ONTARIO POWER GENERATION

News
from Ontario Power Generation

700 University Avenue Toronto, ON M5G 1X6

Tel: 416-592-4008 or 1-877-592-4008
www.opg.com

March 10, 2017

OPG REPORTS 2016 FINANCIAL RESULTS

Solid operating and financial results position the Company for success with major generation projects

[Toronto]: – Ontario Power Generation Inc. (OPG or Company) today reported net income attributable to the Shareholder of $436 million for 2016, compared to $402 million in 2015. The increase was primarily the result of higher generation from its nuclear fleet and higher earnings from the Contracted Generation Portfolio segment. The higher nuclear production reflected more days when the Darlington nuclear units were producing electricity in 2016, compared to 2015.

“I’m pleased with OPG’s 2016 financial results,” said OPG President and CEO Jeff Lyash. “The continued strong financial performance of OPG benefits the Province and electricity consumers. It is essential that we manage our operations effectively for the benefit of Ontarians.”

“Both the Darlington and Pickering nuclear stations, alongside our renewable power fleet of hydroelectric generating stations, produce clean, reliable power with virtually no smog or greenhouse gas emissions. The refurbishment of the Darlington station will provide another 30 years of operations at one of Ontario’s most important public assets,” said Lyash. “The $12.8 billion that we are investing in the refurbishment will provide important economic stimulus in Ontario, creating jobs and providing opportunities for more than 60 companies from over 25 communities across the province. At the same time, OPG continues to produce about half the electricity used in Ontario with the power priced 40 per cent lower than other generators, which helps moderate customer bills.”

Higher electricity demand for stations in the Contracted Generation Portfolio segment in 2016, namely the Lennox Generating Station (GS) and the Atikokan GS, also contributed to the increase in earnings.

“We have achieved significant progress in a number of projects during the year, including the refurbishment work at the Sir Adam Beck Pump GS’s 300-hectare reservoir, and the construction of the Peter Sutherland Sr. GS in northeastern Ontario. The construction of the Peter Sutherland Sr. station is our third partnership with an Indigenous community.” said Lyash. “We’re pleased that construction is progressing ahead of schedule and within budget. The 28 megawatt generating station is currently being commissioned and is expected to be in service this spring. This project is another example of OPG’s strong partnerships with Ontario’s Indigenous communities, yielding renewable power and lasting economic benefits.”

Generating and Operating Performance

Electricity generation increased in 2016 to 78.2 terawatt hours (TWh) from 78.0 TWh in 2015. Higher nuclear generation of 1.1 TWh was primarily due to a lower number of planned outage days during 2016.

Higher volume of water spilled at OPG's hydroelectric stations in 2016 as a result of more prevalent surplus baseload generation (SBG) conditions partially offset the increase in nuclear generation. OPG's generation for 2016 was also affected by the Unit 2 refurbishment outage at the Darlington GS, which commenced in October 2016.

The unit capability factor at the Darlington GS increased to 89.5 per cent for 2016, compared to 76.9 per cent for 2015, primarily due to fewer planned and unplanned outage days at the station during 2016, compared to 2015. The unit capability factor excludes Unit 2 while it is undergoing refurbishment.

At the Pickering GS, the unit capability factor decreased to 75.2 per cent for 2016, compared to 79.4 per cent for 2015, primarily due to a higher number of additional outage days at the station in 2016 as a result of emergent discovery work during planned outages.

The availability of OPG's regulated hydroelectric generating stations decreased to 89.0 per cent for 2016, from 91.2 per cent for 2015. The decrease was primarily due to the scheduled reservoir refurbishment project at the Sir Adam Beck Pump GS.

For the contracted hydroelectric stations, the availability decreased to 77.3 per cent for 2016, from 88.6 per cent for 2015. The decrease reflected an increase in planned outage days.

The Enterprise Total Generating Cost per megawatt hour (MWh) was $48.45 for the year ended Dec. 31, 2016, compared to $50.84 for the same period in 2015. The year-over-year improvement was primarily a result of lower operations, maintenance and administration expenses, excluding the impact of regulatory variance and deferral accounts, and higher electricity generation adjusted for forgone hydroelectric generation due to SBG conditions during 2016.

In the fourth quarter of 2016, a comprehensive update of the estimate for OPG's obligations for nuclear waste management and nuclear facilities decommissioning as at December 31, 2016 was finalized as part of the required process to update the reference plan under the Ontario Nuclear Funds Agreement. As at December 31, 2016, the update resulted in a decrease of approximately $1.6 billion in OPG's obligation, with a corresponding decrease to the asset retirement costs capitalized as part of the carrying value of the nuclear generating stations to which the liabilities relate.

Generation Development

OPG is undertaking a number of generation development and life extension projects in support of Ontario's electricity planning initiatives. Significant developments during 2016 are as follows:

Darlington Refurbishment

In 2016, the Darlington Refurbishment project transitioned from the planning phase to the execution phase, as OPG prepared to commence the refurbishment of the first unit – Unit 2 – in October 2016, as planned. The unit was taken offline on Oct. 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit was removed from service, was safely completed in January 2017, ahead of schedule, with a total of 480 fuel channels de-fuelled. Preparatory work in the reactor vault to support the removal of feeder tubes and fuel channel assemblies commenced immediately after de-fuelling was completed. The project is tracking on budget.

Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. This includes expenditures incurred during the definition and planning phase of the project. The Darlington Refurbishment project is expected to extend the operating life of the station by approximately 30 years. Life-to-date capital expenditures were approximately $3.2 billion as at Dec. 31, 2016.

Peter Sutherland Sr. GS

Construction of the new 28 MW hydroelectric generating station continued during 2016. Commissioning of the generating station began in February 2017, with the station expected to be in-service in the spring of 2017, well ahead of the originally planned schedule of the first half of 2018. The project's schedule was accelerated to take advantage of favourable weather conditions. The project is tracking within the approved budget of $300 million.

Sir Adam Beck Pump GS

The Sir Adam Beck Pump GS reservoir refurbishment project began in April 2016. The 300-hectare reservoir was returned to service in February 2017 upon completion of the refurbishment, which included installation of a partial new liner and construction of a grout curtain in the bedrock foundation of the reservoir dyke. The project is expected to add approximately 50 more years to the reservoir's life. The Sir Adam Beck Pump GS facility is integral to OPG's hydroelectric fleet as it allows water to be diverted from the Sir Adam Beck complex during periods of low electricity demand and stored in the reservoir, to be used to generate up to 600 MW of electricity during subsequent periods of high demand. The project was completed ahead of the originally planned in-service date and below the approved budget of $58 million.

FINANCIAL AND OPERATIONAL HIGHLIGHTS

(millions of dollars – except where noted)	**2016**	**2015**
Revenue	**5,653**	5,476
Fuel expense	**727**	687
Gross margin	**4,926**	4,789
Operations, maintenance and administration	**2,747**	2,783
Depreciation and amortization	**1,257**	1,100
Accretion on fixed asset removal and nuclear waste management liabilities	**929**	895
Earnings on Nuclear Segregated Funds - (a reduction to expenses)	**(746)**	(704)
Income from investments subject to significant influence	**(37)**	(39)
Other net expenses	**35**	65
Income before interest and income taxes	**741**	689
Net interest expense	**120**	180
Income tax expense	**168**	92
Net income	**453**	417
Net income attributable to the Shareholder	**436**	402
Net income attributable to non-controlling interest [1]	**17**	15
Income (loss) before interest and income taxes		
Electricity generation business segments	**928**	912
Regulated – Nuclear Waste Management	**(174)**	(186)
Services, Trading, and Other Non-Generation	**(13)**	(37)
Total income before interest and income taxes	**741**	689
Cash flow		
Cash flow provided by operating activities	**1,705**	1,465
Electricity generation (TWh)		
Regulated – Nuclear Generation	**45.6**	44.5
Regulated – Hydroelectric	**29.5**	30.4
Contracted Generation Portfolio [2]	**3.1**	3.1
Total electricity generation	**78.2**	78.0
Nuclear unit capability factor (per cent) [3]		
Darlington Nuclear GS	**89.5**	76.9
Pickering Nuclear GS	**75.2**	79.4
Availability (per cent)		
Regulated – Hydroelectric	**89.0**	91.2
Contracted Generation Portfolio – hydroelectric stations	**77.3**	88.6
Equivalent forced outage rate		
Contracted Generation Portfolio – thermal stations	**1.6**	11.2
Enterprise Total Generating Cost (TGC) per MWh for the twelve months ended December 31, 2016 and 2015 ($/MWh) [4]	**48.45**	50.84
Return on Equity Excluding Accumulated Other Comprehensive Income (ROE Excluding AOCI) for the twelve months ended December 31, 2016 and 2015 (%) [4]	**4.2**	4.0
Funds from Operations (FFO) Adjusted Interest Coverage for the twelve months ended December 31, 2016 and 2015 (times) [4]	**5.1**	5.1

[1] Relates to the 25 per cent interest of a corporation wholly owned by the Moose Cree First Nation in the Lower Mattagami Limited Partnership.

[2] Includes OPG's share of generation volume from its 50 per cent ownership interests in the Portlands Energy Centre and Brighton Beach GS.

[3] Nuclear unit capability factor excludes unit(s) during the period in which they are undergoing refurbishment. Unit 2 of the Darlington GS was excluded from the measure effective October 15, 2016, when the unit was taken offline for refurbishment.

[4] Enterprise TGC, ROE Excluding AOCI, and FFO Adjusted Interest Coverage are non-GAAP financial measures and do not have any standardized meaning prescribed by US GAAP. Additional information about the non-GAAP measures is provided in OPG's Management's Discussion and Analysis for the year ended December 31, 2016, under the sections *Highlights – Enterprise TGC, Highlights – FFO Adjusted Interest Coverage,* and *Highlights – ROE Excluding AOCI,* as well as *Supplementary Non-GAAP Financial Measures.*

Ontario Power Generation Inc. is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. Our mission is providing low cost power in a safe, clean, reliable and sustainable manner for the benefit of our customers and shareholder.

Ontario Power Generation Inc.'s audited consolidated financial statements and Management's Discussion and Analysis as at and for the year ended December 31, 2016 can be accessed on OPG's web site (www.opg.com), the Canadian Securities Administrators' web site (www.sedar.com), or can be requested from the Company.

For further information, please contact: Investor Relations 416-592-6700
1-866-592-6700
investor.relations@opg.com

Media Relations 416-592-4008
1-877-592-4008

- 30 -

ONTARIO POWER GENERATION INC.

MANAGEMENT'S DISCUSSION AND ANALYSIS

DECEMBER 31, 2016

ONTARIO POWER GENERATION

2016 YEAR-END REPORT

TABLE OF CONTENTS

Forward-Looking Statements	2
The Company	3
Revenue Mechanisms for Regulated and Non-Regulated Generation	4
Highlights	6
Core Business, Strategy, and Outlook	16
Key Operating and Financial Performance Indicators	31
Business Segments	33
Discussion of Operating Results by Business Segment	35
Regulated – Nuclear Generation Segment	35
Regulated – Nuclear Waste Management Segment	36
Regulated – Hydroelectric Segment	37
Contracted Generation Portfolio Segment	38
Services, Trading, and Other Non-Generation Segment	39
Liquidity and Capital Resources	39
Balance Sheet Highlights	43
Critical Accounting Policies and Estimates	45
Risk Management	57
Related Party Transactions	72
Internal Controls over Financial Reporting and Disclosure Controls	73
Fourth Quarter	74
Quarterly Financial Highlights	76
Supplementary Non-GAAP Financial Measures	78

ONTARIO POWER GENERATION INC.
MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis (MD&A) should be read in conjunction with the audited consolidated financial statements and accompanying notes of Ontario Power Generation Inc. (OPG or Company) as at and for the year ended December 31, 2016. OPG's consolidated financial statements are prepared in accordance with United States generally accepted accounting principles (US GAAP) and are presented in Canadian dollars.

As required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario) (FAA), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. The Ontario Securities Commission (OSC) has approved an exemption that allows OPG to apply US GAAP up to January 1, 2019. The term of the exemption is subject to certain conditions, which may result in the expiry of the exemption prior to January 1, 2019. For details, refer to the section, *Critical Accounting Policies and Estimates* under the heading, *Exemptive Relief for Reporting under US GAAP.* This MD&A is dated March 10, 2017.

FORWARD-LOOKING STATEMENTS

The MD&A contains forward-looking statements that reflect OPG's current views regarding certain future events and circumstances. Any statement contained in this document that is not current or historical is a forward-looking statement. OPG generally uses words such as "anticipate", "believe", "foresee", "forecast", "estimate", "expect", "schedule", "intend", "plan", "project", "seek", "target", "goal", "strategy", "may", "will", "should", "could", and other similar words and expressions to indicate forward-looking statements. The absence of any such word or expression does not indicate that a statement is not forward-looking.

All forward-looking statements involve inherent assumptions, risks, and uncertainties, including those set out under the section, *Risk Management,* and forecasts discussed under the section, *Core Business, Strategy, and Outlook.* All forward-looking statements could be inaccurate to a material degree. In particular, forward-looking statements may contain assumptions such as those relating to OPG's generating station performance and availability, fuel costs, surplus baseload generation (SBG), cost of fixed asset removal and nuclear waste management, performance and earnings of investment funds, refurbishment of existing facilities, development and construction of new facilities, pension and other post-employment benefit (OPEB) obligations and funds, income taxes, proposed new legislation, the ongoing evolution of Ontario's electricity industry, environmental and other regulatory requirements, health, safety and environmental developments, business continuity events, the weather, financing and liquidity, applications to the Ontario Energy Board (OEB) for regulatory prices, the impact of regulatory decisions by the OEB, and forecasts of earnings, cash flows, Funds from Operations (FFO) Adjusted Interest Coverage, Return on Common Equity Excluding Accumulated Other Comprehensive Income (ROE Excluding AOCI), Total Generating Cost (TGC) and capital expenditures. Accordingly, undue reliance should not be placed on any forward-looking statement. The forward-looking statements included in this MD&A are made only as of the date of this MD&A. Except as required by applicable securities laws, OPG does not undertake to publicly update these forward-looking statements to reflect new information, future events, or otherwise.

THE COMPANY

OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. OPG was established under the *Business Corporations Act (Ontario)* (OBCA) and is wholly owned by the Province of Ontario (Province or Shareholder).

As at December 31, 2016, OPG's electricity generation portfolio had an in-service capacity of 16,177 megawatts (MW). OPG operates two nuclear generating stations, 65 hydroelectric generating stations, three thermal generating stations, and one wind power turbine. In addition, OPG and TransCanada Energy Ltd. co-own the 550 MW Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS). OPG and ATCO Power Canada Ltd. co-own the 560 MW Brighton Beach gas-fired combined cycle GS (Brighton Beach). OPG's 50 percent share of the in-service capacity and generation volume of these co-owned facilities is included in the generation portfolio statistics set out in this report. The income from the co-owned facilities is accounted for using the equity method of accounting, and OPG's share of income is presented as income from investments subject to significant influence in the Contracted Generation Portfolio segment.

OPG also owns two other nuclear generating stations, the Bruce A GS and the Bruce B GS, which are leased on a long-term basis to Bruce Power LP (Bruce Power). Income from these leased stations is included in revenue under the Regulated – Nuclear Generation segment. The leased stations are not included in the generation portfolio statistics set out in this report.

All of OPG's owned and co-owned generating facilities are located in Ontario.

OPG's Reporting Structure

The composition of OPG's reportable business segments is as follows:

- Regulated – Nuclear Generation
- Regulated – Nuclear Waste Management
- Regulated – Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation.

OPG receives regulated prices for electricity generated from most of its hydroelectric facilities and all of the nuclear facilities that it operates (collectively, prescribed facilities or regulated facilities). This includes the following facilities:

- the six hydroelectric generating stations prescribed for rate regulation prior to 2014, as follows:
    - Sir Adam Beck 1, 2 and Pump hydroelectric generating stations
    - DeCew Falls 1 and 2 hydroelectric generating stations
    - R.H. Saunders hydroelectric GS
- the 48 hydroelectric generating stations prescribed for rate regulation effective in 2014
- Pickering Nuclear GS (Pickering GS)
- Darlington Nuclear GS (Darlington GS).

The operating results related to these regulated facilities are described under the Regulated – Nuclear Generation, Regulated – Nuclear Waste Management, and Regulated – Hydroelectric segments. For the remainder of OPG's operating generating facilities, the operating results are described under the Contracted Generation Portfolio segment. A description of all OPG's segments is provided under the section, *Business Segments*.

In-Service Generating Capacity

OPG's in-service generating capacity by business segment as of December 31 was as follows:

(MW)	**2016**	**2015**
Regulated – Nuclear Generation [1]	**5,728**	6,606
Regulated – Hydroelectric	**6,421**	6,428
Contracted Generation Portfolio [2]	**4,028**	4,021
Total	**16,177**	17,055

[1] The in-service generating capacity as of December 31, 2016 excludes Unit 2 of the Darlington GS. The unit, which has a generating capacity of 878 MW, was taken offline in mid-October 2016 and is currently undergoing refurbishment.
[2] Includes OPG's share of in-service generating capacity of 275 MW for PEC and 280 MW for Brighton Beach.

The total in-service capacity as at December 31, 2016 decreased by 878 MW compared to 2015. The decrease was primarily due to the commencement of the refurbishment of the first Darlington GS unit, Unit 2, which was taken offline in mid-October 2016. In addition, during 2016, the capacity of the regulated hydroelectric units at the Abitibi Canyon GS and the Sir Adam Beck 1 GS was reduced to reflect unit limit capability. This decrease in in-service capacity was partially offset by an increase in capacity of the Contracted Generation Portfolio segment, reflecting the completion of an upgrade and rehabilitation of Unit 2 of the Harmon hydroelectric GS during 2016.

REVENUE MECHANISMS FOR REGULATED AND NON-REGULATED GENERATION

Regulated Generation

The OEB sets the prices for electricity generated from OPG's regulated nuclear and regulated hydroelectric facilities. The following are the OEB-authorized regulated prices for electricity generated from these facilities:

	2016	**2015**	
($/MWh)		**January 1 to June 30**	**July 1 to December 31**
Regulated – Nuclear Generation			
Base regulated price	**59.29**	59.29	59.29
Rate riders	**10.84** [1]	1.33	12.17 [1]
	70.13	60.62	71.46
Regulated – Hydroelectric			
Hydroelectric generating stations prescribed for rate regulation prior to 2014			
Base regulated price	**40.20**	40.20	40.20
Rate riders	**3.19** [1]	6.04	9.23 [1]
	43.39	46.24	49.43
Hydroelectric generating stations prescribed for rate regulation effective in 2014			
Base regulated price	**41.93**	41.93	41.93
Rate rider	**3.19** [1]	-	3.19 [1]
	45.12	41.93	45.12

[1] The increase in the 2015 rate riders effective July 1, 2015 was implemented by the OEB on October 1, 2015. As such, the OEB authorized interim period rate riders for the period from October 1, 2015 to December 31, 2016 to allow for the recovery of the increase in the riders for the period from July 1, 2015 to September 30, 2015. The revenue from the new riders for the July 1, 2015 to September 30, 2015 period was accrued in 2015. The nuclear interim period rate rider was $2.17 per megawatt hour (MWh) and the regulated hydroelectric interim period rate rider was $0.64/MWh. These interim period rate riders have not been included in the above table. All rate riders in effect during 2016 expired on December 31, 2016.

The base regulated prices in effect during 2015 and 2016 were established by the OEB's November 2014 decision and December 2014 order, effective November 1, 2014, using a forecast cost-of-service methodology based on the OEB-approved revenue requirements for the 2014 to 2015 period, taking into account the OEB-approved forecasts of production and operating costs for the regulated facilities and a return on rate base. Rate base for OPG represents the average net level of investment in regulated fixed and intangible assets in service and an allowance for working capital.

In accordance with *Ontario Regulation 53/05* under the *Ontario Energy Board Act, 1998*, OPG's nuclear regulated prices are reduced by the amount of OPG's revenues, net of costs, from leasing the Bruce nuclear generating stations to Bruce Power. As directed by the OEB, OPG's revenues and costs related to the Bruce nuclear generating stations are determined in accordance with US GAAP for the purposes of establishing OPG's nuclear regulated prices and are subject to the Bruce Lease Net Revenues Variance Account in accordance with *Ontario Regulation 53/05*. This includes OPG's costs related to its obligations for nuclear waste management and nuclear facilities decommissioning associated with the Bruce nuclear generating stations and the corresponding portion of earnings on the nuclear fixed asset removal and nuclear waste management segregated funds (Nuclear Segregated Funds) established pursuant to the Ontario Nuclear Funds Agreement (ONFA) between OPG and the Province.

Rate riders for OPG are established to recover or repay approved balances in OEB-authorized regulatory variance and deferral accounts (regulatory accounts). Variance and deferral accounts typically capture, for subsequent review and approval, differences between actual costs and revenues and the corresponding forecast amounts approved by the OEB in setting regulated prices, or record the impact of items not reflected in the approved regulated prices. The rate riders in effect during 2015 included those established by the OEB's December 2014 order for the period from January 1, 2015 to December 31, 2015, as well as those authorized by the OEB's October 2015 order on OPG's 2014 application to recover the December 31, 2014 variance and deferral account balances, for the period from July 1, 2015 to December 31, 2016. The rate riders in effect during 2016 were those authorized by the October 2015 order.

Non-Regulated Generation

Electricity generated from most of OPG's non-regulated assets is subject to Energy Supply Agreements (ESAs) with the Independent Electricity System Operator (IESO). Effective January 1, 2015, the Ontario Power Authority (OPA) merged with the IESO. The new entity continued under the name Independent Electricity System Operator. As such, the IESO was substituted as the counterparty of ESAs and other agreements that were previously executed with the OPA.

During 2016, ESAs were in effect for the following thermal generating facilities:

- Lennox GS: Capacity provided by, and production from, the station are subject to an ESA for the period from January 1, 2013 to September 30, 2022
- Atikokan GS: Capacity provided by, and production from, the station are subject to a 10-year ESA expiring in July 2024
- Thunder Bay GS: Capacity provided by, and production from, the station are subject to a 5-year ESA expiring in January 2020.

In addition, long-term hydroelectric ESAs are in place for the following facilities, with expiry dates for currently operating stations ranging from 2059 to 2064:

- Lac Seul and Ear Falls generating stations
- Healey Falls GS
- Sandy Falls, Wawaitin, Lower Sturgeon, and Hound Chute generating stations
- Little Long, Harmon, Smoky Falls, and Kipling generating stations (collectively the Lower Mattagami River generating stations)

- Peter Sutherland Sr. GS which is being commissioned. Payments under this ESA will commence when the station achieves commercial operation. Further details on the Peter Sutherland Sr. GS project are found in the section, *Core Business, Strategy, and Outlook* under the heading, *Project Excellence*.

HIGHLIGHTS

Overview of Results

This section provides an overview of OPG's operating results for 2016 and 2015.

(millions of dollars – except where noted)	**2016**	**2015**
Revenue	**5,653**	5,476
Fuel expense	**727**	687
Gross margin	**4,926**	4,789
Operations, maintenance and administration	**2,747**	2,783
Depreciation and amortization	**1,257**	1,100
Accretion on fixed asset removal and nuclear waste management liabilities	**929**	895
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(746)**	(704)
Income from investments subject to significant influence	**(37)**	(39)
Property taxes	**46**	45
Restructuring	**6**	6
	4,202	4,086
Income before other (gains) losses, interest, and income taxes	**724**	703
Other (gains) losses	**(17)**	14
Income before interest and income taxes	**741**	689
Net interest expense	**120**	180
Income before income taxes	**621**	509
Income tax expense	**168**	92
Net income	**453**	417
Net income attributable to the Shareholder	**436**	402
Net income attributable to non-controlling interest [1]	**17**	15
Electricity production (TWh) [2]	**78.2**	78.0
Cash flow		
Cash flow provided by operating activities	**1,705**	1,465

[1] Relates to the 25 percent interest of the Amisk-oo-Skow Finance Corporation, a corporation wholly owned by the Moose Cree First Nation, in the Lower Mattagami Limited Partnership.

[2] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

Net income attributable to the Shareholder was $436 million for 2016, an increase of $34 million compared to 2015. Income before interest and income taxes was $741 million for 2016, an increase of $52 million compared to 2015.

The following summarizes the significant factors which contributed to the variance:

Significant factors that increased income before interest and income taxes:

- Higher generation of 1.1 terawatt hours (TWh) from the Regulated – Nuclear generation segment, resulting in an increase in revenue from the nuclear base regulated price of approximately $65 million. The year-over-year increase in revenue from the higher nuclear rate riders in effect during the first half of 2016,

compared to the same period in 2015, was primarily offset by an increase in the amortization expense related to regulatory account balances

- Higher earnings on the Nuclear Segregated Funds of $42 million, primarily due to a higher rate of return on the portion of the Used Fuel Segregated Fund that is subject to a consumer price index (CPI) adjusted rate of return guaranteed by the Province pursuant to the ONFA. This increase in Nuclear Segregated Funds earnings was partially offset by an accounting adjustment recognized in the fourth quarter of 2016 to limit the fund asset values recorded in OPG's consolidated financial statements to the lower underlying funding obligations resulting from the updated ONFA reference plan, approved by the Province in December 2016
- Increase in earnings from the Services, Trading, and Other Non-Generation segment of $24 million, primarily due to lower operations, maintenance and administration (OM&A) expenses
- A gain of $22 million recorded in 2016 to reflect the OEB's January 2016 decision on OPG's motion asking the OEB to review and vary parts of its November 2014 decision on OPG's regulated prices
- Increase in earnings of $20 million from the Contracted Generation Portfolio segment, mainly as a result of an increase in the gross margin due to higher revenues from the Lower Mattagami River generating stations, the Lennox GS and the Atikokan GS.

Significant factors that reduced income before interest and income taxes:

- Higher financing expense of $32 million, which represents an increase in the present value of the nuclear fixed asset removal and nuclear waste management liabilities (Nuclear Liabilities). The financing expense, known as accretion expense, is added to the Nuclear Liabilities balance over time
- A decrease in nuclear non-electricity revenue of $21 million, primarily due to a decrease in nuclear detritiation services revenue and lower isotope sales
- Higher OM&A expenses, fuel expense and depreciation expense for the Regulated – Nuclear Generation segment. The increase in OM&A expenses of $14 million reflected higher expenses related to materials and supplies obsolescence recognized in 2016. The increase in fuel expense of $14 million reflected higher uranium costs and higher generation in 2016. Depreciation and amortization expense, excluding amortization expense related to regulatory account balances, increased by $12 million, primarily due to new assets in service in 2016. The increase in amortization expense related to regulatory account balances was largely offset by the increase in revenue related to rate riders
- Lower earnings before other gains from the Regulated – Hydroelectric segment of $28 million, primarily due to lower hydroelectric incentive mechanism revenue and the income impact of OEB-approved variance accounts.

Net interest expense decreased by $60 million in 2016, compared to 2015, primarily due to a higher amount of interest costs capitalized for the Darlington Refurbishment project and a higher amount of interest costs deferred in regulatory variance and deferral accounts.

Income tax expense increased by $76 million in 2016, compared to 2015, primarily due to higher income before income taxes and a lower amount of tax expense deferred in regulatory assets in 2016.

Segment Results

The following table summarizes OPG's income before interest and income taxes by business segment. Significant factors which contributed to the higher income during 2016, compared to 2015, are discussed above. A detailed discussion of OPG's performance by reportable segment is included in the section, *Discussion of Operating Results by Business Segment*.

(millions of dollars)	**2016**	**2015**
Income (loss) before interest and income taxes		
Regulated – Nuclear Generation	**4**	2
Regulated – Hydroelectric	**642**	648
Contracted Generation Portfolio	**282**	262
Total electricity generation business segments	**928**	912
Regulated – Nuclear Waste Management	**(174)**	(186)
Services, Trading, and Other Non-Generation	**(13)**	(37)
	741	689

Electricity Generation

Electricity generation for 2016 and 2015 was as follows:

(TWh)	**2016**	**2015**
Regulated – Nuclear Generation	**45.6**	44.5
Regulated – Hydroelectric	**29.5**	30.4
Contracted Generation Portfolio [1]	**3.1**	3.1
Total OPG electricity generation	**78.2**	78.0
Total electricity generation by other generators in Ontario [2]	**72.7**	76.1

[1] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

[2] Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the IESO, minus OPG electricity generation.

The higher electricity generation from the Regulated – Nuclear Generation segment in 2016 was primarily a result of a lower number of non-refurbishment planned outage days at the Darlington GS due to the planned Vacuum Building Outage (VBO) in 2015 and a decrease in unplanned outages at the station in 2016. The VBO is a unique outage to inspect and maintain specific safety and other systems common to all four units of the station. The 2015 VBO required the shutdown of the four units for 47 days. Vacuum building outages are currently required every 12 years at the Darlington GS. The year-over-year increase in electricity generation was partially offset by a decrease in generation from the Pickering GS, primarily due to an increase in the number of unplanned outage days, and the removal from service of Unit 2 at the Darlington GS for the duration of the unit's refurbishment beginning on October 15, 2016.

Lower electricity generation from the Regulated – Hydroelectric generating segment was primarily due to a higher volume of water spilled as a result of higher SBG conditions during 2016.

Electricity generation from the Contracted Generation Portfolio segment was 3.1 TWh for each of 2016 and 2015. Electricity generation in 2016 reflected higher production from the Lennox and Atikokan generating stations, primarily due to increased market demand. The increase was offset by a higher volume of water spilled at the contracted hydroelectric stations as a result of higher SBG conditions during 2016, and transmission system constraints in northeastern Ontario in 2016.

OPG's operating results are affected by changes in grid-supplied electricity demand resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Ontario's electricity demand as reported by the IESO was 137.0 TWh in each of 2016 and 2015, which excludes electricity exports out of the province.

Baseload generation supply surplus in Ontario was more prevalent in 2016 than in 2015, mainly due to higher water flows in the province during 2016 and limitations on the export of surplus power out of the province, primarily due to transmission constraints in the state of New York. Power that is surplus to the Ontario market is managed by the IESO, mainly through generation reductions at hydroelectric and nuclear stations and other grid-connected renewable resources. Reducing hydroelectric production, which often results in spilling of water, is the first measure used by the IESO to manage SBG conditions. During 2016 and 2015, OPG lost 4.7 TWh and 3.2 TWh of hydroelectric generation due to SBG conditions, respectively. The gross margin impact of production forgone at OPG's regulated hydroelectric stations due to SBG conditions in 2016 and 2015 was offset by the impact of a regulatory variance account authorized by the OEB. OPG did not forgo any electricity production at its nuclear stations due to SBG conditions.

Average Sales Prices

The majority of OPG's generation is from the Regulated – Nuclear Generation and Regulated – Hydroelectric segments. The regulated prices authorized by the OEB for electricity generated from OPG's nuclear and regulated hydroelectric generating stations are discussed in the section, *Revenue Mechanisms for Regulated and Non-Regulated Generation*.

The average sales price for the Regulated – Nuclear Generation segment during 2016 was 6.9 cents per kilowatt hour (¢/kWh), compared to 6.5 ¢/kWh during 2015. The average sales price in 2016 reflected the higher OEB-authorized nuclear rate rider of $10.84/MWh for recovery of variance and deferral account balances in effect during the full year. The average sales price for the Regulated – Hydroelectric segment was 4.4 ¢/kWh, compared to 4.7 ¢/kWh during 2015. The decrease was primarily due to a lower rate rider in effect during 2016 related to the recovery of variance and deferral account balances for the hydroelectric facilities prescribed for rate regulation prior to 2014. These rate riders were established to recover approved balances recorded in OEB-authorized regulatory variance and deferral accounts in prior years. As such, the year-over-year changes in revenue from the rate riders were largely offset by changes in amortization expense related to regulatory account balances.

Cash Flow from Operations

Cash flow provided by operating activities for 2016 was $1,705 million, compared to $1,465 million for 2015. The increase in cash flow provided by operating activities for 2016, compared to 2015, was primarily due to higher generation revenue receipts reflecting higher nuclear rate riders and higher nuclear generation in 2016. The increase in cash flow was also due to lower pension plan contributions in 2016 reflecting an updated actuarial valuation of the OPG registered pension plan. The increase in cash flow was partially offset by higher OM&A expenditures during 2016, compared to 2015, and the payment of a supplemental rent rebate to Bruce Power in the first quarter of 2016 in relation to the period from January 1, 2015 to December 4, 2015. The rebate was made pursuant to a provision under the lease agreement for the Bruce nuclear generating stations. This provision was eliminated effective December 4, 2015 as part of the 2015 amendments to the lease agreement.

Funds from Operations Adjusted Interest Coverage

FFO Adjusted Interest Coverage is an indicator of OPG's ability to meet interest obligations from operating cash flow. The indicator is measured over a 12-month period. During each of the years of 2016 and 2015, the FFO Adjusted Interest Coverage was 5.1 times. The FFO Adjusted Interest Coverage in 2016 reflected a year-over-year increase in cash flow provided by operating activities, offset by lower working capital balances.

Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with its strategy to provide value to the Shareholder. ROE Excluding AOCI is measured over a 12-month period. ROE Excluding AOCI for 2016 was 4.2 percent, compared to 4.0 percent for 2015. ROE Excluding AOCI increased for 2016, compared to 2015, primarily due to higher net income attributable to the Shareholder. OPG's ROE Excluding AOCI reflects regulated prices established by the OEB in 2014. These prices were lower than requested by OPG based on submitted forecast cost and production levels, which has negatively affected OPG's ability to earn the OEB-prescribed rate of return on the Shareholder's investment in the regulated assets.

ROE Excluding AOCI also reflects the relatively higher equity component in the Company's capital structure, compared to the deemed capital structure used by the OEB in determining OPG's regulated prices. The OEB establishes the allowed return on OPG's investment in regulated assets, which represent the majority of the Company's operations, using the OEB's generic prescribed rate of return and an OPG-specific deemed capital structure. In setting the regulated prices in 2014, the OEB applied a deemed capital structure of 45 percent equity and 55 percent debt. OPG's actual capital structure (excluding AOCI) contains approximately 65 percent equity. The higher equity component in OPG's actual capital structure, compared to the deemed capital structure applied by the OEB, results in a reduced actual ROE Excluding AOCI. In its application for new regulated prices filed with the OEB in May 2016, OPG is seeking an increase in the deemed capital structure to 49 percent equity and 51 percent debt. For further discussion on OPG's application, refer to the section, *Highlights* under the heading, *Recent Developments*.

Enterprise Total Generating Cost per MWh

The Enterprise TGC per MWh was $48.45 for the year ended December 31, 2016, compared to $50.84 for the same period in 2015. The improvement in 2016, compared to 2015, was primarily a result of lower OM&A expenses, excluding the impact of regulatory variance and deferral accounts, and higher electricity generation from OPG-operated generating stations as adjusted for forgone generation due to SBG conditions during 2016.

Nuclear Total Generating Cost per MWh

The Nuclear TGC per MWh was $62.30 for the year ended December 31, 2016, compared to $66.22 for the same period in 2015. The improvement in 2016, compared to 2015, was primarily a result of lower OM&A expenses excluding the impact of regulatory variance and deferral accounts, and higher electricity generation during 2016.

Hydroelectric Total Generating Cost per MWh

The Hydroelectric TGC per MWh was $25.49 for the year ended December 31, 2016, which was comparable to $25.26 for the same period in 2015.

ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are not measurements in accordance with US GAAP and should not be considered alternative measures to net income, cash flow provided by operating activities, or any other performance measure under US GAAP. OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the Company's strategic imperatives and related objectives. The definition and calculation of ROE Excluding AOCI, FFO Adjusted Interest Coverage, Enterprise TGC per MWh, Nuclear TGC per MWh and Hydroelectric TGC per MWh are found in the section, *Supplementary Non-GAAP Financial Measures*.

Recent Developments

Darlington Refurbishment

In October 2016, OPG commenced the refurbishment of the first Darlington GS unit, Unit 2, as planned, as part of the Darlington Refurbishment project. The unit was taken offline safely on October 15, 2016. De-fuelling of the reactor,

the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017, ahead of schedule, with a total of 480 fuel channels de-fuelled. Preparatory work in the reactor vault to support the removal of feeder tubes and fuel channel assemblies commenced immediately after de-fuelling was completed. The unit is scheduled to be returned to service in the first quarter of 2020. The project is tracking on budget.

In April 2016, the Federal Court of Appeal unanimously dismissed the request by certain intervenors for a judicial review of the 2013 Environmental Assessment (EA) decision for the Darlington Refurbishment project by the Canadian Nuclear Safety Commission (CNSC) and Fisheries and Oceans Canada. The EA decision had confirmed that, taking into account identified mitigation measures, the project was not likely to cause significant adverse environmental effects. In dismissing the appeal, the Federal Court of Appeal determined that there were no gaps in the EA, that there was nothing unreasonable about the discretionary determinations made by the responsible authorities, and that the intervenors' arguments were not borne out by the evidence. OPG was also awarded its costs of the appeal, as the successful party.

The Darlington Refurbishment project is discussed further in the section, *Core Business, Strategy, and Outlook* under the heading, *Project Excellence.*

OPG's Application for New Regulated Prices

In May 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. For the first time since OPG's prescribed facilities became subject to rate regulation, the new prices are expected to be determined on the basis of an incentive regulation ratemaking methodology for the hydroelectric operations and a custom incentive regulation framework for the nuclear operations. Rate-setting under incentive regulation is typically more formulaic and involves greater de-coupling of a regulated entity's allowed revenues or prices from its costs than under a cost-of-service rate-setting methodology.

For the hydroelectric facilities, OPG's May 2016 application proposes to escalate the existing base regulated prices, with some adjustments, for each of the years 2017 to 2021 based on a formula that considers an industry specific inflation factor less a productivity improvement factor and less a stretch factor intended to incent additional innovation and efficiency. For the nuclear operations, the application proposes revenue requirements for each of the years 2017 to 2021 based on OPG's forecast of operating costs, reduced by a stretch factor amount, as well as a return on rate base and an annual forecast of production.

The proposed nuclear revenue requirements reflect OPG's plans to pursue Pickering extended operations until 2024, as well as the projected impact of the scheduled return to service of the first refurbished Darlington unit in the first quarter of 2020. OPG is also seeking an increase in the deemed capital structure applied to its total regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 percent debt applied by the OEB in setting the existing regulated prices.

Consistent with the requirements of *Ontario Regulation 53/05*, OPG's application filed in May 2016 incorporated a nuclear rate smoothing proposal. This proposal would result in OPG deferring a portion of the approved annual nuclear revenue requirements during the period from January 1, 2017 to the end of the Darlington Refurbishment project in a deferral account for future collection. The regulation stipulates that the deferral account will record interest at a long-term debt rate reflecting OPG's cost of long-term borrowing approved by the OEB, compounded annually, and that the OEB shall authorize recovery of the balance in the account on a straight line basis over a period not to exceed 10 years following the end of the Darlington Refurbishment project. OPG expects to recognize the deferred amounts as income in the period to which the underlying approved revenue requirements relate.

On OPG's recommendation, the Province amended *Ontario Regulation 53/05* in March 2017 to require that the portion of the approved annual nuclear revenue requirements deferred for future collection under rate smoothing be

determined with a view of making more stable year-over-year changes in OPG's weighted-average nuclear and hydroelectric regulated prices, including rate riders. Previously, the regulation required that the deferred amounts be determined with a view of making more stable year-over-year changes in OPG's nuclear regulated prices only. The amendment is intended to make more predictable the impact on customer bills resulting from changes in OPG's overall regulated prices, reducing the average year-over-year change in customer bills over the term of OPG's current application. OPG is modifying the rate smoothing proposal in its application to reflect the new requirements of the regulation.

OPG's application also requests new rate riders, effective January 1, 2017, to recover or repay the December 31, 2015 balances in all of the Company's OEB-authorized variance and deferral accounts, with the exception of the Pension & OPEB Cash Versus Accrual Differential Deferral Account, less amounts previously approved for recovery or repayment in 2016 through rate riders in effect to December 31, 2016. Additions recorded to these accounts during 2016 would be subject to OEB's review and approval in a future application. OPG's May 2016 application also requests the continuation of all applicable existing variance and deferral accounts. The Pension & OPEB Cash Versus Accrual Differential Deferral Account is discussed in the section, *Critical Accounting Policies and Estimates* under the heading, *Rate Regulated Accounting.*

In January 2017, OPG and the intervenors reached a proposed settlement agreement on a limited set of issues in OPG's application (Proposed Settlement Agreement). The Proposed Settlement Agreement was submitted to the OEB for approval. Among the settled issues, the Proposed Settlement Agreement provides for the continuation of all applicable existing variance and deferral accounts and accepts a number of variance and deferral account balances for recovery, as requested by OPG. In addition, the proposed agreement would result in approval of OPG's proposed adjustments to the existing regulated hydroelectric base regulated prices for the purposes of determining the starting point for an incentive regulation formula for the 2017 to 2021 period. The balances of the Nuclear Liability Deferral Account, the Bruce Lease Net Revenues Variance Account, and the Capacity Refurbishment Variance Account are excluded from the scope of the Proposed Settlement Agreement. The periods of recovery or repayment for the accepted variance and deferral account balances also are excluded. The Proposed Settlement Agreement did not impact OPG's 2016 financial results.

In December 2016, the OEB issued an order granting OPG's request to declare the existing base regulated prices interim, effective January 1, 2017. This preserves the OEB's ability to make new regulated prices effective as early as January 1, 2017, which would allow OPG to recover the difference between the approved new regulated prices and the existing prices for the period between the effective date of the new regulated prices and their implementation date based on the OEB's order. The OEB's decision on the application, including the effective date of the new regulated prices, is expected in the second half of 2017, following a public proceeding. The public proceeding is in progress, with the oral hearing portion having commenced in February 2017. Considering the timing of OPG's application and OPG's procedural adherence to date, the Company believes that the OEB could make the new regulated prices effective January 1, 2017.

OEB's Decision on OPG's December 2014 Motion

In January 2016, the OEB issued its decision on OPG's December 2014 motion asking the OEB to review and vary the parts of its November 2014 decision related to the disallowance of the Niagara Tunnel project expenditures, and the application of the 2013 regulatory tax loss to reduce the 2014/2015 revenue requirement. In its January 2016 decision, the OEB reversed a portion of the original disallowance of the Niagara Tunnel project expenditures, and upheld the original tax loss decision. In the first quarter of 2016, OPG recorded a gain of $22 million to recognize the expected future recovery from customers of the portion of the disallowance reversed by the OEB's motion decision. The original disallowance of the Niagara Tunnel project expenditures resulted in a write-off of $77 million that was charged to operations in 2014.

The original tax loss decision resulted in a reduction of the 2014/2015 revenue requirement by approximately $70 million. As OPG's financial results have previously reflected the effect of the OEB's original tax loss decision, the motion decision on the tax loss did not impact OPG's 2016 financial results.

Ontario Nuclear Funds Agreement Reference Plan Update

In the fourth quarter of 2016, a comprehensive update of the estimate for OPG's obligations for nuclear waste management and nuclear facilities decommissioning as at December 31, 2016 was finalized as part of the required process to update the reference plan under the ONFA. As at December 31, 2016, the update resulted in a decrease of approximately $1,570 million in OPG's Nuclear Liabilities, with a corresponding decrease to the asset retirement costs capitalized as part of the carrying value of the nuclear generating stations to which the liabilities relate. OPG undertakes to perform a comprehensive review of the underlying assumptions and baseline cost estimates for nuclear waste management and nuclear facilities decommissioning at least once every five years, in line with the required ONFA reference plan update process.

The updated estimate of the obligations was reflected in a new ONFA reference plan, for years 2017 to 2021, which was approved by the Province in December 2016, effective January 1, 2017 (the 2017 ONFA Reference Plan). Based on the lower life cycle liability estimates per the 2017 ONFA Reference Plan, starting in 2017, OPG is not currently required to make overall contributions to the Used Fuel Segregated Fund or the Decommissioning Segregated Fund established under the ONFA. Prior to 2017, OPG made contributions to the Used Fuel Segregated Fund every quarter, including a one-time special payment in earlier years, as required by the ONFA. These contributions reflected ONFA requirements to fund the majority of the underlying used fuel liability by the end of the initial estimated useful lives of the nuclear stations assumed in the ONFA, resulting in significantly higher contributions to the Used Fuel Segregated Fund in the earlier years of OPG's existence. OPG has not been required to make contributions to the Decommissioning Segregated Fund, which was fully funded at its inception through the initial contribution made by the Province and, taking into account asset performance and changes in underlying funding obligations over time, at the time of every subsequent approved ONFA reference plan. Contributions to either or both funds may be required in the future should the funds be in an underfunded position when a new reference plan is prepared. Such may be the case as a result of variability in asset performance due to volatility inherent in financial markets and, for the portion of the Used Fuel Segregated Fund guaranteed by the Province, changes in the Ontario CPI. Future contribution levels also are dependent on changes in baseline cost estimates and underpinning assumptions used to establish the funding obligations in subsequent ONFA reference plans.

The decrease in the Nuclear Liabilities and associated capitalized asset retirement costs recognized on the consolidated balance sheet as at December 31, 2016 did not impact OPG's income for 2016. Under the current OEB-approved cost recovery methodology, these changes also are not expected to materially affect OPG's income in 2017, as the associated impact on expenses is expected to be largely offset by the Nuclear Liability Deferral Account and the Bruce Lease Net Revenues Variance Account until such time as the OEB implements corresponding changes to OPG's nuclear regulated prices, and subsequently by the impact of new regulated prices. In accordance with *Ontario Regulation 53/05*, the OEB is required to ensure that OPG recovers the revenue requirement impact of its nuclear waste management and nuclear decommissioning liabilities arising from the current approved ONFA reference plan. For further discussion of the accounting for Nuclear Liabilities, refer to the section, *Critical Accounting Policies and Estimates* under the heading, *Asset Retirement Obligation*.

In the fourth quarter of 2016, OPG recorded a reduction of $88 million in the Nuclear Segregated Funds assets related to the 2017 ONFA Reference Plan, through a reduction in earnings from the Nuclear Segregated Funds and an increase in the associated amount due to the Province. This accounting adjustment represented the incremental overfunded position of the Used Fuel Segregated Fund and the Decommissioning Segregated Fund as at December 31, 2016 resulting from the reduction in the life cycle liabilities per the 2017 ONFA Reference Plan. This excess amount was recorded as due to the Province because OPG does not have the right to withdraw the amount from the Nuclear Segregated Funds and because any excess funding in the Nuclear Segregated Funds upon

termination of the ONFA accrues to the Province. Of the $88 million reduction in Nuclear Segregated Funds earnings, $43 million was offset by the impact of the Bruce Lease Net Revenues Variance Account.

For further discussion of the accounting for the Nuclear Segregated Funds, refer to the section, *Critical Accounting Policies and Estimates* under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*. For further discussion of OPG's risks with respect to nuclear waste management and nuclear decommissioning obligations and Nuclear Segregated Funds, refer to the section, *Risk Management* under the headings, *Nuclear Waste Management and Nuclear Decommissioning Obligations, and Nuclear Segregated Funds* and *Financial Markets*.

Ontario's Fair Hydro Plan

On March 2, 2017, the Province announced Ontario's Fair Hydro Plan (the Plan) aimed at reducing electricity bills by 25 percent on average for all residential consumers in the province. As part of the Plan, the Province has proposed refinancing a portion of the Global Adjustment costs over a longer time period for Regulated Price Plan eligible customers (e.g., residential, farm, small businesses). According to the Plan, the Province intends to introduce legislation that would, if passed, enable the IESO and OPG to work together to undertake this financing. The Global Adjustment is administered by the IESO. OPG intends to work with the Province and the IESO as part of the proposal and is exploring implementation options. Any final agreement to implement the Plan is subject to approval by OPG's Board of Directors, which has established a Special Committee to provide timely strategic and other guidance to OPG management in connection with the implementation of the Plan and to make a recommendation to the Board of Directors. The Global Adjustment includes the difference between Ontario's electricity market clearing price used to dispatch generation and the prices paid to contracted and regulated generators in the province, and the cost of conservation and demand management programs. Virtually all non-OPG generators in Ontario have bilateral contracts with the IESO that provide for payments that are different from the market clearing price of electricity, while the prices for all of OPG's nuclear and a majority of its hydroelectric generation are set by the OEB.

Shareholder Declaration and Shareholder Resolution to Sell Certain Real Estate Properties

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution requiring the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. The assets are reported under the Services, Trading, and Other Non-Generation segment. An active program to locate a buyer for these real estate assets was initiated in October 2016, and a purchase and sale agreement was executed in December 2016. The sale is expected to be completed during the second quarter of 2017. An estimated after-tax gain on sale in excess of $200 million is expected to be recognized upon completion of the transaction. Pursuant to the December 2015 Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer the proceeds, net of prescribed deductions under the act, from this disposition into the Province's Consolidated Revenue Fund.

In June 2016, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its former Lakeview GS site located in Mississauga, Ontario, an asset reported under the Services, Trading, and Other Non-Generation segment. OPG is in the process of preparing the site for sale. Pursuant to the June 2016 Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act (2014)*, OPG is required to transfer the proceeds, net of prescribed deductions under the act, from this disposition into the Province's Consolidated Revenue Fund.

Neither the former Lakeview GS site nor the Company's head office premises and associated parking facility are considered core assets to OPG's business.

Contract Award for Nanticoke Solar Facility

In March 2016, Nanticoke Solar LP, then a partnership between OPG, SunEdison Canadian Construction LP (SECCLP) and a subsidiary of the Six Nations of the Grand River Development Corporation, was selected through the first phase of the IESO's Large Renewable Procurement (LRP) program to develop a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands in Haldimand County, Ontario. The LRP program was a competitive bidding process for procuring large renewable energy projects in Ontario. In March 2016, Nanticoke Solar LP and the IESO executed a 20-year LRP contract, which formalized the terms and conditions for the development and operation of the new solar facility. In the first quarter of 2017, OPG purchased SECCLP's interests in Nanticoke Solar LP and is working to obtain approvals and permits required to enable the commencement of construction planned for the first half of 2018.

The 20-year term of the LRP contract takes effect once the station achieves commercial operation, which is expected in the first quarter of 2019. For further discussion, refer to the section, *Core Business, Strategy, and Outlook* under the heading, *Project Excellence*.

Decommissioning of the Lambton GS

In November 2016, the Company announced the decommissioning of the Lambton GS, which ceased coal-fired generation in 2013, as it was determined that continuing to preserve the station beyond 2016 for future conversion was no longer economically feasible. OPG is currently developing a decommissioning plan for the Lambton GS, which will ensure that the station is closed safely, securely, and in an environmentally responsible manner.

Canadian Nuclear Safety Commission Safety Rating for the Pickering GS and the Darlington GS

The CNSC publishes an annual report on the safety performance of Canada's nuclear power plants. The report assesses how well plant operators are meeting regulatory requirements and program expectations in the areas of operational performance, safety analysis, radiation protection, waste management and conventional health and safety. In its 2015 annual report, the CNSC gave both the Pickering GS and the Darlington GS the highest possible safety rating of "Fully Satisfactory". The Pickering GS received this rating for the first time, while the Darlington GS achieved the rating for the seventh year in a row.

Acquisition of Hydro One Limited Shares

In April 2016, OPG acquired nine million common shares of Hydro One Limited (Hydro One) at $23.65 per share as part of a secondary share offering by the Province through a syndicate of underwriters. OPG paid the same price as other investors in the offering. The acquisition, totaling $213 million, was made for investment purposes to mitigate the risk of future price volatility related to OPG's future share delivery obligations under the collective agreements with the Power Workers' Union (PWU) and The Society of Energy Professional (The Society) renewed in 2015. Changes to these agreements included increases to employee pension plan contributions and provided existing employees represented by the PWU and The Society with eligibility to annually receive common shares of Hydro One for up to 15 years starting in the third year of the respective agreements, as long as these employees continue to make contributions to the OPG pension plan and have less than 35 years of pensionable service. The shares acquired in the April 2016 transaction represent the substantial majority of OPG's currently anticipated purchases of Hydro One shares.

CORE BUSINESS, STRATEGY, AND OUTLOOK

The discussion in this section is qualified in its entirety by the cautionary statements included in the section, *Forward-Looking Statements,* at the beginning of the MD&A.

OPG's mission is to provide low cost power in a safe, clean, reliable and sustainable manner for the benefit of its customers and its Shareholder. OPG also seeks to pursue, on a commercial basis, generation development projects and other business growth opportunities to the benefit of the Shareholder.

OPG's four key strategic imperatives are as follows:

- Operational Excellence
- Project Excellence
- Financial Strength
- Social Licence.

Operational Excellence

Operational excellence at OPG is accomplished by the safe and environmentally responsible generation of reliable and cost-effective electricity from the Company's generating assets through a highly trained and engaged workforce.

Workplace Safety and Public Safety

Workplace safety and public safety are fundamental core values at OPG. OPG is committed to operating all of its facilities in a safe, secure, and reliable manner that minimizes risks to a reasonably achievable level. Safety is an overriding priority in all activities performed at OPG's generating and other facilities, and all employees and contractors are expected to conduct themselves in manner that ensures workplace safety and public safety in line with the Company's safety culture.

In the area of workplace safety, OPG is committed to achieving excellent safety performance through continuous improvement and a strong safety culture, with the ultimate goal of zero injuries. OPG utilizes an integrated health and safety management system and a set of operational risk control procedures to ensure continued monitoring of health and safety performance and to support continuous learning and improvement in this area. Overall, OPG's workplace safety performance has been one of the best amongst its comparator Canadian electrical utilities. In 2016, OPG received the Canadian Electricity Association (CEA) President's Gold Award recognizing three consecutive years, 2013 to 2015, of sustained top quartile safety performance within the comparator group.

Workplace safety performance is measured using two primary indicators at OPG, All Injury Rate (AIR) and Accident Severity Rate (ASR). OPG's AIR and ASR results for employee workplace safety were as follows for the year ended December 31:

	2016	2015
AIR *(injuries per 200,000 hours worked)*	**0.56**	0.39
ASR *(days lost per 200,000 hours)*	**2.59**	0.50

In 2016, OPG's AIR and ASR safety performance was worse than in 2015. OPG's analysis of the underlying events indicated that major contributors to the injuries and near misses included inadequate situational awareness and attention to detail, and suboptimal risk-based decisions, rather than missing or inadequate standards or programs. OPG is implementing a number of initiatives to target the injury trends based on the analysis of the safety events, with a focus on the use of human performance tools including increased field supervisory oversight, situational awareness, communication, and procedural use and adherence.

In 2016, OPG launched an organization-wide "iCare Enough to Act" initiative aimed at renewing employees' commitment to their own and each other's safety and well-being. Plans to further strengthen safety as a foundational

element of the Company's values-based culture are being developed through leadership forums and other engagement activities.

Contractors are required to conduct work safely at OPG sites. In support of this requirement, OPG utilizes an independent contractor pre-qualification process, provides on-site safety support for many of its major projects, and works with contract partners to improve their health and safety programs to meet OPG's requirements. To further strengthen contractors' safety performance, in 2016, OPG updated its contractor safety requirements and related governance, and implemented additional oversight and field monitoring to ensure ongoing compliance. In the past eight years, OPG has consistently shown a better than average Construction Contractor AIR as compared to the Health and Safety Association Contractor AIR, a metric of construction contractor safety performance across Ontario.

To ensure continued public safety, radiation exposure to members of the public resulting from the operation of OPG's nuclear generating stations is estimated on an annual basis for individuals living or working near the stations. The annual dose to the public resulting from operations of each nuclear facility is expressed in microsieverts (μSv), which is an international unit of radiation dose measurement. For 2015, the annual public doses resulting from the Darlington GS operations and the Pickering GS operations were 0.5 μSv and 1.2 μSv, respectively, which is approximately 0.1 percent of the annual legal limit of 1,000 μSv. While the public doses from OPG's nuclear operations for the 2016 operating year will not be finalized until the second quarter of 2017, they are not expected to differ significantly from the 2015 levels.

In June 2016 and August 2016, the CNSC released sampling results from its independent environmental monitoring program, which confirmed that the public and the environment around OPG's nuclear generating stations continued to be safe. Also in 2016, the CNSC published its 2015 annual report on the safety performance of Canada's nuclear power plants, which gave both the Pickering GS and the Darlington GS the highest possible safety rating of "Fully Satisfactory". For further details, refer to the CNSC safety rating discussion in the section, *Highlights* under the heading, *Recent Developments*.

OPG remains committed to high standards of public safety on waterways around hydroelectric dams and generating stations. A Dam Safety Review Panel comprised of internationally recognized experts has previously concluded that OPG's dam and public safety program is comparable with international best practices in a number of areas related to maintaining safe dam operations. In cooperation with the Ontario Ministry of Natural Resources and Forestry (MNRF), OPG continues to develop a new risk-informed approach to prioritize and manage risks identified through dam safety assessments. In 2016, OPG continued its water safety campaign with a series of public service announcements illustrating the danger of water near hydroelectric dams and hydroelectric generating stations.

Electricity Generation Production and Reliability

Key strategic initiatives in support of operational excellence, specific to each of OPG's core generating operations, are discussed below. Generation and reliability performance for 2016 is discussed by operating segment in the section, *Discussion of Operating Results by Business Segment*.

Nuclear Operations

OPG is pursuing a number of strategic initiatives aimed at the continued safe and reliable operation of the Pickering GS and targeting top performance at the Darlington GS.

OPG's nuclear operations are regularly benchmarked against top performing nuclear facilities around the world. This allows OPG to identify, develop and implement initiatives to further improve performance. In May 2016, OPG hosted a World Association of Nuclear Operators peer evaluation for the Darlington GS against standards of excellence through an in-depth, objective review by an international panel of industry experts. The review maintained Darlington's excellent standing as one of the top performing nuclear plants in the world. In September 2016, OPG hosted a team of experts from the International Atomic Energy Agency at the Pickering GS to conduct a standard

Operational Safety Review Team mission. The team conducted an in-depth review of performance and adherence to international safety standards. A report on the mission is expected to be released in the second quarter of 2017.

In January 2016, OPG announced its plan to pursue continued safe and reliable operation of the Pickering GS beyond 2020. OPG's objective is to maximize the safe and reliable operating life of the Pickering units. Under OPG's current plan, all six operating units at the station would operate until 2022, at which point two units would be shut down and the remaining four units would continue to operate until 2024. The Province announced its approval of OPG's plan to pursue continued operation of the Pickering GS beyond 2020 up to 2024 in January 2016. In addition to providing Ontario with a clean, reliable source of baseload electricity during nuclear unit refurbishments at the Darlington GS and the Bruce nuclear generating stations, extending operations at the Pickering GS will provide continued employment to approximately 3,000 regular employees at OPG and help to reduce approximately 17 million tonnes of carbon dioxide emissions, which is the equivalent to removing approximately 3.4 million cars from Ontario's roads.

As part of the plan to extend Pickering operations, OPG is continuing to undertake further technical work to confirm that the station's pressure tubes, a key life-limiting component of the station, will achieve the additional life necessary to operate to 2024. OPG is also conducting component condition assessments to identify the work required to support the continued operation of the station. The accounting end of life assumptions for the Pickering GS, currently established as the end of 2020, are expected to be reassessed when OPG's further technical work confirms the longer fuel channel life and the units' fitness to operate beyond 2020, taking into account the requirement for the CNSC's approval, discussed below.

OPG's current five-year operating licence for the Pickering GS was approved by the CNSC in 2013 and expires on August 31, 2018. This licence was issued assuming that the station would shut down in 2020. By June 30, 2017, OPG is required to confirm to the CNSC the end date of commercial operations of all operating Pickering units. OPG has started work on the Pickering licence renewal application, which is expected to be filed in mid-2017 for the CNSC's approval in 2018. The requested licence renewal will span the planned extended operations period, through to the end of the planned period to de-fuel, de-water, and place the station in a safe state condition after shutdown. A Periodic Safety Review and an Integrated Implementation Plan (IIP) for the station will be submitted to the CNSC as part of the licence renewal application.

OPG strives to operate and maintain its nuclear facilities to optimize equipment, performance, availability and electricity generation, while improving the reliability and predictability of the fleet. Improved equipment reliability generally results in fewer generation interruptions. OPG continues to make investments in the performance of the Pickering GS, with a focus on improving plant reliability and maximizing the value of the asset through implementing equipment modifications and fuel handling reliability improvements, reducing equipment maintenance backlogs, and completing critical and high priority work.

Nuclear inspection and testing programs are largely driven by maintenance and regulatory requirements, and are designed to ensure that equipment is performing safely and reliably. Execution of this and other outage work continues to be a high priority. As part of its commitment to operational excellence, OPG continues to focus on improving the planning, execution, monitoring, and reporting of outage work.

Work continues to ensure the integration of life cycle management and refurbishment programs at the Darlington GS. This includes developing staffing strategies to support both ongoing station operations and the refurbishment project, planning and incorporating pre-requisite work for the refurbishment into the station's work schedule, and identifying life cycle and aging management work necessary to sustain safe and reliable station operations for the next three decades. OPG's longer-term efforts are aimed at positioning the Darlington GS for industry leading operating and cost performance.

Delivering solutions that provide the best combination of safety, cost and effectiveness, as well as establishing challenging financial targets based on comprehensive benchmarking, continues to be a vital part of OPG's strategy to

improve performance of the nuclear business unit. Financial and staffing targets continue to be reviewed and adjusted where necessary to reduce operating costs, while ensuring safety is not compromised.

In 2016, OPG submitted applications with the CNSC seeking a ten-year licence renewal for the Western Waste Management Facility (WWMF), located at the Bruce generating stations' site, to May 31, 2027, and a ten-year licence renewal for the Pickering Waste Management Facility (PWMF) to August 31, 2028. The licence renewal applications will be presented to the CNSC at a public hearing in April 2017. The current licence for the WWMF expires on May 31, 2017 and for the PWMF on March 31, 2018.

Hydroelectric Operations

The objectives of OPG's hydroelectric operations include operating and maintaining the generating facilities in an efficient and cost-effective manner, while enhancing their reliability and availability. OPG continues to evaluate and implement plans to increase capacity, maintain and improve performance, and extend the operating life of its hydroelectric generating assets.

OPG's plans for its existing hydroelectric generating stations are accomplished through multi-year capital investment and other programs, including replacements and upgrades of turbine runners, and refurbishment or replacement of existing generators, transformers, and controls. The aim of OPG's runner replacement and upgrade program is to increase hydroelectric station capacity by leveraging efficiency enhancements in runner design. Where economical and practical, OPG pursues opportunities to refurbish, expand or redevelop its existing hydroelectric stations. Over the next three years, OPG plans to increase the total capacity of its hydroelectric generating fleet by approximately 135 MW, which, in addition to the runner replacement and upgrade program, includes the Peter Sutherland Sr. GS and the Ranney Falls GS projects. Both of these projects are discussed in the section, *Core Business, Strategy, and Outlook* under the heading, *Project Excellence*. OPG is also planning to repair, rehabilitate, or replace a number of aging civil hydroelectric structures.

As part of its commitment to operational excellence, OPG continues to make investments in its existing hydroelectric generating fleet. During 2016, OPG continued to execute a number of projects, including:

- Completion of major equipment overhauls and rehabilitation work on Unit 5 of the Sir Adam Beck Pump GS and Unit 2 of the Whitedog Falls GS
- Completion of a runner upgrade, headgate replacement and rehabilitation of Unit 2 of the Harmon GS
- Completion of headgate replacement at Units 1 and 2 of the Kipling GS
- Completion of concrete rehabilitation of the main dam at Chats Falls GS
- Continued work on the rehabilitation of Unit 10 of the Sir Adam Beck 1 GS, Unit 5 of the DeCew Falls 1 GS, Unit 1 of the Harmon GS, and the replacement of the Shebandowan Lake Control Dam at the Kakabeka Falls GS.

OPG plans to commence several major sustaining hydroelectric projects during 2017, including the overhaul and upgrade of Unit 2 of the DeCew Falls 2 GS, the upgrade of Unit 2 of the Lower Notch GS, and the upgrade of Unit 2 of the Little Long GS.

Thermal Operations

OPG's thermal operations consist of biomass-fuelled generating units at each of Atikokan GS and Thunder Bay GS, and the oil/gas dual-fuelled Lennox GS.

These stations, which operate as peaking facilities, provide Ontario's electricity system with the flexibility to meet changing daily system demand and capacity requirements and enable the system to accommodate the expansion of Ontario's renewable generation portfolio. The continued operation of these stations during the initial years of the refurbishment of the Darlington GS and Bruce nuclear facilities will provide Ontario with over 2,000 MW of peaking generation.

During the third quarter of 2016, the Atikokan and Thunder Bay generating stations provided renewable generation when called upon to meet system requirements while utility maintenance was being conducted on a local transformer station. As a result of utility maintenance, the Atikokan GS operated continuously from late July 2016 to early September 2016, while the Thunder Bay GS operated as needed. To meet the increased demand for biomass fuels at Atikokan GS, OPG coordinated the acceleration of biomass fuel deliveries with suppliers while continuing to operate the plant safely.

As part of OPG's ongoing strategy to reduce costs and increase efficiency, the operations of the Company's hydroelectric and thermal assets have been combined into one organization. OPG continues to evaluate opportunities to consolidate departments within the stations and across regions.

Thermal stations that are no longer available to generate electricity are included in the Services, Trading, and Other Non-Generation segment once they are removed from service. This includes the Lambton GS and Nanticoke GS sites, which ceased coal-fired generation in 2013. In 2015, OPG announced the decommissioning of the Nanticoke GS, as it could not commercially support continued preservation costs. In November 2016, OPG announced the decommissioning of the Lambton GS, as further discussed in the section, *Highlights* under the heading, *Recent Developments*.

OPG is currently developing decommissioning plans for the Lambton and Nanticoke generating stations, which will ensure that they are closed safely, securely and in an environmentally responsible manner. The decommissioning plan for the Nanticoke GS will accommodate the construction and operation of the Nanticoke solar facility. The costs of decommissioning the stations will be charged to a previously established decommissioning provision. OPG expects to review the decommissioning provision estimates for these sites in 2017.

Environmental Performance

OPG's Environmental Policy states that "OPG shall meet all legal requirements and any environmental commitments that it makes, with the objective of exceeding these legal requirements where it makes business sense". This policy commits OPG to:

- establish and maintain an environmental management system (EMS)
- work to prevent or mitigate adverse effects on the environment with a long-term objective of continual improvement
- manage sites in a manner that strives to maintain, or enhance where it makes business sense, significant natural areas and associated species of concern.

In 2016, OPG maintained the ISO 14001 registration of its company-wide EMS. Within the EMS, OPG has planning, operational control, and monitoring programs to manage the Company's positive and negative impacts on the environment. Significant environmental aspects of OPG's operations include: spills, chemical and thermal emissions to water, water flow and level changes, radioactive emissions, low and intermediate level radioactive waste (L&ILW), impact on wildlife habitat, displacement of fossil fuels, and fish impingement and entrainment. Further details regarding OPG's environmental risks can be found in the section, *Risk Management* under the heading, *Environmental Risk*.

Environmental performance targets are set as part of the annual business planning process. OPG met or outperformed its 2016 targets for spills, environmental infractions, and carbon-14 emissions to air. An increase in the volume of waste generated from work activities at the Darlington GS and preparation for the Darlington Refurbishment project led to a higher than expected volume of L&ILW produced in 2016. Performance for tritium emissions to air and water during 2016 remained less than one percent of the regulatory limit. There were no significant environmental events during 2016.

In 2016, the Government of Ontario passed the *Climate Change Mitigation and Low-Carbon Economy Act, 2016* and the associated *Cap and Trade Program Regulation*. The legislation provides the foundation for regulating

greenhouse gas (GHG) emissions in Ontario and establishes a cap and trade program, with the first compliance period being from January 1, 2017 to December 31, 2020.

The cap and trade program is a market mechanism intended to give Ontarians an incentive to reduce GHG emissions by putting a price on carbon. The program requirements are expected to result in increased fuel costs for some OPG-owned and co-owned generating facilities. Fuel costs for these stations are generally recovered from the electricity market. With OPG's low GHG emitting fleet, the program is not expected to have a material adverse financial impact on the Company. OPG has established the necessary processes to comply with the cap and trade program requirements.

OPG is monitoring actions being taken by the Government of Ontario and the Government of Canada to reduce GHG emission levels and transition to a low-carbon economy. In support of efforts to mitigate climate change, the Company continues to evaluate and implement plans to increase the generation capacity of its hydroelectric generating fleet, where economical, and invest in other low-carbon technologies.

OPG communicates its environmental performance internally to employees and to external stakeholders, including the Ontario Ministry of the Environment and Climate Change, Environment and Climate Change Canada, the CNSC, and local communities. Details of OPG's environmental performance and initiatives to fulfill the Company's Environmental Policy can be found in OPG's 2015 Sustainability Report, available on the Company's website at www.opg.com.

Improving Efficiency and Reducing Costs

As part of its commitment to operational excellence, OPG remains focused on reducing costs by pursuing efficiency and productivity improvements across operating business units and support functions, while ensuring that there is no adverse impact on the safety, reliability and environmental sustainability of the Company's operations. This includes streamlining of processes, simplifying governance, upgrading information technology, optimizing service delivery models, and, where appropriate, continuing to leverage attrition to achieve human resource targets aligned with business requirements. Initiatives to improve cost performance and organizational capability are being implemented at the enterprise and business unit level.

To drive efficiency and performance improvement, the Company continues to leverage a more scalable, centre-led organizational model. In 2016, the reduction in OPG's regular headcount from ongoing operations, since the beginning of 2011, reached over 2,800. Improving organizational performance and building on these efficiency gains remains a key priority for the Company. OPG continues to review its cost structure, identify cost improvement strategies and embed an outcomes-driven culture that reinforces low cost, efficiency, and organizational agility as part of business decision-making. In order to enhance the overall focus on productivity, in 2016, OPG adopted Enterprise TGC per MWh as a measure of OPG's overall organizational cost performance and Hydroelectric TGC per MWh as a measure of cost performance of OPG's hydroelectric generating assets, in addition to the existing Nuclear TGC per MWh measure. Further details regarding these measures are included in the sections, *Highlights, Key Operating and Financial Performance Indicators* and *Supplemental Non-GAAP Financial Measures*.

People and Culture

A well trained and engaged workforce is fundamental to the achievement of OPG's strategic imperatives. To succeed in a demanding business environment, OPG is focused on building a diverse, healthy, engaged workforce and fostering a culture of collaboration, accountability and innovation. OPG also continues to communicate and implement the values and behaviours expected from its employees in order to maintain a strong focus on safety, performance excellence, continuous improvement, and corporate citizenship.

The Company continues to focus on improving the capability of its workforce through leadership development, knowledge management, diversity and inclusion programs, and hiring in key areas. Ability to secure the right talent mix in order to effectively meet the Company's immediate and longer term business needs on a timely basis is

supported through workforce planning, resourcing and on-boarding strategies, both to acquire external talent into the organization and to develop existing employees. The goal of workforce planning and resourcing strategies is to ensure that the Company's workforce is diverse and has the right skill set and capability for the safe and effective operation of the generating facilities and successful delivery of major projects, including the refurbishment of the Darlington GS. These strategies are being designed to take into account anticipated staffing requirements to the end of planned commercial operations of the Pickering GS, through to the end of the planned period to de-fuel, de-water and place the station in a safe state condition after shutdown.

As part of the strategy to develop and engage employees and to build leadership talent, the Company has an active succession planning program with a focus on accelerating development. OPG also has a talent management monitoring process to proactively assess staffing risks, challenges and opportunities. Since 2015, OPG offers a company-wide high-potential leadership development program to qualified internal candidates. This 18-month cross-functional, competitive-entry program is designed to identify and develop candidates for future leadership positions while they are relatively early in their careers.

Electricity generation involves complex technologies that require highly skilled and trained workers. Many positions at OPG have significant educational prerequisites and rigorous requirements for continuous training and periodic requalification. In addition to maintaining its internal training infrastructure, OPG relies on partnerships with government agencies, other electrical industry partners and educational institutions to meet the required level of qualification. Training delivery models are evaluated for effectiveness and efficiency.

Effective January 1, 2017, OPG implemented a new Executive Compensation Program that is compliant with *Ontario Regulation 304/16: Executive Compensation Framework*, introduced in September 2016. The regulation sets out how all employers designated under the *Broader Public Sector Executive Compensation Act, 2014*, including OPG, must establish and post compensation programs for executives. The program must include the compensation philosophy, salary and performance-related pay caps, comparative analysis details, and a description of other elements of compensation. OPG's new Executive Compensation Program, which applies to employees at the Vice President level and higher, is designed to provide compensation that is at the 50th percentile of the market and focused on at-risk, performance based pay. The program will better enable OPG to attract, align and retain the executive talent critical to delivering Shareholder and customer value, while ensuring continued safe and reliable operations.

Project Excellence

OPG is pursuing a number of generation development and other major projects in support of Ontario's electricity planning initiatives. OPG also continues to plan and execute maintenance and capital improvement projects related to its existing assets. OPG strives for excellence in the planning and delivery of all projects across the Company.

OPG's vision for project excellence is to be an industry leader in project management capability and performance. As part of its commitment to project excellence, OPG continues to enhance and streamline its approach to project planning and execution, with the goal of delivering all projects safely, on time, on budget, and with high quality. Achieving project excellence at OPG involves, among other things, implementing a common, scalable project delivery model across all business units, establishing qualified project management teams, optimizing contracting strategies, engaging qualified and experienced vendors, and effectively monitoring and controlling performance.

The status updates for OPG's major projects as of December 31, 2016 are outlined below.

Project	Capital expenditures		Approved budget	Expected in-service date	Current status
(millions of dollars)	**Year-to-date**	**Life-to-date**			
Darlington Refurbishment	1,019	3,185	12,800 [1]	First unit - 2020 Last unit - 2026	The refurbishment of Unit 2 commenced in October 2016, as planned. De-fuelling of Unit 2, the first critical path activity, was completed in January 2017, ahead of schedule. The project is tracking on budget. See update below.
Peter Sutherland Sr. Hydroelectric GS	141	236	300	2017	Commissioning of the generating station began in February 2017 and the station is expected to be in-service in the spring of 2017, ahead of the originally planned schedule. See update below.
Sir Adam Beck Pump GS Reservoir Refurbishment	39	46	58	2017	The refurbishment was completed and the reservoir was returned to service in February 2017, ahead of the originally planned in-service date and below the approved budget. See update below.
Ranney Falls Hydroelectric GS	2	3	77	2019	Project design work was completed in 2016 and construction is expected to commence in 2017. See update below.
Nanticoke Solar Facility	1	1		2019	Project definition work is in progress and construction is planned to commence in the first half of 2018. See update below.
Deep Geologic Repository for L&ILW	9 [2]	195 [2]			OPG has completed the additional studies required by the Canadian Environmental Assessment Agency (CEAA) and the federal Minister of Environment and Climate Change and submitted this information in December 2016. See update below.

[1] The total project budget of $12.8 billion is for the refurbishment of all four units at the Darlington GS.
[2] Expenditures are charged against the Nuclear Liabilities.

Darlington Refurbishment

The Darlington generating units are forecast to be approaching their originally designed end-of-life. Refurbishment of the four generating units is expected to extend the operating life of the station by approximately 30 years. The Darlington Refurbishment project is a multi-phase program comprising the following five major sub-projects:

- **Retube and Feeder Replacement (RFR)**, which includes the removal and replacement of fuel channel assemblies and feeder tubes in each reactor
- **Turbines and Generators**, which consists of inspections and repairs of turbine generator sets and the replacement of analog control systems with digital control systems
- **De-fuelling and Fuel Handling**, which involves the de-fuelling of the reactors and the refurbishment of the fuel handling equipment
- **Steam Generators**, which includes mechanical cleaning, water lancing, and inspection and maintenance work on the generators
- **Balance of Plant**, which consists of work on smaller projects to replace or repair certain other station components.

In January 2016, the Government of Ontario's support for the Darlington Refurbishment project was affirmed through the Ontario Minister of Energy's announcement endorsing OPG's plan to refurbish the four Darlington units at a total project budget of $12.8 billion, including capitalized interest and escalation. The Province's announcement followed the approval of the project budget and schedule by OPG's Board of Directors in November 2015. The refurbishment of the last unit is scheduled to be completed by 2026. OPG's current operating licence for the Darlington GS spans most of the planned duration of the Darlington Refurbishment project, expiring in November 2025.

In 2016, the Darlington Refurbishment project transitioned from the planning phase to the execution phase, as OPG commenced the refurbishment of the first unit, Unit 2, in October 2016, as planned. The unit was taken offline on October 15, 2016. De-fuelling of the reactor, the first critical refurbishment activity undertaken once the unit is removed from service, was safely completed in January 2017, ahead of schedule, with a total of 480 fuel channels de-fuelled. Preparatory work in the reactor vault to support the removal of feeder tubes and fuel channel assemblies commenced immediately after de-fuelling was completed. The project is tracking on budget.

Once refurbished, Unit 2 is scheduled to be returned to service in the first quarter of 2020, at which time capital expenditures of approximately $4.8 billion are planned to be placed in service. This includes expenditures incurred during the definition and planning phase of the project. *Ontario Regulation 53/05* requires the OEB to accept the need for the Darlington Refurbishment project in light of Ontario's 2013 Long-Term Energy Plan (LTEP) and the related policy of the Province endorsing the need for nuclear refurbishment. It also requires the OEB to ensure that OPG recovers capital and non-capital costs and firm financial commitments in respect of the Darlington Refurbishment project, if the OEB is satisfied that the costs were prudently incurred and the firm financial commitments were prudently made.

A number of pre-requisite projects in support of the execution phase of the project, including construction of facilities, infrastructure upgrades and installation of safety enhancements have been completed, with the remaining projects tracking for completion within the overall refurbishment execution schedule.

All major contracts for the Darlington Refurbishment project that OPG expected to award were in place prior to proceeding with the Unit 2 refurbishment. This included the RFR execution phase contract awarded in January 2016 and valued at approximately $2.75 billion for work to be executed on all four units. All of the major contracts contain suspension and termination provisions.

Other key activities related to the project in 2016 included the following:

- Fabrication of the major reactor components including fuel channels and feeder tubes is in progress, with the first set of feeder tubes delivered in the fourth quarter of 2016. The remaining components have planned deliveries tracking in line with the project schedule.
- The specialized tooling for removal and replacement of feeder tubes and fuel channel assemblies in each reactor was delivered to OPG's reactor training and mock-up facility in the second quarter of 2016, as planned, and testing of the tooling has been completed.
- All 28 storage tanks have been installed in the Heavy Water Storage and Drum Handling Facility, which is intended to provide storage and processing capability for the removal of heavy water from the units during refurbishment, as well as for continued station operations.
- The RFR Island Support Annex was completed in February 2016. The facility houses RFR field preparatory, contractor management, and project oversight activities.

In addition to the de-fuelling of the Unit 2 reactor completed in January 2017, milestones for the Darlington Refurbishment project in 2017 include:

- Completion of reactor vault preparation activities to support RFR work.
- Continued refurbishment task rehearsals for the specialized tooling to be used for removal and replacement of feeder tubes and fuel channel assemblies at OPG's reactor training and mock-up facility.
- Removal of Unit 2 feeder tubes and commencement of the fuel channel removal series.
- Completion of the Third Emergency Power Generator and Containment Filtered Venting System safety enhancement projects, which were originally scheduled to be placed in-service in 2016. Remediation measures are in progress and OPG expects both projects to be placed in-service by the second quarter of 2017. These delays will not impact the overall Darlington Refurbishment project schedule, as neither of the two projects is on the critical path.
- Completion of the Re-tube Waste Processing Building and the Heavy Water Storage and Drum Handling Facility.
- Commencement of the major turbine generator overhaul and fuel handling power track replacement.
- Continued execution of work to support the requirements set out in the CNSC-approved IIP for the Darlington GS.

In addition to the execution of refurbishment activities for Unit 2, OPG has commenced planning for the refurbishment of the second unit, Unit 3, and is entering into associated commitments to procure major components that require long-lead times. As of December 31, 2016, $31 million has been invested in planning activities related to the refurbishment of the second unit. These planning activities are being undertaken in accordance with the refurbishment project schedule.

Peter Sutherland Sr. Hydroelectric GS

The project to construct the 28 MW Peter Sutherland Sr. hydroelectric GS is in the process of testing and commissioning the turbine and generator units, as well as operator training and document turnover. Work also continues on demobilization efforts, as well as site reclamation. Commissioning of the generating station began in February 2017 and the station is expected to be in service in the spring of 2017, well ahead of the originally planned schedule of the first half of 2018. The project's schedule was accelerated to take advantage of favourable weather conditions. The project is tracking within the approved budget of $300 million.

Sir Adam Beck Pump GS Reservoir Refurbishment

The Sir Adam Beck Pump GS refurbishment construction began in April 2016 and the 300-hectare reservoir was returned to service in February 2017 upon completion of the reservoir commissioning program. The Sir Adam Beck Pump GS facility allows OPG to pump and store water diverted from the Sir Adam Beck generating complex during

periods of low electricity demand to be used to generate up to 600 MW of electricity during subsequent periods of high electricity demand. The work on the project included installation of a partial new liner and construction of a grout curtain in the bedrock foundation of the reservoir dyke. The refurbishment is expected to add approximately 50 more years to the reservoir's life. The project was completed ahead of the originally planned in-service date of April 2017 and below the approved budget of $58 million.

Ranney Falls Hydroelectric GS

During 2016, OPG completed project design work for the construction of an additional 10 MW single-unit powerhouse on the existing Ranney Falls GS site. The new unit will replace an existing unit that reached its end of life in 2014. Capital expenditures for project definition work completed as of December 31, 2016 were $3 million. OPG plans to commence construction work in 2017, with an expected in-service date in the fourth quarter of 2019 and a budget of $77 million.

Nanticoke Solar Facility

The project to construct a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands is planned to commence in the first half of 2018. It is expected to be completed in the first quarter of 2019. Capital expenditures for project definition work completed as of December 31, 2016 were $1 million. For further details on the project, refer to the section, *Highlights* under the heading, *Recent Developments*.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG has proposed a deep geologic repository as the preferred solution for the safe long-term management of the L&ILW produced from the continued operation of OPG-owned nuclear generating stations. Agreement has been reached with local municipalities for OPG to develop the L&ILW Deep Geologic Repository (DGR) on lands adjacent to the WWMF in Kincardine, Ontario.

In 2012, the CNSC and the CEAA appointed a three-member Joint Review Panel (JRP) for OPG's proposed L&ILW DGR. The JRP examined the environmental effects of the proposed L&ILW DGR to meet the requirements of the *Canadian Environmental Assessment Act*. In May 2015, the JRP submitted its report and recommendations on the EA to the federal Minister of Environment. The report concluded that, given mitigation, there is unlikely to be significant environmental impact from the project and recommended that the Minister approve the EA. The report suggested that the project should be implemented expeditiously.

In August 2015, OPG responded to the CEAA's list of potential environmental conditions relating to the JRP report. In February 2016, the federal Minister of Environment and Climate Change requested additional information on certain aspects of the EA, including information related to alternate locations for the project and the impact on environmental effects if Canada's planned used fuel deep geologic repository being developed by the Nuclear Waste Management Organization (NWMO) were to be located in close proximity to OPG's proposed L&ILW DGR. OPG has completed the requested studies and submitted the requested information in December 2016, as planned. Following a review by the CEAA and a period of public comment, an EA Decision Statement by the Minister is expected by the fourth quarter of 2017. Based on the information submitted to the Minister, the L&ILW DGR Project at the WWMF site remains OPG's preferred solution for the safe long-term management of the L&ILW, based on a relative consideration of environmental effects, transportation risks, transportation and other project-related costs and uncertainties, and the absence of certainty of improved safety or environmental quality at an alternate location.

In 2013, OPG suspended design activities on the project pending receipt of a site preparation and construction licence. If the decision on the EA is positive, the licensing process will resume. Upon receipt of the site preparation and construction licence, OPG will complete detailed design and development of a project schedule and a budget. In parallel, OPG will continue its engagement with the Saugeen Ojibway Nations toward securing community support for the L&ILW DGR. The approval of OPG's Board of Directors also must be obtained in order to proceed with

construction. The in-service date of the L&ILW DGR is expected to be approximately six to seven years from the start of construction.

New Nuclear Units

The 2013 LTEP indicated that the Ontario Ministry of Energy would work with OPG to maintain the site preparation licence granted by the CNSC in relation to the potential construction of two new nuclear reactors at the Darlington site. As such, OPG has been undertaking activities required to support the CNSC Power Reactor Site Preparation Licence and the Darlington New Nuclear Project EA. The JRP Report on the EA concluded that the project was not likely to cause significant adverse environmental effects, given mitigation. In April 2016, the Supreme Court of Canada dismissed the application for leave to appeal filed by the parties that had challenged the Darlington New Nuclear Project EA through a judicial review, concluding the litigation on the matter. The CNSC site preparation licence expires in 2022.

Financial Strength

As a commercial enterprise, OPG's financial priority is to achieve a consistent level of strong financial performance that delivers an appropriate level of return on the Shareholder's investment and positions the Company for future growth. Inherent in this priority are three objectives:

- Increase revenue, reduce costs and achieve appropriate return
- Ensure availability of cost effective funding for operational needs, generation development projects and long-term obligations
- Pursue opportunities to expand the existing core business and capitalize on new growth paths.

Increase Revenue, Reduce Costs and Achieve Appropriate Return

In line with its commercial mandate, OPG is focused on increasing revenue and achieving an appropriate rate of return on the Shareholder's investment, while taking into account the impact on Ontario electricity customers.

In order to achieve the above objectives with respect to the regulated operations, OPG is focused on clearly demonstrating in its rate applications to the OEB that the costs required to operate and invest in the assets are reasonable and being prudently incurred, and should be fully recovered, and that the Shareholder's investment in these assets should earn an appropriate rate of return. OPG's existing base regulated prices, which came into effect in November 2014, are lower than requested by OPG based on its forecast costs. This has negatively affected OPG's ability to earn the OEB-prescribed rate of return on the Shareholder's investment in the regulated assets.

To improve the financial strength of the regulated operations going forward, OPG has been focused on providing appropriate, transparent evidence in support of its OEB rate requests, aligning organizational resources to support an effective rate application process, and continuing to identify opportunities for further efficiencies in the Company's cost structure. To date, OPG's focus on cost reduction and efficiency improvement initiatives has resulted in significant changes across the Company. This includes over $1 billion in cumulative savings realized since the beginning of 2011 from reductions in ongoing operations regular headcount. OPG's cost and productivity improvement efforts are discussed further in the section, *Improving Efficiency and Reducing Costs* under the heading, *Operational Excellence*.

In the second quarter of 2016, OPG filed a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. The OEB's decision on the application, including the effective date of approved new regulated prices, is expected in the second half of 2017. Consistent with the requirements of *Ontario Regulation 53/05*, OPG's application incorporates a nuclear rate smoothing proposal. The application seeks to ensure that nuclear regulated prices under the rate smoothing approach allow for sufficient cash flow to meet the Company's liquidity needs, support cost effective funding for the Darlington Refurbishment project and other expenditures, and maintain the Company's

investment grade credit rating, while taking into account both near-term and future impacts on customers. In addition, the application will further challenge and incentivize OPG to find additional cost reductions and efficiencies within its operations, as a result of greater de-coupling of regulated prices from costs and a longer rate-setting period under the OEB's incentive ratemaking framework. The application also seeks an increase in the deemed capital structure applied to the regulated rate base to 49 percent equity and 51 percent debt from 45 percent equity and 55 percent debt reflected in the existing regulated prices. If approved, this would improve OPG's return on Shareholder's investment. Further details on OPG's rate application can be found in the section, *Highlights* under the heading, *Recent Developments*.

For generation development projects that do not form a part of the assets regulated by the OEB, OPG's strategy has been to secure appropriate long-term revenue arrangements prior to proceeding with the project. In line with this strategy, most of OPG's non-regulated operating facilities and assets under construction are subject to ESAs or other long-term contracts with the IESO. Based on these agreements, OPG expects its non-regulated generation operations, reported under the Contracted Generation Portfolio segment, to continue to provide a generally stable level of earnings and cash flow going forward.

OPG's capital structure currently reflects lower levels of debt than the deemed capital structure reflected in the Company's existing or proposed regulated prices. OPG is evaluating strategies to enhance Shareholder returns by optimizing the Company's capital structure through better alignment with the deemed capital structure, taking into account the overall financial strength of the Company and the potential impact on the Company's investment grade credit rating.

Ensure Availability of Cost Effective Funding

OPG actively monitors its funding requirements and forecasts availability of funds to ensure that it can meet the Company's operational needs, project commitments and long-term obligations. OPG utilizes multiple sources of funds, including funds from operations, commercial paper, securitization of assets, letters of credit, credit facilities, long-term corporate debt, and private placement project financing. The Company's financing strategy leverages the strength of its balance sheet to obtain cost effective long-term corporate debt. OPG also accesses the capital markets for private placement project financing, secured by the assets of the project, where the characteristics of the project support such financing. Maintaining an investment grade credit rating is critical to OPG's ability to access cost effective financing.

In April 2016, DBRS Limited (DBRS) re-affirmed the long-term credit rating on OPG's debt at 'A (low)' and OPG's commercial paper rating at 'R-1 (low)'. All ratings from DBRS have a stable outlook. In July 2016, S&P Global Ratings (S&P) re-affirmed OPG's long-term credit rating at 'BBB+' with a stable outlook. S&P's commercial paper rating for OPG is 'A-1 (low)'.

OPG intends to continue to access the capital markets, where appropriate, to obtain cost effective financing for future generation development projects. The Company continues to evaluate arrangements that would appropriately support its financing needs and capital expenditure programs. OPG's liquidity and capital resources are discussed under the section, *Liquidity and Capital Resources.*

Pursue Business Growth Opportunities

OPG pursues commercially-based business growth opportunities through investments in its core generation portfolio, as well as emerging renewable energy project opportunities. OPG's growth strategy considers the Company's financial position and anticipated future changes in the generating fleet, including the eventual end of Pickering commercial operations. The growth strategy is also informed by industry, technological, environmental, social, and economic external factors. Growth opportunities are evaluated using financial and risk-based analyses as well as strategic considerations.

OPG's core business growth strategy focuses on the renewal and expansion of the Company's generation portfolio of nuclear, hydroelectric and thermal generating assets in Ontario, including the redevelopment and expansion of existing sites and potential new developments. The strategy leverages OPG's operating and project development expertise as well as the Company's existing diverse physical asset base. Acquisition opportunities are considered as they arise, taking into account operating synergies, strategic benefits, financial returns and risk profile. OPG's current major generation development projects and asset life extension initiatives are discussed in the section, *Core Business, Strategy, and Outlook* under the headings, *Operational Excellence* and *Project Excellence*.

OPG seeks to continue to expand beyond its core generation business through investments in innovation and emergent low-carbon technologies, including selective solar generation, energy storage, micro-grid, electric vehicle infrastructure and other development. OPG is also considering longer-term growth paths that include broader electricity sector opportunities, within and outside Ontario. Growth opportunities may be pursued in partnership with other commercial entities where appropriate synergies exist and are aligned with OPG's business objectives.

In March 2016, Nanticoke Solar LP was selected, through the first phase of the IESO's LRP program, to develop a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands. The partnership and the IESO executed a 20-year LRP contract in March 2016, which formalized the terms and conditions for the development and operation of the new solar facility. In September 2016, the Government of Ontario suspended the second phase of the LRP program, which does not impact the project.

From October 2016 to December 2016, the Government of Ontario conducted a consultation process to update its LTEP. OPG made a formal submission as part of the consultation as it relates to OPG's core generation business and growth opportunities. The Ontario Ministry of Energy has indicated that the development of the updated LTEP, scheduled to be published in 2017, will balance the principles of affordability, reliability, clean energy, community and Indigenous engagement, as well as conservation and demand management. OPG's business growth opportunities may be affected by the results of the 2017 LTEP.

Social Licence

As the largest electricity generator in Ontario with diverse operations across the province, OPG holds itself accountable to the public and its employees, and continues to focus on maintaining public trust. OPG is committed to maintaining high standards of public safety and corporate citizenship, including environmental stewardship, transparency, community engagement, and Indigenous relations. OPG's commitment to safety is discussed in the section, *Core Business, Strategy, and Outlook* under the heading, *Workplace and Public Safety*.

OPG is focused on building long-term, mutually beneficial working relationships with Indigenous communities, businesses and organizations across Ontario, and continues to support procurement, employment and educational opportunities with its Indigenous community partners. The Company seeks to establish these relationships based on a foundation of respect for the languages, customs, and political, social and cultural organizations of the Indigenous communities. OPG's commitment in this area includes pursuing generation-related development partnerships on the basis of long-term commercial arrangements, and other joint projects. Recent examples of such partnerships include the construction of the Peter Sutherland Sr. GS in partnership with the Taykwa Tagamou Nation, the development of the Nanticoke solar facility in partnership with the Six Nations of the Grand River, and two shoreline remediation projects completed in 2016. The Whitesand First Nation, working closely with OPG, completed a project to remediate nearly two kilometers of shoreline in 2016, while the Long Lake #58 First Nation undertook the management of a five-year shoreline remediation project. OPG also has been engaging proactively with Indigenous communities regarding the Company's nuclear operations, including both regularly scheduled meetings and an outreach effort in connection with OPG's proposed L&ILW DGR and the re-licensing of the PWMF and the WWMF. In November 2016, OPG was recognized for its ongoing commitment to engaging local Indigenous communities with the CEA's 2016 Sustainable Electricity award for Leadership in External Collaboration and Partnerships.

OPG is committed to being an open, transparent, and accountable company. With operations across Ontario, OPG works to maintain public trust with stakeholders by engaging site communities, sharing information, and being transparent about performance. In addition, OPG's operations are subject to extensive regulatory oversight, with public participation, by the CNSC, the OEB, and other bodies.

As part of its commitment to environmental sustainability, OPG works with community partners to support regional ecosystems and biodiversity. In 2016, OPG continued efforts to protect and restore habitat, promote biodiversity education and awareness, and help the recovery of species at risk. In addition, OPG contributes to the well-being of its host communities through the Company's Corporate Citizenship Program (CCP), which supports charitable and non-profit grassroots initiatives in the areas of environment, education, and community involvement, including support for Indigenous initiatives. In 2016, OPG's CCP provided support to over 850 initiatives, of which 87 were Indigenous.

Further details regarding OPG's commitment to sustainable development, including information regarding the Company's environmental, social and economic performance and initiatives, are provided in OPG's 2015 Sustainability Report available on the Company's website at www.opg.com.

Outlook

The financial performance of OPG's regulated operations is driven, in large part, by the outcome of applications for regulated prices to the OEB. The existing base regulated prices were established by the OEB effective November 1, 2014 based on a forecast of costs and production for the regulated facilities for the 2014 to 2015 period. The future outcome of OPG's current application for new base regulated prices, submitted to the OEB in May 2016, is expected to provide substantial price certainty for the regulated business for the 2017 to 2021 period.

In its May 2016 application, OPG has requested January 1, 2017 as the effective date for the new regulated prices. In December 2016, the OEB issued an order declaring the existing base regulated prices interim, which preserves the OEB's ability to make the new regulated prices effective as early as January 1, 2017. The OEB's decision on the application, including the effective date of the new regulated prices, is expected in the second half of 2017. Considering the timing of OPG's application and OPG's procedural adherence to date, the Company believes that the OEB could make the new regulated prices effective January 1, 2017.

Until the OEB's decision on OPG's application is issued, the continuation of existing regulated prices is expected to contribute to lower income, particularly from the Regulated – Nuclear Generation segment, and lower ROE Excluding AOCI during 2017, compared to 2016. In large part, this is due to the expected year-over-year reduction in nuclear electricity generation resulting from the Unit 2 refurbishment outage at the Darlington GS, given that the existing nuclear regulated prices were determined based on a production forecast that reflected the operation of all four units at the station. As such, the OEB's decision on the effective date of the new regulated prices, as well as the timing of the decision issuance, could have a significant impact on OPG's financial results during 2017. The application for new regulated prices is further discussed in the section, *Highlights* under the heading, *Recent Developments*.

Nuclear base regulated prices resulting from OPG's current application will be subject to a rate smoothing mechanism that defers collection of a portion of OEB-approved revenues. As expected, combined with the expiry of rate riders in effect to the end of 2016 and a year-over-year reduction in nuclear generation due to the Darlington Unit 2 refurbishment, this will result in lower cash flow from operations and a lower FFO Adjusted Interest Coverage ratio in 2017, compared to 2016. OPG expects to continue to have the necessary financial capacity and sufficient access to cost effective financing sources to continue to fund its capital requirements and other disbursements. In addition, lower nuclear generation due to the Darlington refurbishment outages will negatively impact the Enterprise TGC metric for the duration of the refurbishment project. Variability in sustaining capital investment expenditures, including major sustaining projects for the hydroelectric operations, also will impact the Enterprise TGC.

Several OEB-authorized regulatory variance and deferral accounts currently in place contribute to reducing the relative variability of the Company's income and ROE Excluding AOCI. Among others, these variance accounts

include those related to the revenue impact of variability in water flows and forgone production due to SBG conditions at the regulated hydroelectric stations. There is no variance or deferral account in place related to the impact of generation performance of the nuclear stations on revenue from base regulated prices. Considering the impact of the variance and deferral accounts, the Regulated – Hydroelectric segment generally is expected to produce overall more predictable earnings compared to the Regulated – Nuclear Generation segment. OPG continues to operate and maintain its nuclear facilities with a view to optimize their performance and availability, while focusing on improving the overall reliability and predictability of the fleet.

Electricity generated from most of OPG's non-regulated assets is subject to ESAs with the IESO. Based on these agreements, OPG expects the Contracted Generation Portfolio segment to continue to contribute a generally stable level of earnings and cash flow from operations going forward.

OPG's forecast capital expenditures for 2017 are approximately $1.8 billion. This includes amounts for the Darlington Refurbishment project, hydroelectric development projects including the completion of the Peter Sutherland Sr. GS and the expansion of the Ranney Falls GS, and sustaining capital investments across the generating fleet. OPG's major development projects are discussed in the *Project Excellence* section.

In addition to the operating and financial performance of the electricity generation business, OPG's results are affected by the earnings on the Nuclear Segregated Funds, which are reported in the Regulated – Nuclear Waste Management segment. While the Nuclear Segregated Funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, the rates of return earned in a given period can be subject to various external factors including financial market conditions and changes in the Ontario CPI. In the short term, these factors can be volatile and cause fluctuations in the Company's income. This volatility has been partially mitigated by the impact of the Bruce Lease Net Revenues Variance Account. OPG's income remains exposed to rate of return risk for the portion of the Nuclear Segregated Funds related to the Pickering and Darlington nuclear generating stations under the current OEB-approved cost recovery methodology for the Nuclear Liabilities.

As OPG limits the amount of Nuclear Segregated Funds assets reported on the balance sheet to the present value of the life cycle funding liabilities per the most recently approved ONFA reference plan, the volatility of earnings on the Nuclear Segregated Funds reflected in net income is reduced when the Nuclear Segregated Funds are in a fully funded or overfunded position. As at December 31, 2016, the Decommissioning Segregated Fund was overfunded by 21 percent, and the Used Fuel Segregated Fund was marginally overfunded, by less than one percent, based on the 2017 ONFA Reference Plan. Variability in asset performance due to volatility inherent in financial markets and changes in Ontario CPI may result in either or both funds becoming underfunded in the future. The 2017 ONFA Reference Plan is discussed in the section, *Highlights* under the heading, *Recent Developments.* The accounting for the Nuclear Segregated Funds is discussed in the section, *Critical Accounting Policies and Estimates* under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

KEY OPERATING AND FINANCIAL PERFORMANCE INDICATORS

OPG evaluates the performance of its generating stations using a number of key indicators. Key operating performance indicators aligned with corporate strategic imperatives are measures of production reliability, cost effectiveness, environmental performance, and safety performance. Certain of the measures used vary depending on the generating technology. The key financial performance indicators evaluate the Company's financial performance at the enterprise level.

In 2016, OPG adopted Enterprise TGC per MWh as an enterprise-wide measure of operational cost effectiveness. Concurrently, OPG adopted Hydroelectric TGC per MWh as a measure of cost performance of OPG's hydroelectric generating assets and no longer reports Hydroelectric OM&A expense per MWh. The new performance measures,

together with Nuclear TGC per MWh, provide the Company with a single, consistent method of evaluating cost effectiveness across the organization.

Enterprise TGC, Nuclear TGC, Hydroelectric TGC, ROE Excluding AOCI, and FFO Adjusted Interest Coverage ratio discussed below are not measurements in accordance with US GAAP. They should not be considered as alternative measures to net income or any other measure of performance under US GAAP. However, OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the Company's strategic imperatives and related objectives. The definition and calculation of Enterprise TGC per MWh, Nuclear TGC per MWh, Hydroelectric TGC per MWh, ROE Excluding AOCI, and FFO Adjusted Interest Coverage are found in the section, *Supplementary Non-GAAP Financial Measures*.

Enterprise Total Generating Cost per MWh

Enterprise TGC per MWh is used to measure OPG's overall organizational cost performance. Enterprise TGC per MWh is defined as OM&A expenses (excluding the Darlington Refurbishment project and other generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's electricity generation business), fuel expense for OPG-operated stations including hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures (excluding the Darlington Refurbishment project and other generation development projects) incurred during the period, divided by total electricity generation from OPG-operated generating stations plus electricity generation forgone due to SBG conditions during the period.

Nuclear Total Generating Cost per MWh

Nuclear TGC per MWh is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding the Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding the Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation for the period.

Hydroelectric Total Generating Cost per MWh

Hydroelectric TGC per MWh is used to measure the cost performance of OPG's hydroelectric generating assets. Hydroelectric TGC per MWh is defined as OM&A expenses of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segments (excluding generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the hydroelectric electricity generation business), hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding expenditures related to the Peter Sutherland Sr. GS project and other hydroelectric generation development projects) incurred during the period, divided by total hydroelectric electricity generation plus hydroelectric electricity generation forgone due to SBG conditions during the period. OPG reports hydroelectric gross revenue charge and water rental payments as fuel expense.

Nuclear Unit Capability Factor

OPG's nuclear stations are baseload facilities that are not designed for fluctuating production levels to meet peaking demand. The nuclear Unit Capability Factor is a key measure of nuclear station performance. It measures the amount of energy that the unit(s) generated over a period of time, adjusted for externally imposed constraints such as transmission or demand limitations, as a percentage of the amount of energy that would have been produced over the same period had the unit(s) produced maximum generation. Capability factors are primarily affected by planned

and unplanned outages. By industry definition, capability factors exclude production losses beyond plant management's control, such as grid-related unavailability. The nuclear Unit Capability Factor also excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS is excluded from the measure effective October 15, 2016, when the unit was taken offline as part of the Darlington Refurbishment project.

Hydroelectric Availability

OPG's hydroelectric stations operate as baseload, intermediate, or peaking stations. Hydroelectric Availability is a measure of the reliability of a hydroelectric generating unit. It represents the percentage of time the generating unit is capable of providing service, whether or not it is actually generating electricity, compared to the total time for the respective period.

Thermal Equivalent Forced Outage Rate

Equivalent Forced Outage Rate (EFOR) is an index of the reliability of a generating unit at OPG's thermal stations. It is measured by the ratio of time a generating unit is forced out of service by unplanned events, including any forced deratings, compared to the amount of time the generating unit was available to operate.

Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with its objective to deliver value to the Shareholder. ROE Excluding AOCI is defined as net income attributable to the Shareholder for the period divided by average equity attributable to the Shareholder excluding AOCI for that period, and is measured over a period of 12 months.

Funds from Operations Adjusted Interest Coverage

The FFO Adjusted Interest Coverage ratio is an indicator of OPG's ability to meet interest obligations from operating cash flow and is consistent with the Company's objective of ensuring availability of cost effective funding. The FFO Adjusted Interest Coverage ratio is defined as FFO before interest divided by adjusted interest expense, and is measured over a period of 12 months.

Other Key Indicators

In addition to production reliability, cost effectiveness, and financial performance indicators, OPG has identified certain environmental and safety performance measures. These measures are discussed under the section, *Core Business, Strategy, and Outlook*.

BUSINESS SEGMENTS

OPG has the following five reportable business segments:

- Regulated – Nuclear Generation
- Regulated – Nuclear Waste Management
- Regulated – Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation.

Regulated – Nuclear Generation Segment

The Regulated – Nuclear Generation business segment operates in Ontario, generating and selling electricity from the Pickering GS and the Darlington GS, both owned and operated by OPG. The business segment also includes

revenue under the terms of a long-term lease arrangement and related agreements with Bruce Power related to the Bruce nuclear generating stations. This revenue includes lease revenue, fees for nuclear waste management, and revenue from heavy water sales and detritiation services. The segment also earns revenue from isotope sales and ancillary services supplied by OPG-operated nuclear stations. Ancillary revenues are earned through voltage control and reactive support. Revenues under the agreements with Bruce Power, including a portion of heavy water sales, and from isotope sales and ancillary services are included by the OEB in the determination of the regulated prices for production from OPG's nuclear facilities, which has had the effect of reducing these prices.

Regulated – Nuclear Waste Management Segment

OPG's Regulated – Nuclear Waste Management segment reports the results of the Company's operations associated with the management of nuclear used fuel and L&ILW, the decommissioning of OPG's nuclear generating stations including the stations on lease to Bruce Power and other facilities, the management of the Nuclear Segregated Funds, and related activities including the inspection and maintenance of the waste storage facilities. Accordingly, accretion expense, which is the increase in the Nuclear Liabilities carried on the consolidated balance sheets in present value terms due to the passage of time, and earnings from the Nuclear Segregated Funds are reported under this segment.

As the nuclear generating stations operate over time, OPG incurs incremental costs related to used nuclear fuel L&ILW, which increase the Nuclear Liabilities. OPG charges these incremental costs to current operations in the Regulated – Nuclear Generation segment to reflect the cost of producing energy from the Pickering and Darlington nuclear generating stations and earning revenue under the Bruce Power lease arrangement and related agreements. Since the incremental costs increase the Nuclear Liabilities reported in the Regulated – Nuclear Waste Management segment, OPG records an inter-segment charge between the Regulated – Nuclear Generation and the Regulated – Nuclear Waste Management segments. The impact of the inter-segment charge is eliminated in the consolidated statements of income and balance sheets.

The Regulated – Nuclear Waste Management segment is considered rate regulated because OPG's costs associated with the Nuclear Liabilities have been included in the determination of regulated prices for production from the Pickering and Darlington nuclear generating stations, in accordance with the methodology applied by the OEB since its 2008 decision on OPG's first application for regulated prices.

Regulated – Hydroelectric Segment

OPG's Regulated – Hydroelectric business segment operates in Ontario, generating and selling electricity from most of the Company's hydroelectric generating stations. The business segment includes the results of the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, and the R.H. Saunders GS, all of which were prescribed for rate regulation prior to 2014, and the 48 hydroelectric stations prescribed for rate regulation effective in 2014.

In addition, the business segment includes ancillary and other revenues from OPG's regulated hydroelectric stations. Ancillary revenues are earned through offering available generating capacity as operating reserve and through the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services. These ancillary revenues and other revenues are included by the OEB in the determination of the regulated prices for production from OPG's prescribed hydroelectric facilities, which has had the effect of reducing these prices.

Contracted Generation Portfolio Segment

The Contracted Generation Portfolio business segment operates in Ontario, generating and selling electricity from the Company's generating stations that are not prescribed for rate regulation. The segment primarily includes generating facilities that are under an ESA with the IESO or other long-term contracts.

The Contracted Generation Portfolio segment also includes OPG's share of equity income from its 50 percent ownership interests in the PEC and Brighton Beach stations. Brighton Beach operates under an energy conversion agreement between Brighton Beach and Shell Energy North America (Canada) Inc., and the PEC station is operated under the terms of an Accelerated Clean Energy Supply contract with the IESO. OPG's share of the in-service generating capacity and generation volume from its interests in the PEC and Brighton Beach stations are reported in this segment.

The business segment also includes ancillary revenues and other revenues from the stations included in the segment, which are earned through offering available generating capacity as operating reserve, and the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services.

Services, Trading, and Other Non-Generation Segment

The Services, Trading, and Other Non-Generation segment is a non-generation segment that is not subject to rate regulation. It includes the revenue and expenses related to OPG's trading and other non-hedging activities. As part of trading activities, OPG transacts with counterparties in Ontario and neighbouring energy markets in predominantly short-term trading activities of typically one year or less in duration. These activities relate to electricity that is purchased and sold at the Ontario border, financial energy trades, financial risk management energy product revenues, and sales of energy-related products. In addition, OPG has a wholly owned trading subsidiary that transacts solely in the United States (US) market. The results of this subsidiary are reported in this segment. All contracts that are not designated as hedges are recorded as assets or liabilities at fair value on the consolidated balance sheets, with changes in fair value recorded in the revenue of this segment. In addition, the segment includes revenue from real estate rentals and non-regulated services, non-regulated business development activities, and, prior to OPG's decisions to decommission the stations, preservation costs related to the Lambton GS and Nanticoke GS sites.

DISCUSSION OF OPERATING RESULTS BY BUSINESS SEGMENT

Regulated – Nuclear Generation Segment

(millions of dollars)	**2016**	**2015**
Revenue	**3,481**	3,245
Fuel expense	**315**	301
Gross margin	**3,166**	2,944
Operations, maintenance and administration	**2,210**	2,196
Depreciation and amortization	**925**	717
Property taxes	**26**	26
Income before other losses, interest, and income taxes	**5**	5
Other losses	**1**	3
Income before interest and income taxes	**4**	2

Income before interest and income taxes from the segment increased to $4 million in 2016, compared to $2 million in 2015. The improvement in earnings of $2 million was primarily due to higher electricity generation in 2016, compared to 2015, which increased revenue from the nuclear base regulated price by approximately $65 million. The increase in revenue was largely offset by higher OM&A expenses, higher fuel expense, and higher depreciation and amortization expenses, excluding amortization expense related to regulatory account balances, in 2016, compared to 2015.

Higher nuclear production of 1.1 TWh in 2016, compared to 2015, was primarily due to the planned four-unit VBO in 2015 and a decrease in the number of unplanned outages at the Darlington GS in 2016. This was partially offset by

the impact of the increased number of unplanned outage days at the Pickering GS in 2016, and the removal from service of Unit 2 of the Darlington GS in October 2016 as part of the Darlington Refurbishment project.

The increase in OM&A expenses of $14 million in 2016 reflected higher expenses related to materials and supplies obsolescence recognized in 2016. The increase in fuel expense of $14 million reflected higher uranium prices and higher generation in 2016. Depreciation and amortization expenses, excluding amortization expense related to regulatory account balances, increased by $12 million primarily due to new assets in service in 2016.

A decrease in non-electricity generation revenue of $21 million in 2016, compared to 2015, also partially offset the increase in segment earnings. The lower non-electricity generation revenue was mainly attributable to lower detritiation services revenue and lower isotope sales in 2016 and an insurance recovery recognized in 2015.

An OEB-authorized rate rider of $10.84/MWh effective from July 1, 2015 to the end of 2016 contributed to the increase in segment revenue in 2016, compared to 2015. In the first half of 2015, OPG received a rate rider of $1.33/MWh. As rate riders allow for recovery of approved balances in OEB-authorized regulatory variance and deferral accounts, this increase in revenue was largely offset by an increase in amortization expense related to regulatory account balances.

The Unit Capability Factors for the Darlington GS and Pickering GS for 2016 and 2015 were as follows:

	2016	2015
Unit Capability Factor *(%)* [1]		
Darlington GS	**89.5**	76.9
Pickering GS	**75.2**	79.4

[1] The nuclear Unit Capability Factor excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS was excluded from the measure effective October 15, 2016, when the unit was taken offline for refurbishment.

The Unit Capability Factor at the Darlington GS increased in 2016, compared to 2015, primarily due to the four-unit VBO completed during 2015. A lower number of unplanned outage days at the Darlington GS during 2016, compared to 2015, also contributed to the improvement in the Unit Capability Factor.

The decrease in the Unit Capability Factor at the Pickering GS in 2016, compared to 2015, was primarily due to a higher number of unplanned outage days at the station in 2016, as a result of emergent discovery work during planned outages.

The definition of the nuclear Unit Capability Factor is found in the section, *Key Operating and Financial Performance Indicators.*

Regulated – Nuclear Waste Management Segment

	2016	2015
Revenue	**138**	122
Operations, maintenance and administration	**146**	132
Accretion on nuclear fixed asset removal and nuclear waste management liabilities	**912**	880
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(746)**	(704)
Loss before interest and income taxes	**(174)**	(186)

Earnings from the segment improved by $12 million in 2016 compared to 2015. The improvement was primarily due to higher earnings from the Nuclear Segregated Funds, partially offset by an increase in accretion expense on the Nuclear Liabilities.

Pursuant to the ONFA, the guaranteed annual rate of return for the initial 2.23 million used fuel bundles of the Used Fuel Segregated Fund is set at 3.25 percent plus the change in the Ontario CPI, as defined by the ONFA. The increase in Ontario CPI was the primary reason for the increase in the Used Fuel Segregated Fund earnings. The increase in Nuclear Segregated Funds earnings was partially offset by an accounting adjustment recognized in the fourth quarter of 2016 to limit the fund asset values recorded in OPG's consolidated financial statements to the lower underlying funding obligations reflected in the 2017 ONFA Reference Plan. The 2017 ONFA Reference Plan was approved by the Province in December 2016, and is discussed in the section, *Highlights* under the heading, *Recent Developments*. The accounting for the Nuclear Segregated Funds is discussed in the *Critical Accounting Policies and Estimates* section under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*. The Nuclear Segregated Funds earnings are reported net of the impact of the Bruce Lease Net Revenue Variance Account.

The higher accretion expense on the Nuclear Liabilities during 2016, compared to 2015, reflected an upward adjustment in the liabilities recognized in December 2015 related to the revised accounting assumptions for the estimated useful lives of OPG's nuclear generating stations. The increased accretion expense was partially offset by the impact of the Bruce Lease Net Revenues Variance Account. The changes in the estimated useful lives of the nuclear stations and the related adjustment to the Nuclear Liabilities are discussed further in the section, *Balance Sheet Highlights* under the heading, *Impact Resulting from Changes in Station End-of-Life Dates Deferral Account*.

Regulated – Hydroelectric Segment

(millions of dollars)	**2016**	**2015**
Revenue [1]	**1,527**	1,619
Fuel expense	**353**	345
Gross margin	**1,174**	1,274
Operations, maintenance and administration	**325**	340
Depreciation and amortization	**225**	282
Property tax	**1**	1
Income before other (gains) losses, interest and income taxes	**623**	651
Other (gains) losses	**(19)**	3
Income before interest and income taxes	**642**	648

[1] During 2016 and 2015, the Regulated – Hydroelectric segment revenue included incentive payments of $14 million and $26 million, respectively, related to the OEB-approved hydroelectric incentive mechanism. The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers.

The decrease in income before interest and income taxes of $6 million in 2016, compared to 2015, was primarily due to lower hydroelectric incentive mechanism payments and the income impact of OEB-approved variance accounts. The lower payments under the hydroelectric incentive mechanism were primarily due to the reservoir refurbishment outage at the Sir Adam Beck Pump GS during 2016. The decrease in segment income was partially offset by a gain of $22 million recognized during the first quarter of 2016 to reflect the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to the Niagara Tunnel project expenditures, in response to OPG's December 2014 motion. The decrease in segment income also was partially offset by a year-over-year decrease in OM&A expenses, primarily due to higher costs incurred in 2015 for shoreline remediation work.

The decrease in segment revenues due to the lower OEB-authorized rate rider in 2016, compared to 2015, was largely offset by a corresponding decrease in amortization expense related to regulatory account balances.

The Hydroelectric Availability for the stations included in the Regulated – Hydroelectric segment was as follows:

	2016	2015
Hydroelectric Availability *(%)*	**89.0**	91.2

The Hydroelectric Availability decreased during 2016, compared to 2015, primarily due to the planned reservoir refurbishment project at the Sir Adam Beck Pump GS. The project was completed in February 2017, as discussed in the section, *Highlights* under the heading, *Recent Developments*.

The definition of Hydroelectric Availability is found in the section, *Key Operating and Financial Performance Indicators*.

Contracted Generation Portfolio Segment

(millions of dollars)	2016	2015
Revenue	**573**	535
Fuel expense	**58**	39
Gross margin	**515**	496
Operations, maintenance and administration	**178**	185
Depreciation and amortization	**75**	72
Accretion on fixed asset removal liabilities	**9**	8
Property taxes	**7**	7
Income from investments subject to significant influence	**(37)**	(39)
Income before other losses, interest, and income taxes	**283**	263
Other losses	**1**	1
Income before interest and income taxes	**282**	262

Income before interest and income taxes increased by $20 million during 2016, compared to 2015. The increase primarily resulted from the higher gross margin due to increased revenues from the Lower Mattagami River generating stations, the Lennox GS, and the Atikokan GS. Higher revenue from the Lennox GS was primarily due to increased market demand. The increase in revenue from the Atikokan GS reflected the support provided to the electricity system in northwestern Ontario as a result of maintenance outage at a local transformer station from late July 2016 to early September 2016. The year-over-year increase in segment revenue also was due to a provision made in 2015 related to an IESO audit.

The Hydroelectric Availability and the Thermal EFOR for the Contracted Generation Portfolio segment were as follows:

	2016	2015
Hydroelectric Availability *(%)*	**77.3**	88.6
Thermal EFOR *(%)*	**1.6**	11.2

Lower Hydroelectric Availability during 2016, compared to 2015, was primarily due to a higher number of planned outage days at the Kipling and Harmon generating stations on the Lower Mattagami River. During 2016, headgate replacements were made at certain units of the Kipling GS and Harmon GS. In addition, a runner upgrade and rehabilitation work was completed at Unit 2 of the Harmon GS. The lower thermal EFOR in 2016, compared to 2015, was primarily due to an outage in 2015 to perform repair work at the Lennox GS.

The definitions of Hydroelectric Availability and Thermal EFOR are found in the section, *Key Operating and Financial Performance Indicators*.

Services, Trading, and Other Non-Generation Segment

(millions of dollars)	2016	2015
Revenue	**68**	73
Fuel expense	**1**	2
Gross margin	**67**	71
Operations, maintenance and administration	**22**	48
Depreciation and amortization	**32**	29
Accretion on fixed asset removal liabilities	**8**	7
Property taxes	**12**	11
Restructuring	**6**	6
Loss before other losses, interest, and income taxes	**(13)**	(30)
Other losses	**-**	7
Loss before interest and income taxes	**(13)**	(37)

Segment earnings improved by $24 million in 2016 compared to 2015. The losses incurred by the segment in 2015 and 2016 largely reflected the costs associated with the Nanticoke and Lambton generating stations prior to OPG's decisions in 2015 and November 2016, respectively, to proceed with the stations' decommissioning. These losses were partially offset by revenues from OPG's electricity trading activities.

The improvement in earnings in 2016 primarily reflected higher OM&A expenses in 2015, including those incurred related to the Nanticoke GS prior to OPG's decision to proceed with the station's decommissioning, and a provision made in 2015 related to an IESO audit. The year-over-year decrease in OM&A expenses also reflected reduced work programs at the Lambton GS during 2016 due to lower staffing levels used to preserve the station. The preservation activities were discontinued after the announcement that the station will be decommissioned. Expenditures incurred in connection with decommissioning activities for the Nanticoke and Lambton generating stations are charged against a previously established decommissioning provision.

During each of 2016 and 2015, OPG recorded a charge against earnings to adjust the scrap value estimates for the Lambton GS. In 2016, this adjustment to other losses was offset by dividend income earned from OPG's investment in Hydro One shares, which contributed to the year-over-year improvement in earnings.

LIQUIDITY AND CAPITAL RESOURCES

OPG's primary sources of liquidity and capital are funds generated from operations, bank financing, credit facilities provided by the Ontario Electricity Financial Corporation (OEFC), long-term corporate debt, and capital market financing. These sources are used for multiple purposes including: to invest in plants and technologies; to undertake major projects; to fund long-term obligations such as contributions to the pension fund and the Nuclear Segregated Funds; to make payments under the OPEB plans; to fund expenditures on Nuclear Liabilities not eligible for reimbursement from the Nuclear Segregated Funds; and to service and repay long-term debt.

Changes in cash and cash equivalents for 2016 and 2015 were as follows:

(millions of dollars)	**2016**	**2015**
Cash and cash equivalents, beginning of period	**464**	610
Cash flow provided by operating activities	**1,705**	1,465
Cash flow used in investing activities	**(1,807)**	(1,553)
Cash flow used in financing activities	**(176)**	(58)
Net decrease	**(278)**	(146)
Cash and cash equivalents, end of period	**186**	464

For a discussion regarding cash flow provided by operating activities and the FFO Adjusted Interest Coverage ratio, refer to the details in the section, *Highlights* under the heading, *Overview of Results*.

Investing Activities

Electricity generation is a capital-intensive business. It requires continued investment in plants and technologies to maintain and improve operating performance including asset reliability, safety and environmental performance, to increase generating capacity of existing stations, and to invest in the development of new generating stations, emerging technologies and other business growth opportunities.

Cash flow used in investing activities in 2016 was $1,807 million, compared to $1,553 million in 2015. The increase was primarily due to higher expenditures on the Darlington Refurbishment project as it transitioned to execution phase, and the acquisition of nine million common shares of Hydro One in April 2016. The higher cash flow used in investing activities in 2016, compared to 2015, was partially offset by the investment of proceeds from a long-term debt issuance in support of the Peter Sutherland Sr. GS project into a structured deposit note in 2015 and the subsequent maturity of this investment on staggered dates throughout 2016. The final maturity date of the deposit note is in April 2017. The acquisition of the Hydro One shares is discussed in the section, *Highlights* under the heading, *Recent Developments*, as well as in Note 3 of the Company's 2016 audited consolidated financial statements.

Financing Activities

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2016, OPG renewed and extended the expiry date of both tranches from May 2020 to May 2021. As at December 31, 2016, there were no outstanding borrowings under the bank credit facility.

As at December 31, 2016, OPG also maintained $25 million of short-term, uncommitted overdraft facilities, and a further $460 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at December 31, 2016, a total of $386 million of Letters of Credit had been issued under these facilities. This included $349 million for the supplementary pension plans, $36 million for general corporate purposes, and $1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust. The maximum amount of co-ownership interest that can be sold under this agreement is $150 million. In October 2016, the expiry date of the agreement was extended from November 30, 2016 to November 30, 2018. As at December 31, 2016, no borrowings were issued under this agreement and there were Letters of Credit outstanding under this agreement of $150 million, which were issued in support of OPG's supplementary pension plans.

As at December 31, 2016, the Lower Mattagami Energy Limited Partnership (LME) maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. As at December 31, 2016, there was no external commercial paper outstanding under LME's commercial paper program. There were also no amounts outstanding under LME's bank credit facility as at December 31, 2016. In October 2016, LME issued senior notes totalling $220 million maturing in October 2026. The effective interest rate and coupon interest rate of these notes were 2.40 percent and 2.31 percent, respectively.

In December 2014, OPG entered into an $800 million general corporate credit facility with the OEFC in support of its financing requirements for 2015 and 2016. As of December 31, 2016, there were outstanding long-term borrowings of $100 million under this credit facility. The balance of the credit facility expired on December 31, 2016. In June 2016, OPG entered into a $700 million general corporate credit facility agreement with the OEFC, which expires on December 31, 2017. There were no outstanding borrowings under this credit facility as of December 31, 2016.

As at December 31, 2016, OPG's long-term debt outstanding was $5,534 million, including $1,103 million due within one year.

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes was 4.12 percent.

OPG continues to evaluate arrangements that would appropriately support the Company's financing needs and capital expenditure programs.

Contractual and Commercial Commitments

OPG's contractual obligations and commercial commitments as at December 31, 2016, are as follows:

(millions of dollars)	2017	2018	2019	2020	2021	Thereafter	Total
Fuel supply agreements	186	169	96	76	61	102	690
Contributions to the OPG registered pension plan [1]	248	251	-	-	-	-	499
Long-term debt repayment	1,103	398	368	663	413	2,589	5,534
Interest on long-term debt	252	196	177	155	125	2,241	3,146
Commitments related to Darlington Refurbishment project [2]	473	-	-	-	-	-	473
Commitments related to Peter Sutherland Sr. GS project	46	-	-	-	-	-	46
Operating licences	43	37	23	24	28	114	269
Operating lease obligations [3]	24	27	25	25	23	92	216
Unconditional purchase obligations	65	58	57	55	4	-	239
Accounts payable and accrued charges	916	-	-	-	-	18	934
Other	52	6	1	2	1	65	127
Total	3,408	1,142	747	1,000	655	5,221	12,173

[1] The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2016, filed with the Financial Services Commission of Ontario in September 2016. The next actuarial valuation of the OPG registered pension plan must have an effective date no later than January 1, 2019. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2018 are excluded due to significant variability in the assumptions required to project the timing of future cash flows. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time.

[2] Represents estimated currently committed costs to close the project, including accruals for completed work, demobilization of project staff and cancellation of existing contracts and material orders.

[3] Includes office lease commitments subsequent to the closing of the sale of the Company's head office premises expected in the second quarter of 2017.

Other Commitments

Collective Agreements

As of December 31, 2016, OPG had approximately 9,270 regular employees. Most of OPG's regular employees are represented by two unions:

- **The PWU** – This union represents approximately 5,070 OPG employees or approximately 55 percent of OPG's regular workforce as at December 31, 2016. Union membership includes operators, technicians, skilled trades, clerical, and security personnel. The current collective agreement between OPG and the PWU has a three-year term, expiring on March 31, 2018.
- **The Society** – This union represents approximately 3,140 OPG employees or approximately 34 percent of OPG's regular workforce as at December 31, 2016. Union membership includes supervisors, professional engineers, scientists, and other professionals. The current collective agreement between OPG and The Society has a three-year term, expiring on December 31, 2018.

In addition to the regular workforce, construction work is performed through 19 craft unions with established bargaining rights at OPG facilities. These bargaining rights are established either through the Electrical Power Systems Construction Association (EPSCA) or directly with OPG. Collective agreements between the Company and its construction unions are negotiated either directly or through EPSCA. All of these collective agreements currently have multi-year terms, expiring on April 30, 2020.

BALANCE SHEET HIGHLIGHTS

The following section provides highlights of OPG's audited consolidated financial position using selected balance sheet data as at December 31:

(millions of dollars)	**2016**	**2015**
Property, plant and equipment – net	**19,998**	20,595
The decrease was primarily due to a reduction in asset retirement costs of approximately $1,570 million in 2016 as a result of a reduction in the estimates for the Nuclear Liabilities to reflect the 2017 ONFA Reference Plan cost estimates. The decrease was partially offset by capital expenditures on the Darlington Refurbishment and other projects, net of depreciation expense.		
Nuclear fixed asset removal and nuclear waste management funds *(current and non-current portions)*	**15,984**	15,136
The increase was primarily due to earnings on the Nuclear Segregated Funds and contributions to the Used Fuel Segregated Fund, partially offset by an accounting adjustment recognized in the fourth quarter of 2016 to limit the fund asset values recorded to the lower funding obligations reflected in the 2017 ONFA Reference Plan, and reimbursements of eligible expenditures on nuclear fixed asset removal and nuclear waste management activities.		
Available-for-sale securities	**212**	-
The balance as at December 31, 2016 represents the fair value of the nine million Hydro One shares acquired in April 2016, as discussed in the section, *Highlights* under the heading, *Recent Developments*.		
Regulatory assets and liabilities – net *(current and non-current portions)*	**5,545**	5,808
The decrease was primarily due to the amortization of regulatory account balances recovered through rate riders in effect during 2016 and an increase in regulatory liabilities resulting from a change in the estimated useful lives of OPG's nuclear stations at the end of 2015, as discussed under the heading, *Impact Resulting from Changes in Station End-of-Life Dates Deferral Account* below. This was partially offset by amounts deferred in the regulatory assets for the Pension & OPEB Cash Versus Accrual Differential Deferral Account and other variance and deferral accounts during the year.		
Short-term debt	**2**	225
The decrease was due to the maturity of external commercial paper outstanding under LME's commercial paper program.		
Fixed asset removal and nuclear waste management liabilities	**19,484**	20,169
The decrease was primarily due to a reduction of approximately $1,570 million in the estimates for the Nuclear Liabilities at the end of 2016 to reflect the 2017 ONFA Reference Plan cost estimates, partially offset by accretion expense during the year.		
Pension liabilities	**3,012**	2,597
The increase was primarily due to the re-measurement of the liabilities at the end of 2016 reflecting lower discount rates, as discussed in the section, *Critical Accounting Policies and Estimates* under the heading, *Pension and Other Post-Employment Benefits.*		

Impact Resulting from Changes in Station End-of-Life Dates Deferral Account

In December 2015, as required by the OEB's previous decisions and orders, OPG applied to the OEB for an accounting order to establish a new deferral account to record the revenue requirement impact on the prescribed nuclear facilities of changes to the Nuclear Liabilities and depreciation expense arising from the changes in the estimated useful lives of OPG's nuclear stations, for accounting purposes, effective December 31, 2015. These impacts were not reflected in the existing regulated prices. In March 2016, the OEB issued its final decision and order establishing the requested account, the Impact Resulting from Changes in Station End-of-Life Dates Deferral Account, effective January 1, 2016. As at December 31, 2016, OPG recognized a regulatory liability of $71 million related to the balance in the deferral account. The deferral account will record these impacts until such time as new regulated prices reflecting the above changes come into effect.

Together with the Bruce Lease Net Revenues Variance Account, the Impact Resulting from Changes in Station End-of-Life Dates Deferral Account offset the decrease in depreciation expense in 2016, compared to 2015, as a result of the changes in the estimated useful lives of OPG's nuclear stations effective December 31, 2015.

The changes in the estimated useful lives were as follows:

- the average service lives of the Bruce A GS and Bruce B GS were extended from 2048 to 2052 and from 2019 to 2061, respectively, to reflect the estimated end-of-life dates reflected in the updated refurbishment agreement between the IESO and Bruce Power, which was announced in December 2015
- the average service life of the Darlington GS was extended by one year to 2052 to reflect the approval of the refurbishment schedule in 2015
- the average service life of the Pickering GS was extended by less than one year.

To reflect these changes in the useful lives, OPG recognized a total increase of $2,330 million in the Nuclear Liabilities and a corresponding increase in the related asset retirement costs, effective December 31, 2015. These increases were primarily due to the changes in the estimated useful life of the Bruce B GS. The nuclear asset retirement obligation (ARO) associated with the Pickering GS and Darlington GS was impacted by the changes to the Bruce nuclear generating stations' useful lives because the costs of the fleet-wide waste management programs are shared by all of OPG's nuclear stations based on the relative used nuclear fuel and waste volumes.

Off-Balance Sheet Arrangements

In the normal course of operations, OPG engages in a variety of transactions that, under US GAAP, are either not recorded in the Company's consolidated financial statements or are recorded in the Company's consolidated financial statements using amounts that differ from the full contract amounts. Principal off-balance sheet activities for OPG include guarantees and long-term contracts.

Guarantees

As part of normal business, OPG and certain of its subsidiaries and joint ventures enter into various agreements to provide financial or performance assurance to third parties. Such agreements include guarantees, standby Letters of Credit and surety bonds. For more details on OPG's guarantees, refer to Note 15 of OPG's audited consolidated financial statements.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

OPG's significant accounting policies, including the impact of major recent accounting pronouncements, are outlined in Note 3 of the audited consolidated financial statements. Certain of these policies are recognized as critical accounting policies by virtue of the subjective and complex judgments and estimates required around matters that are inherently uncertain and could result in materially different amounts being reported under different conditions or assumptions. The critical accounting policies and estimates that affect OPG's US GAAP consolidated financial statements are highlighted below.

Exemptive Relief for Reporting under US GAAP

As required by *Ontario Regulation 395/11,* as amended, under the FAA, OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. Since January 1, 2012, OPG also has received exemptive relief from the OSC from the requirements of section 3.2 of National Instrument 52-107 *Acceptable Accounting Policies and Auditing Standards* (NI 52-107). The exemption allows OPG to file consolidated financial statements based on US GAAP, rather than International Financial Reporting Standards (IFRS), without becoming a U.S. Securities and Exchange Commission registrant or issuing public debt.

The current OSC exemption, received in 2014, will terminate on the earliest of the following:

- January 1, 2019
- The financial year that commences after OPG ceases to have activities subject to rate regulation
- The effective date prescribed by the International Accounting Standards Board (IASB) for the mandatory application of a standard within IFRS specific to entities with rate-regulated activities.

As a result of OPG's 2011 decision to adopt US GAAP, as required by the FAA regulation, OPG's earlier plan to convert to IFRS, effective January 1, 2012, was discontinued. OPG had substantively completed its IFRS conversion project, which included separate diagnostic, development, and implementation phases, when it suspended the project. If a future transition to IFRS for the purposes of OPG's consolidated financial statements is required, conversion work can be effectively restarted with sufficient lead time to evaluate and conclude on changes that occurred subsequent to the decision to suspend the project. OPG continues to monitor the IASB's current standard-setting project related to entities with rate-regulated activities and is evaluating alternatives with respect to the Company's future financial reporting.

Rate Regulated Accounting

The *Ontario Energy Board Act, 1998* and *Ontario Regulation 53/05* provide that OPG receives regulated prices for electricity generated from the Sir Adam Beck 1, 2 and Pump hydroelectric generating stations, the DeCew Falls 1 and 2 hydroelectric generating stations, the R.H. Saunders Hydroelectric GS, the 48 hydroelectric generating stations prescribed for rate regulation effective in 2014, and the Pickering and Darlington nuclear generating stations. OPG's regulated prices for these facilities are determined by the OEB.

The OEB is a self-funding Crown corporation. Its mandate and authority come from the *Ontario Energy Board Act, 1998*, the *Electricity Act, 1998*, and a number of other provincial statutes. The OEB is an independent, quasi-judicial tribunal that reports to the Legislature of the Province through the Ontario Ministry of Energy. It regulates market participants in Ontario's natural gas and electricity industries. The OEB carries out its regulatory functions through public hearings and other more informal processes such as consultations.

US GAAP recognizes that rate regulation can create economic benefits and obligations that are required by the regulator to be obtained from, or settled with, the customers. When the Company assesses that there is sufficient assurance that incurred costs in respect of the regulated facilities will be recovered in the future, those costs are deferred and reported as a regulatory asset. When the Company is required to refund amounts to customers in the

future in respect of the regulated facilities, including amounts related to costs that have not been incurred and for which the OEB has provided recovery through regulated prices, the Company records a regulatory liability.

Certain of the regulatory assets and liabilities recognized by the Company relate to variance and deferral accounts authorized by the OEB, including those authorized pursuant to *Ontario Regulation 53/05.* The measurement of these regulatory assets and liabilities is subject to certain estimates and assumptions, including assumptions made in the interpretation of *Ontario Regulation 53/05* and the OEB's decisions. The estimates and assumptions made in the interpretation of the regulation and the OEB's decisions are reviewed as part of the OEB's regulatory process.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB for inclusion in regulated prices are amortized based on approved recovery or repayment periods. Disallowed balances are charged to operations in the period that the OEB's decision is issued.

In addition to regulatory assets and liabilities for variance and deferral accounts, OPG recognizes regulatory assets and liabilities for unamortized amounts recorded in AOCI in respect of pension and OPEB obligations, and deferred income taxes, in order to reflect the expected recovery or repayment of these amounts through future regulated prices charged to customers. There are measurement uncertainties related to these balances due to the assumptions made in the determination of pension and OPEB obligations and deferred income taxes that are attributed to rate regulated business segments.

The regulatory asset for unamortized pension and OPEB amounts recorded in AOCI has reflected the OEB's use, since April 1, 2008, of the accrual basis of accounting for including pension and OPEB amounts in approved regulated prices for OPG. This is also the manner in which these costs are recognized in OPG's consolidated financial statements. Therefore, unamortized amounts in respect of OPG's pension and OPEB plans recognized in AOCI generally would not be reflected in regulated prices until they have been reclassified from AOCI and recognized as amortization components of the benefit costs for these plans.

In setting OPG's regulated prices effective November 1, 2014, the OEB limited amounts for pension and OPEB costs allowed in the approved revenue requirements to the regulated business portion of the Company's cash expenditures for its pension and OPEB plans. It is the Company's position that this decision by the OEB did not constitute a change in the basis of OPG's rate recovery of pension and OPEB costs. This position is based on the OEB's establishment of the Pension & OPEB Cash Versus Accrual Differential Deferral Account pursuant to its November 2014 decision, as discussed below, and the expectation expressed by the OEB in that decision that a transition from the accrual basis of recovery for OPG, if required, would be addressed in a future OPG rate proceeding, informed by the outcome of an OEB generic proceeding related to the regulatory treatment and recovery of pension and OPEB costs. As discussed below, the generic proceeding is currently in progress. The Company continues to believe that there is sufficient likelihood that unamortized pension and OPEB amounts that have not yet been reclassified from AOCI will be included in future regulated prices, or in an OEB-authorized variance or deferral account for future recovery, as they are recognized in benefit costs. Therefore, the Company continues to recognize a regulatory asset for these unamortized amounts.

Effective November 1, 2014, the Pension & OPEB Cash Versus Accrual Differential Deferral Account records the difference between OPG's actual pension and OPEB costs for the regulated business determined using the accrual method applied in OPG's audited consolidated financial statements and OPG's corresponding actual cash expenditures for these plans. The Company has recognized the amount set aside in the deferral account as a regulatory asset. As at December 31, 2016, the regulatory asset balance was $497 million, which represents the excess of pension and OPEB costs calculated using the accrual basis under US GAAP over the cash basis for the period from November 1, 2014 to December 31, 2016. The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of an OEB generic proceeding related to the regulatory treatment and recovery of pension and OPEB costs.

In May 2015, the OEB began a consultation process to develop standard principles to guide its future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery. OPG is participating in the consultation. In July 2016, OPG participated in a public stakeholder forum held by the OEB as part of the consultation. In September 2016, OPG made a written submission of its position on the cost recovery mechanisms to the OEB. If, as part of this consultation or in a future proceeding, the OEB decides that the recovery basis for OPG's pension and OPEB amounts should be changed from the accrual basis, OPG may be required to adjust the regulatory assets for unamortized pension and OPEB amounts recorded in AOCI and for the Pension & OPEB Cash Versus Accrual Differential Deferral Account. In its May 2016 application for new regulated prices, OPG has proposed to continue recording the difference between actual pension and OPEB costs for the regulated business determined on an accrual basis and OPG's corresponding actual cash expenditures for these plans in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, pending the outcome of the OEB's consultation process.

See Notes 3, 5, 8, 9, and 11 of OPG's 2016 audited consolidated financial statements for additional disclosures related to the OEB's decisions, regulatory assets and liabilities, and rate regulated accounting.

Income Taxes and Investment Tax Credits

OPG is exempt from income tax under the *Income Tax Act* (Canada). However, under the *Electricity Act, 1998*, OPG is required to make payments in lieu of corporate income taxes to the OEFC. These payments are calculated in accordance with the *Income Tax Act* (Canada) and the *Taxation Act, 2007* (Ontario), as modified by the *Electricity Act, 1998* and related regulations. This results in OPG effectively paying taxes similar to those imposed under the federal and Ontario tax acts.

OPG's operations are complex and the computation of the provision for income taxes involves interpretation of the various tax statutes and regulations. OPG has taken certain filing positions in calculating the amount of its income tax provision. These filing positions may be challenged on audit by the Ontario Ministry of Finance and some of them possibly disallowed, resulting in a potential significant change in OPG's tax provision upon reassessment. A change in the tax provision upon reassessment impacting regulated operations may be recoverable from or refundable to customers through the Income and Other Taxes Variance Account authorized by the OEB.

OPG follows the liability method of accounting for income taxes. Under the liability method, deferred income tax assets and liabilities are determined based on differences between the accounting and tax bases of assets and liabilities. Deferred amounts are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The effect of a change in tax rates on deferred income tax assets and liabilities is included in income in the period the change is enacted.

If management determines that it is more likely than not that some, or all, of a deferred income tax asset will not be realized, a valuation allowance is recorded to report the balance at the amount expected to be realized.

OPG recognizes deferred income taxes associated with its rate regulated operations and records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers.

Tax benefits associated with income tax positions taken, or expected to be taken, in a tax return and in respect of investment tax credits are recorded only when the more likely than not recognition threshold is satisfied. Tax benefits and investment tax credits recognized are measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon settlement.

Investment tax credits are recorded as a reduction to income tax expense. OPG classifies interest and penalties associated with unrecognized tax benefits as income tax expense.

The Company has recognized net deferred income tax liabilities of $829 million as at December 31, 2016 (2015 – $880 million).

Property, Plant and Equipment, Intangible Assets and Depreciation and Amortization

Property, plant and equipment (PP&E) and intangible assets are recorded at cost. Interest costs incurred during construction and development are capitalized as part of the cost of the asset, based on the interest rates on OPG's long-term debt. Expenditures for replacements of major components are capitalized.

Depreciation and amortization rates for the various classes of assets are based on their estimated service lives. Asset removal costs that have not been specifically provided for in current or previous periods are charged to OM&A expenses. Repairs and maintenance costs are also expensed when incurred.

PP&E are depreciated on a straight-line basis except for computers, which are depreciated on a declining balance basis. Intangible assets, which consist of major application software, are amortized on a straight-line basis.

The accounting estimates related to end-of-life assumptions for PP&E and intangible assets require significant management judgment, including consideration of various operating, technological, and other factors. OPG reviews the estimated useful lives for its PP&E and intangible assets on a regular basis.

Asset Impairment

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The review is based on the presence of impairment indicators such as the future economic benefit of the assets and external market conditions. The net carrying amount of assets is considered impaired if it exceeds the sum of the estimated undiscounted cash flows expected to result from the asset's use and eventual disposition. In cases where the sum of the undiscounted expected future cash flows is less than the carrying amount, an impairment loss is recognized. This loss equals the amount by which the carrying amount exceeds the fair value. Fair value is determined using expected discounted cash flows when quoted market prices are not available. The impairment is recognized in income in the period in which it is identified.

Various assumptions and accounting estimates are required to determine whether an impairment loss should be recognized and, if so, the value of such loss. This includes factors such as short-term and long-term forecasts of prices for electricity generation under applicable revenue mechanisms, the demand for and supply of electricity, inflation, fuel prices, capital and operating expenditures, and estimated useful service lives of the assets.

The carrying value of investments accounted for under the equity method are reviewed for the presence of any indicators of impairment. If an impairment exists and is determined to be other-than-temporary, an impairment charge is recognized. This charge equals the amount by which the carrying value exceeds the investment's fair value.

Nuclear Fixed Asset Removal and Nuclear Waste Management Funds

In accordance with the ONFA, OPG sets aside and invests funds that are held in segregated custodian and trustee accounts specifically for discharging its obligation for nuclear facilities decommissioning and long-term nuclear waste management. The Decommissioning Segregated Fund was established to fund the future costs of nuclear fixed asset removal and long-term L&ILW management, and certain costs of used fuel storage incurred after the stations are shut down. The Used Fuel Segregated Fund was established to fund the future costs of long-term nuclear used fuel management and certain costs of used fuel storage incurred after the stations are shut down. OPG makes contributions to the Nuclear Segregated Funds based on approved ONFA reference plans. Costs for L&ILW management and used fuel storage incurred during station operation are not funded by the Nuclear Segregated Funds. They are funded through the Company's operating cash flow or other sources of liquidity.

Decommissioning Segregated Fund

Upon termination of the ONFA, the Province has the sole right to any excess funds in the Decommissioning Segregated Fund. Accordingly, when the Decommissioning Segregated Fund is overfunded, OPG limits the fund earnings it recognizes in the consolidated financial statements by recording an amount due to the Province, such that the fund asset recognized on the consolidated balance sheet is equal to the cost estimate of the liability based on the most recently approved ONFA reference plan. Additionally, OPG recognizes the portion of the surplus that it may direct to the Used Fuel Segregated Fund, which is possible when the surplus is such that the underlying liabilities, as defined by the most recently approved ONFA reference plan, are at least 120 percent funded. In those circumstances, OPG may direct, at the time a new or amended reference plan is approved, up to 50 percent of the surplus over 120 percent to the Used Fuel Segregated Fund, with the OEFC entitled to a distribution of an equal amount. Therefore, when the Decommissioning Segregated Fund is at least 120 percent funded, OPG recognizes 50 percent of the excess greater than 120 percent in income, up to the amount by which the Used Fuel Segregated Fund is underfunded.

The amount due to the Province in respect of the Decommissioning Segregated Fund could be reduced in subsequent periods in the event that the fund earns less than is target rate of return, a new ONFA reference plan is approved with a higher underlying liability, or the amount of the underfunding in the Used Fuel Segregated Fund increases.

When the Decommissioning Segregated Fund is underfunded, the earnings on the fund reflect actual fund returns based on the market value of the assets.

Used Fuel Segregated Fund

Under the ONFA, the Province guarantees OPG's annual return in the Used Fuel Segregated Fund at 3.25 percent plus the change in the Ontario CPI, as defined in the ONFA, for funding related to the first 2.23 million used fuel bundles ("committed return"). OPG recognizes the committed return on the Used Fuel Segregated Fund as earnings on the Nuclear Segregated Funds. The difference between the committed return and the actual market return determined based on the fair value of the fund's assets related to the first 2.23 million used fuel bundles is recorded as due to or due from the Province. This amount represents the amount OPG would pay to, or receive from, the Province if the committed return were to be settled as of the consolidated balance sheet date. Upon approval of a new or amended ONFA reference plan, the Province is obligated to make an additional contribution to the Used Fuel Segregated Fund in relation to the first 2.23 million used fuel bundles if the fund's assets earned a rate of return that is less than the guaranteed rate of return. If the return on the fund's assets exceeds the Province's guaranteed rate of return, the Province is entitled to withdraw any portion of the excess related to the 2.23 million used fuel bundles, upon approval of a new or amended ONFA reference plan. The 2.23 million threshold represents the estimated total life cycle fuel bundles based on the initial estimated useful lives of the nuclear stations assumed in the ONFA.

As prescribed under the ONFA, OPG's contributions attributed to the used fuel bundles in excess of 2.23 million are not subject to the Province's guaranteed rate of return, and earn a return based on changes in the market value of the assets of the Used Fuel Segregated Fund.

If there is a surplus in the Used Fuel Segregated Fund such that the funding liabilities, as defined by the most recently approved ONFA Reference Plan, are at least 110 percent funded, the Province has the right, at any time, to access the excess amount greater than 110 percent. Upon termination of the ONFA, the Province is entitled to any surplus in the fund. Accordingly, when the Used Fuel Segregated Fund is overfunded, OPG limits the fund earnings it recognizes in the consolidated financial statements by recording an amount due to the Province, such that the balance of the fund is equal to the cost estimate of the liability based on the most recently approved ONFA reference plan. In accordance with the ONFA, neither OPG nor the Province has a right to direct any amounts from the Used Fuel Segregated Fund to the Decommissioning Segregated Fund.

Provincial Guarantee

In accordance with the *Nuclear Safety and Control Act* (Canada), the CNSC requires OPG to have sufficient funds available to discharge its existing nuclear waste management and nuclear decommissioning obligations. As required by the terms of the ONFA, the Province has provided a Provincial Guarantee to the CNSC, on behalf of OPG, for any shortfall between the CNSC financial guarantee requirement and the value of the Nuclear Segregated Funds. OPG pays the Province an annual guarantee fee equal to 0.5 percent of the amount of the Provincial Guarantee. The current value of the Provincial Guarantee of $1,551 million is in effect through to the end of 2017. Based on this guarantee amount, OPG paid a guarantee fee of $8 million to the Province for each of 2015 and 2016. The CNSC financial guarantee requirement is required to be updated every five years. OPG is currently updating the CNSC financial guarantee requirement for the 2018-2022 period and expects to file it with the CNSC in the first half of 2017.

Pension and Other Post-Employment Benefits

The determination of OPG's pension and OPEB costs and obligations is based on accounting policies and assumptions, as discussed below.

Accounting Policy

OPG's post-employment benefit programs consist of a contributory defined benefit registered pension plan, a defined benefit supplementary pension plan, and other post retirement benefits (OPRB) including group life insurance and health care benefits, and long-term disability (LTD) benefits. Post-employment benefit programs also are provided by the NWMO, which is consolidated into OPG's financial results. Unless otherwise noted, information on the Company's post-employment benefit programs is presented on a consolidated basis.

OPG accrues its obligations under pension and OPEB plans in accordance with US GAAP. The obligations for pension and OPRB are determined using the projected benefit method pro-rated on service. The obligation for LTD benefits is determined using the projected benefit method on a terminal basis. Pension and OPEB obligations are impacted by factors including interest rates, adjustments arising from plan amendments, demographic assumptions, experience gains or losses, salary levels, inflation, and health care cost escalation assumptions. Pension and OPEB costs and obligations are determined annually by independent actuaries using management's best estimate assumptions.

Pension fund assets include equity securities, corporate and government debt securities, pooled funds, real estate, infrastructure and other investments. These assets are managed by professional investment managers. The pension fund does not invest in equity or debt securities issued by OPG. Pension fund assets are valued using market-related values for purposes of determining the amortization of actuarial gains or losses and the expected return on plan assets. The market-related value recognizes gains and losses on equity assets relative to a six percent assumed real return over a five-year period.

Pension and OPEB costs include current service costs, interest costs on the obligations, the expected return on pension plan assets, adjustments for plan amendments and adjustments for actuarial gains or losses, which result from changes in assumptions and experience gains and losses. Past service costs or credits arising from pension and OPRB plan amendments are amortized on a straight-line basis over the expected average remaining service life to full eligibility of the employees covered by the corresponding plan. Past service costs or credits arising from amendments to LTD benefits are immediately recognized as OPEB costs in the period incurred. Due to the long-term nature of pension and OPRB liabilities, the excess of the net cumulative unamortized gain or loss, over 10 percent of the greater of the benefit obligation and the market-related value of the plan assets (the corridor) for each plan is amortized over the expected average remaining service life of the employees covered by the plan, which represents the period during which the associated economic benefits are expected to be realized by the Company. Actuarial gains or losses for LTD benefits are immediately recognized as OPEB costs in the period incurred.

OPG recognizes the funded status of its defined benefit plans on the consolidated balance sheets. The funded status is measured as the difference between the fair value of plan assets and the benefit obligation, on a plan-by-plan basis.

Actuarial gains or losses and past service costs or credits arising during the year that are not recognized immediately as components of benefit costs are recognized as increases or decreases in other comprehensive income (OCI), net of income taxes. These unamortized amounts in AOCI are subsequently reclassified and recognized as amortization components of pension and OPRB costs as described above.

As at December 31, 2016, the unamortized net actuarial loss and unamortized past service costs for the pension and OPEB plans totalled $3,668 million (2015 – $3,646 million). Details of the unamortized net actuarial loss and unamortized past service costs as at December 31, 2016 and 2015 are as follows:

	Registered Pension Plans		Supplementary Pension Plans		Other Post-Employment Benefits	
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Net actuarial gain not yet subject to amortization due to use of market-related values	**(570)**	(809)	**-**	-	**-**	-
Net actuarial loss not subject to amortization due to use of the corridor	**1,619**	1,544	**34**	30	**267**	293
Net actuarial loss subject to amortization	**2,238**	2,288	**72**	47	**3**	247
Unamortized net actuarial loss	**3,287**	3,023	**106**	77	**270**	540
Unamortized past service costs	**-**	-	**-**	-	**5**	6

OPG records an offsetting regulatory asset or liability for the portion of the adjustments to AOCI that is attributable to the regulated operations in order to reflect the expected recovery or refund of these amounts through future regulated prices charged to customers. For the recoverable or refundable portion attributable to regulated operations, OPG records a corresponding change in this regulatory asset or liability for the amount of the increases or decreases in OCI and for the reclassification of AOCI amounts into benefit costs during the period.

When the recognition of the transfer of employees and employee-related benefits gives rise to both a curtailment and a settlement, the curtailment is accounted for prior to the settlement. A curtailment is the loss by employees of the right to earn future benefits under the plan. A settlement is the discharge of a plan's liability.

Accounting Assumptions

Assumptions are significant inputs to actuarial models that measure pension and OPEB obligations and related effects on operations. Discount rate, inflation rate and changes in salary levels are three critical assumptions in the determination of benefit costs and obligations. In addition, the expected long-term rate of return on plan assets is a critical assumption in the determination of registered pension plan cost, and the health care cost trend rate is a critical assumption in the determination of OPEB cost and obligations. These assumptions, as well as other assumptions involving demographic factors such as retirement age, mortality, and employee turnover, are evaluated periodically by management in consultation with independent actuaries. During the evaluation process, the assumptions are updated to reflect past experience and expectations for the future. Actual results in any given year will often differ from actuarial assumptions because of economic and other factors giving rise to actuarial gains and losses.

The discount rates, which are representative of the AA corporate bond yields, are used to calculate the present value of the expected future cash flows on the measurement date in order to determine the projected benefit obligations for the Company's employee benefit plans. In 2016 and prior years, benefit costs were calculated using the same single weighted-average discount rates as reflected in the calculation of the benefit obligations. A lower discount rate

increases the benefit obligations and increases benefit costs. The weighted-average discount rate used to determine the projected pension and OPEB benefit obligations as at December 31, 2016 was 3.9 percent. This represents a decrease compared to the 4.1 percent discount rate that was used to determine the obligations as at December 31, 2015.

Starting in 2017, OPG expects to change the method used to estimate the current service and interest cost components of pension and OPEB costs. OPG expects to adopt a full yield curve approach in the estimation of these cost components, by applying the specific spot rates along the yield curve used in the determination of the projected benefit obligations to the relevant projected cash flows. This change will improve the correlation between projected benefit cash flows and the corresponding yield curve spot rates, and provide a more precise measurement of service and interest costs. This change does not affect the measurement of the total benefit obligations, as the change in the current service and interest cost components from the previous method will be offset by a corresponding change in the actuarial gain or loss recorded in AOCI. OPG will account for this change as a change in estimate, prospectively starting in 2017. With an upward sloping yield curve and the pattern of OPG's estimated future benefit cash flows, the adoption of the full yield curve approach is expected to materially lower OPG's current service and interest cost components, reducing the overall pension and OPEB costs in the initial years following adoption. The reduction in pension and OPEB cost is expected to be largely offset by the impact of OEB-authorized variance and deferral accounts or changes in regulated prices.

The expected rate of return on plan assets is determined based on the pension fund's asset allocation and the expected return considering long-term risks and returns associated with each asset class within the plan portfolio. A lower expected rate of return on plan assets increases pension cost.

A new actuarial valuation of the OPG registered pension plan was filed with the Financial Services Commission of Ontario in September 2016 with an effective date of January 1, 2016. The annual funding requirements in accordance with the new actuarial valuation are outlined in the section, *Liquidity and Capital Resources* under the heading, *Contractual and Commercial Commitments*. OPG conducted a comprehensive actuarial valuation for accounting purposes of its pension and OPEB plans in 2016, using demographic data as at January 1, 2016 consistent with the new funding valuation and assumptions as at December 31, 2016. As part of the valuation, the plans' demographic and other assumptions were reviewed and revised, as necessary, by independent actuaries.

The deficit for the registered pension plan, for accounting purposes, increased from $2,315 million as at December 31, 2015 to $2,693 million as at December 31, 2016. This increase was largely due to a re-measurement of the liabilities at the end of 2016 reflecting lower discount rates, as well as current service and interest costs for the year, partially offset by the impact of the updated membership data as part of the 2016 actuarial valuation and employer contributions to the pension plan during the year.

The projected benefit obligations for OPEB decreased from $3,188 million at December 31, 2015 to $2,992 million as at December 31, 2016. This decrease was largely due to the updated, lower per capita health care claims costs assumption reflected as part of the 2016 actuarial valuation, partially offset by the re-measurement of the liabilities at the end of 2016 reflecting a decrease in the discount rates.

A change in the following assumptions, holding all other assumptions constant, would increase (decrease) pension and OPEB costs for the year ended December 31, 2016 as follows:

(millions of dollars)	Registered Pension Plans [1]	Supplementary Pension Plans [1]	Other Post-Employment Benefits [1]
Expected long-term rate of return			
0.25% increase	(30)	n/a	n/a
0.25% decrease	30	n/a	n/a
Discount rate			
0.25% increase	(57)	(1)	(12)
0.25% decrease	60	1	16
Inflation			
0.25% increase	103	1	1
0.25% decrease	(97)	(1)	(1)
Salary increases			
0.25% increase	20	3	1
0.25% decrease	(20)	(2)	(1)
Health care cost trend rate			
1% increase	n/a	n/a	86
1% decrease	n/a	n/a	(52)

n/a – change in assumption not applicable.

[1] Excludes the impact of regulatory variance and deferral accounts.

Asset Retirement Obligation

OPG recognizes ARO for fixed asset removal and nuclear waste management liabilities, discounted for the time value of money. OPG estimates both the amount and timing of future cash expenditures based on the plans for fixed asset removal and nuclear waste management. The ARO is comprised of expected costs to be incurred up to and beyond termination of operations and the closure of nuclear and thermal generating plant facilities and other facilities. Costs are expected to be incurred for activities such as preparation for safe storage and safe storage of nuclear stations, dismantlement, demolition and disposal of facilities and equipment, remediation and restoration of sites, and the ongoing and long-term management of nuclear used fuel bundles and L&ILW material. The liabilities associated with the decommissioning of the nuclear generating stations and the long-term management of used nuclear fuel comprise the most significant amounts of the total obligation.

The nuclear decommissioning liability includes the estimated costs of closing the nuclear stations after the end of their service lives, which includes preparation and placement of the stations into a safe state condition followed by an assumed 30-year safe store period prior to station dismantlement and site restoration. Activities associated with the placement of stations into a safe state condition include de-fuelling and de-watering of the nuclear reactors. OPG is responsible for the nuclear waste management and nuclear decommissioning obligations associated with the Bruce nuclear generating stations and includes the associated costs in its ARO. Pursuant to the lease agreement, Bruce Power must return the two Bruce stations to OPG together, in a de-fuelled and de-watered state. As such, these de-watering and de-fuelling costs are not part of OPG's ARO.

The life cycle costs of L&ILW management include the costs of processing and storage of such radioactive wastes during and following the operation of the nuclear stations, as well as the costs of the ultimate long-term management of these wastes. The current assumptions used to establish the obligation for these costs include an L&ILW DGR facility to be constructed and operated by OPG, as discussed in the section, *Core Business, Strategy, and Outlook* under the heading, *Project Excellence*. To estimate the liability for nuclear used fuel management, OPG has adopted an approach consistent with the Adaptive Phased Management concept approved by the Government of Canada,

which assumes a deep geologic repository for the long-term management of Canada's nuclear used fuel waste. The NWMO is responsible for the design and implementation of Canada's plan for the long-term management of used nuclear fuel.

The following costs are recognized as a liability on OPG's consolidated balance sheets:

- the present value of the costs of decommissioning the nuclear and thermal production facilities and other facilities after the end of their useful lives
- the present value of the fixed cost portion of nuclear waste management programs that are required based on the total volume of waste expected to be generated over the assumed lives of the stations
- the present value of the variable cost portion of nuclear waste management programs taking into account waste volumes generated to date.

The significant assumptions underlying operational and technical factors used in the calculation of the accrued liabilities are subject to periodic review. Changes to these assumptions, including changes to assumptions on the timing of the programs including construction of assumed waste disposal facilities, station end-of-life dates, waste disposal methods, financial indicators, decommissioning strategy, and the technology employed may result in significant changes to the value of the accrued liabilities. With programs of such long-term duration and the evolving technology to handle nuclear waste, there is a significant degree of inherent uncertainty surrounding the measurement of the costs for these programs. These costs may increase or decrease over time.

The estimates for the Nuclear Liabilities are reviewed on an ongoing basis as part of the overall nuclear waste management program. A comprehensive reassessment of all underlying assumptions and baseline cost estimates is performed periodically, at least once every five years, in line with the required ONFA reference plan update process. Changes in the Nuclear Liabilities resulting from changes in assumptions or estimates that impact the amount or timing of the estimated undiscounted future cash flows are recorded as an adjustment to the liabilities. Upward revisions in the Nuclear Liabilities represent the present value of a net increase in future undiscounted cash flows determined using a current credit-adjusted risk-free rate. Downward revisions in the Nuclear Liabilities represent the present value of a net decrease in future undiscounted cash flows determined using the weighted average discount rate reflected in the existing liability. Resulting changes in the related asset retirement costs are capitalized as part of the carrying amount of nuclear fixed assets in service.

The most recent comprehensive update of the baseline cost estimates for the Nuclear Liabilities was completed in the fourth quarter of 2016 and is contained in the approved 2017 ONFA Reference Plan. The update resulted in a decrease of approximately $1,570 million in the Nuclear Liabilities as at December 31, 2016, which was determined using a weighted average discount rate of 4.95 percent reflected in the existing liability. The overall reduction in OPG's nuclear waste management and nuclear decommissioning obligations was due mainly to a decrease in cost estimates to reflect a proposed new, more cost effective container design and engineered barrier concept to house used nuclear fuel for disposal, updated cost escalation rates, and a later expected in-service date for the NWMO's planned deep geologic repository for the long-term permanent disposal of used nuclear fuel. These decreases were partly offset by higher cost estimates related to decommissioning activities, primarily due to an improved definition of work required during the preparation for safe storage after station shutdown and a higher volume of waste expected to be generated during decommissioning. Cost escalation rates used to estimate future undiscounted cash flows reflected in the December 31, 2016 adjustment to the Nuclear Liabilities ranged from 2.0 percent to 3.4 percent.

The December 31, 2016 adjustment to the Nuclear Liabilities and associated asset retirement costs did not impact OPG's income for 2016. The estimated impact of this adjustment on 2017 expenses, before the impact of the Bruce Lease Net Revenues Variance Account and the Nuclear Liability Deferral Account, includes a decrease to depreciation expense of approximately $8 million, a decrease to accretion expense of approximately $78 million, and a decrease to used fuel and L&ILW variable expenses, charged to fuel expense and OM&A expenses, respectively, of approximately $20 million. Under the current OEB-approved cost recovery methodology, these 2017 impacts are expected to be largely offset by the impact of the Nuclear Liability Deferral Account and the Bruce Lease Net

Revenues Variance Account or corresponding changes to OPG's nuclear regulated prices. Like the Bruce Lease Net Revenues Variance Account, the Nuclear Liability Deferral Account has been established by the OEB pursuant to *Ontario Regulation 53/05*. It records the revenue requirement impact associated with the changes in OPG's nuclear waste management and nuclear decommissioning liabilities arising from an approved ONFA reference plan, for the Pickering and Darlington nuclear generating stations.

For the purposes of calculating OPG's Nuclear Liabilities, as at December 31, 2016, consistent with the current accounting end-of-life assumptions, nuclear station decommissioning activities are projected to occur over approximately the next 80 years.

The liability for nuclear fixed asset removal and nuclear waste management on a present value basis as at December 31, 2016 was $19,103 million (2015 – $19,792 million). As at December 31, 2016, the undiscounted cash flows of expenditures for OPG's Nuclear Liabilities in 2016 dollars are as follows:

(millions of dollars)	**2017**	**2018**	**2019**	**2020**	**2021**	**Thereafter**	**Total**
Expenditures for nuclear fixed asset removal and nuclear waste management [1]	354	360	386	429	465	39,296	41,290

[1] The majority of the expenditures are expected to be reimbursed by the Nuclear Segregated Funds established by the ONFA. Any contributions required under the ONFA are not included in these undiscounted cash flows. Accounting for the Nuclear Segregated Funds is discussed in the section, *Critical Accounting Policies and Estimates* under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

The liability for non-nuclear fixed asset removal was $381 million as at December 31, 2016 (2015 – $377 million). This liability primarily represents the present value of estimated costs of decommissioning OPG's thermal generating stations at the end of their service lives. The liability reflects third party cost estimates based on an in-depth review of plant sites and an assessment of required clean-up and restoration activities completed in 2011 for most of the thermal generating stations. For the purpose of measuring the liability, asset removal activities are assumed to take place approximately over the next one to 15 years. The amount of undiscounted estimated future cash flows associated with the thermal liabilities is approximately $500 million. With the decisions taken in 2015 and 2016 to decommission the Nanticoke and Lambton generating stations, respectively, OPG expects to review the decommissioning liability estimates for these sites in 2017. Any adjustments as a result of a change in the liability estimates for these shut down stations will be recorded in net income in the period of change.

OPG has no legal obligation associated with the decommissioning of its hydroelectric generating facilities and the costs cannot be reasonably estimated because of the long service life of these assets. With either maintenance efforts or rebuilding, the water control structures are assumed to be used for the foreseeable future. Accordingly, OPG has not recognized a liability for the decommissioning of its hydroelectric generating facilities.

Fair Value Measurements

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly arm's-length transaction between market participants at the measurement date. Fair value measurements are required to reflect the assumptions that market participants would use in pricing an asset or liability based on the best available information. These assumptions include the risks inherent in a particular valuation technique, such as a pricing model, and the risks inherent in the inputs to the model.

The fair value of financial assets and liabilities for which quoted prices in an active market are available, including exchange traded derivatives and other financial instruments, are determined directly from those quoted market prices.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the

use of valuation techniques or models, based wherever possible on assumptions supported by observable market prices or rates prevailing at the consolidated balance sheet dates. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Pooled fund investments are valued at the unit values supplied by the pooled fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that may affect a particular instrument's fair value. The methodologies used for calculating the fair value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If the valuation technique or model is not based on observable market data, specific valuation techniques are used, primarily based on recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

OPG's use of financial instruments exposes the Company to certain risks, including credit risk, foreign currency risk and interest rate risk. A discussion of how OPG manages these and other risks is found under the section, *Risk Management*.

Variable Interest Entities

OPG holds a variable interest in the NWMO, of which it is the primary beneficiary. Accordingly, the applicable amounts in the accounts of the NWMO, after elimination of all significant intercompany transactions, are consolidated. As at December 31, 2016, PSS Generating Station Limited Partnership (PSS or Partnership) also was classified as a variable interest entity, as it did not meet the criteria of having sufficient equity at risk to finance its activities. Since OPG is the primary beneficiary of PSS, it continues to consolidate the Partnership. Refer to Note 3 of OPG's 2016 audited consolidated financial statements for further details.

Recent Accounting Pronouncements

The recent US GAAP accounting pronouncements related to revenue recognition, leases, and financial instruments are described below. Other recent accounting pronouncements applicable to OPG are outlined in Note 3 of the audited consolidated financial statements.

Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers* (Topic 606) (ASU 2014-09), which supersedes nearly all existing revenue recognition guidance, including industry-specific guidance, under US GAAP. The core principle of Topic 606 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. Either a full retrospective application or a modified retrospective application is required for annual periods beginning on or after January 1, 2018, including interim periods within that year. Early adoption is permitted.

OPG currently expects to apply the new revenue standard in its 2018 first quarter interim financial statements. During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. Targeted technical updates and training have been provided to financial controllers and working group members corresponding to their responsibilities during 2016.

The Company is in the process of concluding on the method of adoption, as well as evaluating the impact of the new standard on its consolidated financial statements.

Lease Accounting

In February 2016, the FASB issued ASU No. 2016-02, *Leases* (Topic 842). The update includes comprehensive changes to existing guidance for lease accounting, particularly for lessees, and aims to increase transparency and comparability among organizations by requiring the recognition of lease assets and lease liabilities on the balance sheet. The standard is effective for annual periods beginning after December 15, 2018, including interim periods within that year. Entities are required to use a modified retrospective approach for leases that exist, or are entered into, after the beginning of the earliest comparative period presented in the financial statements for the period of adoption. Full retrospective application is prohibited. Early adoption is permitted.

During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. The Company is in the process of evaluating the impact of the new standard on its consolidated financial statements.

Recognition and Measurement of Financial Assets and Financial Liabilities

In January 2016, the FASB issued ASU No. 2016-01, *Financial Instruments – Overall: Recognition and Measurement of Financial Assets and Financial Liabilities*. Under the updated guidance, entities will have to measure equity investments at fair value and recognize any changes in fair value in net income. The update will be effective for OPG's 2018 fiscal year, including interim periods. As a result of this update, effective January 1, 2018, the available-for-sale (AFS) classification for securities will no longer be available, with any unrealized gains and losses related to such securities recognized in net income instead of OCI. Any unrealized gains and losses for AFS securities reported by OPG in AOCI as of the end of 2017 will be reclassified to retained earnings as of January 1, 2018. OPG's Hydro One share holdings are currently the Company's only AFS securities. As at December 31, 2016, these shares are valued on the consolidated balance sheet at $212 million, of which a loss of $1 million has been recorded in AOCI. OPG continues to evaluate whether the new standard will have any further impact on its consolidated financial statements.

RISK MANAGEMENT

Overview

OPG faces various risks that could significantly impact the achievement of its strategic imperatives. The objective of risk management is to identify and mitigate these risks, and to preserve and increase the value of the Shareholder's investment in the Company.

Risk Governance Structure

The Audit and Risk Committee of OPG's Board of Directors assists the Board of Directors in fulfilling its oversight responsibilities for matters relating to the identification and management of the Company's key business risks. An Executive Risk Committee (ERC), which is comprised of business unit leaders and the Chief Risk & Audit Executive (CRAE), assists the Audit and Risk Committee in fulfilling its governance and oversight responsibilities related to OPG's risk management activities.

Risk Management Activities

OPG faces a wide array of risks as a result of its business operations. OPG's Enterprise Risk Management (ERM) framework is designed to identify and evaluate risks on the basis of their potential impact on the Company's capacity to achieve specific strategic imperatives and business plan objectives.

A centralized ERM group led by the CRAE coordinates the quarterly risk management reporting activities. The activities begin with business units identifying, reviewing, and assessing risks that could prevent achievement of their objectives. The ERM group reviews, validates, and consolidates this information and prioritizes risks based on their potential to impact OPG's overall strategic imperatives. The ERM group also assesses external developments that may have implications on the corporate risk profile and facilitates the identification and assessment of emerging risks. The ERC then reviews and validates significant changes in the top risks that may impact OPG's ability to achieve its strategic imperatives, as well as any emerging risks that have been identified. The results of the ERC review and significant changes in the enterprise risk profile are reviewed by the Audit and Risk Committee of OPG's Board of Directors.

In order to maintain an appropriate balance between risk and return, senior management sets limits for the market risk, credit risk and energy trading activities of the Company. Senior management also establishes risk management policies and processes to ensure compliance with such limits.

The key risks to OPG's strategic imperatives are briefly described below.

Risks to Achieving Operational Excellence

OPG is exposed to variable output from its existing generating stations that could adversely impact its financial performance.

Operational risks are the risks inherent in the operation of electricity generating facilities. These risks can lead to interruptions in the operations of generating stations affecting future production. The operational risks of a station are generally a function of its age, human performance, and the technology used.

Nuclear Generating Stations

Operating an aging nuclear fleet exposes OPG to unique risks such as unplanned outages, an increase in operating costs, and risks associated with nuclear waste management operations.

Operating nuclear stations exposes OPG to unique risks, such as greater-than-anticipated deterioration of station components and systems, risks associated with the nuclear industry, supply chain and vendor quality, risks related to the handling, storage and disposal of nuclear waste, and the risk of a nuclear accident. The primary implications of these risks include additional safety requirements, potentially lower than expected generation and revenues, and potentially higher operating costs.

The uncertainty associated with electricity production by OPG's Canadian Deuterium Uranium nuclear generating units is primarily driven by the condition of station components and systems, which are all subject to the effects of aging. Fuel channels are expected to be the most life-limiting component affecting station end-of-life. Another significant factor identified to date includes degradation of primary heat transport pump motors at the Darlington GS. Additionally, there are fuel handling performance challenges at both the Darlington GS and Pickering GS. To respond to these risks, OPG continues to monitor performance, implement extensive inspection and maintenance programs, identify corrective actions, and undertake projects required to operate reliably and within design parameters.

Deterioration of station components may progress in an unexpected manner, resulting in the need to increase monitoring, conduct extensive repairs, or undertake additional remedial measures. To maintain a safe operating margin, a nuclear unit could be derated, resulting in reduced generation. When an unexpected condition first appears, a specific monitoring program is established. The primary impact of these conditions on OPG is an increase in the long-term cost of operations. The associated mitigation may create additional outage work, increasing the number of outages or extending the duration of planned outages.

Pickering Extended Operations to 2024

In January 2016, the Province of Ontario announced its approval of OPG's plan to pursue the continued safe and reliable operation of the Pickering GS to 2024. Under OPG's plan, all six operating units at the Pickering GS would operate until 2022, at which point two units would be shut down and the remaining four units would continue to operate until 2024. The current operating licence for the Pickering GS, which expires in August 2018, was issued in 2013 assuming that the station would shut down in 2020.

Inability to achieve Pickering extended operations as planned would result in a reduction of OPG's future generation revenue and cash flows and lead to the advancement of shutdown and station decommissioning expenditures.

Risk factors for continued operation of the Pickering units include the discovery of unexpected conditions, equipment failures, the state of critical plant components that are reaching end-of-life, and a requirement for significant plant modifications. To mitigate these risks, OPG continues to undertake a number of activities, including the following:

- work to confirm achievability of fuel channel life necessary to enable extended operations
- component condition assessments to identify the work required to support the extended operation of the station
- modification of the operating and maintenance strategy to support continued operation of the station.

Over the remaining lifespan of the station, risks such as performance of the fuel handling system, challenges with parts procurement, and a shortage of qualified human resources may challenge operational excellence at the Pickering GS. OPG is addressing these risks by taking appropriate actions, including undertaking fuel handling reliability improvements, equipment modifications and targeted investments in plant systems and components, supply chain initiatives, and developing workforce planning and resourcing strategies.

Nuclear Waste Management

The process of generating electricity by nuclear generating stations produces nuclear waste. As required by the CNSC, OPG is accountable for the management of used fuel and L&ILW, and decommissioning of its nuclear stations and waste management facilities, including the stations on lease to Bruce Power. Currently, there are no licenced facilities in Canada for the permanent disposal of nuclear used fuel or L&ILW. The risks to OPG's proposed L&ILW DGR for the safe long-term management of L&ILW are discussed below, in the section, *Risks to Achieving Project Excellence* under the heading, *Deep Geologic Repository for Low and Intermediate Level Waste*.

The NWMO has developed a process for moving forward with Adaptive Phased Management as the long-term solution for Canada's nuclear fuel waste. The Adaptive Phased Management plan contemplates the eventual long-term permanent disposal of radioactive nuclear fuel waste in a deep geologic repository. The NWMO is in the process of undertaking a multi-year site selection process for the used fuel deep geologic repository.

In the interim, OPG is storing and managing L&ILW at the WWMF site and used fuel at its nuclear generating station sites.

Nuclear Regulatory Requirements

The uncertainty associated with nuclear regulatory requirements is primarily driven by plant aging, changes to technical codes, and challenges raised by the public at regulatory hearings, particularly in the areas of safety, environment and emergency preparedness. Addressing these requirements could add to the cost of operations, and in some instances, may result in a reduction or elimination of the productive capacity of a station, earlier than planned replacement of a station component, or additional requirements for waste management. Additionally, the operations of nuclear stations are often directly impacted by circumstances or events that occur at other nuclear stations globally. These circumstances or events may lead to CNSC regulatory changes with a significant impact on the cost and future operation of OPG's nuclear fleet.

In December 2015, the CNSC granted the Darlington GS a 10-year operating licence, valid until November 30, 2025. The new licence spans most of the planned duration of the Darlington Refurbishment project, which provides greater regulatory stability and reduces regulatory risk. As discussed in the section, *Core Business, Strategy, and Outlook* under the heading, *Nuclear Operations*, the plan to extend Pickering operations to 2024 is subject to the CNSC's approval of the Pickering licence renewal application and other regulatory requirements as set out by the CNSC.

In January 2014, the federal government introduced Bill C-22 containing a new *Nuclear Liability and Compensation Act* (NLCA). This bill received Royal Assent in February 2015, and the NLCA came into effect on January 1, 2017. The NLCA requires all operators of nuclear generating stations in Canada to maintain specified amounts of nuclear liability insurance purchased from a federal government approved insurer or other equivalent forms of financial security approved by the federal government. The NLCA increased OPG's nuclear liability limit from $75 million to an initial $650 million, with successive annual increases to $750 million, $850 million, and $1 billion. OPG has met this requirement for the $650 million liability limit for 2017 and is assessing the availability and premium cost of coverage for the $750 million liability limit required for 2018.

Hydroelectric Generating Stations

OPG's hydroelectric generation is exposed to risks associated with water flows, the age of plant and equipment, surplus baseload generation conditions, and dam safety requirements.

The extent to which OPG can operate its hydroelectric generation facilities depends upon the availability of water. Significant variability in weather, including impacts of climate change, could affect water flows. For OPG's regulated hydroelectric generation, the financial impact of variability in electricity production due to differences between the forecast water conditions underpinning the hydroelectric regulated prices and the actual water conditions are captured in an OEB-approved regulatory variance account.

OPG's hydroelectric generating stations have an average age of approximately 80 years, with the majority of the hydroelectric generating equipment being over 50 years old. The condition of the equipment and civil components resulting from the age of these components requires OPG to plan potentially significant work to mitigate risks to the reliability of some hydroelectric generating stations. OPG manages these risks by performing inspection and maintenance of critical components and by reviewing mitigating actions. In addition, OPG conducts detailed engineering reviews and station condition assessments on an ongoing basis. These reviews and assessments help to identify future work required to sustain and, as appropriate, upgrade a station.

SBG has, and will continue to be, an issue in Ontario when electricity supply exceeds demand. To manage SBG conditions, the IESO may require OPG to reduce hydroelectric generation and spill water. A regulatory variance account authorized by the OEB helps to mitigate the financial impact of spill due to SBG conditions for OPG's regulated hydroelectric generating stations. The Company anticipates a declining trend in SBG due to reduced nuclear availability resulting from the refurbishment of the Darlington GS, future refurbishment of the Bruce generating stations, and the eventual shutdown of the Pickering GS.

The hydroelectric business operates 238 dams across Ontario. Dam safety legislation does not currently exist in the province. Technical guidelines published by the MNRF represent the government standards for dam safety. In general, OPG's practices in the area of dam safety and public safety around dams exceed the minimum requirements outlined in the MNRF technical guidelines. In cooperation with the MNRF, OPG continues to develop a new risk-informed approach to prioritize the outcomes of dam safety assessments. OPG could eventually incur additional costs for certain dams that it operates in order to comply with any new requirements.

People and Culture

OPG's operations could be affected if skilled human resources are not available or aligned with its talent requirements.

The development of new leaders and retention of staff in critical roles across OPG is a key factor to OPG's success. Another success factor is related to the effective transfer of knowledge from those in critical positions throughout the organization to future leaders. The risk associated with the alignment and/or availability of skilled and experienced resources continues to exist for OPG in specific areas, including leadership and project management positions. To mitigate this risk, OPG continues to focus on succession planning, leadership development and knowledge management programs to improve the capability of its workforce. There is also a continued risk of a mismatch between attrition levels and the resource requirements to meet OPG's future business needs.

Electricity generation involves complex technologies that require highly skilled and trained workers. Many positions at OPG have significant educational prerequisites and rigorous requirements for continuous training and periodic requalification, which requires a long-term outlook to workforce planning.

To mitigate the above risks, OPG is developing an organization-wide workforce planning and resourcing strategies and has established ongoing monitoring processes to reassess risks, challenges and opportunities related to staffing on a regular basis. OPG expects to meet the human resource needs of the business by developing existing employees and hiring in specific areas, while continuing to leverage attrition through realignment of work and streamlining of processes, where appropriate.

As of December 31, 2016, approximately 90 percent of OPG's regular labour force was represented by a union. OPG's current collective agreements with the PWU and The Society expire on March 31, 2018 and December 31, 2018, respectively, while all 19 collective agreements with craft unions expire on April 30, 2020. As a result of these agreements, OPG considers the likelihood of a labour disruption in the near future to be significantly reduced.

Health and Safety

OPG's operations involve inherent occupational safety risks and hazards.

OPG's operations involve inherent occupational safety risks and hazards that could impact the achievement of the Company's health and safety goals. OPG is committed to continuous improvement and achievement of its ultimate goal of zero injuries through a formal enterprise-wide safety management system, integrated at the operating site level, and by continuing to foster a strong health and safety culture among its employees and contractors. The safety management system serves to focus the Company on proactively managing safety risks and hazard exposures to employees and contractors. In 2016, OPG launched the organization-wide "iCare Enough to Act" initiative aimed at renewing employees' commitments to their own and each other's safety and well-being.

Cyber Security

OPG's ability to operate effectively is, in part, dependent on the efficient operation and management of the Company's complex information technology and industrial control systems in a secure, vigilant, and resilient manner that minimizes cyber risks. Cyber security incidents may have an adverse impact on OPG's reputation, energy production, and public and employee safety.

Cyber security incidents have been on the rise for the past several years and this trend is expected to intensify as organizations' reliance on technology continues to increase. OPG has strategies in place to prepare for, respond to, and recover from cyber security incidents. OPG continuously monitors, assesses, and improves the effectiveness of its cyber security strategies and programs considering leading industry practices and remains proactive in information and intelligence sharing to learn and adapt to the changing cyber environment.

As a registered Ontario market participant, OPG is accountable to comply with all applicable reliability obligations. Within the context of the Ontario regulatory framework, OPG is a registered generator, and is responsible for complying with the associated reliability standards. These standards apply to the relevant Bulk Electric System elements specified by the North American Electric Reliability Corporation and the relevant Bulk Power System facilities as determined by the Northeast Power Coordinating Council. In addition, OPG's nuclear cyber assets are subject to CNSC licensing conditions and regulatory requirements. For other cyber assets not subject to applicable regulatory requirements, OPG has adopted a risk-based approach based on the National Institute of Standards and Technology Cybersecurity Framework to manage its cyber security.

To mitigate cyber risks, OPG's cyber security program focuses on educating employees, contractors, and vendors, improving processes, and upgrading technology infrastructure. In particular, OPG's program focuses on the following:

1. Complying with regulatory requirements and applicable laws
2. Improving its cyber security protection and detection capabilities to reduce known or potential exposures by engaging the services of external experts to evaluate the security of its information technology infrastructure and controls
3. Adopting industry leading practices to reduce third-party cyber security risks through enhanced vendor risk assessments, introducing cyber security requirements into commercial agreements, and enhanced governance
4. Improving and exercising its incident response and recovery capability, and business continuity plans to minimize the business impact of an incident
5. Increasing the cyber security awareness and training level of its workforce through mandatory annual cyber security awareness training, specialized training for cyber specialists, social engineering tests, and periodic company-wide communications on relevant cyber security topics.

The oversight responsibility of the Audit and Risk Committee of OPG's Board of Directors over the Company's risk management activities includes the review of a semi-annual update from management on the Company's cyber security position and programs.

Suppliers

Non-performance by strategic suppliers or an inability to diversify the supplier base could adversely impact operating and project performance, financial results and reputation of OPG.

OPG's ability to operate effectively is in part dependent upon timely access to equipment, materials, and service suppliers. Loss of key equipment, materials, and service suppliers, particularly for the nuclear business, could affect OPG's ability to operate effectively and/or to execute major development projects or other capital investment programs. OPG mitigates this risk, to the extent possible, through contract negotiations, contract terms, vendor monitoring, diversification of supplier base, and business continuity plans.

Business Continuity and Emergency Management

Natural, technological or human-caused hazards may impact OPG's business continuity.

OPG is exposed to potential or actual incidents or developments resulting from extreme temperatures, precipitation, wind conditions or other natural disasters, and technological or human-caused hazards; to significant events against which it is not fully insured or indemnified; or to parties that fail to meet their indemnification obligations. These incidents have the potential to disrupt operations resulting in decreased generation revenue or additional costs to repair damages and restore operations.

OPG's business continuity program provides a framework to build resilience into critical business processes by facilitating development of risk response plans and business continuity exercises. OPG's emergency management

program is designed to ensure that the Company can manage an emergency in a timely and effective manner. OPG's plans and implementation procedures identify immediate response actions to be taken to protect the health and safety of employees and the public, and to limit the impact of the crisis on site security, production capability, and the environment. The program elements are designed to meet legal and regulatory requirements.

Risks to Achieving Project Excellence

The risks associated with the cost, schedule, technical and contractor performance aspects of the major projects could adversely impact OPG's financial performance and corporate reputation.

OPG is undertaking several capital intensive projects with significant investments. There may be an adverse effect on the Company if it is unable to: obtain necessary approvals; raise the necessary funds; effectively manage the projects on time and on budget; or fully recover capital costs and earn an appropriate return on investment in a timely manner. These projects also may have a significant impact on OPG's borrowing capacity and credit rating. Some projects may be ultimately reassessed as being uneconomical. The risks associated with OPG's current major projects are described below.

Darlington Refurbishment

OPG is responsible for the management of the Darlington Refurbishment project, including the project's budget and schedule, and continues to systematically manage all of the risks associated with the project through robust risk management practices. There are financial and reputational risk exposures for OPG if actual costs exceed the budget or if OPG does not meet the project schedule. In addition, failure to achieve the objectives of the refurbishment project may result in future forced outages and more complex planned outages, potentially impacting the post-refurbishment performance or useful life of the station. Failure to carry out the refurbishment of the first unit as planned may result in a decision not to proceed with the refurbishment of the remaining units, which, together with the planned end of commercial operations at the Pickering GS, could result in most of OPG's nuclear units shutting down by the early to mid 2020s.

There are a number of specific risks that OPG is managing and mitigating in relation to the Darlington Refurbishment project, which include OPG and vendor performance risks, delay or productivity risks, financial risks related to escalation of costs, technical risks such as equipment conditions resulting in additional scope, and execution risks such as failure to manage foreign material exclusion from the heat transport system that could lead to post-refurbishment operational risks.

To mitigate the above risks and to build on major lessons learned from other nuclear refurbishments and large scale, complex projects, OPG engaged in an extensive five-year project planning phase in order to determine the project scope, rigorously estimate costs in keeping with best practices, and incorporate lessons learned from other nuclear refurbishments. In order to fully define the scope and material requirements for the project, the planning phase included the completion of detailed designs before proceeding with the execution of the unit refurbishments. Further risk mitigation has been implemented through the construction of a full scale model training reactor, which allows for simulations and training for unit refurbishment execution tasks.

A large portion of the costs for the Darlington Refurbishment project is being paid to contractors and suppliers, including vendors that will engineer, procure, and construct components of the project. There is a risk that, as the volume of work increases significantly, vendor capability, capacity, and performance shortfalls may impact project objectives and deliverables. OPG's risk management strategy aims to ensure that contractors are held accountable and appropriate off-ramps are in place. In mitigating its overall financial risk, OPG utilizes a contracting strategy that aims to share the risk with key vendors in a cost effective manner, where appropriate. There is also an increased risk of contractor initiated safety events, which may impact OPG's reputation. Mitigating actions include collaborative execution phase planning, an enhanced human performance program, active risk management, increased field presence by supervisory staff, and assisting vendors in removing barriers to work. OPG also is managing other

ongoing risks that could potentially impact the project, including those related to continuity of skilled leaders within OPG and its vendor partners, as well as the availability of technical resources to support the project through execution.

Independent, third-party oversight has been established for the execution phase of the project, for both the project executive team and OPG's Board of Directors. The Ontario Ministry of Energy also has retained an external advisor to provide oversight of the project, reporting to the Minister of Energy.

Deep Geologic Repository for Low and Intermediate Level Waste

OPG, with the support of Bruce County municipalities, is proposing to construct and operate a deep geologic repository as the preferred solution for the safe long-term management of L&ILW. While broad local community support for the proposed L&ILW DGR is stable, there are pockets of opposition. OPG is currently awaiting a decision on the EA for the project by the federal Minister of Environment and Climate Change, before the issuance of the site preparation and construction licence may proceed. There is a risk of delay to the EA approval and/or the issuance of the site preparation and construction licence from potential political or legal challenges. OPG will continue its engagement with the Saugeen Ojibway Nations toward securing community support for the L&ILW DGR.

Other Development Projects

Projects that are in the initial development stages are subject to schedule delays or possible cancellation due to unforeseen delays in receiving permits or approvals, or establishing sufficient certainty regarding project cost recovery through revenue mechanisms, which may involve various external stakeholders. OPG attempts to mitigate these risks through early involvement and regular communication with applicable government agencies, close consultation with external stakeholders, and ongoing monitoring of contractor compliance relative to permits. Projects in the execution phase are subject to inherent risks related to performance against approved budgets and schedules. Mitigating activities for these risks include performing detailed engineering designs before proceeding with execution, engaging qualified and experienced vendors, and effectively monitoring and controlling performance.

Development projects also could be faced with increasing costs for equipment and construction that could impact their economic viability. OPG continuously monitors such trends in costs in order to identify emerging issues and seeks to manage and limit cost increases through contracting strategies, where possible.

Risks to Maintaining Financial Strength

Risks related to rate regulation, financial markets, and long-term obligations could significantly impact OPG's financial performance. The Company also is exposed to risks such as weak electricity demand, displacement of generation by competitors, and financial risk associated with energy trading.

There is a risk that future regulated prices will not allow OPG to consistently achieve financial performance that is commensurate with that of a commercial enterprise. OPG is exposed to a number of other significant financial risks, many of which arise due to decreasing demand for electricity, competing energy sources, OPG's exposure to volatility in commodity and equity markets, and interest rate fluctuations. This includes risks related to the Company's pension and OPEB obligations and costs that are impacted by market and interest rate fluctuations. OPG manages this complex array of risks with a view to reduce the uncertainty and/or mitigate the potential unfavourable impact on the financial results.

Rate Regulation

Significant uncertainties remain regarding the outcome of rate and generic proceedings impacting OPG's rate regulated operations.

There is an inherent risk that regulated prices established by the OEB may not provide for the recovery of all actual costs that will be incurred by OPG's regulated operations or allow the regulated operations to earn an appropriate

rate of return. This could occur if, in setting regulated prices, the OEB makes adjustments to forecasts submitted by OPG, if actual production and costs significantly differ from the forecasts approved by the OEB, or if OPG is unable to achieve additional efficiencies to meet the OEB-approved stretch factors expected to be included in regulated prices under incentive ratemaking. Differences between OPG's actual and forecast production and costs could be due to factors such as outages or project execution risks. In providing evidence in support of its applications for regulated prices, OPG aims to clearly demonstrate to the OEB that the costs for the regulated operations are reasonable, being prudently incurred and should be fully recovered.

Certain differences between elements of OEB-approved revenue requirements and OPG's actual results are recorded in OEB-approved variance and deferral accounts for future review by the OEB, including a number of accounts that are subject to an OEB prudence review. There is inherent uncertainty associated with the outcomes of future proceedings for the disposition of these balances.

Proposed Incentive Regulation Ratemaking Methodologies

In May 2016, OPG submitted a 5-year application to the OEB for new regulated prices effective January 1, 2017, on the basis of an incentive regulation ratemaking methodology for the hydroelectric operations and a custom incentive regulation framework for the nuclear operations. If accepted by the OEB, both approaches would result in greater decoupling of OPG's revenues for the regulated operations from their costs, which would contribute to the risk that the regulated operations may not earn an appropriate return based on actual cost incurred. The OEB's decision on OPG's application is expected in the second half of 2017.

Effective Date of New Regulated Prices

There are inherent uncertainties regarding the effective date that the OEB will establish for the new regulated prices based on OPG's May 2016 application. OPG has requested January 1, 2017 as the effective date. The OEB's decision on the effective date and the timing of the decision issuance could have a significant impact on OPG's 2017 results. Until the OEB's decision is issued, the continuation of existing regulated prices is expected to contribute to lower income, particularly from the Regulated – Nuclear Generation segment, and lower ROE Excluding AOCI in 2017, compared to 2016. In December 2016, the OEB issued an order declaring the existing base regulated prices interim, which preserves the OEB's ability to make the new regulated prices effective as early as January 1, 2017.

Nuclear Rate Smoothing Proposal

Consistent with the requirements of *Ontario Regulation 53/05*, OPG's May 2016 application includes a nuclear rate smoothing proposal whereby a portion of the approved nuclear revenue requirements will be deferred for future collection. There is an inherent risk that the magnitude of the deferral ordered by the OEB will result in regulated prices that do not provide sufficient cash flow to the Company for meeting its financial objectives in an optimal manner, including ensuring sufficient liquidity, cost effectively funding the Darlington Refurbishment project and other expenditures, and maintaining the Company's investment grade credit rating. Maintaining adequate levels of credit metrics will support OPG's investment grade credit rating. As such, OPG has advanced credit metrics as a key criterion for the OEB to apply in determining the smoothed nuclear base regulated prices.

Recovery of Pension and OPEB Costs

The OEB is currently conducting a consultation in the gas and electricity sectors to develop standard principles to guide the OEB's review of pension and OPEB costs for rate-regulated utilities, including establishing appropriate regulatory mechanisms for cost recovery. The OEB's November 2014 decision establishing OPG's existing regulated prices indicated that a change in the recovery methodology for OPG's pension and OPEB costs from the accrual basis, if required, would be addressed in OPG's next rate proceeding, having been informed by the outcome of the OEB's generic proceeding on the regulatory treatment and recovery of pension and OPEB costs. The decision also stated that the future recovery, if any, of amounts recorded in the Pension & OPEB Cash Versus Accrual Differential Deferral Account authorized by that decision to record the difference between OPG's actual pension and OPEB costs

for the regulated business determined using the accrual method and OPG's actual cash expenditures for these plans also would be subject to the outcome of the generic proceeding. As such, the outcome of the current consultation could have a material impact on OPG's ability to recover the balance recorded in the deferral account, as well as the Company's ability to recover full pension and OPEB costs in the future. Inability to recover these amounts would have significant adverse implications on OPG's future financial results. OPG is participating in the OEB consultation and has advanced its position in support of the appropriateness of using the accrual basis for cost recovery purposes.

Nuclear Waste Management and Nuclear Decommissioning Obligations, and Nuclear Segregated Funds

Changes in cost estimates or strategies for nuclear waste management and nuclear facilities decommissioning obligations could impact OPG's future contributions to the Nuclear Segregated Funds to cover these obligations.

As required by the CNSC, OPG is responsible for the management of used nuclear fuel and L&ILW and the decommissioning of its nuclear stations and waste management facilities. The cost estimates for OPG's nuclear waste management and nuclear decommissioning obligations are based on multiple underlying assumptions and estimates that are inherently uncertain and may evolve over time. The assumptions include station end-of-life dates, waste volumes, waste disposal methods, the timing of construction of assumed waste disposal facilities, waste packaging systems, decommissioning strategy, and financial indicators. To address the inherent uncertainty, OPG undertakes to perform a comprehensive review of the underlying assumptions and baseline cost estimates at least once every five years, in line with the required ONFA Reference Plan update process. The most recent comprehensive update of the nuclear waste management and decommissioning obligations was performed as part the 2017 ONFA Reference Plan, which was approved by the Province in December 2016. An approved ONFA Reference Plan determines OPG's contributions to the Nuclear Segregated Funds. The changes in contribution levels are impacted by changes in the values of the Nuclear Segregated Funds as well as changes in the associated nuclear waste management and nuclear facilities decommissioning funding obligations. Based on the 2017 ONFA Reference Plan, no contributions are currently required to the Nuclear Segregated Funds. Contributions may be required in the future should the Nuclear Segregated Funds be in an underfunded position relative to the funding requirement of a new approved ONFA reference plan.

Financial Markets

The market value of investments held by OPG's Nuclear Segregated Funds and registered pension plan could be significantly affected by changes in various market factors such as equity prices, interest rates, inflation, and commodity prices.

Nuclear Segregated Funds Market Risk

Investments in the Nuclear Segregated Funds are allocated to certain asset classes including fixed income securities, domestic and international equity securities, pooled funds, infrastructure, agriculture and real estate. These funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, in order to fund the expenditures associated with the long-term management of used fuel and L&ILW after station shutdown and the decommissioning of OPG's nuclear stations and waste management facilities. The rates of return earned on these segregated funds are subject to various factors including the current and future financial market conditions, which are inherently uncertain. The asset mix of the funds is determined jointly by OPG and the Province in accordance with the ONFA.

For the Used Fuel Segregated Fund, the Province guarantees the annual rate of return at 3.25 percent plus the change in the Ontario CPI, as defined by the ONFA, for the portion of the fund attributed to the first 2.23 million used fuel bundles. As such, a change in the portion of the fund's value attributed to the first 2.23 million bundles impacts OPG's earnings to the extent of changes in the Ontario CPI. OPG is subject to the market risk for the investment of funds set aside in the Used Fuel Segregated Fund for used fuel bundles in excess of the 2.23 million threshold. OPG also is subject to the market risk for the investment of funds set aside in the Decommissioning Segregated Fund.

In accordance with the cost recovery methodology established by the OEB, the performance of the portion of the Nuclear Segregated Funds attributed to the nuclear generating stations leased to Bruce Power has been subject to the Bruce Lease Net Revenues Variance Account. The variance account partially mitigates the income impact of the rate of return risk related to the Nuclear Segregated Funds, as it captures the differences between actual and forecast earnings from the Nuclear Segregated Funds related to these stations. Forecast earnings are those approved by the OEB in setting nuclear regulated prices. OPG's income is exposed to the rate of return risk related to the portion of the Nuclear Segregated Funds related to the Pickering and Darlington nuclear generating stations under the OEB-approved cost recovery methodology. The income statement impact of this rate of return risk is reduced when the Nuclear Segregated Funds are in a fully funded position. As at December 31, 2016, the Decommissioning Segregated Fund was 21 percent overfunded while the Used Fuel Segregated Fund was marginally overfunded, at less than one percent.

Post-Employment Benefit Obligations Risk

OPG's post-employment benefit obligations include pension, group life insurance, health care benefits, and LTD benefits. OPG's post-employment benefit obligations and costs, and pension plan contributions could be materially affected in the future by numerous factors, including: changes in discount rates, inflation rates, and other actuarial assumptions; future investment returns; experience gains and losses; the funded status of the pension plans; changes in benefits; changes in the regulatory environment including potential changes to the *Pension Benefits Act* (Ontario); changes in OPG's operations; and the measurement uncertainty incorporated into the actuarial valuation process.

The OPG registered pension plan, which covers most of OPG's employees and retirees, is a contributory defined benefit plan that is indexed to inflation. Contributions to the OPG registered pension plan are determined by actuarial valuations, which are filed with the appropriate regulatory authorities at least every three years. The most recent actuarial valuation of the OPG registered pension plan, covering the three-year period to the end of 2018, was completed as of January 1, 2016. There is an inherent risk that future actuarial valuations could increase OPG's funding requirements due to market and economic-related conditions. A significant decline in the financial markets could trigger an immediate requirement to update the actuarial valuation based on declines in the funded status. OPG continues to assess the requirements for contributions to the registered pension plan, including the timing of future actuarial valuations. The next actuarial valuation for funding purposes of the OPG registered plan must have an effective date no later than January 1, 2019. OPG's OPEB obligations are not funded and the associated employee benefits are paid from cash flow provided by operating activities or other sources of liquidity.

Commodity Markets

Changes in the market price of fuels used to produce electricity can adversely impact OPG's earnings and cash flow from operations.

To manage the risk of unpredictable increases in the price of fuels, the Company has fuel hedging programs, which include using fixed price and indexed contracts.

The percentages hedged of OPG's fuel requirements are shown in the following table. These amounts are based on yearly forecasts of generation and supply mix and, as such, are subject to change as these forecasts are updated.

	2017	2018	2019
Estimated fuel requirements hedged [1]	75%	76%	65%

[1] Represents the approximate portion of megawatt-hours of expected generation production (and year-end inventory targets) from each type of OPG-operated facility (nuclear, hydroelectric and thermal) for which the Company has entered into contractual arrangements or obligations in order to secure the price of fuel, or which is subject to regulation. In the case of hydroelectric generation, this represents the gross revenue charge and water rental charges. Excess fuel inventories (nuclear and thermal) in a given year are attributed to the next year for the purpose of measuring hedge ratios.

Foreign Exchange

OPG's earnings and cash flow can be affected by movements in the United States dollar relative to the Canadian dollar.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are primarily denominated in, or tied to, US dollars (USD). To manage this risk, OPG employs various financial instruments such as forwards and other derivative contracts, in accordance with approved risk management policies. As at December 31, 2016, OPG had total foreign exchange contracts outstanding with a notional value of USD $9 million.

Trading

OPG's financial performance can be affected by its trading activities.

OPG's electricity trading operations are closely monitored, with total exposures measured and reported to senior management on a daily basis. The main metric used to measure the financial risk of trading activity is Value at Risk (VaR). VaR is defined as a probabilistic maximum potential future loss expressed in monetary terms for a portfolio based on normal market conditions over a set period of time. During each of 2016 and 2015, the VaR utilization ranged between nil and $1.5 million.

Credit

Deterioration in counterparty credit and non-performance by suppliers and contractors can adversely impact OPG's earnings and cash flow from operations.

The Company's credit risk exposure is a function of its electricity sales, trading and hedging activities, treasury activities including investing, and commercial transactions with various suppliers of goods and services. OPG's credit risk exposure relating to electricity sales is considered low as the majority of sales are through the IESO-administered spot market. The IESO oversees the credit worthiness of all market participants. In accordance with the IESO's prudential support requirements, market participants are required to provide collateral to cover funds that they might owe to the market.

Other major components of OPG's credit risk exposure include those associated with vendors that are contracted to provide services or products. OPG manages its exposure to various suppliers or counterparties by evaluating their financial condition and ensuring that the Company holds appropriate collateral or other forms of security.

The following table summarizes OPG's credit exposure to all counterparties from electricity transactions and trading as at December 31, 2016:

Credit Rating [1]	Number of Counterparties [2]	Potential Exposure [3] *(millions of dollars)*	Potential Exposure for Largest Counterparties: Number of Counterparties	Potential Exposure for Largest Counterparties: Potential Exposure *(millions of dollars)*
Investment grade	11	11	5	9
IESO [4]	1	421	1	422
Total	12	432	6	431

[1] Credit ratings are based on OPG's own analysis, taking into consideration external rating agency analysis where available, as well as recognizing explicit credit support provided through parental guarantees, Letters of Credit or other forms of security.

[2] OPG's counterparties are defined on the basis of individual master agreements.

[3] Potential exposure is OPG's statistical assessment of maximum exposure over the life of each transaction at a 95 percent confidence interval.

[4] Credit exposure is an estimate of the receivable amount arising from OPG's electricity sales into the IESO market. The credit exposure and associated receivable vary each month based on electricity sales. The monthly receivable from the IESO is typically paid to OPG in the subsequent month as per the IESO payment schedule.

Liquidity

Rising liquidity requirements can impact OPG's capital investment projects and ability to meet financial obligations.

OPG operates in a capital intensive business. Significant financial resources are required to fund major development and other capital improvement projects, including the Darlington Refurbishment project. In addition, the Company has other significant disbursement requirements including pension contributions and Nuclear Segregated Funds contributions, payments towards OPEB and other benefit plans, expenditures on Nuclear Liabilities not eligible for reimbursement from the Nuclear Segregated Funds, debt maturities with the OEFC, and investments in new generating capacity and other business growth opportunities. OPG must ensure that it has the financial capacity and sufficient access to cost effective financing sources to fund its capital requirements and other disbursements. In support of this objective, OPG utilizes multiple sources and forecasts availability of funds, actively monitors funding requirements, and is focused on maintaining its investment grade credit rating. A discussion of corporate liquidity is included under the section, *Liquidity and Capital Resources*.

Contracted Generation

OPG may incur costs if its contracted generating assets do not meet performance targets as specified in the ESAs with the IESO or other long-term contracts. There is also a risk that, upon expiry, subsequent ESAs may not be available.

The Company's generating stations operating under ESAs with the IESO or other long-term contracts are subject to availability and production targets specified in their respective contracts. OPG could incur charges and other costs if these facilities fail to operate at required capacity or production levels, as required. This risk is mitigated through the implementation of maintenance, capital investment and other programs, as appropriate.

OPG's owned and co-owned thermal generating stations operate under ESAs with the IESO or other long-term agreements. In December 2016, the Ontario and Quebec governments signed an electricity trade agreement that will allow Ontario to import up to 2 TWh of hydroelectric power from Quebec annually from 2017 to 2023. This is expected to replace some gas-fired generation in Ontario. While OPG expects that its thermal generating stations will continue to provide capacity to the market over the term of the respective agreements, there is a risk that, upon expiry of the current agreements, subsequent contracts for these stations may not be available or may not be available on financially viable terms.

Ontario Electricity Market

Ontario electricity market conditions could impact OPG's revenue and operations.

OPG's revenue can be impacted by external factors related to the electricity market including: the entrance of new participants into the Ontario market; the competitive actions of market participants; Ontario electricity demand; changes in the regulatory environment; and wholesale electricity prices in the interconnected markets.

The structure of the Ontario electricity market is subject to regulation and market rules, changes to which may affect OPG's revenue. The Province, the IESO, the OEB, or another entity or regulatory body may change or institute regulations or rules that can impact OPG's capability to generate revenue and recover appropriate costs and earn an appropriate return on the assets.

Ownership by the Province

OPG's commitment to maximize the return on the Shareholder's investment in the Company may compete with the obligation of the Shareholder to respond to a broad range of matters in its role as the Government of Ontario.

The Province owns all of OPG's issued and outstanding common shares. Accordingly, the Province, as represented by the Ontario Ministry of Energy, has the authority to make appointments to OPG's Board of Directors. OPG could be subject to Shareholder direction, under Section 108 of the OBCA, that can directly influence major decisions including those related to project development, timing and strategy of applications for regulated prices, asset divestitures, financing and capital structure, that could require OPG to undertake activities that result in increased expenditures, that reduce revenues or cash flows relative to the business activities or strategies that would have otherwise been undertaken, or that increase the Company's financial or reputational risk exposure. In addition, the obligation of OPG's Shareholder to respond to a broad range of matters in its role as the Government of Ontario may compete with OPG's commitment to maximize the return on the Shareholder's investment in the Company. This includes, but is not limited to, the Province's response to mitigate the impact of rising electricity prices on consumers.

Government Legislation and Regulation Change

OPG is subject to extensive federal and provincial legislation and regulations that have an impact on the Company's operations and financial position.

OPG's core business and strategy may be impacted by changes in federal and provincial legislation and regulations. Matters that are subject to regulation include, among others, rate regulation, electricity generating operations, nuclear waste management and nuclear decommissioning, and taxation. Regulatory bodies may change or enact regulations or rules, such as new nuclear fitness for duty requirements, that could increase OPG's costs, decrease OPG's revenue, or limit the Company's ability to recover appropriate costs or earn an appropriate return on the assets.

Since legal requirements are subject to change and to interpretation, OPG is unable to predict the impact of such changes on the Company and its operations. To mitigate legislative risks, OPG continues to monitor and actively engage with the federal and provincial governments in order to determine if future legislation will impact the Company.

Risks to Maintaining Social Licence

OPG is exposed to risks associated with its social licence and public profile due to changes in the opinions of various stakeholders, including local communities, Ontario customers, government agencies, and Indigenous communities. Additionally, inability to achieve operational excellence and project excellence safely and reliably and to maintain financial strength could impact OPG's social licence.

Maintaining public trust and meeting stakeholders and Indigenous communities' expectations are critical to OPG's success. OPG focuses on building and maintaining its social licence and corporate reputation through safe, reliable,

environmentally responsible operations, as well as corporate citizenship initiatives across the province. The inability to maintain safe, reliable operations could negatively impact OPG's reputation and result in a loss of public support.

OPG has transparent governance practices and works continuously towards effective communication and consultation with Indigenous communities and stakeholders. Efforts to reinforce OPG's social licence include media campaigns that highlight the Company's contribution as a clean power generator with a commitment to safety, environment and community partnerships. OPG undertakes various assurance and risk management activities to effectively manage the risks to its social licence and corporate reputation. Issue management and response plans are developed to address specific concerns as they arise.

Indigenous Communities

The quality of OPG's relationships and the outcome of negotiations with Indigenous communities may impact OPG's project and financial performance, as well as its social licence to operate.

OPG may be subject to claims by Indigenous communities. These claims stem from projects and generation development related to the operations of OPG and historic operations of OPG's predecessor company, Ontario Hydro, which may have impacted the Aboriginal and/or Treaty rights of Indigenous communities.

OPG has an Indigenous Relations Policy, which sets out the Company's commitment to proactively build and maintain positive relationships with Indigenous communities. OPG has been successful in resolving a number of past grievances by Indigenous communities. However, the outcome of ongoing and any future negotiations depends on a number of factors, including legislation, regulations and precedents created by court rulings, which are subject to change over time. OPG pursues generation-related developments in partnerships with Indigenous communities on the basis of long-term mutually beneficial commercial arrangements.

Environmental Risks

OPG may be subject to orders or charges if it is not in compliance with applicable environmental laws. Changes in environmental regulatory requirements can result in existing operations being in a state of non-compliance, a potential inability to comply, and potential costs and liabilities for OPG.

Changes to environmental laws could create compliance risks and result in potential liabilities that may be addressed by the installation of control technologies, development of new processes, allowances or offsets, or constraints on electricity production. A failure to comply with applicable environmental laws may result in enforcement actions, including the potential for orders or charges. In addition, some of OPG's activities have the potential to impair natural habitat, damage aquatic or terrestrial plant and wildlife, or cause contamination to land or water that may require remediation. There is also a risk that OPG may incur additional costs to meet heritage conservation program requirements under the *Ontario Heritage Act*.

Potential environmental regulatory changes being managed as risks by the Company include electricity production constraints and water flow management requirements to protect fish and fish habitat, expanded fish passage requirements, and lower drinking and ground water tritium concentration standards. These changes could impact plant operations and increase costs. OPG continues to monitor and address risks associated with changes to environmental laws and regulatory requirements. There were no significant changes to environmental legislation applicable to OPG during 2016.

OPG recognizes that efforts are required to plan for the effects of climate change and has identified climate change adaptation as a strategic issue for the company. OPG monitors developments in climate science, adaptation activities, and potential changes to policy and regulatory requirements. OPG continues to work with stakeholders to better define adaptation requirements through analysis and understanding of climate change impacts on watersheds and electricity supply and demand. Once adaptation requirements are better known, a risk-based analysis will help OPG determine the extent of efforts it will undertake to reduce the impact of climate change on its operations.

A carbon cap and trade program became effective in Ontario in January 2017. The program is not expected to have a material adverse economic impact on OPG due to the Company's low GHG emitting generating fleet. Further details can be found in the section, *Core Business, Strategy, and Outlook* under the heading, *Environmental Performance*.

RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties include the Province and other entities controlled by the Province.

The related party transactions summarized below include transactions with the Province and the principal successors to the former Ontario Hydro's integrated electricity business, including Hydro One, the IESO and the OEFC. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. As one of several wholly-owned government business enterprises of the Province, OPG also has transactions in the normal course of business with various government ministries and organizations in Ontario that fall under the purview of the Province.

The related party transactions for the years ended December 31 are summarized below:

	2016		2015	
(millions of dollars)	**Revenue**	**Expense**	**Revenue**	**Expense**
Hydro One				
Electricity sales	**6**	**-**	12	-
Services	**1**	**5**	1	6
Dividends	**6**	**-**	-	-
Province of Ontario				
Change in Decommissioning Segregated Fund amount due to Province [1]	**-**	**192**	-	185
Change in Used Fuel Segregated Fund amount due to Province [1]	**-**	**235**	-	274
Hydroelectric gross revenue charge	**-**	**120**	-	121
ONFA guarantee fee	**-**	**8**	-	8
OEFC				
Gross revenue charge	**-**	**203**	-	207
Interest expense on long-term notes	**-**	**169**	-	177
Income taxes, net of investment tax credits	**-**	**104**	-	80
Contingency support agreement	**-**	**-**	8	-
IESO				
Electricity related revenue	**5,105**	**24**	4,903	65
	5,118	**1,060**	4,924	1,123

[1] The Nuclear Segregated Funds are reported on the consolidated balance sheets net of amounts recognized as due to the Province in respect of excess funding and, for the Used Fuel Segregated Fund, the Province's rate of return guarantee. As at December 31, 2016 and December 31, 2015, the Nuclear Segregated Funds were reported net of amounts due to the Province of $3,415 million and $2,988 million, respectively.

The receivable, available-for-sale securities, payable and long-term debt balances between OPG and its related parties are summarized below:

(millions of dollars)	**2016**	**2015**
Receivables from related parties		
Hydro One	**1**	1
IESO	**421**	531
OEFC	**1**	9
PEC	**4**	3
Province of Ontario	**2**	1
Available-for-sale securities		
Hydro One shares	**212**	-
Accounts payable and accrued charges		
Hydro One	**-**	1
OEFC	**61**	51
Province of Ontario	**2**	20
IESO	**2**	18
Long-term debt (including current portion)		
Notes payable to OEFC	**3,295**	3,465

OPG holds interest-bearing Province of Ontario bonds in the Nuclear Segregated Funds and the OPG registered pension fund. As at December 31, 2016, the Nuclear Segregated Funds and the registered pension fund held $1,652 million and $284 million of interest-bearing Province of Ontario bonds, respectively. As at December 31, 2015, the Nuclear Segregated Funds and the registered pension fund held $1,597 million and $288 million of interest-bearing Province of Ontario bonds, respectively. These bonds are publicly traded securities and are measured at fair value. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

INTERNAL CONTROLS OVER FINANCIAL REPORTING AND DISCLOSURE CONTROLS

Management, including the President and Chief Executive Officer (President and CEO) and the Chief Financial Officer (CFO), are responsible for maintaining Disclosure Controls and Procedures (DC&P) and Internal Controls over Financial Reporting (ICOFR). DC&P is designed to provide reasonable assurance that all relevant information is gathered and reported to senior management, including the President and CEO and the CFO, on a timely basis so that appropriate decisions can be made regarding public disclosure. ICOFR is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the financial statements in accordance with US GAAP.

There were no changes in OPG's ICOFR during the year ended December 31, 2016 that have materially affected or are reasonably likely to materially affect OPG's ICOFR.

Management, including the President and CEO and the CFO, concluded that, as of December 31, 2016, OPG's DC&P and ICOFR (as defined in National Instrument 52-109 – *Certification of Disclosure in Issuers' Annual and Interim Filings*) were effective.

FOURTH QUARTER

Discussion of Results

(millions of dollars) (unaudited)	Three Months Ended December 31 2016	2015
Revenue	**1,388**	1,312
Fuel expense	**186**	175
Gross margin	**1,202**	1,137
Operations, maintenance and administration	**686**	788
Depreciation and amortization	**316**	354
Accretion on fixed asset removal and nuclear waste management liabilities	**233**	223
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(126)**	(169)
Income from investments subject to significant influence	**(9)**	(9)
Property taxes	**11**	11
Restructuring	**6**	5
Income (loss) before other losses, interest, and income taxes	**85**	(66)
Other losses	**6**	12
Income (loss) before interest and income taxes	**79**	(78)
Net interest expense	**28**	44
Income (loss) before income taxes	**51**	(122)
Income tax expense (recovery)	**59**	(22)
Net loss	**(8)**	(100)
Net loss attributable to the Shareholder	**(13)**	(101)
Net income attributable to non-controlling interest	**5**	1

Net loss attributable to the Shareholder for the fourth quarter was $13 million, compared to a net loss of $101 million for the same quarter in 2015.

Income before interest and income taxes was $79 million during the fourth quarter of 2016, an increase of $157 million compared to loss before interest and income taxes of $78 million during the same period in 2015. The following summarizes the significant factors which contributed to the variance:

Significant factors that increased income before interest and income taxes:

- Lower number of outage days increased nuclear generation by 2.2 TWh during the fourth quarter in 2016, compared to the same period in 2015, primarily due to the four-unit Darlington VBO that was completed on October 30, 2015 and a lower number of unplanned outage days at the Darlington GS in 2016. The increase in nuclear generation resulted in an increase in revenue from the nuclear base regulated price of approximately $130 million.
- Lower OM&A expenses of $77 million in the Regulated – Nuclear Generation segment primarily due to increased outage activities in 2015, including the Darlington VBO.

Significant factors that decreased income before interest and income taxes:

- Decrease in earnings from the Nuclear Segregated Funds of $43 million during the fourth quarter of 2016, compared to the same quarter in 2015, mainly due to an accounting adjustment recorded during the fourth quarter of 2016 to limit the funds asset values recognized on OPG's consolidated balance sheet to the lower underlying obligations per the 2017 ONFA Reference Plan.
- Higher accretion expense of $10 million, reflecting the increase in the Nuclear Liabilities recognized in December 2015 in connection with the changes in the estimated useful life assumptions for OPG's nuclear stations, net of the impact of the Bruce Lease Net Revenues Variance Account.

The increase in income tax expense during the fourth quarter of 2016, compared to the same quarter in 2015, was primarily due to higher income before income taxes and a lower amount of tax expense deferred in regulatory assets in 2016.

Average Sales Prices

The average sales price for the Regulated – Nuclear Generation segment during the fourth quarter of 2016 was 6.9 ¢/kWh, compared to 7.0 ¢/kWh during the same quarter in 2015. The decrease in the average sales price was primarily due to the expiry, on December 31, 2015, of an OEB-authorized nuclear rate rider of $1.33/MWh related to the recovery of variance and deferral account balances. The average sales price for the Regulated – Hydroelectric segment during the fourth quarter of 2016 was 4.5 ¢/kWh, compared to 4.8 ¢/kWh during the same quarter in 2015. The decrease in the average sales price was primarily due to the expiry, on December 31, 2015, of an OEB-authorized rate rider of $6.04/MWh related to the recovery of variance and deferral account balances for the hydroelectric facilities prescribed for rate regulation prior to 2014.

The reduction in revenue from rate riders was largely offset by changes in amortization expense related to regulatory account balances. The reduction in amortization expense related to regulatory account balances was the primary reason for the lower depreciation and amortization expense during the fourth quarter of 2016, compared to 2015.

Electricity Generation

OPG's electricity generation for the three months ended December 31, 2016 and 2015 was as follows:

	Three Months Ended December 31	
(TWh)	**2016**	**2015**
Regulated – Nuclear Generation	**11.0**	8.8
Regulated – Hydroelectric	**6.7**	7.3
Contracted Generation Portfolio [1]	**0.6**	0.7
Total OPG electricity generation	**18.3**	16.8
Total electricity generation by all other generators in Ontario [2]	**18.9**	19.6

[1] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

[2] Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the IESO, minus OPG electricity generation.

The increase in OPG's electricity generation of 1.5 TWh during the fourth quarter of 2016, compared to the same quarter in 2015, was primarily due to higher electricity generation of 2.2 TWh from the Regulated – Nuclear Generation segment as a result of fewer outage days at the Darlington GS during the fourth quarter of 2016, primarily due to the Darlington VBO during the fourth quarter of 2015. The increase in generation was partially offset by reduced generation from the Regulated – Hydroelectric Segment of 0.6 TWh, primarily due to lower water flows in eastern Ontario during the fourth quarter of 2016.

Ontario's electricity demand as reported by the IESO was 33.2 TWh during the fourth quarter of 2016, compared to 32.7 TWh during the fourth quarter of 2015.

Liquidity and Capital Resources

Cash flow provided by operating activities during the three months ended December 31, 2016 was $437 million, compared to $111 million for the same period in 2015. The increase in cash flow was primarily due to higher generation revenue receipts, lower pension plan contributions and lower OM&A expenditures during the fourth quarter of 2016. Higher generation revenue receipts reflected higher nuclear generation in the fourth quarter of 2016.

Cash flow used in investing activities during the three months ended December 31, 2016 was $497 million, compared to $571 million during the same period in 2015. The decrease was primarily due to the partial maturity, in the fourth quarter of 2016, of a structured deposit note invested in the fourth quarter of 2015, partially offset by higher expenditures for the Darlington Refurbishment project. The deposit note invested proceeds from the long-term debt issued in support of the Peter Sutherland Sr. GS project in October 2015.

Cash flow used in financing activities during the three months ended December 31, 2016 was $180 million, compared to cash flow provided by financing activities of $356 million for the same period in 2015. The decrease in cash flow provided by financing activities was due to the net repayment of short-term notes and lower net issuance of long-term debt in the fourth quarter of 2016.

QUARTERLY FINANCIAL HIGHLIGHTS

The following tables set out selected annual financial information for the last three years and financial information for each of the eight most recently completed quarters. This information is derived from OPG's unaudited interim consolidated financial statements and the audited consolidated financial statements, and has been prepared in accordance with US GAAP.

Annual Financial Information

(millions of dollars – except where noted)	**2016**	**2015**	**2014**
Revenue	**5,653**	5,476	4,963
Income before extraordinary item attributable to the Shareholder	**436**	402	561
Net income attributable to the Shareholder	**436**	402	804
Net income per common share before extraordinary item *(dollars)*	**$1.70**	$1.57	$2.19
Net income per common share *(dollars)*	**$1.70**	$1.57	$3.14
Total assets	**44,372**	44,250	41,645
Total long-term liabilities	**31,460**	32,404	30,483
Common shares outstanding *(millions)*	**256.3**	256.3	256.3

Quarterly Financial Information

(millions of dollars – except where noted) *(unaudited)*	**2016 Quarters Ended**				
	December 31	**September 30**	**June 30**	**March 31**	**Total**
Revenue	**1,388**	**1,400**	**1,387**	**1,478**	**5,653**
Net (loss) income	**(8)**	**198**	**135**	**128**	**453**
Less: Net income attributable to non-controlling interest	**5**	**4**	**3**	**5**	**17**
Net (loss) income attributable to the Shareholder	**(13)**	**194**	**132**	**123**	**436**
Per common share, attributable to the Shareholder *(dollars)*	**($0.05)**	**$0.76**	**$0.51**	**$0.48**	**$1.70**

Quarterly Financial Information

(millions of dollars – except where noted) (unaudited)	2015 Quarters Ended				
	December 31	**September 30**	**June 30**	**March 31**	**Total**
Revenue	1,312	1,426	1,383	1,355	5,476
Net (loss) income	(100)	85	193	239	417
Less: Net income attributable to non-controlling interest	1	5	4	5	15
Net (loss) income attributable to the Shareholder	(101)	80	189	234	402
Per common share, attributable to the Shareholder *(dollars)*	($0.39)	$0.31	$0.74	$0.91	$1.57

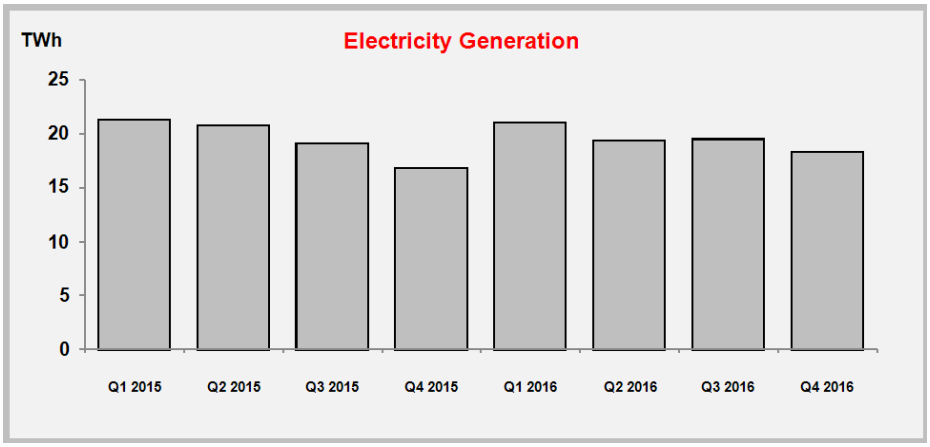
Trends

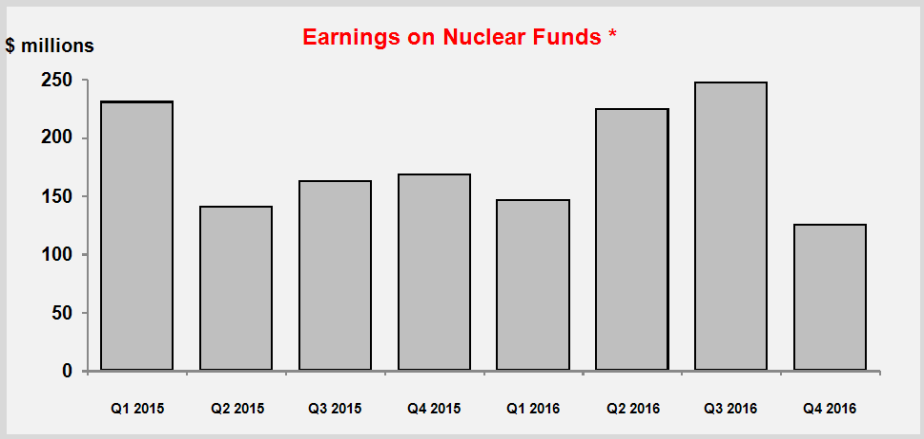
OPG's quarterly results are affected by changes in grid-supplied electricity demand, primarily resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Weather conditions affect water flows, electricity demand, and prevalence of SBG conditions. Historically, OPG's revenues have been higher in the first quarter of a fiscal year as a result of winter heating demands and in the third quarter due to air conditioning and cooling demands. The financial impact of forgone production due to SBG conditions at the regulated hydroelectric stations and the financial impact of differences between forecast water flows reflected in OEB-approved regulated prices and the actual water flows are offset by regulatory variance accounts authorized by the OEB.

The timing of planned outages at a nuclear generating station during the year can cause variability in year-over-year operating results for partial periods of a fiscal year, including the impact on revenue and OM&A expenses, but is not a significant driver of variability for full fiscal year results.

During the third and fourth quarters of 2015, OPG's electricity generation was reduced by the four-unit Darlington VBO, which lasted 47 days from September 14, 2015 to October 30, 2015. A VBO is currently required every 12 years at the Darlington GS.

OPG's financial results are also affected by the earnings on the Nuclear Segregated Funds, net of the impact of the Bruce Lease Net Revenues Variance Account.





*net of regulatory variance account

Additional items which affected net income (loss) in certain quarters above are described below:

- A gain of $22 million recorded during the first quarter of 2016 reflecting the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to Niagara Tunnel project expenditures.
- Lower earnings of $16 million during the first quarter of 2015, compared to the same quarter in 2016, in the Contracted Generation Portfolio segment, primarily as a result of a provision made in that quarter related to an IESO audit.
- Higher OM&A expenses of $105 million for the Regulated – Nuclear Generation segment during the first half of 2016, compared to the same period in 2015, primarily resulting from an increase in planned outage activities and the timing of planned outage activities during the year.
- Lower OM&A expenses of $91 million for the Regulated – Nuclear Generation segment during the second half of 2016, compared to the same period in 2015, primarily as a result of the VBO at the Darlington GS in the third and fourth quarters of 2015.

Additional information about OPG, including its audited consolidated financial statements and notes thereto, can be found on SEDAR at www.sedar.com.

SUPPLEMENTARY NON-GAAP FINANCIAL MEASURES

In addition to providing net income and other financial information in accordance with US GAAP, certain non-GAAP financial measures are also presented in OPG's MD&A. These non-GAAP measures do not have any standardized meaning prescribed by US GAAP and, therefore, may not be comparable to similar measures presented by other issuers. OPG utilizes these measures to make operating decisions and assess performance. Readers of the MD&A would utilize these measures in assessing the Company's financial performance from ongoing operations. The Company believes that these indicators are important since they provide additional information about OPG's performance, facilitate comparison of results over different periods, and present measures consistent with the Company's strategies to provide value to the Shareholder, improve cost performance, and to ensure availability of cost effective funding. These non-GAAP financial measures have not been presented as an alternative to net income, cash flow provided by operating activities, or any other measure in accordance with US GAAP, but as indicators of operating performance.

The definitions of the non-GAAP financial measures are as follows:

(1) ROE Excluding AOCI is defined as net income attributable to the Shareholder divided by average equity attributable to the Shareholder excluding AOCI, for the period.

ROE Excluding AOCI is measured over a 12-month period and is calculated as follows for the period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
ROE Excluding AOCI		
Net income attributable to the Shareholder	**436**	402
Divided by: Average equity attributable to the Shareholder, excluding AOCI	**10,442**	10,023
ROE Excluding AOCI *(percent)*	**4.2**	4.0

(2) FFO Adjusted Interest Coverage is defined as FFO before interest divided by adjusted interest expense. FFO before interest is defined as cash flow provided by operating activities adjusted for interest paid, interest capitalized to fixed and intangible assets, and changes to non-cash working capital balances for the period. Adjusted interest expense is calculated as net interest expense plus interest income, interest capitalized to fixed and intangible assets, interest related to regulatory assets and liabilities, and the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets, for the period.

FFO Adjusted Interest Coverage is measured over a 12-month period and is calculated as follows for the period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
FFO before interest		
Cash flow provided by operating activities	**1,705**	1,465
Add: Interest paid	**269**	269
Less: Interest capitalized to fixed and intangible assets	**(141)**	(102)
Add: Changes to non-cash working capital balances	**(68)**	129
FFO before interest	**1,765**	1,761
Adjusted interest expense		
Net interest expense	**120**	180
Add: Interest income	**7**	9
Add: Interest capitalized to fixed and intangible assets	**141**	102
Add: Interest related to regulatory assets and liabilities	**30**	2
Add: Excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets	**45**	53
Adjusted interest expense	**343**	346
FFO Adjusted Interest Coverage *(times)*	**5.1**	5.1

(3) Enterprise Total Generating Cost per MWh is used to measure OPG's overall organizational cost performance. Enterprise TGC per MWh is defined as OM&A expenses (excluding the Darlington Refurbishment project and other generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's electricity generation business), fuel expense for OPG-operated stations including hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures (excluding the Darlington Refurbishment project and other generation development projects) incurred during the period, divided by total electricity generation from OPG-operated generating stations plus electricity generation forgone due to SBG conditions during the period.

Enterprise TGC per MWh is calculated as follows for the 12-month period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
Enterprise TGC		
Total OM&A expenses	**2,747**	2,783
Total fuel expense	**727**	687
Total capital expenditures	**1,704**	1,376
Less: Darlington Refurbishment capital and OM&A costs	**(1,022)**	(707)
Less: Other generation development project capital and OM&A costs	**(163)**	(201)
Add: OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**62**	250
Less: Nuclear fuel expense for non OPG-operated stations	**(67)**	(55)
Add: Hydroelectric gross revenue charge and water rental payments for electricity generation forgone due to SBG conditions	**49**	34
Less: OM&A expenses ancillary to electricity generation business	**(28)**	(29)
Other adjustments	**(19)**	(40)
	3,990	4,098
Adjusted electricity generation *(TWh)*		
Total OPG electricity generation	**78.2**	78.0
Adjust for electricity generation forgone due to SBG conditions and OPG's share of electricity generation from its co-owned facilities	**4.1**	2.6
	82.3	80.6
Enterprise TGC per MWh *($/MWh)* [1]	**48.45**	**50.84**

[1] Amounts may not calculate due to rounding.

(4) Nuclear Total Generating Cost per MWh is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding the Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding the Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation for the period.

Nuclear TGC per MWh is calculated as follows for the 12-month period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
Nuclear TGC		
Regulated – Nuclear Generation OM&A expenses	**2,210**	2,196
Regulated – Nuclear Generation fuel expense	**315**	301
Regulated – Nuclear Generation capital expenditures	**1,338**	1,023
Less: Darlington Refurbishment capital and OM&A costs	**(1,022)**	(707)
Add: Regulated – Nuclear Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**81**	230
Less: Nuclear fuel expense for non OPG-operated stations	**(67)**	(62)
Less: Regulated – Nuclear Generation OM&A expenses ancillary to nuclear electricity generation business	**(10)**	(7)
Other adjustments	**(4)**	(27)
	2,841	2,947
Nuclear electricity generation *(TWh)*	**45.6**	44.5
Nuclear TGC per MWh *($/MWh)* [1]	**62.30**	66.22

[1] Amounts may not calculate due to rounding.

(5) Hydroelectric Total Generating Cost per MWh is used to measure the cost performance of OPG's hydroelectric generating assets. Hydroelectric TGC per MWh is defined as OM&A expenses of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding generation development project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the hydroelectric electricity generation business), hydroelectric gross revenue charge and water rental payments (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Hydroelectric segment and the hydroelectric facilities included in the Contracted Generation Portfolio segment (excluding expenditures related to the Peter Sutherland Sr. GS and other hydroelectric generation development projects) incurred during the period, divided by total hydroelectric electricity generation plus hydroelectric electricity generation forgone due to SBG conditions during the period. OPG reports hydroelectric gross revenue charge and water rental payments as fuel expense.

Hydroelectric TGC per MWh is calculated as follows for the 12-month period ended December 31:

(millions of dollars – except where noted)	**2016**	**2015**
Hydroelectric TGC		
Regulated – Hydroelectric Generation OM&A expenses	**325**	340
Regulated – Hydroelectric Generation fuel expense	**353**	345
Contracted Generation Portfolio OM&A expenses	**178**	185
Contracted Generation Portfolio fuel expense	**58**	39
Regulated – Hydroelectric Generation and Contracted Generation Portfolio capital expenditures	**330**	311
Less: Regulated – Hydroelectric Generation and Contracted Generation Portfolio generation development project capital and OM&A costs	**(158)**	(197)
Less: Thermal OM&A, fuel expenses, and capital expenditures in the Contracted Generation Portfolio	**(177)**	(163)
(Less) Add: Regulated – Hydroelectric Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**(24)**	18
Add: Hydroelectric gross revenue charge and water rental payments for electricity generation forgone due to SBG conditions	**49**	34
Other adjustments	**(1)**	-
	933	912
Adjusted hydroelectric electricity generation *(TWh)*		
Regulated – Hydroelectric Generation electricity generation	**29.5**	30.4
Contracted Generation Portfolio electricity generation	**3.1**	3.1
Adjust for hydroelectric electricity generation forgone due to SBG conditions and non-hydroelectric electricity generation of the Contracted Generation Portfolio	**4.0**	2.6
	36.6	36.1
Hydroelectric TGC per MWh *($/MWh)*[1]	**25.49**	25.26

[1] Amounts may not calculate due to rounding.

(6) Gross margin is defined as revenue less fuel expense**.**

For further information, please contact:

Investor Relations

416-592-6700

1-866-592-6700

investor.relations@opg.com

Media Relations

416-592-4008

1-877-592-4008

www.opg.com

www.sedar.com

ONTARIO POWER GENERATION INC.

CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2016

ONTARIO POWER GENERATION

STATEMENT OF MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL INFORMATION

Ontario Power Generation Inc.'s (OPG) management is responsible for the presentation and preparation of the annual consolidated financial statements and Management's Discussion and Analysis (MD&A).

The consolidated financial statements have been prepared in accordance with United States generally accepted accounting principles (US GAAP) and the rules and regulations of the United States Securities and Exchange Commission for annual financial statements. The MD&A has been prepared in accordance with the requirements of securities regulators, including National Instrument 51-102 of the Canadian Securities Administrators and its related published requirements.

The consolidated financial statements and information in the MD&A necessarily include amounts based on informed judgments and estimates of the expected effects of current events and transactions with appropriate consideration to materiality. Something is considered material if it is reasonably expected to have a significant impact on the Company's earnings, cash flow, value of an asset or liability, or reputation. In addition, in preparing the financial information, we must interpret the requirements described above, make determinations as to the relevancy of information to be included, and make estimates and assumptions that affect the reported information. The MD&A also includes information regarding the impact of current transactions and events, sources of liquidity and capital resources, operating trends, and risks and uncertainties. Actual results in the future may differ materially from our present assessment of this information because future events and circumstances may not occur as expected.

In meeting our responsibility for the reliability of the financial information, we maintain and rely on a comprehensive system of internal controls and internal audits, including organizational and procedural controls and internal controls over financial reporting. Our system of internal controls includes: written communication of our policies and procedures governing corporate conduct and risk management; comprehensive business planning; effective segregation of duties; delegation of authority and personal accountability; careful selection and training of personnel; and accounting policies, which we regularly update. This structure ensures appropriate internal controls over transactions, assets and records. We also regularly test internal controls. These controls and testing are designed to provide us with reasonable assurance that the financial records are reliable for preparing financial statements and other financial information, assets are safeguarded against unauthorized use or disposition, liabilities are recognized, and we are in compliance with all regulatory requirements.

Management, including the President and Chief Executive Officer (CEO) and the Chief Financial Officer (CFO), is responsible for maintaining disclosure controls and procedures (DC&P) and internal controls over financial reporting (ICOFR). DC&P is designed to provide reasonable assurance that all relevant information is gathered and reported to senior management, including the President and CEO and the CFO, on a timely basis so that appropriate decisions can be made regarding public disclosure. ICOFR is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the consolidated financial statements in accordance with US GAAP.

An evaluation of the effectiveness of the design and operation of OPG's DC&P and ICOFR was conducted as of December 31, 2016. Accordingly, we, as OPG's President and CEO and CFO, will certify OPG's annual disclosure documents filed with the Ontario Securities Commission, which includes attesting to the design and effectiveness of OPG's DC&P and ICOFR.

The Board of Directors, based on recommendations from its Audit and Risk Committee, reviews and approves the consolidated financial statements and the MD&A, and oversees management's responsibilities for the presentation and preparation of financial information, maintenance of appropriate internal controls, management and control of major areas of financial risk, and assessment of significant and related party transactions.

The consolidated financial statements have been audited by Ernst & Young LLP, independent external auditors appointed by the Board of Directors. The Independent Auditors' Report outlines the auditors' responsibilities and the scope of their examination and their opinion on OPG's consolidated financial statements. The independent external auditors, as confirmed by the Audit and Risk Committee, had direct and full access to the Audit and Risk Committee, with and without the presence of management, to discuss their audit and their findings therefrom, as to the integrity of OPG's financial reporting and the effectiveness of the system of internal controls.

Jeff Lyash (signed)
President and Chief Executive Officer

Ken Hartwick (signed)
Chief Financial Officer and Senior Vice President – Finance

March 10, 2017

INDEPENDENT
AUDITORS' REPORT

To the Shareholder of Ontario Power Generation Inc.

We have audited the accompanying consolidated financial statements of Ontario Power Generation Inc., which comprise the consolidated balance sheets as at December 31, 2016 and 2015, and the consolidated statements of income, comprehensive income, cash flows, and changes in shareholder's equity for the years then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with United States generally accepted accounting principles, and for such internal controls as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal controls relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal controls. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained in our audits is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of Ontario Power Generation Inc. as at December 31, 2016 and 2015 and the results of its operations and its cash flows for the years then ended in accordance with United States generally accepted accounting principles.

Toronto, Canada

March 10, 2017

Ernst & Young LLP (signed)

Chartered Professional Accountants,
Licensed Public Accountants

CONSOLIDATED STATEMENTS OF INCOME

Years Ended December 31 *(millions of dollars except where noted)*	**2016**	**2015**
Revenue *(Note 16)*	**5,653**	5,476
Fuel expense *(Note 16)*	**727**	687
Gross margin	**4,926**	4,789
Expenses *(Note 16)*		
Operations, maintenance and administration	**2,747**	2,783
Depreciation and amortization *(Note 4)*	**1,257**	1,100
Accretion on fixed asset removal and nuclear waste management liabilities *(Note 8)*	**929**	895
Earnings on nuclear fixed asset removal and nuclear waste management funds *(Note 8)*	**(746)**	(704)
Income from investments subject to significant influence	**(37)**	(39)
Property taxes	**46**	45
Restructuring	**6**	6
	4,202	4,086
Income before other (gains) losses, interest and income taxes	**724**	703
Other (gains) losses *(Note 16)*	**(17)**	14
Income before interest and income taxes	**741**	689
Net interest expense *(Note 7)*	**120**	180
Income before income taxes	**621**	509
Income tax expense *(Note 9)*	**168**	92
Net income	**453**	417
Net income attributable to the Shareholder	**436**	402
Net income attributable to non-controlling interest	**17**	15
Basic and diluted net income per common share *(dollars)*	**1.70**	1.57
Common shares outstanding *(millions)*	**256.3**	256.3

See accompanying notes to the consolidated financial statements

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

Years Ended December 31 *(millions of dollars)*	**2016**	**2015**
Net income	**453**	417
Other comprehensive income, net of income taxes *(Note 10)*		
Actuarial (loss) gain and past service costs on re-measurement of liabilities for pension and other post-employment benefits [1]	**(6)**	148
Reclassification to income of amounts related to pension and other post-employment benefits [2]	**12**	18
Net loss on derivatives designated as cash flow hedges [3]	**-**	(5)
Reclassification to income of losses on derivatives designated as cash flow hedges [4]	**19**	16
Unrealized loss on available-for-sale securities [5]	**(1)**	-
Other comprehensive income	**24**	177
Comprehensive income	**477**	594
Comprehensive income attributable to the Shareholder	**460**	579
Comprehensive income attributable to non-controlling interest	**17**	15

[1] Net of income tax recovery of $2 million and income tax expense of $49 million for 2016 and 2015, respectively.

[2] Net of income tax expenses of $4 million and $7 million for 2016 and 2015, respectively.

[3] Net of income tax recoveries of nil and $2 million for 2016 and 2015, respectively.

[4] Net of income tax expenses of $2 million for each of 2016 and 2015.

[5] Net of income tax expenses of nil for each of 2016 and 2015.

See accompanying notes to the consolidated financial statements

CONSOLIDATED STATEMENTS OF CASH FLOWS

Years Ended December 31 *(millions of dollars)*	2016	2015
Operating activities		
Net income	**453**	417
Adjust for non-cash items:		
Depreciation and amortization *(Note 4)*	**1,257**	1,100
Accretion on fixed asset removal and nuclear waste management liabilities *(Note 8)*	**929**	895
Earnings on nuclear fixed asset removal and nuclear waste management funds *(Note 8)*	**(746)**	(704)
Pension and other post-employment benefit costs *(Note 11)*	**464**	483
Deferred income taxes *(Note 9)*	**(36)**	33
Mark-to-market on derivative instruments	**3**	(218)
Provision for used nuclear fuel and low and intermediate level nuclear waste	**118**	117
Regulatory assets and liabilities	**(170)**	170
Provision for materials and supplies	**42**	28
Other	**(25)**	9
	2,289	2,330
Contributions to nuclear fixed asset removal and nuclear waste management funds *(Note 8)*	**(150)**	(143)
Expenditures on fixed asset removal and nuclear waste management *(Note 8)*	**(275)**	(218)
Reimbursement of eligible expenditures on nuclear fixed asset removal and nuclear waste management *(Note 8)*	**70**	76
Contributions to pension funds and expenditures on other post-employment benefits and supplementary pension plans *(Note 11)*	**(363)**	(480)
Expenditures on restructuring	**(6)**	(16)
Distributions received from investments subject to significant influence	**52**	51
Net changes to other long-term assets and liabilities	**20**	(6)
Net changes to non-cash working capital balances *(Note 17)*	**68**	(129)
Cash flow provided by operating activities	**1,705**	1,465
Investing activities		
Purchase of available-for-sale securities	**(213)**	-
Investment in deposit note *(Note 6)*	**-**	(180)
Proceeds from deposit note *(Note 6)*	**110**	-
Net proceeds from sale of property, plant and equipment	**-**	3
Investment in property, plant and equipment and intangible assets *(Note 16)*	**(1,704)**	(1,376)
Cash flow used in investing activities	**(1,807)**	(1,553)
Financing activities		
Issuance of long-term debt *(Note 6)*	**334**	245
Repayment of long-term debt *(Note 6)*	**(273)**	(503)
Settlement of cash flow hedges	**-**	(9)
Distribution to non-controlling interest	**(14)**	(16)
Issuance of short-term notes *(Note 7)*	**3,108**	2,628
Repayment of short-term notes *(Note 7)*	**(3,331)**	(2,403)
Cash flow used in financing activities	**(176)**	(58)
Net decrease in cash and cash equivalents	**(278)**	(146)
Cash and cash equivalents, beginning of year	**464**	610
Cash and cash equivalents, end of year	**186**	464

See accompanying notes to the consolidated financial statements

CONSOLIDATED BALANCE SHEETS

As at December 31 *(millions of dollars)*	2016	2015
Assets		
Current assets		
Cash and cash equivalents	**186**	464
Available-for-sale securities *(Note 18)*	**212**	-
Receivables from related parties *(Note 18)*	**429**	545
Nuclear fixed asset removal and nuclear waste management funds *(Notes 8 and 16)*	**24**	15
Fuel inventory *(Note 16)*	**310**	344
Materials and supplies *(Note 16)*	**100**	96
Regulatory assets *(Note 5)*	**-**	628
Prepaid expenses	**200**	92
Other current assets *(Notes 4 and 6)*	**286**	206
	1,747	2,390
Property, plant and equipment *(Notes 4, 15, and 16)*	**29,315**	29,469
Less: accumulated depreciation	**9,317**	8,874
	19,998	20,595
Intangible assets *(Notes 4 and 16)*	**503**	476
Less: accumulated amortization	**404**	378
	99	98
Other assets		
Nuclear fixed asset removal and nuclear waste management funds *(Notes 8 and 16)*	**15,960**	15,121
Long-term materials and supplies *(Note 16)*	**345**	337
Regulatory assets *(Note 5)*	**5,855**	5,240
Investments subject to significant influence *(Note 19)*	**321**	336
Other long-term assets *(Note 6)*	**47**	133
	22,528	21,167
	44,372	44,250

See accompanying notes to the consolidated financial statements

CONSOLIDATED BALANCE SHEETS

As at December 31 *(millions of dollars)*	2016	2015
Liabilities		
Current liabilities		
Accounts payable and accrued charges *(Note 18)*	**1,164**	1,199
Short-term debt *(Note 7)*	**2**	225
Deferred revenue due within one year	**12**	12
Long-term debt due within one year *(Note 6)*	**1,103**	273
Income taxes payable	**123**	66
Regulatory liabilities *(Note 5)*	**-**	26
	2,404	1,801
Long-term debt *(Notes 6 and 18)*	**4,417**	5,186
Other liabilities		
Fixed asset removal and nuclear waste management liabilities *(Notes 8 and 16)*	**19,484**	20,169
Pension liabilities *(Note 11)*	**3,012**	2,597
Other post-employment benefit liabilities *(Note 11)*	**2,897**	3,085
Long-term accounts payable and accrued charges	**213**	207
Deferred revenue	**298**	246
Deferred income taxes *(Note 9)*	**829**	880
Regulatory liabilities *(Note 5)*	**310**	34
	27,043	27,218
Equity		
Common shares *(Note 14)* [1]	**5,126**	5,126
Retained earnings	**5,534**	5,098
Accumulated other comprehensive loss *(Note 10)*	**(295)**	(319)
Equity attributable to the Shareholder	**10,365**	9,905
Equity attributable to non-controlling interest *(Note 21)*	**143**	140
Total equity	**10,508**	10,045
	44,372	44,250

[1] 256,300,010 common shares outstanding at a stated value of $5,126 million as at December 31, 2016 and 2015.

Commitments and Contingencies *(Notes 6, 9, 11, and 15)*

See accompanying notes to the consolidated financial statements

On behalf of the Board of Directors:

Bernard Lord (signed)
Board Chair

M. George Lewis (signed)
Director

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDER'S EQUITY

Years Ended December 31 *(millions of dollars)*	**2016**	**2015**
Common shares *(Note 14)*	**5,126**	5,126
Retained earnings		
Balance at beginning of year	**5,098**	4,696
Net income attributable to the Shareholder	**436**	402
Balance, end of year	**5,534**	5,098
Accumulated other comprehensive loss, net of income taxes *(Note 10)*		
Balance at beginning of year	**(319)**	(496)
Other comprehensive income	**24**	177
Balance, end of year	**(295)**	(319)
Equity attributable to the Shareholder	**10,365**	9,905
Equity attributable to non-controlling interest *(Note 21)*		
Balance at beginning of year	**140**	141
Distribution to non-controlling interest	**(14)**	(16)
Net income attributable to non-controlling interest	**17**	15
Balance, end of year	**143**	140
Total equity	**10,508**	10,045

See accompanying notes to the consolidated financial statements

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the years ended December 31, 2016 and 2015

1. DESCRIPTION OF BUSINESS

Ontario Power Generation Inc. (OPG or the Company) was incorporated on December 1, 1998 pursuant to the *Business Corporations Act* (Ontario) and is wholly owned by the Province of Ontario (the Province or the Shareholder). OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario.

2. BASIS OF PRESENTATION

These consolidated financial statements have been prepared and presented in accordance with United States generally accepted accounting principles (US GAAP) and the rules and regulations of the United States (US) Securities and Exchange Commission for annual financial statements.

As required by *Ontario Regulation 395/11,* as amended, under the *Financial Administration Act* (Ontario), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. Since January 1, 2012, OPG also has received exemptive relief from the Ontario Securities Commission (OSC) from the requirements of section 3.2 of National Instrument 52-107 *Acceptable Accounting Policies and Auditing Standards*. The exemption allows OPG to file consolidated financial statements based on US GAAP, rather than International Financial Reporting Standards (IFRS), without becoming a US Securities and Exchange Commission registrant, or issuing public debt.

The current OSC exemption, received in 2014, will terminate on the earliest of the following:

- January 1, 2019
- The financial year that commences after OPG ceases to have activities subject to rate regulation
- The effective date prescribed by the International Accounting Standards Board for the mandatory application of a standard within IFRS specific to entities with rate-regulated activities.

All dollar amounts are presented in Canadian dollars, except in tabular format where noted. Certain of the 2015 comparative amounts have been reclassified from financial statements previously presented to conform to the 2016 consolidated financial statement presentation.

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Consolidation

The consolidated financial statements of the Company include the accounts of OPG and its majority-owned subsidiaries, and variable interest entities (VIEs) where OPG is the primary beneficiary. All significant intercompany balances and intercompany transactions have been eliminated on consolidation.

Where OPG does not control an investment, but has significant influence over operating and financing policies of the investee, the investment is accounted for under the equity method. OPG co-owns the Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS) with TransCanada Energy Ltd. and co-owns the Brighton Beach gas-fired combined cycle GS (Brighton Beach) with ATCO Power Canada Ltd. OPG accounts for its 50 percent ownership interest in each of these jointly controlled entities using the equity method.

Variable Interest Entities

OPG performs ongoing analysis to assess whether it holds any VIEs. VIEs of which OPG is deemed to be the primary beneficiary are consolidated. The primary beneficiary of a VIE has both the power to direct the activities of the entity that most significantly impact its economic performance and the obligation to absorb losses of the entity that could potentially be significant to the Company. In circumstances where OPG is not deemed to be the primary beneficiary, the VIE is not recorded in OPG's consolidated financial statements.

In 2002, OPG and other Canadian nuclear waste producers established a separately incorporated Nuclear Waste Management Organization (NWMO) in accordance with the *Nuclear Fuel Waste Act* (Canada) (NFWA). The primary long-term mandate of the NWMO is to implement an approach to address the long-term management of used nuclear fuel in Canada. In addition to the above mandate, the NWMO currently provides project management services for OPG's proposed Deep Geologic Repository (DGR) for the long-term management of low and intermediate level waste (L&ILW) and certain other nuclear life cycle liability management services. OPG has the majority of voting rights at the NWMO Board of Directors' and members' level. The NFWA requires the nuclear fuel waste owners to establish and make payments into trust funds for the purpose of funding the implementation of the long-term nuclear used fuel management plan in accordance with the NFWA. OPG provides over 90 percent of NWMO's funding, primarily towards the design and implementation of Canada's Adaptive Phased Management plan for the long-term management of nuclear used fuel. As a result, OPG is expected to absorb a majority of the NWMO's expected losses through future funding in the event of any shortfall. Therefore, OPG holds a variable interest in the NWMO, of which it is the primary beneficiary. Accordingly, the applicable amounts in the accounts of the NWMO, after elimination of all significant intercompany transactions, are consolidated.

As at December 31, 2016, PSS Generating Station Limited Partnership (PSS or the Partnership) also was classified as a VIE, as it did not meet the criteria of having sufficient equity at risk to finance its activities. Since OPG is the primary beneficiary of PSS, it continues to consolidate the Partnership.

Use of Management Estimates

The preparation of consolidated financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses for the reporting periods. Management evaluates these estimates on an ongoing basis based upon historical experience, current conditions, and assumptions believed to be reasonable at the time the assumption is made, with any adjustments recognized in the period incurred. Significant estimates are included in the determination of pension and other post-employment benefit (OPEB) balances, asset retirement obligations (AROs) and associated asset retirement costs capitalized as part of property, plant and equipment (PP&E), income taxes (including deferred income taxes), contingencies, regulatory assets and liabilities, valuation of derivative instruments and investments in segregated funds, depreciation and amortization expenses, and inventories. Actual results may differ significantly from these estimates.

Cash and Cash Equivalents and Short-Term Investments

Cash and cash equivalents include cash on deposit and money market securities with a maturity of less than 90 days on the date of purchase. All other money market securities with a maturity on the date of purchase that is greater than 90 days, but less than one year, are recorded as short-term investments and classified as current assets. These securities are valued at the lower of cost and market.

Inventories

Inventories, consisting of fuel and materials and supplies, are measured at the lower of cost and net realizable value. Cost is determined as weighted average cost for fuel inventory and average cost for materials and supplies.

Property, Plant and Equipment, Intangible Assets and Depreciation and Amortization

PP&E and intangible assets are recorded at cost. Interest costs incurred during construction and development are capitalized as part of the cost of the asset based on the interest rates on OPG's long-term debt. Expenditures for replacements of major components are capitalized.

Depreciation and amortization rates for the various classes of assets are based on their estimated service lives. Asset removal costs that have not been specifically provided for in current or previous periods are charged to operations, maintenance and administration (OM&A) expenses when incurred. Repairs and maintenance costs also are expensed when incurred.

PP&E are depreciated on a straight-line basis, except for computers, which are depreciated on a declining balance basis. Intangible assets, which consist of major application software, are amortized on a straight-line basis. As at December 31, 2016, the amortization periods of PP&E and intangible assets are as follows:

Nuclear generating stations and major components	15 to 74 years [1]
Thermal generating stations and major components	5 to 50 years
Hydroelectric generating stations and major components	10 to 100 years
Administration and service facilities	10 to 50 years
Computers – declining balance	12% to 40% per year
Major application software	5 years
Service equipment	5 to 10 years

[1] As at December 31, 2016, the end of station life for depreciation purposes for the Darlington, Pickering, Bruce A and Bruce B nuclear generating stations ranged between 2020 and 2061. Major components are depreciated over the lesser of the station life and the life of the components.

Asset Impairment

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The review is based on the presence of impairment indicators such as the future economic benefit of the assets and external market conditions. The net carrying amount of assets is considered impaired if it exceeds the sum of the estimated undiscounted cash flows expected to result from the asset's use and eventual disposition. In cases where the sum of the undiscounted expected future cash flows is less than the carrying amount, an impairment loss is recognized. This loss equals the amount by which the carrying amount exceeds the fair value. Fair value is determined using expected discounted cash flows when quoted market prices are not available. The impairment is recognized in income in the period in which it is identified.

The carrying value of investments accounted for under the equity method are reviewed annually for the presence of any indicators of impairment. If an impairment exists and is determined to be other-than-temporary, an impairment charge is recognized. This charge equals the amount by which the carrying value exceeds the investment's fair value.

Rate Regulated Accounting

The *Ontario Energy Board Act, 1998* and *Ontario Regulation 53/05* provide that OPG receives regulated prices for electricity generated from the Sir Adam Beck 1, 2 and Pump hydroelectric generating stations, the DeCew Falls 1 and 2 hydroelectric generating stations, the R.H. Saunders Hydroelectric GS, the 48 hydroelectric generating stations prescribed for rate regulation effective in 2014, and the Pickering and Darlington nuclear generating stations (collectively, prescribed facilities or regulated facilities). OPG's regulated prices for these facilities are determined by the Ontario Energy Board (OEB).

The OEB is a self-funding Crown corporation. Its mandate and authority come from the *Ontario Energy Board Act, 1998,* the *Electricity Act, 1998*, and a number of other provincial statutes. The OEB is an independent, quasi-judicial tribunal that reports to the Legislature of the Province through the Ontario Ministry of Energy. It regulates market

participants in Ontario's natural gas and electricity industries. The OEB carries out its regulatory functions through public hearings and other more informal processes such as consultations.

US GAAP recognizes that rate regulation can create economic benefits and obligations that are required by the regulator to be obtained from, or settled with, the customers. When the Company assesses that there is sufficient assurance that incurred costs in respect of the regulated facilities will be recovered in the future, those costs are deferred and reported as a regulatory asset. When the Company is required to refund amounts to customers in the future in respect of the regulated facilities, including amounts related to costs that have not been incurred but for which the OEB has provided recovery through regulated prices, the Company records a regulatory liability.

Certain of the regulatory assets and liabilities recognized by the Company relate to variance and deferral accounts authorized by the OEB, including those authorized pursuant to *Ontario Regulation 53/05*. Variance and deferral accounts typically capture differences between actual costs and revenues and the corresponding forecast amounts approved by the OEB in setting regulated prices, or record the impact of items not reflected in the approved regulated prices. The measurement of these regulatory assets and liabilities is subject to certain estimates and assumptions, including assumptions made in the interpretation of *Ontario Regulation 53/05* and the OEB's decisions. The estimates and assumptions made in the interpretation of the regulation and the OEB's decisions are reviewed as part of the OEB's regulatory process.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB for inclusion in regulated prices are amortized based on approved recovery or repayment periods. Disallowed balances are charged to operations in the period that the corresponding OEB decision is issued.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB are classified as current if they are expected to be recovered from, or refunded to, customers within 12 months of the end of the reporting period, based on recovery or repayment periods authorized by the OEB. All other regulatory asset and liability balances are classified as non-current on the consolidated balance sheets.

In addition to regulatory assets and liabilities for variance and deferral accounts, OPG recognizes regulatory assets and liabilities for unamortized amounts recorded in accumulated other comprehensive income (AOCI) in respect of pension and OPEB obligations, and deferred income taxes, in order to reflect the expected recovery or repayment of these amounts through future regulated prices charged to customers. There are measurement uncertainties related to these balances due to the assumptions made in the determination of pension and OPEB obligations and deferred income taxes that are attributed to rate regulated business segments.

The regulatory asset for unamortized pension and OPEB amounts recorded in AOCI has reflected the OEB's use, since April 1, 2008, of the accrual basis of accounting for including pension and OPEB amounts in approved regulated prices for OPG. This is also the manner in which these costs are recognized in OPG's consolidated financial statements. Therefore, unamortized amounts in respect of OPG's pension and OPEB plans recognized in AOCI generally would not be reflected in regulated prices until they have been reclassified from AOCI and recognized as amortization components of the benefit costs for these plans. The regulatory asset is reversed as underlying unamortized balances are amortized as components of the benefit cost.

In setting OPG's regulated prices effective November 1, 2014, the OEB limited amounts for pension and OPEB costs allowed in the approved revenue requirements to the regulated business portion of the Company's cash expenditures on its pension and OPEB plans. It is the Company's position that this decision by the OEB does not constitute a change in the basis of rate recovery for OPG's of pension and OPEB costs. This position is based on the OEB's establishment of the Pension & OPEB Cash Versus Accrual Differential Deferral Account pursuant to its November 2014 decision, and the expectation expressed by the OEB in that decision that a transition from the accrual basis of recovery for OPG, if required, would be addressed in a future OPG rate proceeding, informed by the outcome of an OEB generic proceeding related to the regulatory treatment and recovery of pension and OPEB costs. Effective November 1, 2014, the Pension & OPEB Cash Versus Accrual Differential Deferral Account records the difference

between OPG's actual pension and OPEB costs for the regulated business determined using the accrual method applied in OPG's audited consolidated financial statements and OPG's corresponding actual cash expenditures for these plans. The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of an OEB generic proceeding on the regulatory treatment and recovery of pension and OPEB costs. In May 2015, the OEB began a consultation process to develop standard principles to guide its future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery. The consultation is continuing. OPG is participating in the consultation and has advanced its position in support of the appropriateness of using the accrual basis for cost recovery purposes.

In consideration of the above factors, the Company continues to believe that there is sufficient likelihood that unamortized pension and OPEB amounts that have not yet been reclassified from AOCI will be included in future regulated prices or in an OEB-authorized deferral or variance account for future recovery, as they are recognized in benefit costs. Therefore, the Company continues to recognize a regulatory asset for these unamortized amounts and also has recognized a regulatory asset for the balance of the Pension & OPEB Cash Versus Accrual Differential Deferral Account discussed in Note 5.

If, as part of the above noted consultation process or in a future proceeding, the OEB decides that the recovery basis for OPG's pension and OPEB amounts should be changed from the accrual basis, OPG may be required to adjust the regulatory assets for unamortized pension and OPEB amounts recorded in AOCI and for the Pension & OPEB Cash Versus Accrual Differential Deferral Account.

See Notes 5, 8, 9, and 11 for additional disclosures related to the OEB's decisions, regulatory assets and liabilities, and rate regulated accounting.

Revenue Recognition

All of OPG's electricity generation is offered into the real-time energy spot market administered by the Independent Electricity System Operator (IESO). Revenue is recognized as electricity is generated and metered to the IESO.

Revenue Recognition – Regulated Generation

Energy revenue generated from OPG's regulated facilities is based on regulated prices determined by the OEB that include a base regulated price and, as applicable, rate riders for the recovery or repayment of approved variance and deferral account balances.

The base regulated prices in effect during 2016 and 2015 were established by the OEB's November 2014 decision and December 2014 order, effective November 1, 2014, using a forecast cost-of-service rate-setting methodology based on the OEB-approved revenue requirements, taking into account the OEB-approved forecasts of production and operating costs for the regulated facilities for 2014 and 2015 and a return on rate base. Rate base is a regulatory construct that, for OPG, represents the average net level of investment in regulated fixed and intangible assets in-service and an allowance for working capital. The revenues from the regulated hydroelectric facilities are also subject to the OEB-approved hydroelectric incentive mechanism. The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers.

The rate riders in effect during 2016 were established by the OEB in its October 2015 order on OPG's application to recover balances in most of the Company's authorized variance and deferral accounts as at December 31, 2014. The rate riders in effect during 2015 included those established by the OEB in 2014 in conjunction with the base regulated prices in effect since November 1, 2014 and those authorized by the OEB's October 2015 order. The OEB-authorized variance and deferral accounts are discussed in Note 5.

In May 2016, OPG filed an application with the OEB for new base regulated prices and rate riders for production from its regulated hydroelectric and nuclear facilities for the 2017-2021 period, with a proposed effective date of January 1, 2017. The application was made using an incentive regulation ratemaking methodology for the hydroelectric operations and a custom incentive regulation framework for the nuclear operations. Rate-setting under incentive regulation is typically more formulaic and involves greater de-coupling of a regulated entity's allowed revenues or prices from its costs than under a cost-of-service rate-setting methodology. Consistent with the requirements of *Ontario Regulation 53/05*, the application incorporates a rate smoothing proposal, which would result in OPG deferring a portion of the approved nuclear revenue requirements in a deferral account for future collection.

In December 2016, the OEB issued an order granting OPG's request to declare the existing base regulated prices interim, effective January 1, 2017. This preserves the OEB's ability to make the new regulated prices effective as early as January 1, 2017, which would allow OPG to recover the difference between the approved new regulated prices and the existing prices for the period between the effective date of the new prices and their implementation date based on the OEB's order. The final decision on the application will be made by the OEB following a public proceeding, which commenced in 2016 and is continuing. See Note 5 for further information on OPG's May 2016 application.

Revenue Recognition – Non-regulated Generation and Other Revenue

The electricity generation from OPG's non-regulated assets receives the Ontario electricity spot market price, except where an energy supply agreement (ESA) with the IESO or another contractual agreement is in place. As at December 31, 2016, most of OPG's operating non-regulated assets are subject to an ESA. Revenue from the generating stations subject to an ESA is recognized in accordance with the terms of the agreement. Effective January 1, 2015, the Ontario Power Authority (OPA) merged with the IESO. The new entity continued under the name Independent Electricity System Operator. As such, the IESO is substituted as the counterparty of the ESAs or other agreements that were previously executed with the OPA.

OPG also sells into, and purchases from, interconnected markets of other provinces and the northeast and midwest regions of the US. All contracts that are not designated as hedges are recorded on the consolidated balance sheets at market value, with gains or losses recorded in the consolidated statements of income. Gains and losses on energy trading contracts (including those to be physically settled) are recorded on a net basis in the consolidated statements of income. Accordingly, power purchases of $19 million were netted against revenue in 2016 (2015 – $75 million).

OPG derives non-energy revenue under the terms of a lease arrangement and associated agreements with Bruce Power L.P. (Bruce Power) related to the Bruce nuclear generating stations. This includes lease revenue and revenue from heavy water sales, detritiation services and waste management services. OPG's net revenues from the lease of these stations and related agreements, including a portion of heavy water sales, are credited to customers and therefore have reduced regulated prices for the generation from the nuclear facilities owned and operated by OPG. The minimum lease payments are recognized in revenue on a straight-line basis over the term of the lease.

In addition, non-energy revenue includes isotope sales, real estate rentals and other service revenues. Revenues from these activities are recognized as services are provided, or as products are delivered.

Fixed Asset Removal and Nuclear Waste Management Liabilities

OPG recognizes AROs for fixed asset removal and nuclear waste management, discounted for the time value of money. OPG estimates both the amount and timing of future cash expenditures based on the plans for fixed asset removal and nuclear waste management. The liabilities are initially recorded at their estimated fair value, which is based on a discounted value of the expected costs to be paid.

On an ongoing basis, the liabilities for nuclear fixed asset removal and nuclear waste management (Nuclear Liabilities) are increased by the present value of the incremental (variable) cost portion for the nuclear waste generated each year, with the corresponding amounts charged to operating expenses. Variable expenses relating to

L&ILW are charged to OM&A expenses. Variable expenses relating to the management and storage of nuclear used fuel are charged to fuel expense. The liabilities may also be adjusted due to changes in the estimated amount or timing of the underlying future cash flows, with resulting changes in the related asset retirement costs capitalized as part of the carrying amount of the related fixed assets in service. A comprehensive reassessment of all underlying assumptions and baseline cost estimates for the Nuclear Liabilities is performed periodically. Changes in the Nuclear Liabilities resulting from changes in assumptions or estimates that impact the amount or timing of the originally estimated undiscounted future cash flows are recorded as an adjustment to the liabilities. Upward revisions in the Nuclear Liabilities represent the present value of increases in future undiscounted cash flows determined using a current credit-adjusted risk-free rate. Downward revisions in the Nuclear Liabilities represent the present value of decreases in future undiscounted cash flows determined using the weighted average discount rate reflected in the existing liability. Upon settlement of the liabilities, a gain or loss would be recorded.

Accretion arises because the fixed asset removal and nuclear waste management liabilities are reported on a net present value basis. Accretion expense is the increase in the carrying amount of the liabilities due to the passage of time.

The asset retirement cost is capitalized by increasing the carrying value of the related fixed assets in service. The capitalized cost is depreciated over the remaining service life of the related fixed assets and is included in depreciation and amortization expenses.

OPG has no legal obligation associated with the decommissioning of its hydroelectric generating facilities and the costs cannot be reasonably estimated because of the long service life of these assets. With either maintenance efforts or rebuilding, the water control structures are assumed to be used for the foreseeable future. Accordingly, OPG has not recognized a liability for the decommissioning of its hydroelectric generating facilities.

Nuclear Fixed Asset Removal and Nuclear Waste Management Funds

Pursuant to the Ontario Nuclear Funds Agreement (ONFA) between OPG and the Province, OPG has established and sets aside funds in a Used Fuel Segregated Fund and a Decommissioning Segregated Fund (together the Nuclear Segregated Funds). The Used Fuel Segregated Fund is intended to fund expenditures associated with the long-term management of radioactive used nuclear fuel bundles and certain costs of used fuel storage incurred after the nuclear stations are shut down, while the Decommissioning Segregated Fund was established to fund the costs of nuclear fixed asset removal and long-term L&ILW management, and certain costs of used fuel storage incurred after the nuclear stations are shut down. OPG's funding obligations and resulting contributions to the Nuclear Segregated Funds are determined based on periodically updated reference plans approved by the Province under the ONFA. OPG maintains the Nuclear Segregated Funds in third-party custodial and trust accounts that are segregated from the rest of OPG's assets.

OPG's investments in the Nuclear Segregated Funds and the corresponding amounts payable to/receivable from the Province are classified as held-for-trading. The Nuclear Segregated Funds are measured at fair value based on the bid prices of the underlying equity and fixed income securities, and, in the case of the alternative investment portfolio, using appropriate valuation techniques as outlined in Note 13, with realized and unrealized gains and losses recognized in OPG's consolidated statements of income.

Derivatives

All derivatives, including embedded derivatives that must be separately accounted for, generally are classified as held-for-trading and recorded at fair value in the consolidated balance sheets. Transaction costs are expensed as incurred for financial instruments classified or designated as held-for-trading.

Derivatives qualify for hedge accounting if they meet stringent documentation requirements, and if the derivative instrument that is designated as a hedge is expected to effectively hedge the identified risk throughout the life of the hedged item. At the inception of a hedging relationship, OPG documents the relationship between the hedging

instrument and the hedged item, its risk management objective, and its strategy for undertaking the hedge. A documented assessment is made, both at the inception of a hedge and on an ongoing basis, of whether or not the derivatives that are used in hedging transactions are highly effective in offsetting the changes attributable to the hedged risks in the fair values or cash flows of the hedged items.

All derivative contracts not designated as hedges are recorded on the consolidated balance sheets as derivative assets or liabilities at fair value, with changes in the fair value recorded in the revenue of the Services, Trading, and Other Non-Generation segment. Refer to Note 12 for a discussion of OPG's risk exposures and the derivative instruments used to manage these risks.

Fair Value Measurements

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly arm's-length transaction between market participants at the measurement date. Fair value measurements are required to reflect the assumptions that market participants would use in pricing an asset or liability based on the best available information. These assumptions include the risks inherent in a particular valuation technique, such as a pricing model, and the risks inherent in the inputs to the model. OPG uses a fair value hierarchy, grouping assets and liabilities into three levels based on the relative objectivity of the inputs used to measure fair value, with Level 1 representing the most objective. Refer to Note 13 for a discussion of fair value measurements and the fair value hierarchy.

Available-for-Sale Securities

Available-for-sale (AFS) securities are measured at fair value, with unrealized gains and losses due to changes in fair value recognized in other comprehensive income (OCI). Gains and losses are realized and included in net income when the securities are sold or awarded. Related transaction costs are expensed as incurred, and dividend income is included in net income in the period dividends are declared. Equity securities are initially measured at the transaction price.

Research and Development

Research and development costs are expensed as incurred. Research and development costs incurred to discharge long-term obligations for which specific provisions have already been made, such as the Nuclear Liabilities, are charged to the related liability.

Leases

Leases are evaluated and classified as either operating or capital leases for financial reporting purposes. Capital leases, which transfer substantially all of the risks and benefits incidental to ownership of the leased item, are capitalized at the inception of the lease at the fair value of the leased property or, if lower, at the present value of the minimum lease payments. Capital leases are depreciated over the shorter of the estimated useful life of the asset and the lease term.

Leases where the lessor retains substantially all the risks and benefits incidental to ownership of the asset are classified as operating leases. Operating lease payments, other than contingent rentals, are recognized as an expense in the consolidated statements of income on a straight-line basis over the lease term. Where the amount of rent expense recognized is different from the actual operating lease payment, other than contingent rentals, the difference is deferred and included as assets or liabilities on the consolidated balance sheets.

Pension and Other Post-Employment Benefits

OPG's post-employment benefit programs consist of a contributory defined benefit registered pension plan, a defined benefit supplementary pension plan, and other post-retirement benefits (OPRB) including group life insurance and health care benefits, and long-term disability (LTD) benefits. Post-employment benefit programs are also provided by

the NWMO, which is consolidated into OPG's financial results. Unless otherwise noted, information on the Company's post-employment benefit programs is presented on a consolidated basis.

OPG accrues its obligations under pension and OPEB plans in accordance with US GAAP. The obligations for pension and OPRB are determined using the projected benefit method pro-rated on service. The obligation for LTD benefits is determined using the projected benefit method on a terminal basis. Pension and OPEB obligations are impacted by factors including interest rates, adjustments arising from plan amendments, demographic assumptions, experience gains or losses, salary levels, inflation, and health care cost escalation assumptions. Pension and OPEB costs and obligations are determined annually by independent actuaries using management's best estimate assumptions.

Assumptions are significant inputs to actuarial models that measure pension and OPEB obligations and related effects on operations. Discount rate, inflation rate, and changes in salary levels are three critical assumptions in the determination of benefit costs and obligations. In addition, the expected long-term rate of return on plan assets is a critical assumption in the determination of registered pension plan cost and the health care cost trend rate is a critical assumption in the determination of OPEB cost and obligations. These assumptions, as well as other assumptions involving demographic factors such as retirement age, mortality, and employee turnover, are evaluated periodically by management in consultation with independent actuaries. During the evaluation process, the assumptions are updated to reflect past experience and expectations for the future. Actual results in any given year will often differ from actuarial assumptions because of economic and other factors giving rise to actuarial gains and losses. In accordance with US GAAP, for pension and OPRB, the impact of these updates and differences on the respective benefit obligations is accumulated and amortized over future periods. For LTD benefits, the impact of these updates and differences is immediately recognized as OPEB costs in the period incurred.

The discount rates, which are representative of AA corporate bond yields, are used to calculate the present value of the expected future cash flows on the measurement date in order to determine the projected benefit obligations for the Company's employee benefit plans. A lower discount rate increases the benefit obligations and increases benefit costs. The expected rate of return on plan assets is based on the pension fund's asset allocation and the expected return considering long-term risks and returns associated with each asset class within the plan portfolio. A lower expected rate of return on plan assets increases pension cost.

Pension fund assets include equity securities, corporate and government debt securities, pooled funds, real estate, infrastructure, and other investments. These assets are managed by professional investment managers. The pension fund does not invest in equity or debt securities issued by OPG. Pension fund assets are valued using market-related values for purposes of determining the amortization of actuarial gains or losses and the expected return on plan assets. The market-related value recognizes gains and losses on equity assets relative to a six percent assumed real return over a five-year period.

Pension and OPEB costs include current service costs, interest costs on the obligations, the expected return on pension plan assets, adjustments for plan amendments, and adjustments for actuarial gains or losses, which result from changes in assumptions and experience gains and losses. Past service costs or credits arising from pension and OPRB plan amendments are amortized on a straight-line basis over the expected average remaining service life to full eligibility of the employees covered by the corresponding plan. Past service costs or credits arising from amendments to LTD benefits are immediately recognized as OPEB costs in the period incurred. Due to the long-term nature of pension and OPRB liabilities, the excess of the net cumulative unamortized gain or loss, over 10 percent of the greater of the benefit obligation and the market-related value of the plan assets (the corridor), is amortized over the expected average remaining service life of the employees, which represents the period during which the associated economic benefits are expected to be realized by the Company. Actuarial gains or losses for LTD benefits are immediately recognized as OPEB costs in the period incurred.

OPG recognizes the funded status of its defined benefit plans on the consolidated balance sheets. The funded status is measured as the difference between the fair value of plan assets and the benefit obligation, on a plan-by-plan basis.

Actuarial gains or losses and past service costs or credits arising during the year that are not recognized immediately as components of benefit costs are recognized as increases or decreases in OCI, net of income taxes. These unamortized amounts in AOCI are subsequently reclassified and recognized as components of pension and OPRB costs as described above.

OPG records an offsetting regulatory asset or liability for the portion of the adjustments to AOCI that is attributable to the regulated operations in order to reflect the expected recovery or refund of these amounts through future regulated prices charged to customers. For the recoverable or refundable portion attributable to regulated operations, OPG records a corresponding change in this regulatory asset or liability for the amount of the increases or decreases in OCI and for the amounts reclassified from AOCI into benefit costs during the period.

When the recognition of the transfer of employees and employee-related benefits gives rise to both a curtailment and a settlement, the curtailment is accounted for prior to the settlement. A curtailment is the loss by employees of the right to earn future benefits under the plan. A settlement is the discharge of a plan's liability.

Income Taxes and Investment Tax Credits

OPG is exempt from income tax under the *Income Tax Act* (Canada). However, under the *Electricity Act, 1998*, OPG is required to make payments in lieu of corporate income taxes to the Ontario Electricity Financial Corporation (OEFC). These payments are calculated in accordance with the *Income Tax Act* (Canada) and the *Taxation Act, 2007* (Ontario), as modified by the *Electricity Act, 1998* and related regulations. This results in OPG paying taxes similar to those imposed under the federal and Ontario tax acts.

OPG's operations are complex and the computation of the provision for income taxes involves interpretation of the various tax statutes and regulations. OPG has taken certain filing positions in calculating the amount of its income tax provision. These filing positions may be challenged on audit by the Ontario Ministry of Finance and some of them possibly disallowed, resulting in a potential significant change in OPG's tax provision upon reassessment. A change in the tax provision upon reassessment impacting regulated operations may be recoverable from or refundable to customers through the Income and Other Taxes Variance Account authorized by the OEB.

OPG follows the liability method of accounting for income taxes. Under the liability method, deferred income tax assets and liabilities are determined based on differences between the accounting and tax bases of assets and liabilities. Deferred amounts are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The effect of a change in tax rates on deferred income tax assets and liabilities is included in income in the period the change is enacted.

If management determines that it is more likely than not that some, or all, of a deferred income tax asset will not be realized, a valuation allowance is recorded to report the balance at the amount expected to be realized.

OPG recognizes deferred income taxes associated with its regulated operations and records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers.

Tax benefits associated with income tax positions taken, or expected to be taken, in a tax return and investment tax credits are recorded only when the more likely than not recognition threshold is satisfied. Tax benefits and investment tax credits recognized are measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon settlement.

Investment tax credits are recorded as a reduction to income tax expense. OPG classifies interest and penalties associated with unrecognized income tax benefits as income tax expense.

Changes in Accounting Policies and Estimates

Change in Nuclear Liabilities Estimate

In the fourth quarter of 2016, a comprehensive update of the estimate for OPG's obligations for nuclear waste management and nuclear decommissioning was finalized as part of the required process to update the ONFA reference plan. The update resulted in a decrease of approximately $1,570 million in the Nuclear Liabilities as at December 31, 2016, with a corresponding decrease to the asset retirement costs capitalized as part of the nuclear generating stations to which the liabilities relate. OPG undertakes to perform a comprehensive review of the underlying assumptions and baseline cost estimates for nuclear waste management and nuclear facilities decommissioning at least once every five years, in line with the required ONFA reference plan update process.

The decrease in the Nuclear Liabilities and associated capitalized asset retirement costs recognized as of December 31, 2016 did not impact OPG's income for 2016. The estimated impact of these changes on 2017 expenses, before the impact of regulatory variance and deferrals accounts, includes a decrease to depreciation expense of approximately $8 million**,** a decrease to accretion expense of approximately $78 million, and a decrease in used fuel and L&ILW variable expenses of approximately $20 million. Under the current OEB-approved cost recovery methodology for OPG's nuclear waste management and nuclear facilities decommissioning obligations, these 2017 impacts are expected to be largely offset by the Nuclear Liability Deferral Account and the Bruce Lease Net Revenues Variance Account, authorized by the OEB pursuant to *Ontario Regulation 53/05,* or corresponding changes to OPG's nuclear regulated prices.

In the fourth quarter of 2016, OPG recorded a reduction of $88 million to the Nuclear Segregated Funds assets on the consolidated balance sheet as a result of the updated ONFA reference plan, through a reduction in earnings from the Nuclear Segregated Funds and an associated increase in the amount due to the Province. This accounting adjustment represented the incremental overfunded position of the Used Fuel Segregated Fund and the Decommissioning Segregated Fund as at December 31, 2016 resulting from the reduction in the life cycle liabilities per the updated ONFA reference plan. This excess amount was recorded as due to the Province, because OPG does not have the right to withdraw the amount from the Nuclear Segregated Funds and because any excess funding in the funds accrues to the Province upon termination of the ONFA. Of the $88 million reduction in the Nuclear Segregated Funds assets, $43 million was offset by the impact of the Bruce Lease Net Revenues Variance Account. The Bruce Lease Net Revenues Variance Account is discussed in Note 5.

Pension and Other Post-Employment Benefits

A new actuarial valuation of the OPG registered pension plan was filed with the Financial Services Commission of Ontario (FSCO) in September 2016 with an effective date of January 1, 2016. The annual funding requirements in accordance with the new actuarial valuation are outlined in Note 15. OPG also conducted a comprehensive actuarial valuation for accounting purposes of its pension and OPEB plans in 2016, using demographic data as at January 1, 2016 consistent with the new funding valuation, and assumptions as at December 31, 2016. As part of the valuation, the plan's demographic and other assumptions were reviewed and revised, as necessary, by independent actuaries.

The weighted average discount rate used to determine the projected pension benefit obligations and the projected benefit obligations for OPEB as at December 31, 2016 was 3.9 percent. This represents a decrease, compared to the 4.1 percent discount rate that was used to determine the obligations as at December 31, 2015.

The deficit for the registered pension plan increased, for accounting purposes, from $2,315 million as at December 31, 2015 to $2,693 million as at December 31, 2016. This increase was largely due to a re-measurement of the liabilities at the end of 2016 reflecting lower discount rates, as well as current service and interest costs for the year, partially offset by the impact of the updated membership data as part of the 2016 actuarial valuation and employer contributions to the pension plan during the year.

The projected benefit obligations for OPEB decreased from $3,188 million at December 31, 2015 to $2,992 million as at December 31, 2016. This decrease was largely due to the updated, lower per capita health care claims costs assumption as part of the 2016 actuarial valuation, partially offset by the re-measurement of the liabilities at the end of 2016 reflecting a decrease in the discount rates.

As at December 31, 2016, the unamortized net actuarial loss and unamortized past service costs for the pension and OPEB plans totalled $3,668 million (2015 – $3,646 million). Details of the unamortized net actuarial loss and unamortized past service costs as at December 31, 2016 and 2015 are as follows:

	Registered Pension Plans		**Supplementary Pension Plans**		**Other Post-Employment Benefits**	
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Net actuarial gain not yet subject to amortization due to use of market-related values	**(570)**	(809)	**-**	-	**-**	-
Net actuarial loss not subject to amortization due to use of the corridor	**1,619**	1,544	**34**	30	**267**	293
Net actuarial loss subject to amortization	**2,238**	2,288	**72**	47	**3**	247
Unamortized net actuarial loss	**3,287**	3,023	**106**	77	**270**	540
Unamortized past service costs	**-**	-	**-**	-	**5**	6

A change in the following assumptions, holding all other assumptions constant, would increase (decrease) pension and OPEB costs for the year ended December 31, 2016 as follows:

(millions of dollars)	**Registered Pension Plans** [1]	**Supplementary Pension Plans** [1]	**Other Post-Employment Benefits** [1]
Expected long-term rate of return			
0.25% increase	(30)	n/a	n/a
0.25% decrease	30	n/a	n/a
Discount rate			
0.25% increase	(57)	(1)	(12)
0.25% decrease	60	1	16
Inflation			
0.25% increase	103	1	1
0.25% decrease	(97)	(1)	(1)
Salary increases			
0.25% increase	20	3	1
0.25% decrease	(20)	(2)	(1)
Health care cost trend rate			
1% increase	n/a	n/a	86
1% decrease	n/a	n/a	(52)

n/a – change in assumption not applicable.

[1] Excludes the impact of regulatory variance and deferral accounts.

OEB's Decision on OPG's December 2014 Motion

In January 2016, OEB issued its decision on OPG's December 2014 motion that requested the OEB to review and vary parts of its November 2014 decision, including the disallowed Niagara Tunnel project capital costs. In its January 2016 decision, the OEB reversed a portion of the November 2014 Niagara Tunnel capital cost disallowance and established a new variance account, the Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account, to record the revenue requirement impact of the reversed disallowance effective November 1, 2014. The November 2014 disallowance resulted in a write off of capital costs of $77 million in the fourth quarter of 2014. To recognize the expected future recovery of the reversed portion of the disallowance, OPG recorded an increase to PP&E and a corresponding gain of $22 million in 2016 in accordance with Accounting Standards Codification (ASC) Topic 980, *Regulated Operations*. During 2016, OPG also recorded a regulatory asset of $3 million for the balance in the Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account.

Recent Accounting Pronouncements Not Yet Adopted

Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2014-09, *Revenue from Contracts with Customers* (Topic 606), which supersedes nearly all existing revenue recognition guidance, including industry-specific guidance, under US GAAP. The core principle of Topic 606 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. Either a full retrospective application or a modified retrospective application is required for annual periods beginning on or after January 1, 2018, including interim periods within that year. Early adoption is permitted.

OPG currently expects to apply the new revenue standard in its 2018 first quarter interim financial statements. During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross-functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. Targeted technical updates and training have been provided to financial controllers and working group members corresponding to their responsibilities during 2016.

The Company is in the process of concluding on the method of adoption, as well as evaluating the impact of the new standard on its consolidated financial statements.

Lease Accounting

In February 2016, the FASB issued ASU No. 2016-02, *Leases* (Topic 842). The update includes comprehensive changes to existing guidance for lease accounting, particularly for lessees, and aims to increase transparency and comparability among organizations by requiring the recognition of lease assets and lease liabilities on the balance sheet. The standard is effective for annual periods beginning after December 15, 2018, including interim periods within that year. Entities are required to use a modified retrospective approach for leases that exist, or are entered into, after the beginning of the earliest comparative period presented in the financial statements for the period of adoption. Full retrospective application is prohibited. Early adoption is permitted.

During 2016, the Company implemented a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the new accounting standard. The Company is in the process of evaluating the impact of the new standard on its consolidated financial statements.

Recognition and Measurement of Financial Assets and Financial Liabilities

In January 2016, the FASB issued ASU No. 2016-01, *Financial Instruments – Overall: Recognition and Measurement of Financial Assets and Financial Liabilities*. Under the updated guidance, entities will have to measure equity investments at fair value and recognize any changes in fair value in net income. The update will be effective for OPG's 2018 fiscal year, including interim periods. As a result of this update, effective January 1, 2018, the AFS classification for securities will no longer be available, with any unrealized gains and losses related to such securities recognized in net income instead of other comprehensive income. Any unrealized gains and losses for AFS securities reported by OPG in AOCI as of the end of 2017 will be reclassified to retained earnings as of January 1, 2018. OPG's Hydro One Limited (Hydro One) share holdings are currently the Company's only AFS securities. As at December 31, 2016, these shares were valued on the consolidated balance sheet at $212 million, of which a loss of $1 million was recorded in AOCI. OPG will continue to evaluate this ASU to determine if there is any further impact on its consolidated financial statements.

Intra-Entity Transfers of Assets Other than Inventory

In October 2016, the FASB issued ASU No. 2016-16, *Income* Taxes, where entities will be required to recognize the income tax effects of certain intercompany transfers of assets as an income tax expense or benefit in the period the transaction occurs. This is different from existing guidance that requires entities to defer such income tax effects until the transferred asset has been sold to a third party or otherwise recognized. OPG is required to adopt this ASU on January 1, 2018. The amendments in this ASU are required to be applied on a modified retrospective basis through a cumulative-effect adjustment directly to retained earnings as of the beginning of the period of adoption. OPG expects to record a cumulative-effect downward adjustment of $7 million to the 2018 opening retained earnings.

Significant Accounting Standards Update Adopted

Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share

In May 2015, the FASB issued ASU No. 2015-07, *Fair Value Measurement (Topic 820) – Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or its Equivalent)*. Under the new guidance, investments measured at net asset value (NAV), which have been elected under the guidance as a practical expedient for fair value, are excluded from the fair value hierarchy. Removing investments measured using the practical expedient from the fair value hierarchy is intended to eliminate the diversity in practice that has existed with respect to the categorization of these investments. The only criterion for categorizing investments in the fair value hierarchy is the observability of the inputs. OPG has adopted these updates to ASC Topic 820, *Fair Value Measurement* in 2016. The changes in disclosures required under this update are reflected in Notes 11 and 13.

4. PROPERTY, PLANT AND EQUIPMENT, INTANGIBLE ASSETS AND DEPRECIATION AND AMORTIZATION

Depreciation and amortization expenses, including amounts recognized in regulatory variance and deferral accounts authorized by the OEB, for the years ended December 31 consist of the following:

(millions of dollars)	**2016**	**2015**
Depreciation	**602**	617
Amortization of intangible assets	**27**	20
Amounts recognized in regulatory variance and deferral accounts	**26**	(1)
Amortization of regulatory assets and liabilities *(Note 5)*	**602**	464
	1,257	1,100

Property, plant and equipment as at December 31 consist of the following:

(millions of dollars)	**2016**	**2015**
Nuclear generating stations	**11,057**	11,999
Regulated hydroelectric generating stations	**9,430**	9,351
Contracted generation portfolio generating stations	**3,751**	3,713
Other property, plant and equipment	**1,595**	1,839
Construction in progress	**3,482**	2,567
	29,315	29,469
Less: accumulated depreciation		
Generating stations	**7,948**	7,359
Other property, plant and equipment	**1,369**	1,515
	9,317	8,874
	19,998	20,595

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. An active program to locate a buyer was initiated in October 2016. As such, in the fourth quarter of 2016, OPG reclassified the net book value of $96 million (December 31, 2015 – $96 million) for these assets out of PP&E of the Services, Trading, and Other Non-Generation segment into Other current assets. Depreciation on the assets ceased in the fourth quarter of 2016. In December 2016, a purchase and sale agreement was executed, and the sale is expected to be completed during the second quarter of 2017. An estimated after-tax gain on sale in excess of $200 million is expected to be recognized upon completion of the transaction. Pursuant to the December 2015 Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act 2014*, OPG is required to transfer the proceeds, net of prescribed deductions under the act, from this disposition into the Province's Consolidated Revenue Fund.

Construction in progress as at December 31 consists of the following:

(millions of dollars)	**2016**	**2015**
Darlington Refurbishment	**2,563**	1,868
Peter Sutherland Sr. GS	**236**	95
Other	**683**	604
	3,482	2,567

Interest capitalized to construction and development in progress at an average rate of five percent during 2016 (2015 – five percent) was $141 million (2015 – $102 million).

Intangible assets as at December 31 consist of the following:

(millions of dollars)	**2016**	**2015**
Nuclear generating stations	**122**	118
Regulated hydroelectric generating stations	**7**	4
Contracted generation portfolio generating stations	**4**	5
Computer software and other intangible assets	**350**	321
Development in progress	**20**	28
	503	476
Less: accumulated amortization		
Generating stations	**120**	115
Computer software and other intangible assets	**284**	263
	404	378
	99	98

The estimated aggregate amortization expense for each of the five succeeding years for intangible assets in service as at December 31, 2016 is as follows:

(millions of dollars)	**2017**	**2018**	**2019**	**2020**	**2021**
Amortization expense	24	21	20	8	2

5. REGULATORY ASSETS AND LIABILITIES

In December 2014, OPG filed an application with the OEB to recover approximately $1.8 billion in December 31, 2014 balances in most of its authorized regulatory variance and deferral accounts. These amounts were approved by the OEB in 2015, without adjustments. In October 2015, the OEB issued an order implementing its 2015 decisions on this application that authorized OPG to recover $933 million over the period from October 1, 2015 to December 31, 2016, through rate riders for generation from OPG's regulated nuclear and regulated hydroelectric facilities during this period. The remaining approved balances are subject to recovery after 2016.

In 2016, OPG recorded amortization of regulatory assets and liabilities for the variance and deferral account balances approved for disposition, on a straight-line basis, based on recovery or repayment periods authorized by the OEB's October 2015 order. In 2015, OPG recorded such amortization on a straight-line basis based on account balances and recovery or repayment periods authorized by the OEB's December 2014 and October 2015 orders applicable to that period.

Any shortfall or over-recovery of the approved balances due to differences between actual and forecast production is recorded in the authorized Nuclear Deferral and Variance Over/Under Recovery Variance Account and the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account to be collected from, or refunded to, customers in the future.

The OEB's December 2014 and October 2015 orders also approved the continuation of previously authorized variance and deferral accounts, including those authorized pursuant to *Ontario Regulation 53/05*. During the period from January 1, 2015 to December 31, 2016, OPG recorded additions to the variance and deferral accounts as authorized by these orders, relative to the forecast amounts reflected in the cost-of-service regulated prices in effect during that period, where applicable. Where authorized by the OEB, OPG recorded interest on the unamortized balances in the applicable variance and deferral accounts at the OEB-prescribed rates of 1.10 percent per annum for the period from April 1, 2015 to December 31, 2016 and 1.47 percent per annum for the period from January 1, 2015 to March 31, 2015.

OPG's May 2016 application with the OEB for new regulated prices included a request for new rate riders to recover or repay the December 31, 2015 balances in all of the Company's OEB-authorized variance and deferral accounts, with the exception of the Pension & OPEB Cash Versus Accrual Differential Deferral Account, less amounts previously approved for recovery or repayment for these accounts in 2016 through rate riders in effect to December 31, 2016. Additions recorded to these accounts during 2016 would be subject to OEB's review and approval in a future application. OPG's May 2016 application also requested the continuation of all applicable existing variance and deferral accounts.

In January 2017, OPG and the intervenors reached a proposed settlement agreement on a limited set of issues in OPG's application (Proposed Settlement Agreement). The Proposed Settlement Agreement was submitted to the OEB for approval. Among the settled issues, the Proposed Settlement Agreement provides for the continuation of all applicable existing variance and deferral accounts and accepts a number of variance and deferral account balances for recovery, as requested by OPG. In addition, the proposed agreement would result in approval of OPG's proposed adjustments to the existing regulated hydroelectric base regulated prices for the purposes of determining the starting point for an incentive regulation formula for the 2017 to 2021 period. The balances of the Nuclear Liability Deferral Account, the Bruce Lease Net Revenues Variance Account, and the Capacity Refurbishment Variance Account are excluded from the scope of the Proposed Settlement Agreement. The periods of recovery or repayment for the accepted variance and deferral account balances also are excluded. The Proposed Settlement Agreement did not impact OPG's 2016 financial results.

The regulatory assets and liabilities recorded as at December 31 are as follows:

(millions of dollars)	**2016**	**2015**
Regulatory assets		
Variance and deferral accounts authorized by the OEB		
Pension and OPEB Cost Variance Account	**716**	865
Pension & OPEB Cash Versus Accrual Differential Deferral Account *(Note 11)*	**497**	315
Hydroelectric Surplus Baseload Generation Variance Account	**210**	114
Bruce Lease Net Revenues Variance Account	**95**	95
Nuclear Deferral and Variance Over/Under Recovery Variance Account	**74**	82
Other variance and deferral accounts	**33**	243
	1,625	1,714
Pension and OPEB Regulatory Asset *(Note 11)*	**3,392**	3,362
Deferred Income Taxes *(Note 9)*	**838**	792
Total regulatory assets	**5,855**	5,868
Less: current portion	**-**	628
Non-current regulatory assets	**5,855**	5,240
Regulatory liabilities		
Variance and deferral accounts authorized by the OEB		
Capacity Refurbishment Variance Account	**102**	-
Other variance and deferral accounts	**208**	60
Total regulatory liabilities	**310**	60
Less: current portion	**-**	26
Non-current regulatory liabilities	**310**	34

The changes in the regulatory assets and liabilities during 2016 and 2015 are as follows:

(millions of dollars)	Pension and OPEB Cost Variance	Pension & OPEB Cash vs Accrual Differential Deferral	Hydro-electric Surplus Baseload Generation Variance	Bruce Lease Net Revenues Variance	Nuclear Deferral and Variance Over/Under Recovery Variance	Capacity Refurb-ishment Variance	Other Variance and Deferral (net)	Pension and OPEB Regula-tory Asset	Deferred Income Taxes
Net regulatory assets January 1, 2015	939	36	67	315	56	190	320	4,363	861
Increase (decrease)	-	279	82	(149)	44	(68)	3	(1,001)	(69)
Interest	-	-	-	-	1	2	1	-	-
Amortization	(74)	-	(35)	(71)	(19)	(124)	(141)	-	-
Net regulatory assets December 31, 2015	865	315	114	95	82	-	183	3,362	792
Increase (decrease)	**-**	**182**	**126**	**143**	**29**	**(36)**	**(184)**	**30**	**46**
Interest	**-**	**-**	**2**	**-**	**1**	**-**	**-**	**-**	**-**
Amortization	**(149)**	**-**	**(32)**	**(143)**	**(38)**	**(66)**	**(174)**	**-**	**-**
Net regulatory assets December 31, 2016	**716**	**497**	**210**	**95**	**74**	**(102)**	**(175)**	**3,392**	**838**

Pension and OPEB Cost Variance Account

As authorized by the OEB, for the period from March 1, 2011 to October 30, 2014, the Pension and OPEB Cost Variance Account recorded the differences between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis and related tax impacts, and corresponding forecast amounts reflected in the regulated prices then in effect. In its November 2014 decision, the OEB determined that the pension and OPEB amounts reflected in OPG's regulated prices established by that decision effective November 1, 2014 would be limited to the Company's estimated minimum contributions to its registered pension plan and a forecast of OPG's expenditures on the OPEB and supplementary pension plans. As such, the OEB ordered the Pension and OPEB Cost Variance Account to record only amortization beginning on November 1, 2014.

In its October 2015 order, the OEB approved the continuation of the previously authorized recovery of 10/12 of the account balance as at December 31, 2012 over a 144-month period to December 31, 2024. Amounts recorded in the account in 2013 and 2014 were approved for recovery over a 72-month period to June 30, 2021 by the OEB's October 2015 order. OPG's May 2016 application for new regulated prices has requested the continuation of these recovery schedules.

Pension & OPEB Cash Versus Accrual Differential Deferral Account

In its November 2014 decision and December 2014 order, the OEB established the Pension & OPEB Cash Versus Accrual Differential Deferral Account. Effective November 1, 2014, this deferral account records the difference between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis under US GAAP and OPG's corresponding actual cash expenditures for these plans. The balance in the account as at December 31, 2016 represents the excess of costs calculated using the accrual basis over the cash basis for the period from November 1, 2014 to December 31, 2016. The Company has recognized the amount set aside in the deferral account as a regulatory asset.

The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of the OEB generic proceeding on the regulatory treatment and recovery of

pension and OPEB costs. The OEB's consultation process to develop standard principles to guide its review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery, began in May 2015 and is continuing.

In its May 2016 application for new regulated prices, OPG has proposed to continue recording the difference between actual pension and OPEB costs for the regulated business determined on an accrual basis and OPG's corresponding actual cash expenditures for these plans in the Pension & OPEB Cash Versus Accrual Differential Deferral Account, pending the outcome of the OEB's consultation process.

Hydroelectric Surplus Baseload Generation Variance Account

The Hydroelectric Surplus Baseload Generation Variance Account records the impact of forgone production at OPG's regulated hydroelectric facilities due to surplus baseload generation conditions.

The OEB's October 2015 order provided for the recovery of amounts recorded in the account during 2014 over an 18-month period from July 1, 2015 to December 31, 2016. The regulatory asset balance for this account as at December 31, 2016 represents amounts recorded in the account during 2015 and 2016.

Bruce Lease Net Revenues Variance Account

In accordance with *Ontario Regulation 53/05*, the OEB is required to include the difference between OPG's revenues and costs associated with the two nuclear generating stations on lease to Bruce Power in the determination of the regulated prices for production from OPG's regulated nuclear facilities. Based on *Ontario Regulation 53/05* requirements, the OEB has established a variance account that captures differences between OPG's actual revenues and costs related to these stations and the corresponding forecasts included in approved nuclear regulated prices, including the costs associated with OPG's Nuclear Liabilities and the earnings from the portion of the Nuclear Segregated Funds related to the Bruce stations.

In 2013, the OEB ordered the portion of the balance in the Bruce Lease Net Revenues Variance Account related to the impact of the derivative liability embedded in the terms of the lease agreement between OPG and Bruce Power related to the Bruce nuclear generating stations (Bruce Lease) in effect prior to December 2015 to be recovered on the basis of OPG's expected rent rebate payments to Bruce Power and associated income tax impacts. The OEB's October 2015 order reaffirmed this approach and included, in amounts authorized for recovery over the period to the end of 2016, amounts for the derivative liability. In December 2015, as a result of amendments to the Bruce Lease, OPG reversed the derivative liability, with a corresponding reduction to the regulatory asset for the Bruce Lease Net Revenue Variance Account. Amounts collected from customers for the derivative liability for periods after its reversal are subject to refund in the future and have been recognized as a regulatory liability as part of the variance account balance.

In its October 2015 order, the OEB approved the continuation of the previously authorized recovery of the non-derivative portion of the account balance as at December 31, 2012 over a 48-month period ending December 31, 2016, and the recovery of the non-derivative portion of amounts recorded in the account in 2013 and 2014 over an 18-month period ending December 31, 2016.

The regulatory asset balance for the Bruce Lease Net Revenues Variance Account as at December 31, 2016 reflects a net amount of $164 million recoverable from customers for non-derivative variances recorded in 2015 and 2016, partially offset by a liability of $69 million to customers for amounts recovered for the derivative liability since its reversal in December 2015. Non-derivative amounts recorded during 2016 included those arising from the adjustment to the Nuclear Liabilities and related changes to the estimated service lives of OPG's nuclear stations, for accounting purposes, effective December 31, 2015.

Nuclear Deferral and Variance Over/Under Recovery Variance Account

The Nuclear Deferral and Variance Over/Under Recovery Variance Account records any shortfall or over-recovery of the approved variance and deferral account balances due to differences between actual and forecast nuclear production. It also captures the transfer of balances remaining in other variance and deferral accounts as they expire, from time to time.

The OEB's October 2015 order provided for the recovery of amounts recorded in the account in 2013 and 2014 over an 18-month period from July 1, 2015 to December 31, 2016. The regulatory asset balance for this account as at December 31, 2016 represents amounts recorded during 2015 and 2016.

Capacity Refurbishment Variance Account

Pursuant to *Ontario Regulation 53/05*, the OEB has authorized the Capacity Refurbishment Variance Account (CRVA). The account captures variances from the forecasts reflected in the regulated prices for capital and non-capital costs incurred to increase the output of, refurbish, or add operating capacity to one or more of the regulated facilities. The balance in the account as at December 31, 2016 includes variances related to the refurbishment of the Darlington nuclear generating station, life extension initiatives at the Pickering nuclear generation station, and other projects.

OPG determines amounts to be recovered from, or refunded to, customers with respect to variances in capital costs as the difference from forecast depreciation expense and cost of capital associated with the in-service capital reflected in the regulated prices and associated income tax effects. The cost of capital amount in the account is calculated using the weighted average cost of capital, including a return on equity, as approved by the OEB in determining the regulated prices. In accordance with US GAAP, in recognizing a regulatory asset for these amounts, OPG limits the portion of cost of capital additions to amounts calculated using the average rate of capitalized interest applied to construction and development in progress. Upon approval of recovery by the OEB, the amortization of these balances is recorded in the consolidated financial statements on the basis of amounts recognized as a regulatory asset. This can result in a net income impact upon recovery of these balances, as the amortization of the regulatory asset for cost of capital additions recorded at the average rate of capitalized interest would be lower than the corresponding amounts recovered, as revenue, based on OEB-approved balances calculated using the weighted average cost of capital.

The OEB's October 2015 order provided for the recovery of amounts recorded in the account in 2013 and 2014 over an 18-month period from July 1, 2015 to December 31, 2016. The regulatory liability balance for this account as at December 31, 2016 represents amounts recorded during 2015 and 2016.

Impact Resulting from Changes in Station End-of-Life Dates Deferral Account

In December 2015, as required by the OEB's previous decisions and orders, OPG applied to the OEB for an accounting order to establish a new deferral account to record the revenue requirement impact on the Pickering and Darlington nuclear generating stations of changes to the Nuclear Liabilities and depreciation expense arising from extensions in the estimated useful lives of OPG's nuclear stations, for accounting purposes, effective December 31, 2015. These impacts were not reflected in the existing regulated prices. In March 2016, the OEB issued its final decision and order establishing the requested account, the Impact Resulting from Changes in Station End-of-Life Dates Deferral Account, effective January 1, 2016. As at December 31, 2016, OPG recognized a regulatory liability of $71 million related to the balance in the deferral account. The deferral account will record these impacts until such time as new regulated prices reflecting the above changes come into effect.

The extensions to the estimated useful lives of OPG's nuclear generating stations effective December 31, 2015, for accounting purposes, included those of the Bruce A GS and the Bruce B GS to reflect the estimated end-of-life dates per the updated refurbishment agreement between the IESO and Bruce Power announced in December 2015, a one-year extension for the Darlington GS to reflect the approval of the refurbishment schedule in 2015, and an extension

of less than one year for the Pickering GS. To reflect these changes, OPG recognized a total increase of $2,330 million in the Nuclear Liabilities and a corresponding increase in the related asset retirement costs capitalized to PP&E, effective December 31, 2015.

Other Variance and Deferral Accounts

Regulatory assets

As at December 31, 2016 and 2015, regulatory assets for Other variance and deferral accounts included amounts for the Nuclear Liability Deferral Account, the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account, the Nuclear Development Variance Account, and the Pickering Life Extension Depreciation Variance Account.

Pursuant to *Ontario Regulation 53/05*, the Nuclear Liability Deferral Account has been authorized by the OEB in connection with changes to OPG's liabilities for nuclear used fuel management and nuclear decommissioning and L&ILW management associated with the nuclear facilities owned and operated by OPG, which are comprised of the Pickering and Darlington nuclear generating stations. The deferral account records the revenue requirement impact associated with the changes in these liabilities arising from an approved reference plan, in accordance with the terms of the ONFA.

The Nuclear Development Variance Account records variances between the actual non-capital costs incurred and firm financial commitments made in the course of planning and preparation for the development of proposed new nuclear generation facilities and the corresponding forecasts reflected in the regulated prices approved by the OEB.

The Pickering Life Extension Depreciation Variance Account balance was recorded wholly during the period from November 1, 2014 to December 31, 2014 and was fully amortized during the year ended December 31, 2016 based on the recovery period authorized in the OEB's October 2015 order.

As at December 31, 2016, regulatory assets for Other variance and deferral accounts also included the Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account, which is discussed in Note 3.

As at December 31, 2015, regulatory assets for Other variance and deferral accounts also included the Pension & OPEB Cash Payment Variance Account. This account records, effective November 1, 2014, the difference between OPG's actual contributions to its registered pension plan and expenditures on its OPEB and supplementary pension plans for the regulated business, and the corresponding amounts reflected in the regulated prices.

Regulatory liabilities

As at December 31, 2016 and 2015, regulatory liabilities for Other variance and deferral accounts included amounts for the Hydroelectric Water Conditions Variance Account, the Ancillary Services Net Revenue Variance Account, the Income and Other Taxes Variance Account, and the Hydroelectric Incentive Mechanism Variance Account.

The Hydroelectric Water Conditions Variance Account captures the impact of differences in regulated hydroelectric electricity production due to differences between forecast water conditions underlying the production forecast approved by the OEB in setting regulated hydroelectric prices, and the actual water conditions.

The Ancillary Services Net Revenue Variance Account has been authorized by the OEB to capture differences between actual nuclear and regulated hydroelectric ancillary services net revenue and the forecast amounts of such revenue approved by the OEB in setting regulated prices.

The Income and Other Taxes Variance Account includes deviations in income taxes for the regulated business, from those approved by the OEB in setting regulated prices, caused by changes in tax rates and rules, as well as reassessments.

The Hydroelectric Incentive Mechanism Variance Account records a credit to customers equal to 50 percent of OPG's hydroelectric incentive mechanism revenues above a specified threshold for the regulated hydroelectric facilities.

As at December 31, 2016, regulatory liabilities for Other variance and deferral accounts also included the Pension & OPEB Cash Payment Variance Account and the Impact Resulting from Changes in Station-End-of-Life Dates Deferral Account.

In its October 2015 order, the OEB approved the recovery or repayment of the majority of the account balances of the Other variance and deferral accounts as at December 31, 2014, less amounts approved in the December 2014 order, over an 18-month period from July 1, 2015 to December 31, 2016.

Pension and OPEB Regulatory Asset

The Pension and OPEB Regulatory Asset represents unamortized amounts in respect of OPG's pension and OPEB plans that have been recognized in OCI and not yet reclassified into the amortization component of the benefit costs in respect of these plans. These amounts are expected to be recovered from customers through future regulated prices. The regulatory asset is reversed as underlying unamortized balances are amortized as components of benefit costs. For further details, refer to Note 3 under the heading, *Rate Regulated Accounting*. The AOCI amounts related to pension and OPEB plans are presented in Note 11.

Deferred Income Taxes

OPG is required to record a regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers for generation from OPG's regulated facilities. In addition, OPG is required to recognize a deferred income tax liability or asset for the regulatory asset or liability for the amount of deferred income taxes expected to be included in future regulated prices and paid to, or recovered, from customers. Income taxes are discussed in Note 9.

6. LONG-TERM DEBT

Long-term debt consists of the following as at December 31: [1]

(millions of dollars)	**2016**	**2015**
Notes payable to the OEFC		
Senior Notes [2]		
4.91% due 2016	**-**	270
5.35% due 2017	**900**	900
5.27% due 2018	**395**	395
5.44% due 2019	**365**	365
4.56% due 2020	**660**	660
4.28% due 2021	**185**	185
3.30% due 2022	**150**	150
3.12% due 2023	**40**	40
3.04% due 2026	**50**	-
5.07% due 2041	**300**	300
4.36% due 2042	**200**	200
4.03% due 2046	**50**	-
UMH Energy Partnership [3]		
Senior Notes		
7.86% due to 2041	**184**	187
PSS Generating Station Limited Partnership [4]		
Senior Notes		
4.90% due to 2067	**245**	245
Lower Mattagami Energy Limited Partnership [5]		
Senior Notes		
2.35% due 2017	**200**	200
4.46% due 2021	**225**	225
3.53% due 2024	**200**	200
2.40% due 2026	**220**	-
5.26% due 2041	**250**	250
5.05% due 2043	**200**	200
4.26% due 2046	**275**	275
4.26% due 2052	**225**	225
Other	**15**	-
	5,534	5,472
Less: bond issuance fees	**(14)**	(13)
Less: due within one year	**(1,103)**	(273)
Long-term debt	**4,417**	5,186

[1] The interest rates disclosed reflect the effective interest rate of the debt.

[2] OEFC senior debt is entitled to receive, in full, amounts owing in respect of the senior debt and is pari passu to the Lower Mattagami Energy Limited Partnership senior notes.

[3] These notes are secured by the assets of the Upper Mattagami and Hound Chute project. Principal repayments of $3 million per year are made on a semi-annual basis until maturity in 2041, at which time the remaining principal balance of $116 million becomes due.

[4] These notes are secured by the assets of the Peter Sutherland Sr. GS project. The notes have an interest-only feature until 2025 and will be amortized with blended semi-annual principal and interest payments thereafter until maturity in 2067, at which time the remaining principal balance of $49 million becomes due.

[5] These notes are secured by the assets of the Lower Mattagami River project, including existing and new operating facilities, and are recourse to OPG until the recourse release date. These notes rank pari passu to the OEFC senior notes.

In December 2014, OPG entered into an $800 million general corporate credit facility with the OEFC in support of its financing requirements for 2015 and 2016. As at December 31, 2016, there were outstanding long-term borrowings of $100 million under this credit facility, which are included in the table above. The balance of the credit facility

expired on December 31, 2016. In June 2016, OPG entered into a $700 million general corporate credit facility agreement with the OEFC, which expires on December 31, 2017. There were no outstanding borrowings under this credit facility as of December 31, 2016.

Interest paid in 2016 was $269 million (2015 – $269 million), of which $261 million (2015 – $261 million) relates to interest paid on long-term debt.

In the fourth quarter of 2015, PSS, a subsidiary of OPG, issued long-term debt totalling $245 million in support of the Peter Sutherland Sr. GS project. The majority of the debt proceeds, totalling $180 million, were invested in a structured deposit note with staggered maturity dates ranging from January 2016 to April 2017. As at December 31, 2016, the remaining deposit note balance of $70 million was reported as Other current assets on the consolidated balance sheets, based on the terms of the deposit note. As at December 31, 2015, $110 million was reported as Other current assets and $70 million as Other long-term assets in respect of the deposit note.

In October 2016, Lower Mattagami Energy Limited Partnership (LME) issued senior notes totalling $220 million maturing in October 2026. The effective interest rate and coupon interest rate of these notes were 2.40 percent and 2.31 percent, respectively.

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes was 4.12 percent.

A summary of the contractual maturities of all long-term borrowings outstanding as at December 31, 2016, by year, is as follows:

(millions of dollars)	
2017	**1,103**
2018	**398**
2019	**368**
2020	**663**
2021	**413**
Thereafter	**2,589**
	5,534

The net book value of the pledged assets as at December 31, 2016 was $3,510 million (2015 – $3,520 million).

7. SHORT-TERM DEBT AND NET INTEREST EXPENSE

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2016, OPG renewed and extended both tranches to May 2021. As at December 31, 2016 and 2015, there were no outstanding borrowings under the bank credit facility.

As at December 31, 2016, the LME maintained a $500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for the LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2021 and a $200 million tranche maturing in August 2017. As at December 31, 2016, there was no external commercial paper outstanding under LME's commercial paper program (2015 – $225 million). There were also no amounts outstanding under LME's bank credit facility as at December 31, 2016 and 2015.

As at December 31, 2016, OPG maintained $25 million of short-term, uncommitted overdraft facilities and $460 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at

December 31, 2016, a total of $386 million of Letters of Credit had been issued under these facilities. This included $349 million for the supplementary pension plans, $36 million for general corporate purposes, and $1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust. The maximum amount of co-ownership interest that can be sold under this agreement is $150 million. In October 2016, the expiry date of the agreement was extended from November 30, 2016 to November 30, 2018. As at December 31, 2016 and 2015, there were Letters of Credit outstanding under this agreement of $150 million which were issued in support of OPG's supplementary pension plans.

In October 2014, UMH Energy Partnership entered into an $8 million short-term, uncommitted overdraft facility and $16 million of irrevocable, standby Letters of Credit facilities in support of its operations. As at December 31, 2016, total Letters of Credit of $14 million had been issued under these facilities.

The following table summarizes the net interest expense for the years ended December 31:

(millions of dollars)	**2016**	**2015**
Interest on long-term debt	**290**	285
Interest on short-term debt	**8**	8
Interest income	**(7)**	(9)
Interest capitalized to property, plant and equipment and intangible assets	**(141)**	(102)
Interest related to regulatory assets and liabilities [1]	**(30)**	(2)
Net interest expense	**120**	180

[1] Includes interest to recognize the cost of financing related to regulatory variance and deferral accounts, as authorized by the OEB, and interest deferred in the Bruce Lease Net Revenues Variance Account, the Capacity Refurbishment Variance Account, and the Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account.

8. FIXED ASSET REMOVAL AND NUCLEAR WASTE MANAGEMENT LIABILITIES AND FUNDS

The liabilities for fixed asset removal and nuclear waste management on a present value basis consist of the following as at December 31:

(millions of dollars)	**2016**	**2015**
Liability for nuclear used fuel management	**11,292**	12,793
Liability for nuclear decommissioning and nuclear L&ILW waste management	**7,811**	6,999
Liability for non-nuclear fixed asset removal	**381**	377
Fixed asset removal and nuclear waste management liabilities	**19,484**	20,169

The changes in the fixed asset removal and nuclear waste management liabilities for the years ended December 31 are as follows:

(millions of dollars)	**2016**	**2015**
Liabilities, beginning of year	**20,169**	17,028
Increase in liabilities due to accretion [1]	**1,024**	906
Decrease in liabilities resulting from the ONFA reference plan update process *(Note 3)*	**(1,567)**	-
Increase in liabilities reflecting changes to the estimated useful lives of nuclear generating stations	**-**	2,330
Increase in liabilities due to nuclear used fuel and nuclear waste management expenses and other expenses [1]	**133**	123
Liabilities settled by expenditures on fixed asset removal and nuclear waste management	**(275)**	(218)
Liabilities, end of year	**19,484**	20,169

[1] Amounts shown exclude the impact of regulatory variance and deferral accounts.

OPG's fixed asset removal and nuclear waste management liabilities are comprised of expected costs to be incurred up to and beyond termination of operations and the closure of nuclear and thermal generating facilities, and other facilities. Costs will be incurred for activities such as preparation for safe storage and safe storage of the nuclear stations, dismantlement, demolition and disposal of facilities and equipment, remediation and restoration of sites, and the ongoing and long-term management of nuclear used fuel and L&ILW material.

The determination of the accrual for fixed asset removal and nuclear waste management costs requires significant assumptions since these programs are long-term in nature. The most recent comprehensive update of the cost estimates for the Nuclear Liabilities is contained in the 2017-2021 ONFA reference plan, which was finalized and approved by the Province in the fourth quarter of 2016 (2017 ONFA Reference Plan). As discussed in Note 3, effective December 31, 2016, OPG recognized a decrease in the Nuclear Liabilities of approximately $1,570 million and a corresponding decrease in asset retirement costs capitalized as part of the carrying value of nuclear PP&E to reflect the changes in cost estimates arising from the 2017 ONFA Reference Plan update process. The reduction in the liabilities as at December 31, 2016 was determined by discounting the net decrease in future undiscounted cash flows using the weighted average discount rate of 4.95 percent reflected in the existing liability. The cost escalation rates used to determine the future undiscounted cash flows reflected in the December 31, 2016 adjustment to the Nuclear Liabilities ranged from 2.0 percent to 3.4 percent.

For the purposes of calculating OPG's Nuclear Liabilities, as at December 31, 2016, consistent with the current accounting end-of-life assumptions, nuclear station decommissioning activities are projected to occur over approximately the next 80 years. The estimates for the Nuclear Liabilities include cash flow estimates for decommissioning the nuclear stations for approximately 40 years after stations are shut down and to 2088 for placement of used fuel into the assumed long-term disposal repository, followed by extended monitoring.

The significant assumptions underlying operational, technical, and economic factors used in the calculation of the accrued Nuclear Liabilities are subject to periodic review. Changes to these assumptions, including changes to assumptions on the timing of the nuclear waste programs including construction of waste disposal facilities, station end-of-life dates, waste disposal methods, financial indicators, or the technology employed, may result in significant changes to the value of the accrued liabilities. With programs of this long-term duration and the evolving technology to handle the nuclear waste, there is a significant degree of inherent uncertainty surrounding the measurement of the costs for these programs. These costs may increase or decrease over time.

Liability for Nuclear Used Fuel Management Costs

The liability for nuclear used fuel management represents the cost of managing the highly radioactive used nuclear fuel bundles. The federal NFWA, proclaimed into force in 2002, required that Canada's nuclear fuel waste owners form a nuclear waste management organization, and that each waste owner establish a trust fund for used fuel management costs as specified in the NFWA. This organization, the NWMO, is responsible for the design and implementation of Canada's plan for the long-term management of nuclear used fuel waste. To estimate its liability for nuclear used fuel management costs, OPG has adopted a conservative approach consistent with the Adaptive Phased Management concept approved by the Government of Canada, which assumes a deep geologic repository as part of the long-term management of nuclear used fuel, with an in-service date of 2043 at the earliest.

Liability for Nuclear Decommissioning and L&ILW Management Costs

The liability for nuclear decommissioning and L&ILW management represents the estimated costs of decommissioning the nuclear generating stations after the end of their service lives, as well as the cost of managing L&ILW generated by the stations. The significant assumptions used in estimating future nuclear fixed asset removal costs include a deferred dismantlement basis for decommissioning of the stations, whereby the reactors will be de-watered and de-fueled immediately after the station has ceased operations and thereafter will remain in a safe state condition for a 30-year period, prior to an approximate 10-year dismantlement period.

The life cycle costs of L&ILW management include the costs of processing and storage of such radioactive wastes during and following the operation of the nuclear stations, as well as the costs of the ultimate long-term management of these wastes. The current assumptions used to establish the accrued costs for the management of L&ILW include an L&ILW DGR to be owned and operated by OPG. Agreement was previously reached with local municipalities for OPG to develop a deep geologic repository for the long-term management of L&ILW adjacent to OPG's Western Waste Management Facility in Kincardine, Ontario. OPG has suspended design activities for the L&ILW DGR, pending receipt of the site preparation and construction licence.

Liability for Non-Nuclear Fixed Asset Removal Costs

The liability for non-nuclear fixed asset removal primarily represents the estimated costs of decommissioning OPG's thermal generating stations at the end of their services lives. The liability is based on third-party cost estimates based on an in-depth review of plant sites and an assessment of required clean-up and restoration activities completed in 2011 for most of the thermal generating stations. For the purpose of measuring the liability, asset removal activities are estimated to take place over the next one to 15 years.

Ontario Nuclear Funds Agreement

In accordance with the ONFA, OPG sets aside and invests funds that are held in segregated custodian and trustee accounts specifically for discharging its life cycle obligation for nuclear decommissioning and long-term nuclear waste management. The Used Fuel Segregated Fund and the Decommissioning Segregated Fund were established under the ONFA for this purpose. OPG makes contributions to the Nuclear Segregated Funds based on the approved ONFA reference plan in effect. ONFA reference plans are subject to approval by the Province.

Since inception, OPG has been making quarterly payments to the Used Fuel Segregated Fund over the assumed lives of its nuclear generating stations, as specified in the ONFA, including contributions to the NFWA Trust (the Trust) established by OPG pursuant to the NFWA. The Trust forms part of the Used Fuel Segregated Fund, with any OPG contributions to the Used Fuel Segregated Fund, as well as any portion of the fund currently not in the trust, being able to be applied towards the Trust's annual contribution requirements pursuant to the NFWA. Required funding of the Used Fuel Segregated Fund for 2016 was $150 million (2015 – $143 million). ONFA requirements have resulted in the majority of the underlying used fuel management obligation being funded through OPG contributions over the initial estimated useful lives of the nuclear generating stations assumed in the ONFA, which did not reflect subsequent extensions to the nuclear station lives to reflect refurbishment and life extension decisions.

OPG has not been required to make contributions to the Decommissioning Segregated Fund, which was fully funded at its inception through an initial contribution made by the Province and, taking into account asset performance and changes in underlying funding obligation over time, at the time of every subsequent approved ONFA reference plan.

The 2017 ONFA Reference Plan was approved by the Province in December 2016, with an effective date of January 1, 2017. Based on the funded status of the Used Fuel Segregated Fund and the Decommissioning Segregated Fund reflecting the life cycle liability estimates per the 2017 ONFA Reference Plan, no overall contributions to either fund are currently required starting in 2017. Contributions may be required in the future should either or both of the funds be in an underfunded position when a new reference plan is prepared.

The *Nuclear Safety and Control Act* (Canada) requires OPG to have sufficient funds available to discharge its existing nuclear waste management and nuclear facilities decommissioning obligations. As required by the terms of the ONFA, the Province has provided a Provincial Guarantee to the Canadian Nuclear Safety Commission (CNSC) since 2003, on behalf of OPG. The Provincial Guarantee provides for any shortfall between the CNSC consolidated financial guarantee requirement and the value of the Nuclear Segregated Funds. OPG pays the Province an annual guarantee fee of 0.5 percent of the amount of the Provincial Guarantee. The current value of the Provincial Guarantee amount of $1,551 million is in effect through to the end of 2017. Based on this guarantee amount, OPG paid a guarantee fee of $8 million to the Province for each of 2015 and 2016.

The investments in the Nuclear Segregated Funds include a diversified portfolio of equities and fixed income securities that are invested across geographic markets, as well as investments in infrastructure, real estate, and agriculture. The Nuclear Segregated Funds are invested to fund long-term liability requirements and, as such, the portfolio asset mix is structured to achieve the required return over a long-term horizon. While short-term fluctuations in market value will occur, managing the long-term return of the Nuclear Segregated Funds remains the primary goal. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

Decommissioning Segregated Fund

Under the ONFA, OPG is wholly responsible for cost estimate changes and investment returns in the Decommissioning Segregated Fund. As at December 31, 2016 and 2015, the Decommissioning Segregated Fund was in an overfunded position.

Upon termination of the ONFA, the Province has the sole right to any excess funds in the Decommissioning Segregated Fund, which is the excess of the fair market value of the fund's assets over the underlying estimated future costs, as per the most recently approved ONFA reference plan. Accordingly, when the Decommissioning Segregated Fund is overfunded, OPG limits the fund earnings recognized in the consolidated financial statements by recording an amount due to the Province, such that the asset recognized for the fund on the consolidated balance sheet is equal to the cost estimate of the liability based on the most recently approved ONFA reference plan. Additionally, OPG recognizes the portion of the surplus that it may direct to the Used Fuel Segregated Fund, which is possible when the surplus in the Decommissioning Segregated Fund is such that the underlying liabilities, as defined by the most recently approved ONFA reference plan, are at least 120 percent funded. In those circumstances, OPG may direct, at the time a new reference plan is approved, up to 50 percent of the surplus over 120 percent to the

Used Fuel Segregated Fund, with the OEFC entitled to a distribution of an equal amount. Therefore, when the Decommissioning Segregated Fund is at least 120 percent funded, OPG recognizes 50 percent of the excess greater than 120 percent in income, up to the amount by which the Used Fuel Segregated Fund is underfunded. Based on the 2017 ONFA Reference Plan, the Used Fuel Segregated Fund was in a marginally overfunded position as at December 31, 2016, for the first time since inception. As a result, OPG recognized a due to the Province amount such that the Decommissioning Segregated Fund asset on the consolidated balance sheet as at December 31, 2016 was limited to the value of the underlying liability per the 2017 ONFA Reference Plan. The payable to the Province may be reduced in subsequent periods in the event that the Decommissioning Segregated Fund earns less than its target rate of return, a new ONFA reference plan is approved with a higher underlying funding liability, or the Used Fuel Segregated Fund changes to an underfunded status. When the Decommissioning Segregated Fund is underfunded, the earnings on the fund reflect actual fund returns based on the market value of the assets.

When the Decommissioning Segregated Fund is in an overfunded status at less than 120 percent, OPG recognized its annual earnings on the fund at 3.25 percent plus the long-term Ontario Consumer Price Index (CPI) specified in the most recently approved ONFA reference plan, which is the rate of growth in the underlying funding liability. The same treatment is applied to the Decommissioning Segregated Fund when it is in an overfunded status at greater than 120 percent, if the Used Fuel Segregated Fund is fully funded.

Used Fuel Segregated Fund

OPG is responsible for cost increases in the funding liability for used fuel waste management under the ONFA, subject to specified graduated liability thresholds, pursuant to which the Province limits OPG's total financial exposure for the first 2.23 million nuclear used fuel bundles at approximately $15 billion in present value dollars as at December 31, 2016. The graduated liability thresholds do not apply to used fuel bundles beyond the 2.23 million threshold.

Under the ONFA, the Province guarantees OPG's annual return in the Used Fuel Segregated Fund at 3.25 percent plus the change in the Ontario CPI, as defined by ONFA, for funding related to the first 2.23 million used fuel bundles, ("committed return"). OPG recognizes the committed return on the Used Fuel Segregated Fund as earnings on the Nuclear Segregated Funds. The difference between the committed return and the actual market return determined based on the fair value of the fund assets related to the first 2.23 million used fuel bundles is recorded as due to or due from the Province. This amount due to or due from the Province represents the amount that would be paid to or received from the Province if the committed return were to be settled as of the consolidated balance sheet date. The 2.23 million threshold represents the estimated total life cycle fuel bundles based on the initial estimated useful lives of the nuclear stations assumed in the ONFA.

As prescribed under the ONFA, OPG's contributions for fuel bundles in excess of 2.23 million are not subject to the Province's guaranteed rate of return, and earn a return based on changes in the market value of the assets of the Used Fuel Segregated Fund.

If there is a surplus in the Used Fuel Segregated Fund such that the liabilities, as defined by the most recently approved ONFA reference plan, are at least 110 percent funded, the Province, has the right, at any time, to access the excess amount greater than 110 percent. Upon termination of the ONFA, the Province is entitled to any surplus in the fund, which is the excess of the fair market value of the Used Fuel Segregated Fund assets over the estimated future costs, as per the most recently approved ONFA reference plan. Neither OPG nor the Province has a right to direct any amounts from the Used Fuel Segregated Fund to the Decommissioning Segregated Fund. Therefore, when the Used Fuel Fund is overfunded, OPG limits the earnings it recognizes by recording an amount due to the Province, such that the asset recognized for the fund on the consolidated balance sheet is equal to the cost estimate of the liability per the most recently approved ONFA reference plan. This results in OPG recognizing annual earnings on the fund at 3.25 percent plus the long-term Ontario CPI specified in the most recently approved ONFA reference plan, which is the rate of growth in the underlying funding liability, when the fund is overfunded.

As at December 31, 2016, the Used Fuel Segregated Fund was marginally overfunded in accordance with the 2017 ONFA Reference Plan, and OPG recognized a due to the Province amount of $25 million such that the asset recognized for the fund was limited to the value of the underlying funding liability. This payable to the Province may be reduced in subsequent periods in the event that the Used Fuel Segregated Fund earns less than its target rate of return or in the event that a new ONFA reference plan is approved with a higher underlying funding liability.

Nuclear Segregated Funds

The nuclear fixed asset removal and nuclear waste management funds as at December 31 consist of the following:

	Fair Value	
(millions of dollars)	**2016**	**2015**
Decommissioning Segregated Fund	**8,317**	7,834
Due to Province – Decommissioning Segregated Fund	**(1,477)**	(1,285)
	6,840	6,549
Used Fuel Segregated Fund [1]	**11,082**	10,290
Due to Province – Used Fuel Segregated Fund	**(1,938)**	(1,703)
	9,144	8,587
Total Nuclear Segregated Funds	**15,984**	15,136
Less: current portion	**24**	15
Non-current Nuclear Segregated Funds	**15,960**	15,121

[1] The Ontario NFWA Trust represents $3,688 million as at December 31, 2016 (2015 – $3,409 million) of the Used Fuel Segregated Fund on a fair value basis.

The fair value of the securities invested in the Nuclear Segregated Funds as at December 31 is as follows:

	Fair Value	
(millions of dollars)	**2016**	**2015**
Cash and cash equivalents and short-term investments	**354**	343
Alternative investments	**1,989**	1,620
Pooled funds	**1,329**	1,311
Marketable equity securities	**9,503**	8,621
Fixed income securities	**6,181**	6,219
Net receivables/payables	**43**	10
	19,399	18,124
Due to Province	**(3,415)**	(2,988)
	15,984	15,136

The historical cost, gross unrealized aggregate appreciation and depreciation of investment, gross unrealized foreign exchange gains, and fair value of the Nuclear Segregated Funds as at December 31, 2016 and 2015 are summarized as follows:

(millions of dollars)	**Decommissioning Segregated Fund**	**2016 Used Fuel Segregated Fund**	**Total**
Historical cost	**6,896**	**9,385**	**16,281**
Gross unrealized gains (losses)			
Aggregate appreciation	**1,326**	**1,564**	**2,890**
Aggregate depreciation	**(165)**	**(222)**	**(387)**
Foreign exchange	**260**	**355**	**615**
	8,317	**11,082**	**19,399**
Due to Province	**(1,477)**	**(1,938)**	**(3,415)**
Total fair value	**6,840**	**9,144**	**15,984**
Less: current portion	**8**	**16**	**24**
Non-current fair value	**6,832**	**9,128**	**15,960**

(millions of dollars)	**Decommissioning Segregated Fund**	**2015 Used Fuel Segregated Fund**	**Total**
Historical cost	6,608	8,819	15,427
Gross unrealized gains (losses)			
Aggregate appreciation	1,098	1,283	2,381
Aggregate depreciation	(297)	(383)	(680)
Foreign exchange	425	571	996
	7,834	10,290	18,124
Due to Province	(1,285)	(1,703)	(2,988)
Total fair value	6,549	8,587	15,136
Less: current portion	5	10	15
Non-current fair value	6,544	8,577	15,121

Net realized and unrealized gains or losses from investments for the years ended December 31, 2016 and 2015 are summarized as follows:

(millions of dollars)	2016 Decommissioning Segregated Fund	2016 Used Fuel Segregated Fund	2016 Total
Net realized gains			
Realized gains excluding foreign exchange	**84**	**180**	**264**
Realized foreign exchange gains	**30**	**41**	**71**
Net realized gains	**114**	**221**	**335**
Net unrealized gains			
Unrealized gains excluding foreign exchange	**360**	**442**	**802**
Unrealized foreign exchange losses	**(165)**	**(216)**	**(381)**
Net unrealized gains	**195**	**226**	**421**

(millions of dollars)	2015 Decommissioning Segregated Fund	2015 Used Fuel Segregated Fund	2015 Total
Net realized gains			
Realized gains excluding foreign exchange	159	221	380
Realized foreign exchange gains	56	71	127
Net realized gains	215	292	507
Net unrealized gains			
Unrealized losses excluding foreign exchange	(267)	(367)	(634)
Unrealized foreign exchange gains	335	439	774
Net unrealized gains	68	72	140

The change in the Nuclear Segregated Funds for the years ended December 31 is as follows:

(millions of dollars)	Fair Value 2016	2015
Decommissioning Segregated Fund, beginning of year	**6,549**	6,246
Increase in fund due to return on investments	**505**	507
Decrease in fund due to reimbursement of eligible expenditures	**(22)**	(19)
Increase in due to Province	**(192)**	(185)
Decommissioning Segregated Fund, end of year	**6,840**	6,549
Used Fuel Segregated Fund, beginning of year	**8,587**	8,133
Increase in fund due to contributions made	**150**	143
Increase in fund due to return on investments	**690**	642
Decrease in fund due to reimbursement of eligible expenditures	**(48)**	(57)
Increase in due to Province	**(235)**	(274)
Used Fuel Segregated Fund, end of year	**9,144**	8,587

The earnings from the Nuclear Segregated Funds during 2016 and 2015 were impacted by the Bruce Lease Net Revenues Variance Account authorized by the OEB. The earnings on the Nuclear Segregated Funds for the years ended December 31 are as follows:

(millions of dollars)	2016	2015
Decommissioning Segregated Fund	**313**	322
Used Fuel Segregated Fund	**455**	368
Bruce Lease Net Revenues Variance Account	**(22)**	14
Total earnings	**746**	704

9. INCOME TAXES

OPG follows the liability method of accounting for income taxes. The Company records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers for generation from OPG's regulated facilities.

A reconciliation between the statutory and the effective rate of income taxes is as follows:

(millions of dollars)	**2016**	**2015**
Income before income taxes	**621**	509
Combined Canadian federal and provincial statutory enacted income tax rates	**26.5%**	26.5%
Statutory income tax rates applied to accounting income	**165**	135
Increase (decrease) in income taxes resulting from:		
Income tax expense deferred in regulatory assets and liabilities	**65**	29
Scientific Research and Experimental Development investment tax credits	**(48)**	(44)
Manufacturing and processing credit	**(9)**	(8)
Other	**(5)**	(20)
	3	(43)
Income tax expense	**168**	92
Effective rate of income taxes	**27.0%**	18.1%

Significant components of the income tax expense are presented in the table below:

(millions of dollars)	**2016**	**2015**
Current income tax expense	**204**	59
Deferred income tax (recovery) expense	**(36)**	33
Income tax expense	**168**	92

The income tax effects of temporary differences that give rise to deferred income tax assets and liabilities as at December 31 are as follows:

(millions of dollars)	**2016**	**2015**
Deferred income tax assets:		
Fixed asset removal and nuclear waste management liabilities	**4,861**	5,032
Other assets and liabilities	**1,813**	1,699
	6,674	6,731
Deferred income tax liabilities:		
Property, plant and equipment and intangible assets	**(1,807)**	(2,119)
Nuclear fixed asset removal and nuclear waste management funds	**(3,996)**	(3,784)
Other assets and liabilities	**(1,700)**	(1,708)
	(7,503)	(7,611)
Net deferred income tax liabilities	**(829)**	(880)

During 2016, OPG recorded an increase in the deferred income tax liability for the income taxes that are expected to be recovered or refunded through regulated prices charged to customers of $46 million (2015 – a decrease of $69 million). Since these deferred income taxes are expected to be refunded through future regulated prices, OPG recorded a corresponding increase to the regulatory asset for deferred income taxes. As a result, the deferred income tax expense for 2016 and 2015 was not impacted.

The following table summarizes the deferred income tax liabilities recorded for the rate regulated operations that are expected to be recovered through future regulated prices:

(millions of dollars)	**2016**	**2015**
January 1:		
Deferred income tax liabilities on temporary differences related to regulated operations	**592**	644
Deferred income tax liabilities on temporary differences related to the regulatory asset for the deferred income tax liabilities	**200**	217
	792	861
Changes during the year:		
Increase (decrease) in deferred income tax liabilities on temporary differences related to regulated operations	**35**	(52)
Increase (decrease) in deferred income tax liabilities on temporary differences related to the regulatory asset for the deferred income tax liabilities	**11**	(17)
Balance as at December 31	**838**	792

The tax benefit associated with an income tax position is recognized only when it is more likely than not that such a position will be sustained upon examination by the taxing authorities based on the technical merits of the position. The current and deferred income tax benefit is equal to the largest amount, considering possible settlement outcomes, that is greater than 50 percent likely of being realized upon settlement with the taxing authorities.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

(millions of dollars)	**2016**	**2015**
Unrecognized tax benefits, beginning of year	**72**	79
Additions based on tax positions related to the current year	**19**	16
Additions for tax positions of prior years	**2**	7
Reductions for tax positions of prior years	**(16)**	(14)
Other	**-**	(16)
Unrecognized tax benefits, end of year	**77**	72

As at December 31, 2016, OPG's unrecognized tax benefits were $77 million (2015 – $72 million), excluding interest and penalties, all of which, if recognized, would affect OPG's effective tax rate. Changes in unrecognized tax benefits over the next 12 months cannot be predicted with certainty.

OPG recognizes interest and penalties related to unrecognized tax benefits as income tax expense. As at December 31, 2016, OPG had recorded interest on unrecognized tax benefits of $8 million (2015 – $7 million). OPG considers its significant tax jurisdiction to be Canada. OPG remains subject to income tax examination for years after 2012.

OPG paid $98 million in income taxes (net of tax refunds) during 2016 (2015 – $47 million).

10. ACCUMULATED OTHER COMPREHENSIVE LOSS

The changes in the balance of each component of accumulated other comprehensive loss (AOCL), net of income taxes, during the years December 31, 2016 and 2015 are as follows:

	2016			
(millions of dollars)	**Unrealized Gains and Losses on Cash Flow Hedges [1]**	**Pension and OPEB [1]**	**Available-for-sale Securities [1]**	**Total [1]**
AOCL, beginning of year	**(106)**	**(213)**	**-**	**(319)**
Actuarial loss on re-measurement of liabilities for pension and OPEB	**-**	**(6)**	**-**	**(6)**
Unrealized loss on available-for-sale securities	**-**	**-**	**(1)**	**(1)**
Amounts reclassified from AOCL	**19**	**12**	**-**	**31**
OCI for the year	**19**	**6**	**(1)**	**24**
AOCL, end of year	**(87)**	**(207)**	**(1)**	**(295)**

[1] All amounts are net of income taxes.

	2015		
(millions of dollars)	**Unrealized Gains and Losses on Cash Flow Hedges [1]**	**Pension and OPEB [1]**	**Total [1]**
AOCL, beginning of year	(117)	(379)	(496)
Net loss on cash flow hedges	(5)	-	(5)
Actuarial gain on re-measurement of liabilities for pension and OPEB	-	148	148
Amounts reclassified from AOCL	16	18	34
OCI for the year	11	166	177
AOCL, end of year	(106)	(213)	(319)

[1] All amounts are net of income taxes.

The significant amounts reclassified out of each component of AOCL, net of income taxes, during the years ended December 31, 2016 and 2015 are as follows:

	Amount Reclassified from AOCL		
(millions of dollars)	**2016**	**2015**	**Statement of Income Line Item**
Amortization of losses from cash flow hedges			
Losses	**21**	18	Net interest expense and fuel expense
Income tax recovery	**(2)**	(2)	Income tax expense
	19	16	
Amortization of amounts related to pension and OPEB			
Actuarial losses and past service costs	**16**	25	See (1) below
Income tax recovery	**(4)**	(7)	Income tax expense
	12	18	
Total reclassifications for the year	**31**	34	

[1] These AOCL components are included in the computation of pension and OPEB costs (see Note 11 for additional details).

11. PENSION AND OTHER POST-EMPLOYMENT BENEFITS

Fund Assets

The OPG registered pension fund investment guidelines are stated in an approved Statement of Investment Policies and Procedures (SIPP). The SIPP is reviewed and approved by the Audit and Risk Committee of OPG's Board of Directors at least annually and includes a discussion of investment objectives and expectations, asset mix and rebalancing, and the basis for measuring the performance of the pension fund assets.

In accordance with the SIPP, investment allocation decisions are made with a view to achieve OPG's objective of meeting obligations of the plan as they come due. The pension fund assets are invested in four categories of asset classes. The first category is liability hedging assets which are intended to hedge the inflation and interest rate sensitivity of the plan liabilities. The second category is return enhancing assets which are intended to obtain higher investment returns compared to the returns expected for liability hedging assets. The third category is real assets which offer exposure to the combined characteristics of liability hedging and return enhancing assets. The fourth category is return diversifying strategies, which are intended to improve the overall return of the pension fund while mitigating the downside market risk.

To achieve the above objective, OPG has adopted the following target strategic asset allocation:

	Target
Asset Class	
Liability Hedging Assets	34%
Return Enhancing Assets	31%
Real Assets	20%
Return Diversifying Assets	15%

The plan may enter into derivative securities, such as interest rate swaps and forward foreign exchange contracts, for risk management purposes, where such activity is consistent with the plan's investment objectives.

Significant Concentrations of Risk in Fund Assets

The assets of the pension fund are diversified to limit the impact of any individual investment. The pension fund is diversified across multiple asset classes. Fixed income securities are diversified among Canadian government bonds, government agency bonds, real return bonds, corporate bonds, and an interest rate overlay hedging program, which is disclosed under pooled funds. Equity securities are diversified across Canadian, US, and Global stocks. There are also real estate, infrastructure, and agriculture portfolios that represent approximately 12 percent of the total pension fund assets as at December 31, 2016. Investments in the above asset classes are further diversified across funds, investment managers, strategies, vintages, sectors and geographies, depending on the specific characteristics of each asset class.

Credit risk with respect to the pension fund's fixed income securities is managed by risk tolerance guidelines, which requires that fixed income securities comply with various investment constraints that ensure prudent diversification and prescribed minimum required credit rating quality. Credit risk, as it relates to the pension fund's derivatives, is managed through the use of International Swap and Derivatives Association documentation and counterparty management performed by the fund's investment managers.

Risk Management

Risk management oversight with respect to the pension fund includes, but is not limited to, the following activities:

- Periodic asset/liability management and strategic asset allocation studies
- Monitoring of funding levels and funding ratios
- Monitoring compliance with asset allocation guidelines and investment management agreements
- Monitoring asset class performance against asset class benchmarks

- Monitoring investment manager performance against benchmarks
- Monitoring of risk tolerance guidelines

Expected Rate of Return on Plan Assets

The expected rate of return on plan assets is based on the fund's asset allocation, as well as the return expectations considering long-term risks and returns associated with each asset class within the plan portfolio. The asset management decisions consider the economic liabilities of the plan.

Fair Value Measurements

OPG is required to classify fair value measurements using a fair value hierarchy. This hierarchy groups financial instruments into three levels, based on the significance of inputs used in measuring the fair value of the assets and liabilities. Refer to Note 13 for a detailed discussion of fair value measurements and the fair value hierarchy.

The following tables present pension plan assets measured at fair value in accordance with the fair value hierarchy:

	December 31, 2016			
(millions of dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
Cash and cash equivalents	**690**	**-**	**-**	**690**
Fixed income				
Corporate debt securities	**-**	**407**	**-**	**407**
Government bonds	**-**	**3,483**	**-**	**3,483**
Equities				
Canadian	**1,451**	**291**	**-**	**1,742**
US	**1,495**	**-**	**-**	**1,495**
Global	**1,643**	**-**	**-**	**1,643**
Pooled funds	**118**	**413**	**-**	**531**
Other	**(2)**	**-**	**-**	**(2)**
	5,395	**4,594**	**-**	**9,989**
Investments measured at NAV [1]				**3,504**
				13,493 [2]

[1] Represents investments measured at fair value using NAV as a practical expedient, which have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to the total fair value of plan assets presented in tables following.

[2] The table above excludes pension fund receivables and payables.

	December 31, 2015			
(millions of dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
Cash and cash equivalents	374	-	-	374
Short-term investments	-	1	-	1
Fixed income				
Corporate debt securities	-	392	-	392
Government bonds	-	3,794	-	3,794
Equities				
Canadian	1,547	-	-	1,547
US	1,786	-	-	1,786
Global	1,992	-	-	1,992
Pooled funds	37	147	-	184
Other	1	-	-	1
	5,737	4,334	-	10,071
Investments measured at NAV [1]				3,079
				13,150 [2]

[1] Represents investments measured at fair value using NAV as a practical expedient, which have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to the total fair value of plan assets presented in tables following.

[2] The table above excludes pension fund receivables and payables.

During the years ended December 31, 2016 and 2015, there were no transfers between Level 1 and Level 2.

Plan Costs and Liabilities

Details of OPG's pension and OPEB obligations, pension fund assets and costs are presented in the following tables:

	Registered and Supplementary Pension Plans		Other Post-Employment Benefits	
	2016	**2015**	**2016**	**2015**
Weighted Average Assumptions – Benefit Obligations at Year-End				
Rate used to discount future benefits	**3.90%**	4.10%	**3.94%**	4.13%
Salary schedule escalation rate - initial rate [1]	**1.80%**	1.60%	**1.80%**	1.60%
- thereafter	**2.50%**	2.50%	**2.50%**	2.50%
Rate of cost of living increase to pensions	**2.00%**	2.00%	**n/a**	n/a
Initial health care trend rate	**n/a**	n/a	**5.90%**	6.00%
Ultimate health care trend rate	**n/a**	n/a	**4.32%**	4.33%
Year ultimate health care trend rate reached	**n/a**	n/a	**2030**	2030
Rate of increase in disability benefits	**n/a**	n/a	**2.00%**	2.00%

[1] Per year to December 31, 2021.

	Registered and Supplementary Pension Plans		Other Post-Employment Benefits	
	2016	**2015**	**2016**	**2015**
Weighted Average Assumptions – Costs for the Year				
Expected return on plan assets, net of expenses	**6.00%**	6.25%	**n/a**	n/a
Rate used to discount future benefits	**4.10%**	4.00%	**4.13%**	4.03%
Salary schedule escalation rate - initial rate [1]	**1.60%**	2.00%	**1.60%**	2.00%
- thereafter	**2.50%**	2.50%	**2.50%**	2.50%
Rate of cost of living increase to pensions	**2.00%**	2.00%	**n/a**	n/a
Initial health care trend rate	**n/a**	n/a	**6.00%**	6.09%
Ultimate health care trend rate	**n/a**	n/a	**4.33%**	4.33%
Year ultimate health care trend rate reached	**n/a**	n/a	**2030**	2030
Rate of increase in disability benefits	**n/a**	n/a	**2.00%**	2.00%
Expected average remaining service life for employees (years)	**12**	12	**13**	13

[1] For 2016, per year to December 31, 2021. For 2015, per year to December 31, 2020.

	Registered Pension Plans		Supplementary Pension Plans		Other Post-Employment Benefits	
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Components of Cost Recognized for the Year						
Current service costs	**277**	320	**7**	7	**67**	71
Interest on projected benefit obligation	**634**	630	**12**	13	**133**	127
Expected return on plan assets, net of expenses	**(734)**	(717)	**-**	-	**-**	-
Amortization of past service costs [1]	**-**	-	**-**	-	**1**	-
Amortization of net actuarial loss [1]	**192**	292	**4**	6	**19**	27
Recognition of LTD net actuarial (gain) loss	**-**	-	**-**	-	**(52)**	7
Costs recognized [2]	**369**	525	**23**	26	**168**	232

[1] The amortization of past service costs and net actuarial loss was recognized as an increase to OCI. This increase was partially offset by the impact of the Pension and OPEB Regulatory Asset discussed in Note 5.

[2] Excludes the impact of regulatory variance and deferral accounts discussed in Note 5.

Total benefit costs, including the impact of the Pension & OPEB Cash Payment Variance Account and the Pension & OPEB Cash Versus Accrual Differential Deferral Account, for the years ended December 31 are as follows:

(millions of dollars)	**2016**	**2015**
Registered pension plans	**369**	525
Supplementary pension plans	**23**	26
Other post-employment benefits	**168**	232
Pension & OPEB Cash Payment Variance Account *(Note 5)*	**86**	(21)
Pension & OPEB Cash Versus Accrual Differential Deferral Account *(Note 5)*	**(182)**	(279)
Pension and other post-employment benefit costs	**464**	483

The pension and OPEB obligations and the pension fund assets measured as at December 31 are as follows:

	Registered Pension Plans		**Supplementary Pension Plans**		**Other Post-Employment Benefits**	
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Change in Plan Assets						
Fair value of plan assets at beginning of year	**13,160**	12,407	**-**	-	**-**	-
Contributions by employer	**255**	362	**15**	24	**93**	94
Contributions by employees	**85**	72	**-**	-	**-**	-
Actual return on plan assets, net of expenses	**714**	1,151	**-**	-	**-**	-
Benefit payments	**(708)**	(832)	**(15)**	(24)	**(93)**	(94)
Fair value of plan assets at end of year	**13,506**	13,160	**-**	-	**-**	-
Change in Projected Benefit Obligations						
Projected benefit obligations at beginning of year	**15,475**	15,669	**299**	317	**3,188**	3,143
Employer current service costs	**277**	320	**7**	7	**67**	71
Contributions by employees	**85**	72	**-**	-	**-**	-
Interest on projected benefit obligation	**634**	630	**12**	13	**133**	127
Benefit payments	**(708)**	(832)	**(15)**	(24)	**(93)**	(94)
Past service costs	**-**	-	**-**	-	**-**	5
Net actuarial loss (gain)	**436**	(384)	**33**	(14)	**(303)**	(64)
Projected benefit obligations at end of year	**16,199**	15,475	**336**	299	**2,992**	3,188
Funded status – deficit at end of year	**(2,693)**	(2,315)	**(336)**	(299)	**(2,992)**	(3,188)

The following table provides the pension and OPEB liabilities and their classification on the consolidated balance sheets as at December 31:

	Registered Pension Plans		**Supplementary Pension Plans**		**Other Post-Employment Benefits**	
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Current liabilities	**-**	-	**(17)**	(17)	**(95)**	(103)
Non-current liabilities	**(2,693)**	(2,315)	**(319)**	(282)	**(2,897)**	(3,085)
Total liabilities	**(2,693)**	(2,315)	**(336)**	(299)	**(2,992)**	(3,188)

The accumulated benefit obligations for the registered pension plans and supplementary pension plans as at December 31, 2016 are $14,909 million and $293 million, respectively (2015 – $14,327 million and $267 million, respectively). The accumulated benefit obligation differs from the projected benefit obligation in that the accumulated benefit obligation includes no assumption about future compensation levels.

The following table provides the components of OPG's OCI related to pension and OPEB plans and the offsetting Pension and OPEB Regulatory Asset, discussed in Note 5, for the years ended December 31, on a pre-tax basis:

(millions of dollars)	Registered Pension Plans 2016	Registered Pension Plans 2015	Supplementary Pension Plans 2016	Supplementary Pension Plans 2015	Other Post-Employment Benefits 2016	Other Post-Employment Benefits 2015
Changes in plan assets and benefit obligations recognized in OCI						
Current year net actuarial loss (gain)	**456**	(818)	**33**	(14)	**(251)**	(71)
Current year past service costs	**-**	-	**-**	-	**-**	5
Amortization of net actuarial loss	**(192)**	(292)	**(4)**	(6)	**(19)**	(27)
Amortization of past service costs	**-**	-	**-**	-	**(1)**	-
Total decrease (increase) in OCI	**264**	(1,110)	**29**	(20)	**(271)**	(93)
Less: Increase (decrease) in Pension and OPEB Regulatory Asset *(Note 5)*	**253**	(916)	**27**	(15)	**(250)**	(70)
Net decrease (increase) in OCI (pre-tax)	**11**	(194)	**2**	(5)	**(21)**	(23)

The following table provides the components of OPG's AOCL and the offsetting Pension and OPEB Regulatory Asset that have not yet been recognized as components of benefit costs as at December 31, on a pre-tax basis:

(millions of dollars)	Registered Pension Plans 2016	Registered Pension Plans 2015	Supplementary Pension Plans 2016	Supplementary Pension Plans 2015	Other Post-Employment Benefits 2016	Other Post-Employment Benefits 2015
Unamortized amounts recognized in AOCL						
Past service costs	**-**	-	**-**	-	**5**	6
Net actuarial loss	**3,287**	3,023	**106**	77	**270**	540
Total recognized in AOCL	**3,287**	3,023	**106**	77	**275**	546
Less: Pension and OPEB Regulatory Asset *(Note 5)*	**3,039**	2,786	**100**	73	**253**	503
Net recognized in AOCL (pre-tax)	**248**	237	**6**	4	**22**	43

The following table provides the components of OPG's AOCL and the offsetting Pension and OPEB Regulatory Asset as at December 31 (included in the table above) that are expected to be amortized as components of benefit costs and recognized as increases to OCI and reductions in the Pension and OPEB Regulatory Asset in 2017, on a pre-tax basis:

(millions of dollars)	Registered Pension Plans	Supplementary Pension Plans	Other Post-Employment Benefits
Past service costs	**-**	**-**	**1**
Net actuarial loss	**183**	**6**	**-**
Total increase in OCI	**183**	**6**	**1**
Less: Estimated decrease in Pension and OPEB Regulatory Asset	**170**	**6**	**1**
Net increase in OCI (pre-tax)	**13**	**-**	**-**

The most recently filed actuarial valuation, for funding purposes, of the OPG registered pension plan, as at January 1, 2016, was filed with the FSCO in September 2016. The next filed funding valuation must have an effective date no later than January 1, 2019. For 2017, OPG's required contribution to its registered pension plan is expected to be

$248 million. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time. OPG will continue to assess the requirements for contributions to the pension plan.

The supplementary pension plans are not funded, but are secured by Letters of Credit totalling $349 million as at December 31, 2016 (2015 – $345 million).

Estimated future benefit payments to participants in the pension and OPEB plans based on the assumptions used to measure the benefit obligations as at December 31, 2016 are as follows:

(millions of dollars)	**Registered Pension Plans**	**Supplementary Pension Plans**	**Other Post-Employment Benefits**
2017	687	18	95
2018	759	18	98
2019	750	18	101
2020	767	19	105
2021	795	19	108
2022 through 2026	4,218	102	613

A one percent increase or decrease in the health care trend rate would result in an increase in the current service and interest components of the 2016 OPEB costs of $45 million (2015 – $45 million) or a decrease in the service and interest components of the 2016 OPEB costs of $33 million (2015 – $33 million). A one percent increase or decrease in the health care trend rate would result in an increase in the projected OPEB obligation as at December 31, 2016 of $560 million (2015 – $584 million) or a decrease in the projected OPEB obligation as at December 31, 2016 of $426 million (2015 – $446 million).

12. RISK MANAGEMENT AND DERIVATIVES

OPG is exposed to risks related to changes in market interest rates on debt expected to be issued in the future and movements in foreign currency that affect the Company's assets, liabilities, and forecasted transactions. Select derivative instruments are used to manage such risks. Derivatives are used as hedging instruments, as well as for trading purposes.

Interest rate risk is the risk that the value of assets and liabilities can change due to movements in related interest rates. Interest rate risk for OPG arises with the need to refinance existing debt and/or undertake new financing. The management of these risks includes using derivatives to hedge the exposure in accordance with corporate risk management policies. OPG periodically uses interest rate swap agreements to mitigate elements of interest rate risk exposure associated with anticipated financing.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are primarily denominated in, or tied to, US dollars. OPG enters into foreign exchange derivatives and agreements with major financial institutions, when appropriate, in order to manage the Company's exposure to foreign currency movements.

The majority of OPG's revenues are derived from sales through the IESO-administered spot market. Market participants in the IESO spot market provide collateral in accordance with the IESO prudential support requirements to cover funds that they might owe to the market. Although the credit exposure to the IESO represents a significant portion of OPG's accounts receivable, the Company's management accepts this risk due to the IESO's primary role in the Ontario electricity market. The remaining receivables exposure is to a diverse group of generally high quality counterparties. OPG's allowance for doubtful accounts as at December 31, 2016 was less than $1 million. OPG's fair value derivatives totalled a net liability of $24 million as at December 31, 2016 (2015 – $2 million). During 2015, OPG reversed a derivative liability of $299 million embedded in the Bruce Lease, with a corresponding reduction in

the regulatory asset for the Bruce Lease Net Revenues Variance Account, following amendments to the Bruce Lease that removed the provision of the agreement giving rise to the derivative.

The following table shows the pre-tax amounts related to derivatives recorded in AOCL and net income for the years ended December 31:

(millions of dollars)	**2016**	**2015**
Cash flow hedges (recorded in AOCL)		
Losses in OCI	**-**	(7)
Reclassification of losses to net interest expense	**21**	20
Reclassification of gains to fuel expense	**-**	(2)
Commodity derivatives (recorded in net income)		
Realized losses in revenue	**(12)**	(16)
Unrealized losses in revenue	**(3)**	(7)
Embedded derivative (recorded in net income)		
Unrealized gains in revenue [1]	**-**	225

[1] Excludes the impact of the Bruce Lease Net Revenues Variance Account.

Existing net losses of $20 million deferred in AOCL as at December 31, 2016 are expected to be reclassified to net income within the next 12 months.

13. FAIR VALUE MEASUREMENTS

OPG is required to classify fair value measurements using a fair value hierarchy. This hierarchy groups financial assets and liabilities into three levels, based on the inputs used in measuring the fair value of the financial assets and liabilities. The fair value hierarchy has the following levels:

- Level 1: Valuation of inputs is based on unadjusted quoted market prices observed in active markets for identical assets or liabilities.
- Level 2: Valuation is based on inputs other than quoted prices under Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3: Valuation is based on inputs for the asset or liability that are not based on observable market data.

The fair value of financial instruments traded in active markets is based on quoted market prices at the consolidated balance sheet dates. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price used for financial assets held by OPG is the current bid price. These instruments are included in Level 1 and are comprised primarily of equity investments and fund investments.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the use of valuation techniques or models, based wherever possible on assumptions supported by observable market prices or rates prevailing at the consolidated balance sheet dates. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Pooled fund investments are valued at the unit values supplied by the pooled fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that would affect a particular instrument's fair value. The methodologies used for calculating the fair value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If all significant inputs required to fair value an instrument are observable, the instrument is included in Level 2.

If one or more of the significant inputs is not based on observable market data, the instrument is included in Level 3. Specific valuation techniques are used to value these instruments. Significant Level 3 inputs include: recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

Transfers into, out of, or between levels are deemed to have occurred on the date of the event or change in circumstances that caused the transfer to occur.

The Company is required to determine the fair value of all its financial instruments. The following is a summary of OPG's financial instruments as at December 31:

	Fair Value		Carrying Value [1]		
(millions of dollars)	**2016**	**2015**	**2016**	**2015**	**Balance Sheet Line Item**
Nuclear Segregated Funds (includes current portion)	**15,984**	15,136	**15,984**	15,136	Nuclear fixed asset removal and nuclear waste management funds
Investment in Hydro One shares	**212**	-	**212**	-	Available-for-sale securities
Payable related to cash flow hedges	**(48)**	(56)	**(48)**	(56)	Long-term accounts payable and accrued charges
Long-term debt (includes current portion)	**(6,033)**	(5,978)	**(5,520)**	(5,459)	Long-term debt
Other financial instruments	**(18)**	6	**(18)**	6	Various

[1] The carrying values of other financial instruments included in cash and cash equivalents, receivables from related parties, Other current assets, short-term debt, and accounts payable and accrued charges approximate their fair values due to the immediate or short-term maturity of these financial instruments.

The fair value of long-term debt instruments is determined based on a conventional pricing model, which is a function of future cash flows, the current market yield curve and term to maturity. These inputs are considered Level 2 inputs.

The following tables present financial assets and financial liabilities measured at fair value in accordance with the fair value hierarchy as at December 31, 2016 and 2015:

	December 31, 2016			
(millions of dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Used Fuel Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	**5,602**	**4,394**	**-**	**9,996**
Investments measured at NAV [1]				**1,086**
				11,082
Due to Province				**(1,938)**
Used Fuel Segregated Fund, net				**9,144**
Decommissioning Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	**4,171**	**3,243**	**-**	**7,414**
Investments measured at NAV [1]				**903**
				8,317
Due to Province				**(1,477)**
Decommissioning Segregated Fund, net				**6,840**
Investment in available-for-sale securities	**212**	**-**	**-**	**212**
Other financial assets	**6**	**2**	**9**	**17**
Liabilities				
Other financial liabilities	**(29)**	**(6)**	**-**	**(35)**

[1] Represents investments measured at fair value using NAV as a practical expedient, which have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the consolidated balance sheets.

	December 31, 2015			
(millions of dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Used Fuel Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	5,114	4,293	-	9,407
Investments measured at NAV [1]				883
				10,290
Due to Province				(1,703)
Used Fuel Segregated Fund, net				8,587
Decommissioning Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	3,870	3,227	-	7,097
Investments measured at NAV [1]				737
				7,834
Due to Province				(1,285)
Decommissioning Segregated Fund, net				6,549
Other financial assets	14	4	16	34
Liabilities				
Other financial liabilities	(18)	(8)	(2)	(28)

[1] Represents investments measured at fair value using NAV as a practical expedient, which have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the consolidated balance sheets.

During the year ended December 31, 2016, there were no transfers between Level 1 and Level 2. In addition, there were no transfers into and out of Level 3.

The following table presents the changes in OPG's net assets measured at fair value that are classified as Level 3:

(millions of dollars)	**Other financial instruments**
Opening balance, January 1, 2016	**14**
Unrealized gains included in revenue	**1**
Realized losses included in revenue	**(12)**
Purchases	**6**
Closing balance, December 31, 2016	**9**

Nuclear Segregated Funds

The fair value of the investments within the Nuclear Segregated Funds' alternative investment portfolio is determined using appropriate valuation techniques, such as recent arm's length market transactions, references to current fair values of other instruments that are substantially the same, discounted cash flow analyses, third-party independent appraisals, valuation multiples, or other valuation methods. Any control, size, liquidity or other discount premiums on the investments are considered in the determination of fair value. Alternative investments are measured at fair value using NAV as a practical expedient.

The process of valuing investments for which no published market price exists is based on inherent uncertainties and the resulting values may differ from values that would have been used had a ready market existed for these investments. The values may also differ from the prices at which the investments may be sold.

The following are the classes of investments within the Nuclear Segregated Funds that are reported on the basis of NAV as at December 31, 2016:

(millions of dollars except where noted)	**Fair Value**	**Unfunded Commitments**	**Redemption Frequency**	**Redemption Notice**
Alternative Investments				
Infrastructure	**1,205**	**648**	**n/a**	**n/a**
Real Estate	**713**	**406**	**n/a**	**n/a**
Agriculture	**71**	**128**	**n/a**	**n/a**
Pooled Funds				
Short-term Investments	**34**	**n/a**	**Daily**	**1 - 5 Days**
Fixed Income	**553**	**n/a**	**Daily**	**1 - 5 Days**
Equity	**742**	**n/a**	**Daily**	**1 - 5 Days**
Total	**3,318**	**1,182**		

The fair value of the pooled funds is classified as Level 2.

Infrastructure

This class includes investments in funds whose investment objective is to generate a combination of long-term capital appreciation and current income, generally through investments such as energy, transportation and utilities. The fair values of investments in this class have been estimated using NAV of the Nuclear Segregated Funds' ownership interest in partners' capital and/or underlying investments held by subsidiaries of an infrastructure fund. The investments in the respective infrastructure funds are not redeemable. However, the Nuclear Segregated Funds may transfer any of its partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements. Distributions from each infrastructure fund will be received based on the operations of the underlying investments and/or as the underlying investments of the infrastructure funds are liquidated. It is not

possible to estimate when the underlying assets of the infrastructure funds will be liquidated. However, the infrastructure funds have a maturity end period ranging from 2019 to 2025.

Real Estate

This class includes investments in institutional-grade real estate property. The investment objective is to provide a stable level of income with the opportunity for long-term capital appreciation. The fair values of the investments in this class have been estimated using NAV of the Nuclear Segregated Funds' ownership interest in these investments. The partnership investments are not redeemable. However, the Nuclear Segregated Funds may transfer any of its partnership interests to another party, as stipulated in the partnership agreement. For investments in private real estate corporations, shares may be redeemed through a pre-established redemption process. It is not possible to estimate when the underlying assets in this class will be liquidated.

Agriculture

This class includes a diversified portfolio of global farmland and timberland investments. The investment objective is to provide a differentiated return source, income yield, and inflation protection. The fair values of the investments in this class have been estimated using NAV of the Nuclear Segregated Funds' ownership interest in these investments. The investments are not redeemable. However, the Nuclear Segregated Funds may transfer any of its partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements.

Pooled Funds

This class represents investments in pooled funds, which primarily include a diversified portfolio of fixed income securities, issued mainly by Canadian corporations, and diversified portfolios of Emerging Market listed equity. The investment objective of the pooled funds is to achieve capital appreciation and income through professionally managed portfolios. The fair value of the investments in this class has been estimated using NAV per share of the investments. There are no significant restrictions on the ability to sell the investments in this class.

14. COMMON SHARES

As at December 31, 2016 and 2015, OPG had 256,300,010 common shares issued and outstanding at a stated value of $5,126 million. OPG is authorized to issue an unlimited number of common shares without nominal or par value. Any issue of new shares is subject to the consent of OPG's shareholder.

15. COMMITMENTS AND CONTINGENCIES

Litigation

On August 9, 2006, a Notice of Action and Statement of Claim filed with the Ontario Superior Court of Justice in the amount of $500 million was served against OPG and Bruce Power by British Energy Limited and British Energy International Holdings Limited (together British Energy). The action is for contribution and indemnity of any amounts British Energy was liable for in an arbitration against it by some of the owners of Bruce Power regarding an alleged breach of British Energy's representations and warranties to the claimants when they purchased British Energy's interest in Bruce Power (the Arbitration). Both the action and the Arbitration relate to corrosion to a steam generator unit discovered after OPG leased the Bruce nuclear generating stations to Bruce Power.

In 2012, the arbitrator found that British Energy was liable to the claimants for some of the damages they claimed. The final settlement amount was valued by British Energy at $71 million. In September 2014, British Energy amended its Statement of Claim (Amended Claim) to reduce the claim amount to $100 million to reflect that the purchasers of British Energy's interest in Bruce Power did not receive the full damages they originally claimed in the

Arbitration. British Energy also added an allegation to its Amended Claim that OPG breached a covenant to maintain the steam generator between the time of the initial agreement to lease and the effective date of the lease in accordance with "Good Utility Practices".

In November 2016, British Energy obtained consent to a timetable for the remaining steps in the litigation, pursuant to which the matter must be set down for trial by December 31, 2018. OPG is preparing a statement of defence to be delivered by June 30, 2017, as required by the timetable.

Various other legal proceedings are pending against OPG or its subsidiaries covering a wide range of matters that arise in the ordinary course of business activities.

Each of these matters is subject to various uncertainties. Some of these matters may be resolved unfavourably. While it is not possible to determine the ultimate outcome of the various pending actions, it is the Company's belief that their resolution is not likely to have a material adverse impact on its financial position.

Guarantees

The Company and its joint venture partners have jointly guaranteed the financial performance of jointly owned entities related primarily to the payment of liabilities. As at December 31, 2016, the total amount of guarantees OPG provided to these entities was $83 million (2015 – $81 million). OPG may terminate some of these guarantees within a short time frame by providing written notice to the counterparties at any time. Other guarantees have terms ending between 2019 and 2029. As at December 31, 2016, the potential impact of the fair value of these guarantees to income has been estimated to be negligible and OPG does not expect to make any payments associated with these guarantees.

Contractual and Commercial Commitments

OPG's contractual obligations and commercial commitments as at December 31, 2016, are as follows:

(millions of dollars)	2017	2018	2019	2020	2021	Thereafter	Total
Fuel supply agreements	186	169	96	76	61	102	690
Contributions to the OPG registered pension plan [1]	248	251	-	-	-	-	499
Long-term debt repayment	1,103	398	368	663	413	2,589	5,534
Interest on long-term debt	252	196	177	155	125	2,241	3,146
Commitments related to Darlington Refurbishment project [2]	473	-	-	-	-	-	473
Commitments related to Peter Sutherland Sr. GS project	46	-	-	-	-	-	46
Operating licences	43	37	23	24	28	114	269
Operating lease obligations [3]	24	27	25	25	23	92	216
Unconditional purchase obligations	65	58	57	55	4	-	239
Accounts payable and accrued charges	916	-	-	-	-	18	934
Other	52	6	1	2	1	65	127
Total	3,408	1,142	747	1,000	655	5,221	12,173

[1] The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2016, filed with the FSCO in September 2016. The next actuarial valuation of the OPG registered pension plan must have an effective date no later than January 1, 2019. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2018 are excluded due to significant variability in the assumptions required to project the timing of future cash flows. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time.

[2] Represents estimated currently committed costs to close the project, including accruals for completed work, demobilization of project staff and cancellation of existing contracts and material orders.

[3] Includes office lease commitments subsequent to the closing of the sale of the Company's head office premises expected in the second quarter of 2017.

Contractual and commercial commitments as noted exclude certain purchase orders, as they represent purchase authorizations rather than legally binding contracts, and are subject to change without significant penalties.

Lease Commitments

The Company leases the Bruce A and Bruce B nuclear generating stations to Bruce Power. Under the lease agreement, as amended in December 2015, Bruce Power has options to renew the lease up to the end of 2064. As per *Ontario Regulation 53/05* pursuant to the *Ontario Energy Board Act, 1998*, the difference between OPG's revenues and costs associated with the Bruce A and Bruce B nuclear generating stations is included in the determination of OPG's nuclear regulated prices established by the OEB. The OEB has determined that, since the Bruce nuclear generating stations are not prescribed under *Ontario Regulation 53/05*, these revenues, including lease revenues, and costs, including depreciation expense, are to be calculated on the basis of the manner in which they are recognized in OPG's consolidated financial statements, without the application of regulatory constructs. As such, the net book value of the assets for these stations is not included in the regulated rate base.

The net book value of property, plant and equipment on lease to Bruce Power as at December 31, 2016 was $2,986 million (2015 – $4,400 million). The net book value largely comprises asset retirement costs, which decreased effective December 31, 2016 as a result of the change in the estimate for the ARO. Refer to Note 3 for further details on the change in the estimate for the ARO.

Collective Bargaining Agreements

As at December 31, 2016, the Power Workers' Union (PWU) represented approximately 5,070 OPG regular employees or approximately 55 percent of OPG's regular workforce. The previous collective agreement between OPG and the PWU expired on March 31, 2015. In May 2015, the parties agreed to renew the collective agreement for a three-year term, expiring on March 31, 2018. The changes to the collective agreement included increases to employee pension plan contributions in each year of the agreement.

As at December 31, 2016, The Society of Energy Professionals (The Society) represented approximately 3,140 OPG employees or approximately 34 percent of OPG's regular workforce. The previous collective agreement between OPG and The Society expired on December 31, 2015. In November 2015, the parties agreed to renew the collective agreement for a three-year term, expiring on December 31, 2018. The changes to the collective agreement included increases to employee pension plan contributions in each of the first two years of the agreement.

The changes to both collective agreements provide existing employees with lump-sum payments for each of the first two years of the contract and eligibility to annually receive shares in Hydro One for up to 15 years starting in year three of the contract, as long as these employees continue to make contributions to the OPG pension plan and have less than 35 years of pensionable service.

16. BUSINESS SEGMENTS

OPG has the following five reportable business segments:

- Regulated – Nuclear Generation
- Regulated – Nuclear Waste Management
- Regulated – Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation

Regulated – Nuclear Generation Segment

The Regulated – Nuclear Generation business segment operates in Ontario, generating and selling electricity from the Pickering GS and the Darlington GS, both owned and operated by OPG. The business segment also includes revenue under the terms of a long-term lease arrangement and related agreements with Bruce Power related to the Bruce nuclear generating stations. This revenue includes lease revenue, fees for nuclear waste management, and revenue from heavy water sales and detritiation services. The segment also earns revenue from isotope sales and ancillary services supplied by OPG-operated nuclear stations. Ancillary revenues are earned through voltage control and reactive support. Revenues under the agreements with Bruce Power, including a portion of heavy water sales, and from isotope sales and ancillary services are included by the OEB as a credit to customers in the determination of the regulated prices for production from OPG's nuclear facilities, which has had the effect of reducing these prices.

Regulated – Nuclear Waste Management Segment

OPG's Regulated – Nuclear Waste Management segment reports the results of the Company's operations associated with the management of nuclear used fuel and L&ILW, the decommissioning of OPG's nuclear generating stations including the stations on lease to Bruce Power and other waste management facilities, the management of the Nuclear Segregated Funds, and related activities including the inspection and maintenance of the waste storage facilities. Accordingly, accretion expense, which is the increase in the Nuclear Liabilities carried on the consolidated balance sheets in present value terms due to passage of time, and earnings from the Nuclear Segregated Funds are reported under this segment.

As the nuclear generating stations operate over time, OPG incurs incremental costs related to used nuclear fuel and low and intermediate level wastes, which increase the Nuclear Liabilities. OPG charges these incremental costs to current operations in the Regulated – Nuclear Generation segment to reflect the cost of producing energy from the Pickering and Darlington nuclear generating stations and earning revenue under the Bruce Lease and related agreements. Since the incremental costs increase the Nuclear Liabilities in the Regulated – Nuclear Waste Management segment, OPG records an inter-segment charge between the Regulated – Nuclear Generation and the Regulated – Nuclear Waste Management segments. The impact of the inter-segment charge is eliminated in the consolidated statements of income and balance sheets.

The Regulated – Nuclear Waste Management segment is considered rate regulated because OPG's costs associated with the Nuclear Liabilities have been included in the determination of regulated prices for production from the Pickering and Darlington nuclear generating stations, in accordance with the methodology applied by the OEB since its 2008 decision on OPG's first application for regulated prices.

Regulated – Hydroelectric Segment

OPG's Regulated – Hydroelectric business segment operates in Ontario, generating and selling electricity from most of the Company's hydroelectric generating stations. The business segment includes the results of the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, and the R.H. Saunders GS that were prescribed for rate regulation prior to 2014, and the 48 hydroelectric stations prescribed for rate regulation effective in 2014.

In addition, the business segment includes ancillary and other revenues from OPG's regulated hydroelectric stations. Ancillary revenues are earned through offering available generating capacity as operating reserve and through the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services. These ancillary revenues and other revenues are included by the OEB as a credit to ratepayers in the determination of the regulated prices for production from OPG's prescribed hydroelectric facilities, which has had the effect of reducing these prices.

Contracted Generation Portfolio Segment

The Contracted Generation Portfolio business segment operates in Ontario, generating and selling electricity from the Company's generating stations that are not prescribed for rate regulation. The segment primarily includes generating facilities that are under an ESA with the IESO or other long-term contracts.

The Contracted Generation Portfolio segment also includes OPG's share of equity income from its 50 percent ownership interests in the PEC and Brighton Beach stations.

The business segment also includes ancillary revenues and other revenues from the stations included in the segment, which are earned through offering available generating capacity as operating reserve, and the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services.

Services, Trading, and Other Non-Generation Segment

The Services, Trading, and Other Non-Generation segment is a non-generation segment that is not subject to rate regulation. It includes the revenue and expenses related to OPG's trading and other non-hedging activities. As part of these activities, OPG transacts with counterparties in Ontario and neighbouring energy markets in predominantly short-term trading activities of typically one year or less in duration. These activities relate to electricity that is purchased and sold at the Ontario border, financial energy trades, financial risk management energy product revenues, and sales of energy-related products. In addition, OPG has a wholly owned trading subsidiary that transacts solely in the US market. The results of this subsidiary are reported in this segment. All contracts that are not designated as hedges are recorded as assets or liabilities at fair value on the consolidated balance sheets with changes in fair value recorded in the revenue of this segment. In addition, the segment includes revenue from real estate rentals and non-regulated services, non-regulated business development activities, and, prior to OPG's decision to decommission the stations, preservation costs related to the former coal-fired Lambton GS and the Nanticoke GS sites.

OM&A expenses of the generation business segments include an inter-segment service fee for the use of certain PP&E and intangible assets held within Service, Trading, and Other Non-Generation segment. The total service fee is recorded as a reduction to the segment's OM&A expenses.

The service fee included in OM&A expenses by segment in 2016 and 2015 was as follows:

(millions of dollars)	**2016**	**2015**
Regulated – Nuclear Generation	**34**	33
Regulated – Hydroelectric	**7**	6
Contracted Generation Portfolio	**4**	4
Reduction to Services, Trading, and Other Non-Generation	**45**	43

Segment Income (Loss) for the Year Ended December 31, 2016 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Management	Hydroelectric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Elimination	Total
Revenue	**3,481**	**138**	**1,527**	**573**	**68**	**(134)**	**5,653**
Fuel expense	**315**	**-**	**353**	**58**	**1**	**-**	**727**
Gross margin	**3,166**	**138**	**1,174**	**515**	**67**	**(134)**	**4,926**
Operations, maintenance and administration	**2,210**	**146**	**325**	**178**	**22**	**(134)**	**2,747**
Depreciation and amortization	**925**	**-**	**225**	**75**	**32**	**-**	**1,257**
Accretion on fixed asset removal and nuclear waste management liabilities	**-**	**912**	**-**	**9**	**8**	**-**	**929**
Earnings on nuclear fixed asset removal and nuclear waste management funds	**-**	**(746)**	**-**	**-**	**-**	**-**	**(746)**
Income from investments subject to significant influence	**-**	**-**	**-**	**(37)**	**-**	**-**	**(37)**
Property taxes	**26**	**-**	**1**	**7**	**12**	**-**	**46**
Restructuring	**-**	**-**	**-**	**-**	**6**	**-**	**6**
Other losses (gains)	**1**	**-**	**(19)**	**1**	**-**	**-**	**(17)**
Income (loss) before interest and income taxes	**4**	**(174)**	**642**	**282**	**(13)**	**-**	**741**

Segment Income (Loss) for the Year Ended December 31, 2015 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Management	Hydroelectric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Elimination	Total
Revenue	3,245	122	1,619	535	73	(118)	5,476
Fuel expense	301	-	345	39	2	-	687
Gross margin	2,944	122	1,274	496	71	(118)	4,789
Operations, maintenance and administration	2,196	132	340	185	48	(118)	2,783
Depreciation and amortization	717	-	282	72	29	-	1,100
Accretion on fixed asset removal and nuclear waste management liabilities	-	880	-	8	7	-	895
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(704)	-	-	-	-	(704)
Income from investments subject to significant influence	-	-	-	(39)	-	-	(39)
Property taxes	26	-	1	7	11	-	45
Restructuring	-	-	-	-	6	-	6
Other losses	3	-	3	1	7	-	14
Income (loss) before interest and income taxes	2	(186)	648	262	(37)	-	689

Selected Consolidated Balance Sheet Information as at December 31, 2016 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Management	Hydro-electric	Unregulated		Total
				Contracted Generation Portfolio	Services, Trading, and Other Non-Generation	
Segment property, plant and equipment in-service, net	**5,653**	**-**	**7,355**	**3,282**	**226**	**16,516**
Segment construction in progress	**2,988**	**-**	**166**	**301**	**27**	**3,482**
Segment property, plant and equipment, net	**8,641**	**-**	**7,521**	**3,583**	**253**	**19,998**
Segment intangible assets in-service, net	**7**	**-**	**2**	**4**	**66**	**79**
Segment development in progress	**3**	**-**	**-**	**1**	**16**	**20**
Segment intangible assets, net	**10**	**-**	**2**	**5**	**82**	**99**
Segment fuel inventory	**276**	**-**	**-**	**34**	**-**	**310**
Segment materials and supplies inventory, net:						
Current	**99**	**-**	**-**	**1**	**-**	**100**
Long-term	**340**	**-**	**1**	**4**	**-**	**345**
Nuclear fixed asset removal and nuclear waste management funds (current and non-current portions)	**-**	**15,984**	**-**	**-**	**-**	**15,984**
Fixed asset removal and nuclear waste management liabilities	**-**	**(19,103)**	**-**	**(160)**	**(221)**	**(19,484)**

Selected Consolidated Balance Sheet Information as at December 31, 2015 *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Management	Hydro-electric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Total
Segment property, plant and equipment in-service, net	6,972	-	7,413	3,319	324	18,028
Segment construction in progress	2,289	-	99	141	38	2,567
Segment property, plant and equipment, net	9,261	-	7,512	3,460	362	20,595
Segment intangible assets in-service, net	8	-	1	3	58	70
Segment development in progress	-	-	4	-	24	28
Segment intangible assets, net	8	-	5	3	82	98
Segment fuel inventory	304	-	-	40	-	344
Segment materials and supplies inventory, net:						
Current	95	-	-	1	-	96
Long-term	333	-	1	3	-	337
Nuclear fixed asset removal and nuclear waste management funds (current and non-current portions)	-	15,136	-	-	-	15,136
Fixed asset removal and nuclear waste management liabilities	-	(19,792)	-	(151)	(226)	(20,169)

Selected Consolidated Cash Flow Information *(millions of dollars)*	Nuclear Generation	Regulated Nuclear Waste Management	Hydro-electric	Unregulated Contracted Generation Portfolio	Unregulated Services, Trading, and Other Non-Generation	Total
Year ended December 31, 2016						
Investment in property, plant and equipment, and intangible assets	**1,338**	**-**	**132**	**198**	**36**	**1,704**
Year ended December 31, 2015						
Investment in property, plant and equipment, and intangible assets	1,023	-	89	222	42	1,376

17. NET CHANGES IN NON-CASH WORKING CAPITAL BALANCES

(millions of dollars)	2016	2015
Receivables from related parties	**116**	(63)
Prepaid expenses	**(108)**	(35)
Other current assets [1]	**(32)**	(12)
Fuel inventory	**34**	(10)
Materials and supplies	**(4)**	(2)
Income taxes payable	**57**	42
Accounts payable and accrued charges	**5**	(49)
	68	(129)

[1] Represents other accounts receivable.

18. RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties include the Province and other entities controlled by the Province.

The related party transactions summarized below include transactions with the Province and the principal successors to the former Ontario Hydro's integrated electricity business, including Hydro One, the IESO and the OEFC. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. As one of several wholly-owned government business enterprises of the Province, OPG also has transactions in the normal course of business with various government ministries and organizations in Ontario that fall under the purview of the Province.

The related party transactions for the years ended December 31 are summarized below:

	2016		2015	
(millions of dollars)	Revenue	Expense	Revenue	Expense
Hydro One				
Electricity sales	**6**	**-**	12	-
Services	**1**	**5**	1	6
Dividends	**6**	**-**	-	-
Province of Ontario				
Change in Decommissioning Segregated Fund amount due to Province [1]	**-**	**192**	-	185
Change in Used Fuel Segregated Fund amount due to Province [1]	**-**	**235**	-	274
Hydroelectric gross revenue charge	**-**	**120**	-	121
ONFA guarantee fee	**-**	**8**	-	8
OEFC				
Gross revenue charge	**-**	**203**	-	207
Interest expense on long-term notes	**-**	**169**	-	177
Income taxes, net of investment tax credits	**-**	**104**	-	80
Contingency support agreement	**-**	**-**	8	-
IESO				
Electricity related revenue	**5,105**	**24**	4,903	65
	5,118	**1,060**	4,924	1,123

[1] The Nuclear Segregated Funds are reported on the consolidated balance sheets net of amounts recognized as due to the Province in respect of excess funding and, for the Used Fuel Segregated Fund, the Province's rate of return guarantee. As at December 31, 2016 and December 31, 2015, the Nuclear Segregated Funds were reported net of amounts due to the Province of $3,415 million and $2,988 million, respectively.

The receivable, available-for-sale securities, payable and long-term debt balances between OPG and its related parties are summarized below:

(millions of dollars)	**2016**	**2015**
Receivables from related parties		
Hydro One	**1**	1
IESO	**421**	531
OEFC	**1**	9
PEC	**4**	3
Province of Ontario	**2**	1
Available-for-sale securities		
Hydro One shares	**212**	-
Accounts payable and accrued charges		
Hydro One	**-**	1
OEFC	**61**	51
Province of Ontario	**2**	20
IESO	**2**	18
Long-term debt (including current portion)		
Notes payable to OEFC	**3,295**	3,465

OPG holds interest-bearing Province of Ontario bonds in the Nuclear Segregated Funds and the OPG registered pension fund. As at December 31, 2016, the Nuclear Segregated Funds and the registered pension fund held $1,652 million and $284 million of interest-bearing Province of Ontario bonds, respectively. As at December 31, 2015, the Nuclear Segregated Funds and the registered pension fund held $1,597 million and $288 million of interest-bearing Province of Ontario bonds, respectively. These bonds are publicly traded securities and are measured at fair value. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

Hydro One Limited Shares

During 2015, OPG entered into renewed three-year collective bargaining agreements with the PWU and The Society. Changes to the respective collective agreements included increases to employee pension plan contributions and provided existing employees represented by the PWU and The Society with eligibility to annually receive common shares of Hydro One for up to 15 years starting in the third year of the respective agreements. In April 2016, OPG acquired nine million common shares of Hydro One at $23.65 per share as part of a secondary share offering by the Province through a syndicate of underwriters. The acquisition, totalling $213 million, was made for investment purposes to mitigate the risk of future price volatility related to OPG's future share delivery obligations under the collective agreements. The shares acquired in this transaction represent the substantial majority of OPG's currently anticipated purchases of Hydro One shares.

OPG classified the Hydro One shares as AFS securities.

For the year ended December 31, 2016, unrealized losses recognized in accumulated AOCL related to the changes in the fair value of the Hydro One shares were $1 million, net of income taxes. The fair value of the shares was $212 million as at December 31, 2016. Refer to Notes 10 and 13 for the required disclosures related to the AFS securities.

19. INVESTMENTS SUBJECT TO SIGNIFICANT INFLUENCE

Investments subject to significant influence consist of OPG's 50 percent ownership interest in the jointly controlled entities of PEC and Brighton Beach, which are accounted for using the equity method, as described in Note 3. The details of the balance included in the consolidated balance sheets as at December 31 are as follows:

(millions of dollars)	**2016**	**2015**
PEC		
Current assets	**18**	14
Long-term assets	**256**	270
Current liabilities	**(8)**	(4)
Long-term liabilities	**(5)**	(5)
Brighton Beach		
Current assets	**5**	9
Long-term assets	**168**	177
Current liabilities	**(16)**	(15)
Long-term liabilities	**(7)**	(6)
Long-term debt	**(90)**	(104)
Investments subject to significant influence	**321**	336

20. RESEARCH AND DEVELOPMENT

For the year ended December 31, 2016, research and development expenses of $82 million (2015 – $91 million) were charged to operations.

21. NON-CONTROLLING INTEREST

Lower Mattagami Limited Partnership (LMLP) is an Ontario limited partnership between OPG and Amisk-oo-Skow Finance Corporation (AFC), a corporation wholly owned by the Moose Cree First Nation. The principal business of LMLP is the development, construction, ownership, operation and maintenance of hydroelectric generating facilities located on the Lower Mattagami River.

During 2014, all six new units constructed as part of the Lower Mattagami River project were declared in-service. Subsequent to the units' in-service dates, the AFC made contributions of $141 million to acquire their equity interest in LMLP, through the settlement of existing liabilities, including long-term debt. As of December 31, 2016, the AFC had a 25 percent interest in LMLP. OPG consolidates the results of LMLP in its consolidated financial statements. The non-controlling interest reported in OPG's consolidated financial statements represents the AFC's equity interest in LMLP.

GA Financing – Equity Injection

Briefing Note

PURPOSE:

- Develop a timeline / mechanism to facilitate equity injections by the Province to OPG to support GA financing

CONTEXT:

- IESO will effectively sell the "right to collect" deferred future revenue from ratepayers (GA Asset) to the SPV in return for cash proceeds
- In order for the SPV to finance the GA asset on a long-term will obtain financing from two sources on an ongoing basis
    - 51% from capital markets
    - 49% as subordinated debt from OPG, which OPG will finance through:
        - **44% from equity injections from the Province**
        - 5% from capital markets
- OPG will require equity injections on an ongoing basis in order to keep its capital structure in line, and will require flexibility in order to issues shares as needed

GA FINANCING IMPLEMENTATION TIMING:

- **April:** Proposed Legislative Changes Drafted (retroactive to May 1)
- **May 1**: GA smoothing incorporated into "RRP" rates
- **Early June:** Legislation may be passed and SPV created. OPG uses short term facility to accommodate GA asset purchase [OPG TBC]. This represents the earliest possible equity injection [OPG TBC]
- **September**:
    - SPV long-term borrowing begins and would continue

POTENTIAL PROVINCIAL PROCESS FOR EQUITY INJECTIONS

<u>Required Approvals for Equity Injection in May 2017</u>

- ENERGY would seek TB/MBC approval for equity injection up to $xxM over next three years
- Seek approval to use the Operating Asset (vote xx) [ENE CORP TBC]
- Seek appropriation for $xxM in 2017-18 and Note that the out-year requests will be included in ENE's PRRT submission

<u>Ongoing Provincial Approvals Process</u>

- **Nov/Dec**: OPG includes forecasted equity injection requirements in rolling 3-year Business Plan

- **Feb/Mar**: ENERGY seeks TB/MBC approval for equity injection/OPG issuance as part of annual Business Plan concurrence process
    - ENE would seek TB/MBC approval for authority to inject up to $xx in OPG, in exchange for up to xx shares over the next 3 year term [OPG TBC: does this satisfy requirements in articles]
    - Seek approval delegating authority to Minister of Energy to work with the Ministry of Finance to execute equity injections, working with the OFA
    - Seek approval to include the 3-year equity request in ENE's PRRT submission through the operating asset in vote xx
- **Oct/Nov**: ENE would seek appropriation for out-year funding of equity injections

<u>Ongoing Implementation Process</u>

- OPG would send a letter to the Minister of Energy requesting an equity injection of $xx, in exchange for xx shares
- If Minister approves, ENE would work with OFA to flow the money [OFA TBC: Do you need something formal to do this? How much notice do you need to flow the cash? Any other mechanical requirements we should flag?]

Further Considerations

- Share Price Determination:
    - As of December 31, 2016 OPG had 256,300,010 common shares issued and outstanding at a stated value of $5,126 million ($20/share book value)
    - All new issuances would be priced at the same value as existing shares ($20/share)

GA Financing – Equity Injection

Briefing Note

Commented [SK81]: Some edits before mainly for clarity based on my understanding. Happy to have changes reverted back.

PURPOSE:

- Provide an overview on the timing / mechanics for equity injections by the Province to OPG to support GA financing

CONTEXT:

- IESO will effectively sell the "right to collect" deferred future revenue from ratepayers (GA Asset) to the OPG Trust in return for cash proceeds
- In order for the OPG Trust to finance the GA asset on a long-term basis, the OPG Trust will obtain financing from two sources on an ongoing basis
    - 51% from capital markets
    - 49% as subordinated debt from OPG, which OPG will finance through:
        - **44% from equity injections from the Province**
        - 5% from capital markets
- OPG will require equity injections on an ongoing basis in order to keep maintain its capital structure ~~in line~~, and will require flexibility in order to issues shares as needed to the Province.

LONG TERM APPROVALS:

Equity Injection Plan

- OPG would include forecasts of its equity requirements in its business plan each year - ~~(~~typically provided to the province in the Fall~~),~~ - though this portion of the business plan would not be subject to concurrence by the shareholder
- The Ministry of Energy would seek appropriation on an annual basis through PRRT for the amounts requested by OPG for its equity requirements.
    - The Ministry of Energy has received an appropriation for up to $1.1B in equity injections for the fiscal year 2017/18.

SHORT TERM EQUITY INJECTION PROCESS:

- IESO settles contracts with and payments from LDCs / ratepayers
- IESO identifies shortfall and notifies OPG Trust and determines amount to purchase
- OPG Trust notifies OFA of corresponding equity injection requirement and number of shares issued
- OFA and OPG Trust settle equity injection amounts
- Timing for settlement of payments
    - [Five] business day window from notice to OFA to payment and settlement with OPG

- XX business day window for final payment and settlement with IESO

- Equity injections by OFA to OPG expected to occur monthly; no Provincial involvement on approvals

OTHER CONSIDERATIONS:

- Considerations have been given to sShare issuances ~~currently environed~~ envisioned ~~to be~~ with ~~redeemable~~ options to redeem by the Province~~.~~ and ~~and~~ with OPG ~~may also~~ having~~e~~ rights to buy back the shares
  - This ~~W~~would have provided the Province with a flexible mechanism to redeem its equity investment and for OPG to return to a more suitable capital structure as GA financing program progresses.
  - Shares may or may not be valued at par (i.e., $20 per share – as at December 31, 2016, OPG had 256,300,010 common shares outstanding at $5,126 million)
  - The Province is now contemplating equity injection through the common equity structure.
- ~~Potential for ongoing valuation of shares either from financial statements or market-based valuation~~
  - ~~Book value basis could be viewed as a subsidy and [risk GBE status]~~
  - ~~Market valuation would account for premiums that are built over time~~
- May require a natural mechanism for OPG to return equity as borrowing ramps ~~up~~ down and principal is repaid
  - Consider potential for OPG to also pay interest/dividends on an regular (annual) basis
  - Regular interest/dividends ~~W~~would also ~~account~~ provide consideration for Province's costs ~~of~~ for funding OPG Trust
- Private financing by OPG Trust (51%) and OPG (5%) will initially be through short term debt (e.g., Canadian money-markets). ~~to~~ This will be subsequently rolled over to long-term debt as soon as possible.

GA Financing – Equity Injection

Briefing Note

Commented [SK81]: Some edits before mainly for clarity based on my understanding. Happy to have changes reverted back.

PURPOSE:

- Provide an overview on the timing / mechanics for equity injections by the Province to OPG to support GA financing

CONTEXT:

- IESO will effectively sell the "right to collect" deferred future revenue from ratepayers (GA Asset) to the OPG Trust in return for cash proceeds
- In order for the OPG Trust to finance the GA asset on a long-term basis, the OPG Trust will obtain financing from two sources on an ongoing basis
    - 51% from capital markets
    - 49% as subordinated debt from OPG, which OPG will finance through:
        - **44% from equity injections from the Province**
        - 5% from capital markets
- OPG will require equity injections on an ongoing basis in order to keep maintain its capital structure ~~in line~~, and will require flexibility in order to issues shares as needed to the Province.

LONG TERM APPROVALS:

Equity Injection Plan

- OPG would include forecasts of its equity requirements in its business plan each year - ~~(~~typically provided to the province in the Fall~~),~~ - though this portion of the business plan would not be subject to concurrence by the shareholder
- The Ministry of Energy would seek appropriation on an annual basis through PRRT for the amounts requested by OPG for its equity requirements.
    - The Ministry of Energy has received an appropriation for up to $1.1B in equity injections for the fiscal year 2017/18.

SHORT TERM EQUITY INJECTION PROCESS:

- IESO settles contracts with and payments from LDCs / ratepayers
- IESO identifies shortfall and notifies OPG Trust and determines amount to purchase
- OPG Trust notifies OFA of corresponding equity injection requirement and number of shares issued
- OFA and OPG Trust settle equity injection amounts
- Timing for settlement of payments
    - [Five] business day window from notice to OFA to payment and settlement with OPG

- XX business day window for final payment and settlement with IESO

- Equity injections by OFA to OPG expected to occur monthly; no Provincial involvement on approvals

OTHER CONSIDERATIONS:

- Considerations have been given to sShare issuances ~~currently environed~~ envisioned ~~to be~~ with ~~redeemable~~ options to redeem by the Province~~.~~ and ~~and~~ with OPG ~~may also~~ having~~e~~ rights to buy back the shares
  - This ~~W~~would have provided the Province with a flexible mechanism to redeem its equity investment and for OPG to return to a more suitable capital structure as GA financing program progresses.
  - Shares may or may not be valued at par (i.e., $20 per share – as at December 31, 2016, OPG had 256,300,010 common shares outstanding at $5,126 million)
  - The Province is now contemplating equity injection through the common equity structure, however through a new class of shares.

~~• Potential for ongoing valuation of shares either from financial statements or market-based valuation~~

  ~~o Book value basis could be viewed as a subsidy and [risk GBE status]~~

  ~~o Market valuation would account for premiums that are built over time~~

- May require a natural mechanism for OPG to return equity as borrowing ramps ~~up~~ down and principal is repaid
  - Consider potential for OPG to also pay interest/dividends on an regular (annual) basis
  - Regular interest/dividends ~~W~~would also ~~account~~ provide consideration for Province's costs ~~of~~ for funding OPG Trust

- Private financing by OPG Trust (51%) and OPG (5%) will initially be through short term debt (e.g., Canadian money-markets). ~~to~~ This will be subsequently rolled over to long-term debt as soon as possible.

GA Financing – Equity Injection

Briefing Note

Commented [SK81]: Some edits before mainly for clarity based on my understanding. Happy to have changes reverted back.

PURPOSE:

- Provide an overview on the timing / mechanics for equity injections by the Province to OPG to support GA financing

CONTEXT:

- IESO will effectively sell the "right to collect" deferred future revenue from ratepayers (GA Asset) to the OPG Trust in return for cash proceeds
- In order for the OPG Trust to finance the GA asset on a long-term basis, the OPG Trust will obtain financing from two sources on an ongoing basis
    - 51% from capital markets
    - 49% as subordinated debt from OPG, which OPG will finance through:
        - **44% from equity injections from the Province**
        - 5% from capital markets
- OPG will require equity injections on an ongoing basis in order to keep maintain its capital structure ~~in line~~, and will require flexibility in order to issues shares as needed to the Province.

LONG TERM APPROVALS:

Equity Injection Plan

- OPG would include forecasts of its equity requirements in its business plan each year - ~~(~~typically provided to the province in the Fall~~),~~ - though this portion of the business plan would not be subject to concurrence by the shareholder
- The Ministry of Energy would seek appropriation on an annual basis through PRRT for the amounts requested by OPG for its equity requirements.
    - The Ministry of Energy has received an appropriation for up to $1.1B in equity injections for the fiscal year 2017/18.

SHORT TERM EQUITY INJECTION PROCESS:

- IESO settles contracts with and payments from LDCs / ratepayers
- IESO identifies shortfall and notifies OPG Trust and determines amount to purchase
- OPG Trust notifies OFA of corresponding equity injection requirement and number of shares issued
- OFA and OPG Trust settle equity injection amounts
- Timing for settlement of payments
    - [Five] business day window from notice to OFA to payment and settlement with OPG

- XX business day window for final payment and settlement with IESO

- Equity injections by OFA to OPG expected to occur monthly; no Provincial involvement on approvals

OTHER CONSIDERATIONS:

- Considerations have been given to sShare issuances ~~currently environed~~ envisioned ~~to be~~ with ~~redeemable~~ options to redeem by the Province~~.~~ and ~~and~~ with OPG ~~may also~~ having~~e~~ rights to buy back the shares
  - This ~~W~~would have provided the Province with a flexible mechanism to redeem its equity investment and for OPG to return to a more suitable capital structure as GA financing program progresses.
  - The Province is now contemplating equity injection through the common equity structure, however through a new class of shares [TBC].
  - ~~o~~
  - Shares may or may not be valued at par (i.e., $20 per share – as at December 31, 2016, OPG had 256,300,010 common shares outstanding at $5,126 million)
  - ~~, however through a new class of shares~~
- ~~Potential for ongoing valuation of shares either from financial statements or market-based valuation~~
  - ~~Book value basis could be viewed as a subsidy and [risk GBE status]~~
  - ~~Market valuation would account for premiums that are built over time~~
- May require a natural mechanism for OPG to return equity as borrowing ramps ~~up~~ down and principal is repaid
  - Consider potential for OPG to also pay interest/dividends on an regular (annual) basis
  - Regular interest/dividends ~~W~~would also ~~account~~ provide consideration for Province's costs ~~of~~ for funding OPG Trust
- Private financing by OPG Trust (51%) and OPG (5%) will initially be through short term debt (e.g., Canadian money-markets). ~~to~~ This will be subsequently rolled over to long-term debt as soon as possible.

OFHP Business Issues

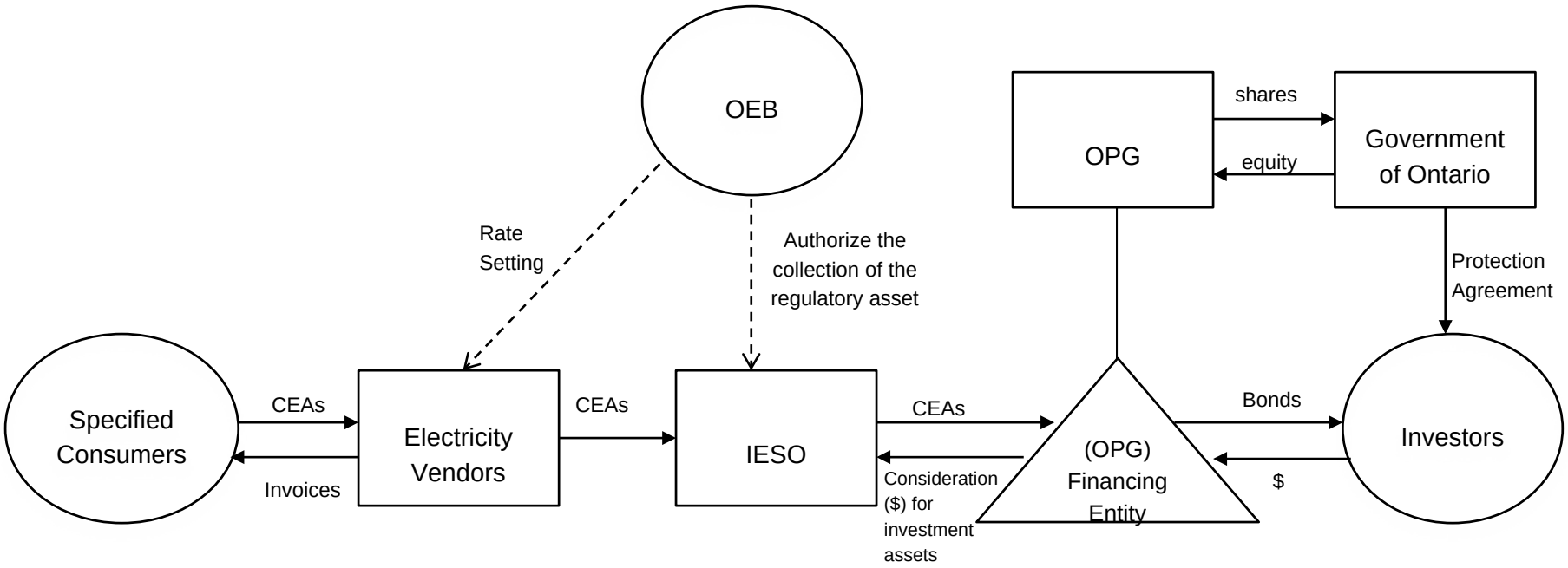
DRAFT – September 11, 2017

CONFIDENTIAL & COMMERCIALLY SENSITIVE

Context: GA Financing

- The *Ontario Fair Hydro Act, 2017,* enables the IESO to establish a variance account to record the deferral amounts from the difference between collections from current ratepayers and payment obligations to generators and conservation, and to create a regulatory asset as the Act provides the IESO the right to recover the balance in the variance account
  - The IESO can then sell the regulatory asset – the right to recover those deferred amounts from specified consumers in the future
  - OPG, as the Financial Services Manager, is authorized to establish one or more financing entities that may incur funding obligations
  - The financing entity will purchase the regulatory asset, effectively financing the IESO's shortfall in current rates not received from ratepayers
- In order to support the establishment of a financing entity, facilitate ongoing funding requirements of the Global Adjustment and optimize ratepayer impacts, OPG and the Province are working on finalizing the details for a number of business issues, including:
  - Provincial Protection and Assurances Agreement (PPAA)
  - Fair Allocation Amount (FAA)
  - Management Fees Regulation
  - Moratorium Period Interest and Fee Recovery
  - Equity Injections
  - Subordinated Debt Agreement
  - PILs Exemption

Global Adjustment Refinancing – Roles and Responsibilities



Note: CEAs are “clean energy adjustments”

Provincial Protection and Assurances Agreement

Overview:

- To purchase the regulatory asset from the IESO, the Financing Entity must borrow a portion of the funds from capital markets (planned to be 51%, with other financing to come from OPG and, indirectly, the Province)
    - OPG's financial advisors have indicated that without adequate protection against legislative, judicial and organizational risk, the debt would not be financeable or would result in higher financing costs, to be passed on to ratepayers
- Upon receiving TB/MBC approval, and as contemplated under the Act, the Province has agreed to provide a protection agreement that supports the Financing Entity and prospective debt holders such that, under certain circumstances, the Province would take over the funding obligations of the Financing Entity, including:
    - Actions of the Legislative Assembly that undermine the financing arrangement, i.e., repeal or amendment of the Ontario Fair Hydro Plan Act, 2017, or new legislation that adversely affect the Financing Entity
    - A court decision that declares the rights of the Financing Entity to recover amounts from ratepayers to be invalid or unenforceable
    - Changes to the organization, structure or operations of IESO or a change in the electricity market structure or operations that adversely affects the ability of the Financing Entity to recover amounts related to funding obligations.

Provincial Protection and Assurances Agreement (Con't)

- In the event the protection agreement is triggered, the Province will be required to pay the obligations of the Financing Entity including principal and interest payments on debt issued to date, any payments to derivatives counterparties and any outstanding payments to service providers
    - The Province could potentially service the debt and other obligations and could replace OPG as the financial services manager
- The protection agreement may need to be revised at a future date, or approval from the Province may be required, if the financing entity must access US market as investors in that market will likely require additional compensation if the assumption agreement is triggered
- The Province will take on a contingent liability, which will increase over the duration of the Fair Hydro Plan and peak at an estimated $20B of debt (final cost forecasts TBC), including principal and accumulated interest
- In the event the protection agreement is triggered, the Province's net debt will most likely increase by an amount equal to the contingent liability at that point in time
    - The Province's interest payments will also increase by the debt interest servicing of the debt payment obligations it has assumed under the protection agreement
    - IOD expense may increase between $0.8B and $1.0B per annum, assuming the protection agreement is triggered when debt is at its peak, and depending on the interest rate at which the Financing entity will be able to borrow at

Next Steps:

- Province to work with OPG and external legal counsel to finalise the Protection Agreement

Fair Allocation Amount

Overview:

- xx

Next Steps:

- xx

Management Fees Regulation

Overview:

- Ontario Power Generation Inc. (OPG) has been appointed the Financial Services Manager under the Fair Hydro Plan Act, 2017 to, among other things evaluate whether funding obligations should be incurred by the Trust for the purpose of acquiring and financing an investment interest.
- The Act enables OPG to achieve its accounting objective of consolidation of the Trust with OPG, and the ability to earn a return and take on risk, through its control of the Trust.
- The fee will have a fixed and variable component and be determined by formulas set out in a regulation, which as currently drafted includes:
    - **Base fee**: Monthly fee calculated as 10 basis points on monthly funding obligation when the annual funding obligation is less than $10B, and 8 basis points on the monthly funding obligation when the annual funding obligation is greater than $10B.
    - **Variable fee**: Annual fee of 5% of the difference difference between forecast and actual interest rates achieved for each of its funding tranches
- The OEB will have a role in reviewing OPG's fees to ensure that the fees are consistent with prevailing market comparators

Next Steps:

- The Province is working with the OEB and OPG to develop a regulation setting out how the fees would be calculated including appropriate comparators for the OEBs review

Moratorium Period Interest and Fee Recovery

Overview:

- xx

Next Steps:

- xx

Equity Injections

Overview:

- To purchase the regulatory asset from the IESO, an OPG financing entity would be established and borrow funds from the following:
  - Capital markets (51%)
  - Subordinated OPG debt, financed through equity injections from the Province (44%) and OPG, financing from capital markets (5%)
- OPG will require equity injections on an ongoing basis in order to provide the 44% share of financing for the financing entity to acquire the regulatory asset from IESO and keep its capital structure in line, and will require flexibility in order to issue shares to the Province as needed, under a share subscription agreement
- The Ministry of Energy will be responsible for seeking approval for the investment envelope each year and managing the share subscription arrangement with OPG
  - On a periodic basis, OPG will send a notice of share subscription to the Ministry of Energy, requesting a certain amount of equity based on the amount of the regulatory asset it plans to purchase in a fiscal year; the Ontario Financing Authority will flow the funds

Next Steps:

- OPG and the Ministry of Energy have approved the Master Subscription Agreement and will proceed to execute in the coming weeks
- The Ministry of Energy will work with the OFA to ensure a mechanism is in place to flow the funds within the required timeframes after the request is made by OPG

Subordinated Debt Agreement

Overview:

- OPG intends to lend the equity injection from the Province to the Trust by way of subordinated debt
- OPG proposes that OPG, the Fair Hydro Trust and the OFA will enter into a subordinated debt loan agreement, which outlines the terms of the subordinated debt [TBD]
- OPG has proposed that interest rates on the subordinated debt be established as follows:
  - During the Trust short term financing period, when bank facilities are used as funding vehicles, the interest rate on subordinated debt will be the sum of (1) funding rate on senior debt, and (2) additional spread margin of [xx], reflecting the credit rating difference between the senior and subordinated debt [TBD]
  - At the time when senior bonds are being issued to take out (term out) the short term financing, OPG will seek indicative coupon rates on the subordinated debt from dealers, reflecting the sum of underlying Government of Canada yield of equivalent term and the appropriate credit spread. The average indicative coupon rate from dealers will be calculated and set as the subordinated debt rate. [TBD]

Next Steps:

- OPG to incorporate the Province's comments into the next draft of the Subordinated Debt Agreement, which is tracking to be finalized by the end of September [TBD]

PILs Exemption

Overview:

- It is currently contemplated that the first financing entity to be established by OPG, in its capacity as Financial Services Manager, will be a trust (Trust)
- The Trust would be subject to tax under the Income Tax Act (Canada) and the Ontario Taxation Act, 2007
- The beneficiary of the Trust will be a corporation (Subco) that will be directly or indirectly wholly-owned by OPG
  - Subco, given it is owned by OPG, would be exempt from federal and provincial corporate taxes and property taxes payable by private sector companies, and instead make payments in lieu of taxes (PILs) to the Ontario Electricity Financial Corporation (OEFC)
  - PILs are used by the OEFC to help pay down its debt and other liabilities – OEFC is the legal continuation of the former Ontario Hydro
- In order to mitigate the cost to ratepayers, the Ministry of Finance plans to bring forward a proposed Minister of Finance's regulation under the *Electricity Act* , 1998 that would exempt Subco from paying PILs on income received as beneficiary of the Trust
- The Ministry of Finance will also consider similar regulations in the future should OPG establish another financing entity in its role as the Financial Services Manager

Next Steps:

- Draft letter from the Minister of Finance to OPG is in development that will provide comfort that Subco will be exempt from PILs on income received as beneficiary of the Trust.
- The Ministry of Finance is working with OPG on a draft regulation, which will be brought forward in the Fall

OFHP Business Issues

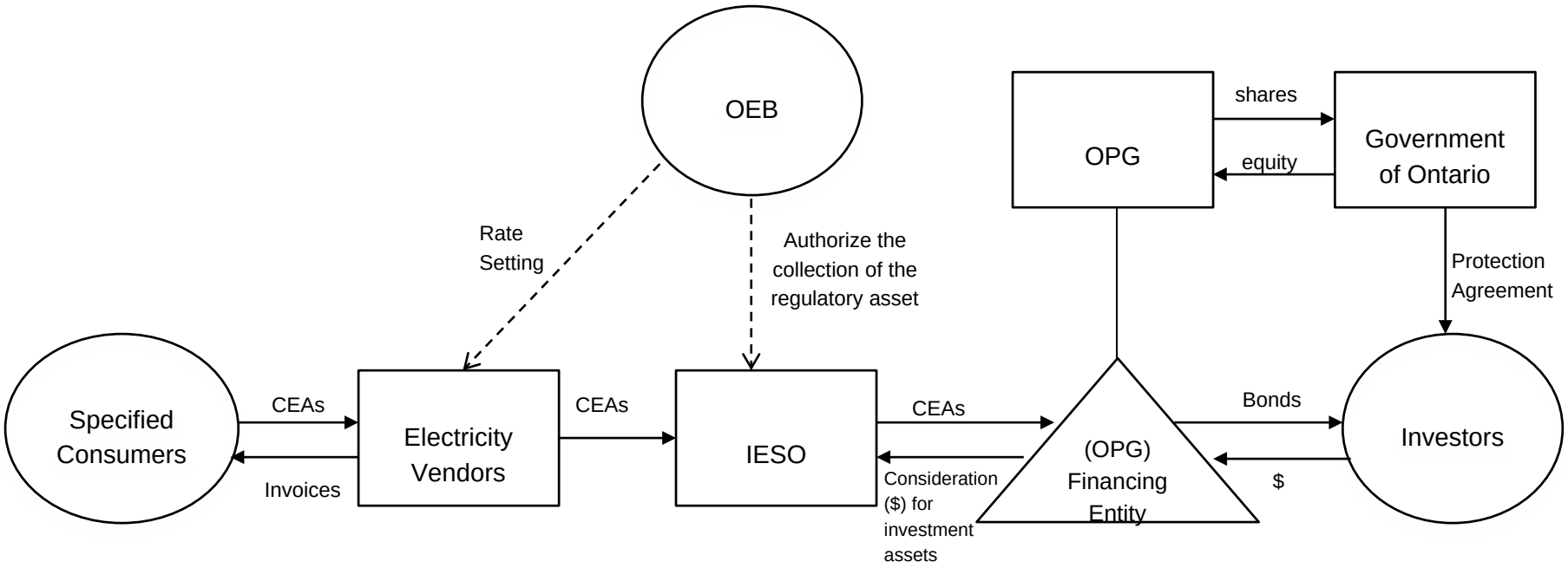
DRAFT – September 11, 2017

CONFIDENTIAL & COMMERCIALLY SENSITIVE

Context: GA Financing

- The *Ontario Fair Hydro Act, 2017,* enables the IESO to establish a variance account to record the deferral amounts from the difference between collections from current ratepayers and payment obligations to generators and conservation, and to create a regulatory asset as the Act provides the IESO the right to recover the balance in the variance account
  - The IESO can then sell the regulatory asset – the right to recover those deferred amounts from specified consumers in the future
  - OPG, as the Financial Services Manager, is authorized to establish one or more financing entities that may incur funding obligations
  - ~~The~~ A financing entity ~~will~~ purchas~~ing~~ ~~e~~ the regulatory asset would~~,~~ effectively finance ~~ing~~ the IESO's shortfall in current rates not received from ratepayers
- In order to support the establishment of a financing entity, facilitate ongoing funding requirements of the Global Adjustment and optimize ratepayer impacts, OPG and the Province are working on finalizing the details for a number of business issues, including
  - Provincial Protection and Assurances Agreement (PPAA)
  - Fair Allocation Amount (FAA)
  - Management Fees Regulation
  - Moratorium Period Interest and Fee Recovery
  - Equity Injections
  - Subordinated Debt Agreement
  - PILs Exemption

Global Adjustment Refinancing – Roles and Responsibilities



Note: CEAs are “clean energy adjustments”

Provincial Protection and Assurances Agreement

Overview:

- To purchase the regulatory asset from the IESO, the Financing Entity must borrow a portion of the funds from capital markets (planned to be 51%, with other financing to come from OPG and, indirectly, the Province)
    - OPG's financial advisors have indicated that without adequate protection against legislative, judicial and organizational risk, the debt would not be financeable or would result in higher financing costs, to be passed on to ratepayers
- Upon receiving TB/MBC approval, and as contemplated under the Act, the Province has agreed to provide a protection agreement that supports the Financing Entity and prospective debt holders such that~~, under certain circumstances,~~ the Province would take over the funding obligations of the Financing Entity, under certain circumstances, including
    - Actions of the Legislative Assembly that undermine the financing arrangement~~,~~; i.e., repeal or amendment of the Ontario Fair Hydro Plan Act, 2017, or new legislation that adversely affect the Financing Entity
    - A court decision that declares the rights of the Financing Entity to recover amounts from ratepayers to be invalid or unenforceable
    - Changes to the organization, structure or operations of IESO or a change in the electricity market structure or operations that adversely affects the ability of the Financing Entity to recover amounts related to funding obligations.

Provincial Protection and Assurances Agreement (Con't)

- In the event the protection agreement is triggered, the Province will be required to pay the obligations of the Financing Entity including principal and interest payments on debt issued to date, any payments to derivatives counterparties and any outstanding payments to service providers
    - The Province could potentially service the debt and other obligations and could replace OPG as the financial services manager
- The protection agreement may need to be revised at a future date, or approval from the Province may be required, if the financing entity must access the U.S. market as investors in that market will likely require additional compensation if the assumption agreement is triggered
- The Province will take on a contingent liability, which will increase over the duration of the Fair Hydro Plan and peak at an estimated $20B of debt (final cost forecasts TBC), including principal and accumulated interest
- In the event the protection agreement is triggered, the Province's net debt will most likely increase by an amount equal to the contingent liability at that point in time
    - The Province's interest payments will also increase by the debt interest servicing of the debt payment obligations it has assumed under the protection agreement
    - IOD expense may increase between $0.8B and $1.0B per annum, assuming the protection agreement is triggered when debt is at its peak, and depending on the interest rate at which the Financing entity will be able to borrow at

Next Steps:

- Province to work with OPG and external legal counsel to finalise the Protection Agreement

Fair Allocation Amount

Overview:

- xx

Next Steps:

- xx

Management Fees Regulation

Overview:

- Ontario Power Generation Inc. (OPG) has been appointed the Financial Services Manager under the Fair Hydro Plan Act, 2017 to, among other things evaluate whether funding obligations should be incurred by the Trust for the purpose of acquiring and financing an investment interest.
- The Act enables OPG to achieve its ~~accounting~~ objectives of consolidation of the Trust with OPG, and the ability to earn a return and take on risk, through its control of the Trust.
- The fee will have a fixed and variable component and be determined by formulas set out in a regulation, which as currently drafted includes:
    - **Base fee**: Monthly fee calculated as 10 basis points on monthly funding obligation when the annual funding obligation is less than $10B, and 8 basis points on the monthly funding obligation when the annual funding obligation is greater than $10B.
    - **Variable fee**: Annual fee of 5% of the difference difference between forecast and actual interest rates achieved for each of its funding tranches
- The OEB will have a role in reviewing OPG's fees to ensure that the fees are consistent with prevailing market comparators

Next Steps:

- The Province is working with the OEB and OPG to develop a regulation setting out how the fees would be calculated including appropriate comparators for the OEBs review

Moratorium Period Interest and Fee Recovery

Overview:

- xx

Next Steps:

- xx

Equity Injections

Overview:

- To purchase the regulatory asset from the IESO, an OPG financing entity would be established and borrow funds from the following:
  - Capital markets (51%)
  - Subordinated OPG debt, financed through equity injections from the Province (44%) and OPG, financing from capital markets (5%)
- OPG will require equity injections on an ongoing basis in order to provide the 44% share of financing for the financing entity to acquire the regulatory asset from IESO and keep its capital structure in line, and will require flexibility in order to issue shares to the Province as needed, under a share subscription agreement
- The Ministry of Energy will be responsible for seeking approval for the investment envelope each year and managing the share subscription arrangement with OPG
  - On a periodic basis, OPG will send a notice of share subscription to the Ministry of Energy, requesting a certain amount of equity based on the amount of the regulatory asset it plans to purchase in a fiscal year; the Ontario Financing Authority will flow the funds

Next Steps:

- OPG and the Ministry of Energy have approved the Master Subscription Agreement and will proceed to execute in the coming weeks
- The Ministry of Energy will work with the OFA to ensure a mechanism is in place to flow the funds within the required timeframes after the request is made by OPG

Subordinated Debt Agreement

Overview:

- OPG intends to lend the equity injection from the Province to the Trust by way of subordinated debt
- OPG proposes that OPG, the Fair Hydro Trust and the OFA will enter into a subordinated debt loan agreement, which outlines the terms of the subordinated debt [TBD]
- OPG has proposed that interest rates on the subordinated debt be established as follows:
  - During the Trust short term financing period, when bank facilities are used as funding vehicles, the interest rate on subordinated debt will be the sum of (1) funding rate on senior debt, and (2) additional spread margin of [xx], reflecting the credit rating difference between the senior and subordinated debt [TBD]
  - At the time when senior bonds are being issued to take out (term out) the short term financing, OPG will seek indicative coupon rates on the subordinated debt from dealers, reflecting the sum of underlying Government of Canada yield of equivalent term and the appropriate credit spread. The average indicative coupon rate from dealers will be calculated and set as the subordinated debt rate. [TBD]

Next Steps:

- OPG to incorporate the Province's comments into the next draft of the Subordinated Debt Agreement, which is tracking to be finalized by the end of September [TBD]

PILs Exemption

Overview:

- It is currently contemplated that the first financing entity to be established by OPG, in its capacity as Financial Services Manager, will be a trust (Trust)
- The Trust would be subject to tax under the Income Tax Act (Canada) and the Ontario Taxation Act, 2007
- The beneficiary of the Trust will be a corporation (Subco) that will be directly or indirectly wholly-owned by OPG
  - Subco, given it is owned by OPG, would be exempt from federal and provincial corporate taxes and property taxes payable by private sector companies, and instead make payments in lieu of taxes (PILs) to the Ontario Electricity Financial Corporation (OEFC)
  - PILs are used by the OEFC to help pay down its debt and other liabilities – OEFC is the legal continuation of the former Ontario Hydro
- In order to mitigate the cost to ratepayers, the Ministry of Finance plans to bring forward a proposed Minister of Finance's regulation under the *Electricity Act* , 1998 that would exempt Subco from paying PILs on income received as beneficiary of the Trust
- The Ministry of Finance will also consider similar regulations in the future should OPG establish another financing entity in its role as the Financial Services Manager

Next Steps:

- Draft letter from the Minister of Finance to OPG is in development that will provide comfort that Subco will be exempt from PILs on income received as beneficiary of the Trust.
- The Ministry of Finance is working with OPG on a draft regulation, which will be brought forward in the Fall

OFHP Business Issues

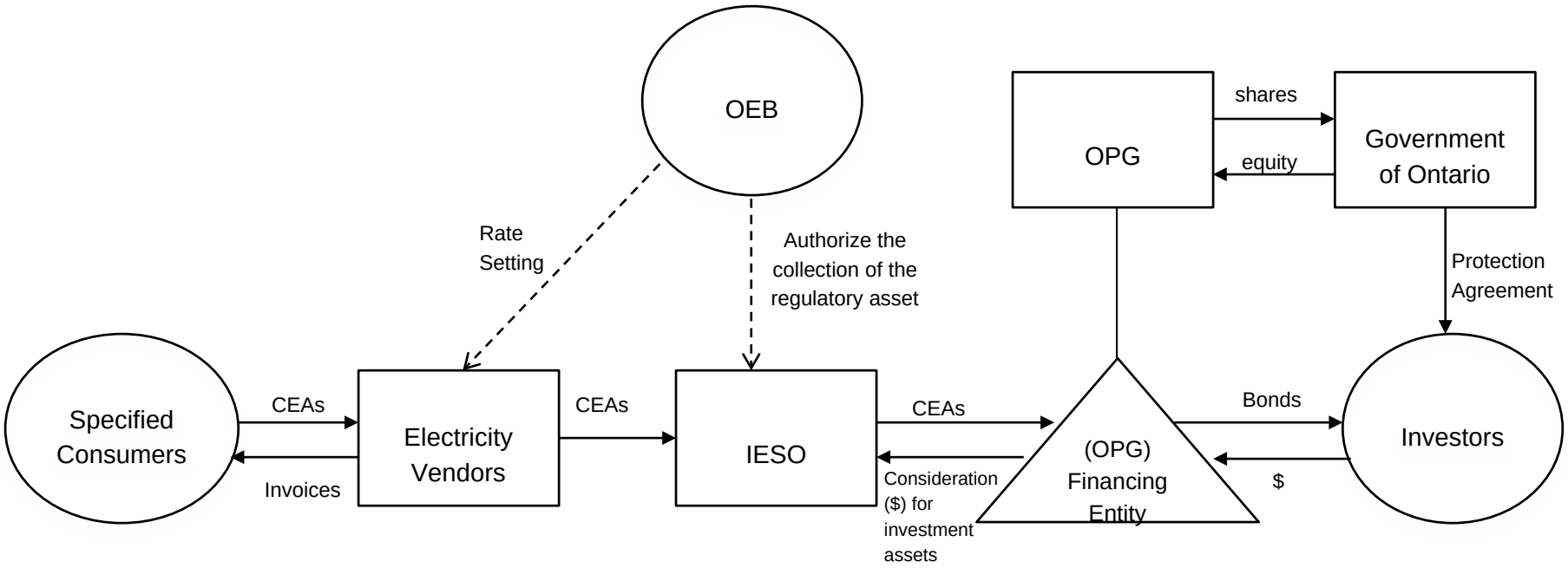
DRAFT – September 11, 2017

CONFIDENTIAL & COMMERCIALLY SENSITIVE

Context: GA Financing

- The *Ontario Fair Hydro Act, 2017,* enables the IESO to establish a variance account to record the deferral amounts from the difference between collections from current ratepayers and payment obligations to generators and conservation, and to create a regulatory asset as the Act provides the IESO the right to recover the balance in the variance account
  - The IESO can then sell the regulatory asset – the right to recover those deferred amounts from specified consumers in the future
  - OPG, as the Financial Services Manager, is authorized to establish one or more financing entities that may incur funding obligations
  - ~~The~~ A financing entity ~~will~~ purchas~~ing~~ ~~e~~ the regulatory asset would~~,~~ effectively finance ~~ing~~ the IESO's shortfall in current rates not received from ratepayers
- In order to support the establishment of a financing entity, facilitate ongoing funding requirements of the Global Adjustment and optimize ratepayer impacts, OPG and the Province are working on finalizing the details for a number of business issues, including
  - Provincial Protection and Assurances Agreement (PPAA)
  - Fair Allocation Amount (FAA)
  - Management Fees Regulation
  - Moratorium Period Interest and Fee Recovery
  - Equity Injections
  - Subordinated Debt Agreement
  - PILs Exemption

Global Adjustment Refinancing – Roles and Responsibilities



Note: CEAs are “clean energy adjustments”

Provincial Protection and Assurances Agreement

Overview:

- To purchase the regulatory asset from the IESO, the Financing Entity must borrow a portion of the funds from capital markets (planned to be 51%, with other financing to come from OPG and, indirectly, the Province)
    - OPG's financial advisors have indicated that without adequate protection against legislative, judicial and organizational risk, the debt would not be financeable or would result in higher financing costs, to be passed on to ratepayers
- Upon receiving TB/MBC approval, and as contemplated under the Act, the Province has agreed to provide a protection agreement that supports the Financing Entity and prospective debt holders such that~~, under certain circumstances,~~ the Province would take over the funding obligations of the Financing Entity, under certain circumstances, including
    - Actions of the Legislative Assembly that undermine the financing arrangement~~,~~; i.e., repeal or amendment of the Ontario Fair Hydro Plan Act, 2017, or new legislation that adversely affect the Financing Entity
    - A court decision that declares the rights of the Financing Entity to recover amounts from ratepayers to be invalid or unenforceable
    - Changes to the organization, structure or operations of IESO or a change in the electricity market structure or operations that adversely affects the ability of the Financing Entity to recover amounts related to funding obligations.

Provincial Protection and Assurances Agreement (Con't)

- In the event the protection agreement is triggered, the Province will be required to pay the obligations of the Financing Entity including principal and interest payments on debt issued to date, any payments to derivatives counterparties and any outstanding payments to service providers
    - The Province could potentially service the debt and other obligations and could replace OPG as the financial services manager
- The protection agreement may need to be revised at a future date, or approval from the Province may be required, if the financing entity must access the U.S. market as investors in that market will likely require additional compensation if the assumption agreement is triggered
- The Province will take on a contingent liability, which will increase over the duration of the Fair Hydro Plan and peak at an estimated $20B of debt (final cost forecasts TBC), including principal and accumulated interest
- In the event the protection agreement is triggered, the Province's net debt will most likely increase by an amount equal to the contingent liability at that point in time
    - The Province's interest payments will also increase by the debt interest servicing of the debt payment obligations it has assumed under the protection agreement
    - IOD expense may increase between $0.8B and $1.0B per annum, assuming the protection agreement is triggered when debt is at its peak, and depending on the interest rate at which the Financing entity will be able to borrow at

Next Steps:

- Province to work with OPG and external legal counsel to finalise the Protection Agreement

Fair Allocation Amount

Overview:

- xx

Next Steps:

- xx

Management Fees Regulation

Overview:

- Ontario Power Generation Inc. (OPG) has been appointed the Financial Services Manager under the Fair Hydro Plan Act, 2017 to, among other things evaluate whether funding obligations should be incurred by the Trust for the purpose of acquiring and financing an investment interest.
- The Act enables OPG to achieve its ~~accounting~~ objectives of consolidation of the Trust with OPG, and the ability to earn a return and take on risk, through its control of the Trust.
- The fee will have a fixed and variable component and be determined by formulas set out in a regulation, which as currently drafted includes:
    - **Base fee**: Monthly fee calculated as 10 basis points on monthly funding obligation when the annual funding obligation is less than $10B, and 8 basis points on the monthly funding obligation when the annual funding obligation is greater than $10B.
    - **Variable fee**: Annual fee of 5% of the difference difference between forecast and actual interest rates achieved for each of its funding tranches
- The OEB will have a role in reviewing OPG's fees to ensure that the fees are consistent with prevailing market comparators

Next Steps:

- The Province is working with the OEB and OPG to develop a regulation setting out how the fees would be calculated including appropriate comparators for the OEBs review

Moratorium Period Interest and Fee Recovery

Overview:

- xx

Next Steps:

- xx

Equity Injections

Overview:

- To purchase the regulatory asset from the IESO, an OPG financing entity would be established and borrow funds from the following:
  - Capital markets (51%)
  - Subordinated OPG debt, financed through equity injections from the Province (44%) and OPG, financing from capital markets (5%)
- OPG will require equity injections on an ongoing basis in order to provide the 44% share of financing for the financing entity to acquire the regulatory asset from IESO and keep its capital structure in line, and will require flexibility in order to issue shares to the Province as needed, under a share subscription agreement
- The Ministry of Energy will be responsible for seeking approval for the investment envelope each year and managing the share subscription arrangement with OPG
  - On a periodic basis, OPG will send a notice of share subscription to the Ministry of Energy, requesting a certain amount of equity based on the amount of the regulatory asset it plans to purchase in a fiscal year; the Ontario Financing Authority will flow the funds, following a receipt of s.11.4 certificate from Energy under the Financial Administration Act.

Next Steps:

- OPG and the Ministry of Energy have approved the Master Subscription Agreement and will proceed to execute in the coming weeks
- The Ministry of Energy will work with the OFA to ensure a mechanism is in place to flow the funds within the required timeframes after the request is made by OPG

Subordinated Debt Agreement

Overview:

- OPG intends to lend the equity injection from the Province to the Trust by way of subordinated debt
- OPG proposes that OPG, the Fair Hydro Trust and the OFA will enter into a subordinated debt loan agreement, which outlines the terms of the subordinated debt [TBD]
- OPG has proposed that interest rates on the subordinated debt be established as follows:
  - During the Trust short term financing period, when bank facilities are used as funding vehicles, the interest rate on subordinated debt will be the sum of (1) funding rate on senior debt, and (2) additional spread margin of [xx], reflecting the credit rating difference between the senior and subordinated debt [TBD]
  - At the time when senior bonds are being issued to take out (term out) the short term financing, OPG will seek indicative coupon rates on the subordinated debt from dealers, reflecting the sum of underlying Government of Canada yield of equivalent term and the appropriate credit spread. The average indicative coupon rate from dealers will be calculated and set as the subordinated debt rate. [TBD]

Next Steps:

- OPG to incorporate the Province's comments into the next draft of the Subordinated Debt Agreement, which is tracking to be finalized by the end of September [TBD]

PILs Exemption

Overview:

- It is currently contemplated that the first financing entity to be established by OPG, in its capacity as Financial Services Manager, will be a trust (Trust)
- The Trust would be subject to tax under the Income Tax Act (Canada) and the Ontario Taxation Act, 2007
- The beneficiary of the Trust will be a corporation (Subco) that will be directly or indirectly wholly-owned by OPG
  - Subco, given it is owned by OPG, would be exempt from federal and provincial corporate taxes and property taxes payable by private sector companies, and instead make payments in lieu of taxes (PILs) to the Ontario Electricity Financial Corporation (OEFC)
  - PILs are used by the OEFC to help pay down its debt and other liabilities – OEFC is the legal continuation of the former Ontario Hydro
- In order to mitigate the cost to ratepayers, the Ministry of Finance plans to bring forward a proposed Minister of Finance's regulation under the *Electricity Act* , 1998 that would exempt Subco from paying PILs on income received as beneficiary of the Trust
- The Ministry of Finance will also consider similar regulations in the future should OPG establish another financing entity in its role as the Financial Services Manager

Next Steps:

- Draft letter from the Minister of Finance to OPG is in development that will provide comfort that Subco will be exempt from PILs on income received as beneficiary of the Trust.
- The Ministry of Finance is working with OPG on a draft regulation, which will be brought forward in the Fall

OFHP Business Issues

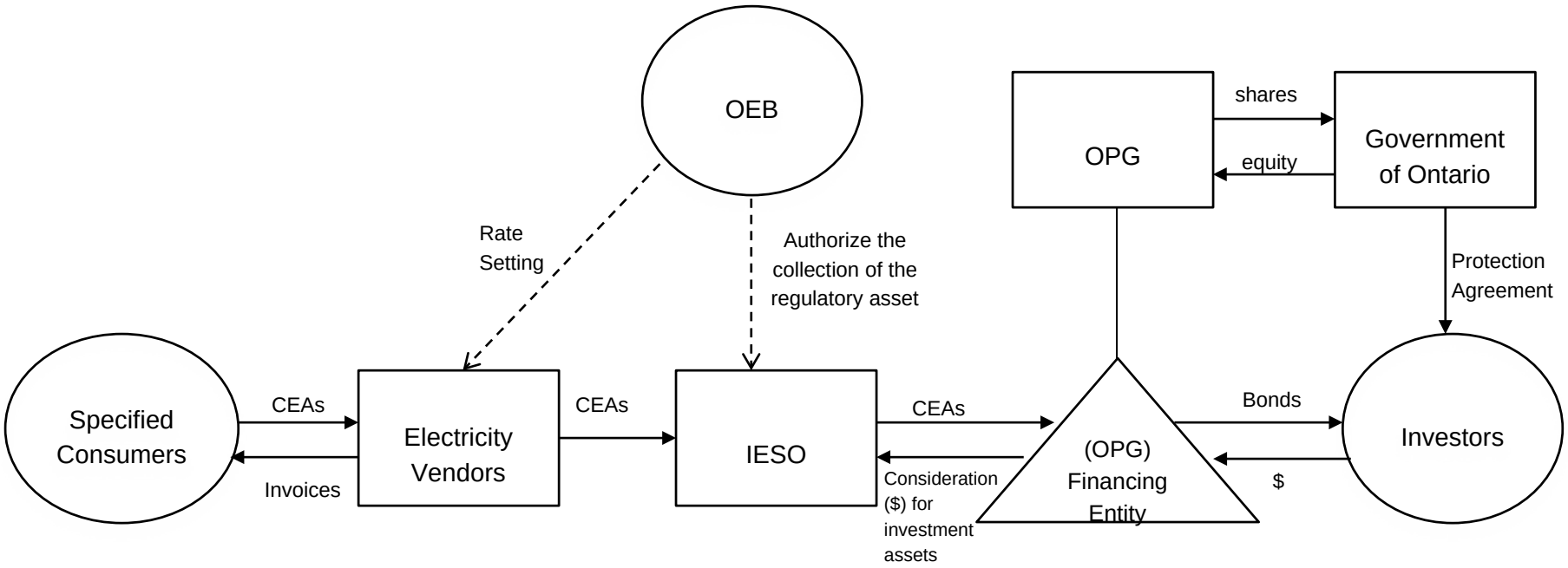
DRAFT – September 11, 2017

CONFIDENTIAL & COMMERCIALLY SENSITIVE

Context: GA Financing

- The *Ontario Fair Hydro Act, 2017,* enables the IESO to establish a variance account to record the deferral amounts from the difference between collections from current ratepayers and payment obligations to generators and conservation, and to create a regulatory asset as the Act provides the IESO the right to recover the balance in the variance account
  - The IESO can then sell the regulatory asset – the right to recover those deferred amounts from specified consumers in the future
  - OPG, as the Financial Services Manager, is authorized to establish one or more financing entities that may incur funding obligations
  - ~~The~~ A financing entity ~~will~~ purchas~~ing~~ ~~e~~ the regulatory asset would~~,~~ effectively finance ~~ing~~ the IESO's shortfall in current rates not received from ratepayers
- In order to support the establishment of a financing entity, facilitate ongoing funding requirements of the Global Adjustment and optimize ratepayer impacts, OPG and the Province are working on finalizing the details for a number of business issues, including
  - Provincial Protection and Assurances Agreement (PPAA)
  - Fair Allocation Amount (FAA)
  - Management Fees Regulation
  - Moratorium Period Interest and Fee Recovery
  - Equity Injections
  - Subordinated Debt Agreement
  - PILs Exemption

Global Adjustment Refinancing – Roles and Responsibilities



Note: CEAs are “clean energy adjustments”

Provincial Protection and Assurances Agreement

Overview:

- To purchase the regulatory asset from the IESO, the Financing Entity must borrow a portion of the funds from capital markets (planned to be 51%, with other financing to come from OPG and, indirectly, the Province)
    - OPG's financial advisors have indicated that without adequate protection against legislative, judicial and organizational risk, the debt would not be financeable or would result in higher financing costs, to be passed on to ratepayers
- Upon receiving TB/MBC approval, and as contemplated under the Act, the Province has agreed to provide a protection agreement that supports the Financing Entity and prospective debt holders such that~~, under certain circumstances,~~ the Province would take over the funding obligations of the Financing Entity, under certain circumstances, including
    - Actions of the Legislative Assembly that undermine the financing arrangement~~,~~; i.e., repeal or amendment of the Ontario Fair Hydro Plan Act, 2017, or new legislation that adversely affect the Financing Entity
    - A court decision that declares the rights of the Financing Entity to recover amounts from ratepayers to be invalid or unenforceable
    - Changes to the organization, structure or operations of IESO or a change in the electricity market structure or operations that adversely affects the ability of the Financing Entity to recover amounts related to funding obligations.

Provincial Protection and Assurances Agreement (Con't)

- In the event the protection agreement is triggered, the Province will be required to pay the obligations of the Financing Entity including principal and interest payments on debt issued to date, any payments to derivatives counterparties and any outstanding payments to service providers
    - The Province could potentially service the debt and other obligations and could replace OPG as the financial services manager
- The protection agreement may need to be revised at a future date, or approval from the Province may be required, if the financing entity must access the U.S. market as investors in that market will likely require additional compensation if the assumption agreement is triggered
- The Province will take on a contingent liability, which will increase over the duration of the Fair Hydro Plan and peak at an estimated $20B of debt (final cost forecasts TBC), including principal and accumulated interest
- In the event the protection agreement is triggered, the Province's net debt will most likely increase by an amount equal to the contingent liability at that point in time
    - The Province's interest payments will also increase by the debt interest servicing of the debt payment obligations it has assumed under the protection agreement
    - IOD expense may increase between $0.8B and $1.0B per annum, assuming the protection agreement is triggered when debt is at its peak, and depending on the interest rate at which the Financing entity will be able to borrow at

Next Steps:

- Province to work with OPG and external legal counsel to finalise the Protection Agreement

Fair Allocation Amount

Overview:

- xx

Next Steps:

- xx

Management Fees Regulation

Overview:

- Ontario Power Generation Inc. (OPG) has been appointed the Financial Services Manager under the Fair Hydro Plan Act, 2017 to, among other things evaluate whether funding obligations should be incurred by the Trust for the purpose of acquiring and financing an investment interest.
- The Act enables OPG to achieve its ~~accounting~~ objectives of consolidation of the Trust with OPG, and the ability to earn a return and take on risk, through its control of the Trust.
- The fee will have a fixed and variable component and be determined by formulas set out in a regulation, which as currently drafted includes:
    - **Base fee**: Monthly fee calculated as 7.5 basis points on monthly funding obligation. The base fee will be independently reviewed in 2018.
    - **Variable fee**: Annual fee of 5% of the difference difference between forecast and actual interest rates achieved for each of its funding tranches. The variable fee in any one year will be no more than 5 basis points of the net annual borrowing and can be no less than -5 basis of the net annual borrowing. If the variable fee is a negative amount, such amount will be deducted from the base fee in the following calendar year in twelve equal monthly payments
- The OEB will have a role in reviewing OPG's fees to ensure that the fees are consistent with prevailing market comparators

Next Steps:

- The Province is working with the OEB and OPG to develop a regulation setting out how the fees would be calculated including appropriate comparators for the OEBs review

Moratorium Period Interest and Fee Recovery

Overview:

- xx

Next Steps:

- xx

Equity Injections

Overview:

- To purchase the regulatory asset from the IESO, an OPG financing entity would be established and borrow funds from the following:
  - Capital markets (51%)
  - Subordinated OPG debt, financed through equity injections from the Province (44%) and OPG, financing from capital markets (5%)
- OPG will require equity injections on an ongoing basis in order to provide the 44% share of financing for the financing entity to acquire the regulatory asset from IESO and keep its capital structure in line, and will require flexibility in order to issue shares to the Province as needed, under a share subscription agreement
- The Ministry of Energy will be responsible for seeking approval for the investment envelope each year and managing the share subscription arrangement with OPG
  - On a periodic basis, OPG will send a notice of share subscription to the Ministry of Energy, requesting a certain amount of equity based on the amount of the regulatory asset it plans to purchase in a fiscal year; the Ontario Financing Authority will flow the funds

Next Steps:

- OPG and the Ministry of Energy have approved the Master Subscription Agreement and will proceed to execute in the coming weeks
- The Ministry of Energy will work with the OFA to ensure a mechanism is in place to flow the funds within the required timeframes after the request is made by OPG

Subordinated Debt Agreement

Overview:

- OPG intends to lend the equity injection from the Province to the Trust by way of subordinated debt
- OPG proposes that OPG, the Fair Hydro Trust and the OFA will enter into a subordinated debt loan agreement, which outlines the terms of the subordinated debt [TBD]
- OPG has proposed that interest rates on the subordinated debt be established as follows:
  - During the Trust short term financing period, when bank facilities are used as funding vehicles, the interest rate on subordinated debt will be the sum of (1) funding rate on senior debt, and (2) additional spread margin of [xx], reflecting the credit rating difference between the senior and subordinated debt [TBD]
  - At the time when senior bonds are being issued to take out (term out) the short term financing, OPG will seek indicative coupon rates on the subordinated debt from dealers, reflecting the sum of underlying Government of Canada yield of equivalent term and the appropriate credit spread. The average indicative coupon rate from dealers will be calculated and set as the subordinated debt rate. [TBD]

Next Steps:

- OPG to incorporate the Province's comments into the next draft of the Subordinated Debt Agreement, which is tracking to be finalized by the end of September [TBD]

PILs Exemption

Overview:

- It is currently contemplated that the first financing entity to be established by OPG, in its capacity as Financial Services Manager, will be a trust (Trust)
- The Trust would be subject to tax under the Income Tax Act (Canada) and the Ontario Taxation Act, 2007
- The beneficiary of the Trust will be a corporation (Subco) that will be directly or indirectly wholly-owned by OPG
  - Subco, given it is owned by OPG, would be exempt from federal and provincial corporate taxes and property taxes payable by private sector companies, and instead make payments in lieu of taxes (PILs) to the Ontario Electricity Financial Corporation (OEFC)
  - PILs are used by the OEFC to help pay down its debt and other liabilities – OEFC is the legal continuation of the former Ontario Hydro
- In order to mitigate the cost to ratepayers, the Ministry of Finance plans to bring forward a proposed Minister of Finance's regulation under the *Electricity Act* , 1998 that would exempt Subco from paying PILs on income received as beneficiary of the Trust
- The Ministry of Finance will also consider similar regulations in the future should OPG establish another financing entity in its role as the Financial Services Manager

Next Steps:

- Draft letter from the Minister of Finance to OPG is in development that will provide comfort that Subco will be exempt from PILs on income received as beneficiary of the Trust.
- The Ministry of Finance is working with OPG on a draft regulation, which will be brought forward in the Fall

OFHP Business Issues

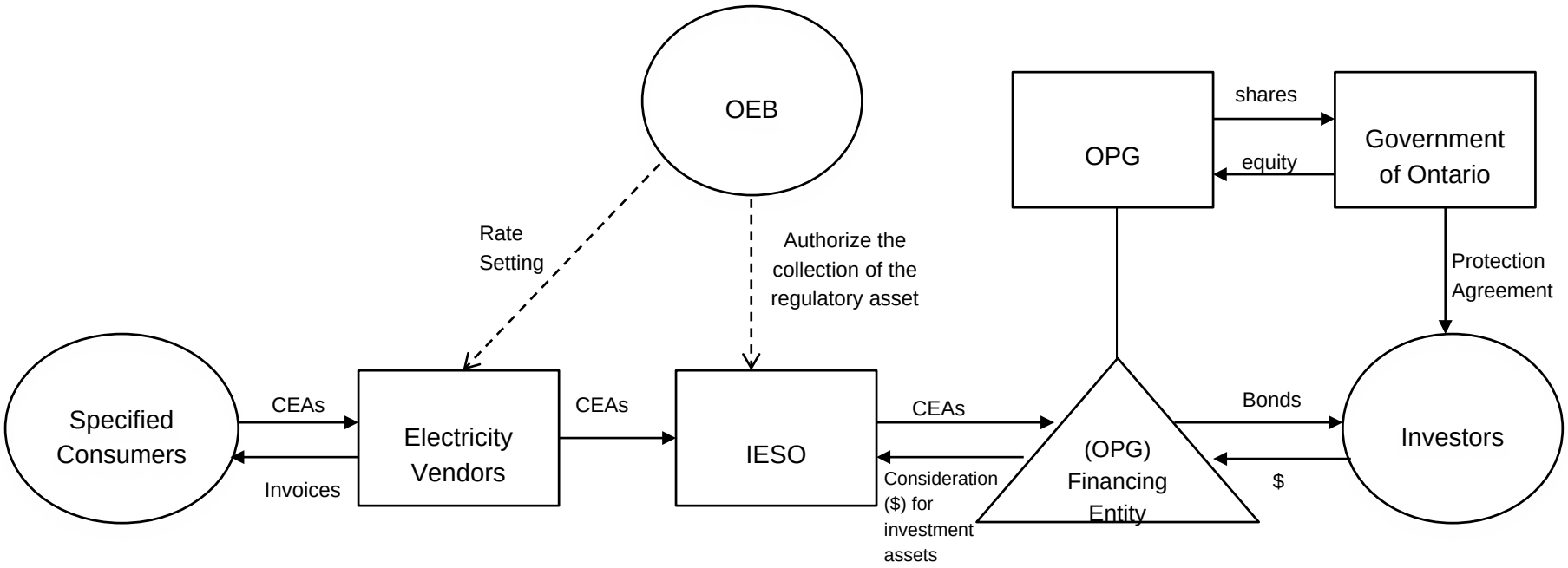
DRAFT – September 11, 2017

CONFIDENTIAL & COMMERCIALLY SENSITIVE

Context: GA Financing

- The *Ontario Fair Hydro Act, 2017,* enables the IESO to establish a variance account to record the deferral amounts from the difference between collections from current ratepayers and payment obligations to generators and conservation, and to create a regulatory asset as the Act provides the IESO the right to recover the balance in the variance account
  - The IESO can then sell the regulatory asset – the right to recover those deferred amounts from specified consumers in the future
  - OPG, as the Financial Services Manager, is authorized to establish one or more financing entities that may incur funding obligations
  - ~~The~~ A financing entity ~~will~~ purchas~~ing~~ ~~e~~ the regulatory asset would~~,~~ effectively finance ~~ing~~ the IESO's shortfall in current rates not received from ratepayers
- In order to support the establishment of a financing entity, facilitate ongoing funding requirements of the Global Adjustment and optimize ratepayer impacts, OPG and the Province are working on finalizing the details for a number of business issues, including
  - Provincial Protection and Assurances Agreement (PPAA)
  - Fair Allocation Amount (FAA)
  - Management Fees Regulation
  - Moratorium Period Interest and Fee Recovery
  - Equity Injections
  - Subordinated Debt Agreement
  - PILs Exemption

Global Adjustment Refinancing – Roles and Responsibilities



Note: CEAs are “clean energy adjustments”

Provincial Protection and Assurances Agreement

Overview:

- To purchase the regulatory asset from the IESO, the Financing Entity must borrow a portion of the funds from capital markets (planned to be 51%, with other financing to come from OPG and, indirectly, the Province)
    - OPG's financial advisors have indicated that without adequate protection against legislative, judicial and organizational risk, the debt would not be financeable or would result in higher financing costs, to be passed on to ratepayers
- Upon receiving TB/MBC approval, and as contemplated under the Act, the Province has agreed to provide a protection agreement that supports the Financing Entity and prospective debt holders such that~~, under certain circumstances,~~ the Province would take over the funding obligations of the Financing Entity, under certain circumstances, including
    - Actions of the Legislative Assembly that undermine the financing arrangement~~,~~; i.e., repeal or amendment of the Ontario Fair Hydro Plan Act, 2017, or new legislation that adversely affect the Financing Entity
    - A court decision that declares the rights of the Financing Entity to recover amounts from ratepayers to be invalid or unenforceable
    - Changes to the organization, structure or operations of IESO or a change in the electricity market structure or operations that adversely affects the ability of the Financing Entity to recover amounts related to funding obligations.

Provincial Protection and Assurances Agreement (Con't)

- In the event the protection agreement is triggered, the Province will be required to pay the obligations of the Financing Entity including principal and interest payments on debt issued to date, any payments to derivatives counterparties and any outstanding payments to service providers
    - The Province could potentially service the debt and other obligations and could replace OPG as the financial services manager
- The protection agreement may need to be revised at a future date, or approval from the Province may be required, if the financing entity must access the U.S. market as investors in that market will likely require additional compensation if the assumption agreement is triggered
- The Province will take on a contingent liability, which will increase over the duration of the Fair Hydro Plan and peak at an estimated $20B of debt (final cost forecasts TBC), including principal and accumulated interest
- In the event the protection agreement is triggered, the Province's net debt will most likely increase by an amount equal to the contingent liability at that point in time
    - The Province's interest payments will also increase by the debt interest servicing of the debt payment obligations it has assumed under the protection agreement
    - IOD expense may increase between $0.8B and $1.0B per annum, assuming the protection agreement is triggered when debt is at its peak, and depending on the interest rate at which the Financing entity will be able to borrow at

Next Steps:

- Province to work with OPG and external legal counsel to finalise the Protection Agreement

Fair Allocation Amount

Overview:

- xx

Next Steps:

- xx

Management Fees Regulation

Overview:

- Ontario Power Generation Inc. (OPG) has been appointed the Financial Services Manager under the Fair Hydro Plan Act, 2017 to, among other things evaluate whether funding obligations should be incurred by the Trust for the purpose of acquiring and financing an investment interest.
- The Act enables OPG to achieve its ~~accounting~~ objectives of consolidation of the Trust with OPG, and the ability to earn a return and take on risk, through its control of the Trust.
- The fee will have a fixed and variable component and be determined by formulas set out in a regulation, which as currently drafted includes:
    - **Base fee**: Monthly fee calculated as 7.5 basis points on monthly funding obligation. The base fee will be independently reviewed in 2018.
    - **Variable fee**: Annual fee of 5% of the difference difference between forecast and actual interest rates achieved for each of its funding tranches. The variable fee in any one year will be no more than 5 basis points of the net annual borrowing and can be no less than -5 basis of the net annual borrowing. If the variable fee is a negative amount, such amount will be deducted from the base fee in the following calendar year in twelve equal monthly payments
- The OEB will have a role in reviewing OPG's fees to ensure that the fees are consistent with prevailing market comparators

Next Steps:

- The Province is working with the OEB and OPG to develop a regulation setting out how the fees would be calculated including appropriate comparators for the OEBs review

Moratorium Period Interest and Fee Recovery

Overview:

- xx

Next Steps:

- xx

Equity Injections

Overview:

- To purchase the regulatory asset from the IESO, an OPG financing entity would be established and borrow funds from the following:
  - Capital markets (51%)
  - Subordinated OPG debt, financed through equity injections from the Province (44%) and OPG, financing from capital markets (5%)
- OPG will require equity injections on an ongoing basis in order to provide the 44% share of financing for the financing entity to acquire the regulatory asset from IESO and keep its capital structure in line, and will require flexibility in order to issue shares to the Province as needed, under a share subscription agreement
- The Ministry of Energy will be responsible for seeking approval for the investment envelope each year and managing the share subscription arrangement with OPG
  - On a periodic basis, OPG will send a notice of share subscription to the Ministry of Energy, requesting a certain amount of equity based on the amount of the regulatory asset it plans to purchase in a fiscal year; the Ontario Financing Authority will flow the funds

Next Steps:

- OPG and the Ministry of Energy have approved the Master Subscription Agreement and will proceed to execute in the coming weeks
- The Ministry of Energy will work with the OFA to ensure a mechanism is in place to flow the funds within the required timeframes after the request is made by OPG

Subordinated Debt Agreement

Overview:

- OPG intends to lend the equity injection from the Province to the Trust by way of subordinated debt
- OPG proposes that OPG, the Fair Hydro Trust and the OFA will enter into a subordinated debt loan agreement, which outlines the terms of the subordinated debt [TBD]
- OPG has proposed that interest rates on the subordinated debt be established as follows:
  - During the Trust short term financing period, when bank facilities are used as funding vehicles, the interest rate on subordinated debt will be the sum of (1) funding rate on senior debt, and (2) additional spread margin of [xx], reflecting the credit rating difference between the senior and subordinated debt [TBD]
  - At the time when senior bonds are being issued to take out (term out) the short term financing, OPG will seek indicative coupon rates on the subordinated debt from dealers, reflecting the sum of underlying Government of Canada yield of equivalent term and the appropriate credit spread. The average indicative coupon rate from dealers will be calculated and set as the subordinated debt rate. [TBD]

Next Steps:

- OPG to incorporate the Province's comments into the next draft of the Subordinated Debt Agreement, which is tracking to be finalized by the end of September [TBD]

PILs Exemption

Overview:

- It is currently contemplated that the first financing entity to be established by OPG, in its capacity as Financial Services Manager, will be a trust (Trust)
- The Trust would be subject to tax under the Income Tax Act (Canada) and the Ontario Taxation Act, 2007
- The beneficiary of the Trust will be a corporation (Subco) that will be directly or indirectly wholly-owned by OPG
  - Subco, given it is owned by OPG, would be exempt from federal and provincial corporate taxes and property taxes payable by private sector companies, and instead make payments in lieu of taxes (PILs) to the Ontario Electricity Financial Corporation (OEFC)
  - PILs are used by the OEFC to help pay down its debt and other liabilities – OEFC is the legal continuation of the former Ontario Hydro
- In order to mitigate the cost to ratepayers, the Ministry of Finance plans to bring forward a proposed Minister of Finance's regulation under the *Electricity Act* , 1998 that would exempt Subco from paying PILs on income received as beneficiary of the Trust
- The Ministry of Finance will also consider similar regulations in the future should OPG establish another financing entity in its role as the Financial Services Manager

Next Steps:

- Draft letter from the Minister of Finance to OPG is in development that will provide comfort that Subco will be exempt from PILs on income received as beneficiary of the Trust.
- The Ministry of Finance is working with OPG on a draft regulation, which will be brought forward in the Fall

2017 Long-Term Energy Plan – Fuels and Electricity Outlooks

Working Draft

August 2017

Agenda for Discussion

1. Overview of 2017 Long-Term Energy Plan (2017 LTEP) Outlooks/Forecasts and confirmation of modelling assumptions:
   A. Fuels; and
   B. Electricity.

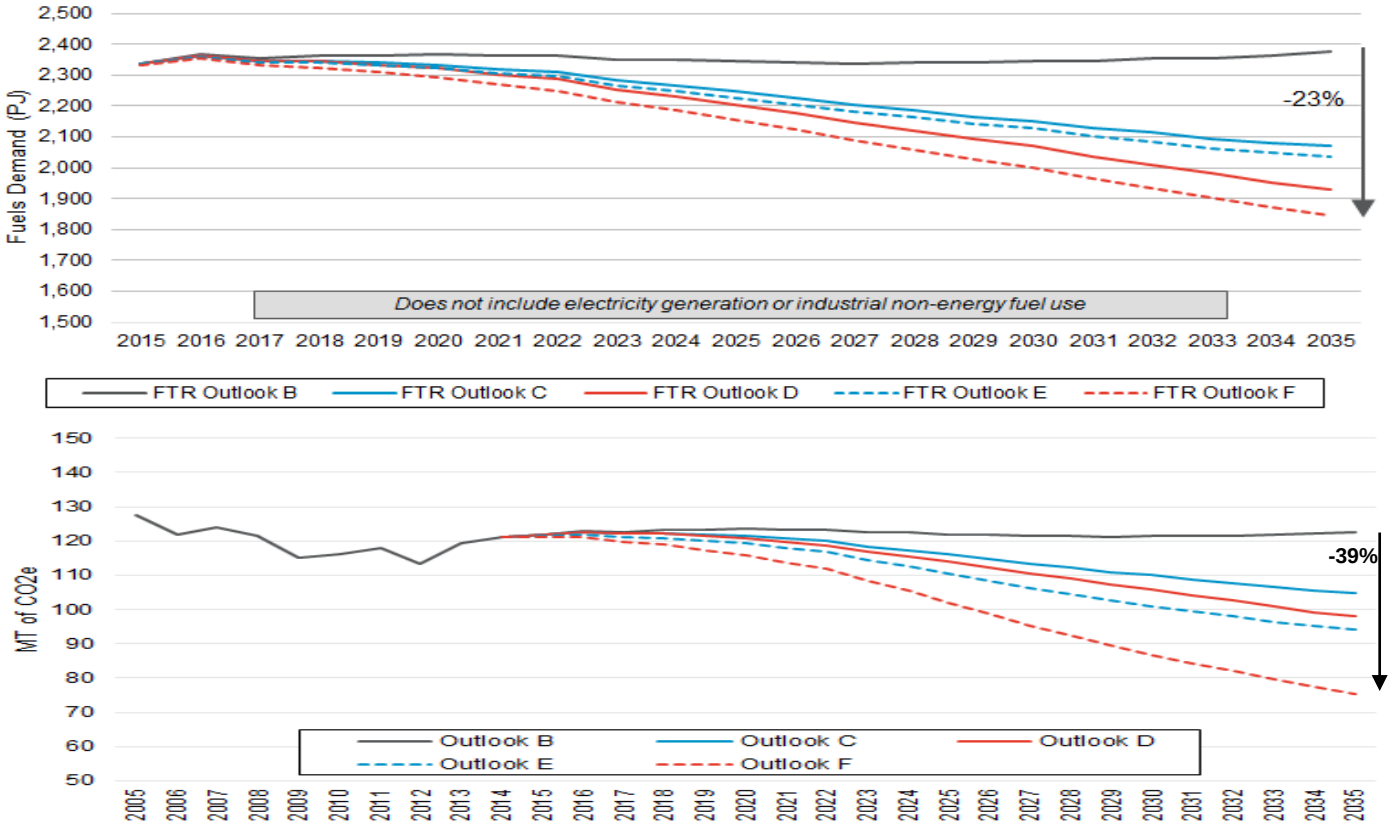
2. Discussion of inputs into the development of the 2017 LTEP Residential Electricity Price Forecast:
   A. Ontario's Fair Hydro Plan; and
   B. Other inputs into the development of the residential electricity bill (e.g., adjusting the inflationary cap, changes in residential consumption, etc).

3. Summary of next steps/critical path.

1A. 2017 LTEP – OUTLOOK AND FORECASTS FOR FUELS

A. 2017 LTEP – Fuels Outlooks and Forecasts – Context

- In 2016 to assist the development of the 2017 Long-Term Energy Plan a Fuels Technical Report (FTR) was prepared.
  - The FTR outlined five scenarios based on the same primary assumptions contained in the Independent Electricity System's (IESO) Ontario Planning Outlook (OPO) with additional "fuels only" initiatives considered in FTR Outlooks E and F.



CONFIDENTIAL CABINET DOCUMENT

Source: Navigant Fuels Technical Report.

A. 2017 LTEP – Fuels Outlooks and Forecasts – Approach

- Fuels modelling for 2017 LTEP aligns with IESO's Updated Outlook for electricity (i.e., higher electric vehicle uptake from Outlook C/D and updated prices for carbon and natural gas).

- The following approach is proposed:

  – <u>FTR Outlook F Targets</u>

    - IESO Updated Outlook with fuels-only assumptions that meet the FTR Outlook F Targets for greenhouse gas (GHG) emissions without additional impacts on the electricity sector. Involves fuels sector initiatives such as:

      - Natural gas demand-side management (e.g., conservation, building efficiency);
      - Renewable natural gas; and
      - Lower-carbon fuels for transportation (e.g., natural gas, ethanol, biodiesel, hydrogen, etc).

    - Additional analysis is required to determine an appropriate and credible set of fuels-only assumptions to meet FTR Outlook F emission targets. Ministry is retaining Navigant to provide additional advice on this work. Note: Navigant was retained to develop the FTR.

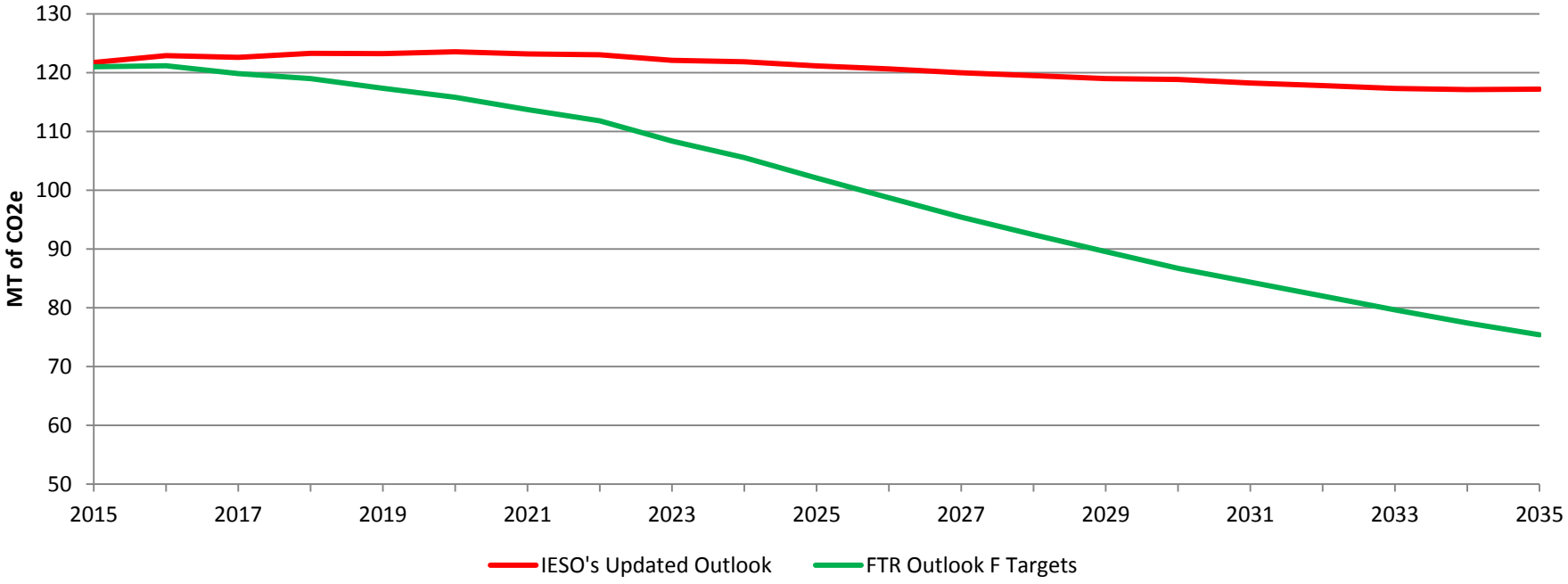
A. 2017 LTEP – Fuels Outlooks and Forecasts – Summary of Original Fuels Modeling Assumptions

- The following table shows the original FTR Outlook F modelling assumptions. These are subject to change in the proposed approach, pending further analysis to meet the FTR emissions targets without any additional impacts on the electricity sector.

Initiative	Key Assumptions
To be updated in proposed modelling approach	
Building Envelope Improvements	• 600,000 single family fossil-fuel heated dwellings improve building envelope to reduce heating load by 20 GJ/year • 255,000 multi-family fossil fuel heated dwellings improve building envelope to reduce heating load by 9 GJ/year • 6% reduction in heating load for fossil-fuel heated commercial buildings
Transportation Sector Switching	• Additional 1.3 billion litres of ethanol • Additional 2 billion litres of biodiesel /renewable diesel • Switching from diesel to natural gas / hydrogen / propane, etc. • Additional urban trips on buses (instead of cars)
Renewable Natural Gas (RNG)	• 155 PJ of RNG injected into the system
Electrification: Vehicles	• Additional 1,400,00 light-duty electric vehicles (EVs) • Additional 30,400 heavy duty EVs
Not included in proposed modelling approach	
Electrification: Public Transit	• Incremental 39,000,000 trips using electrified public transit
Electrification: Heating and Industrial	• 2,100,000 households upgrade/switch from natural gas to electricity for heating. • 80 million square metres of commercial floor space switches from natural gas to electricity for heating. • 57 PJ of industrial fossil fuel demand switches to electric equivalent.

A. 2017 LTEP – Fuels Emissions Outlook

- The chart below shows that GHG emissions from Ontario's fuels sector are expected to decline as a result of electrification of vehicles, as well as conservation and alternative fuel-switching.
  - Note: The chart is illustrative pending further analysis of specific fuels-only assumptions to meet FTR Outlook F emission targets.
- The FTR Outlook F emission targets represent a reduction in fuels sector GHG emissions of 36% by 2035 relative to IESO's Updated Outlook.

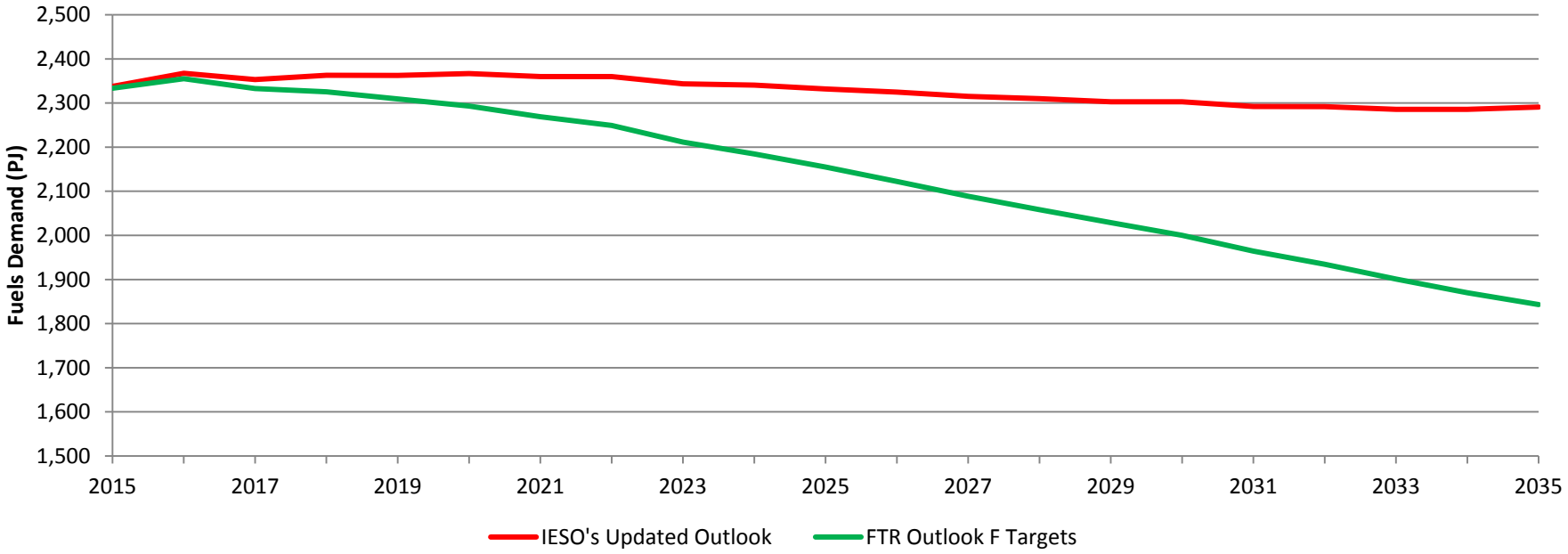


CONFIDENTIAL CABINET DOCUMENT

Source: Navigant Fuels Technical Report.

A. 2017 LTEP – Fuels Demand Outlook

- The chart below compares fuels demand under IESO's Updated Outlook and the FTR Outlook F Targets scenario.
  - Note: The chart is illustrative pending further analysis of specific fuels-only assumptions to meet FTR Outlook F emission targets. Fuels demand is not specifically being targeted in this analysis.



Source: Navigant Fuels Technical Report.

A. Considerations – Fuels Modelling

- Ministry is exploring how to achieve FTR Outlook F Targets in manner that would not result in the need for incremental electricity generating capacity beyond the planned supply resources outlined in IESO's Updated Outlook (i.e., no additional electrification of home heating and industrial processes).

- As such, adopting the FTR Outlook F Targets scenario includes the following considerations to determine an appropriate and credible set of assumptions:

  – Implementing conservation initiatives such as building energy efficiency upgrades through the use of demand-side management to further reduce fuels demand and emissions – including sectors without Ontario Energy Board (OEB) regulated programs (i.e., heating oil and propane);

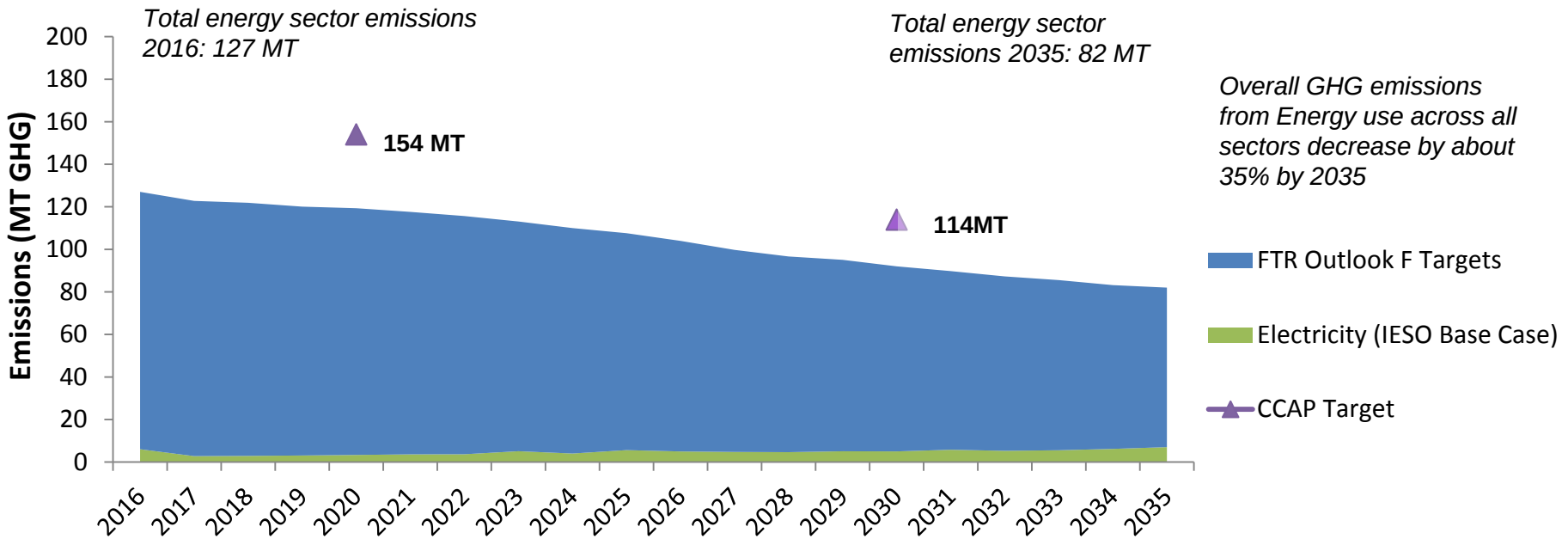
  – Increasing lower-carbon fuels use in home heating thought the adoption and deployment of new and emerging technologies (e.g., renewable natural gas); and

  – Switching to lower-carbon fuels within the transportation sector (i.e., fuels such as ethanol, biodiesel and natural gas, likely in the form of compressed natural gas or liquefied natural gas) and explore the use of emerging technologies (i.e., hydrogen use in public transit).

- Although adopting the FTR Outlook F Targets scenario demonstrates a decline in GHG emissions, it will have cost implications for consumers of fuels (i.e., transportation and home heating).

A. Considerations – Integrated Modelling

- The combined GHG emissions from Ontario's energy sector (i.e., electricity and fuels) under the proposed FTR Outlook F Targets would decrease by 35% by 2035 relative to 2016 levels, and would remain well below the economy-wide CCAP target for 2030.

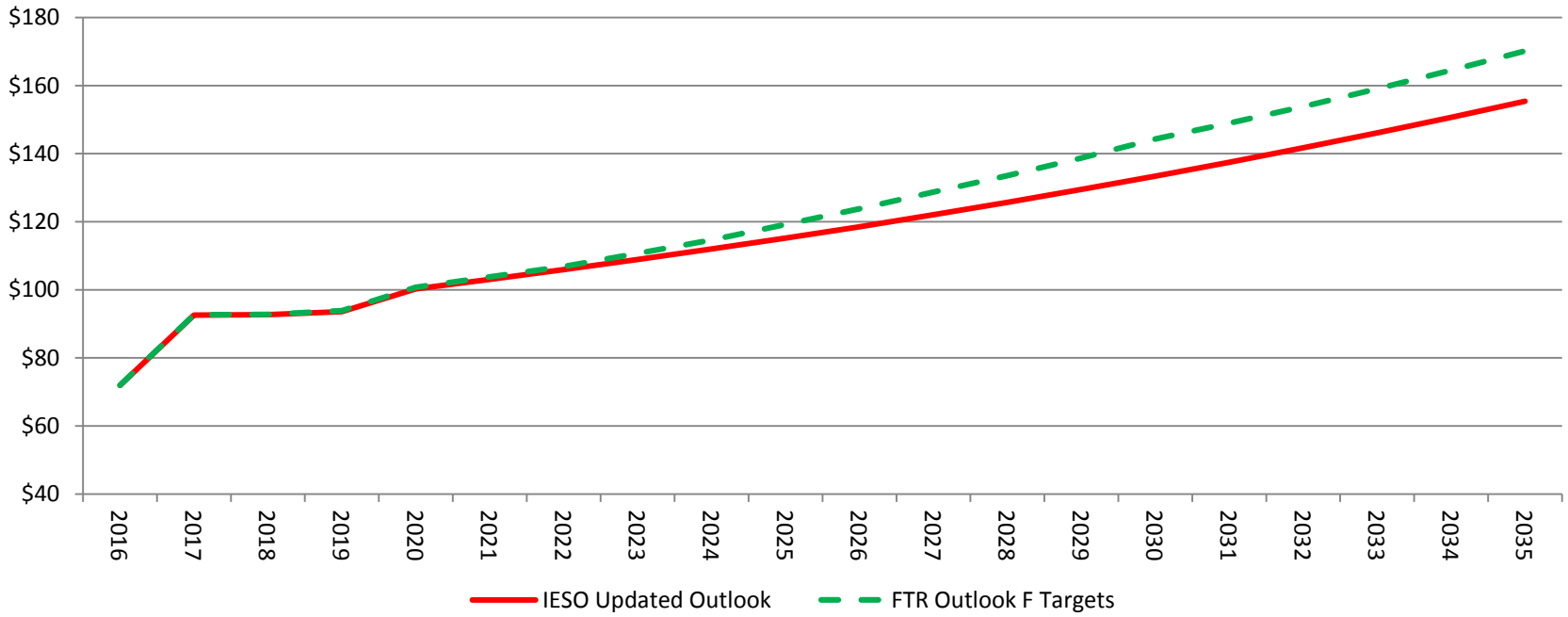


Note: Emissions excludes non-energy sources including agriculture, waste, and non-energy related industrial processes. Updated IESO base case for electricity subject to key assumptions, Emissions from FTR Outlook F used as a proxy pending updated modelling from Navigant. CCAP Targets for Ontario are 15% and 37% reduced emissions from 1990 levels (~182 MT) by 2020 and 2030 respectively.

A. Residential Natural Gas Bill Outlook

- The chart below shows the residential bill under: IESO's Updated Outlook and FTR Outlook F Targets. Analysis is ongoing to ensure appropriate scenario modelling and bill treatment.
  - Bills relative to IESO's Updated Outlook are expected to increase primarily due to further substitution of higher-cost RNG.
    Note: The chart assumes a constant monthly consumption each year.

Typical Residential Natural Gas Bill
(with tax, nominal $ per month)



CONFIDENTIAL CABINET DOCUMENT

Source: IESO Modelling Update and Navigant Fuels Technical Report.

1B. 2017 LTEP – OUTLOOK AND FORECASTS FOR ELECTRICITY

B. 2017 LTEP – Electricity Outlooks and Forecasts

- The Long-Term Energy Plan (LTEP) is the energy sector's roadmap. It includes 20-year outlooks / forecasts, and identifies initiatives to position the energy sector for the future. Past LTEPs have included:
  - Forecast of typical residential electricity bills
  - Electricity Demand Outlook;
  - Electricity Supply Outlook; and
  - Emissions Outlook.

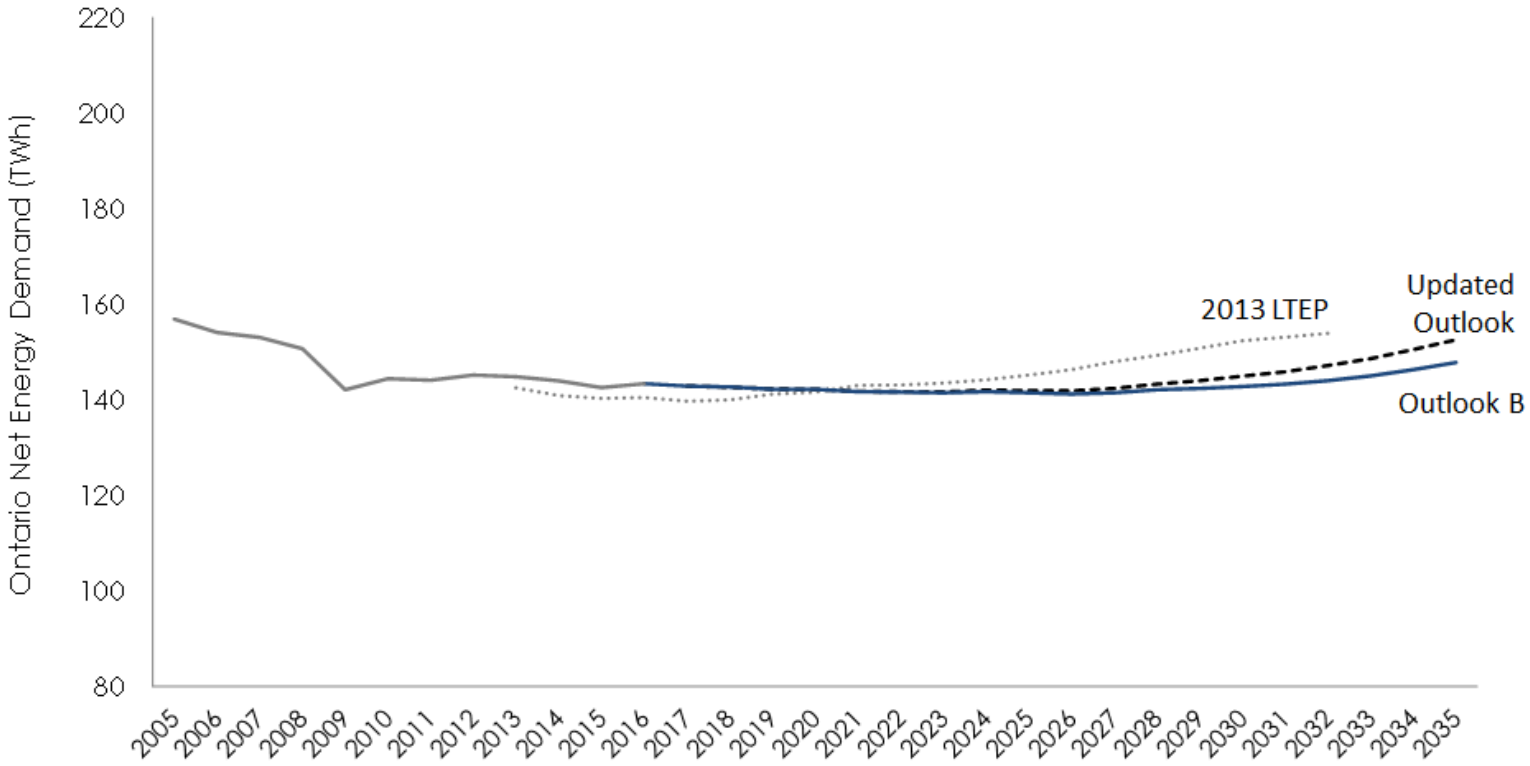
- The introduction of Ontario's Fair Hydro Plan (OFHP) has impacted the residential electricity bill by reducing costs in the near term. Over the long-term the incurred debt will be repaid by electricity consumers.

- Action have been undertaken to lower electricity costs for all consumers. Current actions that are underway or have been agreed to bend the future cost curve, include:
  - Savings from IESO's Market Renewal of up to $5.2 billion over a 10-year period beginning in 2021 have been incorporated into the electricity outlooks; and
  - Ontario Energy Board (OEB) is expected to revaluate its performance mechanisms to ensure that high-cost LDCs are becoming more efficient through the years.
  - ENERGY and its agencies have also considered other options to remove costs from the electricity system through other funding sources and supply mix decisions.

See Appendix for more detail on measures that have been implemented and measures underway.

B. 2017 LTEP – Electricity Demand Outlook

- The following chart compares the demand forecast in 2013 LTEP, IESO's outlook publically released in September 2016 (Outlook B), and the new updated outlook for 2017 LTEP.
- The updated outlook is based on Outlook B with increased EV uptake (2.4 million EVs by 2035) and recent sector updates (about 5 TWh higher than Outlook B by 2035).

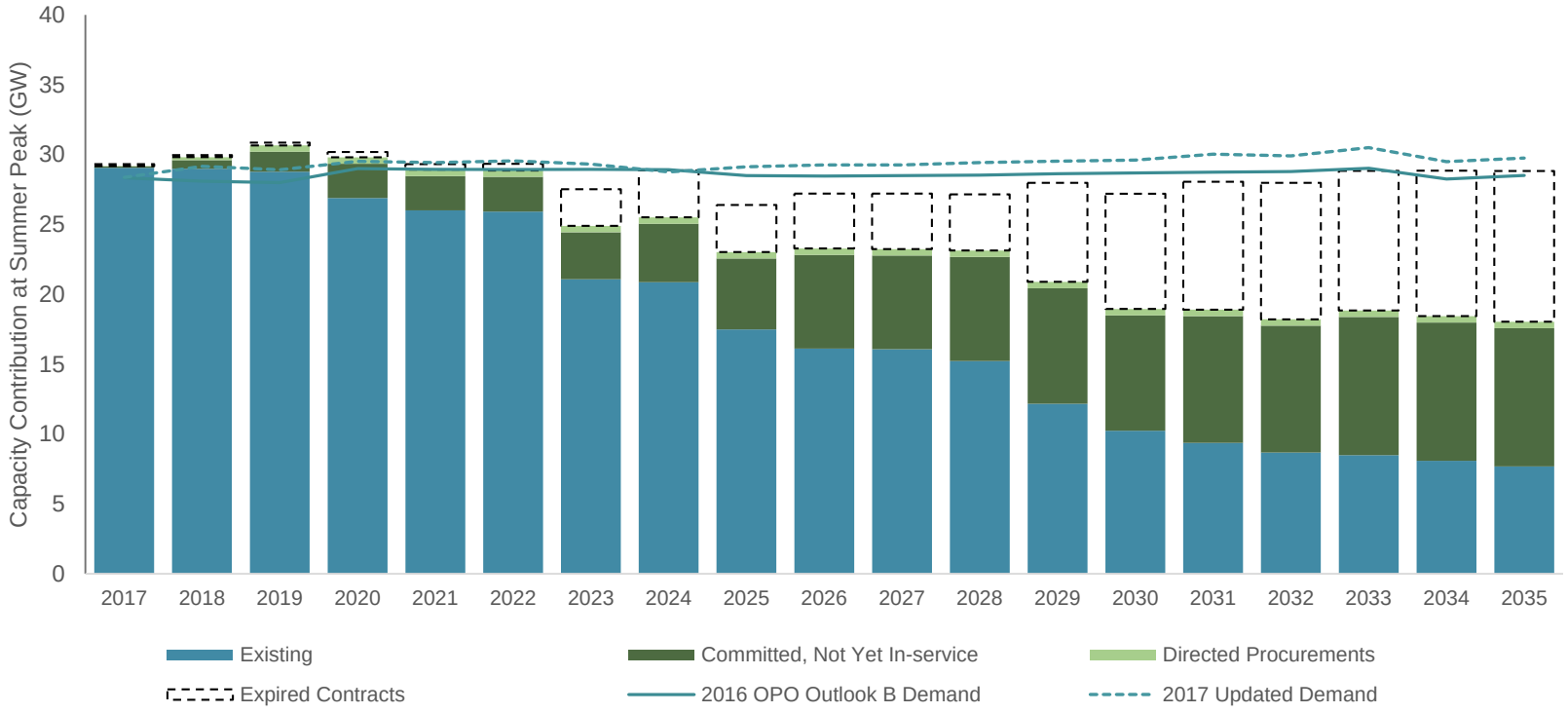


CONFIDENTIAL CABINET DOCUMENT

Source: IESO Modelling Update.

B. 2017 LTEP – Electricity Supply Outlook

- 18 GW of supply resources will reach the end of their contact term by 2035. There will be a need for additional resources in the early 2020s.
  - These resources could offer into the electricity and/or capacity market to provide additional supply as required.
  - Maintaining flexibility allows for the electricity system to meet increases and decreases in future demand.



CONFIDENTIAL CABINET DOCUMENT

Source: IESO Modelling Update.

B. 2017 LTEP – Electricity Outlooks and Forecasts – Summary of Modelling Assumptions

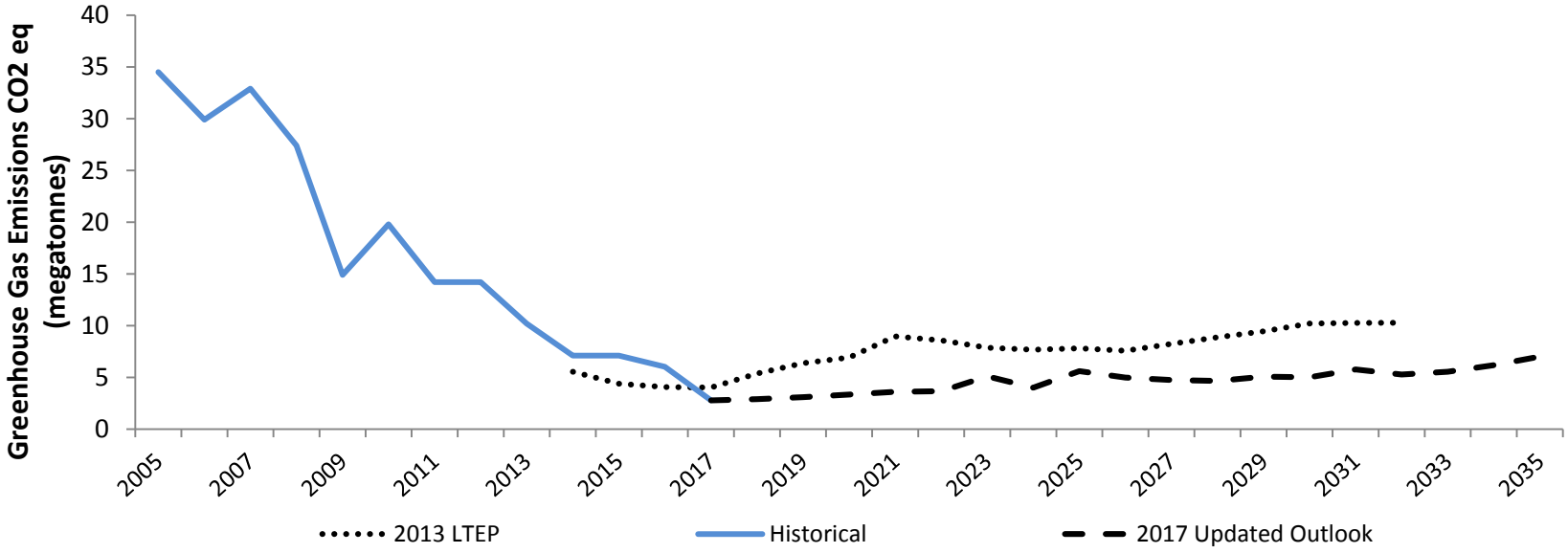
Outlook	Key Assumptions
Supply	<u>Nuclear</u> • Refurbishment schedule reflects OPG's current business plan and the amended Bruce refurbishment schedule; and • Pickering is assumed to operate to 2022/2024. <u>Renewables</u> • Suspension of LRP II and EFW; and • FIT 5 and microFIT 2017 are the remaining renewable programs to be procured that are not yet online or contracted. <u>Electricity Trade Agreements</u> • Ontario-Quebec (2.3 TWh per year from 2017 to 2022 inclusive, 500 MW capacity per winter December 2016 to March 2023 from Ontario to Quebec and 500 MW Quebec to Ontario.
Demand	• Based on OPO Outlook B, with the addition of EVs per OPO Outlook D (i.e., 2.4 million EVs by 2035). Note: Transportation-related electricity is modelled separately.
Conservation and Demand Response	• Conservation: Reflects 2013 LTEP energy efficiency target of 30 TWh by 2032 and assumes that the near term target set in the Conservation First Framework and Industrial Accelerator Program of 8.7 TWh will be achieved by 2020; and • Demand Response (DR): any DR currently procured through the DR auction would continue to be available in future auctions.

B. 2017 LTEP – Electricity Outlooks and Forecasts – Summary of Modelling Assumptions (cont'd)

Outlook	Key Assumptions
Price	• Reflects OPG smoothed rates. • Assumes the generation assets will continue to be available for the duration of the planning outlook, where the costing of expired contracts reflect: – Natural gas is converted to a generic gas plan with assumptions per Hatch report; – Wind is based on LRP I, with a discounted capital cost re-investment for end of life components; – Solar is based on LRP I, except that future investments for end of life components decline in cost in recognition of technological improvements; and – Note: Both the wind and solar re-investment costs are lower than that used in the OPO. • Natural gas price forecast is based on the Sproule projection of February 2017. • Carbon price is based on the actual floor price for the March 2017 cap and trade auction, inflated at 5% as per the cap and trade regulation and 2% inflationary increase. • Updated transmission rates to reflect current application before the OEB for 2017 and 2018; Adjustments to forecast methodology to calculate the fixed and variable elements of the distribution costs. • The estimated bill for a residential consumer now incorporates May and July 2017 actuals (whereas a forecast for the year was previously used).

B. 2017 LTEP – Electricity Emissions Outlook

- With the retirement of coal plants, greenhouse gas (GHG) emissions have dropped by over 80% in the past 10 years. Today, Ontario electricity sector GHG emissions represent about 2% of Ontario's overall economy-wide GHG emissions.
- The trend of lower emissions is forecast to continue over the planning outlook.
- IESO is undertaking analysis of new scenarios, including a flat GHG outlook and a declining GHG outlook, with increased investment in additional clean energy and/or conservation.



CONFIDENTIAL CABINET DOCUMENT

Source: IESO
*Note: Indicative illustration subject to change based on IESO analysis.

2. INPUTS INTO THE DEVELOPMENT OF THE 2017 LTEP RESIDENTIAL ELECTRICITY PRICE FORECAST

2017 LTEP – Residential Electricity Price Forecast

- The 2017 LTEP price forecast needs to show progress at lowering costs relative to the 2013 LTEP.

- The modelling assumptions for 2017 LTEP Residential Electricity Price Forecast include:
  - Benefits from implementing IESO's Market Renewal which includes a number of initiatives focused on more efficiently meeting demand; and
  - Ontario's Fair Hydro Plan (OFHP).

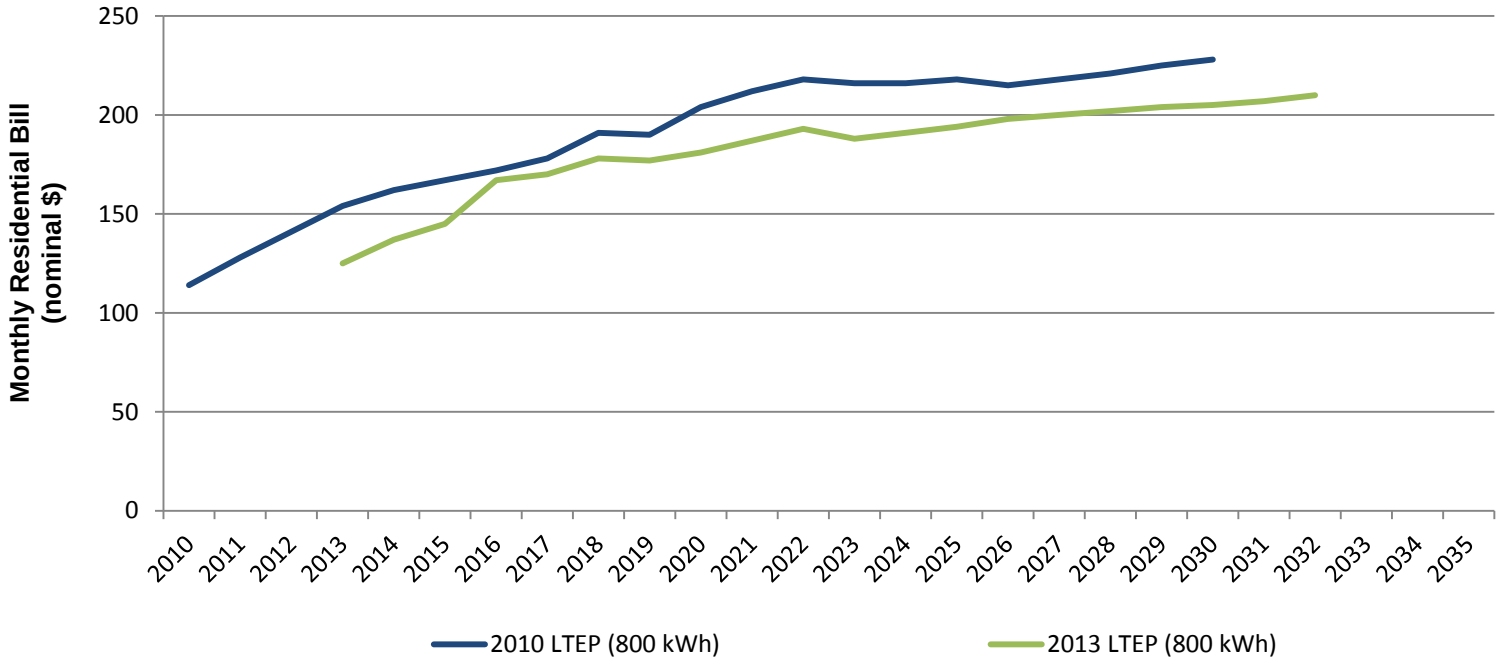
- A decision is required on other inputs which impact the presentation of the residential bill, in the near, medium and long-term, including:
  I. Adjusting the inflationary cap; and
  II. Changes in residential consumption.

A. Ontario's Fair Hydro Plan

- The Ontario Fair Hydro Plan Act, 2017 requires the Minister of Energy to calculate the "Fair Allocation Amount" (FAA) for each 6-month period to 2047.
  - The FAA is the accumulated difference between the allocation of clean energy costs and any associated financing costs payable by specified consumers under the OFHPA and the allocation of clean energy costs that would have been payable by those same consumers absent the OFHPA.
- The FAA aligns clean energy costs with clean energy benefits into the future.
- The Minister is required by the Act to provided the FAA to the Ontario Power Generator (OPG) as Financial Services Manager.
  - The FAA is expected to be set out in a letter from the Minister to OPG.
- The FAA is a constraint on the debt that the Financial Services Manager can finance.
- This is an important input in the development of the 2017 LTEP residential price forecast curve (i.e., the forecast cannot be finalized until the OFHP payback period is finalized).
- The FAA is necessary for the development of a Financing Plan by OPG and must precede the rating and sale of the asset (Summer/Fall 2017 TBC).

A. 2017 LTEP – Residential Price Forecast

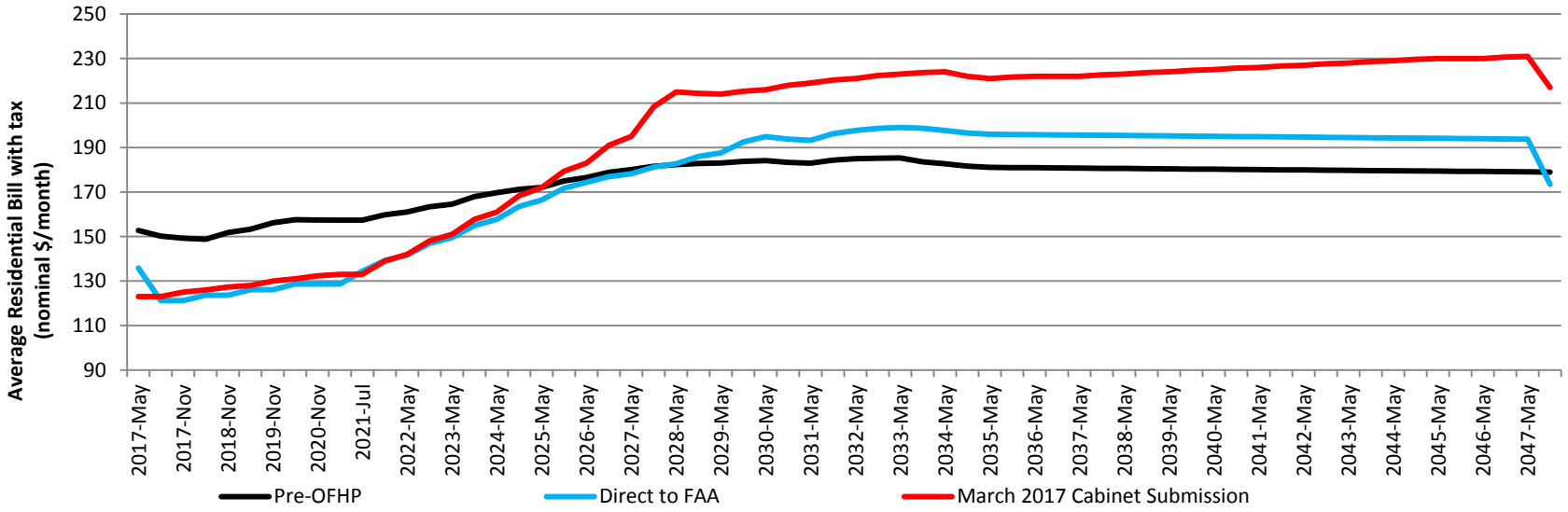
- The 2017 LTEP will include an updated residential electricity bill forecast.
- LTEP residential bill forecasts have followed a trend of being lower than the prior LTEP.



Note: OFHP – Direct to FAA (750 kWh) based on a preliminary July 2017 forecast; forecast is subject to change. As of 2017, the OEB reports residential bill impacts using an average consumption of 750 kWh per month.

A. Ontario's Fair Hydro Plan – Fair Allocation Amount

- Under current OFHP forecasts, residential electricity rates would increase at an average rate of about 5% between the end of the inflationary cap until the recovery period (i.e., 2021-2027).
- Maximum debt is estimated to reach $21.3 billion in 2029. Note: Public estimate was $28 billion.
- Demand, interest, financing, technology performance and system cost assumptions can significantly impact the price forecast.



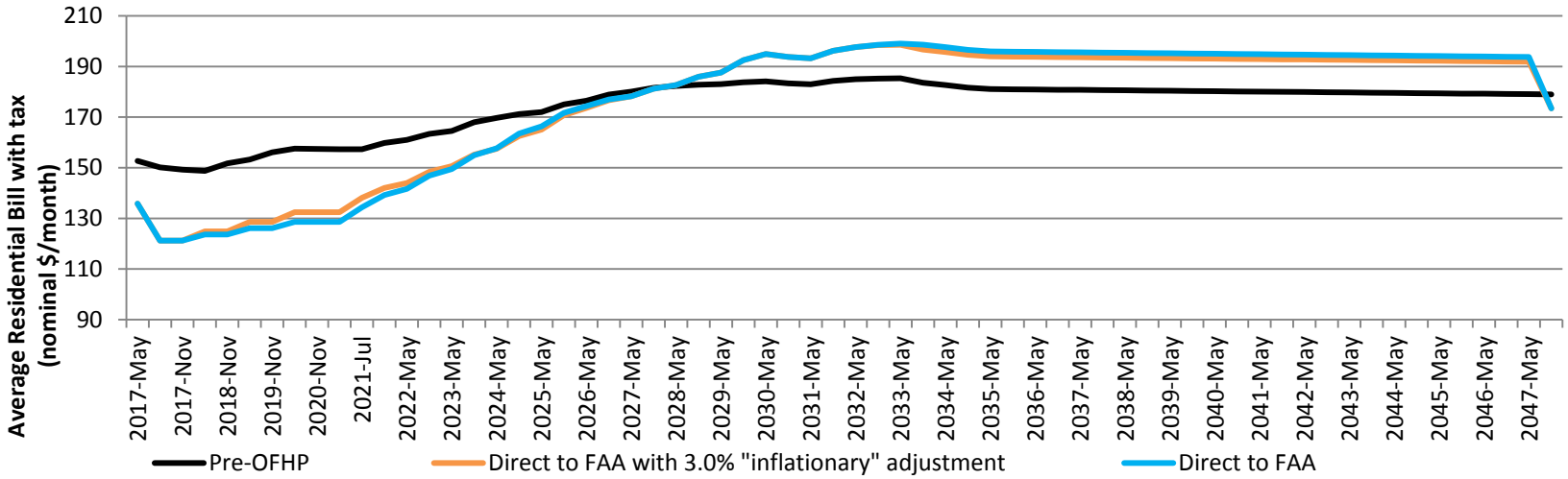
	2017-May	2017-Jul	2018-May	2019-May	2020-May	2021-Jul	2022-May	2023-May	2024-May	2025-May	2026-May	2027-May	2028-May	2029-May	2030-May	2031-May	2032-May	2033-May	2034-May	2035-May	2036-May	2037-May	2038-May	2039-May	2040-May	2041-May	2042-May	2043-May	2044-May	2045-May	2046-May	2047-May	2048-May
Average Residential Bill ($/month)	136	121	124	126	129	134	142	149	158	166	174	178	183	188	195	193	198	199	198	196	196	196	195	195	195	195	195	194	194	194	194	173
Change in bill (%)	n/a	-10.8%	2.0%	2.0%	2.0%	4.5%	5.4%	5.5%	5.5%	5.5%	4.8%	2.2%	2.5%	2.7%	3.9%	-0.8%	2.3%	0.7%	-0.7%	-0.9%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-10.5%
Total Accumulated Debt ($B)	0.2	1.0	3.3	5.8	8.5	11.5	13.6	15.5	17.2	18.4	19.3	20.2	20.9	21.3	21.2	20.9	20.5	19.9	19.1	18.2	17.2	16.2	15.1	13.9	12.7	11.3	9.9	8.3	6.7	4.9	3.1	1.0	0.0

CONFIDENTIAL CABINET DOCUMENT

Note: Based on a preliminary July 2017 forecast; forecast is subject to change. Assumes 30-year financing period and a nominal interest rate of 5% (compounded monthly). Pre-OFHP forecast beyond 2035 is extrapolated.

B1. Adjust the Inflationary Cap

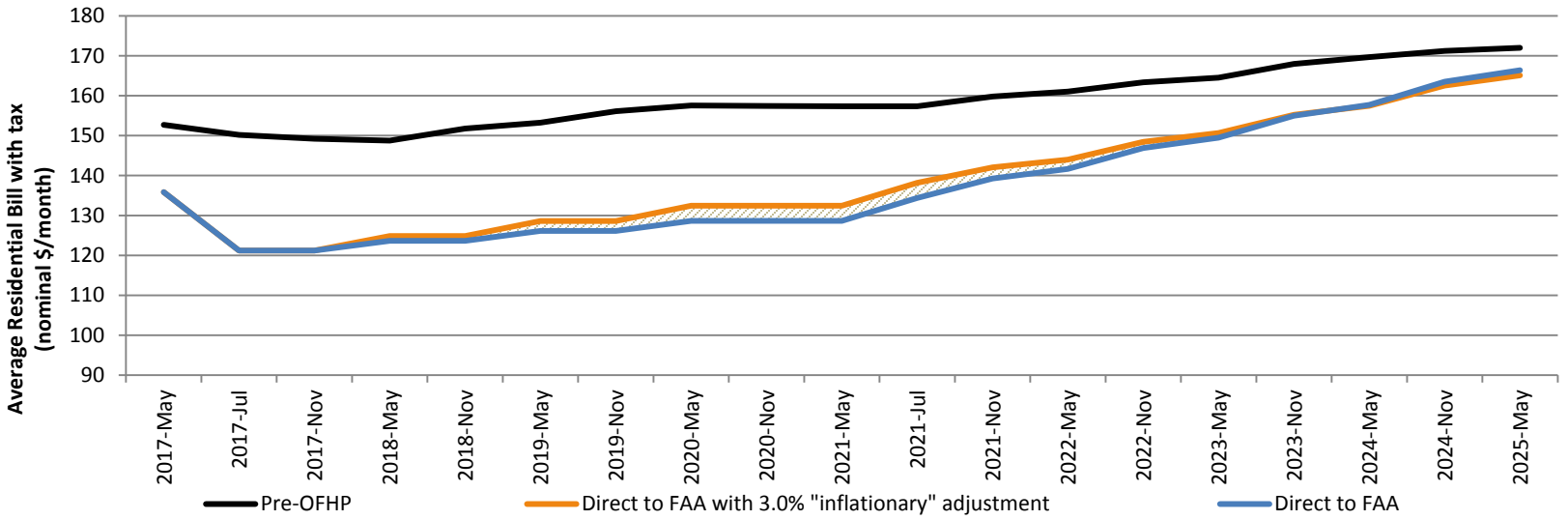
- Under OFHP, typical residential bills would increase at the “rate of inflation” for four years.
- Increasing this cap would have the effect of reducing the incurred debt and smoothing the step change in rates when they return to the Fair Allocation Amount (FAA).
- OFHP modelling previously based on 2% “rate of inflation”. A 3.0% increase during the inflationary cap period reduces the debt over the duration of the program by $1.7 billion down to a total of $19.6 billion (i.e., from $21.3 billion). Furthermore, residential electricity rates would increase at an average rate of about 4.5% between the end of the inflationary cap until the recovery period (i.e., 2021-2027).



	2017-May	2017-Jul	2018-May	2019-May	2020-May	2021-Jul	2022-May	2023-May	2024-May	2025-May	2026-May	2027-May	2028-May	2029-May	2030-May	2031-May	2032-May	2033-May	2034-May	2035-May	2036-May	2037-May	2038-May	2039-May	2040-May	2041-May	2042-May	2043-May	2044-May	2045-May	2046-May	2047-May	2048-May
Direct to FAA																																	
Average residential bill	136	121	124	126	129	134	142	149	158	166	174	178	183	188	195	193	198	199	198	196	196	196	195	195	195	195	195	195	194	194	194	194	173
Change in bill (%)	n/a	-10.8%	2.0%	2.0%	2.0%	4.5%	5.4%	5.5%	5.5%	5.5%	4.8%	2.2%	2.5%	2.7%	3.9%	-0.8%	2.3%	0.7%	-0.7%	-0.9%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-10.5%
Total Accumulated Debt ($B)	0.2	1.0	3.3	5.8	8.5	11.5	13.6	15.5	17.2	18.4	19.3	20.2	20.9	21.3	21.2	20.9	20.5	19.9	19.1	18.2	17.2	16.2	15.1	13.9	12.7	11.3	9.9	8.3	6.7	4.9	3.1	1.0	0.0
Direct to FAA with 3.0% “inflationary’																																	
	136	121	125	129	132	138	144	151	157	165	174	178	183	188	195	193	198	199	196	194	194	194	194	193	193	193	193	193	192	192	192	192	173
Change in bill (%)	n/a	-10.8%	3.0%	3.0%	3.0%	4.3%	4.2%	4.6%	4.5%	4.8%	5.2%	2.6%	2.5%	2.7%	3.9%	-0.8%	2.3%	0.4%	-1.4%	-0.9%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-9.6%
Total Accumulated Debt ($B)	0.2	1.0	3.2	5.5	8.0	10.5	12.4	14.1	15.7	17.0	17.9	18.7	19.3	19.6	19.4	19.1	18.6	17.9	17.2	16.4	15.5	14.6	13.6	12.6	11.4	10.2	8.9	7.5	6.1	4.5	2.8	0.9	0.0

Note: Based on a preliminary July 2017 forecast; forecast is subject to change. Assumes 30-year financing period and a nominal interest rate of 5% (compounded monthly). Pre-OFHP forecast beyond 2035 is extrapolated.

B1. Adjust the Inflationary Cap (cont'd)



	2017-May	2017-Jul	2018-May	2019-May	2020-May	2021-Jul	2022-May	2023-May	2024-May	2025-May
Direct to FAA										
Average residential bill	136	121	124	126	129	134	142	149	158	166
Change in bill (%)	n/a	-10.8%	2.0%	2.0%	2.0%	4.5%	5.4%	5.5%	5.5%	5.5%
Total Accumulated Debt ($B)	0.2	1.0	3.3	5.8	8.5	11.5	13.6	15.5	17.2	18.4
Direct to FAA with 3.0% "inflationary'										
Average residential bill	136	121	125	129	132	138	144	151	157	165
Change in bill (%)	n/a	-10.8%	3.0%	3.0%	3.0%	4.3%	4.2%	4.6%	4.5%	4.8%
Total Accumulated Debt ($B)	0.2	1.0	3.2	5.5	8.0	10.5	12.4	14.1	15.7	17.0

Considerations

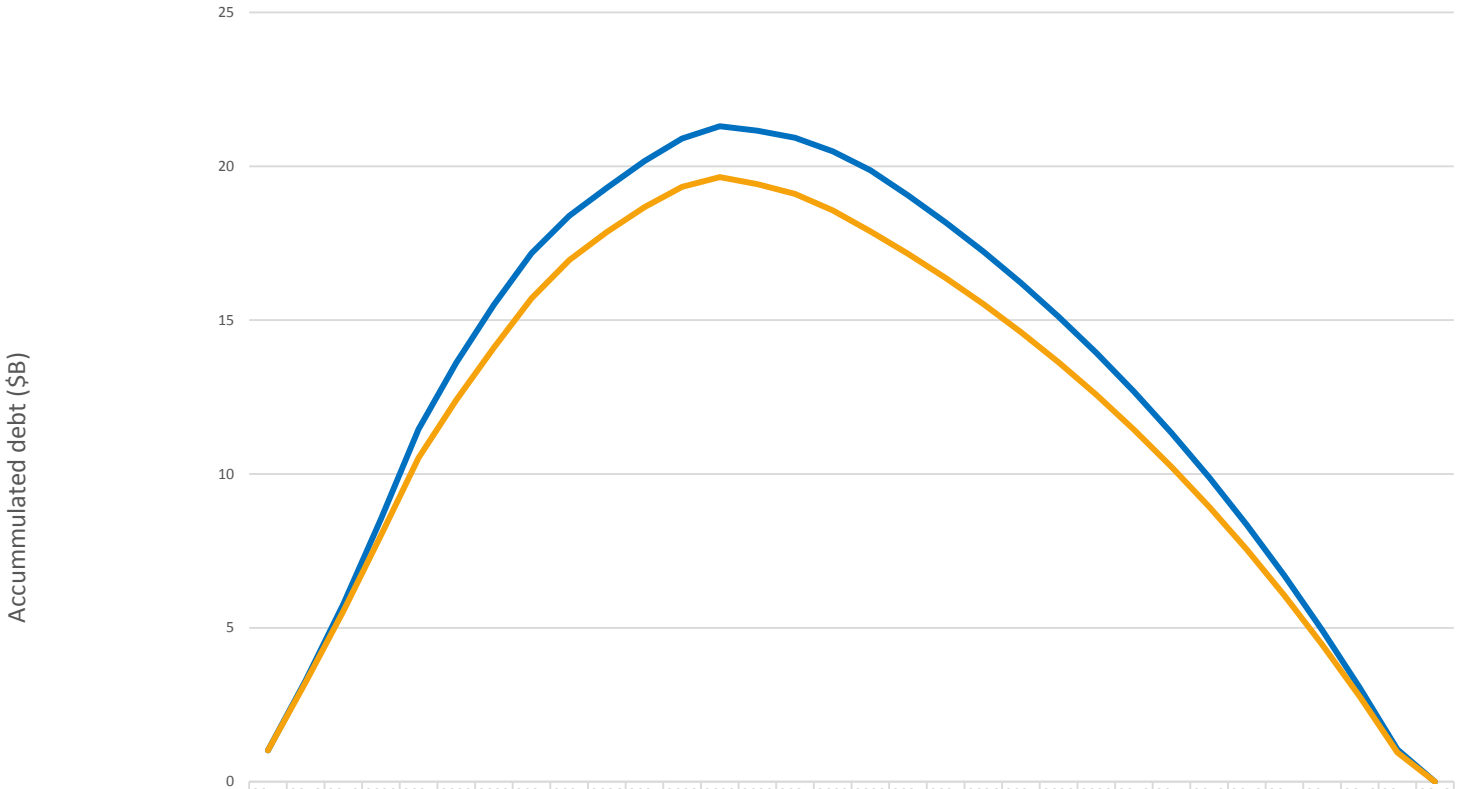
- The four-year inflationary cap has been publicly communicated.
- Inflationary increases are specified in O.Reg. 195/17 to be applied by the Ontario Energy Board (OEB) when setting Regulated Price Plan (RPP) rates. This regulation would need to be amended to alter or extend the increase cap.
- Raising the "inflationary" increases during the cap period reduces total accumulated OFHP debt.

Note: Based on a preliminary July 2017 forecast; forecast is subject to change.

B1. Adjust the Inflationary Cap – Impact on Total Accumulated OFHP Debt

Considerations

- Raising the “inflationary” increases during the cap period reduces total accumulated OFHP debt as shown in the summary provided below.



	2017 -Jul	2018 -May	2019 -May	2020 -May	2021 -Jul	2022 -May	2023 -May	2024 -May	2025 -May	2026 -May	2027 -May	2028 -May	2029 -May	2030 -May	2031 -May	2032 -May	2033 -May	2034 -May	2035 -May	2036 -May	2037 -May	2038 -May	2039 -May	2040 -May	2041 -May	2042 -May	2043 -May	2044 -May	2045 -May	2046 -May	2047 -May	2048 -May
Direct to FAA	1.0	3.3	5.8	8.5	11.5	13.6	15.5	17.2	18.4	19.3	20.2	20.9	21.3	21.2	20.9	20.5	19.9	19.1	18.2	17.2	16.2	15.1	13.9	12.7	11.3	9.9	8.3	6.7	4.9	3.1	1.0	0.0
Direct to FAA with 3.0% "inflationary" adjustment	1.0	3.2	5.5	8.0	10.5	12.4	14.1	15.7	17.0	17.9	18.7	19.3	19.6	19.4	19.1	18.6	17.9	17.2	16.4	15.5	14.6	13.6	12.6	11.4	10.2	8.9	7.5	6.1	4.5	2.8	0.9	0.0

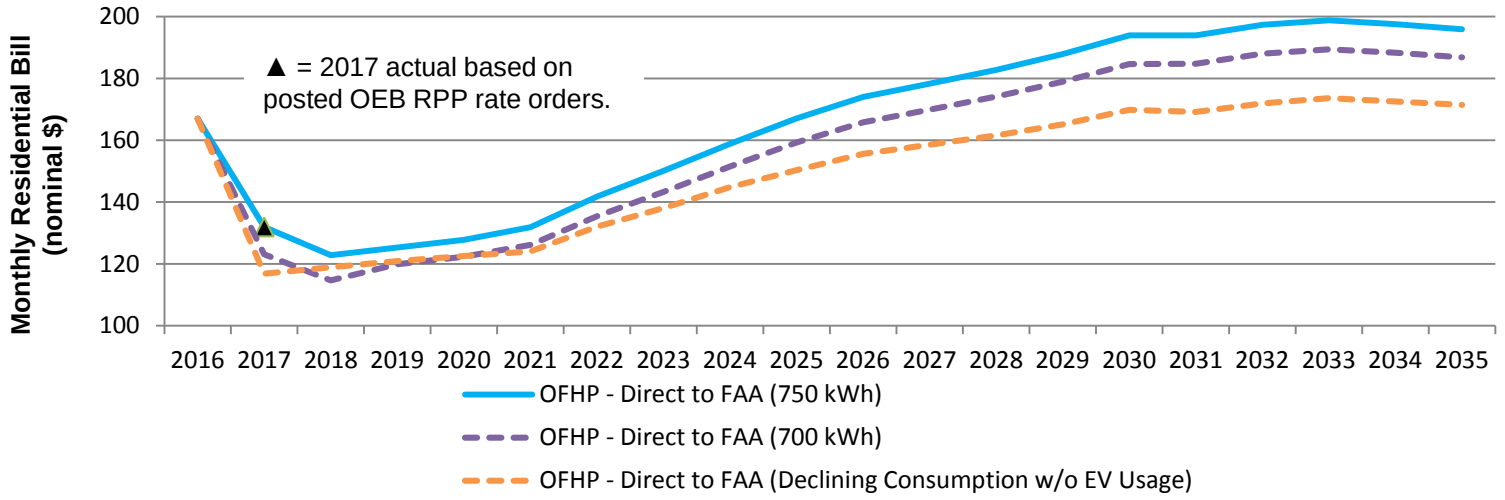
CONFIDENTIAL CABINET DOCUMENT

Note: Based on a preliminary July 2017 forecast; forecast is subject to change. Assumes 30-year financing period and a nominal interest rate of 5% (compounded monthly). Status Quo forecast beyond 2035 is extrapolated.

B2. Changes in Residential Consumption

- Over the forecast period, residential bill impact is expected to change due to factors such as:
  - Declining size of average residential dwellings;
  - Increasing energy efficiency; and
  - Increasing electrification of space heating, water heating and transportation.

- The below graph shows the impact of declining residential consumption over the forecast period:
  - **750 kWh/month:** Based on current OEB Ontario average and OFHP modeling to date;
  - **700 kWh/ month*:** Illustrative example of reduced consumption (Note: Average consumption over the forecast period is 640 kWh/month); and
  - **Declining Annual Consumption*:** A steady decline in average consumption over the planning period from 730 kWh/ month in 2017 to 600 kWh/ month in 2035**.



CONFIDENTIAL CABINET DOCUMENT

* Note: Does not include the impact of the change in debt and the impact of lower consumption on fixed delivery rates.
** Note: A typical household's monthly consumption could rise from 750 kWh to ~1,000 kWh with on-site EV charging.

B2. Changes in Residential Consumption (cont'd)

Considerations

- 2010 and 2013 LTEPs both used OEB average consumption for the full life of the price curve (i.e., 800 kWh/month).
- The OEB has observed a trend of declining consumption since 2005, and IESO's Updated Outlook would support presenting either a reduced average (700 kWh/month) or annual average consumption in the 2017 LTEP. However, the forecast should be qualified to note:
  - While the residential demand outlook includes increased electrification of space and water heating, it does not account for increased electrification due to adoption of EVs. The OPO modelled electricity demand separate from transportation-related electricity demand – this approach was also used in the IESO's Updated Outlook.
    - EV impact on residential consumption depends on the number of EVs per household, charging location and vehicle type. The Updated Outlook assumes 2.4 million EVs in 2035. Including the total electricity demand from all EVs in the residential outlook would increase average monthly residential consumption by 10-15%.
    - While increased adoption of EVs could lead to an increase in household electricity bills, it would also result in a corresponding decrease in a household's expenditure on gasoline/diesel.
    - Net metering could help offset increased consumption from EVs, on average and for participants with EVs.
      - » A typical net metered residential solar PV system can generate an average of over 400 kWh of electricity each month, helping to reduce household consumption from the grid.*
      - » The Ministry is proposing to allow third party providers to own and operate net metering facilities, which could expand net metering participation.
  - Monthly electricity consumption varies significantly across the province, influenced by dwelling size (condo or single-family home), as well as fuel type used for space and water heating, among other factors.

2015 Average Monthly Residential Consumption**

LDC	Toronto Hydro	Hydro Ottawa	Hydro One	Ontario Average
Consumption	620 kWh	631 kWh	954 kWh	746 kWh

CONFIDENTIAL CABINET DOCUMENT

*Note: Assumes a 4kW rooftop solar PV system. A typical residential net metering participant consumes ~50% on site and exports ~50% to the grid.

**Source: OEB 2015 Yearbook for Electricity Distributors.

3. NEXT STEPS / CRITICAL PATH

Timeline of Next Steps

- The following timeline illustrates the steps needed for an early October LTEP release.

July 26
Cabinet approval LTEP Initiatives

- Cabinet approved LTEP policy and program initiatives for inclusion in final LTEP.

August 16
PO briefing on Price Curve

- PO briefing on outlooks for Aug 31 Cabinet submission.

August 16
TB/MBC for Smart Grid Fund

- Seek TB/MBC approval for $60M over five years for renewing the Smart Grid Fund.

August 23
PO briefing on Comms Plan

- PO briefing on communications plan for LTEP release.

August 29
LRC for Frequency Regulation

- Seek LRC approval on new regulation that will specify the frequency for release of future LTEPs.

August 31
Cabinet approval of LTEP outlooks

- Seek Cabinet approval of outlooks for inclusion in final LTEP and frequency regulation.

September 6
Final sign-off from CO/PO

- Final sign-off on LTEP document.
- A delay in sign-off would impact the critical path and push the proposed release of the LTEP beyond the week of October 10.

September 25
LRC for legislative changes

- Seek LRC approval for legislative amendments to enable implementation of Green Button and expansion of Net Metering.

Early Sept – Early Oct
LTEP Production

- The design firm retained by ENERGY requires approximately ~3 weeks from final sign-off to release for layout/ translation and printing.

Oct 4
Final Cabinet approval

- ENERGY will table final LTEP document and implementation directives with Cabinet for approval.

Week of
October 10*
LTEP release

- Release will include web-release, press conference, social media promotion.

* LTEP release during the week of October 10 is dependent on the following approvals:
- Cabinet on Aug 31;
- CO/PO on Sept 6;
- Cabinet on Oct 4.

CONFIDENTIAL CABINET DOCUMENT

Cabinet Approval | Committee Approval | PO Approvals | Production and Release

APPENDIX

Bending the Cost Curve for Electricity Ratepayers

- The government has indicated publicly that the upcoming 2017 LTEP will continue the trend of taking costs out of the electricity system and making it more affordable for ratepayers.

- Ontario has taken a number of actions to lower electricity costs for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., Green Energy Investment Agreement (GEIA) renegotiation, decreasing Feed-In Tariff (FIT) prices, competitive Large Renewable Procurement (LRP));
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., no NUG contract extensions and demand response);
  - Suspending the LRP II and the Energy from Waste Standard Offer Program (EFWSOP) – up to $3.8 billion in cost savings; and
  - Limiting FIT5 procurement target to 150 MW and suspending future FIT procurements – an average annual savings of $15 million.

- ENERGY and its agencies are also considering options to remove costs from the electricity system through efficiencies, other funding sources and supply mix decisions.

1. Bending the Cost Curve – IESO's Market Renewal (cont'd)

- IESO's Market Renewal includes a number of initiatives focused on more efficiently meeting demand over the near and longer terms. Market Renewal includes the following:
  - Introduce a Day-Ahead Market based on a Single Schedule Market to provide greater certainty to market participants and lower the cost of producing electricity.
  - Reduce the cost of scheduling and dispatching resources to meet demand as it changes from hour to hour and minute to minute through Enhanced Real-Time Unit Commitment.
  - More efficiently manage unexpected short-term changes on the system by enabling More Frequent Intertie Scheduling.
  - Improve the way Ontario procures resources to meet our longer-term supply needs by implementing an Incremental Capacity Auction.

Considerations

- An independent third party report estimates that benefits from IESO's Market Renewal could reach up to $5.2 billion over a ten-year period beginning in 2021. Note: IESO has incorporated some of this saving into its current Outlook for electricity system costs and residential bills (i.e., Through reduced capacity payments for generators once their contracts expire).

- In addition to the up to $5.2 billion in estimated benefits, non-quantified benefits are likely to deliver additional value, for example:
  - Inefficiencies in the current market design need to be managed using extensive time and resources including expensive external legal expertise and consultants.

- In other jurisdictions that went through similar changes, actual efficiencies realized have been greater than those expected often because of the non-quantifiable benefits.
  - For example, Southwest Power Pool, a system operator covering 14 U.S. states, realized $1 billion in savings over a two year period compared to an expected saving of $400 million.

2. Bending the Cost Curve – Finding Greater Efficiencies and Savings in the Distribution Sector Savings (cont'd)

- Ontario's distribution sector represents $3.6 billion in annual costs, and typically makes up ~20% of the average residential electricity bill.

- The 2012 Ontario Distribution Sector Review Panel (ODSRP) Report proposed that there was opportunity for $1.7 billion in savings over 10 years through capital planning optimization and operations, maintenance and administrative (OM&A) reductions as a result of LDC consolidation.

- While the ODSRP recommended legislating LDC consolidation, the majority of the savings they identified were in OM&A costs. These cost reductions could be targeted through other regulatory mechanisms, with a stretch savings target of about $135 million, to be sustained year over year.

Considerations

- Through LTEP, the Ministry will request the Ontario Energy Board (OEB) via the LTEP implementation directive to use its authority to create more effective tools to harvest more efficiencies and savings in the distribution sector. Examples of potential mechanisms include:
  - Financial penalties for LDCs who do not meet performance expectations;
  - Requiring LDCs to partner and share back office services; and
  - Modernizing regulatory compliance processes to reduce costs.

- The Ministry will also ask the OEB to revaluate its performance mechanisms to ensure that high-cost LDCs are becoming more efficient through the years and ensure clear metrics are in place to allow for proper evaluations of the low performing LDCs (e.g. further strengthen the scorecard that is already in place by the OEB that evaluates LDCs on various metrics and make it publicly available).

Electricity Rate Mitigation Model Review

This is a review of the Electricity Rate Mitigation model and the accounting consequences. For all the transactions, a 5% interest cost is assumed for debt with the half-year rule applied (i.e., borrowings occur evenly across the year).

IESO Effects

Let's say that in year 1, the Global adjustment Charge was $12B. Assuming that 30% of the GA cost would be differed this means that only 70% or $8.4B will be collected from LDCs for the year. The remaining 30% or $3,600 would be deferred, with the hopes that this amount could be measured and collected through a regulatory asset account. Thus, the income statement for IESO for the year would be:

IESO Income Statement ($M)	**Debit**	**Credit**
Collect cash from LDCs		
Dr. Cash	8,400	
Cr. Due to Power Generators		8,400
Pay Power Generators		
Dr. Due to Power Generators	8,400	
Dr. Regulatory asset	3,600	
Cr. Cash		12,000

In order to cover the shortfall of cash, IESO would "sell" this regulatory asset to OPG **Trust**:

IESO Income Statement ($M)	**Debit**	**Credit**
Dr. Cash	3,600	
Cr. Regulatory asset		3,600

Thus, by the end of the year, there is no reflection of the transactions on the balance sheet:

IESO Balance Sheet Effects ($M)	**Debit**	**Credit**
Cash from LDCs	8,400	
Cash from selling regulatory asset	3,600	
Regulatory Asset recognition upon deferral	3,600	
Cash paid to generators		12,000
Regulatory Asset disposal to OPG		3,600
Due to Power Generators (over year)		12,000
Due to Power Generators (paid with Cash)	12,000	
Total Effects	**27,600**	**27,600**
Net effect	**$0**	**$0**

Point of debate:

In the initial calls on February 24, 2017, there is some debate on if the net interest costs can be deferred through a regulatory asset.

1) There may be the case where the regulatory asset, once sold to OPG trust, cannot reflect the interest cost:

Once the regulatory asset is sold to OPG Trust, it will not be able to earn interest through a carrying cost as the trust does not have rate regulatory accounting. Thus, the interest expense on debt to fund the GA deferral ($3,600M in year 1) cannot be reflected in the asset, leading to a fiscal impact with the interest expense.

2) Alternatively, government legislation and special accounting treatment may make the interest cost recoverable and reasonably guaranteed from ratepayers to merit its reflection in an asset regardless of ownership. This would be reflected in the OPG trust asset, with the recognition of the interest expense on OPG Trust's statements matched by the recognition of income (with the left side of the equation reflected as an asset), leading to no fiscal impact.

The review of the accounting model is based on the assumption that the interest cost cannot be recovered by OPG Trust.

Setting up OPG Trust

The minimal requirements, as stated by external auditors in their commentary on the proposition, is that the Province or its agencies must not directly or indirectly fund (through debt or equity) more than 50% of the Trust. The proposed structure has the Province (i.e., OFA) financing the Trust through a 44% equity injection in OPG (who will then finance the trust), OPG financing the trust with 5% debt, and the Trust getting the remaining 51% of funds directly from the Market. Thus, in this example, the 30% deferred GA cost of $3.6B would be financed by:

OPG (49%)	$180M from debt and $1,584M from Province's equity injection
Capital Markets (51%)	$1,836M

The journal entries for OPG would look like this:

OPG Journal Entries ($M)	Debit	Credit	**Comments on Transaction**
Equity injection from OFA Dr. Cash	1,584		OPG gets 44% of the deferral cost ($3,600M) financed through an equity injection by the Province (i.e., OFA)
Cr. Equity		1,584	
Loan to OPG Trust - #1 Dr. Receivable from OPG Trust	1,584		OPG in turn takes this money and places is in the SPV OPG Trust. The trust owes this money as a receivable to OPG.
Cr. Cash		1,584	
Borrow from the market			

Dr. Cash	180		OPG needs to borrow 5% of the deferral cost ($180M) from the market to fund the trust.
Cr. Long-term debt		180	
Loan to OPG Trust - #2 Dr. Receivable from OPG Trust	180		The $180M in cash provided to the trust, resulting in a receivable from the Trust in OPG's books
Cr. Cash		180	
Recognize interest from OPG Trust - #1 Dr. Interest receivable	39.6		At the end of the year, OPG recognizes interest receivable from the trust for the first loan related to the equity injection (at 5% with the half-year rule)
Cr. Interest income		39.6	
Recognize interest from OPG Trust -- #2 Dr. Interest receivable	4.5		OPG also recognizes a receivable from the trust (assuming 5% interest with half-year rule)
Cr. Interest income		4.5	
Recognize interest expense on long-term debt Dr. interest expense	4.5		This is the interest expense from the market (5% of GA deferral). It nets out with the receivable from the Trust, thus there is no fiscal impact on OPG's non-consolidated books.
Cr. Interest payable		4.5	

The OFA's books would reflect the equity transaction and related debt entries:

OFA Journal Entries ($M)	**Debit**	**Credit**	Comments on Transactions
Borrow to inject equity into OPG Dr. Cash	1,584		The OFA (the Province) needs to borrow money to make an equity injection into OPG from external markets
Cr. Debt		1,584	
Invest in OPG Dr. Investment in GBE	1,584		The OFA invests in OPG, recognizing an investment in the GBE (on consolidation, an increase in the net asset position of OPG would be reflected from the modified equity method on the Province's books).
Cr. Cash		1,584	
Pay interest on debt Dr. interest expense (assume 1/2 year)	39.6		The interest cost on the debt obtained from the market. **There is no offsetting**

Cr. Interest payable	39.6	**transaction, so this is a fiscal impact.**

The overall effects of the transactions will be reflected in OPG Trust's journal entries:

OPG Trust Journal Entries ($M)	**Debit**	**Credit**	**Comments on Transactions**
Loan #1 from OPG Dr. Cash	1,584		This is the loan from OPG that came ultimately from the Province's equity injection (44% of the GA deferral cost)
Cr. Due to OPG		1,584	
Loan #2 from OPG Dr. Cash	180		This the loan from OPG that ultimately came from OPG borrowing from the market (5% of the GA deferral cost)
Cr. Due to OPG		180	
External financing Dr. Cash	1,836		This loan is directly from the external markets to OPG Trust (51% of the deferral cost).
Cr. Long-term debt		1,836	
Purchase cash flow stream from IESO Dr. Intangible asset	3,600		This is the purchase of the intangible asset from IESO that was the regulatory asset that reflected the 30% GA deferral cost.
Cr. Cash		3,600	
Interest expense on Loan #1 to OPG Dr. Interest expense	39.6		This is the interest expense related to the loan portion from OPG that ultimately came from the Province's equity injection.
Cr. Interest payable to OPG		39.6	
Interest expense on Loan #2 to OPG Dr. Interest expense	4.5		This is the interest expense related to the loan portion from OPF that ultimately came from OPG borrowing from external markets.
Cr. Interest payable to OPG		4.5	
Interest expense on external financing Dr. Interest expense	45.9		This interest expense is from the 51% of the GA deferral cost that OPG trust borrowed directly from the market.
Cr. Interest payable on debt		45.9	

Upon consolidation,

The fiscal impact comes from:

	Fiscal Impact ($M)	Comments
OFA – Interest Expense	$39.6	This would be a direct impact on the Province's statements.
OPG – Trust Interest Expense	$45.9	This amount would be consolidated into OPG's income statement, resulting in a reduction of GBE income on the Province's statements.
OPG – Parent non-consolidated	$4.5	This amount would result in a reduction of GBE income on the Province's statements.

If the transaction were to be 100% financed from the Province (rather than with OPG trust borrowing from the market), the interest cost would be the same (ignoring changes in interest rates based on the credit rating or debt-taking ability), because ultimately, in both scenarios, all the funds are coming indirectly or directly from the market. The only difference here would be that 100% of the fiscal impact would be directly on OFA/the Province's books in the interest category rather than be showed through a reduction in GBE income. Regardless, if the accounting expertise is followed, the OPG trust can only take 49% of financing from the Province.

Alternative Proposition (if regulatory asset for interest costs cannot be recognized by OPG Trust)

In order to prevent a fiscal impact, the regulatory asset from IESO that reflects the GA deferral cost needs to remain on IESO's (if regulatory accounting is permitted in the first place) or a GBE's books in order to keep its classification as a regulatory asset. A carrying charge can be reflected in the regulatory asset to offset the associated interest charges with the debt (from all levels – OPG, the Province, Capital Markets). This prevents a fiscal impact; however, the prior method does not have a regulatory asset remaining on IESO's books to be consolidated to the Province.

Conclusion

The Electricity Rate model provided by TBS is an accurate reflection of the accounting impacts of the proposed GA deferral and OPG trust structure. There is a fiscal impact from the debt borrowings due to the inability of OPG Trust to recognize an offsetting regulatory asset to defer the recognition of interest. This is due to the status of the regulatory asset on IESO's books changing to an intangible asset that cannot recognize interest once it is sold to OPG Trust.

The ability for IESO to recognize a regulatory asset or sell one in the first place, among many other considerations, threaten the viability of this proposal. Furthermore, the fact that intangible assets are being used essentially as collateral for several billions of dollars borrowed from the capital market questions the ability of OPG Trust to secure a low interest rate, even when considered the proposed senior debt position of the capital market contributions in the borrowing structure.

Prepared by: Adam Prokop, 416-325-6462

Electricity Finance Branch, Corporate and Electricity Finance Division
February 24, 2017

Government of Canada / Gouvernement du Canada

Canada

Office of the Superintendent of Financial Institutions

Asset Securitization

Alternative Formats

- PDF, 221 kB

Accompanying Documents

- Letter

Type of Publication: Guideline
Category: Prudential Limits and Restrictions
Date: July 1994
Revised: November 2004
No: B-5
Audiences: Banks / T&L / Co-op / Life / P&C

1. Introduction

This guideline outlines the regulatory framework for asset securitization transactions. It applies to all federally regulated financial institutions (FRFIs)[1] on an enterprise-wide basis.

The capital requirements in this guideline are based on bank, trust and loan company, life insurance company, and P&C company capital rules. If OSFI finds the capital inadequate for the risks assumed or retained by virtue of asset securitization activities, OSFI may increase the institution's capital requirements beyond the minimum required in this guideline.

OSFI reserves the right to adopt a look-through approach to determine the originator of the assets. The look-through approach may also be used to ensure appropriate capital is maintained by a FRFI in a securitization transaction.

OSFI's accounting requirements for asset securitizations are set out in Guidelines D-4, *Transfers of Financial Assets* and D-8, *Accounting of Transfers of Receivables Including Securitizations*.

Accounting issues related to NHA mortgage-backed securities transactions are addressed in Guidelines D-3, *Accounting for NHA-insured MBS* and D-8, *Accounting of Transfers of Receivables Including Securitizations*.

The principles contained in this guideline and OSFI's Credit Derivatives – Capital Treatment; Appendix to Guideline A, Parts I and II, will be used to determine the appropriate regulatory treatment of synthetic securitization of assets on a case-by-case basis.

Table of Contents

- 1. Introduction
- 2. Background
  - 2.1 Securitization process
  - 2.2 Enhancement
  - 2.3 Liquidity support
- 3. OSFI's Expectations
- 4. Capital Requirements for Securitization Exposures[3]
  - 4.1 First loss enhancements
  - 4.2 Second or subsequent loss enhancements
  - 4.3 Eligible liquidity facilities[4]

4.4 Ratings-based approach

- 5. Capital Requirements for Other Roles Performed by a FRFI
  - 5.1 Setting up, or causing to be set up, an SPE
  - 5.2 Collecting and transmitting payments
  - 5.3 Providing clean-up calls
  - 5.4 Investor
- 6. ANNEX 1
- 7. ANNEX 2

2. Background

2.1 Securitization process

In its simplest form, asset securitization is the transformation of generally illiquid assets into securities that can be traded in the capital markets. The asset securitization process generally begins with the segregation of financial assets into pools that are relatively homogeneous with respect to their cash-flow characteristics and risk profiles, including both credit and market risks. These pools of assets are then sold to a bankruptcy-remote entity, generally referred to as a special-purpose entity (SPE), which issues asset-backed securities (ABS) to investors to finance the purchase. ABS are financial instruments that may take a variety of forms, including commercial paper and term debt and certificates of beneficial ownership. The cash flow from the underlying assets supports repayment of the ABS. Various forms of enhancement are used to provide credit protection for investors in the ABS.

Securitizations typically split up the risk of credit losses from the underlying assets into tranches that are distributed to different parties. The "first dollar", or most subordinate, loss position is first to absorb credit losses (first loss protection); the most "senior" investor position is last; and there may be one or more loss positions in between ("second" or "subsequent dollar" loss positions). Each loss position functions as an enhancement if it protects the more senior positions in the structure from loss.

A FRFI may perform one or more functions in an asset securitization transaction. It may:

- invest in a debt instrument issued by an SPE (section 4.4);
- provide enhancements (sections 4.1 and 4.2);
- provide liquidity support (section 4.3);
- set up, or cause to be set up, an SPE (section 5.1);
- collect principal and interest payments on the assets and transmit those funds to an SPE, investors in the SPE securities or a trustee representing them (section 5.2); and/or
- provide clean-up calls (section 5.3).

2.2 Enhancement

An enhancement is an arrangement provided to an SPE to cover the losses associated with the pool of assets. Enhancement is a method of protecting investors in the event that cash flows from the underlying assets are insufficient to pay the interest and principal due for the ABS in a timely manner. Enhancement is used to improve or support the credit rating on more senior tranches, and therefore the pricing and marketability of the ABS. The distinction between the types of enhancement - first loss and second or subsequent loss - is drawn to allow for an understanding of the underlying structure, differences in risk profiles and capital requirements.

2.2.1 First loss

A first loss enhancement is a facility[2] designed to cover the first level of losses or first level of financial support for the underlying assets in the pool, the performance of the entity, or the instruments issued to investors. Common examples of these facilities include overcollateralization; cash collateral; recourse provisions; senior/subordinated security structures; subordinated standby lines of credit; subordinated loans;

third party equity; commitments to purchase assets in default; and any arrangement where recourse provisions are offset against retained interests such as spread accounts or interest-only strips. A first loss facility is often provided by the supplier of the assets but may be provided by a third party.

2.2.2 Second or subsequent loss

A second or subsequent loss facility represents an enhancement providing a more senior tier of protection to the SPE or to investors in senior tranches. It is designed to absorb losses and reduce risks for investors and the liquidity provider(s). The share of risk of a second or subsequent loss facility depends on the coverage provided by any first loss facility. In order to limit the possibility of the second or subsequent loss facility carrying a disproportionate level of risk (hence a lower capital requirement), an enhancement facility is deemed a second or subsequent loss facility only if it explicitly benefits from the protection of a significant (see section 4.1) and subordinated first loss facility, i.e., the first loss facility should cover all of the types of risks to which the second or subsequent loss is exposed. Second or subsequent loss facilities may apply to specific assets of a single seller, a specific pool or pools of assets in a multi-seller entity, the performance of an entity, or the instruments issued to investors.

Common examples of these facilities include: recourse provisions; senior/subordinated security structures; subordinated standby lines of credit; subordinated loans; third party equity; swaps that are structured to provide an element of enhancement; and any amount of liquidity facilities in excess of 103% of the face value of outstanding paper. In addition, these facilities include any temporary financing facility, other than qualifying servicer advances, provided by a FRFI to an enhancer or to an SPE to bridge the gap between the date a claim is made against a third party enhancer and when payment is received.

2.3 Liquidity support

Liquidity support is a commitment to lend to, or purchase assets of, an SPE in order to provide investors with assurance of timely payment of principal and interest. Liquidity support may include a general market disruption clause. A general market disruption can be defined as a disruption in the Canadian commercial paper market resulting in the inability of Canadian commercial paper issuers, including the SPE, to issue any commercial paper, and where the inability does not result from a diminution in the creditworthiness of the SPE or any originator or from a deterioration in the performance of the assets of the SPE.

3. OSFI's Expectations

A FRFI should understand the inherent risks of the activity, be competent in structuring and managing such transactions, and have adequate staffing of the functions involved in the transactions.

The terms and conditions of all transactions between the FRFI and the SPE should be at least at market terms and conditions (and any fees are paid in a timely manner) and meet the FRFI's normal credit standards. The Credit Committee or an equally independent committee should approve individual transactions.

A FRFI's capital and liquidity plans should take into account the potential need to finance an increase in assets on its balance sheet as a result of early amortization or maturity events. If OSFI finds the planning inadequate, it may increase the institution's capital requirements.

Securitization documentation should clearly state that early amortization cannot be precipitated by regulatory actions affecting the supplier.

The capital requirements for asset securitization transactions will be limited to those set out in this guideline if the FRFI provides only the level of support (enhancement or liquidity) committed to in the various agreements that define and limit the levels of losses to be borne by the FRFI.

4. Capital Requirements for Securitization Exposures[3]

4.1 First loss enhancements

A FRFI that provides a first loss enhancement is required to deduct the full amount of the facility from total capital for capital adequacy purposes. The amount of the deduction may be reduced by the amount of any provision, deferred gain, or recognized loss on sale, pursuant to Guidelines D-4 and D-8, that relates to that facility. This treatment applies whether or not the FRFI is the supplier of the assets to the SPE.

The amount deducted from the total capital of banks and trust and loan companies in calculating their risk-based capital adequacy and assets-to-capital multiple is limited to the capital that would have been required had the assets remained on the balance sheet, or otherwise been the property, of the institution.

The amount deducted from total capital by life and property and casualty insurance companies is limited to the capital that would have been required under OSFI's relevant risk-based capital adequacy requirements for a direct credit substitute of an amount equal to the assets protected by the first loss enhancement. The counterparty factor used in this calculation will be the applicable factor for the underlying assets, subject to a minimum of 4%.

A first loss enhancement is considered significant if it meets the following conditions:

- there is a documented and reliable credit history for the specific type of asset in each underlying pool;
- the FRFI's credit process properly assesses the credit and other risks of the facility in accordance with its standard credit policy for arm's-length counterparties; and
- the facility adequately covers the expected losses, for example, the facility raises the rating of the next senior tranche to at least BBB.

4.2 Second or subsequent loss enhancements

Where a FRFI provides a second or subsequent loss enhancement, the facility will qualify for treatment as a direct credit substitute (or an on-balance sheet asset at its face value) under the relevant capital adequacy rules if the facility is fully protected by a significant first loss enhancement and meets any of the following conditions:

- at least 25% of the facility is participated to an independent third party;
- the facility is explicitly rated at least BBB; or
- an independent third party provides the first loss enhancement.

If it does not meet at least one of these conditions, the facility will be considered a first loss enhancement.

A second or subsequent loss enhancement is considered significant if it meets the following conditions:

- the rating of the facility indicates a lower risk of loss than that of the underlying pool(s) and any first loss facility; and
- the size of the facility is sufficient to achieve a higher rating on more senior rated tranches.

4.3 Eligible liquidity facilities[4]

To qualify as an eligible liquidity facility, OSFI expects a facility to meet the following criteria:

- the facility documentation must clearly identify and limit the circumstances under which it may be drawn;
- the facility has full protection of first and second or subsequent loss facilities as available to senior investors in the SPE/pool/series;
- draws under the facility must be limited to the amount that is likely to be repaid fully from the liquidation of the underlying exposures and any enhancements;
- the facility cannot be drawn after all applicable first and second or subsequent loss facilities from which the liquidity would benefit have been exhausted;
- the facility cannot be used to provide credit support (even on a temporary basis), or serve as permanent funding for the securitization;
- the facility must not cover any losses incurred in the underlying pool of exposures prior to a draw, or be structured such that draw-down is certain (as indicated by regular or continuous draws);

- funds advanced to repay investors in the senior tranches or the SPE/pool/series are fully secured by at least an equal value of underlying performing assets;
- repayment of funds advanced must rank at least *pari passu* with the claims of investors of the senior tranches;
- the facility must be subject to an asset quality test that precludes it from being drawn to cover credit risk exposures that are in default and includes a clause that causes it to be reduced or terminated if the quality of the assets deteriorates; and
- if the exposures that a liquidity facility is required to fund are externally rated securities, the facility can only be used to fund securities that are externally rated investment grade at the time of funding.

Where these criteria are not met, the facility may be treated as first loss or second or subsequent loss enhancement subject to meeting the conditions outlined in section 4.1 or 4.2.

Where these criteria are met, the following options for capital treatment apply. See Annex 2 for a summary of the options in diagram form.

4.3.1 Where a FRFI provides an eligible liquidity facility under the following conditions:

- an independent third party provides a facility that qualifies as a significant first loss enhancement; and
- the second or subsequent loss enhancement provided is **significant**,

the liquidity facility will be treated as described at the end of section 4.3.3 (see box) for any one of the following scenarios:

- another independent third party provides the second or subsequent loss enhancement;
- the second or subsequent loss enhancement provided is explicitly rated at least BBB;
- the FRFI provides the second or subsequent loss enhancement that is at least 25% participated; or
- the FRFI provides the second or subsequent loss enhancement and at least 25% of the liquidity facility is participated.

4.3.2 Where a FRFI provides an eligible liquidity facility under the following conditions:

- an independent third party provides a facility that qualifies as a significant first loss enhancement; and
- the second or subsequent loss enhancement provided is **insignificant**,

the liquidity facility will be treated as described at the end of section 4.3.3 (see box) for the following scenario:

- another independent third party provides the second or subsequent loss enhancement and at least 25% of the liquidity facility is participated.

A liquidity facility that does not meet any of the conditions or fit within the scenarios described in sections 4.3.1 and 4.3.2 will be considered a **direct credit substitute** under the relevant capital adequacy rules.

4.3.3 Where a FRFI provides an eligible liquidity facility under the following conditions*:*

- the FRFI provides a facility that qualifies as a significant first loss enhancement; and
- the second or subsequent loss enhancement provided is **significant**,

the liquidity facility will be treated as described at the end of this section (see box) for any one of the following scenarios:

- an independent third party provides the second or subsequent loss enhancement;
- the second or subsequent loss enhancement provided is explicitly rated at least BBB; or

- the FRFI provides the second or subsequent loss enhancement that is at least 25% participated.

An eligible liquidity facility that is in compliance with the conditions and scenarios described in sections 4.3.1, 4.3.2, and 4.3.3 is subject to the following capital treatment:

- **for a facility that is available in the event of a general market disruption, a 0% credit conversion factor (CCF) applies;**
- **for a facility with an original maturity of one year or less or that is unconditionally cancellable at any time without prior notice, a 10% CCF applies; or**
- **for a facility with an original maturity of more than one year, a 50% CCF applies**

4.3.4 Where a FRFI provides an eligible liquidity facility under the following conditions*:*

- the FRFI provides a facility that qualifies as a significant first loss enhancement;
- the second or subsequent loss enhancement provided is **insignificant**; and
- the liquidity facility is at least 25% participated,

the liquidity facility will be treated as a **direct credit substitute** under the relevant capital adequacy rules in any of the following scenarios:

- an independent third party provides the second or subsequent loss enhancement;
- the second or subsequent loss enhancement provided is explicitly rated at least BBB; or
- the FRFI provides the second or subsequent loss enhancement that is at least 25% participated.

A liquidity facility that does not meet any of the conditions or fit within the scenarios described in sections 4.3.3 and 4.3.4 will be considered a **first loss enhancement**.

4.4 Ratings-based approach

A FRFI investing in or holding senior tranches or providing second or subsequent loss enhancements (that meet the conditions in section 4.2) may be able to use a ratings-based approach to determine the capital requirements for these exposures. The approach uses credit ratings from widely recognized rating agencies[5] to measure relative exposure to credit risk and determine the associated risk-based capital requirement. For rated exposures that qualify for the ratings-based approach, Annex 1 provides the risk weights and factors that correspond to the various external credit ratings.

A FRFI may not use the ratings-based approach for first loss enhancements; capital requirements for first loss enhancements are described in section 4.1.

For second or subsequent loss enhancements or liquidity facilities explicitly rated BBB[6] and above, the 25% participation requirement[7] is deemed to have been met through the rating process.

5. Capital Requirements for Other Roles Performed by a FRFI

5.1 Setting up, or causing to be set up, an SPE

OSFI expects a FRFI to minimize its exposure to risk arising from its relationship with an SPE. A FRFI that sets up, or causes to be set up, an SPE will not have to hold capital as a result of this activity if the following conditions are met:

- the FRFI does not own any share capital in a company, nor is it the beneficiary of a trust, used as an SPE for purchasing and securitizing financial assets. For this purpose, share capital includes all classes of common and preferred share capital;
- the FRFI's name is not included in the name of a company or trust used as an SPE, nor is any connection implied with the FRFI by, for example, using a symbol closely associated with the FRFI. If, however, the FRFI is performing a specific function for a particular transaction or transactions (e.g.,

collecting and transmitting payments or providing enhancement), this may be indicated in the offering circular (subject to the *Name Use Regulations*);

- the FRFI does not have any of its directors, officers or employees on the board of a company used as an SPE, unless the SPE's board has at least three members. Where the board consists of three or more members, the FRFI may not have more than one director. Where the SPE is a trust, the beneficiary and the indenture trustee and/or the issuer trustee must be third parties independent of the FRFI;
- the FRFI does not lend to the SPE on a subordinated basis, except as otherwise provided herein[8]; and
- the FRFI does not support, except as provided elsewhere in this guideline, any losses suffered by the SPE, or investors in it, or bear any of the recurring expenses of the SPE.

Where a FRFI does not meet all of these conditions, it is required to hold capital against all debt instruments issued to third parties by the SPE.

5.2 Collecting and transmitting payments

A FRFI whose only involvement with a particular asset securitization transaction is to collect interest and principal payments on the underlying assets and transmit these funds to the SPE or investors in the SPE securities (or a trustee representing them) should be under no obligation to remit funds to the SPE or the investors unless and until the funds are received from the obligors. Where this condition is met, this activity does not attract any capital.

A FRFI that is collecting interest and principal payments on the underlying assets and transmitting these funds to the SPE or investors in the SPE securities (or a trustee representing them) may also:

- structure transactions;
- analyse the underlying assets;
- perform due diligence and credit reviews;
- monitor the credit quality of the portfolio of underlying assets; and/or
- provide servicer advances (see conditions outlined in section 5.2.1).

In this role, a FRFI should:

- comply with the conditions specified for a FRFI setting up an SPE;
- have evidence available in its records that its legal advisers are satisfied that the terms of the asset securitization protect it from any liability to investors in the SPE (except normal contractual obligations relating to its role in collecting and transmitting payments); and
- ensure that any offering circular contains a highly visible, unequivocal statement that the FRFI, serving in this capacity, does not stand behind the issue or the SPE and will not make good any losses in the portfolio.

Where a FRFI that is not making servicer advances meets all these conditions, this activity does not attract any capital.

Where a FRFI does not meet all these conditions, it is required to maintain capital against all debt instruments issued to third parties by the SPE.

5.2.1 Making servicer advances

A FRFI may be contractually obligated to provide funds to an SPE to ensure an uninterrupted flow of payments to investors in the SPE's securities, solely under the unusual circumstance that payments from the underlying assets have not been received due to temporary timing differences. A FRFI that provides such support is typically referred to as a servicing agent and the funds provided are typically referred to as servicer advances. Where a FRFI acts as a servicing agent, OSFI expects the following conditions to be met:

- servicer advances are not made to offset shortfalls in cash flow that arise from assets in default;

- the credit facility under which servicer advances are funded is unconditionally cancellable by the servicing agent;
- the total value of cash advances is limited to the total amount transferable for that collection period;
- servicer advances rank ahead of all claims by investors in SPE securities, expenses and other cash allocations;
- the repayment of servicer advances comes from subsequent collections or the available enhancement facilities;
- servicer advances are repaid within thirty one[9] business days; and
- the servicing agent performs an assessment of the likelihood of repayment of servicer advances prior to each advance and such advances should only be made if prudent lending standards are met.

Where these conditions and the conditions in section 5.2 are all met, FRFIs should treat undrawn facilities as off-balance sheet commitments. Drawn facilities will be treated as on-balance sheet loans.

In all other circumstances, the facilities will be treated as first loss enhancements.

5.3 Providing clean-up calls

A clean-up call is an option that permits a FRFI that is the supplier of the assets or collecting and transmitting payments to wind-up an SPE before all of the underlying credit exposures have been repaid. This is generally accomplished by repurchasing the remaining securitization exposures once the pool balance has fallen below a specified level. This level is established at origination and is set to trigger when the amount of assets is too low for the SPE to economically issue securities.

An agreement that permits a FRFI to purchase the remaining assets in a pool when the balance of those assets is equal to or less than 10 percent of the original pool balance is considered a clean- up call and no capital is required. However, a clean-up call that permits the remaining loans to be repurchased when their balance is greater than 10 percent of the original pool balance or permits the purchase of non-performing loans is considered a first loss enhancement.

5.4 Investor

A FRFI investing in the most senior tranches may be able to use explicit external credit ratings to determine the capital requirement. Annex 1 provides the risk weights and factors that correspond with the various external credit ratings.

When an explicit external credit rating is not available, a FRFI holding the most senior tranches should determine its capital requirement based on the relevant capital adequacy rules for similar investments. (See tab 3 of *Capital Adequacy Requirements*, section 3-4-1 of *Minimum Continuing Capital and Surplus Requirements*, or tab 2-4 of *Minimum Capital Test*.)

For all other exposures, investors should refer to section 4 for the appropriate capital treatment.

ANNEX 1

Banks, Trust and Loan Companies

Long-term rating category[10]

External Credit Assessment	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ and below or unrated
Risk Weight	20%	50%	100%	Deduction from capital

Short-term rating category

External Credit Assessment	A1/P1/R1H	A2/P2/R1M	A3/P3/R1L	All other ratings or unrated

Risk Weight	20%	50%	100%	Deduction from capital

Life Insurance Companies

Short-term securities (original maturities of less than one year)

Regular Factor	Qualifying Participating Factor	Commercial Paper
0.25%	0.125%	Rated R1 (H), A-1 or equivalent
0.50%	0.25%	Rated R1 (M), A-2 or equivalent
2%	1%	Rated R1 (L), A-3 or equivalent

Bonds/Loans/Private Placements

Regular Factor	Qualifying Participating Factor	Bonds
0.25%	0.125%	AAA, A++ or equivalent
0.5%	0.25%	AA, A+ or equivalent
1%	0.5%	A, A or equivalent
2%	1%	BBB or equivalent
8%	4%	All other ratings or unrated[11]

P&C Companies

Risk Factors for Investment Grade[12] On- and Off-balance sheet positions

Factor	On-Balance Sheet Assets Investments: Term Deposits, Bonds and Debentures (includes Treasury Bills and Commercial Paper)	Off-Balance Sheet Exposures
0.50%	Expiring or redeemable in one year or less	Structured Settlements, Letters of Credit, Derivatives
2.00%	Expiring or redeemable in more than one year	Other

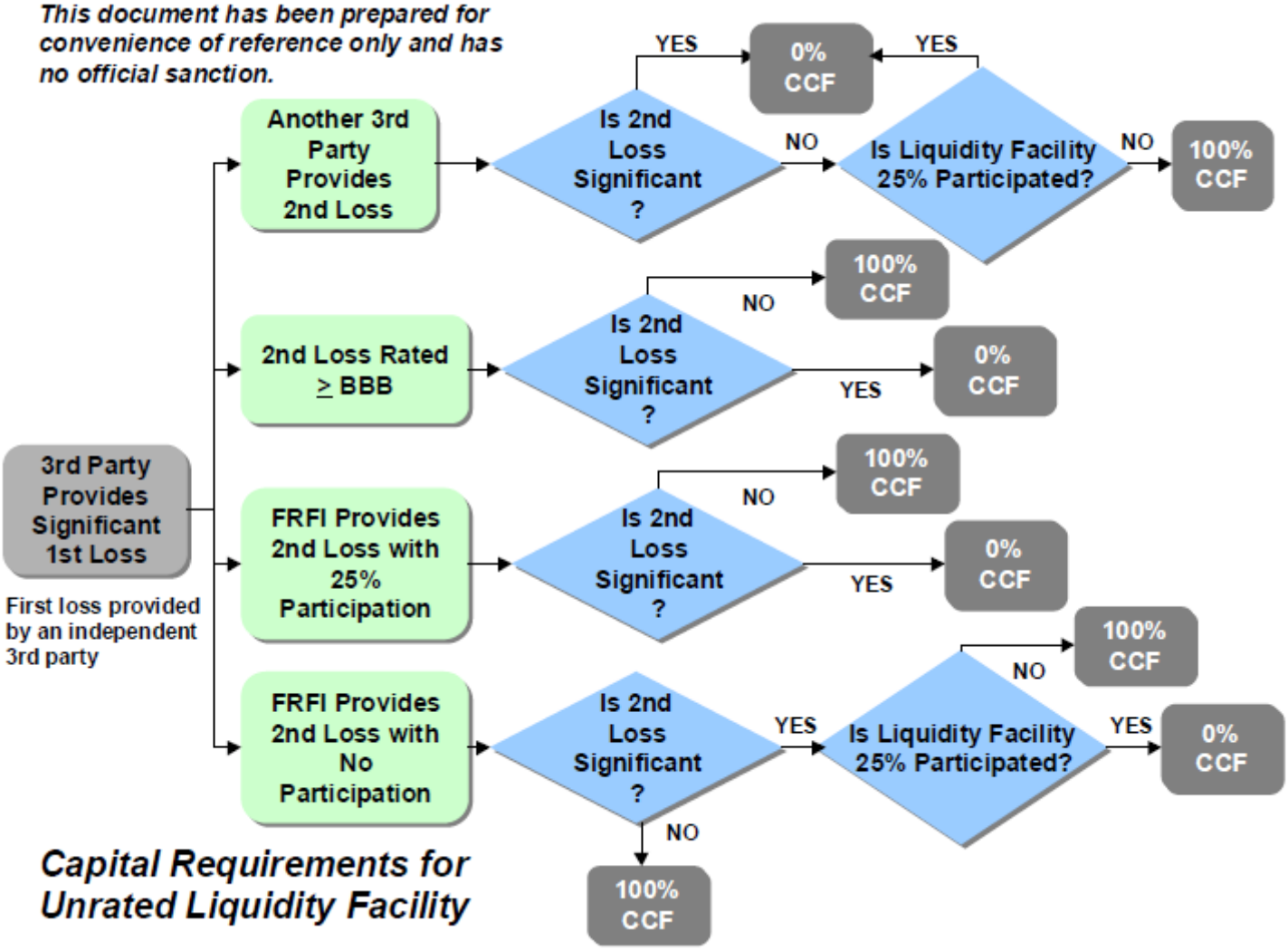
Asset/Guarantor Ratings

Rating Agency	Commercial Paper	Bonds & Debentures (at least as high as)	Preferred Shares
Moody's Investors Service	P-1	A	Aa
Standard and Poor's Corporation	A-1	A	AA
Dominion Bond Rating Service	R-1 (low)	A	Pfd-2

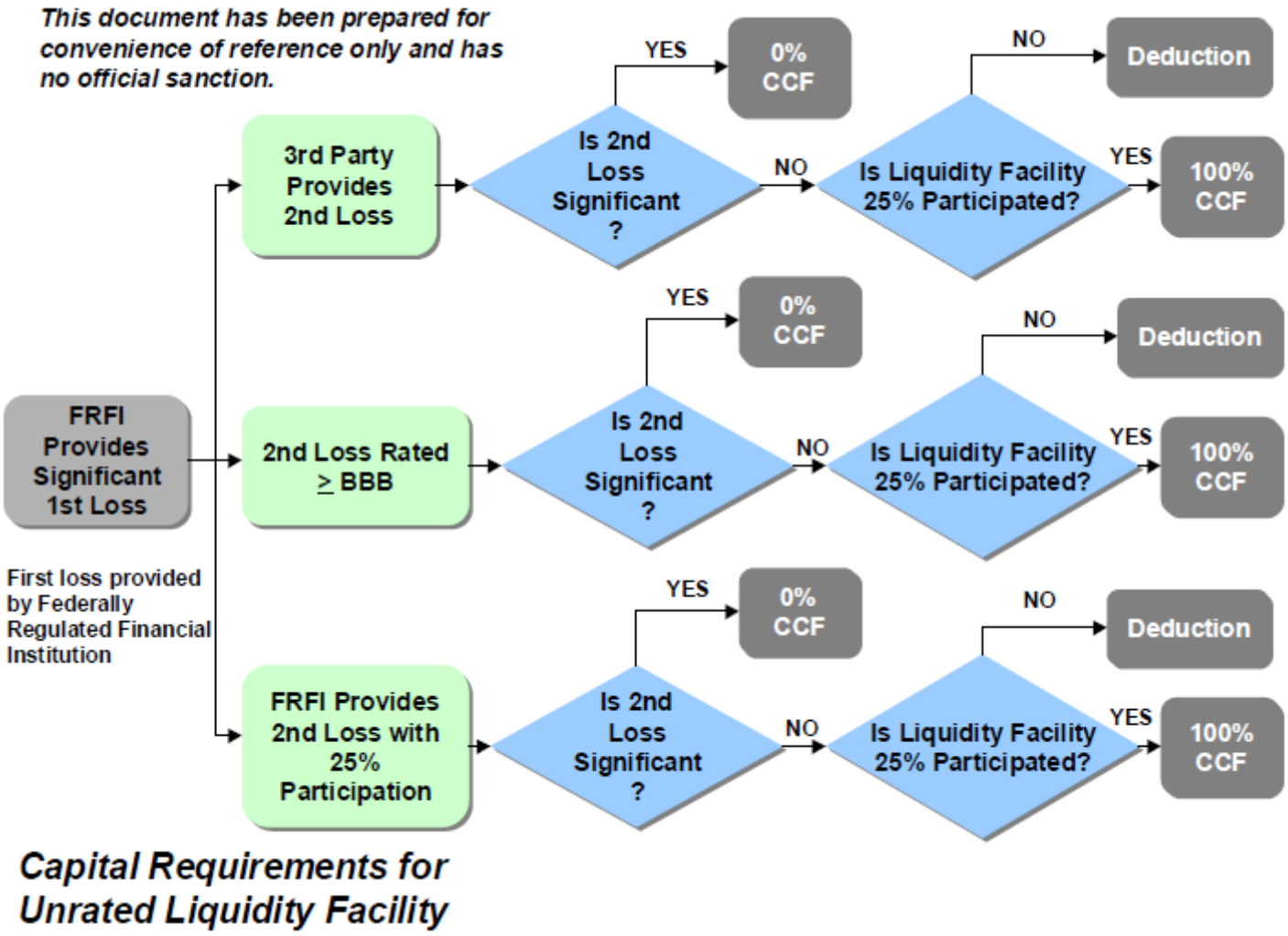
ANNEX 2

Note: The 0% CCF in both diagrams is for illustrative purposes only. Please refer to section 4.3 of this guideline and OSFI's Capital Adequacy Requirements for details.

This document has been prepared for convenience of reference only and has no official sanction.



Capital Requirements for Unrated Liquidity Facility



---

1 For the purposes of this guideline, a FRFI refers to banks, and to federally regulated trust and loan companies, cooperative credit associations, life insurance companies and property and casualty insurance companies. Foreign bank branches should refer to OSFI's Guideline B-5A *Asset Securitization for Foreign Bank Branches*.

2 If a facility is not subject to a maximum contract value, its value is deemed to equal the total amount of the pool of SPE assets.

3 Includes senior tranches, enhancements and liquidity facilities.

4 In any SPE where a FRFI provides second or subsequent loss enhancements or liquidity facilities, the 25% participation rule applies separately at the level of the SPE and at the level of the individual pools within the SPE.

5 For the purposes of this guideline, OSFI recognizes the following agencies: DBRS, Moody's, Standard and Poor's, and Fitch.

6 Or equivalent rating by DBRS, Moody's, Standard and Poor's, or Fitch.

7 The 25% participation (on a pari passu basis with an independent third party) requirement is intended to validate the assessment by the originating FRFI of the risk of the enhancement or liquidity facilities.

8 A loan provided by a FRFI to a SPE to cover initial transaction or set-up costs is a deduction from capital as long as the loan is capped at its original amount; amortized over the life of the securities issued by the SPE; and the loan is not available as a form of enhancement to the assets or securities issued.

9 This means 31 business days from the day the cash is advanced.

10 The rating designations used in the following charts are for illustrative purposes only and do not indicate any preference for, or endorsement of, any particular external assessment system.

11 Does not apply to first loss enhancement.

12 A security is treated as Investment Grade if its rating meets or exceeds the rating listed below.

Modified Date: 2013-06-14

GA FINANCING – EQUITY INJECTION ADDITIONAL CONCERNS

PROVINCIAL CREDIT RATING

- One of the results of the GA financing mechanism is that a significant amount of the borrowing (56%) will be done directly through OPG (5%) and the special purpose vehicle OPG Trust (51%).
- Since OPG is a Government Business Enterprise (GBE), it is consolidated into Public Accounts using the modified equity method.
    - This means that for the balance sheet, only the net assets are reported (assets – liabilities) in one line item.
- If OPG were to lose its GBE status, then it would be consolidated line-by-line onto the Province's books.
    - OPG Trust would also likely be consolidated onto the Province's books since it is an SPV that OPG has a variable interest in.
- It is unclear how the effect of consolidation will have on the Province's credit rating or publicly reported debt ratios, but for Public Accounts, the 56% portion of debt would be represented on the Province's balance sheet.
    - OPG's regulatory assets and nuclear liabilities & assets would also have to be consolidated with the Province.
    - Any debt on OPG's books loaned by OEFC would be consolidated on a net basis, with the receivable owed by OPG to OEFC effectively netting out the payable from OPG.
    - Thus, only external debt that OPG borrowed from outside the province would appear on a consolidated basis.
- Maintaining a strong credit rating is of crucial importance to the Province to keep borrowing costs low for all initiatives, keep investors' confidence high, and to keep the GA financing structure viable for the benefit of ratepayers.
- Having OPG maintain its status as a GBE and commercial enterprise is also critical for the viability of the GA structure including the classification of the Trust as a SPV.

GBE STATUS RISKS

- The equity injections (monthly) from the Province to OPG may be considered a subsidy due to the frequency and large total amount.
    - A GBE receiving subsidies frequently for a long period of time (in this case monthly and for several years) may threaten the GBE status since the GBE could be portrayed as being reliant on government funding.
    - The fact that this amount is only 44% of the GA structure and that OPG Trust is a SPV separate from OPG's other businesses helps mitigate this risk.
- It may be necessary to quantify the overall return from the GA financing structure to the Province to ensure that the Province is "made whole".
    - There is a cost of borrowing associated with the 44% equity injection.

    - If the return from the GA Financing structure is below this amount, the economic rationale behind the equity injection may be lacking.
    - The risk attached to the equity injection (and its eventual composition of the subordinate debt of OPG Trust) may also have to be quantified as a return when considering the feasibility of the initiative.
    - [For example, the economic rationale behind the Hydro One one-time equity injection was that it would help maintain Hydro One's valuation for the IPO. If Hydro One had borrowed debt instead, its value could potentially be lower, leading to lower proceeds to the Province. Taking valuation multiples into consideration, every dollar in equity injected likely resulted in a significantly higher return than a dollar].
- If the Province is not being seen as being compensated for its risk behind the equity injections, then the equity injections could be viewed as a subsidy.
- Having a redeemable feature on the equity injection for the Province, with a properly valued premium, could allow the Province to be made whole.
    - Would also allow the return of capital to the Province to help settle its external debt obligations related to the equity injection.
- If the equity injections were in the form of preferred shares with a cumulative dividend, it could allow for frequent cash inflows from OPG to the Province.
    - The shares could be redeemable at par after a certain lock-up period (similar to Hydro One Series 1 and 2 preferred shares).
    - However, credit rating agencies may consider this as a form of debt which could affect OPG's credit ratings or the Trust's ratings.
    - The dividend yield would have to reflect, to a certain extent, the risk or cost of the Province.

BORROWING

- The timing and maturity of debt issuances from the Province to capital markets in order to fund the equity injections are complex issues.
    - Need to consider if and when capital is being returned from OPG and the settlement of principal.
    - Need to consider how to optimize borrowing to lower the long-term costs to the Province.
- There are bondholder concerns over the limited hedging opportunities.
- There are bondholder concerns over the status of the regulatory assets in terms of the collateral used for bond issuances.
    - If the Trust defaults, what recourse is left for bondholders – are the intangible assets in the Trust with the rights to collect from ratepayers enforceable?

LEGISLATION

- Legislation is still determining the actual rate to be charged to ratepayers. In the most recent shared draft, a few options were being considered:
    - Interest and other financing (e.g., admin costs), as well as the principal portion of the GA financing when those payments commence.

- The ability for OPG to earn a return, i.e., a higher rate charged to ratepayers than the actual total financing and principal costs.
- The ability for OPG to earn a return, but with a cap on profits.

GA FINANCING – EQUITY INJECTION ADDITIONAL CONCERNS

1) PROVINCIAL CREDIT RATING AND OPG GBE STATUS

KEY POINTS:

- OPG losing its GBE status and resulting line-by-line consolidation would impact [provincial debt / provincial net debt] position, and [potentially] in turn the Province's credit rating and borrowing capacity.

- Having OPG maintain its status as a GBE and commercial enterprise is also critical for the viability of the GA structure including the classification of the Trust as a SPV.

Details:

- One of the results of the GA financing mechanism is that a significant amount of the borrowing (56%) will be done directly through OPG (5%) and the special purpose vehicle OPG Trust (51%).

- As ~~OPG is~~ a Government Business Enterprise (GBE), ~~it~~ OPG is consolidated into Public Accounts using the modified equity method.

  - ~~This means that for the~~In the Province's balance sheet, ~~only~~ the net assets (assets minus liabilities) are reported ~~(assets – liabilities)~~ in ~~one~~ a single line ~~item~~.

  - In the Province's incomes statement, the net income is reported in a single line.

- If OPG were to lose its GBE status, ~~then~~ it would be consolidated line-by-line onto the Province's books.

  - OPG Trust would ~~also likely~~potentially be consolidated onto the Province's books line-by-line as well~~since it is an SPV that OPG has a variable interest in~~.

  - ~~o~~

- It is unclear how ~~the effect of~~ consolidation of OPG line-by-line will ~~have on~~ affect the Province's credit rating or publicly reported debt ratios~~, but~~.

  - ~~for~~ For Public Accounts, the 56% portion of debt would be represented on the Province's balance sheet.

  - ~~o~~

  - OPG's regulatory assets and nuclear liabilities/ ~~&~~ assets would also have to be consolidated with the Province.

Commented [SK81]: Assumed this means consolidated line by bline

Commented [SK82]:

- Any debt on OPG's books loaned by OEFC would be consolidated on a net basis~~,~~. ~~with t~~The receivable owed by OPG to OEFC will effectively net~~ting~~ out the payable ~~from OPG~~.

- ~~Thus, o~~Only external debt that OPG borrowed (non-OEFC debt)~~from outside the province~~ would appear on a consolidated basis.

- ~~Maintaining a strong credit rating is of crucial importance to the Province to keep borrowing costs low for all initiatives, keep investors' confidence high, and to keep the GA financing structure viable for the benefit of ratepayers.~~

- ~~Having OPG maintain its status as a GBE and commercial enterprise is also critical for the viability of the GA structure including the classification of the Trust as a SPV.~~

~~GBE STATUS RISKS~~2) EQUITY INJECTIONS

KEY POINTS:

- The [legislation, corporate rules, corporate structure, by-laws etc.] that allow for equity injections must consider that it is in the province's ***financial interests*** to proceed with monthly equity injections in order to finance the trust.

- Equity injections can be viewed as a subsidy if the province is not compensated for its risks.

  - This may be mitigated with a redeemable feature for the equity at a properly valued premium.

- Consideration is also required for the Province's cash needs in order to finance the borrowing for equity injections.

  - This may be mitigated with ongoing dividend payments and/or a redeemable feature for the equity.

  - Issuance of preferred equity may allow for frequent, stable dividend payments, but may be viewed as OPG debt by credit rating agencies.

Details

- The monthly equity injections ~~(monthly)~~ from the Province to OPG may be considered a subsidy due to the frequency and large ~~total amount~~outstanding balance.

- A GBE receiving subsidies frequently for a long period of time (in this case monthly and for several years) may threaten the GBE status since the GBE could be portrayed as being reliant on government funding.

- This risk is mitigated as ~~The fact that this amount is~~ only 44% of the GA structure is funded through equity injections and ~~and~~ that OPG Trust is a SPV ~~separate from OPG's other businesses helps mitigate this risk~~.

Commented [SK83]: Where is this written? Can i have the source?

- It may be necessary to quantify the overall return from the GA financing structure to the Province to ensure that the Province is "made whole".
  - There is a cost of borrowing associated with the 44% equity injection.
  - If the return from the GA Financing structure is below this amount, the economic rationale behind the equity injection may be lacking.
  - The risk attached to the equity injection (and its eventual composition of the subordinate debt of OPG Trust) may also have to be quantified as a return when considering the feasibility of the initiative.
  - [For example, the economic rationale behind the Hydro One one-time equity injection was that it would help maintain Hydro One's valuation for the IPO. If Hydro One had borrowed debt instead, its value could potentially be lower, leading to lower proceeds to the Province. Taking valuation multiples into consideration, every dollar in equity injected likely resulted in a significantly higher return than a dollar].

- If the Province is not being seen as ~~being~~ compensated for its risk behind the equity injections, then the equity injections could be viewed as a subsidy.
- Having a redeemable feature on the equity injection for the Province, with a properly valued premium, could allow the Province to be made whole.
  - Would also allow the return of capital to the Province to help settle its external debt obligations related to the equity injection.
- If the equity injections were in the form of preferred shares with a cumulative dividend, it could allow for frequent cash ~~in~~flows from OPG to the Province.
  - The shares could be redeemable at par after a certain lock-up period (similar to Hydro One Series 1 and 2 preferred shares).
  - However, credit rating agencies may consider this as a form of debt which could affect OPG's credit ratings or the Trust's ratings.

- The dividend yield would have to reflect, to a certain extent, the risk or cost of the Province.

3) BORROWING

KEY POINTS

- The borrowing needs by the Province, OPG and OPG Trust are difficult to predict, and highly variable due to the GA smoothing mechanism.
- Unclear if OPG and OPG Trust borrowing will match monthly IESO invoices and if all borrowing will have consistent terms and structure.
  - The Province maintains a [liquid reserve] for cash needs. Matching is not anticipated to pose an issue.
  - Other considerations include bondholder recourse as multiple entities are involved in payments (OPG, OPG Trust, IESO, LDCs), and hedging opportunities should foreign denominated bonds be issued.

Details:

- The timing and maturity of debt issuances from the ~~Province~~ [OPG/OPG Trust?] to the capital markets in order to fund the equity injections are complex issues.
  - Need to consider if and when capital is being returned from ~~OPG~~ ratepayers and the settlement of principal.
  - Need to consider how to optimize borrowing to lower the long-term costs to the Province.
- [The timing and maturity of debt issuances from the Province to the capital markets in order to fund the equity injections are complex issues.
  - Need to consider if and when capital is being returned from OPG and the settlement of principal.
  - ~~o~~ Need to consider how to optimize borrowing to lower the long-term costs to the Province.]
- There are bondholder concerns over the limited hedging opportunities.
- There are bondholder concerns over the status of the regulatory assets in terms of the collateral used for bond issuances.
  - If the Trust defaults, what recourse is left for bondholders – are the intangible assets in the Trust with the rights to collect from ratepayers enforceable?

Commented [SK84]: Confirm if this is true for the Province. Wouldn't this all flow through the province's "liquid reserves" / working capital? The province won't borrow just for GA financing but would have ongoing borrowings.

- [LDCs are mandated to collect payments from ratepayers.]

4) LEGISLATION AND RATEPAYER IMPACTS

- Legislation is still being drafted to ~~determining~~ determine the actual rate to be charged to ratepayers. In the most recent shared draft, a few options were being considered:
    - Interest and other financing (e.g., admin costs), as well as the principal portion of the GA financing when those payments commence.
    - The ability for OPG to earn a return, i.e., a higher rate charged to ratepayers than the actual total financing and principal costs.
    - The ability for OPG to earn a return, but with a cap on profits.

Corporate and Electricity Finance Division, Ontario Financing Authority
April 6, 2017

Commented [SK85]: which draft?

Commented [SK86]: are these options, in draft legislation??? Or before the legislation was drafted?

GA FINANCING – EQUITY INJECTION ADDITIONAL CONCERNS

1) PROVINCIAL CREDIT RATING AND OPG GBE STATUS

KEY POINTS:

- OPG losing its GBE status and resulting line-by-line consolidation would impact [provincial debt / provincial net debt] position, and [potentially] in turn the Province's credit rating and borrowing capacity.

- Having OPG maintain its status as a GBE and commercial enterprise is also critical for the viability of the GA structure including the classification of the Trust as a SPV.

Details:

- One of the results of the GA financing mechanism is that a significant amount of the borrowing (56%) will be done directly through OPG (5%) and the special purpose vehicle OPG Trust (51%).

- As ~~OPG is~~ a Government Business Enterprise (GBE), ~~it~~ OPG is consolidated into Public Accounts using the modified equity method.

  - ~~This means that for the~~In the Province's balance sheet, ~~only~~ the net assets (assets minus liabilities) are reported ~~(assets – liabilities)~~ in ~~one~~ a single line ~~item~~.

  - In the Province's incomes statement, the net income is reported in a single line.

- If OPG were to lose its GBE status, ~~then~~ it would be consolidated line-by-line onto the Province's books.

  - OPG Trust would ~~also likely~~potentially be consolidated onto the Province's books line-by-line as well~~since it is an SPV that OPG has a variable interest in~~.

  - ~~o~~

- It is unclear how ~~the effect of~~ consolidation of OPG line-by-line will ~~have on~~ affect the Province's credit rating or publicly reported debt ratios~~, but~~.

  - ~~for~~ For Public Accounts, the 56% portion of debt would be represented on the Province's balance sheet.

  - ~~o~~

  - OPG's regulatory assets and nuclear liabilities/ ~~&~~ assets would also have to be consolidated with the Province.

Commented [SK81]: Assumed this means consolidated line by bline

Commented [AP2R1]: Correct.

Commented [SK83]:

- Any debt on OPG's books loaned by OEFC would be consolidated on a net basis~~,~~. ~~with t~~The receivable owed by OPG to OEFC will effectively net~~ting~~ out the payable ~~from OPG~~.

- ~~Thus, o~~Only external debt that OPG borrowed (non-OEFC debt)~~from outside the province~~ would appear on a consolidated basis.

- ~~Maintaining a strong credit rating is of crucial importance to the Province to keep borrowing costs low for all initiatives, keep investors' confidence high, and to keep the GA financing structure viable for the benefit of ratepayers.~~

- ~~Having OPG maintain its status as a GBE and commercial enterprise is also critical for the viability of the GA structure including the classification of the Trust as a SPV.~~

~~GBE STATUS RISKS~~2) EQUITY INJECTIONS

KEY POINTS:

- The [legislation, corporate rules, corporate structure, by-laws etc.] that allow for equity injections must consider that it is in the province's ***financial interests*** to proceed with monthly equity injections in order to finance the trust.

- Equity injections can be viewed as a subsidy if the province is not compensated for its risks.

  - This may be mitigated with a redeemable feature for the equity at a properly valued premium.

- Consideration is also required for the Province's cash needs in order to finance the borrowing for equity injections.

  - This may be mitigated with ongoing dividend payments and/or a redeemable feature for the equity.

  - Issuance of preferred equity may allow for frequent, stable dividend payments, but may be viewed as OPG debt by credit rating agencies.

Details

- The monthly equity injections ~~(monthly)~~ from the Province to OPG may be considered a subsidy due to the frequency and large ~~total amount~~outstanding balance.

- A GBE receiving subsidies frequently for a long period of time (in this case monthly and for several years) may threaten the GBE status since the GBE could be portrayed as being reliant on government funding.
- This risk is mitigated as ~~The fact that this amount is~~ only 44% of the GA structure is funded through equity injections and ~~and~~ that OPG Trust is a SPV ~~separate from OPG's other businesses helps mitigate this risk~~.

- It may be necessary to quantify the overall return from the GA financing structure to the Province to ensure that the Province is "made whole".
  - There is a cost of borrowing associated with the 44% equity injection.
  - If the return from the GA Financing structure is below this amount, the economic rationale behind the equity injection may be lacking.
  - The risk attached to the equity injection (and its eventual composition of the subordinate debt of OPG Trust) may also have to be quantified as a return when considering the feasibility of the initiative.
  - [For example, the economic rationale behind the Hydro One one-time equity injection was that it would help maintain Hydro One's valuation for the IPO. If Hydro One had borrowed debt instead, its value could potentially be lower, leading to lower proceeds to the Province. Taking valuation multiples into consideration, every dollar in equity injected likely resulted in a significantly higher return than a dollar].

- If the Province is not being seen as ~~being~~ compensated for its risk behind the equity injections, then the equity injections could be viewed as a subsidy.
- Having a redeemable feature on the equity injection for the Province, with a properly valued premium, could allow the Province to be made whole.
  - Would also allow the return of capital to the Province to help settle its external debt obligations related to the equity injection.
- If the equity injections were in the form of preferred shares with a cumulative dividend, it could allow for frequent cash ~~in~~flows from OPG to the Province.
  - The shares could be redeemable at par after a certain lock-up period (similar to Hydro One Series 1 and 2 preferred shares).
  - However, credit rating agencies may consider this as a form of debt which could affect OPG's credit ratings or the Trust's ratings.

Commented [SK84]: Where is this written? Can i have the source?

Commented [AP5R4]: IPSAS 1 defines a GBE as an entity that has all the following characteristics:
(a) Is an entity with the power to contract in its own name;
(b) Has been assigned the financial and operational authority to carry on a business;
(c) Sells goods and services, in the normal course of its business, to other entities at a profit or full cost recovery;
(d) Is not reliant on continuing government funding to be a going concern; and
(e) Is controlled by a public sector entity.

Commented [AP6R4]: From PSAB PS 3070
06 A **government business enterprise** is a government organization that has all of the following characteristics:
(d) It can, in the normal course of its operations, maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity.
.30 A government business enterprise should, in the normal course of its operations, be able to maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity. These revenues include not only amounts from the sale of goods and services, but also transfers 3 received from other governments or sources outside of the government reporting entity.
.32 A government business enterprise differs from other government organizations in its relationship to the government, and its objectives, and operations. A government enterprise represents a financial asset of the government and given its autonomy, business-oriented objectives, and financial self-sufficiency, equity accounting is appropriate.

- The dividend yield would have to reflect, to a certain extent, the risk or cost of the Province.

3) BORROWING

KEY POINTS

- The borrowing needs by the Province, OPG and OPG Trust are difficult to predict, and highly variable due to the GA smoothing mechanism.
- Unclear if OPG and OPG Trust borrowing will match monthly IESO invoices and if all borrowing will have consistent terms and structure.
  - The Province maintains a [liquid reserve] for cash needs. Matching is not anticipated to pose an issue.
  - Other considerations include bondholder recourse as multiple entities are involved in payments (OPG, OPG Trust, IESO, LDCs), and hedging opportunities should foreign denominated bonds be issued.

Details:

- The timing and maturity of debt issuances from the ~~Province~~ [OPG/OPG Trust?] to the capital markets in order to fund the equity injections are complex issues.
  - Need to consider if and when capital is being returned from ~~OPG~~ ratepayers and the settlement of principal.
  - Need to consider how to optimize borrowing to lower the long-term costs to the Province.
- [The timing and maturity of debt issuances from the Province to the capital markets in order to fund the equity injections are complex issues.
  - Need to consider if and when capital is being returned from OPG and the settlement of principal.
  - ~~o~~ Need to consider how to optimize borrowing to lower the long-term costs to the Province.]
- There are bondholder concerns over the limited hedging opportunities.
- There are bondholder concerns over the status of the regulatory assets in terms of the collateral used for bond issuances.
  - If the Trust defaults, what recourse is left for bondholders – are the intangible assets in the Trust with the rights to collect from ratepayers enforceable?

Commented [SK87]: Confirm if this is true for the Province. Wouldn't this all flow through the province's "liquid reserves" / working capital? The province won't borrow just for GA financing but would have ongoing borrowings.

Commented [AP8R7]: Is this not what came up from our discussion to include in the note?

- [LDCs are mandated to collect payments from ratepayers.]

4) LEGISLATION AND RATEPAYER IMPACTS

- Legislation is still being drafted to ~~determining~~ determine the actual rate to be charged to ratepayers. In the most recent shared draft, a few options were being considered:
    - Interest and other financing (e.g., admin costs), as well as the principal portion of the GA financing when those payments commence.
    - The ability for OPG to earn a return, i.e., a higher rate charged to ratepayers than the actual total financing and principal costs.
    - The ability for OPG to earn a return, but with a cap on profits.

Corporate and Electricity Finance Division, Ontario Financing Authority
April 6, 2017

Commented [SK89]: which draft?

Commented [AP10R9]: The one shared earlier this week.

Commented [SK811]: are these options, in draft legislation??? Or before the legislation was drafted?

Commented [AP12R11]: In the legislation.

APPENDIX

Formatted: 2. Heading 1

GA FINANCING – EQUITY INJECTION ADDITIONAL CONCERNS

1) PROVINCIAL CREDIT RATING AND OPG GBE STATUS

KEY POINTS:

- OPG losing its GBE status and resulting line-by-line consolidation would impact [provincial debt / provincial net debt] position, and [potentially] in turn the Province's credit rating and borrowing capacity.

- Having OPG maintain its status as a GBE and commercial enterprise is also critical for the viability of the GA structure including the classification of the Trust as a SPV.

Details:

- One of the results of the GA financing mechanism is that a significant amount of the borrowing (56%) will be done directly through OPG (5%) and the special purpose vehicle OPG Trust (51%).

- As ~~OPG is~~ a Government Business Enterprise (GBE), ~~it~~ OPG is consolidated into Public Accounts using the modified equity method.

  - ~~This means that for the~~In the Province's balance sheet, ~~only~~ the net assets (assets minus liabilities) are reported ~~(assets – liabilities)~~ in ~~one~~ a single line ~~item~~.

  - In the Province's incomes statement, the net income is reported in a single line.

- If OPG were to lose its GBE status, ~~then~~ it would be consolidated line-by-line onto the Province's books.

  - OPG Trust would ~~also likely~~potentially be consolidated onto the Province's books line-by-line as well~~since it is an SPV that OPG has a variable interest in~~.

  - ~~o~~

- It is unclear how ~~the effect of~~ consolidation of OPG line-by-line will ~~have on~~ affect the Province's credit rating or publicly reported debt ratios~~, but~~.

  - ~~for~~ For Public Accounts, the 56% portion of debt would be represented on the Province's balance sheet.

  - ~~o~~

  - OPG's regulatory assets and nuclear liabilities/ ~~&~~ assets would also have to be consolidated with the Province.

Commented [SK81]: Assumed this means consolidated line by bline

Commented [AP2R1]: Correct.

Commented [SK83]:

- Any debt on OPG's books loaned by OEFC would be consolidated on a net basis~~,~~. ~~with t~~The receivable owed by OPG to OEFC will effectively net~~ting~~ out the payable ~~from OPG~~.

- ~~Thus, o~~Only external debt that OPG borrowed (non-OEFC debt)~~from outside the province~~ would appear on a consolidated basis.

- ~~Maintaining a strong credit rating is of crucial importance to the Province to keep borrowing costs low for all initiatives, keep investors' confidence high, and to keep the GA financing structure viable for the benefit of ratepayers.~~

- ~~Having OPG maintain its status as a GBE and commercial enterprise is also critical for the viability of the GA structure including the classification of the Trust as a SPV.~~

~~GBE STATUS RISKS~~2) EQUITY INJECTIONS

KEY POINTS:

- The [legislation, corporate rules, corporate structure, by-laws etc.] that allow for equity injections must consider that it is in the province's ***financial interests*** to proceed with monthly equity injections in order to finance the trust.

- Equity injections can be viewed as a subsidy if the province is not compensated for its risks.

  - This may be mitigated with a redeemable feature for the equity at a properly valued premium.

- Consideration is also required for the Province's cash needs in order to finance the borrowing for equity injections.

  - This may be mitigated with ongoing dividend payments and/or a redeemable feature for the equity.

  - Issuance of preferred equity may allow for frequent, stable dividend payments, but may be viewed as OPG debt by credit rating agencies.

Details

- The monthly equity injections ~~(monthly)~~ from the Province to OPG may be considered a subsidy due to the frequency and large ~~total amount~~outstanding balance.

- A GBE receiving subsidies frequently for a long period of time (in this case monthly and for several years) may threaten the GBE status since the GBE could be portrayed as being reliant on government funding.

- This risk is mitigated as ~~The fact that this amount is~~ only 44% of the GA structure is funded through equity injections and ~~and~~ that OPG Trust is a SPV ~~separate from OPG's other businesses helps mitigate this risk~~.

- It may be necessary to quantify the overall return from the GA financing structure to the Province to ensure that the Province is "made whole".
  - There is a cost of borrowing associated with the 44% equity injection.
  - If the return from the GA Financing structure is below this amount, the economic rationale behind the equity injection may be lacking.
  - The risk attached to the equity injection (and its eventual composition of the subordinate debt of OPG Trust) may also have to be quantified as a return when considering the feasibility of the initiative.
  - [For example, the economic rationale behind the Hydro One one-time equity injection was that it would help maintain Hydro One's valuation for the IPO. If Hydro One had borrowed debt instead, its value could potentially be lower, leading to lower proceeds to the Province. Taking valuation multiples into consideration, every dollar in equity injected likely resulted in a significantly higher return than a dollar].

- If the Province is not being seen as ~~being~~ compensated for its risk behind the equity injections, then the equity injections could be viewed as a subsidy.
- Having a redeemable feature on the equity injection for the Province, with a properly valued premium, could allow the Province to be made whole.
  - Would also allow the return of capital to the Province to help settle its external debt obligations related to the equity injection.
- If the equity injections were in the form of preferred shares with a cumulative dividend, it could allow for frequent cash ~~in~~flows from OPG to the Province.
  - The shares could be redeemable at par after a certain lock-up period (similar to Hydro One Series 1 and 2 preferred shares).
  - However, credit rating agencies may consider this as a form of debt which could affect OPG's credit ratings or the Trust's ratings.

Commented [SK84]: Where is this written? Can i have the source?

Commented [AP5R4]: IPSAS 1 defines a GBE as an entity that has all the following characteristics:
(a) Is an entity with the power to contract in its own name;
(b) Has been assigned the financial and operational authority to carry on a business;
(c) Sells goods and services, in the normal course of its business, to other entities at a profit or full cost recovery;
(d) Is not reliant on continuing government funding to be a going concern; and
(e) Is controlled by a public sector entity.

Commented [AP6R4]: From PSAB PS 3070
06 A **government business enterprise** is a government organization that has all of the following characteristics:
(d) It can, in the normal course of its operations, maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity.
.30 A government business enterprise should, in the normal course of its operations, be able to maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity. These revenues include not only amounts from the sale of goods and services, but also transfers 3 received from other governments or sources outside of the government reporting entity.
.32 A government business enterprise differs from other government organizations in its relationship to the government, and its objectives, and operations. A government enterprise represents a financial asset of the government and given its autonomy, business-oriented objectives, and financial self-sufficiency, equity accounting is appropriate.

- The dividend yield would have to reflect, to a certain extent, the risk or cost of the Province.

3) BORROWING

KEY POINTS

- The borrowing needs by the Province, OPG and OPG Trust are difficult to predict, and highly variable due to the GA smoothing mechanism.
- Unclear if OPG and OPG Trust borrowing will match monthly IESO invoices and if all borrowing will have consistent terms and structure.
  - The Province maintains a [liquid reserve] for cash needs. Matching is not anticipated to pose an issue.
  - Other considerations include bondholder recourse as multiple entities are involved in payments (OPG, OPG Trust, IESO, LDCs), and hedging opportunities should foreign denominated bonds be issued.

Details:

- The timing and maturity of debt issuances from the ~~Province~~ [OPG/OPG Trust?] to the capital markets in order to fund the equity injections are complex issues.
  - Need to consider if and when capital is being returned from ~~OPG~~ ratepayers and the settlement of principal.
  - Need to consider how to optimize borrowing to lower the long-term costs to the Province.
- [The timing and maturity of debt issuances from the Province to the capital markets in order to fund the equity injections are complex issues.
  - Need to consider if and when capital is being returned from OPG and the settlement of principal.
  - ~~o~~ Need to consider how to optimize borrowing to lower the long-term costs to the Province.]
- There are bondholder concerns over the limited hedging opportunities.
- There are bondholder concerns over the status of the regulatory assets in terms of the collateral used for bond issuances.
  - If the Trust defaults, what recourse is left for bondholders – are the intangible assets in the Trust with the rights to collect from ratepayers enforceable?

Commented [SK87]: Confirm if this is true for the Province. Wouldn't this all flow through the province's "liquid reserves" / working capital? The province won't borrow just for GA financing but would have ongoing borrowings.

Commented [AP8R7]: Is this not what came up from our discussion to include in the note?

- [LDCs are mandated to collect payments from ratepayers.]

4) LEGISLATION AND RATEPAYER IMPACTS

- Legislation is still being drafted to ~~determining~~ determine the actual rate to be charged to ratepayers. In the most recent shared draft, a few options were being considered:
    - Interest and other financing (e.g., admin costs), as well as the principal portion of the GA financing when those payments commence.
    - The ability for OPG to earn a return, i.e., a higher rate charged to ratepayers than the actual total financing and principal costs.
    - The ability for OPG to earn a return, but with a cap on profits.

Corporate and Electricity Finance Division, Ontario Financing Authority
April 6, 2017

Commented [SK89]: which draft?

Commented [AP10R9]: The one shared earlier this week.

Commented [SK811]: are these options, in draft legislation??? Or before the legislation was drafted?

Commented [AP12R11]: In the legislation.

APPENDIX

IPSAS 1 defines a GBE as an entity that has all the following characteristics:

a) Is an entity with the power to contract in its own name;
b) Has been assigned the financial and operational authority to carry on a business;
c) Sells goods and services, in the normal course of its business, to other entities at a profit or full cost recovery;
d) Is not reliant on continuing government funding to be a going concern; and
e) Is controlled by a public sector entity.

PSAB PS 3070

06 A **government business enterprise** is a government organization that has all of the following characteristics:

(d) It can, in the normal course of its operations, maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity.

.30 A government business enterprise should, in the normal course of its operations, be able to maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity. These revenues include not only amounts from the sale of goods and services, but also transfers 3 received from other governments or sources outside of the government reporting entity.

.32 A government business enterprise differs from other government organizations in its relationship to the government, and its objectives, and operations. A government enterprise represents a financial asset of the government and given its autonomy, business-oriented objectives, and financial self-sufficiency, equity accounting is appropriate.

GA FINANCING – EQUITY INJECTION ADDITIONAL CONCERNS

1) PROVINCIAL CREDIT RATING AND OPG GBE STATUS

KEY POINTS:

- OPG losing its GBE status and resulting line-by-line consolidation would impact [provincial debt / provincial net debt] position, and [potentially] in turn the Province's credit rating and borrowing capacity.

- [Having OPG maintain its status as a GBE and commercial enterprise is also critical for the viability of the GA structure including the classification of the Trust as a SPV.]

Details:

- One of the results of the GA financing mechanism is that a significant amount of the borrowing (56%) will be done directly through OPG (5%) and the special purpose vehicle OPG Trust (51%).

- As ~~OPG is~~ a Government Business Enterprise (GBE), ~~it~~ OPG is consolidated into Public Accounts using the modified equity method.

    - ~~This means that for the~~In the Province's balance sheet, ~~only~~ the net assets (assets minus liabilities) are reported ~~(assets – liabilities)~~ in ~~one~~ a single line ~~item~~.

    - In the Province's incomes statement, the net income is reported in a single line.

- If OPG were to lose its GBE status, ~~then~~ it would be consolidated line-by-line onto the Province's books.

    - OPG Trust would ~~also likely~~potentially be consolidated onto the Province's books line-by-line as well~~since it is an SPV that OPG has a variable interest in~~.

    - OPG's regulatory assets and nuclear liabilities/assets would also have to be consolidated with the Province.

    - ~~o~~

    - ~~o~~

    - ~~for~~ For Public Accounts, the 56% portion of debt would be represented on the Province's balance sheet.

    - ~~o~~

Commented [SK81]: Assumed this means consolidated line by bline

Commented [AP2R1]: Correct.

- ~~OPG's regulatory assets and nuclear liabilities/ & assets would also have to be consolidated with the Province.~~
- Any debt on OPG's books loaned by OEFC would be consolidated on a net basis~~,~~. ~~with t~~The receivable owed by OPG to OEFC will effectively net~~ting~~ out the payable ~~from OPG~~.
- ~~Thus, o~~Only external debt that OPG borrowed (non-OEFC debt)~~from outside the province~~ would appear on a consolidated basis.
- It is unclear how ~~the effect of~~ consolidation of OPG line-by-line will ~~have on~~ affect the Province's credit rating or publicly reported debt ratios~~, but~~ .

Commented [SK83]:

- ~~Maintaining a strong credit rating is of crucial importance to the Province to keep borrowing costs low for all initiatives, keep investors' confidence high, and to keep the GA financing structure viable for the benefit of ratepayers.~~
- ~~Having OPG maintain its status as a GBE and commercial enterprise is also critical for the viability of the GA structure including the classification of the Trust as a SPV.~~

~~GBE STATUS RISKS~~2) EQUITY INJECTIONS

KEY POINTS:

- The [legislation, corporate rules, corporate structure, by-laws etc.] that allow for equity injections should have ~~[return on risk]~~ consideration that it is in the Province's ***economic/financial interests*** to proceed with monthly equity injections in order to finance the trust, with appropriate return on risk.

Commented [SK84]: Or maybe to put it another way, nothing here should preclude the Province's right to return a sufficient return on its equity investment given the risk premium.

- Equity injections can be viewed as a subsidy if the province is not compensated for its risks.
  - This may be mitigated with a redeemable feature for the equity at a properly valued premium.
- Consideration is also required for the Province's cash needs in order to finance the borrowing for equity injections.
  - This may be mitigated with ongoing dividend payments and/or a redeemable feature for the equity.
  - Issuance of preferred equity may allow for frequent, stable dividend payments, but may be viewed as OPG debt by credit rating agencies.

- A redeemable feature would provide for sufficient cash for the province to pay back bondholders.

Details

- The monthly equity injections ~~(monthly)~~ from the Province to OPG may be considered a subsidy due to the frequency and large ~~total amount~~outstanding balance.
  - A GBE receiving subsidies frequently for a long period of time (in this case monthly and for several years) may threaten the GBE status since the GBE could be portrayed as being reliant on government funding.
  - This risk is mitigated as ~~The fact that this amount is~~ only 44% of the GA structure is funded through equity injections and ~~and~~ that OPG Trust is a SPV ~~separate from OPG's other businesses helps mitigate this risk~~.

- It may be necessary to quantify the overall return from the GA financing structure to the Province to ensure that the Province is "made whole".
  - There is a cost of borrowing associated with the 44% equity injection.
  - If the return from the GA Financing structure is below this amount, the economic rationale behind the equity injection may be lacking.
  - The risk attached to the equity injection (and its eventual composition of the subordinate debt of OPG Trust) may also have to be quantified as a return when considering the feasibility of the initiative.
  - [For example, the economic rationale behind the Hydro One one-time equity injection was that it would help maintain Hydro One's valuation for the IPO. If Hydro One had borrowed debt instead, its value could potentially be lower, leading to lower proceeds to the Province. Taking valuation multiples into consideration, every dollar in equity injected likely resulted in a significantly higher return than a dollar].

- If the Province is not being seen as ~~being~~ compensated for its risk behind the equity injections, then the equity injections could be viewed as a subsidy.
- Having a redeemable feature on the equity injection for the Province, with a properly valued premium, could allow the Province to be made whole.
  - Would also allow the return of capital to the Province to help settle its external debt obligations related to the equity injection.

Commented [SK85]: Where is this written? Can i have the source?

Commented [AP6R5]: IPSAS 1 defines a GBE as an entity that has all the following characteristics:
(a) Is an entity with the power to contract in its own name;
(b) Has been assigned the financial and operational authority to carry on a business;
(c) Sells goods and services, in the normal course of its business, to other entities at a profit or full cost recovery;
(d) Is not reliant on continuing government funding to be a going concern; and
(e) Is controlled by a public sector entity.

Commented [AP7R5]: From PSAB PS 3070
06 A **government business enterprise** is a government organization that has all of the following characteristics:
(d) It can, in the normal course of its operations, maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity.
.30 A government business enterprise should, in the normal course of its operations, be able to maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity. These revenues include not only amounts from the sale of goods and services, but also transfers 3 received from other governments or sources outside of the government reporting entity.
.32 A government business enterprise differs from other government organizations in its relationship to the government, and its objectives, and operations. A government enterprise represents a financial asset of the government and given its autonomy, business-oriented objectives, and financial self-sufficiency, equity accounting is appropriate.

- If the equity injections were in the form of preferred shares with a cumulative dividend, it could allow for frequent cash ~~in~~flows from OPG to the Province.
    - The shares could be redeemable at par after a certain lock-up period (similar to Hydro One Series 1 and 2 preferred shares).
    - However, credit rating agencies may consider this as a form of debt which could affect OPG's credit ratings or the Trust's ratings.
    - The dividend yield would have to reflect, to a certain extent, the risk or cost of the Province.

3) BORROWING

KEY POINTS

- The borrowing needs by the Province, OPG and OPG Trust are difficult to predict, and highly variable due to the GA smoothing mechanism.
- Unclear if OPG and OPG Trust borrowing will match monthly IESO invoices and if all borrowing will have consistent terms and structure.
    - The Province maintains a [liquid reserve] for cash needs. Matching is not anticipated to pose an issue.
    - Other considerations include bondholder recourse as multiple entities are involved in payments (OPG, OPG Trust, IESO, LDCs), and hedging opportunities should foreign denominated bonds be issued.

Details:

- The timing and maturity of debt issuances from the ~~Province~~ [OPG/OPG Trust?] to the capital markets in order to fund the equity injections are complex issues.
    - Need to consider if and when capital is being returned from ~~OPG~~ ratepayers and the settlement of principal.
    - Need to consider how to optimize borrowing to lower the long-term costs to the Province.
- [The timing and maturity of debt issuances from the Province to the capital markets in order to fund the equity injections are complex issues.
    - Need to consider if and when capital is being returned from OPG and the settlement of principal.

- ~~o~~ Need to consider how to optimize borrowing to lower the long-term costs to the Province.]

- There are bondholder concerns over the limited hedging opportunities.
- There are bondholder concerns over the status of the regulatory assets in terms of the collateral used for bond issuances.
    - o If the Trust defaults, what recourse is left for bondholders – are the intangible assets in the Trust with the rights to collect from ratepayers enforceable?
- [LDCs are mandated to collect payments from ratepayers.]

4) LEGISLATION AND RATEPAYER IMPACTS

- Legislation is still being drafted to ~~determining~~ determine the actual rate to be charged to ratepayers. In the most recent shared draft, a few options were being considered:
    - o Interest and other financing (e.g., admin costs), as well as the principal portion of the GA financing when those payments commence.
    - o The ability for OPG to earn a return, i.e., a higher rate charged to ratepayers than the actual total financing and principal costs.
    - o The ability for OPG to earn a return, but with a cap on profits.

Corporate and Electricity Finance Division, Ontario Financing Authority
April 6, 2017

Commented [SK88]: Confirm if this is true for the Province. Wouldn't this all flow through the province's "liquid reserves" / working capital? The province won't borrow just for GA financing but would have ongoing borrowings.

Commented [AP9R8]: Is this not what came up from our discussion to include in the note?

Commented [SK810]: which draft?

Commented [AP11R10]: The one shared earlier this week.

Commented [SK812]: are these options, in draft legislation??? Or before the legislation was drafted?

Commented [AP13R12]: In the legislation.

APPENDIX

IPSAS 1 defines a GBE as an entity that has all the following characteristics:

a) Is an entity with the power to contract in its own name;
b) Has been assigned the financial and operational authority to carry on a business;
c) Sells goods and services, in the normal course of its business, to other entities at a profit or full cost recovery;
d) Is not reliant on continuing government funding to be a going concern; and
e) Is controlled by a public sector entity.

Commented [SK814]: What's the source? (URL?)

PSAB PS 3070

06 A **government business enterprise** is a government organization that has all of the following characteristics:

(d) It can, in the normal course of its operations, maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity.

.30 A government business enterprise should, in the normal course of its operations, be able to maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity. These revenues include not only amounts from the sale of goods and services, but also transfers 3 received from other governments or sources outside of the government reporting entity.

.32 A government business enterprise differs from other government organizations in its relationship to the government, and its objectives, and operations. A government enterprise represents a financial asset of the government and given its autonomy, business-oriented objectives, and financial self-sufficiency, equity accounting is appropriate.

Commented [SK815]: What's the source? (URL?)

COMMERCIALLY SENSITIVE AND CONFIDENTIAL

GA FINANCING – EQUITY INJECTION OVERVIEW

This document serves to provide an overview of the implementation mechanism, timelines and other issues for the GA Financing and the Equity Injection for Ontario Power Generation (OPG) from the Province.

OVERVIEW

- The Ministry of Energy, Ministry of Finance and the Ontario Financing Authority (OFA) are coordinating with OPG to implement a Global Adjustment (GA) smoothing mechanism.
- OPG will develop a Special Purpose Vehicle (SPV) referred to as "OPG Trust" to purchase the "right to collect" assets from the IESO in return for cash proceeds. IESO will use the cash proceeds to make up the shortfall in GA payments from ratepayers.
- OPG Trust will be structured to finance 51% of its funding requirements through the capital markets with the remaining 49% being provided by OPG as subordinated debt.
    - The 49% subordinated debt from OPG will be financed through debt from the capital markets (5%) and through equity injections from the Province (44%).
    - Annual payments will be received by OPG Trust for financing & administrative costs.
        - Staff Comments: Unclear if these financing costs/annual payments will be received by OPG Trust [TBC: from IESO or ratepayers directly]?
- The mechanism by which the financing is conducted is yet to be finalized. Both OPG on behalf of OPG Trust and the OFA on behalf of the Province are separately looking to engage 'financial advisors' for the purpose of determining optimal financing structures, e.g. debt covenants, terms and conditions such as if to be callable, redeemable, etc. [Also see below.]

BORROWING

- The 51% financing conducted by OPG Trust and the 5% financing via OPG will initially be financed through a short term credit facility which will be obtained by OPG. OPG has communicated that this may be through short term debt, raised from the Canadian money markets.
    - OPG staff further clarified that this would be facilitated through a new facility and to be put in place by OPG Trust and not any of the existing facilities OPG currently has in place.

Commented [BA1]: May be good to make 2nd part clear upfront. Redraft if I didn't get language right.

Commented [BA2]: Confused here. Are we referring to interest received or OPG annual payments to Trust.

Commented [AP3]: From IESO according to white paper who would collect the payments and remit to OPG.

Commented [BA4]: Also confused about comment: Should that be ".....received by OPG Trust"

Commented [AP5R4]: Yes, you are right. Corrected.

Commented [JK6]: Check with SIFB or CMD on the right terminology.

Commented [FC7]: To me this is part of the terms and conditions

Commented [JK8]: Did I get this right?

Commented [FC9]: If this is the case wouldn't they need a minimum amount of equity to be put in the Trust at the onset? I'm assuming OPG nor the Province will be providing a back stop to the Trust.

- Longer term debt will be issued as soon as possible, subject to market timing constraints.
  - OPG to retain 3 dealers to advice on the long-term borrowing and financing of the GA.
  - The OFA is also expected to retain a dealer to provide due diligence and independent advice for the Province's equity injection [TBC] into OPG and long-term borrowing by OPG Trust [TBC].
- The long term debt issued by OPG Trust may also be callable to buy back the bonds once the financed GA starts to be repaid. [TBC]

Commented [JK10]: I understood OFA's interest was more on how to structure its borrowing than other aspects but open to hearing different view.

Commented [JK11]: Why would OFA's borrowing be different? Carlos mentioned certain features, though would involve premiums?

EQUITY INJECTION MECHANISM

OVERVIEW

- The Province is expected to provide monthly equity injections to OPG.
- In return, OPG would issue new shares to the Province at a value of $20 per share.
- These share issuances currently ~~environed~~ envisioned to be redeemable by the Province and OPG may also have rights to buy back the shares [TBC].
  - This would provide the Province with a flexible mechanism to redeem its equity investment in OPG, and allow OPG to return to a more suitable capital structure once the GA financing program has subsided.
  - Redeemable terms may include a lock-out period that permits the Province to redeem after a set time period.
  - [TBC] Shares may be considered preferred shares. Unclear whether at redemption these shares will have a non-par value (ie. not $20 per share).
  - [TBC] OPG staff have indicated that the current plan is to pay no interest or dividends for the 44% equity injection. Under such a scenario, an appropriate pricing or premium on buyback would need to be priced in or would potentially entail risks described under the Consideration section below.

Commented [FC12]: Not quarterly?

Commented [JK13]: Monthly now.

Commented [BA14R13]: For clarity, should we start with the broader statement that IESO will require monthly payments from the Trust, which in turn requires the Province to make monthly equity injections to OPG?

Commented [FC15]: Redeemable rights are really a call or put option and should be priced accordingly. In absence of this one of the parties is providing a subsidy to the other side.

Commented [AP16]: OPG TB has mentioned a 10% premium on buyback, but this could still be construed as a benefit as the 10% return over a 10 year period does not reflect the risk premium. Threatens the GBE status of OPG, which could lead to full consolidation in Public Accounts.

PROCESS

- OPG Trust would receive the notice to purchase the asset from IESO.
- A notice would be received from OPG by the OFA for 44% of the asset for the equity injection.

- Separately OPG and OPG Trust would take out debt from the capital markets totaling 56% of the IESO asset value.
- There is a 5 business day transaction window from the timing of the notice received by the OFA to payment and settlement with the [or OPG?] IESO.

Commented [SQ217]: [TBC whether 5 business days required for OFA to provide payment to OPG or whether 5 business days is for the entire process of OFA->OPG->OPGT].

LEGISLATION AND TIMING

- The proposed timing for the legislation is May, early June.
- It's unclear how these rates would be effective to consumers if the RPP prices are reset on May 1 and November 1 of every year.
  - Furthermore, the RPP prices are announced by the OEB in mid-April and mid-October annually.
  - Unclear on whether the timing for this implementation mechanism would be sufficient for May 1, RPP prices.

[TBC] TBS would provide an annual allocation, with a three-year program review cycle.

-

~~ADDITIONAL CONCERNS~~CONSIDERATIONS / POTENTIAL RISKS TO THE SPV ARRANGEMENT

- OPG staff have signaled to CEFD staff that their current plan is to not provide the Province with a cash flow, in dividends or otherwise, for the 44% equity injection until the ~~proposed lock-up period ends~~'~~inflection~~' point in time where the ratepayers start to pay down the deferred GA.
- Under the current plan, only the 56% funded through capital markets, directly by OPG Trust or by OPG, would be paid interest over time.
- While the implementation of the~~is~~ proposed structure is ~~hypothetically~~currently viewed as fiscally neutral on an accounting basis, there is some concern over the cash flow-through of this structure with no flow through of interest or dividends over time.
- The Province would~~ill have~~~~incurr~~incur interest associated with the debt it borrows to finance the 44% equity injection. OPG should have an equal or greater amount related to this 44% interest cost collected from ratepayers through annual cash payments.

Commented [BA18]: I'll stand to be corrected by you CFA types, but in economics an inflection point is the point where a curve changes from concave to convex or vice versa. Here we are talking about two lines are crossing. Just want to make sure we have correct terminology so that we don't get called us out later by some (other) smarty pants.

- ~~The interest cost will continue to build during the lock-up period as more principal is borrowed, resulting in potentially billions of aggregate interest owed by the Province to the capital markets.~~

- OPG may have the potential to lower its borrowing/equity injection costs with the "unpaid portion" of interest related to the Provincial debt for the 44% equity injections. Establishing a redemption premium that takes into account the compounded cost of the equity financing could "make the province whole" upon redemption on a further date. Valuation options are currently being discussed.

- It may be necessary to establish a flow-through of cash from OPG to the Province through some type of return, such as a dividend ~~or the SPV arrangement could be viewed as receiving an interest free loan or subsidy from the Province~~

- In order to reasonably guarantee ~~this~~a return to the Province, it may be necessary to establish a separate class of preferred shares with a dividend yield ~~related~~associated with ~~to~~ the interest cost of the Province's ~~related debt~~borrowing costs or provide a mechanism for the interest cost to be recovered on a non-cash basis, e.g. through a form of dividend reinvestment plan.

- A preferred equity structure~~This~~ could potentially impact OPG's credit ratings if rating agencies view the preferred shares as debt rather than equity.

- Legislation is still determining the actual rate to be charged to ratepayers. In the most recent shared draft, a few options were being considered

    - Interest and other financing (e.g., admin costs), as well as the principal portion of the GA financing when those payments commence.

    - The ability for OPG to earn a return, i.e., a higher rate charged to ratepayers than the actual total financing and principal costs.

    - The ability for OPG to earn a return, but with a cap on profits.

Commented [AP19]: This is not necessarily true as an acceptable premium associated with the buyback feature would mitigate this concern. Maybe keep the subsidy issue separate as mentioned above? The main risk is that the Province will be paying several hundred millions to billions of interest over time with no cash flow from OPG. OPG in turn would have the same amount of cash on its books – either idle or used for their own initiatives.

Commented [JK20]: Explain. Is this risk to OPG Trust, OPG or the Province.

Commented [AP21R20]: Risk is to OPG Trust/OPG because, if preferred equity is issued, then it could be viewed as debt.

Formatted

Electricity Finance Branch, Ontario Financing Authority
April 4, 2017

COMMERCIALLY SENSITIVE AND CONFIDENTIAL

GA FINANCING – EQUITY INJECTION OVERVIEW

Thie Province would be required to support the Global Adjustment (GA) financing plan by providing equity injections to Ontario Power Generation Inc. (OPG) that would represent 44% of total financing requirements. This document serves to provides an overview of the proposed GA financing structure, including the provincial equity injections, and discusses steps that must be undertaken by the province to implement the equity injections. implementation mechanism, timelines and other issues for the GA Financing and the Equity Injection for Ontario Power Generation (OPG) from the Province.

GA FINANCING OVERVIEW

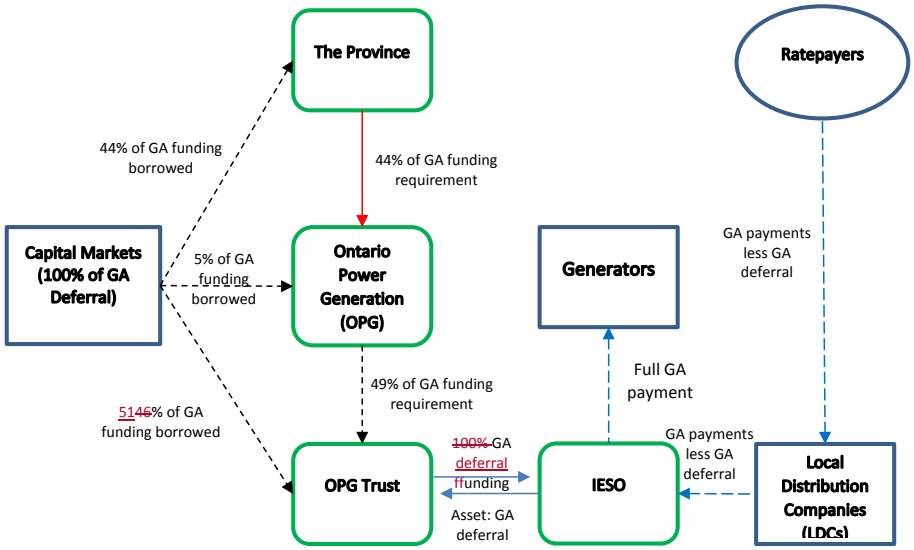
The Ministry of Energy, Ministry of Finance and the Ontario Financing Authority (OFA) are coordinating with OPG to implement a Global Adjustment (GA) smoothing mechanism.

Under the current proposal, OPG will would develop a Special Purpose Vehicle (SPV) referred to as "OPG Trust" which will use 100% debt financing to purchase regulatory assets from the IESO. These regulatory assets represent the portion of RPP GA expenses deferred to future years.the "right to collect" assets from the IESO in return for cash proceeds. IESO would use the cash from the OPG Trust, to make up the shortfall in GA recoveries from ratepayers in order to fully compensate generators.

Commented [BA1]: May be good to make 2nd part clear upfront. Redraft if I didn't get language right.

GA Deferral Process

Formatted: Font: Bold



~~OP~~OPG Trust w~~ould ill be structured to~~ finance 51% of its funding requirements through the capital markets as senior debt with the remaining 49% being provided by OPG as subordinated debt. ~~OPG would contribute the remaining 49% as subordinated debt.~~

The 49% subordinated debt from OPG will be financed through debt OPG issues in its own corporate capacity, from the capital markets (5%) and through equity injections from the Province (44%). The Province will finance its equity injection through its annual borrowing program - from issuing debt into the capital markets.

~~Annual payments will be received by~~ OPG Trust would recover ~~for~~ financing & administrative costs from the ratepayer [is this still up for discussion].

~~Staff Comments: Unclear if these financing costs/annual payments will be received by OPG Trust [TBC: from IESO or ratepayers directly]?~~

~~The mechanism by which the financing is conducted is yet to be finalized. Both OPG on behalf of OPG Trust and the OFA on behalf of the Province are separately looking to engage 'financial advisors' for the purpose of determining optimal financing structures, e.g. debt covenants, terms and conditions~~ ~~such as if to be callable, redeemable, etc. [Also see below.]~~

Commented [AP2]: This has been confirmed by OPG – would be hard for Trust to operate as a going concern if not bringing in cash flow.

Commented [BA3]: Confused here. Are we referring to interest received or OPG annual payments to Trust.

Commented [AP4]: From IESO according to white paper who would collect the payments and remit to OPG.

Commented [BA5]: Also confused about comment: Should that be ".....received by OPG Trust"

Commented [AP6R5]: Yes, you are right. Corrected.

Commented [JK7]: Check with SIFB or CMD on the right terminology.

Commented [FC8]: To me this is part of the terms and conditions

~~**BORROWING**~~

- ~~The 51% financing conducted by OPG Trust and the 5% financing via OPG will initially be financed through a short term credit facility which will be obtained by OPG. OPG has communicated that this may be through short term debt, raised from the Canadian money markets.~~
  - ~~OPG staff further clarified that this would be facilitated through a new facility and to be put in place by OPG Trust and not any of the existing facilities OPG currently has in place.~~
- ~~Longer term debt will be issued as soon as possible, subject to market timing constraints.~~
  - ~~OPG to retain 3 dealers to advice on the long-term borrowing and financing of the GA.~~
  - ~~The OFA is also expected to retain a dealer to provide due diligence and independent advice for the Province's equity injection [TBC] into OPG and long-term borrowing by OPG Trust [TBC].~~
- ~~The long term debt issued by OPG Trust may also be callable to buy back the bonds once the financed GA starts to be repaid. [TBC]~~

EQUITY INJECTION PROCESS OVERVIEW ~~MECHANISM~~

~~**OVERVIEW**~~

- IESO proposes that OPG Trust would purchase the GA~~E~~ deferral asset on a monthly basis. The ~~The~~ Province would, therefore, be required to ~~is expected to~~ provide monthly equity injections to OPG.
- In return, OPG would issue new shares to the Province. It is proposed that shares would be purchased at the book value of ~~at a value of~~ $20 per share. [for discussion]

The proposed process would be as follows:

- ~~These share issuances currently environed envisioned to be redeemable by the Province and OPG may also have rights to buy back the shares [TBC].~~
  - ~~This would provide the Province with a flexible mechanism to redeem its equity investment in OPG, and allow OPG to return to a more suitable capital structure once the `GA financing program has subsided.~~

Commented [JK9]: Did I get this right?

Commented [FC10]: If this is the case wouldn't they need a minimum amount of equity to be put in the Trust at the onset? I'm assuming OPG nor the Province will be providing a back stop to the Trust.

Commented [JK11]: I understood OFA's interest was more on how to structure its borrowing than other aspects but open to hearing different view.

Commented [JK12]: Why would OFA's borrowing be different? Carlos mentioned certain features, though would involve premiums?

Formatted: 2. Heading 1

Formatted: Space After: 0 pt, No bullets or numbering

Commented [FC13]: Not quarterly?

Commented [JK14]: Monthly now.

Commented [BA15R14]: For clarity, should we start with the broader statement that IESO will require monthly payments from the Trust, which in turn requires the Province to make monthly equity injections to OPG?

Formatted: 7. Bullet 2

Commented [FC16]: Redeemable rights are really a call or put option and should be priced accordingly. In absence of this one of the parties is providing a subsidy to the other side.

Commented [AP17]: OPG TB has mentioned a 10% premium on buyback, but this could still be construed as a benefit as the 10% return over a 10 year period does not reflect the risk premium. Threatens the GBE status of OPG, which could lead to full consolidation in Public Accounts.

Formatted: 7. Bullet 1

- ~~Redeemable terms may include a lock-out period that permits the Province to redeem after a set time period.~~

- ~~[TBC] Shares may be considered preferred shares. Unclear whether at redemption these shares will have a non-par value (ie. not $20 per share).~~

- ~~[TBC] OPG staff have indicated that the current plan is to pay no interest or dividends for the 44% equity injection. Under such a scenario, an appropriate pricing or premium on buyback would need to be priced in or would potentially entail risks described under the Consideration section below.~~

~~Process~~

- OPG Trust would receive ~~the~~ notice from the IESO to purchase the asset from IESO.

- The Province~~OFA~~ in turn would ~~A notice would be~~ received notice from OPG for~~by~~ the OFA ~~for~~ to provide 44% of the asset for the equity injection.

- Separately, OPG and OPG Trust would ~~take out~~raise debt from the capital markets totaling 56% of the IESO asset value.

- There is a 5 business day transaction window from the timing of the notice received by the OFA to payment and settlement with the [or OPG?] IESO.

[let's make this as general as necessary]

Commented [AP18]: I am not sure what this sentence means.

Commented [SQ219]: [TBC whether 5 business days required for OFA to provide payment to OPG or whether 5 business days is for the entire process of OFA->OPG->OPGT].

Decisions and Approvals Required for Province's Equity Financing

Commented [SQ220]: Understanding that this is a equity injection, are we going to be tracking the "interest costs" related to this equity injection/investment and if so, with what mechanism?

The mechanics of a capital contribution into OPG could follow the precedent previously completed by the Province in making a capital contribution into Hydro One prior to its initial public offering.

1. The Province would create an "Operating Asset" line for the purchasing of OPG equity. The creation of this line and the annual appropriation for the Operating Asset would require Treasury Board/Management Board of Cabinet approval.

- The Operating Asset would either be categorized as a voted item or a statutory item. While the program would be implemented through legislation, it is assumed that the decisions around the capital contributions would be made outside of legislation. Based on this assumption, the analysis that follows assumes the Operating Asset would be categorized as a voted item.

2. The creation of the Operating Asset would need to be included in the Province's tabling of Estimates in the Legislature (tabled following the release of the Provincial Budget). If the Operating Asset is not included in the Estimates, the Province would need to table Supplementary Estimates in the Legislature.

3. The Province would also need to seek approval, through Estimates or Supplementary Estimates, of an appropriation for the amount of the Operating Asset (i.e., approval to make a capital contribution up to the approved amount). The Province could seek approval of a placeholder amount of $1,000, or an estimate of the total projected required capital contribution for that fiscal year.

    - Under the assumption that the Operating Asset is categorized as a voted item, any capital contribution required over and above the approved amount would either require the implementing Ministry to find expense offsets, or tabling of Supplementary Estimates. Given the magnitude of the initiative, staff have assumed that finding expense offsets is not a viable option.

4. Following the above approvals, the Province would be able to make the capital contribution into OPG and receive shares in the Trust in return.

    - Note that as with the Hydro One capital contribution, this capital contribution represents a balance sheet movement and would not create an upfront fiscal impact to the Province (exchange of cash for shares – both assets).

[HOW PROVINCE WILL RECEIVE RETURNS]

…

Scenarios:

- 0) Interest only (cost of funds for Province)
- 1) Redemption (premium)
- 2) Dividends

- 3) Reduced equity injection
- 4a) Preferred Equity (dividends)
- 4b) Cumulative Dividend

…[OPTIONS]

LEGISLATION AND TIMING

- The proposed timing for the legislation is May, early June.
- It's unclear how these rates would be effective to consumers if the RPP prices are reset on May 1 and November 1 of every year.
    - Furthermore, the RPP prices are announced by the OEB in mid-April and mid-October annually.
    - Unclear on whether the timing for this implementation mechanism would be sufficient for May 1, RPP prices.

[TBC] TBS would provide an annual allocation, with a three-year program review cycle.

-

END OF MAIN SECTION

THE TEXT BELOW IS EQUITY INJECTION DISCUSSION GATHERED FROM A COUPLE OF NOTES. LET'S REVIEW WITH EYE TO DETERMINING WHICH, IF ANY POINTS BELONG IN MAIN SECTION ABOVE AND ORGANIZING REMAINING POINTS.

OTHER PROVINCIAL EQUITY INJECTION ~~ADDITIONAL CONCERNS~~CONSIDERATIONS AND RISKS ~~/ POTENTIAL RISKS TO THE SPV ARRANGEMENT~~

these share issuances currently envisioned to be redeemable by the Province and OPG may also have rights to buy back the shares [TBC].

- This would provide the Province with a flexible mechanism to redeem its equity investment in OPG, and allow OPG to return to a more suitable capital structure once the GA financing program has subsided.
- Redeemable terms may include a lock-out period that permits the Province to redeem after a set time period.
- [TBC] Shares may be considered preferred shares. Unclear whether at redemption these shares will have a non-par value (ie. not $20 per share).

- [TBC] OPG staff have indicated that the current plan is to pay no interest or dividends for the 44% equity injection. Under such a scenario, an appropriate pricing or premium on buyback would need to be priced in or would potentially entail risks described under the Consideration section below. OPG staff have signaled to CEFD staff that their current plan is to not provide the Province with a cash flow, in dividends or otherwise, for the 44% equity injection until the ~~proposed lock-up period ends~~'~~inflection~~' point in time where the ratepayers start to pay down the deferred GA.
- Under the current plan, only the 56% funded through capital markets, directly by OPG Trust or by OPG, would be paid interest over time.
- While the implementation of th~~e~~is proposed structure is ~~hypothetically~~currently viewed as fiscally neutral on an accounting basis, there is some concern over the cash flow-through of this structure with no flow through of interest or dividends over time.
- The Province would~~ill have~~~~incurr~~incur interest associated with the debt it borrows to finance the 44% equity injection. OPG should have an equal or greater amount related to this 44% interest cost collected from ratepayers through annual cash payments.
- ~~The interest cost will continue to build during the lock-up period as more principal is borrowed, resulting in potentially billions of aggregate interest owed by the Province to the capital markets.~~

Commented [FC21]: Redeemable rights are really a call or put option and should be priced accordingly. In absence of this one of the parties is providing a subsidy to the other side.

Commented [AP22]: OPG TB has mentioned a 10% premium on buyback, but this could still be construed as a benefit as the 10% return over a 10 year period does not reflect the risk premium. Threatens the GBE status of OPG, which could lead to full consolidation in Public Accounts.

Commented [BA23]: I'll stand to be corrected by you CFA types, but in economics an inflection point is the point where a curve changes from concave to convex or vice versa. Here we are talking about two lines are crossing. Just want to make sure we have correct terminology so that we don't get called us out later by some (other) smarty pants.

Commented [SQ224]: How?

The pro-rata that occurs is on the IESO asset being purchased.
-The Province keeps its interest costs outside the Trust as its an equity injection.
-Assume OPG flows through its interest costs through operations?
-How does OPGT pay for debt-servicing cost of the debt it is raising?

- OPG may have the potential to lower its borrowing/equity injection costs with the "unpaid portion" of interest related to the Provincial debt for the 44% equity injections. Establishing a redemption premium that takes into account the compounded cost of the equity financing could "make the province whole" upon redemption on a further date. Valuation options are currently being discussed.

- It may be necessary to establish a flow-through of cash from OPG to the Province through some type of return, such as a dividend ~~or the SPV arrangement could be viewed as receiving an interest free loan or subsidy from the Province~~

- In order to reasonably guarantee ~~this~~a return to the Province, it may be necessary to establish a separate class of preferred shares with a dividend yield ~~related~~associated with ~~to~~ the interest cost of the Province's ~~related debt~~borrowing costs or provide a mechanism for the interest cost to be recovered on a non-cash basis, e.g. through a form of dividend reinvestment plan.

- A preferred equity structure~~This~~ could potentially impact OPG's credit ratings if rating agencies view the preferred shares as debt rather than equity.

- Legislation is still determining the actual rate to be charged to ratepayers. In the most recent shared draft, a few options were being considered

    - Interest and other financing (e.g., admin costs), as well as the principal portion of the GA financing when those payments commence.

    - The ability for OPG to earn a return, i.e., a higher rate charged to ratepayers than the actual total financing and principal costs.

    - The ability for OPG to earn a return, but with a cap on profits.

2) EQUITY INJECTIONS

KEY POINTS:

- The [legislation, corporate rules, corporate structure, by-laws etc.] that allow for equity injections should have consideration that it is in the Province's ***economic/financial interests*** to proceed with monthly equity injections in order to finance the trust, with appropriate return on risk.

- Equity injections can be viewed as a subsidy if the province is not compensated for its risks.

    - This may be mitigated with a redeemable feature for the equity at a properly valued premium.

Commented [AP25]: This is not necessarily true as an acceptable premium associated with the buyback feature would mitigate this concern. Maybe keep the subsidy issue separate as mentioned above? The main risk is that the Province will be paying several hundred millions to billions of interest over time with no cash flow from OPG. OPG in turn would have the same amount of cash on its books – either idle or used for their own initiatives.

Commented [JK26]: Explain. Is this risk to OPG Trust, OPG or the Province.

Commented [AP27R26]: Risk is to OPG Trust/OPG because, if preferred equity is issued, then it could be viewed as debt.

Commented [SK828]: Or maybe to put it another way, nothing here should preclude the Province's right to return a sufficient return on its equity investment given the risk premium.

- Consideration is also required for the Province's cash needs in order to finance the borrowing for equity injections.
    - This may be mitigated with ongoing dividend payments and/or a redeemable feature for the equity.
    - Issuance of preferred equity may allow for frequent, stable dividend payments, but may be viewed as OPG debt by credit rating agencies.
    - A redeemable feature would provide for sufficient cash for the province to pay back bondholders.

Details

- The monthly equity injections from the Province to OPG may be considered a subsidy due to the frequency and large outstanding balance.
    - A GBE receiving subsidies frequently for a long period of time (in this case monthly and for several years) may threaten the GBE status since the GBE could be portrayed as being reliant on government funding.
    - This risk is mitigated as only 44% of the GA structure is funded through equity injections and that OPG Trust is a SPV.
- It may be necessary to quantify the overall return from the GA financing structure to the Province to ensure that the Province is "made whole".
    - There is a cost of borrowing associated with the 44% equity injection.
    - If the return from the GA Financing structure is below this amount, the economic rationale behind the equity injection may be lacking.
    - The risk attached to the equity injection (and its eventual composition of the subordinate debt of OPG Trust) may also have to be quantified as a return when considering the feasibility of the initiative.
    - [For example, the economic rationale behind the Hydro One one-time equity injection was that it would help maintain Hydro One's valuation for the IPO. If Hydro One had borrowed debt instead, its value could potentially be lower, leading to lower proceeds to the Province. Taking valuation multiples into consideration, every dollar in equity injected likely resulted in a significantly higher return than a dollar].
- If the Province is not being seen as compensated for its risk behind the equity injections, then the equity injections could be viewed as a subsidy.

Commented [SK829]: Where is this written? Can i have the source?

Commented [AP30R29]: IPSAS 1 defines a GBE as an entity that has all the following characteristics:
(a) Is an entity with the power to contract in its own name;
(b) Has been assigned the financial and operational authority to carry on a business;
(c) Sells goods and services, in the normal course of its business, to other entities at a profit or full cost recovery;
(d) Is not reliant on continuing government funding to be a going concern; and
(e) Is controlled by a public sector entity.

Commented [AP31R29]: From PSAB PS 3070
06 A **government business enterprise** is a government organization that has all of the following characteristics:
(d) It can, in the normal course of its operations, maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity.
.30 A government business enterprise should, in the normal course of its operations, be able to maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity. These revenues include not only amounts from the sale of goods and services, but also transfers 3 received from other governments or sources outside of the government reporting entity.
.32 A government business enterprise differs from other government organizations in its relationship to the government, and its objectives, and operations. A government enterprise represents a financial asset of the government and given its autonomy, business-oriented objectives, and financial self-sufficiency, equity accounting is appropriate.

- Having a redeemable feature on the equity injection for the Province, with a properly valued premium, could allow the Province to be made whole.
    - Would also allow the return of capital to the Province to help settle its external debt obligations related to the equity injection.
- If the equity injections were in the form of preferred shares with a cumulative dividend, it could allow for frequent cash flows from OPG to the Province.
    - The shares could be redeemable at par after a certain lock-up period (similar to Hydro One Series 1 and 2 preferred shares).
    - However, credit rating agencies may consider this as a form of debt which could affect OPG's credit ratings or the Trust's ratings.
    - The dividend yield would have to reflect, to a certain extent, the risk or cost of the Province.

SCENARIOS / OPTIONS

Scenarios:

- 0) Interest only (cost of funds for Province)
- 1) Redemption (premium)
- 2) Dividends
- 3) Reduced equity injection
- 4a) Preferred Equity (dividends)
- 4b) Cumulative Dividend

GA FINANCING – EQUITY INJECTION OVERVIEW

Formatted: Font: 12 pt, Bold

Formatted: Font: Bold

Formatted: Font: 12 pt, Bold

Thie Province ~~would be required to~~is moving ahead with its support for the Global Adjustment (GA) ~~f~~smoothing mechanism~~financing plan~~. ~~by~~Under the mechanism, ~~-~~the Province will be providing equity injections to Ontario Power Generation Inc. (OPG), ~~that would~~ representing 44% of total GA financing requirements. This document ~~serves to~~ provides an overview of the proposed GA financing structure, including the provincial equity injections, and discusses steps that must be undertaken by the P~~p~~rovince to implement the equity injections. ~~implementation mechanism, timelines and other issues for the GA Financing and the Equity Injection for Ontario Power Generation (OPG) from the Province.~~

Formatted: 2. Heading 1, No bullets or numbering

GA FINANCING OVERVIEW

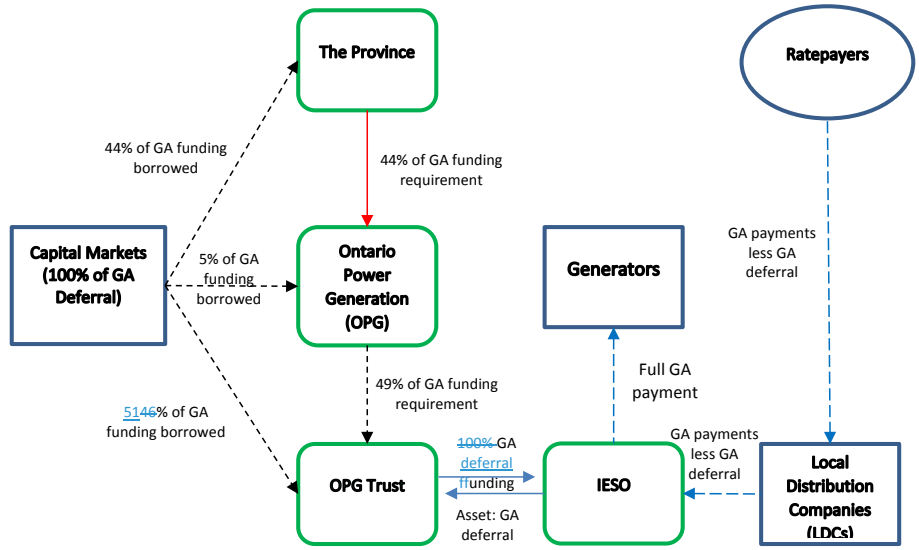
The Ministry of Energy, Ministry of Finance and the Ontario Financing Authority (OFA) are coordinating with OPG to implement a Global Adjustment (GA) smoothing mechanism.

Under the current proposal, OPG ~~will~~ would develop a Special Purpose Vehicle (SPV) referred to as "OPG Trust" which will use 100% debt financing to purchase regulatory assets from the IESO. These regulatory assets represent the portion of RPP GA expenses deferred to future years.~~the "right to collect" assets from the IESO in return for cash proceeds.~~ IESO would use the cash from the OPG Trust~~,~~ to make up the shortfall in GA recoveries from ratepayers in order to fully compensate generators.

Commented [BA1]: May be good to make 2nd part clear upfront. Redraft if I didn't get language right.

GA Deferral Process

Formatted: Font: Bold



~~OP~~OPG Trust w~~ould ill be structured to~~ finance 51% of its funding requirements through the capital markets as senior debt with the remaining 49% being provided by OPG as subordinated debt. ~~OPG would contribute the remaining 49% as subordinated debt.~~

The 49% subordinated debt from OPG will be financed through debt OPG issues in its own corporate capacity, from the capital markets (5%) and through equity injections from the Province (44%). The Province will finance its equity injection through its annual borrowing program - from issuing debt into the capital markets.

~~Annual payments will be received by~~ OPG Trust would recover ~~for~~ financing & administrative costs from the ratepayers. OPG Trust may also set up a short-term borrowing facility to facilitate any market timings for its share of debt issuances. [NTD: is this still up for discussion].

~~STAFF COMMENTS: UNCLEAR IF THESE FINANCING COSTS/ANNUAL PAYMENTS WILL BE RECEIVED BY OPG TRUST [TBC: FROM IESO OR RATEPAYERS DIRECTLY]?~~

~~THE MECHANISM BY WHICH THE FINANCING IS CONDUCTED IS YET TO BE FINALIZED. BOTH OPG ON BEHALF OF OPG TRUST AND THE OFA ON BEHALF OF THE PROVINCE ARE SEPARATELY LOOKING TO ENGAGE 'FINANCIAL ADVISORS' FOR THE PURPOSE OF DETERMINING OPTIMAL FINANCING STRUCTURES, E.G. DEBT COVENANTS, TERMS AND CONDITIONS SUCH AS IF TO BE CALLABLE, REDEEMABLE, ETC. [ALSO SEE BELOW.]~~

Commented [AP2]: This has been confirmed by OPG – would be hard for Trust to operate as a going concern if not bringing in cash flow.

Commented [BA3]: Confused here. Are we referring to interest received or OPG annual payments to Trust.

Formatted: 2. Heading 1

Commented [AP4]: From IESO according to white paper who would collect the payments and remit to OPG.

Commented [BA5]: Also confused about comment: Should that be ".....received by OPG Trust"

Commented [AP6R5]: Yes, you are right. Corrected.

Commented [JK7]: Check with SIFB or CMD on the right terminology.

Commented [FC8]: To me this is part of the terms and conditions

~~BORROWING~~

- ~~THE 51% FINANCING CONDUCTED BY OPG TRUST AND THE 5% FINANCING VIA OPG WILL INITIALLY BE FINANCED THROUGH A SHORT TERM CREDIT FACILITY WHICH WILL BE OBTAINED BY OPG. OPG HAS COMMUNICATED THAT THIS MAY BE THROUGH SHORT TERM DEBT, RAISED FROM THE CANADIAN MONEY MARKETS.~~

  - ~~OPG STAFF FURTHER CLARIFIED THAT THIS WOULD BE FACILITATED THROUGH A NEW FACILITY AND TO BE PUT IN PLACE BY OPG TRUST AND NOT ANY OF THE EXISTING FACILITIES OPG CURRENTLY HAS IN PLACE.~~

- ~~LONGER TERM DEBT WILL BE ISSUED AS SOON AS POSSIBLE, SUBJECT TO MARKET TIMING CONSTRAINTS.~~

  - ~~OPG TO RETAIN 3 DEALERS TO ADVICE ON THE LONG TERM BORROWING AND FINANCING OF THE GA.~~

  - ~~THE OFA IS ALSO EXPECTED TO RETAIN A DEALER TO PROVIDE DUE DILIGENCE AND INDEPENDENT ADVICE FOR THE PROVINCE'S EQUITY INJECTION [TBC] INTO OPG AND LONG TERM BORROWING BY OPG TRUST [TBC].~~

- ~~THE LONG TERM DEBT ISSUED BY OPG TRUST MAY ALSO BE CALLABLE TO BUY BACK THE BONDS ONCE THE FINANCED GA STARTS TO BE REPAID. [TBC]~~

EQUITY INJECTION PROCESS OVERVIEW ~~MECHANISM~~

~~OVERVIEW~~

- IESO proposes that OPG Trust would purchase the GA~~E~~ deferral asset on a monthly basis. The ~~The~~ Province would, therefore, be required to ~~is expected to~~ provide monthly equity injections to OPG.
- In return, OPG would issue new shares to the Province. It is proposed that shares would be purchased at the book value of ~~at a value of~~ $20 per share. [for discussion]

The proposed process would be as follows:

- ~~These share issuances currently environed~~ envisioned ~~to be redeemable by the Province and OPG may also have rights to buy back the shares [TBC].~~

Formatted: 2. Heading 1, Indent: Left: 0"

Formatted: 2. Heading 1

Commented [JK9]: Did I get this right?

Commented [FC10]: If this is the case wouldn't they need a minimum amount of equity to be put in the Trust at the onset? I'm assuming OPG nor the Province will be providing a back stop to the Trust.

Commented [JK11]: I understood OFA's interest was more on how to structure its borrowing than other aspects but open to hearing different view.

Commented [JK12]: Why would OFA's borrowing be different? Carlos mentioned certain features, though would involve premiums?

Formatted: 2. Heading 1, Indent: Left: 0"

Formatted: 2. Heading 1

Formatted: Space After: 0 pt, No bullets or numbering

Commented [FC13]: Not quarterly?

Commented [JK14]: Monthly now.

Commented [BA15R14]: For clarity, should we start with the broader statement that IESO will require monthly payments from the Trust, which in turn requires the Province to make monthly equity injections to OPG?

Formatted: 7. Bullet 2

Commented [FC16]: Redeemable rights are really a call or put option and should be priced accordingly. In absence of this one of the parties is providing a subsidy to the other side.

Commented [AP17]: OPG TB has mentioned a 10% premium on buyback, but this could still be construed as a benefit as the 10% return over a 10 year period does not reflect the risk premium. Threatens the GBE status of OPG, which could lead to full consolidation in Public Accounts.

- ~~This would provide the Province with a flexible mechanism to redeem its equity investment in OPG, and allow OPG to return to a more suitable capital structure once the GA financing program has subsided.~~
- ~~Redeemable terms may include a lock-out period that permits the Province to redeem after a set time period.~~
- ~~[TBC] Shares may be considered preferred shares. Unclear whether at redemption these shares will have a non-par value (ie. not $20 per share).~~
- ~~[TBC] OPG staff have indicated that the current plan is to pay no interest or dividends for the 44% equity injection. Under such a scenario, an appropriate pricing or premium on buyback would need to be priced in or would potentially entail risks described under the Consideration section below.~~

~~Process~~

- OPG Trust would receive ~~the~~ notice from the IESO to purchase the asset from IESO.
-
- The Province~~OFA~~ in turn would ~~A notice would be~~ received notice from OPG for~~by~~ the OFA ~~for~~ to provide 44% of the asset for the equity injection. [This asset would be equal to the GA amount being deferred and would not include any financing or administrative costs incurred by OPG or OPG Trust]
-
- Separately, OPG and OPG Trust would ~~take out~~raise debt from the capital markets totaling 56% of the IESO asset value. [Is this proposing that OPG issue debt on its own or through the OEFC as it currently does?]
-
- There is a 5 business day transaction window from the timing of the notice received by the OFA to payment and settlement with the [or OPG?] IESO.

~~[let's make this as general as necessary]~~

Decisions and Approvals Required for Province's Equity Financing

The mechanics of a capital contribution into OPG could follow the precedent previously completed by the Province in making a capital contribution into Hydro One prior to its initial public offering.

Formatted: 7. Bullet 1

Commented [AP18]: I am not sure what this sentence means.

Commented [SQ219]: [TBC whether 5 business days required for OFA to provide payment to OPG or whether 5 business days is for the entire process of OFA->OPG->OPGT].

Commented [SQ220]: Understanding that this is a equity injection, are we going to be tracking the "interest costs" related to this equity injection/investment and if so, with what mechanism?

1. The Province would create an "Operating Asset" line for the purchasing of OPG equity. The creation of this line and the annual appropriation for the Operating Asset would require Treasury Board/Management Board of Cabinet approval.

    - The Operating Asset would either be categorized as a voted item or a statutory item. While the program would be implemented through legislation, it is assumed that the decisions around the capital contributions would be made outside of legislation. Based on this assumption, the analysis that follows assumes the Operating Asset would be categorized as a voted item.

2. The creation of the Operating Asset would need to be included in the Province's tabling of Estimates in the Legislature (tabled following the release of the Provincial Budget). If the Operating Asset is not included in the Estimates, the Province would need to table Supplementary Estimates in the Legislature.

3. The Province would also need to seek approval, through Estimates or Supplementary Estimates, of an appropriation for the amount of the Operating Asset (i.e., approval to make a capital contribution up to the approved amount). The Province could seek approval of a placeholder amount of $1,000, or an estimate of the total projected required capital contribution for that fiscal year.

    - Under the assumption that the Operating Asset is categorized as a voted item, any capital contribution required over and above the approved amount would either require the implementing Ministry to find expense offsets, or tabling of Supplementary Estimates. Given the magnitude of the initiative, staff have assumed that finding expense offsets is not a viable option.

4. Following the above approvals, the Province would be able to make the capital contribution into OPG and receive shares in the Trust in return.

    - Note that as with the Hydro One capital contribution, this capital contribution represents a balance sheet movement and would not create an upfront fiscal impact to the Province (exchange of cash for shares – both assets).

~~[HOW PROVINCE WILL RECEIVE RETURNS]~~MECHANISM FOR RETURN OF CAPITAL TO PROVINCE

Formatted: 2. Heading 1

...Under the mechanism, the Province will be providing an equity injection into OPG who would then use that contribution to purchase debt from OPG Trust. The current understanding is that that the proposed share price would be $20 at the time of purchase.

Subject to how the equity injection is structured, the Province would be able to sell back the shares to OPG at the same $20 per share in the future. This, however, would only result in the return of its equity injection and without any return, the Province would be responsible for the carrying costs of the equity injection. The following methods can be utilized to ensure the Province receives its equity contribution plus a return.

1. Dividend (Common Shares)

   The Province would incur interest associated with the debt it borrows to finance the 44% equity injection. OPG should have an equal or greater amount related to this 44% interest cost collected from ratepayers through annual cash payments. OPG could elect to provide the interest cost collected back to the Province as a dividend to cover the Province's cost of borrowing for its equity injection.

2. Dividends (Preferred Shares)

   In order to reasonably guarantee a return to the Province, it may be necessary to establish a separate class of preferred shares with a dividend yield associated with the interest cost of the Province's borrowing costs or provide a mechanism for the interest cost to be recovered on a non-cash basis, e.g. through a form of dividend reinvestment plan.

   A preferred equity structure could potentially impact OPG's credit ratings if rating agencies view the preferred shares as debt rather than equity.

3. Cumulative Dividend

   The Province and OPG could

~~1.~~ Redemption of Shares at a Premium

   Equity injections can be viewed as a subsidy if the province is not compensated for its risks. Under such a scenario, an appropriate pricing or premium on buyback would need to be priced in so that when the Province sells back its shares, it receives a higher price per share than the proposed $20/share book value. OPG staff have signaled to CEFD staff that their current plan is to not provide the Province with a cash flow, in dividends or otherwise, for the 44% equity injection until the point in time where the ratepayers

Formatted: Font: 12 pt

Formatted: Normal, Indent: Left: 0", Space After: 8 pt, Line spacing: Multiple 1.08 li

Formatted: Underline

Formatted: Numbered + Level: 1 + Numbering Style: 1, 2, 3, … + Start at: 1 + Alignment: Left + Aligned at: 0.25" + Indent at: 0.5"

Formatted: Underline

Formatted: Underline

Formatted: No underline

Formatted: Underline

Formatted: List Paragraph, Space After: 0 pt, Line spacing: single

Formatted: Font: 12 pt, Underline

start to pay down the deferred GA. [TBC]

4.

Other Considerations:

1. OPG will use the Province's equity injection to purchase subordinated debt from OPG Trust. The Province should be requesting the same return on its equity contribution as to the rate OPG receives from OPG Trust. This return could be higher than the Province's cost of funds.

~~Scenarios:~~

- 0) Interest only (cost of funds for Province)
- 1) Redemption (premium)
- 2) Dividends
- 3) Reduced equity injection
- 4a) Preferred Equity (dividends)
- 4b) Cumulative Dividend

…[OPTIONS]

LEGISLATION AND TIMING

- The proposed timing for the legislation is May, early June.
- It's unclear how these rates would be effective to consumers if the RPP prices are reset on May 1 and November 1 of every year.
  - Furthermore, the RPP prices are announced by the OEB in mid-April and mid-October annually.
  - Unclear on whether the timing for this implementation mechanism would be sufficient for May 1, RPP prices.

[TBC] TBS would provide an annual allocation, with a three-year program review cycle.

•

Formatted: Underline

Formatted: List Paragraph, Numbered + Level: 1 + Numbering Style: 1, 2, 3, … + Start at: 1 + Alignment: Left + Aligned at: 0.25" + Indent at: 0.5"

Formatted: Underline

Formatted: Indent: Left: 0.25", No bullets or numbering

Formatted: Numbered + Level: 1 + Numbering Style: 1, 2, 3, … + Start at: 1 + Alignment: Left + Aligned at: 0.5" + Indent at: 0.75"

Formatted: Highlight

Formatted: 2. Heading 1, No bullets or numbering

Formatted: 2. Heading 1, Indent: Left: 0"

END OF MAIN SECTION

THE TEXT BELOW IS EQUITY INJECTION DISCUSSION GATHERED FROM A COUPLE OF NOTES. LET'S REVIEW WITH EYE TO DETERMINING WHICH, IF ANY POINTS BELONG IN MAIN SECTION ABOVE AND ORGANIZING REMAINING POINTS.

OTHER PROVINCIAL EQUITY INJECTION ~~ADDITIONAL CONCERNS~~CONSIDERATIONS AND RISKS ~~/ POTENTIAL RISKS TO THE SPV ARRANGEMENT~~

these share issuances currently envisioned to be redeemable by the Province and OPG may also have rights to buy back the shares [TBC].

- This would provide the Province with a flexible mechanism to redeem its equity investment in OPG, and allow OPG to return to a more suitable capital structure once the GA financing program has subsided.
- Redeemable terms may include a lock-out period that permits the Province to redeem after a set time period.
- [TBC] Shares may be considered preferred shares. Unclear whether at redemption these shares will have a non-par value (ie. not $20 per share).

- [TBC] OPG staff have indicated that the current plan is to pay no interest or dividends for the 44% equity injection. Under such a scenario, an appropriate pricing or premium on buyback would need to be priced in or would potentially entail risks described under the Consideration section below. OPG staff have signaled to CEFD staff that their current plan is to not provide the Province with a cash flow, in dividends or otherwise, for the 44% equity injection until the ~~proposed lock-up period ends~~'~~inflection~~' point in time where the ratepayers start to pay down the deferred GA.
- Under the current plan, only the 56% funded through capital markets, directly by OPG Trust or by OPG, would be paid interest over time.
- While the implementation of th~~e~~is proposed structure is ~~hypothetically~~currently viewed as fiscally neutral on an accounting basis, there is some concern over the cash flow-through of this structure with no flow through of interest or dividends over time.
- The Province would~~ill~~ ~~have~~~~incurr~~incur interest associated with the debt it borrows to finance the 44% equity injection. OPG should have an equal or greater amount related to this 44% interest cost collected from ratepayers through annual cash payments.
- ~~The interest cost will continue to build during the lock-up period as more principal is borrowed, resulting in potentially billions of aggregate interest owed by the Province to the capital markets.~~

Commented [FC21]: Redeemable rights are really a call or put option and should be priced accordingly. In absence of this one of the parties is providing a subsidy to the other side.

Commented [AP22]: OPG TB has mentioned a 10% premium on buyback, but this could still be construed as a benefit as the 10% return over a 10 year period does not reflect the risk premium. Threatens the GBE status of OPG, which could lead to full consolidation in Public Accounts.

Commented [BA23]: I'll stand to be corrected by you CFA types, but in economics an inflection point is the point where a curve changes from concave to convex or vice versa. Here we are talking about two lines are crossing. Just want to make sure we have correct terminology so that we don't get called us out later by some (other) smarty pants.

Commented [SQ224]: How?

The pro-rata that occurs is on the IESO asset being purchased.
-The Province keeps its interest costs outside the Trust as its an equity injection.
-Assume OPG flows through its interest costs through operations?
-How does OPGT pay for debt-servicing cost of the debt it is raising?

- OPG may have the potential to lower its borrowing/equity injection costs with the "unpaid portion" of interest related to the Provincial debt for the 44% equity injections. Establishing a redemption premium that takes into account the compounded cost of the equity financing could "make the province whole" upon redemption on a further date. Valuation options are currently being discussed.

- It may be necessary to establish a flow-through of cash from OPG to the Province through some type of return, such as a dividend ~~or the SPV arrangement could be viewed as receiving an interest free loan or subsidy from the Province~~

- In order to reasonably guarantee ~~this~~a return to the Province, it may be necessary to establish a separate class of preferred shares with a dividend yield ~~related~~associated with ~~to~~ the interest cost of the Province's ~~related debt~~borrowing costs or provide a mechanism for the interest cost to be recovered on a non-cash basis, e.g. through a form of dividend reinvestment plan.

- A preferred equity structure~~This~~ could potentially impact OPG's credit ratings if rating agencies view the preferred shares as debt rather than equity.

- Legislation is still determining the actual rate to be charged to ratepayers. In the most recent shared draft, a few options were being considered

    - Interest and other financing (e.g., admin costs), as well as the principal portion of the GA financing when those payments commence.

    - The ability for OPG to earn a return, i.e., a higher rate charged to ratepayers than the actual total financing and principal costs.

    - The ability for OPG to earn a return, but with a cap on profits.

2) EQUITY INJECTIONS

KEY POINTS:

- The [legislation, corporate rules, corporate structure, by-laws etc.] that allow for equity injections should have consideration that it is in the Province's ***economic/financial interests*** to proceed with monthly equity injections in order to finance the trust, with appropriate return on risk.

- Equity injections can be viewed as a subsidy if the province is not compensated for its risks.

    - This may be mitigated with a redeemable feature for the equity at a properly valued premium.

Commented [AP25]: This is not necessarily true as an acceptable premium associated with the buyback feature would mitigate this concern. Maybe keep the subsidy issue separate as mentioned above? The main risk is that the Province will be paying several hundred millions to billions of interest over time with no cash flow from OPG. OPG in turn would have the same amount of cash on its books – either idle or used for their own initiatives.

Commented [JK26]: Explain. Is this risk to OPG Trust, OPG or the Province.

Commented [AP27R26]: Risk is to OPG Trust/OPG because, if preferred equity is issued, then it could be viewed as debt.

Commented [SK828]: Or maybe to put it another way, nothing here should preclude the Province's right to return a sufficient return on its equity investment given the risk premium.

- Consideration is also required for the Province's cash needs in order to finance the borrowing for equity injections.
    - This may be mitigated with ongoing dividend payments and/or a redeemable feature for the equity.
    - Issuance of preferred equity may allow for frequent, stable dividend payments, but may be viewed as OPG debt by credit rating agencies.
    - A redeemable feature would provide for sufficient cash for the province to pay back bondholders.

Details

- The monthly equity injections from the Province to OPG may be considered a subsidy due to the frequency and large outstanding balance.
    - A GBE receiving subsidies frequently for a long period of time (in this case monthly and for several years) may threaten the GBE status since the GBE could be portrayed as being reliant on government funding.
    - This risk is mitigated as only 44% of the GA structure is funded through equity injections and that OPG Trust is a SPV.
- It may be necessary to quantify the overall return from the GA financing structure to the Province to ensure that the Province is "made whole".
    - There is a cost of borrowing associated with the 44% equity injection.
    - If the return from the GA Financing structure is below this amount, the economic rationale behind the equity injection may be lacking.
    - The risk attached to the equity injection (and its eventual composition of the subordinate debt of OPG Trust) may also have to be quantified as a return when considering the feasibility of the initiative.
    - [For example, the economic rationale behind the Hydro One one-time equity injection was that it would help maintain Hydro One's valuation for the IPO. If Hydro One had borrowed debt instead, its value could potentially be lower, leading to lower proceeds to the Province. Taking valuation multiples into consideration, every dollar in equity injected likely resulted in a significantly higher return than a dollar].
- If the Province is not being seen as compensated for its risk behind the equity injections, then the equity injections could be viewed as a subsidy.

Commented [SK829]: Where is this written? Can i have the source?

Commented [AP30R29]: IPSAS 1 defines a GBE as an entity that has all the following characteristics:
(a) Is an entity with the power to contract in its own name;
(b) Has been assigned the financial and operational authority to carry on a business;
(c) Sells goods and services, in the normal course of its business, to other entities at a profit or full cost recovery;
(d) Is not reliant on continuing government funding to be a going concern; and
(e) Is controlled by a public sector entity.

Commented [AP31R29]: From PSAB PS 3070
06 A **government business enterprise** is a government organization that has all of the following characteristics:
(d) It can, in the normal course of its operations, maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity.
.30 A government business enterprise should, in the normal course of its operations, be able to maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity. These revenues include not only amounts from the sale of goods and services, but also transfers 3 received from other governments or sources outside of the government reporting entity.
.32 A government business enterprise differs from other government organizations in its relationship to the government, and its objectives, and operations. A government enterprise represents a financial asset of the government and given its autonomy, business-oriented objectives, and financial self-sufficiency, equity accounting is appropriate.

- Having a redeemable feature on the equity injection for the Province, with a properly valued premium, could allow the Province to be made whole.
    - Would also allow the return of capital to the Province to help settle its external debt obligations related to the equity injection.
- If the equity injections were in the form of preferred shares with a cumulative dividend, it could allow for frequent cash flows from OPG to the Province.
    - The shares could be redeemable at par after a certain lock-up period (similar to Hydro One Series 1 and 2 preferred shares).
    - However, credit rating agencies may consider this as a form of debt which could affect OPG's credit ratings or the Trust's ratings.
    - The dividend yield would have to reflect, to a certain extent, the risk or cost of the Province.

SCENARIOS / OPTIONS

Scenarios:

- 0) Interest only (cost of funds for Province)
- 1) Redemption (premium)
- 2) Dividends
- 3) Reduced equity injection
- 4a) Preferred Equity (dividends)
- 4b) Cumulative Dividend

GA FINANCING – EQUITY INJECTION OVERVIEW

Formatted: Font: 12 pt, Bold

Formatted: Font: Bold

Formatted: Font: 12 pt, Bold

Thie Province ~~would be required to~~is moving ahead with its support for the Global Adjustment (GA) ~~f~~smoothing mechanism~~inancing plan~~. ~~by~~Under the mechanism, ~~-~~the Province will be providing equity injections to Ontario Power Generation Inc. (OPG), ~~that would~~ representing 44% of total GA financing requirements. This document ~~serves to~~ provides an overview of the proposed GA financing structure, including the provincial equity injections, and discusses steps that must be undertaken by the P~~p~~rovince to implement the equity injections. ~~implementation mechanism, timelines and other issues for the GA Financing and the Equity Injection for Ontario Power Generation (OPG) from the Province.~~

Formatted: 2. Heading 1, No bullets or numbering

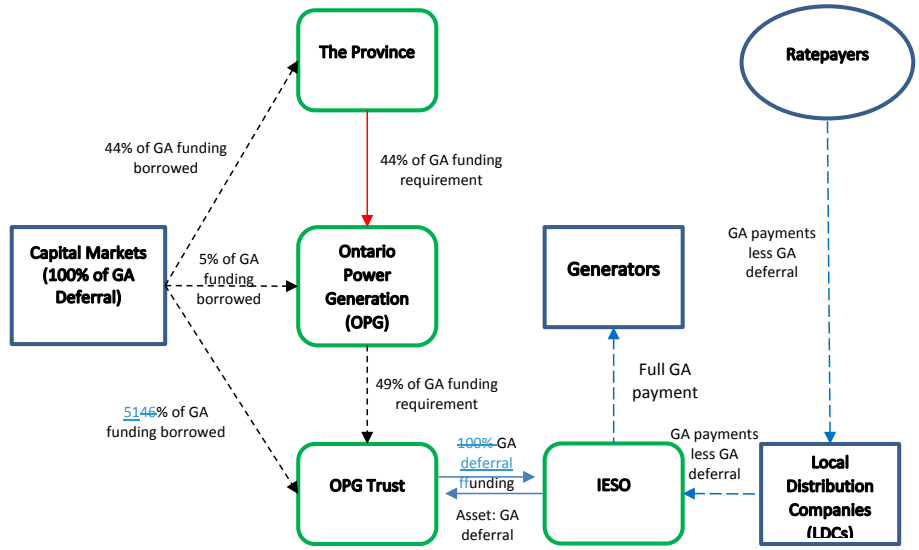
GA FINANCING OVERVIEW

The Ministry of Energy, Ministry of Finance and the Ontario Financing Authority (OFA) are coordinating with OPG to implement a Global Adjustment (GA) smoothing mechanism.

Under the current proposal, OPG ~~will~~ would develop a Special Purpose Vehicle (SPV) referred to as "OPG Trust" which will use 100% debt financing to purchase regulatory assets from the IESO. These regulatory assets represent the portion of RPP GA expenses deferred to future years.~~the "right to collect" assets from the IESO in return for cash proceeds.~~ IESO would use the cash from the OPG Trust~~,~~ to make up the shortfall in GA recoveries from ratepayers in order to fully compensate generators.

GA Deferral Process

Formatted: Font: Bold



~~OP~~OPG Trust w~~ould ill be structured to~~ finance 51% of its funding requirements through the capital markets as senior debt with the remaining 49% being provided by OPG as subordinated debt. ~~OPG would contribute the remaining 49% as subordinated debt.~~

The 49% subordinated debt from OPG will be financed through debt OPG issues in its own corporate capacity, from the capital markets (5%) and through equity injections from the Province (44%). The Province will finance its equity injection through its annual borrowing program - from issuing debt into the capital markets.

~~Annual payments will be received by~~ OPG Trust would recover ~~for~~ financing & administrative costs from the ratepayers. OPG Trust may also set up a short-term borrowing facility to facilitate any market timings for its share of debt issuances. [NTD: is this still up for discussion].

~~STAFF COMMENTS: UNCLEAR IF THESE FINANCING COSTS/ANNUAL PAYMENTS WILL BE RECEIVED BY OPG TRUST [TBC: FROM IESO OR RATEPAYERS DIRECTLY]?~~

~~THE MECHANISM BY WHICH THE FINANCING IS CONDUCTED IS YET TO BE FINALIZED. BOTH OPG ON BEHALF OF OPG TRUST AND THE OFA ON BEHALF OF THE PROVINCE ARE SEPARATELY LOOKING TO ENGAGE 'FINANCIAL ADVISORS' FOR THE PURPOSE OF DETERMINING OPTIMAL FINANCING STRUCTURES, E.G. DEBT COVENANTS, TERMS AND CONDITIONS SUCH AS IF TO BE CALLABLE, REDEEMABLE, ETC. [ALSO SEE BELOW.]~~

Formatted: 2. Heading 1

Commented [AP1]: From IESO according to white paper who would collect the payments and remit to OPG.

Commented [BA2]: Also confused about comment: Should that be "…..received by OPG Trust"

Commented [AP3R2]: Yes, you are right. Corrected.

Commented [JK4]: Check with SIFB or CMD on the right terminology.

Commented [FC5]: To me this is part of the terms and conditions

~~BORROWING~~

- ~~THE 51% FINANCING CONDUCTED BY OPG TRUST AND THE 5% FINANCING VIA OPG WILL INITIALLY BE FINANCED THROUGH A SHORT TERM CREDIT FACILITY WHICH WILL BE OBTAINED BY OPG. OPG HAS COMMUNICATED THAT THIS MAY BE THROUGH SHORT TERM DEBT, RAISED FROM THE CANADIAN MONEY MARKETS.~~

  - ~~OPG STAFF FURTHER CLARIFIED THAT THIS WOULD BE FACILITATED THROUGH A NEW FACILITY AND TO BE PUT IN PLACE BY OPG TRUST AND NOT ANY OF THE EXISTING FACILITIES OPG CURRENTLY HAS IN PLACE.~~

- ~~LONGER TERM DEBT WILL BE ISSUED AS SOON AS POSSIBLE, SUBJECT TO MARKET TIMING CONSTRAINTS.~~

  - ~~OPG TO RETAIN 3 DEALERS TO ADVICE ON THE LONG TERM BORROWING AND FINANCING OF THE GA.~~

  - ~~THE OFA IS ALSO EXPECTED TO RETAIN A DEALER TO PROVIDE DUE DILIGENCE AND INDEPENDENT ADVICE FOR THE PROVINCE'S EQUITY INJECTION [TBC] INTO OPG AND LONG TERM BORROWING BY OPG TRUST [TBC].~~

- ~~THE LONG TERM DEBT ISSUED BY OPG TRUST MAY ALSO BE CALLABLE TO BUY BACK THE BONDS ONCE THE FINANCED GA STARTS TO BE REPAID. [TBC]~~

EQUITY INJECTION PROCESS OVERVIEW ~~MECHANISM~~

~~OVERVIEW~~

- IESO proposes that OPG Trust would purchase the GA~~E~~ deferral asset on a monthly basis. The ~~The~~ Province would, therefore, be required to ~~is expected to~~ provide monthly equity injections to OPG.
- In return, OPG would issue new shares to the Province. It is proposed that shares would be purchased at the book value of ~~at a value of~~ $20 per share. [for discussion]

The proposed process would be as follows:

- ~~These share issuances currently environed~~ envisioned ~~to be redeemable by the Province and OPG may also have rights to buy back the shares [TBC].~~

Formatted: 2. Heading 1, Indent: Left: 0"

Formatted: 2. Heading 1

Commented [JK6]: Did I get this right?

Commented [FC7]: If this is the case wouldn't they need a minimum amount of equity to be put in the Trust at the onset? I'm assuming OPG nor the Province will be providing a back stop to the Trust.

Commented [JK8]: I understood OFA's interest was more on how to structure its borrowing than other aspects but open to hearing different view.

Commented [JK9]: Why would OFA's borrowing be different? Carlos mentioned certain features, though would involve premiums?

Formatted: 2. Heading 1, Indent: Left: 0"

Formatted: 2. Heading 1

Formatted: Space After: 0 pt, No bullets or numbering

Formatted: 7. Bullet 2

Commented [FC10]: Redeemable rights are really a call or put option and should be priced accordingly. In absence of this one of the parties is providing a subsidy to the other side.

Commented [AP11]: OPG TB has mentioned a 10% premium on buyback, but this could still be construed as a benefit as the 10% return over a 10 year period does not reflect the risk premium. Threatens the GBE status of OPG, which could lead to full consolidation in Public Accounts.

- ~~This would provide the Province with a flexible mechanism to redeem its equity investment in OPG, and allow OPG to return to a more suitable capital structure once the GA financing program has subsided.~~
- ~~Redeemable terms may include a lock-out period that permits the Province to redeem after a set time period.~~
- ~~[TBC] Shares may be considered preferred shares. Unclear whether at redemption these shares will have a non-par value (ie. not $20 per share).~~
- ~~[TBC] OPG staff have indicated that the current plan is to pay no interest or dividends for the 44% equity injection. Under such a scenario, an appropriate pricing or premium on buyback would need to be priced in or would potentially entail risks described under the Consideration section below.~~

~~Process~~

- OPG Trust would receive ~~the~~ notice from the IESO to purchase the asset from IESO.
-
- The Province~~OFA~~ in turn would ~~A notice would be~~ receive~~d~~ notice from OPG for~~by~~ the OFA ~~for~~ to provide 44% of the asset for the equity injection. [This asset would be equal to the GA amount being deferred and would not include any financing or administrative costs incurred by OPG or OPG Trust]
-
- Separately, OPG and OPG Trust would ~~take out~~raise debt from the capital markets totaling 56% of the IESO asset value. [Is this proposing that OPG issue debt on its own or through the OEFC as it currently does?]
-
- There is a 5 business day transaction window from the timing of the notice received by the OFA to payment and settlement with the [or OPG?] IESO.

~~[let's make this as general as necessary]~~

Decisions and Approvals Required for Province's Equity Financing

The mechanics of a capital contribution into OPG could follow the precedent previously completed by the Province in making a capital contribution into Hydro One prior to its initial public offering.

Formatted: 7. Bullet 1

1. The Province would create an "Operating Asset" line for the purchasing of OPG equity. The creation of this line and the annual appropriation for the Operating Asset would require Treasury Board/Management Board of Cabinet approval.

    - The Operating Asset would either be categorized as a voted item or a statutory item. While the program would be implemented through legislation, it is assumed that the decisions around the capital contributions would be made outside of legislation. Based on this assumption, the analysis that follows assumes the Operating Asset would be categorized as a voted item.

2. The creation of the Operating Asset would need to be included in the Province's tabling of Estimates in the Legislature (tabled following the release of the Provincial Budget). If the Operating Asset is not included in the Estimates, the Province would need to table Supplementary Estimates in the Legislature.

3. The Province would also need to seek approval, through Estimates or Supplementary Estimates, of an appropriation for the amount of the Operating Asset (i.e., approval to make a capital contribution up to the approved amount). The Province could seek approval of a placeholder amount of $1,000, or an estimate of the total projected required capital contribution for that fiscal year.

    - Under the assumption that the Operating Asset is categorized as a voted item, any capital contribution required over and above the approved amount would either require the implementing Ministry to find expense offsets, or tabling of Supplementary Estimates. Given the magnitude of the initiative, staff have assumed that finding expense offsets is not a viable option.

4. Following the above approvals, the Province would be able to make the capital contribution into OPG and receive shares in the Trust in return.

    - Note that as with the Hydro One capital contribution, this capital contribution represents a balance sheet movement and would not create an upfront fiscal impact to the Province (exchange of cash for shares – both assets).

~~[HOW PROVINCE WILL RECEIVE RETURNS]~~MECHANISM FOR RETURN OF CAPITAL TO PROVINCE

Formatted: 2. Heading 1

...Under the mechanism, the Province will be providing an equity injection into OPG whothat would then use that contribution to purchase debt from OPG Trust. The current understanding is that that the proposed share price would be $20 at the time of purchase.

Subject to how the equity injection is structured, the Province would be able to sell back the shares to OPG at the same $20 per share in the future. This, however, would only result in the return of its equity injection and without any return, the Province would be responsible for the carrying costs of the equity injection. The following methods couldan be utilized to ensureallow the Province receives its equity contribution plus a return related to the cost of financing the equity injections.

1. Dividend (Common Shares)

   The Province would incur interest associated with the debt it borrows to finance the 44% equity injection. OPG should have an equal or greater amount related to this 44% interest cost collected from ratepayers through annual cash payments. OPG could elect to provide the interest cost collected back to the Province as a dividend to cover the Province's cost of borrowing for its equity injection.

2. Dividends (Preferred Shares)

   In order to reasonably guarantee a return to the Province, it may be necessary to establish a separate class of preferred shares with a dividend yield associated with the interest cost of the Province's borrowing costs or provide a mechanism for the interest cost to be recovered on a non-cash basis, e.g., through a form of dividend reinvestment plan or through cumulative preferred dividends that are not paid until principal starts being collected from ratepayers..

   A preferred equity structure could potentially impact OPG's credit ratings if rating agencies view the preferred shares as debt rather than equity.

~~Cumulative Dividend~~

~~The Province and OPG could~~

~~1.~~ Redemption of Shares at a Premium

Equity injections can be viewed as a subsidy if the province is not compensated for its risk or cost of financings. Under such a scenario, an appropriate pricing or premium on buyback would need to be priced in so that when the Province sells back its shares, it receives a higher price per share than the proposed $20/share book value. OPG staff have signaled to CEFD staff that their current plan is to not provide the Province with a

Formatted: Font: 12 pt

Formatted: Normal, Indent: Left: 0", Space After: 8 pt, Line spacing: Multiple 1.08 li

Formatted: Underline

Formatted: Numbered + Level: 1 + Numbering Style: 1, 2, 3, … + Start at: 1 + Alignment: Left + Aligned at: 0.25" + Indent at: 0.5"

Formatted: Underline

Formatted: Underline

Formatted: No underline

Formatted: Underline

Formatted: List Paragraph, Space After: 0 pt, Line spacing: single

Formatted: Font: 12 pt, Underline

cash flow, in dividends or otherwise, for the 44% equity injection until the point in time where the ratepayers start to pay down the deferred GA. [TBC]

3.

~~Other Considerations:~~

- ~~OPG will use the Province's equity injection to purchase subordinated debt from OPG Trust. The Province should be requesting the same return on its equity contribution as to the rate OPG receives from OPG Trust. This return could be higher than the Province's cost of funds.~~

~~Scenarios:~~

LEGISLATION AND TIMING

- The proposed timing for the legislation is May, early June.
- It's unclear how these rates would be effective to consumers if the RPP prices are reset on May 1 and November 1 of every year.
  - Furthermore, the RPP prices are announced by the OEB in mid-April and mid-October annually.
  - Unclear on whether the timing for this implementation mechanism would be sufficient for May 1, RPP prices.

[TBC] TBS would provide an annual allocation, with a three-year program review cycle.

-

~~***END OF MAIN SECTION***~~

Formatted: Underline

Formatted: List Paragraph, Numbered + Level: 1 + Numbering Style: 1, 2, 3, … + Start at: 1 + Alignment: Left + Aligned at: 0.25" + Indent at: 0.5"

Formatted: Underline

Formatted: Indent: Left: 0.25", No bullets or numbering

Formatted: Numbered + Level: 1 + Numbering Style: 1, 2, 3, … + Start at: 1 + Alignment: Left + Aligned at: 0.5" + Indent at: 0.75"

Formatted: Highlight

Formatted: 2. Heading 1, Indent: Left: 0"

~~***THE TEXT BELOW IS EQUITY INJECTION DISCUSSION GATHERED FROM A COUPLE OF NOTES. LET'S REVIEW WITH EYE TO DETERMINING WHICH, IF ANY POINTS BELONG IN MAIN SECTION ABOVE AND ORGANIZING REMAINING POINTS.***~~

~~**OTHER PROVINCIAL EQUITY INJECTION ADDITIONAL CONCERNSCONSIDERATIONS AND RISKS / POTENTIAL RISKS TO THE SPV ARRANGEMENT**~~

~~these share issuances currently envisioned to be redeemable by the Province and OPG may also have rights to buy back the shares [TBC].~~

- ~~This would provide the Province with a flexible mechanism to redeem its equity investment in OPG, and allow OPG to return to a more suitable capital structure once the GA financing program has subsided.~~
- ~~Redeemable terms may include a lock-out period that permits the Province to redeem after a set time period.~~
- ~~[TBC] Shares may be considered preferred shares. Unclear whether at redemption these shares will have a non-par value (ie. not $20 per share).~~
- ~~[TBC] OPG staff have indicated that the current plan is to pay no interest or dividends for the 44% equity injection. Under such a scenario, an appropriate pricing or premium on buyback would need to be priced in or would potentially entail risks described under the Consideration section below. OPG staff have signaled to CEFD staff that their current plan is to not provide the Province with a cash flow, in dividends or otherwise, for the 44% equity injection'inflection' point where the ratepayers start to pay down the deferred GA.~~
- ~~Under the current plan, only the 56% funded through capital markets, directly by OPG Trust or by OPG, would be paid interest over time.~~

- ~~While the implementation of theis proposed currently viewed as with no flow through of interest or dividends over timecouldincurr~~
  - ~~or the SPV arrangement could be viewed as receiving an interest free loan or subsidy from the Provinceassociated withborrowing costs or provide a mechanism for the interest cost to be recovered on a non-cash basis, e.g. through a form of dividend reinvestment planA preferred equity structure~~

~~**2) EQUITY INJECTIONS**~~

~~KEY POINTS:~~

Commented [FC12]: Redeemable rights are really a call or put option and should be priced accordingly. In absence of this one of the parties is providing a subsidy to the other side.

Commented [AP13]: OPG TB has mentioned a 10% premium on buyback, but this could still be construed as a benefit as the 10% return over a 10 year period does not reflect the risk premium. Threatens the GBE status of OPG, which could lead to full consolidation in Public Accounts.

Commented [BA14]: I'll stand to be corrected by you CFA types, but in economics an inflection point is the point where a curve changes from concave to convex or vice versa. Here we are talking about two lines are crossing. Just want to make sure we have correct terminology so that we don't get called us out later by some (other) smarty pants.

Commented [SQ215]: How?

The pro-rata that occurs is on the IESO asset being purchased.
-The Province keeps its interest costs outside the Trust as its an equity injection.
-Assume OPG flows through its interest costs through operations?
-How does OPGT pay for debt-servicing cost of the debt it is raising?

Commented [AP16]: This is not necessarily true as an acceptable premium associated with the buyback feature would mitigate this concern. Maybe keep the subsidy issue separate as mentioned above? The main risk is that the Province will be paying several hundred millions to billions of interest over time with no cash flow from OPG. OPG in turn would have the same amount of cash on its books – either idle or used for their own initiatives.

Commented [JK17]: Explain. Is this risk to OPG Trust, OPG or the Province.

- The [legislation, corporate rules, corporate structure, by-laws etc.] that allow for equity injections should have consideration that it is in the Province's ***economic/financial interests*** to proceed with monthly equity injections in order to finance the trust, with appropriate return on risk.

- Equity injections can be viewed as a subsidy if the province is not compensated for its risks.

    - This may be mitigated with a redeemable feature for the equity at a properly valued premium.

- Consideration is also required for the Province's cash needs in order to finance the borrowing for equity injections.

    - This may be mitigated with ongoing dividend payments and/or a redeemable feature for the equity.

    - Issuance of preferred equity may allow for frequent, stable dividend payments, but may be viewed as OPG debt by credit rating agencies.

    - A redeemable feature would provide for sufficient cash for the province to pay back bondholders.

Details

- The monthly equity injections from the Province to OPG may be considered a subsidy due to the frequency and large outstanding balance.

    - A GBE receiving subsidies frequently for a long period of time (in this case monthly and for several years) may threaten the GBE status since the GBE could be portrayed as being reliant on government funding.

    - This risk is mitigated as only 44% of the GA structure is funded through equity injections and that OPG Trust is a SPV.

- It may be necessary to quantify the overall return from the GA financing structure to the Province to ensure that the Province is "made whole".

    - There is a cost of borrowing associated with the 44% equity injection.

    - If the return from the GA Financing structure is below this amount, the economic rationale behind the equity injection may be lacking.

    - The risk attached to the equity injection (and its eventual composition of the subordinate debt of OPG Trust) may also have to be quantified as a return when considering the feasibility of the initiative.

Commented [SK818]: Or maybe to put it another way, nothing here should preclude the Province's right to return a sufficient return on its equity investment given the risk premium.

Commented [SK819]: Where is this written? Can i have the source?

Commented [AP20R19]: IPSAS 1 defines a GBE as an entity that has all the following characteristics:
(a) Is an entity with the power to contract in its own name;
(b) Has been assigned the financial and operational authority to carry on a business;
(c) Sells goods and services, in the normal course of its business, to other entities at a profit or full cost recovery;
(d) Is not reliant on continuing government funding to be a going concern; and
(e) Is controlled by a public sector entity.

Commented [AP21R19]: From PSAB PS 3070
06 A **government business enterprise** is a government organization that has all of the following characteristics:
(d) It can, in the normal course of its operations, maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity.
.30 A government business enterprise should, in the normal course of its operations, be able to maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity. These revenues include not only amounts from the sale of goods and services, but also transfers 3 received from other governments or sources outside of the government reporting entity.
.32 A government business enterprise differs from other government organizations in its relationship to the government, and its objectives, and operations. A government enterprise represents a financial asset of the government and given its autonomy, business-oriented objectives, and financial self-sufficiency, equity accounting is appropriate.

- [For example, the economic rationale behind the Hydro One one-time equity injection was that it would help maintain Hydro One's valuation for the IPO. If Hydro One had borrowed debt instead, its value could potentially be lower, leading to lower proceeds to the Province. Taking valuation multiples into consideration, every dollar in equity injected likely resulted in a significantly higher return than a dollar].

- If the Province is not being seen as compensated for its risk behind the equity injections, then the equity injections could be viewed as a subsidy.

- Having a redeemable feature on the equity injection for the Province, with a properly valued premium, could allow the Province to be made whole.

  - Would also allow the return of capital to the Province to help settle its external debt obligations related to the equity injection.

- If the equity injections were in the form of preferred shares with a cumulative dividend, it could allow for frequent cash flows from OPG to the Province.

  - The shares could be redeemable at par after a certain lock-up period (similar to Hydro One Series 1 and 2 preferred shares).

  - However, credit rating agencies may consider this as a form of debt which could affect OPG's credit ratings or the Trust's ratings.

  - The dividend yield would have to reflect, to a certain extent, the risk or cost of the Province.

GA FINANCING – EQUITY INJECTION OVERVIEW

Formatted: Font: 12 pt, Bold

Formatted: Font: Bold

Formatted: Font: 12 pt, Bold

Thie Province ~~would be required to~~is moving ahead with its support for the Global Adjustment (GA) ~~f~~smoothing mechanism~~inancing plan~~. ~~by~~Under the mechanism, ~~-~~the Province will be providing equity injections to Ontario Power Generation Inc. (OPG), ~~that would~~ representing 44% of total GA financing requirements. This document ~~serves to~~ provides an overview of the proposed GA financing structure, including the provincial equity injections, and discusses steps that must be undertaken by the P~~p~~rovince to implement the equity injections. ~~implementation mechanism, timelines and other issues for the GA Financing and the Equity Injection for Ontario Power Generation (OPG) from the Province.~~

Formatted: 2. Heading 1, No bullets or numbering

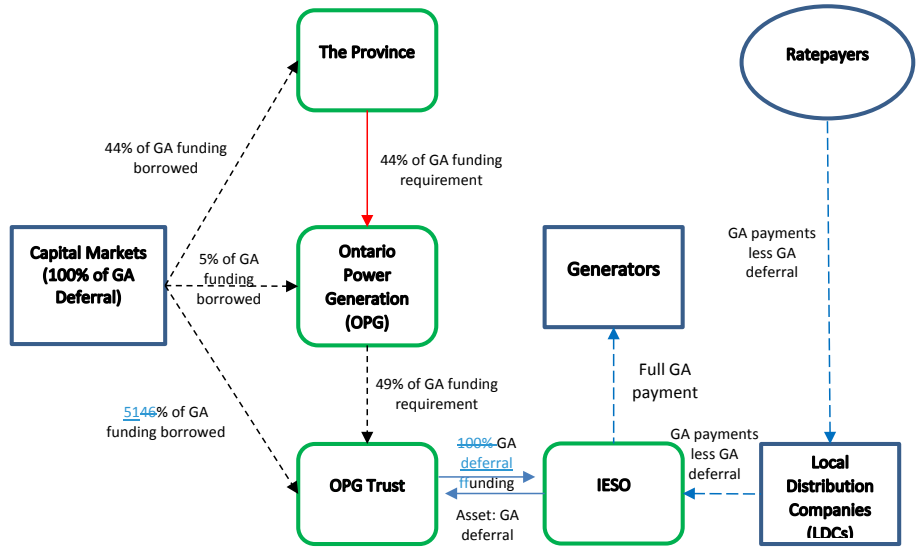
GA FINANCING OVERVIEW

The Ministry of Energy, Ministry of Finance and the Ontario Financing Authority (OFA) are coordinating with OPG to implement a Global Adjustment (GA) smoothing mechanism.

Under the current proposal, OPG ~~will~~ would develop a Special Purpose Vehicle (SPV) referred to as "OPG Trust" which will use 100% debt financing to purchase regulatory assets from the IESO. These regulatory assets represent the portion of RPP GA expenses deferred to future years.~~the "right to collect" assets from the IESO in return for cash proceeds.~~ IESO would use the cash from the OPG Trust~~,~~ to make up the shortfall in GA recoveries from ratepayers in order to fully compensate generators.

GA Deferral Process

Formatted: Font: Bold



~~OP~~OPG Trust w~~ould ill be structured to~~ finance 51% of its funding requirements through the capital markets as senior debt with the remaining 49% being provided by OPG as subordinated debt. ~~OPG would contribute the remaining 49% as subordinated debt.~~

The 49% subordinated debt from OPG will be financed through debt OPG issues in its own corporate capacity, from the capital markets (5%) and through equity injections from the Province (44%). The Province will finance its equity injection through its annual borrowing program - from issuing debt into the capital markets.

~~Annual payments will be received by~~ OPG Trust would recover ~~for~~ financing and~~&~~ administrative costs from the ratepayers. OPG Trust may also set up a short-term borrowing facility to facilitate any market timings for its share of debt issuances. [NTD: for discussion?].

~~STAFF COMMENTS: UNCLEAR IF THESE FINANCING COSTS/ANNUAL PAYMENTS WILL BE RECEIVED BY OPG TRUST [TBC: FROM IESO OR RATEPAYERS DIRECTLY]?~~

~~THE MECHANISM BY WHICH THE FINANCING IS CONDUCTED IS YET TO BE FINALIZED. BOTH OPG ON BEHALF OF OPG TRUST AND THE OFA ON BEHALF OF THE PROVINCE ARE SEPARATELY LOOKING TO ENGAGE 'FINANCIAL ADVISORS' FOR THE PURPOSE OF DETERMINING OPTIMAL FINANCING STRUCTURES, E.G. DEBT COVENANTS, TERMS AND CONDITIONS SUCH AS IF TO BE CALLABLE, REDEEMABLE, ETC. [ALSO SEE BELOW.]~~

Formatted: 2. Heading 1

Commented [AP1]: From IESO according to white paper who would collect the payments and remit to OPG.

Commented [BA2]: Also confused about comment: Should that be "…..received by OPG Trust"

Commented [AP3R2]: Yes, you are right. Corrected.

Commented [JK4]: Check with SIFB or CMD on the right terminology.

Commented [FC5]: To me this is part of the terms and conditions

~~BORROWING~~

- ~~THE 51% FINANCING CONDUCTED BY OPG TRUST AND THE 5% FINANCING VIA OPG WILL INITIALLY BE FINANCED THROUGH A SHORT TERM CREDIT FACILITY WHICH WILL BE OBTAINED BY OPG. OPG HAS COMMUNICATED THAT THIS MAY BE THROUGH SHORT TERM DEBT, RAISED FROM THE CANADIAN MONEY MARKETS.~~

  - ~~OPG STAFF FURTHER CLARIFIED THAT THIS WOULD BE FACILITATED THROUGH A NEW FACILITY AND TO BE PUT IN PLACE BY OPG TRUST AND NOT ANY OF THE EXISTING FACILITIES OPG CURRENTLY HAS IN PLACE.~~

- ~~LONGER TERM DEBT WILL BE ISSUED AS SOON AS POSSIBLE, SUBJECT TO MARKET TIMING CONSTRAINTS.~~

  - ~~OPG TO RETAIN 3 DEALERS TO ADVICE ON THE LONG TERM BORROWING AND FINANCING OF THE GA.~~

  - ~~THE OFA IS ALSO EXPECTED TO RETAIN A DEALER TO PROVIDE DUE DILIGENCE AND INDEPENDENT ADVICE FOR THE PROVINCE'S EQUITY INJECTION [TBC] INTO OPG AND LONG TERM BORROWING BY OPG TRUST [TBC].~~

- ~~THE LONG TERM DEBT ISSUED BY OPG TRUST MAY ALSO BE CALLABLE TO BUY BACK THE BONDS ONCE THE FINANCED GA STARTS TO BE REPAID. [TBC]~~

EQUITY INJECTION PROCESS OVERVIEW ~~MECHANISM~~

~~OVERVIEW~~

- IESO proposes that OPG Trust would purchase the GA~~E~~ deferral asset on a monthly basis. The ~~The~~ Province would, therefore, be required to ~~is expected to~~ provide monthly equity injections to OPG.
- In return, OPG would issue new shares to the Province. It is proposed that shares would be purchased at the book value of ~~at a value of~~ $20 per share. [for discussion]

The proposed process would be as follows:

- ~~These share issuances currently environed~~ envisioned ~~to be redeemable by the Province and OPG may also have rights to buy back the shares [TBC].~~

Formatted: 2. Heading 1, Indent: Left: 0"

Formatted: 2. Heading 1

Commented [JK6]: Did I get this right?

Commented [FC7]: If this is the case wouldn't they need a minimum amount of equity to be put in the Trust at the onset? I'm assuming OPG nor the Province will be providing a back stop to the Trust.

Commented [JK8]: I understood OFA's interest was more on how to structure its borrowing than other aspects but open to hearing different view.

Commented [JK9]: Why would OFA's borrowing be different? Carlos mentioned certain features, though would involve premiums?

Formatted: 2. Heading 1, Indent: Left: 0"

Formatted: 2. Heading 1

Formatted: Space After: 0 pt, No bullets or numbering

Formatted: 7. Bullet 2

Commented [FC10]: Redeemable rights are really a call or put option and should be priced accordingly. In absence of this one of the parties is providing a subsidy to the other side.

Commented [AP11]: OPG TB has mentioned a 10% premium on buyback, but this could still be construed as a benefit as the 10% return over a 10 year period does not reflect the risk premium. Threatens the GBE status of OPG, which could lead to full consolidation in Public Accounts.

- This would provide the Province with a flexible mechanism to redeem its equity investment in OPG, and allow OPG to return to a more suitable capital structure once the GA financing program has subsided.
- Redeemable terms may include a lock-out period that permits the Province to redeem after a set time period.
- [TBC] Shares may be considered preferred shares. Unclear whether at redemption these shares will have a non-par value (ie. not $20 per share).
- [TBC] OPG staff have indicated that the current plan is to pay no interest or dividends for the 44% equity injection. Under such a scenario, an appropriate pricing or premium on buyback would need to be priced in or would potentially entail risks described under the Consideration section below.

Process

- OPG Trust would receive the notice from the IESO to purchase the asset from IESO.
-
- The ProvinceOFA in turn would A notice would be received notice from OPG forby the OFA for to provide 44% of the asset for the equity injection. [This asset would be equal to the GA amount being deferred and would not include any financing or administrative costs incurred by OPG or OPG Trust]
-
- Separately, OPG and OPG Trust would take outraise debt from the capital markets totaling 56% of the IESO asset value. [Is this proposing that OPG issue debt on its own or through the OEFC as it currently does?]
-
- There is a 5 business day transaction window from the timing of the notice received by the OFA to payment and settlement with the [or OPG?] IESO.

[let's make this as general as necessary]

Decisions and Approvals Required for Province's Equity Financing

The capital contribution (equity injection) to OPG could be carried out in the same way as the capital contribution to Hydro One prior to its initial public offering.

Formatted: 7. Bullet 1

1. The Province would create an "Operating Asset" line for the purchasing of OPG equity. The creation of this line and the annual appropriation for the Operating Asset would require Treasury Board/Management Board of Cabinet approval.

    - The Operating Asset could be either a voted item or a statutory item. While the program would be implemented through legislation, it is assumed that the decisions around the capital contributions would be made outside of legislation. Based on this assumption, the analysis that follows assumes the Operating Asset would be categorized as a voted item.

2. Depending on timing, the creation of the Operating Asset would either be included in the Province's Estimates (tabled following the release of the Provincial Budget) or, if this window is not met, in Supplementary Estimates.

3. The Province would need to seek approval, through either Estimates or Supplementary Estimates, of an appropriation for the amount of the Operating Asset (i.e., approval to make a capital contribution up to the approved amount). The Province could seek approval of a placeholder amount of $1,000, or an estimate of the total projected required capital contribution for that fiscal year.

    - Under the assumption that the Operating Asset is categorized as a voted item, any capital contribution required over and above the approved amount would likely require further TB/MBC approvals. Given the magnitude of the initiative, staff have assumed that finding expense offsets is not a viable option.

4. Following the above approvals, the Province would be able to make the capital contribution into OPG and receive OPG shares return.

    - Note that as with the Hydro One capital contribution, this capital contribution would be reflected on the Province's balance sheet (being and exchange of assets – cash for shares) rather than the statement of operations and would, therefore, not result in a fiscal impact to the Province

~~[HOW PROVINCE WILL RECEIVE RETURNS]~~MECHANISM FOR RETURN OF CAPITAL TO PROVINCE

~~...~~Under the mechanism, the Province will be providing an equity injection into OPG ~~who~~that would then use that contribution to purchase debt from OPG Trust. The current understanding is that that the proposed share price would be $20 at the time of purchase.

Formatted: 2. Heading 1

Formatted: Font: 12 pt

Formatted: Normal, Indent: Left: 0", Space After: 8 pt, Line spacing: Multiple 1.08 li

Subject to how the equity injection is structured, the Province would be able to sell back the shares to OPG at the same $20 per share in the future. This, however, would only result in the return of its equity injection and without any return, the Province would be responsible for the carrying costs of the equity injection. The following methods could~~an~~ be utilized to ~~ensure~~allow the Province receives its equity contribution plus a return related to the cost of financing the equity injections.

1. Dividend (Common Shares)

   The Province would incur interest associated with the debt it borrows to finance the 44% equity injection. OPG should have an equal or greater amount related to this 44% interest cost collected from ratepayers through annual cash payments. OPG could elect to provide the interest cost collected back to the Province as a dividend to cover the Province's cost of borrowing for its equity injection.

2. Dividends (Preferred Shares)

   In order to reasonably guarantee a return to the Province, it may be necessary to establish a separate class of preferred shares with a dividend yield associated with the interest cost of the Province's borrowing costs or provide a mechanism for the interest cost to be recovered on a non-cash basis, e.g., through a form of dividend reinvestment plan or through cumulative preferred dividends that are not paid until principal starts being collected from ratepayers.~~.~~

   A preferred equity structure could potentially impact OPG's credit ratings if rating agencies view the preferred shares as debt rather than equity.

~~Cumulative Dividend~~

~~The Province and OPG could~~

~~1.~~ Redemption of Shares at a Premium

Equity injections can be viewed as a subsidy if the province is not compensated for its risk or cost of financing~~s~~. Under such a scenario, an appropriate pricing or premium on buyback would need to be priced in so that when the Province sells back its shares, it receives a higher price per share than the proposed $20/share book value. OPG staff have signaled to CEFD staff that their current plan is to not provide the Province with a cash flow, in dividends or otherwise, for the 44% equity injection until the point in time where the ratepayers start to pay down the deferred GA. [TBC]

Formatted: Underline

Formatted: Numbered + Level: 1 + Numbering Style: 1, 2, 3, … + Start at: 1 + Alignment: Left + Aligned at: 0.25" + Indent at: 0.5"

Formatted: Underline

Formatted: Underline

Formatted: No underline

Formatted: Underline

Formatted: Font: 12 pt, Underline

Formatted: List Paragraph, Space After: 0 pt, Line spacing: single

Formatted: Underline

3.

~~Other Considerations:~~

~~OPG will use the Province's equity injection to purchase subordinated debt from OPG Trust. The Province should be requesting the same return on its equity contribution as to the rate OPG receives from OPG Trust. This return could be higher than the Province's cost of funds.~~

~~Scenarios:~~

LEGISLATION AND TIMING

- The proposed timing for the legislation is May, early June.
- It's unclear how these rates would be effective to consumers if the RPP prices are reset on May 1 and November 1 of every year.
  - Furthermore, the RPP prices are announced by the OEB in mid-April and mid-October annually.
  - Unclear on whether the timing for this implementation mechanism would be sufficient for May 1, RPP prices.

[TBC] TBS would provide an annual allocation, with a three-year program review cycle.

•

~~***END OF MAIN SECTION***~~

Formatted: List Paragraph, Numbered + Level: 1 + Numbering Style: 1, 2, 3, … + Start at: 1 + Alignment: Left + Aligned at: 0.25" + Indent at: 0.5"

Formatted: Indent: Left: 0.25", No bullets or numbering

Formatted: Underline

Formatted: Numbered + Level: 1 + Numbering Style: 1, 2, 3, … + Start at: 1 + Alignment: Left + Aligned at: 0.5" + Indent at: 0.75"

Formatted: Highlight

Formatted: 2. Heading 1, Indent: Left: 0"

THE TEXT BELOW IS EQUITY INJECTION DISCUSSION GATHERED FROM A COUPLE OF NOTES. LET'S REVIEW WITH EYE TO DETERMINING WHICH, IF ANY POINTS BELONG IN MAIN SECTION ABOVE AND ORGANIZING REMAINING POINTS.

OTHER PROVINCIAL EQUITY INJECTION ADDITIONAL CONCERNSCONSIDERATIONS AND RISKS / POTENTIAL RISKS TO THE SPV ARRANGEMENT

these share issuances currently envisioned to be redeemable by the Province and OPG may also have rights to buy back the shares [TBC].

- This would provide the Province with a flexible mechanism to redeem its equity investment in OPG, and allow OPG to return to a more suitable capital structure once the GA financing program has subsided.
- Redeemable terms may include a lock-out period that permits the Province to redeem after a set time period.
- [TBC] Shares may be considered preferred shares. Unclear whether at redemption these shares will have a non-par value (ie. not $20 per share).
- [TBC] OPG staff have indicated that the current plan is to pay no interest or dividends for the 44% equity injection. Under such a scenario, an appropriate pricing or premium on buyback would need to be priced in or would potentially entail risks described under the Consideration section below. OPG staff have signaled to CEFD staff that their current plan is to not provide the Province with a cash flow, in dividends or otherwise, for the 44% equity injection'inflection' point where the ratepayers start to pay down the deferred GA.
- Under the current plan, only the 56% funded through capital markets, directly by OPG Trust or by OPG, would be paid interest over time.
- While the implementation of theis proposed currently viewed as with no flow through of interest or dividends over timecouldincurr
  - or the SPV arrangement could be viewed as receiving an interest free loan or subsidy from the Provinceassociated withborrowing costs or provide a mechanism for the interest cost to be recovered on a non-cash basis, e.g. through a form of dividend reinvestment planA preferred equity structure

2) EQUITY INJECTIONS

KEY POINTS:

Commented [FC12]: Redeemable rights are really a call or put option and should be priced accordingly. In absence of this one of the parties is providing a subsidy to the other side.

Commented [AP13]: OPG TB has mentioned a 10% premium on buyback, but this could still be construed as a benefit as the 10% return over a 10 year period does not reflect the risk premium. Threatens the GBE status of OPG, which could lead to full consolidation in Public Accounts.

Commented [BA14]: I'll stand to be corrected by you CFA types, but in economics an inflection point is the point where a curve changes from concave to convex or vice versa. Here we are talking about two lines are crossing. Just want to make sure we have correct terminology so that we don't get called us out later by some (other) smarty pants.

Commented [SQ215]: How?

The pro-rata that occurs is on the IESO asset being purchased.
-The Province keeps its interest costs outside the Trust as its an equity injection.
-Assume OPG flows through its interest costs through operations?
-How does OPGT pay for debt-servicing cost of the debt it is raising?

Commented [AP16]: This is not necessarily true as an acceptable premium associated with the buyback feature would mitigate this concern. Maybe keep the subsidy issue separate as mentioned above? The main risk is that the Province will be paying several hundred millions to billions of interest over time with no cash flow from OPG. OPG in turn would have the same amount of cash on its books – either idle or used for their own initiatives.

Commented [JK17]: Explain. Is this risk to OPG Trust, OPG or the Province.

- The [legislation, corporate rules, corporate structure, by-laws etc.] that allow for equity injections should have consideration that it is in the Province's ***economic/financial interests*** to proceed with monthly equity injections in order to finance the trust, with appropriate return on risk.

- Equity injections can be viewed as a subsidy if the province is not compensated for its risks.

    - This may be mitigated with a redeemable feature for the equity at a properly valued premium.

- Consideration is also required for the Province's cash needs in order to finance the borrowing for equity injections.

    - This may be mitigated with ongoing dividend payments and/or a redeemable feature for the equity.

    - Issuance of preferred equity may allow for frequent, stable dividend payments, but may be viewed as OPG debt by credit rating agencies.

    - A redeemable feature would provide for sufficient cash for the province to pay back bondholders.

Details

- The monthly equity injections from the Province to OPG may be considered a subsidy due to the frequency and large outstanding balance.

    - A GBE receiving subsidies frequently for a long period of time (in this case monthly and for several years) may threaten the GBE status since the GBE could be portrayed as being reliant on government funding.

    - This risk is mitigated as only 44% of the GA structure is funded through equity injections and that OPG Trust is a SPV.

- It may be necessary to quantify the overall return from the GA financing structure to the Province to ensure that the Province is "made whole".

    - There is a cost of borrowing associated with the 44% equity injection.

    - If the return from the GA Financing structure is below this amount, the economic rationale behind the equity injection may be lacking.

    - The risk attached to the equity injection (and its eventual composition of the subordinate debt of OPG Trust) may also have to be quantified as a return when considering the feasibility of the initiative.

Commented [SK818]: Or maybe to put it another way, nothing here should preclude the Province's right to return a sufficient return on its equity investment given the risk premium.

Commented [SK819]: Where is this written? Can i have the source?

Commented [AP20R19]: IPSAS 1 defines a GBE as an entity that has all the following characteristics:
(a) Is an entity with the power to contract in its own name;
(b) Has been assigned the financial and operational authority to carry on a business;
(c) Sells goods and services, in the normal course of its business, to other entities at a profit or full cost recovery;
(d) Is not reliant on continuing government funding to be a going concern; and
(e) Is controlled by a public sector entity.

Commented [AP21R19]: From PSAB PS 3070
06 A **government business enterprise** is a government organization that has all of the following characteristics:
(d) It can, in the normal course of its operations, maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity.
.30 A government business enterprise should, in the normal course of its operations, be able to maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity. These revenues include not only amounts from the sale of goods and services, but also transfers 3 received from other governments or sources outside of the government reporting entity.
.32 A government business enterprise differs from other government organizations in its relationship to the government, and its objectives, and operations. A government enterprise represents a financial asset of the government and given its autonomy, business-oriented objectives, and financial self-sufficiency, equity accounting is appropriate.

- [For example, the economic rationale behind the Hydro One one-time equity injection was that it would help maintain Hydro One's valuation for the IPO. If Hydro One had borrowed debt instead, its value could potentially be lower, leading to lower proceeds to the Province. Taking valuation multiples into consideration, every dollar in equity injected likely resulted in a significantly higher return than a dollar].

- If the Province is not being seen as compensated for its risk behind the equity injections, then the equity injections could be viewed as a subsidy.

- Having a redeemable feature on the equity injection for the Province, with a properly valued premium, could allow the Province to be made whole.

  - Would also allow the return of capital to the Province to help settle its external debt obligations related to the equity injection.

- If the equity injections were in the form of preferred shares with a cumulative dividend, it could allow for frequent cash flows from OPG to the Province.

  - The shares could be redeemable at par after a certain lock-up period (similar to Hydro One Series 1 and 2 preferred shares).

  - However, credit rating agencies may consider this as a form of debt which could affect OPG's credit ratings or the Trust's ratings.

  - The dividend yield would have to reflect, to a certain extent, the risk or cost of the Province.

GA FINANCING – EQUITY INJECTION OVERVIEW

Formatted: Font: 12 pt, Bold

Formatted: Font: Bold

Formatted: Font: 12 pt, Bold

Thie Province ~~would be required to~~is moving ahead with its support for the Global Adjustment (GA) ~~f~~smoothing mechanism~~inancing plan~~. ~~by~~Under the mechanism, ~~-~~the Province will be providing equity injections to Ontario Power Generation Inc. (OPG), ~~that would~~ representing 44% of total GA financing requirements. This document ~~serves to~~ provides an overview of the proposed GA financing structure, including the provincial equity injections, and discusses steps that must be undertaken by the P~~p~~rovince to implement the equity injections. ~~implementation mechanism, timelines and other issues for the GA Financing and the Equity Injection for Ontario Power Generation (OPG) from the Province.~~

Formatted: 2. Heading 1, No bullets or numbering

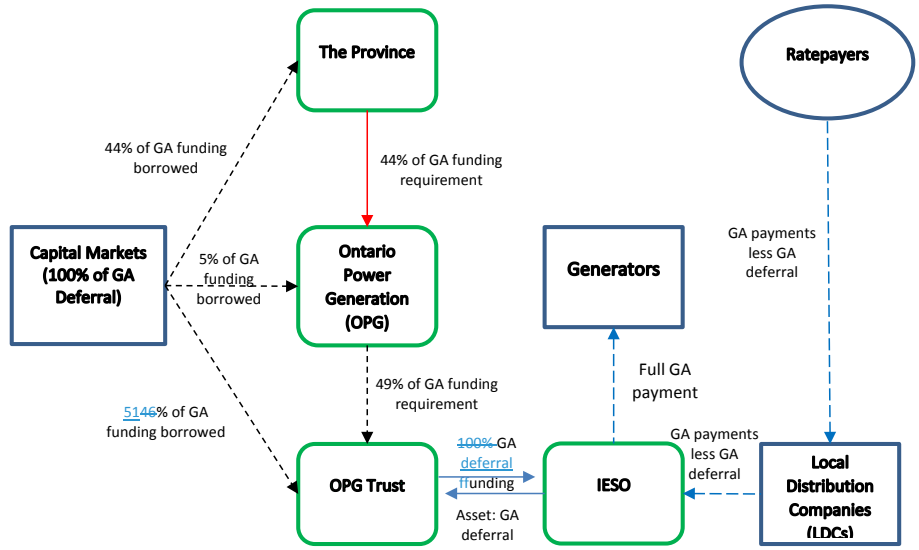
GA FINANCING OVERVIEW

The Ministry of Energy, Ministry of Finance and the Ontario Financing Authority (OFA) are coordinating with OPG to implement a Global Adjustment (GA) smoothing mechanism.

Under the current proposal, OPG ~~will~~ would develop a Special Purpose Vehicle (SPV) referred to as "OPG Trust" which will use 100% debt financing to purchase regulatory assets from the IESO. These regulatory assets represent the portion of RPP GA expenses deferred to future years.~~the "right to collect" assets from the IESO in return for cash proceeds.~~ IESO would use the cash from the OPG Trust~~,~~ to make up the shortfall in GA recoveries from ratepayers in order to fully compensate generators.

GA Deferral Process

Formatted: Font: Bold



~~OP~~OPG Trust w~~ould ill be structured to~~ finance 51% of its funding requirements through the capital markets as senior debt with the remaining 49% being provided by OPG as subordinated debt. ~~OPG would contribute the remaining 49% as subordinated debt.~~

The 49% subordinated debt from OPG will be financed through debt OPG issues in its own corporate capacity, from the capital markets (5%) and through equity injections from the Province (44%). The Province will finance its equity injection through its annual borrowing program - from issuing debt into the capital markets.

~~Annual payments will be received by~~ OPG Trust would recover ~~for~~ financing and~~&~~ administrative costs from the ratepayers. OPG Trust may also set up a short-term borrowing facility to facilitate any market timings for its share of debt issuances. [NTD: for discussion?]. [OPG's current position is to not pass the interest/dividend to the Province for its equity injection.]

~~STAFF COMMENTS: UNCLEAR IF THESE FINANCING COSTS/ANNUAL PAYMENTS WILL BE RECEIVED BY OPG TRUST [TBC: FROM IESO OR RATEPAYERS DIRECTLY]?~~

~~THE MECHANISM BY WHICH THE FINANCING IS CONDUCTED IS YET TO BE FINALIZED. BOTH OPG ON BEHALF OF OPG TRUST AND THE OFA ON BEHALF OF THE PROVINCE ARE SEPARATELY LOOKING TO ENGAGE 'FINANCIAL ADVISORS' FOR THE PURPOSE OF~~

Formatted: 2. Heading 1

Commented [AP1]: From IESO according to white paper who would collect the payments and remit to OPG.

Commented [BA2]: Also confused about comment: Should that be "…..received by OPG Trust"

Commented [AP3R2]: Yes, you are right. Corrected.

~~DETERMINING OPTIMAL FINANCING STRUCTURES, E.G. DEBT COVENANTS, TERMS AND CONDITIONS SUCH AS IF TO BE CALLABLE, REDEEMABLE, ETC. [ALSO SEE BELOW.]~~

Commented [JK4]: Check with SIFB or CMD on the right terminology.

Commented [FC5]: To me this is part of the terms and conditions

Formatted: 2. Heading 1, Indent: Left: 0"

~~BORROWING~~

Formatted: 2. Heading 1

- ~~THE 51% FINANCING CONDUCTED BY OPG TRUST AND THE 5% FINANCING VIA OPG WILL INITIALLY BE FINANCED THROUGH A SHORT TERM CREDIT FACILITY WHICH WILL BE OBTAINED BY OPG. OPG HAS COMMUNICATED THAT THIS MAY BE THROUGH SHORT TERM DEBT, RAISED FROM THE CANADIAN MONEY MARKETS.~~

  - ~~OPG STAFF FURTHER CLARIFIED THAT THIS WOULD BE FACILITATED THROUGH A NEW FACILITY AND TO BE PUT IN PLACE BY OPG TRUST AND NOT ANY OF THE EXISTING FACILITIES OPG CURRENTLY HAS IN PLACE.~~

Commented [JK6]: Did I get this right?

Commented [FC7]: If this is the case wouldn't they need a minimum amount of equity to be put in the Trust at the onset? I'm assuming OPG nor the Province will be providing a back stop to the Trust.

- ~~LONGER TERM DEBT WILL BE ISSUED AS SOON AS POSSIBLE, SUBJECT TO MARKET TIMING CONSTRAINTS.~~

  - ~~OPG TO RETAIN 3 DEALERS TO ADVICE ON THE LONG-TERM BORROWING AND FINANCING OF THE GA.~~

  - ~~THE OFA IS ALSO EXPECTED TO RETAIN A DEALER TO PROVIDE DUE DILIGENCE AND INDEPENDENT ADVICE FOR THE PROVINCE'S EQUITY INJECTION [TBC] INTO OPG AND LONG-TERM BORROWING BY OPG TRUST [TBC].~~

Commented [JK8]: I understood OFA's interest was more on how to structure its borrowing than other aspects but open to hearing different view.

- ~~THE LONG TERM DEBT ISSUED BY OPG TRUST MAY ALSO BE CALLABLE TO BUY BACK THE BONDS ONCE THE FINANCED GA STARTS TO BE REPAID. [TBC]~~

Commented [JK9]: Why would OFA's borrowing be different? Carlos mentioned certain features, though would involve premiums?

Formatted: 2. Heading 1, Indent: Left: 0"

EQUITY INJECTION PROCESS OVERVIEW ~~MECHANISM~~

~~OVERVIEW~~

Formatted: 2. Heading 1

- IESO proposes that OPG Trust would purchase the GA~~E~~ deferral asset on a monthly basis. The ~~The~~ Province would, therefore, be required to ~~is expected to~~ provide monthly equity injections to OPG.

Formatted: Space After: 0 pt, No bullets or numbering

- In return, OPG would issue new shares to the Province. It is proposed that shares would be purchased at the book value of ~~at a value of~~ $20 per share. [for discussion]

Formatted: 7. Bullet 2

The proposed process would be as follows:

- ~~These share issuances currently environed envisioned to be redeemable by the Province and OPG may also have rights to buy back the shares [TBC].~~

  - ~~This would provide the Province with a flexible mechanism to redeem its equity investment in OPG, and allow OPG to return to a more suitable capital structure once the `GA financing program has subsided.~~

  - ~~Redeemable terms may include a lock-out period that permits the Province to redeem after a set time period.~~

  ~~[TBC] Shares may be considered preferred shares. Unclear whether at redemption these shares will have a non-par value (ie. not $20 per share).~~

  - ~~[TBC] OPG staff have indicated that the current plan is to pay no interest or dividends for the 44% equity injection. Under such a scenario, an appropriate pricing or premium on buyback would need to be priced in or would potentially entail risks described under the Consideration section below.~~

  ~~Process~~

- OPG Trust would receive ~~the~~ notice from the IESO to purchase the asset from IESO.

- The Province~~OFA~~ in turn would ~~A notice would be~~ received notice from OPG for~~by~~ the OFA ~~for~~ to provide 44% of the asset for the equity injection. [This asset would be equal to the GA amount being deferred and would not include any financing or administrative costs incurred by OPG or OPG Trust]

- Separately, OPG and OPG Trust would ~~take out~~raise debt from the capital markets totaling 56% of the IESO asset value. [Is this proposing that OPG issue debt on its own or through the OEFC as it currently does?]

- There is a 5 business day transaction window from the timing of the notice received by the OFA to payment and settlement with the [or OPG?] IESO.`

~~**[let's make this as general as necessary]**~~

Decisions and Approvals Required for Province's Equity Financing

Commented [FC10]: Redeemable rights are really a call or put option and should be priced accordingly. In absence of this one of the parties is providing a subsidy to the other side.

Commented [AP11]: OPG TB has mentioned a 10% premium on buyback, but this could still be construed as a benefit as the 10% return over a 10 year period does not reflect the risk premium. Threatens the GBE status of OPG, which could lead to full consolidation in Public Accounts.

Formatted: 7. Bullet 1

Commented [JK12]: I think this is because the financing and administrative costs would be recovered through ratepayers?

The capital contribution (equity injection) to OPG could be carried out in the same way as the capital contribution to Hydro One prior to its initial public offering.

1. The Province would create an "Operating Asset" line for the purchasing of OPG equity. The creation of this line and the annual appropriation for the Operating Asset would require Treasury Board/Management Board of Cabinet approval.

    - The Operating Asset could be either a voted item or a statutory item. While the program would be implemented through legislation, it is assumed that the decisions around the capital contributions or equity injection would be made outside of legislation [largely consistent with the current state of legislative drafting]. Based on this assumption, the analysis that follows assumes the Operating Asset would be categorized as a voted item.

2. Depending on timing, the creation of the Operating Asset would either be included in the Province's Estimates (tabled following the release of the Provincial Budget) or, if this window is not met, in Supplementary Estimates.

3. The Province would need to seek approval, through either Estimates or Supplementary Estimates, of an appropriation for the amount of the Operating Asset (i.e., approval to make a capital contribution up to the approved amount). The Province could seek approval of a placeholder amount of $1,000, or an estimate of the total projected required capital contribution for that fiscal year.

    - Under the assumption that the Operating Asset is categorized as a voted item, any capital contribution required over and above the approved amount would likely require further TB/MBC approvals. Given the magnitude of the initiative, staff have assumed that finding expense offsets is not a viable option.

4. Following the above approvals, the Province would be able to make the capital contribution into OPG and receive OPG shares return.

    - Note that as with the Hydro One capital contribution, this capital contribution would be reflected on the Province's balance sheet (being and exchange of assets – cash for shares) rather than the statement of operations and would, therefore, not result in a fiscal impact to the Province

~~[HOW PROVINCE WILL RECEIVE RETURNS]~~MECHANISM FOR RETURN OF CAPITAL TO PROVINCE

Commented [JK13]: I believe this has to do with the notion that if the ministry can find offsets, then no need to go back to TB for approval.

Commented [JK14]: "in" missing in front?

Formatted: 2. Heading 1

...Under the mechanism, the Province will be providing an equity injection into OPG whothat would then use that contribution to purchase debt from OPG Trust. The current understanding is that that the proposed share price would be $20 at the time of purchase.

Subject to how the equity injection is structured, the Province would be able to sell back the shares to OPG at the same $20 per share in the future. This, however, would only result in the return of its equity injection and without any return, the Province would be responsible for the carrying costs of the equity injection. The following methods couldan be utilized to ensureallow the Province receives its equity contribution plus a return related to the cost of financing the equity injections.

1. Dividend (Common Shares)

   The Province would incur interest associated with the debt it borrows to finance the 44% equity injection. OPG shwould expect to have an equal or greater amount related to this 44% interest cost collected from ratepayers through annual cash payments. OPG could elect to provide the interest cost collected back to the Province as a dividend to cover the Province's cost of borrowing for its equity injection [subject to its Board approval].

2. Dividends (Preferred Shares)

   In order to reasonably guarantee a return to the Province, it may be necessary to establish a separate class of preferred shares with a dividend yield associated with the interest cost of the Province's borrowing costs or provide a mechanism for the interest cost to be recovered on a non-cash basis, e.g., through a form of dividend reinvestment plan or through cumulative preferred dividends that are not paid until principal starts being collected from ratepayers [in the event OPG chooses not to return capital during the accumulation of debt phase, which is understood to be OPG's current internal position, TBC].

   A preferred equity structure could potentially impact OPG's credit ratings if rating agencies view the preferred shares as debt rather than equity.

~~Cumulative Dividend~~

~~The Province and OPG could~~

~~1.~~ Redemption of Shares at a Premium

Equity injections can be viewed as a subsidy if the province is not compensated for its risk or cost of financings. Under such a scenario, an appropriate pricing or premium on

Formatted: Font: 12 pt

Formatted: Normal, Indent: Left: 0", Space After: 8 pt, Line spacing: Multiple 1.08 li

Formatted: Underline

Formatted: Numbered + Level: 1 + Numbering Style: 1, 2, 3, … + Start at: 1 + Alignment: Left + Aligned at: 0.25" + Indent at: 0.5"

Formatted: Underline

Formatted: Underline

Formatted: No underline

Formatted: Underline

Formatted: List Paragraph, Space After: 0 pt, Line spacing: single

Formatted: Font: 12 pt, Underline

buyback would need to be priced in so that when the Province sells back its shares, it receives a higher price per share than the proposed $20/share book value. OPG staff have signaled to CEFD and CMD staff that their current plan is to not provide the Province with a cash flow, in dividends or otherwise, for the 44% equity injection until the point in time where the ratepayers start to pay down the deferred GA. [TBC]

3.

~~Other Considerations:~~

~~OPG will use the Province's equity injection to purchase subordinated debt from OPG Trust. The Province should be requesting the same return on its equity contribution as to the rate OPG receives from OPG Trust. This return could be higher than the Province's cost of funds.~~

~~Scenarios:~~

Formatted: Underline

Formatted: List Paragraph, Numbered + Level: 1 + Numbering Style: 1, 2, 3, … + Start at: 1 + Alignment: Left + Aligned at: 0.25" + Indent at: 0.5"

Formatted: Underline

Formatted: Indent: Left: 0.25", No bullets or numbering

Formatted: Numbered + Level: 1 + Numbering Style: 1, 2, 3, … + Start at: 1 + Alignment: Left + Aligned at: 0.5" + Indent at: 0.75"

Formatted: Highlight

Formatted: 2. Heading 1, Indent: Left: 0"

LEGISLATION AND TIMING

- The proposed timing for the legislation is May, early June.
- It's unclear how these rates would be effective to consumers if the RPP prices are reset on May 1 and November 1 of every year.
  - Furthermore, the RPP prices are announced by the OEB in mid-April and mid-October annually.
  - Unclear on whether the timing for this implementation mechanism would be sufficient for May 1, RPP prices.

[TBC] TBS would provide an annual allocation, with a three-year program review cycle.

•

~~***END OF MAIN SECTION***~~

THE TEXT BELOW IS EQUITY INJECTION DISCUSSION GATHERED FROM A COUPLE OF NOTES. LET'S REVIEW WITH EYE TO DETERMINING WHICH, IF ANY POINTS BELONG IN MAIN SECTION ABOVE AND ORGANIZING REMAINING POINTS.

OTHER PROVINCIAL EQUITY INJECTION ADDITIONAL CONCERNSCONSIDERATIONS AND RISKS / POTENTIAL RISKS TO THE SPV ARRANGEMENT

these share issuances currently envisioned to be redeemable by the Province and OPG may also have rights to buy back the shares [TBC].

- This would provide the Province with a flexible mechanism to redeem its equity investment in OPG, and allow OPG to return to a more suitable capital structure once the GA financing program has subsided.
- Redeemable terms may include a lock-out period that permits the Province to redeem after a set time period.
- [TBC] Shares may be considered preferred shares. Unclear whether at redemption these shares will have a non-par value (ie. not $20 per share).
- [TBC] OPG staff have indicated that the current plan is to pay no interest or dividends for the 44% equity injection. Under such a scenario, an appropriate pricing or premium on buyback would need to be priced in or would potentially entail risks described under the Consideration section below. OPG staff have signaled to CEFD staff that their current plan is to not provide the Province with a cash flow, in dividends or otherwise, for the 44% equity injection'inflection' point where the ratepayers start to pay down the deferred GA.
- Under the current plan, only the 56% funded through capital markets, directly by OPG Trust or by OPG, would be paid interest over time.
- While the implementation of theis proposed currently viewed as with no flow through of interest or dividends over timecouldincurr
  - or the SPV arrangement could be viewed as receiving an interest free loan or subsidy from the Provinceassociated withborrowing costs or provide a mechanism for the interest cost to be recovered on a non-cash basis, e.g. through a form of dividend reinvestment planA preferred equity structure

2) EQUITY INJECTIONS

KEY POINTS:

Commented [FC15]: Redeemable rights are really a call or put option and should be priced accordingly. In absence of this one of the parties is providing a subsidy to the other side.

Commented [AP16]: OPG TB has mentioned a 10% premium on buyback, but this could still be construed as a benefit as the 10% return over a 10 year period does not reflect the risk premium. Threatens the GBE status of OPG, which could lead to full consolidation in Public Accounts.

Commented [BA17]: I'll stand to be corrected by you CFA types, but in economics an inflection point is the point where a curve changes from concave to convex or vice versa. Here we are talking about two lines are crossing. Just want to make sure we have correct terminology so that we don't get called us out later by some (other) smarty pants.

Commented [SQ218]: How?

The pro-rata that occurs is on the IESO asset being purchased.
-The Province keeps its interest costs outside the Trust as its an equity injection.
-Assume OPG flows through its interest costs through operations?
-How does OPGT pay for debt-servicing cost of the debt it is raising?

Commented [AP19]: This is not necessarily true as an acceptable premium associated with the buyback feature would mitigate this concern. Maybe keep the subsidy issue separate as mentioned above? The main risk is that the Province will be paying several hundred millions to billions of interest over time with no cash flow from OPG. OPG in turn would have the same amount of cash on its books – either idle or used for their own initiatives.

Commented [JK20]: Explain. Is this risk to OPG Trust, OPG or the Province.

- The [legislation, corporate rules, corporate structure, by-laws etc.] that allow for equity injections should have consideration that it is in the Province's ***economic/financial interests*** to proceed with monthly equity injections in order to finance the trust, with appropriate return on risk.

- Equity injections can be viewed as a subsidy if the province is not compensated for its risks.
    - This may be mitigated with a redeemable feature for the equity at a properly valued premium.
- Consideration is also required for the Province's cash needs in order to finance the borrowing for equity injections.
    - This may be mitigated with ongoing dividend payments and/or a redeemable feature for the equity.
    - Issuance of preferred equity may allow for frequent, stable dividend payments, but may be viewed as OPG debt by credit rating agencies.
    - A redeemable feature would provide for sufficient cash for the province to pay back bondholders.

Details

- The monthly equity injections from the Province to OPG may be considered a subsidy due to the frequency and large outstanding balance.
    - A GBE receiving subsidies frequently for a long period of time (in this case monthly and for several years) may threaten the GBE status since the GBE could be portrayed as being reliant on government funding.
    - This risk is mitigated as only 44% of the GA structure is funded through equity injections and that OPG Trust is a SPV.
- It may be necessary to quantify the overall return from the GA financing structure to the Province to ensure that the Province is "made whole".
    - There is a cost of borrowing associated with the 44% equity injection.
    - If the return from the GA Financing structure is below this amount, the economic rationale behind the equity injection may be lacking.
    - The risk attached to the equity injection (and its eventual composition of the subordinate debt of OPG Trust) may also have to be quantified as a return when considering the feasibility of the initiative.

Commented [SK821]: Or maybe to put it another way, nothing here should preclude the Province's right to return a sufficient return on its equity investment given the risk premium.

Commented [SK822]: Where is this written? Can i have the source?

Commented [AP23R22]: IPSAS 1 defines a GBE as an entity that has all the following characteristics:
(a) Is an entity with the power to contract in its own name;
(b) Has been assigned the financial and operational authority to carry on a business;
(c) Sells goods and services, in the normal course of its business, to other entities at a profit or full cost recovery;
(d) Is not reliant on continuing government funding to be a going concern; and
(e) Is controlled by a public sector entity.

Commented [AP24R22]: From PSAB PS 3070
06 A **government business enterprise** is a government organization that has all of the following characteristics:
(d) It can, in the normal course of its operations, maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity.
.30 A government business enterprise should, in the normal course of its operations, be able to maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity. These revenues include not only amounts from the sale of goods and services, but also transfers 3 received from other governments or sources outside of the government reporting entity.
.32 A government business enterprise differs from other government organizations in its relationship to the government, and its objectives, and operations. A government enterprise represents a financial asset of the government and given its autonomy, business-oriented objectives, and financial self-sufficiency, equity accounting is appropriate.

- [For example, the economic rationale behind the Hydro One one-time equity injection was that it would help maintain Hydro One's valuation for the IPO. If Hydro One had borrowed debt instead, its value could potentially be lower, leading to lower proceeds to the Province. Taking valuation multiples into consideration, every dollar in equity injected likely resulted in a significantly higher return than a dollar].

- If the Province is not being seen as compensated for its risk behind the equity injections, then the equity injections could be viewed as a subsidy.

- Having a redeemable feature on the equity injection for the Province, with a properly valued premium, could allow the Province to be made whole.

  - Would also allow the return of capital to the Province to help settle its external debt obligations related to the equity injection.

- If the equity injections were in the form of preferred shares with a cumulative dividend, it could allow for frequent cash flows from OPG to the Province.

  - The shares could be redeemable at par after a certain lock-up period (similar to Hydro One Series 1 and 2 preferred shares).

  - However, credit rating agencies may consider this as a form of debt which could affect OPG's credit ratings or the Trust's ratings.

  - The dividend yield would have to reflect, to a certain extent, the risk or cost of the Province.

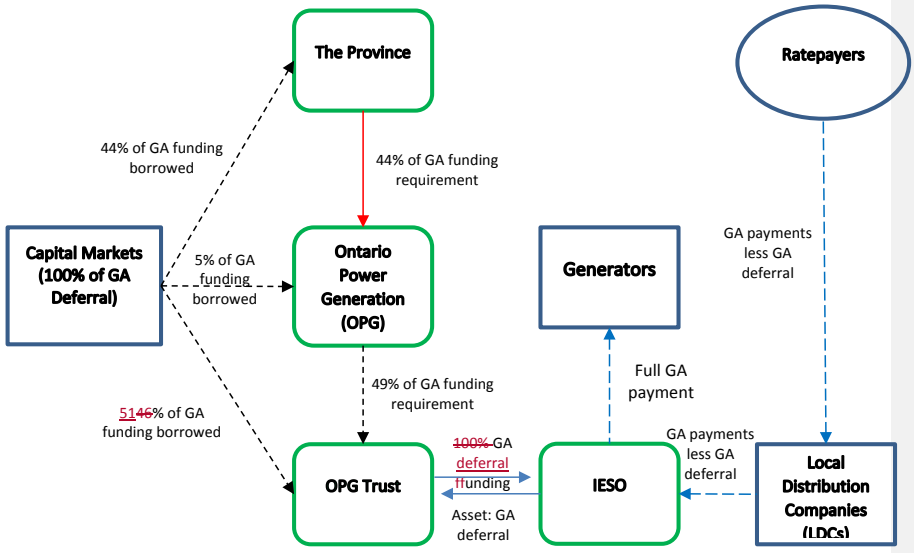
GA FINANCING – EQUITY INJECTION OVERVIEW

Thie Province would be required to support the Global Adjustment (GA) financing plan by providing equity injections to Ontario Power Generation Inc. (OPG) that would represent 44% of total financing requirements. This document serves to provides an overview of the proposed GA financing structure, including provincial equity injections and discusses steps that must be undertaken by the province to implement the equity injections. implementation mechanism, timelines and other issues for the GA Financing and the Equity Injection for Ontario Power Generation (OPG) from the Province.

GA FINANCING OVERVIEW

- The Ministry of Energy, Ministry of Finance and the Ontario Financing Authority (OFA) are coordinating with OPG to implement a Global Adjustment (GA) smoothing mechanism.

Under the current proposal, OPG will would develop a Special Purpose Vehicle (SPV) referred to as "OPG Trust" which will use 100% debt financing to purchase regulatory assets from the IESO. These regulatory assets represent the portion of RPP GA expenses deferred to future years.the "right to collect" assets from the IESO in return for cash proceeds. IESO would use the cash from the OPG Trust, to make up the shortfall in GA recoveries from ratepayers in order to fully compensate generators.



Formatted: No bullets or numbering

Commented [BA1]: May be good to make 2nd part clear upfront. Redraft if I didn't get language right.

- ~~OP~~OPG Trust w~~ould ill be structured to~~ finance 51% of its funding requirements through the capital markets as senior debt with the remaining 49% being provided by OPG as subordinated debt.

The 49% subordinated debt from OPG will be financed through debt from the capital markets (5%) and through equity injections from the Province (44%). The Province will finance its equity injection from capital markets.

- ~~o~~

- ~~o~~ ~~Annual payments will be received by~~ OPG Trust would recover ~~for~~ financing & administrative costs from the ratepayer [is this still up for discussion].

- ~~Staff Comments: Unclear if these financing costs/annual payments will be received by OPG Trust [TBC: from IESO or ratepayers directly]?~~

- ~~The mechanism by which the financing is conducted is yet to be finalized. Both OPG on behalf of OPG Trust and the OFA on behalf of the Province are separately looking to engage 'financial advisors' for the purpose of determining optimal financing structures, e.g. debt covenants, terms and conditions such as if to be callable, redeemable, etc. [Also see below.]~~

~~BORROWING~~

- ~~The 51% financing conducted by OPG Trust and the 5% financing via OPG will initially be financed through a short term credit facility which will be obtained by OPG. OPG has communicated that this may be through short term debt, raised from the Canadian money markets.~~

  - ~~OPG staff further clarified that this would be facilitated through a new facility and to be put in place by OPG Trust and not any of the existing facilities OPG currently has in place.~~

- ~~Longer term debt will be issued as soon as possible, subject to market timing constraints.~~

  - ~~OPG to retain 3 dealers to advice on the long-term borrowing and financing of the GA.~~

  - ~~The OFA is also expected to retain a dealer to provide due diligence and independent advice for the Province's equity injection [TBC] into OPG and long-term borrowing by OPG Trust [TBC].~~

- ~~The long-term debt issued by OPG Trust may also be callable to buy back the bonds once the financed GA starts to be repaid. [TBC]~~

Formatted: 7. Bullet 1

Formatted: No bullets or numbering

Commented [BA2]: Confused here. Are we referring to interest received or OPG annual payments to Trust.

Commented [AP3]: From IESO according to white paper who would collect the payments and remit to OPG.

Commented [BA4]: Also confused about comment: Should that be "…..received by OPG Trust"

Commented [AP5R4]: Yes, you are right. Corrected.

Commented [JK6]: Check with SIFB or CMD on the right terminology.

Commented [FC7]: To me this is part of the terms and conditions

Commented [JK8]: Did I get this right?

Commented [FC9]: If this is the case wouldn't they need a minimum amount of equity to be put in the Trust at the onset? I'm assuming OPG nor the Province will be providing a back stop to the Trust.

Commented [JK10]: I understood OFA's interest was more on how to structure its borrowing than other aspects but open to hearing different view.

Commented [JK11]: Why would OFA's borrowing be different? Carlos mentioned certain features, though would involve premiums?

EQUITY INJECTION PROCESS OVERVIEW ~~MECHANISM~~

~~OVERVIEW~~

- IESO proposes that OPG Trust would purchase the GE deferral asset on a monthly basis. The ~~The~~ Province would, therefore, be required to ~~is expected to~~ provide monthly equity injections to OPG.
- In return, OPG would issue new shares to the Province. It is proposed that shares would be purchased at the book value of ~~at a value of~~ $20 per share. [for discussion]

The proposed process would be as follows:

- ~~These share issuances currently environed envisioned to be redeemable by the Province and OPG may also have rights to buy back the shares [TBC].~~
  - ~~This would provide the Province with a flexible mechanism to redeem its equity investment in OPG, and allow OPG to return to a more suitable capital structure once the GA financing program has subsided.~~
  - ~~Redeemable terms may include a lock-out period that permits the Province to redeem after a set time period.~~
  - ~~[TBC] Shares may be considered preferred shares. Unclear whether at redemption these shares will have a non-par value (ie. not $20 per share).~~
  - ~~[TBC] OPG staff have indicated that the current plan is to pay no interest or dividends for the 44% equity injection. Under such a scenario, an appropriate pricing or premium on buyback would need to be priced in or would potentially entail risks described under the Consideration section below.~~

~~Process~~

- OPG Trust would receive ~~the~~ notice from the IESO to purchase the asset from IESO.
- OFA in turn would ~~A notice would be~~ received from OPG by the OFA for 44% of the asset for the equity injection.
- Separately OPG and OPG Trust would take out debt from the capital markets totaling 56% of the IESO asset value.
- There is a 5 business day transaction window from the timing of the notice received by the OFA to payment and settlement with the [or OPG?] IESO.

[let's make this as general as necessary]

Decisions and Approvals Required for Province's Equity Financing

Formatted: 2. Heading 1

Formatted: Space After: 0 pt, No bullets or numbering

Commented [FC12]: Not quarterly?

Commented [JK13]: Monthly now.

Commented [BA14R13]: For clarity, should we start with the broader statement that IESO will require monthly payments from the Trust, which in turn requires the Province to make monthly equity injections to OPG?

Formatted: 7. Bullet 2

Formatted: Indent: Left: 0", Hanging: 0.38", Space After: 0 pt, Bulleted + Level: 1 + Aligned at: 0.25" + Indent at: 0.5", Tab stops: 0.38", Left

Commented [FC15]: Redeemable rights are really a call or put option and should be priced accordingly. In absence of this one of the parties is providing a subsidy to the other side.

Commented [AP16]: OPG TB has mentioned a 10% premium on buyback, but this could still be construed as a benefit as the 10% return over a 10 year period does not reflect the risk premium. Threatens the GBE status of OPG, which could lead to full consolidation in Public Accounts.

Commented [SQ217]: [TBC whether 5 business days required for OFA to provide payment to OPG or whether 5 business days is for the entire process of OFA->OPG->OPGT].

Formatted: Font: 12 pt

The mechanics of a capital contribution into OPG could follow the precedent previously completed by the Province in making a capital contribution into Hydro One prior to its initial public offering.

1. The Province would create an "Operating Asset" line for the purchasing of OPG equity. The creation of this line and the annual appropriation for the Operating Asset would require Treasury Board/Management Board of Cabinet approval.

    - The Operating Asset would either be categorized as a voted item or a statutory item. While the program would be implemented through legislation, it is assumed that the decisions around the capital contributions would be made outside of legislation. Based on this assumption, the analysis that follows assumes the Operating Asset would be categorized as a voted item.

2. The creation of the Operating Asset would need to be included in the Province's tabling of Estimates in the Legislature (tabled following the release of the Provincial Budget). If the Operating Asset is not included in the Estimates, the Province would need to table Supplementary Estimates in the Legislature.

3. The Province would also need to seek approval, through Estimates or Supplementary Estimates, of an appropriation for the amount of the Operating Asset (i.e., approval to make a capital contribution up to the approved amount). The Province could seek approval of a placeholder amount of $1,000, or an estimate of the total projected required capital contribution for that fiscal year.

    - Under the assumption that the Operating Asset is categorized as a voted item, any capital contribution required over and above the approved amount would either require the implementing Ministry to find expense offsets, or tabling of Supplementary Estimates. Given the magnitude of the initiative, staff have assumed that finding expense offsets is not a viable option.

4. Following the above approvals, the Province would be able to make the capital contribution into OPG and receive shares in the Trust in return.

    - Note that as with the Hydro One capital contribution, this capital contribution represents a balance sheet movement and would not create an upfront fiscal impact to the Province (exchange of cash for shares – both assets).

Formatted: Normal, No bullets or numbering

Formatted: Indent: Left: 0"

Formatted: Font: 12 pt

Formatted: Indent: Left: 0.75"

LEGISLATION AND TIMING

- The proposed timing for the legislation is May, early June.
- It's unclear how these rates would be effective to consumers if the RPP prices are reset on May 1 and November 1 of every year.
    - Furthermore, the RPP prices are announced by the OEB in mid-April and mid-October annually.
    - Unclear on whether the timing for this implementation mechanism would be sufficient for May 1, RPP prices.

[TBC] TBS would provide an annual allocation, with a three-year program review cycle.

-

END OF MAIN SECTION

Formatted: Font: 14 pt

Formatted: Font: 14 pt, Italic, Font color: Blue

Formatted: Font: Italic, Font color: Blue

THE TEXT BELOW IS EQUITY INJECTION DISCUSSION GATHERED FROM A COUPLE OF NOTES. LET'S REVIEW WITH EYE TO DETERMINING WHICH, IF ANY POINTS BELONG IN MAIN SECTION ABOVE AND ORGANIZING REMAINING POINTS.

OTHER PROVINCIAL EQUITY INJECTION ~~ADDITIONAL CONCERNS~~CONSIDERATIONS AND RISKS ~~/ POTENTIAL RISKS TO THE SPV ARRANGEMENT~~

these share issuances currently envisioned to be redeemable by the Province and OPG may also have rights to buy back the shares [TBC].

- This would provide the Province with a flexible mechanism to redeem its equity investment in OPG, and allow OPG to return to a more suitable capital structure once the GA financing program has subsided.
- Redeemable terms may include a lock-out period that permits the Province to redeem after a set time period.
- [TBC] Shares may be considered preferred shares. Unclear whether at redemption these shares will have a non-par value (ie. not $20 per share).

- [TBC] OPG staff have indicated that the current plan is to pay no interest or dividends for the 44% equity injection. Under such a scenario, an appropriate pricing or premium on buyback would need to be priced in or would potentially entail risks described under the Consideration section below. OPG staff have signaled to CEFD staff that their current plan is to not provide the Province with a cash flow, in dividends or otherwise, for the 44% equity injection until the ~~proposed lock-up period ends~~'~~inflection~~' point in time where the ratepayers start to pay down the deferred GA.
- Under the current plan, only the 56% funded through capital markets, directly by OPG Trust or by OPG, would be paid interest over time.
- While the implementation of th~~eis~~ proposed structure is ~~hypothetically~~currently viewed as fiscally neutral on an accounting basis, there is some concern over the cash flow-through of this structure with no flow through of interest or dividends over time.
- The Province would~~ill have~~~~incurr~~incur interest associated with the debt it borrows to finance the 44% equity injection. OPG should have an equal or greater amount related to this 44% interest cost collected from ratepayers through annual cash payments.
- ~~The interest cost will continue to build during the lock-up period as more principal is borrowed, resulting in potentially billions of aggregate interest owed by the Province to the capital markets.~~

Formatted: No bullets or numbering

Formatted: No bullets or numbering

Commented [FC18]: Redeemable rights are really a call or put option and should be priced accordingly. In absence of this one of the parties is providing a subsidy to the other side.

Commented [AP19]: OPG TB has mentioned a 10% premium on buyback, but this could still be construed as a benefit as the 10% return over a 10 year period does not reflect the risk premium. Threatens the GBE status of OPG, which could lead to full consolidation in Public Accounts.

Commented [BA20]: I'll stand to be corrected by you CFA types, but in economics an inflection point is the point where a curve changes from concave to convex or vice versa. Here we are talking about two lines are crossing. Just want to make sure we have correct terminology so that we don't get called us out later by some (other) smarty pants.

- OPG may have the potential to lower its borrowing/equity injection costs with the "unpaid portion" of interest related to the Provincial debt for the 44% equity injections. Establishing a redemption premium that takes into account the compounded cost of the equity financing could "make the province whole" upon redemption on a further date. Valuation options are currently being discussed.

- It may be necessary to establish a flow-through of cash from OPG to the Province through some type of return, such as a dividend ~~or the SPV arrangement could be viewed as receiving an interest free loan or subsidy from the Province~~

- In order to reasonably guarantee ~~this~~a return to the Province, it may be necessary to establish a separate class of preferred shares with a dividend yield ~~related~~associated with ~~to~~ the interest cost of the Province's ~~related debt~~borrowing costs or provide a mechanism for the interest cost to be recovered on a non-cash basis, e.g. through a form of dividend reinvestment plan.

- A preferred equity structure~~This~~ could potentially impact OPG's credit ratings if rating agencies view the preferred shares as debt rather than equity.

- Legislation is still determining the actual rate to be charged to ratepayers. In the most recent shared draft, a few options were being considered

    - Interest and other financing (e.g., admin costs), as well as the principal portion of the GA financing when those payments commence.

    - The ability for OPG to earn a return, i.e., a higher rate charged to ratepayers than the actual total financing and principal costs.

    - The ability for OPG to earn a return, but with a cap on profits.

2) EQUITY INJECTIONS

KEY POINTS:

- The [legislation, corporate rules, corporate structure, by-laws etc.] that allow for equity injections should have consideration that it is in the Province's ***economic/financial interests*** to proceed with monthly equity injections in order to finance the trust, with appropriate return on risk.

- Equity injections can be viewed as a subsidy if the province is not compensated for its risks.

    - This may be mitigated with a redeemable feature for the equity at a properly valued premium.

Commented [AP21]: This is not necessarily true as an acceptable premium associated with the buyback feature would mitigate this concern. Maybe keep the subsidy issue separate as mentioned above? The main risk is that the Province will be paying several hundred millions to billions of interest over time with no cash flow from OPG. OPG in turn would have the same amount of cash on its books – either idle or used for their own initiatives.

Commented [JK22]: Explain. Is this risk to OPG Trust, OPG or the Province.

Commented [AP23R22]: Risk is to OPG Trust/OPG because, if preferred equity is issued, then it could be viewed as debt.

Formatted

Commented [SK824]: Or maybe to put it another way, nothing here should preclude the Province's right to return a sufficient return on its equity investment given the risk premium.

- Consideration is also required for the Province's cash needs in order to finance the borrowing for equity injections.
    - This may be mitigated with ongoing dividend payments and/or a redeemable feature for the equity.
    - Issuance of preferred equity may allow for frequent, stable dividend payments, but may be viewed as OPG debt by credit rating agencies.
    - A redeemable feature would provide for sufficient cash for the province to pay back bondholders.

Details

- The monthly equity injections from the Province to OPG may be considered a subsidy due to the frequency and large outstanding balance.
    - A GBE receiving subsidies frequently for a long period of time (in this case monthly and for several years) may threaten the GBE status since the GBE could be portrayed as being reliant on government funding.
    - This risk is mitigated as only 44% of the GA structure is funded through equity injections and that OPG Trust is a SPV.
- It may be necessary to quantify the overall return from the GA financing structure to the Province to ensure that the Province is "made whole".
    - There is a cost of borrowing associated with the 44% equity injection.
    - If the return from the GA Financing structure is below this amount, the economic rationale behind the equity injection may be lacking.
    - The risk attached to the equity injection (and its eventual composition of the subordinate debt of OPG Trust) may also have to be quantified as a return when considering the feasibility of the initiative.
    - [For example, the economic rationale behind the Hydro One one-time equity injection was that it would help maintain Hydro One's valuation for the IPO. If Hydro One had borrowed debt instead, its value could potentially be lower, leading to lower proceeds to the Province. Taking valuation multiples into consideration, every dollar in equity injected likely resulted in a significantly higher return than a dollar].
- If the Province is not being seen as compensated for its risk behind the equity injections, then the equity injections could be viewed as a subsidy.

Commented [SK825]: Where is this written? Can i have the source?

Commented [AP26R25]: IPSAS 1 defines a GBE as an entity that has all the following characteristics:
(a) Is an entity with the power to contract in its own name;
(b) Has been assigned the financial and operational authority to carry on a business;
(c) Sells goods and services, in the normal course of its business, to other entities at a profit or full cost recovery;
(d) Is not reliant on continuing government funding to be a going concern; and
(e) Is controlled by a public sector entity.

Commented [AP27R25]: From PSAB PS 3070
06 A **government business enterprise** is a government organization that has all of the following characteristics:
(d) It can, in the normal course of its operations, maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity.
.30 A government business enterprise should, in the normal course of its operations, be able to maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity. These revenues include not only amounts from the sale of goods and services, but also transfers 3 received from other governments or sources outside of the government reporting entity.
.32 A government business enterprise differs from other government organizations in its relationship to the government, and its objectives, and operations. A government enterprise represents a financial asset of the government and given its autonomy, business-oriented objectives, and financial self-sufficiency, equity accounting is appropriate.

- Having a redeemable feature on the equity injection for the Province, with a properly valued premium, could allow the Province to be made whole.
    - Would also allow the return of capital to the Province to help settle its external debt obligations related to the equity injection.
- If the equity injections were in the form of preferred shares with a cumulative dividend, it could allow for frequent cash flows from OPG to the Province.
    - The shares could be redeemable at par after a certain lock-up period (similar to Hydro One Series 1 and 2 preferred shares).
    - However, credit rating agencies may consider this as a form of debt which could affect OPG's credit ratings or the Trust's ratings.
    - The dividend yield would have to reflect, to a certain extent, the risk or cost of the Province.

Electricity Finance Branch, Ontario Financing Authority
April 4, 2017

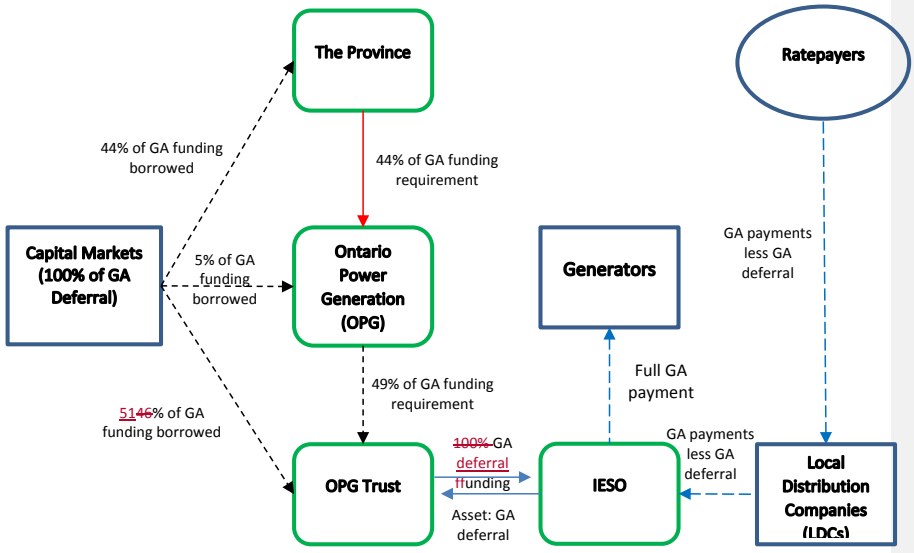
GA FINANCING – EQUITY INJECTION OVERVIEW

Thie Province would be required to support the Global Adjustment (GA) financing plan by providing equity injections to Ontario Power Generation Inc. (OPG) that would represent 44% of total financing requirements. This document serves to provides an overview of the proposed GA financing structure, including provincial equity injections and discusses steps that must be undertaken by the province to implement the equity injections. implementation mechanism, timelines and other issues for the GA Financing and the Equity Injection for Ontario Power Generation (OPG) from the Province.

GA FINANCING OVERVIEW

- The Ministry of Energy, Ministry of Finance and the Ontario Financing Authority (OFA) are coordinating with OPG to implement a Global Adjustment (GA) smoothing mechanism.

Under the current proposal, OPG will would develop a Special Purpose Vehicle (SPV) referred to as "OPG Trust" which will use 100% debt financing to purchase regulatory assets from the IESO. These regulatory assets represent the portion of RPP GA expenses deferred to future years.the "right to collect" assets from the IESO in return for cash proceeds. IESO would use the cash from the OPG Trust, to make up the shortfall in GA recoveries from ratepayers in order to fully compensate generators.



Formatted: No bullets or numbering

Commented [BA1]: May be good to make 2nd part clear upfront. Redraft if I didn't get language right.

- ~~OP~~OPG Trust w~~ould ill be structured to~~ finance 51% of its funding requirements through the capital markets as senior debt with the remaining 49% being provided by OPG as subordinated debt.

The 49% subordinated debt from OPG will be financed through debt from the capital markets (5%) and through equity injections from the Province (44%). The Province will finance its equity injection from capital markets.

- ~~o~~

- ~~o~~ ~~Annual payments will be received by~~ OPG Trust would recover ~~for~~ financing & administrative costs from the ratepayer [is this still up for discussion].

- ~~Staff Comments: Unclear if these financing costs/annual payments will be received by OPG Trust [TBC: from IESO or ratepayers directly]?~~

- ~~The mechanism by which the financing is conducted is yet to be finalized. Both OPG on behalf of OPG Trust and the OFA on behalf of the Province are separately looking to engage 'financial advisors' for the purpose of determining optimal financing structures, e.g. debt covenants, terms and conditions such as if to be callable, redeemable, etc. [Also see below.]~~

~~BORROWING~~

- ~~The 51% financing conducted by OPG Trust and the 5% financing via OPG will initially be financed through a short term credit facility which will be obtained by OPG. OPG has communicated that this may be through short term debt, raised from the Canadian money markets.~~

  - ~~OPG staff further clarified that this would be facilitated through a new facility and to be put in place by OPG Trust and not any of the existing facilities OPG currently has in place.~~

- ~~Longer term debt will be issued as soon as possible, subject to market timing constraints.~~

  - ~~OPG to retain 3 dealers to advice on the long-term borrowing and financing of the GA.~~

  - ~~The OFA is also expected to retain a dealer to provide due diligence and independent advice for the Province's equity injection [TBC] into OPG and long-term borrowing by OPG Trust [TBC].~~

- ~~The long-term debt issued by OPG Trust may also be callable to buy back the bonds once the financed GA starts to be repaid. [TBC]~~

Formatted: 7. Bullet 1

Formatted: No bullets or numbering

Commented [AP2]: This has been confirmed by OPG – would be hard for Trust to operate as a going concern if not bringing in cash flow.

Commented [BA3]: Confused here. Are we referring to interest received or OPG annual payments to Trust.

Commented [AP4]: From IESO according to white paper who would collect the payments and remit to OPG.

Commented [BA5]: Also confused about comment: Should that be "…..received by OPG Trust"

Commented [AP6R5]: Yes, you are right. Corrected.

Commented [JK7]: Check with SIFB or CMD on the right terminology.

Commented [FC8]: To me this is part of the terms and conditions

Commented [JK9]: Did I get this right?

Commented [FC10]: If this is the case wouldn't they need a minimum amount of equity to be put in the Trust at the onset? I'm assuming OPG nor the Province will be providing a back stop to the Trust.

Commented [JK11]: I understood OFA's interest was more on how to structure its borrowing than other aspects but open to hearing different view.

Commented [JK12]: Why would OFA's borrowing be different? Carlos mentioned certain features, though would involve premiums?

EQUITY INJECTION PROCESS OVERVIEW ~~MECHANISM~~

~~OVERVIEW~~

- IESO proposes that OPG Trust would purchase the GE deferral asset on a monthly basis. The ~~The~~ Province would, therefore, be required to ~~is expected to~~ provide monthly equity injections to OPG.
- In return, OPG would issue new shares to the Province. It is proposed that shares would be purchased at the book value of ~~at a value of~~ $20 per share. [for discussion]

The proposed process would be as follows:

- ~~These share issuances currently environed envisioned to be redeemable by the Province and OPG may also have rights to buy back the shares [TBC].~~
  - ~~This would provide the Province with a flexible mechanism to redeem its equity investment in OPG, and allow OPG to return to a more suitable capital structure once the GA financing program has subsided.~~
  - ~~Redeemable terms may include a lock-out period that permits the Province to redeem after a set time period.~~
  - ~~[TBC] Shares may be considered preferred shares. Unclear whether at redemption these shares will have a non-par value (ie. not $20 per share).~~
  - ~~[TBC] OPG staff have indicated that the current plan is to pay no interest or dividends for the 44% equity injection. Under such a scenario, an appropriate pricing or premium on buyback would need to be priced in or would potentially entail risks described under the Consideration section below.~~

~~Process~~

- OPG Trust would receive ~~the~~ notice from the IESO to purchase the asset from IESO.
- OFA in turn would ~~A notice would be~~ received from OPG by the OFA for 44% of the asset for the equity injection.
- Separately OPG and OPG Trust would take out debt from the capital markets totaling 56% of the IESO asset value.
- There is a 5 business day transaction window from the timing of the notice received by the OFA to payment and settlement with the [or OPG?] IESO.

[let's make this as general as necessary]

Decisions and Approvals Required for Province's Equity Financing

Formatted: 2. Heading 1

Formatted: Space After: 0 pt, No bullets or numbering

Commented [FC13]: Not quarterly?

Commented [JK14]: Monthly now.

Commented [BA15R14]: For clarity, should we start with the broader statement that IESO will require monthly payments from the Trust, which in turn requires the Province to make monthly equity injections to OPG?

Formatted: 7. Bullet 2

Formatted: Indent: Left: 0", Hanging: 0.38", Space After: 0 pt, Bulleted + Level: 1 + Aligned at: 0.25" + Indent at: 0.5", Tab stops: 0.38", Left

Commented [FC16]: Redeemable rights are really a call or put option and should be priced accordingly. In absence of this one of the parties is providing a subsidy to the other side.

Commented [AP17]: OPG TB has mentioned a 10% premium on buyback, but this could still be construed as a benefit as the 10% return over a 10 year period does not reflect the risk premium. Threatens the GBE status of OPG, which could lead to full consolidation in Public Accounts.

Commented [AP18]: I am not sure what this sentence means.

Commented [SQ219]: [TBC whether 5 business days required for OFA to provide payment to OPG or whether 5 business days is for the entire process of OFA->OPG->OPGT].

Formatted: Font: 12 pt

The mechanics of a capital contribution into OPG could follow the precedent previously completed by the Province in making a capital contribution into Hydro One prior to its initial public offering.

1. The Province would create an "Operating Asset" line for the purchasing of OPG equity. The creation of this line and the annual appropriation for the Operating Asset would require Treasury Board/Management Board of Cabinet approval.

    - The Operating Asset would either be categorized as a voted item or a statutory item. While the program would be implemented through legislation, it is assumed that the decisions around the capital contributions would be made outside of legislation. Based on this assumption, the analysis that follows assumes the Operating Asset would be categorized as a voted item.

2. The creation of the Operating Asset would need to be included in the Province's tabling of Estimates in the Legislature (tabled following the release of the Provincial Budget). If the Operating Asset is not included in the Estimates, the Province would need to table Supplementary Estimates in the Legislature.

3. The Province would also need to seek approval, through Estimates or Supplementary Estimates, of an appropriation for the amount of the Operating Asset (i.e., approval to make a capital contribution up to the approved amount). The Province could seek approval of a placeholder amount of $1,000, or an estimate of the total projected required capital contribution for that fiscal year.

    - Under the assumption that the Operating Asset is categorized as a voted item, any capital contribution required over and above the approved amount would either require the implementing Ministry to find expense offsets, or tabling of Supplementary Estimates. Given the magnitude of the initiative, staff have assumed that finding expense offsets is not a viable option.

4. Following the above approvals, the Province would be able to make the capital contribution into OPG and receive shares in the Trust in return.

    - Note that as with the Hydro One capital contribution, this capital contribution represents a balance sheet movement and would not create an upfront fiscal impact to the Province (exchange of cash for shares – both assets).

Formatted: Normal, No bullets or numbering

Formatted: Indent: Left: 0"

Formatted: Font: 12 pt

Formatted: Indent: Left: 0.75"

LEGISLATION AND TIMING

- The proposed timing for the legislation is May, early June.
- It's unclear how these rates would be effective to consumers if the RPP prices are reset on May 1 and November 1 of every year.
    - Furthermore, the RPP prices are announced by the OEB in mid-April and mid-October annually.
    - Unclear on whether the timing for this implementation mechanism would be sufficient for May 1, RPP prices.

[TBC] TBS would provide an annual allocation, with a three-year program review cycle.

-

END OF MAIN SECTION

Formatted: Font: 14 pt

Formatted: Font: 14 pt, Italic, Font color: Blue

Formatted: Font: Italic, Font color: Blue

THE TEXT BELOW IS EQUITY INJECTION DISCUSSION GATHERED FROM A COUPLE OF NOTES. LET'S REVIEW WITH EYE TO DETERMINING WHICH, IF ANY POINTS BELONG IN MAIN SECTION ABOVE AND ORGANIZING REMAINING POINTS.

OTHER PROVINCIAL EQUITY INJECTION ~~ADDITIONAL CONCERNS~~CONSIDERATIONS AND RISKS ~~/ POTENTIAL RISKS TO THE SPV ARRANGEMENT~~

these share issuances currently envisioned to be redeemable by the Province and OPG may also have rights to buy back the shares [TBC].

- This would provide the Province with a flexible mechanism to redeem its equity investment in OPG, and allow OPG to return to a more suitable capital structure once the GA financing program has subsided.
- Redeemable terms may include a lock-out period that permits the Province to redeem after a set time period.
- [TBC] Shares may be considered preferred shares. Unclear whether at redemption these shares will have a non-par value (ie. not $20 per share).

- [TBC] OPG staff have indicated that the current plan is to pay no interest or dividends for the 44% equity injection. Under such a scenario, an appropriate pricing or premium on buyback would need to be priced in or would potentially entail risks described under the Consideration section below. OPG staff have signaled to CEFD staff that their current plan is to not provide the Province with a cash flow, in dividends or otherwise, for the 44% equity injection until the ~~proposed lock-up period ends~~'~~inflection~~' point in time where the ratepayers start to pay down the deferred GA.
- Under the current plan, only the 56% funded through capital markets, directly by OPG Trust or by OPG, would be paid interest over time.
- While the implementation of th~~e~~is proposed structure is ~~hypothetically~~currently viewed as fiscally neutral on an accounting basis, there is some concern over the cash flow-through of this structure with no flow through of interest or dividends over time.
- The Province would~~ill have~~~~incurr~~incur interest associated with the debt it borrows to finance the 44% equity injection. OPG should have an equal or greater amount related to this 44% interest cost collected from ratepayers through annual cash payments.
- ~~The interest cost will continue to build during the lock-up period as more principal is borrowed, resulting in potentially billions of aggregate interest owed by the Province to the capital markets.~~

Formatted: No bullets or numbering

Formatted: No bullets or numbering

Commented [FC20]: Redeemable rights are really a call or put option and should be priced accordingly. In absence of this one of the parties is providing a subsidy to the other side.

Commented [AP21]: OPG TB has mentioned a 10% premium on buyback, but this could still be construed as a benefit as the 10% return over a 10 year period does not reflect the risk premium. Threatens the GBE status of OPG, which could lead to full consolidation in Public Accounts.

Commented [BA22]: I'll stand to be corrected by you CFA types, but in economics an inflection point is the point where a curve changes from concave to convex or vice versa. Here we are talking about two lines are crossing. Just want to make sure we have correct terminology so that we don't get called us out later by some (other) smarty pants.

- OPG may have the potential to lower its borrowing/equity injection costs with the "unpaid portion" of interest related to the Provincial debt for the 44% equity injections. Establishing a redemption premium that takes into account the compounded cost of the equity financing could "make the province whole" upon redemption on a further date. Valuation options are currently being discussed.

- It may be necessary to establish a flow-through of cash from OPG to the Province through some type of return, such as a dividend ~~or the SPV arrangement could be viewed as receiving an interest free loan or subsidy from the Province~~

- In order to reasonably guarantee ~~this~~a return to the Province, it may be necessary to establish a separate class of preferred shares with a dividend yield ~~related~~associated with ~~to~~ the interest cost of the Province's ~~related debt~~borrowing costs or provide a mechanism for the interest cost to be recovered on a non-cash basis, e.g. through a form of dividend reinvestment plan.

- A preferred equity structure~~This~~ could potentially impact OPG's credit ratings if rating agencies view the preferred shares as debt rather than equity.

- Legislation is still determining the actual rate to be charged to ratepayers. In the most recent shared draft, a few options were being considered

    - Interest and other financing (e.g., admin costs), as well as the principal portion of the GA financing when those payments commence.

    - The ability for OPG to earn a return, i.e., a higher rate charged to ratepayers than the actual total financing and principal costs.

    - The ability for OPG to earn a return, but with a cap on profits.

2) EQUITY INJECTIONS

KEY POINTS:

- The [legislation, corporate rules, corporate structure, by-laws etc.] that allow for equity injections should have consideration that it is in the Province's ***economic/financial interests*** to proceed with monthly equity injections in order to finance the trust, with appropriate return on risk.

- Equity injections can be viewed as a subsidy if the province is not compensated for its risks.

    - This may be mitigated with a redeemable feature for the equity at a properly valued premium.

Commented [AP23]: This is not necessarily true as an acceptable premium associated with the buyback feature would mitigate this concern. Maybe keep the subsidy issue separate as mentioned above? The main risk is that the Province will be paying several hundred millions to billions of interest over time with no cash flow from OPG. OPG in turn would have the same amount of cash on its books – either idle or used for their own initiatives.

Commented [JK24]: Explain. Is this risk to OPG Trust, OPG or the Province.

Commented [AP25R24]: Risk is to OPG Trust/OPG because, if preferred equity is issued, then it could be viewed as debt.

Formatted

Commented [SK826]: Or maybe to put it another way, nothing here should preclude the Province's right to return a sufficient return on its equity investment given the risk premium.

- Consideration is also required for the Province's cash needs in order to finance the borrowing for equity injections.
    - This may be mitigated with ongoing dividend payments and/or a redeemable feature for the equity.
    - Issuance of preferred equity may allow for frequent, stable dividend payments, but may be viewed as OPG debt by credit rating agencies.
    - A redeemable feature would provide for sufficient cash for the province to pay back bondholders.

Details

- The monthly equity injections from the Province to OPG may be considered a subsidy due to the frequency and large outstanding balance.
    - A GBE receiving subsidies frequently for a long period of time (in this case monthly and for several years) may threaten the GBE status since the GBE could be portrayed as being reliant on government funding.
    - This risk is mitigated as only 44% of the GA structure is funded through equity injections and that OPG Trust is a SPV.
- It may be necessary to quantify the overall return from the GA financing structure to the Province to ensure that the Province is "made whole".
    - There is a cost of borrowing associated with the 44% equity injection.
    - If the return from the GA Financing structure is below this amount, the economic rationale behind the equity injection may be lacking.
    - The risk attached to the equity injection (and its eventual composition of the subordinate debt of OPG Trust) may also have to be quantified as a return when considering the feasibility of the initiative.
    - [For example, the economic rationale behind the Hydro One one-time equity injection was that it would help maintain Hydro One's valuation for the IPO. If Hydro One had borrowed debt instead, its value could potentially be lower, leading to lower proceeds to the Province. Taking valuation multiples into consideration, every dollar in equity injected likely resulted in a significantly higher return than a dollar].
- If the Province is not being seen as compensated for its risk behind the equity injections, then the equity injections could be viewed as a subsidy.

Commented [SK827]: Where is this written? Can i have the source?

Commented [AP28R27]: IPSAS 1 defines a GBE as an entity that has all the following characteristics:
(a) Is an entity with the power to contract in its own name;
(b) Has been assigned the financial and operational authority to carry on a business;
(c) Sells goods and services, in the normal course of its business, to other entities at a profit or full cost recovery;
(d) Is not reliant on continuing government funding to be a going concern; and
(e) Is controlled by a public sector entity.

Commented [AP29R27]: From PSAB PS 3070
06 A **government business enterprise** is a government organization that has all of the following characteristics:
(d) It can, in the normal course of its operations, maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity.
.30 A government business enterprise should, in the normal course of its operations, be able to maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity. These revenues include not only amounts from the sale of goods and services, but also transfers 3 received from other governments or sources outside of the government reporting entity.
.32 A government business enterprise differs from other government organizations in its relationship to the government, and its objectives, and operations. A government enterprise represents a financial asset of the government and given its autonomy, business-oriented objectives, and financial self-sufficiency, equity accounting is appropriate.

- Having a redeemable feature on the equity injection for the Province, with a properly valued premium, could allow the Province to be made whole.
    - Would also allow the return of capital to the Province to help settle its external debt obligations related to the equity injection.
- If the equity injections were in the form of preferred shares with a cumulative dividend, it could allow for frequent cash flows from OPG to the Province.
    - The shares could be redeemable at par after a certain lock-up period (similar to Hydro One Series 1 and 2 preferred shares).
    - However, credit rating agencies may consider this as a form of debt which could affect OPG's credit ratings or the Trust's ratings.
    - The dividend yield would have to reflect, to a certain extent, the risk or cost of the Province.

Electricity Finance Branch, Ontario Financing Authority
April 4, 2017

GA FINANCING – EQUITY INJECTION OVERVIEW

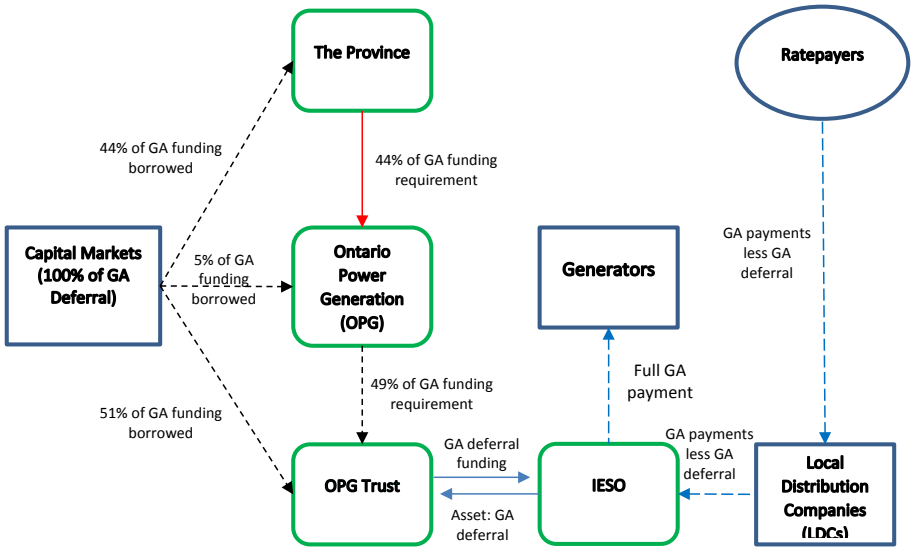
The Province is moving ahead with its support for the Global Adjustment (GA) smoothing mechanism. Under the mechanism, the Province will be providing equity injections to Ontario Power Generation Inc. (OPG), representing 44% of total GA financing requirements. This document provides an overview of the proposed GA financing structure, including the provincial equity injections, and discusses steps that must be undertaken by the Province to implement the equity injections.

GA FINANCING OVERVIEW

The Ministry of Energy, Ministry of Finance and the Ontario Financing Authority (OFA) are coordinating with OPG to implement a Global Adjustment (GA) smoothing mechanism.

Under the current proposal, OPG would develop a Special Purpose Vehicle (SPV) referred to as "OPG Trust" which will use 100% debt financing to purchase regulatory assets from the IESO. These regulatory assets represent the portion of RPP GA expenses deferred to future years. IESO would use the cash from the OPG Trust to make up the shortfall in GA recoveries from ratepayers in order to fully compensate generators.

GA Deferral Process



OPG Trust would finance 51% of its funding requirements through the capital markets as senior debt with the remaining 49% being provided by OPG as subordinated debt. The 49% subordinated debt from OPG will be financed through debt OPG issues in its own corporate

capacity, from the capital markets (5%) and through equity injections from the Province (44%). The Province will finance its equity injection through its annual borrowing program - from issuing debt into the capital markets.

OPG Trust would recover financing and administrative costs from the ratepayers. OPG Trust may also set up a short-term borrowing facility to facilitate any market timings for its share of debt issuances. [NTD: for discussion?]. [OPG's current position is to not pass the interest/dividend to the Province for its equity injection.]

EQUITY INJECTION PROCESS OVERVIEW

IESO proposes that OPG Trust would purchase the GA deferral asset on a monthly basis. The Province would, therefore, be required to provide monthly equity injections to OPG. In return, OPG would issue new shares to the Province. It is proposed that shares would be purchased at the book value of $20 per share. [for discussion]

The proposed process would be as follows:

- OPG Trust would receive notice from the IESO to purchase the asset from IESO.
- The Province in turn would receive notice from OPG for the OFA to provide 44% of the asset for the equity injection. [This asset would be equal to the GA amount being deferred and would not include any financing or administrative costs incurred by OPG or OPG Trust]
- Separately, OPG and OPG Trust would raise debt from the capital markets totaling 56% of the IESO asset value. [Is this proposing that OPG issue debt on its own or through the OEFC as it currently does?]
- There is a 5 business day transaction window from the timing of the notice received by the OFA to payment and settlement with the [or OPG?] IESO.

Commented [JK1]: I think this is because the financing and administrative costs would be recovered through ratepayers?

Decisions and Approvals Required for Province's Equity Financing

The capital contribution (equity injection) to OPG could be carried out in the same way as the capital contribution to Hydro One prior to its initial public offering.

1. The Province would create an "Operating Asset" line for the purchasing of OPG equity. The creation of this line and the annual appropriation for the Operating Asset would require Treasury Board/Management Board of Cabinet approval.

    - The Operating Asset could be either a voted item or a statutory item. While the program would be implemented through legislation, it is assumed that the decisions around the capital contributions or equity injection would be made outside of

legislation [largely consistent with the current state of legislative drafting]. Based on this assumption, the analysis that follows assumes the Operating Asset would be categorized as a voted item.

2. Depending on timing, the creation of the Operating Asset would either be included in the Province's Estimates (tabled following the release of the Provincial Budget) or, if this window is not met, in Supplementary Estimates.

3. The Province would need to seek approval, through either Estimates or Supplementary Estimates, of an appropriation for the amount of the Operating Asset (i.e., approval to make a capital contribution up to the approved amount). The Province could seek approval of a placeholder amount of $1,000, or an estimate of the total projected required capital contribution for that fiscal year.

    - Under the assumption that the Operating Asset is categorized as a voted item, any capital contribution required over and above the approved amount would likely require further TB/MBC approvals. Given the magnitude of the initiative, staff have assumed that finding expense offsets is not a viable option.

4. Following the above approvals, the Province would be able to make the capital contribution into OPG and receive OPG shares return.

    - Note that as with the Hydro One capital contribution, this capital contribution would be reflected on the Province's balance sheet (being and exchange of assets – cash for shares) rather than the statement of operations and would, therefore, not result in a fiscal impact to the Province

Commented [JK2]: I believe this has to do with the notion that if the ministry can find offsets, then no need to go back to TB for approval.

Commented [JK3]: "in" missing in front?

MECHANISM FOR RETURN OF CAPITAL TO PROVINCE

Under the mechanism, the Province will be providing an equity injection into OPG that would then use that contribution to purchase debt from OPG Trust. The current understanding is that that the proposed share price would be $20 at the time of purchase.

Subject to how the equity injection is structured, the Province would be able to sell back the shares to OPG at the same $20 per share in the future. This, however, would only result in the return of its equity injection and without any return, the Province would be responsible for the carrying costs of the equity injection. The following methods could be utilized to allow the Province receives its equity contribution plus a return related to the cost of financing the equity injections.

1. Dividend (Common Shares)

   The Province would incur interest associated with the debt it borrows to finance the 44% equity injection. OPG would expect to have an equal or greater amount related to this 44% interest cost collected from ratepayers through annual cash payments. OPG could elect to provide the interest cost collected back to the Province as a dividend to cover the Province's cost of borrowing for its equity injection [subject to its Board approval].

2. Dividends (Preferred Shares)

   In order to reasonably guarantee a return to the Province, it may be necessary to establish a separate class of preferred shares with a dividend yield associated with the interest cost of the Province's borrowing costs or provide a mechanism for the interest cost to be recovered on a non-cash basis, e.g., through a form of dividend reinvestment plan or through cumulative preferred dividends that are not paid until principal starts being collected from ratepayers [in the event OPG chooses not to return capital during the accumulation of debt phase, which is understood to be OPG's current internal position, TBC].

   A preferred equity structure could potentially impact OPG's credit ratings if rating agencies view the preferred shares as debt rather than equity.

3. Redemption of Shares at a Premium

   Equity injections can be viewed as a subsidy if the province is not compensated for its risk or cost of financing. Under such a scenario, an appropriate pricing or premium on buyback would need to be priced in so that when the Province sells back its shares, it receives a higher price per share than the proposed $20/share book value. OPG staff have signaled to CEFD and CMD staff that their current plan is to not provide the Province with a cash flow, in dividends or otherwise, for the 44% equity injection until the point in time where the ratepayers start to pay down the deferred GA. [TBC]

LEGISLATION AND TIMING

- The proposed timing for the legislation is May, early June.
- It's unclear how these rates would be effective to consumers if the RPP prices are reset on May 1 and November 1 of every year.
  - Furthermore, the RPP prices are announced by the OEB in mid-April and mid-October annually.

- Unclear on whether the timing for this implementation mechanism would be sufficient for May 1, RPP prices.

- [TBC] TBS would provide an annual allocation, with a three-year program review cycle.

Electricity Finance Branch, Ontario Financing Authority
April 12, 2017

GA FINANCING – EQUITY INJECTION OVERVIEW

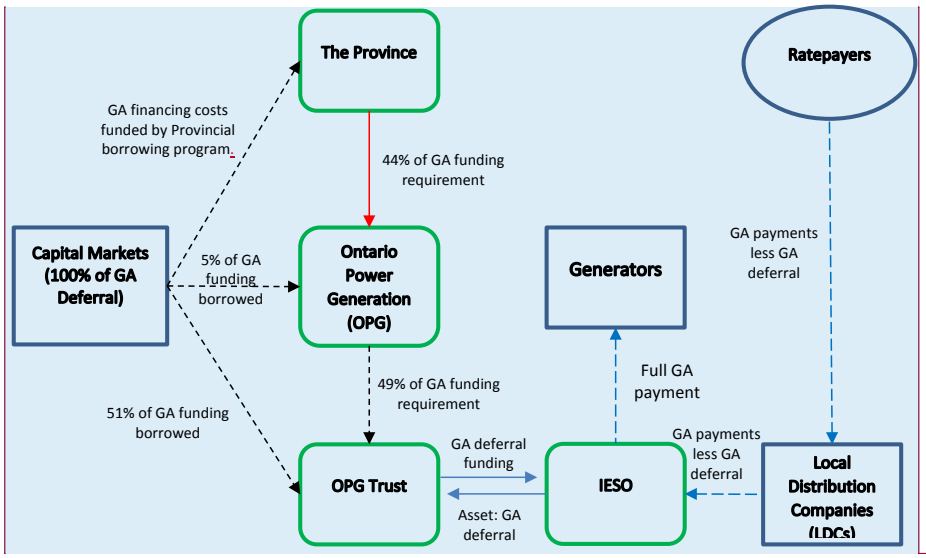
The Province is moving ahead with its support for the Global Adjustment (GA) smoothing mechanism. Under the mechanism, the Province will be providing equity injections to Ontario Power Generation Inc. (OPG), representing 44% of total GA financing requirements. This document provides an overview of the proposed GA financing structure, including the provincial equity injections, and discusses steps that must be undertaken by the Province to implement the equity injections.

GA FINANCING OVERVIEW

The Ministry of Energy, Ministry of Finance and the Ontario Financing Authority (OFA) are coordinating with OPG to implement a Global Adjustment (GA) smoothing mechanism.

Under the current proposal, OPG would develop a Special Purpose Vehicle (SPV) referred to as "OPG Trust" which will use 100% debt financing to purchase regulatory assets from the IESO. These regulatory assets represent the portion of RPP GA expenses deferred to future years. IESO would use the cash from the OPG Trust to make up the shortfall in GA recoveries from ratepayers in order to fully compensate generators.

GA Deferral Process



OPG Trust would finance 51% of its funding requirements through the capital markets as senior debt with the remaining 49% being provided by OPG as subordinated debt. The 49% subordinated debt from OPG will be financed through debt OPG issues in its own corporate

Commented [FC1]: I would suggest rewording the 44% label going to the Province to "Provincial borrowing" as now somehow suggests that there is a perfect matching between the borrowing and the equity contribution.

Commented [BA2R1]: See rewording

capacity, from the capital markets (5%) and through equity injections from the Province (44%). The Province will finance its equity injection through its annual borrowing program - from issuing debt into the capital markets.

OPG Trust would recover all financing and administrative costs from the ratepayers. OPG Trust may also set up a short-term borrowing facility to facilitate any market timings for its share of debt issuances. [NTD: for discussion?]. [OPG's current position is to not pass the interest/dividend to the Province for its equity injection. Although the Province would be entitled to any net income associated with the incremental equity it would mean that it would be out-of-pocket for servicing the cost of debt associated with the equity contribution.]

EQUITY INJECTION PROCESS OVERVIEW

IESO proposes that OPG Trust would purchase the GA deferral asset on a monthly basis. The Province would, therefore, be required to provide monthly equity injections to OPG if it is to match the purchase (different timing would introduce carrying costs to OPG and/or the Province). In return, OPG would issue new shares to the Province. It is proposed that shares would be purchased at the book value of $20 per share. [for discussion]

Commented [FC3]: I don't believe the $20 mark is relevant. The key concept is that equity is being issued at book value.

The proposed process would be as follows:

- OPG Trust would receive notice from the IESO to purchase the asset from IESO.
- The Province in turn would receive notice from OPG for the OFA to provide 44% of the asset for the equity injection. [This asset would be equal to the GA amount being deferred and would not include any financing or administrative costs incurred by OPG or OPG Trust]

Commented [JK4]: I think this is because the financing and administrative costs would be recovered through ratepayers?

- Separately, OPG and OPG Trust would raise debt from the capital markets totaling 56% of the IESO asset value. [Is this proposing that OPG issue debt on its own or through the OEFC as it currently does?]

Commented [DS5]: More for discussion, has OPG (on behalf of the OPG Trust) raised any concerns on borrowing from the markets on a monthly basis?

For the borrowing through OEFC, would just need to ensure approvals are in place in advance as OEFC Board meets quarterly. Shouldn't be an issue though as I think this has been done in the past where OEFC provides a total borrowing limit and OPG can draw down over a period of time.

- There is a 5 business day transaction window from the timing of the notice received by the OFA to payment and settlement with the [or OPG?] IESO.

Decisions and Approvals Required for Province's Equity Financing

The capital contribution (equity injection) to OPG could be carried out in the same way as the capital contribution to Hydro One prior to its initial public offering.

1. The Province, through the Ministry of Energy, would create an "Operating Asset" line for the purchasing of OPG equity. The creation of this line and the annual appropriation for the Operating Asset would require Treasury Board/Management Board of Cabinet approval.

- The Operating Asset could be either a voted item or a statutory item. While the program would be implemented through legislation, it is assumed that the decisions around the capital contributions or equity injection would be made outside of legislation [largely consistent with the current state of legislative drafting]. Based on this assumption, the analysis that follows assumes the Operating Asset would be categorized as a voted item.

2. Depending on timing, the creation of the Operating Asset would either be included in the Province's Estimates (tabled following the release of the Provincial Budget) or, if this window is not met, in Supplementary Estimates.

    - Operating Assets are fiscally neutral, they represent a balance sheet item, but given they are included in the Estimates they are visible to the public, in this case through the Minister of Energy.

3. The Province would need to seek approval, through either Estimates or Supplementary Estimates, of an appropriation for the amount of the Operating Asset (i.e., approval to make a capital contribution up to the approved amount). The Province could seek approval of a placeholder amount of $1,000, or an estimate of the total projected required capital contribution for that fiscal year.

    - Under the assumption that the Operating Asset is categorized as a voted item, any capital contribution required over and above the approved amount would likely require further TB/MBC approvals. Given the magnitude of the initiative, staff have assumed that finding expense offsets is not a viable option.

4. Following the above approvals, the Province would be able to make the capital contribution into OPG and receive OPG shares in return.

Commented [JK6]: I believe this has to do with the notion that if the ministry can find offsets, then no need to go back to TB for approval.

Commented [FC7R6]: That is correct.

MECHANISM FOR RETURN OF CAPITAL TO PROVINCE

Under the mechanism, the Province will be providing an equity injection into OPG that would then use that contribution to purchase debt from OPG Trust. The current understanding is that that the proposed share price would be $20 at the time of purchase.

Subject to how the equity injection is structured, the Province would be able to sell back the shares to OPG at the same $20 per share in the future. This, however, would only result in the return of its equity injection and without any return, the Province would be responsible for the carrying costs of the equity injection partially offset, at least from an accounting perspective, by

Commented [FC8]: Why is this relevant? What is really relevant for the Province that transactions are done at carrying cost. If in the future the BV of OPG is higher than $20 this would cause the Province a loss before consolidation. I would suggest the focus be on transacting at BV.

any ROE earned on the incremental equity. The following methods could be utilized to allow the Province receives its equity contribution plus a return related to the cost of financing the equity injections.

1. Dividend (Common Shares)

   The Province would incur interest associated with the debt it borrows to finance the 44% equity injection. OPG would expect to have an equal or greater amount related to this 44% interest cost collected from ratepayers through annual cash payments. OPG could elect to provide the interest cost collected back to the Province as a dividend to cover the Province's cost of borrowing for its equity injection [subject to its Board approval].

2. Dividends (Preferred Shares)

   In order to reasonably guarantee a return to the Province, it may be necessary to establish a separate class of preferred shares with a dividend yield associated with the interest cost of the Province's borrowing costs or provide a mechanism for the interest cost to be recovered on a non-cash basis, e.g., through a form of dividend reinvestment plan or through cumulative preferred dividends that are not paid until principal starts being collected from ratepayers [in the event OPG chooses not to return capital during the accumulation of debt phase, which is understood to be OPG's current internal position, TBC].

   A preferred equity structure could potentially impact OPG's credit ratings if rating agencies view the preferred shares as debt rather than equity. In general preferred shares are treated at 50% for rating rations (check).

3. Redemption of Shares at a Premium

   Equity injections can be viewed as a subsidy if the province is not compensated for its risk or cost of financing. That would mean that the Province may need to demonstrate that the expected ROE is higher than the cost of funding these new shares. Under such a scenario, an appropriate pricing or premium on buyback would need to be priced in so that when the Province sells back its shares, it receives a higher price per share than the proposed $20/share book value. OPG staff have signaled to CEFD and CMD staff that their current plan is to not provide the Province with a cash flow, in dividends or otherwise, for the 44% equity injection until the point in time where the ratepayers start to pay down the deferred GA. [TBC]

LEGISLATION AND TIMING

- The proposed timing for the legislation is May, early June.
- It's unclear how these rates would be effective to consumers if the RPP prices are reset on May 1 and November 1 of every year.
  - Furthermore, the RPP prices are announced by the OEB in mid-April and mid-October annually.
  - Unclear on whether the timing for this implementation mechanism would be sufficient for May 1, RPP prices.
- [TBC] TBS would provide an annual allocation, with a three-year program review cycle.

Electricity Finance Branch, Ontario Financing Authority
April 12, 2017

HUNTON& WILLIAMS

BASELOAD

Current Topics in Energy Capital Markets





June 2012

Contents

Recent Financing Trend: Reopening Previous Issues of Debt Securities p.1

Cost Recovery Through Rate Reduction Bonds; A Short Survey.....p.3

The Rating Agency Condition: A Cautionary Note.....p.5

Contacts p.7

Recent Financing Trend: Reopening Previous Issues of Debt Securities

We have recently noticed an increase in the popularity of debt "reopeners," including reopener issuances in March 2012 by Mississippi Power Company, in May 2012 by both Georgia Power Company and Westar Energy, Inc. and in June 2012 by Southwestern Public Service Company. This financing technique is known by several different names, including "reopener," "reopening," "add-on," "tack-on" or "tap." Regardless of the name, the procedure is the same. Namely, after the original issuance date of a series of debt securities, the issuer chooses to offer additional securities of such existing series rather than offer a new series with different terms. These reopened securities must have the same terms (maturity, coupon, interest payment dates, CUSIP number, exchange listing, redemption provisions, etc.) as the originally issued securities. The selling price and issue date will likely be the only difference; with the interest rate already fixed, a discount or premium in the selling price is needed to produce a yield reflecting the current market. Additionally, if the issuance of the additional securities occurs after the first interest payment date on the outstanding securities, the initial interest payment date would differ. Additional securities issued pursuant to a reopener should trade fungibly with the originally issued securities.

Why Reopen?

There are several reasons why issuers often want to reopen a series of debt securities, as opposed to issuing a new series. Unlike equity issuances, debt offerings do not typically include an option permitting underwriters to purchase additional securities within a specified period of time (a "green shoe"). A reopening, however, can satisfy additional investor interest in an issuer's debt offering. Unexpected investor demand may be a motivation for an immediate reopening of a recently issued series of securities, but reopenings are not limited to the typical 30-day green shoe option exercise period.

For an issuer requiring new funds, but less than $250 million principal amount, liquidity is another driving force behind the popularity of reopeners. Debt securities that are "index eligible" have more market information

readily available to investors and are more easily traded. In order to be "index eligible" (i.e., eligible to be included in the Barclays Capital US Aggregate Bond Index) a debt issue must aggregate at least $250 million principal amount. A series of securities that is "index eligible" will likely receive more favorable pricing terms than a non-"index eligible" series of securities. So, if an issuer seeks to issue less than $250 million principal amount or if an original issuance was less than $250 million principal amount, a reopener may result in a combined series greater than $250 million and therefore cause the series to be "index eligible."

Requirements & Mechanics

An issuer interested in the reopening technique needs to ensure that the indenture (or other operative document pursuant to which the debt was issued) permits the issuance of reopened debt without the consent of the holders of the original series. The offering document for the original issuance should also disclose the issuer's ability to increase the principal amount and issue additional securities of such series.

A reopener that is registered under the Securities Act of 1933 is basically a routine takedown from the shelf registration statement.[1] The reopener prospectus should be near-identical to that from the original issuance, but any reopening needs up-to-date disclosure (risk factors, issuer developments, financial data, etc.). The reopener prospectus should also include a description of the reopening on the cover page, set out the details of the previously sold securities and note the formation of a fully fungible single series.

Investors who purchase reopened debt are required to pay, as part of the purchase price, accrued interest. The amount of the accrued interest depends on the date of the reopening issuance. In the case where the reopened debt will be issued prior to the first interest payment date following the original issuance, the purchasers will need to pay accrued interest for the period beginning on the date of the issuance of the original securities to, but not including, the date of issuance of the reopened debt. Alternatively, if the reopened debt is issued after an interest payment date on the original issuance of debt, purchasers of the reopened debt will need to pay accrued interest for the period beginning from the most recent interest payment date to, but not including, the date of issuance of the reopener.

The closing documentation for a reopened series will be substantially similar to that of the original issuance. Although the substance of the documents will appear very similar, a complete set of standard agreements, including underwriting agreement, opinions, comfort letters, certificates and receipts, will be necessary. However, the document that, pursuant to the indenture, originally established the series may not be required at the closing of the reopening.

[1] Reopenings of Rule 144A transactions can present a tricky issue. If an issuer reopens an original series of securities that were offered under Rule 144A under the Securities Act, the "restricted period" for the original securities will be restarted, as it will be impossible to distinguish between the originally issued and newly issued securities.

Tax Considerations

For the reopened securities to be fungible with the original issuance, they must have the same tax characteristics. If both the original issuance and the reopened securities are issued with no more than a *de minimis* amount of original issue discount,[2] as long as the securities otherwise have identical terms, they should have the same tax characteristics, even if they technically are not part of the same "issue" for tax purposes.[3]

The tax considerations for a reopening can be more complicated if either the original issuance was issued with original issue discount or the reopened securities will be sold with more than a *de minimis* amount of discount. In that circumstance, to be fungible from a tax perspective, a reopening of debt securities must either close within 13 days of the original issuance as part of a common plan or single transaction, or the additional debt must be part of a "qualified reopening," as determined by one of two tests. Debt securities issued in a qualified reopening are treated for tax purposes as if they were issued in the original issuance. As a result, the reopened securities issued in a qualified reopening have the same tax characteristics, including amount of original issue discount, as the original issuance, and any additional discount in the reopening is treated as market discount.

The Treasury regulations restrict qualified reopenings to two circumstances. First, if the reopening date is not more than six months after the issue date of the original debt securities, then the reopening will be a qualified reopening if (a) the original debt securities are publicly traded[4] and (b) on the pricing date of the reopening (or, if earlier, the announcement date), the yield on the original debt securities is not more than 110 percent of the yield on the issue date of the original debt securities.

Second, if the original debt securities are publicly traded and are not tax-exempt obligations or contingent payment debt obligations, then the reopening will be a qualified reopening if the new debt securities are issued with no more than a *de minimis* amount of original issue discount (determined without applying the qualified reopening rules).

Given this additional level of tax analysis regarding reopeners, many issuers choose to include a tax section in the prospectus supplement disclosing these considerations.

[2] For a noncontingent fixed rate debt security, the amount of original issue discount generally will be the difference between the amount payable at maturity and the issue price of the debt security. Original issue discount is de minimis if it is less than 0.25 percent of the amount payable at maturity multiplied by the number of complete years to maturity from the issue date.

[3] If such reopenings meet the requirements for a qualified reopening described below, then the reopened securities will be treated as the same "issue" for tax purposes.

[4] Whether a debt security is publicly traded is determined under Treasury regulations Section 1.1273-2(f). In general, debt securities that are listed on a specified exchange, that are traded on a contract market designated by the CFTC or an interbank market, for which a system of general circulation disseminates price quotations or recent trading prices, or for which price quotations are readily available from dealers, brokers or traders (subject to certain exceptions), generally are treated as publicly traded. Proposed Treasury regulations would expand the definition of publicly traded to include any debt security for which the price for an executed purchase or sale is reasonably available or for which firm or indicative quotes are available.

Cost Recovery Through Rate Reduction Bonds; A Short Survey

Utility rate reduction bonds help utilities recover certain categories of costs in a fashion that minimizes the rate impact for their customers and resulting stress on the utility's ongoing rate structure. The categories of costs recoverable through this type of financing, and the number of states sponsoring such issuances, have continued to grow in recent years. We thought it would be useful to identify the states that sponsor this type of financing and to survey the types of costs recoverable from proceeds of a rate reduction bond issuance. Although still utilized in less than a majority of the states, rate reduction bonds have represented a significant source of funding for the utility industry in recent years, with more than $45 billion of issuances since the structure was introduced in the late 1990s.

Rate reduction bonds minimize costs by qualifying for triple A ratings and accordingly are issued with yields considerably lower than those based on the sponsoring utility's long-term debt rating. In order to be eligible for this level of credit quality, rate reduction bonds must possess certain common structural characteristics.

- First, the bonds must be authorized by specific state enabling legislation entitling the utility to impose and collect usage-based customer charges that are dedicated to payment of the bonds.
- The charges must be non-bypassable; that is, they cannot be eliminated by switching to alternative providers of service.
- The legislation requires the utility to seek and receive an irrevocable financing order from the state utility regulator. The financing order creates a present intangible property right to impose and collect the non-bypassable charge in amounts necessary to service the bonds.
- The legislation and financing order provide for a periodic true-up rate mechanism, by which at least annually, and more frequently in many cases, the special charges are reviewed and adjusted to correct for any undercollection, to assure timely payment of the principal and interest on the bonds.
- The legislation also provides for a covenant by the state that until the bonds have been paid, the state will not impair the value of the securitization collateral or, but for the true-up process, reduce, alter or impair the special charges to the utility's customers.

In a rate reduction bond transaction, the sponsoring utility typically sells its rights to the special customer charges and related statutory rights and entitlements to its bankruptcy remote subsidiary. This is done pursuant to provisions of the legislation that provide that the sale of this intangible property will be perfected under state law as an absolute transfer. The subsidiary issues the bonds and pledges its entitlements and rights as collateral to the trustee under the bond indenture.

The Internal Revenue Service has issued specific guidance for rate reduction bond structures under which the sponsoring utility is not required to recognize income when it receives the proceeds of the bonds in return for the transfer to the issuer of the intangible rights under the financing order. Instead, the non-bypassable charges are recognized as income to the utility under its usual method of accounting. In addition, the bonds are treated as obligations of the utility.

Enabling legislation for rate reduction bonds has generally been adopted for limited categories of identified costs and not typically for general utility financing. For such legislation to be supported and passed and bonds to be issued thereunder, there typically must be special circumstances that incent both the local utility and legislators and regulators to find that more customary means of utility financing should be supplemented. Both the utility and the regulator lose elements of their normal compact in connection with rate reduction bonds. For the state and regulator, the flexibility to adjust this component of the utility's rates, as interest rates and financing costs vary, is lost. To obtain the lowest rates, rate reduction bonds are non-redeemable and the charges to customers must meet debt service for the life of the bonds. The utility, on the other hand, forgoes its equity return on the component of its rate base financed with rate reduction bonds. The customers' charges are essentially a straight pass-through of debt service. Equity investment in the special purpose issuer has traditionally been 0.05% of the principal amount of the bonds and treated as credit enhancement, without a return other than from investment of such funds when not needed for bond service. As a result, assets financed with rate reduction bonds do not generally bear a meaningful equity return.

As of the date of this article, approximately 20 states have adopted statutes permitting the issuance of rate reduction bonds. Certain of these statutes have been for single offerings or are subject to sunset provisions and certain statutes remain as a generic option for the particular company. The classes of recoverable costs have included the following:

Transition to Competitive Market Costs

These are costs incurred by the utility that would have been recoverable under a regulated monopoly market structure but are not recoverable through market prices in a competitive market. Depending on the state, these costs may include, among other things, generating assets sold below cost, mitigation costs in the transition to competition, and

uneconomic purchased power or fuel costs. Transition bonds are the most common form of rate reduction bonds and are or have been available to utilities in California, Connecticut, Illinois, New Hampshire, Massachusetts, Michigan, Montana, New Jersey, Pennsylvania and Texas.

Storm Recovery Costs

These are costs incurred in connection with the restoration of service and infrastructure after large-scale storm events. In Arkansas, Florida, Louisiana and Texas the securitization proceeds may recover such costs and also fund reserves for future storms.

Environmental Costs

These are costs incurred while constructing, installing or placing in operation equipment intended to control and lessen utility environmental impacts, costs intended to increase the efficiency of energy production or costs associated with retiring existing facilities to reduce, control or eliminate environmental pollution in accordance with federal or state law. Securitization is permitted to cover environmental costs in West Virginia and Wisconsin.

Investment Recovery Costs

In Louisiana recovery through securitization is permitted for costs of cancelling an electric-generating or transmission facility, capital investments in excess of $350 million or costs associated with purchasing or acquiring long-term supplies of fuel of any type or facilities of any type for the production, delivery or storage of such supplies.

Conservation Investment Costs

These are costs associated with energy conservation programs, including loans made to customers for this purpose and conservation measures installed at the expense of the utility. Conservation investment costs have been recoverable through securitization in Oregon and Washington.

Rate Stabilization or Phase-in Costs

These include costs incurred to acquire energy or fuel or other costs in excess of amounts that the utility had been allowed to charge customers currently and costs deferred as a phased implementation of increases in rates. Recently enacted statutes in the states of Ohio and West Virginia permit recovery for costs of this type. Maryland also permits recovery for costs associated with rate stabilization.

Regulatory Assets

The Michigan statute has a generic authorization for use of securitization to finance a utility's regulatory assets generally in addition to more specific references to costs stranded in a competitive market.

Other

Many state rate reduction bond statutes authorize financing the costs of acquiring equity or debt with the proceeds of a bond issuance. Many also include in the calculation of the costs to be recovered, carrying costs incurred during the period from when the costs were initially incurred until recovery through the issuance of the rate recovery bonds. In addition, certain unique situations have also been addressed. For example, California adopted a specific provision allowing Pacific Gas and Electric Company to recover costs as authorized by the public utilities commission relating to its Chapter 11 reorganization in 2003. Finally, the Idaho statute appears to include virtually anything the utility could finance through ordinary means of financing.

Rate reduction bond statutes have continued to be enacted in recent years. In the last year statutes have been enacted in Ohio and West Virginia authorizing rate reduction bonds to be issued for phase-in costs in Ohio as well as "expanded net energy costs" in West Virginia. Also rate reduction bond statutes have continued to be drafted, if not yet implemented, for a number of other potential uses. Lawyers at Hunton & Williams have participated in drafting proposed legislation to enable cost overruns on nuclear power plant construction to be financed with rate reduction bonds. Finally, it bears noting that issuances have continued under rate reduction bond statutes, including, within the last 12 months, the financing of costs associated with a cancelled generating facility ($207 million issued in September 2011 by an Entergy Louisiana, LLC, subsidiary under a Louisiana statute), and transition to competition costs ($1.695 billion issued in January 2012 by a CenterPoint Energy Houston Electric, LLC, subsidiary and $800 million issued in March 2012 by an AEP Texas Central Company subsidiary, each under a Texas statute). Lawyers at Hunton & Williams represented underwriters on nine of the last fourteen rate reduction bond issuances, including these three.

The Rating Agency Condition: A Cautionary Note

Issuers of asset-backed securities often find themselves with a need or desire to amend, supplement or obtain a waiver of the contractual terms of the outstanding securities. Indentures and contracts under which the securities are issued typically do permit modifications or waivers, but only with the consent of specified percentages of the holders of the securities. Obtaining a consent from holders can be time consuming, cumbersome and expensive. Depending on the circumstances, solicitations may require the assistance of specialized solicitation firms, an actual or virtual meeting of securities holders, legal expenses in connection with preparation of the documentation for the solicitation, filings with the Securities and Exchange Commission and, of course, securities holders may seek consideration for their consent. Rating agency conditions, or RACs, are provisions found in many securities transaction documents as a procedure to permit issuers to amend, supplement or obtain the waiver of terms of their agreements without having to get permission from the securities holders. Essentially the RAC is a provision that permits modifications or waivers, provided that it is demonstrated that there is no adverse impact on the rating of the securities.

Examples of RAC provision usage are particularly prevalent in utility rate reduction bond securitizations. These transactions typically involve the issuance of bonds that are to be paid by a special charge on customers of the utility. The charge is authorized by legislation and a special order of the state regulator and adjusted, or trued- up, if necessary, to meet scheduled bond service. The stakeholders in the transaction include not just the issuer and the bondholders, but also the utility regulator and the wide class of utility customers. RACs are used in significant ways to permit adjustments to the transaction and constrain other actions. Satisfaction of a RAC is often a condition to certain amendments of the indenture and other principal documents, to the merger of the issuer, to appointments of successor servicers, to adjustments in the level of the servicer's fee, to application of nonstandard true-ups, to defeasance and to sale of the utility's business. Also, it is not unusual to require the RAC to be satisfied for the utility to enter into any subsequent rate reduction bond transactions.

In its simplest form, a RAC provides that notice of the proposed action must be provided to a specified agency and that confirmation of no adverse ratings impact must be received from that agency to meet the standard for modification of the transaction without consent of securities holders. Because many transactions are rated by more than one agency, a common form requires the affirmative acknowledgement of no adverse impact from one agency and, in addition, notice to one or more other agencies rating the securities, and then the absence of adverse ratings actions from these others during a specified period, after which the proposed action can proceed.

Since 2008, and as a result of increased scrutiny placed on rating agency actions, certain agencies have become reluctant to produce writings outside the guidance in formal press releases or the initial rating advice. Rating agencies have also refined their procedures and policies to stress that, as articulated in one case, they will not "shape the structure of deals." Depending on the circumstance, agencies have either declined to provide a RAC response or made it more difficult to obtain one. In consequence, a provision that is widely used throughout ABS and corporate transactions can become a potential roadblock that can prevent an issuer from amending, supplementing or updating its documents. In addition, issuers may be precluded from taking actions they would otherwise have expected to undertake without difficulty. For an example of the latter, consider a series of utility rate reduction bond transactions that commingle collateral and that require satisfaction of a RAC for a follow-on transaction. In these circumstances, the issuer can find itself in a trap, needing to fully document a transaction to the point of launch before seeking RAC confirmation, only to find that the RAC is not available.

In our recent experience, policy changes at some of the rating agencies have made the traditionally drafted RAC problematic. Many large transactions are rated by the three principal agencies, Standard & Poor's Ratings Services ("S&P"), Moody's Investors Service, Inc. ("Moody's") and Fitch, Inc. ("Fitch"). Of these three, as of March 2012, it is our understanding that only S&P will provide a written response to a RAC inquiry. In our experience, it is now difficult to obtain a direct written response to a RAC inquiry from Moody's and Fitch, with the form of the response and the ability to obtain it in a timely fashion being an issue even when it is available.

One of the rating agencies' current policies in this area resulted in unusual drafting in a recent transaction involving a utility rate reduction bond securitization. The initial proposal was to include a RAC requiring notice to S&P and the confirmation by S&P of no adverse ratings affect. It also required notice to the other agencies rating the securities and no indication of an adverse effect from these agencies before the expiration of a specified period. This approach was consistent with a number of recent transactions in not requiring the other agencies to express a view, but giving them an opportunity to do so if the proposed action was deemed by them to be inconsistent with the continuance of the awarded rating level. One of the rating agencies objected, on the theory that inaction might imply active re-affirmance. Instead, in a convoluted result worked out with the objecting agency, the rating agency condition as to

Moody's and Fitch was deemed removed if no response was received after the expiration of the specified period. The full text of the RAC is produced below.

> *Rating agency condition means, with respect to any action, not less than ten (10) business days' prior written notification to each rating agency of such action, and written confirmation from each of S&P and Moody's to the servicer, the indenture trustee and us that such action will not result in a suspension, reduction or withdrawal of the then current rating by such rating agency of any tranche of transition bonds issued by us and that prior to the taking of the proposed action no other rating agency shall have provided written notice to us that such action has resulted or would result in the suspension, reduction or withdrawal of the then current rating of any such tranche of transition bonds; provided, that if within such ten (10) business day period, any rating agency (other than S&P) has neither replied to such notification nor responded in a manner that indicates that such rating agency is reviewing and considering the notification, then (i) we shall be required to confirm that such rating agency has received the rating agency condition request, and if it has, promptly request the related rating agency condition confirmation and (ii) if the rating agency neither replies to such notification nor responds in a manner that indicates it is reviewing and considering the notification within five (5) business days following such second (2nd) request, the applicable rating agency condition requirement shall not be deemed to apply to such rating agency. For the purposes of this definition, any confirmation, request, acknowledgment or approval that is required to be in writing may be in the form of electronic mail or a press release (which may contain a general waiver of a rating agency's right to review or consent).*

Where a RAC with this structure must be satisfied for a proposed action it will be important to plan for the 15 business days waiting period that may occur. For example, where a RAC is imposed as a condition to a follow-on transaction to avoid triggering a default with respect to outstanding securities, this timing may present a challenge. Often a follow-on transaction requiring a RAC confirmation to not violate the terms of an outstanding security is not fully negotiated or committed until the transaction is ready to move into the market, and the uncertainty built into a potential for a three-week delay, while the RAC process is completed, can be problematic unless planned for well in advance. Another potential issue results from the recent initiatives whereby in ABS transactions, the Securities and Exchange Commission requires issuers to make information provided to a rating agency available to other agencies that may choose to provide a rating for the security (see Rule 17g-5). To avoid potential delay and or an uncontrolled interaction with an agency not chosen by the issuer to rate the transaction, it is important to contractually limit the "rating agencies" to which the RAC applies to be the agencies specifically chosen to rate the securities at issuance.
One last suggestion is that, where possible, a RAC not be imposed as an absolute requirement but always as an alternative to consent of a specified percentage of securities holders. This would mitigate the risk that someday S&P joins the ranks of agencies refusing to respond to a RAC request by providing a clear alternative that would eliminate any ambiguity as to what percentage of securities holders could waive the RAC requirement.

The rating agency condition is still a practical option for most issuers and can be used effectively. It is, however, important to understand and consider what the rating agencies are willing and may in the future be willing to do before drafting and incorporating a particular condition. Addressing the inclusion and structure of a RAC early in the offering process will allow sufficient time for both issuers and the agencies to get comfortable with the process being requested and help to eliminate surprises.

**Originally published in "Total Securitization," Vol. IV, No. 22 (June 4, 2012). This article has been reproduced herein with permission.



Steven R. Loeshelle, Editor
212.309.1028
sloeshelle@hunton.com



Steven C. Friend, Editor
212.309.1065
sfriend@hunton.com

BASELOAD is prepared from time to time to provide general information about selected energy capital markets developments and issues for attorneys at Hunton & Williams LLP, and is provided to clients and friends of Hunton & Williams LLP. It is not intended to provide legal advice or legal opinions and must not be relied on as such.

If you have questions related to any of the articles in this issue, please contact any of the below members of the Capital Markets Group of the Energy and Infrastucture practice at Hunton & Williams LLP:

Dee Ann Dorsey
212.309.1174
ddorsey@hunton.com

Bud Ellis
212.309.1064
ellisb@hunton.com

Kevin C. Felz
212.309.1053
kfelz@hunton.com

Michael F. Fitzpatrick, Jr.
212.309.1071
mfitzpatrick@hunton.com

Steven C. Friend
212.309.1065
sfriend@hunton.com

Steven R. Loeshelle
212.309.1028
sloeshelle@hunton.com

Peter K. O'Brien
212.309.1024
pobrien@hunton.com

Matthew J. Albrecht, Adam R. O'Brian and Andrew J. Spector contributed to articles in this issue.

The editors wish to thank Katie M. Abbott, Gail E. Hageman, Paul M. Kotsol, Jr. and Amy E. Wolf for helping make this issue possible.

Copyright ©2012. All rights reserved. Quotation with attribution is permitted.

Atlanta · Austin · Bangkok · Beijing · Brussels · Charlotte · Dallas · Houston · London · Los Angeles · McLean · Miami · New York · Norfolk
Raleigh · Richmond · San Francisco · Tokyo · Washington

HUNTON& WILLIAMS
www.hunton.com

© 2012 Hunton & Williams LLP. Attorney advertising materials. These materials have been prepared for informational purposes only and are not legal advice. This information is not intended to create an attorney-client or similar relationship. Please do not send us confidential information. Past successes cannot be an assurance of future success. Whether you need legal services and which lawyer you select are important decisions that should not be based solely upon these materials. Photographs are for dramatization purposes only and may include models. Likenesses do not necessarily imply current client, partnership or employee status. Contact: Walfrido J. Martinez, Managing Partner, Hunton & Williams LLP, 2200 Pennsylvania Avenue, NW, Washington, DC 20037, 202.955.1500

WHEREAS pursuant to subsection 22(1) of the *Capital Investment Plan Act, 1993* (the "Act"), the Minister of Finance may purchase securities of or make loans to corporations established under subsection 2(1) of the Act in such amounts, at such times and on such terms and conditions as the Lieutenant Governor in Council considers expedient;

AND WHEREAS the Ontario Financing Authority (the "OFA") is a corporation established under subsection 2(1) of the Act;

AND WHEREAS pursuant to subsection 6(3) of the Act, the power of a corporation established under subsection 2(1) of the Act to borrow and issue securities, among other things, may only be exercised under the authority of a by-law that has been approved by the Minister of Finance;

AND WHEREAS the OFA wishes to borrow up to ● Dollars in lawful money of Canada from the Minister of Finance and has been authorized to do so by a borrowing by-law approved in accordance with the Act;

THEREFORE:

Pursuant to subsection 22 (1) of the Act, the Minister of Finance is authorized to lend a maximum of ● Dollars in lawful money of Canada to the OFA on the following terms and conditions:

(a) the loan may be advanced in such amounts and at such time or times as required by the OFA;

(b) repayment of advances made under the loan plus accrued interest may be made in whole or in part at any time provided that the loan plus any accrued interest shall be fully repaid by ●;

(c) each advance (an "Advance") made under the loan hereby authorized shall bear interest at a rate which is determined as follows:

(i) from the date of the Advance to (but excluding) the date of repayment the Advance shall bear interest at a per annum rate equivalent to the yield earned on ninety day Province of Ontario treasury bills on the date before the Advance Date as determined by the Province, provided that if an Advance is outstanding for longer than ninety days, the interest rate shall be reset on the last day of each ninety day period (the "Reset Date") to the yield earned on ninety day Province of Ontario treasury bills immediately preceding the Reset Date for such ninety day period as determined by the Province;

(ii) in the event that moneys included in an Advance are used by the OFA for the purpose of funding loans to third parties (a "Third Party Loan"), the rate of interest payable by the OFA to the Province on the portion of the Advance so used shall be adjusted effective as of the date that the portion of the Advance is used to fund the Third Party Loan so that the per annum rate of interest payable by the OFA on such moneys is equivalent to the per annum rate of interest payable to the OFA under the Third Party Loan less an amount as may be determined by the Minister of Finance in respect of such Third Party Loan or a class of such Third Party Loans, until but excluding the date on which the Third Party Loan is repaid, at which time the interest rate set out in subparagraph (i) shall again be applicable to that portion of the Advance; and

(iii) in the event that moneys described in subparagraph (ii), once repaid, are subsequently used to fund loans to third parties, subparagraph (ii) shall again be applicable in determining the interest rate payable to the Province on that portion of the Advance used to fund such loan, and so on, until the Advance shall be repaid to the Province in full;

(iv) despite subparagraphs (ii) and (iii), in the event that no interest is payable to the OFA under a Third Party Loan, no interest shall be payable by the OFA on the portion of the Advance so used and to the extent that the terms of a Third Party Loan provide for the deferral of the payment of accrued interest for a period, the interest payment terms of an Advance or portion thereof shall also be deferred for a similar period.

(d) interest for any period of less than one year shall be payable for the actual number of days included in such period, computed on the basis of a 365-day year;

(e) despite paragraph (b) of this Order, interest on any portion of an Advance made to the OFA under the loan that is used by the OFA to fund a Third Party Loan shall accrue on the basis stated above but shall become payable only to the extent the OFA receives payment of interest under the relevant Third Party Loan;

(f) despite paragraph (b) of this Order, any portion of the principal of an Advance made to the OFA under the loan that is used by the OFA to fund a Third Party Loan shall become payable only to the extent the OFA receives repayment of principal under the relevant Third Party Loan; and

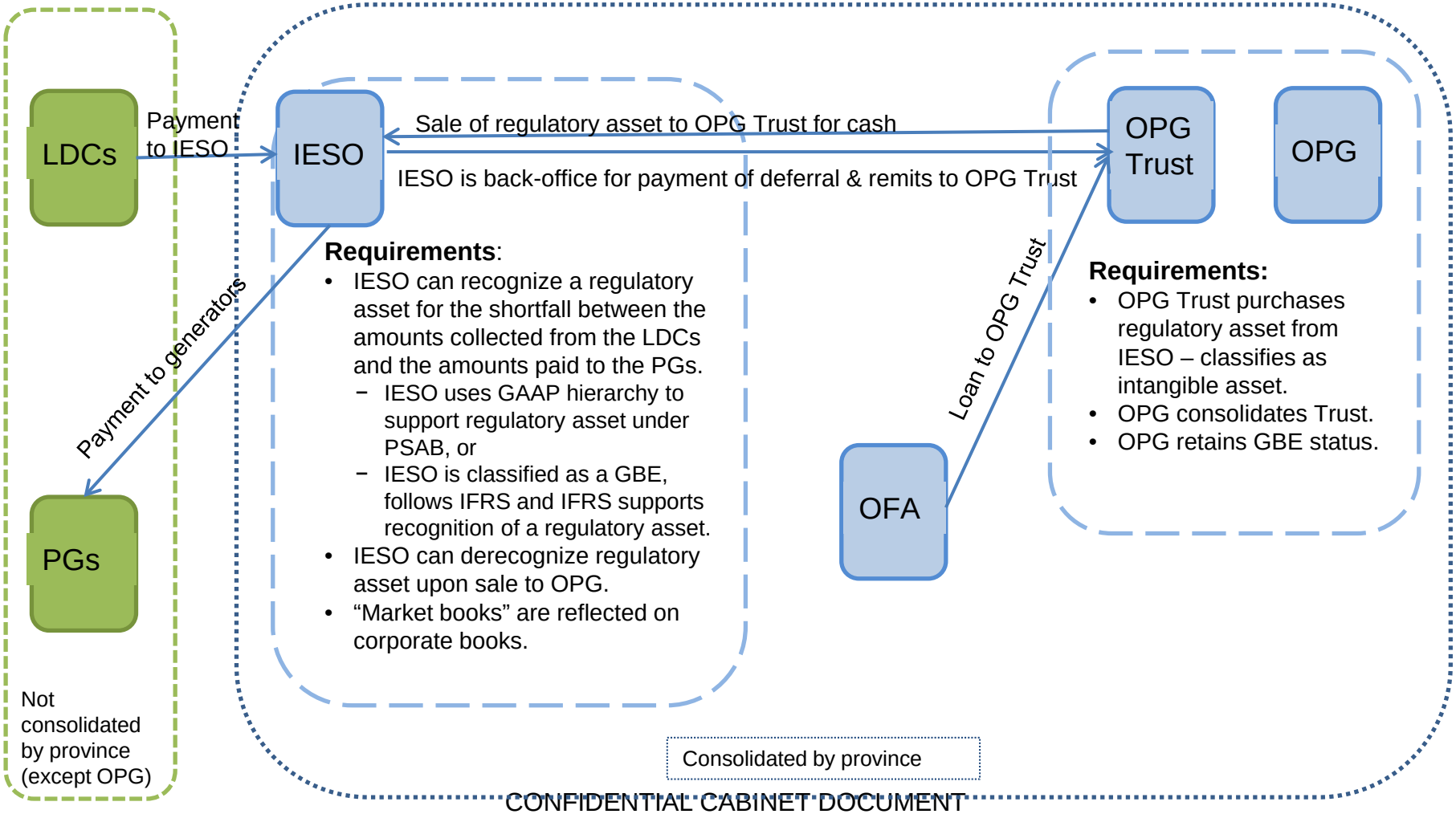
(g) the loan hereby authorized shall be evidenced by a promissory note.

Recommended _____ Concurred _____
Minister of Finance Chair of Cabinet

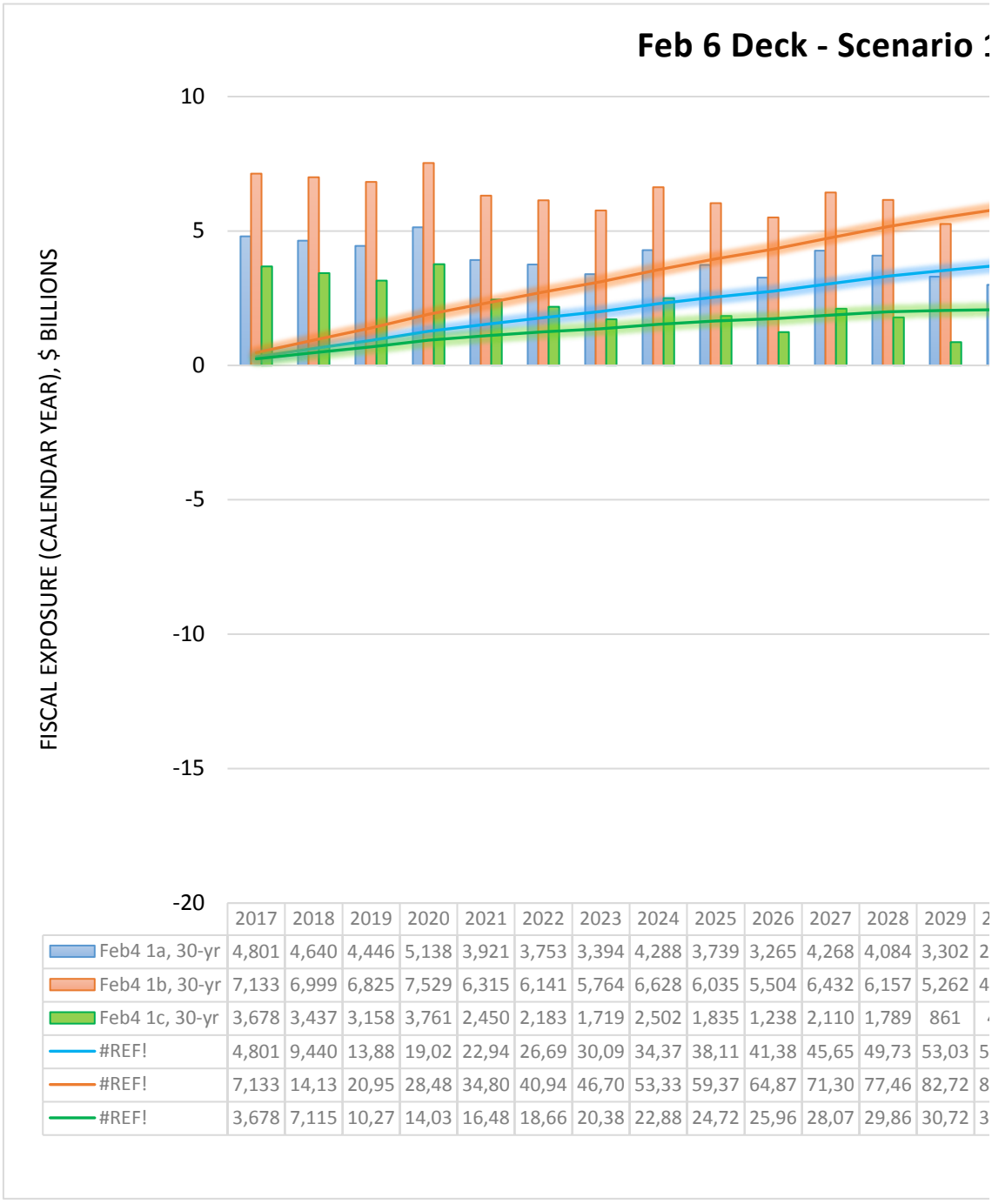
Approved and Ordered _____ _____
Date Lieutenant Governor

GA Smoothing – Potential Structure

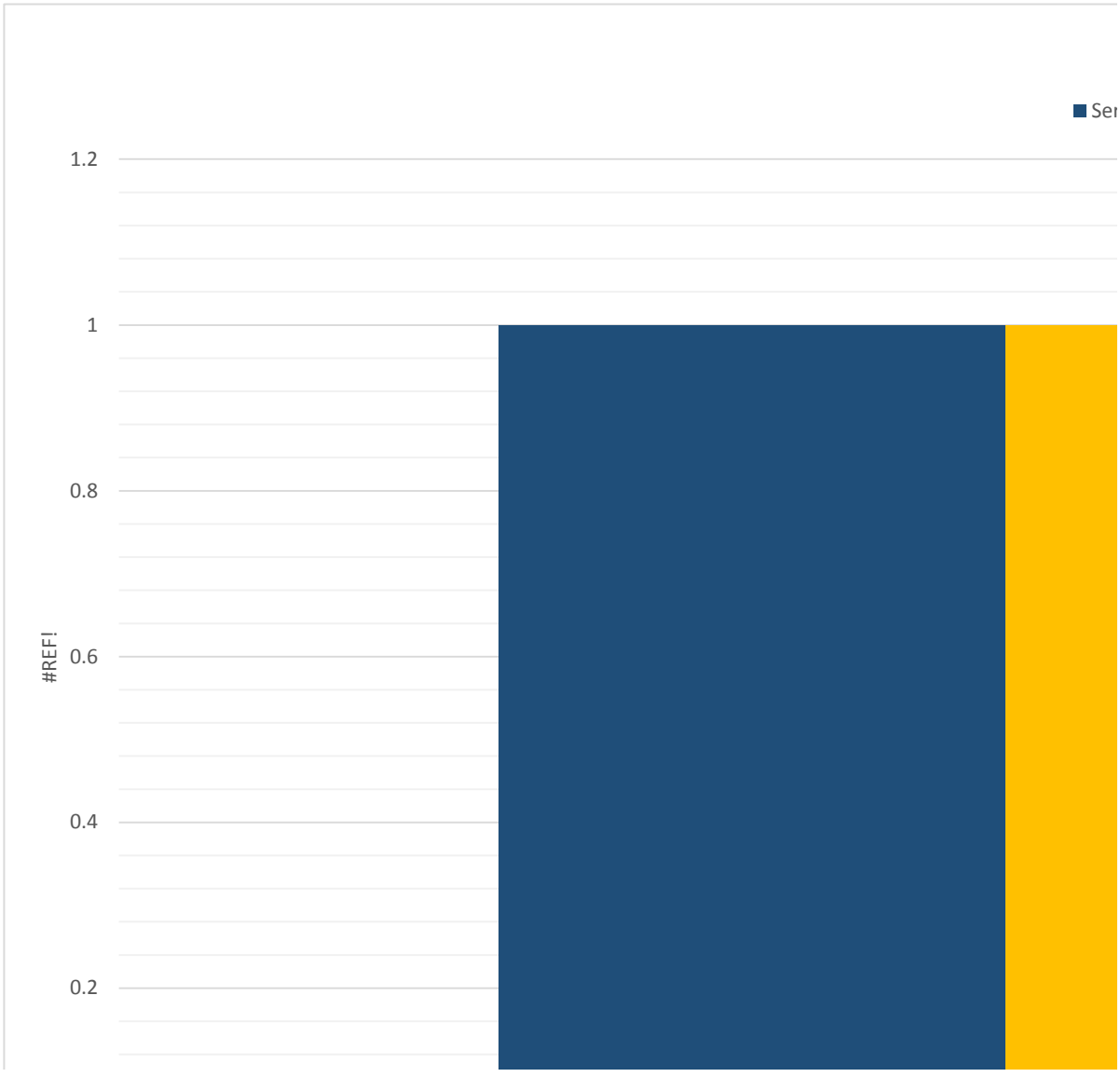
- The following diagram provides an overview of a potential GA smoothing structure, as well as interactions between sector entities and elements required to meet accounting objectives.

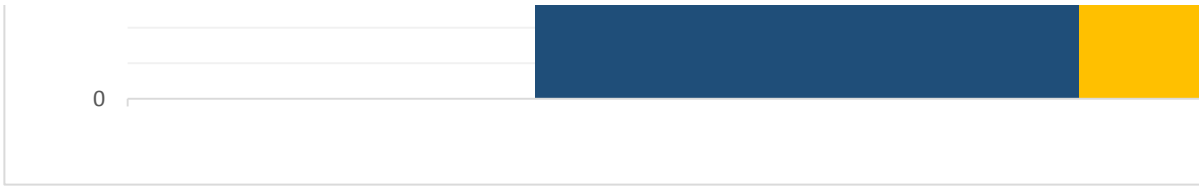


Feb 6 Deck - Scenario 1a, 1b, 1c - at 5.12% interest rate

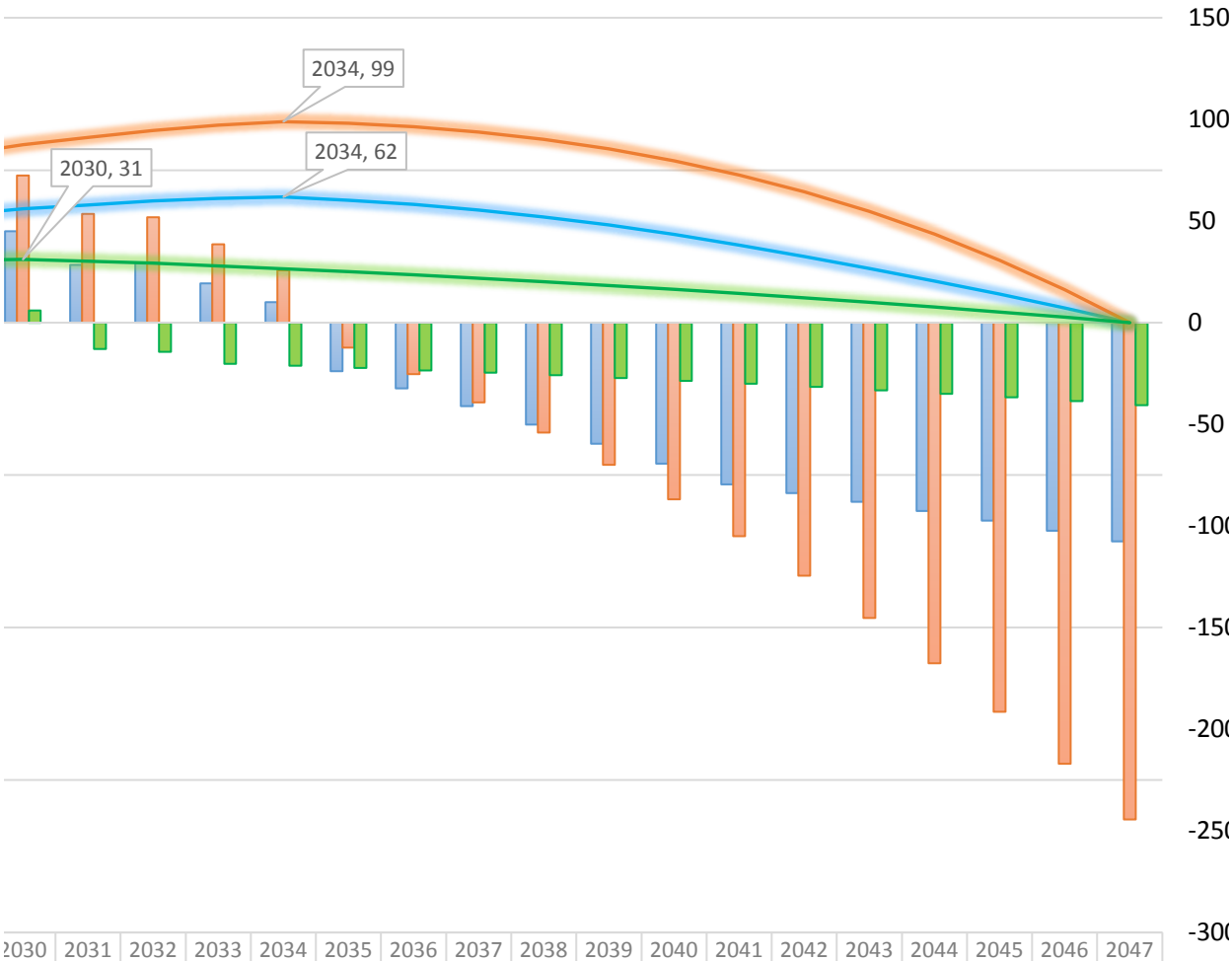


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2
Feb4 1a, 30-yr	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2
Feb4 1b, 30-yr	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4
Feb4 1c, 30-yr	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	
#REF!	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73	53,03	5
#REF!	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	8
#REF!	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	3


Ser
1.2
1
0.8
0.6
0.4
0.2
#REF!

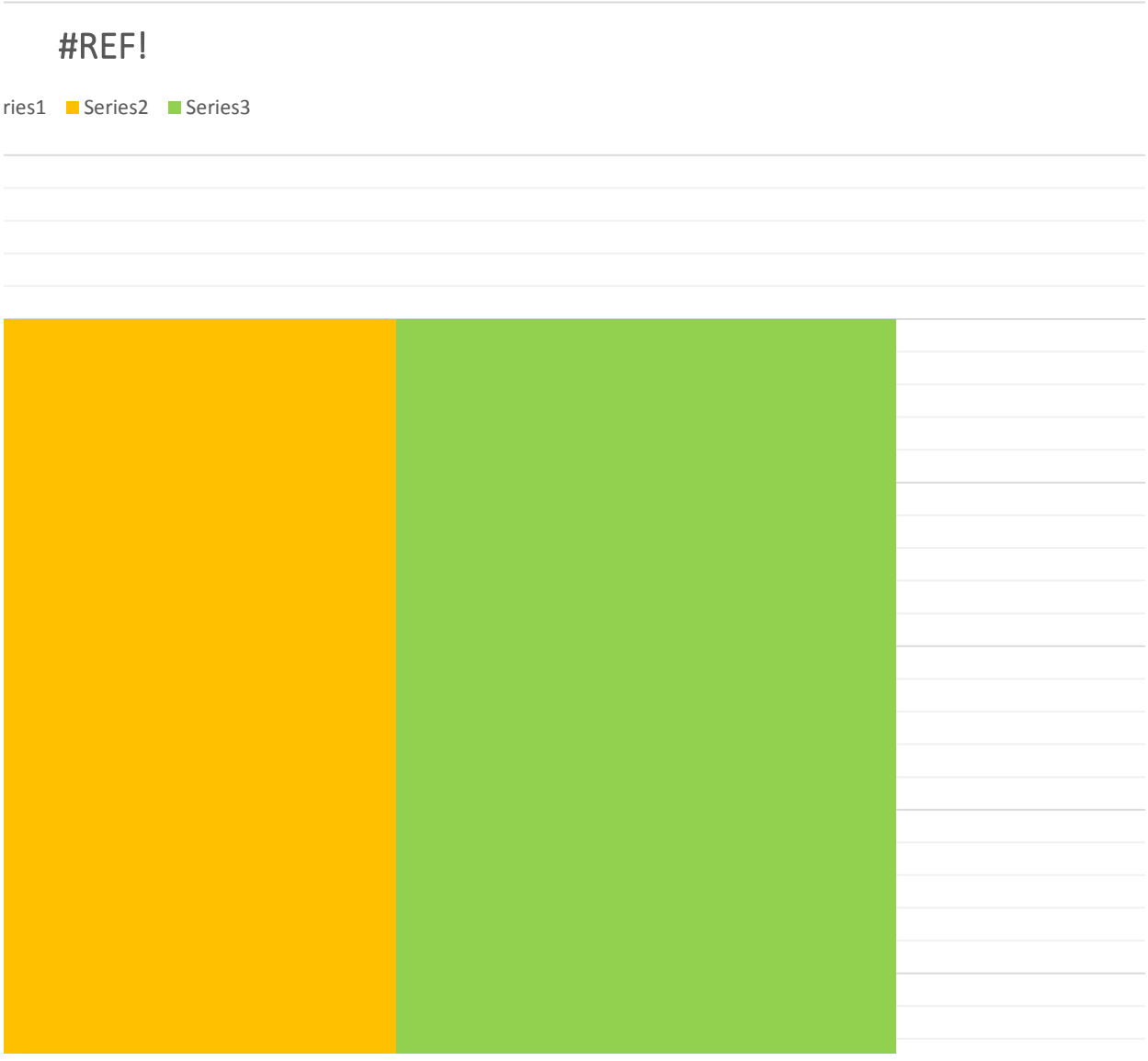

0

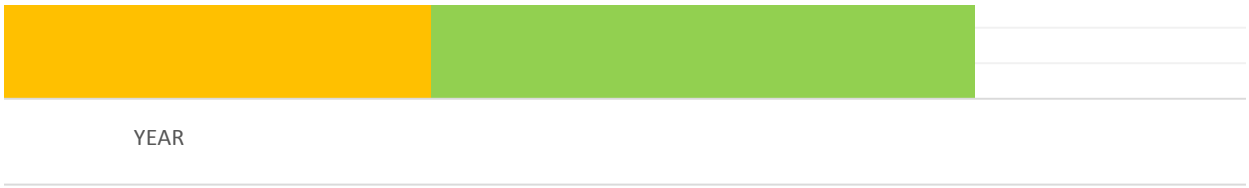
1a, 1b, 1c - at 5.12% interest rate



2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
,998	1,896	1,966	1,288	672	-1,59	-2,15	-2,73	-3,34	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
,826	3,568	3,457	2,571	1,716	-819	-1,68	-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
404	-860	-961	-1,34	-1,41	-1,48	-1,56	-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
6,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0
7,55	91,12	94,57	97,14	98,86	98,04	96,35	93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0
1,12	30,26	29,30	27,95	26,54	25,05	23,49	21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

CALENDAR YEAR


#REF!
ries1
Series2
Series3


YEAR

$BILLIONS

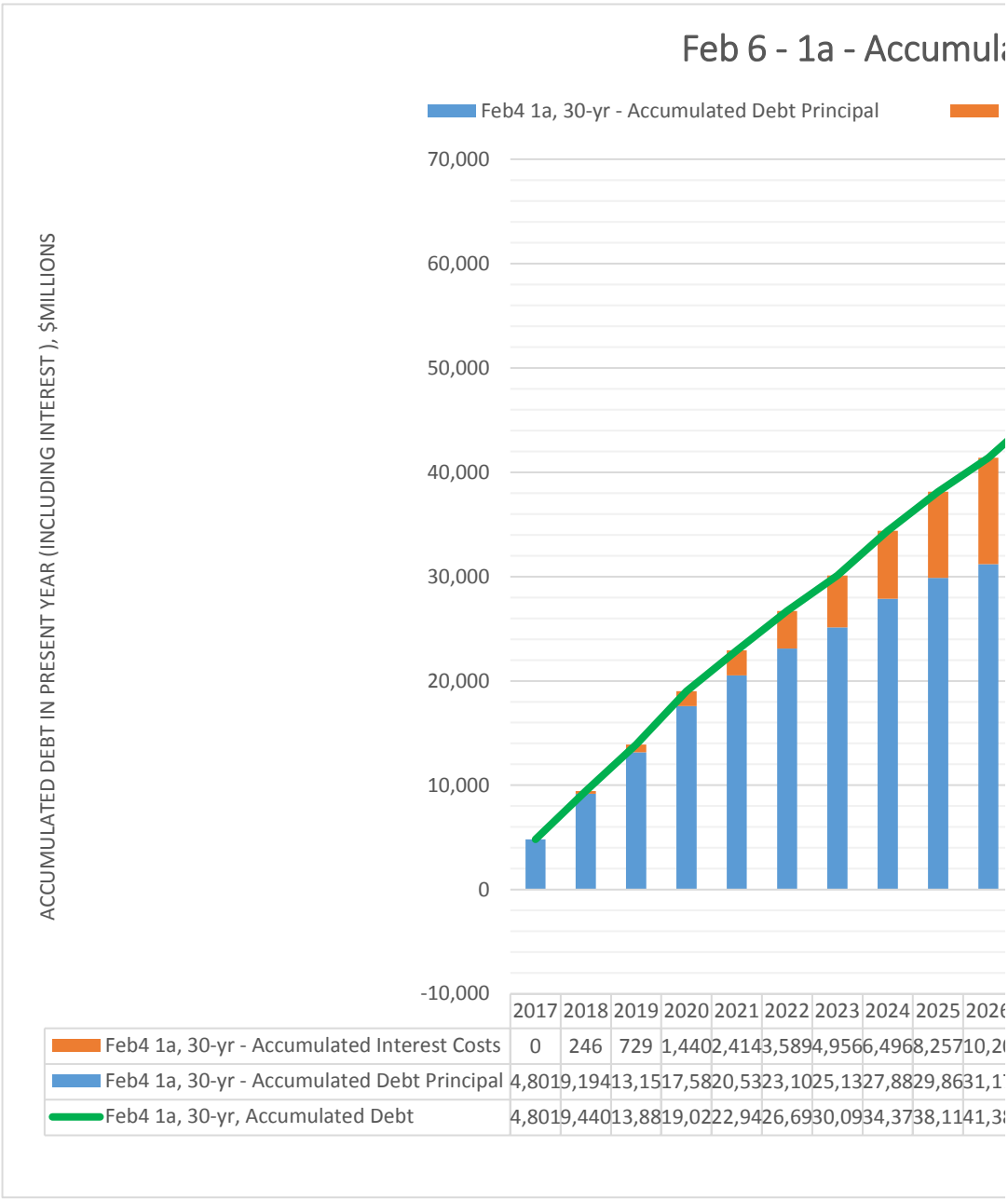
0

0

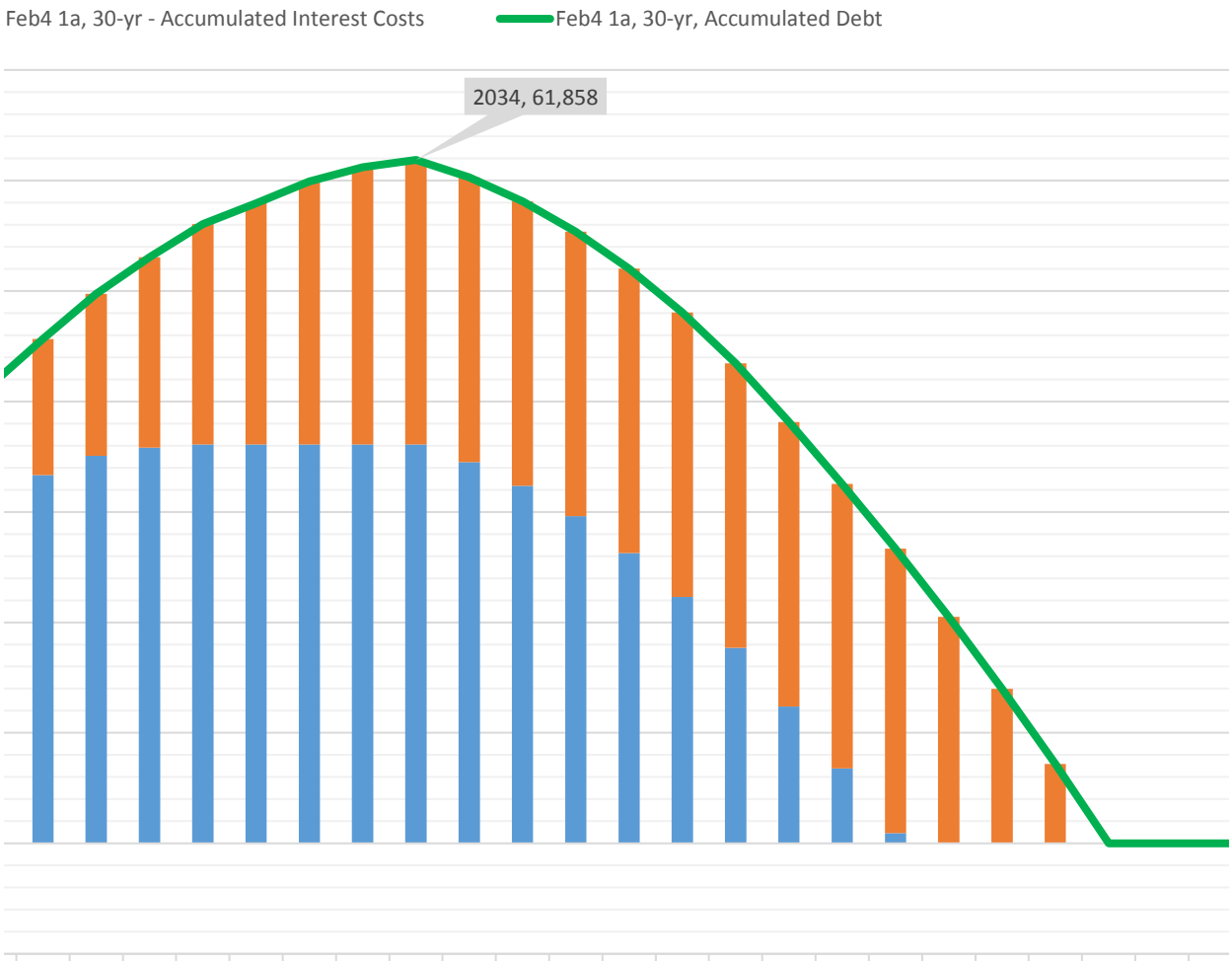
0

0

0

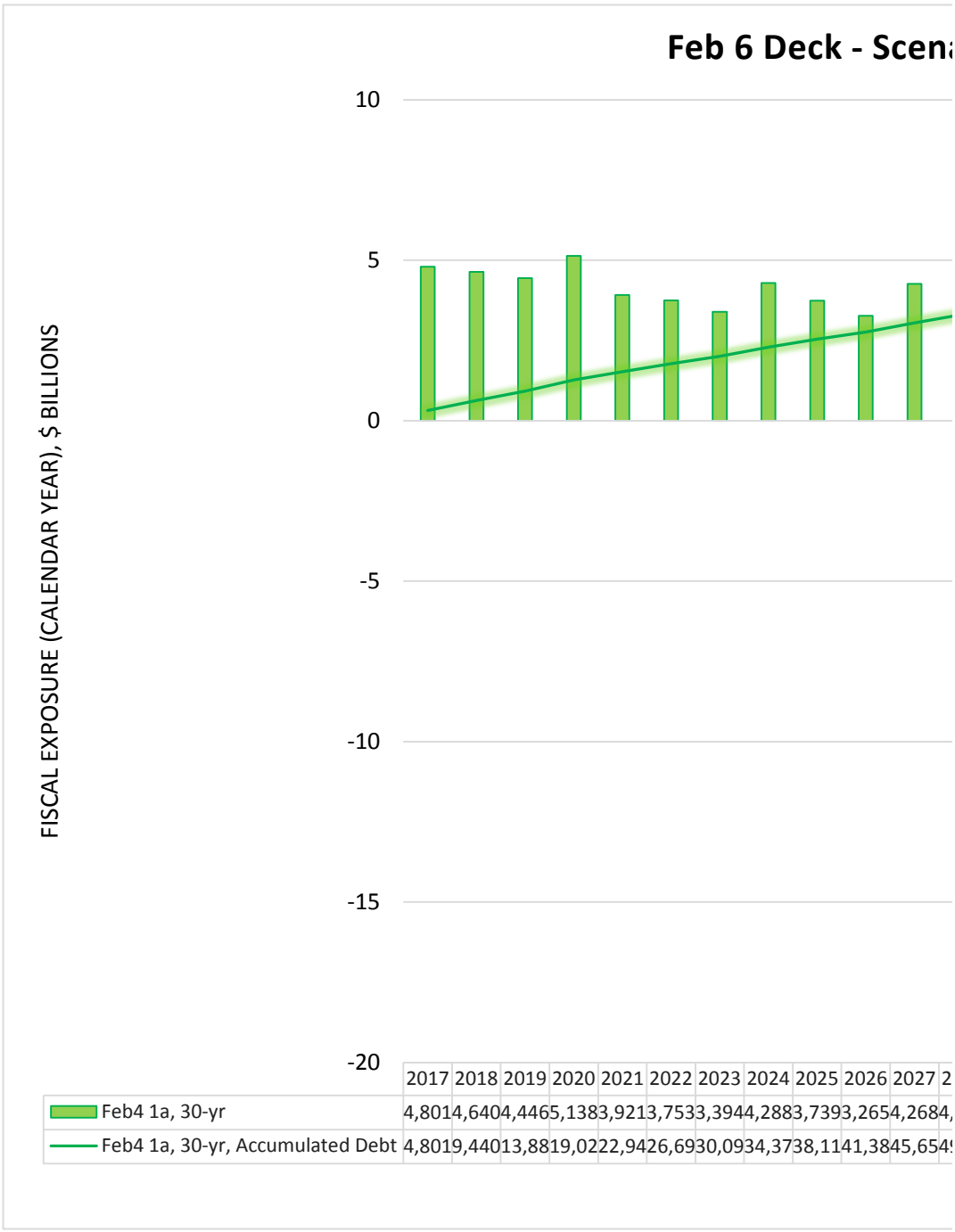


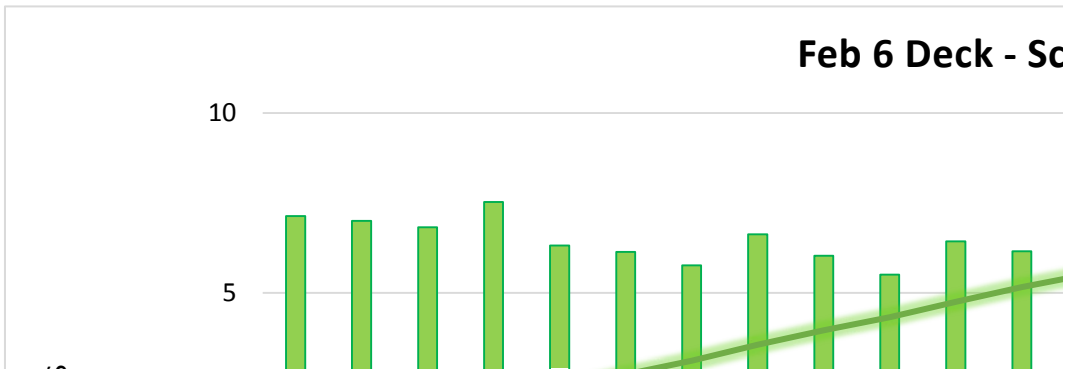
ation of Debt (Principal and Interest)

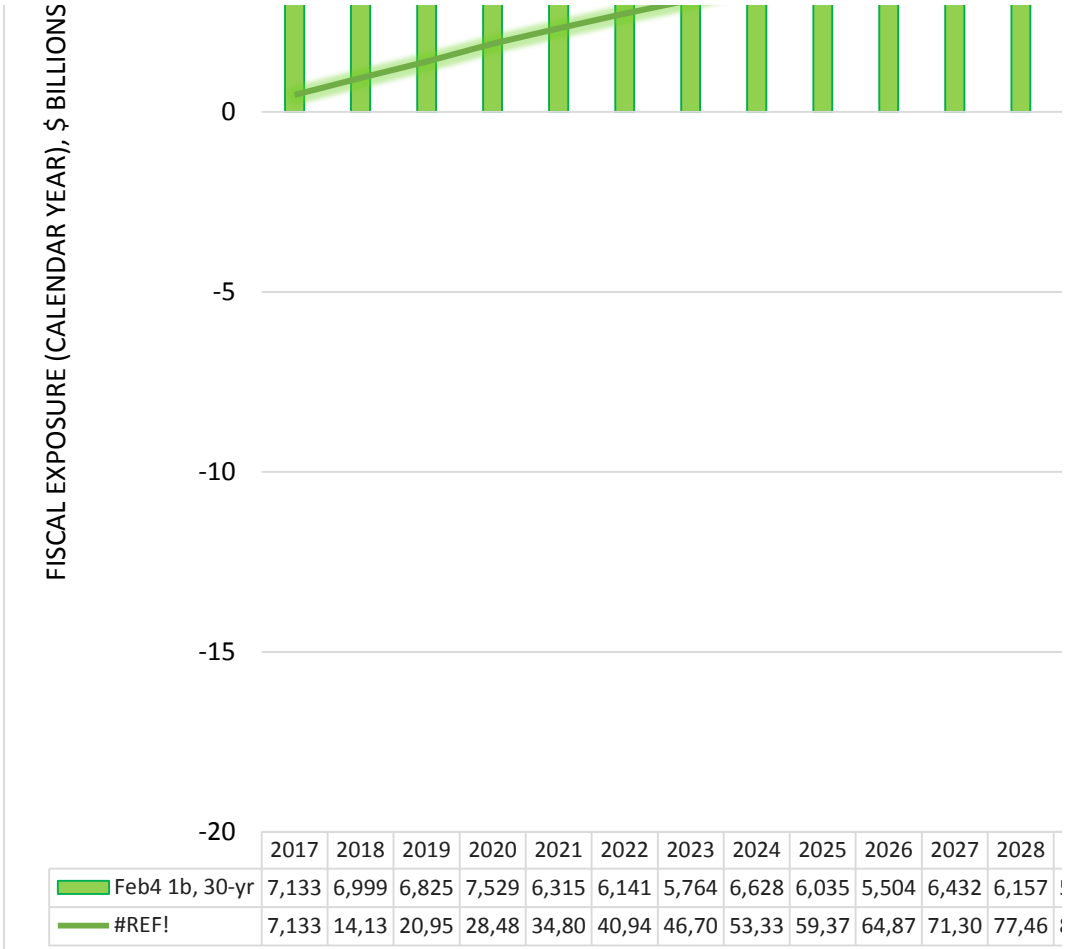


6	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047		
0	12,321	14,661	17,211	19,922	21,822	23,782	25,072	25,742	25,742	25,742	25,742	25,742	25,742	25,742	25,742	25,742	25,742	20,491	13,997	7,173	0	0	0
7	33,323	35,073	35,823	36,103	36,103	36,103	36,103	36,103	34,513	32,362	29,622	26,282	22,311	17,681	12,386	6,793	918	0	0	0	0	0	0
8	45,654	49,735	53,035	56,035	57,935	59,885	61,186	61,858	60,265	58,115	55,375	52,034	48,054	43,433	38,133	32,542	26,662	20,491	13,997	7,173	0	0	0

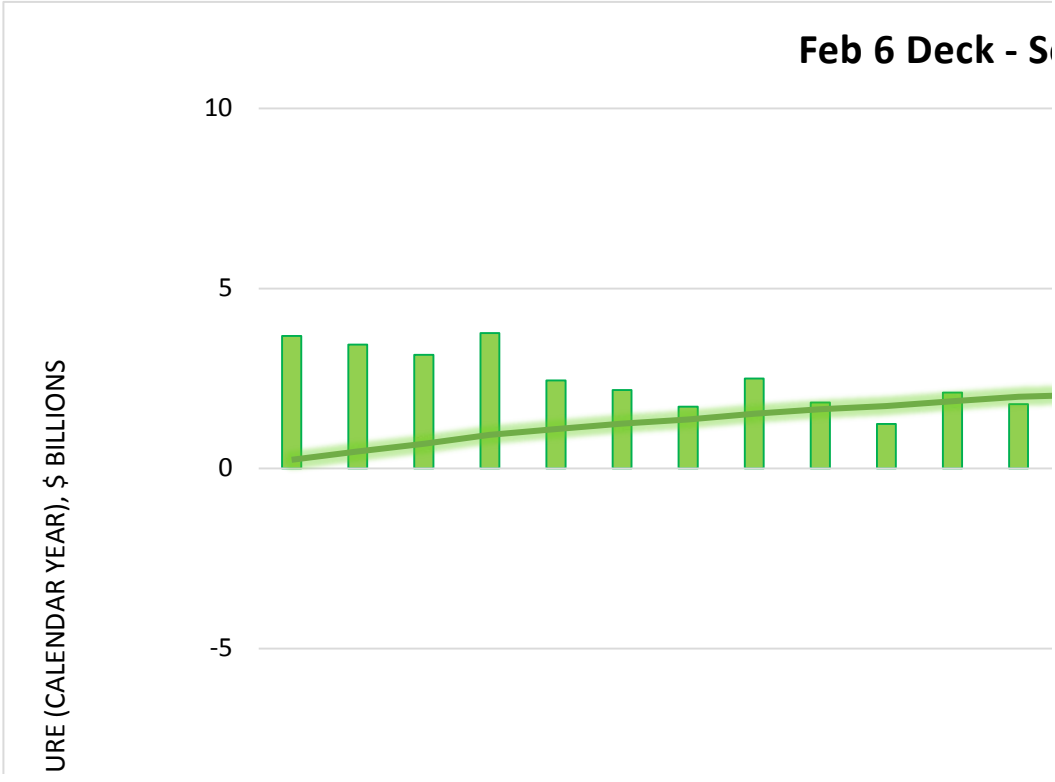
YEAR

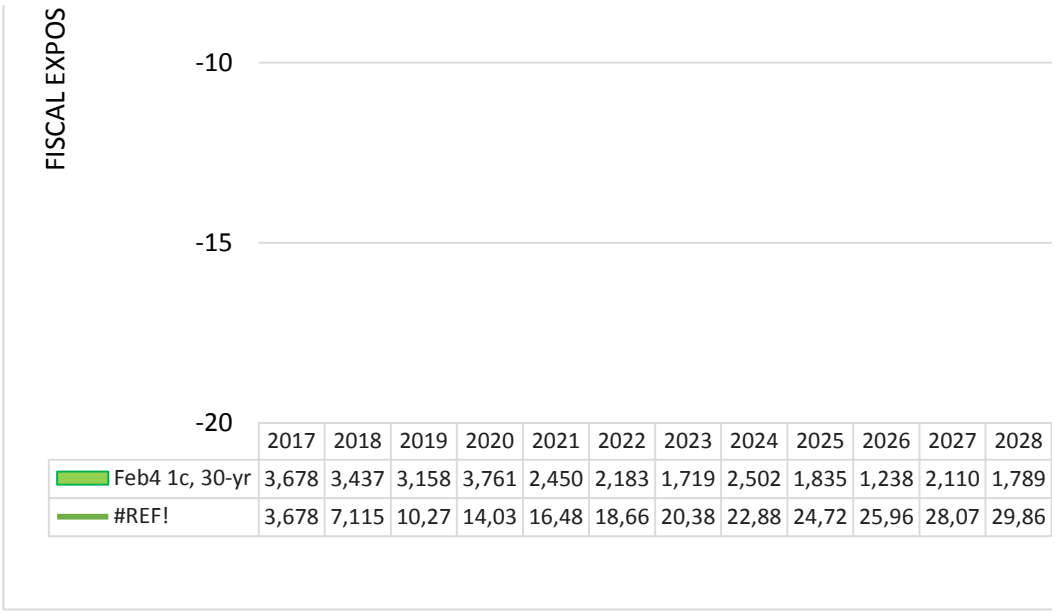

Feb 6 Deck - Scena
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2
Feb4 1a, 30-yr
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268
Feb4 1a, 30-yr, Accumulated Debt
4,801 9,440 13,881 9,022 2,942 6,693 0,093 4,373 8,114 1,384 5,654


Feb 6 Deck - Sc
10
5



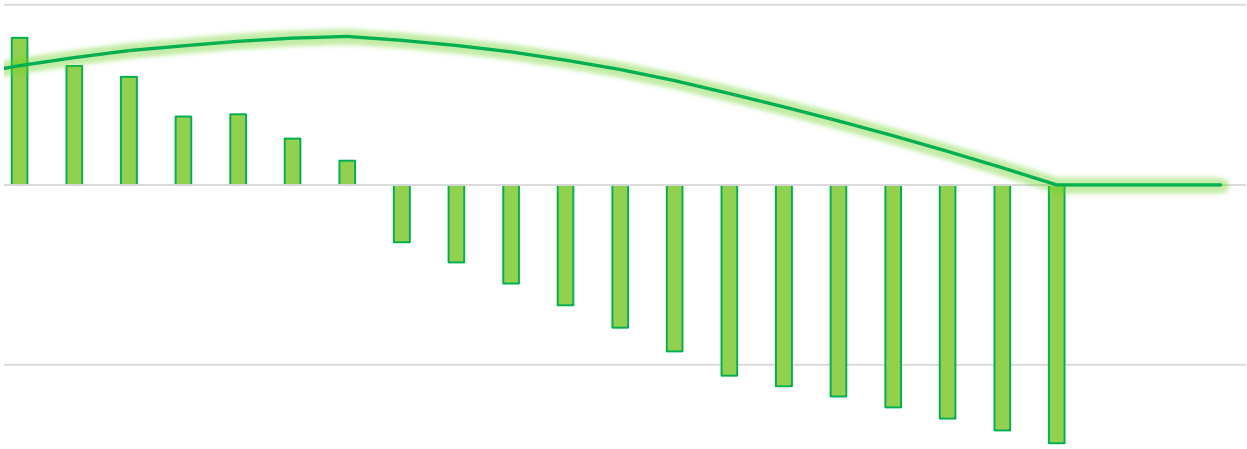
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157
#REF!	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46





	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1c, 30-yr	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789
#REF!	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86

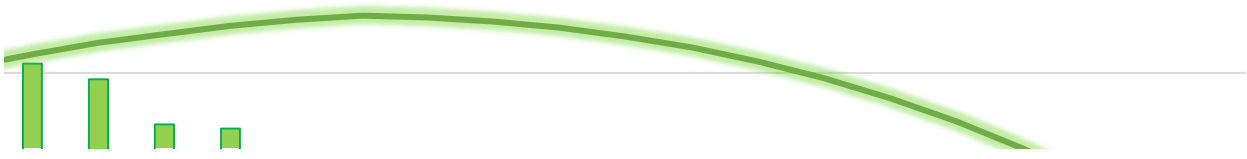
ario 1a - at 5.12% interest rate

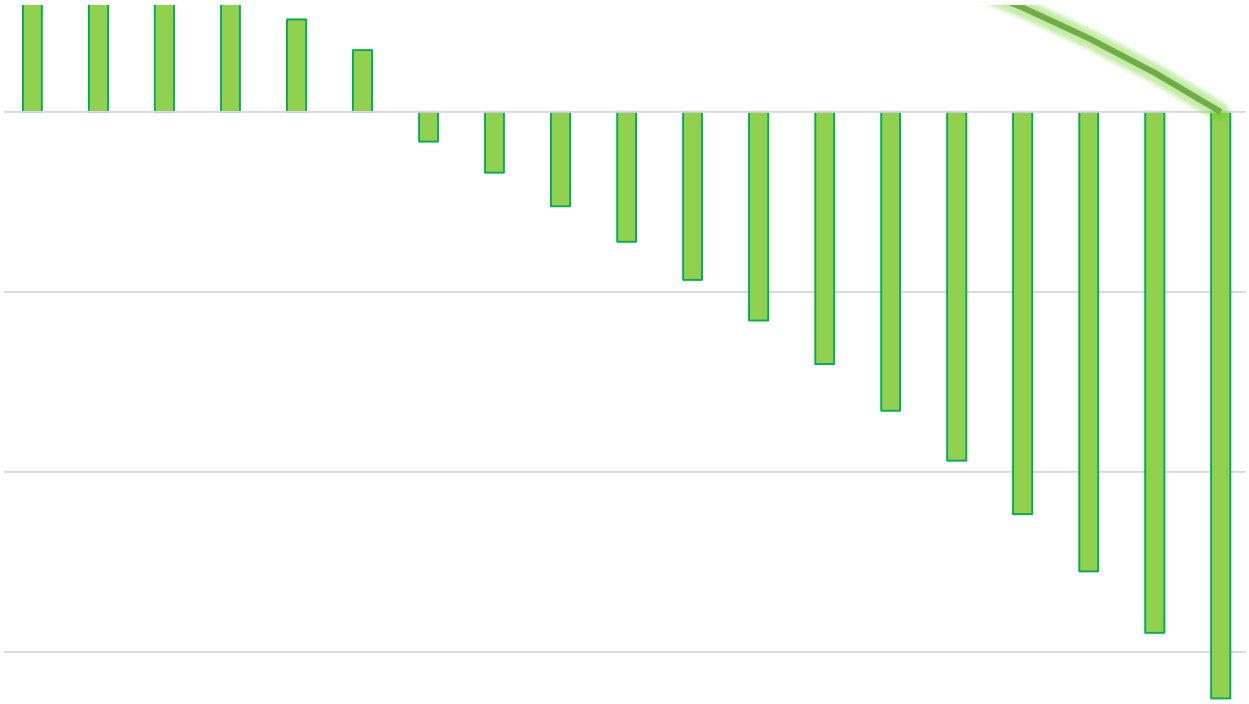


028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
,084	3,302	2,998	1,896	1,966	1,288	672	-1,59	-2,15	-2,73	-3,34	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17	0	0	0
9,735	3,035	6,035	7,935	9,896	1,186	1,856	0,265	8,115	5,375	2,034	8,054	3,433	8,133	2,542	6,662	0,491	3,997	7,173	0	0	0	0

CALENDAR YEAR

enario 1b - at 5.12% interest rate

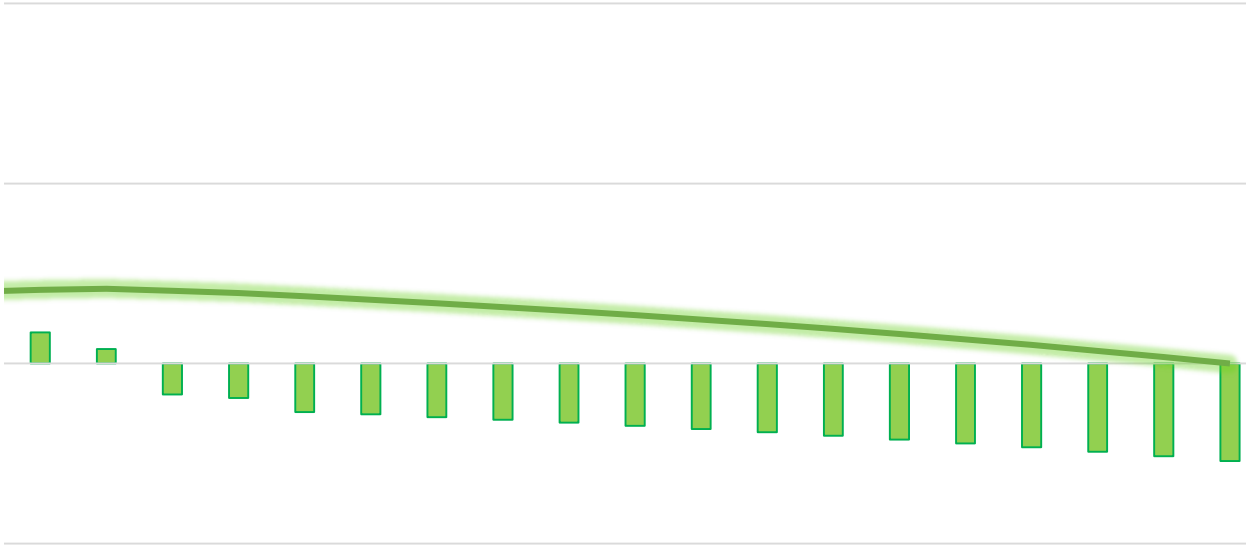




2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68	-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35	93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0

CALENDAR YEAR

cenario 1c - at 5.12% interest rate



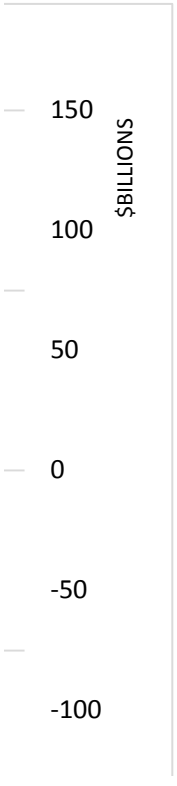
2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	204
861	404	-860	-961	-1,34	-1,41	-1,48	-1,56	-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,7
30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49	21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

CALENDAR YEAR

150
100
50
0
-50
-100
-150
-200
-250
-300
$BILLIONS

150
100
50
$BILLIONS


0
-50
-100
-150
-200
-250
-300


150
100
50
0
-50
-100
$BILLIONS


-150
-200
-250
-300
7
0

Annual Interest Rate	5.12%

1a. GA Smoothing (Borrow ~$5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	2017	2018
Annual Exposure[2]	4,801	4,640

Fiscalized[3]	2016-17	2017-18
	1,200	4,760

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $62 billion, peak
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would var on accounting treatment.

1b. GA Smoothing (Borrow ~$7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	2017	2018
Annual Exposure[2]	7,133	6,999

Fiscalized[3]	2016-17	2017-18
	1,783	7,100

1c. GA Smoothing (Borrow ~$4 billion in 2017)

$ millions

Scenario 1C - 30-yr amortization	2017	2018
Annual Exposure[2]	3,678	3,437

Fiscalized[3]	2016-17	2017-18
	919	3,617

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

2019	2020	2021	2022
4,446	5,138	3,921	3,753

2018-19	2019-20	2020-21	2021-2022
4,591	4,619	4,833	3,879

king in 203 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
g by approximately $33-$36 million.

ry based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
6,825	7,529	6,315	6,141

2018-19	2019-20	2020-21	2021-2022
6,956	7,001	7,226	6,272

2019	2020	2021	2022
3,158	3,761	2,450	2,183

2018-19	2019-20	2020-21	2021-2022
3,367	3,309	3,433	2,383

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision

1a. GA Smoothing (Borrow $5 billion in 2017)

	2017
IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	7,095
Additional GA Debt Drawdown, End of Year	5,000

Ratepayer GA Payment

Total Accumulated Debt *($ billion)*	5,000
Total Change in Accumulated Debt *($ billion)*	5000

1b. GA Smoothing (Borrow $7 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	5,095
Additional GA Debt Drawdown, End of Year	7,000

Total Accumulated Debt *($ billion)*	7000
Total Change in Accumulated Debt *($ billion)*	7000

1c. GA Smoothing (Borrow $4 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	8,095
Additional GA Debt Drawdown, End of Year	4,000

Total Accumulated Debt *($ billion)*	4000
Total Change in Accumulated Debt *($ billion)*	4000

2018	2019	2020	2021	2022	2023	2024	2025
11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489
6,835	7,552	7,168	6,844	6,634	7,212	7,081	6,489
5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000

9,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000
5000	4000	5000	4000	4000	3000	4000	4000

11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489
4,835	4,552	4,168	4,844	4,634	4,212	4,081	4,489
7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000

14000	21000	28000	35000	41000	47000	53000	59000
7000	7000	8000	6000	6000	6000	7000	6000

11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489
8,835	8,552	8,168	8,844	8,634	8,212	8,081	8,489
3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000

7000	10000	14000	16000	19000	20000	23000	25000
3000	3000	4000	2000	2000	2000	3000	2000

2026	2027	2028	2029	2030	2031	2032	2033
10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147
7,020	6,975	6,764	6,919	6,650	6,587	6,758	7,147
3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000

41,000	46,000	50,000	53,000	56,000	58,000	60,000	61,000
3000	4000	4000	3000	3000	2000	2000	1000

10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147
4,020	4,975	4,764	4,919	4,650	4,587	5,758	5,147
6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000

65000	71000	77000	83000	88000	91000	95000	97000
6000	6000	6000	5000	5000	4000	3000	3000

10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147
9,020	8,975	8,764	8,919	9,650	9,587	9,758	9,147
1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000

26000	28000	30000	31000	31000	30000	29000	28000
1000	2000	2000	1000	0	-1000	-1000	-1000

2034	2035	2036	2037	2038	2039	2040	2041
7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109
6,670	7,553	7,281	8,022	7,777	8,543	9,320	9,109
1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000

62,000	60,000	58,000	55,000	52,000	48,000	43,000	38,000
1000	-2000	-2000	-3000	-3000	-4000	-5000	-5000

7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109
5,670	6,553	7,281	8,022	8,777	9,543	10,320	11,109
2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000

99000	98000	96000	94000	90000	85000	80000	73000
2000	-1000	-2000	-3000	-4000	-5000	-6000	-7000

7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109
8,670	6,553	7,281	7,022	6,777	6,543	6,320	6,109
-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000

27000	25000	23000	22000	20000	18000	16000	14000
-1000	-1000	-2000	-2000	-2000	-2000	-2000	-2000

2042	2043	2044	2045	2046	2047	2048
3,908	3,717	3,535	3,362	3,197	3,041	2,892
9,908	9,717	9,535	9,362	10,197	10,041	2,892
-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0

33,000	27,000	20,000	14,000	7,000	-	-	
-6000	-6000	-6000	-6000	-7000	-7000	0	

3,908	3,717	3,535	3,362	3,197	3,041	2,892
11,908	13,717	14,535	16,362	17,197	19,041	2,892
-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0

64000	55000	44000	31000	16000	0	0
-8000	-10000	-11000	-13000	-14000	-16000	0

3,908	3,717	3,535	3,362	3,197	3,041	2,892
5,908	5,717	5,535	5,362	6,197	6,041	2,892
-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0

12000	10000	8000	5000	3000	0	0
-2000	-2000	-2000	-2000	-3000	-3000	0

Feb4 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.12%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Feb4 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	7,295	7,441	7,590	7,742	7,897	8,055	8,185	8,334	8,511	8,707	8,826	9,017	9,164	9,367	9,560	9,758	9,926	10,130	10,312	10,522	10,736	10,954	11,177	11,405	11,637	11,450	11,258	11,076	10,903	10,738	10,582	2,892	2,750	2,616	
	GA Debt Requirement	4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
a	Debt, Beginning of Year	0	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	
c = a*5%	*Interest Cost - Feb4 1a, 30-yr - End of Year Debt Drawdown*	*0*	*246*	*483*	*711*	*974*	*1,175*	*1,367*	*1,541*	*1,760*	*1,952*	*2,119*	*2,337*	*2,546*	*2,716*	*2,869*	*2,966*	*3,067*	*3,133*	*3,167*	*3,086*	*2,975*	*2,835*	*2,664*	*2,461*	*2,224*	*1,952*	*1,666*	*1,365*	*1,049*	*717*	*367*	*0*	*0*	*0*	58,489
b	Additional GA Debt Drawdown, End of Year	4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	21,822	23,788	25,076	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	20,490	13,998	7,173	0	0	0	0
	Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	36,109	36,109	36,109	36,109	34,517	32,362	29,624	26,281	22,311	17,687	12,383	6,793	918	0	0	0	0	0	0	0	
	Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688	49,149	51,372	53,325	54,991	56,356	57,405	58,122	58,489				
	Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371	-5,713	-13,241	-20,783	-28,325	-35,866	-43,408	-50,949	-58,489				
Fiscal Exposure - End of Year Debt Drawdown		4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0	

Feb4 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.12%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Feb4 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,836	11,837	11,838	11,839	11,840	11,841	11,842	11,843	11,844	11,845	11,846	11,847	11,848	11,849	11,850	11,851	11,852	11,853	11,854	11,855	11,856	11,857	11,858	11,859	11,860	11,861	11,862	11,863	11,864	11,865	11,866	11,867	
	Ratepayer GA Payment	4,962	5,201	5,734	5,381	6,981	7,479	8,172	7,604	8,537	9,379	8,733	9,339	10,550	11,256	12,762	13,057	14,121	15,108	17,732	18,560	19,402	20,259	21,133	22,026	22,941	23,879	24,842	25,832	26,852	27,905	28,991	11,865	11,866	11,867	
	GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
a	Debt, Beginning of Year	0	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	
c = a*5%	*Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown*	*0*	*365*	*724*	*1,073*	*1,459*	*1,782*	*2,096*	*2,391*	*2,731*	*3,040*	*3,322*	*3,651*	*3,966*	*4,236*	*4,483*	*4,665*	*4,842*	*4,974*	*5,062*	*5,020*	*4,933*	*4,800*	*4,615*	*4,376*	*4,080*	*3,721*	*3,296*	*2,800*	*2,228*	*1,575*	*834*	*0*	*0*	*0*	97,141
b	Additional GA Debt Drawdown, End of Year	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	0	
	Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,633	26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606	82,685	86,406	89,703	92,503	94,731	96,306	97,141				
	Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,831	56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076	-10,007	-22,027	-35,008	-48,980	-63,971	-80,013	-97,141				
Fiscal Exposure - End of Year Debt Drawdown		7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0	

Feb4 1c, 30-yr - Debt Drawdown Scenarios

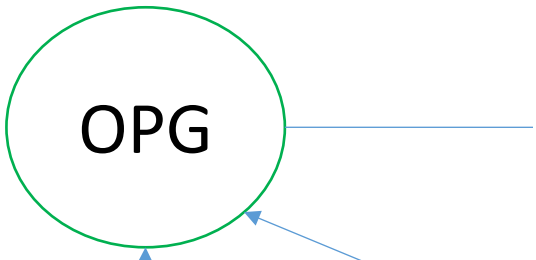
Annual Interest Rate = 5.1%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Feb4 1c, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,836	11,837	11,838	11,839	11,840	11,841	11,842	11,843	11,844	11,845	11,846	11,847	11,848	11,849	11,850	11,851	11,852	11,853	11,854	11,855	11,856	11,857	11,858	11,859	11,860	11,861	11,862	11,863	11,864	11,865	11,866	11,867	
	Ratepayer GA Payment	8,418	8,586	9,042	8,602	10,106	10,500	11,077	10,383	11,178	11,870	11,063	11,493	12,514	13,016	14,301	14,359	14,696	14,697	14,698	14,699	14,700	14,701	14,702	14,703	14,704	14,705	14,706	14,706	14,707	14,708	14,709	11,865	11,866	11,867	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
a	Debt, Beginning of Year	0	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	
c = a*5%	*Interest Cost - Feb4 1c, 30-yr - End of Year Debt Drawdown*	*0*	*188*	*364*	*526*	*719*	*844*	*956*	*1,044*	*1,172*	*1,266*	*1,329*	*1,437*	*1,529*	*1,573*	*1,594*	*1,550*	*1,500*	*1,431*	*1,359*	*1,283*	*1,203*	*1,119*	*1,030*	*937*	*839*	*737*	*629*	*515*	*396*	*270*	*139*	*0*	*0*	*0*	29,477
b	Additional GA Debt Drawdown, End of Year	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	0	
	Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,641	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663	22,866	23,984	25,015	25,952	26,791	27,528	28,157	28,672	29,068	29,338	29,477				
	Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18,247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828	-1,018	-3,864	-6,710	-9,556	-12,402	-15,248	-18,094	-20,940	-23,786	-26,631	-29,477				
Fiscal Exposure - End of Year Debt Drawdown		3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0	

Use the left toggle to switch between fiscal years and the right toggle to switch between debt transactions and interest transactions

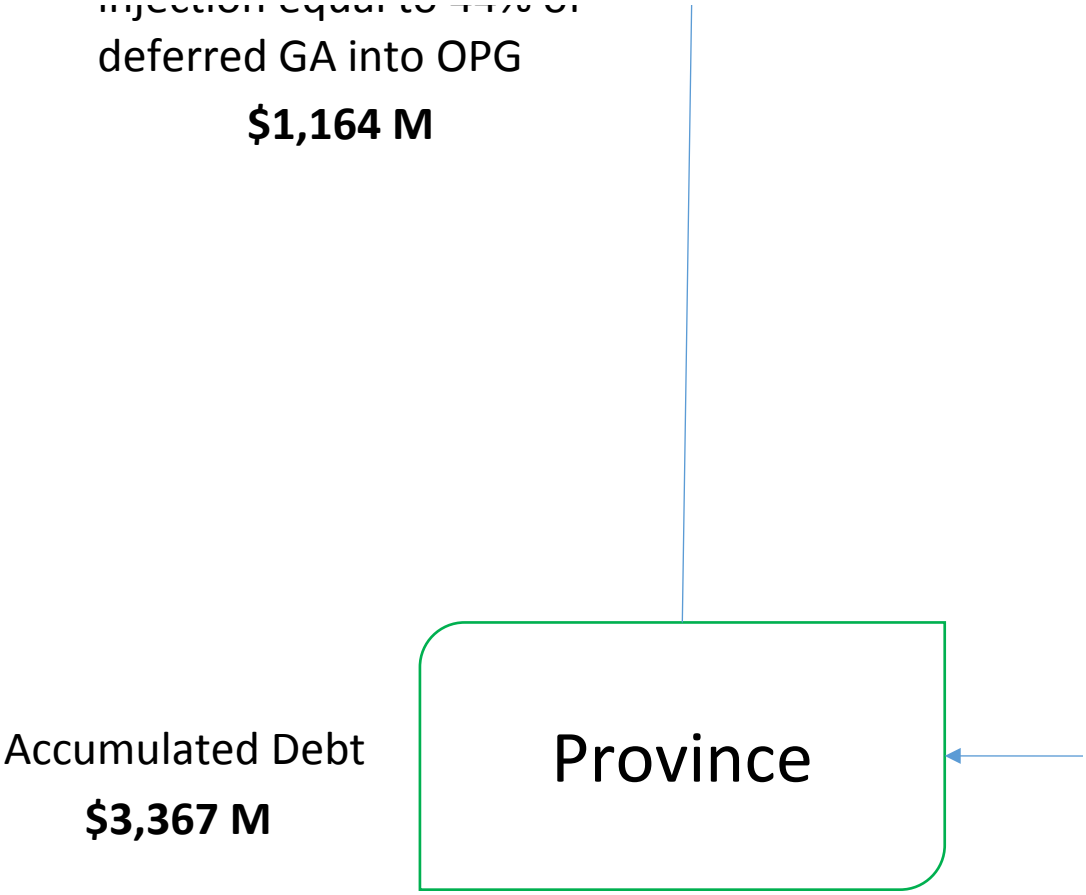
2019-20

B/S Transaction

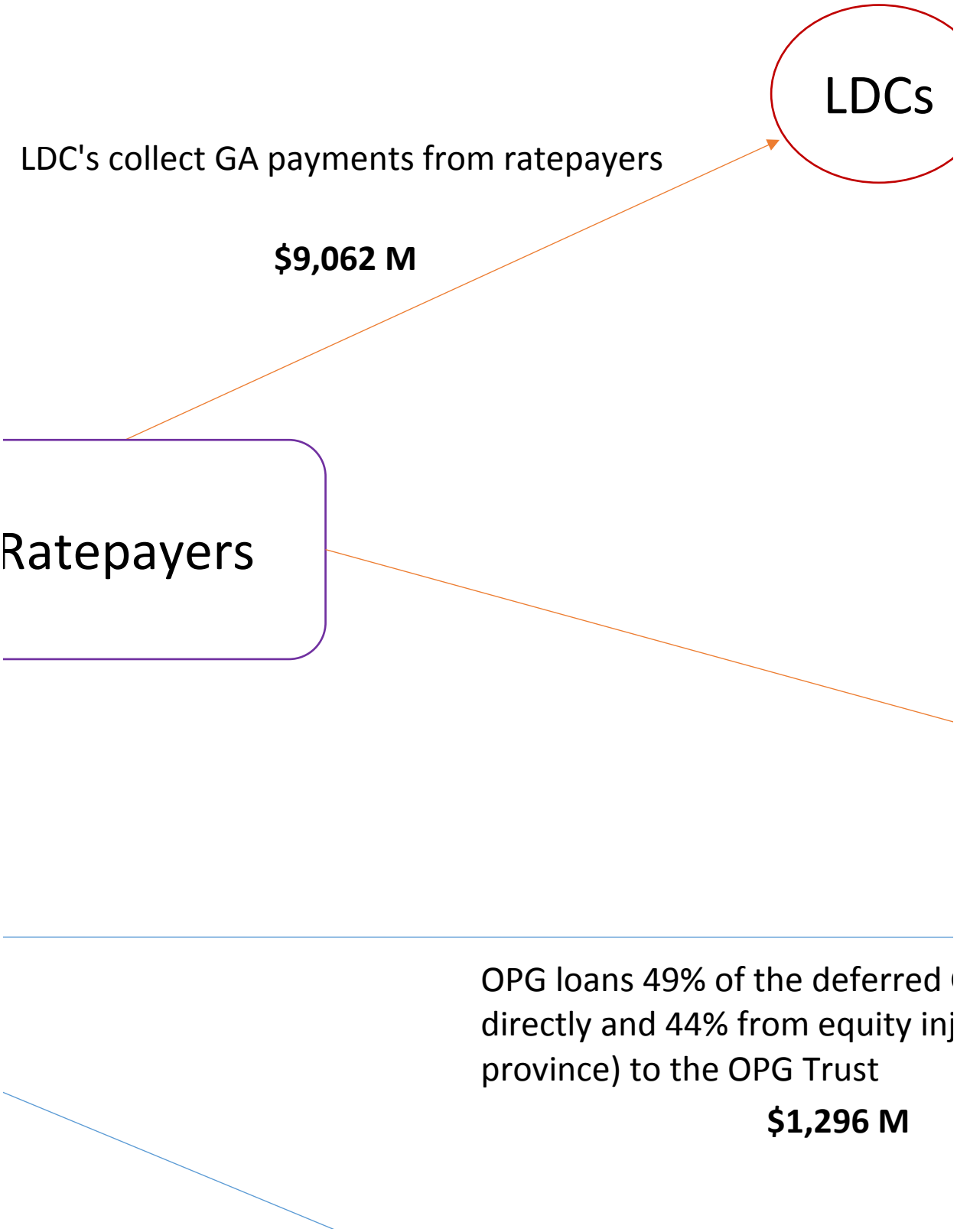
Accumulated Debt
$383 M



Province puts equity injection equal to 44% of


deferred GA into OPG
$1,164 M
Province
Accumulated Debt
$3,367 M

GA Deferral


LDCs
LDC's collect GA payments from ratepayers
$9,062 M
Ratepayers
OPG loans 49% of the deferred
directly and 44% from equity inj
province) to the OPG Trust
$1,296 M

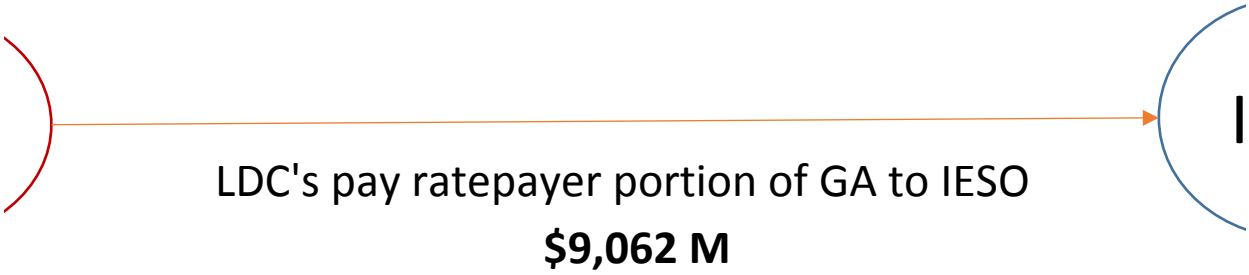
OPG borrows 5% of the deferred GA from the market

$132 M

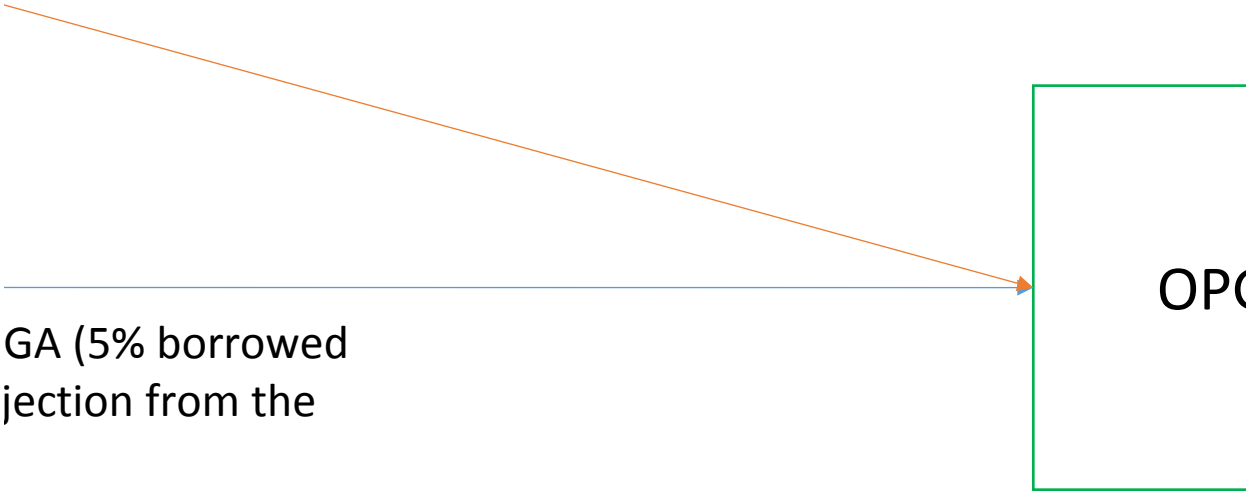
Province borrows 44 deferred GA from the r

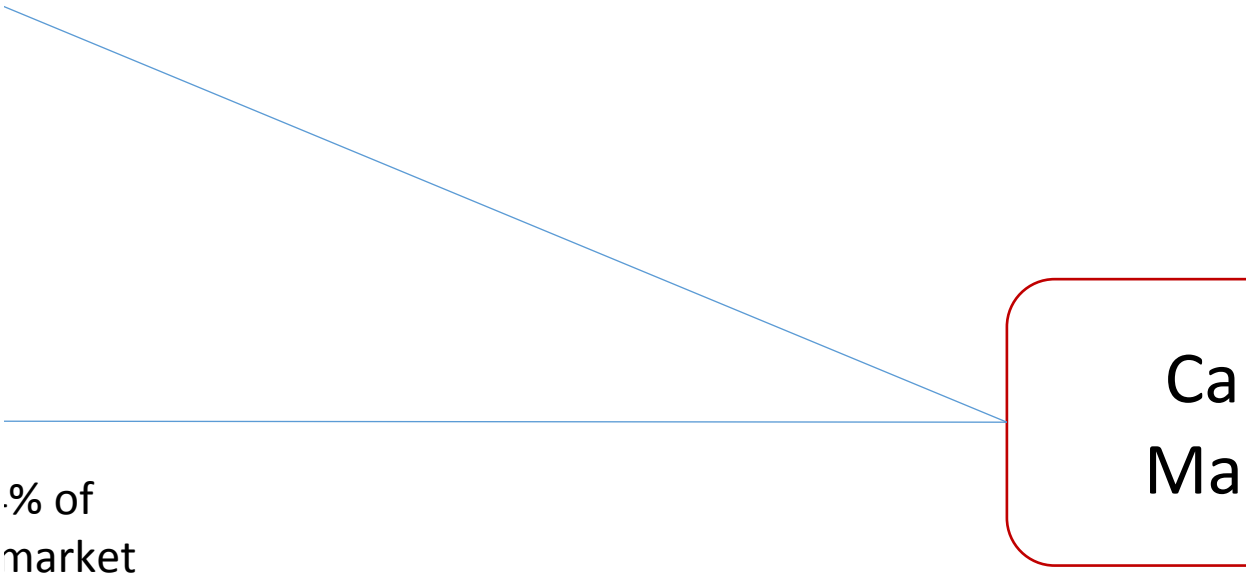
$1,164 M

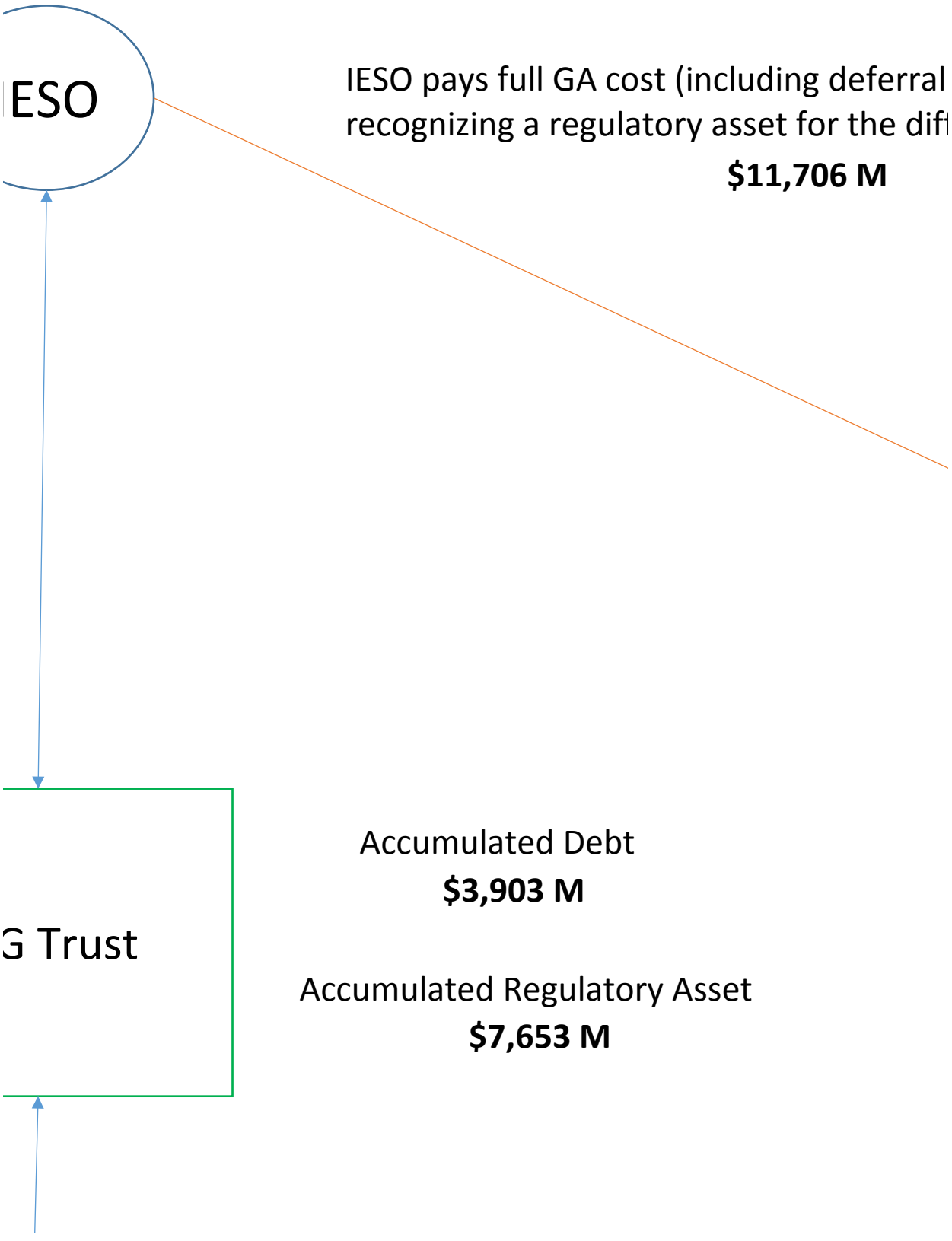
Mechanism



OPG trust purchases the regulatory asset from IESO in exchange for cash
$2,644 M



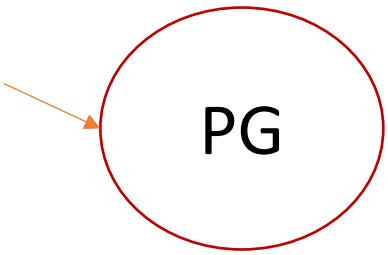

Ca
Ma
% of
market


ESO
IESO pays full GA cost (including deferral
recognizing a regulatory asset for the dif
$11,706 M
G Trust
Accumulated Debt
$3,903 M
Accumulated Regulatory Asset
$7,653 M

OPG Trust borrows 51% of the annual deferred GA from the market - **$1,349 M**

pital
rkets

) to the generators,
ference



44%
5%
51%

44%
5%
51%

B/S Transaction
Interest

B/S Transaction
B/S Transaction
B/S Transaction
B/S Transaction
B/S Transaction
B/S Transaction
B/S Transaction
B/S Transaction
B/S Transaction
B/S Transaction
B/S EOY
B/S EOY
B/S EOY
B/S EOY
Interest
Interest
Interest
Interest
Interest

GA Cost
Ratepayer Cost
Total Debt Borrowed
Province Share
OPG Share
OPG Trust share

Interest
2017-18
2018-19
2019-20
2020-21

Total
Province Share
OPG Share
OPG Trust share

Loan to OPG Trust from OPG

Province puts equity injection equal to 44% of deferred GA into OPG
Province borrows 44% of deferred GA from the market
OPG loans 49% of the deferred GA (5% borrowed directly and 44% from equity injection from the province) to the
OPG borrows 5% of the deferred GA from the market
OPG Trust borrows 51% of the annual deferred GA from the market -
IESO sells the regulatory asset to OPG Trust for cash used to make whole the power generators for the deferred G
OPG trust purchases the regulatory asset from IESO in exchange for cash
LDC's pay ratepayer portion of GA to IESO
LDC's collect GA payments from ratepayers
IESO pays full GA cost (including deferral) to the generators, recognizing a regulatory asset for the difference
Accumulated Regulatory Asset
Accumulated Debt
Accumulated Debt
Accumulated Debt
Interest due from Province to the Market for 44% GA Deferral
Interest due from OPG to the Market for 5% GA Deferral
Interest due from OPG Trust to the Market for 51% GA Deferral -
Interest due from OPG Trust to OPG from the 49% of GA Deferral loan (5% from OPG and 44% from equity injectio
Interest Income OPG Trust recognizes to be received from ratepayers to match 100% GA Deferral interest expens

Province puts equity injection equal to 44% of deferred GA into OPG
Province borrows 44% of deferred GA from the market
OPG loans 49% of the deferred GA (5% borrowed directly and 44% from equity injection from the province) to the
OPG borrows 5% of the deferred GA from the market
OPG Trust borrows 51% of the annual deferred GA from the market -
IESO sells the regulatory asset to OPG Trust for cash used to make whole the power generators for the deferred G
OPG trust purchases the regulatory asset from IESO in exchange for cash
LDC's pay ratepayer portion of GA to IESO
LDC's collect GA payments from ratepayers
IESO pays full GA cost (including deferral) to the generators, recognizing a regulatory asset for the difference
Accumulated Regulatory Asset
Accumulated Debt
Accumulated Debt
Accumulated Debt
Interest due from Province to the Market for 44% GA Deferral
Interest due from OPG to the Market for 5% GA Deferral
Interest due from OPG Trust to the Market for 51% GA Deferral -
Interest due from OPG Trust to OPG from the 49% of GA Deferral loan (5% from OPG and 44% from equity injectio

2017-18	2018-19	2019-20	2020-21
$12,030 M	$11,764 M	$11,706 M	$11,837 M
$9,528 M	$9,258 M	$9,062 M	$8,866 M
$2,502 M	$2,506 M	$2,644 M	$2,971 M
$1,101 M	$1,103 M	$1,164 M	$1,307 M
$125 M	$125 M	$132 M	$149 M
$1,276 M	$1,278 M	$1,349 M	$1,515 M
3.12%	3.63%	4.30%	4.30%
$39 M	$78 M	$78 M	$78 M
	$45 M	$91 M	$91 M
		$57 M	$114 M
			$64 M
$39 M	$124 M	$226 M	$347 M
$17 M	$54 M	$99 M	$153 M
$2 M	$6 M	$11 M	$17 M
$20 M	$63 M	$115 M	$177 M
$1,226 M	$1,228 M	$1,296 M	$1,456 M
1	3		
2017-18	**2018-19**	**2019-20**	**2020-21**
$1,101 M	$1,103 M	$1,164 M	$1,307 M
$1,101 M	$1,103 M	$1,164 M	$1,307 M
$1,226 M	$1,228 M	$1,296 M	$1,456 M
$125 M	$125 M	$132 M	$149 M
$1,276 M	$1,278 M	$1,349 M	$1,515 M
$2,502 M	$2,506 M	$2,644 M	$2,971 M
$2,502 M	$2,506 M	$2,644 M	$2,971 M
$9,528 M	$9,258 M	$9,062 M	$8,866 M
$9,528 M	$9,258 M	$9,062 M	$8,866 M
$12,030 M	$11,764 M	$11,706 M	$11,837 M
$2,502 M	$5,009 M	$7,653 M	$10,624 M
$1,101 M	$2,204 M	$3,367 M	$4,674 M
$125 M	$250 M	$383 M	$531 M
$1,276 M	$2,554 M	$3,903 M	$5,418 M
$17 M	$54 M	$99 M	$153 M
$2 M	$6 M	$11 M	$17 M
$20 M	$63 M	$115 M	$177 M
$19 M	$61 M	$111 M	$170 M
$39 M	$124 M	$226 M	$347 M

$1,164 M
$1,164 M
$1,296 M
$132 M
$1,349 M
$2,644 M
$2,644 M
$9,062 M
$9,062 M
$11,706 M
$7,653 M
$3,367 M
$383 M
$3,903 M
$99 M
$11 M
$115 M
$111 M

GA Financing Model

By changing the inputs, one can model different scenarios for the GA Debt financing.

Total Principal ($M)	$	24,923.90
Peak Debt ($M)	$	24,923.90
Accumulated Interest ($M)	$	12,665.52
Max Payment ($M)	$	2,241.55
Interest Type		Interest Paid annually
GA Scenario		March 3 - Option 1 - Ratepayer cost
Final Payment made in Year		2038
Maximum Payment ($M)	$	(2,241.55)
Payment Periods		12
Share of debt & interest		44%

Negative/positive	1.00
WEIGHT	3.07%
Interest Rate	3.12%

Change in ratepayer cost - Option `
Change in ratepayer cost - Option 2 `

	2017
IESO GA cost forecast + extrapolation	12,095
March 3 - Option 1 - Ratepayer cost	9,595
Feb 22 Option 1 - Ratepayer cost	9,595
Feb 15 Option 1 - Ratepayer cost	9,781
Feb 4 Option 1 - Ratepayer cost	7,294

GA Debt requirement

Option 1	2,501
Interest	3.17%
Debt Beginning of year	0
Interest on Debt	20
Additional GA Drawdown, end of year	2,540
Debt End of year	2,540
Principal	2,540

Fiscalized (44% share) - $M	**2017-18**
Interest	22
	-20.7%
Original benefit	-20.7%

GA (interest deferred)		2,501
GA (higher principal but interest paid)		2540
2017-18 debt		40
2018-19 debt		
2019-20 debt		
2020-21 debt		
2021-22 debt		
2022-23 debt		
2023-24 debt		
2024-25 debt		
2025-26 debt		
Total Interest		**40**
		2,580.4888

Principal

	2017-18
GA Principal (interest deferred)	2,501
GA Principal (higher principal but interest immed	2,540

Notes

1. Based on Ministry of Energy model and associated assumptions.
2. GA forecast, ratepayer payments, and interest costs subject to change.
3. To forecast the payment of the remaining balance, a cap of $2.242 bn above the true cost of GA in any this period.

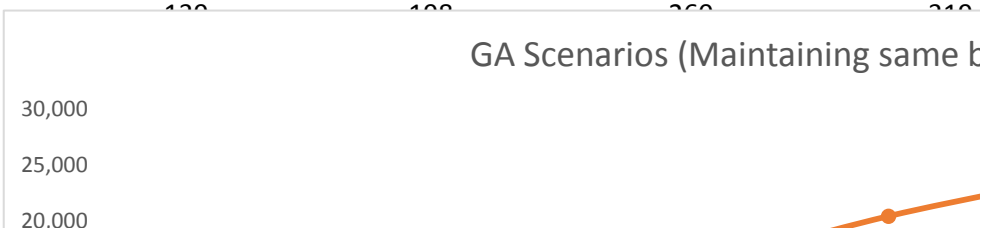
Please only change the yellow cells.

Please Select
Please Select

Can Change Share here

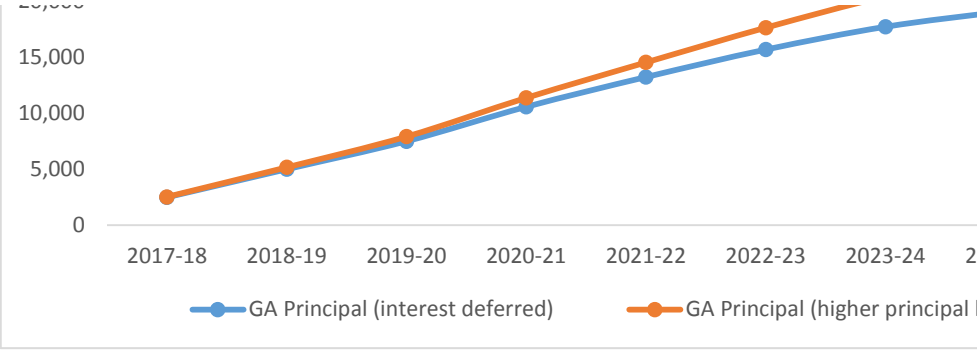
1.00	1.00	1.00	1.00	1.00
3.26%	3.49%	3.59%	3.59%	3.56%
3.63%	4.30%	4.30%	4.30%	4.30%
0	0	0	0	0
-2.79%	-2.95%	0.47%	-10.01%	-0.05%
-2.79%	-2.95%	0.47%	-10.01%	2.32%
2018	**2019**	**2020**	**2021**	**2022**
11,835	11,552	12,168	10,844	10,634
9,327	9,051	9,094	8,184	8,180
9,327	9,051	9,094	8,184	8,374
9,661	9,367	8,733	8,459	8,628
7,441	7,590	7,741	7,897	8,055
2,508	2,501	3,075	2,660	2,454
3.69%	4.39%	4.39%	4.39%	4.39%
2,540	5,178	7,924	11,384	14,554
140	282	415	558	692
2,638	2,746	3,460	3,170	3,100
5,178	7,924	11,384	14,554	17,654
5,178	7,924	11,384	14,554	17,654

2018-19	2019-20	2020-21	2021-22	2022-23
77				
-21.2%				
-21.2%				



2,508
2638

79
48



67

127	**234**	**367**	**510**	**645**
2,771.4342	3,001.3991	3,871.3741	3,777.8021	3,914.1720

2018-19	2019-20	2020-21	2021-22	2022-23
5,009	7,509	10,584	13,244	15,698
5,178	7,924	11,384	14,554	17,654

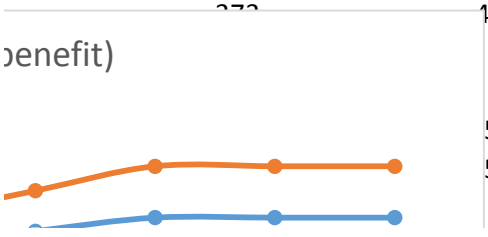
given year is applied. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paic

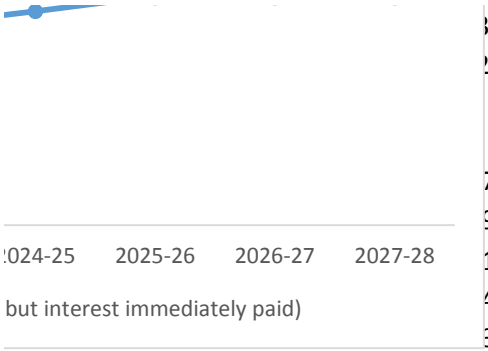
1.00	1.00	1.00	0.00	0.00
3.50%	3.41%	3.32%	3.32%	3.32%
4.30%	4.30%	4.30%	4.30%	4.30%
0	0	0	0	0
0.32%	18.73%	-4.38%	9.88%	12.11%
2.32%	2.32%	2.32%	2.32%	2.32%
2023	**2024**	**2025**	**2026**	**2027**
10,243	11,128	10,527	10,033	11,043
8,206	9,743	9,316	10,236	11,476
8,569	8,768	8,972	9,180	9,394
8,801	8,977	9,156	9,340	9,526
8,216	8,381	8,548	8,719	8,894
2,038	1,386	1,211	-203	-433
4.39%	4.39%	4.39%	4.39%	4.39%
17,654	20,464	22,734	24,924	24,721
820	929	1025	1067	1054
2,810	2,270	2,190	-203	-433
20,464	22,734	24,924	24,721	24,288
20,464	22,734	24,924	24,721	24,288

2023-24	2024-25	2025-26	2026-27	2027-28
	119	456	468	457

benefit)

5%	-11.5%	2.0%	3.9%
5%	-11.5%	2.0%	3.9%





		886	1,211
		270	2190
		79	79
		96	96
		118	118
		149	149
		136	136
	133	133	133
	60	121	121
		49	98
			47
	772	**881**	**977**
	3,874.2156	3,710.0696	3,953.8970

2023-24	2024-25	2025-26	2026-27	2027-28
17,736	19,121	20,332	20,332	20,332
20,464	22,734	24,924	24,924	24,924

d down, with interest still accumulating over

	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3.32%	3.32%	3.32%	3.32%	3.32%	3.32%	3.32%
	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%
	0	0	0	0	0	0	0
	13.81%	-6.20%	-2.34%	-8.92%	1.52%	-5.26%	-4.60%
	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%
	2028	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
	10,819	10,009	9,721	8,654	8,820	8,238	7,756
	13,061	12,250	11,963	10,896	11,061	10,480	9,998
	9,612	9,835	10,064	10,298	10,537	10,782	11,033
	9,717	9,911	10,109	10,312	10,518	10,728	10,943
	9,072	9,254	9,438	9,627	9,820	10,017	10,217
	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242
	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%
	24,288	22,046	19,805	17,563	15,322	13,080	10,839
	996	900	803	707	611	514	418
	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242
	22,046	19,805	17,563	15,322	13,080	10,839	8,597
	22,046	19,805	17,563	15,322	13,080	10,839	8,597

2028-29	**2029-30**	**2030-31**	**2031-32**	**2032-33**	**2033-34**	**2034-35**
428	385	343	300	258	216	173
20.7%	22.4%	23.1%	25.9%	25.4%		
20.7%	22.4%	23.1%	25.9%	25.4%		

0.00	0.00	0.00	0.00	1.00	1.00	1.00
3.32%	3.32%	3.32%	3.32%	3.32%	3.32%	3.32%
4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%
0	0	0	1	1	1	1
-20.95%	-3.46%	-3.41%	-3.36%	-3.31%	-3.26%	-3.20%
-13.13%	-2.85%	-2.80%	-2.74%	-2.68%	-2.62%	-2.56%
2035	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**
5,662	5,389	5,129	4,881	4,645	4,421	4,207
7,904	7,630	7,370	7,122	6,887	6,662	6,449
9,585	9,311	9,051	8,803	8,567	8,343	8,130
9,187	8,913	8,653	8,405	8,170	7,945	7,732
10,421	10,630	10,842	11,059	11,280	11,505	11,735
-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242
4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%
8,597	6,355	4,114	1,872	0	0	0
321	225	129	40	0	0	0
-2,242	-2,242	-2,242	-1,872	0	0	0
6,355	4,114	1,872	0	0	0	0
6,355	4,114	1,872	0	0	0	0

2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42
131	88	47	13	0	0	0

1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
3.32%	3.32%	3.32%	3.32%	3.32%	3.32%	3.32%	3.32%
4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%
1	1	1	1	1	1	1	1
-3.15%	-3.10%	-3.04%	-2.98%	-2.93%	-2.87%	-44.57%	-4.83%
-2.50%	-2.44%	-2.38%	-2.32%	-2.26%	-2.20%	-57.79%	-4.83%
2042	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**
4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831
6,246	6,052	5,868	5,693	5,526	5,368	2,975	2,831
7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831
7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831
11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831
-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0
4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0

2042-43	2043-44	2044-45	2045-46	2046-47	2047-48	2048-49	2049-50
0	0	0	0	0	0	0	0

1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
3.32%	3.32%	3.32%	3.32%	3.32%	3.32%	3.32%	3.32%	3.32%
4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%
1	1	1	1	1	1	1	1	1
-4.83%								
-4.83%								
2050	**2051**	**2052**	**2053**	**2054**	**2055**	**2056**	**2057**	**2058**
2,695								
2,695								
2,695								
2,695								
2,695								
0	0	0	0	0	0	0	0	0
4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

2050-51	**2051-52**	**2052-53**	**2053-54**	**2054-55**	**2055-56**	**2056-57**	**2057-58**	**2058-59**
0	0	0	0	0	0	0	0	0

1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
3.32%	3.32%	3.32%	3.32%	3.32%	3.32%	3.32%	3.32%	3.32%
4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%
1	1	1	1	1	1	1	1	1

2059	2060	2061	2062	2063	2064	2065	2066	2067
0	0	0	0	0	0	0	0	0
4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

2059-60	2060-61	2061-62	2062-63	2063-64	2064-65	2065-66	2066-67	2067-68
0	0	0	0	0	0	0	0	0

1.00	1.00	1.00
3.32%	3.32%	3.32%
4.30%	4.30%	4.30%
1	1	1

2068	2069	2070
0	0	0
4.39%	4.39%	4.39%
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

2068-69	2069-70
0	0

Fiscal Year

Change in Provincial Borrowing

OEP forecast as of Feb. 28

Interest Rate Forecast

IOD from Change in Long-Term Borrowing

2017-18

2018-19

2019-20

2020-21

Total IOD Impact

Reported to Fiscal last Week

GA Debt requirement / Calendar Year	**2017**
Option 1	2501
	12095
	9595

Fiscal Year Equivalent	2017-18
FY Adjusted Debt Requirement	2502
Provincial Borrowing Required	1101
	12030
	9528

2017-18		2018-19	2019-20	2020-21
$M		$M	$M	
	1,101	1,103	1,164	1,307
	OEP	OEP	15-Year Average	15-Year Average
	3.1%	3.6%	4.3%	4.3%
	17	34	34	34
		20	40	40
			25	50
				28
	17	**54**	**99**	**153**
	17	55	102	

2018	**2019**	**2020**	**2021**
2508	2501	3075	2660
11835	11552	12168	10844
9327	9051	9094	8184

2018-19	2019-20	2020-21
2506	2644	2971
1103	1164	1307
11764	11706	11837
9258	9062	8866

Ontario

MINISTRY OF
ENERGY

Rate Mitigation Plan Options

Working Draft

January 2017

CONFIDENTIAL DRAFT

Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity costs for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8% rebate ($11/month savings), updating RRRP ($45/month savings), expanding ICI (up to one-third savings for participants) and suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings).

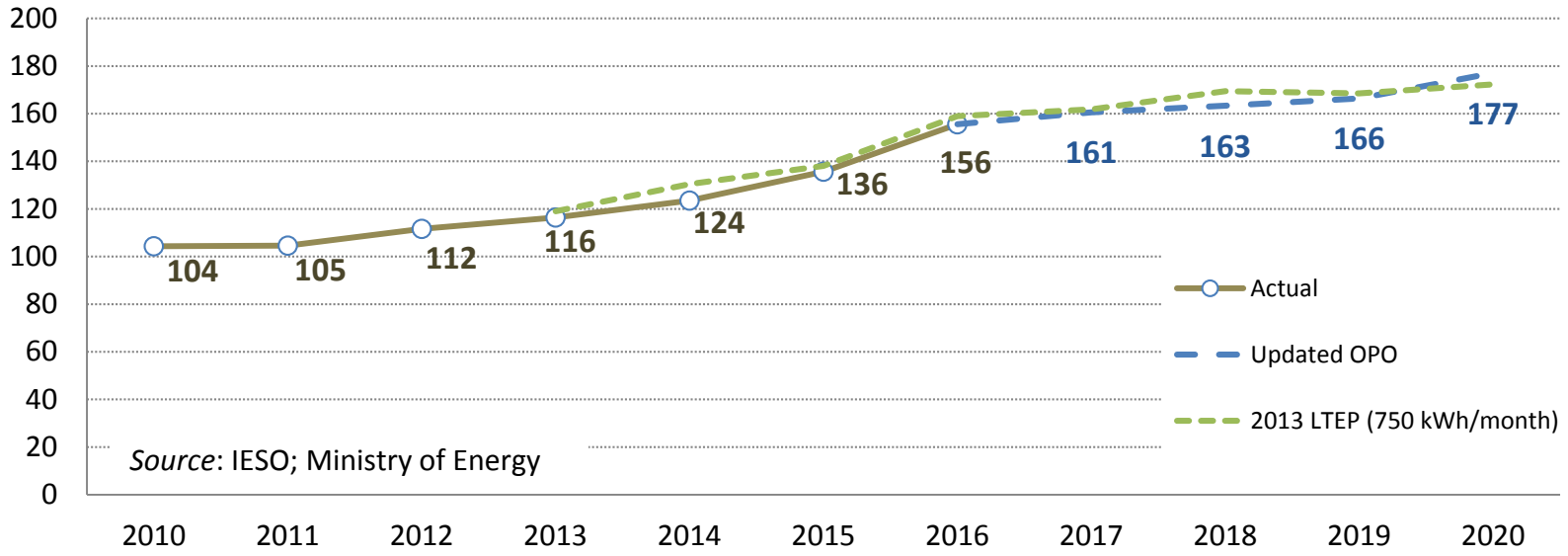
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

Context – Residential Electricity Prices

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bill is currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecast.

Typical Residential Electricity Bills
Historical and Forecast in $/month

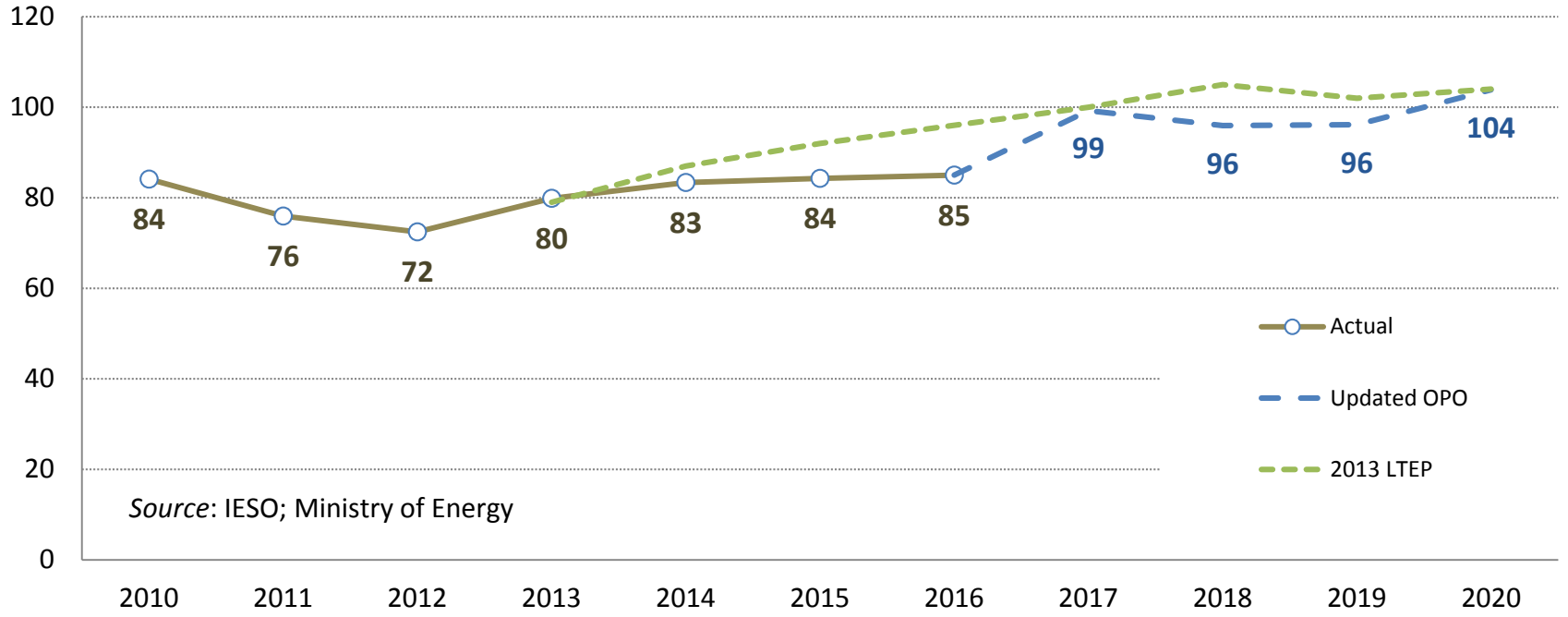


Note: The 2013 LTEP forecast for residential bills was based on 800 kWh/month without RRRP or electric heating; the above has been rebased to 750 kWh/month for comparison purposes. Typical residential are based on Toronto Hydro. The updated OPO forecast above includes the 8% rebate to offset the provincial portion of HST, ICI expansion and RRRP expansion.

Context – Large Industrial Electricity Prices

- Industrial electricity prices continue to be a concern for many businesses.
  - **Note:** The typical industrial electricity price is currently below the 2013 LTEP forecast.

Typical Class A Electricity Prices
Historical and Forecast in $/MWh



Note: The 2013 LTEP forecast for industrial reflects a transmission connected Class A electricity consumer. The updated OPO forecast above includes ICI expansion and RRRP expansion.

Broad Policy Themes / Rationale

- In recognition of the costs borne by ratepayers related to the to decarbonizing and modernizing the province's electricity sector:
  1. Provide significant and immediate rate relief through cost deferral of the global adjustment (GA).

  2. Provide a greater focus on vulnerable consumers by funding electricity support programs, such as the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Protection, (RRRP) through the tax-base. In addition, provide greater support for lower income Ontarians by enhancing the OESP, etc.

  3. Empower energy agencies to increase cost effectiveness and improve efficiency by having – Independent Electricity System Operator (IESO) modernize Ontario's electricity market through electricity market renewal initiatives, the Ontario Energy Board (OEB) identify opportunities for future LDC cost reductions/efficiencies and work with Ontario Power Generation (OPG) to find further efficiencies in operations and pass on savings to ratepayers.

  4. Enhance the existing 8% rebate that went into effect January 1, 2017.

Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

$/750kWh	2016	2017	2018	2019	2020	2021	2022	Timing of Benefit
1. Global Adjustment (GA) Financing (Moderate)	-	17.49	15.01	12.49	14.91	6.32	4.03	Immediate
2. Fund Electricity Support Programs Through the Tax-Base								
a. Rural or Remote Rate Protection (RRRP)	-	1.58	1.62	1.66	1.70	1.75	1.79	Immediate
b. Ontario Electricity Support Program (OESP)*	-	0.83	0.83	0.83	0.83	0.83	0.83	Immediate
c. Low-Income Conservation	-	-	-	-	-	-	-	
d. First Nations Rate	-	-	-	-	-	-	-	
3. Empowering Energy Agencies To Increase Cost Effectiveness and Improve Efficiency								
a. IESO – Market Renewal	-	-	-	-	-	1.00	1.03	Long-Term
b. OEB – LDC Efficiencies/Rates*	-	TBD	TBD	TBD	TBD	TBD	TBD	Medium-Term
c. OPG – Operational Efficiencies	-	0.71	0.89	1.08	1.22	1.35	1.24	Immediate
4. Enhanced Tax-based RPP Rebate (5%)	-	7.04	7.17	7.31	7.77	7.61	7.83	Immediate

***Note**: Savings based on currently approved OESP rate set by OEB.
Note: The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Class B includes small-medium enterprises (SMEs).

Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

$/MWh	2016	2017	2018	2019	2020	2021	2022	Timing of Benefit
1. Global Adjustment (GA) Financing (Moderate)	-	14.49	12.43	10.33	12.35	5.23	3.33	Immediate
2. Fund Electricity Support Programs Through the Tax-Base								
a. RRRP	-	2.10	2.15	2.21	2.26	2.32	2.38	Immediate
b. OESP*	-	1.10	1.10	1.10	1.10	1.10	1.10	Immediate
c. Low-Income Conservation	-	-	-	-	-	-	-	
d. First Nations Rate	-	-	-	-	-	-	-	
3. Empowering Energy Agencies To Increase Cost Effectiveness and Improve Efficiency								
a. IESO – Market Renewal	-	-	-	-	-	1.34	1.38	Long-Term
b. OEB – LDC Efficiencies / Rates*	-	TBD	TBD	TBD	TBD	TBD	TBD	Medium-Term
c. OPG – Operational Efficiencies	-	0.59	0.74	0.89	1.01	1.12	1.03	Immediate
4. Enhanced Tax-based RPP Rebate (5%)	-	-	-	-	-	-	-	Immediate

***Note:** Savings based on current OESP charge as set by OEB.

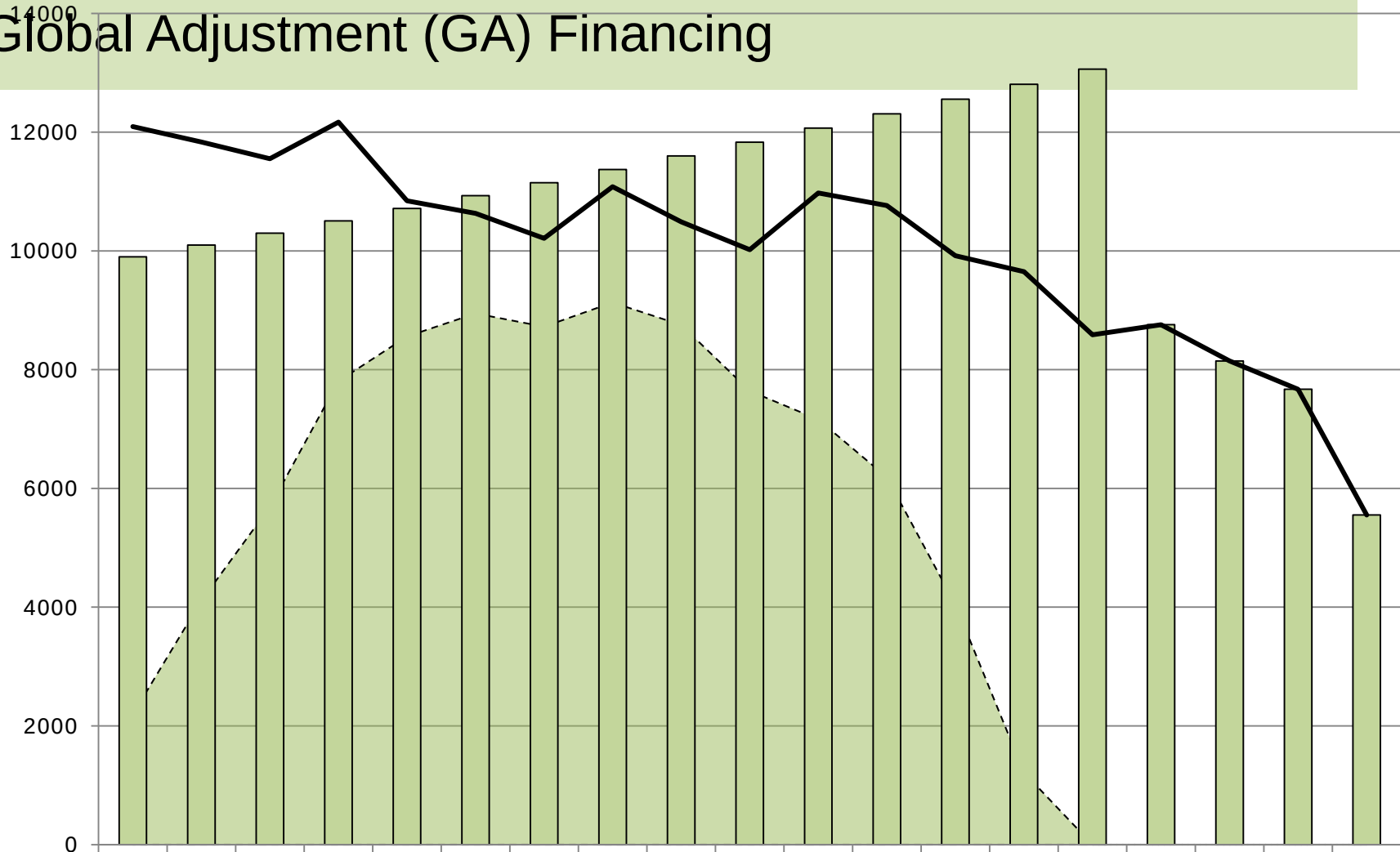
Fiscal Impacts

$M	2016-17	2017-18	2018-19	2019-20	2020-21
1. Global Adjustment (GA) Financing (Moderate)	TBC	TBC	TBC	TBC	TBC
2. Fund Electricity Support Programs Through the Tax-Base*					
a. RRRP	-	$457	$469	$479	$493
b. OESP	-	162	225	279	323
c. Low-Income Conservation	-	60	60	60	60
d. First Nations Rate	-	18	18	18	18
3. Empowering Energy Agencies To Increase Cost Effectiveness and Improve Efficiency					
a. IESO – Market Renewal	-	-	-	-	-
b. OEB – LDC Efficiencies / Rates	-	-	-	-	-
c. OPG – Operational Efficiencies**	-	-	-	-	-
4. Enhanced Tax-based RPP Rebate (5%)	169	699	679	732	724

***Note:** Includes costs of program expansion and various assumptions as detailed on relevant slides.
**** Note:** Risk to fiscal plan of up to $240 million annually (foregone net income) if OPG is unable to reach more aggressive operational efficiency targets.

Source: Ministry of Finance, Energy

1. Global Adjustment (GA) Financing



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Accumulated Debt	2195	4108	5688	7806	8558	8946	8725	9132	8753	7642	7160	6188	4046	1213	0	0	0	0	0
Amount Paid by Ratepayer	9900	10098	10300	10506	10716	10930	11149	11372	11599	11831	12068	12309	12556	12807	13063	8758	8147	7670	5553
IESO Forecast GA Cost	12095	11835	11552	12168	10844	10634	10212	11081	10489	10020	10975	10764	9919	9650	8587	8758	8147	7670	5553

1. GA Financing – Options

1a. Moderate / GA Financing

- The amount of GA paid by ratepayers in 2017 is lowered by $3.2 and $3.4 billion below the true cost of GA and increases at 2% in each subsequent year until the total amount of money borrowed is paid off in 25 and 30 years respectively.
- Future GA over-payments above the true cost of GA are capped at $2 billion to limit electricity cost increases in any given year.

1b. Moderate / GA Financing with Delayed Increase

- The starting GA payment from all ratepayers in 2017 is lowered by $1.1 billion, ratepayer payments *decrease* in the short term to keep residential bills relatively flat, then increases at 3% each year – up to a maximum of $2 billion above the true cost of GA – until the borrowed money is paid back over a 25 and 30 year financing period respectively.

Low / GA Financing (see in Appendix)

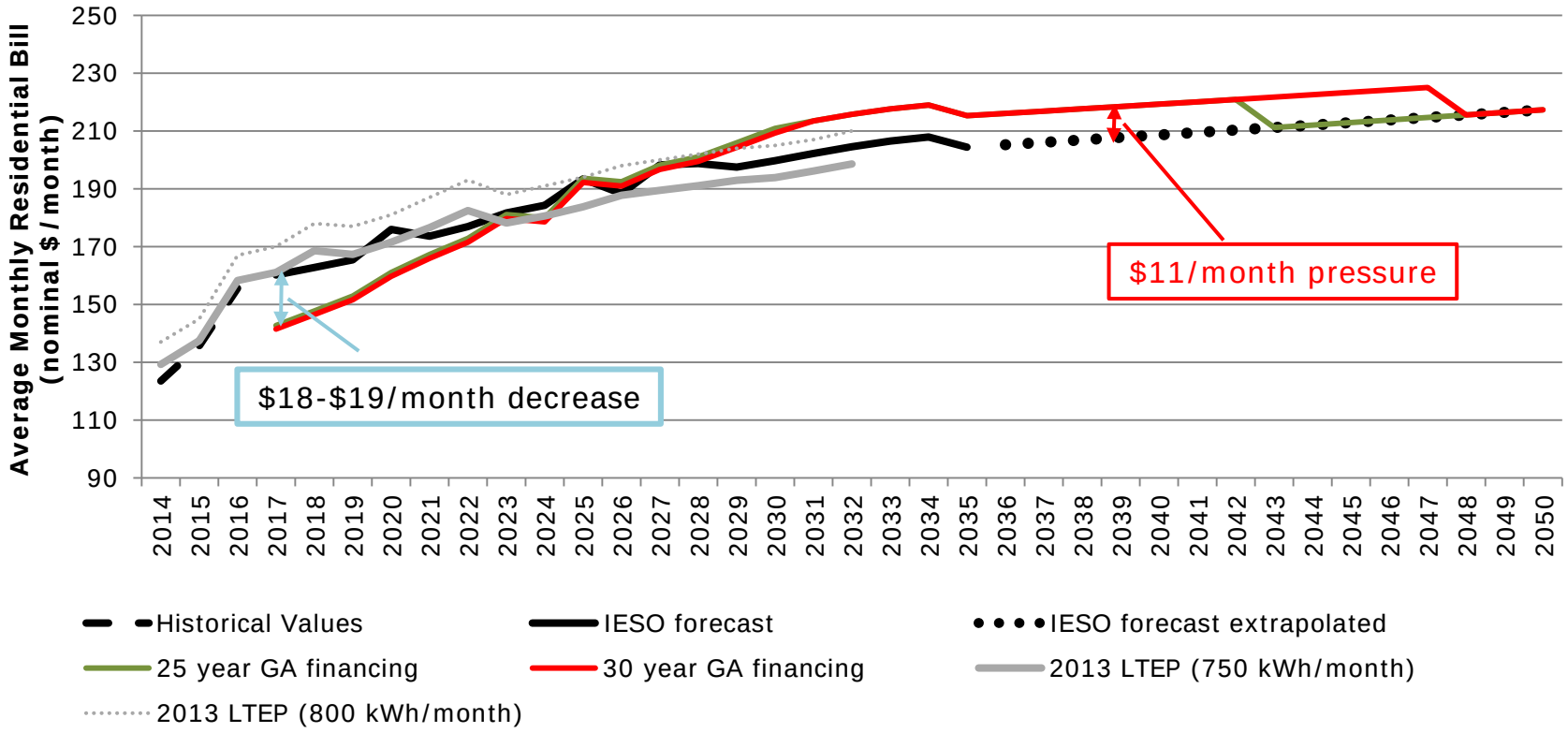
- The amount of GA paid by ratepayers in 2017 is lowered by $2.5 billion below the true cost of GA and increases in each subsequent year until the total amount of money borrowed is paid off.
- Future GA over-payments above the true cost of GA are capped at $2 billion to limit electricity cost increases in any given year.

High / GA Financing (see in Appendix)

- The amount of GA paid by ratepayers in 2017 is lowered by $4.4 and $5 billion below the true cost of GA and increases at 2% in each subsequent year until the total amount of money borrowed is paid off in 25 and 30 years respectively.
- No limit is placed on the amount charged to ratepayers above the true cost of GA.

1a. Moderate / GA Financing – Impact on Residential Electricity Bills

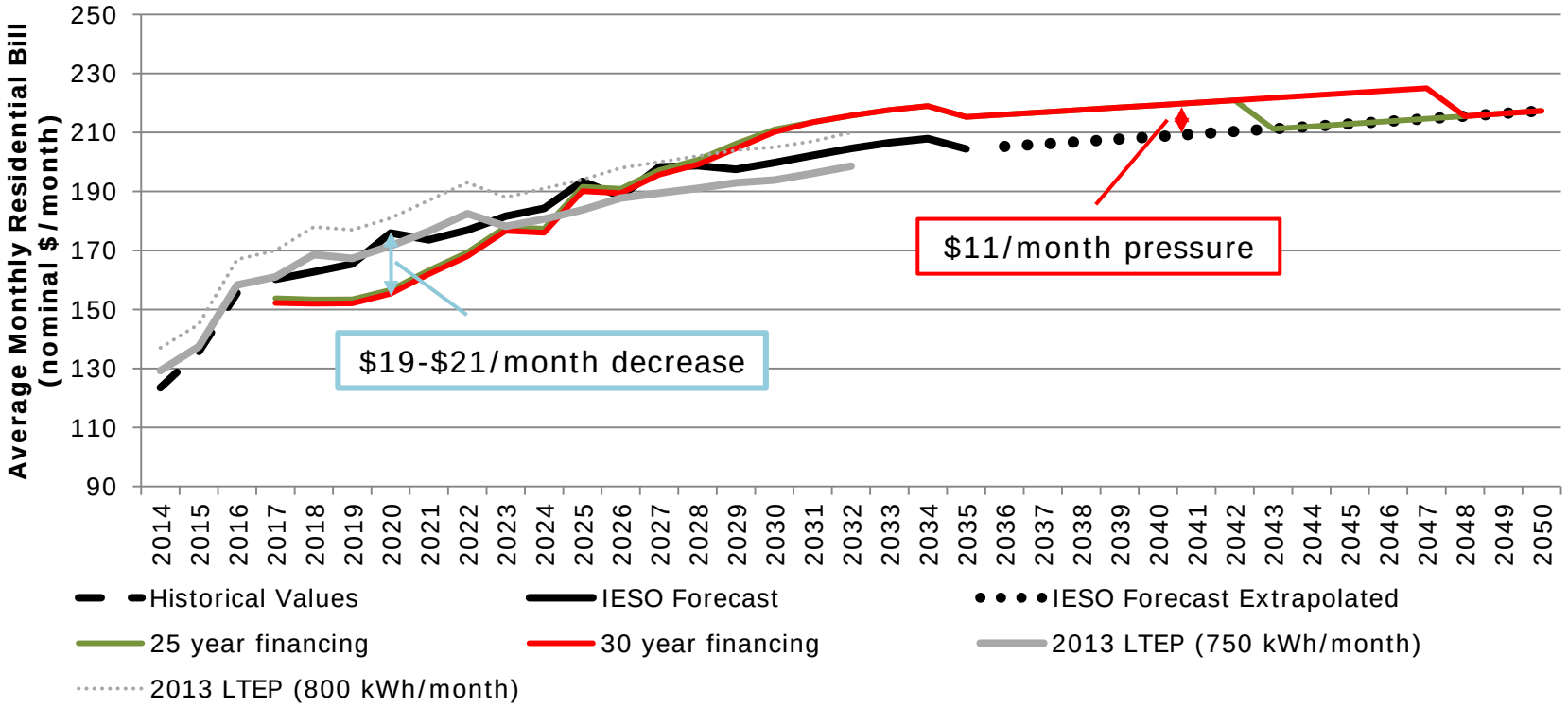
- In this scenario, the starting GA payment from all ratepayers in 2017 is lowered by $3.1 billion (green line) and $3.3 billion (red line) and increases at 2% each year – up to a cap of no more than $2 billion more than the true cost of GA in any year – until the borrowed money is paid back in 25 and 30 years respectively.



- By **borrowing up to $23 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $17-$19/month** at the cost of **increased future electricity bills over 14-19 years of up to $11/month** above the true cost of electricity production.

1b. Moderate / GA Financing with Delayed Increase in Payments – Impact on Residential Electricity Bills

- In this option, the starting GA payment from all ratepayers in 2017 is lowered by $1.1 billion, ratepayer payments *decrease* in the short term to keep residential bills relatively flat, then increases at 3% each year – up to a maximum of $2 billion above the true cost of GA – until the borrowed money is paid back over a 25 and 30 year financing period respectively.

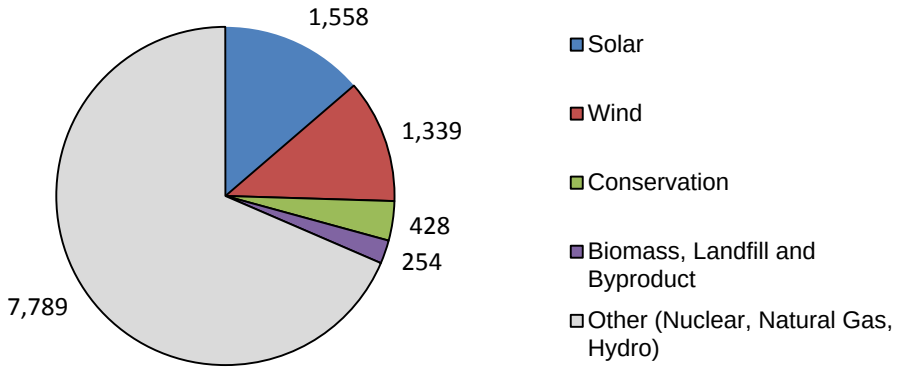


- By **borrowing up to $23 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $19-$21/month** at the cost of **increased future electricity bills over 14-19 years of up to $11/month** above the true cost of electricity production.

1. GA Financing – Cost Breakout

- The allocation of GA costs for most of 2016 are as follows:

GA costs year-to-date November 2016 ($ million)



- This cost breakdown will evolve over time as 2,181 MW of contracted generation comes online in the coming years.
- The proportion of GA costs is compared with the proportion of generation in the table below:

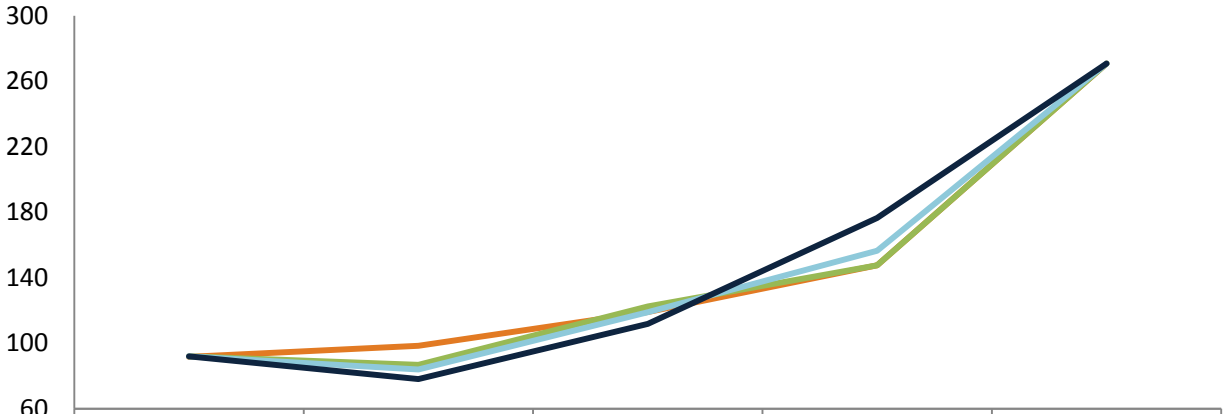
	Fraction of GA Cost	Fraction of Generation*
Solar	14%	0.3%
Wind	12%	6.0%
Biomass, Landfill and Byproduct	2%	0.3%
Conservation	4%	0.0%
Other (Nuclear, Natural Gas, Hydro)	69%	93.4%

***Note:** Only includes generation directly connected to the transmission system. Most solar generation, for example, is connected to the distribution system and is not represented in the generation column.

1. GA Financing – Impact of the Level of Financing on Large Industrial Electricity Consumers

- Below graph illustrates the estimated impact of the level of GA financing for an average Class A electricity consumer over a 25 year amortization period.

Estimated All-In Electricity Price
for Average Class A in $/MWh



	2016	2017	2027	2037	2047
Status Quo	92	98	119	148	271
Low Financing		87	122	148	271
Moderate Financing	-	84	119	157	271
High Financing		78	112	177	271

Note: Assumes that demand by industrial sector continues at average 2011-2015 levels. Please see the Appendix or more information on the estimated impact on large industrial electricity consumers.

1. GA Financing – Considerations

Considerations

Ratepayer:

- Borrowing money to finance the GA, while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.

- The GA financing proposal involves borrowing large amounts of money over a long period of time (16-30 years, depending on the scenario) to reduce electricity rates. This debt would be highly sensitive to interest rates which could extend repayment timelines or put significant pressure on electricity rates. A long-term interest rate of 5% is assumed for this analysis.

- GA and HOEP provide a natural hedge against each other – when one goes up, the other goes down – keeping total electricity costs relatively stable and predictable. Smoothing only the GA would lead to greater price volatility for consumers unless the schedule and amount of ratepayer payments was defined relative to the actual cost of GA.

- Some Class A consumers pay limited Global Adjustment and would receive little benefit under the financing proposal. These consumers also currently pay very low rates.

- Should Ontario electricity demand be lower than forecasted, the cost of paying off the debt will be spread over a smaller pool of consumption, further increasing future costs for individual ratepayers.

- In recognition that Class B electricity consumers pay the majority of GA costs, could limit GA cost reductions through financing to Class B consumers only.

1. GA Financing – Considerations (cont'd)

Considerations

Fiscal / Accounting:

- Further analysis is required on whether such changes to the financing of the GA would affect the Province's current accounting treatment for the GA and represent a potential fiscal risk. As such, early engagement with Legal Services Branch and Treasury Board Secretariat is advised.
  - It is unclear whether legislation could determine the manner in which this initiative is accounted for. Further work is required.

- Historically electricity sector financing has been conducted by the Ontario Financing Authority (i.e., managing OEFC's stranded debt and borrowing on behalf of IESO). Further consultation with the OFA will be required to determine the appropriate vehicle for additional borrowing.

- The significant amount of additional Provincial borrowing needed to finance the GA, and associated risks (e.g., interest rates, repayment timelines), could put pressure on the Province's credit rating and overall borrowing capacity. Further analysis is required and would suggest early engagement with the OFA through which money will be borrowed.

- The significant deferral of electricity system costs over a long time-horizon and associated interest costs may draw criticism from some stakeholders as creating a new "stranded debt" in the sector. **Note:** the Debt Retirement Charge (DRC) was removed from residential bills in 2016 and will be removed for remaining customers in 2018.

1. GA Financing – Guiding Principles (cont'd)

- Based on preliminary discussions with KPMG, the following key steps have been identified:
  - Create an "asset" (and confirm that it meets accounting requirements);
  - Identify who will hold the asset(s), this could include:
    - Province (e.g., OEFC, etc);
    - IESO; or
    - LDCs.
  - Determine the source of the financing (e.g., OFA, IO, etc)

- ENERGY is working with LSB, IESO, MOF, TBS and external accountants to identify legislative, regulatory and accounting requirements associated with GA financing option.

1. GA Financing – Considerations (cont'd)

Considerations

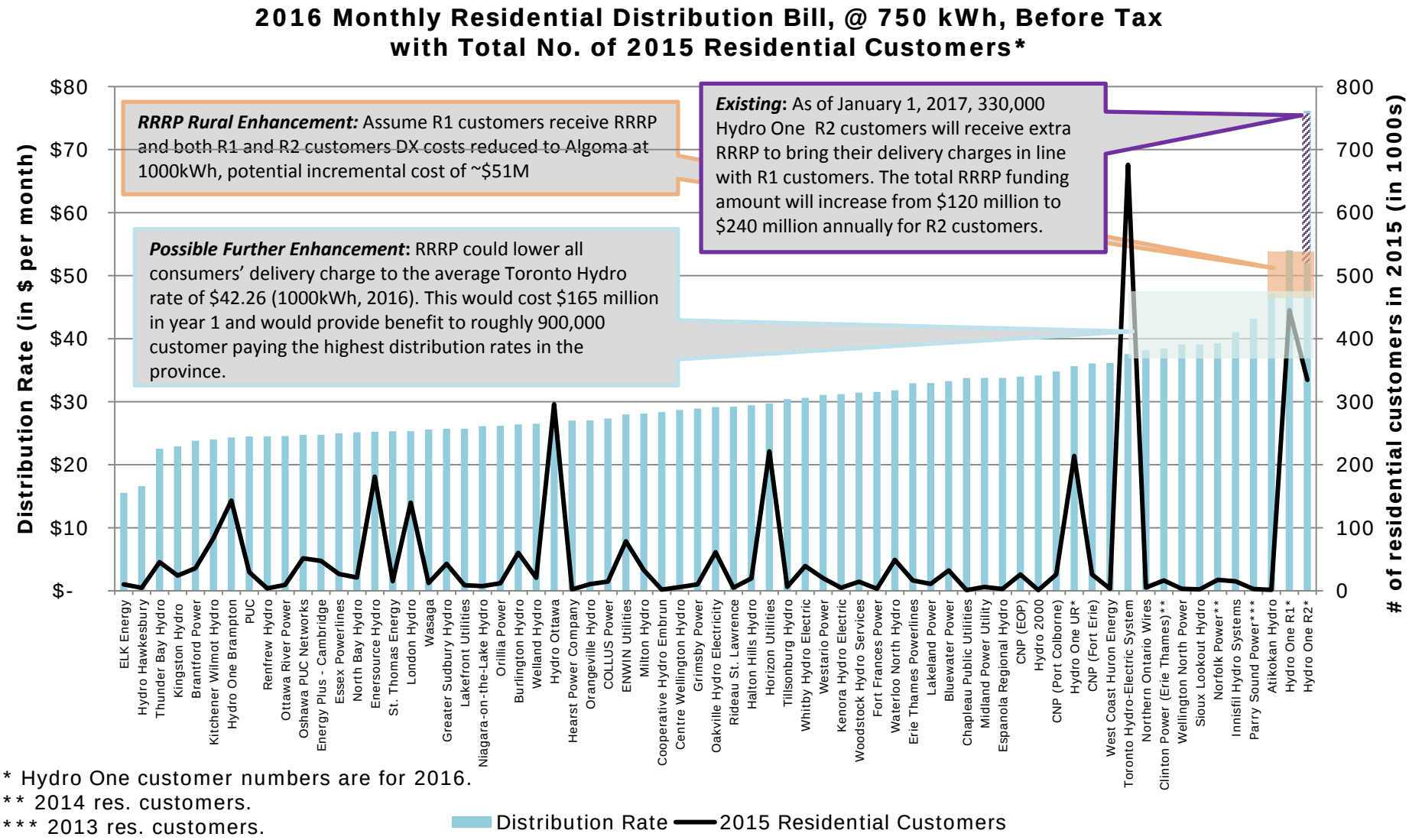
Legal:

- Legislation would be required to authorize the financing proposal.
  - Amendments to the *Electricity Act, 1998* (EA) could authorize the financing of certain costs within or part of the GA. However, whether any other legislation requires amendment is not known at this time.
  - The GA regime currently provides that "true costs" represent the true costs of making payments to generators or counter parties to contracts, not the incurring of discretionary financing or interest costs.
  - Considerations such as the need to analyze legal risks or the need to address costs retroactively (if the proposal requires a January 1, 2017 start) could add to the legal and drafting complexity. Further legal analysis is required.

2a. Fund Electricity Support Programs Through the Tax-Base – Rural or Remote Rate Protection (RRRP)

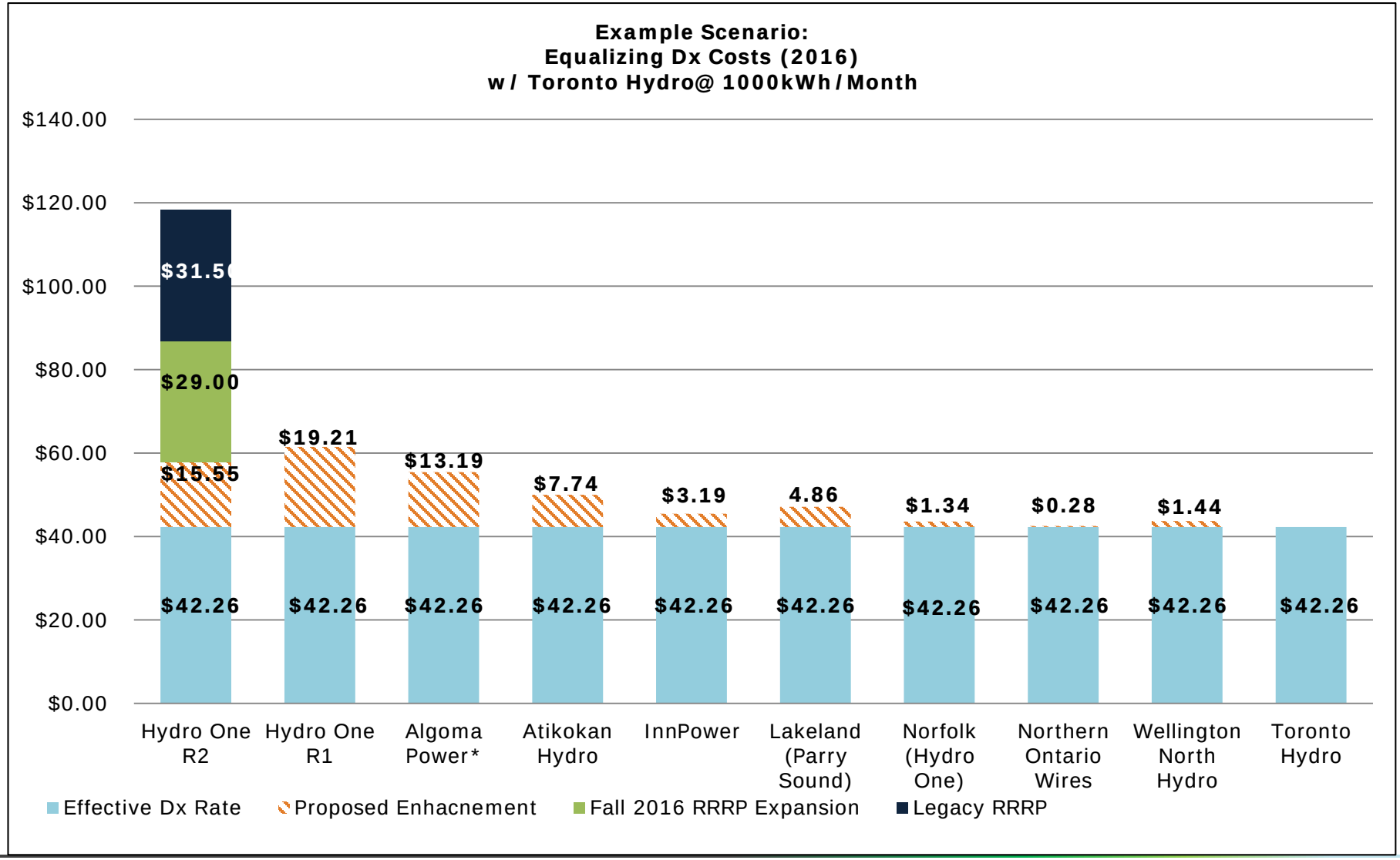
- RRRP supports the most costly-to-serve distributors in Ontario. It is not income tested and most of the support goes to Hydro One's R2 (low density) rate class and remote communities.
- The objective of the program is to reduce extreme distribution costs experienced in low density communities, and bring rates closer to those paid by other customers across the Province.
  - The OEB mandates that low density consumers pay the full cost of service and in recent rate filings has asked Hydro One to ensure this through cost allocation studies. RRRP is thus the mechanism by which these costs can be partly subsidized by all provincial ratepayers.
- Effective January 1, 2017, Ontario has enhanced program funding to further reduce Hydro One R2 distribution rates. As a result, a typical Hydro One R2 customer now pays roughly the same as a Hydro One R1 (medium density) customers, the next highest distribution rate.
- There is opportunity to continue the mitigation of delivery costs for the most costly-to-serve Ontario consumers by revising the program to either:
  - Bring other density based rural costs down by providing benefits to Hydro One R1 customers and ensuring that all RRRP recipients would pay roughly the same delivery costs; or
  - Expanding the program to other distributors that are costly to serve for reasons beyond density (e.g. to bring their distribution rates down to levels currently paid by customers of Toronto Hydro).
- An expansion of the program would result in a cost for all other ratepayers as the RRRP regulatory charge would need to be increased. In order to avoid this and not place an additional burden on consumers, the RRRP program could be transferred to the taxbase.
  - If left on the ratebase, program costs to consumers could rise from an average of $1.58/month to roughly $3.15/month.

2a. RRRP Expansion (cont'd)



* Hydro One customer numbers are for 2016.
** 2014 res. customers.
*** 2013 res. customers.

2a. RRRP Expansion – Ratepayer Impacts



***Note:** Algoma Power also receives $13.5 million (2017) to support operational costs.

2a. RRRP Expansion – Fiscal Impacts

- Table below shows estimate of program costs up to 2022

Year	RRRP Status Quo($M)	RRRP Enhancement Phase 1 ($M)	RRRP Enhancement Phase 2 ($M)	TOTAL RANGE ($M)
2017	$292	$51	$114	**$343 - $457**
2018	$300	$52	$117	**$352 - $469**
2019	$306	$54	$119	**$360 - $479**
2020	$315	$55	$123	**$370 - $493**
2021	$322	$56	$127	**$378 - $505**
2022	$329	$58	$129	**$387 - $516**

- Baseline cost of $292M includes all existing funding for Hydro One R2 (including recent $116 million expansion), Hydro One Remotes, and Algoma Power. Providing the enhanced support would cost an additional $165 million (Phase 1 – $51 million + Phase 2 – $114 million) in year 1.
- For forecast purposes, fiscal impacts are escalated at 2.6%/year. This reflects an estimate of the average yearly distribution rate increase.
  - The current RRRP program includes an adjustment mechanism to increase program funding by the same percentage as the average yearly distribution rate increase.
  - The continuation and appropriateness of this mechanism (and in fact all program design characteristics) would be considered in moving the program to the tax base.

2a. RRRP Expansion – Considerations

Considerations

- **Framework:** New legislation would be required to establish and define the parameters of a tax based RRRP. This may reveal additional considerations.
- **Policy Rationale:** Historically, RRRP has supported costs of LDCs that meet a density threshold. Expanding funding to additional LDCs that do not represent a density threshold (and selecting a specific LDC rate to serve as a cost cap) results in a fundamental change in the program. Program objectives must be considered if expansion is limited to specific LDCs.
- **Program Design:** Program specifics will affect eligible customers, credit amounts, and fiscal impact widely. Issues such as how eligibility is determined and if benefits are equal for all customers within an eligible LDC need to be examined. Financial flow-through mechanisms would need to be considered in consultation with IESO and LDCs. Likely to be modeled after processes used for the Ontario Rebate for Electricity Consumers (OREC).
- **Continuing Support:** There are multiple options and mechanisms available to adjust funding year-over-year depending on desired objective (continuously peg to Toronto, cover annual rate increases, provide inflationary support, amend as needed, etc…). Selection will impact fiscal projections.
- **Fiscal Risk:** As LDC rates change year-over-year, LDCs eligible for tax-based support will change and can cause significant fluctuation in fiscal projects and impacts. For example, if Toronto Hydro meets eligibility criteria in any given year, over 700,000 customers could become newly entitled to taxbase support.
- **Legal Risk:** The OEB is the energy sector's independent regulator and has sole authority to set rates. Ministry-OEB authority must be considered when prescribing cost levels.
- **Hydro One:** Providing tax-based support for Hydro One may be controversial following the broadening of ownership. Hydro One is also transitioning seasonal customers to its R2 and R1 classes; program eligibility will need to be considered.

2b. Ontario Electricity Support Program (OESP) Expansion

- The OESP is an income-tested, application based program that lowers the electricity costs of the most vulnerable consumers by providing a rebate directly on their electricity bills.
- The OESP provides basic benefits to most consumers and enhanced benefits to Indigenous customers and customers with electric heat and medical devices.
- OESP funding is collected from a charge levied on all electricity ratepayers. Based on current level of program up-take and funding collection, OESP program benefits could be increased across the board by 50%. This would mean:
  - Single low income consumers would see an increase from $30 to $45/ month ($540/year);
  - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year); and
  - Indigenous and Métis consumers would also see benefit increases at the same level as those with electric heat and medical devices.
    - The Ministry is also considering options to support a “Delivery” line credit for Indigenous consumers. This would cost ~$18 million/year (Option 2d on slide 8) and would save Indigenous consumers between $75 and $100/month.
- Greater focus and support can be placed on lower income Ontarians by funding OESP through the tax base. This would also reduce costs for all consumers as a result of eliminating the OESP charge.
  - Average residential customer savings: $0.83/month; and
  - Average industrial customer savings: $1.10/MWh.

2b. OESP Expansion – Fiscal Impacts

- Table below shows estimate of program costs up to 2022:

Year	OESP Status Quo($M)	+50%($M)	TOTAL ($M)
2017	$108	$54	**$162**
2018	$150	$75	**$225**
2019	$186	$93	**$279**
2020	$215	$108	**$323**
2021	$243	$122	**$365**
2022	$272	$136	**$408**

- 2017 program costs are based at current program sign-up rate – 30% of eligible consumers. Cost projections assume the program grows to 100% of eligible consumers by 2022 and remains at that level.
- At the time of program design, it was estimated that 40-50% participation would be high for an application-based program delivered through electricity bills. However OESP can be enhanced by working to ensure the program uptake is as close as possible to 100%:
  - Streamlining the application process to make it easier and quicker to get through;
  - Putting in place a more aggressive communications strategy to make sure people are aware of the program;
  - Increasing funding for key partner agencies to work directly with individuals who are applying; and
  - Exploring automatic OESP qualification for those who receive provincial programs (e.g., ODSP).
- OEB is currently exploring options for simplifying the OESP process, including exploring options with MCSS on auto-enrollment options, discussing options to eliminate wet signature consent forms with the federal government, and working with partners to do open houses to better reach vulnerable consumers.

2b. OESP Expansion – Considerations

- **Framework:** New legislation would be required to establish and define the parameters of a tax-based OESP. This may reveal additional considerations, including possible assessment as a tax credit.
- **Implementation:** Financial flow-through mechanisms would need to be considered in consultation with IESO and LDCs. Likely to be modeled after processes used for the Ontario Rebate for Electricity Consumers (OREC).
- **Alternative Delivery:** If the OESP was funded by the tax-base, it could also be explored whether the OESP could be better delivered as a provincial program via the tax system. This may help ensure that the program's participation rate is as high as possible, and could expand coverage to the ~142,000 low-income households that do not receive an electricity bill.
- **Transition to Social Assistance:** Moving OESP to the taxbase can be a transitional step in folding this program into a reform of social and disability assistance programs and enhancement of MCSS' Social Assistance Management System moving forward.
- **Additional Enhancements:** The enhanced credit could be expanded to include additional eligibility categories of customers. For example, a new "Low Density Consumer" category could be introduced that provides Hydro One R2 and/or R1 customers (highest distribution rates) who are already OESP eligible with the enhanced credit.
- **Variance Account:** The OEB has been collecting program funding in excess of program costs and has accrued a positive balance. This balance must be addressed when moving to the tax base.

2c. Low Income Conservation Benefit Program

- Existing low income programs delivered by LDCs and IESO help qualified homeowners and social and/or assisted housing providers improve the energy efficiency of their homes.
  - Programs include the Home Assistance Program and the Retrofit Program (Social Housing Stream).
- A new Low Income Conservation Benefit Program would build on existing programs.
  - Participants could receive incentives for conservation measures not currently covered (e.g. air conditioning, heat pumps (electric heated homes)).
  - Increased incentive amounts (e.g., under the existing Retrofit Program, incentives cover approx. 60% of the total cost of the energy efficiency upgrade).
  - Targeted education and awareness initiatives.
- The new program would be delivered through LDCs and/or IESO.
- The new program would coordinate with CCAP initiatives.
- The budget estimate below is illustrative and assumes annual program budgets three times the 2015 spending for the Home Assistance Program.

	2017	2018	2019	2020	2021	2022
Proposed Budget ($ Million)	$60	$60	$60	$60	$60	$60

- Further analysis is required on costing and implementation details, including alignment with the Conservation First Framework.

3a. IESO – Market Renewal

- Continue to move forward with Independent Electricity System Operator's (IESO) Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

Considerations

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2021, leading to a reduction of:
  - About $1/month or less than 1% at current retail prices for a typical residential bill; and
  - About $1.30/MWh at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.
- IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.

3b. OEB – LDC Efficiencies and Rates

- Reducing costs and having LDCs become more efficient could result in a reduction of distribution costs on electricity bills.
  - Currently, LDCs recover costs through the Delivery line of the electricity bill, which is broken into Distribution and Transmission costs. LDCs are responsible for the Distribution costs of the electricity bill which account which account for about 20% of the total bill.
- Distribution costs vary across the province as LDCs have different service territories and needs (e.g., geography, number of customers, density of customers, life/health of capital assets, etc). See next slide for more detail.
  - For example, comparing 2016 with 2006, distribution rates have increased by about 24.5% (or about 2.2% per year, compounded annually) across the Province, with significant variation between regions and LDCs (-17% to 148%). Overall consumer price inflation in Ontario for the same period increased by about 19% or 1.8% per year.
- Over the same time period, distribution sector productivity and cost efficiency have decreased. This trend raises concern that customers are not realizing a net benefit from sector cost increases, as customers receive less value from the distribution portion of their bill.
  - OM&A costs per customer have increased on average from $235 in 2006 to $319 in 2015.
  - For the period 2002-2012, sector productivity has decreased by an annual average of -0.93% when including Hydro One and Toronto Hydro, the worst performers.
- In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. The Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities. The panel recommended legislation to mandate consolidation.
  - Rather than mandating consolidation, the government response was to pursue voluntary consolidation and put in place tax incentive for consolidation \further changes to the tax incentives and/or revisiting legislated consolidation could be considered.
- The Ontario Energy Board (OEB) has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates. Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- ENERGY could help promote or accelerate these efforts by asking the OEB – through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and/or the 2017 Mandate Letter and other agency business planning processes – to consider opportunities to further drive these efficiency, productivity, and performance improvements.

3b. OEB – LDC Efficiencies and Rates – Potential LDC Cost Reduction Measures (cont'd)

Option	Description	Potential Cost Impacts*	Timeline**	Notes
Performance Standards with Rewards & Penalties	Strengthen LDC scorecard by connecting to LDC financial performance through earnings sharing or penalties paid to consumers. Ex: SAIDI/SAIFI; OM&A per customer	• 1-2% of revenue requirement could be recycled back to customers. • Performance penalties would be real, periodic on-bill $ reductions. • Cost reduction would only occur if standards are not met.	1 year	UK Regulator Ofgem requires utilities to pay consumers up to £50 if reliability standards are not met.
Enhanced Economic Regulation	Revise rate-setting to reflect tightening productivity requirements and capital cost avoidance.	• <1% reduction in rates annually, with additional capital investment avoidance. • Methods include stronger productivity factors, broader peer comparisons, and elimination of ICM.	1-3 years	Incents innovation by requiring LDCs to provide equal or better service on less inflation-adjusted revenue annually.
LDC Collaboration Incentives	Create regulatory incentives for LDCs to pursue efficiencies and service sharing agreements.	• Potential to avoid individual LDC capital investments of up to six figures, plus additional OM&A tightening. • Actual level of rate reduction dependent on specific LDC proposals.	1 year for new guidelines, savings to be realized through LDC planning process.	LDCs have already indicated an interest in pursuing such arrangements but have expressed concern on regulatory barriers and costs.
Line Loss Accountability	Create appropriate benefit-sharing mechanism so LDCs are incented to pursue line loss reductions.	• Potential for 1-3% reduction in commodity charges associated with losses. • Requirements dependent on business cases so costs don't outweigh benefits.	1-2 years	Potential linkages with related proposal for in-front of the meter conservation.

***Note:** Dependent on implementation specifics as determined by OEB

****Note:** Timelines begin from Ministry approval of OEB LTEP Implementation Plan

3b. OEB – LDC Efficiencies and Rates – Considerations

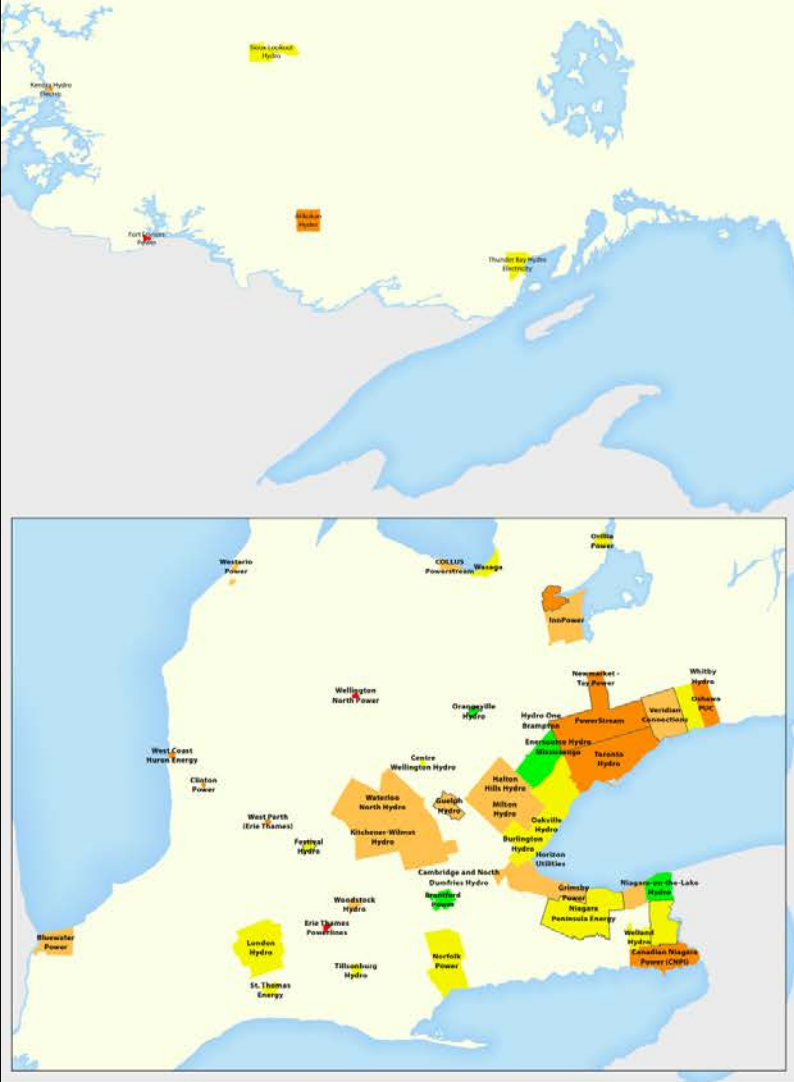
Sector:

- Exact bill reduction levels are unknown, but real OM&A and some capital cost avoidance can reasonably be expected.
- Could indirectly incent consolidation if LDCs feel they are unable to adequately manage their assets in light of tightening requirements.
- Any initiatives that have a direct impact on LDC profitability could affect the value of Hydro One.
- There is a tension between requiring productivity enhancements and creating firm performance standards. LDCs have to invest to maintain system levels, but also finding cost efficiencies, which is an incentive for innovation. The Ministry and the OEB may have to also explore reducing regulatory burden/barriers on LDCs so they have the tools available to satisfy new performance expectations.

Regulatory:

- The OEB is the electricity distribution sector's independent regulator and as such is responsible for establishing rate-setting mechanisms in line with its statutory objectives.
  - The Ministry would engage with OEB to align on approach, and provide only high-level direction so as to respect OEB's role in determining implementation specifics.
  - The OEB would likely need to conduct policy hearings and stakeholder consultations on these initiatives, though Ministry could request new rules be in place for next major LDC rate cycle.
- LDCs are resistant to peer comparison for a variety of historical and service territory issues. OEB econometric analysis has generally supported limiting peer comparisons. As comparisons would be an important component of benchmarking performance standards, the Ministry may experience sector pushback.
- Updating rate-setting mechanisms and regulatory processes could create regulatory uncertainty and limit LDC activity. The OEB has revised its processes multiple times over the past 15 years.

LDC Distribution Rate Changes (2006 vs 2016)



Total Dx Rate	2006	2016	% Rate Change
Hydro One UR (High Density)	$29.13	$35.65	22.4%
Hydro One R1 (Medium Density)	$37.73	$54.02	43.2%
Hydro One R2 (Low Density)	$44.65	$76.14	70.5%

Legend

LDC Rate Comparison 2006 vs 2016

% Total Rate Change (# of LDCs)

- -17.3% to 0% (5)
- 0.1% to 15% (25)
- 15.1% to 30% (21)
- 30.1% to 60% (16)
- 60.1% to 89.3% (4)
- Merged LDCs

Below LDCs had either acquired or merged: (# of merged LDCs)

a. Powerstream Inc. (5)
b. Chatham-Kent Hydro Inc. (13)
c. Veridian Connections Inc. (4)
d. Guelph Hydro Electric Systems Inc. (2)
e. Festival Hydro Inc. (2)
f. Orangeville Hydro Limited (2)
g. Niagara Peninsula Energy Inc. (3)
h. Peterborough Distribution Incorporated (3)

Only LDCs with distribution rates of 2006 and 2016 are shown.
Only the largest distribution areas are shown and smaller satellite areas are not all shown.

Data source: Rate database, Rate orders and OEB yearbook
Produced by Strategic Policy and Analytics Branch,
Strategic Network and Agency Policy Division,
Ministry of Energy

0 30 60 120 180 240
Kilometers

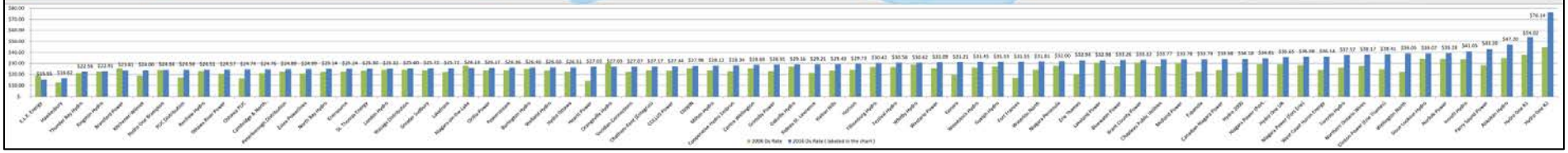
Published December 2016

KEY FINDINGS

- In summary, distribution rates (including rate riders) have increased by about 24.5% across the Province, with significant variation between regions and LDCs (-17% to 148%).
- There is generally no correlation between LDC size or location and distribution rate increase in absolute or percentage terms.
- The current analysis shows no clear relationship between the percentage rate increase and the absolute rate level (that is, high rate increase LDCs may still have among the lowest rates, and low rate increases may have higher rates.
- No clear relationship between amalgamation and rates.
- The analysis does suggest that Hydro One has the highest rates, and some of their customers have seen higher than average rate increases.

NOTES

- **Rate Calculation:** Monthly residential distribution bill rates, before taxes, are based on consumption of 750 kWh. Distribution charges account for approximately 23% of the average 2016 residential bill.
  All figures calculated by ENERGY staff without input from OEB.
- **Colours:** Colour coding of the map only depicts the change in LDC rate amounts (i.e. LDCs in red don't necessarily have the highest total rates).
- **Mergers:** Rates for customers in merged LDCs have experienced different levels of change. For merged entities, the largest LDC in 2006 was used. An accompanying map focuses on merged entities.
- **Points in Time:** Current analysis compares 2016 and 2006 only. Rates could have had an uneven trajectory, especially considering regulatory decisions such as time limited charges/rebates with temporary impacts.



3c. OPG – Operational Efficiencies

- Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh).

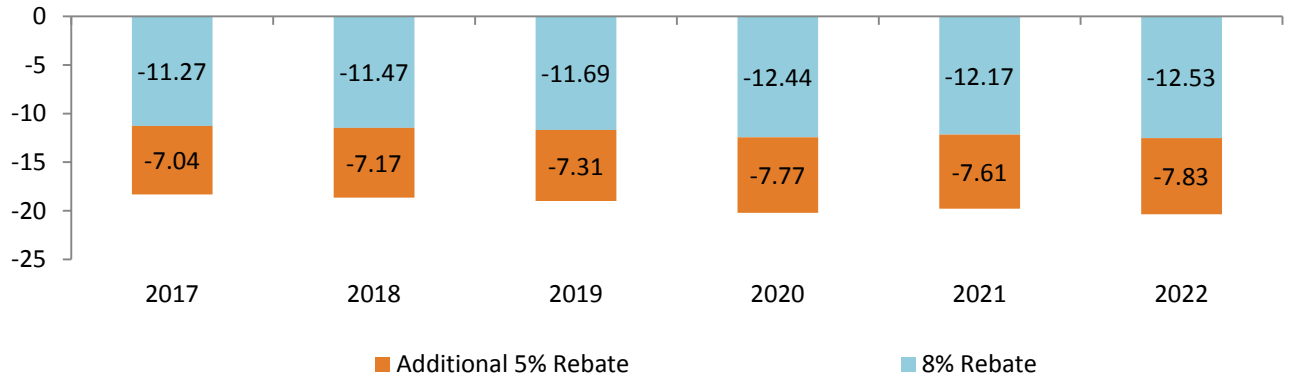
Considerations

- OPG recently submitted its 2017-19 business plan to the Province for concurrence. That plan includes the following:
  - Enterprise total generating cost increasing from $48/MWh in 2016 to an average of $55/MWh over the plan period.
  - An average residential monthly bill increases of $1.05/month annually from 2017-2021.
- Much of this increase is due to the Darlington refurbishment project, which increases costs and reduces OPG's generation over the planning period.
- OPG has also shared its stretch targets for total cost of generation, which average $52/MWh over the 2017-19 plan, a ~$3/MWh reduction (5-6%) relative to its $55/MWh business plan targets.
- The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This is a public document that OEB would likely review and incorporate as part of OPG's current rate application.
- Consistent with regulations under the *Ontario Energy Board Act*, OPG is seeking smoothed rates for nuclear as part of its 2017-2021 rate application.
  - As a result, the benefit to ratepayers of reducing generation costs is uncertain.
  - Given that the application extends beyond the business plan period, and to ensure OPG does not delay costs beyond the planning horizon, the Province may want to provide additional direction for out year expenditures.
- If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.
  - The total cost of $3/MWh based on OPG's forecast production of 74 TWh/yr is about $240 million per year.
- The Province could work with OPG to craft language in the concurrence letter in order to avoid setting unintended precedents for future rate application processes.

4. Enhanced Tax-Base RPP Rebate (5%)

- Enhancing the rebate by a further 5% on the amount before tax provides an average savings of about $7 each month or $84 annually for a typical residential electricity consumer.
- As of January 1, 2017, electricity consumers eligible for the Regulated Price Plan (RPP) receive an 8% rebate equivalent to the provincial portion of HST on their pre-tax bill.
- The eligibility criteria for the 8% rebate is as follows:
  - Consumers with a demand of 50 kW or less;
  - Consumers with a demand of 250,000 kWh/year or less;
  - Farms;
  - Multi-unit residential buildings and other facilities used as residential rental units;
  - Dwellings;
  - Condominiums; and
  - Co-operatives with housing units.

Benefit for a Typical Residential RPP Consumer
in $/750-kWh month



4. Enhanced Tax-Base RPP Rebate (5%) (cont'd)

Considerations

- Amendments would be required related to the *Ontario Rebate for Electricity Consumers Act, 2016.*
- The Act authorizes the making of regulations to reimburse electricity vendors for amounts credited to consumers' accounts under the Act. The Act authorizes the making of other regulations to put in place mechanisms needed to implement the financial assistance.
- The rebate could be made retroactive to January 1, 2017. Similar to the current 8% rebate, electricity consumers would receive a retroactive payment once the local distributor begins issuing the rebates if the distributor needs more time to adjust its billing systems.

Fiscal Cost of an Enhanced Rebate
in $millions

Cost ($M)	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Cost of 8% rebate	271	1,119	1,086	1,171	1,159	1,208
Cost of 13% rebate	440	1,818	1,764	1,903	1,884	1,963
Cost of incremental 5% rebate	169	699	679	732	724	755

Appendix

Existing Rate Mitigation Programs – Overview

- There are a number of existing programs funded by electricity ratepayers that help mitigate electricity bills for some customers, each of which has a unique policy rationale.

- Programs such as the as the Rural or Remote Rate Protection (RRRP) program are targeted at all customers who face the highest delivery costs in the province, while others such as the Ontario Electricity Support Program (OESP), are income tested and targeted at the most vulnerable energy consumers.
  - These program are not mutually exclusive and a customer could receive both the RRRP and the OESP.
  - There are other programs that are still under development such as options for a First Nations Rate currently being developed by the OEB as per the request of the Minister of Energy. These options are ailed to alleviate high delivery costs for on-reserve indigenous consumers.

- There are opportunities to enhance each of these programs. However, if enhancements are funded through the electricity rate-base, while they would lower costs for eligible consumers, they would raise costs for all other ratepayers.

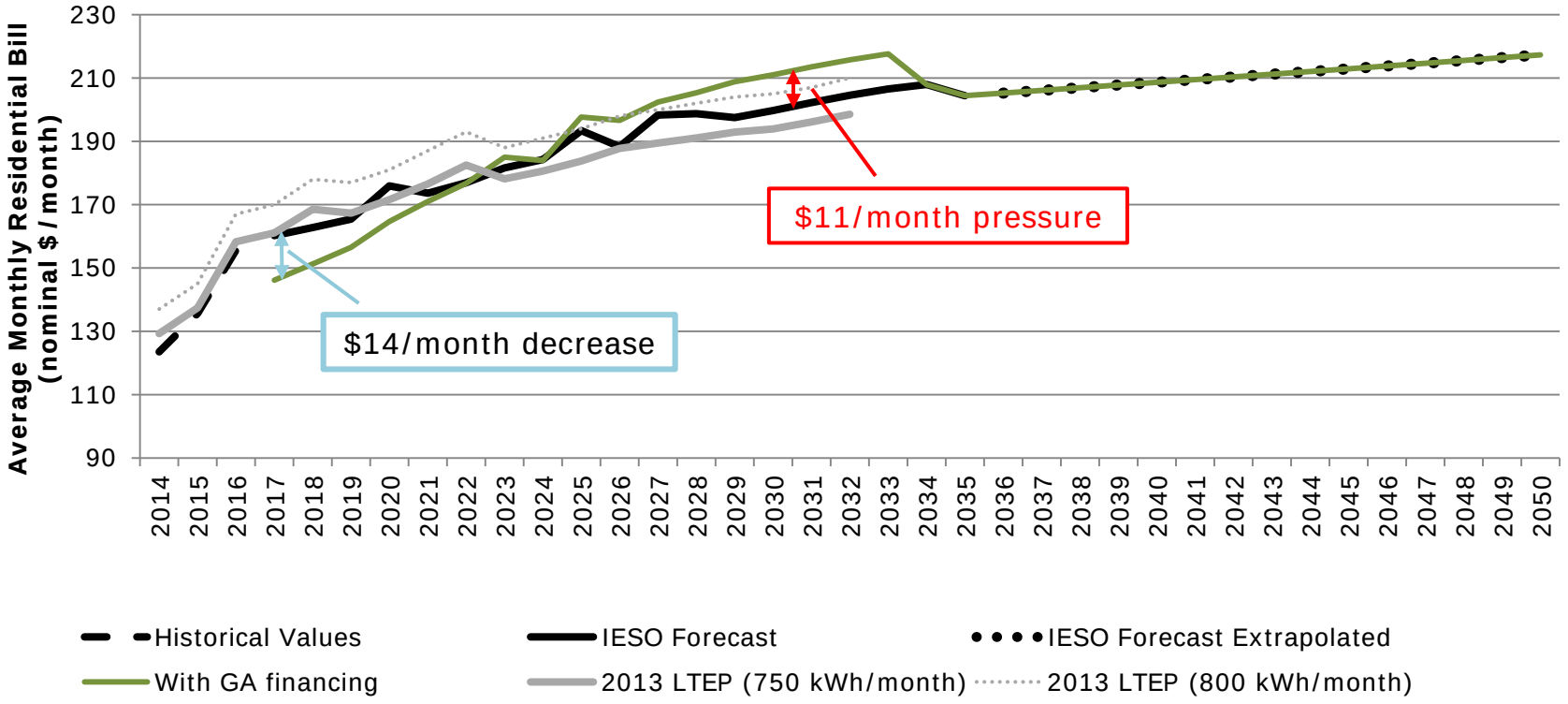
- Given that these programs focus on promoting equity between different area of the province (RRRP) or on social equity (OESP), they could be funded by the tax-base rather than the rate-base. This would allow their goals to be achieved and enhanced without increasing electricity rates. The following slides explore options to enhance each program using the tax-base.

Global Adjustment (GA) Financing

- The global adjustment (GA) is comprised of costs for regulated and contracted generation, as well as conservation.
- Some contracted generation assets are expected to have a useful life that extends beyond the term of their current financial contracts (typically 20-years).
- Similarly, conservation costs are recovered through the GA on an annual basis while conservation initiatives provide benefits to the electricity system over the course of many years.
- Since the GA only includes costs related to the contractual life of these assets, there may be an opportunity to recognize the longer-term benefit of these assets to the electricity system and “bring forward” that benefit for ratepayers today, while deferring some of the current costs.
- An indicative GA financing proposal is presented that lowers ratepayers costs over the short term by borrowing money but increases costs over the long term when GA costs are forecast to be lower.
- **Note:** Not all generating assets will continue operations at the end of their contract term. Regulatory constraints (i.e., nuclear licences) or low demand conditions (i.e., as experienced with current expiring NUGs) would mean that some generators will shutdown at the expiry of their contract. Future ratepayers would be paying for these assets that are no longer producing power.

Low / GA Financing – Impact on Residential Electricity Bills

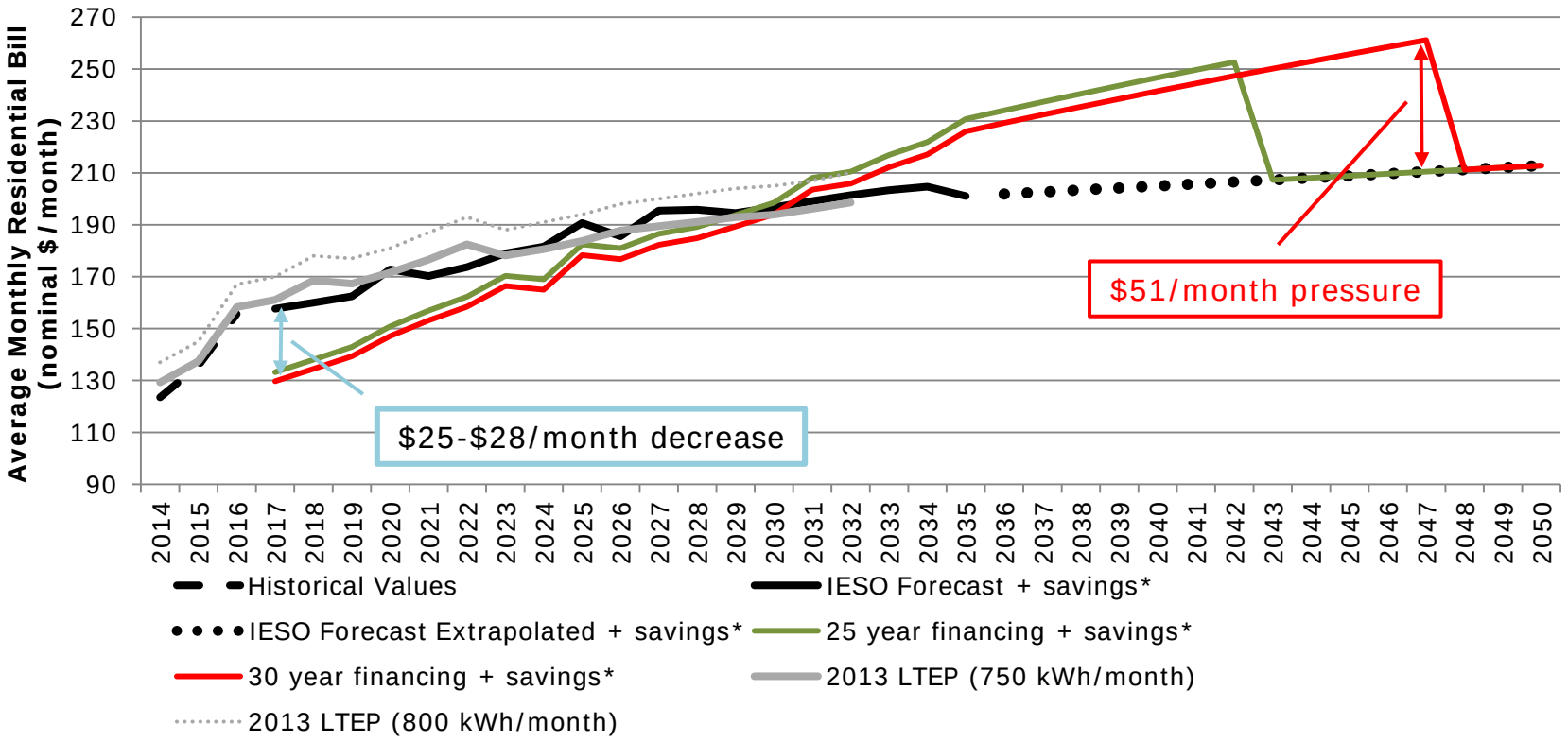
- In this option, the starting GA payment from all ratepayers in 2017 is lowered by $2.5 billion and increases at 2% each year – up to a cap of no more than $2 billion more than the true cost of GA in any year – until the borrowed money is paid back in 2032.



- By **borrowing up to $9.3 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $14/month** at the cost of **increased future electricity bills over 10 years of up to $11/month** above the true cost of electricity production.

High / GA Financing – Impact on Residential Electricity Bills

- In this option, the starting GA payment from all ratepayers in 2017 is lowered by $4.4 and $5 billion and increases at 2% each year until the borrowed money is paid back over a 25 and 30 year financing period respectively.

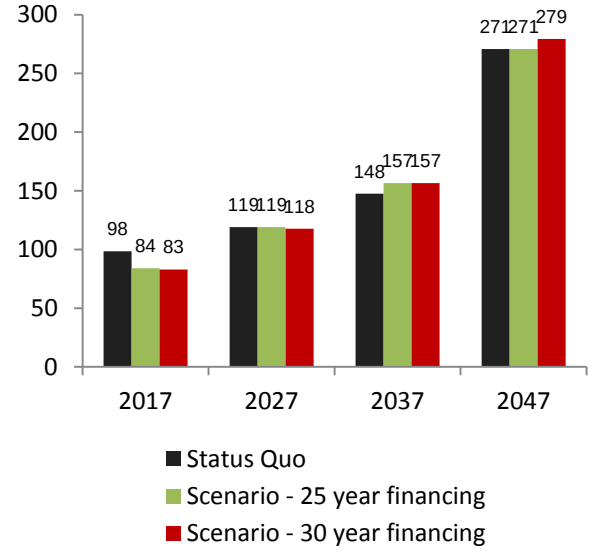


- By **borrowing up to $65 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $25-$28/month** at the cost of **increased future electricity bills over 12-17 years of up to $46-$51/month** above the true cost of electricity production.

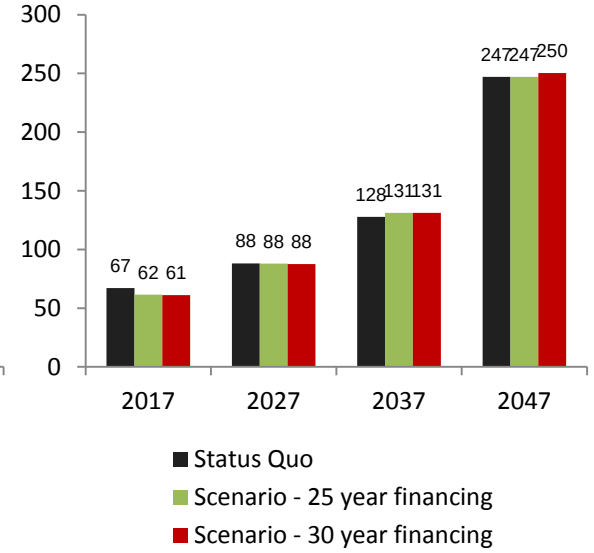
GA Financing – Illustrative Impact for Large Industrial Electricity Consumers

- Below graphs illustrate the estimated impact under the moderate GA financing scenario for an average Class A electricity consumer, a consumer that pays low GA (i.e., pulp and paper) and high GA (i.e., refining and chemical manufacturing).

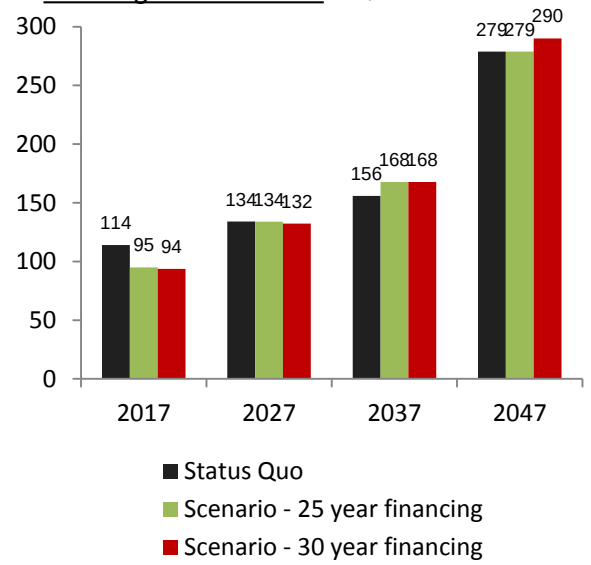
Estimated All-In Electricity Price
for Average Class A in $/MWh



Estimated All-In Electricity Price
for Pulp & Paper in $/MWh

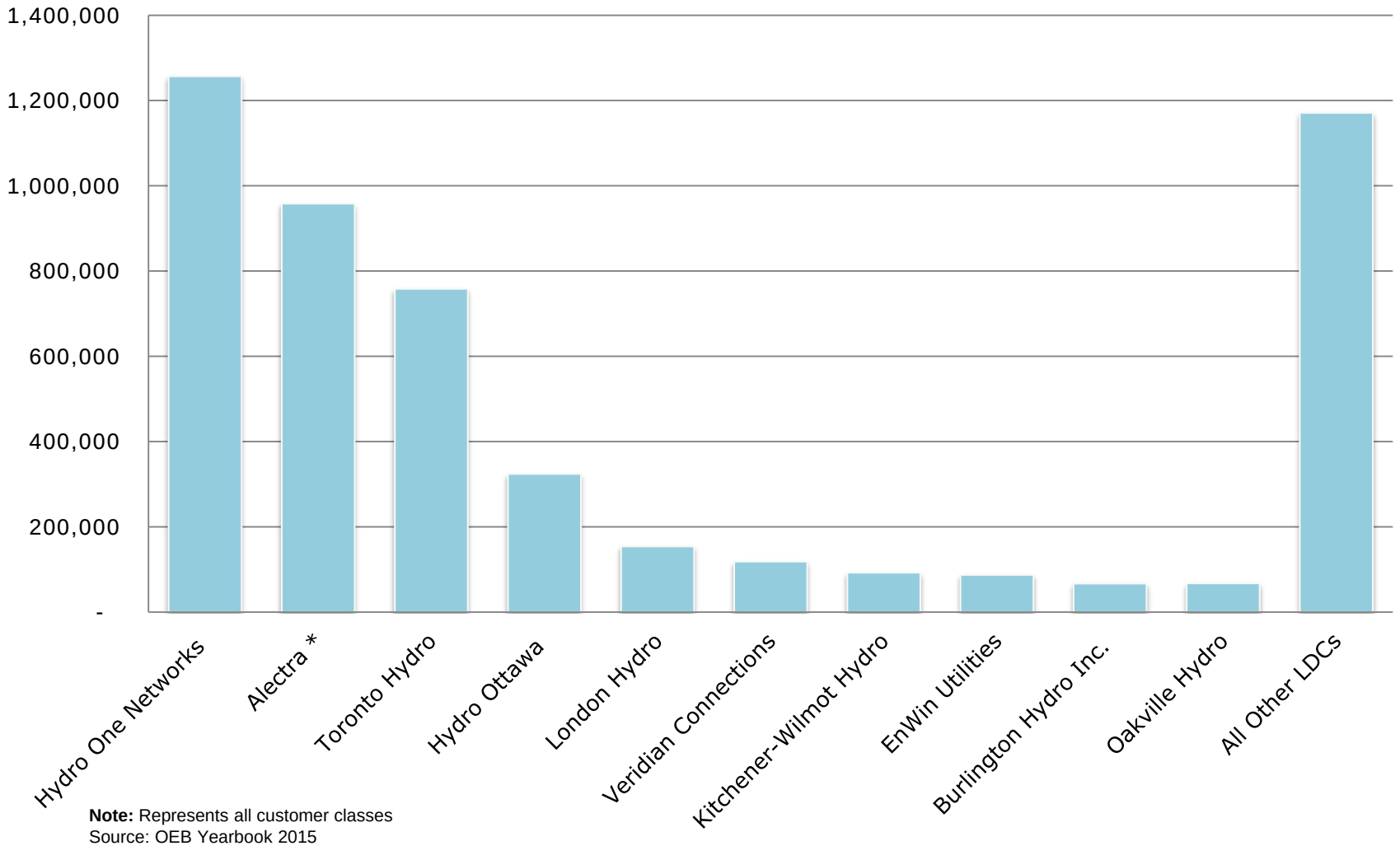


Estimated All-In Electricity Price
for Refining & Chemicals in $/MWh



Note: Assumes that demand by industrial sector continues at average 2011-2015 levels.

Largest LDCs by Customer Base



Note: Represents all customer classes
Source: OEB Yearbook 2015
*Recently approved merger of Powerstream, Enersource, Horizon, and Hydro One Brampton

Extend Length of Existing Wind / Solar Contracts

- Wind and solar developments are typically contracted through standard offer procurements on 20 year fixed terms at fixed pricing.
- Many of these projects have already reached commercial operation.
- The province could explore options for IESO to negotiate extensions to existing renewable energy contracts, for example, by 10 years, in return for the contract holders agreeing to a lower price in the near term.

Considerations

- Projects in commercial operation offer potential for near-term rate reduction whereas projects that have yet to reach commercial operation provide potential to mitigate future rate increases only.
- The attractiveness of this option to contract holders would vary from project to project and would depend on project economics.
- Revised pricing would be subject to negotiation, and associated ratepayer savings would be difficult to forecast accurately.
- The duration of contract renegotiation is difficult to forecast and may not be achievable in the near term.
  - Proponents may have to renegotiate their project financing arrangements, ensure project investors are satisfied with any changes in ROI, and extend land leases.
- Project host communities and Indigenous communities whose traditional territory the projects are sited in may not be interested in these projects extending their operational period; discussions/consultation may be required in advance of this potential option moving forward.

Extend Length of Existing Wind / Solar Contracts (cont'd)

Considerations (cont'd)

- Should Ontario be successful in negotiating lower prices in the near term, it should be noted that contract holders will be in a strong bargaining position (given their existing fixed-priced contracts), and will likely extract additional value from the negotiations.

- The Province is not a party to the contracts and has never been involved in the negotiation of the contracts themselves. IESO would be required to renegotiate the contracts, which would likely involve a direction or directive to IESO.

- Further analysis is required as to how ENERGY could express its policy intent to have IESO renegotiate the contracts for a reduced rate at a longer term, however it is unlikely that IESO could guarantee the outcome.

- Further analysis is also required to ascertain whether there is scope within the existing contracts for IESO to renegotiate their terms in this manner.

- Extending contract terms may require investments in component replacement and additional operation and maintenance costs that developers would seek to recover under any renegotiated contract.

- Extending contract terms would reduce planned flexibility and increase the risk of overpayment as this existing capacity would now be contracted into the 2040s and not the 2030s.

Extend Length of Existing Wind / Solar Contracts (cont'd)

Considerations (cont'd)

- Ontario has over 4,500 MW of wind in commercial operation, with the vast majority being large scale (>500kW) developments.
  - This includes over 2,700 MW of large FIT 1 and GEIA wind projects representing 47 contracts (average size ~58 MW) and over 1,000 MW of solar projects representing 103 contracts.
- Below are two potential approaches to reducing ratepayer costs in the near term by extending contract terms at reduced prices. An illustrative example of a typical large wind project is used.
- **Example:** 100 MW FIT 1 wind project achieving Commercial Operation in 2014 (i.e., 17 years remaining on initial 20 year contract), assuming a 10 year contract extension negotiated at the LRP I low weighted average wind price of $64.5/MWh
  - (17 years @ $135/MWh + 10 years @ $64.5/MWh)
- **Potential Approach 1:** Provide a single new contract price that is the average of the lower extension price and the FIT contract price over the new contract term. The new price would be lower over a longer term.
  - **Illustrative Example:** New contract for 27 years at $129/MWh.
  - New contract price set to allow 10% rate of return over 27 year contract per FIT pricing approach.

100 MW Wind Project	Status Quo	27 Year Contract (remaining term extended for 10 additional years)
Contract Cost (NPV 2017)	$550 Million	$582 Million
Average Monthly Ratepayer Impact Over First 5 Years	$0.03 savings	
Average Monthly Ratepayer Impact Over Remaining 22 Years	$0.02 increase	
Average Monthly Ratepayer Impact Over Entire 27 Year Contract	$0.01 increase	

Extend Length of Existing Wind / Solar Contracts (cont'd)

Considerations (cont'd)

- **Potential Approach 2:** Offer facilities a revised contract that extends terms and is structured to offer lower pricing in the initial contract years and higher pricing in the later years of the contract.
  - **Illustrative Example:** New contract for 27 years at $85.9/MWh over the first 5 years and $169/MWh over the remaining 22 years.
    - Price over first 5 years is LRP I weighted average wind price.
    - Price over remaining 22 years is set to allow 10% rate of return over entire 27 year contract per FIT pricing approach.

100 MW Wind Project	Status Quo	27 Year Contract	
		Initial 5 Years	Last 22 Years
Contract Cost (NPV 2017)	$550 Million	$632 Million	
Monthly Average Ratepayer Impact Over First 5 Years	$0.09 savings		
Monthly Average Ratepayer Impact Over Remaining 22 Years	$0.07 increase		
Monthly Average Ratepayer Impact Over Entire 27 Year Contract	$0.04 increase		

Extend Length of Existing Wind / Solar Contracts (cont'd)

- Below are illustrative estimates of potential GA savings if all contracts for large FIT and GEIA wind and solar projects in commercial operation are renegotiated according to the approaches illustrated above.
- Estimates are for large (10 MW or greater) FIT 1 and GEIA wind and solar projects in commercial operation, totalling about 2,700 MW of wind and about 900 MW of solar capacity. A 10 year contract extension is assumed at a price of:
  - **For Wind:** LRP I low weighted wind price of $64.5/MWh
  - **For Solar:** LRP I low weighted solar price of $141.5/MWh

Potential Approach 1:

	Current Contracts*	**New Extended Contracts**
Total Value (NPV 2017)	$22.9 Billion	$22.8 Billion
Average Annual Contract Value (First 5 Years)	$1.5 Billion	$1.3 Billion
*Figures assume projects remain operational after contract expiry at the LRP I low weighted price inflated to the year of contract expiry, as per OPO assumptions .		

Potential Approach 2"

	Current Contracts	**New Extended Contracts**
Total Value (NPV 2017)	$ 22.9 Billion	$ 25.3 Billion
Average Annual Contract Value (First 5 Years)	1.5 Billion	$1.0 Billion

Extend Length of Existing Wind / Solar Contracts (cont'd)

- Contract re-negotiations could be piloted with large wind and solar contract holders.
- For example, the top 5 contract holders by portfolio value (online projects 10 MW and larger) include:

Contract Holder	Technology	# of Contracts	Capacity (MW)	Estimated Value (NPV 2017)
Samsung	Wind & Solar	5	799	$4.6 Billion
NextERA	Wind	6	534	$2.7 Billion
Pattern / Capital Power	Wind	1	270	$1.5 Billion
ENGIE	Wind	4	265	$1.2 Billion
Northland Power	Wind & Solar	15	290	$1.2 Billion

Other Options Considered – Typical Residential Electricity Consumer

$/750kWh	2017	2018	2019	2020	2021	2022	Timing of Benefit
Conservation Funding Options							
a. Amortize Conservation Program Costs (15-Year Amortization)	1.62	1.88	1.16	1.20	0.82	0.69	Immediate
b. Fund Conservation Programs Through The Tax-Base	3.47	3.83	3.17	3.35	2.84	2.90	Immediate
Eliminate the Industrial Conservation Initiative (ICI)	4.40	4.24	4.10	4.24	3.73	3.58	Immediate
Cancel LRP I	-	-	TBD	TBD	TBD	TBD	Medium-Term
Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc.)	-	-	-	2.16	2.16	2.17	Medium to Long-Term
Dedicate Departure Tax	1.39	1.39	1.39	1.39	1.39	1.39	Immediate
Give Residential Consumers More Rate Choices	-	-	-	-	-	-	n/a
Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)**	-	-	-	-	-	-	n/a

Note: The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

Options Considered – Average Industrial Electricity Consumers

$/MWh	2017	2018	2019	2020	2021	2022	Timing of Benefit
Conservation Funding Options							
a. Amortize Conservation Program Costs (15-Year Amortization)	1.12	1.30	0.80	0.83	0.57	0.47	Immediate
b. Fund Conservation Programs Through The Tax-Base	2.88	3.17	2.66	2.77	2.36	2.41	Immediate
Eliminate the Industrial Conservation Initiative (ICI)	(24.12)	(23.21)	(22.45)	(23.23)	(20.42)	(19.61)	Immediate
Cancel LRP I	-	-	TBD	TBD	TBD	TBD	Medium-Term
Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc.)	-	-	-	1.79	1.79	1.79	Medium to Long-Term
Dedicate Departure Tax	1.86	1.86	1.86	1.86	1.86	1.86	Immediate
Give Residential Consumers More Rate Choices	-	-	-	-	-	-	n/a
Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)**	-	-	-	-	-	-	n/a

Note: The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

Press Releases

Insight beyond the rating.

Date of Release: April 6, 2017

DBRS Confirms Ontario Power Generation Inc. at A (low)/R-1 (low), Stable Trends

DBRS Limited (DBRS) has today confirmed the Issuer Rating and the Unsecured Debt rating of Ontario Power Generation Inc. (OPG or the Company) at A (low) as well as its Commercial Paper rating at R-1 (low). All trends are Stable. OPG's ratings continue to be supported by (1) the reasonable regulatory regime in place for the Company's generation facilities, (2) continuing financial support from its shareholder, the Province of Ontario (rated AA (low), Stable, by DBRS) and (3) strong cash flow-to-debt and debt-to-capital ratios.

In May 2016, OPG filed its application with the Ontario Energy Board (OEB) for rates effective January 1, 2017. As the OEB had indicated, the Company applied to transition to five-year incentive rate-setting (IR) regimes, proposing Price Cap IR for its hydroelectric facilities and Custom IR for its nuclear facilities. Under Price Cap IR, payment amounts will increase annually under a formula based on inflation less productivity and a utility-specific stretch factor. Under Custom IR, payment amounts will be determined by a five-year forecast cost-of-service approach, but with IR features. As noted, DBRS believes that, following the transition to IR frameworks, the Company's profitability may continue to be challenged as the introduction of productivity and efficiency targets could further depress earnings. This is partly mitigated by OPG having demonstrated its ability to contain costs through its cost-reduction and efficiency improvement initiative ($1.0 billion in cumulative cost savings since 2011). Additionally, under both Price Cap IR and Custom IR, the Company could initiate a regulatory review of its application if actual return on equity (ROE) falls 300 basis points below the approved ROE, providing some downside protection. OPG has also requested a mid-term review of its nuclear production forecast which, if approved, could reduce some of the forecasting risk associated with the longer IR term.

Profitability for OPG remained challenged in 2016 as the Company earned a corporate ROE of 4.2%, significantly below the allowed regulatory ROE of 9.19%. DBRS notes that this can be partly attributed to OPG's capitalization at around 35% debt versus the regulatory capital structure of 55% debt. While earnings increased in 2016, net income before non-recurring items remained negative, resulting in a negative EBIT-interest coverage ratio of -0.17 times for the year. While the Company's financial risk profile remains supported by its strong cash flow-to-debt and debt-to-capital ratios (36.4% and 34.4%, respectively, for 2016), OPG will continue to experience higher-than-normal capital expenditures (capex;

$1.7 billion in 2016 and $1.8 billion planned for 2017) as it executes on the Darlington Refurbishment project (final budget of $12.8 billion). DBRS expects the Company's debt ratios to weaken during this period of high capex with leverage increasing to approximately 40%. This is partly mitigated by the continued financial support provided by the Province through its agent, the Ontario Electricity Financial Corporation (OEFC; rated AA (low), Stable, by DBRS), which provides most of OPG's financing (approximately 60% of total debt). The Company's remaining debt is in the form of non-recourse project finance debt. Additionally, DBRS notes that under the Province's Fair Hydro Plan, OPG will be working with the IESO to manage the financing for the Global Adjustment costs to be deferred. DBRS will continue to monitor as more information becomes available.

Notes:
All figures are in Canadian dollars unless otherwise noted.

The related regulatory disclosures pursuant to the National Instrument 25-101 Designated Rating Organizations are hereby incorporated by reference and can be found by clicking on the link to the right under Related Research or by contacting us at info@dbrs.com.

The principal methodologies are Rating Companies in the Regulated Electric, Natural Gas and Water Utilities Industry (October 2016), DBRS Criteria: Guarantees and Other Forms of Support (February 2017) and DBRS Criteria: Commercial Paper Liquidity Support for Non-Bank Issuers (March 2017), which can be found on dbrs.com under Methodologies.

For more information on this credit or on this industry, visit www.dbrs.com or contact us at info@dbrs.com.

DBRS will publish a full report shortly that will provide additional analytical detail on this rating action. If you are interested in receiving this report, contact us at info@dbrs.com.

Ratings

Issuer	Debt Rated	Rating Action	Rating	Trend	Notes	Published	Issued
Ontario Power Generation Inc.	Commercial Paper	Confirmed	R-1 (low)	Stb		Apr 6, 2017	CA
Ontario Power Generation Inc.	Issuer Rating	Confirmed	A (low)	Stb		Apr 6, 2017	CA
Ontario Power Generation Inc.	Unsecured Debt	Confirmed	A (low)	Stb		Apr 6, 2017	CA

US = USA Issued, NRSRO
CA = Canada Issued, NRSRO
EU = EU Issued
E = EU Endorsed
Unsolicited Participating With Access

Unsolicited Participating Without Access
Unsolicited Non-participating

ALL DBRS RATINGS ARE SUBJECT TO DISCLAIMERS AND CERTAIN LIMITATIONS. PLEASE READ THESE DISCLAIMERS AND LIMITATIONS AND ADDITIONAL INFORMATION REGARDING DBRS RATINGS, INCLUDING DEFINITIONS, POLICIES, RATING SCALES AND METHODOLOGIES.

Contacts

Tom Li
Senior Financial Analyst - Corporate Research & Analysis
+1 416 597 7378
tli@dbrs.com

Ravikanth Rai
Assistant Vice President, Energy - Global Corporates
+1 416 597 7388
rrai@dbrs.com

Andrew Lin
Managing Director, Energy and Project Finance - Global Corporates
+1 416 597 7453
andrew.lin@dbrs.com

Copyright © 2017, DBRS Limited, DBRS, Inc. and DBRS Ratings Limited (collectively, DBRS). All rights reserved. The information upon which DBRS ratings and reports are based is obtained by DBRS from sources DBRS believes to be reliable. DBRS does not audit the information it receives in connection with the rating process, and it does not and cannot independently verify that information in every instance. The extent of any factual investigation or independent verification depends on facts and circumstances. DBRS ratings, reports and any other information provided by DBRS are provided "as is" and without representation or warranty of any kind. DBRS hereby disclaims any representation or warranty, express or implied, as to the accuracy, timeliness, completeness, merchantability, fitness for any particular purpose or non-infringement of any of such information. In no event shall DBRS or its directors, officers, employees, independent contractors, agents and representatives (collectively, DBRS Representatives) be liable (1) for any inaccuracy, delay, loss of data, interruption in service, error or omission or for any damages resulting therefrom, or (2) for any direct, indirect, incidental, special, compensatory or consequential damages arising from any use of ratings and rating reports or arising from any error (negligent or otherwise) or other circumstance or contingency within or outside the control of DBRS or any DBRS Representative, in connection with or related to obtaining, collecting, compiling, analyzing, interpreting, communicating, publishing or delivering any such information. Ratings and other opinions issued by DBRS are, and must be construed solely as, statements of opinion and not statements of fact as to credit worthiness or recommendations to purchase, sell or hold any securities. A report providing a DBRS rating is neither a prospectus nor a substitute for the information assembled, verified and presented to investors by the issuer and its agents in connection with the sale of the securities. DBRS receives compensation for its rating activities from issuers, insurers, guarantors and/or underwriters of debt securities for assigning ratings and from subscribers to its website. DBRS is not responsible for the content or operation of third party websites accessed through hypertext or other computer links and DBRS shall have no liability to any person or entity for the use of such third party websites. This publication may not be reproduced, retransmitted or distributed in any form without the prior written consent of DBRS. ALL DBRS RATINGS ARE SUBJECT TO DISCLAIMERS AND CERTAIN LIMITATIONS. PLEASE READ THESE DISCLAIMERS AND LIMITATIONS AT http://www.dbrs.com/about/disclaimer. ADDITIONAL INFORMATION REGARDING DBRS RATINGS, INCLUDING DEFINITIONS, POLICIES, RATING SCALES AND METHODOLOGIES, ARE AVAILABLE ON http://www.dbrs.com.



close Request a DBRS.com Trial Now! or Contact Us to get started.

Rating Report

Ontario Power Generation Inc.

Tom Li
+1 416 597 7378
tli@dbrs.com

James Jung, CFA, FRM, CPA, CMA
+1 416 597 7577
jjung@dbrs.com

DBRS

Insight beyond the rating.

Ratings

Debt	Rating	Rating Action	Trend
Issuer Rating	A (low)	Confirmed	Stable
Unsecured Debt	A (low)	Confirmed	Stable
Commercial Paper	R-1 (low)	Confirmed	Stable

Rating Update

On April 6, 2016, DBRS Limited (DBRS) confirmed the Issuer Rating and Unsecured Debt rating of Ontario Power Generation Inc. (OPG or the Company) at A (low), and the Commercial Paper (CP) rating at R-1 (low), all with Stable trends. The confirmation was largely based on the continuing financial support from the Company's shareholder, the Province of Ontario (the Province; rated AA (low) by DBRS). The Province, through its agent the Ontario Electricity Financial Corporation (OEFC; rated AA (low) by DBRS), provides most of OPG's financing (approximately 63% of total debt). The Company's remaining debt is in the form of non-recourse project finance debt.

The Province announced in January 2016 that OPG will be moving forward with the refurbishment of the Darlington Nuclear Generating Station (the Darlington Refurbishment). The project has a final budget of $12.8 billion, and the refurbishment of the first unit is scheduled to begin in October 2016, with the last unit to be in-service by 2026. DBRS believes that given the complexity and scale of the Darlington Refurbishment, there is significant execution risk as well as the potential for cost overruns. The high capital expenditures (capex) required, albeit spread over a ten-year period, in addition to ongoing maintenance capex (total capex forecast of approximately $2 billion for 2016), are expected to pressure OPG's key credit metrics. Although the Company's cash flow-to-debt and debt-to-capital ratios have remained strong, DBRS expects leverage to increase to approximately 40% during this period of high capex. Additionally, profitability for OPG continues to be challenged as evidenced by the negative EBIT-interest coverage ratio for the year. DBRS notes that while the in-service of the Lower Mattagami River Project (LMRP) and the prescription of 48 previously unregulated hydroelectric facilities to regulated rates in late 2014 have helped improve OPG's EBITDA, the Company's reported corporate return on equity (ROE; 4.1% in 2015) remains far below the approved ROE of 9.3%. This has largely been due to the high cost base of OPG, which has resulted in several disallowances by the Ontario Energy Board (OEB) for the Company to recover forecasted compensation expenses.

OPG plans to submit a five-year application with the OEB later this year for new regulated rates effective 2017. The OEB has expressed that it expects prices for hydroelectric operations to be based on an incentive regulation (IR) ratemaking methodology, and that prices for nuclear operations be based on a multi-year forecast cost-of-service (COS) approach with IR features. DBRS believes that profitability for OPG could continue to be challenged following a switch to an IR framework, as the introduction of productivity and efficiency targets could further depress earnings. However, through its Business Transformation initiative, OPG has demonstrated its ability to improve efficiency by reducing regular headcount from continuing operations by approximately 2,700 personnel since 2011. Furthermore, earnings should also benefit from the growth in the rate base as Darlington Refurbishment pre-requisite projects are completed, and new regulated rates in 2017.

Financial Information

	For the year ended December 31				
(CAD millions)	**2015**	**2014**	**2013**	**2012**	**2011**
Cash flow/Total debt 1	33.2%	27.0%	22.9%	20.8%	28.9%
Total debt in capital structure 1, 2	35.9%	36.9%	38.9%	36.9%	36.8%
EBIT gross interest coverage (times) 3	(0.86)	0.24	(1.12)	0.66	0.02
EBITDA gross interest coverage (times) 3	2.89	2.75	2.21	3.15	2.71
(Cash flow - n.w.f.)/Total debt 4	27.5%	21.3%	16.5%	13.8%	21.1%

1 Including operating leases. 2 Adjusted for Accumulated Other Comprehensive Income. 3 Excluding earnings from nuclear fixed asset removal and nuclear waste management funds. 4 Included nuclear waste funding (n.w.f.) payments as they are not discretionary.

Issuer Description

Ontario Power Generation Inc. is an electricity generating company with a diverse portfolio of over 17,000 megawatts (MW) of in-service generating capacity. The Company is wholly owned by the Province of Ontario.

Rating Considerations

Strengths

1. Support of shareholder (the Province)

The Province indirectly provides OPG with the majority of its long-term funding requirements through the OEFC, a government financing arm for the provincial power companies; however, this debt is not directly guaranteed by the Province. DBRS believes that the Province will continue to support its investment since OPG is a creation of the Province and is integral to fulfilling Ontario's energy needs.

2. Dominant market position in Ontario

OPG's importance in Ontario is demonstrated by the fact that it is the primary electricity generator in the Province, accounting for approximately 51% of electricity produced in Ontario in 2015.

3. Reasonable regulatory framework

The reasonable regulatory framework has allowed the Company to recover prudently incurred costs. However, DBRS notes that the unsuccessful appeal of the OEB's decision to disallow labour compensation costs related to OPG's nuclear operations has increased uncertainty regarding the Company's ability to fully recover its nuclear cost through future regulated prices (refer to the Regulation section for details).

4. Limited nuclear waste management liabilities

As a result of the Ontario Nuclear Funds Agreement (ONFA) with the Province, OPG's exposure relating to nuclear waste management liabilities has been capped at $5.94 billion (in 1999 dollar terms) for the initial 2.23 million used fuel bundles produced. The Company is, however, responsible for the incremental costs related to the management of used fuel bundles in excess of 2.23 million bundles (2.44 million currently). The Province provides a guarantee for any shortfall between the value of the nuclear fund and the Canadian Nuclear Safety Commission consolidated financial guarantee requirement.

Challenges

1. Significant capex program

OPG has a significant capex program underway (approximately $2 billion planned for 2016). The Company also faces significant execution risk associated with the Darlington Refurbishment because of the complexity and scale of the project. It is expected that OPG will not undertake any major capex without having financing and a cost-recovery mechanism in place, thus minimizing the financial risks.

2. Nuclear generation risks

Nuclear generation faces higher operating risks than other types of generation because of its complex technology (approximately 57% of OPG's production in 2015). Financial implications of forced outages, especially with older units (e.g., Pickering Nuclear Generating Station), are greater given the high fixed-cost nature of these plants as well as the fact that lost revenues resulting from outages are not recoverable through rates.

3. High cost base

OPG's high cost base has resulted in several disallowances by the OEB. In its decision on OPG's application for 2014 and 2015 rates, the OEB disallowed recovery of $100 million of compensation costs for each of 2014 and 2015. Additionally, in September 2015, the Supreme Court of Canada upheld the OEB's 2011 decision to disallow $145 million of forecast nuclear compensation costs for 2011 and 2012. DBRS believes that the inability of OPG to fully recover compensation costs in future regulated prices could have a negative impact on earnings and has affected the Company's ability to achieve its approved ROE. DBRS notes that OPG has been combatting this issue through its Business Transformation initiative, which has reduced headcount by over 2,700 since 2011.

4. Political intervention

OPG is subject to political intervention, largely because of changes in government mandates and policies as well as limits that restrict revenues and earnings should the price of electricity rise quickly. DBRS notes that the Province has committed to having OPG run more autonomously; however, the risk of further government intervention still exists.

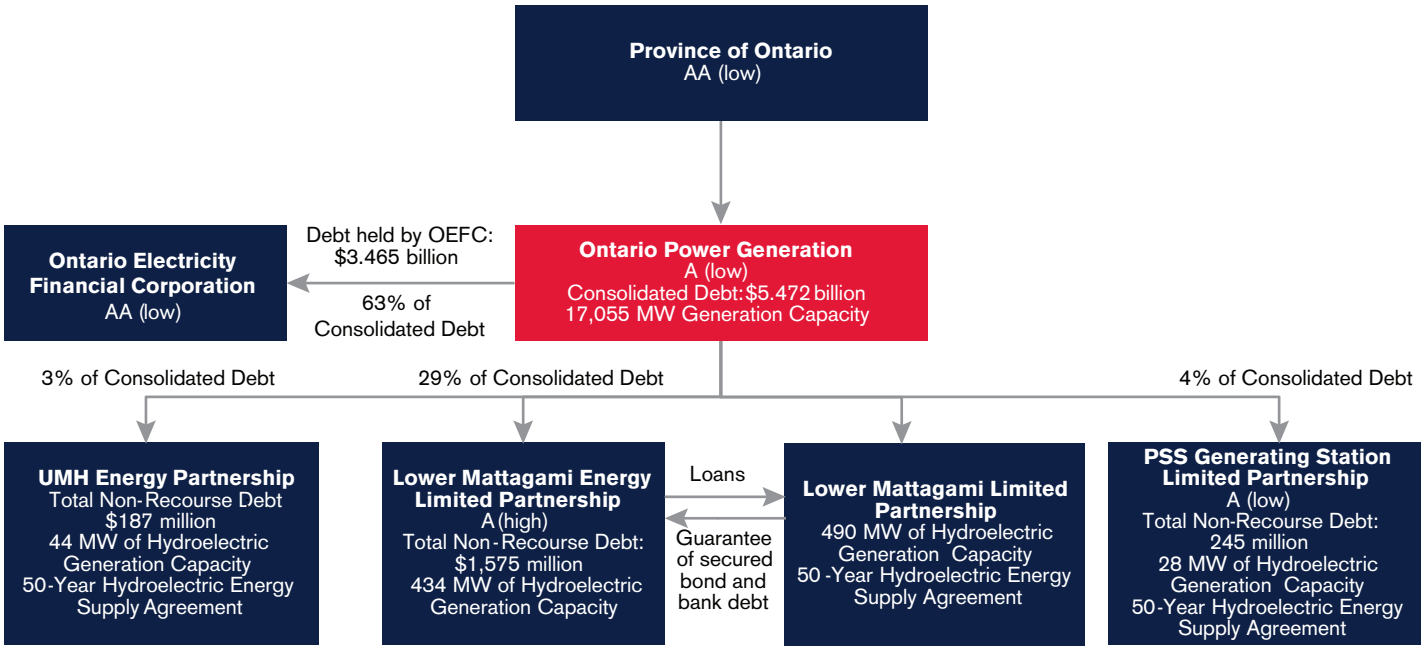
Major Projects

- **Darlington Refurbishment:** The Darlington Refurbishment will extend the operating life of the Darlington Nuclear Generating Station by approximately 30 years. The execution of the refurbishment for the first unit is scheduled to begin in October 2016, with the last unit scheduled to be completed by 2026.
- **Peter Sutherland Sr. Generating Station Project (PSS GS):** The PSS GS is a 28-MW hydroelectric station on the Abitibi River. The project has a 50-year hydro Energy Supply Agreement (ESA) with the Independent Electricity Systems Operator (IESO; rated A (high) by DBRS), which protects it from hydrology and power price risk. Additionally, OPG guarantees PSS GS's debt until the Recourse Release Date (see DBRS's PSS Generating Station LP (New Post Creek) rating report dated October 23, 2015, for more details).
- **Lower Mattagami River Project (LMRP):** All six units of the LMRP were placed in service as of December 31, 2014. This project, which increased the capacity of four generating stations on the Lower Mattagami River by 438 MW, has a 50-year hydroelectric ESA with the IESO, which provides a utility-like COS revenue requirement for energy produced. In addition, OPG guarantees LMRP's debt until the Recourse Release Date (see DBRS's Lower Mattagami Energy Limited Partnership (LMELP) rating report dated June 4, 2015, for more details).
- **Nanticoke Solar Facility:** OPG announced in March 2016 that it has been selected by the IESO to develop a 44-MW solar facility near the Nanticoke Generating Station. Construction will begin once the Company receives the required approvals and contracts.

Project	Estimated Cost ($ millions)	Spent as of Dec. 31, 2015 ($ millions)	In-Service Target Date
Darlington Refurbishment	12,800	2,166	2026*
Peter Sutherland Sr. Generating Station	300	95	H2 2017
Lower Mattagami River Project	2,600	2,484	June 2015**

* Four units with staged in-service. Last unit scheduled to be completed by 2026.
** Entire complex placed in-service by December 2014.

Simplified Organizational Chart

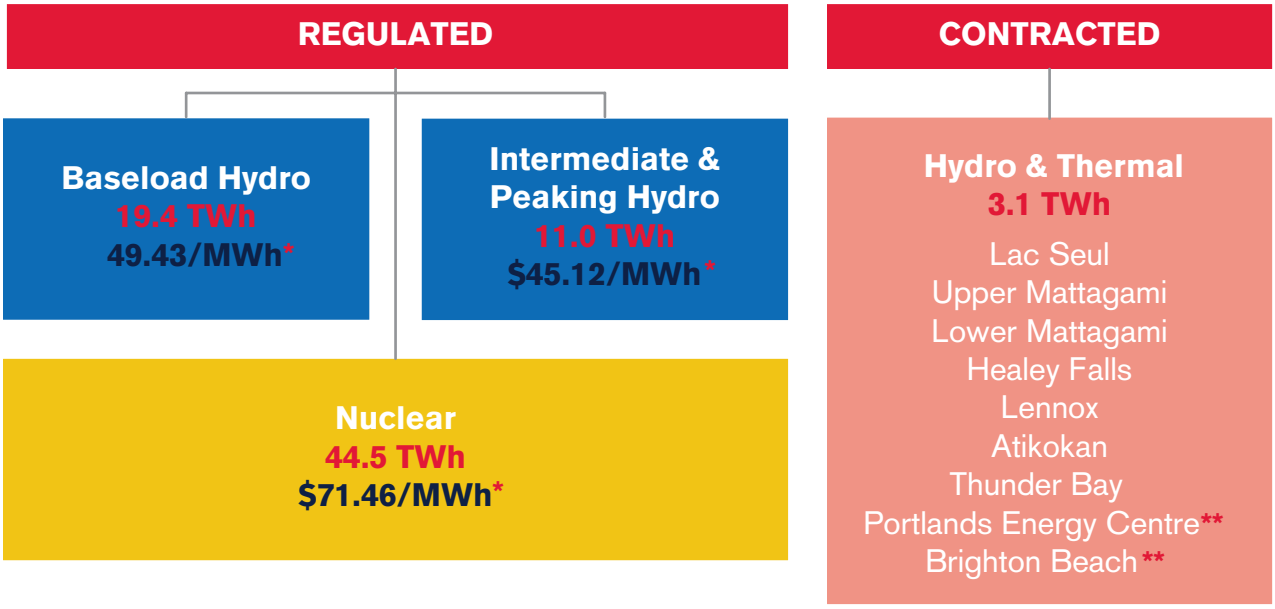


As of December 31, 2015.

Regulation

- OPG benefits from a reasonable regulated environment. As of December 31, 2015, 96% of its installed in-service capacity is regulated.
- OPG, regulated by the OEB under the *Electricity Restructuring Act, 2004 (Ontario)*, is allowed to receive regulated prices for all electricity generated from its nuclear facilities (6,606 MW) as well as most of its hydroelectric power facilities (6,428 MW).
- An amendment to Ontario Regulation 53/05 (O. Reg. 53/05) by the Ministry of Energy brought all of OPG's previously non-regulated hydroelectric facilities not under an ESA with the IESO to be subject to the OEB's regulation effective July 1, 2014. This amendment provided further stability to the Company's credit profile, as a large majority of installed in-service capacity is now regulated.
- In September 2015, the Supreme Court of Canada overturned the Court of Appeal and upheld the OEB's original decision to disallow a portion of the Company's nuclear compensation costs. DBRS believes that the inability of OPG to fully recover its nuclear compensation in future regulated prices could have a negative impact on earnings.
- The OEB issued its decision on OPG's application for Payment Amounts for Prescribed Facilities for 2014 and 2015 in November 2014, approving the following:
  - A 24-month revenue requirement of approximately $8.1 billion for 2014 and 2015, a reduction of $934 million from the requested amount.
  - Payment amounts effective November 1, 2014, of $40.20/megawatt hour (MWh) for previously regulated hydroelectric facilities, $41.93/MWh for newly regulated hydroelectric facilities and $59.29/MWh for regulated nuclear facilities.
  - Payment riders for the recovery of OEB-authorized regulatory variance and deferral accounts of $6.04/MWh for previously regulated hydroelectric facilities and $1.33/MWh for regulated nuclear facilities, effective January 1, 2015.
  - Deemed capital structure of 55% debt, a change from 53%, with an ROE of 9.36% on regulated base rates for 2014.
- The OEB rejected the previous accrual method of accounting for pension and other post-employment benefit (OPEB) costs for 2014 and 2015 rate setting purposes. OPG will instead include pension and OPEB costs on a cash basis with a deferral account set up to account for the difference. This decreased the Company's revenue requirement by approximately $600 million. A final position on the accrual or cash method will be determined based on a generic proceeding on pension and OPEB costs.
- Other significant outcomes from this decision included (1) a reduction of $100 million of compensation costs in each of 2014 and 2015, (2) disallowance of $88 million related to the Niagara Tunnel Project ($77 million write-off for OPG with $1,365 million approved for inclusion into rate base) and (3) a reduction in the revenue requirement of $70 million from a regulatory tax loss in 2013.
  - OPG subsequently filed an application with the OEB to review and vary the decision in regards to the Niagara Tunnel Project disallowance. The OEB issued a decision in January 2016, reducing the disallowance to $66 million.
- In December 2014, the Company filed an application to recover the balance in its deferral and variance accounts as of December 31, 2014. OPG was seeking to recover approximately $1.3 billion through rate riders over the 18-month period from July 2015 to December 2016, and a further $459 million in a future period.
  - The OEB approved a partial settlement in June 2015 for OPG to recover $669 million from October 1, 2015, to December 31, 2016, and a further $816 million in a future period.
  - Subsequently in September 2015, the OEB approved the Company's recovering the remaining applied-for $263 million.
- OPG plans to file a five-year application with the OEB in 2016 for new regulated rates effective 2017. The OEB has expressed that it expects prices for hydroelectric operations to be based on an IR ratemaking methodology, while prices for nuclear operations be based on a multi-year forecast COS approach with IR features.

OPG's Price Structure



* Rates as of January 1, 2016.
** 50% ownership interest.

For the year ended December 31, 2015.

- OPG sells electricity to consumers through the IESO.
- Regulated operating divisions sell at rates set by the OEB, which include rate riders used for the recovery of nuclear deferral and hydroelectric variance account balances.
- The Contracted Generation Portfolio operating division primarily sells electricity at prices set through ESAs or other long-term contracts with the IESO.

Earnings and Outlook

	For the year ended December 31				
(CAD millions)	2015	2014	2013	2012	2011
Revenues	5,476	4,963	4,863	4,732	4,964
EBITDA 1	848	826	638	841	699
EBIT 1	(252)	72	(325)	177	5
Gross interest expense	293	300	289	267	258
Earning before taxes 1	(407)	36	(373)	86	(114)
Net income before non-recurring items 1	(271)	88	(261)	115	48
Reported net income	402	804	135	367	338
Return on equity	-2.8%	1.0%	-3.2%	1.5%	0.6%
Hydroelectric rate base	7,490	7,526	4,829	3,744	3,772
Nuclear rate base	3,659	3,707	3,780	4,133	3,859
Approved regulated ROE	9.30%	9.36%	9.55%	9.55%	9.43%
Achieved regulated ROE	N/A	6.31%	0.46%	4.73%	4.80%

1 Excluding earnings from nuclear fixed asset removal and nuclear waste management funds.

2015 Summary

- EBITDA in 2015 increased largely because of (1) higher rates approved by the OEB for the regulated segments, including for the 48 hydroelectric facilities that began receiving regulated rates as of November 1, 2014, (2) the in-service of all units of the LMRP in December 2014 and (3) the conversion to biomass for the Atikokan and Thunder Bay generating stations.
  - The increase was offset by higher operating expenses and lower nuclear generation as a result of the four-unit Darlington Vacuum Building Outage, which reduced generation by 3.6 TWh.
- EBIT decreased significantly because of a $346 million increase in depreciation and amortization. The increase was because of (1) lower depreciation in 2014 caused by higher amounts deferred for that year, (2) higher amortization of regulatory assets and liabilities as OPG began recovering approximately $1.8 billion in its regulatory variance and deferral accounts and (3) higher depreciation following the in-service of the LMRP and the biomass conversion projects.
- Profitability for OPG remains challenged, as the Company achieved a reported corporate ROE of 4.1% for the year, significantly below the approved ROE of 9.30%. DBRS notes that the lower ROE is partly due to the Company's capitalization at around 35% debt versus the regulatory capital structure of 55% debt.

2016 Outlook

- EBITDA is expected to remain stable in 2016, as the majority of earnings are expected to continue to be from regulated operations.
- While earnings should benefit from higher rate riders in effect for 2016, net income before non-recurring items is expected to remain weak. Additionally, as the Darlington Refurbishment enters the execution stage, earnings will be negatively affected as each generating unit is temporarily removed from service (first unit in October 2016).
- Earnings volatility going forward will come from (1) adjustments to rate base determined by the OEB and (2) macro factors such as weather, unexpected outages and Ontario's economic conditions.

Financial Profile

	For the year ended December 31				
(CAD millions)	2015	2014	2013	2012	2011
Net income before non-recurring items 3	(271)	88	(261)	115	48
Depreciation & amortization	1,100	754	963	664	694
Deferred income taxes and other	1,097	730	616	305	693
Cash flow (bef. working cap. changes)	**1,926**	**1,572**	**1,318**	**1,084**	**1,435**
Nuclear waste funding	(361)	(351)	(383)	(380)	(422)
Dividends paid	0	0	0	0	0
Capital expenditures	(1,376)	(1,545)	(1,568)	(1,427)	(1,145)
Free cash flow (bef. working cap. changes)	**189**	**(324)**	**(633)**	**(723)**	**(132)**
Changes in non-cash working cap. items	(100)	212	239	172	166
Net free cash flow	**89**	**(112)**	**(394)**	**(551)**	**34**
Long-term investments	(180)	0	0	24	0
Proceeds on asset sales	3	0	0	0	7
Net equity change	0	0	0	0	0
Net debt change	(33)	165	543	310	334
Other	(25)	(5)	0	0	(14)
Change in cash	**(146)**	**48**	**149**	**(217)**	**361**
Total debt	5,697	5,730	5,657	5,114	4,804
Cash & equivalents	464	610	562	413	630
Cash flow/Total debt 1	33.2%	27.0%	22.9%	20.8%	28.9%
Total debt in capital structure 1, 2	35.9%	36.9%	38.9%	36.9%	36.8%
EBIT gross interest coverage (times) 1, 3	(0.79)	0.29	(1.05)	0.71	0.12
(Cash flow - n.w.f.)/Total debt 4	27.5%	21.3%	16.5%	13.8%	21.1%
Dividend payout ratio	0.0%	0.0%	0.0%	0.0%	0.0%

1 Including operating leases. 2 Adjusted for Accumulated Other Comprehensive Income. 3 Excluding earnings from nuclear fixed asset removal and nuclear waste management funds. 4 Included nuclear waste funding (n.w.f.) payments as they are not discretionary.

2015 Summary

- OPG's debt-to-capital and cash flow-to-debt ratios were strong for the current rating category; however, the Company's EBIT-interest coverage ratio remained weak.
- Cash flow from operations increased because of higher cash receipts from generation following the prescription of the 48 previously non-regulated hydroelectric facilities for regulated rates, and the in-service of the LMRP and biomass conversion projects.
- Capex of $1.4 billion was lower following the completion of the above-mentioned projects. This was offset by construction starting on the PSS GS and continued work for the Darlington Refurbishment project.
- No dividend payments were made to the Province during this period of high capex requirements.
- OPG generated positive free cash flow in 2016, as cash flow from operations were sufficient to cover all expenditures.
- The Company repaid a $500 million note to the OEFC by using cash on hand. PSS GS issued $245 million of bonds, of which $180 million was invested in a structured deposit note with staggered maturity dates. Debt issued by PSS GS, which is guaranteed by the Company, will become non-recourse to OPG once the project is completed and certain requirements are met.

2016 Outlook

- OPG has planned capex of $2 billion for 2016, including approximately $1 billion for the Darlington Refurbishment project.
- As the Company continues to execute its large capex program, DBRS expects OPG to generate a free cash flow deficit in 2016. This deficit is expected to be financed with debt and cash on hand. As a result, leverage is expected to increase to nearly 40% over the next few years. DBRS expects the Company to maintain its strong debt-to-capital and cash flow-to-debt ratios in order to offset the weaker EBIT-interest coverage ratio.
- DBRS expects the Province to continue to forego dividends during the Company's large capex program.

Long-Term Debt Maturities and Credit Facilities

Long-term Debt

As at December 31, 2015

(CAD millions)	2016	2017	2018	2019	2020	Thereafter	Total
Long-term Debt	273	1,103	398	368	663	2,667	5,472
	5%	20%	7%	7%	12%	49%	100%

Maturity Profile

- The majority of the long-term debt issued at the parent level (approximately $3.465 billion) is held by the OEFC, which is wholly owned by the Ontario government. As a result, DBRS does not expect any material refinancing risk.
- The Company's maturity profile is fairly spread out over the next five years. A modest maturity is expected in 2017 when $900 million of senior notes held by the OEFC come due; however, refinancing risk is expected to be manageable.
- In October 2015, PSS GS issued senior secured bonds totalling $245 million with a maturity date of 2067 and an effective interest rate of 4.90%.

Credit Facilities as at December 31, 2015 (CAD millions)

Bank facilities	Maturity	Amount	Outstanding	Available
Committed credit facility - Tranche 1	20-May-20	500	0	500
Committed credit facility - Tranche 2	20-May-20	500	0	500
Short-term uncommitted credit facilities	Demand	456	384	72
Short-term uncommitted overdraft facilities	Demand	25	0	25
Lower Mattagami River Project - Tranche 1	17-Aug-20	300	225	75
Lower Mattagami River Project - Tranche 2	17-Aug-16	200	0	200
UMH Energy Partnership credit facilities	15-Oct-15	16	14	2
UMH Energy Partnership overdraft facilities	15-Oct-15	8	0	8
Total		**2,005**	**623**	**1,382**

Liquidity

- OPG has a reasonable liquidity profile.
- The Company has a $1 billion CP program backed by two tranches of bank facilities (extended due dates of May 20, 2020). All committed bank facilities were unused as at December 31, 2015.
- As at December 31, 2015, OPG had issued $384 million of letters of credit, of which about $345 million was attributed to its supplementary pension plan.
- The Company has separate credit facilities provided by the OEFC for corporate and project financing, which DBRS views as adequate for working capital purposes.

Company Profile

Generation Portfolio

As at December 31, 2015

		Percent %	Capacity (MW)
Nuclear			
	Darlington	21%	3,512
	Pickering A	6%	1,030
	Pickering B	12%	2,064
		39%	**6,606**
Thermal			
	Atikokan (Biomass)	1%	205
	Thunder Bay (Biomass)	1%	153
	Portlands Energy Centre 1	2%	275
	Brighton Beach 1	2%	280
	Lennox (Dual oil & gas)	12%	2,100
		18%	**3,013**
Hydroelectric			
Contracted 2		6%	1,006
Regulated		38%	6,428
		44%	**7,434**
Other (Wind) 3		0%	2
Total Capacity		**100%**	**17,055**

1 Represents OPG's share of in-service generation. 2 Includes plants under an ESA or a long-term contract with the IESO. 3 One wind-power turbine.

- OPG is the largest generator of electricity in Ontario.
- In 2015, OPG generated 78.0 terawatt hours of electricity with total in-service capacity of 17,055 MW on December 31, 2015.
- OPG partnerships consist of the following:
  - OPG and ATCO Power Canada Ltd. co-own the Brighton Beach Generating Station, a 580-MW natural gas-fired generating station.
  - OPG and TransCanada Energy Ltd. jointly own the Portlands Energy Centre, a 550-MW natural gas-fired generating station.
  - OPG owns the Bruce A and Bruce B nuclear generating stations, which are leased on a long-term basis to Bruce Power Limited Partnership.
  - OPG and the Lac Seul First Nation (LSFN) jointly own the Lac Seul Generating Station, with LSFN owning 25% of the facility.
  - OPG and the Moose Cree First Nation (MCFN), through its wholly owned subsidiary Amisk-oo-Skow Finance Corporation, jointly own the Little Long, Harmon, Kipling and Smoky Falls generating stations, with MCFN owning 25% of the facilities.

Ontario Power Generation Inc.

Balance Sheet

(CAD millions)	Dec. 31 2015	2014	2013
Assets			
Cash & equivalents	464	610	562
Accounts receivable	545	482	402
Inventories	440	428	485
Regulatory assets	628	167	306
Prepaid expenses & other	313	161	224
Total Current Assets	**2,390**	**1,848**	**1,979**
Net fixed assets	20,595	17,593	16,738
Intangibles	98	76	59
Nuclear removal/waste mgmt. funds	15,121	14,354	13,471
Regulatory assets	5,279	7,024	5,094
Investments, materials & other	819	750	750
Total Assets	**44,302**	**41,645**	**38,091**

	Dec. 31 2015	2014	2013
Liabilities & Equity			
S.T. borrowings	225	0	32
Accounts payable	1,228	1,151	1,026
Current portion L.T.D.	273	503	5
Regulatory liabilities	26	5	16
Deferred revenue & other	78	36	26
Total Current Liab.	**1,830**	**1,695**	**1,105**
Long-term debt	5,199	5,227	5,620
Deferred income taxes	890	828	565
Pension & post-retirement benefits	5,682	6,620	5,369
Nuclear removal/waste mgmt. funds	20,169	17,028	16,257
Regulatory liabilities	0	0	0
Payables & other L.T. liab.	487	780	841
Shareholders' equity	10,045	9,467	8,334
Total Liab. & SE	**44,302**	**41,645**	**38,091**

	For the year ended December 31 2015	2014	2013	2012	2011
Balance Sheet & Liquidity & Capital Ratios					
Current ratio	1.31	1.09	1.79	1.91	1.62
Total debt in capital structure	36.2%	37.7%	40.4%	39.3%	38.6%
Total debt in capital structure 1, 2	35.9%	36.9%	38.9%	36.9%	36.8%
Cash flow/Total debt	33.8%	27.4%	23.3%	21.2%	29.9%
Cash flow/Total debt 1	33.2%	27.0%	22.9%	20.8%	28.9%
(Cash flow - dividends)/Capex (times)	1.40	1.02	0.84	0.76	1.25
(Cash flow - n.w.f.)/Total debt 4	27.5%	21.3%	16.5%	13.8%	21.1%
Dividend payout ratio	0.0%	0.0%	0.0%	0.0%	0.0%
Coverage Ratios (times)					
EBIT gross interest coverage 3	(0.86)	0.24	(1.12)	0.66	0.02
EBIT gross interest coverage 1, 3	(0.79)	0.29	(1.05)	0.71	0.12
EBITDA gross interest coverage 3	2.89	2.75	2.21	3.15	2.71
Fixed-charges coverage 3	(0.86)	0.24	(1.12)	0.66	0.02
Profitability Ratios					
EBITDA margin 3	15.5%	16.6%	13.1%	17.8%	14.1%
EBIT margin 3	-4.6%	1.5%	-6.7%	3.7%	0.1%
Profit margin 3	-5.0%	1.8%	-5.4%	2.4%	1.0%
Return on equity 3	-2.8%	1.0%	-3.2%	1.5%	0.6%
Return on capital 1, 2, 3	-0.8%	1.4%	-1.0%	1.6%	1.3%

1 Including operating leases. 2 Adjusted for Accumulated Other Comprehensive Income. 3 Excluding earnings from nuclear fixed asset removal and nuclear waste management funds. 4 Included nuclear waste funding (n.w.f.) payments as they are not discretionary.

Rating History

	Current	2015	2014	2013	2012	2011
Issuer Rating	A (low)	A (low)	A (low)	A (low)	A (low)	NR
Unsecured Debt	A (low)	A (low)	A (low)	A (low)	A (low)	A (low)
Commercial Paper	R-1 (low)	R-1 (low)	R-1 (low)	R-1 (low)	R-1 (low)	R-1 (low)

Previous Action

- Confirmed March 24, 2015.

Commercial Paper Limit

- $1 billion.

Previous Report

- *Ontario Power Generation*, Rating Report, March 24, 2015.

Notes:
All figures are in Canadian dollars unless otherwise noted.

For the definition of Issuer Rating, please refer to Rating Definitions under Rating Policy on **www.dbrs.com**.

Generally, Issuer Ratings apply to all senior unsecured obligations of an applicable issuer, except when an issuer has a significant or unique level of secured debt.

© 2016, DBRS Limited, DBRS, Inc. and DBRS Ratings Limited (collectively, DBRS). All rights reserved. The information upon which DBRS ratings and reports are based is obtained by DBRS from sources DBRS believes to be reliable. DBRS does not audit the information it receives in connection with the rating process, and it does not and cannot independently verify that information in every instance. The extent of any factual investigation or independent verification depends on facts and circumstances. DBRS ratings, reports and any other information provided by DBRS are provided "as is" and without representation or warranty of any kind. DBRS hereby disclaims any representation or warranty, express or implied, as to the accuracy, timeliness, completeness, merchantability, fitness for any particular purpose or non-infringement of any of such information. In no event shall DBRS or its directors, officers, employees, independent contractors, agents and representatives (collectively, DBRS Representatives) be liable (1) for any inaccuracy, delay, loss of data, interruption in service, error or omission or for any damages resulting therefrom, or (2) for any direct, indirect, incidental, special, compensatory or consequential damages arising from any use of ratings and rating reports or arising from any error (negligent or otherwise) or other circumstance or contingency within or outside the control of DBRS or any DBRS Representative, in connection with or related to obtaining, collecting, compiling, analyzing, interpreting, communicating, publishing or delivering any such information. Ratings and other opinions issued by DBRS are, and must be construed solely as, statements of opinion and not statements of fact as to credit worthiness or recommendations to purchase, sell or hold any securities. A report providing a DBRS rating is neither a prospectus nor a substitute for the information assembled, verified and presented to investors by the issuer and its agents in connection with the sale of the securities. DBRS receives compensation for its rating activities from issuers, insurers, guarantors and/or underwriters of debt securities for assigning ratings and from subscribers to its website. DBRS is not responsible for the content or operation of third party websites accessed through hypertext or other computer links and DBRS shall have no liability to any person or entity for the use of such third party websites. This publication may not be reproduced, retransmitted or distributed in any form without the prior written consent of DBRS. ALL DBRS RATINGS ARE SUBJECT TO DISCLAIMERS AND CERTAIN LIMITATIONS. PLEASE READ THESE DISCLAIMERS AND LIMITATIONS AT **http://www.dbrs.com/about/disclaimer**. ADDITIONAL INFORMATION REGARDING DBRS RATINGS, INCLUDING DEFINITIONS, POLICIES AND METHODOLOGIES, ARE AVAILABLE ON **http://www.dbrs.com**.

Debt Financing the Global Adjustment Proposal

ISSUE

To analyze the system cost and ratepayer impact of partially financing the cost of the global adjustment (GA) by incurring debt to defer some of the cost.

CONTENT

The Ministry of Energy (ENERGY) has provided a presentation deck on an indicative GA financing proposal, including a qualitative discussion of the risks associated with the proposal. Four scenarios were presented and discussed as part of the proposal, outlining the amount of debt incurred, impact on total system cost, and impact on residential bills.

CEFD STAFF COMMENTS

Slide 3:

- It would be helpful to understand who would pay for the cost of financing the GA - would it be the ratepayers or taxpayers?
- It would be helpful for the graph to show the financing cost component in the increasing debt or accumulated debt.

Slide 4:

- The risks mentioned are difficult to quantify and entail significant levels of uncertainty. Proposals represent delaying of the GA costs to later years and not necessarily accurate to describe as 'price mitigation'.
- It would be helpful to understand how much certainty there is that the debt could be paid off in the 25 or 30 year scenarios and how the Province would hedge against the various risks? Given the variability and relationship with HOEP, what ability would there be to predict these financing needs for the GA.
- There is significant risk related to the last bullet where with potential future scenario of significant uptake in self-generation, net metering and due to other technological changes, the electricity load drops significantly from the base case scenario. It would then represent a new type of stranded debt scenario.

Slide 5:

- IESO market transactions, including payments to generators above HOEP are not recognized as revenue or expenses in IESO's transactions. Any potential debt-financed payments to IESO would need to consider the revenue recognition limitations of IESO.
- Prior to pursuing the proposal, would also need to consult Constitutional Law Branch on risks related to the GA being charged to those who may not have as direct a link to those who benefited, i.e. the significant time lag between incurring of the costs and recovery of the costs.

Slide 6:

- There should be a High GA/Low HOEP scenario, as this is an identified risk.

Slide 7:

- It would be helpful to understand what is driving the reduced IESO GA Costs up to 2035.

Slide 8:

- It would be helpful to provide more details about the scenario, including how the range of 40-46% would apply throughout the time horizon, interest component related to the accumulated debt, etc. How would the differences be financed (i.e. the funding mechanism or organizations involved)?
- The scenario assumes that a portion of the GA would be financed each year and added to the outstanding debt – does this mean that we would be increasing our debt until 2033 and then start repaying the debt up to 2047?
- The 3% interest cost could be considered already too low in today's rising interest rate expectations, with the 30 year rate already above 3% (about 3.2%).
- The analysis should also factor in the effect of higher debt on the Province's credit rating and the potential impact of the overall debt costs (IOD) for the Province rising as a result of the GA-related debt.

Slide 9:

- The graph shows that we are effectively shifting GA costs from today to future rate payers while incurring financing costs. As mentioned above, it would appear that there would be no savings to the ratepayers, only a shift of cost from today into the future, with the financing cost as an additional component.
- How does the refinanced GA drop 25 and 30 years from now to match IESO's forecast? It would be helpful to understand the assumptions used in making this graph.

Slide 10:

- The scenarios in the slide deck separate the 3% and the 5% examples whereas the more realistic outcome would be to go from the current interest rate of, say 3.2%, to higher rates over time.
- The analysis should also factor in the effect of higher debt on the Province's credit rating and the potential impact of the overall debt costs (IOD) for the Province rising as a result of the GA-related debt.

QUESTIONS

- Do any of the scenarios account for the GA increasing more than the IESO's OPO? What are the chances of that occurring and how would that be mitigated in the long-term?
- Would Energy proposals potentially accept an introduction of a DRC version 2?
- On slide 7, as GA decreases, what is the cause of the increased residential electricity bill?

- How would the regulator or the government manage the long time horizon and the size of the new debt arising in the sector, as well as the mechanism(s) to pay for the debt? Intergenerational aspects to the incurring of the debt and paying down the debt would need to be considered in setting up the structure, as well as the Constitutional Law risk.

Prepared by: **Corporate and Electricity Finance Division**
Date: **January 13th, 2017**

Debt Financing the Global Adjustment Proposal

ISSUE

The Ministry of Energy has provided a presentation on an electricity price mitigation option to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments.

The Ministry of Energy deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation.

CONTENT

The Ministry of Energy (ENERGY) has provided a presentation deck on an indicative GA financing proposal, including a qualitative discussion of the risks associated with the proposal. Four scenarios and sensitivities are presented, e.g., at different degrees of deferred GA amounts to be recovered (capped at $2 billion deferral or not capped) and different assumed financing costs (3% and 5%). Energy's deck shows the cumulative amount of debt incurred, impact on total system cost, and impact on residential bills.

CEFD STAFF COMMENTS

Slide 3:

- It would be helpful for the graph to show the financing cost component in the increasing debt or accumulated debt.

Slide 4:

- It would be helpful to understand how much certainty there is that the debt could be paid off in the 25 or 30 year scenarios and how the Province would hedge against the various risks? Given the variability and relationship with HOEP, what ability would there be to predict these financing needs for the GA.
- There is significant risk related to the last bullet where with potential future scenario of significant uptake in self-generation, net metering and due to other technological changes, the electricity load drops significantly from the base case scenario. It would then represent a new type of stranded debt scenario.

Slide 5:

- IESO market transactions, including payments to generators above HOEP are not reflected as revenue or expenses in IESO's financial statements. IESO receives recovery of the GA amounts in each settlement period. It would be important to consult with OPCD on the accounting treatment if IESO did not recover the full GA costs each settlement period, or over a fiscal year.

- Cash from debt-financing to cover GA payments would not be expected to be recorded as revenue, leaving generation supply costs higher than the amounts recovered from the market plus the global adjustment.
- Prior to pursuing the proposal, would also need to consult Constitutional Law Branch on risks related to the GA being charged to those who may not have as direct a link to those who benefited, i.e. the significant time lag between incurring of the costs and recovery of the costs.

Slide 6:

- Adding a high GA/low HOEP sensitivity would help illustrative the size of the identified risk.

Slide 8:

- It would be helpful to provide more details about the scenario, including how the range of 40-46% would apply throughout the time horizon, interest component related to the accumulated debt, etc. How would the differences be financed (i.e. the funding mechanism or organizations involved)?
- The assumed 3% interest cost could be considered already too low in today's rising interest rate expectations, with the 30 year rate already above 3% (about 3.2%).
- The analysis should also factor in the effect of higher debt on the Province's credit rating and the potential impact of the overall debt costs (IOD) for the Province rising as a result of the GA-related debt.

Slide 9:

- The graph shows that we are effectively shifting GA costs from today to future rate payers while incurring financing costs. As mentioned above, it would appear that there would be no savings to the ratepayers, only a shift of cost from today into the future, with the financing cost as an additional component.
- How does the refinanced GA drop 25 and 30 years from now to match IESO's forecast? It would be helpful to understand the assumptions used in making this graph.

Slide 10:

- The scenarios in the slide deck separate the 3% and the 5% examples whereas the more realistic outcome would be to go from the current interest rate of, say 3.2%, to higher rates over time.
- The analysis should also factor in the effect of higher debt on the Province's credit rating and the potential impact of the overall debt costs (IOD) for the Province rising as a result of the GA-related debt.

QUESTIONS

- Do any of the scenarios account for the GA increasing more than the IESO's OPO? What are the chances of that occurring and how would that be mitigated in the long-term?
- Would Energy proposals potentially accept an introduction of a DRC version 2?
- On slide 7, as GA decreases, what is the cause of the increased residential electricity bill?

- How would the regulator or the government manage the long time horizon and the size of the new debt arising in the sector, as well as the mechanism(s) to pay for the debt? Intergenerational aspects to the incurring of the debt and paying down the debt would need to be considered in setting up the structure, as well as the Constitutional Law risk.

Prepared by: **Corporate and Electricity Finance Division**
Date: **January 13th, 2017**

Debt Financing the Global Adjustment Proposal

ISSUE

The Ministry of Energy (ENERGY) has provided a presentation on an electricity price mitigation option to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments.

The Ministry of Energy deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation.

CONTENT

- As discussed in ENERGY's proposal deck, some contracted generation and conservation initiatives provide benefits in longer term, so there might be an opportunity to recognize these longer-term benefits by deferring some of the current costs in GA.

- ENERGY has provided a presentation deck on an indicative GA financing proposal, including a qualitative discussion of the risks associated with the proposal. Four scenarios and sensitivities are presented, e.g., capped at different degrees of deferred GA amounts to be recovered. Energy's deck assumes 5% borrowing interest and the GA amount increases at 2% per year. The deck shows the cumulative amount of debt incurred, impact on total system cost, and impact on residential bills.

CEFD STAFF COMMENTS

- ENERGY's proposals generally involve reducing current costs and deferring part of the costs into long-term. While the proposals may have a fairly significant residential rate payer savings in short-term, e.g., $14 - $28/month decrease, but might have significant impact on rate payers in the long-term, up to $30/month increase.
- In addition, ENERGY's proposal will lead to significant accumulated debt in longer term. It involves borrowing large amounts of money over a long period of time, 16-30 years, depending on the scenario, which are highly sensitive to interest rates.
- It would be helpful to understand how much certainty there is that the debt could be paid off in the 25 or 30 year scenarios and how the Province would hedge against the various risks? Given the variability and relationship with HOEP, what ability would there be to predict these financing needs for the GA.
- There is significant risk where with potential future scenario of significant uptake in self-generation, net metering and due to other technological changes, the electricity load drops significantly from the base case scenario. It would then represent a new type of stranded debt scenario.
- IESO market transactions, including payments to generators above HOEP are not reflected as revenue or expenses in IESO's financial statements. IESO receives recovery of the GA amounts in each settlement period. It would be important to consult with OPCD on the accounting treatment if IESO did not recover the full GA costs each settlement period, or over a fiscal year.

- Cash from debt-financing to cover GA payments would not be expected to be recorded as revenue, leaving generation supply costs higher than the amounts recovered from the market plus the GA.
- Prior to pursuing the proposal, would also need to consult Constitutional Law Branch on risks related to the GA being charged to those who may not have as direct a link to those who benefited, i.e. the significant time lag between incurring of the costs and recovery of the costs.

Detail on Proposals

Status Quo:

Ratepayers continue to pay the full cost of GA each year until the debt is paid

- According to the graph provided by ENERGY, it seems that as GA decreases, the residential electricity bill increases. What's the cause of this?
- It would be helpful to understand what is driving the reduced IESO GA Costs up to 2035.

Moderate short-term cost reductions with limits (capped at no more than $2B above the true cost of GA)

The starting GA payment from all ratepayers in 2017 is lowered by $2.5 billion below the true cost of GA and is increased at inflation in subsequent years.

- The scenario shows that we are effectively shifting GA costs from today to future rate payers while incurring financing costs. It would appear that there would be no savings to the ratepayers, only a shift of cost from today into the future, with the financing cost as an additional component.

Maximized short-term cost reductions with limits (capped at no more than $2B above the true cost of GA)

The starting GA payment from all ratepayers in 2017 is lowered as much as possible and is increased at inflation in subsequent years.

- The scenario should provide the starting GA payment from all ratepayers in 2017, i.e., by how much it is lowered.
- How does the refinanced GA drop 25 and 30 years from now to match IESO's forecast? It would be helpful to understand the assumptions used in making this graph.
- In this scenario, the total debt was much higher than the previous scenario (up to $10.7B vs $23B), but it seems it will result in a similar increase in residential bills in the long-term. Wouldn't this scenario result in bigger increase in residential bills in long-term?

Maximized short-term cost reductions, no limits

The starting GA payment from all ratepayers in 2017 is lowered as much as possible and is increased at inflation in subsequent years such that the borrowed money is paid back in 25 and 30 years respectively.

QUESTIONS

- Do any of the scenarios account for the GA increasing more than the IESO's OPO? What are the chances of that occurring and how would that be mitigated in the long-term?
- Would Energy proposals potentially accept an introduction of a DRC version 2?
- How would the regulator or the government manage the long time horizon and the size of the new debt arising in the sector, as well as the mechanism(s) to pay for the debt? Intergenerational aspects to the incurring of the debt and paying down the debt would need to be considered in setting up the structure, as well as the Constitutional Law risk.

Prepared by: **Corporate and Electricity Finance Division**
Date: **January 14th, 2017**

Ontario

MINISTRY OF
ENERGY

Debt Financing the Global Adjustment

January 10, 2017

Working Draft for Discussion Purposes Only

Purpose

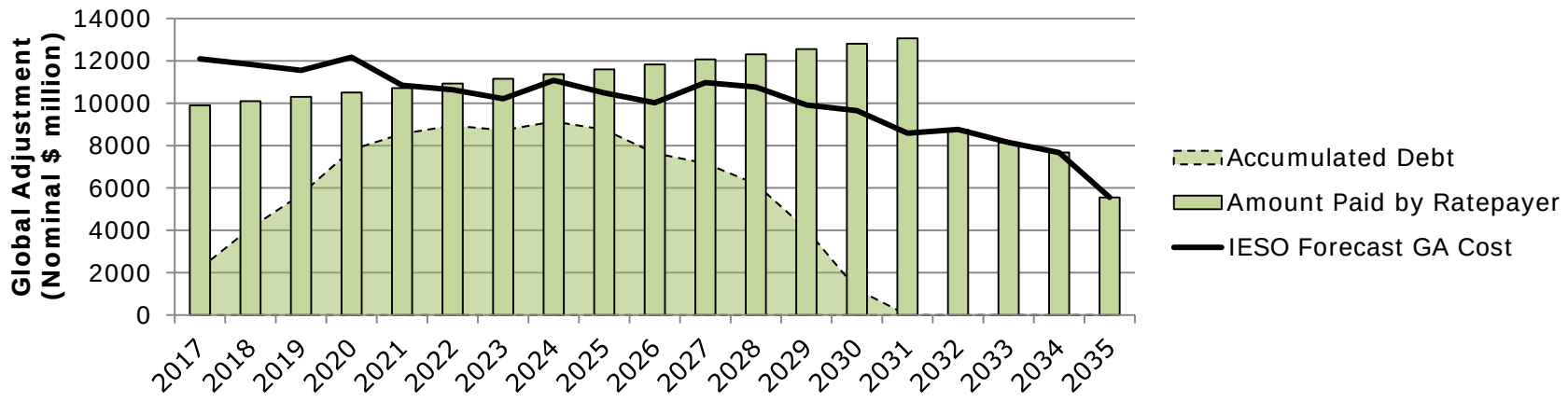
- To analyze the system cost and ratepayer impact of partially financing the cost of the global adjustment (GA) by incurring debt to defer some of the cost.

- An indicative GA financing proposal is presented followed by a qualitative discussion of the proposal's risks.

- The remainder of the presentation quantitatively examines several different scenarios for debt financing the GA, showing:
  - The amount of debt incurred;
  - Impact on total system cost; and
  - Impact on residential bills.

Indicative Proposal to Debt Finance the Global Adjustment

- For the purpose of discussion, the amount of GA paid by ratepayers in each year over the forecast period is set at a fixed amount until the accumulated debt has been completely paid off.
- All scenarios consider setting the 2017 amount of GA paid by ratepayers at a value lower than the true cost of GA and increasing that amount year-over-year at inflation (assumed to be 2%) until the debt has been paid off.
- In this way, GA costs will be "tilted" over time by lowering costs in the short term and increasing costs in the long term.
- In some scenarios, the amount of GA paid by ratepayers *above* the expected true cost of GA is capped so as to limit large increases in the cost of electricity in any given year.
- Analysis is based on forecasts from Independent Electricity System Operator's (IESO) Ontario Planning Outlook.



Sample debt financing: Ratepayers pay less than the cost of GA in early years, accumulating $9 billion of debt that is paid off in 2031 by paying more than the cost of GA in later years.

Considerations and Risks – Ratepayer

Ratepayer:

- Incurring debt to finance the GA, while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.

- The GA financing proposal involves accruing large amounts of debt to reduce electricity rates. This debt would be highly sensitive to interest rates which could extend repayment timelines or put significant pressure on rates (see Scenario 3 for an example of such interest rate risk).

- GA and HOEP provide a natural hedge against each other. Smoothing only one component would lead to greater price volatility. For example, if HOEP is higher than expected (due to higher gas or carbon prices, for example), all-in rates will rise significantly as the natural decrease in GA would not occur given the prescribed GA rate.

- Conversely, if GA is higher than forecast (i.e., because of lower HOEP or additional out-of-market costs), the debt would increase to a higher amount, requiring additional debt service payments and/or a longer recovery period.

- Should Ontario demand be lower than forecasted, the cost of paying off the debt will be shared by a smaller pool of consumption, further increasing future costs for individual ratepayers.

Considerations and Risks – Legal, Fiscal and Stakeholder

Legal:

- Such changes to the financing of the GA may require legislative or other amendments and will require further consultation with Legal Services Branch.

Fiscal / Accounting:

- Further analysis is required on whether such changes to the financing of the GA would affect the Province's current accounting treatment for the GA and represent a potential fiscal risk. As such, early engagement with Legal Services Branch and Treasury Board Secretariat is advised.

- The significant amount of additional Provincial borrowing needed to debt finance the GA, and associated risks (e.g., interest rates, repayment timelines), could put pressure on the Province's credit rating. Further analysis is required and would suggest early engagement with Ministry of Finance / Ontario Financing Authority.

Stakeholder:

- The significant deferral of electricity system costs over a long time-horizon and associated interest costs may draw criticism from some stakeholders as creating a new "stranded debt" of the sector. Note: the Debt Retirement Charge was removed from residential bills in 2016 and will be removed for remaining customers in 2018.

GA Debt Financing Scenarios

1. Status Quo
   - Ratepayers continue paying the full cost of the GA in each year without incurring any debt.

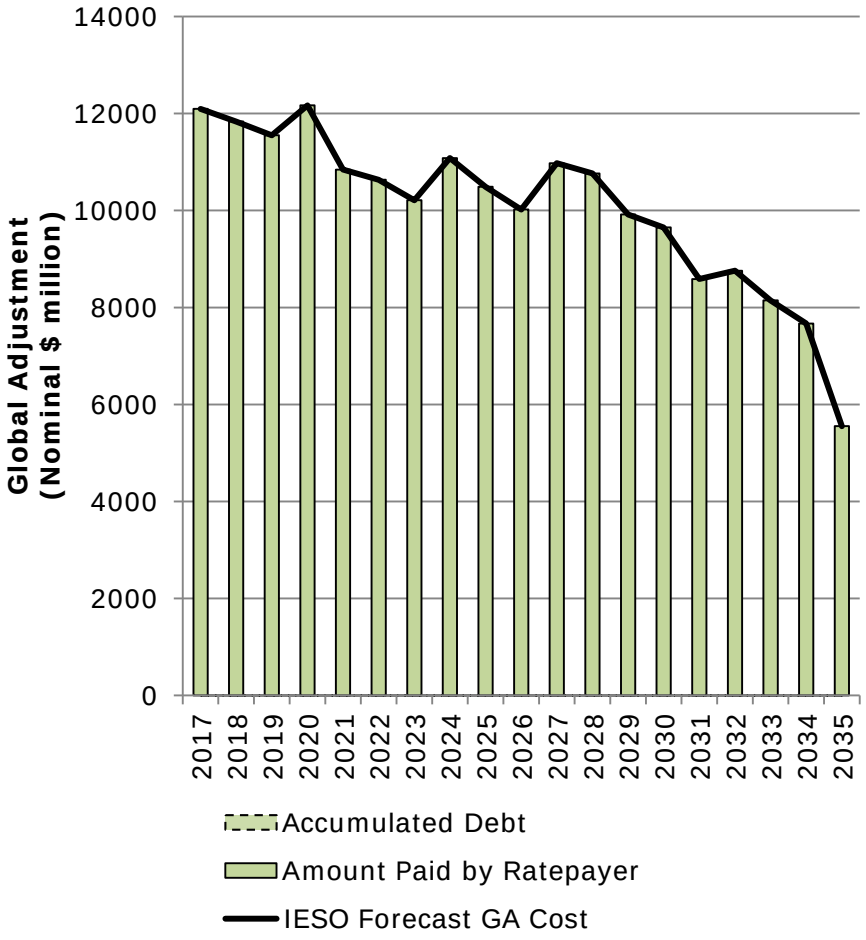
2. Maximize short-term cost reductions
   - This scenario considers the maximum amount by which ratepayer GA costs in 2017 can be reduced such that the accumulated debt is paid off over a 25-30 year financing period. This scenario assumes a 3% borrowing interest rate.

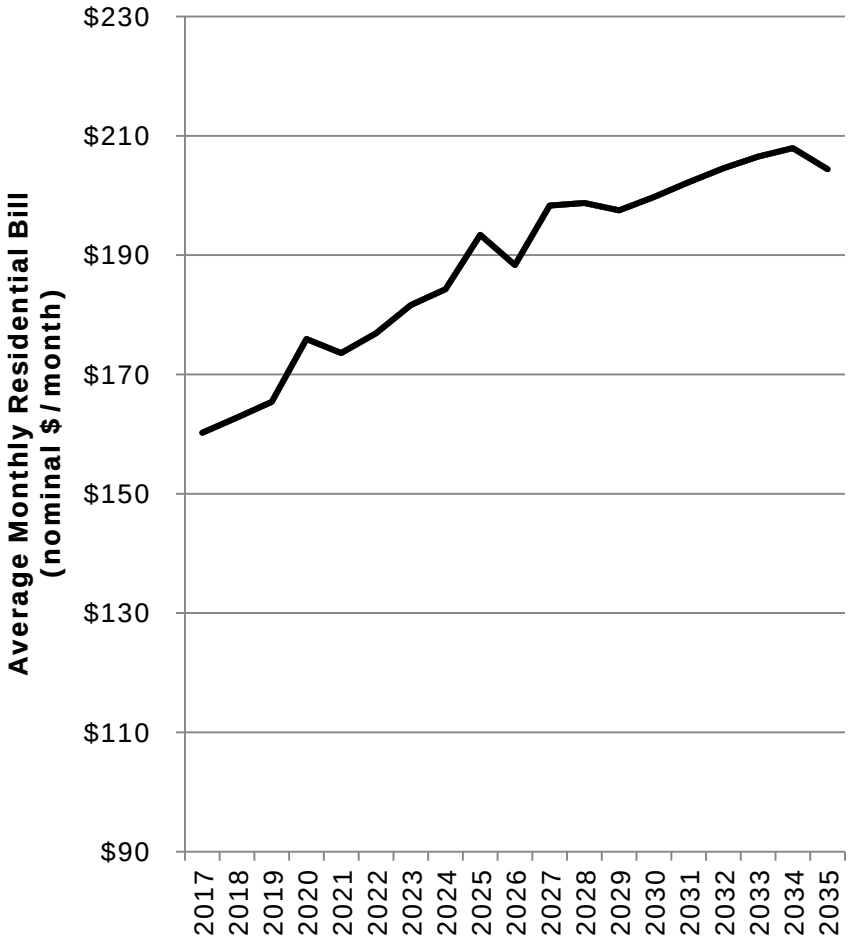
3. Interest Rate Risk
   - Using the 30-year financing case from Scenario 2, this scenario looks at the consequence of an increase of 2 percentage points in the borrowing interest rate.

4. Maximize short-term cost reductions with limits
   - The same as Scenario 2 but with GA over-payments capped at $2 billion above the true cost of GA in any given year.

1. Status Quo – Global and Residential Impacts

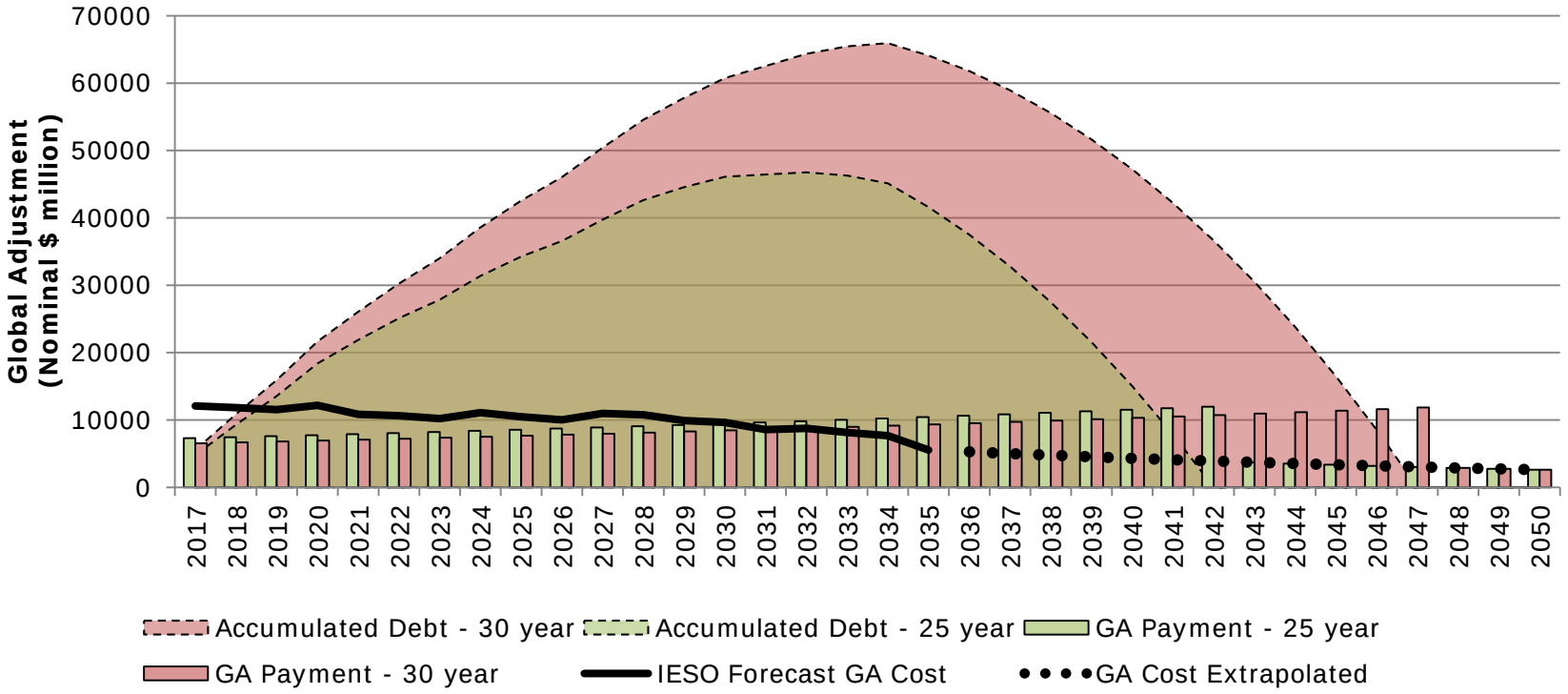
- Ratepayers continue paying the true cost of GA.





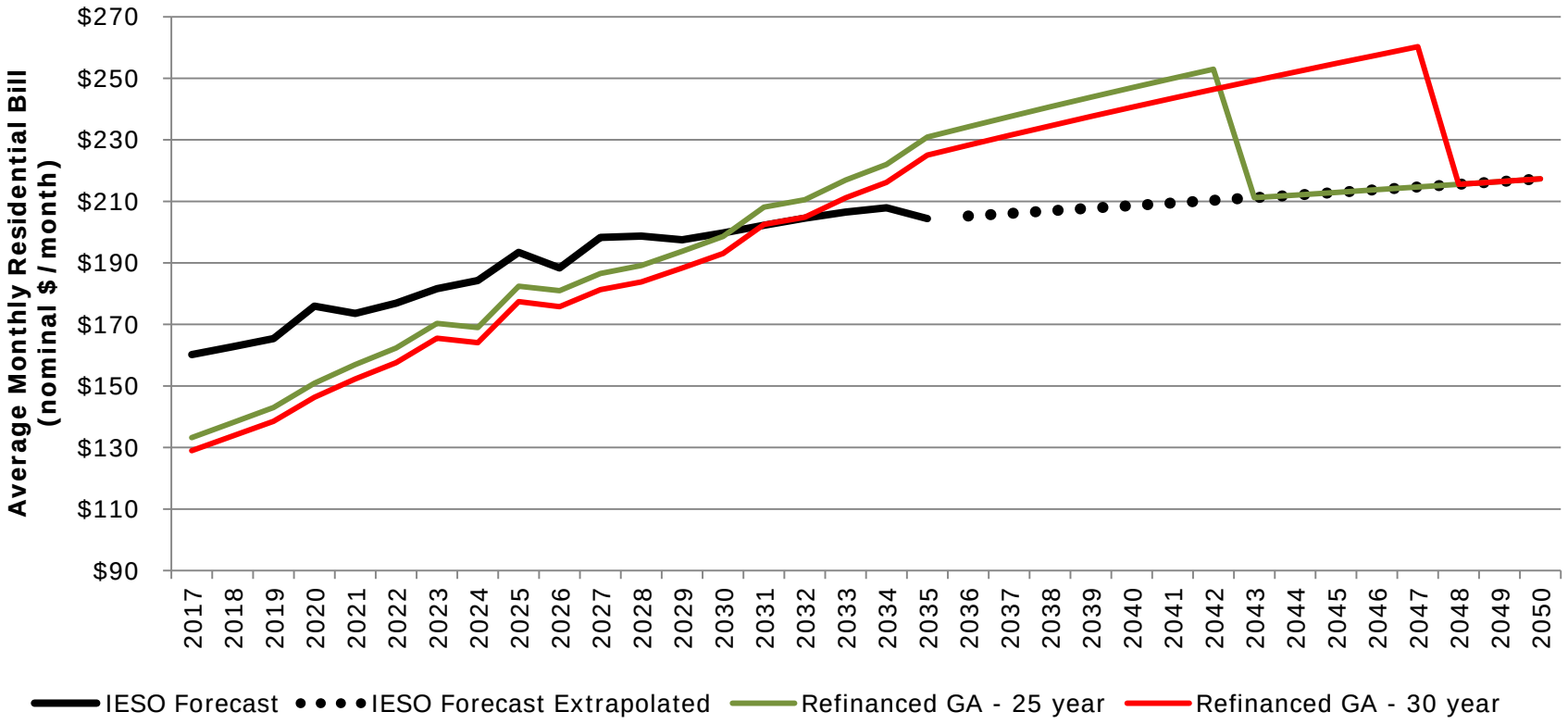
2. Maximize Short-term Cost Reduction – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year financing, green) and 2047 (30 year financing, red) respectively.



- A **reduction of 40-46% in GA payments** in 2017 is possible in this scenario by **accumulating up to $66 billion of debt.**
- Further reductions would require additional payments beyond those indicated in order to pay off the debt by 2042 and 2047 in each of the scenarios respectively.

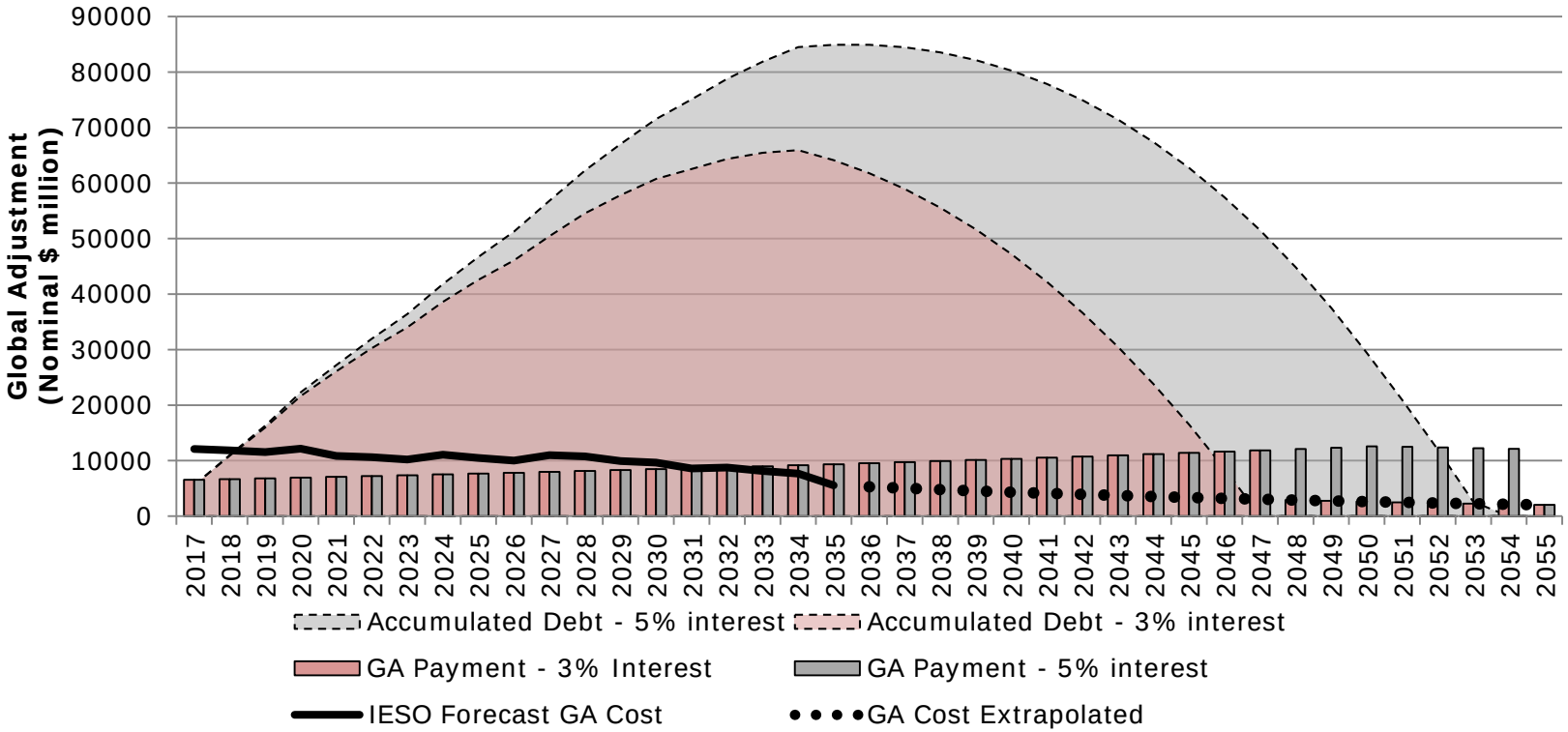
2. Maximize Short-term Cost Reduction – Residential Impacts



- This scenario results in a **short-term reduction of up $27-$31/month** in 2017 at the cost of **a long-term increase of up to $43-$46/month** relative to the IESO forecast.
- Due to the significant increase in electricity bills in later years, Scenario 4 considers limiting the amount above the true cost of the GA that is paid by ratepayers.

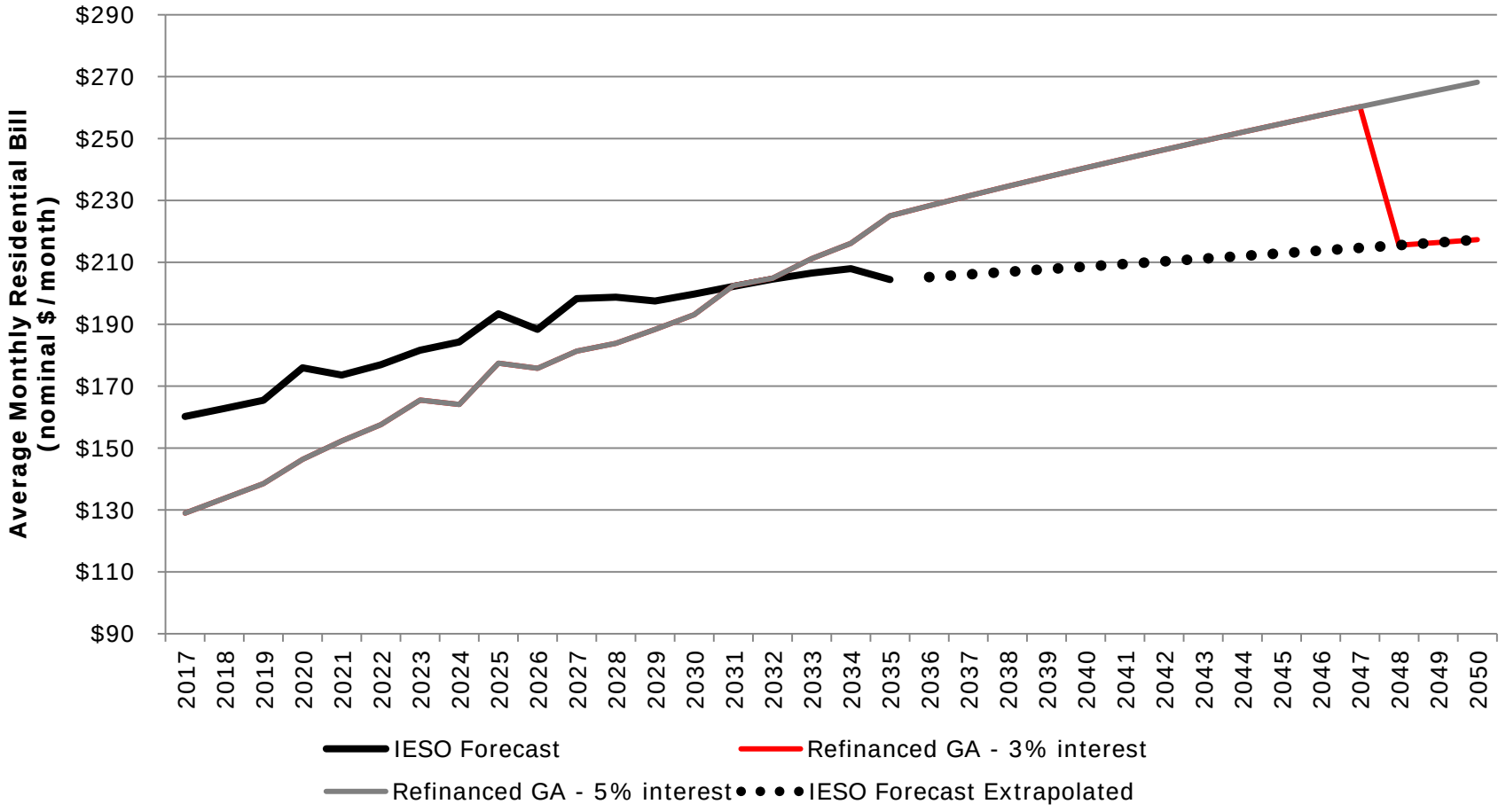
3. Interest Rate Risk – Global Impacts

- This scenario compares the maximal 30-year financing case from Scenario 2 (red, assuming a 3% interest rate) and calculates the resulting debt that would accrue due to an increase of two percentage points in the borrowing interest rate (grey, 5% interest).



- Under a 30-year financing payment schedule that assumes a borrowing interest rate of 3% (red), an increase in interest rate to 5% results in **more than $50 billion of accumulated debt in 2047** (grey) requiring further GA over-payments beyond 2047 in order to service the debt.

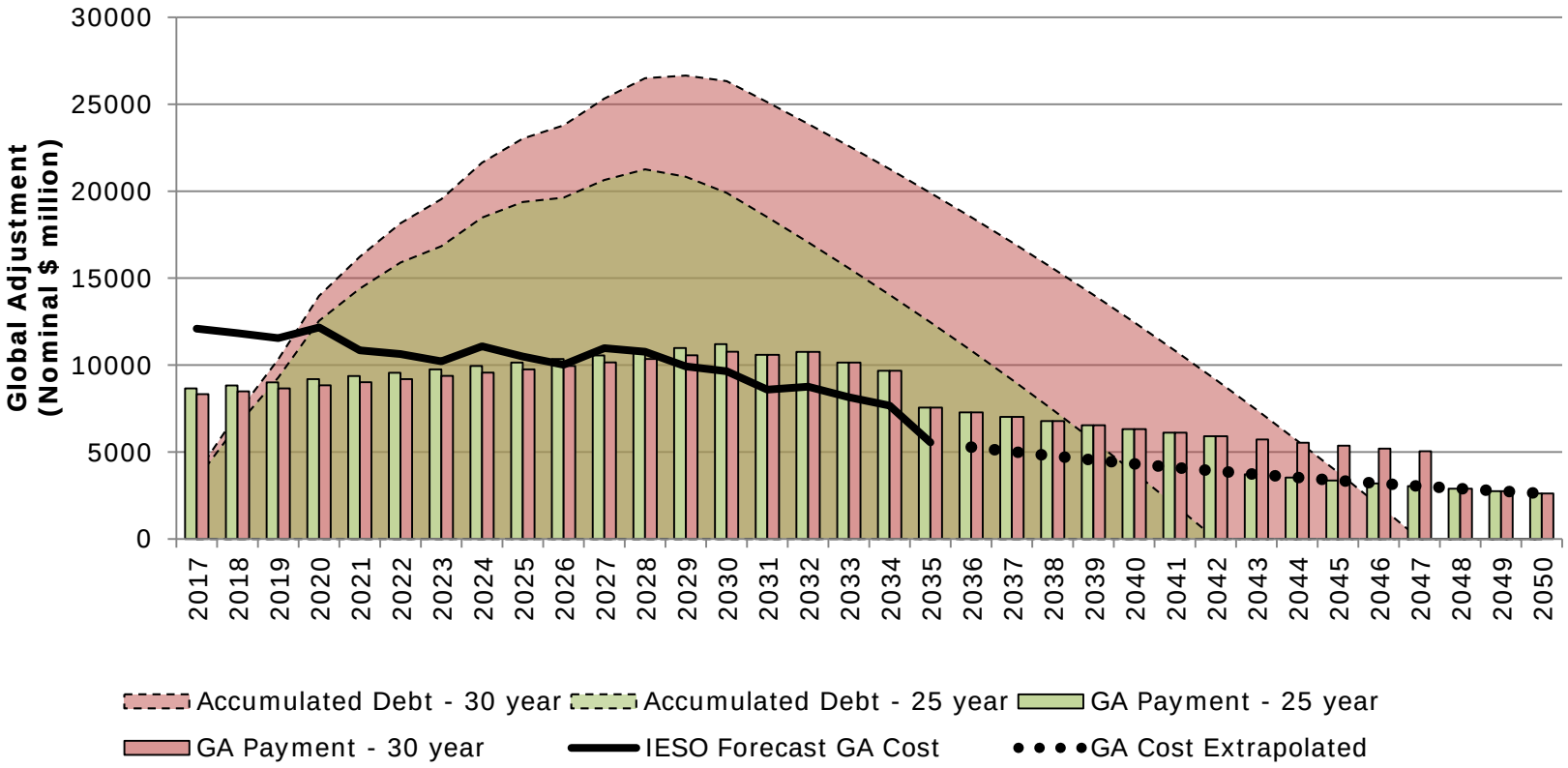
3. Interest Rate Risk – Residential Impacts



- In this scenario, an increase in the borrowing interest rate lengthens the financing period beyond 2047.

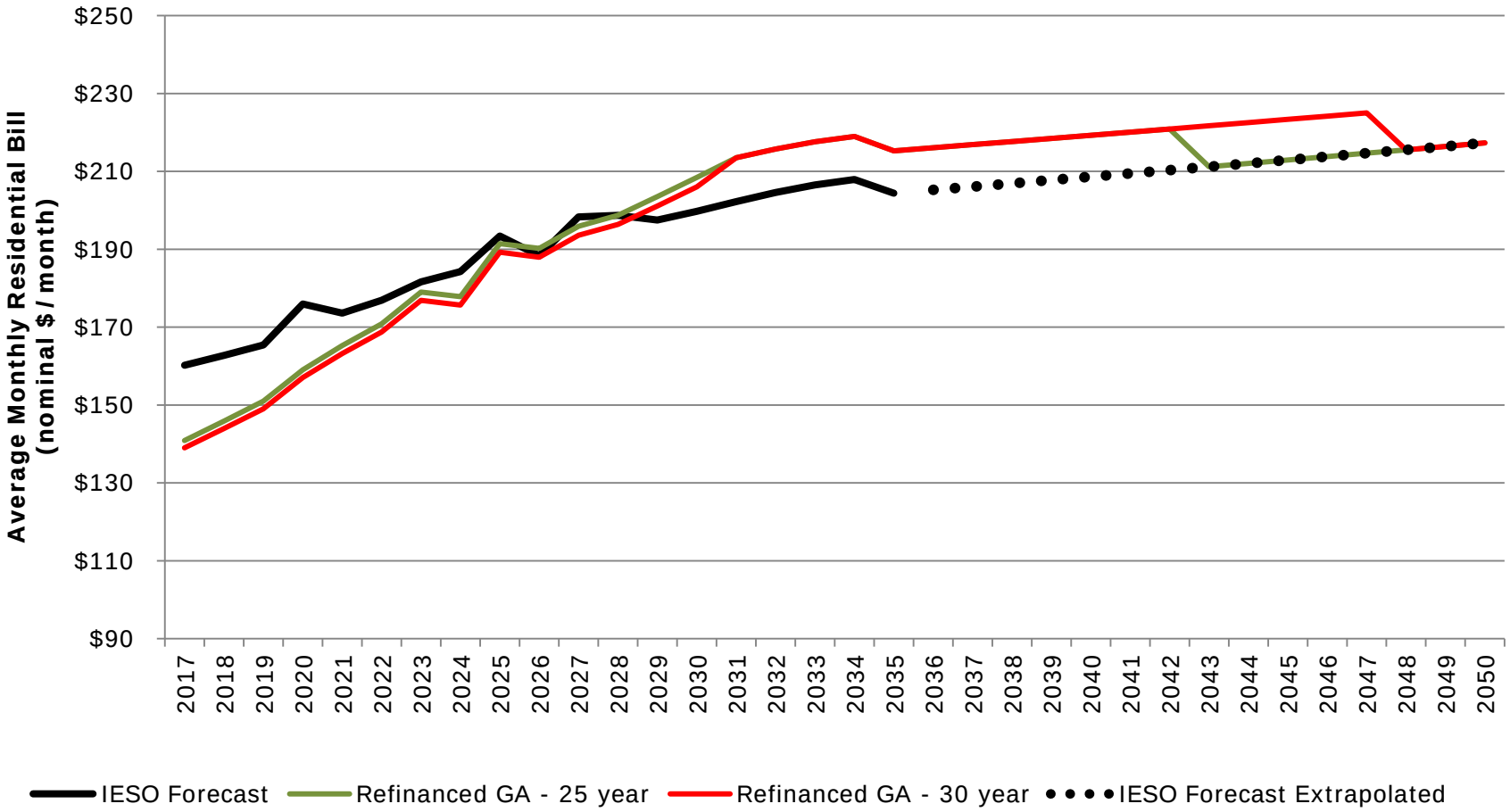
4. Maximize Short-term Cost Reduction with Limits – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year, green) and 2047 (30 year, red) respectively subject to limiting ratepayer over-payments to no more than $2 billion above the true cost of GA.



- A **reduction of 28-31% in GA payments** in 2017 is possible in this scenario by **accumulating up to $26 billion of debt.**

4. Maximize Short-term Cost Reduction with Limits – Residential Impacts



- This scenario results in **a short-term reduction of up $19-$21/month** in 2017 at the cost of **a long-term increase of up to $11/month** in 2029-2047 relative to the IESO forecast.

Ontario

MINISTRY OF
ENERGY

Debt Financing the Global Adjustment

January 10, 2017

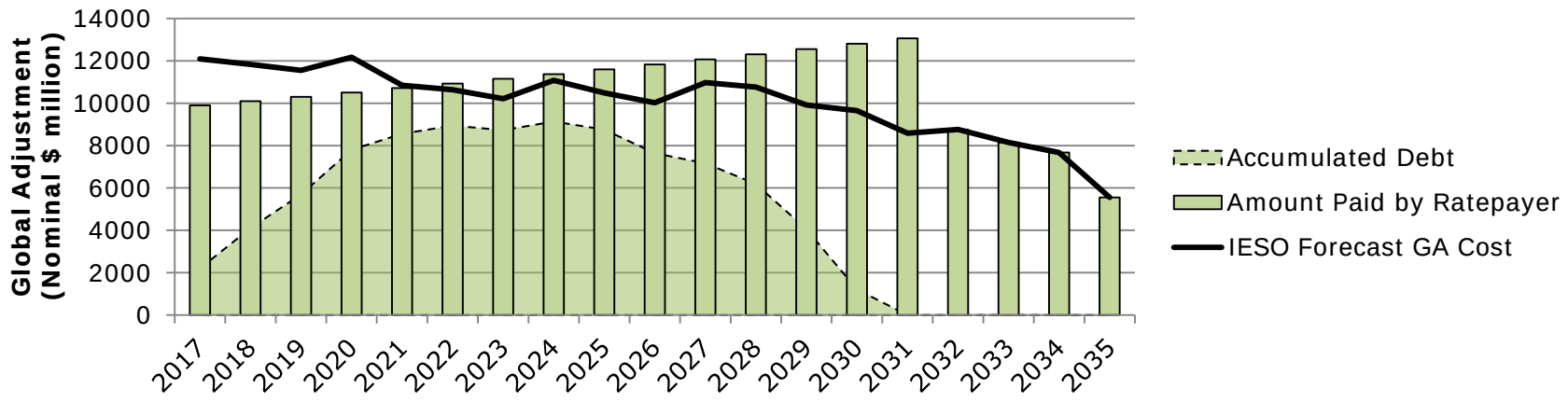
Working Draft for Discussion Purposes Only

Purpose

- To analyze the system cost and ratepayer impact of partially financing the cost of the global adjustment (GA) by incurring debt to defer some of the cost.
- An indicative GA financing proposal is presented followed by a qualitative discussion of the proposal's risks.
- The remainder of the presentation quantitatively examines several different scenarios for debt financing the GA, showing:
  - The amount of debt incurred;
  - Impact on total system cost; and
  - Impact on residential bills.

Indicative Proposal to Debt Finance the Global Adjustment

- For the purpose of discussion, the amount of GA paid by ratepayers in each year over the forecast period is set at a fixed amount until the accumulated debt has been completely paid off.
- All scenarios consider setting the 2017 amount of GA paid by ratepayers at a value lower than the true cost of GA and increasing that amount year-over-year at inflation (assumed to be 2%) until the debt has been paid off.
- In this way, GA costs will be "tilted" over time by lowering costs in the short term and increasing costs in the long term.
- In some scenarios, the amount of GA paid by ratepayers *above* the expected true cost of GA is capped so as to limit large increases in the cost of electricity in any given year.
- Analysis is based on forecasts from Independent Electricity System Operator's (IESO) Ontario Planning Outlook.



Sample debt financing: Ratepayers pay less than the cost of GA in early years, accumulating $9 billion of debt that is paid off in 2031 by paying more than the cost of GA in later years.

Considerations and Risks – Ratepayer

Ratepayer:

- Incurring debt to finance the GA, while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.

- The GA financing proposal involves accruing large amounts of debt to reduce electricity rates. This debt would be highly sensitive to interest rates which could extend repayment timelines or put significant pressure on rates (see Scenario 3 for an example of such interest rate risk).

- GA and HOEP provide a natural hedge against each other. Smoothing only one component would lead to greater price volatility. For example, if HOEP is higher than expected (due to higher gas or carbon prices, for example), all-in rates will rise significantly as the natural decrease in GA would not occur given the prescribed GA rate.

- Conversely, if GA is higher than forecast (i.e., because of lower HOEP or additional out-of-market costs), the debt would increase to a higher amount, requiring additional debt service payments and/or a longer recovery period.

- Should Ontario demand be lower than forecasted, the cost of paying off the debt will be shared by a smaller pool of consumption, further increasing future costs for individual ratepayers.

Considerations and Risks – Legal, Fiscal and Stakeholder

Legal:

- Such changes to the financing of the GA may require legislative or other amendments and will require further consultation with Legal Services Branch.

Fiscal / Accounting:

- Further analysis is required on whether such changes to the financing of the GA would affect the Province's current accounting treatment for the GA and represent a potential fiscal risk. As such, early engagement with Legal Services Branch and Treasury Board Secretariat is advised.

- The significant amount of additional Provincial borrowing needed to debt finance the GA, and associated risks (e.g., interest rates, repayment timelines), could put pressure on the Province's credit rating. Further analysis is required and would suggest early engagement with Ministry of Finance / Ontario Financing Authority.

Stakeholder:

- The significant deferral of electricity system costs over a long time-horizon and associated interest costs may draw criticism from some stakeholders as creating a new "stranded debt" of the sector. Note: the Debt Retirement Charge was removed from residential bills in 2016 and will be removed for remaining customers in 2018.

GA Debt Financing Scenarios

1. Status Quo
   - Ratepayers continue paying the full cost of the GA in each year without incurring any debt.

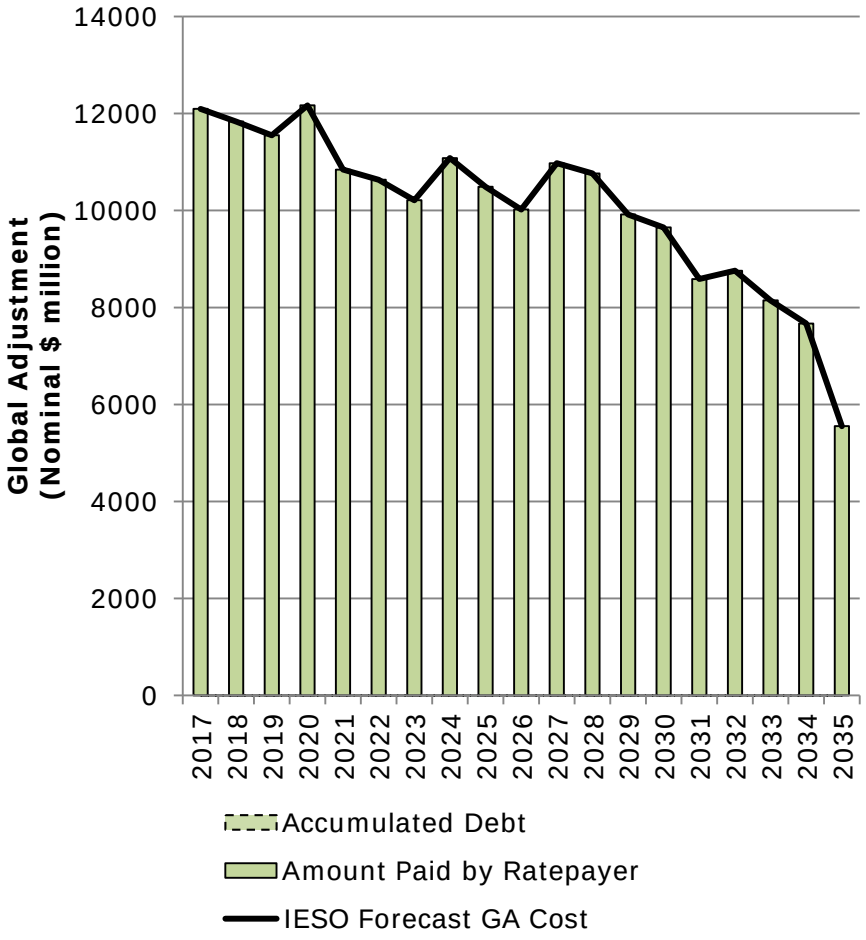
2. Maximize short-term cost reductions
   - This scenario considers the maximum amount by which ratepayer GA costs in 2017 can be reduced such that the accumulated debt is paid off over a 25-30 year financing period. This scenario assumes a 3% borrowing interest rate.

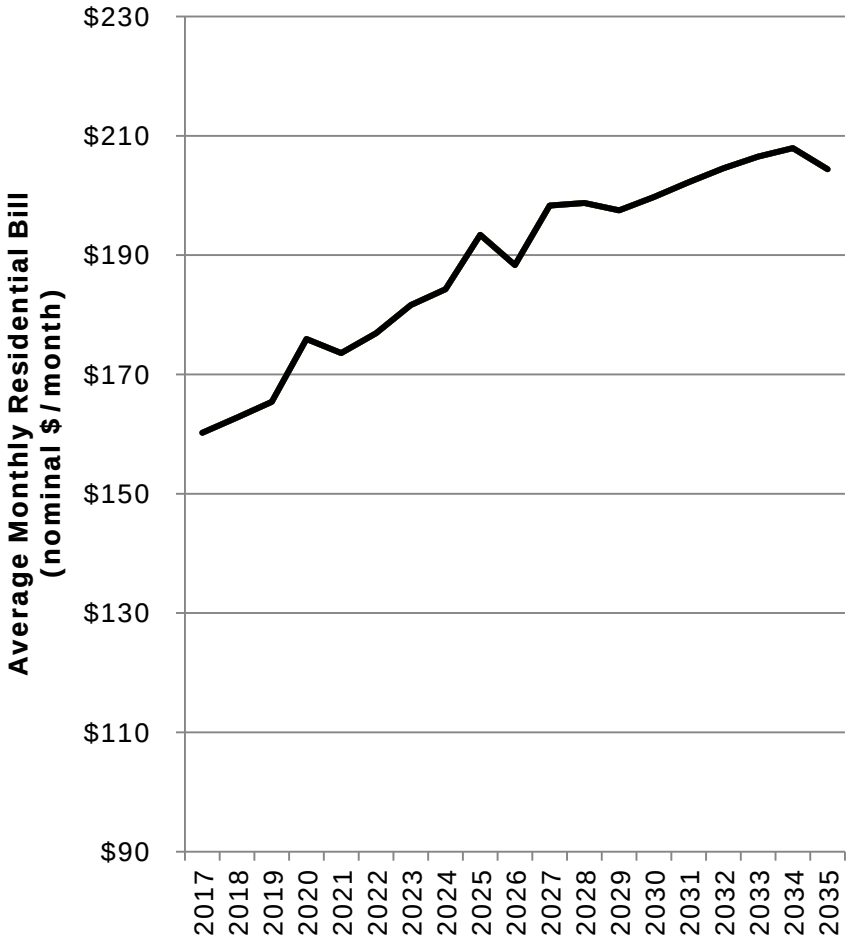
3. Interest Rate Risk
   - Using the 30-year financing case from Scenario 2, this scenario looks at the consequence of an increase of 2 percentage points in the borrowing interest rate.

4. Maximize short-term cost reductions with limits
   - The same as Scenario 2 but with GA over-payments capped at $2 billion above the true cost of GA in any given year.

1. Status Quo – Global and Residential Impacts

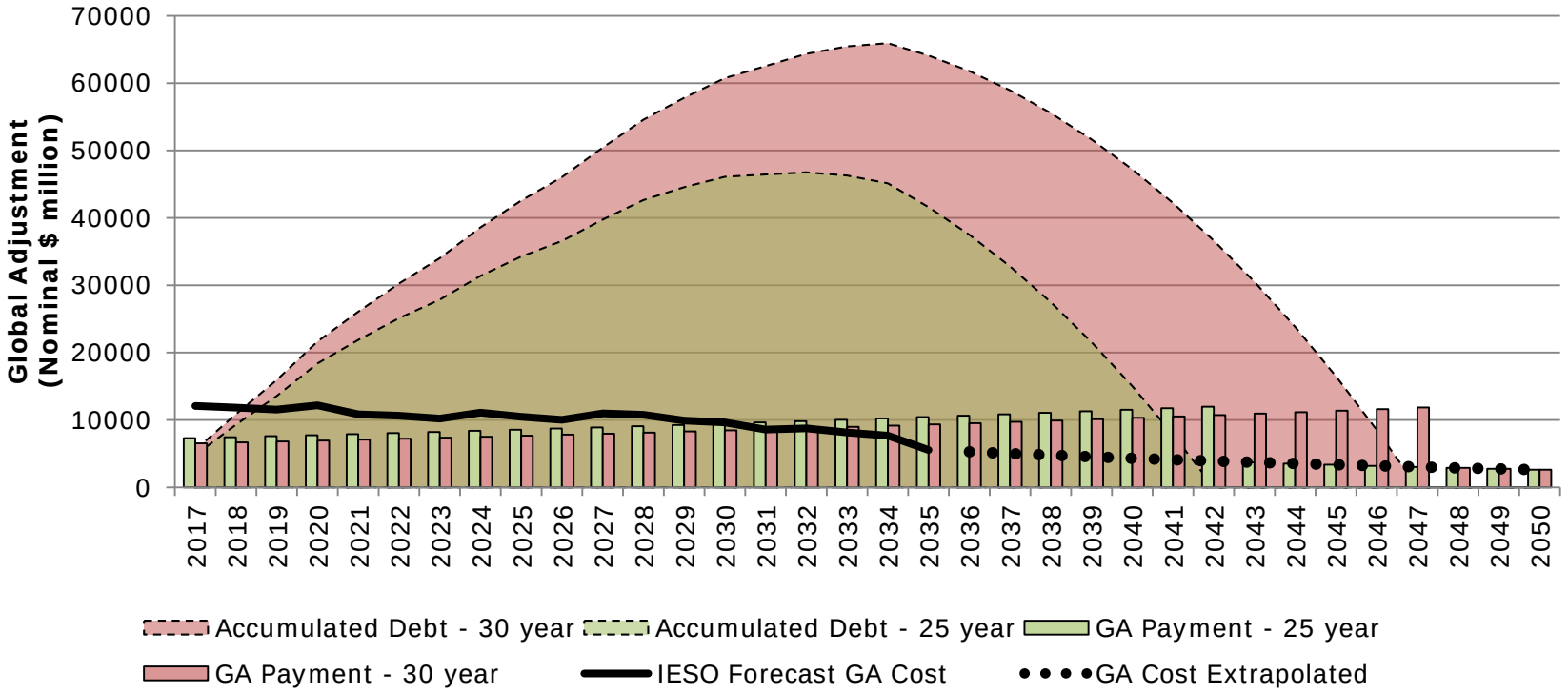
- Ratepayers continue paying the true cost of GA.





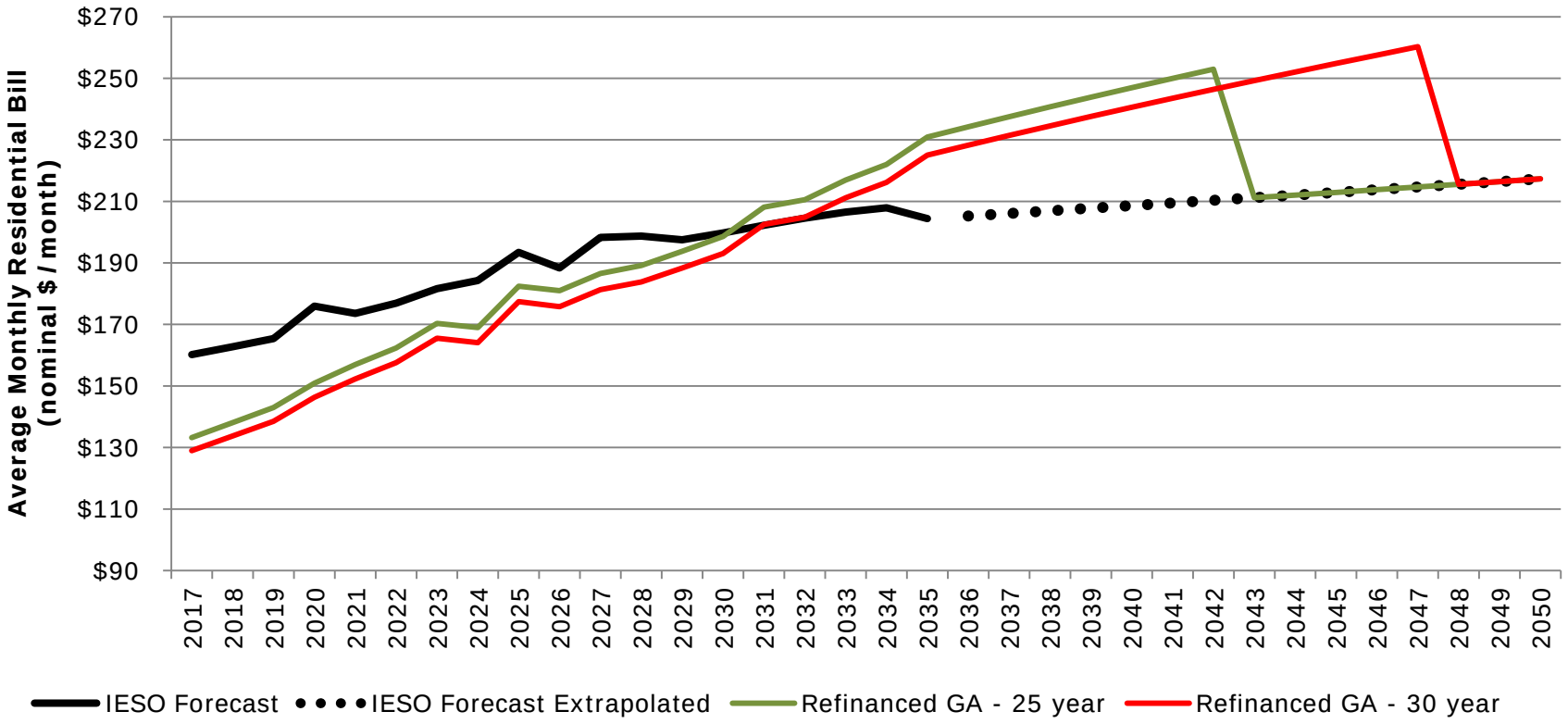
2. Maximize Short-term Cost Reduction – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year financing, green) and 2047 (30 year financing, red) respectively.



- A **reduction of 40-46% in GA payments** in 2017 is possible in this scenario by **accumulating up to $66 billion of debt.**
- Further reductions would require additional payments beyond those indicated in order to pay off the debt by 2042 and 2047 in each of the scenarios respectively.

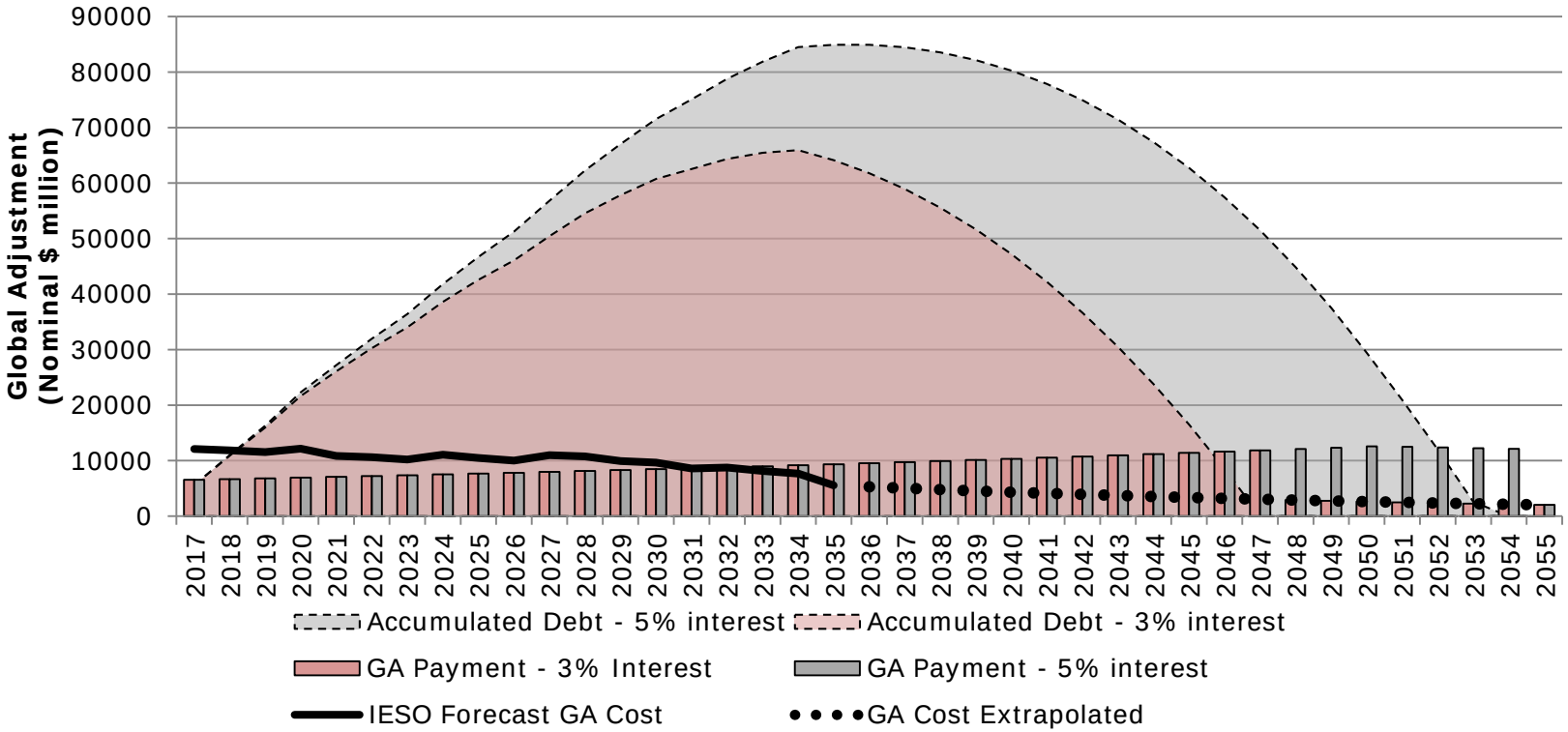
2. Maximize Short-term Cost Reduction – Residential Impacts



- This scenario results in a **short-term reduction of up $27-$31/month** in 2017 at the cost of **a long-term increase of up to $43-$46/month** relative to the IESO forecast.
- Due to the significant increase in electricity bills in later years, Scenario 4 considers limiting the amount above the true cost of the GA that is paid by ratepayers.

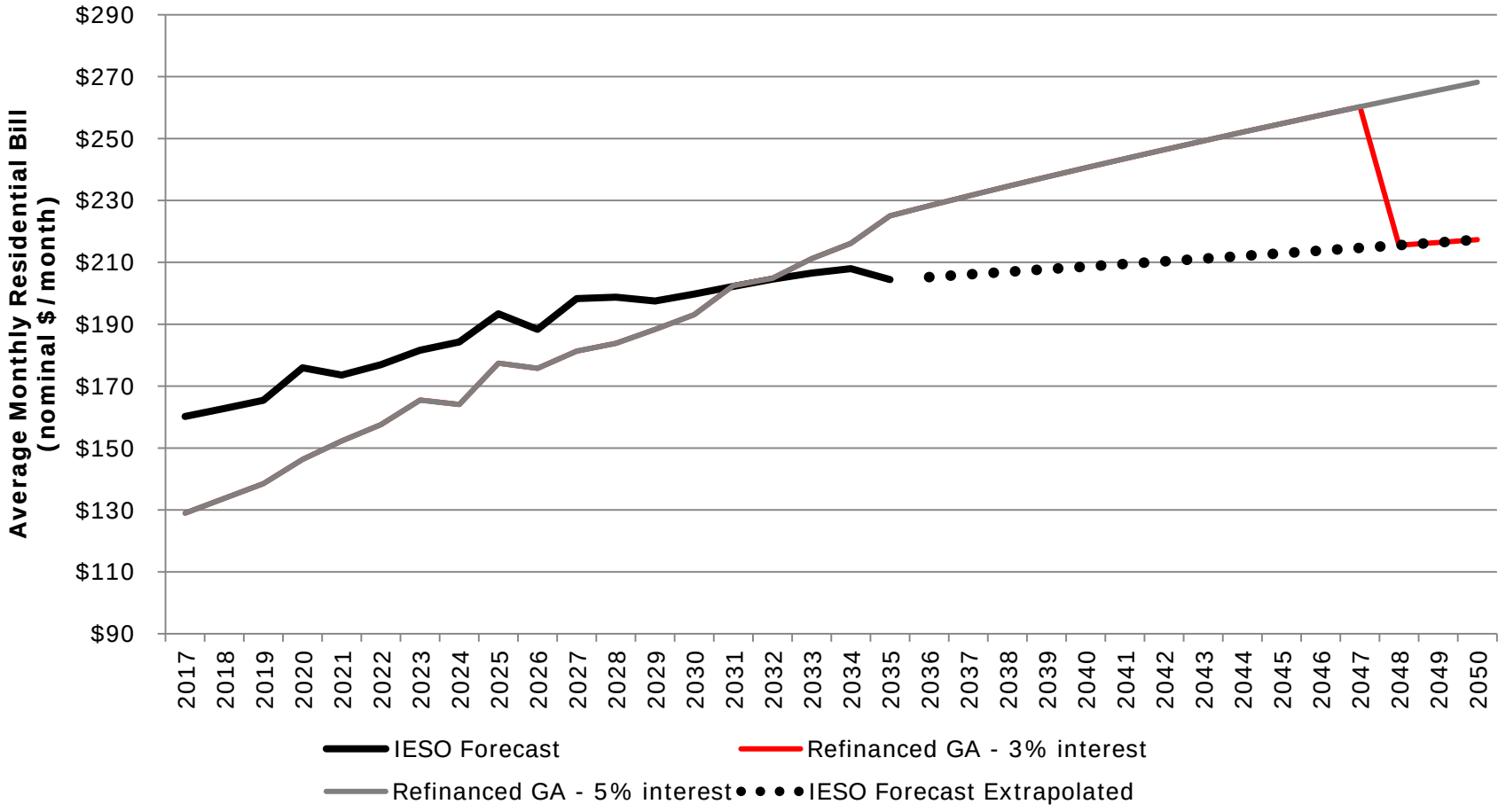
3. Interest Rate Risk – Global Impacts

- This scenario compares the maximal 30-year financing case from Scenario 2 (red, assuming a 3% interest rate) and calculates the resulting debt that would accrue due to an increase of two percentage points in the borrowing interest rate (grey, 5% interest).



- Under a 30-year financing payment schedule that assumes a borrowing interest rate of 3% (red), an increase in interest rate to 5% results in **more than $50 billion of accumulated debt in 2047** (grey) requiring further GA over-payments beyond 2047 in order to service the debt.

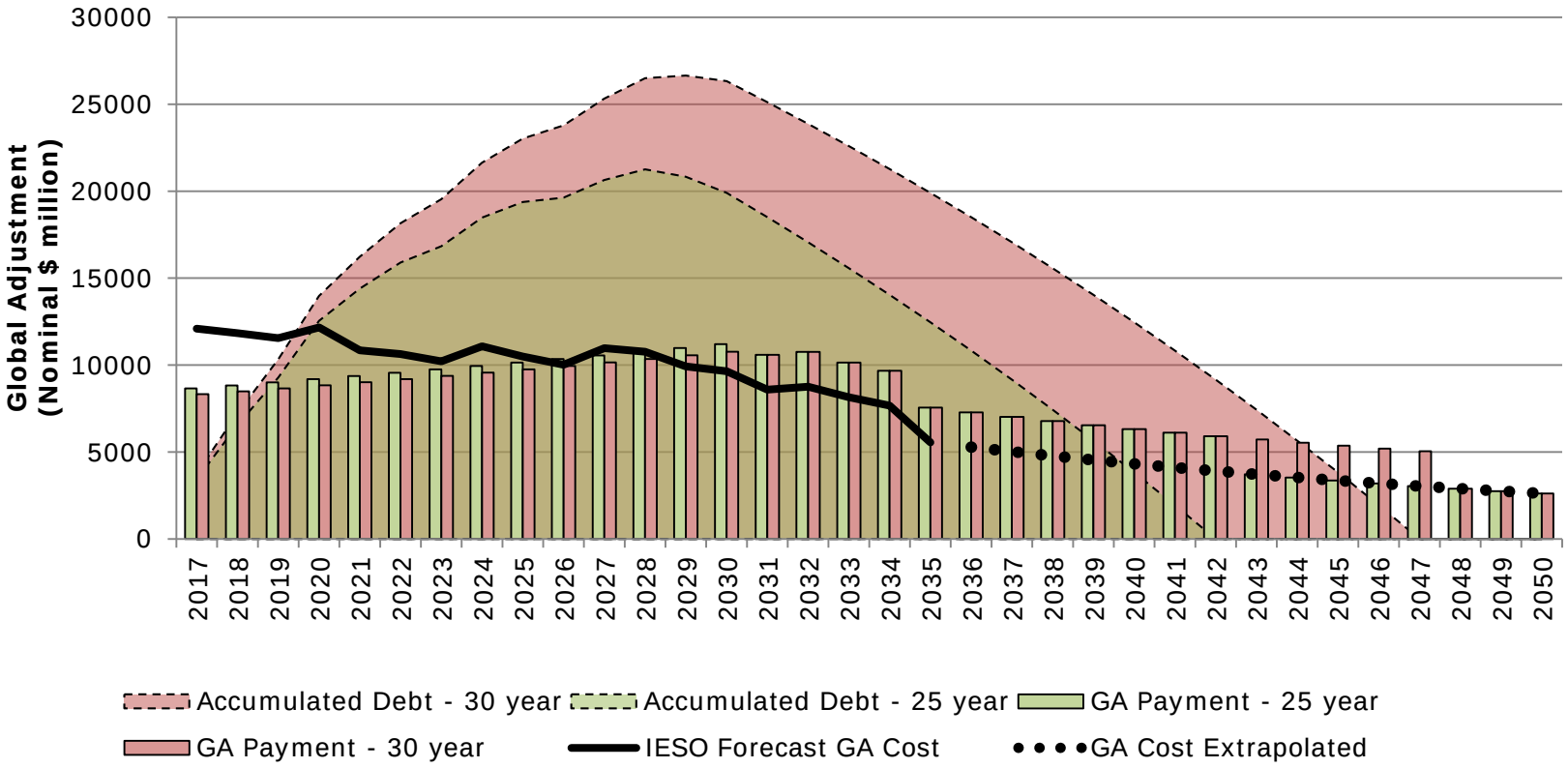
3. Interest Rate Risk – Residential Impacts



- In this scenario, an increase in the borrowing interest rate lengthens the financing period beyond 2047.

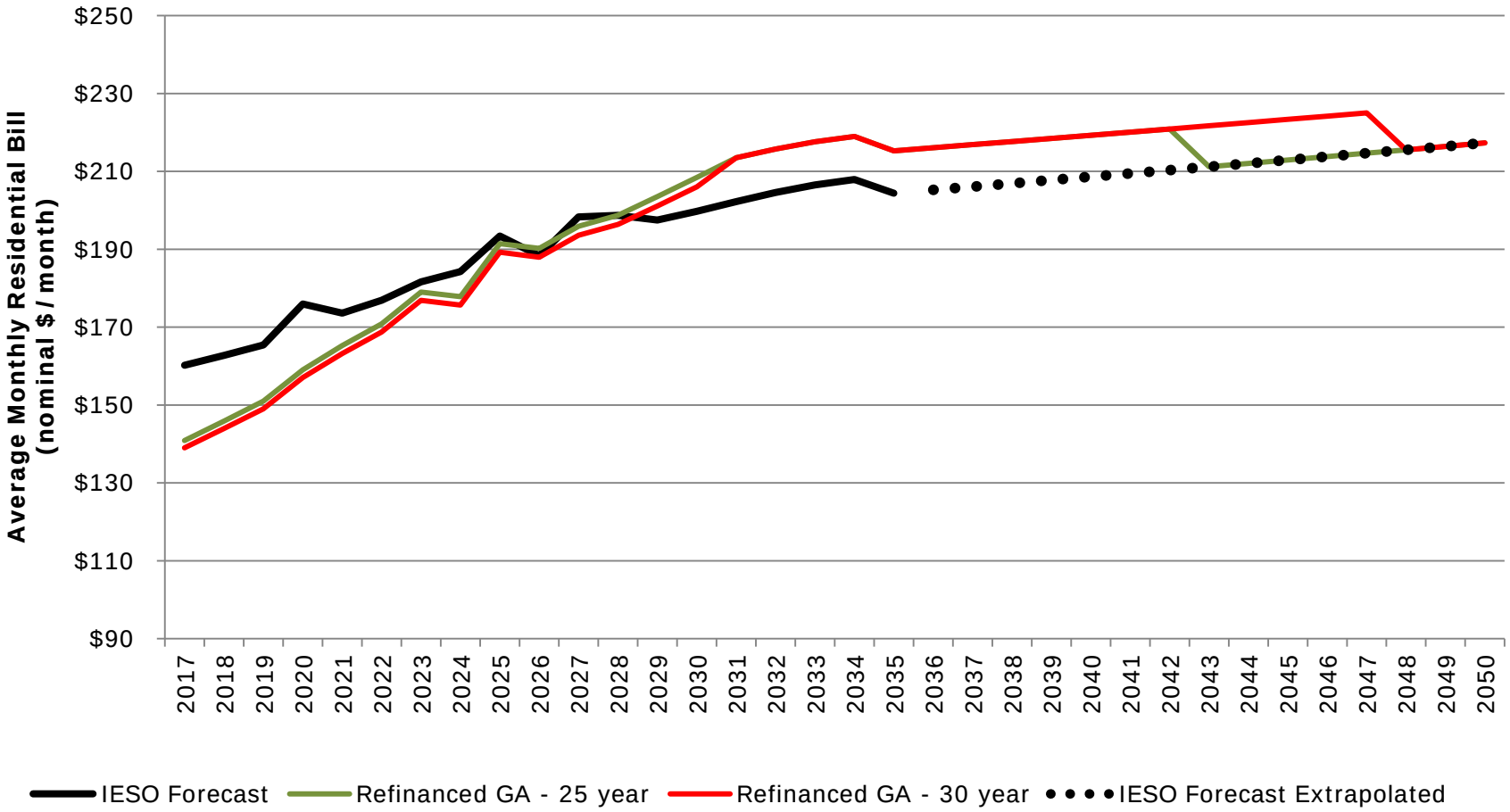
4. Maximize Short-term Cost Reduction with Limits – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year, green) and 2047 (30 year, red) respectively subject to limiting ratepayer over-payments to no more than $2 billion above the true cost of GA.



- A **reduction of 28-31% in GA payments** in 2017 is possible in this scenario by **accumulating up to $26 billion of debt.**

4. Maximize Short-term Cost Reduction with Limits – Residential Impacts



- This scenario results in **a short-term reduction of up $19-$21/month** in 2017 at the cost of **a long-term increase of up to $11/month** in 2029-2047 relative to the IESO forecast.

Ontario

MINISTRY OF
ENERGY

Debt Financing the Global Adjustment

January 10, 2017

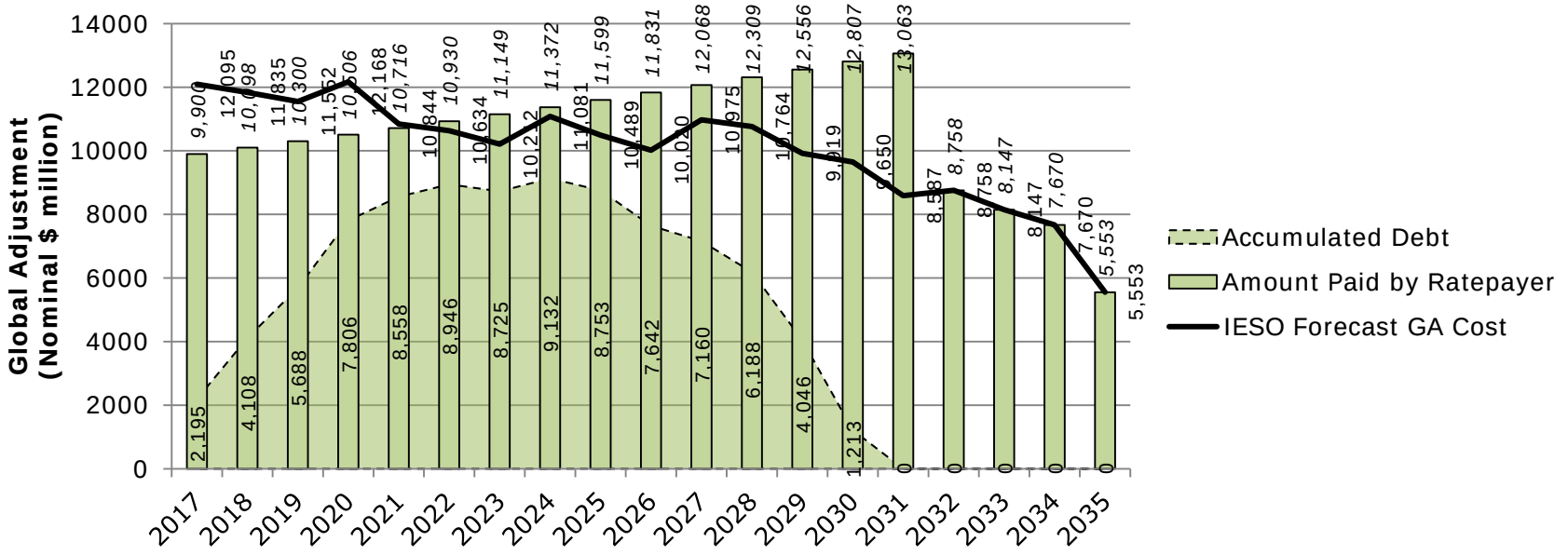
Working Draft for Discussion Purposes Only

Purpose

- To analyze the system cost and ratepayer impact of partially financing the cost of the global adjustment (GA) by incurring debt to defer some of the cost.
- An indicative GA financing proposal is presented followed by a qualitative discussion of the proposal's risks.
- The remainder of the presentation quantitatively examines several different scenarios for debt financing the GA, showing:
  - The amount of debt incurred;
  - Impact on total system cost; and
  - Impact on residential bills.

Indicative Proposal to Debt Finance the Global Adjustment

- For the purpose of discussion, the amount of GA paid by ratepayers in each year over the forecast period is set at a fixed amount until the accumulated debt has been completely paid off.
- All scenarios consider setting the 2017 amount of GA paid by ratepayers at a value lower than the true cost of GA and increasing that amount year-over-year at inflation (assumed to be 2%) until the debt has been paid off.
- In this way, GA costs will be "tilted" over time by lowering costs in the short term and increasing costs in the long term.
- In some scenarios, the amount of GA paid by ratepayers *above* the expected true cost of GA is capped so as to limit large increases in the cost of electricity in any given year.
- Analysis is based on forecasts from Independent Electricity System Operator's (IESO) Ontario Planning Outlook.



Sample debt financing: Ratepayers pay less than the cost of GA in early years, accumulating $9 billion of debt that is paid off in 2031 by paying more than the cost of GA in later years.

Considerations and Risks – Ratepayer

Ratepayer:

- Incurring debt to finance the GA, while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.

- The GA financing proposal involves accruing large amounts of debt to reduce electricity rates. This debt would be highly sensitive to interest rates which could extend repayment timelines or put significant pressure on rates (see Scenario 3 for an example of such interest rate risk).

- GA and HOEP provide a natural hedge against each other. Smoothing only one component would lead to greater price volatility. For example, if HOEP is higher than expected (due to higher gas or carbon prices, for example), all-in rates will rise significantly as the natural decrease in GA would not occur given the prescribed GA rate.

- Conversely, if GA is higher than forecast (i.e., because of lower HOEP or additional out-of-market costs), the debt would increase to a higher amount, requiring additional debt service payments and/or a longer recovery period.

- Should Ontario demand be lower than forecasted, the cost of paying off the debt will be shared by a smaller pool of consumption, further increasing future costs for individual ratepayers.

Considerations and Risks – Legal, Fiscal and Stakeholder

Legal:

- Such changes to the financing of the GA may require legislative or other amendments and will require further consultation with Legal Services Branch.

Fiscal / Accounting:

- Further analysis is required on whether such changes to the financing of the GA would affect the Province's current accounting treatment for the GA and represent a potential fiscal risk. As such, early engagement with Legal Services Branch and Treasury Board Secretariat is advised.

- The significant amount of additional Provincial borrowing needed to debt finance the GA, and associated risks (e.g., interest rates, repayment timelines), could put pressure on the Province's credit rating. Further analysis is required and would suggest early engagement with Ministry of Finance / Ontario Financing Authority.

Stakeholder:

- The significant deferral of electricity system costs over a long time-horizon and associated interest costs may draw criticism from some stakeholders as creating a new "stranded debt" of the sector. Note: the Debt Retirement Charge was removed from residential bills in 2016 and will be removed for remaining customers in 2018.

GA Debt Financing Scenarios

1. Status Quo
   - Ratepayers continue paying the full cost of the GA in each year without incurring any debt.

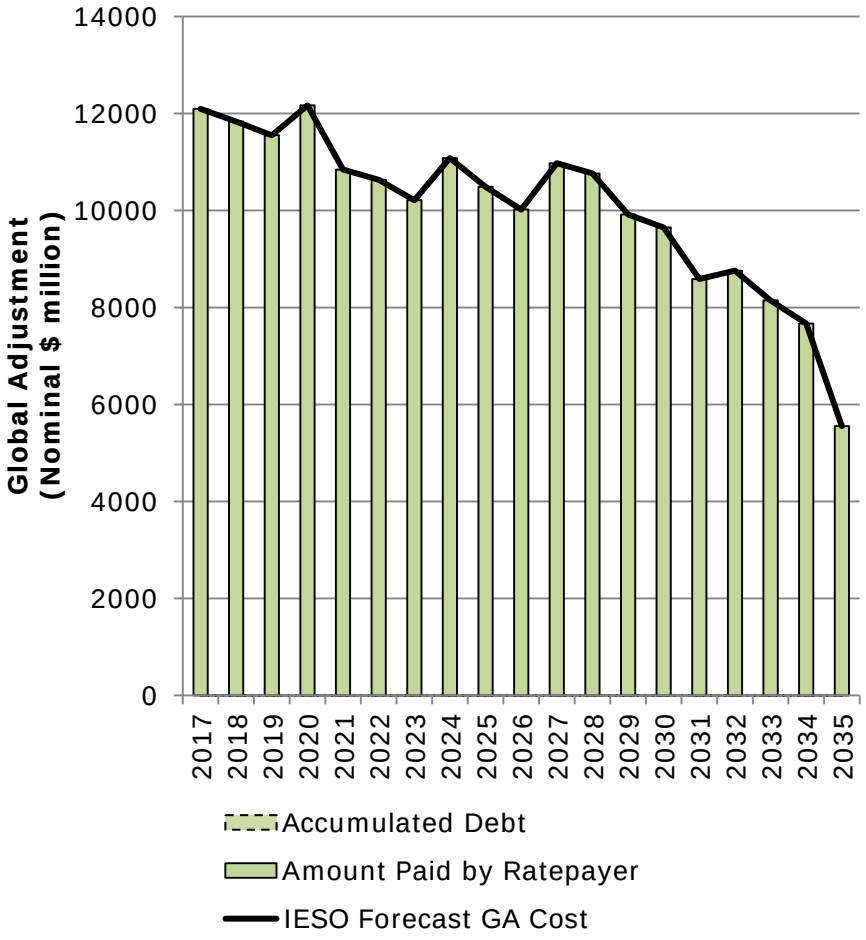
2. Maximize short-term cost reductions
   - This scenario considers the maximum amount by which ratepayer GA costs in 2017 can be reduced such that the accumulated debt is paid off over a 25-30 year financing period. This scenario assumes a 3% borrowing interest rate.

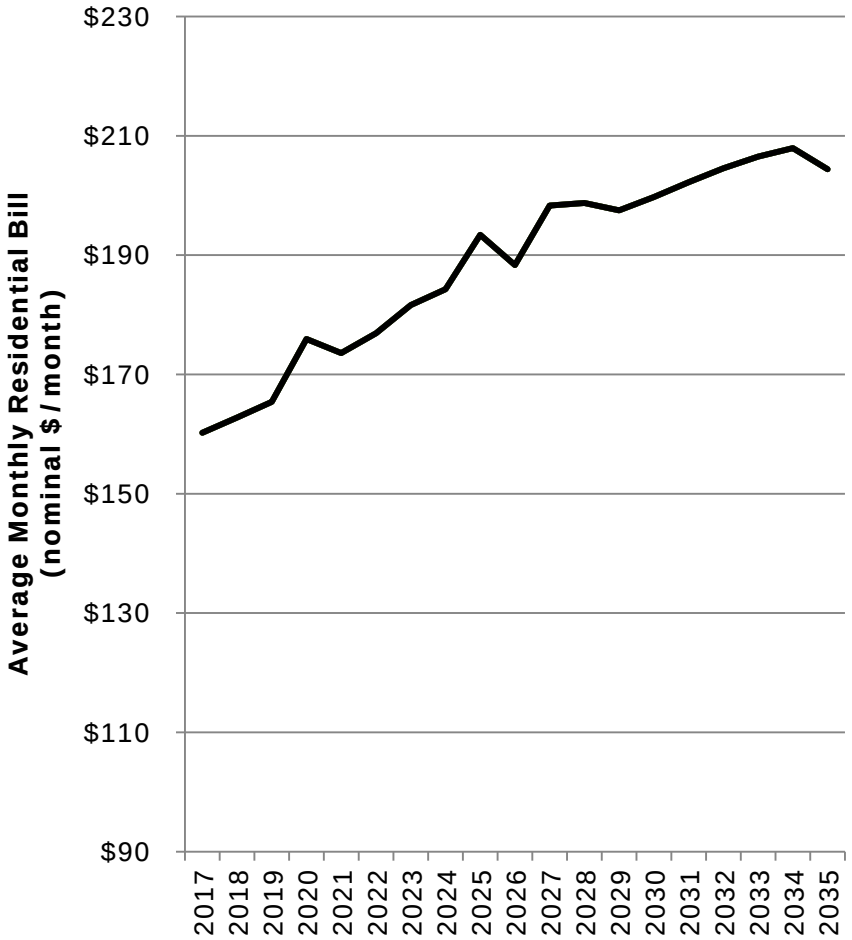
3. Interest Rate Risk
   - Using the 30-year financing case from Scenario 2, this scenario looks at the consequence of an increase of 2 percentage points in the borrowing interest rate.

4. Maximize short-term cost reductions with limits
   - The same as Scenario 2 but with GA over-payments capped at $2 billion above the true cost of GA in any given year.

1. Status Quo – Global and Residential Impacts

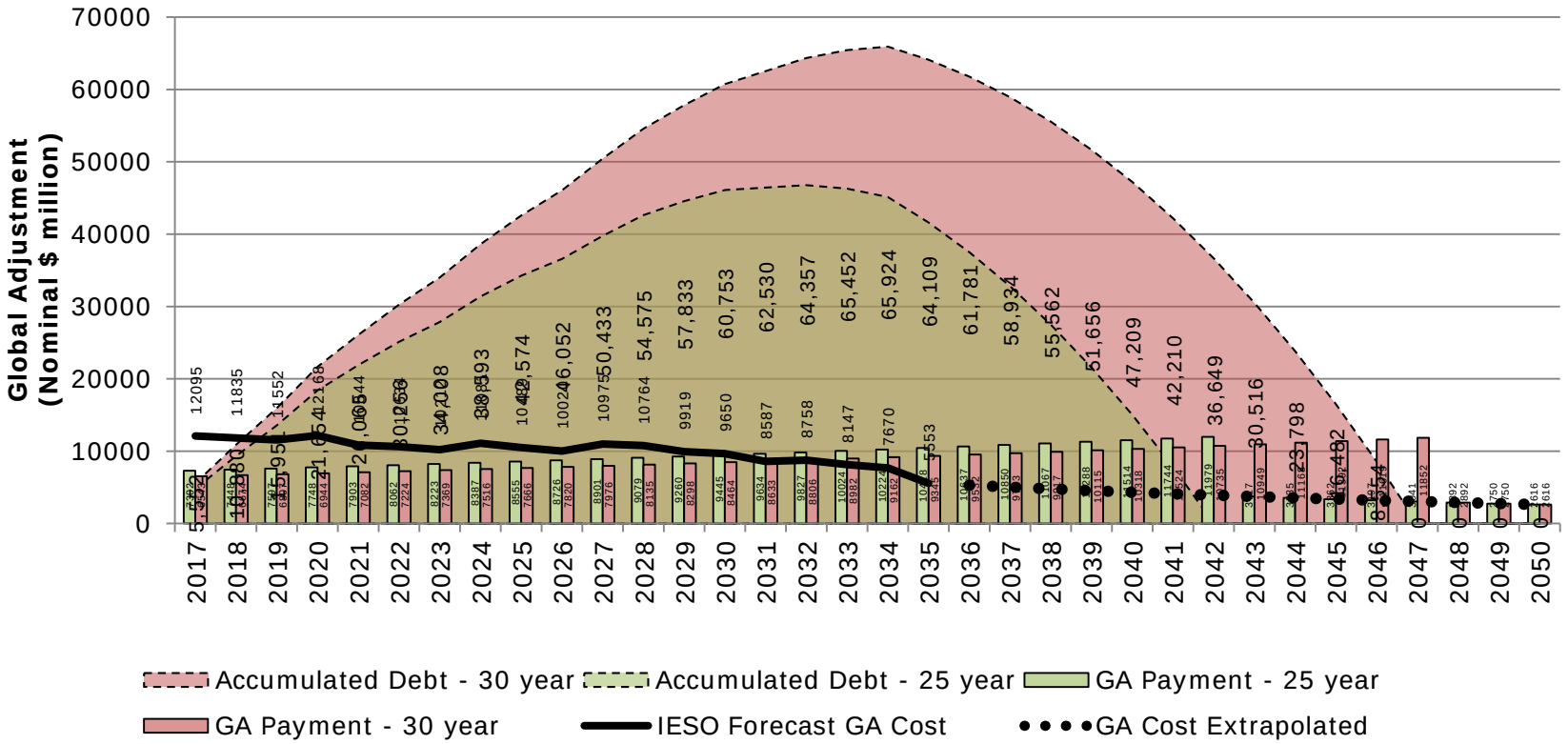
- Ratepayers continue paying the true cost of GA.





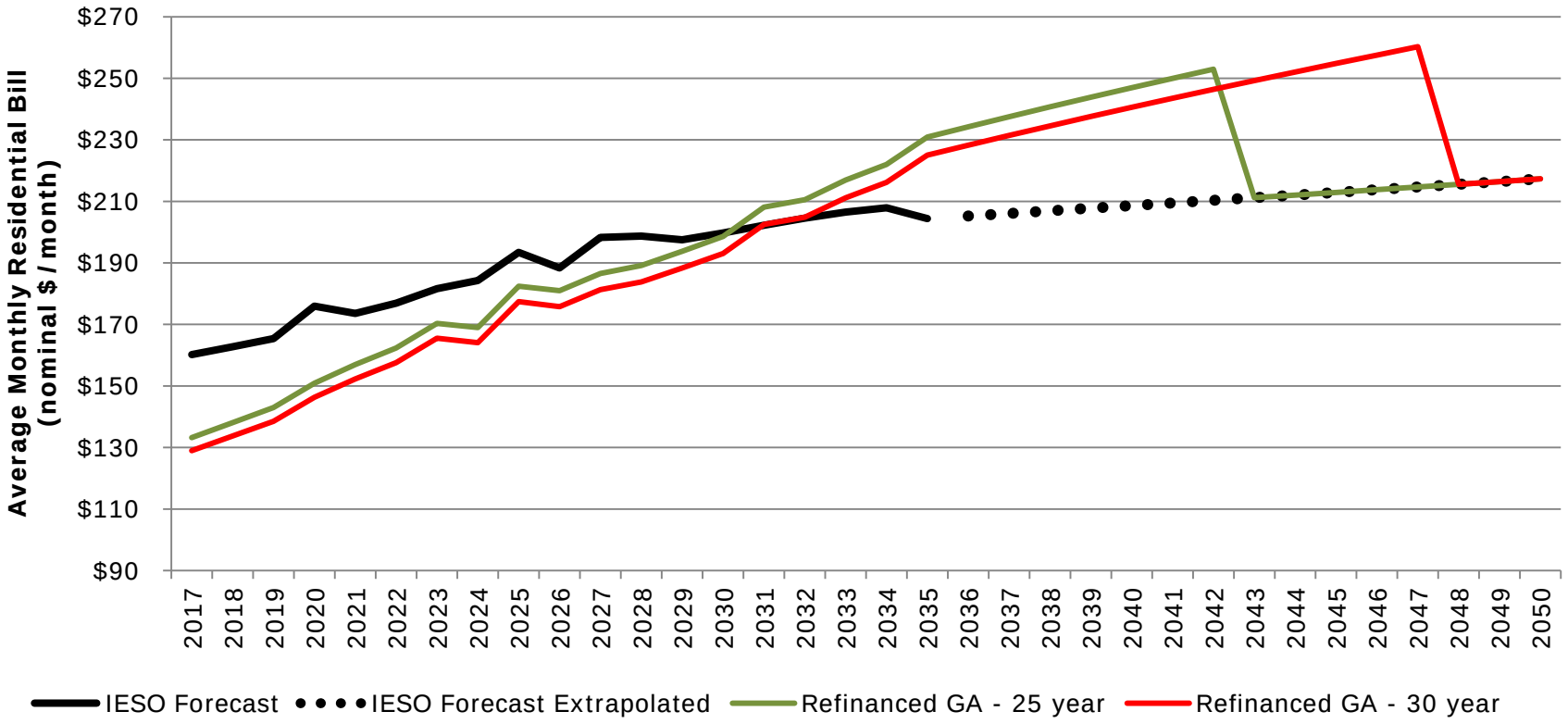
2. Maximize Short-term Cost Reduction – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year financing, green) and 2047 (30 year financing, red) respectively.



- A **reduction of 40-46% in GA payments** in 2017 is possible in this scenario by **accumulating up to $66 billion of debt.**
- Further reductions would require additional payments beyond those indicated in order to pay off the debt by 2042 and 2047 in each of the scenarios respectively.

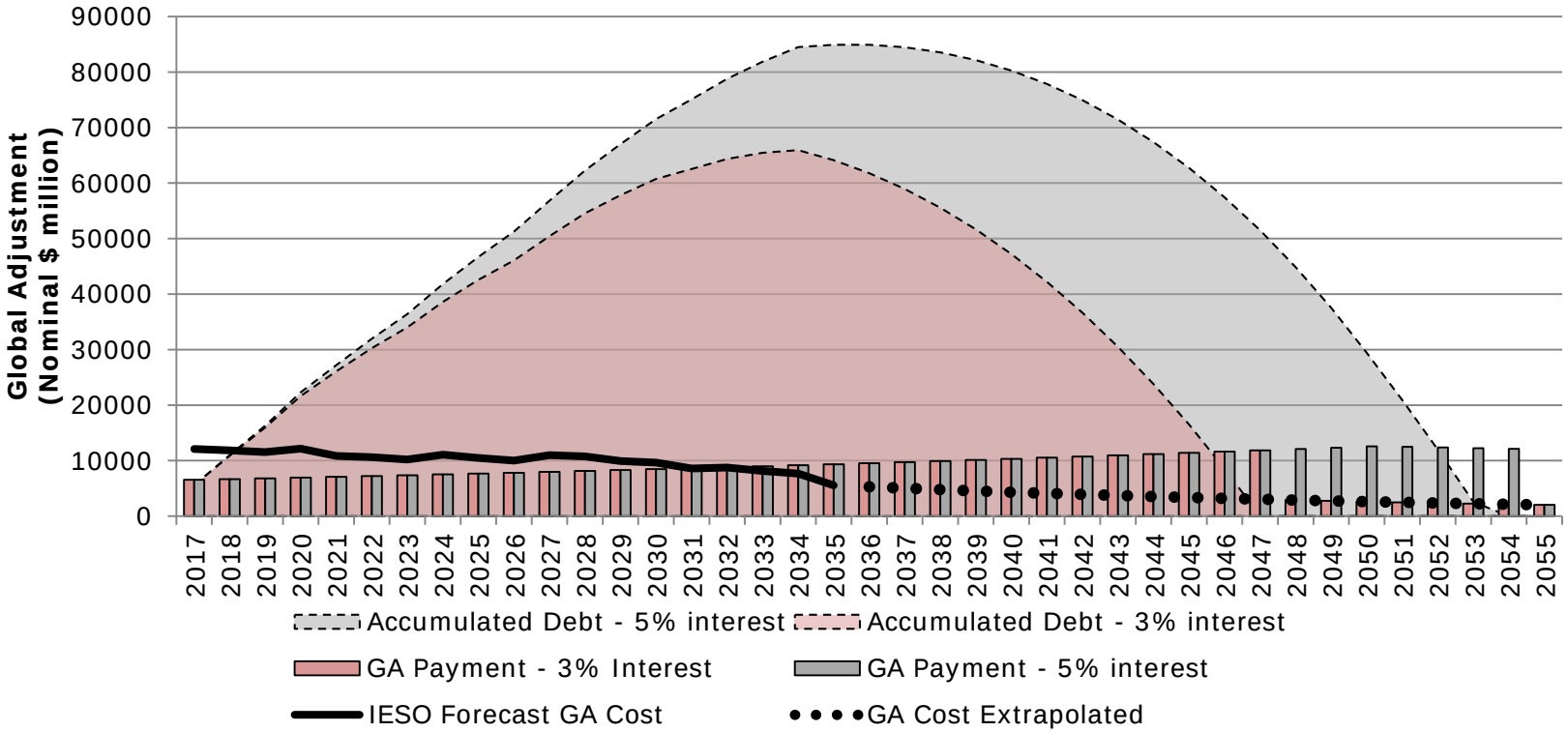
2. Maximize Short-term Cost Reduction – Residential Impacts



- This scenario results in a **short-term reduction of up $27-$31/month** in 2017 at the cost of **a long-term increase of up to $43-$46/month** relative to the IESO forecast.
- Due to the significant increase in electricity bills in later years, Scenario 4 considers limiting the amount above the true cost of the GA that is paid by ratepayers.

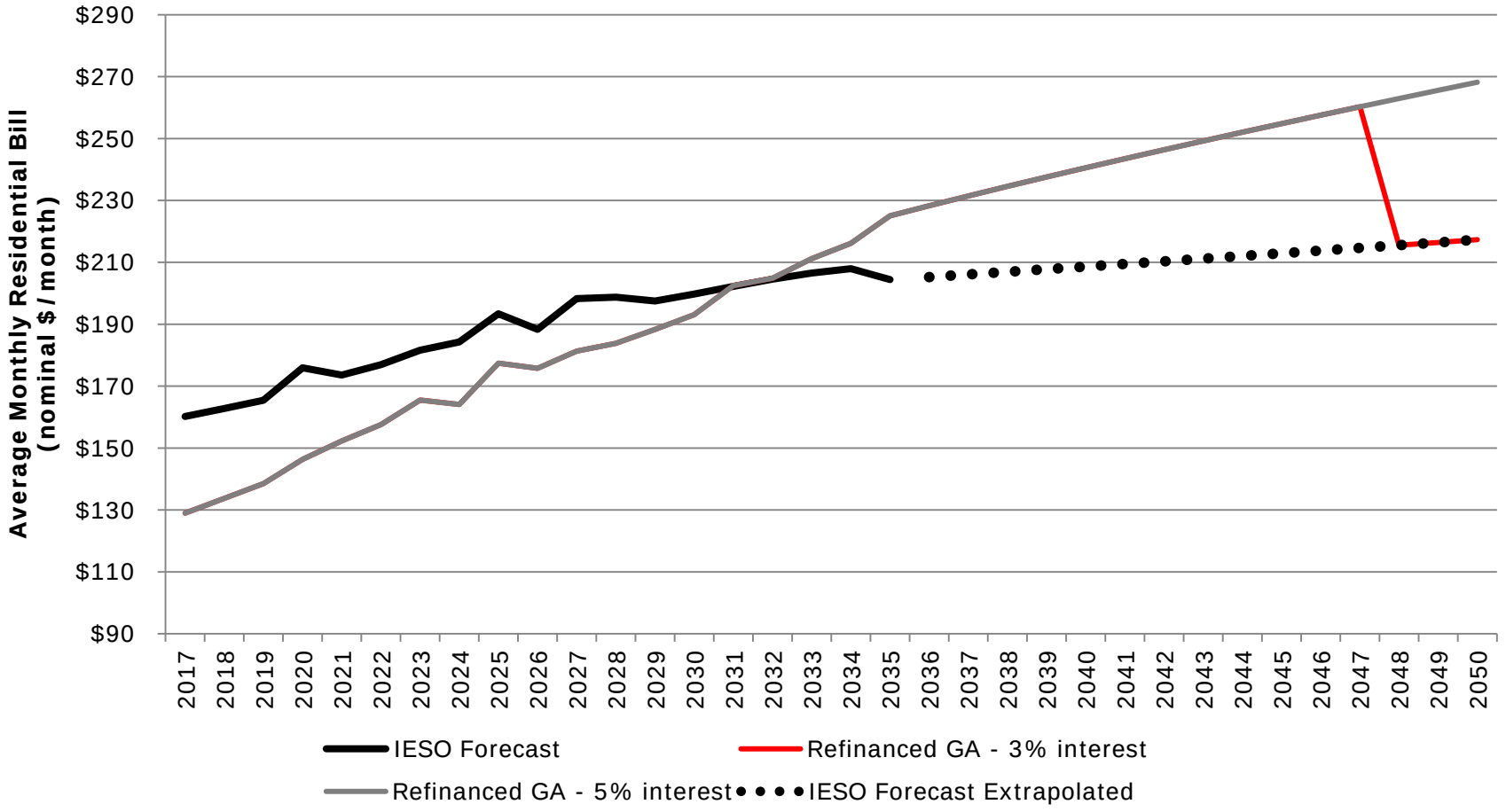
3. Interest Rate Risk – Global Impacts

- This scenario compares the maximal 30-year financing case from Scenario 2 (red, assuming a 3% interest rate) and calculates the resulting debt that would accrue due to an increase of two percentage points in the borrowing interest rate (grey, 5% interest).



- Under a 30-year financing payment schedule that assumes a borrowing interest rate of 3% (red), an increase in interest rate to 5% results in **more than $50 billion of accumulated debt in 2047** (grey) requiring further GA over-payments beyond 2047 in order to service the debt.

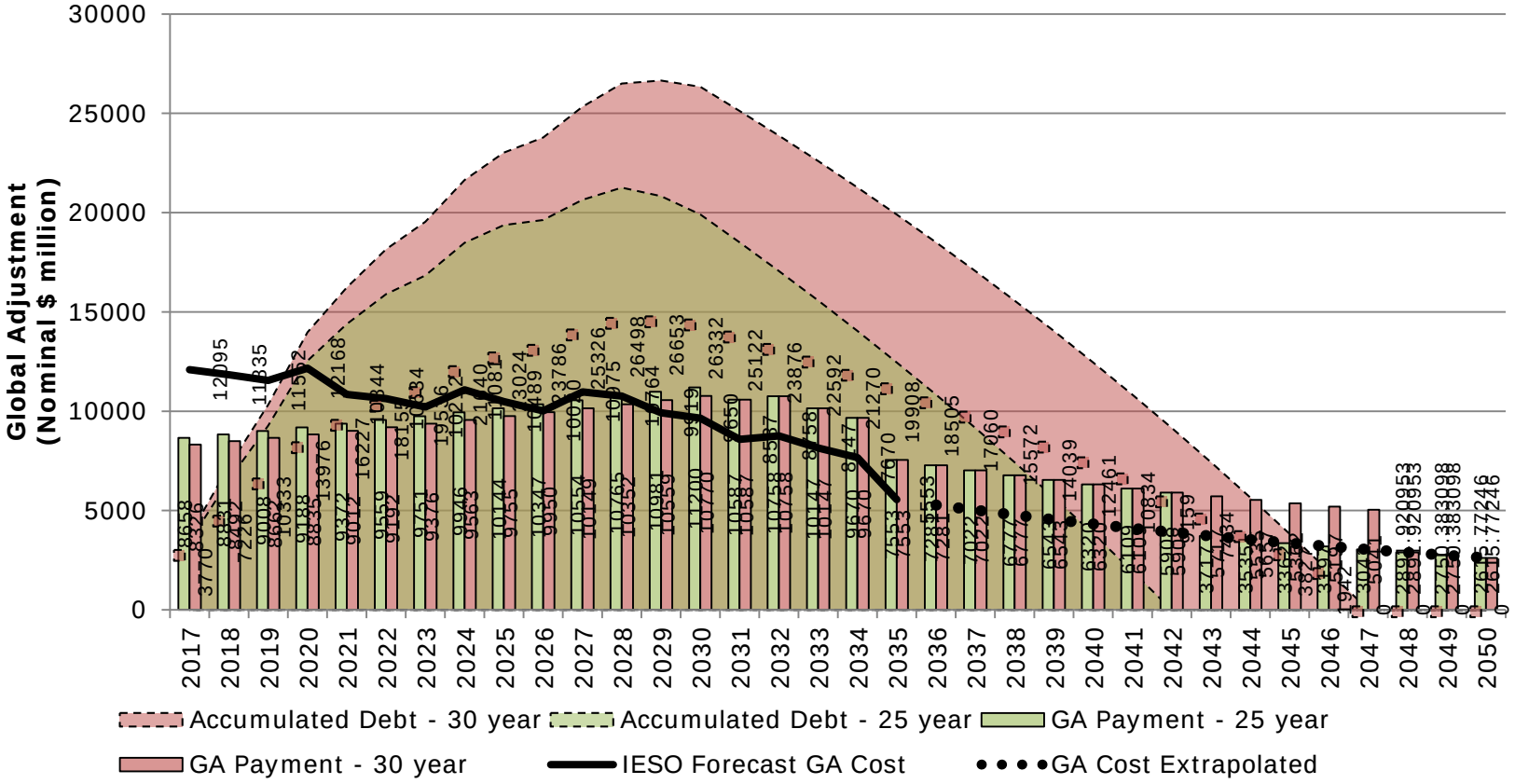
3. Interest Rate Risk – Residential Impacts



- In this scenario, an increase in the borrowing interest rate lengthens the financing period beyond 2047.

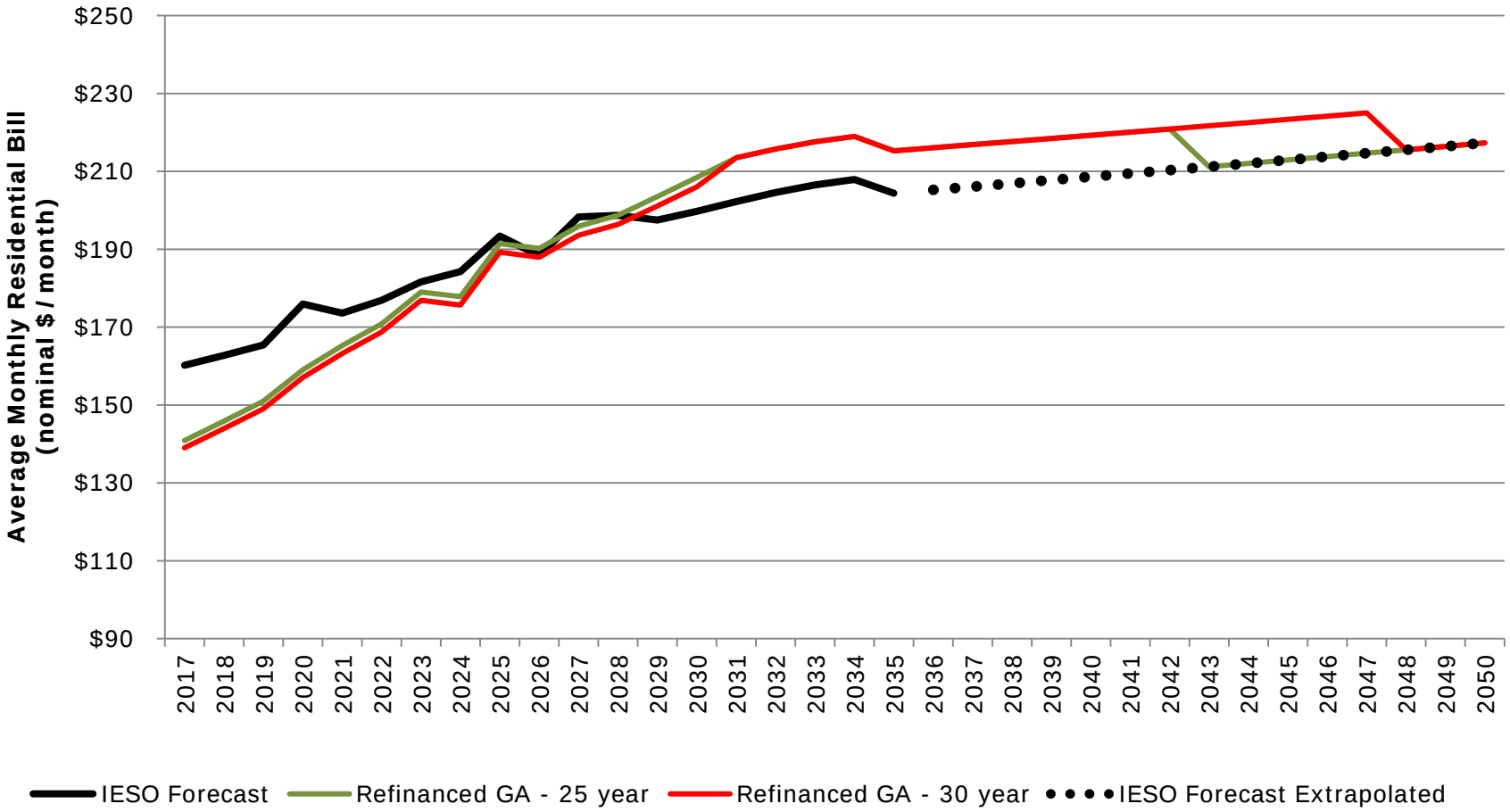
4. Maximize Short-term Cost Reduction with Limits – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year, green) and 2047 (30 year, red) respectively subject to limiting ratepayer over-payments to no more than $2 billion above the true cost of GA.



- A **reduction of 28-31% in GA payments** in 2017 is possible in this scenario by **accumulating up to $26 billion of debt.**

4. Maximize Short-term Cost Reduction with Limits – Residential Impacts



- This scenario results in **a short-term reduction of up $19-$21/month** in 2017 at the cost of **a long-term increase of up to $11/month** in 2029-2047 relative to the IESO forecast.

Ontario

MINISTRY OF
ENERGY

Debt Financing the Global Adjustment

January 10, 2017

Working Draft for Discussion Purposes Only

Purpose

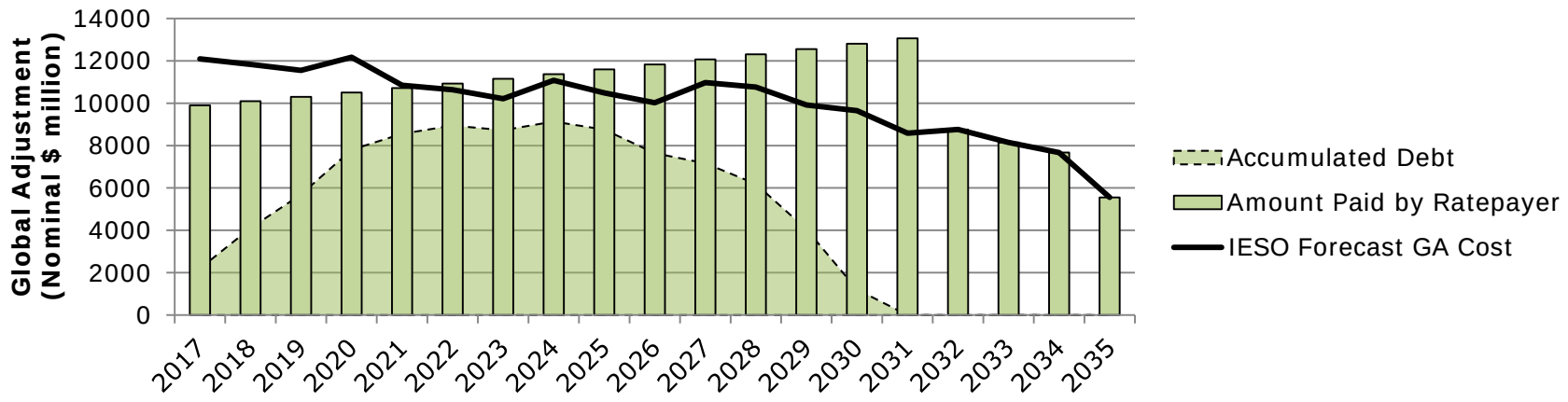
- To analyze the system cost and ratepayer impact of partially financing the cost of the global adjustment (GA) by incurring debt to defer some of the cost.

- An indicative GA financing proposal is presented followed by a qualitative discussion of the proposal's risks.

- The remainder of the presentation quantitatively examines several different scenarios for debt financing the GA, showing:
  - The amount of debt incurred;
  - Impact on total system cost; and
  - Impact on residential bills.

Indicative Proposal to Debt Finance the Global Adjustment

- For the purpose of discussion, the amount of GA paid by ratepayers in each year over the forecast period is set at a fixed amount until the accumulated debt has been completely paid off.
- All scenarios consider setting the 2017 amount of GA paid by ratepayers at a value lower than the true cost of GA and increasing that amount year-over-year at inflation (assumed to be 2%) until the debt has been paid off.
- In this way, GA costs will be "tilted" over time by lowering costs in the short term and increasing costs in the long term.
- In some scenarios, the amount of GA paid by ratepayers *above* the expected true cost of GA is capped so as to limit large increases in the cost of electricity in any given year.
- Analysis is based on forecasts from Independent Electricity System Operator's (IESO) Ontario Planning Outlook.



Sample debt financing: Ratepayers pay less than the cost of GA in early years, accumulating $9 billion of debt that is paid off in 2031 by paying more than the cost of GA in later years.

Considerations and Risks – Ratepayer

Ratepayer:

- Incurring debt to finance the GA, while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.

- The GA financing proposal involves accruing large amounts of debt to reduce electricity rates. This debt would be highly sensitive to interest rates which could extend repayment timelines or put significant pressure on rates (see Scenario 3 for an example of such interest rate risk).

- GA and HOEP provide a natural hedge against each other. Smoothing only one component would lead to greater price volatility. For example, if HOEP is higher than expected (due to higher gas or carbon prices, for example), all-in rates will rise significantly as the natural decrease in GA would not occur given the prescribed GA rate.

- Conversely, if GA is higher than forecast (i.e., because of lower HOEP or additional out-of-market costs), the debt would increase to a higher amount, requiring additional debt service payments and/or a longer recovery period.

- Should Ontario demand be lower than forecasted, the cost of paying off the debt will be shared by a smaller pool of consumption, further increasing future costs for individual ratepayers.

Considerations and Risks – Legal, Fiscal and Stakeholder

Legal:

- Such changes to the financing of the GA may require legislative or other amendments and will require further consultation with Legal Services Branch.

Fiscal / Accounting:

- Further analysis is required on whether such changes to the financing of the GA would affect the Province's current accounting treatment for the GA and represent a potential fiscal risk. As such, early engagement with Legal Services Branch and Treasury Board Secretariat is advised.

- The significant amount of additional Provincial borrowing needed to debt finance the GA, and associated risks (e.g., interest rates, repayment timelines), could put pressure on the Province's credit rating. Further analysis is required and would suggest early engagement with Ministry of Finance / Ontario Financing Authority.

Stakeholder:

- The significant deferral of electricity system costs over a long time-horizon and associated interest costs may draw criticism from some stakeholders as creating a new "stranded debt" of the sector. Note: the Debt Retirement Charge was removed from residential bills in 2016 and will be removed for remaining customers in 2018.

GA Debt Financing Scenarios

1. Status Quo
   - Ratepayers continue paying the full cost of the GA in each year without incurring any debt.

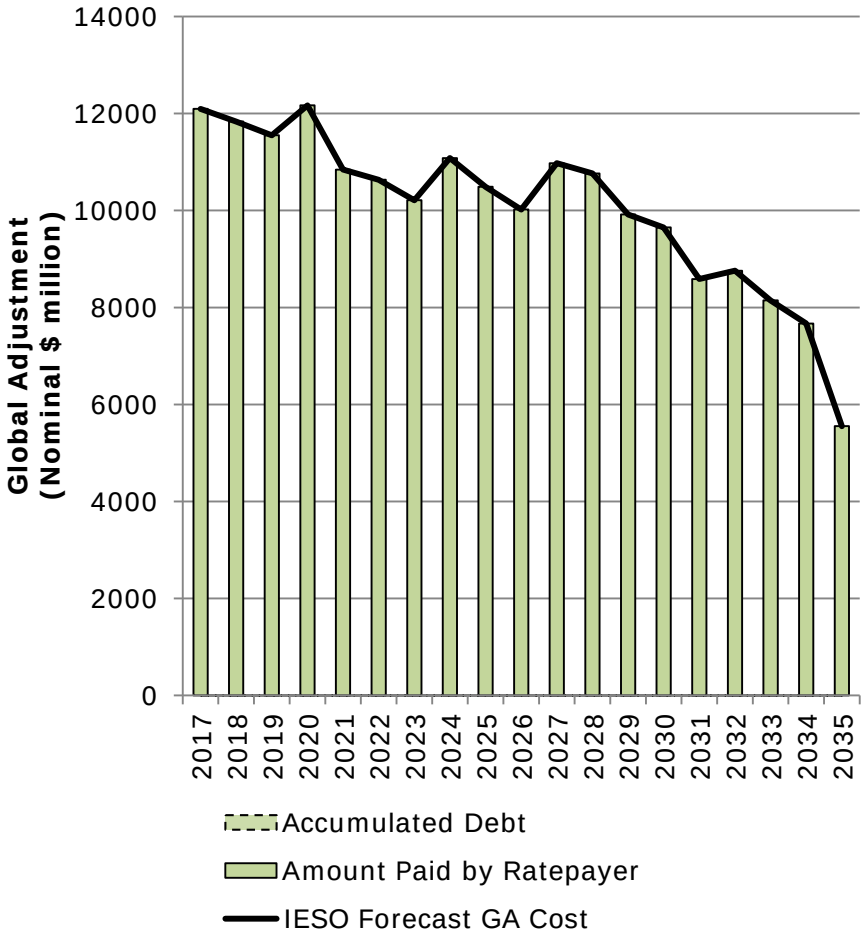
2. Maximize short-term cost reductions
   - This scenario considers the maximum amount by which ratepayer GA costs in 2017 can be reduced such that the accumulated debt is paid off over a 25-30 year financing period. This scenario assumes a 3% borrowing interest rate.

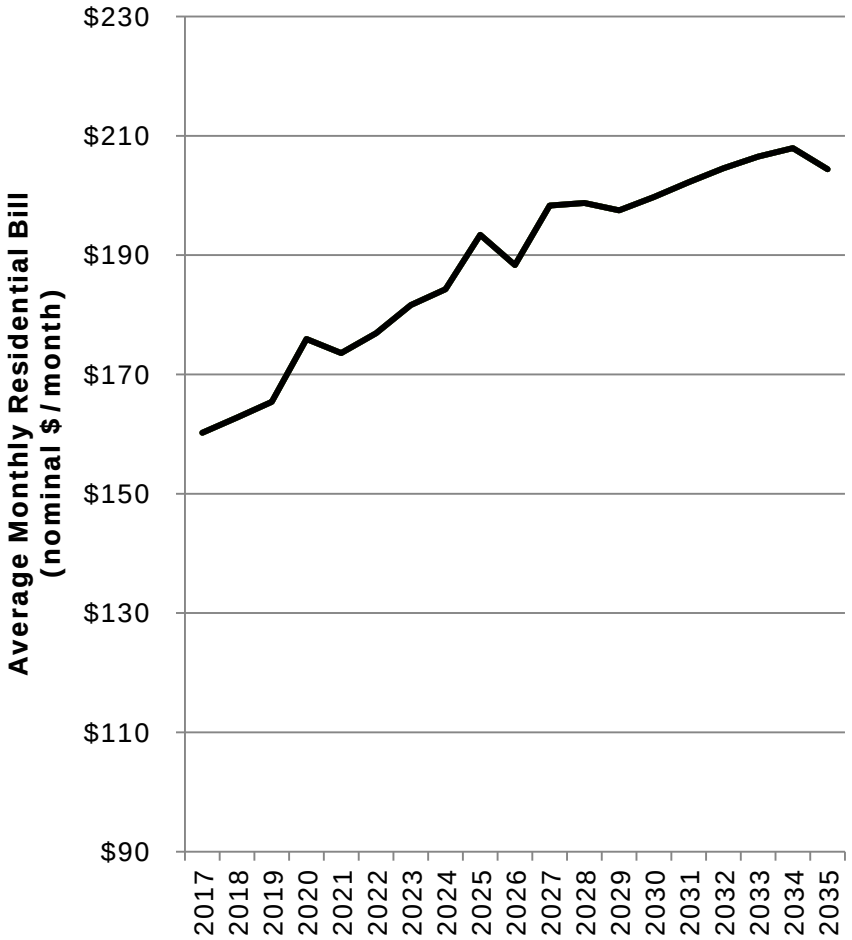
3. Interest Rate Risk
   - Using the 30-year financing case from Scenario 2, this scenario looks at the consequence of an increase of 2 percentage points in the borrowing interest rate.

4. Maximize short-term cost reductions with limits
   - The same as Scenario 2 but with GA over-payments capped at $2 billion above the true cost of GA in any given year.

1. Status Quo – Global and Residential Impacts

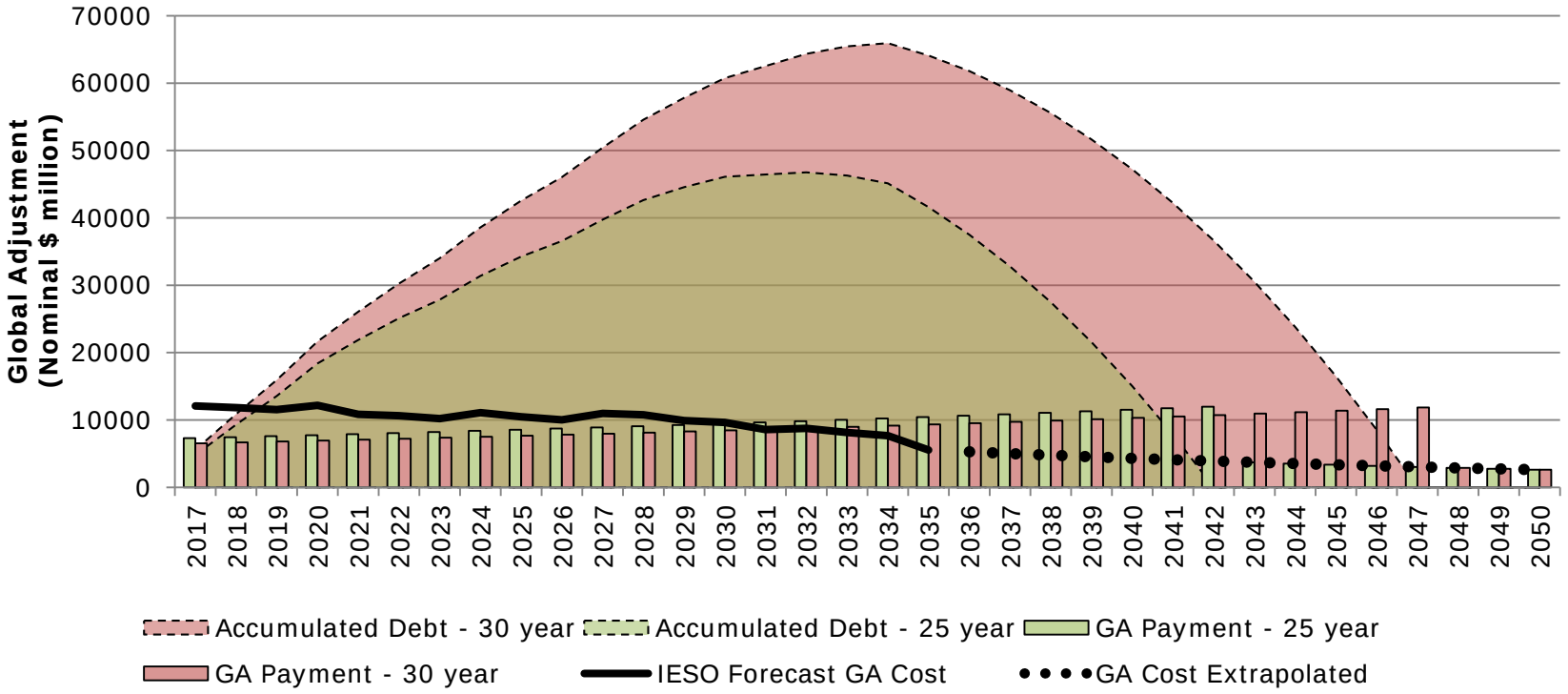
- Ratepayers continue paying the true cost of GA.





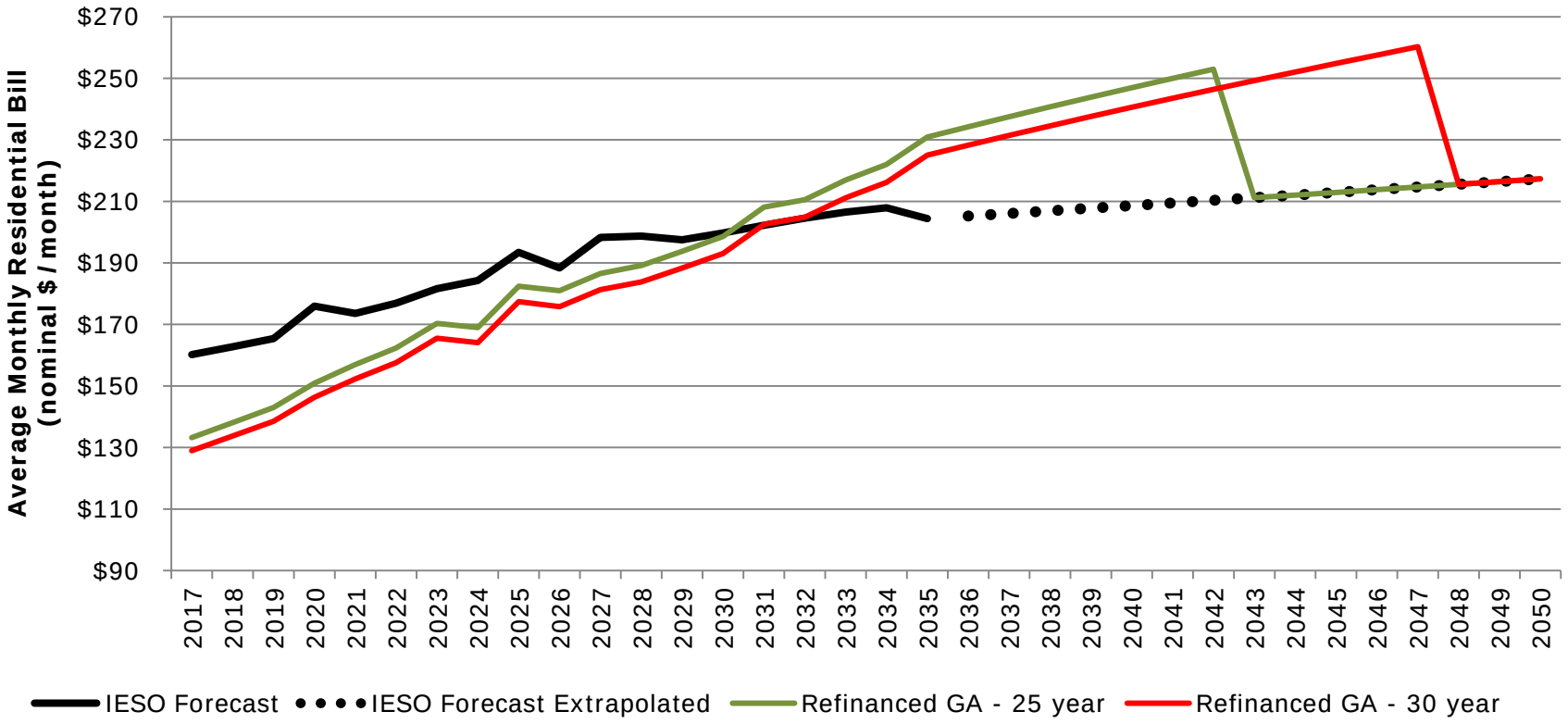
2. Maximize Short-term Cost Reduction – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year financing, green) and 2047 (30 year financing, red) respectively.



- A **reduction of 40-46% in GA payments** in 2017 is possible in this scenario by **accumulating up to $66 billion of debt.**
- Further reductions would require additional payments beyond those indicated in order to pay off the debt by 2042 and 2047 in each of the scenarios respectively.

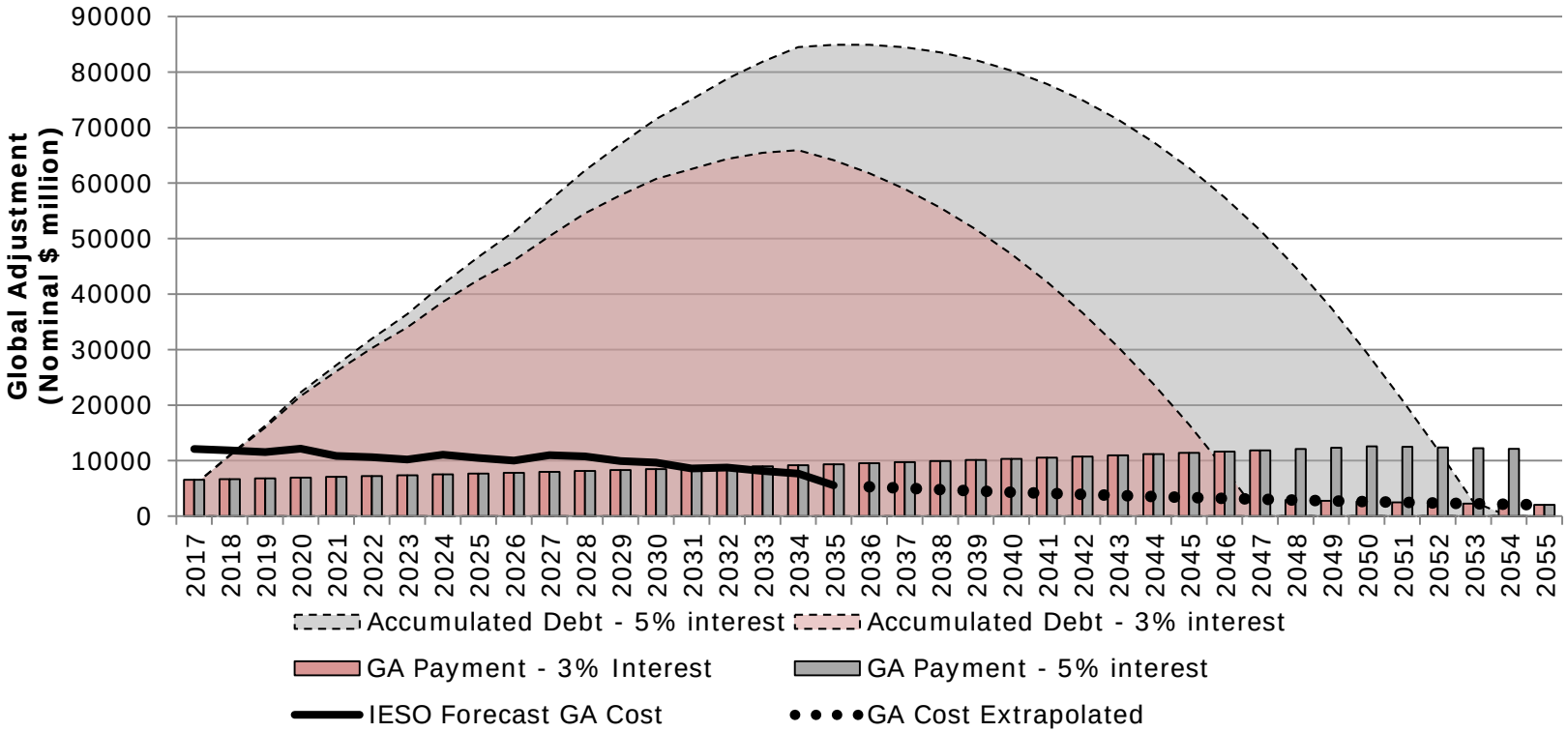
2. Maximize Short-term Cost Reduction – Residential Impacts



- This scenario results in a **short-term reduction of up $27-$31/month** in 2017 at the cost of **a long-term increase of up to $43-$46/month** relative to the IESO forecast.
- Due to the significant increase in electricity bills in later years, Scenario 4 considers limiting the amount above the true cost of the GA that is paid by ratepayers.

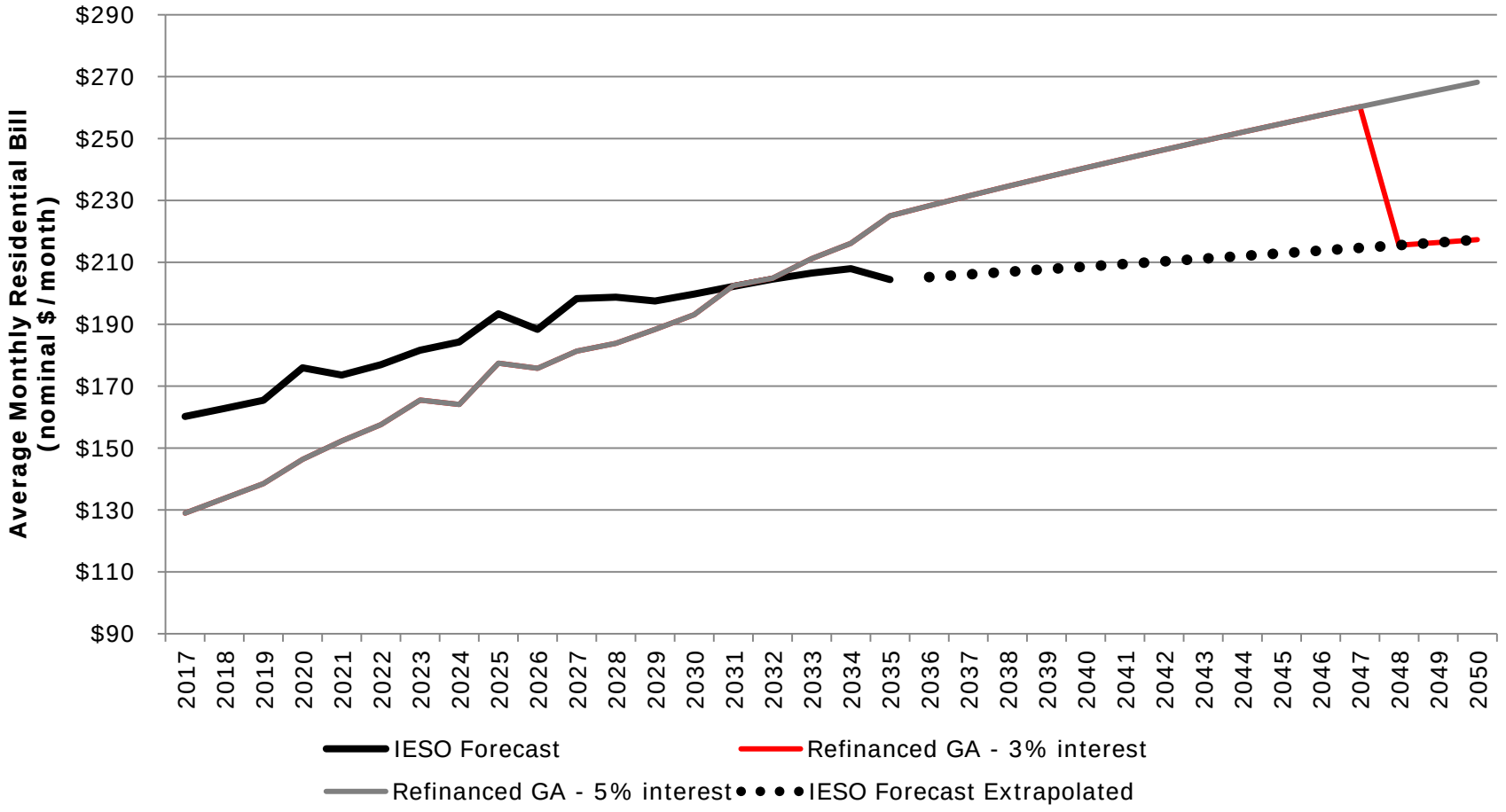
3. Interest Rate Risk – Global Impacts

- This scenario compares the maximal 30-year financing case from Scenario 2 (red, assuming a 3% interest rate) and calculates the resulting debt that would accrue due to an increase of two percentage points in the borrowing interest rate (grey, 5% interest).



- Under a 30-year financing payment schedule that assumes a borrowing interest rate of 3% (red), an increase in interest rate to 5% results in **more than $50 billion of accumulated debt in 2047** (grey) requiring further GA over-payments beyond 2047 in order to service the debt.

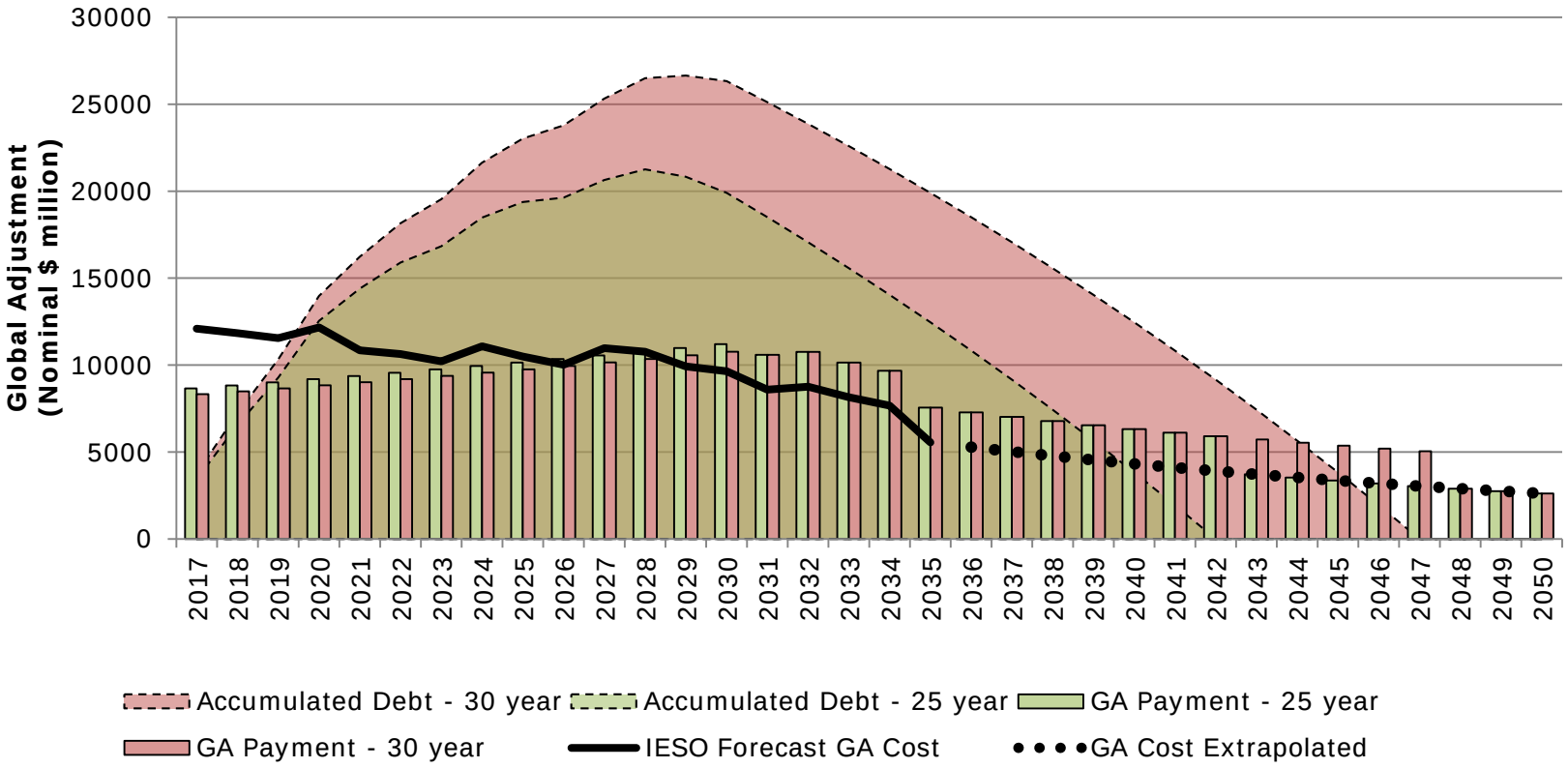
3. Interest Rate Risk – Residential Impacts



- In this scenario, an increase in the borrowing interest rate lengthens the financing period beyond 2047.

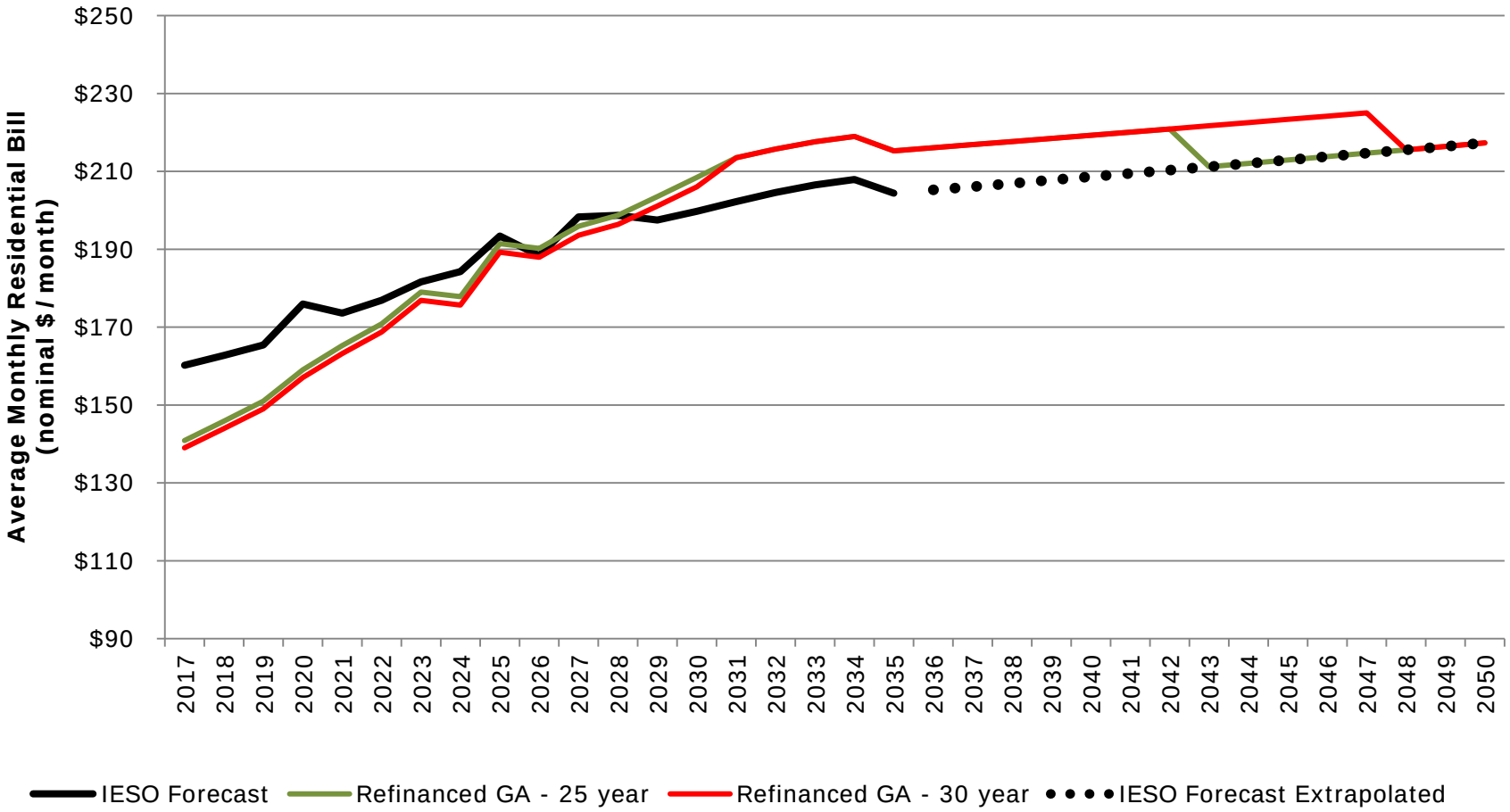
4. Maximize Short-term Cost Reduction with Limits – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year, green) and 2047 (30 year, red) respectively subject to limiting ratepayer over-payments to no more than $2 billion above the true cost of GA.



- A **reduction of 28-31% in GA payments** in 2017 is possible in this scenario by **accumulating up to $26 billion of debt.**

4. Maximize Short-term Cost Reduction with Limits – Residential Impacts



- This scenario results in **a short-term reduction of up $19-$21/month** in 2017 at the cost of **a long-term increase of up to $11/month** in 2029-2047 relative to the IESO forecast.

Ontario

MINISTRY OF
ENERGY

Debt Financing the Global Adjustment

January 10, 2017

Working Draft for Discussion Purposes Only

Purpose

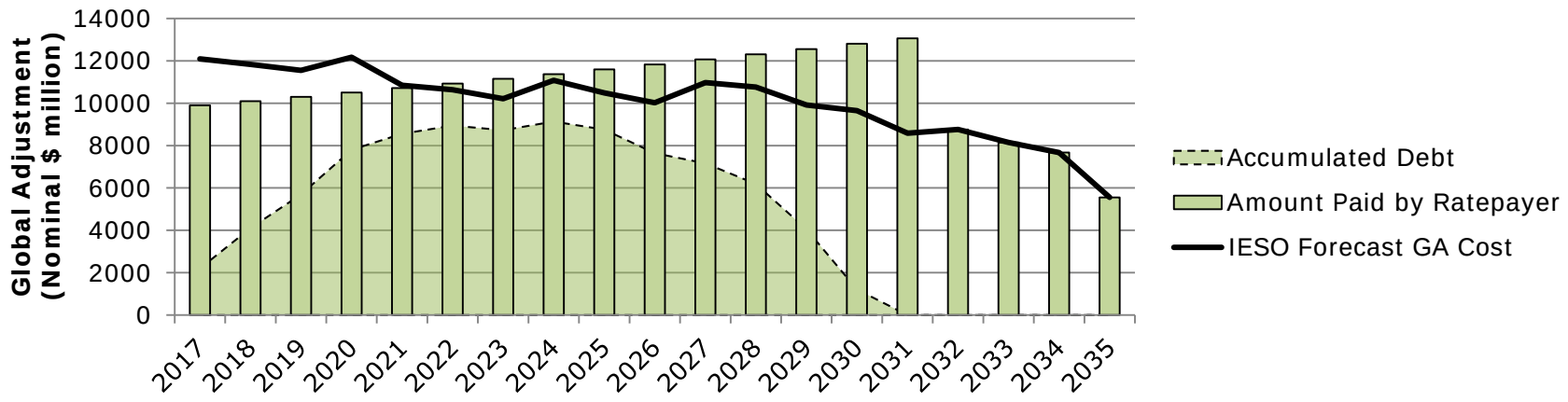
- To analyze the system cost and ratepayer impact of partially financing the cost of the global adjustment (GA) by incurring debt to defer some of the cost.

- An indicative GA financing proposal is presented followed by a qualitative discussion of the proposal's risks.

- The remainder of the presentation quantitatively examines several different scenarios for debt financing the GA, showing:
  - The amount of debt incurred;
  - Impact on total system cost; and
  - Impact on residential bills.

Indicative Proposal to Debt Finance the Global Adjustment

- For the purpose of discussion, the amount of GA paid by ratepayers in each year over the forecast period is set at a fixed amount until the accumulated debt has been completely paid off.
- All scenarios consider setting the 2017 amount of GA paid by ratepayers at a value lower than the true cost of GA and increasing that amount year-over-year at inflation (assumed to be 2%) until the debt has been paid off.
- In this way, GA costs will be "tilted" over time by lowering costs in the short term and increasing costs in the long term.
- In some scenarios, the amount of GA paid by ratepayers *above* the expected true cost of GA is capped so as to limit large increases in the cost of electricity in any given year.
- Analysis is based on forecasts from Independent Electricity System Operator's (IESO) Ontario Planning Outlook.



Sample debt financing: Ratepayers pay less than the cost of GA in early years, accumulating $9 billion of debt that is paid off in 2031 by paying more than the cost of GA in later years.

Considerations and Risks – Ratepayer

Ratepayer:

- Incurring debt to finance the GA, while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.

- The GA financing proposal involves accruing large amounts of debt to reduce electricity rates. This debt would be highly sensitive to interest rates which could extend repayment timelines or put significant pressure on rates (see Scenario 3 for an example of such interest rate risk).

- GA and HOEP provide a natural hedge against each other. Smoothing only one component would lead to greater price volatility. For example, if HOEP is higher than expected (due to higher gas or carbon prices, for example), all-in rates will rise significantly as the natural decrease in GA would not occur given the prescribed GA rate.

- Conversely, if GA is higher than forecast (i.e., because of lower HOEP or additional out-of-market costs), the debt would increase to a higher amount, requiring additional debt service payments and/or a longer recovery period.

- Should Ontario demand be lower than forecasted, the cost of paying off the debt will be shared by a smaller pool of consumption, further increasing future costs for individual ratepayers.

Considerations and Risks – Legal, Fiscal and Stakeholder

Legal:

- Such changes to the financing of the GA may require legislative or other amendments and will require further consultation with Legal Services Branch.

Fiscal / Accounting:

- Further analysis is required on whether such changes to the financing of the GA would affect the Province's current accounting treatment for the GA and represent a potential fiscal risk. As such, early engagement with Legal Services Branch and Treasury Board Secretariat is advised.

- The significant amount of additional Provincial borrowing needed to debt finance the GA, and associated risks (e.g., interest rates, repayment timelines), could put pressure on the Province's credit rating. Further analysis is required and would suggest early engagement with Ministry of Finance / Ontario Financing Authority.

Stakeholder:

- The significant deferral of electricity system costs over a long time-horizon and associated interest costs may draw criticism from some stakeholders as creating a new "stranded debt" of the sector. Note: the Debt Retirement Charge was removed from residential bills in 2016 and will be removed for remaining customers in 2018.

GA Debt Financing Scenarios

1. Status Quo
   - Ratepayers continue paying the full cost of the GA in each year without incurring any debt.

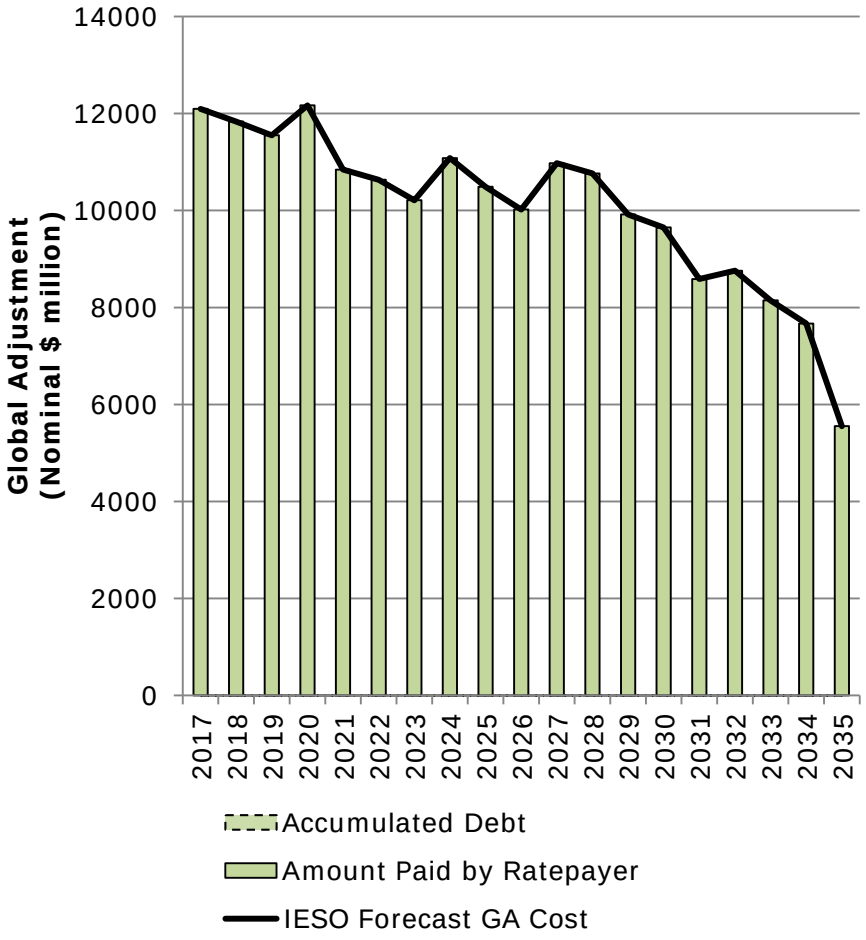
2. Maximize short-term cost reductions
   - This scenario considers the maximum amount by which ratepayer GA costs in 2017 can be reduced such that the accumulated debt is paid off over a 25-30 year financing period. This scenario assumes a 3% borrowing interest rate.

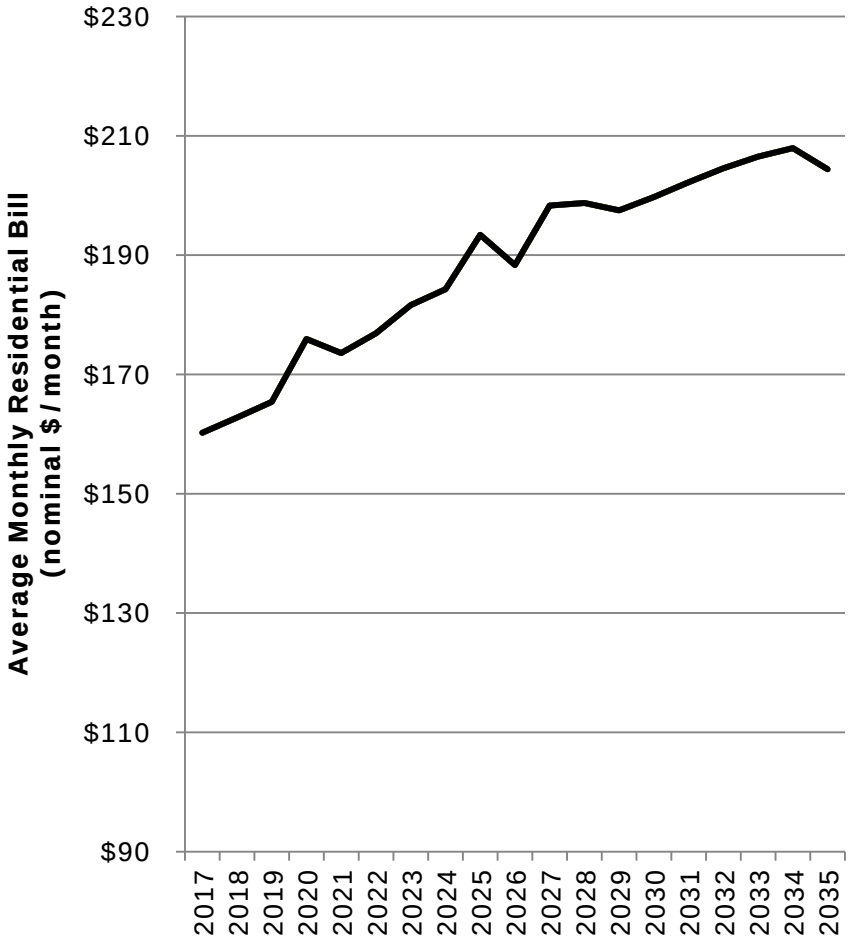
3. Interest Rate Risk
   - Using the 30-year financing case from Scenario 2, this scenario looks at the consequence of an increase of 2 percentage points in the borrowing interest rate.

4. Maximize short-term cost reductions with limits
   - The same as Scenario 2 but with GA over-payments capped at $2 billion above the true cost of GA in any given year.

1. Status Quo – Global and Residential Impacts

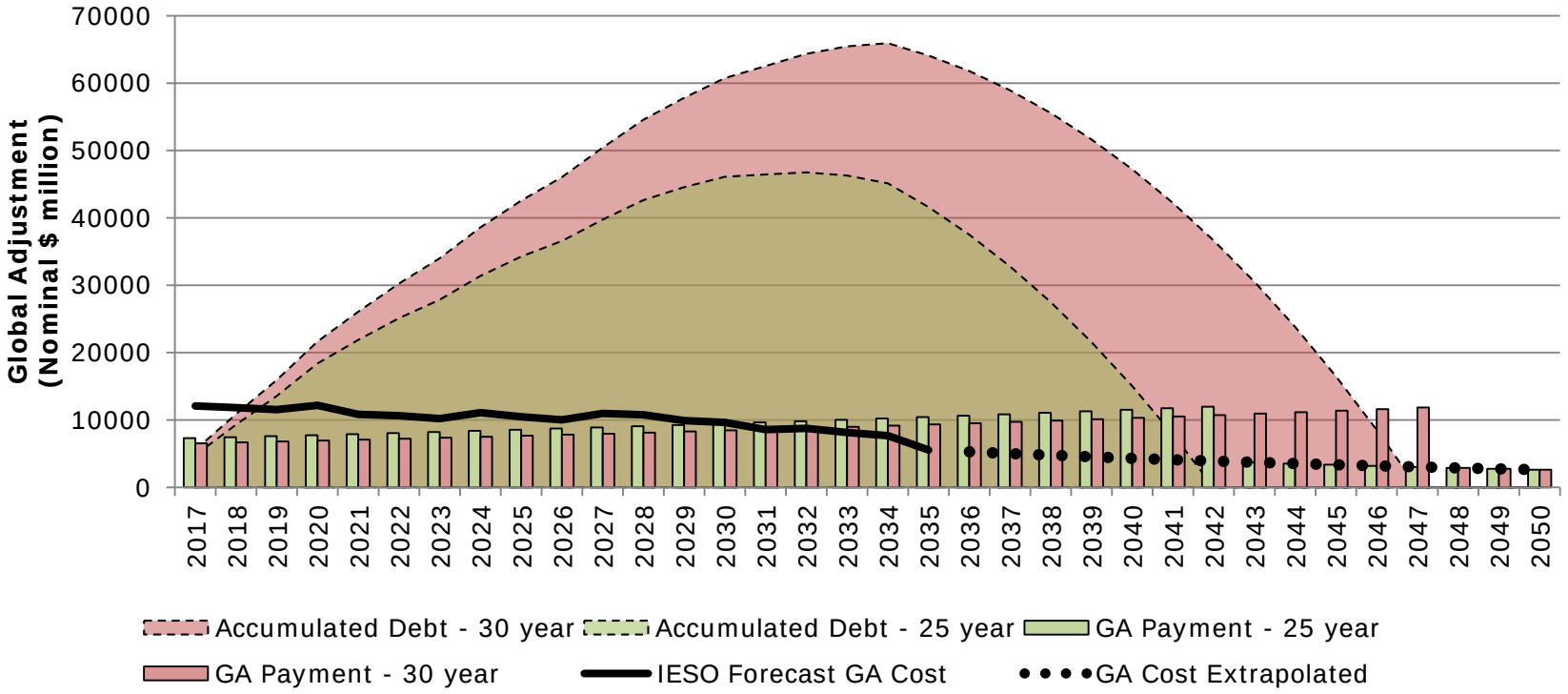
- Ratepayers continue paying the true cost of GA.





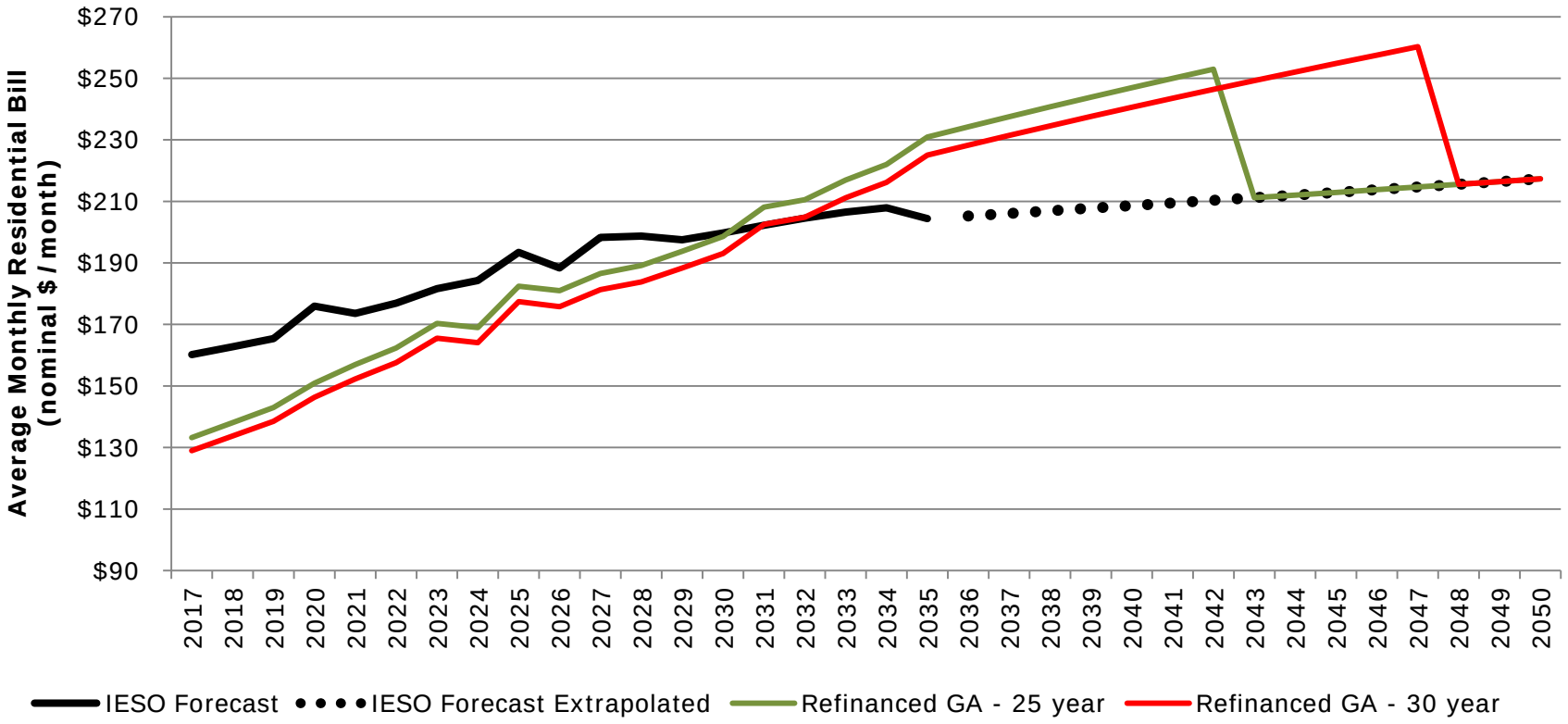
2. Maximize Short-term Cost Reduction – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year financing, green) and 2047 (30 year financing, red) respectively.



- A **reduction of 40-46% in GA payments** in 2017 is possible in this scenario by **accumulating up to $66 billion of debt.**
- Further reductions would require additional payments beyond those indicated in order to pay off the debt by 2042 and 2047 in each of the scenarios respectively.

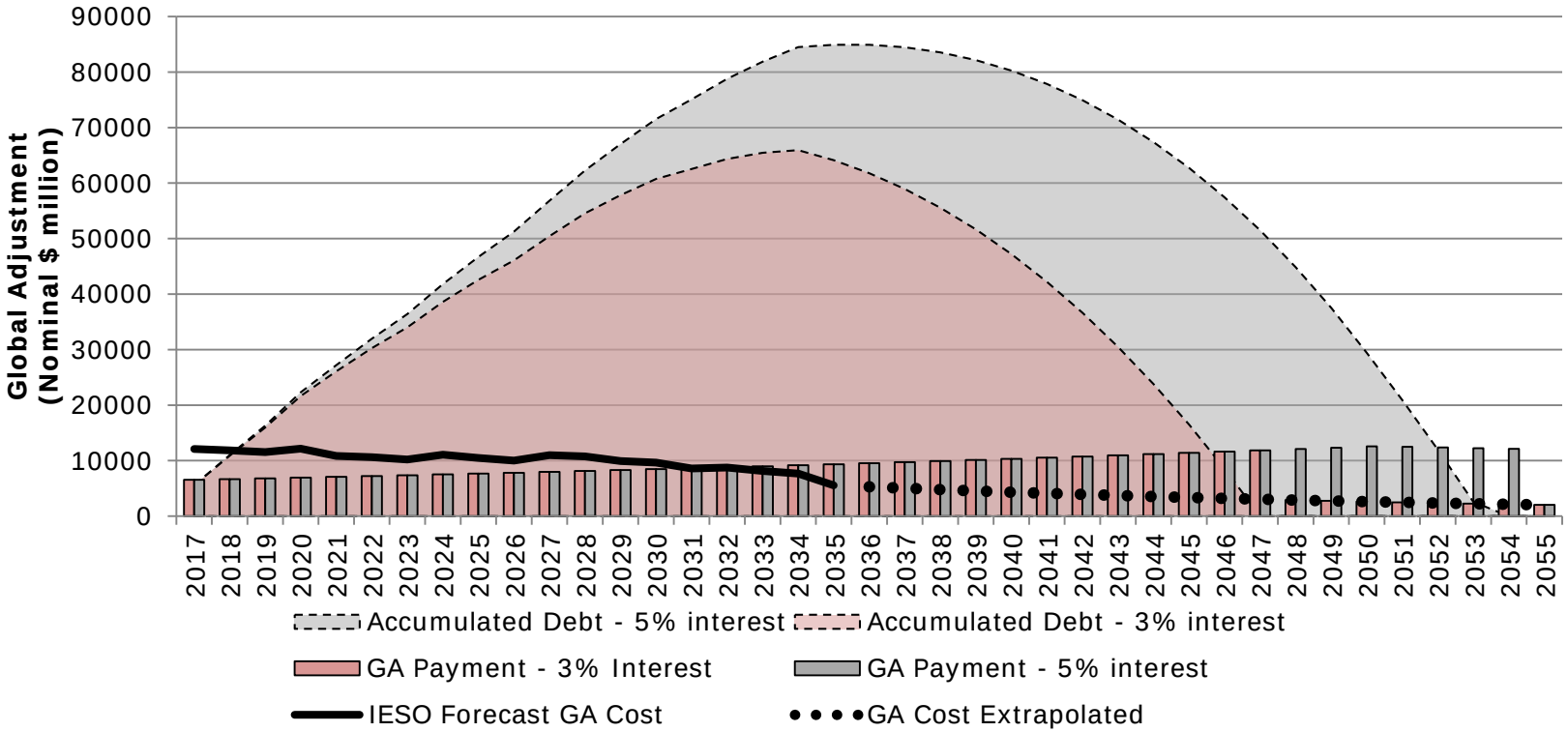
2. Maximize Short-term Cost Reduction – Residential Impacts



- This scenario results in a **short-term reduction of up $27-$31/month** in 2017 at the cost of **a long-term increase of up to $43-$46/month** relative to the IESO forecast.
- Due to the significant increase in electricity bills in later years, Scenario 4 considers limiting the amount above the true cost of the GA that is paid by ratepayers.

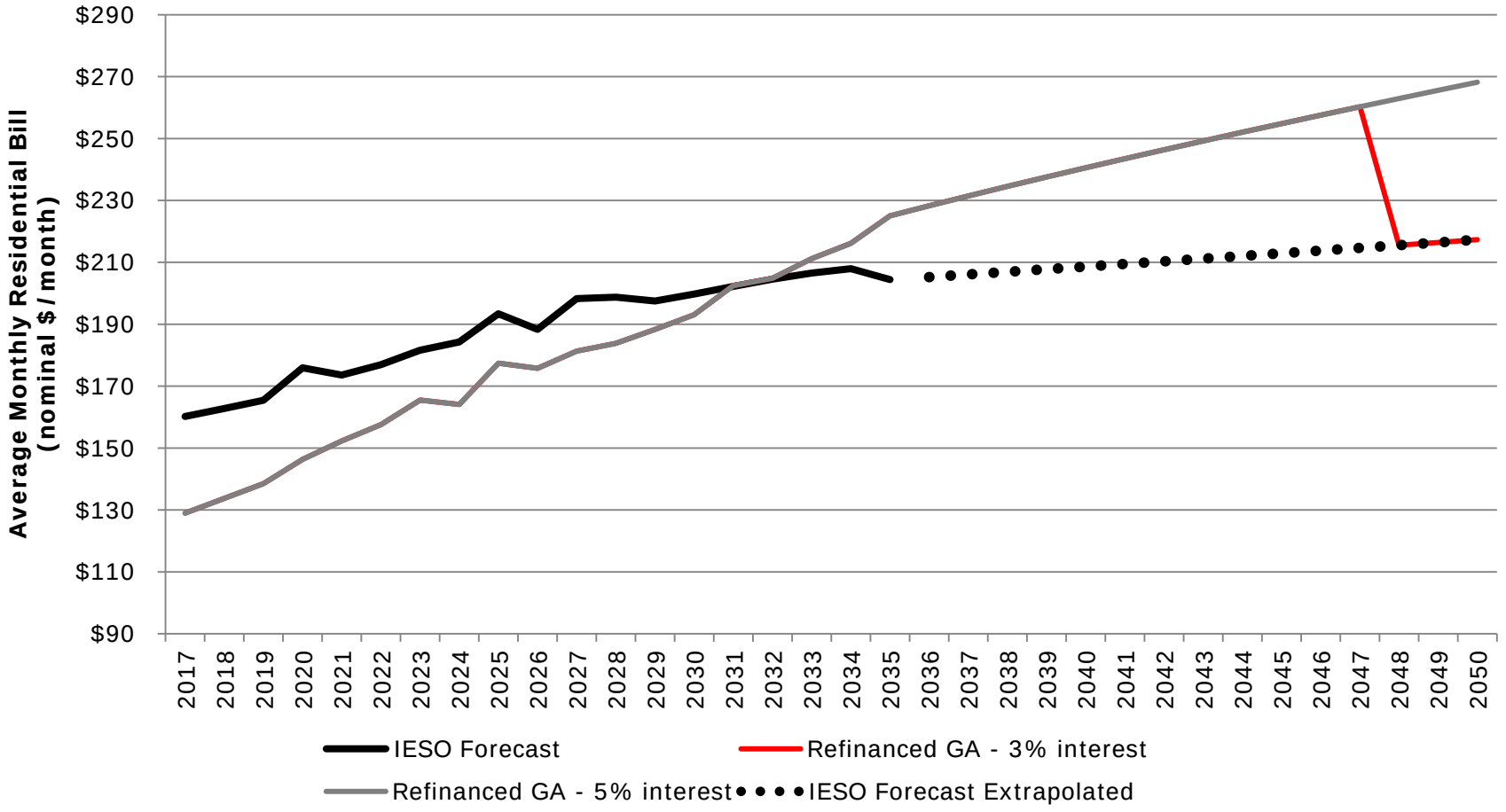
3. Interest Rate Risk – Global Impacts

- This scenario compares the maximal 30-year financing case from Scenario 2 (red, assuming a 3% interest rate) and calculates the resulting debt that would accrue due to an increase of two percentage points in the borrowing interest rate (grey, 5% interest).



- Under a 30-year financing payment schedule that assumes a borrowing interest rate of 3% (red), an increase in interest rate to 5% results in **more than $50 billion of accumulated debt in 2047** (grey) requiring further GA over-payments beyond 2047 in order to service the debt.

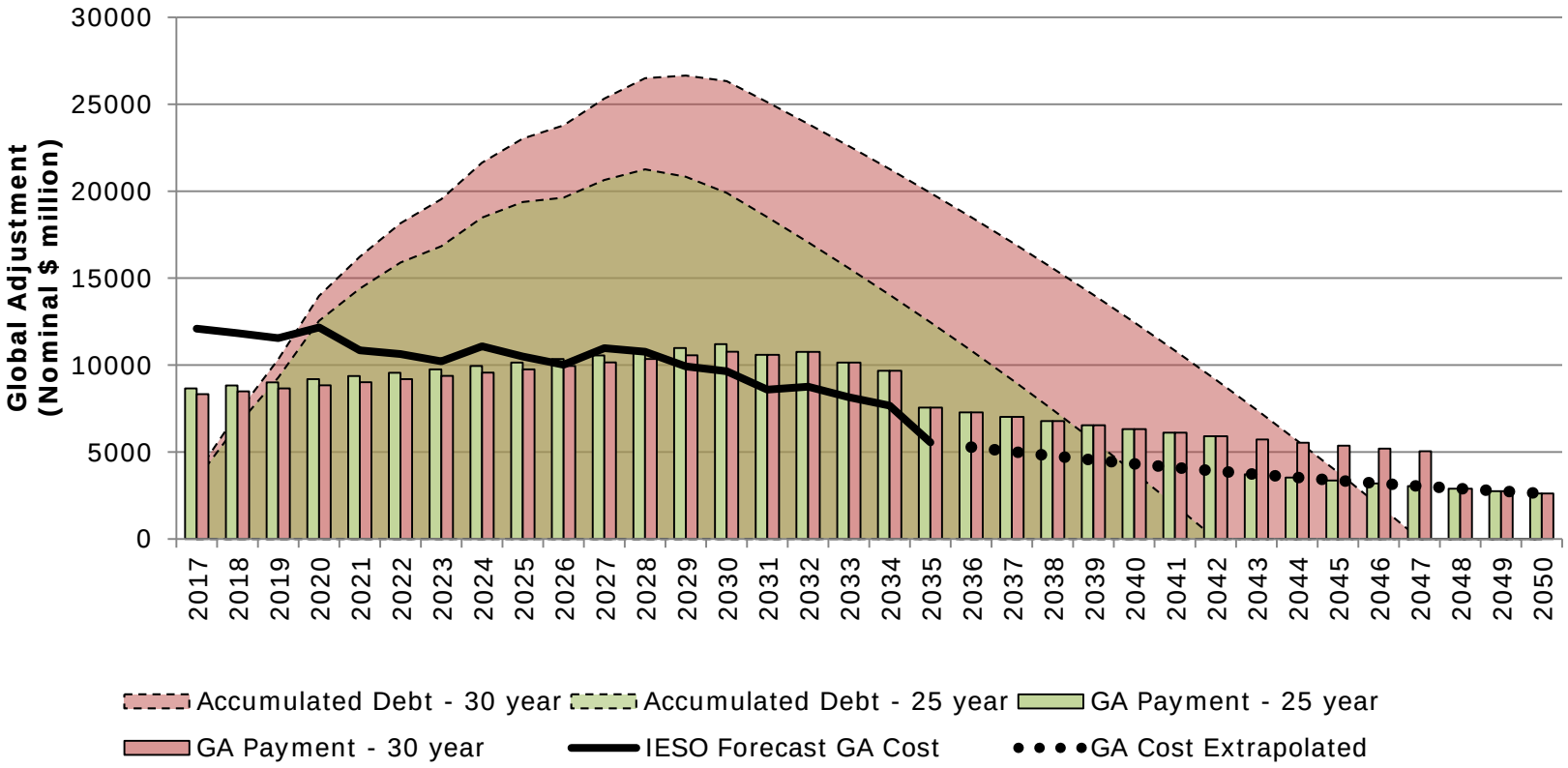
3. Interest Rate Risk – Residential Impacts



- In this scenario, an increase in the borrowing interest rate lengthens the financing period beyond 2047.

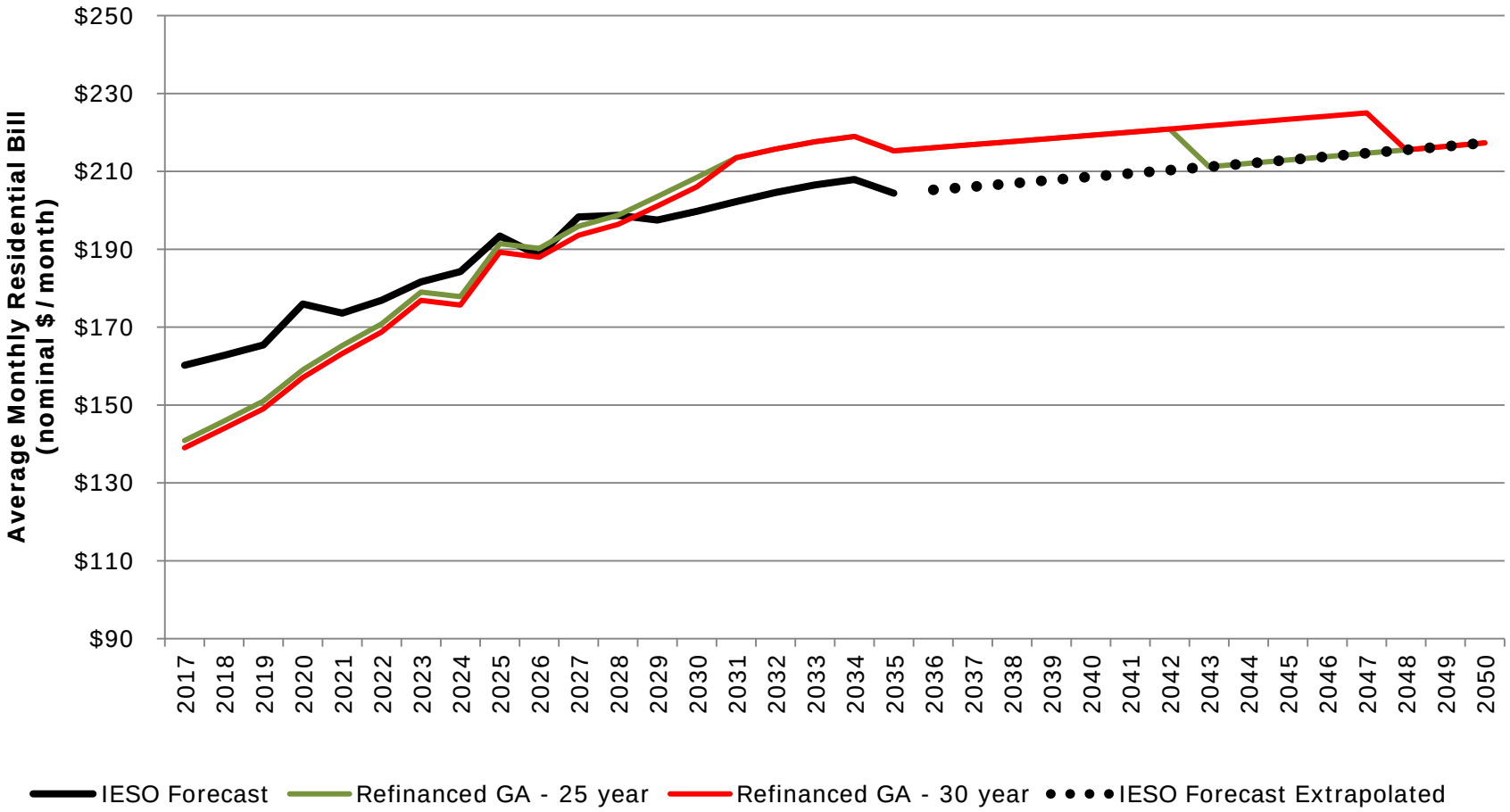
4. Maximize Short-term Cost Reduction with Limits – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year, green) and 2047 (30 year, red) respectively subject to limiting ratepayer over-payments to no more than $2 billion above the true cost of GA.



- A **reduction of 28-31% in GA payments** in 2017 is possible in this scenario by **accumulating up to $26 billion of debt.**

4. Maximize Short-term Cost Reduction with Limits – Residential Impacts



- This scenario results in **a short-term reduction of up $19-$21/month** in 2017 at the cost of **a long-term increase of up to $11/month** in 2029-2047 relative to the IESO forecast.

Ontario

MINISTRY OF
ENERGY

Debt Financing the Global Adjustment

January 10, 2017

Working Draft for Discussion Purposes Only

Purpose

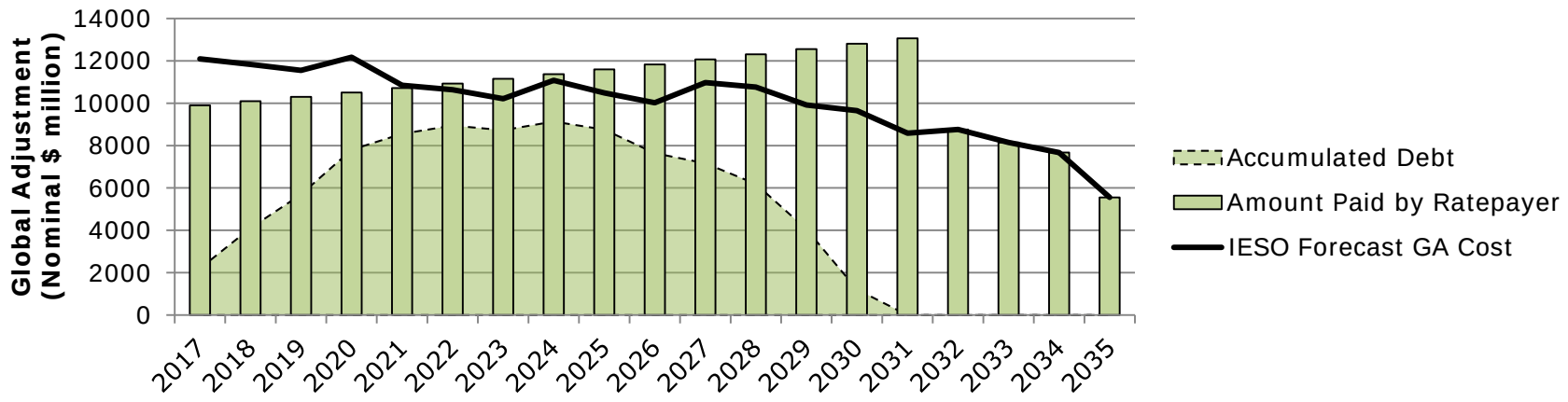
- To analyze the system cost and ratepayer impact of partially financing the cost of the global adjustment (GA) by incurring debt to defer some of the cost.

- An indicative GA financing proposal is presented followed by a qualitative discussion of the proposal's risks.

- The remainder of the presentation quantitatively examines several different scenarios for debt financing the GA, showing:
  - The amount of debt incurred;
  - Impact on total system cost; and
  - Impact on residential bills.

Indicative Proposal to Debt Finance the Global Adjustment

- For the purpose of discussion, the amount of GA paid by ratepayers in each year over the forecast period is set at a fixed amount until the accumulated debt has been completely paid off.
- All scenarios consider setting the 2017 amount of GA paid by ratepayers at a value lower than the true cost of GA and increasing that amount year-over-year at inflation (assumed to be 2%) until the debt has been paid off.
- In this way, GA costs will be "tilted" over time by lowering costs in the short term and increasing costs in the long term.
- In some scenarios, the amount of GA paid by ratepayers *above* the expected true cost of GA is capped so as to limit large increases in the cost of electricity in any given year.
- Analysis is based on forecasts from Independent Electricity System Operator's (IESO) Ontario Planning Outlook.



Sample debt financing: Ratepayers pay less than the cost of GA in early years, accumulating $9 billion of debt that is paid off in 2031 by paying more than the cost of GA in later years.

Considerations and Risks – Ratepayer

Ratepayer:

- Incurring debt to finance the GA, while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.

- The GA financing proposal involves accruing large amounts of debt to reduce electricity rates. This debt would be highly sensitive to interest rates which could extend repayment timelines or put significant pressure on rates (see Scenario 3 for an example of such interest rate risk).

- GA and HOEP provide a natural hedge against each other. Smoothing only one component would lead to greater price volatility. For example, if HOEP is higher than expected (due to higher gas or carbon prices, for example), all-in rates will rise significantly as the natural decrease in GA would not occur given the prescribed GA rate.

- Conversely, if GA is higher than forecast (i.e., because of lower HOEP or additional out-of-market costs), the debt would increase to a higher amount, requiring additional debt service payments and/or a longer recovery period.

- Should Ontario demand be lower than forecasted, the cost of paying off the debt will be shared by a smaller pool of consumption, further increasing future costs for individual ratepayers.

Considerations and Risks – Legal, Fiscal and Stakeholder

Legal:

- Such changes to the financing of the GA may require legislative or other amendments and will require further consultation with Legal Services Branch.

Fiscal / Accounting:

- Further analysis is required on whether such changes to the financing of the GA would affect the Province's current accounting treatment for the GA and represent a potential fiscal risk. As such, early engagement with Legal Services Branch and Treasury Board Secretariat is advised.

- The significant amount of additional Provincial borrowing needed to debt finance the GA, and associated risks (e.g., interest rates, repayment timelines), could put pressure on the Province's credit rating. Further analysis is required and would suggest early engagement with Ministry of Finance / Ontario Financing Authority.

Stakeholder:

- The significant deferral of electricity system costs over a long time-horizon and associated interest costs may draw criticism from some stakeholders as creating a new "stranded debt" of the sector. Note: the Debt Retirement Charge was removed from residential bills in 2016 and will be removed for remaining customers in 2018.

GA Debt Financing Scenarios

1. Status Quo
   - Ratepayers continue paying the full cost of the GA in each year without incurring any debt.

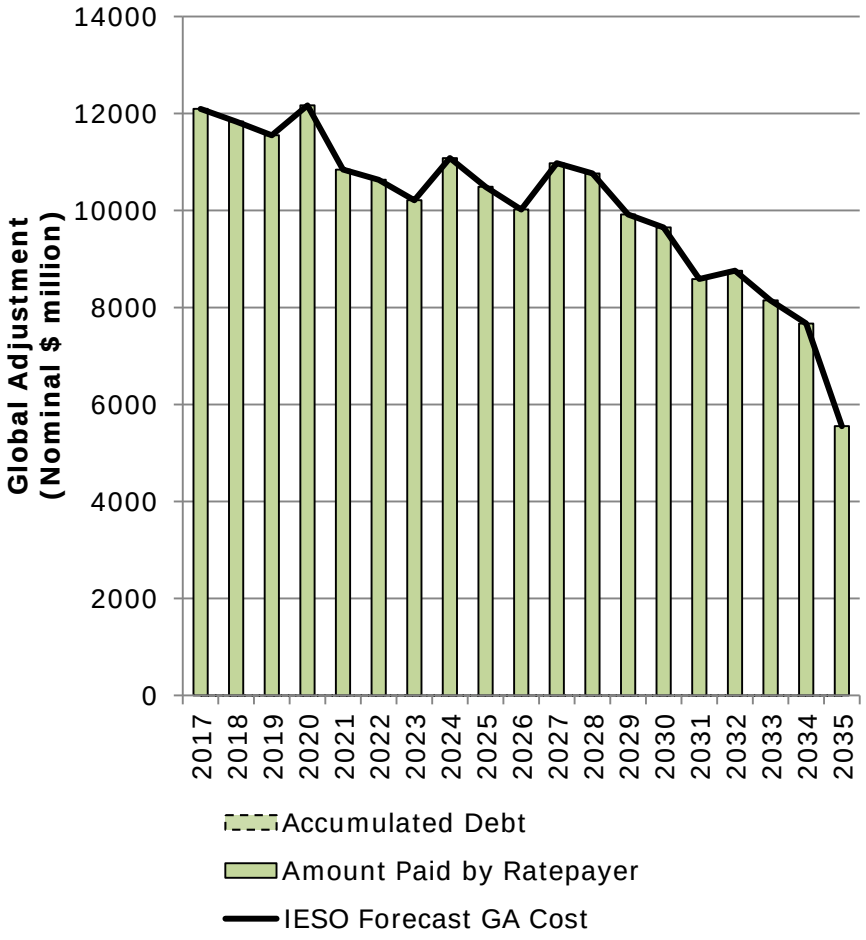
2. Maximize short-term cost reductions
   - This scenario considers the maximum amount by which ratepayer GA costs in 2017 can be reduced such that the accumulated debt is paid off over a 25-30 year financing period. This scenario assumes a 3% borrowing interest rate.

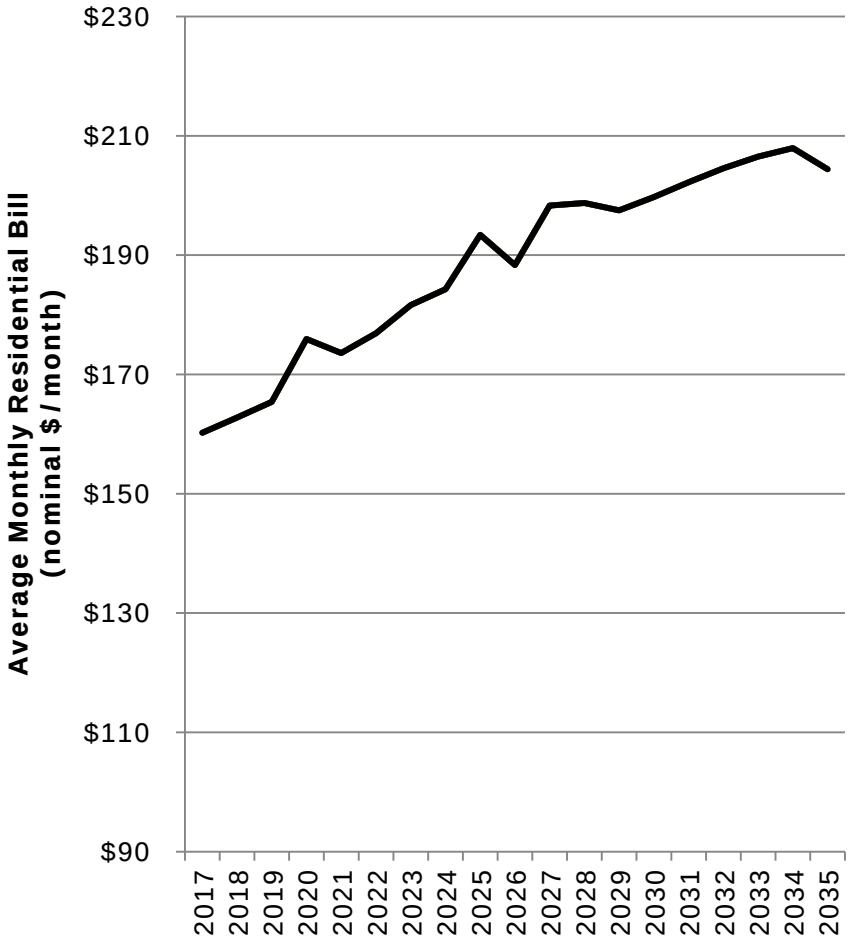
3. Interest Rate Risk
   - Using the 30-year financing case from Scenario 2, this scenario looks at the consequence of an increase of 2 percentage points in the borrowing interest rate.

4. Maximize short-term cost reductions with limits
   - The same as Scenario 2 but with GA over-payments capped at $2 billion above the true cost of GA in any given year.

1. Status Quo – Global and Residential Impacts

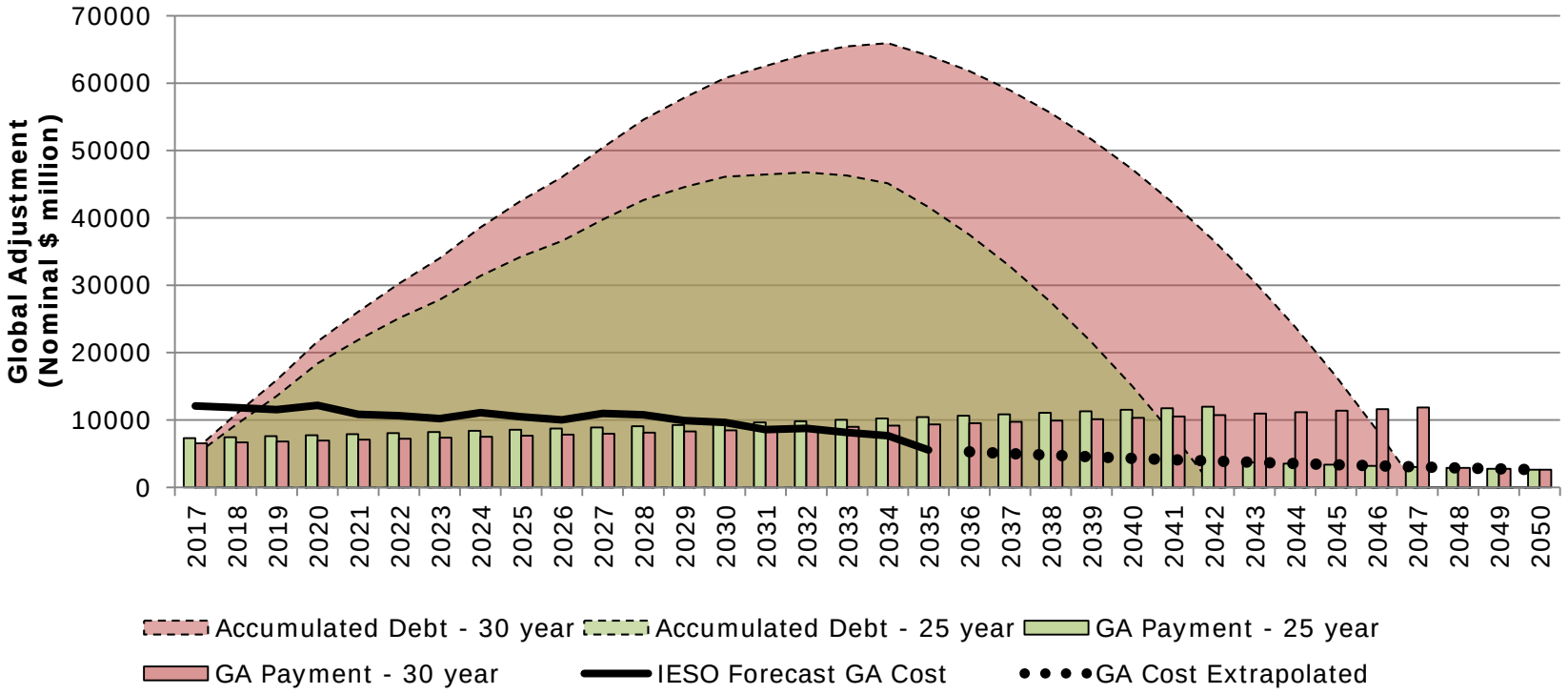
- Ratepayers continue paying the true cost of GA.





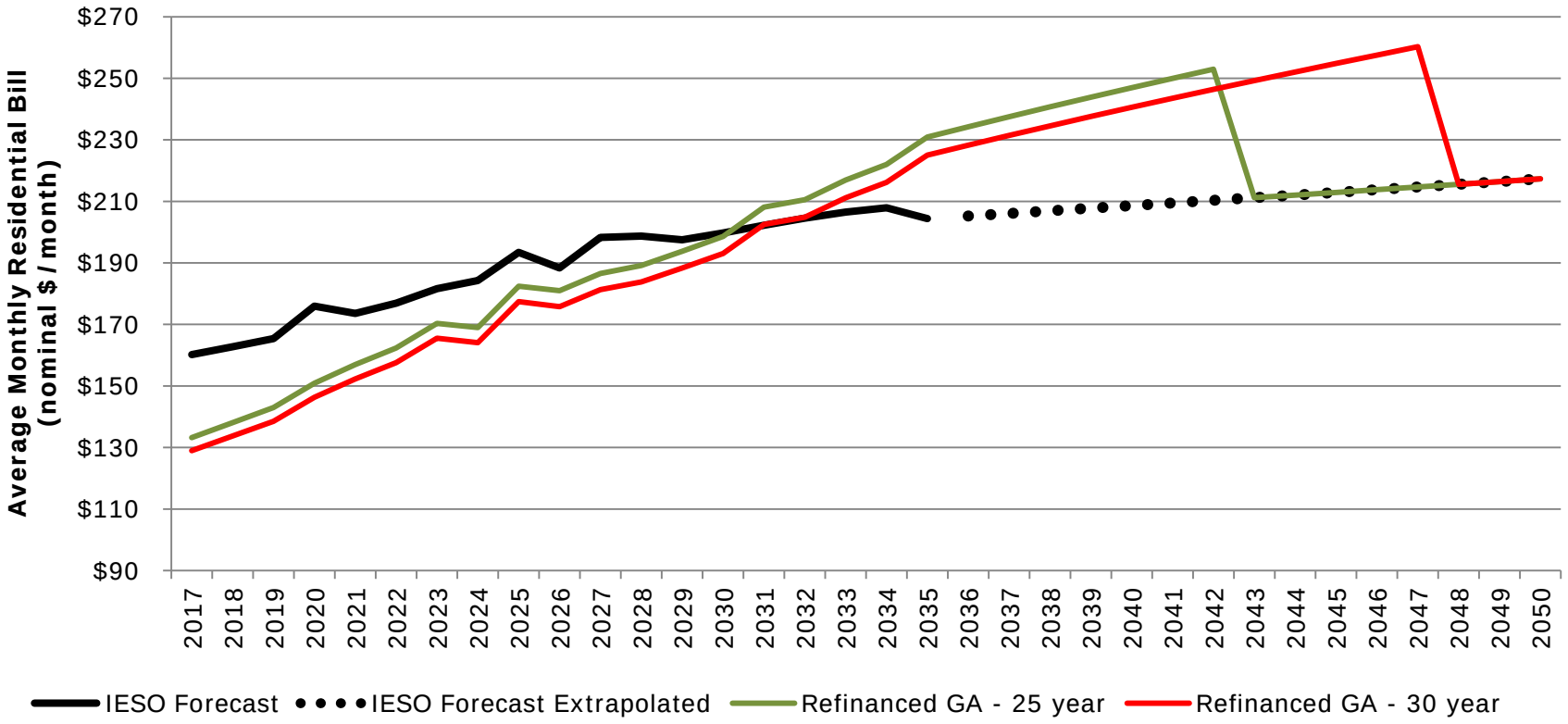
2. Maximize Short-term Cost Reduction – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year financing, green) and 2047 (30 year financing, red) respectively.



- A **reduction of 40-46% in GA payments** in 2017 is possible in this scenario by **accumulating up to $66 billion of debt.**
- Further reductions would require additional payments beyond those indicated in order to pay off the debt by 2042 and 2047 in each of the scenarios respectively.

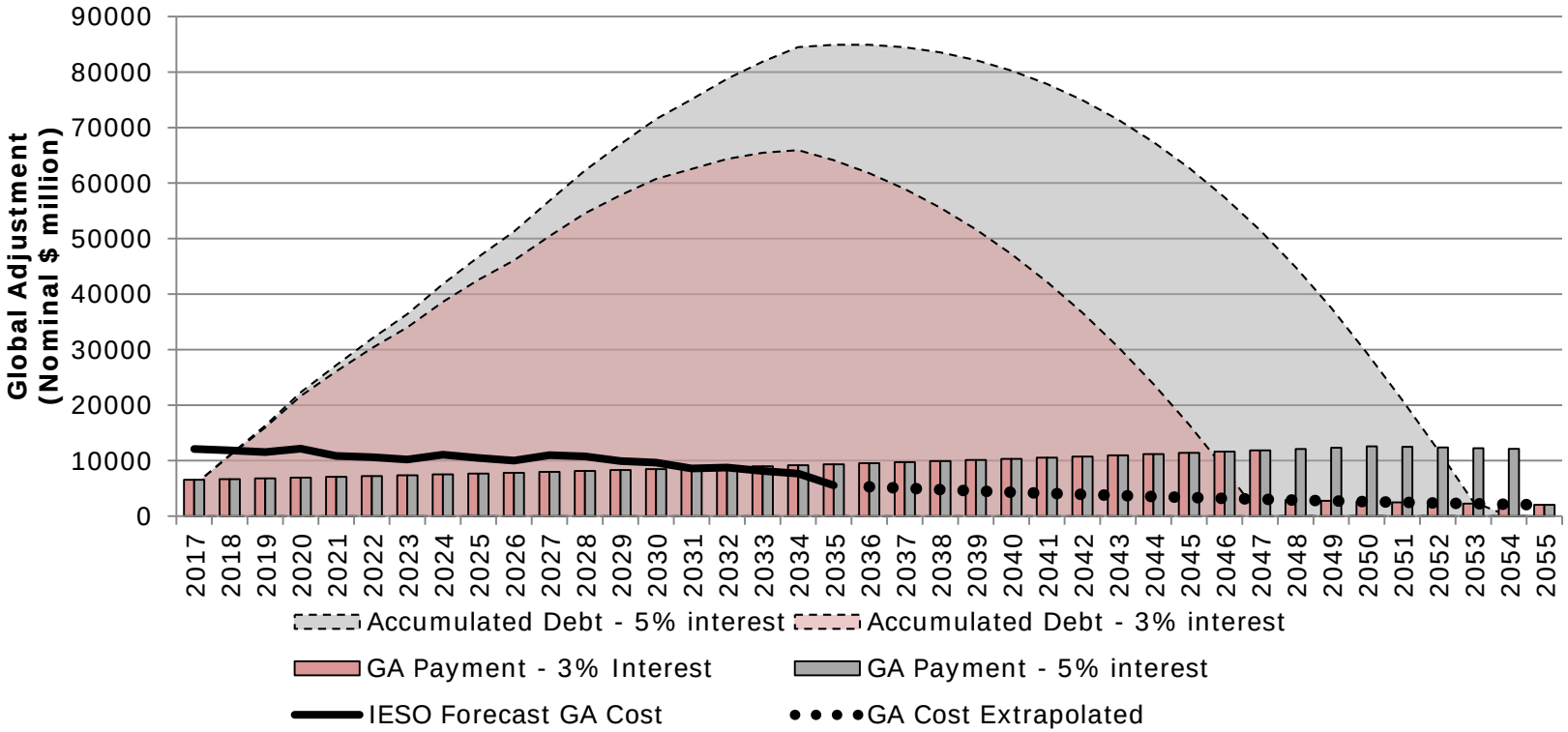
2. Maximize Short-term Cost Reduction – Residential Impacts



- This scenario results in a **short-term reduction of up $27-$31/month** in 2017 at the cost of **a long-term increase of up to $43-$46/month** relative to the IESO forecast.
- Due to the significant increase in electricity bills in later years, Scenario 4 considers limiting the amount above the true cost of the GA that is paid by ratepayers.

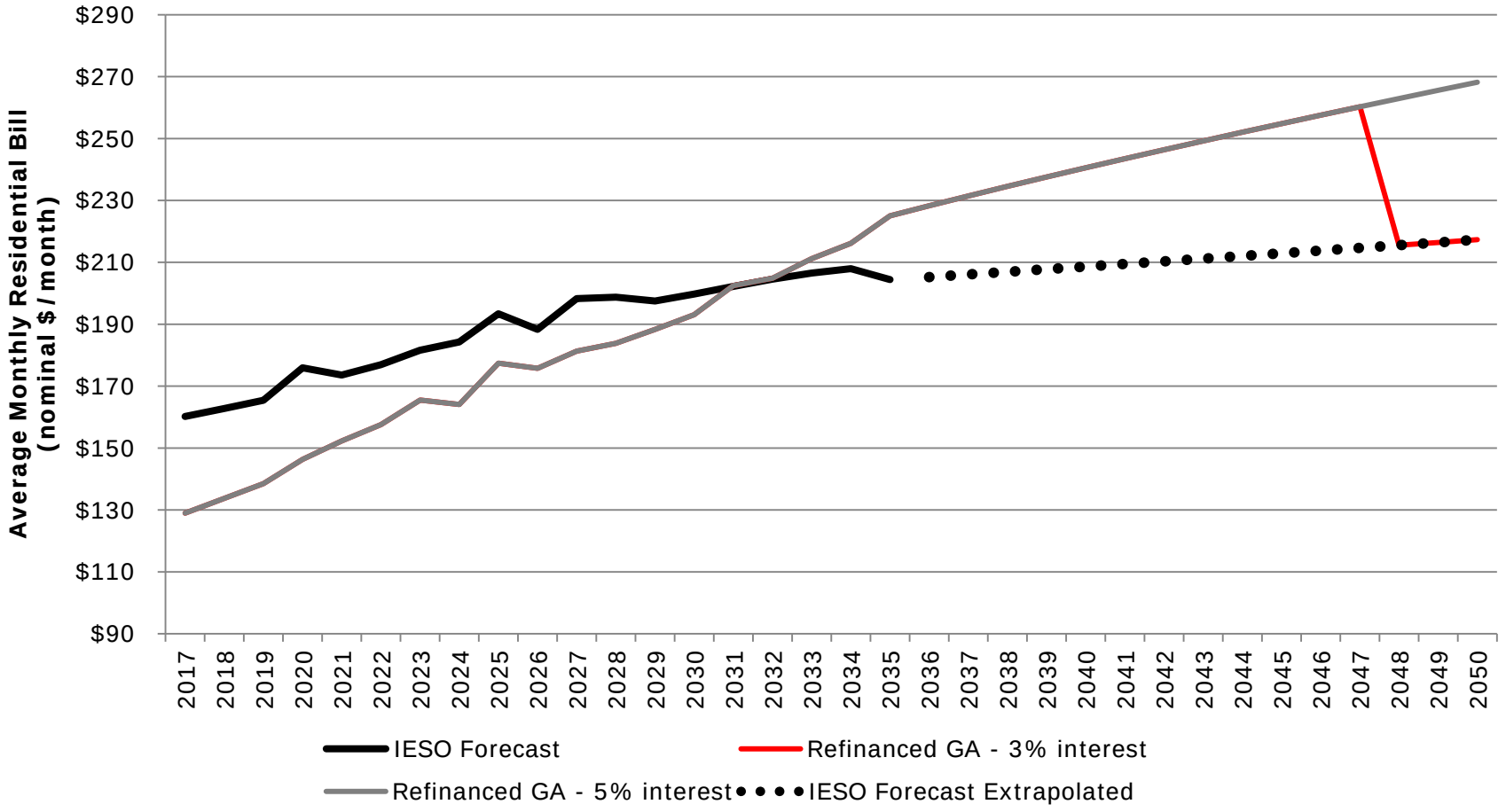
3. Interest Rate Risk – Global Impacts

- This scenario compares the maximal 30-year financing case from Scenario 2 (red, assuming a 3% interest rate) and calculates the resulting debt that would accrue due to an increase of two percentage points in the borrowing interest rate (grey, 5% interest).



- Under a 30-year financing payment schedule that assumes a borrowing interest rate of 3% (red), an increase in interest rate to 5% results in **more than $50 billion of accumulated debt in 2047** (grey) requiring further GA over-payments beyond 2047 in order to service the debt.

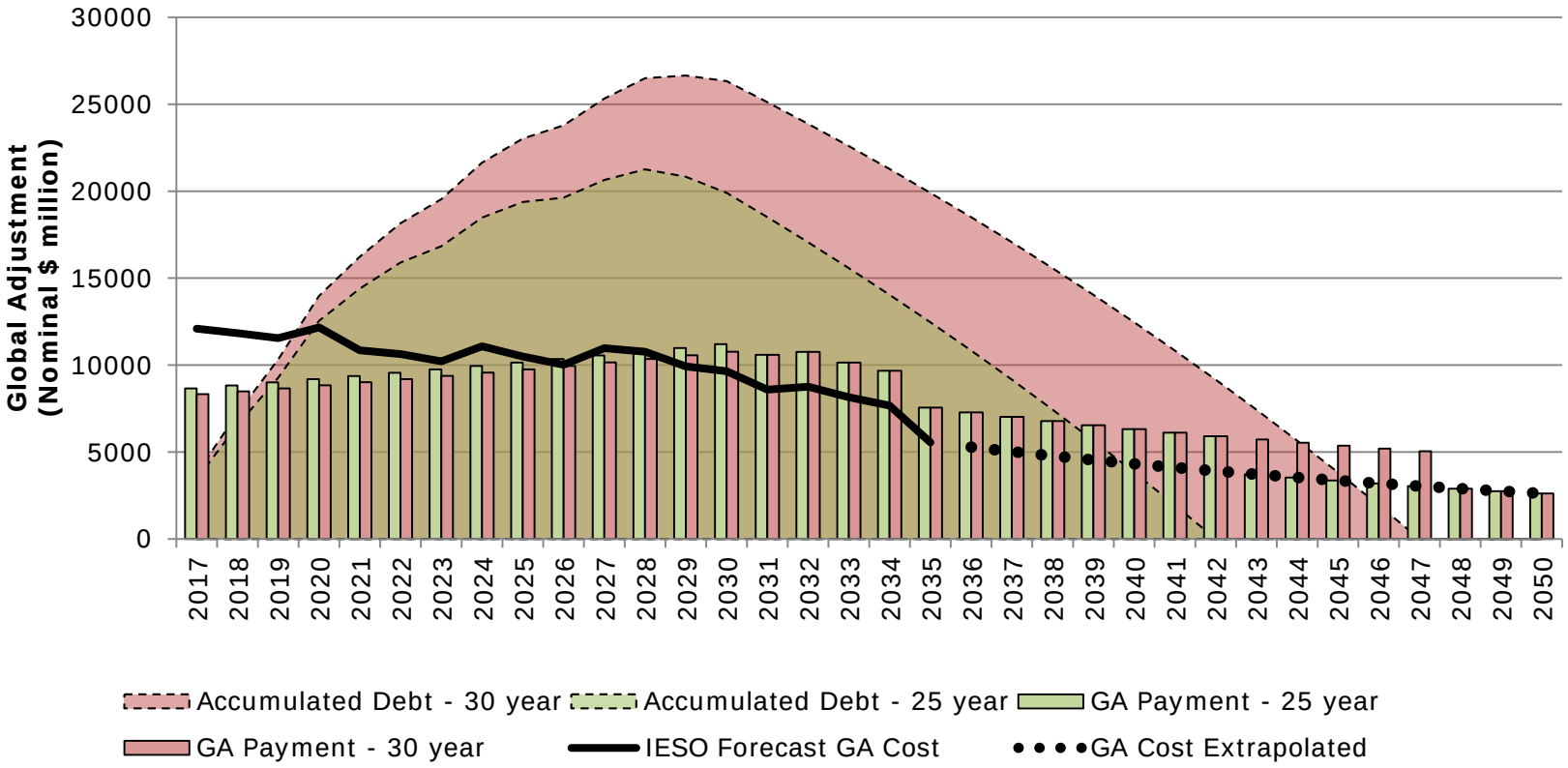
3. Interest Rate Risk – Residential Impacts



- In this scenario, an increase in the borrowing interest rate lengthens the financing period beyond 2047.

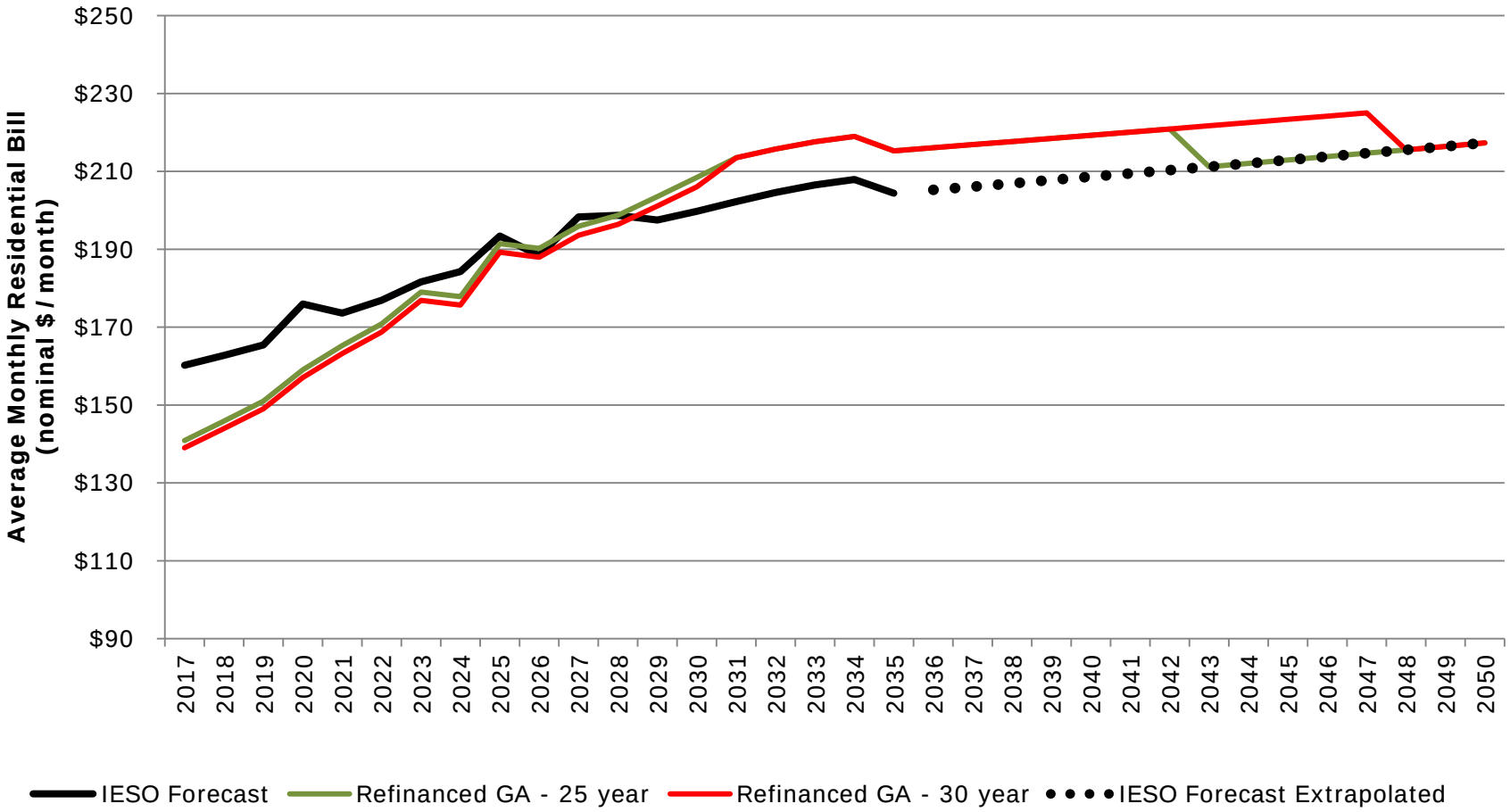
4. Maximize Short-term Cost Reduction with Limits – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year, green) and 2047 (30 year, red) respectively subject to limiting ratepayer over-payments to no more than $2 billion above the true cost of GA.



- A **reduction of 28-31% in GA payments** in 2017 is possible in this scenario by **accumulating up to $26 billion of debt.**

4. Maximize Short-term Cost Reduction with Limits – Residential Impacts



- This scenario results in **a short-term reduction of up $19-$21/month** in 2017 at the cost of **a long-term increase of up to $11/month** in 2029-2047 relative to the IESO forecast.

Ontario

MINISTRY OF
ENERGY

Debt Financing the Global Adjustment

January 10, 2017

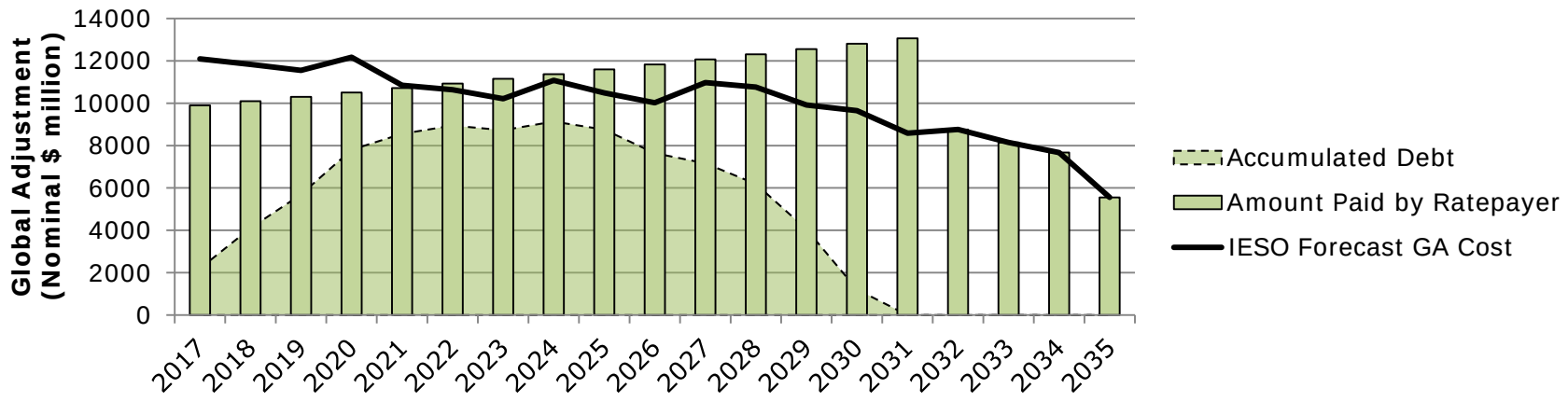
Working Draft for Discussion Purposes Only

Purpose

- To analyze the system cost and ratepayer impact of partially financing the cost of the global adjustment (GA) by incurring debt to defer some of the cost.
- An indicative GA financing proposal is presented followed by a qualitative discussion of the proposal's risks.
- The remainder of the presentation quantitatively examines several different scenarios for debt financing the GA, showing:
  - The amount of debt incurred;
  - Impact on total system cost; and
  - Impact on residential bills.

Indicative Proposal to Debt Finance the Global Adjustment

- For the purpose of discussion, the amount of GA paid by ratepayers in each year over the forecast period is set at a fixed amount until the accumulated debt has been completely paid off.
- All scenarios consider setting the 2017 amount of GA paid by ratepayers at a value lower than the true cost of GA and increasing that amount year-over-year at inflation (assumed to be 2%) until the debt has been paid off.
- In this way, GA costs will be "tilted" over time by lowering costs in the short term and increasing costs in the long term.
- In some scenarios, the amount of GA paid by ratepayers *above* the expected true cost of GA is capped so as to limit large increases in the cost of electricity in any given year.
- Analysis is based on forecasts from Independent Electricity System Operator's (IESO) Ontario Planning Outlook.



Sample debt financing: Ratepayers pay less than the cost of GA in early years, accumulating $9 billion of debt that is paid off in 2031 by paying more than the cost of GA in later years.

Considerations and Risks – Ratepayer

Ratepayer:

- Incurring debt to finance the GA, while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.

- The GA financing proposal involves accruing large amounts of debt to reduce electricity rates. This debt would be highly sensitive to interest rates which could extend repayment timelines or put significant pressure on rates (see Scenario 3 for an example of such interest rate risk).

- GA and HOEP provide a natural hedge against each other. Smoothing only one component would lead to greater price volatility. For example, if HOEP is higher than expected (due to higher gas or carbon prices, for example), all-in rates will rise significantly as the natural decrease in GA would not occur given the prescribed GA rate.

- Conversely, if GA is higher than forecast (i.e., because of lower HOEP or additional out-of-market costs), the debt would increase to a higher amount, requiring additional debt service payments and/or a longer recovery period.

- Should Ontario demand be lower than forecasted, the cost of paying off the debt will be shared by a smaller pool of consumption, further increasing future costs for individual ratepayers.

Considerations and Risks – Legal, Fiscal and Stakeholder

Legal:

- Such changes to the financing of the GA may require legislative or other amendments and will require further consultation with Legal Services Branch.

Fiscal / Accounting:

- Further analysis is required on whether such changes to the financing of the GA would affect the Province's current accounting treatment for the GA and represent a potential fiscal risk. As such, early engagement with Legal Services Branch and Treasury Board Secretariat is advised.

- The significant amount of additional Provincial borrowing needed to debt finance the GA, and associated risks (e.g., interest rates, repayment timelines), could put pressure on the Province's credit rating. Further analysis is required and would suggest early engagement with Ministry of Finance / Ontario Financing Authority.

Stakeholder:

- The significant deferral of electricity system costs over a long time-horizon and associated interest costs may draw criticism from some stakeholders as creating a new "stranded debt" of the sector. Note: the Debt Retirement Charge was removed from residential bills in 2016 and will be removed for remaining customers in 2018.

GA Debt Financing Scenarios

1. Status Quo
   - Ratepayers continue paying the full cost of the GA in each year without incurring any debt.

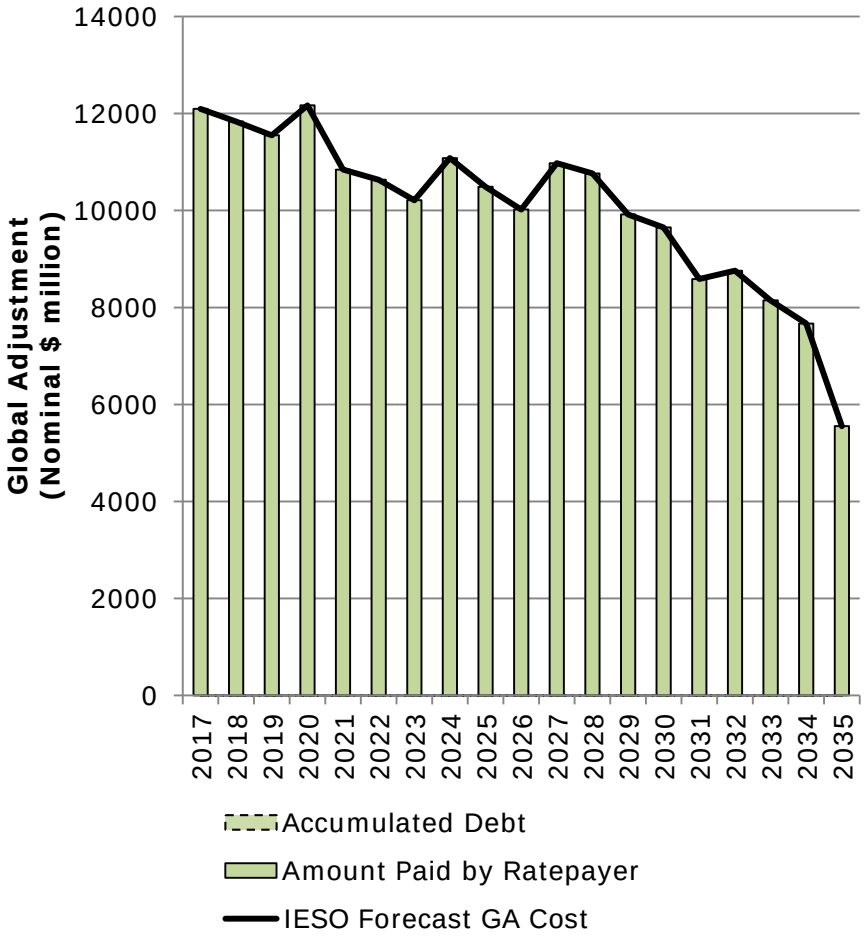
2. Maximize short-term cost reductions
   - This scenario considers the maximum amount by which ratepayer GA costs in 2017 can be reduced such that the accumulated debt is paid off over a 25-30 year financing period. This scenario assumes a 3% borrowing interest rate.

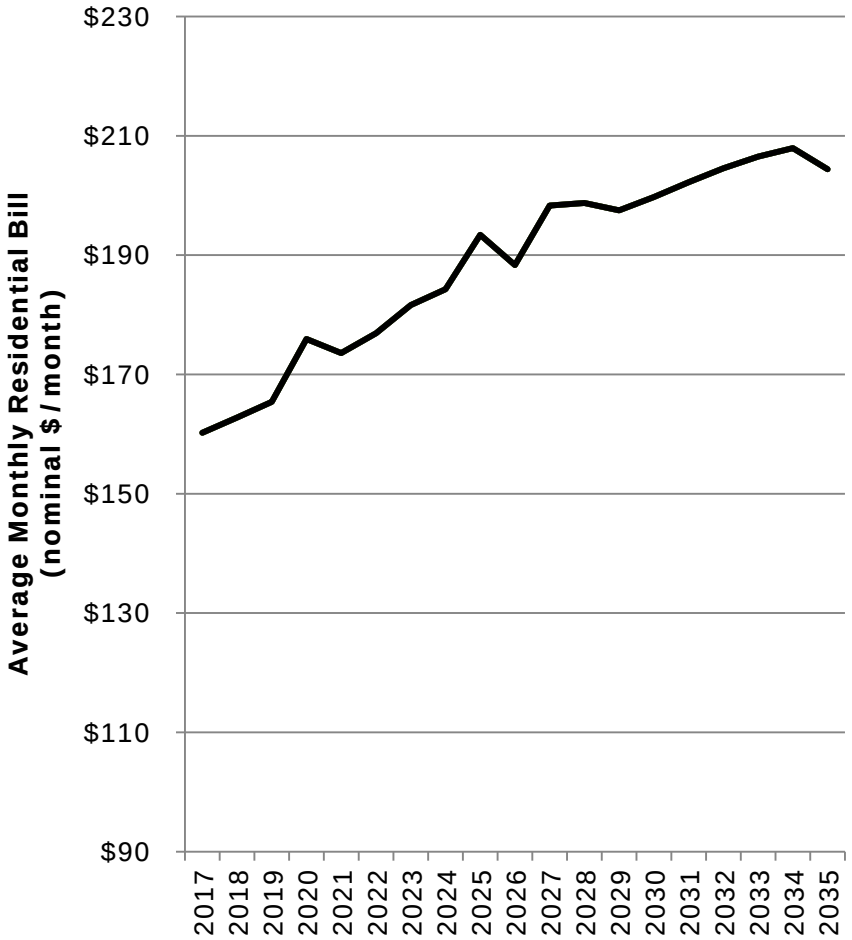
3. Interest Rate Risk
   - Using the 30-year financing case from Scenario 2, this scenario looks at the consequence of an increase of 2 percentage points in the borrowing interest rate.

4. Maximize short-term cost reductions with limits
   - The same as Scenario 2 but with GA over-payments capped at $2 billion above the true cost of GA in any given year.

1. Status Quo – Global and Residential Impacts

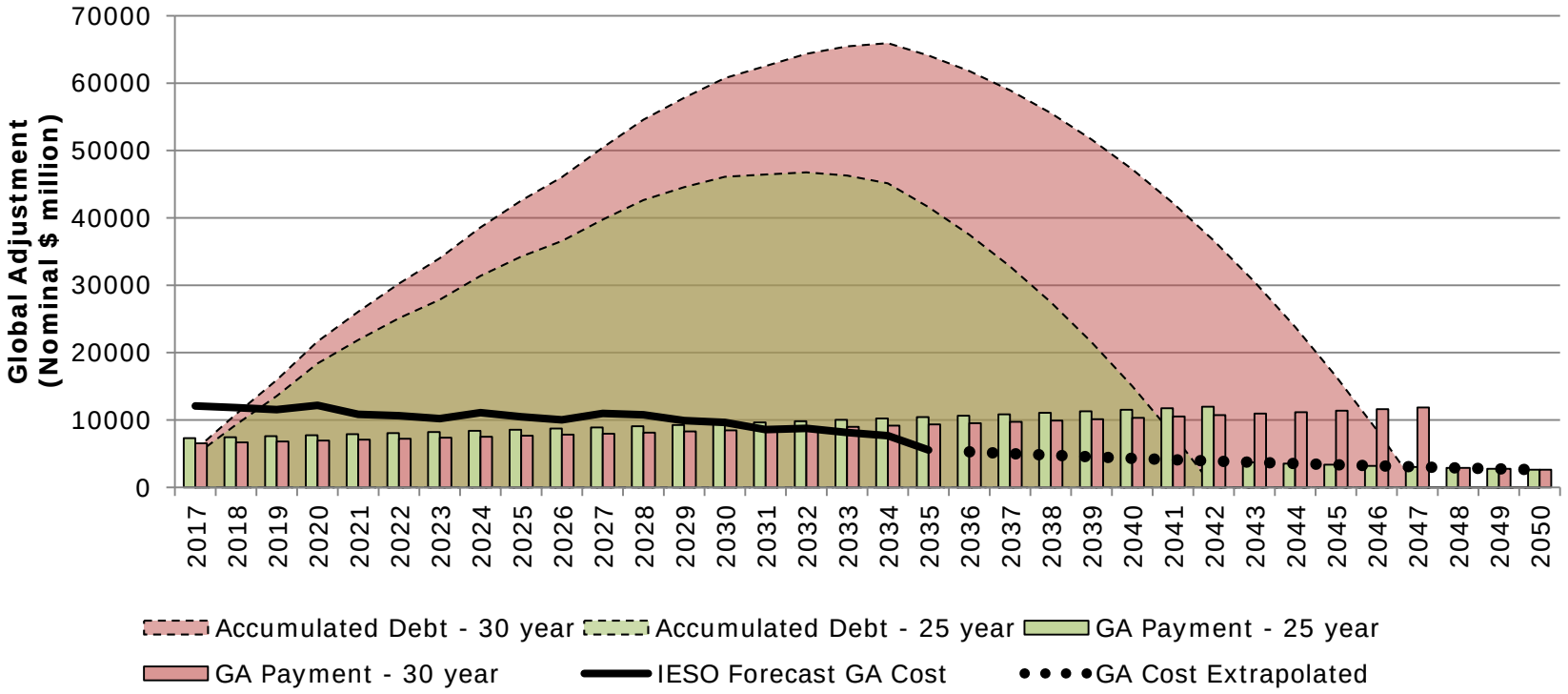
- Ratepayers continue paying the true cost of GA.





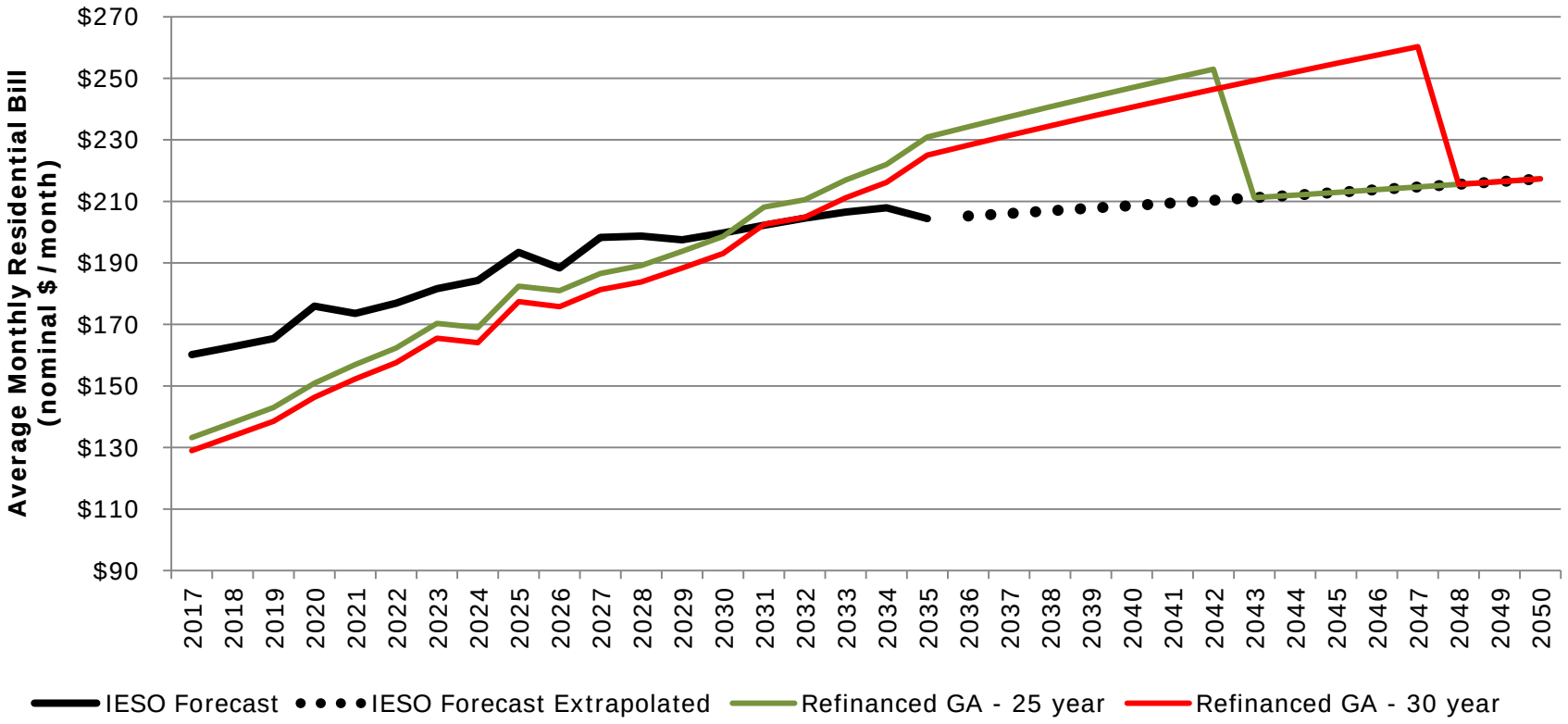
2. Maximize Short-term Cost Reduction – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year financing, green) and 2047 (30 year financing, red) respectively.



- A **reduction of 40-46% in GA payments** in 2017 is possible in this scenario by **accumulating up to $66 billion of debt.**
- Further reductions would require additional payments beyond those indicated in order to pay off the debt by 2042 and 2047 in each of the scenarios respectively.

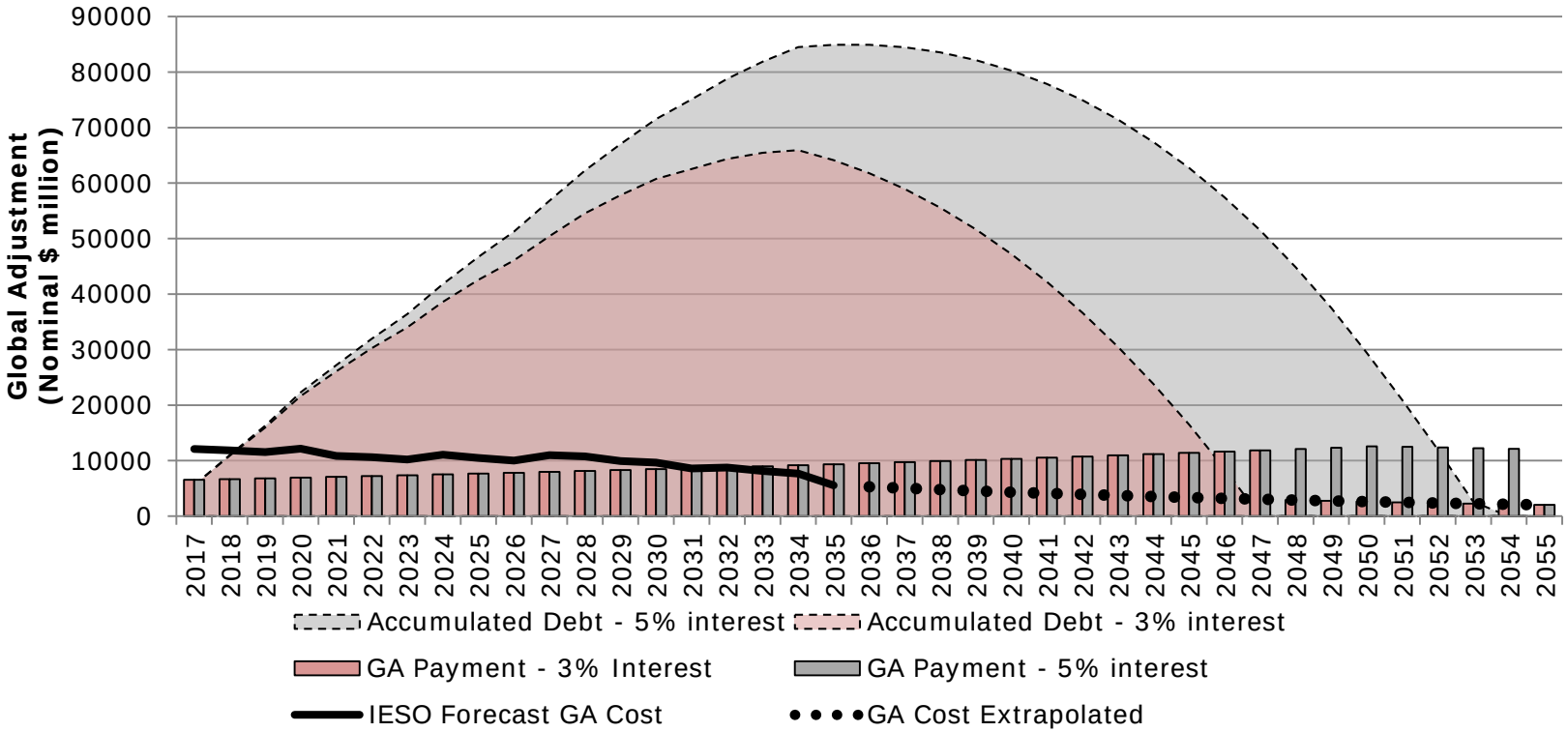
2. Maximize Short-term Cost Reduction – Residential Impacts



- This scenario results in a **short-term reduction of up $27-$31/month** in 2017 at the cost of **a long-term increase of up to $43-$46/month** relative to the IESO forecast.
- Due to the significant increase in electricity bills in later years, Scenario 4 considers limiting the amount above the true cost of the GA that is paid by ratepayers.

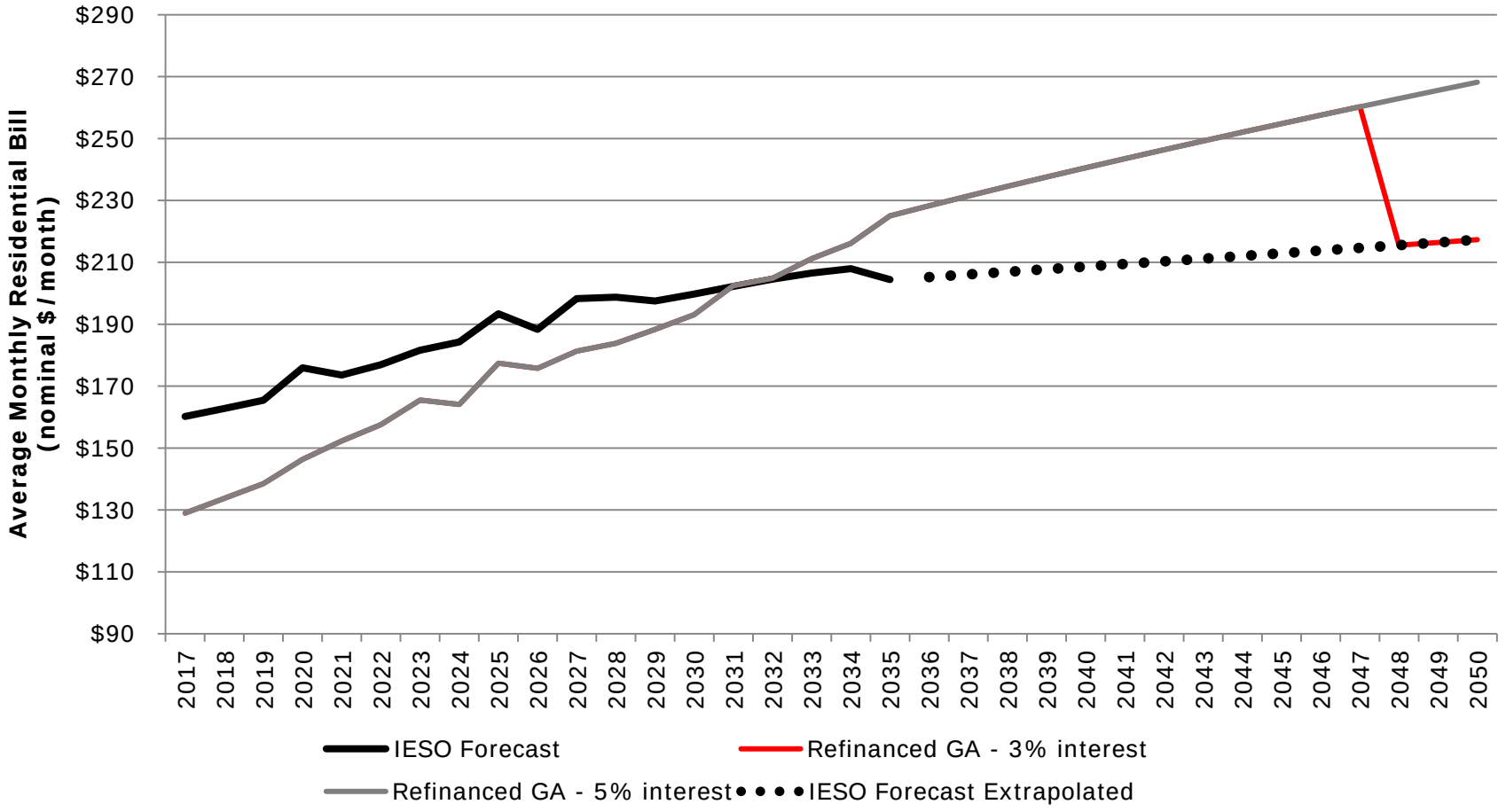
3. Interest Rate Risk – Global Impacts

- This scenario compares the maximal 30-year financing case from Scenario 2 (red, assuming a 3% interest rate) and calculates the resulting debt that would accrue due to an increase of two percentage points in the borrowing interest rate (grey, 5% interest).



- Under a 30-year financing payment schedule that assumes a borrowing interest rate of 3% (red), an increase in interest rate to 5% results in **more than $50 billion of accumulated debt in 2047** (grey) requiring further GA over-payments beyond 2047 in order to service the debt.

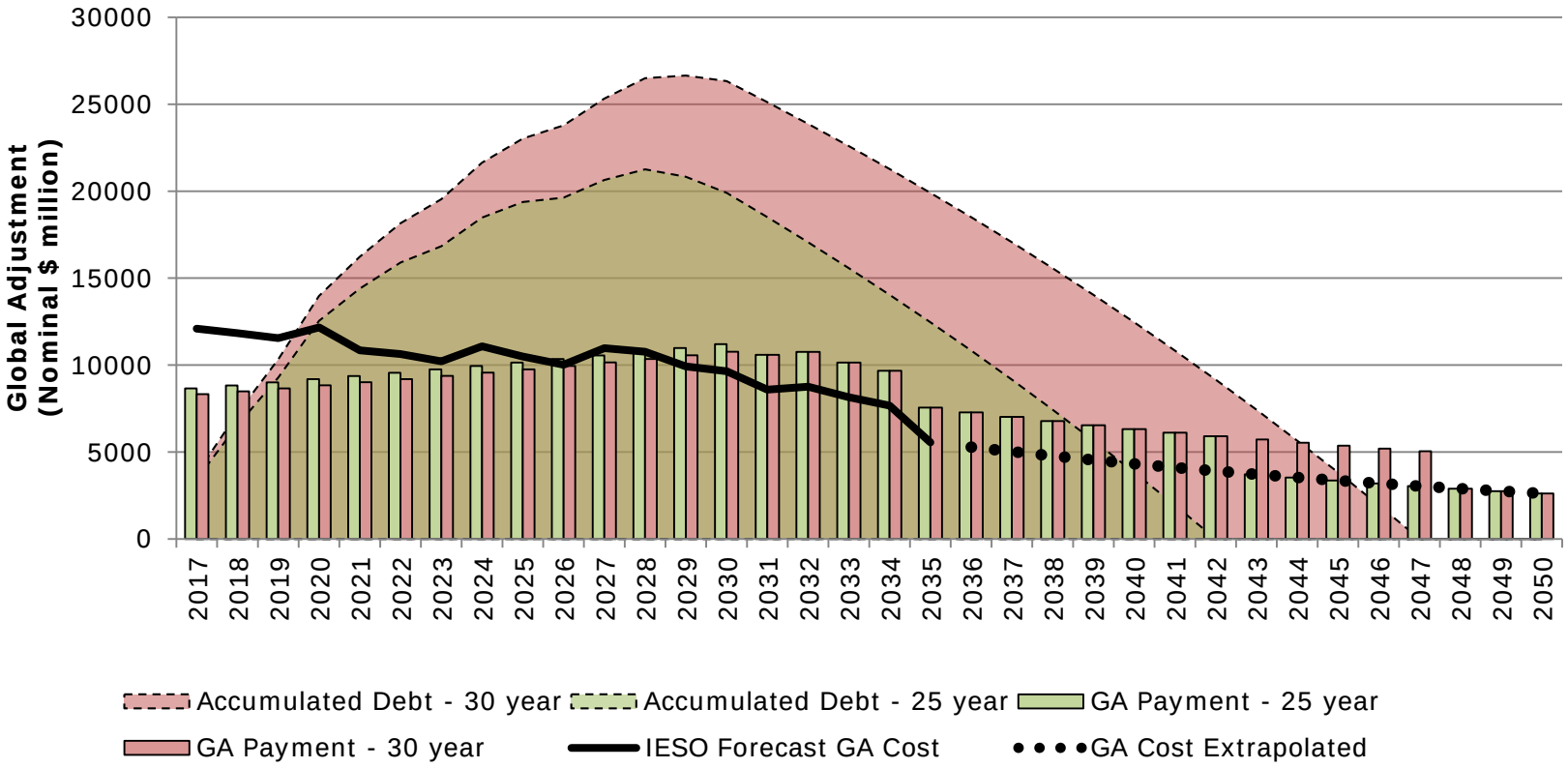
3. Interest Rate Risk – Residential Impacts



- In this scenario, an increase in the borrowing interest rate lengthens the financing period beyond 2047.

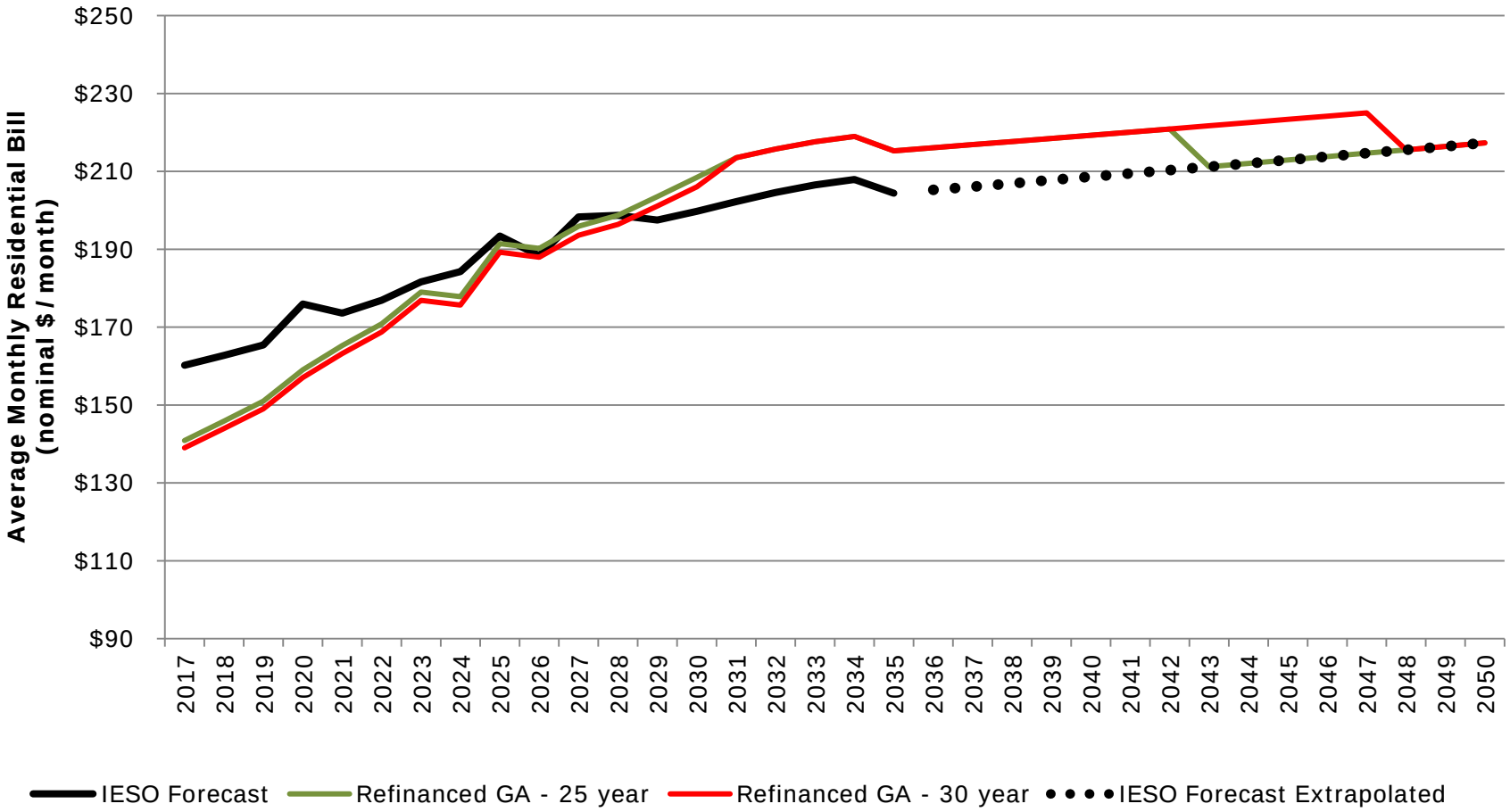
4. Maximize Short-term Cost Reduction with Limits – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year, green) and 2047 (30 year, red) respectively subject to limiting ratepayer over-payments to no more than $2 billion above the true cost of GA.



- A **reduction of 28-31% in GA payments** in 2017 is possible in this scenario by **accumulating up to $26 billion of debt.**

4. Maximize Short-term Cost Reduction with Limits – Residential Impacts



- This scenario results in **a short-term reduction of up $19-$21/month** in 2017 at the cost of **a long-term increase of up to $11/month** in 2029-2047 relative to the IESO forecast.

Electricity Price Mitigation

Deferral of a portion of the Global Adjustment -- LDC long-term receivable option

Preliminary Analysis

Option	An amount of the deferred GA is billed to the LDCs, however, the payment terms are extended into the future (e.g. a long-term receivable from the LDCs) Example (ignores time value of money/interest) • GA = 100 • Amount to be deferred from the ratepayers bills = 30 • LDCs are billed 70 (amount not deferred, due based on current payment terms) + a percentage of the 30, based on the minimum amount that would be expected to be billed to the LDC based on modelling future consumption • If 75% of the 30 were billed with extended payment terms, 22.5 (30*.75) would be set up as receivable from the LDC (Note – this example does not consider time value of money/interest, which would need to be considered)
New entity required	No
Quantum of amount of long term receivable from the LDCs	Based on the [minimum] amount expected to be billed to LDCs Actual amount to be collected from each LDC will be based on consumption; modelling will be required to estimate the amount
LDC implications	Would be required to account for the long-term payable to the n their financial statements. Impact to LDCs to be determined (e.g. credit rating, borrowing capacity, etc.) Expect that most LDCs would be able to offset the fiscal impact with a regulatory asset; some LDCs do not follow rate-regulated accounting – may be a fiscal impact to them as expect they would not be able to set up a receivable from ratepayers.
Direct Connect implications	To determine percentage of GA billed through LDCs vs. direct connects and determine if there would be a different billing arrangement for direct connects
Borrowing requirement	Province required to borrow full amount for deferred portion of GA + interest

Confidential Draft for Discussion

Confidential Draft for Discussion

Accounting issues:	
What entity holds the receivable from the LDCs?	Expect this to be IESO – and in the "market books" Note -- Currently "market books" are not consolidated with the Province; IESO is preparing an accounting analysis on this issue; current expectation is that "market books" should be consolidated, but analysis is not complete; analysis expected by end of week.
What is the accounting for the long-term receivable from the LDCs?	Expect long-term receivables to be recognized by the Province and classified as financial assets (e.g. receivables will offset additional borrowings in computation of net-debt). Need to determine how interest is charged on long-term receivables; preliminary view – interest would be charged on long-term receivable and interest income would be recognized annually and added to long-term receivable balance. Interest rate to be set (same as borrowing rate of province?)
What is the fiscal impact of this option?	Preliminary analysis – fiscal impact would be based on the portion of the deferred GA that is not billed to the LDCs/direct connects. Based on the example above, the fiscal impact would be 7.5 (30 deferred GA less 22.5 billed to LDCs with extended payment terms. Fiscal impact may also include any spread between province's borrowing rate for new debt and rate charged on long-term receivables from LDCs (+/-)
What are the risks to the analysis?	Ability to collect from LDCs if estimates are wrong (too high) – may impact valuation of receivables from LDCs and create additional fiscal impact To confirm if/how Hydro One would be impacted by this scenario and any implications to consolidated financial statements through use of modified equity accounting (none currently identified).
Other	TBD

Confidential Draft for Discussion

Electricity Price Mitigation
Teleconference call summary
January 20, 2017
Participants: IESO (Kim Marshall), KPMG (Michel Picard), Cindy Veinot & N. Petsche (OPCD), Steen Hume (MOE), Ronald Kwan (OEFC/OFA)

General:	CFS	IESO	
	Notes	Notes	Actions
Variance accounts are not all recognized on the CFS? In order to have an asset recognized on the books, need to have a receivable (amounts billed), unless an asset can be established another way (through legislation) Current vs. future IESO role: if move from current settlement related role, and have to negotiate and manage the debt then it will seem more like the OFA. Option to use another party to provide this advice, and not have OFA hold the debt.	- Questionable whether any receivable reflected on the Province's f/s would be sufficiently supportable from the AG's perspective under PSAB. - Consider if might be off-balance sheet financing based if debt acquired through 3rd party vs. OFA. - Want to understand why the debt for the GA is not on the Province's books. (Q from MOE…why would it be assumed that cash flows related to the rate base would be consolidated on the Province's books and intermingled with cash flows related to tax base)	- Issue: 4 M Consumers wouldn't have a liability on their books that would correspond with a recoverable (one to many scenario with no amounts billed) - Strategically difficult to pass along the recoverable to the LDCs as it would impact the d/e ratios; uncertain how many follow IFRS without rate regulated accounting; LDCs also don't have the credit capacity to absorb the debt - Current IESO role: used as a settlement system to support the market (sets HOEP every 5 mins, matches supply and demand, collects through GA for costs of reliable T,D, generation) - As a successor company to previous Ontario Hydro, the IESO would borrow from the OEFC; OPA is a new construct so would borrow from the OFA if needed. - IESO's original accounting was established as an agent for settlement purposes. Legacy contracts were for cash to suppliers which were recovered through the GA. John and Adrian were involved with est of the OPA and est of the RPP variance acct. Was never a GA var. OPA always reported the RPP act (1 set of books) – entered into 3500+ contracts with	- Considering creating a receivable through legislation (vs. direct contracts or billing) - Need an 'authorized' expenditure in order to be recoverable. Assess on what basis we can create an asset which is recoverable. All extra costs need to be recognized as being recoverable (even interest) - Since need legal authority to recover, presumably you would also need legal authority to defer and collect in the future but need to address the proposed change in role of the IESO - Consider who would hold debt (OFA or third party) . Would be

General:	CFS	IESO	
	Notes	Notes	Actions
		generating entities (40B) which NEVER appeared on the Province's books (no rev/exp or debt. These were considered executory contracts, or contractual obligations but NOT liabs of the OPA. - On a monthly basis any GA amounts are settled through the GA; no liability reflected on the IESO's books – currently $10B of recoverable amounts not reflected on the IESO's books (no legal obligation, just an agent for settlement). Seen as a conduit to collect the monies paid to producers, even if does take possession. - Proposal is that the RPP accounts which normally had a term of 6-12 months for recovery would be extended to 25 years	higher rates? Would be provincial guarantee? OPA had AA credit rating and contracts entered into and debt borrowed based on that rating (one ranking lower than the province) - James (legal) asked by Steen Hume to help to id what the new legislative responsibilities of the IESO might look like.
		- 2 sets of books (operating/market vs. financial) - Amounts recoverable through GA NOT reflected on IESO's b/s as a flow through – no impact on the p&l - Currently, the only debt that shows on the IESO's books is related to its operations, NOT MARKET DEBT	- IESO/KPMG to provide background supporting accounting for GA recoveries off book

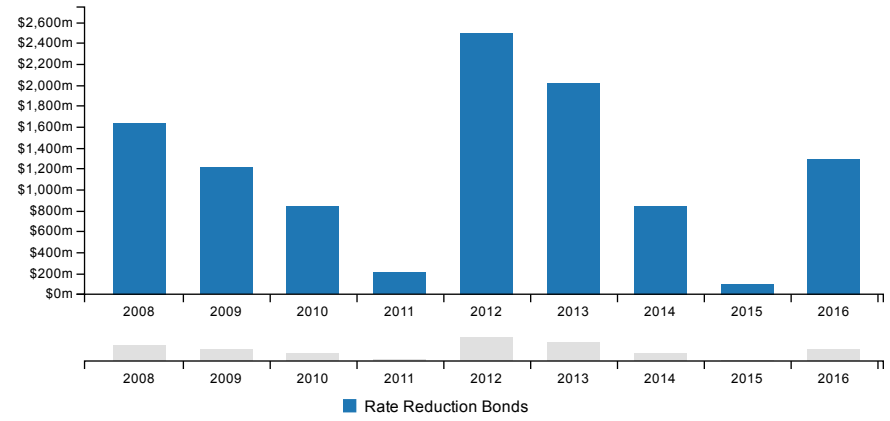
General:	CFS	IESO	
	Notes	Notes	Actions
ON vs. MB – legislates that all people of the province must be rate payers (cannot opt out of paying rates). ON doesn't have this requirement, but has a strong ratebase now so reasonable recoverability of costs through rates (the GA). Lenders rely upon this reasonable probability of recovery (AA rating) as basis to lend money to IESO to cover the time gap w.r.t. billings for GA.		- The OEB has oversight and determines rates. If a regulator agreed that costs could be recovered, would meet requirements of rate regulated asset; but PSAB doesn't recognize rate regulated assets/liabs - regulatory assets normally recovered over 5 years, so 25 years would have to be defended and proven as collectible - would need certainty of recoverability to be an asset (OEB would consider intergenerational equity) in assessing recoverability	
Noted that 25 year period for rate mitigation is not the same as a longer term recovery period for capital refurbishment (intergenerational equity considerations) Noted that other jurisdictions might have longer contract periods (wind and solar>20), and that operating period >20 in reality, so future costs likely lower to consumers. AB wind contracts>25 years. Justification for change → contract periods are too short			
Policy considerations: 1) Argument for rate mitigation deferral period (contracts to short; precedents) 2) IESO's changing role (James to consider) 3) Legislative requirements to allow for deferral (which costs would be authorized as recoverable) Accounting considerations 4) How to create an asset (accounting vs. legislation) Would legislation create an asset on the IESO's books? 5) Off balance sheet financing (3rd party vs. OFA) and related accounting on IESO and CFS			

US Esoteric: Rate Reduction Bonds ABS Sector

Esoteric (/sector/Esoteric) › Rate Reduction Bonds (/sector/Esoteric/Rate Reduction Bonds)

New Issue Volume

Month Quarter **Year** • **Stacked** Grouped



Top Sponsors

All

CenterPoint Energy Houston Elec... (/sponsor/299)	$2,848m	3
Entergy Corporation (/sponsor/52)	$2,655m	7
Duke Energy Florida Inc (/sponsor/264)	$1,294m	1
Appalachian Power Company (/sponsor/18)	$1,180m	2
FirstEnergy Ohio (/sponsor/96)	$890m	1
Long Island Power Authority (/sponsor/121)	$483m	1
Consumers Energy Company (/sponsor/195)	$378m	1
Louisiana Local Government Envi... (/sponsor/104)	$315m	2
Ohio Power Co (/sponsor/123)	$267m	1
Cleco Corporate Holdings LLC (/sponsor/301)	$181m	1

Recent New Issue

Expand / Collapse

ESOT (/sector/Esoteric/Rate Reduction Bonds) DEF 2016-A ($1,294m) (/deal/16572) Duke Energy Florida Inc (/sponsor.. RBC, GUG Jun 15, 2016

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A2018	183.000	2.00	Aaa	AAA	AAA	-	-	-	Fixed	Tsy	-	-	1.196%	1.196%	99.99900
A2021	150.000	5.00	Aaa	AAA	AAA	-	-	-	Fixed	Tsy	-	-	1.731%	1.731%	99.99800
A2026	436.000	10.00	Aaa	AAA	AAA	-	-	-	Fixed	Tsy	-	-	2.538%	2.538%	99.99600
A2032	250.000	15.20	Aaa	AAA	AAA	-	-	-	Fixed	Tsy	-	-	2.858%	2.858%	99.99500
A2035	275.290	18.70	Aaa	AAA	AAA	-	-	-	Fixed	Tsy	-	-	3.112%	3.112%	99.99400

ESOT (/sector/Esoteric/Rate Reduction Bonds) ENOI 2015-1 ($99m) (/deal/16166) Entergy Corporation (/sponsor/52) CTI Jul 14, 2015

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A	98.730	4.97	Aa1	AAA	-	-	-	-	Fixed	Swaps	-	90	-	2.673%	99.97560

ESOT (/sector/Esoteric/Rate Reduction Bonds) HGEMS 2014-A ($150m) (/deal/15740) State of Hawaii (/sponsor/49) GSC Nov 4, 2014

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A1	50.000	3.05	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	30	1.47%	1.467%	-
A2	100.000	10.21	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	75	3.24%	3.242%	-

ESOT (/sector/Esoteric/Rate Reduction Bonds) LCDA 2014-ELL ($244m) (/deal/15628) Louisiana Local Government Envi... CTI Jul 29, 2014

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A	91.700	3.00	Aaa	AAA	-	-	-	-	Fixed	Swaps	-	51	1.66%	1.665%	-
B	152.150	8.91	Aaa	AAA	-	-	-	-	Fixed	Swaps	-	77	3.24%	3.240%	-

ESOT (/sector/Esoteric/Rate Reduction Bonds) LCDA 2014-EGSL ($71m) (/deal/15622) Louisiana Local Government Envi... CTI Jul 29, 2014

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
-	71.000	6.73	Aaa	AAA	-	-	-	-	Fixed	Swaps	-	70	2.86%	2.861%	-

ESOT (/sector/Esoteric/Rate Reduction Bonds) CMS 2014-A ($378m) (/deal/15439) Consumers Energy Company (/sp... CTI, GSC Jul 14, 2014

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A	123.400	3.00	Aaa	AAA	-	-	-	-	Fixed	Swaps	30a	27	1.33%	1.334%	-
A2	139.400	8.00	Aaa	AAA	-	-	-	-	Fixed	Swaps	65a	57	2.96%	2.962%	-
A3	115.200	12.26	Aaa	AAA	-	-	-	-	Fixed	Swaps	75a	70	3.53%	3.528%	-

ESOT (/sector/Esoteric/Rate Reduction Bonds) UDSA 2013-T ($483m) (/deal/15557) Long Island Power Authority (/spo.. MOS, GSC Dec 12, 2013

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
T1	100.000	4.91	Aaa	AAA	AAA	-	-	-	Fixed	-	-	50	2.04%	2.040%	99.99900
T2	100.000	5.92	Aaa	AAA	AAA	-	-	-	Fixed	-	-	63	2.55%	2.550%	99.99500
T3	100.000	6.79	Aaa	AAA	AAA	-	-	-	Fixed	-	-	73	2.94%	2.930%	99.99700
T4	182.930	8.77	Aaa	AAA	AAA	-	-	-	Fixed	-	-	75	3.44%	3.430%	99.99400

ESOT (/sector/Esoteric/Rate Reduction Bonds) AEPWV 2013-1 ($380m) (/deal/15978) Appalachian Power Company (/sp... MOS, RBS Nov 6, 2013

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A1	215.800	5.00	Aaa	AAA	-	-	-	-	Fixed	-	-	54	-	-	-
A2	164.500	12.24	Aaa	AAA	-	-	-	-	Fixed	-	-	70	-	-	-

ESOT (/sector/Esoteric/Rate Reduction Bonds) AEPOH 2013-1 ($267m) (/deal/15507) Ohio Power Co (/sponsor/123) CTI, RBS Jul 23, 2013

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A1	164.900	2.25	Aaa	AAA	-	-	-	-	Fixed	Swaps	-	40	0.96%	0.958%	99.99882
A2	102.510	5.08	Aaa	AAA	-	-	-	-	Fixed	Swaps	-	52	2.05%	2.048%	99.99867

ESOT (/sector/Esoteric/Rate Reduction Bonds) FEOH 2013-1 ($890m) (/deal/15997) FirstEnergy Ohio (/sponsor/96) CTI, CAG, GSC Jun 12, 2013

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A1	111.830	1.60	-	-	-	-	-	-	Fixed	EDSF	-	25	0.68%	0.679%	99.99990
A1	111.970		Aaa	AAA	AAA	-	-	-	Fixed	EDSF	-	25	0.68%	0.679%	99.99990
A2	70.310	5.07	-	-	-	-	-	-	Fixed	Swaps	-	40	1.73%	1.727%	99.99540
A2	70.470		Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	40	1.73%	1.727%	99.99540
A3	262.560	13.69	-	-	-	-	-	-	Fixed	Swaps	-	70	3.45%	3.450%	99.99790
A3	262.480		Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	70	3.45%	3.450%	99.99790

ESOT (/sector/Esoteric/Rate Reduction Bonds) AEPTC 2012-1 ($800m) (/deal/17389) Appalachian Power Company (/sp... MOS, CTI Mar 7, 2012

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A1	307.300	3.00	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	20	0.88%	0.88%	99.99971
A2	179.400	7.00	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	40	1.98%	1.98%	99.99967
A3	313.300	10.76	Aaa	AAA	AAA	-	-	-	Fixed	-	-	70	2.84%	2.84%	99.99948

ESOT (/sector/Esoteric/Rate Reduction Bonds) CNP 2012-1 ($1,695m) (/deal/17355) CenterPoint Energy Houston Elec... CTI, MOS Jan 11, 2012

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A1	606.220	3.00	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	18	0.90%	0.90%	99.99990
A2	407.520	7.00	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	55	2.16%	2.16%	99.99980
A3	681.260	10.81	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	90	3.02%	3.03%	99.99930

ESOT (/sector/Esoteric/Rate Reduction Bonds) ELL 2011-A ($207m) (/deal/17293) Entergy Corporation (/sponsor/52) MOS Sep 15, 2011

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A1	207.160	5.38	Aaa	AAA	AAA	-	-	-	Fixed	-	-	75	2.04%	2.04%	99.98345

ESOT (/sector/Esoteric/Rate Reduction Bonds) EAI 2010-A ($124m) (/deal/17109) Entergy Corporation (/sponsor/52) MOS Aug 11, 2010

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A1	124.100	5.45	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	55	2.30%	2.31%	99.97123

ESOT (/sector/Esoteric/Rate Reduction Bonds) EGSL 2010-1 ($713m) (/deal/17098) Entergy Corporation (/sponsor/52) CTI Jul 15, 2010

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A1	97.000	3.00	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	30	1.52%	1.53%	99.97942
A1	112.000	2.00	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	25	1.11%	1.12%	99.98490
A2	60.000	7.00	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	70	3.22%	3.22%	99.97299
A2	111.000	5.00	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	50	2.47%	2.47%	99.96996
A3	87.100	10.40	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	95	3.99%	4.00%	99.88302
A3	121.000	8.00	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	73	3.45%	3.45%	99.96213
A4	124.900	10.90	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	85	3.96%	3.96%	99.95069

ESOT (/sector/Esoteric/Rate Reduction Bonds) CNP 2009-1 ($665m) (/deal/16984) CenterPoint Energy Houston Elec... GSC Nov 18, 2009

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A1	224.790	3.00	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	20	1.83%	1.83%	99.99730
A2	160.150	7.00	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	45	3.46%	3.46%	99.99070
A3	279.920	10.82	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	70	4.24%	4.24%	99.98410

ESOT (/sector/Esoteric/Rate Reduction Bonds) ETRF 2009-1 ($546m) (/deal/16971) Entergy Corporation (/sponsor/52) MOS Oct 30, 2009

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A1	182.500	3.00	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	20	2.12%	2.12%	99.99329
A2	144.800	7.00	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	40	3.65%	3.65%	99.97042
A3	218.600	10.87	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	65	4.39%	4.38%	99.92491

ESOT (/sector/Esoteric/Rate Reduction Bonds) EGSL 2008-A ($278m) (/deal/16852) Entergy Corporation (/sponsor/52) CTI Aug 21, 2008

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A1	103.000	2.66	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	145	4.95%	4.95%	99.94582
A2	90.000	6.24	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	170	5.88%	5.88%	99.93962
A3	85.400	8.97	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	210	6.55%	6.54%	99.97284

ESOT (/sector/Esoteric/Rate Reduction Bonds) EGSL 2008-A ($688m) (/deal/16838) Entergy Corporation (/sponsor/52) CTI Jul 22, 2008

ESOT (/sector/Esoteric/Rate Reduction Bonds) CLECO 2008-1 ($181m) (/deal/16759) Cleco Corporate Holdings LLC (/s... CSG Feb 28, 2008

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A1	113.000	5.00	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	80	4.41%	4.41%	99.93793
A2	67.600	10.58	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	115	4.41%	4.41%	99.93793

ESOT (/sector/Esoteric/Rate Reduction Bonds) CNP 2008-1 ($488m) (/deal/16748) CenterPoint Energy Houston Elec... CTI, MOS Jan 29, 2008

Missing something? Tell us

Debt Borrowing/Payment Schedule for GA Financing Scenarios ***($ millions)***	**2017**
IESO GA cost forecast + extrapolation	12,095
1a. Moderate / GA Financing	
25-year Financing	
Ratepayer GA Payment	8,988
Accumulated debt in present year (including 5% annual interest)	3,107
30-year Financing	
Ratepayer GA Payment	8769
Accumulated debt in present year (including 5% annual interest)	3326
1b. Moderate / GA Financing with Delayed Increase in Payments	
25-year Financing	
Ratepayer GA Payment	10954
Accumulated debt in present year (including 5% annual interest)	1142
30-year Financing	
Ratepayer GA Payment	10679
Accumulated debt in present year (including 5% annual interest)	1416

2018	2019	2020	2021	2022	2023	2024	2025	2026
11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020
9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741
5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844
8944	9123	9306	9492	9682	9875	10073	10274	10480
6383	9131	12451	14425	16098	17240	19111	20281	20836
10167	9437	8760	9024	9297	9577	9867	10165	10472
2866	5124	8790	11048	12938	14219	16145	17277	17690
9912	9200	8540	8798	9063	9337	9619	9910	10209
3410	5932	9857	12396	14586	16190	18462	19964	20774

2027	2028	2029	2030	2031	2032	2033	2034	2035
10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553
10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553
18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573
10689	10903	11121	11344	10587	10758	10147	9670	7553
22164	23133	23087	22548	21676	20759	19797	18787	17727
10788	11114	11449	11650	10587	10758	10147	9670	7553
18762	19350	18787	17727	16613	15443	14216	12926	11573
10517	10835	11162	11499	10587	10758	10147	9670	7553
22271	23313	23236	22548	21676	20759	19797	18787	17727

2036	2037	2038	2039	2040	2041	2042	2043	2044
5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535
7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535
10,151	8,659	7,092	5,446	3,719	1,905	0	0	0
7281	7022	6777	6543	6320	6109	5908	5717	5535
16613	15443	14216	12926	11573	10151	8659	7092	5446
7281	7022	6777	6543	6320	6109	5908	3717	3535
10151	8659	7092	5446	3719	1905	0	0	0
7281	7022	6777	6543	6320	6109	5908	5717	5535
16613	15443	14216	12926	11573	10151	8659	7092	5446

2045	2046	2047	2048	2049	2050
3,362	3,197	3,041	2,892	2,750	2,616
3,362	3,197	3,041	2,892	2,750	2,616
0	0	0	0	0	0
5362	5197	5041	2892	2750	2616
3719	1905	0	0	0	0
3362	3197	3041	2892	2750	2616
0	0	0	0	0	0
5362	5197	5041	2892	2750	2616
3719	1905	0	0	0	0

Funding the Ontario Fair Hydro Plan – Global Adjustment Refinancing

EXECUTIVE SUMMARY

The Ontario Fair Hydro Plan was announced in March 2017 to lower electricity rates for consumers. A large part of this plan was the refinancing of the global adjustment (GA) charge[1].

Refinancing

In the early years, a portion of the costs covered by the GA would be refinanced to reduce pressure on today's electricity ratepayers. In later years, the cost of refinancing would be recovered from ratepayers. Under current forecasts, the immediate reduction in the GA would be about $2.5 billion per year on average over the first 10 years, with annual interest costs not exceeding $1.4 billion.

The government intends to introduce legislation that would, if passed, enable the Independent Electricity System Operator (IESO) and Ontario Power Generation (OPG) to work together to refinance the GA over a longer period of time. OPG and IESO will be used in a GA deferral structure for a variety of reasons, including:

- The ability of OPG to recognize regulatory assets as a government business enterprise – this allows the costs to be recovered from ratepayers and recognized under an established accounting framework to eliminate fiscal impacts.
- To reduce the borrowing pressure on the Province's credit rating, as debt from OPG is not consolidated on a line-by-line basis.
- To allow for a commercialization process in line with similar structures regarding utility assets from a historical precedent.
- To lower financing costs to ratepayers to allow gradual increases in rates.

Funding Criteria

The current proposal is to have the Province fund up to 44% of the annual GA refinancing (analogous to "GA deferral"). In determining the method of funding for the GA deferral structure, there are several interrelated issues that need to be addressed in order to achieve critical objectives. The following are some of the critical objectives considered in this document:

1. **Maintaining OPG's status as a Government Business Enterprise**
2. **Credit rating agency considerations (including capital structure)**

---

[1] The GA covers the cost of building new electricity infrastructure in the province, as well as delivering Ontario's conservation programs − ensuring that enough electricity supply will be available over the long term. The global adjustment is set monthly to reflect:

- The differences between the wholesale market price for electricity, known as Hourly Ontario Energy Price (HOEP) and:
  - Regulated rates for Ontario Power Generation's nuclear and hydroelectric generating stations;
  - Payments for building or refurbishing infrastructure such as gas-fired and renewable facilities and other nuclear, as well as the contracted rates paid to a number of generators across the province;
- The cost of delivering conservation programs.

Responding to changes in the HOEP, the global adjustment varies from month to month − generally, when the HOEP is lower, the global adjustment is higher in order to cover the costs of regulated and contracted generation.

   a. **Maintaining a good credit rating for OPG**
   b. **Maintaining a good credit rating for tranches in the SPV, particularly the senior tranche for capital markets**
   c. **Maintaining a good credit rating for the Province**
3. **Allowing for the consolidation of the SPV onto OPG's books**
4. **Enabling OPG and the Province to recover the costs of financing**
5. **Maintaining the profitability and viability of the GA deferral structure**
6. **Eliminating or mitigating the annual fiscal impact over the refinancing period**

Funding Options

A variety of funding options from the Province are being considered, in the range between debt and equity, including:

1. **Equity Injection – cash given to OPG in exchange for common shares**
2. **Equity Injection – cash given to OPG in exchange for preferred shares**
3. **Debt – cash given to OPG in exchange for debt (market level interest)**
4. **Other Mezzanine debt – cash given to OPG in exchange for some type of convertible debt**
5. **Debt into SPV – the Province buys debt securities directly from the SPV in exchange for cash**

Recommendation

Based on the available funding options and key objectives, the following risks have been identified in Figure 1:

Figure 1 – Risk Table*

	Common Equity to OPG	Preferred Shares to OPG	Debt to OPG	Other Mezzanine Debt to OPG	Debt to SPV
Maintaining GBE status	M – H	L – M	M – H	L – M	L – M
Credit Rating	L	L – M	M – H	L – M	M
Accounting Consolidation	L – MH	L – MH	L – MH	L – MH	L – MH
Cost Recovery	M – H	L – M	L – M	L - M	L
Profitability & viability	L	L – M	M	L – M	L – M
Fiscal Impact	M	L – M	L – M	L – M	L

**Level of risk of objectives not being achieved*
L = Low, M = Medium, MH = Medium High, H = High

The recommended strategy would be not to limit provincial funding to a certain type of debt or equity, but rather to implement a financing plan that benefits all parties (i.e., the Province, OPG,

IESO, security holders, LDCs, and ratepayers). Such a strategy could involve issuing more equity (e.g., a mix of common and preferred shares) in earlier years to establish the viability of the financing structure, and gradually moving to more debt-like financing options as the financing structure reaches the repayment "inflection point", and as the mechanism establishes a history of profitable operations as well as timely payments.

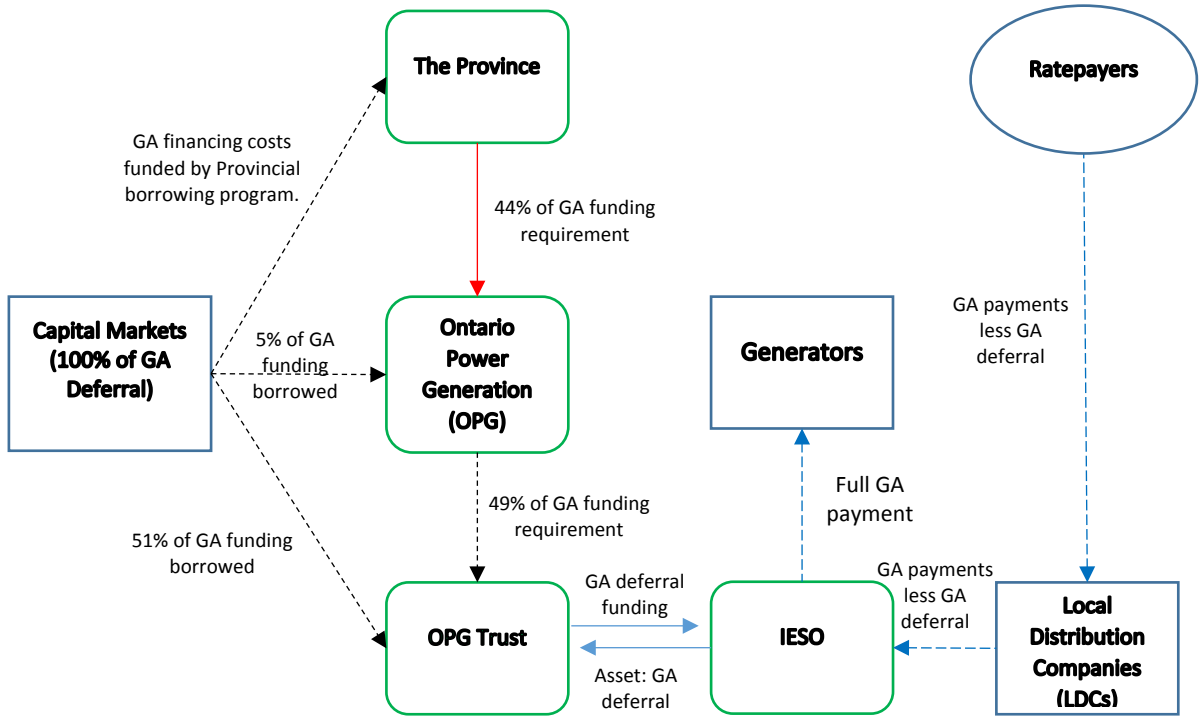
External auditors, accounting experts, and credit rating agencies need to be brought into the discussion to ensure the required objectives can be obtained.

Current Proposed Structure

The Ministry of Energy, Ministry of Finance and the Ontario Financing Authority (OFA) are coordinating with OPG to implement a Global Adjustment (GA) smoothing mechanism.

Under the current proposal, OPG would develop a Special Purpose Vehicle (SPV) referred to as "OPG Trust" which will use 100% debt financing to purchase regulatory assets from the IESO. These regulatory assets represent the portion of RPP GA expenses deferred to future years. IESO would use the cash from the OPG Trust to make up the shortfall in GA recoveries from ratepayers in order to fully compensate generators. Figure 2 illustrates a simplified version of the GA refinancing structure.

Figure 2 – GA Refinancing Structure



Based on the OPG white paper (*Appendix B*) - a collection of proposed requirements for the structure to get the preferred accounting treatment from OPG's auditors and accounting advisors - it is important to note that:

- The 44% funding provided by the Province is the **maximum** amount that can be provided to OPG for the SPV, either indirectly (through OPG) or directly (into the SPV).
    - Can be **debt** or **equity**
    - Can be **less than 44%**
    - Nothing in the proposed requirements requires the Province to invest in OPG directly rather than directly in the SPV; **need a written confirmation from external auditors/advisors to illustrate why this is necessary**.
- The 51% of the funding directly into the SPV from the capital markets is **not a minimum** amount that must be provided, based on the language provided.
    - For example, OPG could borrow 20% of the GA deferral from capital markets and separate that into the SPV, the Province could provide 40% of the deferral directly or indirectly, and capital markets could provide the remaining 40% directly into the SPV. This would satisfy the requirements (since the capital markets are funding the OPG's 20%).
    - Rephrased, capital markets must fund the majority of the SPV, either directly or through OPG.
- OPG must own at least 5% of the total debt, and over 50% of the most junior debt in the SPV (i.e., the equity tranche).
    - This is to fulfill consolidation requirements for IFRS and US GAAP for an SPV (explained later).
    - Based on the notion that the minimal amount of the equity tranche is 10% (with OPG owning more than half of this amount).

Critical Objectives

1. Maintaining OPG's status as a Government Business Enterprise

Appendix A highlights the relevant Public Sector Accounting Standards (PSAS or "PS") issued by the Public Sector Accounting Board (PSAB). The December 2014 version is the latest available standard. PSAS is the accounting framework followed by the Province for its financial statements.

A government business enterprise is accounted for under the modified equity method – it is reported at its net asset value (i.e., total assets – total liabilities, with adjustments) on the Provincial accounts, without conforming to PSAB standards or being consolidated on a line-by-line basis. For OPG, even though the company is using US GAAP as its accounting framework, it is now accounted for under the modified equity method using IFRS as the accounting framework. This is the Auditor General's preference, as there are now interim IFRS standards (*IFRS 14 Regulated Deferral Accounts*) that allow for rate regulation. The original rationale for

OPG and Hydro One using US GAAP was because PSAB and IFRS had no standards for rate regulation.

The rationale for using the modified equity method rather than line-by-line consolidation like other government reporting entities is explained under PS 1300.33:

> *Accounting for a government business enterprise by the equity method avoids commingling the independently-managed business enterprise's budget and actual results with those of other government organizations on a line-by-line basis. It also avoids including the business enterprise's gross debt with that of other government organizations as the business enterprise is expected to repay that debt from its own revenues.*

There are four requirements to be considered a government business enterprise (GBE):

> *PS 3070.03 (and PS 1300.28) - a government business enterprise is an organization that* ***has <u>all</u> of the following characteristics****:*
> *(a) It is a separate legal entity with the power to contract in its own name and that can sue and be sued;*
> *(b) It has been delegated the financial and operational authority to carry on a business;*
> *(c) It sells goods and services to individuals and organizations outside of the government reporting entity as its principal activity; and*
> *(d) It can, in the normal course of its operations, maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity.*

If one of these conditions fails for OPG, it would lose its status as a GBE, resulting in line-by-line consolidation with the province. This will cause considerable consolidation problems because:

- OPG has rate regulated assets that would likely not be recognized under PSAB in the Provincial accounts – could result in a fiscal impact.
- OPG's nuclear liabilities and assets would be consolidated onto the public accounts, potentially impacting credit ratings.
- In the case of the GA structure, the debt in the SPV from capital markets would be recognized directly on the Province's balance sheet and the offsetting regulatory assets may be derecognized/written down – a fiscal impact.

In terms of the SPV structure, the fourth requirement from PS 3070.03 is the most at risk – if OPG can, in the normal course of its operations, maintain its operations and meets its liabilities from revenues received from sources outside of the government reporting entity. PS 1300.30 and 1300.31.b further explain this standard:

> *.30 A government business enterprise should, in the normal course of its operations, be able to maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity. These revenues include not only amounts from the sale of goods and services, but also* ***transfers received from other governments or sources outside of the government reporting entity****.*

> *.31 When determining if an organization can maintain its operations and meet its liabilities with revenues received from outside of the government reporting entity, the following factors should be considered:*
> *(a) The organization's history of maintaining its operations and meeting its liabilities;*
> *(b) Whether the organization would continue to maintain its operations and meet its liabilities without relying on* ***sales to, or subsidies in cash or kind from, the government reporting entity****;*
> *(c) Past, present and future economic conditions within which the organization operates; and*
> *(d)* ***Whether the organization has realistic and specific plans that show how it expects to be able to maintain its operations and meet its liabilities in the future****.*

There is nothing specific in PSAB about equity injections, but in terms of debt, there is the following standard:

> *PS 3230.09 If a government* ***charges little or no interest to the government business enterprise for the use of debt proceeds****, the difference between the interest cost to the government and the interest charged to the government business enterprise is in the* ***nature of a subsidy****. Such circumstances would be* ***taken into account in assessing if the organization continues to meet the financial self-sustainability requirement*** *inherent in the definition of a government business enterprise in GOVERNMENT REPORTING ENTITY, Section PS 1300.*

For an equity injection from the Province to OPG, there is a risk that it could be viewed as subsidy due to:

a) **The frequency and size of the transactions** – It has been proposed that the equity injection be monthly and over a period of ten years. Such a reliance on continually injected funds without a mandatory "cost" such as interest could be viewed as a subsidy, akin to an interest-free loan.
    a. The notion that OPG is operating as a "going concern" is also threatened by the reliance on the equity funding.

b) Ontario is already the sole shareholder – The Province already owns 100% of OPG, and is essentially dictating that OPG use equity injections for a specific mandate which threatens the idea of autonomy.

c) There needs to be a rate of return that justifies an equity injection from a commercial standpoint: the cost of equity is always higher than the cost of debt due to the lowest claim on assets that an equity holder possesses – debtholders get paid first. Thus, equity holders must be compensated for taking this risk. In order for the equity injection to not be viewed as a subsidy, the return from the GA deferral mechanism must be substantially higher than the cost of borrowing for the Province to fund these equity injections.
    - Several wholly-owned state-owned enterprises (SOEs), which are similar to GBEs in definition, were examined for the rationale behind recapitalization from their respective governments. Australia, Estonia, Hungary, New Zealand, Slovenia, and

Norway all demonstrate that wholly-owned unlisted SOEs have requirements that recapitalizations from the government are subject to minimum expected rates-of-return. This is usually at least the cost of capital or a market comparable rate. Other countries (Chile, Finland, Israel, Korea, Lithuania, Netherlands, Poland, and UK) have no specific mechanisms to ensure market-consistent equity costs, but have several other methods including:

- Recapitalization is subject to a regular feasibility study
- Both public interest and expected financial return are taken into account when deciding on recapitalization
- Considering a market consistent benchmark
- Considering the risk of the investment.

As long as the weighted average return from the SPV (i.e., the rate that is charged to ratepayers) adequately compensates the Province for the risk associated with an equity injection, it is unlikely that the equity injections will be viewed as a subsidy.

In terms of credit ratings, there is nothing in PSAB that dictates that a GBE requires certain ratios or credit ratings in order to maintain that status:

- As of April 6, 2017, OPG has a credit rating of A(low) from DBRS.
- Even if OPG was downgraded in the BBB range, this would still be investment grade.
- OPG would have a higher cost of debt, but this would passed on to consumers (higher cost of debt for the regulated activities, excluding the SPV mechanism).
- The credit rating section will further address rating agency issues.

2. Credit rating agency considerations (including capital structure)

Page 21 from the Cabinet submission PowerPoint (*Appendix C*) states a number of assumptions about the financing of the GA deferral structure, which are assessed below:

- *"Given that SPV will be consolidated into OPG for accounting purposes, the significant amount of debt required to fund the GA deferral will have a severe impact on OPG's credit rating. If 100% of the requirement is funded by debt, OPG would be downgraded"*.
  - **Comments:**
  - The purpose of the SPV is to separate the risk from the regulatory assets from the business risk of OPG – the SPV is bankruptcy remote if setup correctly.
  - The SPV is consolidated on an accounting basis, but only the percentage of the GA deferral funded directly by OPG to the SPV would be considered as part of the normal operations structure of OPG.
    - However, as DBRS views securitization as a form of debt financing, securitized assets of non-financial companies are normally added back to debt to calculate adjusted debt ratios.

- If OPG goes bankrupt, it will not impact the SPV – OPG has no right to the assets in the SPV as a separate legal entity.
- If the SPV fails, the capital market debtholders (**expected to 51% of the GA deferral)** have the right to the regulatory assets in the SPV that were securitized, but have no recourse from OPG since the SPV is a separate legal entity.
- The tranches that make up the SPV will be given a separate credit rating assessment by rating agencies.

- "*To manage the exposure and minimize the cost of funding. The required funding would be split into 2 buckets:*

  1. 56% from capital markets; and

  2. The remainder provided by the Province via equity injection, which would be loaned to SPV as subordinated debt."
  - **Comments:**
  - The remainder does not need to be financed from the Province – both OPG and the capital markets have the potential to take on more debt from the SPV.
  - The cost of funding for OPG may be minimized, but the cost of funding overall may not be due to the higher cost of equity.
  - "Exposure" is already being minimized through the SPV.
- *The use of equity to fund a portion of the GA deferral allows for an improvement in both Net Income and EBITDA as incremental revenue is captured by the increase in the value of the deferral which would offset the fiscal impact of the borrowing at Province level.*
  - **Comments:**
  - There would be an improvement in net income and the structure theoretically would have no fiscal impact.
- "*Credit rating metrics are generally maintained within established limits*":
  - **Comments:**
  - No supplementary evidence to support this.

Maintaining a strong credit rating for OPG

On April 6, 2017, DBRS confirmed the issuer rating and Unsecured Debt rating of OPG at A(low) as well as its Commercial Paper at R-1 (low). The outlook for OPG was stable, with the ratings supported by four key factors:

1) The reasonable regulatory regime in place for the Company's generation facilities
2) Continuing financial support from its shareholder, the Province of Ontario (rated AA (low) Stable, by DBRS)
3) Strong cash flow-to-debt ratios
4) Strong debt-to-capital ratios

With the GA deferral and recovery mechanism, assuming the supporting legislation is passed, the first two factors would remain strong. In terms of cash flow-to-debt and debt-to-capital ratios, there may be a difference in the total debt and total debt amounts on an accounting, legal, regulatory, and rating agency basis:

- **Accounting basis**: The entire Trust, i.e., 100% of the GA deferral and the associated regulatory assets, would be consolidated onto OPG's books, increasing total debt and total capital.
- **Legal basis**: the SPV is considered separate from OPG.
- **Regulatory basis**: From the latest draft legislation, the expectation is that the SPV would not be part of the rate-setting process. It remains to be seen how equity injections from the Province to OPG would be treated.
- **Rating agency basis**: A discussion with rating agencies needs to be conferenced to confirm how they would treat the debt in the SPV in the calculation of risk assessment ratios such as total debt-to-capital.

DBRS's primary financial risk assessment (FRA) metrics for utilities are highlighted in Figure 3 below:

Figure 3. Regulated Electric, Natural Gas, and Water Utilities – Primary DBRS FRA Metrics

Primary Metric	AA	A	BBB	BB/B
Cashflow-to-debt	> 17.5%	12.5% to 17.5%	10.0% to 12.5%	0.0% to 10.0%
Debt-to-capital	< 55%	55% to 65%	65% to 75%	75% to 90%
EBIT-to-interest	> 2.8x	1.8x to 2.8x	1.5x to 1.8x	1.0x to 1.5x

OPG's historical performance on these key ratios are illustrated below in Figure 4:

Figure 4. OPG Historical DBRS Primary FRA Metrics

(CAD millions)	2015	2014	2013	2012	2011
Cash flow/Total debt 1	33.2%	27.0%	22.9%	20.8%	28.9%
Total debt in capital structure 1, 2	35.9%	36.9%	38.9%	36.9%	36.8%
EBIT gross interest coverage (times) 3	(0.86)	0.24	(1.12)	0.66	0.02
EBITDA gross interest coverage (times) 3	2.89	2.75	2.21	3.15	2.71
(Cash flow - n.w.f.)/Total debt 4	27.5%	21.3%	16.5%	13.8%	21.1%

1 Including operating leases. 2 Adjusted for Accumulated Other Comprehensive Income. 3 Excluding earnings from nuclear fixed asset removal and nuclear waste management funds. 4 Included nuclear waste funding (n.w.f.) payments as they are not discretionary.

OPG has been outperforming two of the three key metrics for the past five years (within AA range), but has been rated at A (low) for several reasons including the negative EBIT coverage, among other factors. *Appendix E* includes additional information from DBRS's general methodology for regulated utilities.

The effect of different scenarios on capital structure, assuming that the Province uses either preferred equity or debt instead of equity injections to finance 44% of the GA deferral annually, is shown below:

Figure 5. Financing effect on Capital Structure ($20.3B total borrowing)

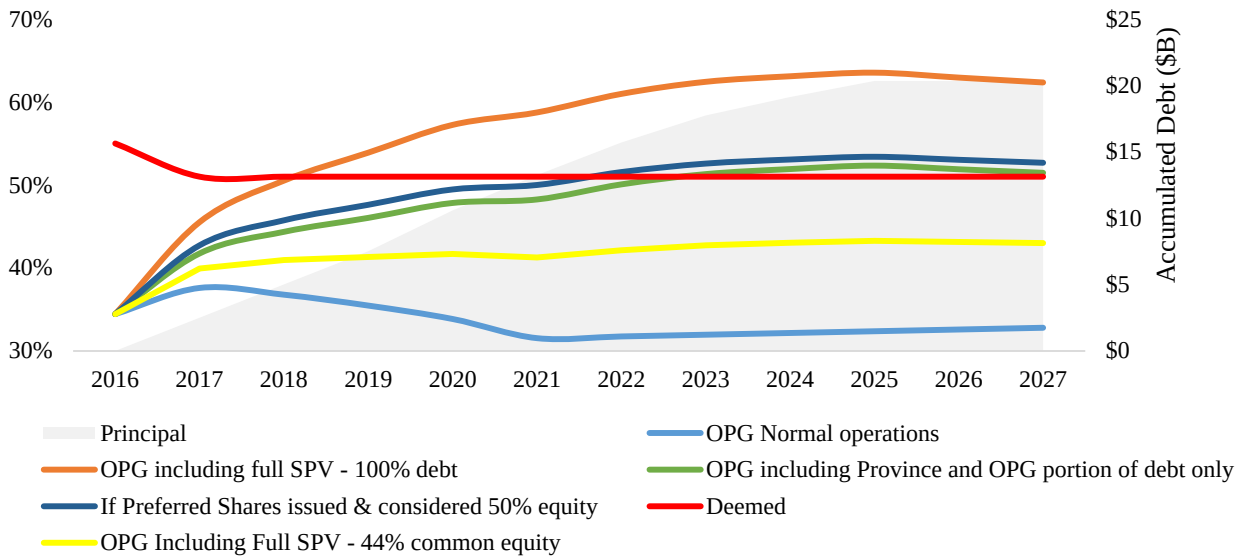
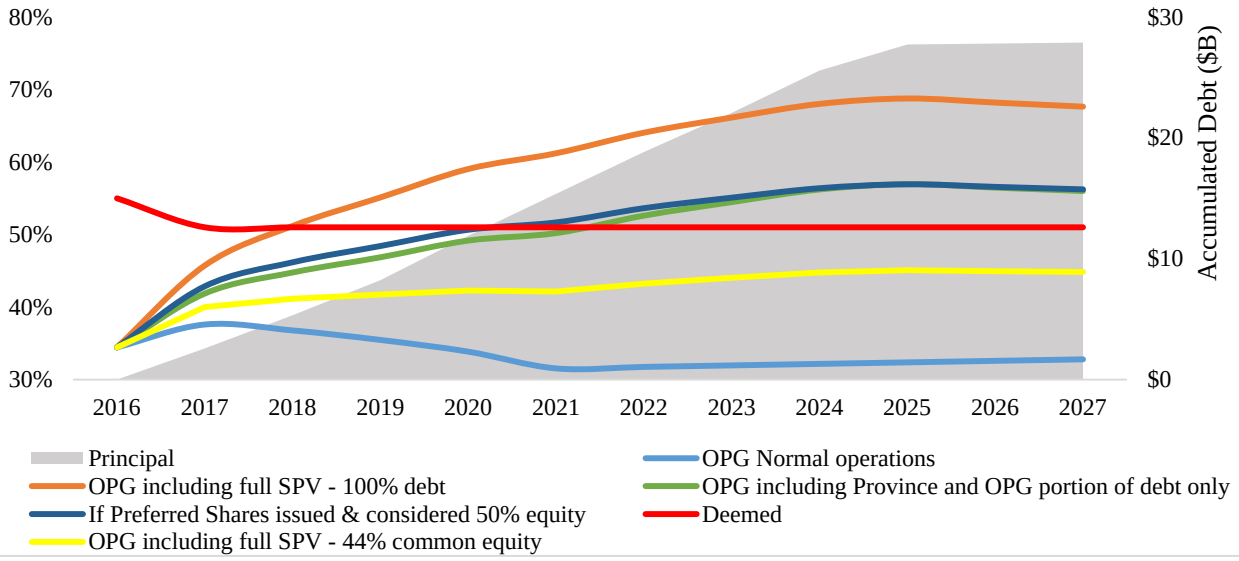


Figure 6. Financing effect on Capital Structure ($28B total borrowing)



**Figures generated from model based on OPG BP forecasts, Ministry of Energy cabinet submission, and internal CEFD assumptions. Assumes no limit on preferred share as a percentage of common equity for rating agency classification.*

- Preferred equity is generally limited to 20% of common equity by DBRS in terms of counting as equity rather than debt, although this limit does not apply if it is preferred equity held by the parent for the subsidiary.

- **Need to open a conversation with the rating agency to see how they would treat the preferred equity since the Province owns 100% of OPG but OPG is a GBE which is not technically a subsidiary of the province despite 100% ownership (i.e., it is not consolidated in the Province's books but rather recorded under the modified equity method).**

It is recommended that OPG provide a forecast and rationale on key credit rating ratios and capital structure to justify its insistence that common equity is required to maintain a good credit rating.

Maintaining a good credit rating for the SPV

In order to understand the proposed GA financing structure, one can examine the components of the structure and similar historical undertakings.

SPV

An SPV (special purpose vehicle or special purpose entity) is a bankruptcy-remote entity established for the sole purpose of issuing debt securities. The bankruptcy remote component of the SPV is crucial to the securitization and isolates the bondholders from event risk associated with the originator and servicer. The debt securities typically issued by an SPV are asset-backed securities (ABS) which are bonds collateralized by a distinct pool of assets. The most common collateral types found in asset-backed securities are credit card receivables, auto and equipment loans or leases, home equity loans, student loans and installment sales contracts for manufactured housing units.

- The performance of the underlying collateral will largely determine the performance of the bond.
- **In recent conversations, it has been flagged that the proposed structure will not result in a securitization transaction, despite its similarities.**

US Rate Reduction Bonds

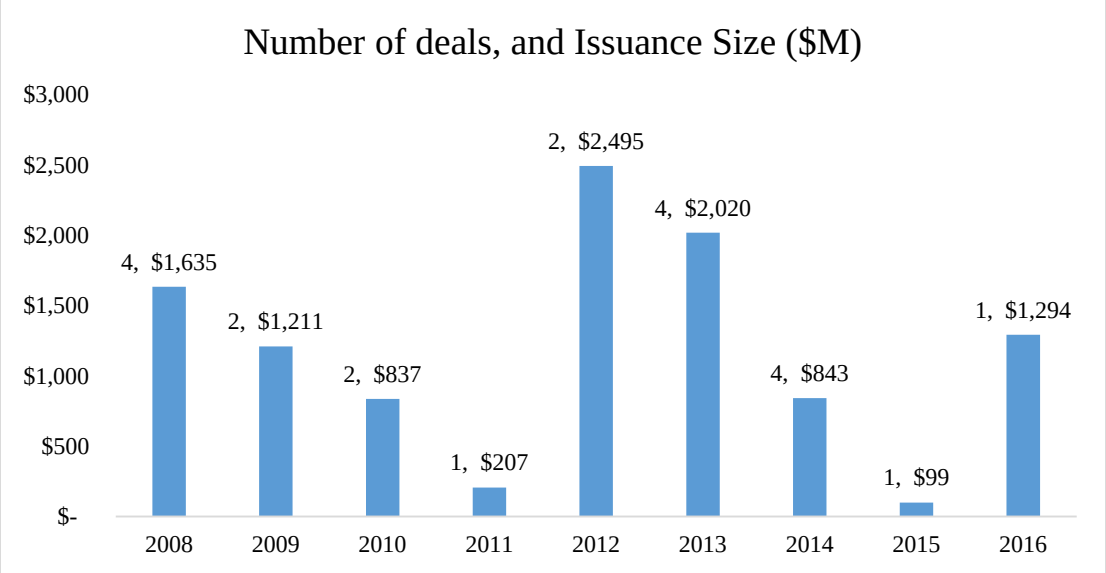
The proposed GA mechanism is most similar to rated reduction bonds (RRBs) from the United States. An RRB is the securitization of a cashflow stream generated by a fee charged to utility consumers. RRBs came into prominence in the US after the passing of the Energy Policy Act of 1992 that led to the privatization of the electricity market. Deregulation of the electric utilities was introduced to foster a competitive environment and to reduce the rates charged to customers. However, when states deregulated utilities, the resulting decrease in revenue caused many utility company assets to become uneconomic to operate. These uneconomic assets are referred to as "stranded assets". RRBs were developed to enable utilities to bridge the gap between the book value of stranded assets in the previously regulated environment and their current market value in

a deregulated one. The use of RRBs allows for an extended recovery period of those costs at an AAA funding rate.

The fee or transition charge is collected by utilities over a specific period of time. Because the state legislature designates the transition charge to be a statutory property right, it can be sold by a utility to an SPV and then securitized. It is the legislative designation of the transition charge as an asset that makes RRBs different from the typical asset securitized.

Transition charges are initially calculated based on projections of utility usage and the ability to collect revenues. However, actual collection experience may differ from initial projections. Because of this, there is a "true up" mechanism in these securitizations. This mechanism permits the utility to recompute the transition charges on a periodic basis over the term of the securitization based on actual collection experience. The advantage of the true-up mechanism to the bond classes is that it provides cash flow stability as well as a form of credit enhancement.

From 1995 to 2003, there were more than $31B issuances of RRBs (about $45B total since 2012) in over 20 states. The deal size has been between $35M and $3B in the past for the US. RRBs have traded at spreads comparable to AAA-rated credit cards in the US. Figure 7 below is a summary of RRB deals since 2008:



Appendix D contains details of each of the historical RRB issuances from Figure 7 above.

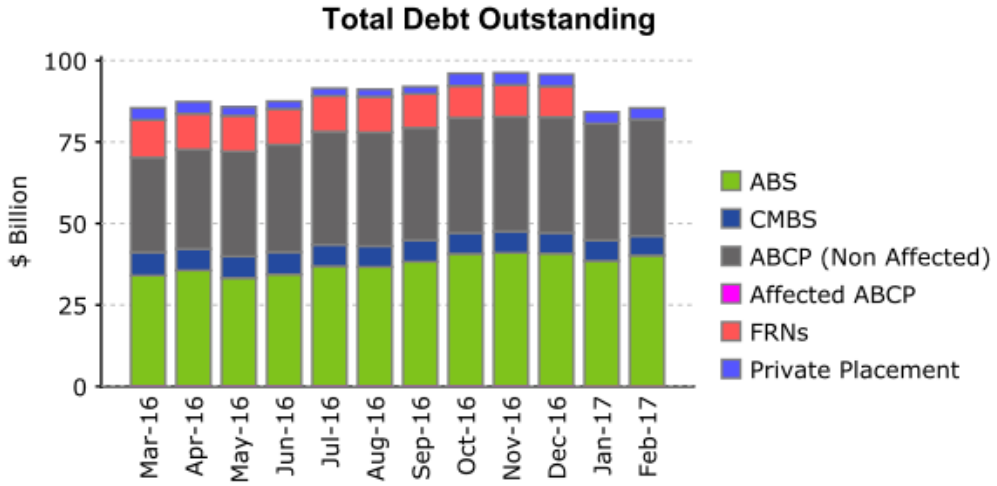
A key difference between RRBs and the proposed debt securities from the GA financing structure is that there is more uncertainty surrounding the GA deferral mechanism.

- RRBs book value and current market value are relatively known at the time of issuance, thus it may be easier to determine the fee that is needed to recuperate the stranded assets from the start.

- The extent of borrowing needed for the GA adjustment is not known ahead of time.
    - However, reasonable estimation and the true-up mechanism can mitigate this issue.
    - Once a history of forecast accuracy and fees collected from ratepayers has been established, there will be more certainty in the amount and timing of cashflows.

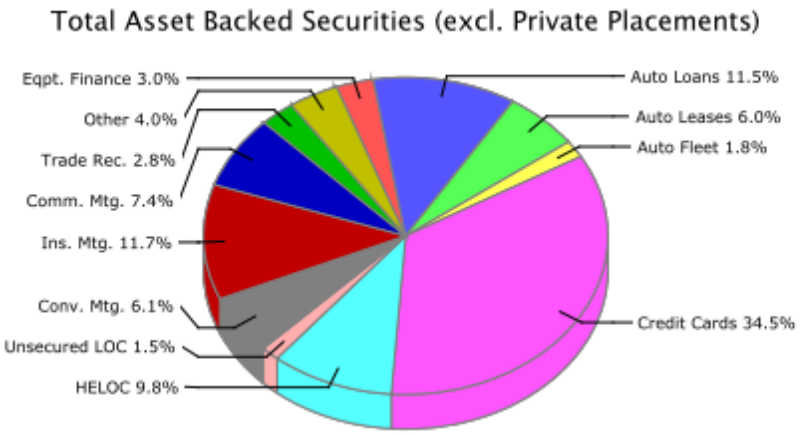
Canadian Securitization Market

The total amount outstanding in the Canadian securitization market ended February 2017 at $85.0 billion. The figures below illustrate the market composition as of February 2017.



Total Asset Backed Securities (excl. Private Placements)

Dealer/Administrator	Outstanding Amount	Market Share
TD Securities Inc.	21,108,826,721	25.8%
RBC Capital Markets Inc.	15,849,571,935	19.3%
BMO Capital Markets	14,880,241,648	18.2%
CIBC World Markets Inc.	9,648,552,341	11.8%
Scotia Capital Inc.	7,732,545,756	9.4%
Other	5,941,339,645	7.3%
National Bank Financial Inc.	4,376,185,678	5.3%
Bank of Nova Scotia (BNS)	1,551,896,531	1.9%
Merrill Lynch Canada Inc.	591,797,636	0.7%
HSBC Securities (Canada) Inc.	92,500,000	0.1%
Canadian Tire Bank	89,698,890	0.1%
National Bank of Canada (NBC)	60,910,750	0.1%
HSBC Bank Canada	4,349,881	0.0%
Total	**$81,928,417,413**	**100.0%**



Asset Classes in Other	Percent
Auto Floorplan	0.65 %
Equipment Floorplan	0.72 %
Auto Rental	0.82 %
Reverse Mtg.	0.73 %
Ins. Premium Loans	0.20 %
Fran. Loans	0.87 %

An issuance of $2.5 billion a year by the SPV (including the "private placement" to the Province) would be approximately 3% of the total Canadian market. There has also been discussion of entrance into the US market.

Credit Enhancement

There are a variety of methods for credit enhancement of securitized assets:

1) Excess spread – The difference between the utility fee cash flows brought in from the regulated asset and the costs of the securitization (financing costs, servicing fees, etc.). If ratepayers are charged 6% and bondholders have an interest at 4%, the excess spread of 2% helps cover if some ratepayers have late payments.
2) Cash reserve account: holding excess cash.
3) Overcollateralization: having the regulatory assets value higher than the issued notes.
4) Subordination
5) Letter of credit from a third party.

SPV Credit rating

Rate reduction bonds minimize costs by qualifying for triple A ratings and accordingly are issued with yields considerably lower than those based on the sponsoring utility's long-term debt rating. In order to be eligible for this level of credit quality, rate reduction bonds must possess certain common structural characteristics.

- First, the bonds must be authorized by specific state enabling legislation entitling the utility to impose and collect usage-based customer charges that are dedicated to payment of the bonds.
- The charges must be non-bypassable; that is, they cannot be eliminated by switching to alternative providers of service.
- The legislation requires the utility to seek and receive an irrevocable financing order from the state utility regulator. The financing order creates a present intangible property right to impose and collect the non-bypassable charge in amounts necessary to service the bonds.

- The legislation and financing order provide for a periodic true-up rate mechanism, by which at least annually, and more frequently in many cases, the special charges are reviewed and adjusted to correct for any under collection, to assure timely payment of the principal and interest on the bonds.
- The legislation also provides for a covenant by the state that until the bonds have been paid, the state will not impair the value of the securitization collateral or, but for the true-up process, reduce, alter or impair the special charges to the utility's customers.

Legislation

- The current draft of the legislation has similar provisions discussed above.
- A Triple AAA rating is likely with the supporting legislation and the proposed credit enhancements of subordination, excess spread, and the true-up mechanism.
    - For RRBs, the difference between market value and book value (i.e., the stranded assets) was relatively known at the time of issuance.
    - In this case, the extent of the total borrowing is not known, which may put the credit rating at risk with more uncertain cash flows than the precedent from RRB.

Maintaining a good credit rating for the Province

Maintaining the Province's credit rating is critical to lowering the borrowing costs over the refinancing period. Keeping the SPV consolidated onto OPG's books and minimizing Provincial borrowing are the two critical objectives needed to reduce fiscal impacts and the probability of a rating downgrade.

3. Allowing for the consolidation of the SPV onto OPG's books

The SPV needs to be consolidated onto OPG's balance sheets in order for the rate regulated assets to be recognized under US GAAP. When OPG is consolidated onto the Province's accounts, it will be recognized under the modified equity method under PSAB. The modified equity method has the net asset value of OPG recognized as an equity investment on the province's books, with OPG able to maintain an IFRS accounting framework when calculating the net assets and not conforming to PSAB. If the Province or related government reporting entity that is not a GBE is seen as controlling the SPV, then line-by-line consolidation will occur with potential fiscal impacts from the loss of recognition of the regulatory assets that are not recognized under PSAB.

Appendix F highlights how the Province could indirectly or indirectly fund the SPV while allowing OPG to consolidate the SPV on its books. In general terms, the two main criteria to be satisfied are:

1) **OPG must be seen as controlling the Trust** – the way the legislation is being drafted is to have OPG have full control of the Trust, including controlling the economic performance of the Trust.

2) **OPG must have the majority of the equity tranche in the SPV** – this is because OPG must be exposed to either the majority of expected losses, the majority of expected residual returns, or both, under general accounting consolidation requirements. The equity tranche gets all of the residual returns but is the first to absorb losses – thus satisfying this requirement.

It is important to note that:

- There are no clear rules under PSAB for the consolidation of a special purpose vehicle or special purpose entity.
    - The OPG white paper requirements do not prohibit the Province from directly funding the SPV.
- There are no public sector accounting standards specifically related to a provincial investment in the subsidiary of a government business enterprise.
- There may be the possibility of the Province issuing debt to OPG that is then moved to the SPV, thus giving the Province access to the returns from the SPV without the Province going through OPG.

4-6. Cost Recovery, Profitability, and Fiscal impact

The options for the Province to fund the GA deferral structure are in the continuum of common equity to pure debt:

Common equity to OPG

- Gives OPG the most flexibility in managing the trust and ability to absorb temporary losses.
- Preferred method by OPG.
- Lower chance of a ratings downgrade.
- Return charged to ratepayers, on a weighted average basis, would need to justify the proportion of equity injected into OPG that is ultimately put into the SPV, otherwise could be seen as a subsidy to the Province.
- OPG would be able to, but not obliged to, flow dividends back to the Province that would be used to settle interest/principal costs.
- Issue of "double leverage" – the Province's equity stake in OPG (and ultimately the SPV) is funded by debt.
- There could be no fiscal impact with the profit to OPG from the Trust offsetting the interest on Provincial borrowing.
    - However, on a cash basis, there is no guarantee that OPG would pass the required payments to the Province to settle interest and principal payments – there are timing issues.
    - This could lead to fiscal costs eventually once the Trust is dissolved with OPG potentially hanging on to billions of dollars of cash to use for its own initiatives.

Preferred Equity to OPG

- The suggested method would have cumulative dividends that could be deferred for at least 10 years, payable with cash, and with the preferred shares redeemable after ten years from the time of issuance.
    - Under DBRS rating criteria, would likely get 50% equity treatment (*Appendix E*)
- The deferral of dividends would still give OPG flexibility in managing the trust and the ability to absorb temporary losses.
- Lower chance of a ratings downgrade than using debt.
- Lower return to be charged to ratepayers versus common equity to justify preferred equity funding.
- Allows for the Province to eventually receive payments, with the cumulative dividends compensating the Province for the interest payments on its borrowed portion.
    - The preferred share rate of return would need to be higher than the cost of debt for the Province to be compensating for capitalized interest costs.
- OPG would be obliged to pay back dividends, but could delay this outcome for ten years.
- The fiscal impact risk would be expected to be less than common equity with a reasonably guaranteed flow of cash from OPG to the Province through dividends and redemption.

Debt to OPG

- Gives OPG the least flexibility in managing the trust and ability to absorb temporary losses.
- Highest chance of a ratings downgrade.
- Provides a mechanism for the Province to get timely interest and principal payments back from the Trust.
- Fiscal impact risk is the lowest in terms of receiving principal and interest payments.

Various other options would be between the equity and debt spectrum.

Appendix A. Public Sector Accounting Standards related to Government Business Enterprises

Key sections have been highlighted.

SECTION PS 3070 – Investments in Government Business Enterprises

.03 A government business enterprise is a government organization that has all of the following characteristics:
(i) It is a separate legal entity with the power to contract in its own name and that can sue and be sued;
(ii) It has been delegated the financial and operational authority to carry on a business;
(iii) **It sells goods and services to individuals and organizations outside of the government reporting entity as its principal activity**; and
(iv) **It can, in the normal course of its operations, maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity**.

These criteria are explained in GOVERNMENT REPORTING ENTITY, paragraphs PS 1300.29-.31.

Inter-organizational transactions and balances

.29 Inter-organizational transactions and balances are not eliminated under the modified equity method.

.30 Inter-organizational gains and losses are, however, eliminated on assets remaining within the government reporting entity at the financial statement date. As a result, gains or losses related to sales and purchases of services for example, between a government business enterprise and other government organizations would not be eliminated when the government business enterprise is included in government consolidated financial statements by the modified equity method.

.31 For financial assets, such as inventories for resale, that are transferred between a governmental unit and a government business enterprise, unrealized gains or losses may occur. The existence of unrealized losses may indicate a permanent decline in the value of the relevant assets. It may be necessary to recognize this decline by writing down such assets.

.32 Transfers of assets from a governmental unit to a government business enterprise normally result in an increase to the assets and contributed surplus of the government business enterprise. When tangible capital assets are transferred, an unrealized increase in the financial position of the government reporting entity may be created. When tangible capital assets are transferred to a government business enterprise, they are recorded by the government reporting entity as an investment and reported as a financial asset in government consolidated financial statements. Any unrealized gains on tangible capital assets would be eliminated when the government business enterprise is included in government consolidated financial statements on a modified equity basis.

.33 The situation in paragraph PS 3070.32 is analogous to that which arises regarding tangible capital assets when a governmental unit changes in status to be a government business enterprise as described in ADDITIONAL AREAS OF CONSOLIDATION, paragraphs PS 2510.46-.49. The amount of the adjustment to eliminate an unrealized gain arising on the transfer of a tangible capital asset to a government business enterprise in any given period would vary depending on whether the transferred asset is depreciable and, if so, the extent of the depreciation recorded on the asset by the government business enterprise. Any impairment or other adjustment made by a government business enterprise to the recorded value of a tangible capital asset transferred from a governmental unit to the government business enterprise would also affect the amount of the elimination entry.

.34 *The transfer or sale of a tangible capital asset from a governmental unit to a government business enterprise should not improve the net operating results of the period or otherwise improve the net financial position of the government reporting entity*

Inter-organizational bond holdings

.35 From the point of view of the government reporting entity, constructive debt retirement occurs when:

(a) Another government organization purchases the bonds, notes or other debt instruments of a government business enterprise; or

(b) A government business enterprise purchases the bonds, notes or other debt instruments of another government organization, from an organization external to the government reporting entity.

The debt retirement is "constructive" because the debt remains outstanding from the viewpoint of the issuer as a separate legal entity and remains an investment from the point of view of the acquirer as a separate legal entity. As a result of such purchases, a constructive gain or loss, equal to the difference between the carrying value of the debt in the accounts of the issuer and the cost to the acquirer, is recognized in government consolidated financial statements at the date of acquisition. The gain or loss is "constructive" because it is realized and recognized at acquisition from the viewpoint of the government reporting entity, but no gain or loss is recognized at acquisition in the books of the issuing or the acquiring government organization. A constructive gain or loss arises because the acquirer has purchased the debt at a premium or discount and/or the issuer originally issued the debt at a premium or discount.

.36 Neither the carrying values of the inter-organizational bond holdings between a government business enterprise and another government organization, nor the related interest income and expense would be eliminated when the government business enterprise is included in government consolidated financial statements by the modified equity method. However, the amortization of the premium or discount on the books of the acquirer and the amortization of the premium or discount on the books of the issuer would be eliminated. The eliminations would be reflected in the government's investment in a government business enterprise and its income from an investment in a government business enterprise.

.37 Because the debt remains outstanding from the viewpoint of the acquirer and the issuer, they would continue to account for the portion of the debt deemed to be constructively retired, and any related premiums or discounts, and would, therefore, recognize the constructive gain or loss in their own accounts over the period to the maturity or sale of the debt. As the constructive gain or loss was recognized by the government reporting entity in the period the debt was constructively retired, elimination of the gain or loss being recognized by the acquirer and the issuer in each subsequent accounting period through the amortization of any premium or discount related to the debt will be required when the government business enterprise is included in government consolidated financial statements by the modified equity method. In making such eliminations, the government's proportionate ownership of the government business enterprise would need to be taken into account when the government business enterprise is the issuer of the debt.

.38 Regardless of whether the government or a government business enterprise is the acquirer in such a transaction, the government's investment in a government business enterprise and its income from an investment in a government business enterprise would be adjusted to recognize the constructive gain or loss in government consolidated financial statements in the year of the acquisition. In recognizing the gain or loss, the government's proportionate ownership of the government business enterprise would need to be taken into account when the government business enterprise is the issuer of the debt.

WHEN AN ORGANIZATION NO LONGER MEETS THE DEFINITION OF A GOVERNMENT BUSINESS ENTERPRISE

.48 The circumstances affecting a government organization may change so that it no longer meets the definition of a government business enterprise. Failure to meet any of the four characteristics of the government business enterprise definition would require such a change in status of the enterprise.

.49 **When the nature of a government organization changes such that it no longer meets the definition of a government business enterprise, the organization would become a governmental unit and would be consolidated in government financial statements in accordance with BASIC PRINCIPLES OF CONSOLIDATION, Section PS 2500 and ADDITIONAL AREAS OF CONSOLIDATION, Section PS 2510, instead of being accounted for on a modified equity basis. (i.e., line-by-line consolidation)**

.50 When the change in status of a government business enterprise to a governmental unit is the result of an observable event, a government would apply both modified equity and consolidation accounting to the organization in the period, as appropriate. The individual revenues and expenses of the former government business enterprise would be included with those of the other governmental units and recognized in the consolidated statement of operations subsequent to the date the status of the organization changes. Prior to the date of change, only income from an investment in a government business enterprise would be recorded, calculated in accordance with the modified equity method.

.51 When the change in status of a government business enterprise to a governmental unit is not a specific observable event, but occurs over time, a government would account for the organization as a governmental unit for the reporting period in which the change in status occurs.

.52 When an organization ceases to meet the definition of a government business enterprise and that organization applies accounting policies that differ from those of the government reporting entity, the accounting policies of that organization must be conformed to those of the government reporting entity for the purposes of its consolidation in government financial statements. For example, when an acquired government business enterprise changes its status to a governmental unit, any remaining unamortized purchase premium would be written off to consolidated operating results in the period the status changed in accordance with the accounting treatment for purchase premiums required by ADDITIONAL AREAS OF CONSOLIDATION, Section PS 2510.

.53 *In the period that a government organization no longer meets the definition of a government business enterprise, the effect of conforming its accounting policies to those of the government reporting entity for the purposes of consolidation should be included in the determination of consolidated operating results.* [APRIL 2000]

.54 When part of a government business enterprise, such as a division or other discrete component, is sold, but the government still retains control of the organization that remains, that organization is still considered to be part of the government reporting entity. If the part of the organization that remains does not on its own meet the definition of a government business enterprise, it would be consolidated in government financial statements. If the part of the organization that remains continues on its own to meet the definition of a government business enterprise, it would continue to be accounted for on the modified equity basis as a government business enterprise.

.55 **When the circumstances affecting a government organization change so that it no longer meets the definition of a government business enterprise, the change in accounting treatment would not be applied retroactively**. The alteration of an accounting treatment necessitated by events or transactions that reflect a difference in substance from those previously occurring is not considered to be a change in accounting policy 3 or a change in classification. 4 The financial position and results of prior periods would not be adjusted to reflect the change in status of the organization as if it had always been a governmental unit. It is important for government consolidated financial statements to show that a government business enterprise has changed its status to become a governmental unit.

.56 *When the circumstances affecting a government organization change such that it no longer meets the definition of a government business enterprise, the resulting change in accounting treatment, the underlying reasons for the change, and the financial effect of the change should be disclosed.* [APRIL 2000]

.65 Government business enterprises may enter into significant transactions with other government organizations in the government reporting entity. Since the modified equity method of accounting does not eliminate inter-organizational transactions and balances, such as loans and advances, users need supplementary information to identify amounts

owing to or receivable from, and revenues received from or paid to, other government organizations in the government reporting entity.

.66 In addition, because unrealized gains or losses on amounts that remain within the government reporting entity are eliminated, users need information on any adjustments that have been made to the reported net assets and net income of the government business enterprise. Furthermore, users need information on any contractual obligations and contingencies of government business enterprises to understand and assess the future revenue requirements of the government reporting entity.

.67 One result of accounting for a government business enterprise by the modified equity method is that the outstanding debt issued by a government business enterprise is not included in the debt reported by the government reporting entity on its consolidated statement of financial position. Disclosure in government consolidated financial statements of the nature and terms of any government guarantees relating to debt issued by a government business enterprise would serve to highlight a government's contingent exposure to and responsibility for any debt of government business enterprises arising as a result of specific guarantees.

.68 When the nature of the business of a government business enterprise is not self-explanatory, governments are also encouraged to disclose by enterprise, or category of enterprise where appropriate, the nature of the business in which the enterprise(s) are engaged

SECTION PS 1300 – Government Reporting Entity

.27 *Government financial statements should consolidate the financial statements of governmental units comprising the government reporting entity.* 2 [Former paragraph PS 1300.27 retained in Archived Pronouncements.] [JUNE 1996 *]

Defining a government business enterprise

.28 A government business enterprise is an organization that has all of the following characteristics:

(a) It is a separate legal entity with the power to contract in its own name and that can sue and be sued;

(b) It has been delegated the financial and operational authority to carry on a business;

(c) It sells goods and services to individuals and organizations outside of the government reporting entity as its principal activity; and

(d) It can, in the normal course of its operations, maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity

.29 Selling goods and services involves a direct exchange relationship between the revenues and the goods and services provided. Selling prices are related to the quantity and quality of goods or services sold, and not just to the recovery of administrative costs. Imposed fees and penalties, such

as licenses and fines, do not represent sales of goods and services. Insurance premiums charged by a government organization are a sale of a service and not an imposed fee.

.30 A government business enterprise should, in the normal course of its operations, be able to maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity. These revenues include not only amounts from the sale of goods and services, but also transfers received from other governments or sources outside of the government reporting entity.

.31 When determining if an organization can maintain its operations and meet its liabilities with revenues received from outside of the government reporting entity, the following factors should be considered:

(a) The organization's history of maintaining its operations and meeting its liabilities;

(b) Whether the organization would continue to maintain its operations and meet its liabilities without relying on sales to, or subsidies in cash or kind from, the government reporting entity;

(c) Past, present and future economic conditions within which the organization operates; and

(d) Whether the organization has realistic and specific plans that show how it expects to be able to maintain its operations and meet its liabilities in the future.

Accounting for a government business enterprise

.32 A government business enterprise differs from other government organizations in its relationship to the government, and its objectives, and operations. A government enterprise represents a financial asset of the government and given its autonomy, business-oriented objectives, and financial self-sufficiency, equity accounting is appropriate.

.33 Accounting for a government business enterprise by the equity method avoids commingling the independently-managed business enterprise's budget and actual results with those of other government organizations on a line-by-line basis. It also avoids including the business enterprise's gross debt with that of other government organizations as the business enterprise is expected to repay that debt from its own revenues.

.34 Because a government enterprise carries on a business, its financial statements should be prepared on the same basis as a private sector business. This basis is most appropriate for measuring the government's investment in the organization and the impact it has on the government's financial position and results. As such, the modified equity method is the most suitable form of equity accounting.

.35 Government business enterprises should be accounted for by the modified equity method. [JUNE 1996]

.36 Accounting for government business enterprises by the modified equity method is outlined in INVESTMENTS IN GOVERNMENT BUSINESS ENTERPRISES, Section PS 3070.

SECTION PS 3230 – Long-term Debt

.09 If a government charges little or no interest to the government business enterprise for the use of debt proceeds, the difference between the interest cost to the government and the interest charged to the government business enterprise is in the nature of a subsidy. Such circumstances would be taken into account in assessing if the organization continues to meet the financial self-sustainability requirement inherent in the definition of a government business enterprise in GOVERNMENT REPORTING ENTITY, Section PS 1300.

.10 ***When there is sufficient evidence that debt has been issued by a government specifically on behalf of a government business enterprise:***

(a) The debt issued on behalf of the government business enterprise and the related receivable from the government business enterprise should be presented on a net basis in the consolidated statement of financial position; and

(b) The interest expense on the debt issued on behalf of the government business enterprise and the related interest revenue from the government business enterprise should be presented on a net basis in the consolidated statement of operations. **[APRIL 2000]**

Appendix B – OPG Global Adjustment White Paper Conditions

A. Ability to Recognize an Asset and Record Revenue

Accounting Requirements under International Financial Reporting Standards (IFRS)

1) It is our understanding that the IESO and KPMG have concluded that the sale of this 'right to collect' future revenue (or regulatory asset) is not a financing transaction and will not be recorded as a financial liability. Based on that conclusion, the right to collect will be accounted for as an intangible asset in the SPV.

2) In order to the SPV to record this right as an intangible asset, the right must meet the following conditions:

- The intangible asset must be separable and arise from a contractual or legal right (i.e. mandated by the Legislation and SPV Indenture Agreement).
- The SPV must have the control and power to obtain future economic benefits from the intangible asset.
- The SPV must be able to demonstrate that the intangible asset is purchased at fair value.

3) In order for the SPV to recognize appropriate revenue to offset any ongoing costs, the **Legislation must require interest, carrying and administrative costs to be paid to the SPV on a monthly basis**. **This may result in additional amounts to be deferred to achieve the desired customer impact**. Payment of revenue to the SPV is also important to service the interest expenses of the debt.

B. Ability to Consolidate the SPV into OPG under IFRS

OPG 'Control' of the SPV - Accounting Requirements

1) In order to meet the accounting definition of 'control', accounting guidance must be considered. There are no bright lines to determine whether OPG has exposure, or rights, to variable returns from its involvement with the SPV, or whether it has the ability to affect the returns of the SPV through its power over the SPV. Rather, all facts and circumstances are considered when assessing whether an entity has control over another entity. Based on the relevant accounting guidance under IFRS, OPG has proposed terms necessary to demonstrate that OPG has control over the SPV. OPG's external auditors, Ernst & Young, has provided their concurrence that based on the information provided to them to date that the following conditions should permit consolidation of the SPV by OPG.

Directive:

1. **The SPV must be undertaken by OPG as a business initiative on its merits**. A Shareholder Directive is to be limited to direct OPG to investigate the option of establishing a SPV vehicle to administer, finance and operate the Global Adjustment plan. The control, risk and rewards of that SPV will determine its consolidation into OPG as a business enterprise.

SPV:

2. **The SPV should not operate in a predetermined way such that OPG does not have decision-making authority over the SPV's ongoing activities after its formation** (i.e. should not operate on 'autopilot').

3. **OPG must have the ability to appoint and remove the Trustee (or Board of Trustees), with no veto right by the Province. No party shall have the ability to remove OPG from its role and authority in the SPV.**

4. The Province cannot have the right to veto OPG's decisions about the relevant activities of the SPV. **OPG must have the power over the relevant activities of the SPV and be compensated**. The relevant activities of the SPV include (but are not limited to) the evaluation and decisions on financing alternatives, duration, and the strategy to minimize financing costs. **OPG must have the power to establish operating and capital budgets of the SPV.**

5. OPG must have the power to determine or change operating and financing policies of the SPV, which will affect the variability of risks and returns.

6**. The Province or its agencies must not directly or indirectly fund (through debt or equity) more than 50% of** the following:

- **The SPV**
- **Any of OPG's investments in the most subordinated debt of the Trust**

7. OPG must own greater than 50% of the most subordinated debt and targeted to be no less than 5%[2] of the total debt of the SPV. **Such ownership must be financed entirely by OPG through operating cash flows or external debt, without assistance from Provincial sources**. A quantitative analysis should be performed at a later date to corroborate the **appropriateness of the 5% threshold to support that the 5% subordinated debt investment is sufficient to absorb most of the expected variability in the SPV.**

8. OPG must have the ability to earn variable returns by exercising its authority, which shall be accomplished as follows:

a. The cash flow from the restructured asset shall include interest determined based on a relevant benchmark that is appropriate relative to the restructured asset, plus an appropriate margin consistent with the relevant market and other risks

b. OPG shall have the authority to determine the financing strategy, which will vary the financing costs with the objective of enabling the SPV to achieve a more favourable return compared to the return from the restructured asset

c. The SPV shall establish classes of liabilities (senior, subordinated and the most subordinated). The classes would allow the SPV to delineate financing of lower risk investment and investment that would bear higher residual risk. The delineation would

---

[2] *While the rest of the letter refers to a 10% investment in the most junior subordinated debt with OPG owning 5%, it should be noted that OPG should own more than 50% of the most subordinate debt. For simplicity, the degree to which OPG's ownership beyond 50% is not shown in this letter.*

limit OPG's self-funded investment to a reasonable level in order to allow OPG to remain a self-sustaining entity.

d. OPG shall, through its ownership of the most subordinated liability, be able to capture and retain the pricing difference between cost of financing and benchmark for interest on the restructured asset, or any residual risk of restructured asset. The targeted return of the subordinated liability should be reflective of the underlying risks and compensate holders for active management that would be required.

e. OPG should participate in the detailed design of the above and the SPV documentation to ensure that it has substantive power and variability, which will allow OPG's Board of Directors to evaluate the opportunity as a business initiative instead of through a shareholder directive.

Notwithstanding the above, under certain Defined Forced Majeure for emergency events (e.g. unlikely credit market event or disruption where it is not possible to borrow from the market at a reasonable rate), the OEFC may provide bridge financing beyond the designated percentage for a defined period. The relevant terms should ensure that this temporary measure does not detract from the rights of OPG to direct all of the relevant activities of the SPV. Additionally, OPG should not be protected from risk of loss by the OEFC with respect to its subordinated investment, nor should it lose its right to derive the residual returns should such bridge financing be required.

Legislation

9. **The Legislation must require interest, carrying and administrative costs to be paid to the SPV on a monthly basis, so that the SPV is able to recognize appropriate revenue to offset any ongoing costs.**

10. The Legislation must dictate the manner in which the restructured asset would be determined, collected, and the period of collection, so that the determination of the restructured asset will not be subject to the Province's decisions on an ongoing basis, but determined based on a formula. Alternatively, the Legislation may allow for an adjustment to the pre-determined deferral formula based on specific parameters that would limit the adjustment to the restructured asset. Adjustments beyond the specific parameters would require approval by the Board of Trustees.

11. The Legislation must be written to avoid legal or constitutional challenges and be irrevocable to reduce the cost of borrowing and with a specific formula which determines the deferral amount. As irrevocability would be difficult under Canadian law one mitigation would be to provide a Provincial guarantee which only applies with cancellation or amendment of the legislation.

12. The spirit of the above terms should be reflected in the SPV Indenture Agreement as well as Legislation, wherever possible.

2) The Trust is expected to be financed as follows:

- 51% senior secured debt from external markets
- 39% senior subordinated debt from OPG (via Province equity injection into OPG)
- 10% junior subordinated debt from OPG (5% from external markets and 5% from Province equity injection into OPG).

When assessing control, an investor shall consider the nature of its relationship with other parties and whether those parties are acting on the investor's behalf (i.e. they are 'de facto agents'). If OPG is assessed to be a 'de facto agent' of the Province, it will compromise the ability for OPG to consolidate the Trust. The split above is to meet the following conditions to ensure that OPG is not considered a 'de facto agent' of the Province:

- The Province or its agencies must not directly or indirectly fund (through debt or equity) more than 50% of the following:
    - The Trust
    - Any of OPG's investments in the most subordinated debt of the Trust
- OPG must own greater than 50% of the most subordinated debt and targeted to own no less than 5% of the total debt of the Trust. Such ownership must be financed entirely by OPG through operating cash flows or external debt, without assistance from Provincial sources.

3) The Province will need to conclude on whether OPG still meets the definition of a Government Business Enterprise as defined under Public Sector Accounting Board standards in order to obtain the preferred consolidation treatment after the transaction. We also recommend that the Province to undertake the analysis deemed necessary to confirm the accounting treatment in its consolidated Public Accounts, **including if the recognition of the intangible asset would result in an offsetting liability in the Public Accounts.**

Appendix C – Cabinet Submission Reference to SPV and GBE

- Special Purpose Vehicle (SPV) will be used to raise the GA financing and ring fence OPG from its legal obligations.
- SPV will be structured to allow for GBE accounting consolidation into OPG
- Given that SPV will be consolidated into OPG for accounting purposes, the significant amount of debt required to fund the GA deferral will have a severe impact on OPG's credit rating. If 100% of the requirement is funded by debt OPG would be downgraded.
- To manage the exposure and minimize the cost of funding. The required funding would be split into 2 buckets:
  1. 56% from capital markets; and
  2. The remainder provided by the Province via equity injection, which would be loaned to SPV as subordinated debt.
- The use of equity to fund a portion of the GA deferral allows for an improvement in both Net Income and EBITDA as incremental revenue is captured by the increase in the value of the deferral which would offset the fiscal impact of the borrowing at Province level.
- Credit rating metrics are generally maintained within established limits.

Appendix D – RRB Historical Issuances

ESOT DEF 2016-A ($1,294m) Duke Energy Florida IncRBC, GUG Jun 15, 2016

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A2018	183	2	Aaa	AAA	AAA	-	-	-	Fixed	Tsy	-	-	1.20%	1.20%	99.999
A2021	150	5	Aaa	AAA	AAA	-	-	-	Fixed	Tsy	-	-	1.73%	1.73%	99.998
A2026	436	10	Aaa	AAA	AAA	-	-	-	Fixed	Tsy	-	-	2.54%	2.54%	99.996
A2032	250	15.2	Aaa	AAA	AAA	-	-	-	Fixed	Tsy	-	-	2.86%	2.86%	99.995
A2035	275.29	18.7	Aaa	AAA	AAA	-	-	-	Fixed	Tsy	-	-	3.11%	3.11%	99.994

ESOT ENOI 2015-1 ($99m) Entergy CorporationCTI Jul 14, 2015

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A	98.73	4.97	Aa1	AAA	-	-	-	-	Fixed	Swaps	-	90	-	2.67%	99.9756

ESOT HGEMS 2014-A ($150m) State of HawaiiGSC Nov 4, 2014

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A1	50	3.05	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	30	1.47%	1.47%	-
A2	100	10.21	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	75	3.24%	3.24%	-

ESOT LCDA 2014-ELL ($244m) Louisiana Local Government Environmental Facilities and Community Development AuthorityCTI Jul 29, 2014

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A	91.7	3	Aaa	AAA	-	-	-	-	Fixed	Swaps	-	51	1.66%	1.67%	-
B	152.15	8.91	Aaa	AAA	-	-	-	-	Fixed	Swaps	-	77	3.24%	3.24%	-

ESOT LCDA 2014-EGSL ($71m) Louisiana Local Government Environmental Facilities and Community Development AuthorityCTI Jul 29, 2014

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
-	71	6.73	Aaa	AAA	-	-	-	-	Fixed	Swaps	-	70	2.86%	2.86%	-

ESOT CMS 2014-A ($378m) Consumers Energy CompanyCTI, GSC Jul 14, 2014

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A	123.4	3	Aaa	AAA	-	-	-	-	Fixed	Swaps	30a	27	1.33%	1.33%	-
A2	139.4	8	Aaa	AAA	-	-	-	-	Fixed	Swaps	65a	57	2.96%	2.96%	-
A3	115.2	12.26	Aaa	AAA	-	-	-	-	Fixed	Swaps	75a	70	3.53%	3.53%	-

ESOT UDSA 2013-T ($483m) Long Island Power AuthorityMOS, GSC Dec 12, 2013

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
T1	100	4.91	Aaa	AAA	AAA	-	-	-	Fixed	-	-	50	2.04%	2.04%	99.999
T2	100	5.92	Aaa	AAA	AAA	-	-	-	Fixed	-	-	63	2.55%	2.55%	99.995
T3	100	6.79	Aaa	AAA	AAA	-	-	-	Fixed	-	-	73	2.94%	2.93%	99.997
T4	182.93	8.77	Aaa	AAA	AAA	-	-	-	Fixed	-	-	75	3.44%	3.43%	99.994

ESOT AEPWV 2013-1 ($380m) Appalachian Power CompanyMOS, RBS Nov 6, 2013

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A1	215.8	5	Aaa	AAA	-	-	-	-	Fixed	-	-	54	-	-	-
A2	164.5	12.24	Aaa	AAA	-	-	-	-	Fixed	-	-	70	-	-	-

ESOT AEPOH 2013-1 ($267m) Ohio Power CoCTI, RBS Jul 23, 2013

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A1	164.9	2.25	Aaa	AAA	-	-	-	-	Fixed	Swaps	-	40	0.96%	0.96%	99.9988
A2	102.51	5.08	Aaa	AAA	-	-	-	-	Fixed	Swaps	-	52	2.05%	2.05%	99.9987

ESOT FEOH 2013-1 ($890m) FirstEnergy OhioCTI, CAG, GSC Jun 12, 2013

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A1	111.83	1.6	-	-	-	-	-	-	Fixed	EDSF	-	25	0.68%	0.68%	99.9999
A1	111.97		Aaa	AAA	AAA	-	-	-	Fixed	EDSF	-	25	0.68%	0.68%	99.9999
A2	70.31	5.07	-	-	-	-	-	-	Fixed	Swaps	-	40	1.73%	1.73%	99.9954
A2	70.47		Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	40	1.73%	1.73%	99.9954
A3	262.56	13.69	-	-	-	-	-	-	Fixed	Swaps	-	70	3.45%	3.45%	99.9979
A3	262.48		Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	70	3.45%	3.45%	99.9979

ESOT AEPTC 2012-1 ($800m) Appalachian Power CompanyMOS, CTI Mar 7, 2012

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A1	307.3	3	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	20	0.88%	0.88%	99.9997
A2	179.4	7	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	40	1.98%	1.98%	99.9997
A3	313.3	10.76	Aaa	AAA	AAA	-	-	-	Fixed	-	-	70	2.84%	2.84%	99.9995

ESOT CNP 2012-1 ($1,695m) CenterPoint Energy Houston Electric LLCCTI, MOS Jan 11, 2012

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A1	606.22	3	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	18	0.90%	0.90%	99.9999
A2	407.52	7	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	55	2.16%	2.16%	99.9998
A3	681.26	10.81	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	90	3.02%	3.03%	99.9993

ESOT ELL 2011-A ($207m) Entergy CorporationMOS Sep 15, 2011

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A1	207.16	5.38	Aaa	AAA	AAA	-	-	-	Fixed	-	-	75	2.04%	2.04%	99.9835

ESOT EAI 2010-A ($124m) Entergy CorporationMOS Aug 11, 2010

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A1	124.1	5.45	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	55	2.30%	2.31%	99.9712

ESOT EGSL 2010-1 ($713m) Entergy CorporationCTI Jul 15, 2010

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A1	97	3	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	30	1.52%	1.53%	99.9794
A1	112	2	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	25	1.11%	1.12%	99.9849
A2	60	7	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	70	3.22%	3.22%	99.973
A2	111	5	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	50	2.47%	2.47%	99.97
A3	87.1	10.4	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	95	3.99%	4.00%	99.883
A3	121	8	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	73	3.45%	3.45%	99.9621
A4	124.9	10.9	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	85	3.96%	3.96%	99.9507

ESOT CNP 2009-1 ($665m) CenterPoint Energy Houston Electric LLCGSC Nov 18, 2009

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A1	224.79	3	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	20	1.83%	1.83%	99.9973
A2	160.15	7	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	45	3.46%	3.46%	99.9907
A3	279.92	10.82	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	70	4.24%	4.24%	99.9841

ESOT ETRF 2009-1 ($546m) Entergy CorporationMOS Oct 30, 2009

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A1	182.5	3	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	20	2.12%	2.12%	99.9933
A2	144.8	7	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	40	3.65%	3.65%	99.9704
A3	218.6	10.87	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	65	4.39%	4.38%	99.9249

ESOT EGSL 2008-A ($278m) Entergy CorporationCTI Aug 21, 2008

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A1	103	2.66	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	145	4.95%	4.95%	99.9458
A2	90	6.24	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	170	5.88%	5.88%	99.9396
A3	85.4	8.97	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	210	6.55%	6.54%	99.9728

ESOT EGSL 2008-A ($688m) Entergy CorporationCTI Jul 22, 2008

ESOT CLECO 2008-1 ($181m) Cleco Corporate Holdings LLCCSG Feb 28, 2008

Class	$(M)	WAL	MO	SP	FI	DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD	Price
A1	113	5	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	80	4.41%	4.41%	99.9379
A2	67.6	10.58	Aaa	AAA	AAA	-	-	-	Fixed	Swaps	-	115	4.41%	4.41%	99.9379

Appendix E – Key Aspects of DBRS Credit Rating Methodology

DBRS Limited (DBRS) has today confirmed the Issuer Rating and the Unsecured Debt rating of Ontario Power Generation Inc. (OPG or the Company) at A(low) as well as its Commercial Paper rating at R-1 (low). All trends are Stable. OPG's ratings continue to be supported by (1) the reasonable regulatory regime in place for the Company's generation facilities, (2) continuing financial support from its shareholder, the Province of Ontario (rated AA (low), Stable, by DBRS) and (3) strong cash flow-to-debt and debt-to-capital ratios.

http://www.dbrs.com/research/308279/dbrs-confirms-ontario-power-generation-inc-at-a-low-r-1-low-stable-trends.html

DBRS Criteria: Preferred Share and Hybrid Security Criteria for Corporate Issuers DBRS.COM 6

Hybrid Features	25%	50%	75%	100%
Subordination	Required – to ALL debt types	Required - to ALL debt types	Required - to ALL debt types	Required – to ALL debt types
Assumed Remaining Term to Maturity (as determined by DBRS)	> Five years	> Ten years	> 50 years	> 100 years
Interest Deferral	Optional; Cumulative for up to five years; Payable with cash	Optional; Cumulative for up to ten years; Payable with cash	Optional; Non-cumulative or cumulative and payable with equity	Mandatory; Non-cumulative or cumulative and payable with equity
Redemption Rights without Make-Whole and Replacement Language	Acceptable	Acceptable	Acceptable	**Not acceptable while senior debt is outstanding**
Tax- and Rating Agency Event-Based Redemption Rights with no Make-Whole	Acceptable	Acceptable	**Not Acceptable**	**Not Acceptable**

CASH FLOW-TO-DEBT = CASH FLOW FROM OPERATIONS / TOTAL DEBT

Cash flow from operations = core net income + depreciation + amortization + deferred taxes + other non-cash items from income statement (before changes in non-cash working capital items).

Total debt = short-term debt + long-term debt + hybrid debt portion + capital leases.

Gross interest expense = all interest expense + debt hybrid interest expenses + capitalized interest (excludes any International Financial Reporting Standards (IFRS) adjustments).

DEBT-TO-CAPITAL = TOTAL DEBT / TOTAL CAPITAL

Total capital = total debt + total preferred equity + total common equity + minority interest + capital leases.

EBIT-TO-INTEREST = EBIT / GROSS INTEREST EXPENSE

EBIT = revenue – cost of goods sold – selling, general and administrative expenses – depreciation – amortization.

Gross interest expense = all interest expense + debt hybrid interest expenses + capitalized interest (excludes any IFRS adjustments).

- To determine the BRA for regulation (see page 6), DBRS reviews the eight considerations found below, which assess the regulatory framework in which the utility conducts its business.
- The ranking of the factors is based on a five-point scale (excellent, good, satisfactory, below average and poor).
- The first four factors are generally of greater importance than the others when assessing regulatory risk; however, the factors are not given a specific weighting when assessing the regulatory framework.

Consideration 1: Deemed Equity Ratio

Definition

The deemed equity ratio is the percentage of equity investment in the rate base on which a utility could earn a return. In general, the higher the deemed equity ratio, the higher the earnings for a utility.

Score	Item	Definition
Excellent	50.00%+	• The deemed equity ratio represents 50.00% or more of the utility's rate base. • The treatment of the deemed equity ratio is consistent historically.
Good	45.00% to 49.99%	• The deemed equity ratio represents 45.00% to 49.99% of the utility's capital structure. • The treatment of the deemed equity ratio is consistent historically.
Satisfactory	40.00% to 44.99%	• The deemed equity ratio represents 40.00% to 44.99% of the utility's capital structure. • The treatment of the deemed equity ratio has not been consistent historically.
Below Average	35.00% to 39.99%	• The deemed equity ratio represents 35.00% to 39.99% of the utility's capital structure. • The treatment of the deemed equity ratio has not been consistent historically.
Poor	Below 34.99%	• The deemed equity ratio represents less than 34.99% of the utility's capital structure. • The treatment of the deemed equity ratio has not been consistent historically.

Consideration 2: Allowed ROE

Definition

Allowed ROE is a measurement of returns on the deemed equity portion of the rate base. The regulator assesses and sets an allowed ROE based on a utility's business risk level. These allowed ROE levels assume a current North American or Western European inflationary environment.

Score	Item	Definition
Excellent	10%+	• An allowed ROE is set at 10.00% or higher. • The regulatory treatment of allowed ROE has been consistent historically.
Good	9.00% to 10.00%	• An allowed ROE is set at 9.00% to 10.00%. • The regulatory treatment of allowed ROE has been consistent historically.
Satisfactory	8.00% to 8.99%	• An allowed ROE is set at 8.00% to 8.99%. • The regulatory treatment of allowed ROE has been consistent historically.
Below Average	7.00% to 7.99%	• An allowed ROE is set at 7.00% to 7.99%. • The regulatory treatment of allowed ROE has not been consistent historically.
Poor	Below 7.00%	• An allowed ROE is set at below 7.00%. • The regulatory treatment of allowed ROE has not been consistent historically.

Consideration 3: Energy Cost Recovery

Definition

Fuel and purchased energy cost (F&PE) recovery certainty and the timing of recovery are critical in DBRS's assessment of a regulatory system within a certain jurisdiction. DBRS looks at the following factors: (1) whether F&PE costs are fully passed through to the customers, (2) how often a utility is allowed to adjust the F&PE costs in retail rates charged to customers and (3) if there is a mechanism within a jurisdiction to allow utilities to make F&PE cost adjustments with no or minimal regulatory review. In addition, DBRS also focuses on the generation mix within a certain market. A high power cost market could have an impact on the utility's ability to recover the purchased power costs in a timely manner. DBRS notes that this factor is not applicable for water and waste-water utilities.

Score	Item	Definition
Excellent	Monthly/bimonthly	• F&PE costs are fully passed through. • Adjustment is made on a monthly basis. • There is an automatic adjustment mechanism. • The jurisdiction is in a favourable generation mix market, resulting in low power cost.
Good	Quarterly	• F&PE costs are fully passed through. • Adjustment is made on a quarterly basis. • There is an automatic adjustment mechanism. • The jurisdiction is in a favourable generation mix market, resulting in low power cost.
Satisfactory	Quarterly with regulatory review	• F&PE costs are fully passed through. • Adjustment is made on a quarterly basis. • F&PE cost deferrals are subject to some regulatory review. • The jurisdiction is in a good generation mix market.
Below Average	Annually with automatic adjustment	• F&PE costs are fully passed through or utilities have minimal exposure to energy price volatility. • Adjustment is made on an annual basis and is subject to minimal or some regulatory review. • The jurisdiction is in an above-average power cost market.
Poor	Annually with no automatic adjustment mechanism	• F&PE costs are fully passed through or utilities have minimal exposure to energy price volatility. • Adjustment is made on an annual basis. • F&PE cost deferrals are subject to regulatory review. • The jurisdiction is in an above-average power cost market.

Consideration 4: Capital and Operating Cost Recoveries

Definition

In assessing CCR and OCR, DBRS focuses on the likelihood of a utility's capex being added to its rate base, along with the timing of such an addition. In addition, DBRS focuses on cost-inflation adjustments that could affect the timing of the OCR. In particular, DBRS looks at the following factors: (1) the utilization of future test periods for rate decisions, (2) whether the spending is allowed to be added to the rate base during the construction or will only be added when the project is completed, (3) the level of upfront capital spending required without regulatory approval, (4) the degree of regulatory lag and uncertainty with respect to the CCR and (5) whether or not there is a reasonable mechanism to deal with cost overruns.

Score	Item	Definition
Excellent	Minimal CCR and OCR lag risk	• Work-in-progress costs can be added to the rate base if capex is significant. • Interim base-rate increases have been frequently authorized. • Future test periods are fully incorporated for rate-case decisions. • Rate cases are typically decided well within one year unless the rate cases are litigated or unusual circumstances occur. • There is a reasonable mechanism to deal with cost overruns.
Good	Reasonable CCR and OCR lag risk	• Capital costs are added to the rate base after completion of work. • Interim base-rate increases have been authorized from time to time. • Future test periods are at least partially incorporated for rate-case decisions. • Rate cases are typically decided within one year unless the rate cases are litigated or unusual circumstances occur. • There is a reasonable mechanism to deal with cost overruns.
Satisfactory	Modestly elevated CCR and OCR lag risk	• Capex is generally pre-approved by the regulator, but there is some modest upfront capital spending before regulatory approval. • Interim base-rate increases have been rarely authorized. • Historical test periods are commonly incorporated for rate-case decisions. • Rate cases are typically decided within one year unless the rate cases are litigated or unusual circumstances occur. • There is a reasonable mechanism to deal with cost overruns.
Below Average	Below-average CCR and OCR lag risk	• There is significant upfront capital spending before regulatory approval. • Interim base-rate increases have been rarely authorized. • Historical test periods are commonly incorporated for rate-case decisions. • Rate-case decisions typically take more than one year because of frequent court cases and other circumstances. • There are some mechanisms to deal with cost overruns.
Poor	Significant CCR and OCR lag risk	• Capex is generally not pre-approved by the regulator. • Capital costs are added to the rate base after completion of work. • Utilities face significant regulatory lag risk with respect to the CCR and the OCR. • There is no meaningful mechanism to deal with cost overruns.

Consideration 5: COS versus IRM

Definition

In general, under COS, regulated utilities are allowed to recover prudently incurred operating costs and earn a reasonable return on their investment. Under IRM, revenue requirements for the year are based on a COS base year, adjusted for inflation (using the consumer price index (CPI)) and subtracted a productivity factor, which is set by the regulator. This forces utilities to maintain their operational efficiency to achieve allowed ROE. DBRS views COS as lower risk than IRM. In addition, DBRS also considers the length of an IRM period between COS years. DBRS's scoring system gives a higher score for a shorter IRM period.

Score	Item	Definition
Excellent	COS	• The COS regime allows utilities to recover prudently and reasonably incurred operating costs.
Good	IRM (three years or shorter)	• The IRM regime is a maximum of three years between COS years. • For an IRM period of more than three years, there are reasonable mechanisms in place to mitigate unexpected capital investment and operating costs. In addition, key IRM assumptions, including CPI and productivity factors, are reasonable.
Satisfactory	IRM (four- to five-year framework)	• The IRM period is four to five years.
Below Average	IRM (six- to ten-year framework)	• The IRM period is six to ten years.
Poor	IRM (ten-plus years)	• The IRM period is over ten years.

Consideration 6: Political Interference

Definition

Political interference refers to political risk that could occur within a jurisdiction. Political interference could be in the following forms: (1) influence on the regulator's ability to independently and impartially arrive at a decision, (2) passing legislation to override a decision made by the regulator and (3) the regulator being elected instead of being appointed.

Score	Definition
Excellent	• There is no government influence on the regulatory decision-making process. • There has been no adverse legislation in the regulated utility sector. • The regulator is appointed.
Good	• There is a low degree of government influence on the regulatory decision-making process. • There has been no adverse legislation in the regulated utility sector. • The regulator is appointed.
Satisfactory	• There is a low degree of government influence on the regulatory decision-making process. • There has been no adverse legislation in the regulated utility sector. • The regulator is appointed or elected.
Below Average	• There is a modest degree of government influence on the regulatory decision-making process. • There has been no adverse legislation in the regulated utility sector. • The regulator is appointed or elected.
Poor	• There is a high degree of government influence on the regulatory decision-making process. • There has been some adverse legislation in the regulated utility sector. • The regulator is appointed or elected.

Consideration 7: Stranded Cost Recovery

Definition

Stranded costs occur when a utility has already incurred costs (F&PE, operating cost or capital spending) and faces uncertainty as to when it can recover these costs. In some cases, stranded costs are written off if it is certain that these costs cannot be recovered. DBRS looks at the following factors: (1) whether stranded costs exist and their magnitude, (2) the likelihood of recovering stranded costs, (3) the frequency and materiality of writedowns and (4) the time it takes to recover these costs.

Score	Item	Definition
Excellent	No stranded cost	• No stranded costs associated with legitimate or reasonable costs incurred by utilities.
Good	Full recovery	• Some stranded costs exist. • Stranded costs are fully recovered in a timely manner. • No historical stranded cost writedowns.
Satisfactory	Occasional writedowns	• Some stranded costs exist. • Stranded costs are recovered but subject to some regulatory lag. • Occasional writedowns.
Below Average	Frequent writedowns	• Some stranded costs exist. • Stranded costs are sometimes recovered. • Frequent writedowns. • Takes considerable time to recover costs.
Poor	Frequent significant writedowns	• Significant stranded costs exist. • Stranded costs are not fully recovered. • Significant writedowns occur. • Significant regulatory lag associated with the recovery.

Consideration 8: Rate Freeze

Definition

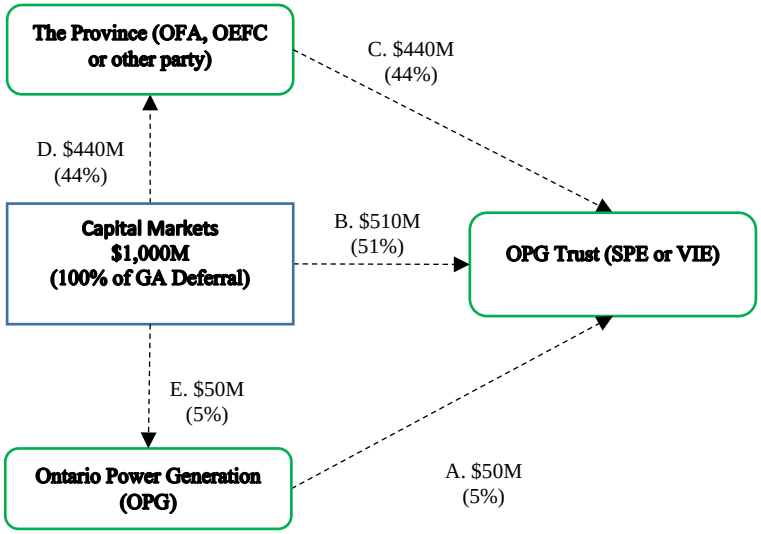
A rate freeze refers to a fixed retail rate that is charged to customers during a period of time (more than two years). During the rate-freeze period, utilities are exposed to increases in operating and energy costs. The longer the rate-freeze period or the more frequency with which a rate freeze occurs within a jurisdiction, the riskier it is for the utility.

Score	Item	Definition
Excellent	Never	• Rates are never frozen.
Good	Potential	• Rates have the potential to be frozen.
Satisfactory	Occasional	• Rates are occasionally frozen. • The frozen period is fewer than three years.
Below Average	Frequently	• Rates are frequently frozen. • The frozen period is fewer than three years.
Poor	Rate freeze	• Rates are currently frozen. • The frozen period is three years and longer.

Appendix F. GA Deferral Structure – Accounting Considerations for Consolidation of SPV

Assumptions: Year #1 – GA Deferral of $1B
Rate Charged to ratepayers – 5%
Interest Collected Year 1 - $50M*
Tranche A – 4.0%, $20.4M annually
Tranche B – 5.5%, $24.2M annually
Tranche C - 10.8%, $5.4M annually (the **residual return**)
**Assume straight interest for simplicity, 5% x $1B = $50M*

Scenario



Under US GAAP (OPG's Perspective)

- The relevant standard is FASB ASC Topic 810 [*Consolidation*]
- An SPE is an enterprise created to accommodate specific needs of the sponsoring entity.
- A SPE is classified as a VIE if
  - **Total equity at risk is insufficient to finance activities without financial support from other parties, or**
  - Equity investors lack any one of the following:
    - The ability to make decisions
    - The obligation to absorb losses
    - **The right to receive returns**
- The **primary beneficiary** of a VIE must consolidate it as its subsidiary **regardless of how much of an equity investment it has in the VIE**.
- The primary beneficiary (**usually the sponsor**, **which in this case is OPG)** is the entity that is expected to **absorb the majority of the VIE's expected losses**, receives the **majority of the VIE's residual returns,** or both.
- The primary beneficiary has the **power to direct the activities of the VIE that most significantly impact the entity's economic performance**.
- If one entity will absorb the majority of the VIE's expected losses and another unrelated entity will receive a majority of the VIE's expected residual returns, the entity absorbing a majority of the losses must consolidate the VIE.
- The SPE borrowing from the debt market acquires or constructs an asset – the asset may be acquired from the sponsoring company (i.e., OPG) or from an outside source (e.g., IESO).
- Under US GAAP, with the Province indirectly or directly financing the SPV, since OPG will absorb the majority of the **expected** losses from the equity tranche, will receive the **majority** of the **residual returns**, and will have the **power to direct activities of the VIE**, it would likely be considered the primary beneficiary and would consolidate the VIE.

Setting up the Trust (in no particular order)
A. OPG Trust, the Special Purpose Entity (SPE) under IFRS and Variable Interest Entity (VIE) under US GAAP, receives 5% of the GA Deferral to fund the purchase of the IESO's regulatory asset. This 5% represents the junior "equity" tranche ("Tranche C").
B. The SPE funds 51% **(or more)** of the GA deferral by issuing **debt securities** to the capital markets. This forms the senior tranche ("Tranche A").
C. The SPE funds 44% (**or less**) of the GA deferral by issuing **debt securities** to the Province. This could form part of Tranche A or a more subordinated debt ("Tranche B") that is higher than Tranche C. The alternative option is from Figure 1.
D. The Province uses general borrowing to finance the 44% of the GA deferral given to the SPV as **debt**. Or given to OPG → SPV.
E. OPG borrows the 5% (**minimum**) from the capital markets directly (minimum based on white paper).

Under PSAB (Province's Perspective for the SPV)

- OPG already receives all its financing from the Province through standard debt issuances, credit facilities, and non-recourse project financing.
- The white paper states that the Province cannot "indirectly or directly" fund the SPV through debt or equity.
- Arguably, the Province investing directly into the SPV (with debt not equity) rather than OPG directly is more arm's length, with the Province securing a better chance of return than with equity injections.
  - A lower interest rate can be secured due to the securitization of the regulatory asset (or intangible asset once purchased) – as the assets in a SPV are bankruptcy remote.
  - The fact that the debt, treated as an interorganizational loan under PSAB, is related to cashflows from a rate regulated asset should not impact its recognition on the balance sheet (similar to how OPG and Hydro One have debt and equity from the Province that gain a return from regulated assets).
  - There is a risk that if the SPV structure dissolves, then the rate regulated assets would be the recourse for the debt, resulting in a fiscal impact with their inability to be recognized on Provincial Accounts.
- **To be confirmed by external accountants – regardless of if the Province invest directly in the SPV or indirectly through OPG, all else being equal, there would be no line-by-line consolidation.**

Under IFRS (Province's Perspective for OPG modified equity method)

- The Province is required under PSAB to consolidate OPG in its books **under the modified equity method, but under IFRS**.
- Thus, OPG Trust must also be considered an SPE for OPG under IFRS for the preferred accounting treatment to be attained.
- The relevant standard is IFRS 10 (below taken from **2017 IFRS standards**) are similar to US GAAP:
- **Par 7** - an investor controls an investee if and only if the investor has **all the following:**
  - **power over the investee**
  - **exposure, or rights, to variable returns** from its involvement with the investee; and
  - **the ability to use its power over the investee to affect the amount of the investor's returns**.
- **Par 17** - An investor controls an investee if the investor not only has power over the investee and exposure or rights to variable returns from its involvement with the investee, but also has the ability to use its power to affect the investor's returns from its involvement with the investee.
- **Relationship with other parties: Par B73** - When assessing control, an investor shall consider the nature of its relationship with other parties and whether those other parties are acting on the investor's behalf (i.e. they are 'de facto agents'). The determination of whether other parties are acting as de facto agents requires judgement, considering not only the nature of the relationship but also how those parties interact with each other and the investor.
- **Par B74** - Such a relationship need not involve a contractual arrangement. A party is a de facto agent when the investor has, or those that direct the activities of the investor have, the ability to direct that party to act on the investor's behalf. In these circumstances, the investor shall consider its de facto agent's decision-making rights and its indirect exposure, or rights, to variable returns through the de facto agent together with its own when assessing control of an investee.
- **Par B75** - Here are examples of parties that, by the nature of their relationship, might act as de facto agents for the investor:
- (a) the investor's related parties. **Criterion is met as Province is a related party.**
- (b) a party that received its interest in the investee as a contribution or loan from the investor. **OPG's only interest in the investee is the 5% if Province funds SPV directly – 5% from capital markets. Criteria not met (TBC).**
- (c) a party that has agreed not to sell, transfer or encumber its interests in the investee without the investor's prior approval (except for situations in which the investor and the other party have the right of prior approval and the rights are based on mutually agreed terms by willing independent parties). **Criterion met based on latest legislation draft**.
- (d) a party that cannot finance operations without subordinated financial support from the investor. **OPG is self-sufficient GBE.**
- (e) an investee for which the majority of the members of its governing body or for which its key management personnel are the same as those of the investor. **Test not met – OPG governing body (Board of directors) is separate from the Province.**
- (f) a party that has a close business relationship with the investor, such as the relationship between a professional service provider and one of its significant clients**. Criterion met**.
- **CEFD interpretation**: The Province directly funding the SPV has the same consolidation effect as indirect funding through OPG.

DRAFT

GA Financing Plan: Role of IESO

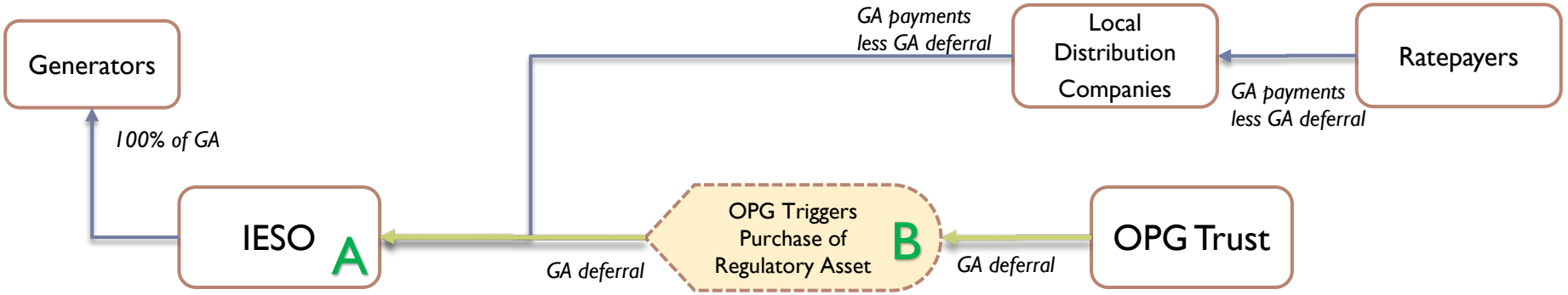
Corporate and Electricity Finance Division
April 21, 2017

Overview

- The Ministry of Energy, Ministry of Finance and the Ontario Financing Authority (OFA) are coordinating with OPG and IESO to implement a Global Adjustment (GA) smoothing mechanism.
- Under the current proposal:
  - OPG would create a Special Purpose Vehicle (SPV) referred to as "OPG Trust" or "Financing Entity" which will use 100% debt financing to purchase regulatory assets from the IESO (i.e. the GA amount being deferred)
  - OPG Trust would finance its funding requirements as follows:
    - 51% of its funding requirements through the capital markets as senior debt
    - 49% being provided by OPG as subordinated debt.
      - The 49% subordinated debt from OPG will be financed through debt OPG issues in its own corporate capacity, from the capital markets (5%) and through equity injections from the Province (44%).
      - The Province will finance its equity injection through its annual borrowing program - from issuing debt into the capital markets.
  - The regulatory assets that OPG will purchase represent the portion of GA recoveries deferred to future years. IESO would use the cash from the OPG Trust to make up the shortfall in GA recoveries from ratepayers in order to fully compensate generators.
- OPG Trust would recover all financing and administrative costs from the ratepayers. Since IESO will be invoicing monthly, OPG Trust may also set up a short-term borrowing facility to accommodate any market timings for its share of debt issuances.

Proposed GA Deferral Structure

- It is understood that the Ontario Energy Board would set the RPP rates lower based on the GA amount being deferred. This would result in IESO creating a variance account which will be offset by IESO selling the shortfall as a Regulatory Asset to OPG Trust.



- OPG, as the Financial Services Manager of OPG Trust, will implement a financing plan. Although it may be expected that OPG will purchase (B) the Regulatory Asset created by IESO every month, OPG is not obligated to do so. This presents a risk for IESO (A) to be able to have sufficient financing available to ensure its generators are paid.

IESO Financing Requirements

- IESO will need to ensure it will have the funds available to be able to compensate generators on a monthly basis, as per usual.
- The latest draft of the *Fair Hydro Act*[1] proposes that IESO will create a Regulatory Asset (i.e. the GA amount being deferred or the "shortfall" as it would have collected less funds from ratepayers to pay generators).
- According to a Financing Plan that would be prepared by OPG as the Financial Services Manager of the OPG Trust, it will purchase these Regulator Assets.
    - Notwithstanding this, it is understood that OPG/OPG Trust will not be obligated to purchase the Regulatory Asset from IESO.
- As a result, IESO would require financing should it be required to hold the Regulatory Asset. This would be the case should OPG elect not to purchase the Regulatory Asset.
- Currently, IESO has the following credit agreements in place with the OEFC or OFA, as of May 1, 2017:
    1. $975 million revolving line of credit, with the OFA
    2. $160 million revolving line of credit, with the OEFC
    3. $120 million non-revolving loan, with the OEFC
- Of the three credit facilities available to IESO, only the first facility ($975 million) could potentially be used by IESO for temporarily financing their Regulatory Asset.

1 2017-04-12 - Fair_Hydro_Act Torys_Osler Mark-up April 11 2017 Draft (Torys-Oslers_Apr....docx

IESO Existing Credit Facility

- The purpose of the $975 million revolving credit facility with the OFA is to provide working capital and liquidity for the market transactions IESO is involved in. A reduction in the RPP (as a result of GA deferral) can be temporarily be financed by the IESO. This, however, is subject to certain risks outlined later in the deck.
- The current credit limit was approved based on the following requirements from IESO in late 2016:

Financial Obligation	Amt. ($ M)
1. RPP variance account exposure between RPP rate-setting periods	$100 - $325
2. New variance accounts (OESP, RRRP) and liquidity related to the potential Cap and Trade Program	$15 - $325
3. Global Adjustment and Overall Market Liquidity and any other timing differences including conservation programs and generation contracts	$25 - $325
Total: Short-Term Borrowing Requirements	**$140 - $975**

- The RPP variance account was at a surplus of $46 million as at August 31, 2016. Over the last three years, the highest RPP shortfall was $117 million in May 2016.
- The new variance accounts will no longer be needed as the OESP and RRRP is now proposed to be funded through the taxpayer (up to aggregate $150 million).

IESO Potential Financing and Risk

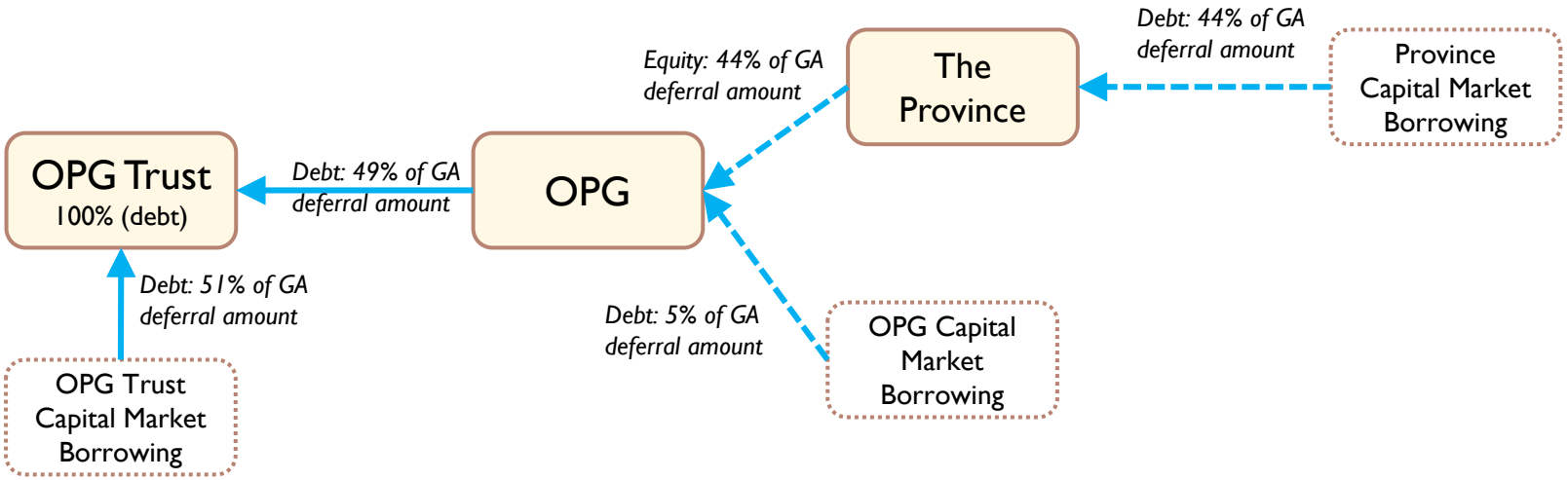
- The existing $975 million line of credit with the OFA may be sufficient to cover 1-3 months of GA deferral, assuming it is unused for other reasons and whether its due to OPG electing not to purchase the Regulatory Asset or due to timing differences.
    - Deferring $2.5-3.0 billion per year results in approximately $200-250 million per month. This is based on Ministry of Energy's annual GA deferral amounts, assuming the monthly deferral is equally-weighted.
- However, the annual amount being deferred and the resulting monthly amounts can be substantially different based on various factors, such as seasonality or electricity usage.
- Therefore, this monthly number can rise, with IESO stating it can be as high as $400 million per month.
- Other factors that may increase the monthly GA deferral amounts:
    - IESO will also incur financing charges that will need to be refinanced.
    - The financing and administration costs that OPG Trust incurs will need to be paid for each month and will not be deferred. The GA amounts Ministry of Energy modelled to be deferred did not include the financing and administration costs. If the ratepayer is paying these costs every month, the GA deferral will need to increase to ensure that the related electricity bill decreases (as a result of the deferral) can reflect the government's proposed 25% electricity rate cut and the increase in bills at the rate of inflation.

Other Risks and Considerations

- Although to be confirmed, even if IESO is allowed to recognized the Regulatory Asset, there is a risk that upon consolidation with the Province, whether this recognition will be permitted under the Accounting standards.
- The current $975 million line of credit is with the OFA and borrowings under the credit facility are included in the OFA's financial statements, which will result in fiscal exposure to the Province.
    - Even if a credit facility is set up with the OEFC, the same fiscal exposure will be present [TBC].
- The current facility is a short-term facility. Should OPG not purchase the Regulatory Asset, IESO may require long-term financing to either 1) help unwind the asset or 2) maintain the deferral financing plan.
- If the IESO borrowings start to increase its requirement, the Province will be obligated to provide increased support at the risk of implications to the overall GA deferral plan.
- Since OPG Trust will be financed with 100% debt from OPG and OPG Trust's capital market borrowings, OPG Trust will be required to pay interest costs. These interest costs will be recovered from the ratepayers immediately and will not be deferred. Notwithstanding this, as currently proposed, OPG will not be obligated to pay the Province any interest costs that the Province incurs since the Province's contribution was an equity contribution. It is not clear why the Province would not simply provide OPG debt instead of equity, even more so since it is expected that the Province's contribution will not effect the rate base.

Proposed GA Financing Structure

- OPG Trust would finance 51% of its funding requirements through the capital markets as senior debt with the remaining 49% being provided by OPG as subordinated debt.
  - The 49% subordinated debt from OPG will be financed through debt OPG issues in its own corporate capacity, from the capital markets (5%) and through equity injections into OPG from the Province (44%).
    - The Province will finance its equity injection through its annual borrowing program - from issuing debt into the capital markets.
- OPG Trust would recover all financing and administrative costs from the ratepayers. Since IESO will be invoicing monthly, OPG Trust may also set up a short-term borrowing facility to accommodate any market timings for its share of debt issuances.



DRAFT

GA Financing Plan: Role of IESO

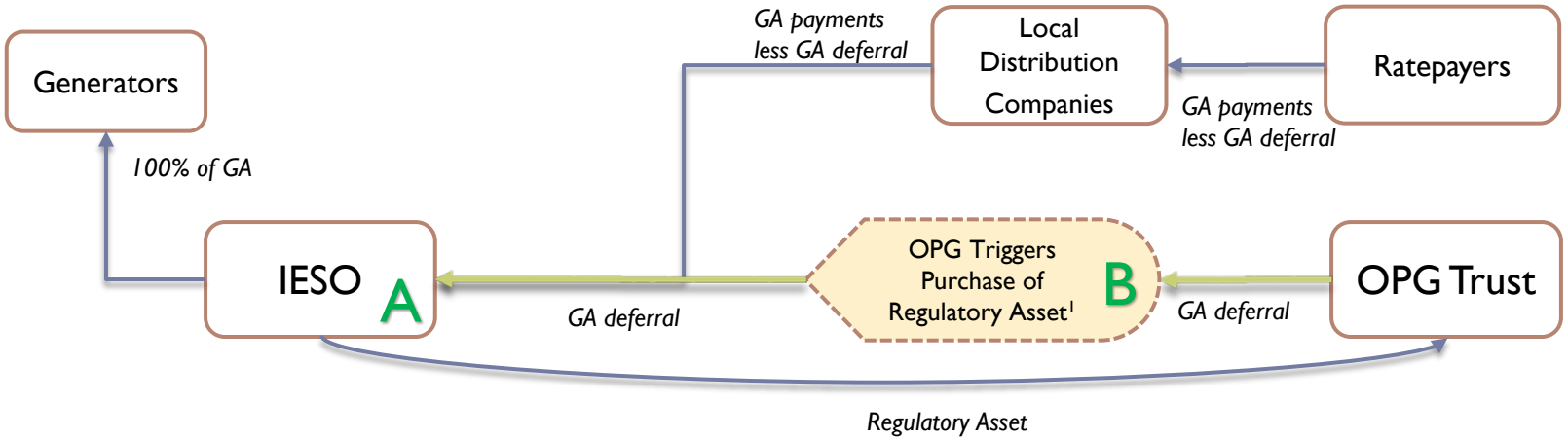
Corporate and Electricity Finance Division
April 25, 2017

Overview

- The IESO ensures that electricity generators are paid to cover the cost of electricity used by ratepayers. A portion of this cost includes the GA.
- The proposed Fair Hydro Act plans to reduce the price paid by ratepayers who fall primarily under the Regulated Price Plan, by up to 25% for the average ratepayer. To help achieve this savings target, the Act proposes to reduce the GA portion of RPP-eligible ratepayers today by refinancing it over a 30-year period.
    - As ratepayers will be paying a reduced GA amount, IESO will have a shortfall in its payment to the generators. OPG, through a Trust, would purchase the Regulatory Asset (i.e. shortfall).
- Under the current proposal:
    - OPG would create a Special Purpose Vehicle (SPV) referred to as "OPG Trust" or "Financing Entity" which will use 100% debt financing to purchase regulatory assets from the IESO (i.e. the GA amount being deferred)
    - OPG Trust would finance its funding requirements as follows:
        - 51% of its funding requirements through the capital markets as senior debt
        - 49% being provided by OPG as subordinated debt.
            - The 49% subordinated debt from OPG will be financed through debt OPG issues in its own corporate capacity, from the capital markets (5%) and through equity injections from the Province (44%).
            - The Province will finance its equity injection through its annual borrowing program - from issuing debt into the capital markets.
    - The regulatory assets that OPG will purchase represent the portion of GA recoveries deferred to future years. IESO would use the cash from the OPG Trust to make up the shortfall in GA recoveries from ratepayers in order to fully compensate generators.
- OPG Trust would recover all financing and administrative costs from the ratepayers. Since IESO will be invoicing monthly, OPG Trust may also set up a short-term borrowing facility to accommodate any market timings for its share of debt issuances.

Proposed GA Deferral Structure

- It is understood that the Ontario Energy Board would set the RPP rates lower based on the GA amount being deferred. This would result in IESO creating a variance account which will be offset by IESO selling the shortfall as a Regulatory Asset to OPG Trust.



- OPG, as the Financial Services Manager of OPG Trust, will implement a financing plan. Although it may be expected that OPG Trust will purchase (B) the Regulatory Asset created by IESO every month, OPG is not obligated to do so. This presents a risk for IESO (A) to be able to have sufficient financing available to ensure its generators are paid.

1 Under the proposed Fair Hydro Act, OPG will act as the Financial Services Manager to the OPG Trust to ensure the Financing Plan (i.e. plan to finance the purchase of the Regulatory Assets from IESO) is implemented.

IESO Financing Requirements

- IESO will need to ensure that it continues to have the funds available to compensate generators on a monthly basis.
- The latest draft of the *Fair Hydro Act*[1] proposes that IESO will create a Regulatory Asset (equal to the GA amount being deferred or the "shortfall" as a result of lower payments by ratepayers).
- Under a Financing Plan that would be prepared by OPG as the Financial Services Manager of the OPG Trust, it will purchase these regulator assets.
    - Under current draft legislation, OPG/OPG Trust will not be obligated to purchase the Regulatory Asset from IESO.
- As a result, IESO would require financing to compensate generators should it be required to hold any portion of the unpurchased Regulatory Asset.
- Currently, IESO has the following credit agreements in place with the OEFC or OFA, as of May 1, 2017:
    1. $975 million revolving line of credit, with the OFA
    2. $160 million revolving line of credit, with the OEFC
    3. $120 million non-revolving loan, with the OEFC
- Based on the purposes of the three credit facilities available to IESO, only the first facility ($975 million) could potentially be used by IESO for temporarily financing their Regulatory Asset.

1 2017-04-12 - Fair_Hydro_Act Torys_Osler Mark-up April 11 2017 Draft (Torys-Oslers_Apr....docx

IESO Existing Credit Facility

- The purpose of the $975 million revolving credit facility with the OFA is to provide working capital and liquidity for the market transactions IESO is involved in. Any variance as a result of RPP pricing (as a result of GA deferral) can be temporarily be financed by the IESO. This, however, is subject to certain risks outlined later in the deck.
- The current credit limit was approved based on the following requirements from IESO in late 2016:

Financial Obligation	Amt. ($ M)
1. RPP variance account exposure between RPP rate-setting periods	$100 - $325
2. New variance accounts (OESP, RRRP) and liquidity related to the potential Cap and Trade Program	$15 - $325
3. Global Adjustment and Overall Market Liquidity and any other timing differences including conservation programs and generation contracts	$25 - $325
Total: Short-Term Borrowing Requirements	**$140 - $975**

- The RPP variance account was at a surplus of $46 million as at August 31, 2016. Over the last three years, the highest RPP shortfall was $117 million in May 2016.
- The new variance accounts will no longer be needed as the OESP and RRRP is now proposed to be funded through the taxpayer (up to aggregate $150 million).

IESO Potential Financing and Risk

- Based on Ministry of Energy's GA deferral plan, it is estimated that approximately $2.5-3.0 billion will need to be deferred per year for over first 10 years.
- Deferring $2.5-3.0 billion per year results in approximately $200-250 million per month. This is based on Ministry of Energy's annual GA deferral amounts, assuming the monthly deferral is equally-weighted.
    - The existing $975 million line of credit with the OFA may be sufficient to cover 1-3 months of GA deferral, assuming it is unused for other reasons and whether its due to OPG electing not to purchase the Regulatory Asset or due to timing differences.
- However, the annual amount being deferred and the resulting monthly amounts can be substantially different based on various factors, such as seasonality or electricity usage.
- Therefore, this monthly number can rise, with IESO estimating as high as $400 million per month.
- Other factors that may increase the monthly GA deferral amounts:
    - IESO will also incur financing charges that will need to be refinanced.
    - The financing and administration costs that OPG Trust incurs will need to be paid for each month and will not be deferred. The GA amounts Ministry of Energy modelled to be deferred did not include the financing and administration costs. If the ratepayer is paying these costs every month, the GA deferral will need to increase to ensure that the related electricity bill decreases (as a result of the deferral) can reflect the government's proposed 25% electricity rate cut and the increase in bills at the rate of inflation.

Other Risks and Considerations

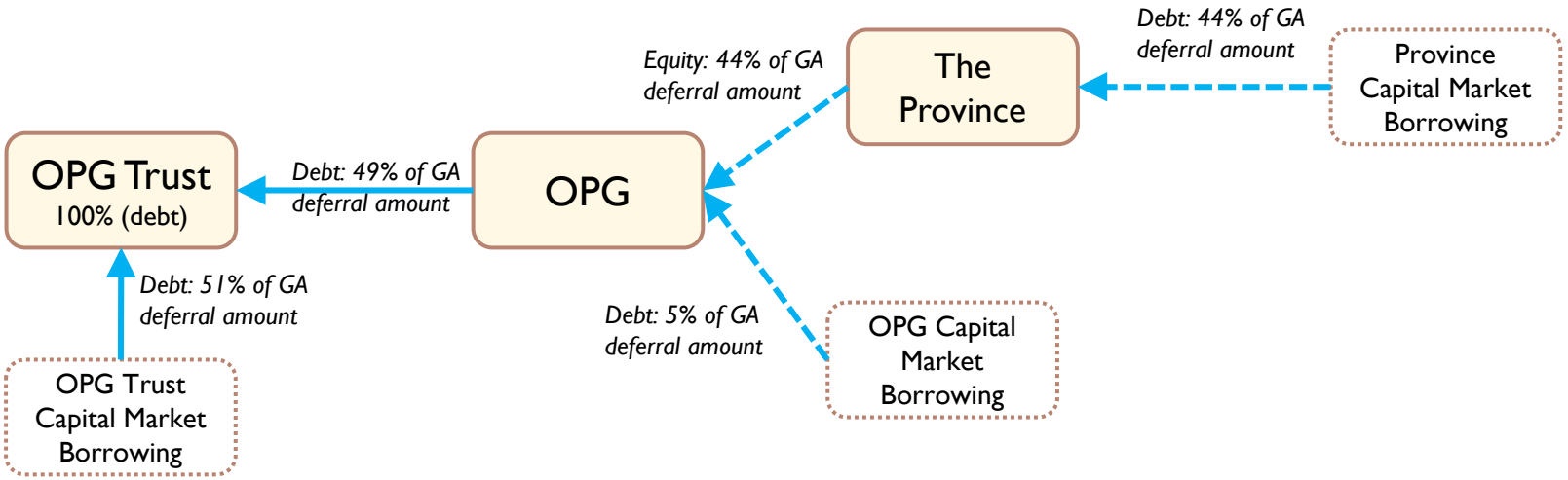
- Although to be confirmed, even if IESO is allowed to recognized the Regulatory Asset, there is a risk that upon consolidation with the Province, whether this recognition will be permitted under the Accounting standards.
- The current $975 million line of credit is with the OFA and borrowings under the credit facility are included in the OFA's financial statements, which will result in fiscal exposure to the Province.
    - Even if a credit facility is set up with the OEFC, the same fiscal exposure will be present [TBC].
- The current facility is a short-term facility. Should OPG not purchase the Regulatory Asset, IESO may require long-term financing to either 1) help unwind the asset or 2) maintain the deferral financing plan.
- If the IESO borrowing requirements increase, the Province will be obligated to provide increased support, which would have implications for the overall GA deferral plan.
- Since OPG Trust will be financed with 100% debt from OPG and OPG Trust's capital market borrowings, OPG Trust will be required to pay interest costs. These interest costs will be recovered from the ratepayers immediately and will not be deferred. As currently proposed, OPG will not be obligated to pay the Province any interest costs that the Province incurs since the Province's contribution was an equity contribution.

Other Risks and Considerations ../2

- An alternative to the Province providing equity injections to OPG, the Province could purchase OPG debt instead.
  - This would result in OPG having increased debt on its books. The GA deferral is expected to be treated outside the capital structure OEB looks at for OPG's rate application.
  - The only requirement as advised by Ernst and Young to OPG is "…that the majority of the debt in the Trust is not more than 44% funded by the Province".
  - This would have no impact on OPG Trust's mandate as OPG Trust is 100% debt financed. Details provided to date do not state otherwise.
- OPG will receive interest income on its contribution to OPG Trust. This will ensure that the Province also receives interest income to cover the interest costs incurred for its contribution to OPG for the GA deferral. Alternatively, OPG will be permitted to keep the interest income which may or may not be used to offset future income back to the Province.
  - Although keeping the interest income in OPG versus distributing back to the Province has no fiscal impact, the Province will need to cover the interest costs, possibly with additional borrowings.

Proposed GA Financing Structure

- OPG Trust would finance 51% of its funding requirements through the capital markets as senior debt with the remaining 49% being provided by OPG as subordinated debt.
  - The 49% subordinated debt from OPG will be financed through debt OPG issues in its own corporate capacity, from the capital markets (5%) and through equity injections into OPG from the Province (44%).
    - The Province will finance its equity injection through its annual borrowing program - from issuing debt into the capital markets.
- OPG Trust would recover all financing and administrative costs from the ratepayers. Since IESO will be invoicing monthly, OPG Trust may also set up a short-term borrowing facility to accommodate any market timings for its share of debt issuances.



DRAFT

GA Financing Plan: Role of IESO

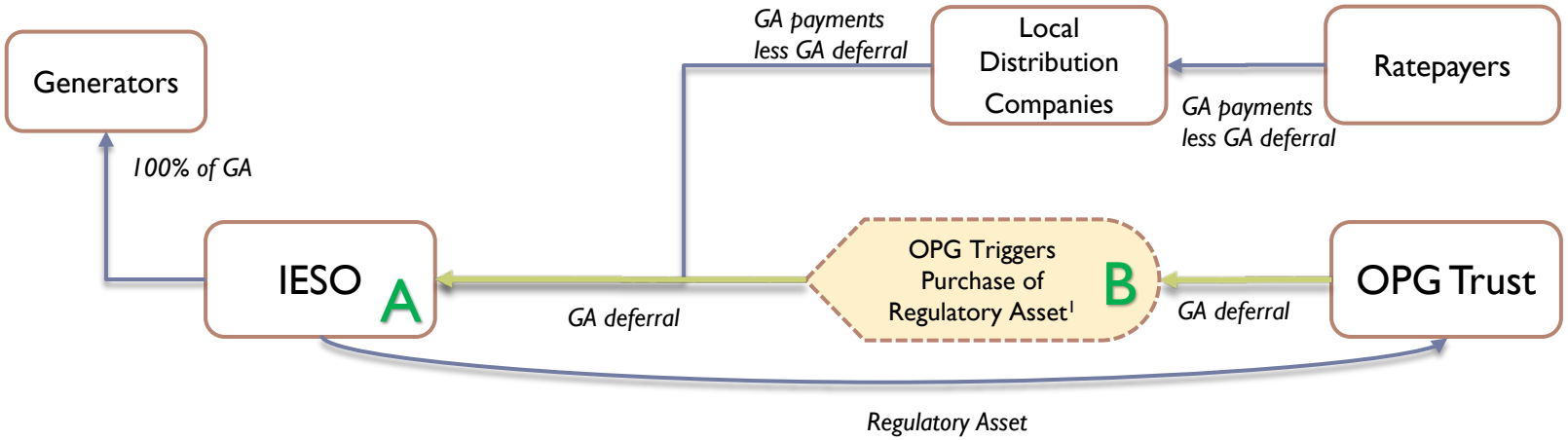
Corporate and Electricity Finance Division
April 25, 2017

Overview

- The IESO ensures that electricity generators are paid to cover the cost of electricity used by ratepayers. A portion of this cost includes the GA.
- The proposed Fair Hydro Act plans to reduce the price paid by ratepayers who fall primarily under the Regulated Price Plan, by up to 25% for the average ratepayer. To help achieve this savings target, the Act proposes to reduce the GA portion of RPP-eligible ratepayers today by refinancing it over a 30-year period.
    - As ratepayers will be paying a reduced GA amount, IESO will have a shortfall in its payment to the generators. OPG, through a Trust, would purchase the Regulatory Asset (i.e. shortfall).
- Under the current proposal:
    - OPG would create a Special Purpose Vehicle (SPV) referred to as "OPG Trust" or "Financing Entity" which will use 100% debt financing to purchase regulatory assets from the IESO (i.e. the GA amount being deferred)
    - OPG Trust would finance its funding requirements as follows:
        - 51% of its funding requirements through the capital markets as senior debt
        - 49% being provided by OPG as subordinated debt.
            - The 49% subordinated debt from OPG will be financed through debt OPG issues in its own corporate capacity, from the capital markets (5%) and through equity injections from the Province (44%).
            - The Province will finance its equity injection through its annual borrowing program - from issuing debt into the capital markets.
    - The regulatory assets that OPG will purchase represent the portion of GA recoveries deferred to future years. IESO would use the cash from the OPG Trust to make up the shortfall in GA recoveries from ratepayers in order to fully compensate generators.
- OPG Trust would recover all financing and administrative costs from the ratepayers. Since IESO will be invoicing monthly, OPG Trust may also set up a short-term borrowing facility to accommodate any market timings for its share of debt issuances.

Proposed GA Deferral Structure

- It is understood that the Ontario Energy Board would set the RPP rates lower based on the GA amount being deferred. This would result in IESO creating a variance account which will be offset by IESO selling the shortfall as a Regulatory Asset to OPG Trust.



- OPG, as the Financial Services Manager of OPG Trust, will implement a financing plan. Although it may be expected that OPG Trust will purchase (B) the Regulatory Asset created by IESO every month, OPG is not obligated to do so. This presents a risk for IESO (A) to be able to have sufficient financing available to ensure its generators are paid.

1 Under the proposed Fair Hydro Act, OPG will act as the Financial Services Manager to the OPG Trust to ensure the Financing Plan (i.e. plan to finance the purchase of the Regulatory Assets from IESO) is implemented.

IESO Financing Requirements

- IESO will need to ensure that it continues to have the funds available to compensate generators on a monthly basis.
- The latest draft of the *Fair Hydro Act*[1] proposes that IESO will create a Regulatory Asset (equal to the GA amount being deferred or the "shortfall" as a result of lower payments by ratepayers).
- Under a Financing Plan that would be prepared by OPG as the Financial Services Manager of the OPG Trust, it will purchase these regulator assets.
    - Under current draft legislation, OPG/OPG Trust will not be obligated to purchase the Regulatory Asset from IESO.
- As a result, IESO would require financing to compensate generators should it be required to hold any portion of the unpurchased Regulatory Asset.
- Currently, IESO has the following credit agreements in place with the OEFC or OFA, as of May 1, 2017:
    1. $975 million revolving line of credit, with the OFA
    2. $160 million revolving line of credit, with the OEFC
    3. $120 million non-revolving loan, with the OEFC
- Based on the purposes of the three credit facilities available to IESO, only the first facility ($975 million) could potentially be used by IESO for temporarily financing their Regulatory Asset.

1 2017-04-12 - Fair_Hydro_Act Torys_Osler Mark-up April 11 2017 Draft (Torys-Oslers_Apr....docx

IESO Existing Credit Facility

- The purpose of the $975 million revolving credit facility with the OFA is to provide working capital and liquidity for the market transactions IESO is involved in. Any variance as a result of RPP pricing (as a result of GA deferral) can be temporarily be financed by the IESO. This, however, is subject to certain risks outlined later in the deck.
- The current credit limit was approved based on the following requirements from IESO in late 2016:

Financial Obligation	Amt. ($ M)
1. RPP variance account exposure between RPP rate-setting periods	$100 - $325
2. New variance accounts (OESP, RRRP) and liquidity related to the potential Cap and Trade Program	$15 - $325
3. Global Adjustment and Overall Market Liquidity and any other timing differences including conservation programs and generation contracts	$25 - $325
Total: Short-Term Borrowing Requirements	**$140 - $975**

- The RPP variance account was at a surplus of $46 million as at August 31, 2016. Over the last three years, the highest RPP shortfall was $117 million in May 2016.
- The new variance accounts will no longer be needed as the OESP and RRRP is now proposed to be funded through the taxpayer (up to aggregate $150 million).

IESO Potential Financing and Risk

- Based on Ministry of Energy's GA deferral plan, it is estimated that approximately $2.5-3.0 billion will need to be deferred per year for over first 10 years.
- Deferring $2.5-3.0 billion per year results in approximately $200-250 million per month. This is based on Ministry of Energy's annual GA deferral amounts, assuming the monthly deferral is equally-weighted.
    - The existing $975 million line of credit with the OFA may be sufficient to cover 1-3 months of GA deferral, assuming it is unused for other reasons and whether its due to OPG electing not to purchase the Regulatory Asset or due to timing differences.
- However, the annual amount being deferred and the resulting monthly amounts can be substantially different based on various factors, such as seasonality or electricity usage.
- Therefore, this monthly number can rise, with IESO estimating as high as $400 million per month.
- Other factors that may increase the monthly GA deferral amounts:
    - IESO will also incur financing charges that will need to be refinanced.
    - The financing and administration costs that OPG Trust incurs will need to be paid for each month and will not be deferred. The GA amounts Ministry of Energy modelled to be deferred did not include the financing and administration costs. If the ratepayer is paying these costs every month, the GA deferral will need to increase to ensure that the related electricity bill decreases (as a result of the deferral) can reflect the government's proposed 25% electricity rate cut and the increase in bills at the rate of inflation.

Other Risks and Considerations

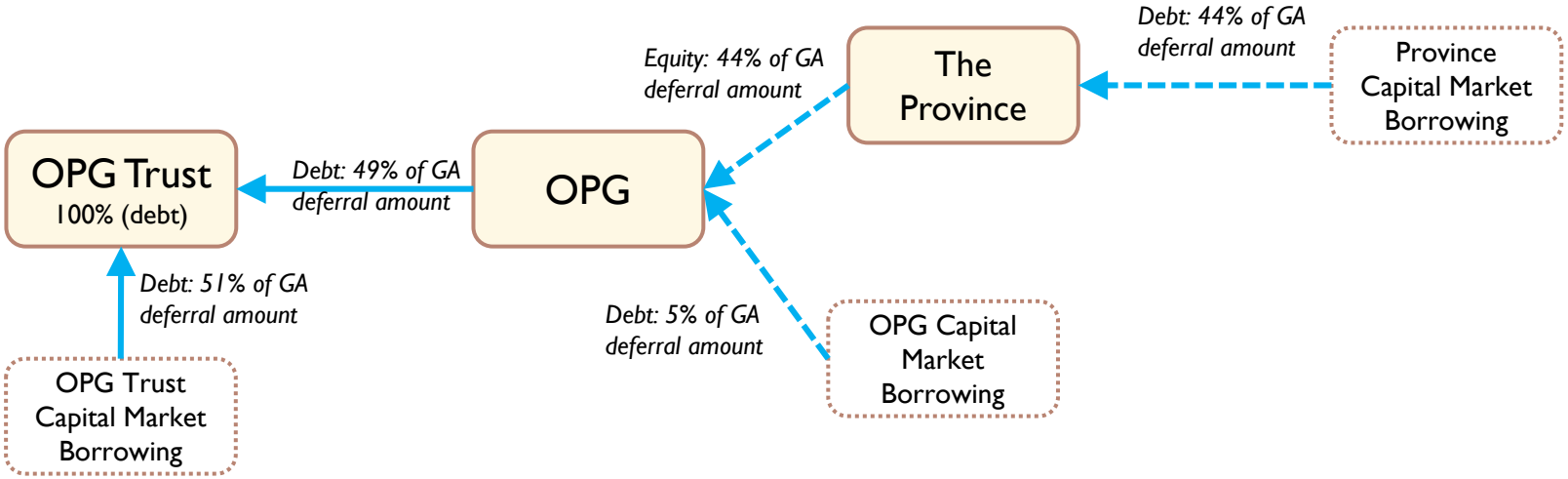
- ~~Although to be confirmed,~~ Even if IESO is allowed to recognized the Regulatory Asset, there is a risk as to whether this recognition will be permitted under the Accounting standards upon consolidation with the Province.
- The current $975 million line of credit is with the OFA and borrowings under the credit facility are included in the OFA's financial statements, which will result in fiscal exposure to the Province.
    - Even if a credit facility is set up with the OEFC, the same fiscal exposure will be present [TBC].
- The current facility is a short-term facility. Should OPG not purchase the Regulatory Asset, IESO may require long-term financing to either 1) help unwind the asset or 2) maintain the deferral financing plan.
- If the IESO borrowing requirements increase, the Province will be obligated to provide increased support, which would have implications for the overall GA deferral plan.
- Since OPG Trust will be financed with 100% debt from OPG and OPG Trust's capital market borrowings, OPG Trust will be required to pay interest costs. These interest costs will be recovered from the ratepayers immediately and will not be deferred. As currently proposed, OPG will not be obligated to pay the Province any interest costs that the Province incurs since the Province's contribution was an equity contribution.

Other Risks and Considerations ../2

- As an alternative to the Province providing equity injections to OPG, the Province could purchase OPG debt instead.
  - This would result in OPG having increased debt on its books. The GA deferral is expected to be treated outside the capital structure OEB looks at for OPG's rate application.
  - The only requirement as advised by Ernst and Young to OPG is "…that the majority of the debt in the Trust is not more than 44% funded by the Province".
  - This would have no impact on OPG Trust's mandate as OPG Trust is 100% debt financed. Details provided to date do not state otherwise.
- OPG would receive interest income on its contribution to OPG Trust. This would ensure that the Province also receives interest income to cover the interest costs incurred for its contribution to OPG for the GA deferral. Alternatively, OPG may be permitted to keep the interest income which may or may not be used to offset future income back to the Province.
  - Although keeping the interest income in OPG versus distributing back to the Province has no fiscal impact, the Province would need to cover the interest costs, possibly with additional borrowings.

Proposed GA Financing Structure

- OPG Trust would finance 51% of its funding requirements through the capital markets as senior debt with the remaining 49% being provided by OPG as subordinated debt.
  - The 49% subordinated debt from OPG will be financed through debt OPG issues in its own corporate capacity, from the capital markets (5%) and through equity injections into OPG from the Province (44%).
    - The Province will finance its equity injection through its annual borrowing program - from issuing debt into the capital markets.
- OPG Trust would recover all financing and administrative costs from the ratepayers. Since IESO will be invoicing monthly, OPG Trust may also set up a short-term borrowing facility to accommodate any market timings for its share of debt issuances.



DRAFT

GA Financing Plan: Role of IESO

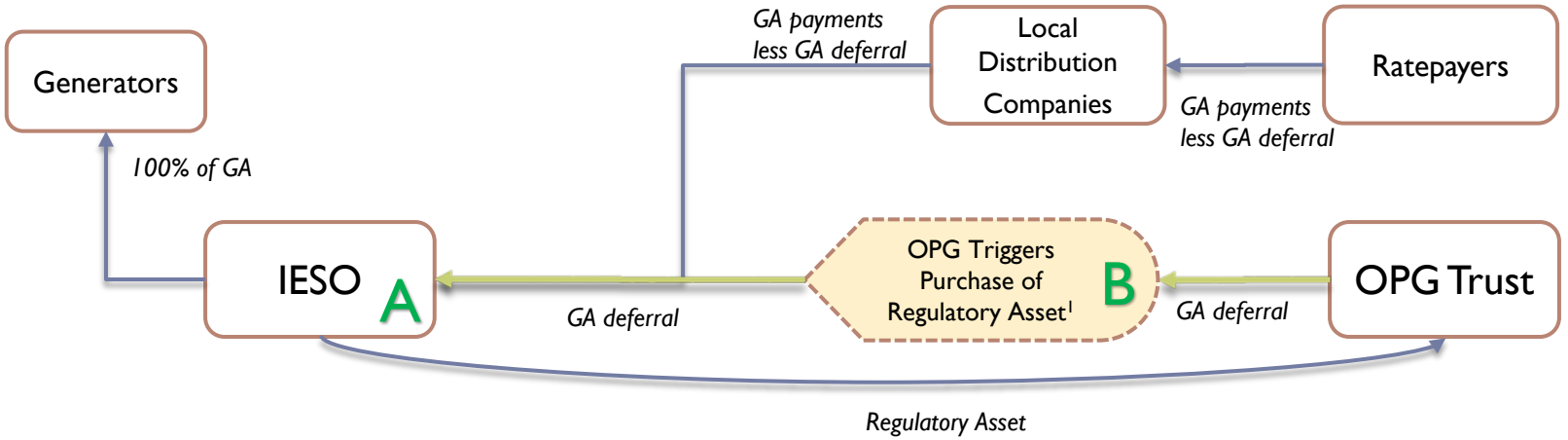
Corporate and Electricity Finance Division
April 25, 2017

Overview

- The IESO ensures that electricity generators are paid to cover the cost of electricity used by ratepayers. A portion of this cost includes the GA.
- The proposed Fair Hydro Act plans to reduce the price paid by ratepayers who fall primarily under the Regulated Price Plan, by ~~up to~~ 25% for the average ratepayer. To help achieve this savings target, the Act proposes to reduce the GA portion of RPP-eligible ratepayers today by refinancing it over a 30-year period.
    - As ratepayers will be paying a reduced GA amount, IESO will have a shortfall in its payment to the generators. OPG, through a Trust, would purchase the Regulatory Asset (i.e. shortfall).
- Under the current proposal:
    - OPG would create a Special Purpose Vehicle (SPV) referred to as "OPG Trust" or "Financing Entity" which will use 100% debt financing to purchase regulatory assets from the IESO (i.e. the GA amount being deferred)
    - OPG Trust would finance its funding requirements as follows:
        - 51% of its funding requirements through the capital markets as senior debt
        - 49% being provided by OPG as subordinated debt.
            - The 49% subordinated debt from OPG will be financed through debt OPG issues in its own corporate capacity, from the capital markets (5%) and through equity injections from the Province (44%).
            - The Province will finance its equity injection through its annual borrowing program - from issuing debt into the capital markets.
    - The regulatory assets that OPG will purchase represent the portion of GA recoveries deferred to future years. IESO would use the cash from the OPG Trust to make up the shortfall in GA recoveries from ratepayers in order to fully compensate generators.
- OPG Trust would be expected to recover all financing and administrative costs from the ratepayers. Since IESO will be invoicing monthly, OPG Trust may also set up a short-term borrowing facility to accommodate any market timings for its share of debt issuances.

Proposed GA Deferral Structure

- It is understood that the Ontario Energy Board would set the RPP rates lower based on the GA amount being deferred. This would result in IESO creating a variance account which will be offset by IESO selling the shortfall as a Regulatory Asset to OPG Trust.



- OPG, as the Financial Services Manager of OPG Trust, will implement a financing plan. Although it may be expected that OPG Trust will purchase (B) the Regulatory Asset created by IESO every month, OPG is not obligated to do so. This presents a risk for IESO (A) to be able to have sufficient financing available to ensure its generators are paid.
- Current draft legislation does not appear to mandate OPG Trust to purchase the Regulatory Asset from IESO, which has resulted in IESO reviewing its existing credit facility with the OFA. (See following slide)
  - The use of the OFA facility likely would represent a fiscal impact to the Province [TBC – Accounting]

1 Under the proposed Fair Hydro Act, OPG will act as the Financial Services Manager to the OPG Trust to ensure the Financing Plan (i.e. plan to finance the purchase of the Regulatory Assets from IESO) is implemented.

IESO Financing Requirements

- IESO will need to ensure that it continues to have the funds available to compensate generators on a monthly basis.
- The latest draft of the *Fair Hydro Act*[1] proposes that IESO will create a Regulatory Asset (equal to the GA amount being deferred or the "shortfall" as a result of lower payments by ratepayers).
- Under a Financing Plan that would be prepared by OPG as the Financial Services Manager of the OPG Trust, it will purchase these regulator assets.
    - Under current draft legislation, OPG/OPG Trust will not be obligated to purchase the Regulatory Asset from IESO.
- As a result, IESO would potentially require financing to compensate generators should it be required to hold any portion of the unpurchased Regulatory Asset.
- Currently, IESO has the following credit agreements in place with the OEFC or OFA, as of May 1, 2017:
    1. $975 million revolving line of credit, with the OFA
    2. $160 million revolving line of credit, with the OEFC
    3. $120 million non-revolving loan, with the OEFC
- Based on the purposes of the three credit facilities available to IESO, only the first facility ($975 million) could potentially be used by IESO for temporarily financing their Regulatory Asset.

1 2017-04-12 - Fair_Hydro_Act Torys_Osler Mark-up April 11 2017 Draft (Torys-Oslers_Apr....docx

IESO Existing Credit Facility

- The purpose of the $975 million revolving credit facility with the OFA is to provide working capital and liquidity for the market transactions IESO is involved in. Any variance as a result of RPP pricing (as a result of GA deferral) can be temporarily be financed by the IESO. This, however, is subject to certain risks outlined later in the deck.
- The current credit limit was approved based on the following requirements from IESO in late 2016:

Financial Obligation	Amt. ($ M)
1. RPP variance account exposure between RPP rate-setting periods	$100 - $325
2. New variance accounts (OESP, RRRP) and liquidity related to the potential Cap and Trade Program	$15 - $325
3. Global Adjustment and Overall Market Liquidity and any other timing differences including conservation programs and generation contracts	$25 - $325
Total: Short-Term Borrowing Requirements	**$140 - $975**

- The RPP variance account was at a surplus of $46 million as at August 31, 2016. Over the last three years, the highest RPP shortfall was $117 million in May 2016.
- The new variance accounts will no longer be needed as the OESP and RRRP is now proposed to be funded through the taxpayer (up to aggregate $150 million).

IESO Potential Financing and Risk

- Based on Ministry of Energy's GA deferral plan, it is estimated that approximately $2.5-3.0 billion will need to be deferred per year for over first 10 years.
- Deferring $2.5-3.0 billion per year results in approximately $200-250 million per month. This is based on Ministry of Energy's annual GA deferral amounts, assuming the monthly deferral is equally-weighted.
    - The existing $975 million line of credit with the OFA may be sufficient to cover 1-3 months of GA deferral, assuming it is unused for other reasons and whether its due to OPG electing not to purchase the Regulatory Asset or due to timing differences.
- However, the annual amount being deferred and the resulting monthly amounts can be substantially different based on various factors, such as seasonality or electricity usage.
- Therefore, this monthly number can rise, with IESO estimating as high as $400 million per month.
- Other factors that may increase the monthly GA deferral amounts:
    - IESO will also incur financing charges that will need to be refinanced.
    - The financing and administration costs that OPG Trust incurs will need to be paid for each month and will not be deferred. The GA amounts Ministry of Energy modelled to be deferred did not include the financing and administration costs. If the ratepayer is paying these costs every month, the GA deferral will need to increase to ensure that the related electricity bill decreases (as a result of the deferral) can reflect the government's proposed 25% electricity rate cut and the increase in bills at the rate of inflation.

Other Risks and Considerations

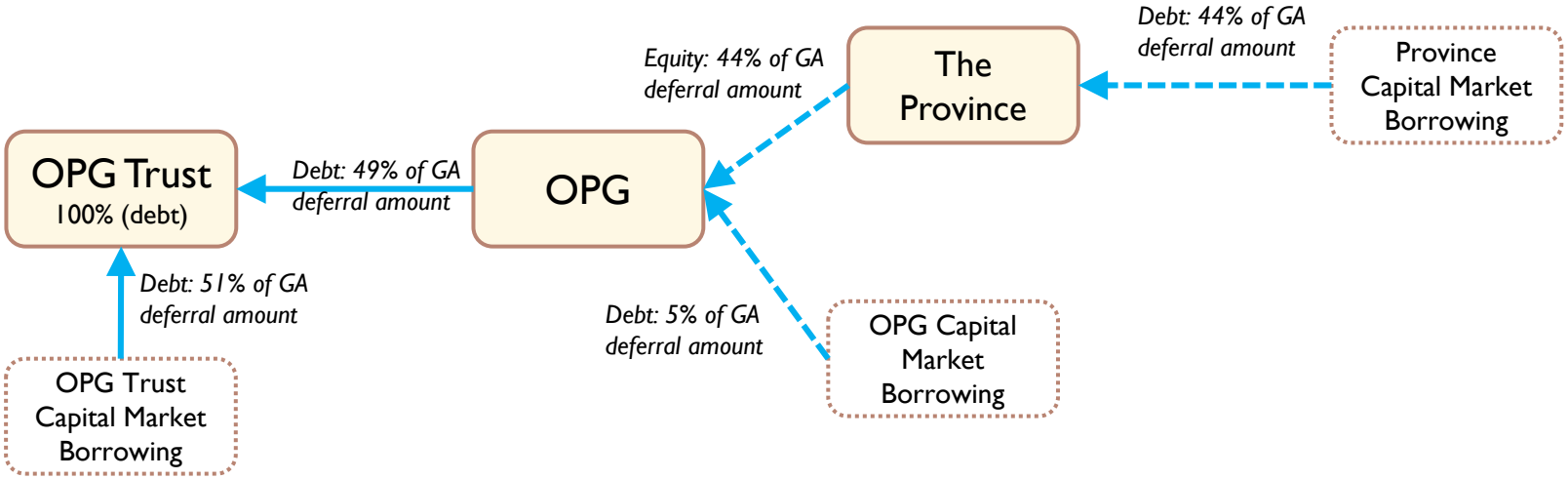
- ~~Although to be confirmed,~~ Even if IESO is allowed to recognized the Regulatory Asset, there is a risk as to whether this recognition will be permitted under the Accounting standards upon consolidation with the Province.
- The current $975 million line of credit is with the OFA and borrowings under the credit facility are included in the OFA's financial statements, which will result in fiscal exposure to the Province.
    - Even if a credit facility is set up with the OEFC, the same fiscal exposure will be present [TBC].
- The current facility is a short-term facility. Should OPG not purchase the Regulatory Asset, IESO may require long-term financing to either 1) help unwind the asset or 2) maintain the deferral financing plan.
- If the IESO borrowing requirements increase, the Province will be obligated to provide increased support, which would have implications for the overall GA deferral plan.
- Since OPG Trust will be financed with 100% debt from OPG and OPG Trust's capital market borrowings, OPG Trust will be required to pay interest costs. These interest costs will be recovered from the ratepayers immediately and will not be deferred. As currently proposed, OPG will not be obligated to pay the Province any interest costs that the Province incurs since the Province's contribution was an equity contribution.

Other Risks and Considerations ../2

- As an alternative to the Province providing equity injections to OPG, the Province could purchase OPG debt instead.
  - This would result in OPG having increased debt on its books. The GA deferral is expected to be treated outside the capital structure OEB looks at for OPG's rate application.
  - The only requirement as advised by Ernst and Young to OPG is "…that the majority of the debt in the Trust is not more than 44% funded by the Province".
  - This would have no impact on OPG Trust's mandate as OPG Trust is 100% debt financed. Details provided to date do not state otherwise.
- OPG would receive interest income on its contribution to OPG Trust. This would ensure that the Province also receives interest income to cover the interest costs incurred for its contribution to OPG for the GA deferral. Alternatively, OPG may be permitted to keep the interest income which may or may not be used to offset future income back to the Province.
  - Although keeping the interest income in OPG versus distributing back to the Province has no fiscal impact, the Province would need to cover the interest costs, possibly with additional borrowings.

Proposed GA Financing Structure

- OPG Trust would finance 51% of its funding requirements through the capital markets as senior debt with the remaining 49% being provided by OPG as subordinated debt.
  - The 49% subordinated debt from OPG will be financed through debt OPG issues in its own corporate capacity, from the capital markets (5%) and through equity injections into OPG from the Province (44%).
    - The Province will finance its equity injection through its annual borrowing program - from issuing debt into the capital markets.
- OPG Trust would recover all financing and administrative costs from the ratepayers. Since IESO will be invoicing monthly, OPG Trust may also set up a short-term borrowing facility to accommodate any market timings for its share of debt issuances.



DRAFT

GA Financing Plan: Role of IESO

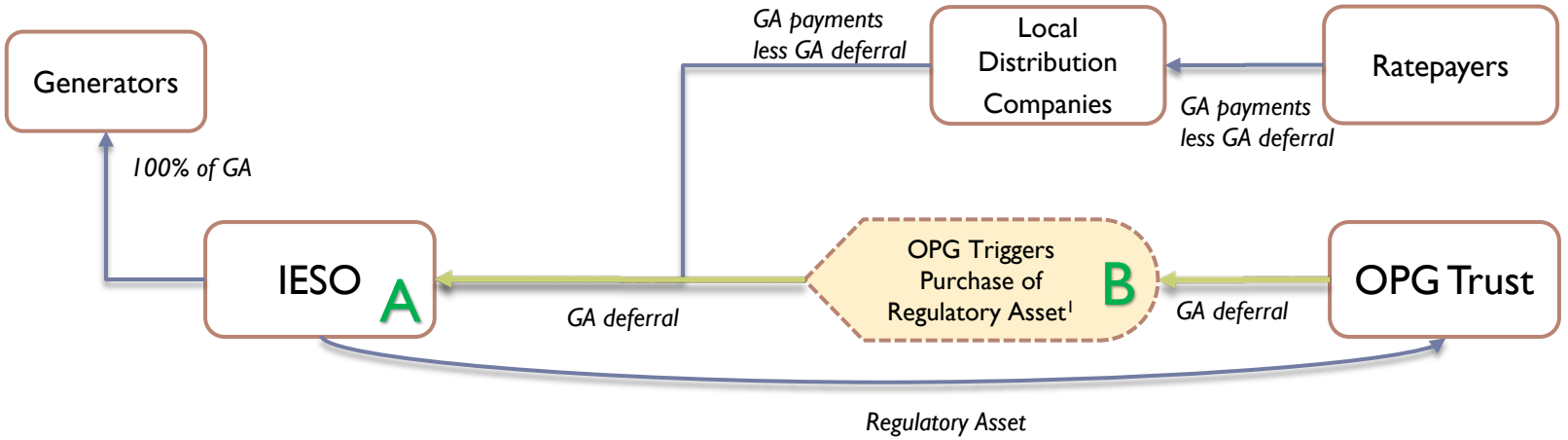
Corporate and Electricity Finance Division
April 25, 2017

Overview

- The IESO ensures that electricity generators are paid to cover the cost of electricity used by ratepayers. A portion of this cost includes the GA.
- The proposed Fair Hydro Act plans to reduce the price paid by ratepayers who fall primarily under the Regulated Price Plan, by ~~up to~~ 25% for the average ratepayer. To help achieve this savings target, the Act proposes to reduce the GA portion of RPP-eligible ratepayers today by refinancing it over a 30-year period.
    - As ratepayers will be paying a reduced GA amount, IESO will have a shortfall in its payment to the generators. OPG, through a Trust, would purchase the Regulatory Asset (i.e. shortfall).
- Under the current proposal:
    - OPG would create a Special Purpose Vehicle (SPV) referred to as "OPG Trust" or "Financing Entity" which will use 100% debt financing to purchase regulatory assets from the IESO (i.e. the GA amount being deferred)
    - OPG Trust would finance its funding requirements as follows:
        - 51% of its funding requirements through the capital markets as senior debt
        - 49% being provided by OPG as subordinated debt.
            - The 49% subordinated debt from OPG will be financed through debt OPG issues in its own corporate capacity, from the capital markets (5%) and through equity injections from the Province (44%).
            - The Province will finance its equity injection through its annual borrowing program - from issuing debt into the capital markets.
    - The regulatory assets that OPG will purchase represent the portion of GA recoveries deferred to future years. IESO would use the cash from the OPG Trust to make up the shortfall in GA recoveries from ratepayers in order to fully compensate generators.
- OPG Trust would be expected to recover all financing and administrative costs from the ratepayers. Since IESO will be invoicing monthly, OPG Trust may also set up a short-term borrowing facility to accommodate any market timings for its share of debt issuances.

Proposed GA Deferral Structure

- It is understood that the Ontario Energy Board would set the RPP rates lower based on the GA amount being deferred. This would result in IESO creating a variance account which will be offset by IESO selling the shortfall as a Regulatory Asset to OPG Trust.



- OPG, as the Financial Services Manager of OPG Trust, will implement a financing plan. Although it may be expected that OPG Trust will purchase (B) the Regulatory Asset created by IESO every month, OPG is not obligated to do so. This presents a risk for IESO (A) to be able to have sufficient financing available to ensure its generators are paid.
- Current draft legislation does not appear to mandate that OPG Trust must purchase the 100 per cent of the Regulatory Asset every month from IESO, which has resulted in IESO reviewing its existing credit facility with the OFA. (See following slide)
  - The use of the OFA facility likely would represent a fiscal impact to the Province [TBC – Accounting]

1 Under the proposed Fair Hydro Act, OPG will act as the Financial Services Manager to the OPG Trust to ensure the Financing Plan (i.e. plan to finance the purchase of the Regulatory Assets from IESO) is implemented.

IESO Financing Requirements

- IESO will need to ensure that it continues to have the funds available to compensate generators on a monthly basis.
- The latest draft of the *Fair Hydro Act*[1] proposes that IESO will create a Regulatory Asset (equal to the GA amount being deferred or the "shortfall" as a result of lower payments by ratepayers).
- Under a Financing Plan that would be prepared by OPG as the Financial Services Manager of the OPG Trust, it will purchase these regulator assets.
    - Under current draft legislation, OPG/OPG Trust will not be obligated to purchase the Regulatory Asset from IESO.
- As a result, IESO would potentially require financing to compensate generators should it be required to hold any portion of the unpurchased Regulatory Asset.
- Currently, IESO has the following credit agreements in place with the OEFC or OFA, as of May 1, 2017:
    1. $975 million revolving line of credit, with the OFA
    2. $160 million revolving line of credit, with the OEFC
    3. $120 million non-revolving loan, with the OEFC
- Based on the purposes of the three credit facilities available to IESO, only the first facility ($975 million) could potentially be used by IESO for temporarily financing their Regulatory Asset.

1 2017-04-12 - Fair_Hydro_Act Torys_Osler Mark-up April 11 2017 Draft (Torys-Oslers_Apr....docx

IESO Existing Credit Facility

- The purpose of the $975 million revolving credit facility with the OFA is to provide working capital and liquidity for the market transactions IESO is involved in. Any variance as a result of RPP pricing (as a result of GA deferral) can be temporarily be financed by the IESO. This, however, is subject to certain risks outlined later in the deck.
- The current credit limit was approved based on the following requirements from IESO in late 2016:

Financial Obligation	Amt. ($ M)
1. RPP variance account exposure between RPP rate-setting periods	$100 - $325
2. New variance accounts (OESP, RRRP) and liquidity related to the potential Cap and Trade Program	$15 - $325
3. Global Adjustment and Overall Market Liquidity and any other timing differences including conservation programs and generation contracts	$25 - $325
Total: Short-Term Borrowing Requirements	**$140 - $975**

- The RPP variance account was at a surplus of $46 million as at August 31, 2016. Over the last three years, the highest RPP shortfall was $117 million in May 2016.
- The new variance accounts will no longer be needed as the OESP and RRRP is now proposed to be funded through the taxpayer (up to aggregate $150 million).

IESO Potential Financing and Risk

- Based on Ministry of Energy's GA deferral plan, it is estimated that approximately $2.5-3.0 billion will need to be deferred per year for over first 10 years.
- Deferring $2.5-3.0 billion per year results in approximately $200-250 million per month. This is based on Ministry of Energy's annual GA deferral amounts, assuming the monthly deferral is equally-weighted.
    - The existing $975 million line of credit with the OFA may be sufficient to cover 1-3 months of GA deferral, assuming it is unused for other reasons and whether its due to OPG electing not to purchase the Regulatory Asset or due to timing differences.
- However, the annual amount being deferred and the resulting monthly amounts can be substantially different based on various factors, such as seasonality or electricity usage.
- Therefore, this monthly number can rise, with IESO estimating as high as $400 million per month.
- Other factors that may increase the monthly GA deferral amounts:
    - IESO will also incur financing charges that will need to be refinanced.
    - The financing and administration costs that OPG Trust incurs will need to be paid for each month and will not be deferred. The GA amounts Ministry of Energy modelled to be deferred did not include the financing and administration costs. If the ratepayer is paying these costs every month, the GA deferral will need to increase to ensure that the related electricity bill decreases (as a result of the deferral) can reflect the government's proposed 25% electricity rate cut and the increase in bills at the rate of inflation.

Other Risks and Considerations

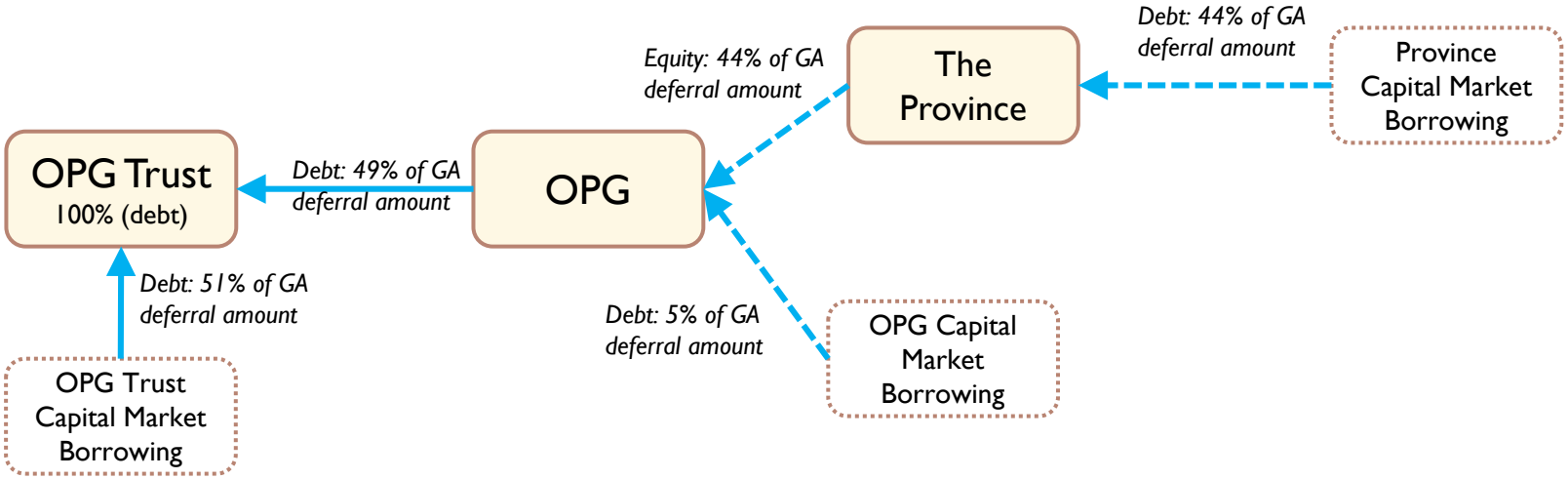
- ~~Although to be confirmed,~~ Even if IESO is allowed to recognized the Regulatory Asset, there is a risk as to whether this recognition will be permitted under the Accounting standards upon consolidation with the Province.
- The current $975 million line of credit is with the OFA and borrowings under the credit facility are included in the OFA's financial statements, which will result in fiscal exposure to the Province.
    - Even if a credit facility is set up with the OEFC, the same fiscal exposure will be present [TBC].
- The current facility is a short-term facility. Should OPG not purchase the Regulatory Asset, IESO may require long-term financing to either 1) help unwind the asset or 2) maintain the deferral financing plan.
- If the IESO borrowing requirements increase, the Province will be obligated to provide increased support, which would have implications for the overall GA deferral plan.
- Since OPG Trust will be financed with 100% debt from OPG and OPG Trust's capital market borrowings, OPG Trust will be required to pay interest costs. These interest costs will be recovered from the ratepayers immediately and will not be deferred. As currently proposed, OPG will not be obligated to pay the Province any interest costs that the Province incurs since the Province's contribution was an equity contribution.

Other Risks and Considerations ../2

- As an alternative to the Province providing equity injections to OPG, the Province could purchase OPG debt instead.
  - This would result in OPG having increased debt on its books. The GA deferral is expected to be treated outside the capital structure OEB looks at for OPG's rate application.
  - The only requirement as advised by Ernst and Young to OPG is "…that the majority of the debt in the Trust is not more than 44% funded by the Province".
  - This would have no impact on OPG Trust's mandate as OPG Trust is 100% debt financed. Details provided to date do not state otherwise.
- OPG would receive interest income on its contribution to OPG Trust. This would ensure that the Province also receives interest income to cover the interest costs incurred for its contribution to OPG for the GA deferral. Alternatively, OPG may be permitted to keep the interest income which may or may not be used to offset future income back to the Province.
  - Although keeping the interest income in OPG versus distributing back to the Province has no fiscal impact, the Province would need to cover the interest costs, possibly with additional borrowings.

Proposed GA Financing Structure

- OPG Trust would finance 51% of its funding requirements through the capital markets as senior debt with the remaining 49% being provided by OPG as subordinated debt.
  - The 49% subordinated debt from OPG will be financed through debt OPG issues in its own corporate capacity, from the capital markets (5%) and through equity injections into OPG from the Province (44%).
    - The Province will finance its equity injection through its annual borrowing program - from issuing debt into the capital markets.
- OPG Trust would recover all financing and administrative costs from the ratepayers. Since IESO will be invoicing monthly, OPG Trust may also set up a short-term borrowing facility to accommodate any market timings for its share of debt issuances.



DRAFT

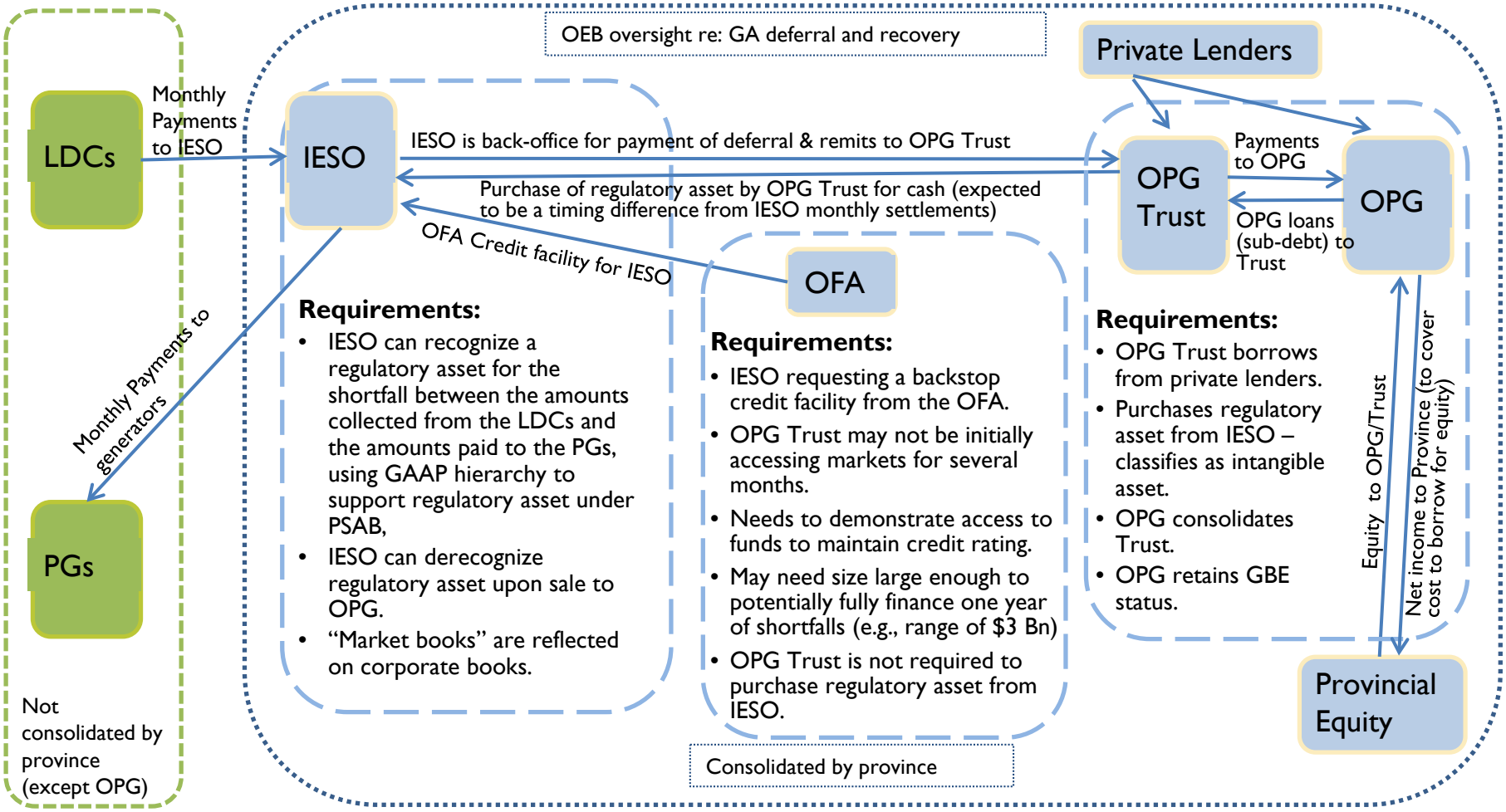
GA Financing Plan: Role of IESO

Corporate and Electricity Finance Division
May 1, 2017

DRAFT

GA Smoothing – Proposed Structure

- The following diagram provides an overview of the proposed GA smoothing structure, as well as interactions between sector entities and elements required to meet accounting objectives.



Note: Proposed structure is subject to legal and accounting confirmation, absent that confirmation, there would be a fiscal impact to the province.

IESO Financing Requirements

- IESO will need to ensure that it continues to have the funds available to provide payments to generators on a monthly basis as part of the IESO settlements process, while recoveries from LDCs for Regulated Price Plan (RPP) / Fair Hydro Plan eligible customers will be lower.
- IESO has an existing credit facility from the OFA; however, a new or expanded facility is being requested.
- IESO would require financing to compensate generators should it be required to hold any portion of the unpurchased Regulatory Asset beyond each monthly settlement period.
  - OPG Trust is not expected to access public capital markets for several months after the start of the FHP, and may be purchasing the asset with a lag vs monthly settlements. Also, OPG Trust is not required to purchase the regulatory asset.
  - IESO will need a credit facility for interim financing.
  - IESO may require longer-term financing to maintain the deferral financing plan, should the OPG Trust not be able to access debt markets on a timely basis for purchase of some or all of the regulatory asset.
- Based on Ministry of Energy's GA deferral plan, it is estimated that approximately $2.5-3.0 billion need to be deferred per year for over first 10 years, equal to approximately $200-250 million per month, on average.[1]
  - The size of the credit facility required to backstop IESO could be $2.5 to $3.0 billion. [TBC]
- The monthly and annual amount being deferred and the resulting monthly amounts can be substantially different than forecast based on various factors, such as seasonality or electricity usage, as well as potential changes to electricity costs from OEB rate decisions, with IESO estimating deferral amounts as high as $400 million per month.
- Other factors that may increase IESO's financing requirements:
  - IESO will also incur financing charges that will need to be refinanced.
  - The financing and administration costs that OPG Trust incurs will need to be paid.
- There is an accounting risk on how OFA financing of the IESO requirements would be treated.
  - Even if IESO is allowed to recognized the Regulatory Asset, there is a risk as to whether this recognition will be permitted under the accounting standards (PSAS) upon consolidation with the Province.

[1] Based on Ministry of Energy's annual GA deferral amounts, assuming the monthly deferral is equally-weighted.

DRAFT

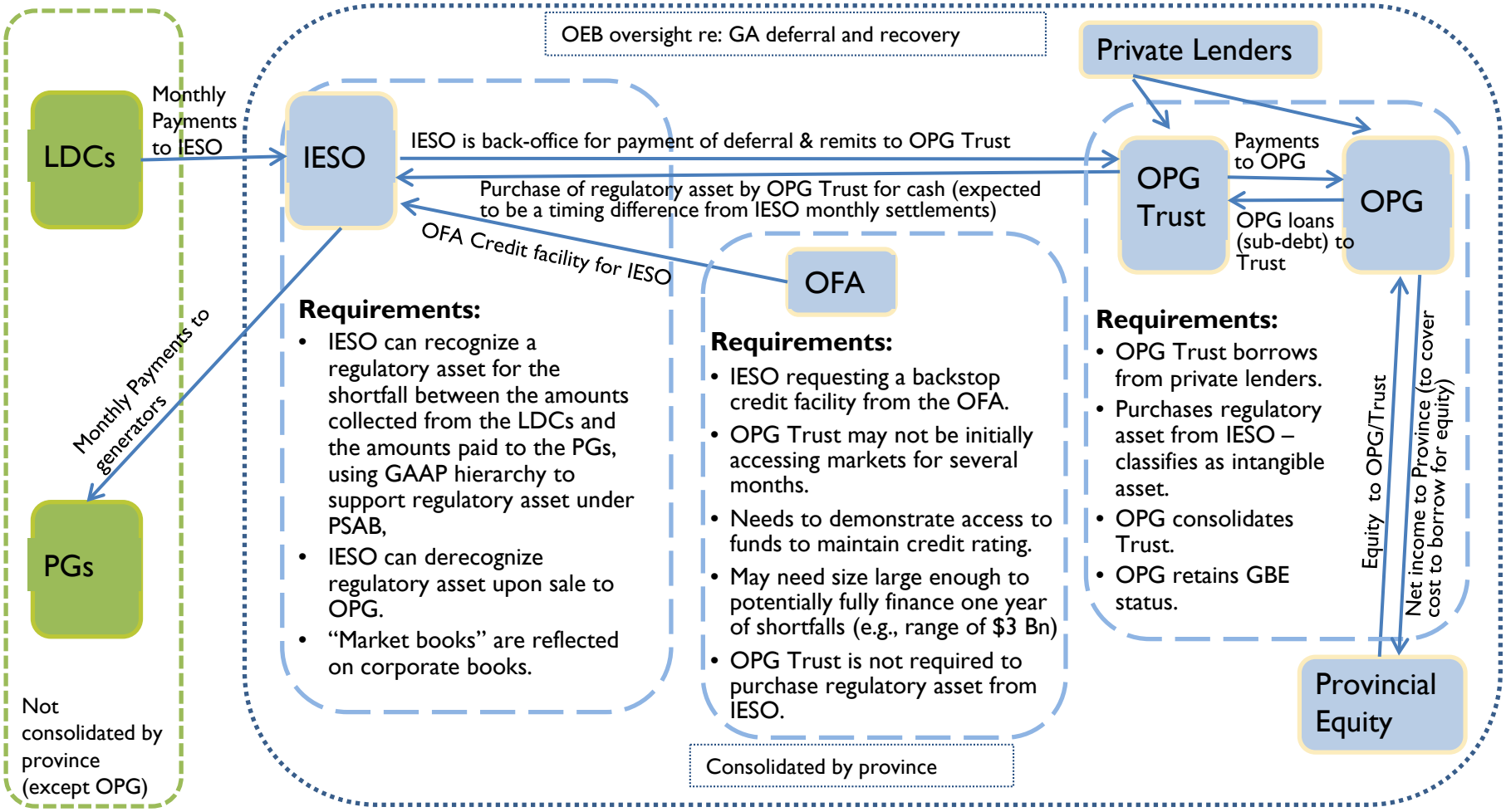
GA Financing Plan: Role of IESO

Corporate and Electricity Finance Division
May 1, 2017

DRAFT

GA Smoothing – Proposed Structure

- The following diagram provides an overview of the proposed GA smoothing structure, as well as interactions between sector entities and elements required to meet accounting objectives.



Note: Proposed structure is subject to legal and accounting confirmation, absent that confirmation, there would be a fiscal impact to the province.

DRAFT

IESO Financing Requirements

- IESO will need to ensure that it continues to have the funds available to provide payments to generators on a monthly basis as part of the IESO settlements process, while recoveries from LDCs for Regulated Price Plan (RPP) / Fair Hydro Plan eligible customers will be lower.
- IESO has an existing credit facility from the OFA; however, a new or expanded facility is being requested.
- IESO would require financing to compensate generators should it be required to hold any portion of the unpurchased Regulatory Asset beyond each monthly settlement period.
  - OPG Trust is not expected to access public capital markets for several months after the start of the FHP, and may be purchasing the asset with a lag vs monthly settlements. Also, OPG Trust is not required to purchase the regulatory asset.
  - IESO will need a credit facility for interim financing.
  - IESO may require longer-term financing to maintain the deferral financing plan, should the OPG Trust not be able to access debt markets on a timely basis for purchase of some or all of the regulatory asset.
- Based on Ministry of Energy's GA deferral plan, it is estimated that approximately $2.5-3.0 billion need to be deferred per year for over first 10 years, equal to approximately $200-250 million per month, on average.[1]
  - The size of the credit facility required to backstop IESO could be $2.5 to $3.0 billion. [TBC]
- There could be a fiscal impact and accounting risk on OFA financing of the IESO requirements if it were to be more than temporary borrowing to cover timing differences on when the OPG SPV buys the regulatory asset vs the timing of IESO monthly settlements.
  - Even if IESO is allowed to recognized the Regulatory Asset, on consolidation into Public Accounts, the regulatory asset would not be expected to be recognised, so that the deferral amount and associated financing costs would be expected to have a fiscal impact.
- The monthly and annual amount being deferred and the resulting monthly amounts can be substantially different than forecast based on various factors, such as seasonality or electricity usage, as well as potential changes to electricity costs from OEB rate decisions, with IESO estimating deferral amounts as high as $400 million per month.
- Other factors that may increase IESO's financing requirements:
  - IESO will also incur financing charges that will need to be refinanced.
  - The financing and administration costs that OPG Trust incurs will need to be paid.

[1] Based on Ministry of Energy's annual GA deferral amounts, assuming the monthly deferral is equally-weighted.

DRAFT

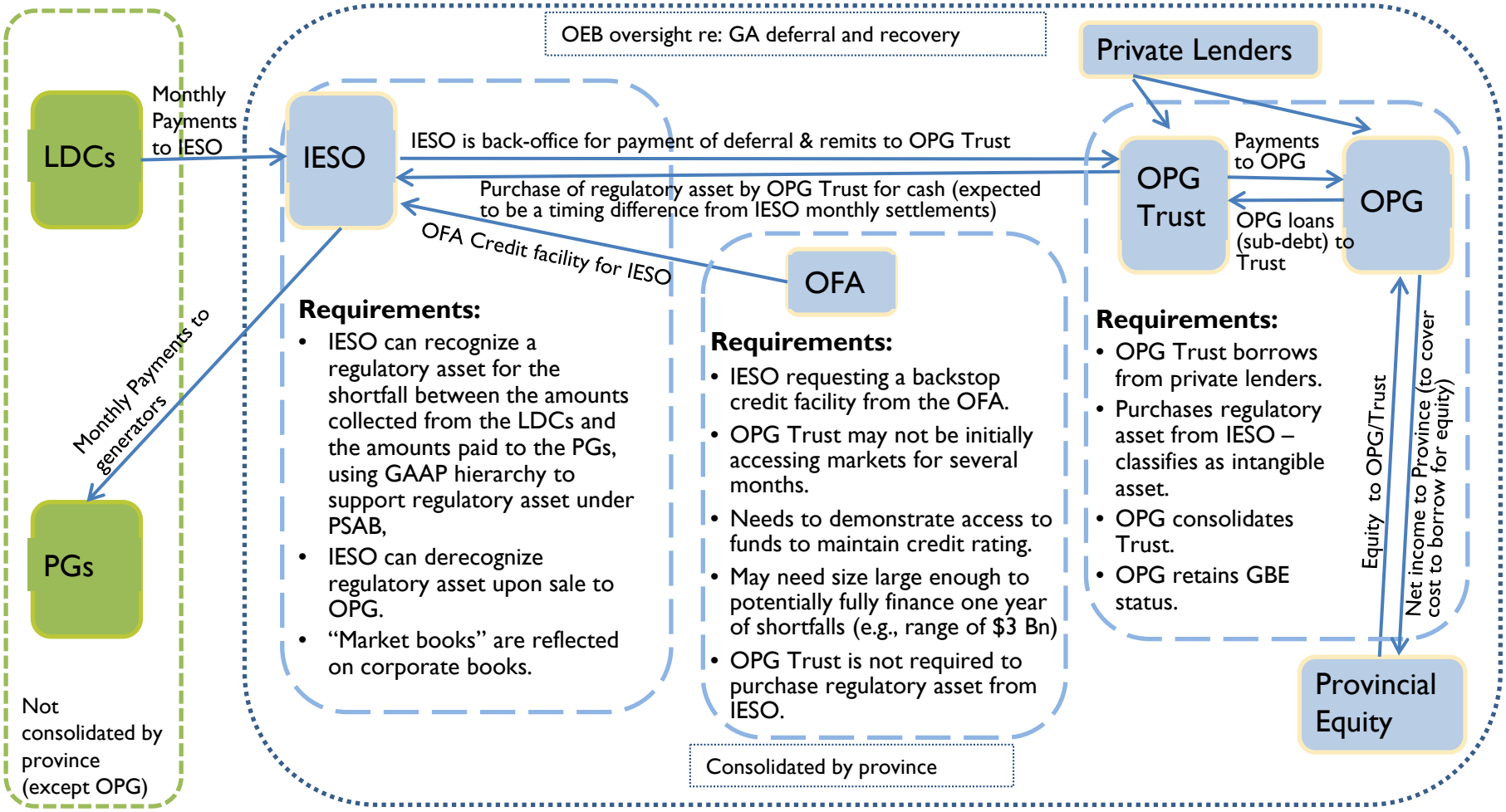
GA Financing Plan: Role of IESO

Corporate and Electricity Finance Division
May 1, 2017

DRAFT

GA Smoothing – Proposed Structure

- The following diagram provides an overview of the proposed GA smoothing structure, as well as interactions between sector entities and elements required to meet accounting objectives.



Note: Proposed structure is subject to legal and accounting confirmation, absent that confirmation, there would be a fiscal impact to the province.

DRAFT

IESO Financing Requirements

- IESO will need to ensure that it continues to have the funds available to provide payments to generators on a monthly basis as part of the IESO settlements process, while recoveries from LDCs for Regulated Price Plan (RPP) / Fair Hydro Plan eligible customers will be lower.
- IESO has an existing credit facility from the OFA; however, a new or expanded facility is being requested. An Order-in-Council would be needed to facilitate this new OFA-IESO credit facility.
- IESO would require financing to compensate generators should it be required to hold any portion of the unpurchased Regulatory Asset beyond each monthly settlement period.
  - OPG Trust is not expected to access public capital markets for several months after the start of the FHP, and may be purchasing the asset with a lag vs monthly settlements. Also, OPG Trust is not required to purchase the regulatory asset.
  - IESO will need a credit facility for interim financing.
  - IESO may require longer-term financing to maintain the deferral financing plan, should the OPG Trust not be able to access debt markets on a timely basis for purchase of some or all of the regulatory asset.
- Based on Ministry of Energy's GA deferral plan, it is estimated that approximately $2.5-3.0 billion need to be deferred per year for over first 10 years, equal to approximately $200-250 million per month, on average.[1]
  - The size of the credit facility required to backstop IESO could be $2.5 to $3.0 billion. [TBC]
- There could be a fiscal impact and accounting risk on OFA financing of the IESO requirements if it were to be more than temporary borrowing to cover timing differences on when the OPG SPV buys the regulatory asset vs the timing of IESO monthly settlements.
  - Even if IESO is allowed to recognized the Regulatory Asset, on consolidation into Public Accounts, the regulatory asset would not be expected to be recognised, so that the deferral amount and associated financing costs would be expected to have a fiscal impact.
- The monthly and annual amount being deferred and the resulting monthly amounts can be substantially different than forecast based on various factors, such as seasonality or electricity usage, as well as potential changes to electricity costs from OEB rate decisions, with IESO estimating deferral amounts as high as $400 million per month.
- Other factors that may increase IESO's financing requirements:
  - IESO will also incur financing charges that will need to be refinanced.
  - The financing and administration costs that OPG Trust incurs will need to be paid.

[1] Based on Ministry of Energy's annual GA deferral amounts, assuming the monthly deferral is equally-weighted.

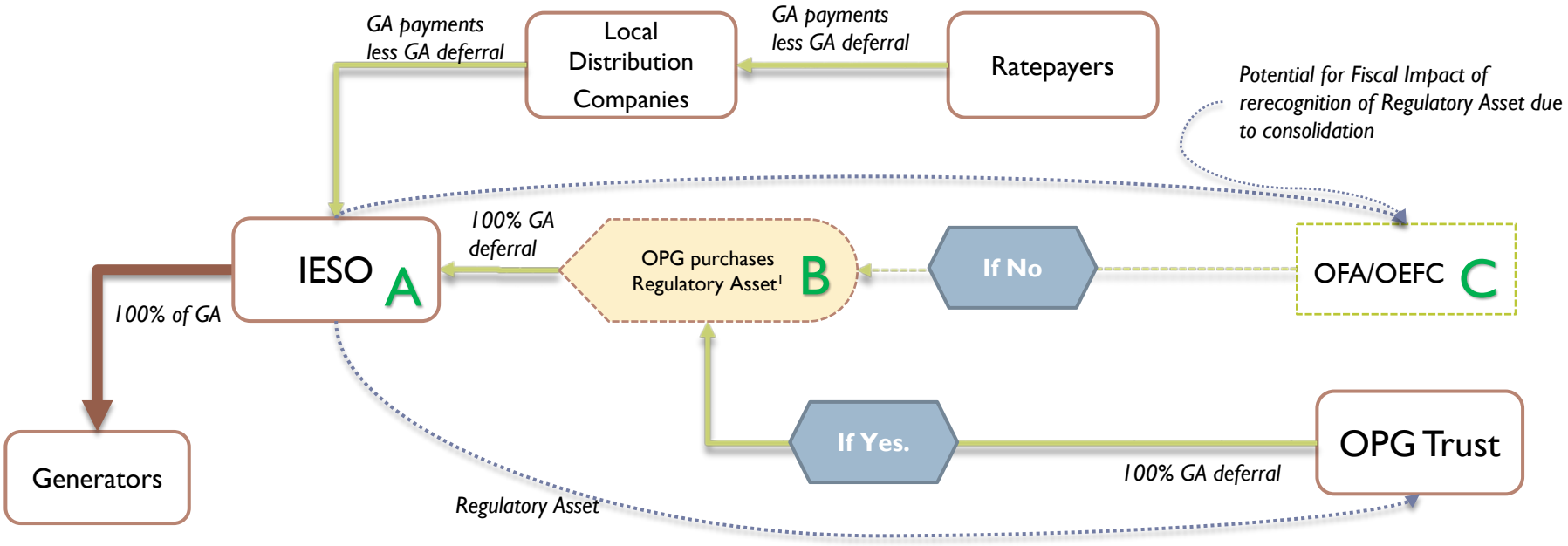
DRAFT

GA Financing Plan: Role of IESO

Corporate and Electricity Finance Division
April 25, 2017

Proposed GA Deferral Structure

- As ratepayers will be paying a reduced GA amount, IESO will have a shortfall in its payment to the generators. OPG, through a Trust, would purchase the Regulatory Asset (i.e. shortfall).



- OPG, as the Financial Services Manager of OPG Trust, will implement a financing plan. Although it may be expected that OPG Trust will purchase (B) the Regulatory Asset created by IESO every month, OPG is not obligated to do so. This presents a risk for IESO (A) to be able to have sufficient financing available to ensure its generators are paid.
- Current draft legislation does not appear to mandate that OPG Trust must purchase the 100 per cent of the Regulatory Asset every month from IESO, which results in IESO requiring a revolving credit facility from the Province/OEFC/OFA(C).
  - The use of a credit facility would likely represent a fiscal impact to the Province [TBC – Accounting]

1 Under the proposed Fair Hydro Act, OPG will act as the Financial Services Manager to the OPG Trust to ensure the Financing Plan (i.e. plan to finance the purchase of the Regulatory Assets from IESO) is implemented.

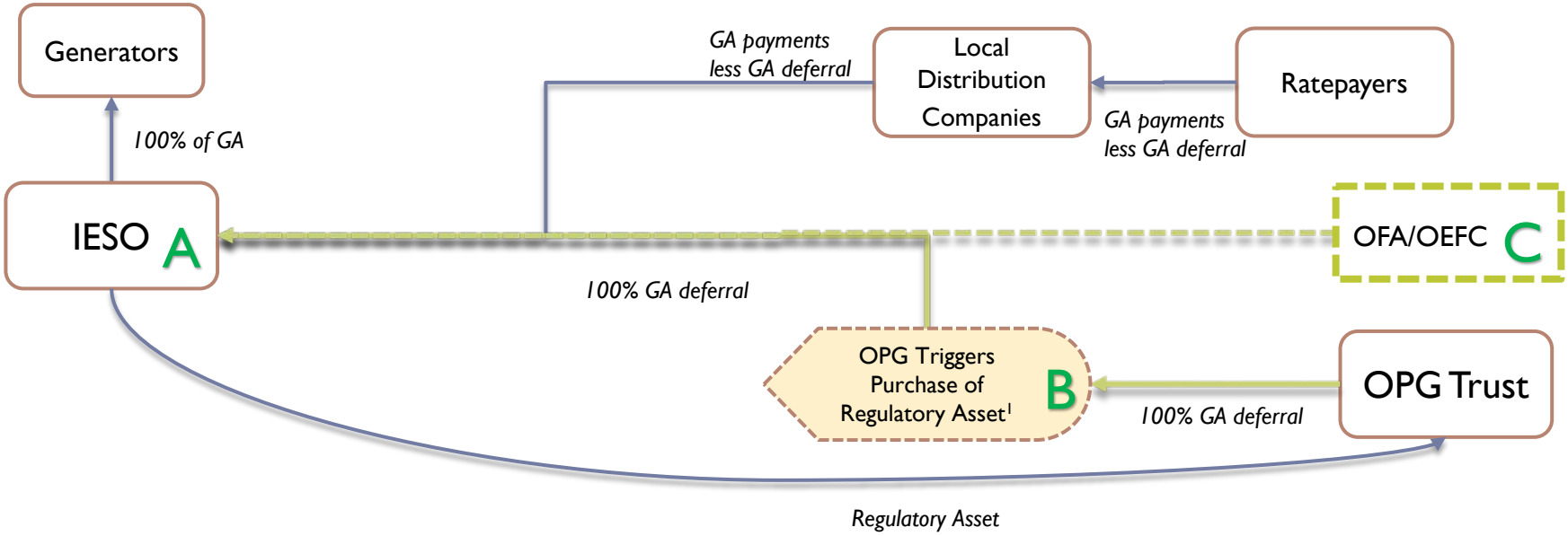
IESO Financing Requirements & Risks

- IESO will need to ensure that it continues to have the funds available to compensate generators on a monthly basis.
- As a result, IESO would potentially require financing to compensate generators should it be required to hold any portion of the unpurchased Regulatory Asset.
    - Even if IESO is allowed to recognized the Regulatory Asset, there is a risk as to whether this recognition will be permitted under the Accounting standards upon consolidation with the Province.
- Based on Ministry of Energy's GA deferral plan, it is estimated that approximately $2.5-3.0 billion will need to be deferred per year for over first 10 years, equal to approximately $200-250 million per month.[1]
- However, the annual amount being deferred and the resulting monthly amounts can be substantially different based on various factors, such as seasonality or electricity usage, with IESO estimating deferral amounts as high as $400 million per month.
- Other factors that may increase the monthly GA deferral amounts:
    - IESO will also incur financing charges that will need to be refinanced.
    - The financing and administration costs that OPG Trust incurs will need to be paid for each month and will not be deferred. The GA amounts Ministry of Energy modelled to be deferred did not include the financing and administration costs. If the ratepayer is paying these costs every month, the GA deferral will need to increase to ensure that the related electricity bill decreases (as a result of the deferral) can reflect the government's proposed 25% electricity rate cut and the increase in bills at the rate of inflation.
- Should OPG not purchase the Regulatory Asset, IESO may require long-term financing to either 1) help unwind the asset or 2) maintain the deferral financing plan.
- If the IESO borrowing requirements increase, the Province will be obligated to provide increased support, which would have implications for the overall GA deferral plan. This increased support from the Province would be repaid by ratepayers.
    - Recent documents show that the Province may be asked to provide a guarantee in which if the GA deferral plan is cancelled, the Province would be responsible for making the investors of the Trust whole. This would mean that the taxpayers could be liable and result in a significant fiscal impact.

1 Based on Ministry of Energy's annual GA deferral amounts, assuming the monthly deferral is equally-weighted.

Proposed GA Deferral Structure

- As ratepayers will be paying a reduced GA amount, IESO will have a shortfall in its payment to the generators. OPG, through a Trust, would purchase the Regulatory Asset (i.e. shortfall).



- OPG, as the Financial Services Manager of OPG Trust, will implement a financing plan. Although it may be expected that OPG Trust will purchase (B) the Regulatory Asset created by IESO every month, OPG is not obligated to do so. This presents a risk for IESO (A) to be able to have sufficient financing available to ensure its generators are paid.
- Current draft legislation does not appear to mandate that OPG Trust must purchase the 100 per cent of the Regulatory Asset every month from IESO, which results in IESO requiring a revolving credit facility from the Province/OEFC/OFA(C).
    - The use of a credit facility would likely represent a fiscal impact to the Province [TBC – Accounting]

1 Under the proposed Fair Hydro Act, OPG will act as the Financial Services Manager to the OPG Trust to ensure the Financing Plan (i.e. plan to finance the purchase of the Regulatory Assets from IESO) is implemented.

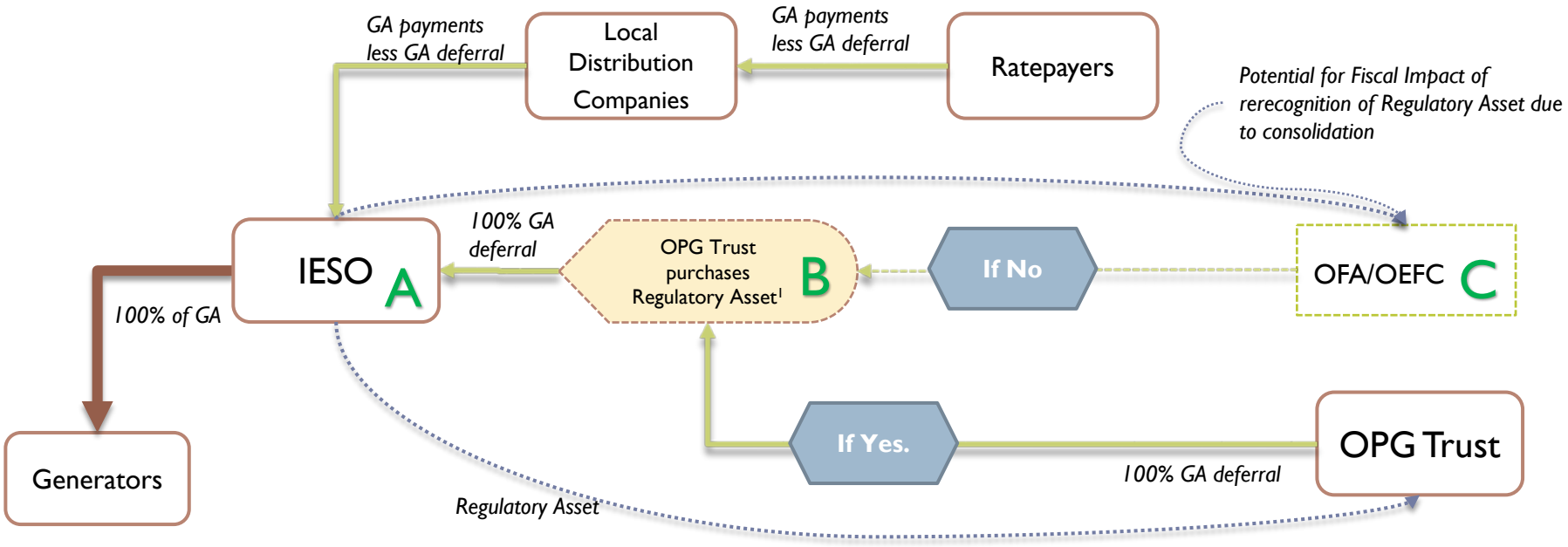
DRAFT

GA Financing Plan: Role of IESO

Corporate and Electricity Finance Division
April 25, 2017

Proposed GA Deferral Structure

- As ratepayers will be paying a reduced GA amount, IESO will have a shortfall in its payment to the generators. OPG, through a Trust, would purchase the Regulatory Asset (i.e. shortfall).



- OPG, as the Financial Services Manager of OPG Trust, will implement a financing plan. Although it may be expected that OPG Trust will purchase (B) the Regulatory Asset created by IESO every month, OPG is not obligated to do so. This presents a risk for IESO (A) to be able to have sufficient financing available to ensure its generators are paid.
- Current draft legislation does not appear to mandate that OPG Trust must purchase the 100 per cent of the Regulatory Asset every month from IESO, which results in IESO requiring a revolving credit facility from the Province/OEFC/OFA(C).
  - The use of a credit facility would likely represent a fiscal impact to the Province [TBC – Accounting]

1 Under the proposed Fair Hydro Act, OPG will act as the Financial Services Manager to the OPG Trust to ensure the Financing Plan (i.e. plan to finance the purchase of the Regulatory Assets from IESO) is implemented.

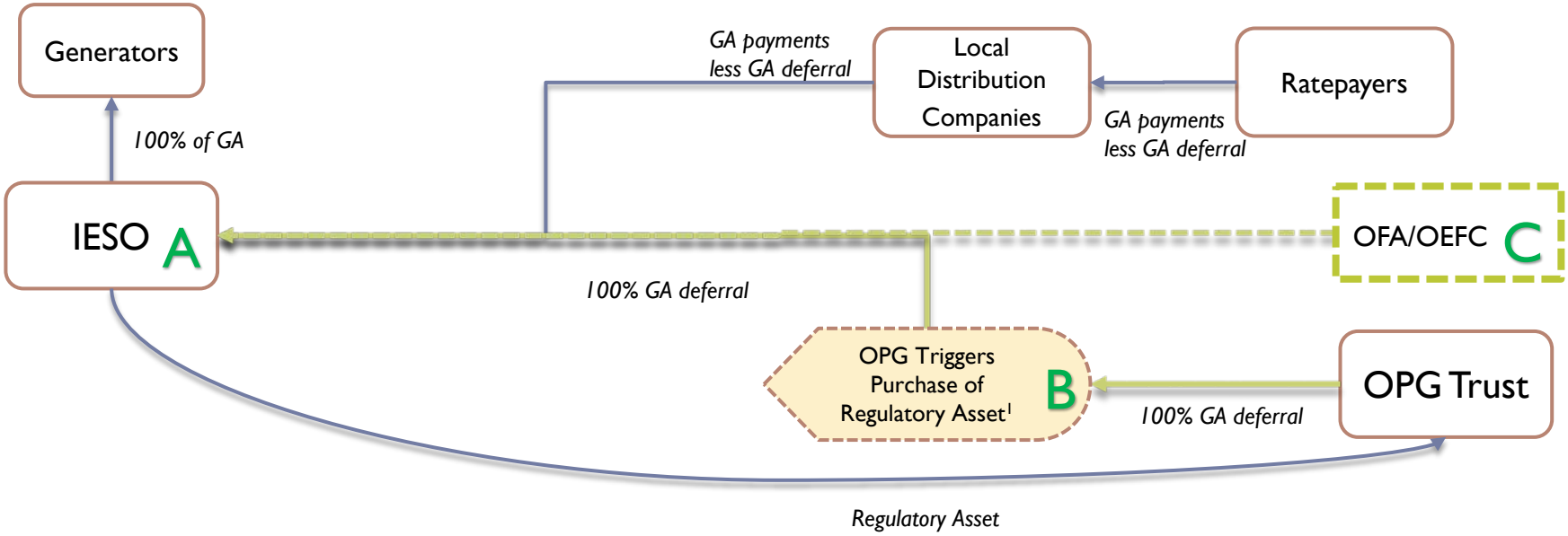
IESO Financing Requirements & Risks

- IESO will need to ensure that it continues to have the funds available to compensate generators on a monthly basis.
- As a result, IESO would potentially require financing to compensate generators should it be required to hold any portion of the unpurchased Regulatory Asset.
    - Even if IESO is allowed to recognized the Regulatory Asset, there is a risk as to whether this recognition will be permitted under the Accounting standards upon consolidation with the Province.
- Based on Ministry of Energy's GA deferral plan, it is estimated that approximately $2.5-3.0 billion will need to be deferred per year for over first 10 years, equal to approximately $200-250 million per month.[1]
- However, the annual amount being deferred and the resulting monthly amounts can be substantially different based on various factors, such as seasonality or electricity usage, with IESO estimating deferral amounts as high as $400 million per month.
- Other factors that may increase the monthly GA deferral amounts:
    - IESO will also incur financing charges that will need to be refinanced.
    - The financing and administration costs that OPG Trust incurs will need to be paid for each month and will not be deferred. The GA amounts Ministry of Energy modelled to be deferred did not include the financing and administration costs. If the ratepayer is paying these costs every month, the GA deferral will need to increase to ensure that the related electricity bill decreases (as a result of the deferral) can reflect the government's proposed 25% electricity rate cut and the increase in bills at the rate of inflation.
- Should OPG not purchase the Regulatory Asset, IESO may require long-term financing to either 1) help unwind the asset or 2) maintain the deferral financing plan.
- If the IESO borrowing requirements increase, the Province will be obligated to provide increased support, which would have implications for the overall GA deferral plan. This increased support from the Province would be repaid by ratepayers.
    - Recent documents show that the Province may be asked to provide a guarantee in which if the GA deferral plan is cancelled, the Province would be responsible for making the investors of the Trust whole. This would mean that the taxpayers could be liable and result in a significant fiscal impact.

1 Based on Ministry of Energy's annual GA deferral amounts, assuming the monthly deferral is equally-weighted.

Proposed GA Deferral Structure

- As ratepayers will be paying a reduced GA amount, IESO will have a shortfall in its payment to the generators. OPG, through a Trust, would purchase the Regulatory Asset (i.e. shortfall).



- OPG, as the Financial Services Manager of OPG Trust, will implement a financing plan. Although it may be expected that OPG Trust will purchase (B) the Regulatory Asset created by IESO every month, OPG is not obligated to do so. This presents a risk for IESO (A) to be able to have sufficient financing available to ensure its generators are paid.
- Current draft legislation does not appear to mandate that OPG Trust must purchase the 100 per cent of the Regulatory Asset every month from IESO, which results in IESO requiring a revolving credit facility from the Province/OEFC/OFA(C).
    - The use of a credit facility would likely represent a fiscal impact to the Province [TBC – Accounting]

1 Under the proposed Fair Hydro Act, OPG will act as the Financial Services Manager to the OPG Trust to ensure the Financing Plan (i.e. plan to finance the purchase of the Regulatory Assets from IESO) is implemented.

DRAFT

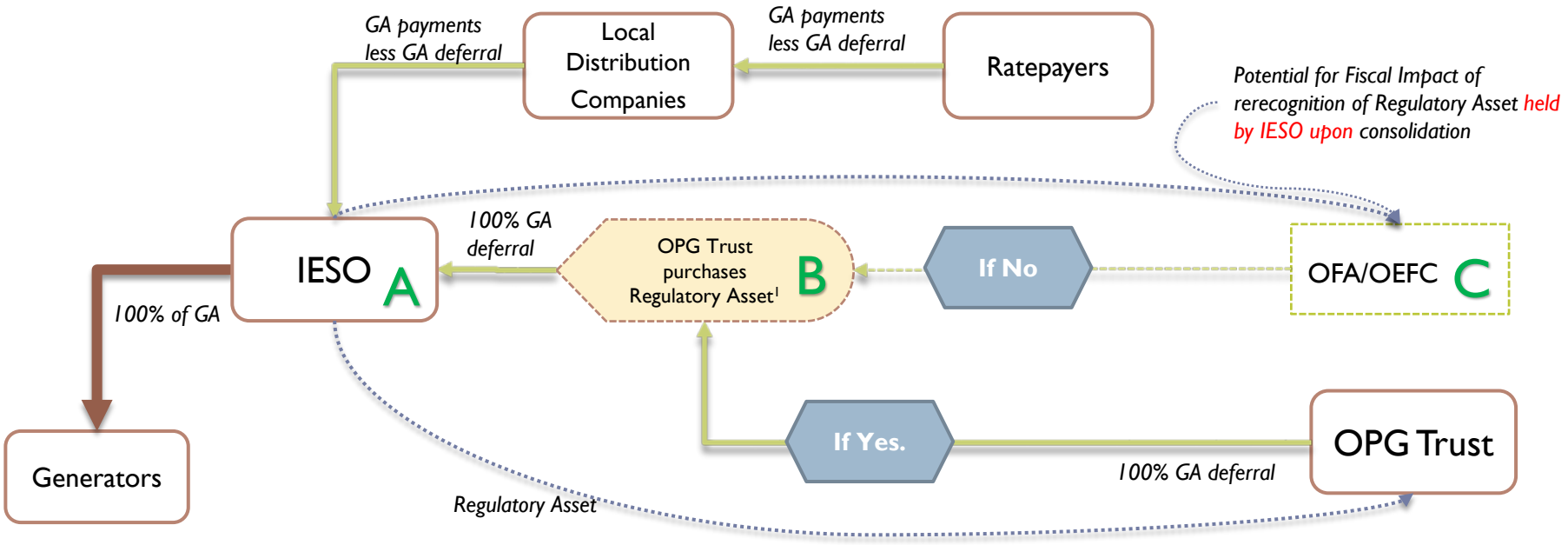
GA Financing Plan: Role of IESO

Corporate and Electricity Finance Division
April 25, 2017

DRAFT

Proposed GA Deferral Structure

- As ratepayers will be paying a reduced GA amount, IESO will have a shortfall in its payment to the generators. OPG, through a Trust, would purchase the Regulatory Asset (i.e. shortfall).



- OPG, as the Financial Services Manager of OPG Trust, will implement a financing plan. Although it may be expected that OPG Trust will purchase (B) the Regulatory Asset created by IESO every month, OPG is not obligated to do so. This presents a risk for IESO (A) to be able to have sufficient financing available to ensure its generators are paid.
- Current draft legislation does not appear to mandate that OPG Trust must purchase the 100 per cent of the Regulatory Asset every month from IESO, which results in IESO requiring a revolving credit facility from the Province/OEFC/OFA(C).
  - The use of a credit facility would likely represent a fiscal impact to the Province [TBC – Accounting]

1 Under the proposed Fair Hydro Act, OPG will act as the Financial Services Manager to the OPG Trust to ensure the Financing Plan (i.e. plan to finance the purchase of the Regulatory Assets from IESO) is implemented.

DRAFT

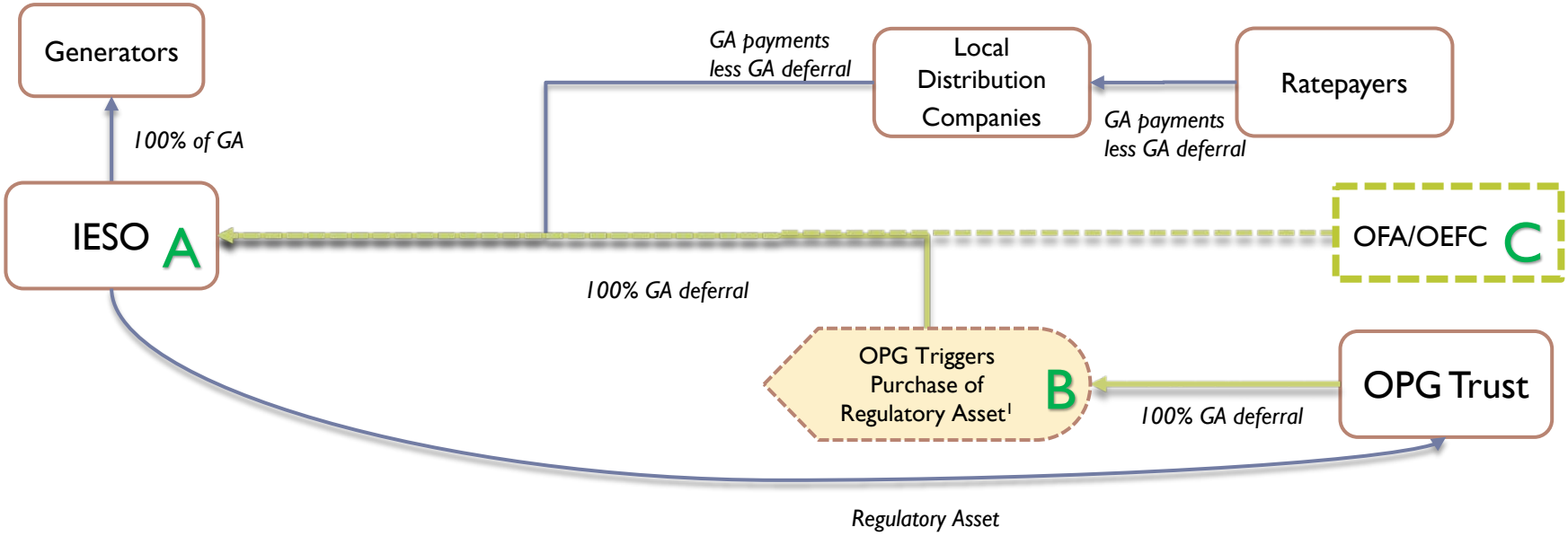
IESO Financing Requirements & Risks

- IESO will need to ensure that it continues to have the funds available to compensate generators on a monthly basis.
- As a result, IESO would potentially require financing to compensate generators should it be required to hold any portion of the unpurchased Regulatory Asset.
    - Even if IESO is allowed to recognized the Regulatory Asset, there is a risk as to whether this recognition will be permitted under the Accounting standards (PSAB) upon consolidation with the Province.
- Based on Ministry of Energy's GA deferral plan, it is estimated that approximately $2.5-3.0 billion need to be deferred per year for over first 10 years, equal to approximately $200-250 million per month.[1] ~~will~~
    - The amount of credit facility required to backstop IESO could be as high as $2.5 to 3.5 billion.
- However, the annual amount being deferred and the resulting monthly amounts can be substantially different based on various factors, such as seasonality or electricity usage, with IESO estimating deferral amounts as high as $400 million per month.
- Other factors that may increase the monthly GA deferral amounts:
    - IESO will also incur financing charges that will need to be refinanced.
    - [The financing and administration costs that OPG Trust incurs will need to be paid for each month and will not be deferred. The GA amounts Ministry of Energy modelled to be deferred did not include the financing and administration costs.] If the ratepayer is paying these costs every month, the GA deferral will need to increase to ensure that the related electricity bill decreases (as a result of the deferral) can reflect the government's proposed 25% electricity rate cut and the increase in bills at the rate of inflation.
- Should OPG not purchase the Regulatory Asset, IESO may require long-term financing to either 1) help unwind the asset (i.e. pay off the deferred amount) or 2) maintain the deferral financing plan.
- If the IESO borrowing requirements increase, the Province will be obligated to provide increased support, which would have implications for the overall GA deferral plan. This increased support from the Province would be repaid by ratepayers.
    - [Recent documents show that the Province may be asked to provide a guarantee in which if the GA deferral plan is cancelled, the Province would be responsible for making the investors of the Trust whole. This would mean that the taxpayers could be liable and result in a significant fiscal impact.]

1 Based on Ministry of Energy's annual GA deferral amounts, assuming the monthly deferral is equally-weighted.

Proposed GA Deferral Structure

- As ratepayers will be paying a reduced GA amount, IESO will have a shortfall in its payment to the generators. OPG, through a Trust, would purchase the Regulatory Asset (i.e. shortfall).



- OPG, as the Financial Services Manager of OPG Trust, will implement a financing plan. Although it may be expected that OPG Trust will purchase (B) the Regulatory Asset created by IESO every month, OPG is not obligated to do so. This presents a risk for IESO (A) to be able to have sufficient financing available to ensure its generators are paid.
- Current draft legislation does not appear to mandate that OPG Trust must purchase the 100 per cent of the Regulatory Asset every month from IESO, which results in IESO requiring a revolving credit facility from the Province/OEFC/OFA(C).
    - The use of a credit facility would likely represent a fiscal impact to the Province [TBC – Accounting]

1 Under the proposed Fair Hydro Act, OPG will act as the Financial Services Manager to the OPG Trust to ensure the Financing Plan (i.e. plan to finance the purchase of the Regulatory Assets from IESO) is implemented.

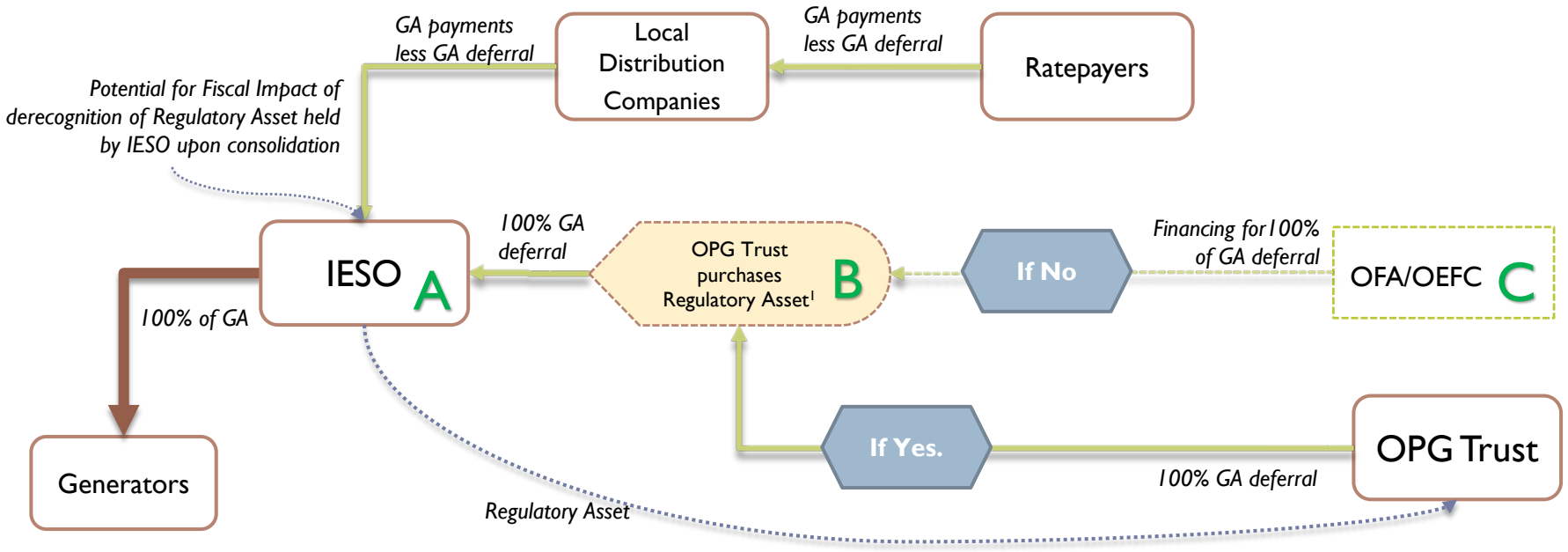
DRAFT

GA Financing Plan: Role of IESO

Corporate and Electricity Finance Division
April 25, 2017

Proposed GA Deferral Structure

- As ratepayers will be paying a reduced GA amount, IESO will have a shortfall in its payment to the generators. OPG, through a Trust, would purchase the Regulatory Asset (i.e. shortfall).



- OPG, as the Financial Services Manager of OPG Trust, will implement a financing plan. Although it may be expected that OPG Trust will purchase (B) the Regulatory Asset created by IESO every month, OPG is not obligated to do so. This presents a risk for IESO (A) to be able to have sufficient financing available to ensure its generators are paid.
- Current draft legislation does not appear to mandate that OPG Trust must purchase the 100 per cent of the Regulatory Asset every month from IESO, which results in IESO requiring a revolving credit facility from the Province/OEFC/OFA(C).
  - The use of a credit facility would likely represent a fiscal impact to the Province [TBC – Accounting]

1 Under the proposed Fair Hydro Act, OPG will act as the Financial Services Manager to the OPG Trust to ensure the Financing Plan (i.e. plan to finance the purchase of the Regulatory Assets from IESO) is implemented.

DRAFT

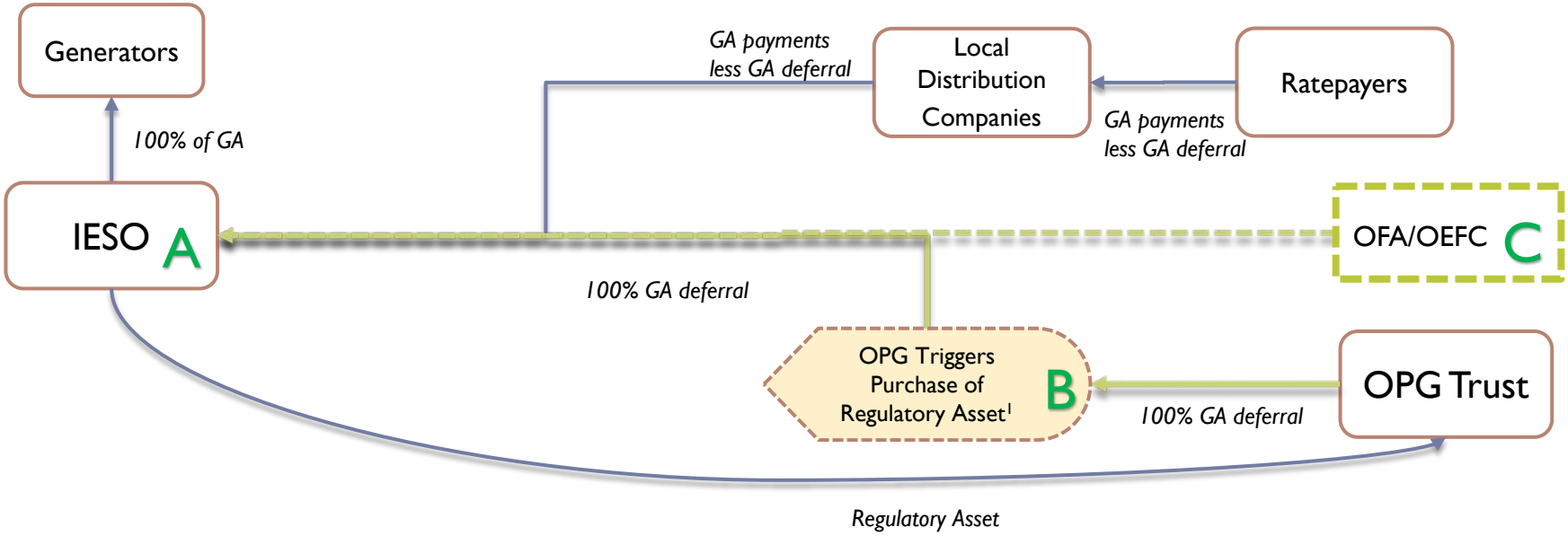
IESO Financing Requirements & Risks

- IESO will need to ensure that it continues to have the funds available to compensate generators on a monthly basis.
- As a result, IESO would potentially require financing to compensate generators should it be required to hold any portion of the unpurchased Regulatory Asset.
    - Even if IESO is allowed to recognized the Regulatory Asset, there is a risk as to whether this recognition will be permitted under the Accounting standards (PSAS) upon consolidation with the Province.
- Based on Ministry of Energy's GA deferral plan, it is estimated that approximately $2.5-3.0 billion need to be deferred per year for over first 10 years, equal to approximately $200-250 million per month.[1]
    - The amount of credit facility required to backstop IESO could be as high as $2.5 to $3.5 billion per year.
- However, the annual amount being deferred and the resulting monthly amounts can be substantially different based on various factors, such as seasonality or electricity usage, with IESO estimating deferral amounts as high as $400 million per month.
- Other factors that may increase IESO's financing requirements ~~the monthly GA deferral amounts~~:
    - IESO will also incur financing charges that will need to be refinanced.
    - [The financing and administration costs that OPG Trust incurs will need to be paid for each month ~~and will not be deferred. The GA amounts Ministry of Energy modelled to be deferred did not include the financing and administration costs.~~] With the ratepayer paying these costs every month, the amount needed to be financed will include these costs in addition to the actual GA being deferred to ensure that the related electricity bill decreases (as a result of the deferral) can reflect the government's proposed 25% electricity rate cut and the increase in bills at the rate of inflation.
- Should OPG not purchase the Regulatory Asset, IESO may require long-term financing to ~~either 1) help unwind the asset (i.e. pay off the deferred amount) or 2)~~ maintain~~ing~~ the deferral financing plan.
- If the IESO borrowing requirements increase, the Province will be obligated to provide increased support, which would have implications for the overall GA deferral plan. This increased support from the Province would be repaid by ratepayers.
    - [Recent documents show that the Province may be asked to provide a guarantee in which if the GA deferral plan is cancelled, the Province would be responsible for making the investors of the Trust whole. This would mean that the taxpayers could be liable and result in a significant fiscal impact.] - TBC

1 Based on Ministry of Energy's annual GA deferral amounts, assuming the monthly deferral is equally-weighted.

Proposed GA Deferral Structure

- As ratepayers will be paying a reduced GA amount, IESO will have a shortfall in its payment to the generators. OPG, through a Trust, would purchase the Regulatory Asset (i.e. shortfall).



- OPG, as the Financial Services Manager of OPG Trust, will implement a financing plan. Although it may be expected that OPG Trust will purchase (B) the Regulatory Asset created by IESO every month, OPG is not obligated to do so. This presents a risk for IESO (A) to be able to have sufficient financing available to ensure its generators are paid.
- Current draft legislation does not appear to mandate that OPG Trust must purchase the 100 per cent of the Regulatory Asset every month from IESO, which results in IESO requiring a revolving credit facility from the Province/OEFC/OFA(C).
    - The use of a credit facility would likely represent a fiscal impact to the Province [TBC – Accounting]

1 Under the proposed Fair Hydro Act, OPG will act as the Financial Services Manager to the OPG Trust to ensure the Financing Plan (i.e. plan to finance the purchase of the Regulatory Assets from IESO) is implemented.

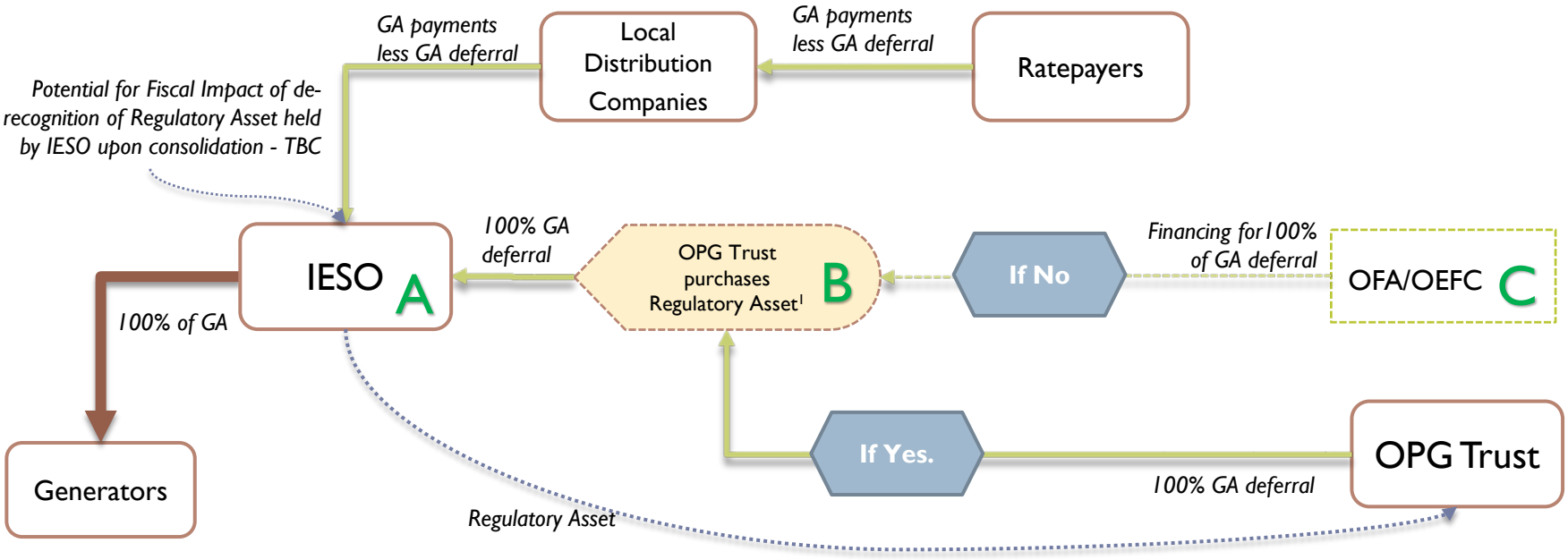
DRAFT

GA Financing Plan: Role of IESO

Corporate and Electricity Finance Division
April 28, 2017

Proposed GA Deferral Structure

- As ratepayers will be paying a reduced GA amount, IESO will have a shortfall in its payment to the generators. OPG, through a Trust, would purchase the Regulatory Asset (i.e. shortfall).



- OPG, as the Financial Services Manager of OPG Trust, will implement a financing plan. Although it may be expected that OPG Trust will purchase (B) the Regulatory Asset created by IESO every month, OPG is not obligated to do so. This presents a risk for IESO (A) to be able to have sufficient financing available to ensure its generators are paid.
- Current draft legislation does not appear to mandate that OPG Trust must purchase the 100 per cent of the Regulatory Asset every month from IESO, which results in IESO requiring a revolving credit facility from the Province/OEFC/OFA(C).
  - The use of a credit facility would likely represent a fiscal impact to the Province [TBC – Accounting]

1 Under the proposed Fair Hydro Act, OPG will act as the Financial Services Manager to the OPG Trust to ensure the Financing Plan (i.e. plan to finance the purchase of the Regulatory Assets from IESO) is implemented.

IESO Financing Requirements & Risks

- IESO will need to ensure that it continues to have the funds available to compensate generators on a monthly basis.
- As a result, IESO would potentially require financing to compensate generators should it be required to hold any portion of the unpurchased Regulatory Asset.
    - Even if IESO is allowed to recognized the Regulatory Asset, there is a risk as to whether this recognition will be permitted under the Accounting standards (PSAS) upon consolidation with the Province.
- Based on Ministry of Energy's GA deferral plan, it is estimated that approximately $2.5-3.0 billion need to be deferred per year for over first 10 years, equal to approximately $200-250 million per month.[1]
    - The amount of credit facility required to backstop IESO could be as high as $2.5 to $3.5 billion per year.
- However, the annual amount being deferred and the resulting monthly amounts can be substantially different based on various factors, such as seasonality or electricity usage, with IESO estimating deferral amounts as high as $400 million per month.
- Other factors that may increase IESO's financing requirements:
    - IESO will also incur financing charges that will need to be refinanced.
    - The financing and administration costs that OPG Trust incurs will need to be paid. With the ratepayer paying these costs every month, the amount needed to be financed will include these costs in addition to the actual GA being deferred to ensure that the related electricity bill decreases (as a result of the deferral) can reflect the government's proposed 25% electricity rate cut and the increase in bills at the rate of inflation.
- Should OPG not purchase the Regulatory Asset, IESO may require long-term financing to maintain the deferral financing plan.
- If the IESO borrowing requirements increase, the Province will be obligated to provide increased support, which would have implications for the overall GA deferral plan. This increased support from the Province would be repaid by ratepayers.
    - [Recent documents show that the Province may be asked to provide a guarantee in which if the GA deferral plan is cancelled, the Province would be responsible for making the investors of the Trust whole. This would mean that the taxpayers could be liable and result in a significant fiscal impact.] - TBC

1 Based on Ministry of Energy's annual GA deferral amounts, assuming the monthly deferral is equally-weighted.

DRAFT

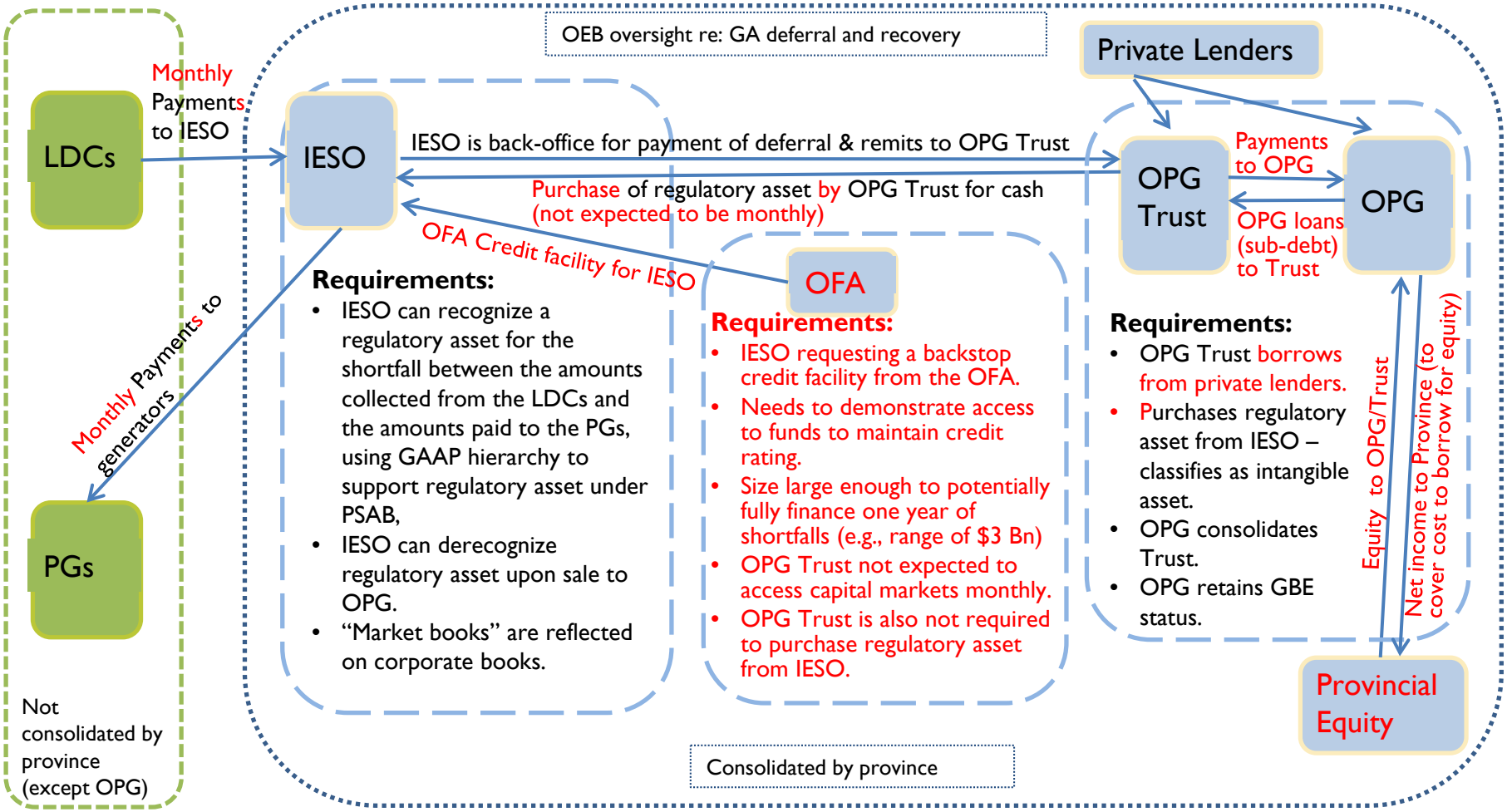
GA Financing Plan: Role of IESO

Corporate and Electricity Finance Division
April 28, 2017

DRAFT

B. GA Smoothing – ~~Potential~~ Proposed Structure

- The following diagram provides an overview of the proposed GA smoothing structure, as well as interactions between sector entities and elements required to meet accounting objectives.



Note: Proposed structure is subject to legal and accounting confirmation, absent that confirmation, there would be a fiscal impact to the province.

DRAFT

IESO Financing Requirements & Risks

- IESO will need to ensure that it continues to have the funds available to provide payments to ~~compensate~~ generators on a monthly basis as part of the IESO settlements process, while recoveries from LDCs for Regulated Price Plan (RPP) / Fair Hydro Plan eligible customers will be lower.
- IESO would potentially require financing to compensate generators should it be required to hold any portion of the unpurchased Regulatory Asset beyond each monthly settlement period.
  - OPG Trust is not expected to access public capital markets monthly, nor is it required to purchase the regulatory asset.
  - IESO will need a credit facility for interim financing
  - IESO may require longer-term financing to maintain the deferral financing plan, should the OPG Trust not be able to access debt markets on a timely basis for purchase of some or all of the regulatory asset.
- Based on Ministry of Energy's GA deferral plan, it is estimated that approximately $2.5-3.0 billion need to be deferred per year for over first 10 years, equal to approximately $200-250 million per month, on average.[1]
  - The amount of credit facility required to backstop IESO could be as high as $2.5 to $3.5 billion per year.
- However, the monthly and annual amount being deferred and the resulting monthly amounts can be substantially different based on various factors, such as seasonality or electricity usage, as well as potential changes to electricity costs from OEB rate decisions, with IESO estimating deferral amounts as high as $400 million per month.
- Other factors that may increase IESO's financing requirements:
  - IESO will also incur financing charges that will need to be refinanced.
  - The financing and administration costs that OPG Trust incurs will need to be paid.
- There is an accounting risk on how OFA financing of the IESO requirements would be treated, as interim financing or as longer term financing.
  - Even if IESO is allowed to recognized the Regulatory Asset, there is a risk as to whether this recognition will be permitted under the Accounting standards (PSAS) upon consolidation with the Province.

1 Based on Ministry of Energy's annual GA deferral amounts, assuming the monthly deferral is equally-weighted.

DRAFT

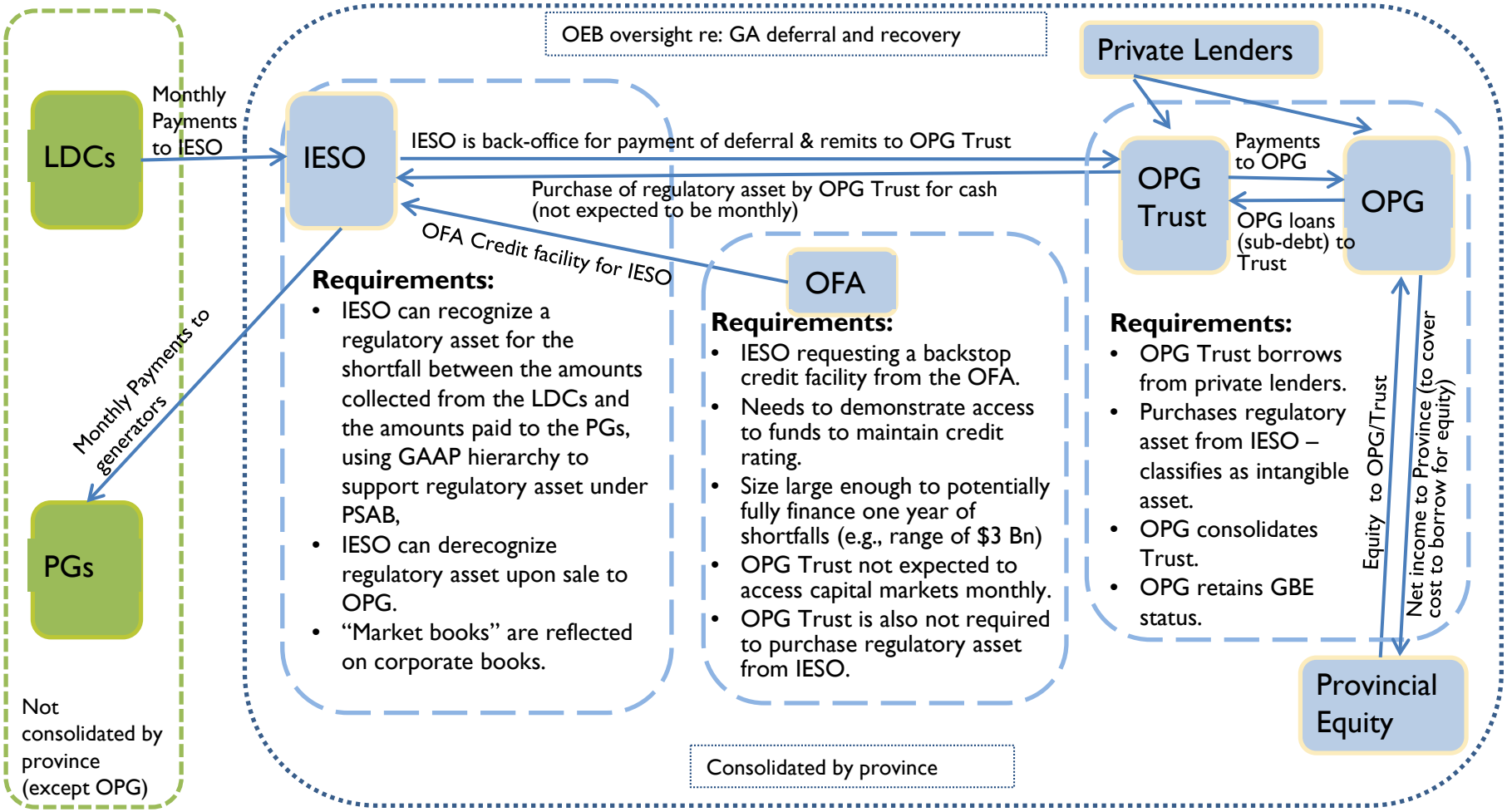
GA Financing Plan: Role of IESO

Corporate and Electricity Finance Division
April 28, 2017

DRAFT

GA Smoothing – Proposed Structure

- The following diagram provides an overview of the proposed GA smoothing structure, as well as interactions between sector entities and elements required to meet accounting objectives.



Note: Proposed structure is subject to legal and accounting confirmation, absent that confirmation, there would be a fiscal impact to the province.

IESO Financing Requirements

- IESO will need to ensure that it continues to have the funds available to provide payments to generators on a monthly basis as part of the IESO settlements process, while recoveries from LDCs for Regulated Price Plan (RPP) / Fair Hydro Plan eligible customers will be lower.
- IESO would potentially require financing to compensate generators should it be required to hold any portion of the unpurchased Regulatory Asset beyond each monthly settlement period.
  - OPG Trust is not expected to access public capital markets monthly, nor is it required to purchase the regulatory asset.
  - IESO will need a credit facility for interim financing
  - IESO may require longer-term financing to maintain the deferral financing plan, should the OPG Trust not be able to access debt markets on a timely basis for purchase of some or all of the regulatory asset.
- Based on Ministry of Energy's GA deferral plan, it is estimated that approximately $2.5-3.0 billion need to be deferred per year for over first 10 years, equal to approximately $200-250 million per month, on average.[1]
  - The amount of credit facility required to backstop IESO could be as high as $2.5 to $3.5 billion per year.
- However, the monthly and annual amount being deferred and the resulting monthly amounts can be substantially different based on various factors, such as seasonality or electricity usage, as well as potential changes to electricity costs from OEB rate decisions, with IESO estimating deferral amounts as high as $400 million per month.
- Other factors that may increase IESO's financing requirements:
  - IESO will also incur financing charges that will need to be refinanced.
  - The financing and administration costs that OPG Trust incurs will need to be paid.
- There is an accounting risk on how OFA financing of the IESO requirements would be treated, as interim financing or as longer term financing.
  - Even if IESO is allowed to recognized the Regulatory Asset, there is a risk as to whether this recognition will be permitted under the Accounting standards (PSAS) upon consolidation with the Province.

[1] Based on Ministry of Energy's annual GA deferral amounts, assuming the monthly deferral is equally-weighted.

DRAFT

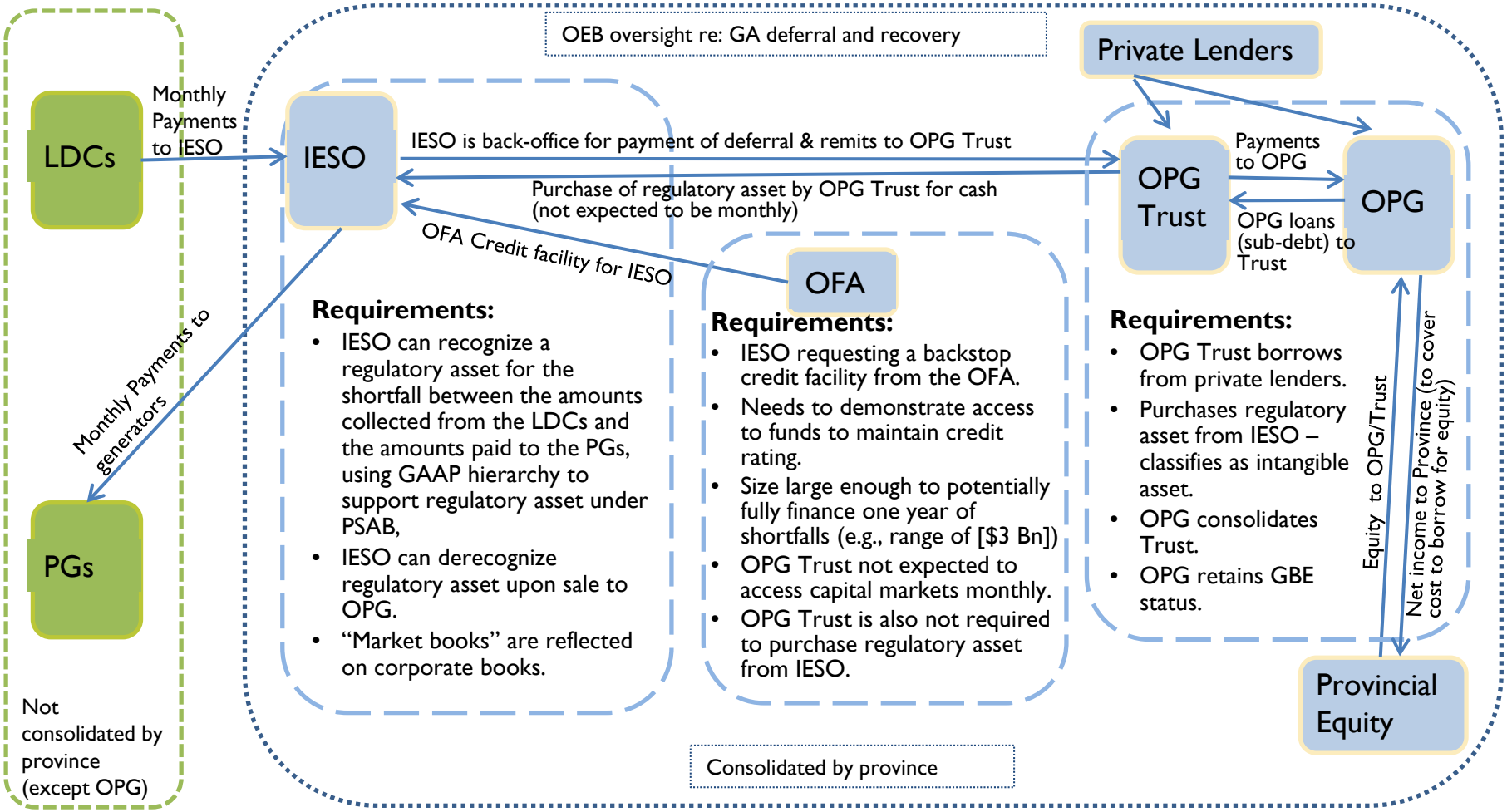
GA Financing Plan: Role of IESO

Corporate and Electricity Finance Division
April 28, 2017

DRAFT

GA Smoothing – Proposed Structure

- The following diagram provides an overview of the proposed GA smoothing structure, as well as interactions between sector entities and elements required to meet accounting objectives.



Note: Proposed structure is subject to legal and accounting confirmation, absent that confirmation, there would be a fiscal impact to the province.

DRAFT

IESO Financing Requirements

- IESO will need to ensure that it continues to have the funds available to provide payments to generators on a monthly basis as part of the IESO settlements process, while recoveries from LDCs for Regulated Price Plan (RPP) / Fair Hydro Plan eligible customers will be lower.
- IESO has an existing credit facility from the OFA; however, a new or expanded facility is being requested.
- IESO would ~~potentially~~ require financing to compensate generators should it be required to hold any portion of the unpurchased Regulatory Asset beyond each monthly settlement period.
  - OPG Trust is not expected to access public capital markets monthly, nor is it required to purchase the regulatory asset.
  - IESO will need a credit facility for interim financing
  - IESO may require longer-term financing to maintain the deferral financing plan, should the OPG Trust not be able to access debt markets on a timely basis for purchase of some or all of the regulatory asset.
- Based on Ministry of Energy's GA deferral plan, it is estimated that approximately $2.5-3.0 billion need to be deferred per year for over first 10 years, equal to approximately $200-250 million per month, on average.[1]
  - The amount of credit facility required to backstop IESO could be ~~as high as~~ $2.5 to $3~~.5~~ billion per year. [TBC]
- However, the monthly and annual amount being deferred and the resulting monthly amounts can be substantially different based on various factors, such as seasonality or electricity usage, as well as potential changes to electricity costs from OEB rate decisions, with IESO estimating deferral amounts as high as $400 million per month.
- Other factors that may increase IESO's financing requirements:
  - IESO will also incur financing charges that will need to be refinanced.
  - The financing and administration costs that OPG Trust incurs will need to be paid.
- There is an accounting risk on how OFA financing of the IESO requirements would be treated~~, as interim financing or as longer-term financing~~.
  - Even if IESO is allowed to recognized the Regulatory Asset, there is a risk as to whether this recognition will be permitted under the Accounting standards (PSAS) upon consolidation with the Province.

[1] Based on Ministry of Energy's annual GA deferral amounts, assuming the monthly deferral is equally-weighted.

DRAFT

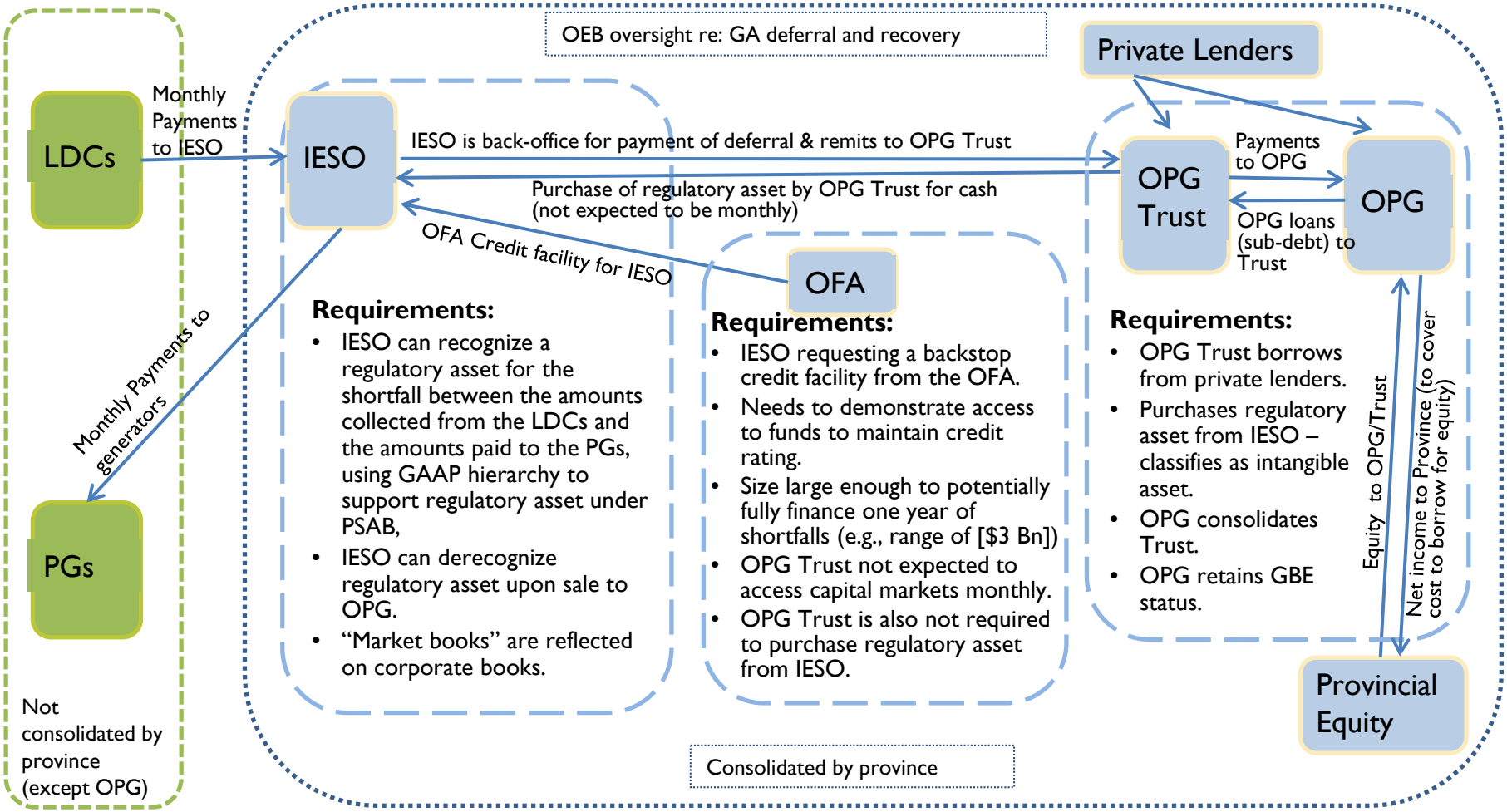
GA Financing Plan: Role of IESO

Corporate and Electricity Finance Division
April 28, 2017

DRAFT

GA Smoothing – Proposed Structure

- The following diagram provides an overview of the proposed GA smoothing structure, as well as interactions between sector entities and elements required to meet accounting objectives.



Note: Proposed structure is subject to legal and accounting confirmation, absent that confirmation, there would be a fiscal impact to the province.

IESO Financing Requirements

- IESO will need to ensure that it continues to have the funds available to provide payments to generators on a monthly basis as part of the IESO settlements process, while recoveries from LDCs for Regulated Price Plan (RPP) / Fair Hydro Plan eligible customers will be lower.
- IESO has an existing credit facility from the OFA; however, a new or expanded facility is being requested.
- IESO would require financing to compensate generators should it be required to hold any portion of the unpurchased Regulatory Asset beyond each monthly settlement period.
  - OPG Trust is not expected to access public capital markets monthly, nor is it required to purchase the regulatory asset.
  - IESO will need a credit facility for interim financing
  - IESO may require longer-term financing to maintain the deferral financing plan, should the OPG Trust not be able to access debt markets on a timely basis for purchase of some or all of the regulatory asset.
- Based on Ministry of Energy's GA deferral plan, it is estimated that approximately $2.5-3.0 billion need to be deferred per year for over first 10 years, equal to approximately $200-250 million per month, on average.[1]
  - The amount of credit facility required to backstop IESO could be $2.5 to $3 billion per year. [TBC]
- However, the monthly and annual amount being deferred and the resulting monthly amounts can be substantially different based on various factors, such as seasonality or electricity usage, as well as potential changes to electricity costs from OEB rate decisions, with IESO estimating deferral amounts as high as $400 million per month.
- Other factors that may increase IESO's financing requirements:
  - IESO will also incur financing charges that will need to be refinanced.
  - The financing and administration costs that OPG Trust incurs will need to be paid.
- There is an accounting risk on how OFA financing of the IESO requirements would be treated.
  - Even if IESO is allowed to recognized the Regulatory Asset, there is a risk as to whether this recognition will be permitted under the Accounting standards (PSAS) upon consolidation with the Province.

[1] Based on Ministry of Energy's annual GA deferral amounts, assuming the monthly deferral is equally-weighted.

DRAFT

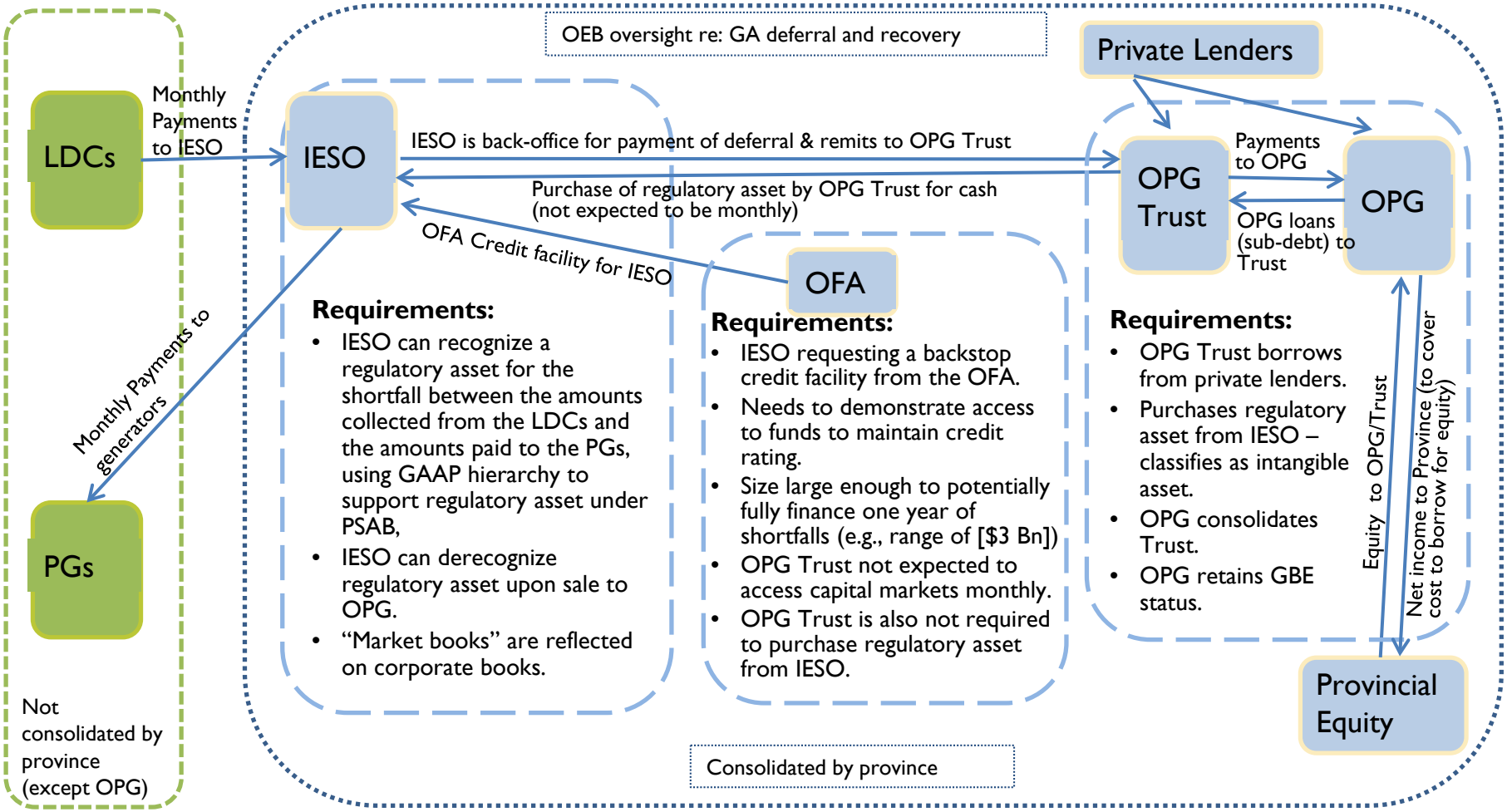
GA Financing Plan: Role of IESO

Corporate and Electricity Finance Division
April 28, 2017

DRAFT

GA Smoothing – Proposed Structure

- The following diagram provides an overview of the proposed GA smoothing structure, as well as interactions between sector entities and elements required to meet accounting objectives.



Note: Proposed structure is subject to legal and accounting confirmation, absent that confirmation, there would be a fiscal impact to the province.

IESO Financing Requirements

- IESO will need to ensure that it continues to have the funds available to provide payments to generators on a monthly basis as part of the IESO settlements process, while recoveries from LDCs for Regulated Price Plan (RPP) / Fair Hydro Plan eligible customers will be lower.
- IESO has an existing credit facility from the OFA; however, a new or expanded facility is being requested.
- IESO would require financing to compensate generators should it be required to hold any portion of the unpurchased Regulatory Asset beyond each monthly settlement period.
    - OPG Trust is not expected to access public capital markets monthly, nor is it required to purchase the regulatory asset.
    - IESO will need a credit facility for interim financing
    - IESO may require longer-term financing to maintain the deferral financing plan, should the OPG Trust not be able to access debt markets on a timely basis for purchase of some or all of the regulatory asset.
- Based on Ministry of Energy's GA deferral plan, it is estimated that approximately $2.5-3.0 billion need to be deferred per year for over first 10 years, equal to approximately $200-250 million per month, on average.[1]
    - The amount of credit facility required to backstop IESO could be $2.5 to $3.0 billion per year. [TBC]
- However, the monthly and annual amount being deferred and the resulting monthly amounts can be substantially different based on various factors, such as seasonality or electricity usage, as well as potential changes to electricity costs from OEB rate decisions, with IESO estimating deferral amounts as high as $400 million per month.
- Other factors that may increase IESO's financing requirements:
    - IESO will also incur financing charges that will need to be refinanced.
    - The financing and administration costs that OPG Trust incurs will need to be paid.
- There is an accounting risk on how OFA financing of the IESO requirements would be treated.
    - Even if IESO is allowed to recognized the Regulatory Asset, there is a risk as to whether this recognition will be permitted under the accounting standards (PSAS) upon consolidation with the Province.

[1] Based on Ministry of Energy's annual GA deferral amounts, assuming the monthly deferral is equally-weighted.

DRAFT

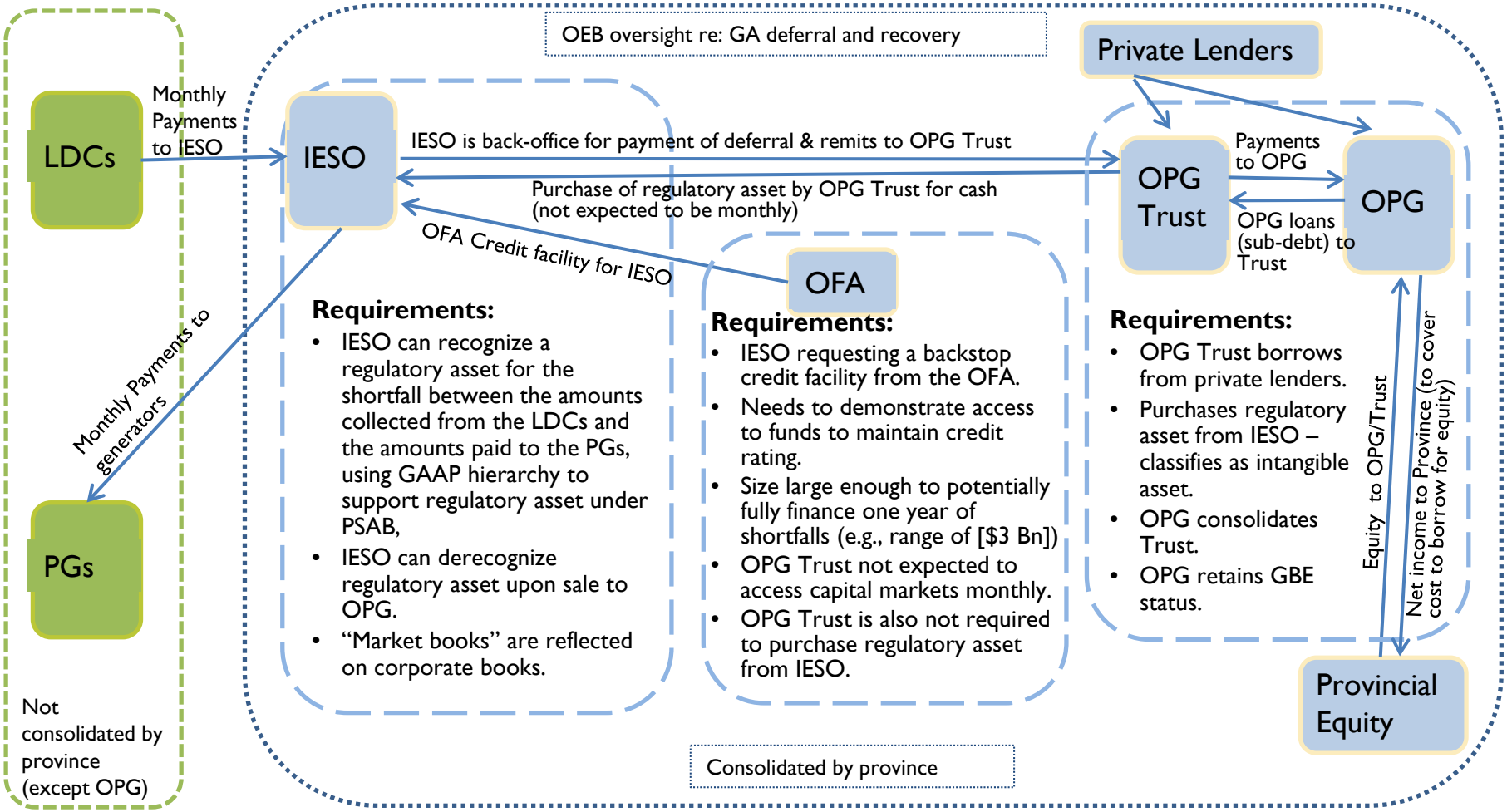
GA Financing Plan: Role of IESO

Corporate and Electricity Finance Division
April 28, 2017

DRAFT

GA Smoothing – Proposed Structure

- The following diagram provides an overview of the proposed GA smoothing structure, as well as interactions between sector entities and elements required to meet accounting objectives.



Note: Proposed structure is subject to legal and accounting confirmation, absent that confirmation, there would be a fiscal impact to the province.

DRAFT

IESO Financing Requirements

- IESO will need to ensure that it continues to have the funds available to provide payments to generators on a monthly basis as part of the IESO settlements process, while recoveries from LDCs for Regulated Price Plan (RPP) / Fair Hydro Plan eligible customers will be lower.
- IESO has an existing credit facility from the OFA; however, a new or expanded facility is being requested.
- IESO would require financing to compensate generators should it be required to hold any portion of the unpurchased Regulatory Asset beyond each monthly settlement period.
  - OPG Trust is not expected to access public capital markets monthly, nor is it required to purchase the regulatory asset.
  - IESO will need a credit facility for interim financing
  - IESO may require longer-term financing to maintain the deferral financing plan, should the OPG Trust not be able to access debt markets on a timely basis for purchase of some or all of the regulatory asset.
- Based on Ministry of Energy's GA deferral plan, it is estimated that approximately $2.5-3.0 billion need to be deferred per year for over first 10 years, equal to approximately $200-250 million per month, on average.[1]
  - The amount of credit facility required to backstop IESO could be $2.5 to $3.0 billion per year. [TBC]
- However, the monthly and annual amount being deferred and the resulting monthly amounts can be substantially different based on various factors, such as seasonality or electricity usage, as well as potential changes to electricity costs from OEB rate decisions, with IESO estimating deferral amounts as high as $400 million per month.
- Other factors that may increase IESO's financing requirements:
  - IESO will also incur financing charges that will need to be refinanced.
  - The financing and administration costs that OPG Trust incurs will need to be paid.
- There is an accounting risk on how OFA financing of the IESO requirements would be treated.
  - Even if IESO is allowed to recognized the Regulatory Asset, there is a risk as to whether this recognition will be permitted under the accounting standards (PSAS) upon consolidation with the Province.

[1] Based on Ministry of Energy's annual GA deferral amounts, assuming the monthly deferral is equally-weighted.

DRAFT

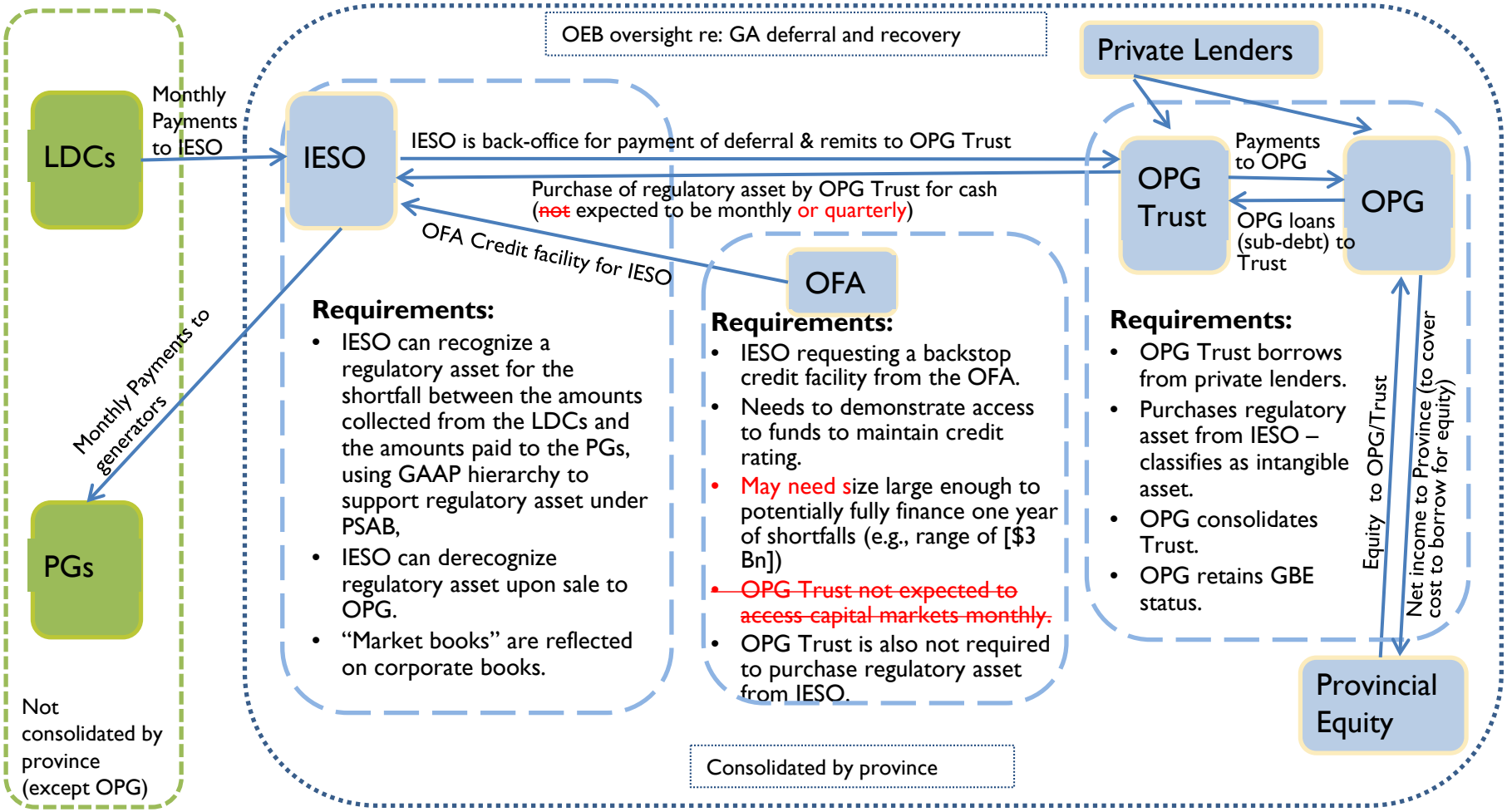
GA Financing Plan: Role of IESO

Corporate and Electricity Finance Division
April 28, 2017

DRAFT

GA Smoothing – Proposed Structure

- The following diagram provides an overview of the proposed GA smoothing structure, as well as interactions between sector entities and elements required to meet accounting objectives.



Note: Proposed structure is subject to legal and accounting confirmation, absent that confirmation, there would be a fiscal impact to the province.

DRAFT

IESO Financing Requirements

- IESO will need to ensure that it continues to have the funds available to provide payments to generators on a monthly basis as part of the IESO settlements process, while recoveries from LDCs for Regulated Price Plan (RPP) / Fair Hydro Plan eligible customers will be lower.
- IESO has an existing credit facility from the OFA; however, a new or expanded facility is being requested.
- IESO would require financing to compensate generators should it be required to hold any portion of the unpurchased Regulatory Asset beyond each monthly settlement period.
  - OPG Trust is not expected to access public capital markets monthly, nor is it required to purchase the regulatory asset.
  - IESO will need a credit facility for interim financing
  - IESO may require longer-term financing to maintain the deferral financing plan, should the OPG Trust not be able to access debt markets on a timely basis for purchase of some or all of the regulatory asset.
- Based on Ministry of Energy's GA deferral plan, it is estimated that approximately $2.5-3.0 billion need to be deferred per year for over first 10 years, equal to approximately $200-250 million per month, on average.[1]
  - The amount of credit facility required to backstop IESO could be $2.5 to $3.0 billion per year. [TBC]
- However, the monthly and annual amount being deferred and the resulting monthly amounts can be substantially different based on various factors, such as seasonality or electricity usage, as well as potential changes to electricity costs from OEB rate decisions, with IESO estimating deferral amounts as high as $400 million per month.
- Other factors that may increase IESO's financing requirements:
  - IESO will also incur financing charges that will need to be refinanced.
  - The financing and administration costs that OPG Trust incurs will need to be paid.
- There is an accounting risk on how OFA financing of the IESO requirements would be treated.
  - Even if IESO is allowed to recognized the Regulatory Asset, there is a risk as to whether this recognition will be permitted under the accounting standards (PSAS) upon consolidation with the Province.

[1] Based on Ministry of Energy's annual GA deferral amounts, assuming the monthly deferral is equally-weighted.

DRAFT

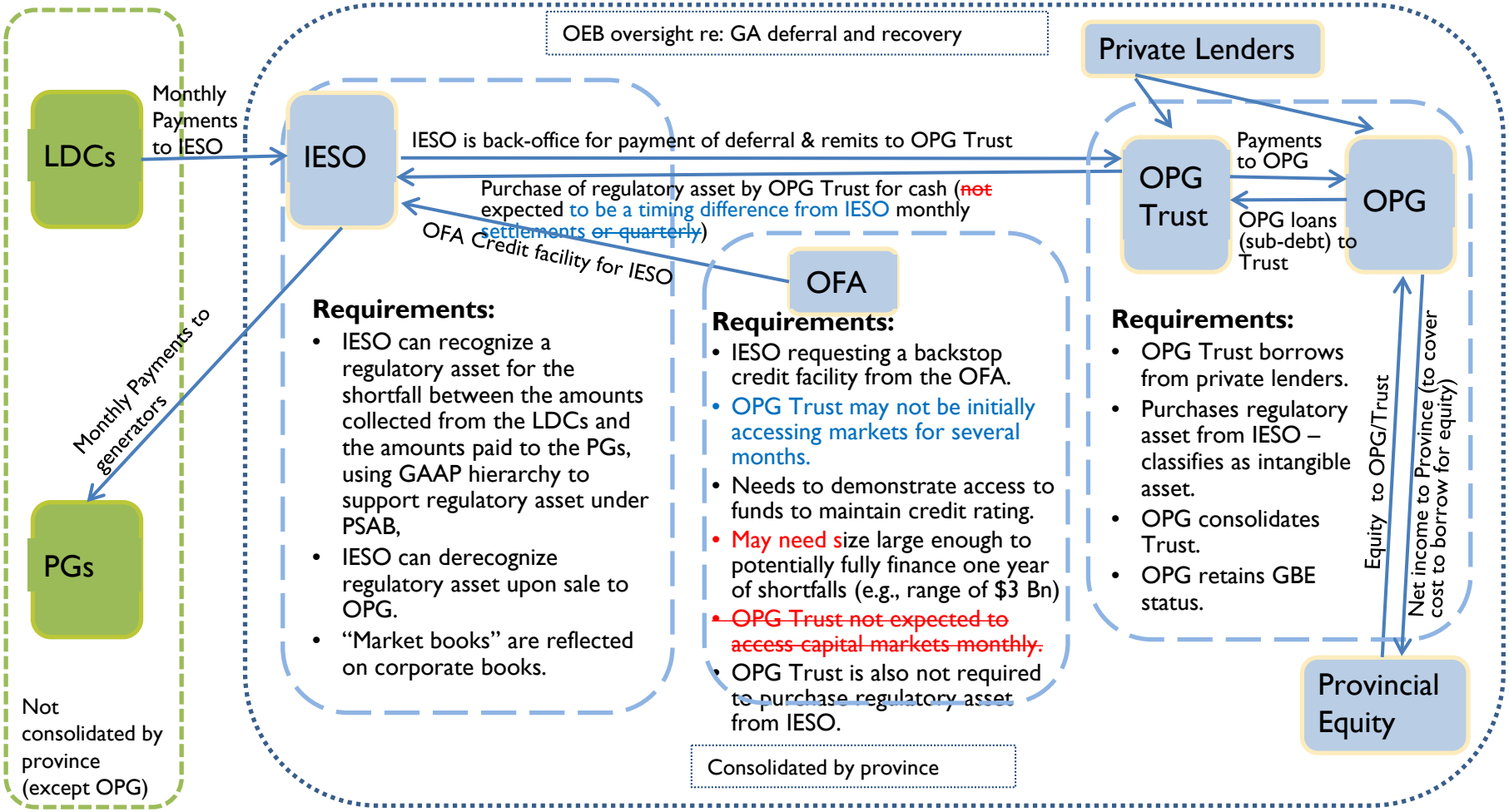
GA Financing Plan: Role of IESO

Corporate and Electricity Finance Division
April 28, 2017

DRAFT

GA Smoothing – Proposed Structure

- The following diagram provides an overview of the proposed GA smoothing structure, as well as interactions between sector entities and elements required to meet accounting objectives.



Note: Proposed structure is subject to legal and accounting confirmation, absent that confirmation, there would be a fiscal impact to the province.

DRAFT

IESO Financing Requirements

- IESO will need to ensure that it continues to have the funds available to provide payments to generators on a monthly basis as part of the IESO settlements process, while recoveries from LDCs for Regulated Price Plan (RPP) / Fair Hydro Plan eligible customers will be lower.
- IESO has an existing credit facility from the OFA; however, a new or expanded facility is being requested.
- IESO would require financing to compensate generators should it be required to hold any portion of the unpurchased Regulatory Asset beyond each monthly settlement period.
  - OPG Trust is not expected to access public capital markets for several months after the start of the FHP, and may be purchasing the asset with a lag vs monthly settlements. Also, nor is it required to purchase the regulatory asset.
  - IESO will need a credit facility for interim financing.
  - IESO may require longer-term financing to maintain the deferral financing plan, should the OPG Trust not be able to access debt markets on a timely basis for purchase of some or all of the regulatory asset.
- Based on Ministry of Energy's GA deferral plan, it is estimated that approximately $2.5-3.0 billion need to be deferred per year for over first 10 years, equal to approximately $200-250 million per month, on average.[1]
  - The size of the credit facility required to backstop IESO could be $2.5 to $3.0 billion ~~per year~~. [TBC]
- The monthly and annual amount being deferred and the resulting monthly amounts can be substantially different than forecast based on various factors, such as seasonality or electricity usage, as well as potential changes to electricity costs from OEB rate decisions, with IESO estimating deferral amounts as high as $400 million per month.
- Other factors that may increase IESO's financing requirements:
  - IESO will also incur financing charges that will need to be refinanced.
  - The financing and administration costs that OPG Trust incurs will need to be paid.
- There is an accounting risk on how OFA financing of the IESO requirements would be treated.
  - Even if IESO is allowed to recognized the Regulatory Asset, there is a risk as to whether this recognition will be permitted under the accounting standards (PSAS) upon consolidation with the Province.

[1] Based on Ministry of Energy's annual GA deferral amounts, assuming the monthly deferral is equally-weighted.

DRAFT

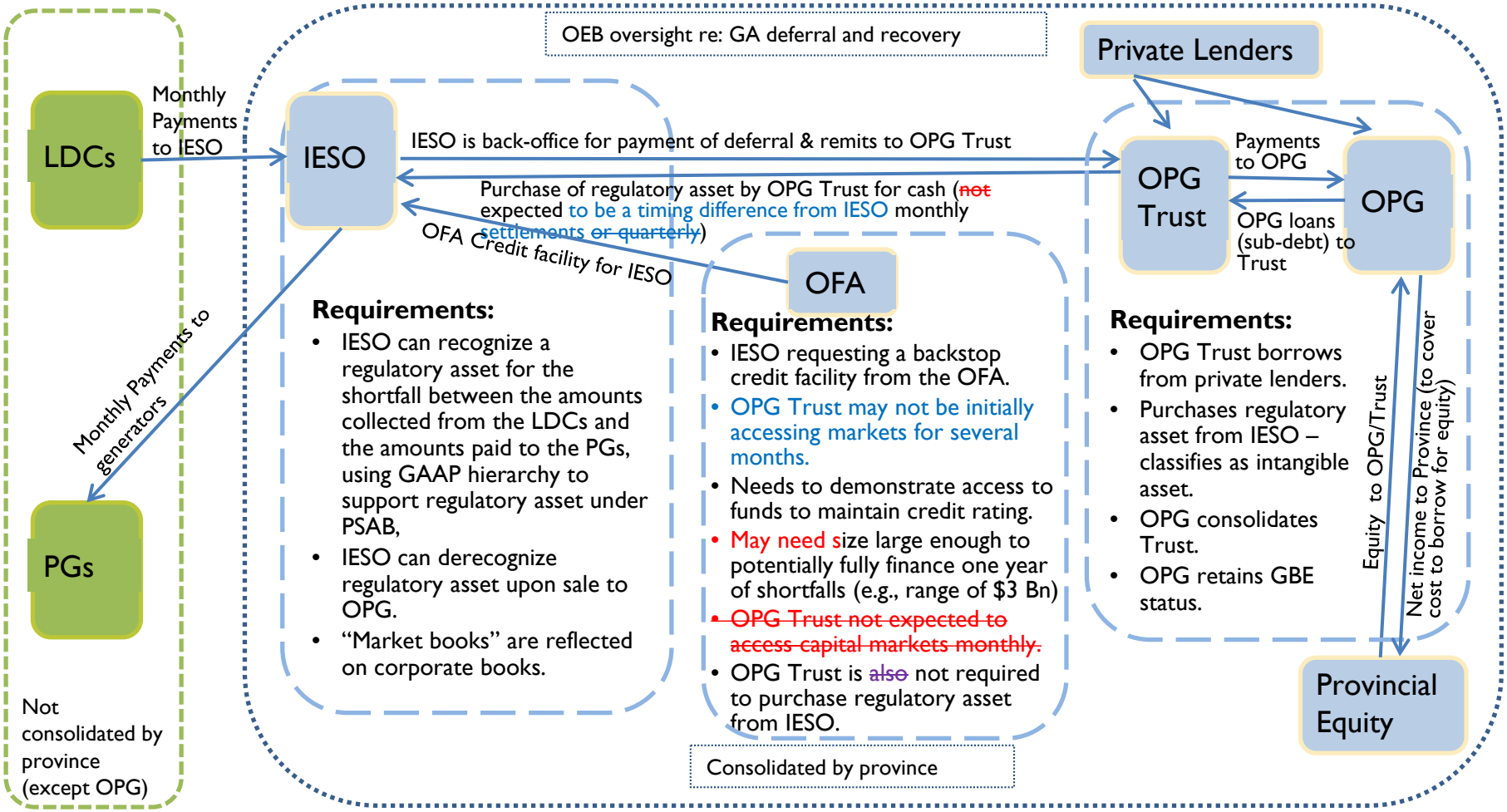
GA Financing Plan: Role of IESO

Corporate and Electricity Finance Division
April 28, 2017

DRAFT

GA Smoothing – Proposed Structure

- The following diagram provides an overview of the proposed GA smoothing structure, as well as interactions between sector entities and elements required to meet accounting objectives.



Note: Proposed structure is subject to legal and accounting confirmation, absent that confirmation, there would be a fiscal impact to the province.

IESO Financing Requirements

- IESO will need to ensure that it continues to have the funds available to provide payments to generators on a monthly basis as part of the IESO settlements process, while recoveries from LDCs for Regulated Price Plan (RPP) / Fair Hydro Plan eligible customers will be lower.
- IESO has an existing credit facility from the OFA; however, a new or expanded facility is being requested.
- IESO would require financing to compensate generators should it be required to hold any portion of the unpurchased Regulatory Asset beyond each monthly settlement period.
  - OPG Trust is not expected to access public capital markets for several months after the start of the FHP, and may be purchasing the asset with a lag vs monthly settlements. Also, OPG Trust is not ~~nor is it~~ required to purchase the regulatory asset.
  - IESO will need a credit facility for interim financing.
  - IESO may require longer-term financing to maintain the deferral financing plan, should the OPG Trust not be able to access debt markets on a timely basis for purchase of some or all of the regulatory asset.
- Based on Ministry of Energy's GA deferral plan, it is estimated that approximately $2.5-3.0 billion need to be deferred per year for over first 10 years, equal to approximately $200-250 million per month, on average.[1]
  - The size of the credit facility required to backstop IESO could be $2.5 to $3.0 billion ~~per year~~. [TBC]
- The monthly and annual amount being deferred and the resulting monthly amounts can be substantially different than forecast based on various factors, such as seasonality or electricity usage, as well as potential changes to electricity costs from OEB rate decisions, with IESO estimating deferral amounts as high as $400 million per month.
- Other factors that may increase IESO's financing requirements:
  - IESO will also incur financing charges that will need to be refinanced.
  - The financing and administration costs that OPG Trust incurs will need to be paid.
- There is an accounting risk on how OFA financing of the IESO requirements would be treated.
  - Even if IESO is allowed to recognized the Regulatory Asset, there is a risk as to whether this recognition will be permitted under the accounting standards (PSAS) upon consolidation with the Province.

[1] Based on Ministry of Energy's annual GA deferral amounts, assuming the monthly deferral is equally-weighted.

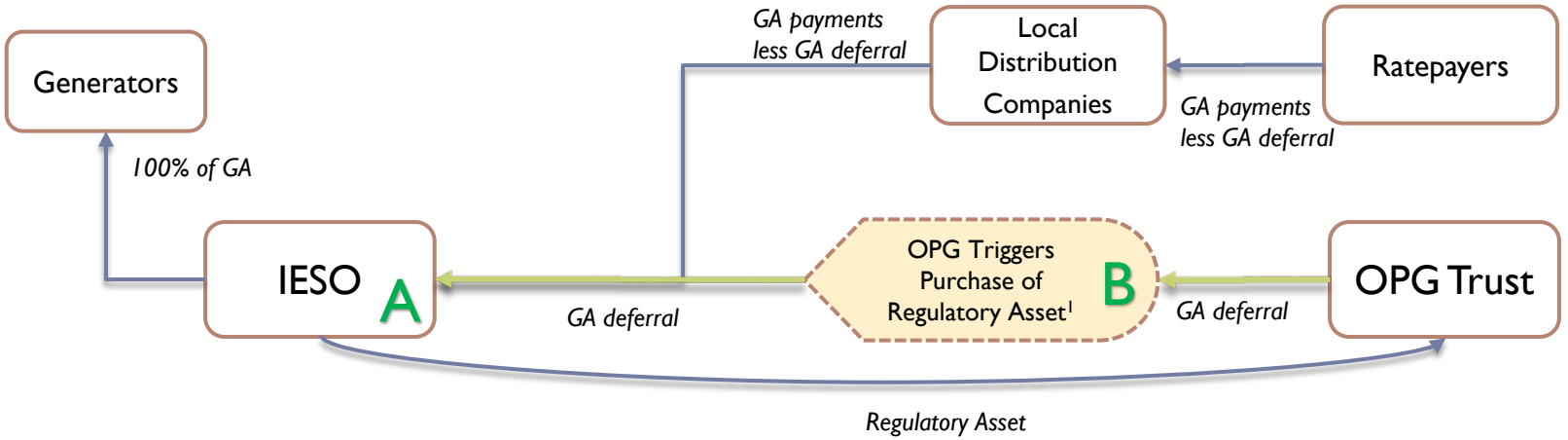
DRAFT

GA Financing Plan: Role of IESO

Corporate and Electricity Finance Division
April 25, 2017

Proposed GA Deferral Structure

- ~~It is understood that the Ontario Energy Board would set the RPP rates lower based on the GA amount being deferred.~~ As ratepayers will be paying a reduced GA amount, IESO will have a shortfall in its payment to the generators. OPG, through a Trust, would purchase the Regulatory Asset (i.e. shortfall).



- OPG, as the Financial Services Manager of OPG Trust, will implement a financing plan. Although it may be expected that OPG Trust will purchase (B) the Regulatory Asset created by IESO every month, OPG is not obligated to do so. This presents a risk for IESO (A) to be able to have sufficient financing available to ensure its generators are paid.
- Current draft legislation does not appear to mandate that OPG Trust must purchase the 100 per cent of the Regulatory Asset every month from IESO, which results in IESO requiring a revolving credit facility from the Province/OEFC/OFA.
    - The use of a credit facility likely would represent a fiscal impact to the Province [TBC – Accounting]

1 Under the proposed Fair Hydro Act, OPG will act as the Financial Services Manager to the OPG Trust to ensure the Financing Plan (i.e. plan to finance the purchase of the Regulatory Assets from IESO) is implemented.

IESO Financing Requirements & Risks

- IESO will need to ensure that it continues to have the funds available to compensate generators on a monthly basis.
- As a result, IESO would potentially require financing to compensate generators should it be required to hold any portion of the unpurchased Regulatory Asset.
    - Even if IESO is allowed to recognized the Regulatory Asset, there is a risk as to whether this recognition will be permitted under the Accounting standards upon consolidation with the Province.
- Based on Ministry of Energy's GA deferral plan, it is estimated that approximately $2.5-3.0 billion will need to be deferred per year for over first 10 years, equal to approximately $200-250 million per month.[1]
- However, the annual amount being deferred and the resulting monthly amounts can be substantially different based on various factors, such as seasonality or electricity usage, with IESO estimating deferral amounts as high as $400 million per month.
- Other factors that may increase the monthly GA deferral amounts:
    - IESO will also incur financing charges that will need to be refinanced.
    - The financing and administration costs that OPG Trust incurs will need to be paid for each month and will not be deferred. The GA amounts Ministry of Energy modelled to be deferred did not include the financing and administration costs. If the ratepayer is paying these costs every month, the GA deferral will need to increase to ensure that the related electricity bill decreases (as a result of the deferral) can reflect the government's proposed 25% electricity rate cut and the increase in bills at the rate of inflation.
- Should OPG not purchase the Regulatory Asset, IESO may require long-term financing to either 1) help unwind the asset or 2) maintain the deferral financing plan.
- If the IESO borrowing requirements increase, the Province will be obligated to provide increased support, which would have implications for the overall GA deferral plan. This increased support from the Province would be repaid by ratepayers.
    - Recent documents show that the Province may be asked to provide a guarantee in which if the GA deferral plan is cancelled, the Province would be responsible for making the investors of the Trust whole. This would mean that the taxpayers could be liable and result in a significant fiscal impact.

1 Based on Ministry of Energy's annual GA deferral amounts, assuming the monthly deferral is equally-weighted.

DRAFT

GA Financing Plan: Role of IESO

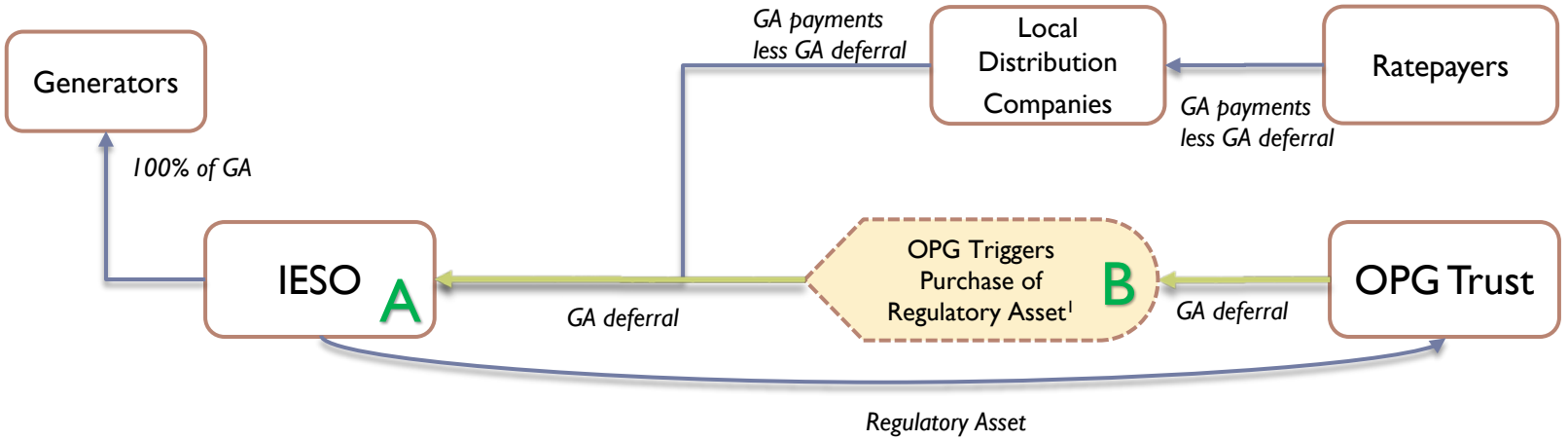
Corporate and Electricity Finance Division
April 25, 2017

Overview

- The IESO ensures that electricity generators are paid to cover the cost of electricity used by ratepayers. A portion of this cost includes the GA.
- The proposed Fair Hydro Act plans to reduce the price paid by ratepayers who fall primarily under the Regulated Price Plan, by 25% for the average ratepayer. To help achieve this savings target, the Act proposes to reduce the GA portion of RPP-eligible ratepayers today by refinancing it over a 30-year period.
    - As ratepayers will be paying a reduced GA amount, IESO will have a shortfall in its payment to the generators. OPG, through a Trust, would purchase the Regulatory Asset (i.e. shortfall).
- Under the current proposal:
    - OPG would create a Special Purpose Vehicle (SPV) referred to as "OPG Trust" or "Financing Entity" which will use 100% debt financing to purchase regulatory assets from the IESO (i.e. the GA amount being deferred)
    - OPG Trust would finance its funding requirements as follows:
        - 51% of its funding requirements through the capital markets as senior debt
        - 49% being provided by OPG as subordinated debt.
            - The 49% subordinated debt from OPG will be financed through debt OPG issues in its own corporate capacity, from the capital markets (5%) and through equity injections from the Province (44%).
            - The Province will finance its equity injection through its annual borrowing program - from issuing debt into the capital markets.
    - The regulatory assets that OPG will purchase represent the portion of GA recoveries deferred to future years. IESO would use the cash from the OPG Trust to make up the shortfall in GA recoveries from ratepayers in order to fully compensate generators.
- OPG Trust would be expected to recover all financing and administrative costs from the ratepayers. Since IESO will be invoicing monthly, OPG Trust may also set up a short-term borrowing facility to accommodate any market timings for its share of debt issuances.

Proposed GA Deferral Structure

- It is understood that the Ontario Energy Board would set the RPP rates lower based on the GA amount being deferred. This would result in IESO creating a variance account which will be offset by IESO selling the shortfall as a Regulatory Asset to OPG Trust.



- OPG, as the Financial Services Manager of OPG Trust, will implement a financing plan. Although it may be expected that OPG Trust will purchase (B) the Regulatory Asset created by IESO every month, OPG is not obligated to do so. This presents a risk for IESO (A) to be able to have sufficient financing available to ensure its generators are paid.
- Current draft legislation does not appear to mandate that OPG Trust must purchase the 100 per cent of the Regulatory Asset every month from IESO, which has resulted in IESO reviewing its existing credit facility with the OFA. (See following slide)
  - The use of the OFA facility likely would represent a fiscal impact to the Province [TBC – Accounting]

1 Under the proposed Fair Hydro Act, OPG will act as the Financial Services Manager to the OPG Trust to ensure the Financing Plan (i.e. plan to finance the purchase of the Regulatory Assets from IESO) is implemented.

IESO Financing Requirements

- IESO will need to ensure that it continues to have the funds available to compensate generators on a monthly basis.
- The latest draft of the *Fair Hydro Act*[1] proposes that IESO will create a Regulatory Asset (equal to the GA amount being deferred or the "shortfall" as a result of lower payments by ratepayers).
- Under a Financing Plan that would be prepared by OPG as the Financial Services Manager of the OPG Trust, it will purchase these regulator assets.
    - Under current draft legislation, OPG/OPG Trust will not be obligated to purchase the Regulatory Asset from IESO.
- As a result, IESO would potentially require financing to compensate generators should it be required to hold any portion of the unpurchased Regulatory Asset.
- Currently, IESO has the following credit agreements in place with the OEFC or OFA, as of May 1, 2017:
    1. $975 million revolving line of credit, with the OFA
    2. $160 million revolving line of credit, with the OEFC
    3. $120 million non-revolving loan, with the OEFC
- Based on the purposes of the three credit facilities available to IESO, only the first facility ($975 million) could potentially be used by IESO for temporarily financing their Regulatory Asset.

1 2017-04-12 - Fair_Hydro_Act Torys_Osler Mark-up April 11 2017 Draft (Torys-Oslers_Apr....docx

IESO Existing Credit Facility

- The purpose of the $975 million revolving credit facility with the OFA is to provide working capital and liquidity for the market transactions IESO is involved in. Any variance as a result of RPP pricing (as a result of GA deferral) can be temporarily be financed by the IESO. This, however, is subject to certain risks outlined later in the deck.
- The current credit limit was approved based on the following requirements from IESO in late 2016:

Financial Obligation	Amt. ($ M)
1. RPP variance account exposure between RPP rate-setting periods	$100 - $325
2. New variance accounts (OESP, RRRP) and liquidity related to the potential Cap and Trade Program	$15 - $325
3. Global Adjustment and Overall Market Liquidity and any other timing differences including conservation programs and generation contracts	$25 - $325
Total: Short-Term Borrowing Requirements	**$140 - $975**

- The RPP variance account was at a surplus of $46 million as at August 31, 2016. Over the last three years, the highest RPP shortfall was $117 million in May 2016.
- The new variance accounts will no longer be needed as the OESP and RRRP is now proposed to be funded through the taxpayer (up to aggregate $150 million).

IESO Potential Financing and Risk

- Based on Ministry of Energy's GA deferral plan, it is estimated that approximately $2.5-3.0 billion will need to be deferred per year for over first 10 years.
- Deferring $2.5-3.0 billion per year results in approximately $200-250 million per month. This is based on Ministry of Energy's annual GA deferral amounts, assuming the monthly deferral is equally-weighted.
    - The existing $975 million line of credit with the OFA may be sufficient to cover 1-3 months of GA deferral, assuming it is unused for other reasons and whether its due to OPG electing not to purchase the Regulatory Asset or due to timing differences.
- However, the annual amount being deferred and the resulting monthly amounts can be substantially different based on various factors, such as seasonality or electricity usage.
- Therefore, this monthly number can rise, with IESO estimating as high as $400 million per month.
- Other factors that may increase the monthly GA deferral amounts:
    - IESO will also incur financing charges that will need to be refinanced.
    - The financing and administration costs that OPG Trust incurs will need to be paid for each month and will not be deferred. The GA amounts Ministry of Energy modelled to be deferred did not include the financing and administration costs. If the ratepayer is paying these costs every month, the GA deferral will need to increase to ensure that the related electricity bill decreases (as a result of the deferral) can reflect the government's proposed 25% electricity rate cut and the increase in bills at the rate of inflation.

Other Risks and Considerations

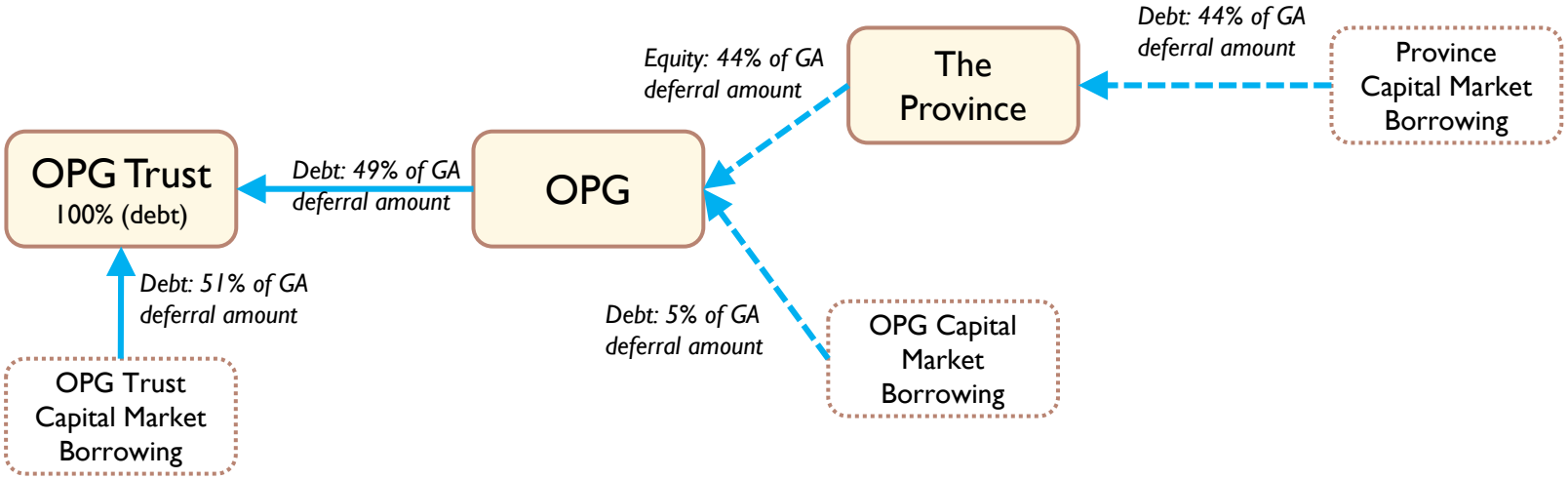
- Even if IESO is allowed to recognized the Regulatory Asset, there is a risk as to whether this recognition will be permitted under the Accounting standards upon consolidation with the Province.
- The current $975 million line of credit is with the OFA and borrowings under the credit facility are included in the OFA's financial statements, which will result in fiscal exposure to the Province.
    - Even if a credit facility is set up with the OEFC, the same fiscal exposure will be present [TBC].
- The current facility is a short-term facility. Should OPG not purchase the Regulatory Asset, IESO may require long-term financing to either 1) help unwind the asset or 2) maintain the deferral financing plan.
- If the IESO borrowing requirements increase, the Province will be obligated to provide increased support, which would have implications for the overall GA deferral plan.
- Since OPG Trust will be financed with 100% debt from OPG and OPG Trust's capital market borrowings, OPG Trust will be required to pay interest costs. These interest costs will be recovered from the ratepayers immediately and will not be deferred. As currently proposed, OPG will not be obligated to pay the Province any interest costs that the Province incurs since the Province's contribution was an equity contribution.

Other Risks and Considerations ../2

- As an alternative to the Province providing equity injections to OPG, the Province could purchase OPG debt instead.
  - This would result in OPG having increased debt on its books. The GA deferral is expected to be treated outside the capital structure OEB looks at for OPG's rate application.
  - The only requirement as advised by Ernst and Young to OPG is "…that the majority of the debt in the Trust is not more than 44% funded by the Province".
  - This would have no impact on OPG Trust's mandate as OPG Trust is 100% debt financed. Details provided to date do not state otherwise.
- OPG would receive interest income on its contribution to OPG Trust. This would ensure that the Province also receives interest income to cover the interest costs incurred for its contribution to OPG for the GA deferral. Alternatively, OPG may be permitted to keep the interest income which may or may not be used to offset future income back to the Province.
  - Although keeping the interest income in OPG versus distributing back to the Province has no fiscal impact, the Province would need to cover the interest costs, possibly with additional borrowings.

Proposed GA Financing Structure

- OPG Trust would finance 51% of its funding requirements through the capital markets as senior debt with the remaining 49% being provided by OPG as subordinated debt.
  - The 49% subordinated debt from OPG will be financed through debt OPG issues in its own corporate capacity, from the capital markets (5%) and through equity injections into OPG from the Province (44%).
    - The Province will finance its equity injection through its annual borrowing program - from issuing debt into the capital markets.
- OPG Trust would recover all financing and administrative costs from the ratepayers. Since IESO will be invoicing monthly, OPG Trust may also set up a short-term borrowing facility to accommodate any market timings for its share of debt issuances.



Comments on Ministry of Energy's Proposals "Global Adjustment Options"

The Ministry of Energy (Energy) has provided a number of potential price mitigation options involving delayed recovery of a portion of the Global Adjustment (GA). This note will provide preliminary illustrative fiscal exposure analysis involving potentially much larger GA deferral amounts of up to 50% and the implementation option involving local distribution companies (LDCs) holding the regulatory assets and long-term payables in favour of the Province.

CONTEXT

- As outlined in Energy's deck, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).
- The government has taken action to lower electricity cost pressures to all consumers including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency, and decreasing costs related to renewable procurement (e.g., GEIA renegotiation with Samsung consortium, decreasing FIT prices, etc.).
- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has expanded the Rural or Remote Electricity Rate Protection (RRRP) program, saving eligible RRRP customers about $45 per month, when combined with OREC.
- Over the past five years, the existing fiscally-funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC in 2017-18. The existing program costs are summarized in the table below:

($M)	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17[1]	2017-18[1]
OCEB	1,033	994	1,006	1,078	860	-	-
OREC	-	-	-	-	-	300	1,100*
Ending DRC[2]	-	-	-	-	85	330	330
NIERP	120	120	115	108	120	120	120
NOEC	23	24	25	24	26	25	25
OEPTC[3]	354	406	418	429	444	450	460
TOTAL	1,530	1,544	1,564	1,639	1,535	1,225	2,035

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt Retirement Charge
OEPTC – Ont. Energy & Property Tax Credit

LDC LONG-TERM RECEIVABLE OPTION

- On February 2, 2017, an implementation option was provided by the Office of the Provincial Controller division staff as follows: [A summary of the proposed option is provided here and does not constitute the full details.]
    - An amount of the deferred GA is to be billed to the local distribution companies (LDCs) but the payment terms are extended into the future, representing a long-term receivable from the LDCs. For example, [ingoring the time value of money/interest],
        - GA = 100

- Amount to be deferred from the electricity consumer bills = 30
- LDCs are billed 70 (the amount not deferred) + a percentage of the 30, based on the minimum amount that would be expected to be billed to the LDCs based on modelling future consumption
- If 75% of the 30 were billed with extended payment terms, 22.5 (30*.75) would be set up as receivable from the LDCs.
- The remaining 7.5 would potentially represent a fiscal exposure.

PRELIMINARY FISCAL IMPACT ESITIMATES

- To the extent that the GA deferral proposals and their fiscal exposures are not mitigated through offsetting regulatory assets or with favourable accounting treatments, the Province would potentially end up reflecting the GA deferral in its accounts. Based on CEFD analysis the fiscal exposure could range from $1.8 to $3.6 billion in 2017-18 depending on the option selected based on an earlier set of moderate scenarios.

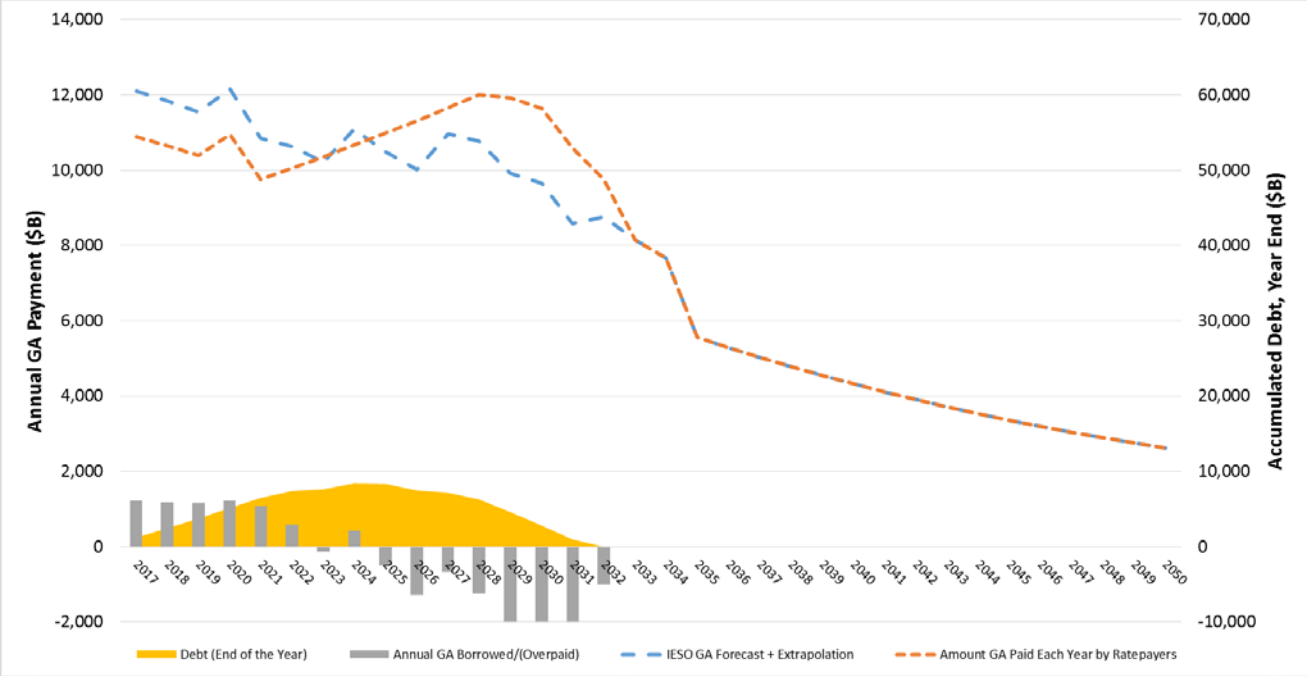
Fiscal exposure based on Energy's scenarios 1a and 1b: (Including, with modifications based on July 1, 2017 effective date)

Fiscal exposure based on OPCD's implementation option: (Assuming Energy's scenarios 1a and 1b)

Scenario analysis involving high GA-financing:

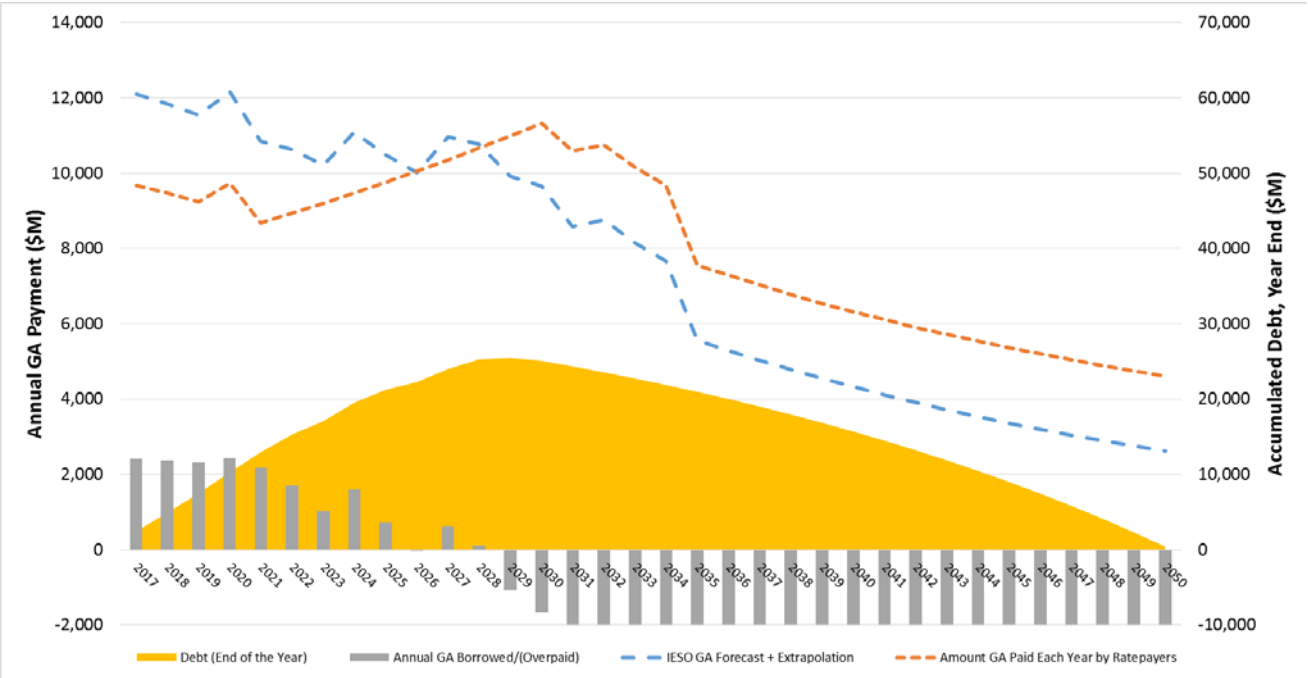
Scenario 1:

- **Initial 5 year reduction: 90%**
- Percentage of Rate Increases after initial reduction: 3%
- Overpayment Cap ($M): 2,000
    - 5% Financing Rate



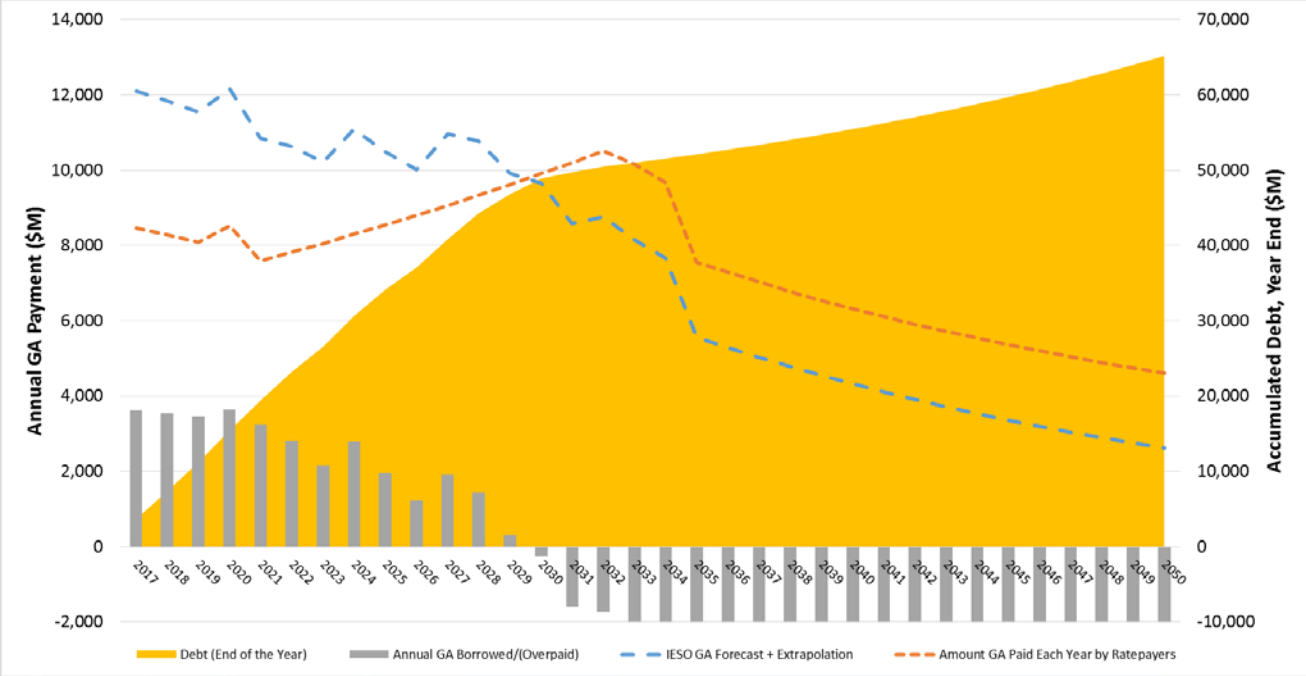
Scenario 2:

- **Initial 5 year reduction: 80%**
- Percentage of Rate Increases after initial reduction: 3%
- Overpayment Cap ($M): 2,000
    - 5% Financing Rate



Scenario 3:

- **Initial 5 year reduction: 70%**
- Percentage of Rate Increases after initial reduction: 3%
- Overpayment Cap ($M): 2,000
    - 5% Financing Rate



Corporate and Electricity Finance Division / Ontario Financing Authority
January 30, 2017

Comments on Ministry of Energy's Proposals "Global Adjustment Options"

The Ministry of Energy (Energy) has provided a number of potential price mitigation options involving delayed recovery of a portion of the Global Adjustment (GA). This note will provide preliminary illustrative fiscal exposure analysis involving potentially much larger GA deferral amounts of up to 50% and the implementation option involving local distribution companies (LDCs) holding the regulatory assets and long-term payables in favour of the Province.

CONTEXT

- As outlined in Energy's deck, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).
- The government has taken action to lower electricity cost pressures to all consumers including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency, and decreasing costs related to renewable procurement (e.g., GEIA renegotiation with Samsung consortium, decreasing FIT prices, etc.).
- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has expanded the Rural or Remote Electricity Rate Protection (RRRP) program, saving eligible RRRP customers about $45 per month, when combined with OREC.
- Over the past five years, the existing fiscally-funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC in 2017-18. The existing program costs are summarized in the table below:

($M)	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17[1]	2017-18[1]
OCEB	1,033	994	1,006	1,078	860	-	-
OREC	-	-	-	-	-	300	1,100*
Ending DRC[2]	-	-	-	-	85	330	330
NIERP	120	120	115	108	120	120	120
NOEC	23	24	25	24	26	25	25
OEPTC[3]	354	406	418	429	444	450	460
TOTAL	1,530	1,544	1,564	1,639	1,535	1,225	2,035

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt Retirement Charge
OEPTC – Ont. Energy & Property Tax Credit

LDC LONG-TERM RECEIVABLE OPTION

- On February 2, 2017, an implementation option was provided by the Office of the Provincial Controller division staff as follows: [A summary of the proposed option is provided here and does not constitute the full details.]
    - An amount of the deferred GA is to be billed to the local distribution companies (LDCs) but the payment terms are extended into the future, representing a long-term receivable from the LDCs. For example, [ingoring the time value of money/interest],
        - GA = 100

- Amount to be deferred from the electricity consumer bills = 30
- LDCs are billed 70 (the amount not deferred) + a percentage of the 30, based on the minimum amount that would be expected to be billed to the LDCs based on modelling future consumption
- If 75% of the 30 were billed with extended payment terms, 22.5 (30*.75) would be set up as receivable from the LDCs.
- The remaining 7.5 would potentially represent a fiscal exposure.

PRELIMINARY FISCAL IMPACT ESITIMATES

- To the extent that the GA deferral proposals and their fiscal exposures are not mitigated through offsetting regulatory assets or with favourable accounting treatments, the Province would potentially end up reflecting the GA deferral in its accounts. Based on CEFD analysis the fiscal exposure could range from $1.8 to $3.6 billion in 2017-18 depending on the option selected based on an earlier set of moderate scenarios.

Fiscal exposure based on Energy's scenarios 1a and 1b: (Including, with modifications based on July 1, 2017 effective date)

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	3,180	2,888	2,556	3,123	1,728	1,400
Annual Exposure2 with start on July 1st	*1,590*	*2,888*	*2,556*	*3,123*	*1,728*	*1,400*

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	795	3,107	2,805	2,697	2,774	1,646
Start: July 1st	-	*2,312*	*2,805*	*2,697*	*2,774*	*1,646*

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	3,404	3,128	2,812	3,396	2,020	1,712
Annual Exposure2 with start on July 1st	*1,702*	*3,128*	*2,812*	*3,396*	*2,020*	*1,712*

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	-	3,335	3,049	2,958	3,052	1,943
Start: July 1st	-	*2,484*	*3,049*	*2,958*	*3,052*	*1,943*

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	1,168	1,765	2,311	3,750	2,311	1,933
Annual Exposure2 with start on July 1st	*584*	*1,765*	*2,311*	*3,750*	*2,311*	*1,933*

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	292	1,609	1,901	2,671	3,391	2,217
Start: July 1st	-	*1,025*	*1,901*	*2,671*	*3,391*	*2,217*

Scenario 1b - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	1,449	2,040	2,581	4,016	2,598	2,241
Annual Exposure2 with start on July 1st	*725*	*2,040*	*2,581*	*4,016*	*2,598*	*2,241*

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	362	1,597	2,175	2,940	3,662	2,508
Start: July 1st	-	*1,959*	*2,175*	*2,940*	*3,662*	*2,508*

[1] Based on an interest rate of 5%.

[2] Fiscal exposure based on equal monthly drawdown of debt.

[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

Fiscal exposure based on OPCD's implementation option: (Assuming Energy's scenarios 1a and 1b)

OPCD's implementation option outlined an example where LDCs would be billed a portion of the GA being deferred.

- The example provided an assumption 30% of the true cost of the GA would be deferred, of which 75% would be billed to the LDCs, with 25% being the potential fiscal exposure for the Province.
- Given the scenarios provided by Energy, fiscalized by the CEFD, the estimated 'Fiscal Exposure, 25%' is provided below.
    - Although 25% of all GA deferral is the Province's fiscal exposure, Energy's projections do not defer an equal 30% of the true cost of the GA. the green highlights the particular year where 30% of true cost of the GA is actually estimated to be deferred – whereas in other years, less than 30% of the true cost of the GA is being deferred.

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	3,180	2,888	2,556	3,123	1,728	1,400

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	795	3,107	2,805	2,697	2,774	1,646
Fiscal Exposure, 25%	199	777	701	674	693	412

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	3,404	3,128	2,812	3,396	2,020	1,712

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	851	3,335	3,049	2,958	3,052	1,943
Fiscal Exposure, 25%	213	834	762	740	763	486

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions	9%	14%	18%	28%	17%	13%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	1,168	1,765	2,311	3,750	2,311	1,933

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	292	1,609	1,901	2,671	3,391	2,217
Fiscal Exposure, 25%	73	402	475	668	848	554

Scenario 1b - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	1,449	2,040	2,581	4,016	2,598	2,241

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	362	1,597	2,175	2,940	3,662	2,508
Fiscal Exposure, 25%	91	399	544	735	915	627

[1] Based on an interest rate of 5%.

[2] Fiscal exposure based on equal monthly drawdown of debt.

[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

Scenario analysis involving high GA-financing:

ENERGY provided data on forecasted GA along with the amount of GA paid each year and amount financed.

However to understand the sensitivitie of various policy proposals, CEFD performed a similar analysis to determine the ability to finance the deferred GA payment.
This analysis included assumptions on

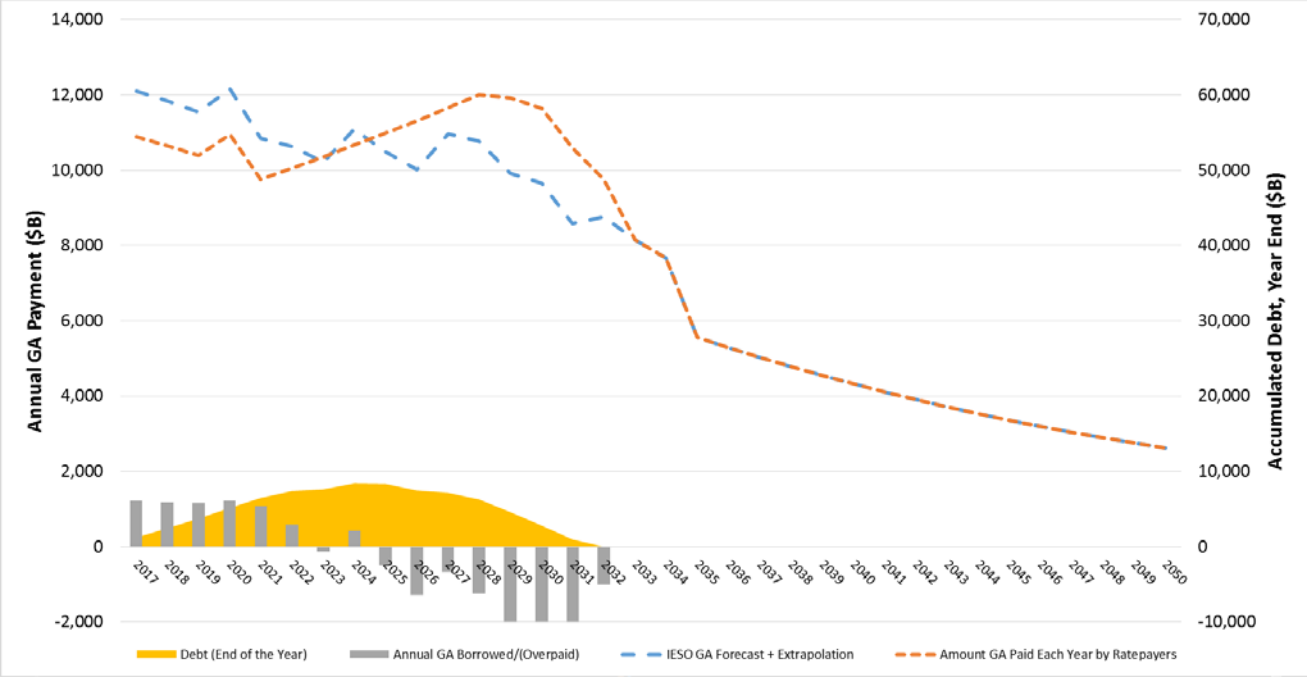
- Initial GA payments ranging from 70 to 90 percent of annual GA payment
- Change in the percentage rate of increase (after initial reduction) from 3% to 10%
- Change in the overpayment cap of $2B to $10B

The table below provides a quick summary of the various scenarios explored:

Scenario	Initial 5 yr Reduction to (%)	Annual Increase after initial reduction (%)	Overpayment Cap ($M)	Year Debt Paid Off	Maximum Accumulated Debt ($M) (and year)
1	90	3	2,000	2033	8,407 (2024)
2	80	3	2,000	~2051	25,473 (2029)
3	70	3	2,000	Never	Debt perpetually rises as annual interest costs are greater than the overpayment cap
4	70	5	2,000	A long time after 2050	39,448 (2029)
5	70	10	2,000	2050	27,795 (2025)
6	70	3	3,000	After 2050	50,460 (2032)
7	70	3	5,000	2048	50,460 (2032)

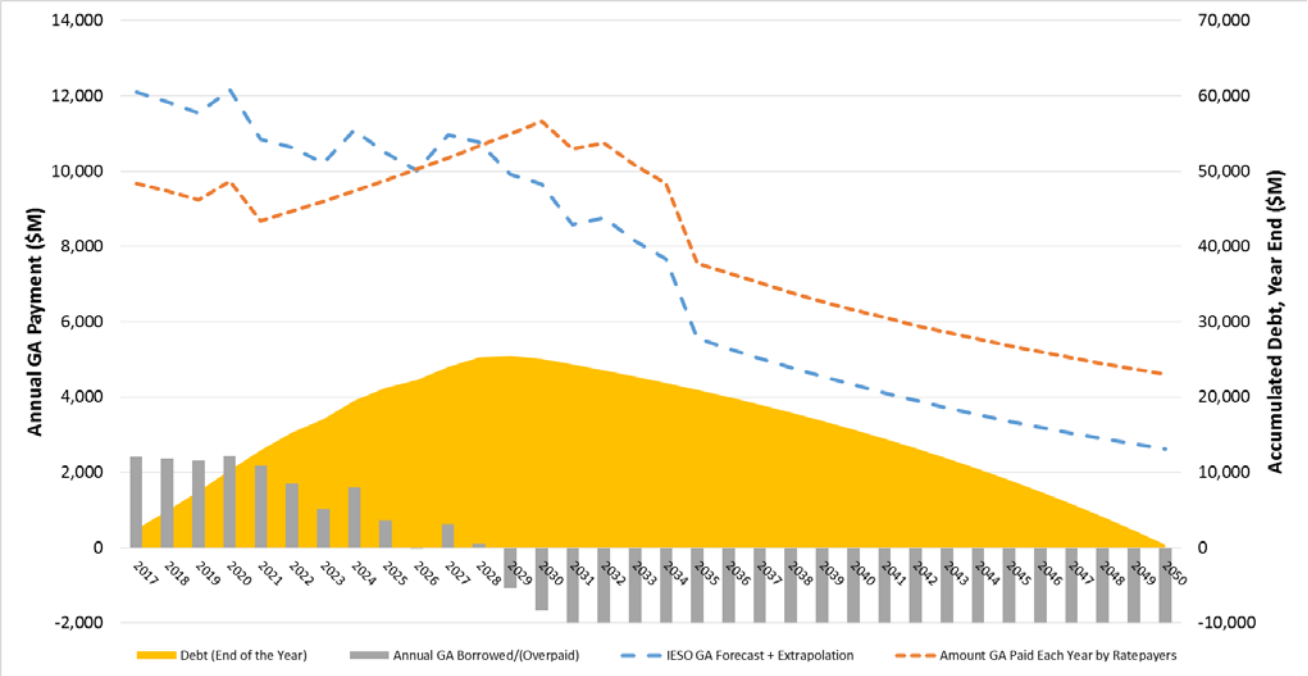
Scenario 1:

- **Initial 5 year reduction: 90%**
- Percentage of Rate Increases after initial reduction: 3%
- Overpayment Cap ($M): 2,000
    - 5% Financing Rate



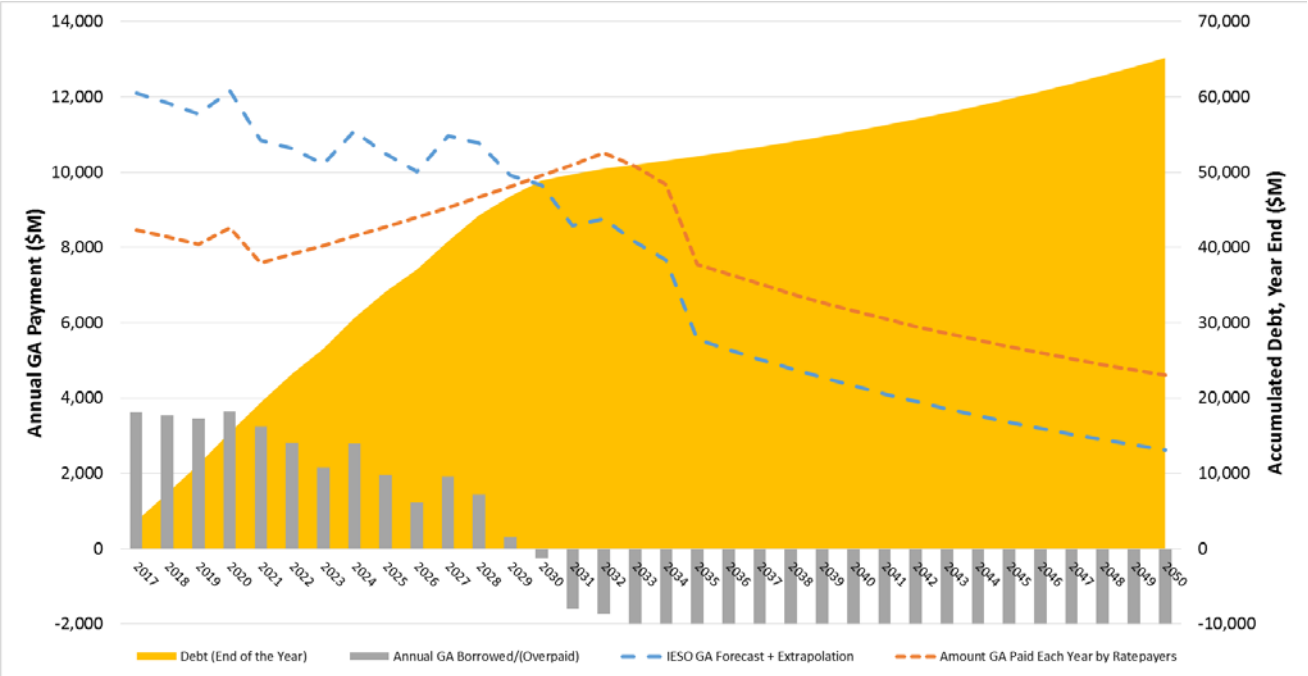
Scenario 2:

- **Initial 5 year reduction: 80%**
- Percentage of Rate Increases after initial reduction: 3%
- Overpayment Cap ($M): 2,000
    - 5% Financing Rate



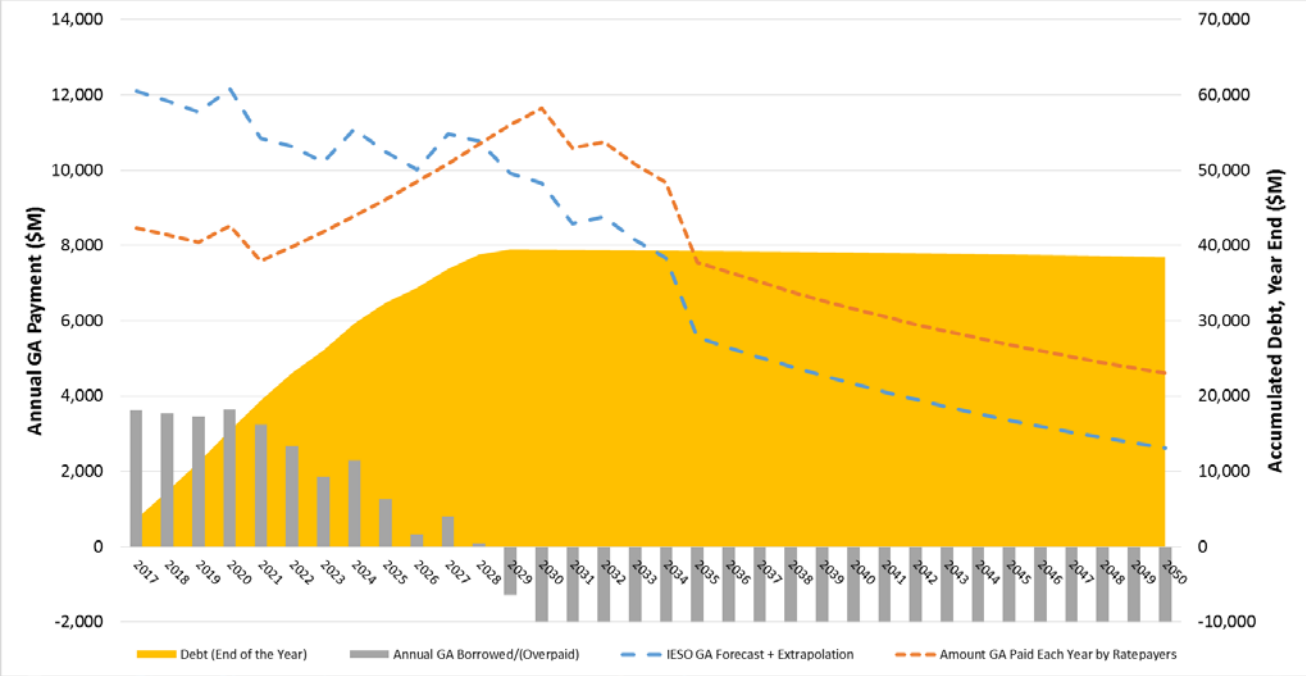
Scenario 3 (Similar to OPCD Implementation Option):

- **Initial 5 year reduction: 70%**
- Percentage of Rate Increases after initial reduction: 3%
- Overpayment Cap ($M): 2,000
    - 5% Financing Rate



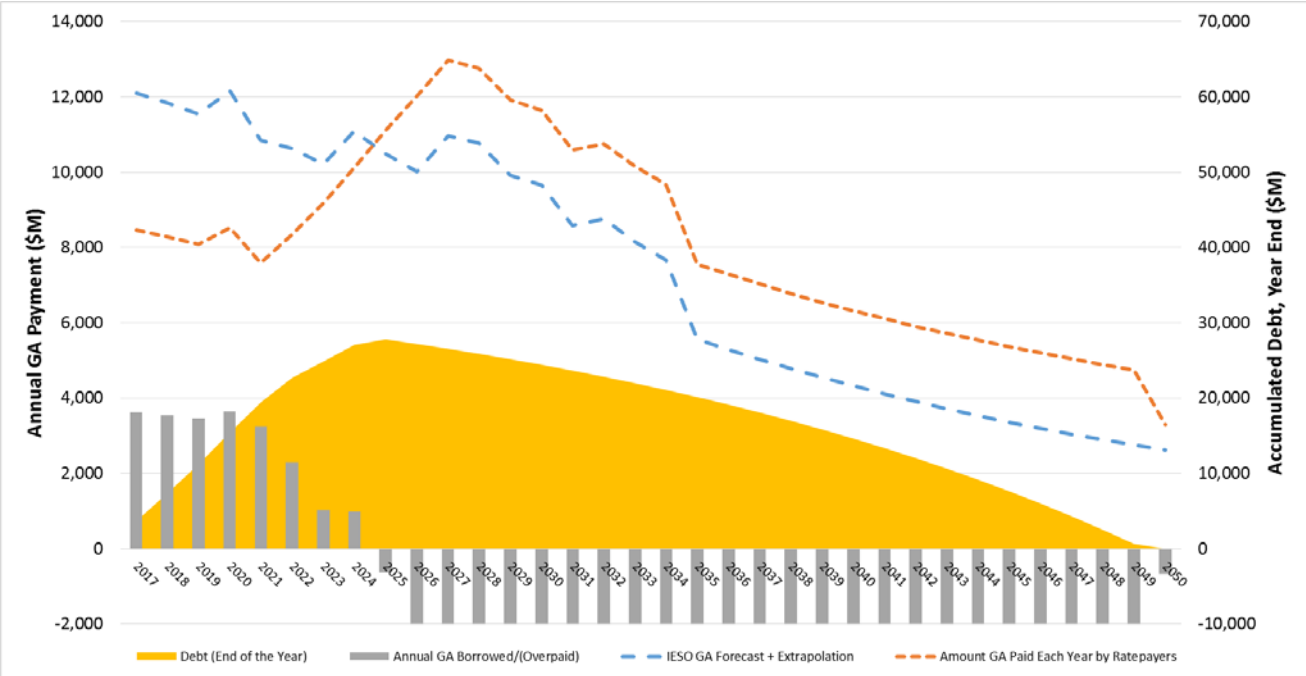
Scenario 4:

- **Initial 5 year reduction: 70%**
- Percentage of Rate Increases after initial reduction: **5%**
- Overpayment Cap ($M): 2,000
    - 5% Financing Rate



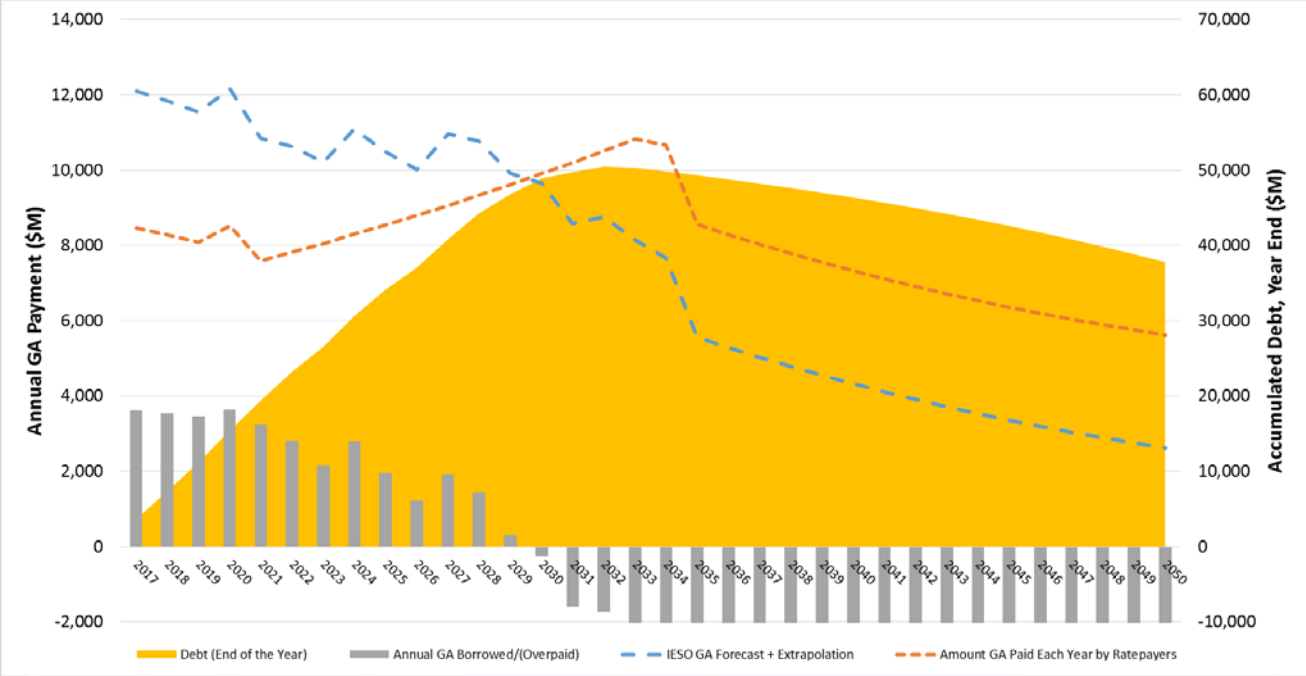
Scenario 5:

- **Initial 5 year reduction: 70%**
- Percentage of Rate Increases after initial reduction: **10%**
- Overpayment Cap ($M): 2,000
    - 5% Financing Rate



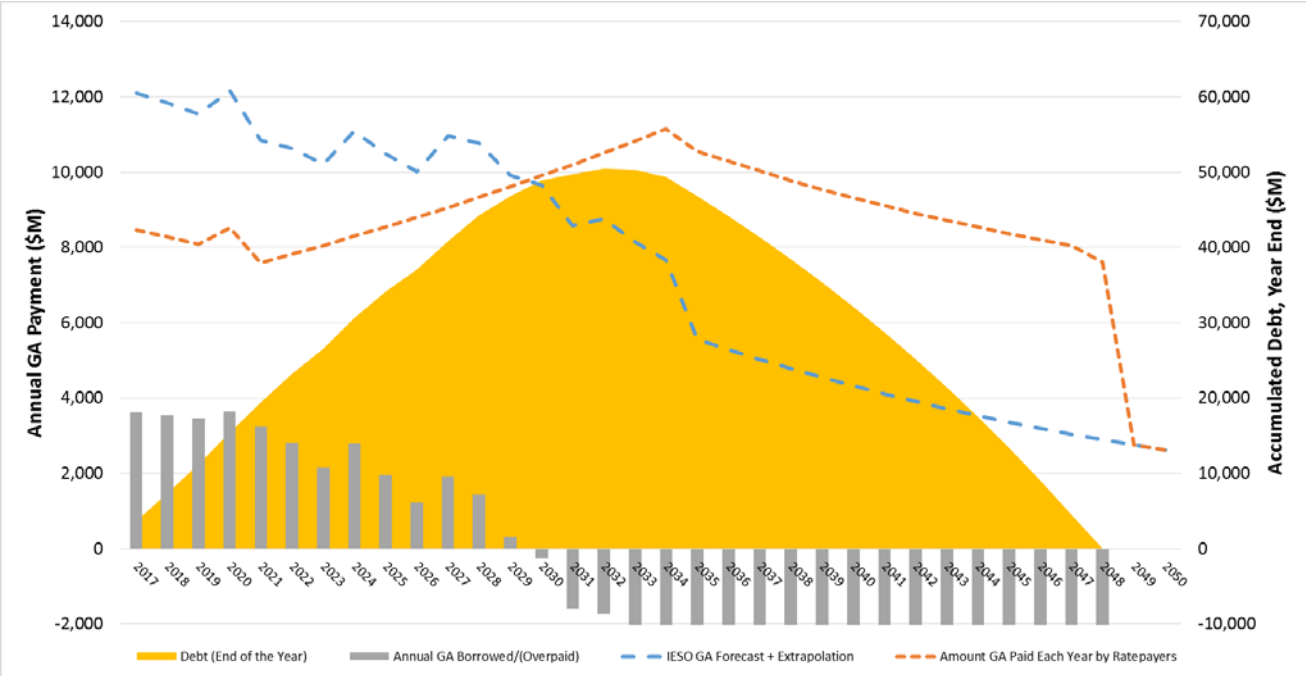
Scenario 6:

- **Initial 5 year reduction: 70%**
- Percentage of Rate Increases after initial reduction: 3%
- Overpayment Cap ($M): **3,000**
    - 5% Financing Rate



Scenario 7:

- **Initial 5 year reduction: 70%**
- Percentage of Rate Increases after initial reduction: 3%
- Overpayment Cap ($M): **5,000**
    - 5% Financing Rate



Corporate and Electricity Finance Division / Ontario Financing Authority
January 30, 2017

Comments on Ministry of Energy's Proposals "Global Adjustment Options"

The Ministry of Energy (Energy) has provided a number of potential price mitigation options involving delayed recovery of a portion of the Global Adjustment (GA). This note will provide preliminary illustrative fiscal exposure analysis involving potentially much larger GA deferral amounts of up to 50% and the implementation option involving local distribution companies (LDCs) holding the regulatory assets and long-term payables in favour of the Province.

CONTEXT

- As outlined in Energy's deck, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).
- The government has taken action to lower electricity cost pressures to all consumers including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency, and decreasing costs related to renewable procurement (e.g., GEIA renegotiation with Samsung consortium, decreasing FIT prices, etc.).
- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has expanded the Rural or Remote Electricity Rate Protection (RRRP) program, saving eligible RRRP customers about $45 per month, when combined with OREC.
- Over the past five years, the existing fiscally-funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC in 2017-18. The existing program costs are summarized in the table below:

($M)	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17[1]	2017-18[1]
OCEB	1,033	994	1,006	1,078	860	-	-
OREC	-	-	-	-	-	300	1,100*
Ending DRC[2]	-	-	-	-	85	330	330
NIERP	120	120	115	108	120	120	120
NOEC	23	24	25	24	26	25	25
OEPTC[3]	354	406	418	429	444	450	460
TOTAL	1,530	1,544	1,564	1,639	1,535	1,225	2,035

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt Retirement Charge
OEPTC – Ont. Energy & Property Tax Credit

LDC LONG-TERM RECEIVABLE OPTION

- On February 2, 2017, an implementation option was provided by the Office of the Provincial Controller division staff as follows: [A summary of the proposed option is provided here and does not constitute the full details.]
    - An amount of the deferred GA is to be billed to the local distribution companies (LDCs) but the payment terms are extended into the future, representing a long-term receivable from the LDCs. For example, [ingoring the time value of money/interest],
        - GA = 100

- Amount to be deferred from the electricity consumer bills = 30
- LDCs are billed 70 (the amount not deferred) + a percentage of the 30, based on the minimum amount that would be expected to be billed to the LDCs based on modelling future consumption
- If 75% of the 30 were billed with extended payment terms, 22.5 (30*.75) would be set up as receivable from the LDCs.
- The remaining 7.5 would potentially represent a fiscal exposure.

PRELIMINARY FISCAL IMPACT ESITIMATES

- To the extent that the GA deferral proposals and their fiscal exposures are not mitigated through offsetting regulatory assets or with favourable accounting treatments, the Province would potentially end up reflecting the GA deferral in its accounts. Based on CEFD analysis the fiscal exposure could range from $1.8 to $3.6 billion in 2017-18 depending on the option selected based on an earlier set of moderate scenarios.

Fiscal exposure based on Energy's scenarios 1a and 1b: (Including, with modifications based on July 1, 2017 effective date)

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	3,180	2,888	2,556	3,123	1,728	1,400
Annual Exposure2 with start on July 1st	*1,590*	*2,888*	*2,556*	*3,123*	*1,728*	*1,400*

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	795	3,107	2,805	2,697	2,774	1,646
Start: July 1st	-	*2,312*	*2,805*	*2,697*	*2,774*	*1,646*

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	3,404	3,128	2,812	3,396	2,020	1,712
Annual Exposure2 with start on July 1st	*1,702*	*3,128*	*2,812*	*3,396*	*2,020*	*1,712*

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	-	3,335	3,049	2,958	3,052	1,943
Start: July 1st	-	*2,484*	*3,049*	*2,958*	*3,052*	*1,943*

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	1,168	1,765	2,311	3,750	2,311	1,933
Annual Exposure2 with start on July 1st	*584*	*1,765*	*2,311*	*3,750*	*2,311*	*1,933*

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	292	1,609	1,901	2,671	3,391	2,217
Start: July 1st	-	*1,025*	*1,901*	*2,671*	*3,391*	*2,217*

Scenario 1b - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	1,449	2,040	2,581	4,016	2,598	2,241
Annual Exposure2 with start on July 1st	*725*	*2,040*	*2,581*	*4,016*	*2,598*	*2,241*

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	362	1,597	2,175	2,940	3,662	2,508
Start: July 1st	-	*1,959*	*2,175*	*2,940*	*3,662*	*2,508*

[1] Based on an interest rate of 5%.

[2] Fiscal exposure based on equal monthly drawdown of debt.

[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

Fiscal exposure based on OPCD's implementation option: (Assuming Energy's scenarios 1a and 1b)

OPCD's implementation option outlined an example where LDCs would be billed a portion of the GA being deferred.

- The example provided an assumption 30% of the true cost of the GA would be deferred, of which 75% would be billed to the LDCs, with 25% being the potential fiscal exposure for the Province.
- Given the scenarios provided by Energy, fiscalized by the CEFD, the estimated 'Fiscal Exposure, 25%' is provided below.
    - Although 25% of all GA deferral is the Province's fiscal exposure, Energy's projections do not defer an equal 30% of the true cost of the GA. the green highlights the particular year where 30% of true cost of the GA is actually estimated to be deferred – whereas in other years, less than 30% of the true cost of the GA is being deferred.

Scenario 1a - *GA 25/30 year financing*							
$ millions							
Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	3,180	2,888	2,556	3,123	1,728	1,400
Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	795	3,107	2,805	2,697	2,774	1,646
Fiscal Exposure, 25%	199	777	701	674	693	412
Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	3,404	3,128	2,812	3,396	2,020	1,712
Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	851	3,335	3,049	2,958	3,052	1,943
Fiscal Exposure, 25%	213	834	762	740	763	486

Indicates year in which, similar to OPCD's example, the true cost of GA being deferred is closest to 30%. As Fiscal 2016/17 is a partial year, exposure may be less subject to which month the GA deferral begins.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*							
$ millions		9%	14%	18%	28%	17%	13%
Scenario 1b - 25-yr amortization[1]		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]		1,168	1,765	2,311	3,750	2,311	1,933
	Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	Start: January 1st	292	1,609	1,901	2,671	3,391	2,217
	Fiscal Exposure, 25%	73	402	475	668	848	554
Scenario 1b - 30-yr amortization		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]		1,449	2,040	2,581	4,016	2,598	2,241
	Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	Start: January 1st	362	1,597	2,175	2,940	3,662	2,508
	Fiscal Exposure, 25%	91	399	544	735	915	627
		Indicates year in which, similar to OPCD's example, the true cost of GA being deferred is closest to 30%.					

[1] Based on an interest rate of 5%.

[2] Fiscal exposure based on equal monthly drawdown of debt.

[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

<u>Scenario analysis involving high GA-financing</u>:

ENERGY provided data on forecasted GA along with the amount of GA paid each year and amount financed.

However to understand the sensitivitie of various policy proposals, CEFD performed a similar analysis to determine the ability to finance the deferred GA payment.
This analysis included assumptions on

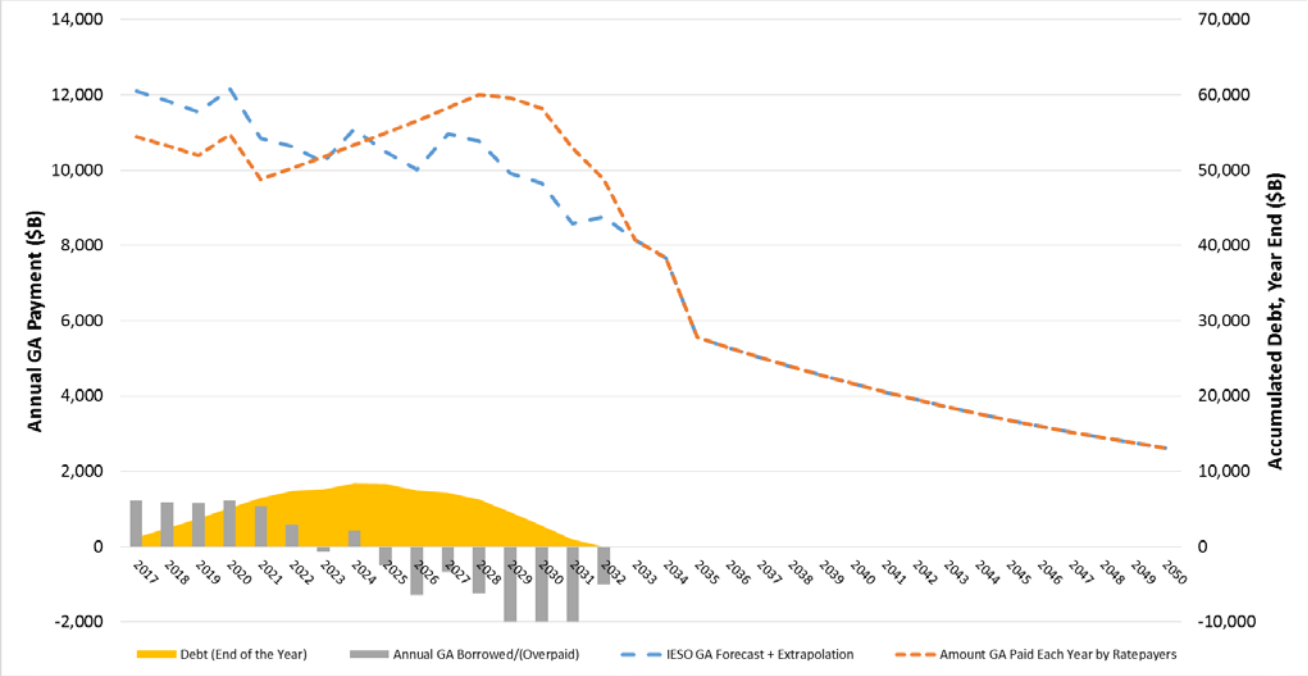
- Initial GA payments ranging from 70 to 90 percent of annual GA payment
- Change in the percentage rate of increase (after initial reduction) from 3% to 10%
- Change in the overpayment cap of $2B to $10B

The table below provides a quick summary of the various scenarios explored:

Scenario	Initial 5 yr Reduction to (%)	Annual Increase after initial reduction (%)	Overpayment Cap ($M)	Year Debt Paid Off	Maximum Accumulated Debt ($M) (and year)
1	90	3	2,000	2033	8,407 (2024)
2	80	3	2,000	~2051	25,473 (2029)
3	70	3	2,000	Never	Debt perpetually rises as annual interest costs are greater than the overpayment cap
4	70	5	2,000	A long time after 2050	39,448 (2029)
5	70	10	2,000	2050	27,795 (2025)
6	70	3	3,000	After 2050	50,460 (2032)
7	70	3	5,000	2048	50,460 (2032)

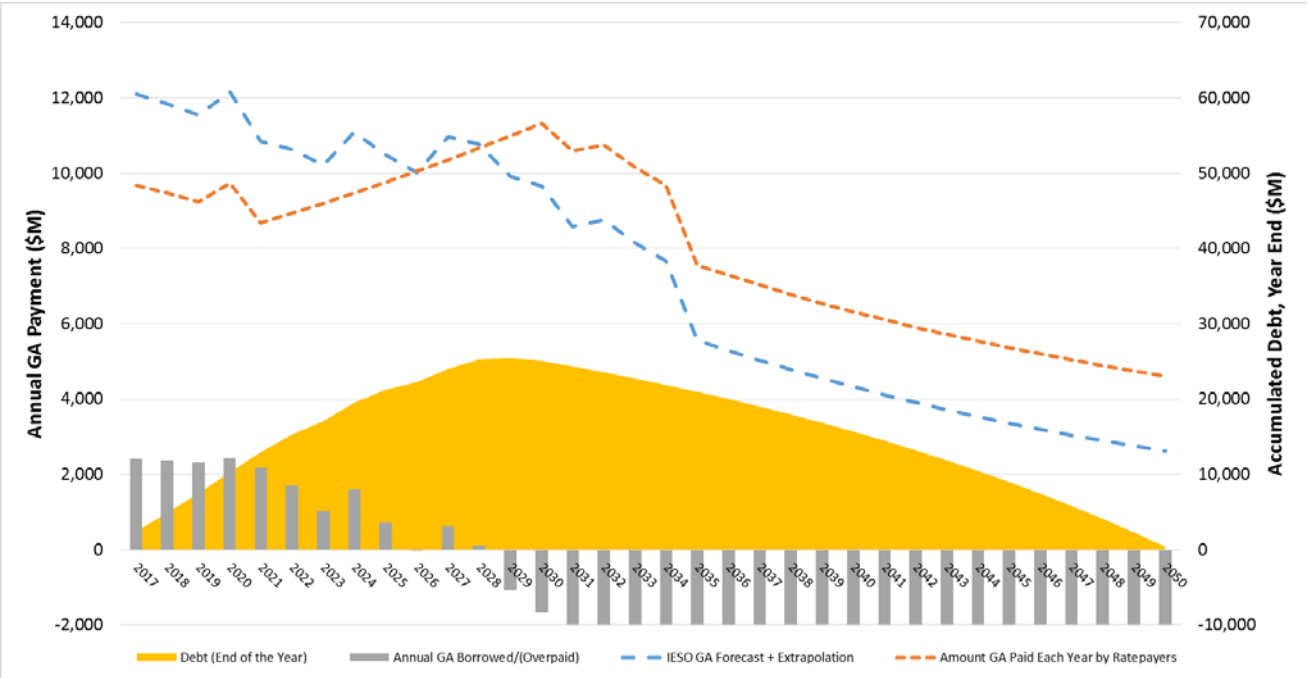
Scenario 1:

- **Initial 5 year reduction: 90%**
- Percentage of Rate Increases after initial reduction: 3%
- Overpayment Cap ($M): 2,000
    - 5% Financing Rate



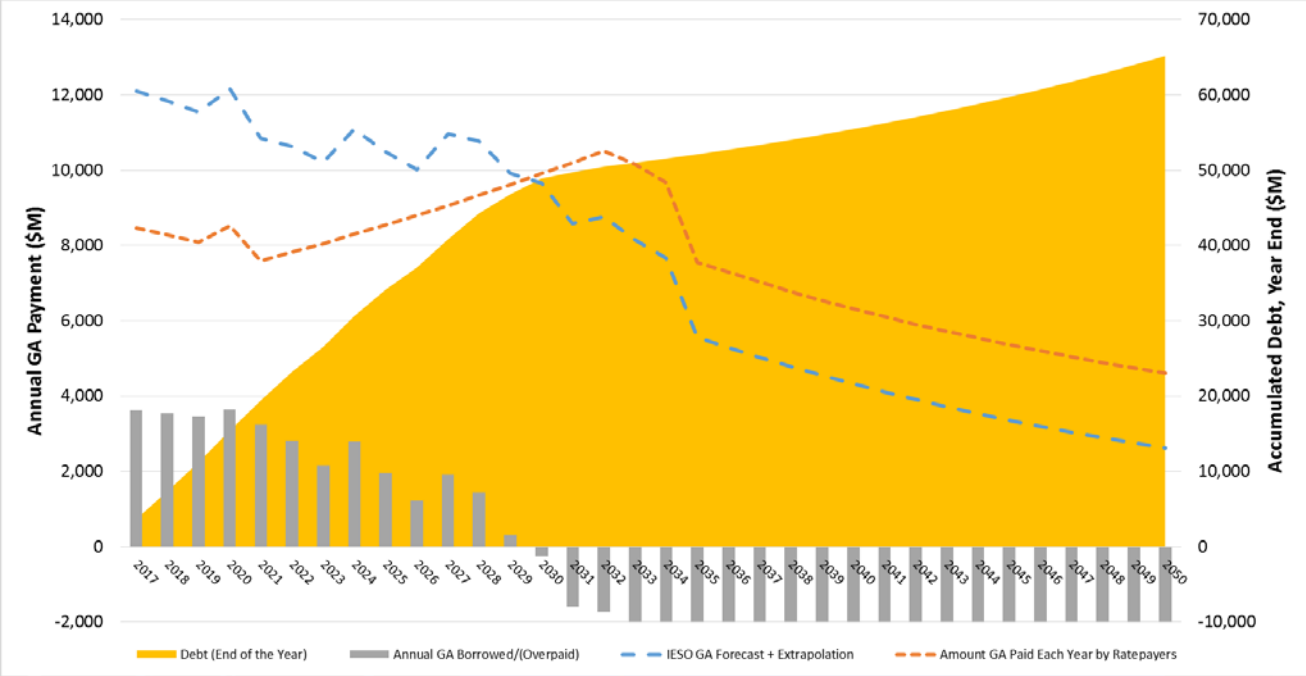
Scenario 2:

- **Initial 5 year reduction: 80%**
- Percentage of Rate Increases after initial reduction: 3%
- Overpayment Cap ($M): 2,000
    - 5% Financing Rate



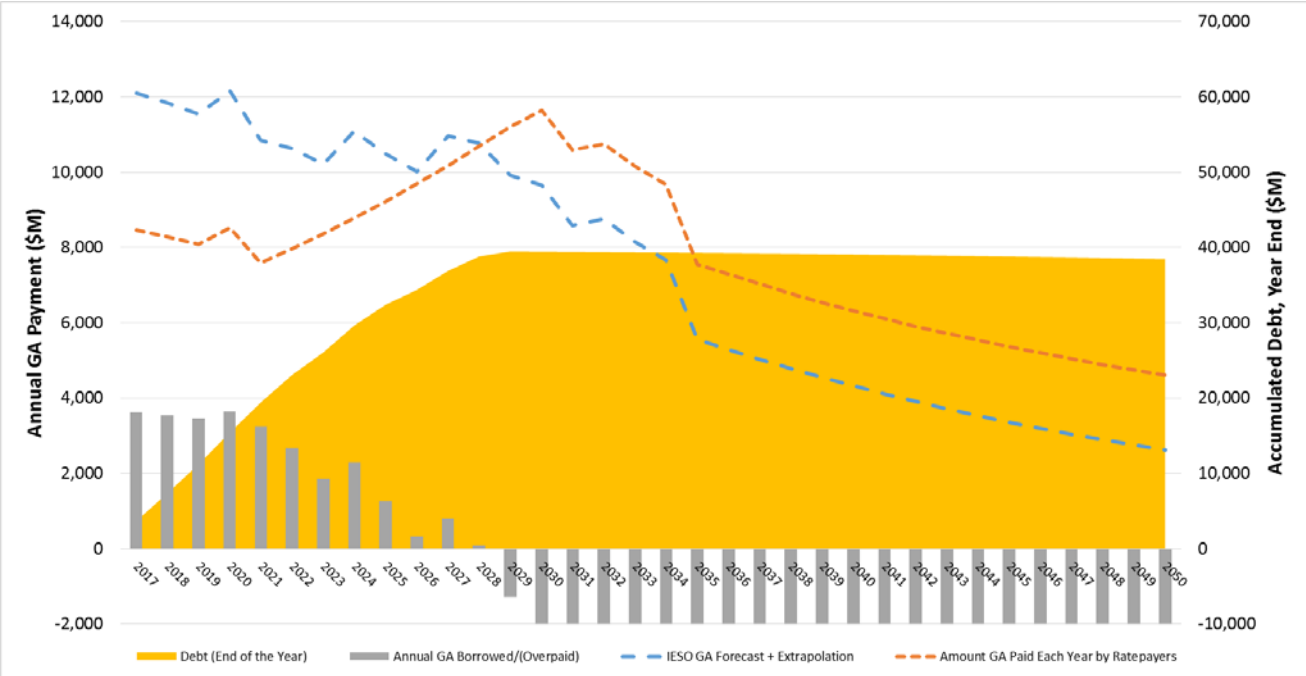
Scenario 3 (Similar to OPCD Implementation Option):

- **Initial 5 year reduction: 70%**
- Percentage of Rate Increases after initial reduction: 3%
- Overpayment Cap ($M): 2,000
    - 5% Financing Rate



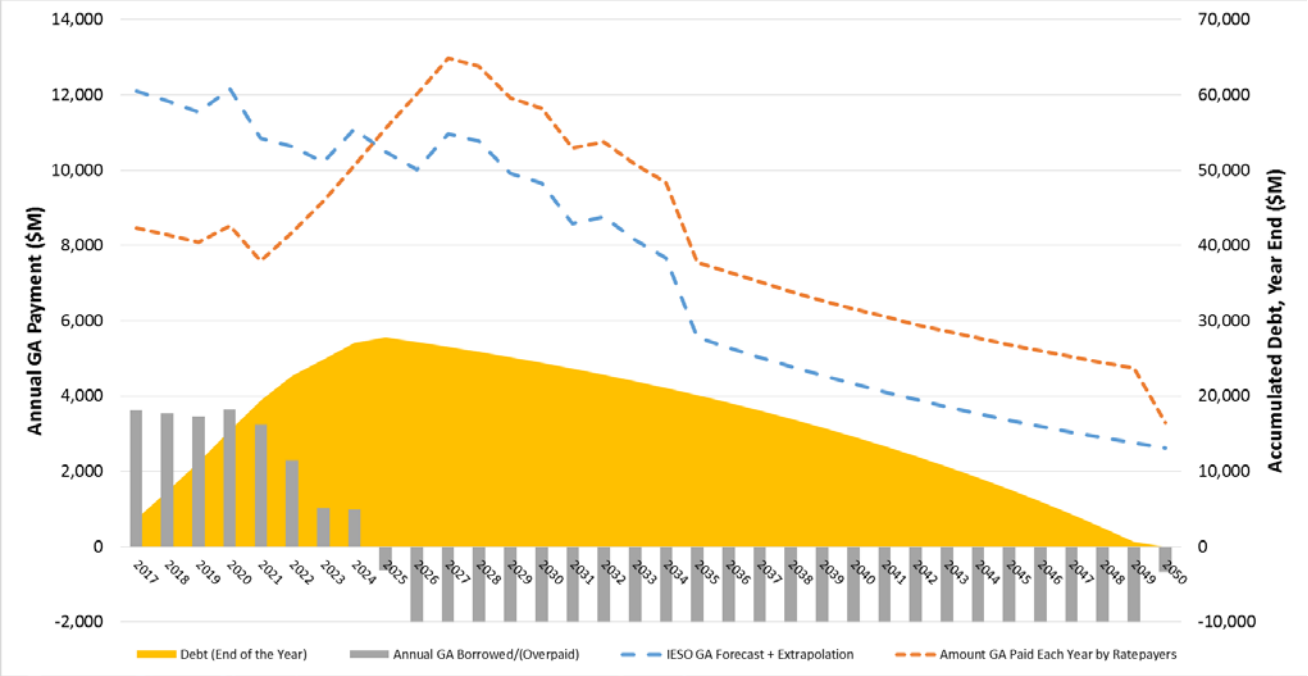
Scenario 4:

- **Initial 5 year reduction: 70%**
- Percentage of Rate Increases after initial reduction: **5%**
- Overpayment Cap ($M): 2,000
    - 5% Financing Rate



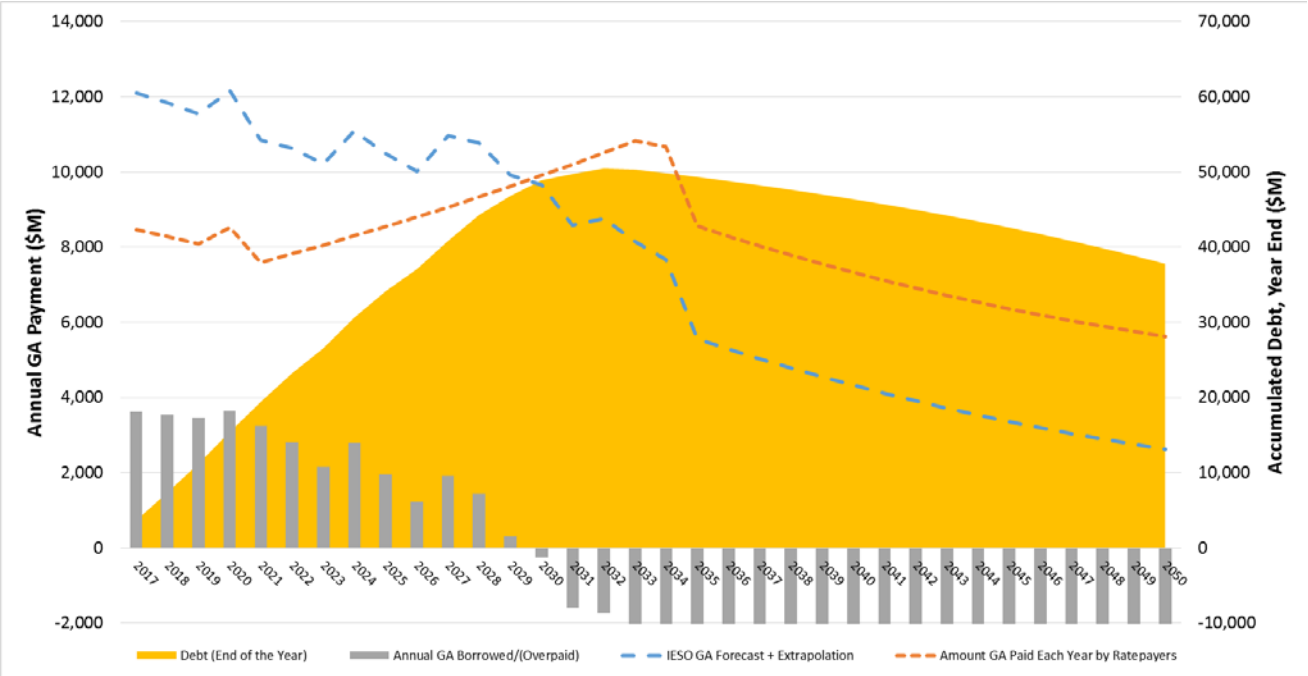
Scenario 5:

- **Initial 5 year reduction: 70%**
- Percentage of Rate Increases after initial reduction: **10%**
- Overpayment Cap ($M): 2,000
    - 5% Financing Rate



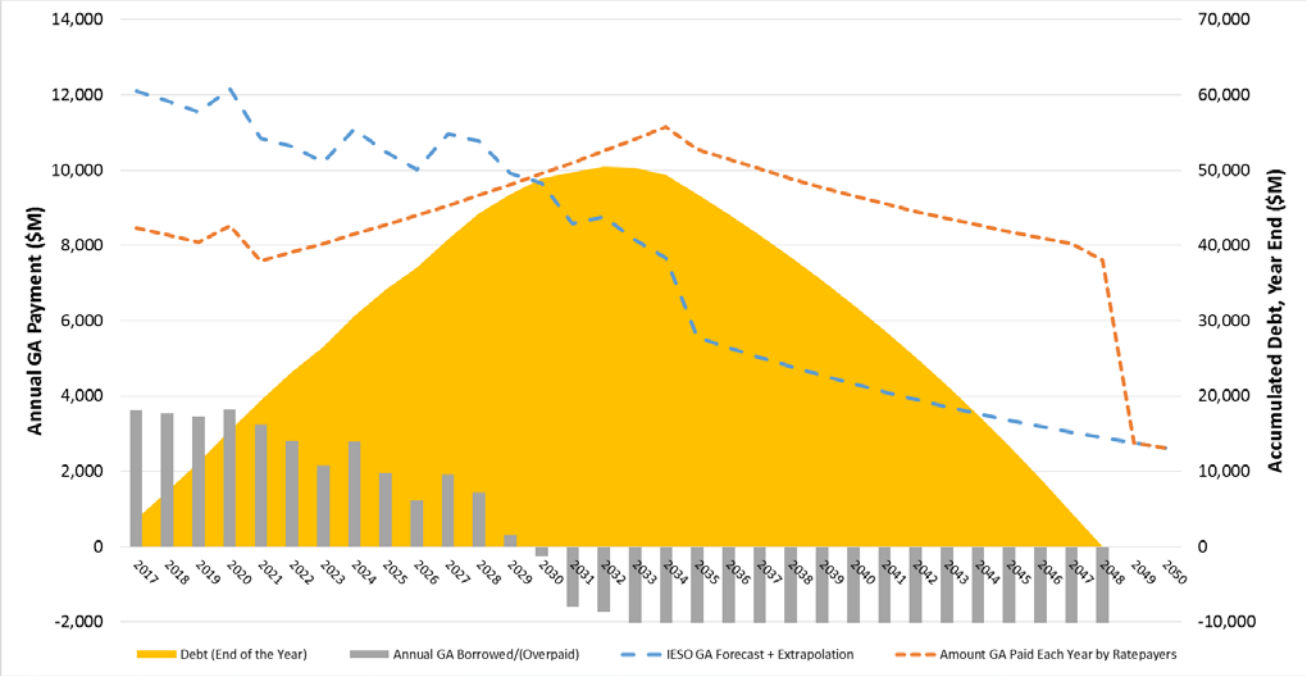
Scenario 6:

- **Initial 5 year reduction: 70%**
- Percentage of Rate Increases after initial reduction: 3%
- Overpayment Cap ($M): **3,000**
    - 5% Financing Rate



Scenario 7:

- **Initial 5 year reduction: 70%**
- Percentage of Rate Increases after initial reduction: 3%
- Overpayment Cap ($M): **5,000**
    - 5% Financing Rate



Corporate and Electricity Finance Division / Ontario Financing Authority
January 30, 2017

DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS

Comments on Ministry of Energy's Proposals "Global Adjustment Options"

The Ministry of Energy (Energy) has provided a number of potential price mitigation options involving delayed recovery of a portion of the Global Adjustment (GA). This note will provide preliminary illustrative fiscal exposure analysis involving potentially much larger GA deferral amounts of up to 50% and the implementation option involving local distribution companies (LDCs) holding the regulatory assets and long-term payables in favour of the Province.

CONTEXT

- As outlined in Energy's deck, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).
- The government has taken action to lower electricity cost pressures to all consumers including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency, and decreasing costs related to renewable procurement (e.g., GEIA renegotiation with Samsung consortium, decreasing FIT prices, etc.).
- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has expanded the Rural or Remote Electricity Rate Protection (RRRP) program, saving eligible RRRP customers about $45 per month, when combined with OREC.
- Over the past five years, the existing fiscally-funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC in 2017-18. The existing program costs are summarized in the table below:

($M)	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17[1]	2017-18[1]
OCEB	1,033	994	1,006	1,078	860	-	-
OREC	-	-	-	-	-	300	1,100*
Ending DRC[2]	-	-	-	-	85	330	330
NIERP	120	120	115	108	120	120	120
NOEC	23	24	25	24	26	25	25
OEPTC[3]	354	406	418	429	444	450	460
TOTAL	1,530	1,544	1,564	1,639	1,535	1,225	2,035

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

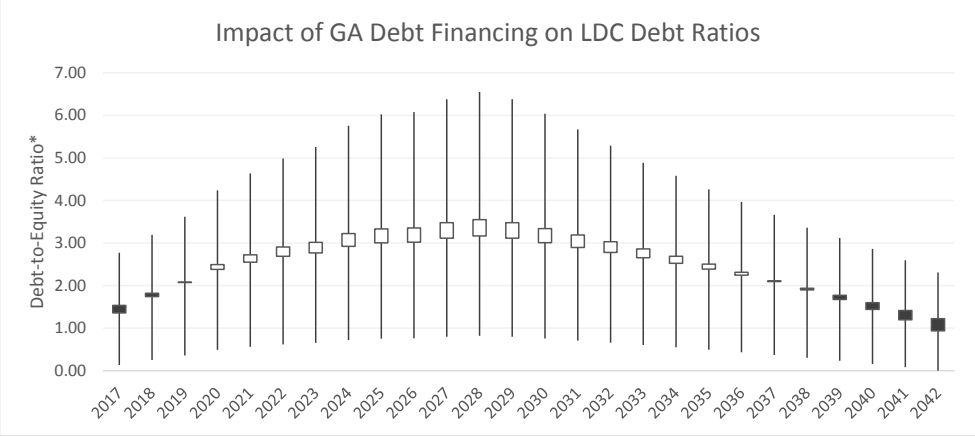
* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt Retirement Charge
OEPTC – Ont. Energy & Property Tax Credit

LDC LONG-TERM RECEIVABLE OPTION

- On February 2, 2017, an implementation option was provided by the Office of the Provincial Controller division staff as follows: [A summary of the proposed option is provided here and does not constitute the full details.]
    - An amount of the deferred GA is to be billed to the local distribution companies (LDCs) but the payment terms are extended into the future, representing a long-term receivable from the LDCs. For example, [ingoring the time value of money/interest],
        - GA = 100

- Amount to be deferred from the electricity consumer bills = 30
- LDCs are billed 70 (the amount not deferred) + a percentage of the 30, based on the minimum amount that would be expected to be billed to the LDCs based on modelling future consumption
- If 75% of the 30 were billed with extended payment terms, 22.5 (30*.75) would be set up as receivable from the LDCs.
- The remaining 7.5 would potentially represent a fiscal exposure.



*The chart shows *Debt-to-equity ratio is calculated as the total interest-bearing debt divided by the total equity for each LDC. The chart shows the effect of LDCs taking on their share of the Global Adjustment (GA) Debt Financing for the portion of the GA not passed on to ratepayers. In this scenario, it is assumed that 75% of the additional GA debt financing is absorbed on LDC balance sheets. The debt is allocated to the LDCs based on their percentage share of the total LDC KWh production. A nearly identical result is replicated if the allocation factor is based off of revenue market share. Financial data is from the financials of 71 LDCs on record in Ontario as of December 31, 2015 as recorded by the Ontario Energy Board. Annual drawdown is assumed for the additional debt, with a 5% accumulated interest incorporated into the total debt amount. Pre-existing debt is kept stable over the analysis; likely that other interest-bearing debt for normal LDC operations would increase over time based on historical growth; this would further increase the forecasted ratios.*

Commented [SK81]: Electricity consumption

Commented [SK82]: Wdtm?

At the end of 2015, the average LDC had a debt-to-equity ratio of 0.94 (total industry LDC interest-bearing debt/total industry LDC equity was 1.22) based on 71 LDCs. The range of the debt-to-equity ratios was from 0.00 to 2.31. When assessing the impact of the GA Debt Financing proposal, the average debt-to-equity ratio peaks to over 3.0 in 2028, with a range from 0.82 to 6.55. This ratio would decrease over time as repayments of debt begin in 2028.

PRELIMINARY FISCAL IMPACT ESTIMATES

- To the extent that the GA deferral proposals and their fiscal exposures are not mitigated through offsetting regulatory assets or with favourable accounting treatments, the Province would potentially end up reflecting the GA deferral in its accounts. Based on CEFD analysis the fiscal exposure could range from $1.8 to $3.6 billion in 2017-18 depending on the option selected based on an earlier set of moderate scenarios.

DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS

Fiscal exposure based on Energy's scenarios 1a and 1b: (Including, with modifications based on July 1, 2017 effective date)

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	3,180	2,888	2,556	3,123	1,728	1,400
Annual Exposure2 with start on July 1st	*1,590*	*2,888*	*2,556*	*3,123*	*1,728*	*1,400*

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	795	3,107	2,805	2,697	2,774	1,646
Start: July 1st	-	*2,312*	*2,805*	*2,697*	*2,774*	*1,646*

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	3,404	3,128	2,812	3,396	2,020	1,712
Annual Exposure2 with start on July 1st	*1,702*	*3,128*	*2,812*	*3,396*	*2,020*	*1,712*

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	-	3,335	3,049	2,958	3,052	1,943
Start: July 1st	-	*2,484*	*3,049*	*2,958*	*3,052*	*1,943*

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	1,168	1,765	2,311	3,750	2,311	1,933
Annual Exposure2 with start on July 1st	*584*	*1,765*	*2,311*	*3,750*	*2,311*	*1,933*

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	292	1,609	1,901	2,671	3,391	2,217
Start: July 1st	-	*1,025*	*1,901*	*2,671*	*3,391*	*2,217*

Scenario 1b - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	1,449	2,040	2,581	4,016	2,598	2,241
Annual Exposure2 with start on July 1st	*725*	*2,040*	*2,581*	*4,016*	*2,598*	*2,241*

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	362	1,597	2,175	2,940	3,662	2,508
Start: July 1st	-	*1,959*	*2,175*	*2,940*	*3,662*	*2,508*

[1] Based on an interest rate of 5%.

[2] Fiscal exposure based on equal monthly drawdown of debt.

[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS

Fiscal exposure based on OPCD's implementation option: (Assuming Energy's scenarios 1a and 1b)

OPCD's implementation option outlined an example where LDCs would be billed a portion of the GA being deferred.

- The example provided an assumption 30% of the true cost of the GA would be deferred, of which 75% would be billed to the LDCs, with 25% being the potential fiscal exposure for the Province.
- Given the scenarios provided by Energy, fiscalized by the CEFD, the estimated 'Fiscal Exposure, 25%' is provided below.
    - Although 25% of all GA deferral is the Province's fiscal exposure, Energy's projections do not defer an equal 30% of the true cost of the GA. the green highlights the particular year where 30% of true cost of the GA is actually estimated to be deferred – whereas in other years, less than 30% of the true cost of the GA is being deferred.

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	3,180	2,888	2,556	3,123	1,728	1,400

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	795	3,107	2,805	2,697	2,774	1,646
Fiscal Exposure, 25%	199	777	701	674	693	412

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	3,404	3,128	2,812	3,396	2,020	1,712

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	851	3,335	3,049	2,958	3,052	1,943
Fiscal Exposure, 25%	213	834	762	740	763	486

Indicates year in which, similar to OPCD's example, the true cost of GA being deferred is closest to 30%. As Fiscal 2016/17 is a partial year, exposure may be less subject to which month the GA deferral begins.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*						
$ millions	9%	14%	18%	28%	17%	13%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	1,168	1,765	2,311	3,750	2,311	1,933
Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	292	1,609	1,901	2,671	3,391	2,217
Fiscal Exposure, 25%	73	402	475	668	848	554
Scenario 1b - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	1,449	2,040	2,581	4,016	2,598	2,241
Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	362	1,597	2,175	2,940	3,662	2,508
Fiscal Exposure, 25%	91	399	544	735	915	627

Indicates year in which, similar to OPCD's example, the true cost of GA being deferred is closest to 30%.

[1] Based on an interest rate of 5%.

[2] Fiscal exposure based on equal monthly drawdown of debt.

[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

Scenario analysis involving high GA-financing:

ENERGY provided data on forecasted GA along with the amount of GA paid each year and amount financed.

However to understand the sensitivitie of various policy proposals, CEFD performed a similar analysis to determine the ability to finance the deferred GA payment.
This analysis included assumptions on

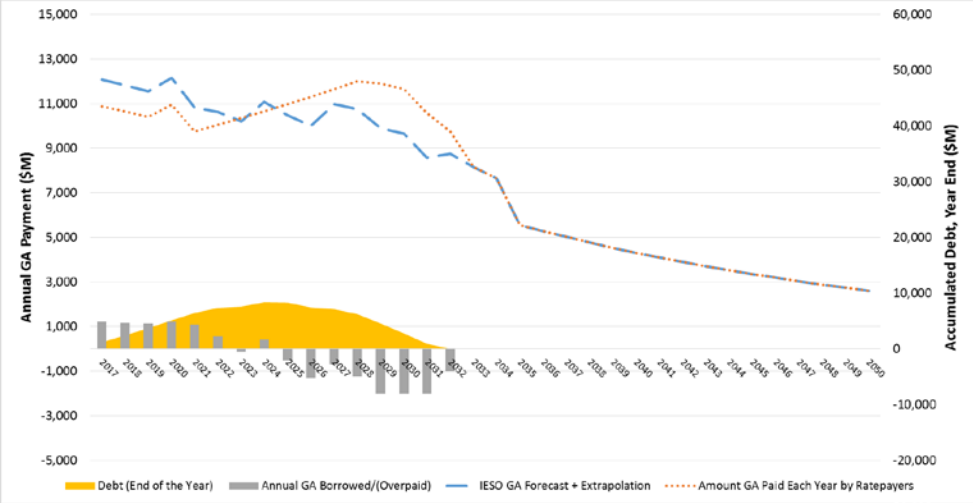
- Initial GA payments ranging from 70 to 90 percent of annual GA payment
- Change in the percentage rate of increase (after initial reduction) from 3% to 10%
- Change in the overpayment cap of $2B to $10B

The table below provides a quick summary of the various scenarios explored:

Scenario	Initial 5 yr Reduction to (%)	Annual Increase after initial reduction (%)	Overpayment Cap ($M)	Year Debt Paid Off	Maximum Accumulated Debt ($M) (and year)
1	90	3	2,000	2033	8,407 (2024)
2	80	3	2,000	~2051	25,473 (2029)
3	70	3	2,000	Indefinite	Debt perpetually rises as annual interest costs are greater than the overpayment cap
4	70	5	2,000	A long time after 2050	39,448 (2029)
5	70	10	2,000	2050	27,795 (2025)
6	70	3	3,000	After 2050	50,460 (2032)
7	70	3	5,000	2048	50,460 (2032)

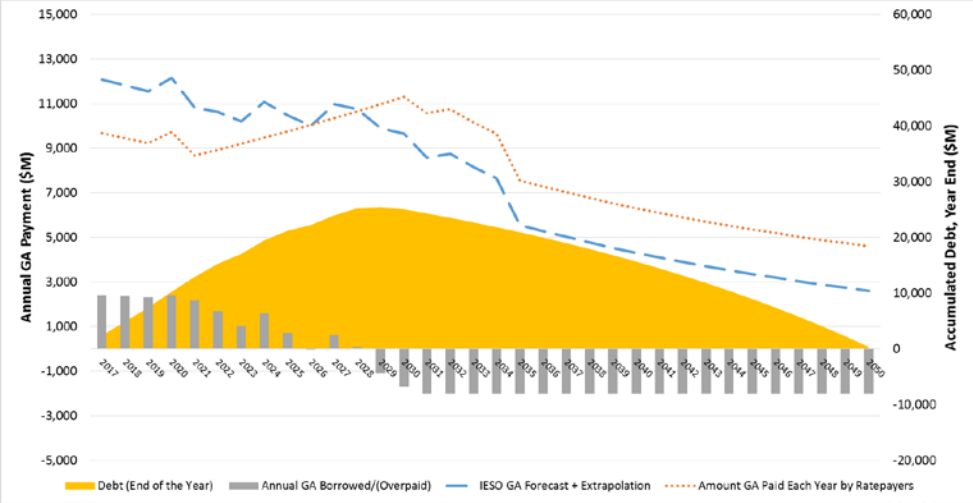
Scenario 1:

- **Initial 5 year reduction: 90%**
- Percentage of Rate Increases after initial reduction: 3%
- Overpayment Cap ($M): 2,000
    - 5% Financing Rate



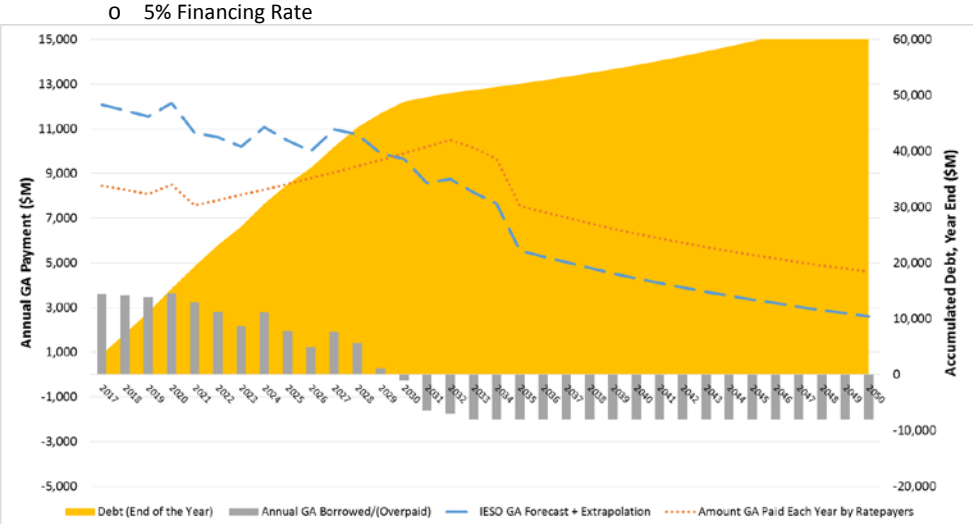
Scenario 2:

- **Initial 5 year reduction: 80%**
- Percentage of Rate Increases after initial reduction: 3%
- Overpayment Cap ($M): 2,000
    - 5% Financing Rate



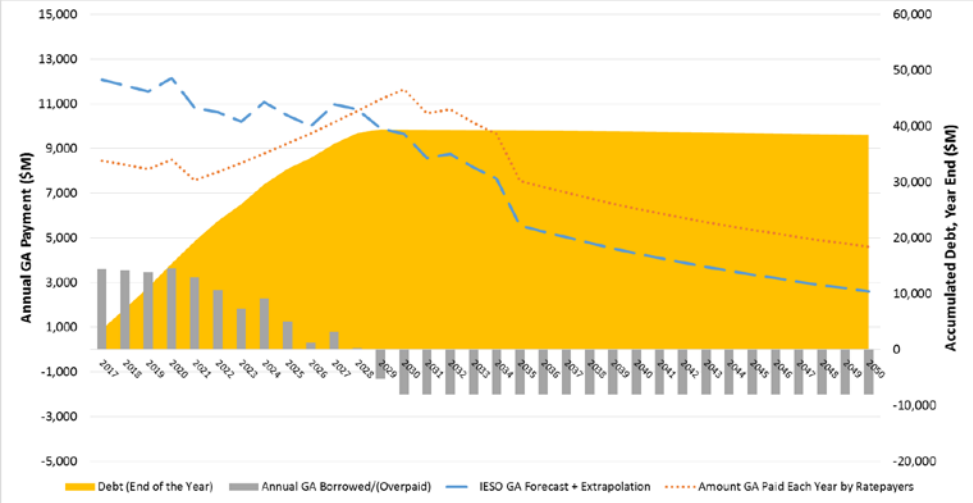
Scenario 3 (Similar to OPCD Implementation Option):

- **Initial 5 year reduction: 70%**
- Percentage of Rate Increases after initial reduction: 3%
- Overpayment Cap ($M): 2,000
    - 5% Financing Rate



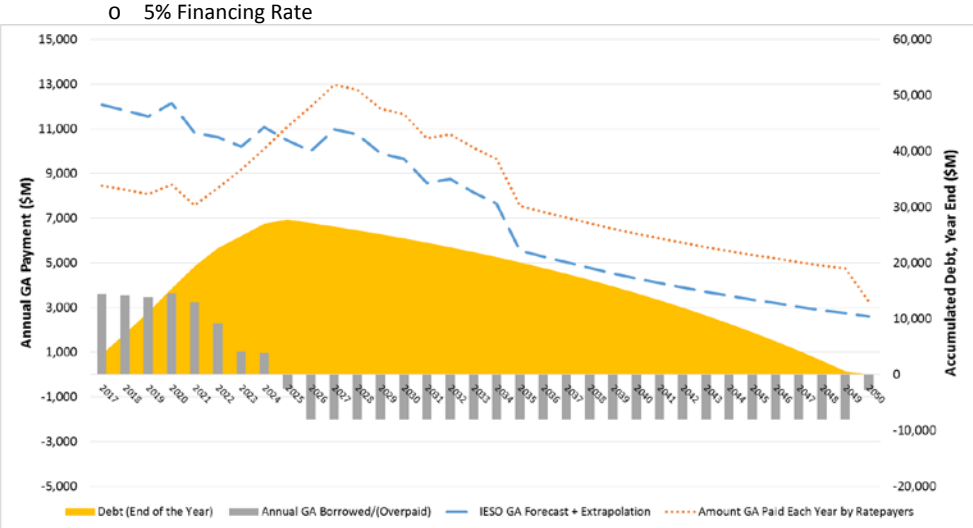
Scenario 4:

- **Initial 5 year reduction: 70%**
- Percentage of Rate Increases after initial reduction: **5%**
- Overpayment Cap ($M): 2,000
    - 5% Financing Rate



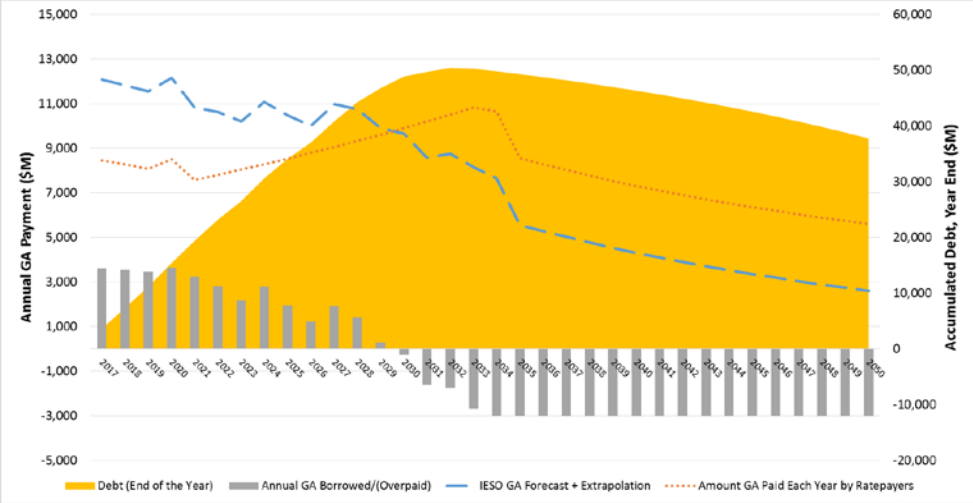
Scenario 5:

- **Initial 5 year reduction: 70%**
- Percentage of Rate Increases after initial reduction: **10%**
- Overpayment Cap ($M): 2,000
    - 5% Financing Rate



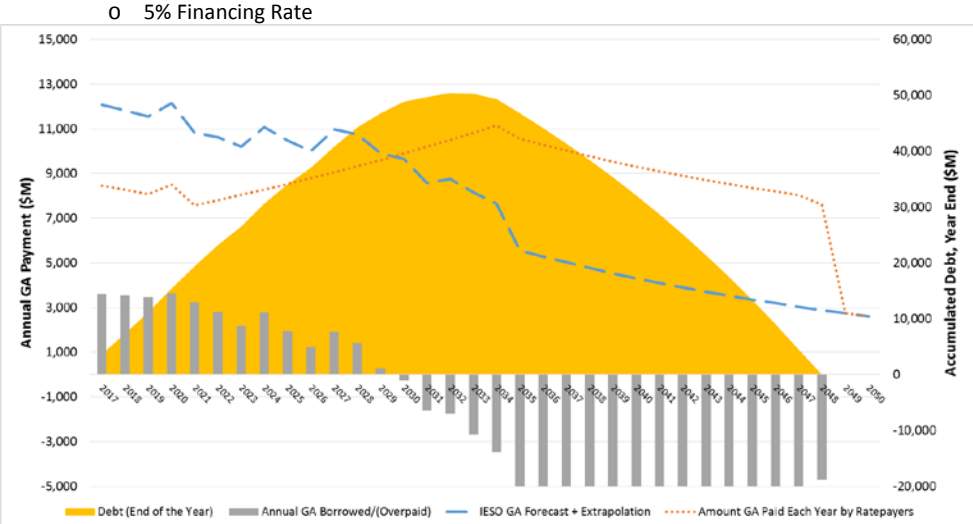
Scenario 6:

- **Initial 5 year reduction: 70%**
- Percentage of Rate Increases after initial reduction: 3%
- Overpayment Cap ($M): **3,000**
    - 5% Financing Rate



Scenario 7:

- **Initial 5 year reduction: 70%**
- Percentage of Rate Increases after initial reduction: 3%
- Overpayment Cap ($M): **5,000**
    - 5% Financing Rate



DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS

Corporate and Electricity Finance Division / Ontario Financing Authority
January 30, 2017

DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS

Comments on Ministry of Energy's Proposals "Global Adjustment Options"

The Ministry of Energy (Energy) has provided a number of potential price mitigation options involving delayed recovery of a portion of the Global Adjustment (GA). This note will provide preliminary illustrative fiscal exposure analysis involving potentially much larger GA deferral amounts of up to 50% and the implementation option involving local distribution companies (LDCs) holding the regulatory assets and long-term payables in favour of the Province.

CONTEXT

- As outlined in Energy's deck, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).
- The government has taken action to lower electricity cost pressures to all consumers including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency, and decreasing costs related to renewable procurement (e.g., GEIA renegotiation with Samsung consortium, decreasing FIT prices, etc.).
- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has expanded the Rural or Remote Electricity Rate Protection (RRRP) program, saving eligible RRRP customers about $45 per month, when combined with OREC.
- Over the past five years, the existing fiscally-funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC in 2017-18. The existing program costs are summarized in the table below:

($M)	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17[1]	2017-18[1]
OCEB	1,033	994	1,006	1,078	860	-	-
OREC	-	-	-	-	-	300	1,100*
Ending DRC[2]	-	-	-	-	85	330	330
NIERP	120	120	115	108	120	120	120
NOEC	23	24	25	24	26	25	25
OEPTC[3]	354	406	418	429	444	450	460
TOTAL	1,530	1,544	1,564	1,639	1,535	1,225	2,035

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

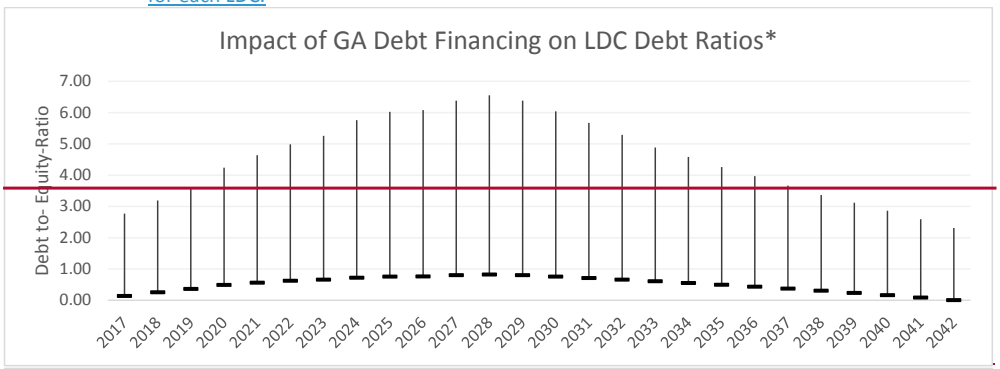
OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt Retirement Charge
OEPTC – Ont. Energy & Property Tax Credit

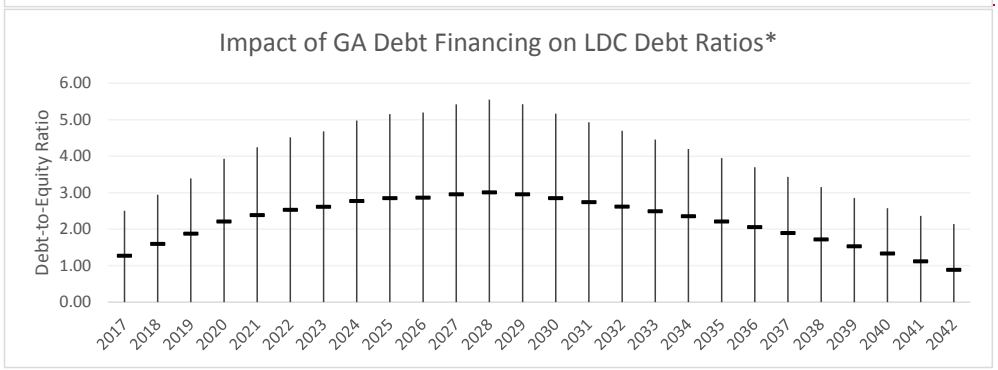
LDC LONG-TERM RECEIVABLE OPTION

- On February 2, 2017, an implementation option was provided by the Office of the Provincial Controller division staff as follows: [A summary of the proposed option is provided here and does not constitute the full details.]
    - An amount of the deferred GA is to be billed to the local distribution companies (LDCs) but the payment terms are extended into the future, representing a long-term receivable from the LDCs. For example, [~~ingoring~~ignoring the time value of money/interest],
        - GA = 100
        - Amount to be deferred from the electricity consumer bills = 30

- LDCs are billed 70 (the amount not deferred) + a percentage of the 30, based on the minimum amount that would be expected to be billed to the LDCs based on modelling future consumption
- If 75% of the 30 were billed with extended payment terms, 22.5 (30*.75) would be set up as receivable from the LDCs.
- The remaemaining 7.5 would potentially represent a fiscal exposure.

- ~~The following chart illustrates the potential impact of the GA-related liabilities on the debt-to-equity:~~
- The chart shows the effect of LDCs taking on their share of the Global Adjustment (GA) Debt Financing for the portion of the GA not passed on to ratepayers. The black bar is the average LDC debt-to-equity ratio within the total industry range (minimum to maximum).
  - Debt-to-equity ratio is calculated as the total interest-bearing debt divided by the total equity for each LDC.





*~~The chart shows the effect of LDCs taking on their share of the Global Adjustment (GA) Debt Financing for the portion of the GA not passed on to ratepayers. The black bar is the average LDC debt-to-equity ratio within the total industry range (minimum to maximum). Debt-to-equity ratio is calculated as the total interest-bearing debt divided by the total equity for each LDC. This scenario uses the qA~~ssumptions from **Scenario 1a – 25 years** with annual drawdown. Annual drawdown is assumed for the additional debt, with a 5% accumulated interest incorporated into the total debt amount. It is assumed that 75% of the additional GA debt financing is absorbed on LDC balance sheets. The debt is allocated to the LDCs based on their percentage share of the total ~~LDC KWh production~~electricity delivered. A nearly identical result is replicated if the allocation ~~factor~~ is based off of revenue market share.

* Financial data ~~is from the financials of~~ for 71 LDCs ~~on record in Ontario as of December 31, 2015, as recorded by~~ from the Ontario Energy Board~~'s 2015 Yearbook of Electricity Distributor~~~~butoro~~s.

~~* Equity is grown by 5.52% per year in-line with the historical industry equity growth from 2013 to 2015.~~

* Pre-existing debt ~~and equity~~ is kept stable over the analysis period, although in actual fact~~, likely that~~ other interest-bearing debt for normal LDC operations would increase over time~~, and equity would increase from positive net income.~~ This would heighten~~lessen~~ the impact of the additional GA debt on the debt-to-equity ratios.

- At the end of 2015, the average LDC had a debt-to-equity ratio of 0.94 (total industry LDC interest-bearing debt to ~~/~~total industry LDC equity was 1.22) based on 71 LDCs. The range of the debt-to-equity ratios was from 0.00 to 2.31 in 2015.

- ~~-~~When assessing the impact of the GA Debt Financing proposal, the average debt-to-equity ratio peaks to ~~over~~ 3.0 in 2028, with a range from 0.00~~82~~ to 5~~6~~.55. This ratio would decrease over time as repayments of debt begin in 2028.

The following table~~s~~ illustrate~~s~~ the top and bottom ~~5~~ five LDC's debt-to-equity ratios in 2028 (the year the ratios are at their maximum) versus their respective ratios in 2015:

Highest LDC Debt-to-equity Ratios (in 2028)	2015	2028
West Coast Huron Energy Inc.~~Greater Sudbury Hydro Inc.~~	0.91~~0.19~~	5.55~~6.55~~
Hydro 2000 Inc.~~Northern Ontario Wires Inc.~~	0.00~~1.52~~	5.44~~6.08~~
Cooperative Hydro Embrun Inc.~~Woodstock Hydro Services Inc.~~	0.00~~1.90~~	5.27~~5.82~~
Woodstock Hydro Services Inc.~~Erie Thames Powerlines Corporation~~	1.90~~1.44~~	4.97~~5.66~~
Entegrus Powerlines Inc.~~COLLUS PowerStream Corp.~~	1.40~~1.42~~	4.78~~5.55~~

~~Lowest LDC Debt-to-equity Ratios (in 2028)~~ Lowest LDC Debt-to-equity Ratios (in 2028)	~~2015~~ 2015	~~2028~~ 2028
Peterborough Distribution Incorporated~~Algoma Power Inc.~~	1.54~~1.12~~	1.26~~1.65~~
Orillia Power Distribution Corporation~~Chapleau Public Utilities Corporation~~	1.01~~0.00~~	1.06~~1.55~~
Greater Sudbury Hydro Inc.~~Fort Frances Power Corporation~~	0.19~~0.00~~	0.86~~1.52~~
Enersource Hydro Mississauga Inc.~~Haldimand County Hydro Inc.~~	1.50~~0.39~~	0.77~~1.31~~
Northern Ontario Wires Inc.~~Cooperative Hydro Embrun Inc.~~	1.52~~0.00~~	0.00~~0.82~~

Formatted: Keep with next

Staff Comments

- Further development of this option is required in order to allow for a complete evaluation, including
  - Energy legal analysis of legislative and regulatory considerations.
  - Analysis to determine LDCs ability to establish a regulatory asset.
  - Determination of how LDCs' current and future lenders, and equity holders, would assess this option.

- Consumers directly connected to the electricity transmission grid would be unlikely to want enforced borrowing and would not have regulatory accounting. As a result, it is unlikely these consumers could be billed in the same way as the proposed method for LDCs.

- Increased electricity prices when the deferred GA costs are recovered from consumers may accelerate the incentive for consumers to move off grid.
  - Energy had previously estimated that the cost of installing and operating a solar PV system over its lifetime may fall below the cost of paying an electricity bill over the same period in the mid/late 2020s.

PRELIMINARY FISCAL IMPACT ESTIMATES

- To the extent that the GA deferral proposals and their fiscal exposures are not mitigated through offsetting regulatory assets or with favourable accounting treatments, the Province would potentially end up reflecting the GA deferral in its accounts. Based on CEFD analysis the fiscal exposure could range from $1.8 to $3.~~6~~ billion in 2017-18 depending on the option selected based on an earlier set of moderate scenarios.

DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS

Fiscal exposure based on Energy's scenarios 1a and 1b: (Including, with modifications based on July 1, 2017 effective date)

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	3,180	2,888	2,556	3,123	1,728	1,400
Annual Exposure2 with start on July 1st	*1,590*	*2,888*	*2,556*	*3,123*	*1,728*	*1,400*

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	795	3,107	2,805	2,697	2,774	1,646
Start: July 1st	-	*2,312*	*2,805*	*2,697*	*2,774*	*1,646*

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	3,404	3,128	2,812	3,396	2,020	1,712
Annual Exposure2 with start on July 1st	*1,702*	*3,128*	*2,812*	*3,396*	*2,020*	*1,712*

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	-	3,335	3,049	2,958	3,052	1,943
Start: July 1st	-	*2,484*	*3,049*	*2,958*	*3,052*	*1,943*

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	1,168	1,765	2,311	3,750	2,311	1,933
Annual Exposure2 with start on July 1st	*584*	*1,765*	*2,311*	*3,750*	*2,311*	*1,933*

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	292	1,609	1,901	2,671	3,391	2,217
Start: July 1st	-	*1,025*	*1,901*	*2,671*	*3,391*	*2,217*

Scenario 1b - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	1,449	2,040	2,581	4,016	2,598	2,241
Annual Exposure2 with start on July 1st	*725*	*2,040*	*2,581*	*4,016*	*2,598*	*2,241*

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	362	1,597	2,175	2,940	3,662	2,508
Start: July 1st	-	*1,959*	*2,175*	*2,940*	*3,662*	*2,508*

[1] Based on an interest rate of 5%.

[2] Fiscal exposure based on equal monthly drawdown of debt.

[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS

Fiscal exposure based on OPCD's implementation option: (Assuming Energy's scenarios 1a and 1b)

OPCD's implementation option outlined an example where LDCs would be billed a portion of the GA being deferred.

- The example provided an assumption that 30% of the true cost of the GA would be deferred, of which 75% of the deffered amount would be billed to the LDCs, with the remaining 25% being ~~the~~ a potential fiscal exposure for the Province.
- Given the scenarios provided by Energy, fiscalized by the CEFD, the estimated 'Fiscal Exposure, 25%' is provided below.
    - Although 25% of all GA deferral is the Province's fiscal exposure, Energy's projections do not defer an equal 30% of the true cost of the GA. ~~the~~ The green highlighted~~s~~ cells ~~the~~ identify the particular year where 30% of true cost of the GA is actually estimated to be deferred – whereas in other years, less than 30% of the true cost of the GA is being deferred.

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	3,180	2,888	2,556	3,123	1,728	1,400

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	795	3,107	2,805	2,697	2,774	1,646
Fiscal Exposure, 25%	199	777	701	674	693	412

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	3,404	3,128	2,812	3,396	2,020	1,712

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	851	3,335	3,049	2,958	3,052	1,943
Fiscal Exposure, 25%	213	834	762	740	763	486

Indicates year in which, similar to OPCD's example, the true cost of GA being deferred is closest to 30%. As Fiscal 2016/17 is a partial year, exposure may be less subject to which month the GA deferral begins.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*						
$ millions	9%	14%	18%	28%	17%	13%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	1,168	1,765	2,311	3,750	2,311	1,933
Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	292	1,609	1,901	2,671	3,391	2,217
Fiscal Exposure, 25%	73	402	475	668	848	554
Scenario 1b - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	1,449	2,040	2,581	4,016	2,598	2,241
Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	362	1,597	2,175	2,940	3,662	2,508
Fiscal Exposure, 25%	91	399	544	735	915	627
	Indicates year in which, similar to OPCD's example, the true cost of GA being deferred is closest to 30%.					

[1] Based on an interest rate of 5%.

[2] Fiscal exposure based on equal monthly drawdown of debt.

[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

Scenario analysis involving high GA-financing:

ENERGY provided data on forecasted GA along with the amount of GA paid each year and amount financed.

However to understand the sensitivities of various policy proposals, CEFD performed a similar analysis to determine the ability to finance and ultimately pay down the deferred GA payment.

This analysis included various assumptions on:

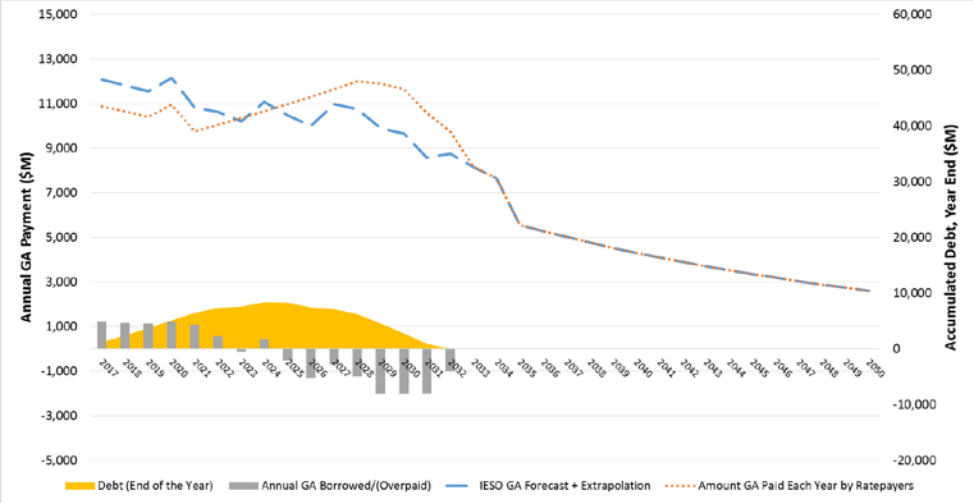
- Initial GA payments ranging from 70 to 90 percent of annual GA ~~payment~~forecasted amounts
- Change in the percentage rate of increase (after initial reduction) from 3% to 10%
- Change in the overpayment cap of $2B to $10B

The table below provides a ~~quick~~ summary of the various scenarios explored:

Scenario	Initial 5 yr Reduction to (%)	Annual Increase after initial reduction (%)	Overpayment Cap ($M)	Year Debt Paid Off	Maximum Accumulated Debt ($M) (and year)
1	90	3	2,000	2033	8,407 (2024)
2	80	3	2,000	~2051	25,473 (2029)
3	70	3	2,000	~~Never~~Indefinite	Debt perpetually rises as annual interest costs are greater than the overpayment cap
4	70	5	2,000	A long time after 2050	39,448 (2029)
5	70	10	2,000	2050	27,795 (2025)
6	70	3	3,000	After 2050	50,460 (2032)
7	70	3	5,000	2048	50,460 (2032)

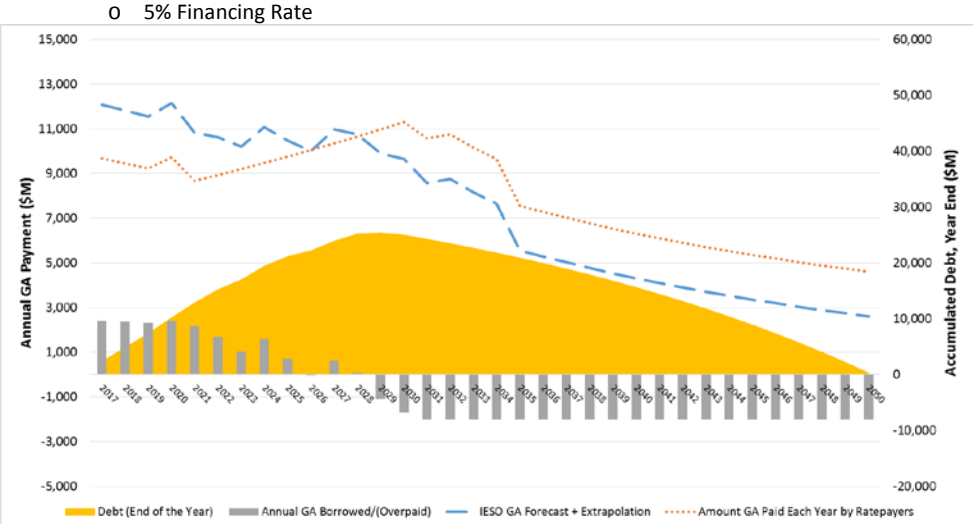
Scenario 1:

- **Initial 5 year reduction: 90%**
- Percentage of Rate Increases after initial reduction: 3%
- Overpayment Cap ($M): 2,000
    - 5% Financing Rate



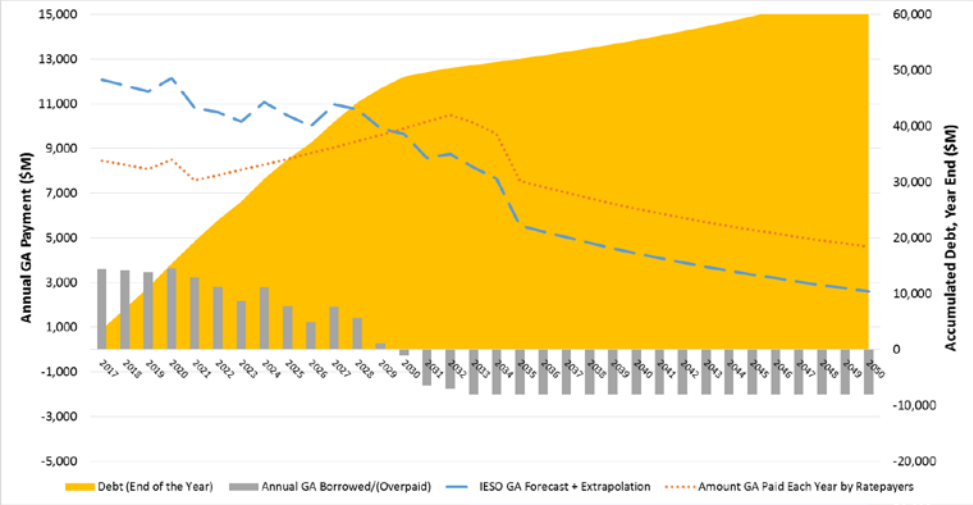
Scenario 2:

- **Initial 5 year reduction: 80%**
- Percentage of Rate Increases after initial reduction: 3%
- Overpayment Cap ($M): 2,000
    - 5% Financing Rate



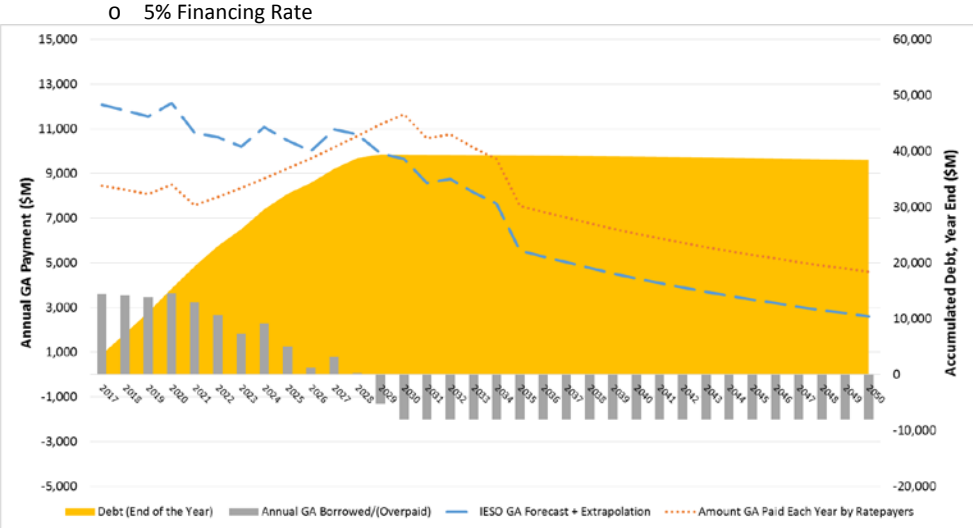
Scenario 3 (Similar to OPCD Implementation Option):

- **Initial 5 year reduction: 70%**
- Percentage of Rate Increases after initial reduction: 3%
- Overpayment Cap ($M): 2,000
    - 5% Financing Rate



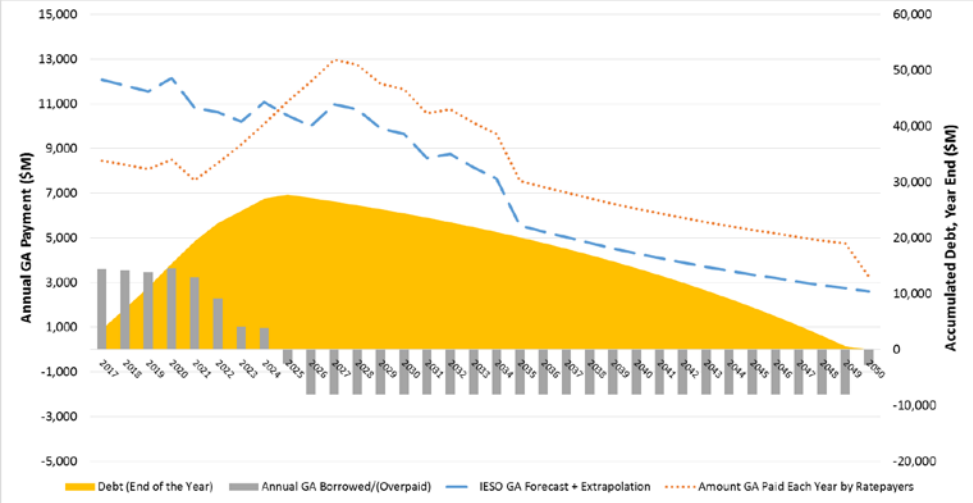
Scenario 4:

- **Initial 5 year reduction: 70%**
- Percentage of Rate Increases after initial reduction: **5%**
- Overpayment Cap ($M): 2,000
    - 5% Financing Rate



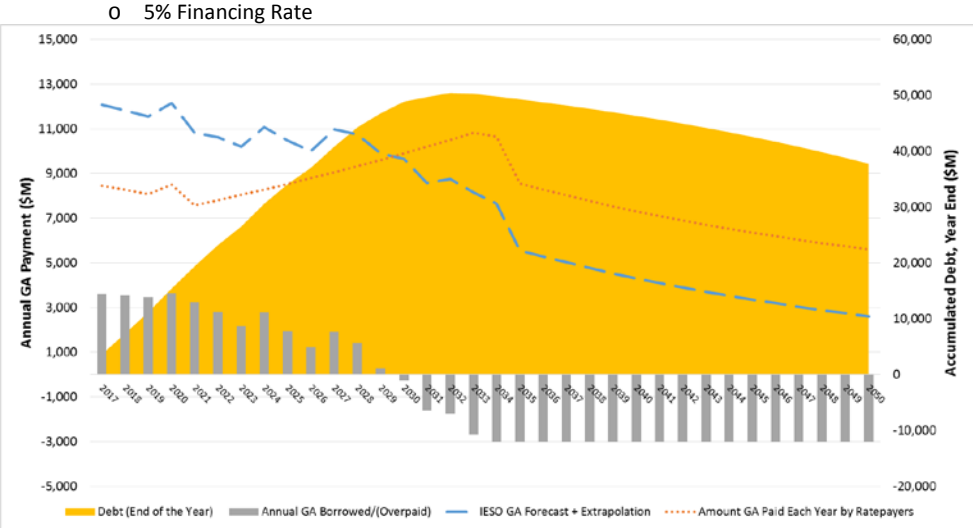
Scenario 5:

- **Initial 5 year reduction: 70%**
- Percentage of Rate Increases after initial reduction: **10%**
- Overpayment Cap ($M): 2,000
    - 5% Financing Rate



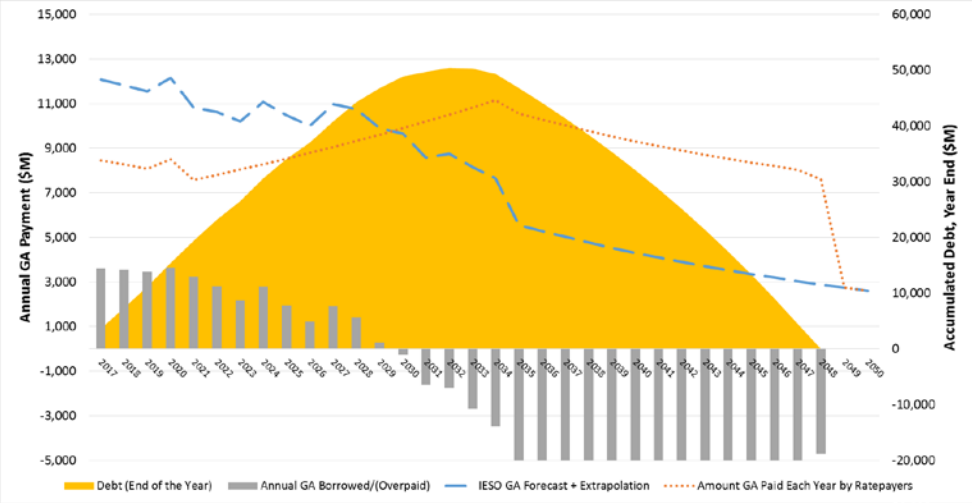
Scenario 6:

- **Initial 5 year reduction: 70%**
- Percentage of Rate Increases after initial reduction: 3%
- Overpayment Cap ($M): **3,000**
    - 5% Financing Rate



Scenario 7:

- **Initial 5 year reduction: 70%**
- Percentage of Rate Increases after initial reduction: 3%
- Overpayment Cap ($M): **5,000**
    - 5% Financing Rate



Corporate and Electricity Finance Division / Ontario Financing Authority
~~January 30~~February 2, 2017

DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS

Comments on Ministry of Energy's Proposals "Global Adjustment Options"

The Ministry of Energy (Energy) has provided a number of potential price mitigation options involving delayed recovery of a portion of the Global Adjustment (GA). This note will provide preliminary illustrative fiscal exposure analysis involving potentially much larger GA deferral amounts of up to 50% and the implementation option involving local distribution companies (LDCs) holding the regulatory assets and long-term payables in favour of the Province.

CONTEXT

- As outlined in Energy's deck, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).
- The government has taken action to lower electricity cost pressures to all consumers including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency, and decreasing costs related to renewable procurement (e.g., GEIA renegotiation with Samsung consortium, decreasing FIT prices, etc.).
- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has expanded the Rural or Remote Electricity Rate Protection (RRRP) program, saving eligible RRRP customers about $45 per month, when combined with OREC.
- Over the past five years, the existing fiscally-funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC in 2017-18. The existing program costs are summarized in the table below:

($M)	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17[1]	2017-18[1]
OCEB	1,033	994	1,006	1,078	860	-	-
OREC	-	-	-	-	-	300	1,100*
Ending DRC[2]	-	-	-	-	85	330	330
NIERP	120	120	115	108	120	120	120
NOEC	23	24	25	24	26	25	25
OEPTC[3]	354	406	418	429	444	450	460
TOTAL	1,530	1,544	1,564	1,639	1,535	1,225	2,035

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

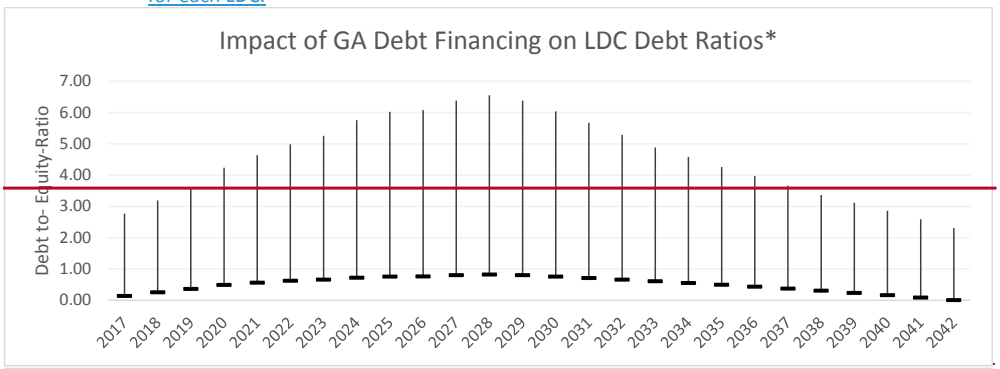
OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt Retirement Charge
OEPTC – Ont. Energy & Property Tax Credit

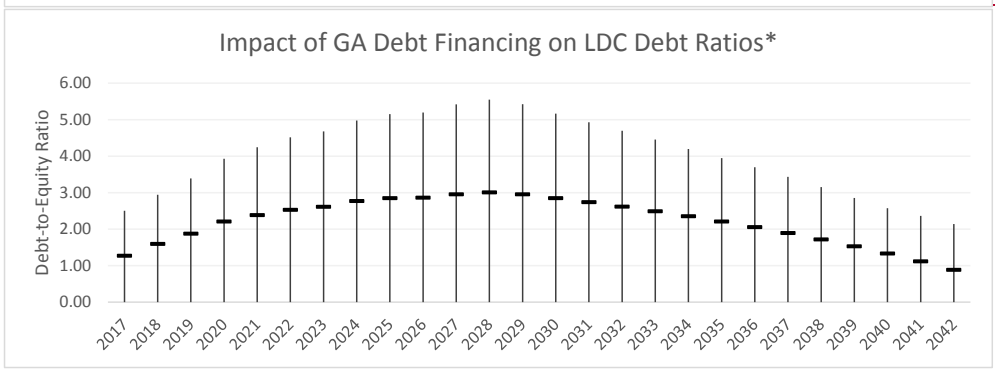
LDC LONG-TERM RECEIVABLE OPTION

- On February 2, 2017, an implementation option was provided by the Office of the Provincial Controller division staff as follows: [A summary of the proposed option is provided here and does not constitute the full details.]
    - An amount of the deferred GA is to be billed to the local distribution companies (LDCs) but the payment terms are extended into the future, representing a long-term receivable from the LDCs. For example, [~~ingoring~~ignoring the time value of money/interest],
        - GA = 100
        - Amount to be deferred from the electricity consumer bills = 30

- LDCs are billed 70 (the amount not deferred) + a percentage of the 30, based on the minimum amount that would be expected to be billed to the LDCs based on modelling future consumption
- If 75% of the 30 were billed with extended payment terms, 22.5 (30*.75) would be set up as receivable from the LDCs.
- The remaining 7.5 would potentially represent a fiscal exposure.

- ~~The following chart illustrates the potential impact of the GA-related liabilities on the debt-to-equity:~~
- The chart shows the effect of LDCs taking on their share of the Global Adjustment (GA) Debt Financing for the portion of the GA not passed on to ratepayers. The black bar is the average LDC debt-to-equity ratio within the total industry range (minimum to maximum).
  - Debt-to-equity ratio is calculated as the total interest-bearing debt divided by the total equity for each LDC.





*~~The chart shows the effect of LDCs taking on their share of the Global Adjustment (GA) Debt Financing for the portion of the GA not passed on to ratepayers. The black bar is the average LDC debt-to-equity ratio within the total industry range (minimum to maximum). Debt-to-equity ratio is calculated as the total interest-bearing debt divided by the total equity for each LDC. This scenario uses the qA~~ssumptions from **Scenario 1a – 25 years** with annual drawdown. Annual drawdown is assumed for the additional debt, with a 5% accumulated interest incorporated into the total debt amount. It is assumed that 75% of the additional GA debt financing is absorbed on LDC balance sheets. The debt is allocated to the LDCs based on their percentage share of the total ~~LDC KWh production~~electricity delivered. A nearly identical result is replicated if the allocation ~~factor~~ is based off of revenue market share.

* Financial data ~~is from the financials of~~ for 71 LDCs ~~on record in Ontario as of December 31, 2015, as recorded by~~ from the Ontario Energy Board~~'s 2015 Yearbook of Electricity Distributor~~~~butoro~~s.

~~* Equity is grown by 5.52% per year in-line with the historical industry equity growth from 2013 to 2015.~~

* Pre-existing debt ~~and equity~~ is kept stable over the analysis period, although in actual fact~~ likely that~~ other interest-bearing debt for normal LDC operations would increase over time~~, and equity would increase from positive net income.~~ This would heighten~~lessen~~ the impact of the additional GA debt on the debt-to-equity ratios.

- At the end of 2015, the average LDC had a debt-to-equity ratio of 0.94 (total industry LDC interest-bearing debt to ~~/~~total industry LDC equity was 1.22) based on 71 LDCs. The range of the debt-to-equity ratios was from 0.00 to 2.31 in 2015.

- ~~-~~When assessing the impact of the GA Debt Financing proposal, the average debt-to-equity ratio peaks to ~~over~~ 3.0 in 2028, with a range from 0.00~~82~~ to 5~~6~~.55. This ratio would decrease over time as repayments of debt begin in 2028.

The following table~~s~~ illustrate~~s~~ the top and bottom ~~5~~ five LDC's debt-to-equity ratios in 2028 (the year the ratios are at their maximum) versus their respective ratios in 2015:

Highest LDC Debt-to-equity Ratios (in 2028)	2015	2028
West Coast Huron Energy Inc.~~Greater Sudbury Hydro Inc.~~	0.91~~0.19~~	5.55~~6.55~~
Hydro 2000 Inc.~~Northern Ontario Wires Inc.~~	0.00~~1.52~~	5.44~~6.08~~
Cooperative Hydro Embrun Inc.~~Woodstock Hydro Services Inc.~~	0.00~~1.90~~	5.27~~5.82~~
Woodstock Hydro Services Inc.~~Erie Thames Powerlines Corporation~~	1.90~~1.44~~	4.97~~5.66~~
Entegrus Powerlines Inc.~~COLLUS PowerStream Corp.~~	1.40~~1.42~~	4.78~~5.55~~

~~Lowest LDC Debt-to-equity Ratios (in 2028)~~ Lowest LDC Debt-to-equity Ratios (in 2028)	~~2015~~ 2015	~~2028~~ 2028
Peterborough Distribution Incorporated~~Algoma Power Inc.~~	1.54~~1.12~~	1.26~~1.65~~
Orillia Power Distribution Corporation~~Chapleau Public Utilities Corporation~~	1.01~~0.00~~	1.06~~1.55~~
Greater Sudbury Hydro Inc.~~Fort Frances Power Corporation~~	0.19~~0.00~~	0.86~~1.52~~
Enersource Hydro Mississauga Inc.~~Haldimand County Hydro Inc.~~	1.50~~0.39~~	0.77~~1.31~~
Northern Ontario Wires Inc.~~Cooperative Hydro Embrun Inc.~~	1.52~~0.00~~	0.00~~0.82~~

Formatted: Keep with next

Staff Comments

- Further development of this option is required in order to allow for a complete evaluation, including
  - Energy legal analysis of legislative and regulatory considerations.
  - Analysis to determine LDCs ability to establish a regulatory asset.
  - Determination of how LDCs' current and future lenders, and equity holders, would assess this option.

- Consumers directly connected to the electricity transmission grid would be unlikely to want enforced borrowing and would not have regulatory accounting. As a result, it is unlikely these consumers could be billed in the same way as the proposed method for LDCs.

- Increased electricity prices when the deferred GA costs are recovered from consumers may accelerate the incentive for consumers to move off grid.
  - Energy had previously estimated that the cost of installing and operating a solar PV system over its lifetime may fall below the cost of paying an electricity bill over the same period in the mid/late 2020s.

PRELIMINARY FISCAL IMPACT ESTIMATES

- To the extent that the GA deferral proposals and their fiscal exposures are not mitigated through offsetting regulatory assets or with favourable accounting treatments, the Province would potentially end up reflecting the GA deferral in its accounts. Based on CEFD analysis the fiscal exposure could range from $1.8 to $3.6 billion in 2017-18 depending on the option selected based on an earlier set of moderate scenarios.

DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS

Fiscal exposure based on Energy's scenarios 1a and 1b: (Including, with modifications based on July 1, 2017 effective date)

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	3,180	2,888	2,556	3,123	1,728	1,400
Annual Exposure2 with start on July 1st	*1,590*	*2,888*	*2,556*	*3,123*	*1,728*	*1,400*

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	795	3,107	2,805	2,697	2,774	1,646
Start: July 1st	-	*2,312*	*2,805*	*2,697*	*2,774*	*1,646*

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	3,404	3,128	2,812	3,396	2,020	1,712
Annual Exposure2 with start on July 1st	*1,702*	*3,128*	*2,812*	*3,396*	*2,020*	*1,712*

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	-	3,335	3,049	2,958	3,052	1,943
Start: July 1st	-	*2,484*	*3,049*	*2,958*	*3,052*	*1,943*

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	1,168	1,765	2,311	3,750	2,311	1,933
Annual Exposure2 with start on July 1st	*584*	*1,765*	*2,311*	*3,750*	*2,311*	*1,933*

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	292	1,609	1,901	2,671	3,391	2,217
Start: July 1st	-	*1,025*	*1,901*	*2,671*	*3,391*	*2,217*

Scenario 1b - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	1,449	2,040	2,581	4,016	2,598	2,241
Annual Exposure2 with start on July 1st	*725*	*2,040*	*2,581*	*4,016*	*2,598*	*2,241*

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	362	1,597	2,175	2,940	3,662	2,508
Start: July 1st	-	*1,959*	*2,175*	*2,940*	*3,662*	*2,508*

[1] Based on an interest rate of 5%.

[2] Fiscal exposure based on equal monthly drawdown of debt.

[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS

Fiscal exposure based on OPCD's implementation option: (Assuming Energy's scenarios 1a and 1b)

OPCD's implementation option outlined an example where LDCs would be billed a portion of the GA being deferred.

- The example provided an assumption that 30% of the true cost of the GA would be deferred, of which 75% of the deffered amount would be billed to the LDCs, with the remaining 25% being ~~the~~ a potential fiscal exposure for the Province.
- Given the scenarios provided by Energy, fiscalized by the CEFD, the estimated 'Fiscal Exposure, 25%' is provided below.
    - Although 25% of all GA deferral is the Province's fiscal exposure, Energy's projections do not defer an equal 30% of the true cost of the GA. ~~the~~ The green highlighted~~s~~ cells ~~the~~ identify the particular year where 30% of true cost of the GA is actually estimated to be deferred – whereas in other years, less than 30% of the true cost of the GA is being deferred.

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	3,180	2,888	2,556	3,123	1,728	1,400

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	795	3,107	2,805	2,697	2,774	1,646
Fiscal Exposure, 25%	199	777	701	674	693	412

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	3,404	3,128	2,812	3,396	2,020	1,712

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	851	3,335	3,049	2,958	3,052	1,943
Fiscal Exposure, 25%	213	834	762	740	763	486

Indicates year in which, similar to OPCD's example, the true cost of GA being deferred is closest to 30%. As Fiscal 2016/17 is a partial year, exposure may be less subject to which month the GA deferral begins.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*						
$ millions	9%	14%	18%	28%	17%	13%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	1,168	1,765	2,311	3,750	2,311	1,933
Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	292	1,609	1,901	2,671	3,391	2,217
Fiscal Exposure, 25%	73	402	475	668	848	554
Scenario 1b - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	1,449	2,040	2,581	4,016	2,598	2,241
Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	362	1,597	2,175	2,940	3,662	2,508
Fiscal Exposure, 25%	91	399	544	735	915	627

Indicates year in which, similar to OPCD's example, the true cost of GA being deferred is closest to 30%.

[1] Based on an interest rate of 5%.

[2] Fiscal exposure based on equal monthly drawdown of debt.

[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

Scenario analysis involving high GA-financing:

ENERGY provided data on forecasted GA along with the amount of GA paid each year and amount financed.

However to understand the sensitivities of various policy proposals, CEFD performed a similar analysis to determine the ability to finance and ultimately pay down the deferred GA payment.

This analysis included various assumptions on:

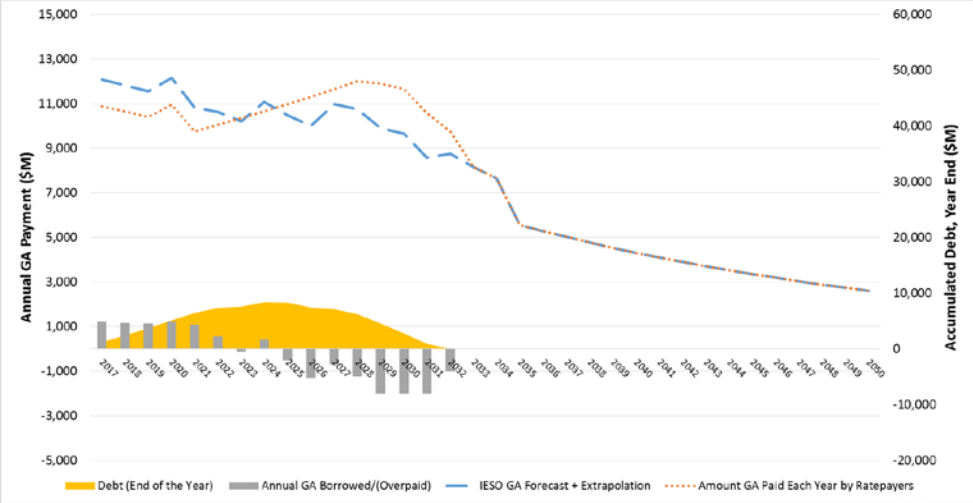
- Initial GA payments ranging from 70 to 90 percent of annual GA ~~payment~~forecasted amounts
- Change in the percentage rate of increase (after initial reduction) from 3% to 10%
- Change in the overpayment cap of $2B to $10B

The table below provides a ~~quick~~ summary of the various scenarios explored:

Scenario	Initial 5 yr Reduction to (%)	Annual Increase after initial reduction (%)	Overpayment Cap ($M)	Year Debt Paid Off	Maximum Accumulated Debt ($M) (and year)
1	90	3	2,000	2033	8,407 (2024)
2	80	3	2,000	~2051	25,473 (2029)
3	70	3	2,000	~~Never~~Indefinite	Debt perpetually rises as annual interest costs are greater than the overpayment cap
4	70	5	2,000	A long time after 2050	39,448 (2029)
5	70	10	2,000	2050	27,795 (2025)
6	70	3	3,000	After 2050	50,460 (2032)
7	70	3	5,000	2048	50,460 (2032)

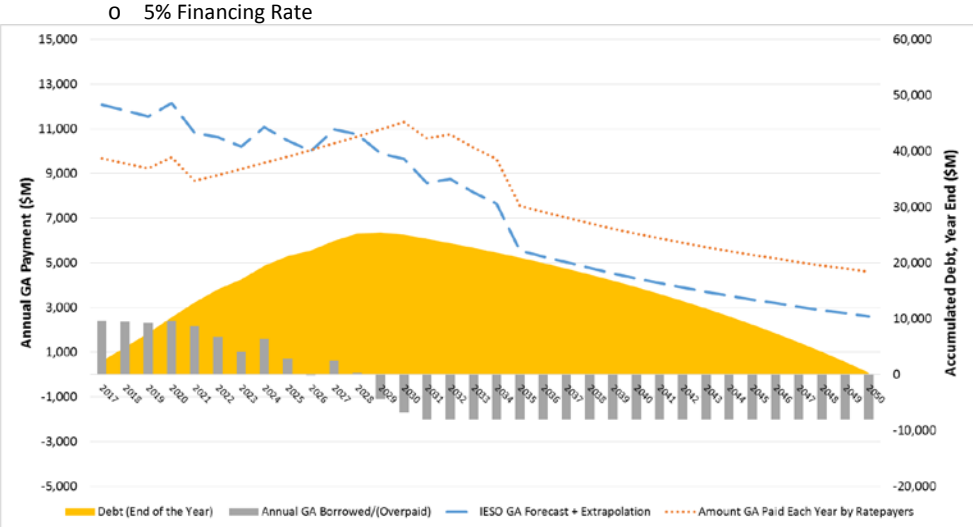
Scenario 1:

- **Initial 5 year reduction: 90%**
- Percentage of Rate Increases after initial reduction: 3%
- Overpayment Cap ($M): 2,000
    - 5% Financing Rate



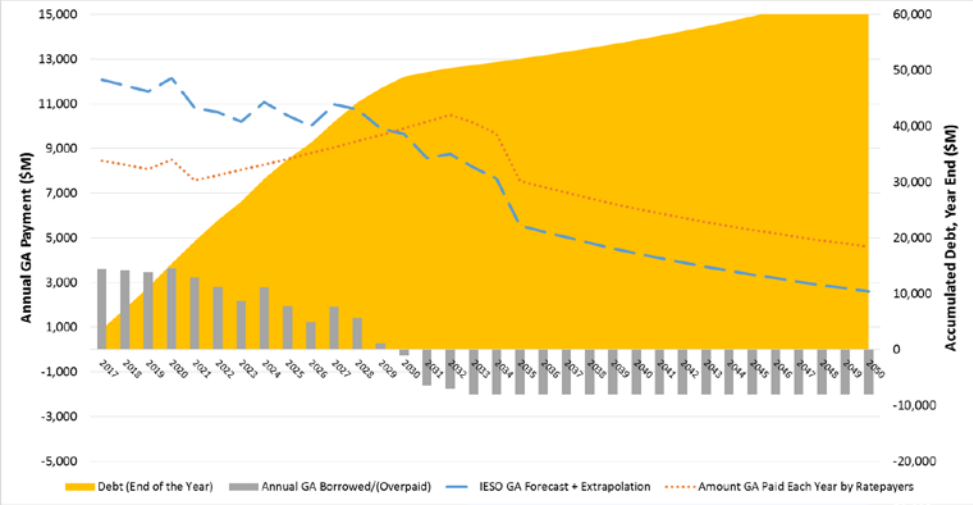
Scenario 2:

- **Initial 5 year reduction: 80%**
- Percentage of Rate Increases after initial reduction: 3%
- Overpayment Cap ($M): 2,000
    - 5% Financing Rate



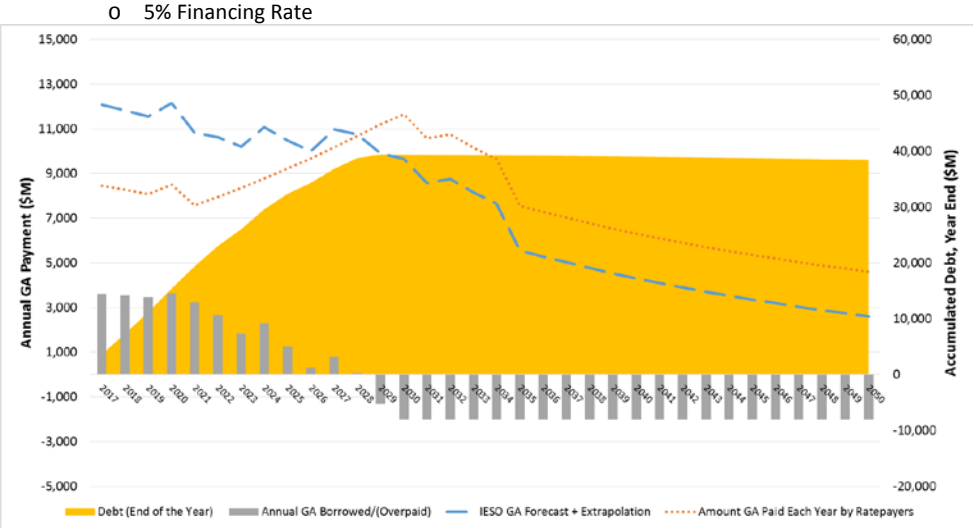
Scenario 3 (Similar to OPCD Implementation Option):

- **Initial 5 year reduction: 70%**
- Percentage of Rate Increases after initial reduction: 3%
- Overpayment Cap ($M): 2,000
    - 5% Financing Rate



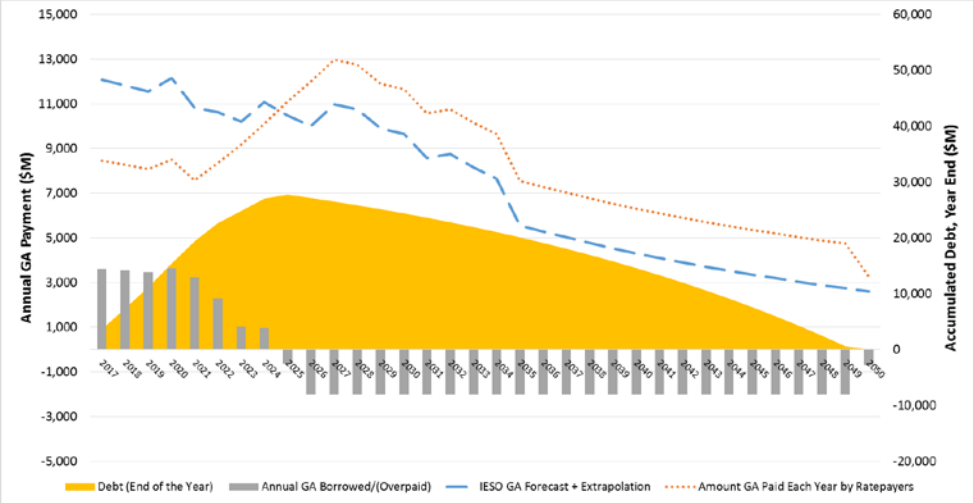
Scenario 4:

- **Initial 5 year reduction: 70%**
- Percentage of Rate Increases after initial reduction: **5%**
- Overpayment Cap ($M): 2,000
    - 5% Financing Rate



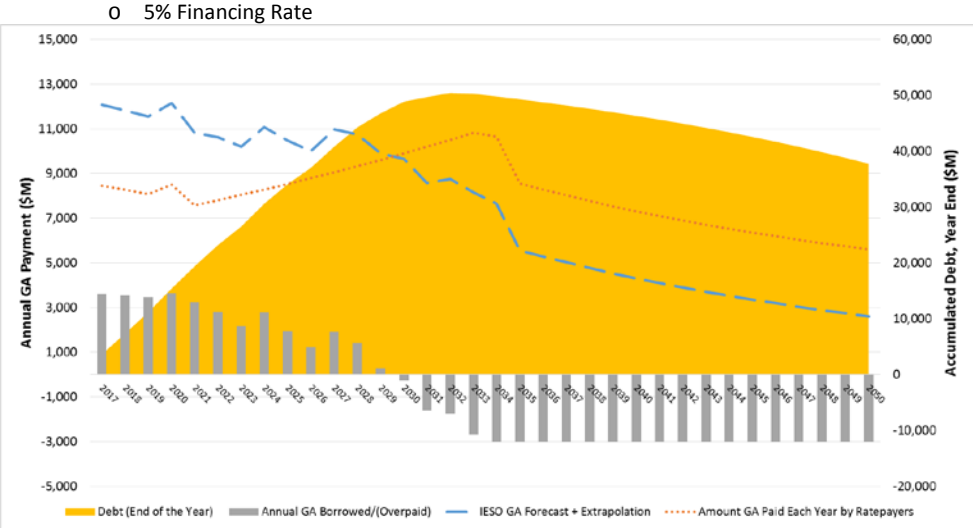
Scenario 5:

- **Initial 5 year reduction: 70%**
- Percentage of Rate Increases after initial reduction: **10%**
- Overpayment Cap ($M): 2,000
    - 5% Financing Rate



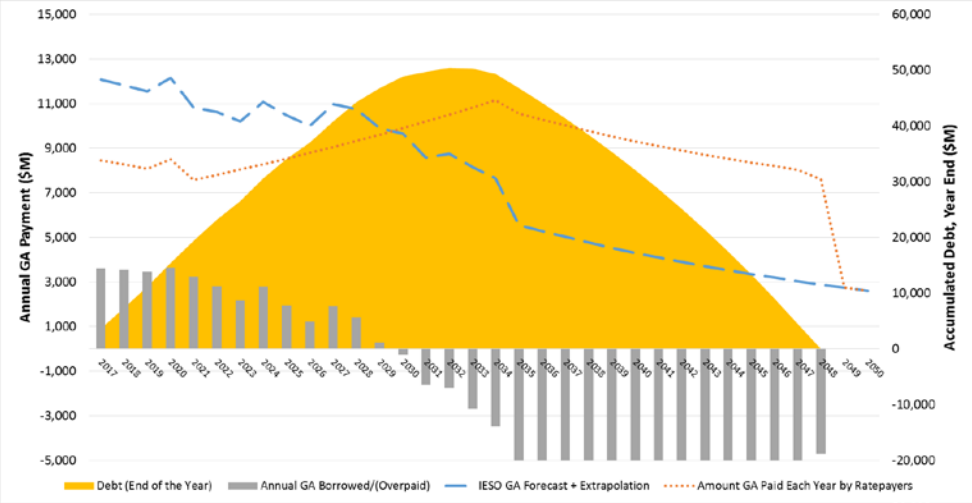
Scenario 6:

- **Initial 5 year reduction: 70%**
- Percentage of Rate Increases after initial reduction: 3%
- Overpayment Cap ($M): **3,000**
    - 5% Financing Rate



Scenario 7:

- **Initial 5 year reduction: 70%**
- Percentage of Rate Increases after initial reduction: 3%
- Overpayment Cap ($M): **5,000**
    - 5% Financing Rate



Corporate and Electricity Finance Division / Ontario Financing Authority
~~January 30~~February 2, 2017

GLOBAL ADJUSTMENT DEFERRAL OPTIONS:					
($M)	2016-17	2017-18	2018-19	2019-20	2020-21
Option 1	560	2,266	2,373	2,633	3,097
Option 2	390	1,574	1,632	1,844	2,282
Option 3	362	1,487	1,585	1,524	1,503

2,266	2,372	2,633	3,096
1,574	1,632	1,844	2,282
1,487	1,585	1,524	1,503

-	1	(0)	0
(0)	0	0	(0)
(0)	(0)	(0)	(0)

Notes:

Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary ba

Based on an annual interest rate of 5.12%.

GLOBAL ADJUSTMENT DEFERRAL OPTIONS:					
($M)	2017	2018	2019	2020	2021
Option 1	2,239	2,347	2,449	3,184	2,834
Option 2	1,559	1,619	1,674	2,355	2,060
Option 3	1,447	1,606	1,522	1,530	1,423

ısed on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting tre

atment.

GLOBAL ADJUSTMENT DEFERRAL OPTIONS:					
($M)	2016-17	2017-18	2018-19	2019-20	2020-21
1a	1,169	4,723	4,912	5,430	6,449
1b	1,169	4,723	4,913	5,430	6,449
1c	1,169	4,668	4,634	4,909	5,658
1d	545	2,203	2,291	2,533	3,008
1e	375	1,510	1,551	1,745	2,165

Notes:

Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary

Based on an annual interest rate of 5.12%.

GLOBAL ADJUSTMENT DEFERRAL OPTIONS:					
($M)	2017	2018	2019	2020	2021
1a	4,674	4,867	5,045	6,586	6,039
1b	4,674	4,869	5,045	6,586	6,037
1c	4,674	4,649	4,589	5,867	5,031
1d	2,180	2,270	2,353	3,072	2,817
1e	1,500	1,542	1,578	2,243	1,931

based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting t

:reatment.

GLOBAL ADJUSTMENT DEFERRAL OPTIONS:					
($M)	2016-17	2017-18	2018-19	2019-20	2020-21
Option 1	550	2,250	2,400	2,600	3,125
Option 2	400	1,600	1,625	1,850	2,250

Notes:

Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary

Based on an annual interest rate of 5.12%.

GLOBAL ADJUSTMENT DEFERRAL OPTIONS:					
($M)	2017	2018	2019	2020	2021
Option 1	2,200	2,400	2,400	3,200	2,900
Option 2	1,600	1,600	1,700	2,300	2,100

based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting t

:reatment.

DRAFT

GA Financing Scenarios

February 4, 2017

Scenario 1a/1b/1c

Corporate and Electricity Finance Division

February 7, 2017

Overview

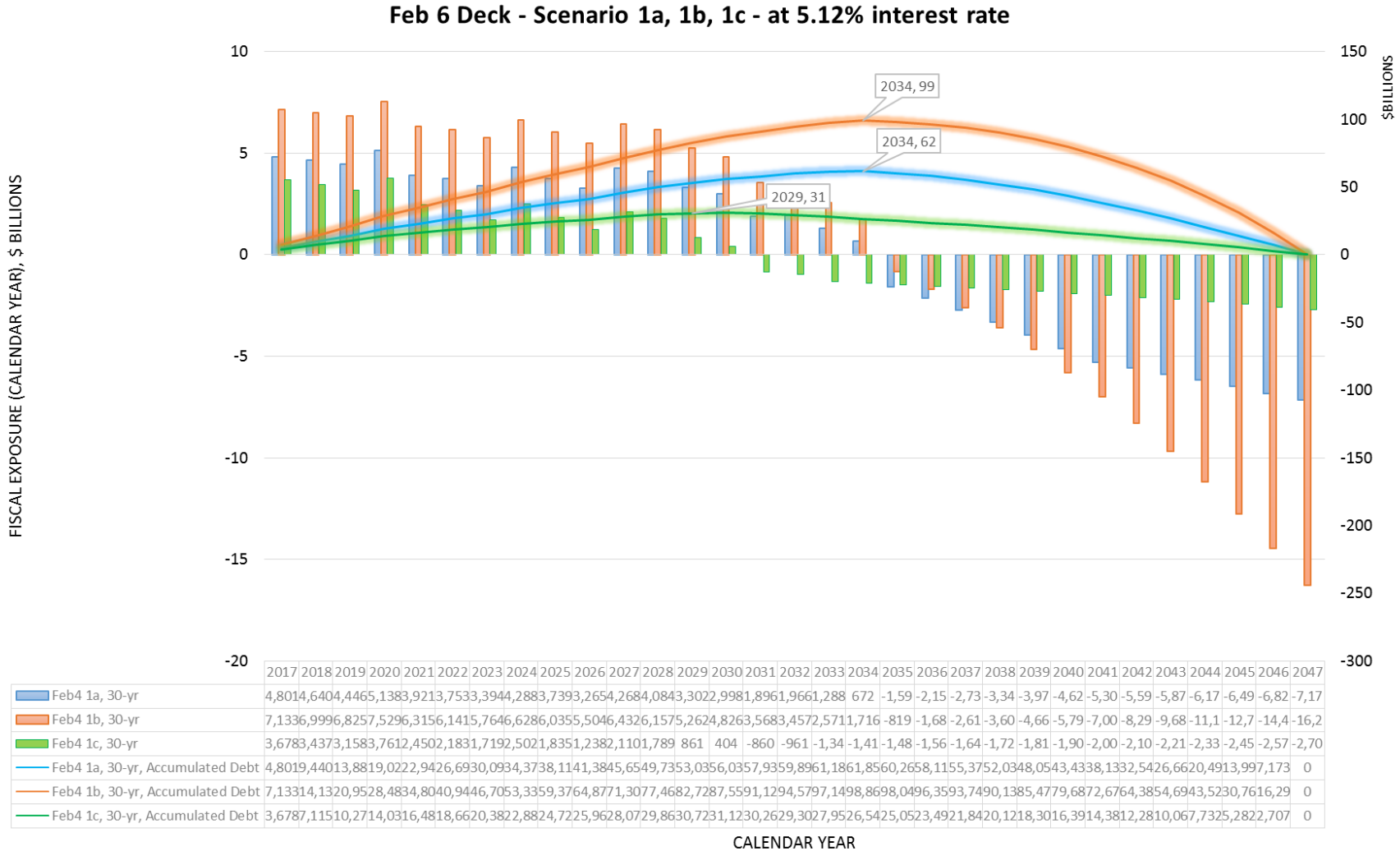
February 6 Deck

- In a draft deck (dated February 6, 2017), the Ministry of Energy considers a number of electricity price mitigation options; in particular deferring the pass-through to ratepayers of some generation supply costs by partially debt financing the cost of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments.
  - The amount of GA paid by ratepayers would be set at a value lower than the costs of supply in the early years, and would be increased over time according to a pre-defined formula until the debt has been paid off.
  - Without a favourable outcome on the discussions and implementation of the accounting treatment of the GA-related debt financing, the accumulated debt would potentially represent a fiscal exposure to the Province.
- The following three new scenarios were provided by Energy:
  - Scenario 1a: GA Smoothing, Residential Bills Lowered 25% (Borrow approx. $5B in 2017) - The amount of GA paid by ratepayers in 2017 is lowered by about $5 billion below the annual supply costs, with the GA increasing at the rate of inflation thereafter. GA over-payments capped at $7.5 billion above the true cost of GA in any given year.
  - Scenario 1b: GA Smoothing, Residential Bills Lowered 33% (Borrow approx. $7B in 2017) - The amount of GA paid by ratepayers in 2017 is lowered by about $7 billion below the annual supply costs, with GA increasing at 2.7% thereafter. No limits placed on GA over-payments.
  - Scenario 1c: GA Smoothing, Residential Bills Lowered 25% (Borrow approx. $4B in 2017) - The amount of GA paid by ratepayers in 2017 is lowered by about $5 billion below the annual supply costs, with the GA increasing at the rate of inflation thereafter. GA over-payments capped at $2.8 billion above the true cost of GA in any given year.
- Energy scenario modelling was provided on a calendar year basis, and assumed to be starting as at January 1, 2017. Actual costs and timing may differ.
- Energy assumed a 30 year financing period and a nominal interest rate of 5.12% per year (compounded annually). Actual borrowing costs may differ, depending on source of financing, structure of the entity including financial risks borne, and general financial market conditions.
  - Internal modelling that follows is based on GA data provided by Energy and assumes monthly GA amounts to be financed and interest expense accumulating from that point. Energy modelling may make different assumptions.

DRAFT

Scenario 1A/1B/1C *(Calendar Year Basis)*

February 6 Deck

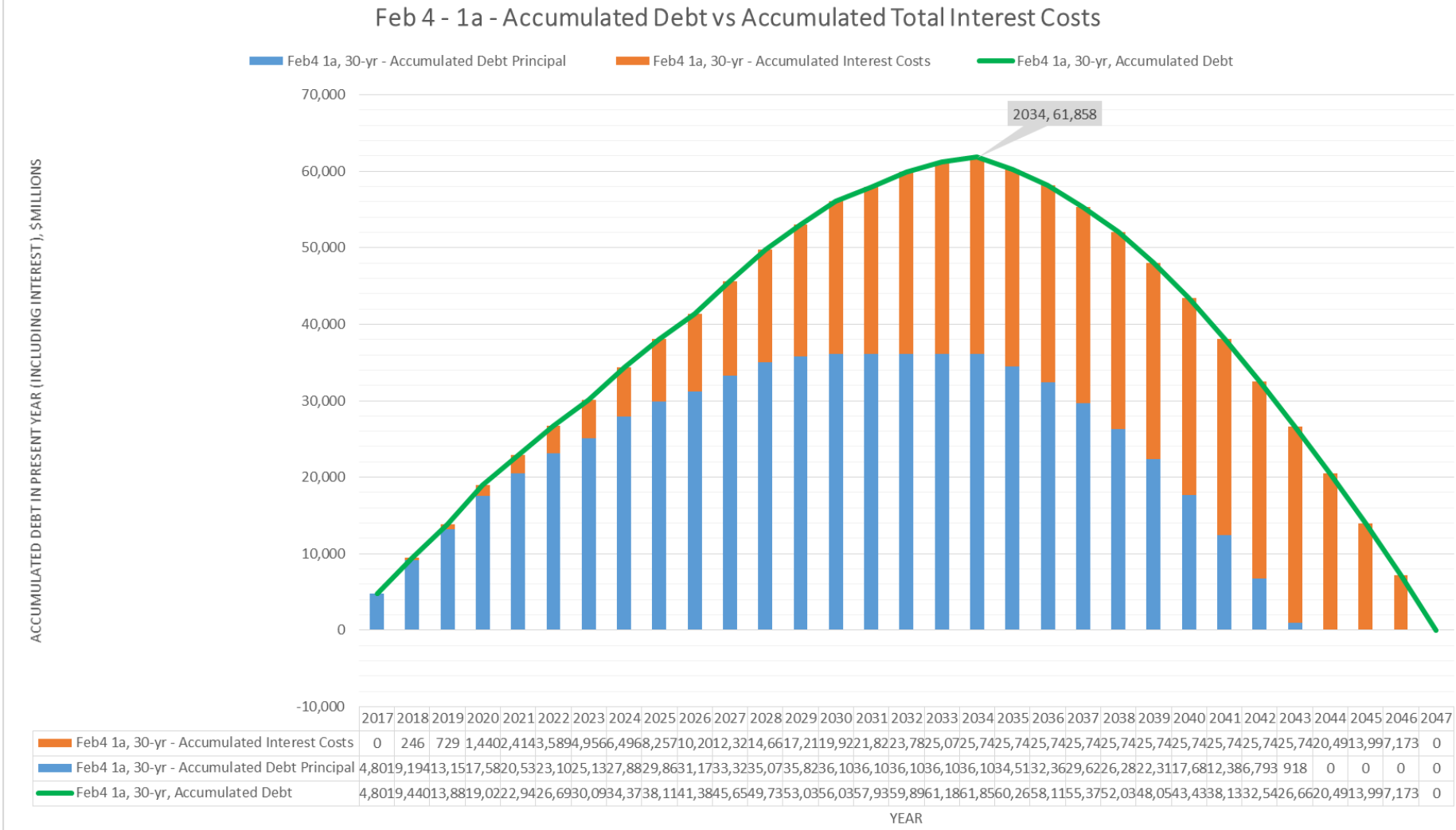


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
Feb4 1a, 30-yr	4,801	4,640	4,465	1,383	9,213	7,533	3,944	2,883	7,393	2,654	2,684	0,843	3,022	9,981	8,961	9,661	1,288	672	-1,59	-2,15	-2,73	-3,34	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
Feb4 1b, 30-yr	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,286	0,355	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68	-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
Feb4 1c, 30-yr	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56	-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,881	9,022	9,426	6,930	0,934	3,738	1,141	3,845	6,549	7,353	0,356	0,357	9,359	8,961	1,861	8,560	2,658	1,155	3,752	0,348	0,543	4,338	1,332	5,426	6,620	4,913	9,997	3,173	0
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,132	0,952	8,483	4,804	0,944	6,705	3,359	3,764	8,771	3,077	4,682	7,287	5,591	1,294	5,797	1,498	8,698	0,496	3,593	7,490	1,385	5,477	9,687	2,676	4,385	4,694	3,523	0,761	6,629	0
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,271	4,031	6,481	8,662	0,382	2,882	4,722	5,962	8,072	9,863	0,723	1,123	0,262	9,302	7,952	6,542	5,052	3,492	1,842	0,121	8,301	6,391	4,381	2,281	0,067	7,732	5,282	2,707	0

DRAFT

Scenario 1A *(Calendar Year Basis)*

February 6 Deck



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,012	12,321	14,661	17,211	19,922	21,822	23,782	25,072	25,742	25,742	25,742	25,742	25,742	25,742	25,742	25,742	25,742	25,742	20,491	13,997	7,173	0
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,151	17,582	20,532	23,102	5,132	7,882	9,863	1,733	3,235	0,735	8,236	10,036	10,036	10,036	10,036	10,034	5,132	3,629	6,226	2,822	3,117	6,812	2,386	7,793	918	0	0	0	0
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,881	19,022	22,946	26,691	30,093	34,373	8,114	1,384	5,654	9,735	3,035	6,235	9,359	8,961	1,861	8,560	2,658	1,155	3,752	0,348	0,543	4,338	1,332	5,426	6,620	4,913	3,997	7,173	0

Scenario 1A *(Calendar Year Basis)*

February 6 Deck

- **Scenario 1a:** GA Smoothing, Residential Bills Lowered 25% (Borrow approx. $5B in 2017) - The amount of GA paid by ratepayers in 2017 is lowered by about $5 billion below the annual supply costs, with the GA increasing at the rate of inflation thereafter. GA over-payments capped at $7.5 billion above the true cost of GA in any given year.
  - On a calendar year basis, annual interest cost peaks at $3.2 billion (Year 2035) , with cumulative interest costs of about $58 billion over the 30-year financing term.

1a. GA Smoothing (Borrow ~$5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	4,801	4,640	4,446	5,138	3,921	3,753

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	1,200	4,760	4,591	4,619	4,833	3,879

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $62 billion, peaking in 2034.

1 Based on an interest rate of 5.12%, compounded annually.
2 Fiscal exposure based on annual drawdown of debt.
3 Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

DRAFT

Scenario 1B *(Calendar Year Basis)*

February 6 Deck

- **Scenario 1b:** GA Smoothing, Residential Bills Lowered 33% (Borrow approx. $7B in 2017) - The amount of GA paid by ratepayers in 2017 is lowered by about $7 billion below the annual supply costs, with GA increasing at 2.7% thereafter. No limits placed on GA over-payments.
  - On a calendar year basis, annual interest cost peaks at $5 billion (Year 2035) , with cumulative interest costs of about $97 billion over the 30-year financing term.

1b. GA Smoothing (Borrow ~$7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	2017	2018	2019	2020	2021	2022
Annual Exposure[2]	7,133	6,999	6,825	7,529	6,315	6,141

Fiscalized[3]	2016-17	2017-18	2018-19	2019-20	2020-21	2021-2022
Start: January 1st	1,783	7,100	6,956	7,001	7,226	6,272

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $99 billion, peaking in 2034.

1 Based on an interest rate of 5.12%, compounded annually.
2 Fiscal exposure based on annual drawdown of debt.
3 Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

Scenario 1C *(Calendar Year Basis)*

February 6 Deck

- **Scenario 1c:** GA Smoothing, Residential Bills Lowered 25% (Borrow approx. $4B in 2017) - The amount of GA paid by ratepayers in 2017 is lowered by about $5 billion below the annual supply costs, with the GA increasing at the rate of inflation thereafter. GA over-payments capped at $2.8 billion above the true cost of GA in any given year.
  - On a calendar year basis, annual interest cost peaks at $1.6 billion (Year 2031) , with cumulative interest costs of about $29 billion over the 30-year financing term.

1c. GA Smoothing (Borrow ~$4 billion in 2017)

$ millions

Scenario 1C - 30-yr amortization	2017	2018	2019	2020	2021	2022
Annual Exposure[2]	3,678	3,437	3,158	3,761	2,450	2,183

Fiscalized[3]	2016-17	2017-18	2018-19	2019-20	2020-21	2021-2022
Start: January 1st	919	3,617	3,367	3,309	3,433	2,383

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $31 billion, peaking in 2030.

1 Based on an interest rate of 5.12%, compounded annually.
2 Fiscal exposure based on annual drawdown of debt.
3 Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

DRAFT

GA Financing Scenarios

January 2017

Scenario 1a/1b, 25-yr/30-yr

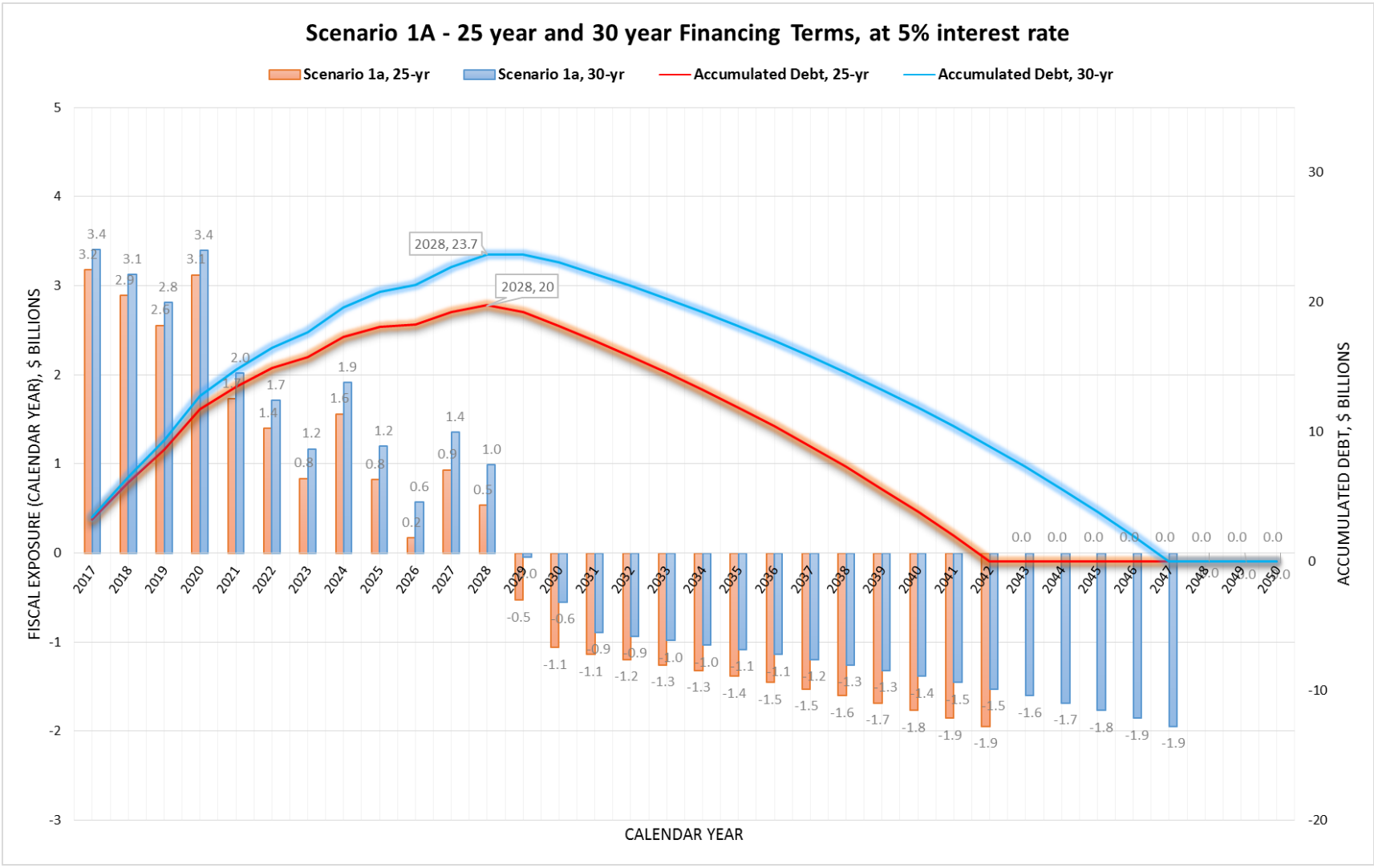
Corporate and Electricity Finance Division

February 7, 2017

DRAFT

Scenario 1A *(Calendar Year Basis)*

January Deck



Scenario 1A *(Calendar Year Basis)*

January Deck

- Scenario 1a: Moderate GA financing: Initially paying in a year up to $3.2 and $3.4 billion below the true cost of GA. Then limits, when consumers start to "pay down", of paying no more than $2 billion per year above the true cost of GA.
  - On a calendar year basis, annual interest cost peaks at $1 billion ($1.2 billion) , with cumulative interest costs of about $15 billion ($22 billion), under a 25-year (or 30-year) financing term

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Fiscal Exposure[2]	3,180	2,888	2,556	3,123	1,728	1,400

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	795	3,107	2,805	2,697	2,774	1,646

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Fiscal Exposure[2]	3,404	3,128	2,812	3,396	2,020	1,712

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	851	3,335	3,049	2,958	3,052	1,943

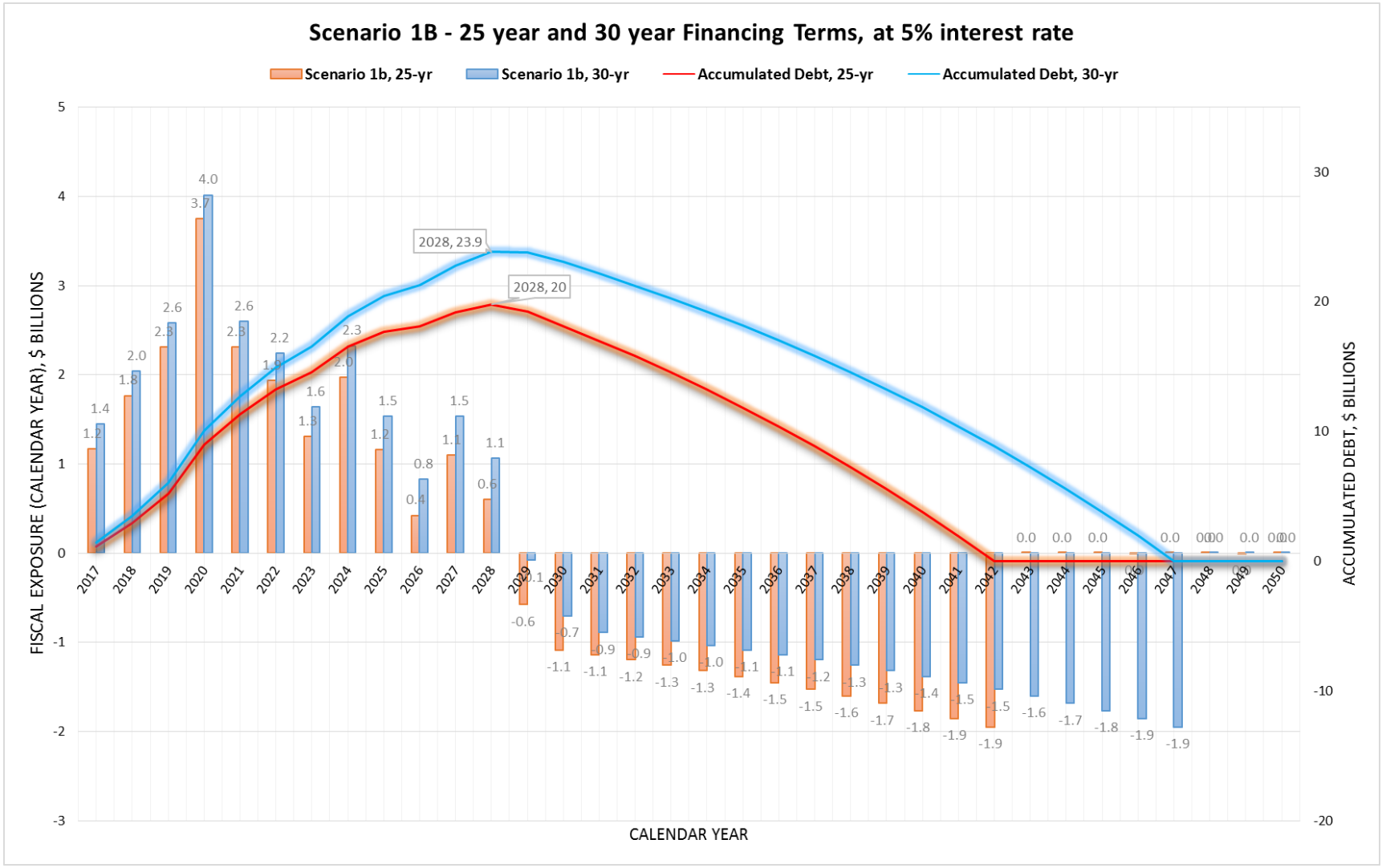
Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and $17-21 billion (at 3% interest rate), peaking in 2028.
- At 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately $33-$36 million compared to that at 5% interest rate.

1 Based on an interest rate of 5%.
2 Fiscal exposure based on equal monthly drawdown of debt.
3 Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

DRAFT

Scenario 1B *(Calendar Year Basis)*

January Deck



Scenario 1B *(Calendar Year Basis)*

January Deck

- Scenario 1b: Moderate GA financing, with delayed increase, paying initially in a year $1.1 billion below the true cost of GA. Then limits, when consumers start to "pay down", of no more than $2 billion per year above the true cost of GA
  - On a calendar year basis, annual interest cost peaks at $1 billion ($1.2 billion) , with cumulative interest costs of about $15 billion ($21 billion), under a 25-year (or 30-year) financing term

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Fiscal Exposure[2]	1,168	1,765	2,311	3,750	2,311	1,933

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	292	1,317	1,901	2,671	3,391	2,217

Scenario 1b - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Fiscal Exposure[2]	1,449	2,040	2,581	4,016	2,598	2,241

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	362	1,597	2,175	2,940	3,662	2,508

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 and $17-21 billion (at 3% interest rate), peaking in 2028.
- At 3.5%, the highest fiscal exposure will occur in 2020-21, decreasing by approximately $118-$134 million compared to that at 5% interest rate.

1 Based on an interest rate of 5%.
2 Fiscal exposure based on equal monthly drawdown of debt.
3 Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

DRAFT

GA Financing Scenarios

February 4, 2017

Scenario 1a/1b/1c

Corporate and Electricity Finance Division

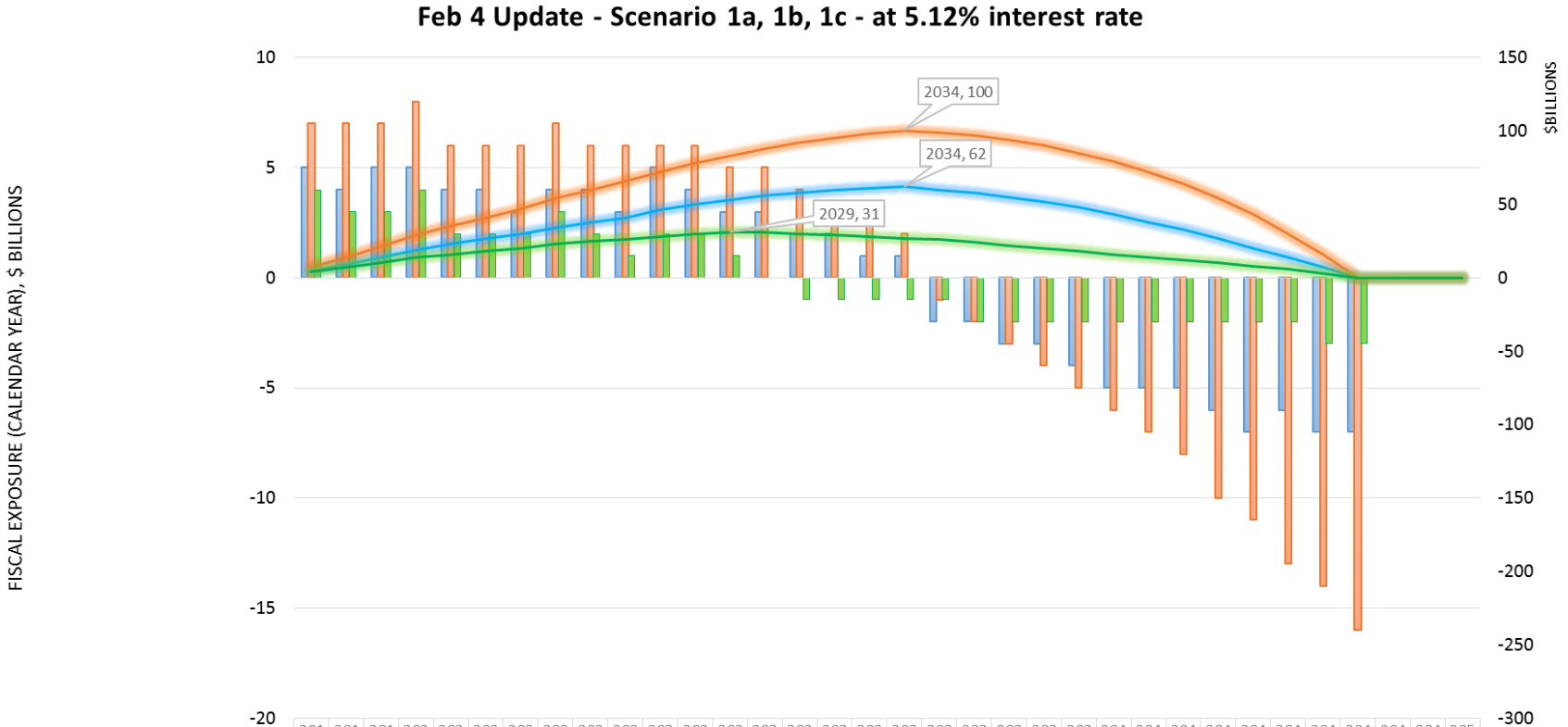
February 7, 2017

Overview

- In a draft deck (dated February 6, 2017), the Ministry of Energy considers a number of electricity price mitigation options; in particular deferring the pass-through to ratepayers of some generation supply costs by partially debt financing the cost of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments.
  - The amount of GA paid by ratepayers would be set at a value lower than the costs of supply in the early years, and would be increased over time according to a pre-defined formula until the debt has been paid off.
  - Without a favourable outcome on the discussions and implementation of the accounting treatment of the GA-related debt financing, the accumulated debt would potentially represent a fiscal exposure to the Province.
- Based on the two Energy options below, each at a 25-year amortization period and at a 30-year amortization period, there are a total of six scenarios considered:
  - Option 1a: GA Smoothing, Residential Bills Lowered 25% (Borrow approx. $5B in 2017) - The amount of GA paid by ratepayers in 2017 is lowered by about $5 billion below the annual supply costs, with the GA increasing at the rate of inflation thereafter. GA over-payments capped at $7.5 billion above the true cost of GA in any given year.
  - Option 1b: GA Smoothing, Residential Bills Lowered 33% (Borrow approx. $7B in 2017) - The amount of GA paid by ratepayers in 2017 is lowered by about $7 billion below the annual supply costs, with GA increasing at 2.7% thereafter. No limits placed on GA over-payments.
  - Option 1c: GA Smoothing, Residential Bills Lowered 25% (Borrow approx. $4B in 2017) - The amount of GA paid by ratepayers in 2017 is lowered by about $5 billion below the annual supply costs, with the GA increasing at the rate of inflation thereafter. GA over-payments capped at $2.8 billion above the true cost of GA in any given year.
- Energy scenario modelling was provided on a calendar year basis, and assumed to be starting as at January 1, 2017. Actual costs and timing may differ.
- Energy assumed a 30 year financing period and a nominal interest rate of 5.12% per year (compounded annually). Actual borrowing costs may differ, depending on source of financing, structure of the entity including financial risks borne, and general financial market conditions.
  - Internal modelling that follows is based on GA data provided by Energy and assumes monthly GA amounts to be financed and interest expense accumulating from that point. Energy modelling may make different assumptions.

DRAFT

Scenario 1A/1B/1C *(Calendar Year Basis)*



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Feb4 1a, 30-yr	5,00	4,00	5,00	5,00	4,00	4,00	3,00	4,00	4,00	3,00	5,00	4,00	3,00	3,00	2,00	2,00	1,00	1,00	-2,0	-2,0	-3,0	-3,0	-4,0	-5,0	-5,0	-5,0	-6,0	-7,0	-6,0	-7,0	-7,0	0	0	0
Feb4 1b, 30-yr	7,00	7,00	7,00	8,00	6,00	6,00	6,00	7,00	6,00	6,00	6,00	6,00	5,00	5,00	4,00	3,00	3,00	2,00	-1,0	-2,0	-3,0	-4,0	-5,0	-6,0	-7,0	-8,0	-10,	-11,	-13,	-14,	-16,	0	0	0
Feb4 1c, 30-yr	4,00	3,00	3,00	4,00	2,00	2,00	2,00	3,00	2,00	1,00	2,00	2,00	1,00	0	-1,0	-1,0	-1,0	-1,0	-1,0	-2,0	-2,0	-2,0	-2,0	-2,0	-2,0	-2,0	-2,0	-2,0	-2,0	-3,0	-3,0	0	0	0
Feb4 1a, 30-yr, Accumulated Debt	5,00	9,00	14,0	19,0	23,0	27,0	30,0	34,0	38,0	41,0	46,0	50,0	53,0	56,0	58,0	60,0	61,0	62,0	60,0	58,0	55,0	52,0	48,0	43,0	38,0	33,0	27,0	20,0	14,0	7,00	0	0	0	0
Feb4 1b, 30-yr, Accumulated Debt	7,00	14,0	21,0	29,0	35,0	41,0	47,0	54,0	60,0	66,0	72,0	78,0	83,0	88,0	92,0	95,0	98,0	100,	99,0	97,0	94,0	90,0	85,0	79,0	72,0	64,0	54,0	43,0	30,0	16,0	0	0	0	0
Feb4 1c, 30-yr, Accumulated Debt	4,00	7,00	10,0	14,0	16,0	18,0	20,0	23,0	25,0	26,0	28,0	30,0	31,0	31,0	30,0	29,0	28,0	27,0	26,0	24,0	22,0	20,0	18,0	16,0	14,0	12,0	10,0	8,00	6,00	3,00	0	0	0	0

CALENDAR YEAR

DRAFT

Scenario 1A *(Calendar Year Basis)*

- Scenario 1a:
  - On a calendar year basis, annual interest cost peaks at $1 billion ($1.2 billion) , with cumulative interest costs of about $15 billion ($22 billion), under a 25-year (or 30-year) financing term

1a. GA Smoothing (Borrow $5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	2017	2018	2019	2020	2021	2022
Annual Exposure[2]	5,119	4,095	5,119	5,119	4,095	4,095

Fiscalized[3]	2016-17	2017-18	2018-19	2019-20	2020-21	2021-2022
Start: January 1st	1,280	4,863	4,351	5,119	4,863	4,095

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and $17-21 billion (at 3% interest rate), peaking in 2028.
- At 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately $33-$36 million compared to that at 5% interest rate.

1 Based on an interest rate of 5%.
2 Fiscal exposure based on equal monthly drawdown of debt.
3 Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

Scenario 1B *(Calendar Year Basis)*

- Scenario 1b: Moderate GA financing, with delayed increase, paying initially in a year $1.1 billion below the true cost of GA. Then limits, when consumers start to "pay down", of no more than $2 billion per year above the true cost of GA
  - On a calendar year basis, annual interest cost peaks at $1 billion ($1.2 billion) , with cumulative interest costs of about $15 billion ($21 billion), under a 25-year (or 30-year) financing term

1b. GA Smoothing (Borrow $7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	7,167	7,534	7,919	9,349	7,780	8,178

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	1,792	7,258	7,630	8,277	8,956	7,879

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 and $17-21 billion (at 3% interest rate), peaking in 2028.
- At 3.5%, the highest fiscal exposure will occur in 2020-21, decreasing by approximately $118-$134 million compared to that at 5% interest rate.

1 Based on an interest rate of 5%.
2 Fiscal exposure based on equal monthly drawdown of debt.
3 Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

DRAFT

Scenario 1C *(Calendar Year Basis)*

- Scenario 1b: Moderate GA financing, with delayed increase, paying initially in a year $1.1 billion below the true cost of GA. Then limits, when consumers start to "pay down", of no more than $2 billion per year above the true cost of GA
  - On a calendar year basis, annual interest cost peaks at $1 billion ($1.2 billion) , with cumulative interest costs of about $15 billion ($21 billion), under a 25-year (or 30-year) financing term

1c. GA Smoothing (Borrow $4 billion in 2017)

$ millions

Scenario 1C - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	4,095	3,281	3,449	4,649	2,840	2,985

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	1,024	3,892	3,323	3,749	4,197	2,876

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 and $17-21 billion (at 3% interest rate), peaking in 2028.
- At 3.5%, the highest fiscal exposure will occur in 2020-21, decreasing by approximately $118-$134 million compared to that at 5% interest rate.

1 Based on an interest rate of 5%.
2 Fiscal exposure based on equal monthly drawdown of debt.
3 Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

DRAFT

GA Financing Scenarios

January 2017

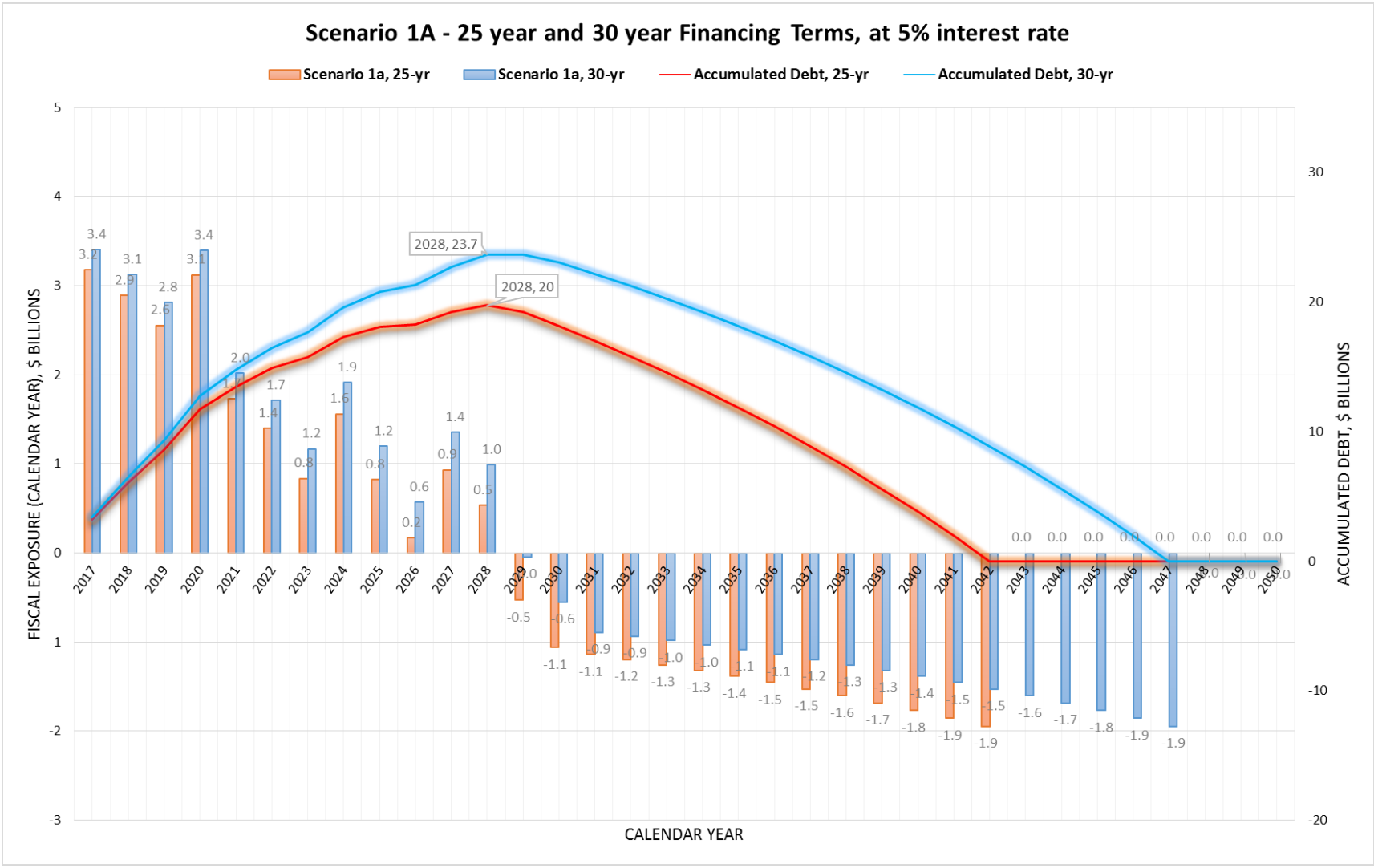
Scenario 1a/1b, 25-yr/30-yr

Corporate and Electricity Finance Division

February 7, 2017

DRAFT

Scenario 1A *(Calendar Year Basis)*



DRAFT

Scenario 1A *(Calendar Year Basis)*

- Scenario 1a: Moderate GA financing: Initially paying in a year up to $3.2 and $3.4 billion below the true cost of GA. Then limits, when consumers start to "pay down", of paying no more than $2 billion per year above the true cost of GA.
  - On a calendar year basis, annual interest cost peaks at $1 billion ($1.2 billion) , with cumulative interest costs of about $15 billion ($22 billion), under a 25-year (or 30-year) financing term

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Fiscal Exposure[2]	3,180	2,888	2,556	3,123	1,728	1,400

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	795	3,107	2,805	2,697	2,774	1,646

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Fiscal Exposure[2]	3,404	3,128	2,812	3,396	2,020	1,712

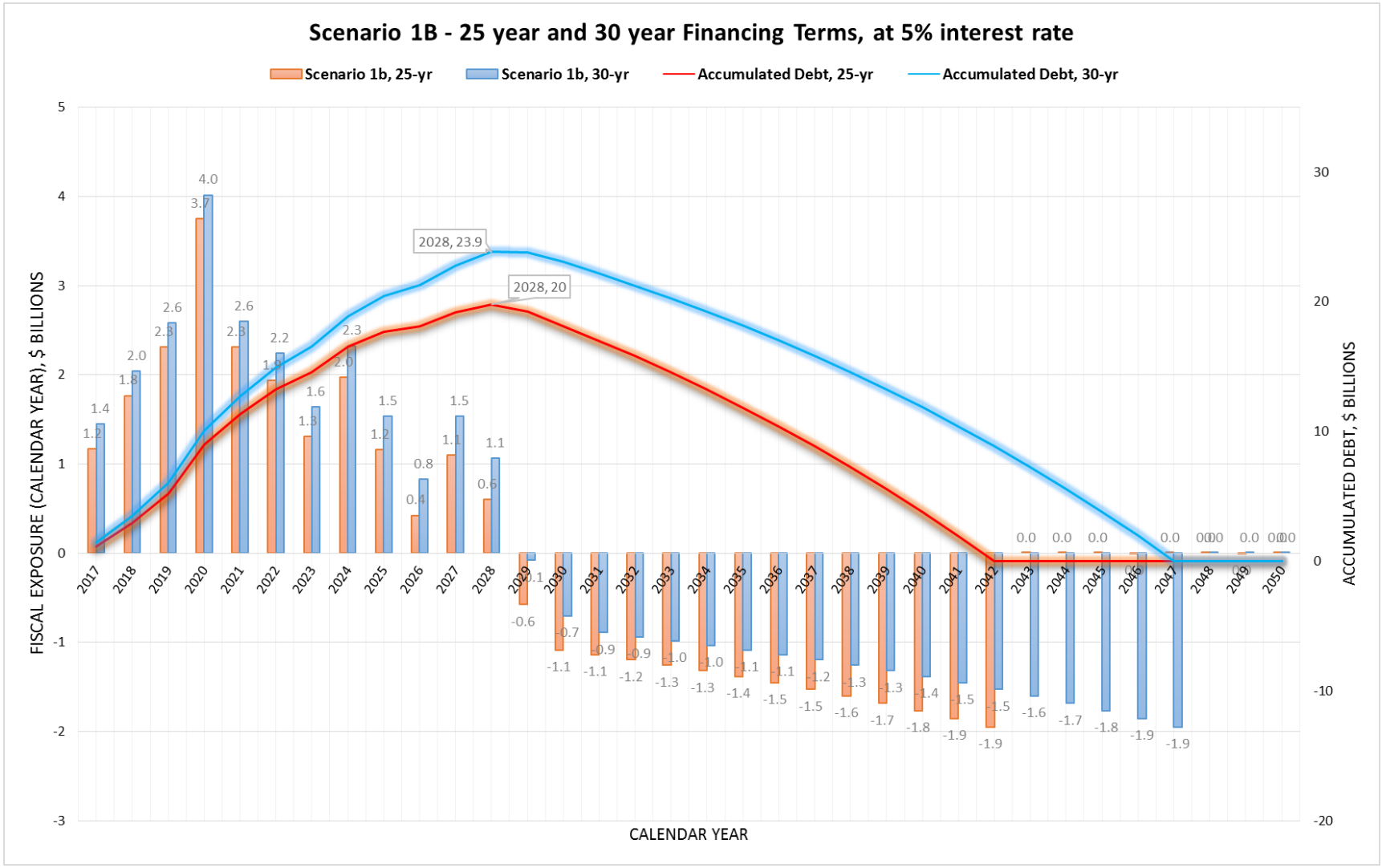
Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	851	3,335	3,049	2,958	3,052	1,943

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and $17-21 billion (at 3% interest rate), peaking in 2028.
- At 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately $33-$36 million compared to that at 5% interest rate.

1 Based on an interest rate of 5%.
2 Fiscal exposure based on equal monthly drawdown of debt.
3 Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

DRAFT

Scenario 1B *(Calendar Year Basis)*



DRAFT

Scenario 1B *(Calendar Year Basis)*

- Scenario 1b: Moderate GA financing, with delayed increase, paying initially in a year $1.1 billion below the true cost of GA. Then limits, when consumers start to "pay down", of no more than $2 billion per year above the true cost of GA
  - On a calendar year basis, annual interest cost peaks at $1 billion ($1.2 billion) , with cumulative interest costs of about $15 billion ($21 billion), under a 25-year (or 30-year) financing term

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Fiscal Exposure[2]	1,168	1,765	2,311	3,750	2,311	1,933

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	292	1,317	1,901	2,671	3,391	2,217

Scenario 1b - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Fiscal Exposure[2]	1,449	2,040	2,581	4,016	2,598	2,241

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	362	1,597	2,175	2,940	3,662	2,508

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 and $17-21 billion (at 3% interest rate), peaking in 2028.
- At 3.5%, the highest fiscal exposure will occur in 2020-21, decreasing by approximately $118-$134 million compared to that at 5% interest rate.

1 Based on an interest rate of 5%.
2 Fiscal exposure based on equal monthly drawdown of debt.
3 Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

DRAFT

GA Financing Scenarios

February 4, 2017

Scenario 1a/1b/1c

Corporate and Electricity Finance Division

February 7, 2017

Overview

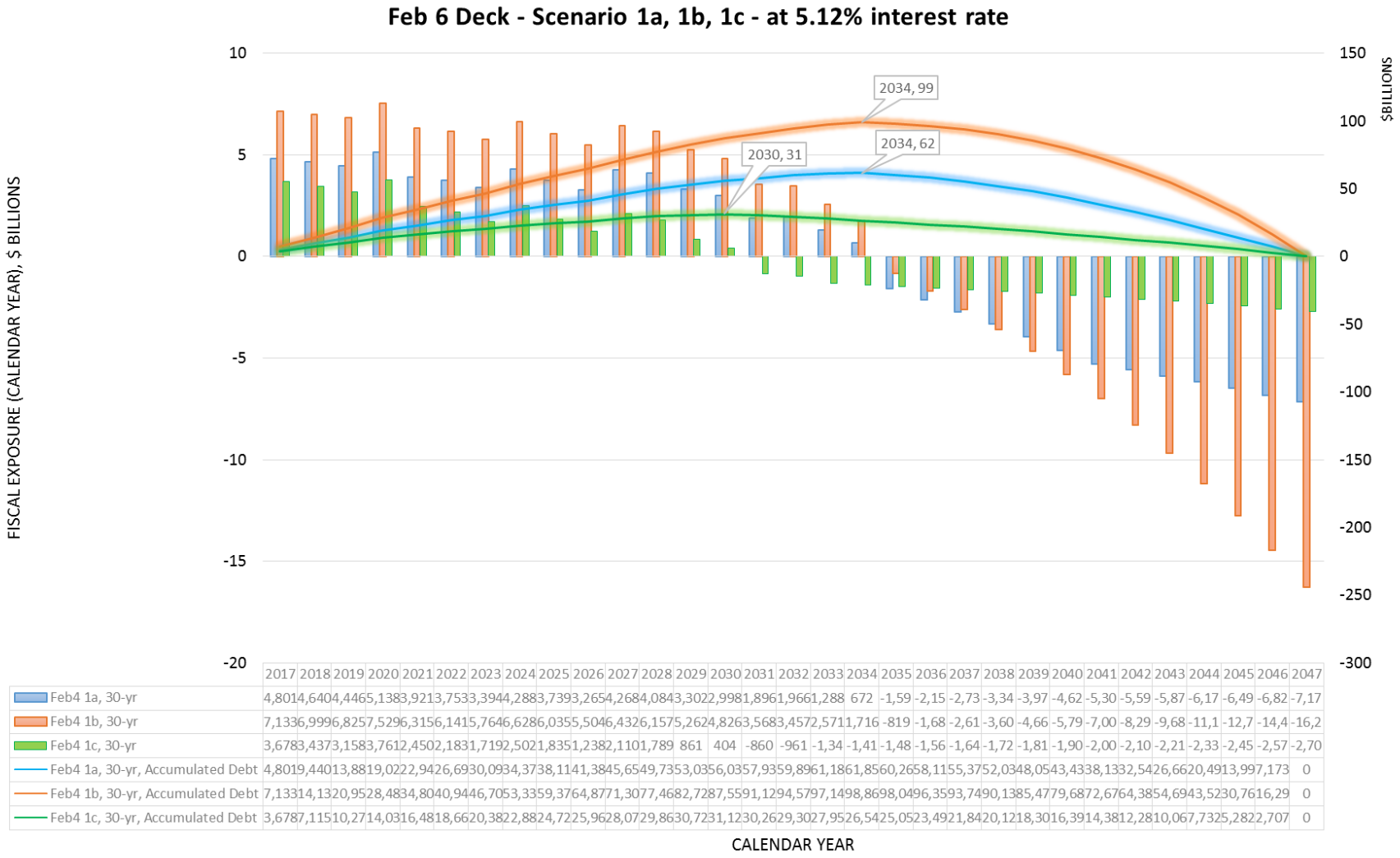
February 6 Deck

- In a draft deck (dated February 6, 2017), the Ministry of Energy considers a number of electricity price mitigation options; in particular deferring the pass-through to ratepayers of some generation supply costs by partially debt financing the cost of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments.
  - The amount of GA paid by ratepayers would be set at a value lower than the costs of supply in the early years, and would be increased over time according to a pre-defined formula until the debt has been paid off.
  - Without a favourable outcome on the discussions and implementation of the accounting treatment of the GA-related debt financing, the accumulated debt would potentially represent a fiscal exposure to the Province.
- The following three new scenarios were provided by Energy:
  - Scenario 1a: GA Smoothing, Residential Bills Lowered 25% (Borrow approx. $5B in 2017) - The amount of GA paid by ratepayers in 2017 is lowered by about $5 billion below the annual supply costs, with the GA increasing at the rate of inflation thereafter. GA over-payments capped at $7.5 billion above the true cost of GA in any given year.
  - Scenario 1b: GA Smoothing, Residential Bills Lowered 33% (Borrow approx. $7B in 2017) - The amount of GA paid by ratepayers in 2017 is lowered by about $7 billion below the annual supply costs, with GA increasing at 2.7% thereafter. No limits placed on GA over-payments.
  - Scenario 1c: GA Smoothing, Residential Bills Lowered 25% (Borrow approx. $4B in 2017) - The amount of GA paid by ratepayers in 2017 is lowered by about $5 billion below the annual supply costs, with the GA increasing at the rate of inflation thereafter. GA over-payments capped at $2.8 billion above the true cost of GA in any given year.
- Energy scenario modelling was provided on a calendar year basis, and assumed to be starting as at January 1, 2017. Actual costs and timing may differ.
- Energy assumed a 30 year financing period and a nominal interest rate of 5.12% per year (compounded annually). Actual borrowing costs may differ, depending on source of financing, structure of the entity including financial risks borne, and general financial market conditions.
  - Internal modelling that follows is based on GA data provided by Energy and assumes monthly GA amounts to be financed and interest expense accumulating from that point. Energy modelling may make different assumptions.

DRAFT

Scenario 1A/1B/1C *(Calendar Year Basis)*

February 6 Deck



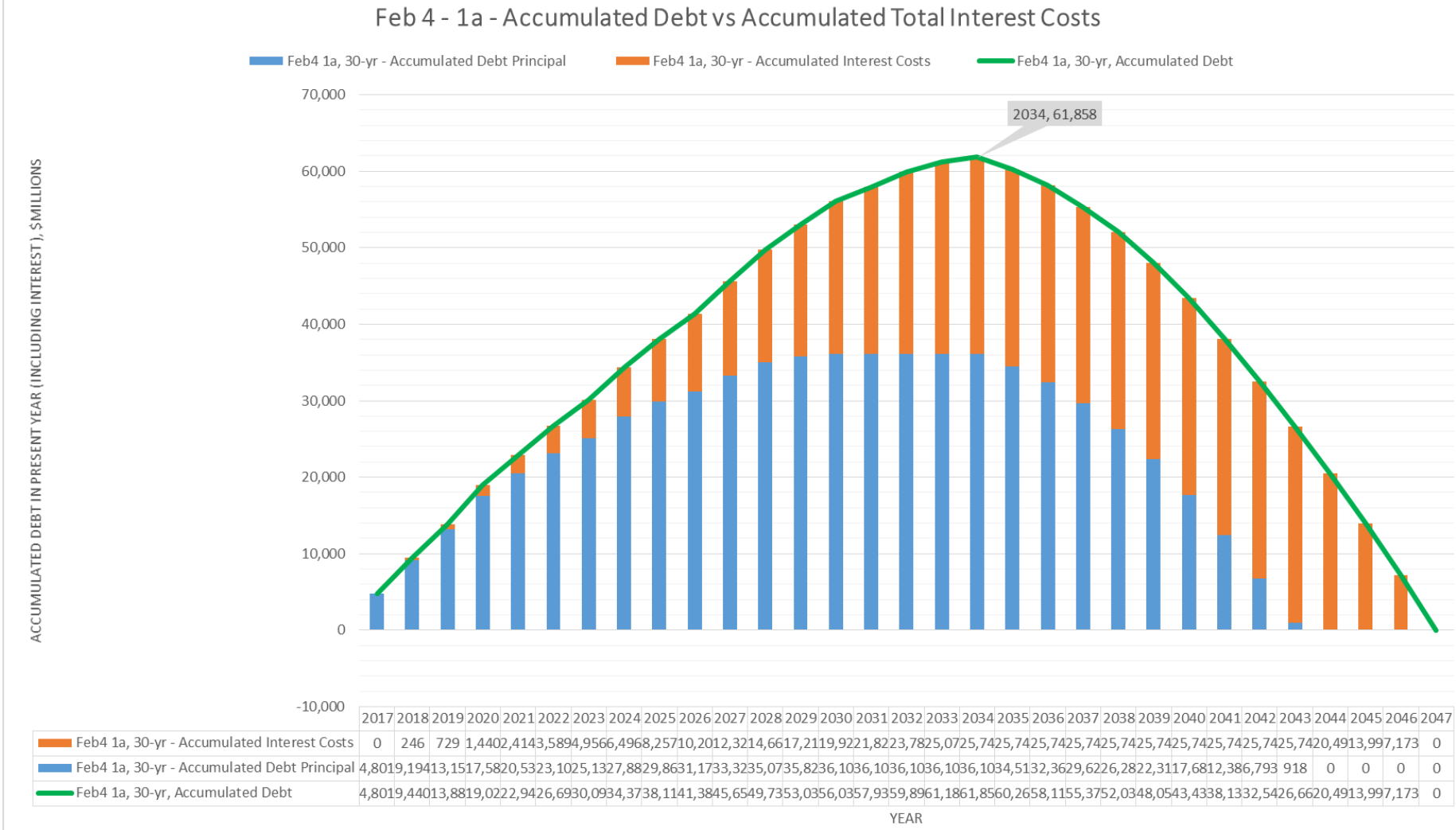
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
Feb4 1a, 30-yr	4,801	4,640	4,465	1,383	921	3,753	3,944	2,883	7,393	2,654	2,684	0,843	3,022	9,981	8,961	9,661	1,288	672	-1,59	-2,15	-2,73	-3,34	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
Feb4 1b, 30-yr	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68	-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
Feb4 1c, 30-yr	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56	-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,881	9,022	9,426	6,930	0,934	3,738	1,141	3,845	6,549	7,353	0,356	0,357	9,359	8,961	1,861	8,560	2,658	1,155	3,752	0,348	0,543	4,338	1,332	5,426	6,620	4,913	997,173	0	
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,132	0,952	8,483	4,804	0,944	6,705	3,359	3,764	8,771	3,077	4,682	7,287	5,591	1,294	5,797	1,498	8,698	0,496	3,593	7,490	1,385	4,779	6,872	6,764	3,854	6,943	5,230	7,616	29	0
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,271	4,031	6,481	8,662	0,382	2,882	4,722	5,962	8,072	9,863	0,723	1,123	0,262	9,302	7,952	6,542	5,052	3,492	1,842	0,121	8,301	6,391	4,381	2,281	0,067	7,732	5,282	2,707	0

CALENDAR YEAR

DRAFT

Scenario 1A *(Calendar Year Basis)*

February 6 Deck



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,012	12,321	14,661	17,211	19,922	21,822	23,782	25,072	25,742	25,742	25,742	25,742	25,742	25,742	25,742	25,742	25,742	25,742	20,491	13,997	7,173	0
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,151	17,582	20,532	23,102	5,132	7,882	9,863	1,733	3,235	0,735	8,236	10,036	10,036	10,036	10,036	10,034	5,132	3,629	6,226	2,822	3,117	6,812	2,386	7,793	918	0	0	0	0
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,881	19,022	22,946	26,691	30,093	34,373	8,114	1,384	5,654	9,735	3,035	6,235	9,359	8,961	1,861	8,560	2,658	1,155	3,752	0,348	0,543	4,338	1,332	5,426	6,620	4,913	3,997	7,173	0

Scenario 1A *(Calendar Year Basis)*

February 6 Deck

- **Scenario 1a:** GA Smoothing, Residential Bills Lowered 25% (Borrow approx. $5B in 2017) - The amount of GA paid by ratepayers in 2017 is lowered by about $5 billion below the annual supply costs, with the GA increasing at the rate of inflation thereafter. GA over-payments capped at $7.5 billion above the true cost of GA in any given year.
  - On a calendar year basis, annual interest cost peaks at $3.2 billion (Year 2035) , with cumulative interest costs of about $58 billion over the 30-year financing term.

1a. GA Smoothing (Borrow ~$5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	4,801	4,640	4,446	5,138	3,921	3,753

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	1,200	4,760	4,591	4,619	4,833	3,879

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $62 billion, peaking in 2034.

1 Based on an interest rate of 5.12%, compounded annually.
2 Fiscal exposure based on annual drawdown of debt.
3 Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

DRAFT

Scenario 1B *(Calendar Year Basis)*

February 6 Deck

- **Scenario 1b:** GA Smoothing, Residential Bills Lowered 33% (Borrow approx. $7B in 2017) - The amount of GA paid by ratepayers in 2017 is lowered by about $7 billion below the annual supply costs, with GA increasing at 2.7% thereafter. No limits placed on GA over-payments.
  - On a calendar year basis, annual interest cost peaks at $5 billion (Year 2035) , with cumulative interest costs of about $97 billion over the 30-year financing term.

1b. GA Smoothing (Borrow ~$7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	2017	2018	2019	2020	2021	2022
Annual Exposure[2]	7,133	6,999	6,825	7,529	6,315	6,141

Fiscalized[3]	2016-17	2017-18	2018-19	2019-20	2020-21	2021-2022
Start: January 1st	1,783	7,100	6,956	7,001	7,226	6,272

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $99 billion, peaking in 2034.

1 Based on an interest rate of 5.12%, compounded annually.
2 Fiscal exposure based on annual drawdown of debt.
3 Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

Scenario 1C *(Calendar Year Basis)*

February 6 Deck

- **Scenario 1c:** GA Smoothing, Residential Bills Lowered 25% (Borrow approx. $4B in 2017) - The amount of GA paid by ratepayers in 2017 is lowered by about $5 billion below the annual supply costs, with the GA increasing at the rate of inflation thereafter. GA over-payments capped at $2.8 billion above the true cost of GA in any given year.
  - On a calendar year basis, annual interest cost peaks at $1.6 billion (Year 2031) , with cumulative interest costs of about $29 billion over the 30-year financing term.

1c. GA Smoothing (Borrow ~$4 billion in 2017)

$ millions

Scenario 1C - 30-yr amortization	2017	2018	2019	2020	2021	2022
Annual Exposure[2]	3,678	3,437	3,158	3,761	2,450	2,183

Fiscalized[3]	2016-17	2017-18	2018-19	2019-20	2020-21	2021-2022
Start: January 1st	919	3,617	3,367	3,309	3,433	2,383

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $31 billion, peaking in 2030.

1 Based on an interest rate of 5.12%, compounded annually.
2 Fiscal exposure based on annual drawdown of debt.
3 Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

DRAFT

GA Financing Scenarios

January 2017

Scenario 1a/1b, 25-yr/30-yr

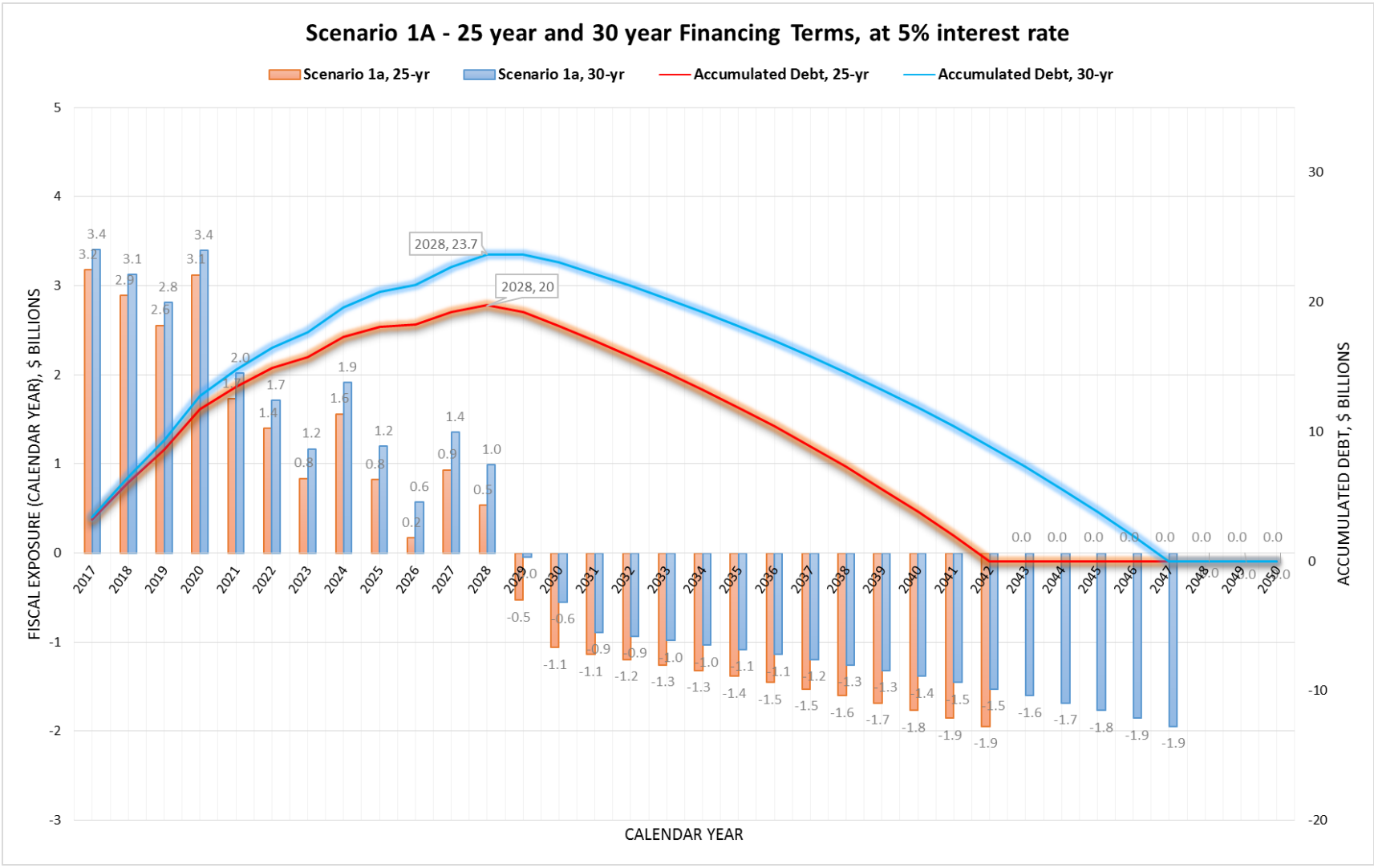
Corporate and Electricity Finance Division

February 7, 2017

DRAFT

Scenario 1A *(Calendar Year Basis)*

January Deck



Scenario 1A *(Calendar Year Basis)*

January Deck

- Scenario 1a: Moderate GA financing: Initially paying in a year up to $3.2 and $3.4 billion below the true cost of GA. Then limits, when consumers start to "pay down", of paying no more than $2 billion per year above the true cost of GA.
  - On a calendar year basis, annual interest cost peaks at $1 billion ($1.2 billion) , with cumulative interest costs of about $15 billion ($22 billion), under a 25-year (or 30-year) financing term

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Fiscal Exposure[2]	3,180	2,888	2,556	3,123	1,728	1,400

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	795	3,107	2,805	2,697	2,774	1,646

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Fiscal Exposure[2]	3,404	3,128	2,812	3,396	2,020	1,712

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	851	3,335	3,049	2,958	3,052	1,943

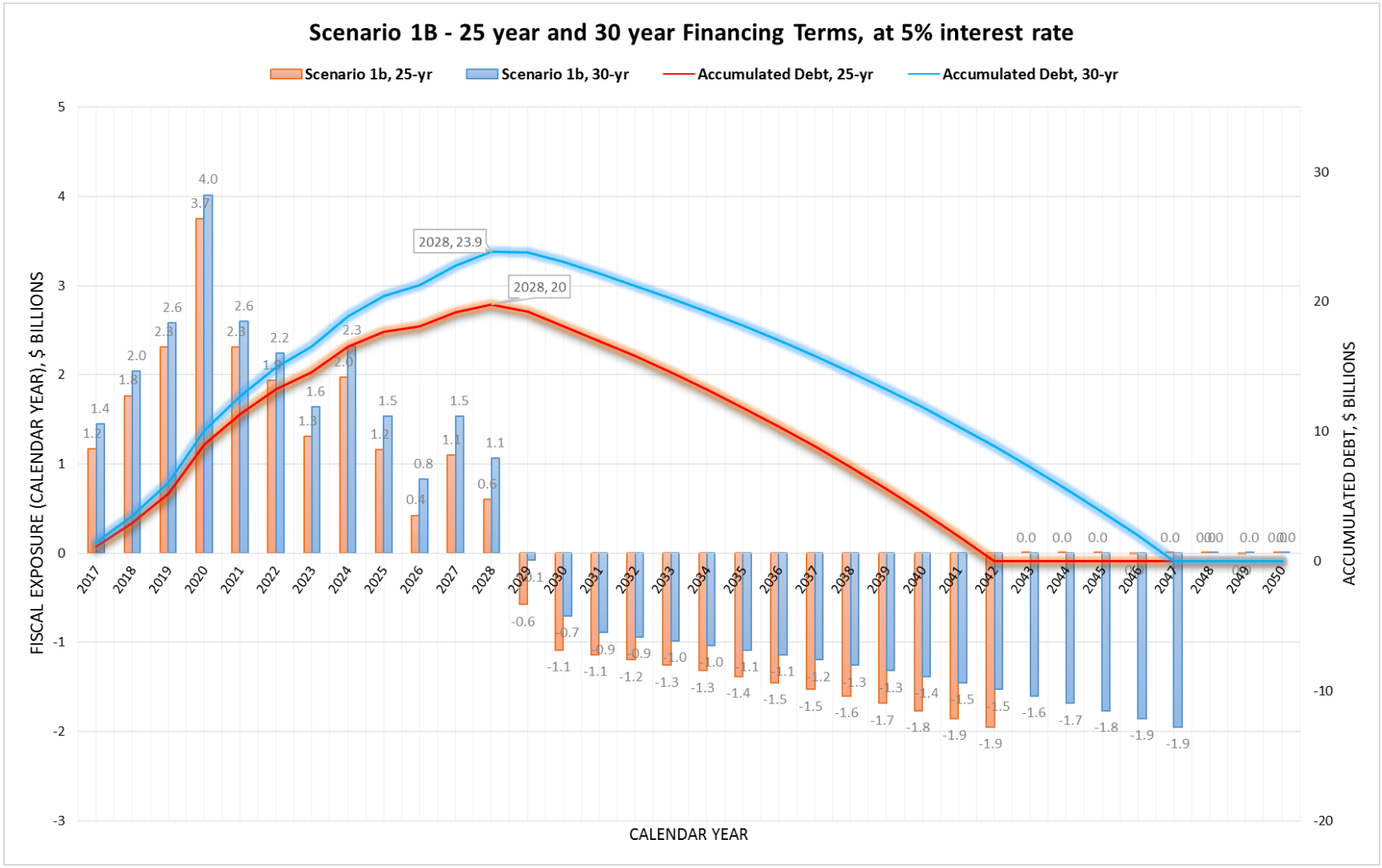
Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and $17-21 billion (at 3% interest rate), peaking in 2028.
- At 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately $33-$36 million compared to that at 5% interest rate.

1 Based on an interest rate of 5%.
2 Fiscal exposure based on equal monthly drawdown of debt.
3 Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

DRAFT

Scenario 1B *(Calendar Year Basis)*

January Deck



Scenario 1B *(Calendar Year Basis)*

January Deck

- Scenario 1b: Moderate GA financing, with delayed increase, paying initially in a year $1.1 billion below the true cost of GA. Then limits, when consumers start to "pay down", of no more than $2 billion per year above the true cost of GA
  - On a calendar year basis, annual interest cost peaks at $1 billion ($1.2 billion) , with cumulative interest costs of about $15 billion ($21 billion), under a 25-year (or 30-year) financing term

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Fiscal Exposure[2]	1,168	1,765	2,311	3,750	2,311	1,933

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	292	1,317	1,901	2,671	3,391	2,217

Scenario 1b - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Fiscal Exposure[2]	1,449	2,040	2,581	4,016	2,598	2,241

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	362	1,597	2,175	2,940	3,662	2,508

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 and $17-21 billion (at 3% interest rate), peaking in 2028.
- At 3.5%, the highest fiscal exposure will occur in 2020-21, decreasing by approximately $118-$134 million compared to that at 5% interest rate.

1 Based on an interest rate of 5%.
2 Fiscal exposure based on equal monthly drawdown of debt.
3 Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

DRAFT

GA Financing Scenarios

February 4, 2017

Scenario 1a/1b/1c

Corporate and Electricity Finance Division

February 7, 2017

Overview

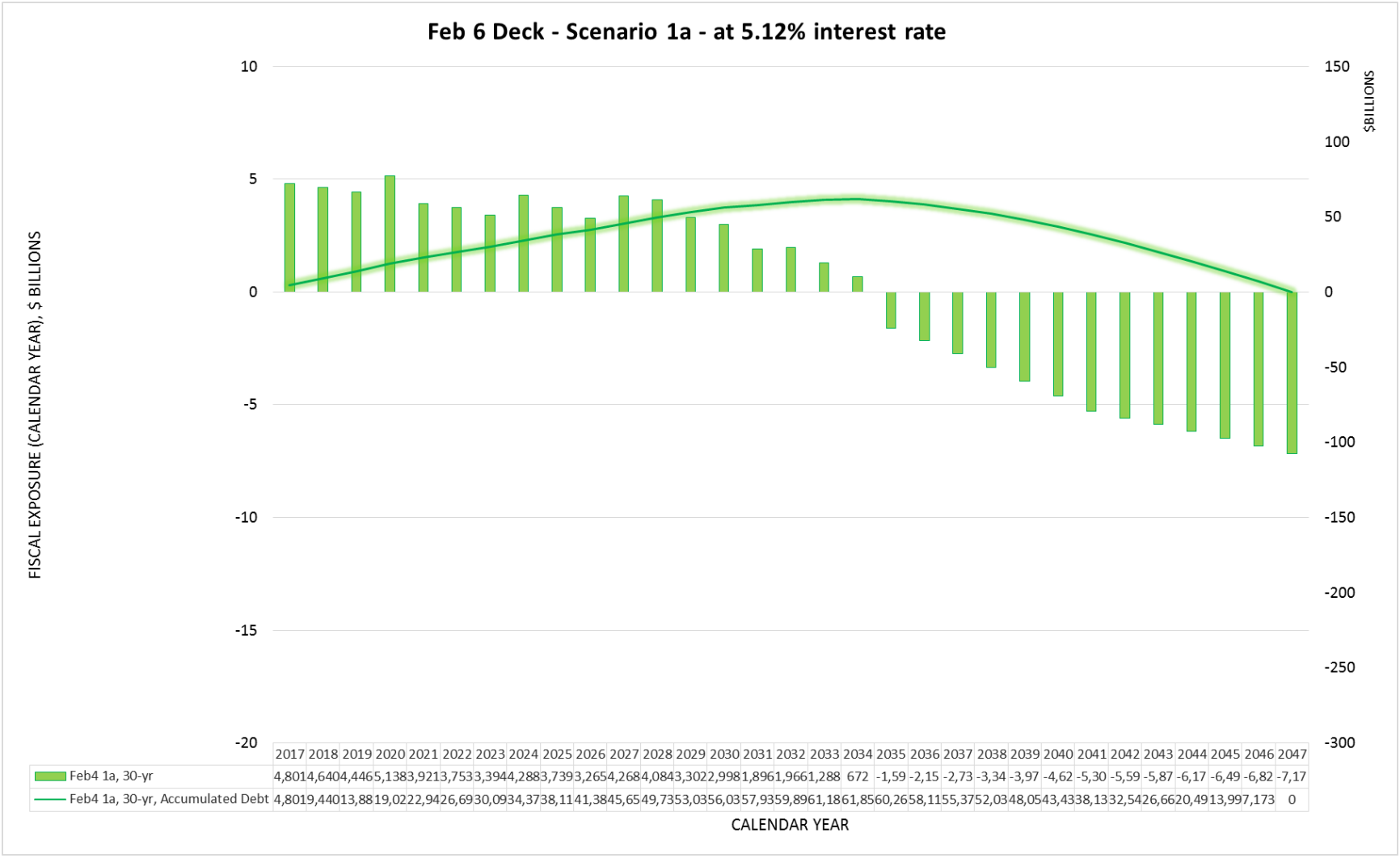
February 6 Deck

- In a draft deck (dated February 6, 2017), the Ministry of Energy considers a number of electricity price mitigation options; in particular deferring the pass-through to ratepayers of some generation supply costs by partially debt financing the cost of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments.
  - The amount of GA paid by ratepayers would be set at a value lower than the costs of supply in the early years, and would be increased over time according to a pre-defined formula until the debt has been paid off.
  - Without a favourable outcome on the discussions and implementation of the accounting treatment of the GA-related debt financing, the accumulated debt would potentially represent a fiscal exposure to the Province.
- The following three new scenarios were provided by Energy:
  - Scenario 1a: GA Smoothing, Residential Bills Lowered 25% (Borrow approx. $5B in 2017) - The amount of GA paid by ratepayers in 2017 is lowered by about $5 billion below the annual supply costs, with the GA increasing at the rate of inflation thereafter. GA over-payments capped at $7.5 billion above the true cost of GA in any given year.
  - Scenario 1b: GA Smoothing, Residential Bills Lowered 33% (Borrow approx. $7B in 2017) - The amount of GA paid by ratepayers in 2017 is lowered by about $7 billion below the annual supply costs, with GA increasing at 2.7% thereafter. No limits placed on GA over-payments.
  - Scenario 1c: GA Smoothing, Residential Bills Lowered 25% (Borrow approx. $4B in 2017) - The amount of GA paid by ratepayers in 2017 is lowered by about $5 billion below the annual supply costs, with the GA increasing at the rate of inflation thereafter. GA over-payments capped at $2.8 billion above the true cost of GA in any given year.
- Energy scenario modelling was provided on a calendar year basis, and assumed to be starting as at January 1, 2017. Actual costs and timing may differ.
- Energy assumed a 30 year financing period and a nominal interest rate of 5.12% per year (compounded annually). Actual borrowing costs may differ, depending on source of financing, structure of the entity including financial risks borne, and general financial market conditions.
  - Internal modelling that follows is based on GA data provided by Energy and assumes monthly GA amounts to be financed and interest expense accumulating from that point. Energy modelling may make different assumptions.

DRAFT

Scenario 1A *(Calendar Year Basis)*

February 6 Deck



DRAFT

Scenario 1A *(Calendar Year Basis)*

February 6 Deck

- **Scenario 1a:** GA Smoothing, Residential Bills Lowered 25% (Borrow approx. $5B in 2017) - The amount of GA paid by ratepayers in 2017 is lowered by about $5 billion below the annual supply costs, with the GA increasing at the rate of inflation thereafter. GA over-payments capped at $7.5 billion above the true cost of GA in any given year.
  - On a calendar year basis, annual interest cost peaks at $3.2 billion (Year 2035) , with cumulative interest costs of about $58 billion over the 30-year financing term.

1a. GA Smoothing (Borrow ~$5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	4,801	4,640	4,446	5,138	3,921	3,753

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	1,200	4,760	4,591	4,619	4,833	3,879

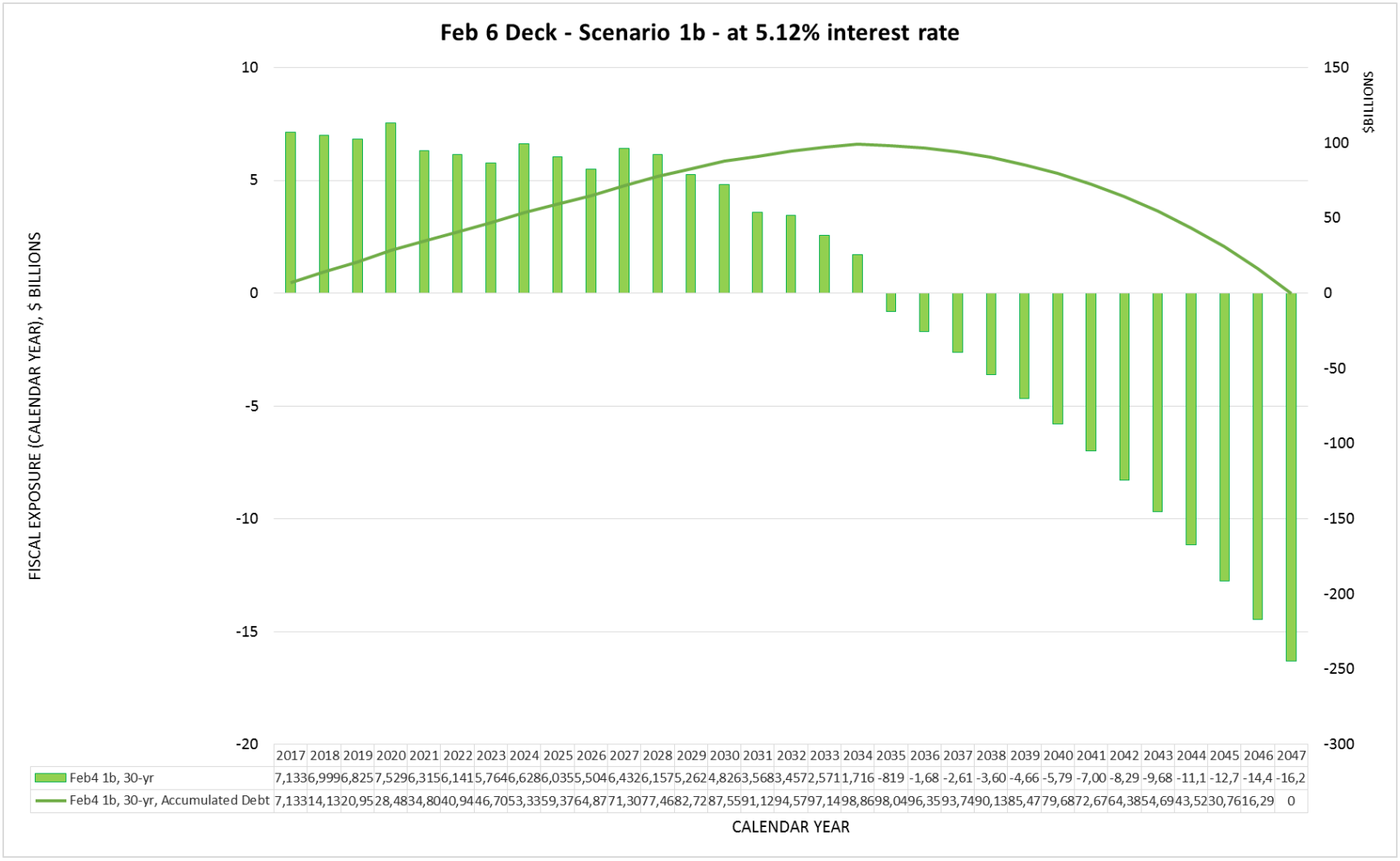
Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $62 billion, peaking in 2034.

1 Based on an interest rate of 5.12%, compounded annually.
2 Fiscal exposure based on annual drawdown of debt.
3 Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

DRAFT

Scenario 1B *(Calendar Year Basis)*

February 6 Deck



DRAFT

Scenario 1B *(Calendar Year Basis)*

February 6 Deck

- **Scenario 1b:** GA Smoothing, Residential Bills Lowered 33% (Borrow approx. $7B in 2017) - The amount of GA paid by ratepayers in 2017 is lowered by about $7 billion below the annual supply costs, with GA increasing at 2.7% thereafter. No limits placed on GA over-payments.
  - On a calendar year basis, annual interest cost peaks at $5.1 billion (Year 2035) , with cumulative interest costs of about $97 billion over the 30-year financing term.

1b. GA Smoothing (Borrow ~$7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	7,133	6,999	6,825	7,529	6,315	6,141

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	1,783	7,100	6,956	7,001	7,226	6,272

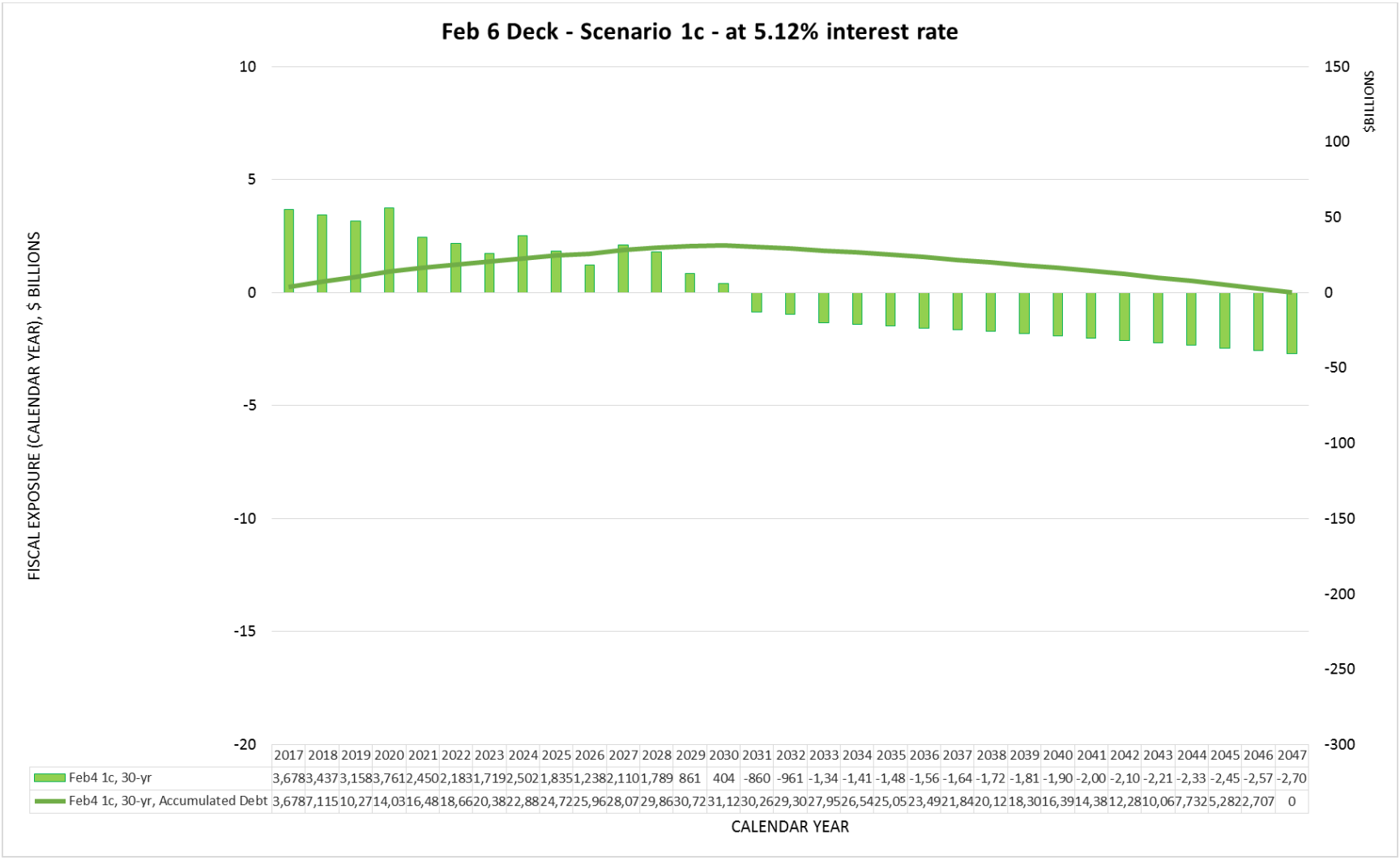
Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $99 billion, peaking in 2034.

1 Based on an interest rate of 5.12%, compounded annually.
2 Fiscal exposure based on annual drawdown of debt.
3 Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

DRAFT

Scenario 1C *(Calendar Year Basis)*

February 6 Deck



Scenario 1C *(Calendar Year Basis)*

February 6 Deck

- **Scenario 1c:** GA Smoothing, Residential Bills Lowered 25% (Borrow approx. $4B in 2017) - The amount of GA paid by ratepayers in 2017 is lowered by about $5 billion below the annual supply costs, with the GA increasing at the rate of inflation thereafter. GA over-payments capped at $2.8 billion above the true cost of GA in any given year.
  - On a calendar year basis, annual interest cost peaks at $1.6 billion (Year 2031) , with cumulative interest costs of about $29 billion over the 30-year financing term.

1c. GA Smoothing (Borrow ~$4 billion in 2017)

$ millions

Scenario 1C - 30-yr amortization	2017	2018	2019	2020	2021	2022
Annual Exposure[2]	3,678	3,437	3,158	3,761	2,450	2,183

Fiscalized[3]	2016-17	2017-18	2018-19	2019-20	2020-21	2021-2022
Start: January 1st	919	3,617	3,367	3,309	3,433	2,383

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $31 billion, peaking in 2030.

1 Based on an interest rate of 5.12%, compounded annually.
2 Fiscal exposure based on annual drawdown of debt.
3 Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

DRAFT

GA Financing Scenarios

January 2017

Scenario 1a/1b, 25-yr/30-yr

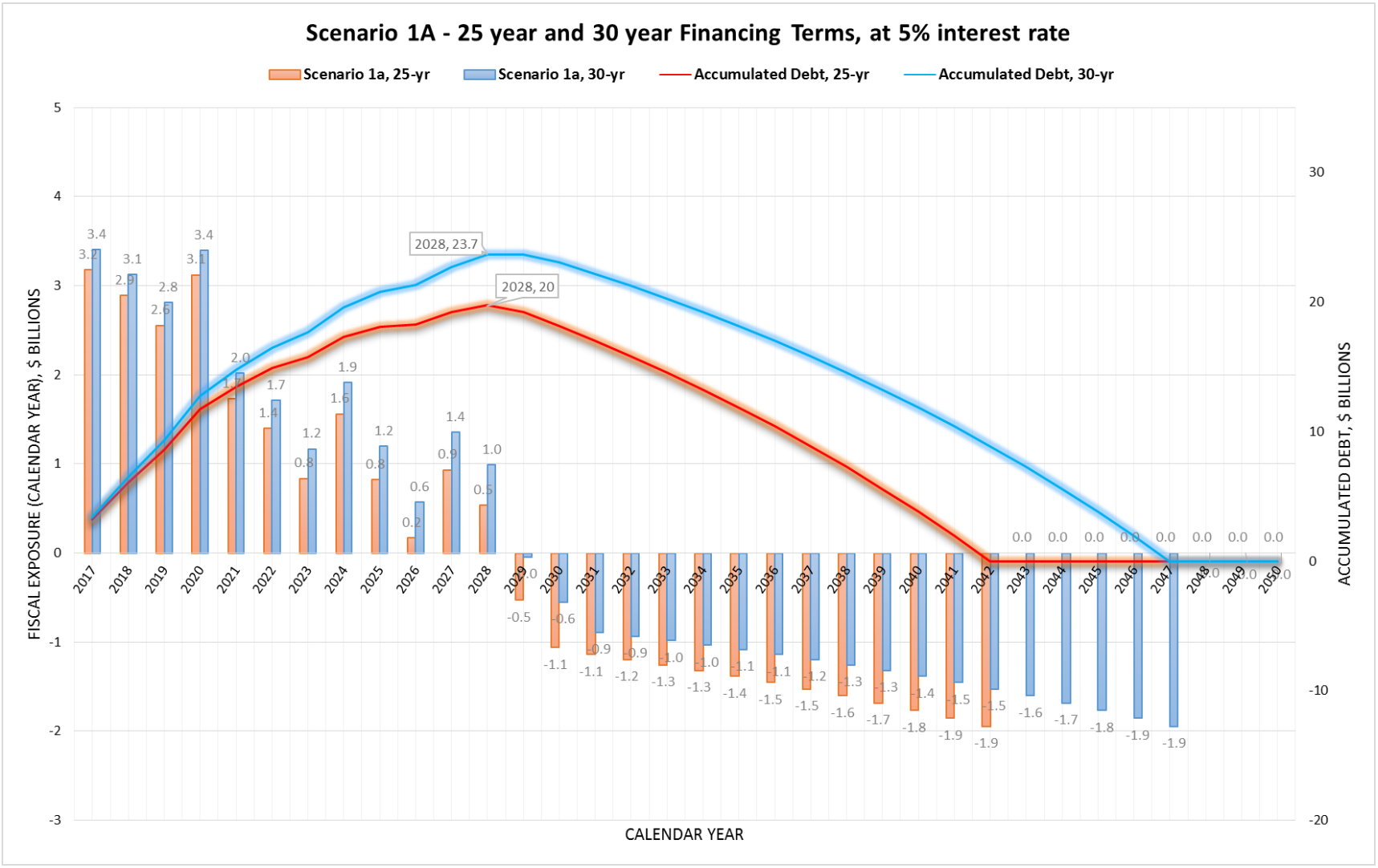
Corporate and Electricity Finance Division

February 7, 2017

DRAFT

Scenario 1A *(Calendar Year Basis)*

January Deck



DRAFT

Scenario 1A *(Calendar Year Basis)*

January Deck

- Scenario 1a: Moderate GA financing: Initially paying in a year up to $3.2 and $3.4 billion below the true cost of GA. Then limits, when consumers start to "pay down", of paying no more than $2 billion per year above the true cost of GA.
  - On a calendar year basis, annual interest cost peaks at $1 billion ($1.2 billion) , with cumulative interest costs of about $15 billion ($22 billion), under a 25-year (or 30-year) financing term

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Fiscal Exposure[2]	3,180	2,888	2,556	3,123	1,728	1,400

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	795	3,107	2,805	2,697	2,774	1,646

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Fiscal Exposure[2]	3,404	3,128	2,812	3,396	2,020	1,712

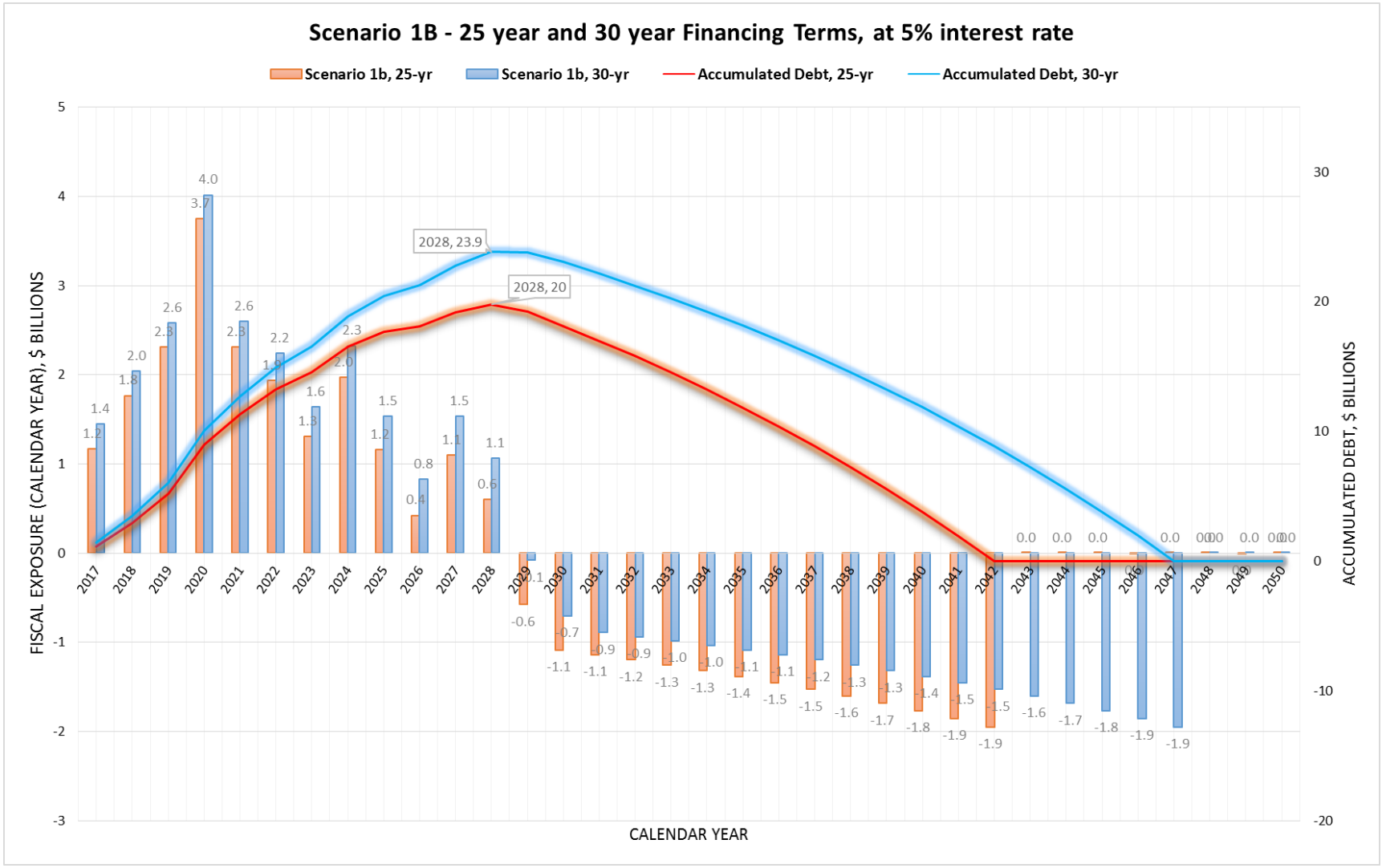
Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	851	3,335	3,049	2,958	3,052	1,943

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and $17-21 billion (at 3% interest rate), peaking in 2028.
- At 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately $33-$36 million compared to that at 5% interest rate.

1 Based on an interest rate of 5%.
2 Fiscal exposure based on equal monthly drawdown of debt.
3 Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

Scenario 1B *(Calendar Year Basis)*

January Deck



DRAFT

Scenario 1B *(Calendar Year Basis)*

January Deck

- Scenario 1b: Moderate GA financing, with delayed increase, paying initially in a year $1.1 billion below the true cost of GA. Then limits, when consumers start to "pay down", of no more than $2 billion per year above the true cost of GA
  - On a calendar year basis, annual interest cost peaks at $1 billion ($1.2 billion) , with cumulative interest costs of about $15 billion ($21 billion), under a 25-year (or 30-year) financing term

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Fiscal Exposure[2]	1,168	1,765	2,311	3,750	2,311	1,933

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	292	1,317	1,901	2,671	3,391	2,217

Scenario 1b - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Fiscal Exposure[2]	1,449	2,040	2,581	4,016	2,598	2,241

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	362	1,597	2,175	2,940	3,662	2,508

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 and $17-21 billion (at 3% interest rate), peaking in 2028.
- At 3.5%, the highest fiscal exposure will occur in 2020-21, decreasing by approximately $118-$134 million compared to that at 5% interest rate.

1 Based on an interest rate of 5%.
2 Fiscal exposure based on equal monthly drawdown of debt.
3 Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

DRAFT

GA Financing Scenarios

February 4, 2017

Scenario 1a/1b/1c

Corporate and Electricity Finance Division

February 7, 2017

Overview

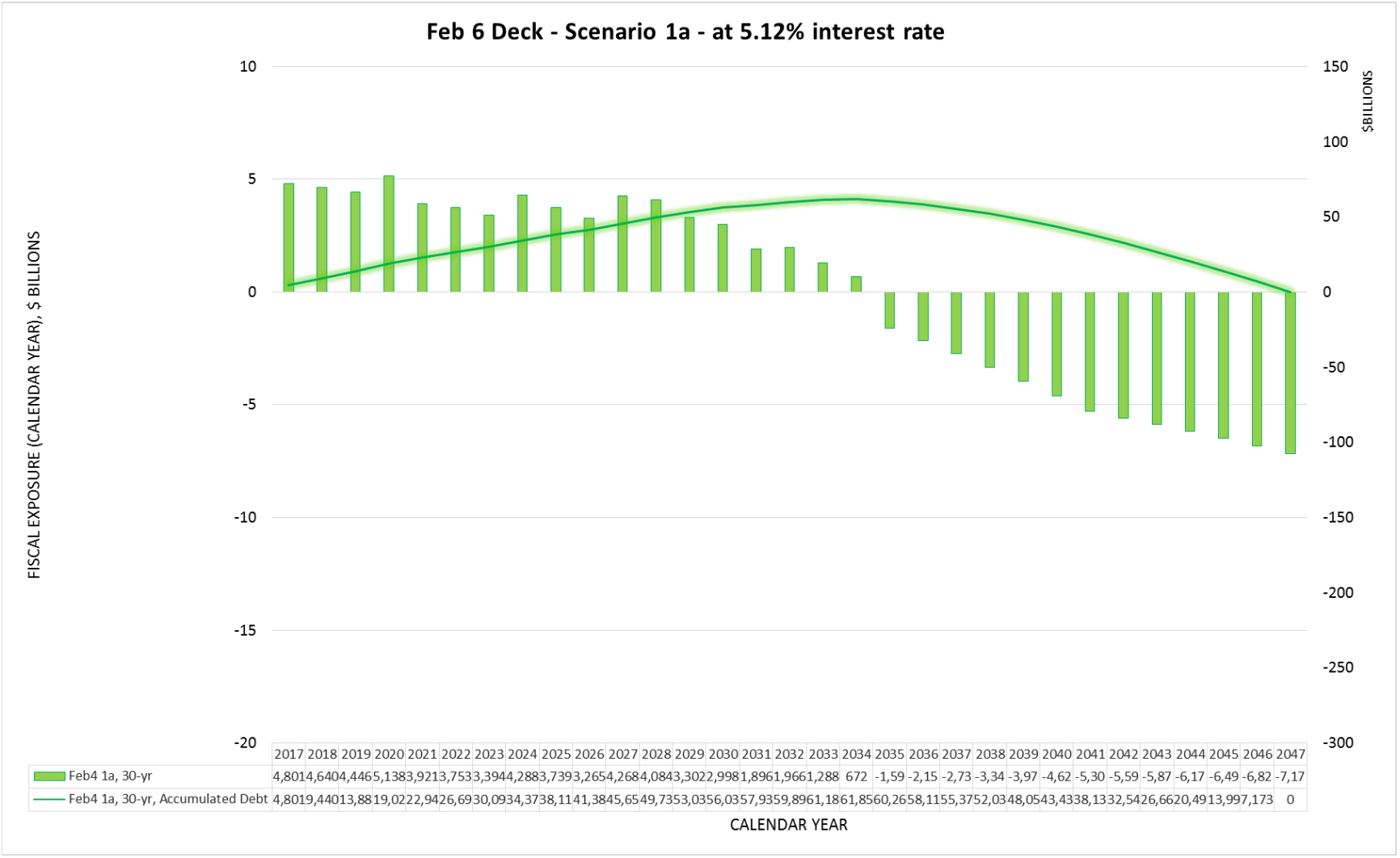
February 6 Deck

- In a draft deck (dated February 6, 2017), the Ministry of Energy considers a number of electricity price mitigation options; in particular deferring the pass-through to ratepayers of some generation supply costs by partially debt financing the cost of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments.
  - The amount of GA paid by ratepayers would be set at a value lower than the costs of supply in the early years, and would be increased over time according to a pre-defined formula until the debt has been paid off.
  - Without a favourable outcome on the discussions and implementation of the accounting treatment of the GA-related debt financing, the accumulated debt would potentially represent a fiscal exposure to the Province.
- The following three new scenarios were provided by Energy:
  - Scenario 1a: GA Smoothing, Residential Bills Lowered 25% (Borrow approx. $5B in 2017) - The amount of GA paid by ratepayers in 2017 is lowered by about $5 billion below the annual supply costs, with the GA increasing at the rate of inflation thereafter. GA over-payments capped at $7.5 billion above the true cost of GA in any given year.
  - Scenario 1b: GA Smoothing, Residential Bills Lowered 33% (Borrow approx. $7B in 2017) - The amount of GA paid by ratepayers in 2017 is lowered by about $7 billion below the annual supply costs, with GA increasing at 2.7% thereafter. No limits placed on GA over-payments.
  - Scenario 1c: GA Smoothing, Residential Bills Lowered 25% (Borrow approx. $4B in 2017) - The amount of GA paid by ratepayers in 2017 is lowered by about $5 billion below the annual supply costs, with the GA increasing at the rate of inflation thereafter. GA over-payments capped at $2.8 billion above the true cost of GA in any given year.
- Energy scenario modelling was provided on a calendar year basis, and assumed to be starting as at January 1, 2017. Actual costs and timing may differ.
- Energy assumed a 30 year financing period and a nominal interest rate of 5.12% per year (compounded annually). Actual borrowing costs may differ, depending on source of financing, structure of the entity including financial risks borne, and general financial market conditions.
  - Internal modelling that follows is based on GA data provided by Energy and assumes monthly GA amounts to be financed and interest expense accumulating from that point. Energy modelling may make different assumptions.

DRAFT

Scenario 1A *(Calendar Year Basis)*

February 6 Deck



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
Feb4 1a, 30-yr	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,59	-2,15	-2,73	-3,34	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,022	22,942	26,695	30,093	34,373	38,111	41,384	45,654	49,735	53,035	56,035	57,935	59,896	61,186	61,856	60,265	58,115	55,375	52,034	48,054	43,433	38,133	32,542	26,662	20,491	13,997	7,173	0

Scenario 1A *(Calendar Year Basis)*

February 6 Deck

- **Scenario 1a:** GA Smoothing, Residential Bills Lowered 25% (Borrow approx. $5B in 2017) - The amount of GA paid by ratepayers in 2017 is lowered by about $5 billion below the annual supply costs, with the GA increasing at the rate of inflation thereafter. GA over-payments capped at $7.5 billion above the true cost of GA in any given year.
  - ~~On a calendar year basis,~~ Under this scenario, borrowing a total of $36 billion in principal over the 30-year period results in an annual interest cost average about $2 billion per year, peak~~ings~~ at $3.2 billion per year (Year 2035), with cumulative interest costs of about $58 billion over the 30-year financing term.

1a. GA Smoothing (Borrow ~$5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	2017	2018	2019	2020	2021	2022
Annual Exposure[2]	4,801	4,640	4,446	5,138	3,921	3,753

Fiscalized[3]	2016-17	2017-18	2018-19	2019-20	2020-21	2021-2022
Start: January 1st	1,200	4,760	4,591	4,619	4,833	3,879

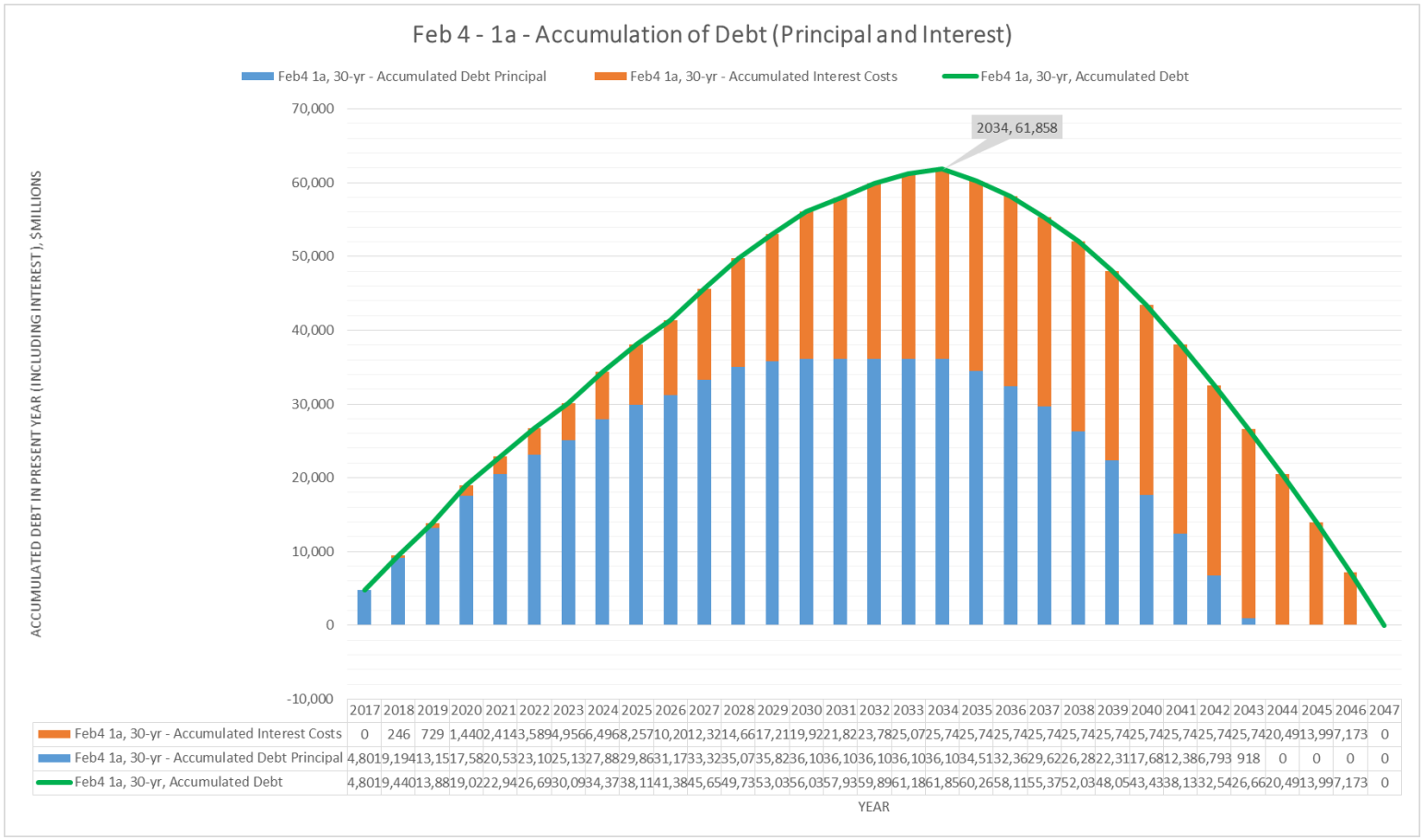
Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $62 billion, peaking in 2034.

1 Based on an interest rate of 5.12%, compounded annually.
2 Fiscal exposure based on annual drawdown of debt.
3 Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

DRAFT

Scenario 1A *(Calendar Year Basis)*

February 6 Deck

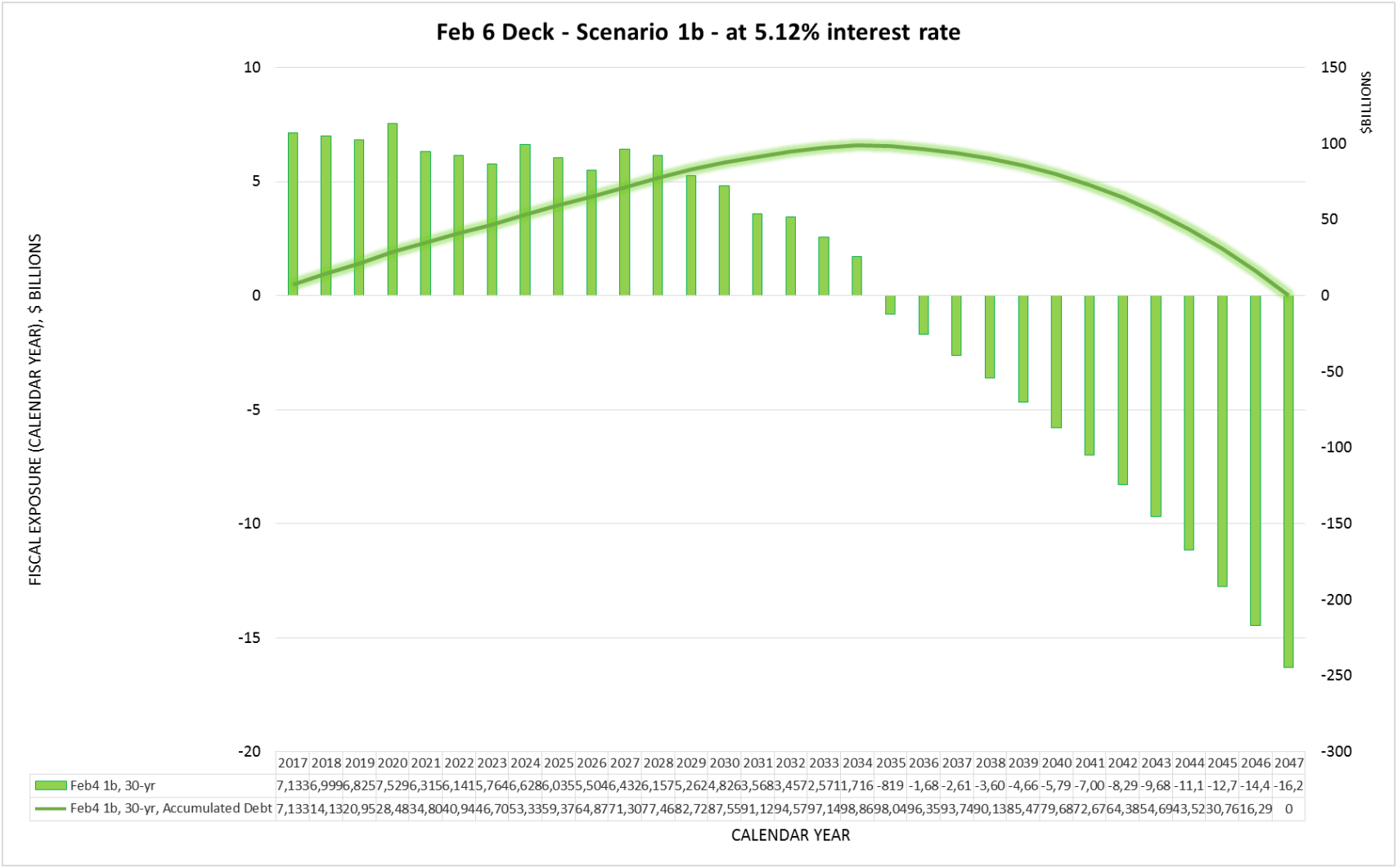


Notes: The graph attempts to illustrate the portion of the debt accumulation related to principal growth and interest accrual/capitalization.
(1) The green line illustrates the accumulated of debt, including capitalized interest as principal is drawn and annual interest costs are capitalized.
(2) The blue bar represents the debt being drawn down (principal only). The orange bar represents the accumulation of interest and capitalized interest.
(3) As the debt is started to be repaid, it is insufficient to cover the annual interest cost in the corresponding year, which results in the total debt increasing as a result of interest continuing to be capitalized.
(4) When the annual debt payment amount is sufficient to cover the annual interest and repayment of principal, the orange bar remains constant and the blue bar starts to shrink.

DRAFT

Scenario 1B *(Calendar Year Basis)*

February 6 Deck



DRAFT

Scenario 1B *(Calendar Year Basis)*

February 6 Deck

- **Scenario 1b:** GA Smoothing, Residential Bills Lowered 33% (Borrow approx. $7B in 2017) - The amount of GA paid by ratepayers in 2017 is lowered by about $7 billion below the annual supply costs, with GA increasing at 2.7% thereafter. No limits placed on GA over-payments.
  - ~~On a calendar year basis,~~ Under this scenario, borrowing a total of $57 billion in principal over the 30-year period results in an annual interest cost average about $2.8 billion per year, peak~~ings~~ at $5.1 billion per year (Year 2035), with cumulative interest costs of about $97 billion over the 30-year financing term.

1b. GA Smoothing (Borrow ~$7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	2017	2018	2019	2020	2021	2022
Annual Exposure[2]	7,133	6,999	6,825	7,529	6,315	6,141

Fiscalized[3]	2016-17	2017-18	2018-19	2019-20	2020-21	2021-2022
Start: January 1st	1,783	7,100	6,956	7,001	7,226	6,272

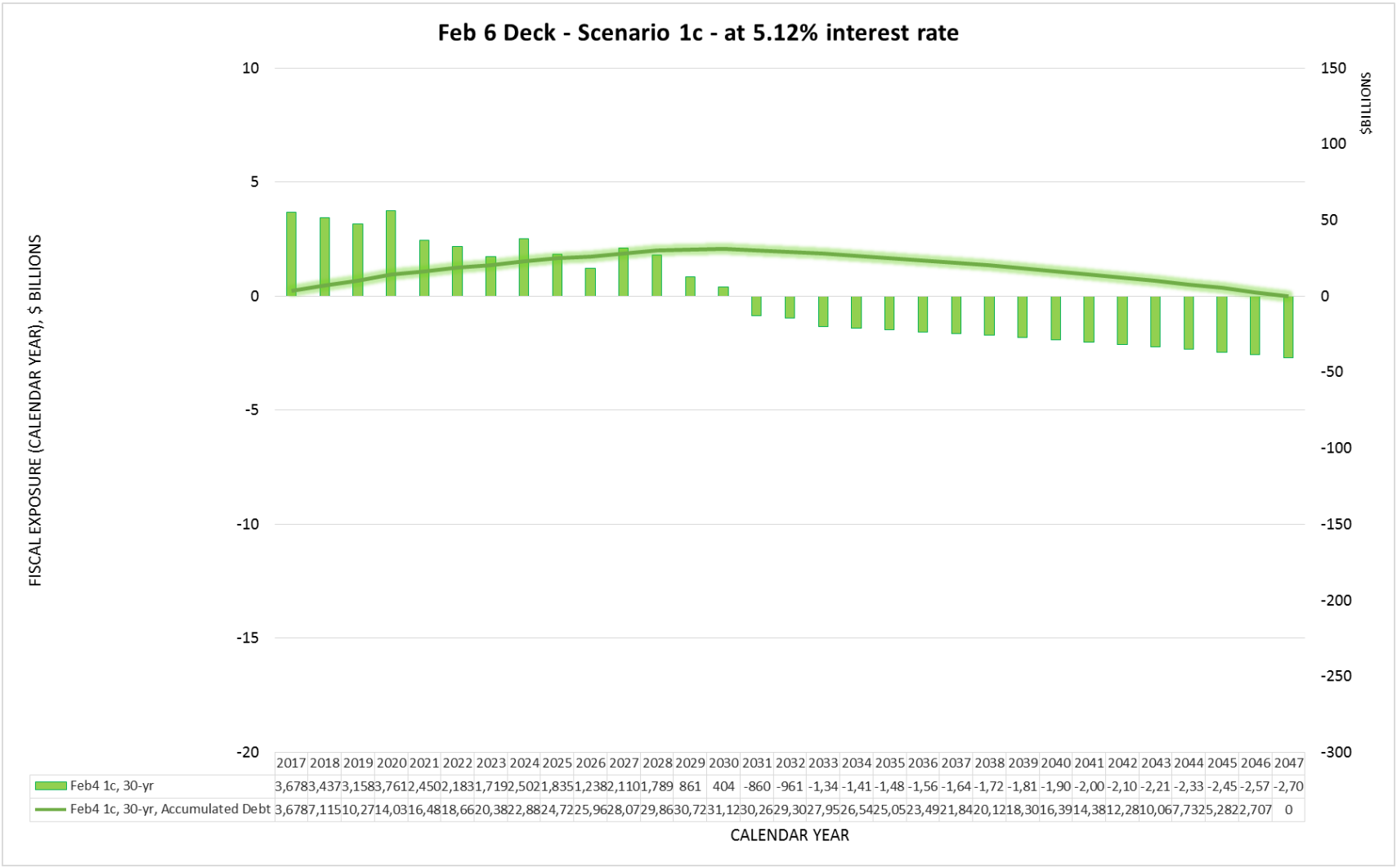
Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $99 billion, peaking in 2034.

1 Based on an interest rate of 5.12%, compounded annually.
2 Fiscal exposure based on annual drawdown of debt.
3 Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

DRAFT

Scenario 1C *(Calendar Year Basis)*

February 6 Deck



Scenario 1C *(Calendar Year Basis)*

February 6 Deck

- **Scenario 1c:** GA Smoothing, Residential Bills Lowered 25% (Borrow approx. $4B in 2017) - The amount of GA paid by ratepayers in 2017 is lowered by about $5 billion below the annual supply costs, with the GA increasing at the rate of inflation thereafter. GA over-payments capped at $2.8 billion above the true cost of GA in any given year.
  - ~~On a calendar year basis,~~ Under this scenario, borrowing a total of $57 billion in principal over the 30-year period results in an annual interest cost average about $0.9 billion per year, peak~~ings~~ at $1.6 billion per year (Year 2031), with cumulative interest costs of about $20 billion over the 30-year financing term.

1c. GA Smoothing (Borrow ~$4 billion in 2017)

$ millions

Scenario 1C - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Annual Exposure[2]	3,678	3,437	3,158	3,761	2,450	2,183

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
Start: January 1st	919	3,617	3,367	3,309	3,433	2,383

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $31 billion, peaking in 2030.

1 Based on an interest rate of 5.12%, compounded annually.
2 Fiscal exposure based on annual drawdown of debt.
3 Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

DRAFT

APPENDIX

GA Financing Scenarios

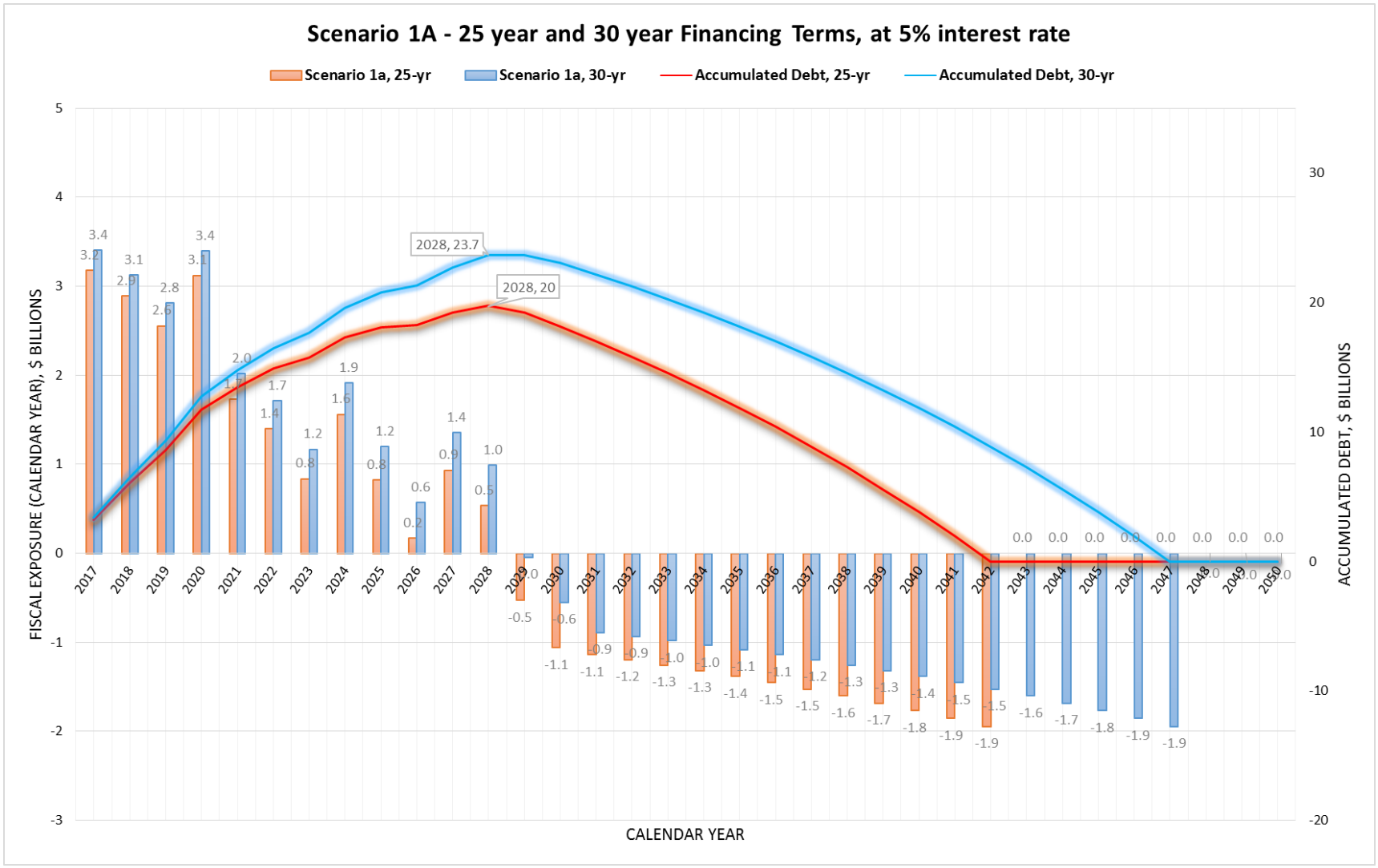
January 2017

Scenario 1a/1b, 25-yr/30-yr

Corporate and Electricity Finance Division

February 7, 2017

Scenario 1A *(Calendar Year Basis)*



Scenario 1A *(Calendar Year Basis)*

Appendix - January Deck

- Scenario 1a: Moderate GA financing: Initially paying in a year up to $3.2 and $3.4 billion below the true cost of GA. Then limits, when consumers start to "pay down", of paying no more than $2 billion per year above the true cost of GA.
  - On a calendar year basis, annual interest cost peaks at $1 billion ($1.2 billion) , with cumulative interest costs of about $15 billion ($22 billion), under a 25-year (or 30-year) financing term

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Fiscal Exposure[2]	3,180	2,888	2,556	3,123	1,728	1,400

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	795	3,107	2,805	2,697	2,774	1,646

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Fiscal Exposure[2]	3,404	3,128	2,812	3,396	2,020	1,712

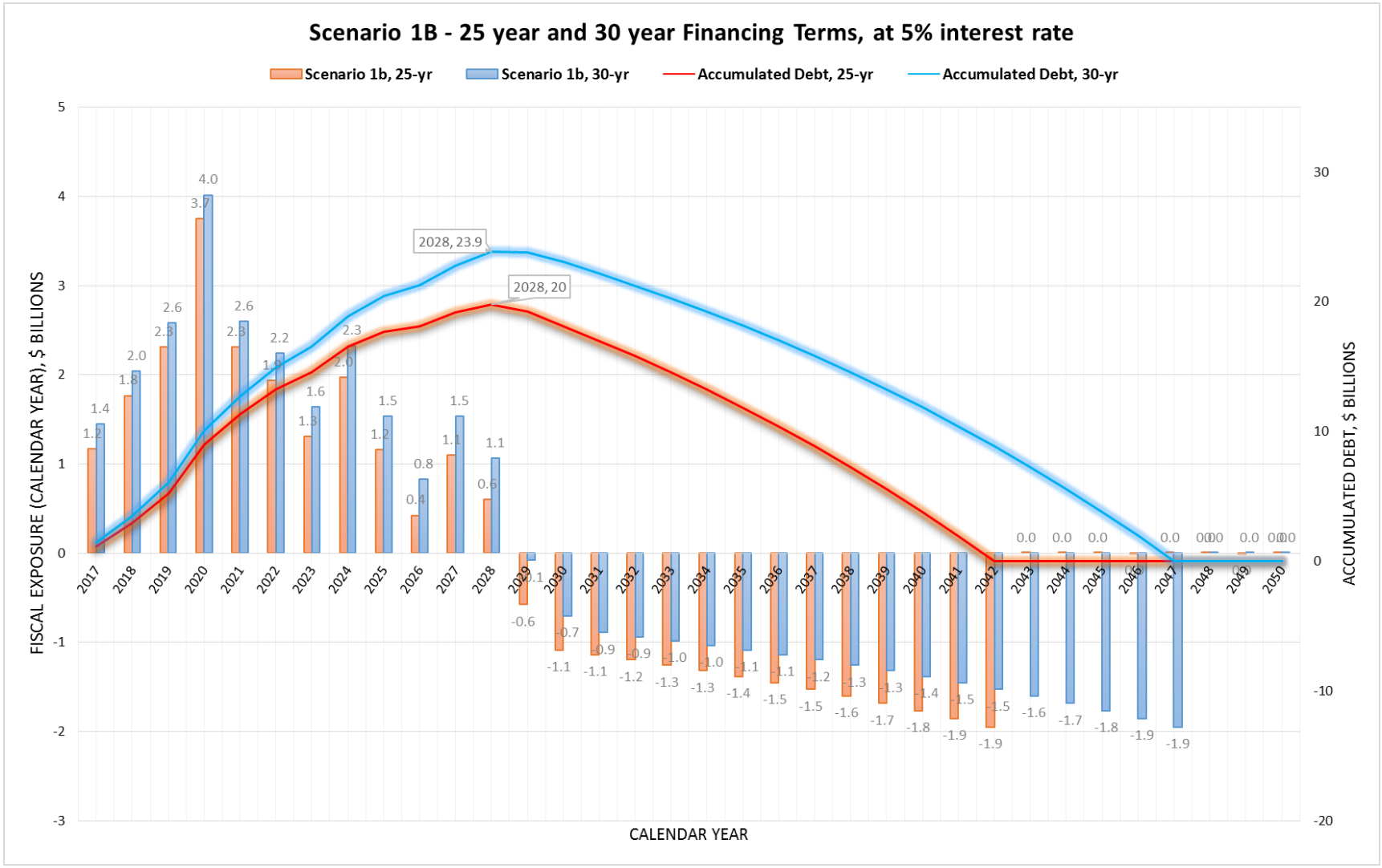
Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	851	3,335	3,049	2,958	3,052	1,943

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and $17-21 billion (at 3% interest rate), peaking in 2028.
- At 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately $33-$36 million compared to that at 5% interest rate.

1 Based on an interest rate of 5%.
2 Fiscal exposure based on equal monthly drawdown of debt.
3 Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

Scenario 1B *(Calendar Year Basis)*

Appendix - January Deck



Scenario 1B *(Calendar Year Basis)*

- Scenario 1b: Moderate GA financing, with delayed increase, paying initially in a year $1.1 billion below the true cost of GA. Then limits, when consumers start to "pay down", of no more than $2 billion per year above the true cost of GA
  - On a calendar year basis, annual interest cost peaks at $1 billion ($1.2 billion) , with cumulative interest costs of about $15 billion ($21 billion), under a 25-year (or 30-year) financing term

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Fiscal Exposure[2]	1,168	1,765	2,311	3,750	2,311	1,933

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	292	1,317	1,901	2,671	3,391	2,217

Scenario 1b - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Fiscal Exposure[2]	1,449	2,040	2,581	4,016	2,598	2,241

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	362	1,597	2,175	2,940	3,662	2,508

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 and $17-21 billion (at 3% interest rate), peaking in 2028.
- At 3.5%, the highest fiscal exposure will occur in 2020-21, decreasing by approximately $118-$134 million compared to that at 5% interest rate.

1 Based on an interest rate of 5%.
2 Fiscal exposure based on equal monthly drawdown of debt.
3 Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

OPG & IESO Financial Position

Appendix

Balance Sheet Comparison

In $ Millions

Entity	**OPG**	**IESO**
Statement Date	Nov-16	Dec-15
Assets		
Cash & Cash equivalents	426	15
Securities	233	37
Receivables	438	33
Other Current Assets	763	6
Net Tangible Capital Assets	21,297	104
Net Intangibles	95	
Nuclear Assets	15,878	
Regulatory Assets	5,647	
Other Long-term Assets	704	
	45,481	**195**
Liabilities		
Accounts Payable/Accrued Charges	1,223	49
Financial Debt	5,699	90
Nuclear Liabilities	20,845	
Pension & OPEB	5,646	121
Regulatory Liabilities	241	
Other Liabilities	1,294	10
Total Liabilities	**34,948**	**269**
Equity/Accumulated Deficit	**10,533**	**(74)**
Total Liabilities & Equity	**45,481**	**195**
Net Assets*	15,500	(74)
Net Debt**	(4,602)	(5)
Public Accounts Net Assets (15/16)	13,005	

*Net Assets is total assets less total liabilities
**Net Debt is total financial debt less (Cash & Cash Equivalents + Securities + Receivables); presented in brackets

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-1,667	-2,115	-3,409
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-1,905	-2,498	-3,943

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,819	-1,337	-635	-1,215	-325	451	-187	350	1,531	2,000
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,488	-2,097	-1,466	-2,120	-1,307	-576	-1,260	-781	375	858

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

Equal Monthly Debt Drawdown
5.00%

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Fiscal Exposure[2]	3,180	2,888	2,556

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
	795	3,107	2,805

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Fiscal Exposure[2]	3,404	3,128	2,812

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
	851	3,335	3,049

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approx

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Fiscal Exposure[2]	1,168	1,765	2,311

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
	292	1,317	1,901

Scenario 1b - 30-yr amortization	**2017**	**2018**	**2019**
Fiscal Exposure[2]	1,449	2,040	2,581

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**

	362	1,597	2,175

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approxi

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on decision on accounting treatment.

30-year term	2016-17	2017-18	2018-19
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335	2,175 - 3,049

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]

Debt-Finance Global Adjustment Costs, Option 1a	851	3335	3049
Debt-Finance Global Adjustment Costs, Option 1a	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**851**	**3575**	**3352**
Total, B	362	1837	2478

Proposed Program Total:	362 - 851	1,837 - 3,575	2,478 - 3,352

2020	2021	2022					
3,123	1,728	1,400	836	1,560	821	167	932

2019-20	2020-21	2021-2022					
					3106.5	(0)	
2,697	2,774	1,646					

2020	2021	2022					
3,396	2,020	1,712	1,168	1,914	1,198	568	1,359

2019-20	2020-21	2021-2022					
2,958	3,052	1,943			3334.553	(0)	

2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
ximately $33-$36 million.

ı GA actuals per month based on month of the year. Actuals may also depend on

2020	2021	2022					
3,750	2,311	1,933	1,311	1,971	1,158	422	1,097
						3390.282	

2019-20	2020-21	2021-2022	2022-2023			(0)	
2,671	3,391	2,217	1,778	1,476	1,767	974	591

2020	2021	2022					
4,016	2,598	2,241	1,642	2,325	1,538	829	1,531
						3661.322	

2019-20	2020-21	2021-2022				(0)	

2,940	3,662	2,508	2,091	1,812	2,128	1,360	1,004

2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
imately $118-$134 million.

GA actuals per month based on month of the year. Actuals may also depend on

2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019-20[1]	2020-21[1]

2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453

539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454
992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140
602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454
973	308	(703)	(1,099)	(1,154)	(1,211)	(1,272)	(1,336)	(1,402)
1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140

1,415	780	(235)	(751)	(904)	(949)	(997)	(1,047)	(1,099)

-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768
-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
(1,473)	(1,546)	(1,624)	(1,705)	(1,790)	(1,879)	(1,462)	(0)	(0)
-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768

(1,154)	(1,211)	(1,272)	(1,336)	(1,402)	(1,473)	(1,546)	(1,624)	(1,705)

0	0	0	0	0
-1,856	-1,949	0	0	0
0	0	0	0	0
(0)	(0)	(0)	(0)	(0)
-1,856	-1,949	0	0	0

(1,790)	(1,879)	(1,462)	(0)	(0)

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3575**
Total, B	362	1837

Proposed Program Total:	362 - 851	1,837 - 3,575

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964	
Equal Monthly Debt Drawdown	3,180	952	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

Scenario 1a, 25-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	
	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1a, 25-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	

Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	3,665	968	
Equal Monthly Debt Drawdown	3,750	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

Scenario 1b, 25-yr — End of Year Debt Drawdown

Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

Scenario 1b, 25-yr — Equal Monthly Debt Drawdown

12

Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	*954*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

	Monthly Drawdown	95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr — Bi-Annual Debt Drawdown

2

Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments
($ millions)

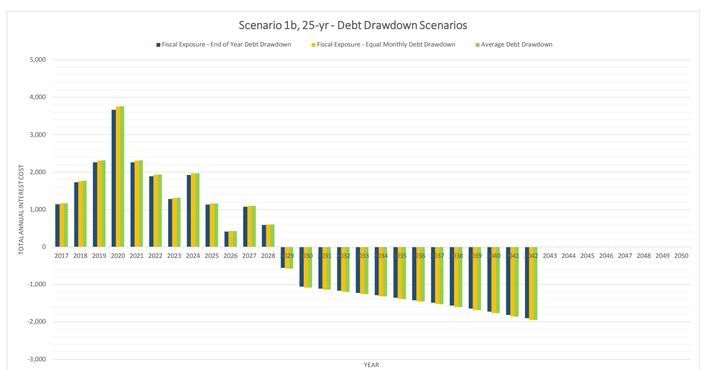
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

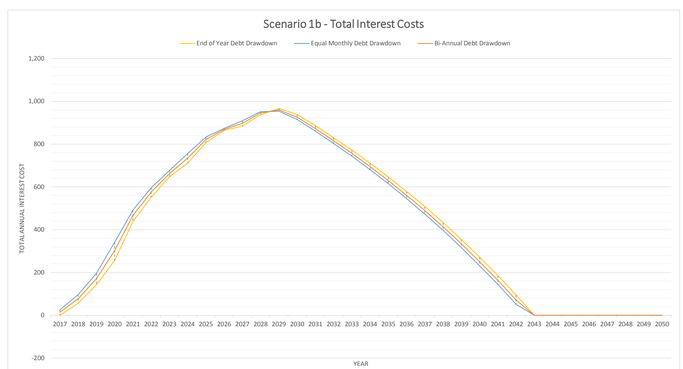
	Bi-Annual Drawdown	571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr — Average Debt Drawdown

Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

Scenario 1a, 30-yr — End of Year Debt Drawdown

Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1a, 30-yr — Equal Monthly Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	*1,156*	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr — Bi-Annual Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

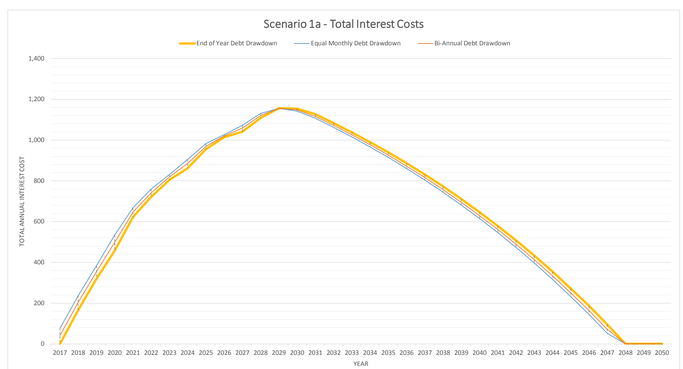
	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr — Average Debt Drawdown

Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

Scenario 1b, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr — Equal Monthly Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr — Bi-Annual Debt Drawdown

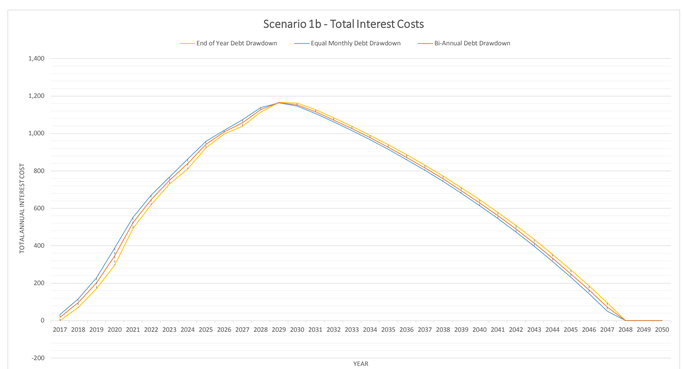
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

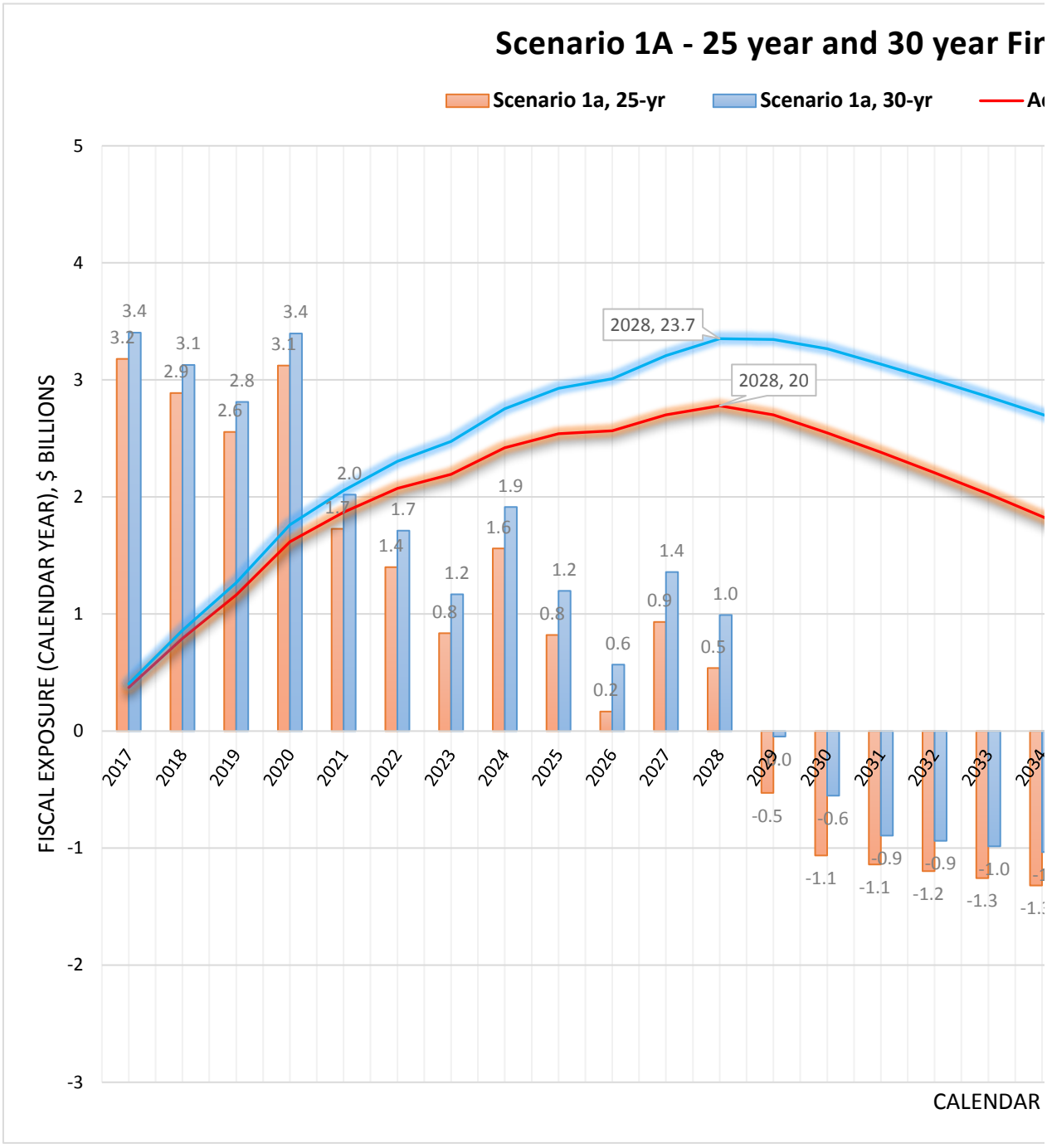
Scenario 1b, 30-yr — Average Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

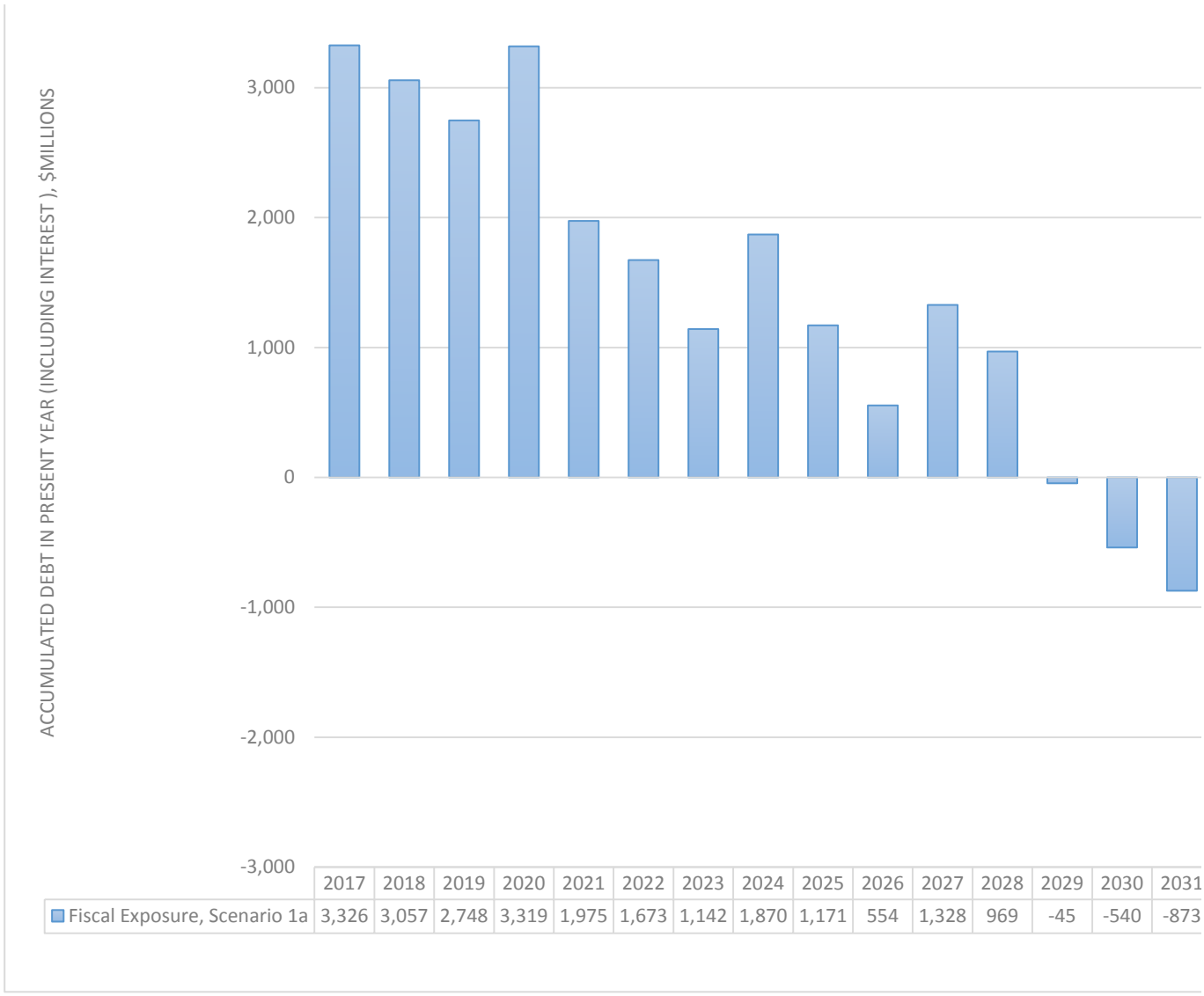




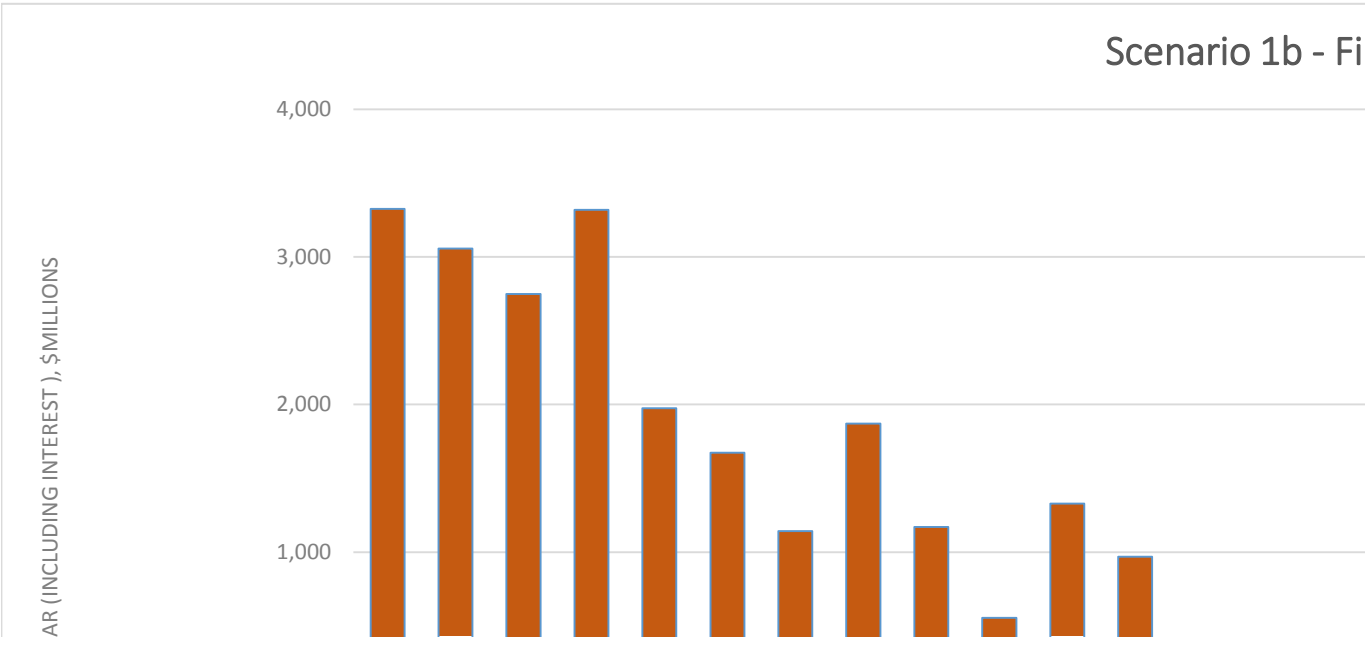
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

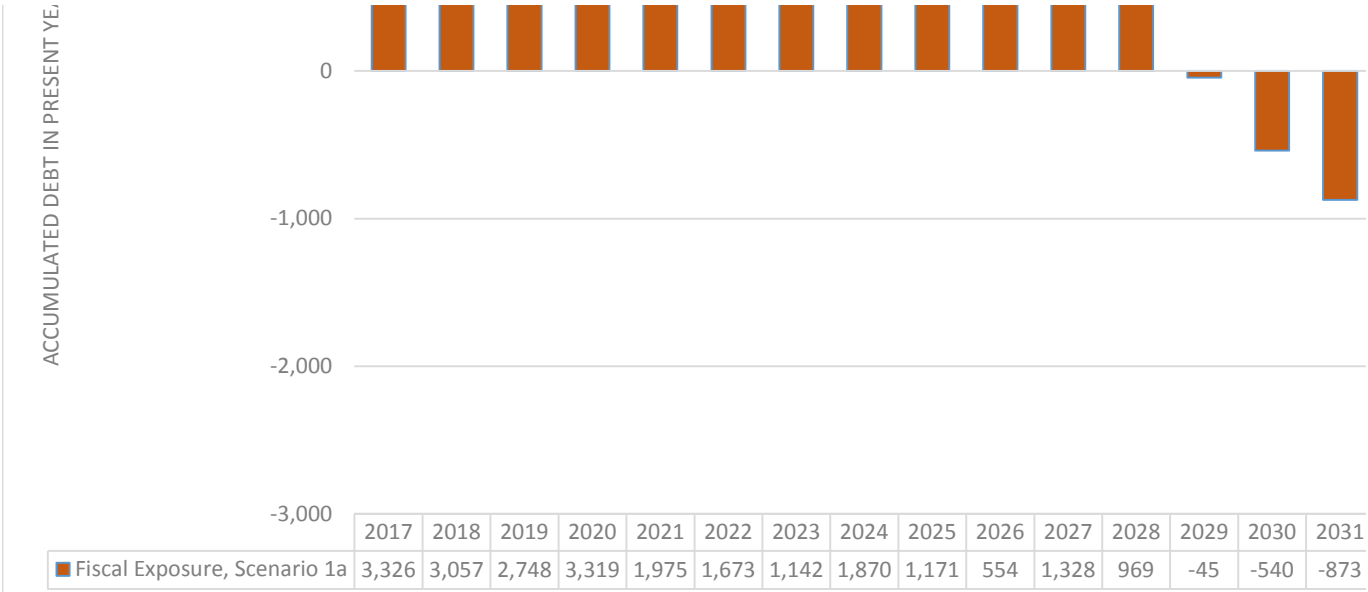




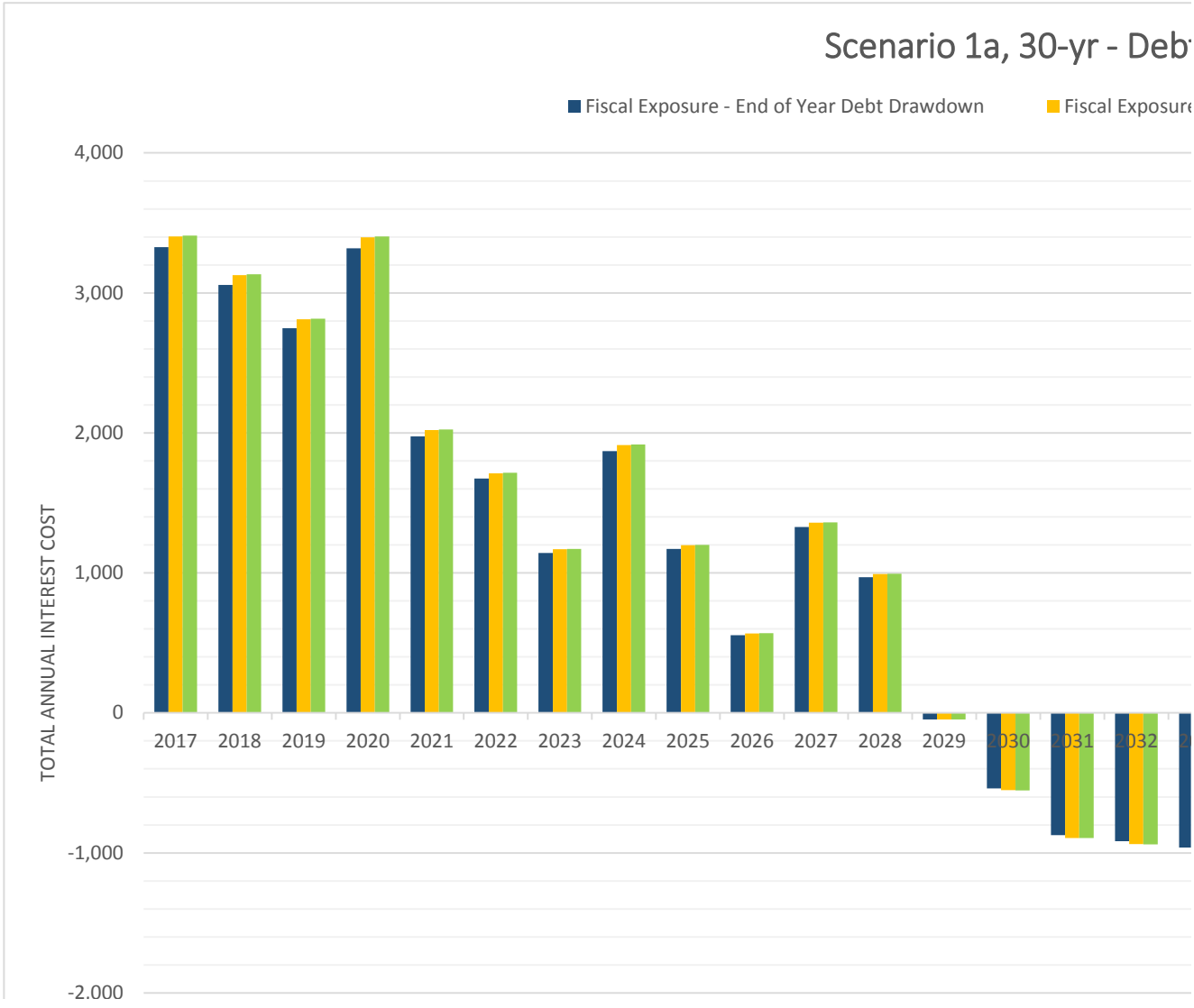


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



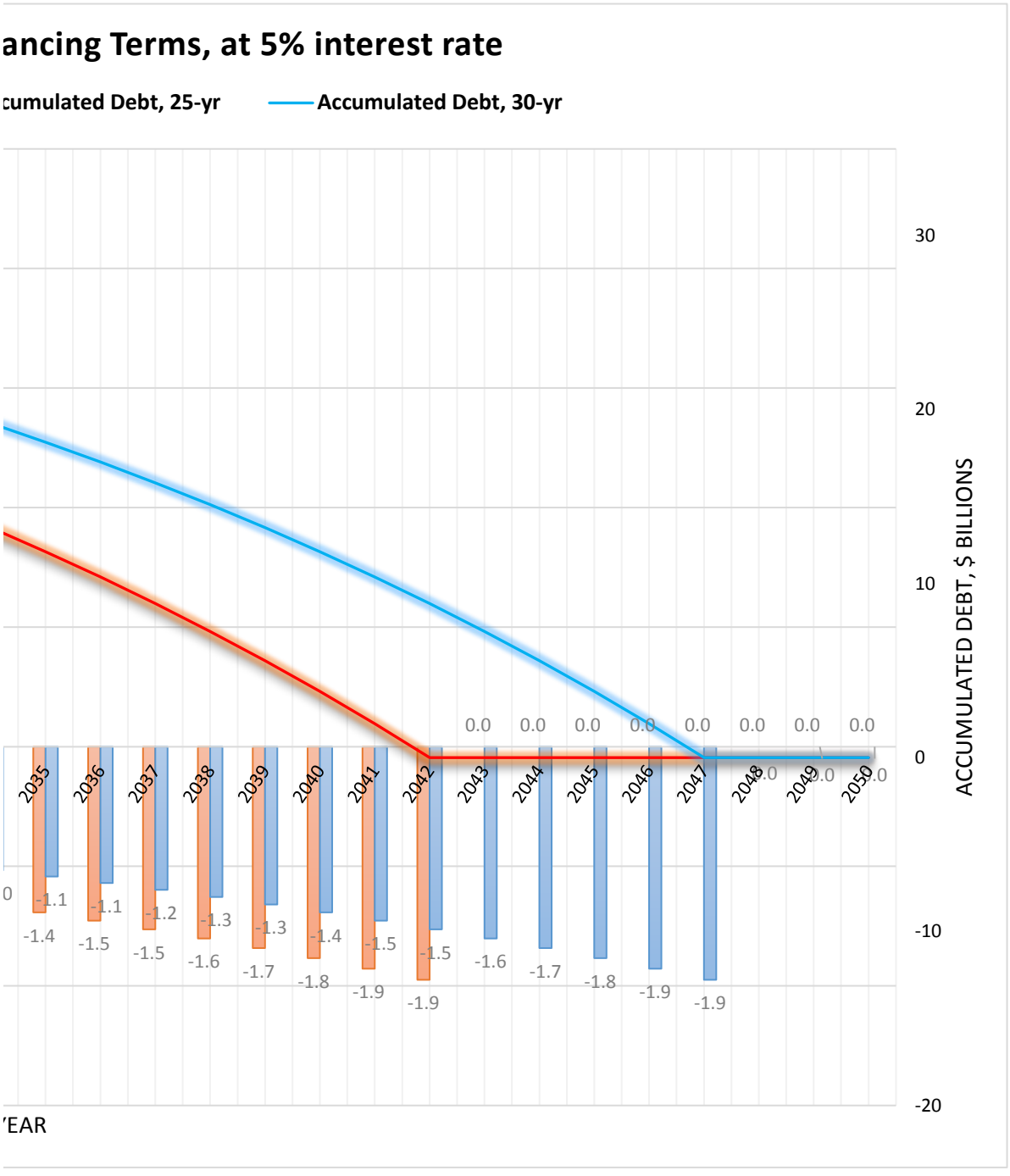


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



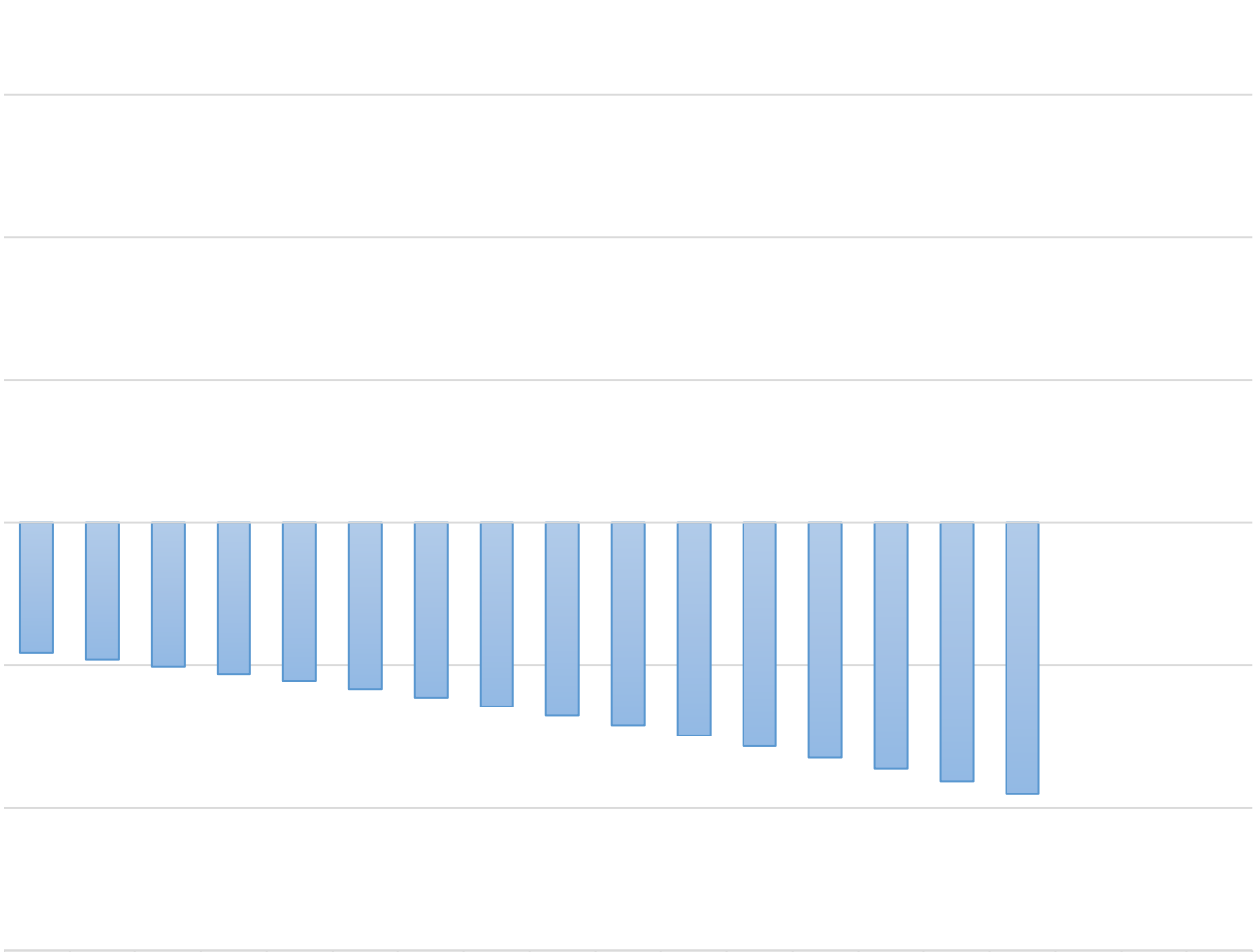

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

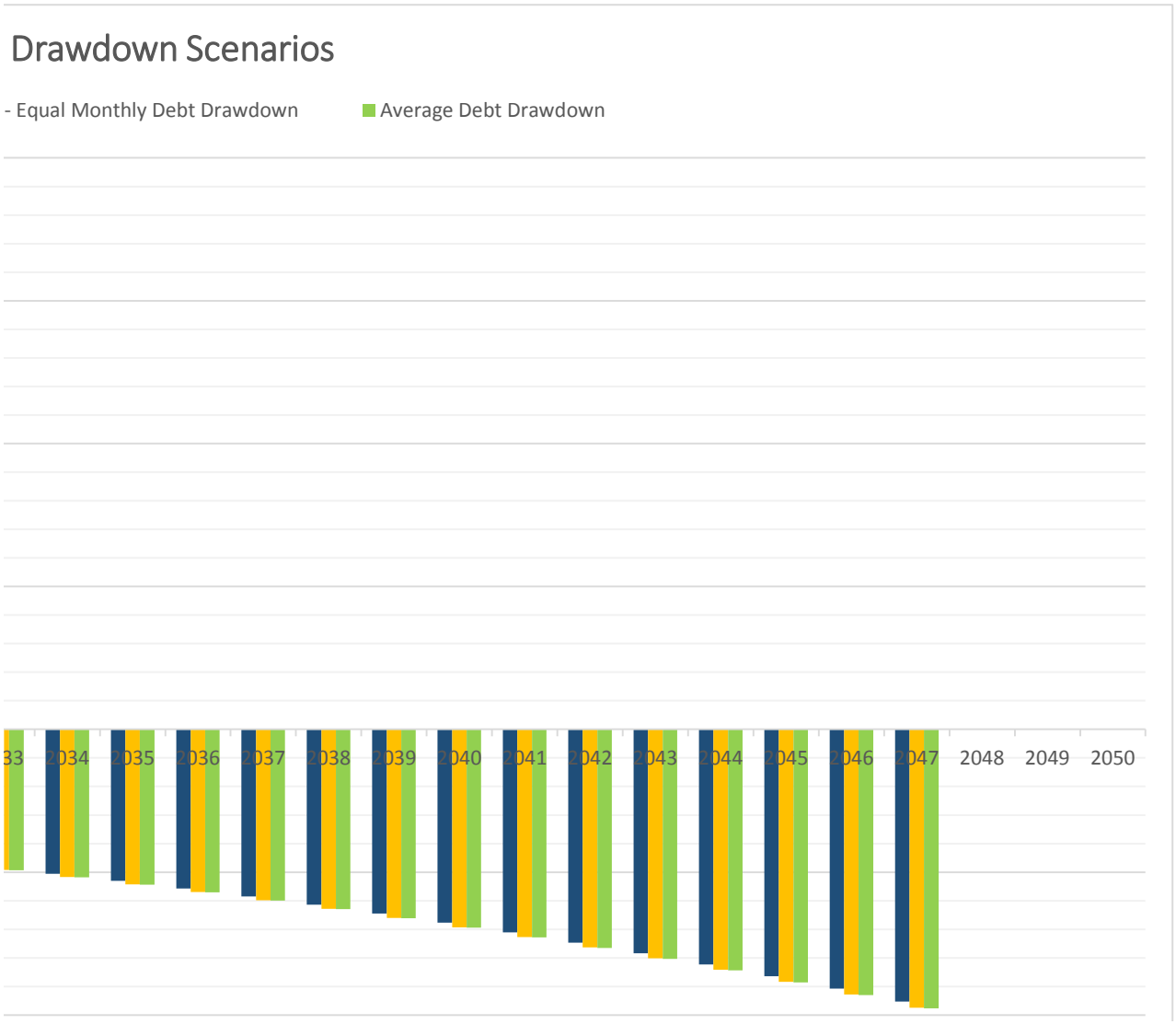
YEAR

cal Exposure



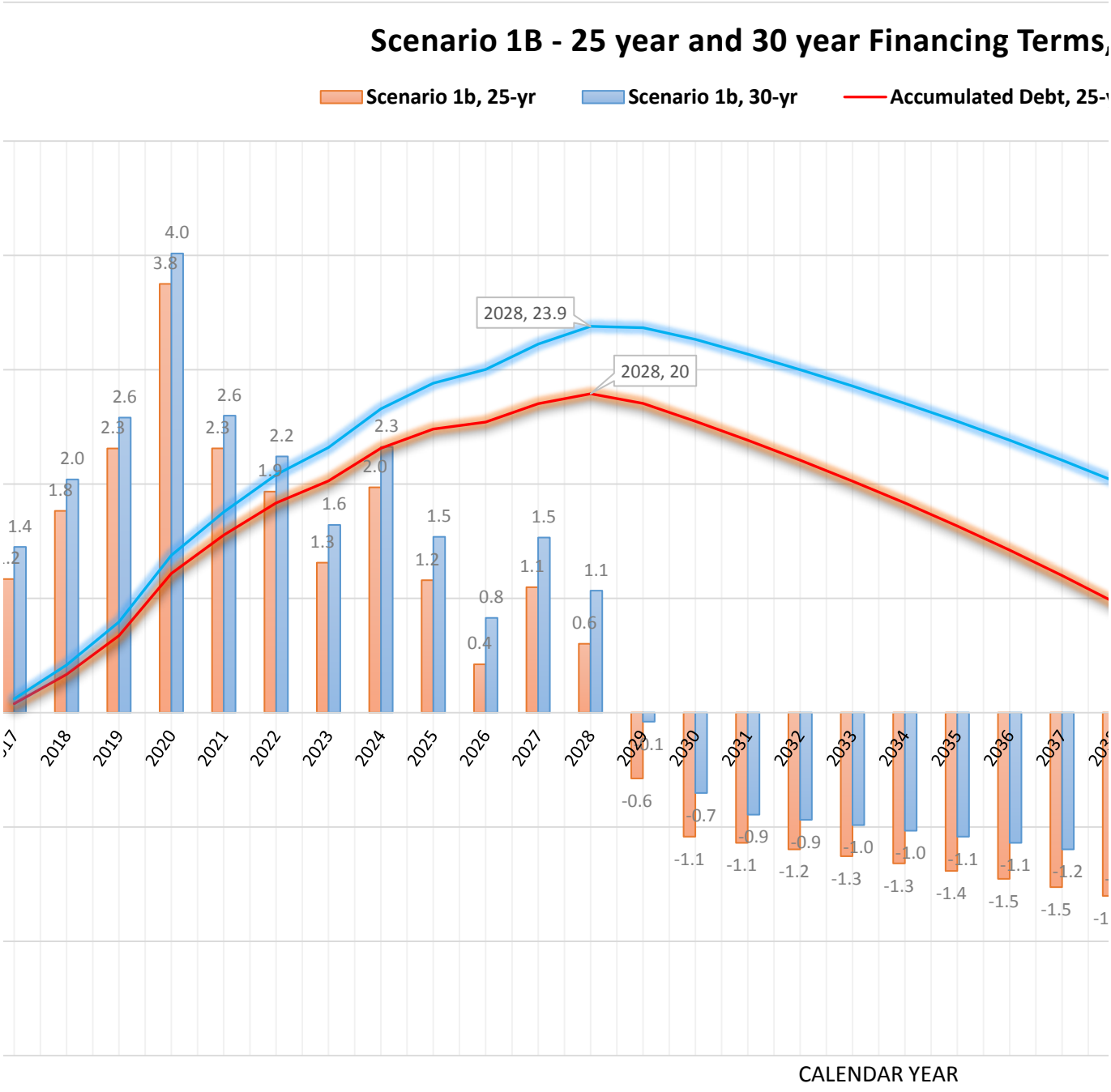
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

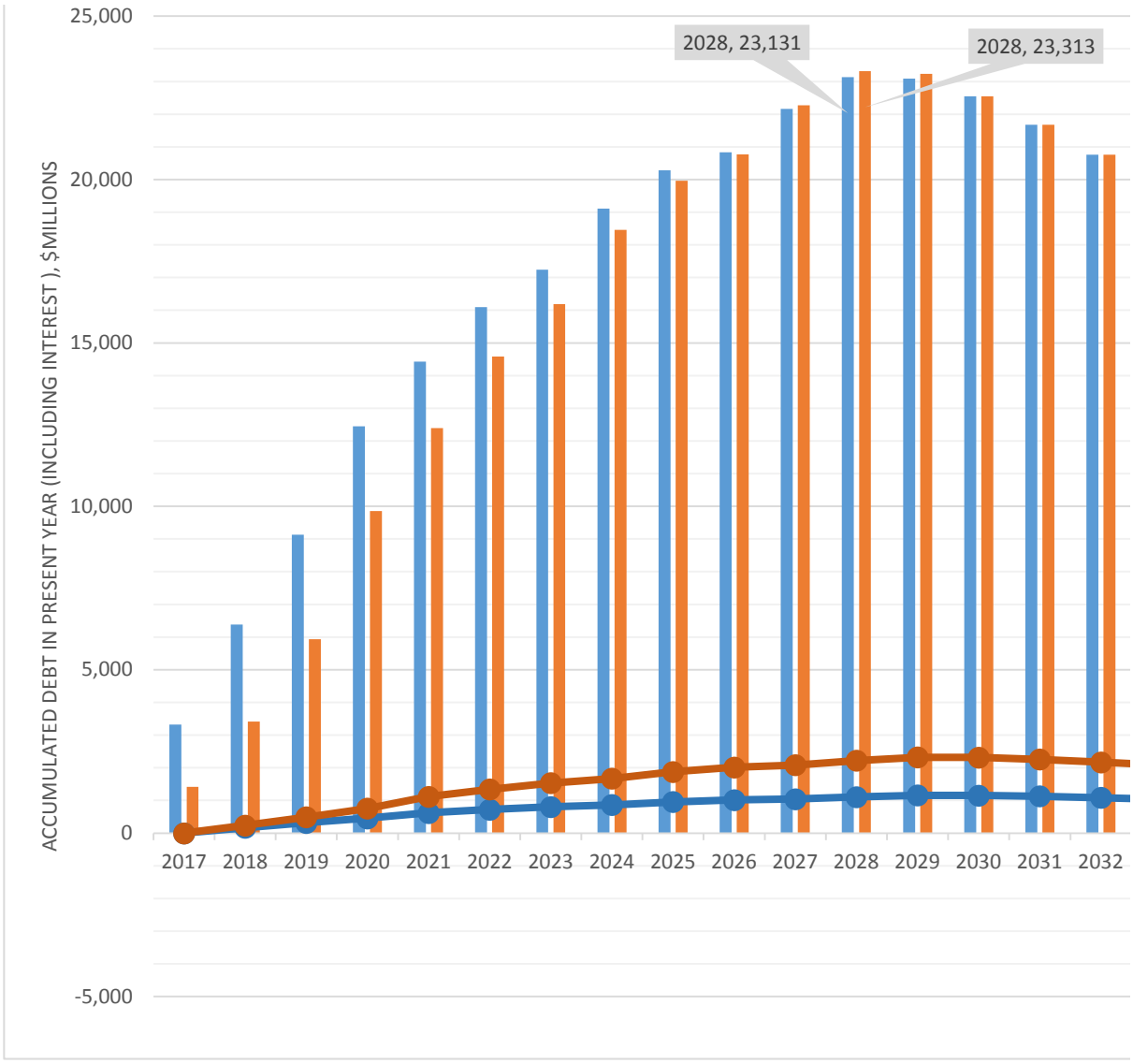


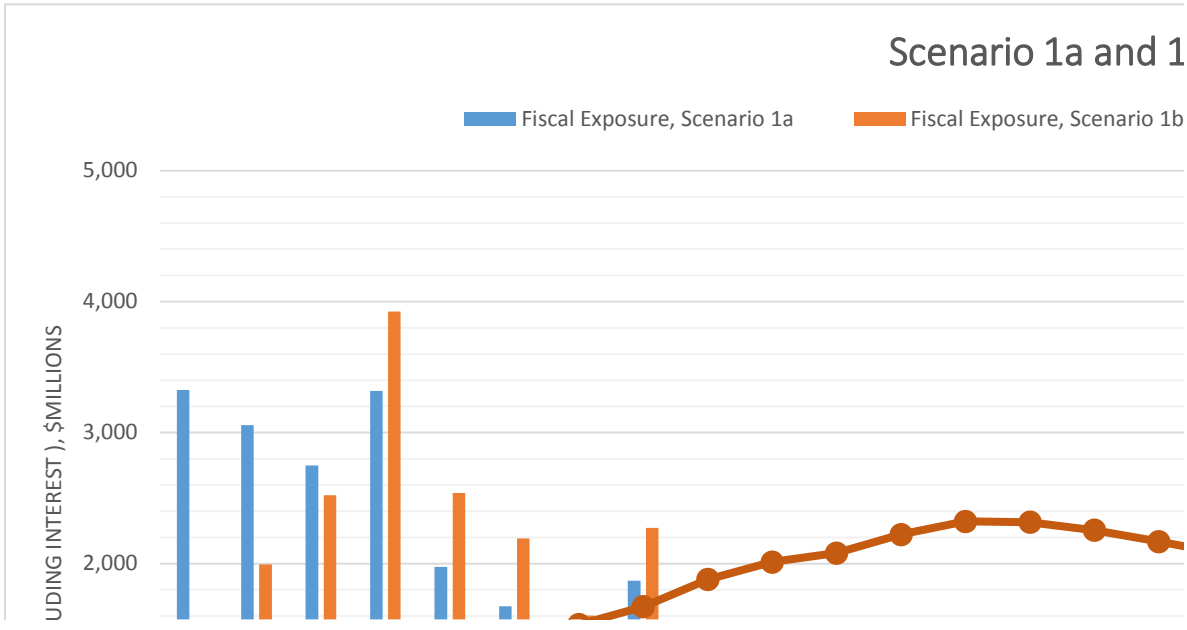
YEAR

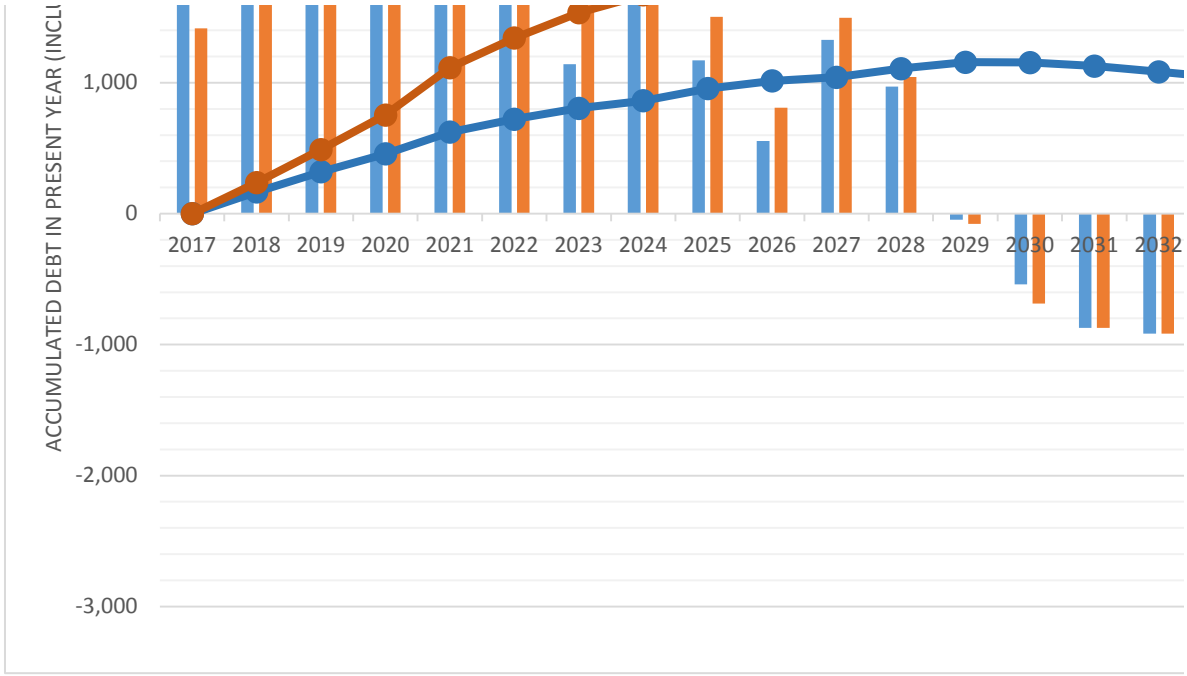
3 - 25 year and 30 year Financing Terms, at 5% interest rate

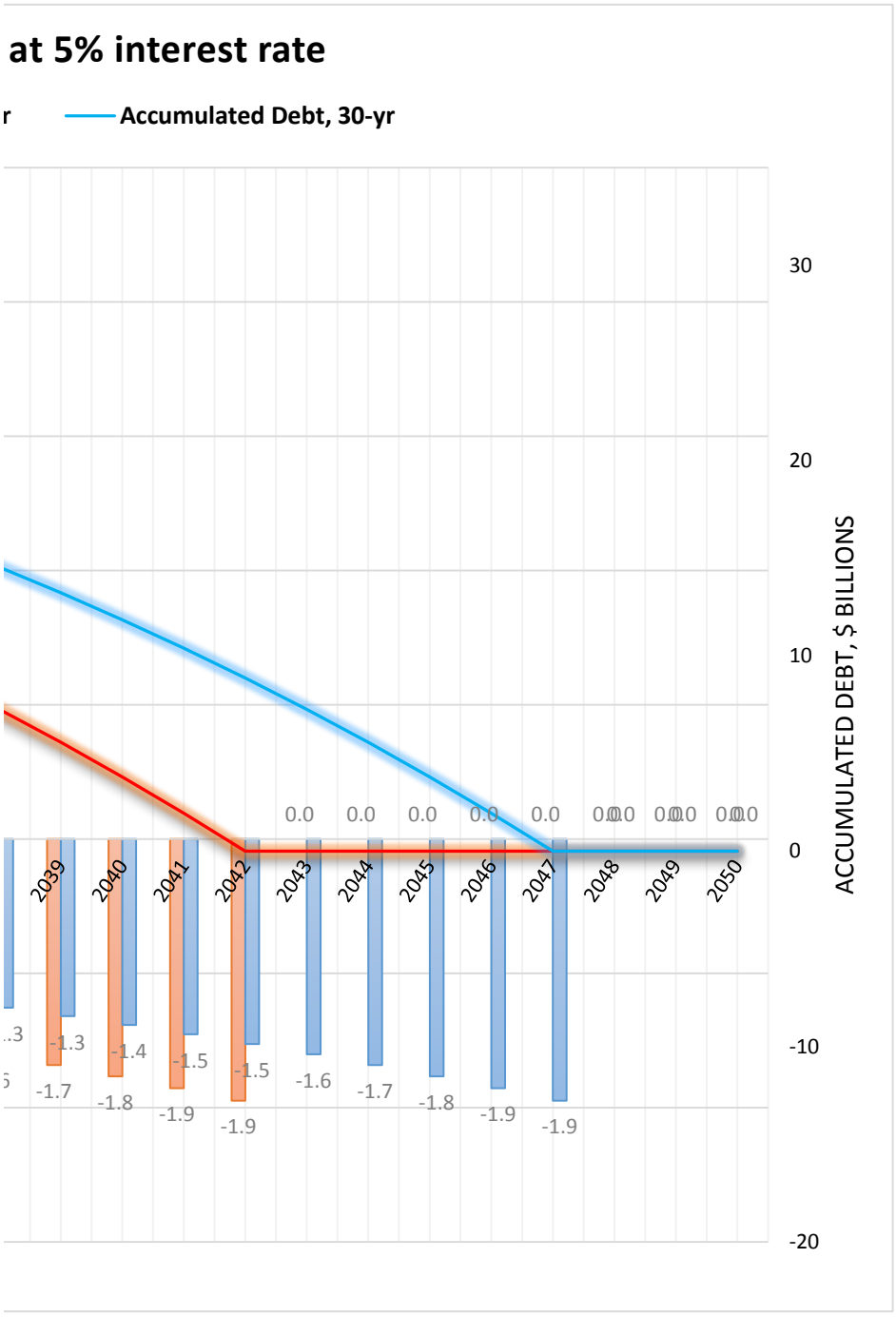





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

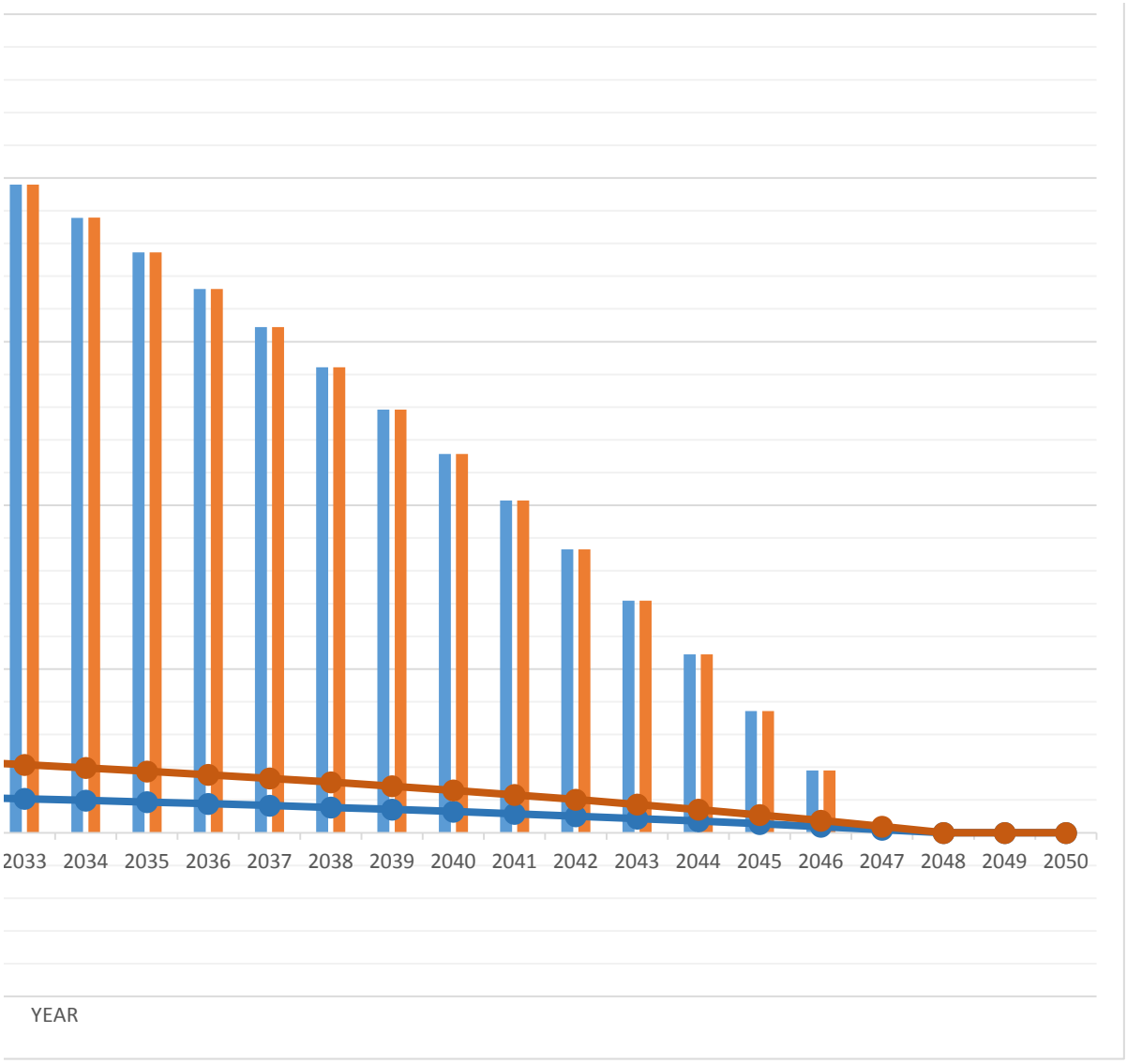

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

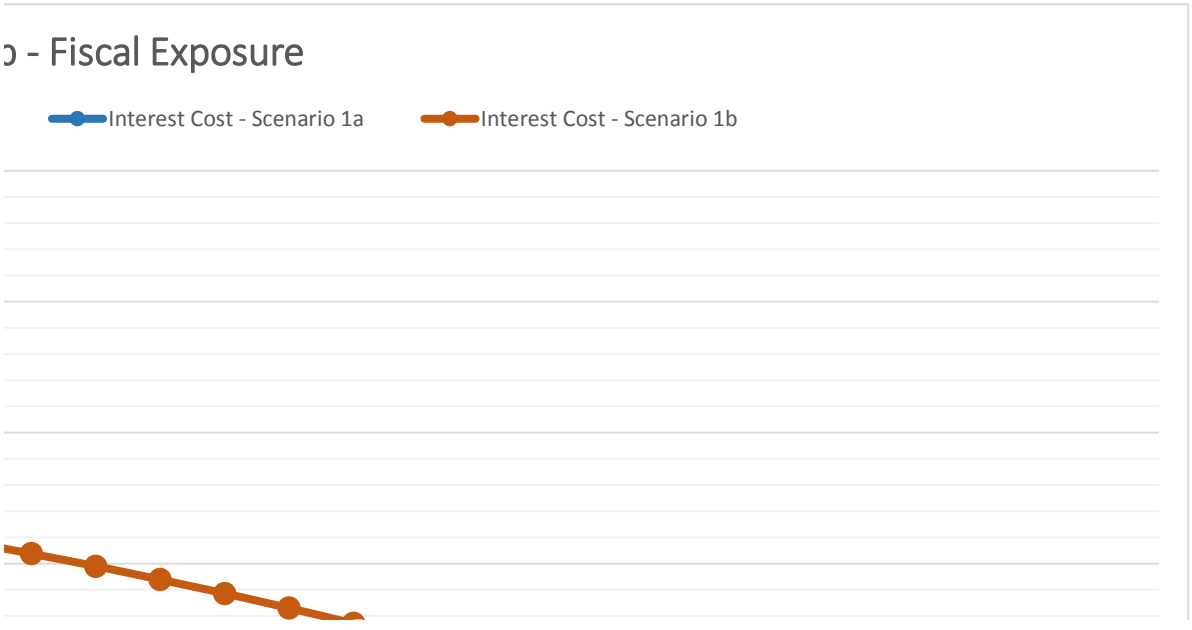

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

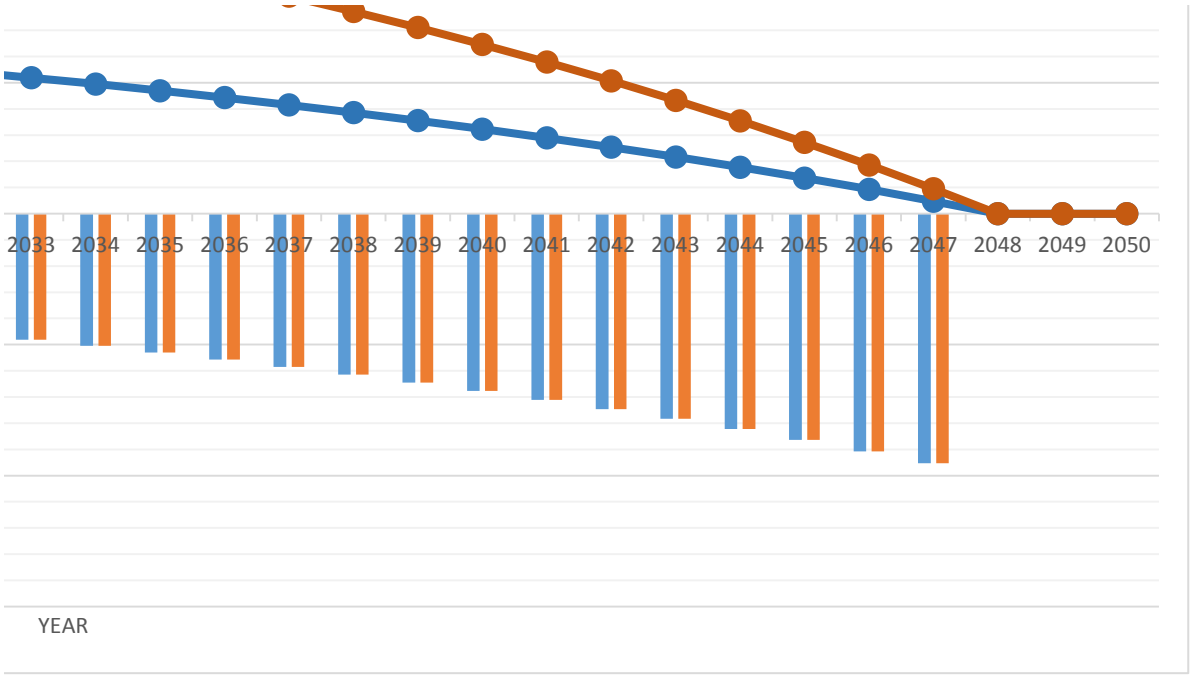


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

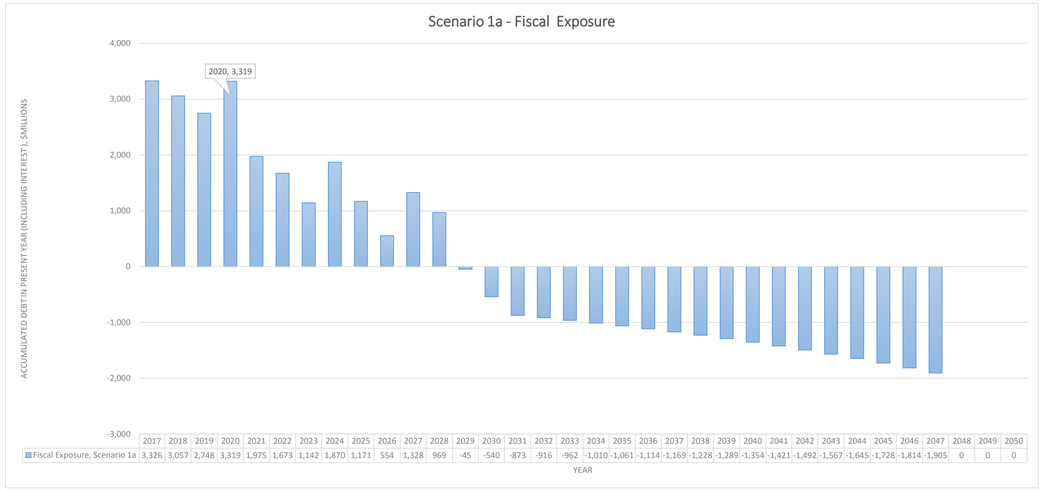
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

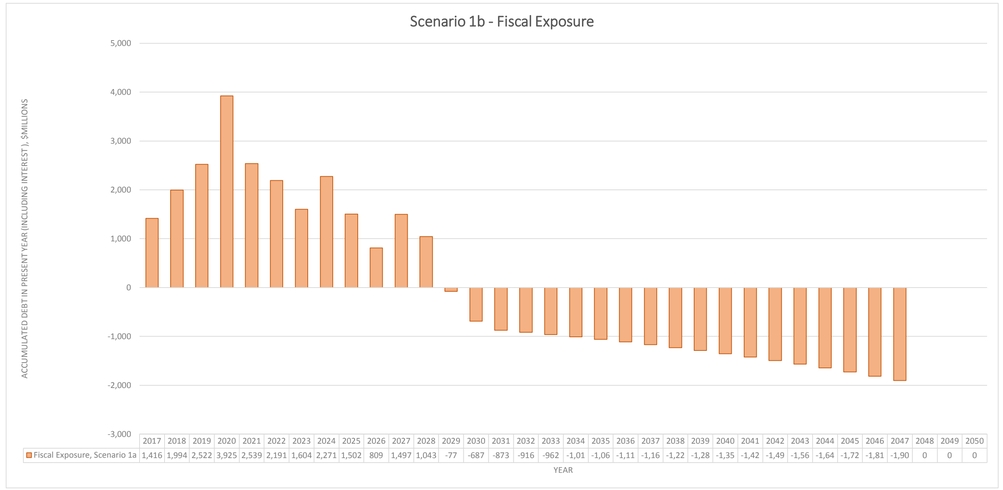
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

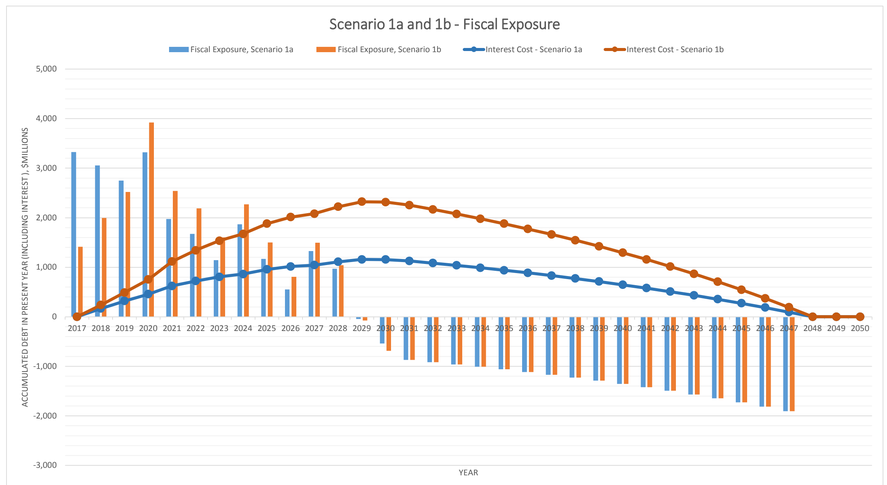
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

Notes:	Accounting treatment is to be determined.


Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0


Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0


Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

JK: Fixed the formula in the yellow highlighted cells. Pls. check. (SK: looks good to me)

Equal Monthly Debt Drawdown
5.00%

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Fiscal Exposure[2]	3,180	2,888	2,556

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
	795	3,107	2,805

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Fiscal Exposure[2]	3,404	3,128	2,812

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
	851	3,335	3,049

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approx

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Fiscal Exposure[2]	1,168	1,765	2,311

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
	292	1,317	1,901

Scenario 1b - 30-yr amortization	**2017**	**2018**	**2019**
Fiscal Exposure[2]	1,449	2,040	2,581

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**

	362	1,597	2,175

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approxi

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on decision on accounting treatment.

30-year term	2016-17	2017-18	2018-19
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335	2,175 - 3,049

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]

Debt-Finance Global Adjustment Costs, Option 1a	851	3335	3049
Debt-Finance Global Adjustment Costs, Option 1a	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**851**	**3575**	**3352**
Total, B	362	1837	2478

Proposed Program Total:	362 - 851	1,837 - 3,575	2,478 - 3,352

2020	2021	2022					
3,123	1,728	1,400	836	1,560	821	167	932

2019-20	2020-21	2021-2022					
					3106.5	(0)	
2,697	2,774	1,646					

2020	2021	2022					
3,396	2,020	1,712	1,168	1,914	1,198	568	1,359

2019-20	2020-21	2021-2022					
2,958	3,052	1,943			3334.553	(0)	

2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
ximately $33-$36 million.

ı GA actuals per month based on month of the year. Actuals may also depend on

2020	2021	2022					
3,750	2,311	1,933	1,311	1,971	1,158	422	1,097
						3390.282	

2019-20	2020-21	2021-2022	2022-2023			(0)	
2,671	3,391	2,217	1,778	1,476	1,767	974	591

2020	2021	2022					
4,016	2,598	2,241	1,642	2,325	1,538	829	1,531
						3661.322	

2019-20	2020-21	2021-2022				(0)	

2,940	3,662	2,508	2,091	1,812	2,128	1,360	1,004

2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
imately $118-$134 million.

GA actuals per month based on month of the year. Actuals may also depend on

2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019-20[1]	2020-21[1]

2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453

539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454
992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140
602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454
973	308	(703)	(1,099)	(1,154)	(1,211)	(1,272)	(1,336)	(1,402)
1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140

1,415	780	(235)	(751)	(904)	(949)	(997)	(1,047)	(1,099)

-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768
-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
(1,473)	(1,546)	(1,624)	(1,705)	(1,790)	(1,879)	(1,462)	(0)	(0)
-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768

(1,154)	(1,211)	(1,272)	(1,336)	(1,402)	(1,473)	(1,546)	(1,624)	(1,705)

0	0	0	0	0
-1,856	-1,949	0	0	0
0	0	0	0	0
(0)	(0)	(0)	(0)	(0)
-1,856	-1,949	0	0	0

(1,790)	(1,879)	(1,462)	(0)	(0)

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3575**
Total, B	362	1837

Proposed Program Total:	362 - 851	1,837 - 3,575

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964	
Equal Monthly Debt Drawdown	3,180	952	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

Scenario 1a, 25-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	
	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1a, 25-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	

Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	3,665	968	
Equal Monthly Debt Drawdown	3,750	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

Scenario 1b, 25-yr — End of Year Debt Drawdown

Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

Scenario 1b, 25-yr — Equal Monthly Debt Drawdown

12

Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	*954*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

	Monthly Drawdown	95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr — Bi-Annual Debt Drawdown

2

Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments
($ millions)

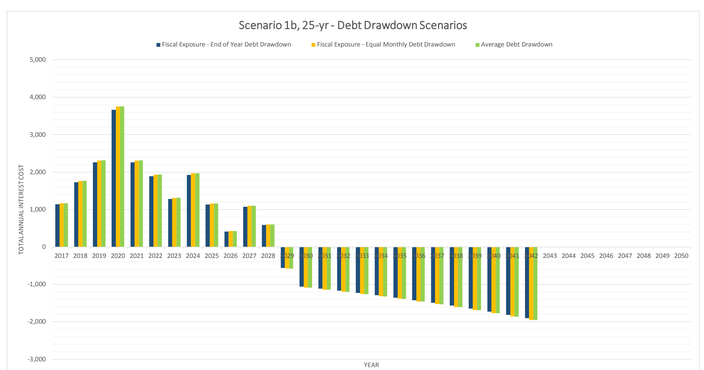
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

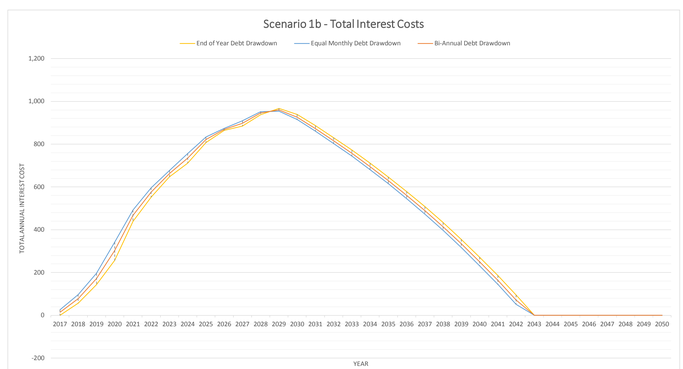
	Bi-Annual Drawdown	571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr — Average Debt Drawdown

Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

Scenario 1a, 30-yr — End of Year Debt Drawdown

Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1a, 30-yr — Equal Monthly Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	*1,156*	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr — Bi-Annual Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

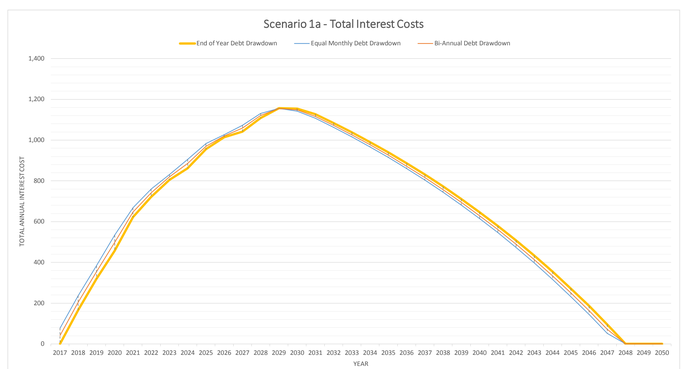
	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr — Average Debt Drawdown

Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

Scenario 1b, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr — Equal Monthly Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr — Bi-Annual Debt Drawdown

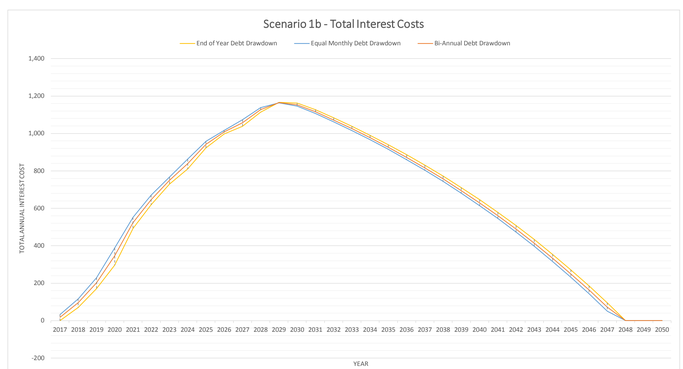
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

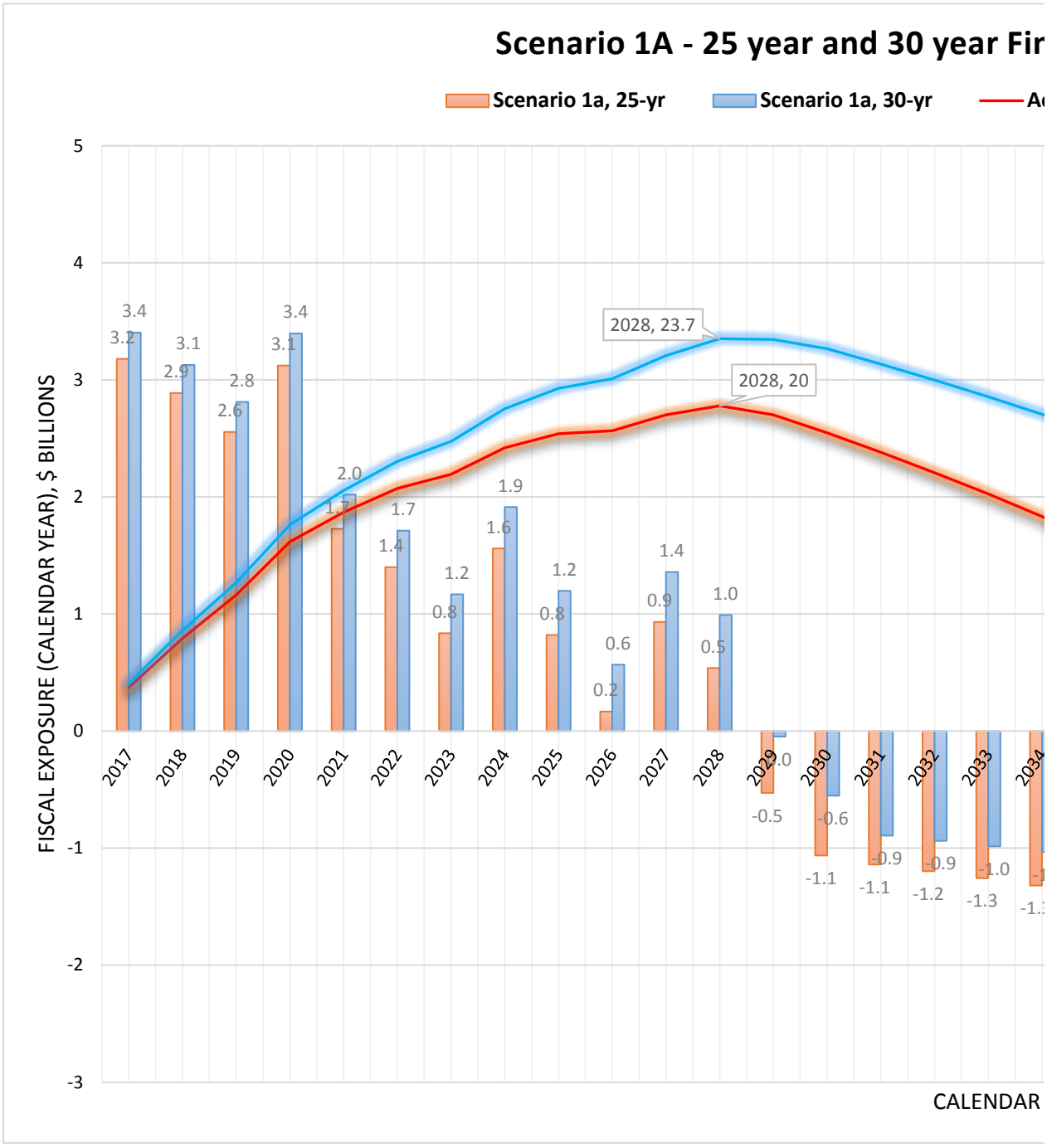
Scenario 1b, 30-yr — Average Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

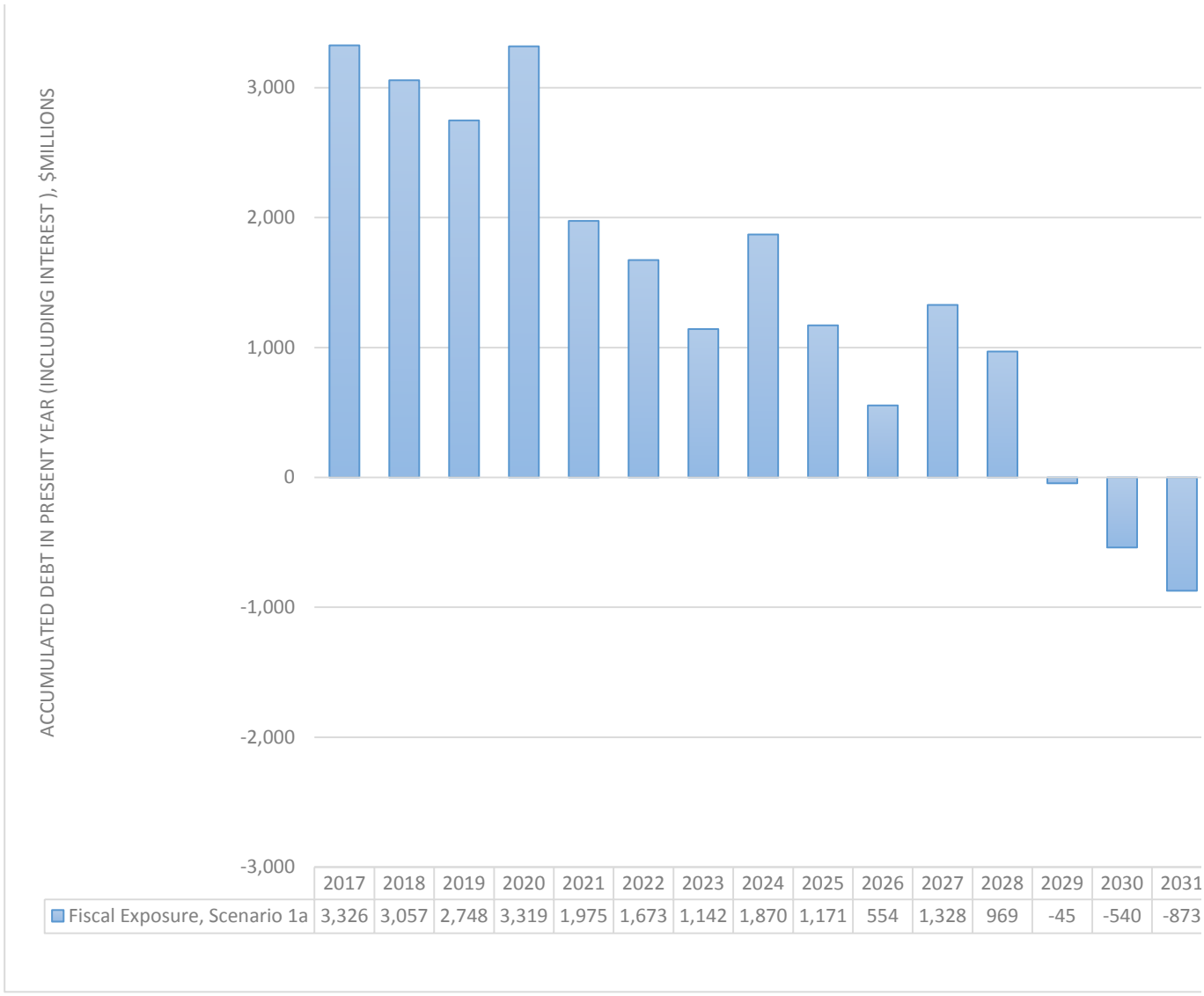




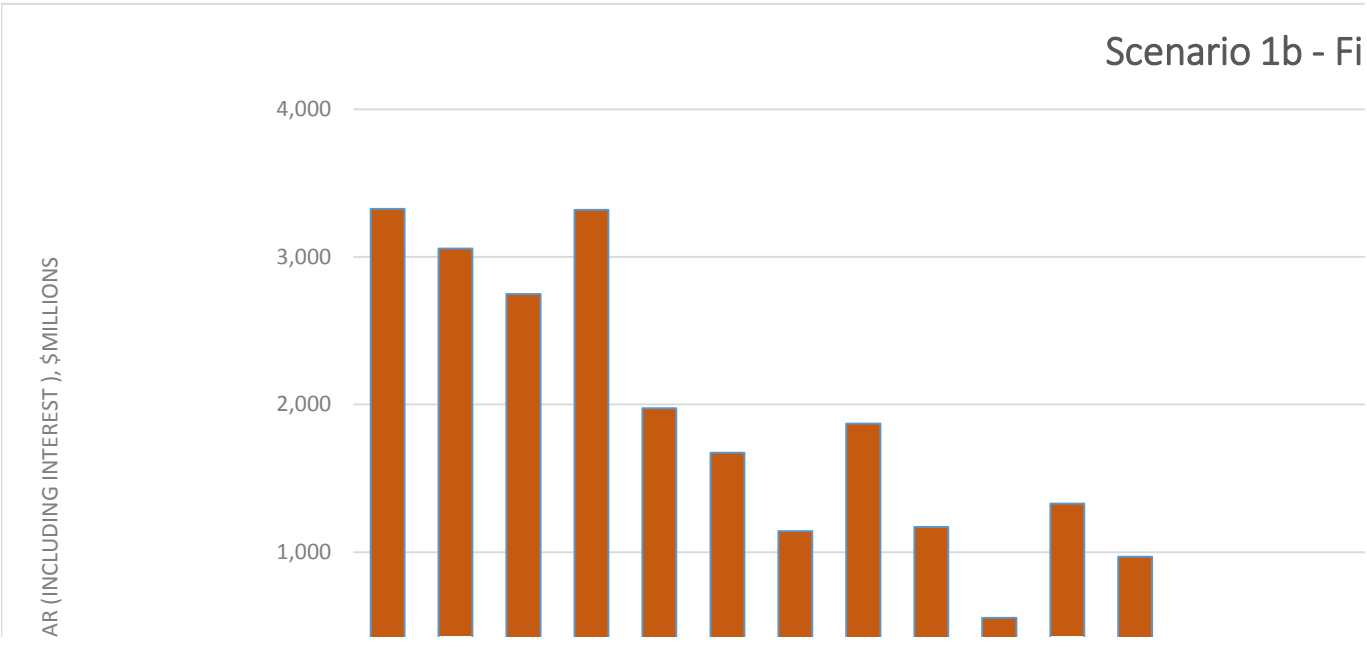
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

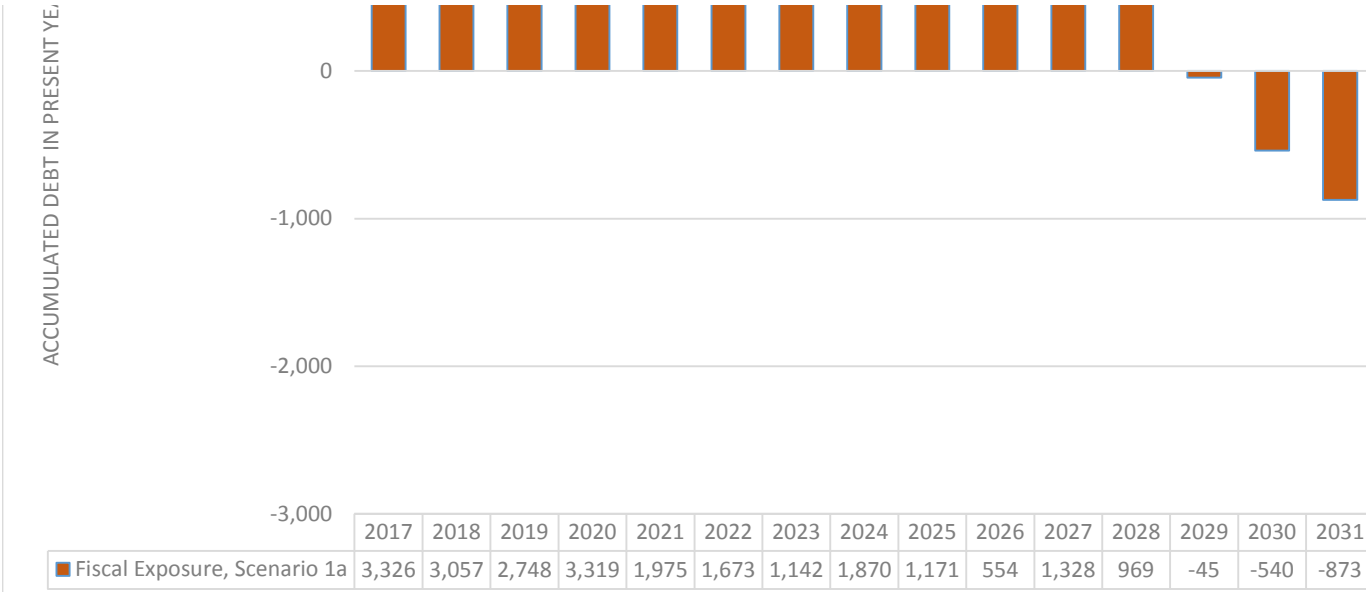




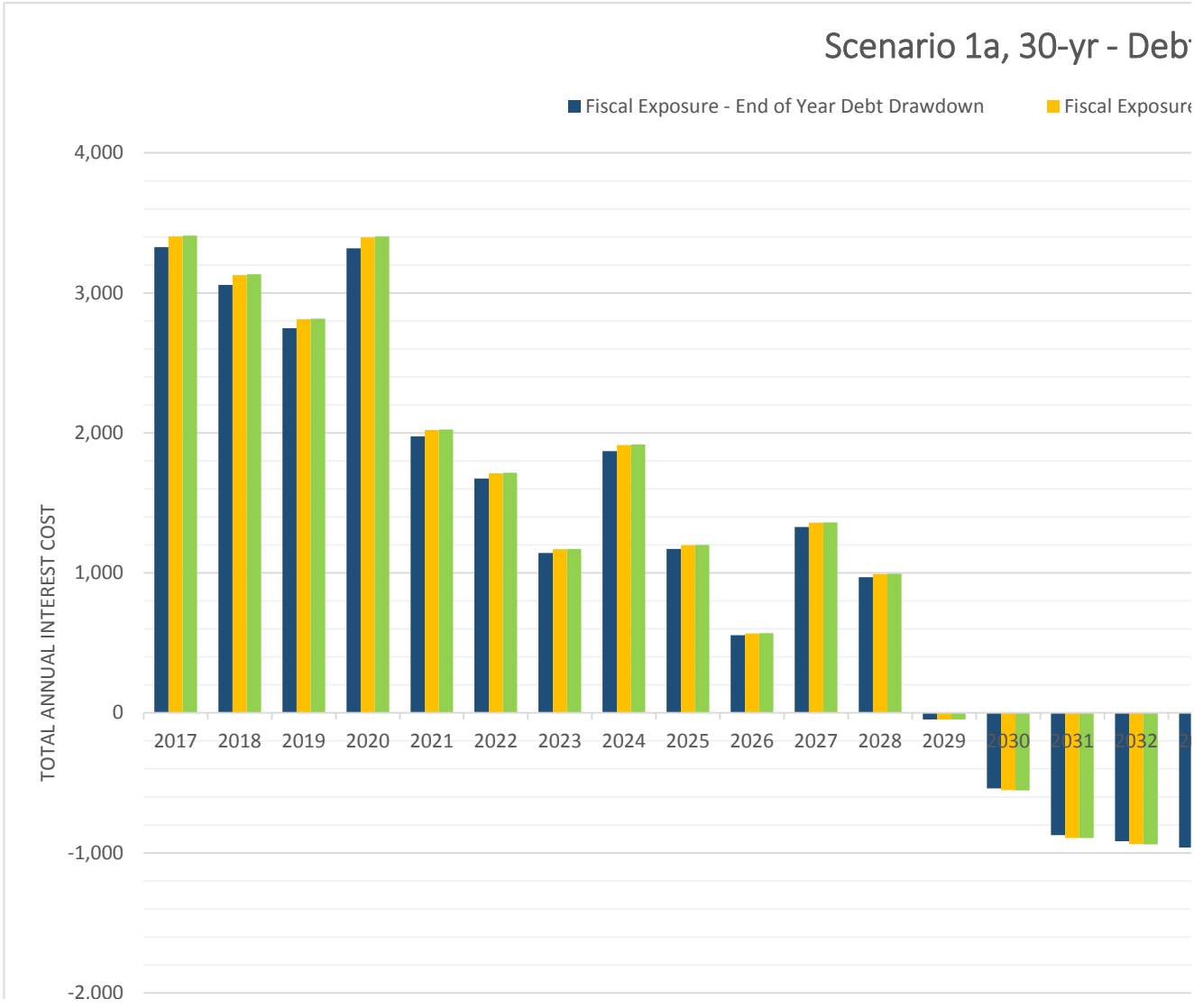


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



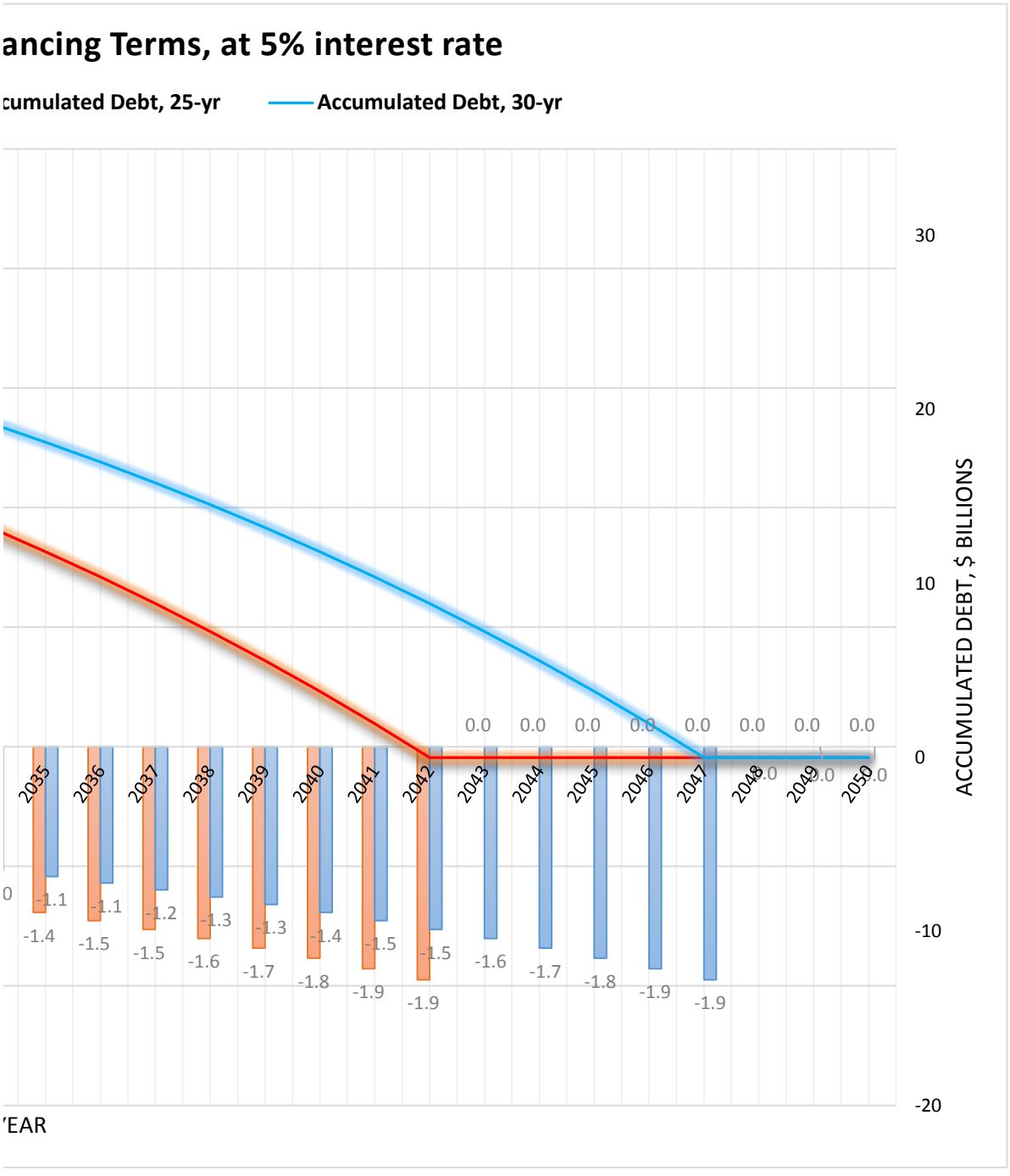


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



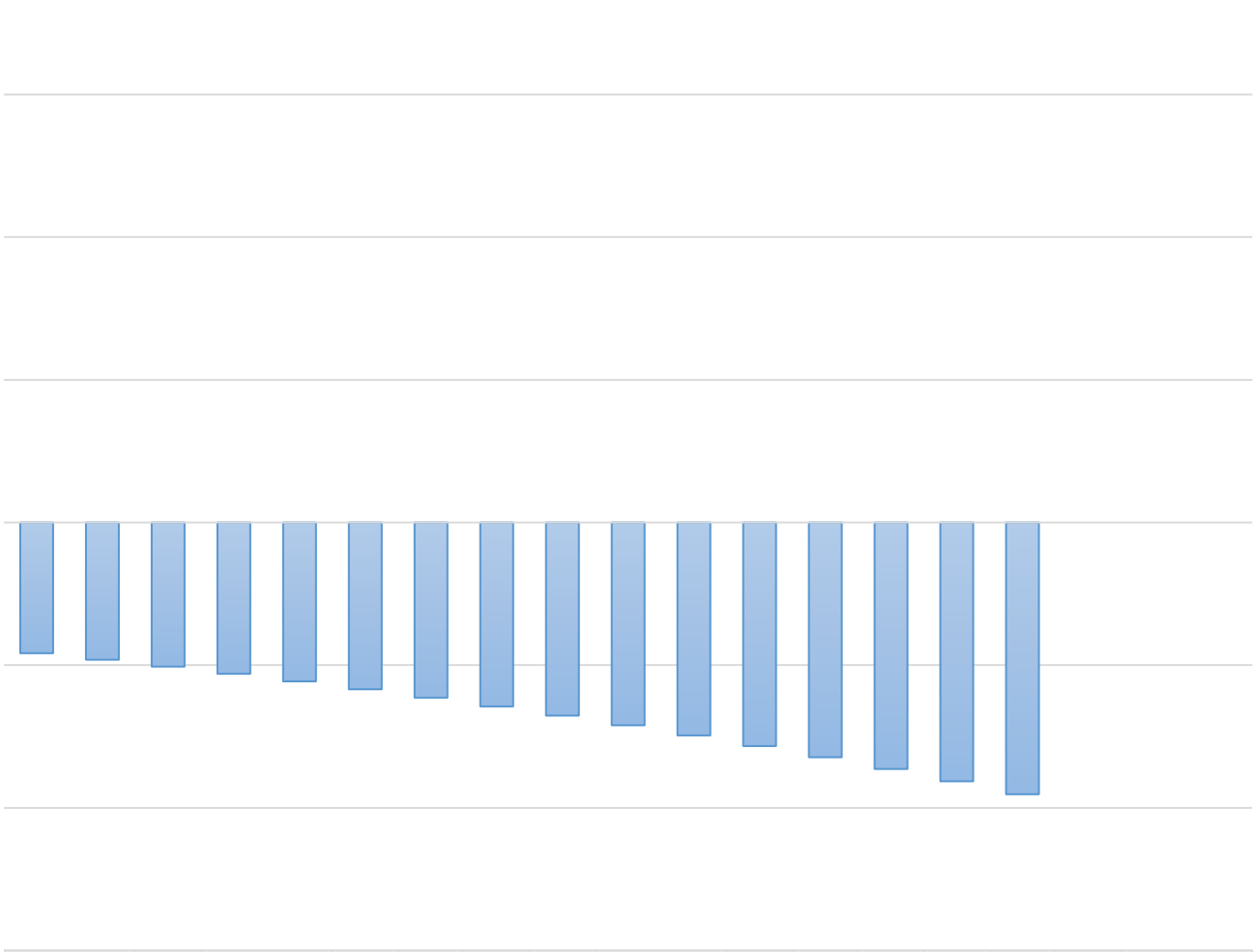

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

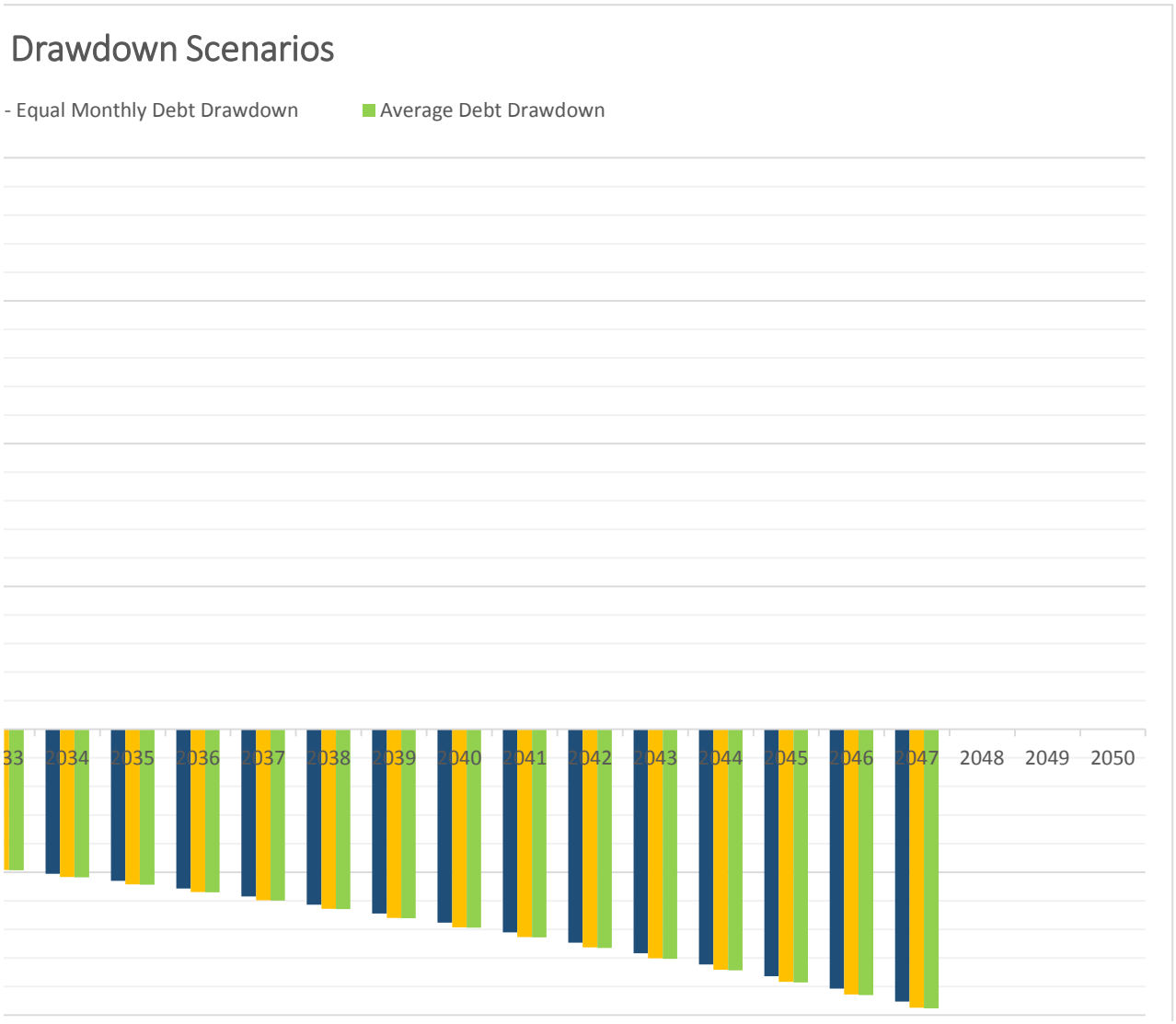
YEAR

cal Exposure



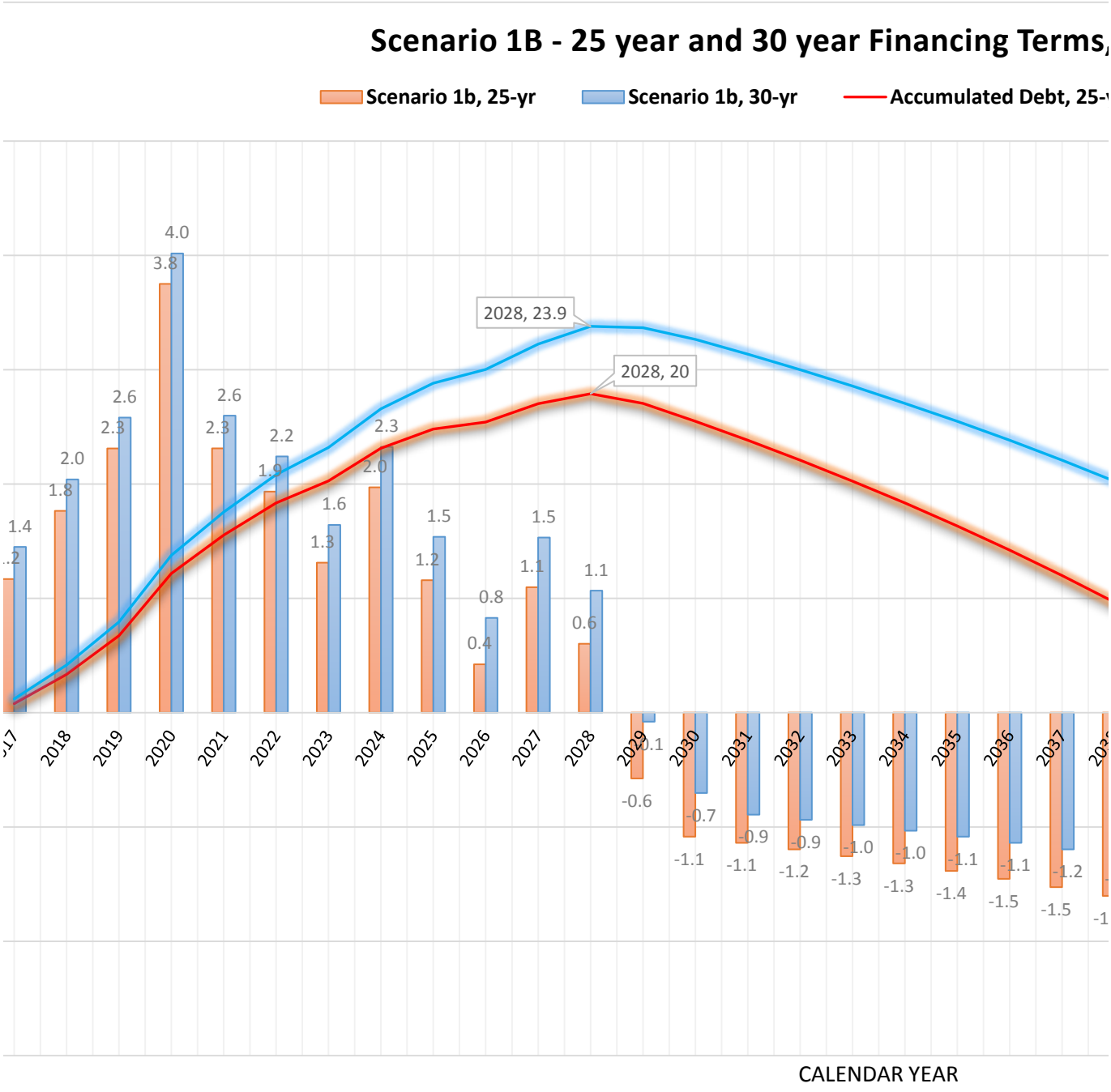
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

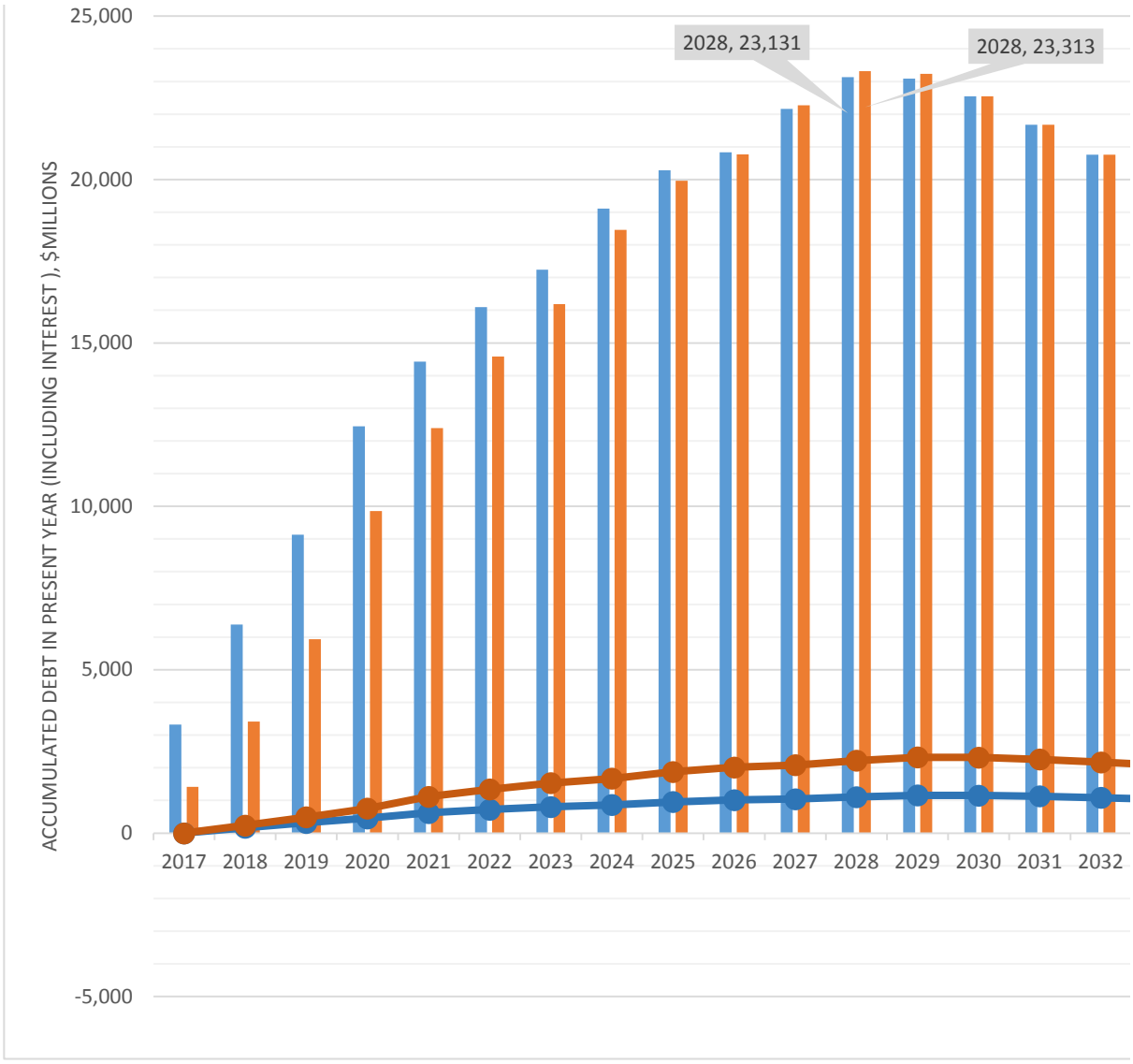


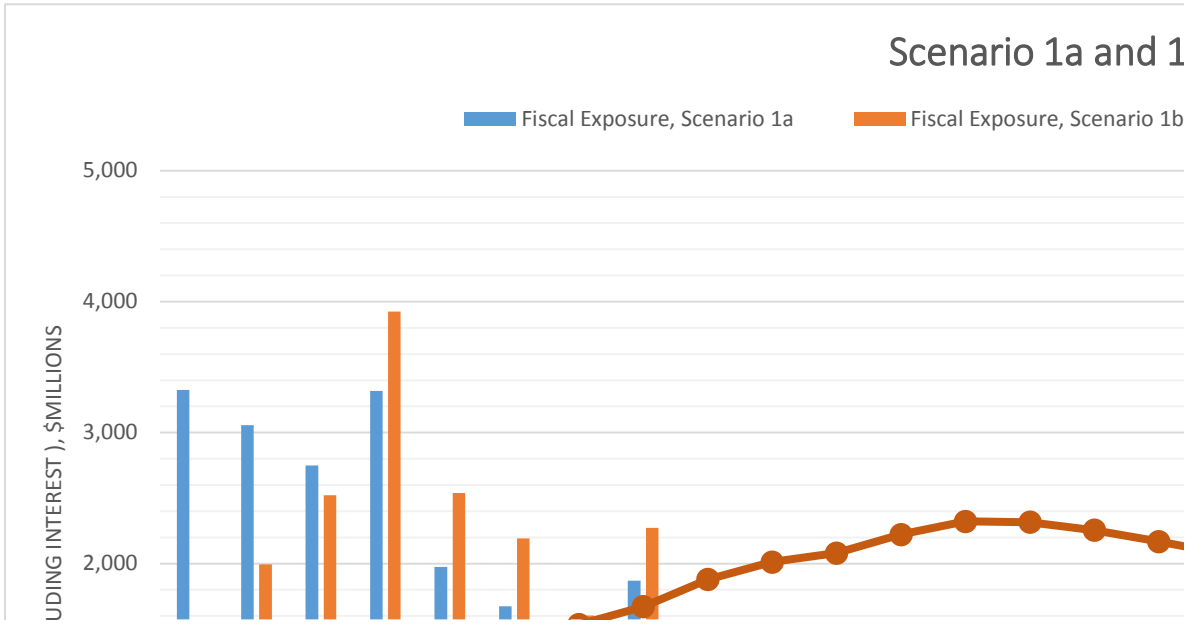
YEAR

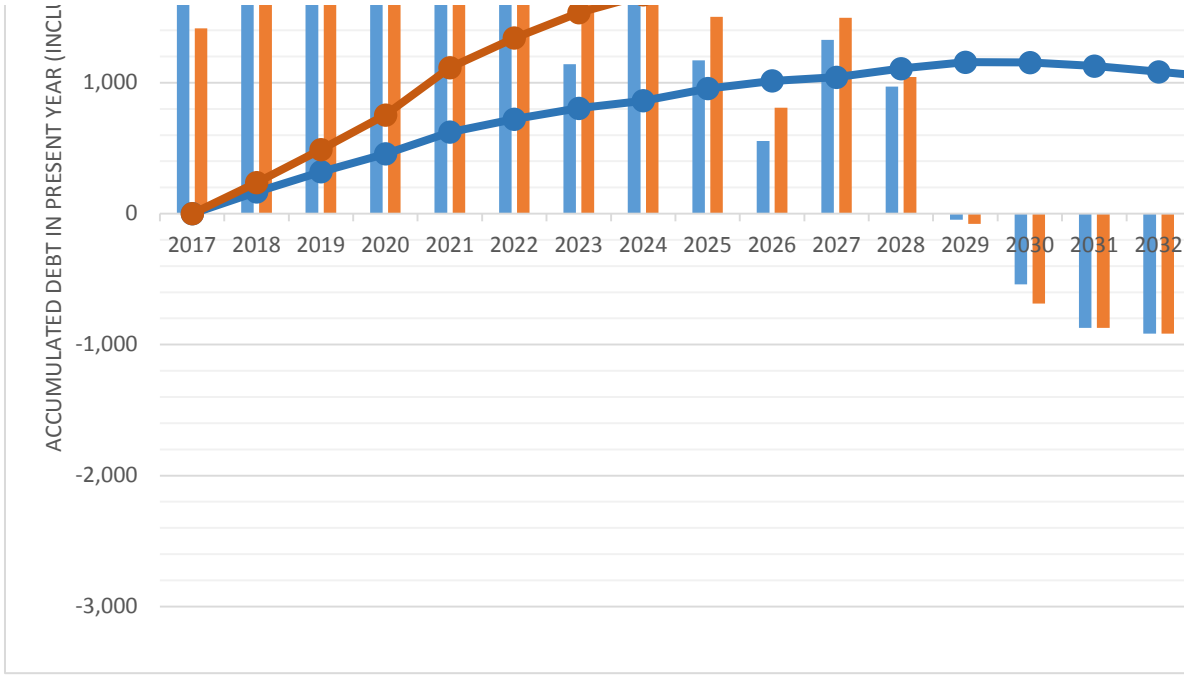
3 - 25 year and 30 year Financing Terms, at 5% interest rate

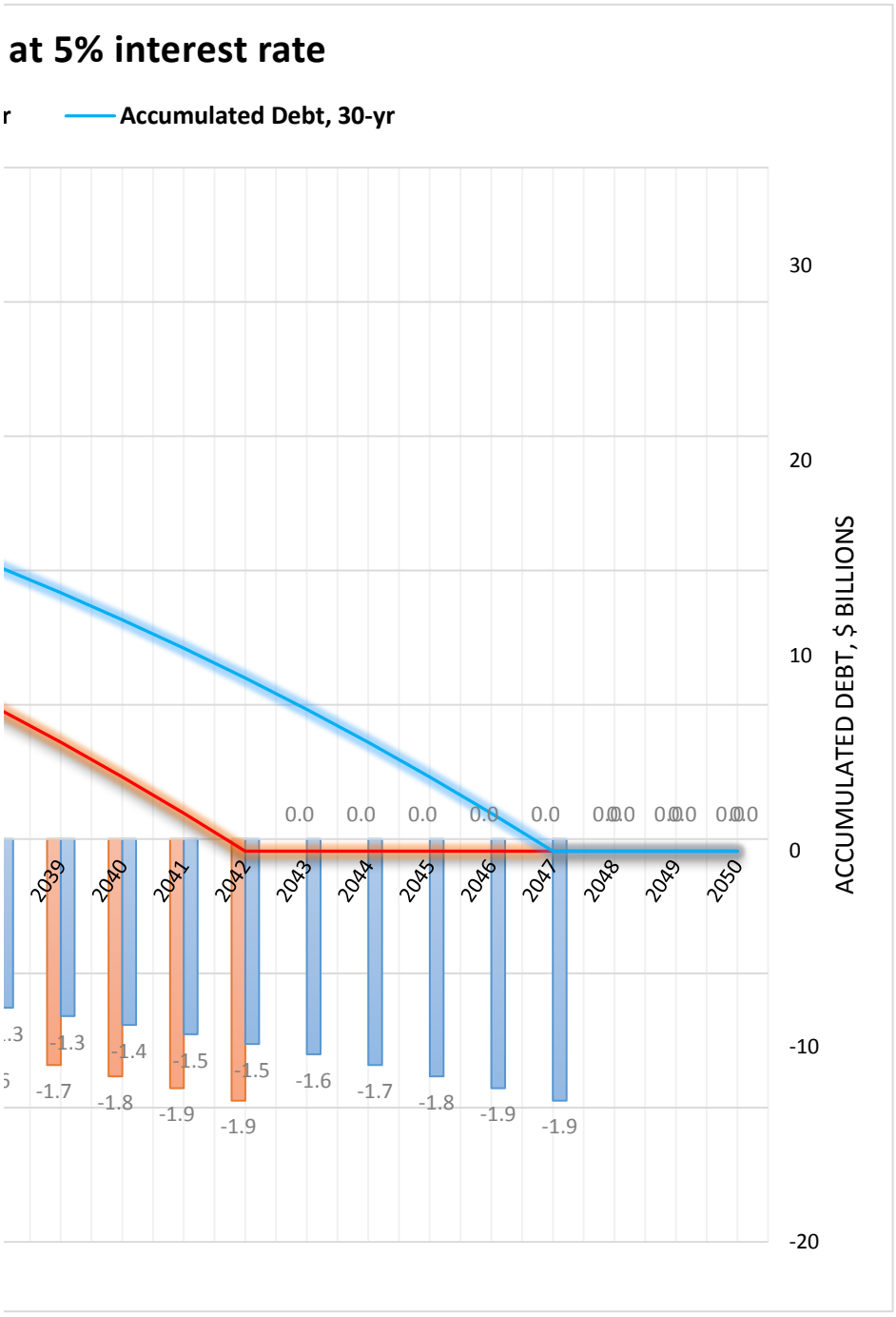





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

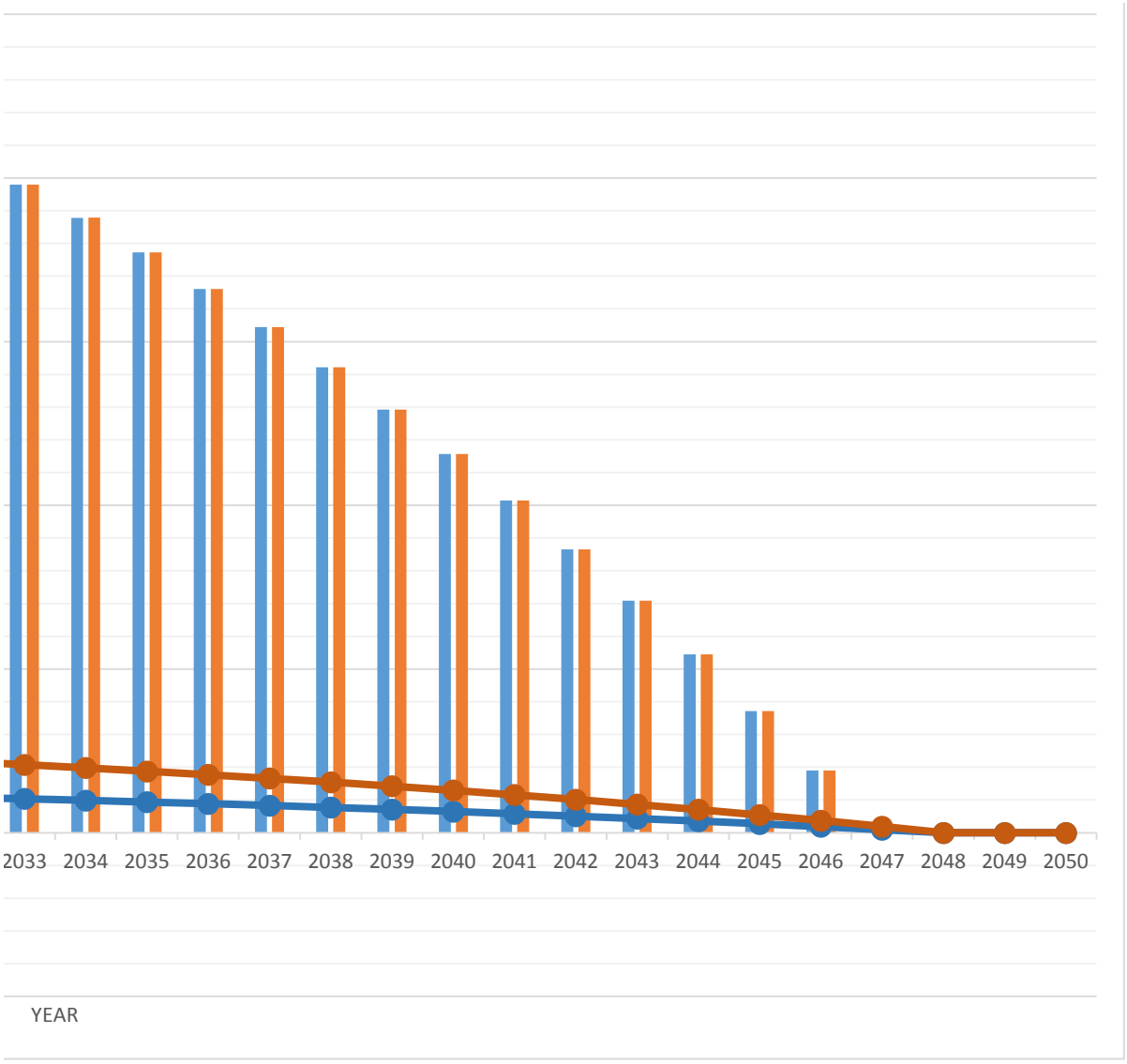

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

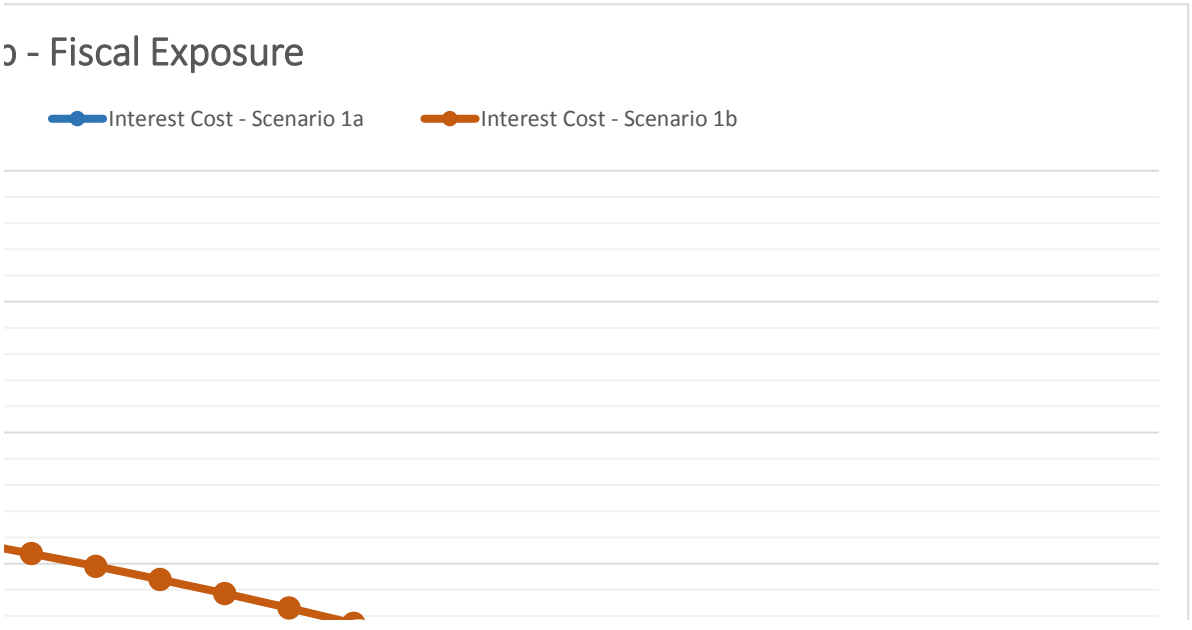

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

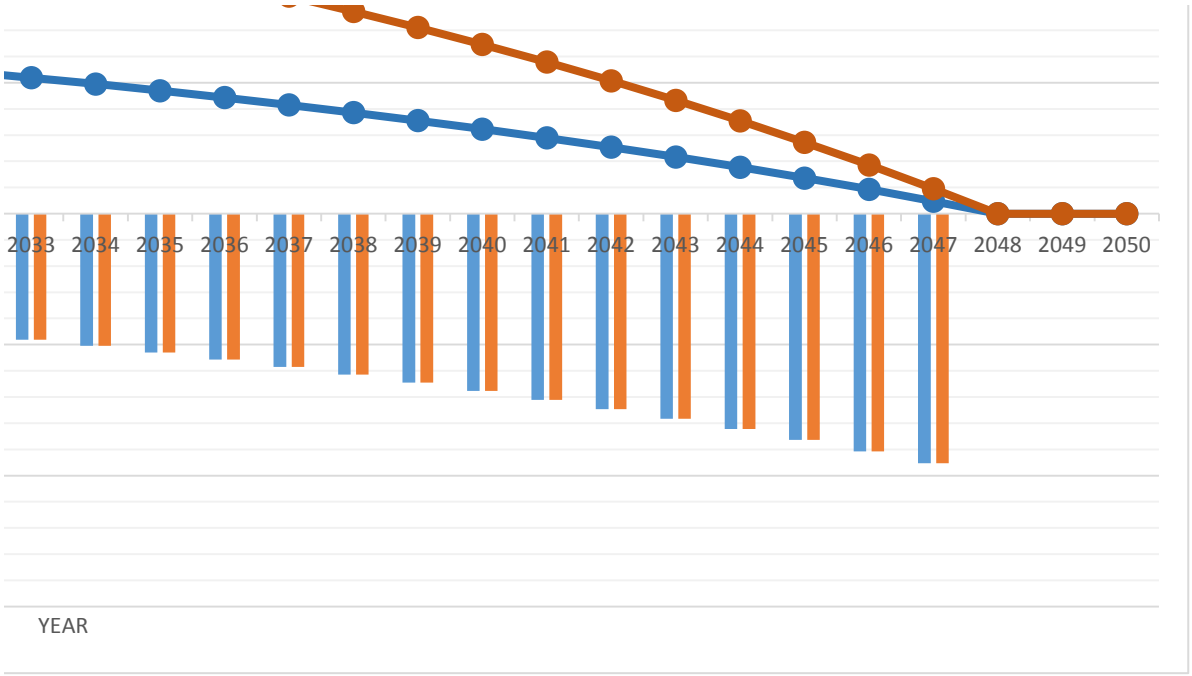


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

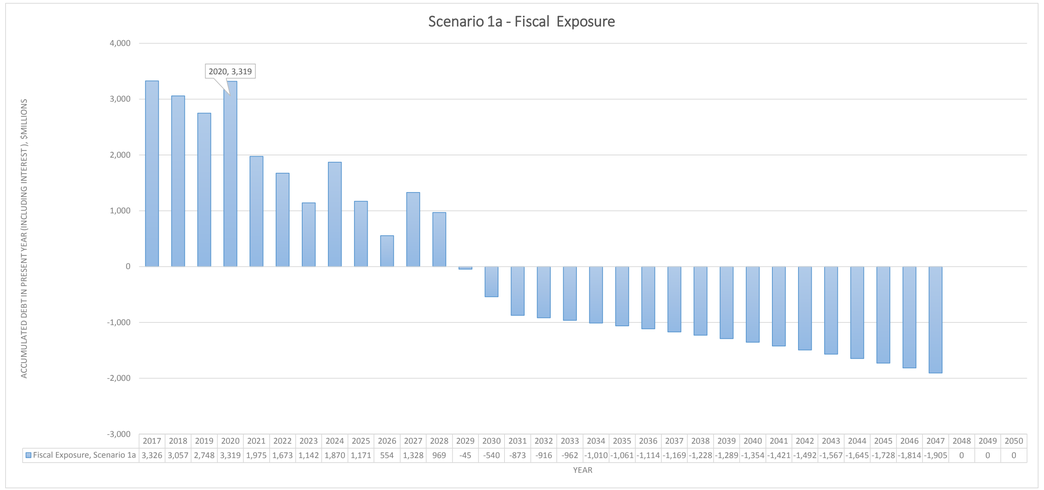
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

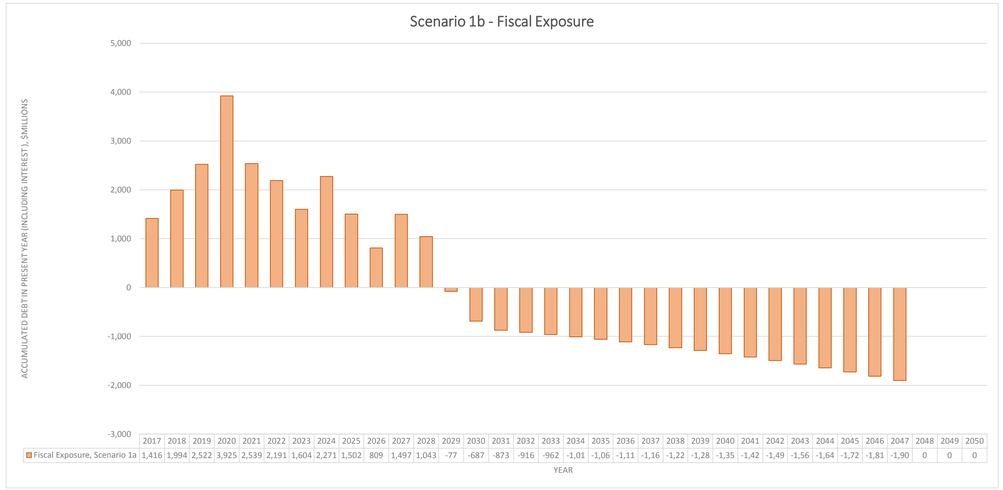
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

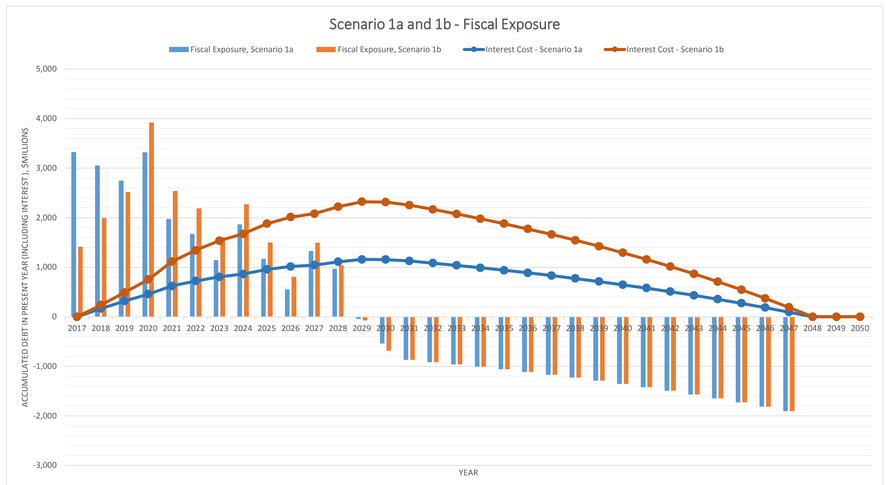
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

Notes:	Accounting treatment is to be determined.


Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0


Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0


Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

	Tab
v16	Powerpoint_Export

Change Description

Added in trigger for later start in the year

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

JK: Fixed the formula in the yellow highlighted cells. Pls. check. (SK: looks good to me)

Equal Monthly Debt Drawdown

		Month	Months Remaining
Scenario Start Date	July	7	6

AS LONG AS >

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	3,180	2,888	2,556
Annual Exposure2 with start on July 1st	*1,590*	*2,888*	*2,556*

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	795	3,107	2,805
Start: July 1st	-	*2,312*	*2,805*

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Annual Exposure[2]	3,404	3,128	2,812
Annual Exposure2 with start on July 1st	*1,702*	*3,128*	*2,812*

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	-	3,335	3,049
Start: July 1st	-	*2,484*	*3,049*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 202
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approxim

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on G
decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	1,168	1,765	2,311
Annual Exposure2 with start on July 1st	*584*	*1,765*	*2,311*

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**

Start: January 1st	292	1,609	1,901
Start: July 1st	-	*1,025*	*1,901*

Scenario 1b - 30-yr amortization	**2017**	**2018**	**2019**
Annual Exposure[2]	1,449	2,040	2,581
Annual Exposure2 with start on July 1st	*725*	*2,040*	*2,581*

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	362	1,597	2,175
Start: July 1st	-	*1,959*	*2,175*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 20
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approxim

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA
decision on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**	**2018-19**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 -	1,597 - 3,335	2,175 - 3,049

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]
Debt-Finance Global Adjustment Costs, Option 1a	0	3335	3049
Debt-Finance Global Adjustment Costs, Option 1a	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**0**	**3575**	**3352**
Total, B	362	1837	2478
Proposed Program Total:	362 -	1,837 - 3,575	2,478 - 3,352

1	1 = Comparision Enabled

APRIL 1, 2017

2020	2021	2022
3,123	1,728	1,400
3,123	*1,728*	*1,400*

2019-20	2020-21	2021-2022
2,697	2,774	1,646
2,697	*2,774*	*1,646*

2020	2021	2022
3,396	2,020	1,712
3,396	*2,020*	*1,712*

2019-20	2020-21	2021-2022
2,958	3,052	1,943
2,958	*3,052*	*1,943*

28 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
nately $33-$36 million.

A actuals per month based on month of the year. Actuals may also depend on

2020	2021	2022
3,750	2,311	1,933
3,750	*2,311*	*1,933*

2019-20	2020-21	2021-2022

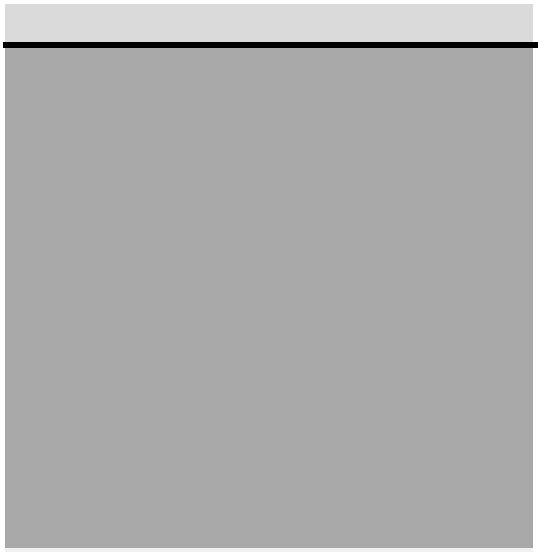
2,671	3,391	2,217
2,671	*3,391*	*2,217*

2020	2021	2022
4,016	2,598	2,241
4,016	*2,598*	*2,241*

2019-20	2020-21	2021-2022
2,940	3,662	2,508
2,940	*3,662*	*2,508*

28 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
ately $118-$134 million.

\ actuals per month based on month of the year. Actuals may also depend on



2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019-20[1]	2020-21[1]
2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3575**
Total, B	362	1837

Proposed Program Total:	362 - 851	1,837 - 3,575

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964
Equal Monthly Debt Drawdown	3,180	952

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

Scenario 1a, 25-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	
	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1a, 25-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	

Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	3,665	968	
Equal Monthly Debt Drawdown	3,750	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

Scenario 1b, 25-yr — End of Year Debt Drawdown

Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

Scenario 1b, 25-yr — Equal Monthly Debt Drawdown

12

Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	*954*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

	Monthly Drawdown	95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr — Bi-Annual Debt Drawdown

2

Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments
($ millions)

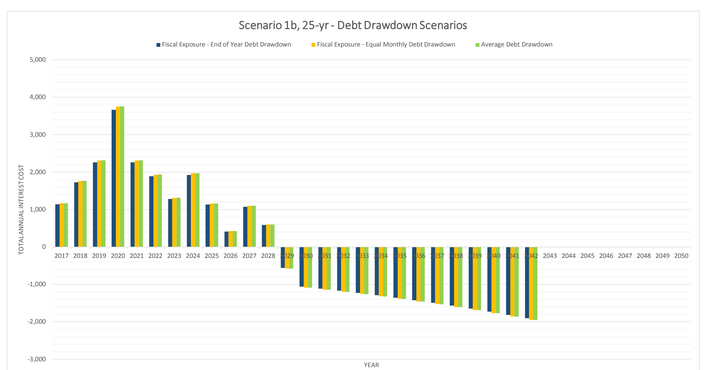
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

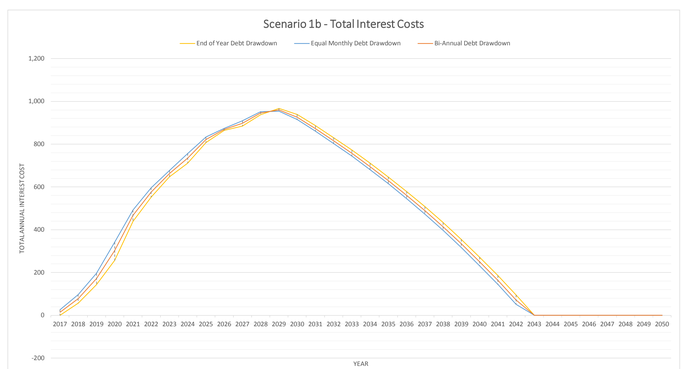
	Bi-Annual Drawdown	571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr — Average Debt Drawdown

Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

Scenario 1a, 30-yr — End of Year Debt Drawdown

Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1a, 30-yr — Equal Monthly Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	*1,156*	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr — Bi-Annual Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

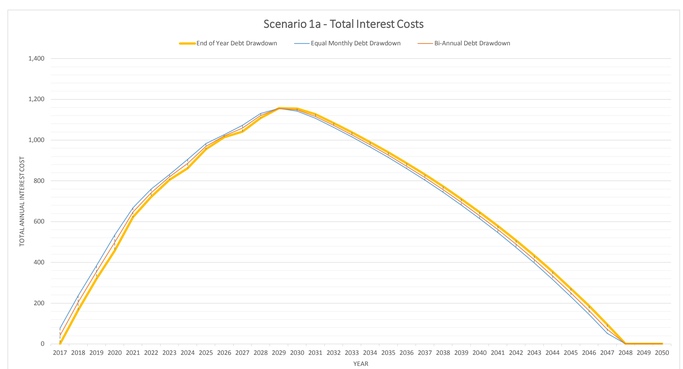
	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr — Average Debt Drawdown

Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

Scenario 1b, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr — Equal Monthly Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr — Bi-Annual Debt Drawdown

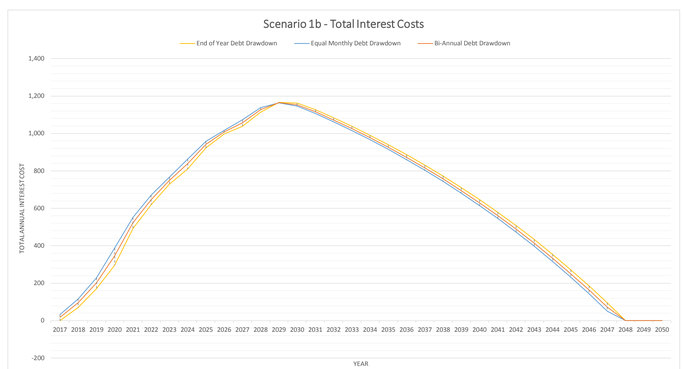
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

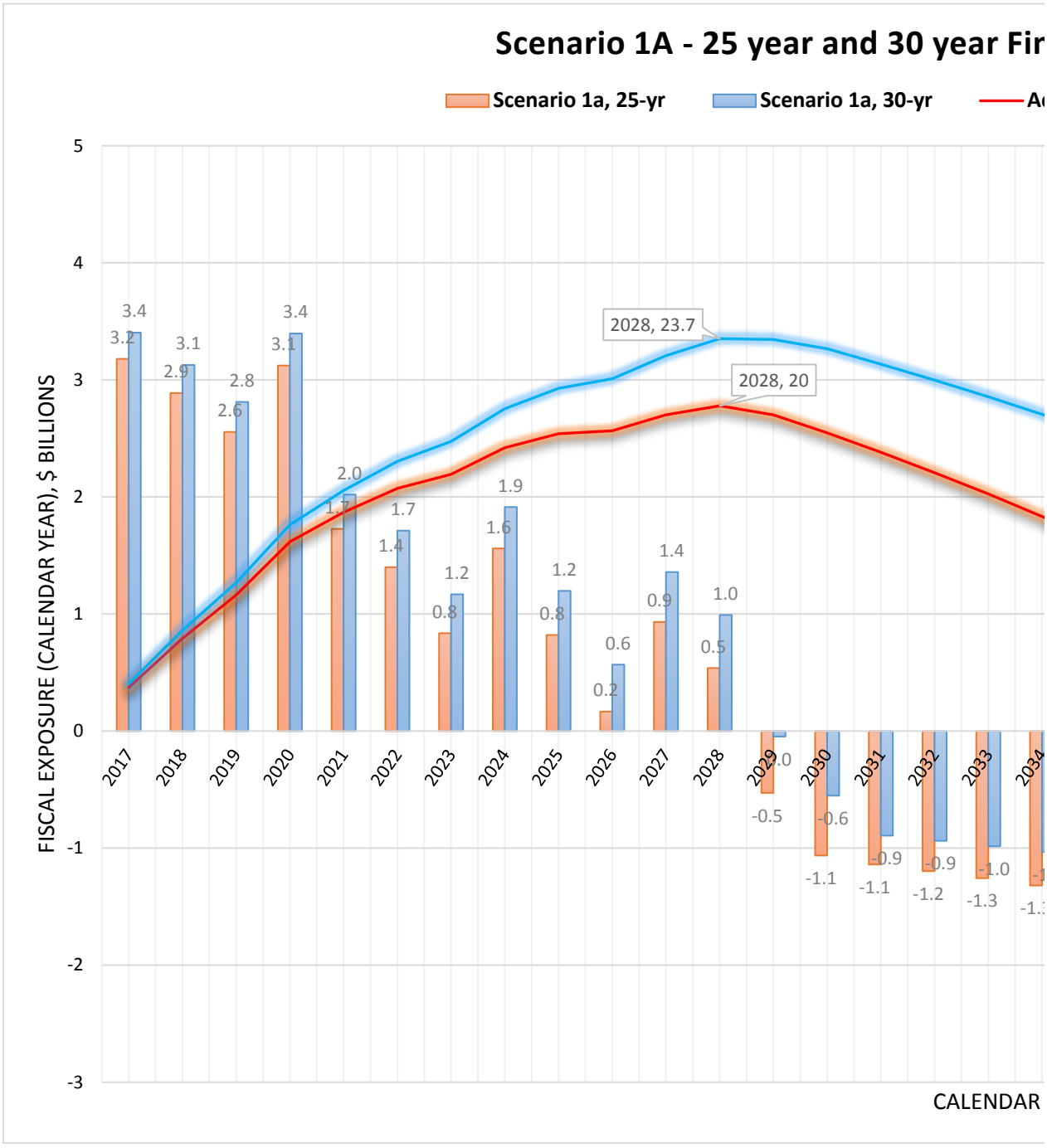
Scenario 1b, 30-yr — Average Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

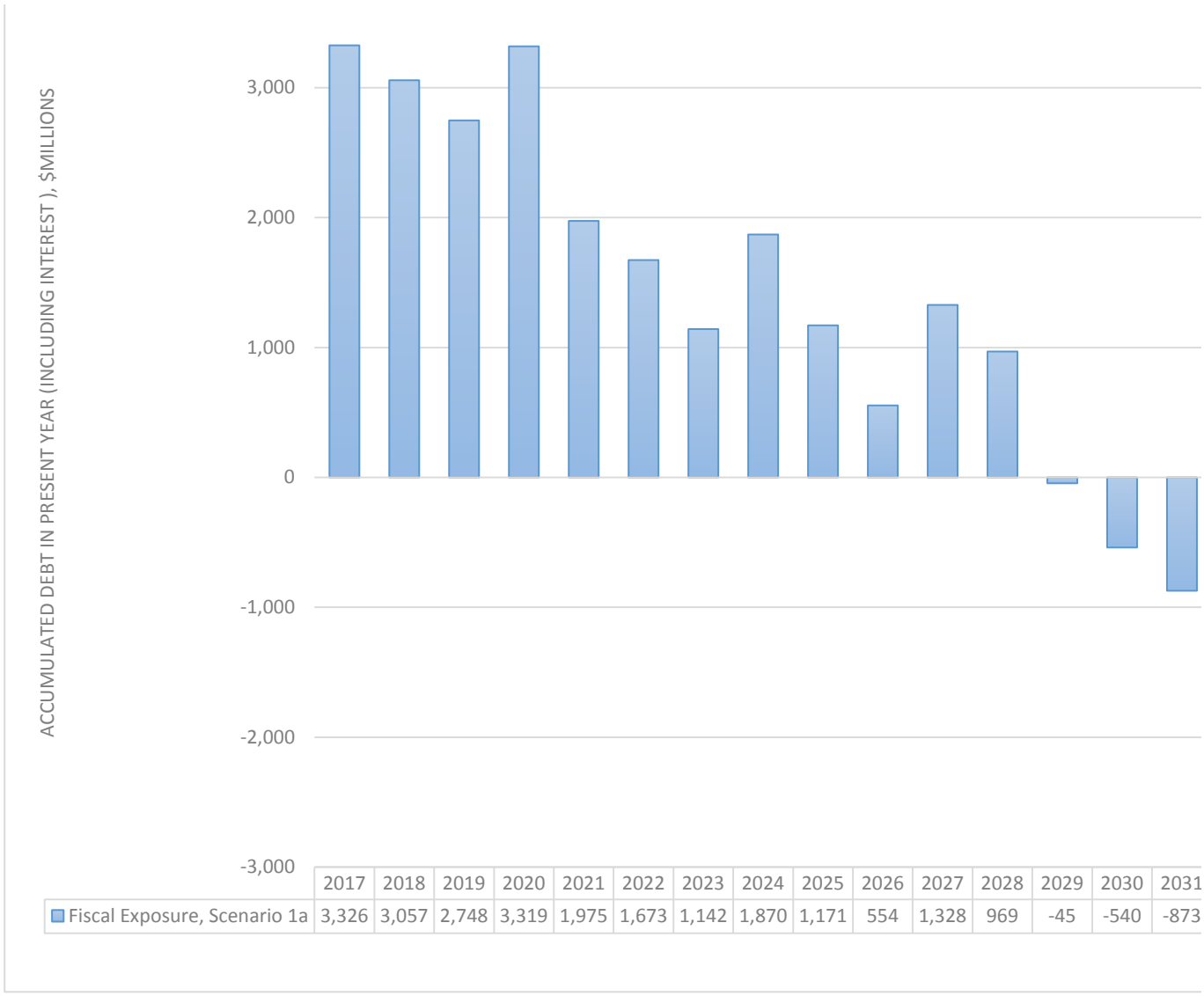




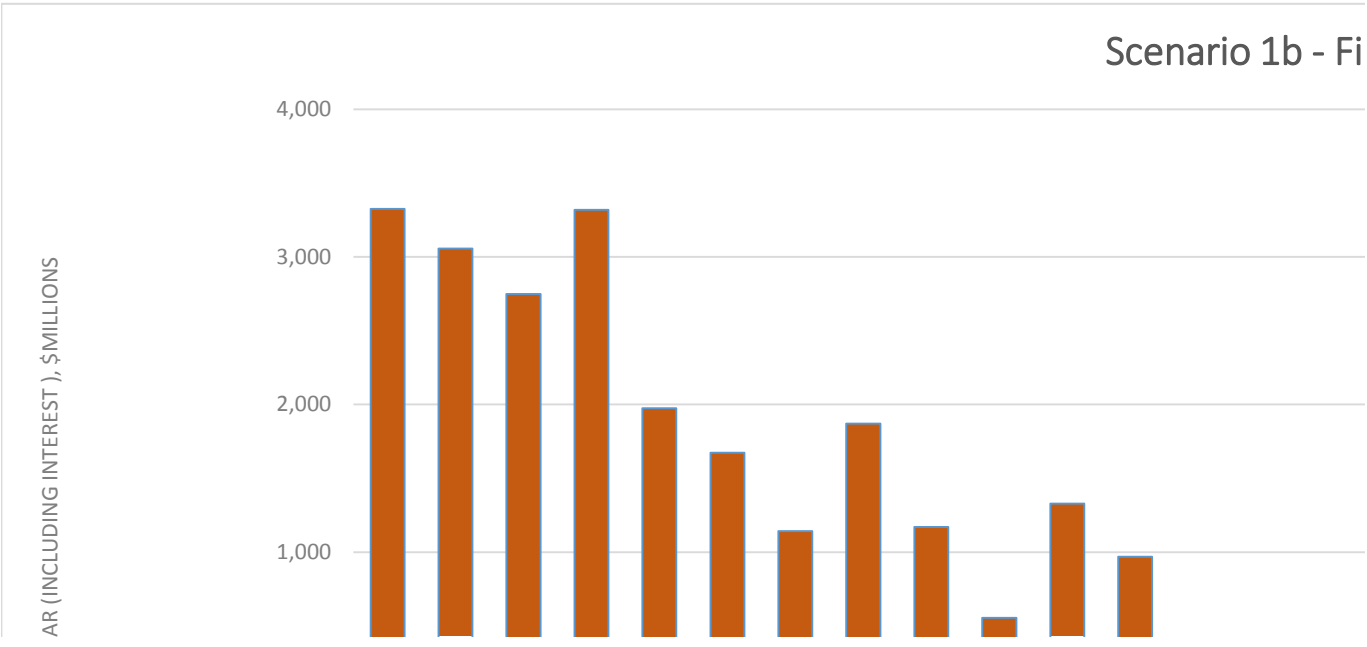
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

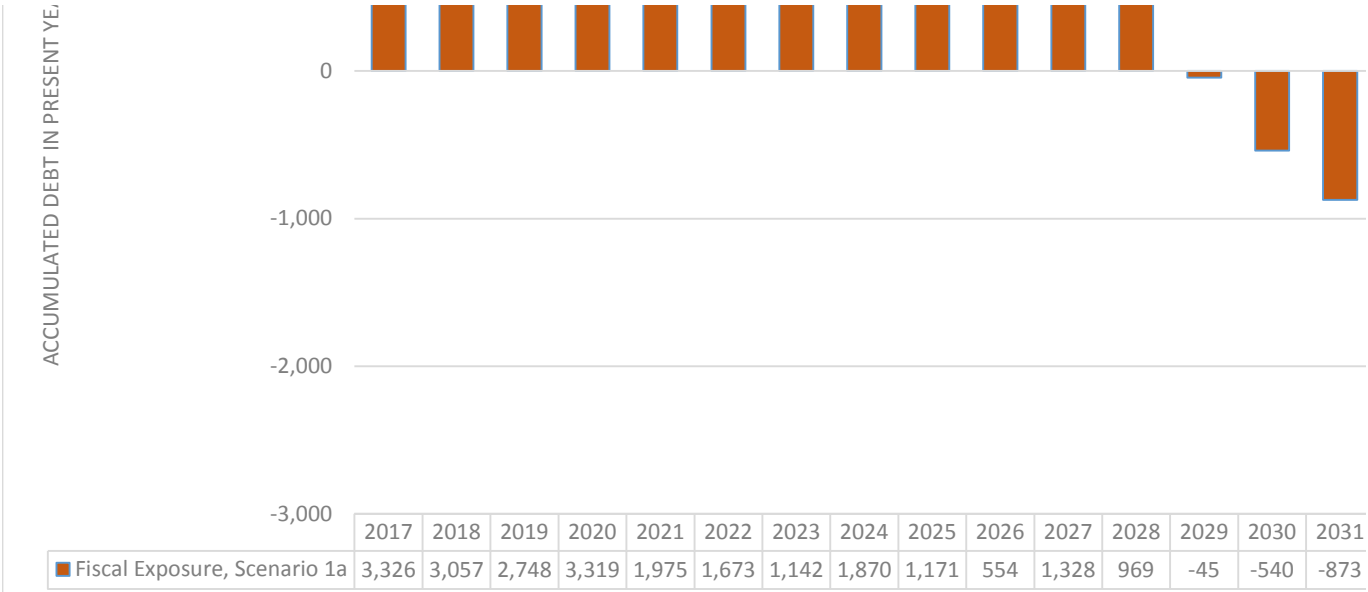




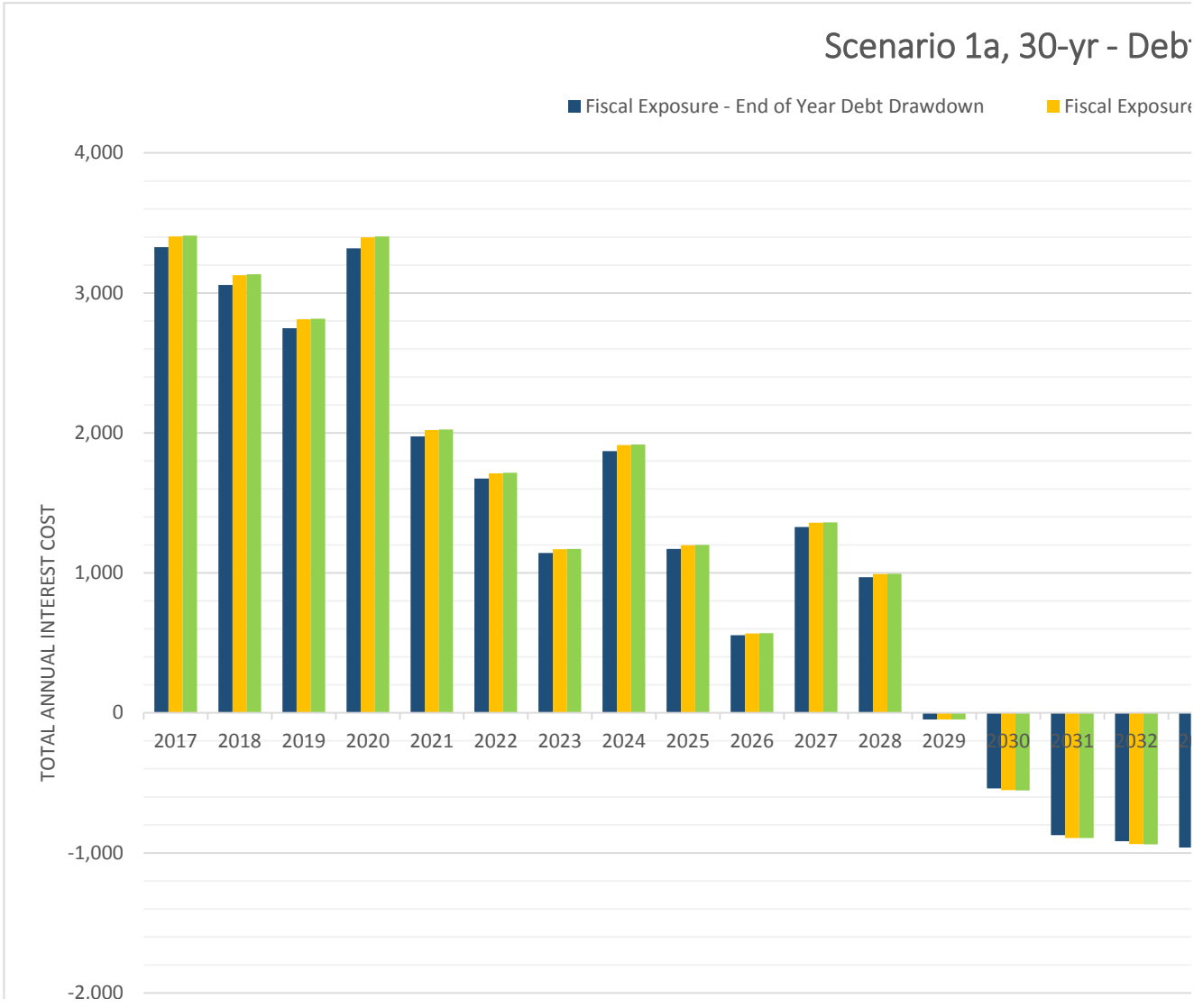


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



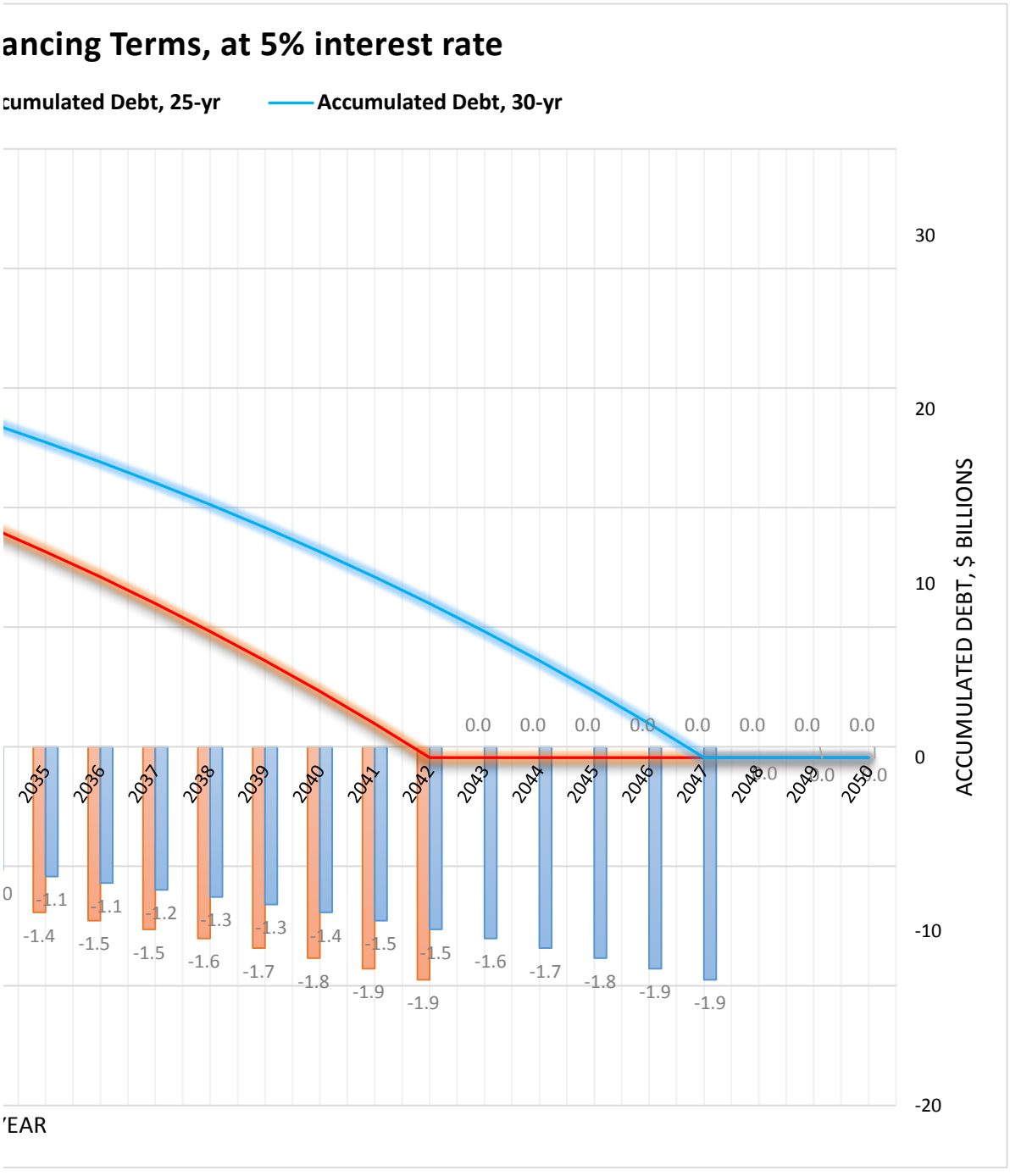


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



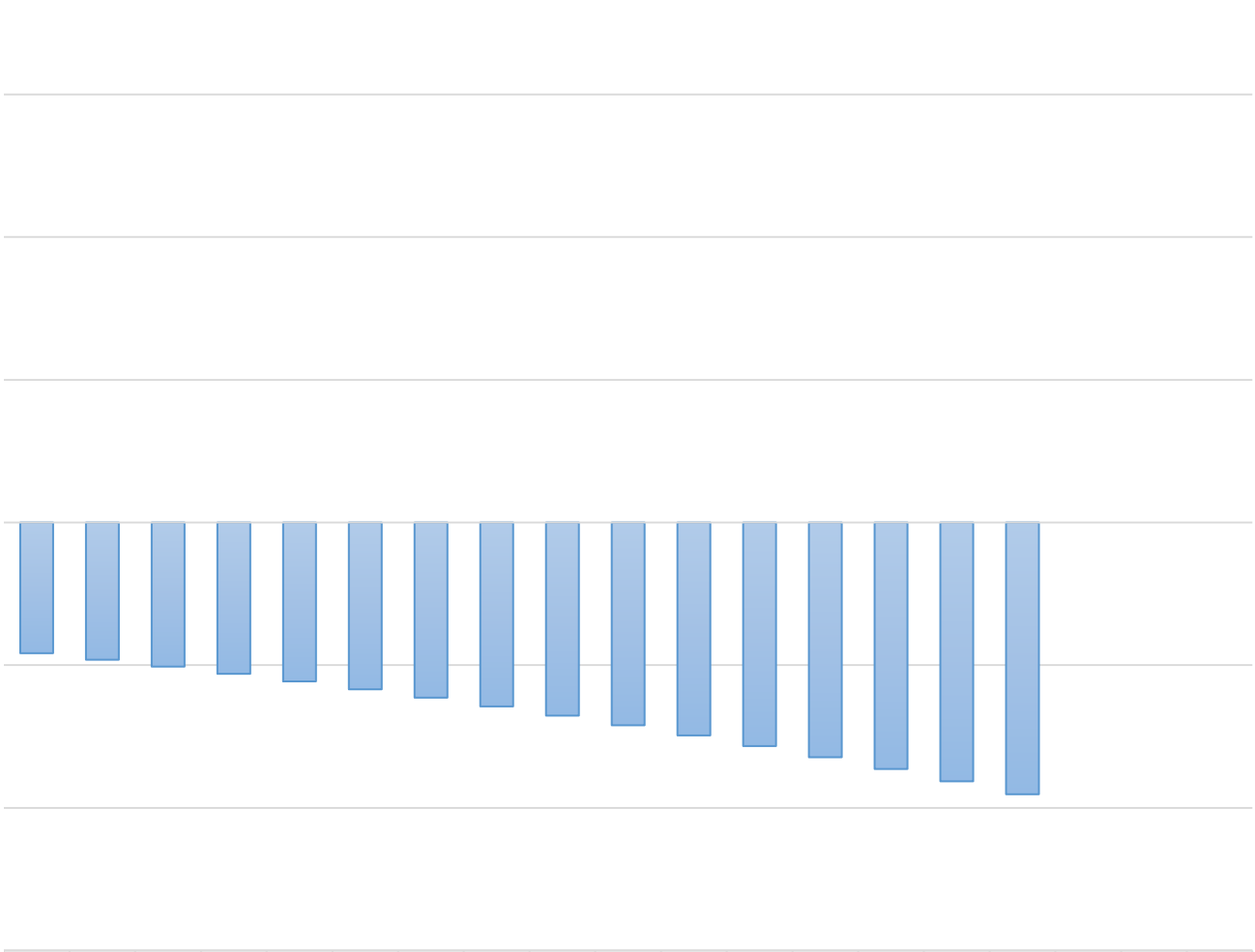

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

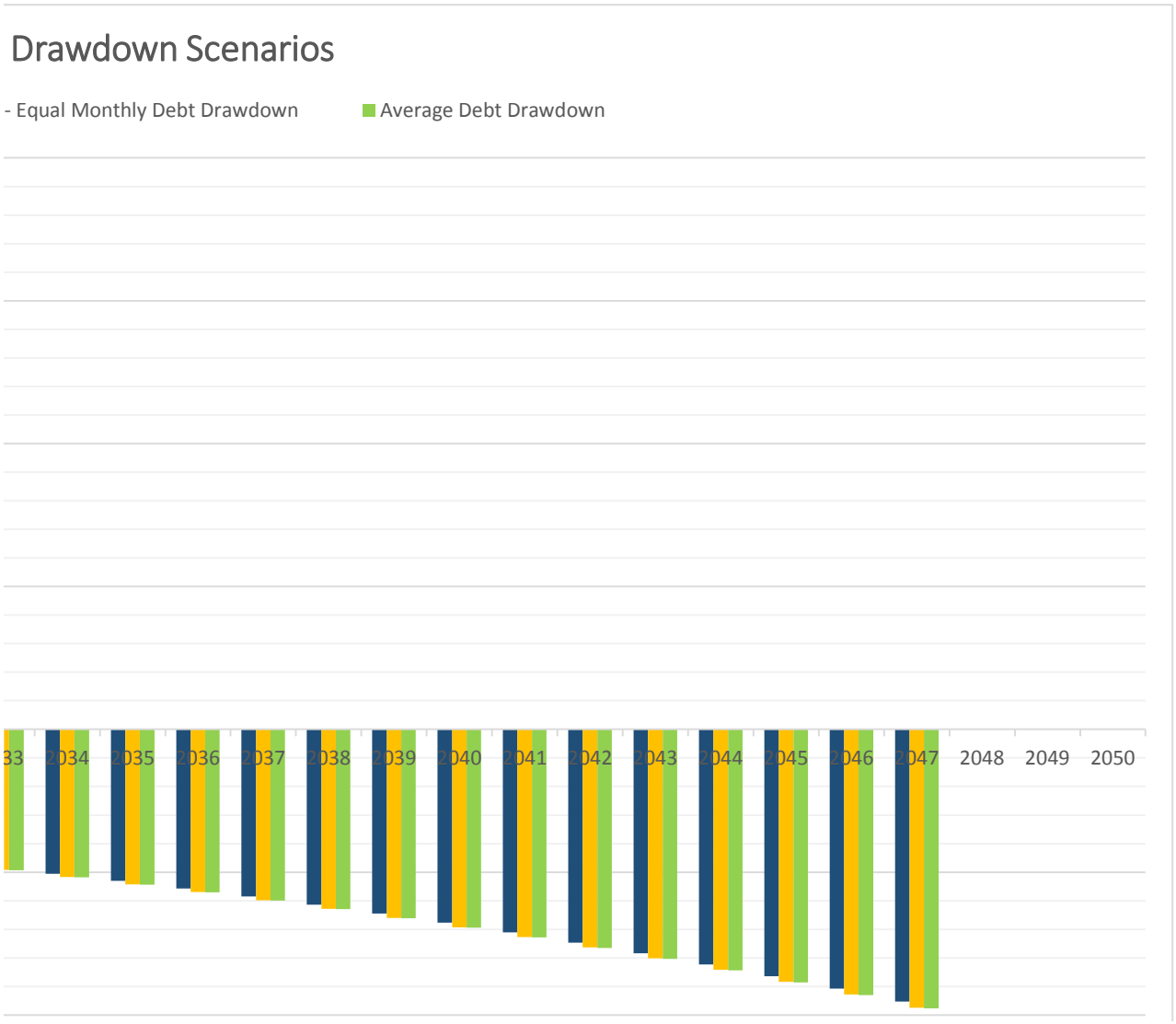
YEAR

cal Exposure



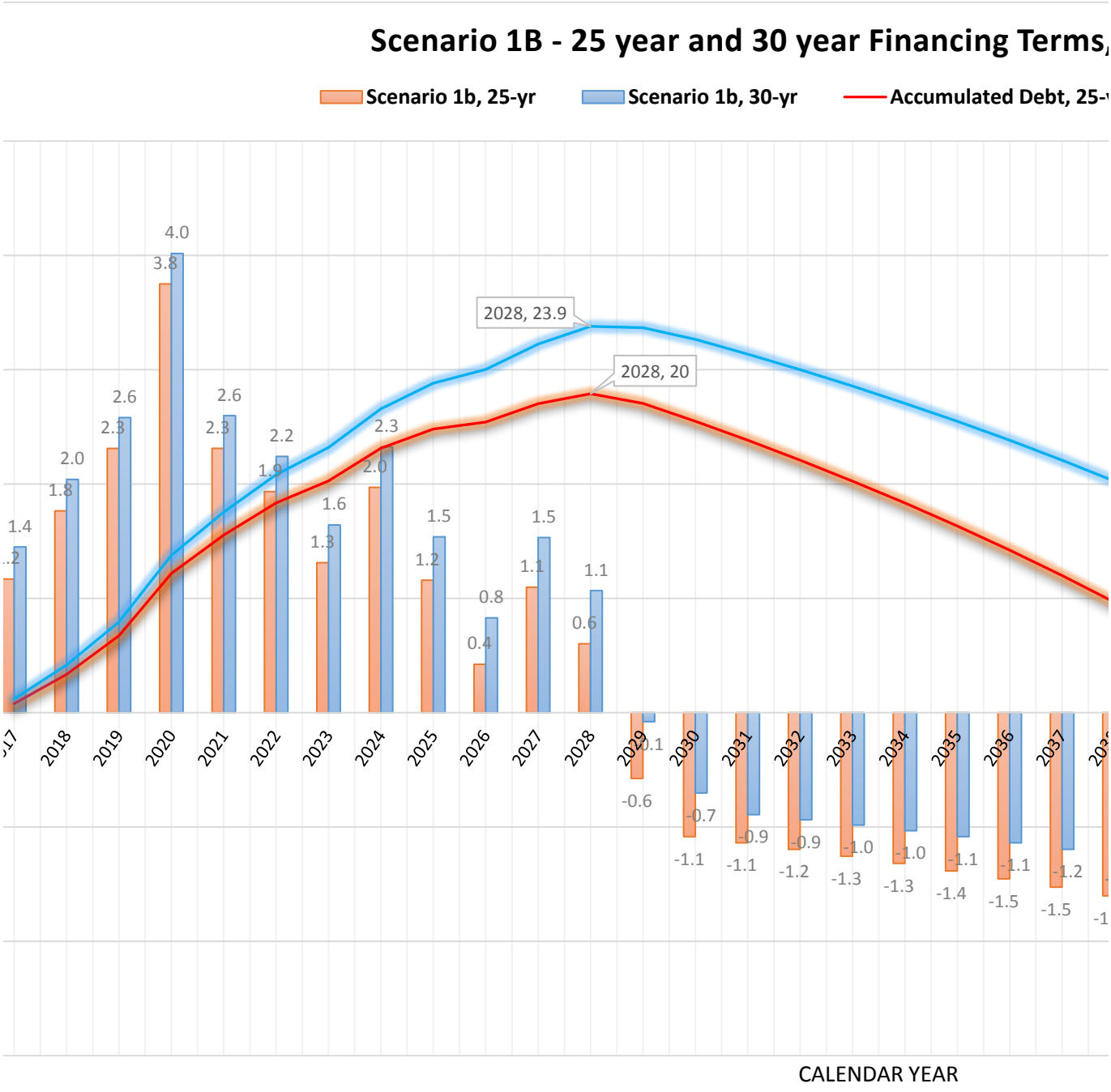
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

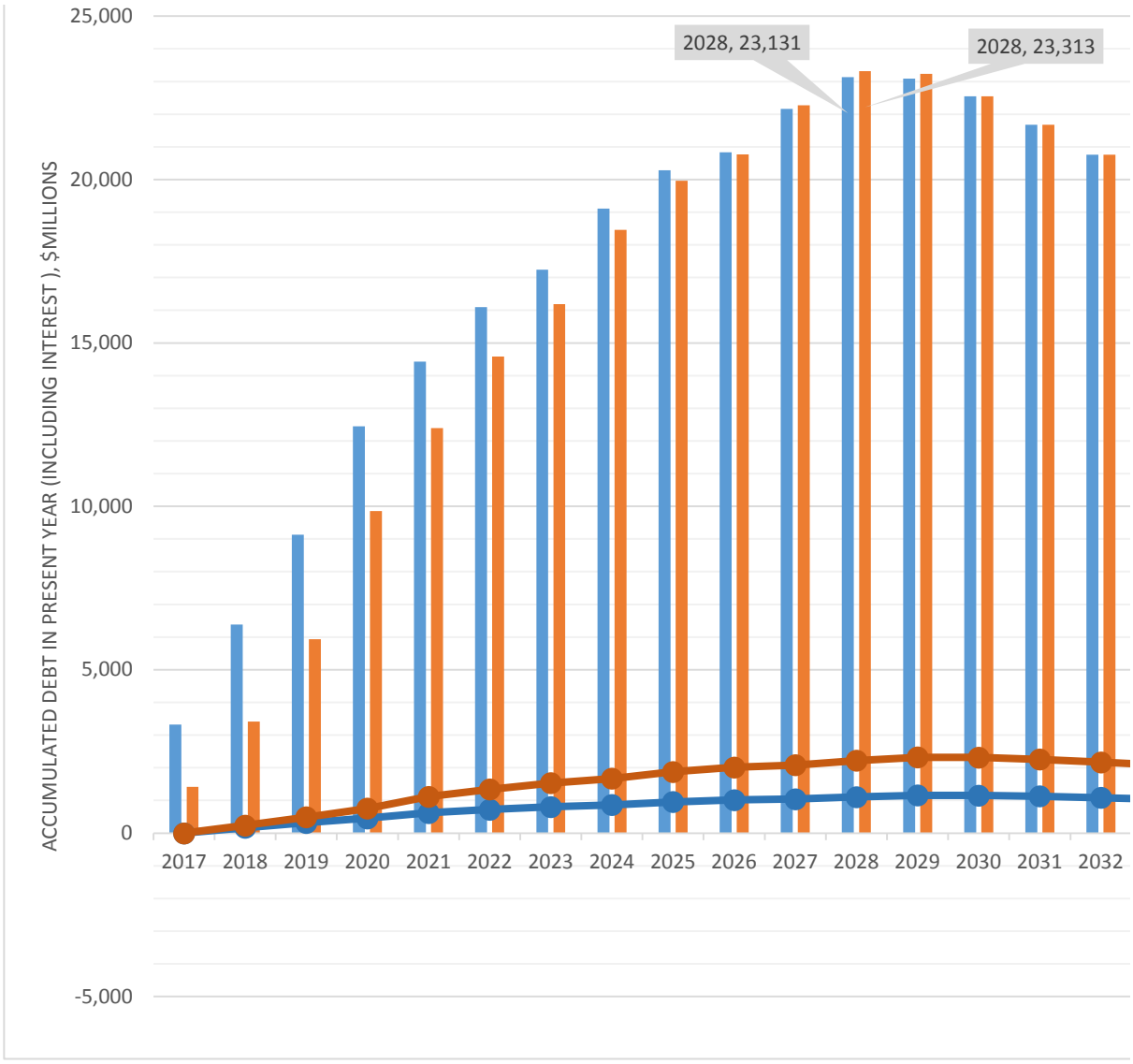


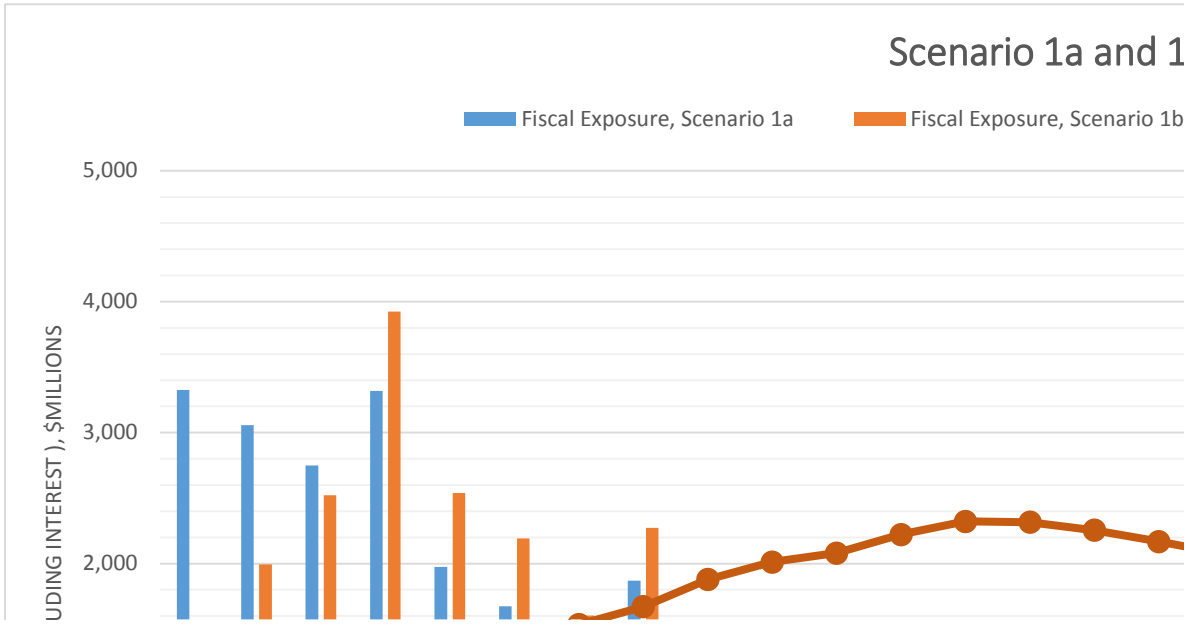
YEAR

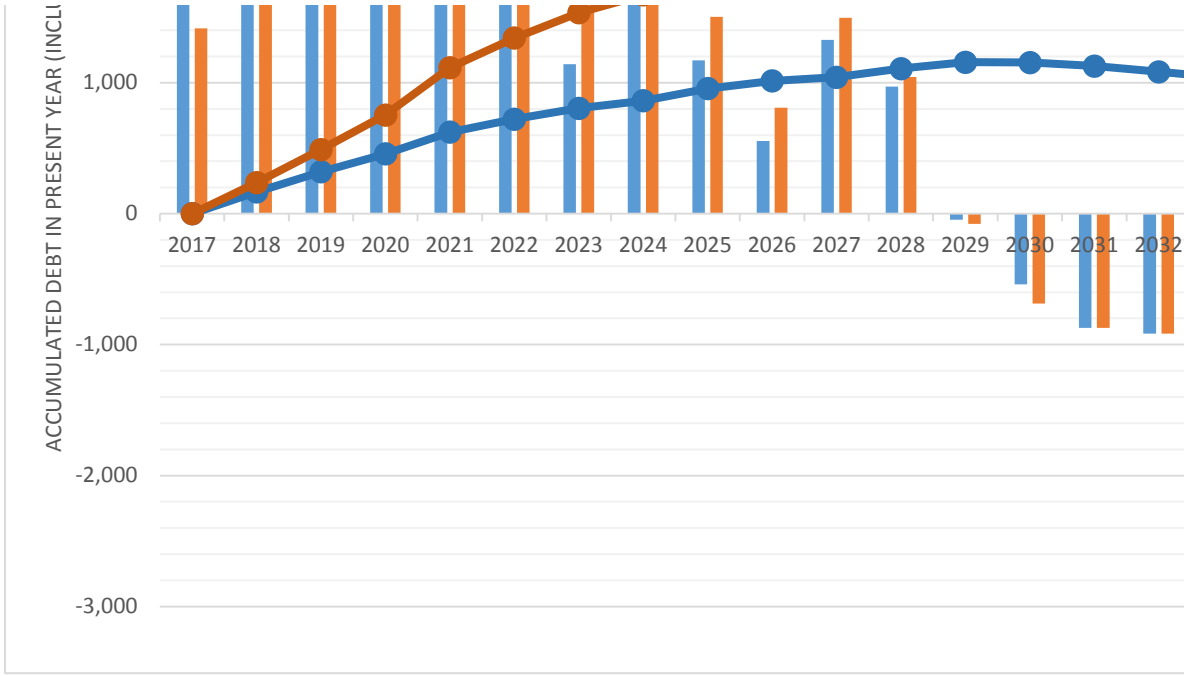
3 - 25 year and 30 year Financing Terms, at 5% interest rate

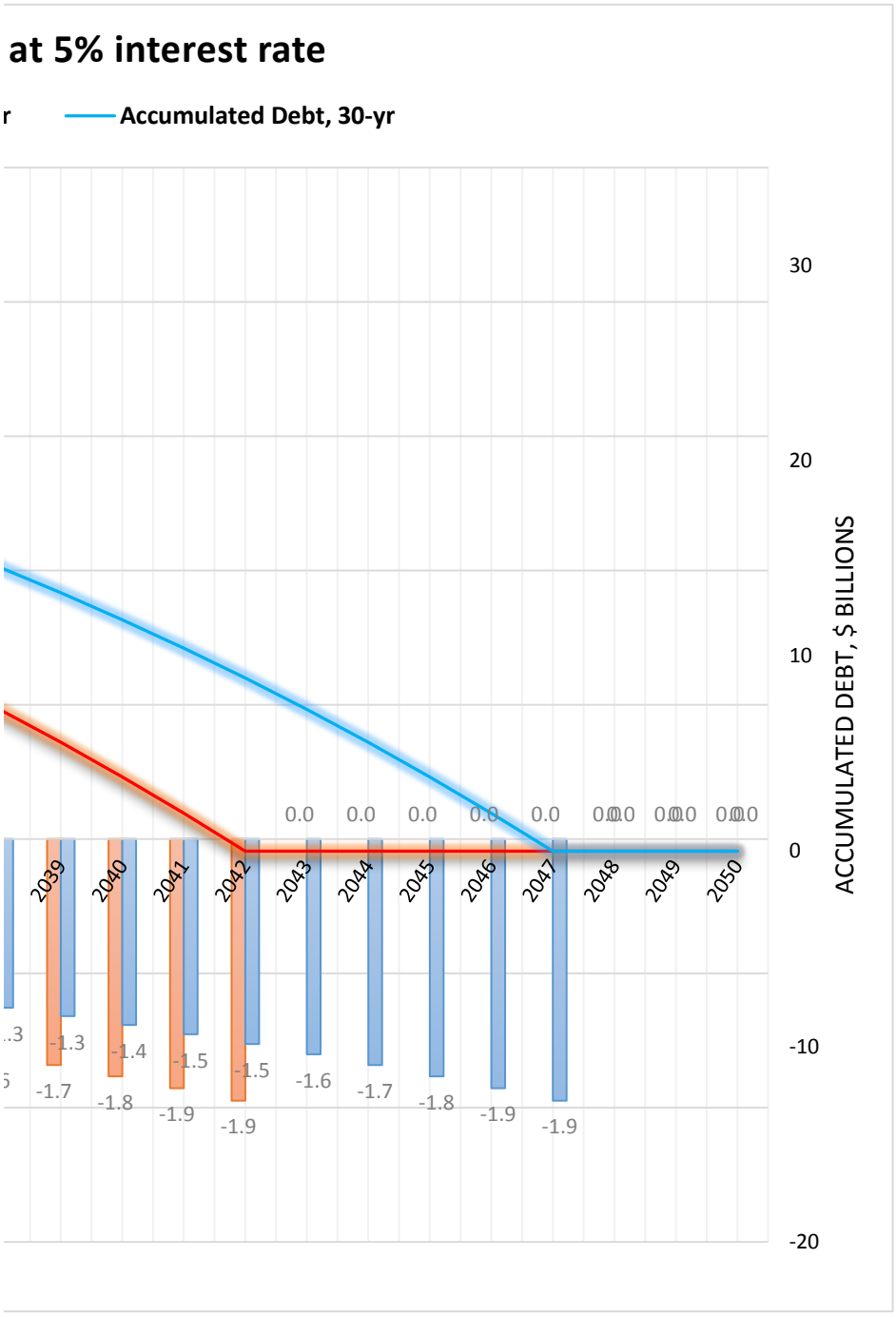





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

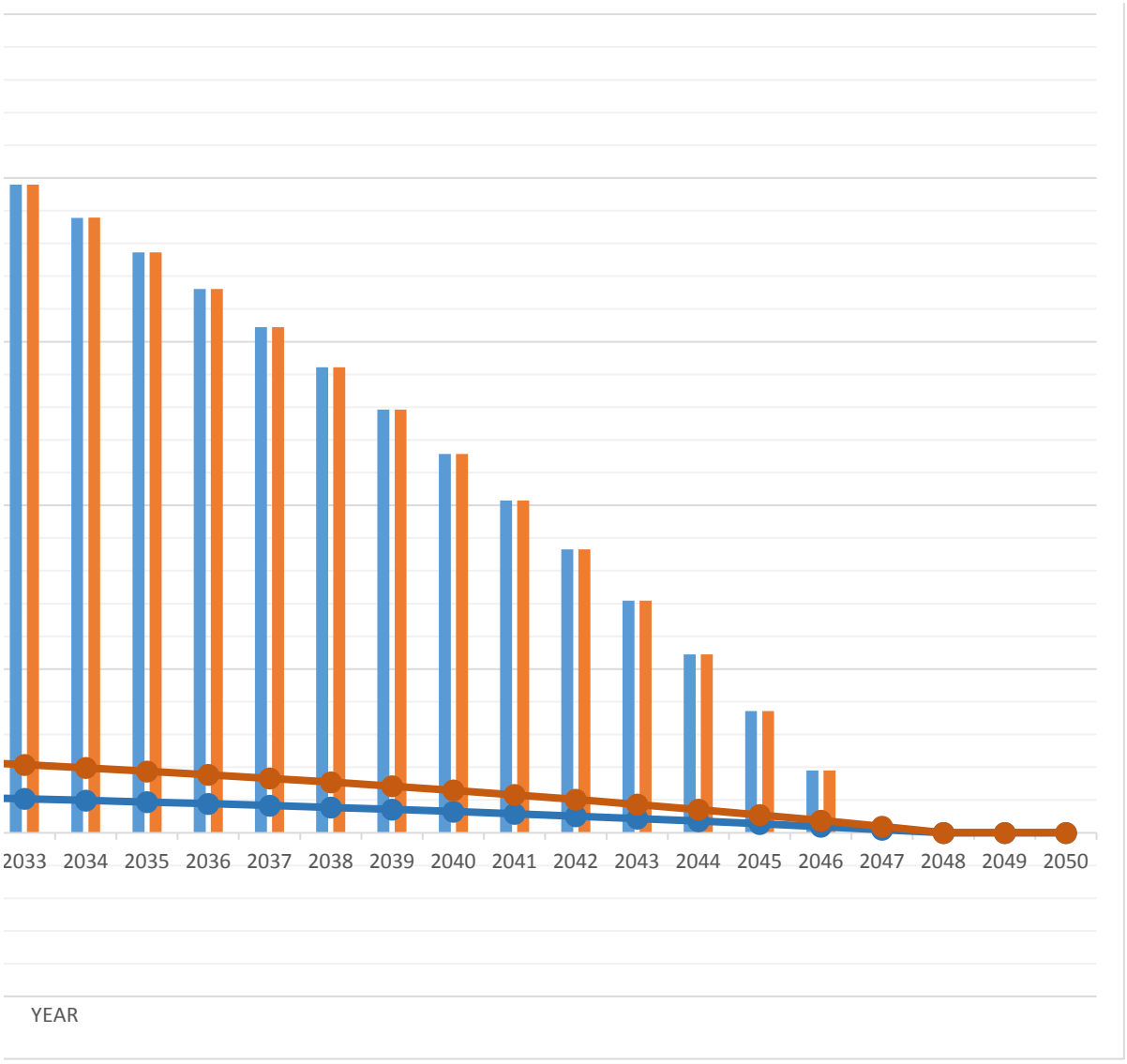

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

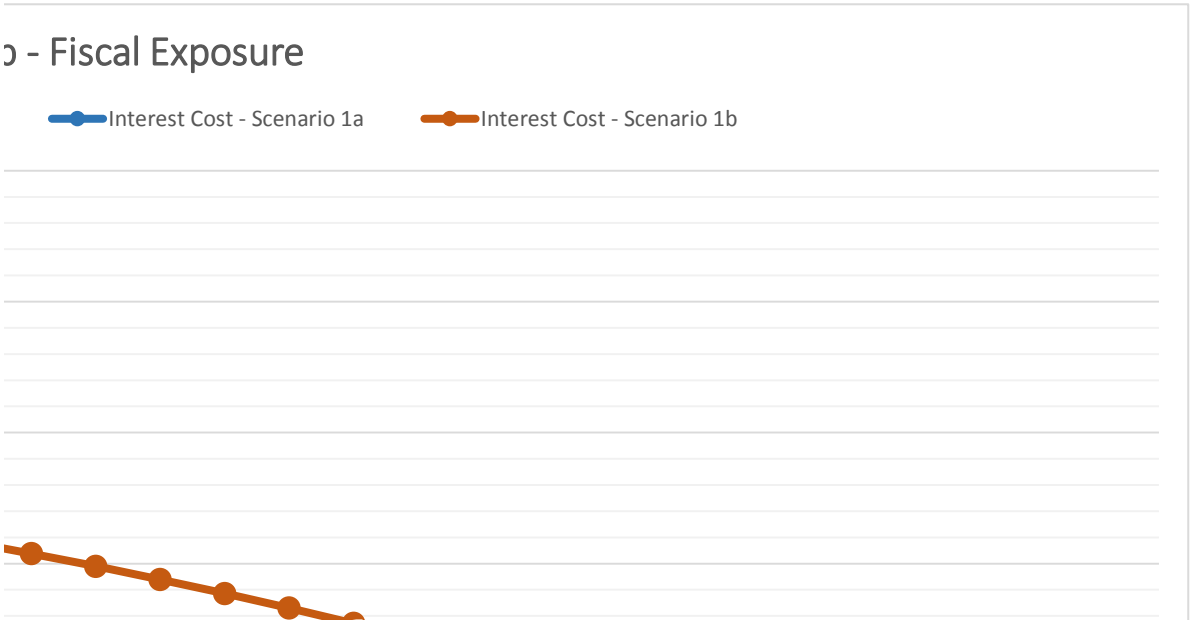

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

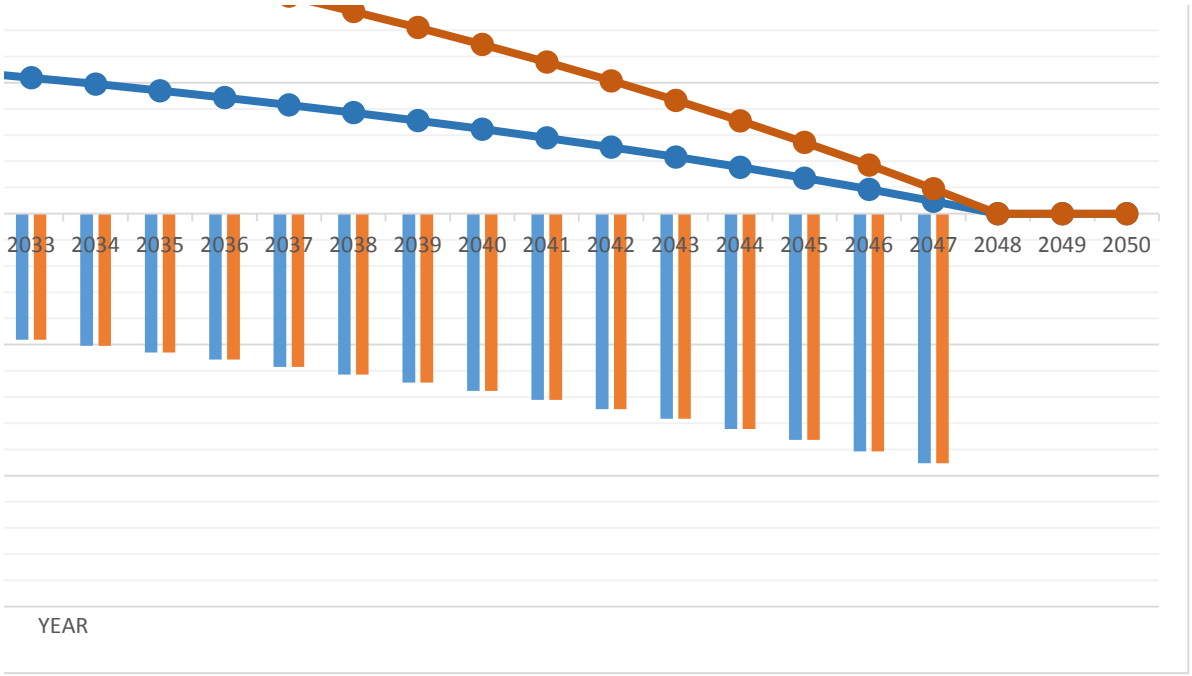


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

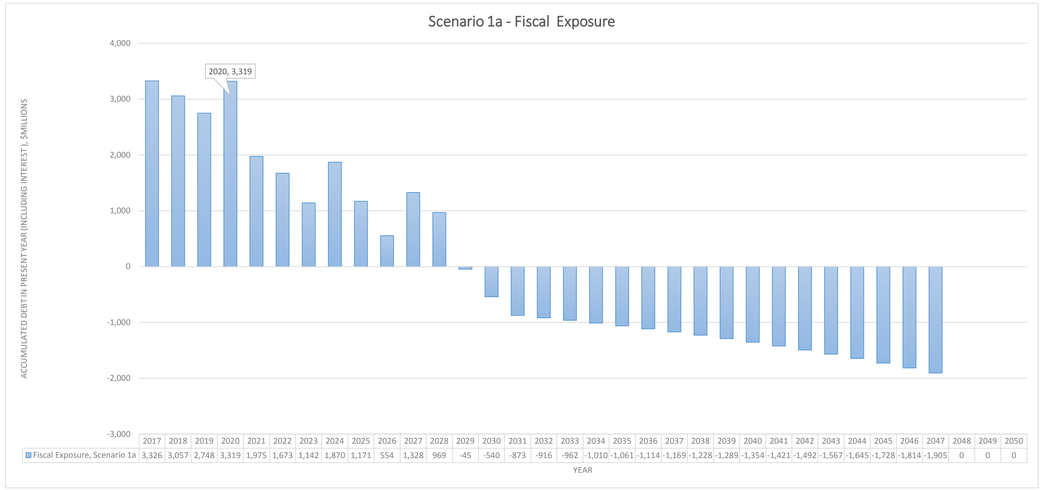
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

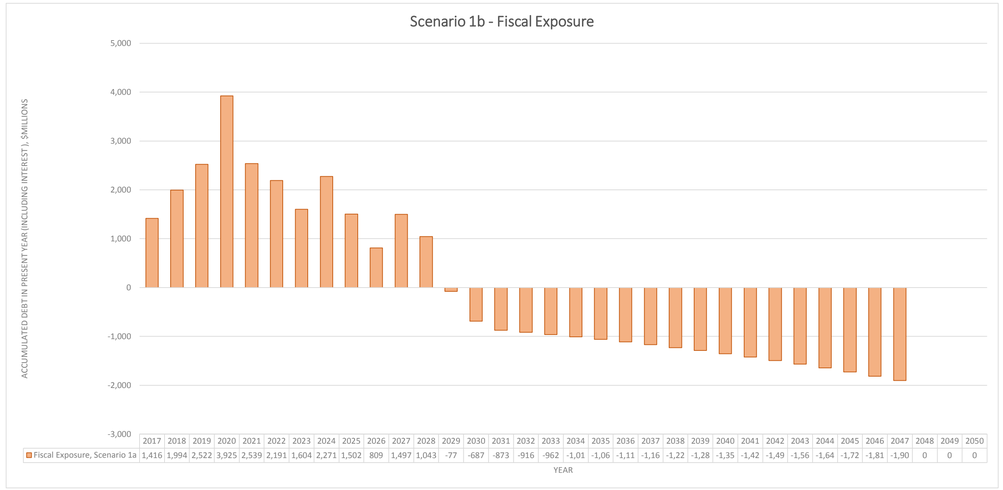
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

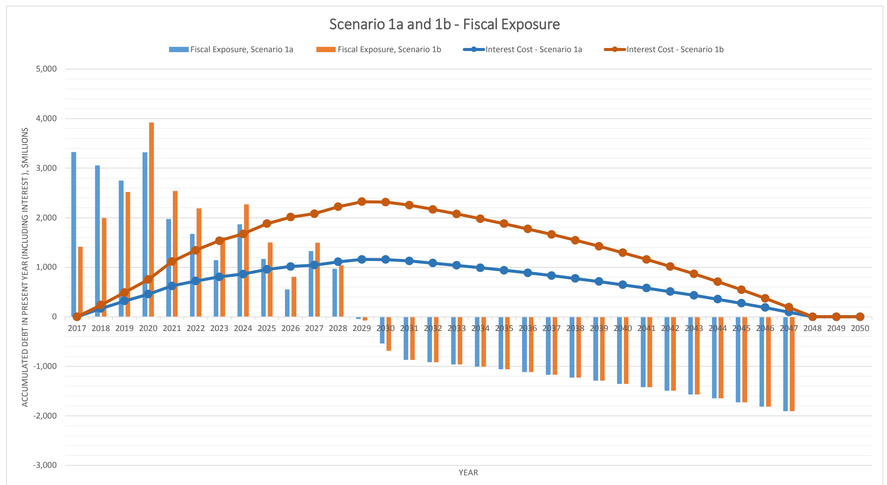
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

Notes:	Accounting treatment is to be determined.


Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0


Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0


Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3575**
Total, B	362	1837

Proposed Program Total:	362 - 851	1,837 - 3,575

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

JK: Fixed the formula in the yellow highlighted cells. Pls. check. (SK: looks good to me)

	Tab
v16	Powerpoint_Export

Change Description

Added in trigger for later start in the year

Equal Monthly Debt Drawdown

		Month	Months Remai
Scenario Start Date	**July**	7	6

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	3,180	2,888
Annual Exposure2 with start on July 1st	*1,590*	*2,888*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	795	3,107
Start: July 1st	-	*2,312*

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	-	3,335
Start: July 1st	-	*2,484*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	1,168	1,765
Annual Exposure2 with start on July 1st	*584*	*1,765*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	292	1,609
Start: July 1st	-	*1,025*

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,449	2,040
Annual Exposure2 with start on July 1st	*725*	*2,040*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,597
Start: July 1st	-	*1,959*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 -	1,597 - 3,335

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	0	3335
Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**0**	**3575**
Total, B	362	1837

Proposed Program Total:	362 -	1,837 - 3,575

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,556	3,123	1,728	1,400
2,556	*3,123*	*1,728*	*1,400*

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646
2,805	*2,697*	*2,774*	*1,646*

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

ıking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
2,311	3,750	2,311	1,933
2,311	*3,750*	*2,311*	*1,933*

2018-19	2019-20	2020-21	2021-2022

1,901	2,671	3,391	2,217
1,901	*2,671*	*3,391*	*2,217*

2019	2020	2021	2022
2,581	4,016	2,598	2,241
2,581	*4,016*	*2,598*	*2,241*

2018-19	2019-20	2020-21	2021-2022
2,175	2,940	3,662	2,508
2,175	*2,940*	*3,662*	*2,508*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

/1

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052
2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

Equal Monthly Debt Drawdown

		Month	Months Remaining
Scenario Start Date	July	7	6

AS LONG AS >

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	3,180	2,888	2,556

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	795	3,107	2,805
Fiscal Exposure, 25%	199	777	701

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Annual Exposure[2]	3,404	3,128	2,812

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	851	3,335	3,049
Fiscal Exposure, 25%	213	834	762

Indicates year in which, similar to OPCD's exa
closest to 30%. As Fiscal 2016/17 is a partial y
month the GA deferral begins.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu
decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions	9%	14%	18%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	1,168	1,765	2,311

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	292	1,609	1,901
Fiscal Exposure, 25%	73	402	475

Scenario 1b - 30-yr amortization	2017	2018	2019
Annual Exposure[2]	1,449	2,040	2,581

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	362	1,597	2,175
Fiscal Exposure, 25%	91	399	544

Indicates year in which, similar to OPCD's exar closest to 30%.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 ar
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu on accounting treatment.

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]
Debt-Finance Global Adjustment Costs, Option 1a	213	834	762
Debt-Finance Global Adjustment Costs, Option 1b	91	399	544
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**213**	**1074**	**1065**
Total, B	91	639	847

Proposed Program Total:	91 - 213	639 - 1,074	847 - 1,065

($M)	2016-171	2017-181	2018-191
Debt-Finance Global Adjustment Costs, Option 1a	851	3335	3049
Debt-Finance Global Adjustment Costs, Option 1b	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**851**	**3575**	**3352**
Total, B	362	1837	2478

Proposed Program Total:	362 - 851	1,837 - 3,575	2,478 - 3,352

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6

7	July	7	
8	August	8	
9	September	9	
10	October	10	
11	November	11	
12	December	12	

30-year term	**2016-17**	**2017-18**	**2018-19**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335	2,175 - 3,049

ROWS HIDDEN

1	1 = Comparision Enabled

APRIL 1, 2017 25%

2020	2021	2022
3,123	1,728	1,400

2019-20	2020-21	2021-2022
2,697	2,774	1,646
674	693	412

2020	2021	2022
3,396	2,020	1,712

2019-20	2020-21	2021-2022
2,958	3,052	1,943
740	763	486

mple, the true cost of GA being deferred is
ear, exposure may be less subject to which

l $17-21 billion (at 3.5% interest rate), peaking in 2028.
$33-$36 million.

ıals per month based on month of the year. Actuals may also depend on

28%	17%	13%
2020	2021	2022
3,750	2,311	1,933

2019-20	2020-21	2021-2022
2,671	3,391	2,217
668	848	554

2020	2021	2022
4,016	2,598	2,241

2019-20	2020-21	2021-2022
2,940	3,662	2,508
735	915	627

mple, the true cost of GA being deferred is

ıd $17-21 billion (at 3.5% interest rate), peaking in 2028.
$118-$134 million.

ıals per month based on month of the year. Actuals may also depend on decision

2019-20[1]	2020-21[1]
740	763
735	915
279	323
60	60
18	18
1097	**1164**
1092	1316

1,092 - 1,097 1,316 - 1,164

2019-201	2020-211
2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453





2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964
Equal Monthly Debt Drawdown	3,180	952

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

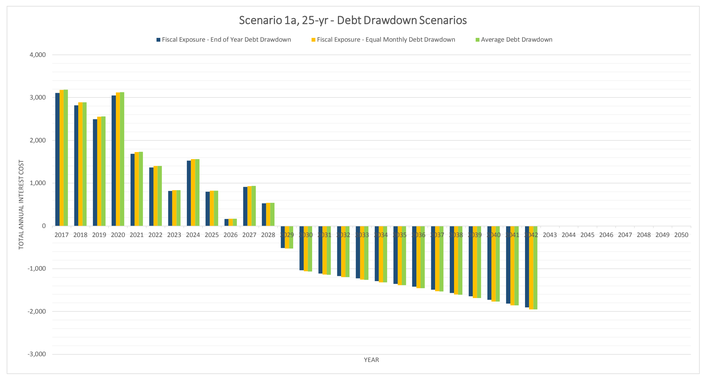
		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

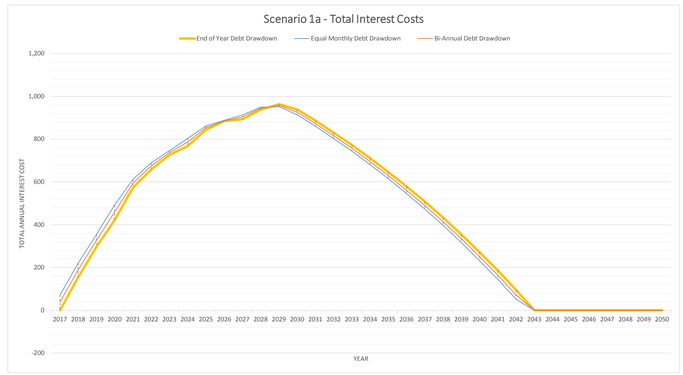
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	3,665	968	
Equal Monthly Debt Drawdown	3,750	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

		9%	14%	18%	28%	17%	13%																													
Scenario 1b, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

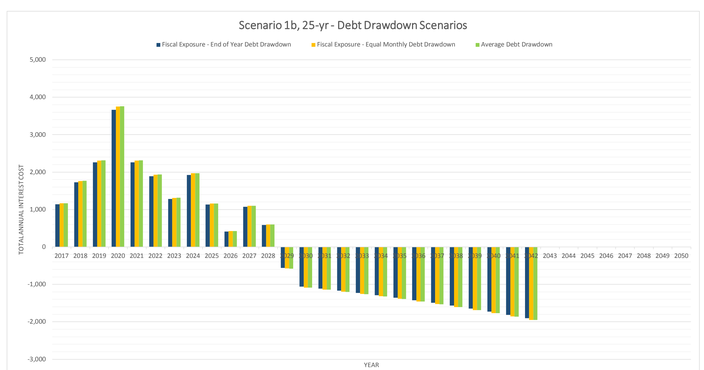
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	*954*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

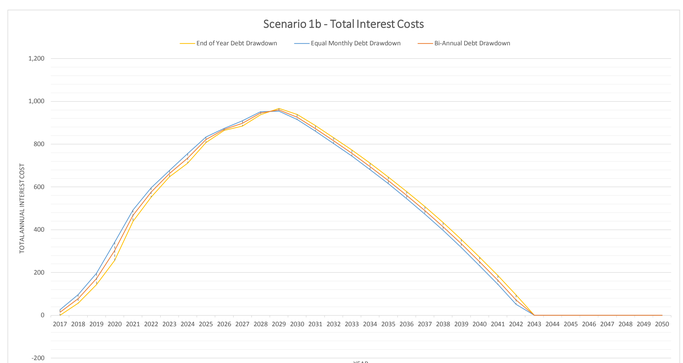
	Monthly Drawdown	95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

		28%	24%	21%	24%	12%	9%																													
Scenario 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1a, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	*1,156*	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

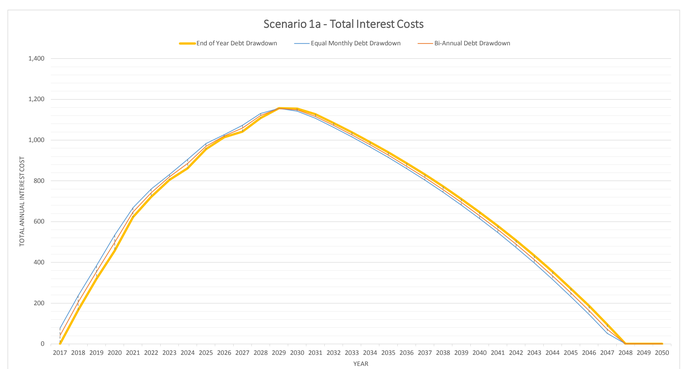
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

		12%	16%	20%	30%	19%	15%																													
Scenario 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

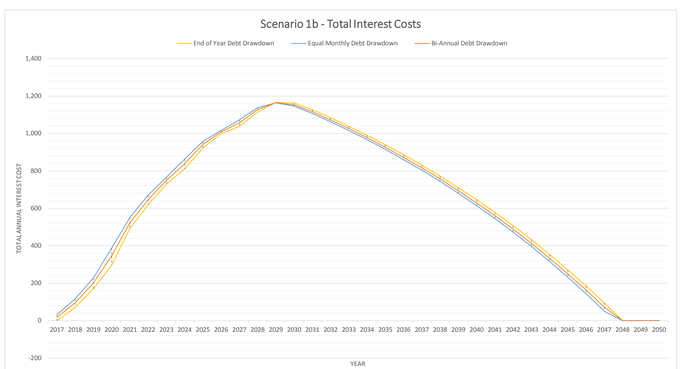
	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

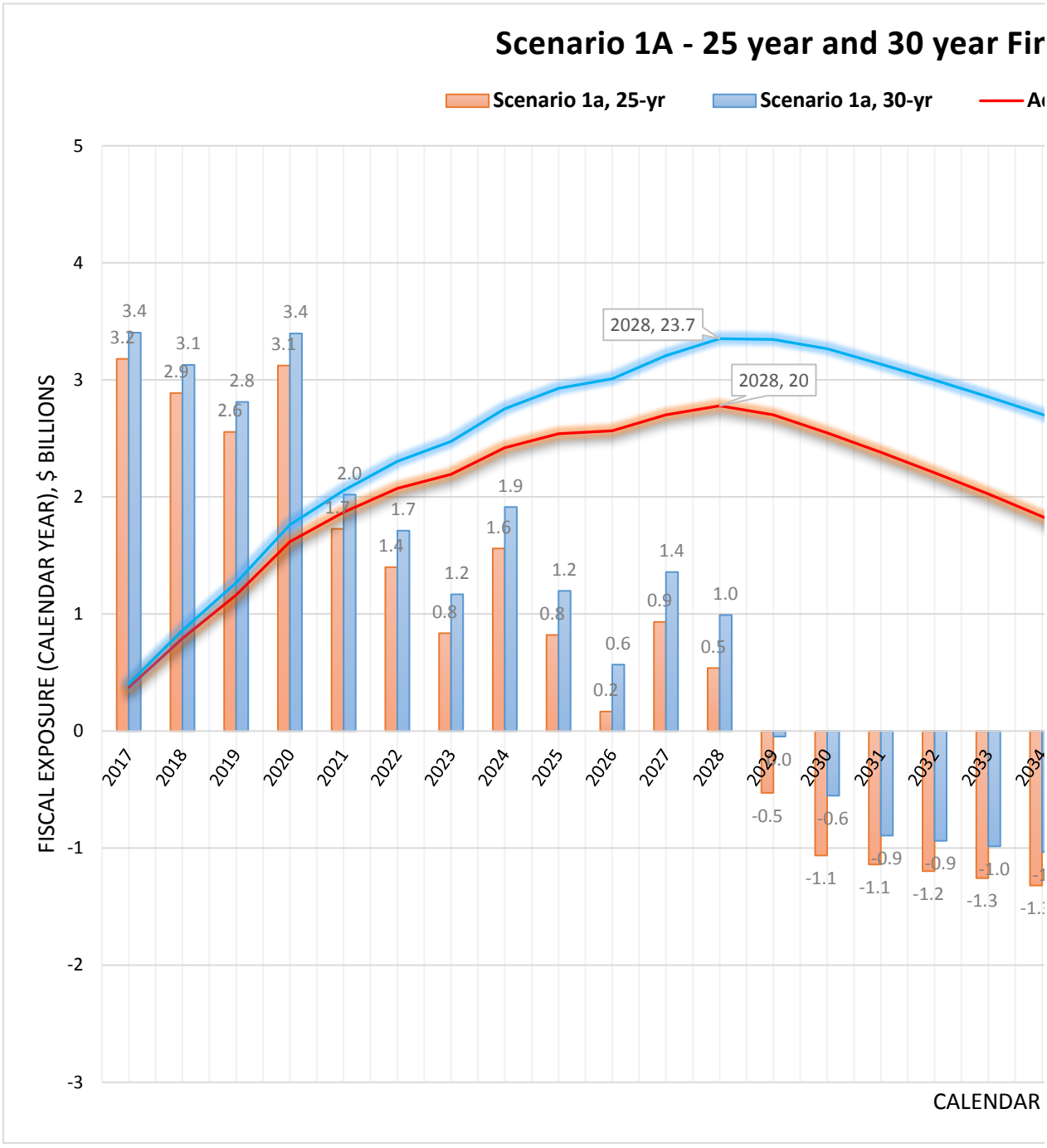
	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

Scenario 1b, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

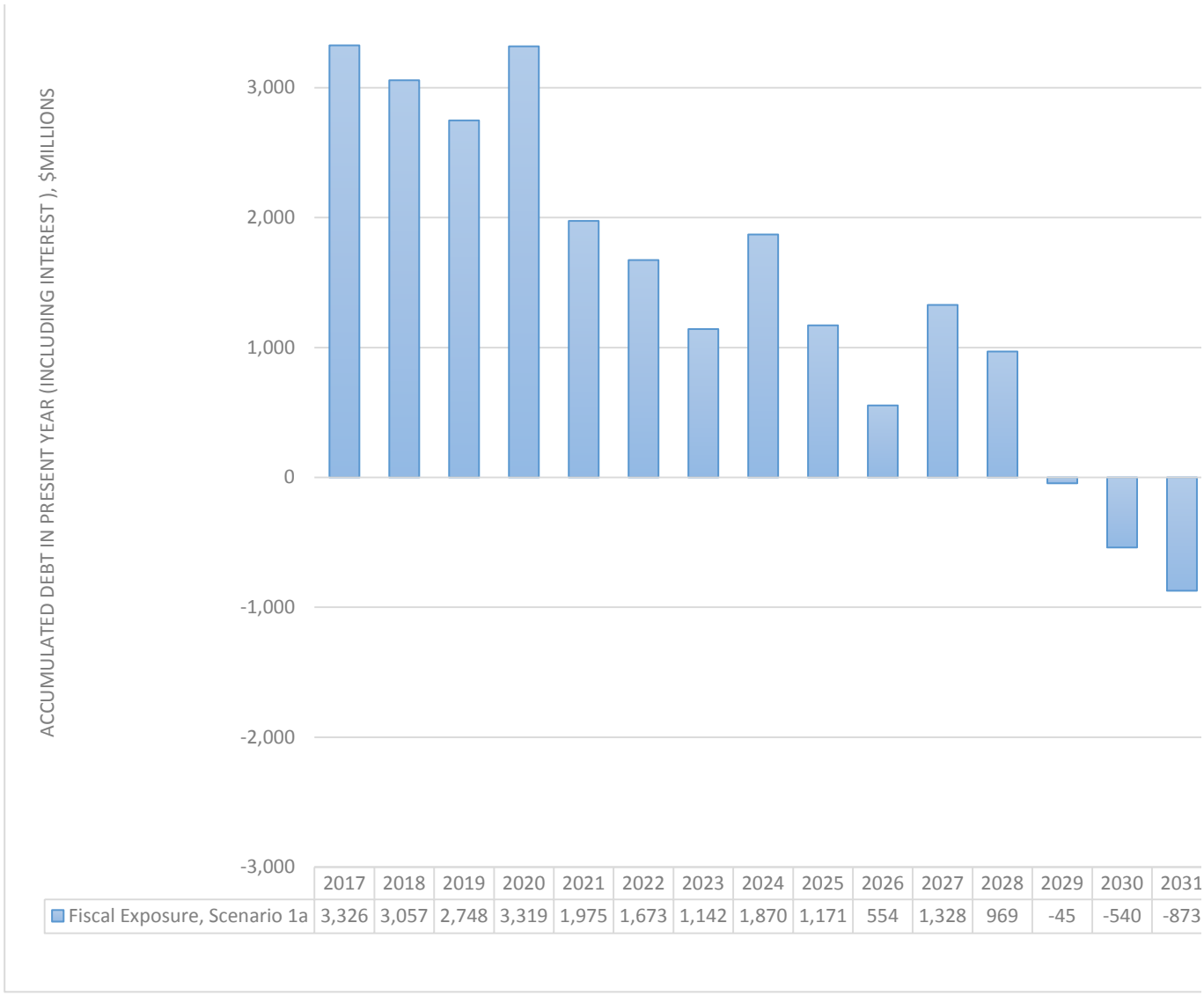




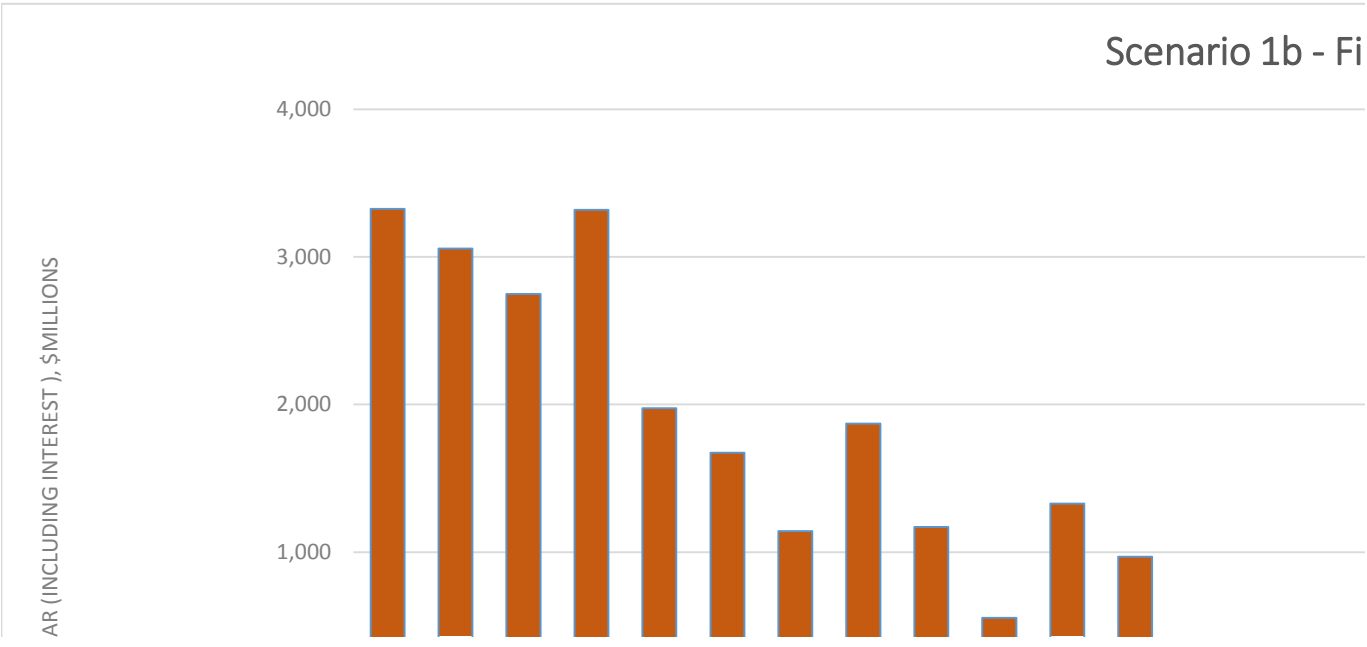
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

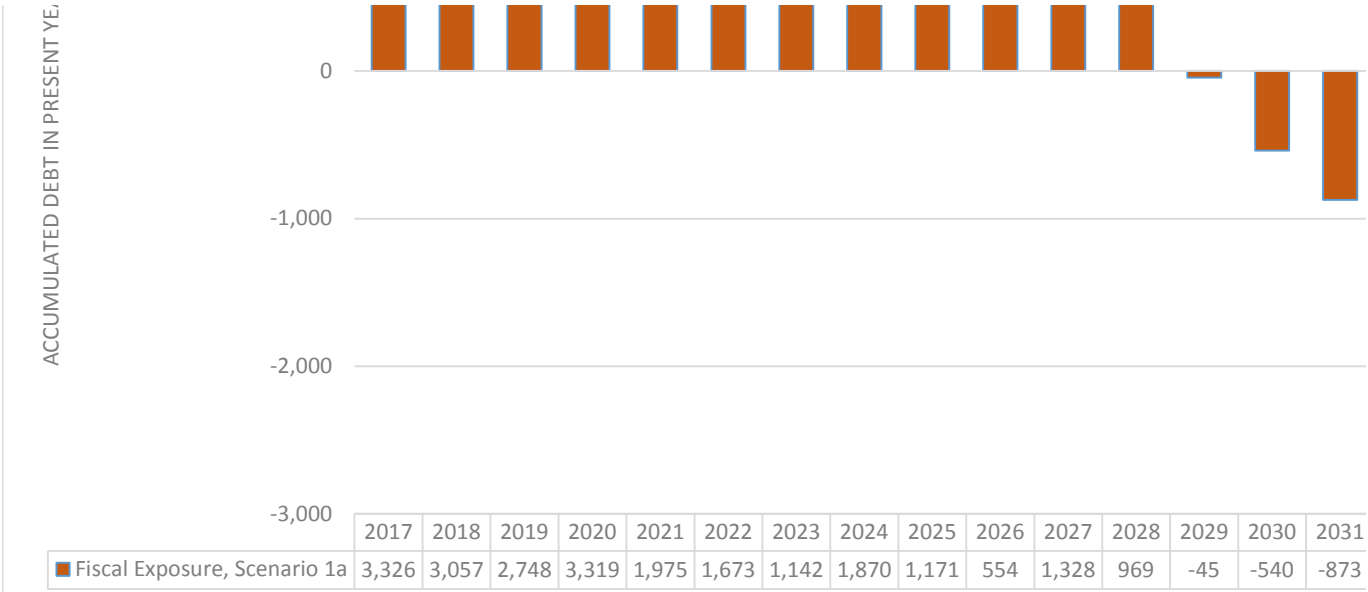




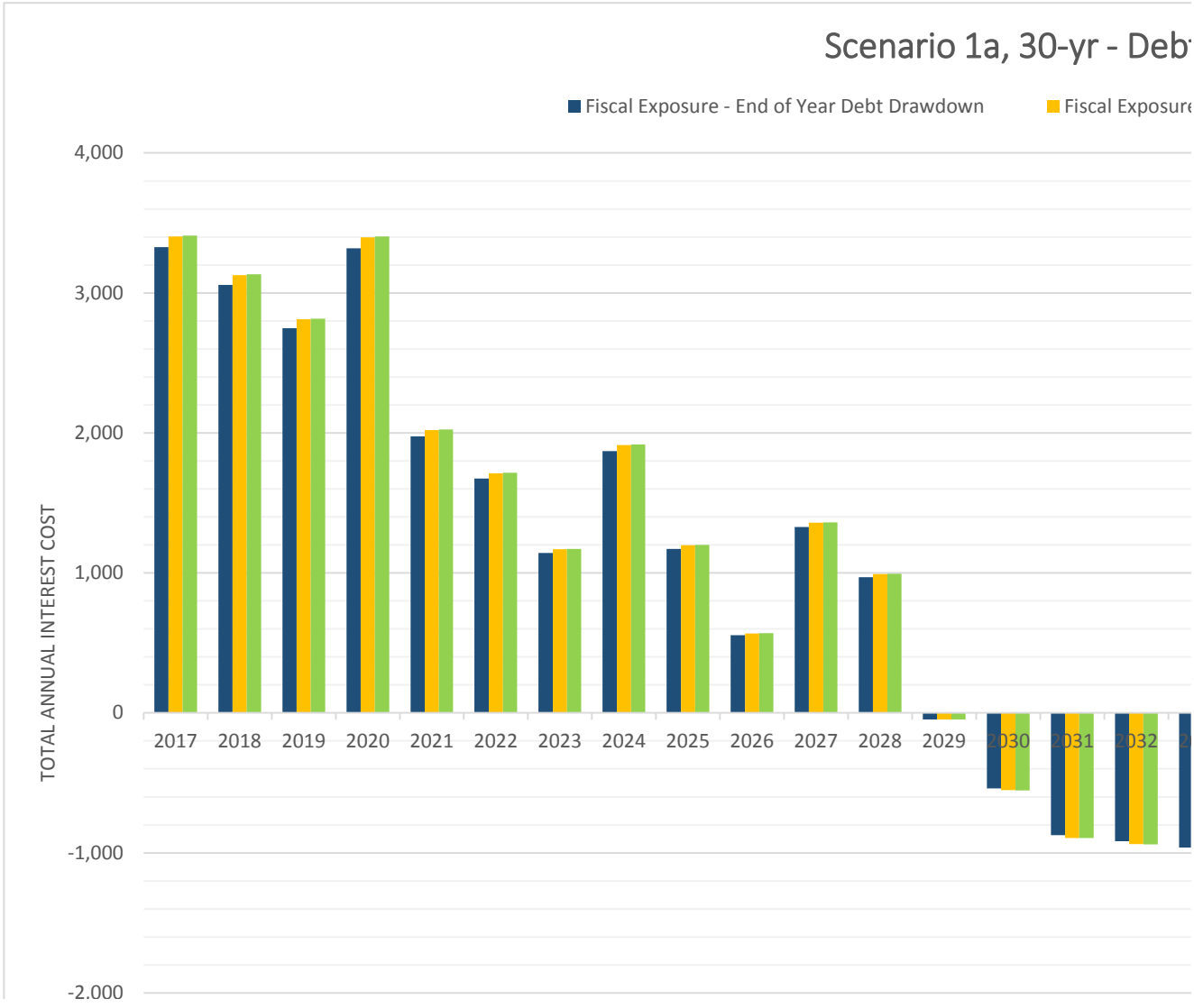


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



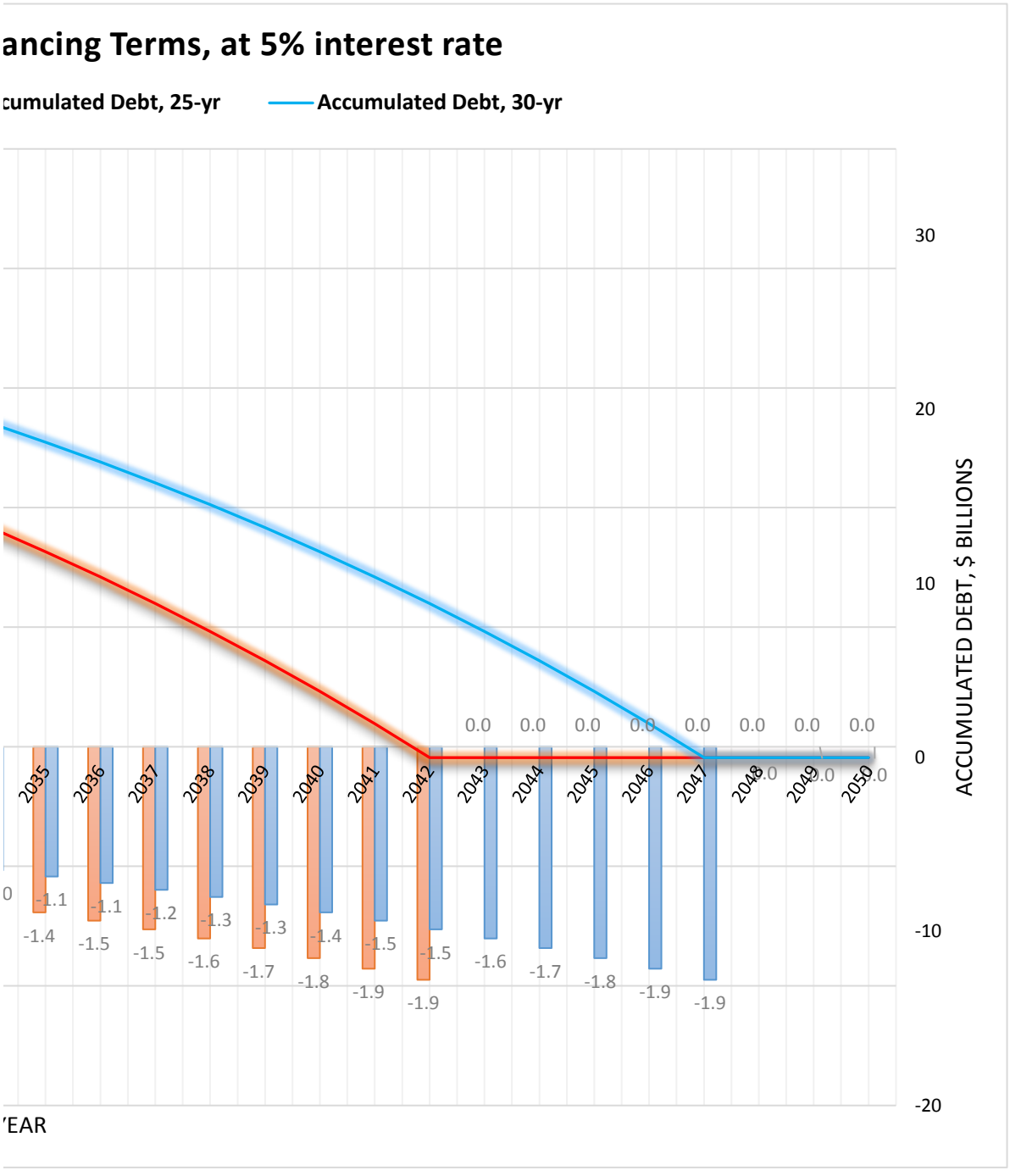


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



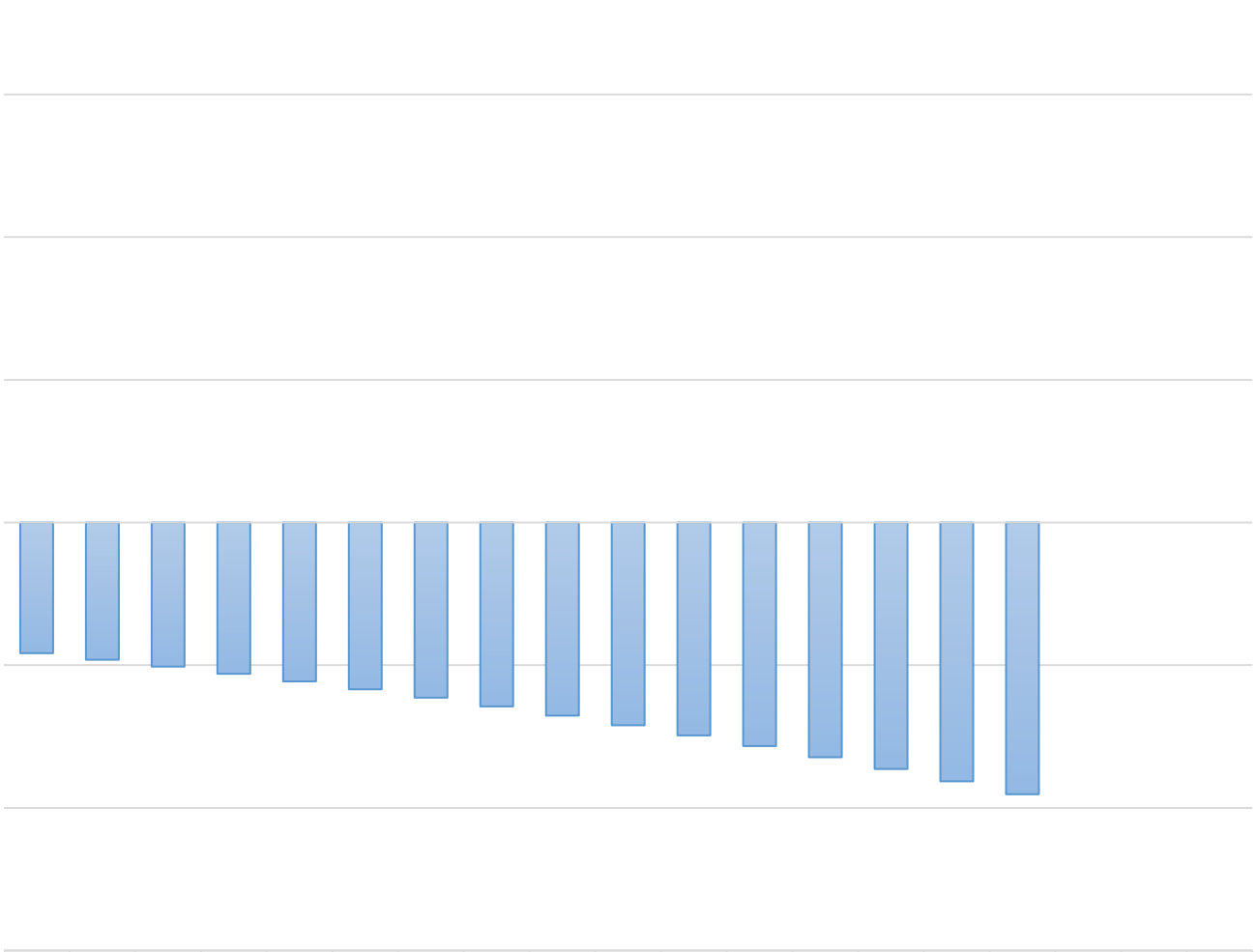

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

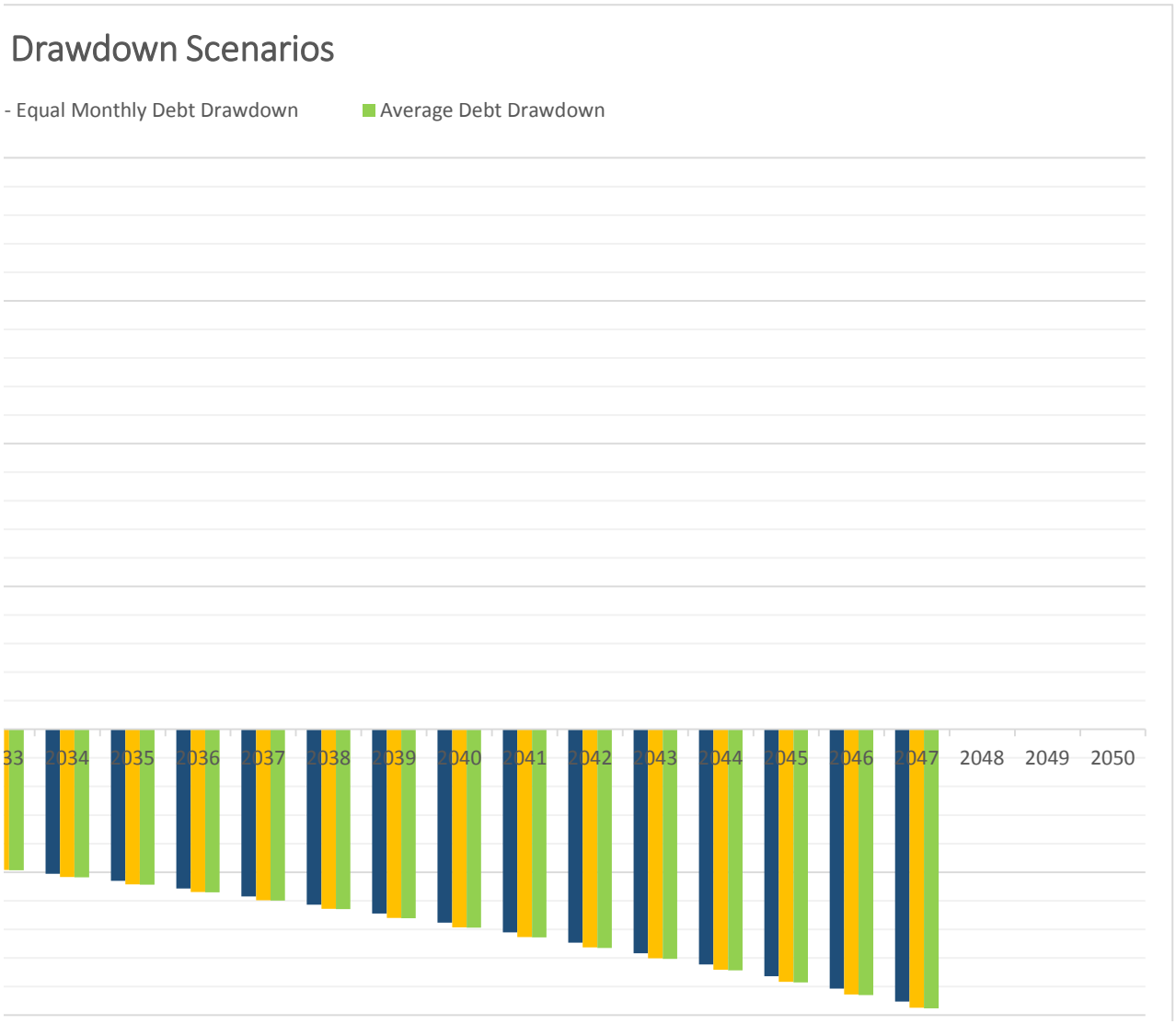
YEAR

cal Exposure



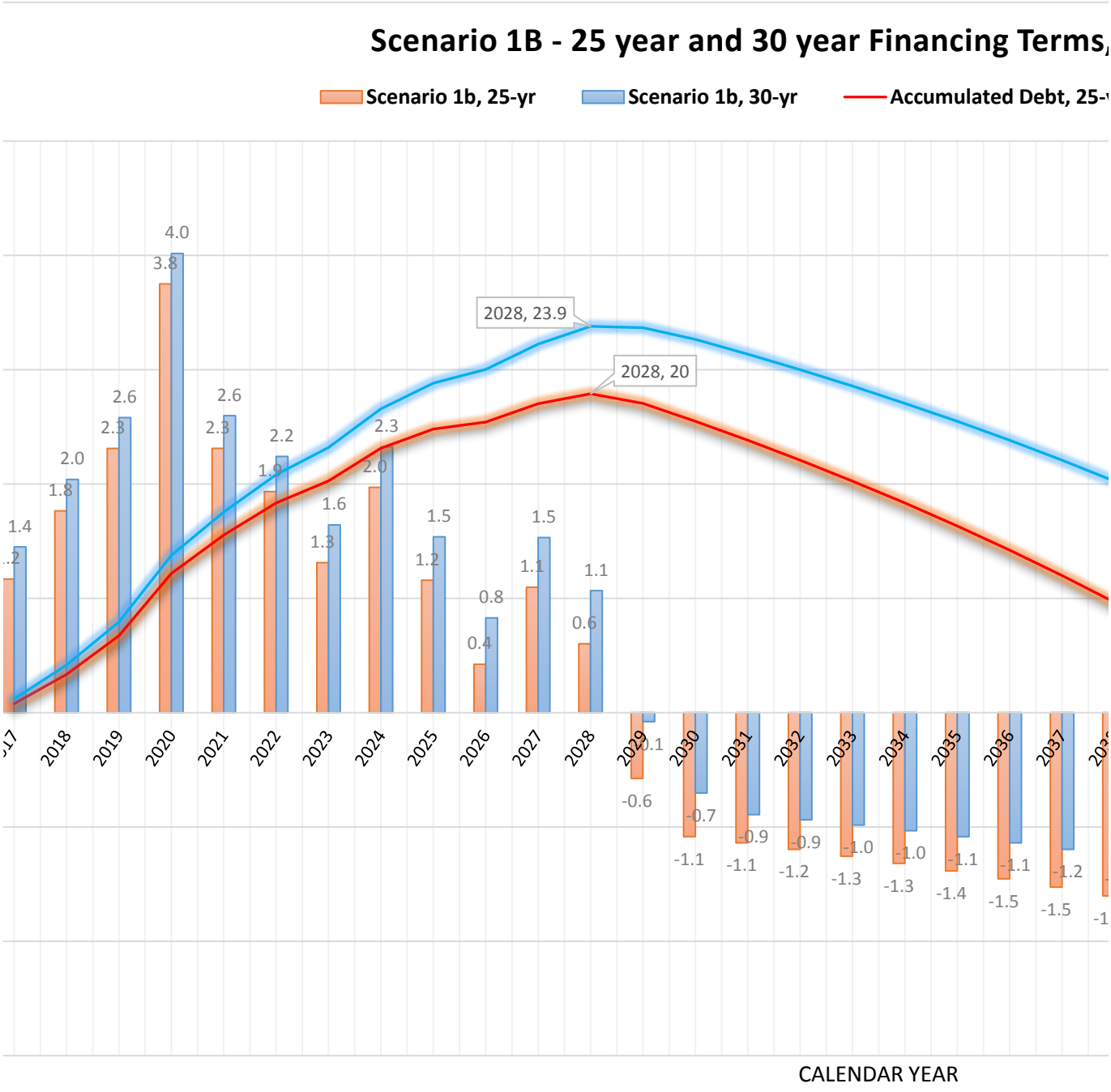
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

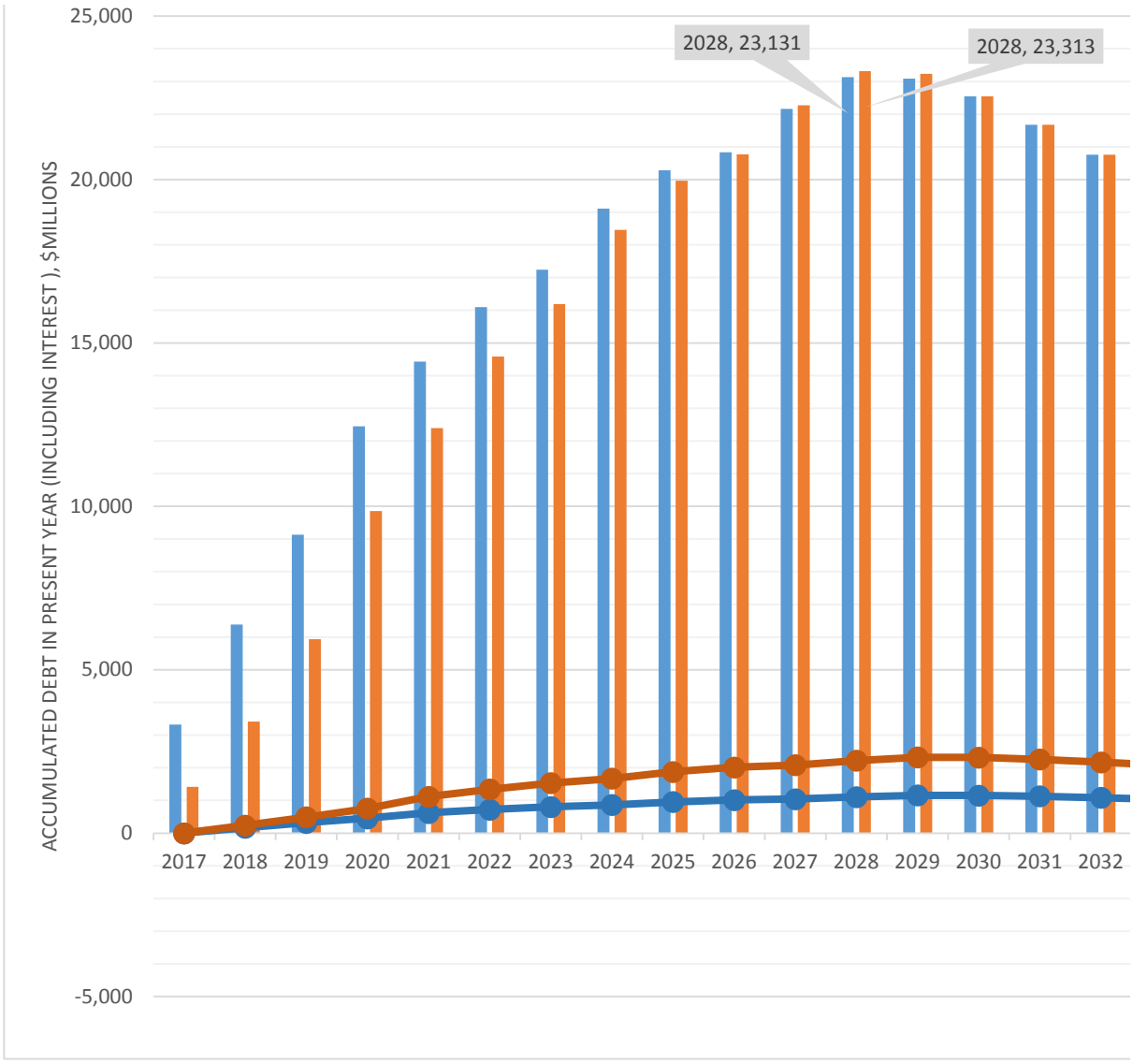


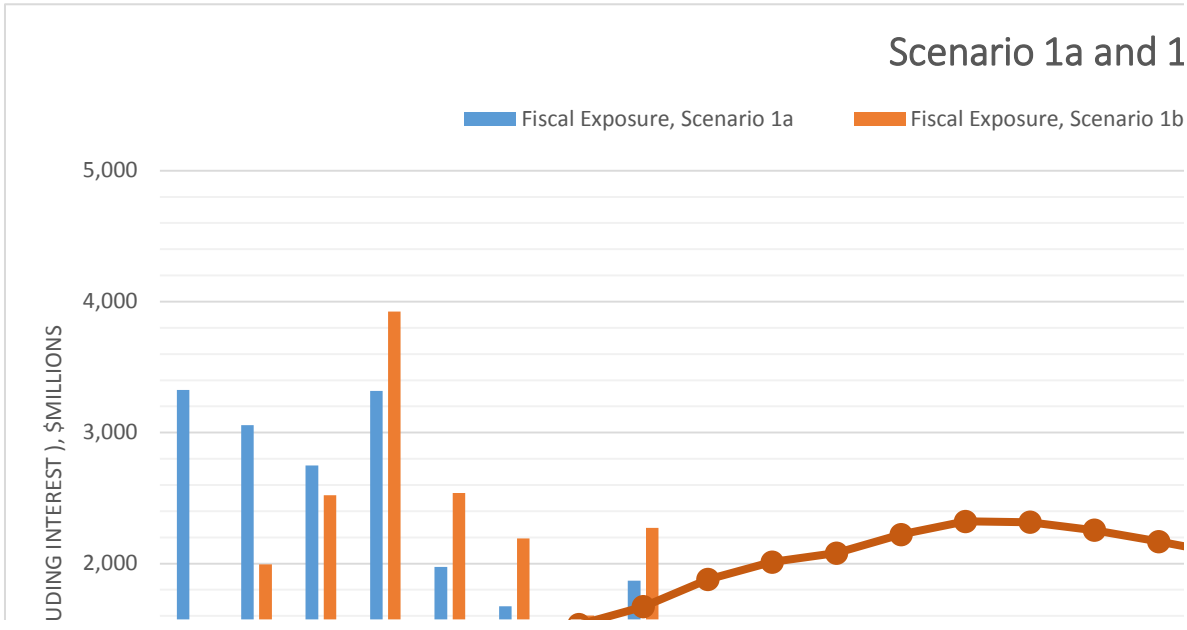
YEAR

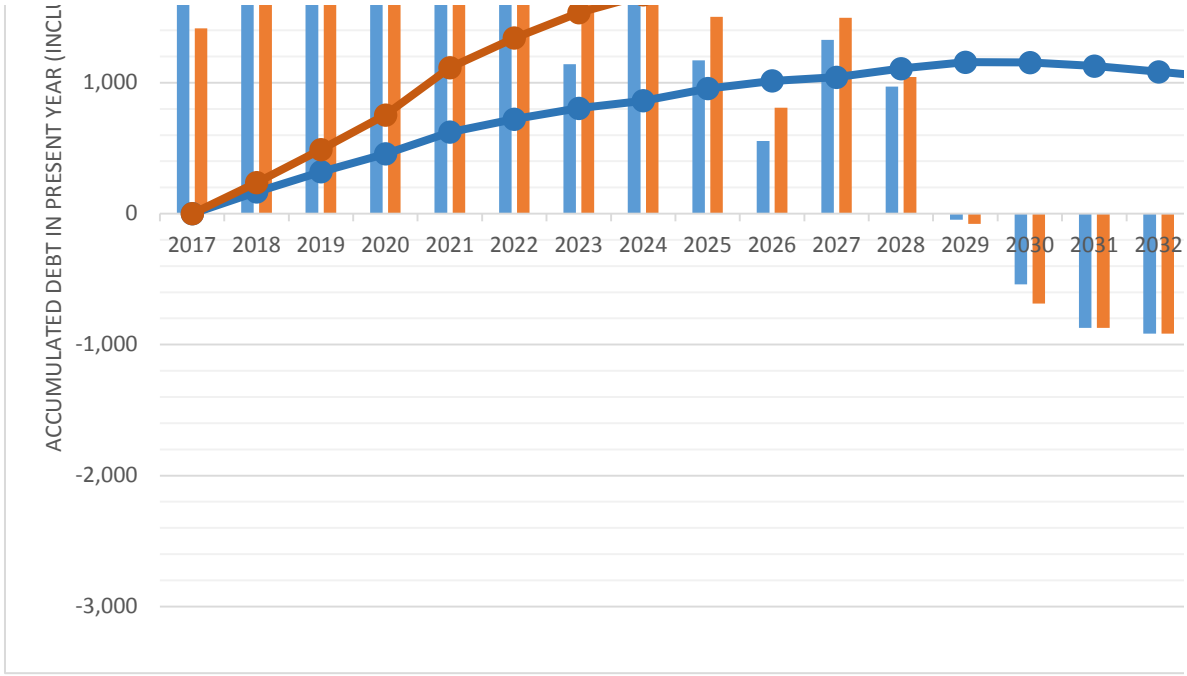
3 - 25 year and 30 year Financing Terms, at 5% interest rate

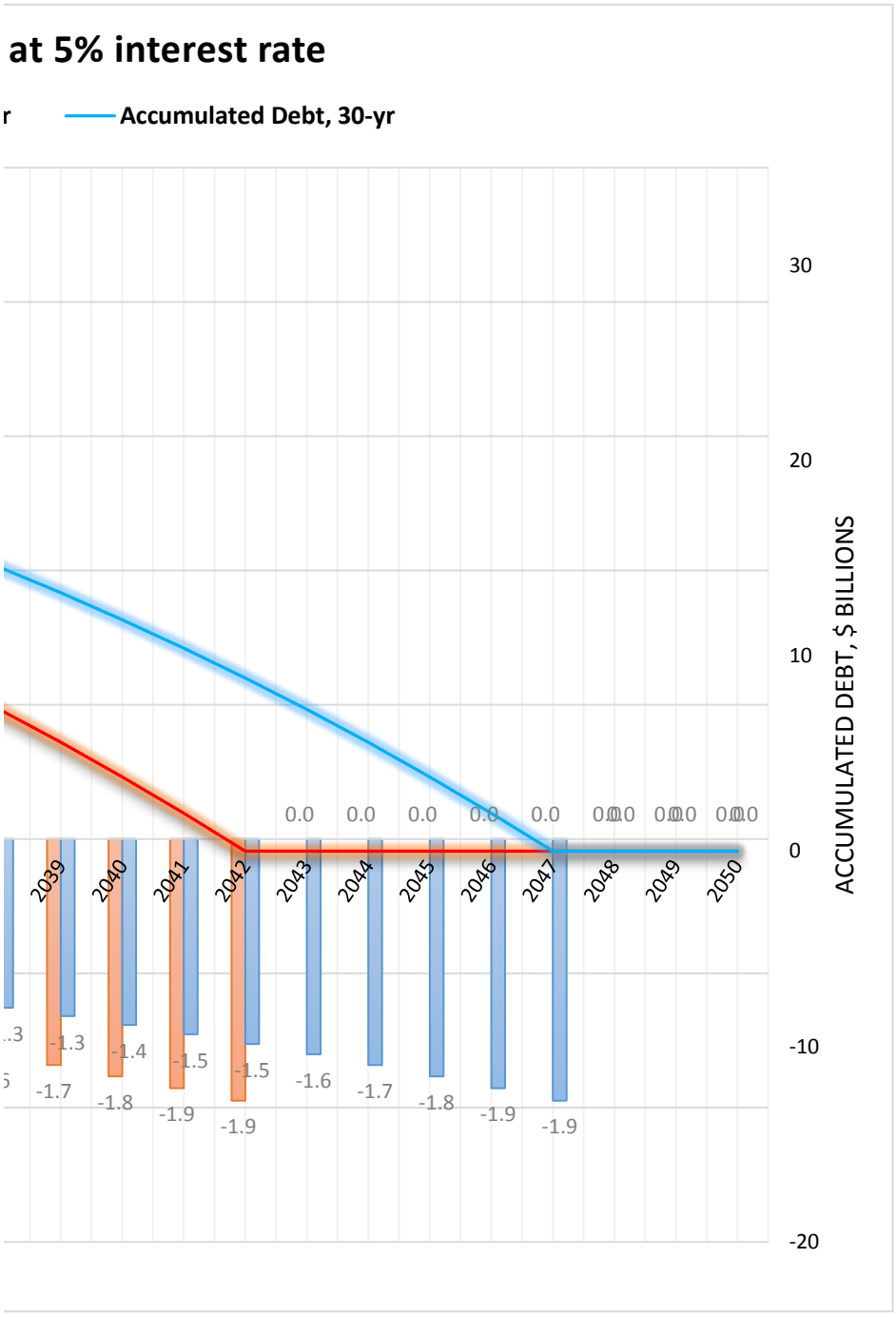





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

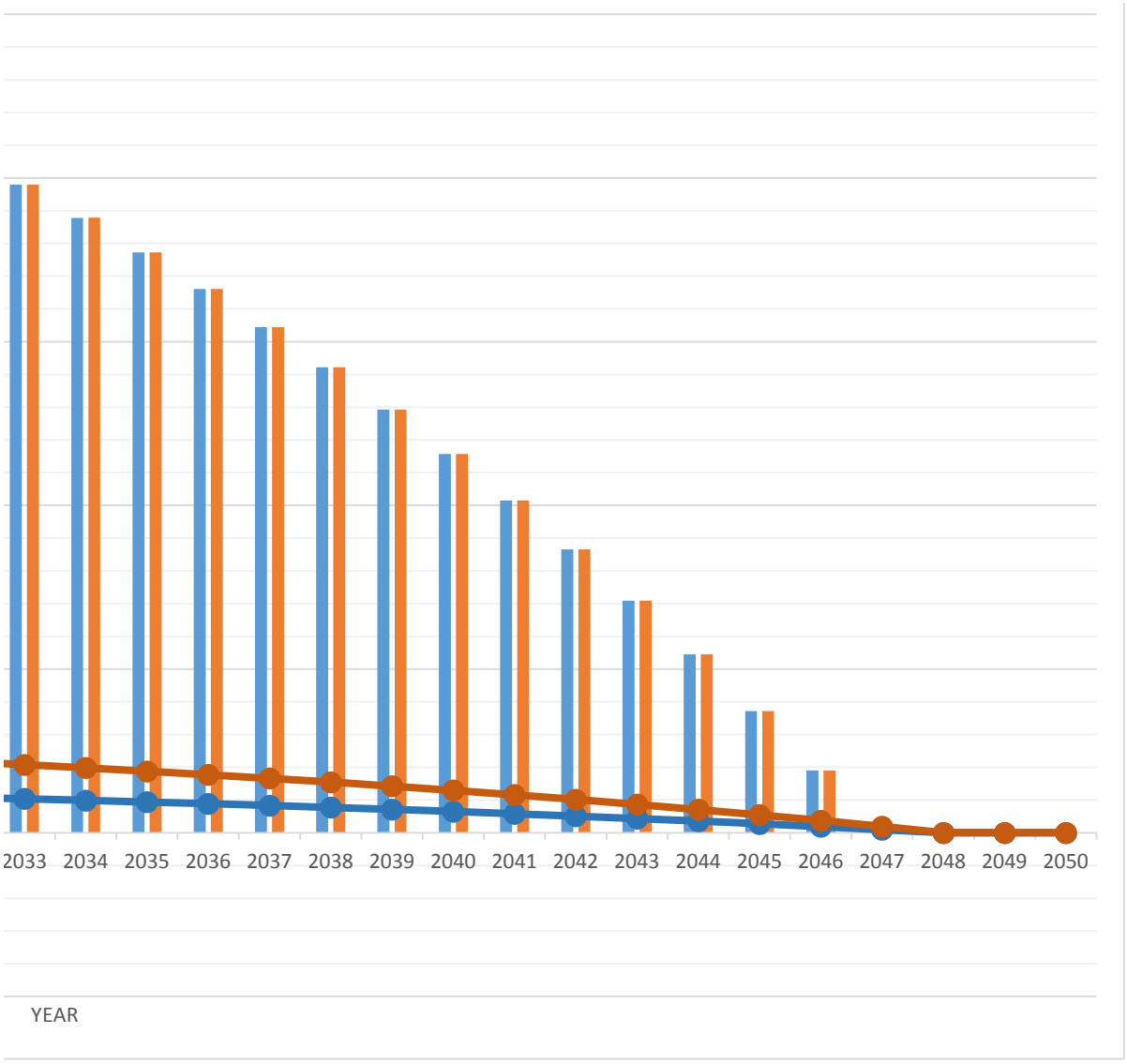

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

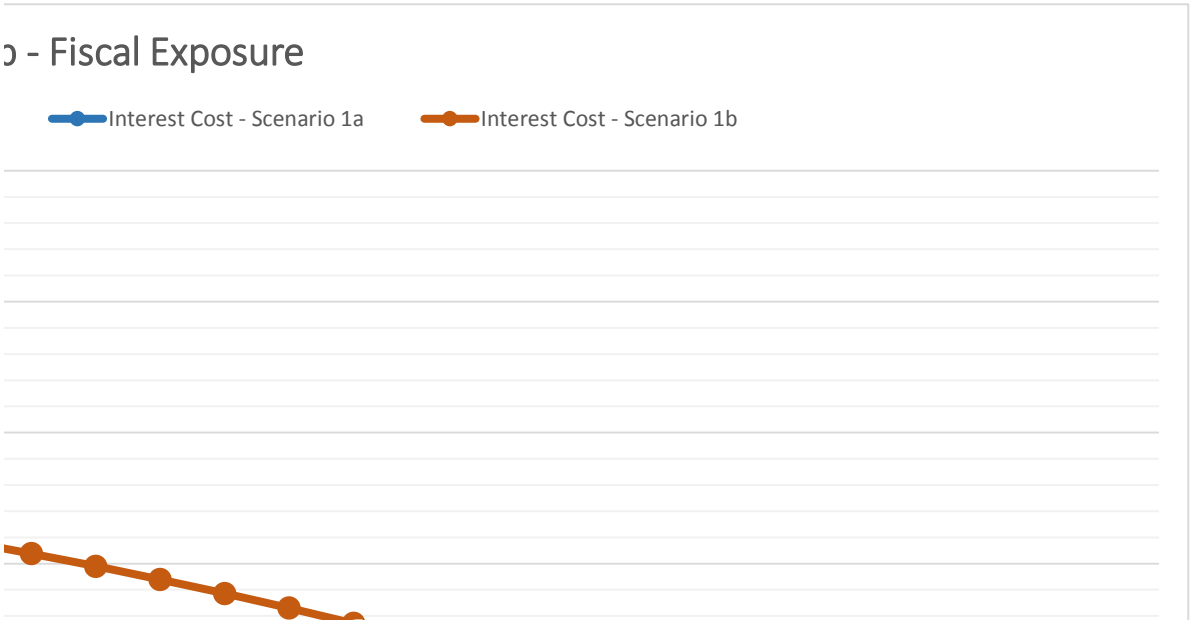

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

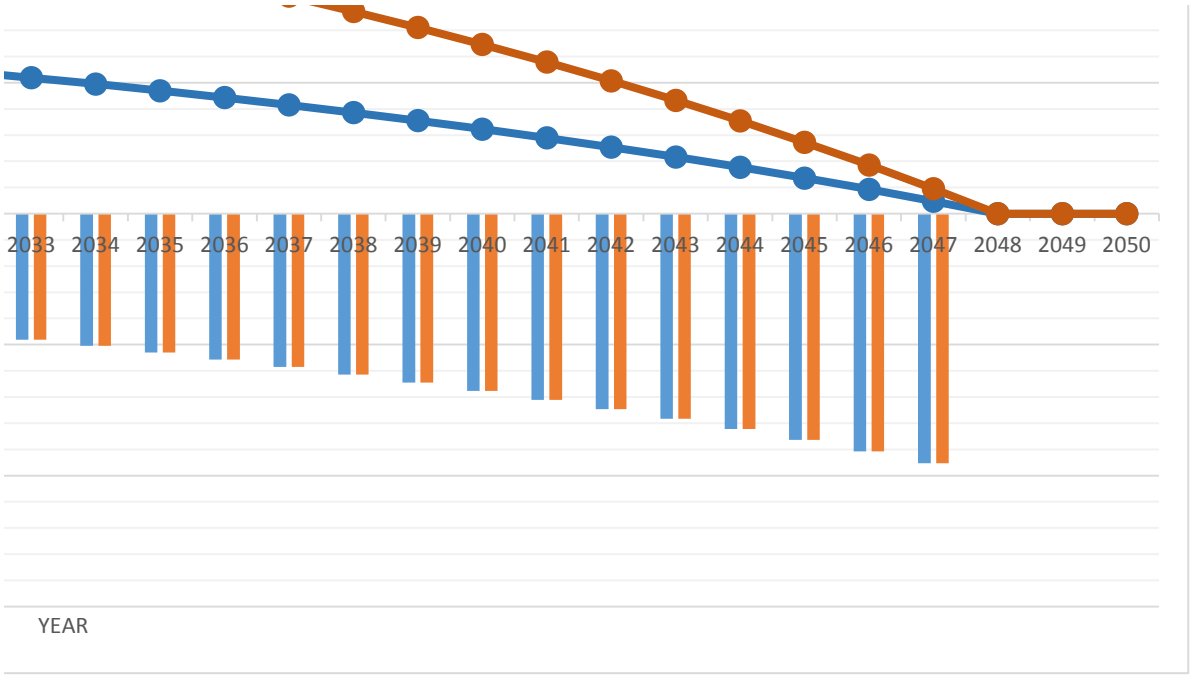


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

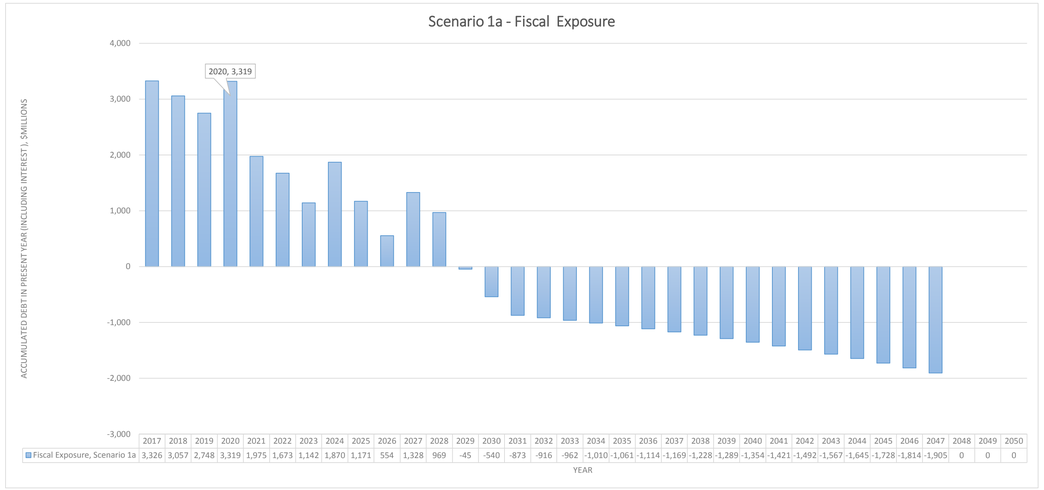
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

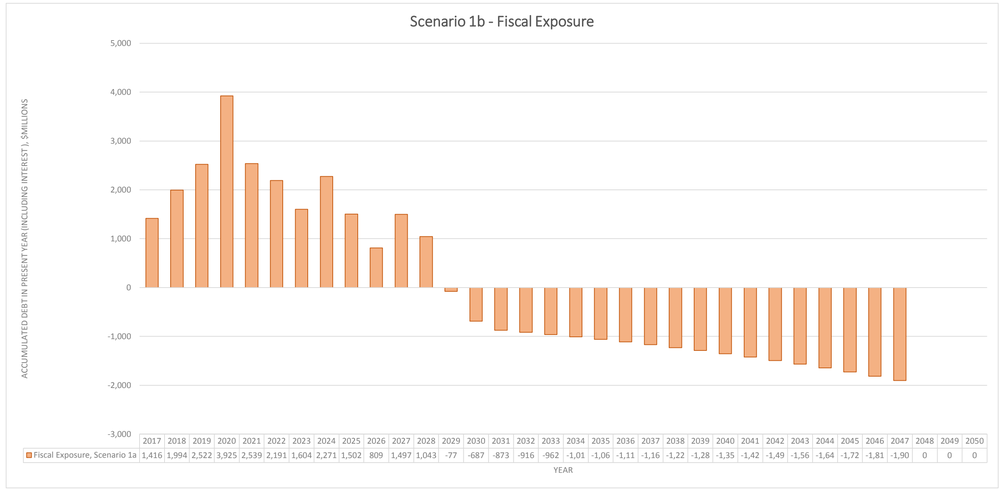
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

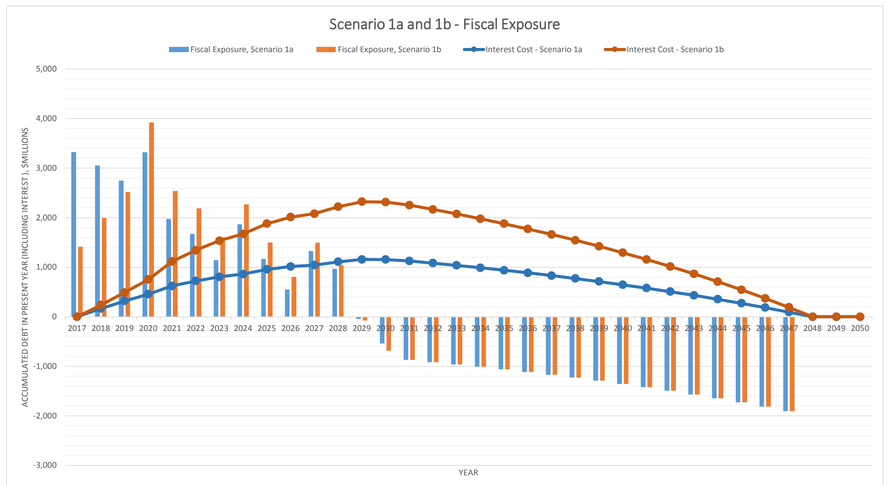
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

Notes:	Accounting treatment is to be determined.


Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0


Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0


Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Equal Monthly Debt Drawdown

Annual Interest Rate	**5.00%**	Month	Months Remai
Scenario Start Date	**July**	7	6

1a. GA Smoothing (Borrow $5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	851	3,335
Start: July 1st	-	2,484

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b on accounting treatment.

1b. GA Smoothing (Borrow $7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	851	3,335
Start: July 1st	-	*4,186*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.

[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

1c. GA Smoothing (Borrow $4 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	2017	2018
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	2016-17	2017-18
Start: January 1st	851	3,335
Start: July 1st	-	*4,186*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9

	10 October	10
	11 November	11
	12 December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	851 - 851	3,335 - 3,335

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3575**
Total, B	851	3575

Proposed Program Total:	851 - 851	3,575 - 3,575

ining

1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

king in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision





2018-19	2019-20	2020-21	2021-2022
3,049 - 3,049	2,958 - 2,958	3,052 - 3,052	1,943 - 1,943

/1

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052
3049	2958	3052

225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
3352	3315	3453

3,352 - 3,352 3,315 - 3,315 3,453 - 3,453

Feb4 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

			28%	24%	21%	24%	12%	9%																													
Feb4 1a, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow $5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement		3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year		0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Feb4 1a, 30-yr - End of Year Debt Drawdown*		*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year		3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown			3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

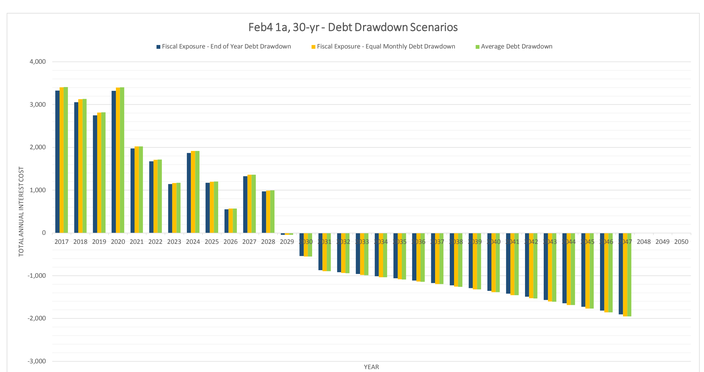
Feb4 1a, 30-yr	Equal Monthly Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			12																																			
1a. GA Smoothing (Borrow $5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement		3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year		0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Feb4 1a, 30-yr*		*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	1,156	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown		3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

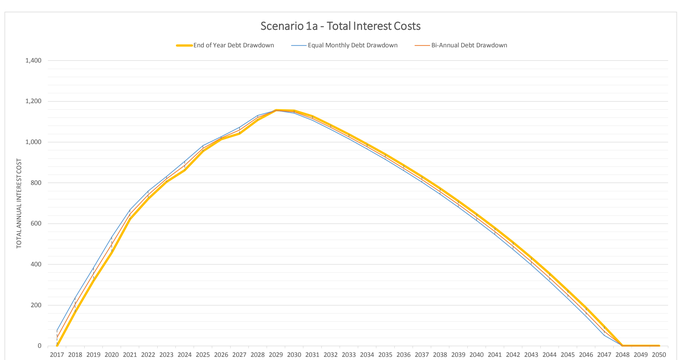
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Feb4 1a, 30-yr	Bi-Annual Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			2																																			
1a. GA Smoothing (Borrow $5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement		3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year		0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown		3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown			3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0		
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Feb4 1a, 30-yr	Average Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow $5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement		3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year		0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown		3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown			3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Feb 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

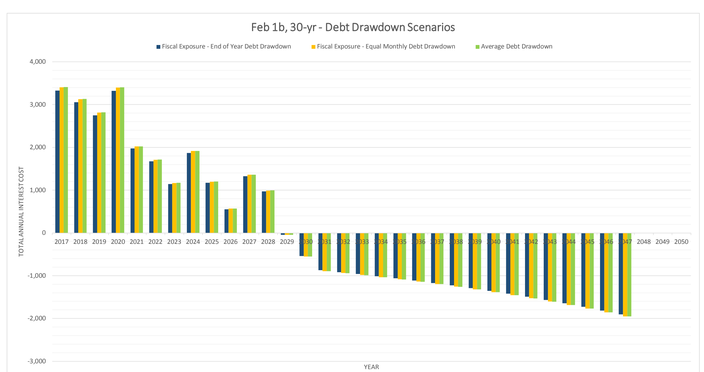
Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

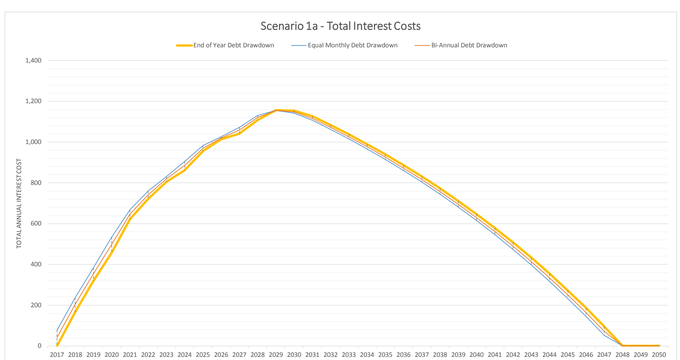
		28%	24%	21%	24%	12%	9%																													
Feb 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1b. GA Smoothing (Borrow $7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Feb 1b, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Feb 1b, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1b. GA Smoothing (Borrow $7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Feb 1b, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	*1,156*	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Feb 1b, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
1b. GA Smoothing (Borrow $7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Feb 1b, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	
	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Feb 1b, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1b. GA Smoothing (Borrow $7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Feb 1b, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Feb 4 1c, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

		28%	24%	21%	24%	12%	9%																													
Feb 4 1c, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow $4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Feb 4 1c, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

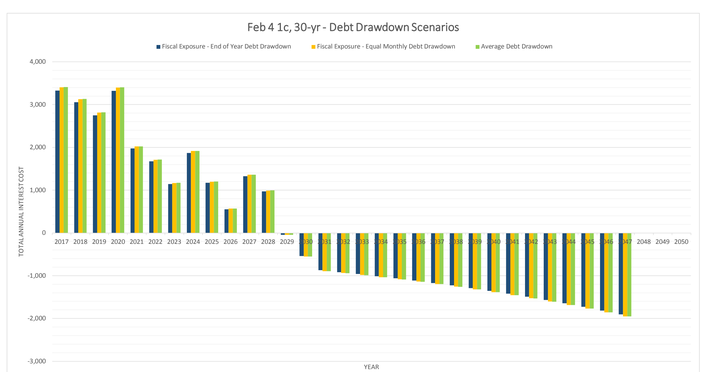
Feb 4 1c, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1c. GA Smoothing (Borrow $4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Feb 4 1c, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	*1,156*	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

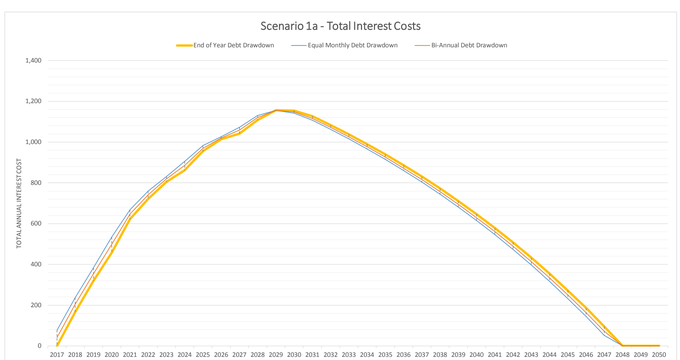
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Feb 4 1c, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
1c. GA Smoothing (Borrow $4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Feb 4 1c, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Feb 4 1c, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow $4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Feb 4 1c, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





	2017
IESO GA cost forecast + extrapolation	12,095
	12
Ratepayer GA Payment	7
Additional GA Debt Drawdown, End of Year	

1a. GA Smoothing (Borrow $5 billion in 2017)

Ratepayer GA Payment

Total Accumulated Debt *($ billion)*	5
Total Change in Accumulated Debt *($ billion)*	5

1b. GA Smoothing (Borrow $7 billion in 2017)

Total Accumulated Debt *($ billion)*	7
Total Change in Accumulated Debt *($ billion)*	7

1c. GA Smoothing (Borrow $4 billion in 2017)

Total Accumulated Debt *($ billion)*	4
Total Change in Accumulated Debt *($ billion)*	4

2018	2019	2020	2021	2022	2023	2024	2025	2026
11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020
12	12	12	11	11	10	11	10	10

9	14	19	23	27	30	34	38	41
5	4	5	4	4	3	4	4	3

14	21	28	35	41	47	53	59	65
7	7	8	6	6	6	7	6	6

7	10	14	16	19	20	23	25	26
3	3	4	2	2	2	3	2	1

2027	2028	2029	2030	2031	2032	2033	2034	2035
10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553
11	11	10	10	9	9	8	8	6

46	50	53	56	58	60	61	62	60
4	4	3	3	2	2	1	1	-2

71	77	83	88	91	95	97	99	98
6	6	5	5	4	3	3	2	-1

28	30	31	31	30	29	28	27	25
2	2	1	0	-1	-1	-1	-1	-1

2036	2037	2038	2039	2040	2041	2042	2043	2044
5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535
5	5	5	5	4	4	4	4	4

58	55	52	48	43	38	33	27	20
-2	-3	-3	-4	-5	-5	-6	-6	-6

96	94	90	85	80	73	64	55	44
-2	-3	-4	-5	-6	-7	-8	-10	-11

23	22	20	18	16	14	12	10	8
-2	-2	-2	-2	-2	-2	-2	-2	-2

2045	2046	2047	2048		
3,362	3,197	3,041	2,892	2,750	2,616
3	3	3	3		

14	7	0	0
-6	-7	-7	0

31	16	0	0
-13	-14	-16	0

5	3	0	0
-2	-3	-3	0

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

JK: Fixed the formula in the yellow highlighted cells. Pls. check. (SK: looks good to me)

	Tab
v16	Powerpoint_Export

Change Description

Added in trigger for later start in the year

Equal Monthly Debt Drawdown

		Month	Months Remai
Scenario Start Date	**July**	7	6

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	3,180	2,888
Annual Exposure2 with start on July 1st	*1,590*	*2,888*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	795	3,107
Start: July 1st	-	*2,312*

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	851	3,335
Start: July 1st	-	*2,484*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	1,168	1,765
Annual Exposure2 with start on July 1st	*584*	*1,765*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	292	1,609
Start: July 1st	-	*1,025*

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,449	2,040
Annual Exposure2 with start on July 1st	*725*	*2,040*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,597
Start: July 1st	-	*1,959*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335
Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3575**
Total, B	362	1837
Proposed Program Total:	362 - 851	1,837 - 3,575

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,556	3,123	1,728	1,400
2,556	*3,123*	*1,728*	*1,400*

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646
2,805	*2,697*	*2,774*	*1,646*

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

ıking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
2,311	3,750	2,311	1,933
2,311	*3,750*	*2,311*	*1,933*

2018-19	2019-20	2020-21	2021-2022

1,901	2,671	3,391	2,217
1,901	*2,671*	*3,391*	*2,217*

2019	2020	2021	2022
2,581	4,016	2,598	2,241
2,581	*4,016*	*2,598*	*2,241*

2018-19	2019-20	2020-21	2021-2022
2,175	2,940	3,662	2,508
2,175	*2,940*	*3,662*	*2,508*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

/1

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052
2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

Equal Monthly Debt Drawdown

		Month	Months Remaining
Scenario Start Date	July	7	6

AS LONG AS >

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	3,180	2,888	2,556

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	795	3,107	2,805
Fiscal Exposure, 25%	199	777	701

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Annual Exposure[2]	3,404	3,128	2,812

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	851	3,335	3,049
Fiscal Exposure, 25%	213	834	762

Indicates year in which, similar to OPCD's exa
closest to 30%. As Fiscal 2016/17 is a partial y
month the GA deferral begins.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu
decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions	9%	14%	18%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	1,168	1,765	2,311

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	292	1,609	1,901
Fiscal Exposure, 25%	73	402	475

Scenario 1b - 30-yr amortization	2017	2018	2019
Annual Exposure[2]	1,449	2,040	2,581

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	362	1,597	2,175
Fiscal Exposure, 25%	91	399	544

Indicates year in which, similar to OPCD's exar closest to 30%.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 ar
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu on accounting treatment.

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]
Debt-Finance Global Adjustment Costs, Option 1a	213	834	762
Debt-Finance Global Adjustment Costs, Option 1b	91	399	544
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**213**	**1074**	**1065**
Total, B	91	639	847

Proposed Program Total:	91 - 213	639 - 1,074	847 - 1,065

($M)	2016-171	2017-181	2018-191
Debt-Finance Global Adjustment Costs, Option 1a	851	3335	3049
Debt-Finance Global Adjustment Costs, Option 1b	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**851**	**3575**	**3352**
Total, B	362	1837	2478

Proposed Program Total:	362 - 851	1,837 - 3,575	2,478 - 3,352

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6

7	July	7	
8	August	8	
9	September	9	
10	October	10	
11	November	11	
12	December	12	

30-year term	**2016-17**	**2017-18**	**2018-19**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335	2,175 - 3,049

ROWS HIDDEN

1	1 = Comparision Enabled

APRIL 1, 2017 25%

2020	2021	2022
3,123	1,728	1,400

2019-20	2020-21	2021-2022
2,697	2,774	1,646
674	693	412

2020	2021	2022
3,396	2,020	1,712

2019-20	2020-21	2021-2022
2,958	3,052	1,943
740	763	486

mple, the true cost of GA being deferred is
ear, exposure may be less subject to which

l $17-21 billion (at 3.5% interest rate), peaking in 2028.
$33-$36 million.

ıals per month based on month of the year. Actuals may also depend on

28%	17%	13%
2020	2021	2022
3,750	2,311	1,933

2019-20	2020-21	2021-2022
2,671	3,391	2,217
668	848	554

2020	2021	2022
4,016	2,598	2,241

2019-20	2020-21	2021-2022
2,940	3,662	2,508
735	915	627

mple, the true cost of GA being deferred is

ıd $17-21 billion (at 3.5% interest rate), peaking in 2028.
$118-$134 million.

ıals per month based on month of the year. Actuals may also depend on decision

2019-20[1]	2020-21[1]
740	763
735	915
279	323
60	60
18	18
1097	**1164**
1092	1316

1,092 - 1,097 1,316 - 1,164

2019-201	2020-211
2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453





2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964
Equal Monthly Debt Drawdown	3,180	952

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

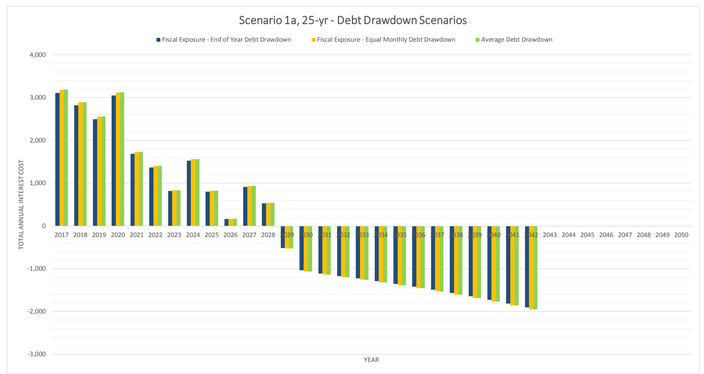
		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

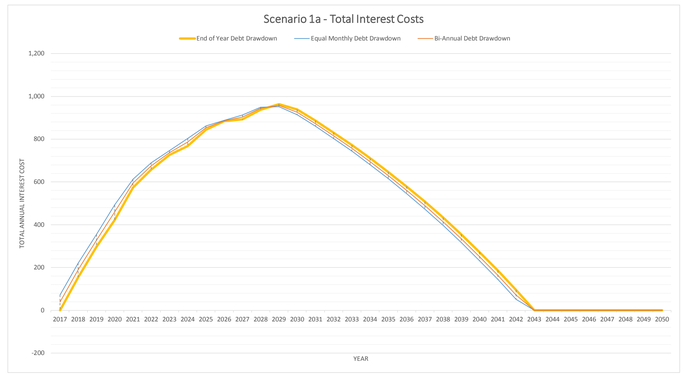
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	3,665	968	
Equal Monthly Debt Drawdown	3,750	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

		9%	14%	18%	28%	17%	13%																													
Scenario 1b, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

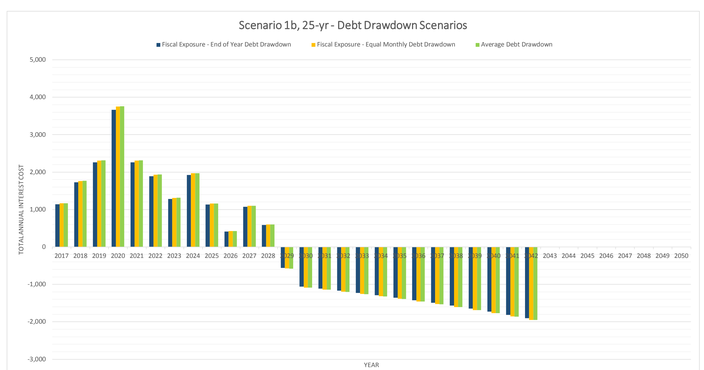
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	*954*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

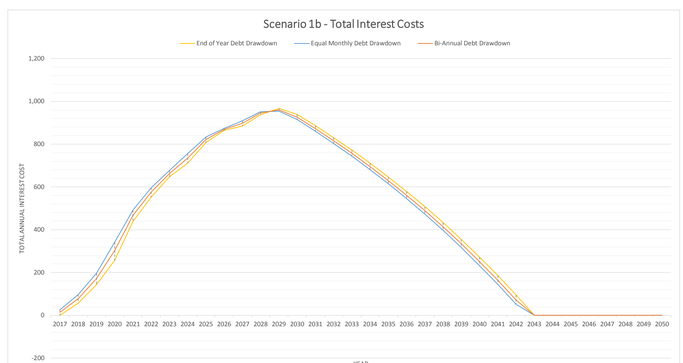
	Monthly Drawdown	95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

		28%	24%	21%	24%	12%	9%																													
Scenario 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1a, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	*1,156*	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

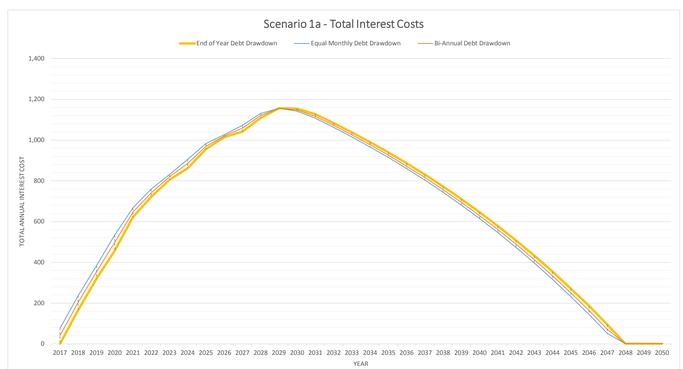
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

		12%	16%	20%	30%	19%	15%																													
Scenario 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

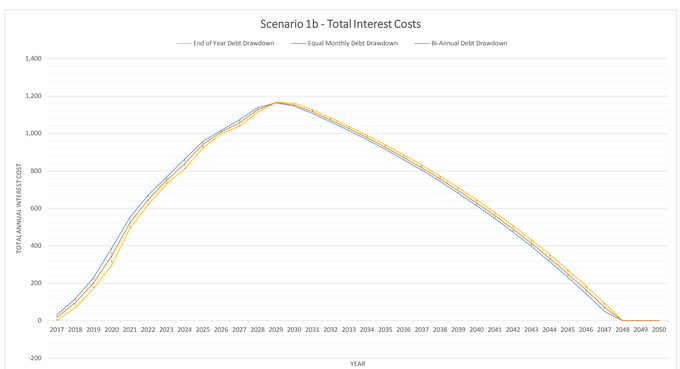
	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

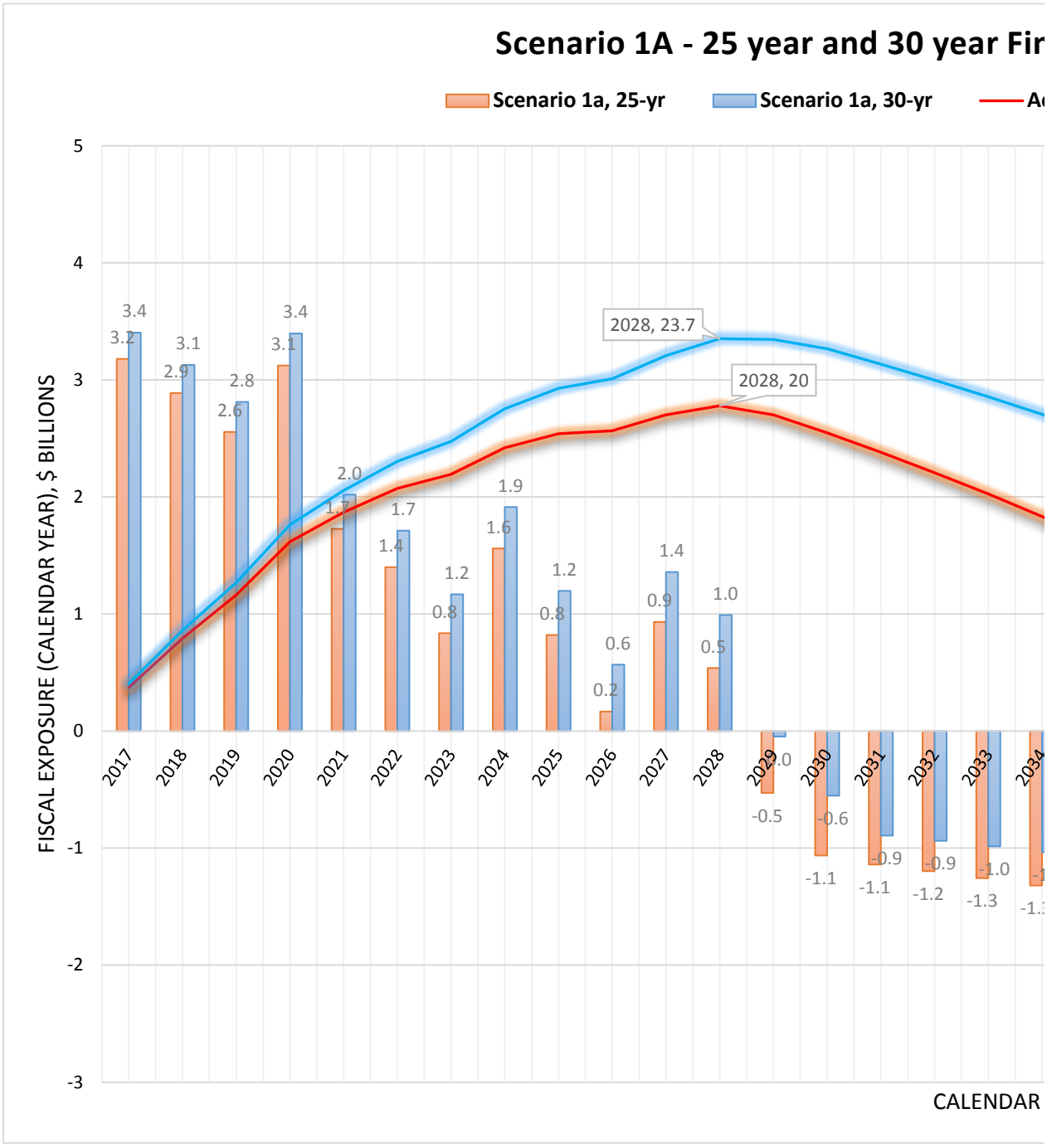
	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

Scenario 1b, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

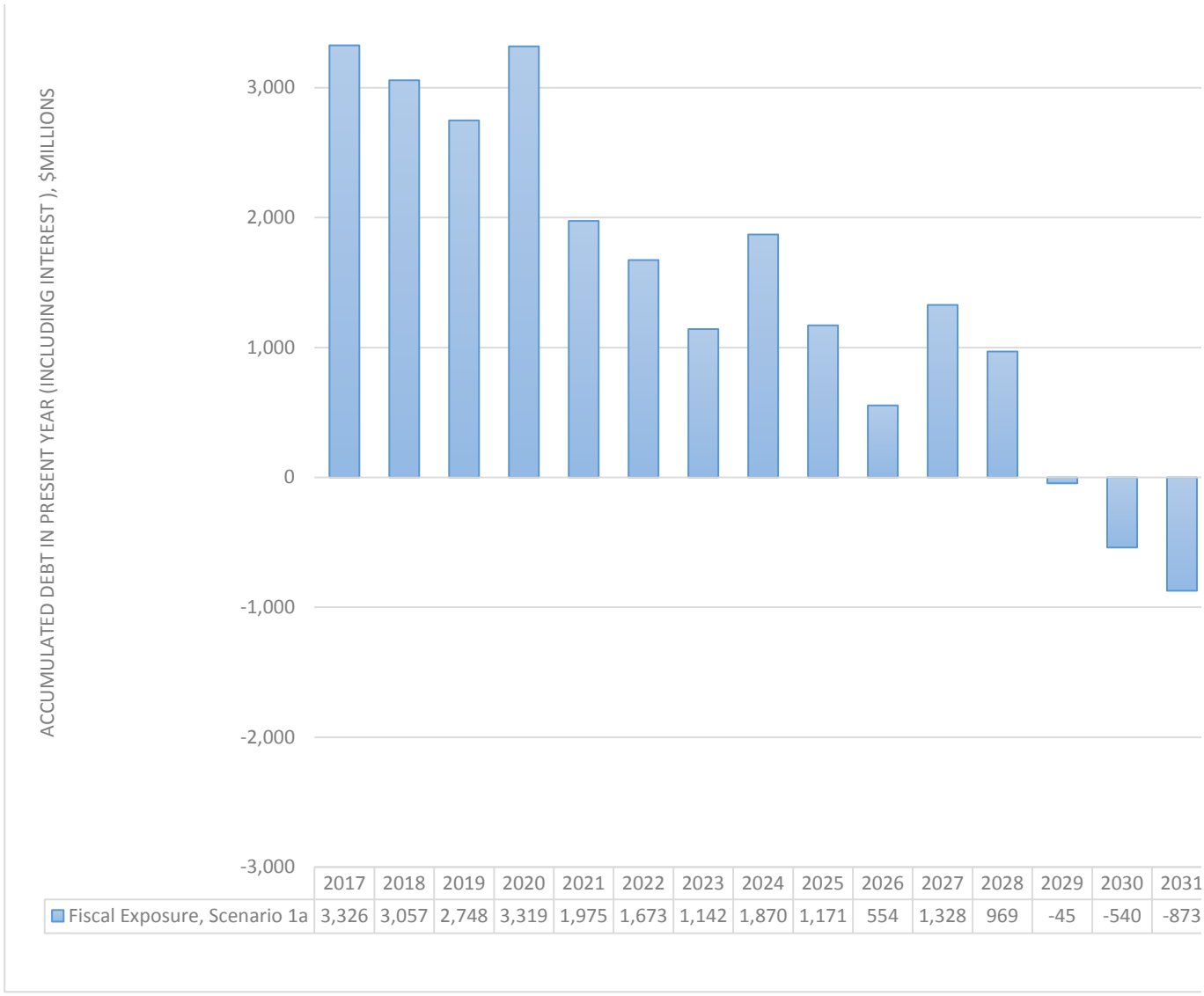




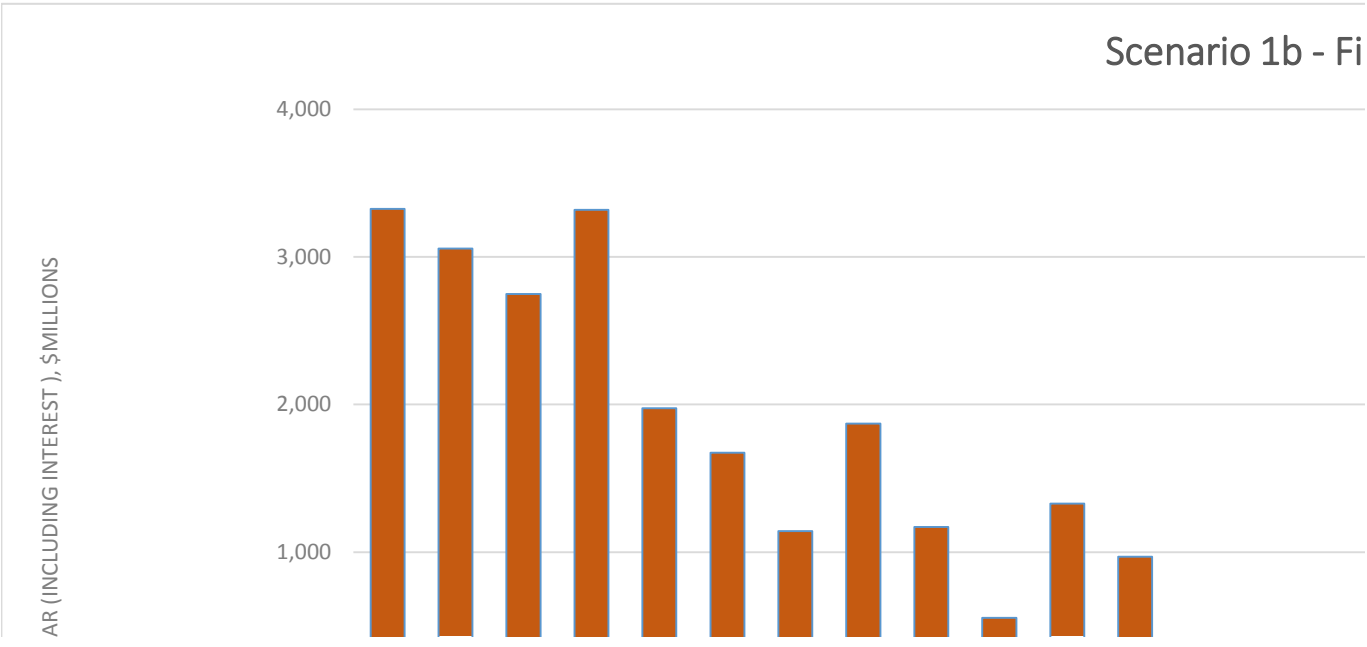
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

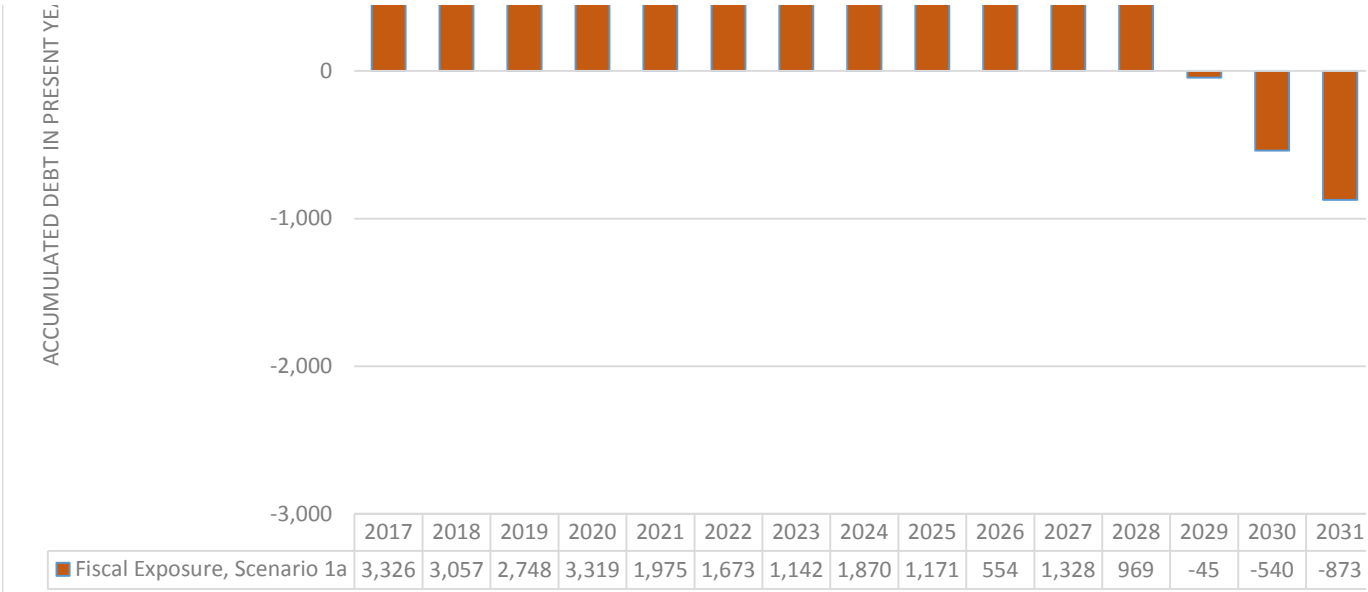




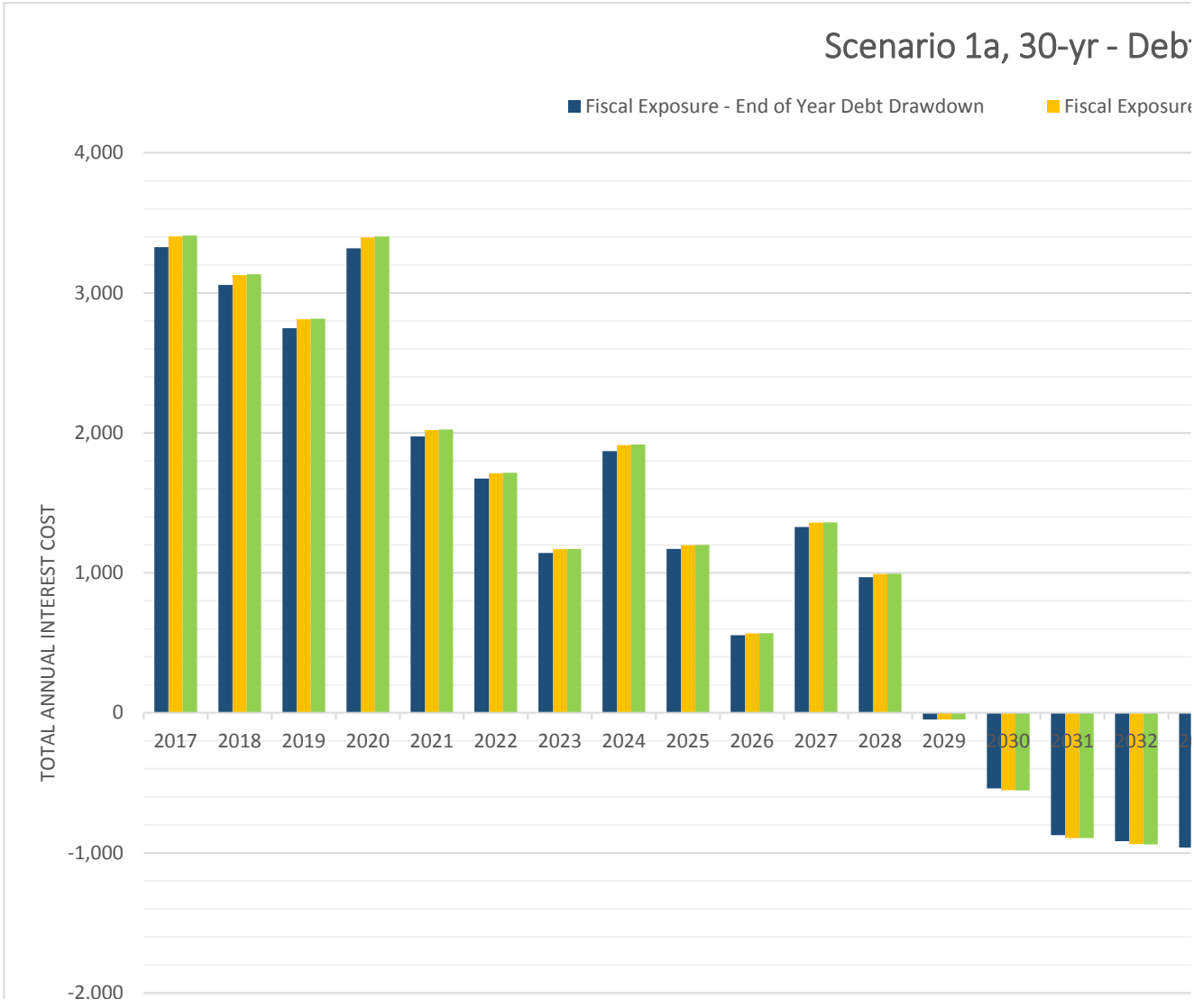


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



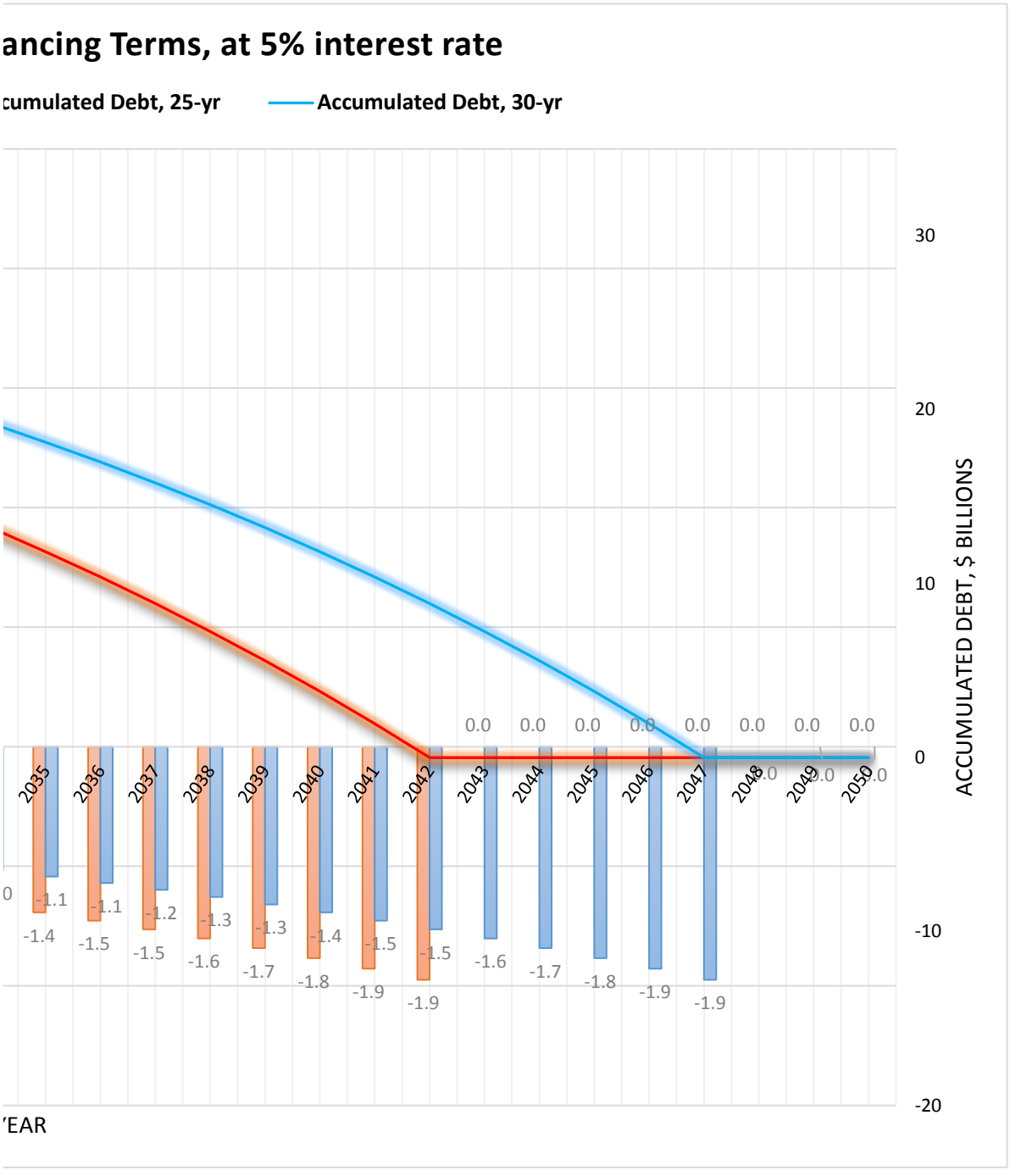


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



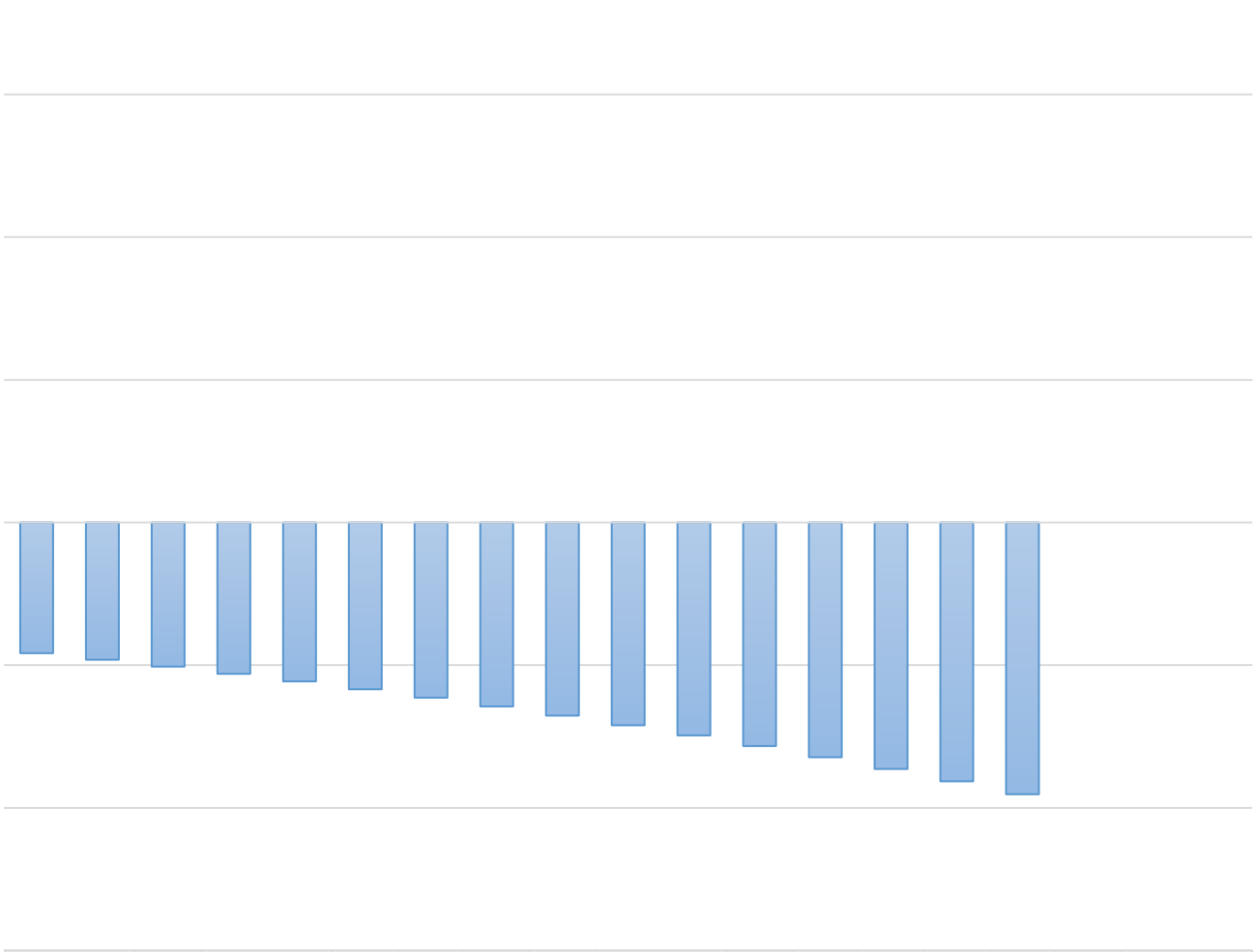

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

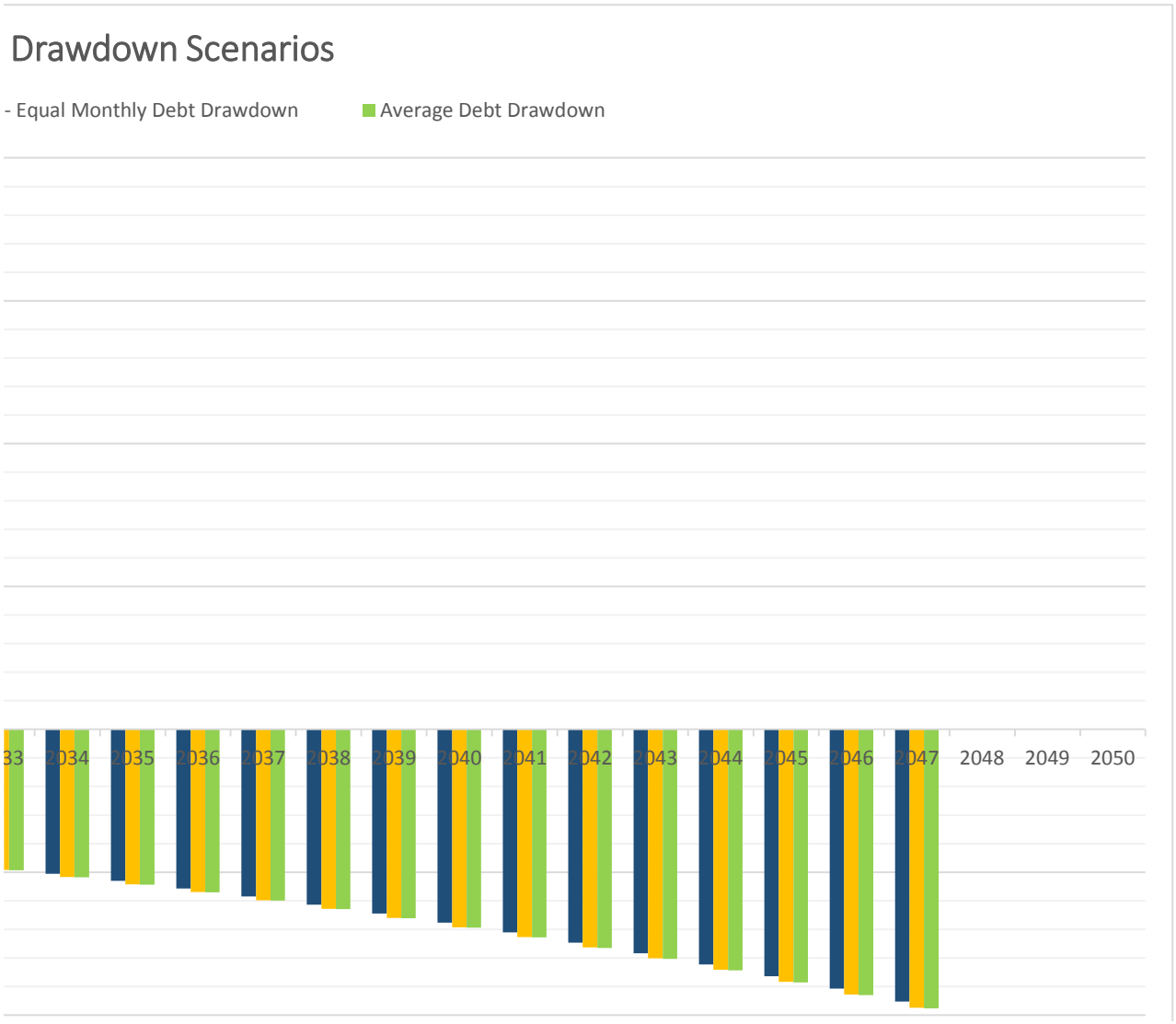
YEAR

cal Exposure



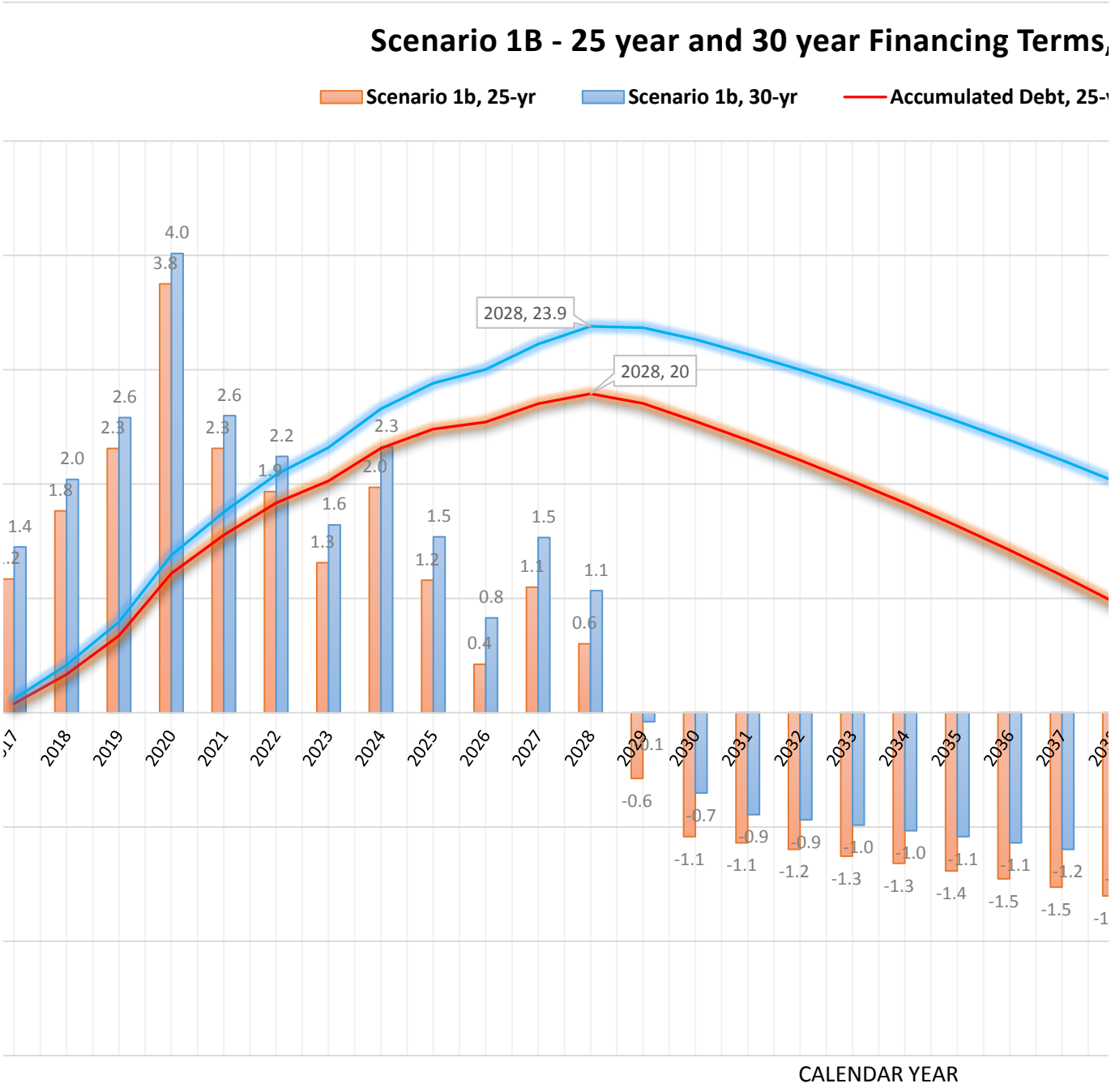
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

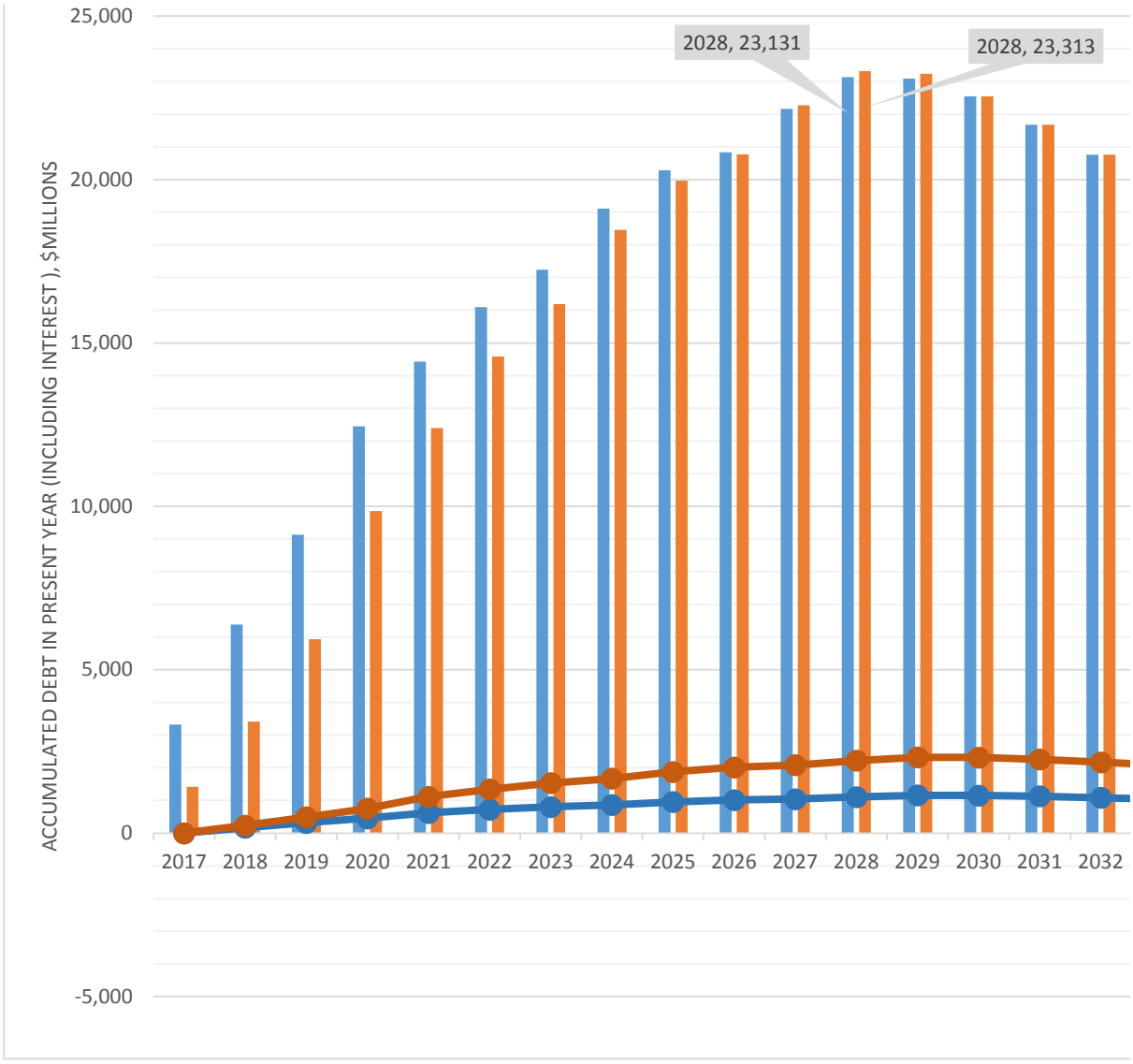


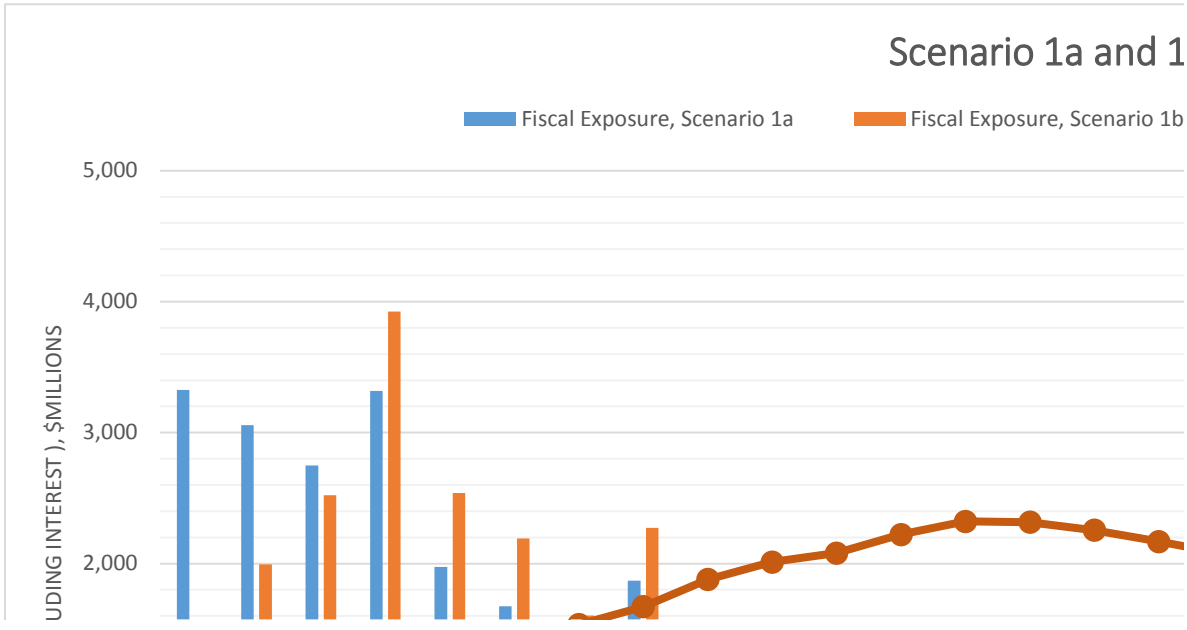
YEAR

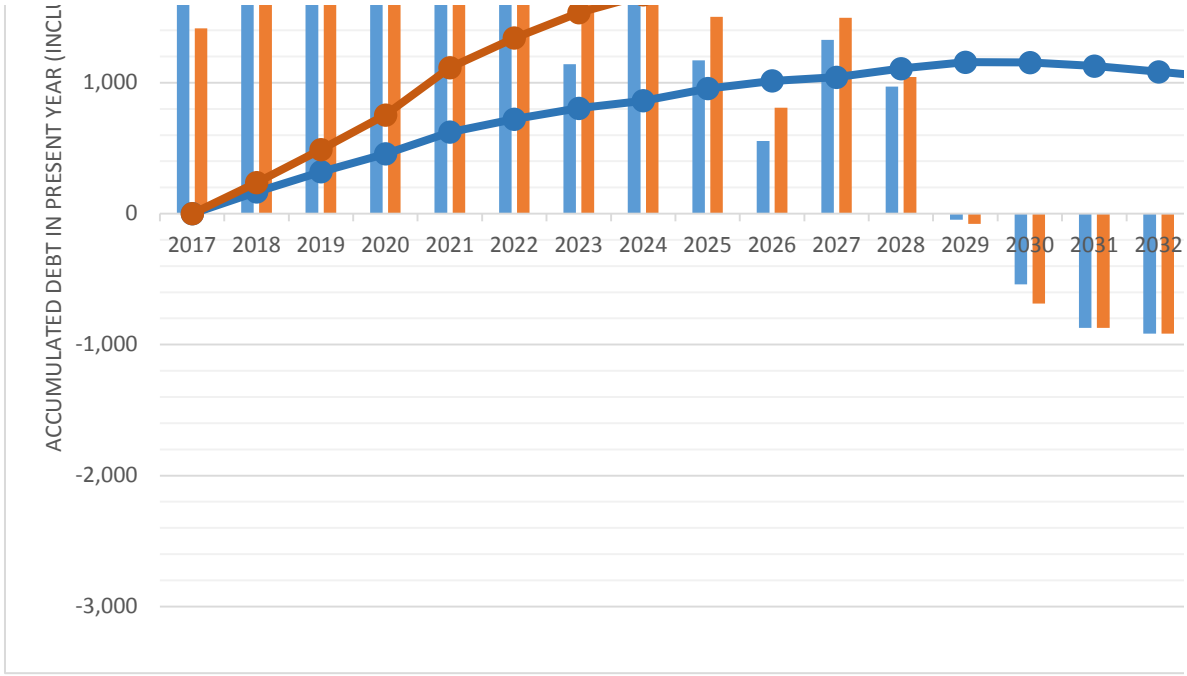
3 - 25 year and 30 year Financing Terms, at 5% interest rate

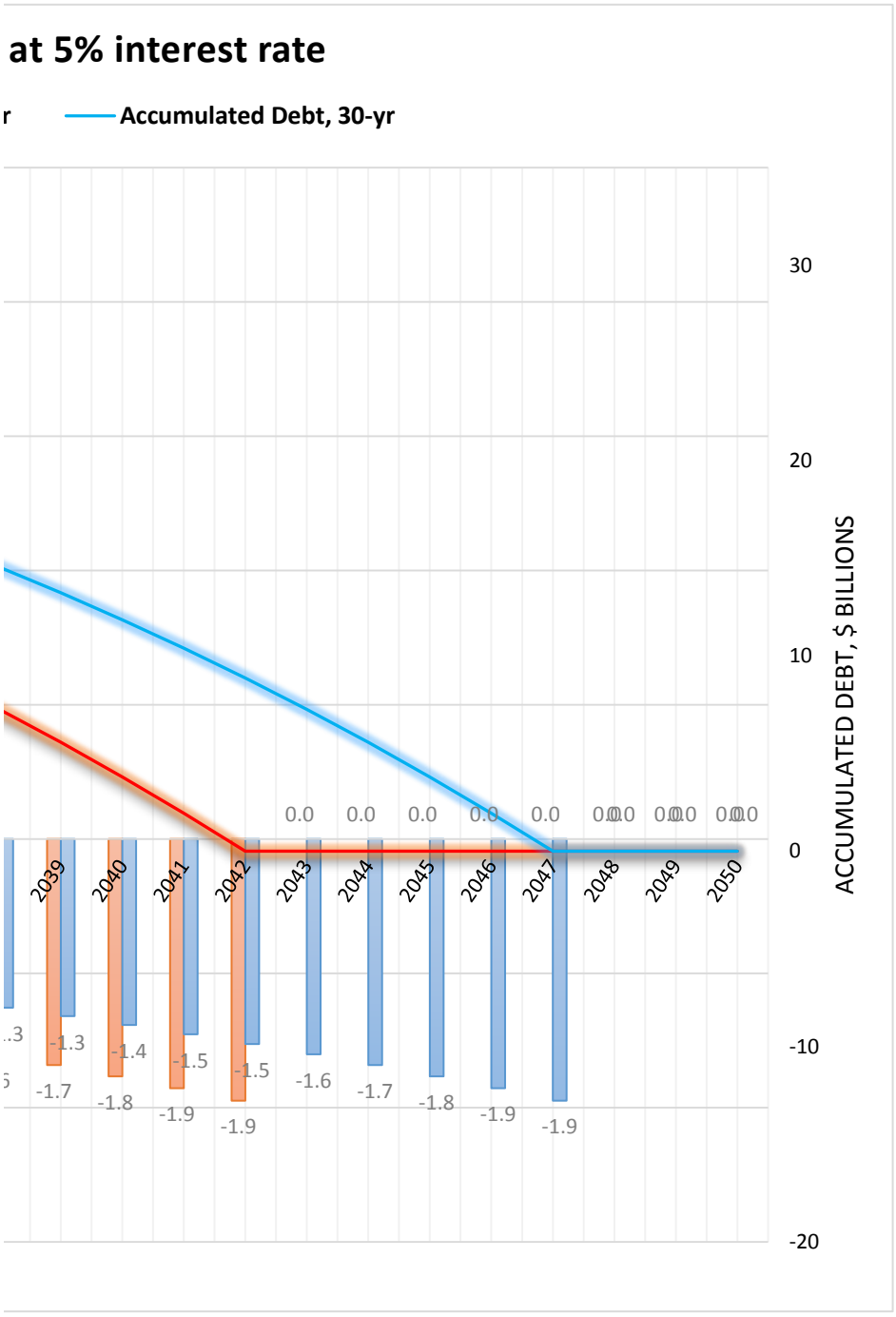





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

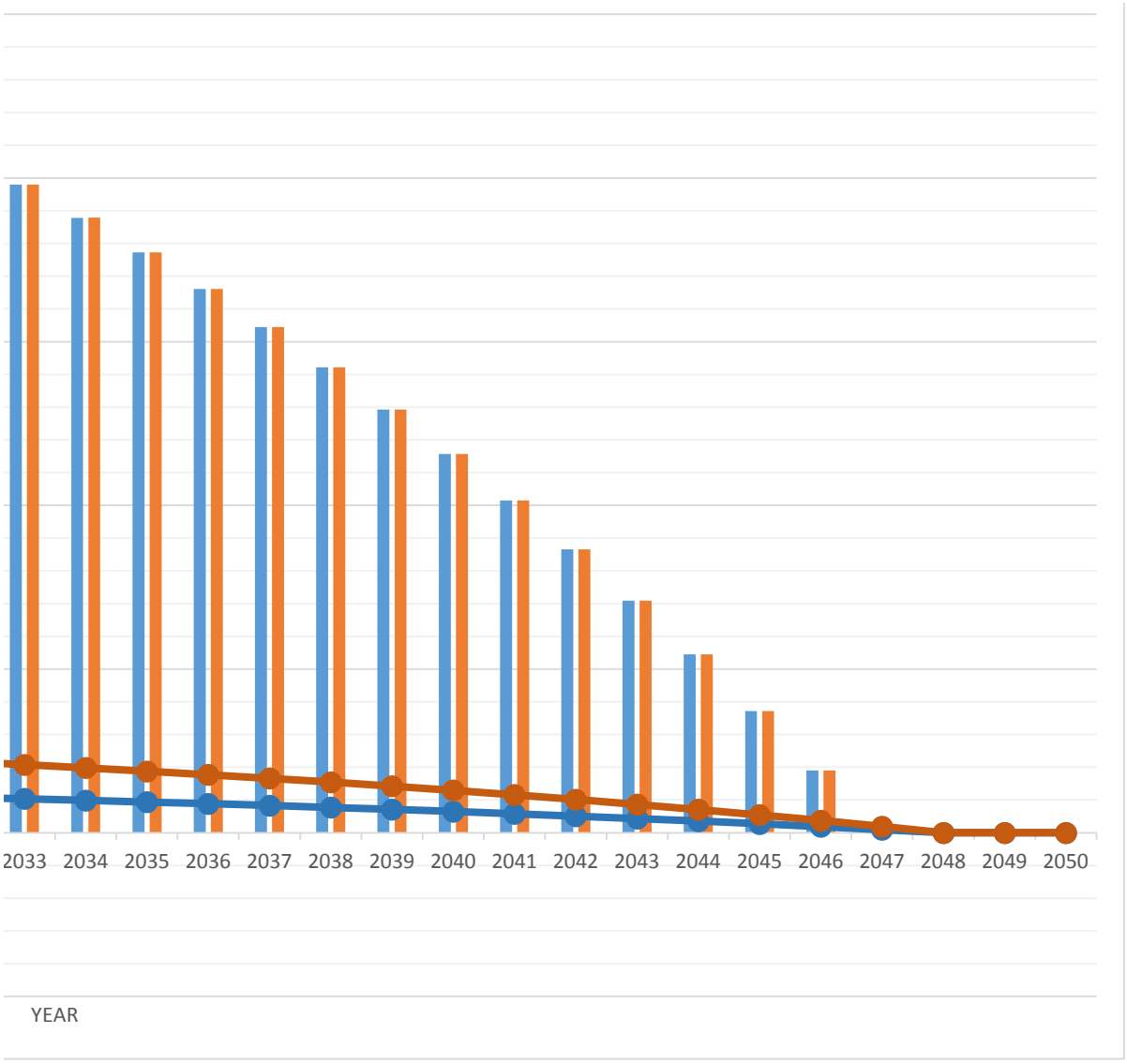

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

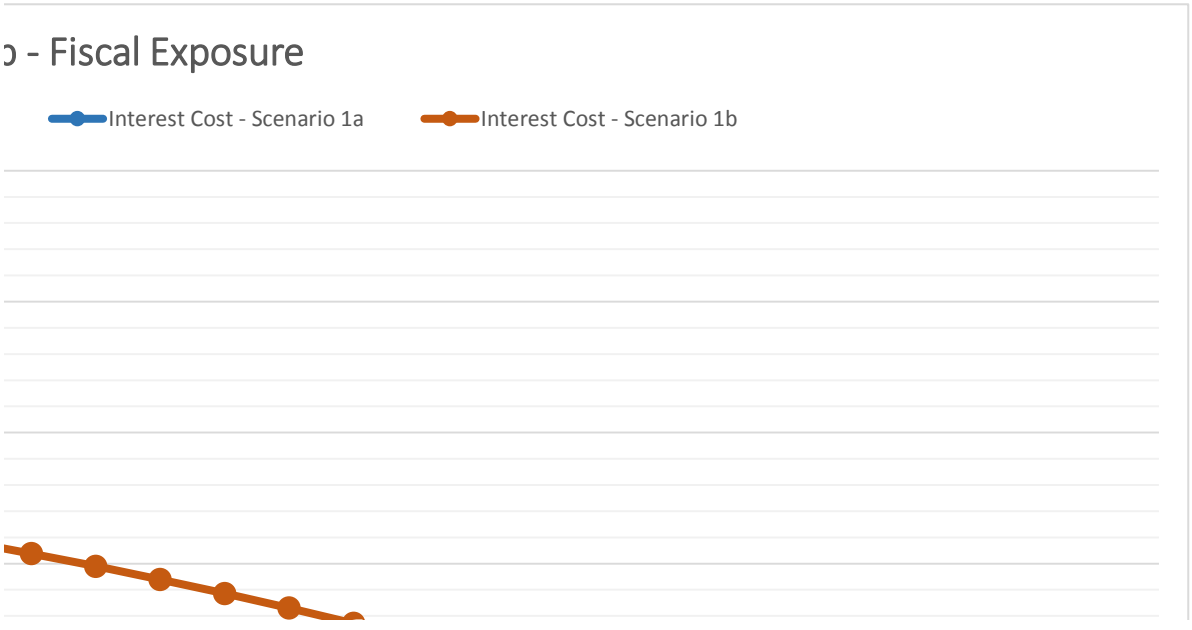

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

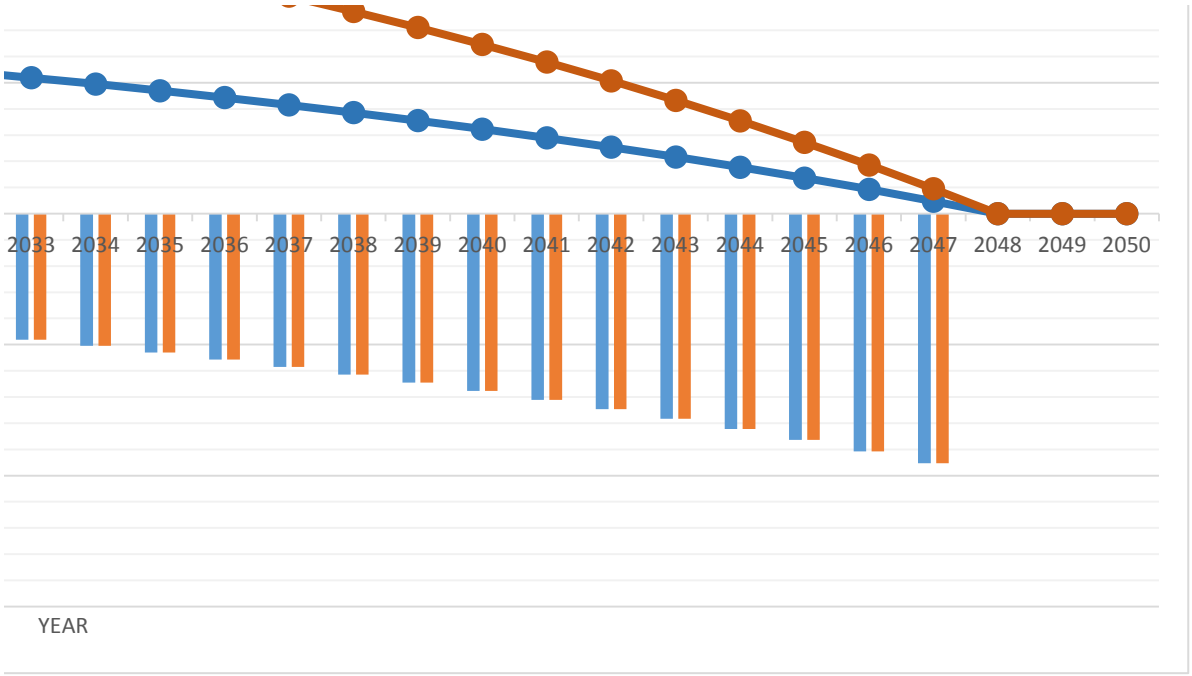


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

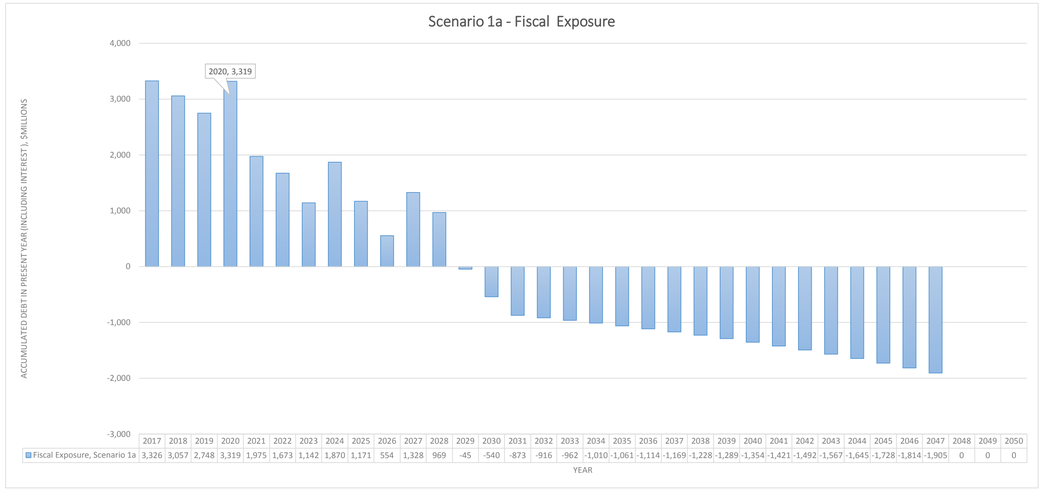
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

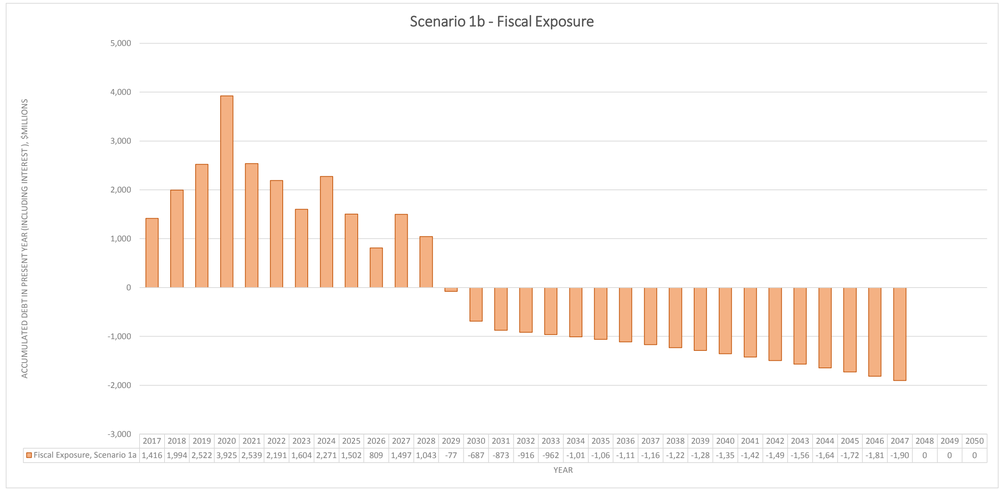
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

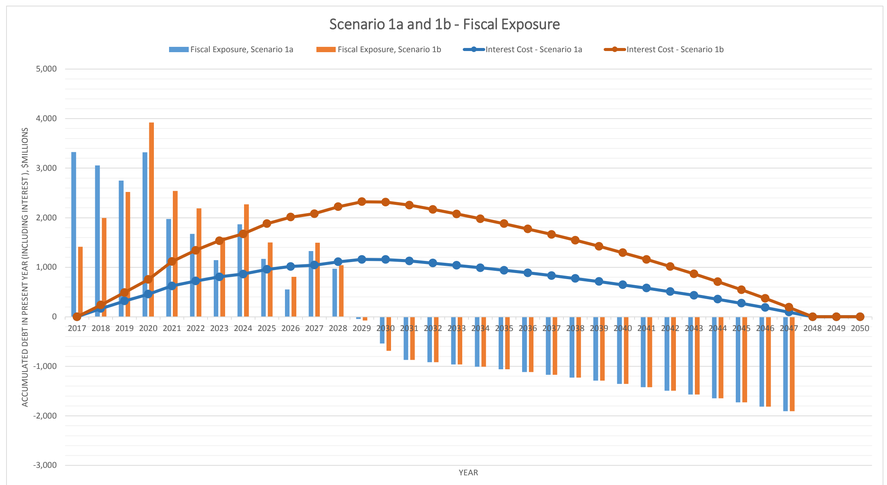
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

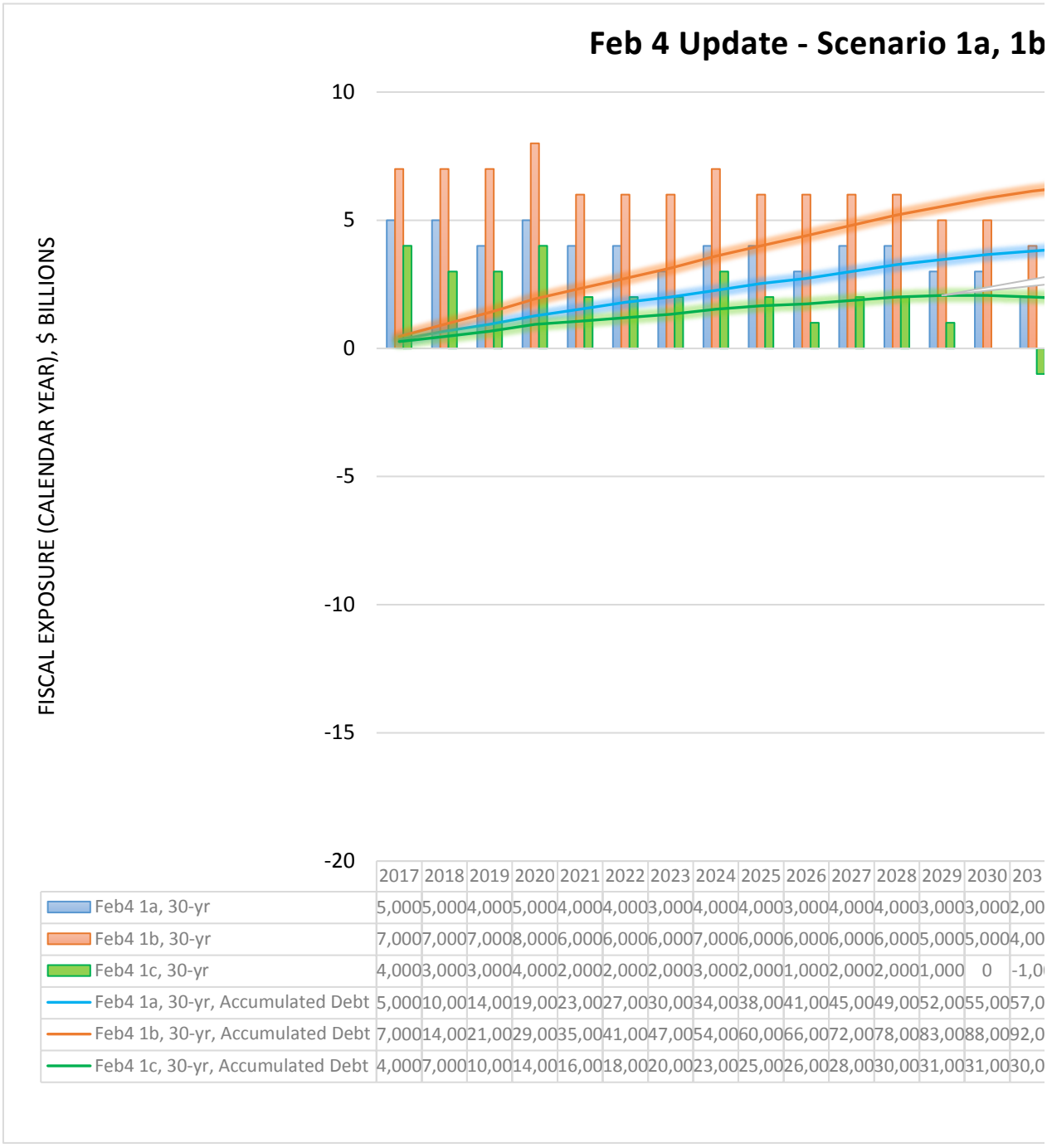
Notes:	Accounting treatment is to be determined.


Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0

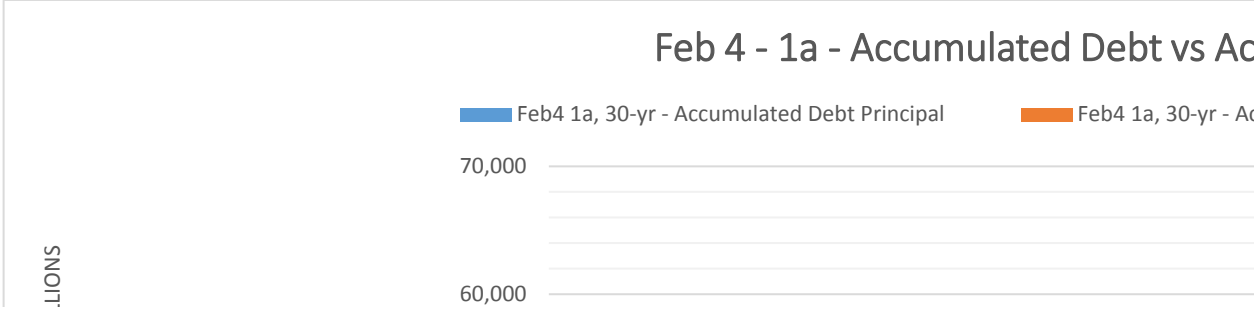

Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0

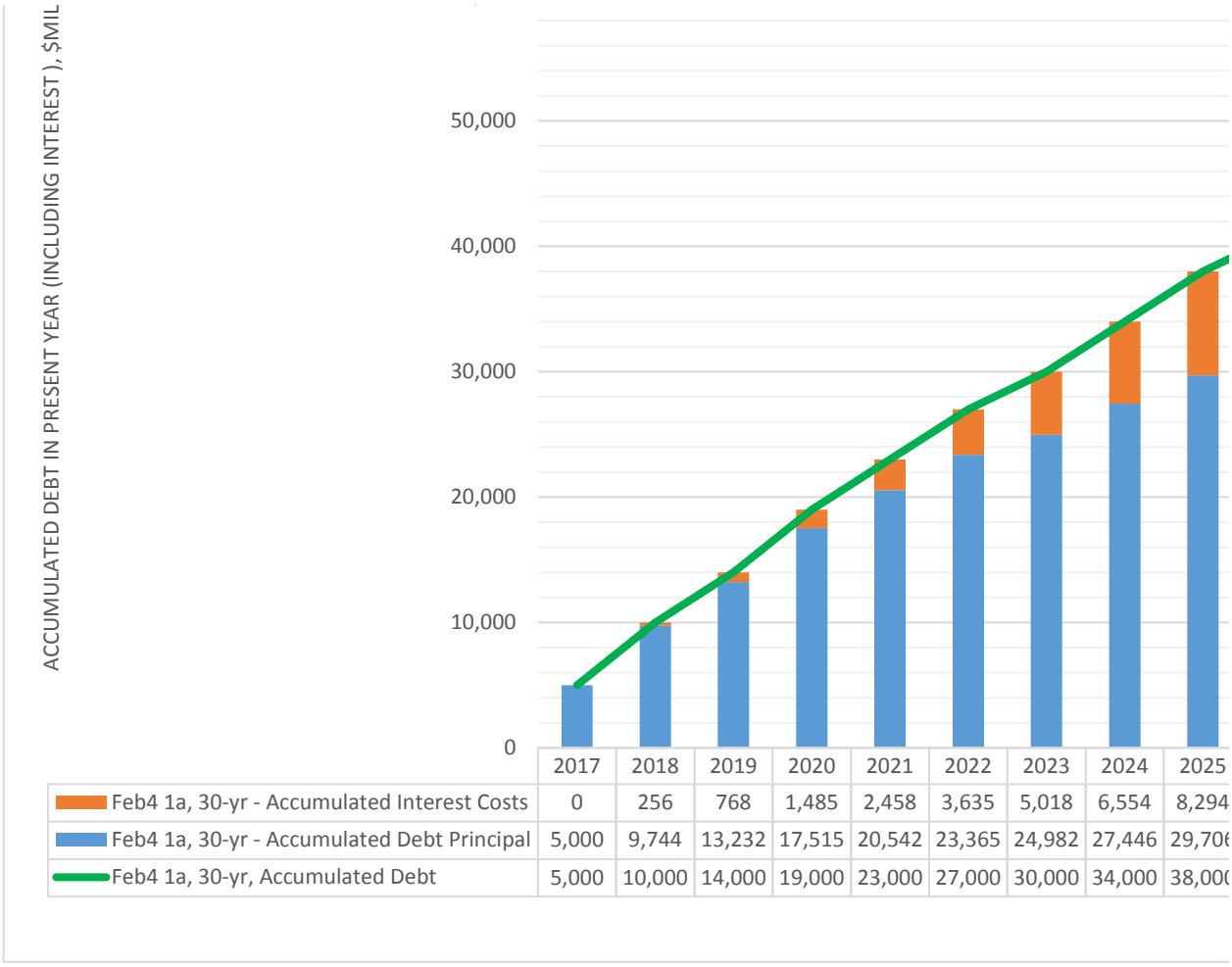

Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

Feb 4 Update - Scenario 1a, 1b, 1c - at 5.12% interest rate

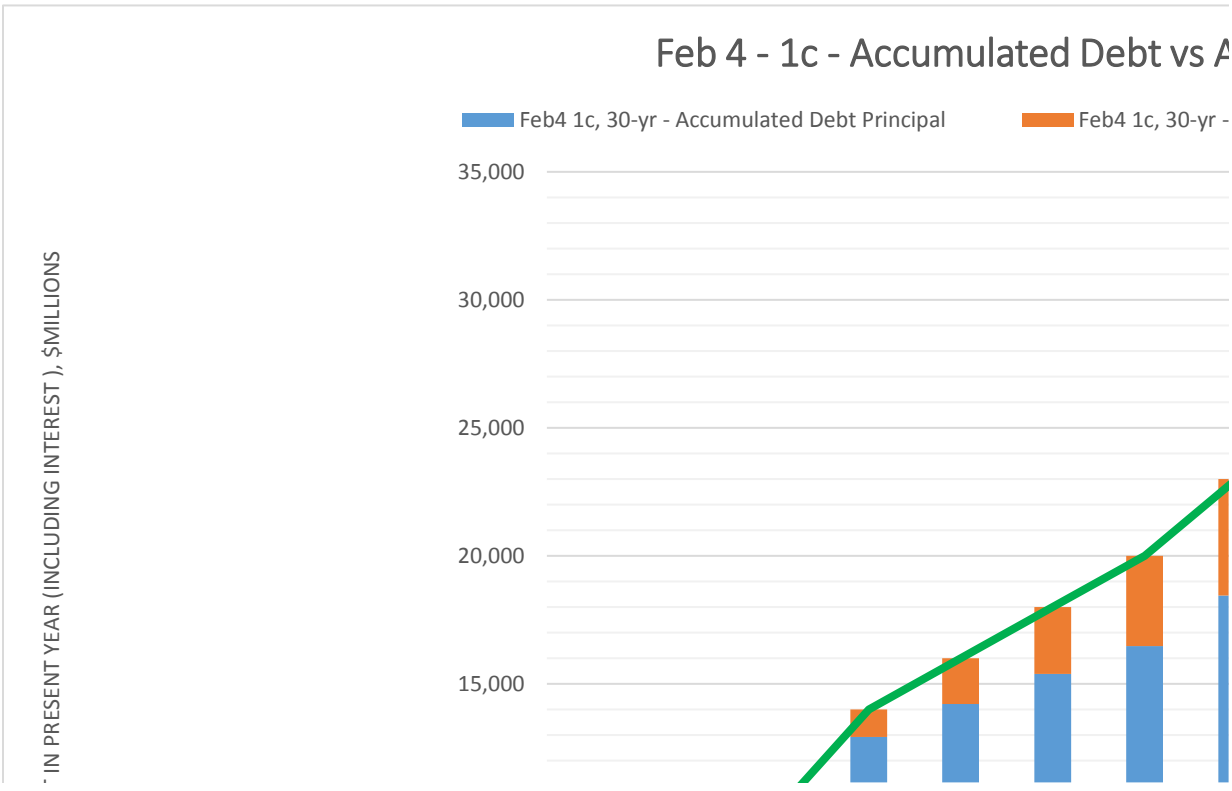


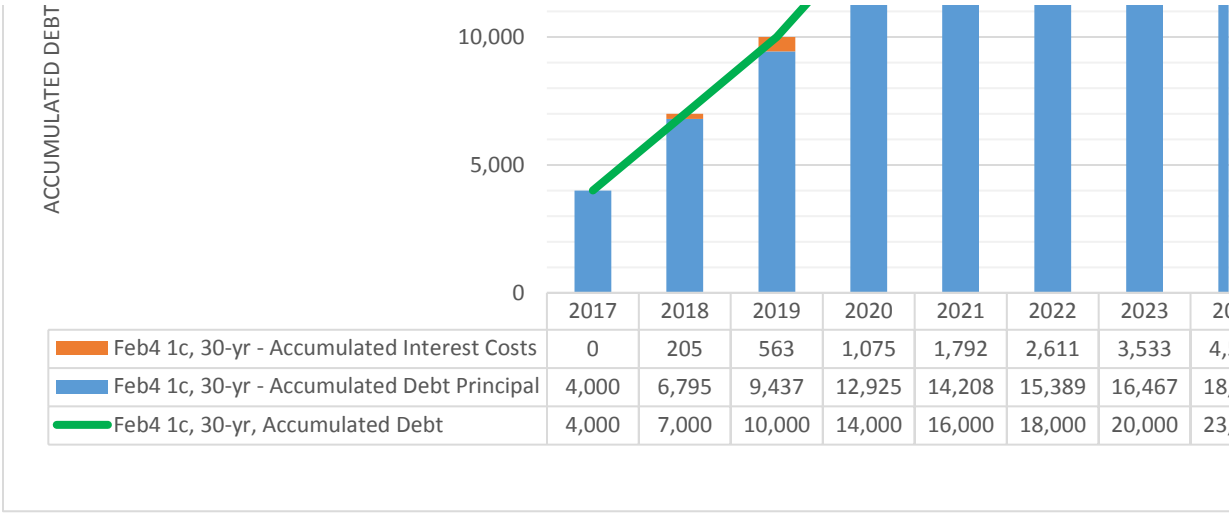
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	203
Feb4 1a, 30-yr	5,000	5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000	3,000	4,000	4,000	3,000	3,000	2,00
Feb4 1b, 30-yr	7,000	7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000	6,000	6,000	6,000	5,000	5,000	4,00
Feb4 1c, 30-yr	4,000	3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000	1,000	2,000	2,000	1,000	0	-1,0
Feb4 1a, 30-yr, Accumulated Debt	5,000	10,00	14,00	19,00	23,00	27,00	30,00	34,00	38,00	41,00	45,00	49,00	52,00	55,00	57,0
Feb4 1b, 30-yr, Accumulated Debt	7,000	14,00	21,00	29,00	35,00	41,00	47,00	54,00	60,00	66,00	72,00	78,00	83,00	88,00	92,0
Feb4 1c, 30-yr, Accumulated Debt	4,000	7,000	10,00	14,00	16,00	18,00	20,00	23,00	25,00	26,00	28,00	30,00	31,00	31,00	30,0



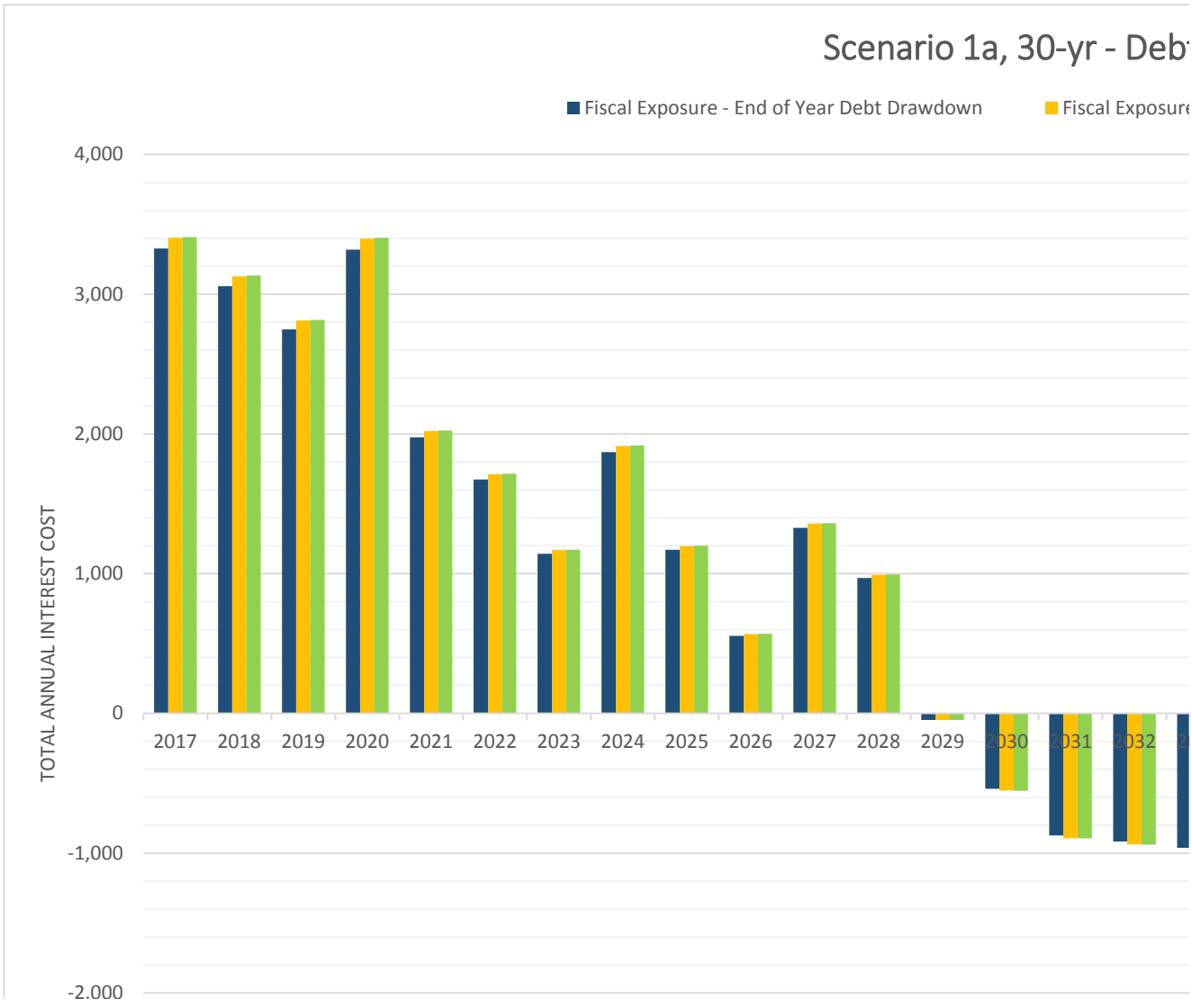


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	256	768	1,485	2,458	3,635	5,018	6,554	8,294
Feb4 1a, 30-yr - Accumulated Debt Principal	5,000	9,744	13,232	17,515	20,542	23,365	24,982	27,446	29,706
Feb4 1a, 30-yr, Accumulated Debt	5,000	10,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000



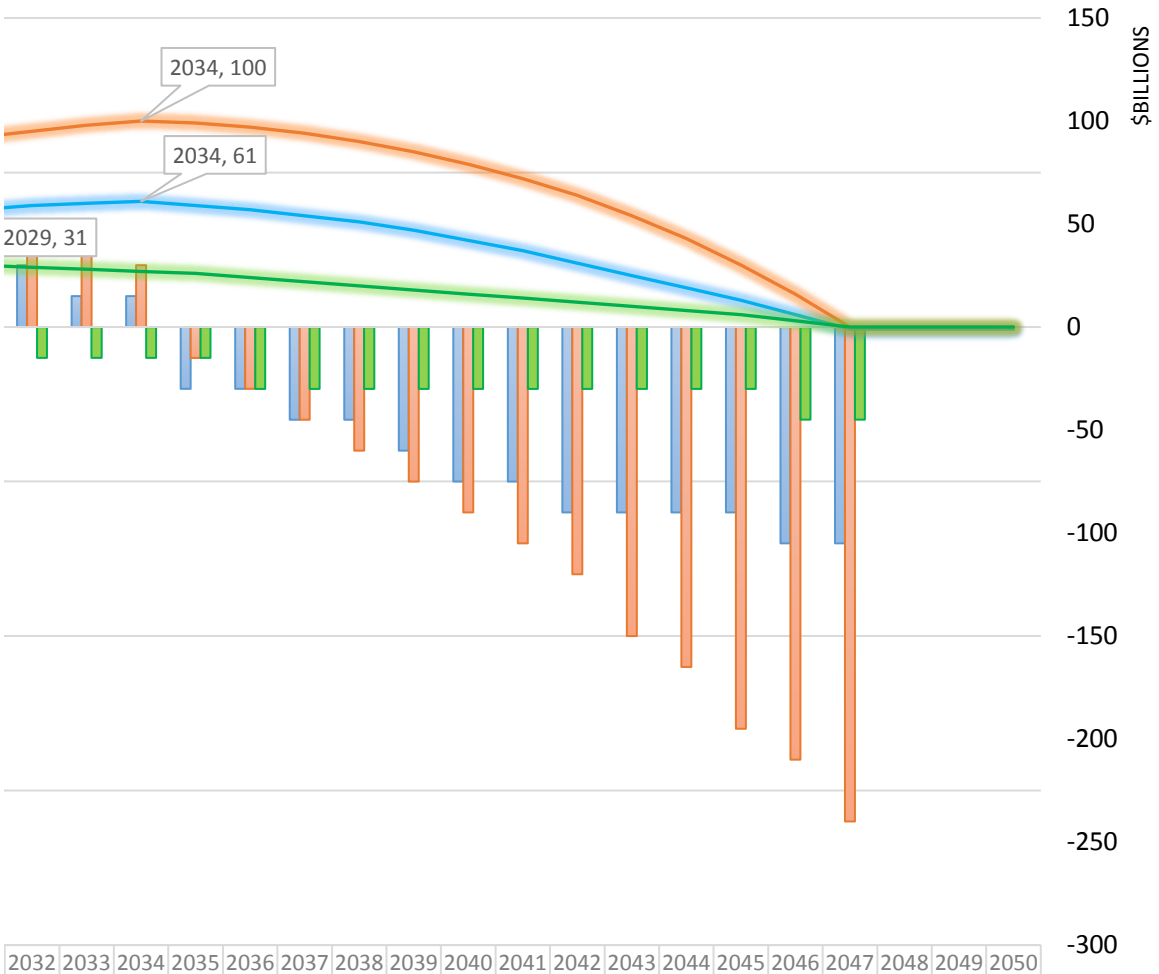


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	205	563	1,075	1,792	2,611	3,533	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	4,000	6,795	9,437	12,925	14,208	15,389	16,467	18
Feb4 1c, 30-yr, Accumulated Debt	4,000	7,000	10,000	14,000	16,000	18,000	20,000	23



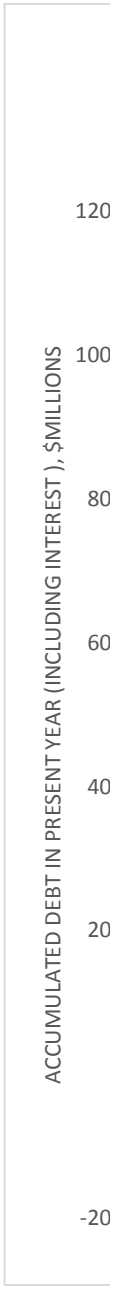

-3,000

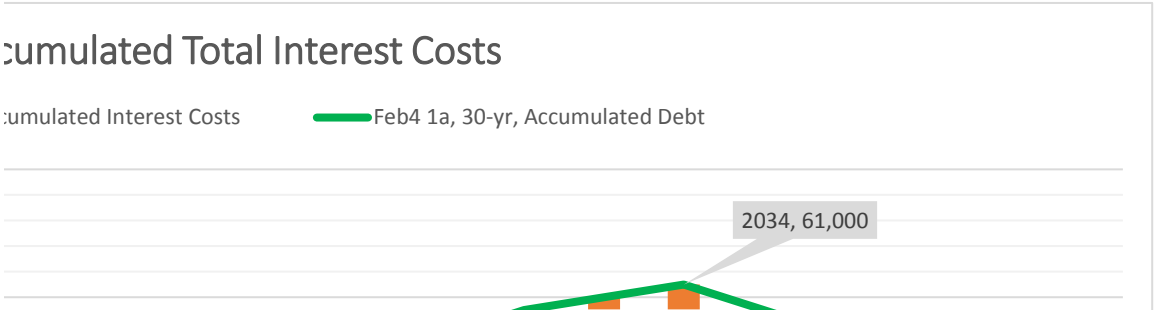
1c - at 5.12% interest rate

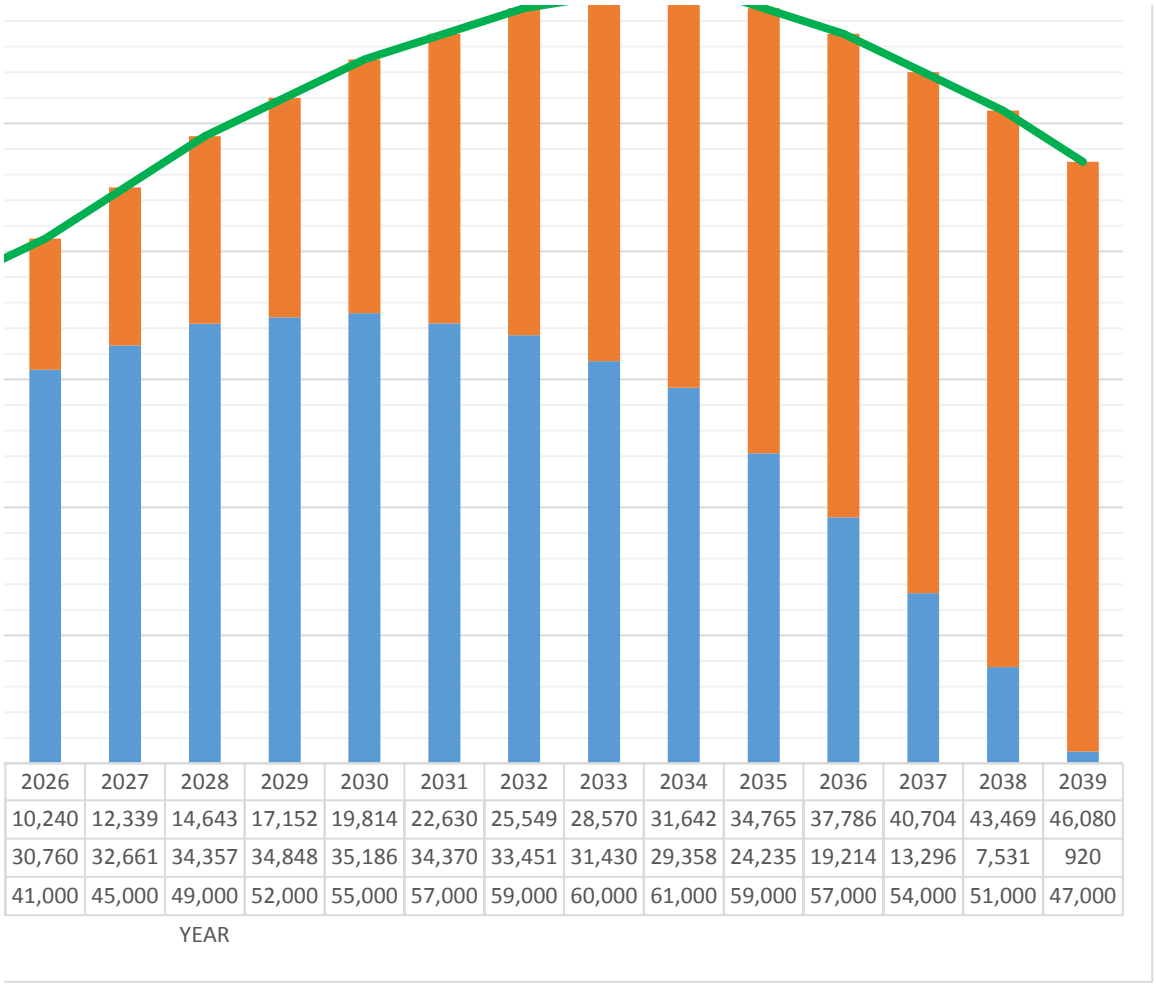


2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
2,000	1,000	1,000	-2,00	-2,00	-3,00	-3,00	-4,00	-5,00	-5,00	-6,00	-6,00	-6,00	-6,00	-7,00	-7,00	0	0	0
3,000	3,000	2,000	-1,00	-2,00	-3,00	-4,00	-5,00	-6,00	-7,00	-8,00	-10,0	-11,0	-13,0	-14,0	-16,0	0	0	0
-1,00	-1,00	-1,00	-1,00	-2,00	-2,00	-2,00	-2,00	-2,00	-2,00	-2,00	-2,00	-2,00	-2,00	-3,00	-3,00	0	0	0
59,00	60,00	61,00	59,00	57,00	54,00	51,00	47,00	42,00	37,00	31,00	25,00	19,00	13,00	6,000	-1,00	-1,00	-1,00	-1,00
95,00	98,00	100,0	99,00	97,00	94,00	90,00	85,00	79,00	72,00	64,00	54,00	43,00	30,00	16,00	0	0	0	0
29,00	28,00	27,00	26,00	24,00	22,00	20,00	18,00	16,00	14,00	12,00	10,00	8,000	6,000	3,000	0	0	0	0

CALENDAR YEAR







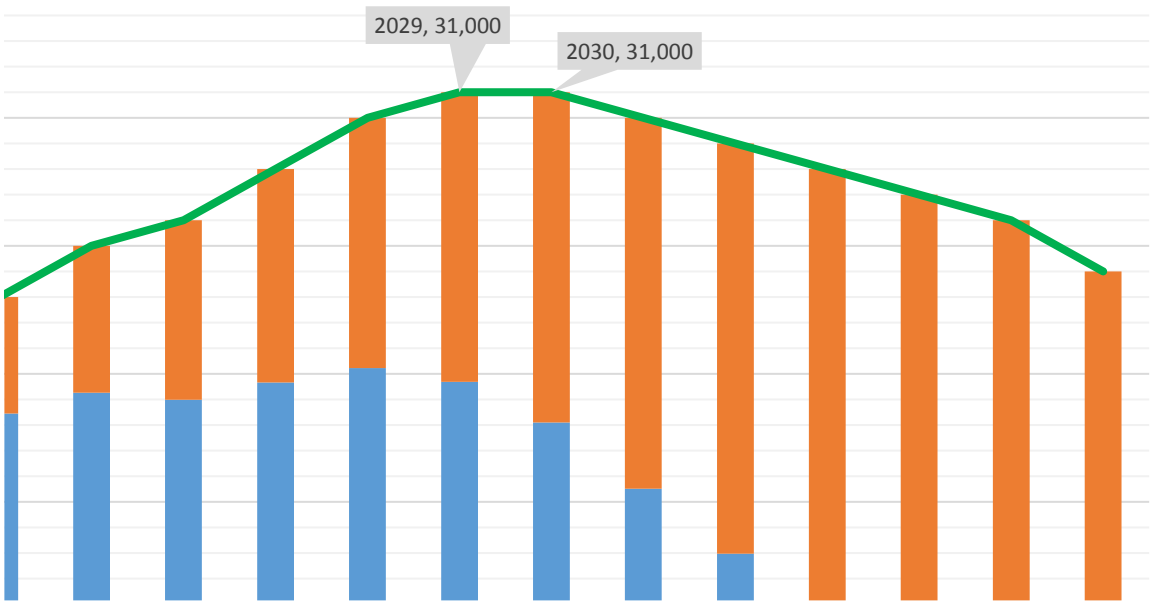
2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,240	12,339	14,643	17,152	19,814	22,630	25,549	28,570	31,642	34,765	37,786	40,704	43,469	46,080
30,760	32,661	34,357	34,848	35,186	34,370	33,451	31,430	29,358	24,235	19,214	13,296	7,531	920
41,000	45,000	49,000	52,000	55,000	57,000	59,000	60,000	61,000	59,000	57,000	54,000	51,000	47,000

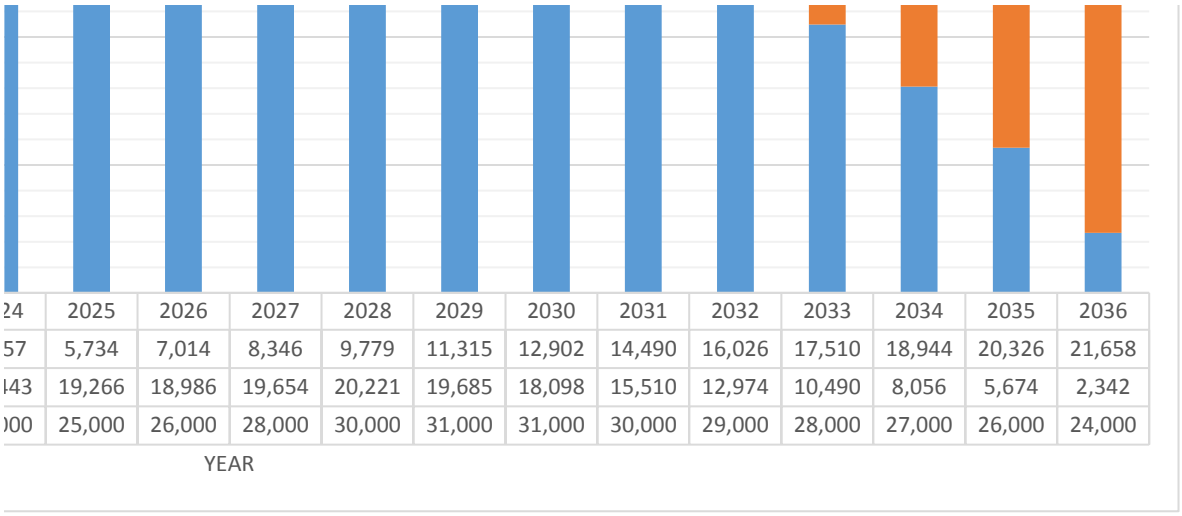
YEAR

ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL

ccumulated Total Interest Costs

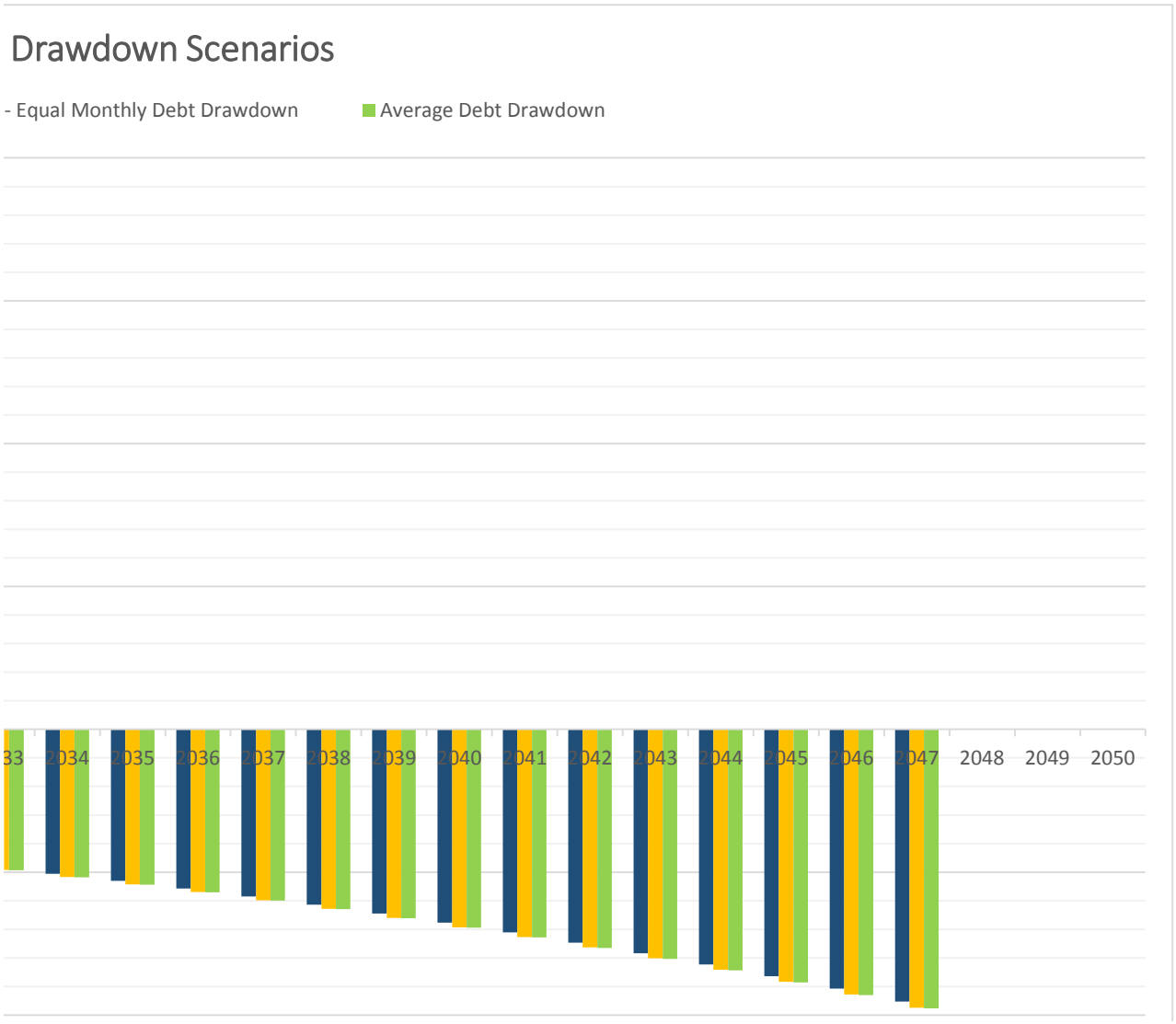
Accumulated Interest Costs — Feb4 1c, 30-yr, Accumulated Debt





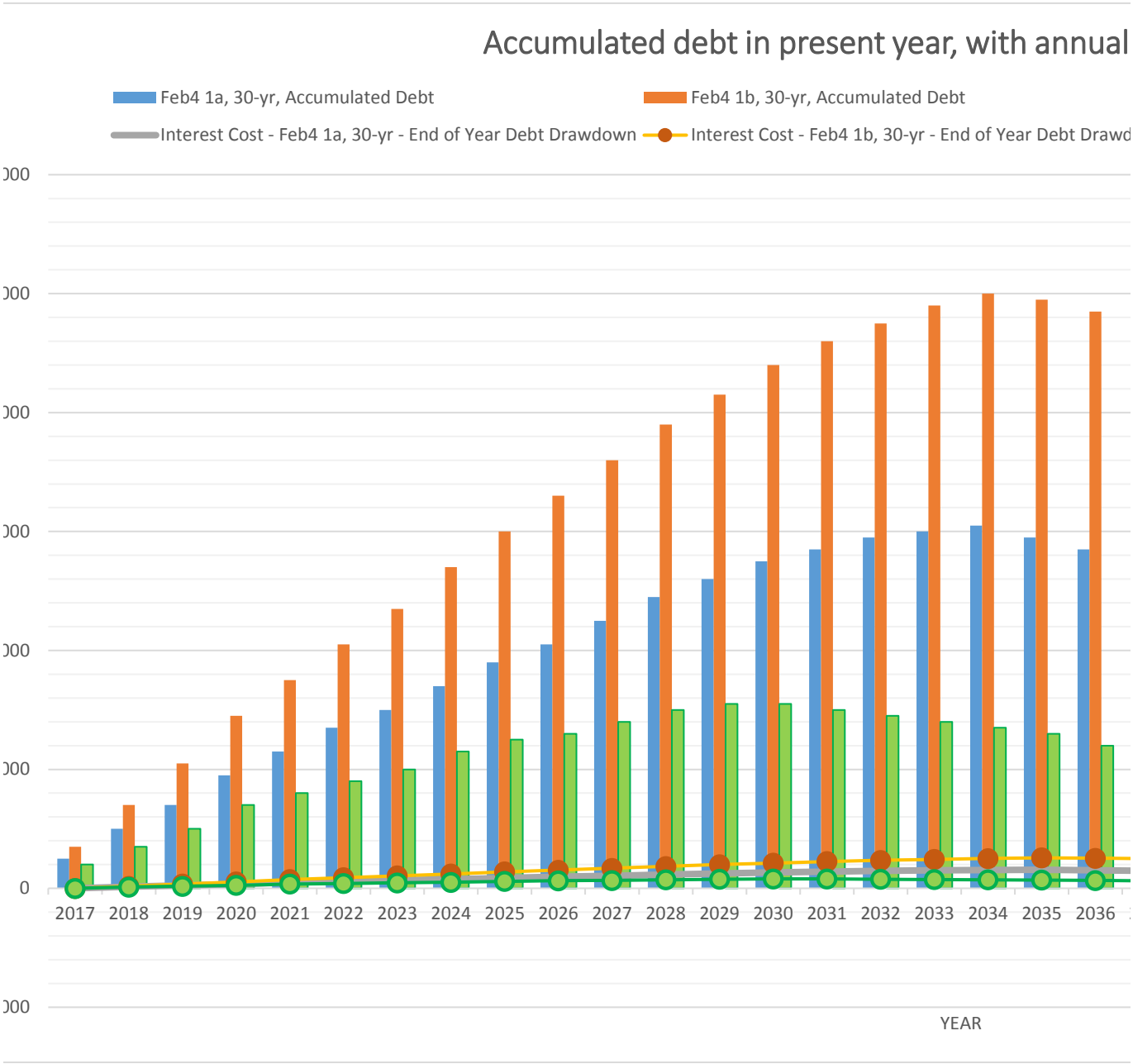
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
57	5,734	7,014	8,346	9,779	11,315	12,902	14,490	16,026	17,510	18,944	20,326	21,658
143	19,266	18,986	19,654	20,221	19,685	18,098	15,510	12,974	10,490	8,056	5,674	2,342
000	25,000	26,000	28,000	30,000	31,000	31,000	30,000	29,000	28,000	27,000	26,000	24,000

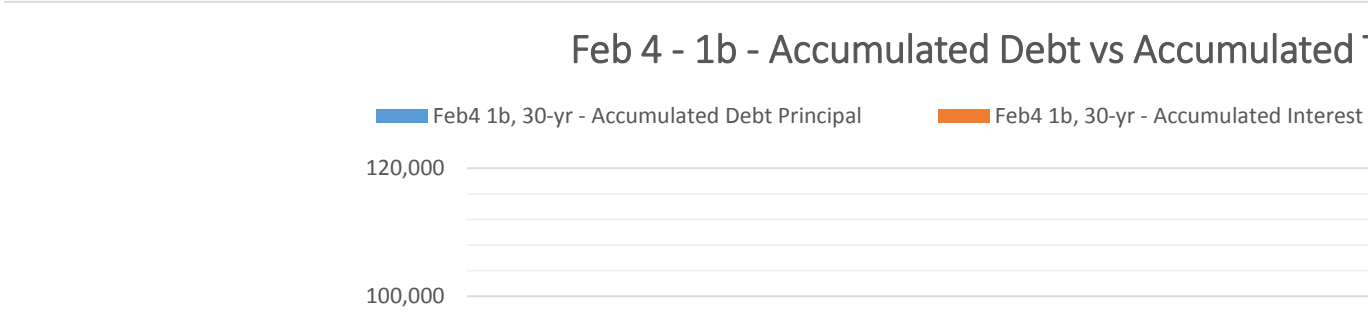
YEAR

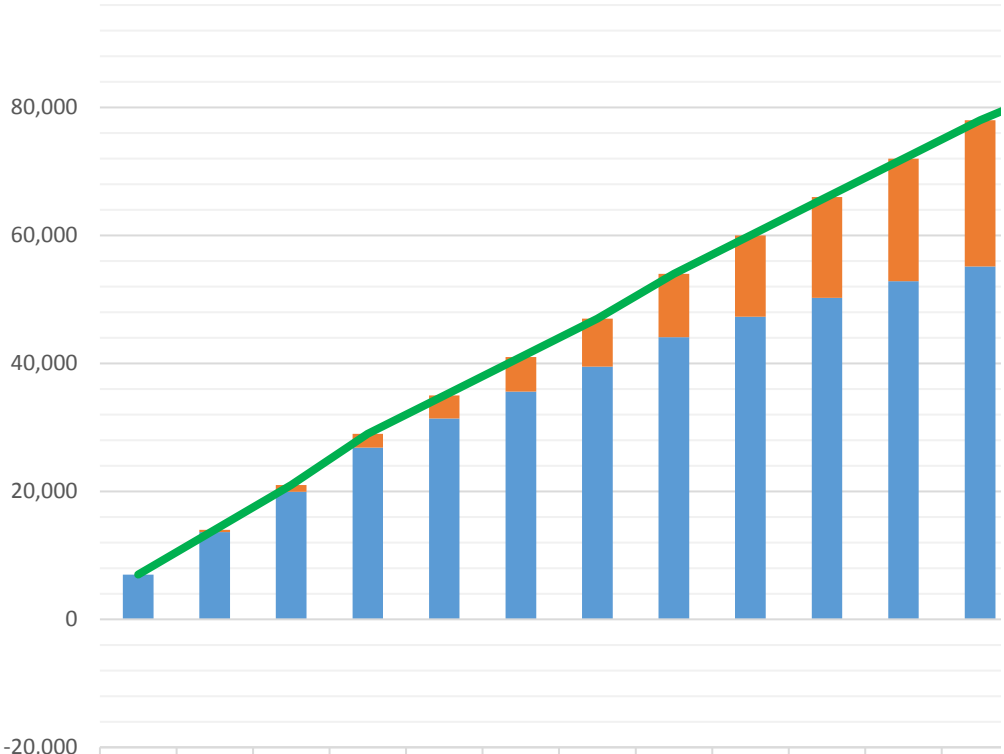


YEAR

ɜ - 25 year and 30 year Financing Terms, at 5% interest rate

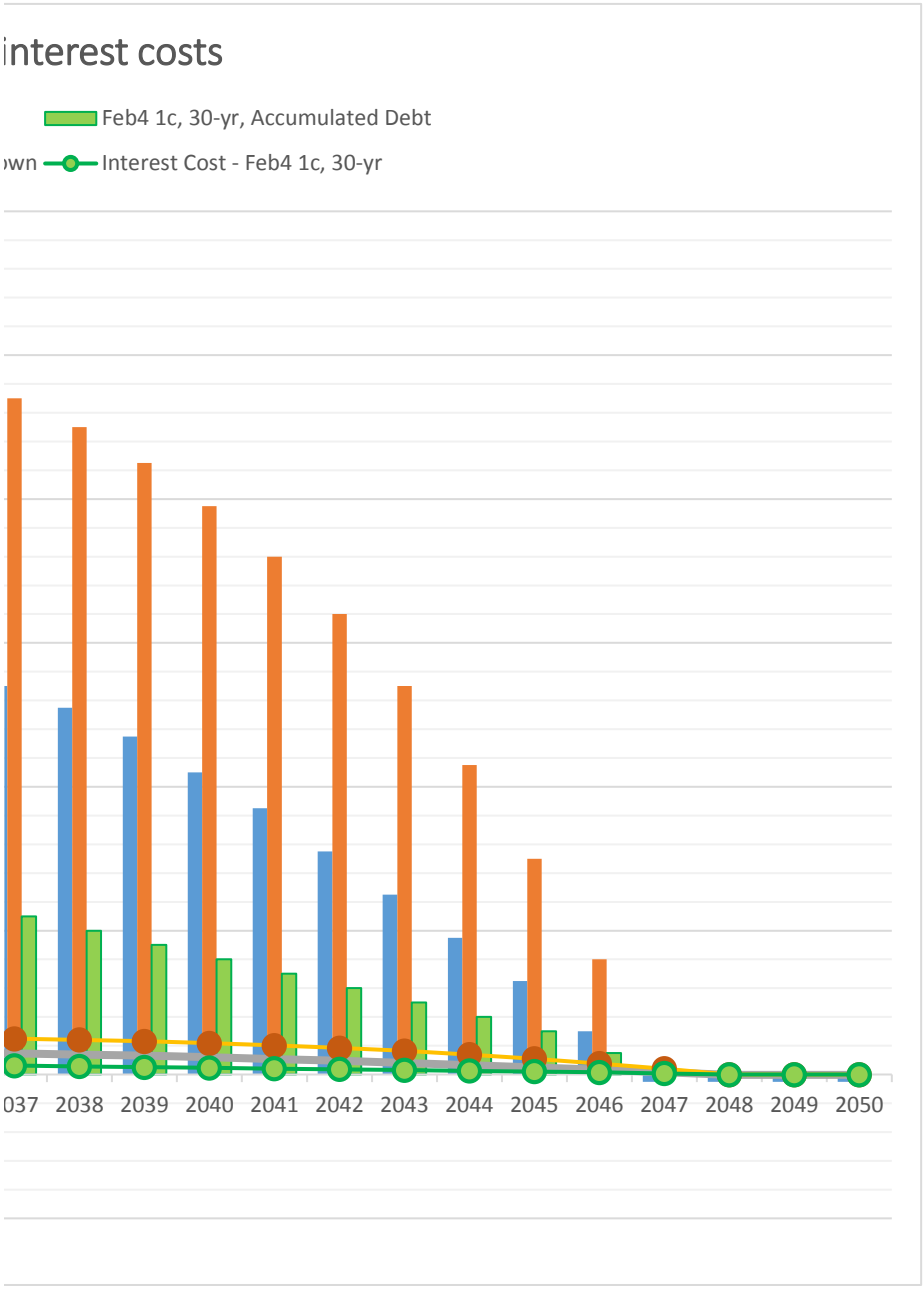


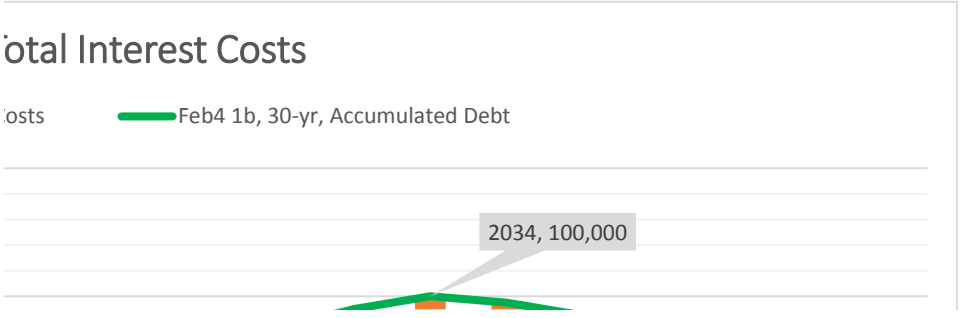


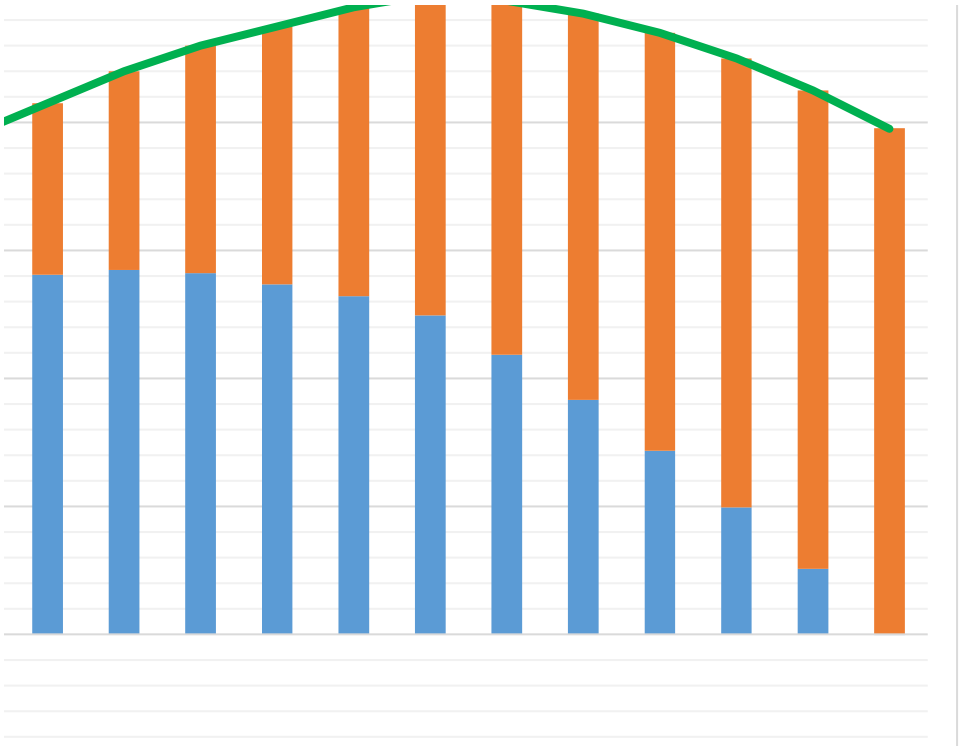


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	358	1,075	2,150	3,635	5,427	7,526	9,933	12,698	15,770	19,149	22,83
Feb4 1b, 30-yr - Accumulated Debt Principal	7,000	13,642	19,925	26,850	31,365	35,573	39,474	44,067	47,302	50,230	52,851	55,16
Feb4 1b, 30-yr, Accumulated Debt	7,000	14,000	21,000	29,000	35,000	41,000	47,000	54,000	60,000	66,000	72,000	78,00

Y


interest costs
Feb4 1c, 30-yr, Accumulated Debt
wn
Interest Cost - Feb4 1c, 30-yr
037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 100,000



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,829	31,078	35,584	40,294	45,158	50,176	55,296	60,365	65,331	70,144	74,752	79,104
56,171	56,922	56,416	54,706	52,842	49,824	43,704	36,635	28,669	19,856	10,248	-104
83,000	88,000	92,000	95,000	98,000	100,000	99,000	97,000	94,000	90,000	85,000	79,000

:AR

Equal Monthly Debt Drawdown

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

1a. GA Smoothing (Borrow $5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	5,119	5,381
Annual Exposure2 with start on July 1st	*1,702*	*5,381*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,280	5,185
Start: July 1st	-	3,047

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

1b. GA Smoothing (Borrow $7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	7,167	7,534
Annual Exposure2 with start on July 1st	*3,583*	*7,534*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,792	7,258
Start: July 1st	-	*9,050*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.

[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

1c. GA Smoothing (Borrow $4 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	2017	2018
Annual Exposure[2]	4,095	3,281
Annual Exposure2 with start on July 1st	*2,048*	*3,281*

Fiscalized[3]	2016-17	2017-18
Start: January 1st	1,024	3,892
Start: July 1st	-	*4,915*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9

	10 October	10
	11 November	11
	12 December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	1,792 - 1,280	7,258 - 5,185

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1280	5185
Debt-Finance Global Adjustment Costs, Option 1a	1792	7258

RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1280**	**5425**
Total, B	1792	7498

Proposed Program Total:	1,792 - 1,280	7,498 - 5,425

ining

1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
4,633	5,894	5,172	5,437
4,633	*5,894*	*5,172*	*5,437*

2018-19	2019-20	2020-21	2021-2022
5,194	4,948	5,713	5,238
5,194	*4,948*	*5,713*	*5,238*

king in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
7,919	9,349	7,780	8,178
7,919	*9,349*	*7,780*	*8,178*

2018-19	2019-20	2020-21	2021-2022
7,630	8,277	8,956	7,879
7,630	*8,277*	*8,956*	*7,879*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
3,449	4,649	2,840	2,985
3,449	*4,649*	*2,840*	*2,985*

2018-19	2019-20	2020-21	2021-2022
3,323	3,749	4,197	2,876
3,323	*3,749*	*4,197*	*2,876*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
7,630 - 5,194	8,277 - 4,948	8,956 - 5,713	7,879 - 5,238

/1

2018-19[1]	2019-20[1]	2020-21[1]
5194	4948	5713
7630	8277	8956

225	279	323
60	60	60
18	18	18
5497	**5305**	**6114**
7933	8634	9357

7,933 - 5,497 8,634 - 5,305 9,357 - 6,114

Feb4 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	5,000	5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000	3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000	1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000	-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	5,119	5,381	4,633	5,894	5,172	5,437	4,691	5,955	6,260	5,557	6,865	7,217	6,562	6,898	6,228	6,546	5,858	6,158	3,402	3,576	2,735	2,875	1,998	1,077	1,132	166	175	184	193	-821	-863	6,260	6,580	6,917	
			119	381	633	894	1,172	1,437	1,691	1,955	2,260	2,557	2,865	3,217	3,562	3,898	4,228	4,546	4,858	5,158	5,402	5,576	5,735	5,875	5,998	6,077	6,132	6,166	6,175	6,184	6,193	6,179	6,137	6,260	6,580	6,917	143,016

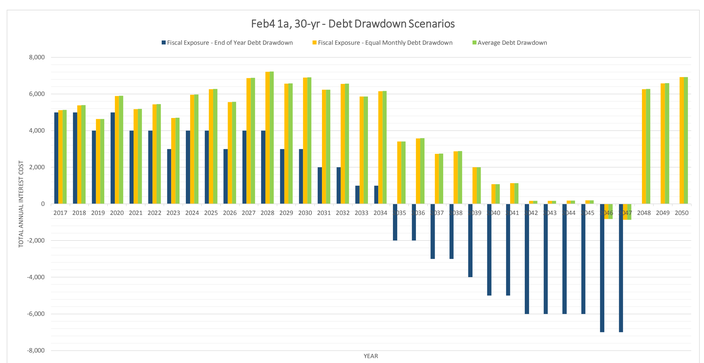
Maximum Fiscal Exposure	Maximum Annual Interest Cost	143,016
End of Year Debt Drawdown	5,000	3,123
Equal Monthly Debt Drawdown	7,217	6,917
Maximum Accumulated Debt	Feb4 1a, 30-yr, Accumulated Debt	
End of Year Debt Drawdown	61,000	
Equal Monthly Debt Drawdown	142,016	

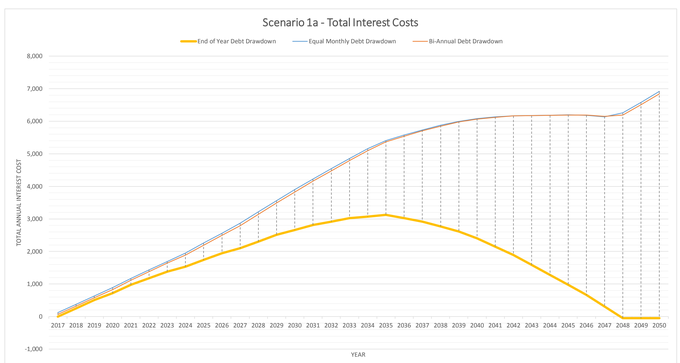
		41%	42%	35%	41%	37%	38%																													
Feb4 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow $5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	7,095	6,835	7,552	7,168	6,844	6,634	7,212	7,081	6,489	7,020	6,975	6,764	6,919	6,650	6,587	6,758	7,147	6,670	7,553	7,281	8,022	7,777	8,543	9,320	9,109	9,908	9,717	9,535	9,362	10,197	10,041	2,892	2,750	2,616	
	GA Debt Requirement	5,000	5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000	3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000	1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000	-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0	0	0	
a	Debt, Beginning of Year	0	5,000	10,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000	41,000	45,000	49,000	52,000	55,000	57,000	59,000	60,000	61,000	59,000	57,000	54,000	51,000	47,000	42,000	37,000	31,000	25,000	19,000	13,000	6,000	-1,000	-1,000	-1,000	
c = a*5%	*Interest Cost - Feb4 1a, 30-yr - End of Year Debt Drawdown*	*0*	*256*	*512*	*717*	*973*	*1,178*	*1,382*	*1,536*	*1,741*	*1,946*	*2,099*	*2,304*	*2,509*	*2,662*	*2,816*	*2,918*	*3,021*	*3,072*	*3,123*	*3,021*	*2,918*	*2,765*	*2,611*	*2,406*	*2,150*	*1,894*	*1,587*	*1,280*	*973*	*666*	*307*	*-51*	*-51*	*-51*	*-51*	57,190
b	Additional GA Debt Drawdown, End of Year	5,000	4,744	3,488	4,283	3,027	2,822	1,618	2,464	2,259	1,054	1,901	1,696	491	338	-816	-918	-2,021	-2,072	-5,123	-5,021	-5,918	-5,765	-6,611	-7,406	-7,150	-7,894	-7,587	-7,280	-6,973	-7,666	-7,307	51	51	51	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	5,000	10,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000	41,000	45,000	49,000	52,000	55,000	57,000	59,000	60,000	61,000	59,000	57,000	54,000	51,000	47,000	42,000	37,000	31,000	25,000	19,000	13,000	6,000	-1,000	-1,000	-1,000	-1,000	
	Feb4 1a, 30-yr - Accumulated Interest Costs	0	256	768	1,485	2,458	3,635	5,018	6,554	8,294	10,240	12,339	14,643	17,152	19,814	22,630	25,549	28,570	31,642	34,765	37,786	40,704	43,469	46,080	48,486	50,637	52,531	54,118	55,398	56,371	57,037	57,344				
	Feb4 1a, 30-yr - Accumulated Debt Principal	5,000	9,744	13,232	17,515	20,542	23,365	24,982	27,446	29,706	30,760	32,661	34,357	34,848	35,186	34,370	33,451	31,430	29,358	24,235	19,214	13,296	7,531	920	-6,486	-13,637	-21,531	-29,118	-36,398	-43,371	-51,037	-58,344				
Fiscal Exposure - End of Year Debt Drawdown		5,000	5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000	3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000	1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000	-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0	0	0	

Feb4 1a, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1a. GA Smoothing (Borrow $5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	7,095	6,835	7,552	7,168	6,844	6,634	7,212	7,081	6,489	7,020	6,975	6,764	6,919	6,650	6,587	6,758	7,147	6,670	7,553	7,281	8,022	7,777	8,543	9,320	9,109	9,908	9,717	9,535	9,362	10,197	10,041	2,892	2,750	2,616	
	GA Debt Requirement	5,000	5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000	3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000	1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000	-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0	0	0	
	Debt, Beginning of Year	0	5,119	10,500	15,133	21,027	26,199	31,635	36,326	42,281	48,541	54,098	60,963	68,180	74,742	81,640	87,868	94,414	100,272	106,430	109,831	113,407	116,142	119,017	121,016	122,093	123,225	123,391	123,566	123,749	123,943	123,122	122,259	128,519	135,099	
6,917	*Interest Cost - Feb4 1a, 30-yr*	*119*	*381*	*633*	*894*	*1,172*	*1,437*	*1,691*	*1,955*	*2,260*	*2,557*	*2,865*	*3,217*	*3,562*	*3,898*	*4,228*	*4,546*	*4,858*	*5,158*	*5,402*	*5,576*	*5,735*	*5,875*	*5,998*	*6,077*	*6,132*	*6,166*	*6,175*	*6,184*	*6,193*	*6,179*	*6,137*	*6,260*	*6,580*	*6,917*	143,016
	Additional GA Debt Drawdown	5,000	5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000	3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000	1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000	-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	5,119	10,500	15,133	21,027	26,199	31,635	36,326	42,281	48,541	54,098	60,963	68,180	74,742	81,640	87,868	94,414	100,272	106,430	109,831	113,407	116,142	119,017	121,016	122,093	123,225	123,391	123,566	123,749	123,943	123,122	122,259	128,519	135,099	142,016	
Fiscal Exposure - Equal Monthly Debt Drawdown		5,119	5,381	4,633	5,894	5,172	5,437	4,691	5,955	6,260	5,557	6,865	7,217	6,562	6,898	6,228	6,546	5,858	6,158	3,402	3,576	2,735	2,875	1,998	1,077	1,132	166	175	184	193	-821	-863	6,260	6,580	6,917	
	Monthly Drawdown	417	417	333	417	333	333	250	333	333	250	333	333	250	250	167	167	83	83	(167)	(167)	(250)	(250)	(333)	(417)	(417)	(500)	(500)	(500)	(500)	(583)	(583)	-	-	-	
	FV of Monthly Drawdown at 5%	5,119	5,119	4,095	5,119	4,095	4,095	3,071	4,095	4,095	3,071	4,095	4,095	3,071	3,071	2,048	2,048	1,024	1,024	(2,048)	(2,048)	(3,071)	(3,071)	(4,095)	(5,119)	(5,119)	(6,143)	(6,143)	(6,143)	(6,143)	(7,167)	(7,167)	-	-	-	
	Annual Interest Cost on New Drawdowns	119	119	95	119	95	95	71	95	95	71	95	95	71	71	48	48	24	24	(48)	(48)	(71)	(71)	(95)	(119)	(119)	(143)	(143)	(143)	(143)	(167)	(167)	-	-	-	
	Annual Interest Cost on Opening Balance	-	262	538	775	1,077	1,341	1,620	1,860	2,165	2,485	2,770	3,121	3,491	3,827	4,180	4,499	4,834	5,134	5,449	5,623	5,806	5,946	6,094	6,196	6,251	6,309	6,318	6,327	6,336	6,346	6,304	6,260	6,580	6,917	
	Total Annual Interest Cost	119	381	633	894	1,172	1,437	1,691	1,955	2,260	2,557	2,865	3,217	3,562	3,898	4,228	4,546	4,858	5,158	5,402	5,576	5,735	5,875	5,998	6,077	6,132	6,166	6,175	6,184	6,193	6,179	6,137	6,260	6,580	6,917	

Feb4 1a, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
1a. GA Smoothing (Borrow $5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	7,095	6,835	7,552	7,168	6,844	6,634	7,212	7,081	6,489	7,020	6,975	6,764	6,919	6,650	6,587	6,758	7,147	6,670	7,553	7,281	8,022	7,777	8,543	9,320	9,109	9,908	9,717	9,535	9,362	10,197	10,041	2,892	2,750	2,616	
	GA Debt Requirement	5,000	5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000	3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000	1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000	-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0	0	0	
	Debt, Beginning of Year	0	5,064	10,387	14,970	20,801	25,917	31,295	35,936	41,827	48,020	53,517	60,308	67,447	73,939	80,763	86,923	93,399	99,194	105,286	108,651	112,188	114,894	117,738	119,715	120,780	121,900	122,065	122,238	122,419	122,611	121,799	120,945	127,137	133,647	
	Interest Cost - Feb4 1a, 30-yr	*64*	*323*	*583*	*830*	*1,116*	*1,378*	*1,641*	*1,891*	*2,193*	*2,497*	*2,791*	*3,139*	*3,492*	*3,824*	*4,161*	*4,476*	*4,795*	*5,092*	*5,365*	*5,537*	*5,706*	*5,844*	*5,977*	*6,065*	*6,120*	*6,164*	*6,173*	*6,182*	*6,191*	*6,188*	*6,146*	*6,192*	*6,509*	*6,843*	141,490
	Additional GA Debt Drawdown	5,000	5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000	3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000	1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000	-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	5,064	10,387	14,970	20,801	25,917	31,295	35,936	41,827	48,020	53,517	60,308	67,447	73,939	80,763	86,923	93,399	99,194	105,286	108,651	112,188	114,894	117,738	119,715	120,780	121,900	122,065	122,238	122,419	122,611	121,799	120,945	127,137	133,647	140,490	
Fiscal Exposure - Bi-Annual Debt Drawdown		5,064	5,323	4,583	5,830	5,116	5,378	4,641	5,891	6,193	5,497	6,791	7,139	6,492	6,824	6,161	6,476	5,795	6,092	3,365	3,537	2,706	2,844	1,977	1,065	1,120	164	173	182	191	-812	-854	6,192	6,509	6,843	
	Bi-Annual Drawdown	2,500	2,500	2,000	2,500	2,000	2,000	1,500	2,000	2,000	1,500	2,000	2,000	1,500	1,500	1,000	1,000	500	500	(1,000)	(1,000)	(1,500)	(1,500)	(2,000)	(2,500)	(2,500)	(3,000)	(3,000)	(3,000)	(3,000)	(3,500)	(3,500)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	5,064	5,064	4,051	5,064	4,051	4,051	3,038	4,051	4,051	3,038	4,051	4,051	3,038	3,038	2,026	2,026	1,013	1,013	(2,026)	(2,026)	(3,038)	(3,038)	(4,051)	(5,064)	(5,064)	(6,077)	(6,077)	(6,077)	(6,077)	(7,090)	(7,090)	-	-	-	
	Annual Interest Cost on New Drawdowns	64	64	51	64	51	51	38	51	51	38	51	51	38	38	26	26	13	13	(26)	(26)	(38)	(38)	(51)	(64)	(64)	(77)	(77)	(77)	(77)	(90)	(90)	-	-	-	
	Annual Interest Cost on Opening Balance	-	259	532	766	1,065	1,327	1,602	1,840	2,142	2,459	2,740	3,088	3,453	3,786	4,135	4,450	4,782	5,079	5,391	5,563	5,744	5,883	6,028	6,129	6,184	6,241	6,250	6,259	6,268	6,278	6,236	6,192	6,509	6,843	
	Total Annual Interest Cost	64	323	583	830	1,116	1,378	1,641	1,891	2,193	2,497	2,791	3,139	3,492	3,824	4,161	4,476	4,795	5,092	5,365	5,537	5,706	5,844	5,977	6,065	6,120	6,164	6,173	6,182	6,191	6,188	6,146	6,192	6,509	6,843	

Feb4 1a, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow $5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	7,095	6,835	7,552	7,168	6,844	6,634	7,212	7,081	6,489	7,020	6,975	6,764	6,919	6,650	6,587	6,758	7,147	6,670	7,553	7,281	8,022	7,777	8,543	9,320	9,109	9,908	9,717	9,535	9,362	10,197	10,041	2,892	2,750	2,616	
	GA Debt Requirement	5,000	5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000	3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000	1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000	-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0	0	0	
	Debt, Beginning of Year	0	5,128	10,519	15,160	21,064	26,245	31,691	36,390	42,356	48,627	54,193	61,070	68,299	74,873	81,783	88,022	94,580	100,448	106,616	110,024	113,606	116,346	119,226	121,228	122,307	123,441	123,607	123,783	123,967	124,160	123,338	122,474	128,744	135,336	
	Interest Cost - Feb4 1a, 30-yr	*128*	*391*	*641*	*904*	*1,181*	*1,446*	*1,699*	*1,966*	*2,271*	*2,566*	*2,877*	*3,229*	*3,574*	*3,910*	*4,239*	*4,558*	*4,868*	*5,169*	*5,408*	*5,582*	*5,740*	*5,880*	*6,002*	*6,079*	*6,134*	*6,167*	*6,175*	*6,184*	*6,193*	*6,178*	*6,136*	*6,271*	*6,592*	*6,929*	143,265
	Additional GA Debt Drawdown	5,000	5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000	3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000	1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000	-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	5,128	10,519	15,160	21,064	26,245	31,691	36,390	42,356	48,627	54,193	61,070	68,299	74,873	81,783	88,022	94,580	100,448	106,616	110,024	113,606	116,346	119,226	121,228	122,307	123,441	123,607	123,783	123,967	124,160	123,338	122,474	128,744	135,336	142,265	
Fiscal Exposure - Average Debt Drawdown		5,128	5,391	4,641	5,904	5,181	5,446	4,699	5,966	6,271	5,566	6,877	7,229	6,574	6,910	6,239	6,558	5,868	6,169	3,408	3,582	2,740	2,880	2,002	1,079	1,134	167	175	184	193	-822	-864	6,271	6,592	6,929	





Feb4 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.1%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	7,000	7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000	6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000	2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000	-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	7,167	7,534	7,919	9,349	7,780	8,178	8,597	10,061	9,552	10,041	10,555	11,095	10,640	11,184	10,733	10,259	10,784	10,313	7,769	7,143	6,485	5,793	5,066	4,302	3,498	2,654	742	-244	-2,304	-3,446	-5,670	10,421	10,954	11,515	
			167	534	919	1,349	1,780	2,178	2,597	3,061	3,552	4,041	4,555	5,095	5,640	6,184	6,733	7,259	7,784	8,313	8,769	9,143	9,485	9,793	10,066	10,302	10,498	10,654	10,742	10,756	10,696	10,554	10,330	10,421	10,954	11,515	236,418

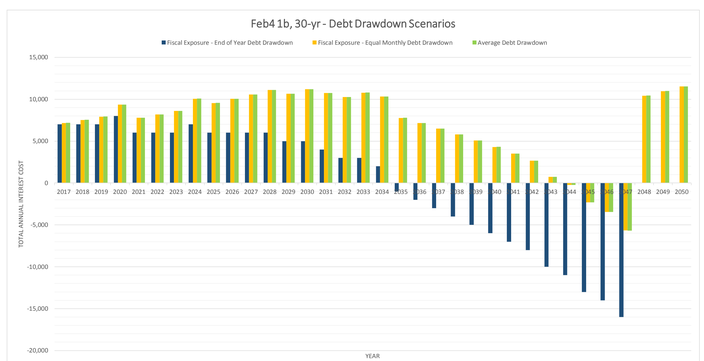
Maximum Fiscal Exposure	Maximum Annual Interest Cost	236,418
End of Year Debt Drawdown	8,000	5,120
Equal Monthly Debt Drawdown	11,515	11,515
Maximum Accumulated Debt	Feb4 1b, 30-yr, Accumulated Debt	
End of Year Debt Drawdown	100,000	
Equal Monthly Debt Drawdown	236,418	

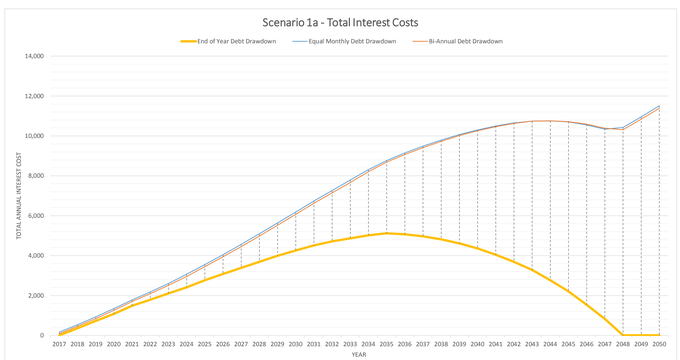
			58%	59%	61%	66%	55%	56%																														
Feb4 1b, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1b. GA Smoothing (Borrow $7 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		5,095	4,835	4,552	4,168	4,844	4,634	4,212	4,081	4,489	4,020	4,975	4,764	4,919	4,650	4,587	5,758	5,147	5,670	6,553	7,281	8,022	8,777	9,543	10,320	11,109	11,908	13,717	14,535	16,362	17,197	19,041	2,892	2,750	2,616	
	GA Debt Requirement		7,000	7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000	6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000	2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000	-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0	0	0	
a	Debt, Beginning of Year		0	7,000	14,000	21,000	29,000	35,000	41,000	47,000	54,000	60,000	66,000	72,000	78,000	83,000	88,000	92,000	95,000	98,000	100,000	99,000	97,000	94,000	90,000	85,000	79,000	72,000	64,000	54,000	43,000	30,000	16,000	0	0	0	
c = a*5%	*Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown*		*0*	*358*	*717*	*1,075*	*1,485*	*1,792*	*2,099*	*2,406*	*2,765*	*3,072*	*3,379*	*3,686*	*3,994*	*4,250*	*4,506*	*4,710*	*4,864*	*5,018*	*5,120*	*5,069*	*4,966*	*4,813*	*4,608*	*4,352*	*4,045*	*3,686*	*3,277*	*2,765*	*2,202*	*1,536*	*819*	*0*	*0*	*0*	97,434
b	Additional GA Debt Drawdown, End of Year		7,000	6,642	6,283	6,925	4,515	4,208	3,901	4,594	3,235	2,928	2,621	2,314	1,006	750	-506	-1,710	-1,864	-3,018	-6,120	-7,069	-7,966	-8,813	-9,608	-10,352	-11,045	-11,686	-13,277	-13,765	-15,202	-15,536	-16,819	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		7,000	14,000	21,000	29,000	35,000	41,000	47,000	54,000	60,000	66,000	72,000	78,000	83,000	88,000	92,000	95,000	98,000	100,000	99,000	97,000	94,000	90,000	85,000	79,000	72,000	64,000	54,000	43,000	30,000	16,000	0	0	0	0	
	Feb4 1b, 30-yr - Accumulated Interest Costs		0	358	1,075	2,150	3,635	5,427	7,526	9,933	12,698	15,770	19,149	22,835	26,829	31,078	35,584	40,294	45,158	50,176	55,296	60,365	65,331	70,144	74,752	79,104	83,149	86,835	90,112	92,877	95,078	96,614	97,434				
	Feb4 1b, 30-yr - Accumulated Debt Principal		7,000	13,642	19,925	26,850	31,365	35,573	39,474	44,067	47,302	50,230	52,851	55,165	56,171	56,922	56,416	54,706	52,842	49,824	43,704	36,635	28,669	19,856	10,248	-104	-11,149	-22,835	-36,112	-49,877	-65,078	-80,614	-97,434				
Fiscal Exposure - End of Year Debt Drawdown			7,000	7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000	6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000	2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000	-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0	0	0	

Feb4 1b, 30-yr	Equal Monthly Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			12																																		
1b. GA Smoothing (Borrow $7 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		5,095	4,835	4,552	4,168	4,844	4,634	4,212	4,081	4,489	4,020	4,975	4,764	4,919	4,650	4,587	5,758	5,147	5,670	6,553	7,281	8,022	8,777	9,543	10,320	11,109	11,908	13,717	14,535	16,362	17,197	19,041	2,892	2,750	2,616	
	GA Debt Requirement		7,000	7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000	6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000	2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000	-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0	0	0	
	Debt, Beginning of Year		0	7,167	14,700	22,619	31,968	39,748	47,925	56,522	66,583	76,135	86,175	96,730	107,826	118,466	129,650	140,383	150,642	161,427	171,739	179,509	186,652	193,137	198,930	203,997	208,298	211,797	214,450	215,192	214,948	212,644	209,198	203,528	213,949	224,903	
11,515	*Interest Cost - Feb4 1b, 30-yr*		*167*	*534*	*919*	*1,349*	*1,780*	*2,178*	*2,597*	*3,061*	*3,552*	*4,041*	*4,555*	*5,095*	*5,640*	*6,184*	*6,733*	*7,259*	*7,784*	*8,313*	*8,769*	*9,143*	*9,485*	*9,793*	*10,066*	*10,302*	*10,498*	*10,654*	*10,742*	*10,756*	*10,696*	*10,554*	*10,330*	*10,421*	*10,954*	*11,515*	236,418
	Additional GA Debt Drawdown		7,000	7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000	6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000	2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000	-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		7,167	14,700	22,619	31,968	39,748	47,925	56,522	66,583	76,135	86,175	96,730	107,826	118,466	129,650	140,383	150,642	161,427	171,739	179,509	186,652	193,137	198,930	203,997	208,298	211,797	214,450	215,192	214,948	212,644	209,198	203,528	213,949	224,903	236,418	
Fiscal Exposure - Equal Monthly Debt Drawdown			7,167	7,534	7,919	9,349	7,780	8,178	8,597	10,061	9,552	10,041	10,555	11,095	10,640	11,184	10,733	10,259	10,784	10,313	7,769	7,143	6,485	5,793	5,066	4,302	3,498	2,654	742	-244	-2,304	-3,446	-5,670	10,421	10,954	11,515	
	Monthly Drawdown		583	583	583	667	500	500	500	583	500	500	500	500	417	417	333	250	250	167	(83)	(167)	(250)	(333)	(417)	(500)	(583)	(667)	(833)	(917)	(1,083)	(1,167)	(1,333)	-	-	-	
	FV of Monthly Drawdown at 5%		7,167	7,167	7,167	8,190	6,143	6,143	6,143	7,167	6,143	6,143	6,143	6,143	5,119	5,119	4,095	3,071	3,071	2,048	(1,024)	(2,048)	(3,071)	(4,095)	(5,119)	(6,143)	(7,167)	(8,190)	(10,238)	(11,262)	(13,309)	(14,333)	(16,381)	-	-	-	
	Annual Interest Cost on New Drawdowns		167	167	167	190	143	143	143	167	143	143	143	143	119	119	95	71	71	48	(24)	(48)	(71)	(95)	(119)	(143)	(167)	(190)	(238)	(262)	(309)	(333)	(381)	-	-	-	
	Annual Interest Cost on Opening Balance		-	367	753	1,158	1,637	2,035	2,454	2,894	3,409	3,898	4,412	4,953	5,521	6,065	6,638	7,188	7,713	8,265	8,793	9,191	9,557	9,889	10,185	10,445	10,665	10,844	10,980	11,018	11,005	10,887	10,711	10,421	10,954	11,515	
	Total Annual Interest Cost		167	534	919	1,349	1,780	2,178	2,597	3,061	3,552	4,041	4,555	5,095	5,640	6,184	6,733	7,259	7,784	8,313	8,769	9,143	9,485	9,793	10,066	10,302	10,498	10,654	10,742	10,756	10,696	10,554	10,330	10,421	10,954	11,515	

Feb4 1b, 30-yr	Bi-Annual Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			2																																		
1b. GA Smoothing (Borrow $7 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		5,095	4,835	4,552	4,168	4,844	4,634	4,212	4,081	4,489	4,020	4,975	4,764	4,919	4,650	4,587	5,758	5,147	5,670	6,553	7,281	8,022	8,777	9,543	10,320	11,109	11,908	13,717	14,535	16,362	17,197	19,041	2,892	2,750	2,616	
	GA Debt Requirement		7,000	7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000	6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000	2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000	-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0	0	0	
	Debt, Beginning of Year		0	7,090	14,542	22,376	31,624	39,320	47,410	55,915	65,867	75,316	85,249	95,691	106,667	117,192	128,257	138,874	149,023	159,692	169,893	177,579	184,646	191,061	196,792	201,804	206,060	209,520	212,145	212,879	212,638	210,358	206,949	201,340	211,649	222,486	
	Interest Cost - Feb4 1b, 30-yr		*90*	*453*	*834*	*1,248*	*1,696*	*2,090*	*2,504*	*2,952*	*3,449*	*3,933*	*4,442*	*4,976*	*5,525*	*6,064*	*6,618*	*7,149*	*7,668*	*8,202*	*8,686*	*9,066*	*9,415*	*9,731*	*10,012*	*10,256*	*10,461*	*10,625*	*10,734*	*10,759*	*10,721*	*10,591*	*10,391*	*10,309*	*10,836*	*11,391*	233,877	
	Additional GA Debt Drawdown		7,000	7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000	6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000	2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000	-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		7,090	14,542	22,376	31,624	39,320	47,410	55,915	65,867	75,316	85,249	95,691	106,667	117,192	128,257	138,874	149,023	159,692	169,893	177,579	184,646	191,061	196,792	201,804	206,060	209,520	212,145	212,879	212,638	210,358	206,949	201,340	211,649	222,486	233,877	
Fiscal Exposure - Bi-Annual Debt Drawdown			7,090	7,453	7,834	9,248	7,696	8,090	8,504	9,952	9,449	9,933	10,442	10,976	10,525	11,064	10,618	10,149	10,668	10,202	7,686	7,066	6,415	5,731	5,012	4,256	3,461	2,625	734	-241	-2,279	-3,409	-5,609	10,309	10,836	11,391	
	Bi-Annual Drawdown		3,500	3,500	3,500	4,000	3,000	3,000	3,000	3,500	3,000	3,000	3,000	3,000	2,500	2,500	2,000	1,500	1,500	1,000	(500)	(1,000)	(1,500)	(2,000)	(2,500)	(3,000)	(3,500)	(4,000)	(5,000)	(5,500)	(6,500)	(7,000)	(8,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%		7,090	7,090	7,090	8,102	6,077	6,077	6,077	7,090	6,077	6,077	6,077	6,077	5,064	5,064	4,051	3,038	3,038	2,026	(1,013)	(2,026)	(3,038)	(4,051)	(5,064)	(6,077)	(7,090)	(8,102)	(10,128)	(11,141)	(13,166)	(14,179)	(16,205)	-	-	-	
	Annual Interest Cost on New Drawdowns		90	90	90	102	77	77	77	90	77	77	77	77	64	64	51	38	38	26	(13)	(26)	(38)	(51)	(64)	(77)	(90)	(102)	(128)	(141)	(166)	(179)	(205)	-	-	-	
	Annual Interest Cost on Opening Balance		-	363	745	1,146	1,619	2,013	2,427	2,863	3,372	3,856	4,365	4,899	5,461	6,000	6,567	7,110	7,630	8,176	8,699	9,092	9,454	9,782	10,076	10,332	10,550	10,727	10,862	10,899	10,887	10,770	10,596	10,309	10,836	11,391	
	Total Annual Interest Cost		90	453	834	1,248	1,696	2,090	2,504	2,952	3,449	3,933	4,442	4,976	5,525	6,064	6,618	7,149	7,668	8,202	8,686	9,066	9,415	9,731	10,012	10,256	10,461	10,625	10,734	10,759	10,721	10,591	10,391	10,309	10,836	11,391	

Feb4 1b, 30-yr	Average Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1b. GA Smoothing (Borrow $7 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		5,095	4,835	4,552	4,168	4,844	4,634	4,212	4,081	4,489	4,020	4,975	4,764	4,919	4,650	4,587	5,758	5,147	5,670	6,553	7,281	8,022	8,777	9,543	10,320	11,109	11,908	13,717	14,535	16,362	17,197	19,041	2,892	2,750	2,616	
	GA Debt Requirement		7,000	7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000	6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000	2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000	-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0	0	0	
	Debt, Beginning of Year		0	7,179	14,726	22,659	32,024	39,817	48,010	56,621	66,699	76,268	86,327	96,900	108,015	118,673	129,877	140,630	150,907	161,710	172,041	179,823	186,979	193,476	199,279	204,354	208,664	212,168	214,826	215,569	215,325	213,017	209,565	203,885	214,324	225,297	
	Interest Cost - Feb4 1b, 30-yr		*179*	*547*	*933*	*1,365*	*1,793*	*2,192*	*2,612*	*3,078*	*3,569*	*4,059*	*4,574*	*5,115*	*5,658*	*6,204*	*6,752*	*7,277*	*7,803*	*8,331*	*8,783*	*9,156*	*9,497*	*9,804*	*10,075*	*10,309*	*10,504*	*10,658*	*10,743*	*10,756*	*10,692*	*10,548*	*10,320*	*10,439*	*10,973*	*11,535*	236,833	
	Additional GA Debt Drawdown		7,000	7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000	6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000	2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000	-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		7,179	14,726	22,659	32,024	39,817	48,010	56,621	66,699	76,268	86,327	96,900	108,015	118,673	129,877	140,630	150,907	161,710	172,041	179,823	186,979	193,476	199,279	204,354	208,664	212,168	214,826	215,569	215,325	213,017	209,565	203,885	214,324	225,297	236,833	
Fiscal Exposure - Average Debt Drawdown			7,179	7,547	7,933	9,365	7,793	8,192	8,612	10,078	9,569	10,059	10,574	11,115	10,658	11,204	10,752	10,277	10,803	10,331	7,783	7,156	6,497	5,804	5,075	4,309	3,504	2,658	743	-244	-2,308	-3,452	-5,680	10,439	10,973	11,535	





Feb4 1c, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.1%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,000	3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000	1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000	-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,095	3,281	3,449	4,649	2,840	2,985	3,138	4,323	3,520	2,677	3,837	4,034	3,217	2,358	1,454	1,529	1,607	1,689	1,776	843	886	932	979	1,029	1,082	1,138	1,196	1,257	1,321	365	384	3,475	3,653	3,840	
			95	281	449	649	840	985	1,138	1,323	1,520	1,677	1,837	2,034	2,217	2,358	2,454	2,529	2,607	2,689	2,776	2,843	2,886	2,932	2,979	3,029	3,082	3,138	3,196	3,257	3,321	3,365	3,384	3,475	3,653	3,840	78,841

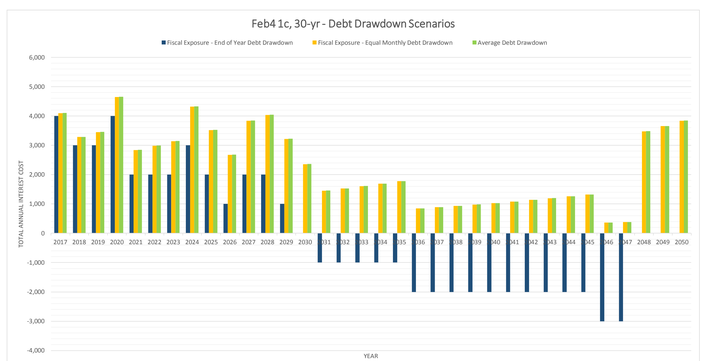
Maximum Fiscal Exposure	Maximum Annual Interest Cost	78,841
End of Year Debt Drawdown	4,000	1,587
Equal Monthly Debt Drawdown	4,649	3,840
Maximum Accumulated Debt	Feb4 1c, 30-yr, Accumulated Debt	
End of Year Debt Drawdown	31,000	
Equal Monthly Debt Drawdown	78,841	

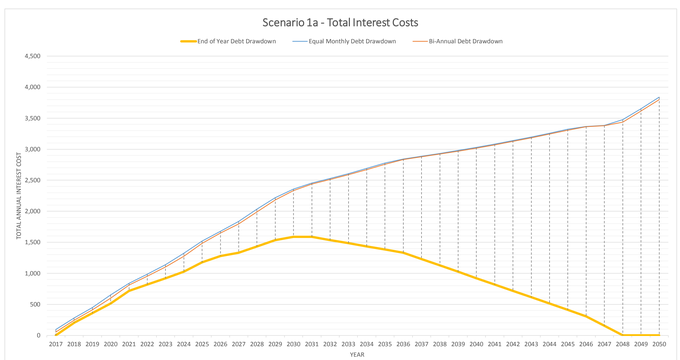
		33%	25%	26%	33%	18%	19%																														
Feb4 1c, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow $4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,095	8,835	8,552	8,168	8,844	8,634	8,212	8,081	8,489	9,020	8,975	8,764	8,919	9,650	9,587	9,758	9,147	8,670	6,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	6,197	6,041	2,892	2,750	2,616	
	GA Debt Requirement	4,000	3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000	1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000	-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0	0	0	
a	Debt, Beginning of Year	0	4,000	7,000	10,000	14,000	16,000	18,000	20,000	23,000	25,000	26,000	28,000	30,000	31,000	31,000	30,000	29,000	28,000	27,000	26,000	24,000	22,000	20,000	18,000	16,000	14,000	12,000	10,000	8,000	6,000	3,000	0	0	0	
c = a*5%	*Interest Cost - Feb4 1c, 30-yr - End of Year Debt Drawdown*	*0*	*205*	*358*	*512*	*717*	*819*	*922*	*1,024*	*1,178*	*1,280*	*1,331*	*1,434*	*1,536*	*1,587*	*1,587*	*1,536*	*1,485*	*1,434*	*1,382*	*1,331*	*1,229*	*1,126*	*1,024*	*922*	*819*	*717*	*614*	*512*	*410*	*307*	*154*	*0*	*0*	*0*	*0*	29,491
b	Additional GA Debt Drawdown, End of Year	4,000	2,795	2,642	3,488	1,283	1,181	1,078	1,976	822	-280	669	566	-536	-1,587	-2,587	-2,536	-2,485	-2,434	-2,382	-3,331	-3,229	-3,126	-3,024	-2,922	-2,819	-2,717	-2,614	-2,512	-2,410	-3,307	-3,154	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	4,000	7,000	10,000	14,000	16,000	18,000	20,000	23,000	25,000	26,000	28,000	30,000	31,000	31,000	30,000	29,000	28,000	27,000	26,000	24,000	22,000	20,000	18,000	16,000	14,000	12,000	10,000	8,000	6,000	3,000	0	0	0	0	
	Feb4 1c, 30-yr - Accumulated Interest Costs	0	205	563	1,075	1,792	2,611	3,533	4,557	5,734	7,014	8,346	9,779	11,315	12,902	14,490	16,026	17,510	18,944	20,326	21,658	22,886	24,013	25,037	25,958	26,778	27,494	28,109	28,621	29,030	29,338	29,491				
	Feb4 1c, 30-yr - Accumulated Debt Principal	4,000	6,795	9,437	12,925	14,208	15,389	16,467	18,443	19,266	18,986	19,654	20,221	19,685	18,098	15,510	12,974	10,490	8,056	5,674	2,342	-886	-4,013	-7,037	-9,958	-12,778	-15,494	-18,109	-20,621	-23,030	-26,338	-29,491				
Fiscal Exposure - End of Year Debt Drawdown		4,000	3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000	1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000	-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0	0	0	

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Feb4 1c, 30-yr	Equal Monthly Debt Drawdown		**12**																																	
1c. GA Smoothing (Borrow $4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,095	8,835	8,552	8,168	8,844	8,634	8,212	8,081	8,489	9,020	8,975	8,764	8,919	9,650	9,587	9,758	9,147	8,670	6,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	6,197	6,041	2,892	2,750	2,616	
	GA Debt Requirement	4,000	3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000	1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000	-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0	0	0	
	Debt, Beginning of Year	0	4,095	7,376	10,825	15,475	18,315	21,300	24,438	28,761	32,281	34,958	38,795	42,829	46,046	48,403	49,858	51,387	52,994	54,683	56,459	57,302	58,189	59,120	60,100	61,129	62,211	63,349	64,545	65,802	67,123	67,489	67,873	71,348	75,001	
3,840	*Interest Cost - Feb4 1c, 30-yr*	*95*	*281*	*449*	*649*	*840*	*985*	*1,138*	*1,323*	*1,520*	*1,677*	*1,837*	*2,034*	*2,217*	*2,358*	*2,454*	*2,529*	*2,607*	*2,689*	*2,776*	*2,843*	*2,886*	*2,932*	*2,979*	*3,029*	*3,082*	*3,138*	*3,196*	*3,257*	*3,321*	*3,365*	*3,384*	*3,475*	*3,653*	*3,840*	78,841
	Additional GA Debt Drawdown	4,000	3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000	1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000	-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,095	7,376	10,825	15,475	18,315	21,300	24,438	28,761	32,281	34,958	38,795	42,829	46,046	48,403	49,858	51,387	52,994	54,683	56,459	57,302	58,189	59,120	60,100	61,129	62,211	63,349	64,545	65,802	67,123	67,489	67,873	71,348	75,001	78,841	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,095	3,281	3,449	4,649	2,840	2,985	3,138	4,323	3,520	2,677	3,837	4,034	3,217	2,358	1,454	1,529	1,607	1,689	1,776	843	886	932	979	1,029	1,082	1,138	1,196	1,257	1,321	365	384	3,475	3,653	3,840	
	Monthly Drawdown	333	250	250	333	167	167	167	250	167	83	167	167	83	-	(83)	(83)	(83)	(83)	(83)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(250)	(250)	-	-	-	
	FV of Monthly Drawdown at 5%	4,095	3,071	3,071	4,095	2,048	2,048	2,048	3,071	2,048	1,024	2,048	2,048	1,024	-	(1,024)	(1,024)	(1,024)	(1,024)	(1,024)	(2,048)	(2,048)	(2,048)	(2,048)	(2,048)	(2,048)	(2,048)	(2,048)	(2,048)	(2,048)	(3,071)	(3,071)	-	-	-	
	Annual Interest Cost on New Drawdowns	95	71	71	95	48	48	48	71	48	24	48	48	24	-	(24)	(24)	(24)	(24)	(24)	(48)	(48)	(48)	(48)	(48)	(48)	(48)	(48)	(48)	(48)	(71)	(71)	-	-	-	
	Annual Interest Cost on Opening Balance	-	210	378	554	792	938	1,091	1,251	1,473	1,653	1,790	1,986	2,193	2,358	2,478	2,553	2,631	2,713	2,800	2,891	2,934	2,979	3,027	3,077	3,130	3,185	3,243	3,305	3,369	3,437	3,455	3,475	3,653	3,840	
	Total Annual Interest Cost	95	281	449	649	840	985	1,138	1,323	1,520	1,677	1,837	2,034	2,217	2,358	2,454	2,529	2,607	2,689	2,776	2,843	2,886	2,932	2,979	3,029	3,082	3,138	3,196	3,257	3,321	3,365	3,384	3,475	3,653	3,840	

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Feb4 1c, 30-yr	Bi-Annual Debt Drawdown		**2**																																	
1c. GA Smoothing (Borrow $4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,095	8,835	8,552	8,168	8,844	8,634	8,212	8,081	8,489	9,020	8,975	8,764	8,919	9,650	9,587	9,758	9,147	8,670	6,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	6,197	6,041	2,892	2,750	2,616	
	GA Debt Requirement	4,000	3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000	1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000	-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0	0	0	
	Debt, Beginning of Year	0	4,051	7,297	10,709	15,309	18,118	21,071	24,176	28,452	31,934	34,582	38,378	42,369	45,551	47,883	49,322	50,834	52,424	54,096	55,852	56,686	57,563	58,485	59,454	60,472	61,543	62,668	63,851	65,095	66,402	66,763	67,143	70,581	74,195	
	Interest Cost - Feb4 1c, 30-yr	*51*	*246*	*412*	*600*	*809*	*953*	*1,104*	*1,276*	*1,482*	*1,648*	*1,796*	*1,991*	*2,182*	*2,332*	*2,439*	*2,512*	*2,590*	*2,671*	*2,757*	*2,834*	*2,877*	*2,922*	*2,969*	*3,018*	*3,071*	*3,125*	*3,183*	*3,244*	*3,307*	*3,361*	*3,380*	*3,438*	*3,614*	*3,799*	77,993
	Additional GA Debt Drawdown	4,000	3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000	1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000	-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,051	7,297	10,709	15,309	18,118	21,071	24,176	28,452	31,934	34,582	38,378	42,369	45,551	47,883	49,322	50,834	52,424	54,096	55,852	56,686	57,563	58,485	59,454	60,472	61,543	62,668	63,851	65,095	66,402	66,763	67,143	70,581	74,195	77,993	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,051	3,246	3,412	4,600	2,809	2,953	3,104	4,276	3,482	2,648	3,796	3,991	3,182	2,332	1,439	1,512	1,590	1,671	1,757	834	877	922	969	1,018	1,071	1,125	1,183	1,244	1,307	361	380	3,438	3,614	3,799	
	Bi-Annual Drawdown	2,000	1,500	1,500	2,000	1,000	1,000	1,000	1,500	1,000	500	1,000	1,000	500	-	(500)	(500)	(500)	(500)	(500)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,500)	(1,500)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,051	3,038	3,038	4,051	2,026	2,026	2,026	3,038	2,026	1,013	2,026	2,026	1,013	-	(1,013)	(1,013)	(1,013)	(1,013)	(1,013)	(2,026)	(2,026)	(2,026)	(2,026)	(2,026)	(2,026)	(2,026)	(2,026)	(2,026)	(2,026)	(3,038)	(3,038)	-	-	-	
	Annual Interest Cost on New Drawdowns	51	38	38	51	26	26	26	38	26	13	26	26	13	-	(13)	(13)	(13)	(13)	(13)	(26)	(26)	(26)	(26)	(26)	(26)	(26)	(26)	(26)	(26)	(38)	(38)	-	-	-	
	Annual Interest Cost on Opening Balance	-	207	374	548	784	928	1,079	1,238	1,457	1,635	1,771	1,965	2,169	2,332	2,452	2,525	2,603	2,684	2,770	2,860	2,902	2,947	2,994	3,044	3,096	3,151	3,209	3,269	3,333	3,400	3,418	3,438	3,614	3,799	
	Total Annual Interest Cost	51	246	412	600	809	953	1,104	1,276	1,482	1,648	1,796	1,991	2,182	2,332	2,439	2,512	2,590	2,671	2,757	2,834	2,877	2,922	2,969	3,018	3,071	3,125	3,183	3,244	3,307	3,361	3,380	3,438	3,614	3,799	

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Feb4 1c, 30-yr	Average Debt Drawdown																																			
1c. GA Smoothing (Borrow $4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,095	8,835	8,552	8,168	8,844	8,634	8,212	8,081	8,489	9,020	8,975	8,764	8,919	9,650	9,587	9,758	9,147	8,670	6,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	6,197	6,041	2,892	2,750	2,616	
	GA Debt Requirement	4,000	3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000	1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000	-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0	0	0	
	Debt, Beginning of Year	0	4,102	7,389	10,844	15,502	18,347	21,337	24,481	28,811	32,338	35,019	38,863	42,904	46,126	48,488	49,945	51,477	53,087	54,779	56,558	57,403	58,291	59,224	60,205	61,236	62,320	63,460	64,658	65,917	67,241	67,607	67,992	71,473	75,132	
	Interest Cost - Feb4 1c, 30-yr	*102*	*287*	*455*	*658*	*845*	*991*	*1,144*	*1,330*	*1,526*	*1,681*	*1,844*	*2,041*	*2,222*	*2,362*	*2,457*	*2,532*	*2,610*	*2,692*	*2,779*	*2,845*	*2,888*	*2,933*	*2,981*	*3,031*	*3,084*	*3,140*	*3,198*	*3,259*	*3,324*	*3,366*	*3,385*	*3,481*	*3,659*	*3,847*	78,979
	Additional GA Debt Drawdown	4,000	3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000	1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000	-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,102	7,389	10,844	15,502	18,347	21,337	24,481	28,811	32,338	35,019	38,863	42,904	46,126	48,488	49,945	51,477	53,087	54,779	56,558	57,403	58,291	59,224	60,205	61,236	62,320	63,460	64,658	65,917	67,241	67,607	67,992	71,473	75,132	78,979	
Fiscal Exposure - Average Debt Drawdown		4,102	3,287	3,455	4,658	2,845	2,991	3,144	4,330	3,526	2,681	3,844	4,041	3,222	2,362	1,457	1,532	1,610	1,692	1,779	845	888	933	981	1,031	1,084	1,140	1,198	1,259	1,324	366	385	3,481	3,659	3,847	





1a. GA Smoothing (Borrow $5 billion in 2017)

	2017
IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	7,095
Additional GA Debt Drawdown, End of Year	5,000

Ratepayer GA Payment

Total Accumulated Debt *($ billion)*	9,000
Total Change in Accumulated Debt *($ billion)*	5000

1b. GA Smoothing (Borrow $7 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	5,095
Additional GA Debt Drawdown, End of Year	7,000

Total Accumulated Debt *($ billion)*	7000
Total Change in Accumulated Debt *($ billion)*	7000

1c. GA Smoothing (Borrow $4 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	8,095
Additional GA Debt Drawdown, End of Year	4,000

Total Accumulated Debt *($ billion)*	4000
Total Change in Accumulated Debt *($ billion)*	4000

2018	2019	2020	2021	2022	2023	2024	2025
11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489
6,835	7,552	7,168	6,844	6,634	7,212	7,081	6,489
5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000

14,000	19,000	23,000	27,000	30,000	34,000	38,000	41,000
5000	4000	5000	4000	4000	3000	4000	4000

11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489
4,835	4,552	4,168	4,844	4,634	4,212	4,081	4,489
7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000

14000	21000	28000	35000	41000	47000	53000	59000
7000	7000	8000	6000	6000	6000	7000	6000

11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489
8,835	8,552	8,168	8,844	8,634	8,212	8,081	8,489
3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000

7000	10000	14000	16000	19000	20000	23000	25000
3000	3000	4000	2000	2000	2000	3000	2000

2026	2027	2028	2029	2030	2031	2032	2033
10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147
7,020	6,975	6,764	6,919	6,650	6,587	6,758	7,147
3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000

46,000	50,000	53,000	56,000	58,000	60,000	61,000	62,000
3000	4000	4000	3000	3000	2000	2000	1000

10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147
4,020	4,975	4,764	4,919	4,650	4,587	5,758	5,147
6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000

65000	71000	77000	83000	88000	91000	95000	97000
6000	6000	6000	5000	5000	4000	3000	3000

10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147
9,020	8,975	8,764	8,919	9,650	9,587	9,758	9,147
1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000

26000	28000	30000	31000	31000	30000	29000	28000
1000	2000	2000	1000	0	-1000	-1000	-1000

2034	2035	2036	2037	2038	2039	2040	2041
7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109
6,670	7,553	7,281	8,022	7,777	8,543	9,320	9,109
1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000

60,000	58,000	55,000	52,000	48,000	43,000	38,000	33,000
1000	-2000	-2000	-3000	-3000	-4000	-5000	-5000

7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109
5,670	6,553	7,281	8,022	8,777	9,543	10,320	11,109
2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000

99000	98000	96000	94000	90000	85000	80000	73000
2000	-1000	-2000	-3000	-4000	-5000	-6000	-7000

7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109
8,670	6,553	7,281	7,022	6,777	6,543	6,320	6,109
-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000

27000	25000	23000	22000	20000	18000	16000	14000
-1000	-1000	-2000	-2000	-2000	-2000	-2000	-2000

2042	2043	2044	2045	2046	2047	2048
3,908	3,717	3,535	3,362	3,197	3,041	2,892
9,908	9,717	9,535	9,362	10,197	10,041	2,892
-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0

27,000	20,000	14,000	7,000	-	-	0
-6000	-6000	-6000	-6000	-7000	-7000	0

3,908	3,717	3,535	3,362	3,197	3,041	2,892
11,908	13,717	14,535	16,362	17,197	19,041	2,892
-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0

64000	55000	44000	31000	16000	0	0
-8000	-10000	-11000	-13000	-14000	-16000	0

3,908	3,717	3,535	3,362	3,197	3,041	2,892
5,908	5,717	5,535	5,362	6,197	6,041	2,892
-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0

12000	10000	8000	5000	3000	0	0
-2000	-2000	-2000	-2000	-3000	-3000	0

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

TO BE

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,556	3,123	1,728	1,400	836	1,560	821	167

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

E UPDATED

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

JK: Fixed the formula in the yellow highlighted cells. Pls. check. (SK: looks good to me)

	Tab
v16	Powerpoint_Export

Change Description

Added in trigger for later start in the year

Equal Monthly Debt Drawdown

		Month	Months Remai
Scenario Start Date	**July**	7	6

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	3,180	2,888
Annual Exposure2 with start on July 1st	*1,590*	*2,888*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	795	3,107
Start: July 1st	-	*2,312*

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	851	3,335
Start: July 1st	-	*2,484*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	1,168	1,765
Annual Exposure2 with start on July 1st	*584*	*1,765*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	292	1,609
Start: July 1st	-	*1,025*

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,449	2,040
Annual Exposure2 with start on July 1st	*725*	*2,040*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,597
Start: July 1st	-	*1,959*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335
Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3575**
Total, B	362	1837
Proposed Program Total:	362 - 851	1,837 - 3,575

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,556	3,123	1,728	1,400
2,556	*3,123*	*1,728*	*1,400*

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646
2,805	*2,697*	*2,774*	*1,646*

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

ıking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
2,311	3,750	2,311	1,933
2,311	*3,750*	*2,311*	*1,933*

2018-19	2019-20	2020-21	2021-2022

1,901	2,671	3,391	2,217
1,901	*2,671*	*3,391*	*2,217*

2019	2020	2021	2022
2,581	4,016	2,598	2,241
2,581	*4,016*	*2,598*	*2,241*

2018-19	2019-20	2020-21	2021-2022
2,175	2,940	3,662	2,508
2,175	*2,940*	*3,662*	*2,508*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

/1

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052
2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

Equal Monthly Debt Drawdown

		Month	Months Remaining
Scenario Start Date	July	7	6

AS LONG AS >

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	3,180	2,888	2,556

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	795	3,107	2,805
Fiscal Exposure, 25%	199	777	701

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Annual Exposure[2]	3,404	3,128	2,812

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	851	3,335	3,049
Fiscal Exposure, 25%	213	834	762

Indicates year in which, similar to OPCD's exa
closest to 30%. As Fiscal 2016/17 is a partial y
month the GA deferral begins.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu
decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions	9%	14%	18%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	1,168	1,765	2,311

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	292	1,609	1,901
Fiscal Exposure, 25%	73	402	475

Scenario 1b - 30-yr amortization	2017	2018	2019
Annual Exposure[2]	1,449	2,040	2,581

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	362	1,597	2,175
Fiscal Exposure, 25%	91	399	544

Indicates year in which, similar to OPCD's exar closest to 30%.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 ar
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu on accounting treatment.

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]
Debt-Finance Global Adjustment Costs, Option 1a	213	834	762
Debt-Finance Global Adjustment Costs, Option 1b	91	399	544
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**213**	**1074**	**1065**
Total, B	91	639	847

Proposed Program Total:	91 - 213	639 - 1,074	847 - 1,065

($M)	2016-171	2017-181	2018-191
Debt-Finance Global Adjustment Costs, Option 1a	851	3335	3049
Debt-Finance Global Adjustment Costs, Option 1b	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**851**	**3575**	**3352**
Total, B	362	1837	2478

Proposed Program Total:	362 - 851	1,837 - 3,575	2,478 - 3,352

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6

7	July	7	
8	August	8	
9	September	9	
10	October	10	
11	November	11	
12	December	12	

30-year term	**2016-17**	**2017-18**	**2018-19**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335	2,175 - 3,049

ROWS HIDDEN

1	1 = Comparision Enabled

APRIL 1, 2017 25%

2020	2021	2022
3,123	1,728	1,400

2019-20	2020-21	2021-2022
2,697	2,774	1,646
674	693	412

2020	2021	2022
3,396	2,020	1,712

2019-20	2020-21	2021-2022
2,958	3,052	1,943
740	763	486

mple, the true cost of GA being deferred is
ear, exposure may be less subject to which

l $17-21 billion (at 3.5% interest rate), peaking in 2028.
$33-$36 million.

ıals per month based on month of the year. Actuals may also depend on

28%	17%	13%
2020	2021	2022
3,750	2,311	1,933

2019-20	2020-21	2021-2022
2,671	3,391	2,217
668	848	554

2020	2021	2022
4,016	2,598	2,241

2019-20	2020-21	2021-2022
2,940	3,662	2,508
735	915	627

mple, the true cost of GA being deferred is

ıd $17-21 billion (at 3.5% interest rate), peaking in 2028.
$118-$134 million.

ıals per month based on month of the year. Actuals may also depend on decision

2019-20[1]	2020-21[1]
740	763
735	915
279	323
60	60
18	18
1097	**1164**
1092	1316

1,092 - 1,097 1,316 - 1,164

2019-201	2020-211
2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453





2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964
Equal Monthly Debt Drawdown	3,180	952

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

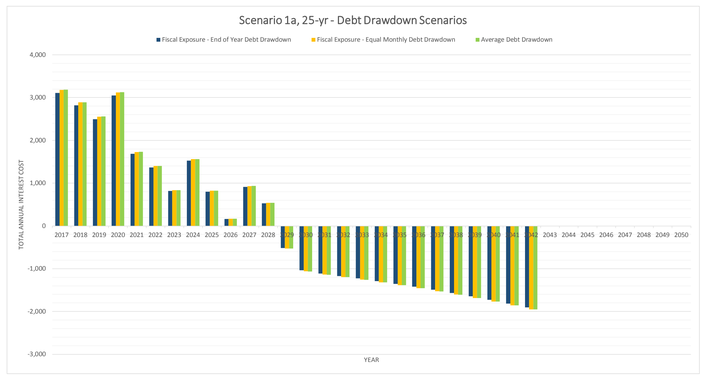
		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

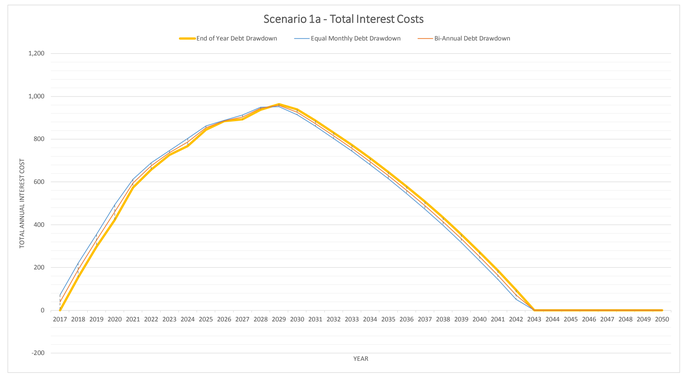
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	3,665	968	
Equal Monthly Debt Drawdown	3,750	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

		9%	14%	18%	28%	17%	13%																													
Scenario 1b, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

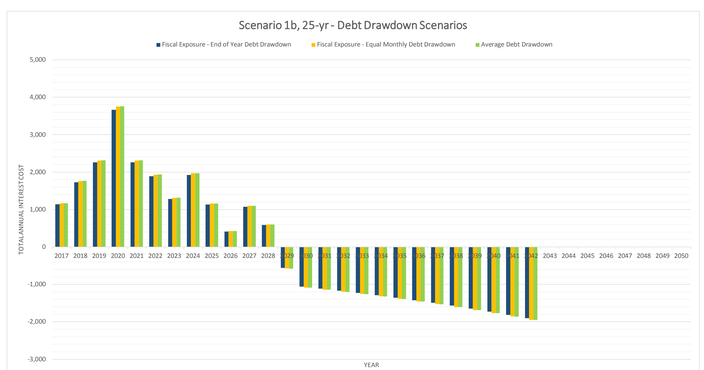
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	*954*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

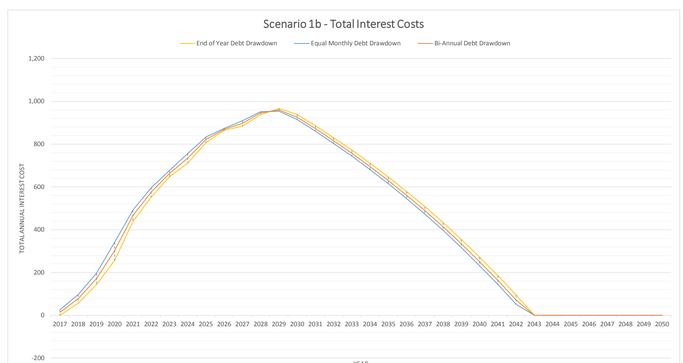
	Monthly Drawdown	95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

		28%	24%	21%	24%	12%	9%																													
Scenario 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1a, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	*1,156*	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

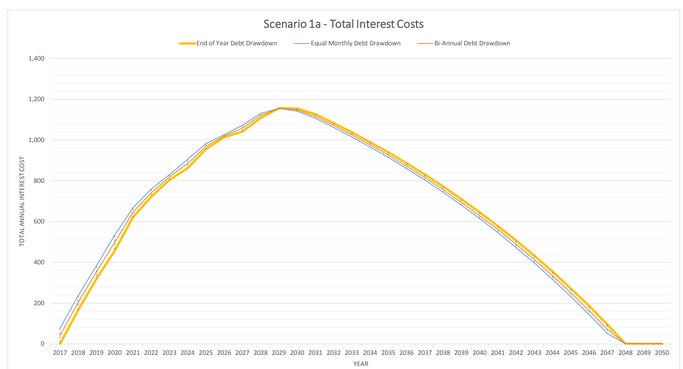
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

		12%	16%	20%	30%	19%	15%																													
Scenario 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

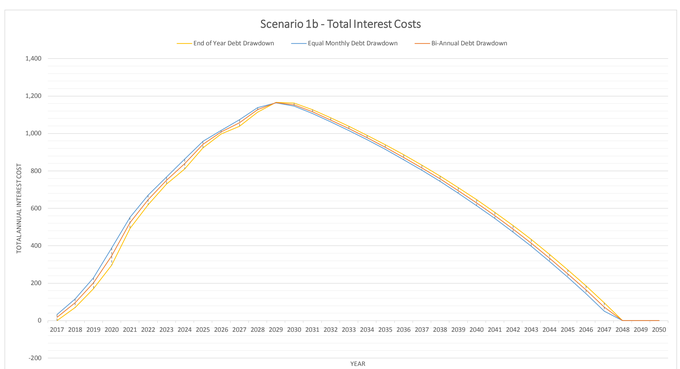
	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

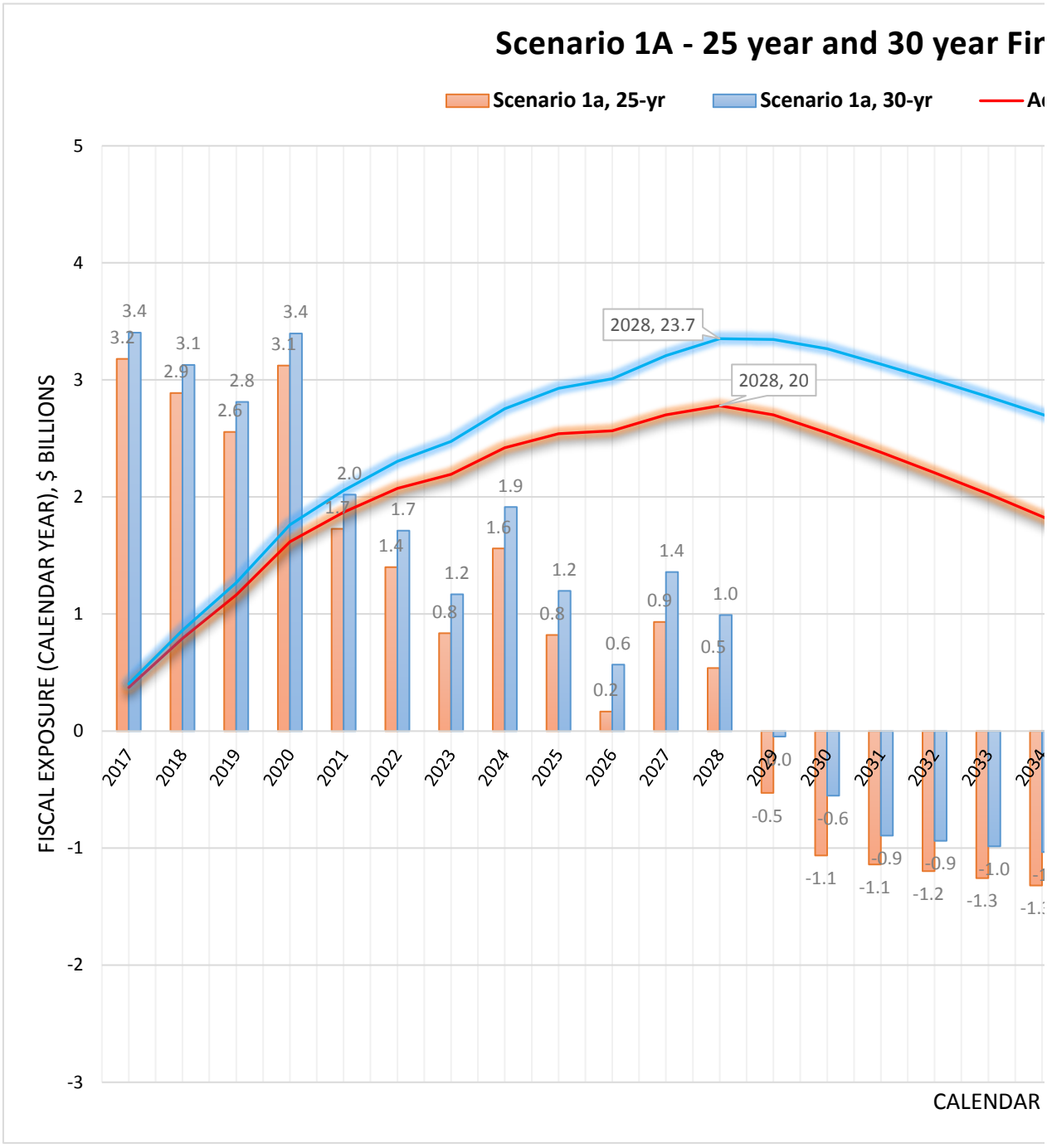
	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

Scenario 1b, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

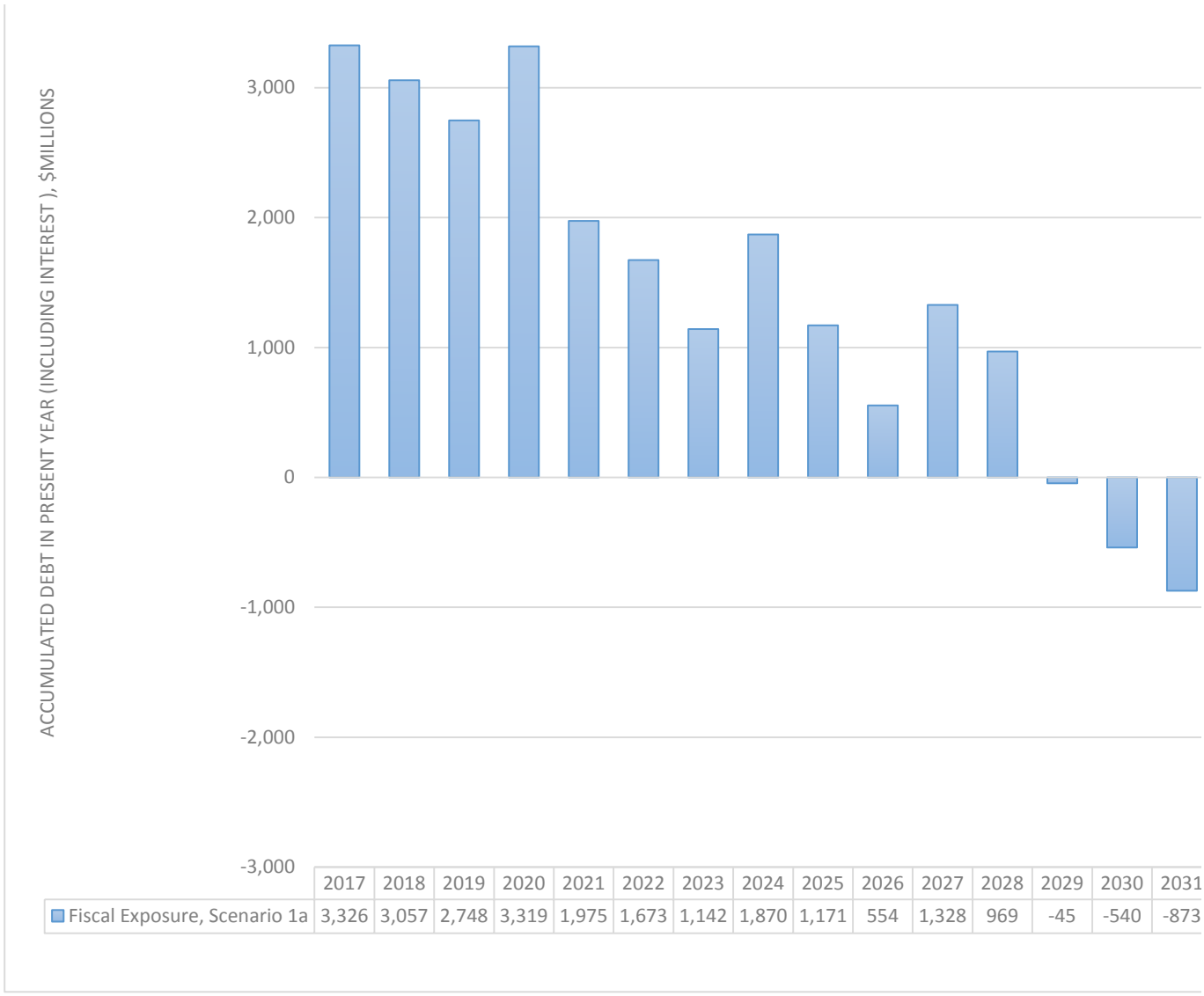




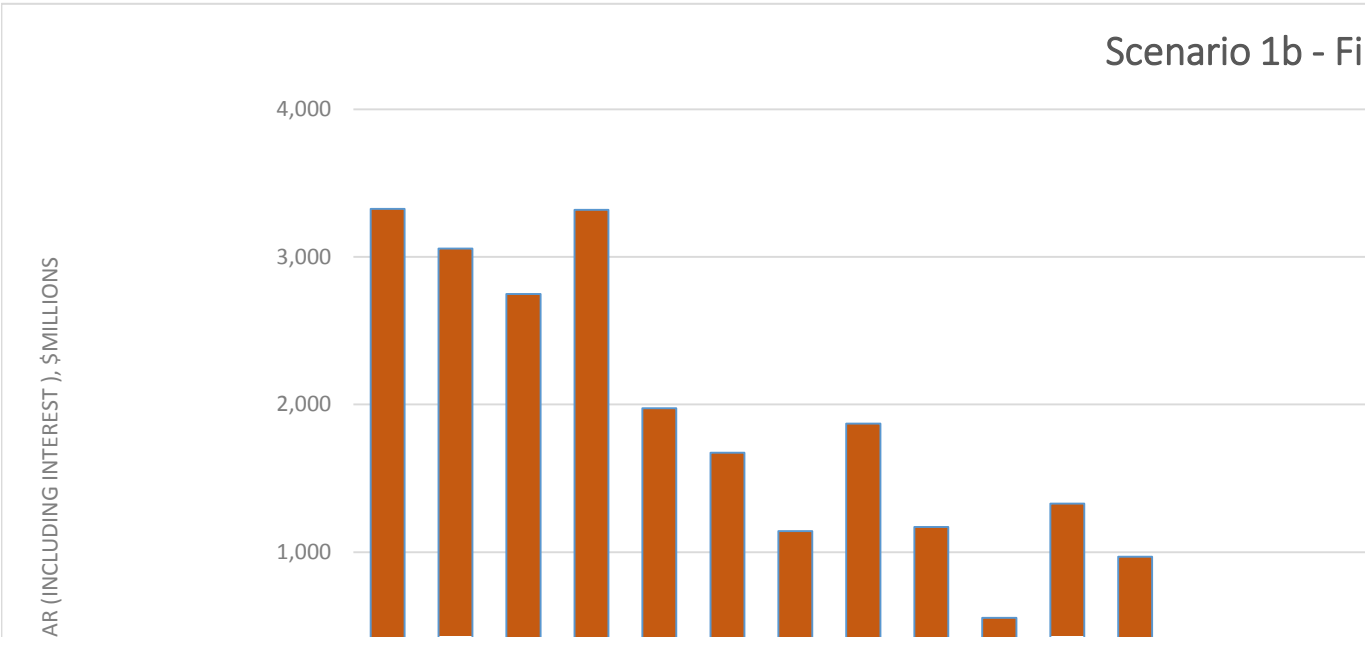
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

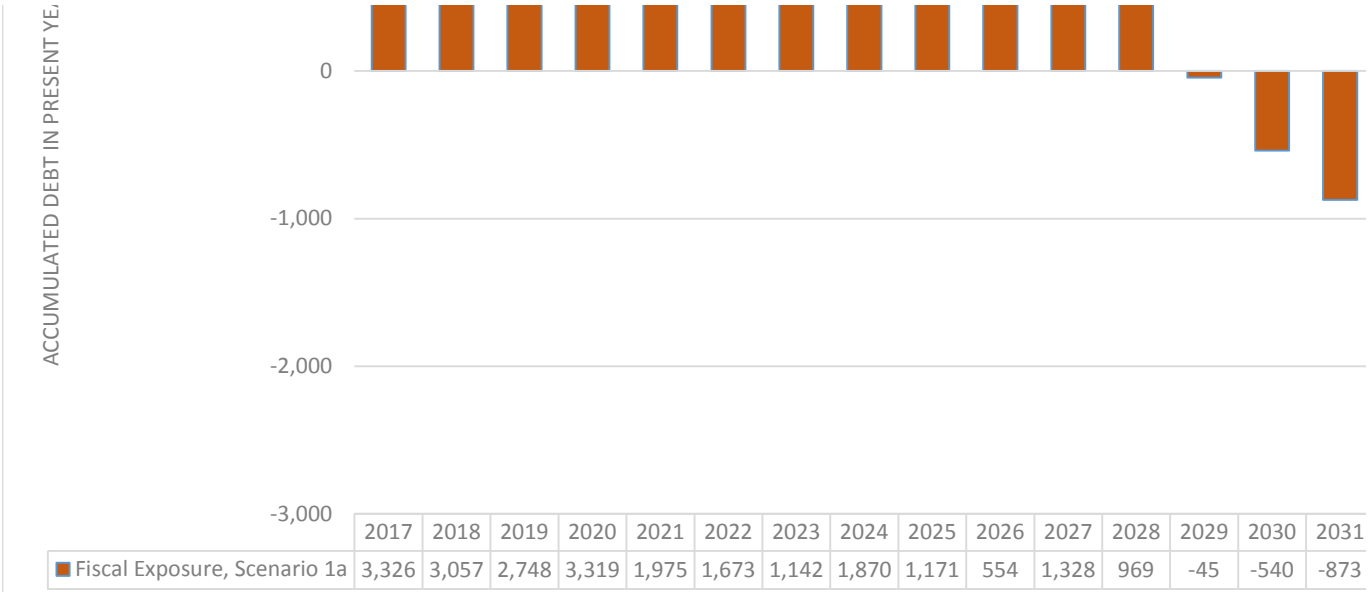




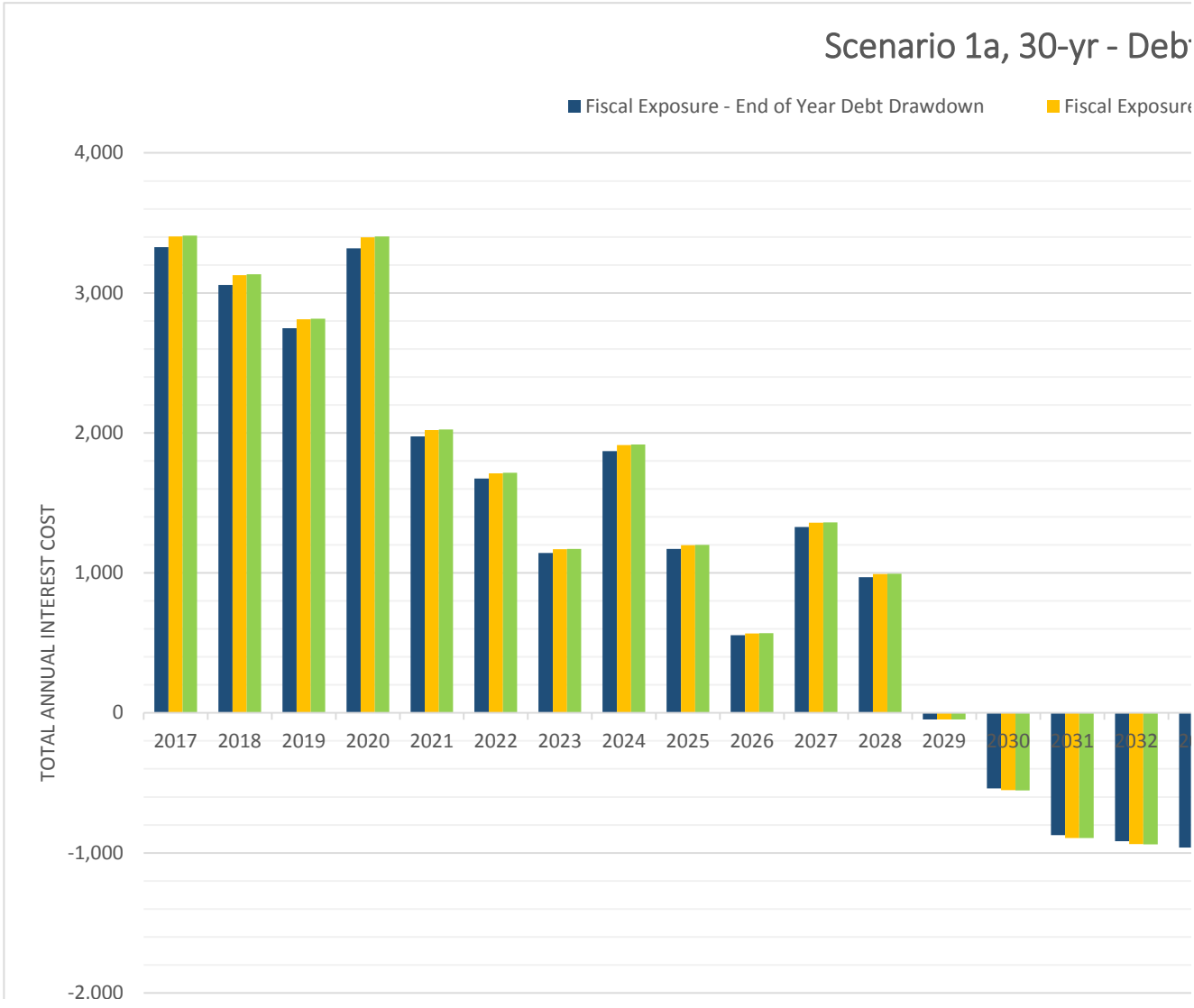


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



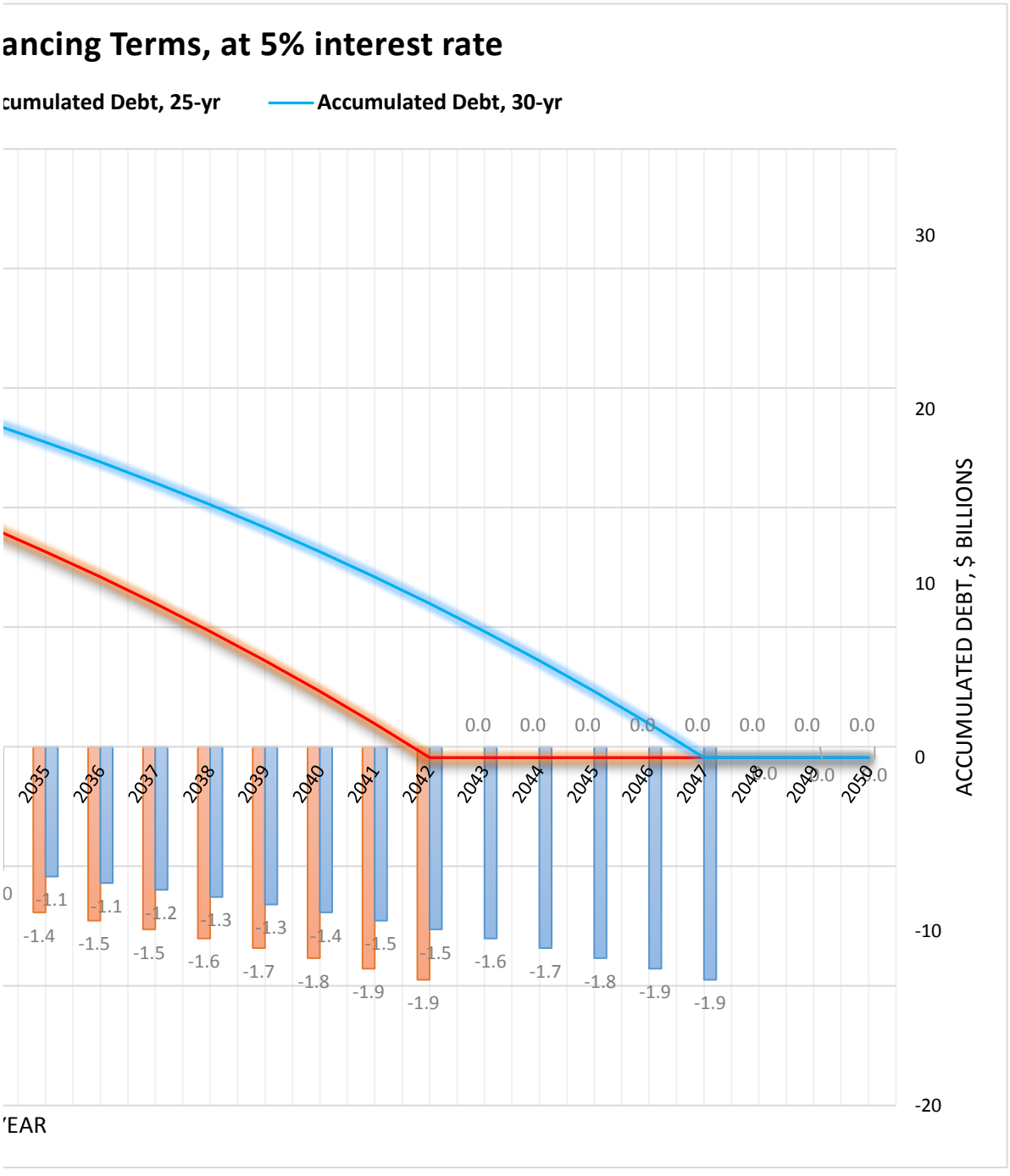


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



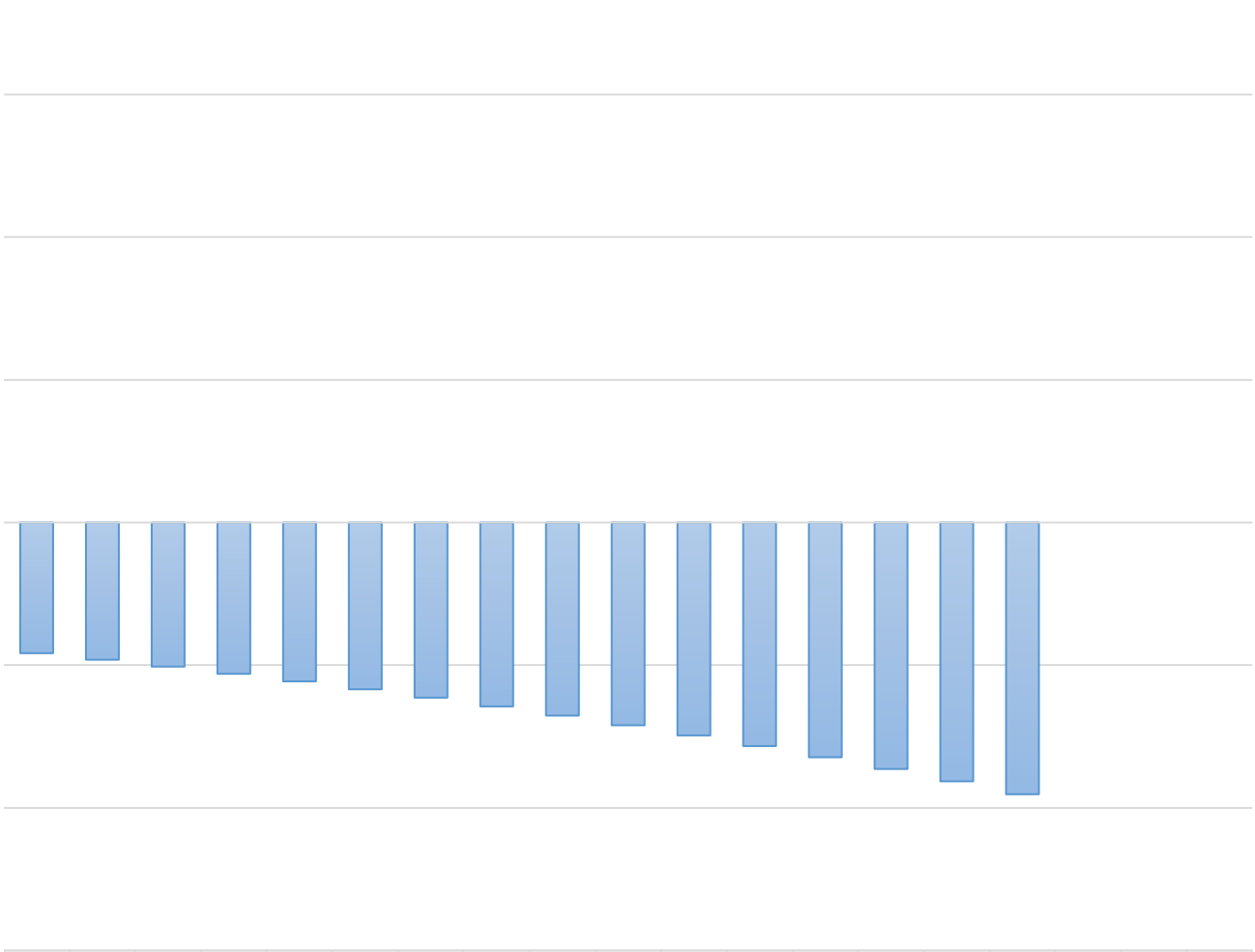

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

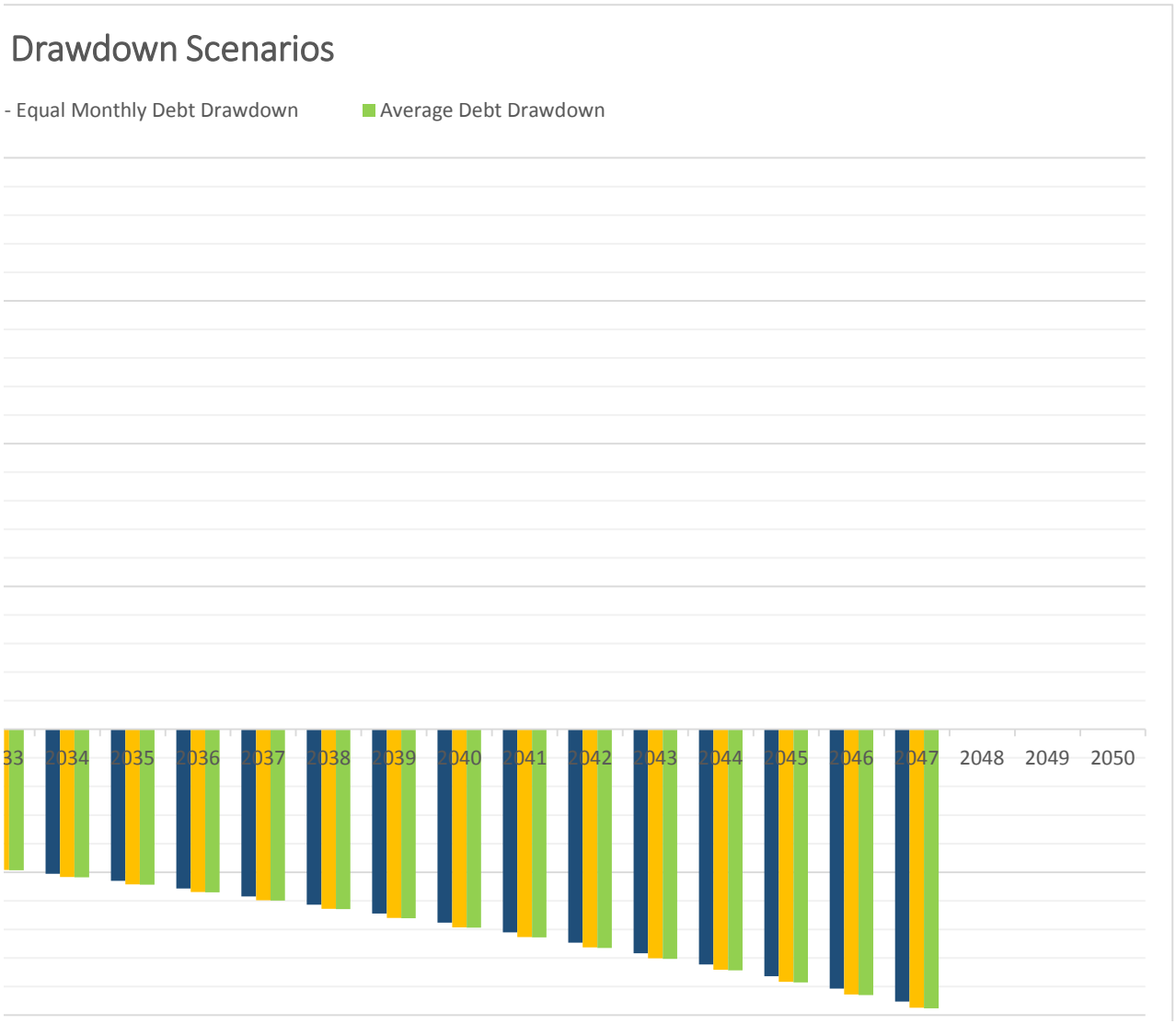
YEAR

cal Exposure



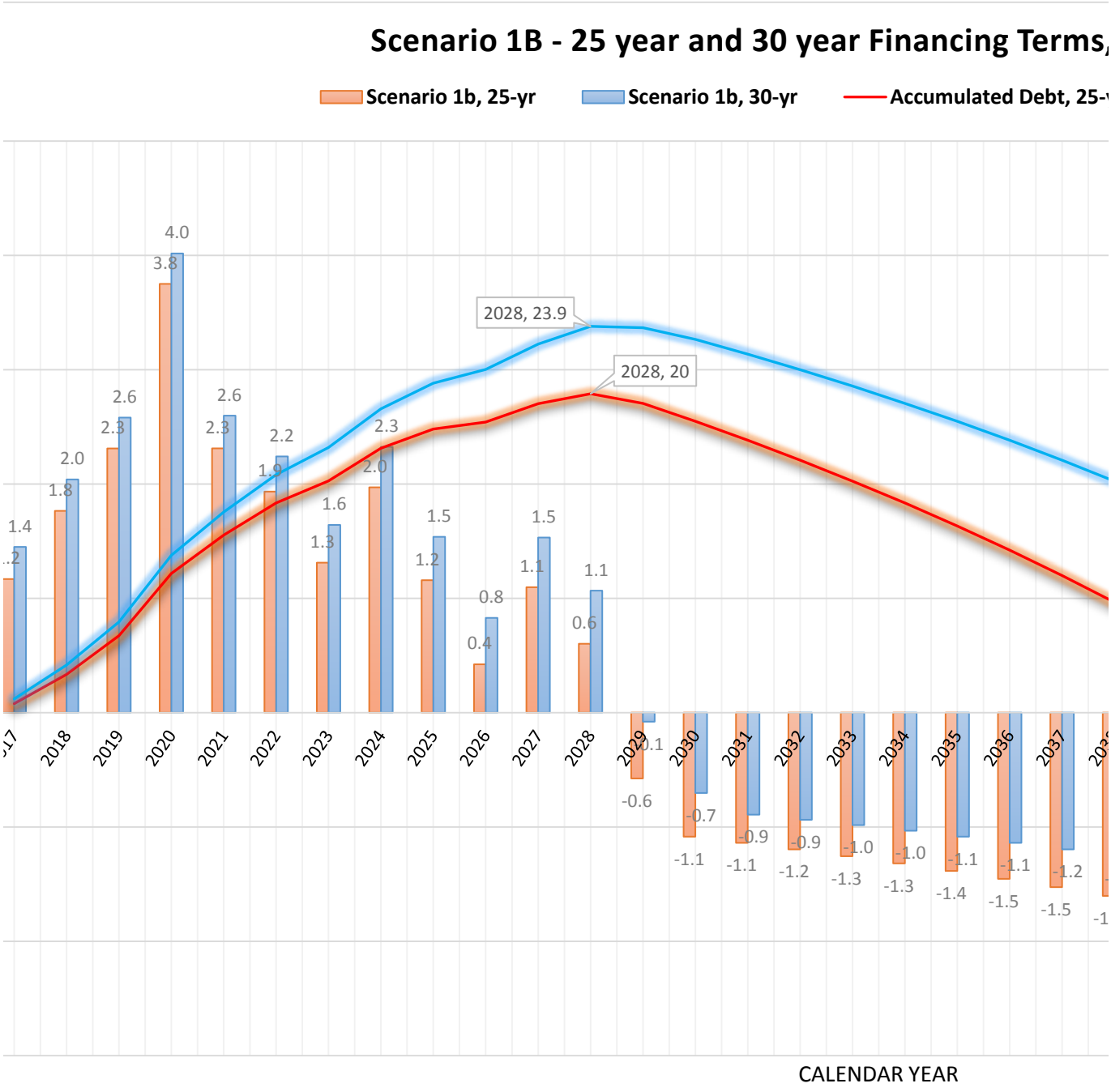
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

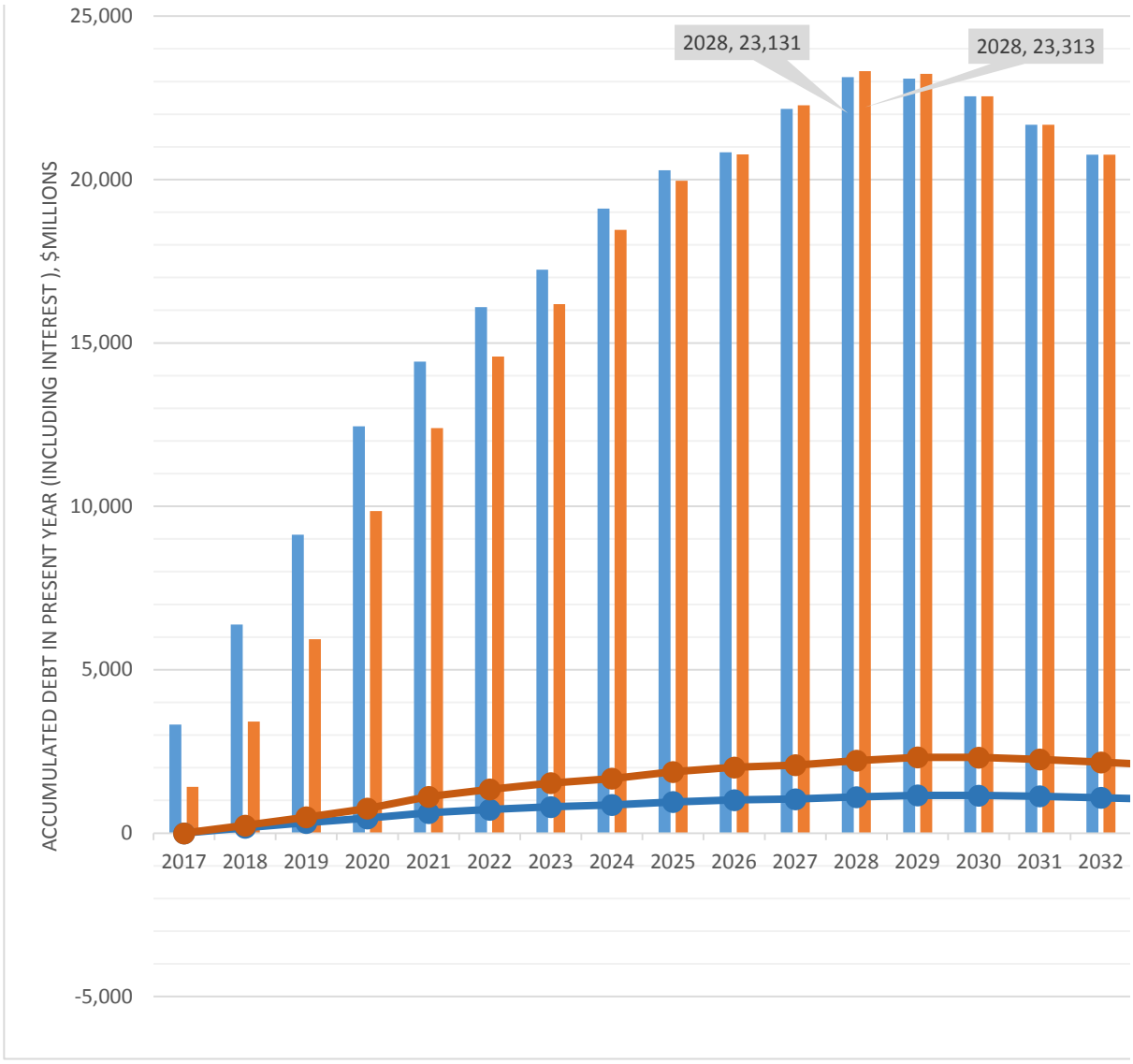


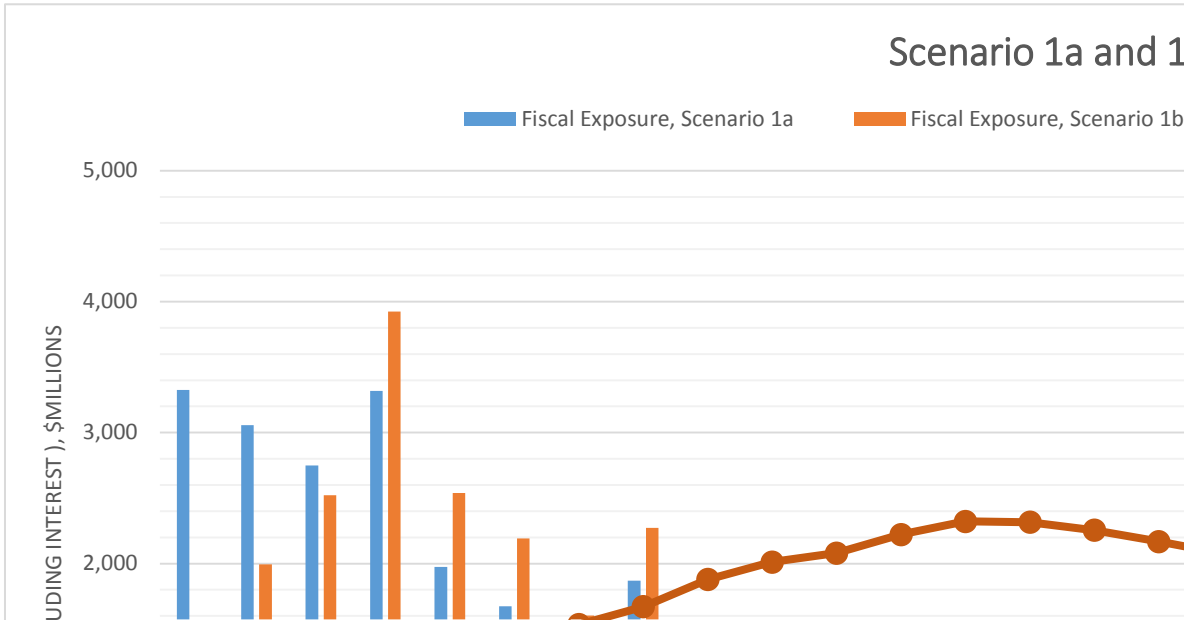
YEAR

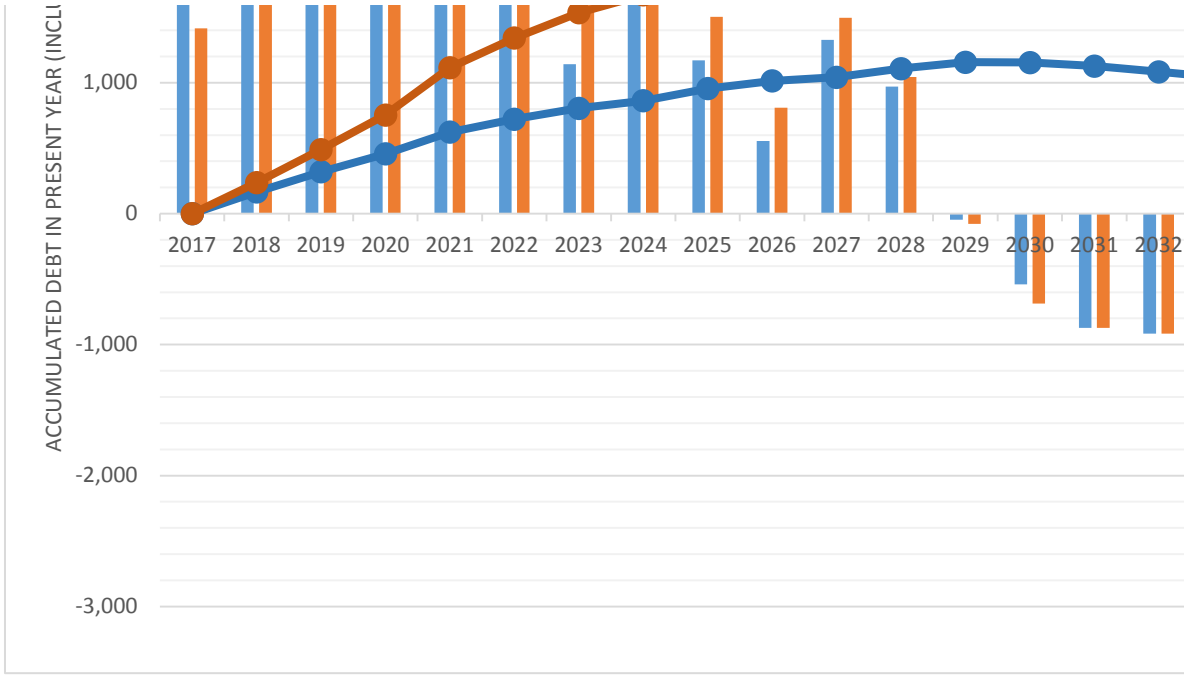
3 - 25 year and 30 year Financing Terms, at 5% interest rate

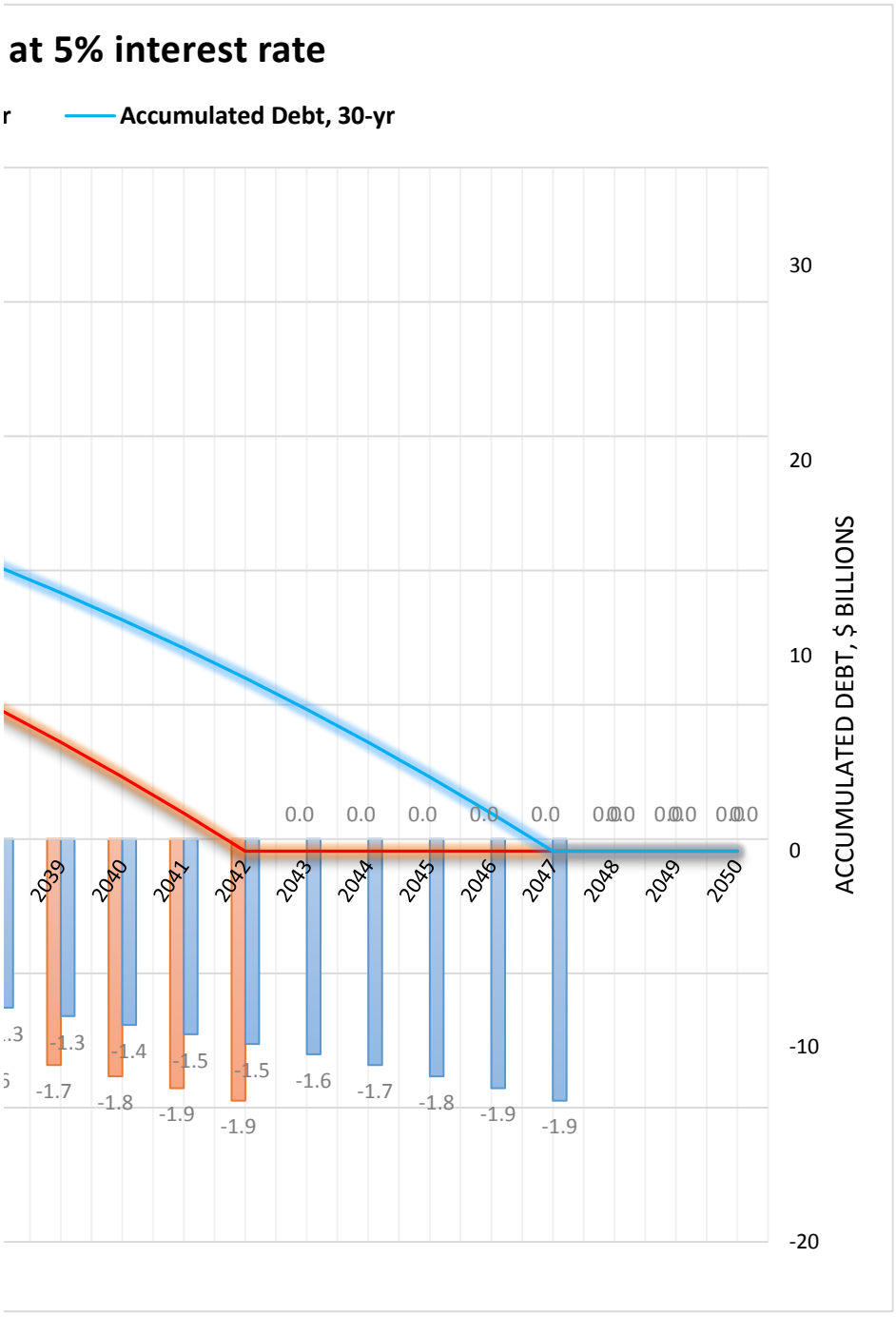





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

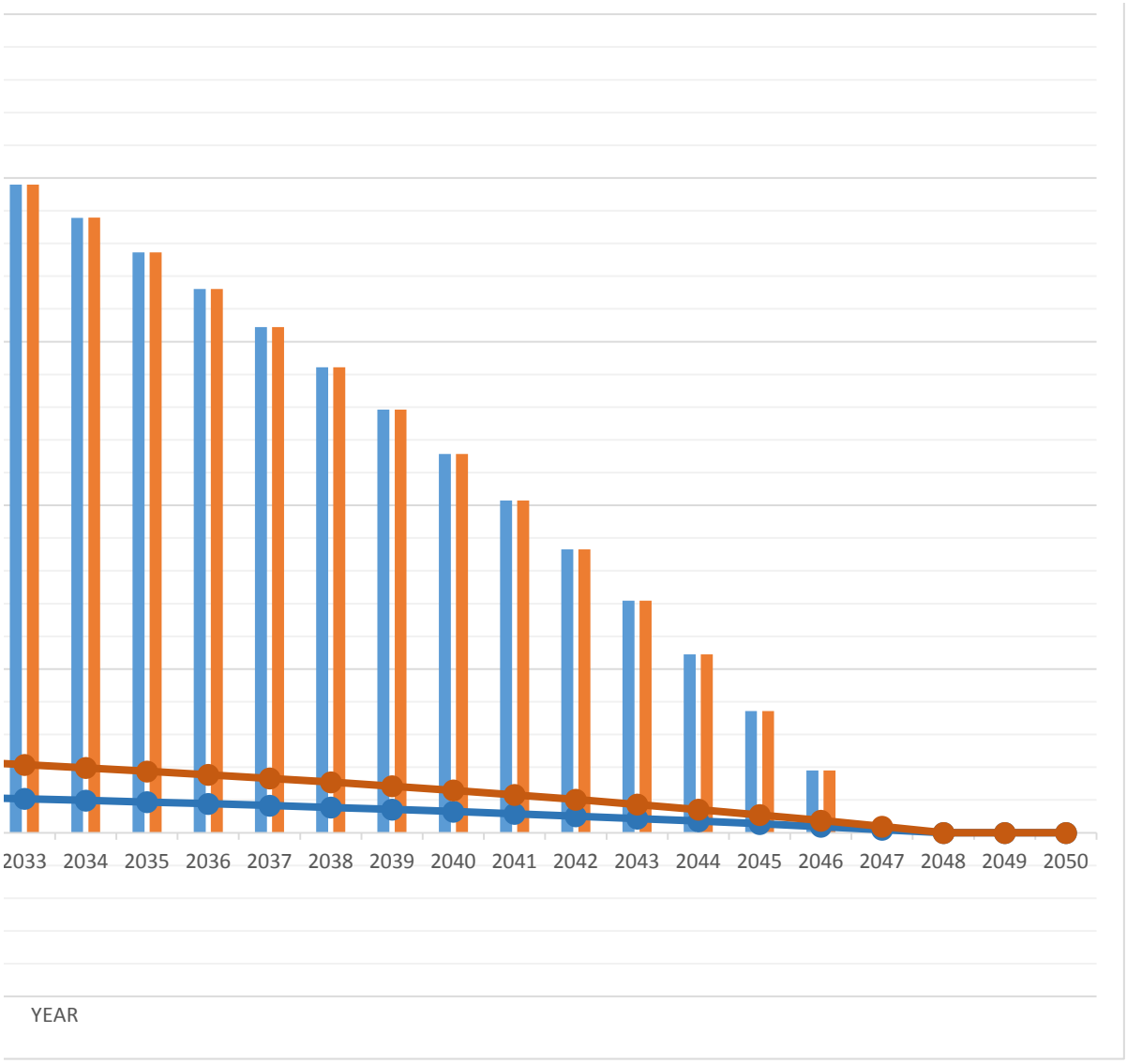

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

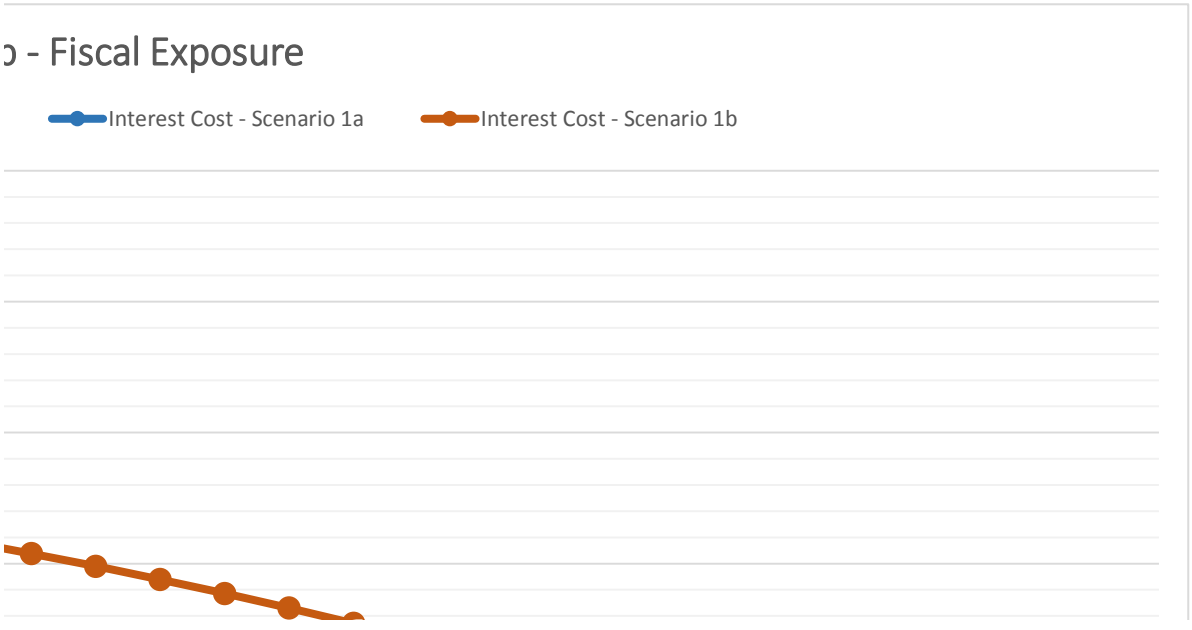

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

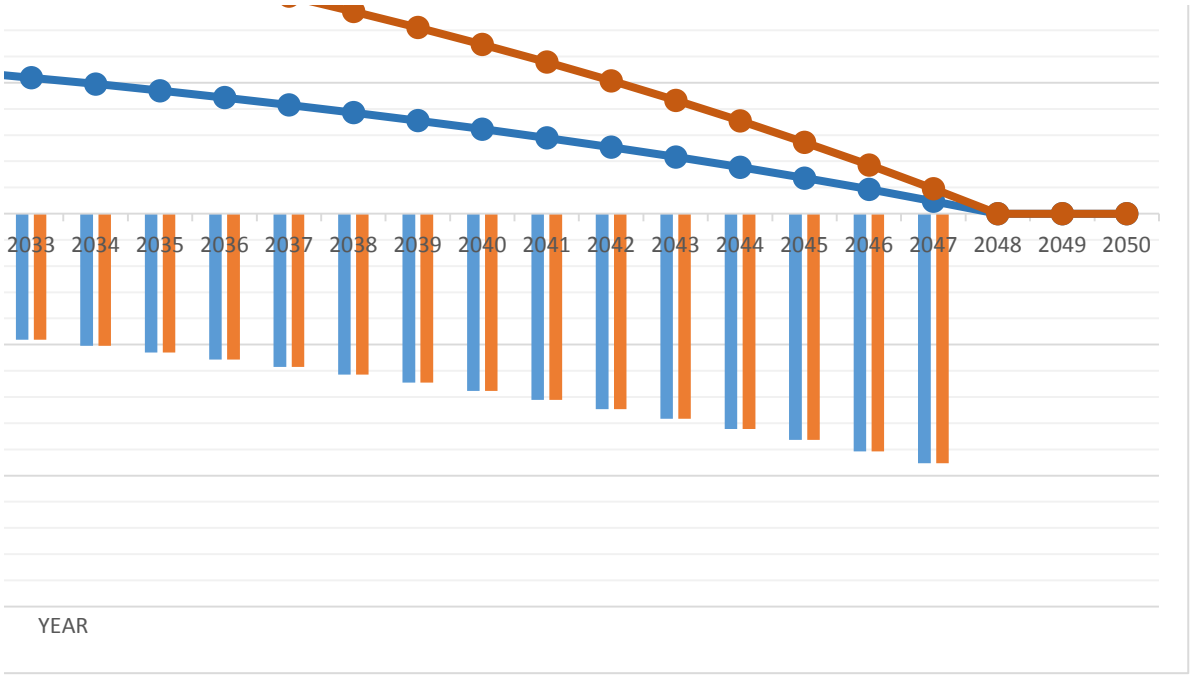


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

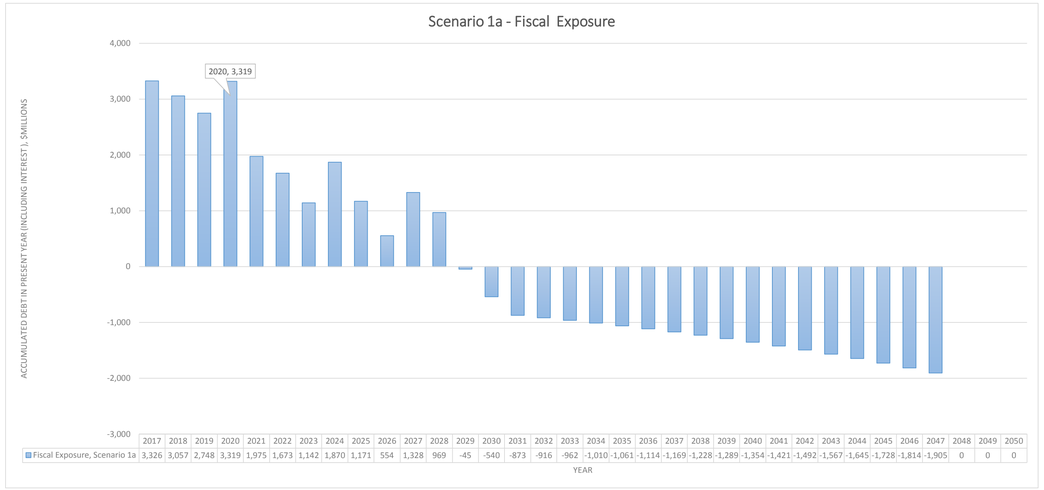
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

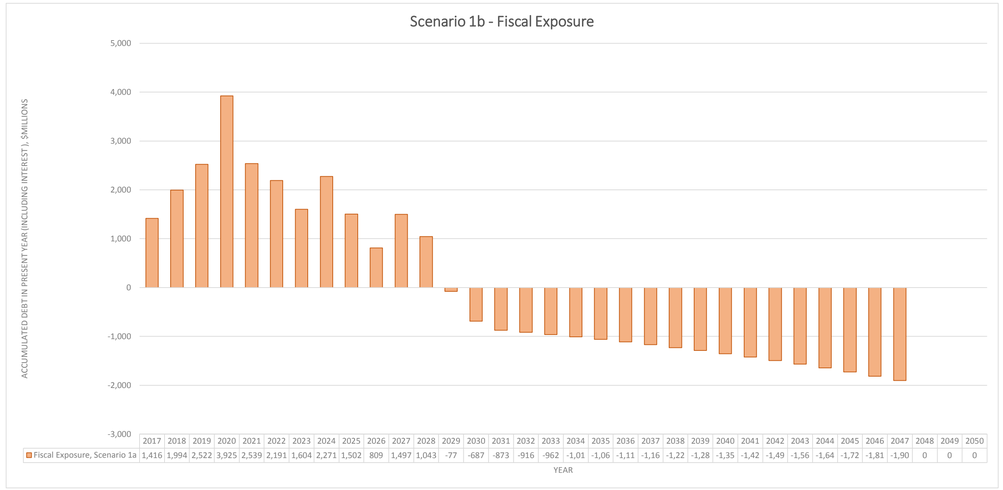
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

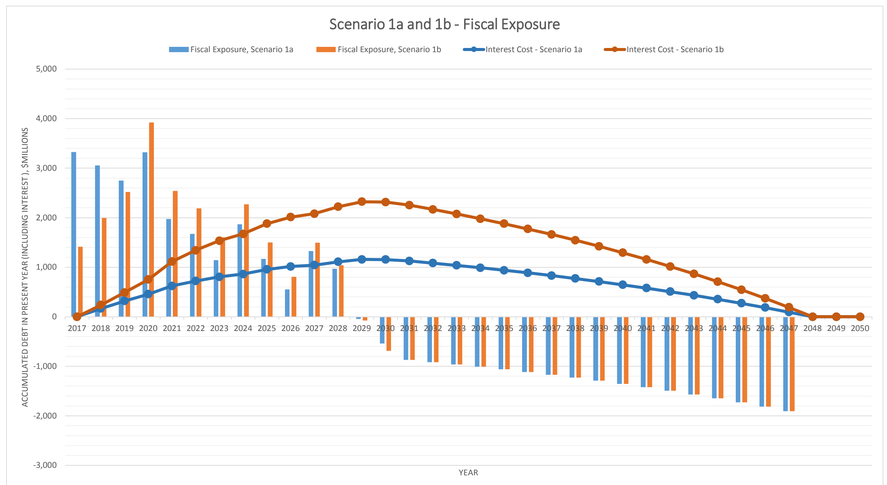
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

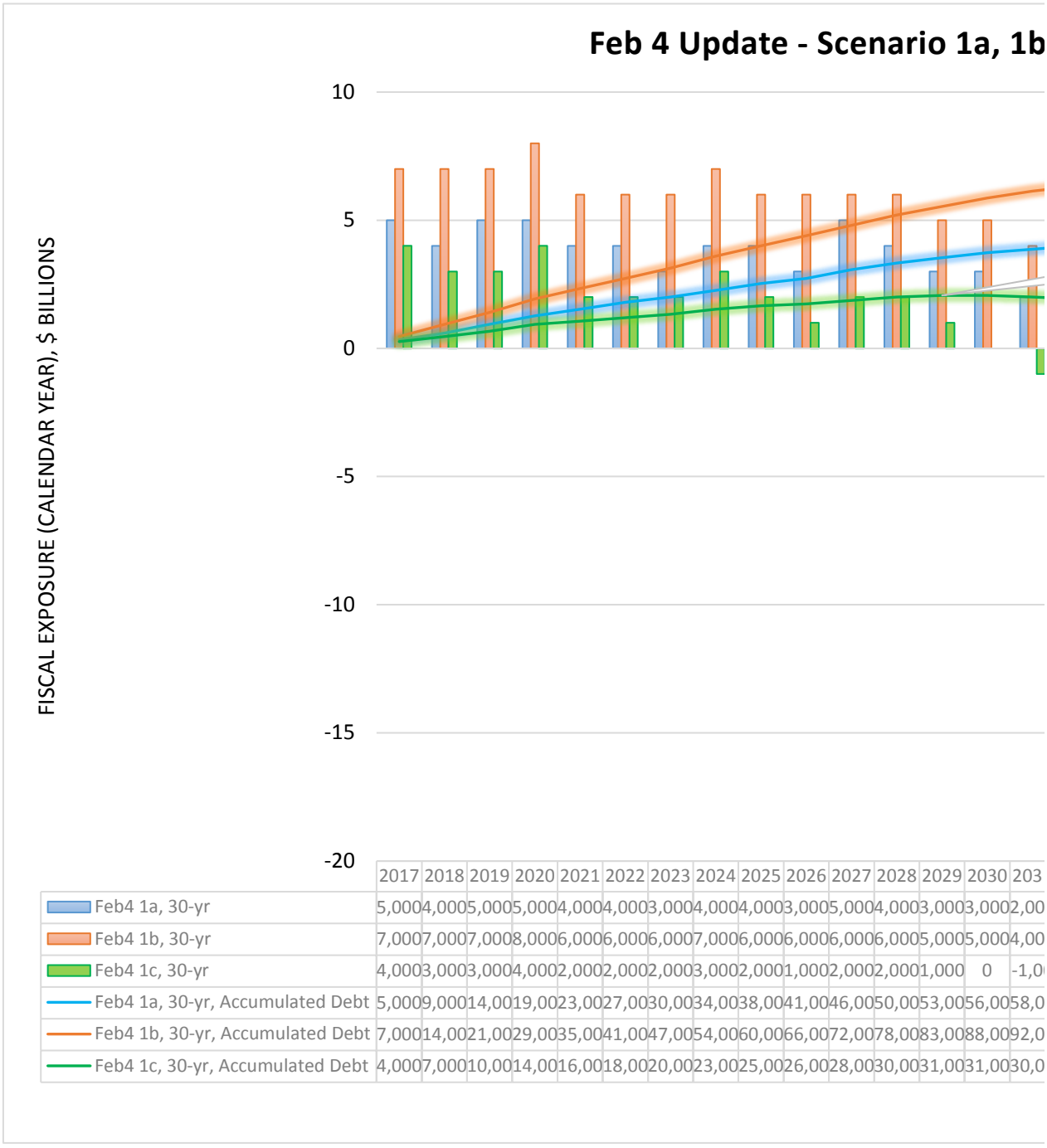
Notes:	Accounting treatment is to be determined.


Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0

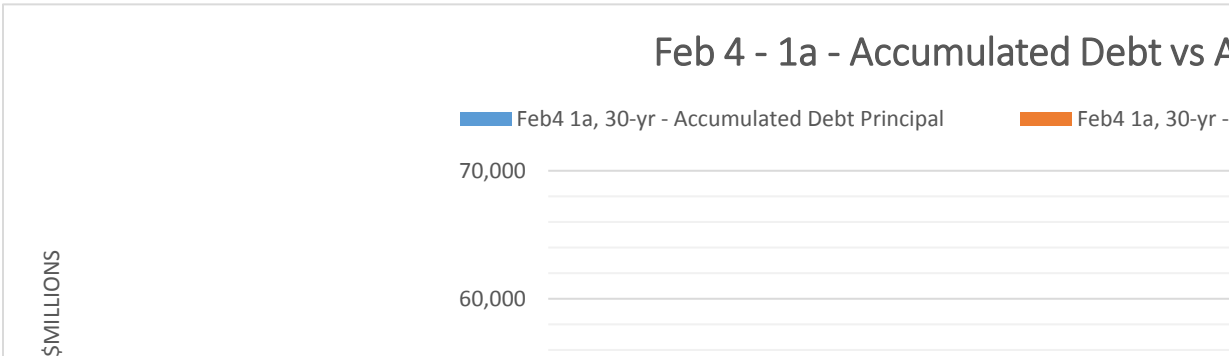

Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0

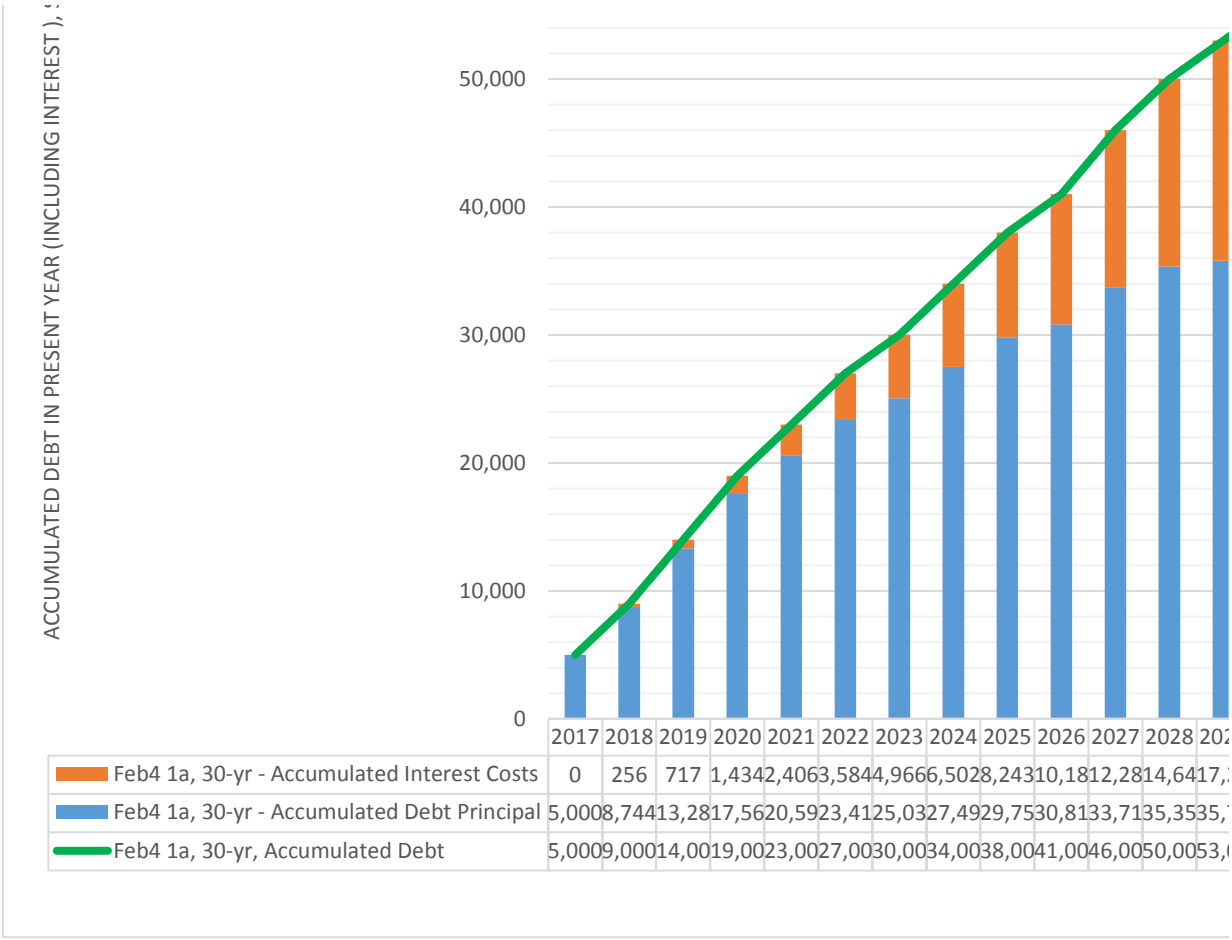

Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

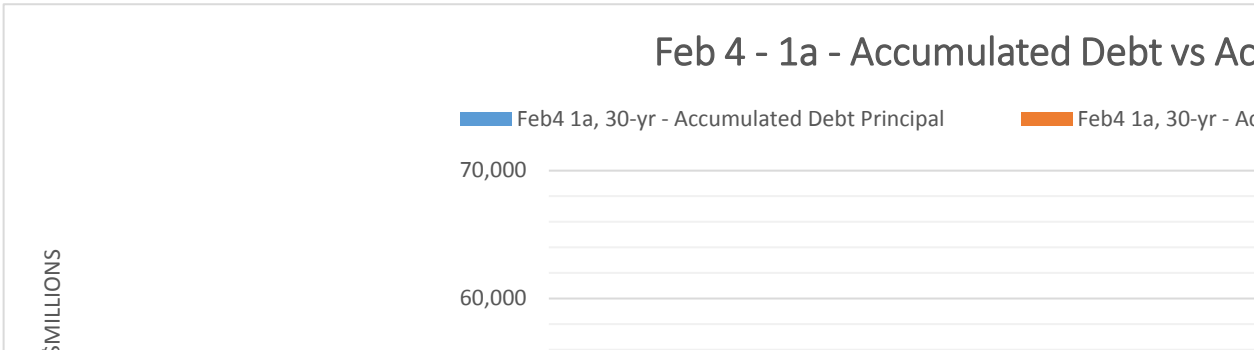
Feb 4 Update - Scenario 1a, 1b, 1c - at 5.12% interest rate

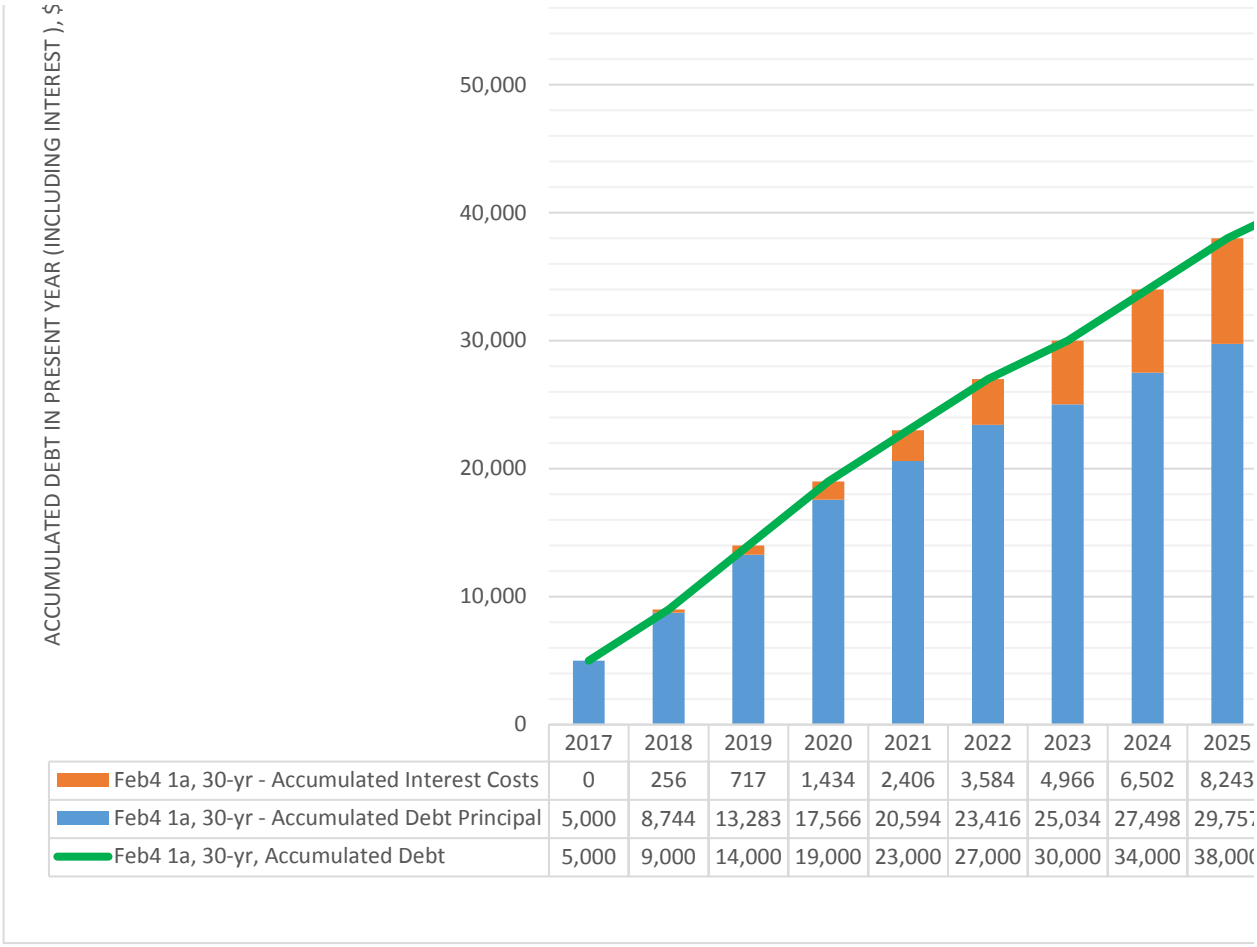


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	203
Feb4 1a, 30-yr	5,000	4,000	5,000	5,000	4,000	4,000	3,000	4,000	4,000	3,000	5,000	4,000	3,000	3,000	2,00
Feb4 1b, 30-yr	7,000	7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000	6,000	6,000	6,000	5,000	5,000	4,00
Feb4 1c, 30-yr	4,000	3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000	1,000	2,000	2,000	1,000	0	-1,0
Feb4 1a, 30-yr, Accumulated Debt	5,000	9,000	14,001	9,000	23,002	27,003	30,003	34,003	38,004	41,004	46,005	50,005	53,005	56,005	58,0
Feb4 1b, 30-yr, Accumulated Debt	7,000	14,002	21,002	9,000	35,004	41,004	47,005	54,005	60,006	66,006	72,007	78,007	83,008	88,009	92,0
Feb4 1c, 30-yr, Accumulated Debt	4,000	7,000	10,001	4,000	16,001	18,002	20,002	23,002	25,002	26,002	28,003	30,003	31,004	31,004	30,0

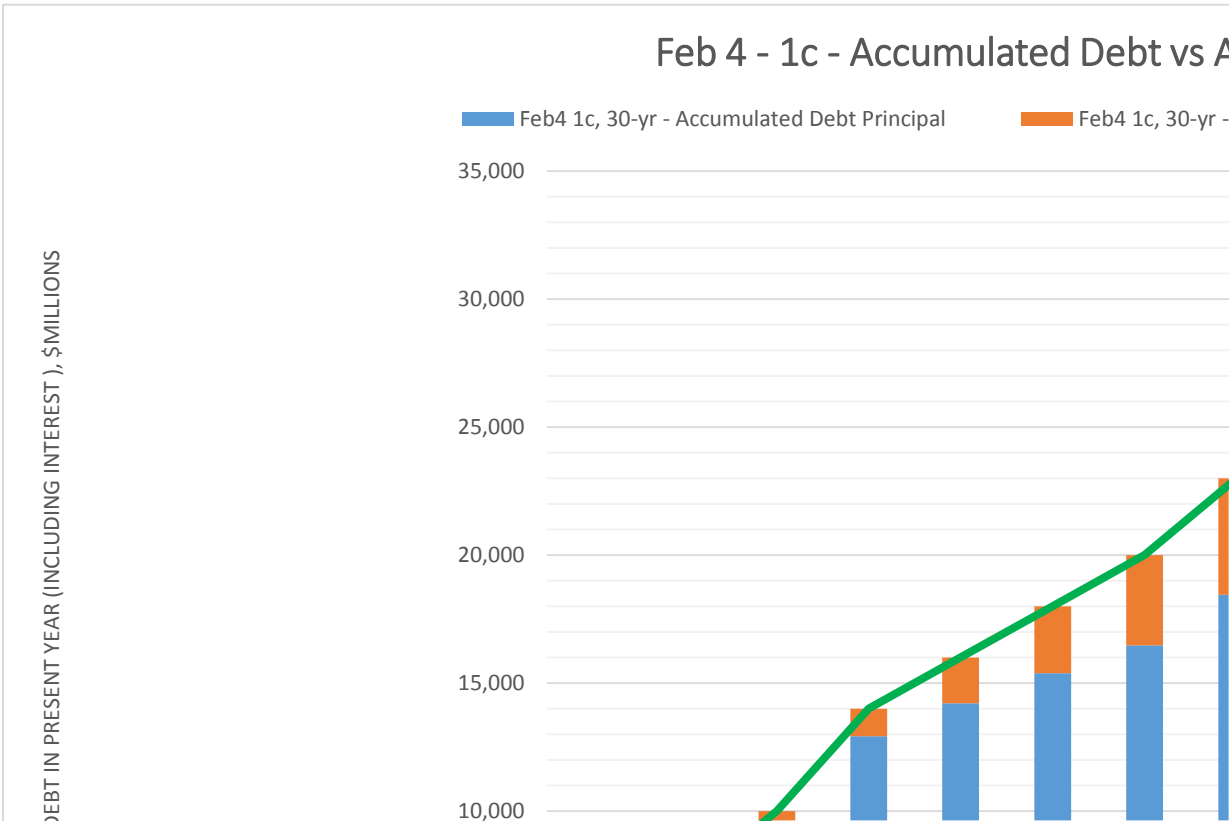


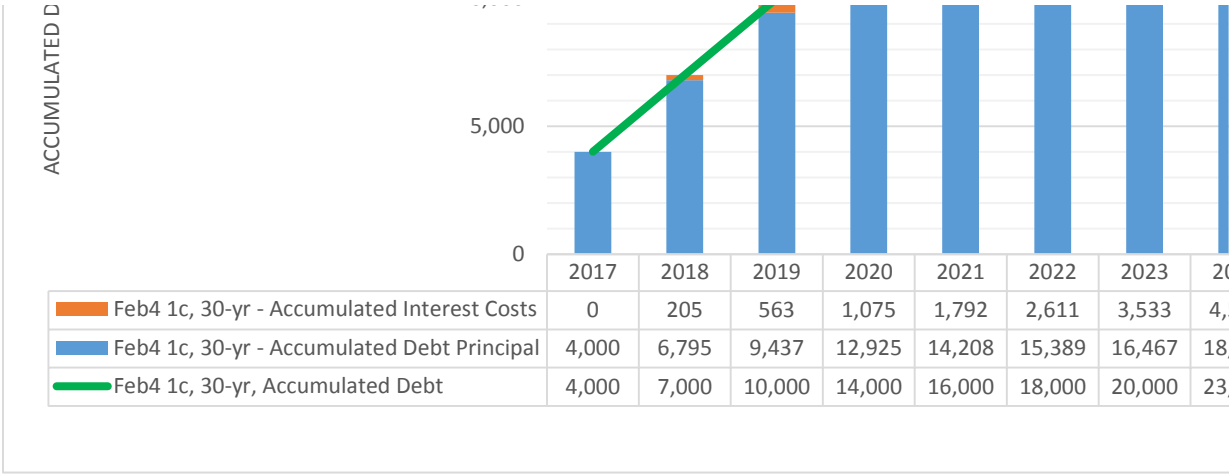

ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST),
50,000
40,000
30,000
20,000
10,000
0
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028
Feb4 1a, 30-yr - Accumulated Interest Costs 0 256 717 1,434 2,406 3,584 4,966 6,502 8,243 10,181 12,281 4,641
Feb4 1a, 30-yr - Accumulated Debt Principal 5,000 8,744 13,281 17,562 20,592 23,412 25,032 27,492 29,757 30,813 33,719 35,353
Feb4 1a, 30-yr, Accumulated Debt 5,000 9,000 14,001 19,002 23,002 27,002 30,002 34,002 38,002 41,002 46,002 50,002


Feb 4 - 1a - Accumulated Debt vs Ac
Feb4 1a, 30-yr - Accumulated Debt Principal
Feb4 1a, 30-yr - Ac
70,000
60,000
MILLIONS

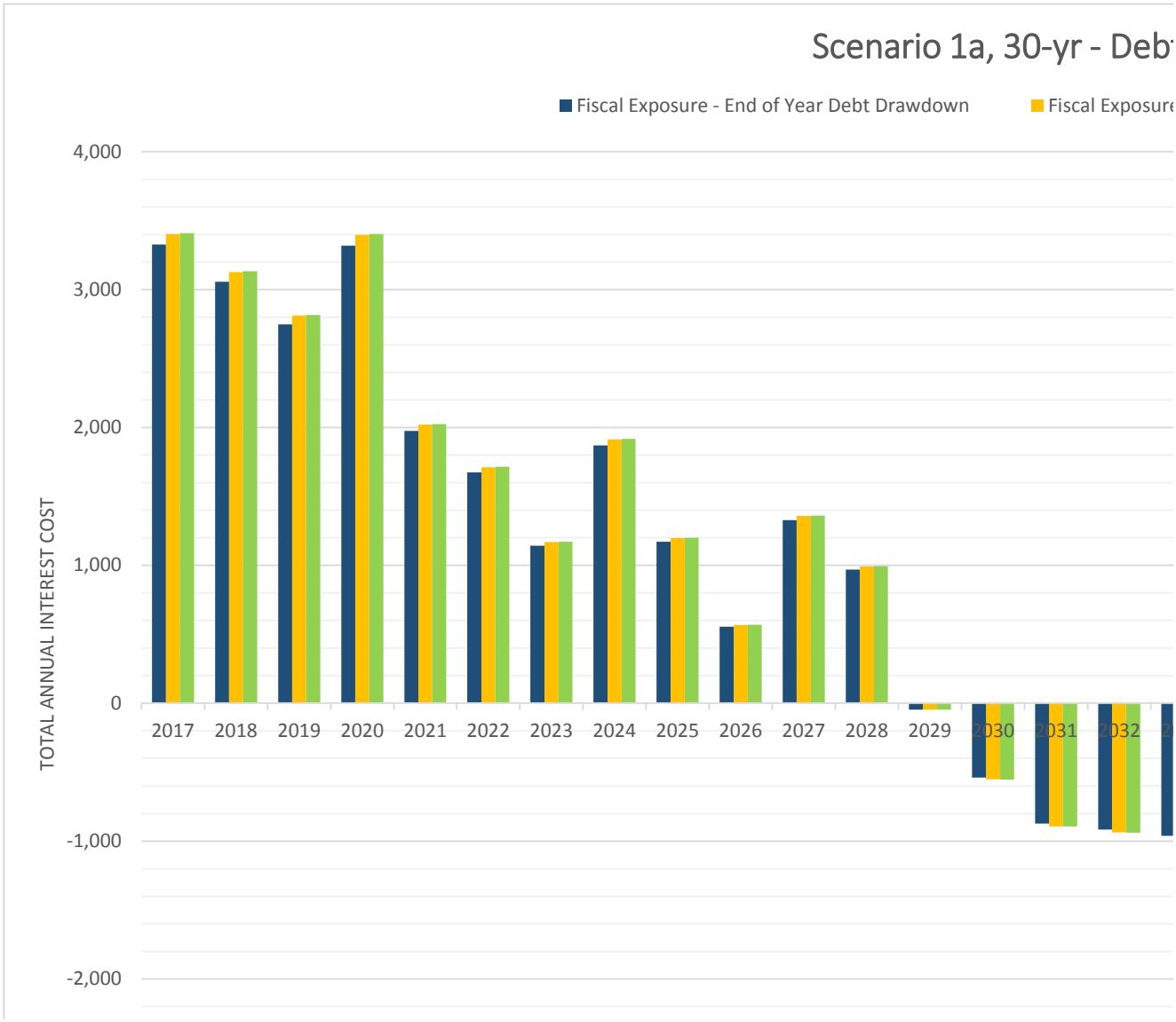


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	256	717	1,434	2,406	3,584	4,966	6,502	8,243
Feb4 1a, 30-yr - Accumulated Debt Principal	5,000	8,744	13,283	17,566	20,594	23,416	25,034	27,498	29,757
Feb4 1a, 30-yr, Accumulated Debt	5,000	9,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000





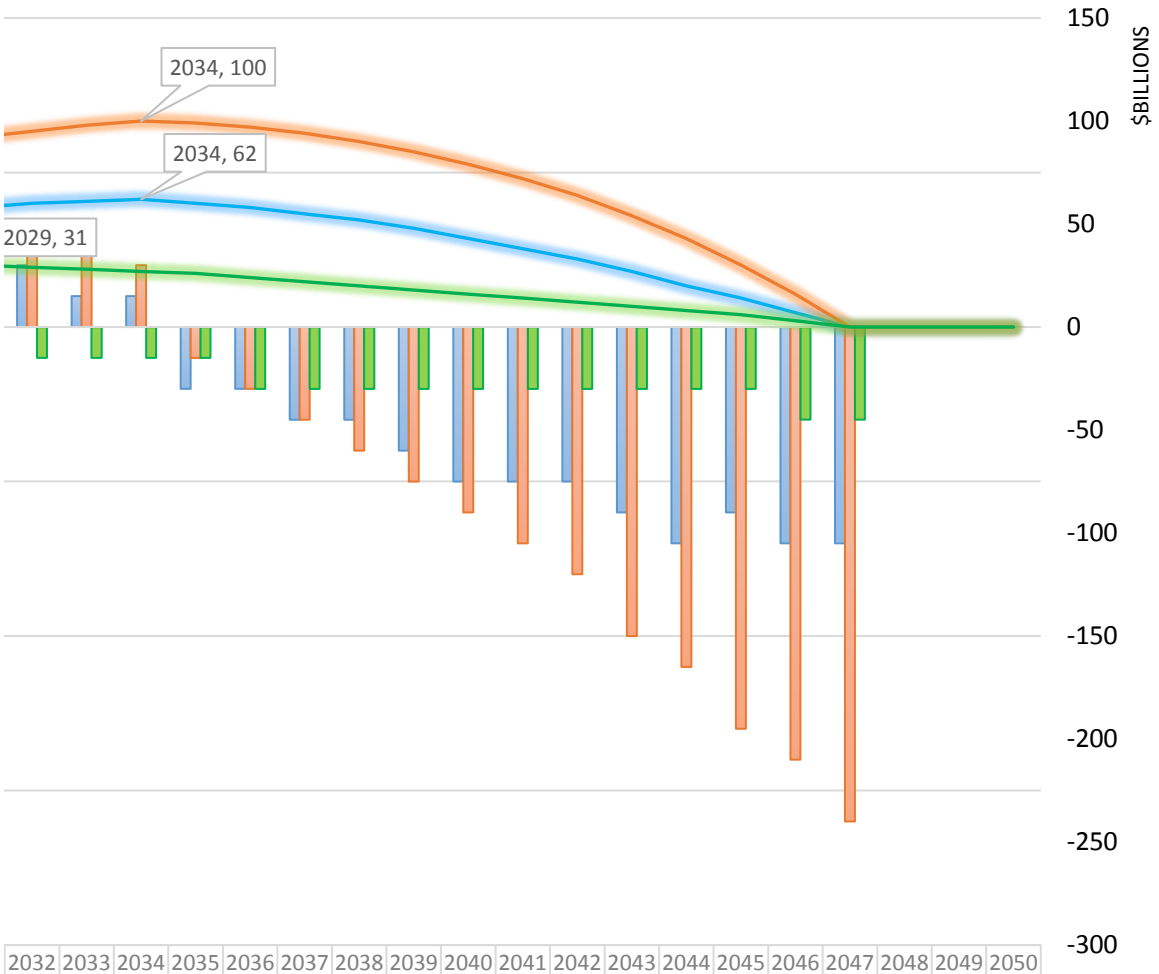
	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	205	563	1,075	1,792	2,611	3,533	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	4,000	6,795	9,437	12,925	14,208	15,389	16,467	18
Feb4 1c, 30-yr, Accumulated Debt	4,000	7,000	10,000	14,000	16,000	18,000	20,000	23




-3,000

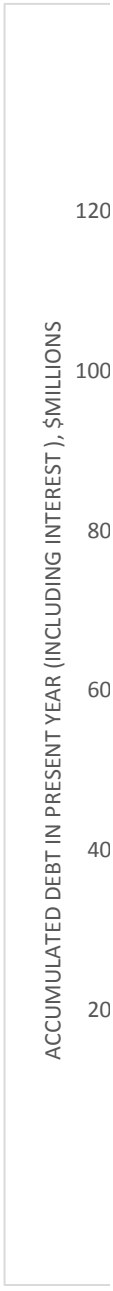
Scenario 1E

1c - at 5.12% interest rate

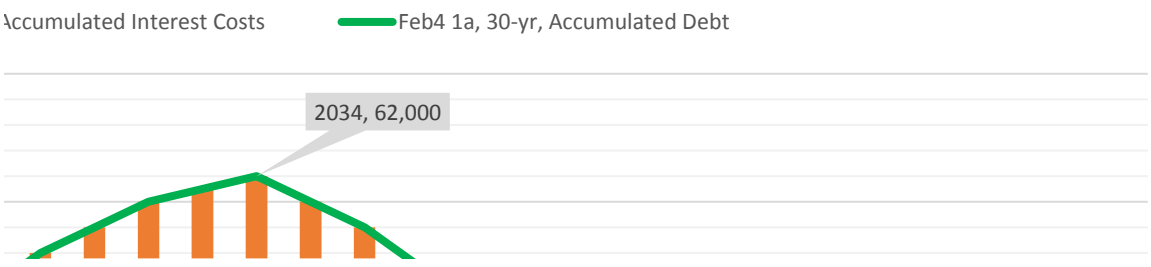


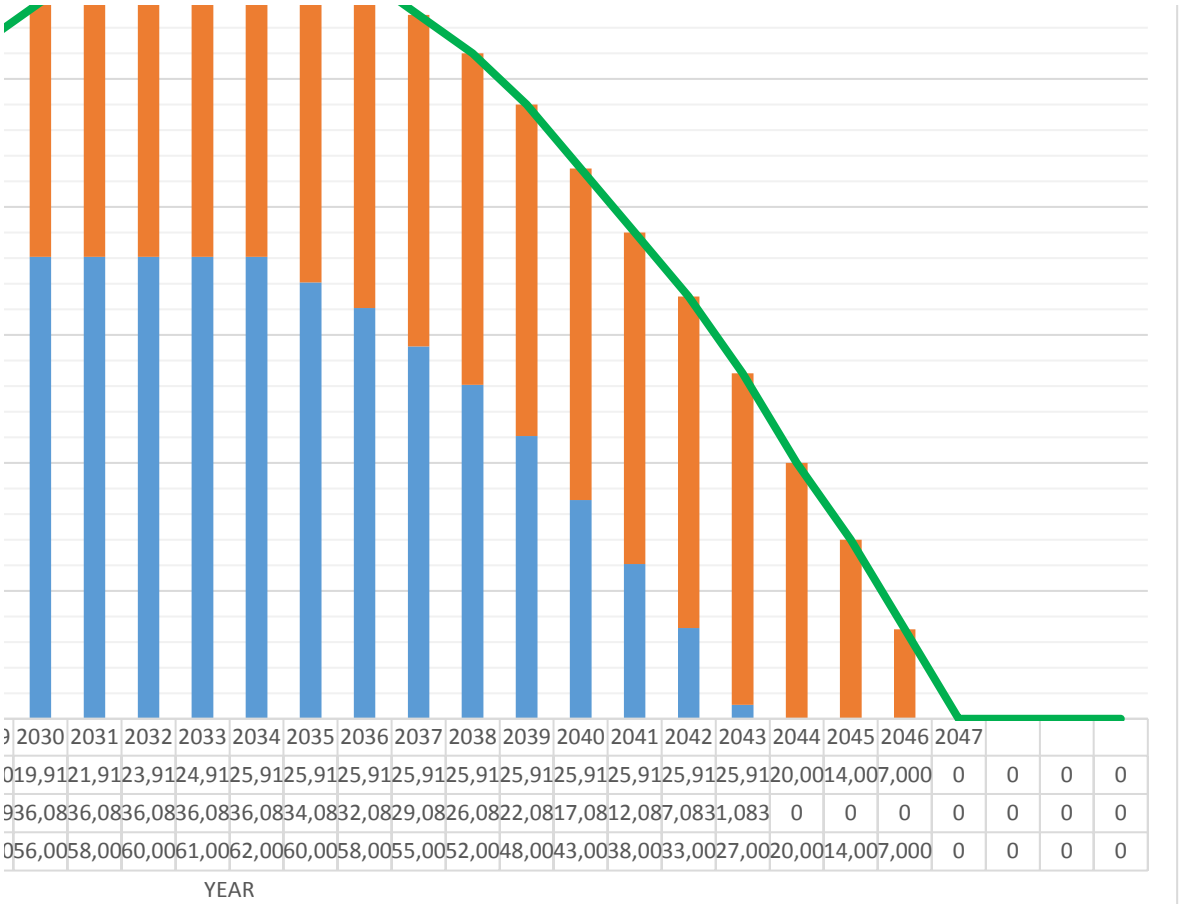
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
2,000	1,000	1,000	-2,00	-2,00	-3,00	-3,00	-4,00	-5,00	-5,00	-5,00	-6,00	-7,00	-6,00	-7,00	-7,00	0	0	0
3,000	3,000	2,000	-1,00	-2,00	-3,00	-4,00	-5,00	-6,00	-7,00	-8,00	-10,0	-11,0	-13,0	-14,0	-16,0	0	0	0
-1,00	-1,00	-1,00	-1,00	-2,00	-2,00	-2,00	-2,00	-2,00	-2,00	-2,00	-2,00	-2,00	-2,00	-3,00	-3,00	0	0	0
60,00	61,00	62,00	60,00	58,00	55,00	52,00	48,00	43,00	38,00	33,00	27,00	20,00	14,00	7,000	0	0	0	0
95,00	98,00	100,0	99,00	97,00	94,00	90,00	85,00	79,00	72,00	64,00	54,00	43,00	30,00	16,00	0	0	0	0
29,00	28,00	27,00	26,00	24,00	22,00	20,00	18,00	16,00	14,00	12,00	10,00	8,000	6,000	3,000	0	0	0	0

CALENDAR YEAR



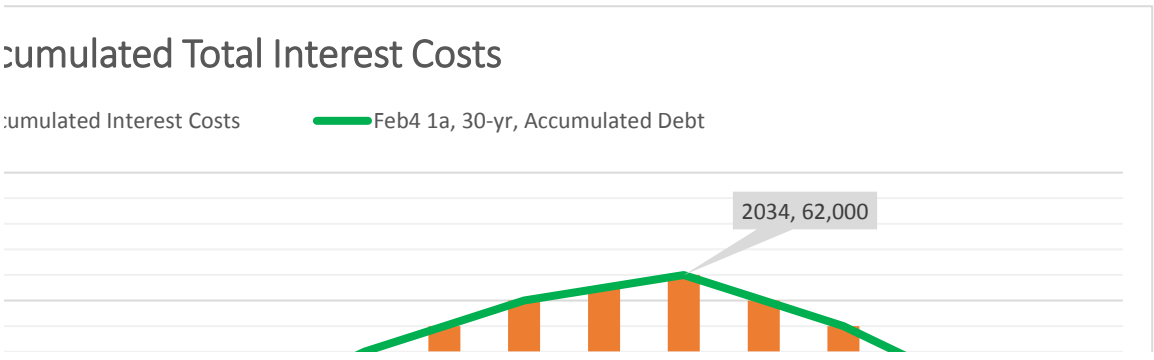
ccumulated Total Interest Costs

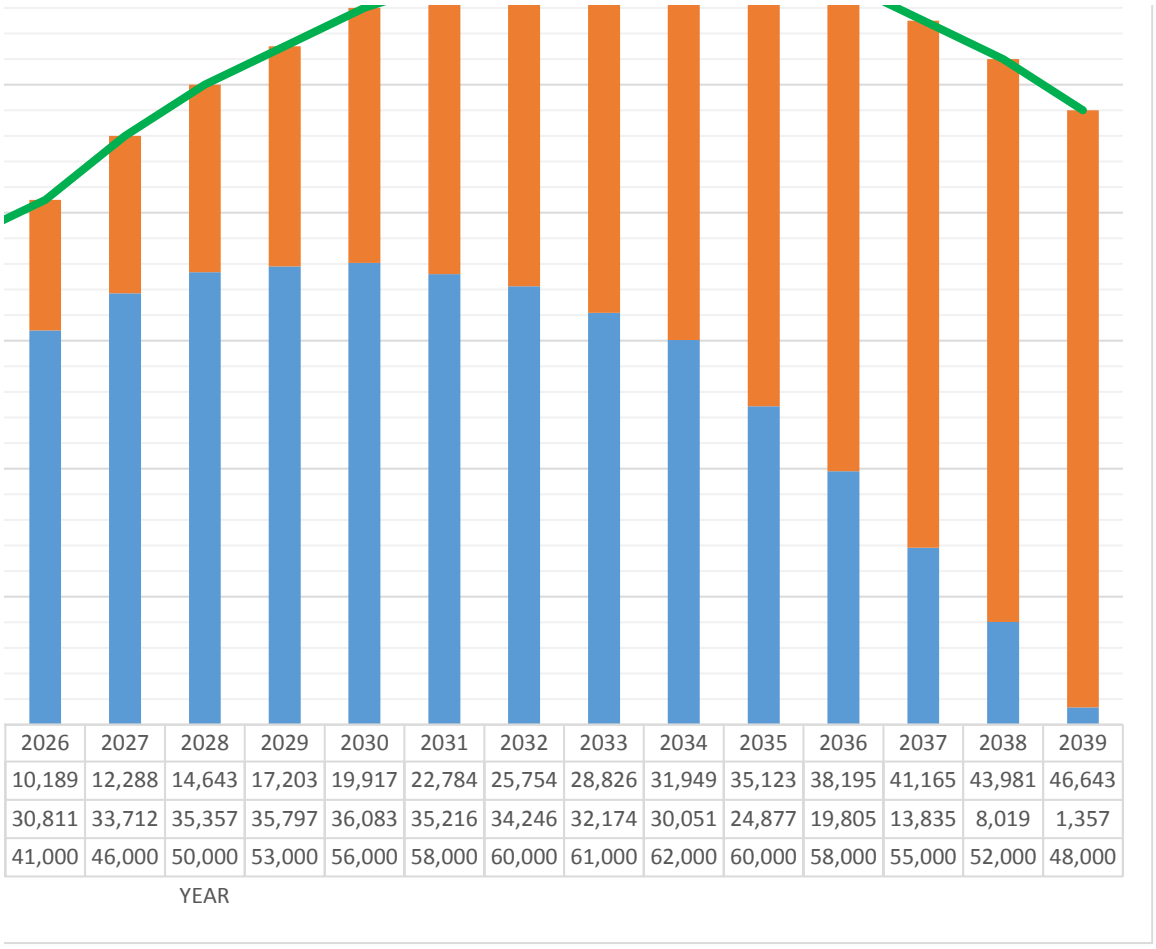




	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047			
	019,91	21,91	23,91	24,91	25,91	25,91	25,91	25,91	25,91	25,91	25,91	25,91	25,91	25,91	20,00	14,00	7,000	0	0	0	0
	936,08	36,08	36,08	36,08	36,08	34,08	32,08	29,08	26,08	22,08	17,08	12,08	7,083	1,083	0	0	0	0	0	0	0
	056,00	58,00	60,00	61,00	62,00	60,00	58,00	55,00	52,00	48,00	43,00	38,00	33,00	27,00	20,00	14,00	7,000	0	0	0	0

YEAR

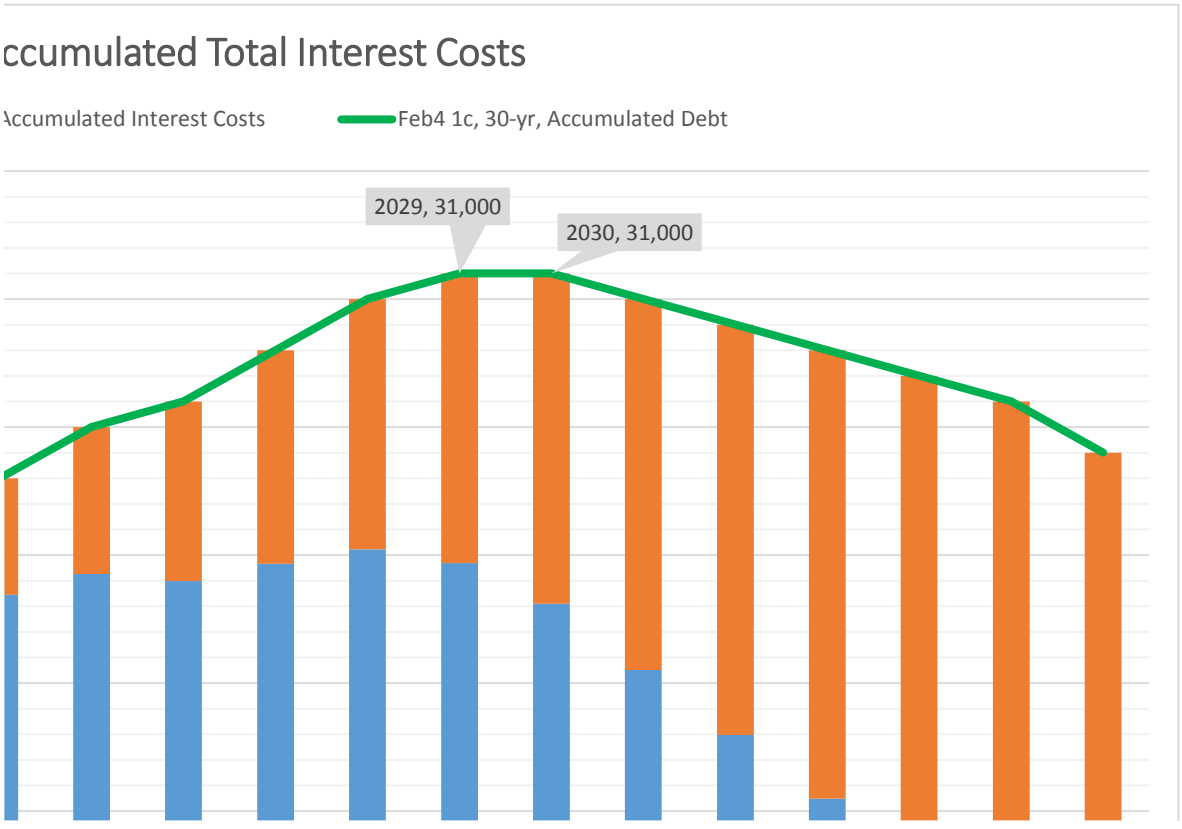


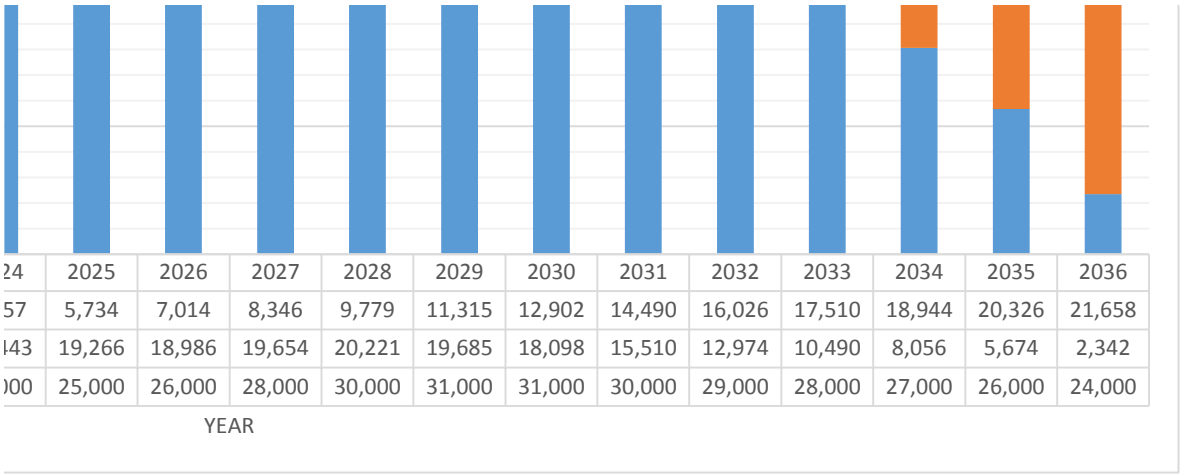


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,189	12,288	14,643	17,203	19,917	22,784	25,754	28,826	31,949	35,123	38,195	41,165	43,981	46,643
30,811	33,712	35,357	35,797	36,083	35,216	34,246	32,174	30,051	24,877	19,805	13,835	8,019	1,357
41,000	46,000	50,000	53,000	56,000	58,000	60,000	61,000	62,000	60,000	58,000	55,000	52,000	48,000

YEAR

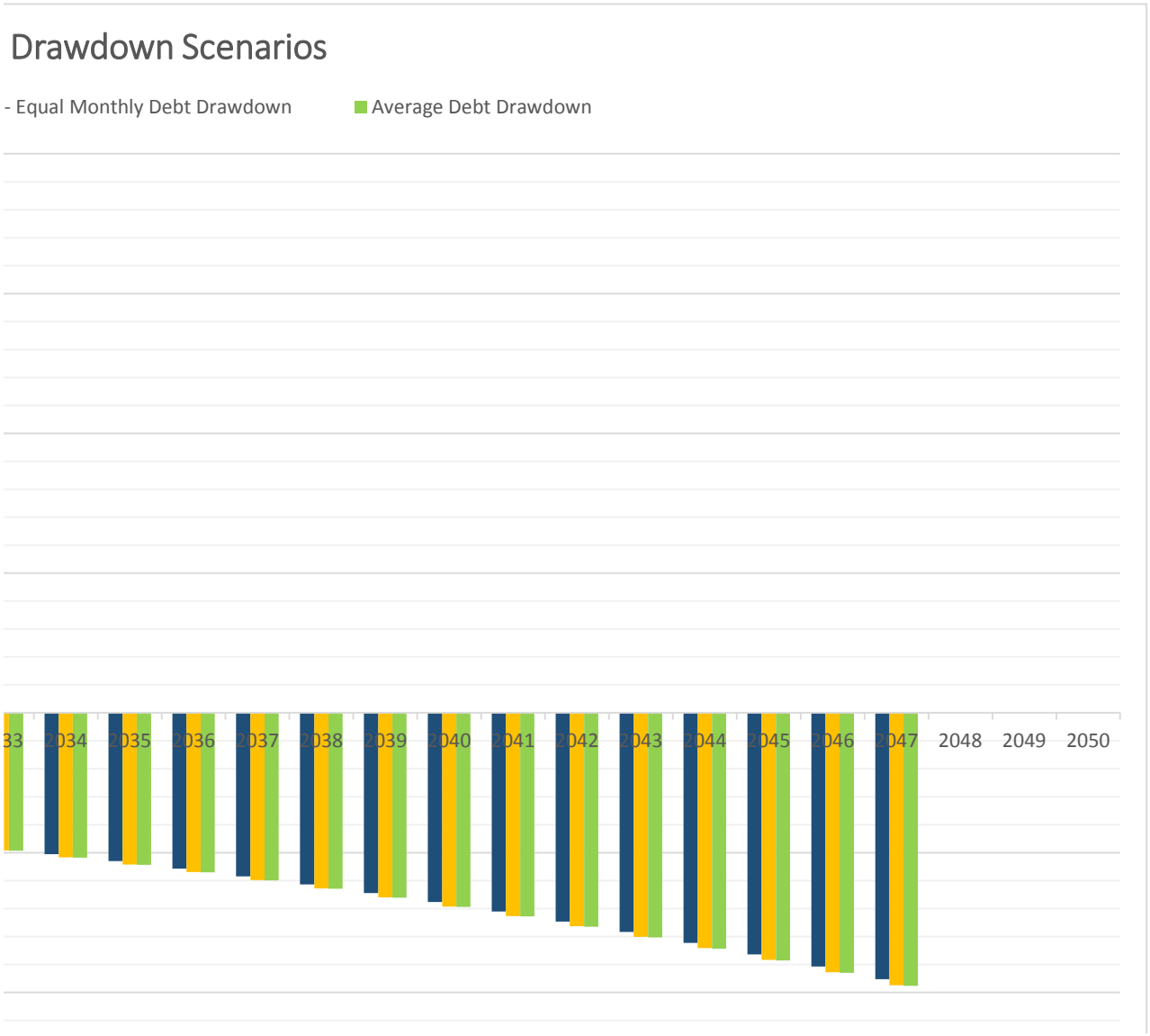
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $





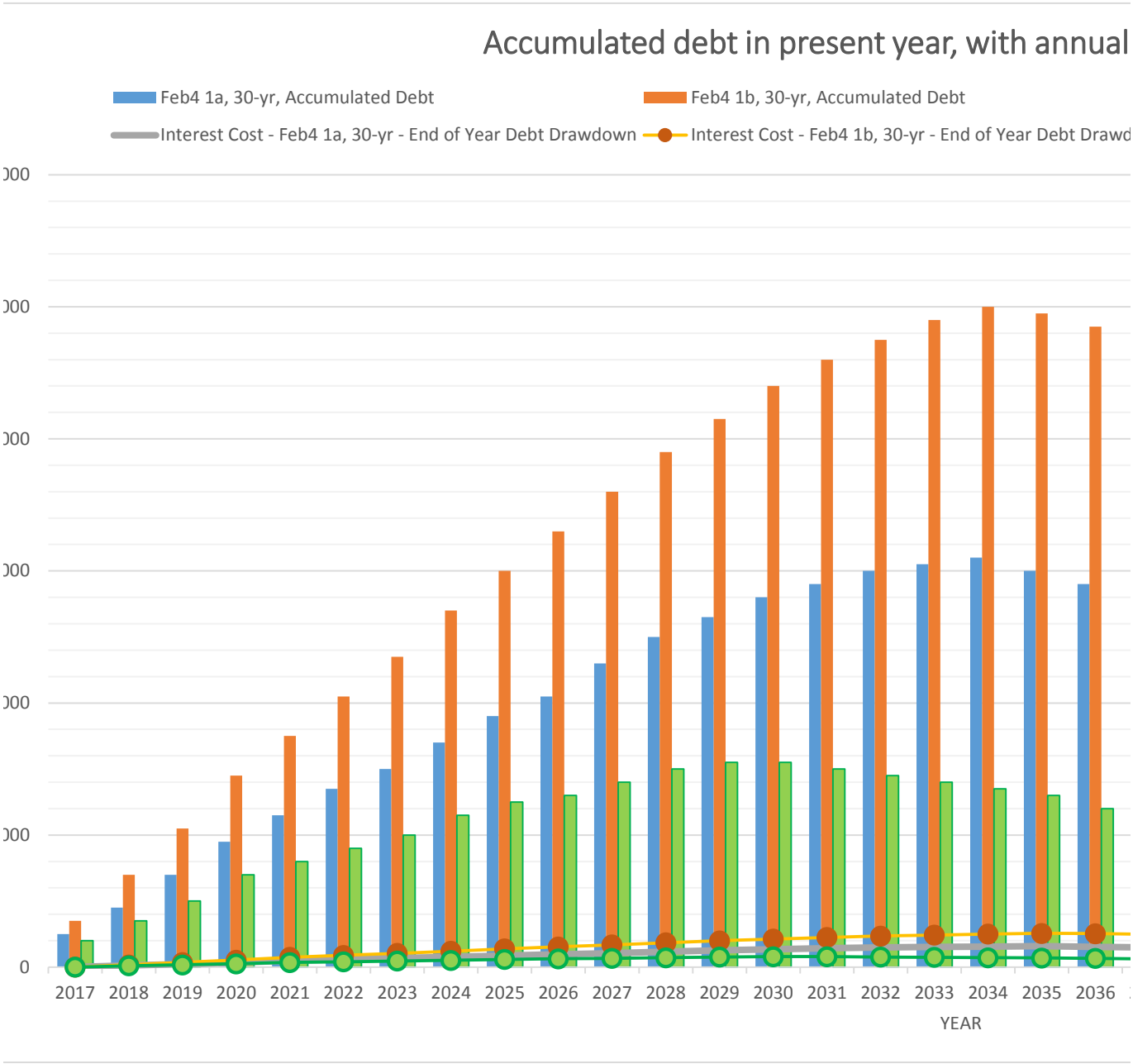
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
57	5,734	7,014	8,346	9,779	11,315	12,902	14,490	16,026	17,510	18,944	20,326	21,658
43	19,266	18,986	19,654	20,221	19,685	18,098	15,510	12,974	10,490	8,056	5,674	2,342
00	25,000	26,000	28,000	30,000	31,000	31,000	30,000	29,000	28,000	27,000	26,000	24,000

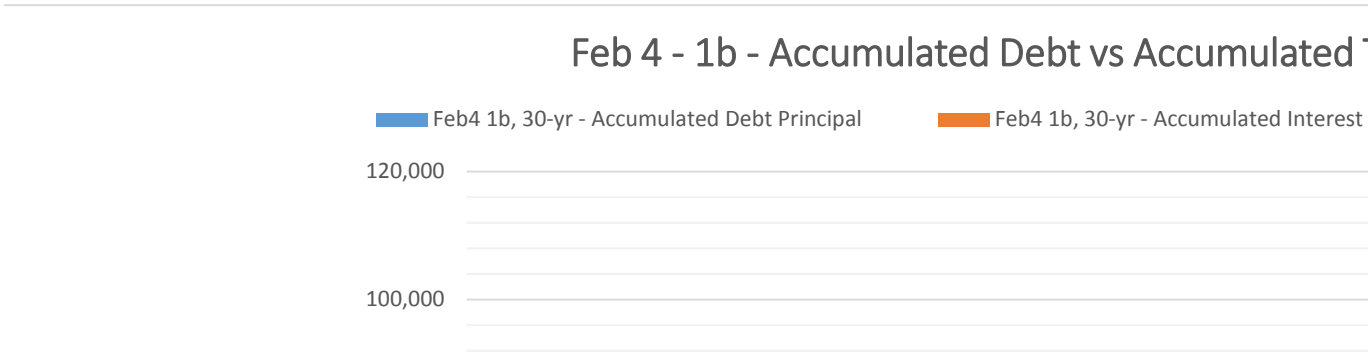
YEAR

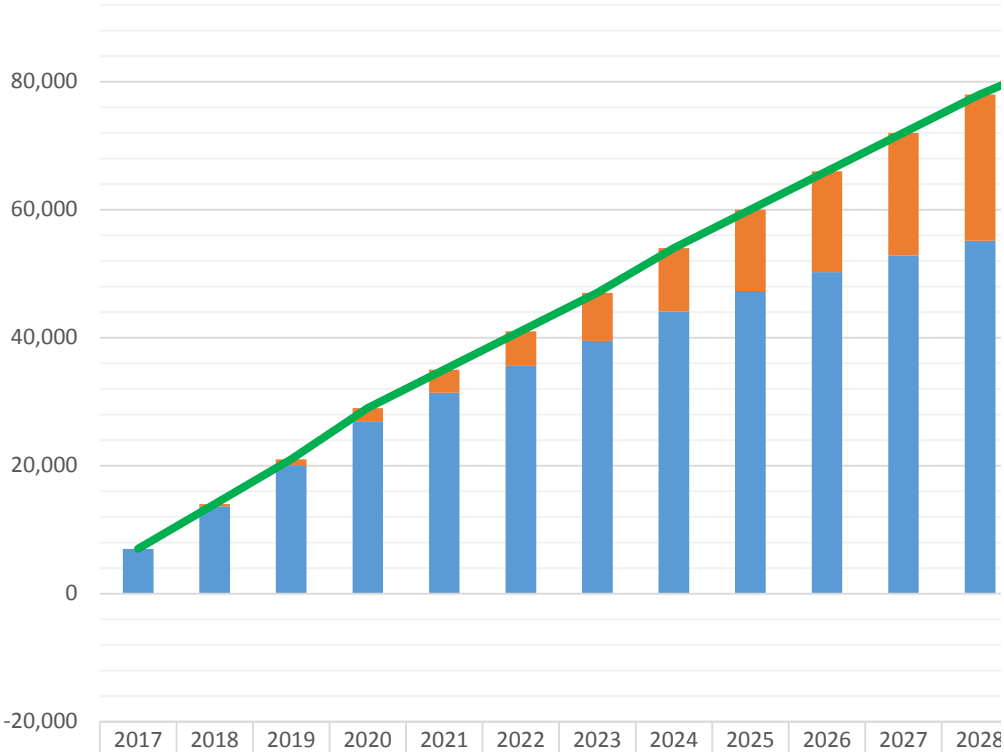


YEAR

ɜ - 25 year and 30 year Financing Terms, at 5% interest rate

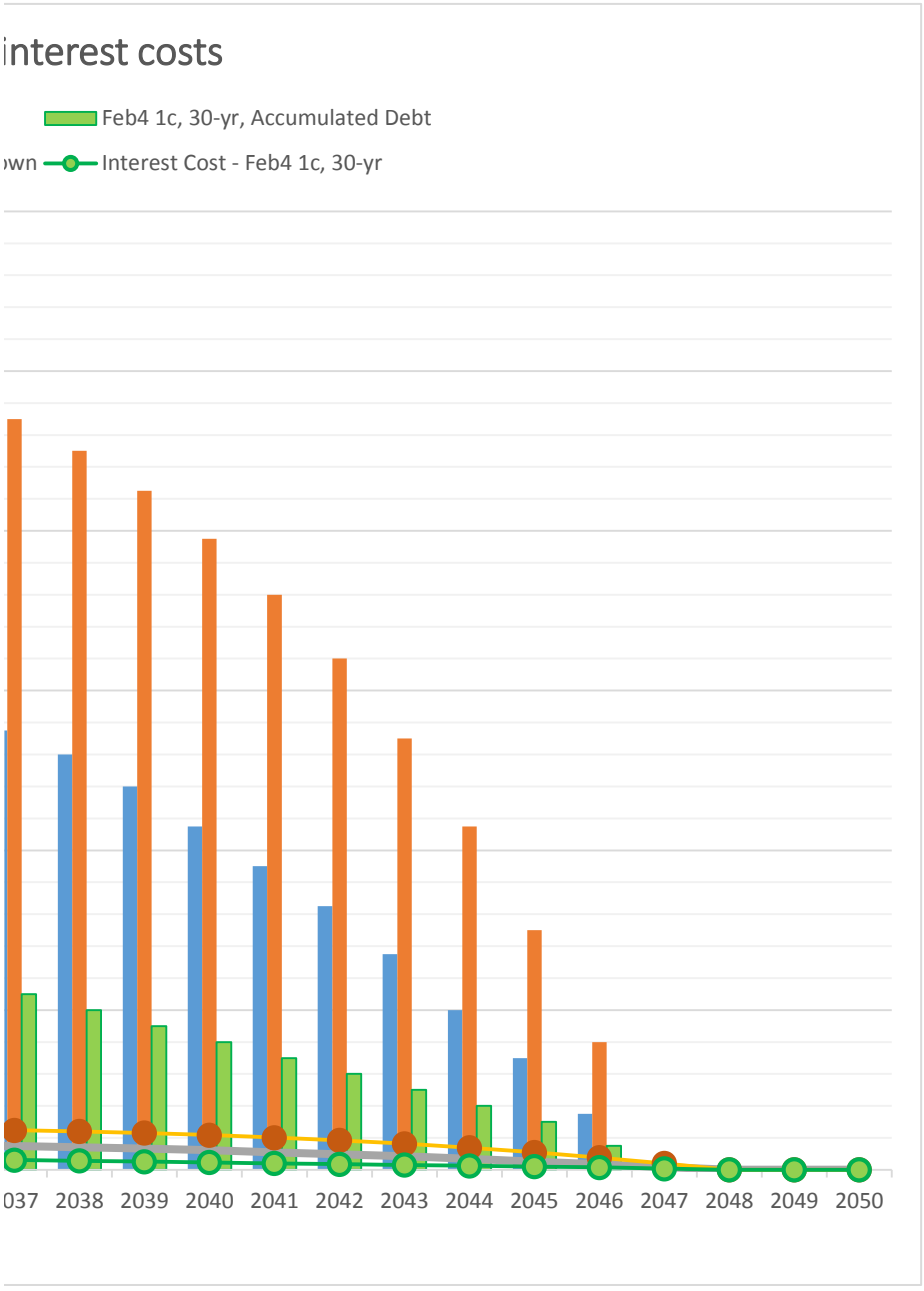


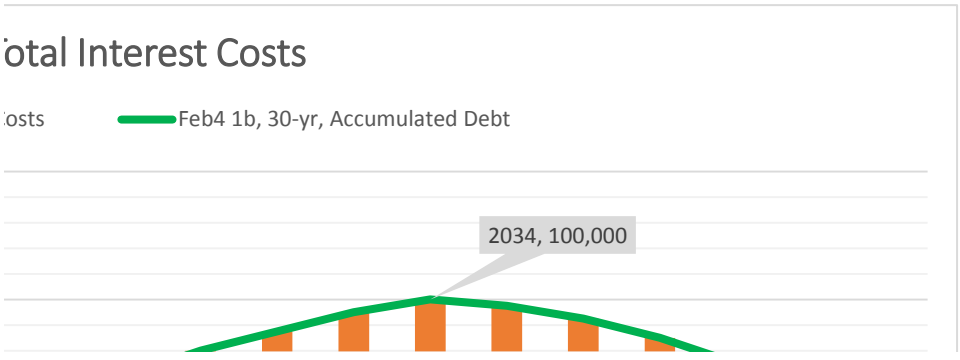

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000
100,000

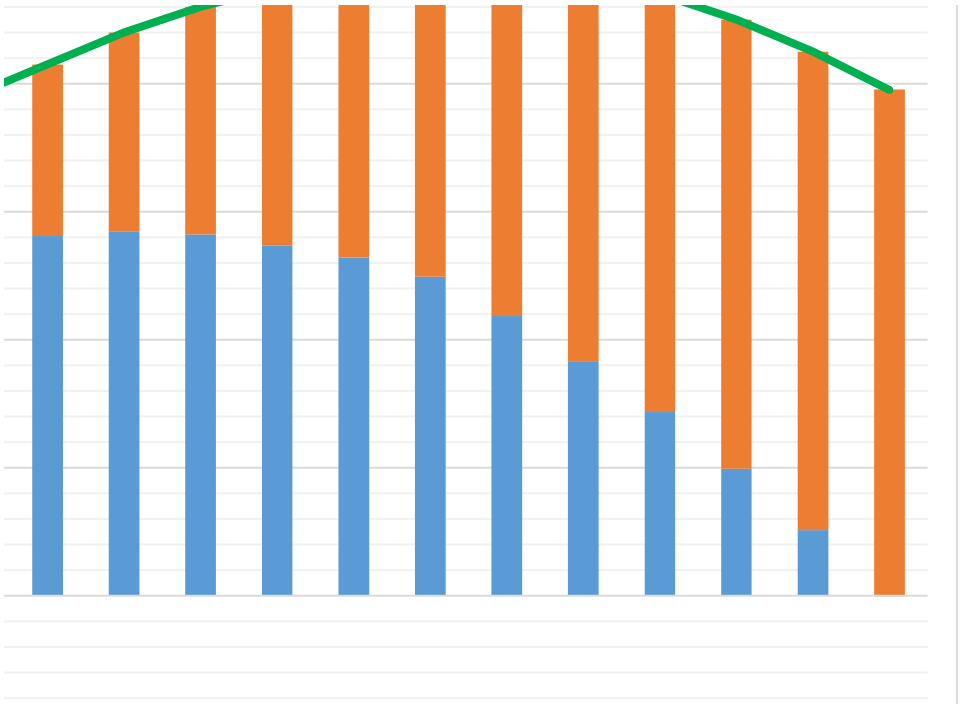


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	358	1,075	2,150	3,635	5,427	7,526	9,933	12,698	15,770	19,149	22,83
Feb4 1b, 30-yr - Accumulated Debt Principal	7,000	13,642	19,925	26,850	31,365	35,573	39,474	44,067	47,302	50,230	52,851	55,16
Feb4 1b, 30-yr, Accumulated Debt	7,000	14,000	21,000	29,000	35,000	41,000	47,000	54,000	60,000	66,000	72,000	78,00

Y


interest costs
Feb4 1c, 30-yr, Accumulated Debt
wn
Interest Cost - Feb4 1c, 30-yr
037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 100,000



	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
	26,829	31,078	35,584	40,294	45,158	50,176	55,296	60,365	65,331	70,144	74,752	79,104
	56,171	56,922	56,416	54,706	52,842	49,824	43,704	36,635	28,669	19,856	10,248	-104
	83,000	88,000	92,000	95,000	98,000	100,000	99,000	97,000	94,000	90,000	85,000	79,000

:AR

Equal Monthly Debt Drawdown

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

1a. GA Smoothing (Borrow $5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	5,119	4,095
Annual Exposure2 with start on July 1st	*1,702*	*4,095*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,280	4,863
Start: July 1st	-	2,726

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

1b. GA Smoothing (Borrow $7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	7,167	7,534
Annual Exposure2 with start on July 1st	*3,583*	*7,534*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,792	7,258
Start: July 1st	-	*9,050*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.

[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

1c. GA Smoothing (Borrow $4 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	2017	2018
Annual Exposure[2]	4,095	3,281
Annual Exposure2 with start on July 1st	*2,048*	*3,281*

Fiscalized[3]	2016-17	2017-18
Start: January 1st	1,024	3,892
Start: July 1st	-	*4,915*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9

	10 October	10
	11 November	11
	12 December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	1,792 - 1,280	7,258 - 4,863

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1280	4863
Debt-Finance Global Adjustment Costs, Option 1a	1792	7258

RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1280**	**5103**
Total, B	1792	7498

Proposed Program Total:	1,792 - 1,280	7,498 - 5,103

ining

1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
5,119	5,119	4,095	4,095
5,119	*5,119*	*4,095*	*4,095*

2018-19	2019-20	2020-21	2021-2022
4,351	5,119	4,863	4,095
4,351	*5,119*	*4,863*	*4,095*

king in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
7,919	9,349	7,780	8,178
7,919	*9,349*	*7,780*	*8,178*

2018-19	2019-20	2020-21	2021-2022
7,630	8,277	8,956	7,879
7,630	*8,277*	*8,956*	*7,879*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
3,449	4,649	2,840	2,985
3,449	*4,649*	*2,840*	*2,985*

2018-19	2019-20	2020-21	2021-2022
3,323	3,749	4,197	2,876
3,323	*3,749*	*4,197*	*2,876*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
7,630 - 4,351	8,277 - 5,119	8,956 - 4,863	7,879 - 4,095

/1

2018-19[1]	2019-20[1]	2020-21[1]
4351	5119	4863
7630	8277	8956

225	279	323
60	60	60
18	18	18
4654	**5476**	**5264**
7933	8634	9357

7,933 - 4,654 8,634 - 5,476 9,357 - 5,264

1a. GA Smoothing (Borrow $5 billion in 2017)

	2017
IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	7,095
Additional GA Debt Drawdown, End of Year	5,000

Ratepayer GA Payment

Total Accumulated Debt *($ billion)*	5,000
Total Change in Accumulated Debt *($ billion)*	5000

1b. GA Smoothing (Borrow $7 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	5,095
Additional GA Debt Drawdown, End of Year	7,000

Total Accumulated Debt *($ billion)*	7000
Total Change in Accumulated Debt *($ billion)*	7000

1c. GA Smoothing (Borrow $4 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	8,095
Additional GA Debt Drawdown, End of Year	4,000

Total Accumulated Debt *($ billion)*	4000
Total Change in Accumulated Debt *($ billion)*	4000

2018	2019	2020	2021	2022	2023	2024	2025
11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489
6,835	7,552	7,168	6,844	6,634	7,212	7,081	6,489
5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000

9,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000
5000	4000	5000	4000	4000	3000	4000	4000

11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489
4,835	4,552	4,168	4,844	4,634	4,212	4,081	4,489
7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000

14000	21000	28000	35000	41000	47000	53000	59000
7000	7000	8000	6000	6000	6000	7000	6000

11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489
8,835	8,552	8,168	8,844	8,634	8,212	8,081	8,489
3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000

7000	10000	14000	16000	19000	20000	23000	25000
3000	3000	4000	2000	2000	2000	3000	2000

2026	2027	2028	2029	2030	2031	2032	2033
10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147
7,020	6,975	6,764	6,919	6,650	6,587	6,758	7,147
3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000

41,000	46,000	50,000	53,000	56,000	58,000	60,000	61,000
3000	4000	4000	3000	3000	2000	2000	1000

10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147
4,020	4,975	4,764	4,919	4,650	4,587	5,758	5,147
6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000

65000	71000	77000	83000	88000	91000	95000	97000
6000	6000	6000	5000	5000	4000	3000	3000

10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147
9,020	8,975	8,764	8,919	9,650	9,587	9,758	9,147
1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000

26000	28000	30000	31000	31000	30000	29000	28000
1000	2000	2000	1000	0	-1000	-1000	-1000

2034	2035	2036	2037	2038	2039	2040	2041
7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109
6,670	7,553	7,281	8,022	7,777	8,543	9,320	9,109
1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000

62,000	60,000	58,000	55,000	52,000	48,000	43,000	38,000
1000	-2000	-2000	-3000	-3000	-4000	-5000	-5000

7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109
5,670	6,553	7,281	8,022	8,777	9,543	10,320	11,109
2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000

99000	98000	96000	94000	90000	85000	80000	73000
2000	-1000	-2000	-3000	-4000	-5000	-6000	-7000

7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109
8,670	6,553	7,281	7,022	6,777	6,543	6,320	6,109
-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000

27000	25000	23000	22000	20000	18000	16000	14000
-1000	-1000	-2000	-2000	-2000	-2000	-2000	-2000

2042	2043	2044	2045	2046	2047	2048
3,908	3,717	3,535	3,362	3,197	3,041	2,892
9,908	9,717	9,535	9,362	10,197	10,041	2,892
-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0

33,000	27,000	20,000	14,000	7,000	-	-	
-6000	-6000	-6000	-6000	-7000	-7000	0	

3,908	3,717	3,535	3,362	3,197	3,041	2,892
11,908	13,717	14,535	16,362	17,197	19,041	2,892
-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0

64000	55000	44000	31000	16000	0	0
-8000	-10000	-11000	-13000	-14000	-16000	0

3,908	3,717	3,535	3,362	3,197	3,041	2,892
5,908	5,717	5,535	5,362	6,197	6,041	2,892
-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0

12000	10000	8000	5000	3000	0	0
-2000	-2000	-2000	-2000	-3000	-3000	0

Feb4 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	5,000	4,000	5,000	5,000	4,000	4,000	3,000	4,000	4,000	3,000	5,000	4,000	3,000	3,000	2,000	2,000	1,000	1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000	-5,000	-6,000	-7,000	-6,000	-7,000	-7,000	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	5,119	4,095	5,119	5,119	4,095	4,095	3,071	4,095	4,095	3,071	5,119	4,095	3,071	3,071	2,048	2,048	1,024	1,024	-2,048	-2,048	-3,071	-3,071	-4,095	-5,119	-5,119	-5,119	-6,143	-7,167	-6,143	-7,167	-7,167	0	0	0	
			119	95	119	119	95	95	71	95	95	71	119	95	71	71	48	48	24	24	-48	-48	-71	-71	-95	-119	-119	-119	-143	-167	-143	-167	-167	0	0	0	0

Maximum Fiscal Exposure — Maximum Annual Interest Cost: 58,419

End of Year Debt Drawdown	5,000
Equal Monthly Debt Drawdown	5,119

End of Year Debt Drawdown	3,174
Equal Monthly Debt Drawdown	3,147

Maximum Accumulated Debt — Feb4 1a, 30-yr, Accumulated Debt

End of Year Debt Drawdown	62,000
Equal Monthly Debt Drawdown	63,476

			41%	32%	39%	35%	28%	27%																														
Feb4 1a, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow $5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		7,095	8,091	7,013	7,885	7,816	7,811	8,595	8,617	8,230	8,966	8,074	9,119	9,479	9,364	9,454	9,727	10,219	9,793	10,727	10,353	10,992	10,593	11,205	11,778	11,311	10,854	11,406	11,917	10,386	10,914	10,399	2,892	2,750	2,616	
	GA Debt Requirement		5,000	3,744	4,539	4,283	3,027	2,822	1,618	2,464	2,259	1,054	2,901	1,645	440	286	-867	-970	-2,072	-2,123	-5,174	-5,072	-5,970	-5,816	-6,662	-7,458	-7,202	-6,946	-7,690	-8,382	-7,024	-7,717	-7,358	0	0	0	
	Debt, Beginning of Year		0	5,000	9,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000	41,000	46,000	50,000	53,000	56,000	58,000	60,000	61,000	62,000	60,000	58,000	55,000	52,000	48,000	43,000	38,000	33,000	27,000	20,000	14,000	7,000	0	0	0	
a	*Interest Cost - Feb4 1a, 30-yr - End of Year Debt Drawdown*		*0*	*256*	*461*	*717*	*973*	*1,178*	*1,382*	*1,536*	*1,741*	*1,946*	*2,099*	*2,355*	*2,560*	*2,714*	*2,867*	*2,970*	*3,072*	*3,123*	*3,174*	*3,072*	*2,970*	*2,816*	*2,662*	*2,458*	*2,202*	*1,946*	*1,690*	*1,382*	*1,024*	*717*	*358*	*0*	*0*	*0*	*0*	58,419
b	Additional GA Debt Drawdown, End of Year		5,000	3,744	4,539	4,283	3,027	2,822	1,618	2,464	2,259	1,054	2,901	1,645	440	286	-867	-970	-2,072	-2,123	-5,174	-5,072	-5,970	-5,816	-6,662	-7,458	-7,202	-6,946	-7,690	-8,382	-7,024	-7,717	-7,358	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		5,000	9,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000	41,000	46,000	50,000	53,000	56,000	58,000	60,000	61,000	62,000	60,000	58,000	55,000	52,000	48,000	43,000	38,000	33,000	27,000	20,000	14,000	7,000	0	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	256	717	1,434	2,406	3,584	4,966	6,502	8,243	10,189	12,288	14,643	17,203	19,917	21,917	23,917	24,917	25,917	25,917	25,917	25,917	25,917	25,917	25,917	25,917	25,917	25,917	25,917	20,000	14,000	7,000	0	0	0	
	Feb4 1a, 30-yr - Accumulated Debt Principal		5,000	8,744	13,283	17,566	20,594	23,416	25,034	27,498	29,757	30,811	33,712	35,357	35,797	36,083	36,083	36,083	36,083	36,083	34,083	32,083	29,083	26,083	22,083	17,083	12,083	7,083	1,083	0	0	0	0	0	0	0	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	256	717	1,434	2,406	3,584	4,966	6,502	8,243	10,189	12,288	14,643	17,203	19,917	22,784	25,754	28,826	31,949	35,123	38,195	41,165	43,981	46,643	49,101	51,302	53,248	54,938	56,320	57,344	58,061	58,419				
	Feb4 1a, 30-yr - Accumulated Debt Principal		5,000	8,744	13,283	17,566	20,594	23,416	25,034	27,498	29,757	30,811	33,712	35,357	35,797	36,083	35,216	34,246	32,174	30,051	24,877	19,805	13,835	8,019	1,357	-6,101	-13,302	-20,248	-27,938	-36,320	-43,344	-51,061	-58,419				
Fiscal Exposure - End of Year Debt Drawdown			5,000	4,000	5,000	5,000	4,000	4,000	3,000	4,000	4,000	3,000	5,000	4,000	3,000	3,000	2,000	2,000	1,000	1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000	-5,000	-6,000	-7,000	-6,000	-7,000	-7,000	0	0	0	

Feb4 1a, 30-yr	Equal Monthly Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			12																																		
1a. GA Smoothing (Borrow $5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		7,095	8,091	7,013	7,885	7,816	7,811	8,595	8,617	8,230	8,966	8,074	9,119	9,479	9,364	9,454	9,727	10,219	9,793	10,727	10,353	10,992	10,593	11,205	11,778	11,311	10,854	11,406	11,917	10,386	10,914	10,399	2,892	2,750	2,616	
	GA Debt Requirement		5,000	3,744	4,539	4,283	3,027	2,822	1,618	2,464	2,259	1,054	2,901	1,645	440	286	-867	-970	-2,072	-2,123	-5,174	-5,072	-5,970	-5,816	-6,662	-7,458	-7,202	-6,946	-7,690	-8,382	-7,024	-7,717	-7,358	0	0	0	
	Debt, Beginning of Year		0	5,119	9,214	14,333	19,452	23,547	27,643	30,714	34,809	38,905	41,976	47,095	51,190	54,262	57,333	59,381	61,428	62,452	63,476	61,428	59,381	56,309	53,238	49,143	44,024	38,905	33,786	27,643	20,476	14,333	7,167	0	0	0	
3,147	*Interest Cost - Feb4 1a, 30-yr*		*119*	*351*	*580*	*836*	*1,068*	*1,273*	*1,454*	*1,631*	*1,836*	*2,017*	*2,218*	*2,450*	2,631	*2,785*	*2,915*	*3,017*	*3,096*	*3,147*	*3,127*	*3,024*	*2,898*	*2,745*	*2,567*	*2,339*	*2,083*	*1,827*	*1,547*	*1,216*	*881*	*550*	*192*	*0*	*0*	*0*	58,419
	Additional GA Debt Drawdown		5,000	3,744	4,539	4,283	3,027	2,822	1,618	2,464	2,259	1,054	2,901	1,645	440	286	-867	-970	-2,072	-2,123	-5,174	-5,072	-5,970	-5,816	-6,662	-7,458	-7,202	-6,946	-7,690	-8,382	-7,024	-7,717	-7,358	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		5,119	9,214	14,333	19,452	23,547	27,643	30,714	34,809	38,905	41,976	47,095	51,190	54,262	57,333	59,381	61,428	62,452	63,476	61,428	59,381	56,309	53,238	49,143	44,024	38,905	33,786	27,643	20,476	14,333	7,167	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			5,119	4,095	5,119	5,119	4,095	4,095	3,071	4,095	4,095	3,071	5,119	4,095	3,071	3,071	2,048	2,048	1,024	1,024	-2,048	-2,048	-3,071	-3,071	-4,095	-5,119	-5,119	-5,119	-6,143	-7,167	-6,143	-7,167	-7,167	0	0	0	
	Monthly Drawdown		417	312	378	357	252	235	135	205	188	88	242	137	37	24	(72)	(81)	(173)	(177)	(431)	(423)	(497)	(485)	(555)	(621)	(600)	(579)	(641)	(699)	(585)	(643)	(613)	-	-	-	
	FV of Monthly Drawdown at 5%		5,119	3,833	4,647	4,385	3,099	2,890	1,656	2,523	2,313	1,079	2,970	1,684	450	293	(888)	(993)	(2,121)	(2,174)	(5,298)	(5,193)	(6,112)	(5,954)	(6,821)	(7,635)	(7,373)	(7,111)	(7,873)	(8,582)	(7,191)	(7,900)	(7,534)	-	-	-	
	Annual Interest Cost on New Drawdowns		119	89	108	102	72	67	39	59	54	25	69	39	10	7	(21)	(23)	(49)	(51)	(123)	(121)	(142)	(138)	(159)	(178)	(171)	(165)	(183)	(200)	(167)	(184)	(175)	-	-	-	
	Annual Interest Cost on Opening Balance		-	262	472	734	996	1,206	1,415	1,573	1,782	1,992	2,149	2,411	2,621	2,778	2,935	3,040	3,145	3,198	3,250	3,145	3,040	2,883	2,726	2,516	2,254	1,992	1,730	1,415	1,048	734	367	0	0	0	
	Total Annual Interest Cost		119	351	580	836	1,068	1,273	1,454	1,631	1,836	2,017	2,218	2,450	2,631	2,785	2,915	3,017	3,096	3,147	3,127	3,024	2,898	2,745	2,567	2,339	2,083	1,827	1,547	1,216	881	550	192	0	0	0	

Feb4 1a, 30-yr	Bi-Annual Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			2																																		
1a. GA Smoothing (Borrow $5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		7,095	8,091	7,013	7,885	7,816	7,811	8,595	8,617	8,230	8,966	8,074	9,119	9,479	9,364	9,454	9,727	10,219	9,793	10,727	10,353	10,992	10,593	11,205	11,778	11,311	10,854	11,406	11,917	10,386	10,914	10,399	2,892	2,750	2,616	
	GA Debt Requirement		5,000	3,744	4,539	4,283	3,027	2,822	1,618	2,464	2,259	1,054	2,901	1,645	440	286	-867	-970	-2,072	-2,123	-5,174	-5,072	-5,970	-5,816	-6,662	-7,458	-7,202	-6,946	-7,690	-8,382	-7,024	-7,717	-7,358	0	0	0	
	Debt, Beginning of Year		0	5,064	9,115	14,179	19,243	23,294	27,346	30,384	34,435	38,486	41,525	46,589	50,640	53,678	56,717	58,742	60,768	61,781	62,794	60,768	58,742	55,704	52,666	48,614	43,550	38,486	33,422	27,346	20,256	14,179	7,090	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*64*	*307*	*525*	*781*	*1,024*	*1,229*	*1,421*	*1,587*	*1,792*	*1,984*	*2,163*	*2,406*	*2,598*	*2,752*	*2,893*	*2,995*	*3,085*	*3,136*	*3,149*	*3,046*	*2,931*	*2,778*	*2,611*	*2,394*	*2,138*	*1,882*	*1,613*	*1,293*	*947*	*627*	*269*	*0*	*0*	*0*	58,419
	Additional GA Debt Drawdown		5,000	3,744	4,539	4,283	3,027	2,822	1,618	2,464	2,259	1,054	2,901	1,645	440	286	-867	-970	-2,072	-2,123	-5,174	-5,072	-5,970	-5,816	-6,662	-7,458	-7,202	-6,946	-7,690	-8,382	-7,024	-7,717	-7,358	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		5,064	9,115	14,179	19,243	23,294	27,346	30,384	34,435	38,486	41,525	46,589	50,640	53,678	56,717	58,742	60,768	61,781	62,794	60,768	58,742	55,704	52,666	48,614	43,550	38,486	33,422	27,346	20,256	14,179	7,090	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown			5,064	4,051	5,064	5,064	4,051	4,051	3,038	4,051	4,051	3,038	5,064	4,051	3,038	3,038	2,026	2,026	1,013	1,013	-2,026	-2,026	-3,038	-3,038	-4,051	-5,064	-5,064	-5,064	-6,077	-7,090	-6,077	-7,090	-7,090	0	0	0	
	Bi-Annual Drawdown		2,500	1,872	2,270	2,142	1,514	1,411	809	1,232	1,130	527	1,450	822	220	143	(434)	(485)	(1,036)	(1,062)	(2,587)	(2,536)	(2,985)	(2,908)	(3,331)	(3,729)	(3,601)	(3,473)	(3,845)	(4,191)	(3,512)	(3,858)	(3,679)	-	-	-	
	FV of Bi-Annual Drawdown at 5%		5,064	3,792	4,597	4,338	3,066	2,859	1,638	2,496	2,288	1,068	2,938	1,666	446	290	(878)	(982)	(2,099)	(2,150)	(5,241)	(5,137)	(6,046)	(5,890)	(6,748)	(7,553)	(7,294)	(7,035)	(7,788)	(8,490)	(7,114)	(7,816)	(7,453)	-	-	-	
	Annual Interest Cost on New Drawdowns		64	48	58	55	39	36	21	32	29	13	37	21	6	4	(11)	(12)	(27)	(27)	(66)	(65)	(76)	(74)	(85)	(95)	(92)	(89)	(98)	(107)	(90)	(99)	(94)	-	-	-	
	Annual Interest Cost on Opening Balance		-	259	467	726	985	1,193	1,400	1,556	1,763	1,971	2,126	2,385	2,593	2,748	2,904	3,008	3,111	3,163	3,215	3,111	3,008	2,852	2,696	2,489	2,230	1,971	1,711	1,400	1,037	726	363	0	0	0	
	Total Annual Interest Cost		64	307	525	781	1,024	1,229	1,421	1,587	1,792	1,984	2,163	2,406	2,598	2,752	2,893	2,995	3,085	3,136	3,149	3,046	2,931	2,778	2,611	2,394	2,138	1,882	1,613	1,293	947	627	269	0	0	0	

Feb4 1a, 30-yr	Average Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow $5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		7,095	8,091	7,013	7,885	7,816	7,811	8,595	8,617	8,230	8,966	8,074	9,119	9,479	9,364	9,454	9,727	10,219	9,793	10,727	10,353	10,992	10,593	11,205	11,778	11,311	10,854	11,406	11,917	10,386	10,914	10,399	2,892	2,750	2,616	
	GA Debt Requirement		5,000	3,744	4,539	4,283	3,027	2,822	1,618	2,464	2,259	1,054	2,901	1,645	440	286	-867	-970	-2,072	-2,123	-5,174	-5,072	-5,970	-5,816	-6,662	-7,458	-7,202	-6,946	-7,690	-8,382	-7,024	-7,717	-7,358	0	0	0	
	Debt, Beginning of Year		0	5,128	9,230	14,358	19,486	23,589	27,691	30,768	34,870	38,973	42,050	47,178	51,280	54,357	57,434	59,485	61,536	62,562	63,587	61,536	59,485	56,408	53,331	49,229	44,101	38,973	33,845	27,691	20,512	14,358	7,179	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*128*	*358*	*589*	*845*	*1,075*	*1,280*	*1,459*	*1,638*	*1,843*	*2,022*	*2,227*	*2,458*	*2,637*	*2,790*	*2,918*	*3,021*	*3,098*	*3,149*	*3,123*	*3,021*	*2,893*	*2,739*	*2,560*	*2,330*	*2,074*	*1,818*	*1,536*	*1,203*	*870*	*538*	*179*	*0*	*0*	*0*	58,419
	Additional GA Debt Drawdown		5,000	3,744	4,539	4,283	3,027	2,822	1,618	2,464	2,259	1,054	2,901	1,645	440	286	-867	-970	-2,072	-2,123	-5,174	-5,072	-5,970	-5,816	-6,662	-7,458	-7,202	-6,946	-7,690	-8,382	-7,024	-7,717	-7,358	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		5,128	9,230	14,358	19,486	23,589	27,691	30,768	34,870	38,973	42,050	47,178	51,280	54,357	57,434	59,485	61,536	62,562	63,587	61,536	59,485	56,408	53,331	49,229	44,101	38,973	33,845	27,691	20,512	14,358	7,179	0	0	0	
Fiscal Exposure - Average Debt Drawdown			5,128	4,102	5,128	5,128	4,102	4,102	3,077	4,102	4,102	3,077	5,128	4,102	3,077	3,077	2,051	2,051	1,026	1,026	-2,051	-2,051	-3,077	-3,077	-4,102	-5,128	-5,128	-5,128	-6,154	-7,179	-6,154	-7,179	-7,179	0	0	0	

Feb4 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.1%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	7,000	7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000	6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000	2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000	-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	7,167	7,534	7,919	9,349	7,780	8,178	8,597	10,061	9,552	10,041	10,555	11,095	10,640	11,184	10,733	10,259	10,784	10,313	7,769	7,143	6,485	5,793	5,066	4,302	3,498	2,654	742	-244	-2,304	-3,446	-5,670	10,421	10,954	11,515	
			167	534	919	1,349	1,780	2,178	2,597	3,061	3,552	4,041	4,555	5,095	5,640	6,184	6,733	7,259	7,784	8,313	8,769	9,143	9,485	9,793	10,066	10,302	10,498	10,654	10,742	10,756	10,696	10,554	10,330	10,421	10,954	11,515	236,418

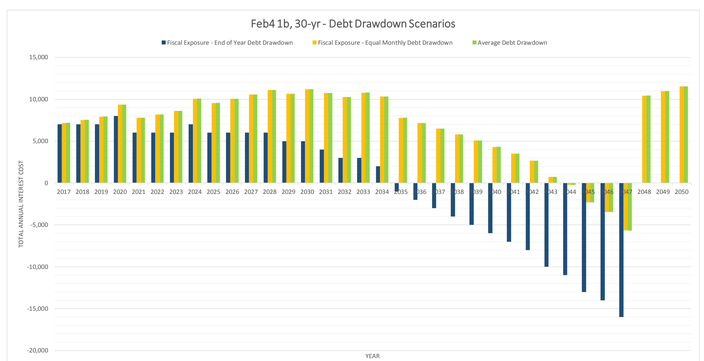
Maximum Fiscal Exposure	Maximum Annual Interest Cost	236,418
End of Year Debt Drawdown	8,000	5,120
Equal Monthly Debt Drawdown	11,515	11,515
Maximum Accumulated Debt	Feb4 1b, 30-yr, Accumulated Debt	
End of Year Debt Drawdown	100,000	
Equal Monthly Debt Drawdown	236,418	

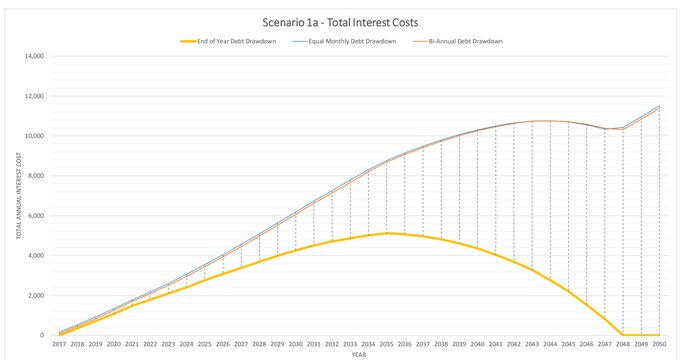
			58%	59%	61%	66%	55%	56%																														
Feb4 1b, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1b. GA Smoothing (Borrow $7 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		5,095	4,835	4,552	4,168	4,844	4,634	4,212	4,081	4,489	4,020	4,975	4,764	4,919	4,650	4,587	5,758	5,147	5,670	6,553	7,281	8,022	8,777	9,543	10,320	11,109	11,908	13,717	14,535	16,362	17,197	19,041	2,892	2,750	2,616	
	GA Debt Requirement		7,000	7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000	6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000	2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000	-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0	0	0	
a	Debt, Beginning of Year		0	7,000	14,000	21,000	29,000	35,000	41,000	47,000	54,000	60,000	66,000	72,000	78,000	83,000	88,000	92,000	95,000	98,000	100,000	99,000	97,000	94,000	90,000	85,000	79,000	72,000	64,000	54,000	43,000	30,000	16,000	0	0	0	
c = a*5%	*Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown*		*0*	*358*	*717*	*1,075*	*1,485*	*1,792*	*2,099*	*2,406*	*2,765*	*3,072*	*3,379*	*3,686*	*3,994*	*4,250*	*4,506*	*4,710*	*4,864*	*5,018*	*5,120*	*5,069*	*4,966*	*4,813*	*4,608*	*4,352*	*4,045*	*3,686*	*3,277*	*2,765*	*2,202*	*1,536*	*819*	*0*	*0*	*0*	97,434
b	Additional GA Debt Drawdown, End of Year		7,000	6,642	6,283	6,925	4,515	4,208	3,901	4,594	3,235	2,928	2,621	2,314	1,006	750	-506	-1,710	-1,864	-3,018	-6,120	-7,069	-7,966	-8,813	-9,608	-10,352	-11,045	-11,686	-13,277	-13,765	-15,202	-15,536	-16,819	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		7,000	14,000	21,000	29,000	35,000	41,000	47,000	54,000	60,000	66,000	72,000	78,000	83,000	88,000	92,000	95,000	98,000	100,000	99,000	97,000	94,000	90,000	85,000	79,000	72,000	64,000	54,000	43,000	30,000	16,000	0	0	0	0	
	Feb4 1b, 30-yr - Accumulated Interest Costs		0	358	1,075	2,150	3,635	5,427	7,526	9,933	12,698	15,770	19,149	22,835	26,829	31,078	35,584	40,294	45,158	50,176	55,296	60,365	65,331	70,144	74,752	79,104	83,149	86,835	90,112	92,877	95,078	96,614	97,434				
	Feb4 1b, 30-yr - Accumulated Debt Principal		7,000	13,642	19,925	26,850	31,365	35,573	39,474	44,067	47,302	50,230	52,851	55,165	56,171	56,922	56,416	54,706	52,842	49,824	43,704	36,635	28,669	19,856	10,248	-104	-11,149	-22,835	-36,112	-49,877	-65,078	-80,614	-97,434				
Fiscal Exposure - End of Year Debt Drawdown			7,000	7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000	6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000	2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000	-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0	0	0	

Feb4 1b, 30-yr	Equal Monthly Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			12																																		
1b. GA Smoothing (Borrow $7 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		5,095	4,835	4,552	4,168	4,844	4,634	4,212	4,081	4,489	4,020	4,975	4,764	4,919	4,650	4,587	5,758	5,147	5,670	6,553	7,281	8,022	8,777	9,543	10,320	11,109	11,908	13,717	14,535	16,362	17,197	19,041	2,892	2,750	2,616	
	GA Debt Requirement		7,000	7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000	6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000	2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000	-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0	0	0	
	Debt, Beginning of Year		0	7,167	14,700	22,619	31,968	39,748	47,925	56,522	66,583	76,135	86,175	96,730	107,826	118,466	129,650	140,383	150,642	161,427	171,739	179,509	186,652	193,137	198,930	203,997	208,298	211,797	214,450	215,192	214,948	212,644	209,198	203,528	213,949	224,903	
11,515	*Interest Cost - Feb4 1b, 30-yr*		*167*	*534*	*919*	*1,349*	*1,780*	*2,178*	*2,597*	*3,061*	*3,552*	*4,041*	*4,555*	*5,095*	*5,640*	*6,184*	*6,733*	*7,259*	*7,784*	*8,313*	*8,769*	*9,143*	*9,485*	*9,793*	*10,066*	*10,302*	*10,498*	*10,654*	*10,742*	*10,756*	*10,696*	*10,554*	*10,330*	*10,421*	*10,954*	*11,515*	236,418
	Additional GA Debt Drawdown		7,000	7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000	6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000	2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000	-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		7,167	14,700	22,619	31,968	39,748	47,925	56,522	66,583	76,135	86,175	96,730	107,826	118,466	129,650	140,383	150,642	161,427	171,739	179,509	186,652	193,137	198,930	203,997	208,298	211,797	214,450	215,192	214,948	212,644	209,198	203,528	213,949	224,903	236,418	
Fiscal Exposure - Equal Monthly Debt Drawdown			7,167	7,534	7,919	9,349	7,780	8,178	8,597	10,061	9,552	10,041	10,555	11,095	10,640	11,184	10,733	10,259	10,784	10,313	7,769	7,143	6,485	5,793	5,066	4,302	3,498	2,654	742	-244	-2,304	-3,446	-5,670	10,421	10,954	11,515	
	Monthly Drawdown		583	583	583	667	500	500	500	583	500	500	500	500	417	417	333	250	250	167	(83)	(167)	(250)	(333)	(417)	(500)	(583)	(667)	(833)	(917)	(1,083)	(1,167)	(1,333)	-	-	-	
	FV of Monthly Drawdown at 5%		7,167	7,167	7,167	8,190	6,143	6,143	6,143	7,167	6,143	6,143	6,143	6,143	5,119	5,119	4,095	3,071	3,071	2,048	(1,024)	(2,048)	(3,071)	(4,095)	(5,119)	(6,143)	(7,167)	(8,190)	(10,238)	(11,262)	(13,309)	(14,333)	(16,381)	-	-	-	
	Annual Interest Cost on New Drawdowns		167	167	167	190	143	143	143	167	143	143	143	143	119	119	95	71	71	48	(24)	(48)	(71)	(95)	(119)	(143)	(167)	(190)	(238)	(262)	(309)	(333)	(381)	-	-	-	
	Annual Interest Cost on Opening Balance		-	367	753	1,158	1,637	2,035	2,454	2,894	3,409	3,898	4,412	4,953	5,521	6,065	6,638	7,188	7,713	8,265	8,793	9,191	9,557	9,889	10,185	10,445	10,665	10,844	10,980	11,018	11,005	10,887	10,711	10,421	10,954	11,515	
	Total Annual Interest Cost		167	534	919	1,349	1,780	2,178	2,597	3,061	3,552	4,041	4,555	5,095	5,640	6,184	6,733	7,259	7,784	8,313	8,769	9,143	9,485	9,793	10,066	10,302	10,498	10,654	10,742	10,756	10,696	10,554	10,330	10,421	10,954	11,515	

Feb4 1b, 30-yr	Bi-Annual Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			2																																		
1b. GA Smoothing (Borrow $7 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		5,095	4,835	4,552	4,168	4,844	4,634	4,212	4,081	4,489	4,020	4,975	4,764	4,919	4,650	4,587	5,758	5,147	5,670	6,553	7,281	8,022	8,777	9,543	10,320	11,109	11,908	13,717	14,535	16,362	17,197	19,041	2,892	2,750	2,616	
	GA Debt Requirement		7,000	7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000	6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000	2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000	-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0	0	0	
	Debt, Beginning of Year		0	7,090	14,542	22,376	31,624	39,320	47,410	55,915	65,867	75,316	85,249	95,691	106,667	117,192	128,257	138,874	149,023	159,692	169,893	177,579	184,646	191,061	196,792	201,804	206,060	209,520	212,145	212,879	212,638	210,358	206,949	201,340	211,649	222,486	
	Interest Cost - Feb4 1b, 30-yr		*90*	*453*	*834*	*1,248*	*1,696*	*2,090*	*2,504*	*2,952*	*3,449*	*3,933*	*4,442*	*4,976*	*5,525*	*6,064*	*6,618*	*7,149*	*7,668*	*8,202*	*8,686*	*9,066*	*9,415*	*9,731*	*10,012*	*10,256*	*10,461*	*10,625*	*10,734*	*10,759*	*10,721*	*10,591*	*10,391*	*10,309*	*10,836*	*11,391*	233,877	
	Additional GA Debt Drawdown		7,000	7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000	6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000	2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000	-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		7,090	14,542	22,376	31,624	39,320	47,410	55,915	65,867	75,316	85,249	95,691	106,667	117,192	128,257	138,874	149,023	159,692	169,893	177,579	184,646	191,061	196,792	201,804	206,060	209,520	212,145	212,879	212,638	210,358	206,949	201,340	211,649	222,486	233,877	
Fiscal Exposure - Bi-Annual Debt Drawdown			7,090	7,453	7,834	9,248	7,696	8,090	8,504	9,952	9,449	9,933	10,442	10,976	10,525	11,064	10,618	10,149	10,668	10,202	7,686	7,066	6,415	5,731	5,012	4,256	3,461	2,625	734	-241	-2,279	-3,409	-5,609	10,309	10,836	11,391	
	Bi-Annual Drawdown		3,500	3,500	3,500	4,000	3,000	3,000	3,000	3,500	3,000	3,000	3,000	3,000	2,500	2,500	2,000	1,500	1,500	1,000	(500)	(1,000)	(1,500)	(2,000)	(2,500)	(3,000)	(3,500)	(4,000)	(5,000)	(5,500)	(6,500)	(7,000)	(8,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%		7,090	7,090	7,090	8,102	6,077	6,077	6,077	7,090	6,077	6,077	6,077	6,077	5,064	5,064	4,051	3,038	3,038	2,026	(1,013)	(2,026)	(3,038)	(4,051)	(5,064)	(6,077)	(7,090)	(8,102)	(10,128)	(11,141)	(13,166)	(14,179)	(16,205)	-	-	-	
	Annual Interest Cost on New Drawdowns		90	90	90	102	77	77	77	90	77	77	77	77	64	64	51	38	38	26	(13)	(26)	(38)	(51)	(64)	(77)	(90)	(102)	(128)	(141)	(166)	(179)	(205)	-	-	-	
	Annual Interest Cost on Opening Balance		-	363	745	1,146	1,619	2,013	2,427	2,863	3,372	3,856	4,365	4,899	5,461	6,000	6,567	7,110	7,630	8,176	8,699	9,092	9,454	9,782	10,076	10,332	10,550	10,727	10,862	10,899	10,887	10,770	10,596	10,309	10,836	11,391	
	Total Annual Interest Cost		90	453	834	1,248	1,696	2,090	2,504	2,952	3,449	3,933	4,442	4,976	5,525	6,064	6,618	7,149	7,668	8,202	8,686	9,066	9,415	9,731	10,012	10,256	10,461	10,625	10,734	10,759	10,721	10,591	10,391	10,309	10,836	11,391	

Feb4 1b, 30-yr	Average Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1b. GA Smoothing (Borrow $7 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		5,095	4,835	4,552	4,168	4,844	4,634	4,212	4,081	4,489	4,020	4,975	4,764	4,919	4,650	4,587	5,758	5,147	5,670	6,553	7,281	8,022	8,777	9,543	10,320	11,109	11,908	13,717	14,535	16,362	17,197	19,041	2,892	2,750	2,616	
	GA Debt Requirement		7,000	7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000	6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000	2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000	-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0	0	0	
	Debt, Beginning of Year		0	7,179	14,726	22,659	32,024	39,817	48,010	56,621	66,699	76,268	86,327	96,900	108,015	118,673	129,877	140,630	150,907	161,710	172,041	179,823	186,979	193,476	199,279	204,354	208,664	212,168	214,826	215,569	215,325	213,017	209,565	203,885	214,324	225,297	
	Interest Cost - Feb4 1b, 30-yr		*179*	*547*	*933*	*1,365*	*1,793*	*2,192*	*2,612*	*3,078*	*3,569*	*4,059*	*4,574*	*5,115*	*5,658*	*6,204*	*6,752*	*7,277*	*7,803*	*8,331*	*8,783*	*9,156*	*9,497*	*9,804*	*10,075*	*10,309*	*10,504*	*10,658*	*10,743*	*10,756*	*10,692*	*10,548*	*10,320*	*10,439*	*10,973*	*11,535*	236,833	
	Additional GA Debt Drawdown		7,000	7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000	6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000	2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000	-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		7,179	14,726	22,659	32,024	39,817	48,010	56,621	66,699	76,268	86,327	96,900	108,015	118,673	129,877	140,630	150,907	161,710	172,041	179,823	186,979	193,476	199,279	204,354	208,664	212,168	214,826	215,569	215,325	213,017	209,565	203,885	214,324	225,297	236,833	
Fiscal Exposure - Average Debt Drawdown			7,179	7,547	7,933	9,365	7,793	8,192	8,612	10,078	9,569	10,059	10,574	11,115	10,658	11,204	10,752	10,277	10,803	10,331	7,783	7,156	6,497	5,804	5,075	4,309	3,504	2,658	743	-244	-2,308	-3,452	-5,680	10,439	10,973	11,535	





Feb4 1c, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.1%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,000	3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000	1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000	-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,095	3,281	3,449	4,649	2,840	2,985	3,138	4,323	3,520	2,677	3,837	4,034	3,217	2,358	1,454	1,529	1,607	1,689	1,776	843	886	932	979	1,029	1,082	1,138	1,196	1,257	1,321	365	384	3,475	3,653	3,840	
			95	281	449	649	840	985	1,138	1,323	1,520	1,677	1,837	2,034	2,217	2,358	2,454	2,529	2,607	2,689	2,776	2,843	2,886	2,932	2,979	3,029	3,082	3,138	3,196	3,257	3,321	3,365	3,384	3,475	3,653	3,840	78,841

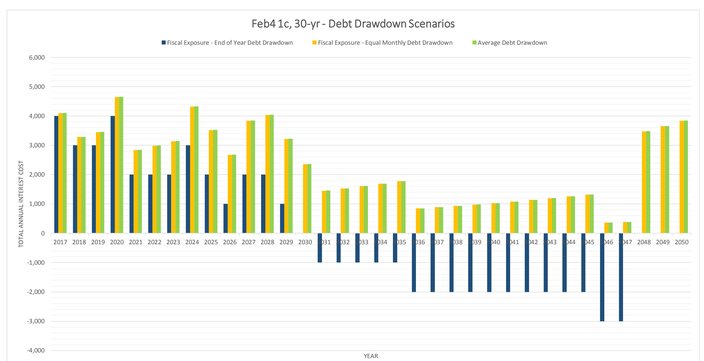
Maximum Fiscal Exposure	Maximum Annual Interest Cost	78,841
End of Year Debt Drawdown	4,000	1,587
Equal Monthly Debt Drawdown	4,649	3,840
Maximum Accumulated Debt	Feb4 1c, 30-yr, Accumulated Debt	
End of Year Debt Drawdown	31,000	
Equal Monthly Debt Drawdown	78,841	

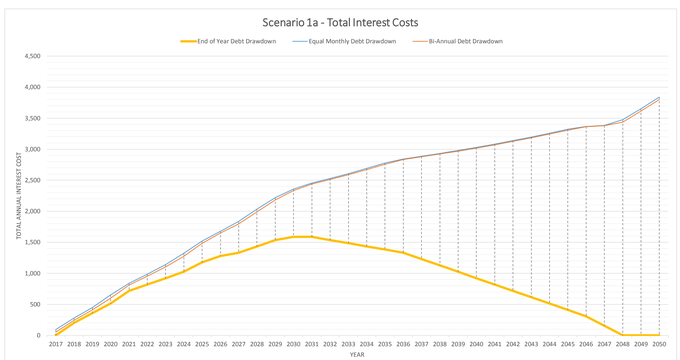
		33%	25%	26%	33%	18%	19%																														
Feb4 1c, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow $4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,095	8,835	8,552	8,168	8,844	8,634	8,212	8,081	8,489	9,020	8,975	8,764	8,919	9,650	9,587	9,758	9,147	8,670	6,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	6,197	6,041	2,892	2,750	2,616	
	GA Debt Requirement	4,000	3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000	1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000	-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0	0	0	
a	Debt, Beginning of Year	0	4,000	7,000	10,000	14,000	16,000	18,000	20,000	23,000	25,000	26,000	28,000	30,000	31,000	31,000	30,000	29,000	28,000	27,000	26,000	24,000	22,000	20,000	18,000	16,000	14,000	12,000	10,000	8,000	6,000	3,000	0	0	0	
c = a*5%	*Interest Cost - Feb4 1c, 30-yr - End of Year Debt Drawdown*	*0*	*205*	*358*	*512*	*717*	*819*	*922*	*1,024*	*1,178*	*1,280*	*1,331*	*1,434*	*1,536*	*1,587*	*1,587*	*1,536*	*1,485*	*1,434*	*1,382*	*1,331*	*1,229*	*1,126*	*1,024*	*922*	*819*	*717*	*614*	*512*	*410*	*307*	*154*	*0*	*0*	*0*	*0*	29,491
b	Additional GA Debt Drawdown, End of Year	4,000	2,795	2,642	3,488	1,283	1,181	1,078	1,976	822	-280	669	566	-536	-1,587	-2,587	-2,536	-2,485	-2,434	-2,382	-3,331	-3,229	-3,126	-3,024	-2,922	-2,819	-2,717	-2,614	-2,512	-2,410	-3,307	-3,154	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	4,000	7,000	10,000	14,000	16,000	18,000	20,000	23,000	25,000	26,000	28,000	30,000	31,000	31,000	30,000	29,000	28,000	27,000	26,000	24,000	22,000	20,000	18,000	16,000	14,000	12,000	10,000	8,000	6,000	3,000	0	0	0	0	
	Feb4 1c, 30-yr - Accumulated Interest Costs	0	205	563	1,075	1,792	2,611	3,533	4,557	5,734	7,014	8,346	9,779	11,315	12,902	14,490	16,026	17,510	18,944	20,326	21,658	22,886	24,013	25,037	25,958	26,778	27,494	28,109	28,621	29,030	29,338	29,491				
	Feb4 1c, 30-yr - Accumulated Debt Principal	4,000	6,795	9,437	12,925	14,208	15,389	16,467	18,443	19,266	18,986	19,654	20,221	19,685	18,098	15,510	12,974	10,490	8,056	5,674	2,342	-886	-4,013	-7,037	-9,958	-12,778	-15,494	-18,109	-20,621	-23,030	-26,338	-29,491				
Fiscal Exposure - End of Year Debt Drawdown		4,000	3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000	1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000	-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0	0	0	

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Feb4 1c, 30-yr	Equal Monthly Debt Drawdown		**12**																																	
1c. GA Smoothing (Borrow $4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,095	8,835	8,552	8,168	8,844	8,634	8,212	8,081	8,489	9,020	8,975	8,764	8,919	9,650	9,587	9,758	9,147	8,670	6,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	6,197	6,041	2,892	2,750	2,616	
	GA Debt Requirement	4,000	3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000	1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000	-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0	0	0	
	Debt, Beginning of Year	0	4,095	7,376	10,825	15,475	18,315	21,300	24,438	28,761	32,281	34,958	38,795	42,829	46,046	48,403	49,858	51,387	52,994	54,683	56,459	57,302	58,189	59,120	60,100	61,129	62,211	63,349	64,545	65,802	67,123	67,489	67,873	71,348	75,001	
3,840	*Interest Cost - Feb4 1c, 30-yr*	*95*	*281*	*449*	*649*	*840*	*985*	*1,138*	*1,323*	*1,520*	*1,677*	*1,837*	*2,034*	*2,217*	*2,358*	*2,454*	*2,529*	*2,607*	*2,689*	*2,776*	*2,843*	*2,886*	*2,932*	*2,979*	*3,029*	*3,082*	*3,138*	*3,196*	*3,257*	*3,321*	*3,365*	*3,384*	*3,475*	*3,653*	*3,840*	78,841
	Additional GA Debt Drawdown	4,000	3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000	1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000	-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,095	7,376	10,825	15,475	18,315	21,300	24,438	28,761	32,281	34,958	38,795	42,829	46,046	48,403	49,858	51,387	52,994	54,683	56,459	57,302	58,189	59,120	60,100	61,129	62,211	63,349	64,545	65,802	67,123	67,489	67,873	71,348	75,001	78,841	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,095	3,281	3,449	4,649	2,840	2,985	3,138	4,323	3,520	2,677	3,837	4,034	3,217	2,358	1,454	1,529	1,607	1,689	1,776	843	886	932	979	1,029	1,082	1,138	1,196	1,257	1,321	365	384	3,475	3,653	3,840	
	Monthly Drawdown	333	250	250	333	167	167	167	250	167	83	167	167	83	-	(83)	(83)	(83)	(83)	(83)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(250)	(250)	-	-	-	
	FV of Monthly Drawdown at 5%	4,095	3,071	3,071	4,095	2,048	2,048	2,048	3,071	2,048	1,024	2,048	2,048	1,024	-	(1,024)	(1,024)	(1,024)	(1,024)	(1,024)	(2,048)	(2,048)	(2,048)	(2,048)	(2,048)	(2,048)	(2,048)	(2,048)	(2,048)	(2,048)	(3,071)	(3,071)	-	-	-	
	Annual Interest Cost on New Drawdowns	95	71	71	95	48	48	48	71	48	24	48	48	24	-	(24)	(24)	(24)	(24)	(24)	(48)	(48)	(48)	(48)	(48)	(48)	(48)	(48)	(48)	(48)	(71)	(71)	-	-	-	
	Annual Interest Cost on Opening Balance	-	210	378	554	792	938	1,091	1,251	1,473	1,653	1,790	1,986	2,193	2,358	2,478	2,553	2,631	2,713	2,800	2,891	2,934	2,979	3,027	3,077	3,130	3,185	3,243	3,305	3,369	3,437	3,455	3,475	3,653	3,840	
	Total Annual Interest Cost	95	281	449	649	840	985	1,138	1,323	1,520	1,677	1,837	2,034	2,217	2,358	2,454	2,529	2,607	2,689	2,776	2,843	2,886	2,932	2,979	3,029	3,082	3,138	3,196	3,257	3,321	3,365	3,384	3,475	3,653	3,840	

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Feb4 1c, 30-yr	Bi-Annual Debt Drawdown		**2**																																	
1c. GA Smoothing (Borrow $4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,095	8,835	8,552	8,168	8,844	8,634	8,212	8,081	8,489	9,020	8,975	8,764	8,919	9,650	9,587	9,758	9,147	8,670	6,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	6,197	6,041	2,892	2,750	2,616	
	GA Debt Requirement	4,000	3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000	1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000	-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0	0	0	
	Debt, Beginning of Year	0	4,051	7,297	10,709	15,309	18,118	21,071	24,176	28,452	31,934	34,582	38,378	42,369	45,551	47,883	49,322	50,834	52,424	54,096	55,852	56,686	57,563	58,485	59,454	60,472	61,543	62,668	63,851	65,095	66,402	66,763	67,143	70,581	74,195	
	Interest Cost - Feb4 1c, 30-yr	*51*	*246*	*412*	*600*	*809*	*953*	*1,104*	*1,276*	*1,482*	*1,648*	*1,796*	*1,991*	*2,182*	*2,332*	*2,439*	*2,512*	*2,590*	*2,671*	*2,757*	*2,834*	*2,877*	*2,922*	*2,969*	*3,018*	*3,071*	*3,125*	*3,183*	*3,244*	*3,307*	*3,361*	*3,380*	*3,438*	*3,614*	*3,799*	77,993
	Additional GA Debt Drawdown	4,000	3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000	1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000	-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,051	7,297	10,709	15,309	18,118	21,071	24,176	28,452	31,934	34,582	38,378	42,369	45,551	47,883	49,322	50,834	52,424	54,096	55,852	56,686	57,563	58,485	59,454	60,472	61,543	62,668	63,851	65,095	66,402	66,763	67,143	70,581	74,195	77,993	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,051	3,246	3,412	4,600	2,809	2,953	3,104	4,276	3,482	2,648	3,796	3,991	3,182	2,332	1,439	1,512	1,590	1,671	1,757	834	877	922	969	1,018	1,071	1,125	1,183	1,244	1,307	361	380	3,438	3,614	3,799	
	Bi-Annual Drawdown	2,000	1,500	1,500	2,000	1,000	1,000	1,000	1,500	1,000	500	1,000	1,000	500	-	(500)	(500)	(500)	(500)	(500)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,500)	(1,500)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,051	3,038	3,038	4,051	2,026	2,026	2,026	3,038	2,026	1,013	2,026	2,026	1,013	-	(1,013)	(1,013)	(1,013)	(1,013)	(1,013)	(2,026)	(2,026)	(2,026)	(2,026)	(2,026)	(2,026)	(2,026)	(2,026)	(2,026)	(2,026)	(3,038)	(3,038)	-	-	-	
	Annual Interest Cost on New Drawdowns	51	38	38	51	26	26	26	38	26	13	26	26	13	-	(13)	(13)	(13)	(13)	(13)	(26)	(26)	(26)	(26)	(26)	(26)	(26)	(26)	(26)	(26)	(38)	(38)	-	-	-	
	Annual Interest Cost on Opening Balance	-	207	374	548	784	928	1,079	1,238	1,457	1,635	1,771	1,965	2,169	2,332	2,452	2,525	2,603	2,684	2,770	2,860	2,902	2,947	2,994	3,044	3,096	3,151	3,209	3,269	3,333	3,400	3,418	3,438	3,614	3,799	
	Total Annual Interest Cost	51	246	412	600	809	953	1,104	1,276	1,482	1,648	1,796	1,991	2,182	2,332	2,439	2,512	2,590	2,671	2,757	2,834	2,877	2,922	2,969	3,018	3,071	3,125	3,183	3,244	3,307	3,361	3,380	3,438	3,614	3,799	

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Feb4 1c, 30-yr	Average Debt Drawdown																																			
1c. GA Smoothing (Borrow $4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,095	8,835	8,552	8,168	8,844	8,634	8,212	8,081	8,489	9,020	8,975	8,764	8,919	9,650	9,587	9,758	9,147	8,670	6,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	6,197	6,041	2,892	2,750	2,616	
	GA Debt Requirement	4,000	3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000	1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000	-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0	0	0	
	Debt, Beginning of Year	0	4,102	7,389	10,844	15,502	18,347	21,337	24,481	28,811	32,338	35,019	38,863	42,904	46,126	48,488	49,945	51,477	53,087	54,779	56,558	57,403	58,291	59,224	60,205	61,236	62,320	63,460	64,658	65,917	67,241	67,607	67,992	71,473	75,132	
	Interest Cost - Feb4 1c, 30-yr	*102*	*287*	*455*	*658*	*845*	*991*	*1,144*	*1,330*	*1,526*	*1,681*	*1,844*	*2,041*	*2,222*	*2,362*	*2,457*	*2,532*	*2,610*	*2,692*	*2,779*	*2,845*	*2,888*	*2,933*	*2,981*	*3,031*	*3,084*	*3,140*	*3,198*	*3,259*	*3,324*	*3,366*	*3,385*	*3,481*	*3,659*	*3,847*	78,979
	Additional GA Debt Drawdown	4,000	3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000	1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000	-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,102	7,389	10,844	15,502	18,347	21,337	24,481	28,811	32,338	35,019	38,863	42,904	46,126	48,488	49,945	51,477	53,087	54,779	56,558	57,403	58,291	59,224	60,205	61,236	62,320	63,460	64,658	65,917	67,241	67,607	67,992	71,473	75,132	78,979	
Fiscal Exposure - Average Debt Drawdown		4,102	3,287	3,455	4,658	2,845	2,991	3,144	4,330	3,526	2,681	3,844	4,041	3,222	2,362	1,457	1,532	1,610	1,692	1,779	845	888	933	981	1,031	1,084	1,140	1,198	1,259	1,324	366	385	3,481	3,659	3,847	





30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

TO BE

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,556	3,123	1,728	1,400	836	1,560	821	167

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

E UPDATED

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

JK: Fixed the formula in the yellow highlighted cells. Pls. check. (SK: looks good to me)

	Tab
v16	Powerpoint_Export

Change Description

Added in trigger for later start in the year

Equal Monthly Debt Drawdown

		Month	Months Remai
Scenario Start Date	**July**	7	6

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	3,180	2,888
Annual Exposure2 with start on July 1st	*1,590*	*2,888*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	795	3,107
Start: July 1st	-	*2,312*

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	851	3,335
Start: July 1st	-	*2,484*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	1,168	1,765
Annual Exposure2 with start on July 1st	*584*	*1,765*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	292	1,609
Start: July 1st	-	*1,025*

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,449	2,040
Annual Exposure2 with start on July 1st	*725*	*2,040*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,597
Start: July 1st	-	*1,959*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335
Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3575**
Total, B	362	1837
Proposed Program Total:	362 - 851	1,837 - 3,575

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,556	3,123	1,728	1,400
2,556	*3,123*	*1,728*	*1,400*

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646
2,805	*2,697*	*2,774*	*1,646*

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

ıking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
2,311	3,750	2,311	1,933
2,311	*3,750*	*2,311*	*1,933*

2018-19	2019-20	2020-21	2021-2022

1,901	2,671	3,391	2,217
1,901	*2,671*	*3,391*	*2,217*

2019	2020	2021	2022
2,581	4,016	2,598	2,241
2,581	*4,016*	*2,598*	*2,241*

2018-19	2019-20	2020-21	2021-2022
2,175	2,940	3,662	2,508
2,175	*2,940*	*3,662*	*2,508*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

/1

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052
2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

Equal Monthly Debt Drawdown

		Month	Months Remaining
Scenario Start Date	July	7	6

AS LONG AS >

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	3,180	2,888	2,556

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	795	3,107	2,805
Fiscal Exposure, 25%	199	777	701

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Annual Exposure[2]	3,404	3,128	2,812

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	851	3,335	3,049
Fiscal Exposure, 25%	213	834	762

Indicates year in which, similar to OPCD's exa
closest to 30%. As Fiscal 2016/17 is a partial y
month the GA deferral begins.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu
decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions	9%	14%	18%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	1,168	1,765	2,311

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	292	1,609	1,901
Fiscal Exposure, 25%	73	402	475

Scenario 1b - 30-yr amortization	2017	2018	2019
Annual Exposure[2]	1,449	2,040	2,581

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	362	1,597	2,175
Fiscal Exposure, 25%	91	399	544

Indicates year in which, similar to OPCD's exar closest to 30%.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 ar
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu on accounting treatment.

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]
Debt-Finance Global Adjustment Costs, Option 1a	213	834	762
Debt-Finance Global Adjustment Costs, Option 1b	91	399	544
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**213**	**1074**	**1065**
Total, B	91	639	847

Proposed Program Total:	91 - 213	639 - 1,074	847 - 1,065

($M)	2016-171	2017-181	2018-191
Debt-Finance Global Adjustment Costs, Option 1a	851	3335	3049
Debt-Finance Global Adjustment Costs, Option 1b	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**851**	**3575**	**3352**
Total, B	362	1837	2478

Proposed Program Total:	362 - 851	1,837 - 3,575	2,478 - 3,352

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6

7	July	7	
8	August	8	
9	September	9	
10	October	10	
11	November	11	
12	December	12	

30-year term	**2016-17**	**2017-18**	**2018-19**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335	2,175 - 3,049

ROWS HIDDEN

1	1 = Comparision Enabled

APRIL 1, 2017 25%

2020	2021	2022
3,123	1,728	1,400

2019-20	2020-21	2021-2022
2,697	2,774	1,646
674	693	412

2020	2021	2022
3,396	2,020	1,712

2019-20	2020-21	2021-2022
2,958	3,052	1,943
740	763	486

mple, the true cost of GA being deferred is
ear, exposure may be less subject to which

l $17-21 billion (at 3.5% interest rate), peaking in 2028.
$33-$36 million.

ıals per month based on month of the year. Actuals may also depend on

28%	17%	13%
2020	2021	2022
3,750	2,311	1,933

2019-20	2020-21	2021-2022
2,671	3,391	2,217
668	848	554

2020	2021	2022
4,016	2,598	2,241

2019-20	2020-21	2021-2022
2,940	3,662	2,508
735	915	627

mple, the true cost of GA being deferred is

ıd $17-21 billion (at 3.5% interest rate), peaking in 2028.
$118-$134 million.

ıals per month based on month of the year. Actuals may also depend on decision

2019-20[1]	2020-21[1]
740	763
735	915
279	323
60	60
18	18
1097	**1164**
1092	1316

1,092 - 1,097 1,316 - 1,164

2019-201	2020-211
2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453





2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964
Equal Monthly Debt Drawdown	3,180	952

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

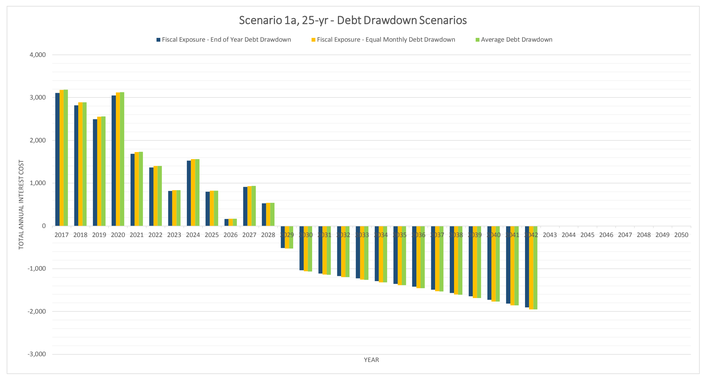
		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

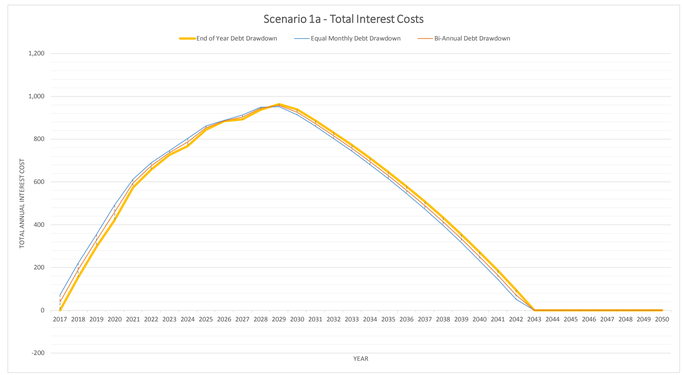
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	3,665	968	
Equal Monthly Debt Drawdown	3,750	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

		9%	14%	18%	28%	17%	13%																													
Scenario 1b, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

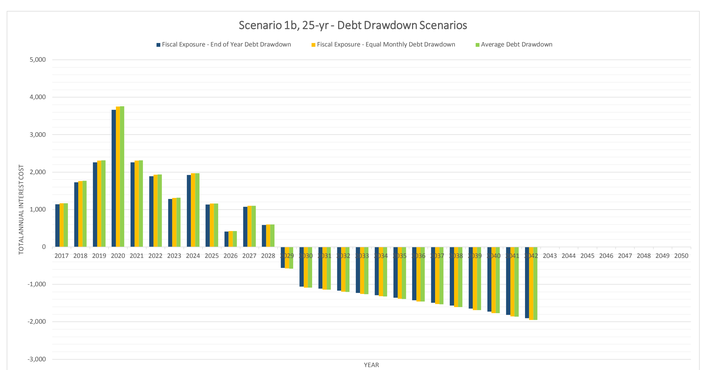
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	*954*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

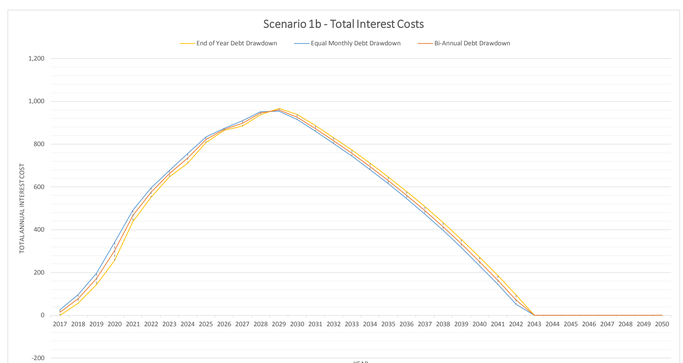
	Monthly Drawdown	95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

		28%	24%	21%	24%	12%	9%																													
Scenario 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1a, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	*1,156*	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

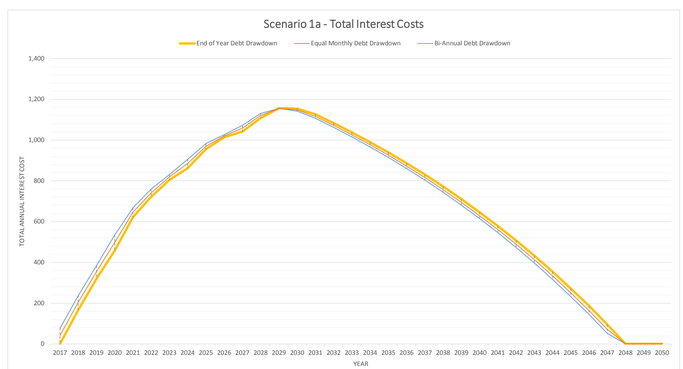
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

		12%	16%	20%	30%	19%	15%																													
Scenario 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

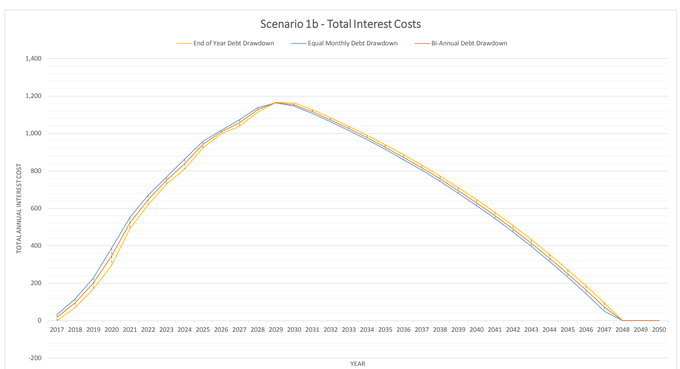
	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

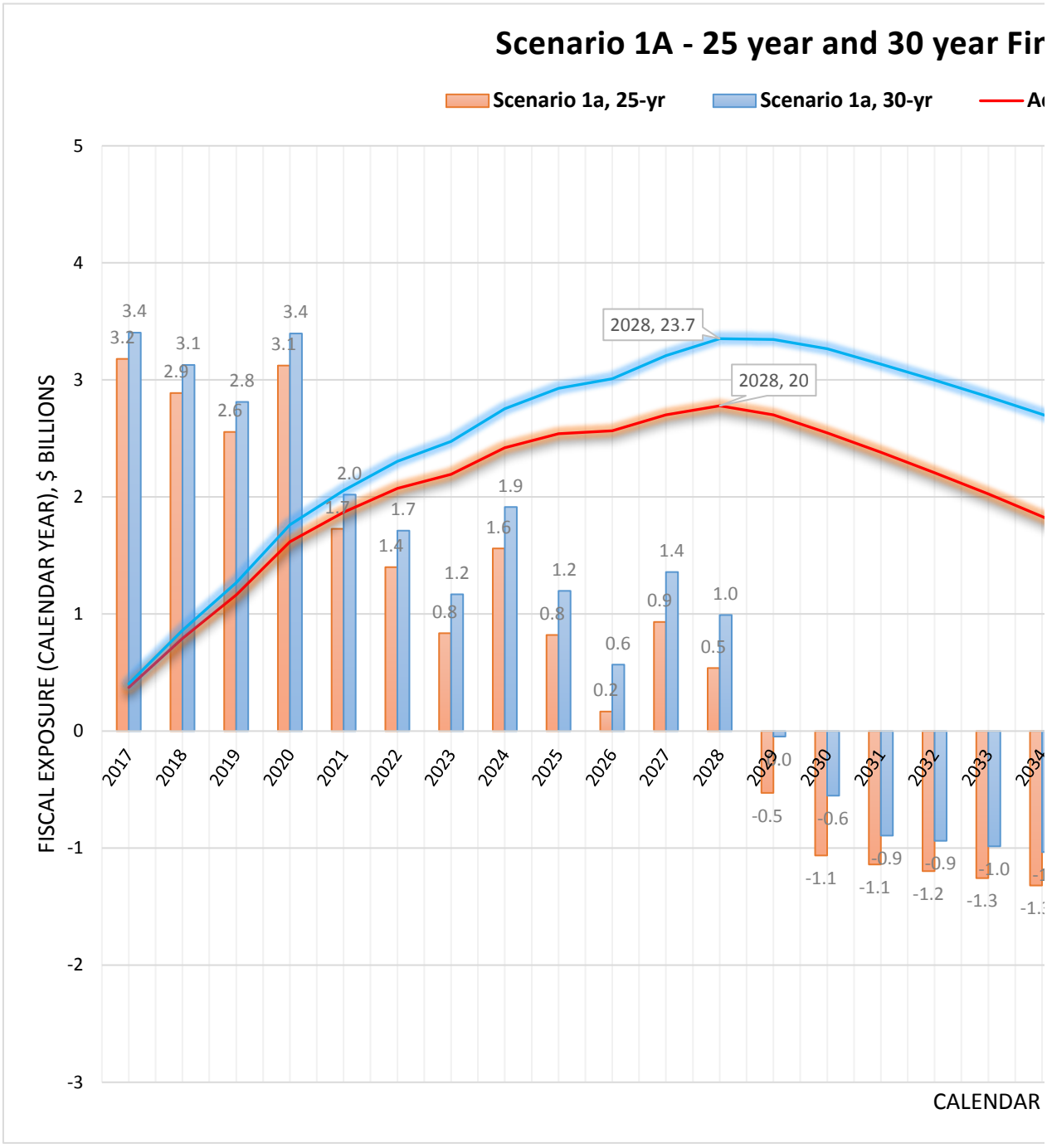
	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

Scenario 1b, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

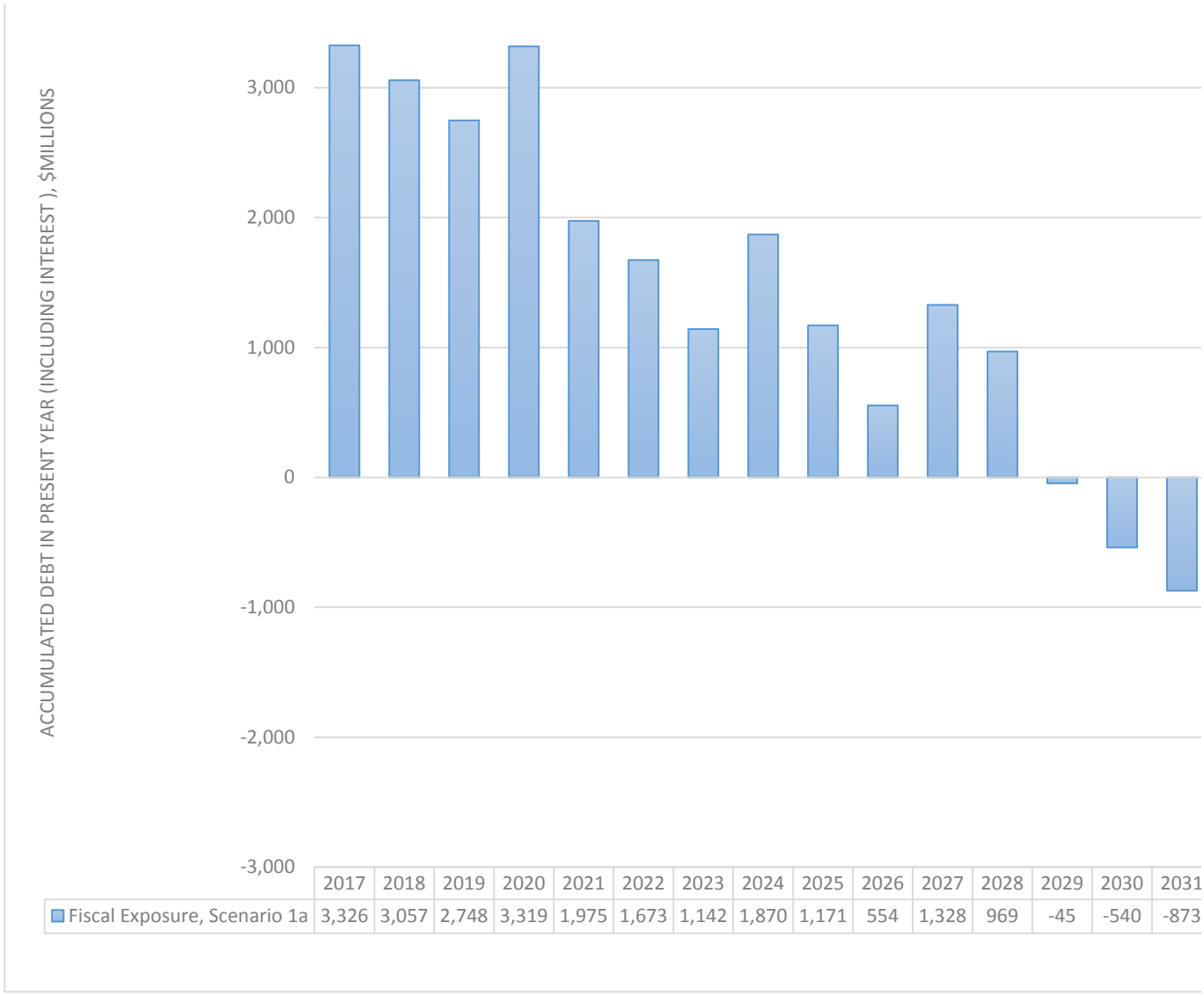




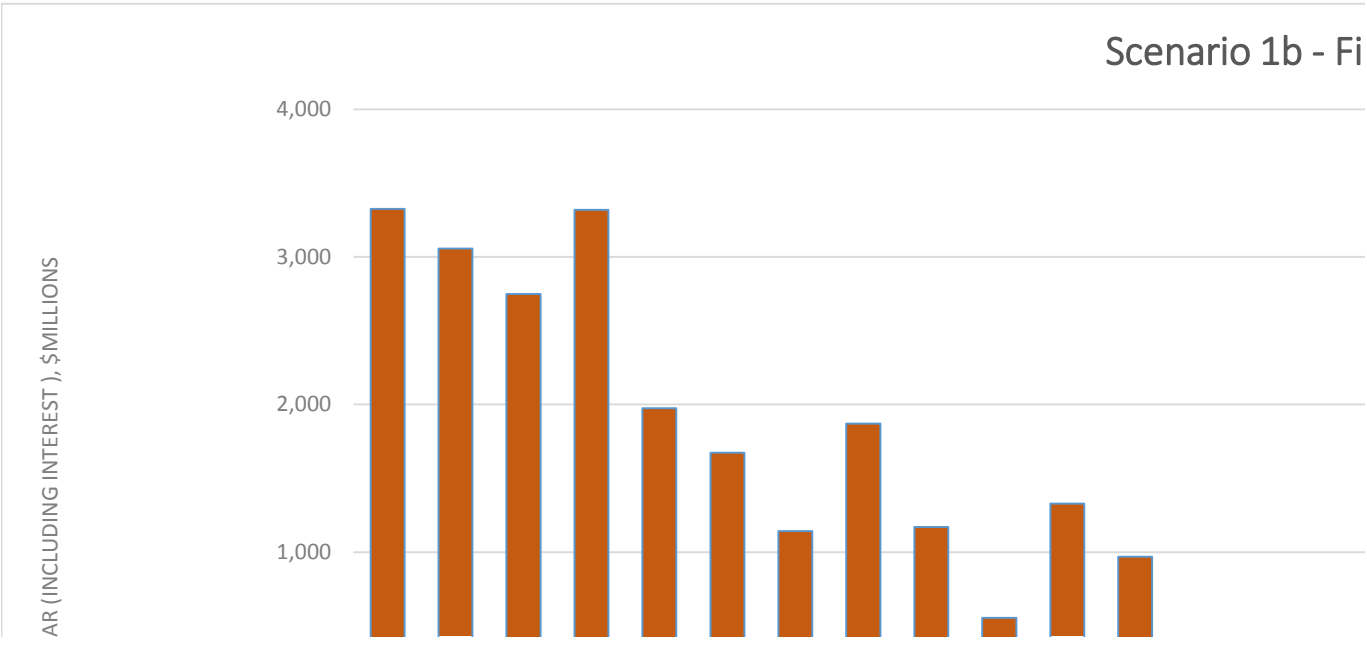
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

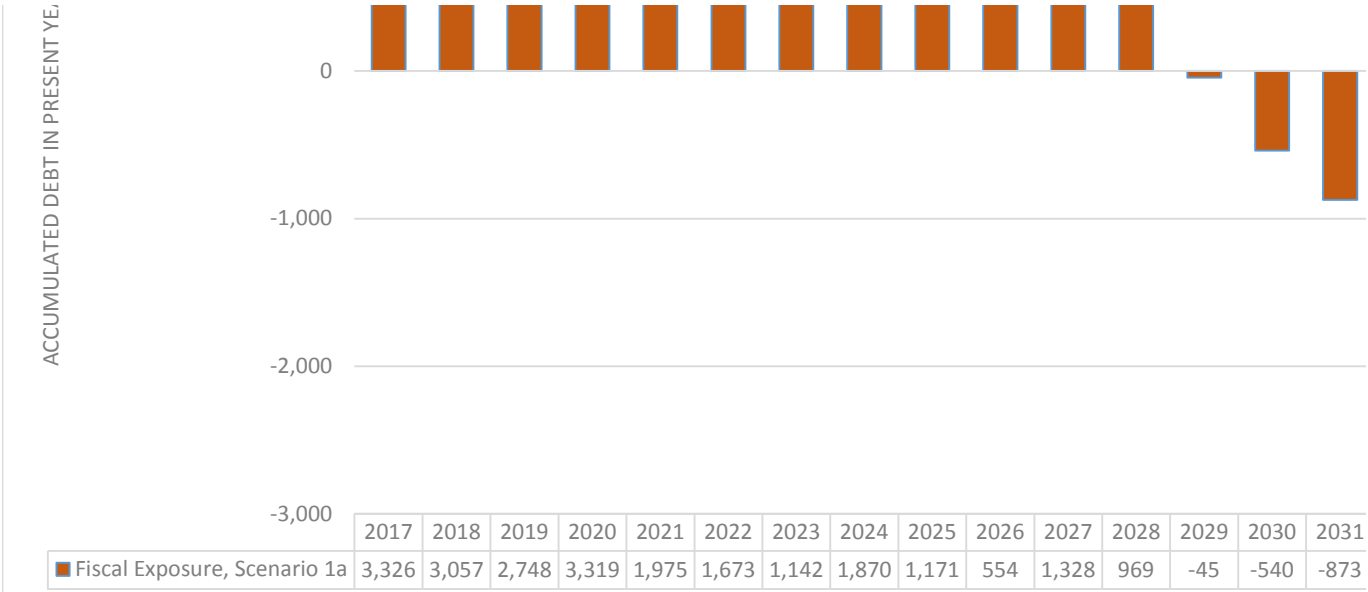




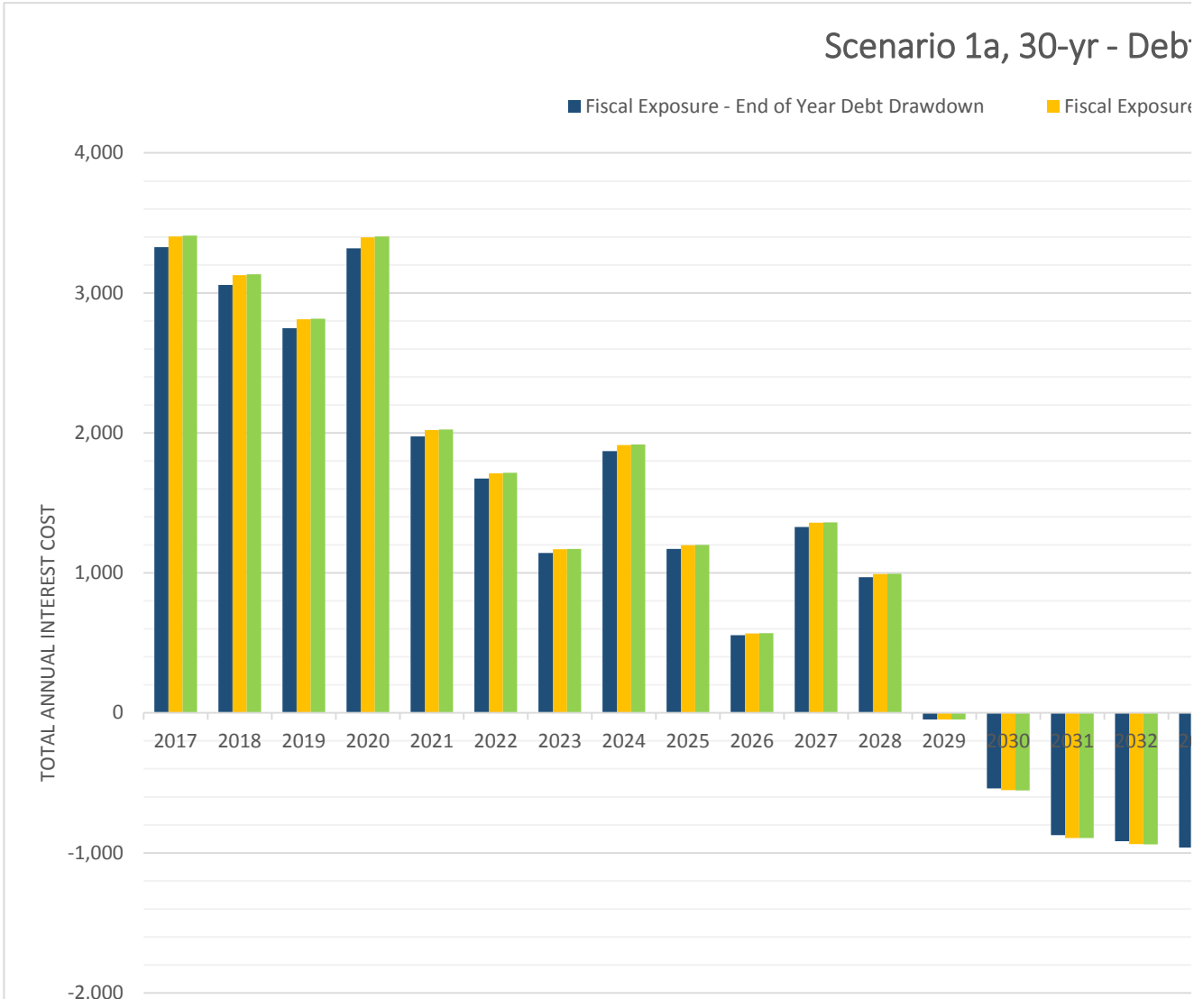


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



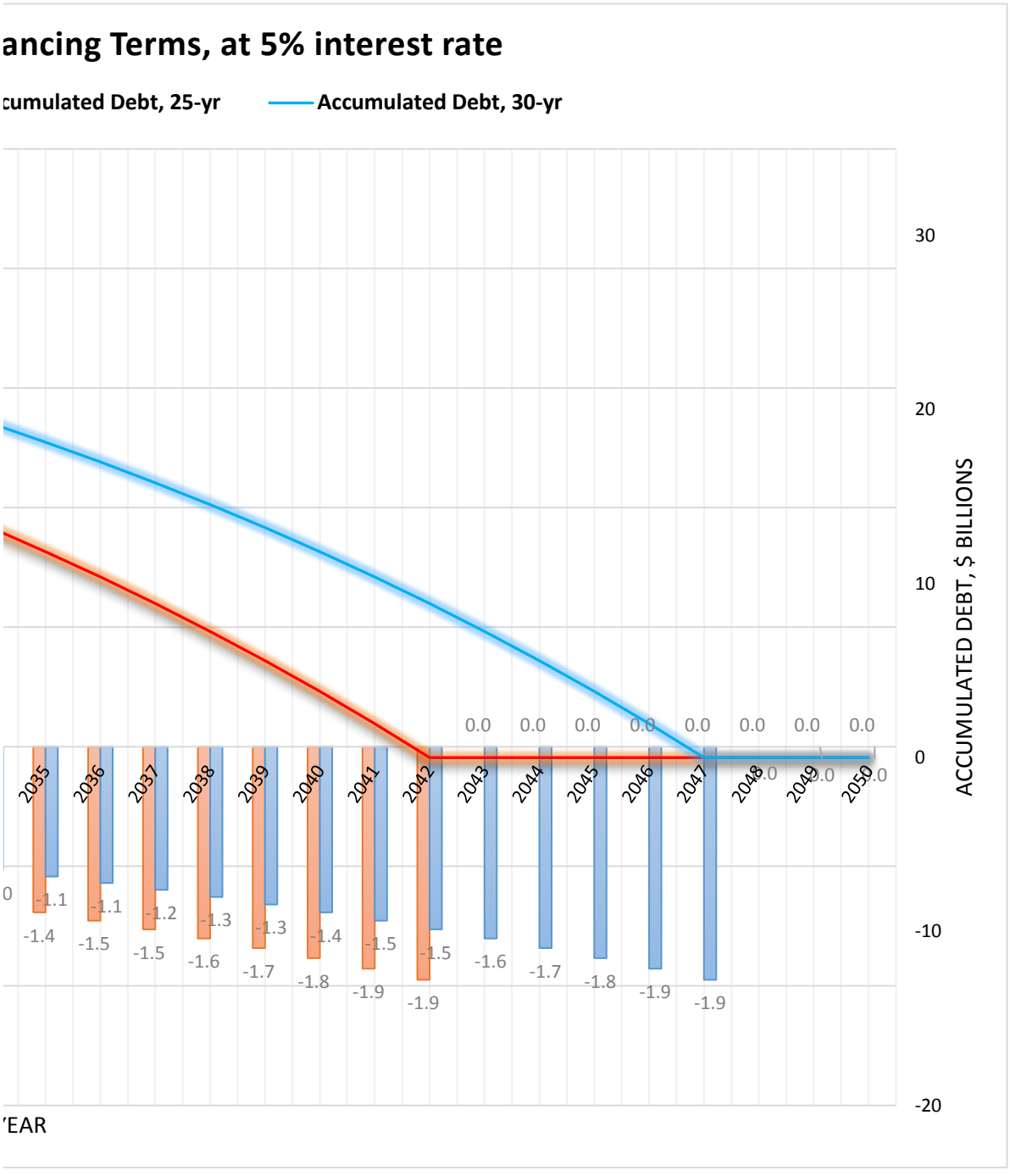


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



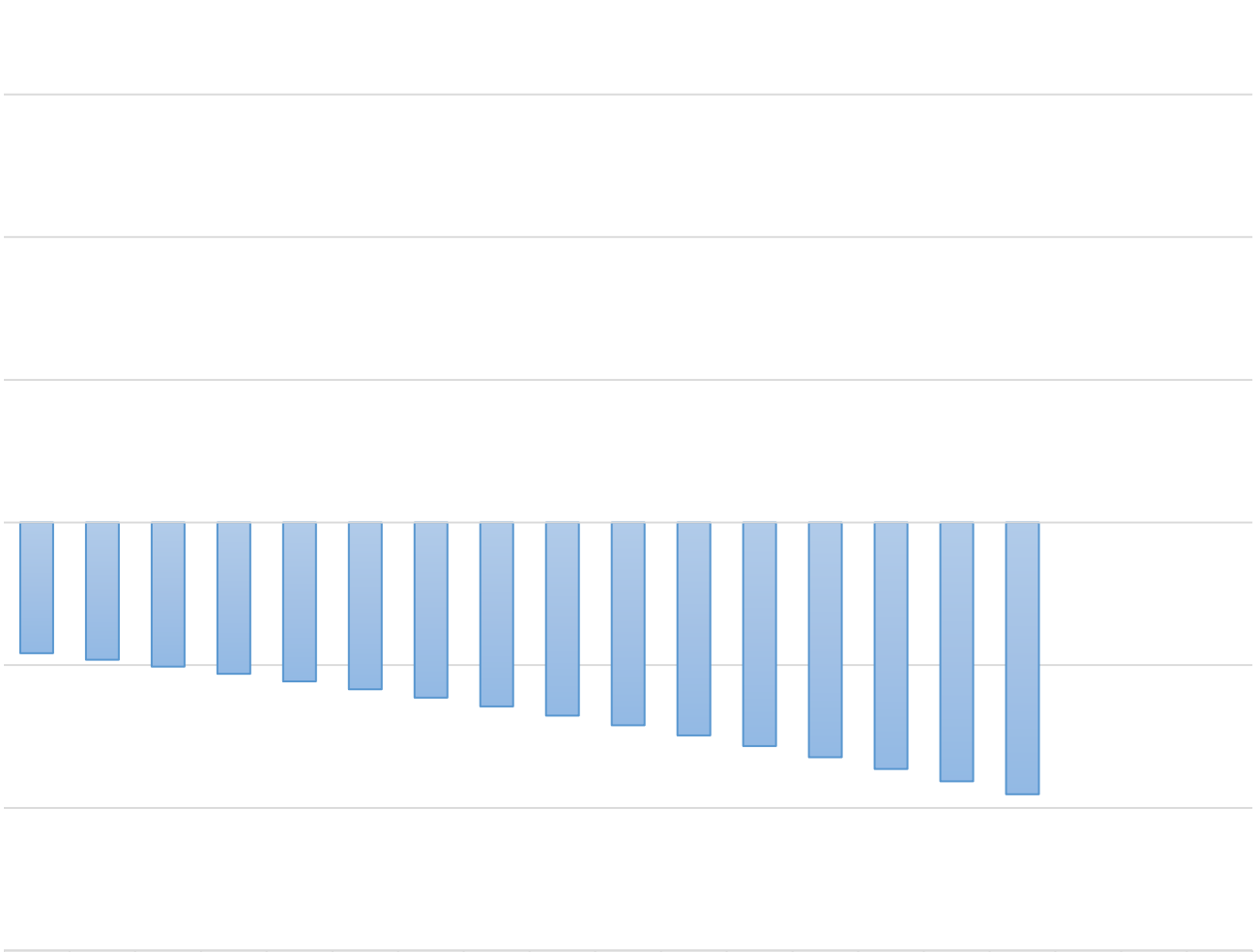

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

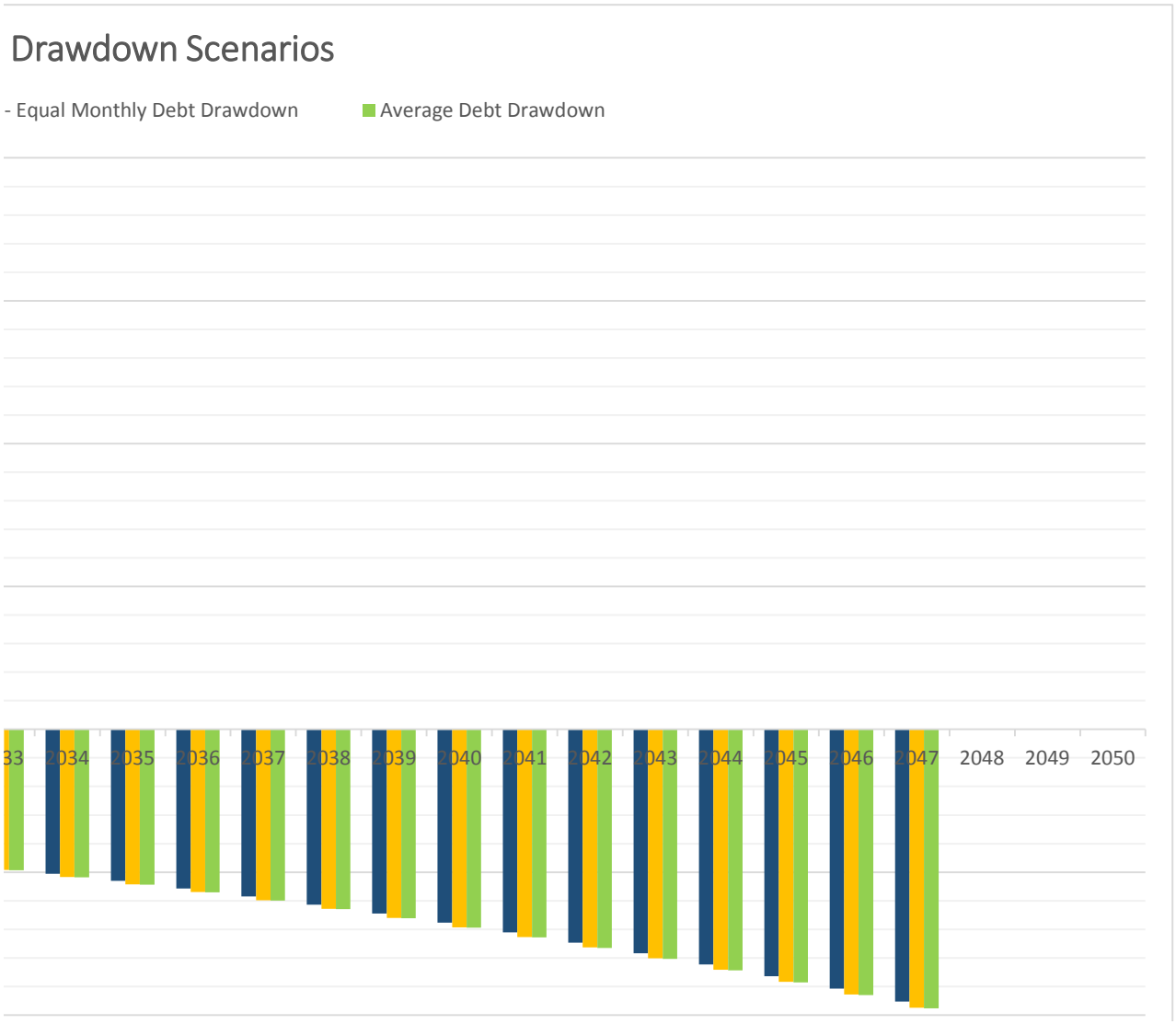
YEAR

cal Exposure



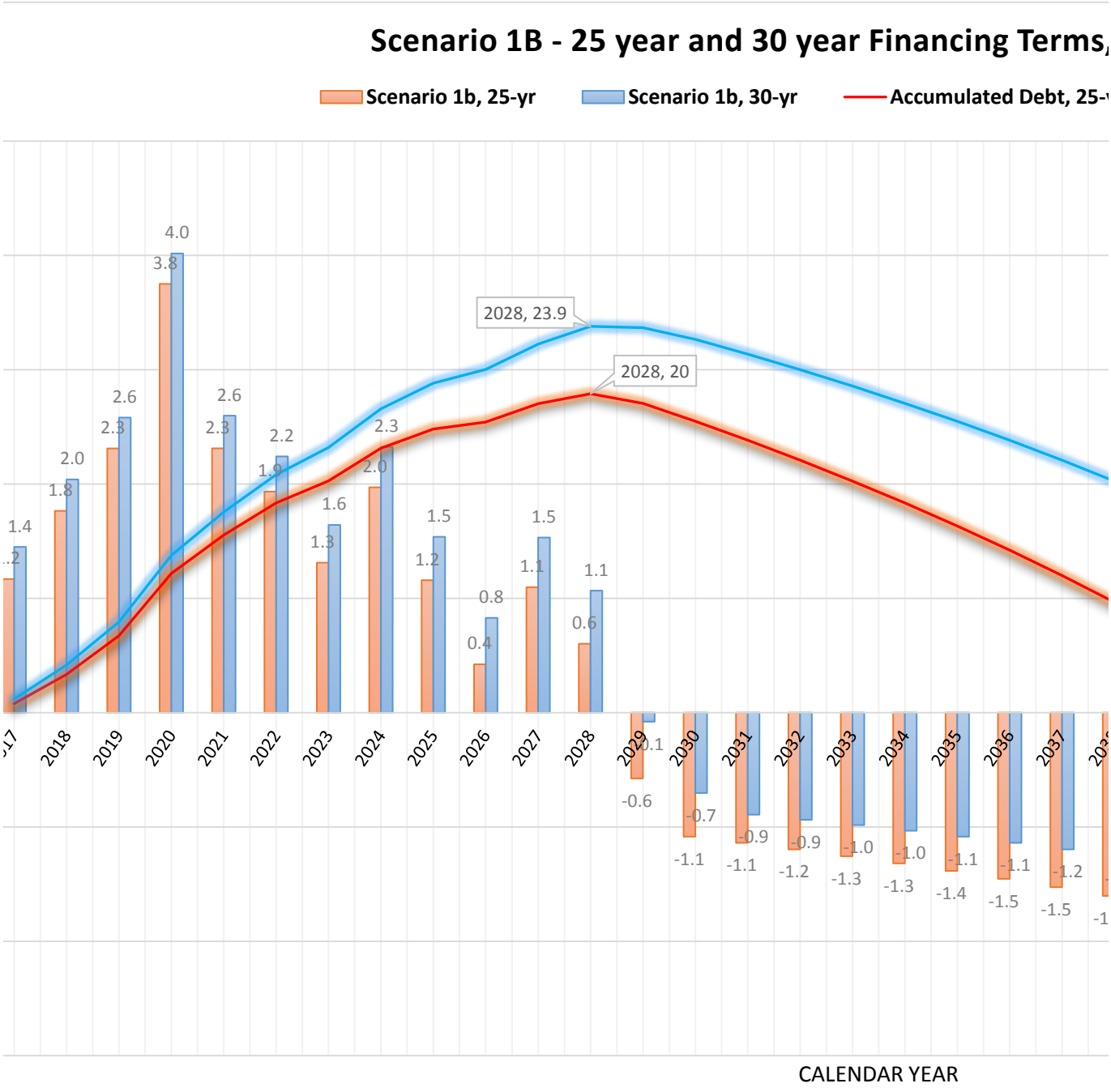
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

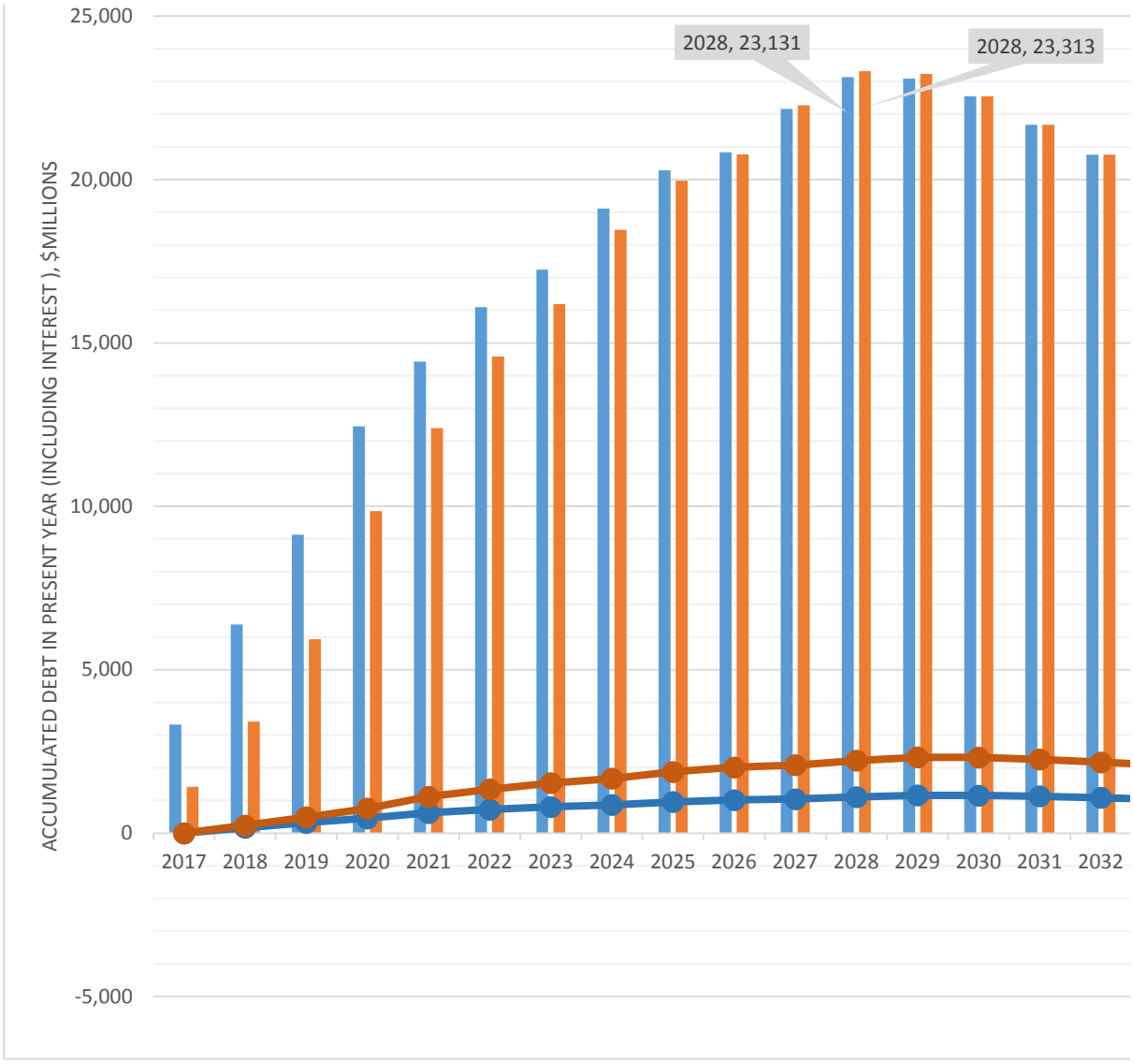


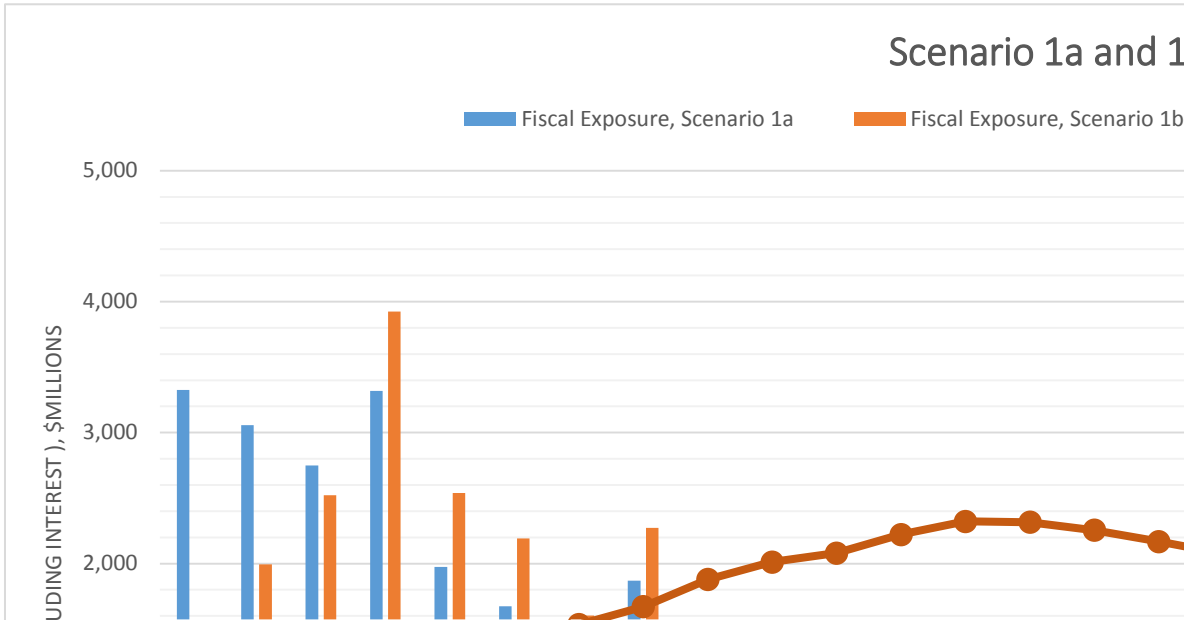
YEAR

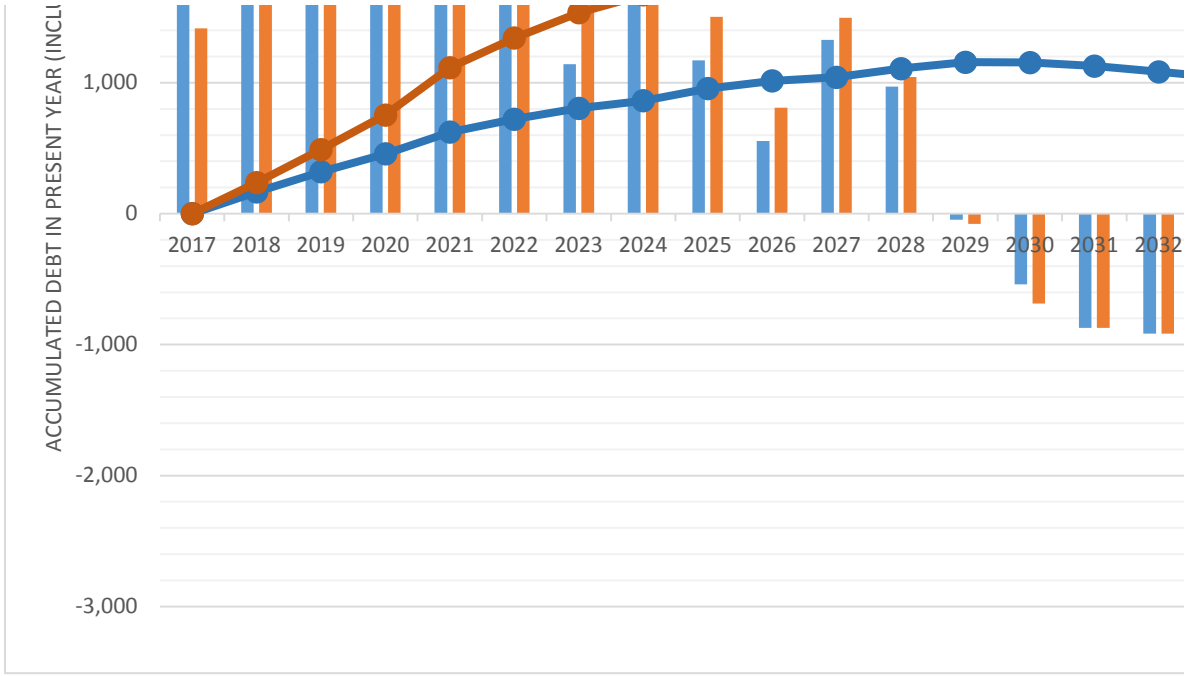
3 - 25 year and 30 year Financing Terms, at 5% interest rate

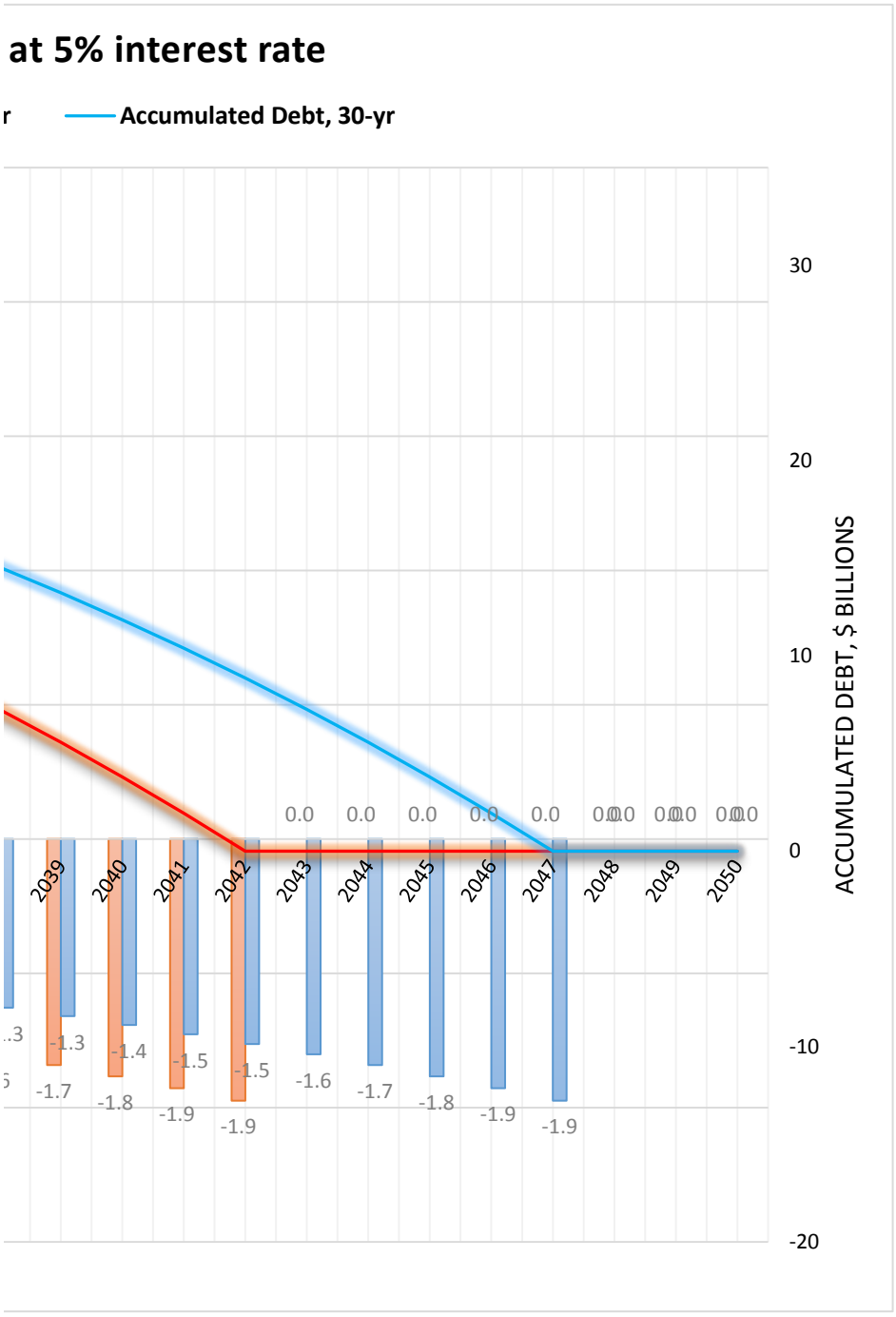





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

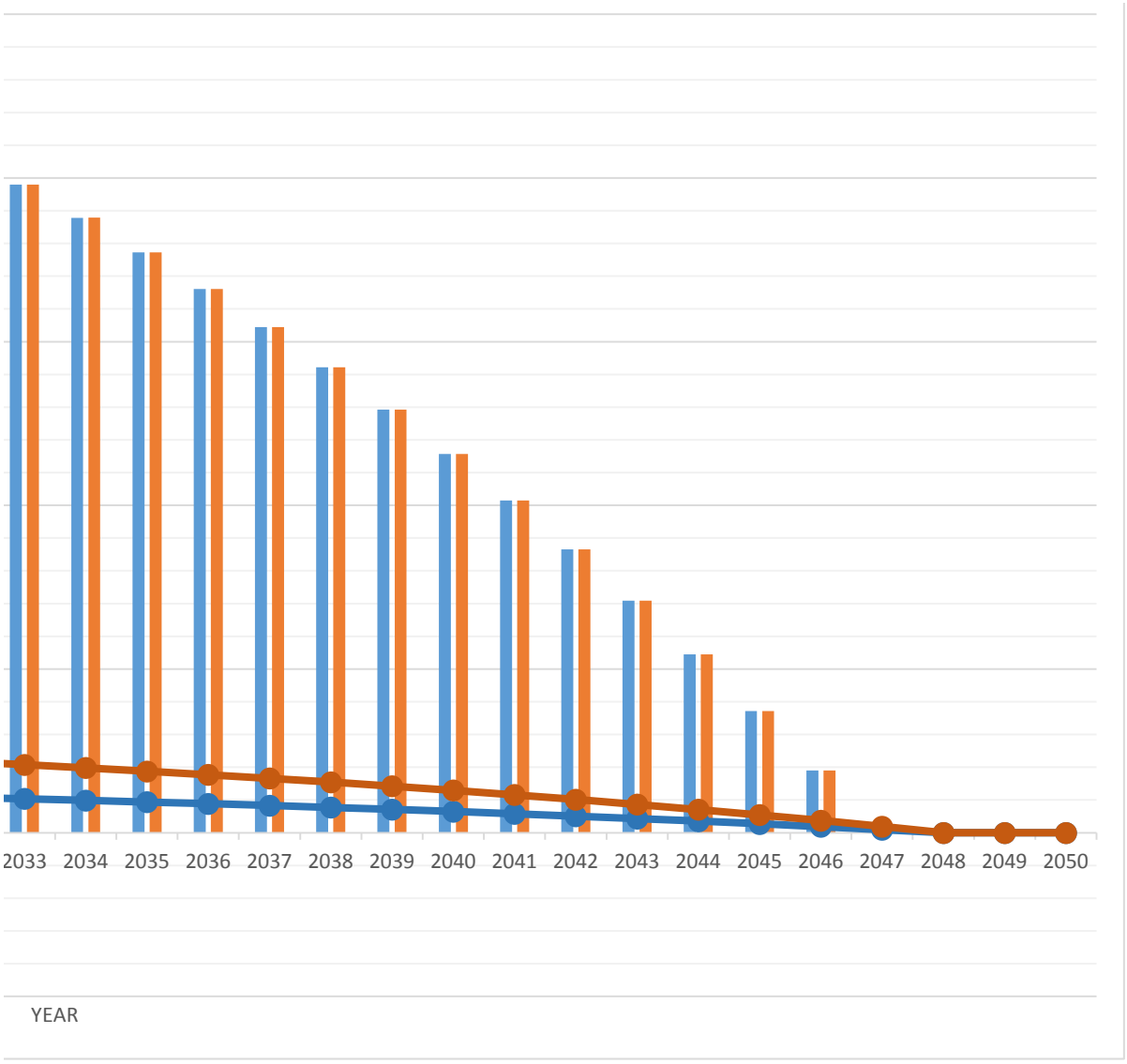

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

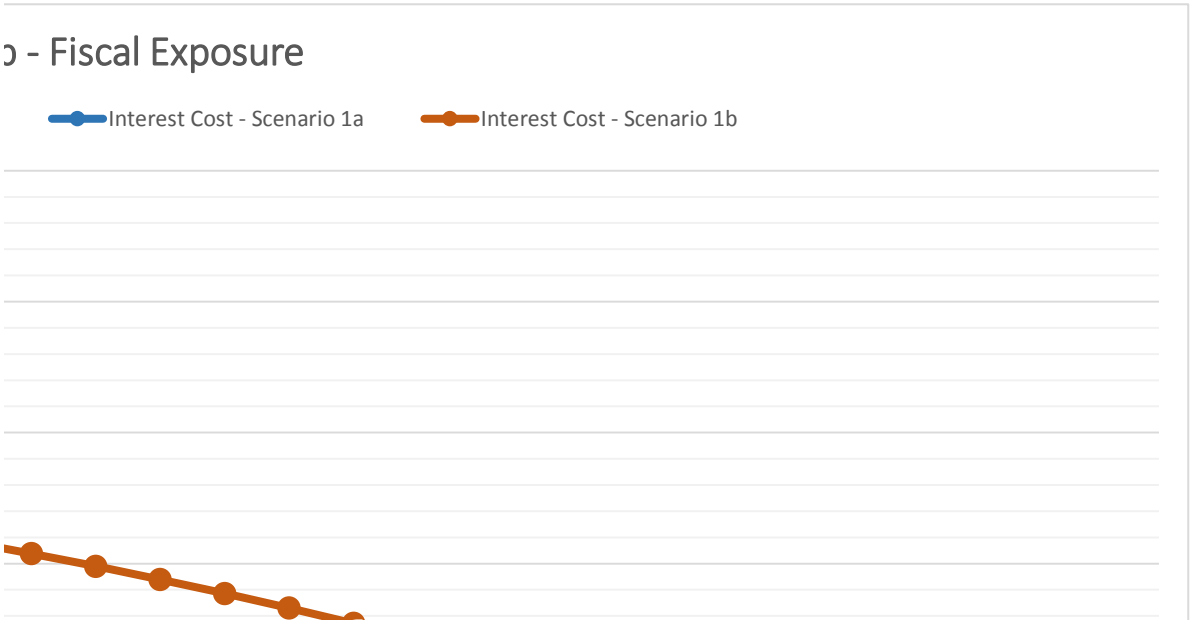

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

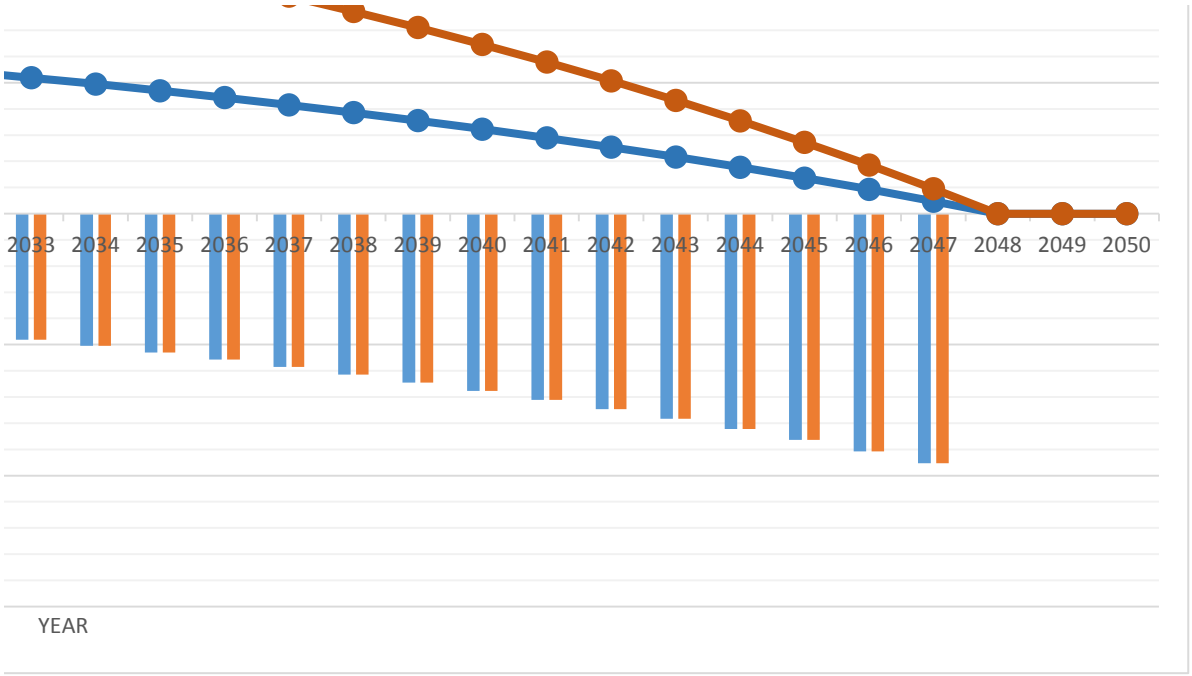


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

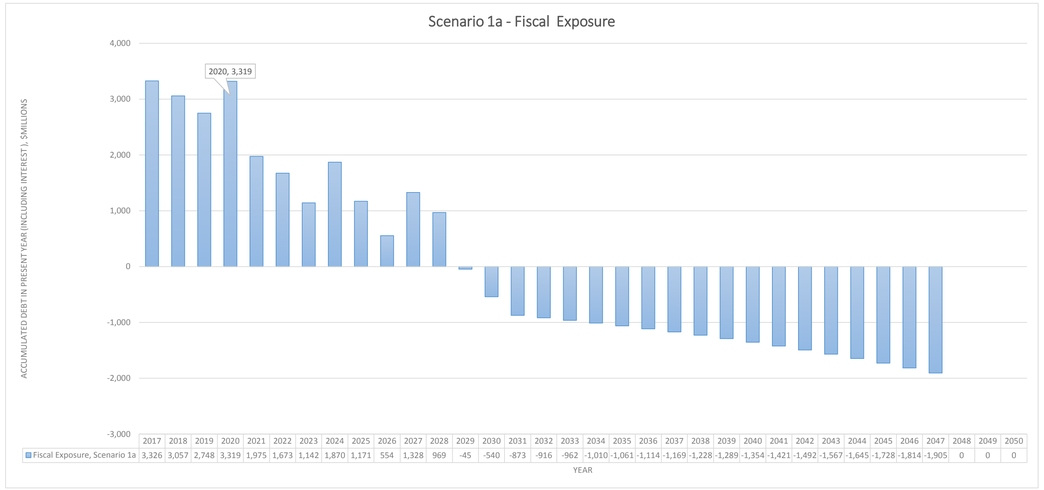
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

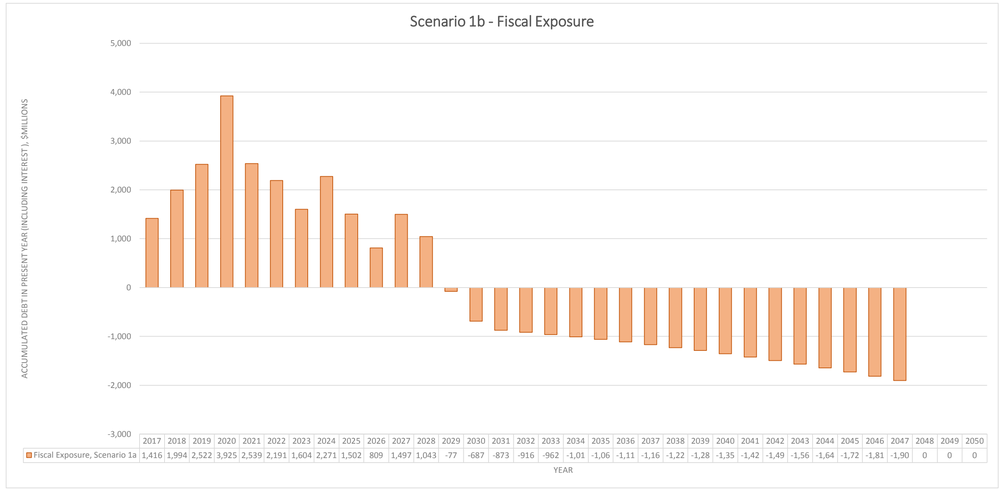
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

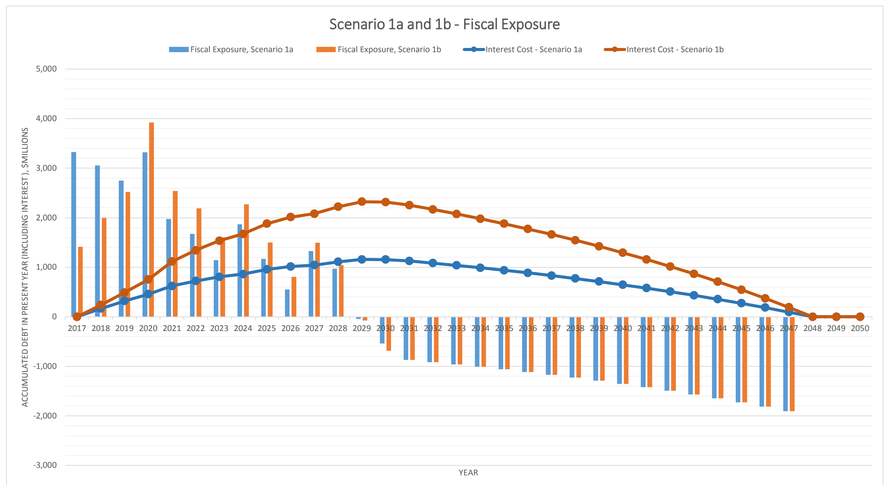
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

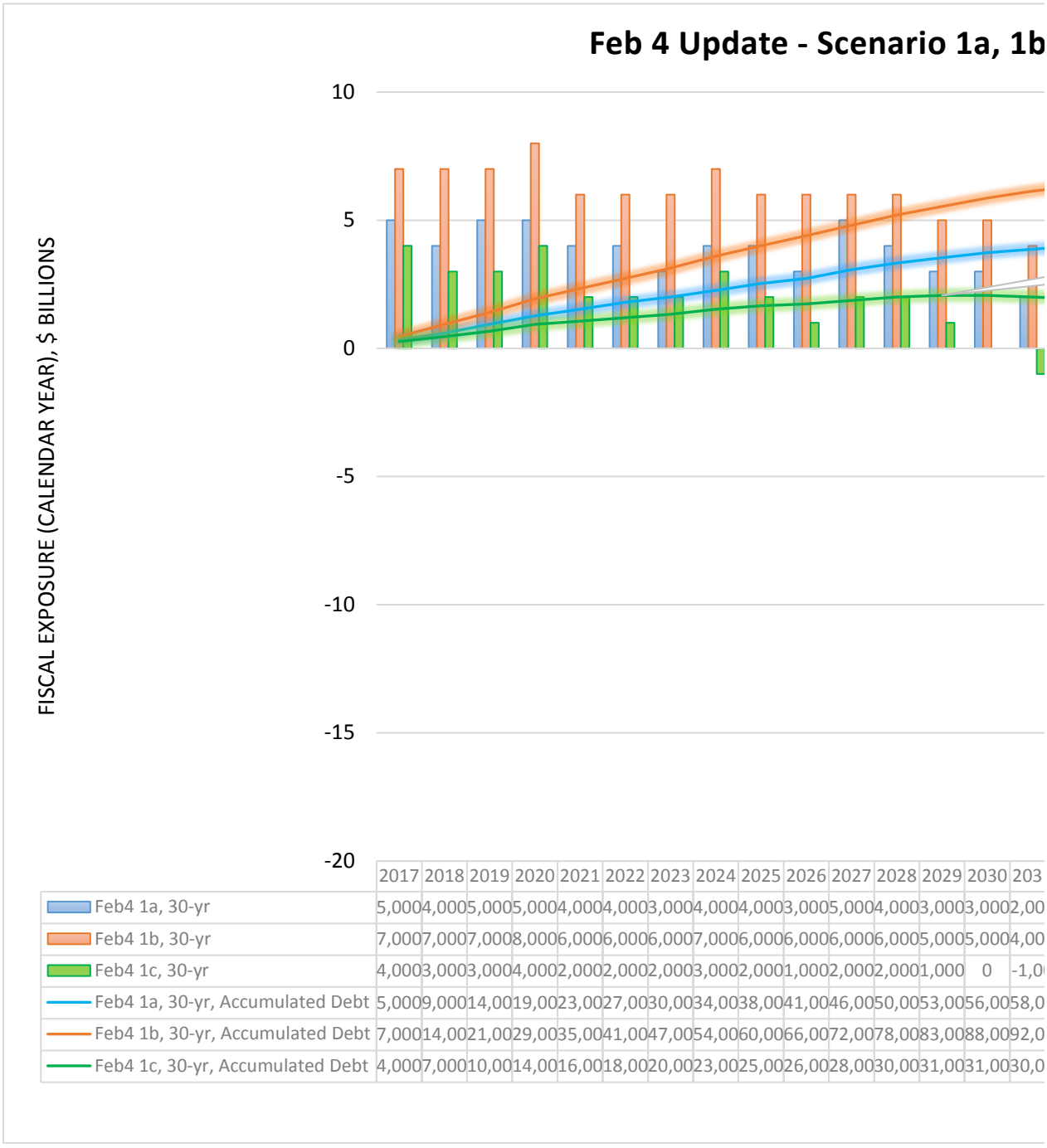
Notes:	Accounting treatment is to be determined.

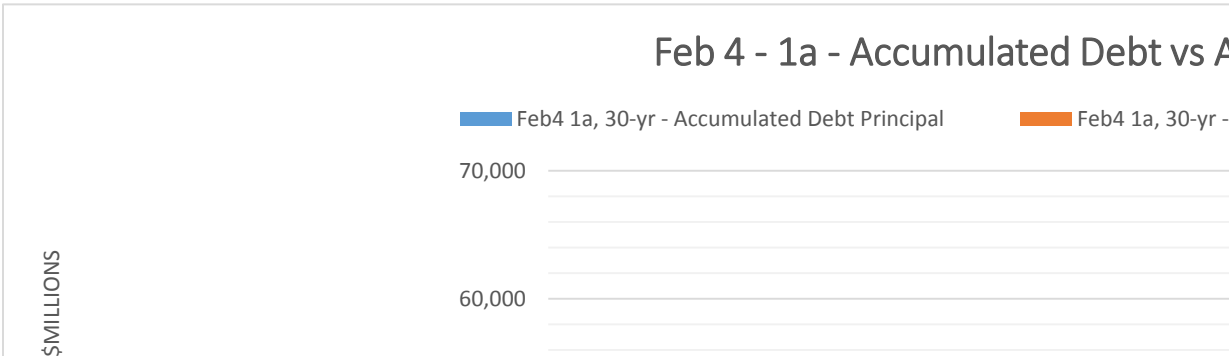

Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0

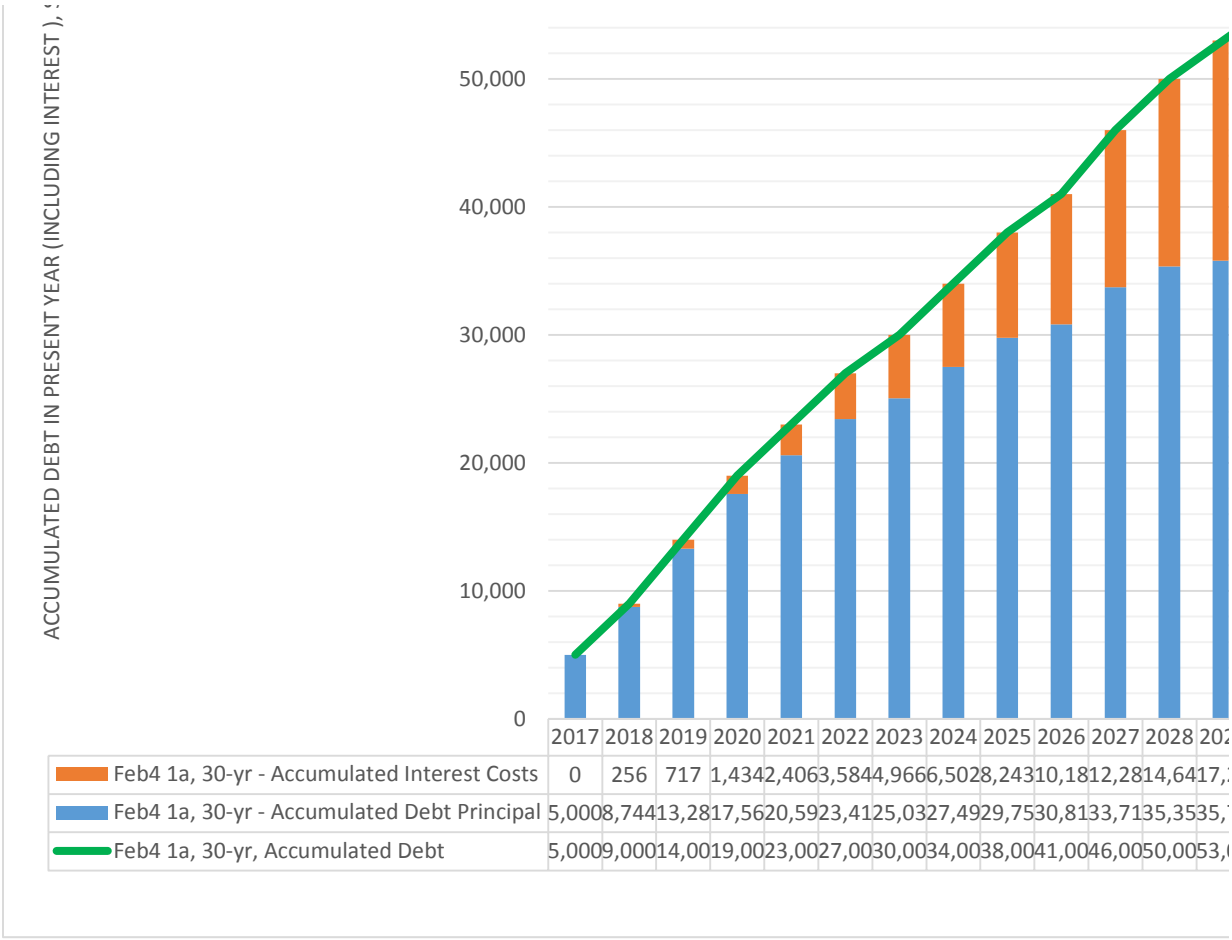

Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0


Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

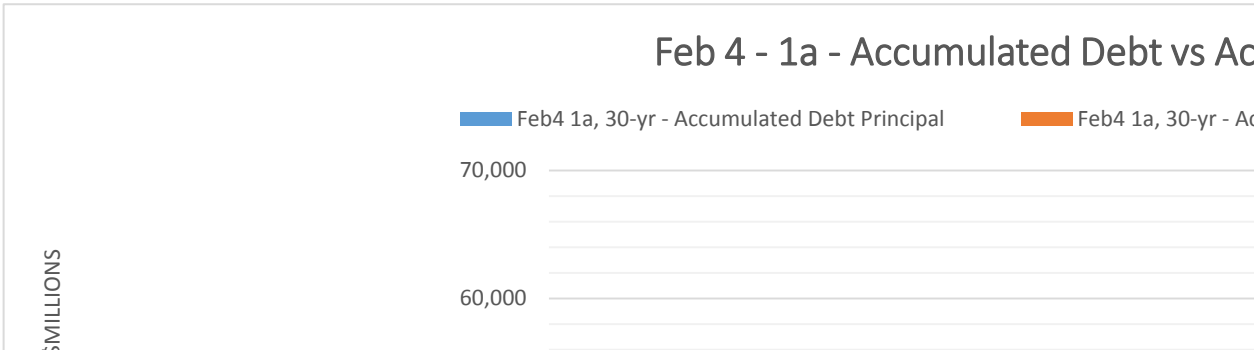
Feb 4 Update - Scenario 1a, 1b, 1c - at 5.12% interest rate

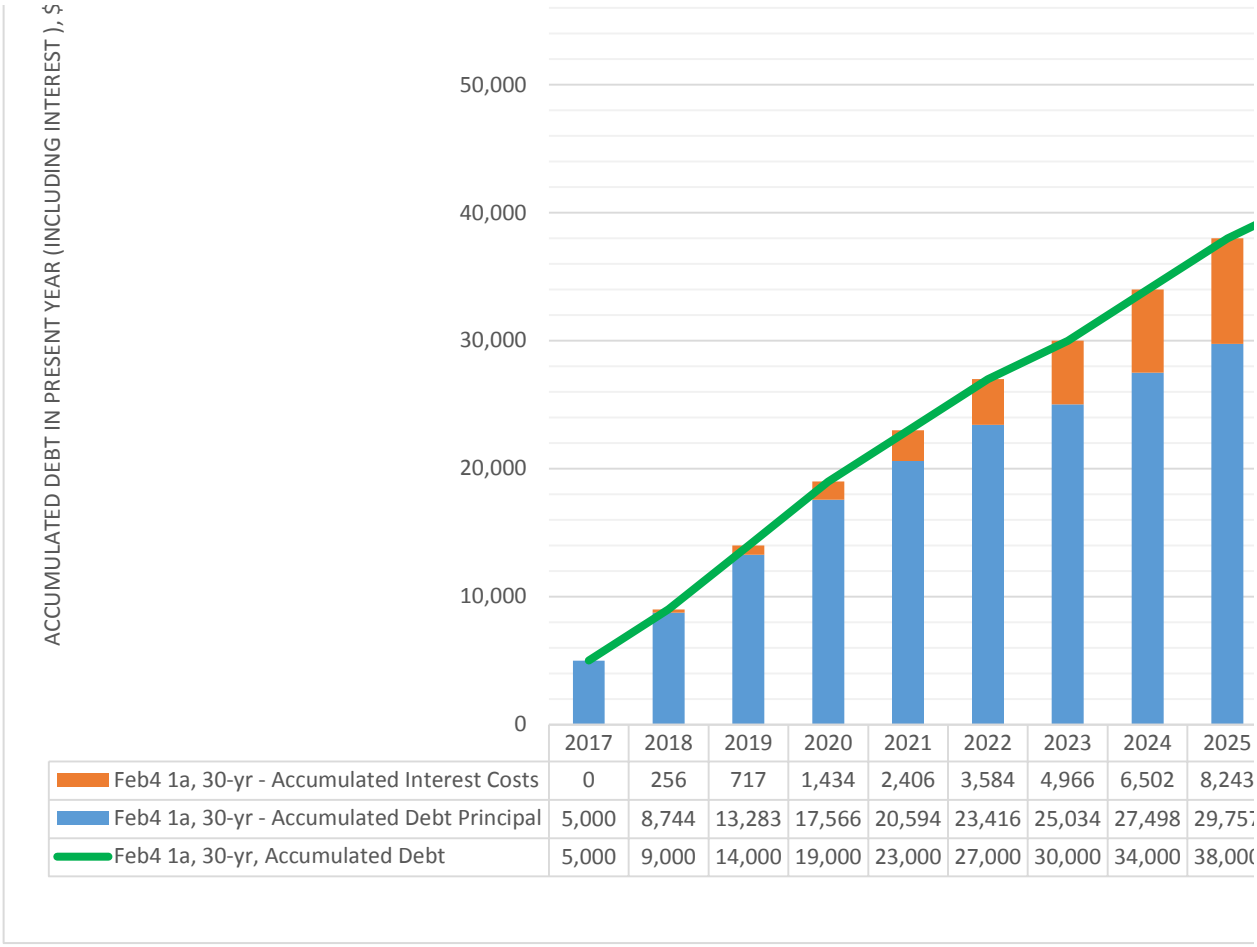




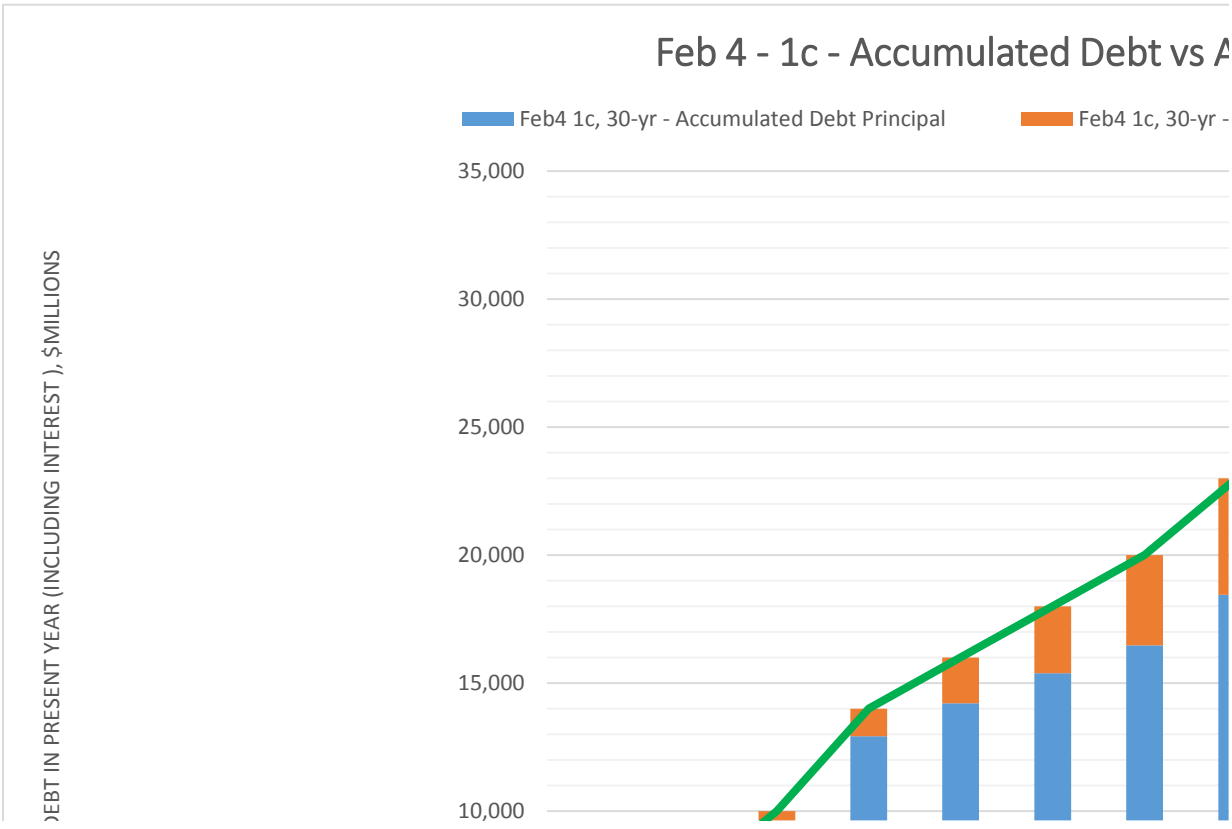


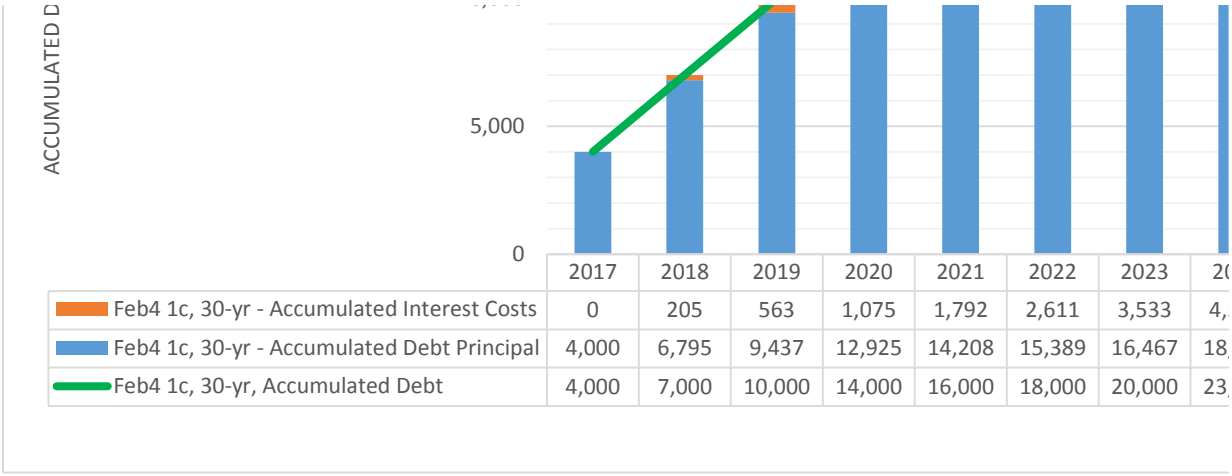
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	202
Feb4 1a, 30-yr - Accumulated Interest Costs	0	256	717	1,434	2,406	3,584	4,966	6,502	8,243	10,181	12,281	14,641	17,
Feb4 1a, 30-yr - Accumulated Debt Principal	5,000	8,744	13,281	17,562	20,592	23,412	25,032	27,492	29,757	30,813	33,713	35,353	35,
Feb4 1a, 30-yr, Accumulated Debt	5,000	9,000	14,001	19,002	23,002	27,003	30,003	34,003	38,003	41,003	46,003	50,003	53,



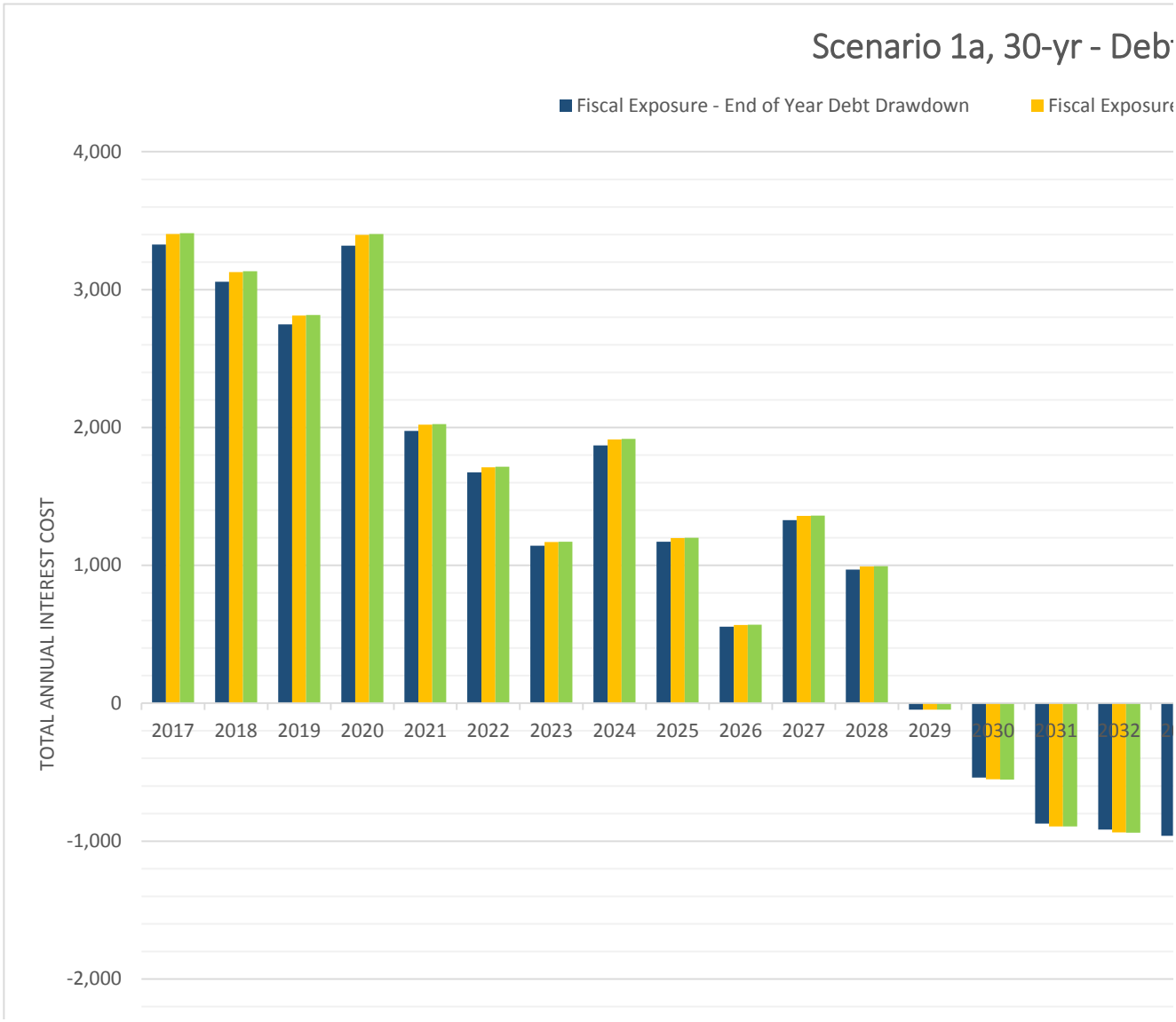


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	256	717	1,434	2,406	3,584	4,966	6,502	8,243
Feb4 1a, 30-yr - Accumulated Debt Principal	5,000	8,744	13,283	17,566	20,594	23,416	25,034	27,498	29,757
Feb4 1a, 30-yr, Accumulated Debt	5,000	9,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000





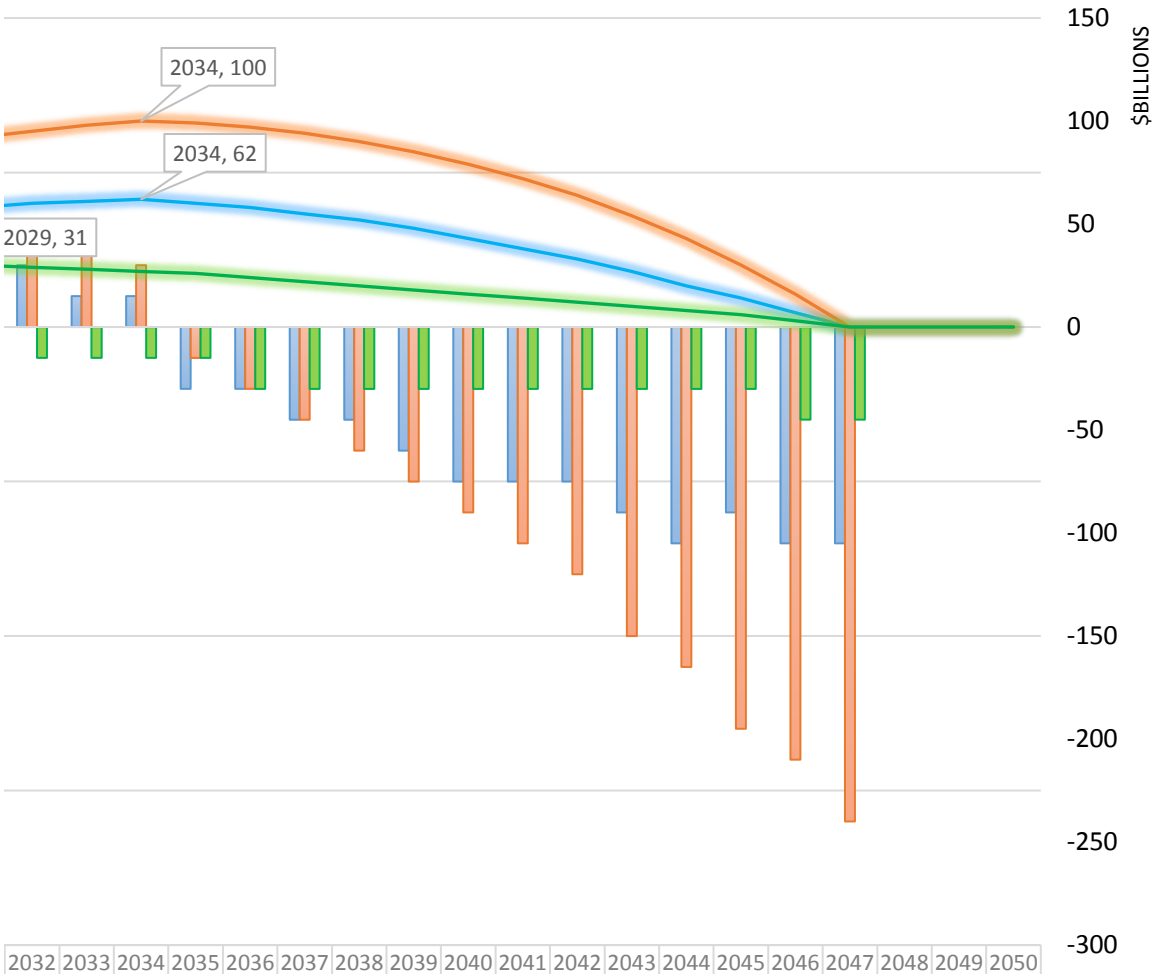
	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	205	563	1,075	1,792	2,611	3,533	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	4,000	6,795	9,437	12,925	14,208	15,389	16,467	18
Feb4 1c, 30-yr, Accumulated Debt	4,000	7,000	10,000	14,000	16,000	18,000	20,000	23




-3,000

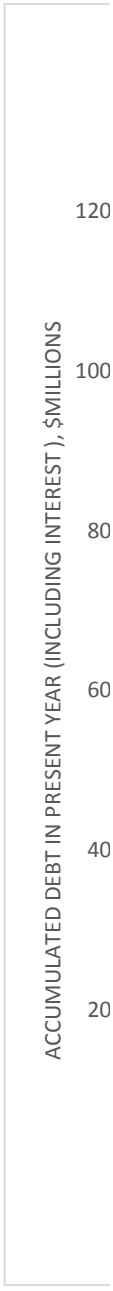
Scenario 1E

1c - at 5.12% interest rate

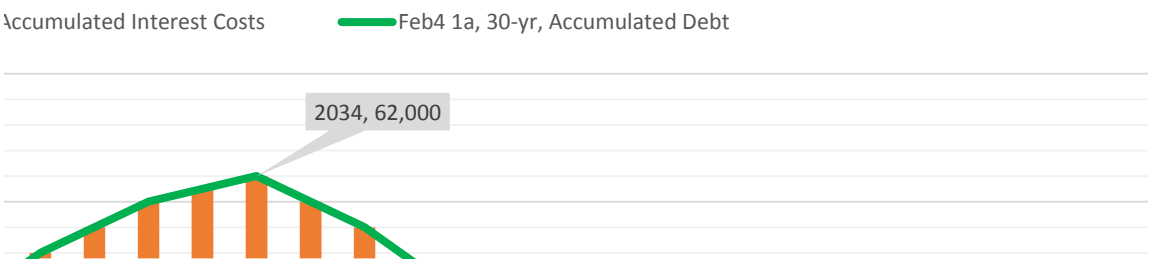


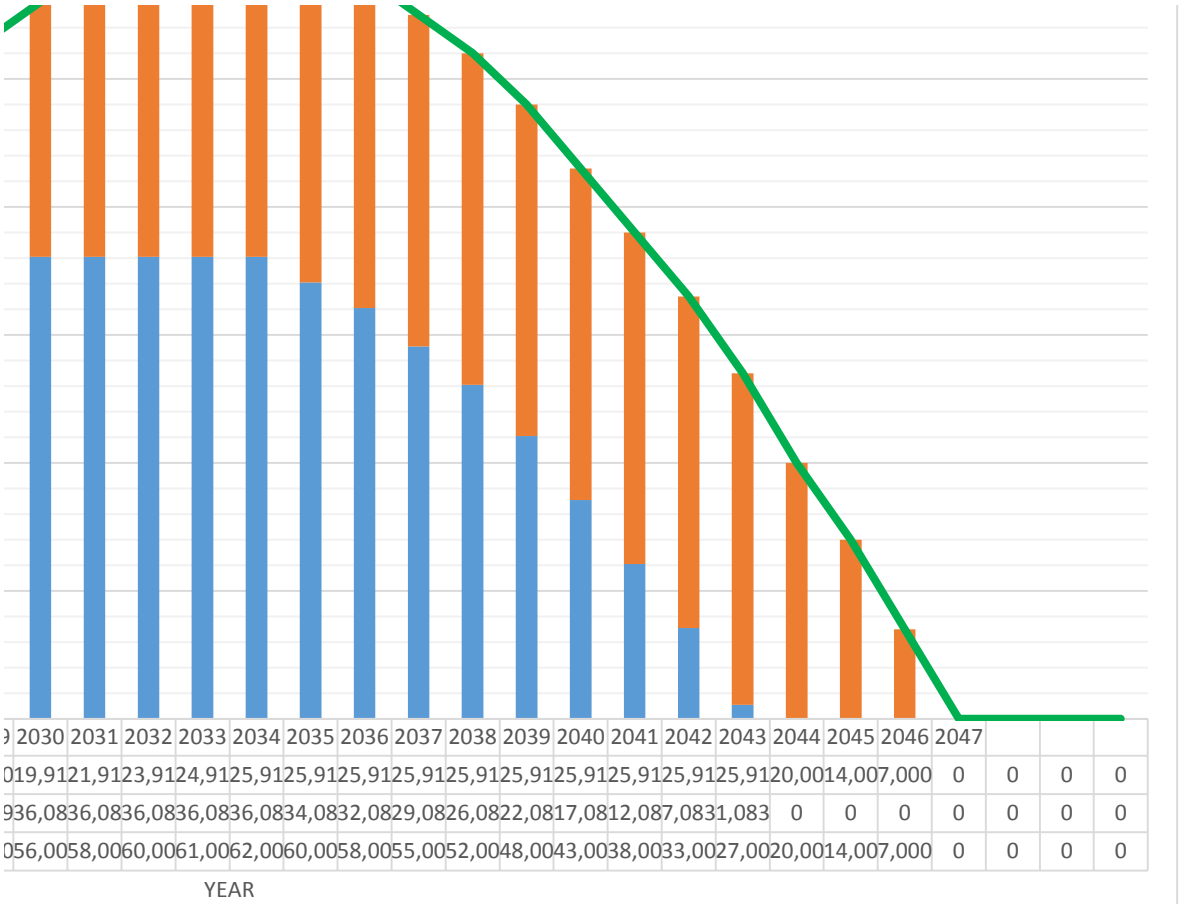
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
2,000	1,000	1,000	-2,00	-2,00	-3,00	-3,00	-4,00	-5,00	-5,00	-5,00	-6,00	-7,00	-6,00	-7,00	-7,00	0	0	0
3,000	3,000	2,000	-1,00	-2,00	-3,00	-4,00	-5,00	-6,00	-7,00	-8,00	-10,0	-11,0	-13,0	-14,0	-16,0	0	0	0
-1,00	-1,00	-1,00	-1,00	-2,00	-2,00	-2,00	-2,00	-2,00	-2,00	-2,00	-2,00	-2,00	-2,00	-3,00	-3,00	0	0	0
60,00	61,00	62,00	60,00	58,00	55,00	52,00	48,00	43,00	38,00	33,00	27,00	20,00	14,00	7,000	0	0	0	0
95,00	98,00	100,0	99,00	97,00	94,00	90,00	85,00	79,00	72,00	64,00	54,00	43,00	30,00	16,00	0	0	0	0
29,00	28,00	27,00	26,00	24,00	22,00	20,00	18,00	16,00	14,00	12,00	10,00	8,000	6,000	3,000	0	0	0	0

CALENDAR YEAR



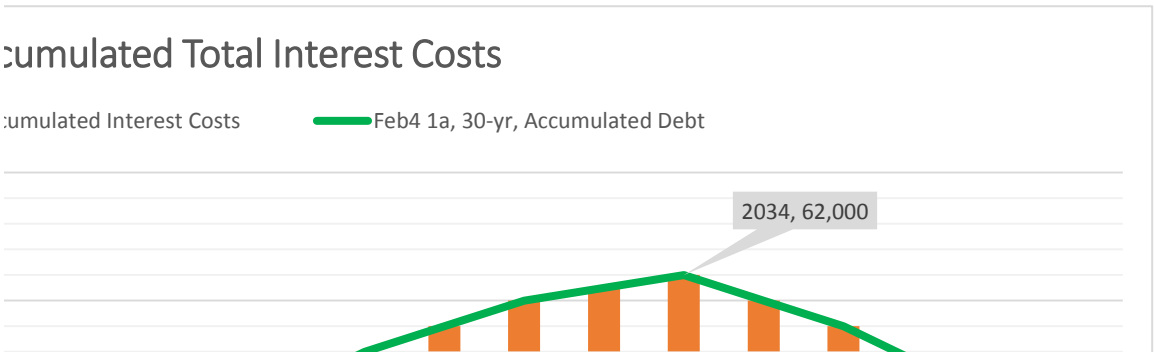
ccumulated Total Interest Costs

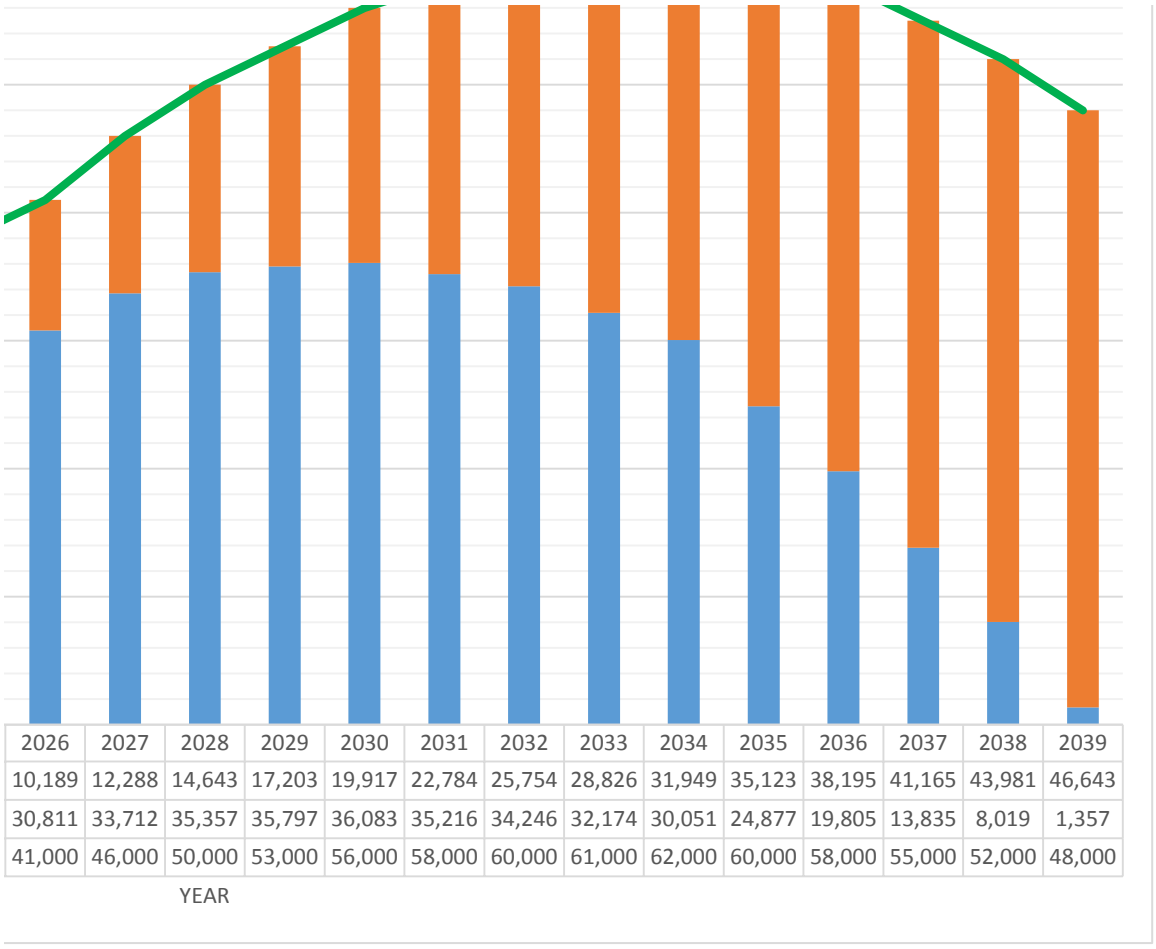




	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047			
	019,91	21,91	23,91	24,91	25,91	25,91	25,91	25,91	25,91	25,91	25,91	25,91	25,91	25,91	20,00	14,00	7,000	0	0	0	0
	936,08	36,08	36,08	36,08	36,08	34,08	32,08	29,08	26,08	22,08	17,08	12,08	7,083	1,083	0	0	0	0	0	0	0
	056,00	58,00	60,00	61,00	62,00	60,00	58,00	55,00	52,00	48,00	43,00	38,00	33,00	27,00	20,00	14,00	7,000	0	0	0	0

YEAR

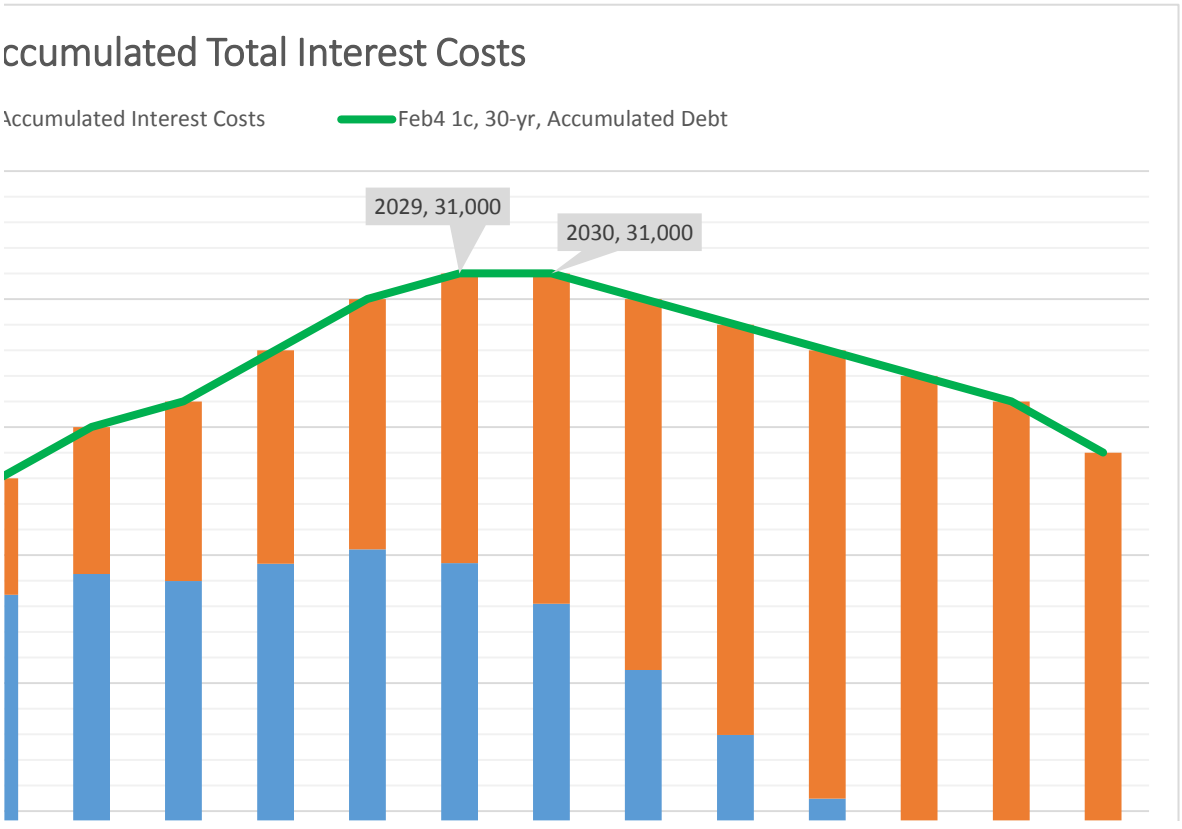


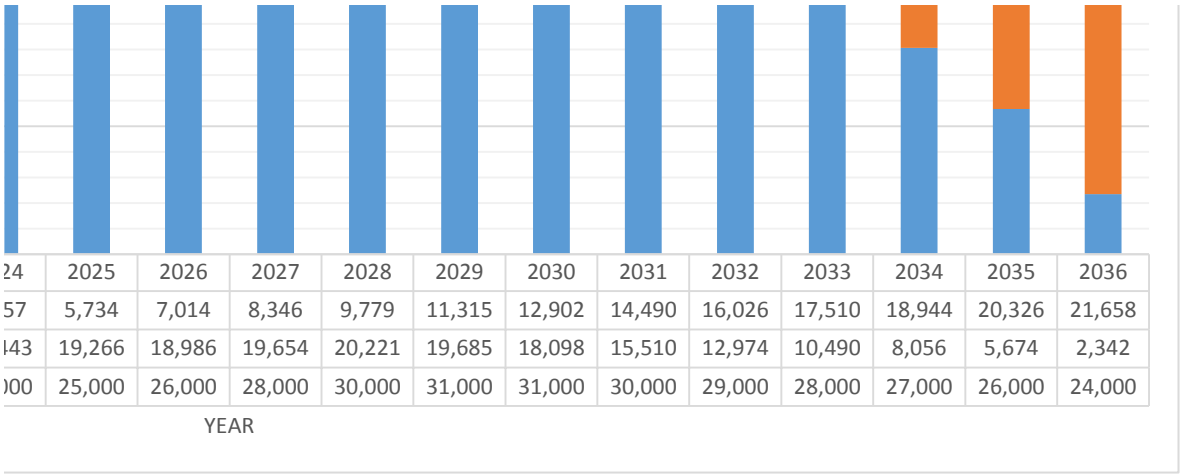


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,189	12,288	14,643	17,203	19,917	22,784	25,754	28,826	31,949	35,123	38,195	41,165	43,981	46,643
30,811	33,712	35,357	35,797	36,083	35,216	34,246	32,174	30,051	24,877	19,805	13,835	8,019	1,357
41,000	46,000	50,000	53,000	56,000	58,000	60,000	61,000	62,000	60,000	58,000	55,000	52,000	48,000

YEAR

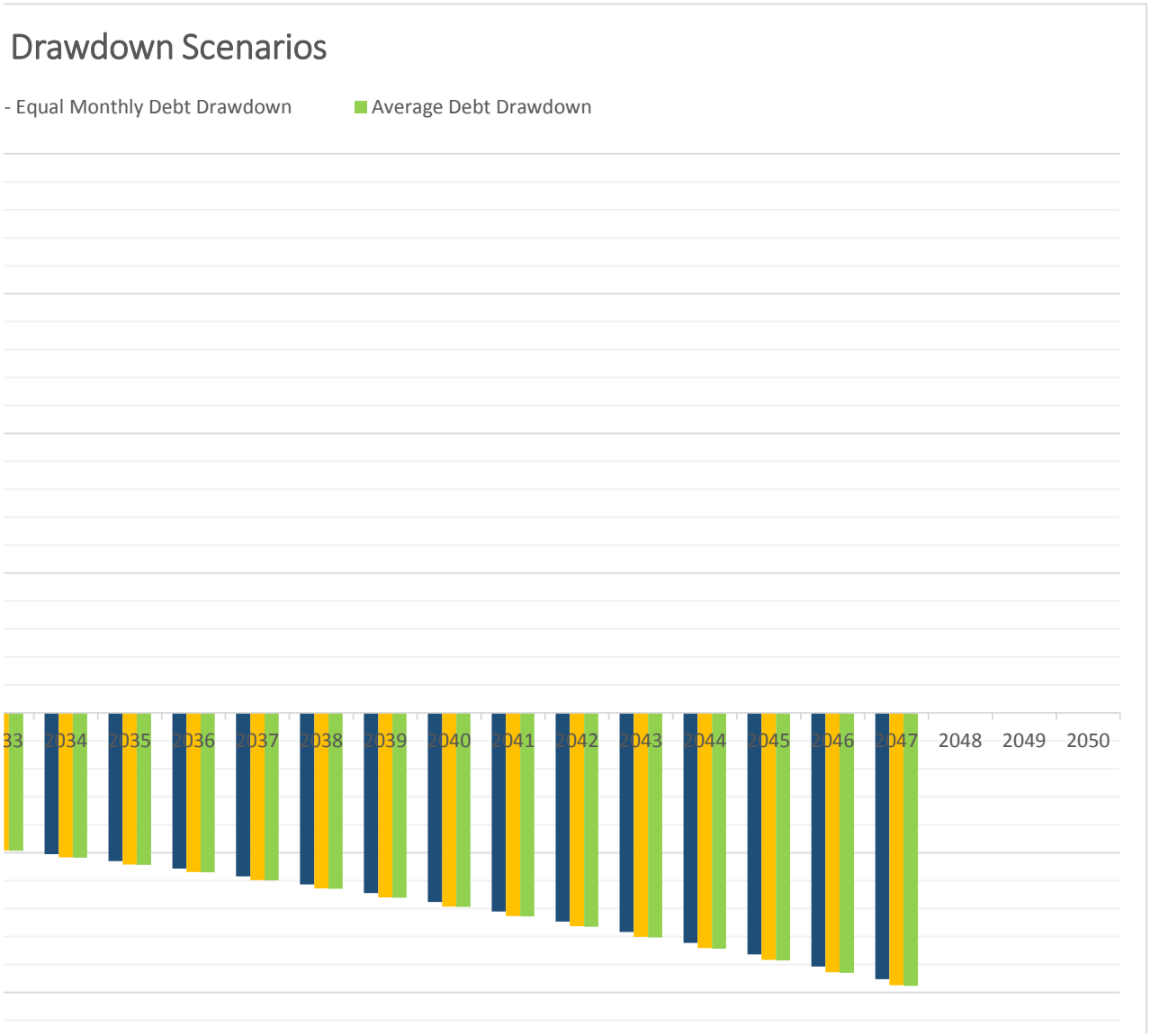
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $





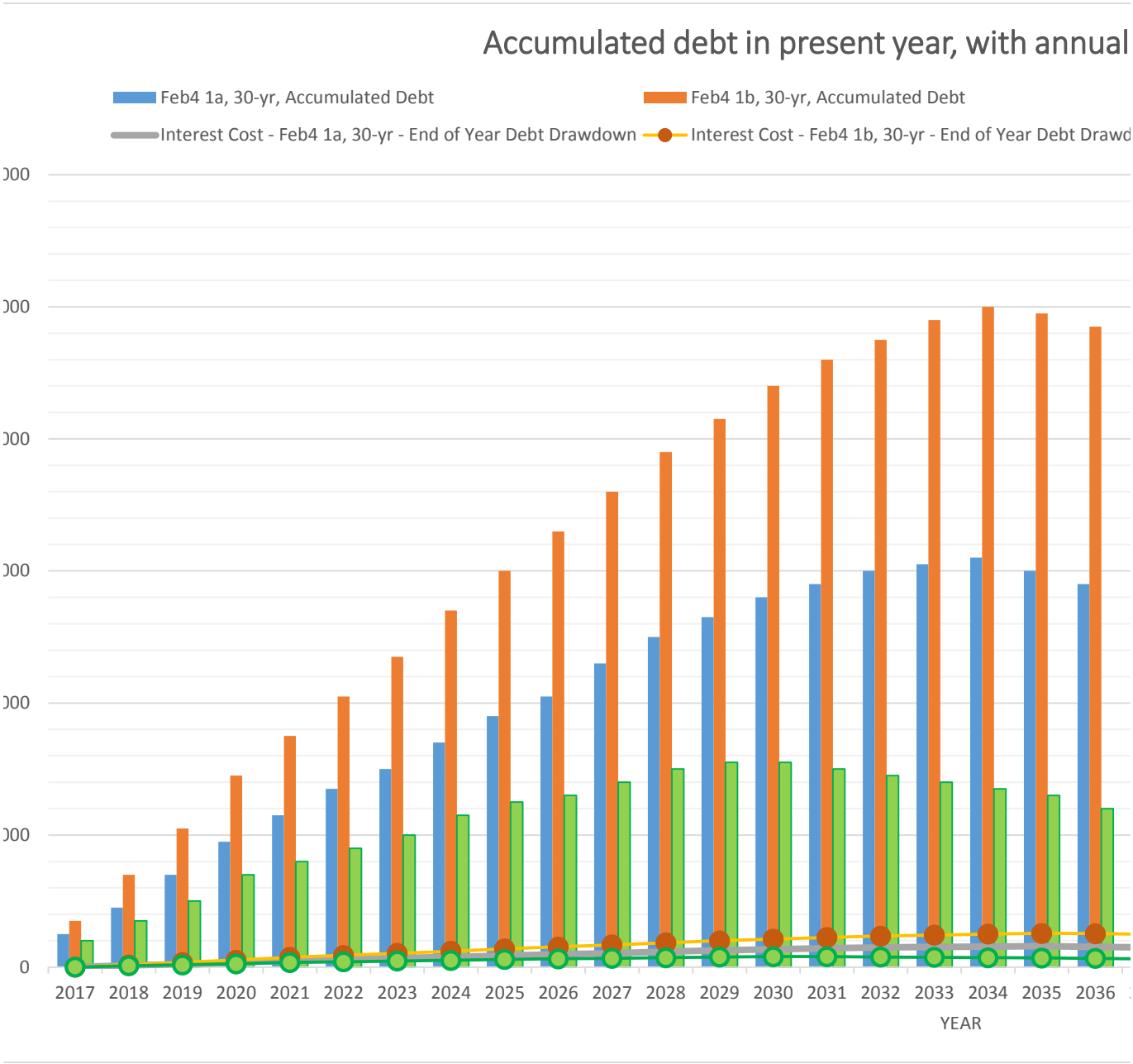
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
57	5,734	7,014	8,346	9,779	11,315	12,902	14,490	16,026	17,510	18,944	20,326	21,658
43	19,266	18,986	19,654	20,221	19,685	18,098	15,510	12,974	10,490	8,056	5,674	2,342
00	25,000	26,000	28,000	30,000	31,000	31,000	30,000	29,000	28,000	27,000	26,000	24,000

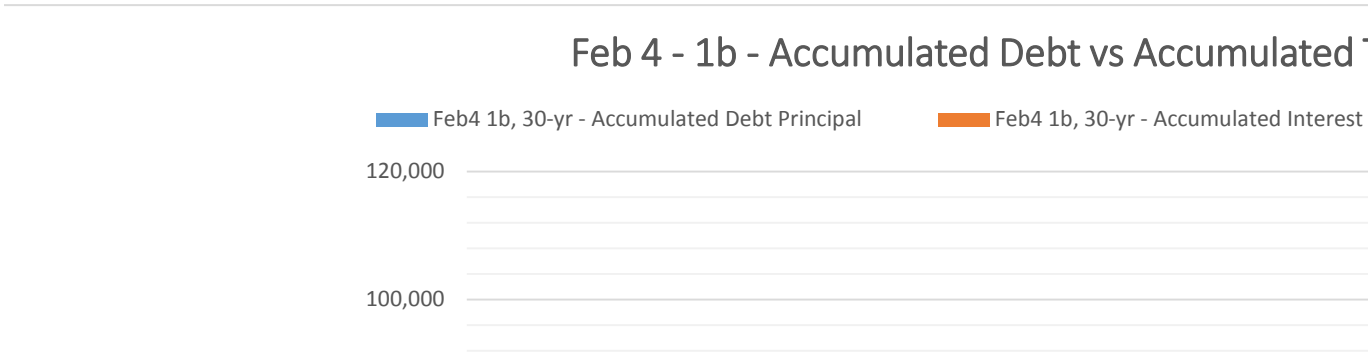
YEAR

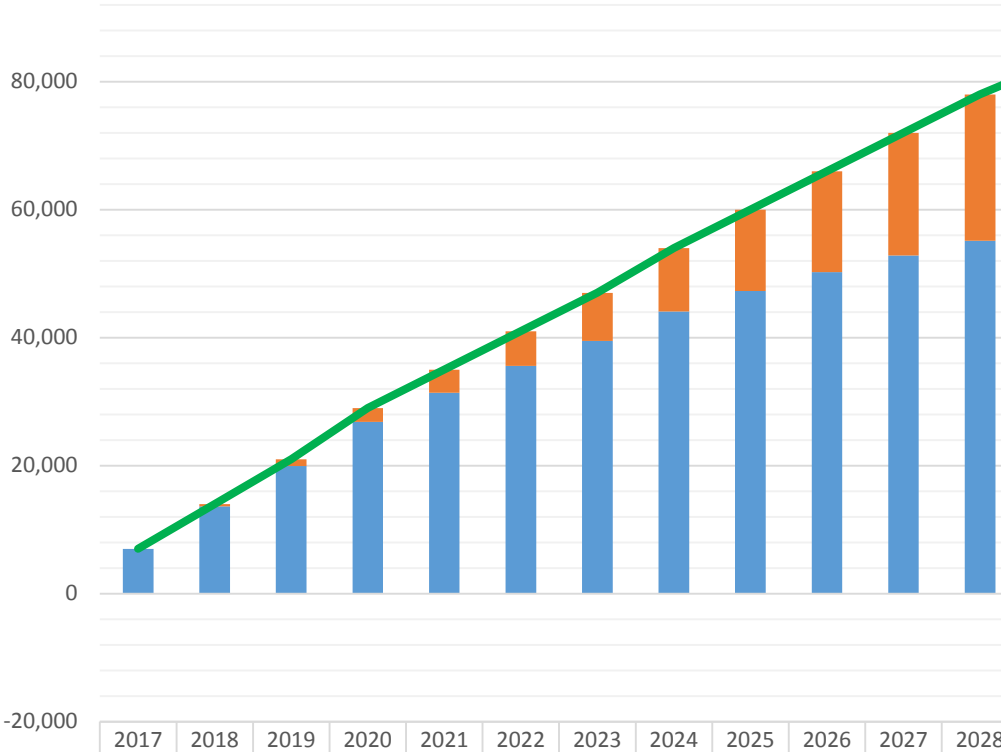


YEAR

ɜ - 25 year and 30 year Financing Terms, at 5% interest rate

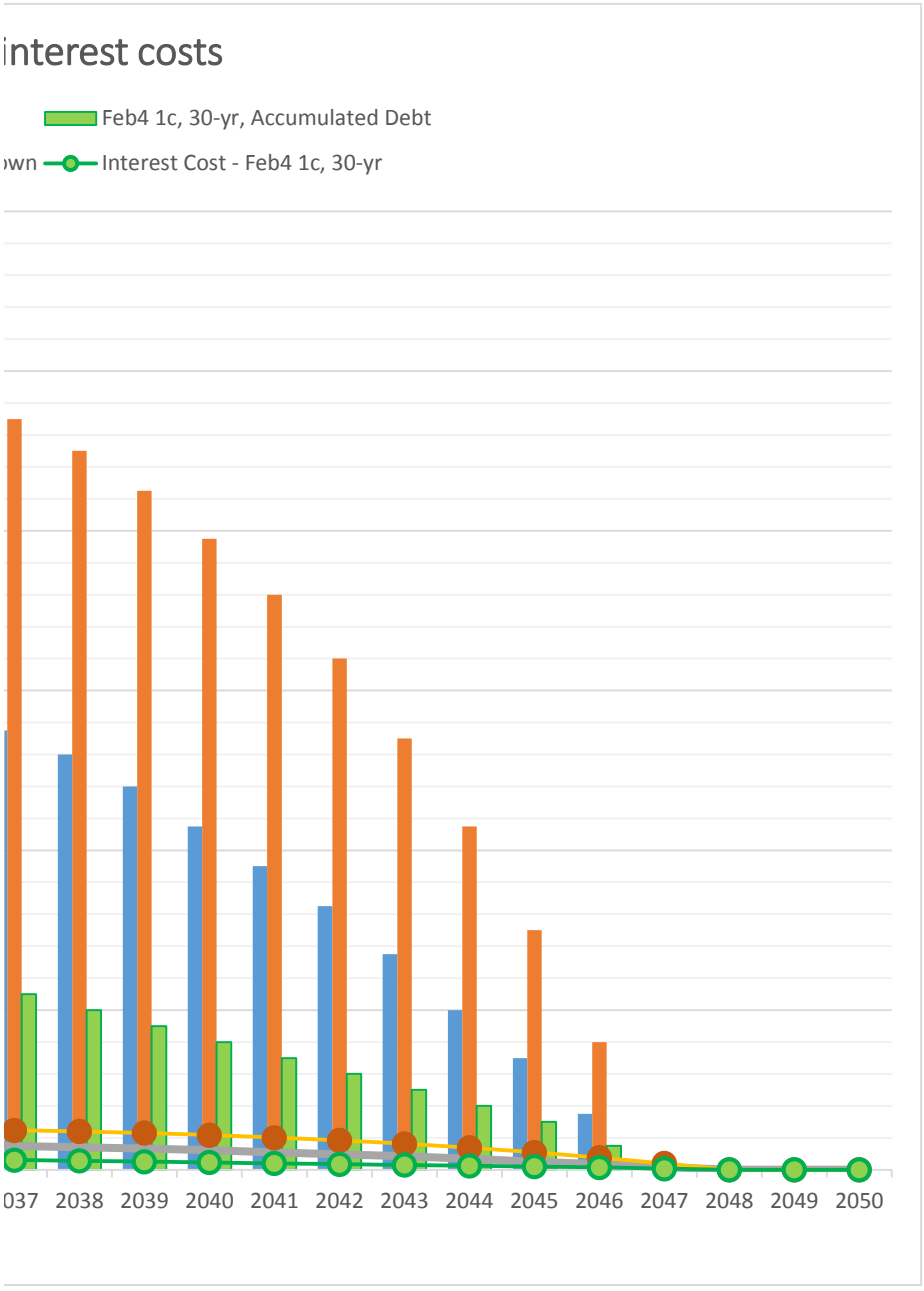


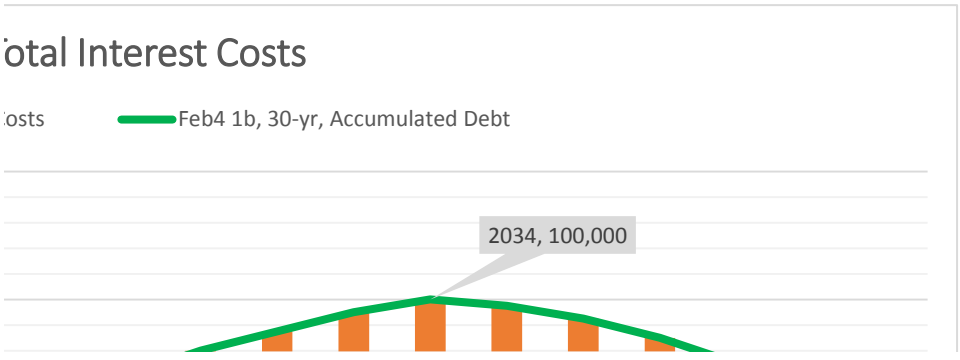

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000
100,000

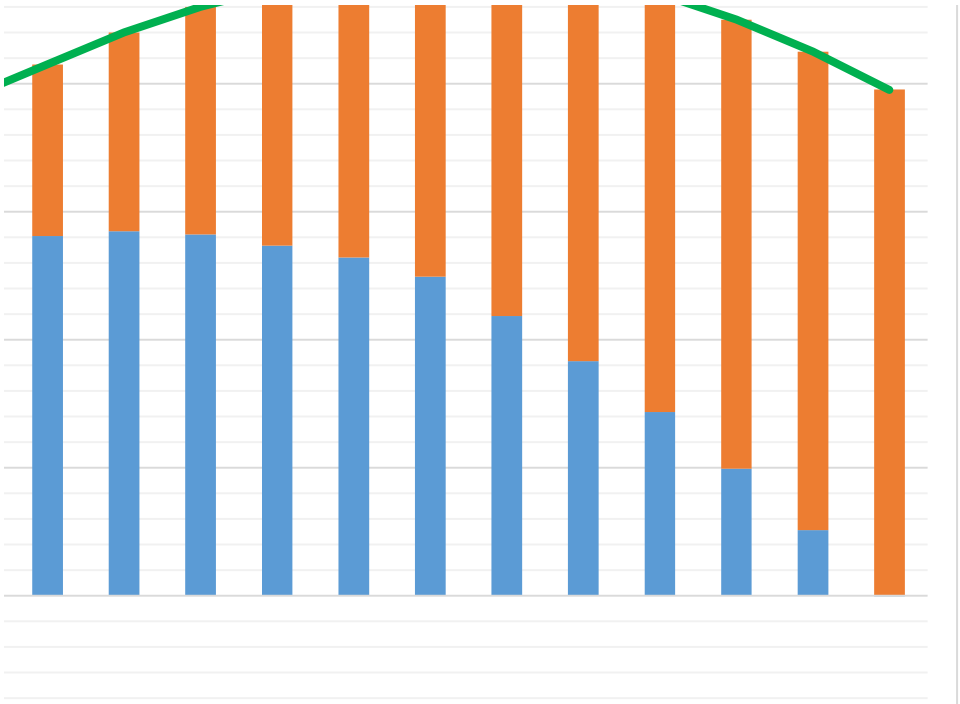


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	358	1,075	2,150	3,635	5,427	7,526	9,933	12,698	15,770	19,149	22,83
Feb4 1b, 30-yr - Accumulated Debt Principal	7,000	13,642	19,925	26,850	31,365	35,573	39,474	44,067	47,302	50,230	52,851	55,16
Feb4 1b, 30-yr, Accumulated Debt	7,000	14,000	21,000	29,000	35,000	41,000	47,000	54,000	60,000	66,000	72,000	78,00

Y


interest costs
Feb4 1c, 30-yr, Accumulated Debt
wn
Interest Cost - Feb4 1c, 30-yr
037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 100,000



	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
	26,829	31,078	35,584	40,294	45,158	50,176	55,296	60,365	65,331	70,144	74,752	79,104
	56,171	56,922	56,416	54,706	52,842	49,824	43,704	36,635	28,669	19,856	10,248	-104
	83,000	88,000	92,000	95,000	98,000	100,000	99,000	97,000	94,000	90,000	85,000	79,000

:AR

Equal Monthly Debt Drawdown

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

1a. GA Smoothing (Borrow $5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	5,000	4,000

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,250	4,750

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

1b. GA Smoothing (Borrow $7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	7,000	7,000

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,750	7,000

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

1c. GA Smoothing (Borrow $4 billion in 2017)

$ millions

Scenario 1C - 30-yr amortization	2017	2018
Annual Exposure[2]	4,000	3,000

	Fiscalized[3]	2016-17	2017-18
	Start: January 1st	1,000	3,750

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	1,750 - 1,250	7,000 - 4,750

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1250	4750
Debt-Finance Global Adjustment Costs, Option 1a	1750	7000
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18

Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1250**	**4990**
Total, B	1750	7240
Proposed Program Total:	1,750 - 1,250	7,240 - 4,990

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
5,000	5,000	4,000	4,000

2018-19	2019-20	2020-21	2021-2022
4,250	5,000	4,750	4,000

king in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
7,000	8,000	6,000	6,000

2018-19	2019-20	2020-21	2021-2022
7,000	7,250	7,500	6,000

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
3,000	4,000	2,000	2,000

2018-19	2019-20	2020-21	2021-2022
3,000	3,250	3,500	2,000

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
7,000 - 4,250	7,250 - 5,000	7,500 - 4,750	6,000 - 4,000

/1

2018-19[1]	2019-20[1]	2020-21[1]
4250	5000	4750
7000	7250	7500
225	279	323
60	60	60
18	18	18

4553	**5357**	**5151**
7303	7607	7901

7,303 - 4,553 7,607 - 5,357 7,901 - 5,151

1a. GA Smoothing (Borrow $5 billion in 2017)

	2017
IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	7,095
Additional GA Debt Drawdown, End of Year	5,000

Ratepayer GA Payment

Total Accumulated Debt *($ billion)*	5,000
Total Change in Accumulated Debt *($ billion)*	5000

1b. GA Smoothing (Borrow $7 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	5,095
Additional GA Debt Drawdown, End of Year	7,000

Total Accumulated Debt *($ billion)*	7000
Total Change in Accumulated Debt *($ billion)*	7000

1c. GA Smoothing (Borrow $4 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	8,095
Additional GA Debt Drawdown, End of Year	4,000

Total Accumulated Debt *($ billion)*	4000
Total Change in Accumulated Debt *($ billion)*	4000

2018	2019	2020	2021	2022	2023	2024	2025
11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489
6,835	7,552	7,168	6,844	6,634	7,212	7,081	6,489
5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000

9,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000
5000	4000	5000	4000	4000	3000	4000	4000

11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489
4,835	4,552	4,168	4,844	4,634	4,212	4,081	4,489
7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000

14000	21000	28000	35000	41000	47000	53000	59000
7000	7000	8000	6000	6000	6000	7000	6000

11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489
8,835	8,552	8,168	8,844	8,634	8,212	8,081	8,489
3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000

7000	10000	14000	16000	19000	20000	23000	25000
3000	3000	4000	2000	2000	2000	3000	2000

2026	2027	2028	2029	2030	2031	2032	2033
10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147
7,020	6,975	6,764	6,919	6,650	6,587	6,758	7,147
3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000

41,000	46,000	50,000	53,000	56,000	58,000	60,000	61,000
3000	4000	4000	3000	3000	2000	2000	1000

10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147
4,020	4,975	4,764	4,919	4,650	4,587	5,758	5,147
6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000

65000	71000	77000	83000	88000	91000	95000	97000
6000	6000	6000	5000	5000	4000	3000	3000

10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147
9,020	8,975	8,764	8,919	9,650	9,587	9,758	9,147
1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000

26000	28000	30000	31000	31000	30000	29000	28000
1000	2000	2000	1000	0	-1000	-1000	-1000

2034	2035	2036	2037	2038	2039	2040	2041
7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109
6,670	7,553	7,281	8,022	7,777	8,543	9,320	9,109
1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000

62,000	60,000	58,000	55,000	52,000	48,000	43,000	38,000
1000	-2000	-2000	-3000	-3000	-4000	-5000	-5000

7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109
5,670	6,553	7,281	8,022	8,777	9,543	10,320	11,109
2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000

99000	98000	96000	94000	90000	85000	80000	73000
2000	-1000	-2000	-3000	-4000	-5000	-6000	-7000

7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109
8,670	6,553	7,281	7,022	6,777	6,543	6,320	6,109
-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000

27000	25000	23000	22000	20000	18000	16000	14000
-1000	-1000	-2000	-2000	-2000	-2000	-2000	-2000

2042	2043	2044	2045	2046	2047	2048
3,908	3,717	3,535	3,362	3,197	3,041	2,892
9,908	9,717	9,535	9,362	10,197	10,041	2,892
-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0

33,000	27,000	20,000	14,000	7,000	-	-	
-6000	-6000	-6000	-6000	-7000	-7000	0	

3,908	3,717	3,535	3,362	3,197	3,041	2,892
11,908	13,717	14,535	16,362	17,197	19,041	2,892
-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0

64000	55000	44000	31000	16000	0	0
-8000	-10000	-11000	-13000	-14000	-16000	0

3,908	3,717	3,535	3,362	3,197	3,041	2,892
5,908	5,717	5,535	5,362	6,197	6,041	2,892
-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0

12000	10000	8000	5000	3000	0	0
-2000	-2000	-2000	-2000	-3000	-3000	0

Feb4 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	5,000	4,000	5,000	5,000	4,000	4,000	3,000	4,000	4,000	3,000	5,000	4,000	3,000	3,000	2,000	2,000	1,000	1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000	-5,000	-6,000	-7,000	-6,000	-7,000	-7,000	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	5,119	4,095	5,119	5,119	4,095	4,095	3,071	4,095	4,095	3,071	5,119	4,095	3,071	3,071	2,048	2,048	1,024	1,024	-2,048	-2,048	-3,071	-3,071	-4,095	-5,119	-5,119	-5,119	-6,143	-7,167	-6,143	-7,167	-7,167	0	0	0	
			119	95	119	119	95	95	71	95	95	71	119	95	71	71	48	48	24	24	-48	-48	-71	-71	-95	-119	-119	-119	-143	-167	-143	-167	-167	0	0	0	0

Maximum Fiscal Exposure — Maximum Annual Interest Cost: 58,419

End of Year Debt Drawdown	5,000
Equal Monthly Debt Drawdown	5,119

End of Year Debt Drawdown	3,174
Equal Monthly Debt Drawdown	3,147

Maximum Accumulated Debt — Feb4 1a, 30-yr, Accumulated Debt

End of Year Debt Drawdown	62,000
Equal Monthly Debt Drawdown	63,476

			41%	32%	39%	35%	28%	27%																														
Feb4 1a, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow $5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		7,095	8,091	7,013	7,885	7,816	7,811	8,595	8,617	8,230	8,966	8,074	9,119	9,479	9,364	9,454	9,727	10,219	9,793	10,727	10,353	10,992	10,593	11,205	11,778	11,311	10,854	11,406	11,917	10,386	10,914	10,399	2,892	2,750	2,616	
	GA Debt Requirement		5,000	3,744	4,539	4,283	3,027	2,822	1,618	2,464	2,259	1,054	2,901	1,645	440	286	-867	-970	-2,072	-2,123	-5,174	-5,072	-5,970	-5,816	-6,662	-7,458	-7,202	-6,946	-7,690	-8,382	-7,024	-7,717	-7,358	0	0	0	
	Debt, Beginning of Year		0	5,000	9,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000	41,000	46,000	50,000	53,000	56,000	58,000	60,000	61,000	62,000	60,000	58,000	55,000	52,000	48,000	43,000	38,000	33,000	27,000	20,000	14,000	7,000	0	0	0	
a	*Interest Cost - Feb4 1a, 30-yr - End of Year Debt Drawdown*		*0*	*256*	*461*	*717*	*973*	*1,178*	*1,382*	*1,536*	*1,741*	*1,946*	*2,099*	*2,355*	*2,560*	*2,714*	*2,867*	*2,970*	*3,072*	*3,123*	*3,174*	*3,072*	*2,970*	*2,816*	*2,662*	*2,458*	*2,202*	*1,946*	*1,690*	*1,382*	*1,024*	*717*	*358*	*0*	*0*	*0*	*0*	58,419
b	Additional GA Debt Drawdown, End of Year		5,000	3,744	4,539	4,283	3,027	2,822	1,618	2,464	2,259	1,054	2,901	1,645	440	286	-867	-970	-2,072	-2,123	-5,174	-5,072	-5,970	-5,816	-6,662	-7,458	-7,202	-6,946	-7,690	-8,382	-7,024	-7,717	-7,358	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		5,000	9,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000	41,000	46,000	50,000	53,000	56,000	58,000	60,000	61,000	62,000	60,000	58,000	55,000	52,000	48,000	43,000	38,000	33,000	27,000	20,000	14,000	7,000	0	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	256	717	1,434	2,406	3,584	4,966	6,502	8,243	10,189	12,288	14,643	17,203	19,917	21,917	23,917	24,917	25,917	25,917	25,917	25,917	25,917	25,917	25,917	25,917	25,917	25,917	25,917	20,000	14,000	7,000	0	0	0	
	Feb4 1a, 30-yr - Accumulated Debt Principal		5,000	8,744	13,283	17,566	20,594	23,416	25,034	27,498	29,757	30,811	33,712	35,357	35,797	36,083	36,083	36,083	36,083	36,083	34,083	32,083	29,083	26,083	22,083	17,083	12,083	7,083	1,083	0	0	0	0	0	0	0	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	256	717	1,434	2,406	3,584	4,966	6,502	8,243	10,189	12,288	14,643	17,203	19,917	22,784	25,754	28,826	31,949	35,123	38,195	41,165	43,981	46,643	49,101	51,302	53,248	54,938	56,320	57,344	58,061	58,419				
	Feb4 1a, 30-yr - Accumulated Debt Principal		5,000	8,744	13,283	17,566	20,594	23,416	25,034	27,498	29,757	30,811	33,712	35,357	35,797	36,083	35,216	34,246	32,174	30,051	24,877	19,805	13,835	8,019	1,357	-6,101	-13,302	-20,248	-27,938	-36,320	-43,344	-51,061	-58,419				
Fiscal Exposure - End of Year Debt Drawdown			5,000	4,000	5,000	5,000	4,000	4,000	3,000	4,000	4,000	3,000	5,000	4,000	3,000	3,000	2,000	2,000	1,000	1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000	-5,000	-6,000	-7,000	-6,000	-7,000	-7,000	0	0	0	

Feb4 1a, 30-yr	Equal Monthly Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			12																																		
1a. GA Smoothing (Borrow $5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		7,095	8,091	7,013	7,885	7,816	7,811	8,595	8,617	8,230	8,966	8,074	9,119	9,479	9,364	9,454	9,727	10,219	9,793	10,727	10,353	10,992	10,593	11,205	11,778	11,311	10,854	11,406	11,917	10,386	10,914	10,399	2,892	2,750	2,616	
	GA Debt Requirement		5,000	3,744	4,539	4,283	3,027	2,822	1,618	2,464	2,259	1,054	2,901	1,645	440	286	-867	-970	-2,072	-2,123	-5,174	-5,072	-5,970	-5,816	-6,662	-7,458	-7,202	-6,946	-7,690	-8,382	-7,024	-7,717	-7,358	0	0	0	
	Debt, Beginning of Year		0	5,119	9,214	14,333	19,452	23,547	27,643	30,714	34,809	38,905	41,976	47,095	51,190	54,262	57,333	59,381	61,428	62,452	63,476	61,428	59,381	56,309	53,238	49,143	44,024	38,905	33,786	27,643	20,476	14,333	7,167	0	0	0	
3,147	*Interest Cost - Feb4 1a, 30-yr*		*119*	*351*	*580*	*836*	*1,068*	*1,273*	*1,454*	*1,631*	*1,836*	*2,017*	*2,218*	*2,450*	2,631	*2,785*	*2,915*	*3,017*	*3,096*	*3,147*	*3,127*	*3,024*	*2,898*	*2,745*	*2,567*	*2,339*	*2,083*	*1,827*	*1,547*	*1,216*	*881*	*550*	*192*	*0*	*0*	*0*	58,419
	Additional GA Debt Drawdown		5,000	3,744	4,539	4,283	3,027	2,822	1,618	2,464	2,259	1,054	2,901	1,645	440	286	-867	-970	-2,072	-2,123	-5,174	-5,072	-5,970	-5,816	-6,662	-7,458	-7,202	-6,946	-7,690	-8,382	-7,024	-7,717	-7,358	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		5,119	9,214	14,333	19,452	23,547	27,643	30,714	34,809	38,905	41,976	47,095	51,190	54,262	57,333	59,381	61,428	62,452	63,476	61,428	59,381	56,309	53,238	49,143	44,024	38,905	33,786	27,643	20,476	14,333	7,167	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			5,119	4,095	5,119	5,119	4,095	4,095	3,071	4,095	4,095	3,071	5,119	4,095	3,071	3,071	2,048	2,048	1,024	1,024	-2,048	-2,048	-3,071	-3,071	-4,095	-5,119	-5,119	-5,119	-6,143	-7,167	-6,143	-7,167	-7,167	0	0	0	
	Monthly Drawdown		417	312	378	357	252	235	135	205	188	88	242	137	37	24	(72)	(81)	(173)	(177)	(431)	(423)	(497)	(485)	(555)	(621)	(600)	(579)	(641)	(699)	(585)	(643)	(613)	-	-	-	
	FV of Monthly Drawdown at 5%		5,119	3,833	4,647	4,385	3,099	2,890	1,656	2,523	2,313	1,079	2,970	1,684	450	293	(888)	(993)	(2,121)	(2,174)	(5,298)	(5,193)	(6,112)	(5,954)	(6,821)	(7,635)	(7,373)	(7,111)	(7,873)	(8,582)	(7,191)	(7,900)	(7,534)	-	-	-	
	Annual Interest Cost on New Drawdowns		119	89	108	102	72	67	39	59	54	25	69	39	10	7	(21)	(23)	(49)	(51)	(123)	(121)	(142)	(138)	(159)	(178)	(171)	(165)	(183)	(200)	(167)	(184)	(175)	-	-	-	
	Annual Interest Cost on Opening Balance		-	262	472	734	996	1,206	1,415	1,573	1,782	1,992	2,149	2,411	2,621	2,778	2,935	3,040	3,145	3,198	3,250	3,145	3,040	2,883	2,726	2,516	2,254	1,992	1,730	1,415	1,048	734	367	0	0	0	
	Total Annual Interest Cost		119	351	580	836	1,068	1,273	1,454	1,631	1,836	2,017	2,218	2,450	2,631	2,785	2,915	3,017	3,096	3,147	3,127	3,024	2,898	2,745	2,567	2,339	2,083	1,827	1,547	1,216	881	550	192	0	0	0	

Feb4 1a, 30-yr	Bi-Annual Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			2																																		
1a. GA Smoothing (Borrow $5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		7,095	8,091	7,013	7,885	7,816	7,811	8,595	8,617	8,230	8,966	8,074	9,119	9,479	9,364	9,454	9,727	10,219	9,793	10,727	10,353	10,992	10,593	11,205	11,778	11,311	10,854	11,406	11,917	10,386	10,914	10,399	2,892	2,750	2,616	
	GA Debt Requirement		5,000	3,744	4,539	4,283	3,027	2,822	1,618	2,464	2,259	1,054	2,901	1,645	440	286	-867	-970	-2,072	-2,123	-5,174	-5,072	-5,970	-5,816	-6,662	-7,458	-7,202	-6,946	-7,690	-8,382	-7,024	-7,717	-7,358	0	0	0	
	Debt, Beginning of Year		0	5,064	9,115	14,179	19,243	23,294	27,346	30,384	34,435	38,486	41,525	46,589	50,640	53,678	56,717	58,742	60,768	61,781	62,794	60,768	58,742	55,704	52,666	48,614	43,550	38,486	33,422	27,346	20,256	14,179	7,090	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*64*	*307*	*525*	*781*	*1,024*	*1,229*	*1,421*	*1,587*	*1,792*	*1,984*	*2,163*	*2,406*	*2,598*	*2,752*	*2,893*	*2,995*	*3,085*	*3,136*	*3,149*	*3,046*	*2,931*	*2,778*	*2,611*	*2,394*	*2,138*	*1,882*	*1,613*	*1,293*	*947*	*627*	*269*	*0*	*0*	*0*	58,419
	Additional GA Debt Drawdown		5,000	3,744	4,539	4,283	3,027	2,822	1,618	2,464	2,259	1,054	2,901	1,645	440	286	-867	-970	-2,072	-2,123	-5,174	-5,072	-5,970	-5,816	-6,662	-7,458	-7,202	-6,946	-7,690	-8,382	-7,024	-7,717	-7,358	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		5,064	9,115	14,179	19,243	23,294	27,346	30,384	34,435	38,486	41,525	46,589	50,640	53,678	56,717	58,742	60,768	61,781	62,794	60,768	58,742	55,704	52,666	48,614	43,550	38,486	33,422	27,346	20,256	14,179	7,090	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown			5,064	4,051	5,064	5,064	4,051	4,051	3,038	4,051	4,051	3,038	5,064	4,051	3,038	3,038	2,026	2,026	1,013	1,013	-2,026	-2,026	-3,038	-3,038	-4,051	-5,064	-5,064	-5,064	-6,077	-7,090	-6,077	-7,090	-7,090	0	0	0	
	Bi-Annual Drawdown		2,500	1,872	2,270	2,142	1,514	1,411	809	1,232	1,130	527	1,450	822	220	143	(434)	(485)	(1,036)	(1,062)	(2,587)	(2,536)	(2,985)	(2,908)	(3,331)	(3,729)	(3,601)	(3,473)	(3,845)	(4,191)	(3,512)	(3,858)	(3,679)	-	-	-	
	FV of Bi-Annual Drawdown at 5%		5,064	3,792	4,597	4,338	3,066	2,859	1,638	2,496	2,288	1,068	2,938	1,666	446	290	(878)	(982)	(2,099)	(2,150)	(5,241)	(5,137)	(6,046)	(5,890)	(6,748)	(7,553)	(7,294)	(7,035)	(7,788)	(8,490)	(7,114)	(7,816)	(7,453)	-	-	-	
	Annual Interest Cost on New Drawdowns		64	48	58	55	39	36	21	32	29	13	37	21	6	4	(11)	(12)	(27)	(27)	(66)	(65)	(76)	(74)	(85)	(95)	(92)	(89)	(98)	(107)	(90)	(99)	(94)	-	-	-	
	Annual Interest Cost on Opening Balance		-	259	467	726	985	1,193	1,400	1,556	1,763	1,971	2,126	2,385	2,593	2,748	2,904	3,008	3,111	3,163	3,215	3,111	3,008	2,852	2,696	2,489	2,230	1,971	1,711	1,400	1,037	726	363	0	0	0	
	Total Annual Interest Cost		64	307	525	781	1,024	1,229	1,421	1,587	1,792	1,984	2,163	2,406	2,598	2,752	2,893	2,995	3,085	3,136	3,149	3,046	2,931	2,778	2,611	2,394	2,138	1,882	1,613	1,293	947	627	269	0	0	0	

Feb4 1a, 30-yr	Average Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow $5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		7,095	8,091	7,013	7,885	7,816	7,811	8,595	8,617	8,230	8,966	8,074	9,119	9,479	9,364	9,454	9,727	10,219	9,793	10,727	10,353	10,992	10,593	11,205	11,778	11,311	10,854	11,406	11,917	10,386	10,914	10,399	2,892	2,750	2,616	
	GA Debt Requirement		5,000	3,744	4,539	4,283	3,027	2,822	1,618	2,464	2,259	1,054	2,901	1,645	440	286	-867	-970	-2,072	-2,123	-5,174	-5,072	-5,970	-5,816	-6,662	-7,458	-7,202	-6,946	-7,690	-8,382	-7,024	-7,717	-7,358	0	0	0	
	Debt, Beginning of Year		0	5,128	9,230	14,358	19,486	23,589	27,691	30,768	34,870	38,973	42,050	47,178	51,280	54,357	57,434	59,485	61,536	62,562	63,587	61,536	59,485	56,408	53,331	49,229	44,101	38,973	33,845	27,691	20,512	14,358	7,179	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*128*	*358*	*589*	*845*	*1,075*	*1,280*	*1,459*	*1,638*	*1,843*	*2,022*	*2,227*	*2,458*	*2,637*	*2,790*	*2,918*	*3,021*	*3,098*	*3,149*	*3,123*	*3,021*	*2,893*	*2,739*	*2,560*	*2,330*	*2,074*	*1,818*	*1,536*	*1,203*	*870*	*538*	*179*	*0*	*0*	*0*	58,419
	Additional GA Debt Drawdown		5,000	3,744	4,539	4,283	3,027	2,822	1,618	2,464	2,259	1,054	2,901	1,645	440	286	-867	-970	-2,072	-2,123	-5,174	-5,072	-5,970	-5,816	-6,662	-7,458	-7,202	-6,946	-7,690	-8,382	-7,024	-7,717	-7,358	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		5,128	9,230	14,358	19,486	23,589	27,691	30,768	34,870	38,973	42,050	47,178	51,280	54,357	57,434	59,485	61,536	62,562	63,587	61,536	59,485	56,408	53,331	49,229	44,101	38,973	33,845	27,691	20,512	14,358	7,179	0	0	0	
Fiscal Exposure - Average Debt Drawdown			5,128	4,102	5,128	5,128	4,102	4,102	3,077	4,102	4,102	3,077	5,128	4,102	3,077	3,077	2,051	2,051	1,026	1,026	-2,051	-2,051	-3,077	-3,077	-4,102	-5,128	-5,128	-5,128	-6,154	-7,179	-6,154	-7,179	-7,179	0	0	0	

Feb4 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.1%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	7,000	7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000	6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000	2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000	-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	7,167	7,534	7,919	9,349	7,780	8,178	8,597	10,061	9,552	10,041	10,555	11,095	10,640	11,184	10,733	10,259	10,784	10,313	7,769	7,143	6,485	5,793	5,066	4,302	3,498	2,654	742	-244	-2,304	-3,446	-5,670	10,421	10,954	11,515	
			167	534	919	1,349	1,780	2,178	2,597	3,061	3,552	4,041	4,555	5,095	5,640	6,184	6,733	7,259	7,784	8,313	8,769	9,143	9,485	9,793	10,066	10,302	10,498	10,654	10,742	10,756	10,696	10,554	10,330	10,421	10,954	11,515	236,418

Maximum Fiscal Exposure		Maximum Annual Interest Cost	236,418
End of Year Debt Drawdown	8,000	5,120	
Equal Monthly Debt Drawdown	11,515	11,515	

Maximum Accumulated Debt	Feb4 1b, 30-yr, Accumulated Debt
End of Year Debt Drawdown	100,000
Equal Monthly Debt Drawdown	236,418

			58%	59%	61%	66%	55%	56%																													
Feb4 1b, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1b. GA Smoothing (Borrow $7 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		5,095	4,835	4,552	4,168	4,844	4,634	4,212	4,081	4,489	4,020	4,975	4,764	4,919	4,650	4,587	5,758	5,147	5,670	6,553	7,281	8,022	8,777	9,543	10,320	11,109	11,908	13,717	14,535	16,362	17,197	19,041	2,892	2,750	2,616	
	GA Debt Requirement		7,000	7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000	6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000	2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000	-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0	0	0	
a	Debt, Beginning of Year		0	7,000	14,000	21,000	29,000	35,000	41,000	47,000	54,000	60,000	66,000	72,000	78,000	83,000	88,000	92,000	95,000	98,000	100,000	99,000	97,000	94,000	90,000	85,000	79,000	72,000	64,000	54,000	43,000	30,000	16,000	0	0	0	
c = a*5%	*Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown*		*0*	*358*	*717*	*1,075*	*1,485*	*1,792*	*2,099*	*2,406*	*2,765*	*3,072*	*3,379*	*3,686*	*3,994*	*4,250*	*4,506*	*4,710*	*4,864*	*5,018*	*5,120*	*5,069*	*4,966*	*4,813*	*4,608*	*4,352*	*4,045*	*3,686*	*3,277*	*2,765*	*2,202*	*1,536*	*819*	*0*	*0*	*0*	97,434
b	Additional GA Debt Drawdown, End of Year		7,000	6,642	6,283	6,925	4,515	4,208	3,901	4,594	3,235	2,928	2,621	2,314	1,006	750	-506	-1,710	-1,864	-3,018	-6,120	-7,069	-7,966	-8,813	-9,608	-10,352	-11,045	-11,686	-13,277	-13,765	-15,202	-15,536	-16,819	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		7,000	14,000	21,000	29,000	35,000	41,000	47,000	54,000	60,000	66,000	72,000	78,000	83,000	88,000	92,000	95,000	98,000	100,000	99,000	97,000	94,000	90,000	85,000	79,000	72,000	64,000	54,000	43,000	30,000	16,000	0	0	0	0	
	Feb4 1b, 30-yr - Accumulated Interest Costs		0	358	1,075	2,150	3,635	5,427	7,526	9,933	12,698	15,770	19,149	22,835	26,829	31,078	35,584	40,294	45,158	50,176	55,296	60,365	65,331	70,144	74,752	79,104	83,149	86,835	90,112	92,877	95,078	96,614	97,434				
	Feb4 1b, 30-yr - Accumulated Debt Principal		7,000	13,642	19,925	26,850	31,365	35,573	39,474	44,067	47,302	50,230	52,851	55,165	56,171	56,922	56,416	54,706	52,842	49,824	43,704	36,635	28,669	19,856	10,248	-104	-11,149	-22,835	-36,112	-49,877	-65,078	-80,614	-97,434				
Fiscal Exposure - End of Year Debt Drawdown			7,000	7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000	6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000	2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000	-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0	0	0	

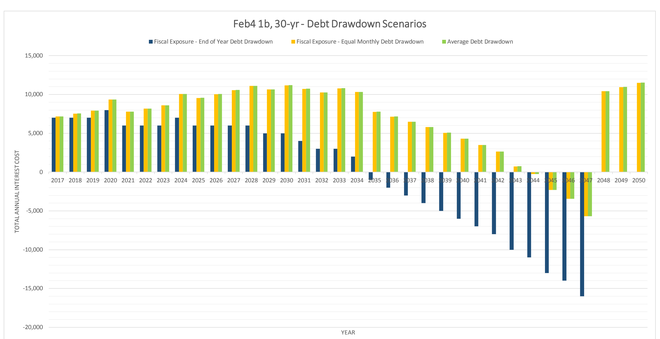
Feb4 1b, 30-yr	Equal Monthly Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			12																																		
1b. GA Smoothing (Borrow $7 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		5,095	4,835	4,552	4,168	4,844	4,634	4,212	4,081	4,489	4,020	4,975	4,764	4,919	4,650	4,587	5,758	5,147	5,670	6,553	7,281	8,022	8,777	9,543	10,320	11,109	11,908	13,717	14,535	16,362	17,197	19,041	2,892	2,750	2,616	
	GA Debt Requirement		7,000	7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000	6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000	2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000	-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0	0	0	
	Debt, Beginning of Year		0	7,167	14,700	22,619	31,968	39,748	47,925	56,522	66,583	76,135	86,175	96,730	107,826	118,466	129,650	140,383	150,642	161,427	171,739	179,509	186,652	193,137	198,930	203,997	208,298	211,797	214,450	215,192	214,948	212,644	209,198	203,528	213,949	224,903	
11,515	*Interest Cost - Feb4 1b, 30-yr*		*167*	*534*	*919*	*1,349*	*1,780*	*2,178*	*2,597*	*3,061*	*3,552*	*4,041*	*4,555*	*5,095*	5,640	*6,184*	*6,733*	*7,259*	*7,784*	*8,313*	*8,769*	*9,143*	*9,485*	*9,793*	*10,066*	*10,302*	*10,498*	*10,654*	*10,742*	*10,756*	*10,696*	*10,554*	*10,330*	*10,421*	*10,954*	*11,515*	236,418
	Additional GA Debt Drawdown		7,000	7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000	6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000	2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000	-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		7,167	14,700	22,619	31,968	39,748	47,925	56,522	66,583	76,135	86,175	96,730	107,826	118,466	129,650	140,383	150,642	161,427	171,739	179,509	186,652	193,137	198,930	203,997	208,298	211,797	214,450	215,192	214,948	212,644	209,198	203,528	213,949	224,903	236,418	
Fiscal Exposure - Equal Monthly Debt Drawdown			7,167	7,534	7,919	9,349	7,780	8,178	8,597	10,061	9,552	10,041	10,555	11,095	10,640	11,184	10,733	10,259	10,784	10,313	7,769	7,143	6,485	5,793	5,066	4,302	3,498	2,654	742	-244	-2,304	-3,446	-5,670	10,421	10,954	11,515	

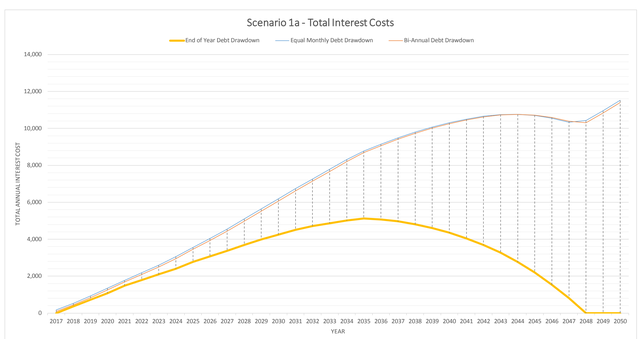
	Monthly Drawdown	583	583	583	667	500	500	500	583	500	500	500	500	417	417	333	250	250	167	(83)	(167)	(250)	(333)	(417)	(500)	(583)	(667)	(833)	(917)	(1,083)	(1,167)	(1,333)	-	-	-	
	FV of Monthly Drawdown at 5%	7,167	7,167	7,167	8,190	6,143	6,143	6,143	7,167	6,143	6,143	6,143	6,143	5,119	5,119	4,095	3,071	3,071	2,048	(1,024)	(2,048)	(3,071)	(4,095)	(5,119)	(6,143)	(7,167)	(8,190)	(10,238)	(11,262)	(13,309)	(14,333)	(16,381)	-	-	-	
	Annual Interest Cost on New Drawdowns	167	167	167	190	143	143	143	167	143	143	143	143	119	119	95	71	71	48	(24)	(48)	(71)	(95)	(119)	(143)	(167)	(190)	(238)	(262)	(309)	(333)	(381)	-	-	-	
	Annual Interest Cost on Opening Balance	-	367	753	1,158	1,637	2,035	2,454	2,894	3,409	3,898	4,412	4,953	5,521	6,065	6,638	7,188	7,713	8,265	8,793	9,191	9,557	9,889	10,185	10,445	10,665	10,844	10,980	11,018	11,005	10,887	10,711	10,421	10,954	11,515	
	Total Annual Interest Cost	167	534	919	1,349	1,780	2,178	2,597	3,061	3,552	4,041	4,555	5,095	5,640	6,184	6,733	7,259	7,784	8,313	8,769	9,143	9,485	9,793	10,066	10,302	10,498	10,654	10,742	10,756	10,696	10,554	10,330	10,421	10,954	11,515	

Feb4 1b, 30-yr	Bi-Annual Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			2																																		
1b. GA Smoothing (Borrow $7 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		5,095	4,835	4,552	4,168	4,844	4,634	4,212	4,081	4,489	4,020	4,975	4,764	4,919	4,650	4,587	5,758	5,147	5,670	6,553	7,281	8,022	8,777	9,543	10,320	11,109	11,908	13,717	14,535	16,362	17,197	19,041	2,892	2,750	2,616	
	GA Debt Requirement		7,000	7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000	6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000	2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000	-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0	0	0	
	Debt, Beginning of Year		0	7,090	14,542	22,376	31,624	39,320	47,410	55,915	65,867	75,316	85,249	95,691	106,667	117,192	128,257	138,874	149,023	159,692	169,893	177,579	184,646	191,061	196,792	201,804	206,060	209,520	212,145	212,879	212,638	210,358	206,949	201,340	211,649	222,486	
	Interest Cost - Feb4 1b, 30-yr		*90*	*453*	*834*	*1,248*	*1,696*	*2,090*	*2,504*	*2,952*	*3,449*	*3,933*	*4,442*	*4,976*	*5,525*	*6,064*	*6,618*	*7,149*	*7,668*	*8,202*	*8,686*	*9,066*	*9,415*	*9,731*	*10,012*	*10,256*	*10,461*	*10,625*	*10,734*	*10,759*	*10,721*	*10,591*	*10,391*	*10,309*	*10,836*	*11,391*	233,877
	Additional GA Debt Drawdown		7,000	7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000	6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000	2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000	-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		7,090	14,542	22,376	31,624	39,320	47,410	55,915	65,867	75,316	85,249	95,691	106,667	117,192	128,257	138,874	149,023	159,692	169,893	177,579	184,646	191,061	196,792	201,804	206,060	209,520	212,145	212,879	212,638	210,358	206,949	201,340	211,649	222,486	233,877	
Fiscal Exposure - Bi-Annual Debt Drawdown			7,090	7,453	7,834	9,248	7,696	8,090	8,504	9,952	9,449	9,933	10,442	10,976	10,525	11,064	10,618	10,149	10,668	10,202	7,686	7,066	6,415	5,731	5,012	4,256	3,461	2,625	734	-241	-2,279	-3,409	-5,609	10,309	10,836	11,391	

	Bi-Annual Drawdown	3,500	3,500	3,500	4,000	3,000	3,000	3,000	3,500	3,000	3,000	3,000	3,000	2,500	2,500	2,000	1,500	1,500	1,000	(500)	(1,000)	(1,500)	(2,000)	(2,500)	(3,000)	(3,500)	(4,000)	(5,000)	(5,500)	(6,500)	(7,000)	(8,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	7,090	7,090	7,090	8,102	6,077	6,077	6,077	7,090	6,077	6,077	6,077	6,077	5,064	5,064	4,051	3,038	3,038	2,026	(1,013)	(2,026)	(3,038)	(4,051)	(5,064)	(6,077)	(7,090)	(8,102)	(10,128)	(11,141)	(13,166)	(14,179)	(16,205)	-	-	-	
	Annual Interest Cost on New Drawdowns	90	90	90	102	77	77	77	90	77	77	77	77	64	64	51	38	38	26	(13)	(26)	(38)	(51)	(64)	(77)	(90)	(102)	(128)	(141)	(166)	(179)	(205)	-	-	-	
	Annual Interest Cost on Opening Balance	-	363	745	1,146	1,619	2,013	2,427	2,863	3,372	3,856	4,365	4,899	5,461	6,000	6,567	7,110	7,630	8,176	8,699	9,092	9,454	9,782	10,076	10,332	10,550	10,727	10,862	10,899	10,887	10,770	10,596	10,309	10,836	11,391	
	Total Annual Interest Cost	90	453	834	1,248	1,696	2,090	2,504	2,952	3,449	3,933	4,442	4,976	5,525	6,064	6,618	7,149	7,668	8,202	8,686	9,066	9,415	9,731	10,012	10,256	10,461	10,625	10,734	10,759	10,721	10,591	10,391	10,309	10,836	11,391	

Feb4 1b, 30-yr	Average Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1b. GA Smoothing (Borrow $7 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		5,095	4,835	4,552	4,168	4,844	4,634	4,212	4,081	4,489	4,020	4,975	4,764	4,919	4,650	4,587	5,758	5,147	5,670	6,553	7,281	8,022	8,777	9,543	10,320	11,109	11,908	13,717	14,535	16,362	17,197	19,041	2,892	2,750	2,616	
	GA Debt Requirement		7,000	7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000	6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000	2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000	-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0	0	0	
	Debt, Beginning of Year		0	7,179	14,726	22,659	32,024	39,817	48,010	56,621	66,699	76,268	86,327	96,900	108,015	118,673	129,877	140,630	150,907	161,710	172,041	179,823	186,979	193,476	199,279	204,354	208,664	212,168	214,826	215,569	215,325	213,017	209,565	203,885	214,324	225,297	
	Interest Cost - Feb4 1b, 30-yr		*179*	*547*	*933*	*1,365*	*1,793*	*2,192*	*2,612*	*3,078*	*3,569*	*4,059*	*4,574*	*5,115*	*5,658*	*6,204*	*6,752*	*7,277*	*7,803*	*8,331*	*8,783*	*9,156*	*9,497*	*9,804*	*10,075*	*10,309*	*10,504*	*10,658*	*10,743*	*10,756*	*10,692*	*10,548*	*10,320*	*10,439*	*10,973*	*11,535*	236,833
	Additional GA Debt Drawdown		7,000	7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000	6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000	2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000	-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		7,179	14,726	22,659	32,024	39,817	48,010	56,621	66,699	76,268	86,327	96,900	108,015	118,673	129,877	140,630	150,907	161,710	172,041	179,823	186,979	193,476	199,279	204,354	208,664	212,168	214,826	215,569	215,325	213,017	209,565	203,885	214,324	225,297	236,833	
Fiscal Exposure - Average Debt Drawdown			7,179	7,547	7,933	9,365	7,793	8,192	8,612	10,078	9,569	10,059	10,574	11,115	10,658	11,204	10,752	10,277	10,803	10,331	7,783	7,156	6,497	5,804	5,075	4,309	3,504	2,658	743	-244	-2,308	-3,452	-5,680	10,439	10,973	11,535	





Feb4 1c, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.1%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,000	3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000	1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000	-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,095	3,281	3,449	4,649	2,840	2,985	3,138	4,323	3,520	2,677	3,837	4,034	3,217	2,358	1,454	1,529	1,607	1,689	1,776	843	886	932	979	1,029	1,082	1,138	1,196	1,257	1,321	365	384	3,475	3,653	3,840	
			95	281	449	649	840	985	1,138	1,323	1,520	1,677	1,837	2,034	2,217	2,358	2,454	2,529	2,607	2,689	2,776	2,843	2,886	2,932	2,979	3,029	3,082	3,138	3,196	3,257	3,321	3,365	3,384	3,475	3,653	3,840	78,841

Maximum Fiscal Exposure		Maximum Annual Interest Cost	
End of Year Debt Drawdown	4,000	1,587	78,841
Equal Monthly Debt Drawdown	4,649	3,840	

Maximum Accumulated Debt	Feb4 1c, 30-yr, Accumulated Debt
End of Year Debt Drawdown	31,000
Equal Monthly Debt Drawdown	78,841

		33%	25%	26%	33%	18%	19%																													
Feb4 1c, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow $4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,095	8,835	8,552	8,168	8,844	8,634	8,212	8,081	8,489	9,020	8,975	8,764	8,919	9,650	9,587	9,758	9,147	8,670	6,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	6,197	6,041	2,892	2,750	2,616	
	GA Debt Requirement	4,000	3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000	1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000	-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0	0	0	
a	Debt, Beginning of Year	0	4,000	7,000	10,000	14,000	16,000	18,000	20,000	23,000	25,000	26,000	28,000	30,000	31,000	31,000	30,000	29,000	28,000	27,000	26,000	24,000	22,000	20,000	18,000	16,000	14,000	12,000	10,000	8,000	6,000	3,000	0	0	0	
c = a*5%	*Interest Cost - Feb4 1c, 30-yr - End of Year Debt Drawdown*	*0*	*205*	*358*	*512*	*717*	*819*	*922*	*1,024*	*1,178*	*1,280*	*1,331*	*1,434*	*1,536*	*1,587*	*1,587*	*1,536*	*1,485*	*1,434*	*1,382*	*1,331*	*1,229*	*1,126*	*1,024*	*922*	*819*	*717*	*614*	*512*	*410*	*307*	*154*	*0*	*0*	*0*	*0*	29,491
b	Additional GA Debt Drawdown, End of Year	4,000	2,795	2,642	3,488	1,283	1,181	1,078	1,976	822	-280	669	566	-536	-1,587	-2,587	-2,536	-2,485	-2,434	-2,382	-3,331	-3,229	-3,126	-3,024	-2,922	-2,819	-2,717	-2,614	-2,512	-2,410	-3,307	-3,154	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	4,000	7,000	10,000	14,000	16,000	18,000	20,000	23,000	25,000	26,000	28,000	30,000	31,000	31,000	30,000	29,000	28,000	27,000	26,000	24,000	22,000	20,000	18,000	16,000	14,000	12,000	10,000	8,000	6,000	3,000	0	0	0	0	
	Feb4 1c, 30-yr - Accumulated Interest Costs	0	205	563	1,075	1,792	2,611	3,533	4,557	5,734	7,014	8,346	9,779	11,315	12,902	14,490	16,026	17,510	18,944	20,326	21,658	22,886	24,013	25,037	25,958	26,778	27,494	28,109	28,621	29,030	29,338	29,491				
	Feb4 1c, 30-yr - Accumulated Debt Principal	4,000	6,795	9,437	12,925	14,208	15,389	16,467	18,443	19,266	18,986	19,654	20,221	19,685	18,098	15,510	12,974	10,490	8,056	5,674	2,342	-886	-4,013	-7,037	-9,958	-12,778	-15,494	-18,109	-20,621	-23,030	-26,338	-29,491				
Fiscal Exposure - End of Year Debt Drawdown		4,000	3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000	1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000	-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0	0	0	

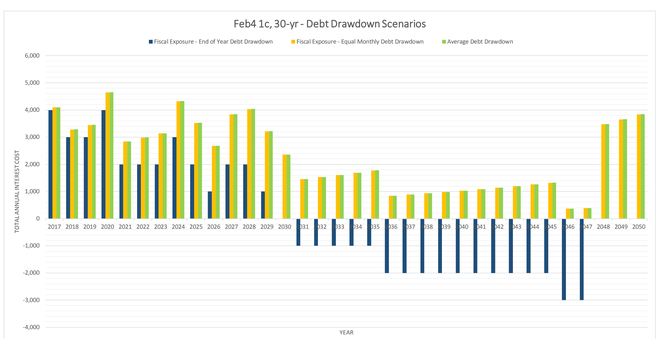
Feb4 1c, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1c. GA Smoothing (Borrow $4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,095	8,835	8,552	8,168	8,844	8,634	8,212	8,081	8,489	9,020	8,975	8,764	8,919	9,650	9,587	9,758	9,147	8,670	6,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	6,197	6,041	2,892	2,750	2,616	
	GA Debt Requirement	4,000	3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000	1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000	-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0	0	0	
	Debt, Beginning of Year	0	4,095	7,376	10,825	15,475	18,315	21,300	24,438	28,761	32,281	34,958	38,795	42,829	46,046	48,403	49,858	51,387	52,994	54,683	56,459	57,302	58,189	59,120	60,100	61,129	62,211	63,349	64,545	65,802	67,123	67,489	67,873	71,348	75,001	
3,840	*Interest Cost - Feb4 1c, 30-yr*	*95*	*281*	*449*	*649*	*840*	*985*	*1,138*	*1,323*	*1,520*	*1,677*	*1,837*	*2,034*	*2,217*	*2,358*	*2,454*	*2,529*	*2,607*	*2,689*	*2,776*	*2,843*	*2,886*	*2,932*	*2,979*	*3,029*	*3,082*	*3,138*	*3,196*	*3,257*	*3,321*	*3,365*	*3,384*	*3,475*	*3,653*	*3,840*	78,841
	Additional GA Debt Drawdown	4,000	3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000	1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000	-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,095	7,376	10,825	15,475	18,315	21,300	24,438	28,761	32,281	34,958	38,795	42,829	46,046	48,403	49,858	51,387	52,994	54,683	56,459	57,302	58,189	59,120	60,100	61,129	62,211	63,349	64,545	65,802	67,123	67,489	67,873	71,348	75,001	78,841	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,095	3,281	3,449	4,649	2,840	2,985	3,138	4,323	3,520	2,677	3,837	4,034	3,217	2,358	1,454	1,529	1,607	1,689	1,776	843	886	932	979	1,029	1,082	1,138	1,196	1,257	1,321	365	384	3,475	3,653	3,840	

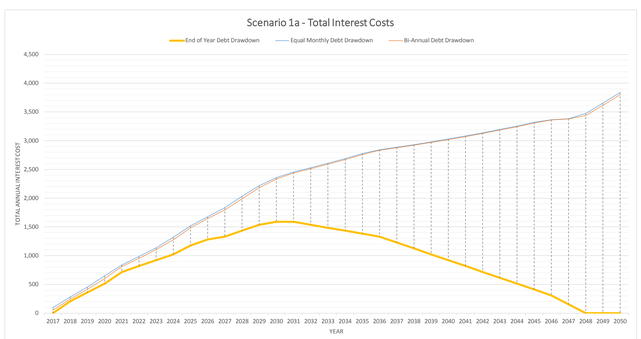
	Monthly Drawdown	333	250	250	333	167	167	167	250	167	83	167	167	83	-	(83)	(83)	(83)	(83)	(83)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(250)	(250)	-	-	-	
	FV of Monthly Drawdown at 5%	4,095	3,071	3,071	4,095	2,048	2,048	3,071	2,048	1,024	2,048	2,048	1,024	-	(1,024)	(1,024)	(1,024)	(1,024)	(1,024)	(2,048)	(2,048)	(2,048)	(2,048)	(2,048)	(2,048)	(2,048)	(2,048)	(2,048)	(2,048)	(2,048)	(3,071)	(3,071)	-	-	-	
	Annual Interest Cost on New Drawdowns	95	71	71	95	48	48	71	48	24	48	48	24	-	(24)	(24)	(24)	(24)	(24)	(48)	(48)	(48)	(48)	(48)	(48)	(48)	(48)	(48)	(48)	(48)	(71)	(71)	-	-	-	
	Annual Interest Cost on Opening Balance	-	210	378	554	792	938	1,091	1,251	1,473	1,653	1,790	1,986	2,193	2,358	2,478	2,553	2,631	2,713	2,800	2,891	2,934	2,979	3,027	3,077	3,130	3,185	3,243	3,305	3,369	3,437	3,455	3,475	3,653	3,840	
	Total Annual Interest Cost	95	281	449	649	840	985	1,138	1,323	1,520	1,677	1,837	2,034	2,217	2,358	2,454	2,529	2,607	2,689	2,776	2,843	2,886	2,932	2,979	3,029	3,082	3,138	3,196	3,257	3,321	3,365	3,384	3,475	3,653	3,840	

Feb4 1c, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
1c. GA Smoothing (Borrow $4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,095	8,835	8,552	8,168	8,844	8,634	8,212	8,081	8,489	9,020	8,975	8,764	8,919	9,650	9,587	9,758	9,147	8,670	6,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	6,197	6,041	2,892	2,750	2,616	
	GA Debt Requirement	4,000	3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000	1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000	-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0	0	0	
	Debt, Beginning of Year	0	4,051	7,297	10,709	15,309	18,118	21,071	24,176	28,452	31,934	34,582	38,378	42,369	45,551	47,883	49,322	50,834	52,424	54,096	55,852	56,686	57,563	58,485	59,454	60,472	61,543	62,668	63,851	65,095	66,402	66,763	67,143	70,581	74,195	
	Interest Cost - Feb4 1c, 30-yr	*51*	*246*	*412*	*600*	*809*	*953*	*1,104*	*1,276*	*1,482*	*1,648*	*1,796*	*1,991*	*2,182*	*2,332*	*2,439*	*2,512*	*2,590*	*2,671*	*2,757*	*2,834*	*2,877*	*2,922*	*2,969*	*3,018*	*3,071*	*3,125*	*3,183*	*3,244*	*3,307*	*3,361*	*3,380*	*3,438*	*3,614*	*3,799*	77,993
	Additional GA Debt Drawdown	4,000	3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000	1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000	-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,051	7,297	10,709	15,309	18,118	21,071	24,176	28,452	31,934	34,582	38,378	42,369	45,551	47,883	49,322	50,834	52,424	54,096	55,852	56,686	57,563	58,485	59,454	60,472	61,543	62,668	63,851	65,095	66,402	66,763	67,143	70,581	74,195	77,993	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,051	3,246	3,412	4,600	2,809	2,953	3,104	4,276	3,482	2,648	3,796	3,991	3,182	2,332	1,439	1,512	1,590	1,671	1,757	834	877	922	969	1,018	1,071	1,125	1,183	1,244	1,307	361	380	3,438	3,614	3,799	

	Bi-Annual Drawdown	2,000	1,500	1,500	2,000	1,000	1,000	1,000	1,500	1,000	500	1,000	1,000	500	-	(500)	(500)	(500)	(500)	(500)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,500)	(1,500)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,051	3,038	3,038	4,051	2,026	2,026	2,026	3,038	2,026	1,013	2,026	2,026	1,013	-	(1,013)	(1,013)	(1,013)	(1,013)	(1,013)	(2,026)	(2,026)	(2,026)	(2,026)	(2,026)	(2,026)	(2,026)	(2,026)	(2,026)	(2,026)	(2,026)	(3,038)	(3,038)	-	-	-	
	Annual Interest Cost on New Drawdowns	51	38	38	51	26	26	26	38	26	13	26	26	13	-	(13)	(13)	(13)	(13)	(13)	(26)	(26)	(26)	(26)	(26)	(26)	(26)	(26)	(26)	(26)	(26)	(38)	(38)	-	-	-	
	Annual Interest Cost on Opening Balance	-	207	374	548	784	928	1,079	1,238	1,457	1,635	1,771	1,965	2,169	2,332	2,452	2,525	2,603	2,684	2,770	2,860	2,902	2,947	2,994	3,044	3,096	3,151	3,209	3,269	3,333	3,400	3,418	3,438	3,614	3,799	
	Total Annual Interest Cost	51	246	412	600	809	953	1,104	1,276	1,482	1,648	1,796	1,991	2,182	2,332	2,439	2,512	2,590	2,671	2,757	2,834	2,877	2,922	2,969	3,018	3,071	3,125	3,183	3,244	3,307	3,361	3,380	3,438	3,614	3,799	

Feb4 1c, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow $4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,095	8,835	8,552	8,168	8,844	8,634	8,212	8,081	8,489	9,020	8,975	8,764	8,919	9,650	9,587	9,758	9,147	8,670	6,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	6,197	6,041	2,892	2,750	2,616	
	GA Debt Requirement	4,000	3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000	1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000	-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0	0	0	
	Debt, Beginning of Year	0	4,102	7,389	10,844	15,502	18,347	21,337	24,481	28,811	32,338	35,019	38,863	42,904	46,126	48,488	49,945	51,477	53,087	54,779	56,558	57,403	58,291	59,224	60,205	61,236	62,320	63,460	64,658	65,917	67,241	67,607	67,992	71,473	75,132	
	Interest Cost - Feb4 1c, 30-yr	*102*	*287*	*455*	*658*	*845*	*991*	*1,144*	*1,330*	*1,526*	*1,681*	*1,844*	*2,041*	*2,222*	*2,362*	*2,457*	*2,532*	*2,610*	*2,692*	*2,779*	*2,845*	*2,888*	*2,933*	*2,981*	*3,031*	*3,084*	*3,140*	*3,198*	*3,259*	*3,324*	*3,366*	*3,385*	*3,481*	*3,659*	*3,847*	78,979
	Additional GA Debt Drawdown	4,000	3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000	1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000	-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,102	7,389	10,844	15,502	18,347	21,337	24,481	28,811	32,338	35,019	38,863	42,904	46,126	48,488	49,945	51,477	53,087	54,779	56,558	57,403	58,291	59,224	60,205	61,236	62,320	63,460	64,658	65,917	67,241	67,607	67,992	71,473	75,132	78,979	
Fiscal Exposure - Average Debt Drawdown		4,102	3,287	3,455	4,658	2,845	2,991	3,144	4,330	3,526	2,681	3,844	4,041	3,222	2,362	1,457	1,532	1,610	1,692	1,779	845	888	933	981	1,031	1,084	1,140	1,198	1,259	1,324	366	385	3,481	3,659	3,847	





30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

TO BE

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,556	3,123	1,728	1,400	836	1,560	821	167

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

E UPDATED

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

JK: Fixed the formula in the yellow highlighted cells. Pls. check. (SK: looks good to me)

	Tab
v16	Powerpoint_Export

Change Description

Added in trigger for later start in the year

Equal Monthly Debt Drawdown

		Month	Months Remai
Scenario Start Date	**July**	7	6

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	3,180	2,888
Annual Exposure2 with start on July 1st	*1,590*	*2,888*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	795	3,107
Start: July 1st	-	*2,312*

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	851	3,335
Start: July 1st	-	*2,484*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	1,168	1,765
Annual Exposure2 with start on July 1st	*584*	*1,765*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	292	1,609
Start: July 1st	-	*1,025*

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,449	2,040
Annual Exposure2 with start on July 1st	*725*	*2,040*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,597
Start: July 1st	-	*1,959*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335
Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3575**
Total, B	362	1837
Proposed Program Total:	362 - 851	1,837 - 3,575

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,556	3,123	1,728	1,400
2,556	*3,123*	*1,728*	*1,400*

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646
2,805	*2,697*	*2,774*	*1,646*

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

ıking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
2,311	3,750	2,311	1,933
2,311	*3,750*	*2,311*	*1,933*

2018-19	2019-20	2020-21	2021-2022

1,901	2,671	3,391	2,217
1,901	*2,671*	*3,391*	*2,217*

2019	2020	2021	2022
2,581	4,016	2,598	2,241
2,581	*4,016*	*2,598*	*2,241*

2018-19	2019-20	2020-21	2021-2022
2,175	2,940	3,662	2,508
2,175	*2,940*	*3,662*	*2,508*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

/1

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052
2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

Equal Monthly Debt Drawdown

		Month	Months Remaining
Scenario Start Date	July	7	6

AS LONG AS >

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	3,180	2,888	2,556

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	795	3,107	2,805
Fiscal Exposure, 25%	199	777	701

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Annual Exposure[2]	3,404	3,128	2,812

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	851	3,335	3,049
Fiscal Exposure, 25%	213	834	762

Indicates year in which, similar to OPCD's exa
closest to 30%. As Fiscal 2016/17 is a partial y
month the GA deferral begins.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu
decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions	9%	14%	18%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	1,168	1,765	2,311

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	292	1,609	1,901
Fiscal Exposure, 25%	73	402	475

Scenario 1b - 30-yr amortization	2017	2018	2019
Annual Exposure[2]	1,449	2,040	2,581

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	362	1,597	2,175
Fiscal Exposure, 25%	91	399	544

Indicates year in which, similar to OPCD's exar closest to 30%.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 ar
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu on accounting treatment.

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]
Debt-Finance Global Adjustment Costs, Option 1a	213	834	762
Debt-Finance Global Adjustment Costs, Option 1b	91	399	544
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**213**	**1074**	**1065**
Total, B	91	639	847

Proposed Program Total:	91 - 213	639 - 1,074	847 - 1,065

($M)	2016-171	2017-181	2018-191
Debt-Finance Global Adjustment Costs, Option 1a	851	3335	3049
Debt-Finance Global Adjustment Costs, Option 1b	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**851**	**3575**	**3352**
Total, B	362	1837	2478

Proposed Program Total:	362 - 851	1,837 - 3,575	2,478 - 3,352

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6

7	July	7	
8	August	8	
9	September	9	
10	October	10	
11	November	11	
12	December	12	

30-year term	**2016-17**	**2017-18**	**2018-19**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335	2,175 - 3,049

ROWS HIDDEN

1	1 = Comparision Enabled

APRIL 1, 2017 25%

2020	2021	2022
3,123	1,728	1,400

2019-20	2020-21	2021-2022
2,697	2,774	1,646
674	693	412

2020	2021	2022
3,396	2,020	1,712

2019-20	2020-21	2021-2022
2,958	3,052	1,943
740	763	486

mple, the true cost of GA being deferred is
ear, exposure may be less subject to which

l $17-21 billion (at 3.5% interest rate), peaking in 2028.
$33-$36 million.

ıals per month based on month of the year. Actuals may also depend on

28%	17%	13%
2020	2021	2022
3,750	2,311	1,933

2019-20	2020-21	2021-2022
2,671	3,391	2,217
668	848	554

2020	2021	2022
4,016	2,598	2,241

2019-20	2020-21	2021-2022
2,940	3,662	2,508
735	915	627

mple, the true cost of GA being deferred is

ıd $17-21 billion (at 3.5% interest rate), peaking in 2028.
$118-$134 million.

ıals per month based on month of the year. Actuals may also depend on decision

2019-20[1]	2020-21[1]
740	763
735	915
279	323
60	60
18	18
1097	**1164**
1092	1316

1,092 - 1,097 1,316 - 1,164

2019-201	2020-211
2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453





2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964
Equal Monthly Debt Drawdown	3,180	952

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

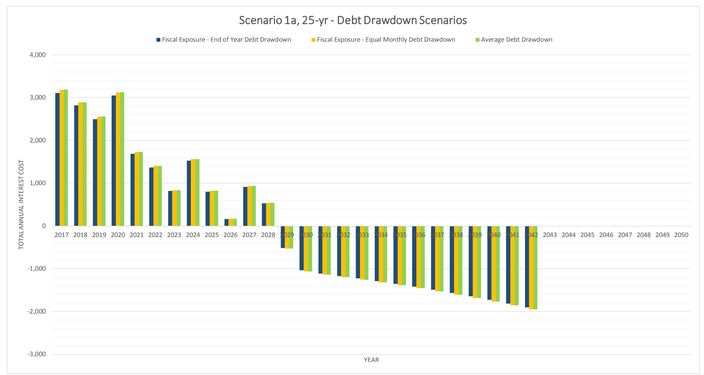
		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

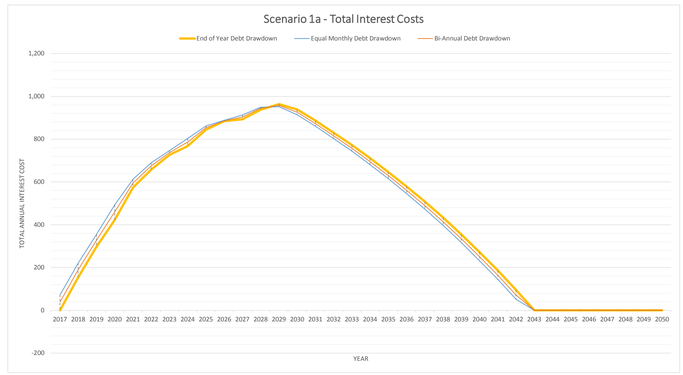
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	3,665	968	
Equal Monthly Debt Drawdown	3,750	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

		9%	14%	18%	28%	17%	13%																													
Scenario 1b, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

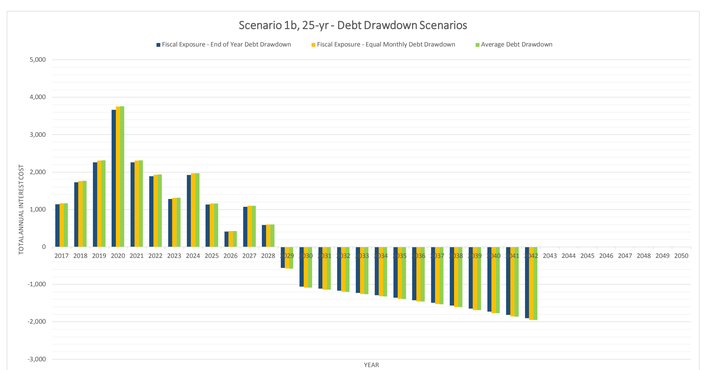
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	*954*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

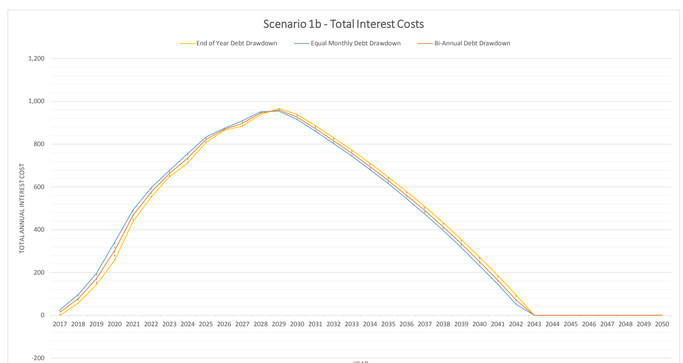
	Monthly Drawdown	95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

		28%	24%	21%	24%	12%	9%																													
Scenario 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1a, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	*1,156*	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

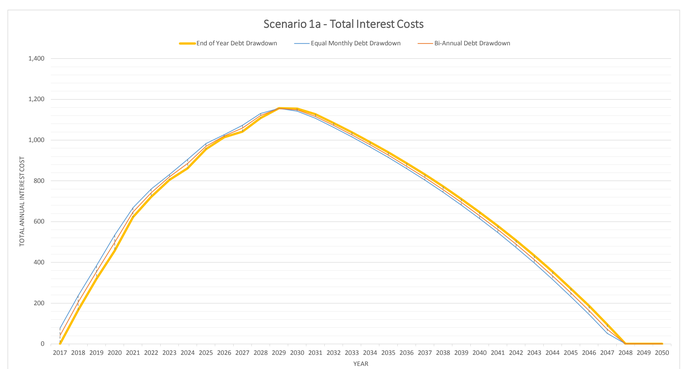
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

		12%	16%	20%	30%	19%	15%																													
Scenario 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

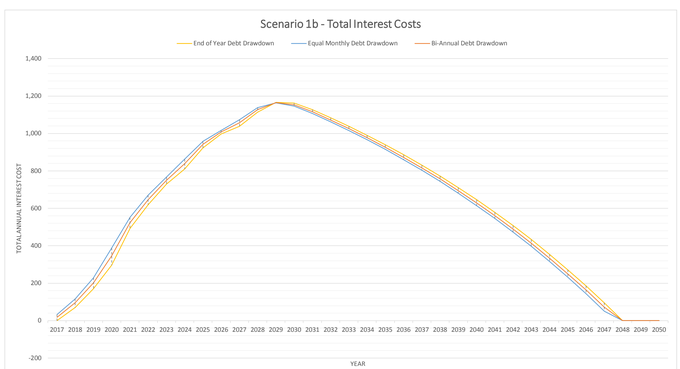
	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

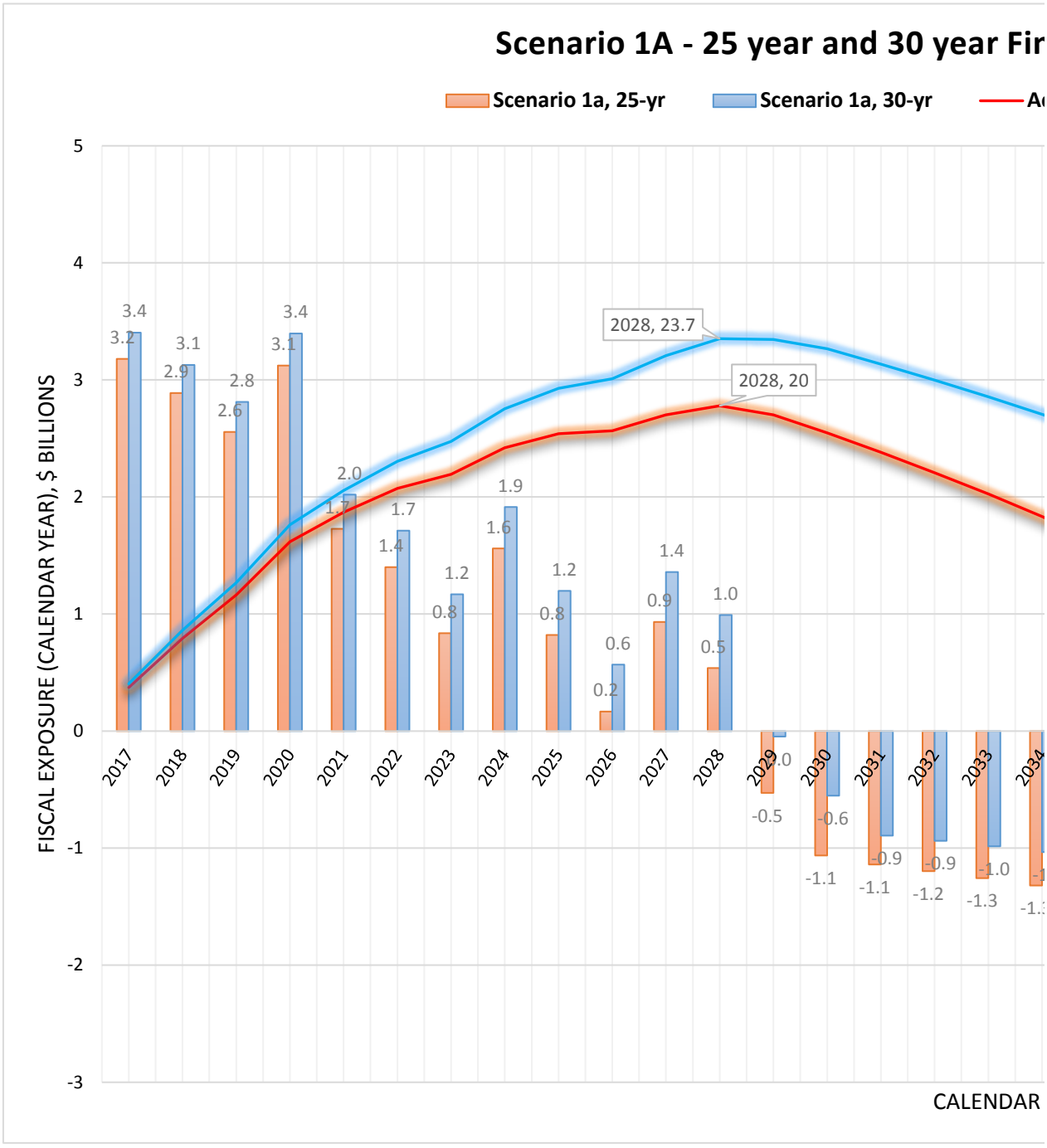
	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

Scenario 1b, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

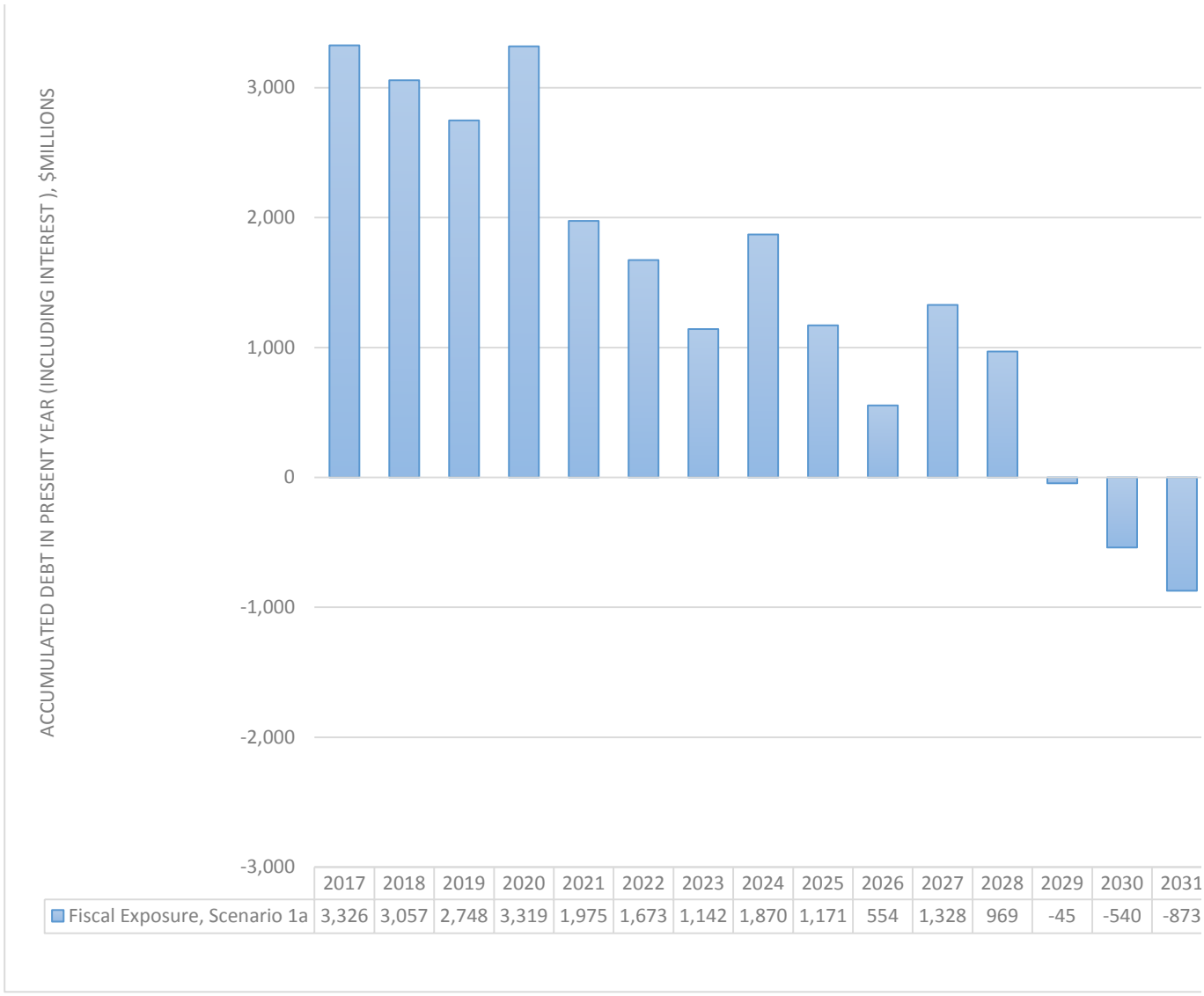




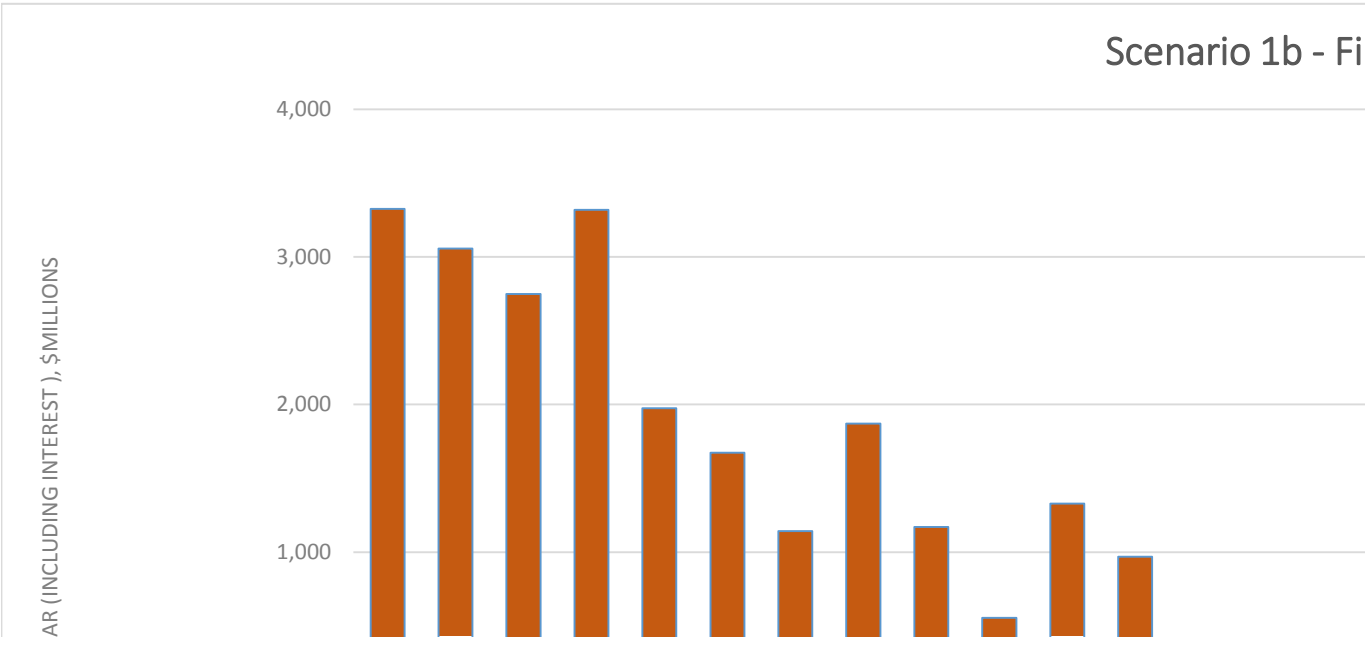
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

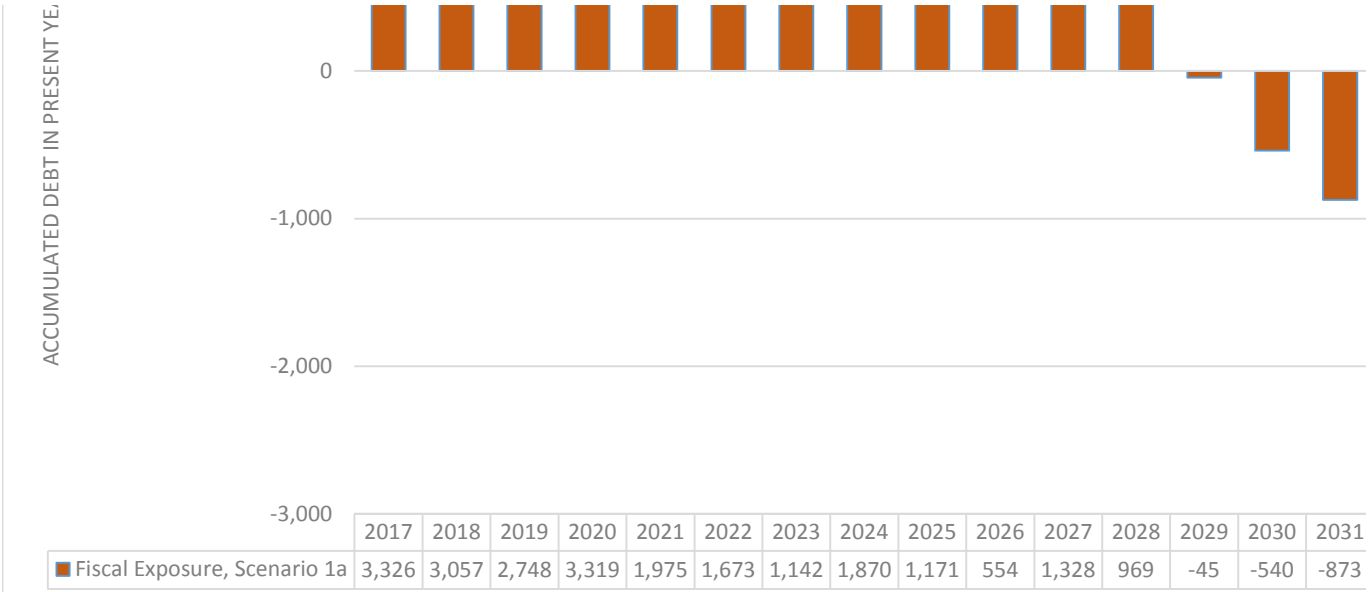




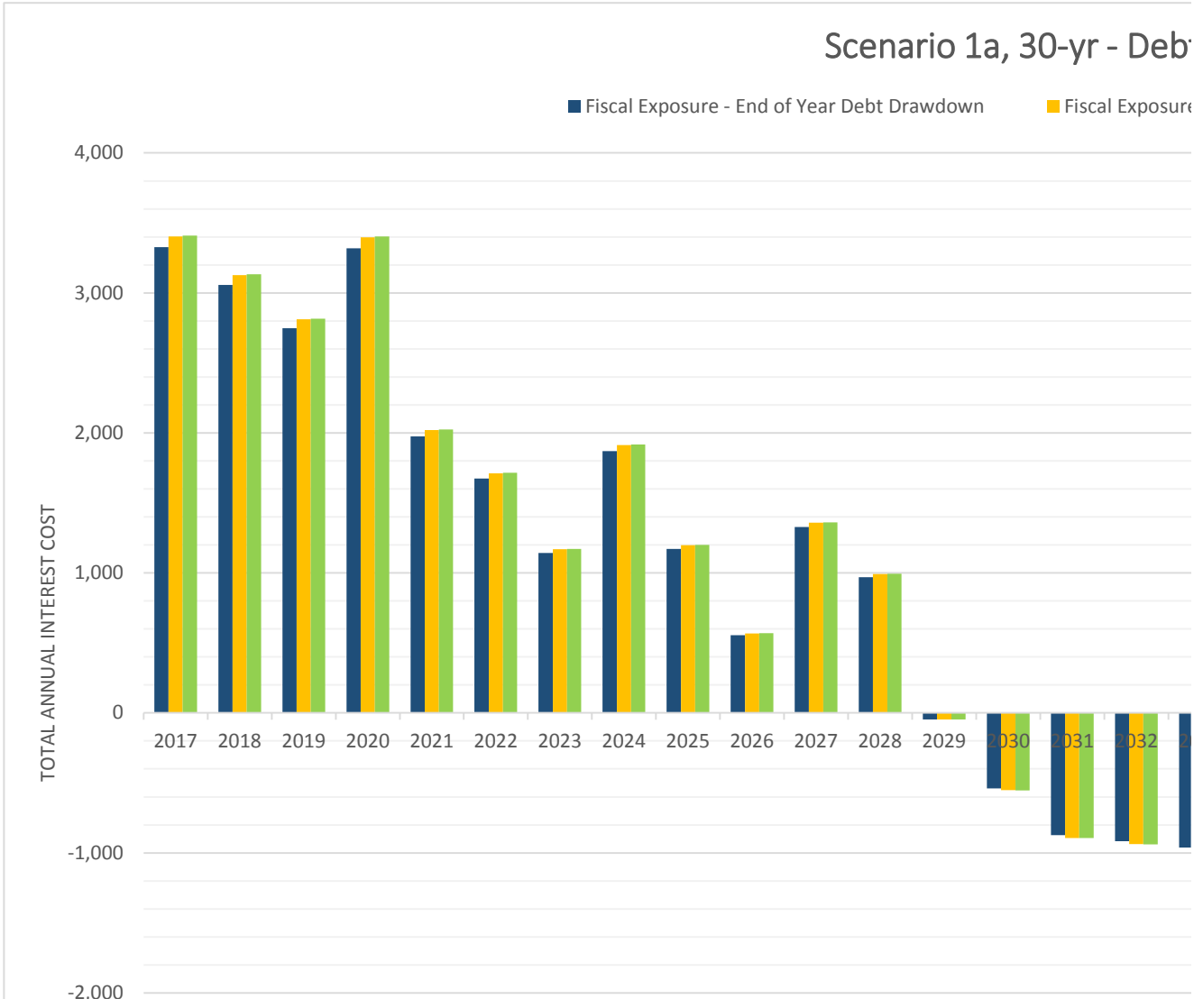


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



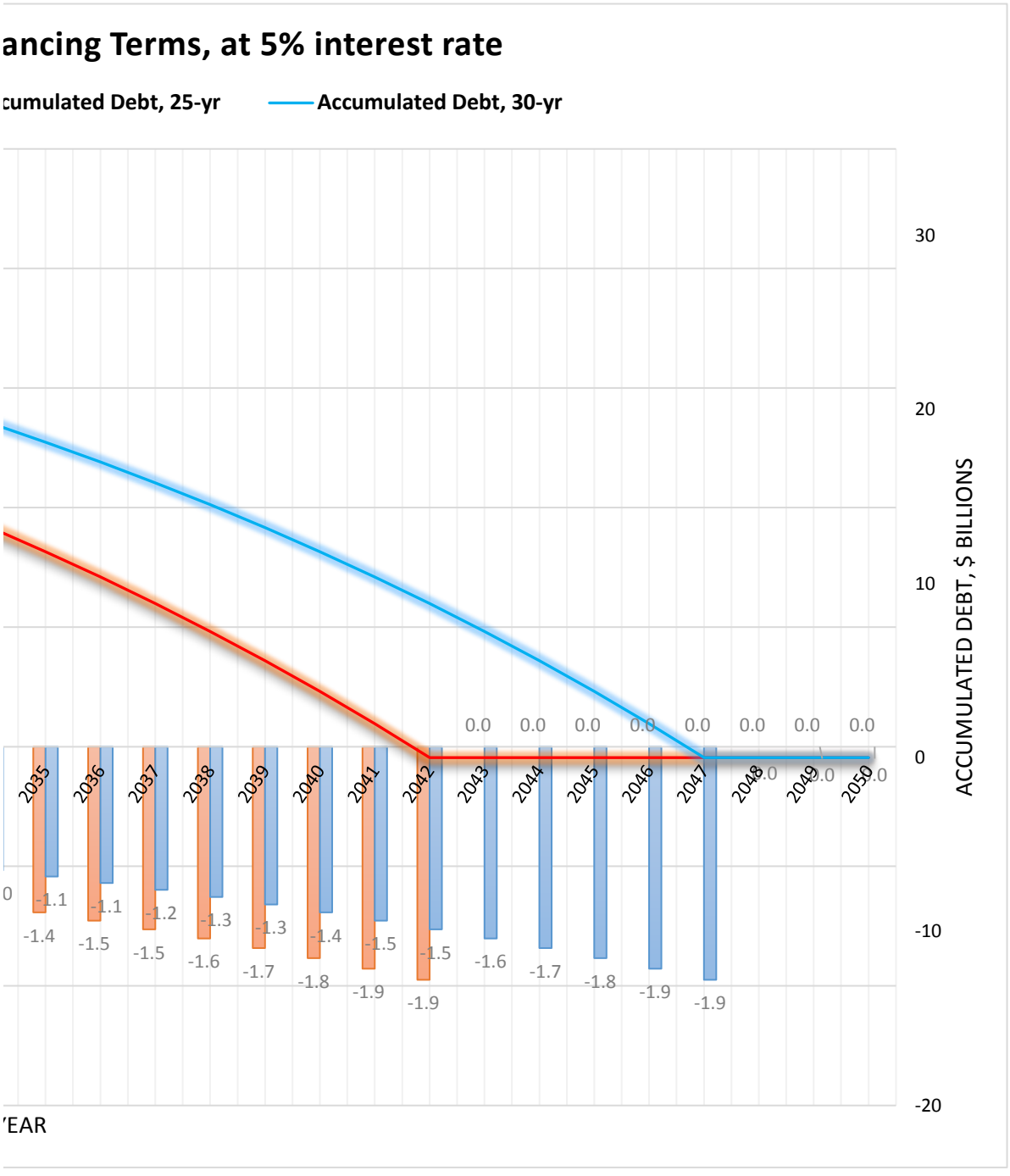


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



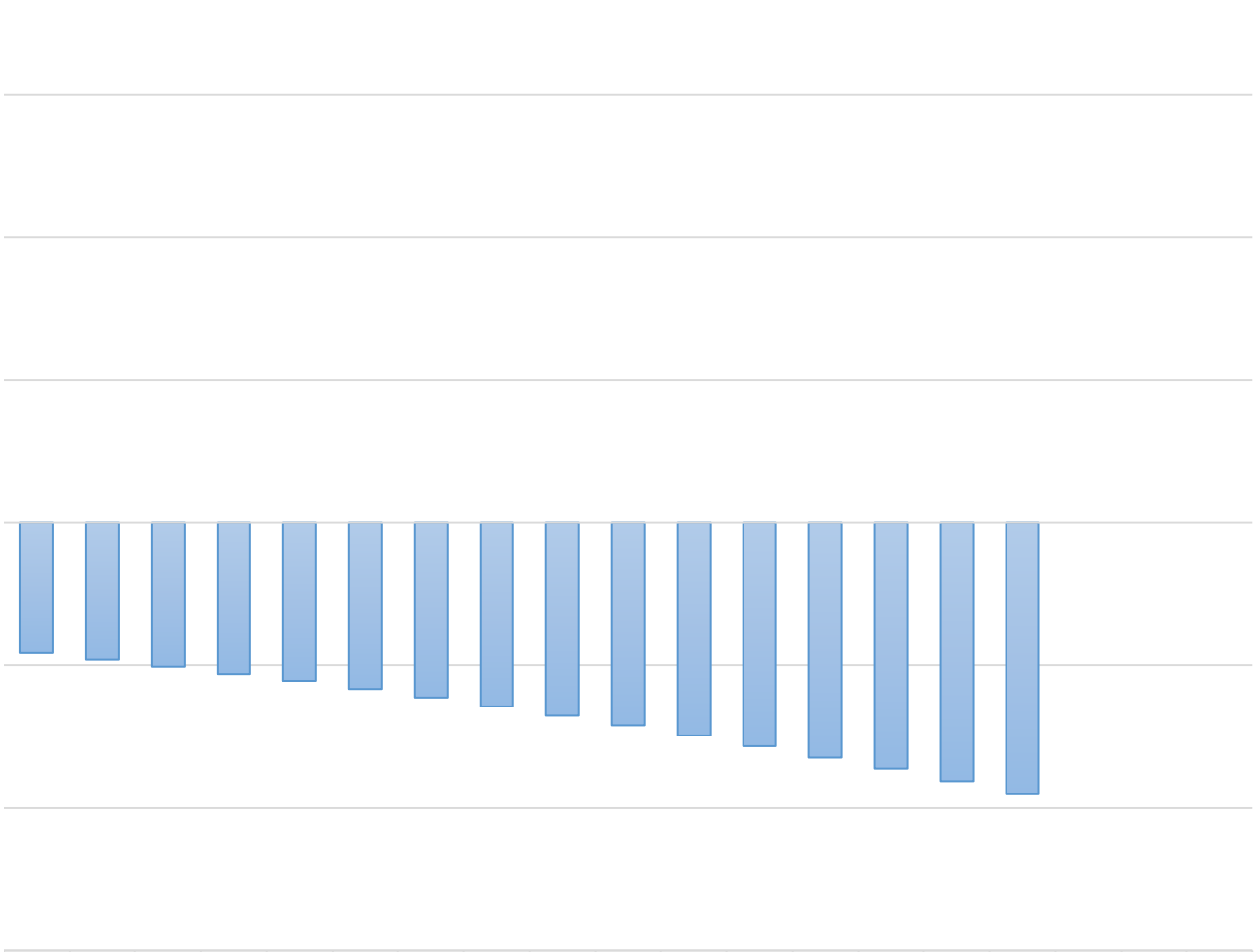

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

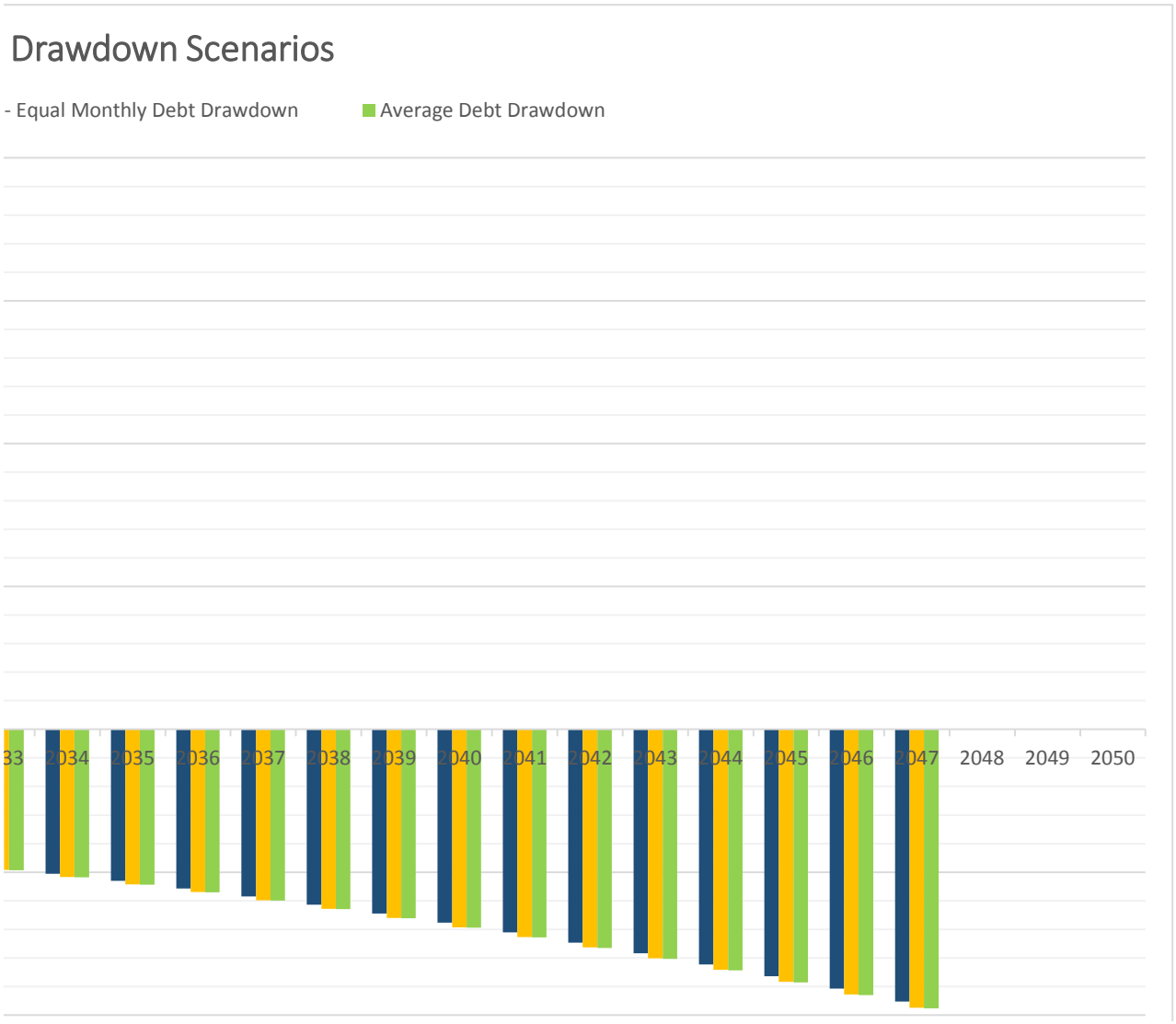
YEAR

cal Exposure



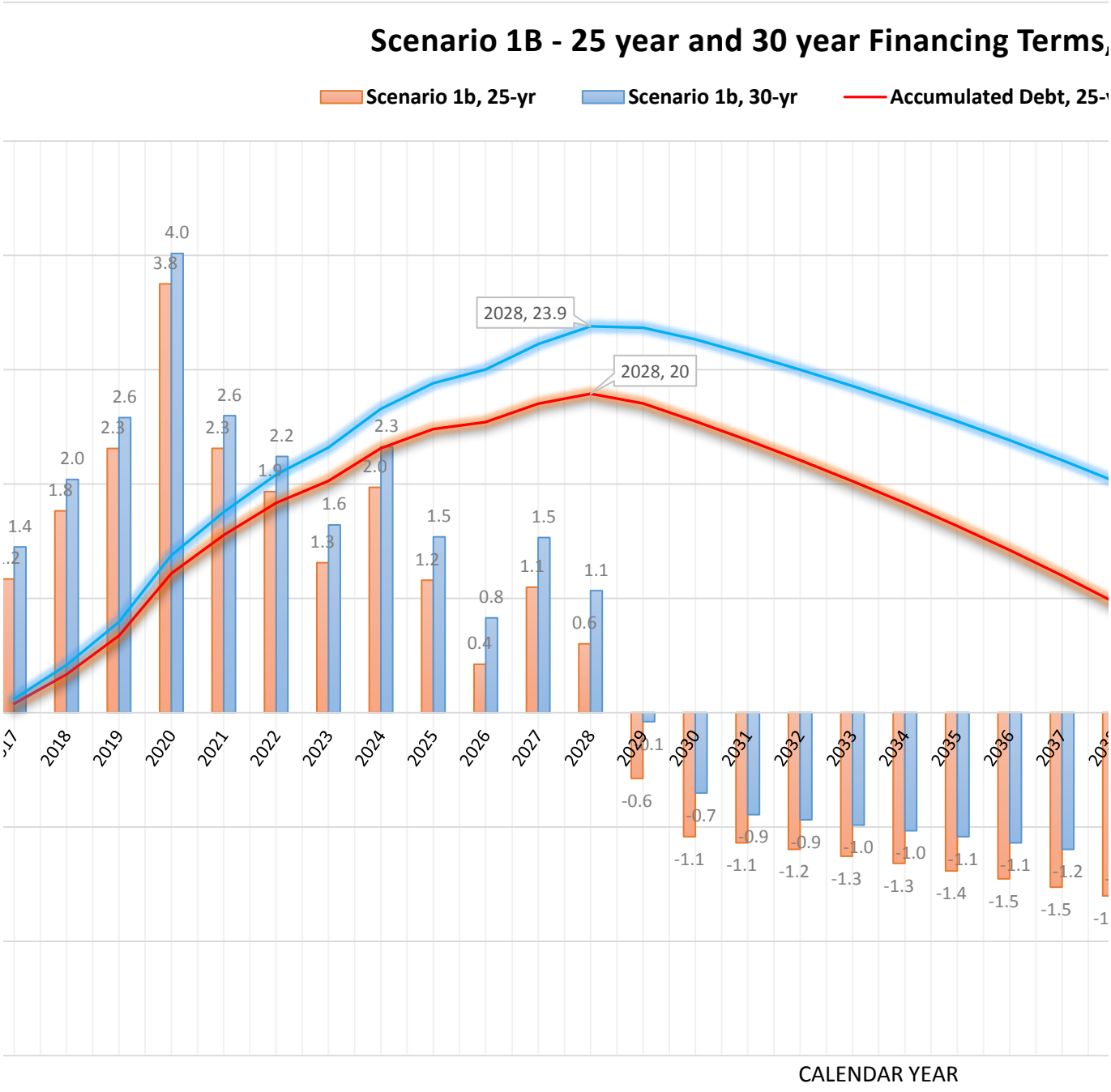
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

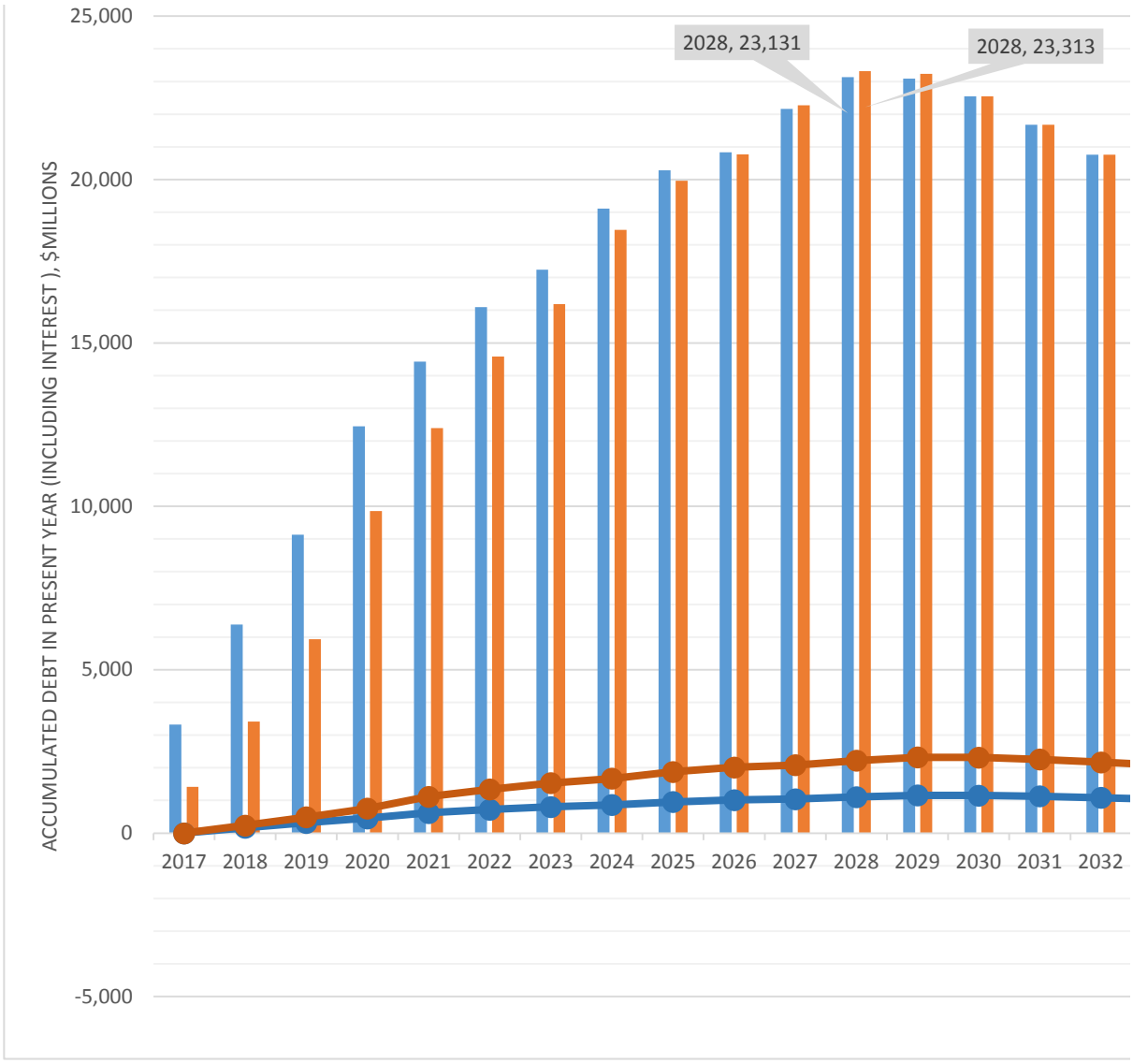


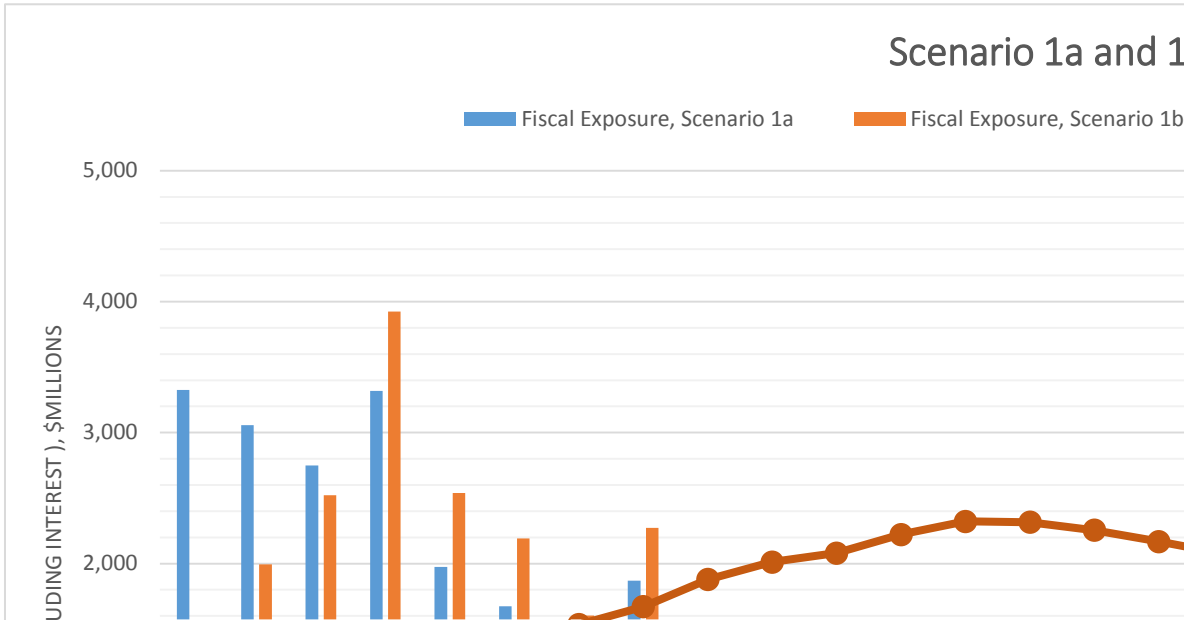
YEAR

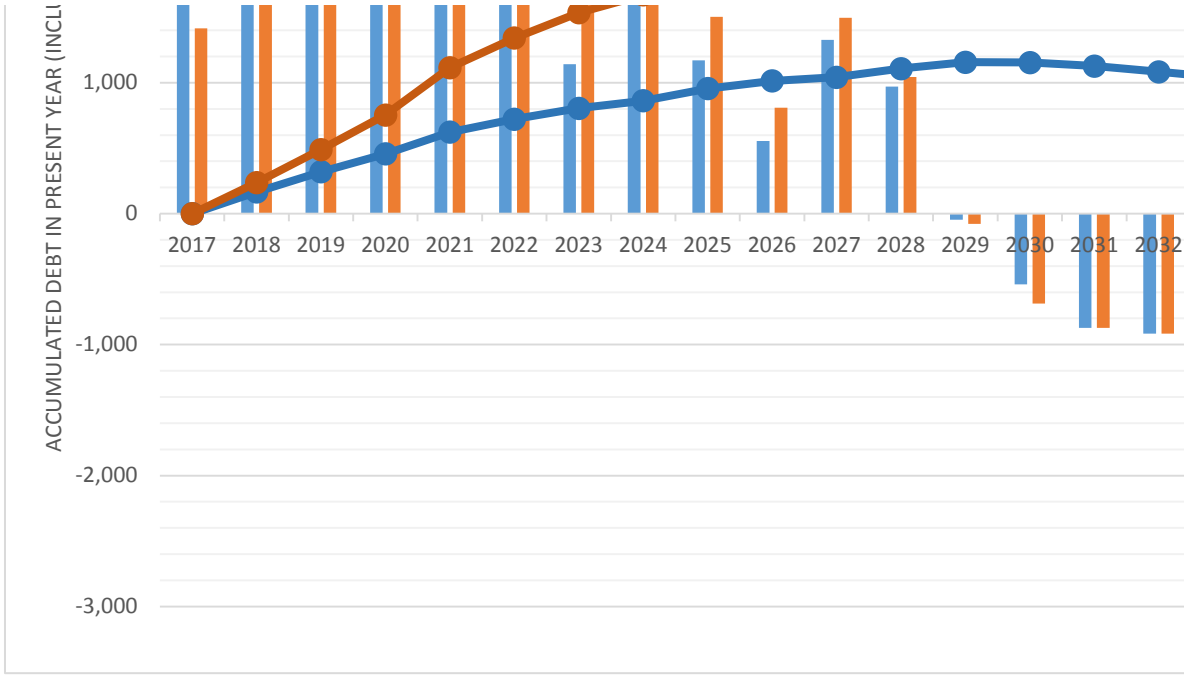
3 - 25 year and 30 year Financing Terms, at 5% interest rate

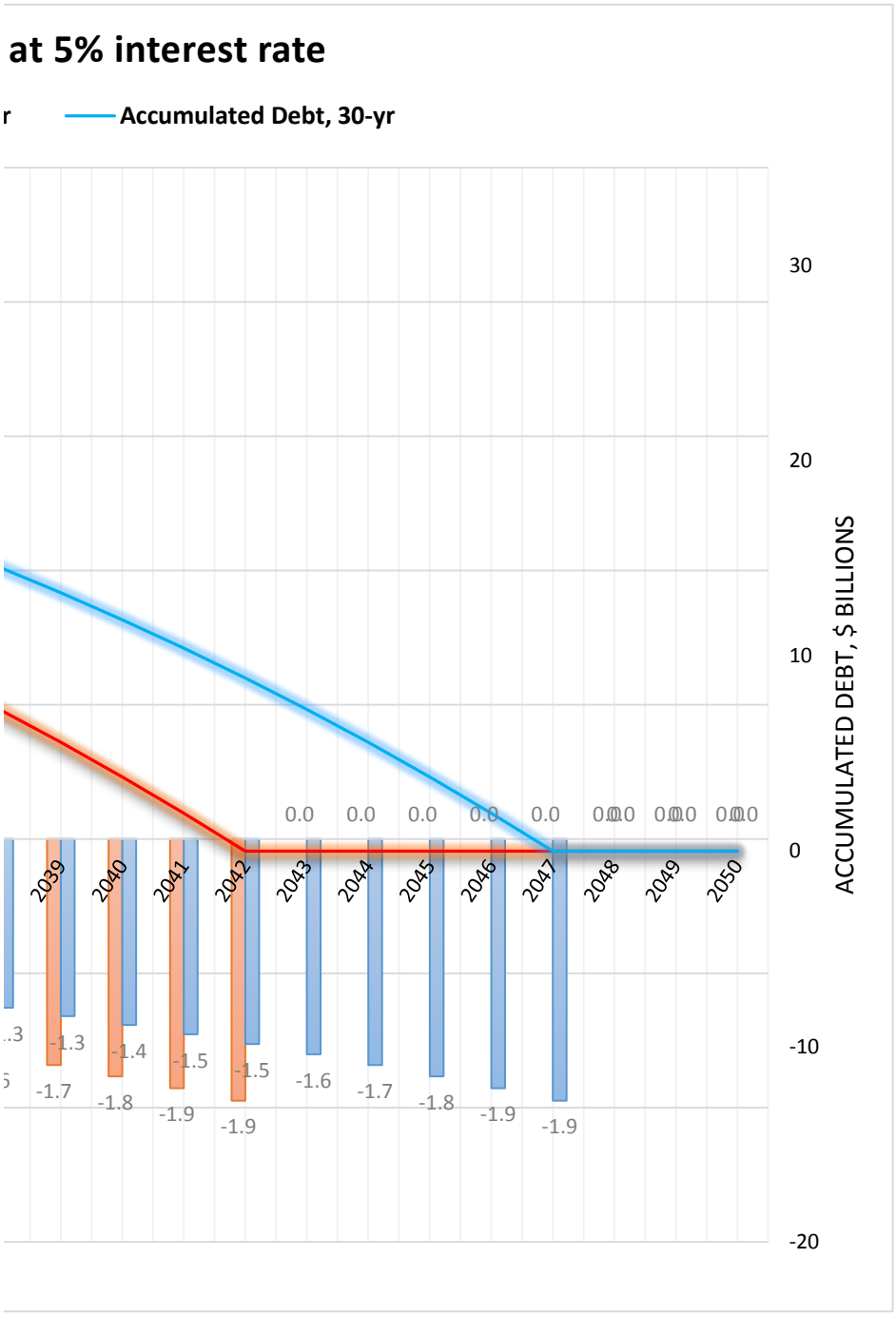





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

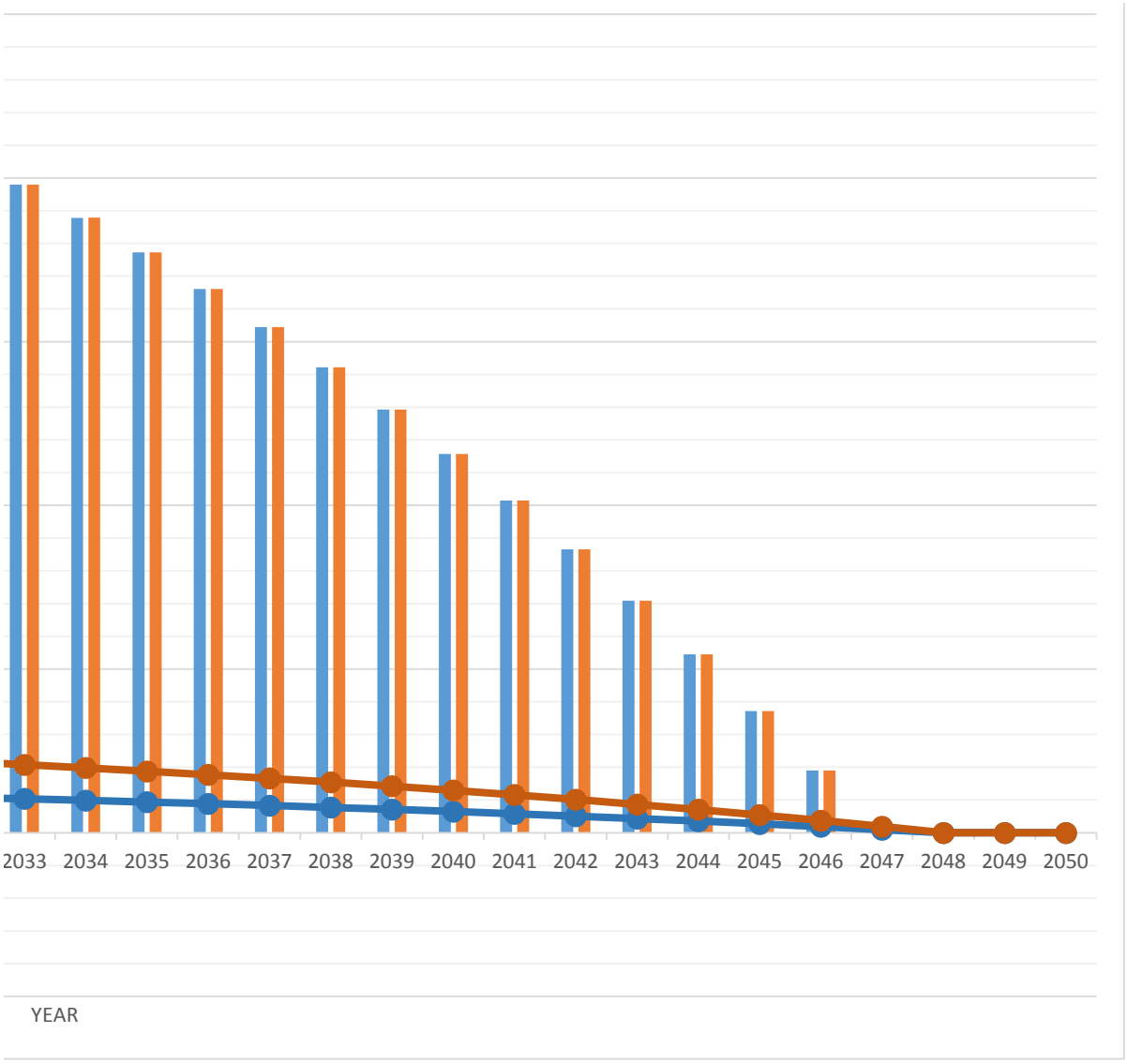

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

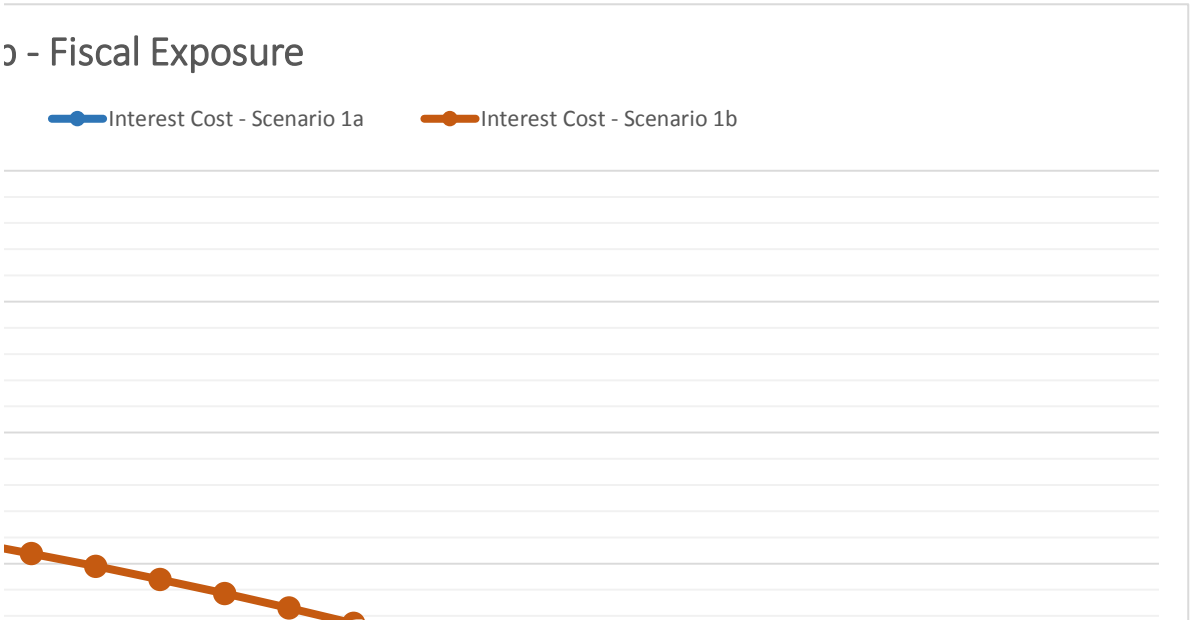

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

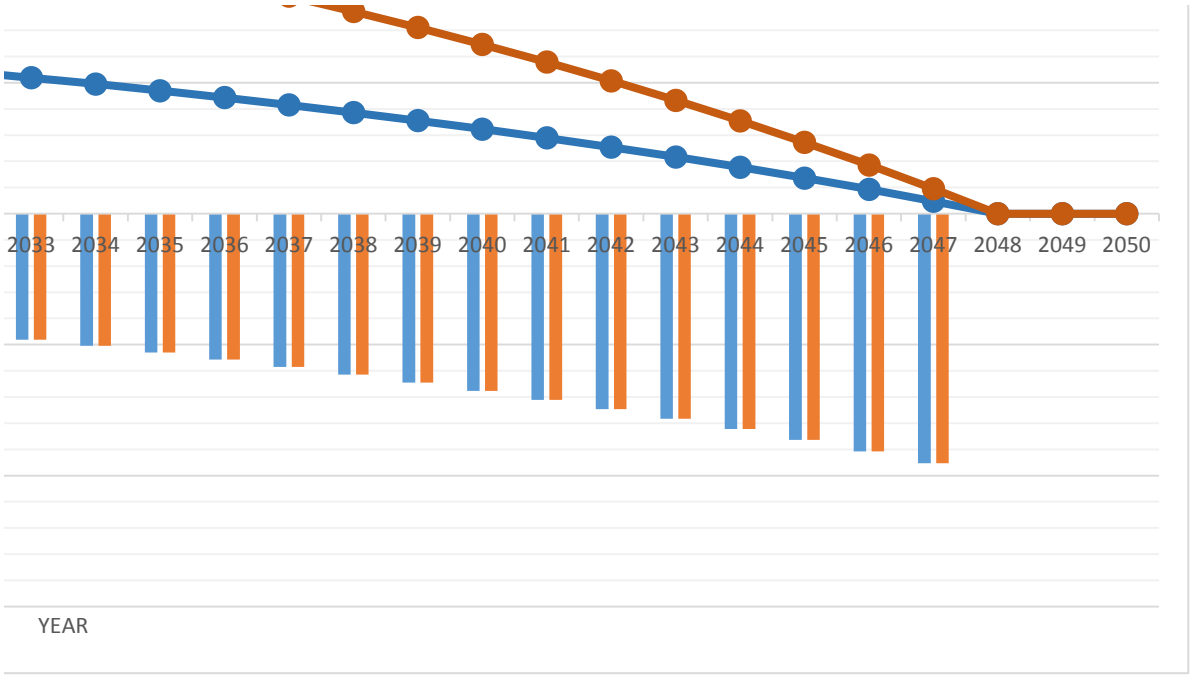


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

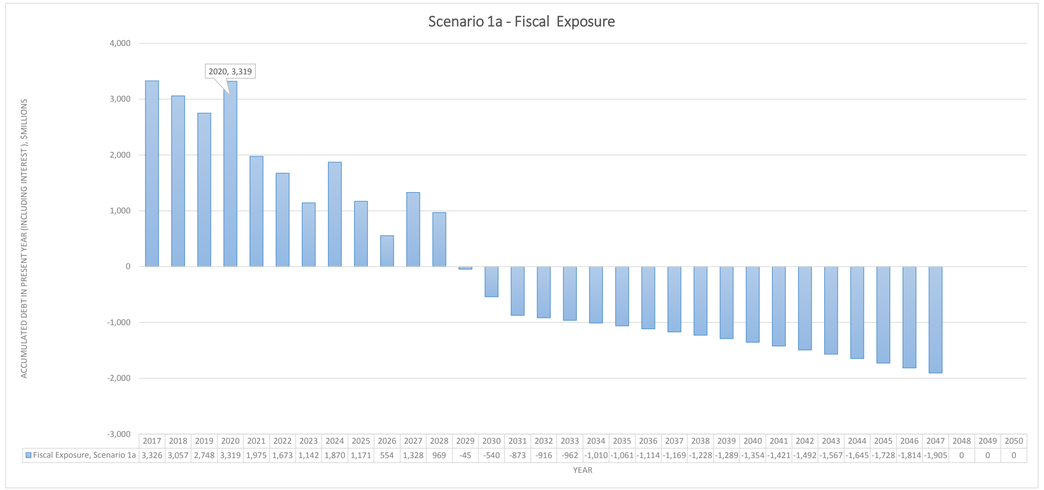
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

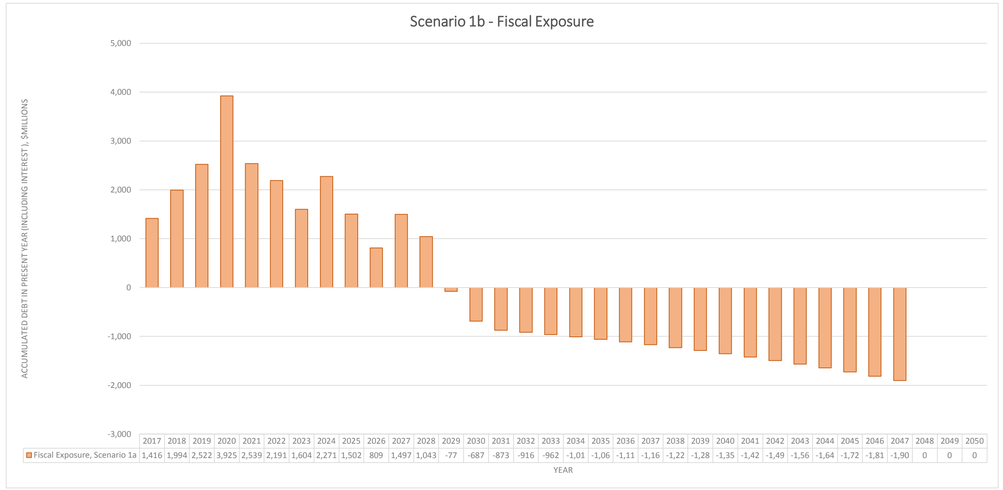
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

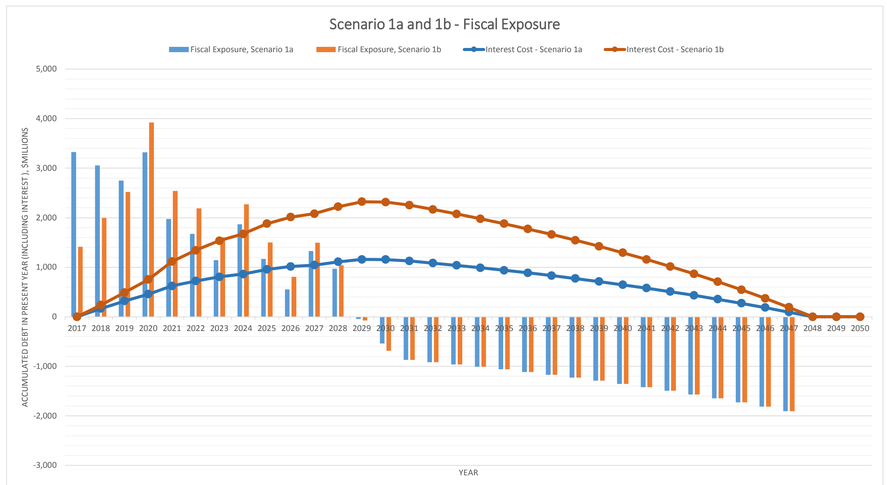
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

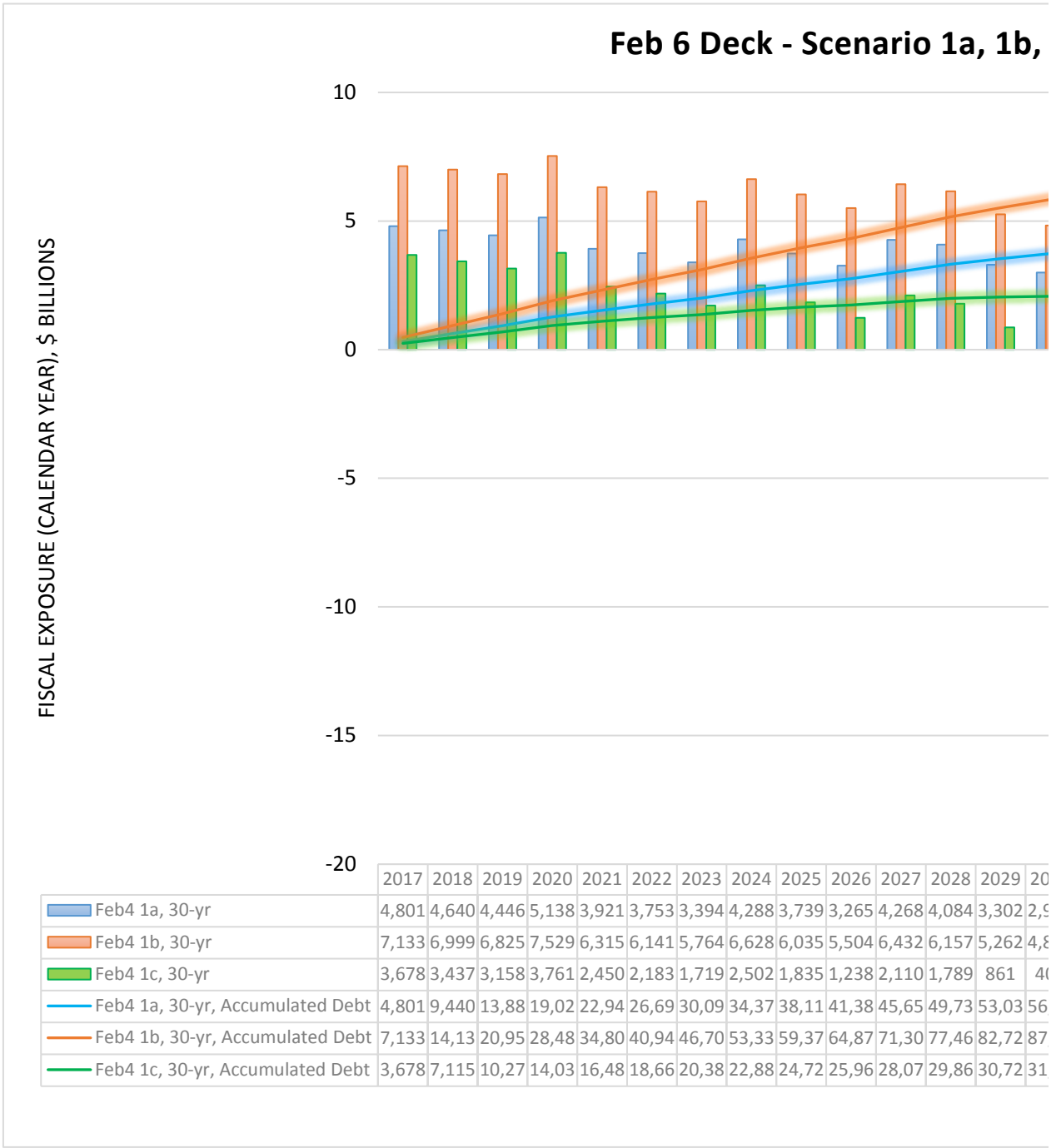
Notes:	Accounting treatment is to be determined.


Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0

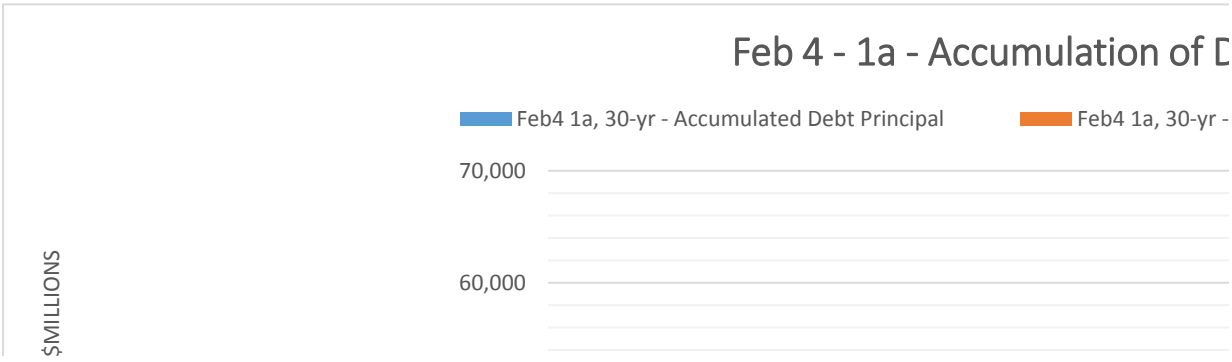

Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0

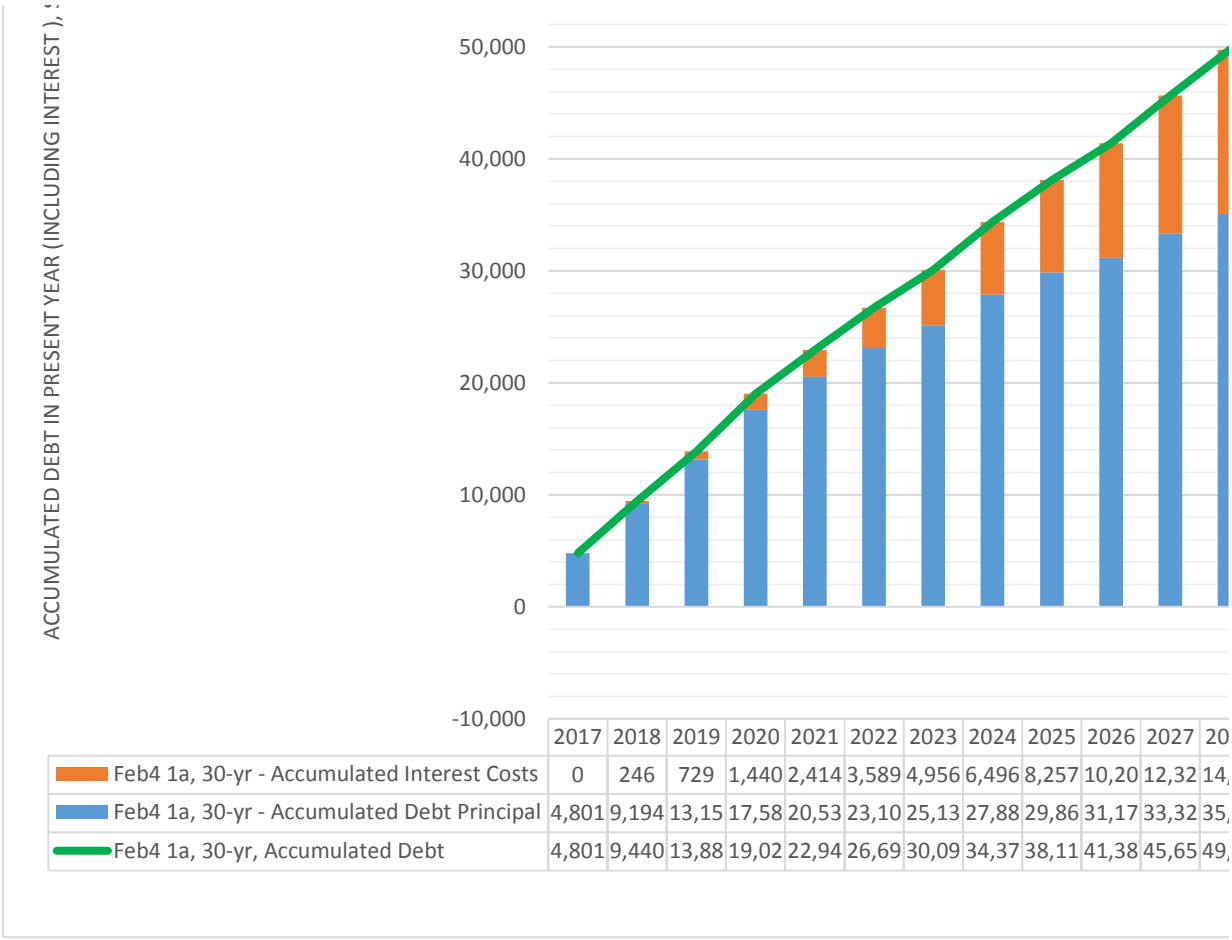

Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

Feb 6 Deck - Scenario 1a, 1b, 1c - at 5.12% interest rate

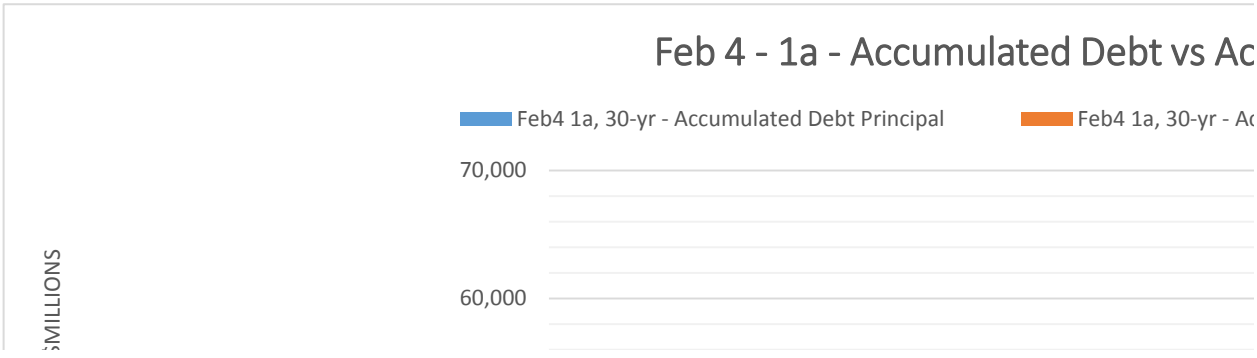


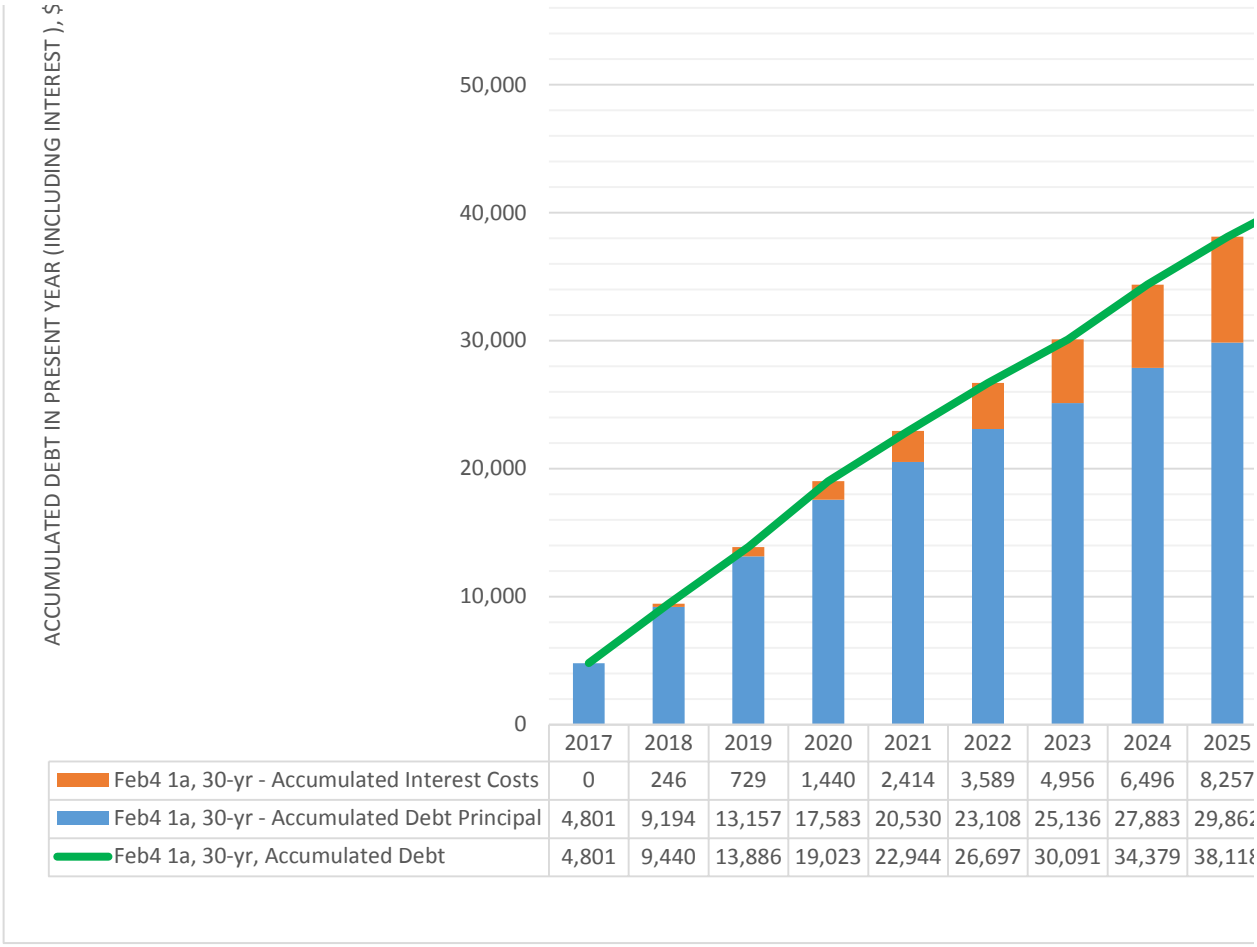
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	20
Feb4 1a, 30-yr	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,9
Feb4 1b, 30-yr	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,8
Feb4 1c, 30-yr	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	4(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73	53,03	56
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31



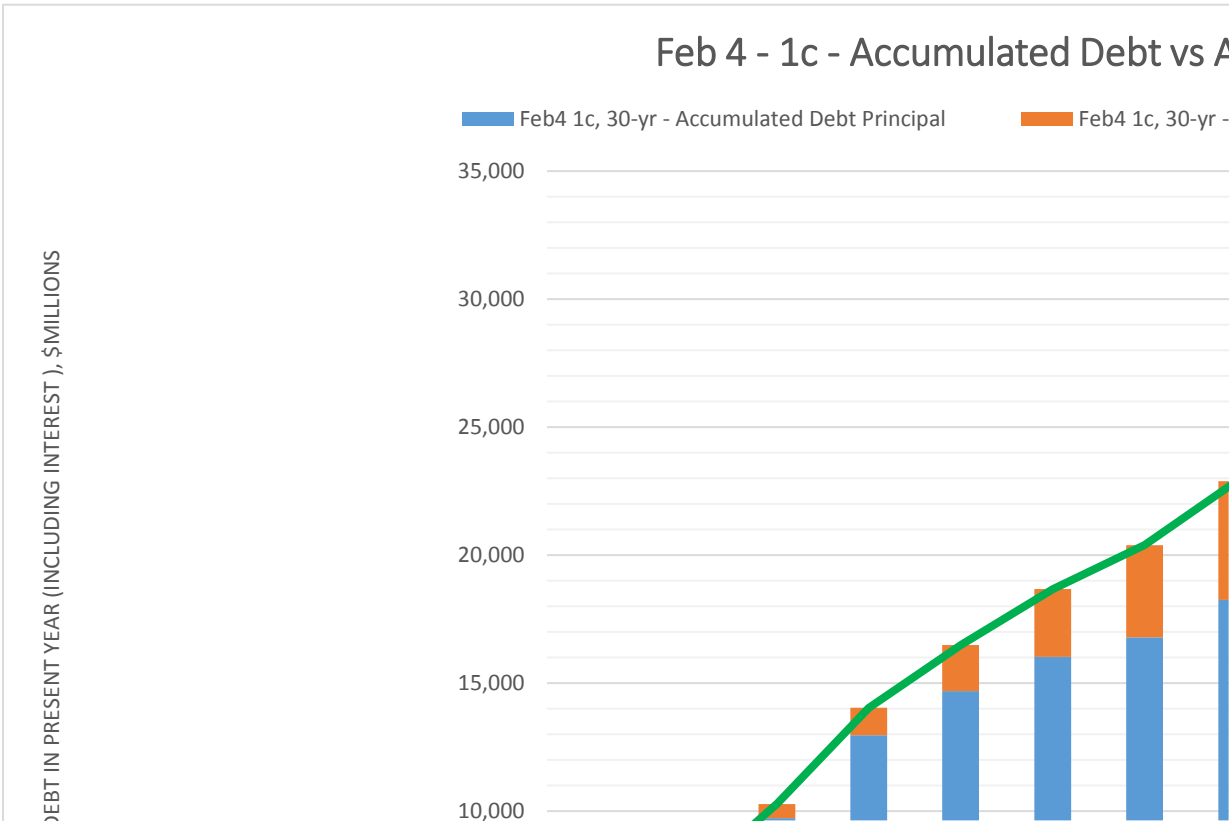


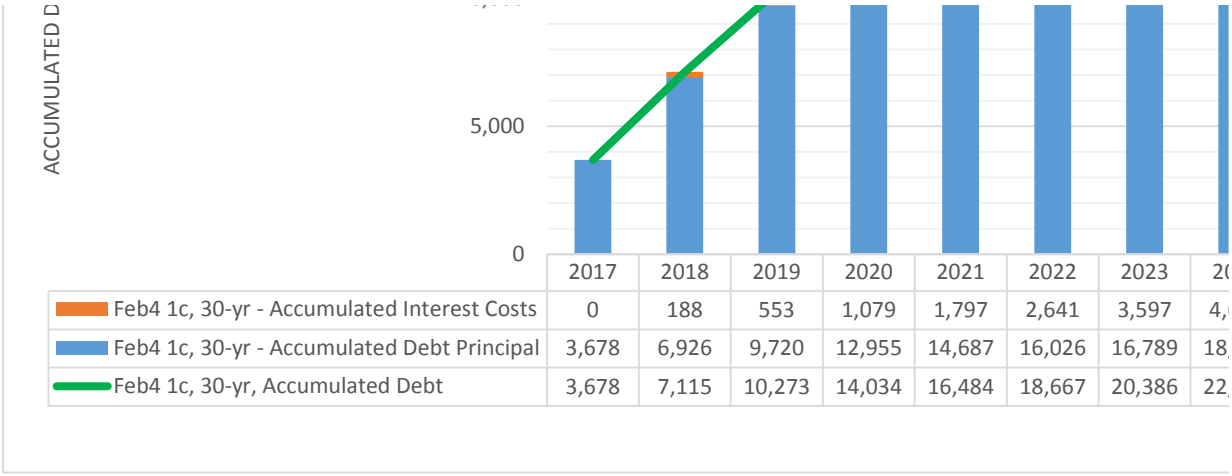
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	20
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,



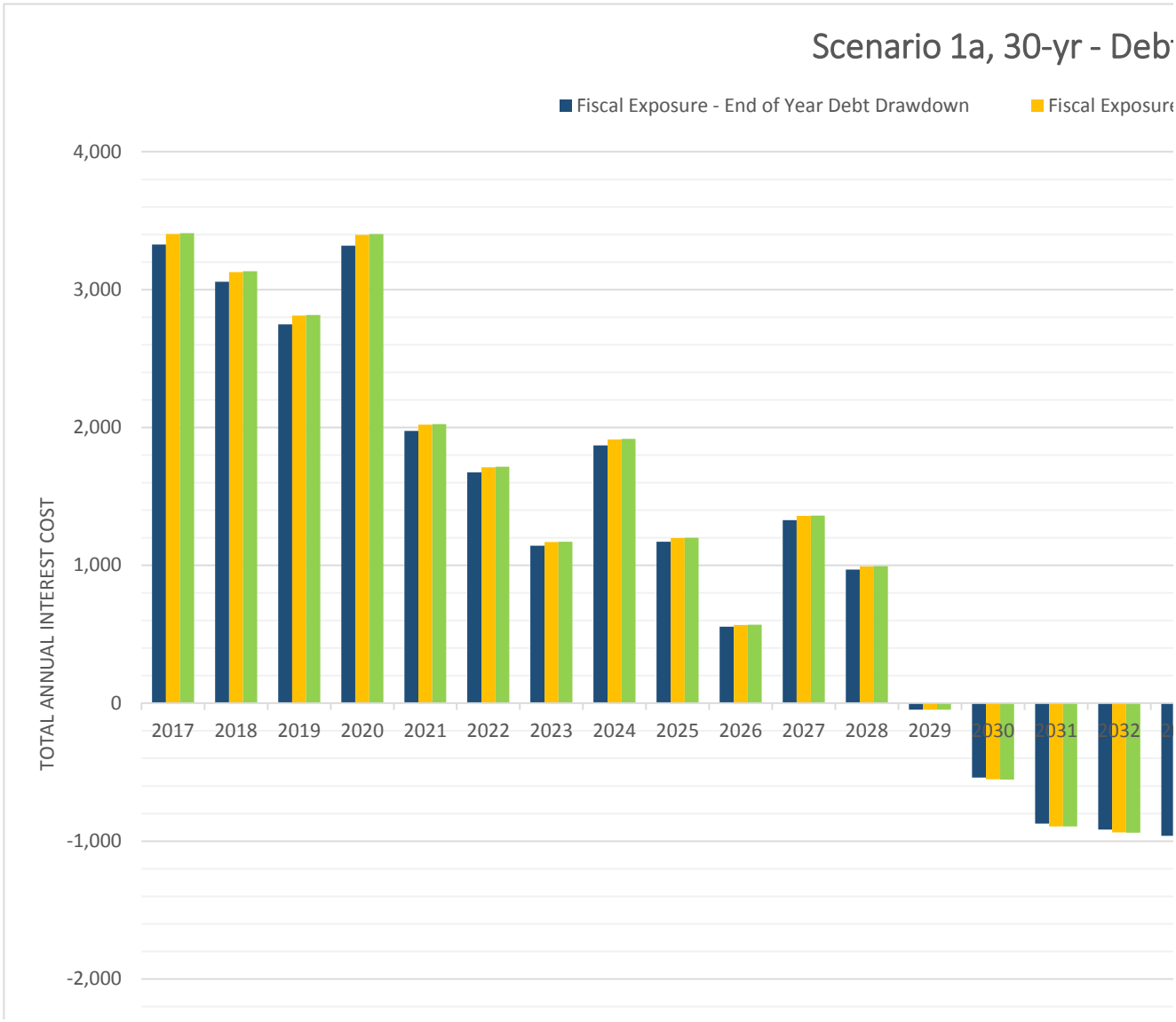


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



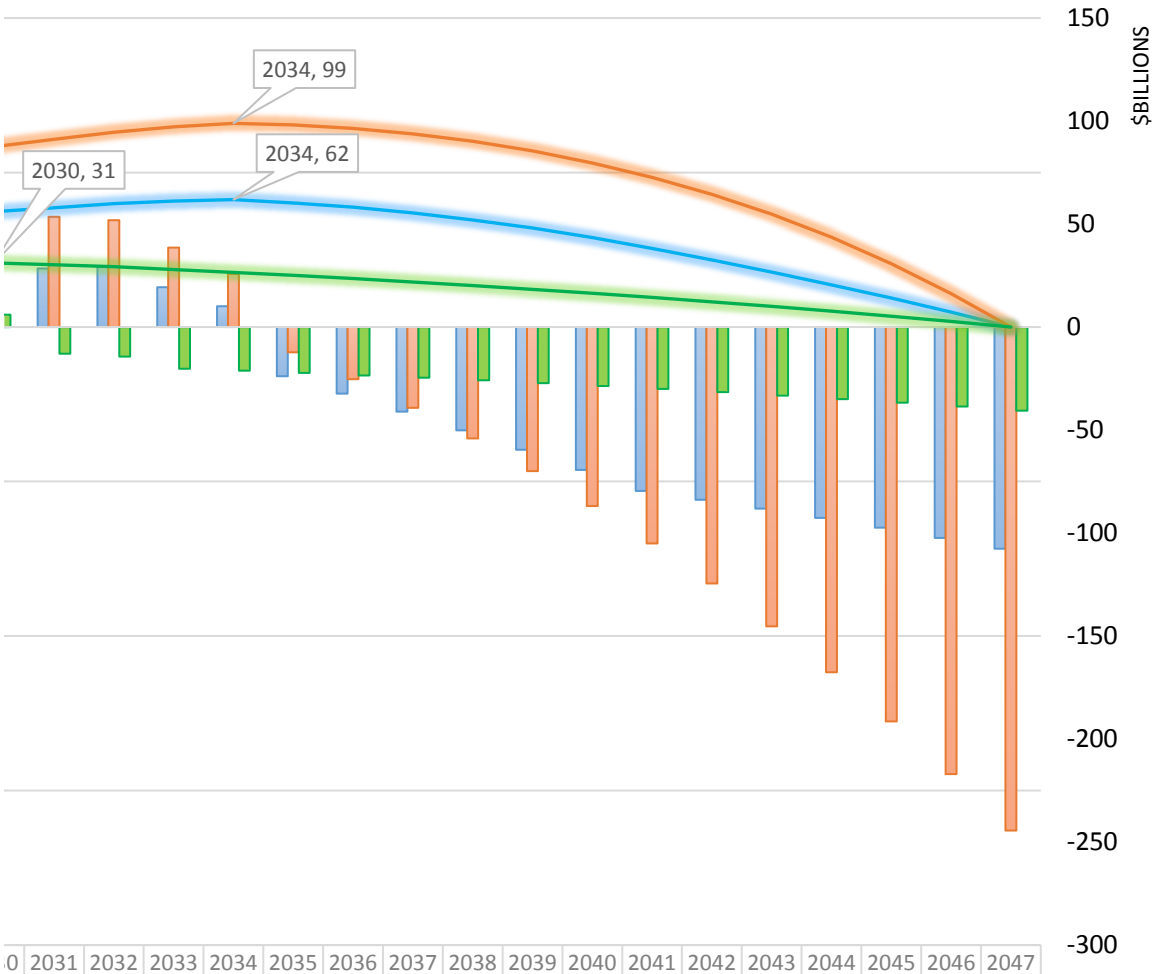


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22



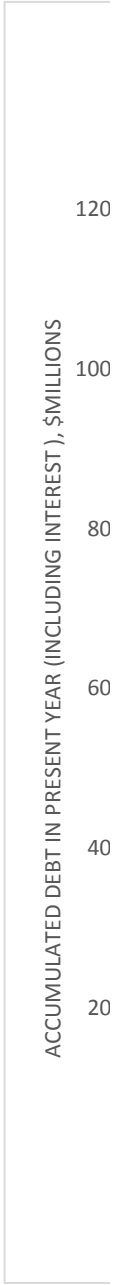

-3,000

lc - at 5.12% interest rate

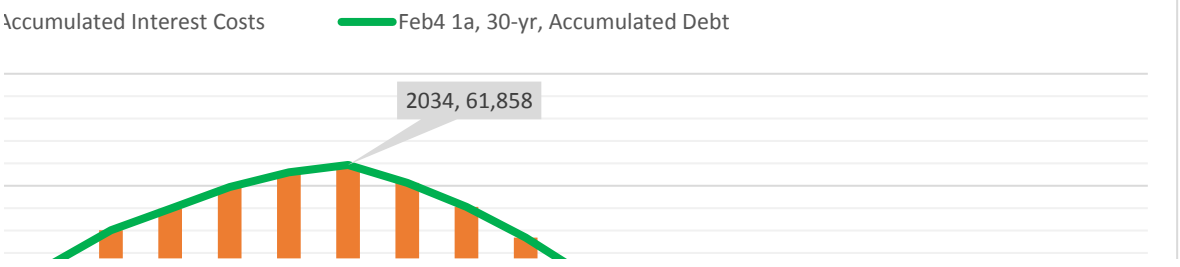


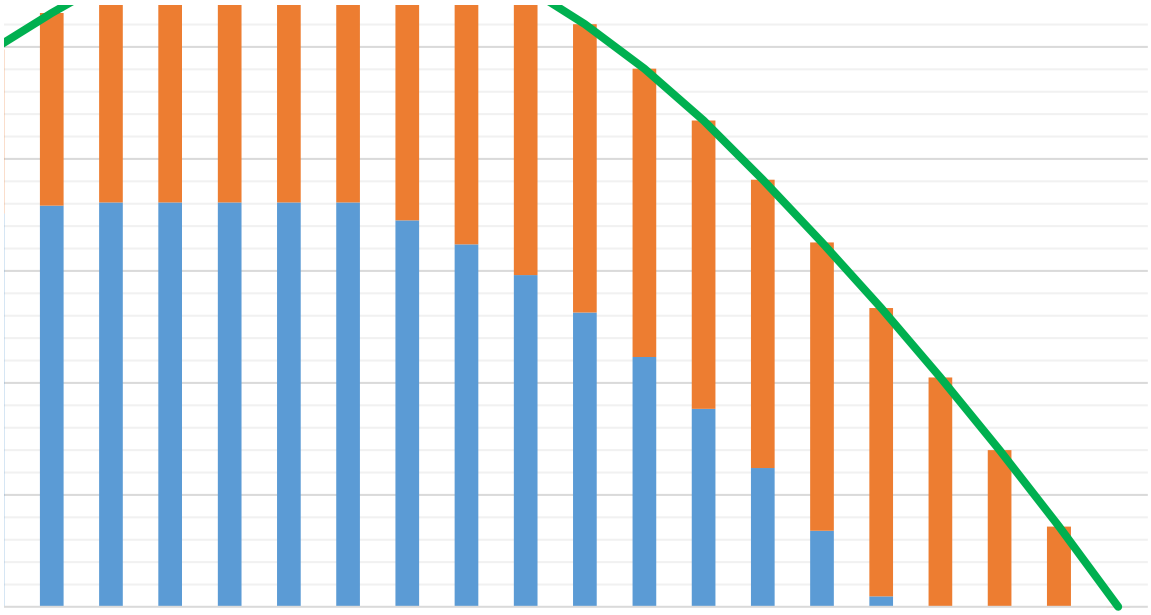
0	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
98	1,896	1,966	1,288	672	-1,59	-2,15	-2,73	-3,34	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
26	3,568	3,457	2,571	1,716	-819	-1,68	-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
4	-860	-961	-1,34	-1,41	-1,48	-1,56	-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0
55	91,12	94,57	97,14	98,86	98,04	96,35	93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0
12	30,26	29,30	27,95	26,54	25,05	23,49	21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

CALENDAR YEAR



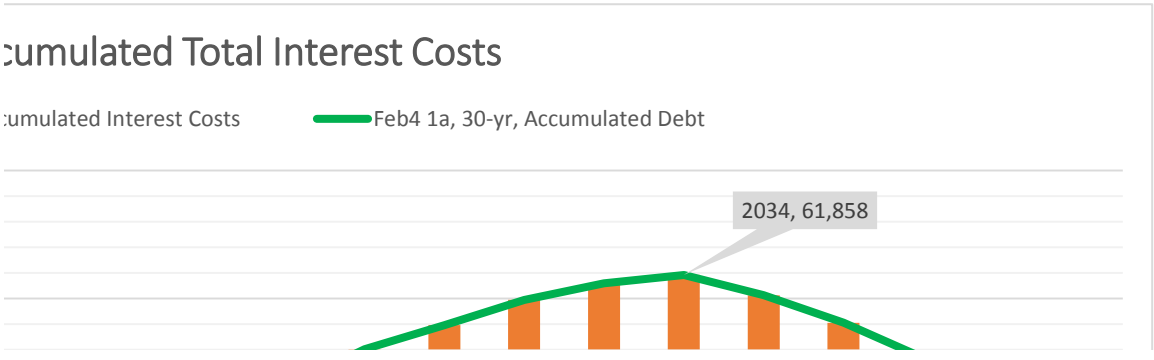
ebt (Principal and Interest)

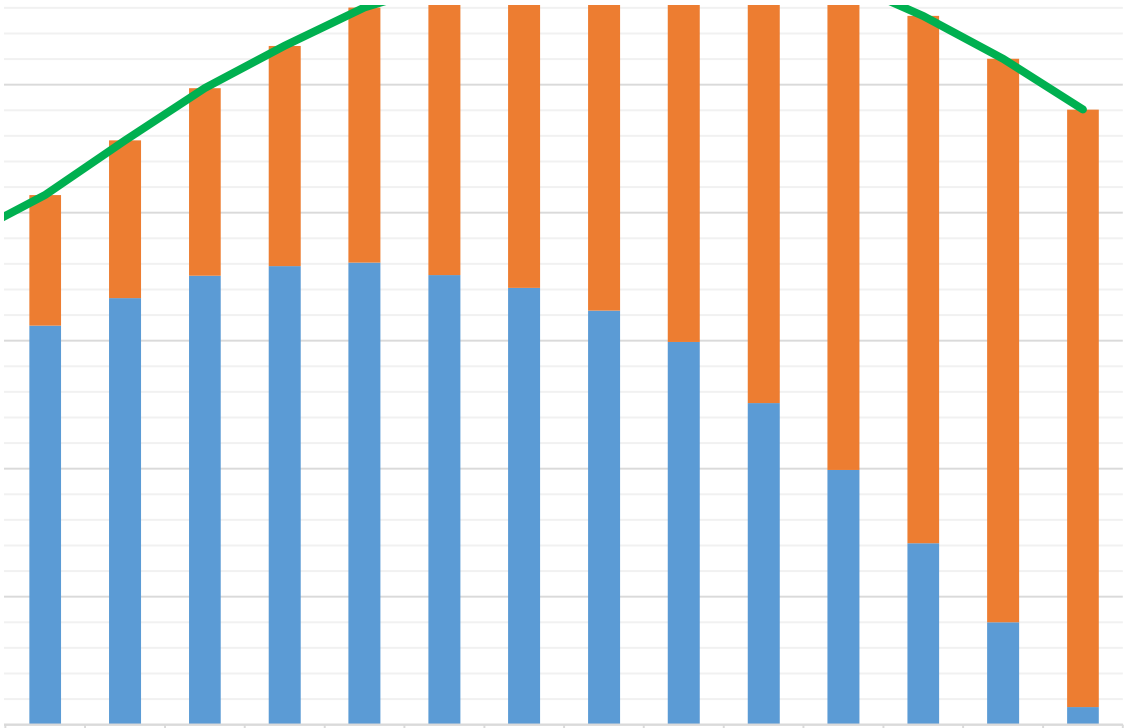




8	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
6	17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
7	35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
3	53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



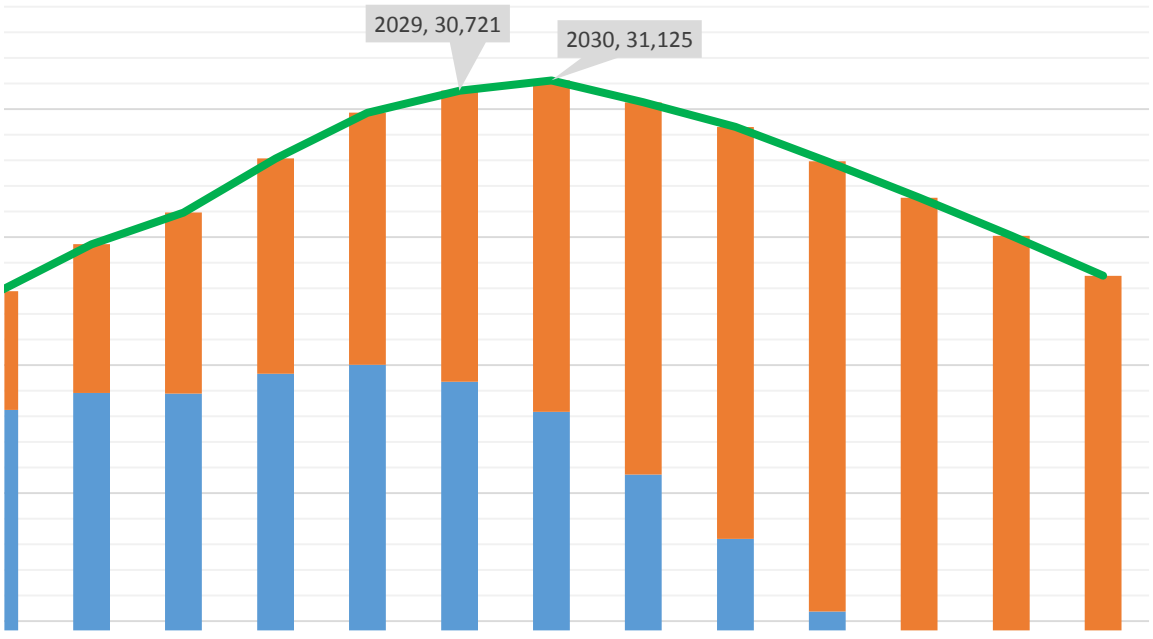


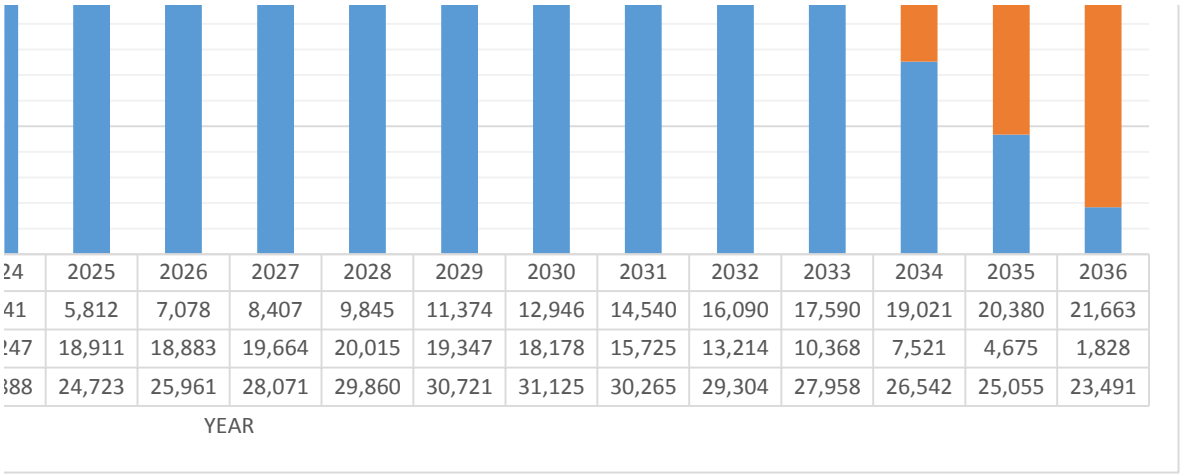
	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
	10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
	31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059
YEAR														

ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $

ccumulated Total Interest Costs

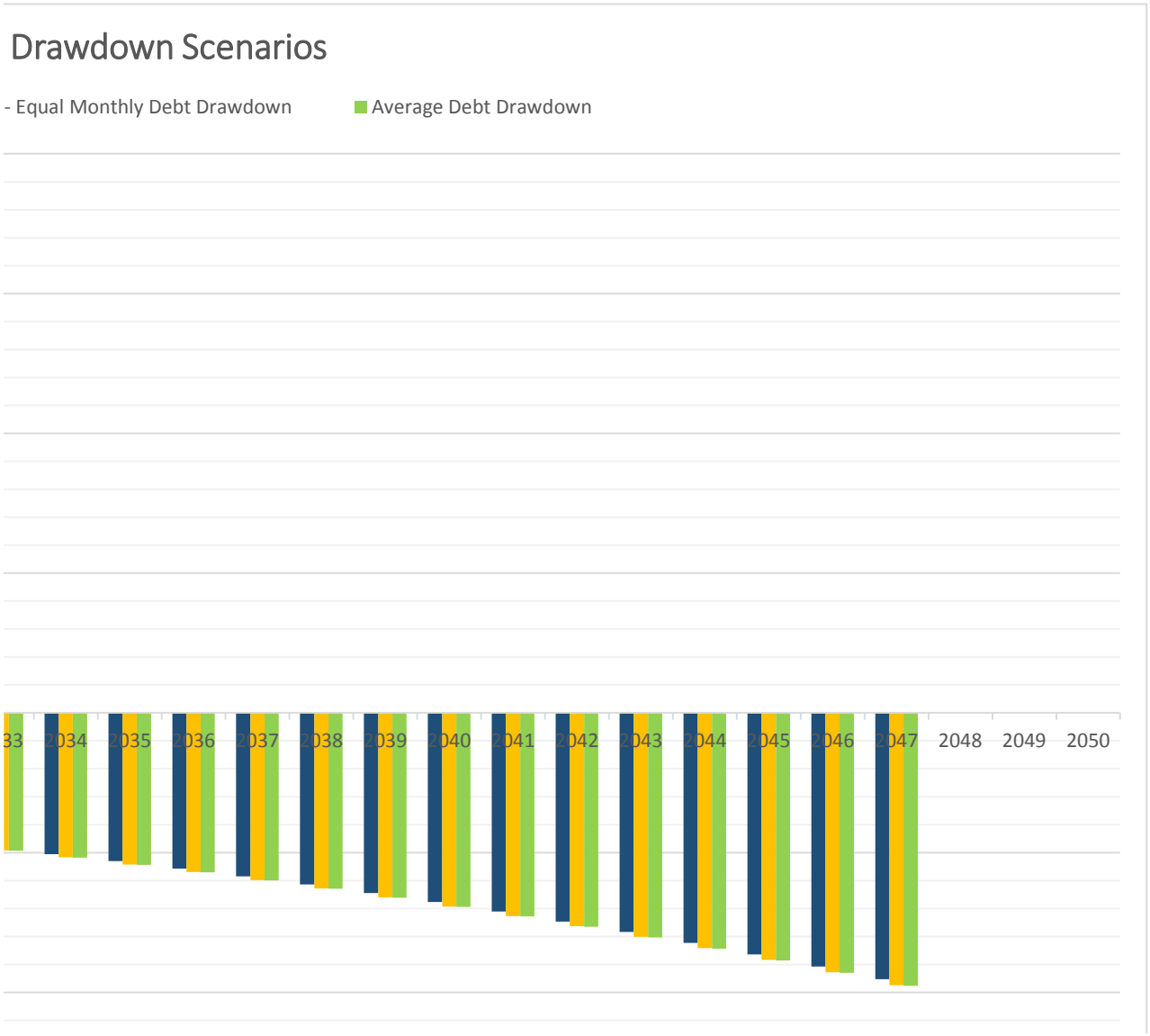
Accumulated Interest Costs — Feb4 1c, 30-yr, Accumulated Debt





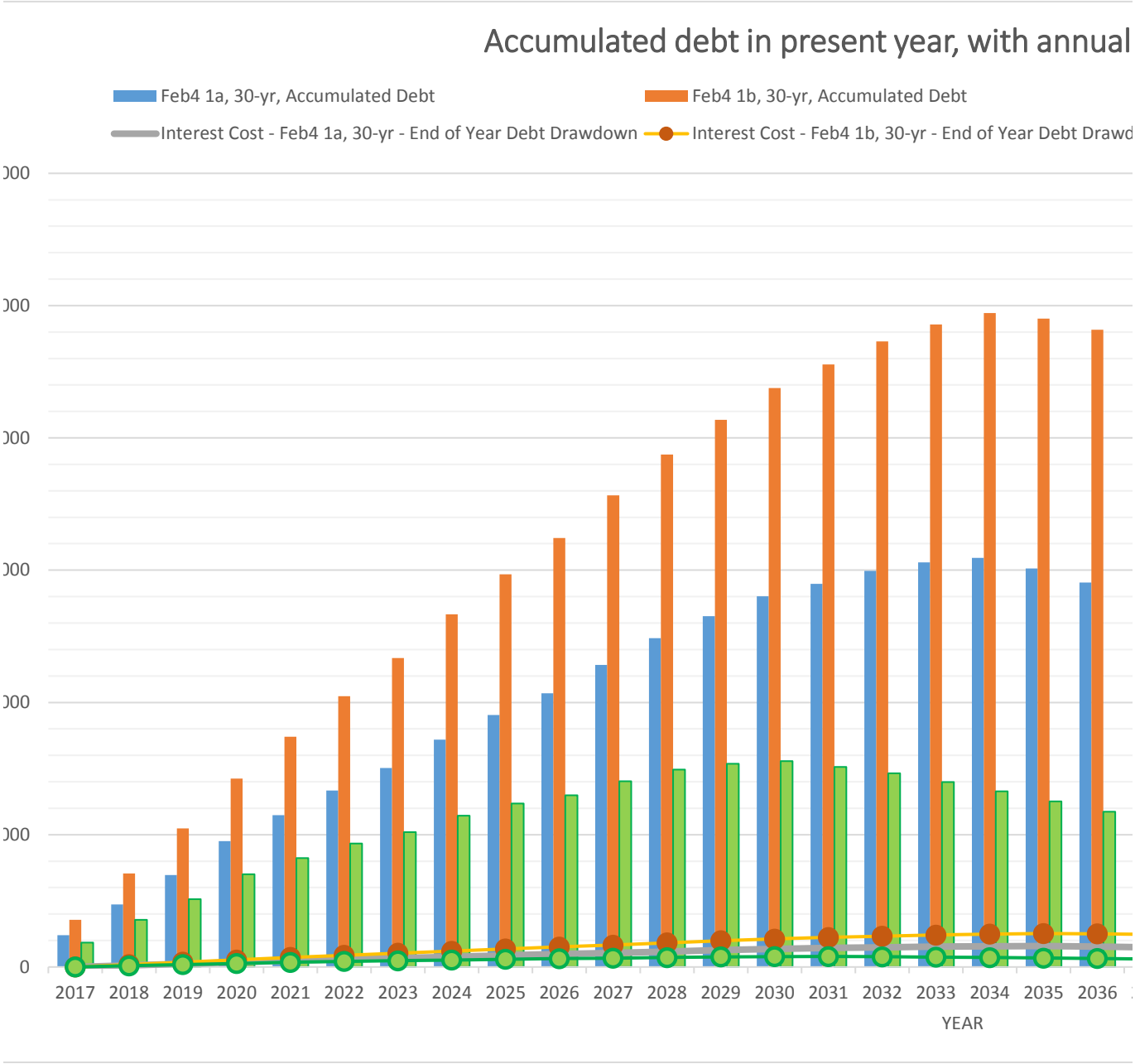
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

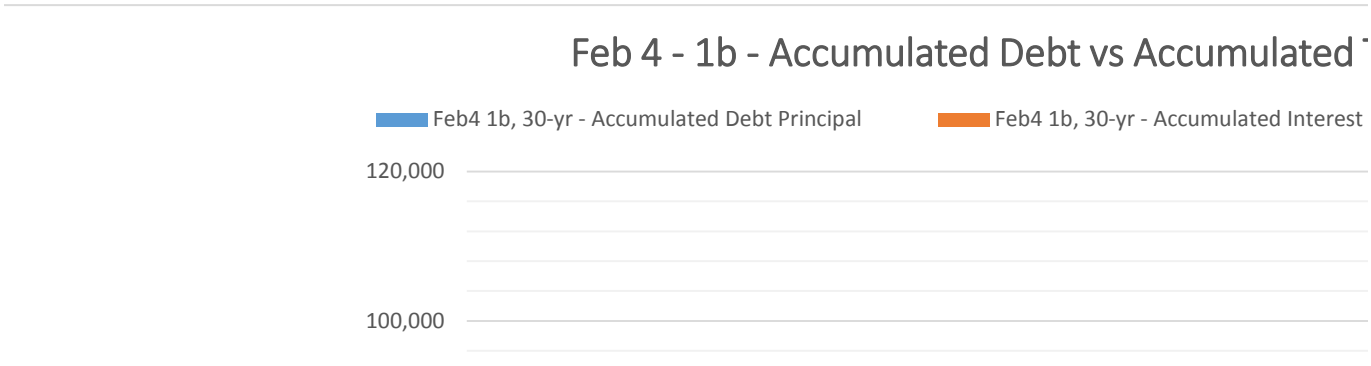
YEAR

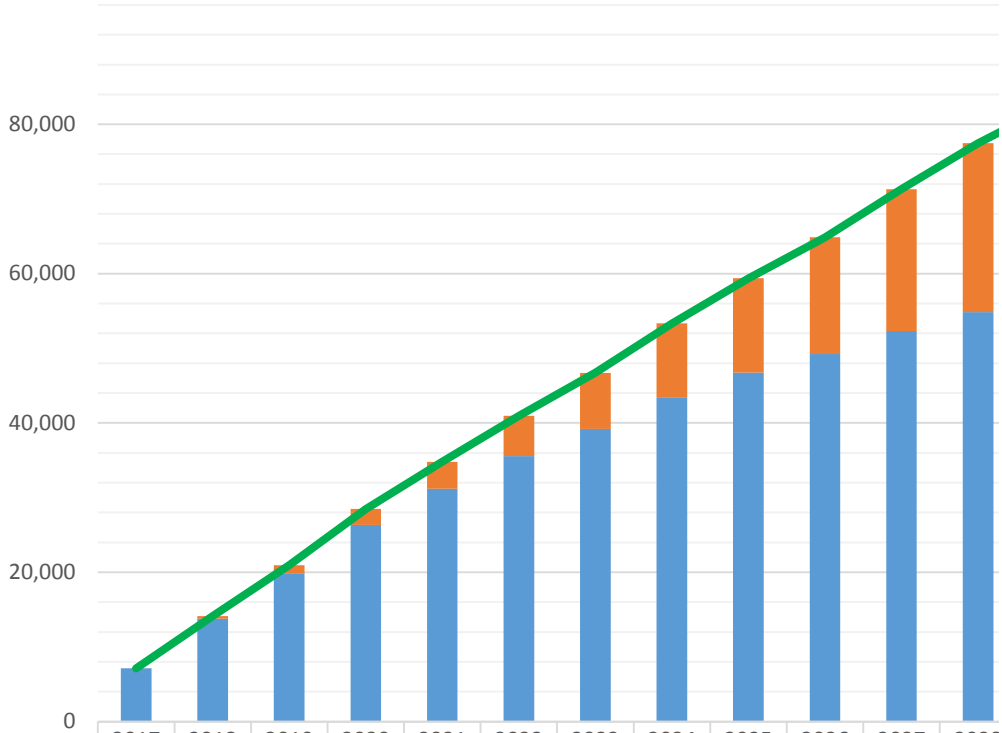


YEAR

ɜ - 25 year and 30 year Financing Terms, at 5% interest rate

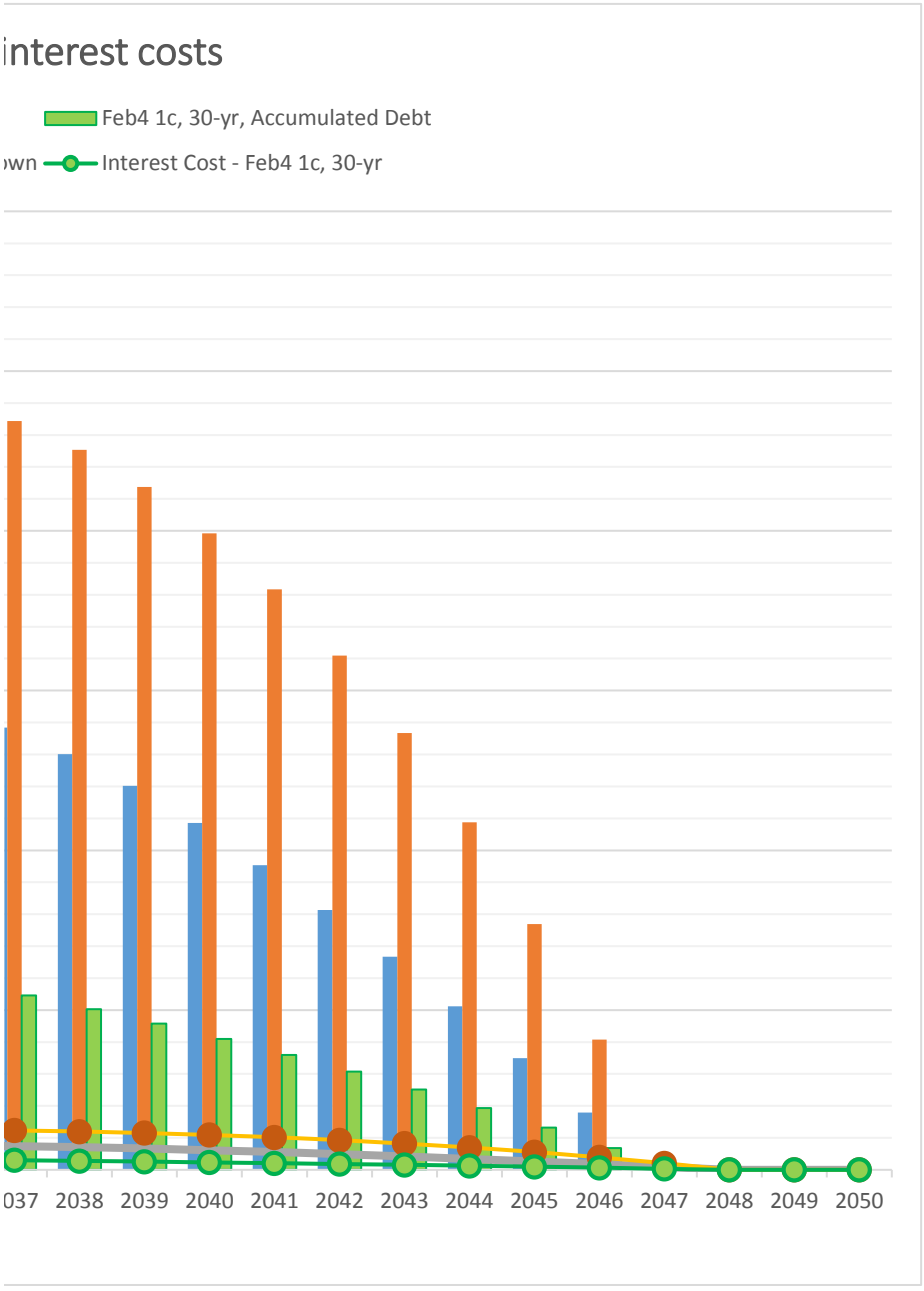


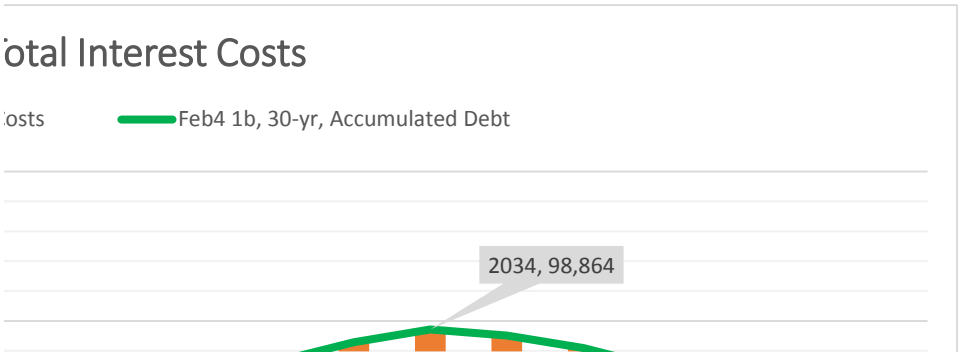

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000
100,000

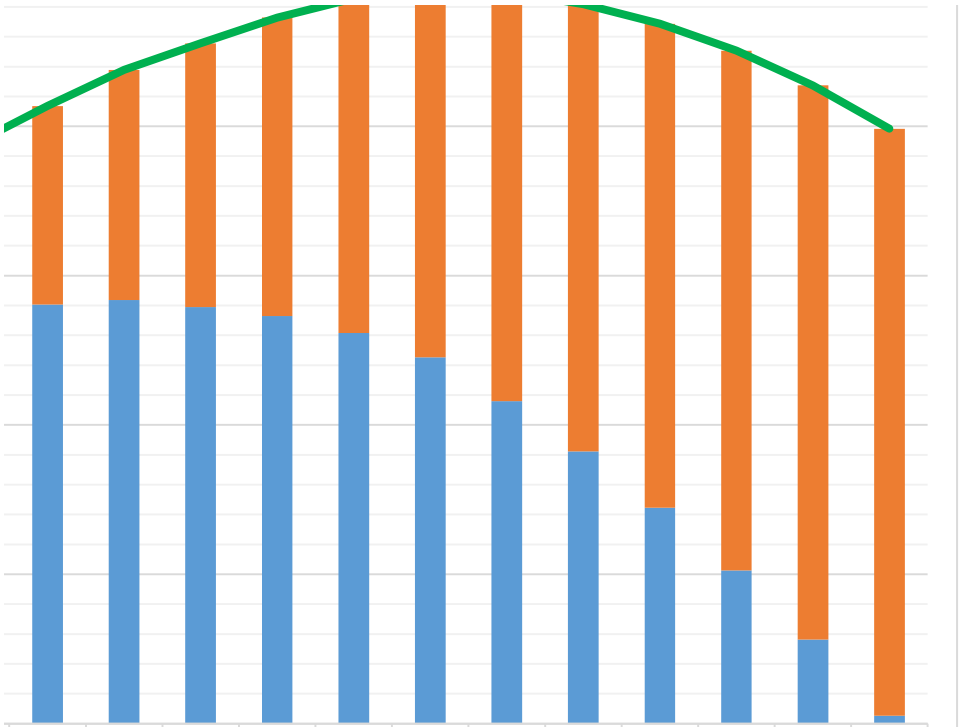


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y


interest costs
Feb4 1c, 30-yr, Accumulated Debt
wn
Interest Cost - Feb4 1c, 30-yr
037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR

Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

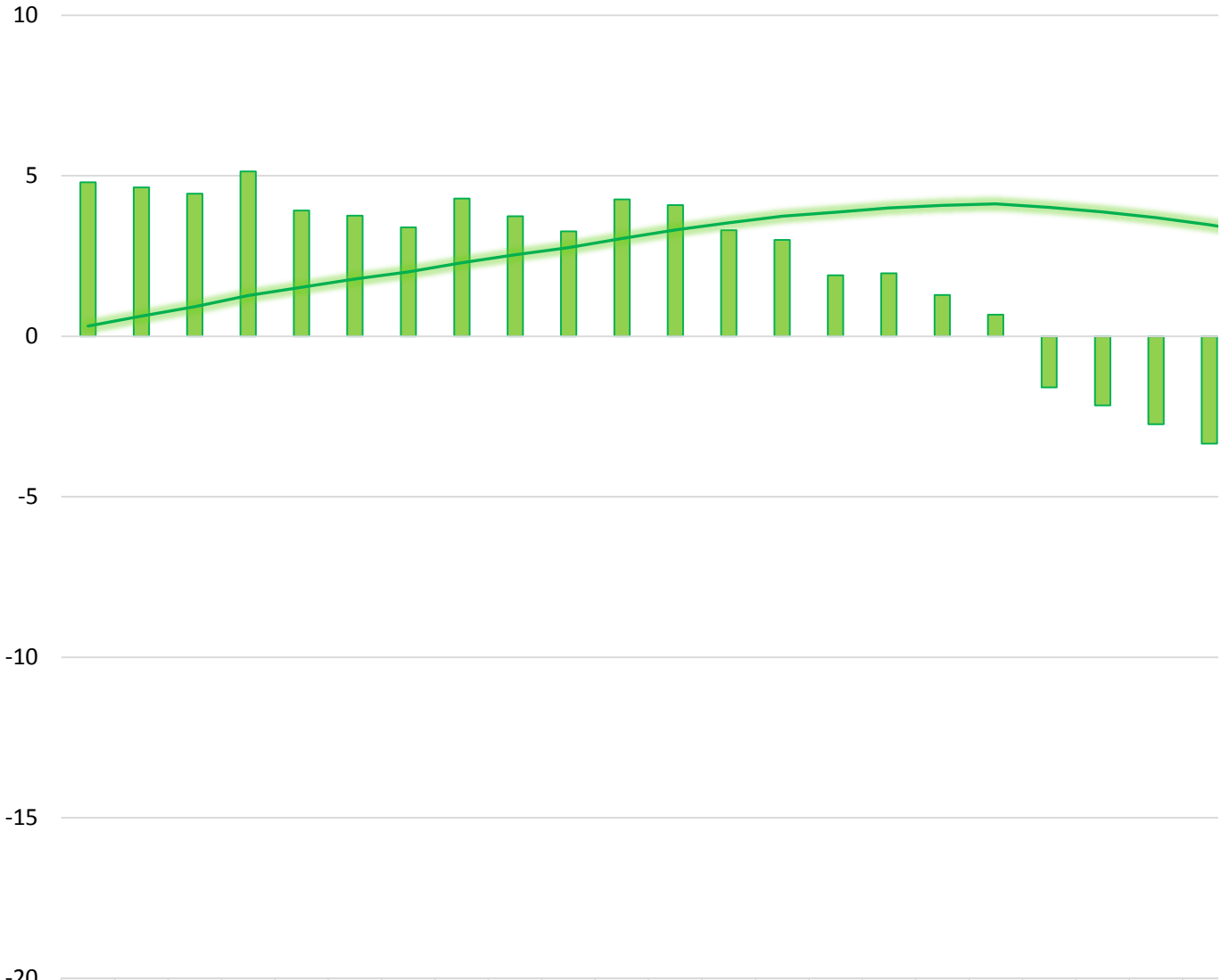
NS



FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIO
Feb4 1c, 30-yr
Feb4 1c, 30-yr,

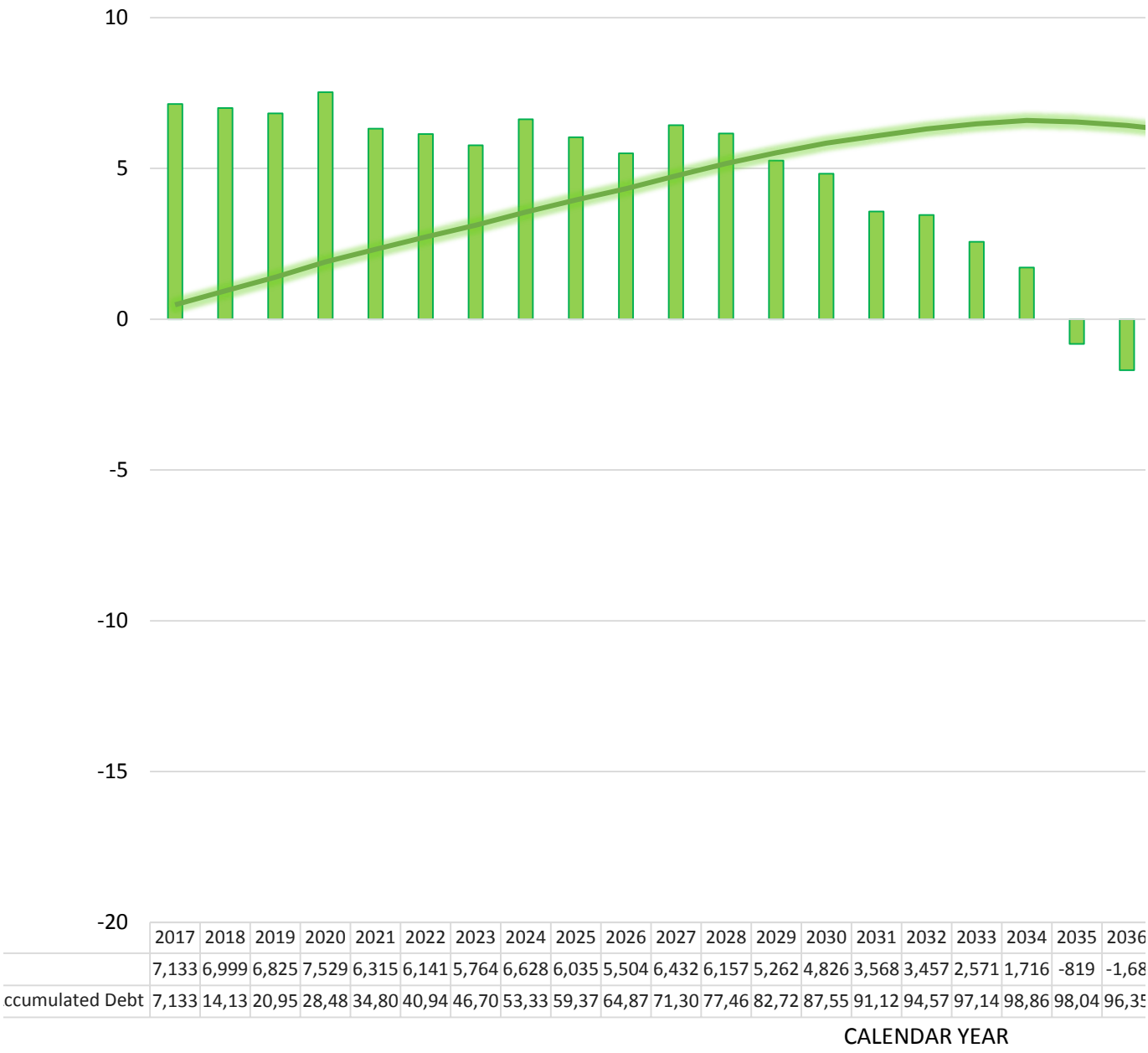
Feb 6 Deck - Scenario 1a - at 5.12% interest rate



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	203
	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,59	-2,15	-2,73	-3,3
Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73	53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,(

CALENDAR YEAR

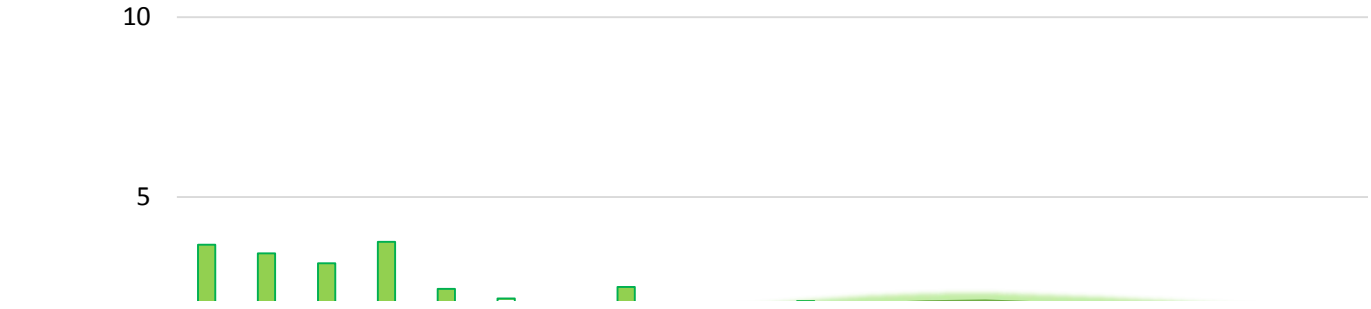
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

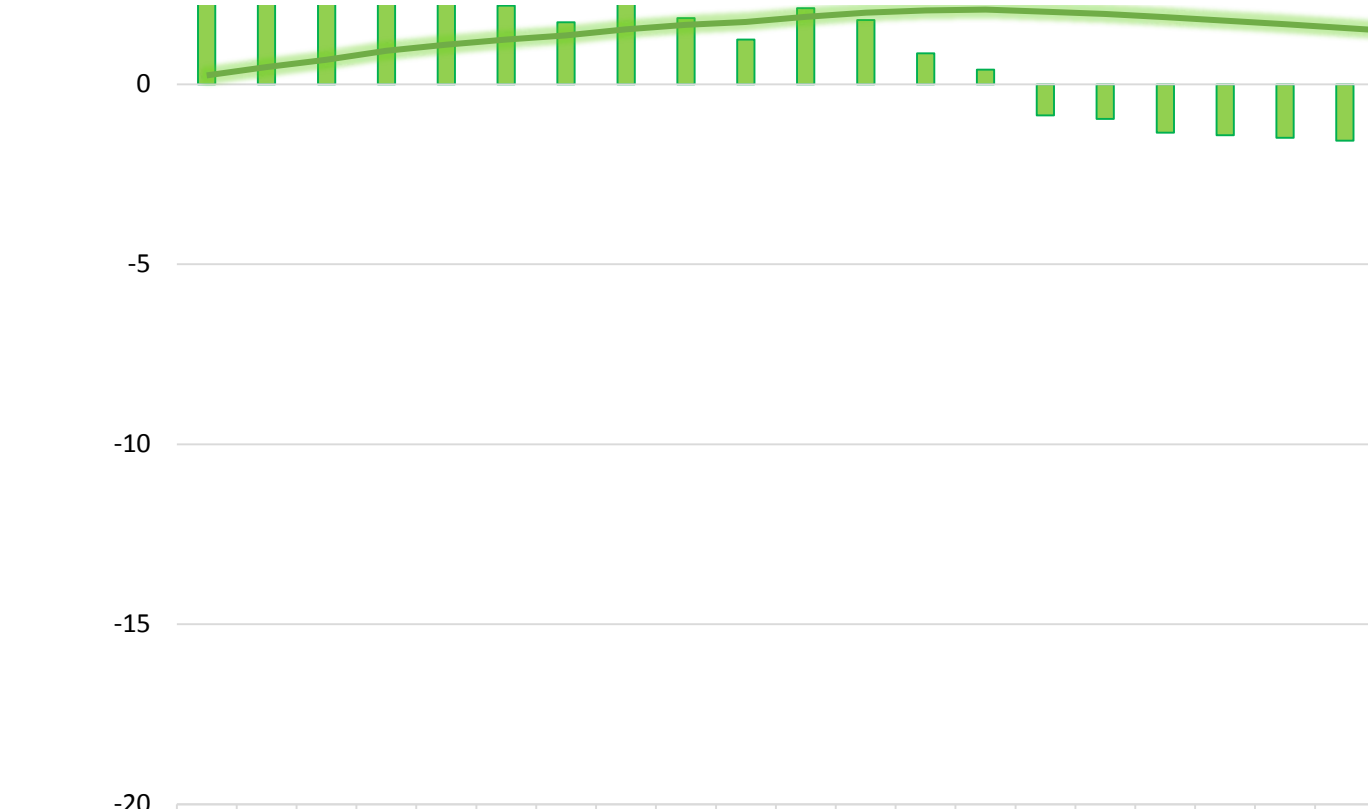


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



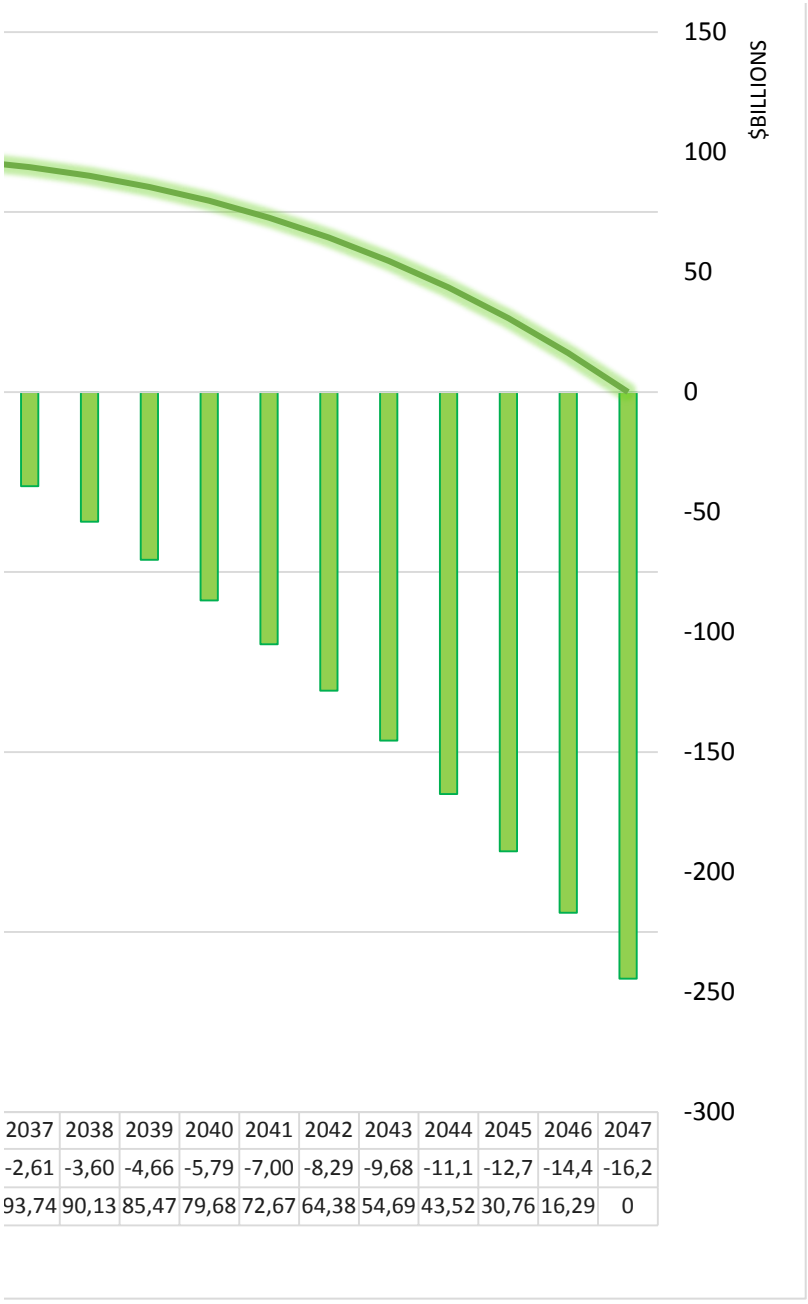


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

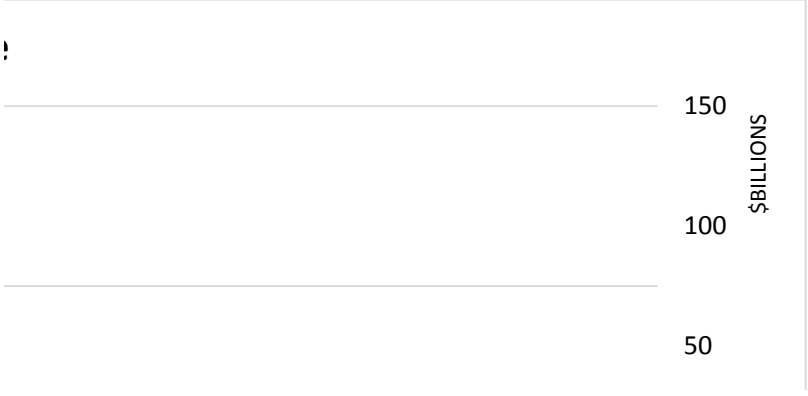
CALENDAR YEAR

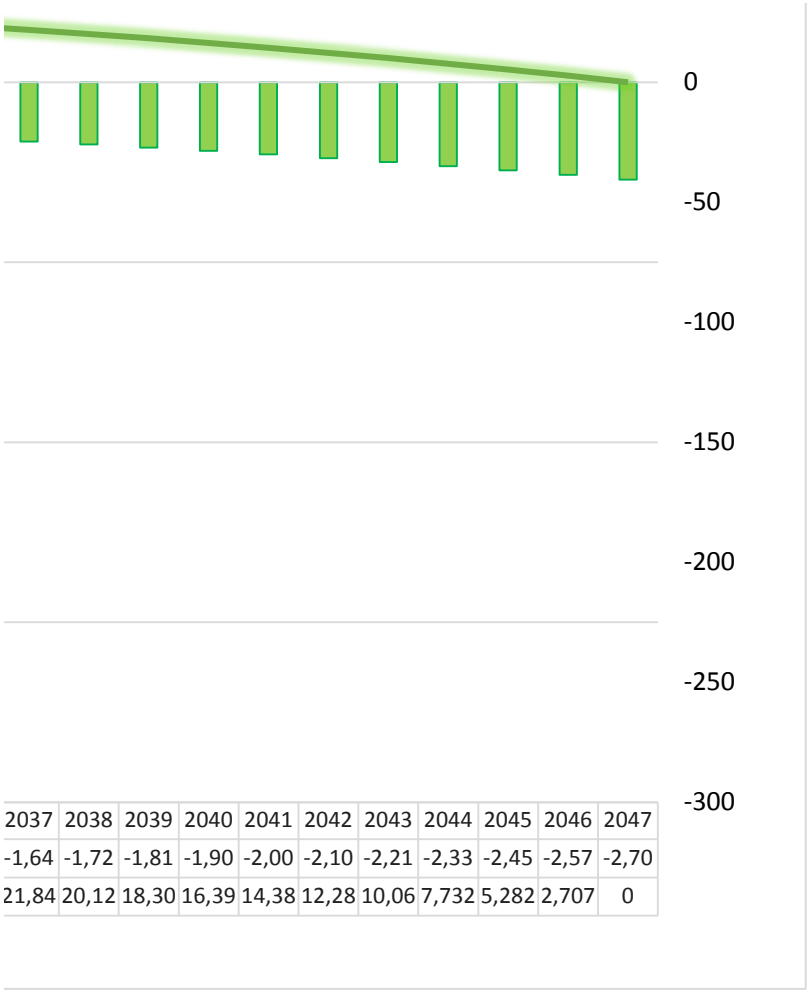


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Equal Monthly Debt Drawdown

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

1a. GA Smoothing (Borrow ~$5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,801	4,640

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,200	4,760

1b. GA Smoothing (Borrow ~$7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	7,133	6,999

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,783	7,100

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $99 billion, peaking
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

1c. GA Smoothing (Borrow ~$4 billion in 2017)

$ millions

Scenario 1C - 30-yr amortization	2017	2018
Annual Exposure[2]	3,678	3,437

	Fiscalized[3]	2016-17	2017-18
	Start: January 1st	919	3,617

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	1,783 - 1,200	7,100 - 4,760

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1200	4760
Debt-Finance Global Adjustment Costs, Option 1a	1783	7100
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18

Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1200**	**5000**
Total, B	1783	7340
Proposed Program Total:	1,783 - 1,200	7,340 - 5,000

ining

1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
4,446	5,138	3,921	3,753

2018-19	2019-20	2020-21	2021-2022
4,591	4,619	4,833	3,879

Actuals are subject to actual prices and actual interest
- The highest debt accumulation (at 5% interest rate) i
- Compared to a 5% interest rate, at 3.5%, the highest

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown o
[3] Fiscalized based on 75/25 split of annual numbers pr
on accounting treatment.

2019	2020	2021	2022
6,825	7,529	6,315	6,141

2018-19	2019-20	2020-21	2021-2022
6,956	7,001	7,226	6,272

g in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
3,158	3,761	2,450	2,183

2018-19	2019-20	2020-21	2021-2022
3,367	3,309	3,433	2,383

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
6,956 - 4,591	7,001 - 4,619	7,226 - 4,833	6,272 - 3,879

/1

2018-19[1]	2019-20[1]	2020-21[1]
4591	4619	4833
6956	7001	7226
225	279	323
60	60	60
18	18	18

4894	**4976**	**5234**
7259	7358	7627

7,259 - 4,894 7,358 - 4,976 7,627 - 5,234

rates.
is expected to be approximately $62 billion, peaking in 203 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
fiscal exposure will occur in 2017-18, decreasing by approximately $33-$36 million.

of debt.
rovided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also d

epend on decision

1a. GA Smoothing (Borrow $5 billion in 2017)

	2017
IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	7,095
Additional GA Debt Drawdown, End of Year	5,000

Ratepayer GA Payment

Total Accumulated Debt *($ billion)*	5,000
Total Change in Accumulated Debt *($ billion)*	5000

1b. GA Smoothing (Borrow $7 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	5,095
Additional GA Debt Drawdown, End of Year	7,000

Total Accumulated Debt *($ billion)*	7000
Total Change in Accumulated Debt *($ billion)*	7000

1c. GA Smoothing (Borrow $4 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	8,095
Additional GA Debt Drawdown, End of Year	4,000

Total Accumulated Debt *($ billion)*	4000
Total Change in Accumulated Debt *($ billion)*	4000

2018	2019	2020	2021	2022	2023	2024	2025
11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489
6,835	7,552	7,168	6,844	6,634	7,212	7,081	6,489
5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000

9,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000
5000	4000	5000	4000	4000	3000	4000	4000

11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489
4,835	4,552	4,168	4,844	4,634	4,212	4,081	4,489
7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000

14000	21000	28000	35000	41000	47000	53000	59000
7000	7000	8000	6000	6000	6000	7000	6000

11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489
8,835	8,552	8,168	8,844	8,634	8,212	8,081	8,489
3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000

7000	10000	14000	16000	19000	20000	23000	25000
3000	3000	4000	2000	2000	2000	3000	2000

2026	2027	2028	2029	2030	2031	2032	2033
10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147
7,020	6,975	6,764	6,919	6,650	6,587	6,758	7,147
3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000

41,000	46,000	50,000	53,000	56,000	58,000	60,000	61,000
3000	4000	4000	3000	3000	2000	2000	1000

10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147
4,020	4,975	4,764	4,919	4,650	4,587	5,758	5,147
6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000

65000	71000	77000	83000	88000	91000	95000	97000
6000	6000	6000	5000	5000	4000	3000	3000

10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147
9,020	8,975	8,764	8,919	9,650	9,587	9,758	9,147
1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000

26000	28000	30000	31000	31000	30000	29000	28000
1000	2000	2000	1000	0	-1000	-1000	-1000

2034	2035	2036	2037	2038	2039	2040	2041
7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109
6,670	7,553	7,281	8,022	7,777	8,543	9,320	9,109
1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000

62,000	60,000	58,000	55,000	52,000	48,000	43,000	38,000
1000	-2000	-2000	-3000	-3000	-4000	-5000	-5000

7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109
5,670	6,553	7,281	8,022	8,777	9,543	10,320	11,109
2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000

99000	98000	96000	94000	90000	85000	80000	73000
2000	-1000	-2000	-3000	-4000	-5000	-6000	-7000

7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109
8,670	6,553	7,281	7,022	6,777	6,543	6,320	6,109
-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000

27000	25000	23000	22000	20000	18000	16000	14000
-1000	-1000	-2000	-2000	-2000	-2000	-2000	-2000

2042	2043	2044	2045	2046	2047	2048
3,908	3,717	3,535	3,362	3,197	3,041	2,892
9,908	9,717	9,535	9,362	10,197	10,041	2,892
-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0

33,000	27,000	20,000	14,000	7,000	-	-	
-6000	-6000	-6000	-6000	-7000	-7000	0	

3,908	3,717	3,535	3,362	3,197	3,041	2,892
11,908	13,717	14,535	16,362	17,197	19,041	2,892
-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0

64000	55000	44000	31000	16000	0	0
-8000	-10000	-11000	-13000	-14000	-16000	0

3,908	3,717	3,535	3,362	3,197	3,041	2,892
5,908	5,717	5,535	5,362	6,197	6,041	2,892
-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0

12000	10000	8000	5000	3000	0	0
-2000	-2000	-2000	-2000	-3000	-3000	0

Feb4 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0
			114	110	106	122	93	89	81	102	89	78	102	97	79	71	45	47	31	16	-38	-51	-65	-80	-95	-110	-126	-133	-140	-147	-155	-162	-171	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost		58,489
End of Year Debt Drawdown	5,138		3,167	
Equal Monthly Debt Drawdown	5,260		3,149	
Maximum Accumulated Debt	Feb4 1a, 30-yr, Accumulated Debt			
End of Year Debt Drawdown	61,858			
Equal Monthly Debt Drawdown	63,330			

			40%	37%	34%	36%	27%	24%																													
Feb4 1a, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		7,295	7,441	7,590	7,742	7,897	8,055	8,185	8,334	8,511	8,707	8,826	9,017	9,164	9,367	9,560	9,758	9,926	10,130	10,312	10,522	10,736	10,954	11,177	11,405	11,637	11,450	11,258	11,076	10,903	10,738	10,582	2,892	2,750	2,616	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
a	Debt, Beginning of Year		0	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	
c = a*5%	*Interest Cost - Feb4 1a, 30-yr - End of Year Debt Drawdown*		*0*	*246*	*483*	*711*	*974*	*1,175*	*1,367*	*1,541*	*1,760*	*1,952*	*2,119*	*2,337*	*2,546*	*2,716*	*2,869*	*2,966*	*3,067*	*3,133*	*3,167*	*3,086*	*2,975*	*2,835*	*2,664*	*2,461*	*2,224*	*1,952*	*1,666*	*1,365*	*1,049*	*717*	*367*	*0*	*0*	*0*	58,489
b	Additional GA Debt Drawdown, End of Year		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	21,822	23,788	25,076	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	20,490	13,998	7,173	0	0	0	
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	36,109	36,109	36,109	36,109	34,517	32,362	29,624	26,281	22,311	17,687	12,383	6,793	918	0	0	0	0	0	0	0	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688	49,149	51,372	53,325	54,991	56,356	57,405	58,122	58,489				
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371	-5,713	-13,241	-20,783	-28,325	-35,866	-43,408	-50,949	-58,489				
Fiscal Exposure - End of Year Debt Drawdown			4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0	

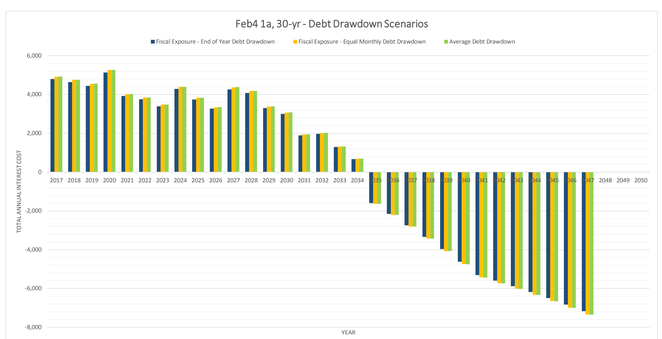
Feb4 1a, 30-yr	Equal Monthly Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			12																																		
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		7,295	7,441	7,590	7,742	7,897	8,055	8,185	8,334	8,511	8,707	8,826	9,017	9,164	9,367	9,560	9,758	9,926	10,130	10,312	10,522	10,736	10,954	11,177	11,405	11,637	11,450	11,258	11,076	10,903	10,738	10,582	2,892	2,750	2,616	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
3,149	Debt, Beginning of Year		0	4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*114*	*356*	*589*	*833*	*1,067*	*1,264*	*1,448*	*1,643*	*1,849*	*2,029*	*2,220*	*2,435*	*2,625*	*2,787*	*2,914*	*3,013*	*3,097*	*3,149*	*3,129*	*3,034*	*2,910*	*2,756*	*2,569*	*2,351*	*2,098*	*1,819*	*1,526*	*1,218*	*895*	*554*	*197*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0	

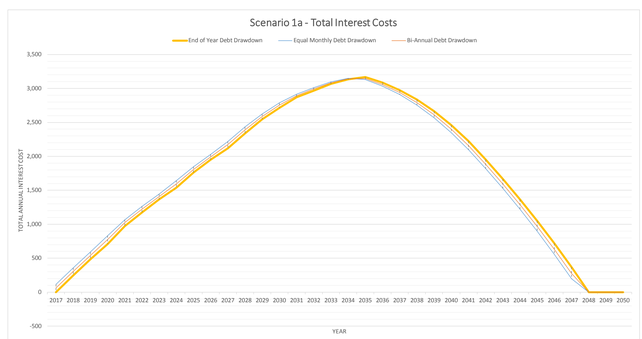
	Monthly Drawdown		400	366	330	369	246	215	169	229	165	109	179	146	63	24	(81)	(83)	(148)	(205)	(397)	(437)	(476)	(515)	(553)	(590)	(627)	(629)	(628)	(628)	(628)	(628)	(628)	-	-	-
	FV of Monthly Drawdown at 5%		4,915	4,498	4,057	4,532	3,017	2,640	2,075	2,813	2,026	1,345	2,200	1,789	773	289	(996)	(1,024)	(1,821)	(2,519)	(4,872)	(5,365)	(5,849)	(6,325)	(6,793)	(7,253)	(7,707)	(7,722)	(7,721)	(7,721)	(7,721)	(7,721)	(7,720)	-	-	-
	Annual Interest Cost on New Drawdowns		114	105	94	105	70	61	48	65	47	31	51	42	18	7	(23)	(24)	(42)	(59)	(113)	(125)	(136)	(147)	(158)	(169)	(179)	(180)	(180)	(180)	(180)	(180)	(179)	-	-	-
	Annual Interest Cost on Opening Balance		-	252	495	728	997	1,203	1,399	1,577	1,802	1,998	2,169	2,393	2,607	2,780	2,937	3,037	3,140	3,207	3,243	3,159	3,046	2,903	2,727	2,519	2,277	1,999	1,706	1,398	1,074	734	376	(0)	(0)	(0)
	Total Annual Interest Cost		114	356	589	833	1,067	1,264	1,448	1,643	1,849	2,029	2,220	2,435	2,625	2,787	2,914	3,013	3,097	3,149	3,129	3,034	2,910	2,756	2,569	2,351	2,098	1,819	1,526	1,218	895	554	197	(0)	(0)	(0)

Feb4 1a, 30-yr	Bi-Annual Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			2																																		
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		7,295	7,441	7,590	7,742	7,897	8,055	8,185	8,334	8,511	8,707	8,826	9,017	9,164	9,367	9,560	9,758	9,926	10,130	10,312	10,522	10,736	10,954	11,177	11,405	11,637	11,450	11,258	11,076	10,903	10,738	10,582	2,892	2,750	2,616	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*61*	*305*	*540*	*777*	*1,024*	*1,223*	*1,410*	*1,596*	*1,808*	*1,993*	*2,173*	*2,390*	*2,589*	*2,754*	*2,893*	*2,991*	*3,083*	*3,141*	*3,147*	*3,058*	*2,940*	*2,792*	*2,613*	*2,401*	*2,156*	*1,881*	*1,591*	*1,286*	*966*	*629*	*275*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown			4,862	4,699	4,502	5,203	3,971	3,801	3,438	4,343	3,787	3,307	4,322	4,137	3,344	3,037	1,920	1,991	1,305	681	-1,612	-2,183	-2,773	-3,386	-4,021	-4,683	-5,372	-5,661	-5,951	-6,255	-6,575	-6,912	-7,265	0	0	0	

	Bi-Annual Drawdown		2,400	2,197	1,981	2,213	1,473	1,289	1,014	1,374	989	657	1,074	874	378	141	(487)	(500)	(889)	(1,230)	(2,379)	(2,620)	(2,857)	(3,089)	(3,317)	(3,542)	(3,764)	(3,771)	(3,771)	(3,771)	(3,771)	(3,771)	(3,770)	-	-	-
	FV of Bi-Annual Drawdown at 5%		4,862	4,450	4,013	4,483	2,984	2,612	2,053	2,783	2,004	1,331	2,176	1,769	765	286	(986)	(1,013)	(1,801)	(2,492)	(4,820)	(5,308)	(5,787)	(6,257)	(6,719)	(7,175)	(7,624)	(7,639)	(7,638)	(7,638)	(7,638)	(7,638)	(7,637)	-	-	-
	Annual Interest Cost on New Drawdowns		61	56	51	57	38	33	26	35	25	17	28	22	10	4	(12)	(13)	(23)	(31)	(61)	(67)	(73)	(79)	(85)	(91)	(96)	(97)	(97)	(97)	(97)	(97)	(97)	-	-	-
	Annual Interest Cost on Opening Balance		-	249	490	720	986	1,190	1,384	1,560	1,783	1,977	2,146	2,367	2,579	2,750	2,906	3,004	3,106	3,173	3,208	3,125	3,013	2,871	2,698	2,492	2,252	1,977	1,687	1,383	1,063	726	372	(0)	(0)	(0)	
	Total Annual Interest Cost		61	305	540	777	1,024	1,223	1,410	1,596	1,808	1,993	2,173	2,390	2,589	2,754	2,893	2,991	3,083	3,141	3,147	3,058	2,940	2,792	2,613	2,401	2,156	1,881	1,591	1,286	966	629	275	(0)	(0)	(0)	

Feb4 1a, 30-yr	Average Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		7,295	7,441	7,590	7,742	7,897	8,055	8,185	8,334	8,511	8,707	8,826	9,017	9,164	9,367	9,560	9,758	9,926	10,130	10,312	10,522	10,736	10,954	11,177	11,405	11,637	11,450	11,258	11,076	10,903	10,738	10,582	2,892	2,750	2,616	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*123*	*365*	*597*	*842*	*1,074*	*1,271*	*1,454*	*1,650*	*1,856*	*2,035*	*2,228*	*2,442*	*2,631*	*2,792*	*2,918*	*3,016*	*3,100*	*3,150*	*3,126*	*3,030*	*2,905*	*2,749*	*2,562*	*2,342*	*2,088*	*1,809*	*1,516*	*1,207*	*883*	*542*	*184*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
Fiscal Exposure - Average Debt Drawdown			4,923	4,758	4,559	5,269	4,021	3,849	3,481	4,398	3,835	3,349	4,377	4,189	3,386	3,075	1,944	2,016	1,321	689	-1,633	-2,210	-2,808	-3,428	-4,072	-4,742	-5,440	-5,733	-6,026	-6,334	-6,658	-6,999	-7,357	0	0	0	





Feb4 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.12%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0
			170	167	162	179	150	146	137	158	144	131	153	147	125	115	85	82	61	41	-19	-40	-62	-86	-111	-138	-167	-198	-231	-266	-304	-344	-388	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	
End of Year Debt Drawdown	7,529	5,062	97,141
Equal Monthly Debt Drawdown	7,708	5,042	

Maximum Accumulated Debt	Feb4 1b, 30-yr, Accumulated Debt
End of Year Debt Drawdown	98,864
Equal Monthly Debt Drawdown	101,217

Feb4 1b, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,836	11,837	11,838	11,839	11,840	11,841	11,842	11,843	11,844	11,845	11,846	11,847	11,848	11,849	11,850	11,851	11,852	11,853	11,854	11,855	11,856	11,857	11,858	11,859	11,860	11,861	11,862	11,863	11,864	11,865	11,866	11,867	
	Ratepayer GA Payment	4,962	5,201	5,734	5,381	6,981	7,479	8,172	7,604	8,537	9,379	8,733	9,339	10,550	11,256	12,762	13,057	14,121	15,108	17,732	18,560	19,402	20,259	21,133	22,026	22,941	23,879	24,842	25,832	26,852	27,905	28,991	11,865	11,866	11,867	
	GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
a	Debt, Beginning of Year	0	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	
c = a*5%	*Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown*	*0*	*365*	*724*	*1,073*	*1,459*	*1,782*	*2,096*	*2,391*	*2,731*	*3,040*	*3,322*	*3,651*	*3,966*	*4,236*	*4,483*	*4,665*	*4,842*	*4,974*	*5,062*	*5,020*	*4,933*	*4,800*	*4,615*	*4,376*	*4,080*	*3,721*	*3,296*	*2,800*	*2,228*	*1,575*	*834*	*0*	*0*	*0*	97,141
b	Additional GA Debt Drawdown, End of Year	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	0	
	Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,633	26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606	82,685	86,406	89,703	92,503	94,731	96,306	97,141				
	Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,831	56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076	-10,007	-22,027	-35,008	-48,980	-63,971	-80,013	-97,141				
Fiscal Exposure - End of Year Debt Drawdown		7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0	

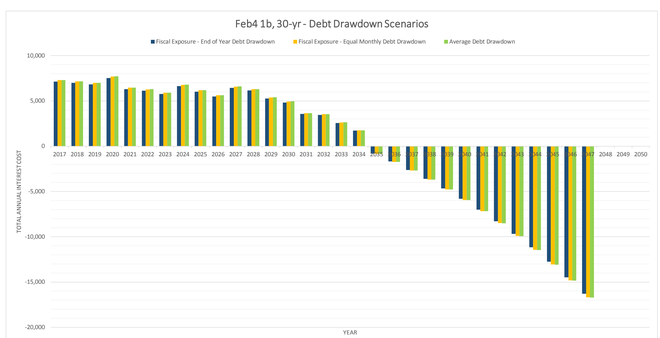
Feb4 1b, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,836	11,837	11,838	11,839	11,840	11,841	11,842	11,843	11,844	11,845	11,846	11,847	11,848	11,849	11,850	11,851	11,852	11,853	11,854	11,855	11,856	11,857	11,858	11,859	11,860	11,861	11,862	11,863	11,864	11,865	11,866	11,867	
	Ratepayer GA Payment	4,962	5,201	5,734	5,381	6,981	7,479	8,172	7,604	8,537	9,379	8,733	9,339	10,550	11,256	12,762	13,057	14,121	15,108	17,732	18,560	19,402	20,259	21,133	22,026	22,941	23,879	24,842	25,832	26,852	27,905	28,991	11,865	11,866	11,867	
	GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
	Debt, Beginning of Year	0	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	
5,042	*Interest Cost - Feb4 1b, 30-yr*	*170*	*532*	*886*	*1,252*	*1,609*	*1,928*	*2,234*	*2,549*	*2,874*	*3,171*	*3,475*	*3,797*	4,091	*4,350*	*4,568*	*4,748*	*4,904*	*5,015*	*5,042*	*4,980*	*4,871*	*4,714*	*4,504*	*4,238*	*3,913*	*3,524*	*3,066*	*2,534*	*1,925*	*1,231*	*446*	*0*	*0*	*0*	97,141
	Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0	

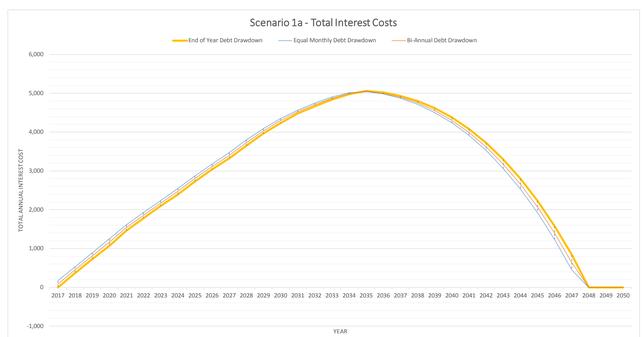
	Monthly Drawdown	594	553	508	538	405	363	306	353	275	205	259	209	108	49	(76)	(101)	(189)	(271)	(490)	(559)	(629)	(700)	(773)	(847)	(924)	(1,002)	(1,082)	(1,164)	(1,249)	(1,337)	(1,427)	(0)	-	-
	FV of Monthly Drawdown at 5%	7,303	6,792	6,247	6,610	4,972	4,463	3,755	4,338	3,383	2,523	3,184	2,565	1,327	605	(937)	(1,237)	(2,326)	(3,335)	(6,020)	(6,867)	(7,728)	(8,604)	(9,498)	(10,412)	(11,347)	(12,306)	(13,291)	(14,304)	(15,348)	(16,424)	(17,536)	(0)	-	-
	Annual Interest Cost on New Drawdowns	170	158	145	154	116	104	87	101	79	59	74	60	31	14	(22)	(29)	(54)	(78)	(140)	(160)	(180)	(200)	(221)	(242)	(264)	(286)	(309)	(333)	(357)	(382)	(408)	(0)	-	-
	Annual Interest Cost on Opening Balance	-	374	741	1,099	1,493	1,824	2,146	2,448	2,796	3,112	3,401	3,738	4,061	4,336	4,589	4,776	4,958	5,092	5,182	5,139	5,051	4,914	4,725	4,481	4,177	3,810	3,375	2,867	2,281	1,612	854	0	(0)	(0)
	Total Annual Interest Cost	170	532	886	1,252	1,609	1,928	2,234	2,549	2,874	3,171	3,475	3,797	4,091	4,350	4,568	4,748	4,904	5,015	5,042	4,980	4,871	4,714	4,504	4,238	3,913	3,524	3,066	2,534	1,925	1,231	446	0	(0)	(0)	

Feb4 1b, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,836	11,837	11,838	11,839	11,840	11,841	11,842	11,843	11,844	11,845	11,846	11,847	11,848	11,849	11,850	11,851	11,852	11,853	11,854	11,855	11,856	11,857	11,858	11,859	11,860	11,861	11,862	11,863	11,864	11,865	11,866	11,867	
	Ratepayer GA Payment	4,962	5,201	5,734	5,381	6,981	7,479	8,172	7,604	8,537	9,379	8,733	9,339	10,550	11,256	12,762	13,057	14,121	15,108	17,732	18,560	19,402	20,259	21,133	22,026	22,941	23,879	24,842	25,832	26,852	27,905	28,991	11,865	11,866	11,867	
	GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
	Debt, Beginning of Year	0	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	
	Interest Cost - Feb4 1b, 30-yr	*91*	*455*	*811*	*1,169*	*1,539*	*1,861*	*2,170*	*2,476*	*2,808*	*3,110*	*3,404*	*3,730*	*4,034*	*4,297*	*4,528*	*4,710*	*4,875*	*4,996*	*5,051*	*4,998*	*4,900*	*4,753*	*4,555*	*4,302*	*3,990*	*3,615*	*3,172*	*2,657*	*2,065*	*1,390*	*626*	*0*	*0*	*0*	97,141
	Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		7,225	7,089	6,913	7,626	6,396	6,220	5,838	6,713	6,113	5,574	6,514	6,235	5,330	4,888	3,614	3,501	2,603	1,738	-829	-1,709	-2,648	-3,651	-4,722	-5,867	-7,093	-8,405	-9,810	-11,314	-12,926	-14,652	-16,502	0	0	0	

	Bi-Annual Drawdown	3,567	3,317	3,051	3,228	2,428	2,180	1,834	2,118	1,652	1,232	1,555	1,253	648	295	(457)	(604)	(1,136)	(1,629)	(2,940)	(3,354)	(3,774)	(4,202)	(4,639)	(5,085)	(5,542)	(6,010)	(6,491)	(6,986)	(7,495)	(8,021)	(8,564)	(0)	-	-
	FV of Bi-Annual Drawdown at 5%	7,225	6,719	6,180	6,539	4,919	4,415	3,715	4,291	3,347	2,496	3,150	2,538	1,313	598	(926)	(1,224)	(2,301)	(3,299)	(5,956)	(6,794)	(7,645)	(8,512)	(9,396)	(10,300)	(11,225)	(12,174)	(13,148)	(14,150)	(15,183)	(16,247)	(17,347)	(0)	-	-
	Annual Interest Cost on New Drawdowns	91	85	78	83	62	56	47	54	42	32	40	32	17	8	(12)	(15)	(29)	(42)	(75)	(86)	(97)	(108)	(119)	(130)	(142)	(154)	(166)	(179)	(192)	(205)	(219)	(0)	-	-
	Annual Interest Cost on Opening Balance	-	370	733	1,087	1,477	1,805	2,123	2,422	2,766	3,079	3,364	3,698	4,017	4,290	4,540	4,725	4,904	5,038	5,127	5,084	4,997	4,861	4,674	4,432	4,132	3,769	3,338	2,836	2,257	1,595	845	0	0	0	
	Total Annual Interest Cost	91	455	811	1,169	1,539	1,861	2,170	2,476	2,808	3,110	3,404	3,730	4,034	4,297	4,528	4,710	4,875	4,996	5,051	4,998	4,900	4,753	4,555	4,302	3,990	3,615	3,172	2,657	2,065	1,390	626	0	0	0	

Feb4 1b, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,836	11,837	11,838	11,839	11,840	11,841	11,842	11,843	11,844	11,845	11,846	11,847	11,848	11,849	11,850	11,851	11,852	11,853	11,854	11,855	11,856	11,857	11,858	11,859	11,860	11,861	11,862	11,863	11,864	11,865	11,866	11,867	
	Ratepayer GA Payment	4,962	5,201	5,734	5,381	6,981	7,479	8,172	7,604	8,537	9,379	8,733	9,339	10,550	11,256	12,762	13,057	14,121	15,108	17,732	18,560	19,402	20,259	21,133	22,026	22,941	23,879	24,842	25,832	26,852	27,905	28,991	11,865	11,866	11,867	
	GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
	Debt, Beginning of Year	0	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	
	Interest Cost - Feb4 1b, 30-yr	*183*	*544*	*898*	*1,266*	*1,620*	*1,939*	*2,244*	*2,561*	*2,885*	*3,181*	*3,486*	*3,809*	*4,101*	*4,359*	*4,574*	*4,754*	*4,908*	*5,018*	*5,041*	*4,977*	*4,867*	*4,707*	*4,496*	*4,228*	*3,900*	*3,509*	*3,048*	*2,514*	*1,902*	*1,205*	*417*	*0*	*0*	*0*	97,141
	Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		7,316	7,179	7,000	7,722	6,477	6,298	5,912	6,798	6,190	5,645	6,597	6,314	5,397	4,950	3,659	3,545	2,636	1,760	-840	-1,731	-2,682	-3,697	-4,782	-5,942	-7,183	-8,511	-9,934	-11,457	-13,089	-14,838	-16,711	0	0	0	





Feb4 1c, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.1%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0	
			88	82	75	90	58	52	41	60	44	29	50	43	20	10	-20	-23	-32	-34	-35	-37	-39	-41	-43	-45	-48	-50	-53	-55	-58	-61	-64	0	0	0	0

Maximum Fiscal Exposure — Maximum Annual Interest Cost: 29,477

End of Year Debt Drawdown	3,761	1,594
Equal Monthly Debt Drawdown	3,851	1,583

Maximum Accumulated Debt — Feb4 1c, 30-yr, Accumulated Debt

End of Year Debt Drawdown	31,125
Equal Monthly Debt Drawdown	31,866

		30%	27%	24%	27%	15%	11%																														
Feb4 1c, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,836	11,837	11,838	11,839	11,840	11,841	11,842	11,843	11,844	11,845	11,846	11,847	11,848	11,849	11,850	11,851	11,852	11,853	11,854	11,855	11,856	11,857	11,858	11,859	11,860	11,861	11,862	11,863	11,864	11,865	11,866	11,867	
	Ratepayer GA Payment	8,418	8,586	9,042	8,602	10,106	10,500	11,077	10,383	11,178	11,870	11,063	11,493	12,514	13,016	14,301	14,359	14,696	14,697	14,698	14,699	14,700	14,701	14,702	14,703	14,704	14,705	14,706	14,706	14,707	14,708	14,709	11,865	11,866	11,867	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
a	Debt, Beginning of Year	0	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	
c = a*5%	*Interest Cost - Feb4 1c, 30-yr - End of Year Debt Drawdown*	*0*	*188*	*364*	*526*	*719*	*844*	*956*	*1,044*	*1,172*	*1,266*	*1,329*	*1,437*	*1,529*	*1,573*	*1,594*	*1,550*	*1,500*	*1,431*	*1,359*	*1,283*	*1,203*	*1,119*	*1,030*	*937*	*839*	*737*	*629*	*515*	*396*	*270*	*139*	*0*	*0*	*0*	*0*	29,477
b	Additional GA Debt Drawdown, End of Year	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	0	
	Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,641	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663	22,866	23,984	25,015	25,952	26,791	27,528	28,157	28,672	29,068	29,338	29,477				
	Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18,247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828	-1,018	-3,864	-6,710	-9,556	-12,402	-15,248	-18,094	-20,940	-23,786	-26,631	-29,477				
Fiscal Exposure - End of Year Debt Drawdown		3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0	

Feb4 1c, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,836	11,837	11,838	11,839	11,840	11,841	11,842	11,843	11,844	11,845	11,846	11,847	11,848	11,849	11,850	11,851	11,852	11,853	11,854	11,855	11,856	11,857	11,858	11,859	11,860	11,861	11,862	11,863	11,864	11,865	11,866	11,867	
	Ratepayer GA Payment	8,418	8,586	9,042	8,602	10,106	10,500	11,077	10,383	11,178	11,870	11,063	11,493	12,514	13,016	14,301	14,359	14,696	14,697	14,698	14,699	14,700	14,701	14,702	14,703	14,704	14,705	14,706	14,706	14,707	14,708	14,709	11,865	11,866	11,867	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	
1,583	*Interest Cost - Feb4 1c, 30-yr*	*88*	*270*	*439*	*615*	*777*	*896*	*997*	*1,103*	*1,216*	*1,295*	*1,379*	*1,480*	1,549	*1,583*	*1,573*	*1,527*	*1,468*	*1,398*	*1,324*	*1,246*	*1,164*	*1,077*	*987*	*892*	*792*	*686*	*576*	*460*	*338*	*209*	*74*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0	
	Monthly Drawdown	306	271	233	270	144	112	64	122	55	(2)	65	29	(56)	(97)	(204)	(209)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	-	-	-	
	FV of Monthly Drawdown at 5%	3,765	3,326	2,861	3,312	1,773	1,371	781	1,493	679	(28)	799	360	(684)	(1,197)	(2,512)	(2,570)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,913)	(2,913)	(2,913)	-	-	-	
	Annual Interest Cost on New Drawdowns	88	77	67	77	41	32	18	35	16	(1)	19	8	(16)	(28)	(58)	(60)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	-	-	-	
	Annual Interest Cost on Opening Balance	-	193	373	538	736	864	979	1,069	1,200	1,296	1,361	1,471	1,565	1,610	1,632	1,586	1,536	1,465	1,391	1,313	1,231	1,145	1,055	959	859	754	644	527	405	277	142	0	0	0	
	Total Annual Interest Cost	88	270	439	615	777	896	997	1,103	1,216	1,295	1,379	1,480	1,549	1,583	1,573	1,527	1,468	1,398	1,324	1,246	1,164	1,077	987	892	792	686	576	460	338	209	74	0	0	0	

Feb4 1c, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,836	11,837	11,838	11,839	11,840	11,841	11,842	11,843	11,844	11,845	11,846	11,847	11,848	11,849	11,850	11,851	11,852	11,853	11,854	11,855	11,856	11,857	11,858	11,859	11,860	11,861	11,862	11,863	11,864	11,865	11,866	11,867	
	Ratepayer GA Payment	8,418	8,586	9,042	8,602	10,106	10,500	11,077	10,383	11,178	11,870	11,063	11,493	12,514	13,016	14,301	14,359	14,696	14,697	14,698	14,699	14,700	14,701	14,702	14,703	14,704	14,705	14,706	14,706	14,707	14,708	14,709	11,865	11,866	11,867	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*47*	*232*	*405*	*574*	*750*	*872*	*978*	*1,076*	*1,195*	*1,282*	*1,356*	*1,460*	*1,540*	*1,578*	*1,583*	*1,537*	*1,483*	*1,413*	*1,340*	*1,263*	*1,182*	*1,097*	*1,007*	*913*	*814*	*710*	*600*	*485*	*365*	*237*	*104*	*0*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,725	3,481	3,199	3,809	2,481	2,211	1,741	2,534	1,859	1,254	2,137	1,812	872	409	-871	-973	-1,363	-1,433	-1,506	-1,584	-1,665	-1,750	-1,839	-1,933	-2,032	-2,136	-2,246	-2,360	-2,481	-2,608	-2,742	0	0	0	
	Bi-Annual Drawdown	1,839	1,624	1,397	1,618	866	670	382	729	332	(14)	390	176	(334)	(584)	(1,227)	(1,255)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,725	3,290	2,830	3,277	1,754	1,356	773	1,477	672	(28)	791	356	(677)	(1,184)	(2,485)	(2,542)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	-	-	-	
	Annual Interest Cost on New Drawdowns	47	42	36	41	22	17	10	19	8	(0)	10	5	(9)	(15)	(31)	(32)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	-	-	-	
	Annual Interest Cost on Opening Balance	-	191	369	533	728	855	968	1,057	1,187	1,282	1,346	1,456	1,548	1,593	1,614	1,569	1,520	1,450	1,376	1,299	1,218	1,133	1,043	949	850	746	637	522	401	274	140	0	0	0	
	Total Annual Interest Cost	47	232	405	574	750	872	978	1,076	1,195	1,282	1,356	1,460	1,540	1,578	1,583	1,537	1,483	1,413	1,340	1,263	1,182	1,097	1,007	913	814	710	600	485	365	237	104	0	0	0	

Feb4 1c, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,836	11,837	11,838	11,839	11,840	11,841	11,842	11,843	11,844	11,845	11,846	11,847	11,848	11,849	11,850	11,851	11,852	11,853	11,854	11,855	11,856	11,857	11,858	11,859	11,860	11,861	11,862	11,863	11,864	11,865	11,866	11,867	
	Ratepayer GA Payment	8,418	8,586	9,042	8,602	10,106	10,500	11,077	10,383	11,178	11,870	11,063	11,493	12,514	13,016	14,301	14,359	14,696	14,697	14,698	14,699	14,700	14,701	14,702	14,703	14,704	14,705	14,706	14,706	14,707	14,708	14,709	11,865	11,866	11,867	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*94*	*276*	*445*	*622*	*781*	*900*	*1,000*	*1,108*	*1,219*	*1,298*	*1,383*	*1,483*	*1,551*	*1,583*	*1,572*	*1,525*	*1,466*	*1,395*	*1,321*	*1,243*	*1,161*	*1,074*	*984*	*888*	*788*	*683*	*572*	*456*	*333*	*205*	*69*	*0*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,772	3,525	3,239	3,857	2,513	2,239	1,763	2,566	1,882	1,270	2,164	1,835	883	414	-882	-985	-1,381	-1,451	-1,526	-1,604	-1,686	-1,772	-1,863	-1,958	-2,058	-2,163	-2,274	-2,390	-2,513	-2,641	-2,776	0	0	0	

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

TO BE

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,556	3,123	1,728	1,400	836	1,560	821	167

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

E UPDATED

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

JK: Fixed the formula in the yellow highlighted cells. Pls. check. (SK: looks good to me)

	Tab
v16	Powerpoint_Export

Change Description

Added in trigger for later start in the year

Equal Monthly Debt Drawdown

		Month	Months Remai
Scenario Start Date	**July**	7	6

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	3,180	2,888
Annual Exposure2 with start on July 1st	*1,590*	*2,888*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	795	3,107
Start: July 1st	-	*2,312*

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	851	3,335
Start: July 1st	-	*2,484*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	1,168	1,765
Annual Exposure2 with start on July 1st	*584*	*1,765*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	292	1,609
Start: July 1st	-	*1,025*

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,449	2,040
Annual Exposure2 with start on July 1st	*725*	*2,040*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,597
Start: July 1st	-	*1,959*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335
Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3575**
Total, B	362	1837
Proposed Program Total:	362 - 851	1,837 - 3,575

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,556	3,123	1,728	1,400
2,556	*3,123*	*1,728*	*1,400*

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646
2,805	*2,697*	*2,774*	*1,646*

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

ıking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
2,311	3,750	2,311	1,933
2,311	*3,750*	*2,311*	*1,933*

2018-19	2019-20	2020-21	2021-2022

1,901	2,671	3,391	2,217
1,901	*2,671*	*3,391*	*2,217*

2019	2020	2021	2022
2,581	4,016	2,598	2,241
2,581	*4,016*	*2,598*	*2,241*

2018-19	2019-20	2020-21	2021-2022
2,175	2,940	3,662	2,508
2,175	*2,940*	*3,662*	*2,508*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

/1

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052
2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

Equal Monthly Debt Drawdown

		Month	Months Remaining
Scenario Start Date	July	7	6

AS LONG AS >

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	3,180	2,888	2,556

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	795	3,107	2,805
Fiscal Exposure, 25%	199	777	701

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Annual Exposure[2]	3,404	3,128	2,812

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	851	3,335	3,049
Fiscal Exposure, 25%	213	834	762

Indicates year in which, similar to OPCD's exa
closest to 30%. As Fiscal 2016/17 is a partial y
month the GA deferral begins.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu
decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions	9%	14%	18%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	1,168	1,765	2,311

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	292	1,609	1,901
Fiscal Exposure, 25%	73	402	475

Scenario 1b - 30-yr amortization	2017	2018	2019
Annual Exposure[2]	1,449	2,040	2,581

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	362	1,597	2,175
Fiscal Exposure, 25%	91	399	544

Indicates year in which, similar to OPCD's exar closest to 30%.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 ar
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu on accounting treatment.

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]
Debt-Finance Global Adjustment Costs, Option 1a	213	834	762
Debt-Finance Global Adjustment Costs, Option 1b	91	399	544
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**213**	**1074**	**1065**
Total, B	91	639	847

Proposed Program Total:	91 - 213	639 - 1,074	847 - 1,065

($M)	2016-171	2017-181	2018-191
Debt-Finance Global Adjustment Costs, Option 1a	851	3335	3049
Debt-Finance Global Adjustment Costs, Option 1b	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**851**	**3575**	**3352**
Total, B	362	1837	2478

Proposed Program Total:	362 - 851	1,837 - 3,575	2,478 - 3,352

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6

7	July	7	
8	August	8	
9	September	9	
10	October	10	
11	November	11	
12	December	12	

30-year term	**2016-17**	**2017-18**	**2018-19**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335	2,175 - 3,049

ROWS HIDDEN

1	1 = Comparision Enabled

APRIL 1, 2017 25%

2020	2021	2022
3,123	1,728	1,400

2019-20	2020-21	2021-2022
2,697	2,774	1,646
674	693	412

2020	2021	2022
3,396	2,020	1,712

2019-20	2020-21	2021-2022
2,958	3,052	1,943
740	763	486

mple, the true cost of GA being deferred is
ear, exposure may be less subject to which

l $17-21 billion (at 3.5% interest rate), peaking in 2028.
$33-$36 million.

ıals per month based on month of the year. Actuals may also depend on

28%	17%	13%
2020	2021	2022
3,750	2,311	1,933

2019-20	2020-21	2021-2022
2,671	3,391	2,217
668	848	554

2020	2021	2022
4,016	2,598	2,241

2019-20	2020-21	2021-2022
2,940	3,662	2,508
735	915	627

mple, the true cost of GA being deferred is

ıd $17-21 billion (at 3.5% interest rate), peaking in 2028.
$118-$134 million.

ıals per month based on month of the year. Actuals may also depend on decision

2019-20[1]	2020-21[1]
740	763
735	915
279	323
60	60
18	18
1097	**1164**
1092	1316

1,092 - 1,097 1,316 - 1,164

2019-201	2020-211
2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453





2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964
Equal Monthly Debt Drawdown	3,180	952

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

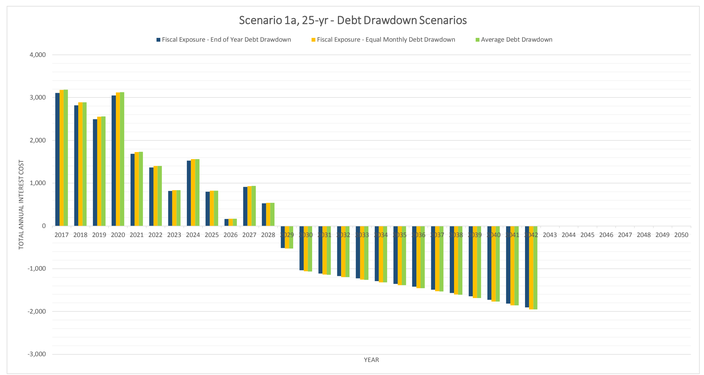
		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

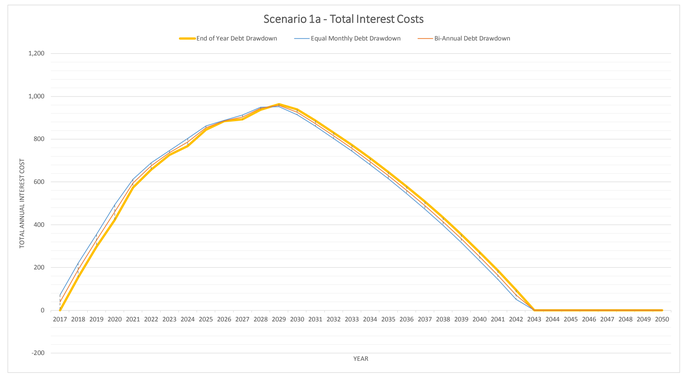
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	3,665	968	
Equal Monthly Debt Drawdown	3,750	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

		9%	14%	18%	28%	17%	13%																													
Scenario 1b, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

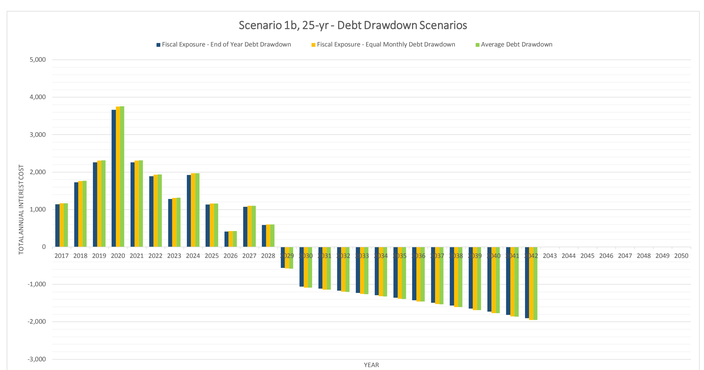
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	*954*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

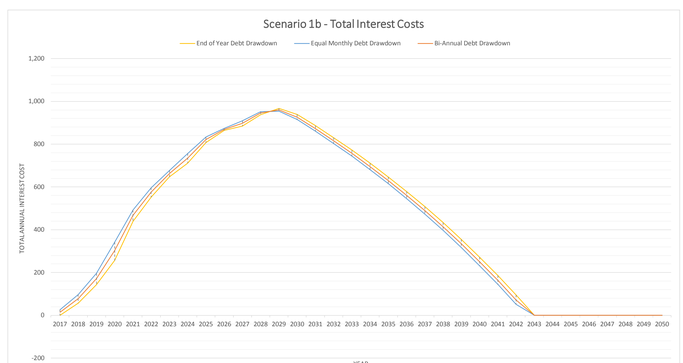
	Monthly Drawdown	95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

		28%	24%	21%	24%	12%	9%																													
Scenario 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1a, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	*1,156*	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

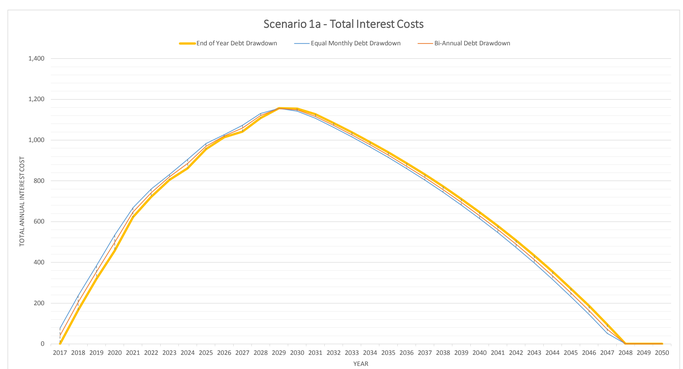
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

		12%	16%	20%	30%	19%	15%																													
Scenario 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

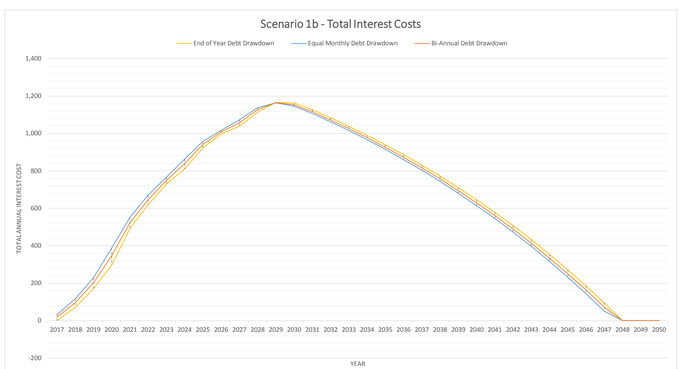
	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

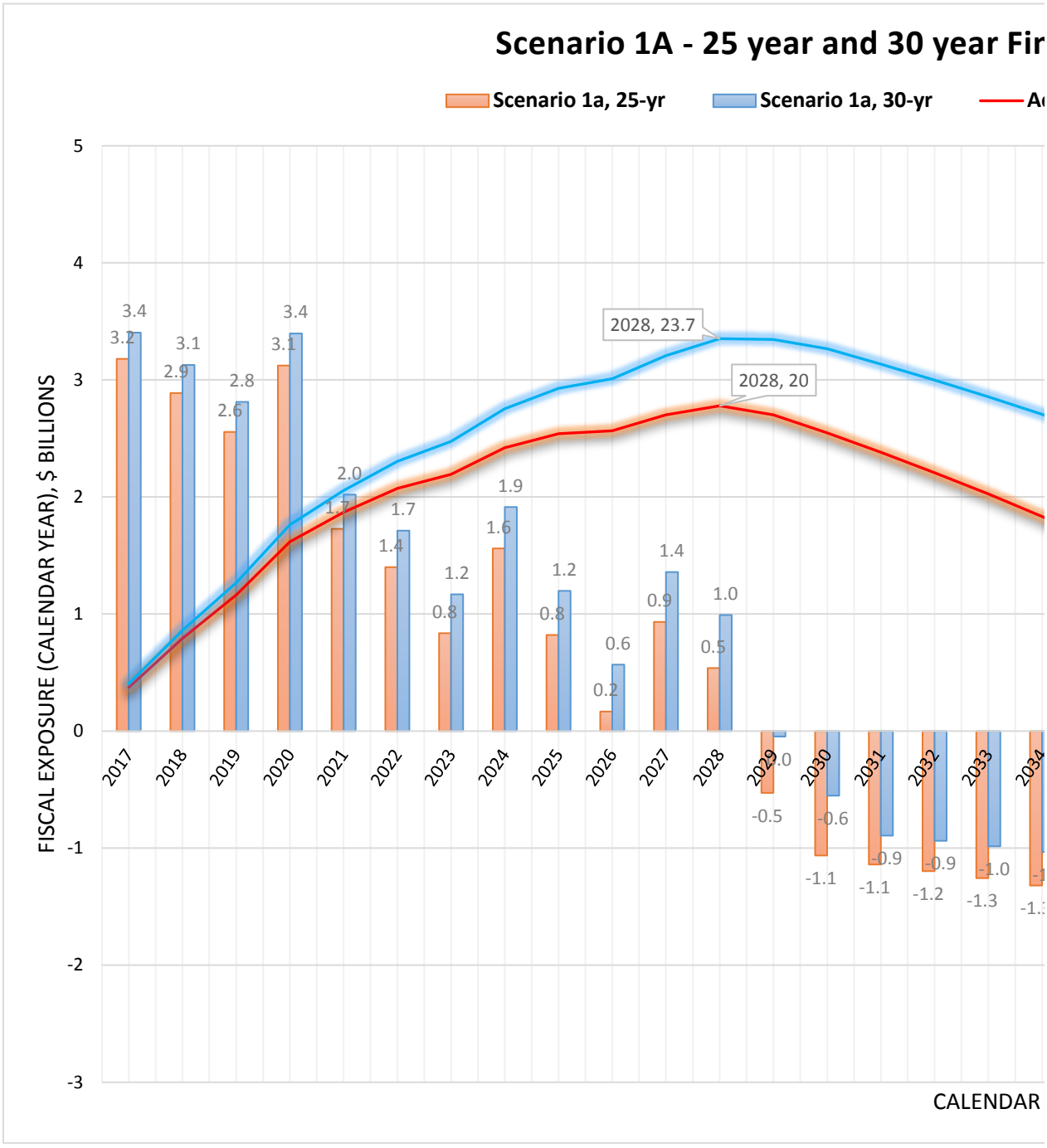
	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

Scenario 1b, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

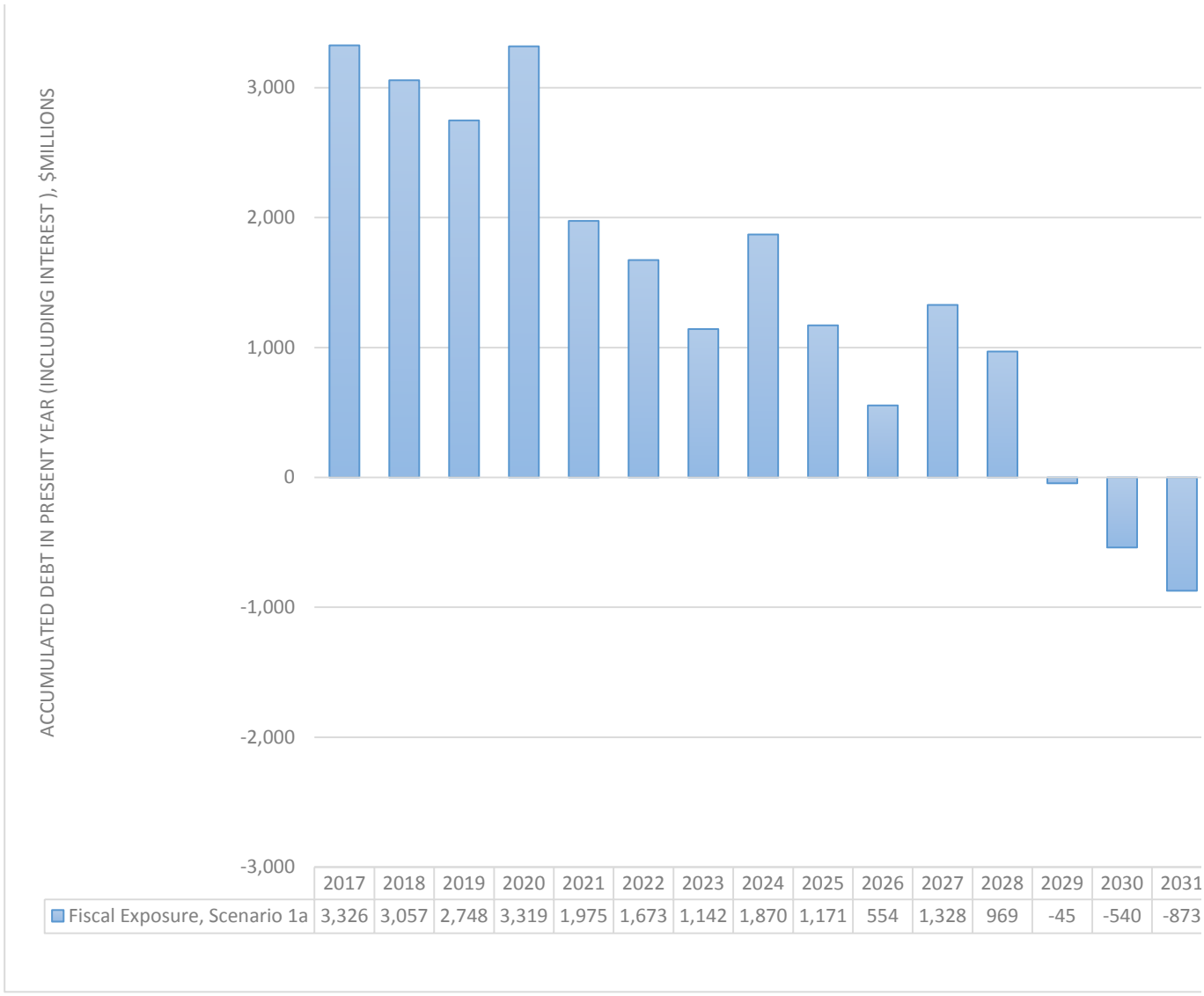




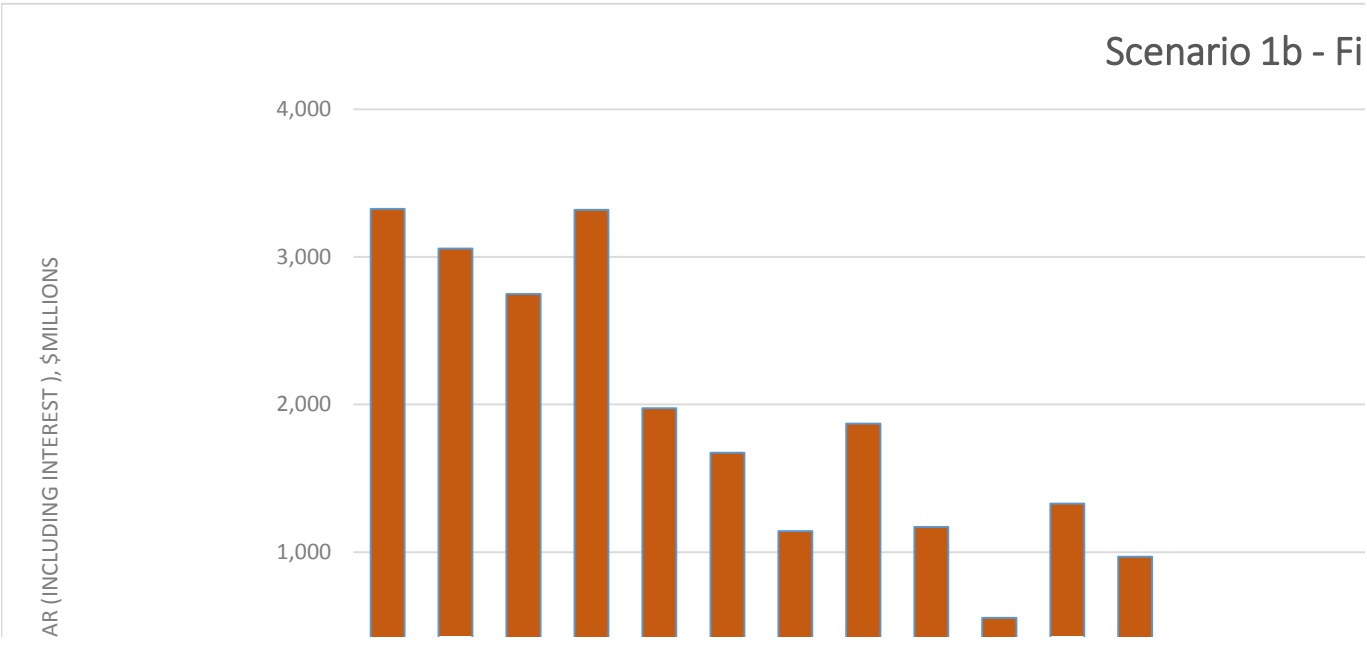
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

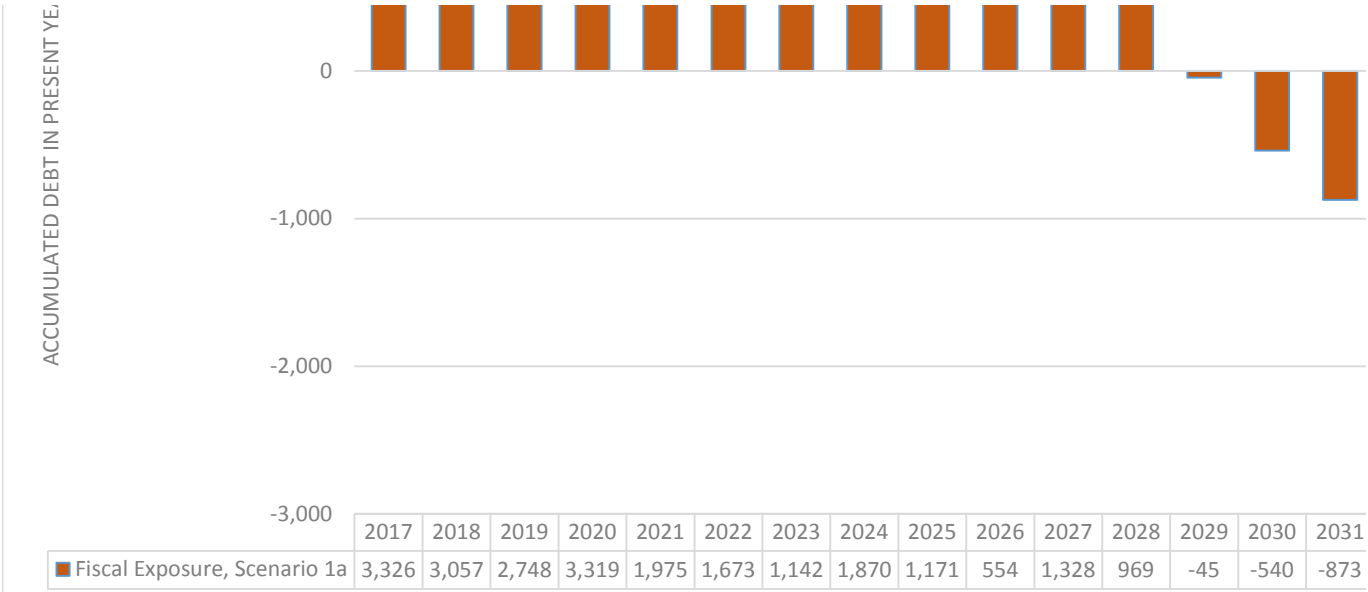




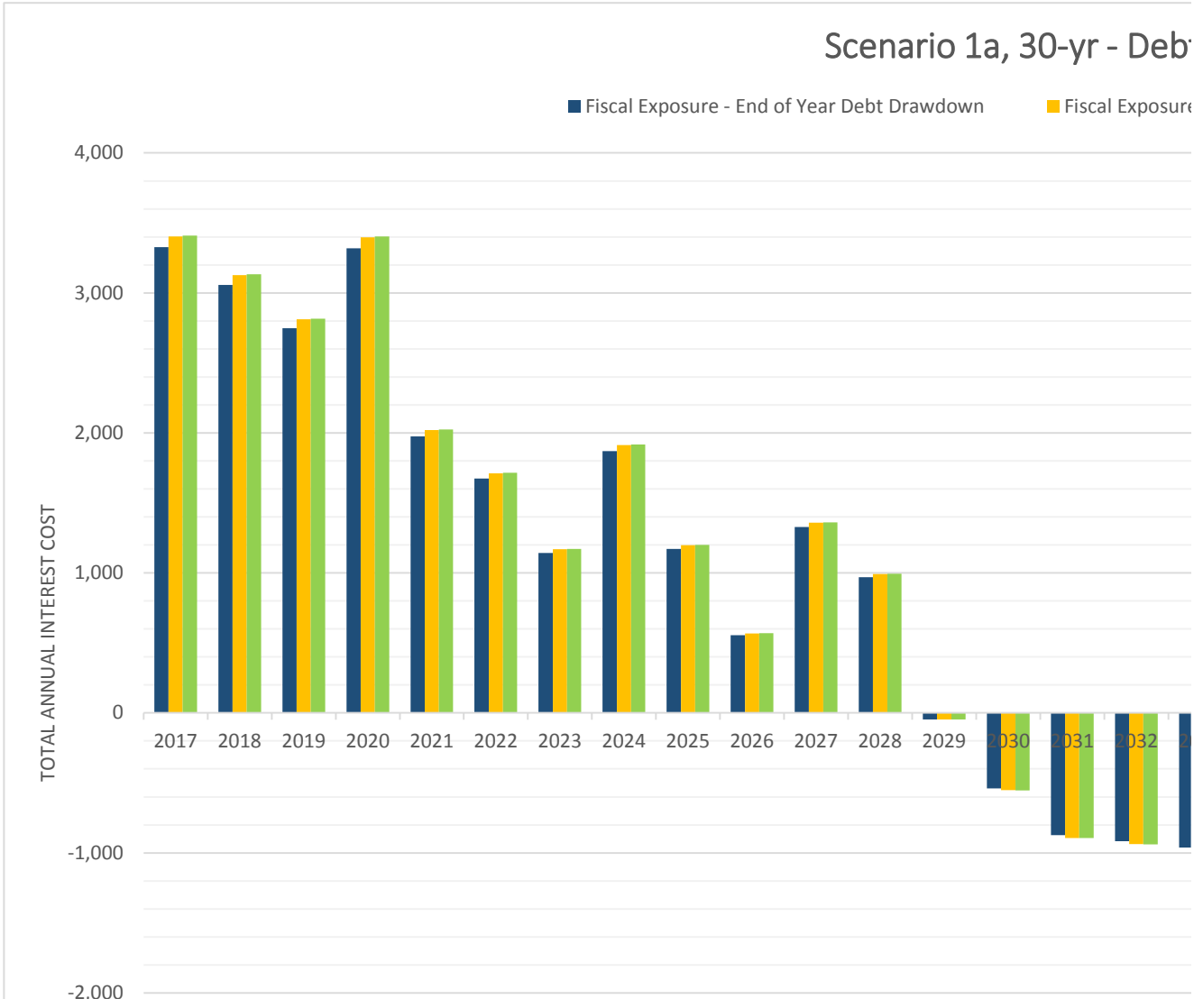


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



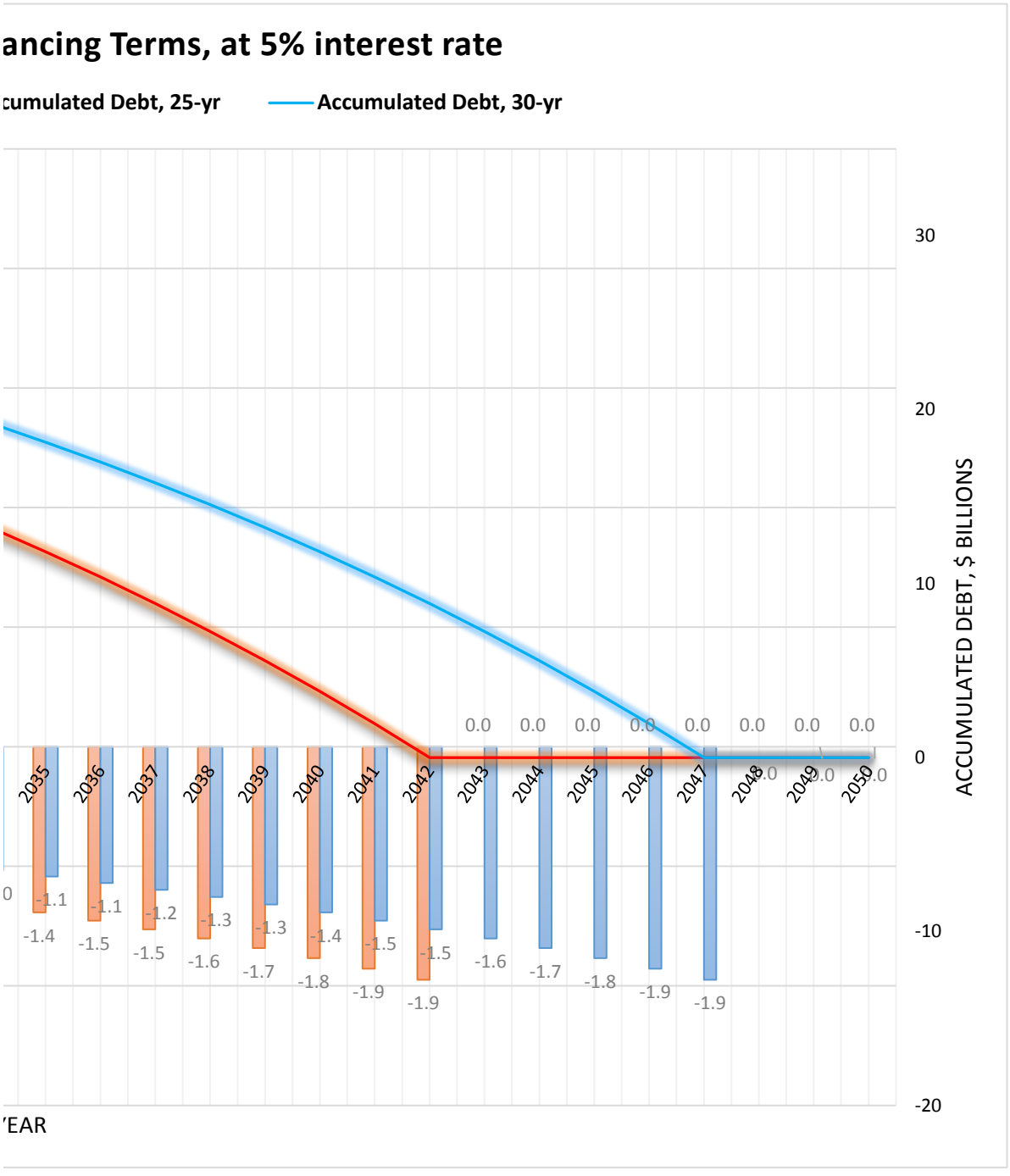


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



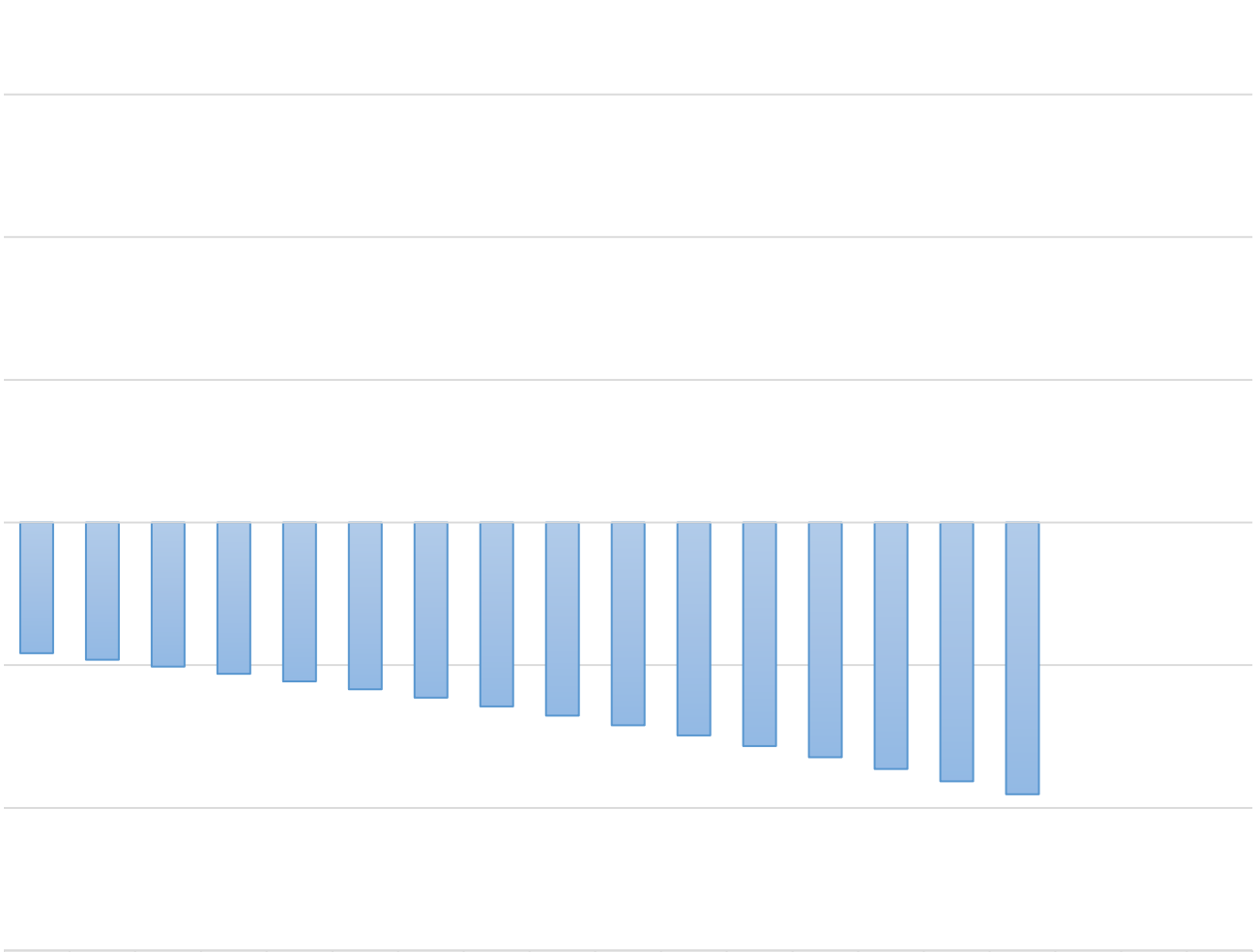

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

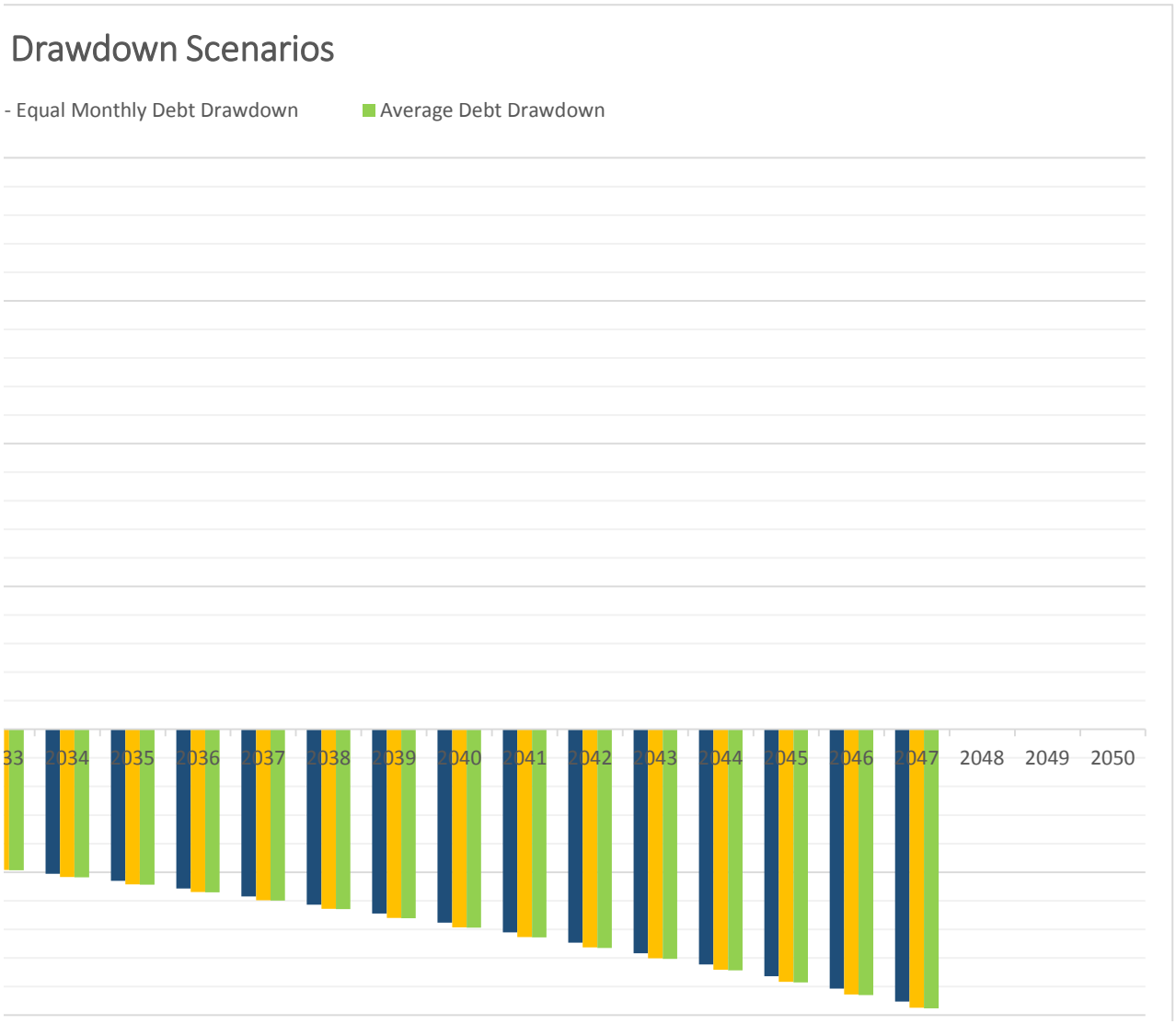
YEAR

cal Exposure



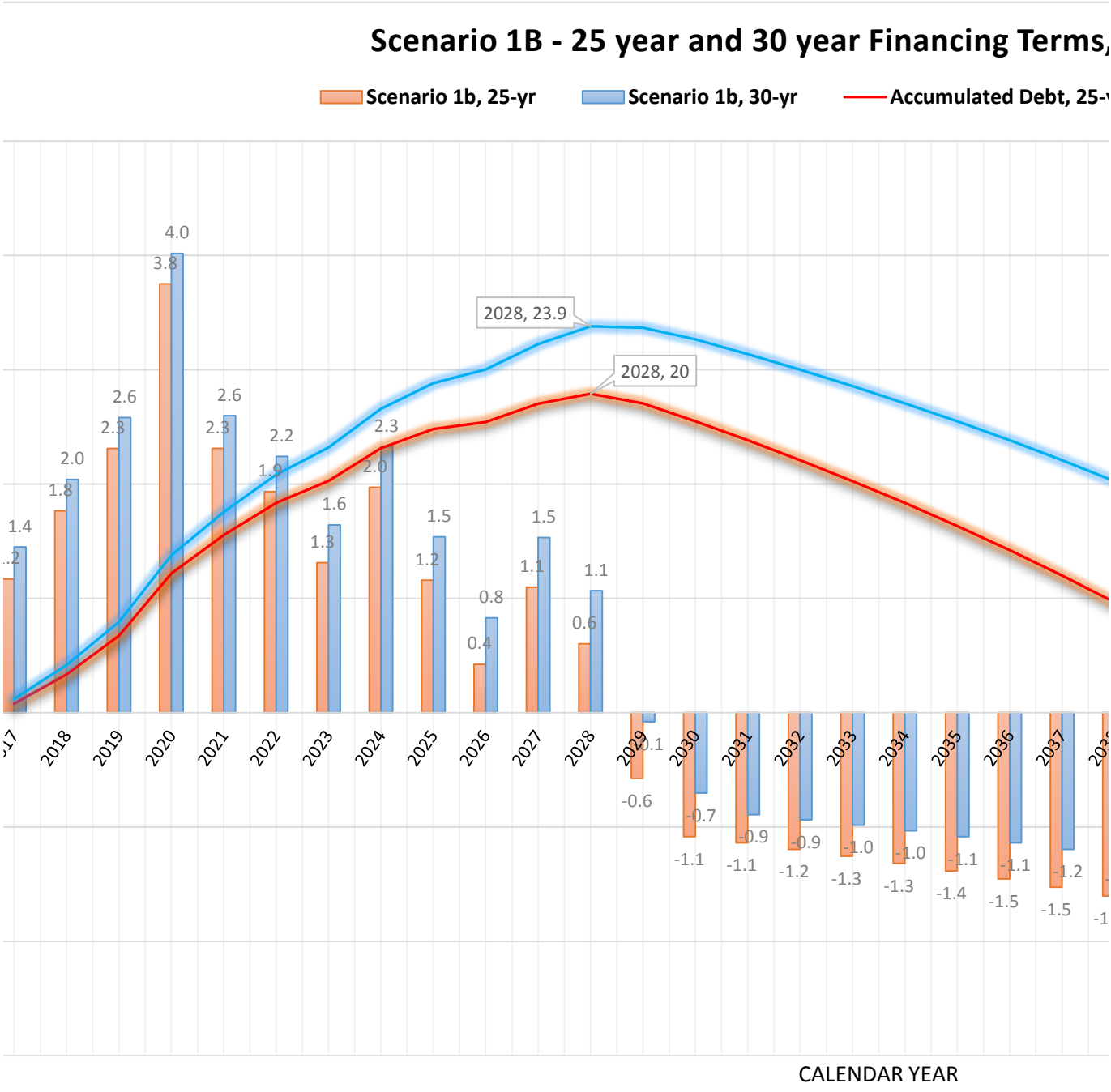
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

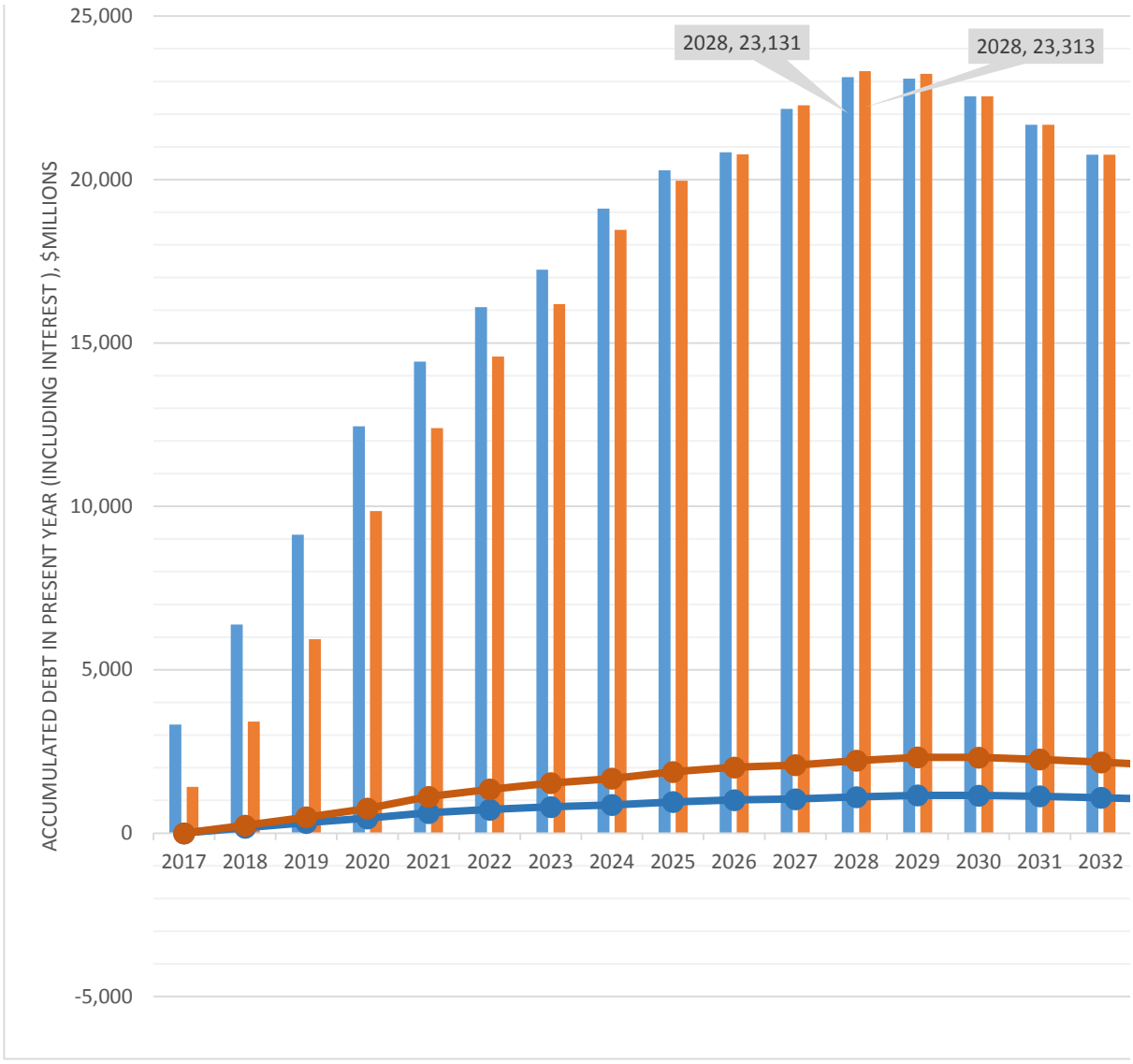


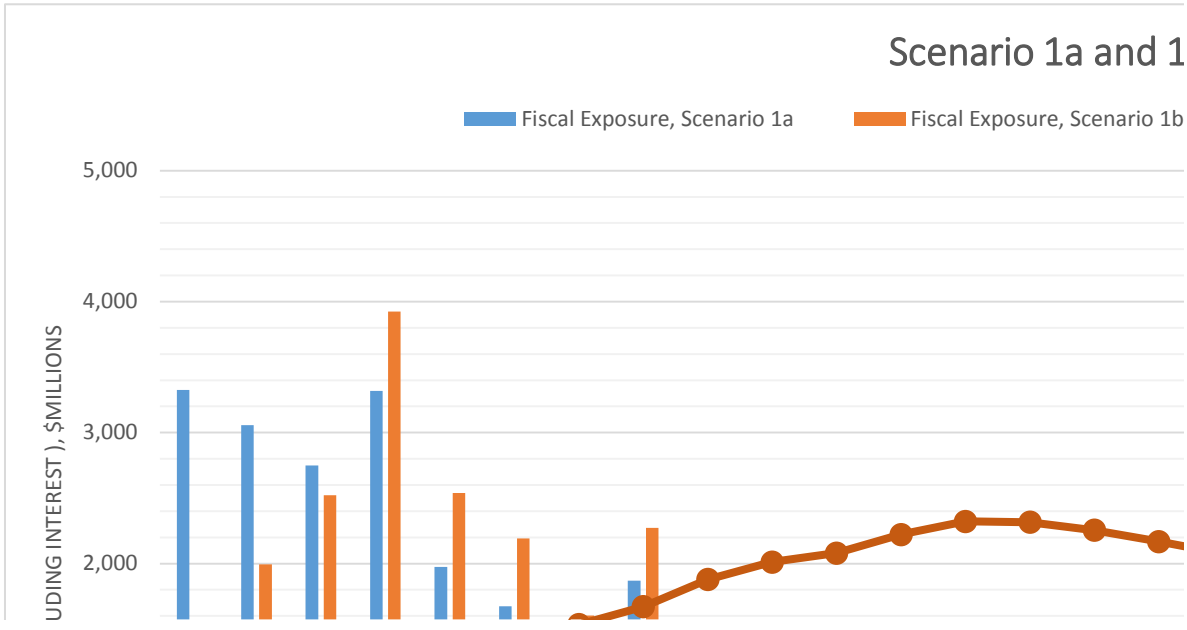
YEAR

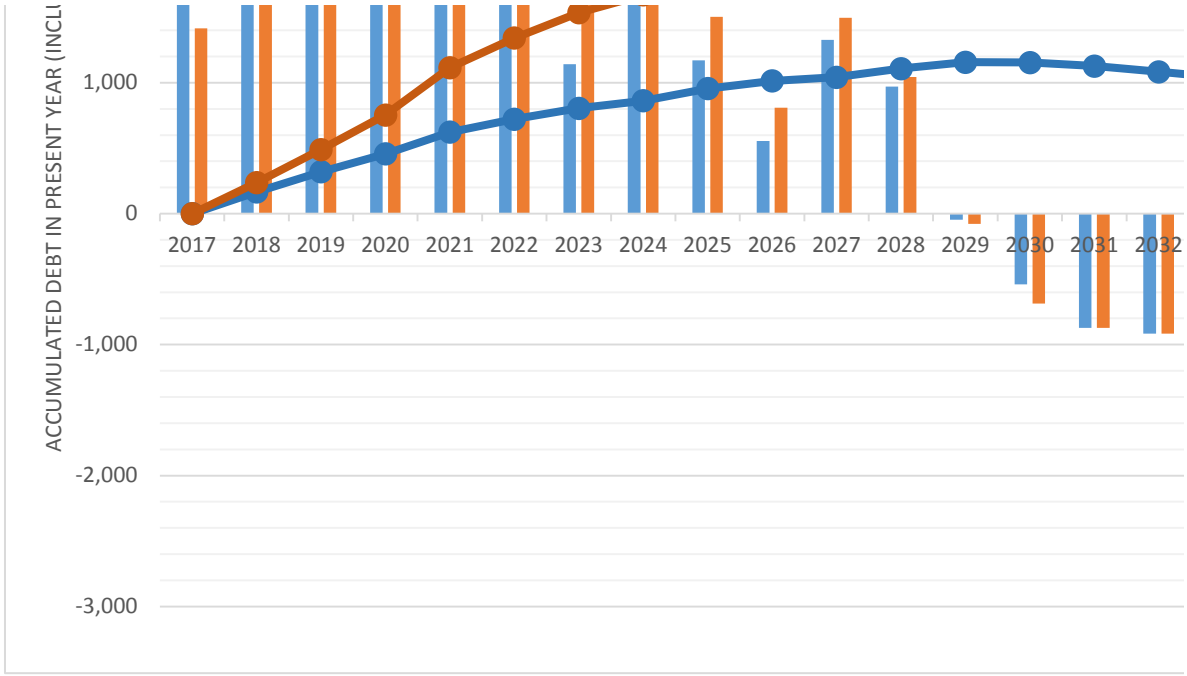
3 - 25 year and 30 year Financing Terms, at 5% interest rate

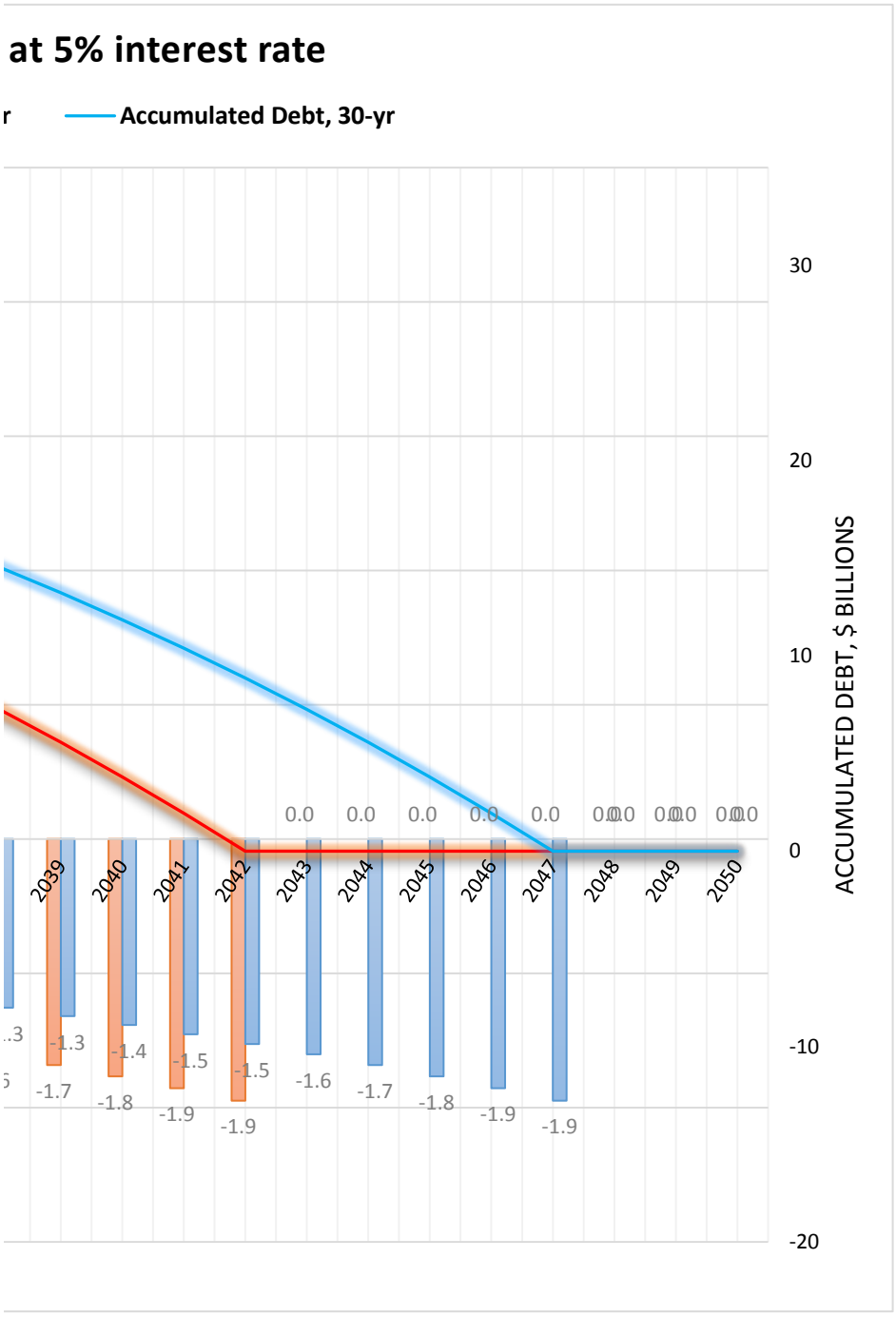





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

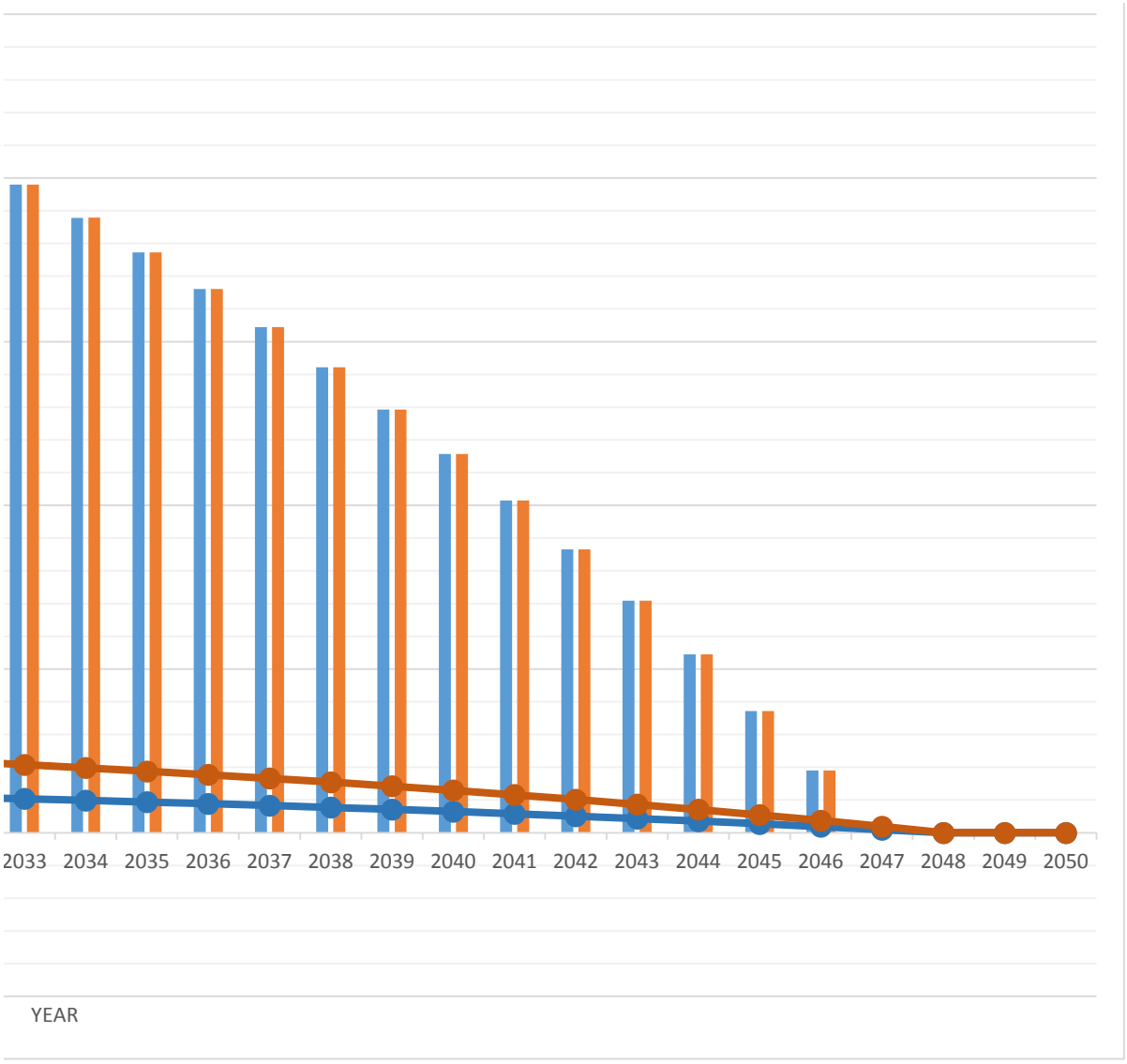

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

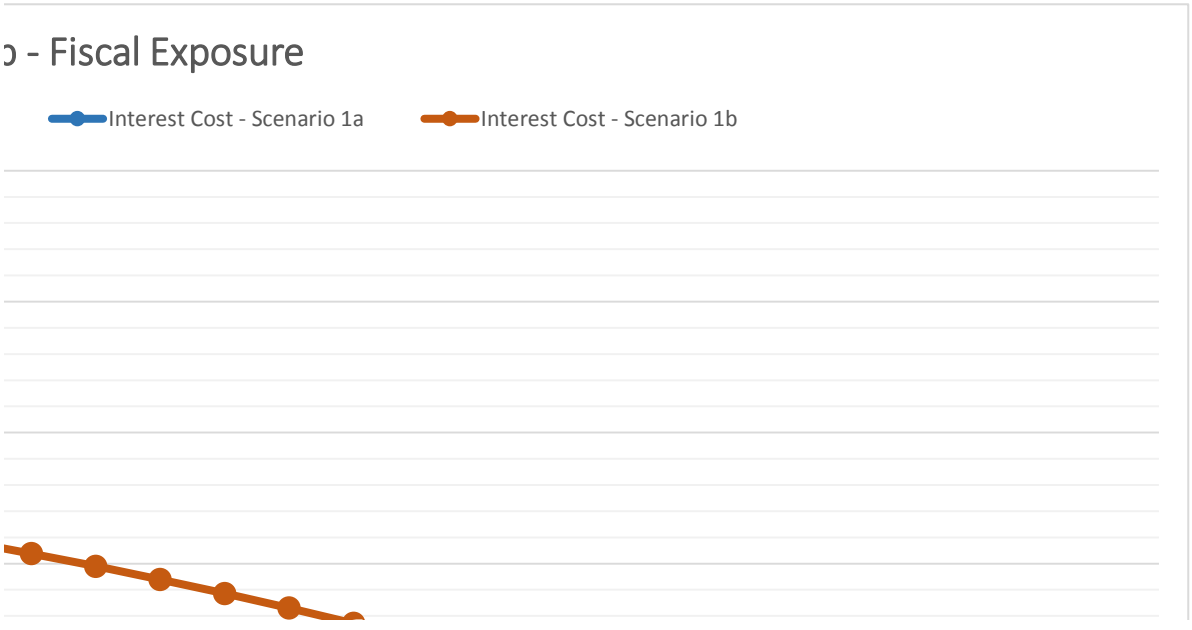

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

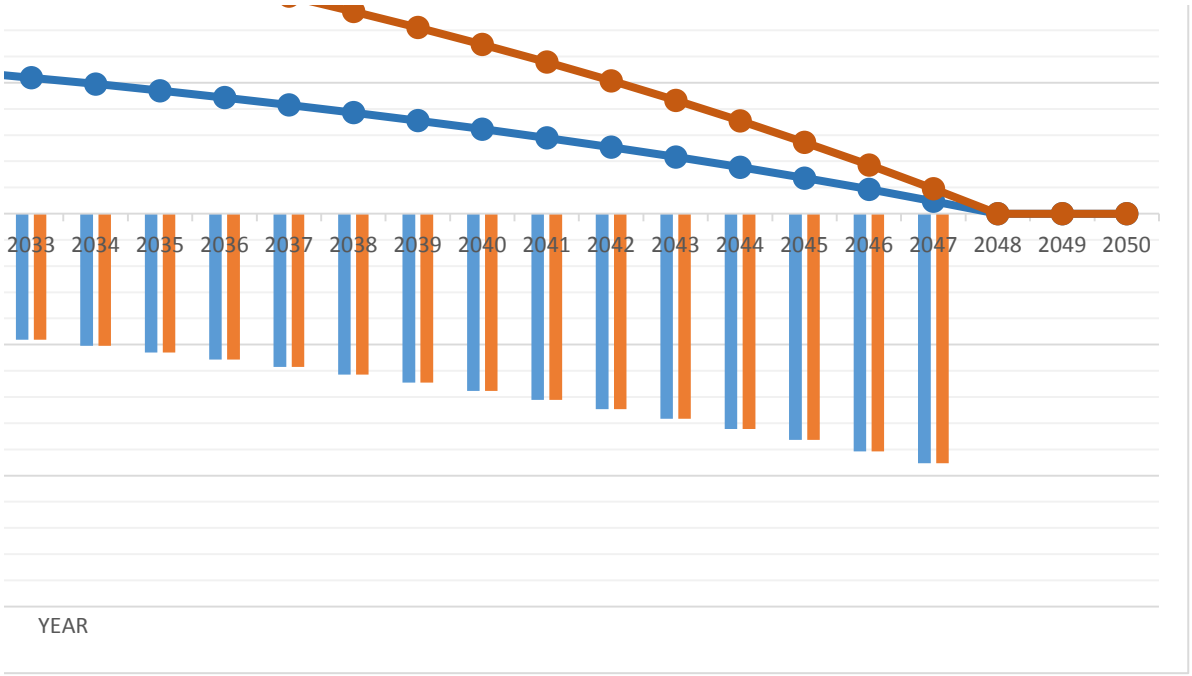


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

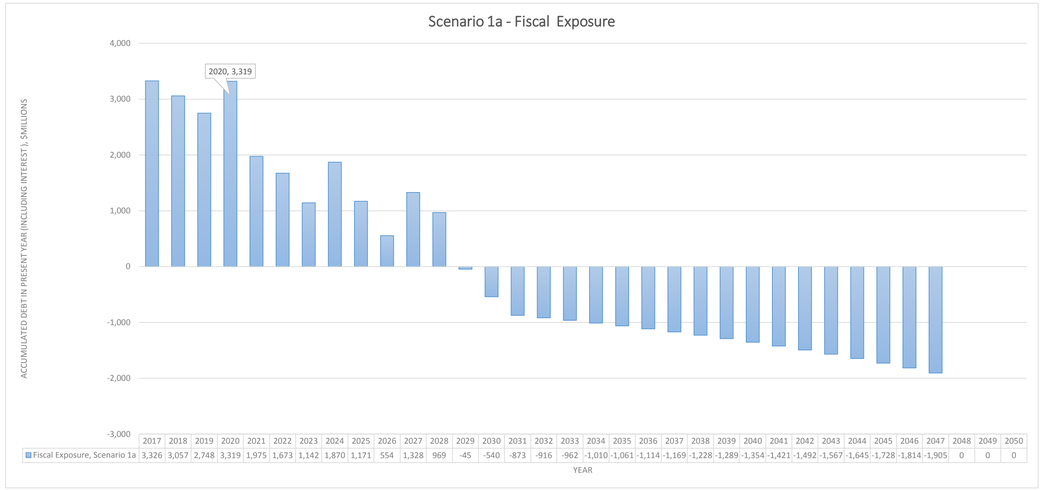
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

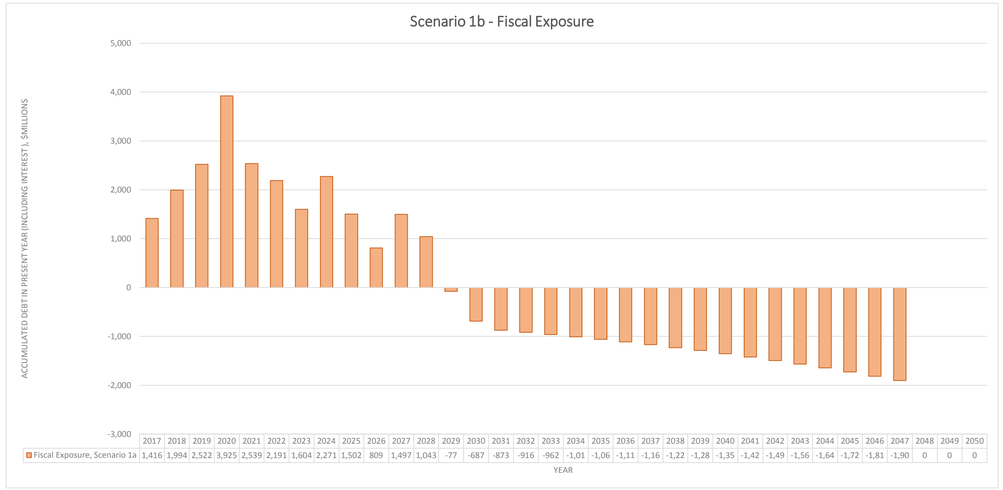
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

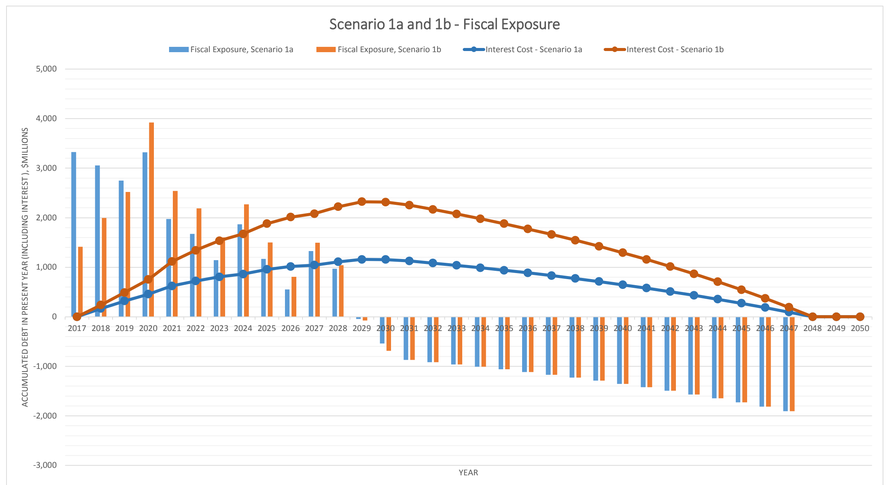
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

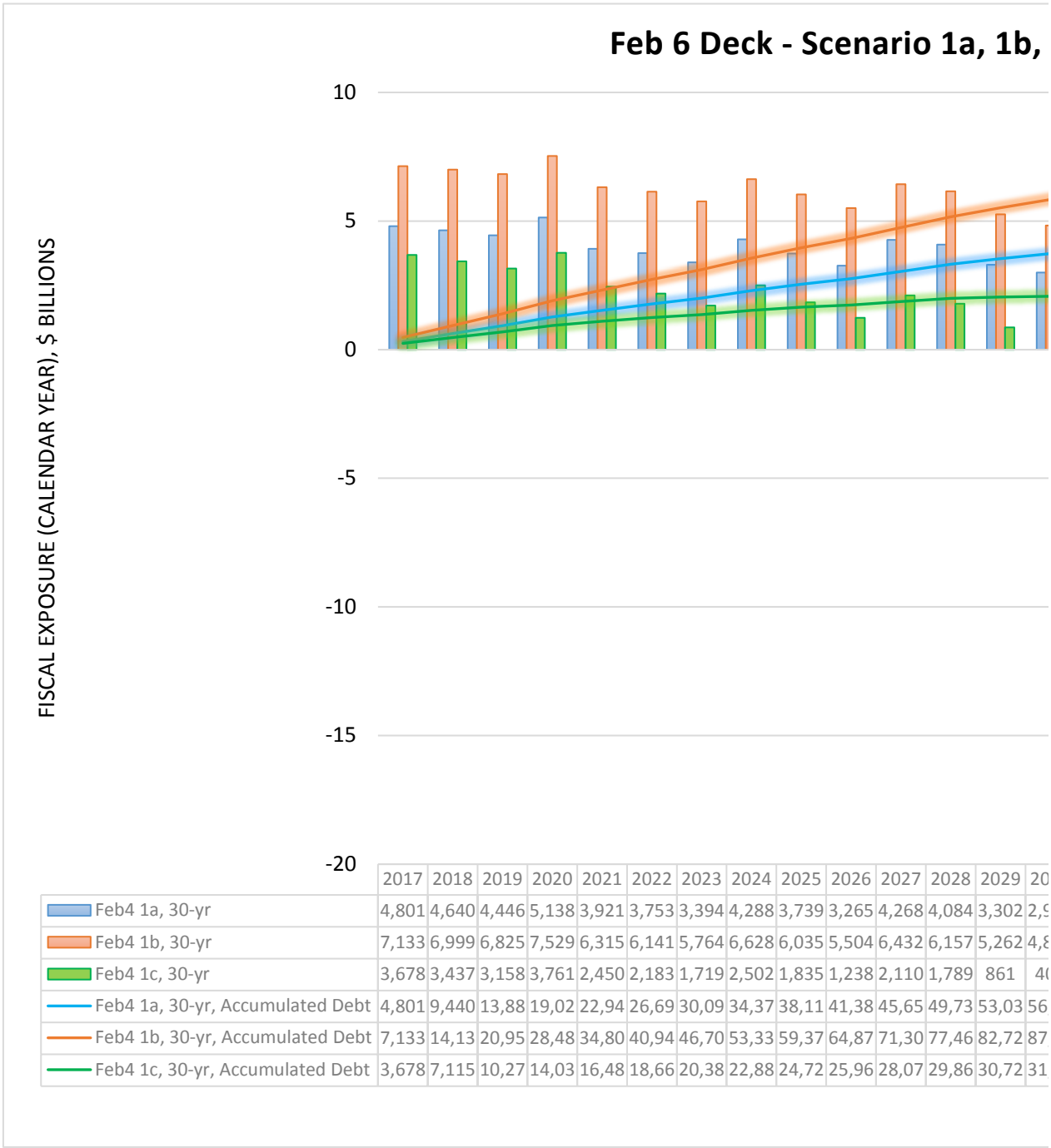
Notes:	Accounting treatment is to be determined.


Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0

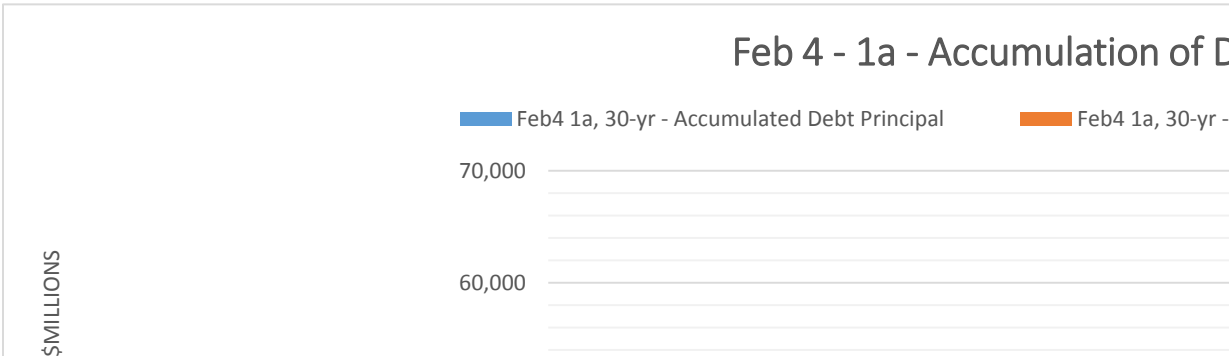

Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0

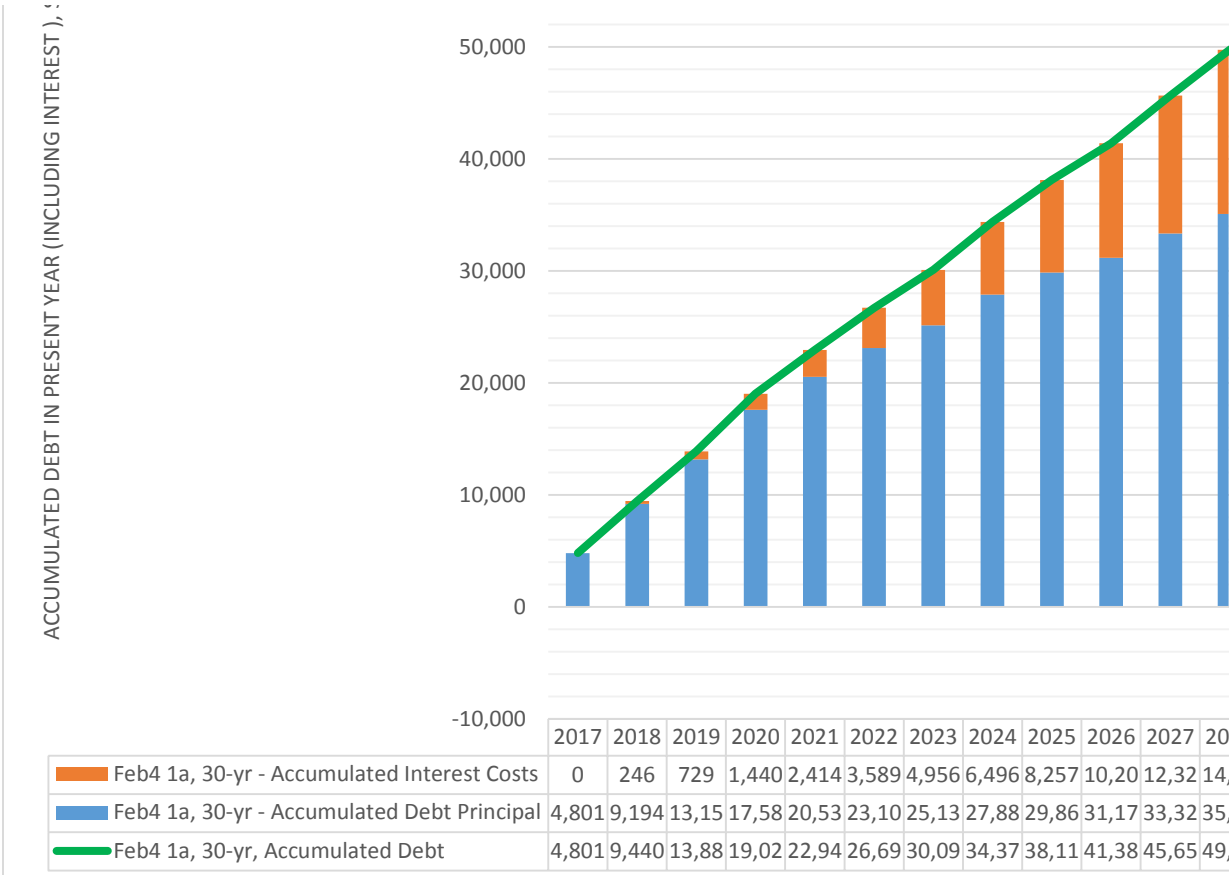

Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

Feb 6 Deck - Scenario 1a, 1b, 1c - at 5.12% interest rate

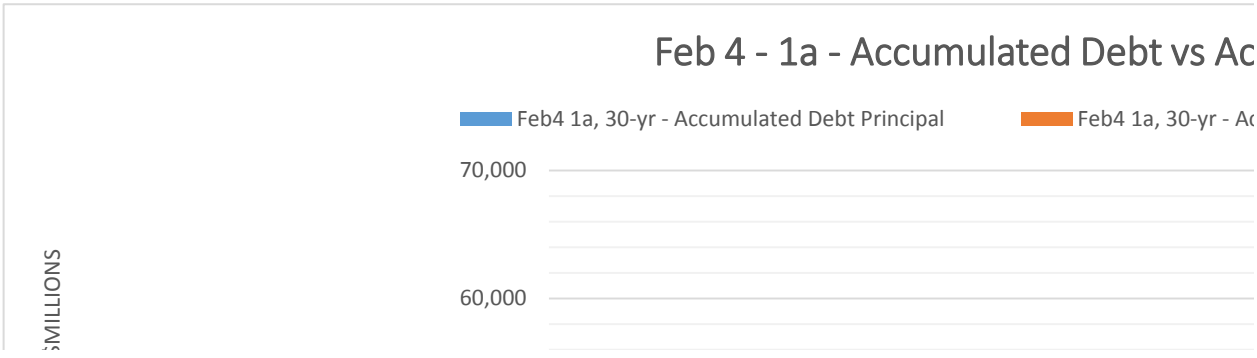


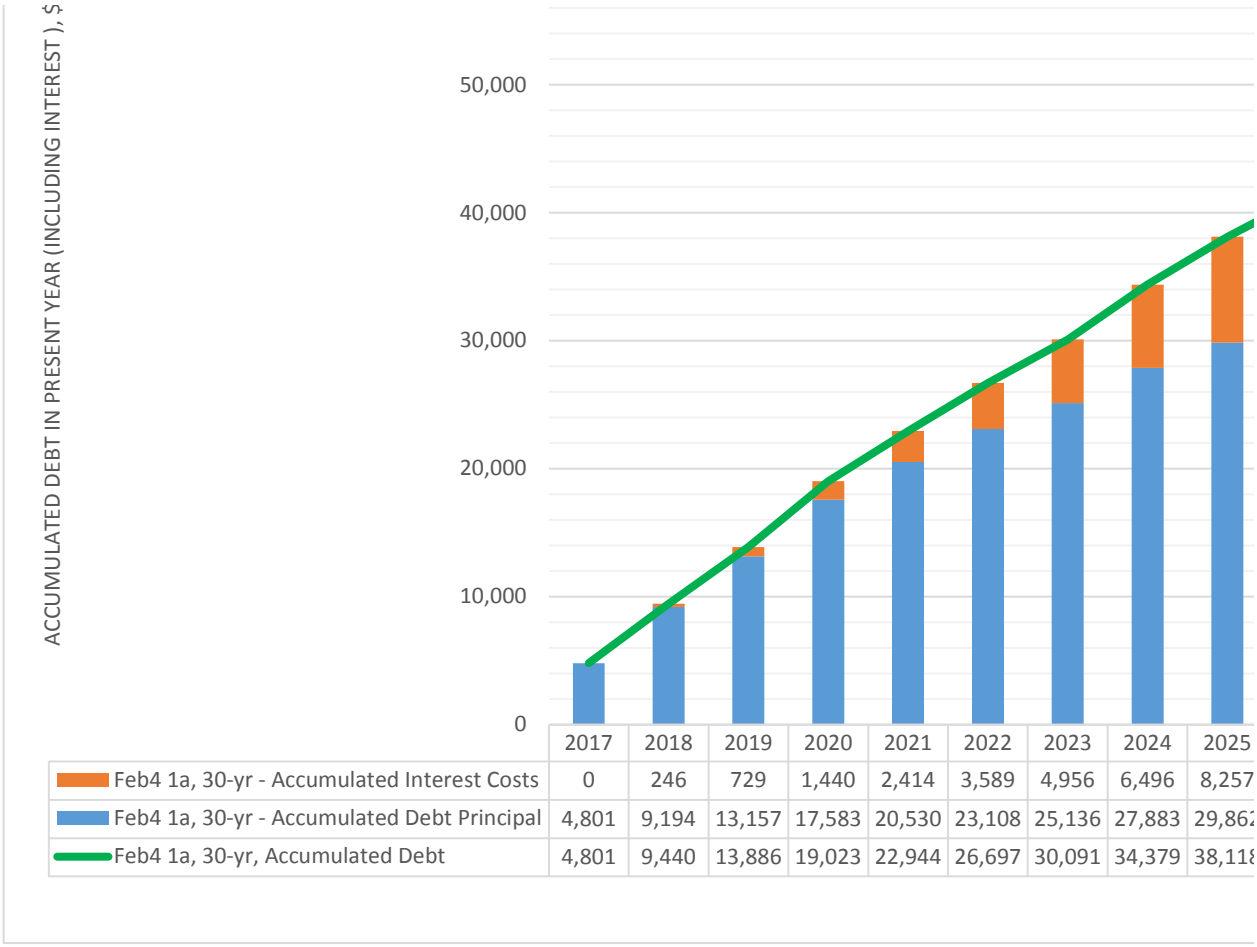
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	20
Feb4 1a, 30-yr	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,9
Feb4 1b, 30-yr	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,8
Feb4 1c, 30-yr	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	4(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73	53,03	56
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31



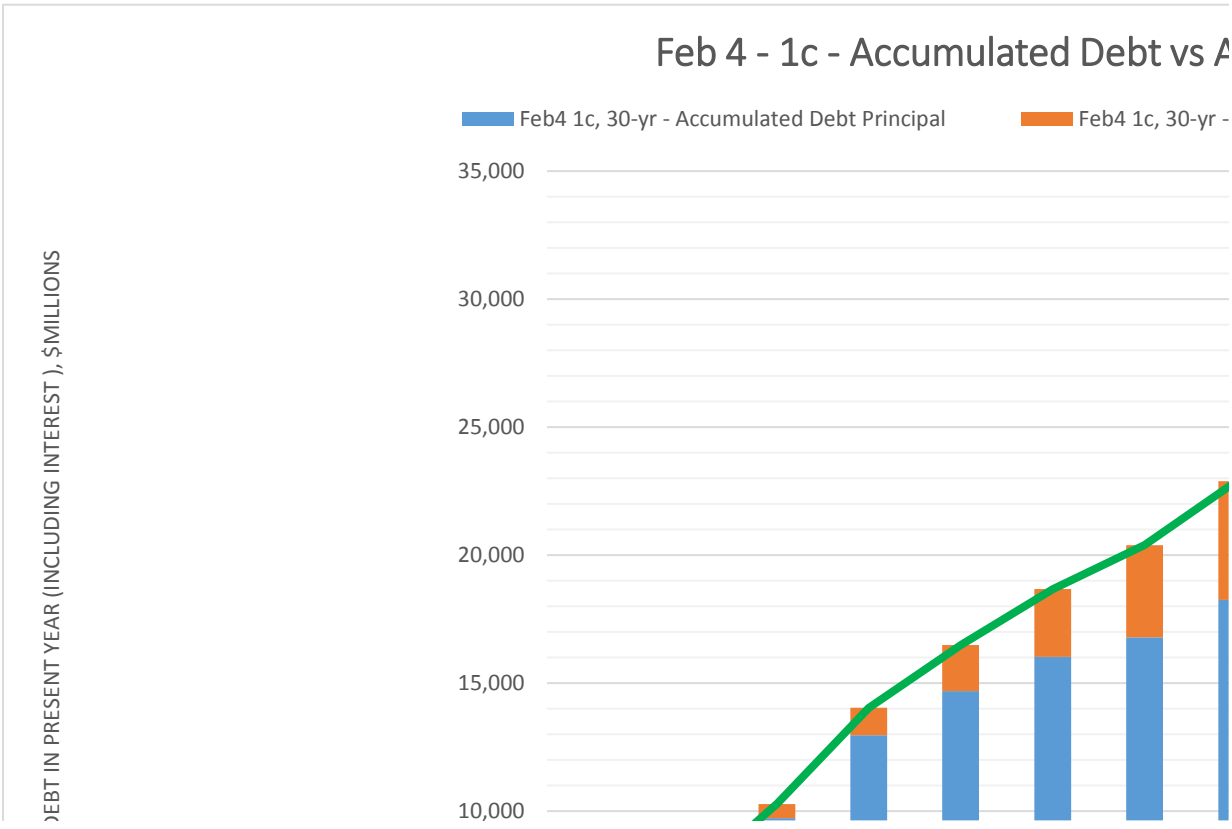


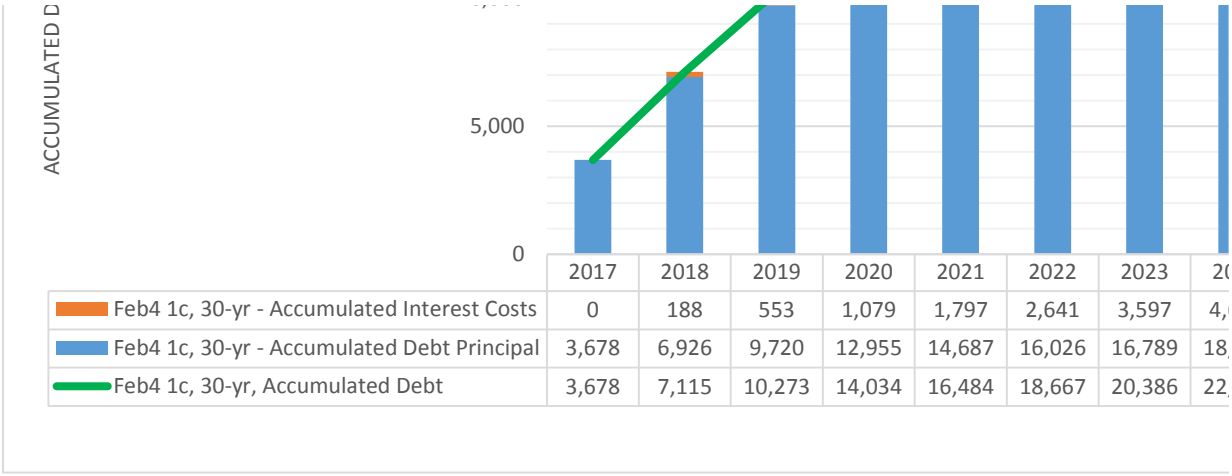
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	20
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,



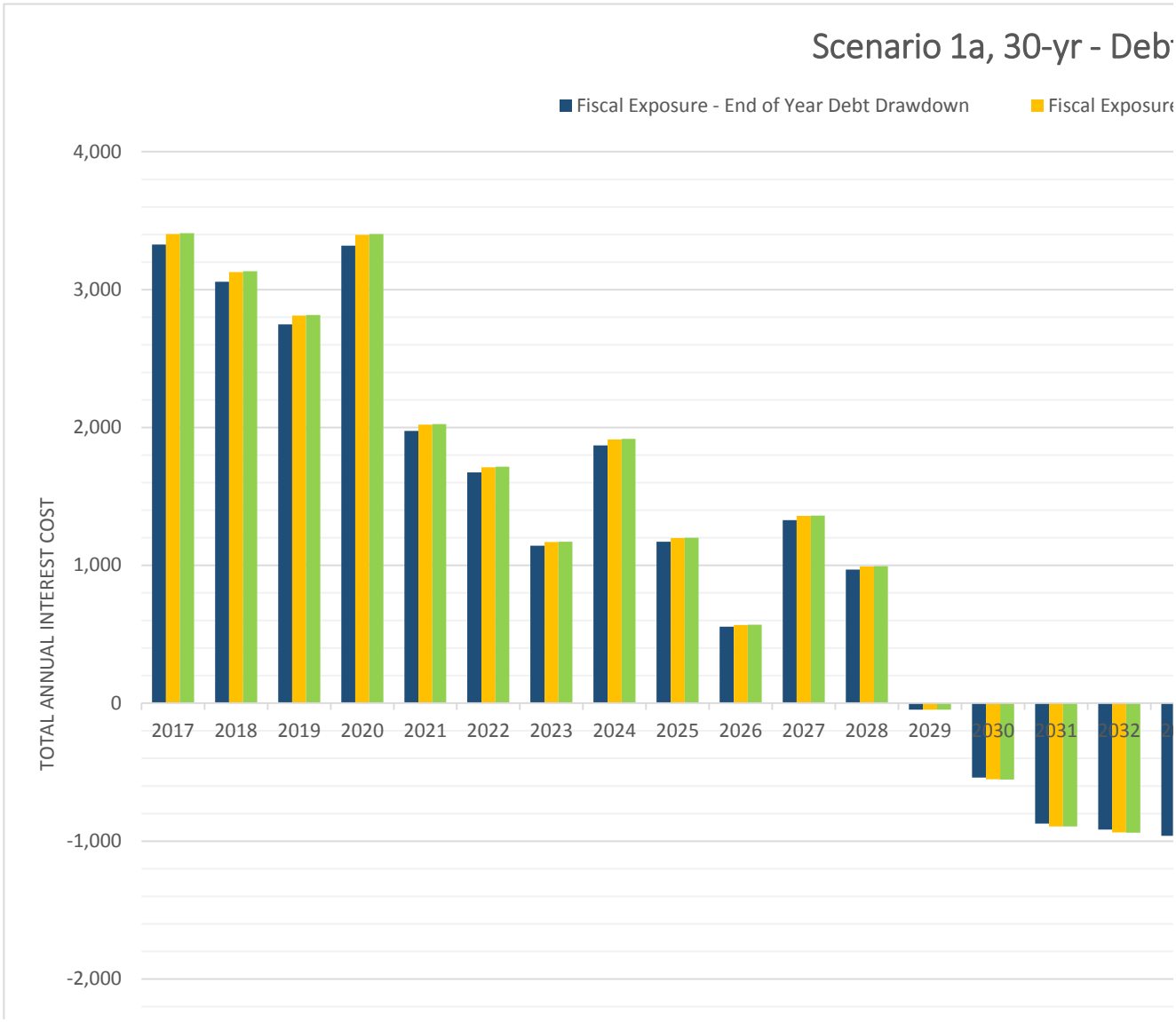


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118





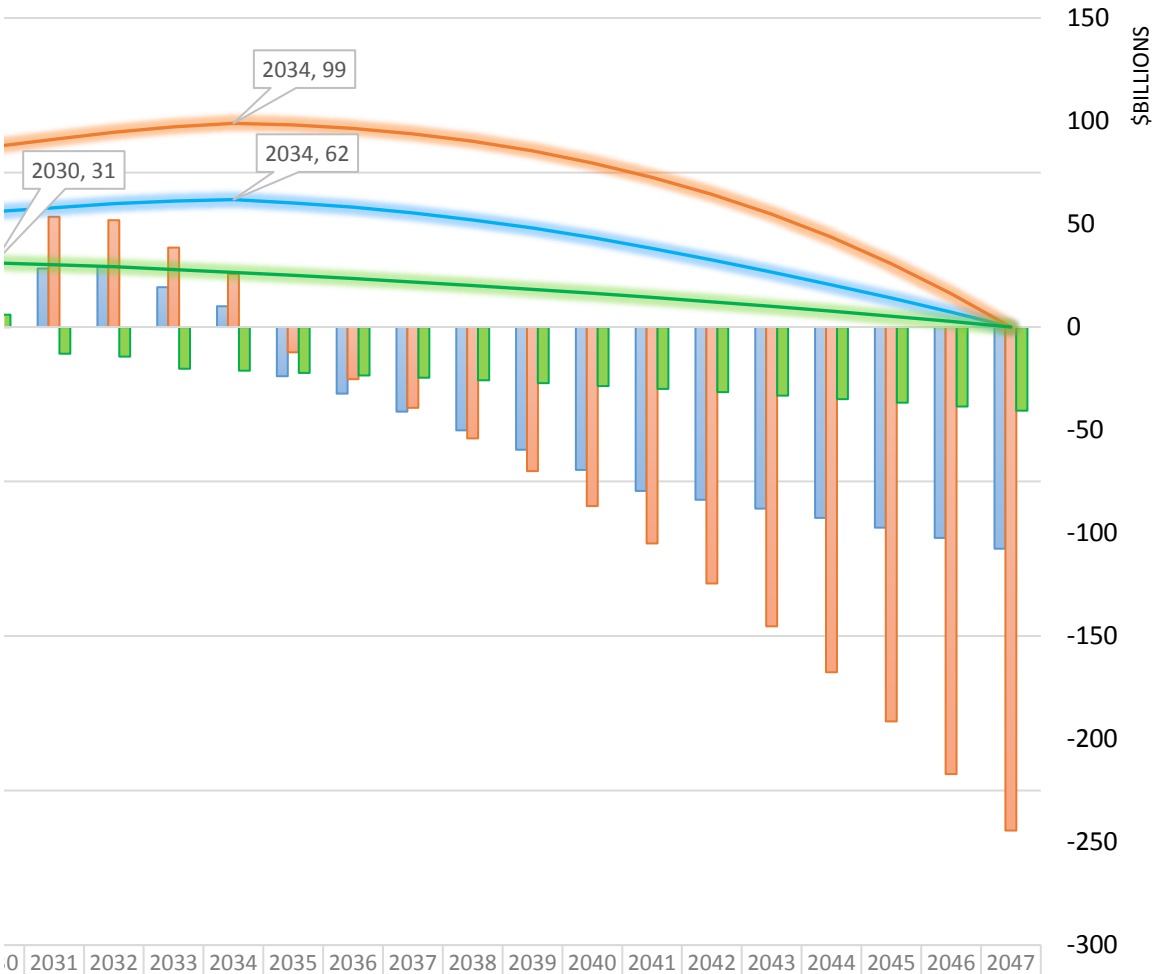
	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

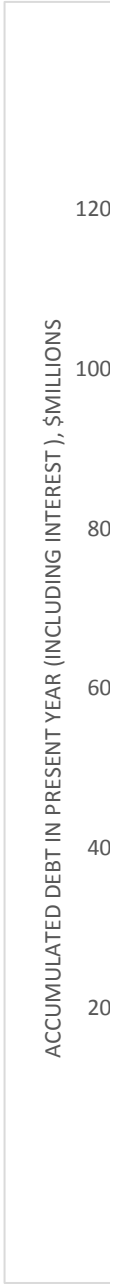
Scenario 1E

lc - at 5.12% interest rate

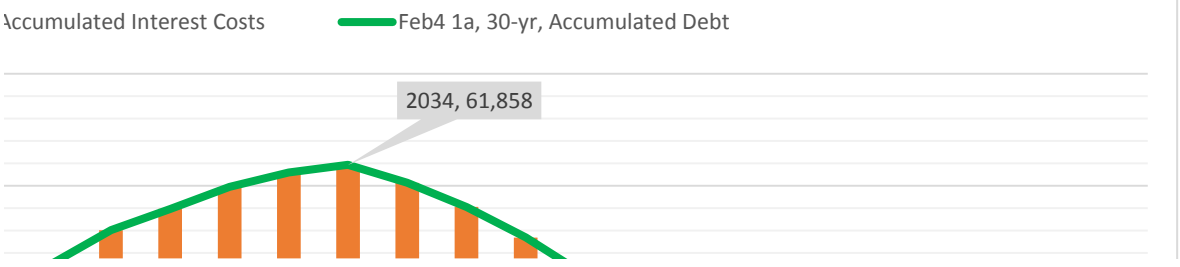


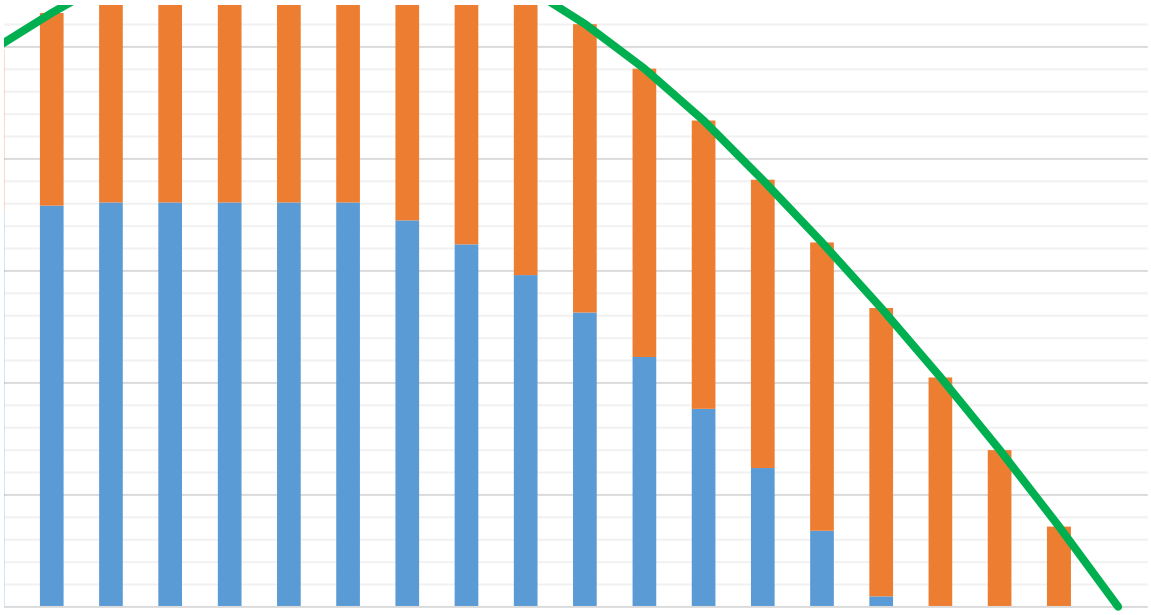
0	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
98	1,896	1,966	1,288	672	-1,59	-2,15	-2,73	-3,34	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
26	3,568	3,457	2,571	1,716	-819	-1,68	-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
4	-860	-961	-1,34	-1,41	-1,48	-1,56	-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0
55	91,12	94,57	97,14	98,86	98,04	96,35	93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0
12	30,26	29,30	27,95	26,54	25,05	23,49	21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

CALENDAR YEAR



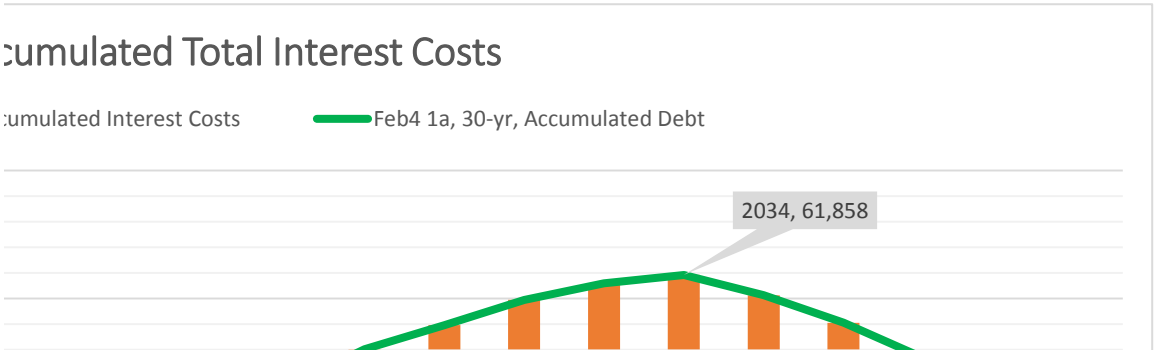
ebt (Principal and Interest)

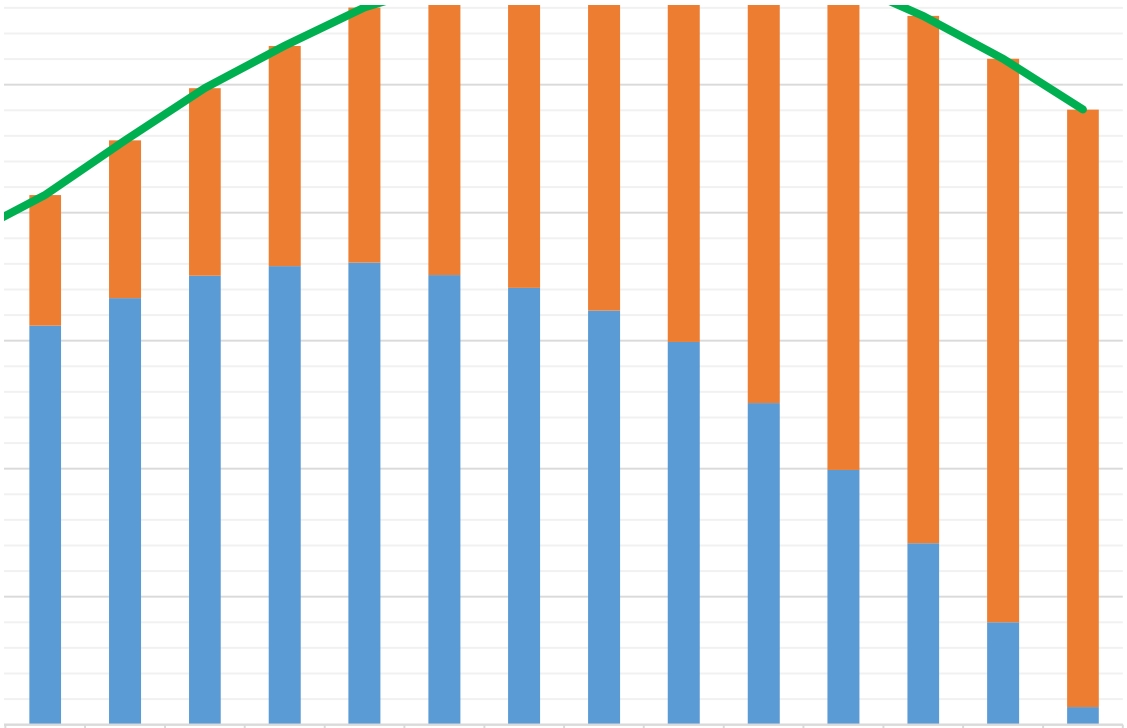




8	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
6	17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
7	35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
3	53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



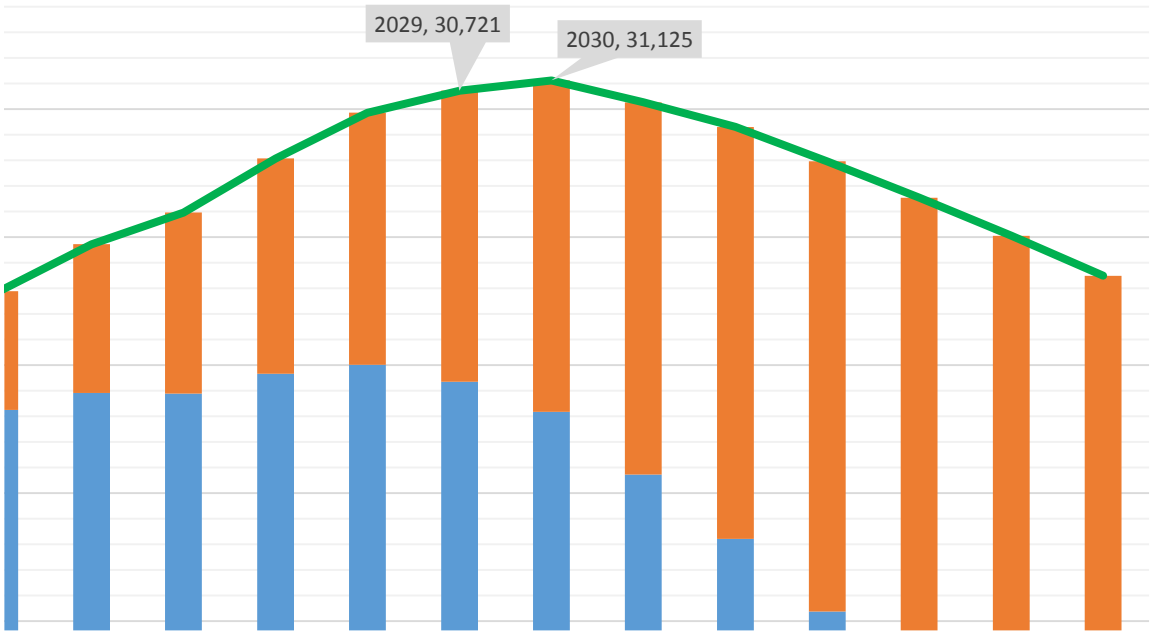


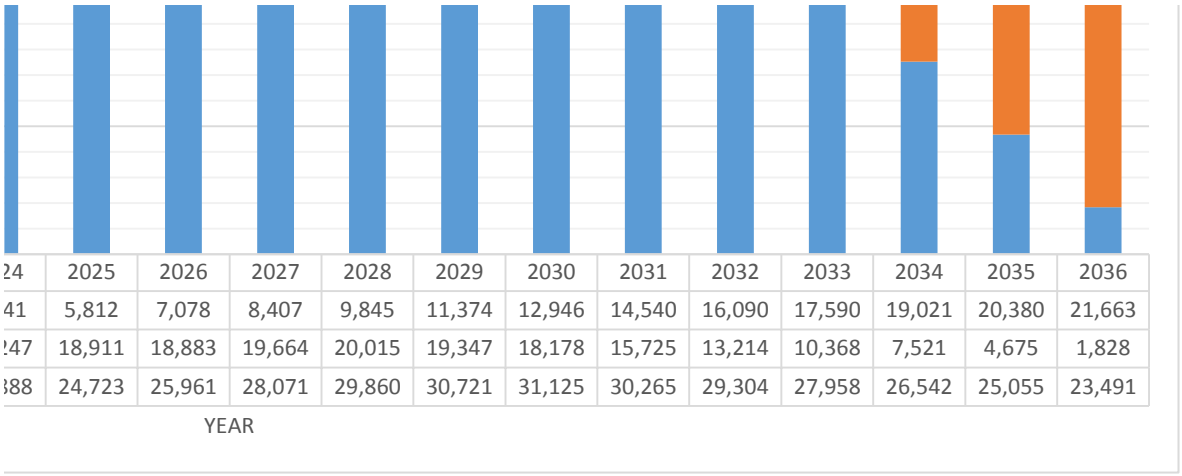
	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
	10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
	31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059
YEAR														

ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $

ccumulated Total Interest Costs

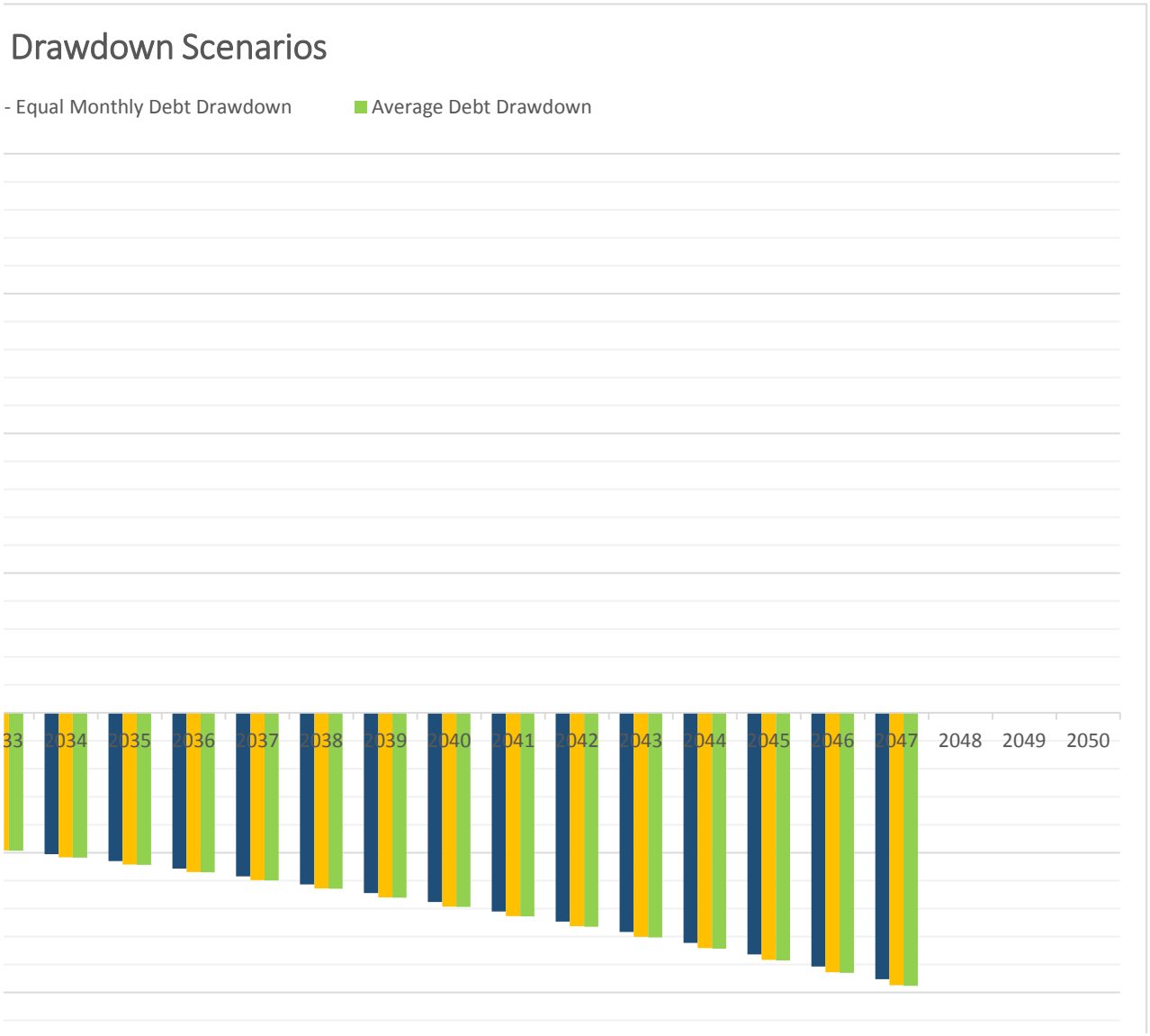
Accumulated Interest Costs — Feb4 1c, 30-yr, Accumulated Debt





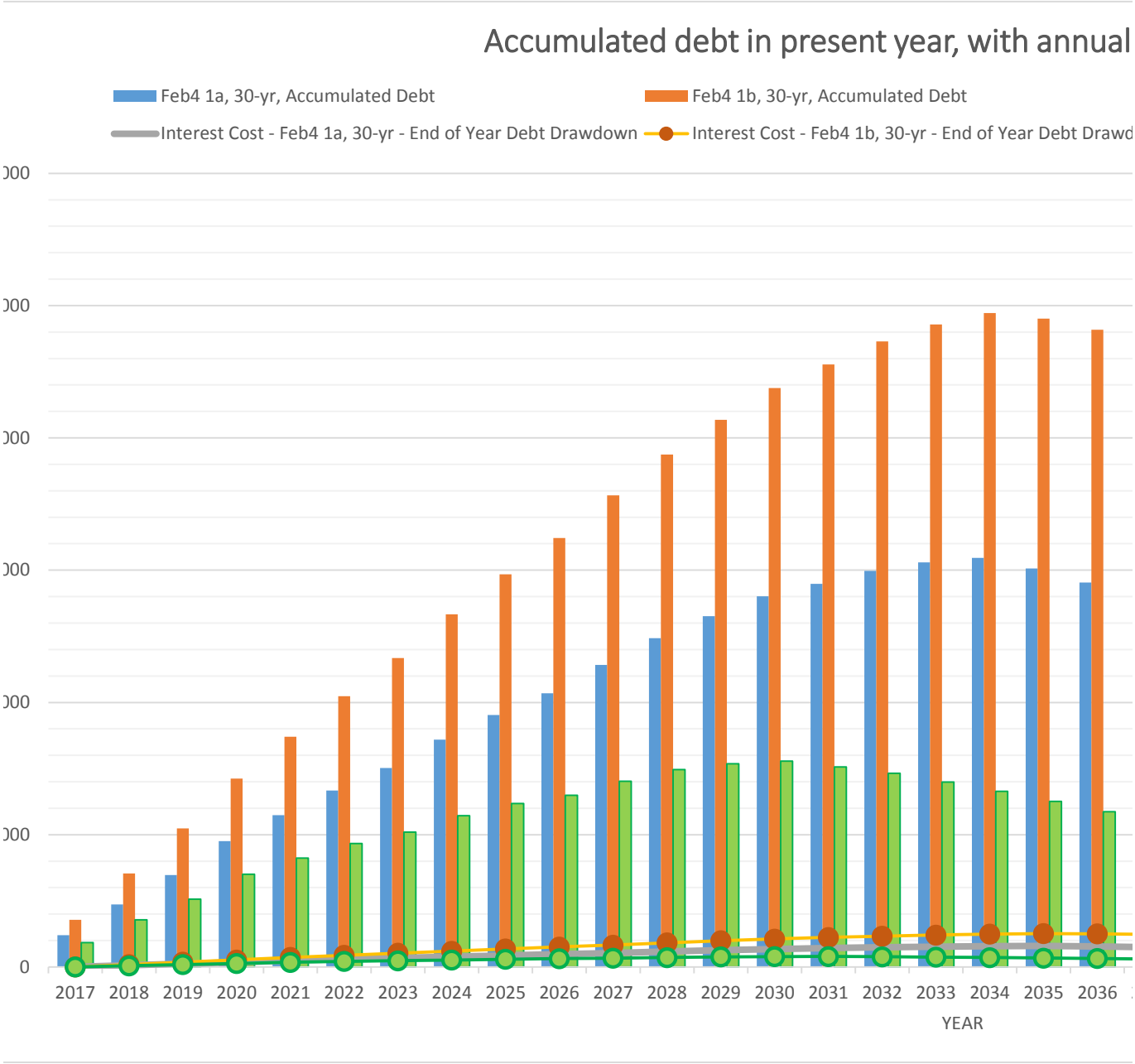
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

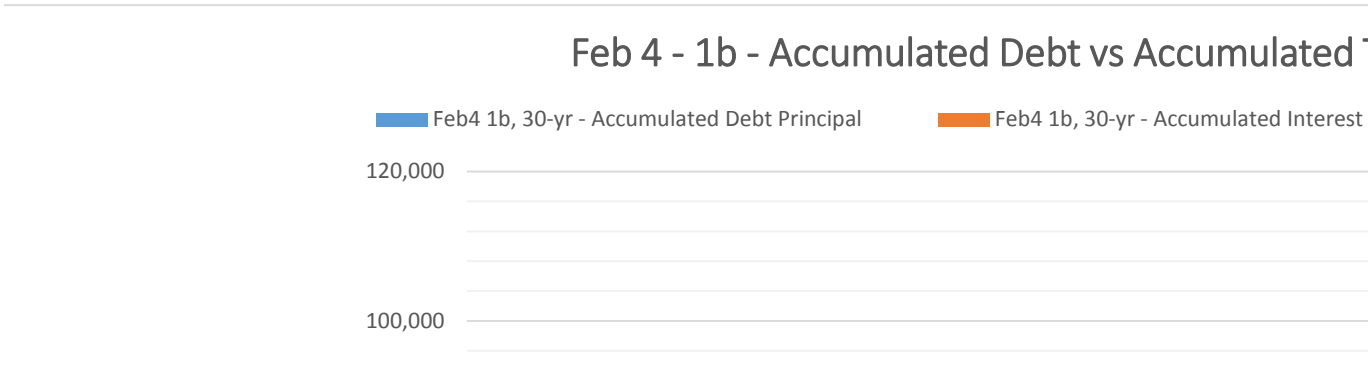
YEAR

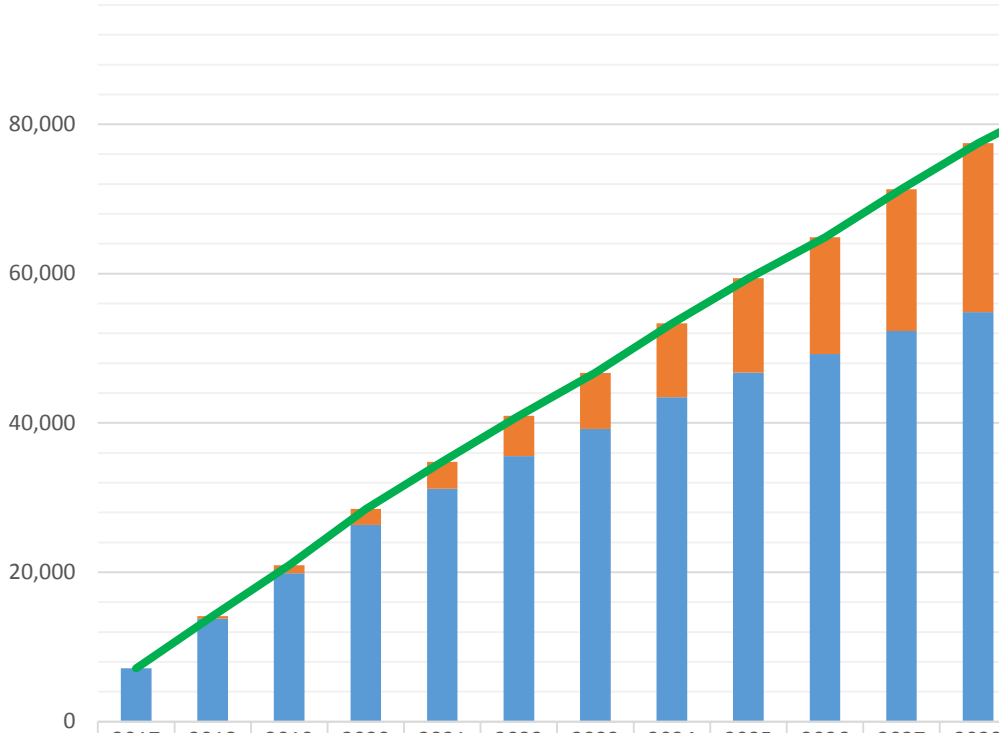


YEAR

ɜ - 25 year and 30 year Financing Terms, at 5% interest rate

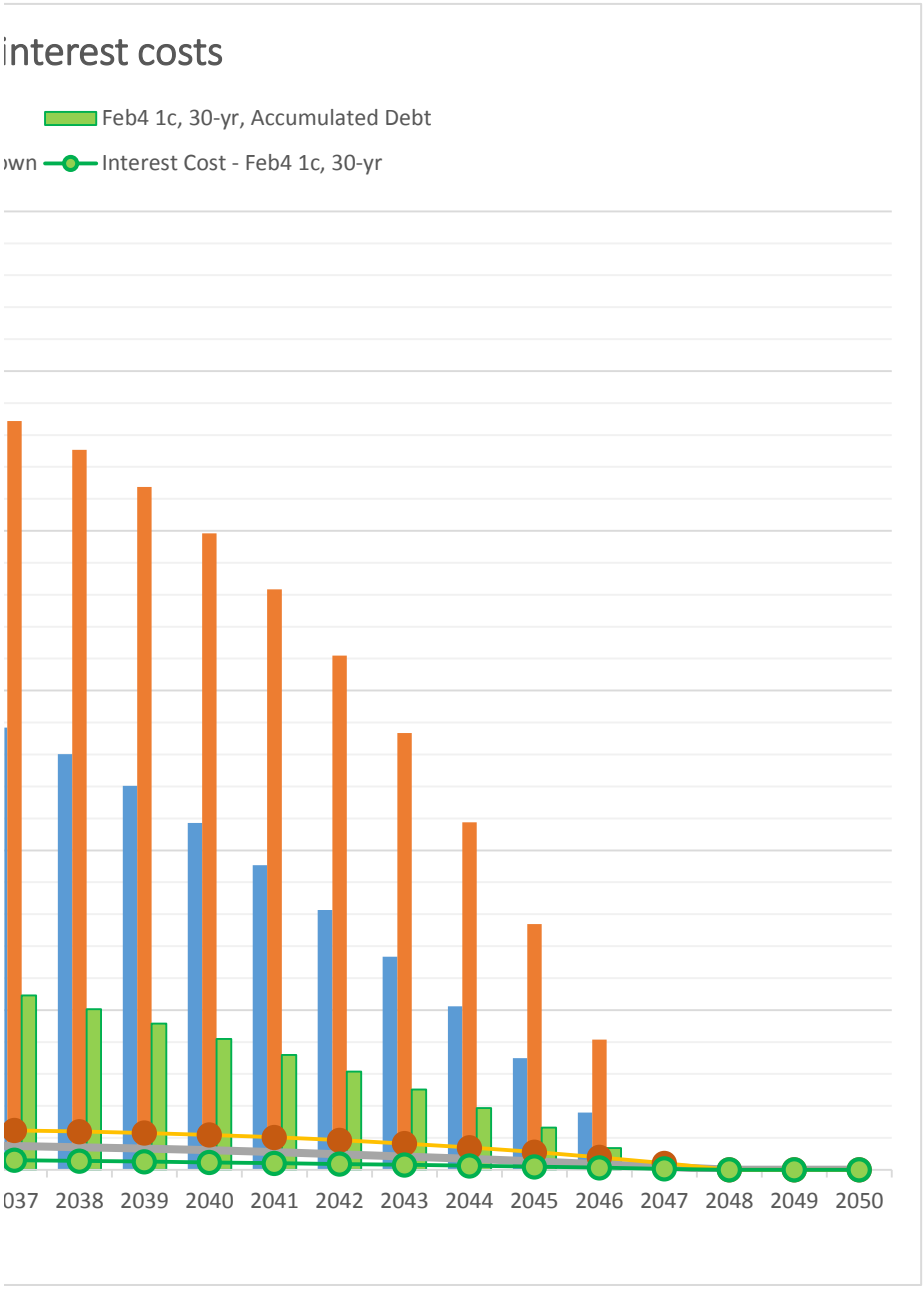


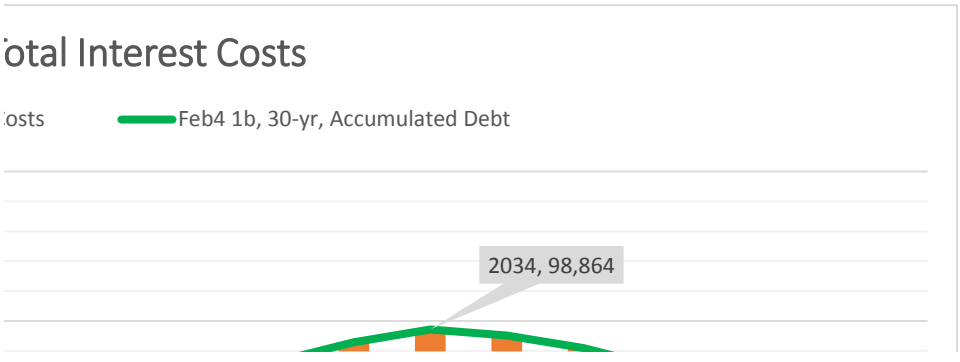

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000
100,000

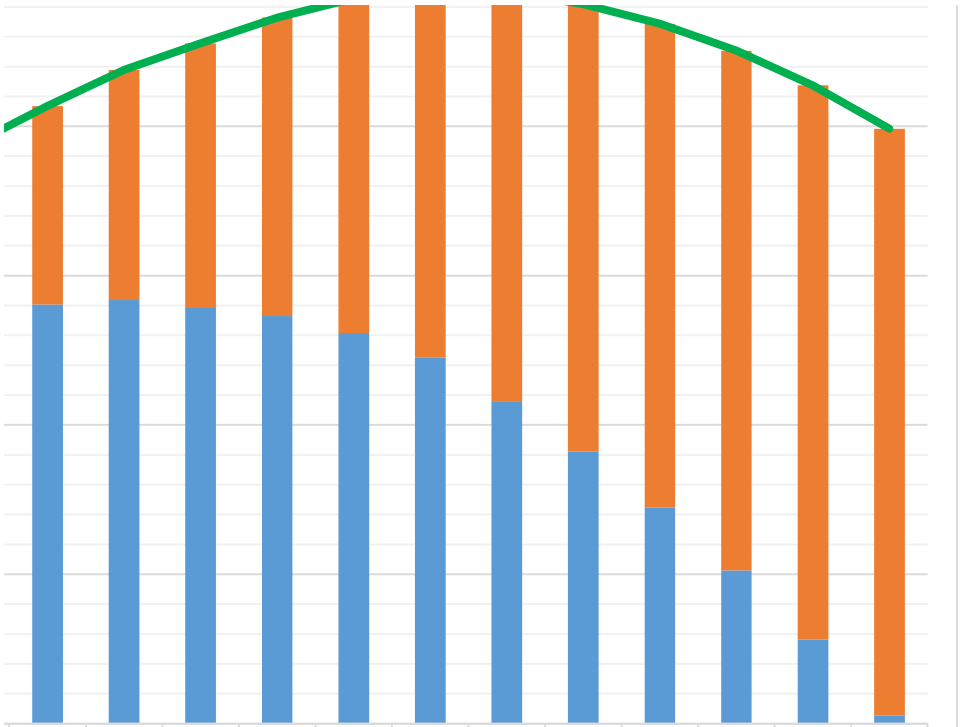


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y


interest costs
Feb4 1c, 30-yr, Accumulated Debt
wn
Interest Cost - Feb4 1c, 30-yr
037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR

Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

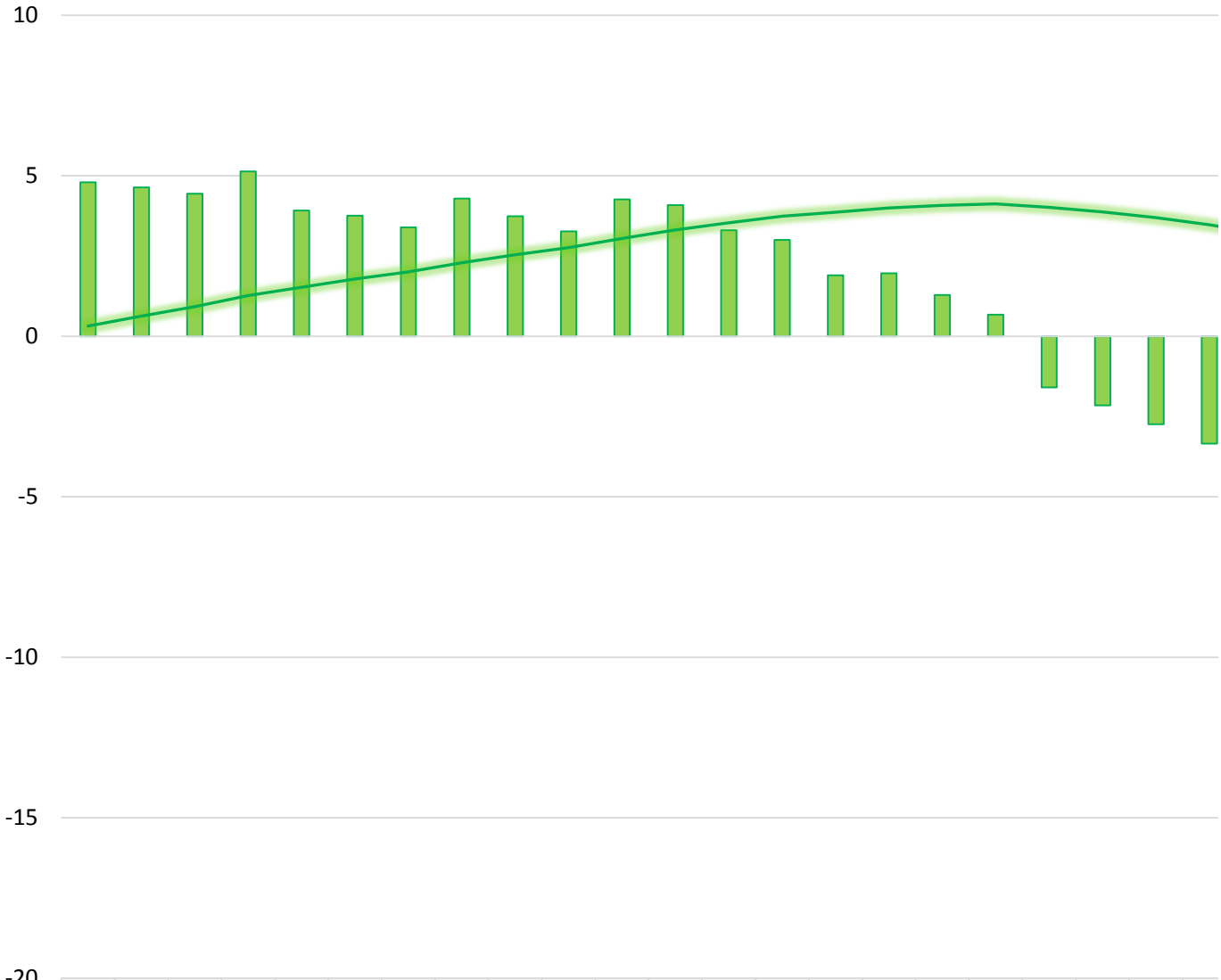
NS



FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIO
Feb4 1c, 30-yr
Feb4 1c, 30-yr,

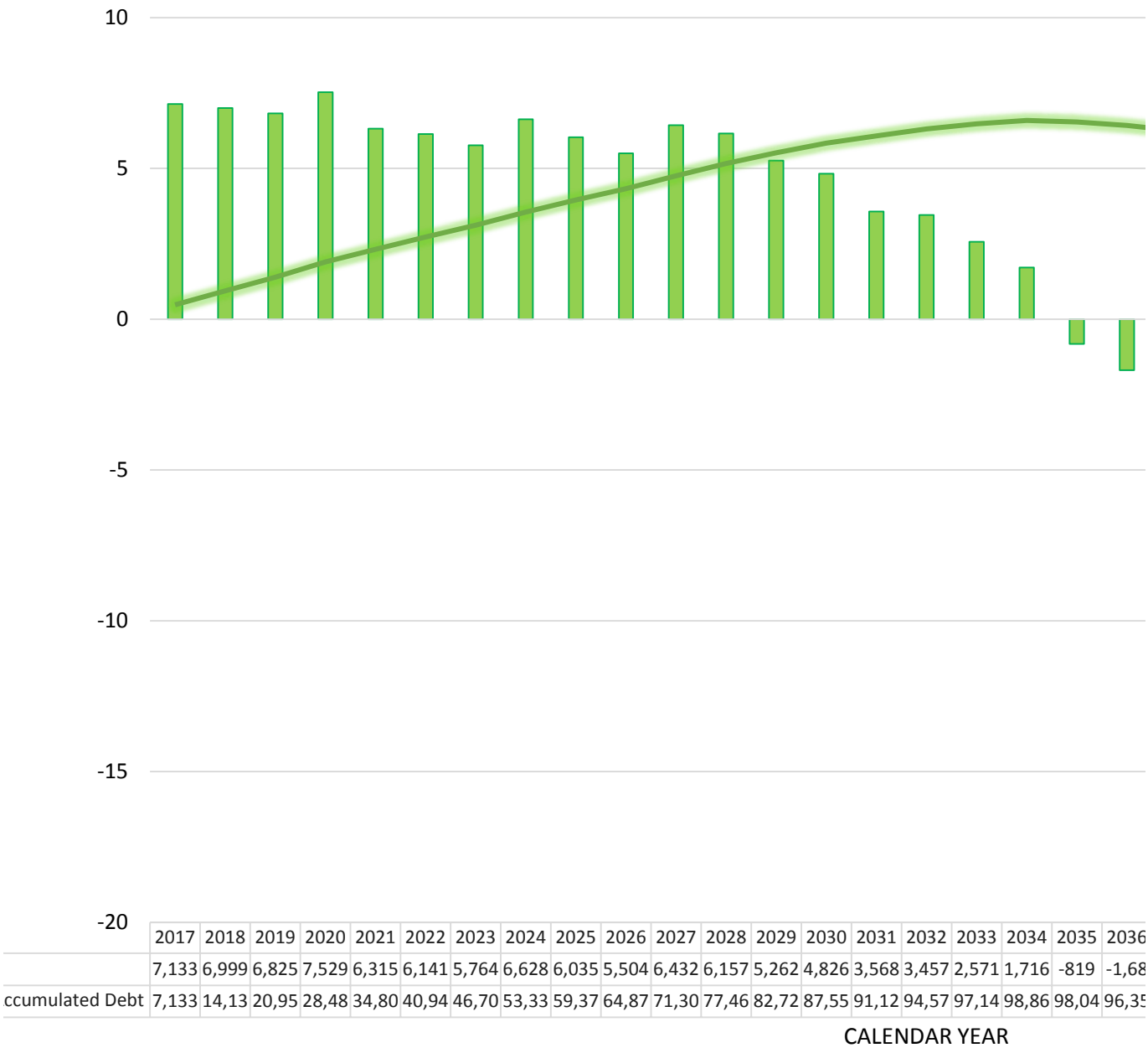
Feb 6 Deck - Scenario 1a - at 5.12% interest rate



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	203
	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,59	-2,15	-2,73	-3,3
Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73	53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,(

CALENDAR YEAR

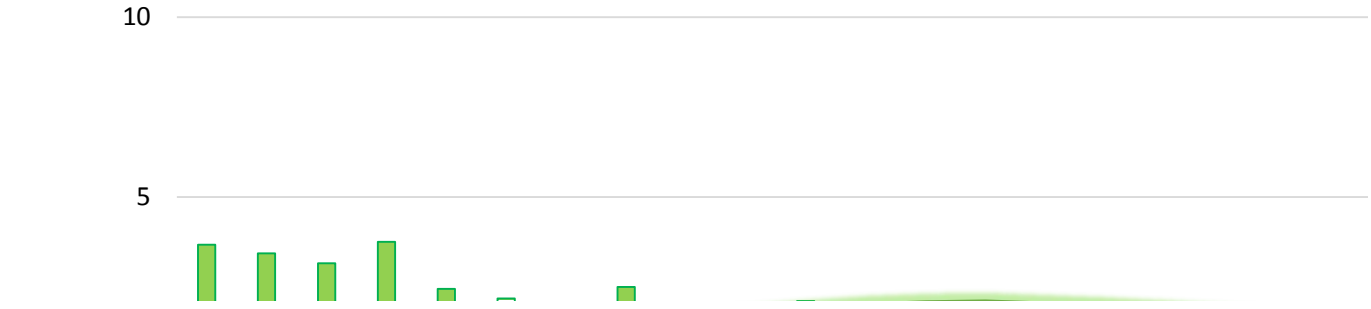
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

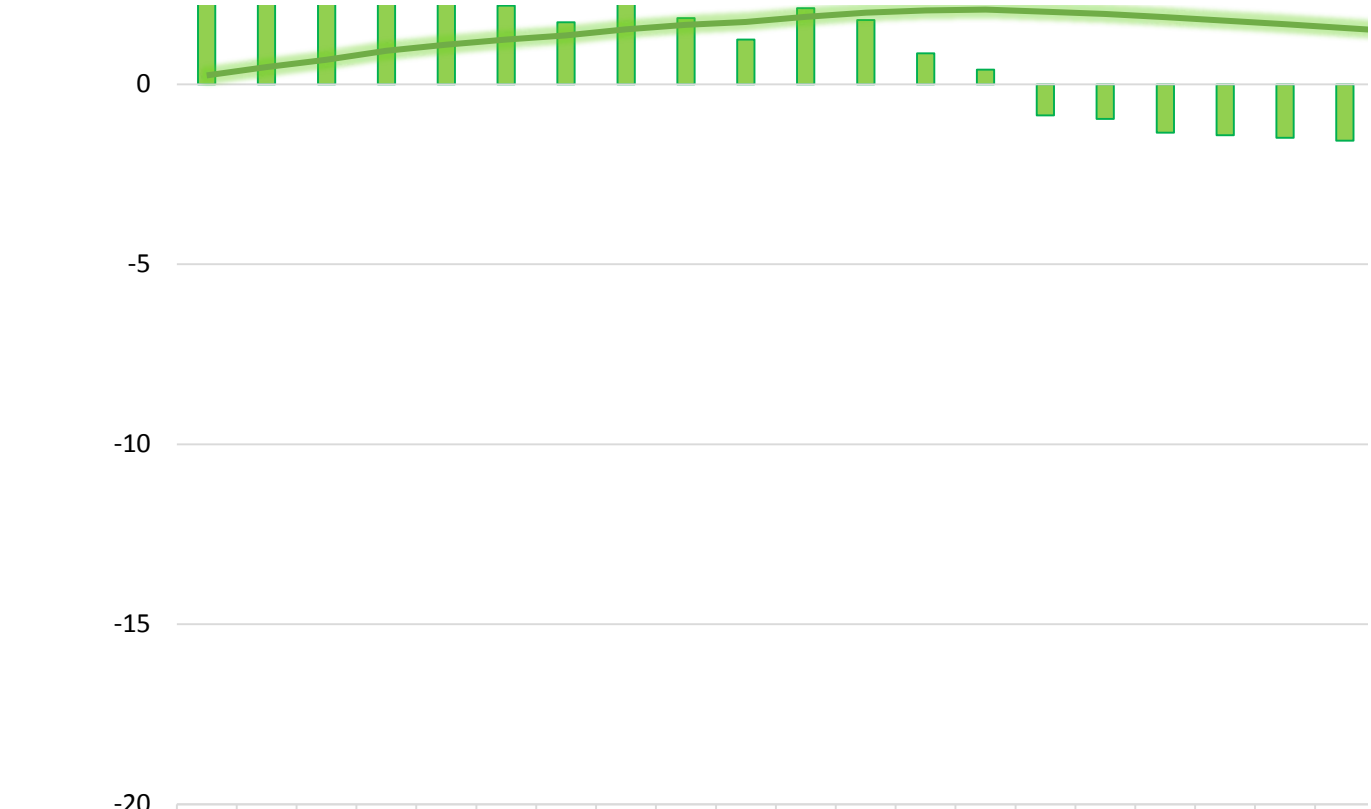


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



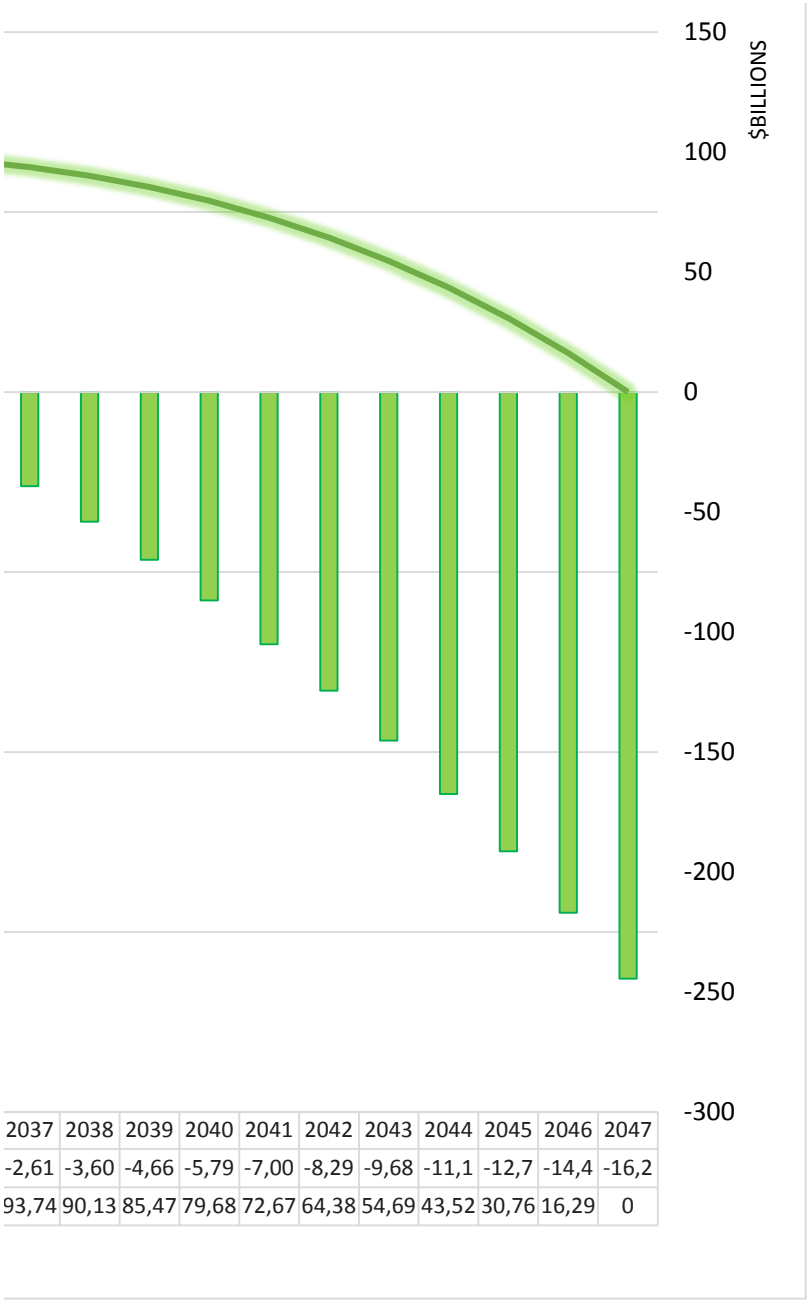


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

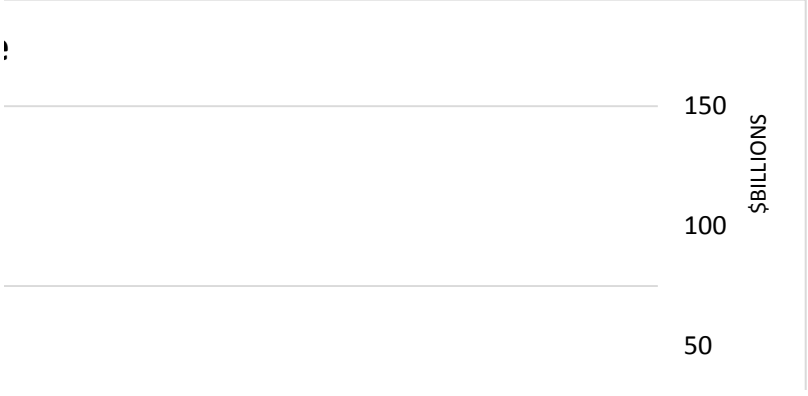
CALENDAR YEAR

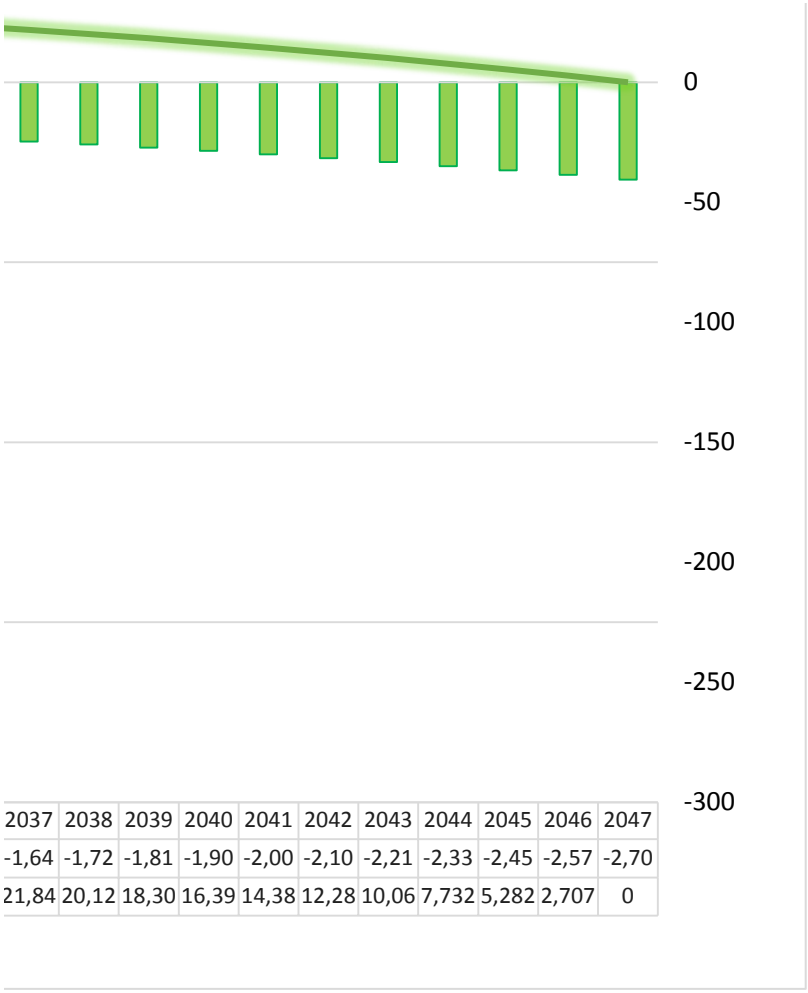


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Equal Monthly Debt Drawdown

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

1a. GA Smoothing (Borrow ~$5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,801	4,640

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,200	4,760

1b. GA Smoothing (Borrow ~$7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	7,133	6,999

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,783	7,100

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $99 billion, peaking
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

1c. GA Smoothing (Borrow ~$4 billion in 2017)

$ millions

Scenario 1C - 30-yr amortization	2017	2018
Annual Exposure[2]	3,678	3,437

	Fiscalized[3]	2016-17	2017-18
	Start: January 1st	919	3,617

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	1,783 - 1,200	7,100 - 4,760

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1200	4760
Debt-Finance Global Adjustment Costs, Option 1a	1783	7100
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18

Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1200**	**5000**
Total, B	1783	7340
Proposed Program Total:	1,783 - 1,200	7,340 - 5,000

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
4,446	5,138	3,921	3,753

2018-19	2019-20	2020-21	2021-2022
4,591	4,619	4,833	3,879

Actuals are subject to actual prices and actual interest
- The highest debt accumulation (at 5% interest rate) i
- Compared to a 5% interest rate, at 3.5%, the highest f

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown o
[3] Fiscalized based on 75/25 split of annual numbers pr
on accounting treatment.

2019	2020	2021	2022
6,825	7,529	6,315	6,141

2018-19	2019-20	2020-21	2021-2022
6,956	7,001	7,226	6,272

g in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
3,158	3,761	2,450	2,183

2018-19	2019-20	2020-21	2021-2022
3,367	3,309	3,433	2,383

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
6,956 - 4,591	7,001 - 4,619	7,226 - 4,833	6,272 - 3,879

/1

2018-19[1]	2019-20[1]	2020-21[1]
4591	4619	4833
6956	7001	7226
225	279	323
60	60	60
18	18	18

4894	**4976**	**5234**
7259	7358	7627

7,259 - 4,894 7,358 - 4,976 7,627 - 5,234

rates.
s expected to be approximately $62 billion, peaking in 203 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
fiscal exposure will occur in 2017-18, decreasing by approximately $33-$36 million.

f debt.
ovided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also de

epend on decision

1a. GA Smoothing (Borrow $5 billion in 2017)

	2017
IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	7,095
Additional GA Debt Drawdown, End of Year	5,000

Ratepayer GA Payment

Total Accumulated Debt *($ billion)*	5,000
Total Change in Accumulated Debt *($ billion)*	5000

1b. GA Smoothing (Borrow $7 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	5,095
Additional GA Debt Drawdown, End of Year	7,000

Total Accumulated Debt *($ billion)*	7000
Total Change in Accumulated Debt *($ billion)*	7000

1c. GA Smoothing (Borrow $4 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	8,095
Additional GA Debt Drawdown, End of Year	4,000

Total Accumulated Debt *($ billion)*	4000
Total Change in Accumulated Debt *($ billion)*	4000

2018	2019	2020	2021	2022	2023	2024	2025
11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
6,835	7,552	7,168	6,844	6,634	7,243	7,128	6,527
5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000

9,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000
5000	4000	5000	4000	4000	3000	4000	4000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
4,835	4,552	4,168	4,844	4,634	4,243	4,128	4,527
7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000

14000	21000	28000	35000	41000	47000	53000	59000
7000	7000	8000	6000	6000	6000	7000	6000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
8,835	8,552	8,168	8,844	8,634	8,243	8,128	8,527
3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000

7000	10000	14000	16000	19000	20000	23000	25000
3000	3000	4000	2000	2000	2000	3000	2000

2026	2027	2028	2029	2030	2031	2032	2033
10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
7,033	7,043	6,819	7,009	6,721	6,654	6,820	7,238
3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000

41,000	46,000	50,000	53,000	56,000	58,000	60,000	61,000
3000	4000	4000	3000	3000	2000	2000	1000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
4,033	5,043	4,819	5,009	4,721	4,654	5,820	5,238
6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000

65000	71000	77000	83000	88000	91000	95000	97000
6000	6000	6000	5000	5000	4000	3000	3000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
9,033	9,043	8,819	9,009	9,721	9,654	9,820	9,238
1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000

26000	28000	30000	31000	31000	30000	29000	28000
1000	2000	2000	1000	0	-1000	-1000	-1000

2034	2035	2036	2037	2038	2039	2040	2041
7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
6,756	7,662	7,389	8,129	7,881	8,645	9,421	9,207
1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000

62,000	60,000	58,000	55,000	52,000	48,000	43,000	38,000
1000	-2000	-2000	-3000	-3000	-4000	-5000	-5000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
5,756	6,662	7,389	8,129	8,881	9,645	10,421	11,207
2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000

99000	98000	96000	94000	90000	85000	80000	73000
2000	-1000	-2000	-3000	-4000	-5000	-6000	-7000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
8,756	6,662	7,389	7,129	6,881	6,645	6,421	6,207
-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000

27000	25000	23000	22000	20000	18000	16000	14000
-1000	-1000	-2000	-2000	-2000	-2000	-2000	-2000

2042	2043	2044	2045	2046	2047	2048		
4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
10,004	9,811	9,627	9,451	10,285	10,126	2,975		
-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0		

33,000	27,000	20,000	14,000	7,000	-	-	
-6000	-6000	-6000	-6000	-7000	-7000	0	

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
12,004	13,811	14,627	16,451	17,285	19,126	2,975		
-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0		

64000	55000	44000	31000	16000	0	0
-8000	-10000	-11000	-13000	-14000	-16000	0

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
6,004	5,811	5,627	5,451	6,285	6,126	2,975		
-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0		

12000	10000	8000	5000	3000	0	0
-2000	-2000	-2000	-2000	-3000	-3000	0

Feb4 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.12%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0
			114	110	106	122	93	89	81	102	89	78	102	97	79	71	45	47	31	16	-38	-51	-65	-80	-95	-110	-126	-133	-140	-147	-155	-162	-171	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost				58,489																													
End of Year Debt Drawdown	5,138	3,167																																	
Equal Monthly Debt Drawdown	5,260	3,149																																	

Maximum Accumulated Debt	Feb4 1a, 30-yr, Accumulated Debt																																		
End of Year Debt Drawdown	61,858																																		
Equal Monthly Debt Drawdown	63,330																																		

		40%	37%	34%	36%	27%	24%																													
Feb4 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement	4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
a	Debt, Beginning of Year	0	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	
c = a*5%	*Interest Cost - Feb4 1a, 30-yr - End of Year Debt Drawdown*	*0*	*246*	*483*	*711*	*974*	*1,175*	*1,367*	*1,541*	*1,760*	*1,952*	*2,119*	*2,337*	*2,546*	*2,716*	*2,869*	*2,966*	*3,067*	*3,133*	*3,167*	*3,086*	*2,975*	*2,835*	*2,664*	*2,461*	*2,224*	*1,952*	*1,666*	*1,365*	*1,049*	*717*	*367*	*0*	*0*	*0*	58,489
b	Additional GA Debt Drawdown, End of Year	4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	21,822	23,788	25,076	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	20,490	13,998	7,173	0	0	0	
	Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	36,109	36,109	36,109	36,109	34,517	32,362	29,624	26,281	22,311	17,687	12,383	6,793	918	0	0	0	0	0	0	0	
	Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688	49,149	51,372	53,325	54,991	56,356	57,405	58,122	58,489				
	Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371	-5,713	-13,241	-20,783	-28,325	-35,866	-43,408	-50,949	-58,489				
Fiscal Exposure - End of Year Debt Drawdown		4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0	

Feb4 1a, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement	4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
3,149	Debt, Beginning of Year	0	4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
	Interest Cost - Feb4 1a, 30-yr	*114*	*356*	*589*	*833*	*1,067*	*1,264*	*1,448*	*1,643*	*1,849*	*2,029*	*2,220*	*2,435*	*2,625*	*2,787*	*2,914*	*3,013*	*3,097*	*3,149*	*3,129*	*3,034*	*2,910*	*2,756*	*2,569*	*2,351*	*2,098*	*1,819*	*1,526*	*1,218*	*895*	*554*	*197*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown	4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0	

	Monthly Drawdown	400	366	330	369	246	215	169	229	165	109	179	146	63	24	(81)	(83)	(148)	(205)	(397)	(437)	(476)	(515)	(553)	(590)	(627)	(629)	(628)	(628)	(628)	(628)	(628)	-	-	-
	FV of Monthly Drawdown at 5%	4,915	4,498	4,057	4,532	3,017	2,640	2,075	2,813	2,026	1,345	2,200	1,789	773	289	(996)	(1,024)	(1,821)	(2,519)	(4,872)	(5,365)	(5,849)	(6,325)	(6,793)	(7,253)	(7,707)	(7,722)	(7,721)	(7,721)	(7,721)	(7,721)	(7,720)	-	-	-
	Annual Interest Cost on New Drawdowns	114	105	94	105	70	61	48	65	47	31	51	42	18	7	(23)	(24)	(42)	(59)	(113)	(125)	(136)	(147)	(158)	(169)	(179)	(180)	(180)	(180)	(180)	(180)	(179)	-	-	-
	Annual Interest Cost on Opening Balance	-	252	495	728	997	1,203	1,399	1,577	1,802	1,998	2,169	2,393	2,607	2,780	2,937	3,037	3,140	3,207	3,243	3,159	3,046	2,903	2,727	2,519	2,277	1,999	1,706	1,398	1,074	734	376	(0)	(0)	(0)
	Total Annual Interest Cost	114	356	589	833	1,067	1,264	1,448	1,643	1,849	2,029	2,220	2,435	2,625	2,787	2,914	3,013	3,097	3,149	3,129	3,034	2,910	2,756	2,569	2,351	2,098	1,819	1,526	1,218	895	554	197	(0)	(0)	(0)

Feb4 1a, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement	4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year	0	4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
	Interest Cost - Feb4 1a, 30-yr	*61*	*305*	*540*	*777*	*1,024*	*1,223*	*1,410*	*1,596*	*1,808*	*1,993*	*2,173*	*2,390*	*2,589*	*2,754*	*2,893*	*2,991*	*3,083*	*3,141*	*3,147*	*3,058*	*2,940*	*2,792*	*2,613*	*2,401*	*2,156*	*1,881*	*1,591*	*1,286*	*966*	*629*	*275*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown	4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,862	4,699	4,502	5,203	3,971	3,801	3,438	4,343	3,787	3,307	4,322	4,137	3,344	3,037	1,920	1,991	1,305	681	-1,612	-2,183	-2,773	-3,386	-4,021	-4,683	-5,372	-5,661	-5,951	-6,255	-6,575	-6,912	-7,265	0	0	0	

	Bi-Annual Drawdown	2,400	2,197	1,981	2,213	1,473	1,289	1,014	1,374	989	657	1,074	874	378	141	(487)	(500)	(889)	(1,230)	(2,379)	(2,620)	(2,857)	(3,089)	(3,317)	(3,542)	(3,764)	(3,771)	(3,771)	(3,771)	(3,771)	(3,771)	(3,770)	-	-	-
	FV of Bi-Annual Drawdown at 5%	4,862	4,450	4,013	4,483	2,984	2,612	2,053	2,783	2,004	1,331	2,176	1,769	765	286	(986)	(1,013)	(1,801)	(2,492)	(4,820)	(5,308)	(5,787)	(6,257)	(6,719)	(7,175)	(7,624)	(7,639)	(7,638)	(7,638)	(7,638)	(7,638)	(7,637)	-	-	-
	Annual Interest Cost on New Drawdowns	61	56	51	57	38	33	26	35	25	17	28	22	10	4	(12)	(13)	(23)	(31)	(61)	(67)	(73)	(79)	(85)	(91)	(96)	(97)	(97)	(97)	(97)	(97)	(97)	-	-	-
	Annual Interest Cost on Opening Balance	-	249	490	720	986	1,190	1,384	1,560	1,783	1,977	2,146	2,367	2,579	2,750	2,906	3,004	3,106	3,173	3,208	3,125	3,013	2,871	2,698	2,492	2,252	1,977	1,687	1,383	1,063	726	372	(0)	(0)	(0)
	Total Annual Interest Cost	61	305	540	777	1,024	1,223	1,410	1,596	1,808	1,993	2,173	2,390	2,589	2,754	2,893	2,991	3,083	3,141	3,147	3,058	2,940	2,792	2,613	2,401	2,156	1,881	1,591	1,286	966	629	275	(0)	(0)	(0)

Feb4 1a, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement	4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year	0	4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
	Interest Cost - Feb4 1a, 30-yr	*123*	*365*	*597*	*842*	*1,074*	*1,271*	*1,454*	*1,650*	*1,856*	*2,035*	*2,228*	*2,442*	*2,631*	*2,792*	*2,918*	*3,016*	*3,100*	*3,150*	*3,126*	*3,030*	*2,905*	*2,749*	*2,562*	*2,342*	*2,088*	*1,809*	*1,516*	*1,207*	*883*	*542*	*184*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown	4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,923	4,758	4,559	5,269	4,021	3,849	3,481	4,398	3,835	3,349	4,377	4,189	3,386	3,075	1,944	2,016	1,321	689	-1,633	-2,210	-2,808	-3,428	-4,072	-4,742	-5,440	-5,733	-6,026	-6,334	-6,658	-6,999	-7,357	0	0	0	

Feb4 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.12%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0	
			170	167	162	179	150	146	137	158	144	131	153	147	125	115	85	82	61	41	-19	-40	-62	-86	-111	-138	-167	-198	-231	-266	-304	-344	-388	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	
End of Year Debt Drawdown	7,529	5,062	97,141
Equal Monthly Debt Drawdown	7,708	5,042	

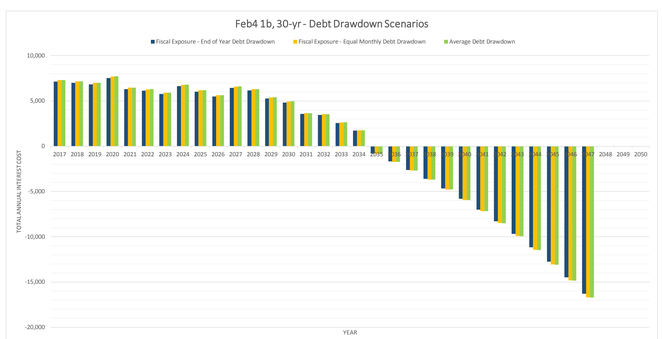
Maximum Accumulated Debt	Feb4 1b, 30-yr, Accumulated Debt
End of Year Debt Drawdown	98,864
Equal Monthly Debt Drawdown	101,217

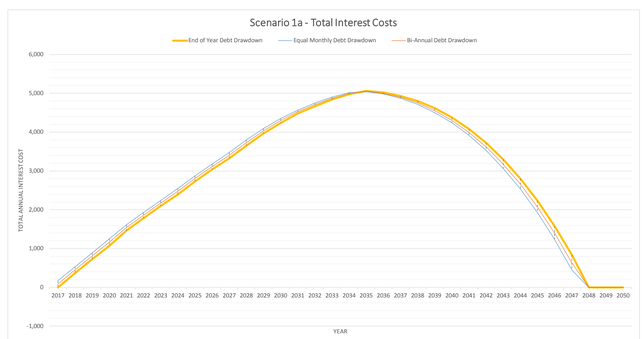
Feb4 1b, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
	GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
a	Debt, Beginning of Year	0	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	
c = a*5%	*Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown*	*0*	*365*	*724*	*1,073*	*1,459*	*1,782*	*2,096*	*2,391*	*2,731*	*3,040*	*3,322*	*3,651*	*3,966*	*4,236*	*4,483*	*4,665*	*4,842*	*4,974*	*5,062*	*5,020*	*4,933*	*4,800*	*4,615*	*4,376*	*4,080*	*3,721*	*3,296*	*2,800*	*2,228*	*1,575*	*834*	*0*	*0*	*0*	97,141
b	Additional GA Debt Drawdown, End of Year	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	0	
	Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,633	26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606	82,685	86,406	89,703	92,503	94,731	96,306	97,141				
	Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,831	56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076	-10,007	-22,027	-35,008	-48,980	-63,971	-80,013	-97,141				
Fiscal Exposure - End of Year Debt Drawdown		7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0	

Feb4 1b, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
	GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
	Debt, Beginning of Year	0	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	
5,042	*Interest Cost - Feb4 1b, 30-yr*	*170*	*532*	*886*	*1,252*	*1,609*	*1,928*	*2,234*	*2,549*	*2,874*	*3,171*	*3,475*	*3,797*	4,091	*4,350*	*4,568*	*4,748*	*4,904*	*5,015*	*5,042*	*4,980*	*4,871*	*4,714*	*4,504*	*4,238*	*3,913*	*3,524*	*3,066*	*2,534*	*1,925*	*1,231*	*446*	*0*	*0*	*0*	97,141
	Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0	
	Monthly Drawdown	594	553	508	538	405	363	306	353	275	205	259	209	108	49	(76)	(101)	(189)	(271)	(490)	(559)	(629)	(700)	(773)	(847)	(924)	(1,002)	(1,082)	(1,164)	(1,249)	(1,337)	(1,427)	(0)	-	-	
	FV of Monthly Drawdown at 5%	7,303	6,792	6,247	6,610	4,972	4,463	3,755	4,338	3,383	2,523	3,184	2,565	1,327	605	(937)	(1,237)	(2,326)	(3,335)	(6,020)	(6,867)	(7,728)	(8,604)	(9,498)	(10,412)	(11,347)	(12,306)	(13,291)	(14,304)	(15,348)	(16,424)	(17,536)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	170	158	145	154	116	104	87	101	79	59	74	60	31	14	(22)	(29)	(54)	(78)	(140)	(160)	(180)	(200)	(221)	(242)	(264)	(286)	(309)	(333)	(357)	(382)	(408)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	374	741	1,099	1,493	1,824	2,146	2,448	2,796	3,112	3,401	3,738	4,061	4,336	4,589	4,776	4,958	5,092	5,182	5,139	5,051	4,914	4,725	4,481	4,177	3,810	3,375	2,867	2,281	1,612	854	0	(0)	(0)	
	Total Annual Interest Cost	170	532	886	1,252	1,609	1,928	2,234	2,549	2,874	3,171	3,475	3,797	4,091	4,350	4,568	4,748	4,904	5,015	5,042	4,980	4,871	4,714	4,504	4,238	3,913	3,524	3,066	2,534	1,925	1,231	446	0	(0)	(0)	

Feb4 1b, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
	GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
	Debt, Beginning of Year	0	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	
	Interest Cost - Feb4 1b, 30-yr	*91*	*455*	*811*	*1,169*	*1,539*	*1,861*	*2,170*	*2,476*	*2,808*	*3,110*	*3,404*	*3,730*	*4,034*	*4,297*	*4,528*	*4,710*	*4,875*	*4,996*	*5,051*	*4,998*	*4,900*	*4,753*	*4,555*	*4,302*	*3,990*	*3,615*	*3,172*	*2,657*	*2,065*	*1,390*	*626*	*0*	*0*	*0*	97,141
	Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		7,225	7,089	6,913	7,626	6,396	6,220	5,838	6,713	6,113	5,574	6,514	6,235	5,330	4,888	3,614	3,501	2,603	1,738	-829	-1,709	-2,648	-3,651	-4,722	-5,867	-7,093	-8,405	-9,810	-11,314	-12,926	-14,652	-16,502	0	0	0	
	Bi-Annual Drawdown	3,567	3,317	3,051	3,228	2,428	2,180	1,834	2,118	1,652	1,232	1,555	1,253	648	295	(457)	(604)	(1,136)	(1,629)	(2,940)	(3,354)	(3,774)	(4,202)	(4,639)	(5,085)	(5,542)	(6,010)	(6,491)	(6,986)	(7,495)	(8,021)	(8,564)	(0)	-	-	
	FV of Bi-Annual Drawdown at 5%	7,225	6,719	6,180	6,539	4,919	4,415	3,715	4,291	3,347	2,496	3,150	2,538	1,313	598	(926)	(1,224)	(2,301)	(3,299)	(5,956)	(6,794)	(7,645)	(8,512)	(9,396)	(10,300)	(11,225)	(12,174)	(13,148)	(14,150)	(15,183)	(16,247)	(17,347)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	91	85	78	83	62	56	47	54	42	32	40	32	17	8	(12)	(15)	(29)	(42)	(75)	(86)	(97)	(108)	(119)	(130)	(142)	(154)	(166)	(179)	(192)	(205)	(219)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	370	733	1,087	1,477	1,805	2,123	2,422	2,766	3,079	3,364	3,698	4,017	4,290	4,540	4,725	4,904	5,038	5,127	5,084	4,997	4,861	4,674	4,432	4,132	3,769	3,338	2,836	2,257	1,595	845	0	0	0	
	Total Annual Interest Cost	91	455	811	1,169	1,539	1,861	2,170	2,476	2,808	3,110	3,404	3,730	4,034	4,297	4,528	4,710	4,875	4,996	5,051	4,998	4,900	4,753	4,555	4,302	3,990	3,615	3,172	2,657	2,065	1,390	626	0	0	0	

Feb4 1b, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
	GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
	Debt, Beginning of Year	0	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	
	Interest Cost - Feb4 1b, 30-yr	*183*	*544*	*898*	*1,266*	*1,620*	*1,939*	*2,244*	*2,561*	*2,885*	*3,181*	*3,486*	*3,809*	*4,101*	*4,359*	*4,574*	*4,754*	*4,908*	*5,018*	*5,041*	*4,977*	*4,867*	*4,707*	*4,496*	*4,228*	*3,900*	*3,509*	*3,048*	*2,514*	*1,902*	*1,205*	*417*	*0*	*0*	*0*	97,141
	Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		7,316	7,179	7,000	7,722	6,477	6,298	5,912	6,798	6,190	5,645	6,597	6,314	5,397	4,950	3,659	3,545	2,636	1,760	-840	-1,731	-2,682	-3,697	-4,782	-5,942	-7,183	-8,511	-9,934	-11,457	-13,089	-14,838	-16,711	0	0	0	





Feb4 1c, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.1%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0	
			88	82	75	90	58	52	41	60	44	29	50	43	20	10	-20	-23	-32	-34	-35	-37	-39	-41	-43	-45	-48	-50	-53	-55	-58	-61	-64	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	29,477
End of Year Debt Drawdown	3,761	1,594	
Equal Monthly Debt Drawdown	3,851	1,583	

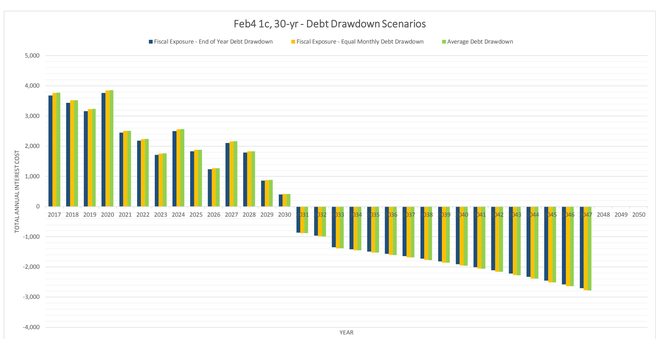
Maximum Accumulated Debt	Feb4 1c, 30-yr, Accumulated Debt
End of Year Debt Drawdown	31,125
Equal Monthly Debt Drawdown	31,866

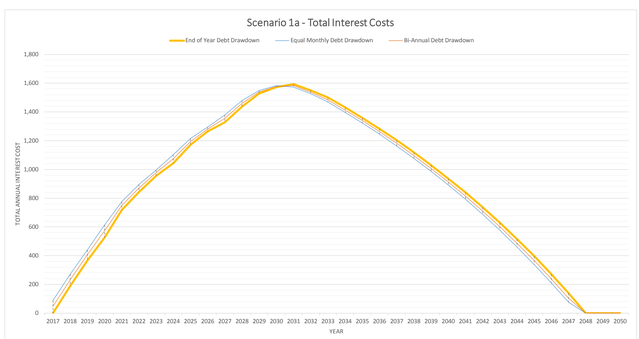
		30%	27%	24%	27%	16%	13%																													
Feb4 1c, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
a	Debt, Beginning of Year	0	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	
c = a*5%	*Interest Cost - Feb4 1c, 30-yr - End of Year Debt Drawdown*	*0*	*188*	*364*	*526*	*719*	*844*	*956*	*1,044*	*1,172*	*1,266*	*1,329*	*1,437*	*1,529*	*1,573*	*1,594*	*1,550*	*1,500*	*1,431*	*1,359*	*1,283*	*1,203*	*1,119*	*1,030*	*937*	*839*	*737*	*629*	*515*	*396*	*270*	*139*	*0*	*0*	*0*	*0*	29,477
b	Additional GA Debt Drawdown, End of Year	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	0	
	Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,641	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663	22,866	23,984	25,015	25,952	26,791	27,528	28,157	28,672	29,068	29,338	29,477				
	Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18,247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828	-1,018	-3,864	-6,710	-9,556	-12,402	-15,248	-18,094	-20,940	-23,786	-26,631	-29,477				
Fiscal Exposure - End of Year Debt Drawdown		3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0	

Feb4 1c, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	
1,583	*Interest Cost - Feb4 1c, 30-yr*	*88*	*270*	*439*	*615*	*777*	*896*	*997*	*1,103*	*1,216*	*1,295*	*1,379*	*1,480*	1,549	*1,583*	*1,573*	*1,527*	*1,468*	*1,398*	*1,324*	*1,246*	*1,164*	*1,077*	*987*	*892*	*792*	*686*	*576*	*460*	*338*	*209*	*74*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0	
	Monthly Drawdown	306	271	233	270	144	112	64	122	55	(2)	65	29	(56)	(97)	(204)	(209)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(0)	-	-	
	FV of Monthly Drawdown at 5%	3,765	3,326	2,861	3,312	1,773	1,371	781	1,493	679	(28)	799	360	(684)	(1,197)	(2,512)	(2,570)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,913)	(2,913)	(2,913)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	88	77	67	77	41	32	18	35	16	(1)	19	8	(16)	(28)	(58)	(60)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	193	373	538	736	864	979	1,069	1,200	1,296	1,361	1,471	1,565	1,610	1,632	1,586	1,536	1,465	1,391	1,313	1,231	1,145	1,055	959	859	754	644	527	405	277	142	0	0	0	
	Total Annual Interest Cost	88	270	439	615	777	896	997	1,103	1,216	1,295	1,379	1,480	1,549	1,583	1,573	1,527	1,468	1,398	1,324	1,246	1,164	1,077	987	892	792	686	576	460	338	209	74	0	0	0	

Feb4 1c, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*47*	*232*	*405*	*574*	*750*	*872*	*978*	*1,076*	*1,195*	*1,282*	*1,356*	*1,460*	*1,540*	*1,578*	*1,583*	*1,537*	*1,483*	*1,413*	*1,340*	*1,263*	*1,182*	*1,097*	*1,007*	*913*	*814*	*710*	*600*	*485*	*365*	*237*	*104*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,725	3,481	3,199	3,809	2,481	2,211	1,741	2,534	1,859	1,254	2,137	1,812	872	409	-871	-973	-1,363	-1,433	-1,506	-1,584	-1,665	-1,750	-1,839	-1,933	-2,032	-2,136	-2,246	-2,360	-2,481	-2,608	-2,742	0	0	0	
	Bi-Annual Drawdown	1,839	1,624	1,397	1,618	866	670	382	729	332	(14)	390	176	(334)	(584)	(1,227)	(1,255)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(0)	-	-	
	FV of Bi-Annual Drawdown at 5%	3,725	3,290	2,830	3,277	1,754	1,356	773	1,477	672	(28)	791	356	(677)	(1,184)	(2,485)	(2,542)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	47	42	36	41	22	17	10	19	8	(0)	10	5	(9)	(15)	(31)	(32)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	191	369	533	728	855	968	1,057	1,187	1,282	1,346	1,456	1,548	1,593	1,614	1,569	1,520	1,450	1,376	1,299	1,218	1,133	1,043	949	850	746	637	522	401	274	140	0	0	0	
	Total Annual Interest Cost	47	232	405	574	750	872	978	1,076	1,195	1,282	1,356	1,460	1,540	1,578	1,583	1,537	1,483	1,413	1,340	1,263	1,182	1,097	1,007	913	814	710	600	485	365	237	104	0	0	0	

Feb4 1c, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*94*	*276*	*445*	*622*	*781*	*900*	*1,000*	*1,108*	*1,219*	*1,298*	*1,383*	*1,483*	*1,551*	*1,583*	*1,572*	*1,525*	*1,466*	*1,395*	*1,321*	*1,243*	*1,161*	*1,074*	*984*	*888*	*788*	*683*	*572*	*456*	*333*	*205*	*69*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,772	3,525	3,239	3,857	2,513	2,239	1,763	2,566	1,882	1,270	2,164	1,835	883	414	-882	-985	-1,381	-1,451	-1,526	-1,604	-1,686	-1,772	-1,863	-1,958	-2,058	-2,163	-2,274	-2,390	-2,513	-2,641	-2,776	0	0	0	





30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

TO BE

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,556	3,123	1,728	1,400	836	1,560	821	167

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

E UPDATED

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

JK: Fixed the formula in the yellow highlighted cells. Pls. check. (SK: looks good to me)

	Tab
v16 GA Financing - Scenario 1a 1b v18 (with fiscal) - Feb 4_v2.xlsx	Powerpoint_Export Scenario tabs

Change Description

Added in trigger for later start in the year
Updated IESO forecast from Energy (IESO GA Cost Forecast 170207 (Feb 6 update).xlsx)

Equal Monthly Debt Drawdown

		Month	Months Remai
Scenario Start Date	**July**	7	6

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	3,180	2,888
Annual Exposure2 with start on July 1st	*1,590*	*2,888*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	795	3,107
Start: July 1st	-	*2,312*

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	851	3,335
Start: July 1st	-	*2,484*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	1,168	1,765
Annual Exposure2 with start on July 1st	*584*	*1,765*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	292	1,609
Start: July 1st	-	*1,025*

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,449	2,040
Annual Exposure2 with start on July 1st	*725*	*2,040*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,597
Start: July 1st	-	*1,959*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335
Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3575**
Total, B	362	1837
Proposed Program Total:	362 - 851	1,837 - 3,575

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,556	3,123	1,728	1,400
2,556	*3,123*	*1,728*	*1,400*

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646
2,805	*2,697*	*2,774*	*1,646*

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

ıking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
2,311	3,750	2,311	1,933
2,311	*3,750*	*2,311*	*1,933*

2018-19	2019-20	2020-21	2021-2022

1,901	2,671	3,391	2,217
1,901	*2,671*	*3,391*	*2,217*

2019	2020	2021	2022
2,581	4,016	2,598	2,241
2,581	*4,016*	*2,598*	*2,241*

2018-19	2019-20	2020-21	2021-2022
2,175	2,940	3,662	2,508
2,175	*2,940*	*3,662*	*2,508*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

/1

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052
2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

Equal Monthly Debt Drawdown

		Month	Months Remaining
Scenario Start Date	July	7	6

AS LONG AS >

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	3,180	2,888	2,556

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	795	3,107	2,805
Fiscal Exposure, 25%	199	777	701

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Annual Exposure[2]	3,404	3,128	2,812

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	851	3,335	3,049
Fiscal Exposure, 25%	213	834	762

Indicates year in which, similar to OPCD's exa
closest to 30%. As Fiscal 2016/17 is a partial y
month the GA deferral begins.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu
decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions	9%	14%	18%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	1,168	1,765	2,311

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	292	1,609	1,901
Fiscal Exposure, 25%	73	402	475

Scenario 1b - 30-yr amortization	2017	2018	2019
Annual Exposure[2]	1,449	2,040	2,581

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	362	1,597	2,175
Fiscal Exposure, 25%	91	399	544

Indicates year in which, similar to OPCD's exar closest to 30%.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 ar
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu on accounting treatment.

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]
Debt-Finance Global Adjustment Costs, Option 1a	213	834	762
Debt-Finance Global Adjustment Costs, Option 1b	91	399	544
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**213**	**1074**	**1065**
Total, B	91	639	847

Proposed Program Total:	91 - 213	639 - 1,074	847 - 1,065

($M)	2016-171	2017-181	2018-191
Debt-Finance Global Adjustment Costs, Option 1a	851	3335	3049
Debt-Finance Global Adjustment Costs, Option 1b	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**851**	**3575**	**3352**
Total, B	362	1837	2478

Proposed Program Total:	362 - 851	1,837 - 3,575	2,478 - 3,352

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6

7	July	7	
8	August	8	
9	September	9	
10	October	10	
11	November	11	
12	December	12	

30-year term	**2016-17**	**2017-18**	**2018-19**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335	2,175 - 3,049

ROWS HIDDEN

1	1 = Comparision Enabled

APRIL 1, 2017 25%

2020	2021	2022
3,123	1,728	1,400

2019-20	2020-21	2021-2022
2,697	2,774	1,646
674	693	412

2020	2021	2022
3,396	2,020	1,712

2019-20	2020-21	2021-2022
2,958	3,052	1,943
740	763	486

mple, the true cost of GA being deferred is
ear, exposure may be less subject to which

l $17-21 billion (at 3.5% interest rate), peaking in 2028.
$33-$36 million.

ıals per month based on month of the year. Actuals may also depend on

28%	17%	13%
2020	2021	2022
3,750	2,311	1,933

2019-20	2020-21	2021-2022
2,671	3,391	2,217
668	848	554

2020	2021	2022
4,016	2,598	2,241

2019-20	2020-21	2021-2022
2,940	3,662	2,508
735	915	627

mple, the true cost of GA being deferred is

ıd $17-21 billion (at 3.5% interest rate), peaking in 2028.
$118-$134 million.

ıals per month based on month of the year. Actuals may also depend on decision

2019-20[1]	2020-21[1]
740	763
735	915
279	323
60	60
18	18
1097	**1164**
1092	1316

1,092 - 1,097 1,316 - 1,164

2019-201	2020-211
2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453





2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964
Equal Monthly Debt Drawdown	3,180	952

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

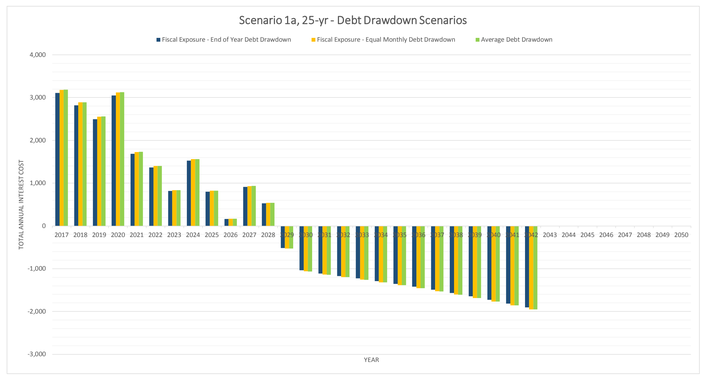
		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

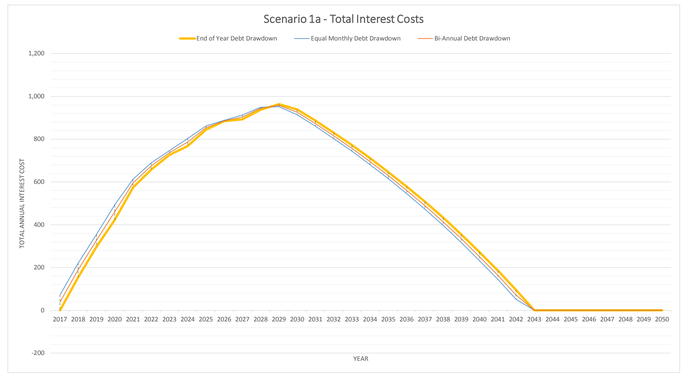
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	3,665	968	
Equal Monthly Debt Drawdown	3,750	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

		9%	14%	18%	28%	17%	13%																													
Scenario 1b, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

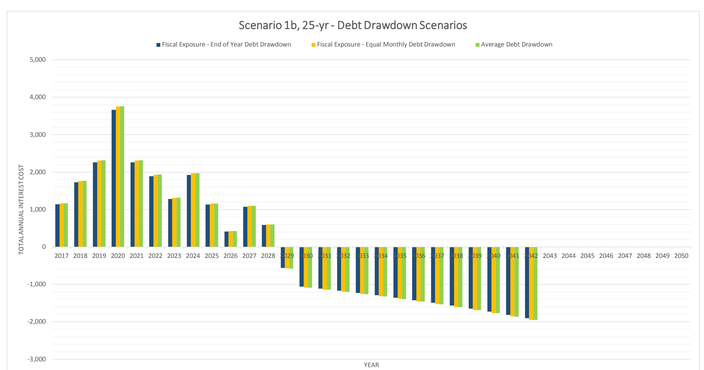
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	*954*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

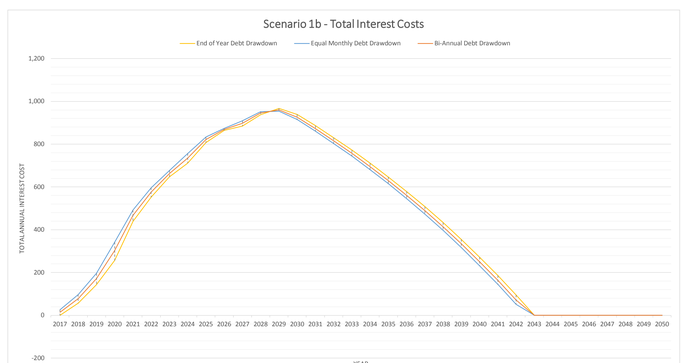
	Monthly Drawdown	95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

		28%	24%	21%	24%	12%	9%																													
Scenario 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1a, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	*1,156*	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

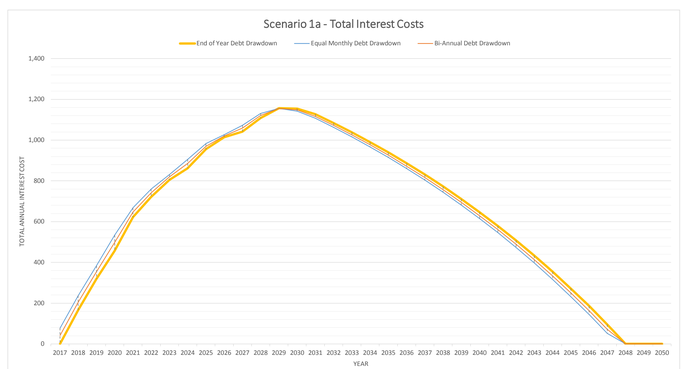
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

		12%	16%	20%	30%	19%	15%																													
Scenario 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

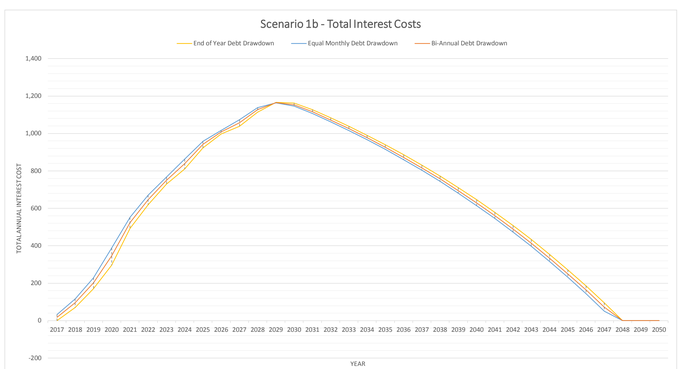
	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

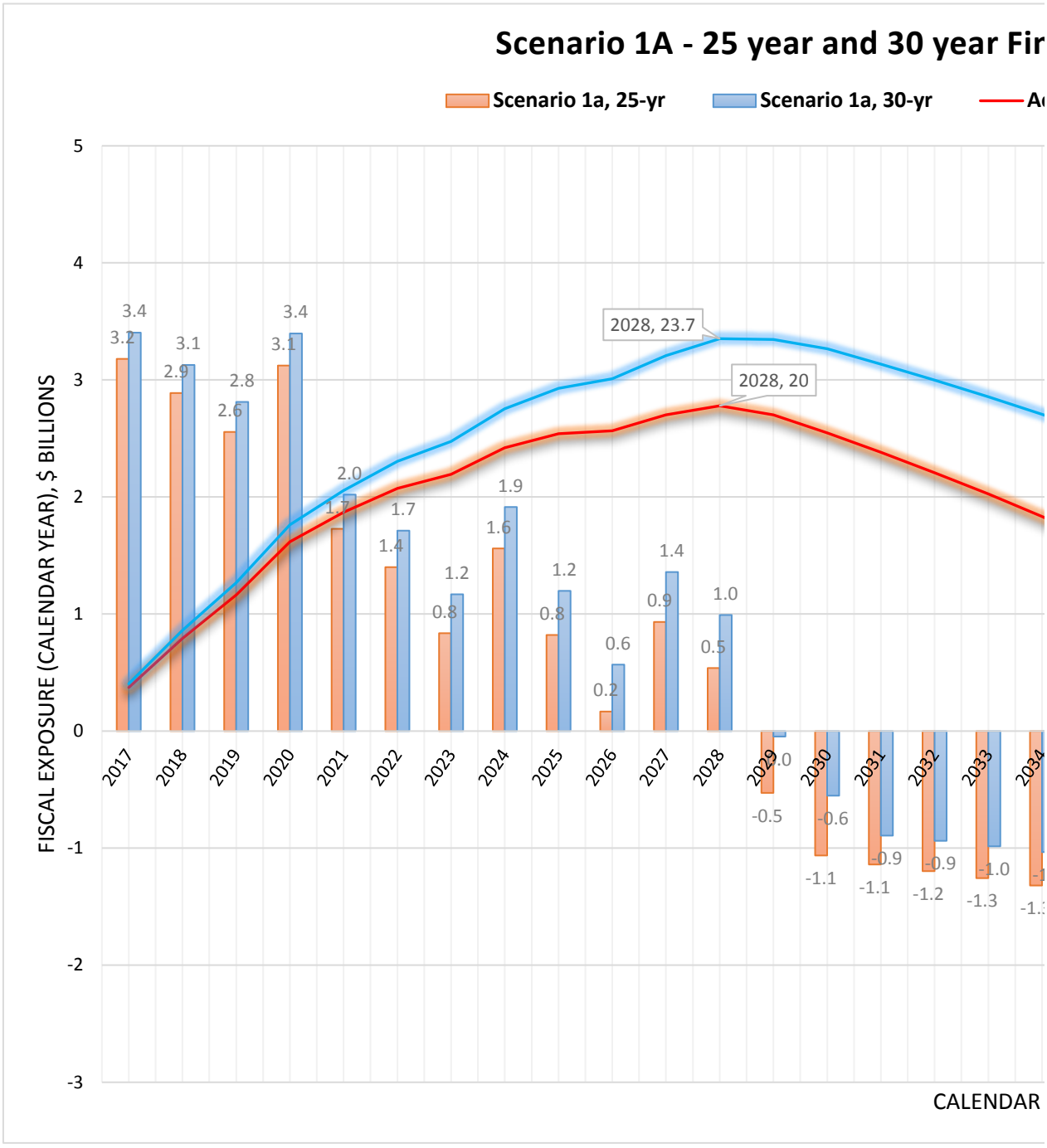
	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

Scenario 1b, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

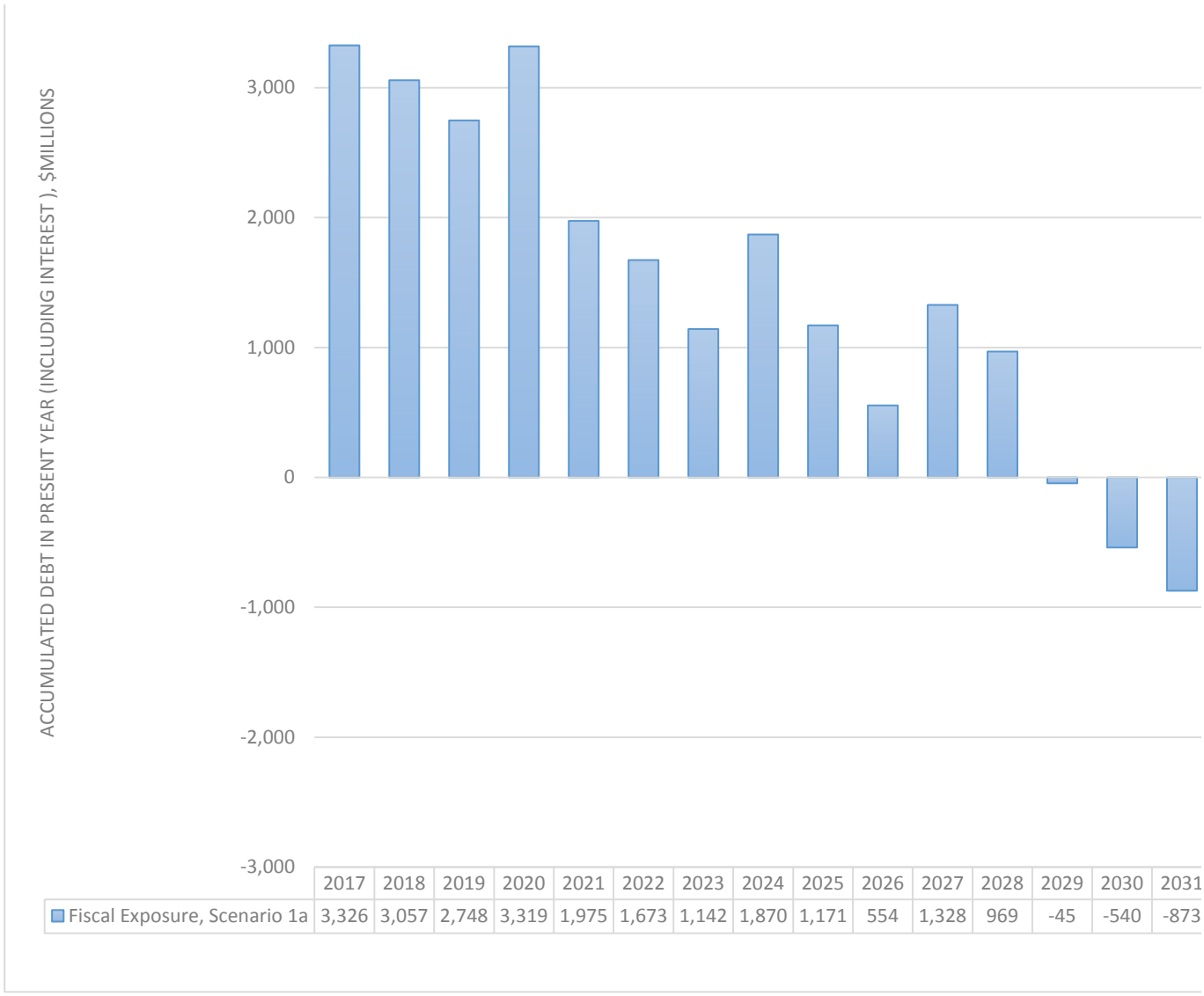




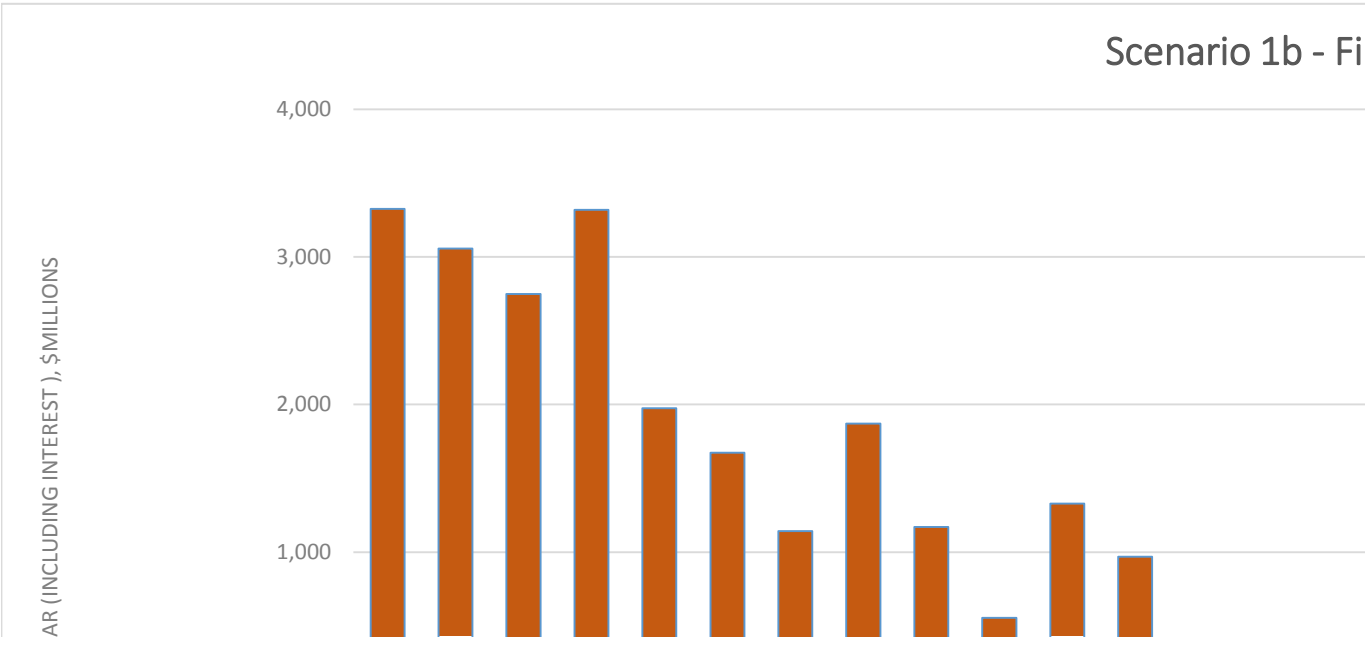
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

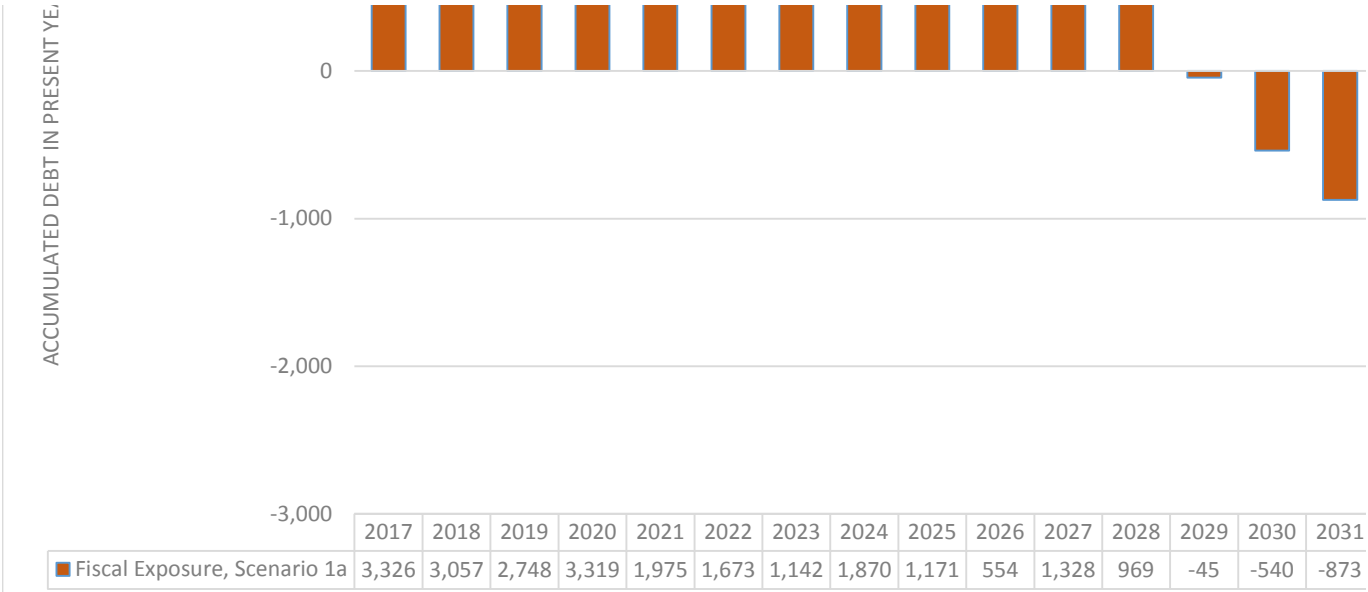




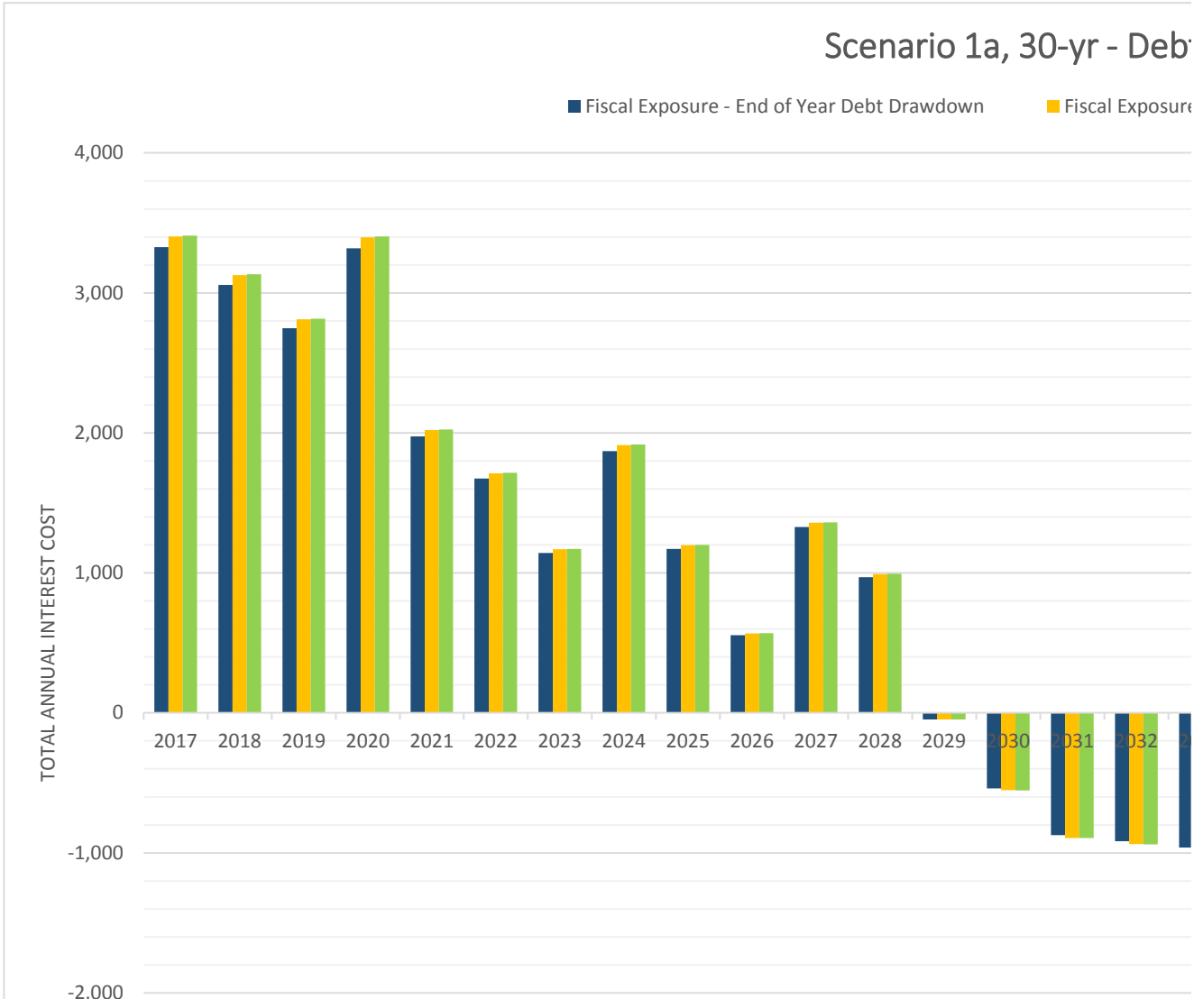


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



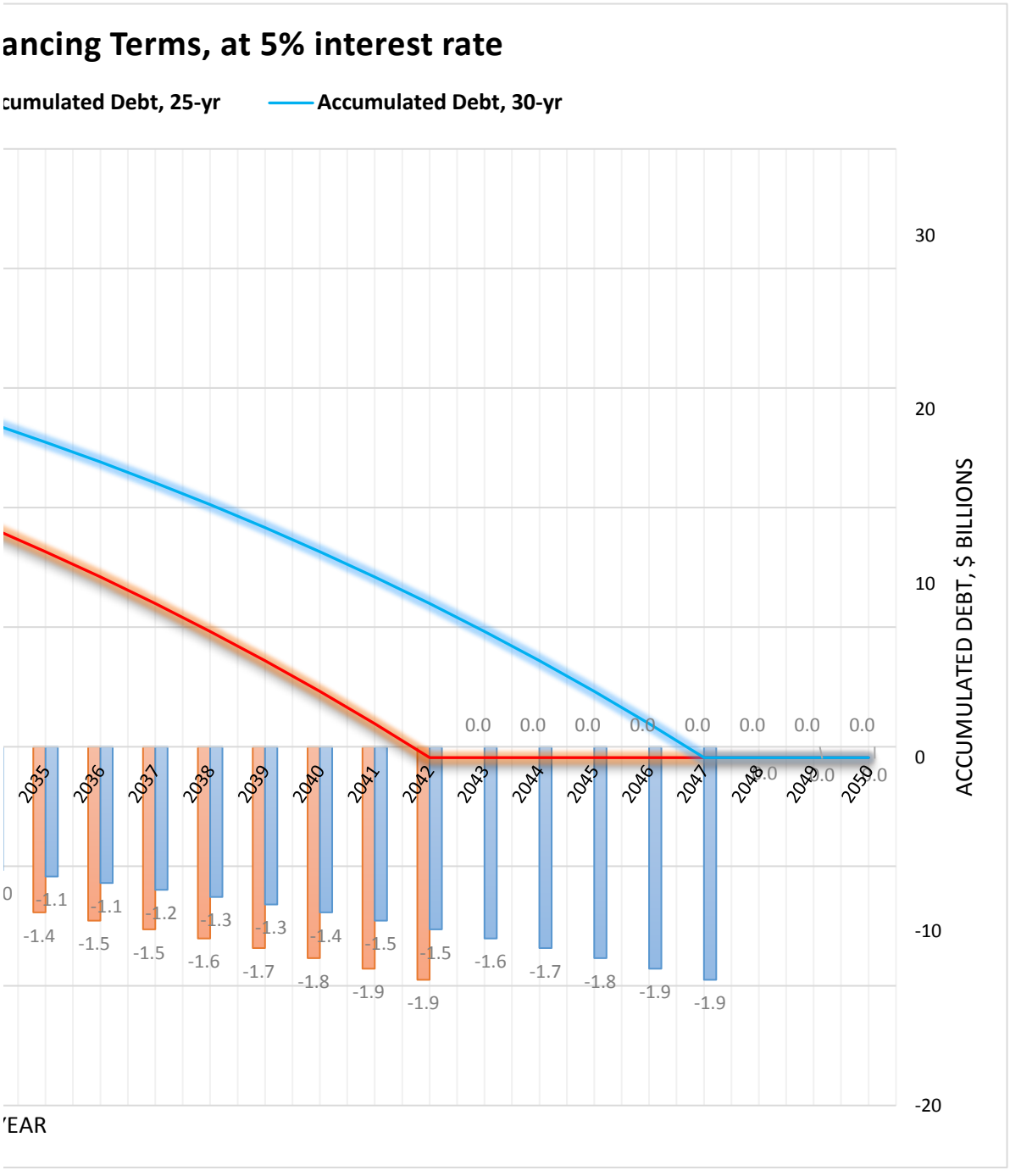


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



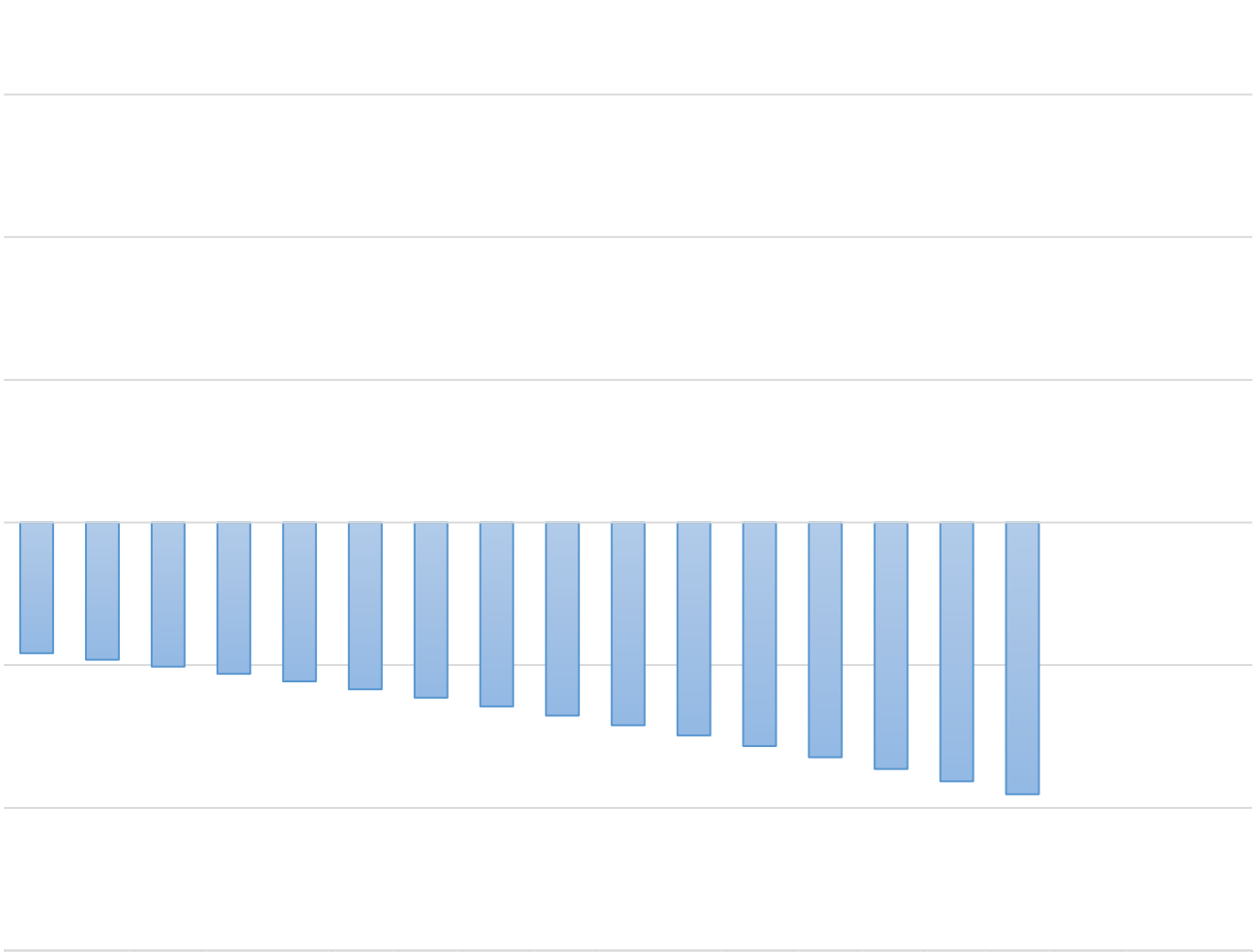

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

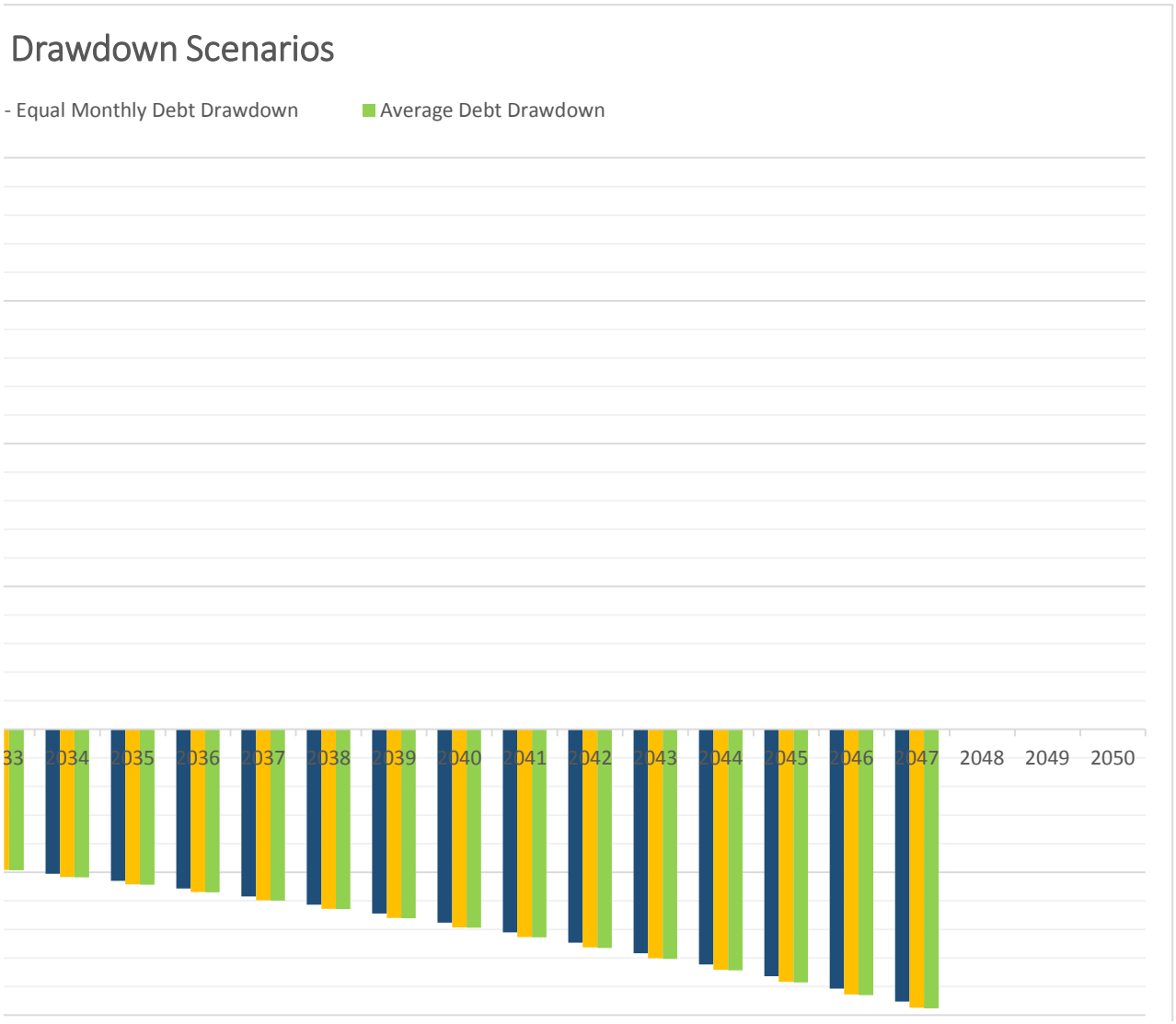
YEAR

cal Exposure



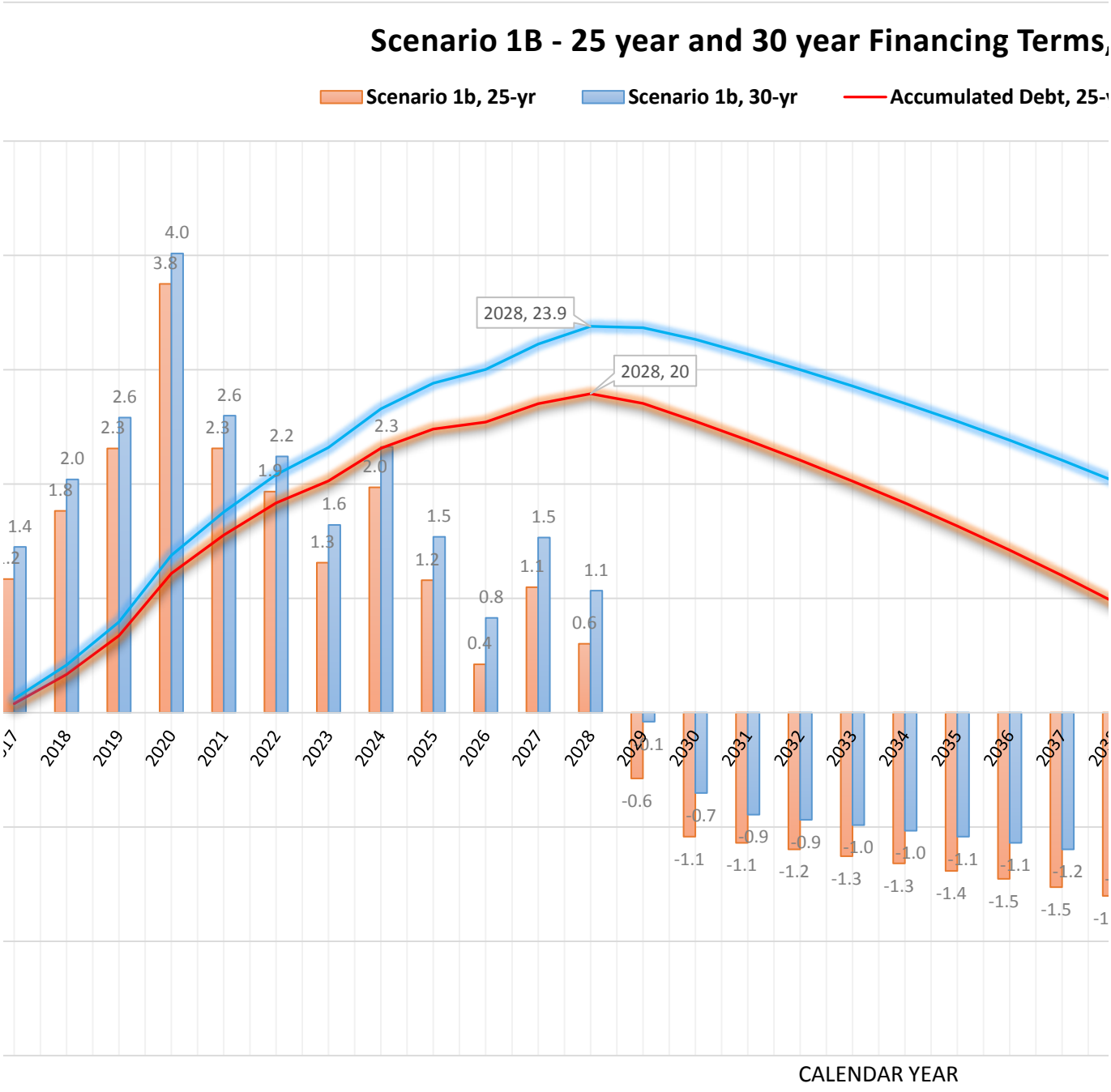
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

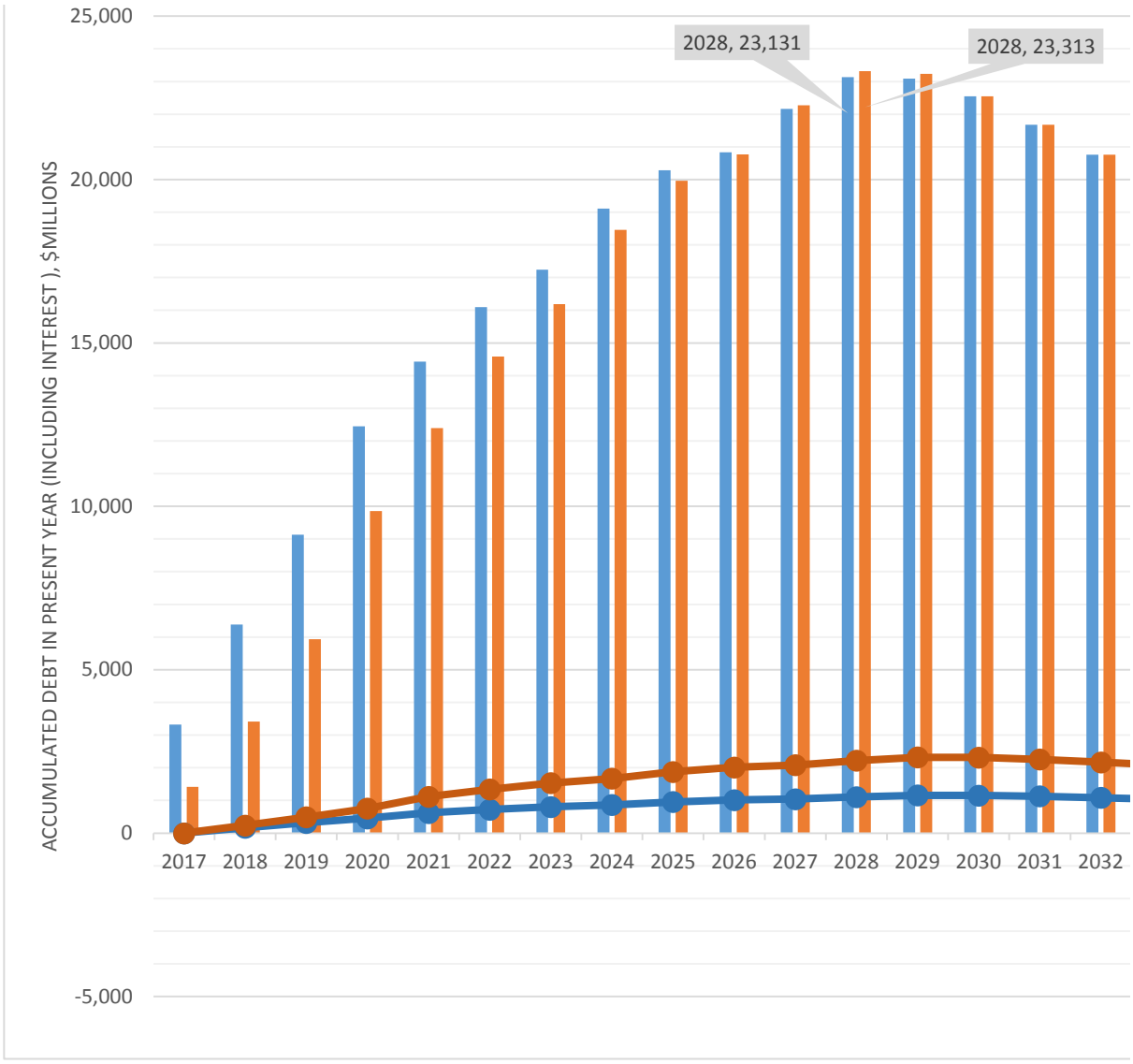


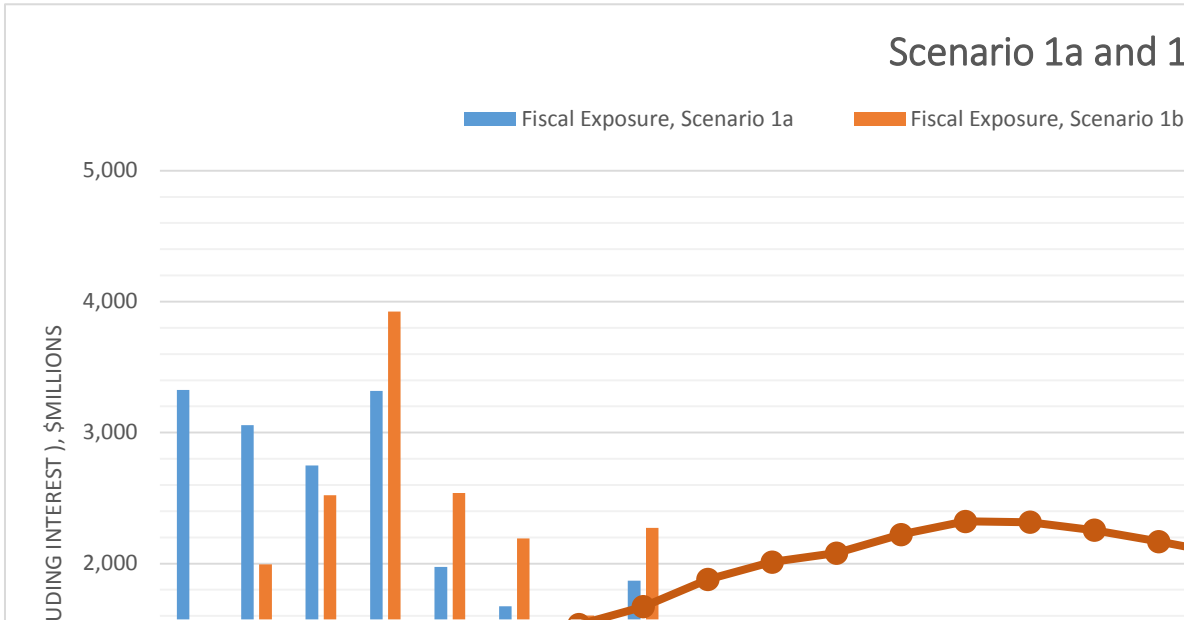
YEAR

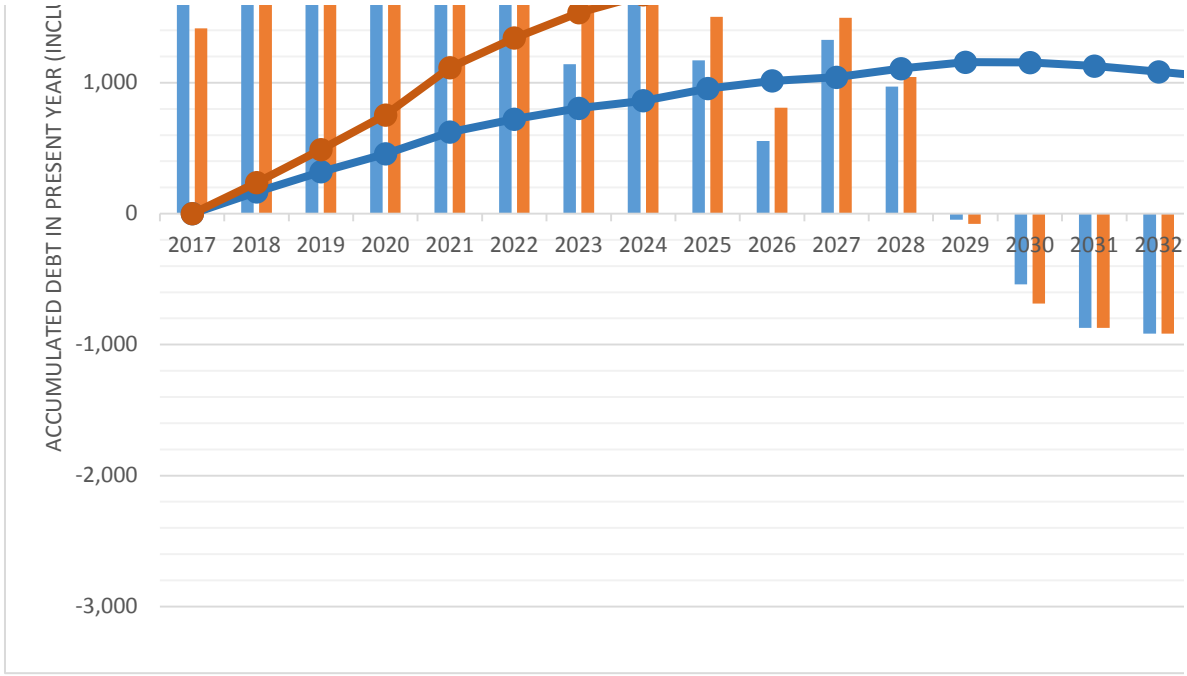
3 - 25 year and 30 year Financing Terms, at 5% interest rate

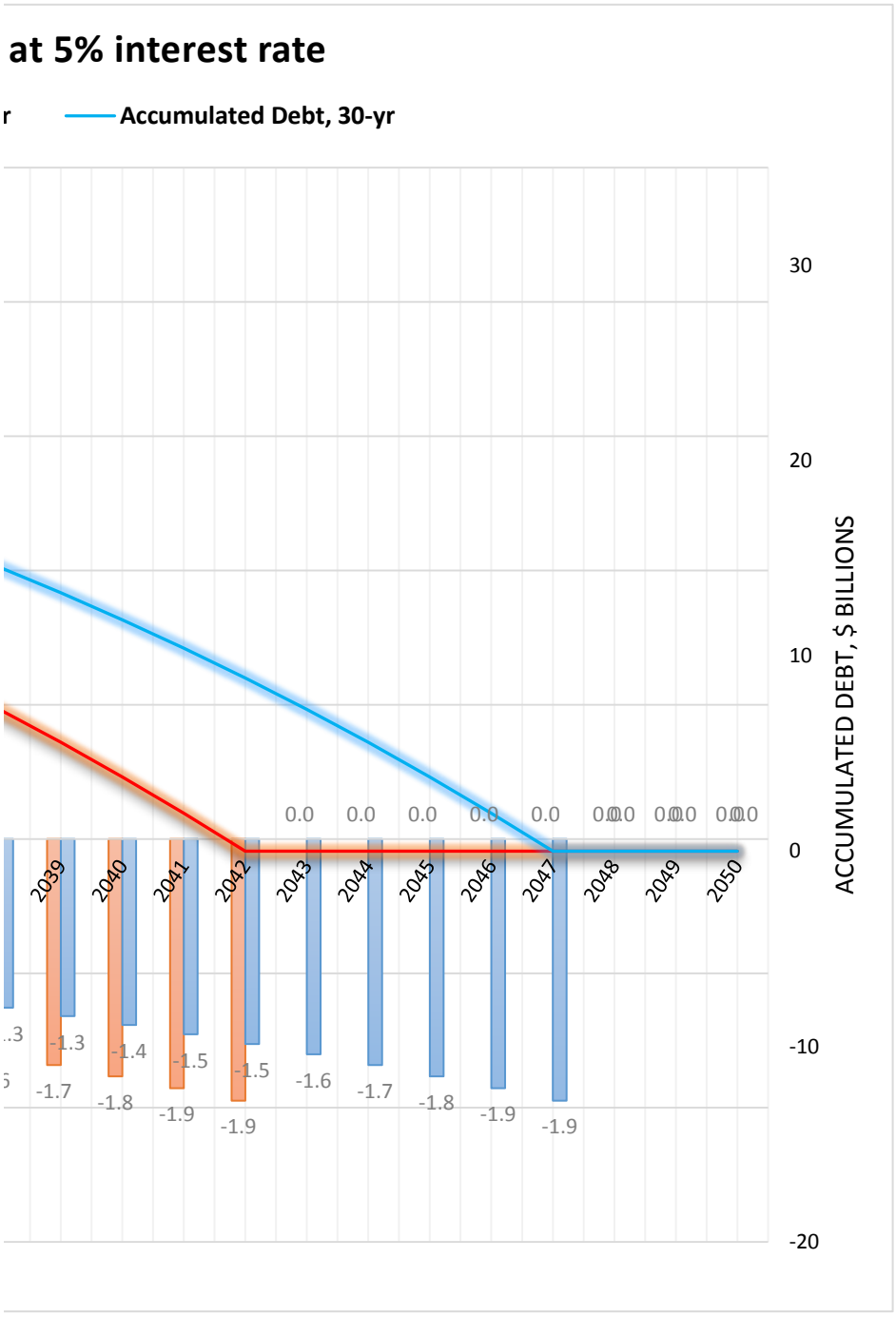





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

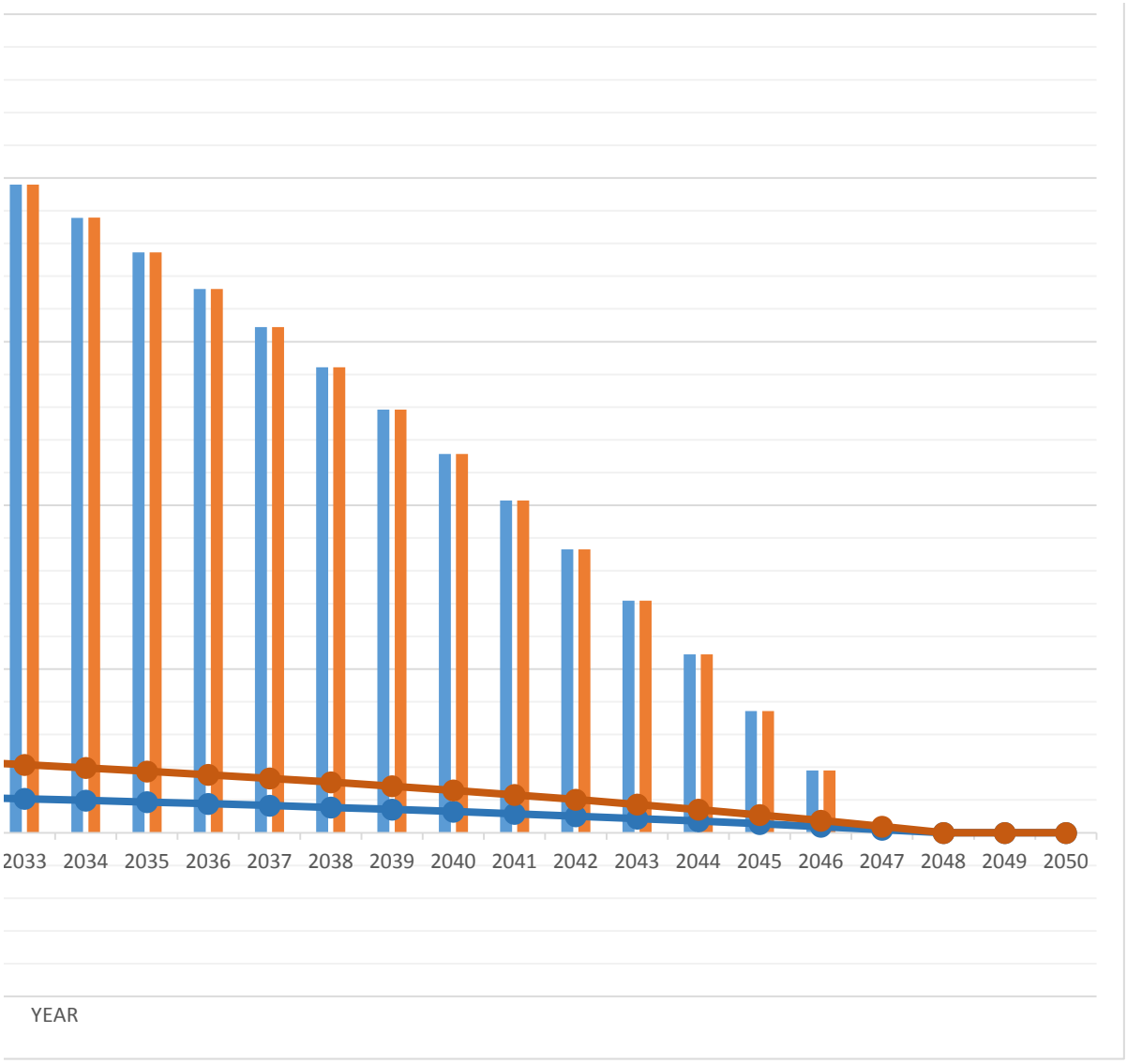

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

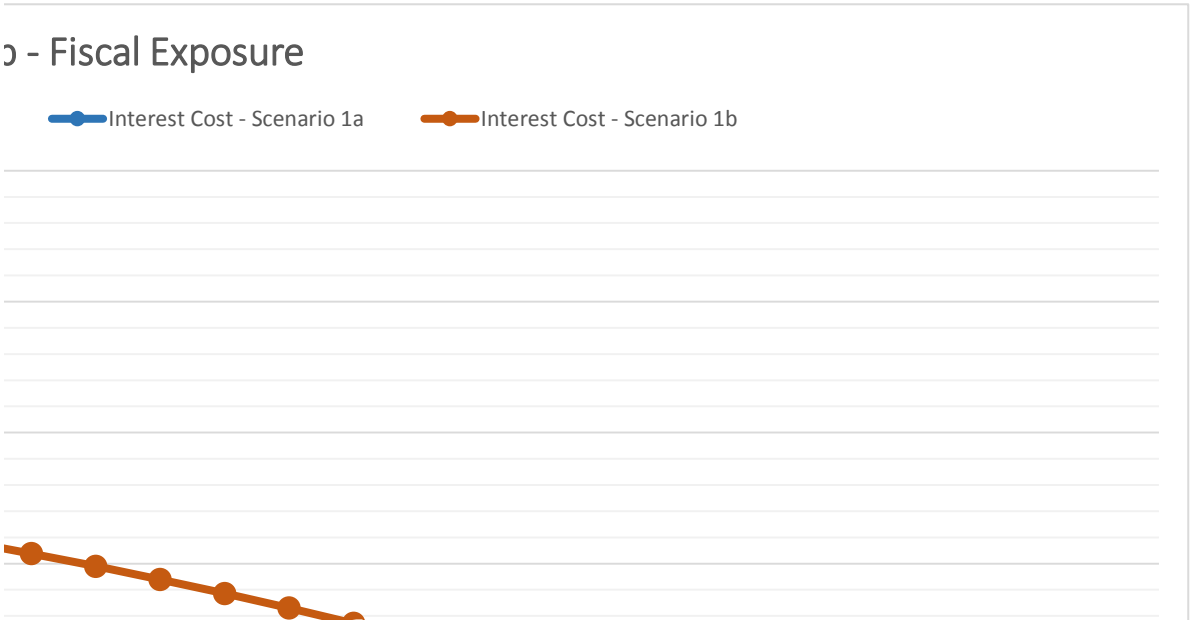

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

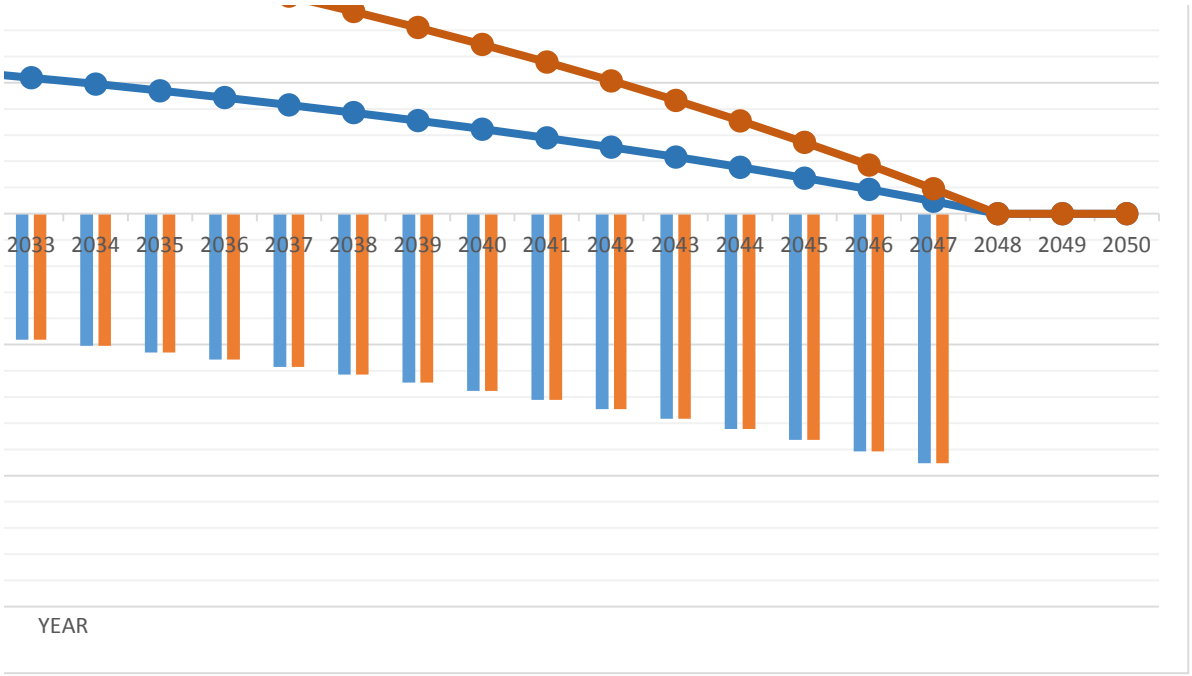


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

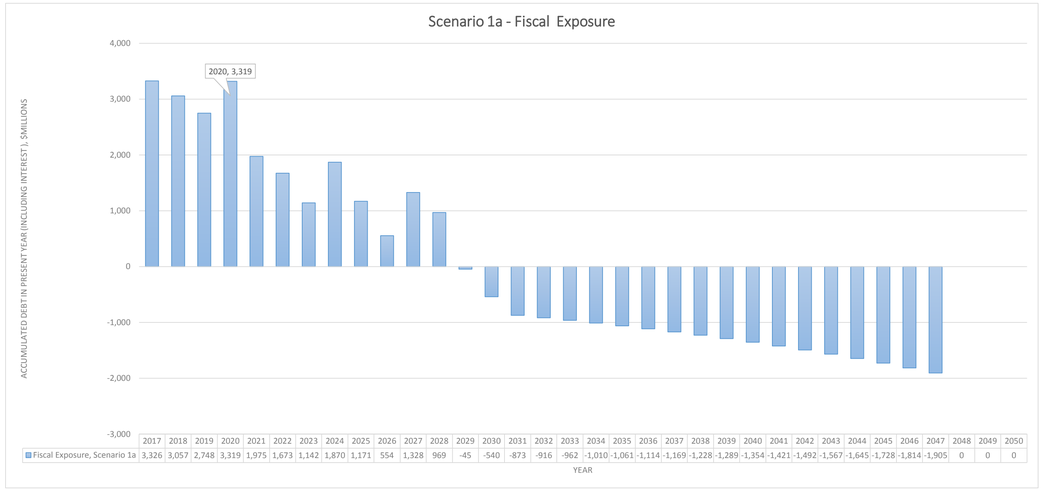
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

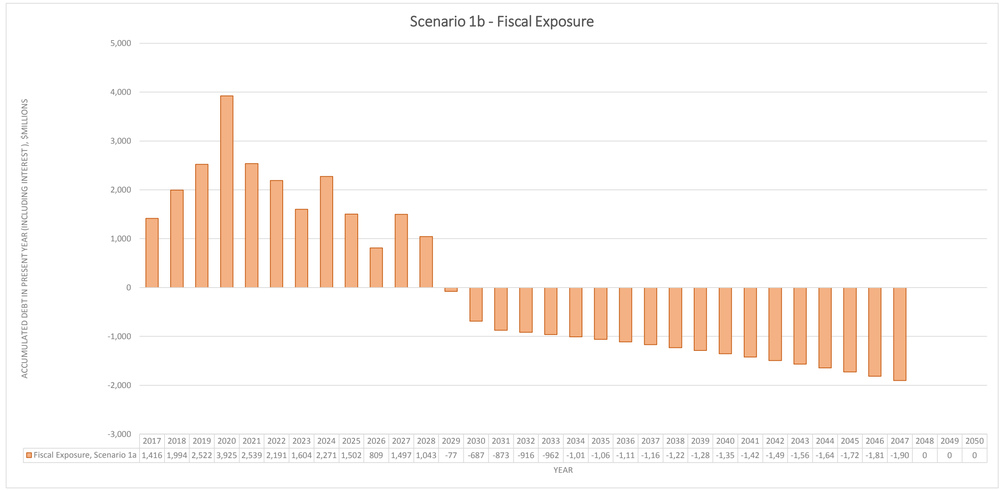
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

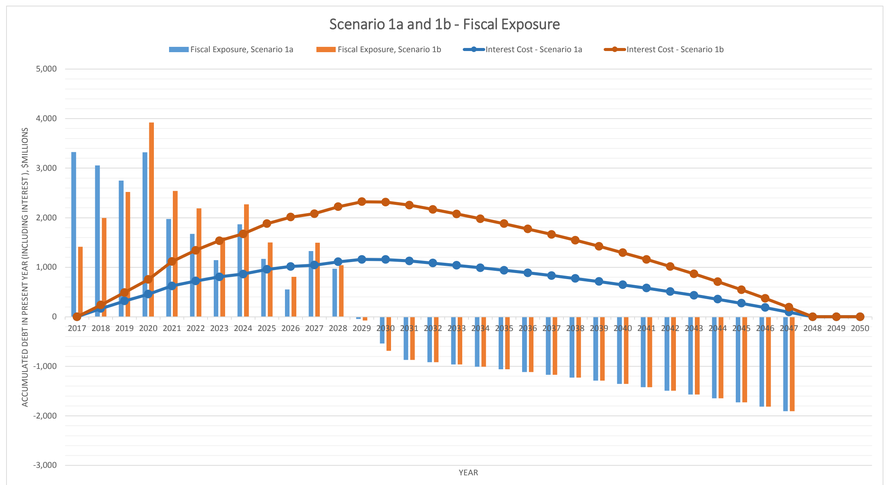
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

Notes:	Accounting treatment is to be determined.

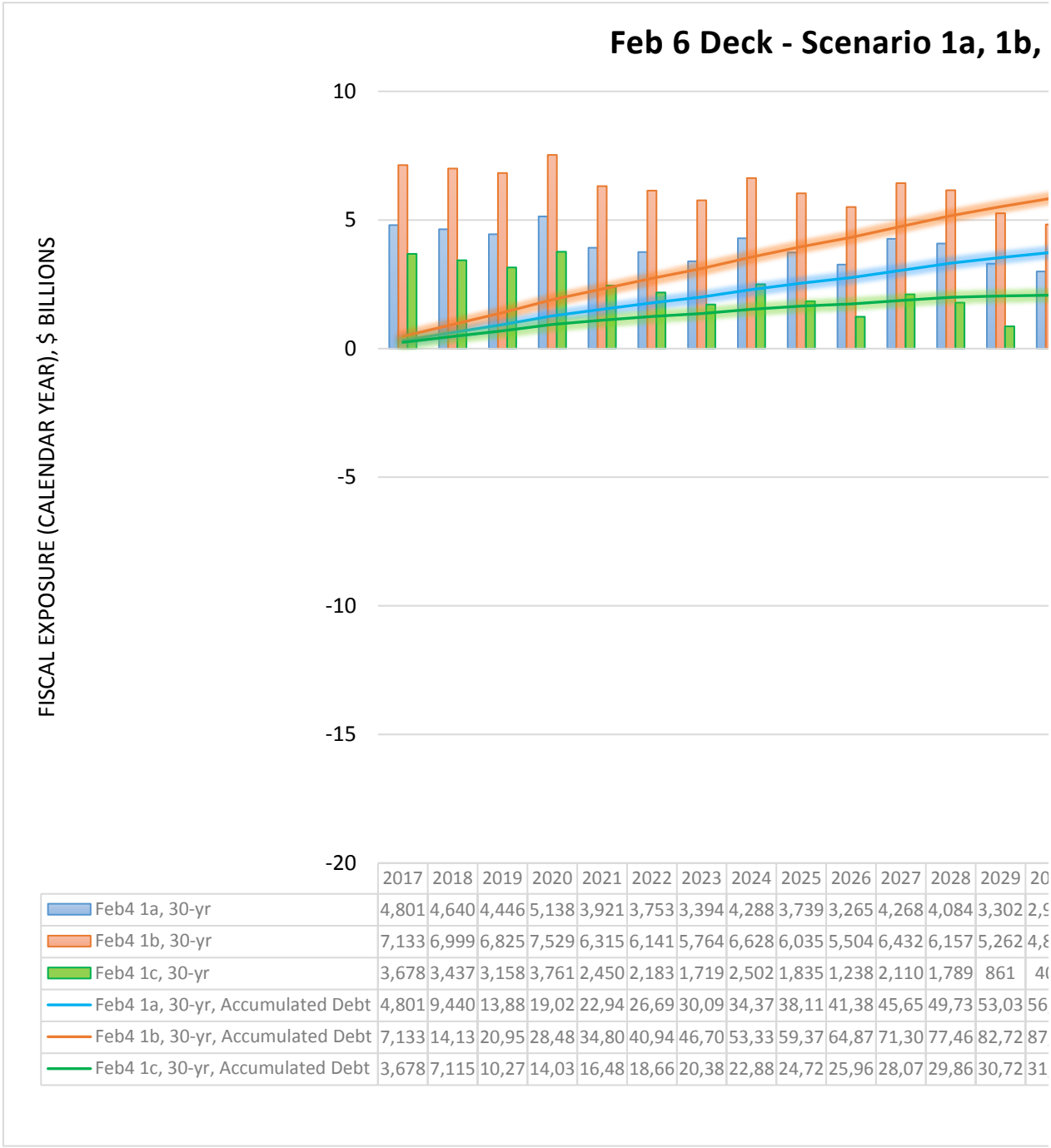

Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0


Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0


Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

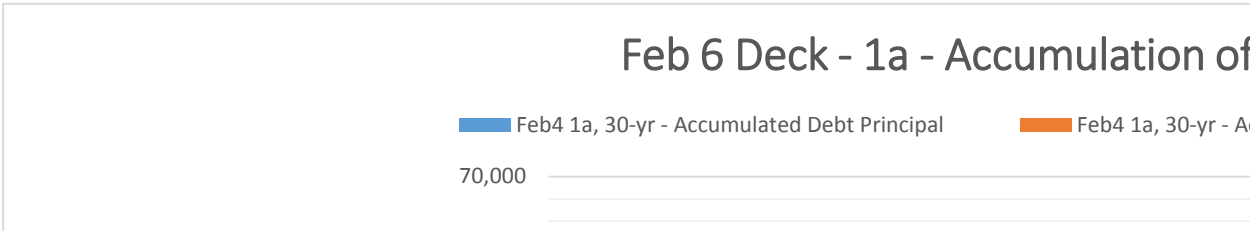
Feb 6 Deck

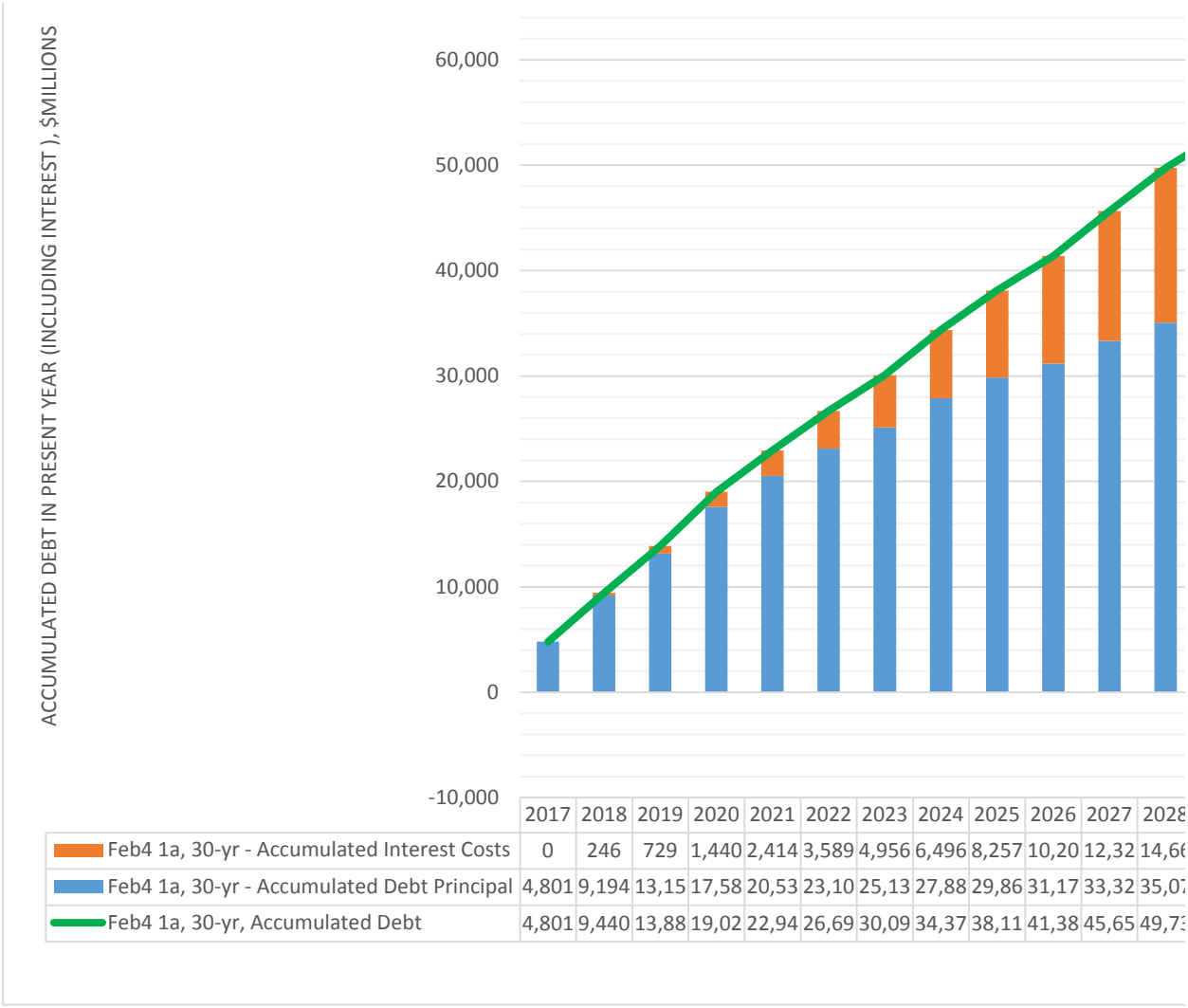
Feb 6 Deck - Scenario 1a, 1b, 1c - at 5.12% interest rate



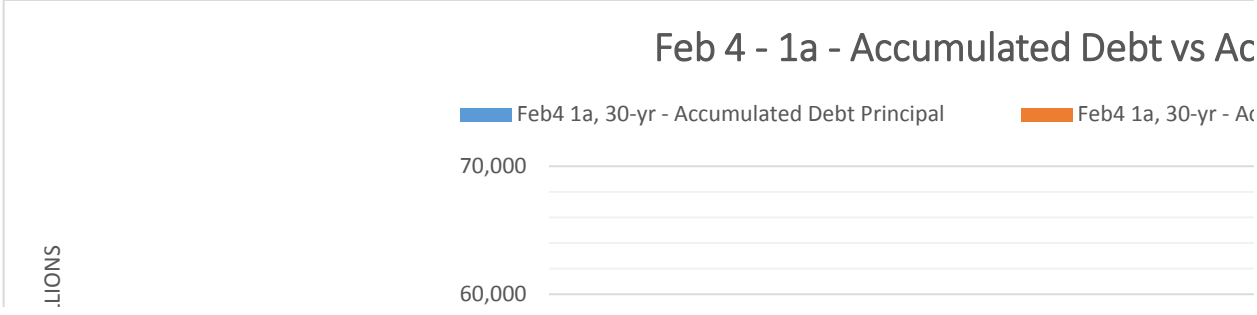
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	20
Feb4 1a, 30-yr	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,9
Feb4 1b, 30-yr	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,8
Feb4 1c, 30-yr	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	4(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73	53,03	56
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31

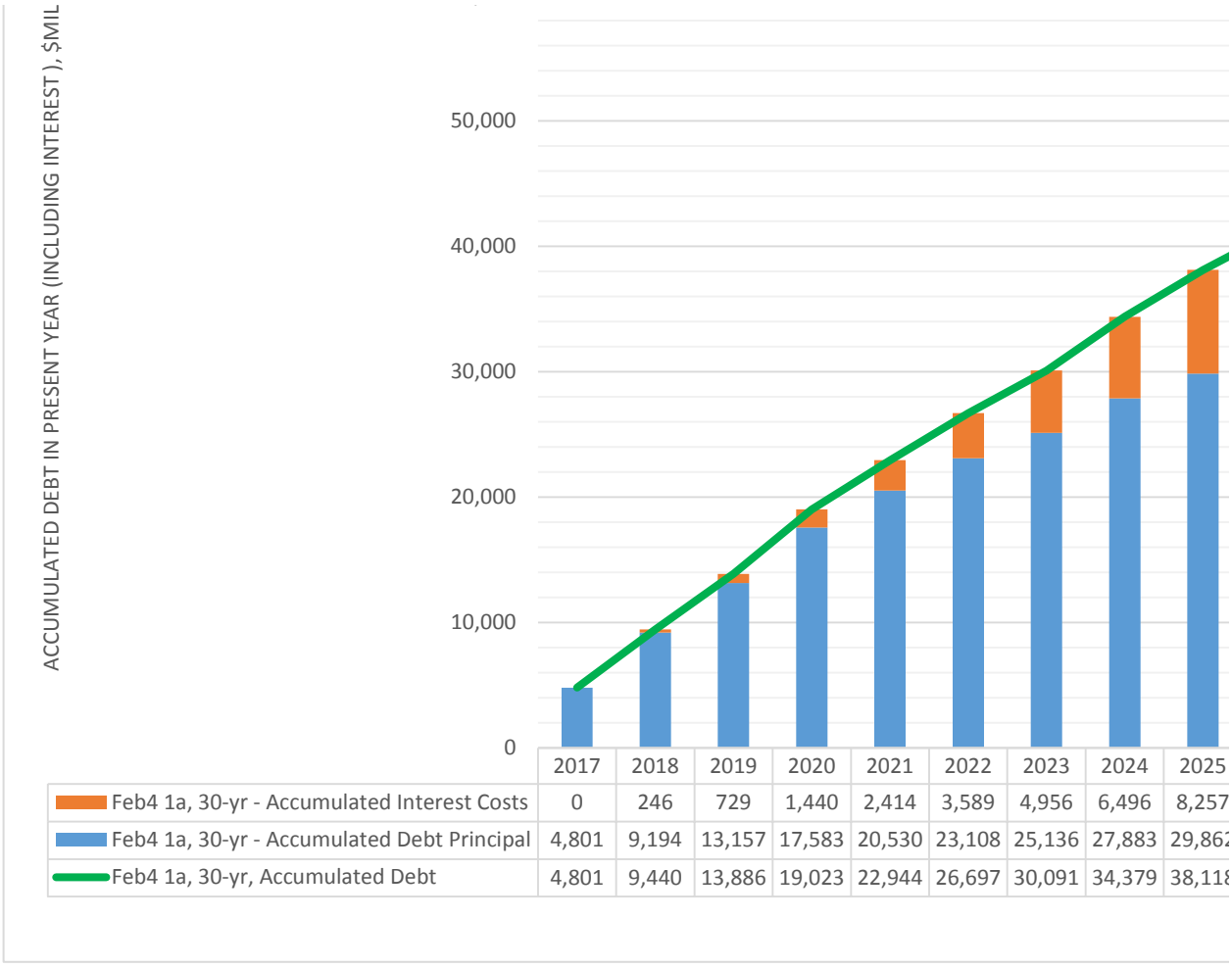
Feb 6 Deck - 1a - Accumulation of Debt (Principal and Interest)



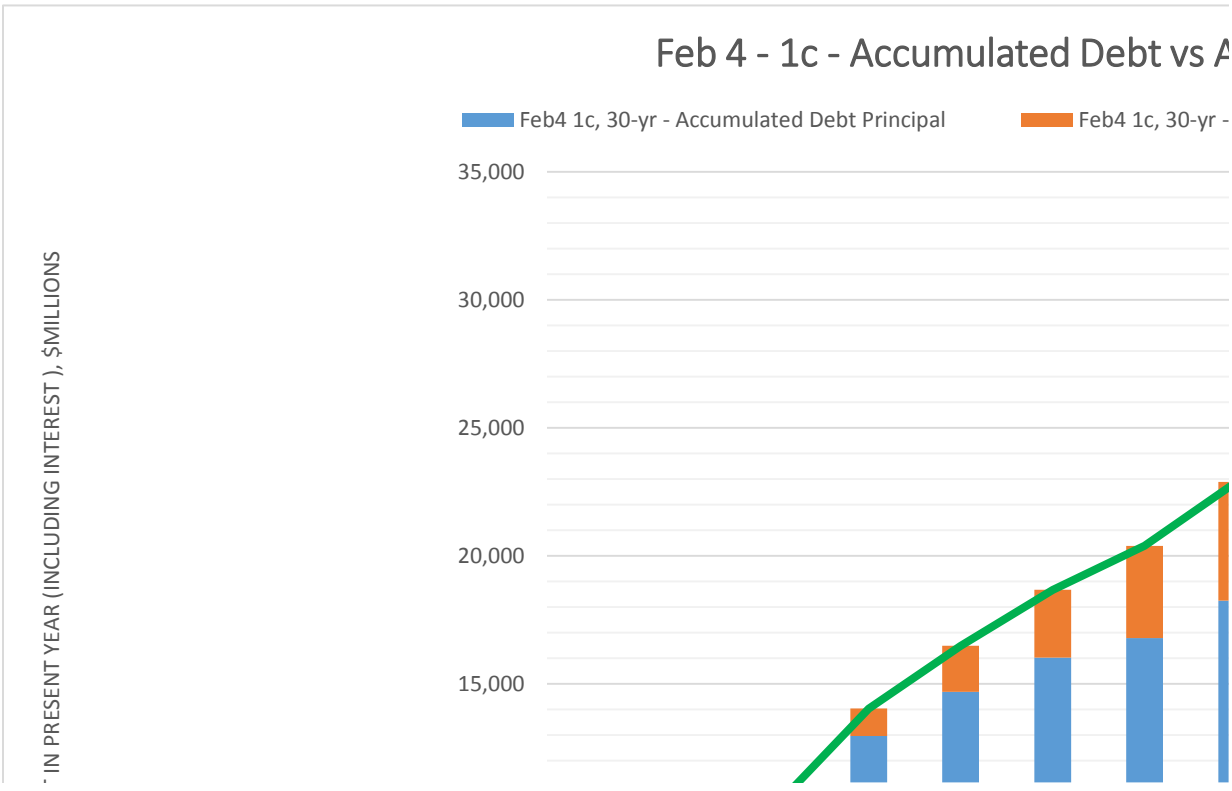


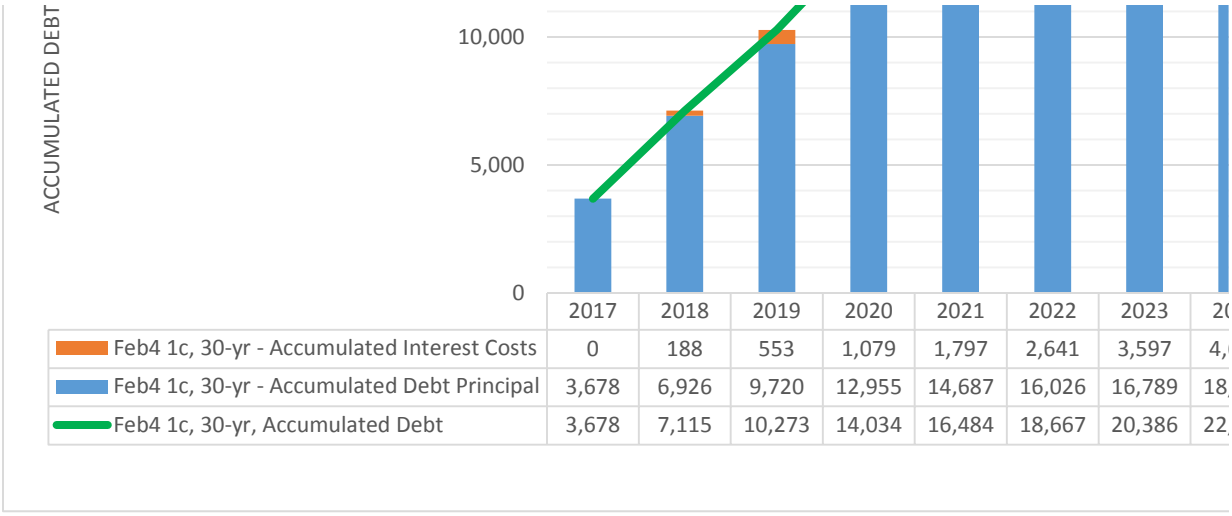
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,66
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,07
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73



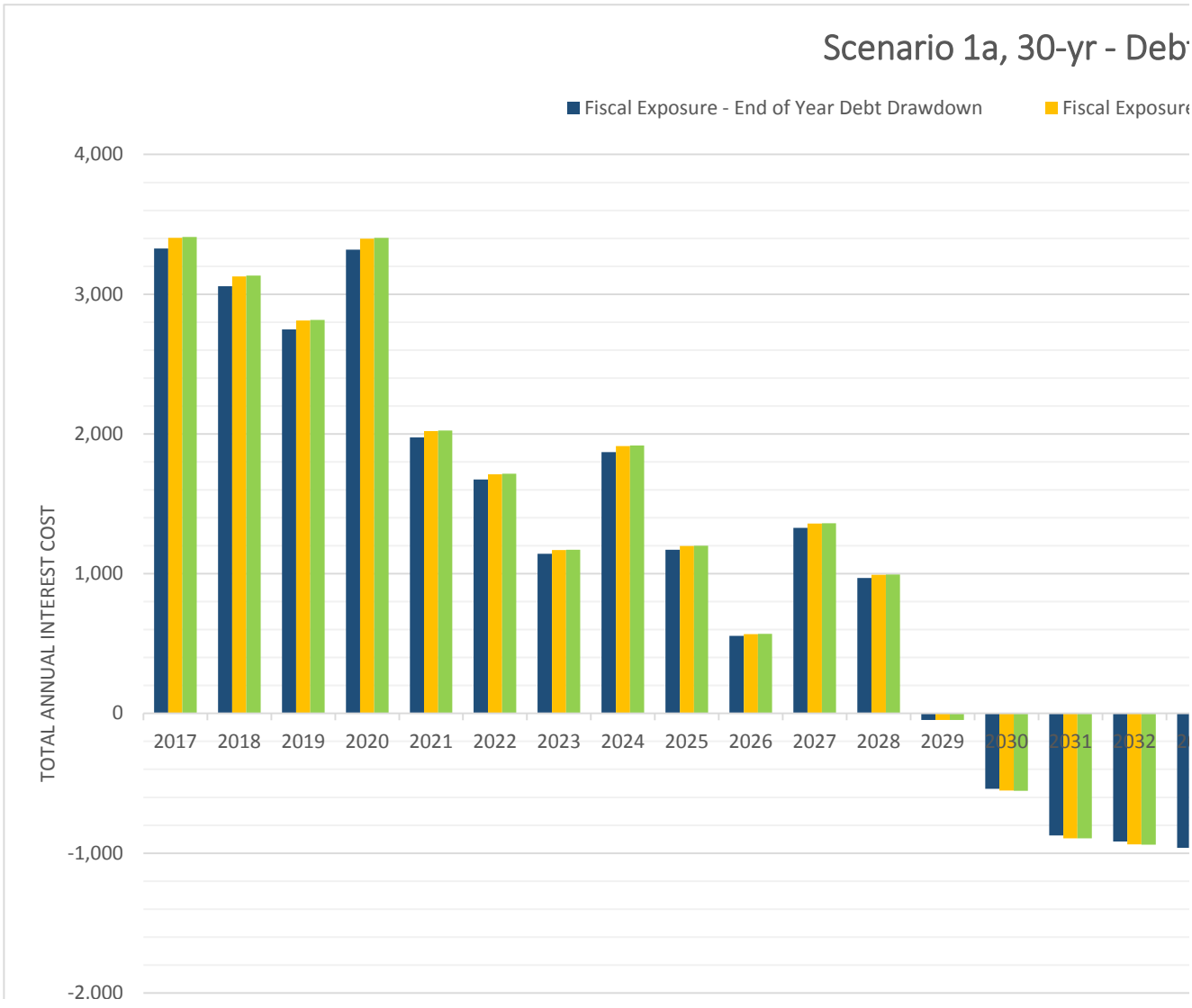


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



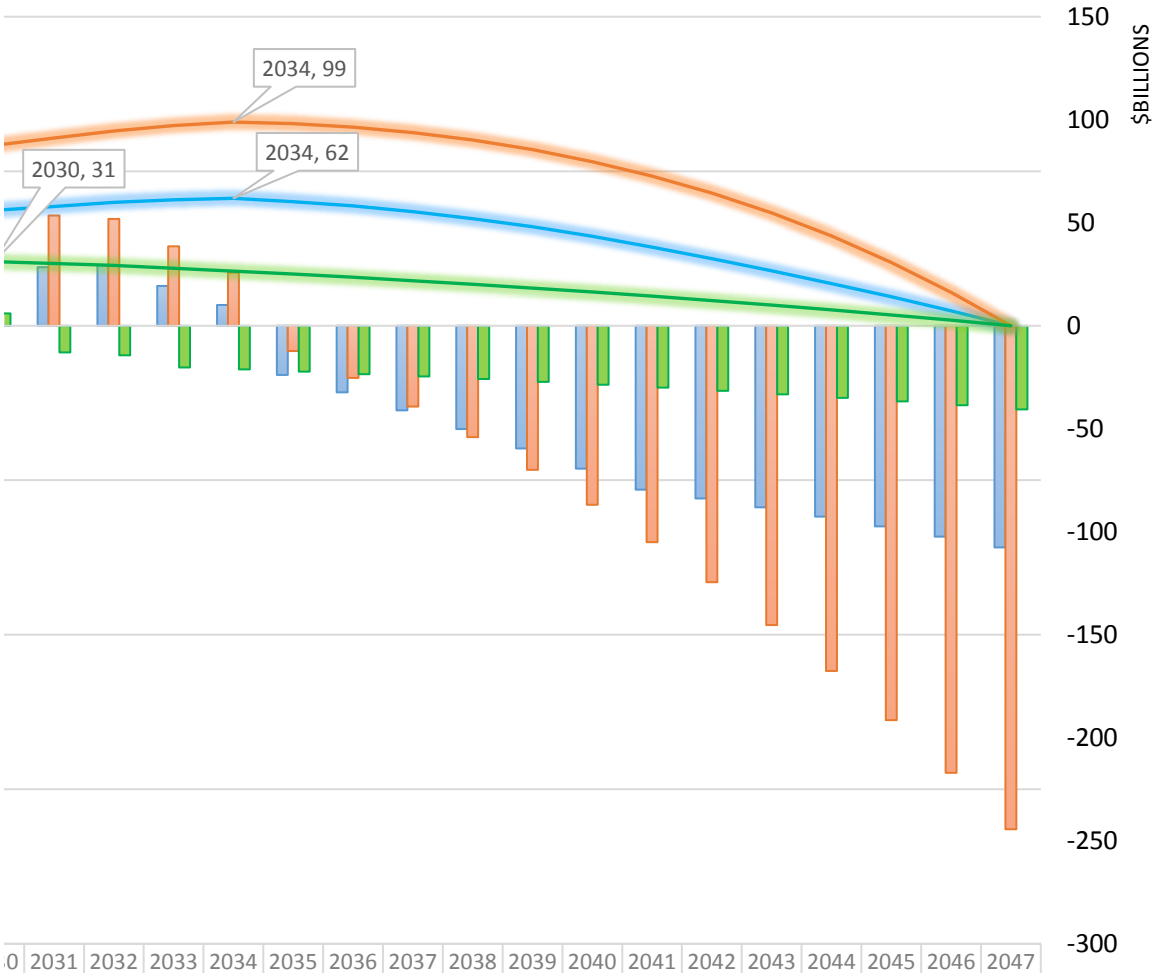


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22



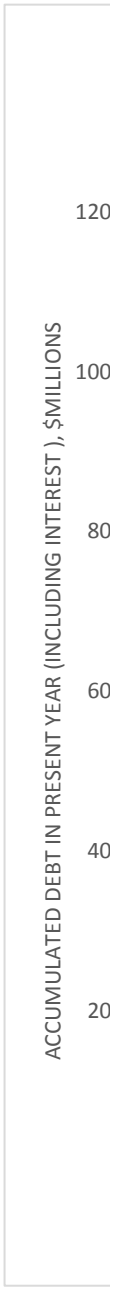

-3,000

lc - at 5.12% interest rate



0	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
98	1,896	1,966	1,288	672	-1,59	-2,15	-2,73	-3,34	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
26	3,568	3,457	2,571	1,716	-819	-1,68	-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
4	-860	-961	-1,34	-1,41	-1,48	-1,56	-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0
55	91,12	94,57	97,14	98,86	98,04	96,35	93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0
12	30,26	29,30	27,95	26,54	25,05	23,49	21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

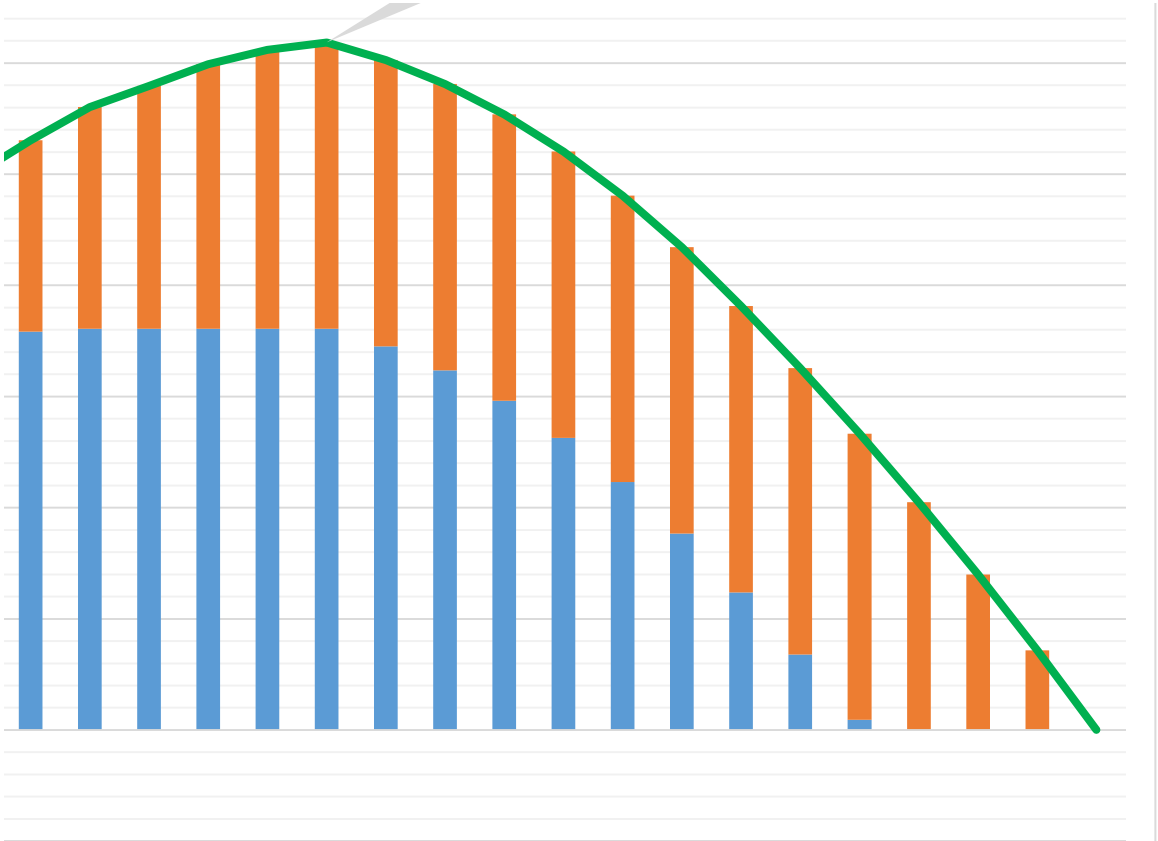
CALENDAR YEAR



Debt (Principal and Interest)

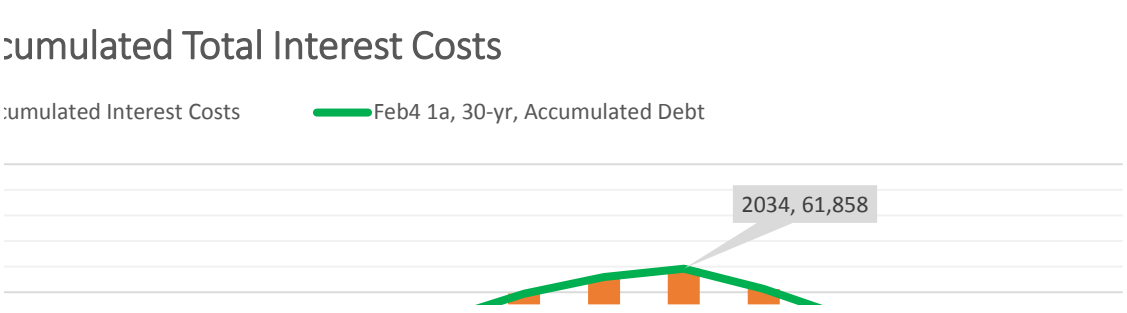
cumulated Interest Costs — Feb4 1a, 30-yr, Accumulated Debt

2034, 61,858

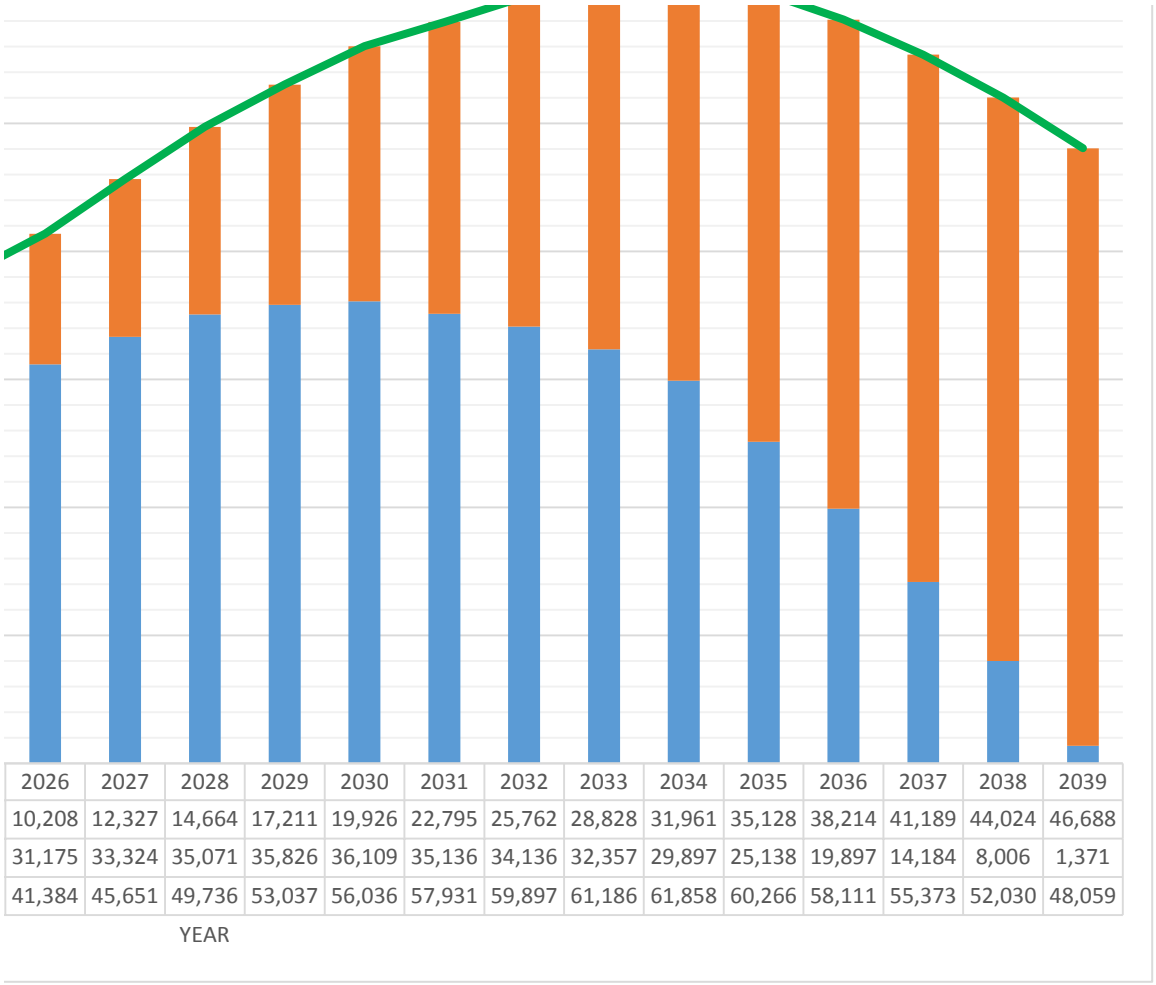


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



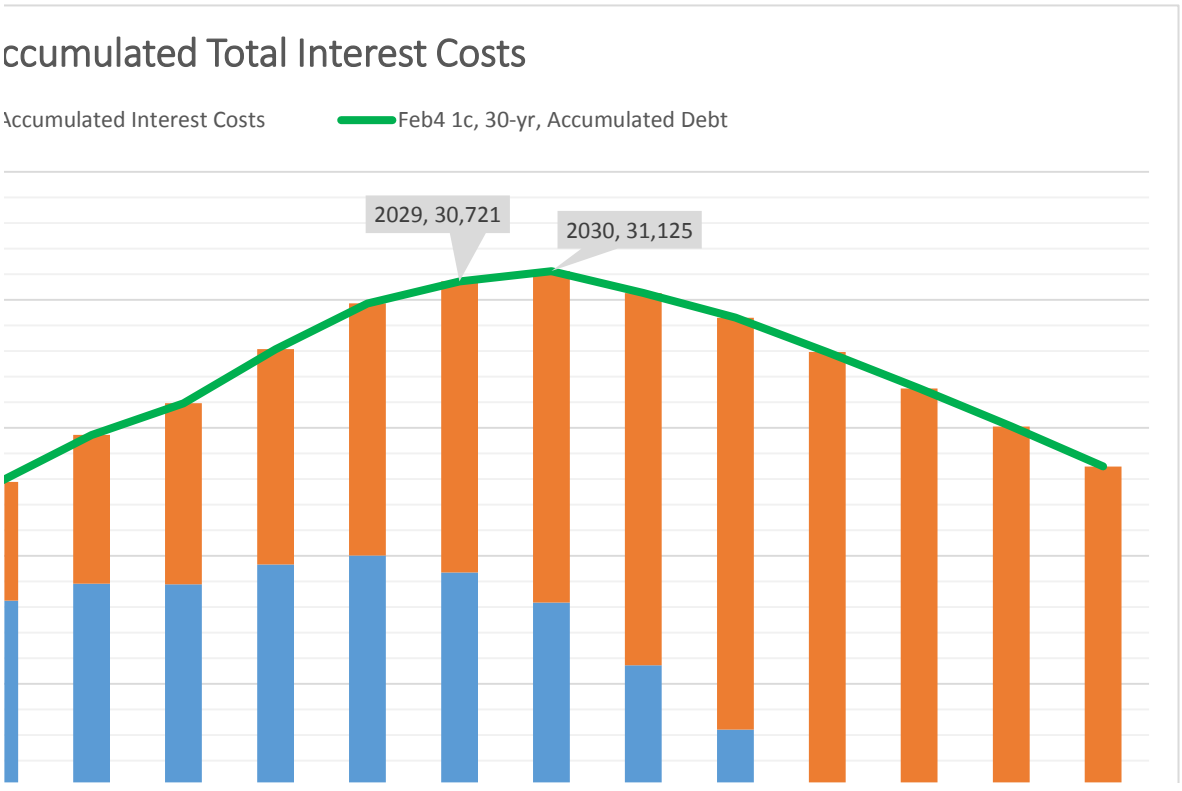
LIONS

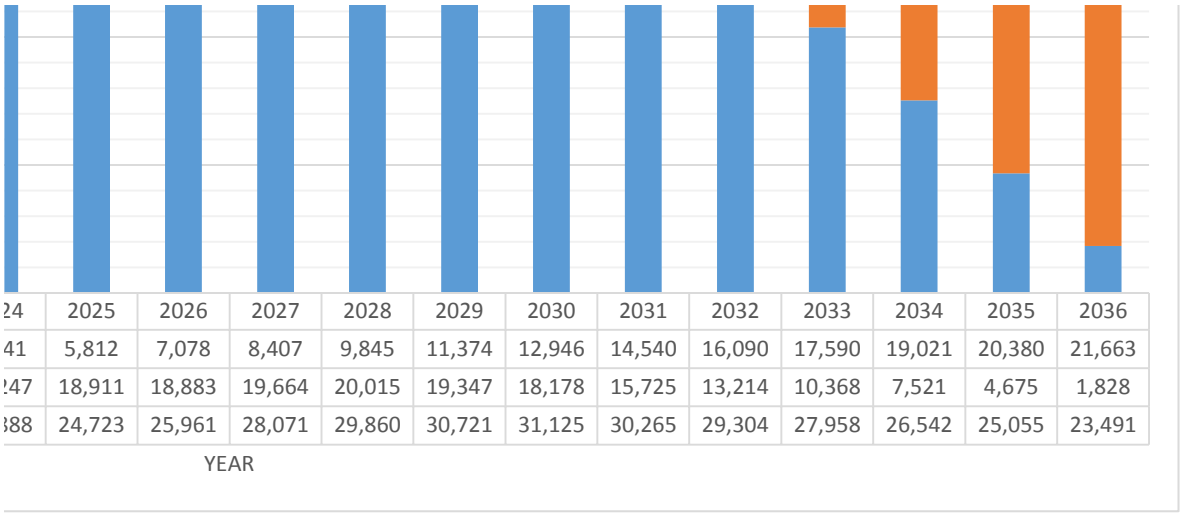


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

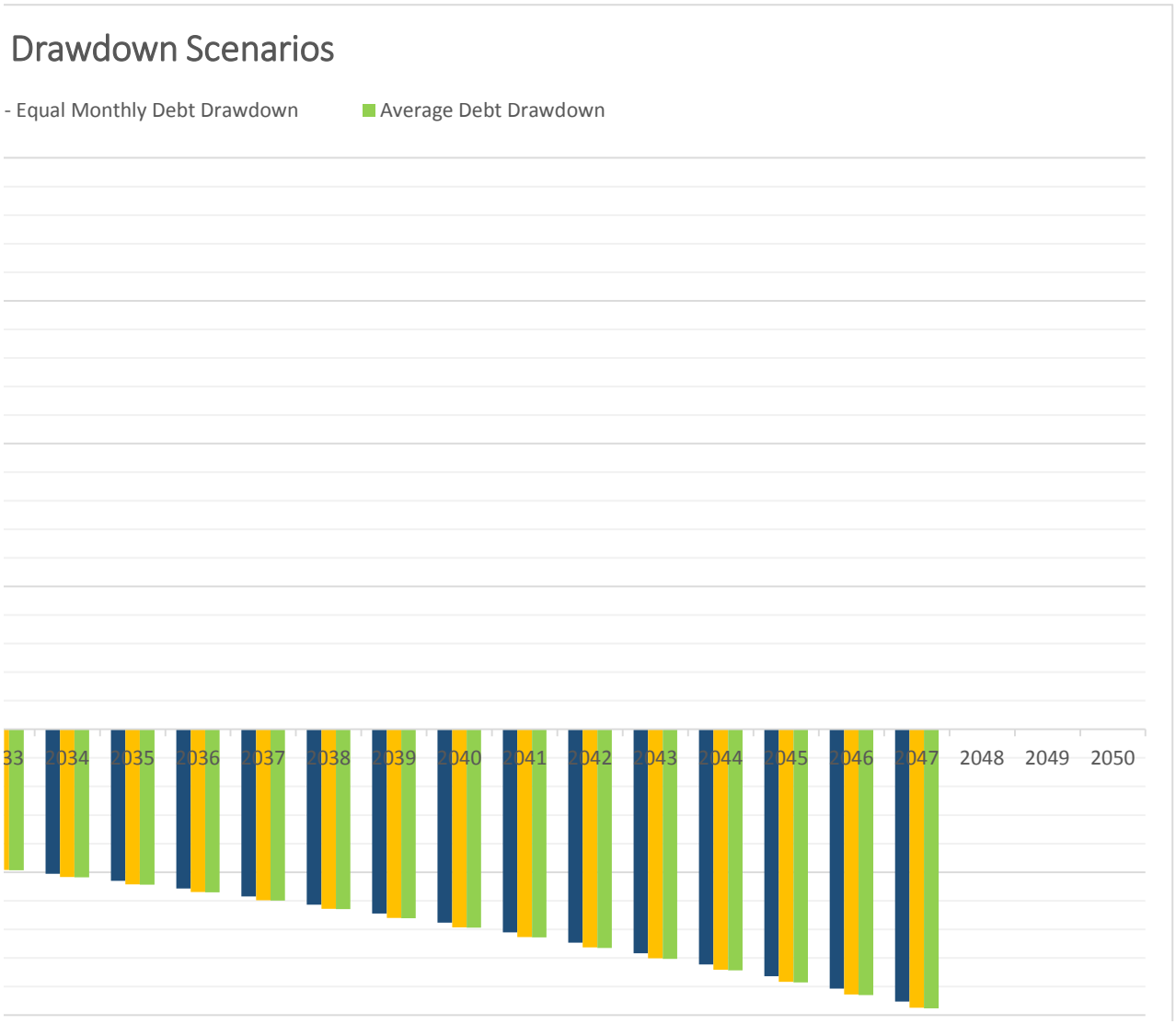
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





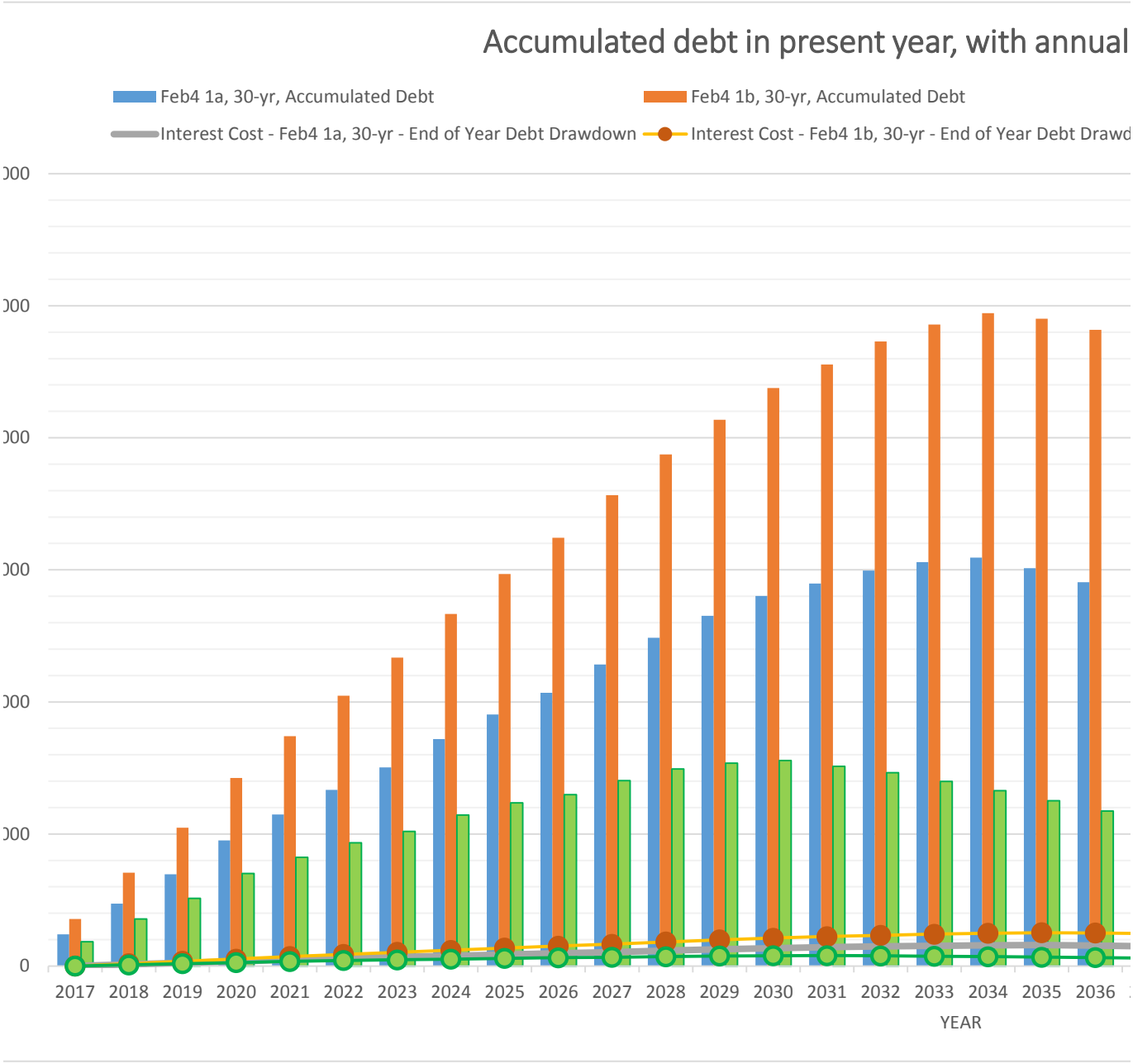
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

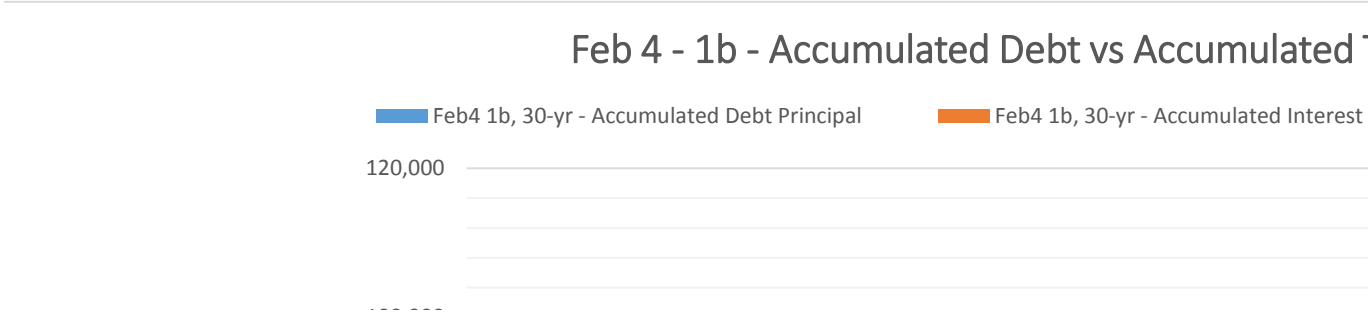
YEAR

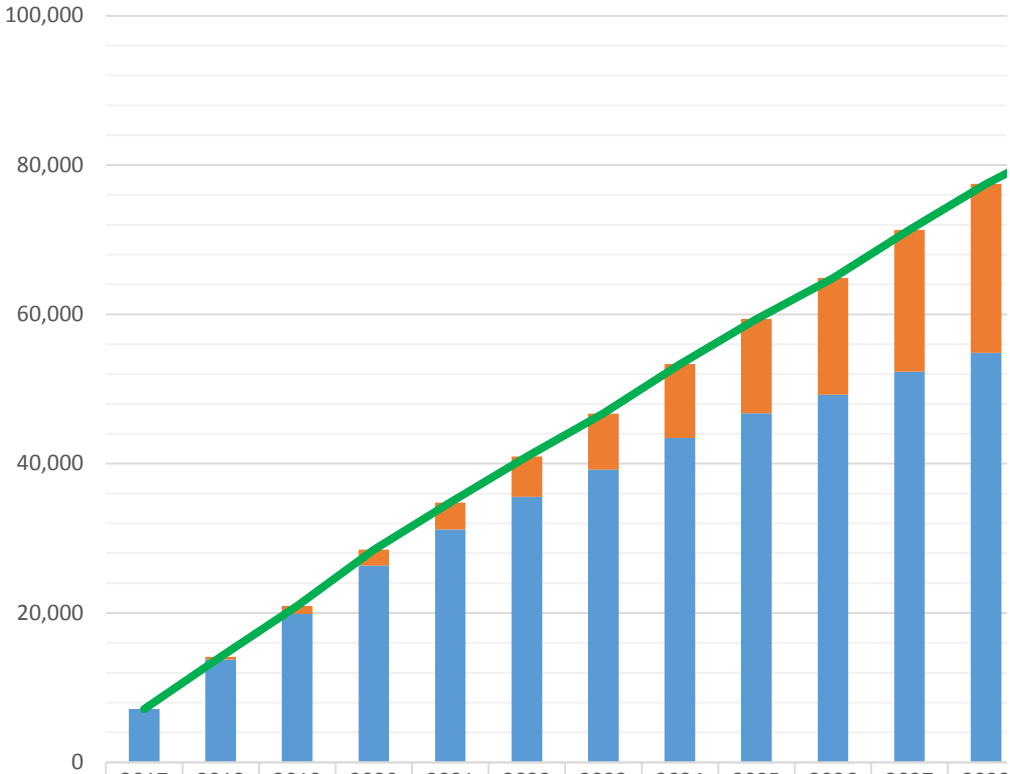


YEAR

ɜ - 25 year and 30 year Financing Terms, at 5% interest rate

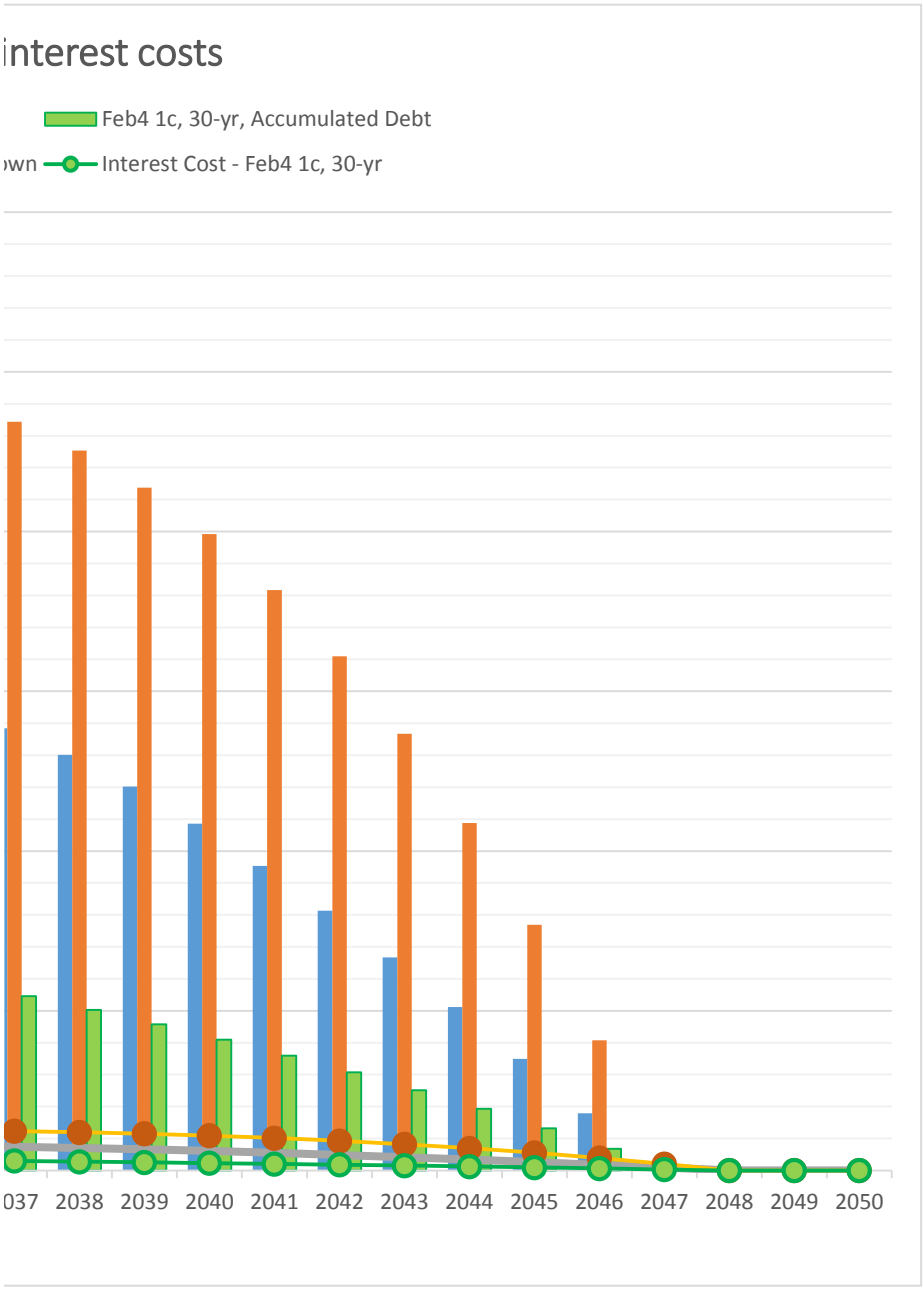


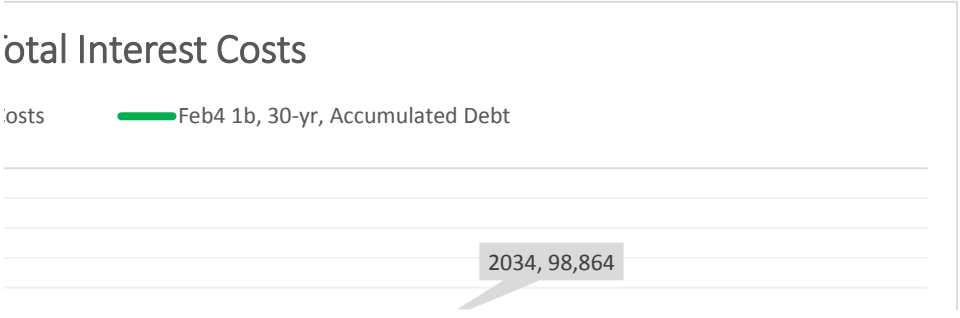

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

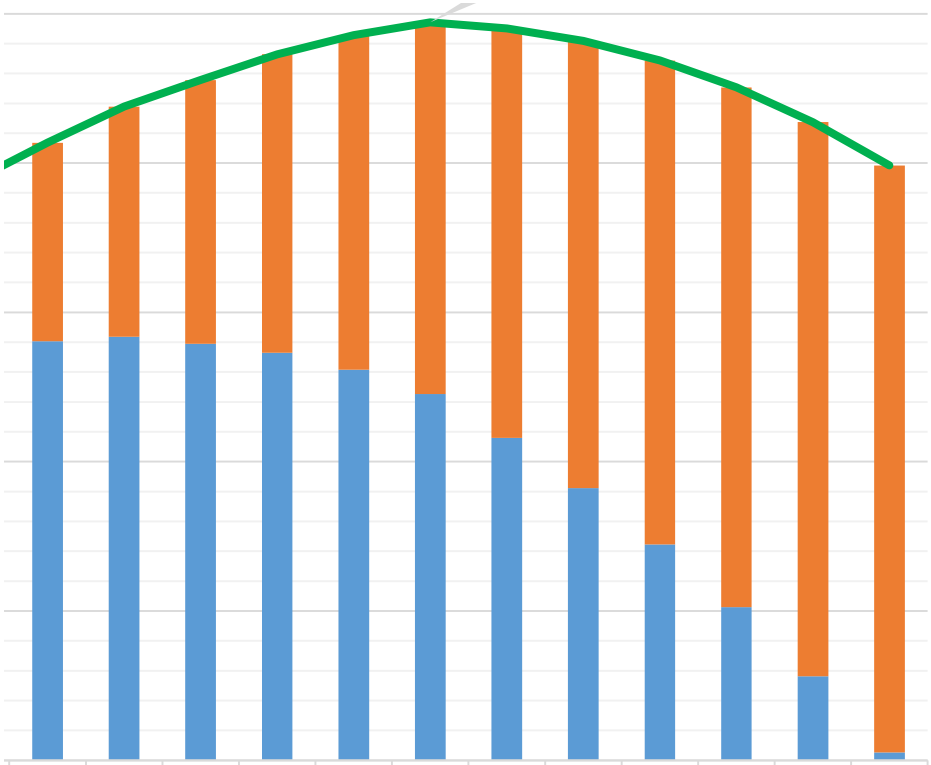


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y


interest costs
Feb4 1c, 30-yr, Accumulated Debt
wn
Interest Cost - Feb4 1c, 30-yr
037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR

Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

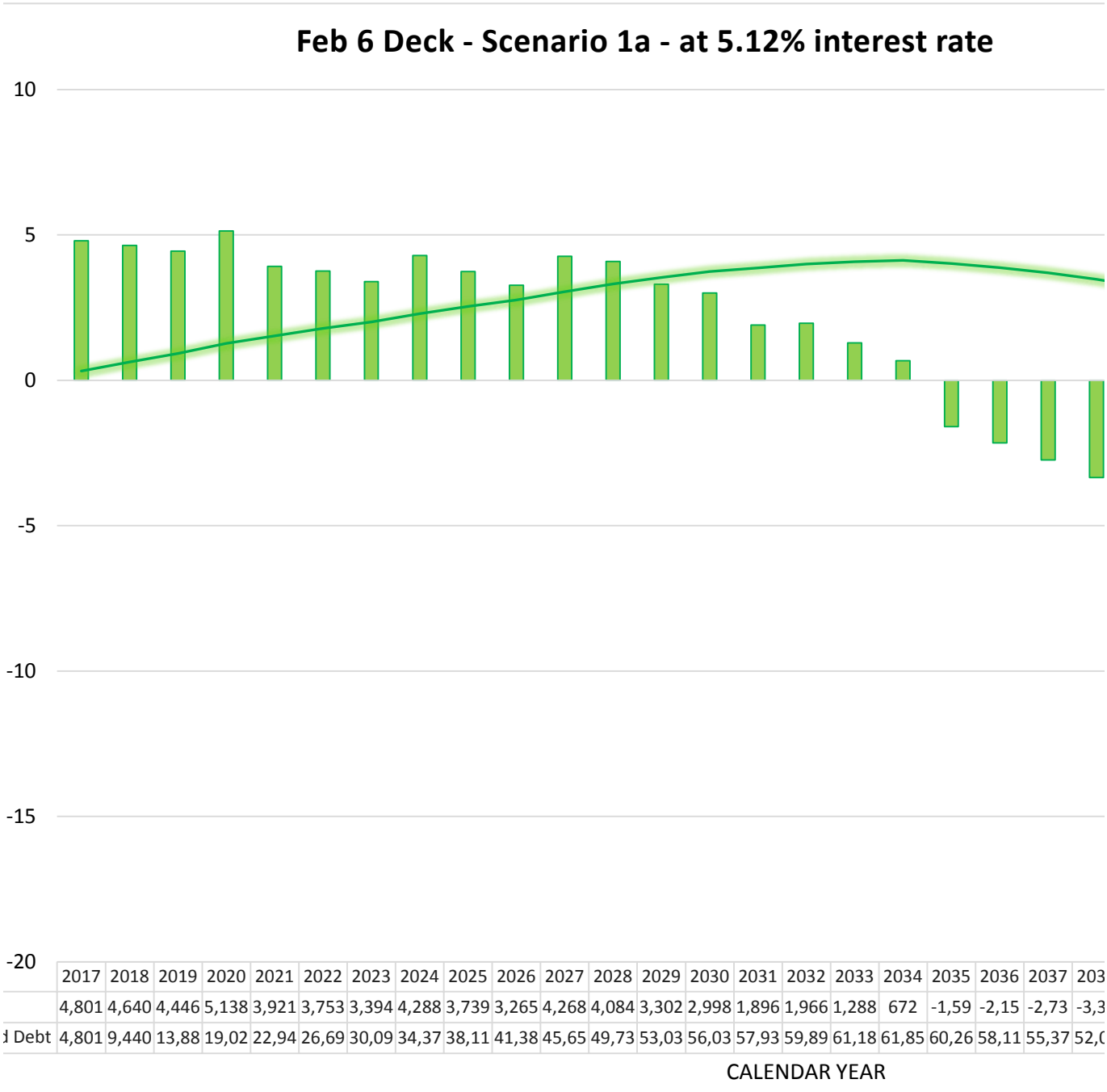
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

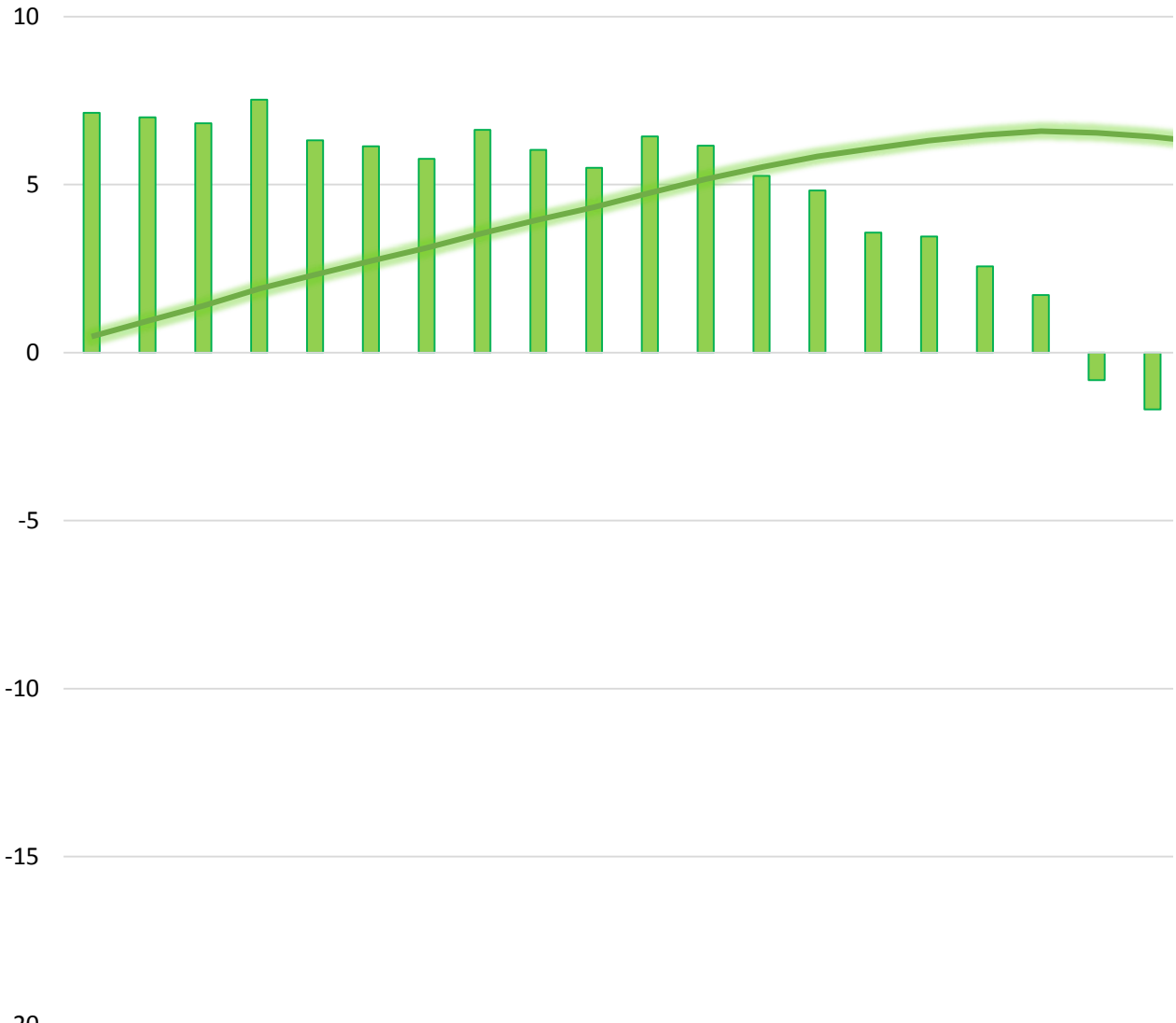
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

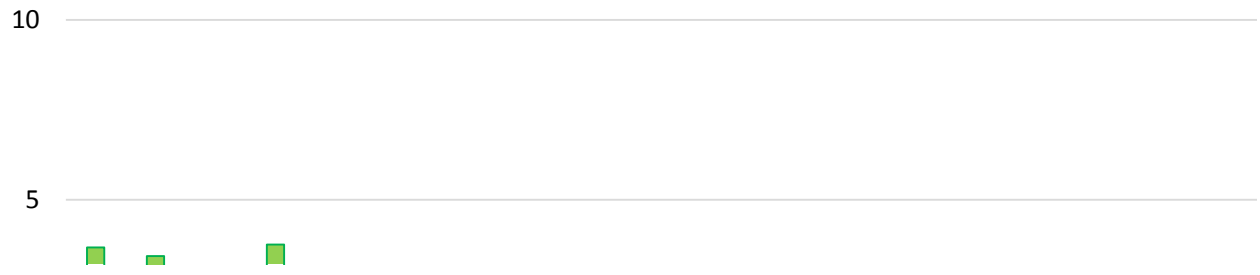
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

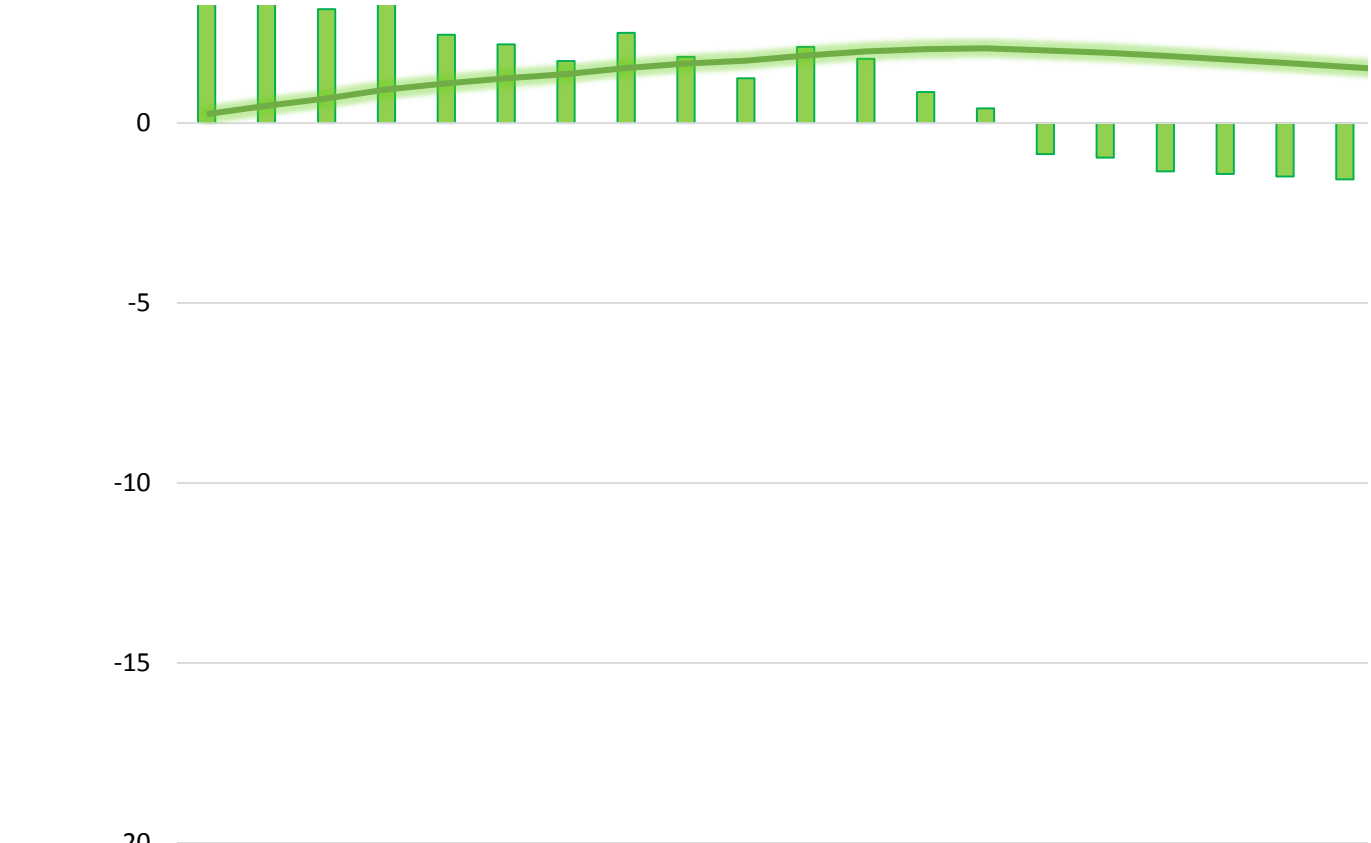


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



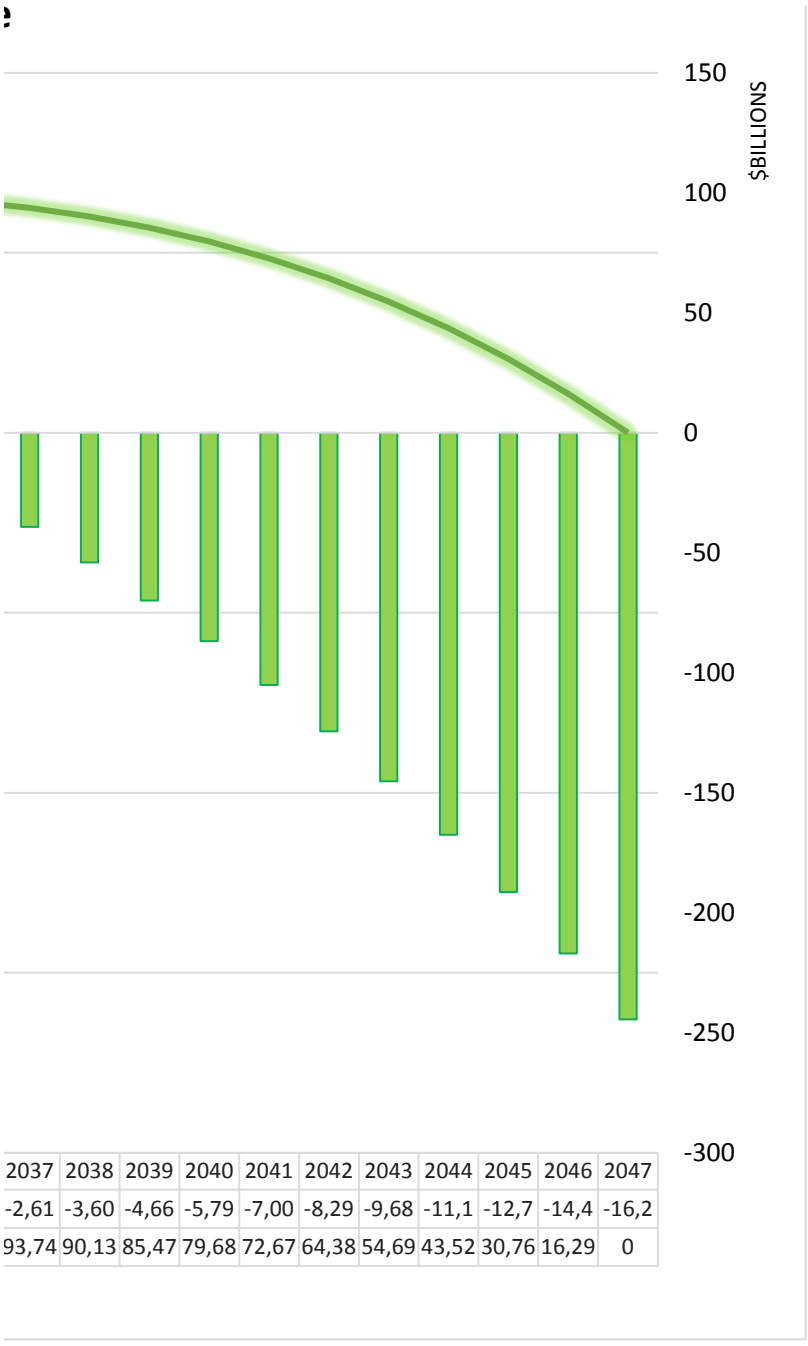


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

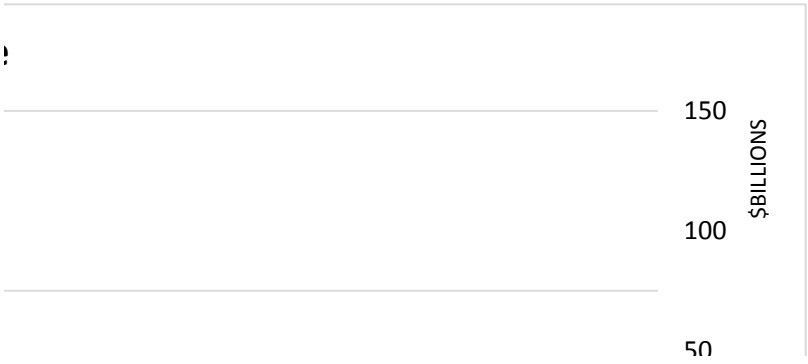
CALENDAR YEAR

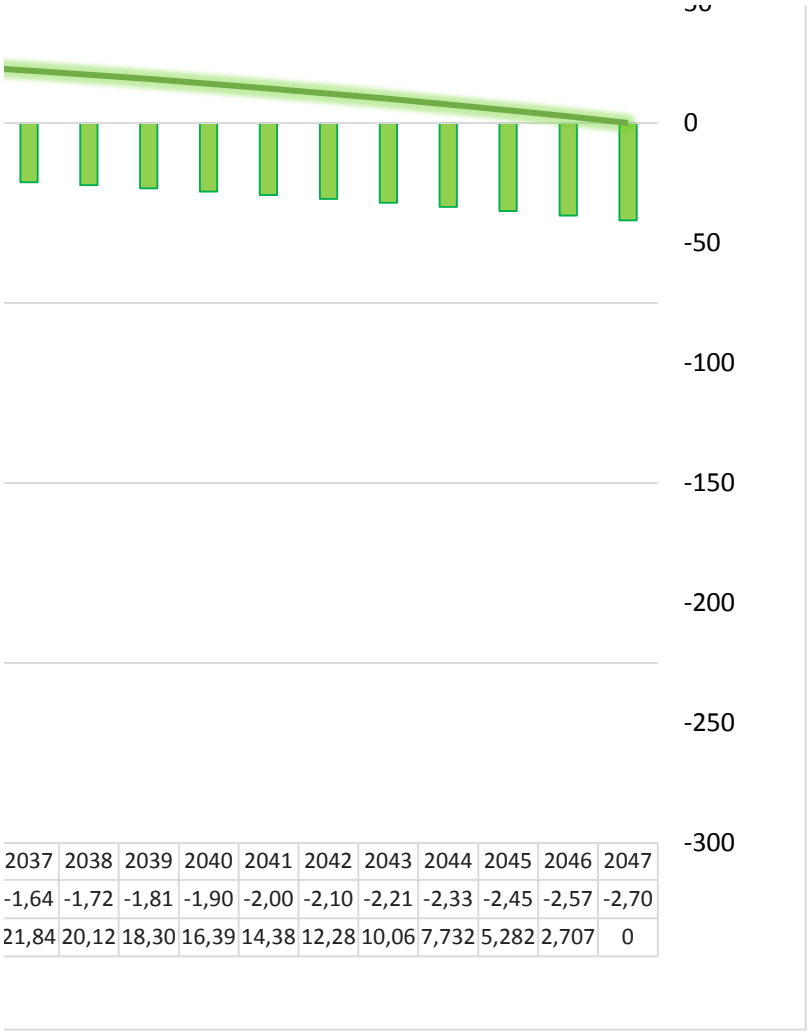


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0

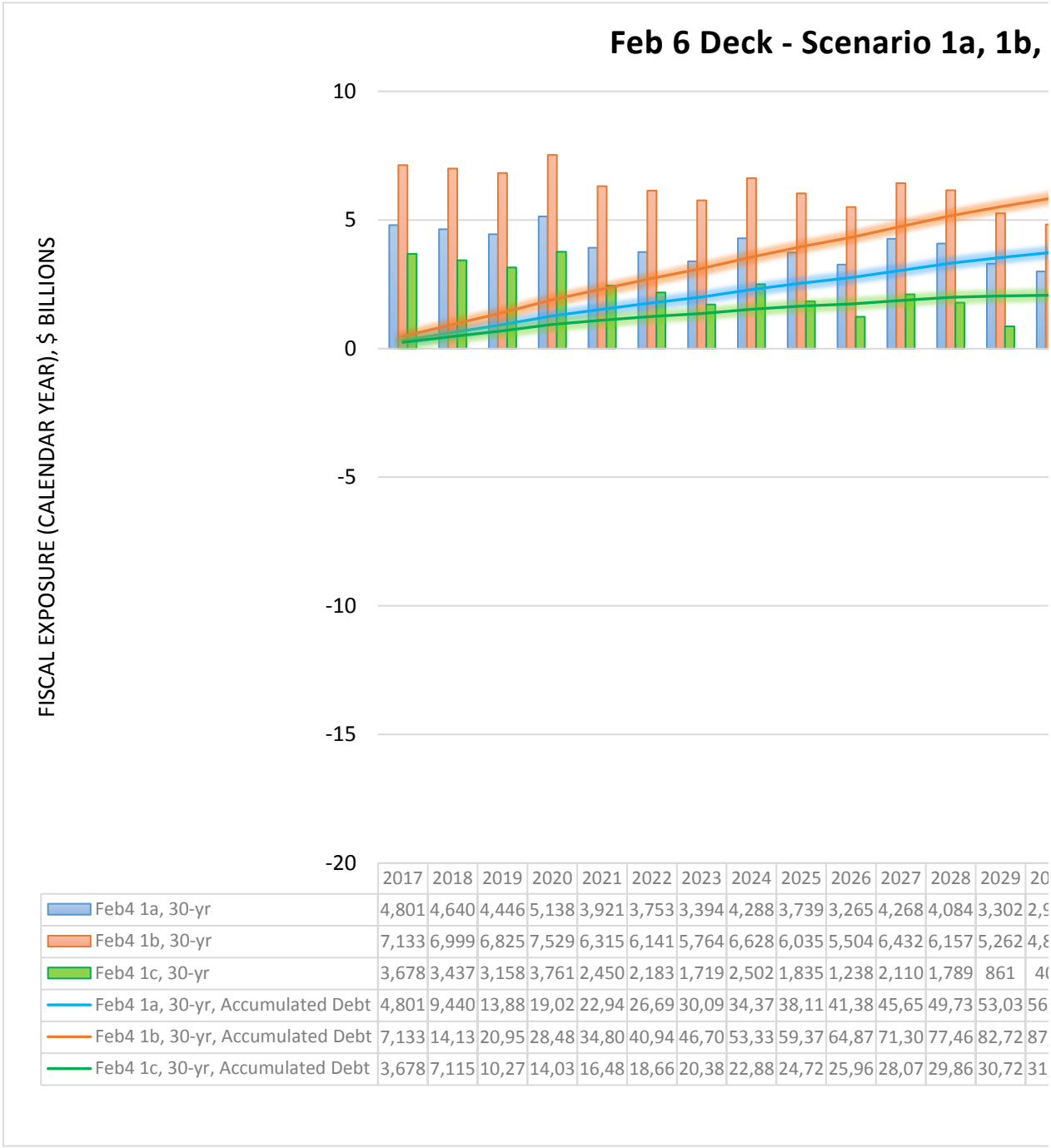




2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

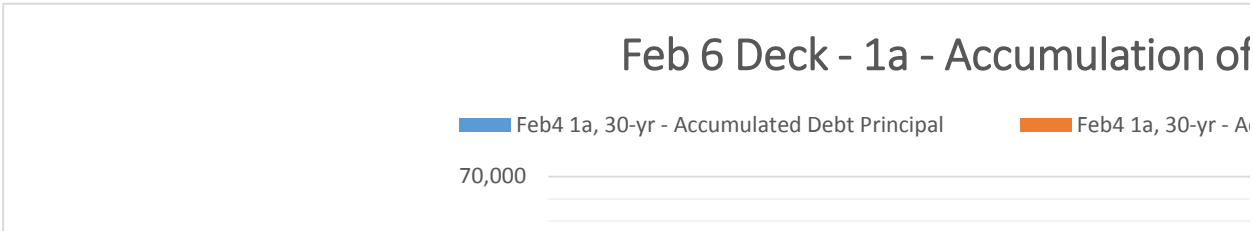
Feb 6 Deck

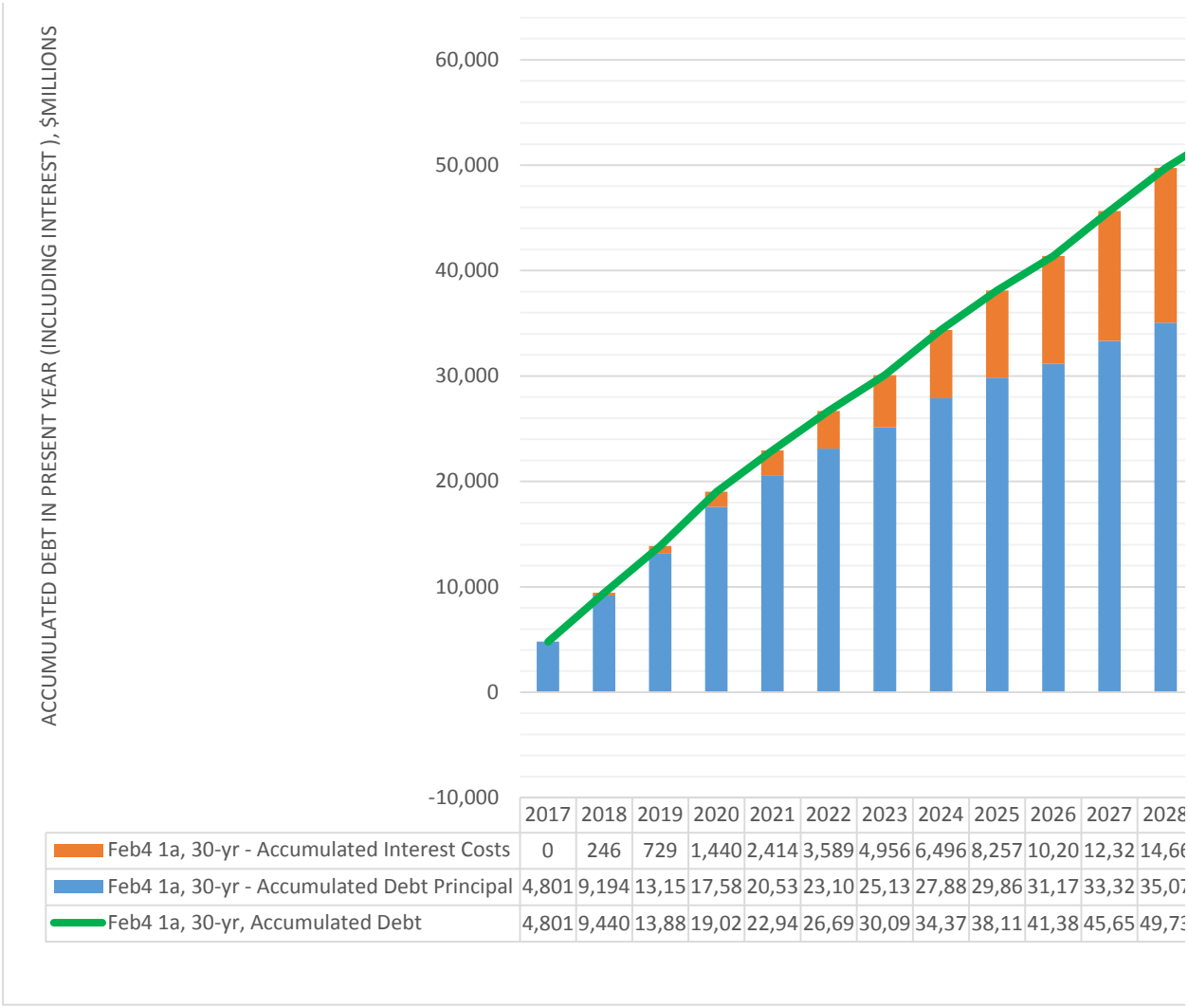
Feb 6 Deck - Scenario 1a, 1b, 1c - at 5.12% interest rate



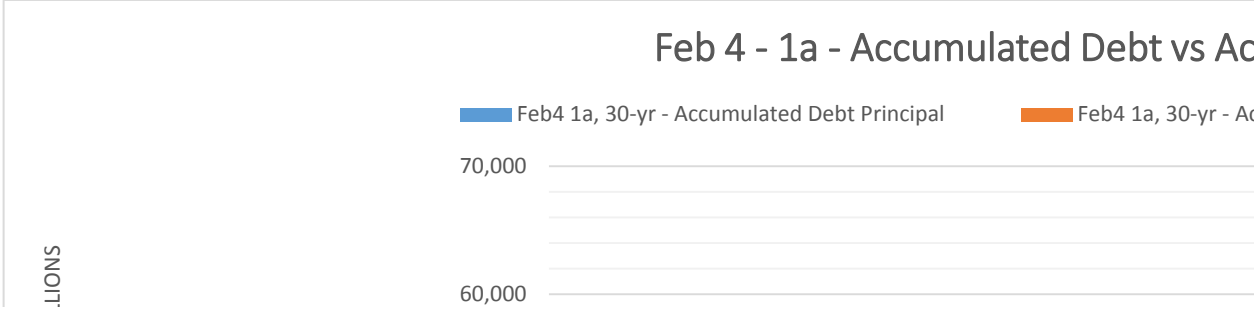
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	20
Feb4 1a, 30-yr	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,9
Feb4 1b, 30-yr	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,8
Feb4 1c, 30-yr	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	4(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73	53,03	56
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31

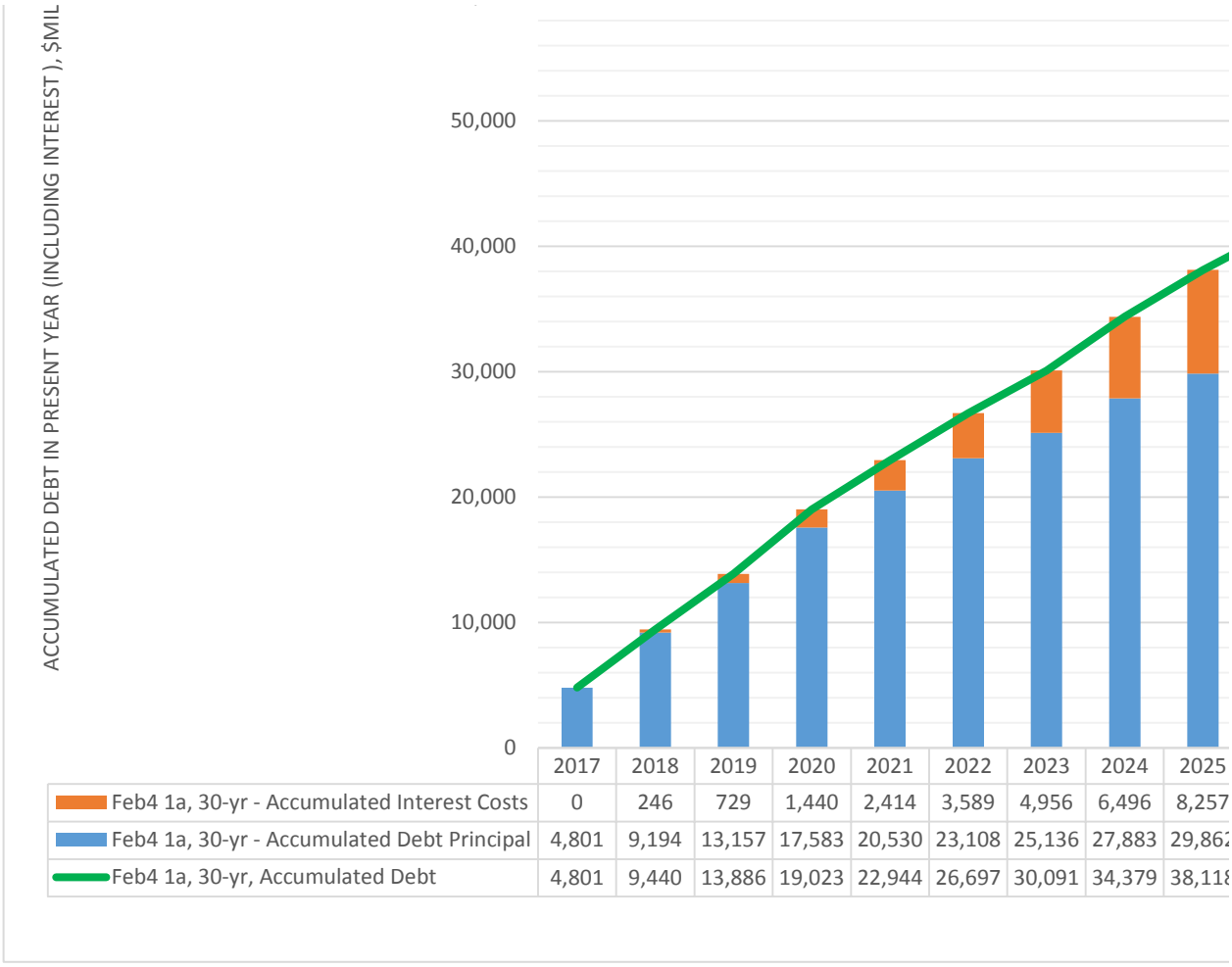
Feb 6 Deck - 1a - Accumulation of Debt (Principal and Interest)



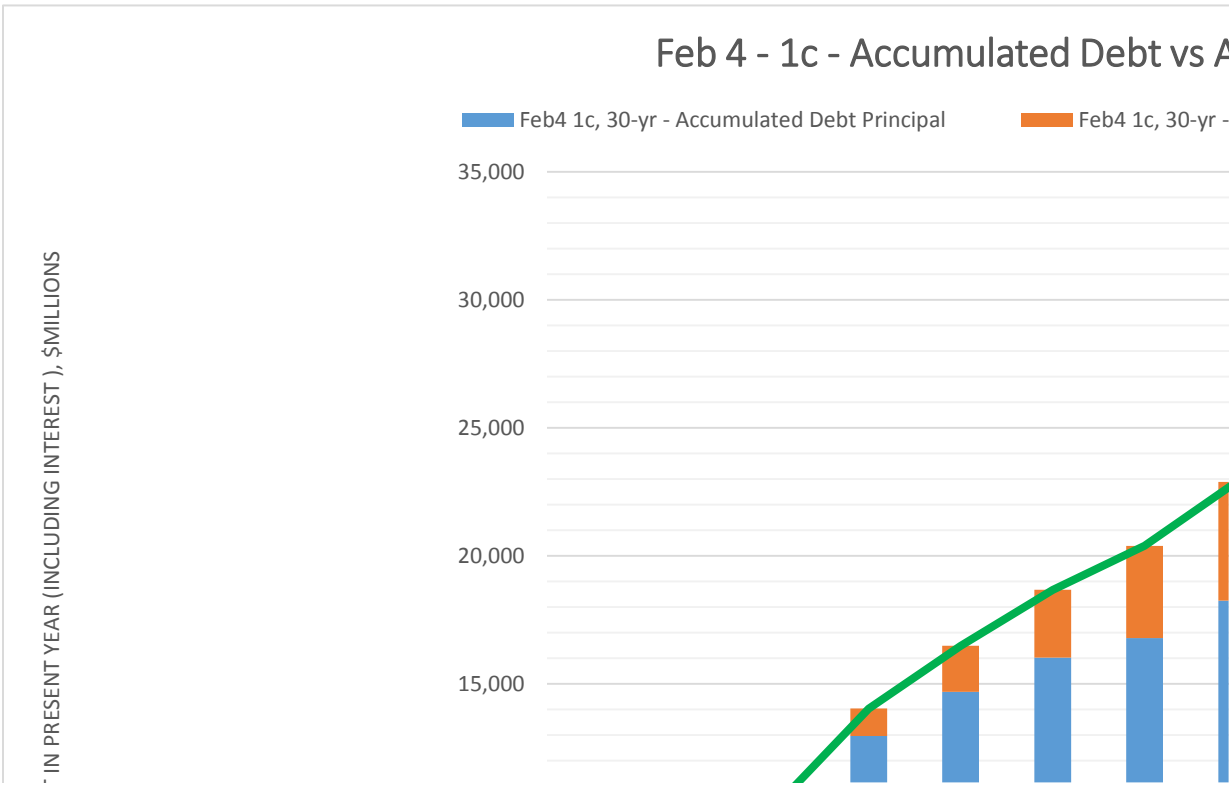


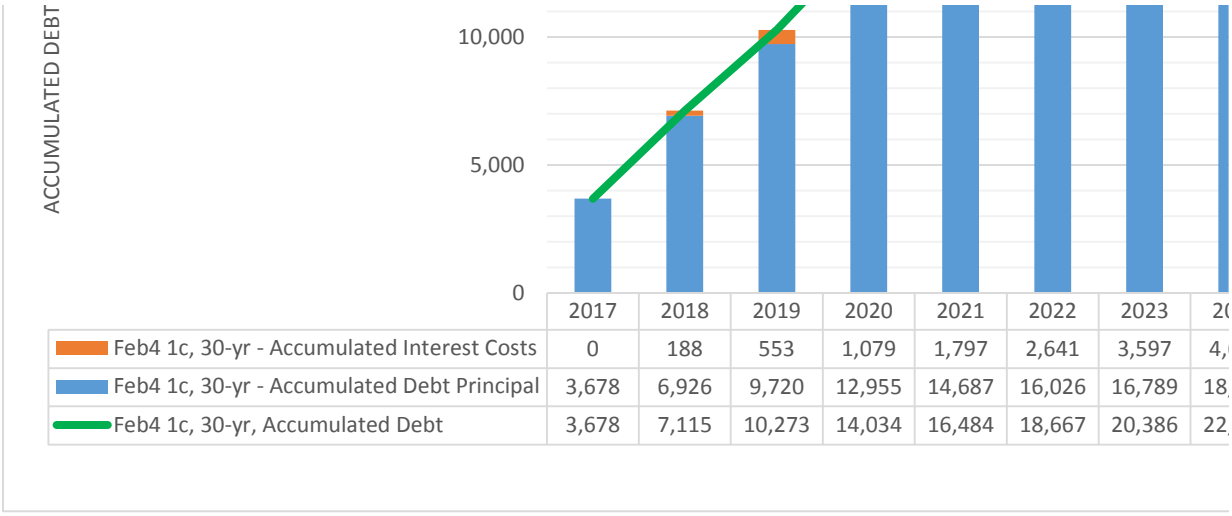
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,66
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,07
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73



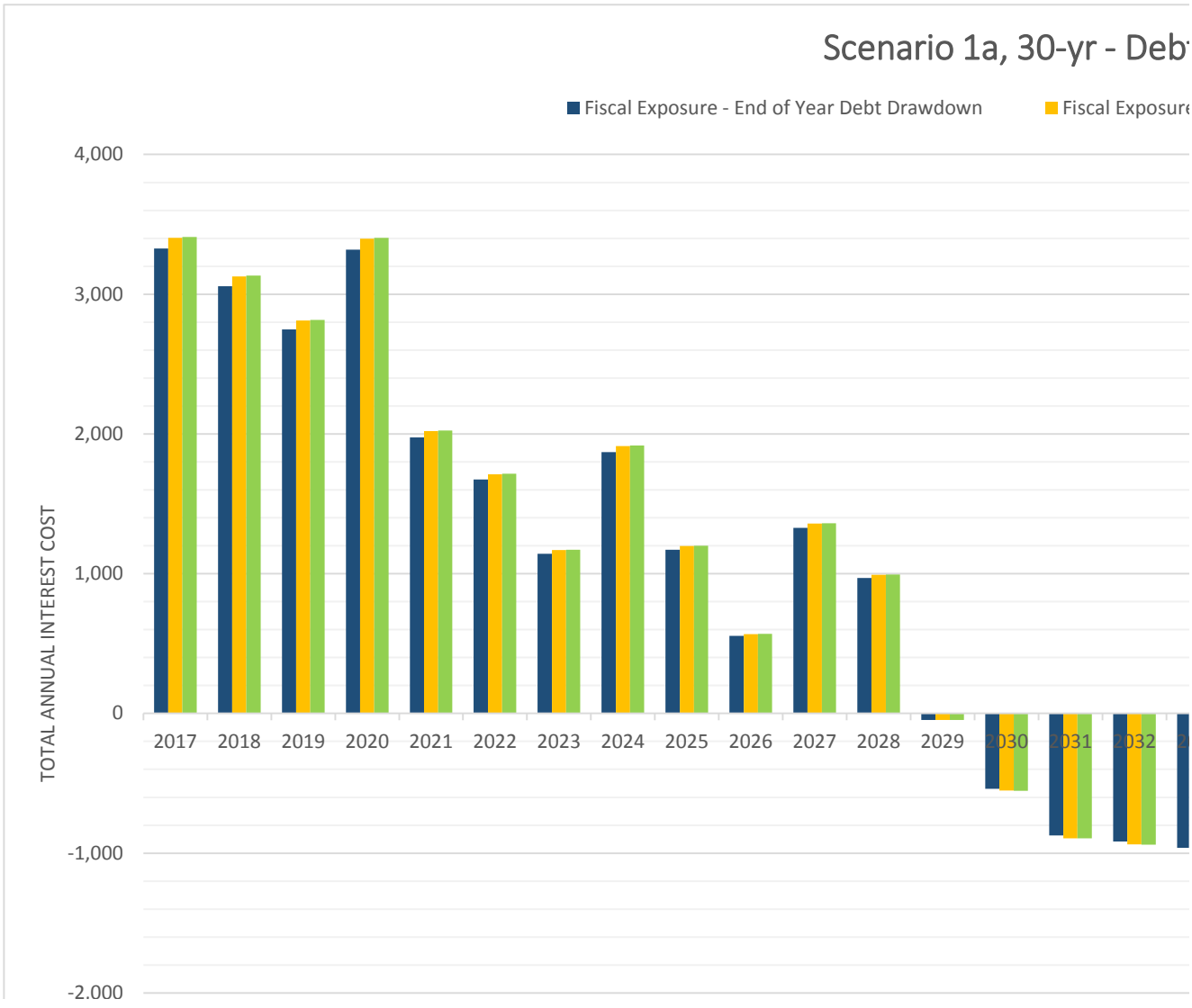


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



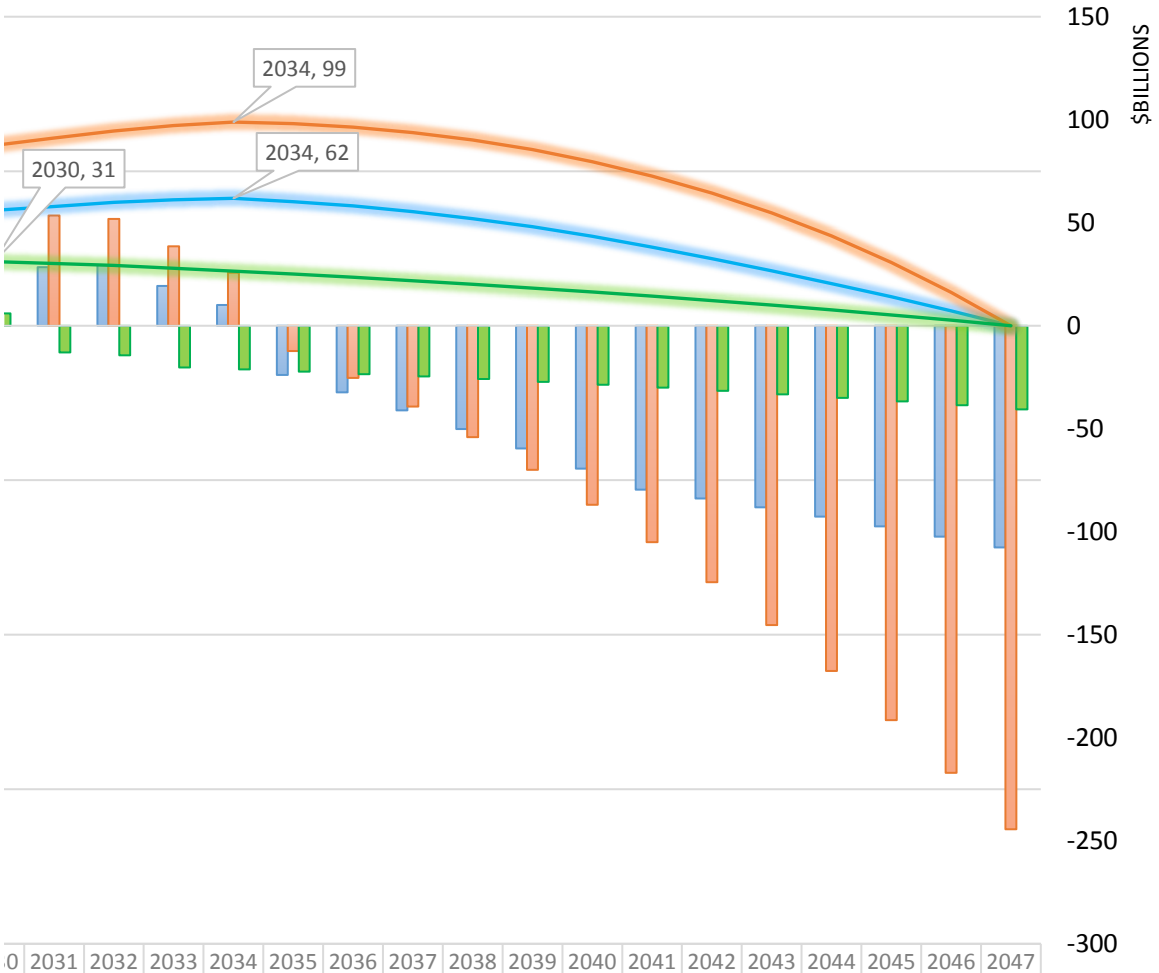


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22



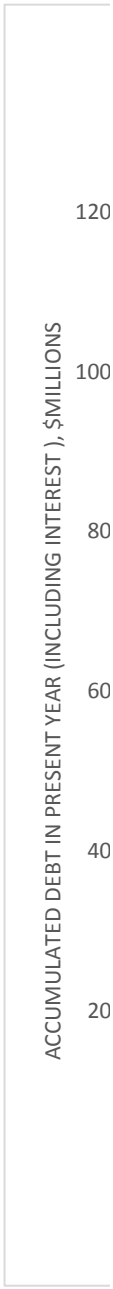

-3,000

lc - at 5.12% interest rate



0	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
98	1,896	1,966	1,288	672	-1,59	-2,15	-2,73	-3,34	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
26	3,568	3,457	2,571	1,716	-819	-1,68	-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
4	-860	-961	-1,34	-1,41	-1,48	-1,56	-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0
55	91,12	94,57	97,14	98,86	98,04	96,35	93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0
12	30,26	29,30	27,95	26,54	25,05	23,49	21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

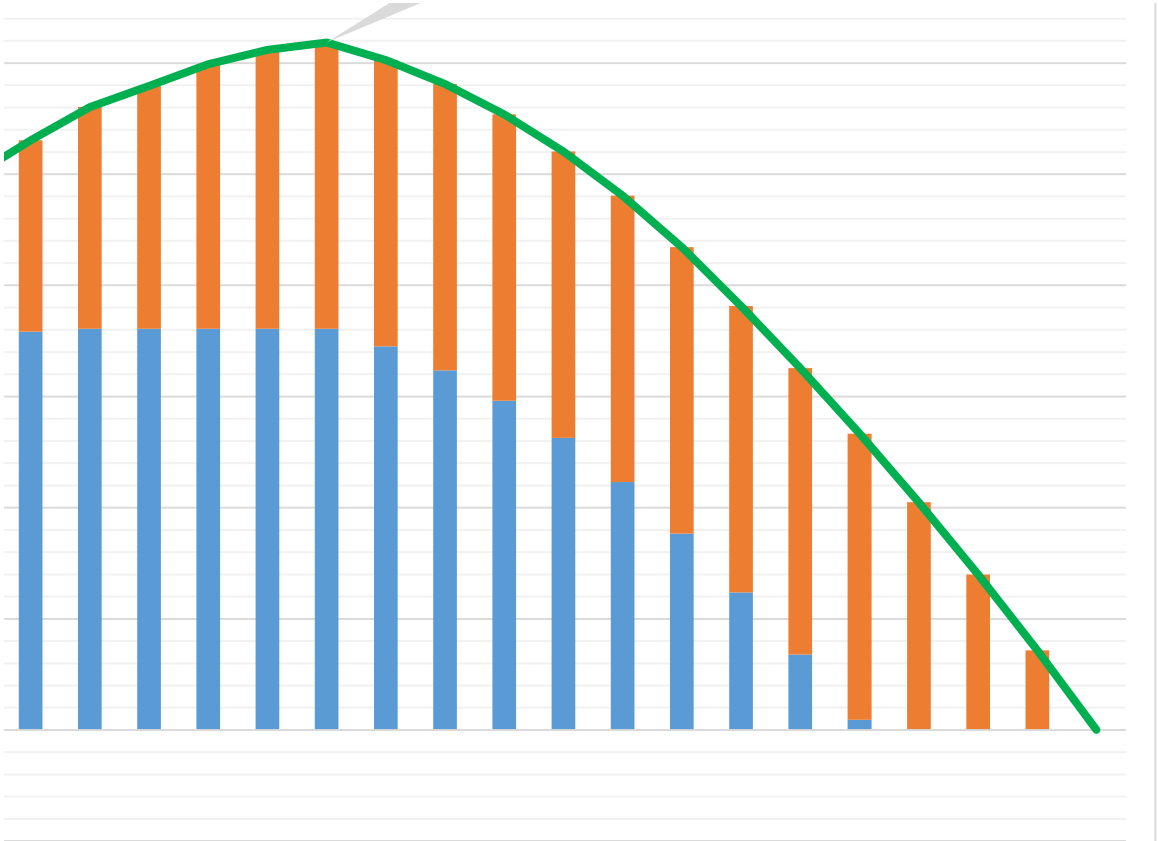
CALENDAR YEAR



Debt (Principal and Interest)

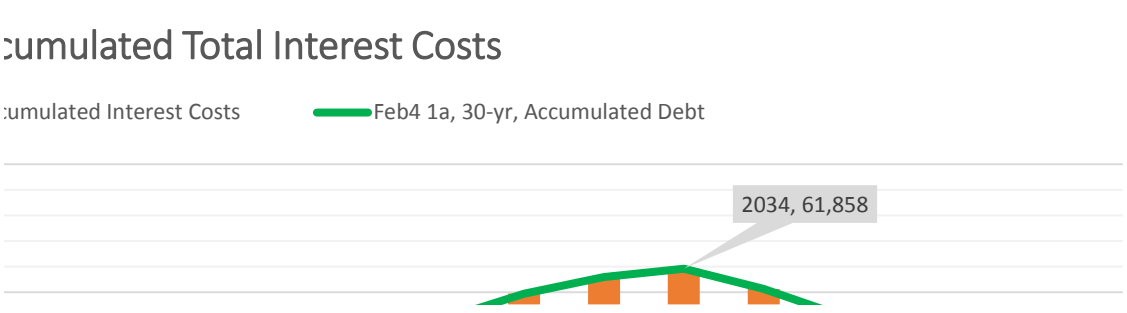
cumulated Interest Costs — Feb4 1a, 30-yr, Accumulated Debt

2034, 61,858

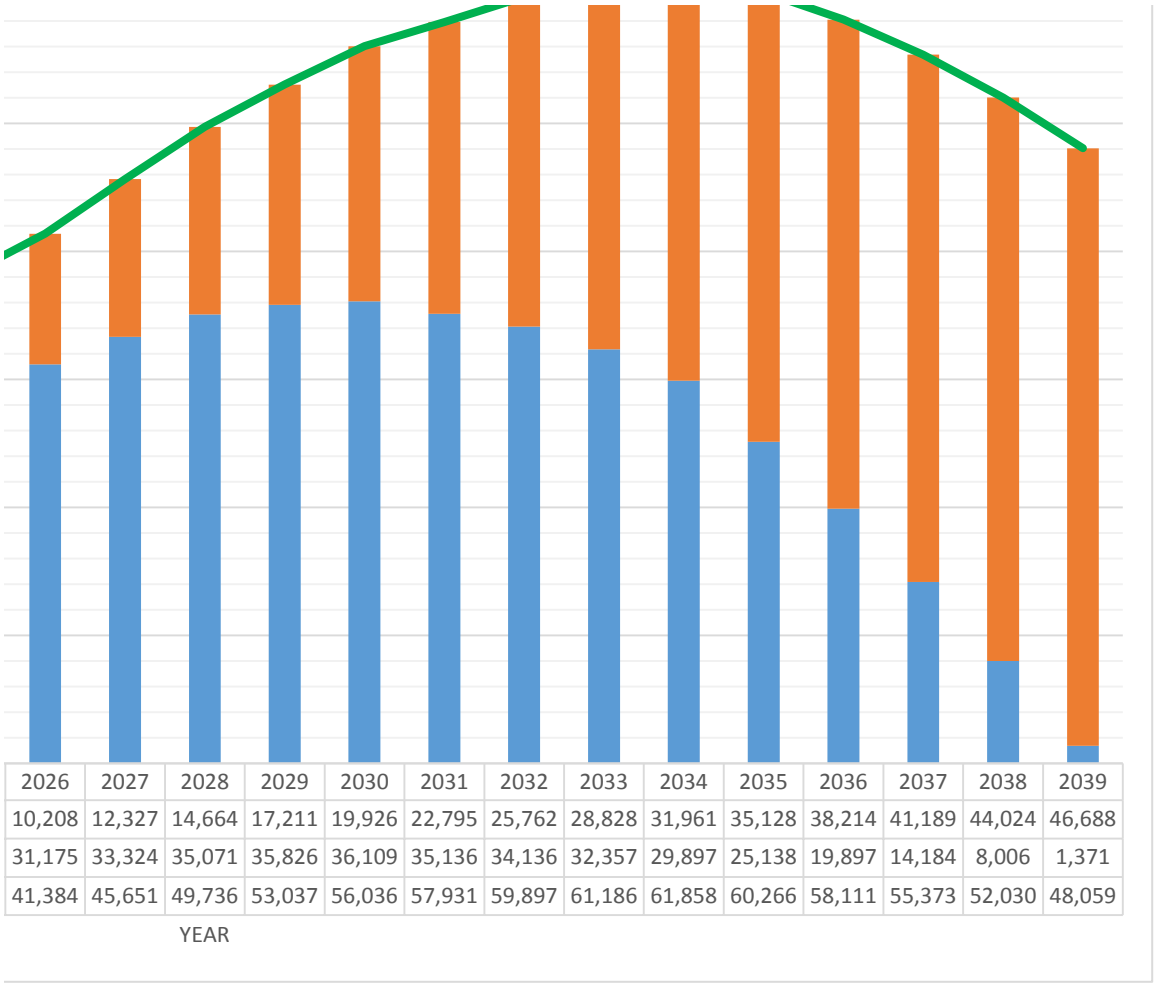


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



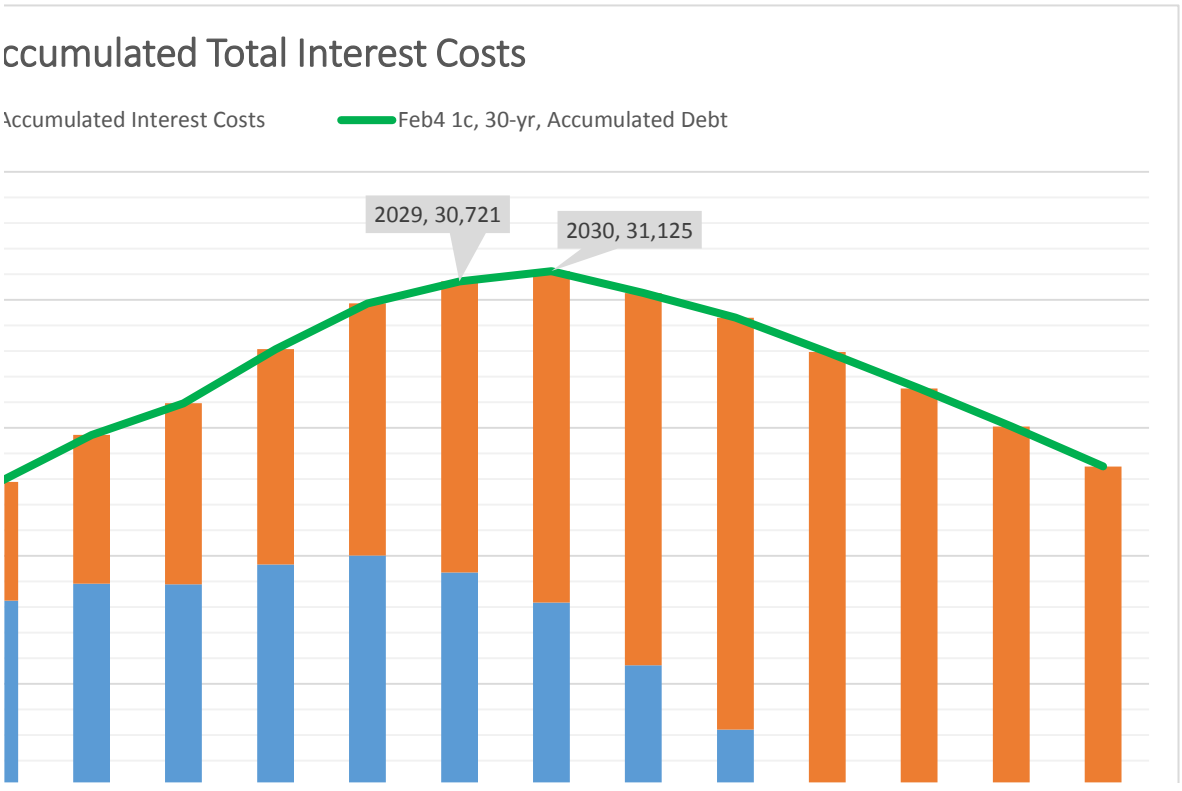
LIONS

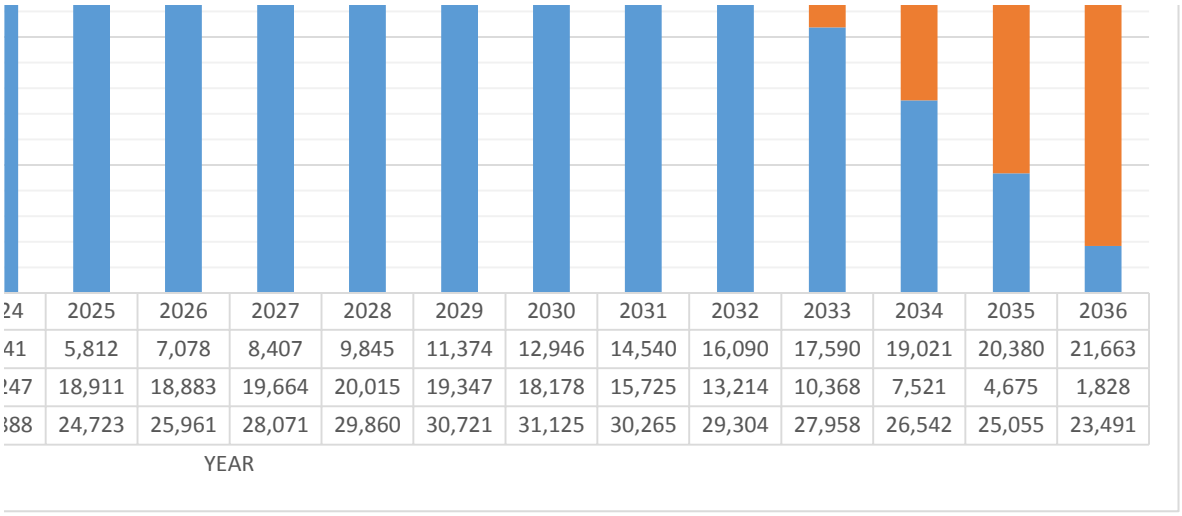


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

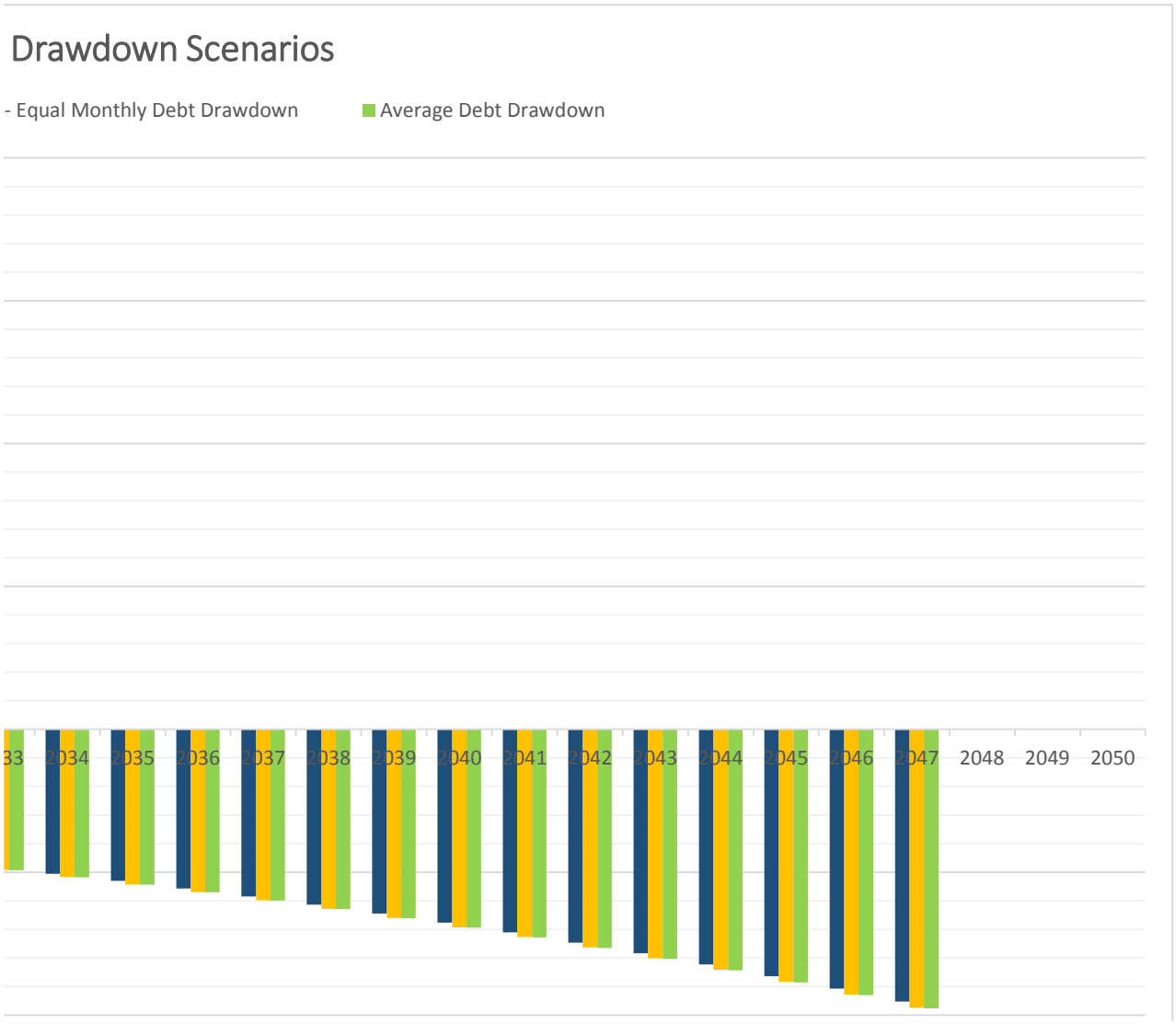
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





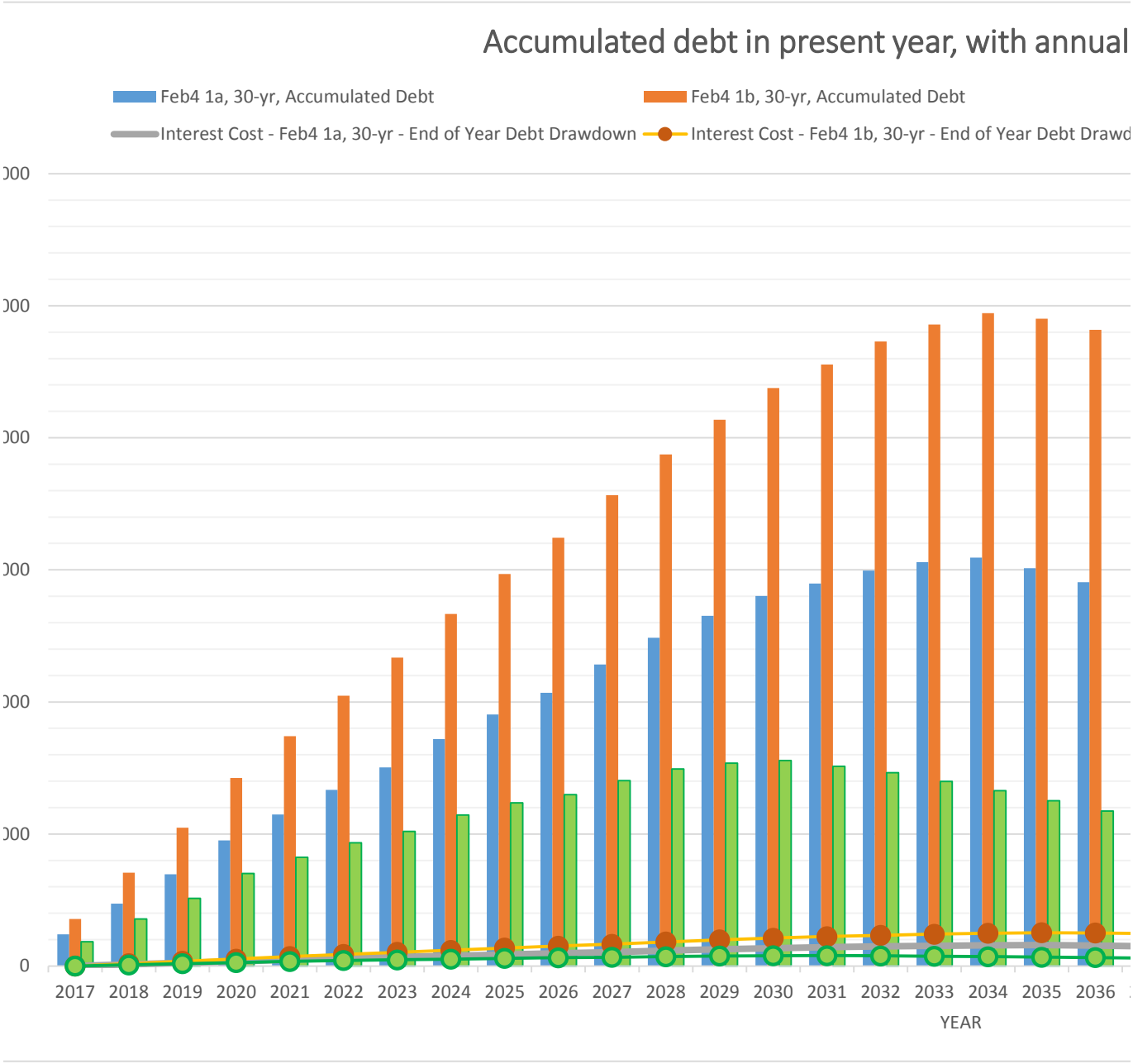
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

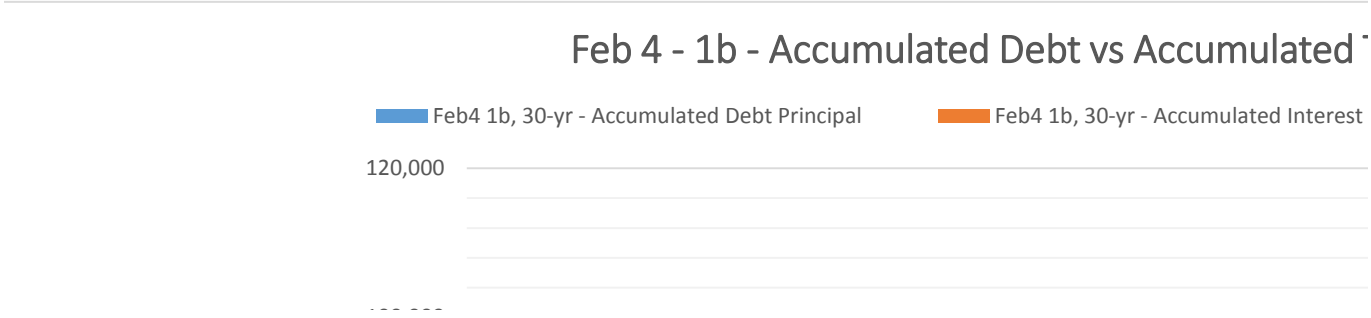
YEAR

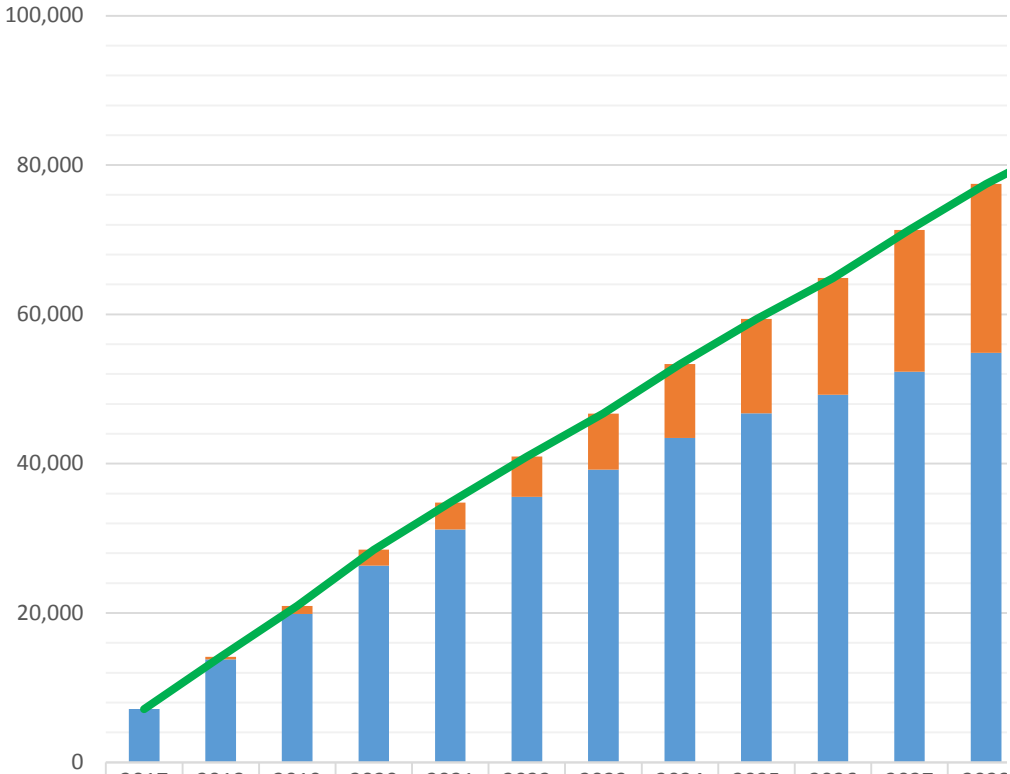


YEAR

ɜ - 25 year and 30 year Financing Terms, at 5% interest rate

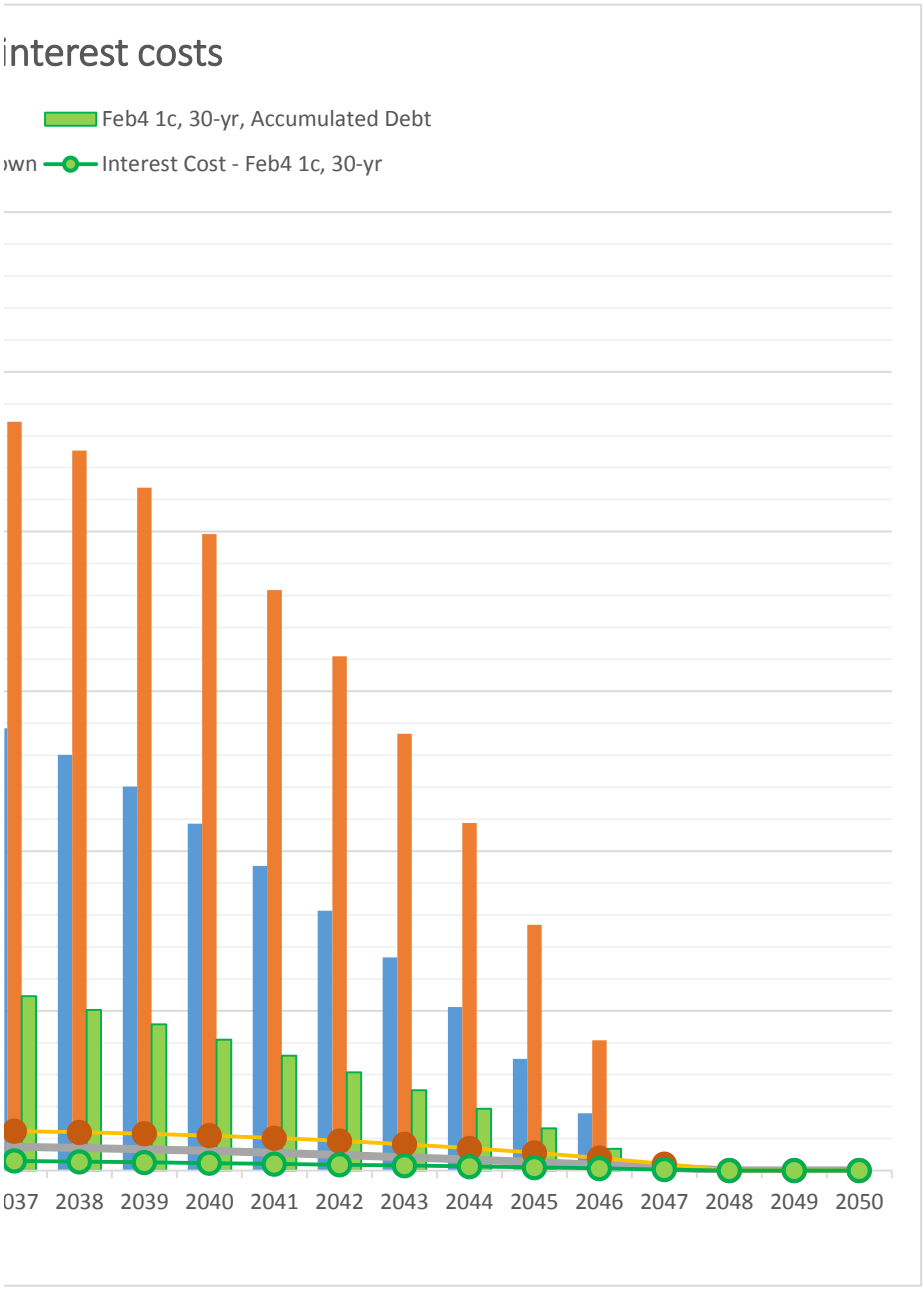


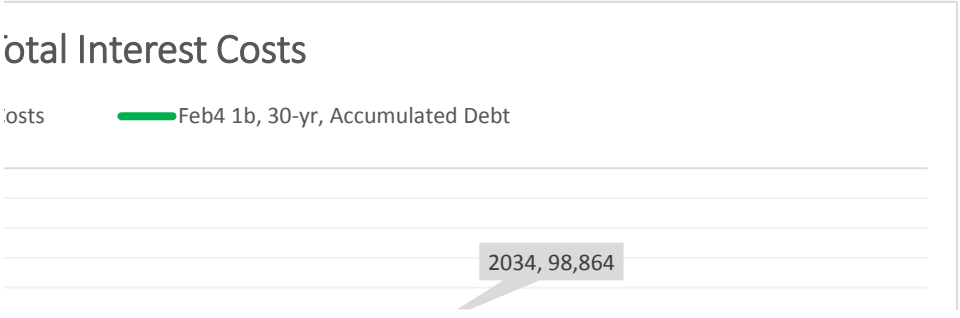

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

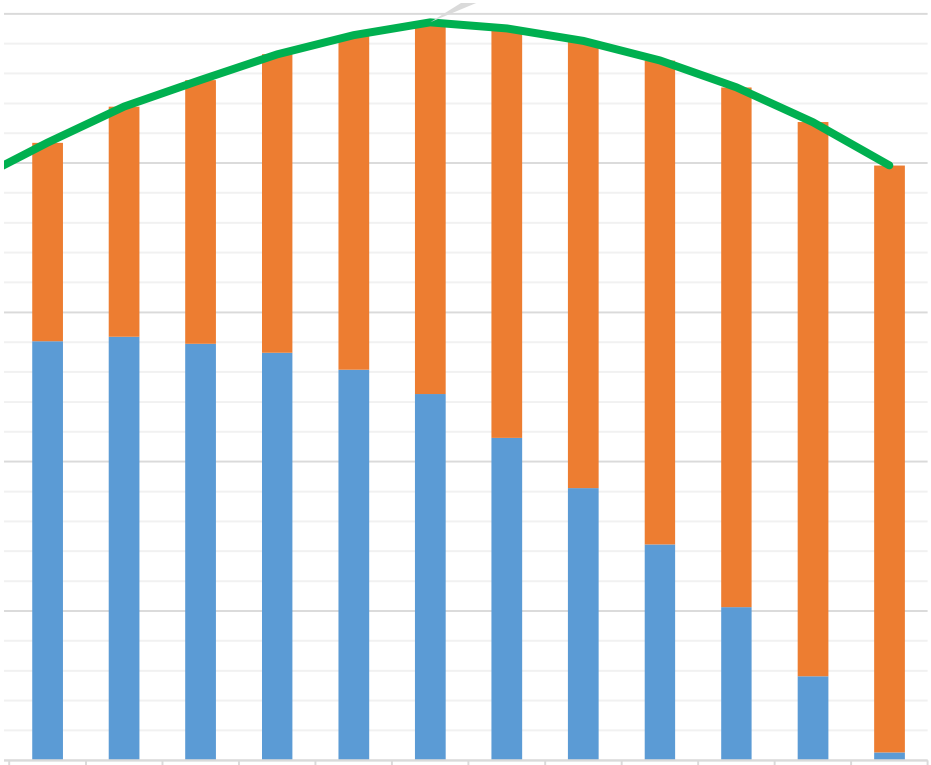


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y


interest costs
Feb4 1c, 30-yr, Accumulated Debt
wn
Interest Cost - Feb4 1c, 30-yr
037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR

Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

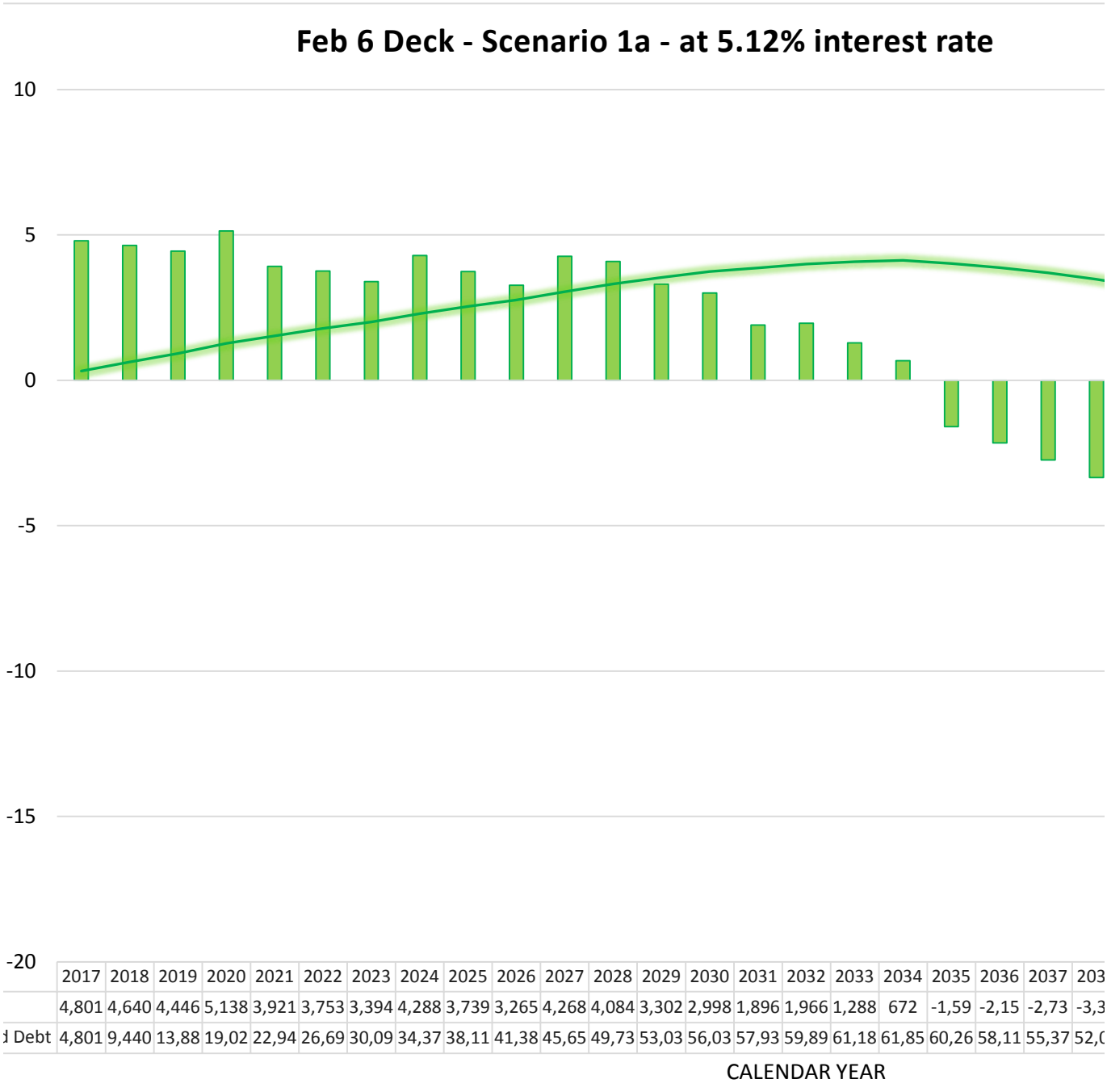
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

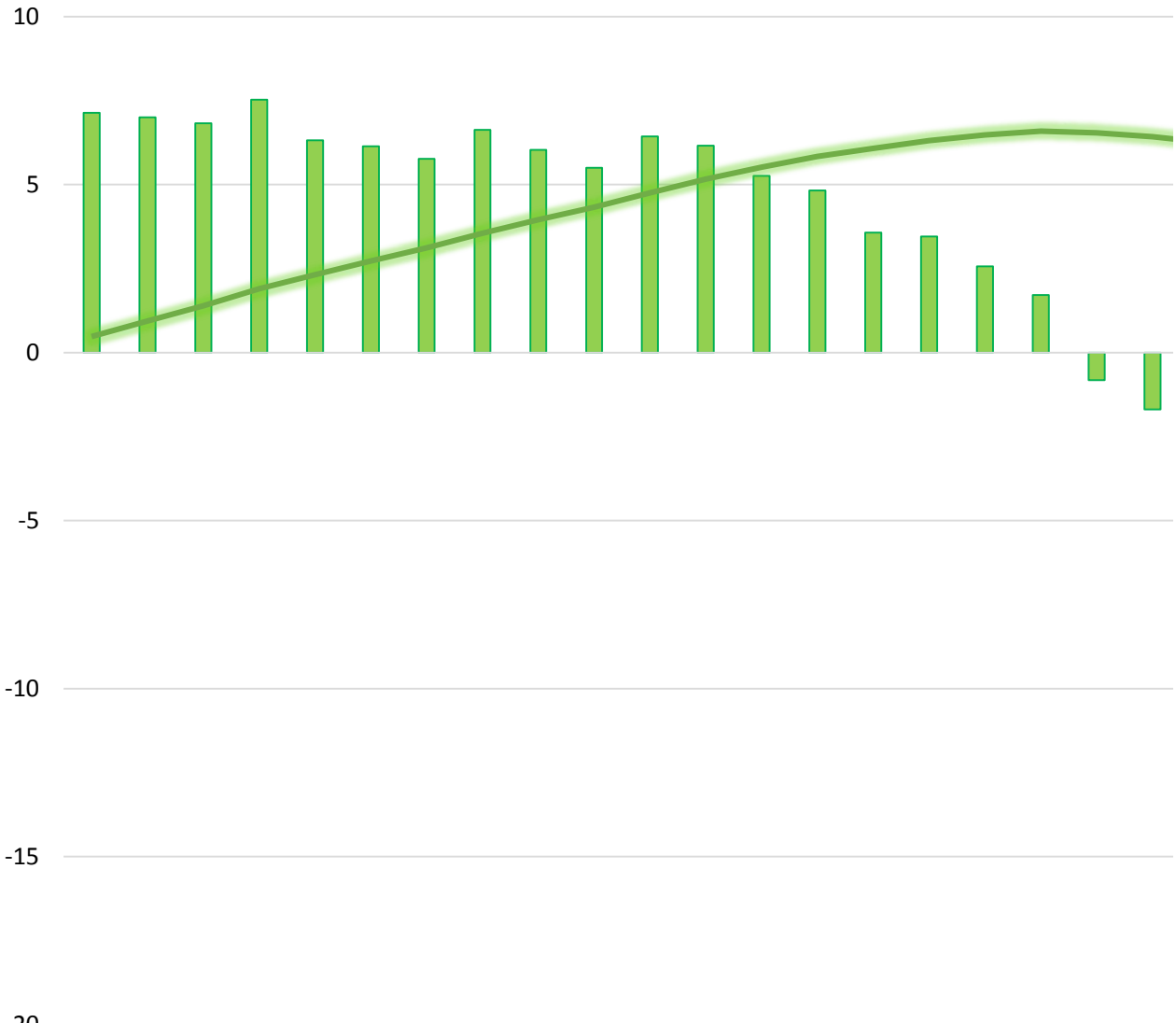
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

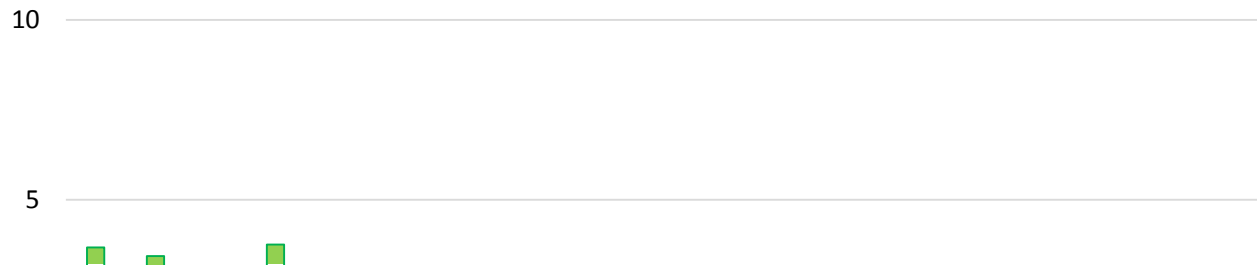
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

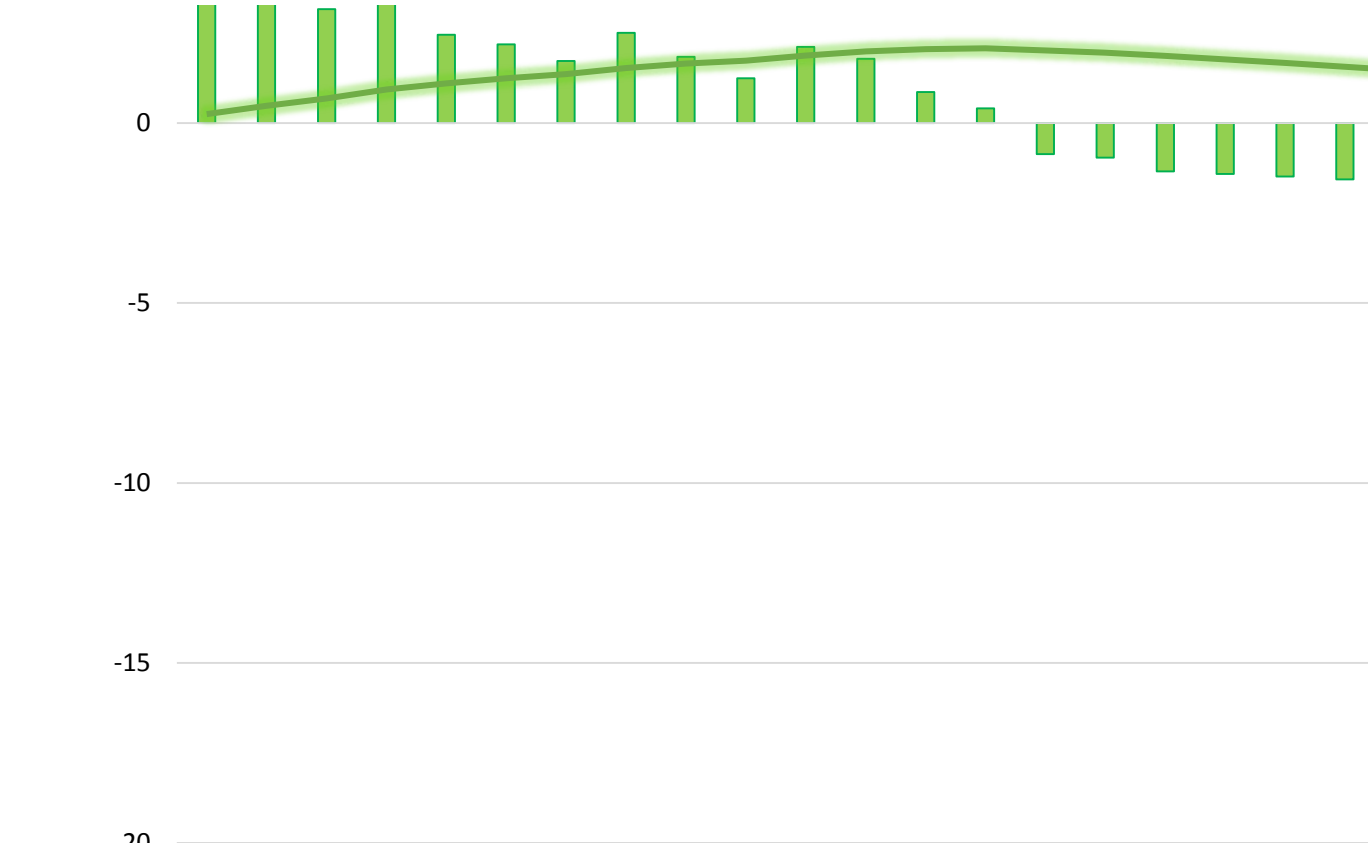


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



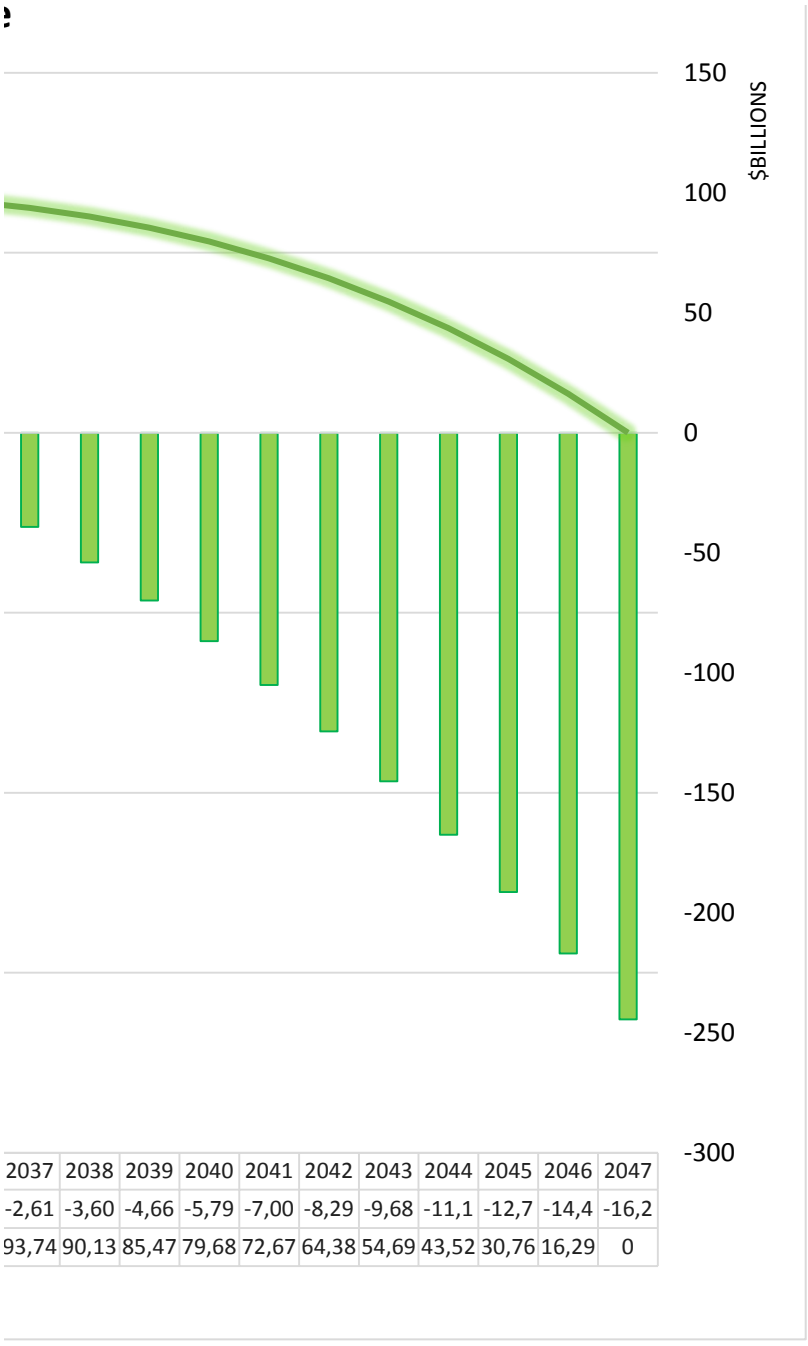


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

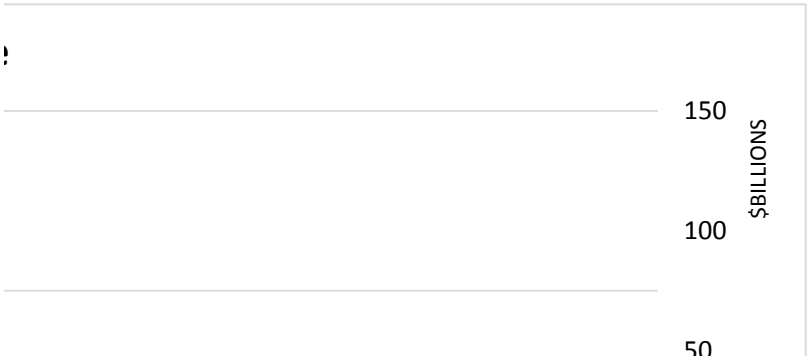
CALENDAR YEAR

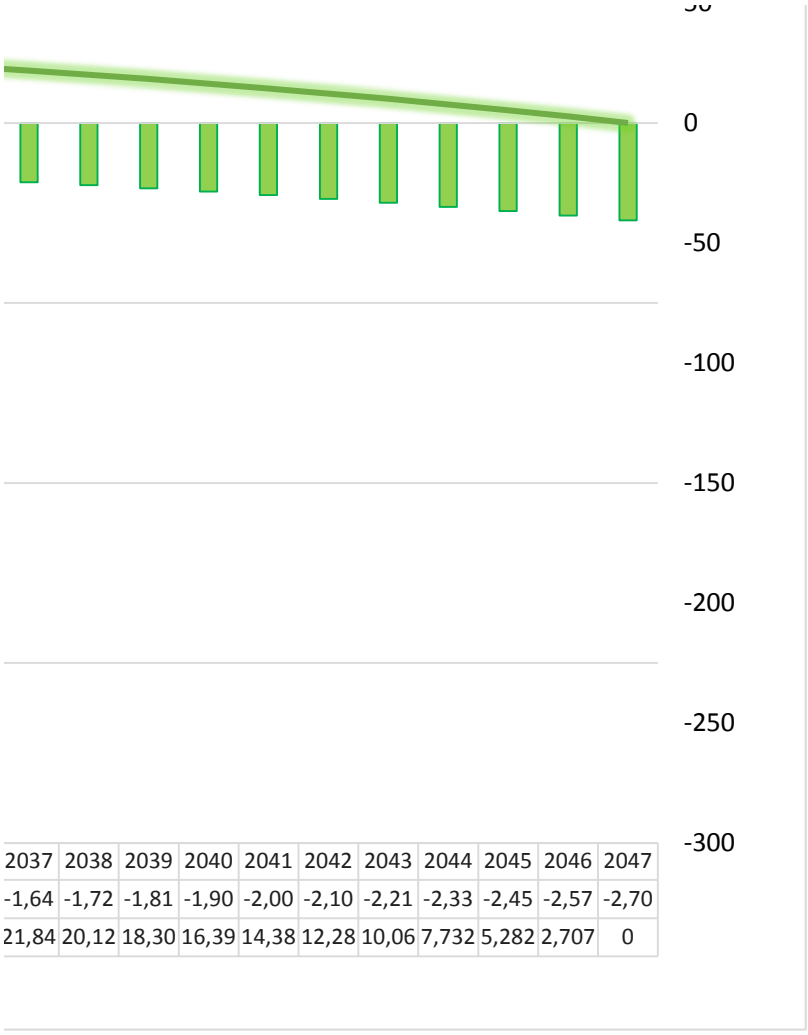


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Feb 8 Deck - Scenario 1a, 1b, 1c - at 5.12% interest
IESO GA cost forecast + extrapolation

Scenario
1a

1b

1c

1d

1e

	2017	2018	2019	2020
rate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	4674	9542	14587	21173

GA Payment from Impacted Rate Class	7421	7205	6995	6329
Accumulated debt in present year (including interest)	4674	9544	14589	21175

GA Payment from Impacted Rate Class	7421	7425	7440	7013
Accumulated debt in present year (including interest)	4674	9323	13913	19780

GA Payment from Impacted Rate Class	9915	9676	9427	9445
Accumulated debt in present year (including interest)	2180	4450	6803	9875

GA Payment from Impacted Rate Class	10596	10370	10129	10162
Accumulated debt in present year (including interest)	1500	3042	4620	6863

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
27212	33084	38588	44968	50769	56056	62291	68274

5890	6156	6434	6724	7028	7345	7677	8024
27212	33082	38585	44963	50762	56048	62281	68263

6825	7042	7266	7497	7736	7983	8237	8499
24810	29671	34167	39545	44359	48679	53976	59058

8532	8703	8877	9054	9236	9420	9609	9801
12692	15272	17420	20384	22719	24494	27181	29590

9264	9449	9638	9831	10027	10228	10432	10641
8794	10429	11568	13457	14645	15200	16588	17614

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
73391	78103	81594	85015	87596	89375	88679	87180

8386	8765	9160	9574	10006	10458	10931	11424
73378	78089	81578	84997	87577	89356	88659	87159

8770	9049	9337	9634	9941	10257	10584	10921
63318	67230	69987	72754	74773	76097	75068	73377

9997	10197	10401	10609	10821	10916	8822	8548
31116	32233	32135	31991	31045	29473	27822	26085

10854	11071	10196	10361	9779	9298	7203	6930
17670	17225	16565	15871	15142	14376	13570	12723

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
84828	81568	77341	72085	65730	58203	49425	39310

11940	12480	13043	13632	14248	14891	15564	16267
84806	81546	77320	72065	65711	58186	49409	39297

11269	11628	11998	12380	12774	13181	13600	14033
70990	67875	63995	59310	53778	47352	39985	31624

8288	8040	7805	7580	7367	7164	6970	6786
24260	22342	20325	18206	15978	13635	11173	8586

6670	6422	6186	5962	5748	5545	5352	5168
11833	10897	9914	8880	7793	6651	5450	4188

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
27767	14699	0	0	0	0

17001	17769	18572	2975	2831	2695
27758	14694	0	0	0	0

14480	14941	15417	2975	2831	2695
22213	11693	0	0	0	0

6611	6444	6286	2975	2831	2695
5865	3006	0	0	0	0

4993	4826	4667	2975	2831	2695
2861	1466	0	0	0	0

Feb 7 Deck - Scenario 1a, 1b, 1c - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb8_1a_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,867
Annual Exposure2 with start on July 1st	*2,337*	*4,867*

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,169	4,723

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $62 billion peak

7,133 7,133

Feb4_1b_30yr 7,133

1b. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,869

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,169	4,723

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

Scenario 1C - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649

Fiscalized[3]	2016-17	2017-18
Start: January 1st	1,169	4,668

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

Scenario 1D - 30-yr amortization	2017	2018
Annual Exposure[2]	2,180	2,270

Fiscalized[3]	2016-17	2017-18
Start: January 1st	545	2,203
Start: July 1st	-	*1,658*

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

Scenario 1E - 30-yr amortization	2017	2018
Annual Exposure[2]	1,500	1,542

Fiscalized[3]	2016-17	2017-18
Start: January 1st	375	1,510

Rough

1

2

	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	1,169 - 1,169	4,723 - 4,723

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1169**	**4963**
Total, B	1169	4963
Proposed Program Total:	1,169 - 1,169	4,963 - 4,963

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	**2020**	**2021**	**2022**
5,045	6,586	6,039	5,872
5,045	*6,586*	*6,039*	*5,872*

2018-19	**2019-20**	**2020-21**	**2021-2022**
4,912	5,430	6,449	5,997

Scenario
1a
1b
1c
1d

1e

king in 203X".

2019	**2020**	**2021**	**2022**
5,045	6,586	6,037	5,870

2018-19	**2019-20**	**2020-21**	**2021-2022**
4,913	5,430	6,449	5,996

2019	**2020**	**2021**	**2022**
4,589	5,867	5,031	4,861

Actuals are subjec
- The highest debt
- Compared to a 5

[1] Based on an inte
[2] Fiscal exposure l
[3] Fiscalized based

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988

2019	2020	2021	2022
2,353	3,072	2,817	2,580

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757
2,291	*2,533*	*3,008*	*2,757*

2019	2020	2021	2022
1,578	2,243	1,931	1,635

2018-19	2019-20	2020-21	2021-2022
1,551	1,745	2,165	1,857



2018-19	2019-20	2020-21	2021-2022
4,913 - 4,912	5,430 - 5,430	6,449 - 6,449	5,996 - 5,997

/1

2018-19[1]	2019-20[1]	2020-21[1]
4912	5430	6449
4913	5430	6449
225	279	323
60	60	60
18	18	18
5215	**5787**	**6850**
5216	5787	6850

5,216 - 5,215 5,787 - 5,787 6,850 - 6,850

Total Principal Debt	Total Interest Costs	Peak Total Debt	in Year
52,287	85,599		

ct to actual prices and actual interest rates.
t accumulation (at 5% interest rate) is expected to be approximately $62 billion, peaking in 203 and $17-21 billion (at 3.5% interes
% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately $33-$36 million.

erest rate of 5%.
based on equal monthly drawdown of debt.
on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on m

st rate), peaking in 2028.

onth of the year. Actuals may also depend on decision on accounting treatment.

Feb 7 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-275	-311	-350	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,573	85,599
Equal Monthly Debt Drawdown	6,743	4,556	

Maximum Accumulated Debt	Feb8 1a, 30-yr, Accumulated Debt	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,375	52,287
Equal Monthly Debt Drawdown	91,501	

			39%	39%	39%	48%	46%	42%																												
Feb8 1a, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement		4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
a	Debt, Beginning of Year		0	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	
c = a*5%	*Interest Cost - Feb8 1a, 30-yr - End of Year Debt Drawdown*		*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,301*	*2,597*	*2,868*	*3,187*	*3,493*	*3,755*	*3,996*	*4,175*	*4,350*	*4,482*	*4,573*	*4,537*	*4,460*	*4,340*	*4,173*	*3,957*	*3,688*	*3,363*	*2,978*	*2,529*	*2,011*	*1,421*	*752*	*0*	*0*	*0*	85,599
b	Additional GA Debt Drawdown, End of Year		4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)		4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	0
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1a, 30-yr - Accumulated Interest Costs		0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,307	32,728	35,309	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	39,310	27,767	14,699	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Debt Principal		4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	52,287	52,287	52,287	52,287	51,591	50,091	47,739	44,479	40,253	34,997	28,642	21,115	12,336	0	0	0	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Interest Costs		0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,813	33,987	38,337	42,818	47,391	51,928	56,388	60,728	64,901	68,858	72,546	75,909	78,887	81,416	83,427	84,847	85,599				
	Feb8 1a, 30-yr - Accumulated Debt Principal		4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	51,781	51,028	49,259	46,557	41,288	35,252	28,440	20,840	12,440	3,227	-6,816	-17,706	-29,462	-42,106	-55,660	-70,149	-85,599				
Fiscal Exposure - End of Year Debt Drawdown			4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	

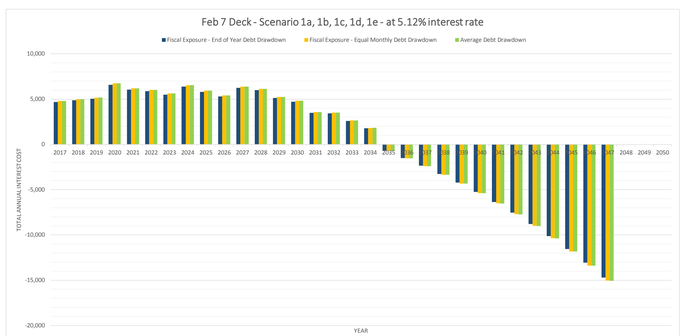
Feb8 1a, 30-yr	Equal Monthly Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement		4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year		0	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	
4,556	*Interest Cost - Feb8 1a, 30-yr*		*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,824*	*2,126*	*2,439*	*2,723*	*3,016*	*3,329*	*3,615*	*3,867*	*4,079*	*4,256*	*4,411*	*4,524*	*4,556*	*4,501*	*4,404*	*4,262*	*4,073*	*3,832*	*3,537*	*3,184*	*2,769*	*2,288*	*1,737*	*1,110*	*402*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown		4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	0
Fiscal Exposure - Equal Monthly Debt Drawdown			4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	

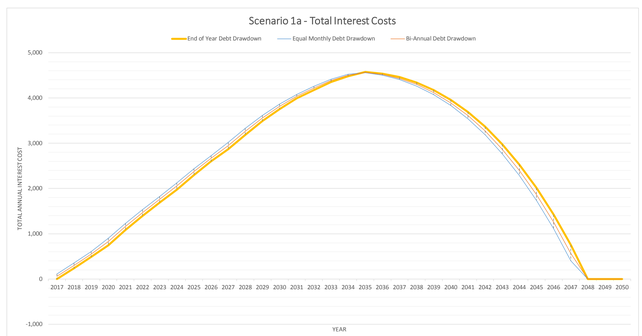
	Monthly Drawdown	390	386	380	487	413	373	318	367	292	224	281	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(980)	(1,054)	(1,129)	(1,207)	(1,288)	-	-	-
	FV of Monthly Drawdown at 5%	4,786	4,738	4,665	5,979	5,074	4,586	3,902	4,510	3,584	2,753	3,447	2,863	1,662	980	(517)	(772)	(1,810)	(2,766)	(5,394)	(6,180)	(6,975)	(7,781)	(8,599)	(9,432)	(10,282)	(11,149)	(12,036)	(12,944)	(13,876)	(14,834)	(15,818)	-	-	-
	Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	67	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(368)	-	-	-
	Annual Interest Cost on Opening Balance	-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,263	3,576	3,844	4,091	4,274	4,453	4,588	4,681	4,645	4,566	4,443	4,272	4,051	3,776	3,443	3,049	2,589	2,059	1,454	770	(0)	(0)	(0)	
	Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,824	2,126	2,439	2,723	3,016	3,329	3,615	3,867	4,079	4,256	4,411	4,524	4,556	4,501	4,404	4,262	4,073	3,832	3,537	3,184	2,769	2,288	1,737	1,110	402	(0)	(0)	(0)	

Feb8 1a, 30-yr	Bi-Annual Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement		4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year		0	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	
	Interest Cost - Feb8 1a, 30-yr		*60*	*301*	*553*	*831*	*1,160*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,948*	*3,263*	*3,558*	*3,815*	*4,041*	*4,218*	*4,383*	*4,504*	*4,564*	*4,518*	*4,430*	*4,298*	*4,119*	*3,890*	*3,607*	*3,267*	*2,866*	*2,399*	*1,864*	*1,253*	*564*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown		4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	0
Fiscal Exposure - Bi-Annual Debt Drawdown			4,734	4,930	5,110	6,670	6,116	5,947	5,575	6,461	5,875	5,354	6,315	6,060	5,182	4,773	3,535	3,464	2,614	1,802	-705	-1,518	-2,382	-3,302	-4,280	-5,324	-6,436	-7,623	-8,891	-10,244	-11,690	-13,236	-14,887	0	0	0	

	Bi-Annual Drawdown	2,337	2,314	2,279	2,920	2,478	2,240	1,906	2,203	1,750	1,345	1,684	1,398	812	479	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,800)	(4,200)	(4,607)	(5,021)	(5,445)	(5,878)	(6,322)	(6,777)	(7,245)	(7,725)	-	-	-
	FV of Bi-Annual Drawdown at 5%	4,734	4,687	4,615	5,914	5,019	4,537	3,860	4,462	3,545	2,724	3,410	2,832	1,644	970	(512)	(763)	(1,791)	(2,737)	(5,336)	(6,113)	(6,900)	(7,697)	(8,507)	(9,331)	(10,171)	(11,029)	(11,907)	(12,805)	(13,727)	(14,674)	(15,648)	-	-	-
	Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	-	-	-
	Annual Interest Cost on Opening Balance	-	242	494	756	1,097	1,410	1,714	1,999	2,330	2,631	2,905	3,228	3,538	3,803	4,047	4,228	4,405	4,539	4,631	4,595	4,517	4,395	4,227	4,008	3,735	3,406	3,016	2,561	2,037	1,439	762	(0)	(0)	(0)	
	Total Annual Interest Cost	60	301	553	831	1,160	1,467	1,763	2,056	2,375	2,665	2,948	3,263	3,558	3,815	4,041	4,218	4,383	4,504	4,564	4,518	4,430	4,298	4,119	3,890	3,607	3,267	2,866	2,399	1,864	1,253	564	(0)	(0)	(0)	

Feb8 1a, 30-yr	Average Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement		4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year		0	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	
	Interest Cost - Feb8 1a, 30-yr		*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,733*	*3,027*	*3,340*	*3,624*	*3,875*	*4,085*	*4,262*	*4,416*	*4,527*	*4,555*	*4,499*	*4,400*	*4,257*	*4,065*	*3,822*	*3,525*	*3,170*	*2,753*	*2,270*	*1,716*	*1,086*	*376*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown		4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	0
Fiscal Exposure - Average Debt Drawdown			4,794	4,992	5,174	6,754	6,193	6,022	5,645	6,543	5,950	5,422	6,395	6,137	5,248	4,833	3,580	3,508	2,647	1,825	-714	-1,537	-2,412	-3,343	-4,334	-5,391	-6,517	-7,720	-9,003	-10,374	-11,838	-13,403	-15,075	0	0	0	





Feb 7 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-274	-311	-349	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,572	85,582
Equal Monthly Debt Drawdown	6,743	4,555	

Maximum Accumulated Debt	Feb8 1b, 30-yr, Accumulated Debt	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,356	52,275
Equal Monthly Debt Drawdown	91,481	

		39%	39%	39%	48%	46%	42%																													
Feb8 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	
c = a*5%	*Interest Cost - Feb8 1b, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,300*	*2,597*	*2,867*	*3,186*	*3,492*	*3,754*	*3,995*	*4,174*	*4,349*	*4,481*	*4,572*	*4,536*	*4,459*	*4,339*	*4,172*	*3,956*	*3,687*	*3,362*	*2,977*	*2,528*	*2,011*	*1,420*	*752*	*0*	*0*	*0*	85,582
b	Additional GA Debt Drawdown, End of Year	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,303	32,722	35,302	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	39,297	27,758	14,694	0	0	0	0	0	
	Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	52,275	52,275	52,275	52,275	51,578	50,078	47,725	44,465	40,239	34,984	28,630	21,105	12,328	0	0	0	0	0	0	0	
	Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,809	33,983	38,331	42,812	47,384	51,920	56,379	60,718	64,890	68,846	72,533	75,895	78,871	81,399	83,410	84,830	85,582				
	Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	51,769	51,014	49,246	46,544	41,275	35,239	28,428	20,829	12,431	3,219	-6,822	-17,709	-29,462	-42,102	-55,652	-70,136	-85,582				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	

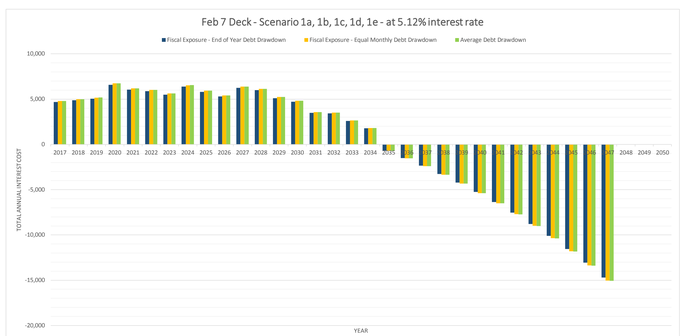
Feb8 1b, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
	Debt, Beginning of Year	0	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	
4,555	*Interest Cost - Feb8 1b, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,823*	*2,126*	*2,438*	*2,723*	*3,016*	*3,329*	*3,614*	*3,866*	*4,078*	*4,255*	*4,410*	*4,523*	*4,555*	*4,500*	*4,403*	*4,261*	*4,072*	*3,831*	*3,536*	*3,183*	*2,768*	*2,287*	*1,736*	*1,109*	*402*	*0*	*0*	*0*	85,582
	Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	0	

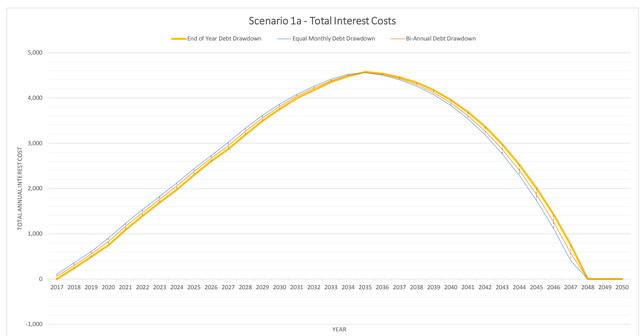
	Monthly Drawdown	390	386	380	487	413	373	317	367	292	224	280	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(979)	(1,053)	(1,129)	(1,207)	(1,287)	(0)	-	-
	FV of Monthly Drawdown at 5%	4,786	4,740	4,665	5,979	5,072	4,585	3,900	4,509	3,582	2,752	3,446	2,862	1,661	979	(518)	(772)	(1,811)	(2,766)	(5,394)	(6,179)	(6,974)	(7,780)	(8,598)	(9,431)	(10,279)	(11,146)	(12,033)	(12,941)	(13,872)	(14,829)	(15,813)	(0)	-	-
	Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	66	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(367)	(0)	-	-
	Annual Interest Cost on Opening Balance	-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,262	3,576	3,843	4,090	4,273	4,452	4,587	4,680	4,644	4,565	4,442	4,271	4,050	3,775	3,442	3,048	2,588	2,058	1,454	770	0	0	0	
	Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,823	2,126	2,438	2,723	3,016	3,329	3,614	3,866	4,078	4,255	4,410	4,523	4,555	4,500	4,403	4,261	4,072	3,831	3,536	3,183	2,768	2,287	1,736	1,109	402	0	0	0	

Feb8 1b, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
	Debt, Beginning of Year	0	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	
	Interest Cost - Feb8 1b, 30-yr	*60*	*301*	*553*	*831*	*1,161*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,947*	*3,263*	*3,558*	*3,814*	*4,040*	*4,217*	*4,382*	*4,503*	*4,563*	*4,517*	*4,429*	*4,297*	*4,118*	*3,889*	*3,606*	*3,266*	*2,865*	*2,399*	*1,863*	*1,253*	*564*	*0*	*0*	*0*	85,582
	Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,931	5,110	6,670	6,115	5,945	5,573	6,460	5,874	5,353	6,313	6,058	5,181	4,771	3,534	3,463	2,613	1,801	-706	-1,519	-2,383	-3,302	-4,280	-5,323	-6,435	-7,622	-8,889	-10,242	-11,687	-13,231	-14,882	0	0	0	

	Bi-Annual Drawdown	2,337	2,315	2,279	2,920	2,477	2,239	1,905	2,202	1,750	1,344	1,683	1,398	811	478	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,799)	(4,199)	(4,606)	(5,020)	(5,444)	(5,877)	(6,320)	(6,775)	(7,242)	(7,723)	(0)	-	-
	FV of Bi-Annual Drawdown at 5%	4,734	4,689	4,615	5,914	5,017	4,535	3,859	4,460	3,544	2,722	3,409	2,831	1,643	969	(513)	(764)	(1,791)	(2,737)	(5,336)	(6,113)	(6,899)	(7,696)	(8,506)	(9,329)	(10,169)	(11,027)	(11,904)	(12,802)	(13,723)	(14,670)	(15,643)	(0)	-	-
	Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	(0)	-	-
	Annual Interest Cost on Opening Balance	-	242	495	756	1,097	1,410	1,714	1,999	2,330	2,630	2,904	3,227	3,537	3,802	4,046	4,227	4,404	4,538	4,630	4,594	4,516	4,394	4,225	4,006	3,734	3,405	3,015	2,560	2,036	1,438	761	0	(0)	(0)	
	Total Annual Interest Cost	60	301	553	831	1,161	1,467	1,763	2,056	2,375	2,665	2,947	3,263	3,558	3,814	4,040	4,217	4,382	4,503	4,563	4,517	4,429	4,297	4,118	3,889	3,606	3,266	2,865	2,399	1,863	1,253	564	0	(0)	(0)	

Feb8 1b, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
	Debt, Beginning of Year	0	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	
	Interest Cost - Feb8 1b, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,732*	*3,027*	*3,339*	*3,623*	*3,875*	*4,084*	*4,261*	*4,415*	*4,526*	*4,554*	*4,498*	*4,399*	*4,255*	*4,064*	*3,821*	*3,524*	*3,169*	*2,752*	*2,269*	*1,715*	*1,086*	*376*	*0*	*0*	*0*	85,582
	Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,994	5,174	6,754	6,192	6,020	5,643	6,541	5,948	5,420	6,393	6,135	5,246	4,831	3,578	3,507	2,646	1,824	-715	-1,538	-2,413	-3,343	-4,334	-5,390	-6,516	-7,718	-9,001	-10,371	-11,835	-13,398	-15,070	0	0	0	





Feb 7 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1c_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0
			111	111	109	140	120	116	107	128	115	103	126	121	101	93	66	66	48	32	-24	-40	-57	-74	-92	-111	-132	-153	-175	-199	-224	-250	-278	0	0	0

0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	5,867	3,893	72,823
Equal Monthly Debt Drawdown	6,006	3,869	

Maximum Accumulated Debt — Feb8 1c, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

End of Year Debt Drawdown	76,097	44,449
Equal Monthly Debt Drawdown	77,907	

		39%	37%	36%	42%	37%	34%																													
Feb8 1c, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	
c = a*5%	*Interest Cost - Feb8 1c, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*477*	*712*	*1,012*	*1,269*	*1,518*	*1,748*	*2,023*	*2,270*	*2,491*	*2,762*	*3,022*	*3,239*	*3,440*	*3,581*	*3,722*	*3,826*	*3,893*	*3,841*	*3,754*	*3,632*	*3,473*	*3,274*	*3,034*	*2,751*	*2,423*	*2,046*	*1,618*	*1,136*	*598*	*0*	*0*	*0*	72,823
b	Additional GA Debt Drawdown, End of Year	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
	Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	25,538	28,304	30,324	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,624	22,213	11,693	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	44,449	44,449	44,449	44,449	43,420	41,729	39,342	36,228	32,347	27,662	22,130	15,704	8,337	0	0	0	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	26,221	29,801	33,524	37,349	41,242	45,083	48,837	52,469	55,942	59,216	62,250	65,002	67,424	69,470	71,088	72,224	72,823				
	Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	43,767	42,952	41,249	38,748	33,826	28,294	22,153	15,406	8,054	94	-8,473	-17,649	-27,439	-37,846	-48,875	-60,532	-72,823				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	

Feb8 1c, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	
3,869	*Interest Cost - Feb8 1c, 30-yr*	*111*	*350*	*586*	*851*	*1,132*	*1,385*	*1,625*	*1,876*	*2,138*	*2,372*	*2,617*	*2,882*	*3,123*	*3,333*	*3,505*	*3,646*	*3,770*	*3,857*	*3,869*	*3,800*	*3,697*	*3,558*	*3,380*	*3,163*	*2,903*	*2,599*	*2,247*	*1,847*	*1,394*	*886*	*320*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	

	Monthly Drawdown	390	367	343	430	335	299	248	303	233	171	234	193	103	56	(57)	(68)	(142)	(208)	(410)	(461)	(512)	(562)	(613)	(663)	(714)	(765)	(816)	(867)	(919)	(971)	(1,024)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,515	4,210	5,278	4,114	3,677	3,048	3,717	2,857	2,099	2,873	2,375	1,268	689	(699)	(834)	(1,744)	(2,561)	(5,039)	(5,664)	(6,286)	(6,907)	(7,528)	(8,148)	(8,771)	(9,395)	(10,023)	(10,654)	(11,291)	(11,934)	(12,583)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	105	98	123	96	85	71	86	66	49	67	55	29	16	(16)	(19)	(41)	(59)	(117)	(132)	(146)	(160)	(175)	(189)	(204)	(218)	(233)	(248)	(262)	(277)	(292)	-	-	-	
	Annual Interest Cost on Opening Balance	-	245	488	729	1,036	1,300	1,554	1,790	2,071	2,323	2,550	2,827	3,093	3,317	3,521	3,666	3,811	3,917	3,986	3,932	3,843	3,718	3,555	3,352	3,107	2,817	2,480	2,094	1,656	1,163	612	(0)	(0)	(0)	
	Total Annual Interest Cost	111	350	586	851	1,132	1,385	1,625	1,876	2,138	2,372	2,617	2,882	3,123	3,333	3,505	3,646	3,770	3,857	3,869	3,800	3,697	3,558	3,380	3,163	2,903	2,599	2,247	1,847	1,394	886	320	(0)	(0)	(0)	

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Feb8 1c, 30-yr	Bi-Annual Debt Drawdown	**2**																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*60*	*299*	*536*	*787*	*1,076*	*1,332*	*1,576*	*1,817*	*2,085*	*2,325*	*2,558*	*2,827*	*3,076*	*3,290*	*3,475*	*3,616*	*3,748*	*3,842*	*3,880*	*3,819*	*3,724*	*3,592*	*3,423*	*3,214*	*2,964*	*2,669*	*2,328*	*1,939*	*1,498*	*1,002*	*449*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,708	4,648	5,942	5,095	4,923	4,553	5,447	4,876	4,375	5,364	5,147	4,315	3,962	2,792	2,802	2,045	1,341	-1,042	-1,713	-2,417	-3,155	-3,930	-4,745	-5,603	-6,508	-7,461	-8,468	-9,531	-10,655	-11,842	0	0	0	

	Bi-Annual Drawdown	2,337	2,205	2,056	2,578	2,009	1,796	1,489	1,815	1,395	1,025	1,403	1,160	620	336	(341)	(407)	(852)	(1,251)	(2,461)	(2,766)	(3,070)	(3,373)	(3,676)	(3,980)	(4,283)	(4,588)	(4,895)	(5,203)	(5,514)	(5,828)	(6,146)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,466	4,165	5,221	4,070	3,638	3,015	3,677	2,826	2,077	2,842	2,350	1,255	681	(691)	(825)	(1,725)	(2,533)	(4,985)	(5,603)	(6,219)	(6,833)	(7,447)	(8,061)	(8,676)	(9,294)	(9,915)	(10,540)	(11,170)	(11,806)	(12,448)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	56	53	66	51	46	38	46	36	26	36	30	16	9	(9)	(10)	(22)	(32)	(63)	(71)	(79)	(86)	(94)	(102)	(110)	(117)	(125)	(133)	(141)	(149)	(157)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	483	721	1,025	1,286	1,537	1,770	2,049	2,299	2,522	2,797	3,060	3,281	3,484	3,626	3,770	3,874	3,943	3,890	3,802	3,678	3,517	3,316	3,073	2,787	2,454	2,072	1,639	1,151	606	(0)	(0)	(0)	
	Total Annual Interest Cost	60	299	536	787	1,076	1,332	1,576	1,817	2,085	2,325	2,558	2,827	3,076	3,290	3,475	3,616	3,748	3,842	3,880	3,819	3,724	3,592	3,423	3,214	2,964	2,669	2,328	1,939	1,498	1,002	449	(0)	(0)	(0)	

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Feb8 1c, 30-yr	Average Debt Drawdown																																			
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*120*	*358*	*594*	*862*	*1,141*	*1,394*	*1,633*	*1,886*	*2,146*	*2,380*	*2,626*	*2,892*	*3,130*	*3,340*	*3,510*	*3,651*	*3,774*	*3,859*	*3,867*	*3,797*	*3,693*	*3,552*	*3,373*	*3,154*	*2,893*	*2,587*	*2,234*	*1,832*	*1,377*	*867*	*299*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,768	4,707	6,017	5,160	4,985	4,610	5,516	4,937	4,431	5,432	5,212	4,370	4,012	2,828	2,837	2,071	1,358	-1,055	-1,735	-2,447	-3,195	-3,979	-4,805	-5,674	-6,590	-7,556	-8,575	-9,652	-10,789	-11,992	0	0	0	

Feb 7 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1d_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0
			52	54	56	73	67	61	51	71	56	42	64	57	36	27	-2	-3	-23	-37	-39	-41	-43	-46	-48	-50	-53	-56	-59	-62	-65	-68	-71	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,072	1,649	29,589
Equal Monthly Debt Drawdown	3,145	1,647	

Maximum Accumulated Debt	Feb8 1d, 30-yr, Accumulated Debt	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,233	21,239
Equal Monthly Debt Drawdown	32,999	

		18%	18%	18%	22%	21%	18%																													
Feb8 1d, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
a	Debt, Beginning of Year	0	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	
c = a*5%	*Interest Cost - Feb8 1d, 30-yr - End of Year Debt Drawdown*	*0*	*112*	*228*	*348*	*505*	*649*	*781*	*891*	*1,043*	*1,162*	*1,253*	*1,391*	*1,514*	*1,592*	*1,649*	*1,644*	*1,637*	*1,588*	*1,508*	*1,423*	*1,335*	*1,241*	*1,143*	*1,040*	*931*	*817*	*698*	*572*	*439*	*300*	*154*	*0*	*0*	*0*	29,589
b	Additional GA Debt Drawdown, End of Year	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	11,372	11,227	10,281	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,586	5,865	3,006	0	0	0	0	
	Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	20,763	20,763	20,763	20,763	19,112	17,375	15,550	13,632	11,616	9,496	7,268	4,926	2,464	0	0	0	0	0	0	0	
	Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	13,118	14,763	16,399	17,988	19,495	20,919	22,253	23,495	24,638	25,678	26,609	27,426	28,124	28,696	29,135	29,435	29,589				
	Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	19,017	17,228	14,645	11,486	8,326	5,167	2,007	-1,153	-4,312	-7,472	-10,631	-13,791	-16,951	-20,110	-23,270	-26,429	-29,589				
Fiscal Exposure - End of Year Debt Drawdown		2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	

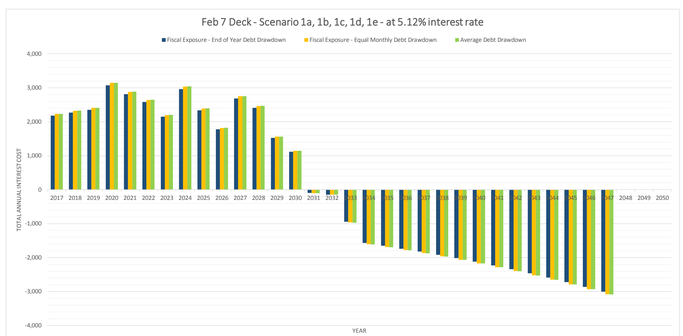
Feb8 1d, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Debt, Beginning of Year	0	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	
1,647	*Interest Cost - Feb8 1d, 30-yr*	*52*	*166*	*284*	*421*	*572*	*711*	*832*	*962*	*1,098*	*1,205*	*1,317*	*1,448*	*1,550*	*1,619*	*1,647*	*1,641*	*1,614*	*1,551*	*1,469*	*1,382*	*1,291*	*1,196*	*1,095*	*989*	*878*	*762*	*639*	*510*	*375*	*232*	*82*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	

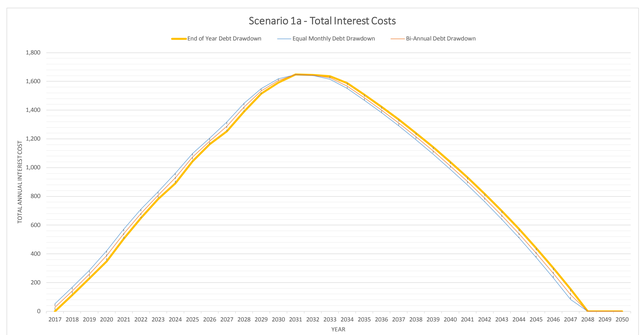
	Monthly Drawdown	182	180	177	227	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	-	-	-
	FV of Monthly Drawdown at 5%	2,232	2,210	2,176	2,788	2,366	1,977	1,399	2,123	1,322	628	1,468	1,042	12	(487)	(1,788)	(1,831)	(2,644)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	-	-	-
	Annual Interest Cost on New Drawdowns	52	51	51	65	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	-	-	-
	Annual Interest Cost on Opening Balance	-	114	233	356	517	665	800	912	1,068	1,190	1,283	1,424	1,550	1,630	1,688	1,683	1,676	1,626	1,544	1,457	1,366	1,271	1,170	1,065	954	837	714	585	450	307	157	0	0	0
	Total Annual Interest Cost	52	166	284	421	572	711	832	962	1,098	1,205	1,317	1,448	1,550	1,619	1,647	1,641	1,614	1,551	1,469	1,382	1,291	1,196	1,095	989	878	762	639	510	375	232	82	0	0	0

Feb8 1d, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Debt, Beginning of Year	0	2,208	4,507	6,890	10,001	12,854	15,467	17,642	20,645	23,009	24,807	27,529	29,969	31,514	32,645	32,546	32,400	31,442	29,850	28,177	26,419	24,571	22,628	20,585	18,439	16,182	13,810	11,316	8,695	5,940	3,044	0	0	0	
	Interest Cost - Feb8 1d, 30-yr	*28*	*141*	*258*	*387*	*541*	*682*	*809*	*929*	*1,073*	*1,185*	*1,288*	*1,421*	*1,533*	*1,606*	*1,648*	*1,642*	*1,625*	*1,568*	*1,487*	*1,401*	*1,311*	*1,217*	*1,117*	*1,013*	*903*	*787*	*666*	*539*	*404*	*264*	*115*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,208	4,507	6,890	10,001	12,854	15,467	17,642	20,645	23,009	24,807	27,529	29,969	31,514	32,645	32,546	32,400	31,442	29,850	28,177	26,419	24,571	22,628	20,585	18,439	16,182	13,810	11,316	8,695	5,940	3,044	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,208	2,299	2,383	3,111	2,853	2,613	2,175	3,003	2,364	1,798	2,722	2,440	1,545	1,131	-98	-147	-958	-1,591	-1,673	-1,758	-1,848	-1,943	-2,042	-2,147	-2,257	-2,372	-2,493	-2,621	-2,755	-2,896	-3,044	0	0	0	

	Bi-Annual Drawdown	1,090	1,079	1,063	1,362	1,156	965	683	1,037	646	307	717	509	6	(238)	(873)	(894)	(1,291)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	-	-	-
	FV of Bi-Annual Drawdown at 5%	2,208	2,186	2,153	2,758	2,341	1,955	1,384	2,100	1,308	621	1,453	1,031	12	(481)	(1,769)	(1,812)	(2,616)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	-	-	-
	Annual Interest Cost on New Drawdowns	28	28	27	35	30	25	17	27	17	8	18	13	0	(6)	(22)	(23)	(33)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	-	-	-
	Annual Interest Cost on Opening Balance	-	113	231	353	512	658	791	903	1,056	1,177	1,269	1,408	1,533	1,612	1,670	1,665	1,658	1,609	1,527	1,442	1,352	1,257	1,158	1,053	943	828	707	579	445	304	156	0	0	0
	Total Annual Interest Cost	28	141	258	387	541	682	809	929	1,073	1,185	1,288	1,421	1,533	1,606	1,648	1,642	1,625	1,568	1,487	1,401	1,311	1,217	1,117	1,013	903	787	666	539	404	264	115	0	0	0

Feb8 1d, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Debt, Beginning of Year	0	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	
	Interest Cost - Feb8 1d, 30-yr	*56*	*170*	*288*	*427*	*577*	*715*	*836*	*967*	*1,103*	*1,208*	*1,322*	*1,452*	*1,553*	*1,621*	*1,647*	*1,640*	*1,613*	*1,548*	*1,466*	*1,379*	*1,288*	*1,192*	*1,091*	*986*	*874*	*758*	*635*	*505*	*370*	*227*	*77*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		2,236	2,328	2,413	3,150	2,889	2,646	2,203	3,041	2,394	1,821	2,756	2,471	1,565	1,145	-100	-148	-970	-1,612	-1,694	-1,781	-1,872	-1,967	-2,068	-2,174	-2,285	-2,402	-2,525	-2,654	-2,790	-2,933	-3,083	0	0	0	





Feb 7 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1e_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0
			36	37	38	53	46	39	27	45	28	13	33	24	1	-11	-16	-16	-17	-18	-19	-20	-21	-22	-23	-25	-26	-27	-29	-30	-32	-33	-35	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,243	904	16,239
Equal Monthly Debt Drawdown	2,297	903	

Maximum Accumulated Debt	Feb8 1e, 30-yr, Accumulated Debt	Total Principal Debt Borrowed
End of Year Debt Drawdown	17,670	12,350
Equal Monthly Debt Drawdown	18,091	

		12%	12%	12%	16%	15%	11%																													
Feb8 1e, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
	GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
a	Debt, Beginning of Year	0	1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	
c = a*5%	*Interest Cost - Feb8 1e, 30-yr - End of Year Debt Drawdown*	*0*	*77*	*156*	*236*	*351*	*450*	*534*	*592*	*688*	*749*	*778*	*849*	*901*	*904*	*881*	*847*	*812*	*775*	*735*	*694*	*651*	*605*	*558*	*507*	*454*	*399*	*340*	*279*	*214*	*146*	*75*	*0*	*0*	*0*	16,239
b	Additional GA Debt Drawdown, End of Year	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1e, 30-yr - Accumulated Interest Costs	0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	6,605	5,911	5,182	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,188	2,861	1,466	0	0	0	0	
	Feb8 1e, 30-yr - Accumulated Debt Principal	1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	9,960	9,960	9,960	9,960	9,155	8,308	7,418	6,482	5,498	4,465	3,378	2,235	1,035	0	0	0	0	0	0	0	
	Feb8 1e, 30-yr - Accumulated Interest Costs	0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	8,146	8,993	9,805	10,580	11,315	12,010	12,661	13,266	13,824	14,331	14,785	15,184	15,524	15,803	16,017	16,164	16,239				
	Feb8 1e, 30-yr - Accumulated Debt Principal	1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	8,419	6,878	5,337	3,796	2,255	714	-827	-2,369	-3,910	-5,451	-6,992	-8,533	-10,074	-11,615	-13,156	-14,697	-16,239				
Fiscal Exposure - End of Year Debt Drawdown		1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	

Feb8 1e, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
	GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
	Debt, Beginning of Year	0	1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	
903	*Interest Cost - Feb8 1e, 30-yr*	*36*	*113*	*193*	*290*	*397*	*489*	*561*	*637*	*717*	*762*	*811*	*873*	*903*	*893*	*866*	*831*	*795*	*756*	*716*	*674*	*630*	*583*	*534*	*483*	*428*	*372*	*312*	*249*	*183*	*113*	*40*	*0*	*0*	*0*	16,239
	Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	

	Monthly Drawdown	125	122	119	167	132	99	50	108	42	(16)	51	15	(70)	(112)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	-	-	-
	FV of Monthly Drawdown at 5%	1,536	1,500	1,457	2,055	1,617	1,213	620	1,328	512	(199)	625	182	(865)	(1,382)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	-	-	-
	Annual Interest Cost on New Drawdowns	36	35	34	48	38	28	14	31	12	(5)	15	4	(20)	(32)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	-	-	-
	Annual Interest Cost on Opening Balance	-	79	159	242	359	461	546	606	705	767	796	869	923	926	902	868	831	793	753	711	666	620	571	519	465	408	348	285	219	150	77	0	0	0
	Total Annual Interest Cost	36	113	193	290	397	489	561	637	717	762	811	873	903	893	866	831	795	756	716	674	630	583	534	483	428	372	312	249	183	113	40	0	0	0

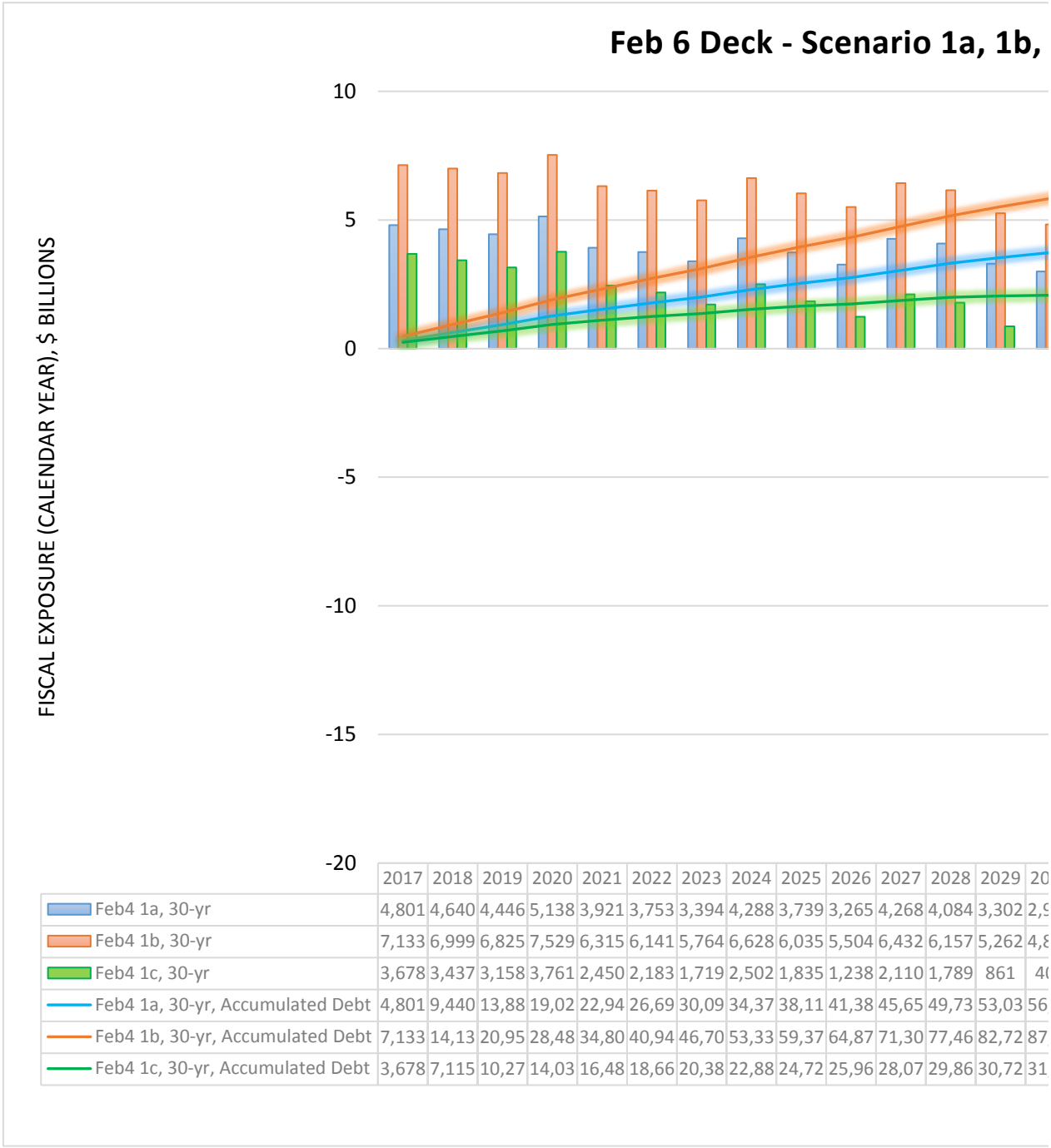
Feb8 1e, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
	GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
	Debt, Beginning of Year	0	1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	
	Interest Cost - Feb8 1e, 30-yr	*19*	*96*	*176*	*265*	*376*	*471*	*548*	*616*	*704*	*756*	*795*	*862*	*902*	*898*	*873*	*839*	*803*	*765*	*725*	*683*	*640*	*593*	*545*	*494*	*440*	*384*	*325*	*263*	*197*	*129*	*56*	*0*	*0*	*0*	16,239
	Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,519	1,561	1,598	2,272	1,956	1,655	1,154	1,913	1,203	562	1,406	1,040	57	-451	-668	-703	-738	-776	-816	-858	-902	-948	-996	-1,047	-1,101	-1,157	-1,216	-1,278	-1,344	-1,413	-1,485	0	0	0	

	Bi-Annual Drawdown	750	733	711	1,003	790	592	303	649	250	(97)	305	89	(423)	(675)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	-	-	-
	FV of Bi-Annual Drawdown at 5%	1,519	1,484	1,441	2,033	1,600	1,200	613	1,314	506	(197)	618	180	(856)	(1,367)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	-	-	-
	Annual Interest Cost on New Drawdowns	19	19	18	26	20	15	8	17	6	(2)	8	2	(11)	(17)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	-	-	-
	Annual Interest Cost on Opening Balance	-	78	158	239	356	456	540	599	697	759	788	860	913	916	893	858	822	785	745	703	659	613	565	514	460	404	345	282	217	148	76	0	0	0	
	Total Annual Interest Cost	19	96	176	265	376	471	548	616	704	756	795	862	902	898	873	839	803	765	725	683	640	593	545	494	440	384	325	263	197	129	56	0	0	0	

Feb8 1e, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
	GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
	Debt, Beginning of Year	0	1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	
	Interest Cost - Feb8 1e, 30-yr	*38*	*116*	*196*	*294*	*401*	*492*	*563*	*640*	*719*	*763*	*813*	*875*	*903*	*893*	*864*	*830*	*793*	*755*	*715*	*673*	*628*	*581*	*532*	*481*	*427*	*369*	*310*	*247*	*180*	*111*	*38*	*0*	*0*	*0*	16,239
	Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,538	1,581	1,619	2,301	1,980	1,676	1,168	1,938	1,219	569	1,424	1,053	57	-457	-677	-711	-748	-786	-826	-869	-913	-960	-1,009	-1,060	-1,115	-1,172	-1,232	-1,295	-1,361	-1,430	-1,504	0	0	0	

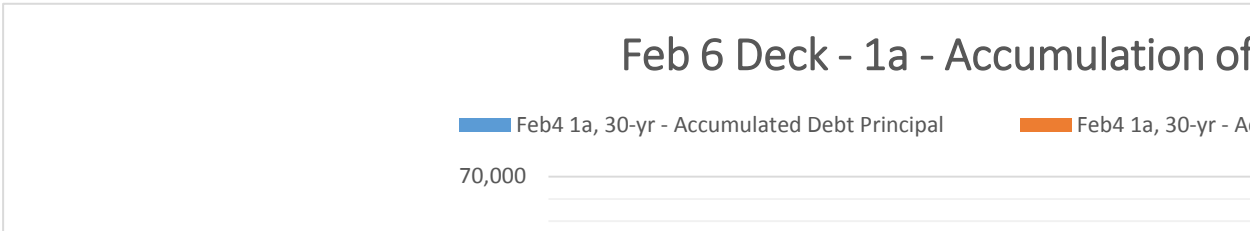
Feb 6 Deck

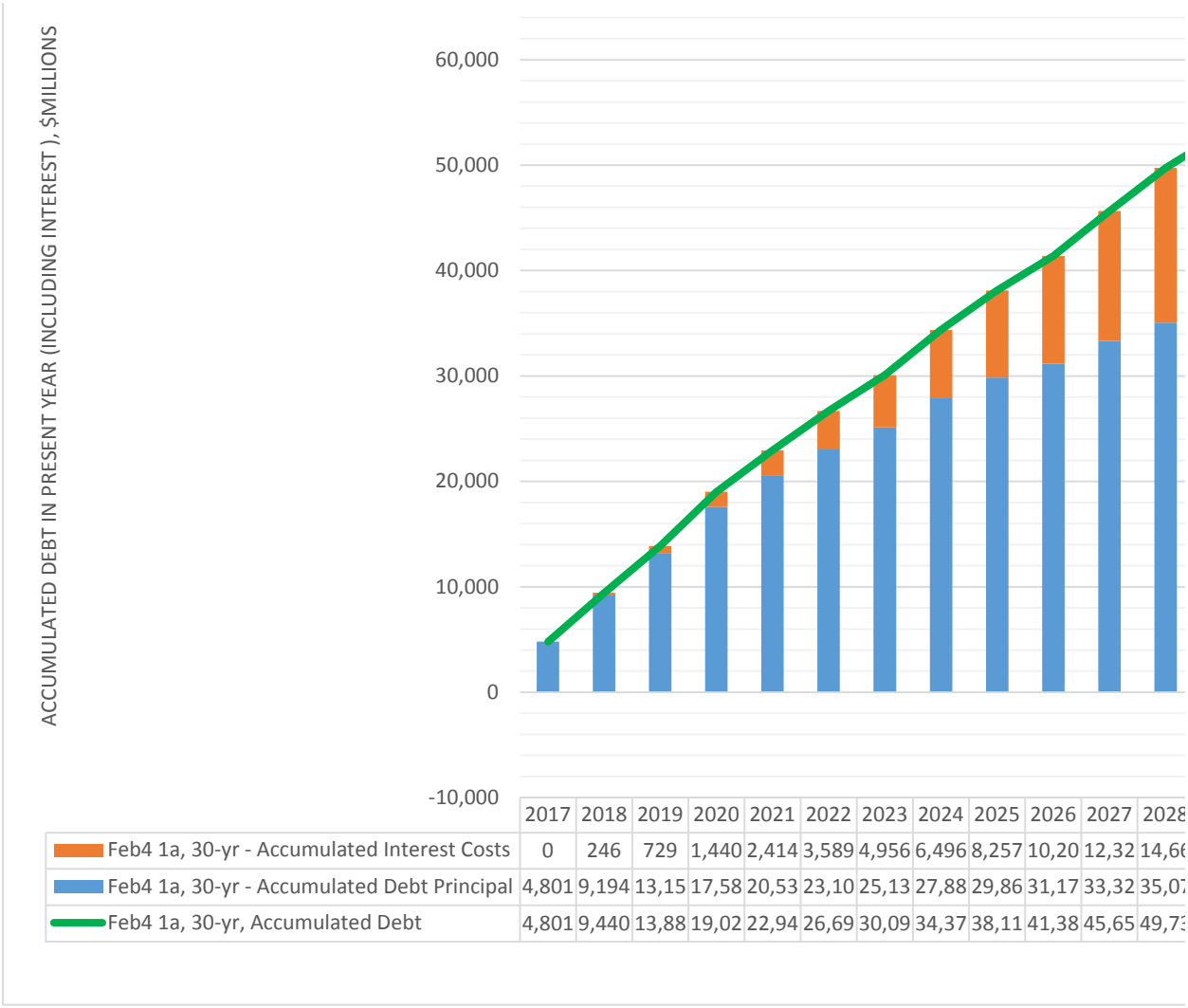
Feb 6 Deck - Scenario 1a, 1b, 1c - at 5.12% interest rate



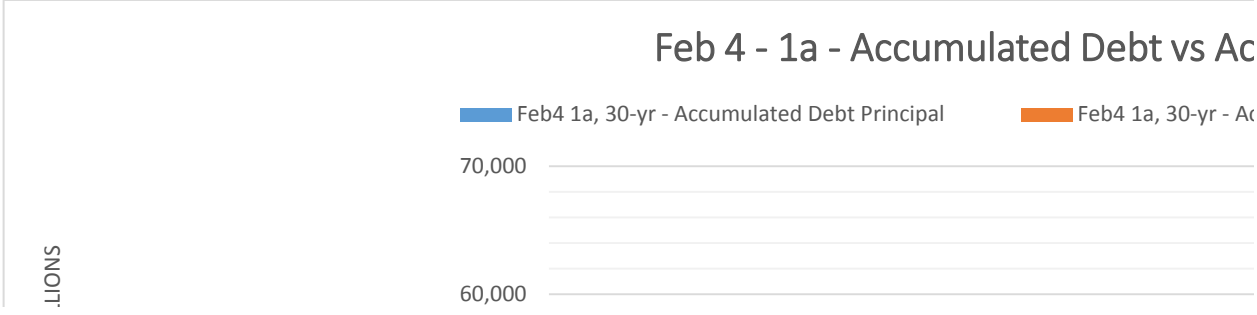
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	20
Feb4 1a, 30-yr	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,9
Feb4 1b, 30-yr	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,8
Feb4 1c, 30-yr	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	4(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73	53,03	56
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31

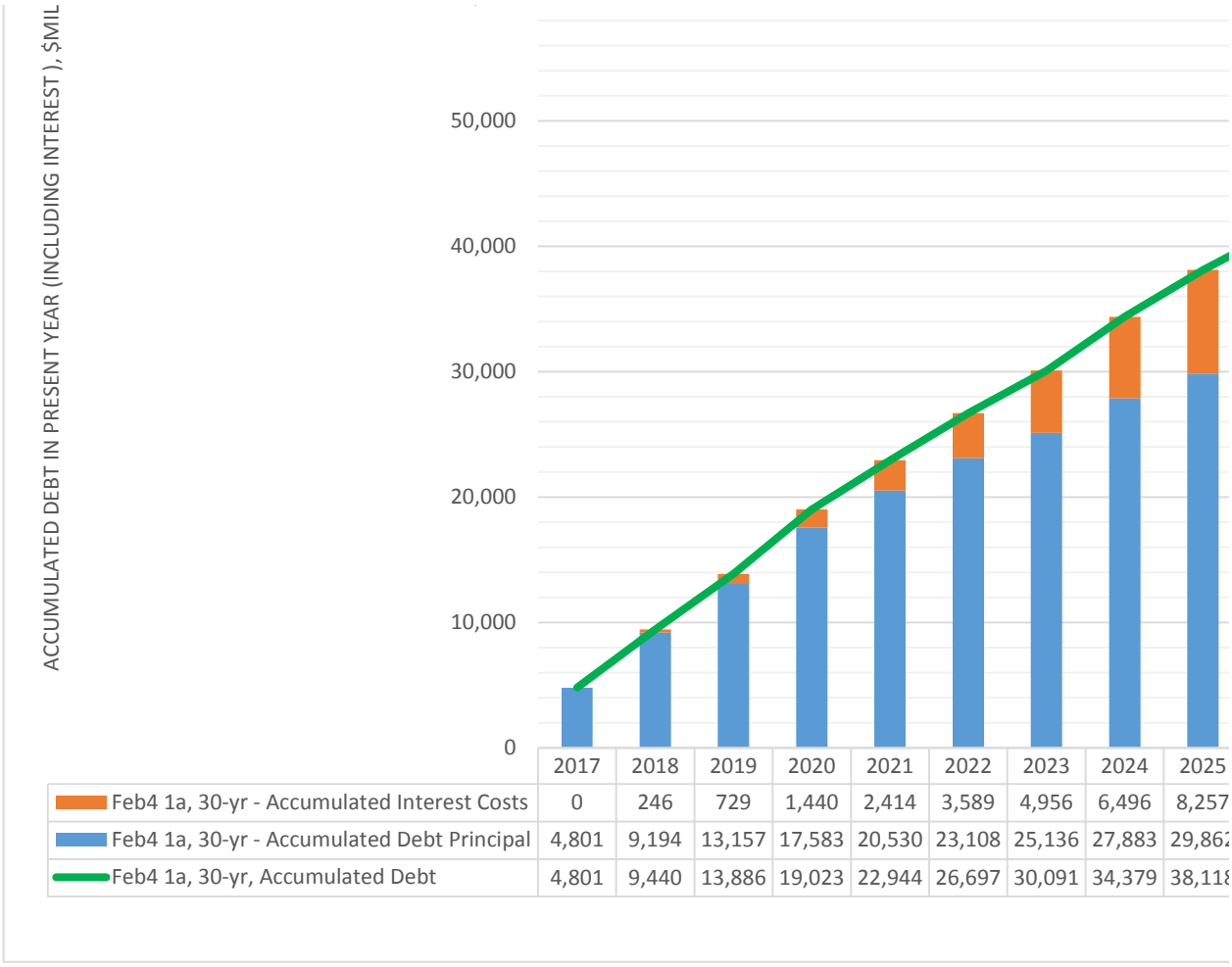
Feb 6 Deck - 1a - Accumulation of Debt (Principal and Interest)



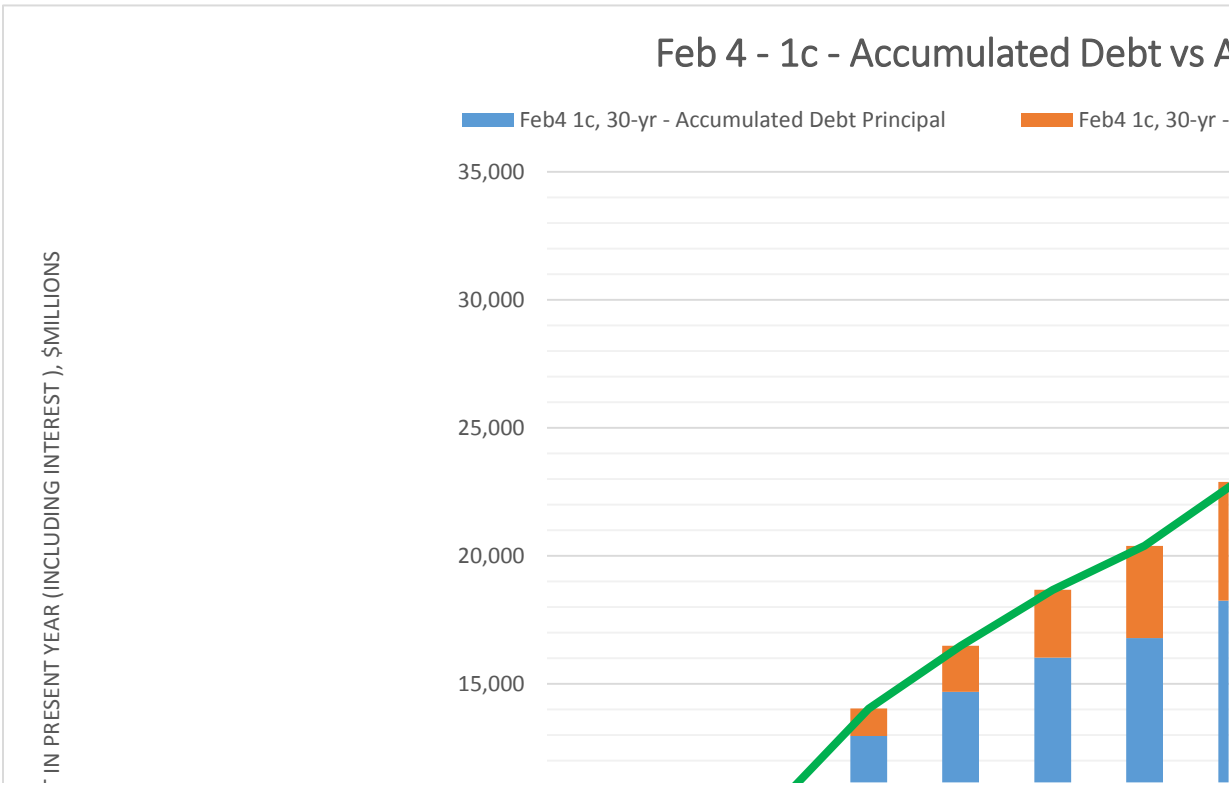


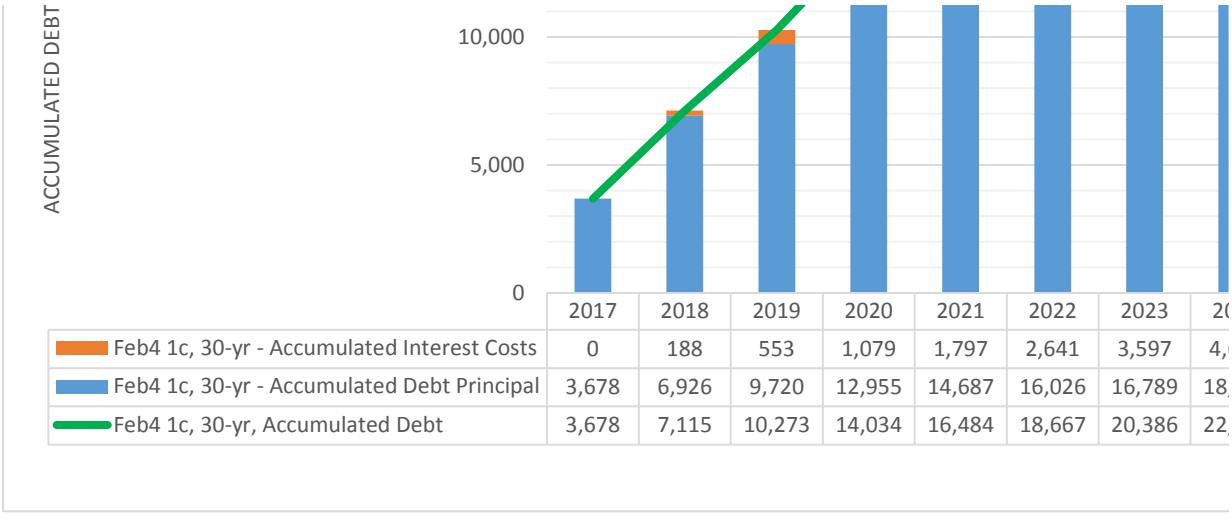
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,66
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,07
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73



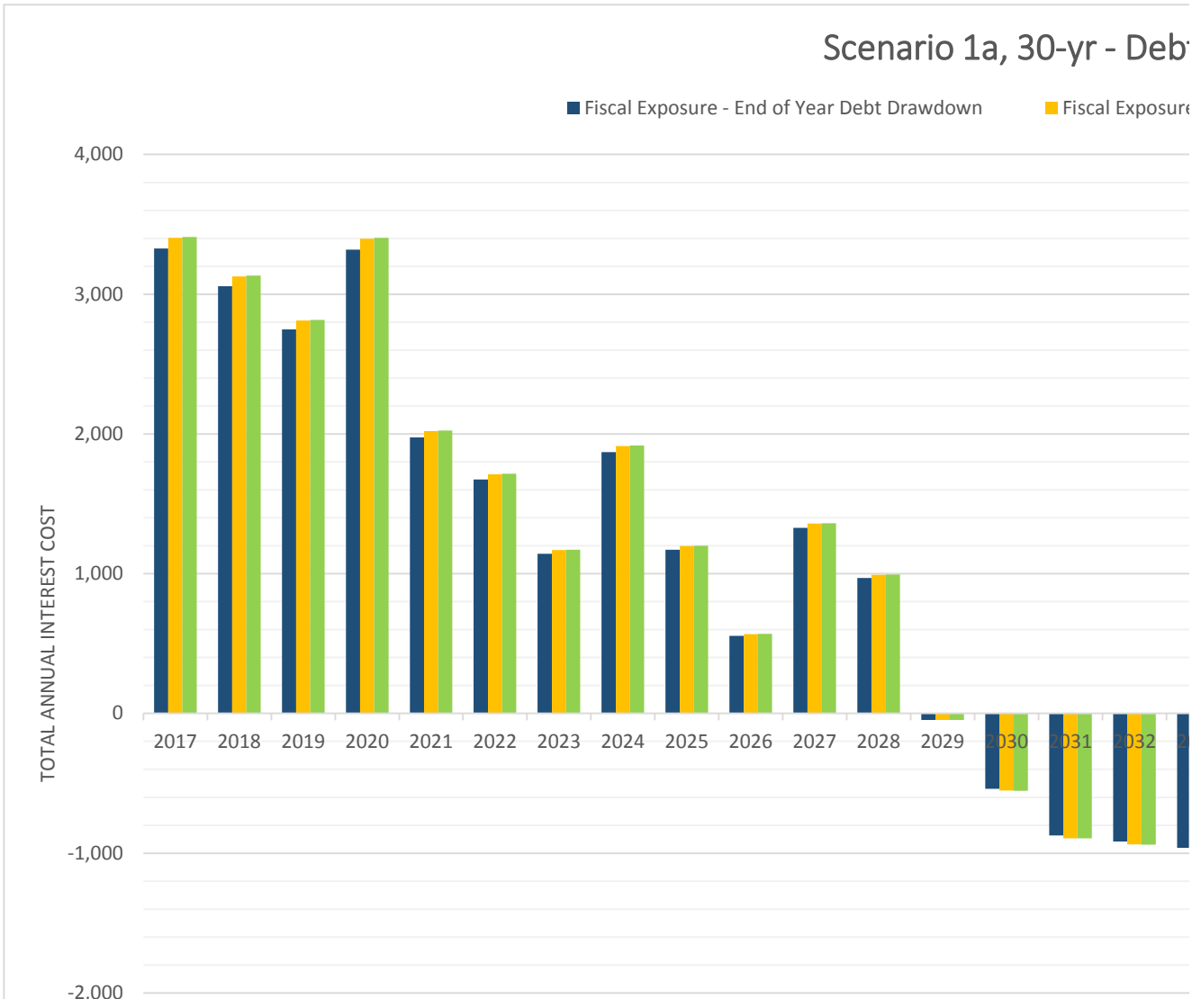


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



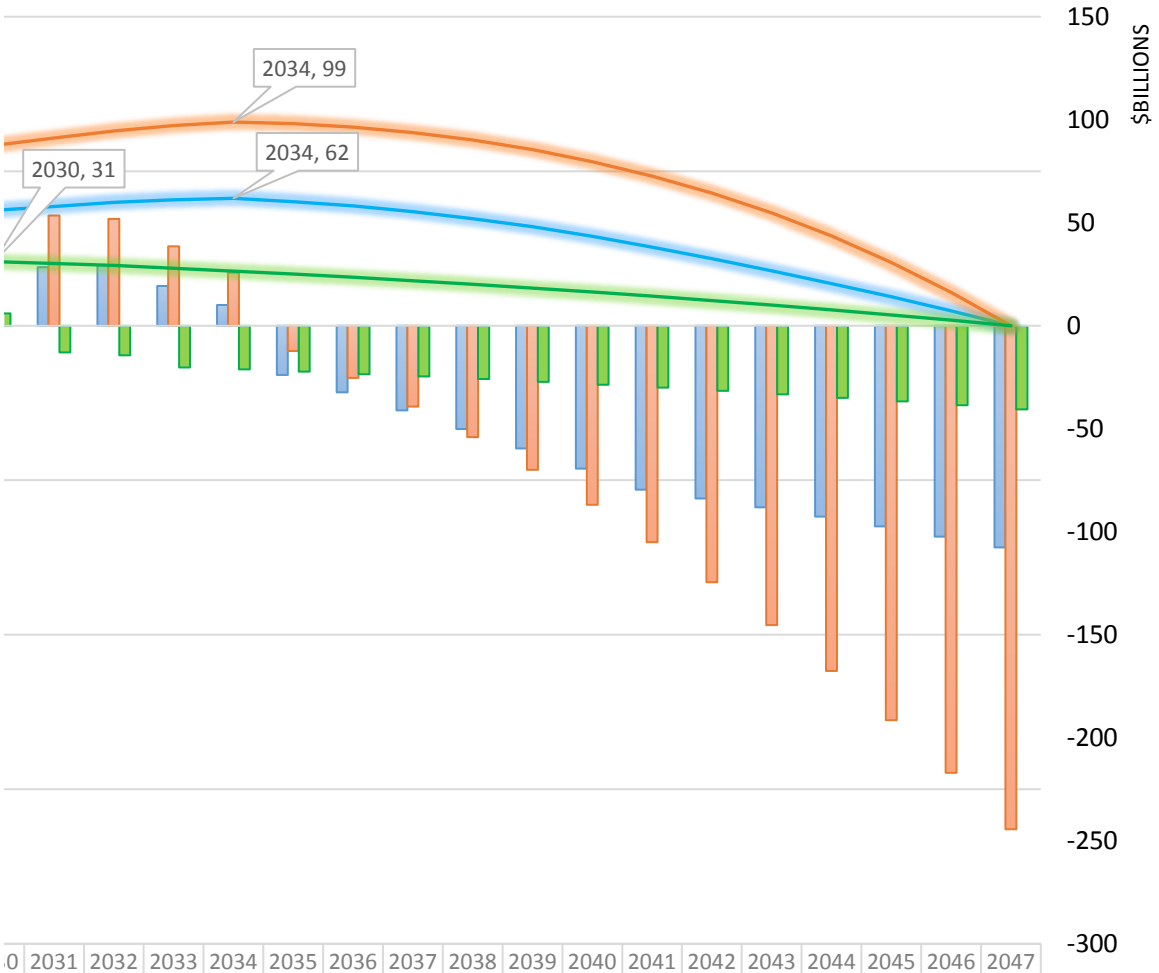


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22



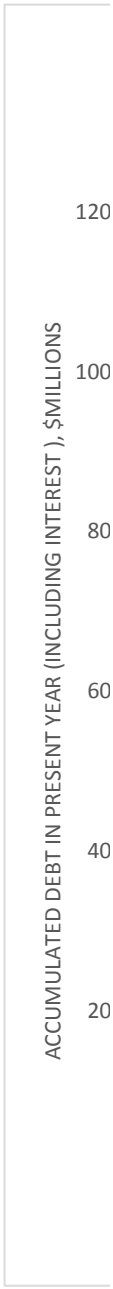

-3,000

lc - at 5.12% interest rate



0	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
98	1,896	1,966	1,288	672	-1,59	-2,15	-2,73	-3,34	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
26	3,568	3,457	2,571	1,716	-819	-1,68	-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
4	-860	-961	-1,34	-1,41	-1,48	-1,56	-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0
55	91,12	94,57	97,14	98,86	98,04	96,35	93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0
12	30,26	29,30	27,95	26,54	25,05	23,49	21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

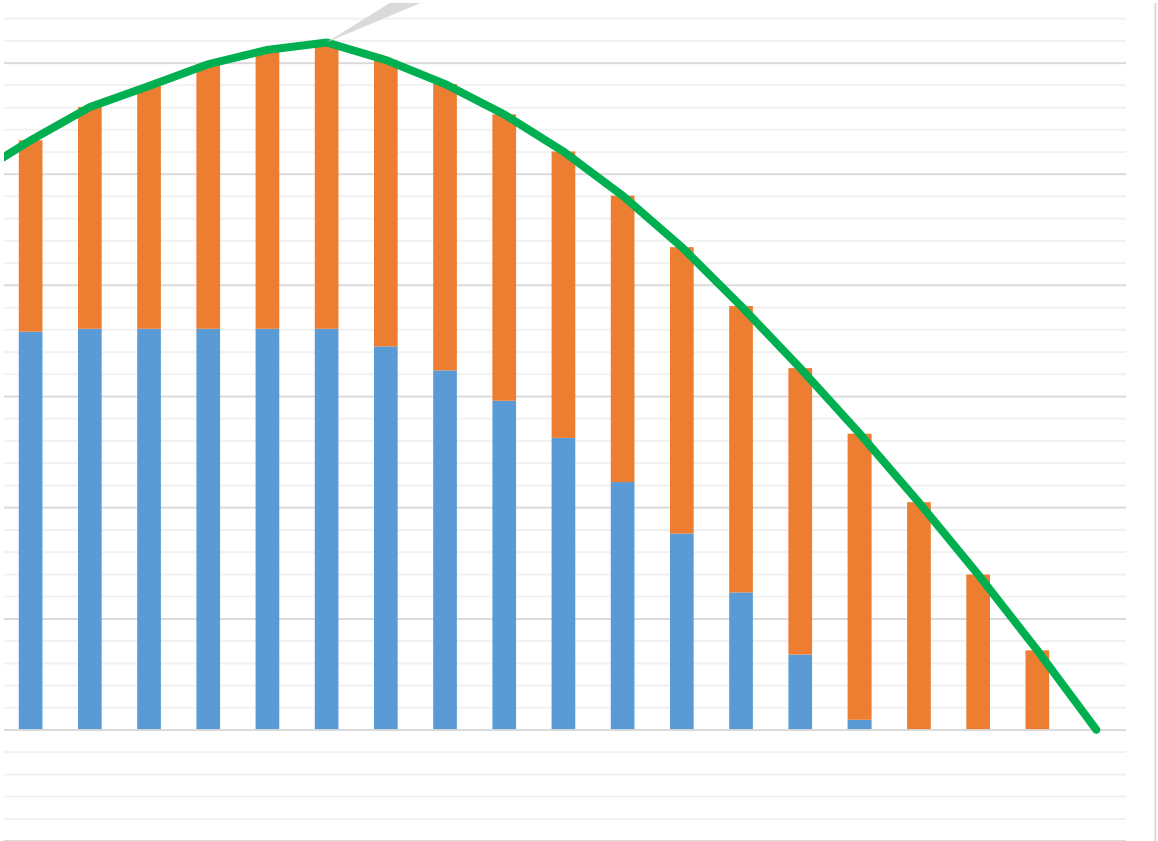
CALENDAR YEAR



Debt (Principal and Interest)

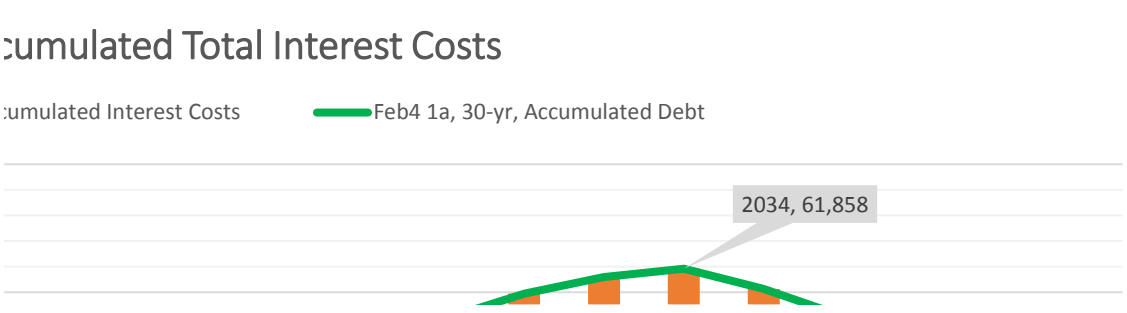
cumulated Interest Costs — Feb4 1a, 30-yr, Accumulated Debt

2034, 61,858

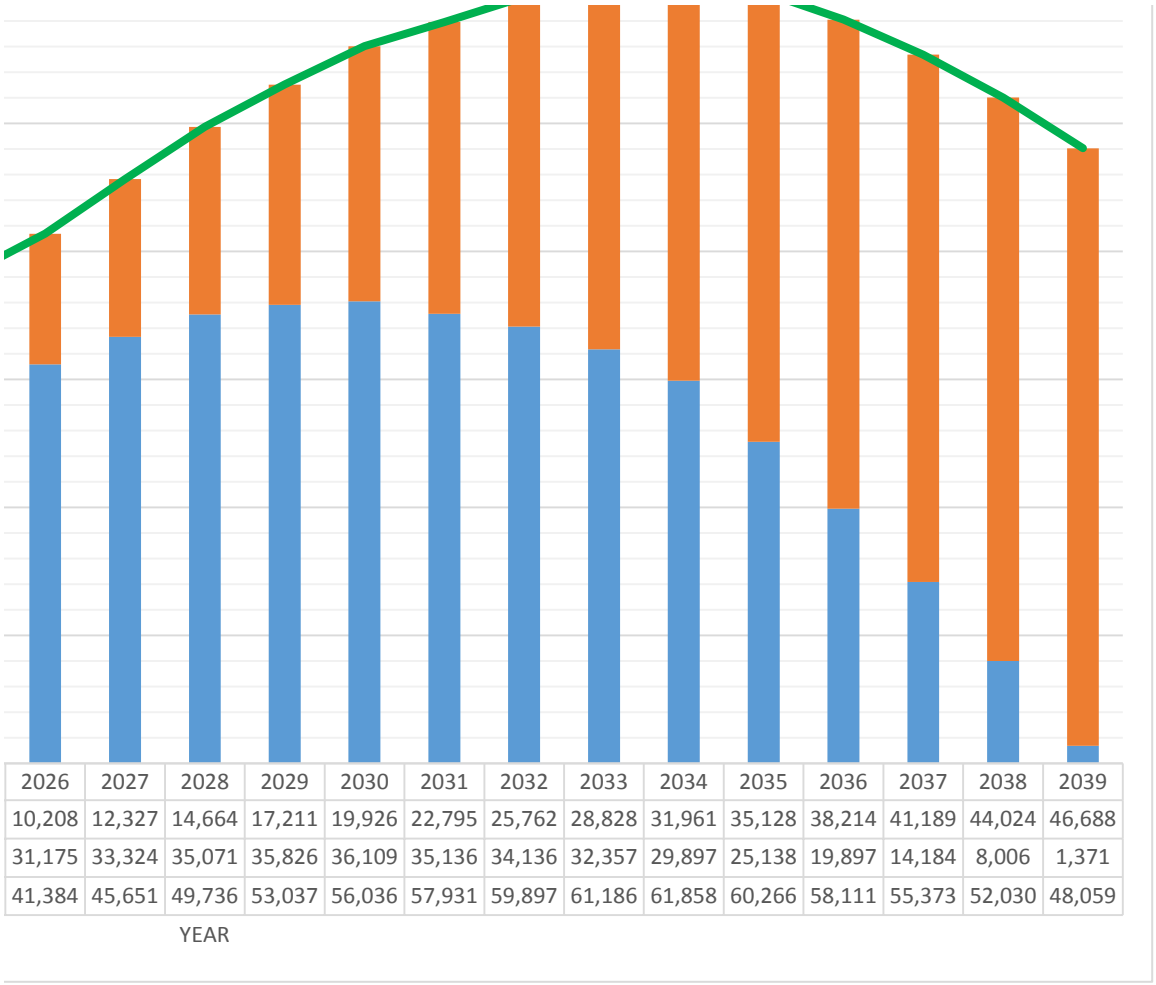


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



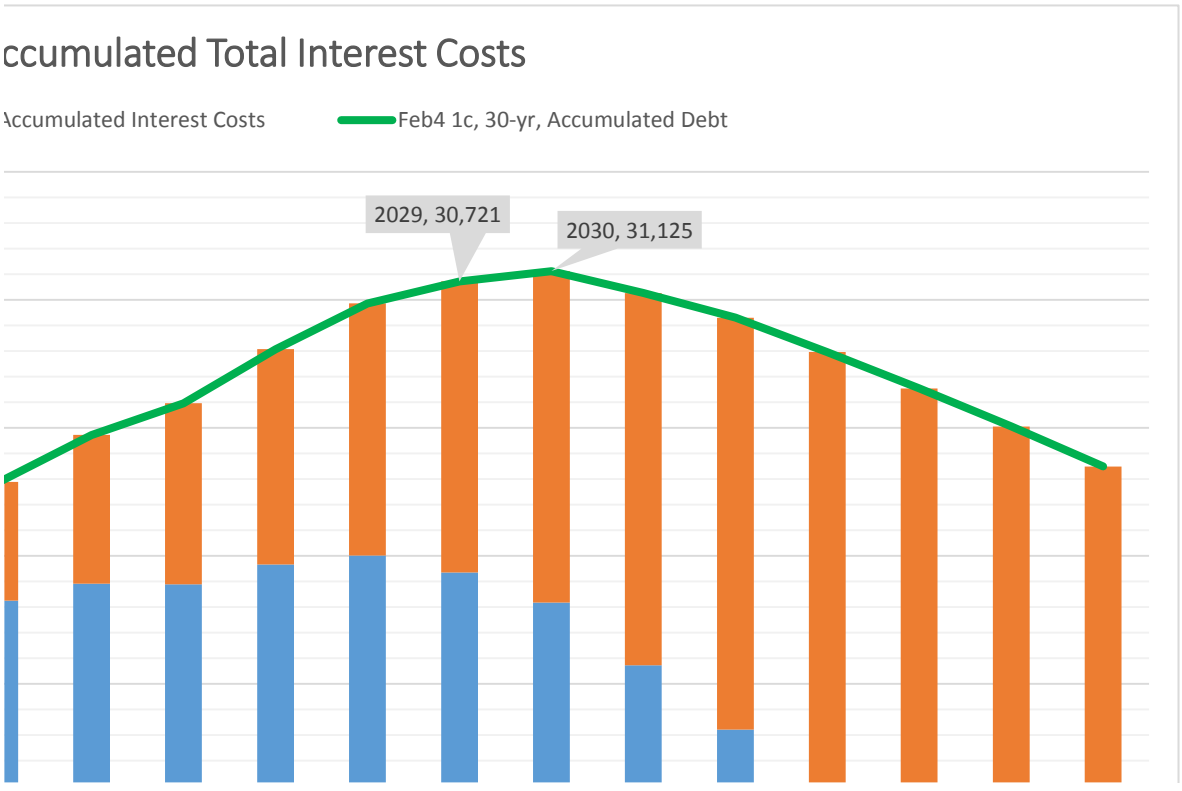
LIONS

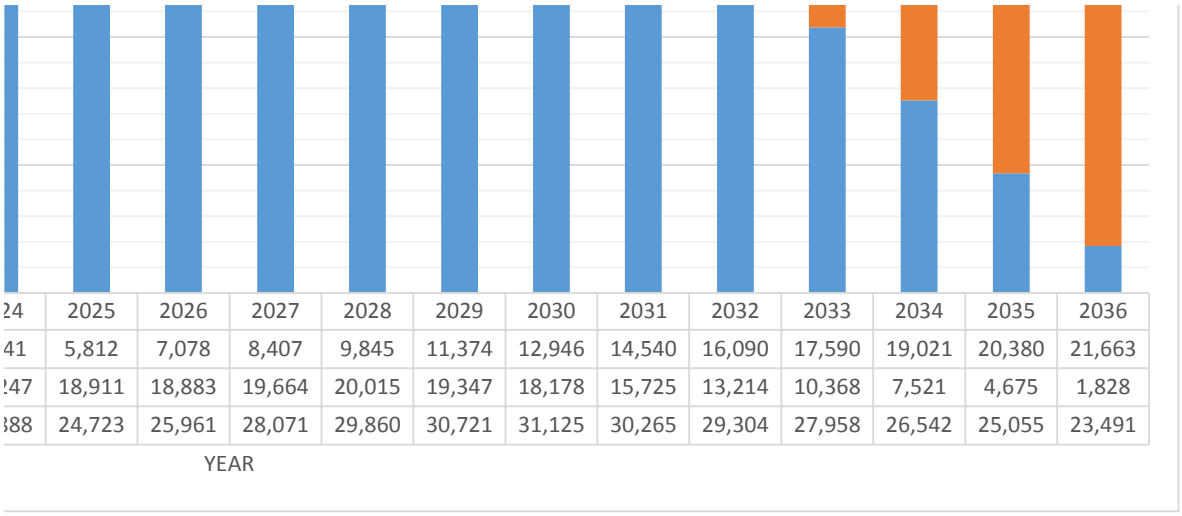


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

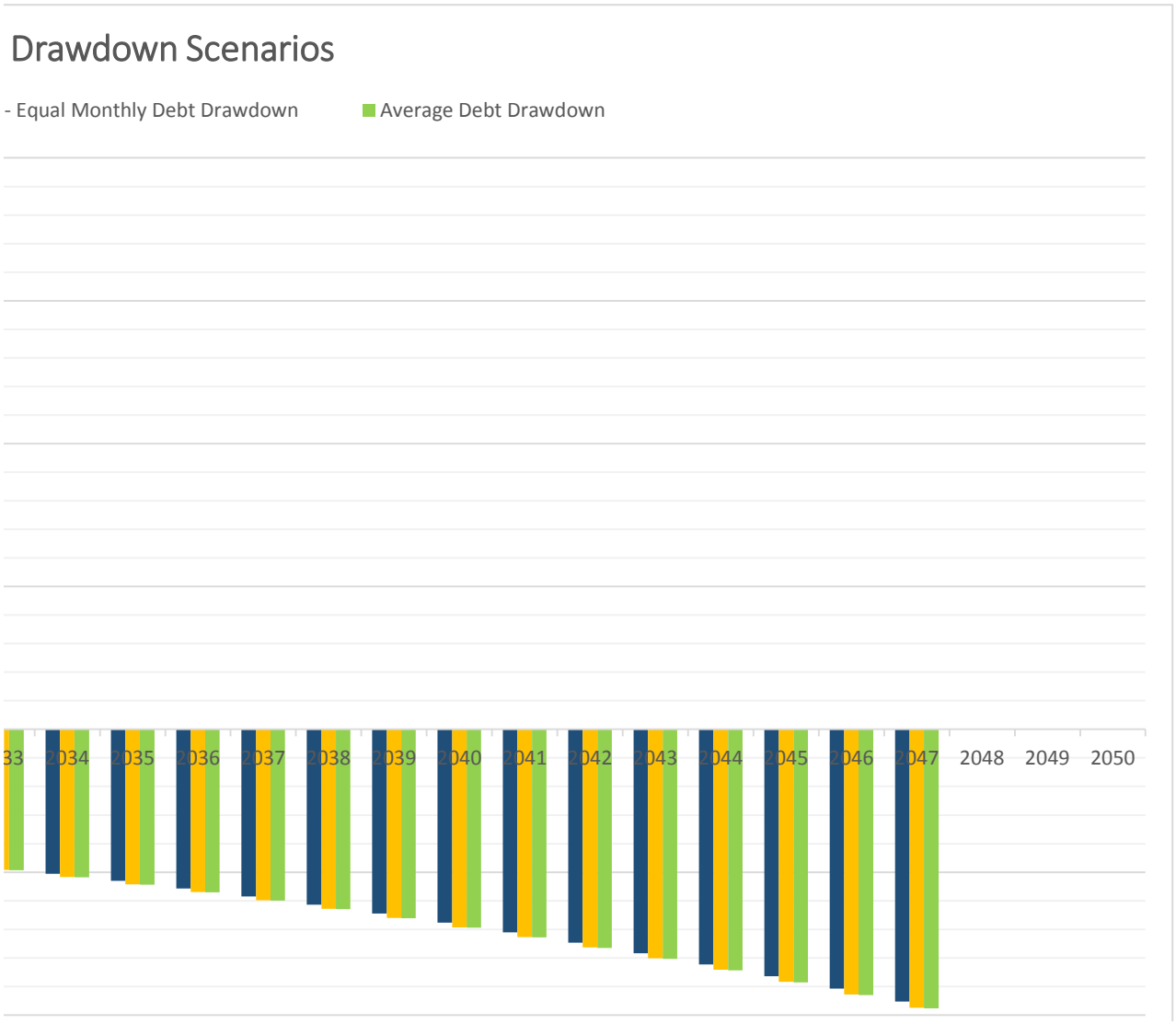
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





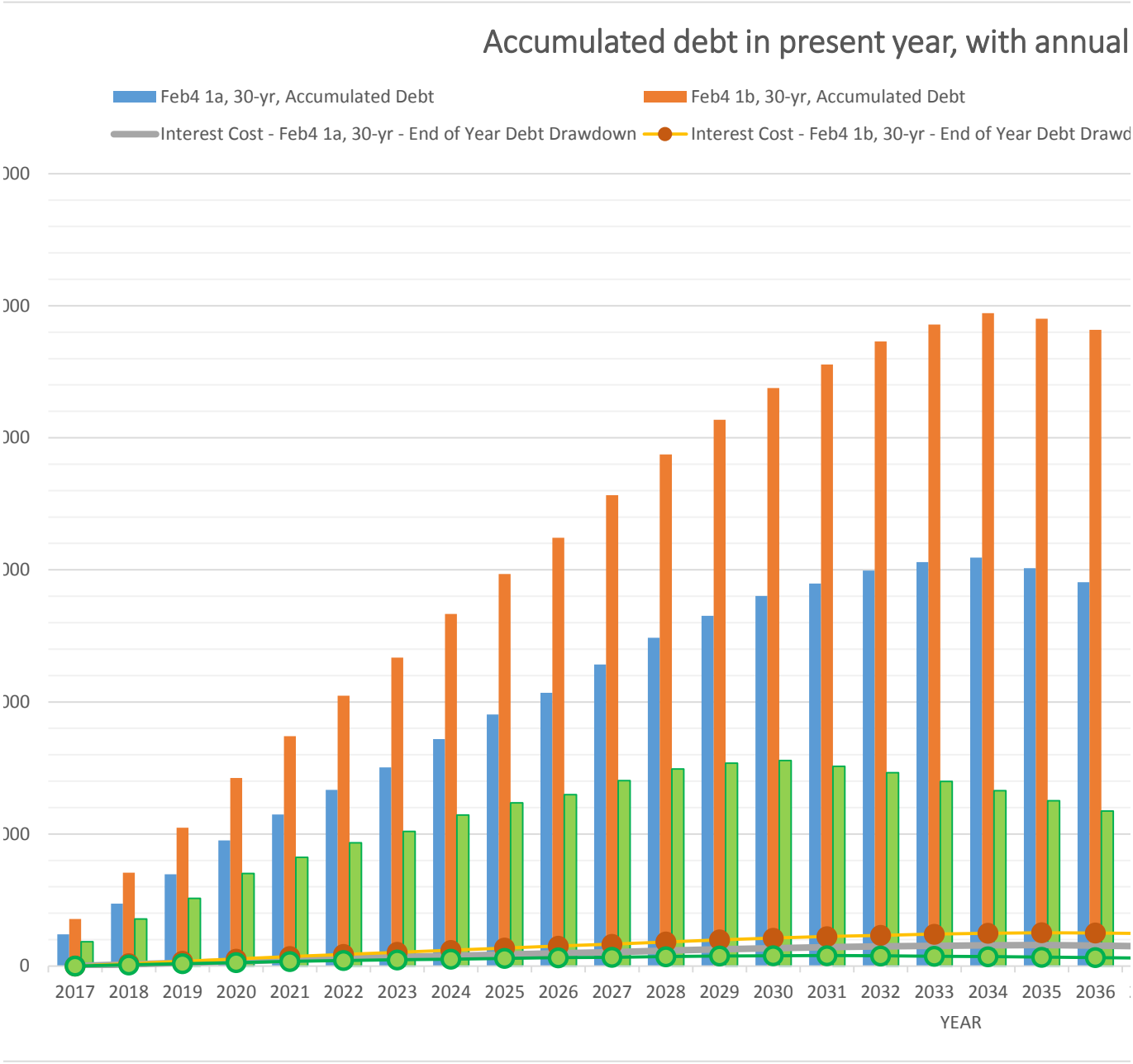
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

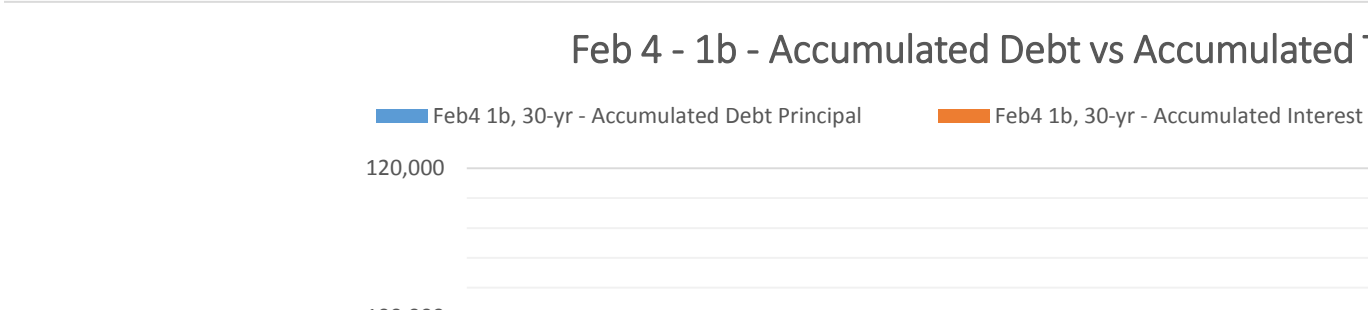
YEAR

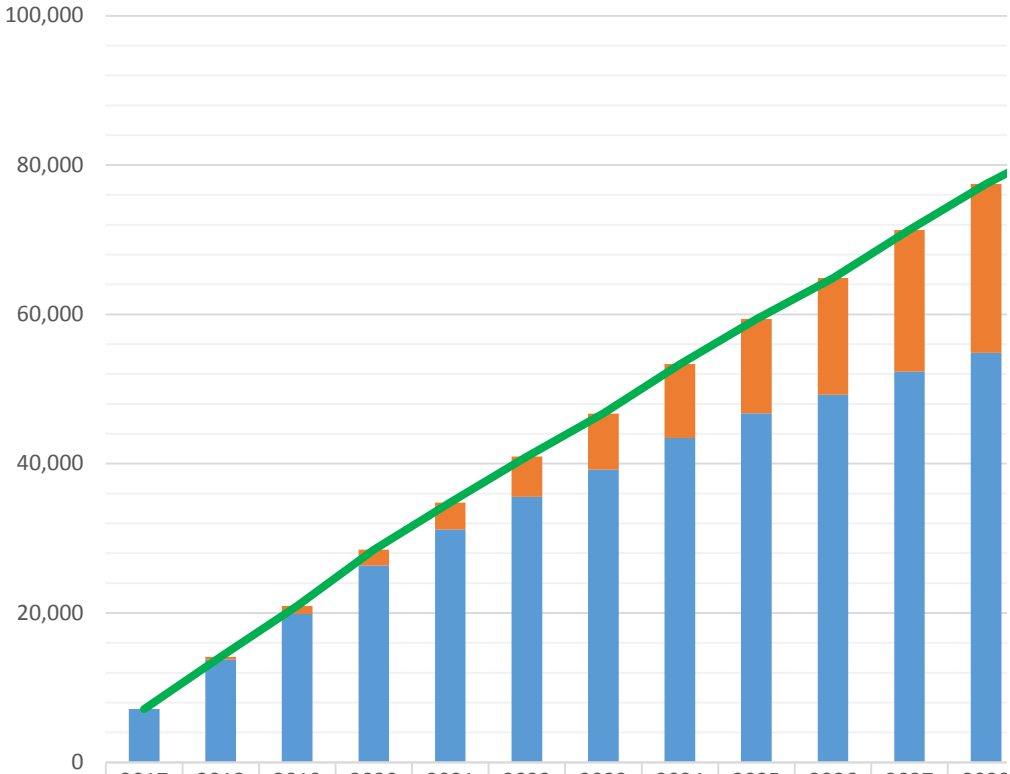


YEAR

ɜ - 25 year and 30 year Financing Terms, at 5% interest rate

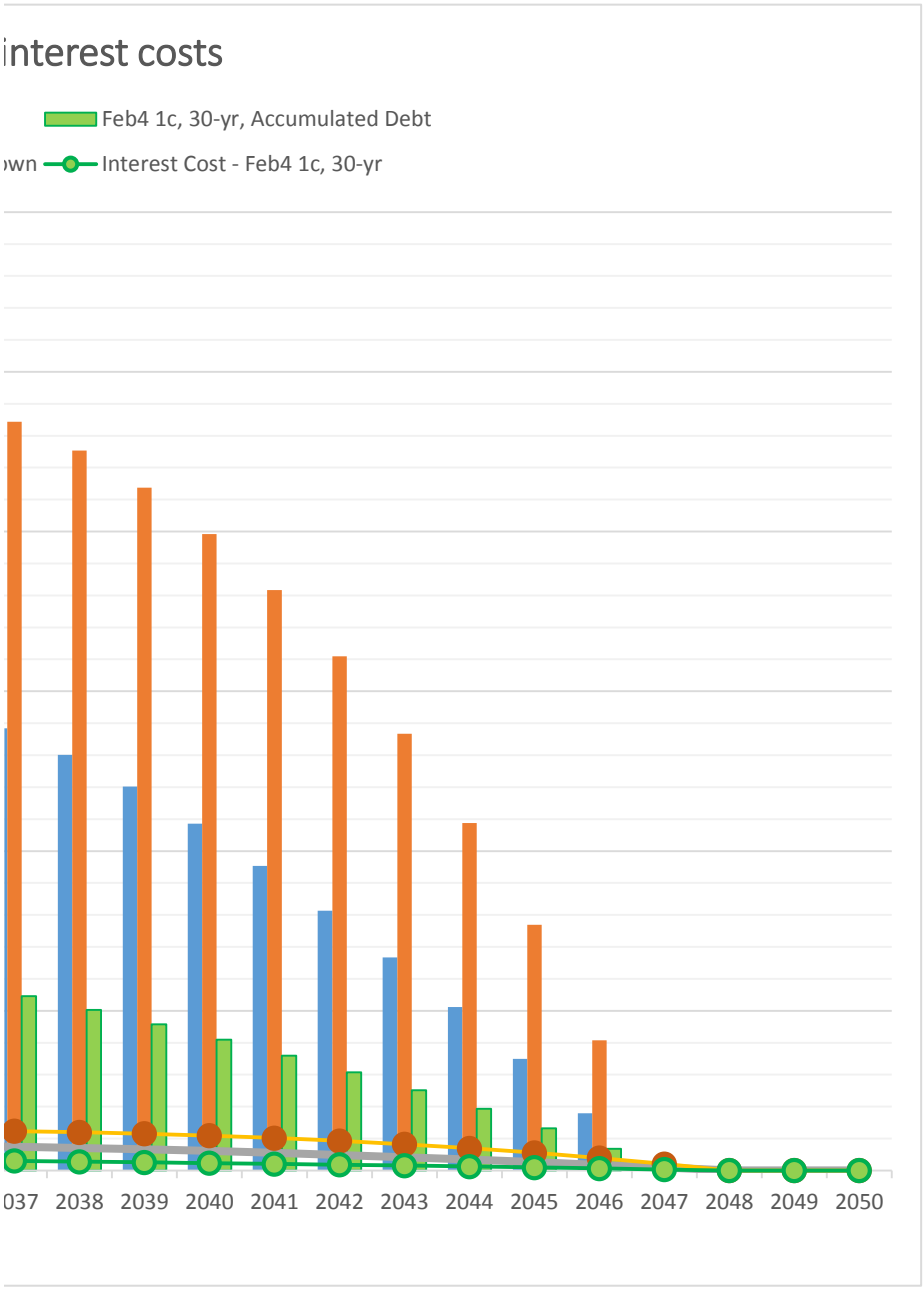


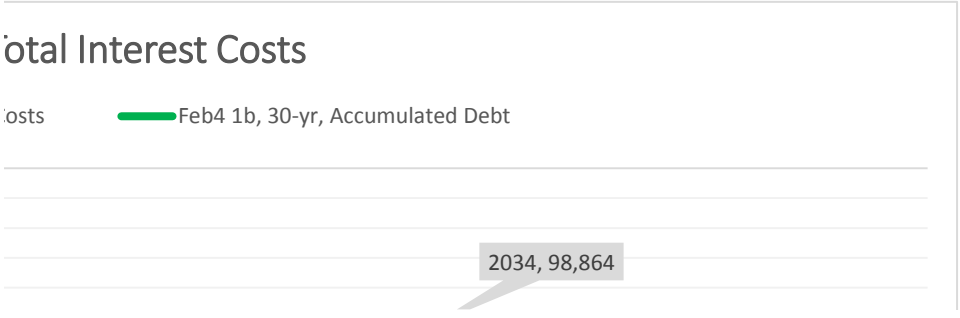

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

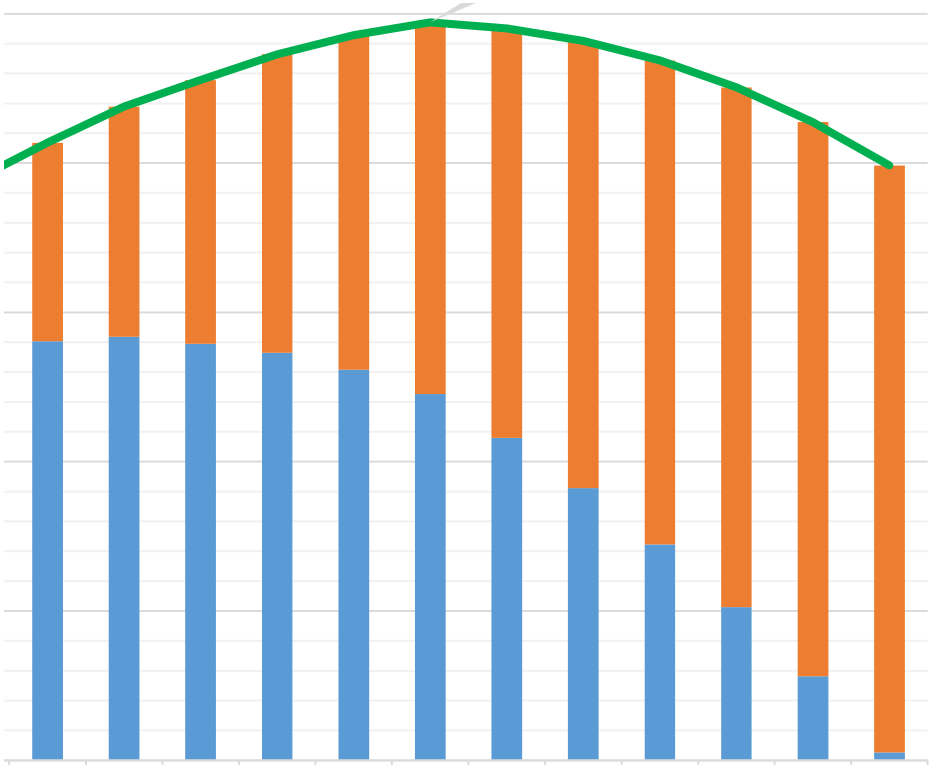


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y


interest costs
Feb4 1c, 30-yr, Accumulated Debt
wn
Interest Cost - Feb4 1c, 30-yr
037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR

Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

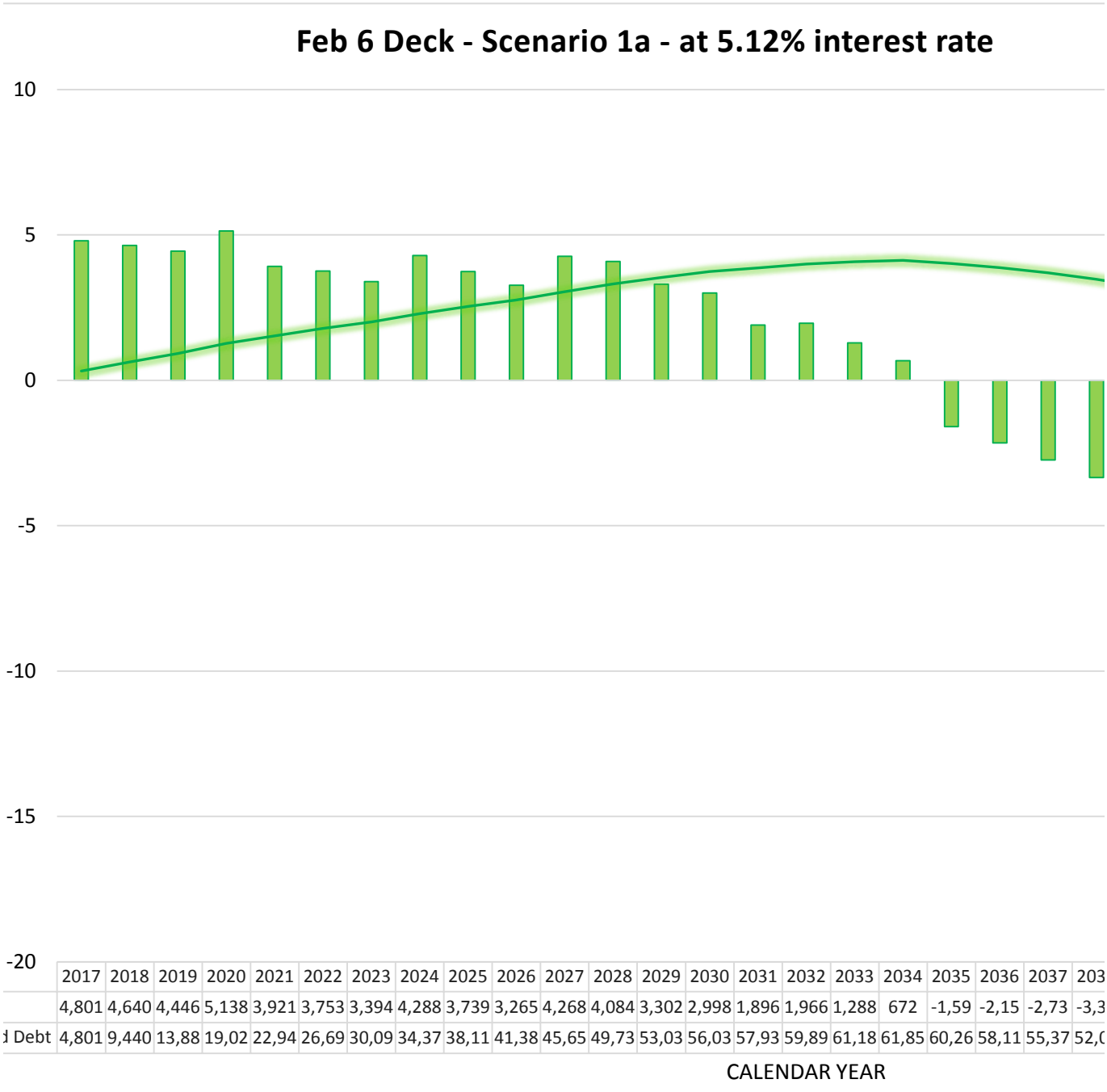
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

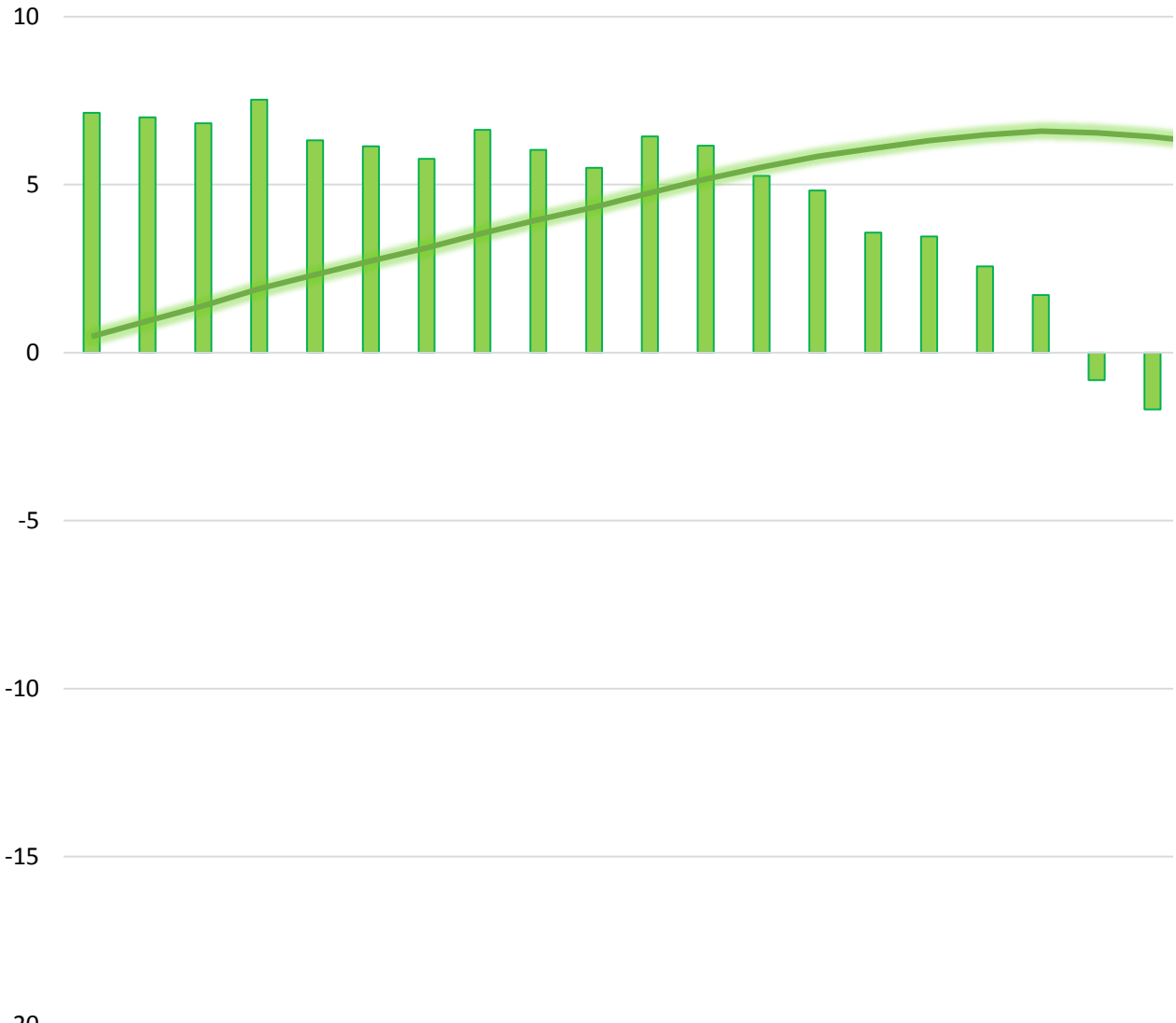
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

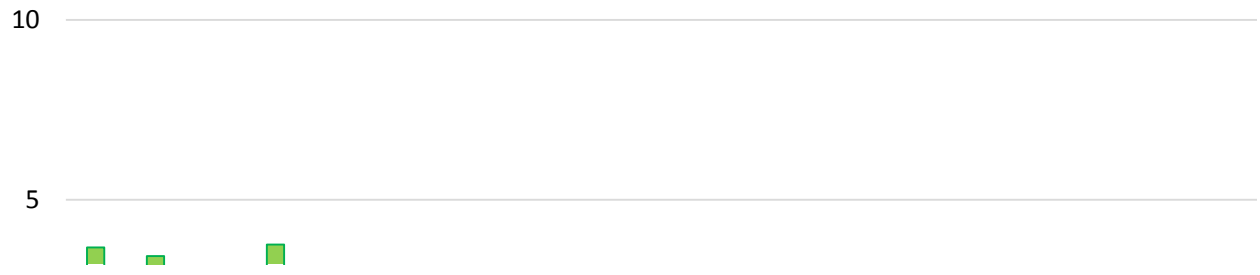
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

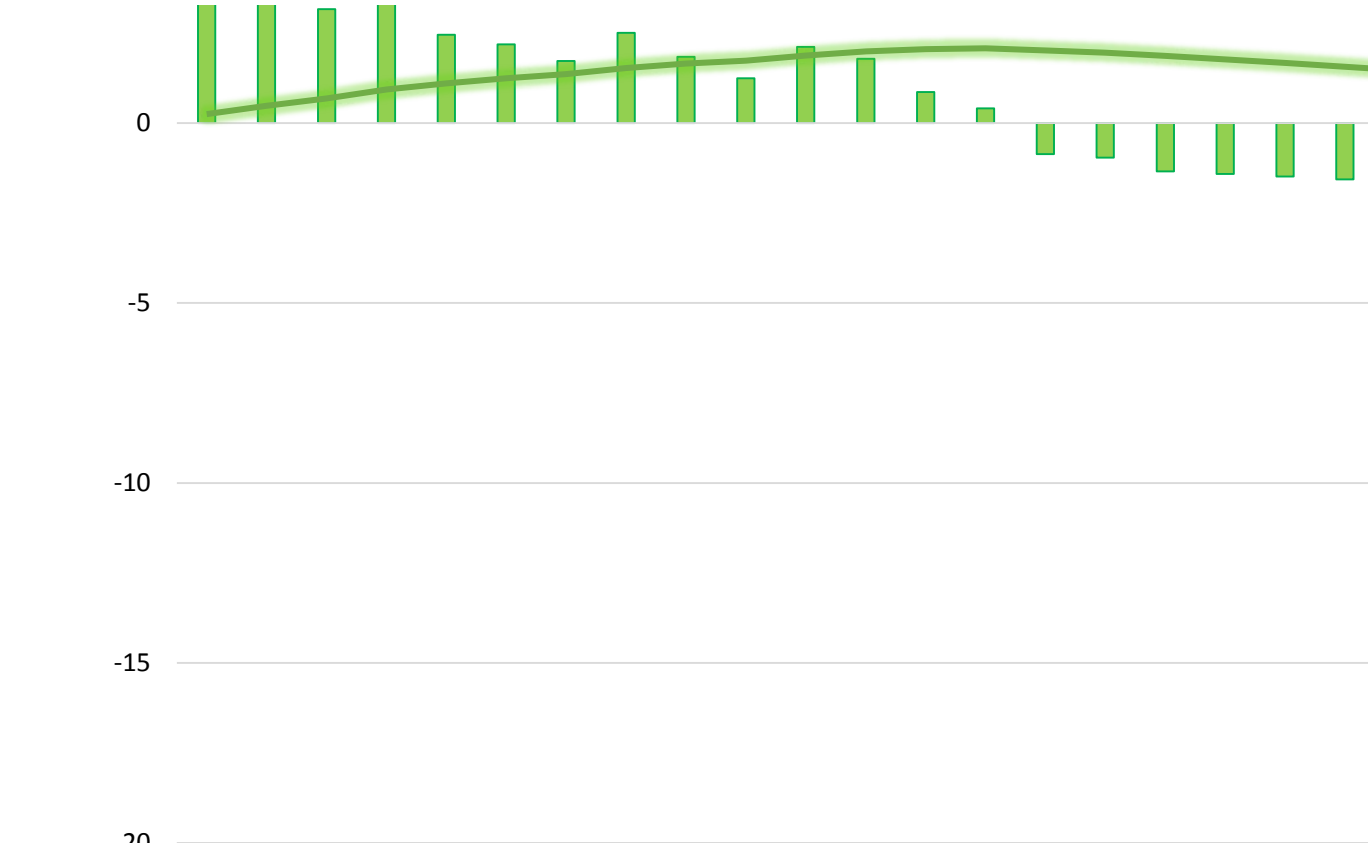


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



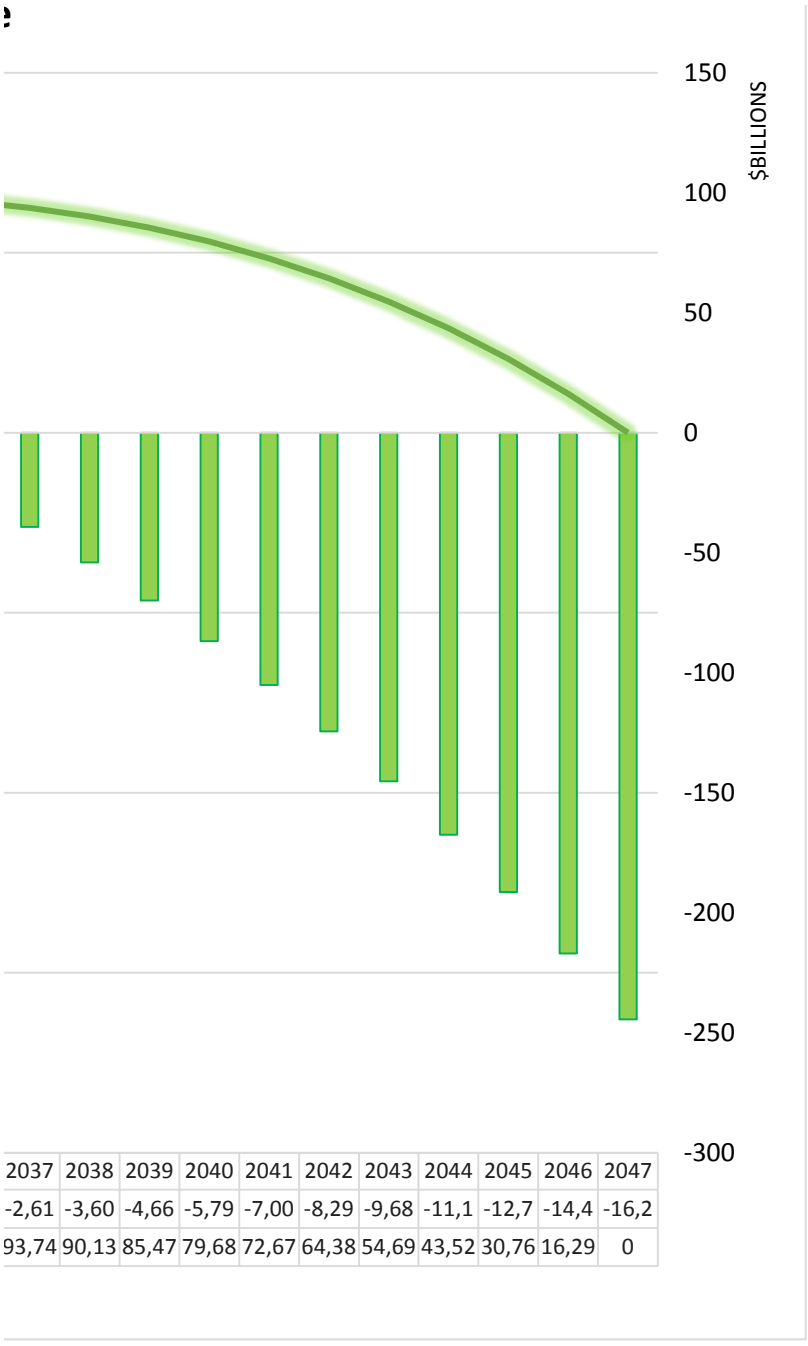


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

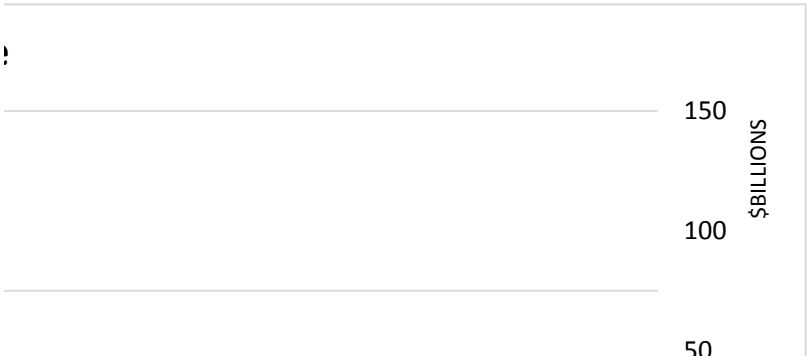
CALENDAR YEAR

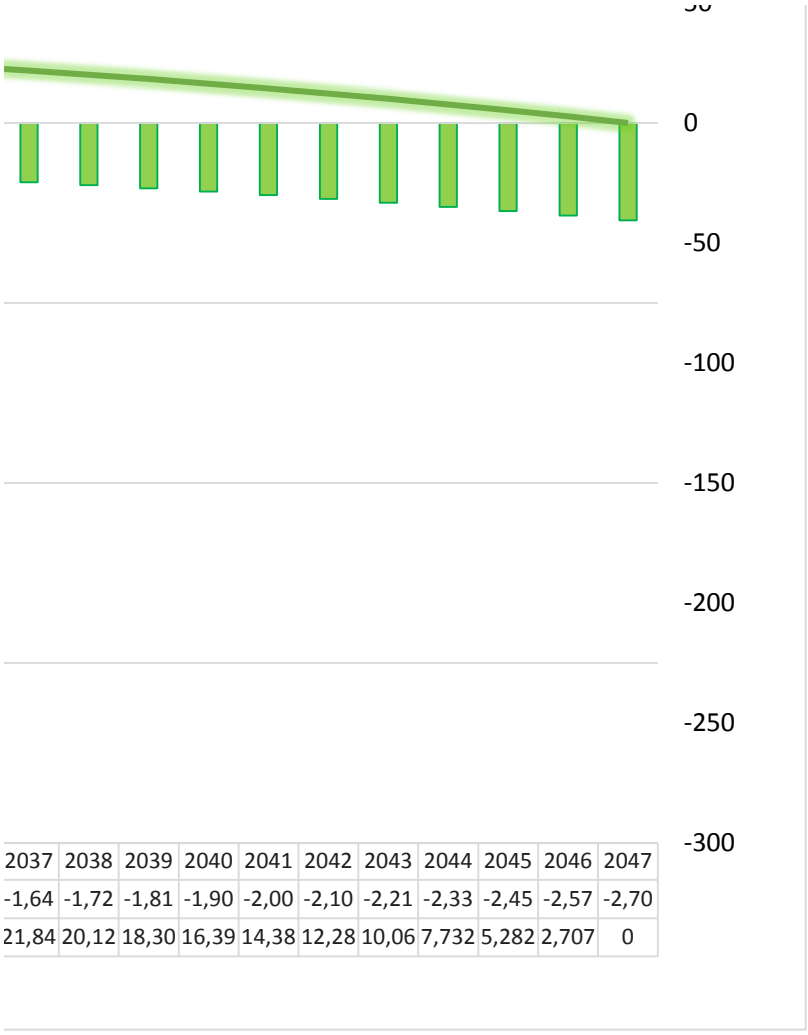


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Equal Monthly Debt Drawdown

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb4_1a_30yr

1a. GA Smoothing (Borrow ~$5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,801	4,640

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,200	4,760

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $62 billion, peakin
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary on accounting treatment.

7,133 7,133

Feb4_1b_30yr 7,133

1b. GA Smoothing (Borrow ~$7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	7,133	6,999

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,783	7,100

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $99 billion, peaking
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b on accounting treatment.

Feb4_1c_30yr

1c. GA Smoothing (Borrow ~$4 billion in 2017)

$ millions

Scenario 1C - 30-yr amortization	2017	2018
Annual Exposure[2]	3,678	3,437

	Fiscalized[3]	2016-17	2017-18
	Start: January 1st	919	3,617

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	1,783 - 1,200	7,100 - 4,760

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1200	4760
Debt-Finance Global Adjustment Costs, Option 1a	1783	7100
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18

Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1200**	**5000**
Total, B	1783	7340
Proposed Program Total:	1,783 - 1,200	7,340 - 5,000

ining

1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
4,446	5,138	3,921	3,753

2018-19	2019-20	2020-21	2021-2022
4,591	4,619	4,833	3,879

ng in 203 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
by approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
6,825	7,529	6,315	6,141

2018-19	2019-20	2020-21	2021-2022
6,956	7,001	7,226	6,272

g in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
3,158	3,761	2,450	2,183

2018-19	2019-20	2020-21	2021-2022
3,367	3,309	3,433	2,383

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
6,956 - 4,591	7,001 - 4,619	7,226 - 4,833	6,272 - 3,879

/1

2018-19[1]	2019-20[1]	2020-21[1]
4591	4619	4833
6956	7001	7226
225	279	323
60	60	60
18	18	18

4894	**4976**	**5234**
7259	7358	7627

7,259 - 4,894 7,358 - 4,976 7,627 - 5,234

1a. GA Smoothing (Borrow $5 billion in 2017)

	2017
IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	7,095
Additional GA Debt Drawdown, End of Year	5,000

Ratepayer GA Payment

Total Accumulated Debt *($ billion)*	5,000
Total Change in Accumulated Debt *($ billion)*	5000

1b. GA Smoothing (Borrow $7 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	5,095
Additional GA Debt Drawdown, End of Year	7,000

Total Accumulated Debt *($ billion)*	7000
Total Change in Accumulated Debt *($ billion)*	7000

1c. GA Smoothing (Borrow $4 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	8,095
Additional GA Debt Drawdown, End of Year	4,000

Total Accumulated Debt *($ billion)*	4000
Total Change in Accumulated Debt *($ billion)*	4000

2018	2019	2020	2021	2022	2023	2024	2025
11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
6,835	7,552	7,168	6,844	6,634	7,243	7,128	6,527
5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000

9,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000
5000	4000	5000	4000	4000	3000	4000	4000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
4,835	4,552	4,168	4,844	4,634	4,243	4,128	4,527
7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000

14000	21000	28000	35000	41000	47000	53000	59000
7000	7000	8000	6000	6000	6000	7000	6000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
8,835	8,552	8,168	8,844	8,634	8,243	8,128	8,527
3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000

7000	10000	14000	16000	19000	20000	23000	25000
3000	3000	4000	2000	2000	2000	3000	2000

2026	2027	2028	2029	2030	2031	2032	2033
10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
7,033	7,043	6,819	7,009	6,721	6,654	6,820	7,238
3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000

41,000	46,000	50,000	53,000	56,000	58,000	60,000	61,000
3000	4000	4000	3000	3000	2000	2000	1000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
4,033	5,043	4,819	5,009	4,721	4,654	5,820	5,238
6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000

65000	71000	77000	83000	88000	91000	95000	97000
6000	6000	6000	5000	5000	4000	3000	3000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
9,033	9,043	8,819	9,009	9,721	9,654	9,820	9,238
1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000

26000	28000	30000	31000	31000	30000	29000	28000
1000	2000	2000	1000	0	-1000	-1000	-1000

2034	2035	2036	2037	2038	2039	2040	2041
7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
6,756	7,662	7,389	8,129	7,881	8,645	9,421	9,207
1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000

62,000	60,000	58,000	55,000	52,000	48,000	43,000	38,000
1000	-2000	-2000	-3000	-3000	-4000	-5000	-5000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
5,756	6,662	7,389	8,129	8,881	9,645	10,421	11,207
2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000

99000	98000	96000	94000	90000	85000	80000	73000
2000	-1000	-2000	-3000	-4000	-5000	-6000	-7000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
8,756	6,662	7,389	7,129	6,881	6,645	6,421	6,207
-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000

27000	25000	23000	22000	20000	18000	16000	14000
-1000	-1000	-2000	-2000	-2000	-2000	-2000	-2000

2042	2043	2044	2045	2046	2047	2048		
4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
10,004	9,811	9,627	9,451	10,285	10,126	2,975		
-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0		

33,000	27,000	20,000	14,000	7,000	-	-	
-6000	-6000	-6000	-6000	-7000	-7000	0	

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
12,004	13,811	14,627	16,451	17,285	19,126	2,975		
-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0		

64000	55000	44000	31000	16000	0	0
-8000	-10000	-11000	-13000	-14000	-16000	0

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
6,004	5,811	5,627	5,451	6,285	6,126	2,975		
-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0		

12000	10000	8000	5000	3000	0	0
-2000	-2000	-2000	-2000	-3000	-3000	0

Feb4 1a, 30-yr - Debt Drawdown Scenarios

-92,247 -94598.515 58,489 36109.18 0

Feb4_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0
			114	110	106	122	93	89	81	102	89	78	102	97	79	71	45	47	31	16	-38	-51	-65	-80	-95	-110	-126	-133	-140	-147	-155	-162	-171	0	0	0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	5,138	3,167	58,489
Equal Monthly Debt Drawdown	5,260	3,149	

Maximum Accumulated Debt — Feb4 1a, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

End of Year Debt Drawdown	61,858	36,109
Equal Monthly Debt Drawdown	63,330	

			40%	37%	34%	36%	27%	24%																												
Feb4 1a, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
a	Debt, Beginning of Year		0	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	
c = a*5%	*Interest Cost - Feb4 1a, 30-yr - End of Year Debt Drawdown*		*0*	*246*	*483*	*711*	*974*	*1,175*	*1,367*	*1,541*	*1,760*	*1,952*	*2,119*	*2,337*	*2,546*	*2,716*	*2,869*	*2,966*	*3,067*	*3,133*	*3,167*	*3,086*	*2,975*	*2,835*	*2,664*	*2,461*	*2,224*	*1,952*	*1,666*	*1,365*	*1,049*	*717*	*367*	*0*	*0*	*0*	58,489
b	Additional GA Debt Drawdown, End of Year		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	21,822	23,788	25,076	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	20,490	13,998	7,173	0	0	0	
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	36,109	36,109	36,109	36,109	34,517	32,362	29,624	26,281	22,311	17,687	12,383	6,793	918	0	0	0	0	0	0	0	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688	49,149	51,372	53,325	54,991	56,356	57,405	58,122	58,489				
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371	-5,713	-13,241	-20,783	-28,325	-35,866	-43,408	-50,949	-58,489				
Fiscal Exposure - End of Year Debt Drawdown			4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0	

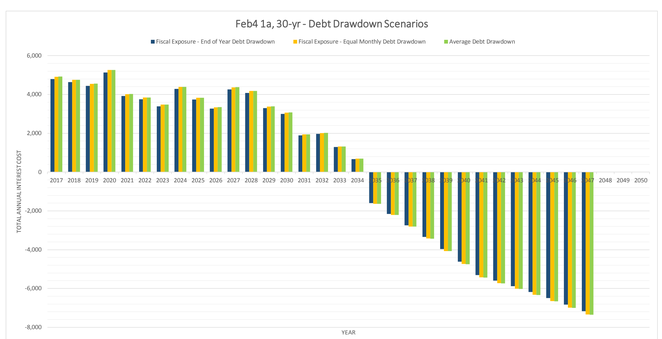
Feb4 1a, 30-yr	Equal Monthly Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			12																																		
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
3,149	*Interest Cost - Feb4 1a, 30-yr*		*114*	*356*	*589*	*833*	*1,067*	*1,264*	*1,448*	*1,643*	*1,849*	*2,029*	*2,220*	*2,435*	*2,625*	*2,787*	*2,914*	*3,013*	*3,097*	*3,149*	*3,129*	*3,034*	*2,910*	*2,756*	*2,569*	*2,351*	*2,098*	*1,819*	*1,526*	*1,218*	*895*	*554*	*197*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0	

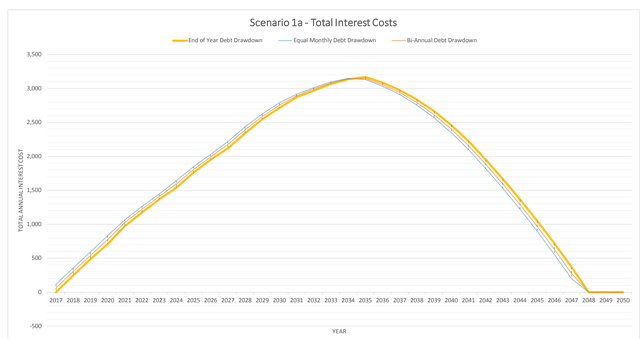
	Monthly Drawdown		400	366	330	369	246	215	169	229	165	109	179	146	63	24	(81)	(83)	(148)	(205)	(397)	(437)	(476)	(515)	(553)	(590)	(627)	(629)	(628)	(628)	(628)	(628)	(628)	-	-	-
	FV of Monthly Drawdown at 5%		4,915	4,498	4,057	4,532	3,017	2,640	2,075	2,813	2,026	1,345	2,200	1,789	773	289	(996)	(1,024)	(1,821)	(2,519)	(4,872)	(5,365)	(5,849)	(6,325)	(6,793)	(7,253)	(7,707)	(7,722)	(7,721)	(7,721)	(7,721)	(7,721)	(7,720)	-	-	-
	Annual Interest Cost on New Drawdowns		114	105	94	105	70	61	48	65	47	31	51	42	18	7	(23)	(24)	(42)	(59)	(113)	(125)	(136)	(147)	(158)	(169)	(179)	(180)	(180)	(180)	(180)	(180)	(179)	-	-	-
	Annual Interest Cost on Opening Balance		-	252	495	728	997	1,203	1,399	1,577	1,802	1,998	2,169	2,393	2,607	2,780	2,937	3,037	3,140	3,207	3,243	3,159	3,046	2,903	2,727	2,519	2,277	1,999	1,706	1,398	1,074	734	376	(0)	(0)	(0)
	Total Annual Interest Cost		114	356	589	833	1,067	1,264	1,448	1,643	1,849	2,029	2,220	2,435	2,625	2,787	2,914	3,013	3,097	3,149	3,129	3,034	2,910	2,756	2,569	2,351	2,098	1,819	1,526	1,218	895	554	197	(0)	(0)	(0)

Feb4 1a, 30-yr	Bi-Annual Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*61*	*305*	*540*	*777*	*1,024*	*1,223*	*1,410*	*1,596*	*1,808*	*1,993*	*2,173*	*2,390*	*2,589*	*2,754*	*2,893*	*2,991*	*3,083*	*3,141*	*3,147*	*3,058*	*2,940*	*2,792*	*2,613*	*2,401*	*2,156*	*1,881*	*1,591*	*1,286*	*966*	*629*	*275*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown			4,862	4,699	4,502	5,203	3,971	3,801	3,438	4,343	3,787	3,307	4,322	4,137	3,344	3,037	1,920	1,991	1,305	681	-1,612	-2,183	-2,773	-3,386	-4,021	-4,683	-5,372	-5,661	-5,951	-6,255	-6,575	-6,912	-7,265	0	0	0	

	Bi-Annual Drawdown		2,400	2,197	1,981	2,213	1,473	1,289	1,014	1,374	989	657	1,074	874	378	141	(487)	(500)	(889)	(1,230)	(2,379)	(2,620)	(2,857)	(3,089)	(3,317)	(3,542)	(3,764)	(3,771)	(3,771)	(3,771)	(3,771)	(3,771)	(3,770)	-	-	-
	FV of Bi-Annual Drawdown at 5%		4,862	4,450	4,013	4,483	2,984	2,612	2,053	2,783	2,004	1,331	2,176	1,769	765	286	(986)	(1,013)	(1,801)	(2,492)	(4,820)	(5,308)	(5,787)	(6,257)	(6,719)	(7,175)	(7,624)	(7,639)	(7,638)	(7,638)	(7,638)	(7,638)	(7,637)	-	-	-
	Annual Interest Cost on New Drawdowns		61	56	51	57	38	33	26	35	25	17	28	22	10	4	(12)	(13)	(23)	(31)	(61)	(67)	(73)	(79)	(85)	(91)	(96)	(97)	(97)	(97)	(97)	(97)	(97)	-	-	-
	Annual Interest Cost on Opening Balance		-	249	490	720	986	1,190	1,384	1,560	1,783	1,977	2,146	2,367	2,579	2,750	2,906	3,004	3,106	3,173	3,208	3,125	3,013	2,871	2,698	2,492	2,252	1,977	1,687	1,383	1,063	726	372	(0)	(0)	(0)
	Total Annual Interest Cost		61	305	540	777	1,024	1,223	1,410	1,596	1,808	1,993	2,173	2,390	2,589	2,754	2,893	2,991	3,083	3,141	3,147	3,058	2,940	2,792	2,613	2,401	2,156	1,881	1,591	1,286	966	629	275	(0)	(0)	(0)

Feb4 1a, 30-yr	Average Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*123*	*365*	*597*	*842*	*1,074*	*1,271*	*1,454*	*1,650*	*1,856*	*2,035*	*2,228*	*2,442*	*2,631*	*2,792*	*2,918*	*3,016*	*3,100*	*3,150*	*3,126*	*3,030*	*2,905*	*2,749*	*2,562*	*2,342*	*2,088*	*1,809*	*1,516*	*1,207*	*883*	*542*	*184*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
Fiscal Exposure - Average Debt Drawdown			4,923	4,758	4,559	5,269	4,021	3,849	3,481	4,398	3,835	3,349	4,377	4,189	3,386	3,075	1,944	2,016	1,321	689	-1,633	-2,210	-2,808	-3,428	-4,072	-4,742	-5,440	-5,733	-6,026	-6,334	-6,658	-6,999	-7,357	0	0	0	





Feb4 1b, 30-yr - Debt Drawdown Scenarios

-149,507 -153857.97 97,141 56717.33 0

Feb4_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0
			170	167	162	179	150	146	137	158	144	131	153	147	125	115	85	82	61	41	-19	-40	-62	-86	-111	-138	-167	-198	-231	-266	-304	-344	-388	0	0	0

0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown 7,529	5,062	97,141
Equal Monthly Debt Drawdown 7,708	5,042	

Maximum Accumulated Debt	Feb4 1b, 30-yr, Accumulated Debt	Total Principal Debt Borrowed
End of Year Debt Drawdown	98,864	56,717
Equal Monthly Debt Drawdown	101,217	

Feb4 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
a Debt, Beginning of Year	0	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	
c = a*5% *Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown*	*0*	*365*	*724*	*1,073*	*1,459*	*1,782*	*2,096*	*2,391*	*2,731*	*3,040*	*3,322*	*3,651*	*3,966*	*4,236*	*4,483*	*4,665*	*4,842*	*4,974*	*5,062*	*5,020*	*4,933*	*4,800*	*4,615*	*4,376*	*4,080*	*3,721*	*3,296*	*2,800*	*2,228*	*1,575*	*834*	*0*	*0*	*0*	97,141
b Additional GA Debt Drawdown, End of Year	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
d = a+b+c Accumulated debt in present year (including 5% annual interest)	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	0	
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,633	26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606	82,685	86,406	89,703	92,503	94,731	96,306	97,141				
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,831	56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076	-10,007	-22,027	-35,008	-48,980	-63,971	-80,013	-97,141				
Fiscal Exposure - End of Year Debt Drawdown	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0	

Feb4 1b, 30-yr — Equal Monthly Debt Drawdown

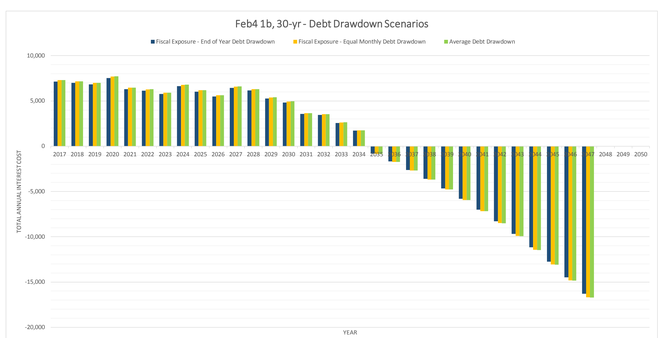
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	
5,042 *Interest Cost - Feb4 1b, 30-yr*	*170*	*532*	*886*	*1,252*	*1,609*	*1,928*	*2,234*	*2,549*	*2,874*	*3,171*	*3,475*	*3,797*	4,091	*4,350*	*4,568*	*4,748*	*4,904*	*5,015*	*5,042*	*4,980*	*4,871*	*4,714*	*4,504*	*4,238*	*3,913*	*3,524*	*3,066*	*2,534*	*1,925*	*1,231*	*446*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0	
Monthly Drawdown	594	553	508	538	405	363	306	353	275	205	259	209	108	49	(76)	(101)	(189)	(271)	(490)	(559)	(629)	(700)	(773)	(847)	(924)	(1,002)	(1,082)	(1,164)	(1,249)	(1,337)	(1,427)	(0)	-	-	
FV of Monthly Drawdown at 5%	7,303	6,792	6,247	6,610	4,972	4,463	3,755	4,338	3,383	2,523	3,184	2,565	1,327	605	(937)	(1,237)	(2,326)	(3,335)	(6,020)	(6,867)	(7,728)	(8,604)	(9,498)	(10,412)	(11,347)	(12,306)	(13,291)	(14,304)	(15,348)	(16,424)	(17,536)	(0)	-	-	
Annual Interest Cost on New Drawdowns	170	158	145	154	116	104	87	101	79	59	74	60	31	14	(22)	(29)	(54)	(78)	(140)	(160)	(180)	(200)	(221)	(242)	(264)	(286)	(309)	(333)	(357)	(382)	(408)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	374	741	1,099	1,493	1,824	2,146	2,448	2,796	3,112	3,401	3,738	4,061	4,336	4,589	4,776	4,958	5,092	5,182	5,139	5,051	4,914	4,725	4,481	4,177	3,810	3,375	2,867	2,281	1,612	854	0	(0)	(0)	
Total Annual Interest Cost	170	532	886	1,252	1,609	1,928	2,234	2,549	2,874	3,171	3,475	3,797	4,091	4,350	4,568	4,748	4,904	5,015	5,042	4,980	4,871	4,714	4,504	4,238	3,913	3,524	3,066	2,534	1,925	1,231	446	0	(0)	(0)	

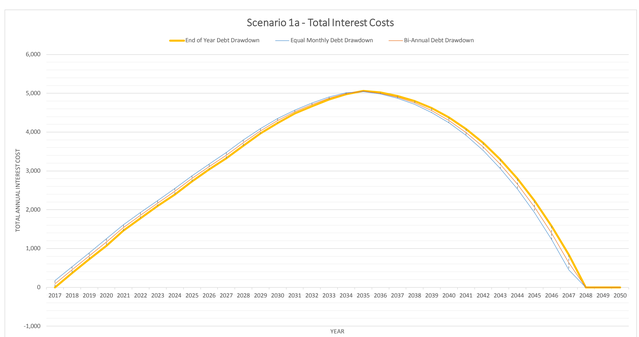
Feb4 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*91*	*455*	*811*	*1,169*	*1,539*	*1,861*	*2,170*	*2,476*	*2,808*	*3,110*	*3,404*	*3,730*	*4,034*	*4,297*	*4,528*	*4,710*	*4,875*	*4,996*	*5,051*	*4,998*	*4,900*	*4,753*	*4,555*	*4,302*	*3,990*	*3,615*	*3,172*	*2,657*	*2,065*	*1,390*	*626*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	7,225	7,089	6,913	7,626	6,396	6,220	5,838	6,713	6,113	5,574	6,514	6,235	5,330	4,888	3,614	3,501	2,603	1,738	-829	-1,709	-2,648	-3,651	-4,722	-5,867	-7,093	-8,405	-9,810	-11,314	-12,926	-14,652	-16,502	0	0	0	
Bi-Annual Drawdown	3,567	3,317	3,051	3,228	2,428	2,180	1,834	2,118	1,652	1,232	1,555	1,253	648	295	(457)	(604)	(1,136)	(1,629)	(2,940)	(3,354)	(3,774)	(4,202)	(4,639)	(5,085)	(5,542)	(6,010)	(6,491)	(6,986)	(7,495)	(8,021)	(8,564)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	7,225	6,719	6,180	6,539	4,919	4,415	3,715	4,291	3,347	2,496	3,150	2,538	1,313	598	(926)	(1,224)	(2,301)	(3,299)	(5,956)	(6,794)	(7,645)	(8,512)	(9,396)	(10,300)	(11,225)	(12,174)	(13,148)	(14,150)	(15,183)	(16,247)	(17,347)	(0)	-	-	
Annual Interest Cost on New Drawdowns	91	85	78	83	62	56	47	54	42	32	40	32	17	8	(12)	(15)	(29)	(42)	(75)	(86)	(97)	(108)	(119)	(130)	(142)	(154)	(166)	(179)	(192)	(205)	(219)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	370	733	1,087	1,477	1,805	2,123	2,422	2,766	3,079	3,364	3,698	4,017	4,290	4,540	4,725	4,904	5,038	5,127	5,084	4,997	4,861	4,674	4,432	4,132	3,769	3,338	2,836	2,257	1,595	845	0	0	0	
Total Annual Interest Cost	91	455	811	1,169	1,539	1,861	2,170	2,476	2,808	3,110	3,404	3,730	4,034	4,297	4,528	4,710	4,875	4,996	5,051	4,998	4,900	4,753	4,555	4,302	3,990	3,615	3,172	2,657	2,065	1,390	626	0	0	0	

Feb4 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*183*	*544*	*898*	*1,266*	*1,620*	*1,939*	*2,244*	*2,561*	*2,885*	*3,181*	*3,486*	*3,809*	*4,101*	*4,359*	*4,574*	*4,754*	*4,908*	*5,018*	*5,041*	*4,977*	*4,867*	*4,707*	*4,496*	*4,228*	*3,900*	*3,509*	*3,048*	*2,514*	*1,902*	*1,205*	*417*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	7,316	7,179	7,000	7,722	6,477	6,298	5,912	6,798	6,190	5,645	6,597	6,314	5,397	4,950	3,659	3,545	2,636	1,760	-840	-1,731	-2,682	-3,697	-4,782	-5,942	-7,183	-8,511	-9,934	-11,457	-13,089	-14,838	-16,711	0	0	0	





Feb4 1c, 30-yr - Debt Drawdown Scenarios

Feb4_1c_30yr

Annual Interest Rate = 5.1%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0
			88	82	75	90	58	52	41	60	44	29	50	43	20	10	-20	-23	-32	-34	-35	-37	-39	-41	-43	-45	-48	-50	-53	-55	-58	-61	-64	0	0	0

0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	3,761	1,594	29,477
Equal Monthly Debt Drawdown	3,851	1,583	

Maximum Accumulated Debt — Feb4 1c, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

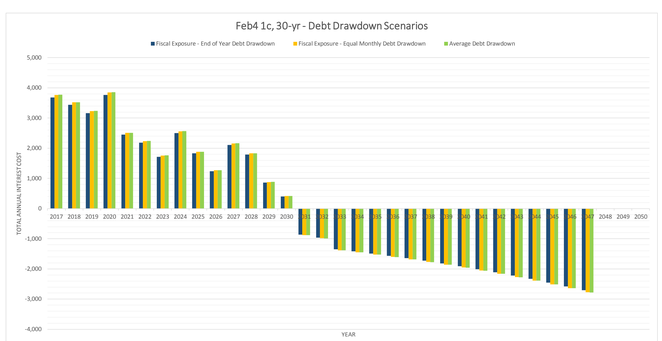
End of Year Debt Drawdown	31,125	20,043
Equal Monthly Debt Drawdown	31,866	

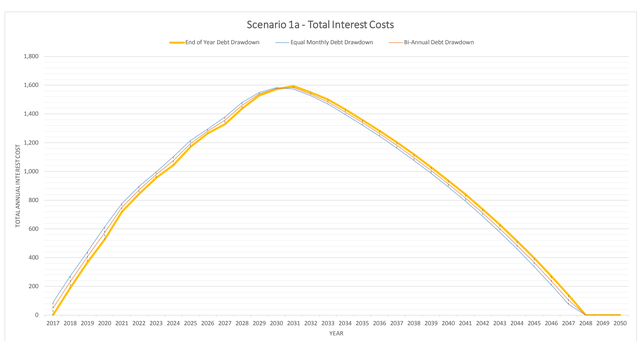
		30%	27%	24%	27%	16%	13%																														
Feb4 1c, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
a	Debt, Beginning of Year	0	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	
c = a*5%	*Interest Cost - Feb4 1c, 30-yr - End of Year Debt Drawdown*	*0*	*188*	*364*	*526*	*719*	*844*	*956*	*1,044*	*1,172*	*1,266*	*1,329*	*1,437*	*1,529*	*1,573*	*1,594*	*1,550*	*1,500*	*1,431*	*1,359*	*1,283*	*1,203*	*1,119*	*1,030*	*937*	*839*	*737*	*629*	*515*	*396*	*270*	*139*	*0*	*0*	*0*	*0*	29,477
b	Additional GA Debt Drawdown, End of Year	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	0	
	Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,641	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663	22,866	23,984	25,015	25,952	26,791	27,528	28,157	28,672	29,068	29,338	29,477				
	Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18,247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828	-1,018	-3,864	-6,710	-9,556	-12,402	-15,248	-18,094	-20,940	-23,786	-26,631	-29,477				
Fiscal Exposure - End of Year Debt Drawdown		3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0	

Feb4 1c, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	
1,583	*Interest Cost - Feb4 1c, 30-yr*	*88*	*270*	*439*	*615*	*777*	*896*	*997*	*1,103*	*1,216*	*1,295*	*1,379*	*1,480*	1,549	*1,583*	*1,573*	*1,527*	*1,468*	*1,398*	*1,324*	*1,246*	*1,164*	*1,077*	*987*	*892*	*792*	*686*	*576*	*460*	*338*	*209*	*74*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0	
	Monthly Drawdown	306	271	233	270	144	112	64	122	55	(2)	65	29	(56)	(97)	(204)	(209)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(0)	-	-	
	FV of Monthly Drawdown at 5%	3,765	3,326	2,861	3,312	1,773	1,371	781	1,493	679	(28)	799	360	(684)	(1,197)	(2,512)	(2,570)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,913)	(2,913)	(2,913)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	88	77	67	77	41	32	18	35	16	(1)	19	8	(16)	(28)	(58)	(60)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	193	373	538	736	864	979	1,069	1,200	1,296	1,361	1,471	1,565	1,610	1,632	1,586	1,536	1,465	1,391	1,313	1,231	1,145	1,055	959	859	754	644	527	405	277	142	0	0	0	
	Total Annual Interest Cost	88	270	439	615	777	896	997	1,103	1,216	1,295	1,379	1,480	1,549	1,583	1,573	1,527	1,468	1,398	1,324	1,246	1,164	1,077	987	892	792	686	576	460	338	209	74	0	0	0	

Feb4 1c, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*47*	*232*	*405*	*574*	*750*	*872*	*978*	*1,076*	*1,195*	*1,282*	*1,356*	*1,460*	*1,540*	*1,578*	*1,583*	*1,537*	*1,483*	*1,413*	*1,340*	*1,263*	*1,182*	*1,097*	*1,007*	*913*	*814*	*710*	*600*	*485*	*365*	*237*	*104*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,725	3,481	3,199	3,809	2,481	2,211	1,741	2,534	1,859	1,254	2,137	1,812	872	409	-871	-973	-1,363	-1,433	-1,506	-1,584	-1,665	-1,750	-1,839	-1,933	-2,032	-2,136	-2,246	-2,360	-2,481	-2,608	-2,742	0	0	0	
	Bi-Annual Drawdown	1,839	1,624	1,397	1,618	866	670	382	729	332	(14)	390	176	(334)	(584)	(1,227)	(1,255)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(0)	-	-	
	FV of Bi-Annual Drawdown at 5%	3,725	3,290	2,830	3,277	1,754	1,356	773	1,477	672	(28)	791	356	(677)	(1,184)	(2,485)	(2,542)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	47	42	36	41	22	17	10	19	8	(0)	10	5	(9)	(15)	(31)	(32)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	191	369	533	728	855	968	1,057	1,187	1,282	1,346	1,456	1,548	1,593	1,614	1,569	1,520	1,450	1,376	1,299	1,218	1,133	1,043	949	850	746	637	522	401	274	140	0	0	0	
	Total Annual Interest Cost	47	232	405	574	750	872	978	1,076	1,195	1,282	1,356	1,460	1,540	1,578	1,583	1,537	1,483	1,413	1,340	1,263	1,182	1,097	1,007	913	814	710	600	485	365	237	104	0	0	0	

Feb4 1c, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*94*	*276*	*445*	*622*	*781*	*900*	*1,000*	*1,108*	*1,219*	*1,298*	*1,383*	*1,483*	*1,551*	*1,583*	*1,572*	*1,525*	*1,466*	*1,395*	*1,321*	*1,243*	*1,161*	*1,074*	*984*	*888*	*788*	*683*	*572*	*456*	*333*	*205*	*69*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,772	3,525	3,239	3,857	2,513	2,239	1,763	2,566	1,882	1,270	2,164	1,835	883	414	-882	-985	-1,381	-1,451	-1,526	-1,604	-1,686	-1,772	-1,863	-1,958	-2,058	-2,163	-2,274	-2,390	-2,513	-2,641	-2,776	0	0	0	





30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

TO BE

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,556	3,123	1,728	1,400	836	1,560	821	167

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

E UPDATED

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

JK: Fixed the formula in the yellow highlighted cells. Pls. check. (SK: looks good to me)

	Tab
v16 GA Financing - Scenario 1a 1b v18 (with fiscal) - Feb 4_v2.xlsx	Powerpoint_Export Scenario tabs

Change Description

Added in trigger for later start in the year
Updated IESO forecast from Energy (IESO GA Cost Forecast 170207 (Feb 6 update).xlsx)

Equal Monthly Debt Drawdown

		Month	Months Remai
Scenario Start Date	**July**	7	6

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	3,180	2,888
Annual Exposure2 with start on July 1st	*1,590*	*2,888*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	795	3,107
Start: July 1st	-	*2,312*

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	851	3,335
Start: July 1st	-	*2,484*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	1,168	1,765
Annual Exposure2 with start on July 1st	*584*	*1,765*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	292	1,609
Start: July 1st	-	*1,025*

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,449	2,040
Annual Exposure2 with start on July 1st	*725*	*2,040*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,597
Start: July 1st	-	*1,959*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335
Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3575**
Total, B	362	1837
Proposed Program Total:	362 - 851	1,837 - 3,575

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,556	3,123	1,728	1,400
2,556	*3,123*	*1,728*	*1,400*

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646
2,805	*2,697*	*2,774*	*1,646*

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

ıking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
2,311	3,750	2,311	1,933
2,311	*3,750*	*2,311*	*1,933*

2018-19	2019-20	2020-21	2021-2022

1,901	2,671	3,391	2,217
1,901	*2,671*	*3,391*	*2,217*

2019	2020	2021	2022
2,581	4,016	2,598	2,241
2,581	*4,016*	*2,598*	*2,241*

2018-19	2019-20	2020-21	2021-2022
2,175	2,940	3,662	2,508
2,175	*2,940*	*3,662*	*2,508*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

/1

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052
2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

Equal Monthly Debt Drawdown

		Month	Months Remaining
Scenario Start Date	July	7	6

AS LONG AS >

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	3,180	2,888	2,556

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	795	3,107	2,805
Fiscal Exposure, 25%	199	777	701

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Annual Exposure[2]	3,404	3,128	2,812

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	851	3,335	3,049
Fiscal Exposure, 25%	213	834	762

Indicates year in which, similar to OPCD's exa
closest to 30%. As Fiscal 2016/17 is a partial y
month the GA deferral begins.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu
decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions	9%	14%	18%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	1,168	1,765	2,311

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	292	1,609	1,901
Fiscal Exposure, 25%	73	402	475

Scenario 1b - 30-yr amortization	2017	2018	2019
Annual Exposure[2]	1,449	2,040	2,581

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	362	1,597	2,175
Fiscal Exposure, 25%	91	399	544

Indicates year in which, similar to OPCD's exar closest to 30%.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 ar
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu on accounting treatment.

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]
Debt-Finance Global Adjustment Costs, Option 1a	213	834	762
Debt-Finance Global Adjustment Costs, Option 1b	91	399	544
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**213**	**1074**	**1065**
Total, B	91	639	847

Proposed Program Total:	91 - 213	639 - 1,074	847 - 1,065

($M)	2016-171	2017-181	2018-191
Debt-Finance Global Adjustment Costs, Option 1a	851	3335	3049
Debt-Finance Global Adjustment Costs, Option 1b	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**851**	**3575**	**3352**
Total, B	362	1837	2478

Proposed Program Total:	362 - 851	1,837 - 3,575	2,478 - 3,352

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6

7	July	7	
8	August	8	
9	September	9	
10	October	10	
11	November	11	
12	December	12	

30-year term	**2016-17**	**2017-18**	**2018-19**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335	2,175 - 3,049

ROWS HIDDEN

1	1 = Comparision Enabled

APRIL 1, 2017 25%

2020	2021	2022
3,123	1,728	1,400

2019-20	2020-21	2021-2022
2,697	2,774	1,646
674	693	412

2020	2021	2022
3,396	2,020	1,712

2019-20	2020-21	2021-2022
2,958	3,052	1,943
740	763	486

mple, the true cost of GA being deferred is
ear, exposure may be less subject to which

l $17-21 billion (at 3.5% interest rate), peaking in 2028.
$33-$36 million.

ıals per month based on month of the year. Actuals may also depend on

28%	17%	13%
2020	2021	2022
3,750	2,311	1,933

2019-20	2020-21	2021-2022
2,671	3,391	2,217
668	848	554

2020	2021	2022
4,016	2,598	2,241

2019-20	2020-21	2021-2022
2,940	3,662	2,508
735	915	627

mple, the true cost of GA being deferred is

ıd $17-21 billion (at 3.5% interest rate), peaking in 2028.
$118-$134 million.

ıals per month based on month of the year. Actuals may also depend on decision

2019-20[1]	2020-21[1]
740	763
735	915
279	323
60	60
18	18
1097	**1164**
1092	1316

1,092 - 1,097 1,316 - 1,164

2019-201	2020-211
2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453





2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964
Equal Monthly Debt Drawdown	3,180	952

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

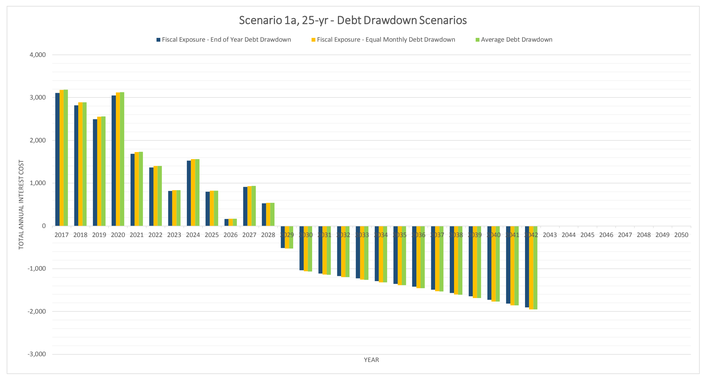
		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

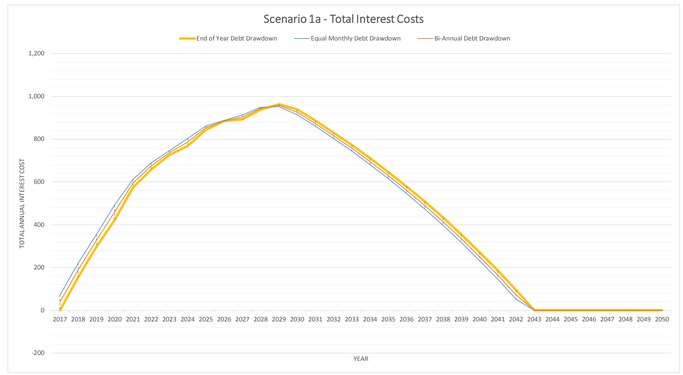
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	3,665	968	
Equal Monthly Debt Drawdown	3,750	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

		9%	14%	18%	28%	17%	13%																													
Scenario 1b, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

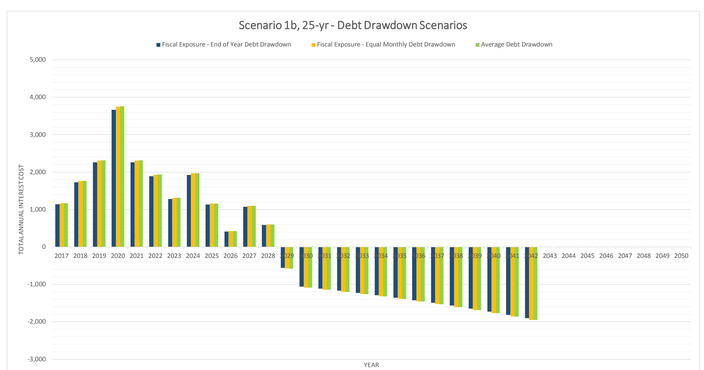
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	*954*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

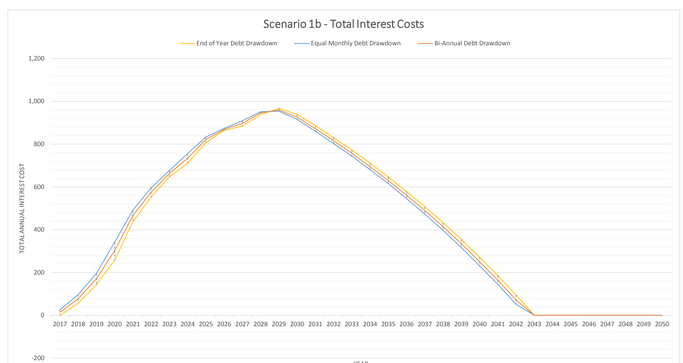
	Monthly Drawdown	95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

		28%	24%	21%	24%	12%	9%																													
Scenario 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1a, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	*1,156*	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

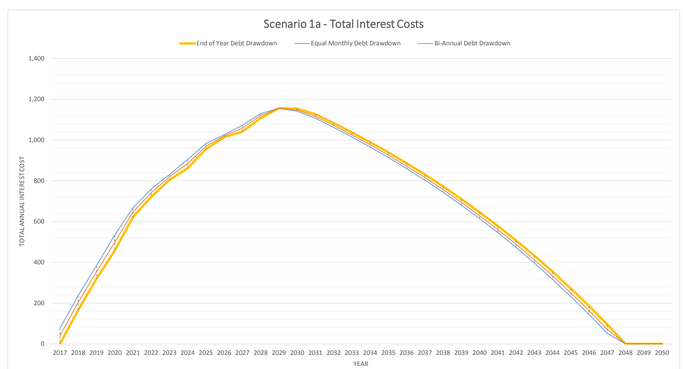
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

		12%	16%	20%	30%	19%	15%																													
Scenario 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

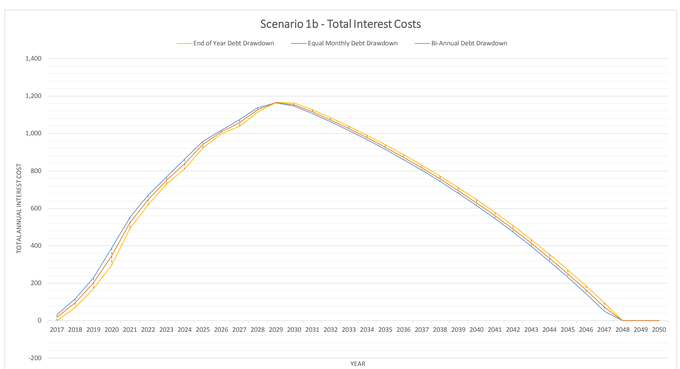
	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

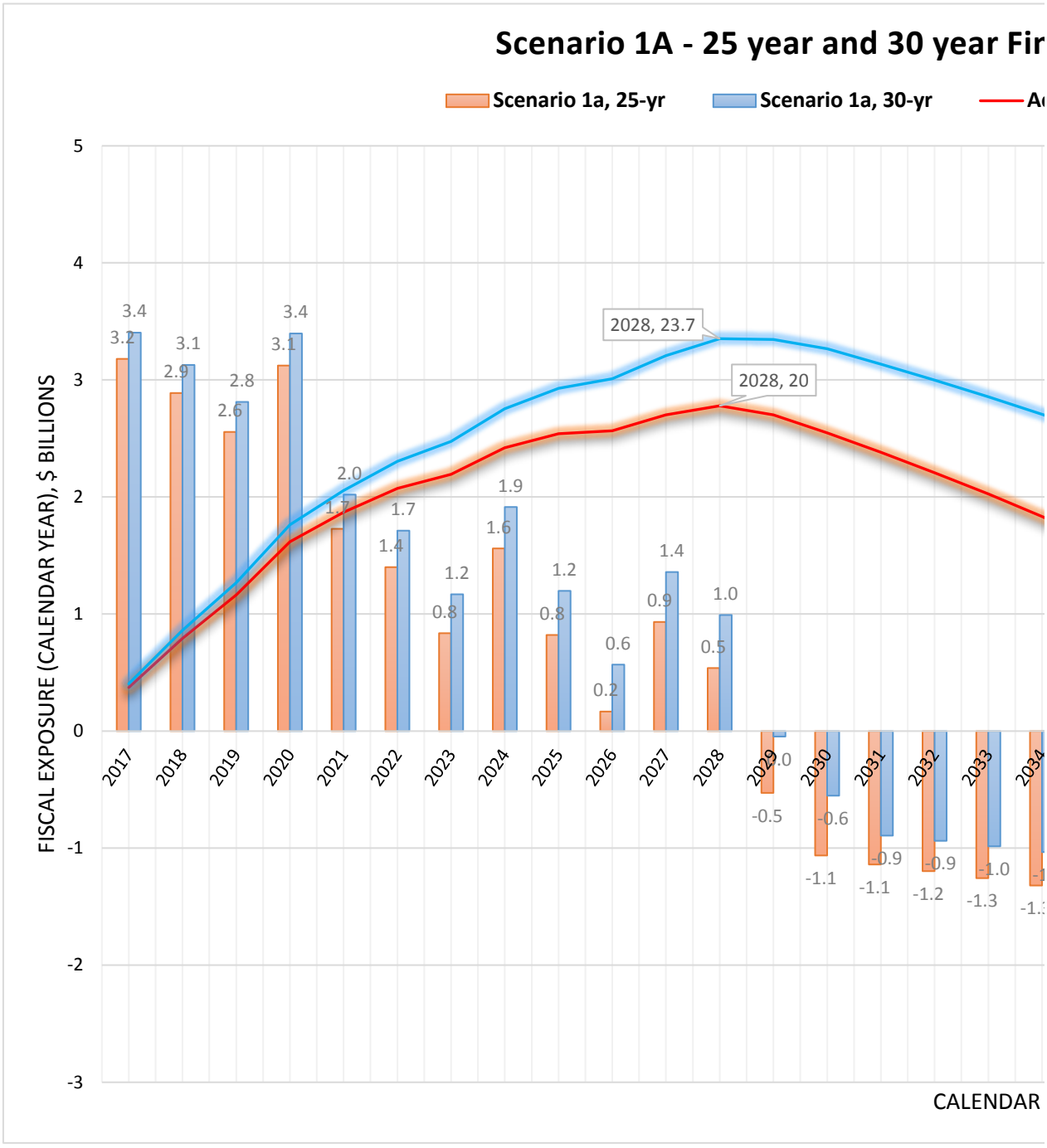
	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

Scenario 1b, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

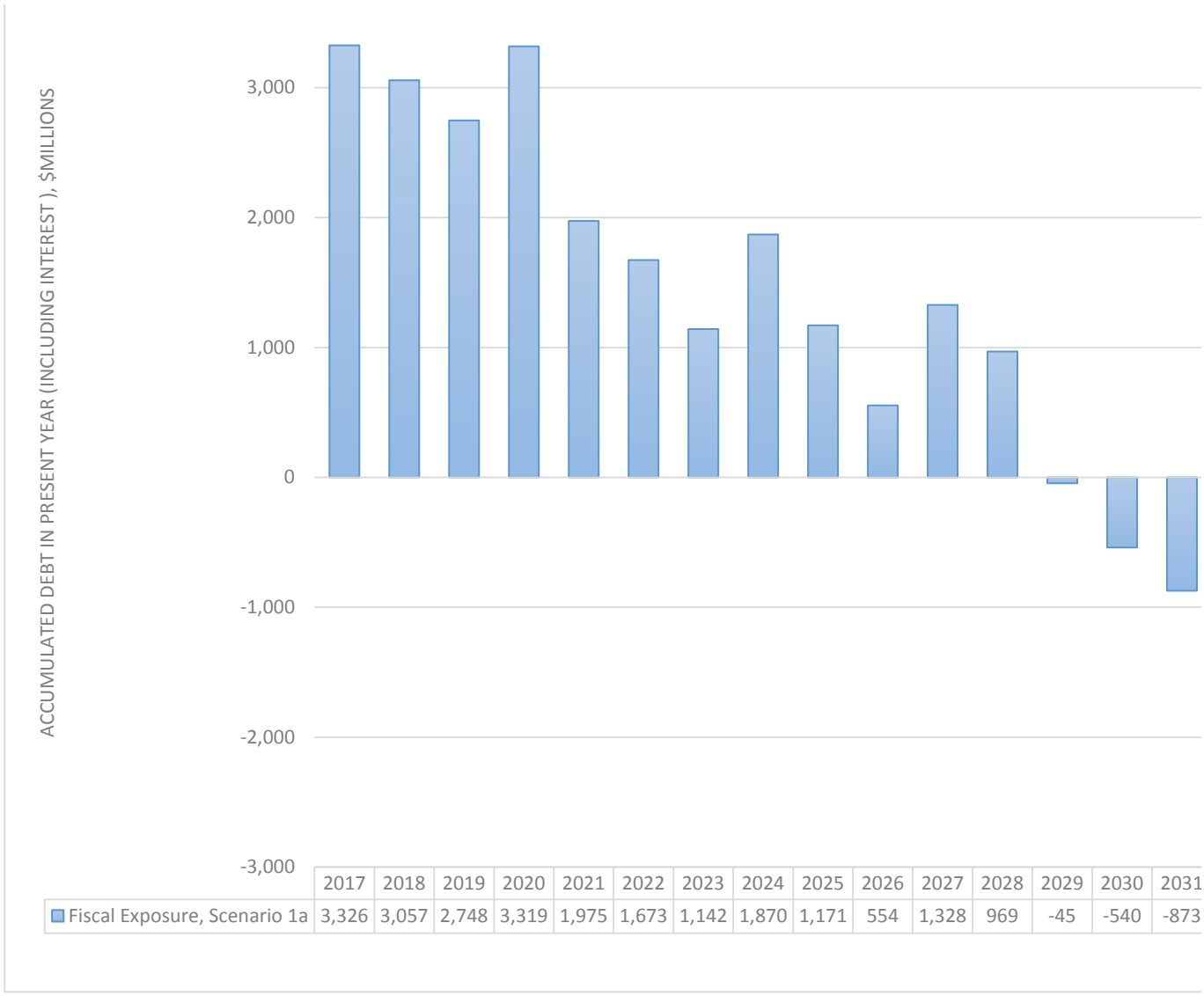




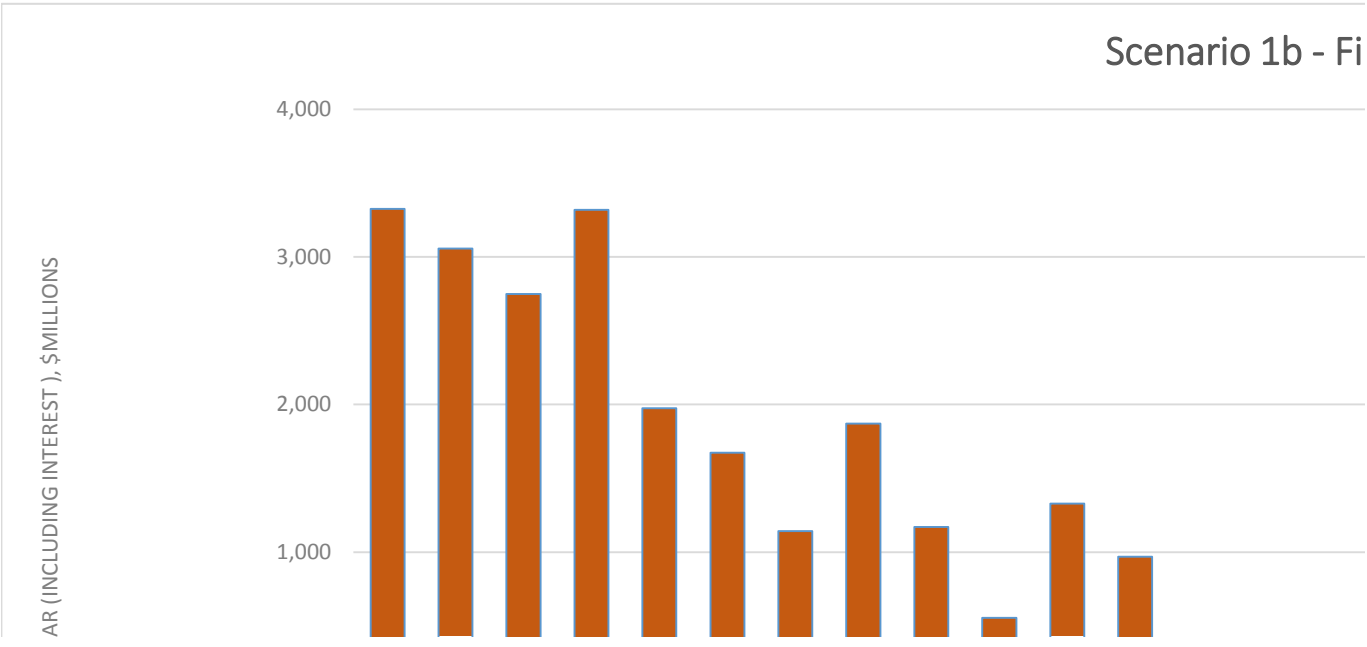
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

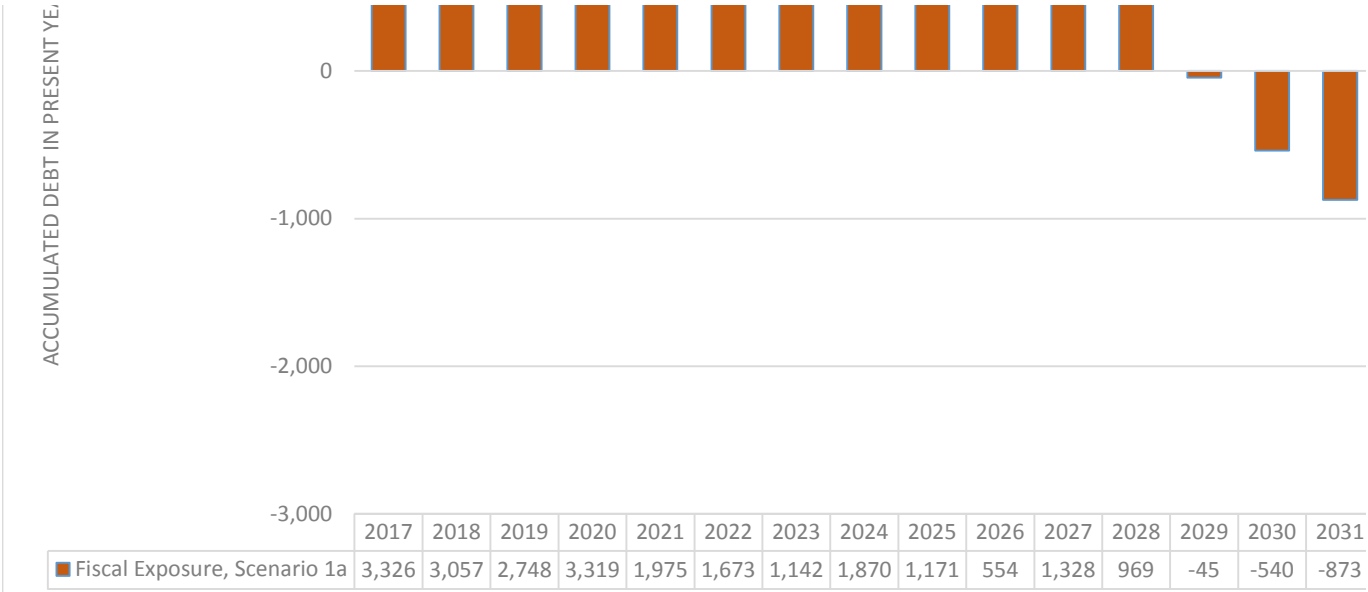




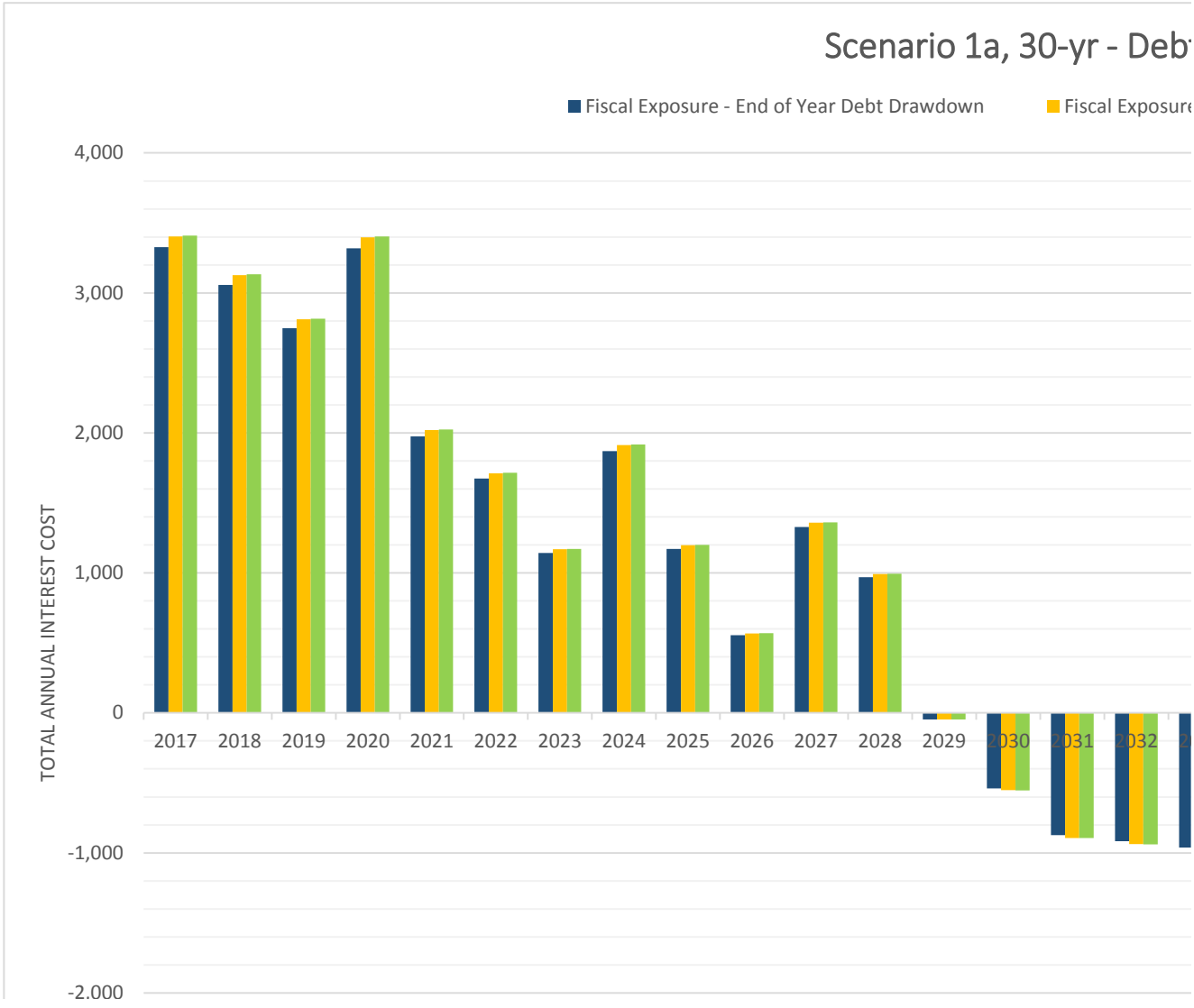


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



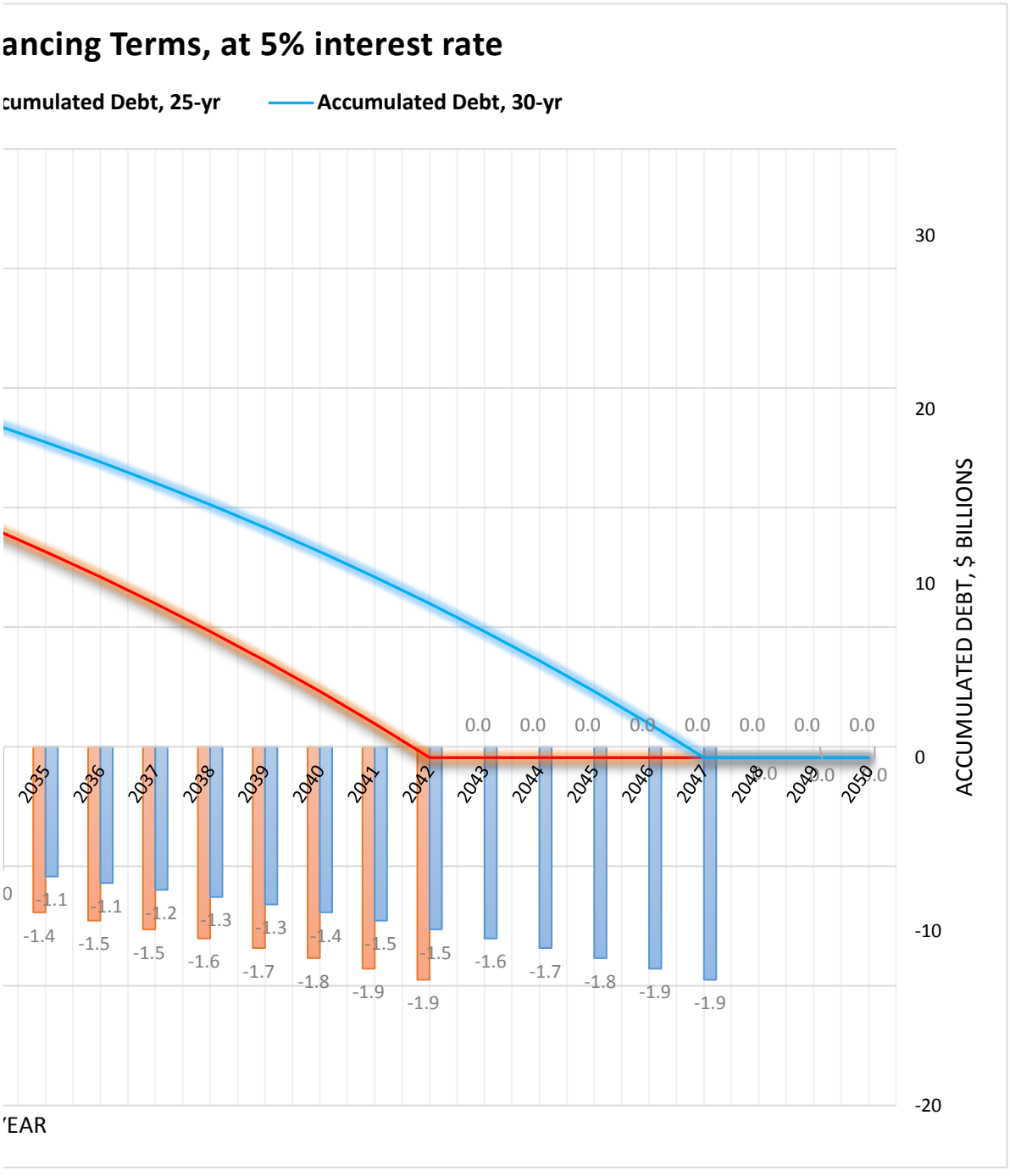


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



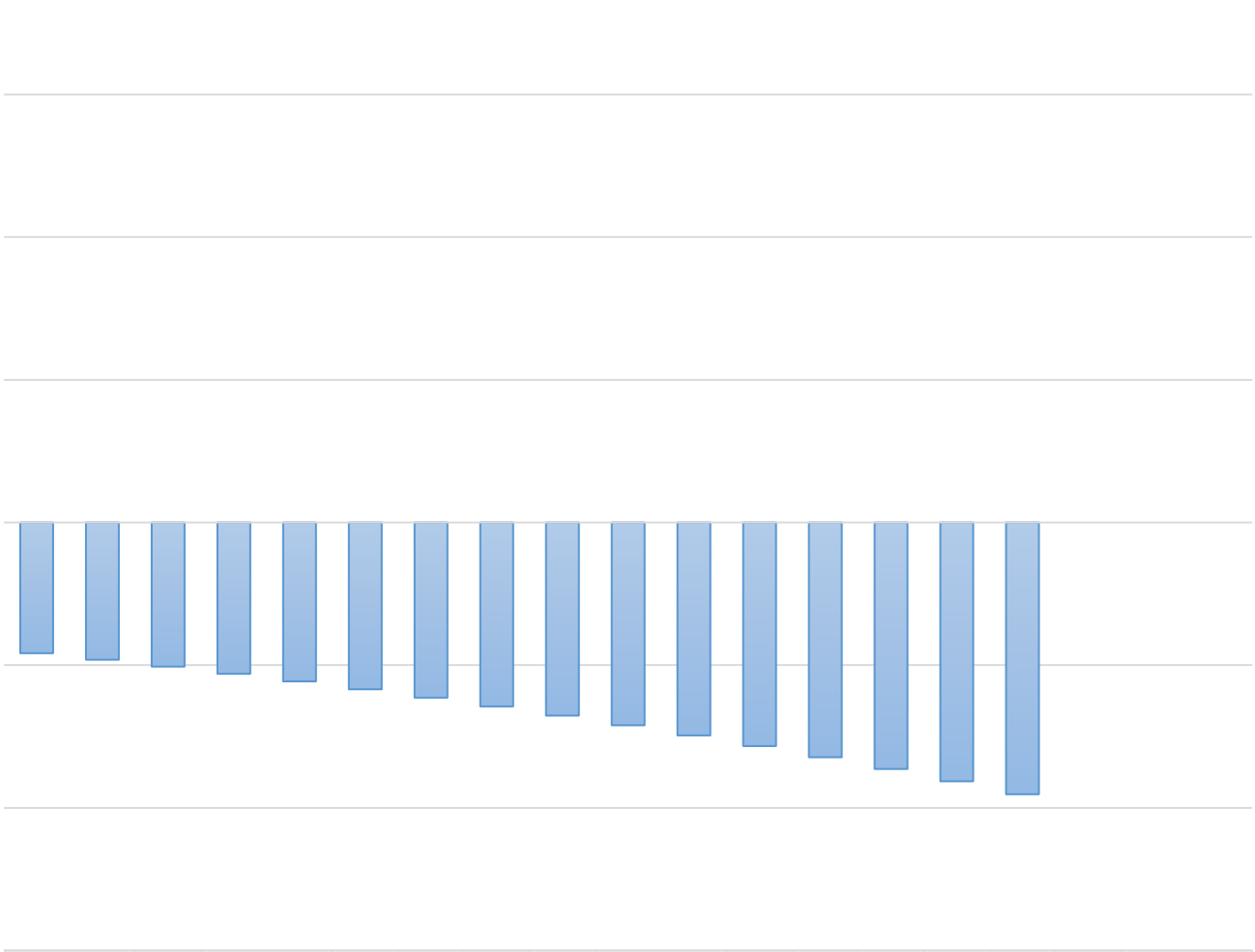

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

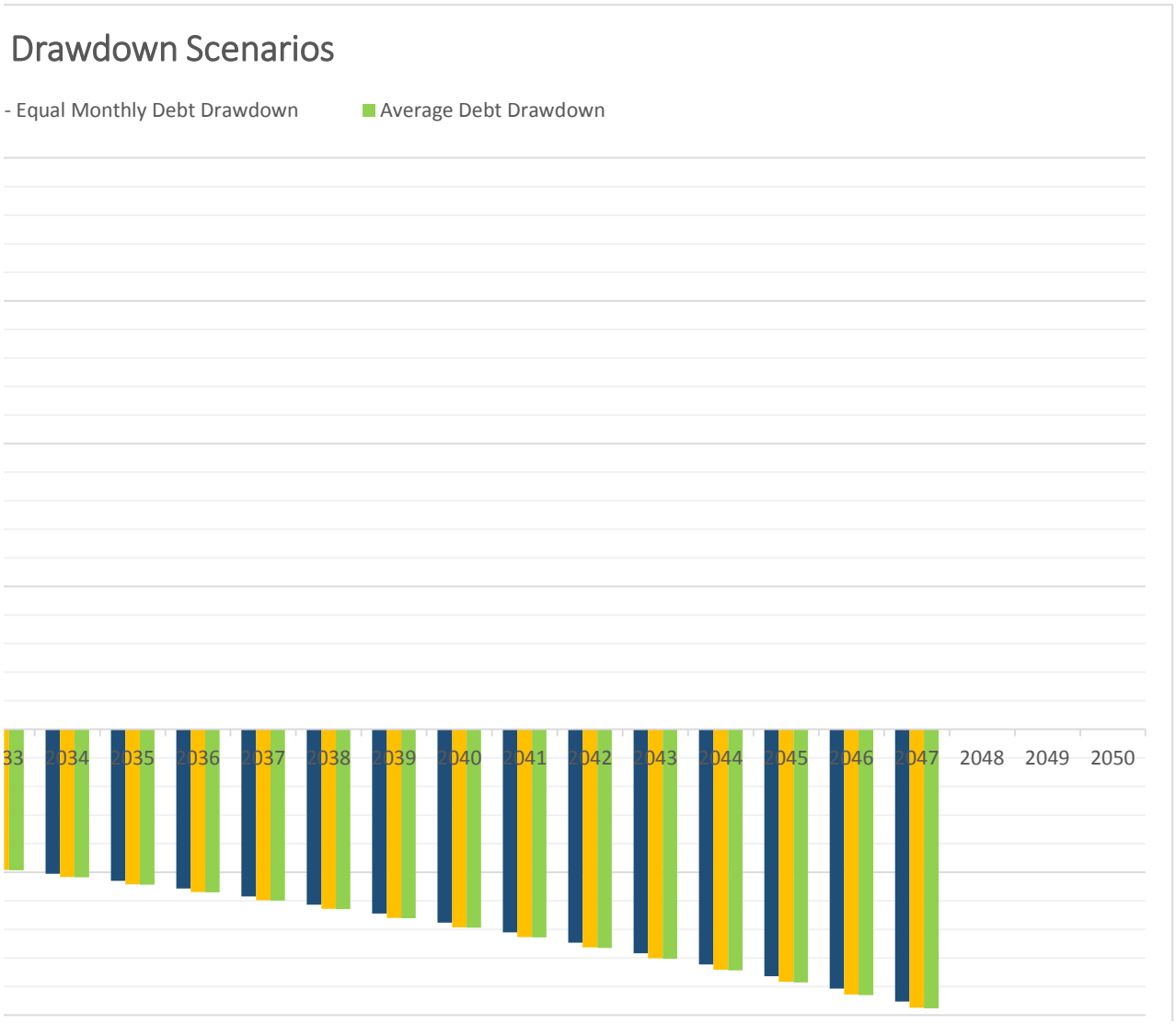
YEAR

cal Exposure



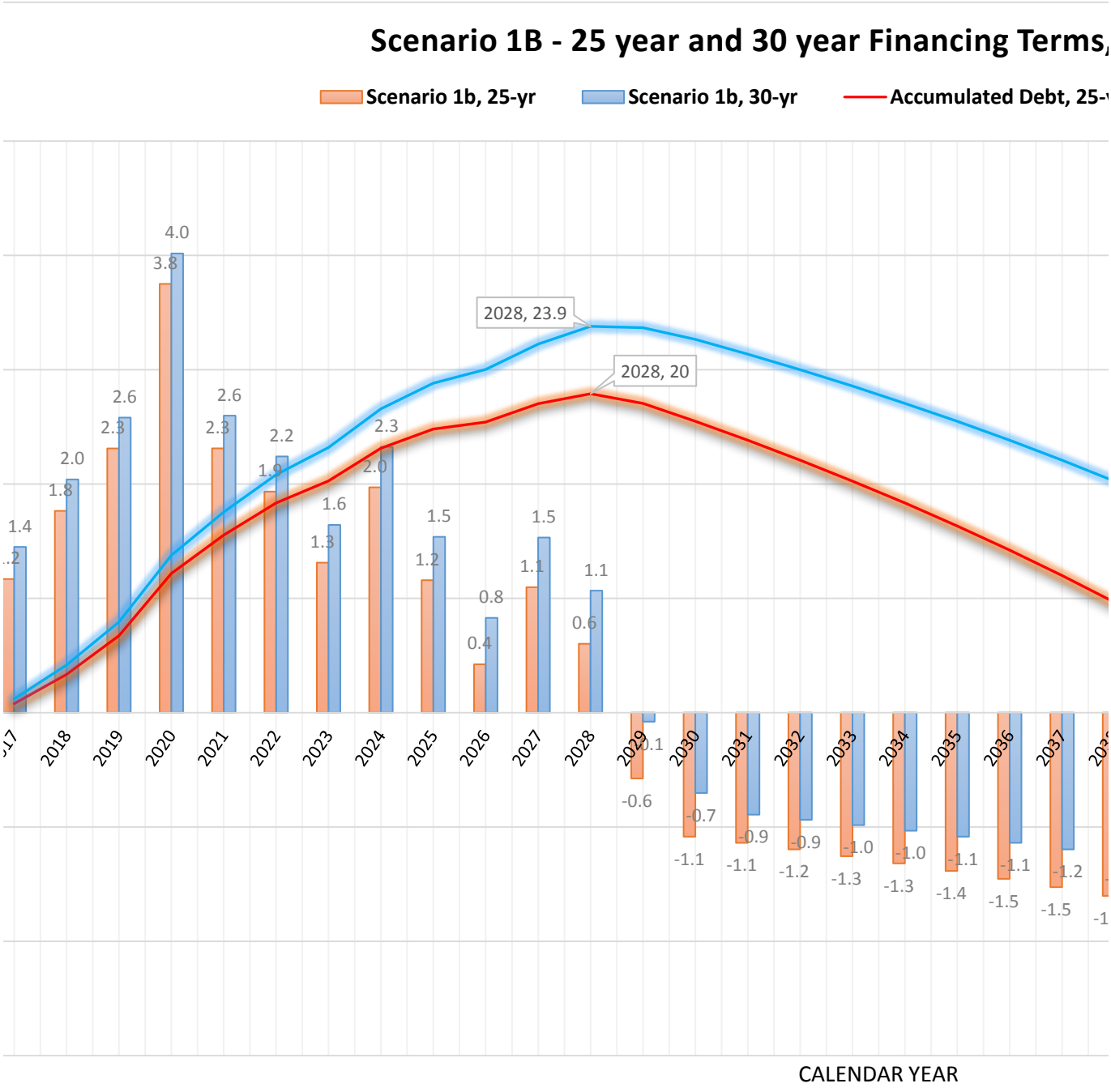
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

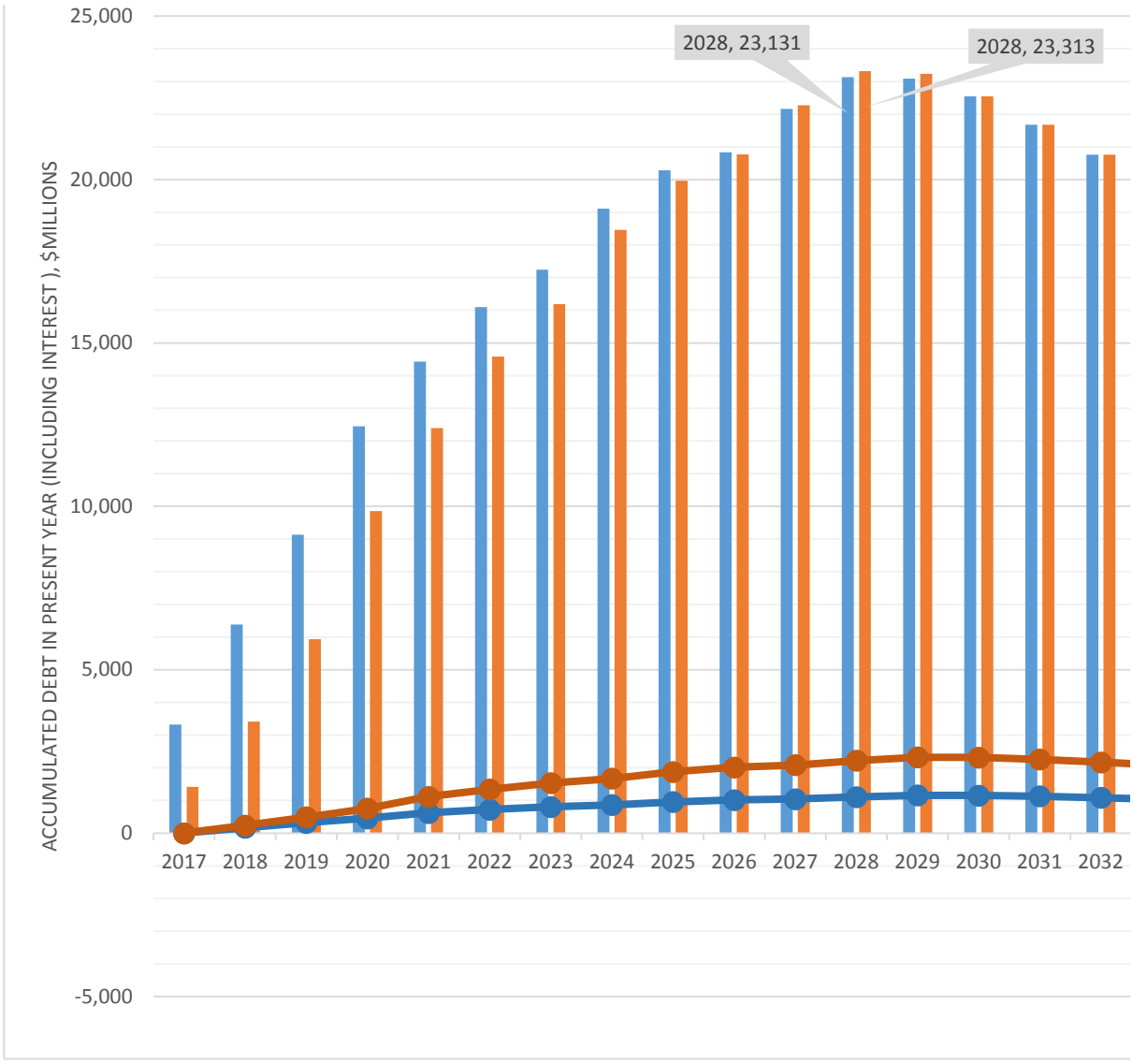


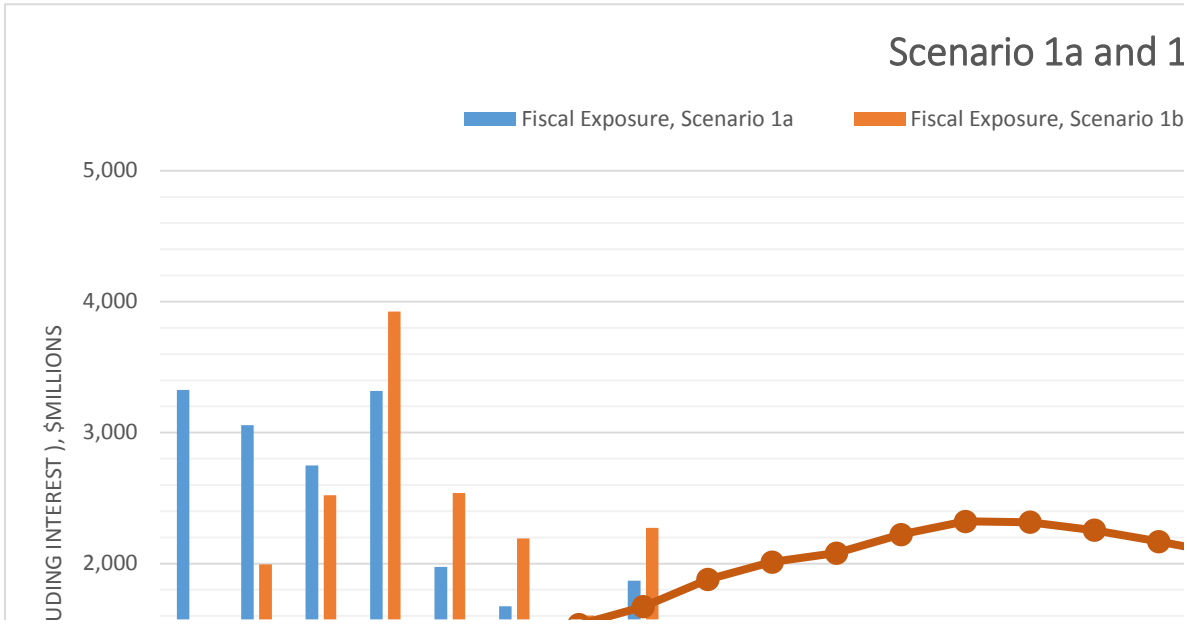
YEAR

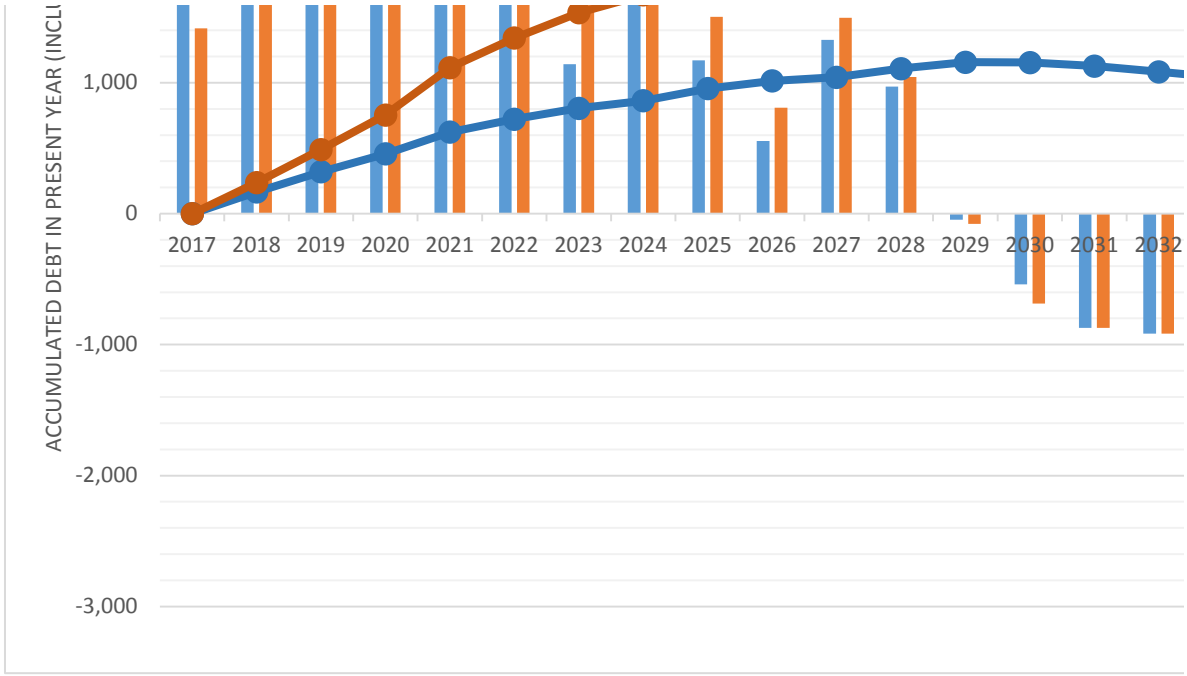
3 - 25 year and 30 year Financing Terms, at 5% interest rate

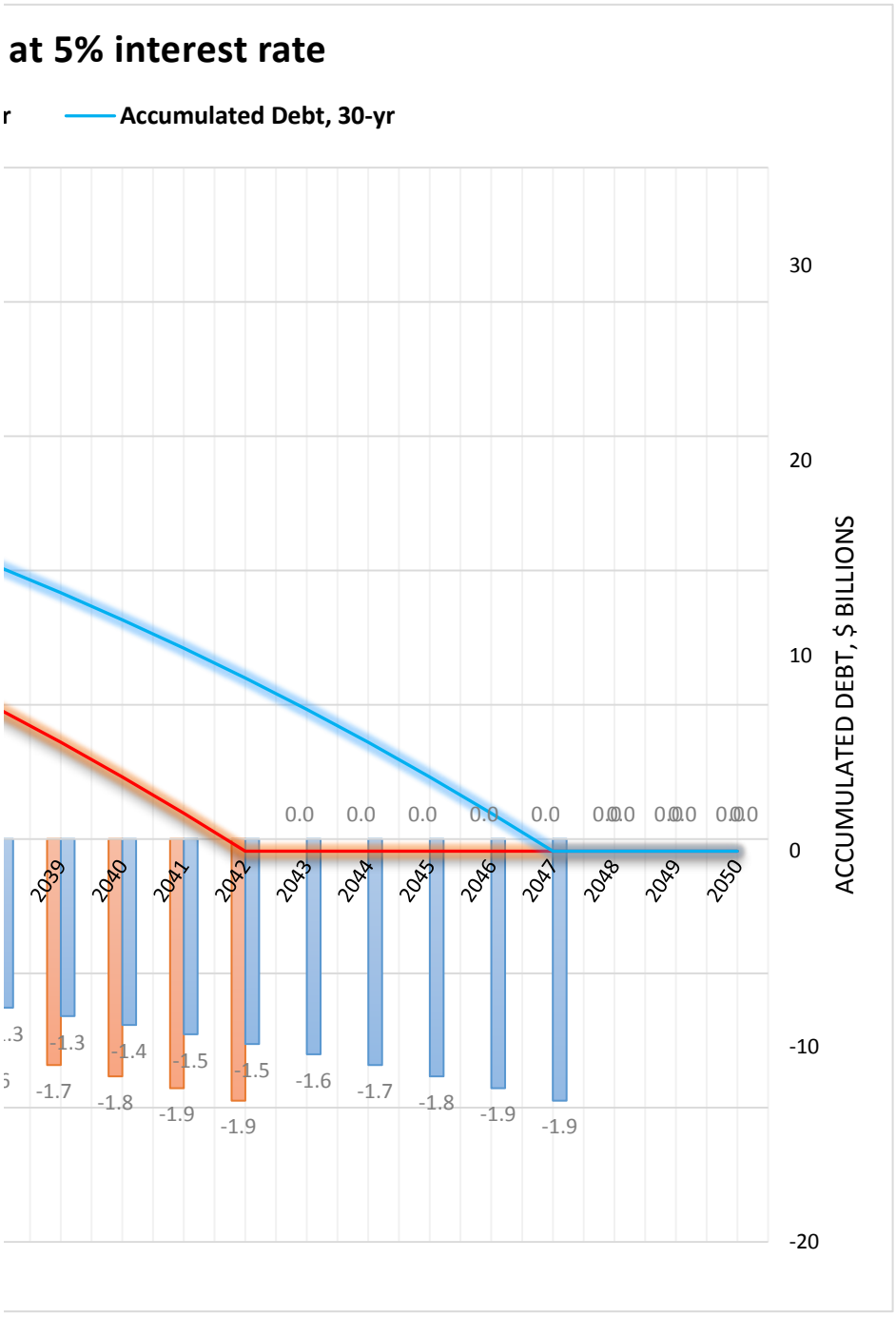





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

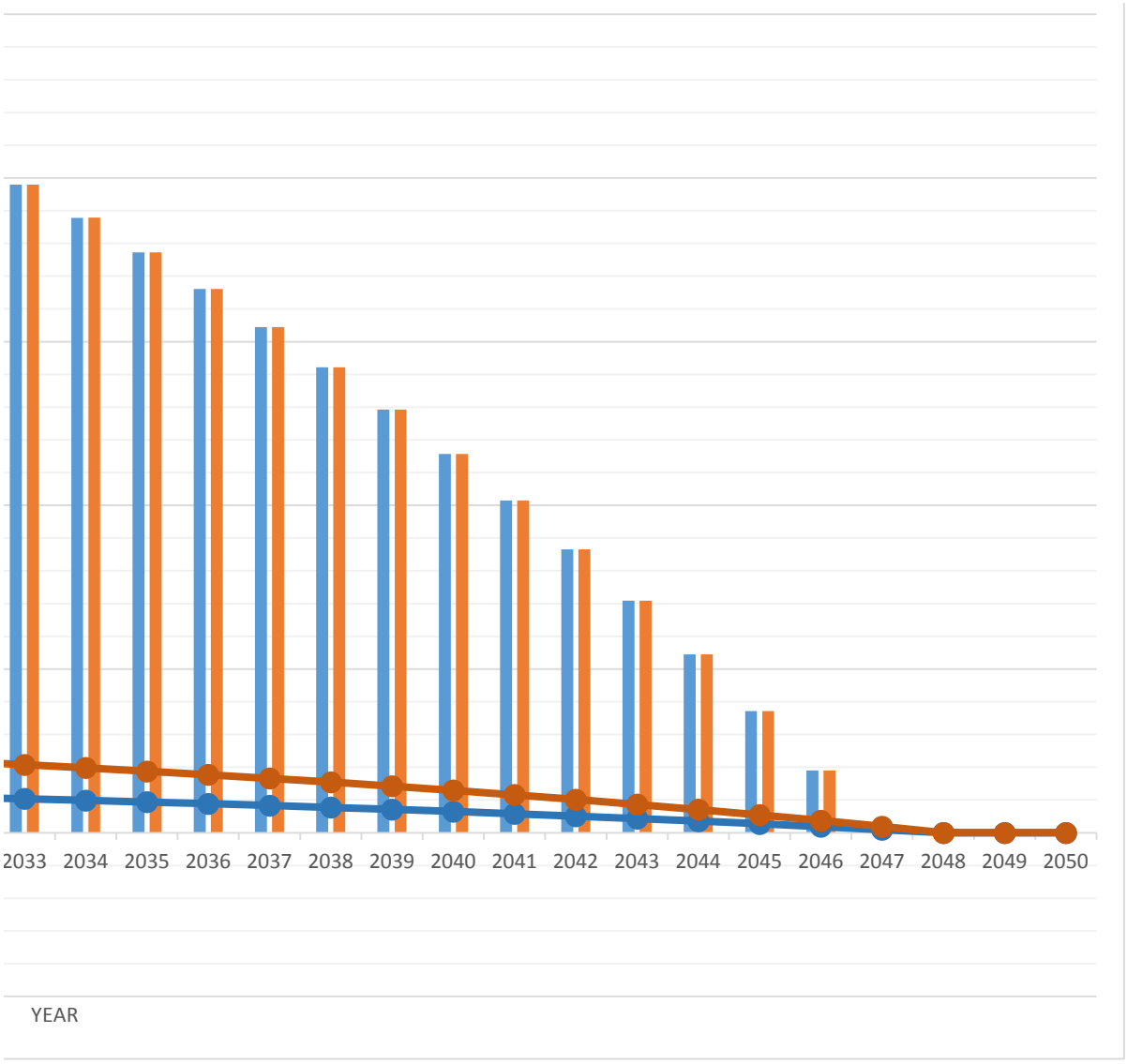

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

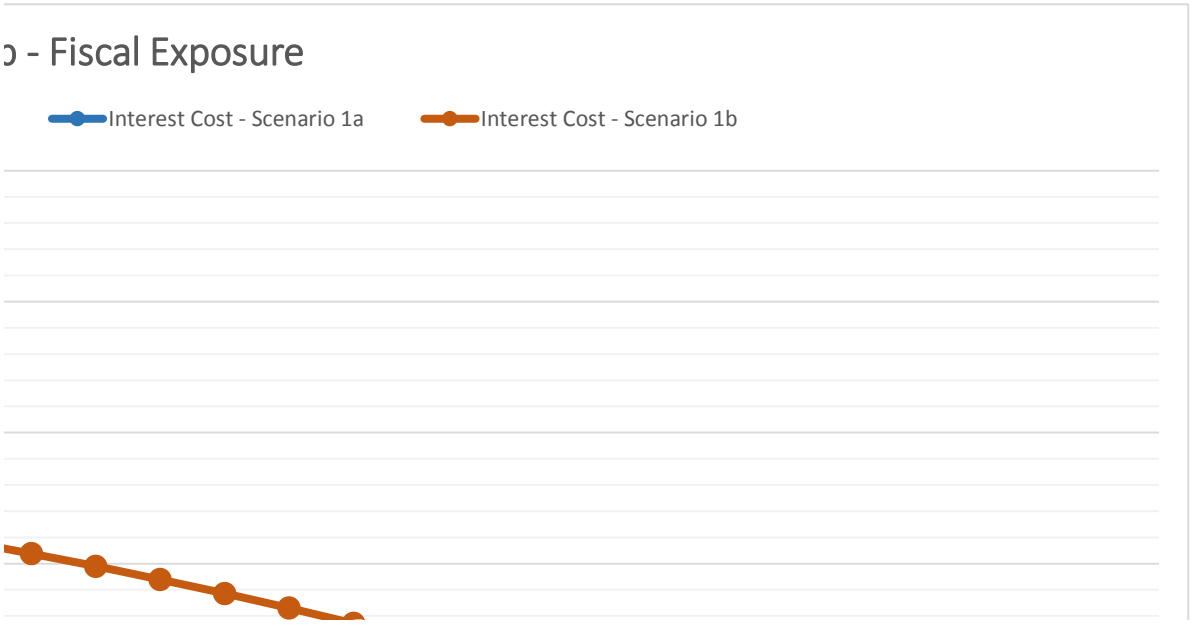

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

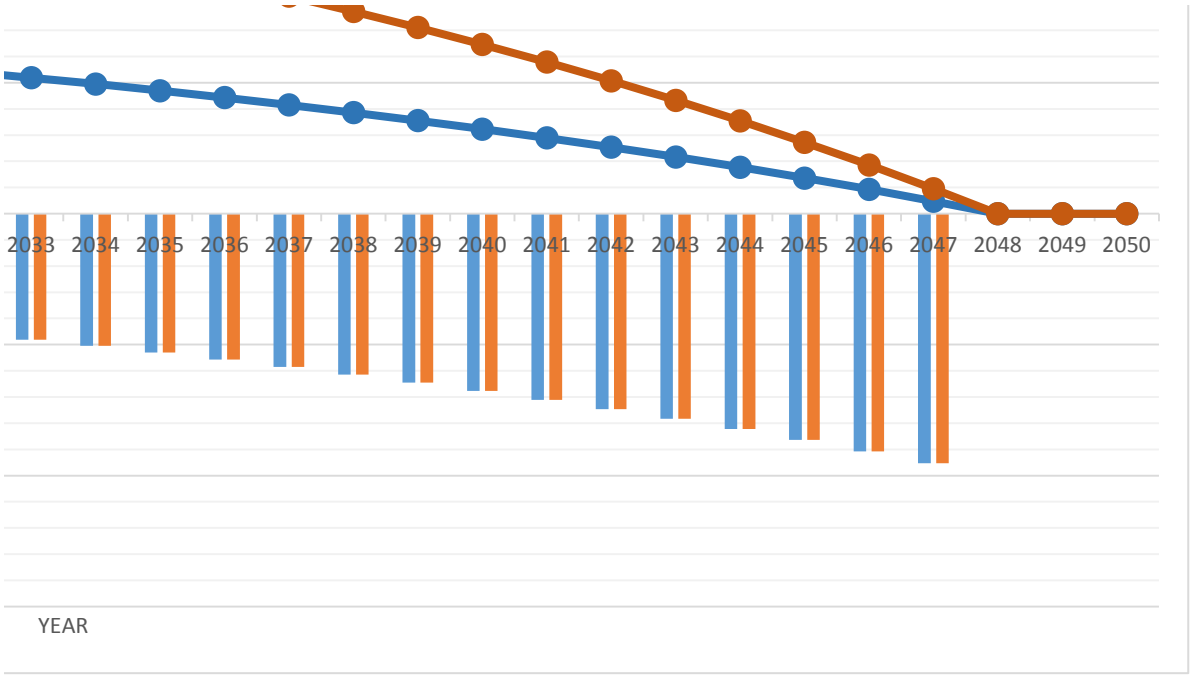


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

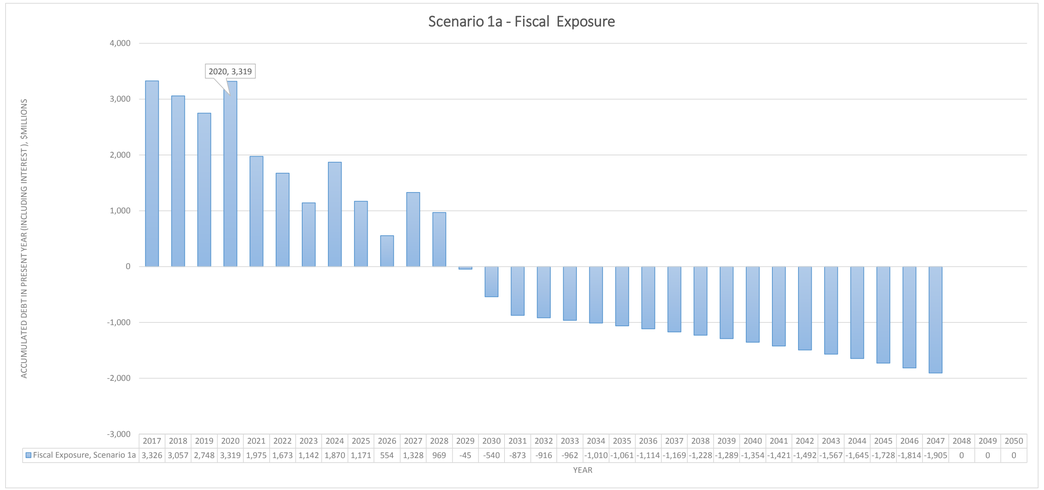
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

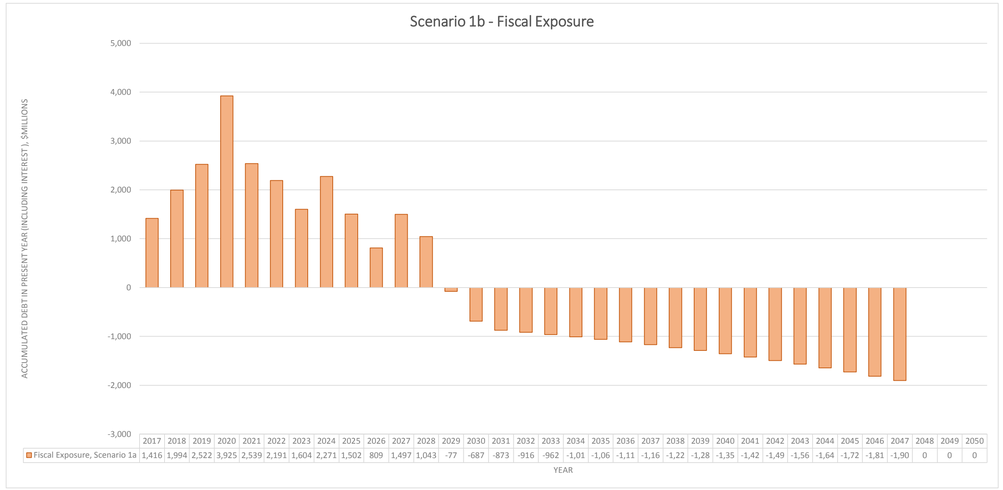
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

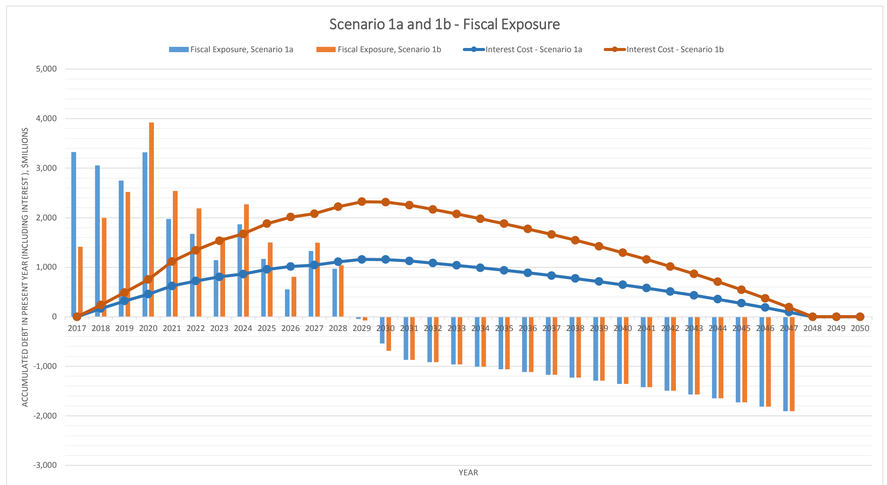
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

Notes:	Accounting treatment is to be determined.


Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0


Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0


Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

JK: Fixed the formula in the yellow highlighted cells. Pls. check. (SK: looks good to me)

	Tab
v16	Powerpoint_Export

Change Description

Added in trigger for later start in the year

Equal Monthly Debt Drawdown

		Month	Months Remai
Scenario Start Date	**July**	7	6

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	3,180	2,888
Annual Exposure2 with start on July 1st	*1,590*	*2,888*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	795	3,107
Start: July 1st	-	*2,312*

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	-	3,335
Start: July 1st	-	*2,484*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	1,168	1,765
Annual Exposure2 with start on July 1st	*584*	*1,765*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	292	1,609
Start: July 1st	-	*1,025*

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,449	2,040
Annual Exposure2 with start on July 1st	*725*	*2,040*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,597
Start: July 1st	-	*1,959*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 -	1,597 - 3,335

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	0	3335
Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**0**	**3575**
Total, B	362	1837

Proposed Program Total:	362 -	1,837 - 3,575

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,556	3,123	1,728	1,400
2,556	*3,123*	*1,728*	*1,400*

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646
2,805	*2,697*	*2,774*	*1,646*

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

ıking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
2,311	3,750	2,311	1,933
2,311	*3,750*	*2,311*	*1,933*

2018-19	2019-20	2020-21	2021-2022

1,901	2,671	3,391	2,217
1,901	*2,671*	*3,391*	*2,217*

2019	2020	2021	2022
2,581	4,016	2,598	2,241
2,581	*4,016*	*2,598*	*2,241*

2018-19	2019-20	2020-21	2021-2022
2,175	2,940	3,662	2,508
2,175	*2,940*	*3,662*	*2,508*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

/1

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052
2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

Equal Monthly Debt Drawdown

		Month	Months Remaining
Scenario Start Date	July	7	6

AS LONG AS >

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	3,180	2,888	2,556

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	795	3,107	2,805
Fiscal Exposure, 25%	199	777	701

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Annual Exposure[2]	3,404	3,128	2,812

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	851	3,335	3,049
Fiscal Exposure, 25%	213	834	762

Indicates year in which, similar to OPCD's exa
closest to 30%. As Fiscal 2016/17 is a partial y
month the GA deferral begins.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu
decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions	9%	14%	18%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	1,168	1,765	2,311

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	292	1,609	1,901
Fiscal Exposure, 25%	73	402	475

Scenario 1b - 30-yr amortization	2017	2018	2019
Annual Exposure[2]	1,449	2,040	2,581

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	362	1,597	2,175
Fiscal Exposure, 25%	91	399	544

Indicates year in which, similar to OPCD's exar closest to 30%.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 ar
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu on accounting treatment.

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]
Debt-Finance Global Adjustment Costs, Option 1a	213	834	762
Debt-Finance Global Adjustment Costs, Option 1b	91	399	544
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**213**	**1074**	**1065**
Total, B	91	639	847

Proposed Program Total:	91 - 213	639 - 1,074	847 - 1,065

($M)	2016-171	2017-181	2018-191
Debt-Finance Global Adjustment Costs, Option 1a	851	3335	3049
Debt-Finance Global Adjustment Costs, Option 1b	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**851**	**3575**	**3352**
Total, B	362	1837	2478

Proposed Program Total:	362 - 851	1,837 - 3,575	2,478 - 3,352

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6

7	July	7	
8	August	8	
9	September	9	
10	October	10	
11	November	11	
12	December	12	

30-year term	**2016-17**	**2017-18**	**2018-19**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335	2,175 - 3,049

ROWS HIDDEN

1	1 = Comparision Enabled

APRIL 1, 2017 25%

2020	2021	2022
3,123	1,728	1,400

2019-20	2020-21	2021-2022
2,697	2,774	1,646
674	693	412

2020	2021	2022
3,396	2,020	1,712

2019-20	2020-21	2021-2022
2,958	3,052	1,943
740	763	486

mple, the true cost of GA being deferred is
ear, exposure may be less subject to which

l $17-21 billion (at 3.5% interest rate), peaking in 2028.
$33-$36 million.

ıals per month based on month of the year. Actuals may also depend on

28%	17%	13%
2020	2021	2022
3,750	2,311	1,933

2019-20	2020-21	2021-2022
2,671	3,391	2,217
668	848	554

2020	2021	2022
4,016	2,598	2,241

2019-20	2020-21	2021-2022
2,940	3,662	2,508
735	915	627

mple, the true cost of GA being deferred is

ıd $17-21 billion (at 3.5% interest rate), peaking in 2028.
$118-$134 million.

ıals per month based on month of the year. Actuals may also depend on decision

2019-20[1]	2020-21[1]
740	763
735	915
279	323
60	60
18	18
1097	**1164**
1092	1316

1,092 - 1,097 1,316 - 1,164

2019-201	2020-211
2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453





2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964
Equal Monthly Debt Drawdown	3,180	952

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

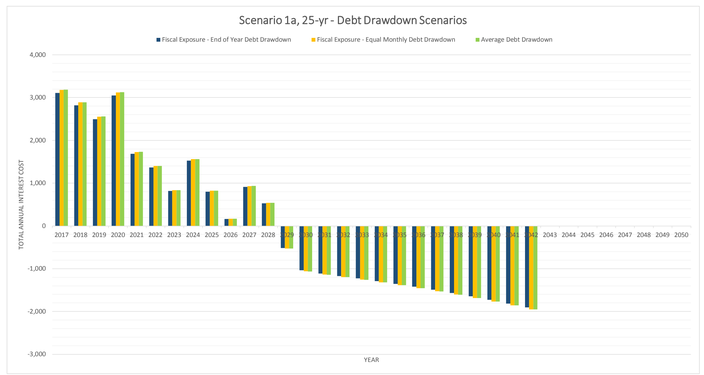
		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

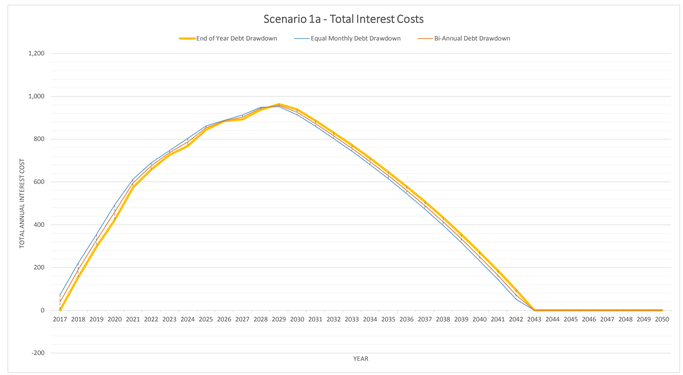
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	3,665	968	
Equal Monthly Debt Drawdown	3,750	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

		9%	14%	18%	28%	17%	13%																													
Scenario 1b, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

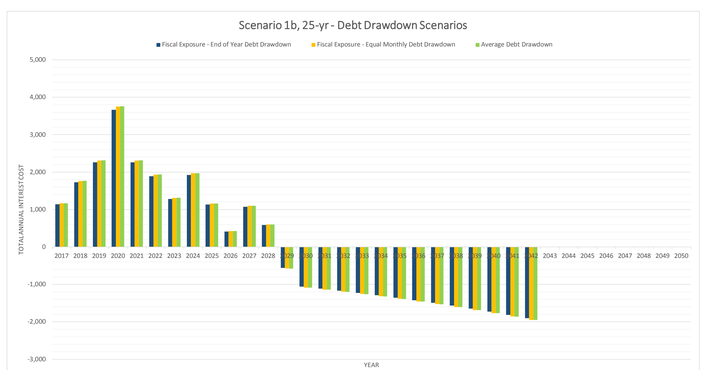
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	*954*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

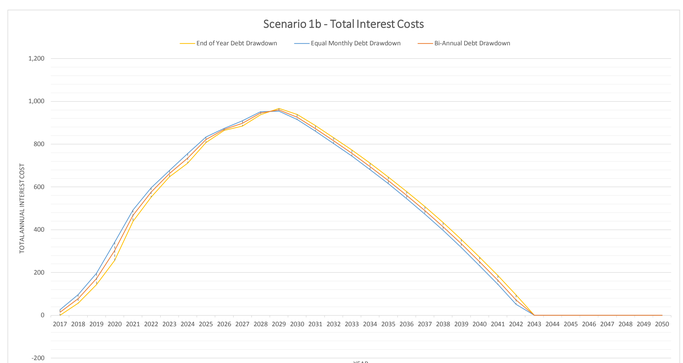
	Monthly Drawdown	95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

		28%	24%	21%	24%	12%	9%																													
Scenario 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1a, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	*1,156*	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

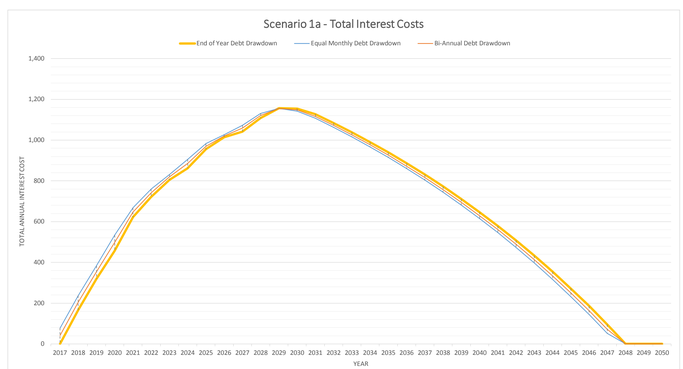
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

		12%	16%	20%	30%	19%	15%																													
Scenario 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

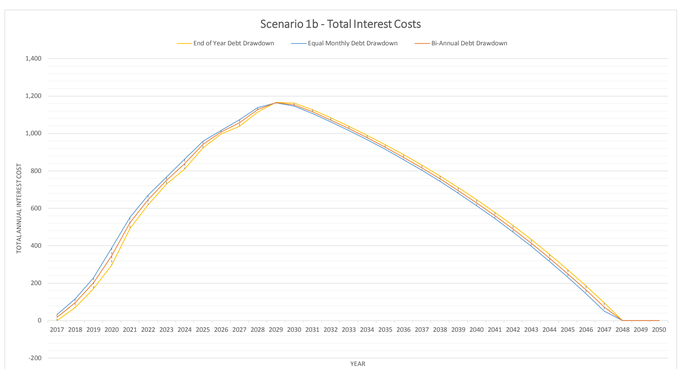
	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

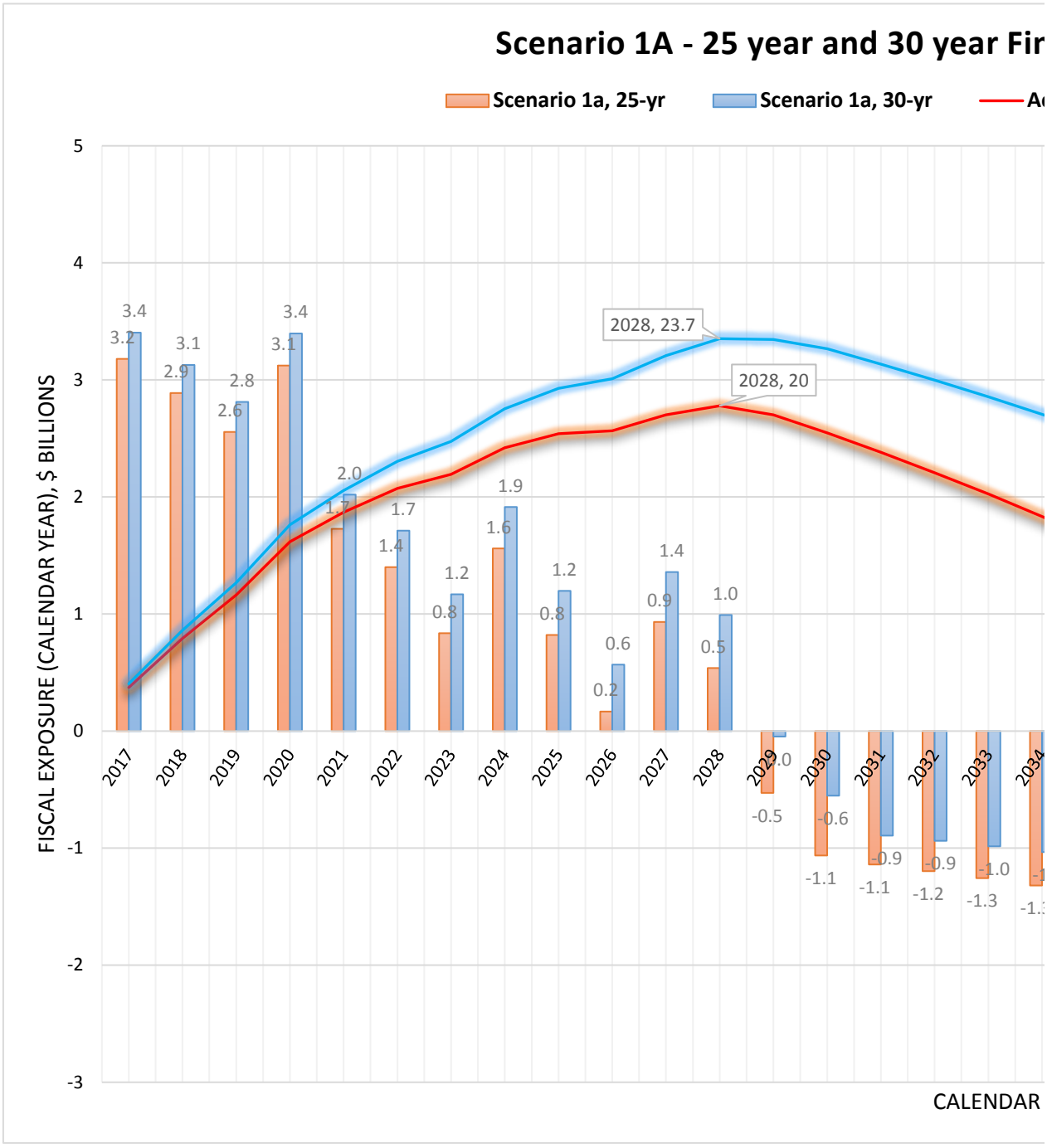
	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

Scenario 1b, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

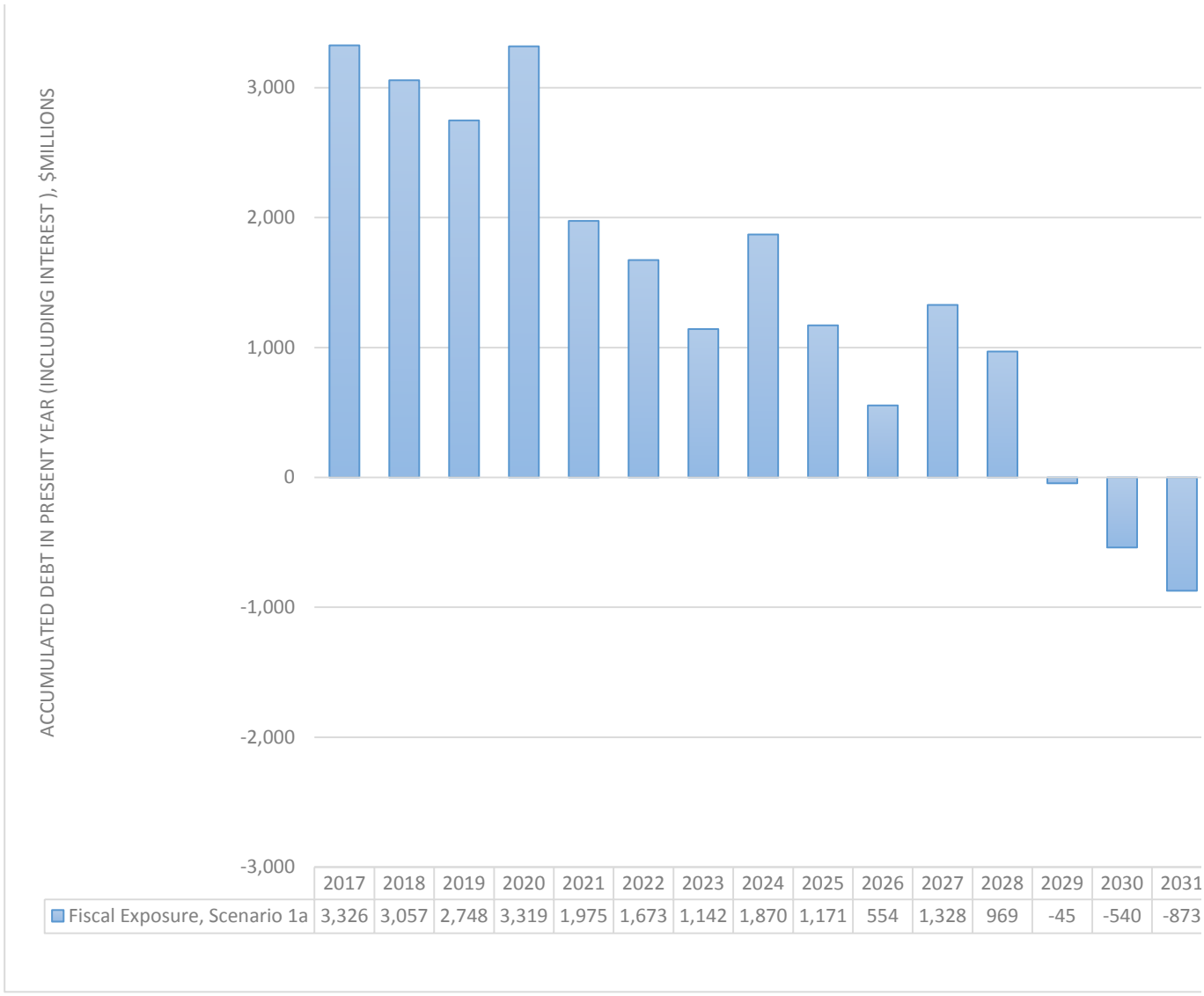




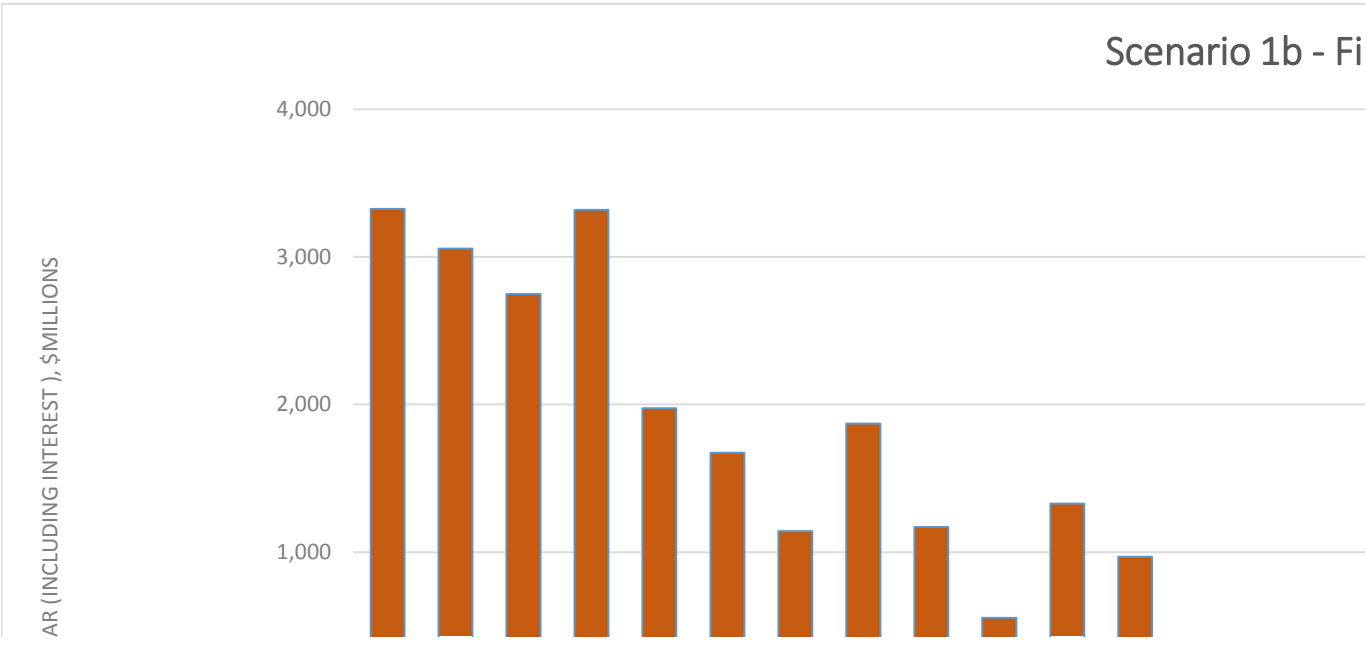
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

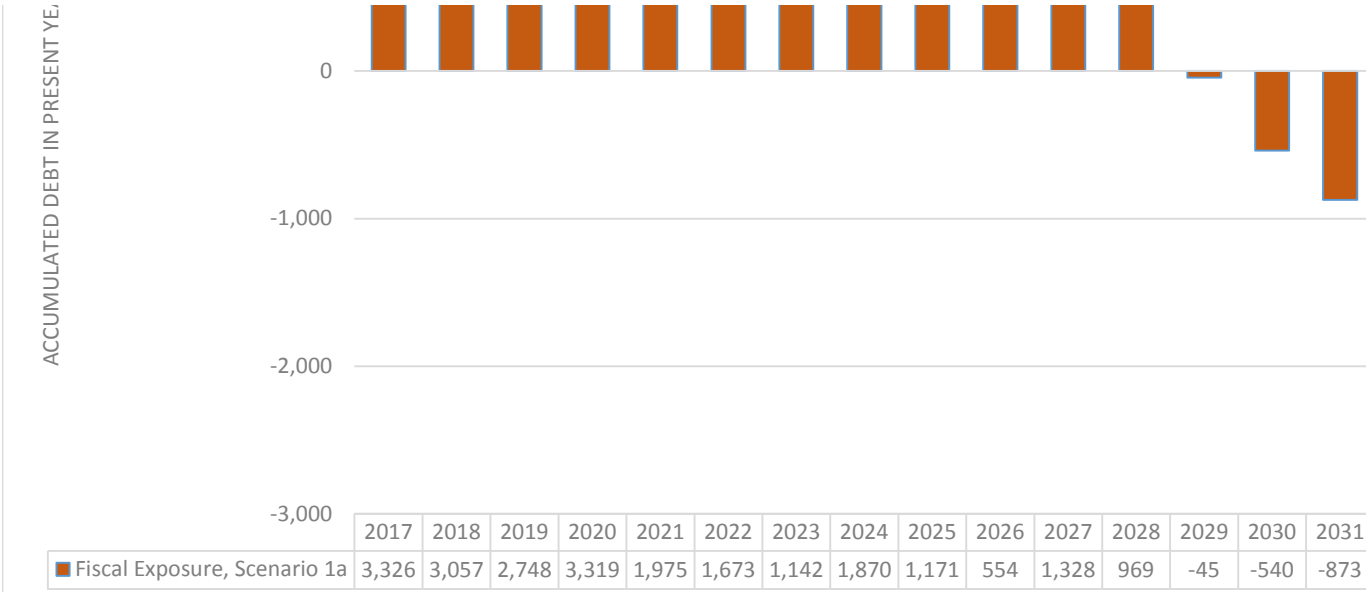




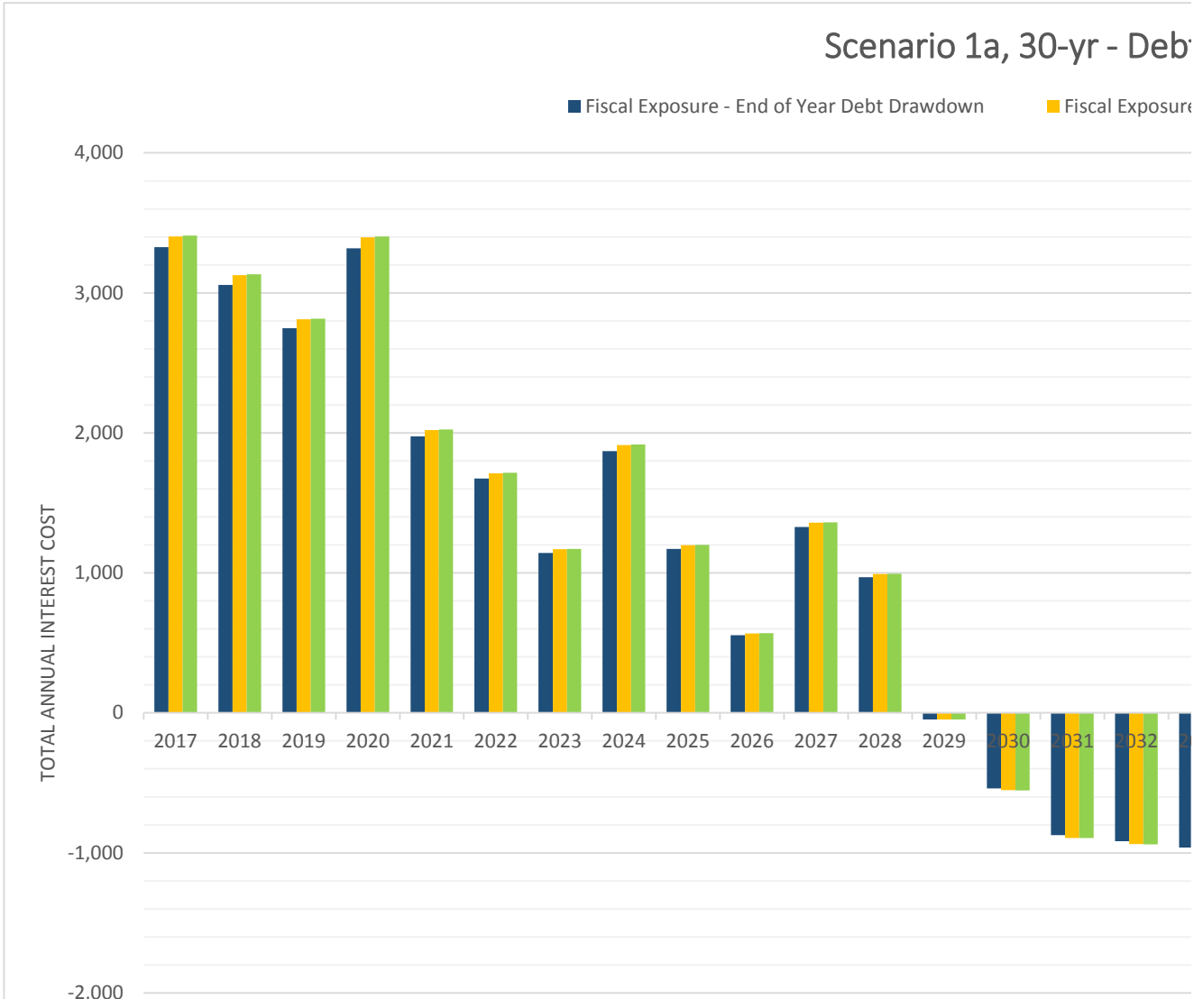


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



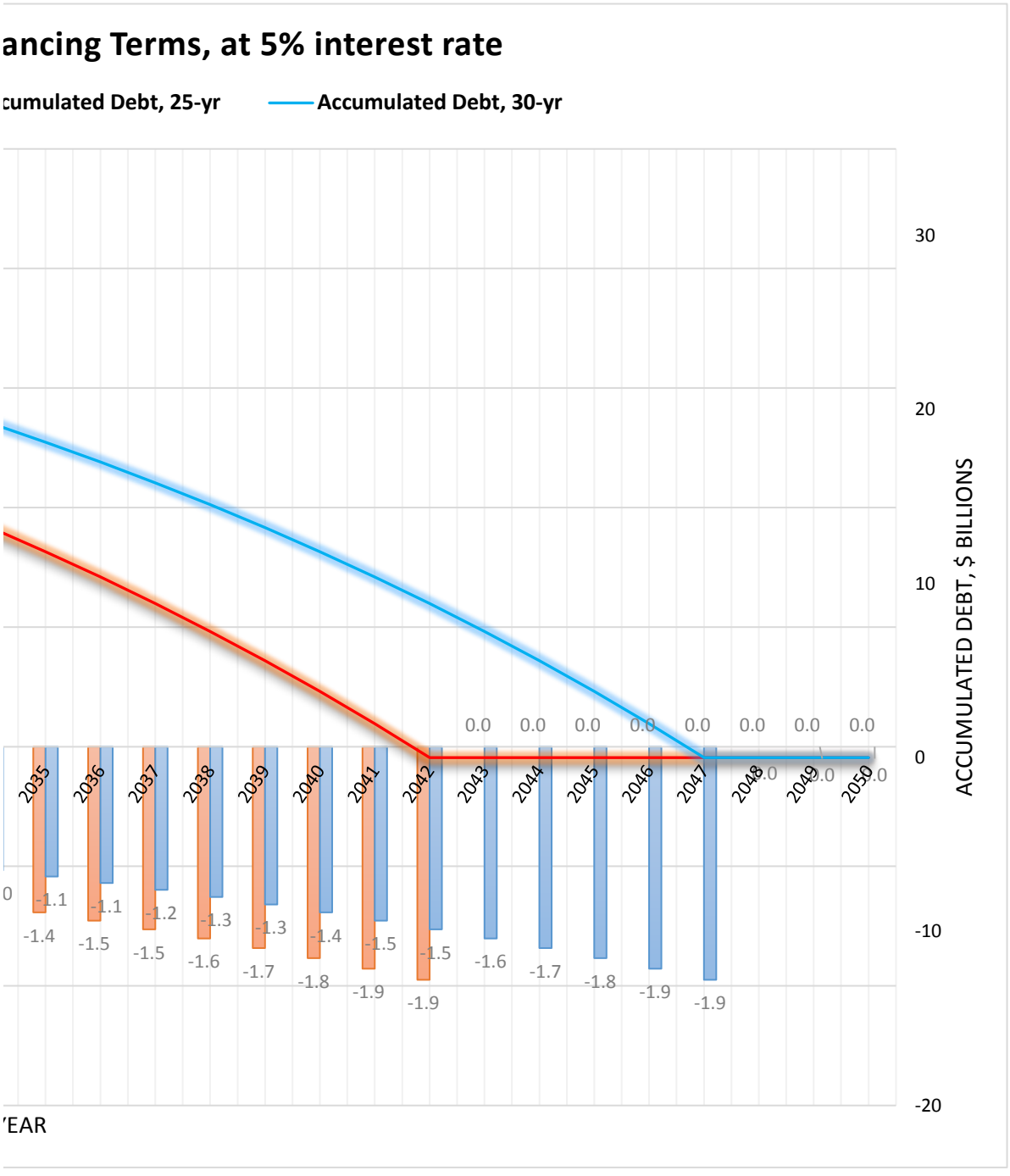


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



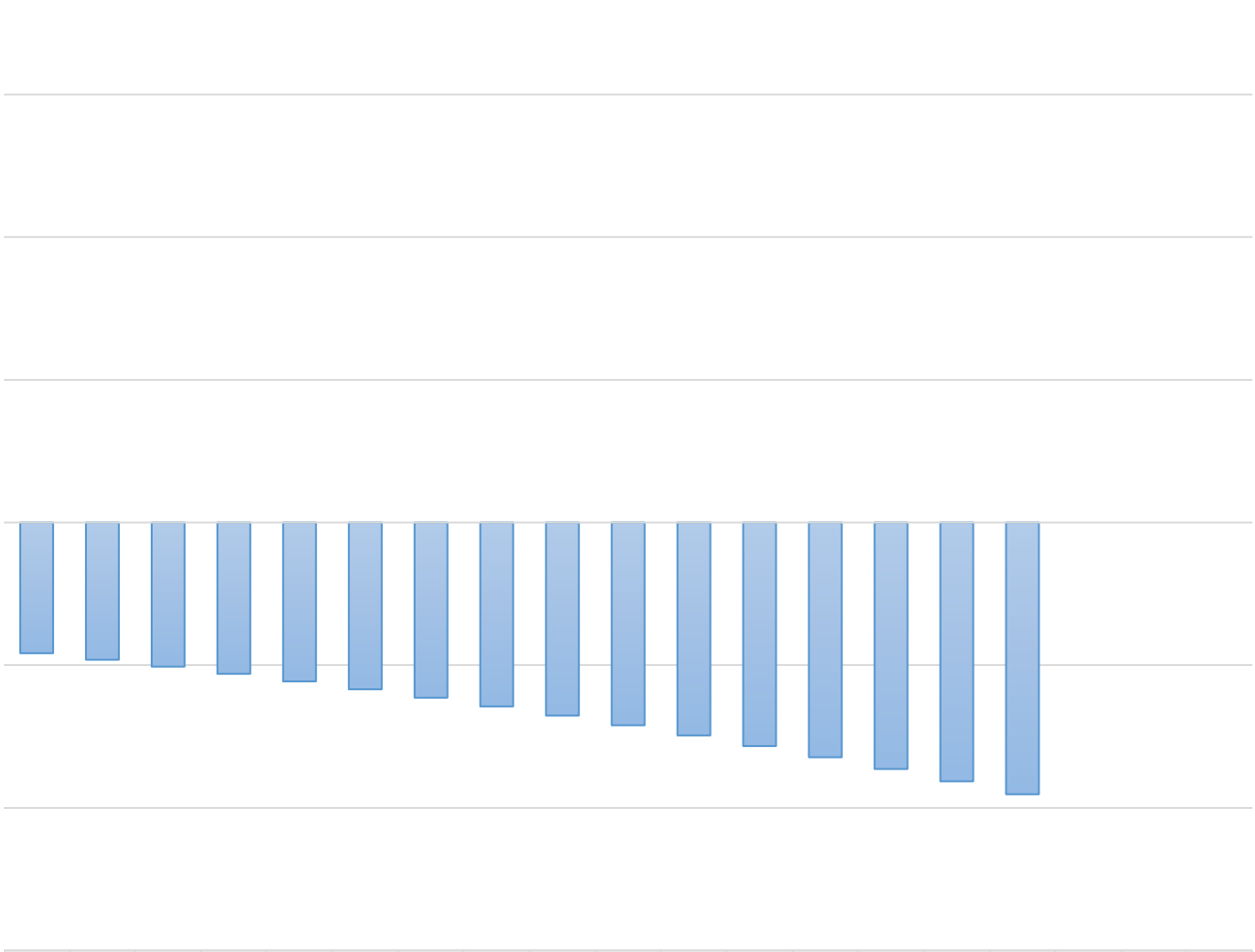

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

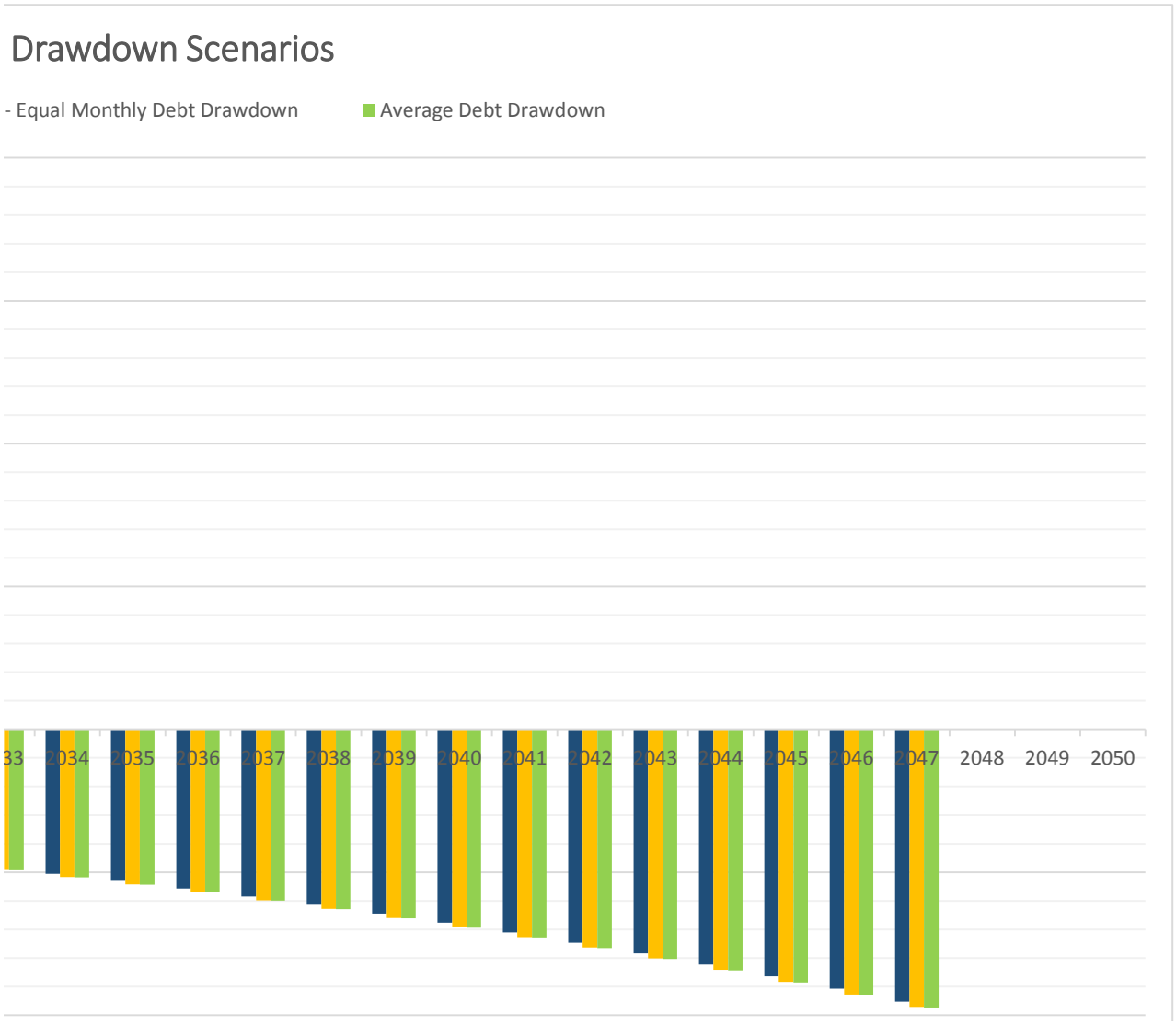
YEAR

cal Exposure



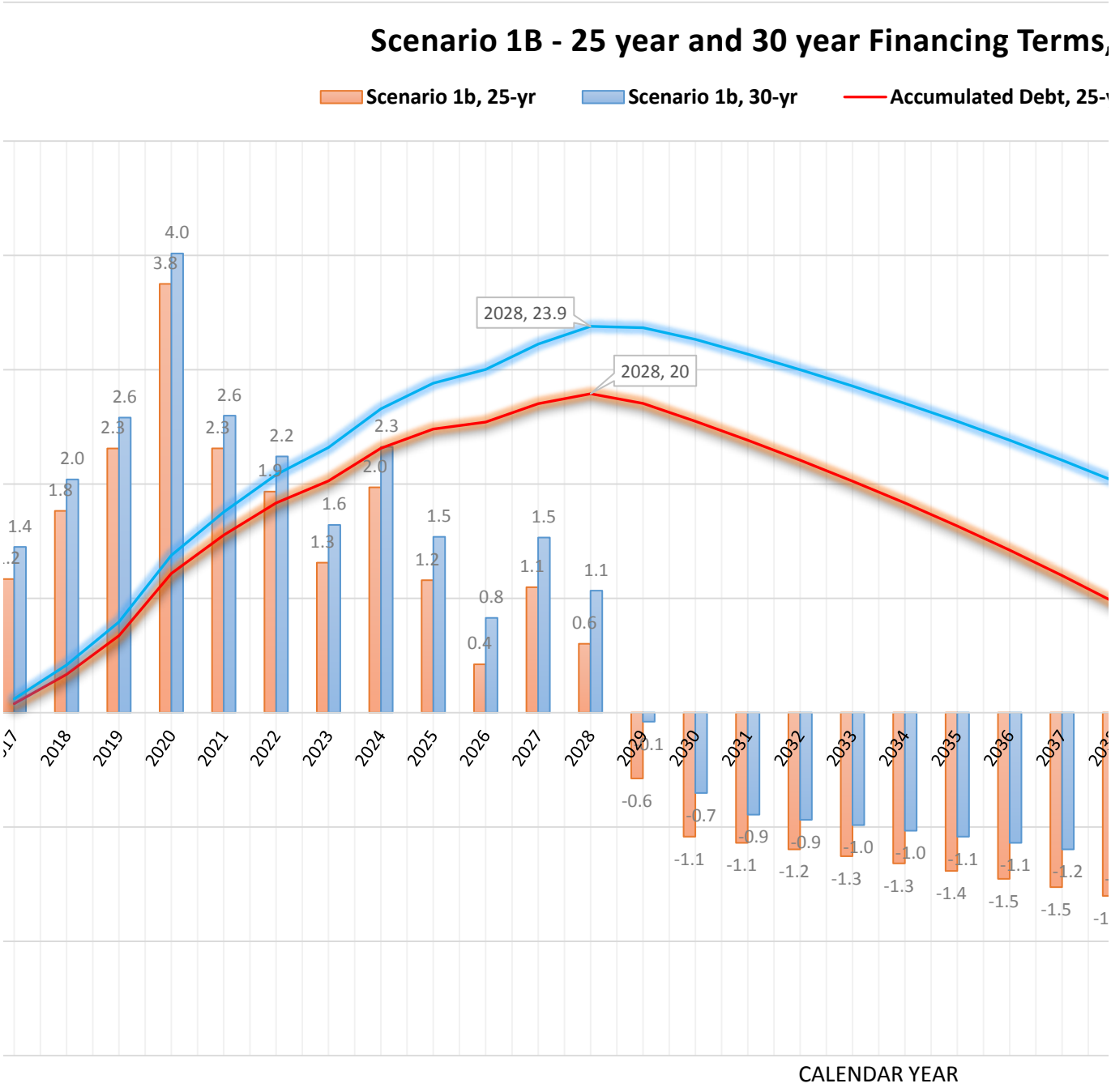
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

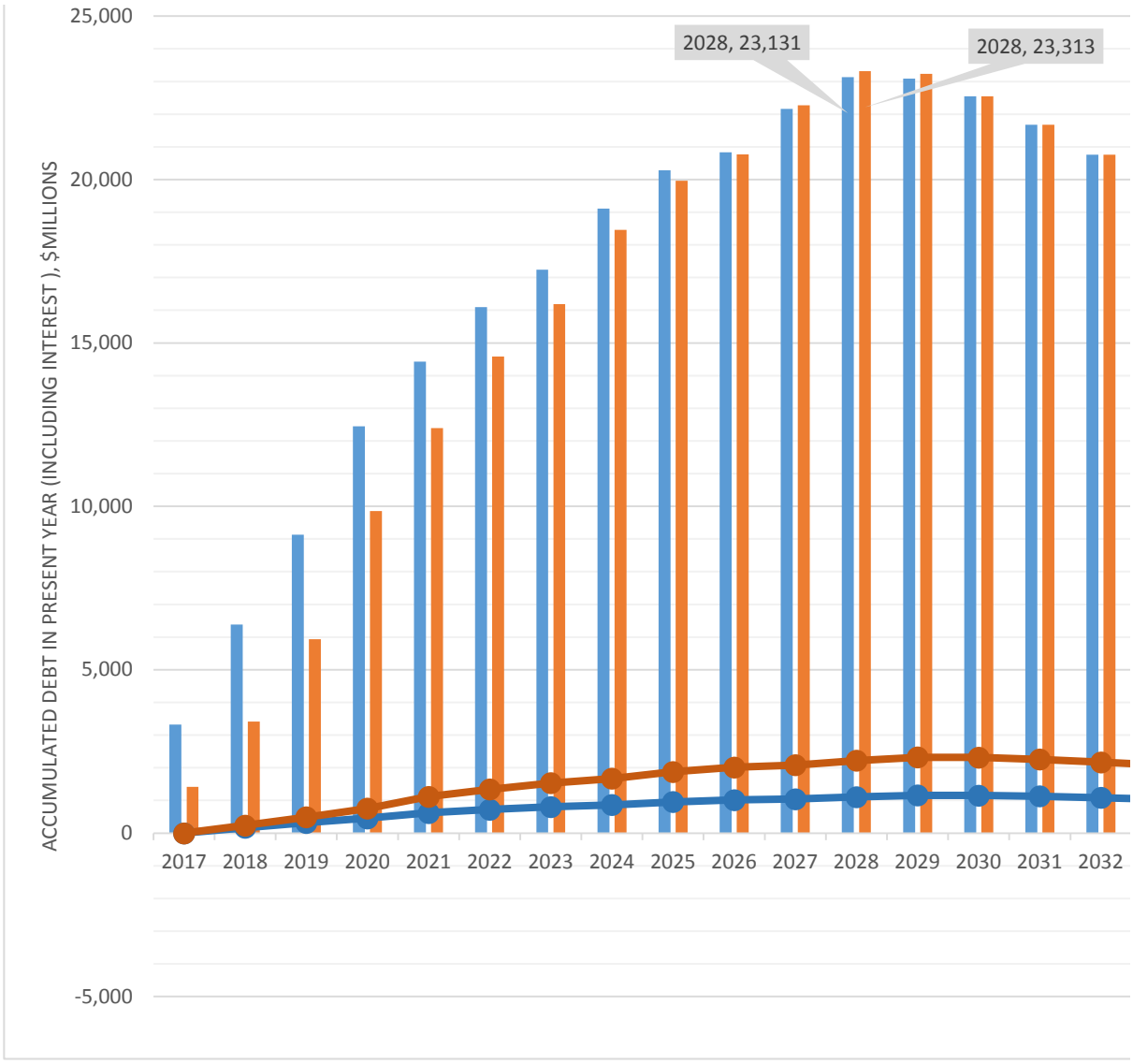


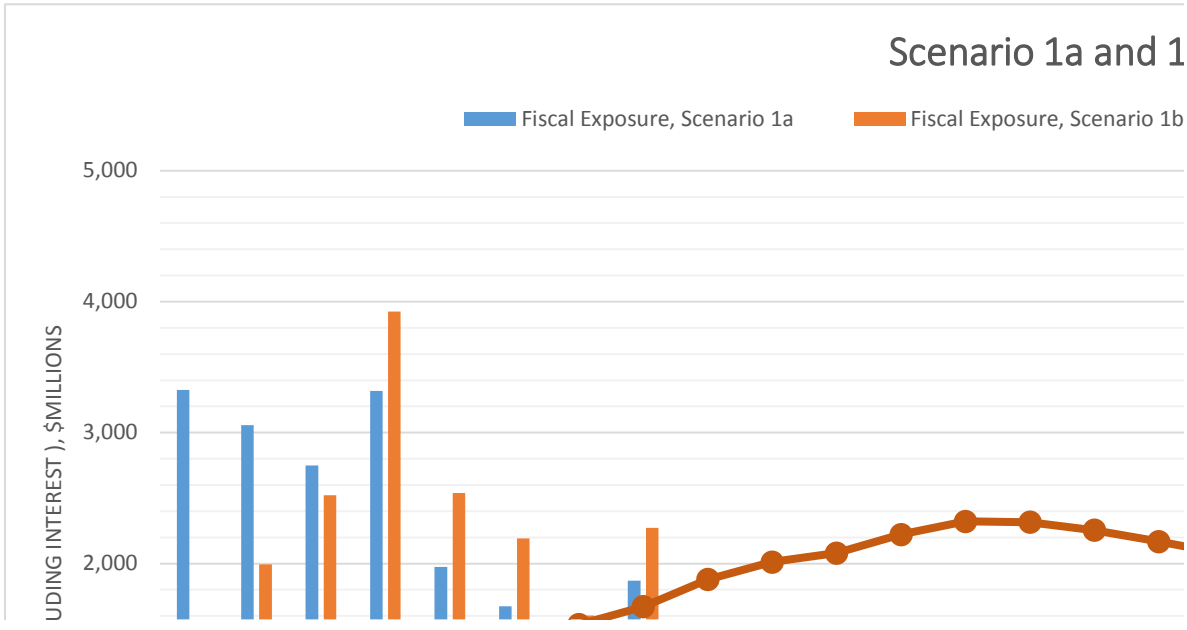
YEAR

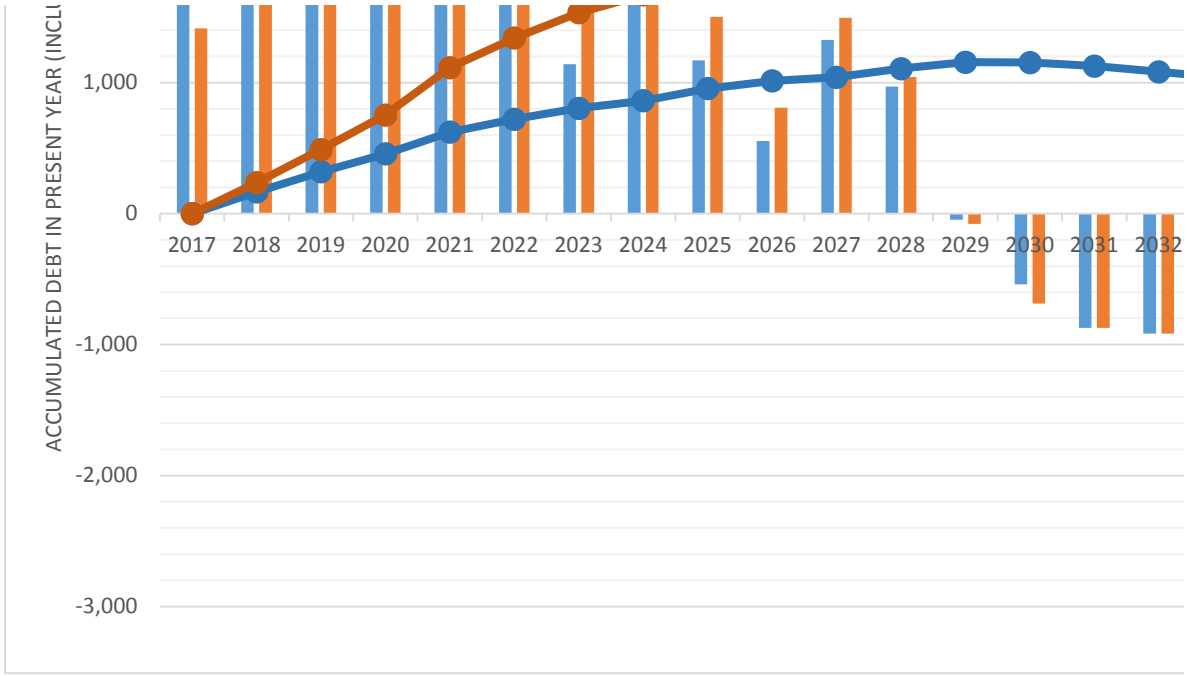
3 - 25 year and 30 year Financing Terms, at 5% interest rate

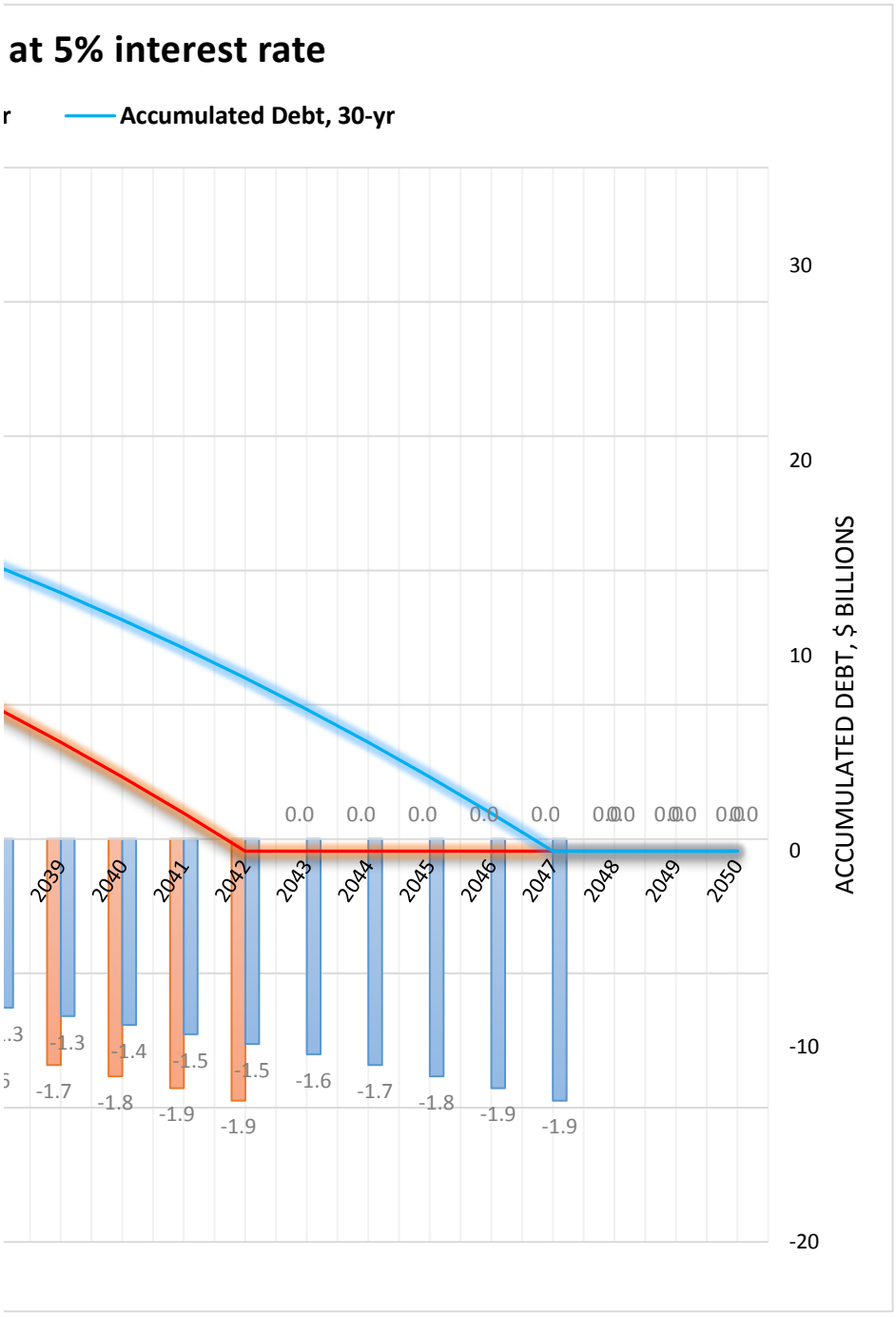





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

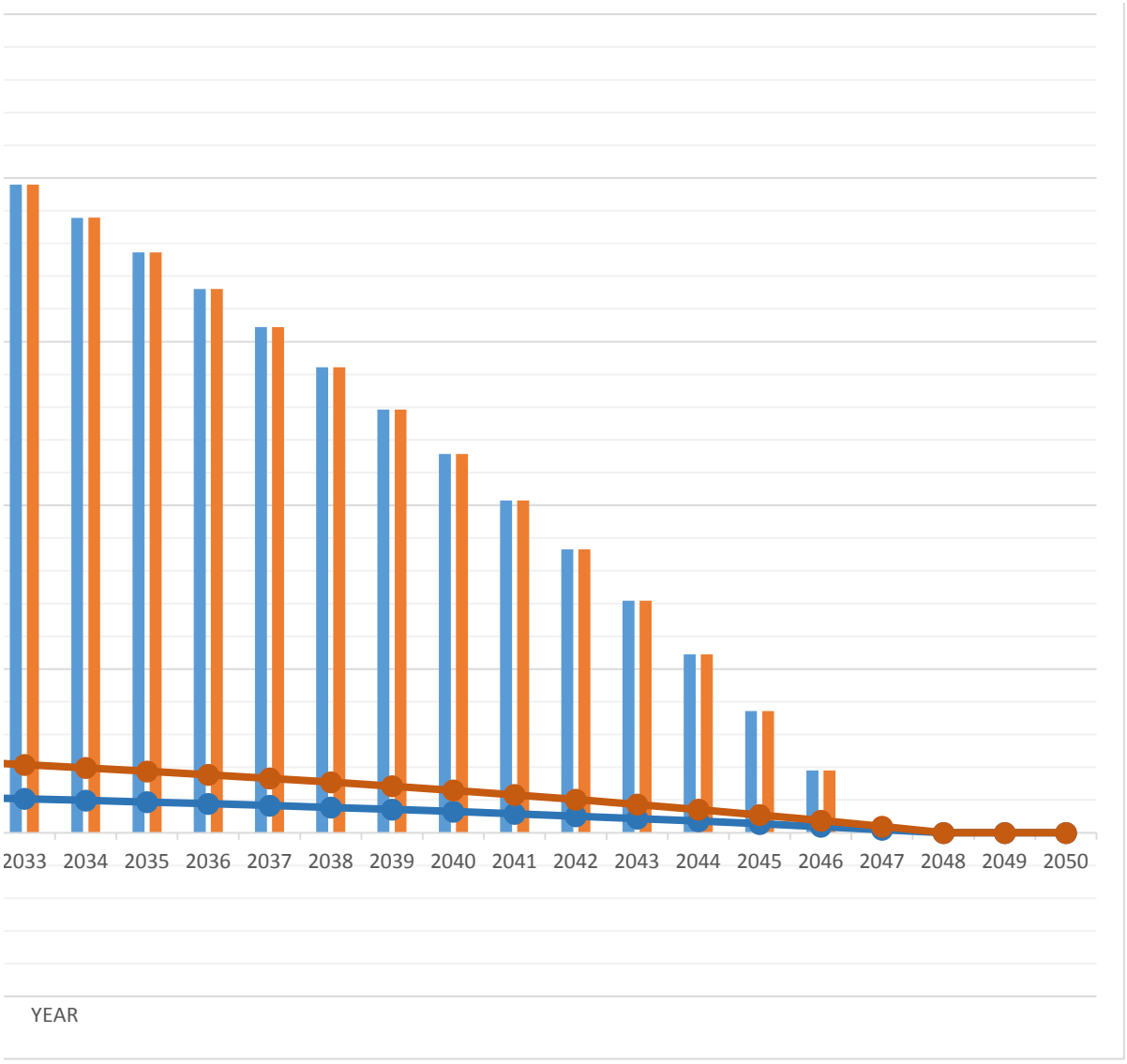

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

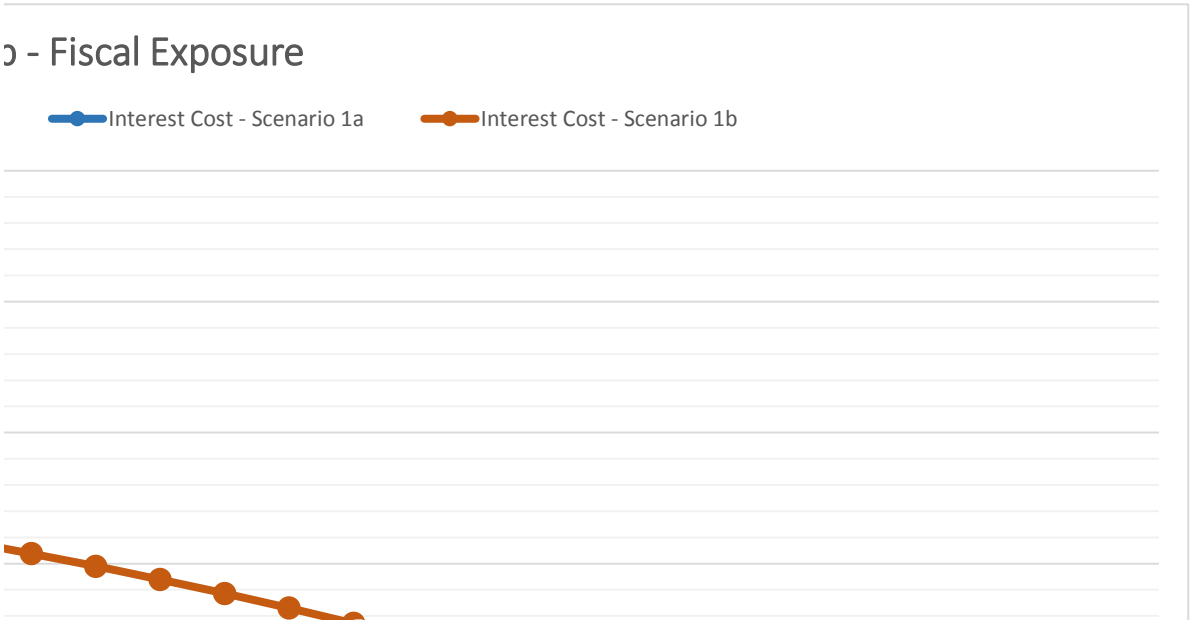

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

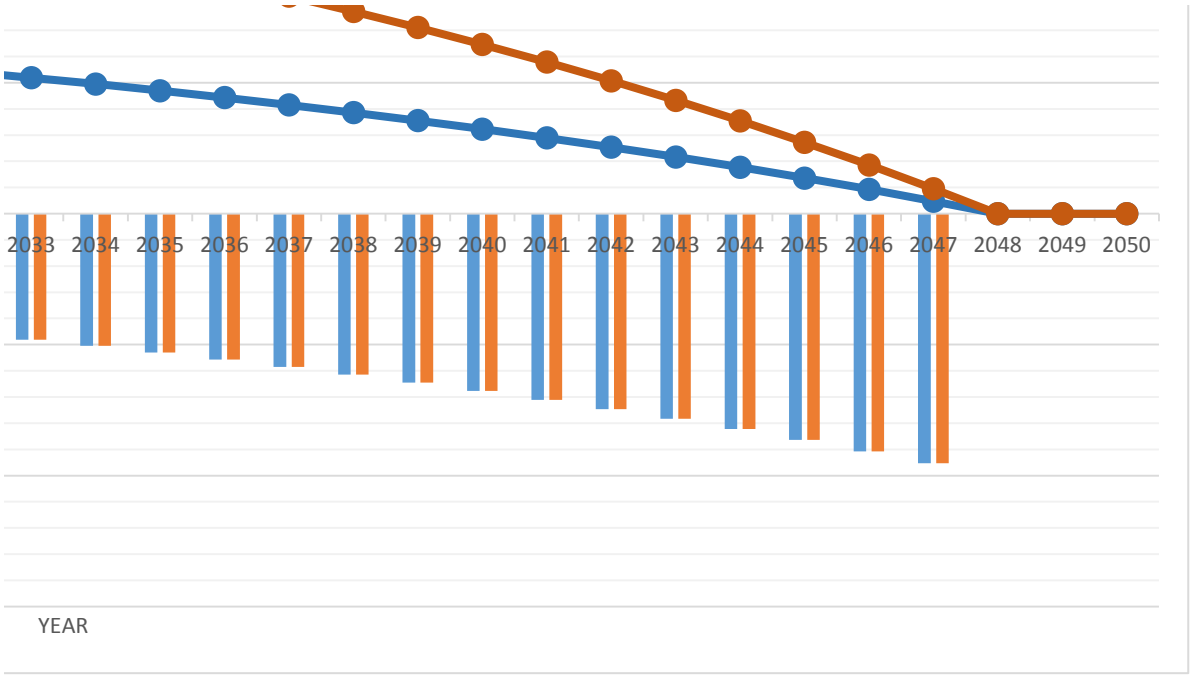


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

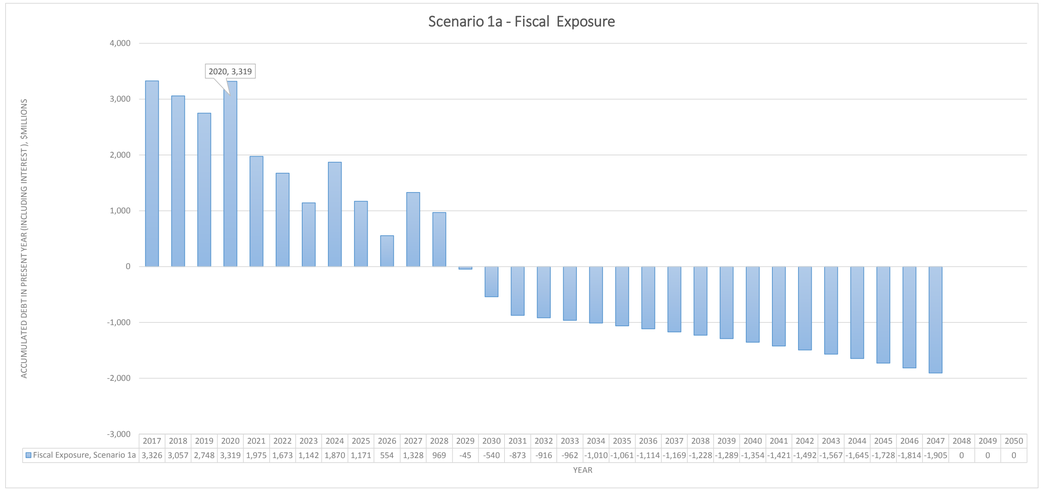
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

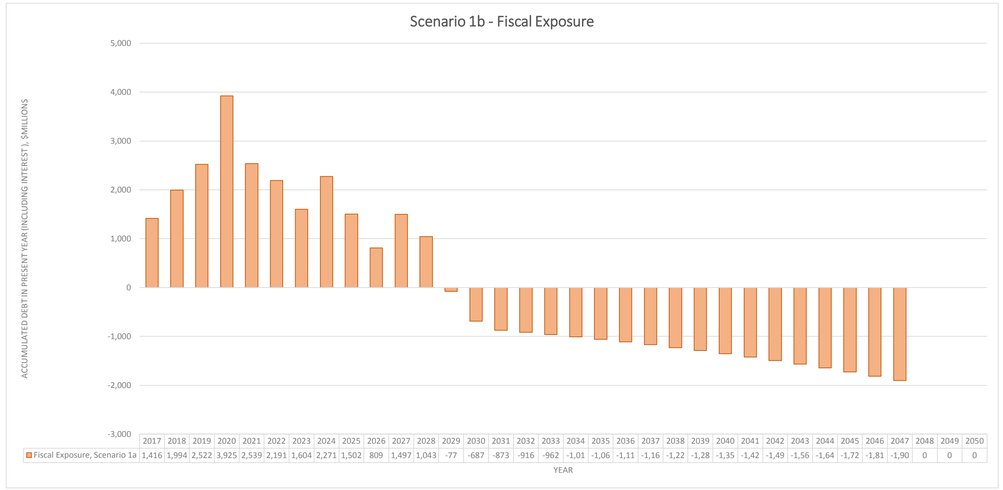
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

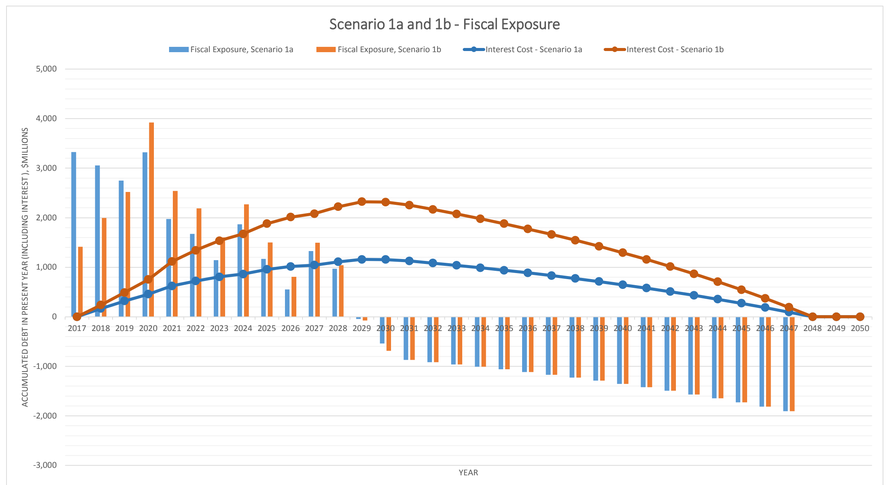
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

Notes:	Accounting treatment is to be determined.


Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0


Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0


Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

JK: Fixed the formula in the yellow highlighted cells. Pls. check. (SK: looks good to me)

	Tab
v16	Powerpoint_Export

Change Description

Added in trigger for later start in the year

Equal Monthly Debt Drawdown

		Month	Months Remai
Scenario Start Date	**July**	7	6

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	3,180	2,888
Annual Exposure2 with start on July 1st	*1,590*	*2,888*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	795	3,107
Start: July 1st	-	*2,312*

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	-	3,335
Start: July 1st	-	*2,484*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	1,168	1,765
Annual Exposure2 with start on July 1st	*584*	*1,765*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	292	1,609
Start: July 1st	-	*1,025*

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,449	2,040
Annual Exposure2 with start on July 1st	*725*	*2,040*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,597
Start: July 1st	-	*1,959*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 -	1,597 - 3,335

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	0	3335
Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**0**	**3575**
Total, B	362	1837

Proposed Program Total:	362 -	1,837 - 3,575

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,556	3,123	1,728	1,400
2,556	*3,123*	*1,728*	*1,400*

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646
2,805	*2,697*	*2,774*	*1,646*

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

ıking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
2,311	3,750	2,311	1,933
2,311	*3,750*	*2,311*	*1,933*

2018-19	2019-20	2020-21	2021-2022

1,901	2,671	3,391	2,217
1,901	*2,671*	*3,391*	*2,217*

2019	2020	2021	2022
2,581	4,016	2,598	2,241
2,581	*4,016*	*2,598*	*2,241*

2018-19	2019-20	2020-21	2021-2022
2,175	2,940	3,662	2,508
2,175	*2,940*	*3,662*	*2,508*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

/1

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052
2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

Equal Monthly Debt Drawdown

		Month	Months Remaining
Scenario Start Date	July	7	6

AS LONG AS >

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	3,180	2,888	2,556

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	795	3,107	2,805
Fiscal Exposure, 25%	199	777	701

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Annual Exposure[2]	3,404	3,128	2,812

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	851	3,335	3,049
Fiscal Exposure, 25%	213	834	762

Indicates year in which, similar to OPCD's exa
closest to 30%. As Fiscal 2016/17 is a partial y
month the GA deferral begins.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu
decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions	9%	14%	18%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	1,168	1,765	2,311

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	292	1,609	1,901
Fiscal Exposure, 25%	73	402	475

Scenario 1b - 30-yr amortization	2017	2018	2019
Annual Exposure[2]	1,449	2,040	2,581

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	362	1,597	2,175
Fiscal Exposure, 25%	91	399	544

Indicates year in which, similar to OPCD's exar closest to 30%.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 ar
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu on accounting treatment.

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]
Debt-Finance Global Adjustment Costs, Option 1a	213	834	762
Debt-Finance Global Adjustment Costs, Option 1b	91	399	544
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**213**	**1074**	**1065**
Total, B	91	639	847

Proposed Program Total:	91 - 213	639 - 1,074	847 - 1,065

($M)	2016-171	2017-181	2018-191
Debt-Finance Global Adjustment Costs, Option 1a	851	3335	3049
Debt-Finance Global Adjustment Costs, Option 1b	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**851**	**3575**	**3352**
Total, B	362	1837	2478

Proposed Program Total:	362 - 851	1,837 - 3,575	2,478 - 3,352

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6

7	July	7	
8	August	8	
9	September	9	
10	October	10	
11	November	11	
12	December	12	

30-year term	**2016-17**	**2017-18**	**2018-19**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335	2,175 - 3,049

ROWS HIDDEN

1	1 = Comparision Enabled

APRIL 1, 2017 25%

2020	2021	2022
3,123	1,728	1,400

2019-20	2020-21	2021-2022
2,697	2,774	1,646
674	693	412

2020	2021	2022
3,396	2,020	1,712

2019-20	2020-21	2021-2022
2,958	3,052	1,943
740	763	486

mple, the true cost of GA being deferred is
ear, exposure may be less subject to which

l $17-21 billion (at 3.5% interest rate), peaking in 2028.
$33-$36 million.

ıals per month based on month of the year. Actuals may also depend on

28%	17%	13%
2020	2021	2022
3,750	2,311	1,933

2019-20	2020-21	2021-2022
2,671	3,391	2,217
668	848	554

2020	2021	2022
4,016	2,598	2,241

2019-20	2020-21	2021-2022
2,940	3,662	2,508
735	915	627

mple, the true cost of GA being deferred is

ıd $17-21 billion (at 3.5% interest rate), peaking in 2028.
$118-$134 million.

ıals per month based on month of the year. Actuals may also depend on decision

2019-20[1]	2020-21[1]
740	763
735	915
279	323
60	60
18	18
1097	**1164**
1092	1316

1,092 - 1,097 1,316 - 1,164

2019-201	2020-211
2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453





2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

Scenario 1a, 25-yr - Debt Dra

Annual Interest Rate = 5.0%

Energy End of Year Debt Drawdown
CEFD Equal Monthly Debt Drawdown

Maximum Fiscal Exposure
- End of Year Debt Drawdown
- Equal Monthly Debt Drawdown

Maximum Accumulated Debt
- End of Year Debt Drawdown
- Equal Monthly Debt Drawdown

Scenario 1a, 25-yr

Debt Borrowing/Payment Schedule f
($ millions)

a
c = a*5%
b
d = a+b+c

Fiscal Exposure - End of Year Debt Dr

Scenario 1a, 25-yr

Debt Borrowing/Payment Schedule f
($ millions)

Fiscal Exposure - Equal Monthly Debt

Scenario 1a, 25-yr

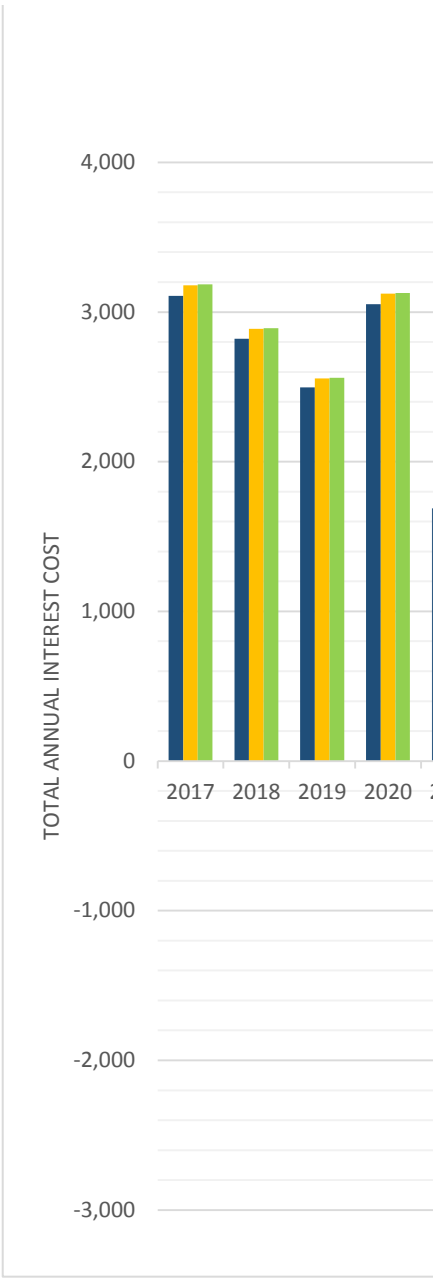
Debt Borrowing/Payment Schedule f
($ millions)

Fiscal Exposure - Bi-Annual Debt Drav

Scenario 1a, 25-yr

Debt Borrowing/Payment Schedule f
($ millions)

Fiscal Exposure - Average Debt Drawd


4,000
3,000
2,000
1,000
0
-1,000
-2,000
-3,000
TOTAL ANNUAL INTEREST COST
2017
2018
2019
2020

wdown Scenarios

	2017	2018	2019
Fiscal Exposure	3,107	2,822	2,498
Fiscal Exposure	3,180	2,888	2,556
	72	66	58

	Maximum Annual Interest Cost
3,107	964
3,180	952

Accumulated Debt, 25-yr
19,281
19,729

	26%	23%	19%
End of Year Debt Drawdown	**2017**	**2018**	**2019**

or Scenario 1a. Moderate / GA Financing 30-year financing

IESO GA cost forecast + extrapolation	12,095	11,835	11,552
Ratepayer GA Payment	8,988	9,168	9,351
GA Debt Requirement	3,107	2,667	2,201
Debt, Beginning of Year	0	3,107	5,930
Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown	*0*	*155*	*296*
Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201
Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427

awdown	3,107	2,822	2,498
	26%	23%	19%
Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**
	12		

or Scenario 1a. Moderate / GA Financing 30-year financing

IESO GA cost forecast + extrapolation	12,095	11,835	11,552
Ratepayer GA Payment	8,988	9,168	9,351
GA Debt Requirement	3,107	2,667	2,201
Debt, Beginning of Year	0	3,180	6,068
Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*
Additional GA Debt Drawdown	3,107	2,667	2,201
Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623

Drawdown	3,180	2,888	2,556
Monthly Drawdown	259	222	183
FV of Monthly Drawdown at 5%	3,180	2,729	2,252
Annual Interest Cost on New Drawdowns	72	62	51
Annual Interest Cost on Opening Balance	-	159	303
Total Annual Interest Cost	72	221	355

Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**
	2		
or Scenario 1a. Moderate / GA Financing 30-year financing			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552
Ratepayer GA Payment	8,988	9,168	9,351
GA Debt Requirement	3,107	2,667	2,201
Debt, Beginning of Year	0	3,146	6,004
Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*
Additional GA Debt Drawdown	3,107	2,667	2,201
Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533

wdown	3,146	2,858	2,529
Bi-Annual Drawdown	1,554	1,333	1,101
FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229
Annual Interest Cost on New Drawdowns	39	33	28
Annual Interest Cost on Opening Balance	-	157	300
Total Annual Interest Cost	39	191	328

Average Debt Drawdown	**2017**	**2018**	**2019**
or Scenario 1a. Moderate / GA Financing 30-year financing			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552
Ratepayer GA Payment	8,988	9,168	9,351
GA Debt Requirement	3,107	2,667	2,201
Debt, Beginning of Year	0	3,185	6,078
Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*
Additional GA Debt Drawdown	3,107	2,667	2,201
Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638

down	3,185	2,893	2,560


Scenario 1a, 25-yr - Debt Drawdown Scenarios
Fiscal Exposure - End of Year Debt Drawdown
Fiscal Exposure - Equal Monthly Debt Drawdown
Average Del
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
2033
2034
2035
2036
2037
2038
2039
2040
YEAR

2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
3,052	1,689	1,369	817	1,525	802	163	911	526	-516
3,123	1,728	1,400	836	1,560	821	167	932	539	-528
71	39	32	19	35	19	4	21	12	-12
	15,334								
22%	10%	7%							

2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919
9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399
2,630	1,115	710	90	757	-41	-721	19	-411	-1,480
8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281
421	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*
2,630	1,115	710	90	757	-41	-721	19	-411	-1,480
11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765
3,052	1,689	1,369	817	1,525	802	163	911	526	-516
22%	10%	7%							

2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919
9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399
2,630	1,115	710	90	757	-41	-721	19	-411	-1,480
8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729
492	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*
2,630	1,115	710	90	757	-41	-721	19	-411	-1,480
11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201

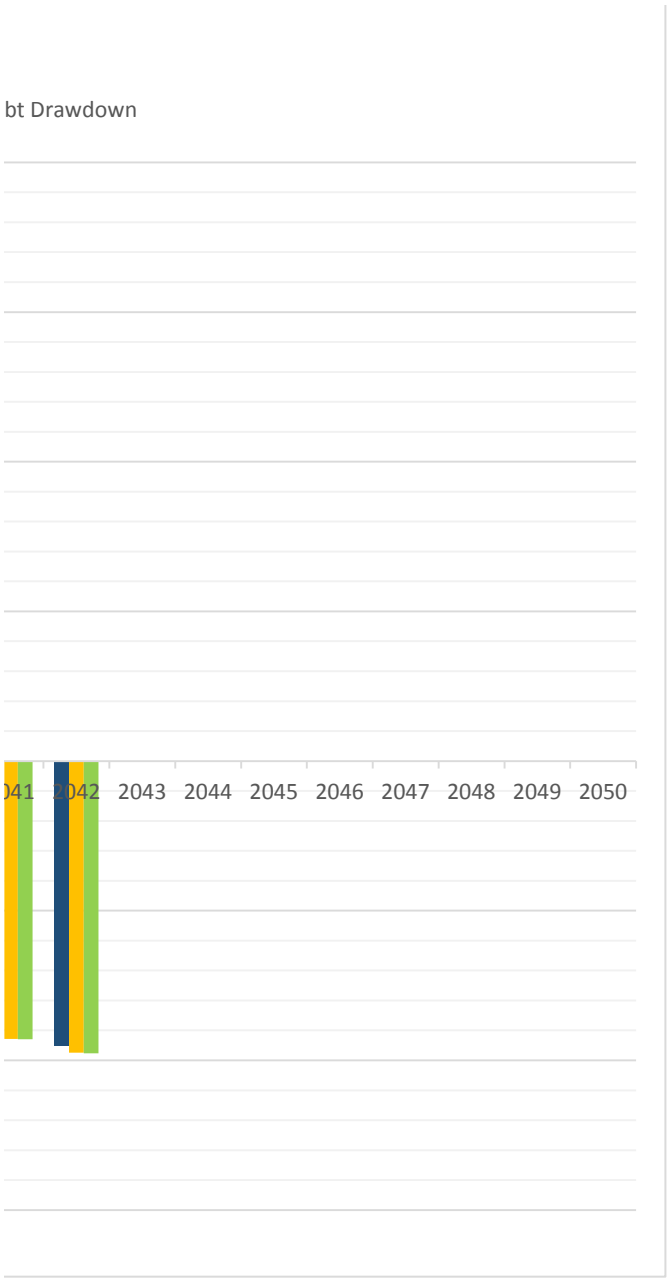
3,123	1,728	1,400	836	1,560	821	167	932	539	-528
219	93	59	8	63	(3)	(60)	2	(34)	(123)
2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)
61	26	17	2	18	(1)	(17)	0	(10)	(34)
431	587	674	744	786	864	905	913	960	986
492	613	690	746	803	863	888	913	950	952

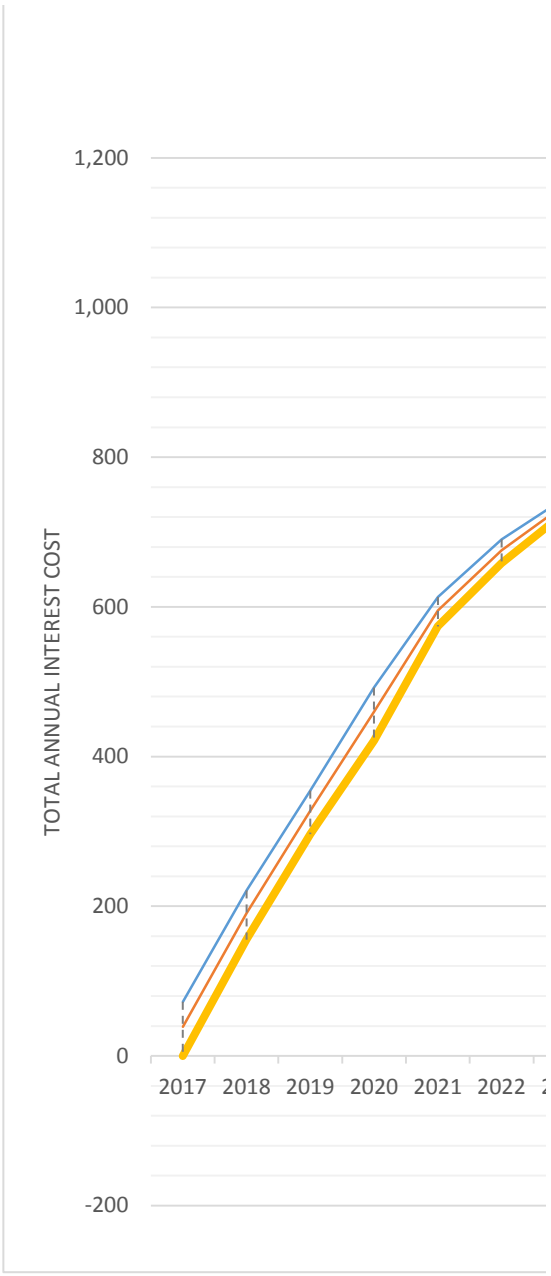
2020	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919
9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399
2,630	1,115	710	90	757	-41	-721	19	-411	-1,480
8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522
460	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*
2,630	1,115	710	90	757	-41	-721	19	-411	-1,480
11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000

3,090	1,710	1,386	827	1,544	812	165	923	533	-523
1,315	557	355	45	379	(21)	(360)	9	(206)	(740)
2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)
33	14	9	1	9	(1)	(9)	0	(5)	(19)
427	581	667	736	777	854	895	903	949	976
460	595	675	737	787	854	886	904	944	958

2020	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919
9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399
2,630	1,115	710	90	757	-41	-721	19	-411	-1,480
8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763
498	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*
2,630	1,115	710	90	757	-41	-721	19	-411	-1,480
11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234

3,128	1,731	1,403	838	1,563	822	167	934	539	-529


bt Drawdown
041
2042
2043
2044
2045
2046
2047
2048
2049
2050


1,200
1,000
800
600
400
200
0
-200
TOTAL ANNUAL INTEREST COST
2017
2018
2019
2020
2021
2022

2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645
-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-24	-26	-27	-29	-30	-31	-33	-35	-36	-38

2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543
11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543
-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000
18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092
938	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*
-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000
17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446
-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645

2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543
11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543
-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000
19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257
914	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*
-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000
18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573

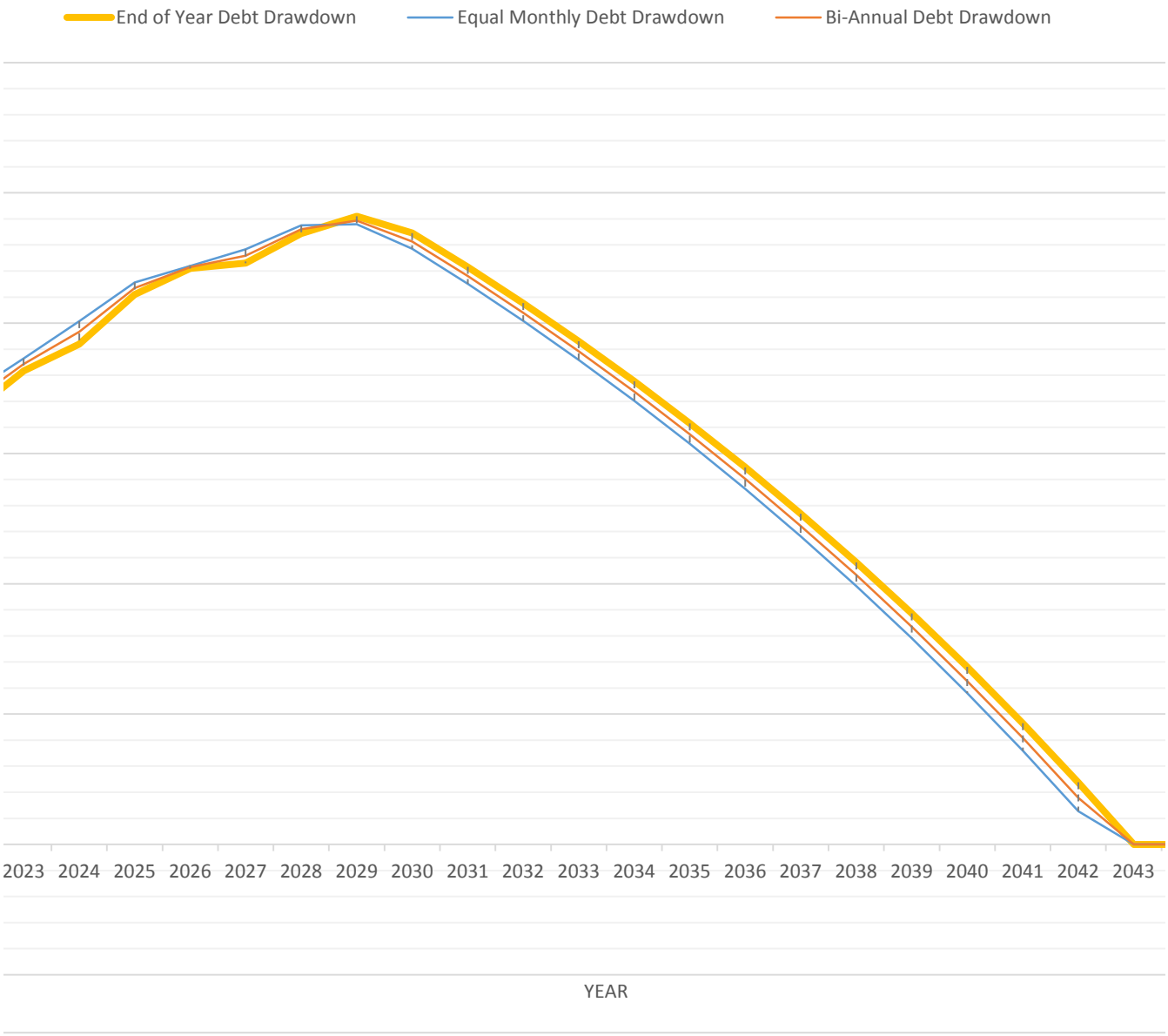
-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)
(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)
(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)
960	907	850	790	727	661	592	519	443	363
914	860	803	744	681	615	546	473	397	316

2030	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**
9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543
11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543
-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000
19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181
925	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*
-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000
17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515

-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666
(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)
(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)
(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)
950	897	841	782	720	654	586	514	438	359
925	872	816	757	695	629	561	489	413	334

2030	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**
9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543
11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543
-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000
19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269
912	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*
-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000
18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583

-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687


Scenario 1a - Total Interest Costs
End of Year Debt Drawdown
Equal Monthly Debt Drawdown
Bi-Annual Debt Drawdown
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
YEAR

2040	2041	2042	2043	2044	2045	2046	2047	2048	2049
-1,728	-1,814	-1,905	0	0	0	0	0	0	0
-1,768	-1,856	-1,949	0	0	0	0	0	0	0
-40	-42	-44	0	0	0	0	0	0	0

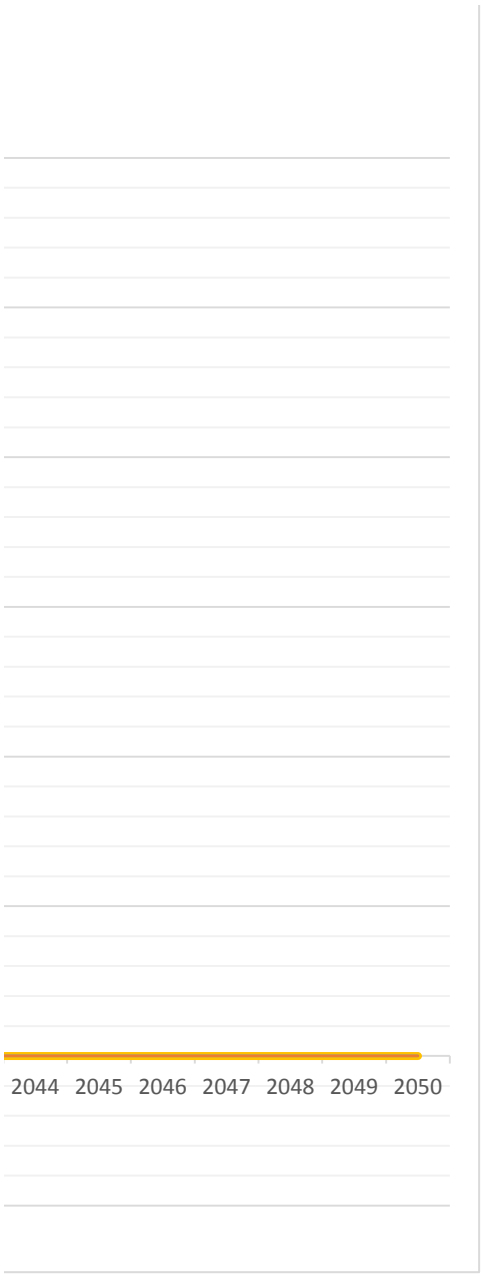
2040	2041	2042	2043	2044	2045	2046	2047	2048	2049
4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750
6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750
-2,000	-2,000	-2,000	0	0	0	0	0	0	0
5,446	3,719	1,905	0	0	0	0	0	0	0
272	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
-2,000	-2,000	-2,000	0	0	0	0	0	0	0
3,719	1,905	0	0	0	0	0	0	0	0
-1,728	-1,814	-1,905	0	0	0	0	0	0	0

2040	2041	2042	2043	2044	2045	2046	2047	2048	2049
4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750
6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750
-2,000	-2,000	-2,000	0	0	0	0	0	0	0
5,573	3,805	1,949	0	0	0	0	0	0	0
232	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
-2,000	-2,000	-2,000	0	0	0	0	0	0	0
3,805	1,949	0	0	0	0	0	0	0	0

-1,768	-1,856	-1,949	0	0	0	0	0	0	0
(167)	(167)	(167)	-	-	-	-	-	-	-
(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-
(46)	(46)	(46)	-	-	-	-	-	-	-
279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)
232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)

2040	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**
4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750
6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750
-2,000	-2,000	-2,000	0	0	0	0	0	0	0
5,515	3,765	1,929	0	0	0	0	0	0	0
251	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
-2,000	-2,000	-2,000	0	0	0	0	0	0	0
3,765	1,929	0	0	0	0	0	0	0	0
-1,749	-1,837	-1,929	0	0	0	0	0	0	0
(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-
(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-
(25)	(25)	(25)	-	-	-	-	-	-	-
276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)
251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)

2040	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**
4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750
6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750
-2,000	-2,000	-2,000	0	0	0	0	0	0	0
5,583	3,812	1,952	0	0	0	0	0	0	0
229	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
-2,000	-2,000	-2,000	0	0	0	0	0	0	0
3,812	1,952	0	0	0	0	0	0	0	0
-1,771	-1,859	-1,952	0	0	0	0	0	0	0


2044
2045
2046
2047
2048
2049
2050

2050	
0	
0	
0	0

2050	Total
2,616	
2,616	
0	
0	
0	15,334
0	
0	
0	

2050	Total
2,616	
2,616	
0	
0	
0	15,334
0	
0	

0	
-	
-	
-	
(0)	
(0)	

2050	Total
2,616	
2,616	
0	
0	
0	15,334
0	
0	
0	
-	
-	
-	
(0)	
(0)	

2050	Total
2,616	
2,616	
0	
0	
0	15,334
0	
0	
0	

Scenario 1a, 25-yr - Debt Dra

Annual Interest Rate = 5.0%

Energy End of Year Debt Drawdown
CEFD Equal Monthly Debt Drawdown

Maximum Fiscal Exposure
- End of Year Debt Drawdown
- Equal Monthly Debt Drawdown

Maximum Accumulated Debt
- End of Year Debt Drawdown
- Equal Monthly Debt Drawdown

Scenario 1a, 25-yr

Debt Borrowing/Payment Schedule f
($ millions)

a
c = a*5%
b
d = a+b+c

Fiscal Exposure - End of Year Debt Dr

Scenario 1a, 25-yr

Debt Borrowing/Payment Schedule f
($ millions)

Fiscal Exposure - Equal Monthly Debt

Scenario 1a, 25-yr

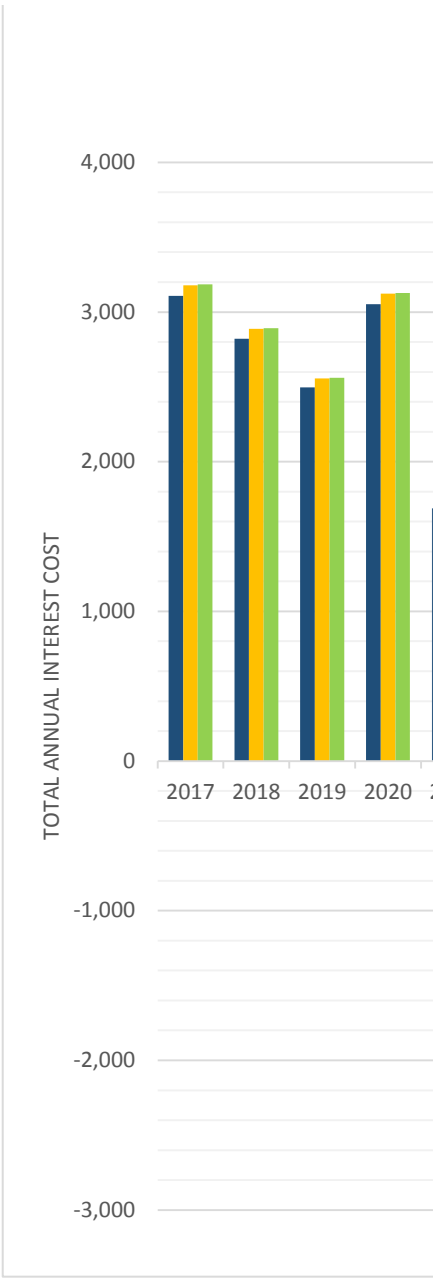
Debt Borrowing/Payment Schedule f
($ millions)

Fiscal Exposure - Bi-Annual Debt Drav

Scenario 1a, 25-yr

Debt Borrowing/Payment Schedule f
($ millions)

Fiscal Exposure - Average Debt Drawd


4,000
3,000
2,000
1,000
0
-1,000
-2,000
-3,000
TOTAL ANNUAL INTEREST COST
2017
2018
2019
2020

wdown Scenarios

	2017	2018	2019
Fiscal Exposure	3,107	2,822	2,498
Fiscal Exposure	3,180	2,888	2,556
	72	66	58

	Maximum Annual Interest Cost
3,107	964
3,180	952

Accumulated Debt, 25-yr
19,281
19,729

	26%	23%	19%
End of Year Debt Drawdown	**2017**	**2018**	**2019**

or Scenario 1a. Moderate / GA Financing 30-year financing

IESO GA cost forecast + extrapolation	12,095	11,835	11,552
Ratepayer GA Payment	8,988	9,168	9,351
GA Debt Requirement	3,107	2,667	2,201
Debt, Beginning of Year	0	3,107	5,930
Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown	*0*	*155*	*296*
Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201
Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427

awdown	3,107	2,822	2,498
	26%	23%	19%
Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**
	12		

or Scenario 1a. Moderate / GA Financing 30-year financing

IESO GA cost forecast + extrapolation	12,095	11,835	11,552
Ratepayer GA Payment	8,988	9,168	9,351
GA Debt Requirement	3,107	2,667	2,201
Debt, Beginning of Year	0	3,180	6,068
Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*
Additional GA Debt Drawdown	3,107	2,667	2,201
Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623

Drawdown	3,180	2,888	2,556
Monthly Drawdown	259	222	183
FV of Monthly Drawdown at 5%	3,180	2,729	2,252
Annual Interest Cost on New Drawdowns	72	62	51
Annual Interest Cost on Opening Balance	-	159	303
Total Annual Interest Cost	72	221	355

Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**
	2		
or Scenario 1a. Moderate / GA Financing 30-year financing			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552
Ratepayer GA Payment	8,988	9,168	9,351
GA Debt Requirement	3,107	2,667	2,201
Debt, Beginning of Year	0	3,146	6,004
Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*
Additional GA Debt Drawdown	3,107	2,667	2,201
Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533

wdown	3,146	2,858	2,529
Bi-Annual Drawdown	1,554	1,333	1,101
FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229
Annual Interest Cost on New Drawdowns	39	33	28
Annual Interest Cost on Opening Balance	-	157	300
Total Annual Interest Cost	39	191	328

Average Debt Drawdown	**2017**	**2018**	**2019**
or Scenario 1a. Moderate / GA Financing 30-year financing			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552
Ratepayer GA Payment	8,988	9,168	9,351
GA Debt Requirement	3,107	2,667	2,201
Debt, Beginning of Year	0	3,185	6,078
Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*
Additional GA Debt Drawdown	3,107	2,667	2,201
Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638

down	3,185	2,893	2,560


Scenario 1a, 25-yr - Debt Drawdown Scenarios
Fiscal Exposure - End of Year Debt Drawdown
Fiscal Exposure - Equal Monthly Debt Drawdown
Average Del
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
2033
2034
2035
2036
2037
2038
2039
2040
YEAR

2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
3,052	1,689	1,369	817	1,525	802	163	911	526	-516
3,123	1,728	1,400	836	1,560	821	167	932	539	-528
71	39	32	19	35	19	4	21	12	-12
	15,334								
22%	10%	7%							

2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919
9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399
2,630	1,115	710	90	757	-41	-721	19	-411	-1,480
8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281
421	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*
2,630	1,115	710	90	757	-41	-721	19	-411	-1,480
11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765
3,052	1,689	1,369	817	1,525	802	163	911	526	-516
22%	10%	7%							

2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919
9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399
2,630	1,115	710	90	757	-41	-721	19	-411	-1,480
8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729
492	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*
2,630	1,115	710	90	757	-41	-721	19	-411	-1,480
11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201

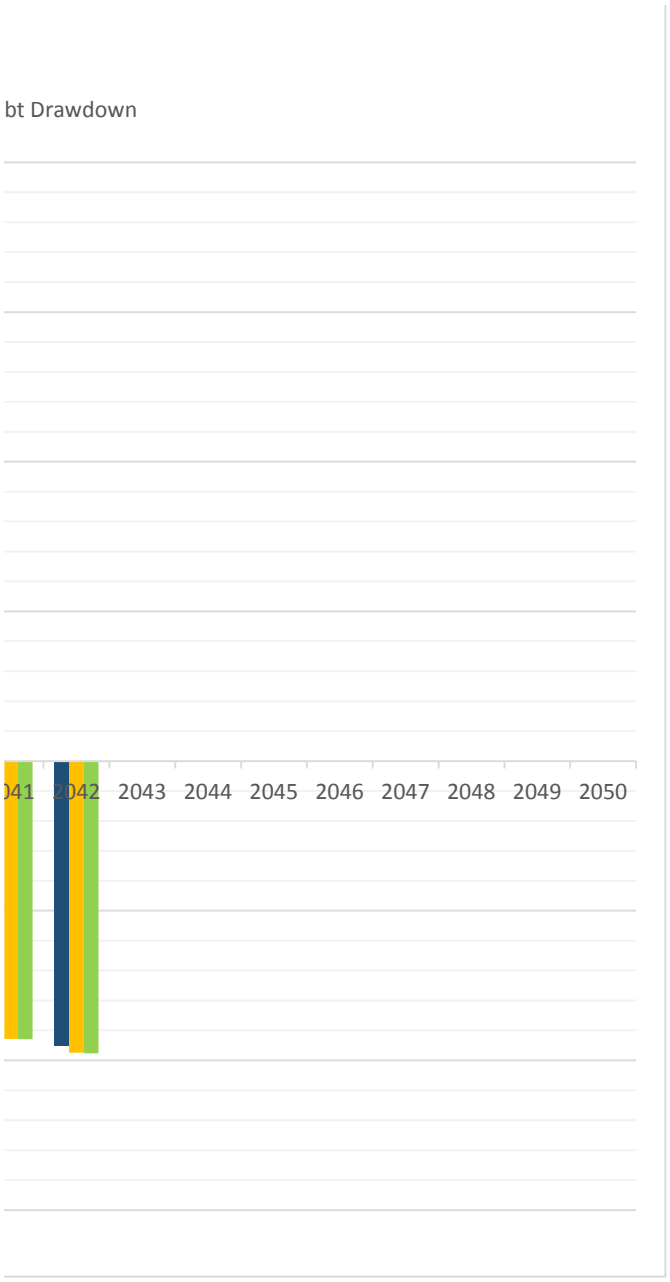
3,123	1,728	1,400	836	1,560	821	167	932	539	-528
219	93	59	8	63	(3)	(60)	2	(34)	(123)
2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)
61	26	17	2	18	(1)	(17)	0	(10)	(34)
431	587	674	744	786	864	905	913	960	986
492	613	690	746	803	863	888	913	950	952

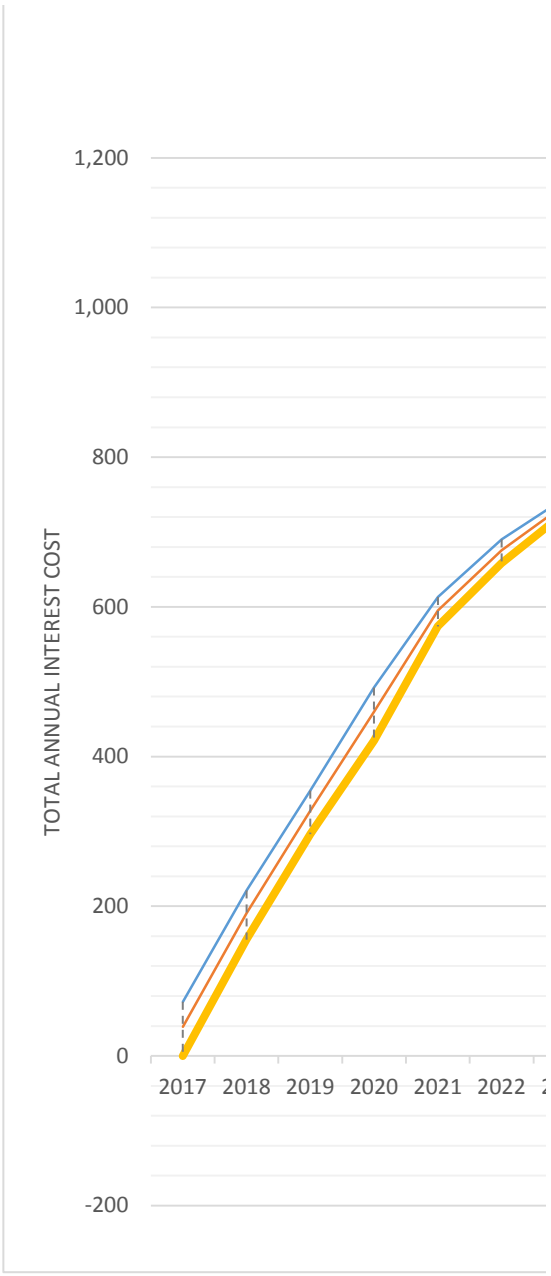
2020	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919
9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399
2,630	1,115	710	90	757	-41	-721	19	-411	-1,480
8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522
460	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*
2,630	1,115	710	90	757	-41	-721	19	-411	-1,480
11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000

3,090	1,710	1,386	827	1,544	812	165	923	533	-523
1,315	557	355	45	379	(21)	(360)	9	(206)	(740)
2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)
33	14	9	1	9	(1)	(9)	0	(5)	(19)
427	581	667	736	777	854	895	903	949	976
460	595	675	737	787	854	886	904	944	958

2020	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919
9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399
2,630	1,115	710	90	757	-41	-721	19	-411	-1,480
8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763
498	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*
2,630	1,115	710	90	757	-41	-721	19	-411	-1,480
11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234

3,128	1,731	1,403	838	1,563	822	167	934	539	-529


bt Drawdown
041
2042
2043
2044
2045
2046
2047
2048
2049
2050


1,200
1,000
800
600
400
200
0
-200
TOTAL ANNUAL INTEREST COST
2017
2018
2019
2020
2021
2022

2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645
-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-24	-26	-27	-29	-30	-31	-33	-35	-36	-38

2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543
11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543
-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000
18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092
938	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*
-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000
17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446
-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645

2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543
11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543
-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000
19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257
914	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*
-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000
18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573

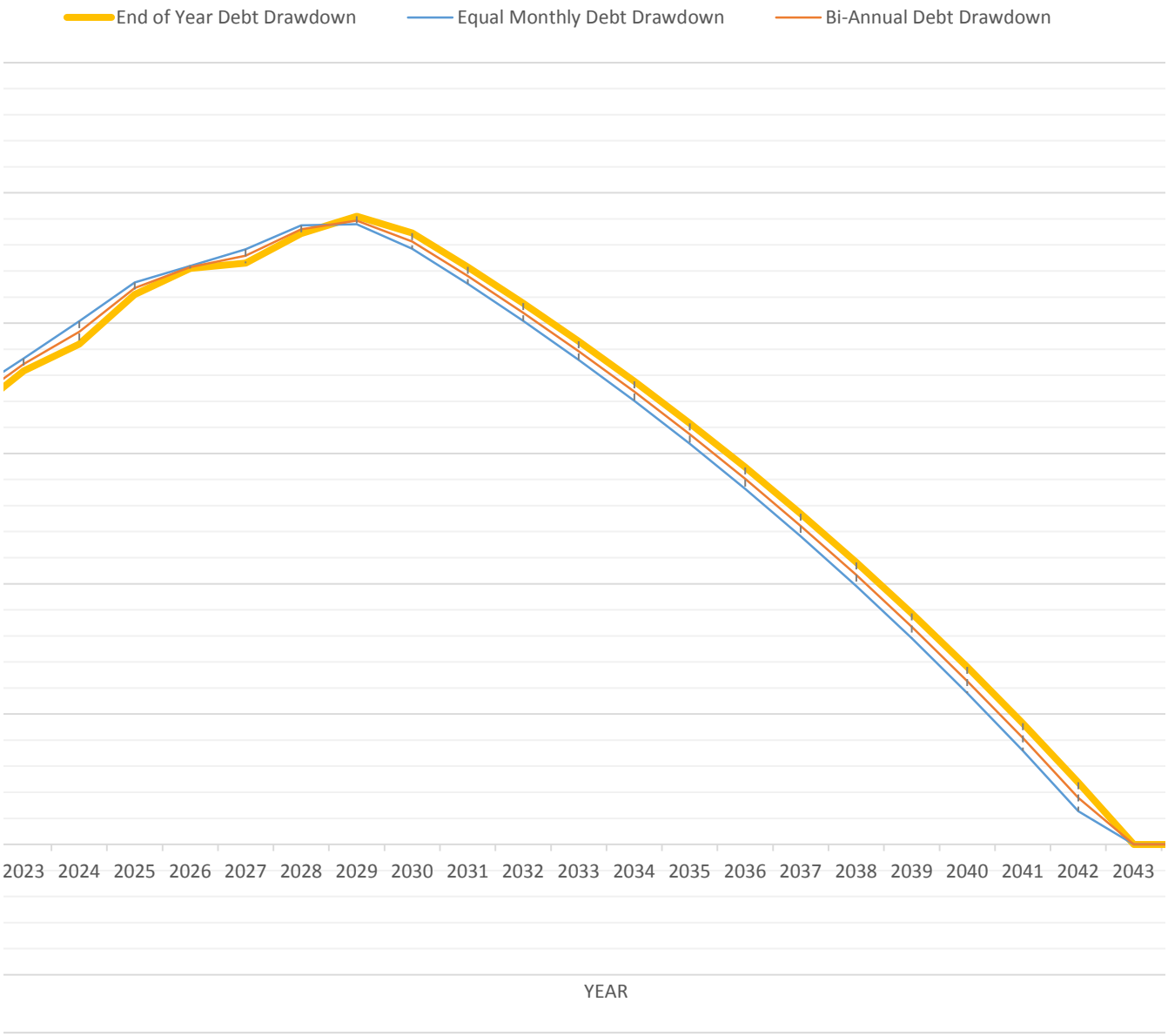
-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)
(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)
(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)
960	907	850	790	727	661	592	519	443	363
914	860	803	744	681	615	546	473	397	316

2030	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**
9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543
11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543
-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000
19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181
925	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*
-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000
17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515

-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666
(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)
(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)
(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)
950	897	841	782	720	654	586	514	438	359
925	872	816	757	695	629	561	489	413	334

2030	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**
9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543
11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543
-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000
19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269
912	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*
-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000
18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583

-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687


Scenario 1a - Total Interest Costs
End of Year Debt Drawdown
Equal Monthly Debt Drawdown
Bi-Annual Debt Drawdown
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
YEAR

2040	2041	2042	2043	2044	2045	2046	2047	2048	2049
-1,728	-1,814	-1,905	0	0	0	0	0	0	0
-1,768	-1,856	-1,949	0	0	0	0	0	0	0
-40	-42	-44	0	0	0	0	0	0	0

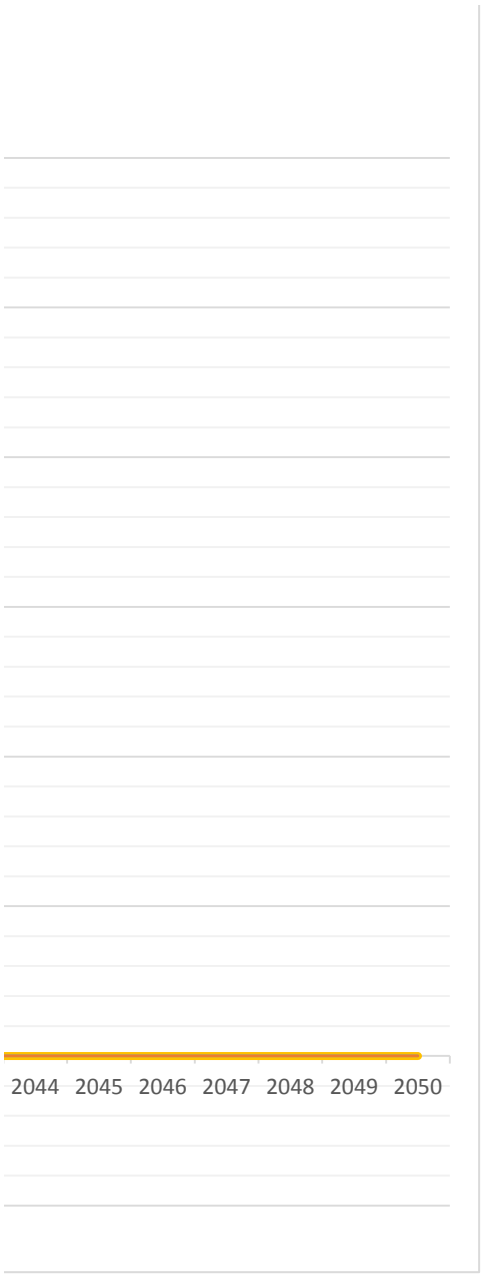
2040	2041	2042	2043	2044	2045	2046	2047	2048	2049
4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750
6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750
-2,000	-2,000	-2,000	0	0	0	0	0	0	0
5,446	3,719	1,905	0	0	0	0	0	0	0
272	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
-2,000	-2,000	-2,000	0	0	0	0	0	0	0
3,719	1,905	0	0	0	0	0	0	0	0
-1,728	-1,814	-1,905	0	0	0	0	0	0	0

2040	2041	2042	2043	2044	2045	2046	2047	2048	2049
4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750
6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750
-2,000	-2,000	-2,000	0	0	0	0	0	0	0
5,573	3,805	1,949	0	0	0	0	0	0	0
232	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
-2,000	-2,000	-2,000	0	0	0	0	0	0	0
3,805	1,949	0	0	0	0	0	0	0	0

-1,768	-1,856	-1,949	0	0	0	0	0	0	0
(167)	(167)	(167)	-	-	-	-	-	-	-
(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-
(46)	(46)	(46)	-	-	-	-	-	-	-
279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)
232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)

2040	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**
4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750
6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750
-2,000	-2,000	-2,000	0	0	0	0	0	0	0
5,515	3,765	1,929	0	0	0	0	0	0	0
251	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
-2,000	-2,000	-2,000	0	0	0	0	0	0	0
3,765	1,929	0	0	0	0	0	0	0	0
-1,749	-1,837	-1,929	0	0	0	0	0	0	0
(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-
(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-
(25)	(25)	(25)	-	-	-	-	-	-	-
276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)
251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)

2040	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**
4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750
6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750
-2,000	-2,000	-2,000	0	0	0	0	0	0	0
5,583	3,812	1,952	0	0	0	0	0	0	0
229	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
-2,000	-2,000	-2,000	0	0	0	0	0	0	0
3,812	1,952	0	0	0	0	0	0	0	0
-1,771	-1,859	-1,952	0	0	0	0	0	0	0


2044
2045
2046
2047
2048
2049
2050

2050	
0	
0	
0	0

2050	Total
2,616	
2,616	
0	
0	
0	15,334
0	
0	
0	

2050	Total
2,616	
2,616	
0	
0	
0	15,334
0	
0	

0	
-	
-	
-	
(0)	
(0)	

2050	Total
2,616	
2,616	
0	
0	
0	15,334
0	
0	
0	
-	
-	
-	
(0)	
(0)	

2050	Total
2,616	
2,616	
0	
0	
0	15,334
0	
0	
0	

Scenario 1a, 25-yr - Debt Dra

Annual Interest Rate = 5.0%

Energy End of Year Debt Drawdown
CEFD Equal Monthly Debt Drawdown

Maximum Fiscal Exposure
- End of Year Debt Drawdown
- Equal Monthly Debt Drawdown

Maximum Accumulated Debt
- End of Year Debt Drawdown
- Equal Monthly Debt Drawdown

Scenario 1a, 25-yr

Debt Borrowing/Payment Schedule f
($ millions)

a
c = a*5%
b
d = a+b+c

Fiscal Exposure - End of Year Debt Dr

Scenario 1a, 25-yr

Debt Borrowing/Payment Schedule f
($ millions)

Fiscal Exposure - Equal Monthly Debt

Scenario 1a, 25-yr

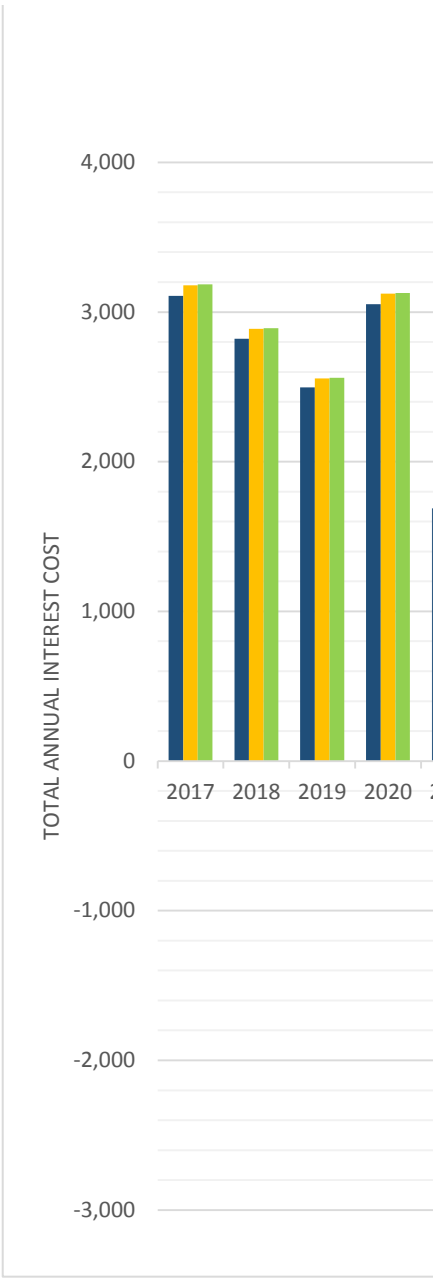
Debt Borrowing/Payment Schedule f
($ millions)

Fiscal Exposure - Bi-Annual Debt Drav

Scenario 1a, 25-yr

Debt Borrowing/Payment Schedule f
($ millions)

Fiscal Exposure - Average Debt Drawd


4,000
3,000
2,000
1,000
0
-1,000
-2,000
-3,000
TOTAL ANNUAL INTEREST COST
2017
2018
2019
2020

wdown Scenarios

	2017	2018	2019
Fiscal Exposure	3,107	2,822	2,498
Fiscal Exposure	3,180	2,888	2,556
	72	66	58

	Maximum Annual Interest Cost
3,107	964
3,180	952

Accumulated Debt, 25-yr
19,281
19,729

	26%	23%	19%
End of Year Debt Drawdown	**2017**	**2018**	**2019**

or Scenario 1a. Moderate / GA Financing 30-year financing

IESO GA cost forecast + extrapolation	12,095	11,835	11,552
Ratepayer GA Payment	8,988	9,168	9,351
GA Debt Requirement	3,107	2,667	2,201
Debt, Beginning of Year	0	3,107	5,930
Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown	*0*	*155*	*296*
Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201
Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427

awdown	3,107	2,822	2,498
	26%	23%	19%
Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**
	12		

or Scenario 1a. Moderate / GA Financing 30-year financing

IESO GA cost forecast + extrapolation	12,095	11,835	11,552
Ratepayer GA Payment	8,988	9,168	9,351
GA Debt Requirement	3,107	2,667	2,201
Debt, Beginning of Year	0	3,180	6,068
Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*
Additional GA Debt Drawdown	3,107	2,667	2,201
Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623

Drawdown	3,180	2,888	2,556
Monthly Drawdown	259	222	183
FV of Monthly Drawdown at 5%	3,180	2,729	2,252
Annual Interest Cost on New Drawdowns	72	62	51
Annual Interest Cost on Opening Balance	-	159	303
Total Annual Interest Cost	72	221	355

Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**
	2		
or Scenario 1a. Moderate / GA Financing 30-year financing			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552
Ratepayer GA Payment	8,988	9,168	9,351
GA Debt Requirement	3,107	2,667	2,201
Debt, Beginning of Year	0	3,146	6,004
Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*
Additional GA Debt Drawdown	3,107	2,667	2,201
Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533

wdown	3,146	2,858	2,529
Bi-Annual Drawdown	1,554	1,333	1,101
FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229
Annual Interest Cost on New Drawdowns	39	33	28
Annual Interest Cost on Opening Balance	-	157	300
Total Annual Interest Cost	39	191	328

Average Debt Drawdown	**2017**	**2018**	**2019**
or Scenario 1a. Moderate / GA Financing 30-year financing			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552
Ratepayer GA Payment	8,988	9,168	9,351
GA Debt Requirement	3,107	2,667	2,201
Debt, Beginning of Year	0	3,185	6,078
Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*
Additional GA Debt Drawdown	3,107	2,667	2,201
Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638

down	3,185	2,893	2,560


Scenario 1a, 25-yr - Debt Drawdown Scenarios
Fiscal Exposure - End of Year Debt Drawdown
Fiscal Exposure - Equal Monthly Debt Drawdown
Average Del
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
2033
2034
2035
2036
2037
2038
2039
2040
YEAR

2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
3,052	1,689	1,369	817	1,525	802	163	911	526	-516
3,123	1,728	1,400	836	1,560	821	167	932	539	-528
71	39	32	19	35	19	4	21	12	-12
	15,334								
22%	10%	7%							

2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919
9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399
2,630	1,115	710	90	757	-41	-721	19	-411	-1,480
8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281
421	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*
2,630	1,115	710	90	757	-41	-721	19	-411	-1,480
11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765
3,052	1,689	1,369	817	1,525	802	163	911	526	-516
22%	10%	7%							

2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919
9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399
2,630	1,115	710	90	757	-41	-721	19	-411	-1,480
8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729
492	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*
2,630	1,115	710	90	757	-41	-721	19	-411	-1,480
11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201

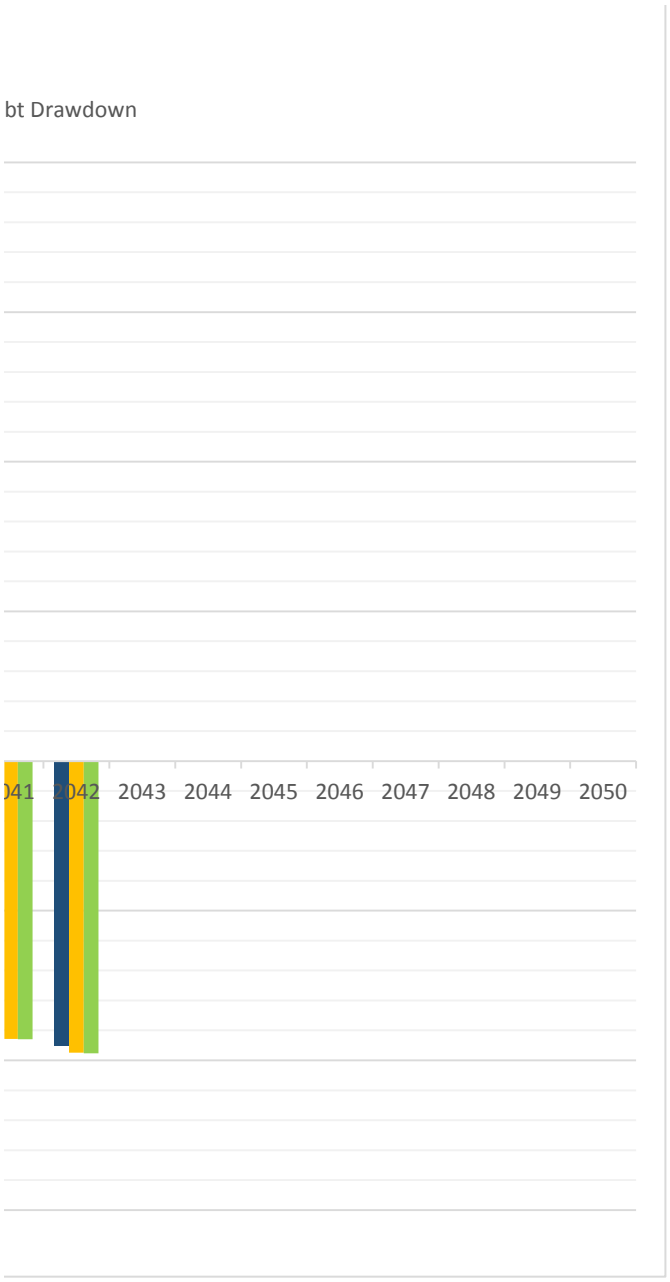
3,123	1,728	1,400	836	1,560	821	167	932	539	-528
219	93	59	8	63	(3)	(60)	2	(34)	(123)
2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)
61	26	17	2	18	(1)	(17)	0	(10)	(34)
431	587	674	744	786	864	905	913	960	986
492	613	690	746	803	863	888	913	950	952

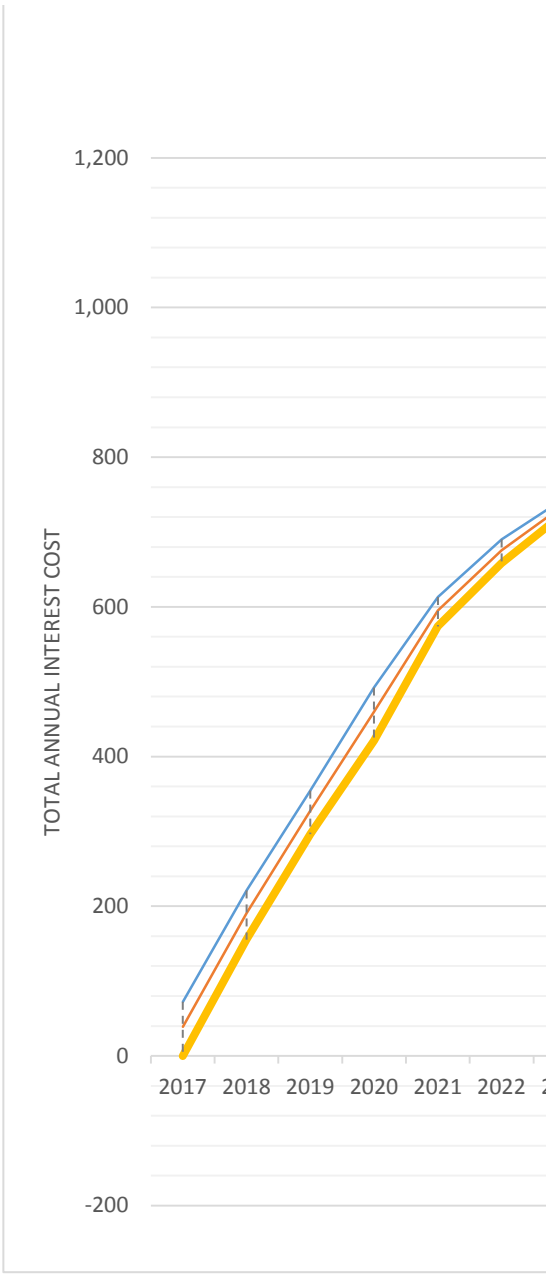
2020	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919
9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399
2,630	1,115	710	90	757	-41	-721	19	-411	-1,480
8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522
460	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*
2,630	1,115	710	90	757	-41	-721	19	-411	-1,480
11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000

3,090	1,710	1,386	827	1,544	812	165	923	533	-523
1,315	557	355	45	379	(21)	(360)	9	(206)	(740)
2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)
33	14	9	1	9	(1)	(9)	0	(5)	(19)
427	581	667	736	777	854	895	903	949	976
460	595	675	737	787	854	886	904	944	958

2020	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919
9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399
2,630	1,115	710	90	757	-41	-721	19	-411	-1,480
8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763
498	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*
2,630	1,115	710	90	757	-41	-721	19	-411	-1,480
11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234

3,128	1,731	1,403	838	1,563	822	167	934	539	-529


bt Drawdown
041
2042
2043
2044
2045
2046
2047
2048
2049
2050


1,200
1,000
800
600
400
200
0
-200
TOTAL ANNUAL INTEREST COST
2017
2018
2019
2020
2021
2022

2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645
-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-24	-26	-27	-29	-30	-31	-33	-35	-36	-38

2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543
11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543
-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000
18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092
938	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*
-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000
17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446
-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645

2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543
11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543
-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000
19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257
914	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*
-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000
18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573

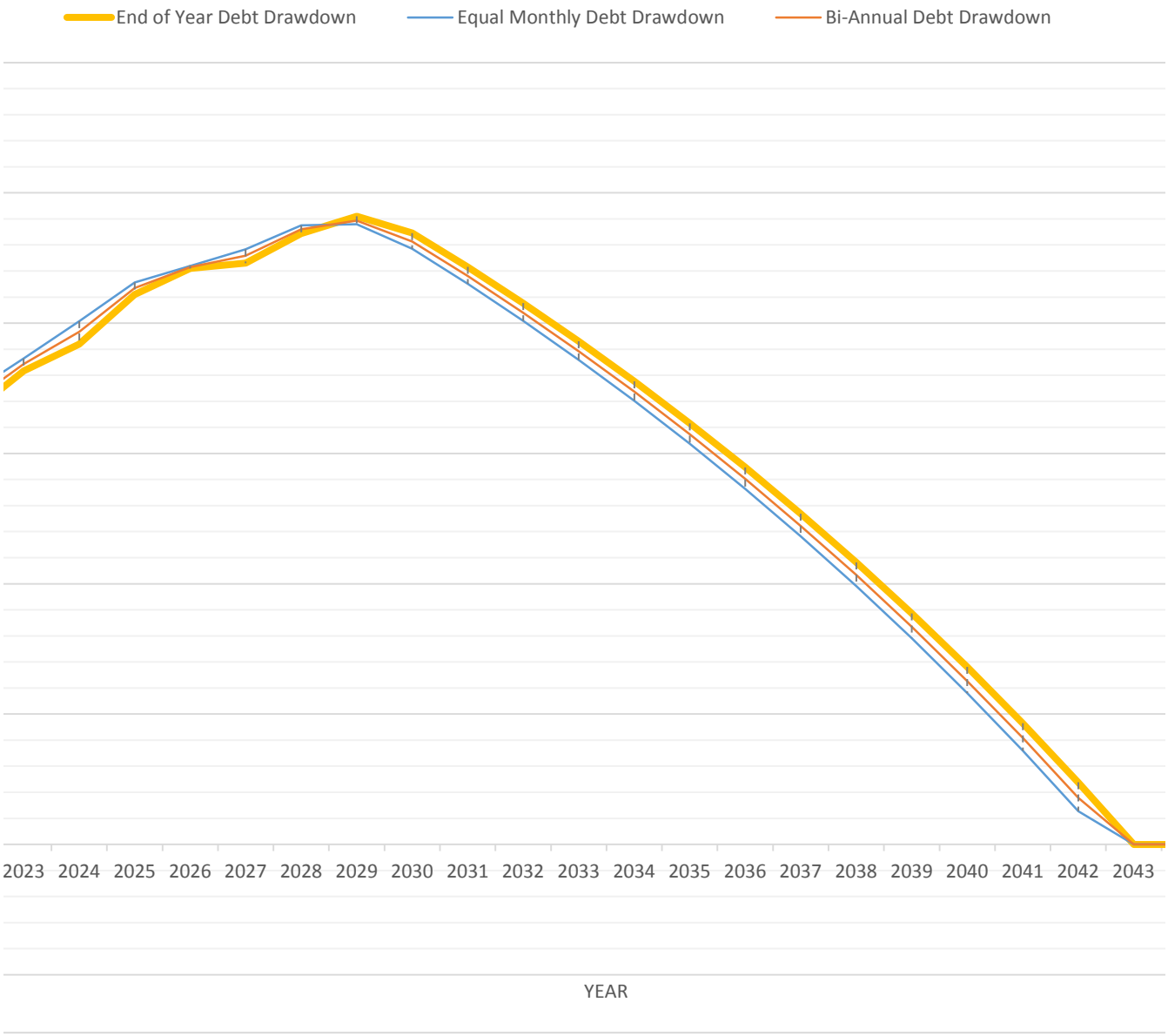
-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)
(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)
(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)
960	907	850	790	727	661	592	519	443	363
914	860	803	744	681	615	546	473	397	316

2030	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**
9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543
11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543
-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000
19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181
925	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*
-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000
17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515

-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666
(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)
(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)
(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)
950	897	841	782	720	654	586	514	438	359
925	872	816	757	695	629	561	489	413	334

2030	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**
9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543
11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543
-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000
19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269
912	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*
-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000
18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583

-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687


Scenario 1a - Total Interest Costs
End of Year Debt Drawdown
Equal Monthly Debt Drawdown
Bi-Annual Debt Drawdown
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
YEAR

2040	2041	2042	2043	2044	2045	2046	2047	2048	2049
-1,728	-1,814	-1,905	0	0	0	0	0	0	0
-1,768	-1,856	-1,949	0	0	0	0	0	0	0
-40	-42	-44	0	0	0	0	0	0	0

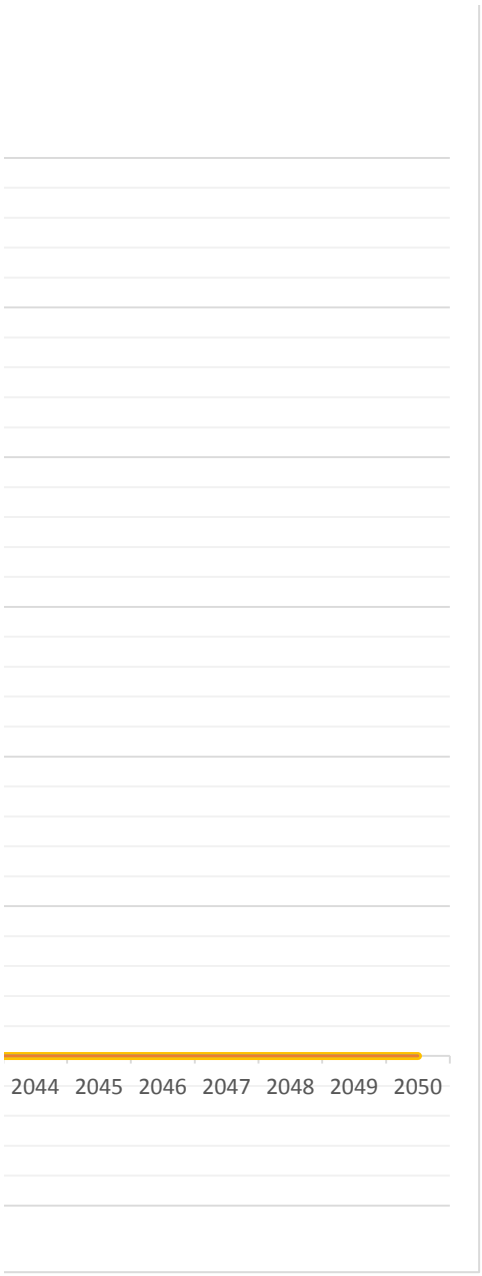
2040	2041	2042	2043	2044	2045	2046	2047	2048	2049
4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750
6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750
-2,000	-2,000	-2,000	0	0	0	0	0	0	0
5,446	3,719	1,905	0	0	0	0	0	0	0
272	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
-2,000	-2,000	-2,000	0	0	0	0	0	0	0
3,719	1,905	0	0	0	0	0	0	0	0
-1,728	-1,814	-1,905	0	0	0	0	0	0	0

2040	2041	2042	2043	2044	2045	2046	2047	2048	2049
4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750
6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750
-2,000	-2,000	-2,000	0	0	0	0	0	0	0
5,573	3,805	1,949	0	0	0	0	0	0	0
232	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
-2,000	-2,000	-2,000	0	0	0	0	0	0	0
3,805	1,949	0	0	0	0	0	0	0	0

-1,768	-1,856	-1,949	0	0	0	0	0	0	0
(167)	(167)	(167)	-	-	-	-	-	-	-
(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-
(46)	(46)	(46)	-	-	-	-	-	-	-
279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)
232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)

2040	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**
4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750
6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750
-2,000	-2,000	-2,000	0	0	0	0	0	0	0
5,515	3,765	1,929	0	0	0	0	0	0	0
251	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
-2,000	-2,000	-2,000	0	0	0	0	0	0	0
3,765	1,929	0	0	0	0	0	0	0	0
-1,749	-1,837	-1,929	0	0	0	0	0	0	0
(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-
(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-
(25)	(25)	(25)	-	-	-	-	-	-	-
276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)
251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)

2040	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**
4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750
6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750
-2,000	-2,000	-2,000	0	0	0	0	0	0	0
5,583	3,812	1,952	0	0	0	0	0	0	0
229	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
-2,000	-2,000	-2,000	0	0	0	0	0	0	0
3,812	1,952	0	0	0	0	0	0	0	0
-1,771	-1,859	-1,952	0	0	0	0	0	0	0


2044
2045
2046
2047
2048
2049
2050

2050	
0	
0	
0	0

2050	Total
2,616	
2,616	
0	
0	
0	15,334
0	
0	
0	

2050	Total
2,616	
2,616	
0	
0	
0	15,334
0	
0	

0	
-	
-	
-	
(0)	
(0)	

2050	Total
2,616	
2,616	
0	
0	
0	15,334
0	
0	
0	
-	
-	
-	
(0)	
(0)	

2050	Total
2,616	
2,616	
0	
0	
0	15,334
0	
0	
0	

1a-Feb4	###	###	###	###
Average Monthly Residential Bill Impact of GA Smoothing, pre-tax *($/month)*	-27	-25	-22	-25
Total Accumulated Debt *($ billion)*	5	9	14	19
Total Change in Accumulated Debt *($ billion)*	5	5	4	5

	2017-18	**2018-19**	**2019-20**	**2020-21**
1.25	5	4.75	4.25	4.75
1250	5000	4750	4250	4750

	###	###	###	###
Average Monthly Residential Bill Impact of GA Smoothing, pre-tax ($/month)	-40	-37	-35	-37
Total Accumulated Debt ($ billion)	7	14	21	28
Total Change in Accumulated Debt ($ billion)	7	7	7	8

	2017-18	**2018-19**	**2019-20**	**2020-21**
1.75	7	7	7.25	7.5
1750	7000	7000	7250	7500

	#	#	#	#
Average Monthly Residential Bill Impact of GA Smoothing, pre-tax ($/month)	-21	-18	-16	-18
Total Accumulated Debt ($ billion)	4	7	10	14
Total Change in Accumulated Debt ($ billion)	4	3	3	4

	2017-18	**2018-19**	**2019-20**	**2020-21**
1	3.75	3	3.25	3.5
1000	3750	3000	3250	3500

###	###	###	###	###	###	###	###	###	###
-17	-15	-11	-16	-11	-8	-12	-10	-4	-2
23	27	30	34	38	41	46	50	53	56
4	4	3	4	4	3	4	4	3	3

2021-22	**2022-23**	**2023-24**	**2024-25**	**2025-26**	**2026-27**	**2027-28**	**2028-29**	**2029-30**	**2030-31**
4	3.75	3.25	4	3.75	3.25	4	3.75	3	2.75
4000	3750	3250	4000	3750	3250	4000	3750	3000	2750

###	###	###	###	###	###	###	###	###	###
-28	-25	-21	-24	-19	-14	-18	-14	-7	-3
35	41	47	53	59	65	71	77	83	88
6	6	6	7	6	6	6	6	5	5

2021-22	**2022-23**	**2023-24**	**2024-25**	**2025-26**	**2026-27**	**2027-28**	**2028-29**	**2029-30**	**2030-31**
6	6	6.25	6.75	6	6	6	5.75	5	4.75
6000	6000	6250	6750	6000	6000	6000	5750	5000	4750

##	##	##	##	##	##	##	##	##	##
-10	-8	-4	-8	-4	0	-4	-2	4	7
16	19	20	23	25	26	28	30	31	31
2	2	2	3	2	1	2	2	1	0

2021-22	**2022-23**	**2023-24**	**2024-25**	**2025-26**	**2026-27**	**2027-28**	**2028-29**	**2029-30**	**2030-31**
2	2	2.25	2.75	1.75	1.25	2	1.75	0.75	-0.25
2000	2000	2250	2750	1750	1250	2000	1750	750	-250

###	###	###	###	###	###	###	###	###	###
5	6	10	14	26	28	31	33	35	38
58	60	61	62	60	58	55	52	48	43
2	2	1	1	-2	-2	-3	-3	-4	-5

###	###	###	###	###	###	###	###	###	###
5	7	13	18	32	36	41	45	50	54
91	95	97	99	98	96	94	90	85	80
4	3	3	2	-1	-2	-3	-4	-5	-6

##	##	##	##	##	##	##	##	##	##
14	14	16	16	15	15	15	15	15	15
30	29	28	27	25	23	22	20	18	16
-1	-1	-1	-1	-1	-2	-2	-2	-2	-2

###	###	###	###	###	###	###	###
40	40	40	40	39	39	39	0
38	33	27	20	14	7	0	0
-5	-6	-6	-6	-6	-7	-7	0

###	###	###	###	###	###	###	###
59	63	68	73	78	83	89	0
73	64	55	44	31	16	0	0
-7	-8	-10	-11	-13	-14	-16	0

##	##	##	##	##	##	##	##
15	15	15	15	15	15	15	0
14	12	10	8	5	3	0	0
-2	-2	-2	-2	-2	-3	-3	0

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964
Equal Monthly Debt Drawdown	3,180	952

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

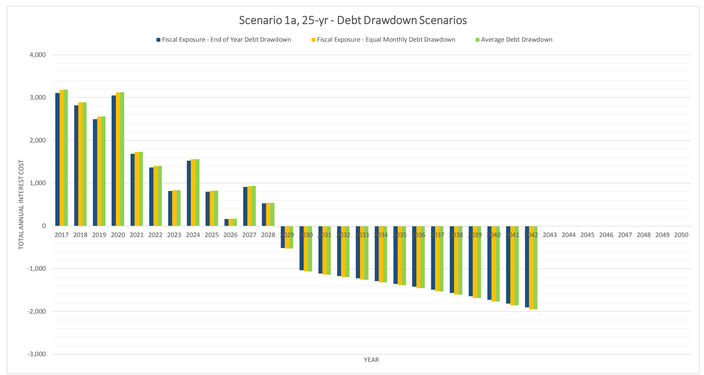
		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

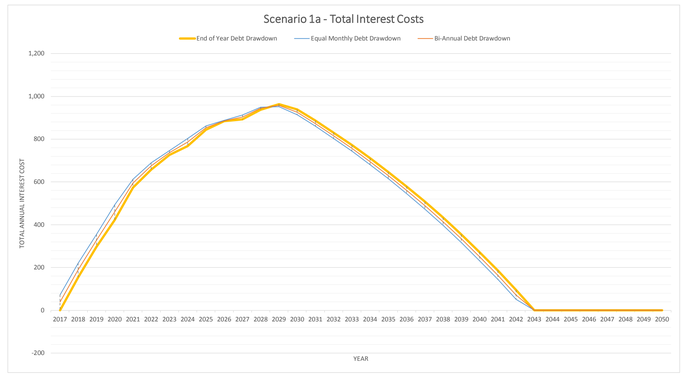
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	3,665	968	
Equal Monthly Debt Drawdown	3,750	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

		9%	14%	18%	28%	17%	13%																													
Scenario 1b, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

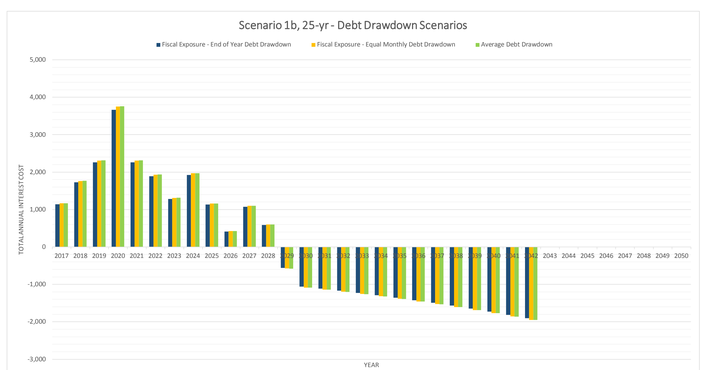
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	*954*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

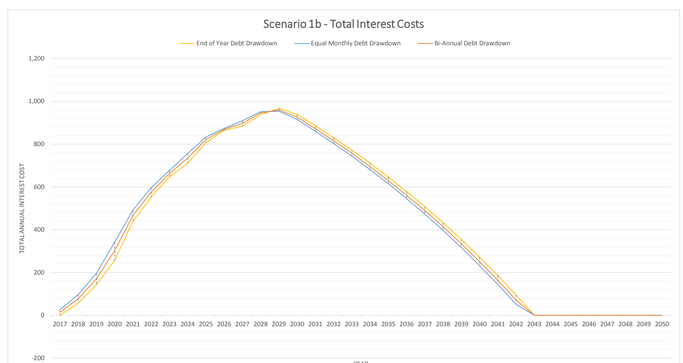
	Monthly Drawdown	95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

		28%	24%	21%	24%	12%	9%																													
Scenario 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1a, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	*1,156*	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

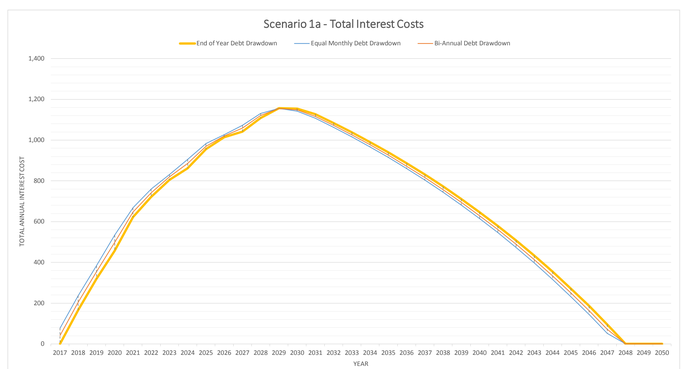
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

		12%	16%	20%	30%	19%	15%																													
Scenario 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

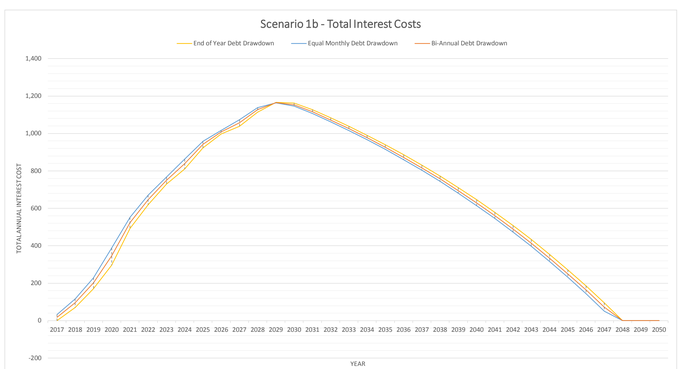
	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

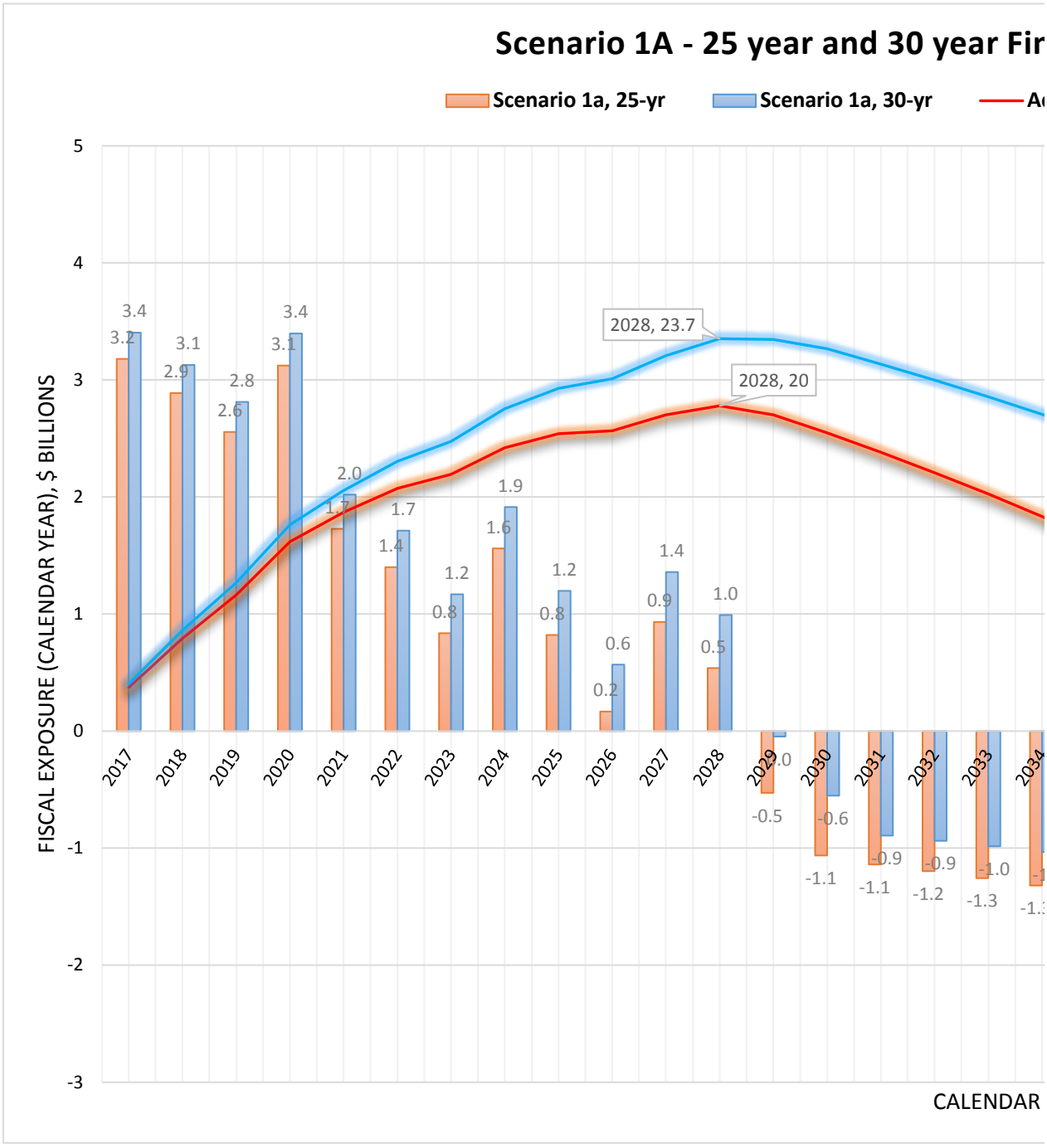
	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

Scenario 1b, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

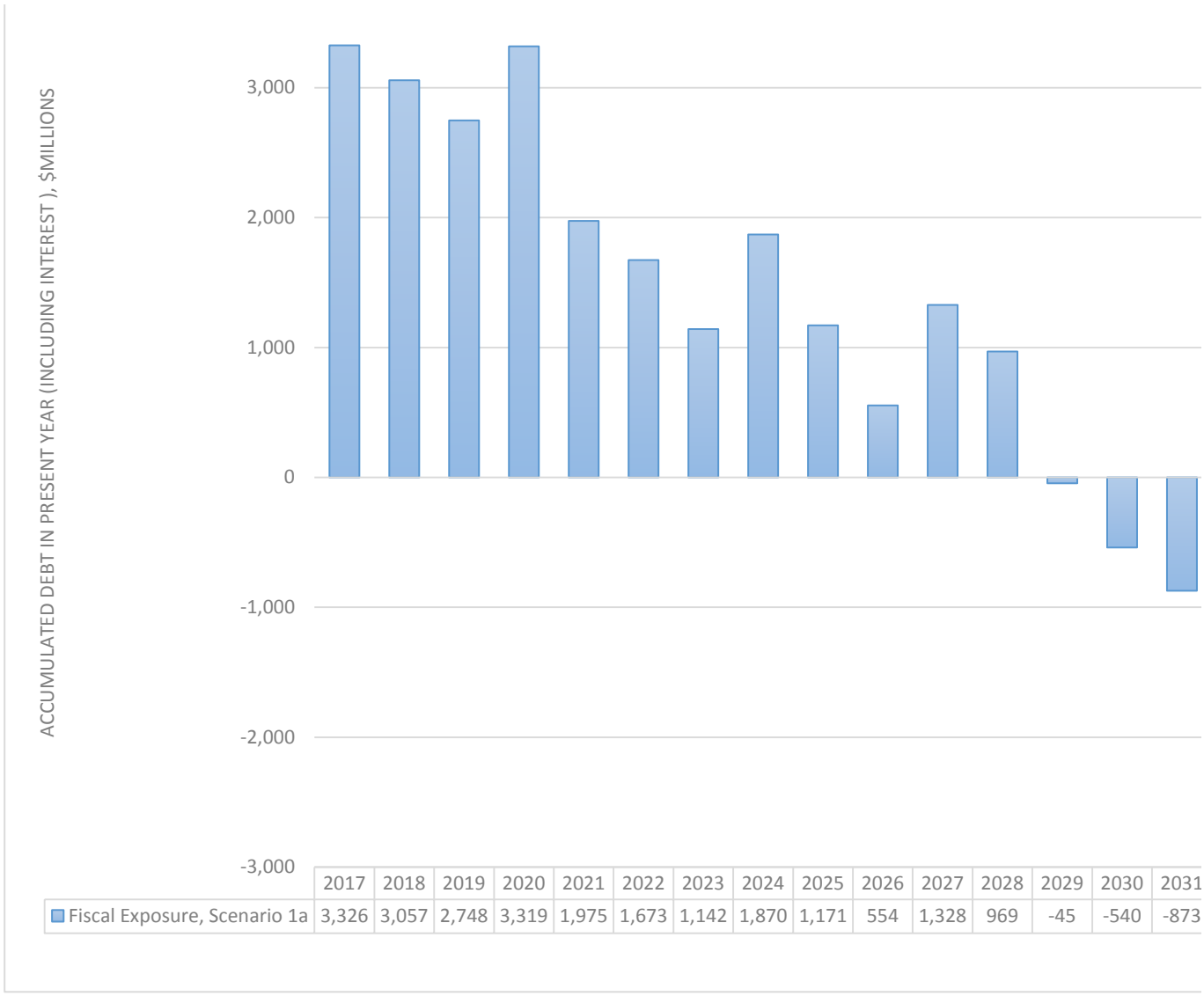




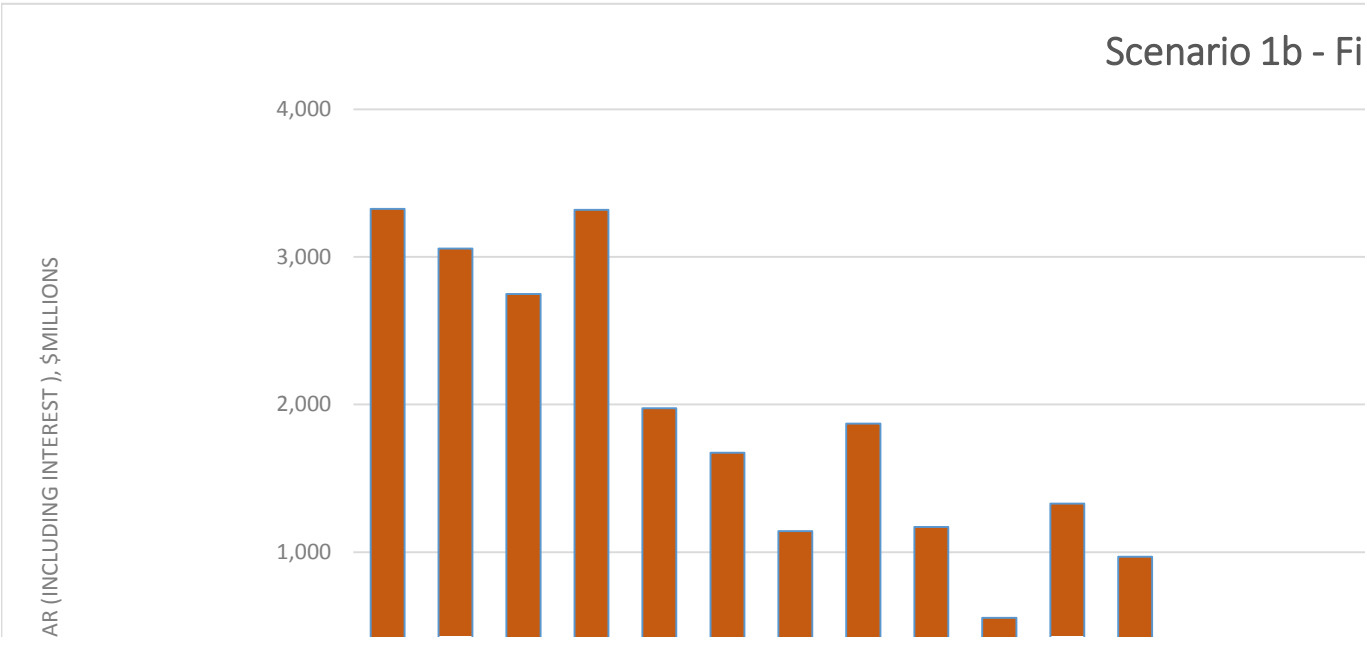
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

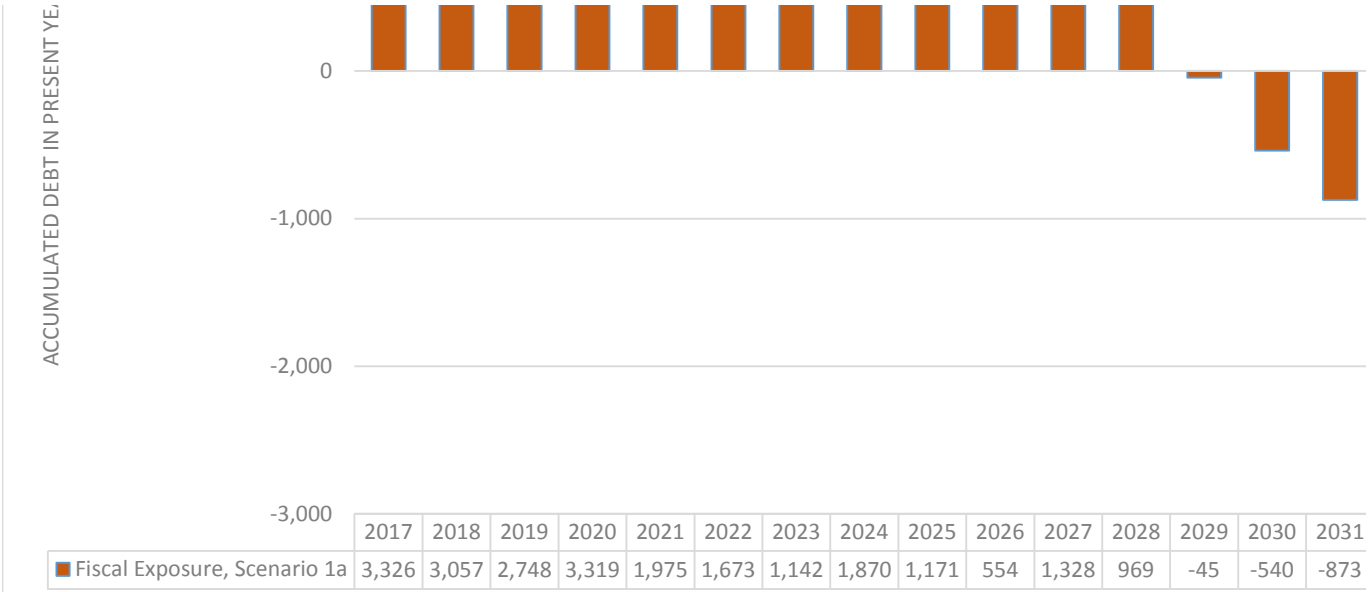




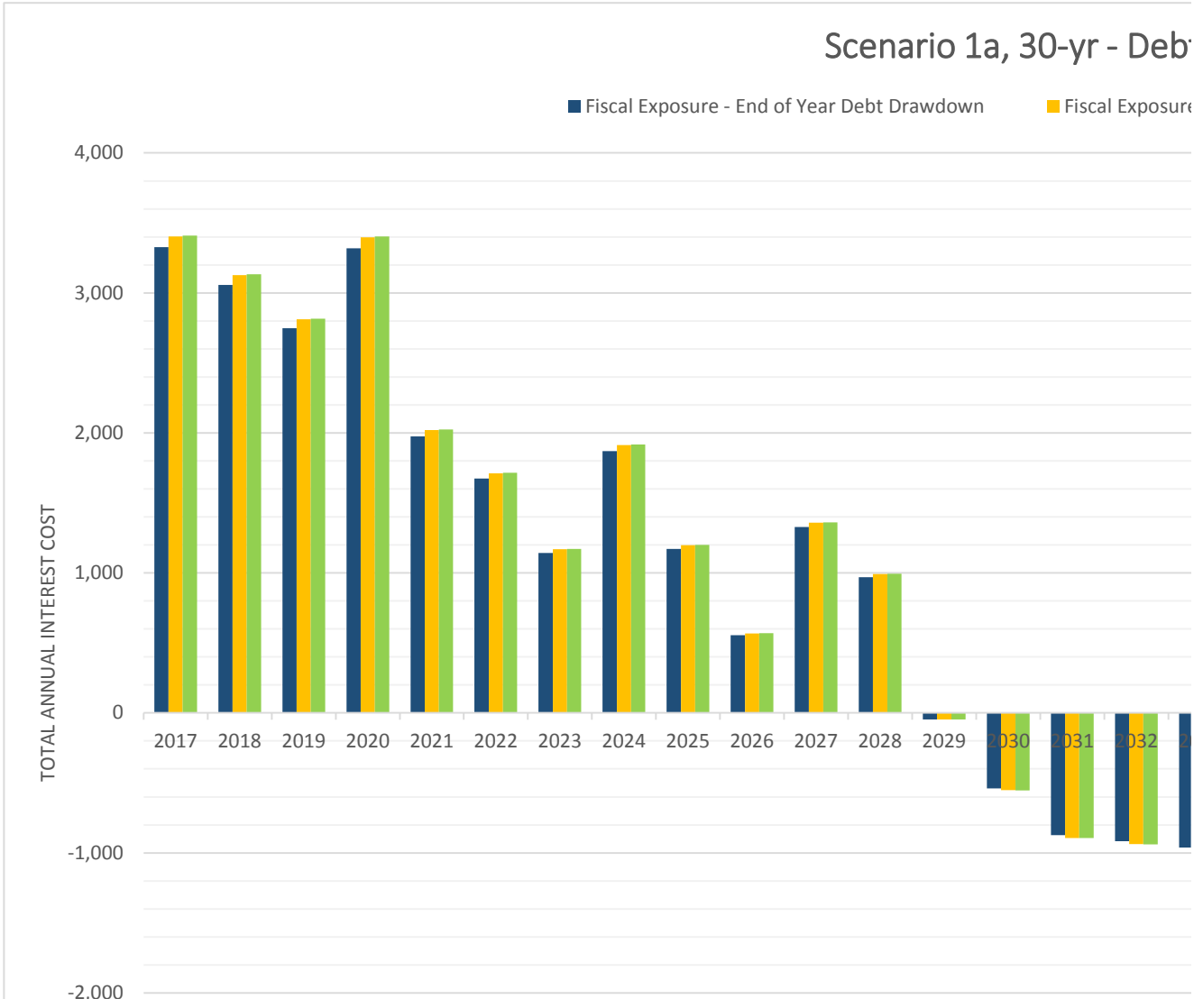


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



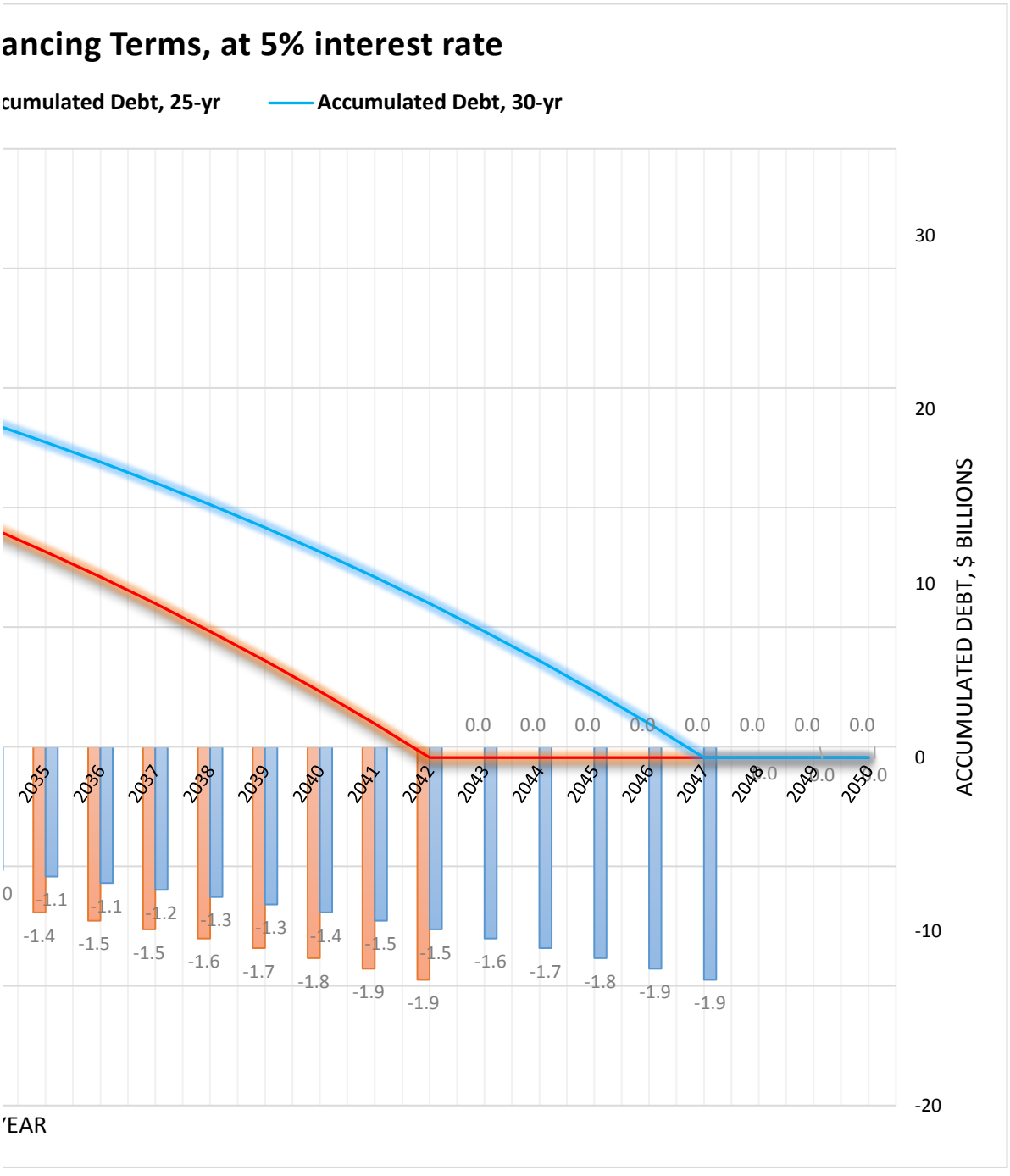


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



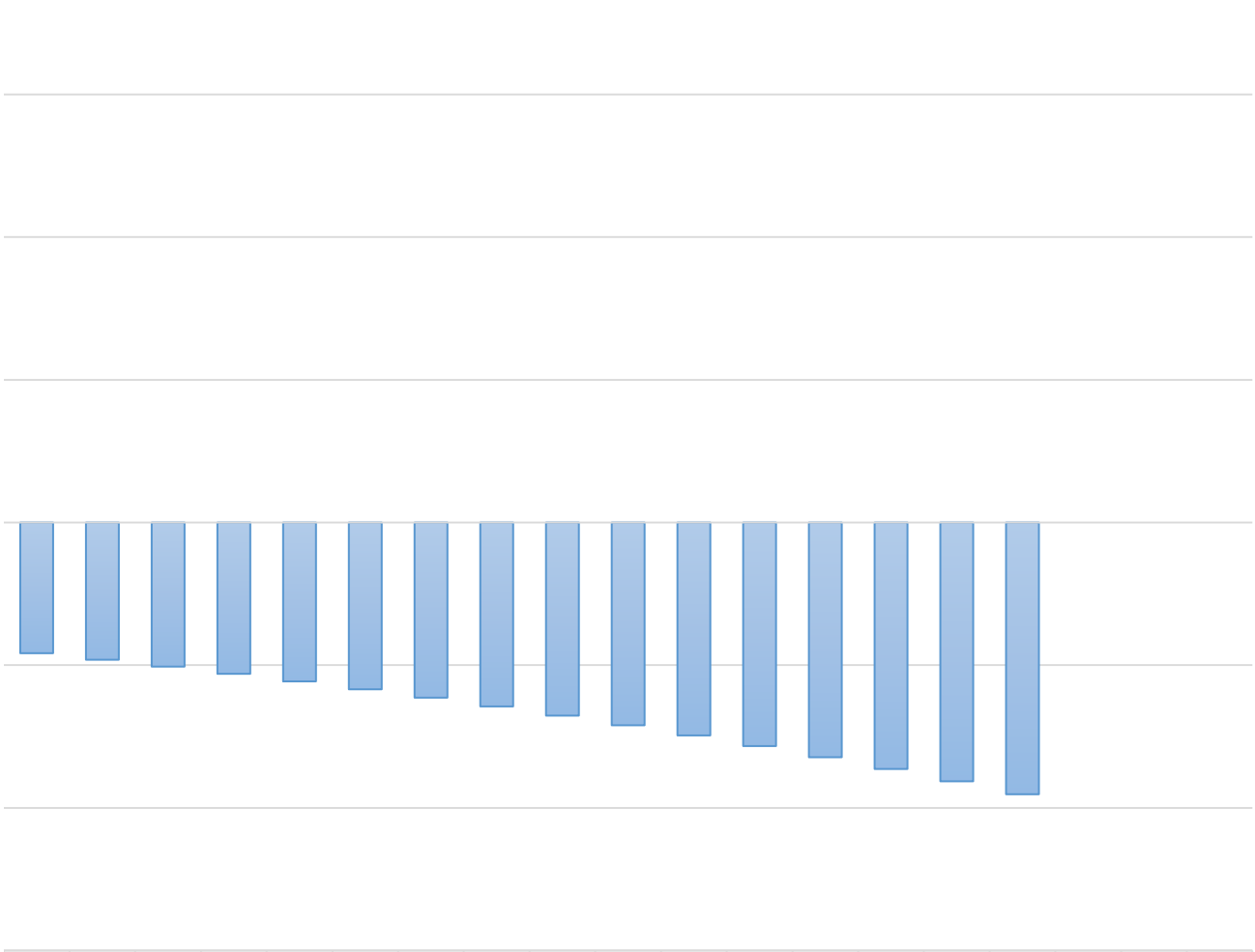

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

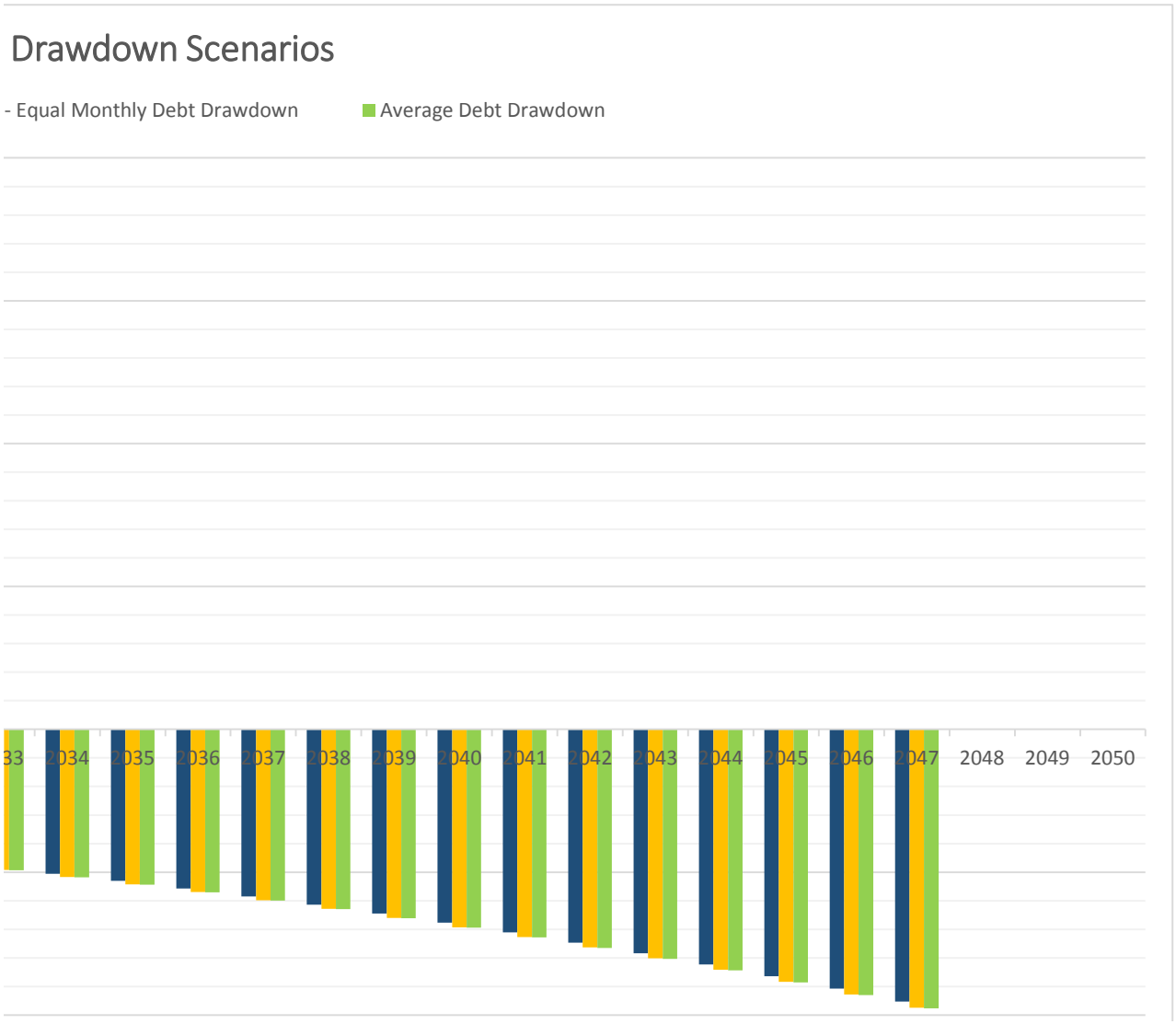
YEAR

cal Exposure



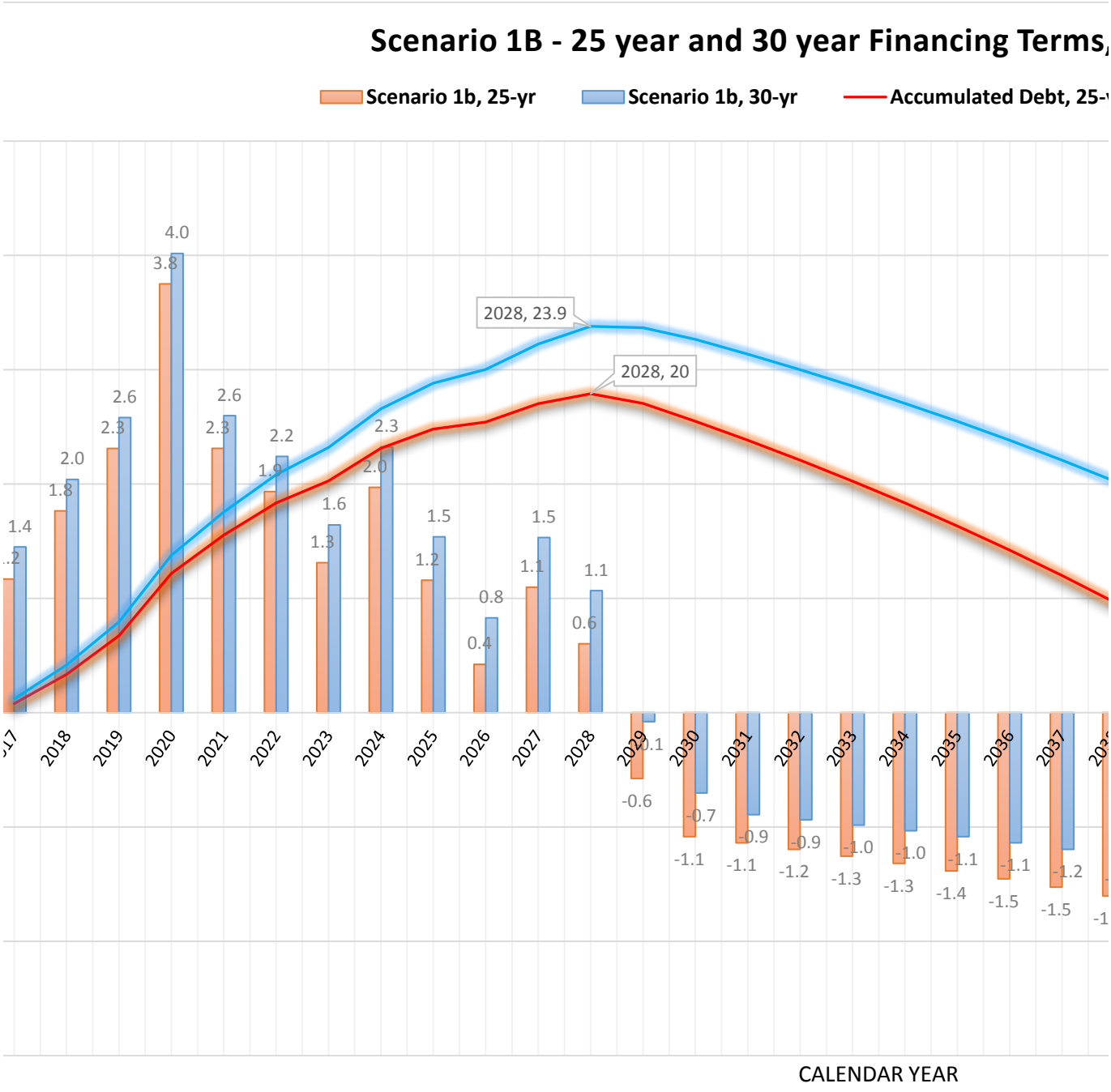
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

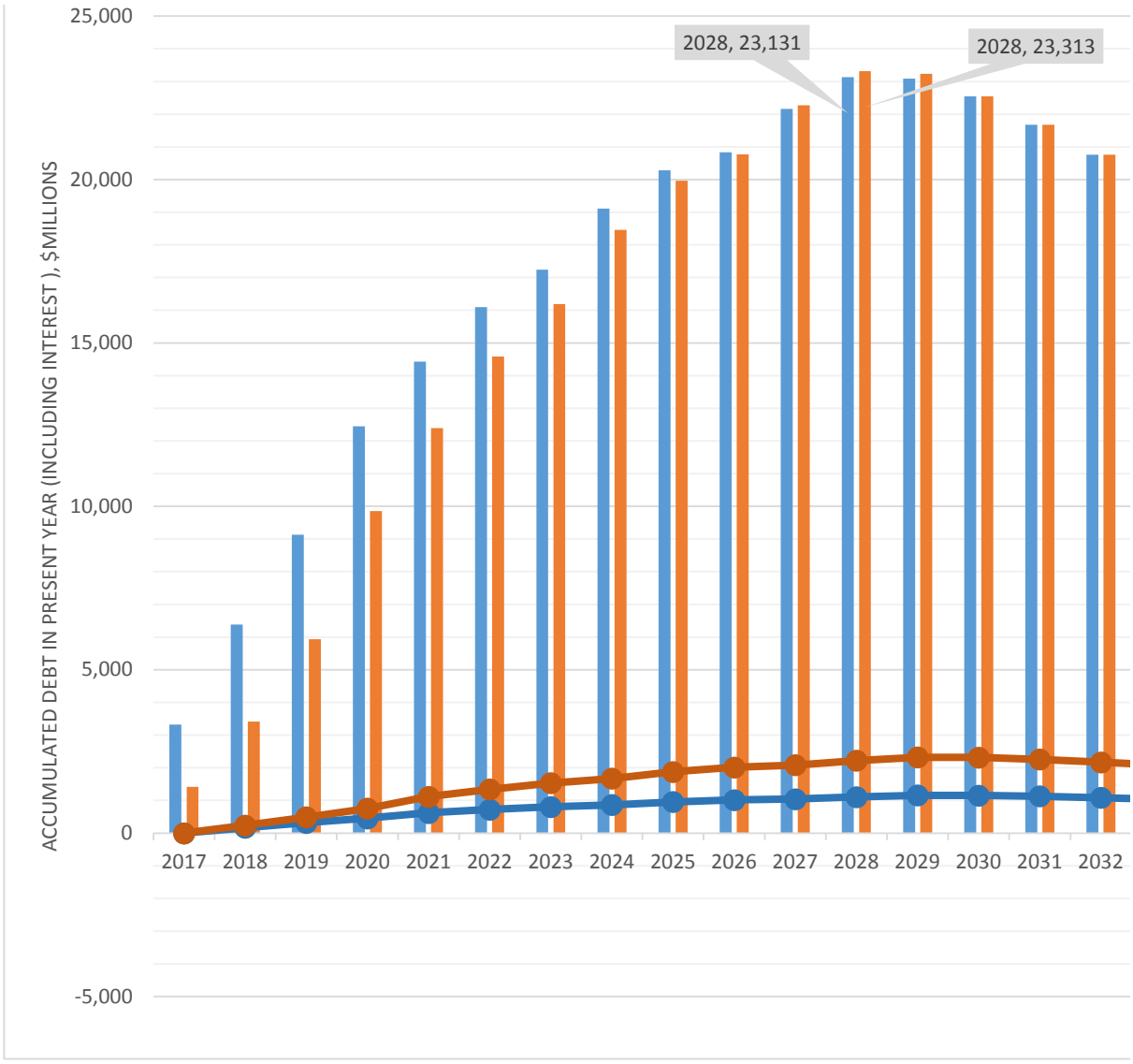


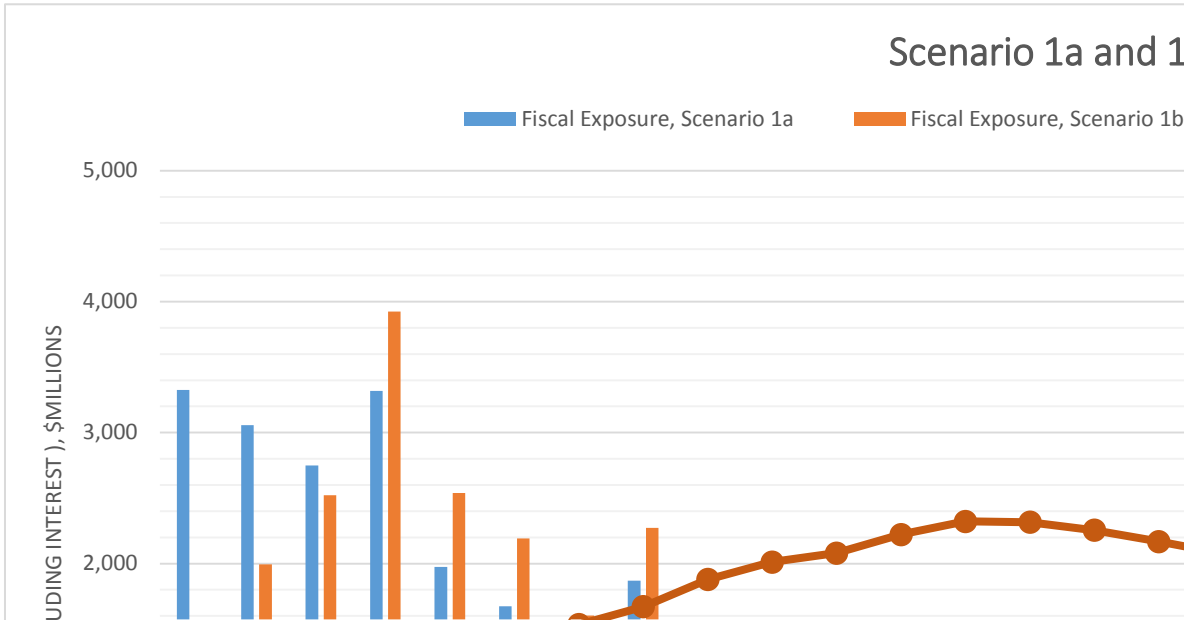
YEAR

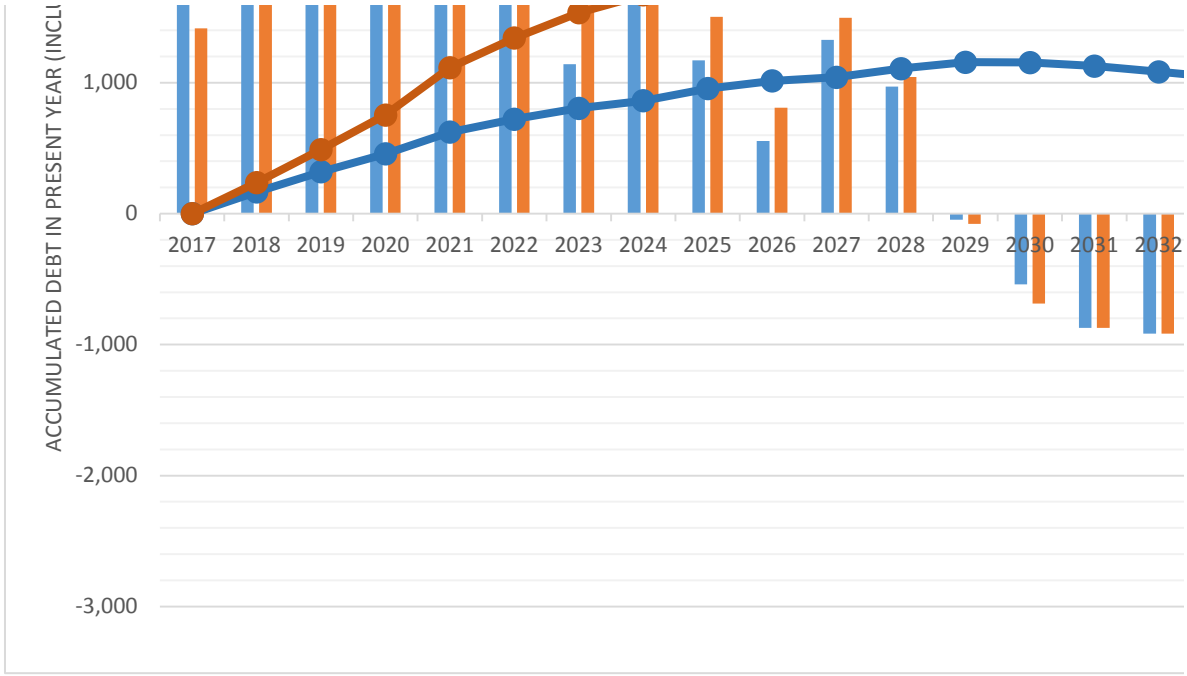
3 - 25 year and 30 year Financing Terms, at 5% interest rate

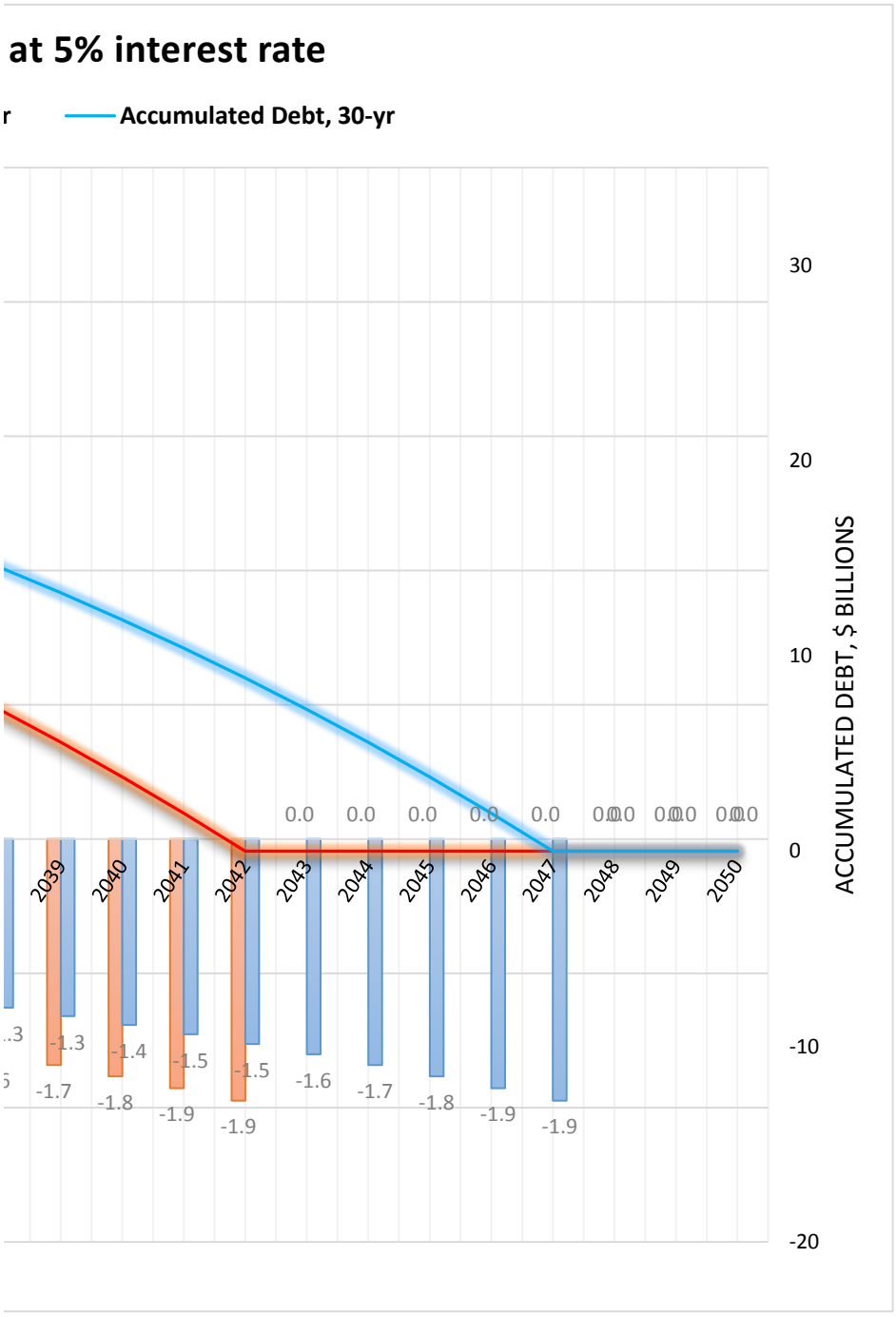





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

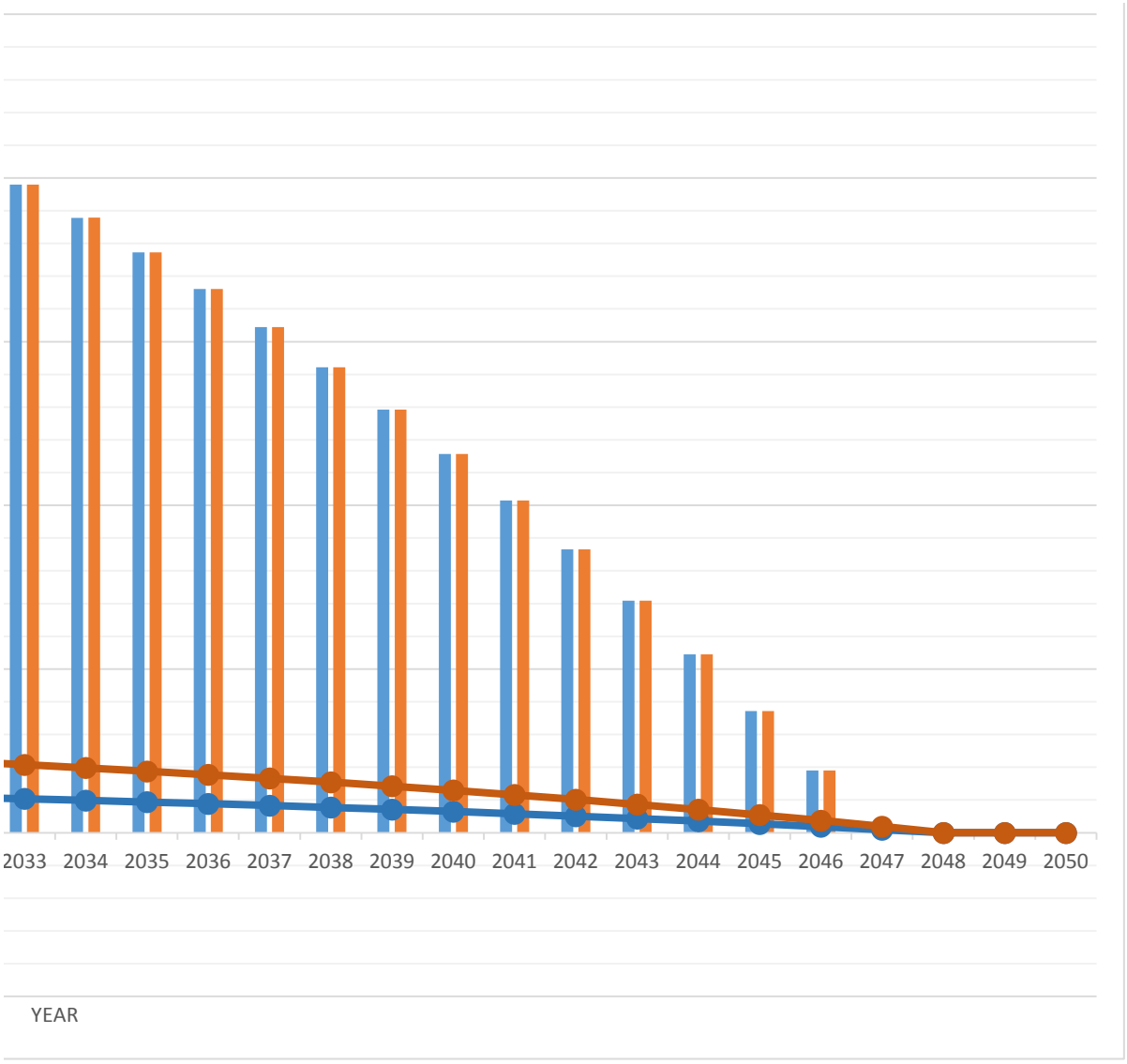

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

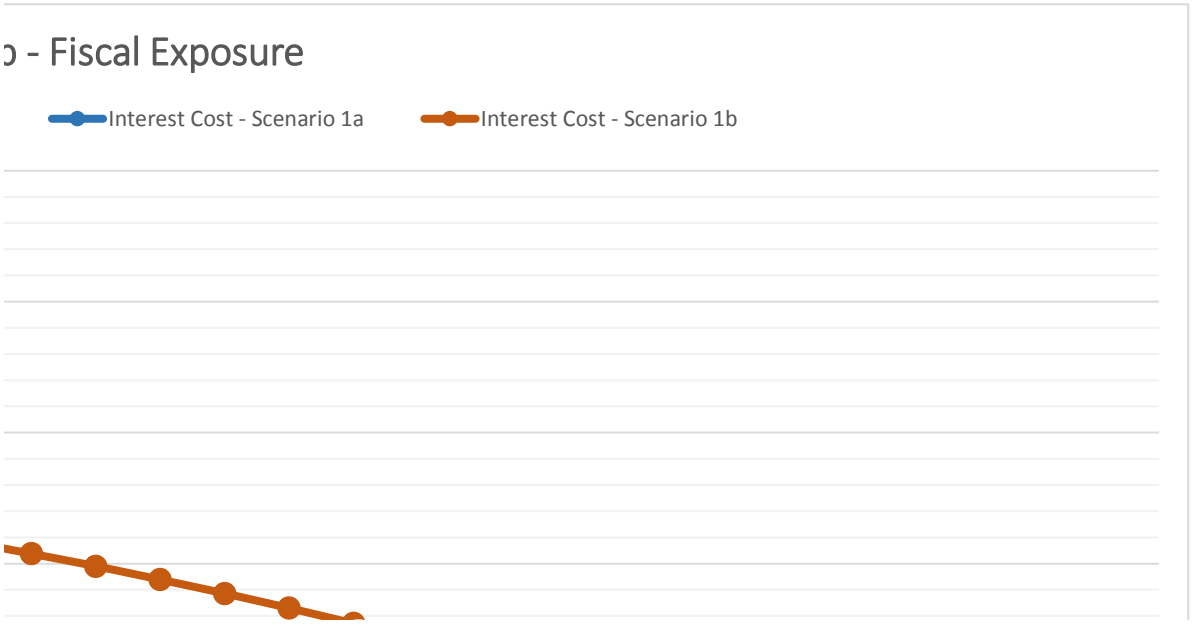

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

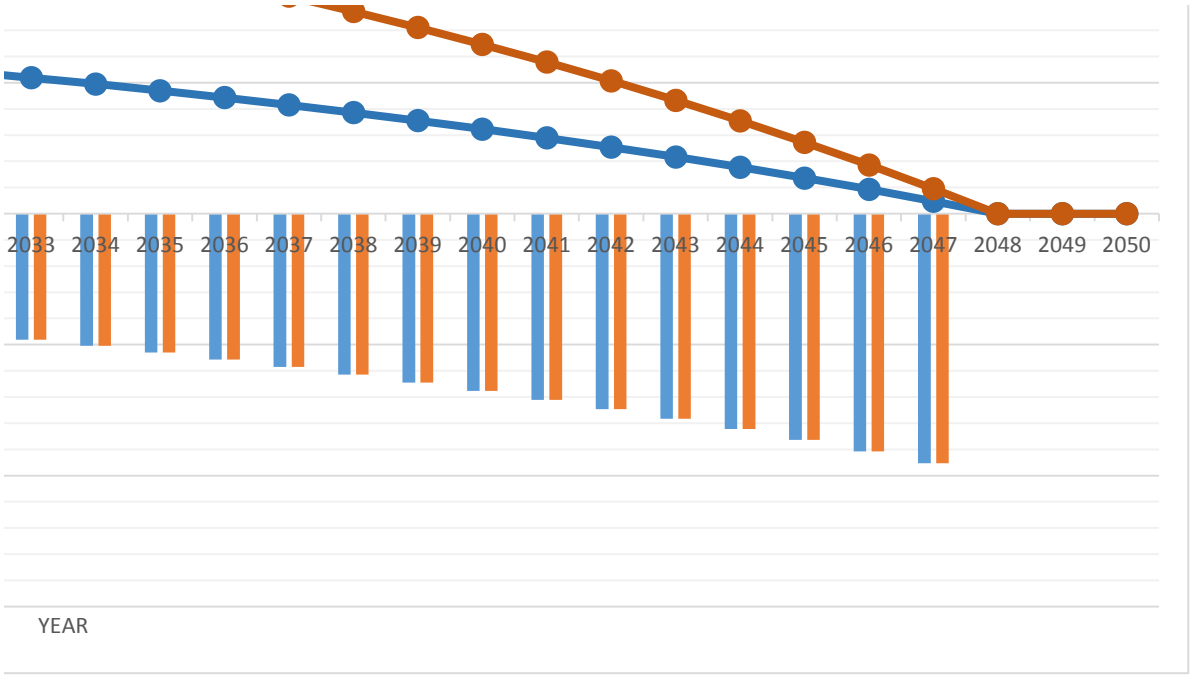


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

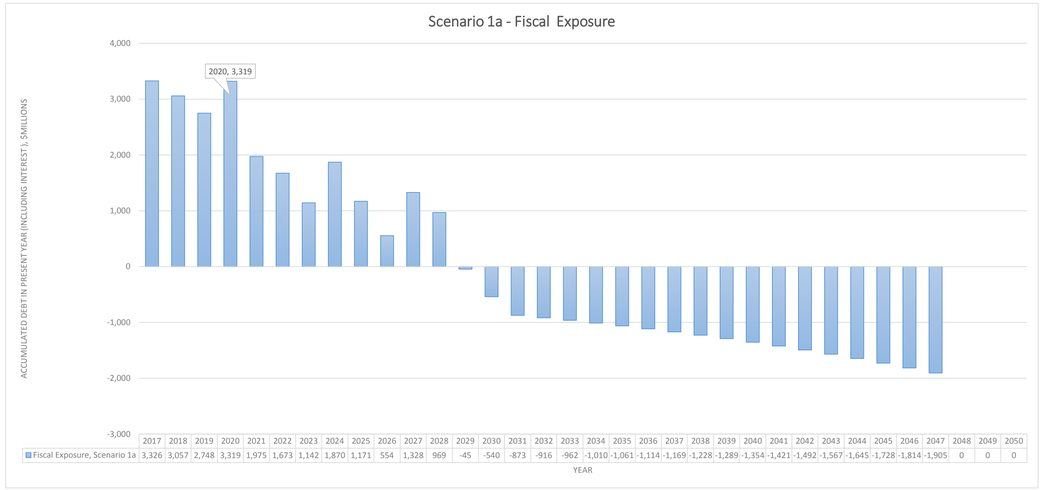
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

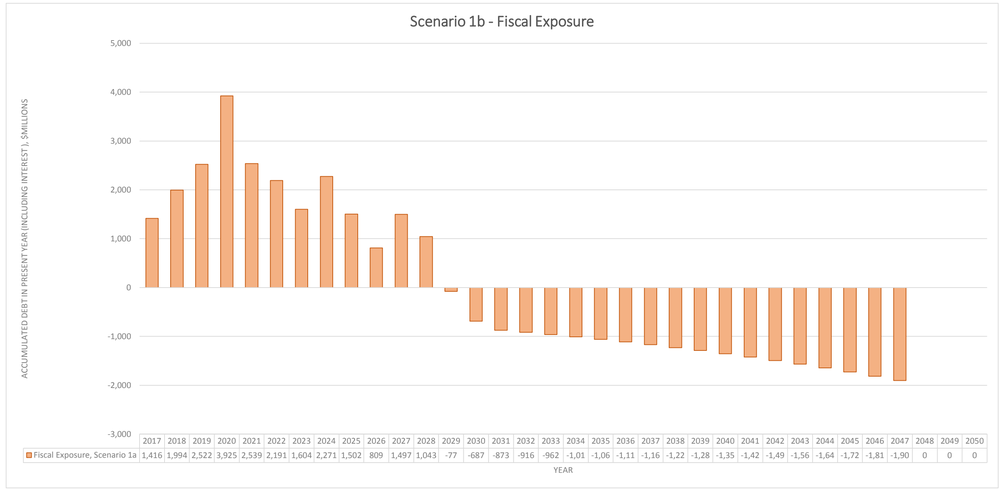
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

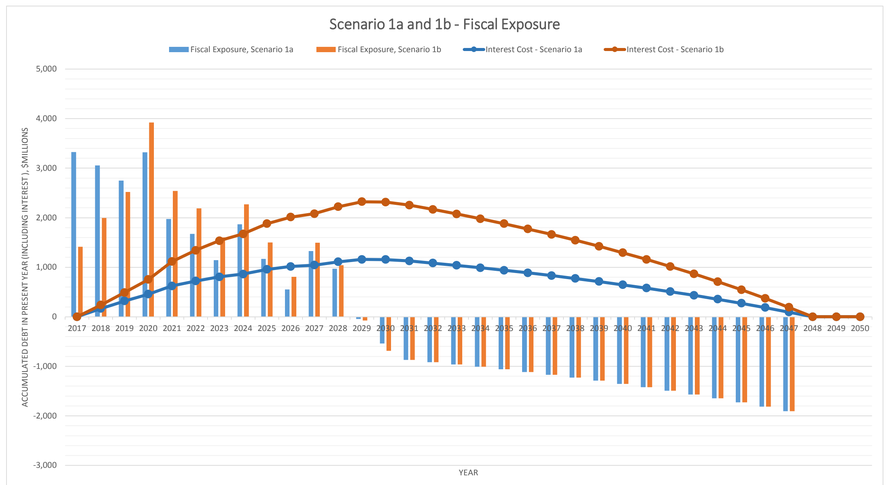
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

Notes:	Accounting treatment is to be determined.


Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0


Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0


Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

DRAFT

GA Financing Scenario
Option 1a/1b

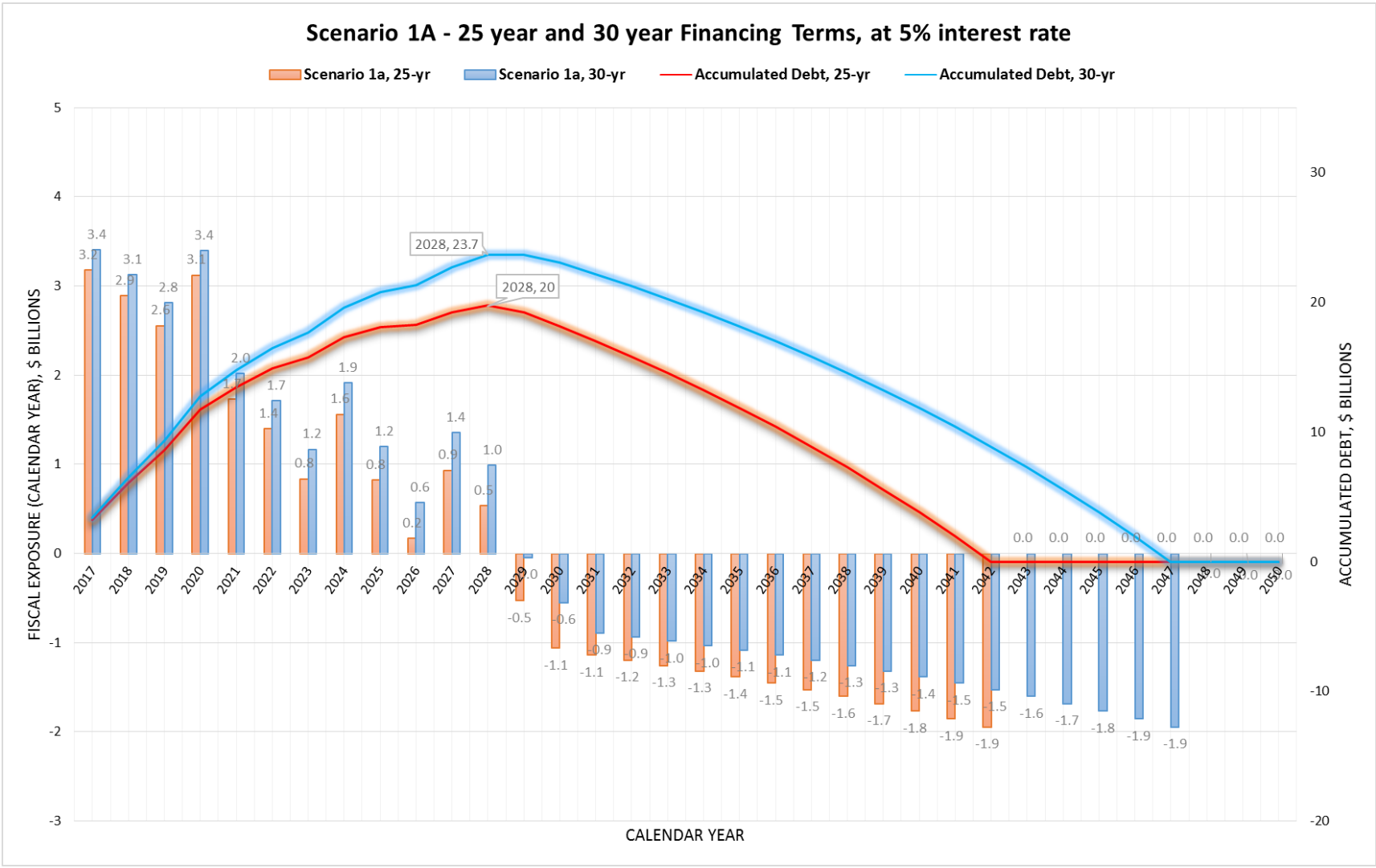
Corporate and Electricity Finance Division
January 30, 2017

Overview

- In a draft Ministry of Energy deck, Energy considers a number of electricity price mitigation options, including deferring the pass-through to ratepayers of some generation supply costs by partially debt financing the cost of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments.
  - The amount of GA paid by ratepayers would be set at a value lower in the early years than the costs of supply, and would be increased over time according to a pre-defined formula until the debt has been paid off.
  - Without a favourable outcome on the discussions and implementation of the accounting treatment of the GA-related debt financing, the accumulated debt would potentially represent fiscal exposure to the Province.
- Based on the two Energy options below, each at a 25-year amortization period and at a 30-year amortization period, there are a total of four scenarios considered:
  - Option 1a: Moderate GA financing - The amount of GA paid by ratepayers in 2017 is lowered by $3.2 and $3.4 billion below the annual supply costs, with the GA increasing by 2% thereafter, with limits on deferred amounts to be recovered annually to be no more than $2 billion above the annual cost of generation supply
  - Option 1b: Moderate GA financing with delayed increase - The starting GA payment from all ratepayers in 2017 is lowered by $1.1 and $1.4 billion, reducing ratepayer payments more in the short term to keep residential bills relatively flat, then increases at 3% each year with limits of no more than $2 billion above the annual cost of generation supply
- Energy scenario modelling was provided on a calendar year basis, and assumed to be starting as at January 1, 2017. Actual costs and timing may differ.
- Energy assumed a 5% interest cost. Actually borrowing costs may differ, depending on source of financing, structure of the entity including financial risks borne, and general financial market conditions.
  - Internal modelling that follows is based on GA data provided by Energy and assumes monthly GA amounts to be financed and interest expense accumulating from that point. Energy modelling may make different assumptions.

DRAFT

Scenario 1A *(Calendar Year Basis)*



DRAFT

Scenario 1A *(Calendar Year Basis)*

- Scenario 1a: Moderate GA financing: Initially paying in a year up to $3.2 and $3.4 billion below the true cost of GA. Then limits, when consumers start to "pay down", of paying no more than $2 billion per year above the true cost of GA.
  - On a calendar year basis, annual interest cost peaks at $1 billion ($1.2 billion) , with cumulative interest costs of about $15 billion ($22 billion), under a 25-year (or 30-year) financing term

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Fiscal Exposure[2]	3,180	2,888	2,556	3,123	1,728	1,400

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	795	3,107	2,805	2,697	2,774	1,646

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Fiscal Exposure[2]	3,404	3,128	2,812	3,396	2,020	1,712

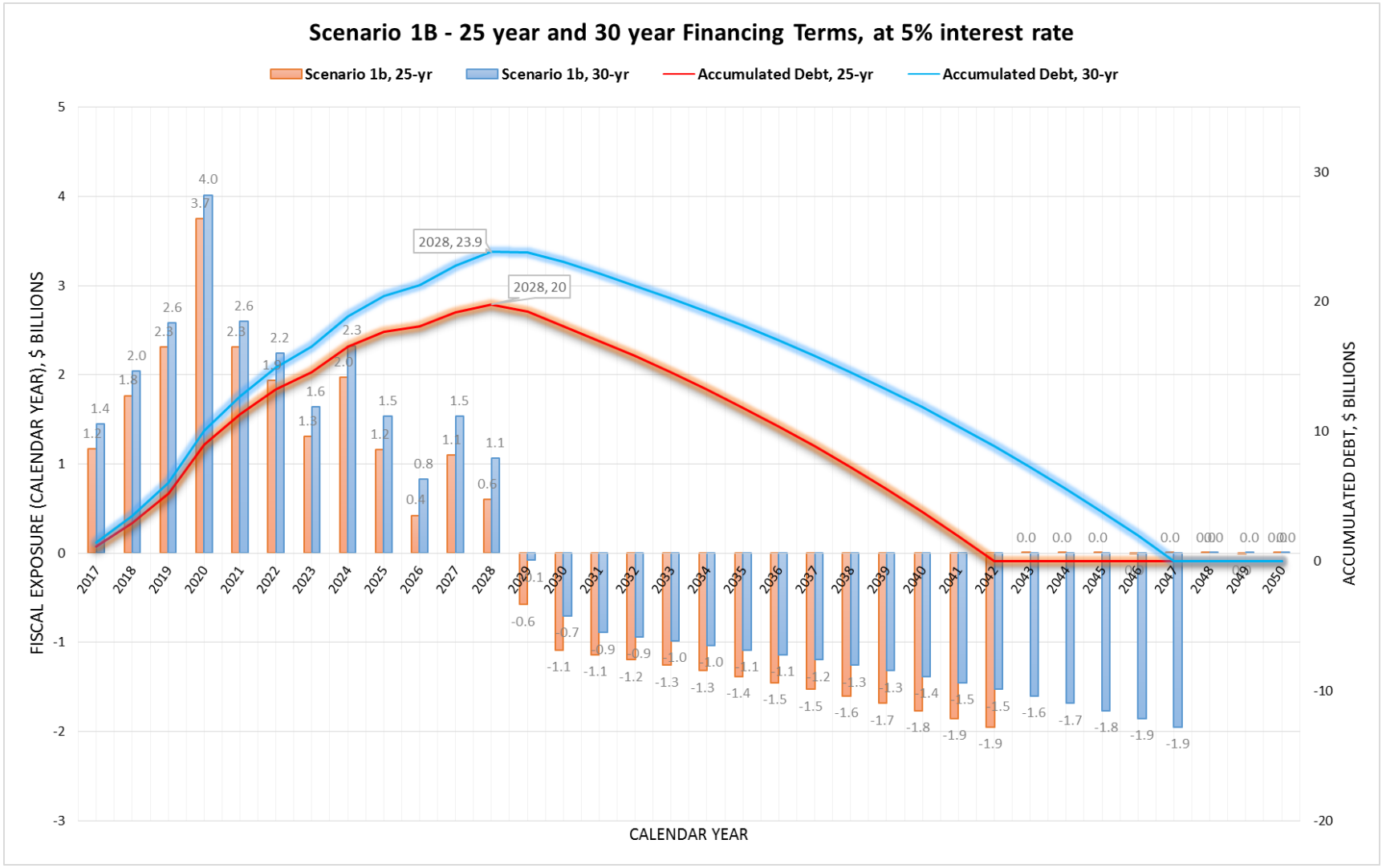
Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	851	3,335	3,049	2,958	3,052	1,943

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and $17-21 billion (at 3% interest rate), peaking in 2028.
- At 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately $33-$36 million compared to that at 5% interest rate.

1 Based on an interest rate of 5%.
2 Fiscal exposure based on equal monthly drawdown of debt.
3 Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

DRAFT

Scenario 1B *(Calendar Year Basis)*



DRAFT

Scenario 1B *(Calendar Year Basis)*

- Scenario 1b: Moderate GA financing, with delayed increase, paying initially in a year $1.1 billion below the true cost of GA. Then limits, when consumers start to "pay down", of no more than $2 billion per year above the true cost of GA
  - On a calendar year basis, annual interest cost peaks at $1 billion ($1.2 billion) , with cumulative interest costs of about $15 billion ($21 billion), under a 25-year (or 30-year) financing term

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Fiscal Exposure[2]	1,168	1,765	2,311	3,750	2,311	1,933

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	292	1,317	1,901	2,671	3,391	2,217

Scenario 1b - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Fiscal Exposure[2]	1,449	2,040	2,581	4,016	2,598	2,241

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	362	1,597	2,175	2,940	3,662	2,508

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 and $17-21 billion (at 3% interest rate), peaking in 2028.
- At 3.5%, the highest fiscal exposure will occur in 2020-21, decreasing by approximately $118-$134 million compared to that at 5% interest rate.

1 Based on an interest rate of 5%.
2 Fiscal exposure based on equal monthly drawdown of debt.
3 Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

DRAFT

GA Financing Scenario
Option 1a/1b

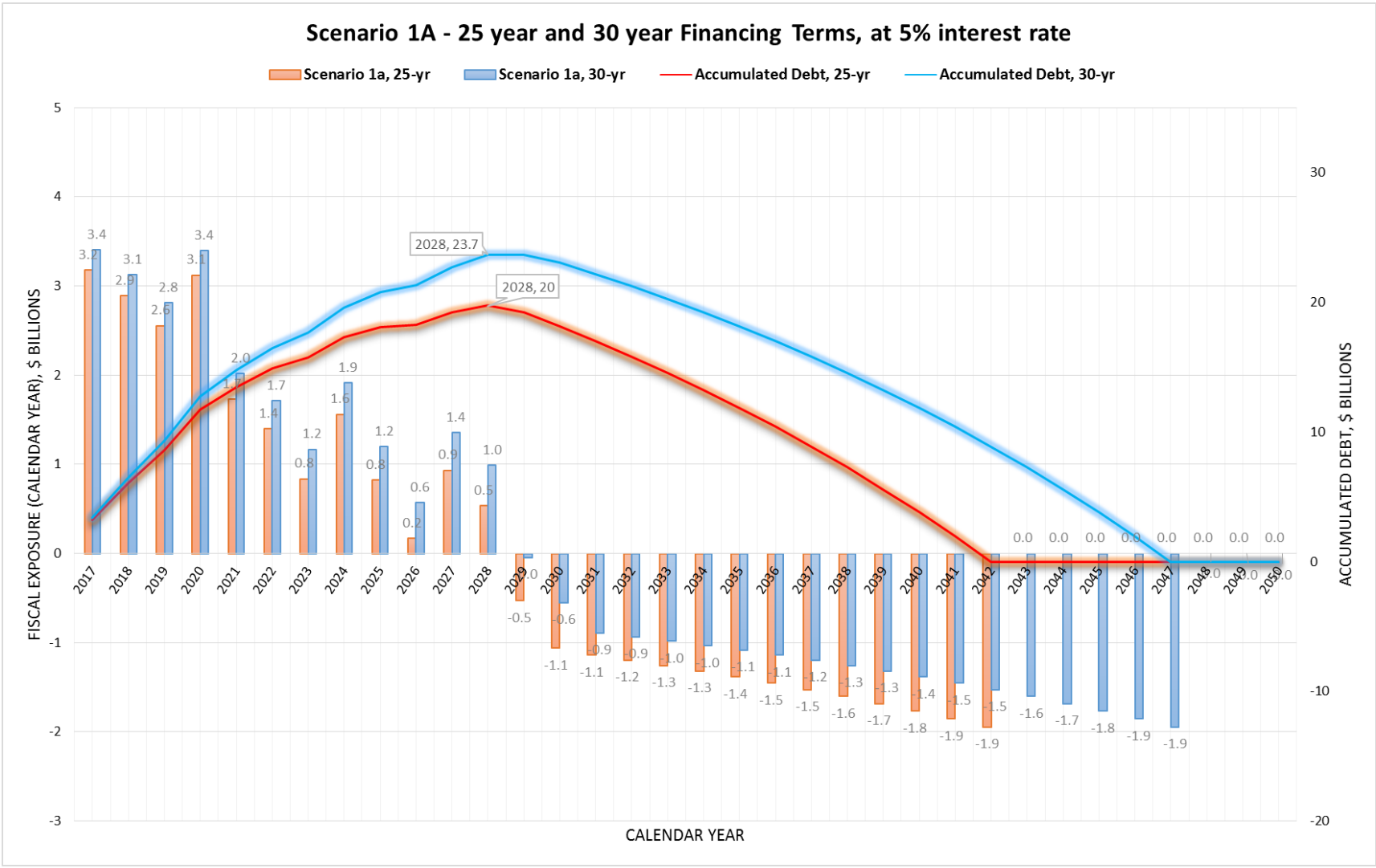
Corporate and Electricity Finance Division
January 30, 2017

Overview

- In a draft Ministry of Energy deck, Energy considers a number of electricity price mitigation options, including deferring the pass-through to ratepayers of some generation supply costs by partially debt financing the cost of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments.
  - The amount of GA paid by ratepayers would be set at a value lower in the early years than the costs of supply, and would be increased over time according to a pre-defined formula until the debt has been paid off.
  - Without a favourable outcome on the discussions and implementation of the accounting treatment of the GA-related debt financing, the accumulated debt would potentially represent fiscal exposure to the Province.
- Based on the two Energy options below, each at a 25-year amortization period and at a 30-year amortization period, there are a total of four scenarios considered:
  - Option 1a: Moderate GA financing - The amount of GA paid by ratepayers in 2017 is lowered by $3.2 and $3.4 billion below the annual supply costs, with the GA increasing by 2% thereafter, with limits on deferred amounts to be recovered annually to be no more than $2 billion above the annual cost of generation supply
  - Option 1b: Moderate GA financing with delayed increase - The starting GA payment from all ratepayers in 2017 is lowered by $1.1 and $1.4 billion, reducing ratepayer payments more in the short term to keep residential bills relatively flat, then increases at 3% each year with limits of no more than $2 billion above the annual cost of generation supply
- Energy scenario modelling was provided on a calendar year basis, and assumed to be starting as at January 1, 2017. Actual costs and timing may differ.
- Energy assumed a 5% interest cost. Actually borrowing costs may differ, depending on source of financing, structure of the entity including financial risks borne, and general financial market conditions.
  - Internal modelling that follows is based on GA data provided by Energy and assumes monthly GA amounts to be financed and interest expense accumulating from that point. Energy modelling may make different assumptions.

DRAFT

Scenario 1A *(Calendar Year Basis)*



DRAFT

Scenario 1A *(Calendar Year Basis)*

- Scenario 1a: Moderate GA financing: Initially paying in a year up to $3.2 and $3.4 billion below the true cost of GA. Then limits, when consumers start to "pay down", of paying no more than $2 billion per year above the true cost of GA.
  - On a calendar year basis, annual interest cost peaks at $1 billion ($1.2 billion) , with cumulative interest costs of about $15 billion ($22 billion), under a 25-year (or 30-year) financing term

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Fiscal Exposure[2]	3,180	2,888	2,556	3,123	1,728	1,400

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	795	3,107	2,805	2,697	2,774	1,646

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Fiscal Exposure[2]	3,404	3,128	2,812	3,396	2,020	1,712

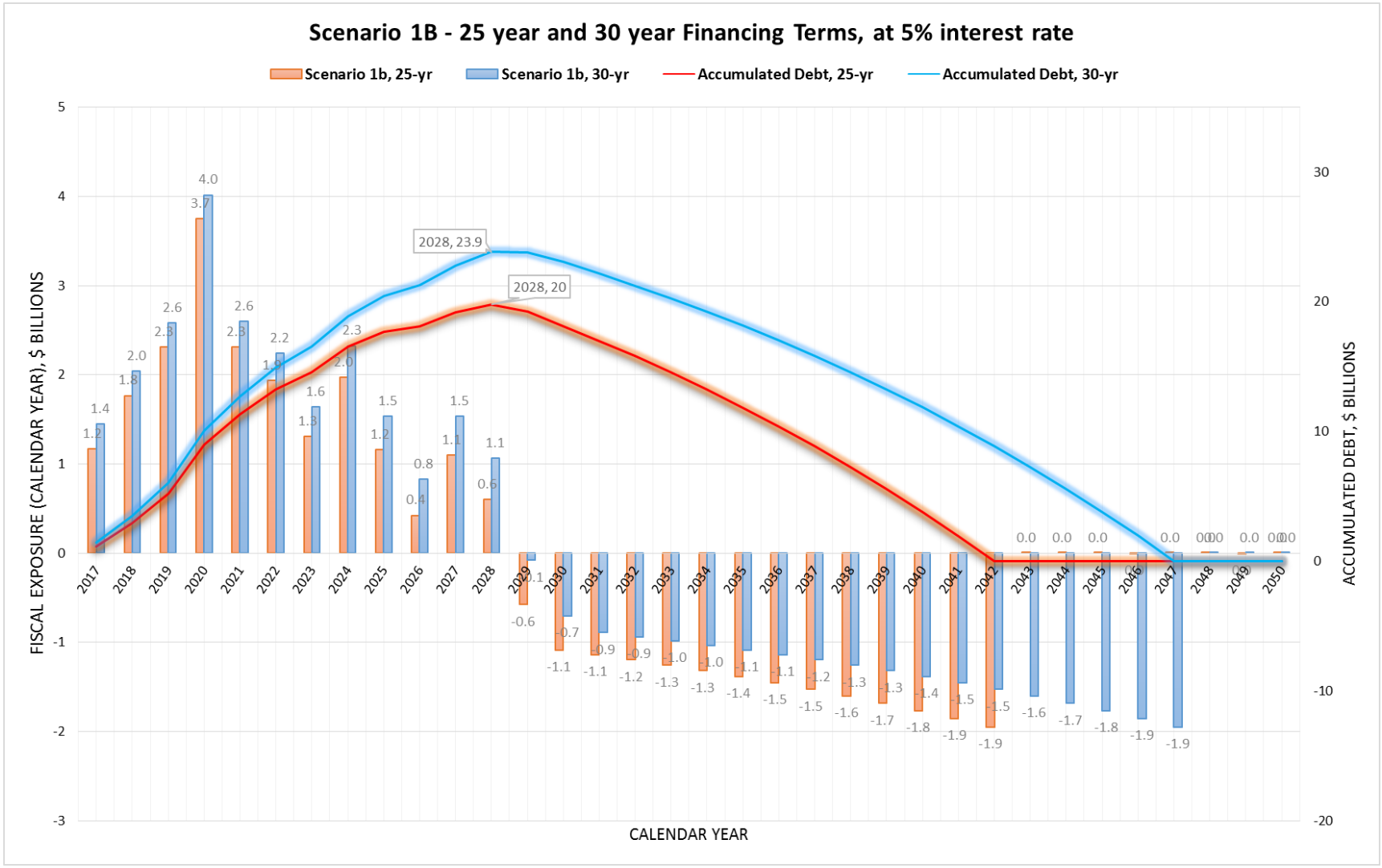
Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	851	3,335	3,049	2,958	3,052	1,943

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and $17-21 billion (at 3% interest rate), peaking in 2028.
- At 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately $33-$36 million compared to that at 5% interest rate.

1 Based on an interest rate of 5%.
2 Fiscal exposure based on equal monthly drawdown of debt.
3 Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

DRAFT

Scenario 1B *(Calendar Year Basis)*



DRAFT

Scenario 1B *(Calendar Year Basis)*

- Scenario 1b: Moderate GA financing, with delayed increase, paying initially in a year $1.1 billion below the true cost of GA. Then limits, when consumers start to "pay down", of no more than $2 billion per year above the true cost of GA
  - On a calendar year basis, annual interest cost peaks at $1 billion ($1.2 billion) , with cumulative interest costs of about $15 billion ($21 billion), under a 25-year (or 30-year) financing term

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Fiscal Exposure[2]	1,168	1,765	2,311	3,750	2,311	1,933

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	292	1,317	1,901	2,671	3,391	2,217

Scenario 1b - 30-yr amortization	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Fiscal Exposure[2]	1,449	2,040	2,581	4,016	2,598	2,241

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-2022**
	362	1,597	2,175	2,940	3,662	2,508

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 and $17-21 billion (at 3% interest rate), peaking in 2028.
- At 3.5%, the highest fiscal exposure will occur in 2020-21, decreasing by approximately $118-$134 million compared to that at 5% interest rate.

1 Based on an interest rate of 5%.
2 Fiscal exposure based on equal monthly drawdown of debt.
3 Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also depend on decision on accounting treatment.

GA Financing:
Interest Rate Base Scenario & Sensitivities
March 1, 2017, Energy Deck Case

March 2017

GA Financing *(Calendar Year Basis) – (**Effective January 1, 2017**)* March 1 Deck

- The interest cost estimates are based on Ministry of Energy estimates of the Global Adjustment cost amounts to be deferred as per its modelling as at March 1, 2017.
  - GA deferral estimates are subject to updates from the Ministry of Energy.
  - Actual annual and cumulative interest costs are very sensitive to actual borrowing rates. Table below is illustrative.
  - Sensitivities shown on lower interest rates assume faster debt pay down. Alternatively, pay down could be stretched out, but would result in relatively higher cumulative interest costs than shown for that interest rate.
- Interest cost estimates are slightly adjusted from Ministry of Energy amounts, to reflect in-year interest costs. Energy's base case interest costs shown were an assumed 5%, compounded monthly, calculated in the following year, with a term of 30-years (2047).

Interest Rate	Peak Annual Interest Cost	Total Life-cycle Accumulated Interest Costs	Term (Approximate)
3.5%	$0.879 billion in 2027	$12.6 billion	2042 (25-year term)
4.2%	$1.1 billion in 2027	$17.4 billion	2044 (27-year term)
5.0%	$1.4 billion in 2028	$25.1 billion	2047 (30-year term)

Total GA deferral amount being financed is approximately $20.3 billion (plus deferred, capitalised interest, that can increase peak debt to about $28 bn under the 5% scenario). If interest is paid and passed through in each period, more GA would have to be deferred to achieve the same net rate impact; however, there would be lower cumulative interest costs than modelled.

Base Scenario – *5% Interest Rate* with GA draw downs occurring on an equal monthly basis.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655
Annual Interest Cost	58	189	327	485	658	822	980	1,120	1,244	1,337	1,389	1,396	1,353	1,307	1,260	1,209
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655	23,622

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	23,622	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	
Annual Interest Cost	1,156	1,101	1,043	981	917	849	778	703	624	541	454	363	267	166	60	**25,137**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	
Accumulated debt in present year	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	2	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.
2 Higher interest rates results in extended the term of the financing. It is assumed that a cap of $2.242 bn above the true cost of GA in any given year is continued to be applied to repay any remaining debt. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period. In this Scenario, the term would be extended to Year 2056.

Provided in Response to Request from the Financial Accountability Officer: Confidential -- subject to the disclosure restrictions under the Cabinet records order-in-council

GA Financing *(Calendar Year Basis) – (**Effective July 1, 2017**)*

March 1 Deck

- Ministry of Energy modelling estimates provided have been based on a full-year of GA deferral in 2017. Annual and cumulative interest and debt estimates would be sensitive to an in-year start date of, e.g., July 1, 2017, as below.
  - Otherwise, as before, modelling is based on Ministry of Energy estimates of the Global Adjustment cost amounts to be deferred as per its modelling as at March 1, 2017.
  - GA deferral cost estimates are subject to updates from the Ministry of Energy.
  - Actual annual and cumulative interest costs are very sensitive to actual borrowing rates. Table below is illustrative.
  - Sensitivities shown on lower interest rates assume faster debt pay down. Alternatively, pay down could be stretched out, but would result in relatively higher cumulative interest costs than shown for that interest rate.
- Interest cost estimates are adjusted from Ministry of Energy amounts, to reflect in-year interest costs and an assumed July 1, 2017 implementation date. Half-a-year of reduced deferred GA significantly reduces estimated cumulative interest costs.

Interest Rate	Peak Annual Interest Cost	Total Life-cycle Accumulated Interest Costs	Term (Approximate)
3.5%	$0.817 billion in 2027	$11 billion	2041 (24-year term)
4.2%	$1.0 billion in 2027	$14.9 billion	2042 (25-year term)
5.0%	$1.3 billion in 2028	$21.0 billion	2045 (28-year term)

Total GA deferral amount being financed is approximately $19.1 billion (plus deferred, capitalised interest, that can increase peak debt to about $26 bn under the 5% scenario). If interest is paid and passed through in each period, more GA would have to be deferred to achieve the same net rate impact; however, there would be lower cumulative interest costs than modelled.

Base Scenario – *5% Interest Rate* with GA draw downs occurring on an equal monthly basis.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	1,277	3,908	6,667	10,154	13,395	16,592	19,526	21,943	24,304	25,340	26,194	25,240	24,238	23,184	22,077
Annual Interest Cost	26	124	258	413	581	742	896	1,031	1,151	1,239	1,286	1,288	1,239	1,188	1,134	1,077
Additional GA Debt Drawdown Required	1,250	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	1,277	3,908	6,667	10,154	13,395	16,592	19,526	21,943	24,304	25,340	26,194	25,240	24,238	23,184	22,077	20,912

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	20,912	19,689	18,402	17,050	15,629	14,135	12,564	10,914	9,178	7,354	5,437	3,421	1,303	0	0	
Annual Interest Cost	1,018	955	889	820	748	671	591	506	417	324	226	123	15	0	0	20,978
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,317	0	0	
Accumulated debt in present year	19,689	18,402	17,050	15,629	14,135	12,564	10,914	9,178	7,354	5,437	3,421	1,303	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.
2 Higher interest rates results in extended the term of the financing. It is assumed that a cap of $2.242 bn above the true cost of GA in any given year is continued to be applied to repay any remaining debt. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period. In this Scenario, the term would be extended to Year 2056.

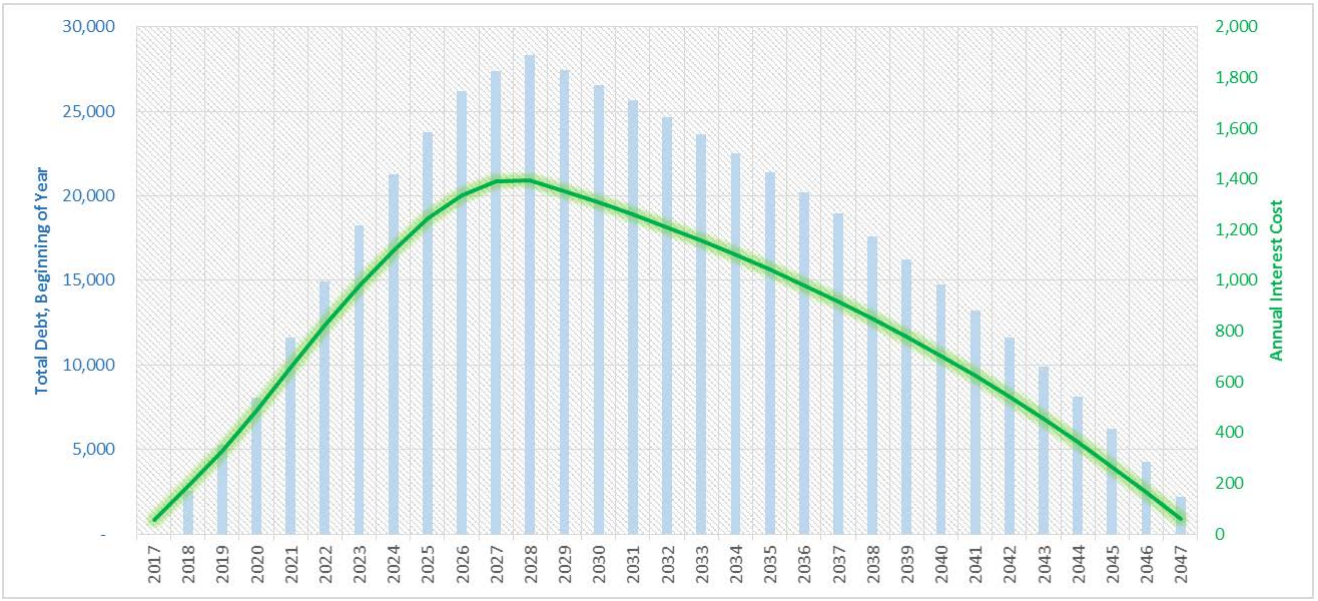
Provided in Response to Request from the Financial Accountability Officer: Confidential -- subject to the disclosure restrictions under the Cabinet records order-in-council

APPENDIX

Effective Date: January 1, 2017

GA Financing (Base, 5%)

(Calendar Year Basis)
*(**Effective January 1, 2017**)* *March 1 Deck*



At an **Interest Rate of 5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2028 at approximately $1.4B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655
Annual Interest Cost	58	189	327	485	658	822	980	1,120	1,244	1,337	1,389	1,396	1,353	1,307	1,260	1,209
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655	23,622

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	23,622	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	
Annual Interest Cost	1,156	1,101	1,043	981	917	849	778	703	624	541	454	363	267	166	60	**25,137**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	
Accumulated debt in present year	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	2	

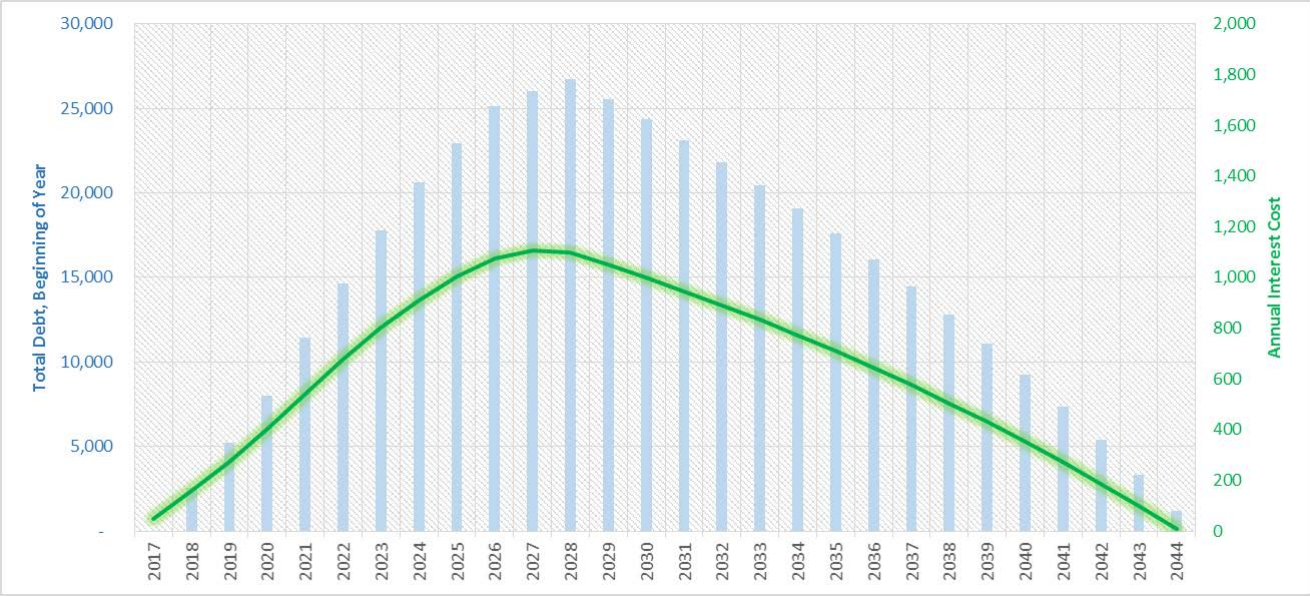
Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%.
2 To forecast the repayment of the remaining balance, a cap of $2.242 bn above the true cost of GA in any given year is applied. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period.

Provided in Response to Request from the Financial Accountability Officer: Confidential -- subject to the disclosure restrictions under the Cabinet records order-in-council

GA Financing: 4.2%

(Calendar Year Basis)
*(**Effective January 1, 2017**)*

March 1 Deck



At an **Interest Rate of 4.2%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $1.1B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,549	5,215	7,988	11,465	14,667	17,797	20,637	22,933	25,149	26,019	26,692	25,550	24,358	23,116	21,821
Annual Interest Cost	49	158	272	402	543	676	802	911	1,006	1,073	1,106	1,099	1,050	999	946	891
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,549	5,215	7,988	11,465	14,667	17,797	20,637	22,933	25,149	26,019	26,692	25,550	24,358	23,116	21,821	20,470

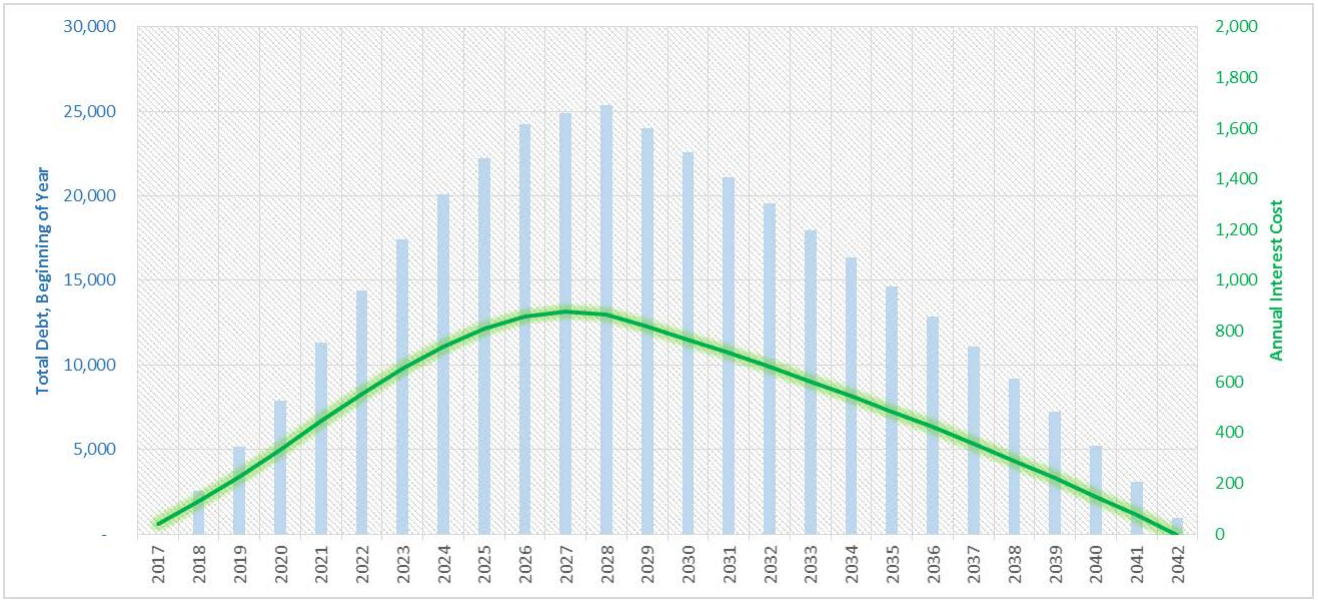
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	20,470	19,061	17,592	16,060	14,462	12,797	11,059	9,248	7,358	5,388	3,334	1,191	0	0	0	
Annual Interest Cost	833	772	710	644	576	504	430	352	271	187	99	7	0	0	0	17,367
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,199	0	0	0	
Accumulated debt in present year	19,061	17,592	16,060	14,462	12,797	11,059	9,248	7,358	5,388	3,334	1,191	0	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 4.2%.

GA Financing: 3.5%

(Calendar Year Basis)
*(**Effective January 1, 2017**)*

March 1 Deck



At an **Interest Rate of 3.5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $879M.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,541	5,180	7,906	11,311	14,417	17,423	20,113	22,237	24,258	24,915	25,361	23,985	22,561	21,085	19,557
Annual Interest Cost	41	131	225	331	445	553	653	738	811	860	879	866	817	766	714	659
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,541	5,180	7,906	11,311	14,417	17,423	20,113	22,237	24,258	24,915	25,361	23,985	22,561	21,085	19,557	17,975

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	17,975	16,336	14,639	12,882	11,063	9,178	7,227	5,206	3,113	946	0	0	0	0	0	
Annual Interest Cost	603	545	484	422	357	290	221	149	74	34	0	0	0	0	0	**12,665**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-980	0	0	0	0	0	
Accumulated debt in present year	16,336	14,639	12,882	11,063	9,178	7,227	5,206	3,113	946	0	0	0	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 3.5%.

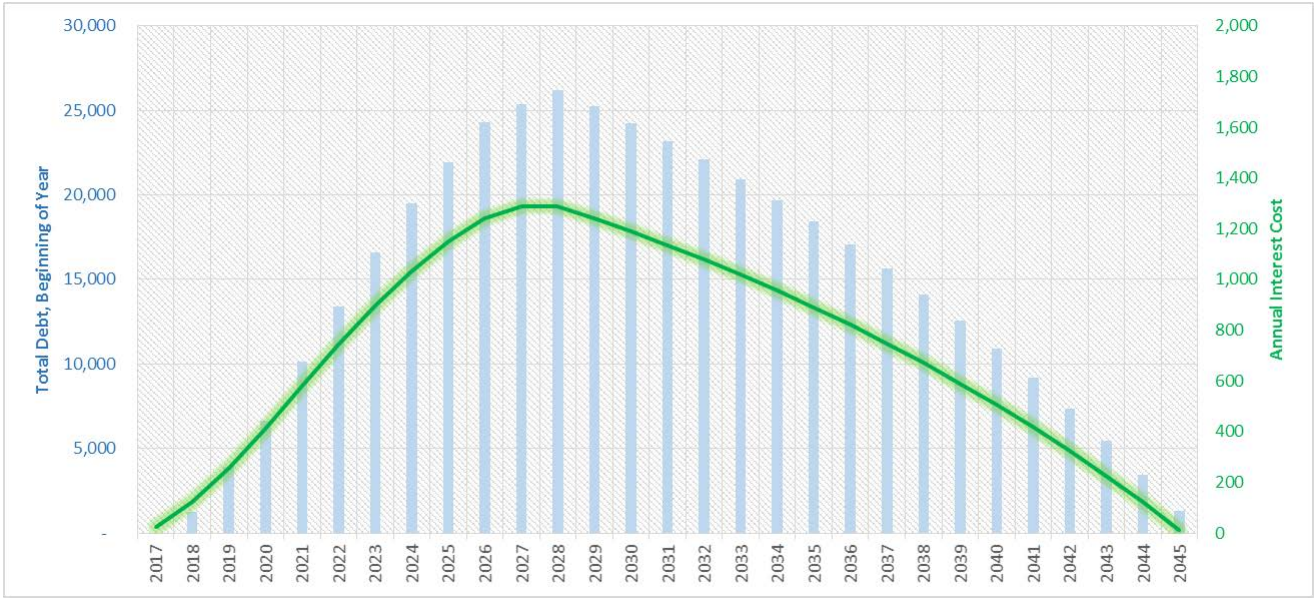
Provided in Response to Request from the Financial Accountability Officer: Confidential -- subject to the disclosure restrictions under the Cabinet records order-in-council

APPENDIX

Effective Date: July 1, 2017

GA Financing (Base, 5%) *(Calendar Year Basis)* ***(Effective July1, 2017)***

March 1 Deck



At an **Interest Rate of 5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2028 at approximately $1.3B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	1,277	3,908	6,667	10,154	13,395	16,592	19,526	21,943	24,304	25,340	26,194	25,240	24,238	23,184	22,077
Annual Interest Cost	26	124	258	413	581	742	896	1,031	1,151	1,239	1,286	1,288	1,239	1,188	1,134	1,077
Additional GA Debt Drawdown Required	1,250	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	1,277	3,908	6,667	10,154	13,395	16,592	19,526	21,943	24,304	25,340	26,194	25,240	24,238	23,184	22,077	20,912

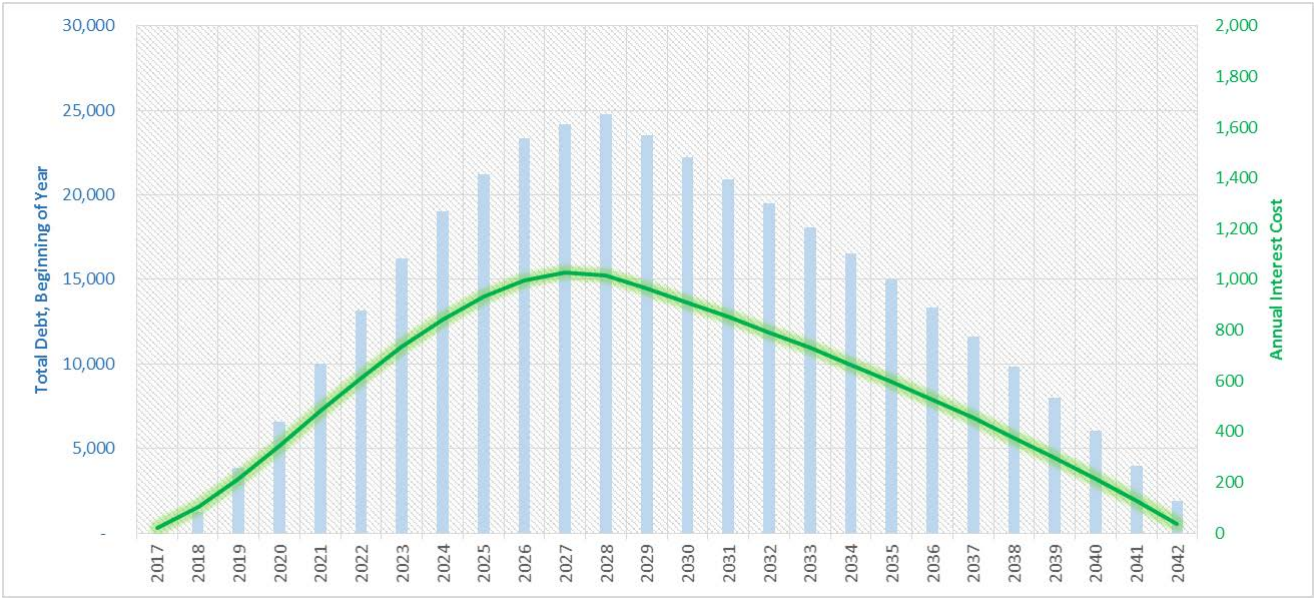
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	20,912	19,689	18,402	17,050	15,629	14,135	12,564	10,914	9,178	7,354	5,437	3,421	1,303	0	0	
Annual Interest Cost	1,018	955	889	820	748	671	591	506	417	324	226	123	15	0	0	**20,978**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,317	0	0	
Accumulated debt in present year	19,689	18,402	17,050	15,629	14,135	12,564	10,914	9,178	7,354	5,437	3,421	1,303	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%.
2 To forecast the repayment of the remaining balance, a cap of $2.242 bn above the true cost of GA in any given year is applied. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period.

Provided in Response to Request from the Financial Accountability Officer: Confidential -- subject to the disclosure restrictions under the Cabinet records order-in-council

GA Financing: 4.2% *(Calendar Year Basis)* ***(Effective July 1, 2017)***

March 1 Deck



At an **Interest Rate of 4.2%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $1B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	1,272	3,884	6,600	10,017	13,157	16,222	18,994	21,220	23,364	24,157	24,750	23,524	22,246	20,914	19,524
Annual Interest Cost	22	103	215	342	481	611	734	840	932	996	1,026	1,016	964	909	852	792
Additional GA Debt Drawdown Required	1,250	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	1,272	3,884	6,600	10,017	13,157	16,222	18,994	21,220	23,364	24,157	24,750	23,524	22,246	20,914	19,524	18,075

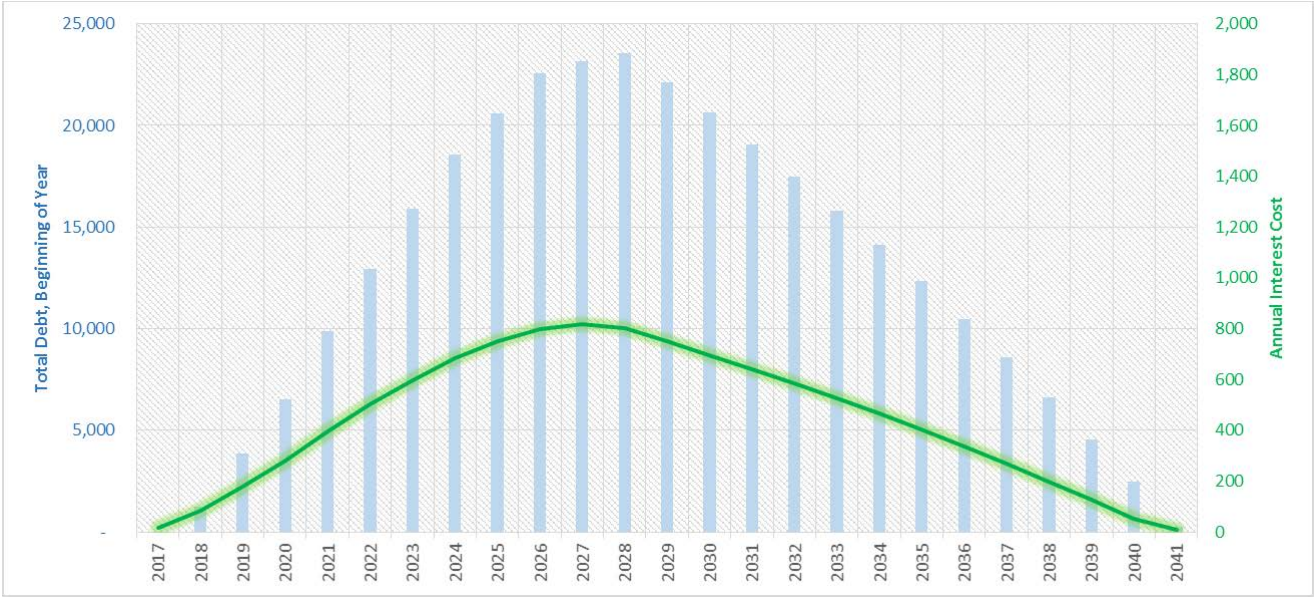
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	18,075	16,564	14,988	13,344	11,630	9,843	7,979	6,036	4,009	1,895	0	0	0	0	0	
Annual Interest Cost	730	666	598	528	454	378	298	215	128	38	0	0	0	0	0	**14,869**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,933	0	0	0	0	0	
Accumulated debt in present year	16,564	14,988	13,344	11,630	9,843	7,979	6,036	4,009	1,895	0	0	0	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 4.2%.

GA Financing: 5%

(Calendar Year Basis)
(Effective July 1, 2017)

March 1 Deck



At an **Interest Rate of 3.5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $817M.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	1,269	3,862	6,541	9,898	12,953	15,908	18,544	20,612	22,576	23,172	23,556	22,116	20,625	19,081	17,482
Annual Interest Cost	18	86	178	282	395	500	599	682	753	800	817	802	750	697	642	585
Additional GA Debt Drawdown Required	1,250	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	1,269	3,862	6,541	9,898	12,953	15,908	18,544	20,612	22,576	23,172	23,556	22,116	20,625	19,081	17,482	15,825

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	15,825	14,111	12,335	10,495	8,591	6,618	4,576	2,461	271	0	0	0	0	0	0	
Annual Interest Cost	527	466	402	337	269	199	126	51	10	0	0	0	0	0	0	10,974
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-280	0	0	0	0	0	0	
Accumulated debt in present year	14,111	12,335	10,495	8,591	6,618	4,576	2,461	271	0	0	0	0	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 3.5%.

Provided in Response to Request from the Financial Accountability Officer: Confidential -- subject to the disclosure restrictions under the Cabinet records order-in-council

DRAFT

GA Financing – Interest Scenarios

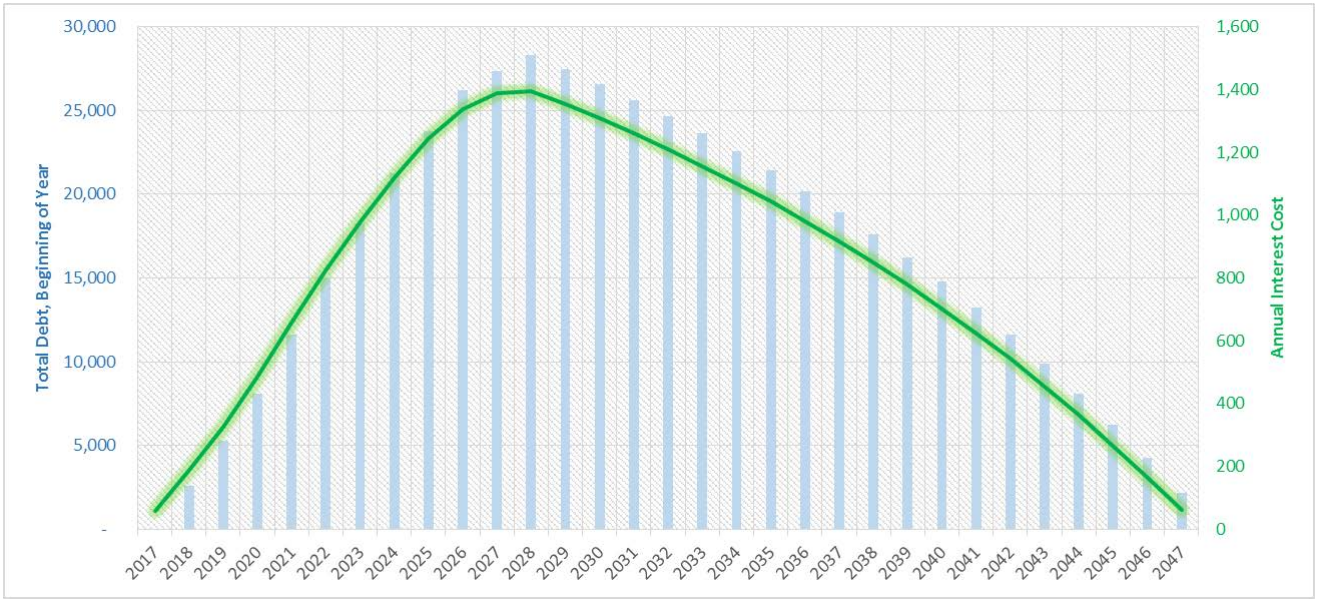
March 1, 2017 Deck

Corporate and Electricity Finance Division

March 6, 2017

DRAFT

GA Financing Comparison *(Calendar Year Basis)* *March 1 Deck*



At an **Interest Rate of 5%** with GA draw downs occurring on an equal monthly basis.
- Annual Interest Cost peaks in 2028 at approximately $1.4B.

At an Interest Rate of 3.5%, 4.2% and 6%, Interest Cost is approx. $12.6B, $17.4B and $44.3B[2], respectively.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655
Annual Interest Cost	24	189	327	485	658	822	980	1,120	1,244	1,337	1,389	1,396	1,353	1,307	1,260	1,209
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655	23,622

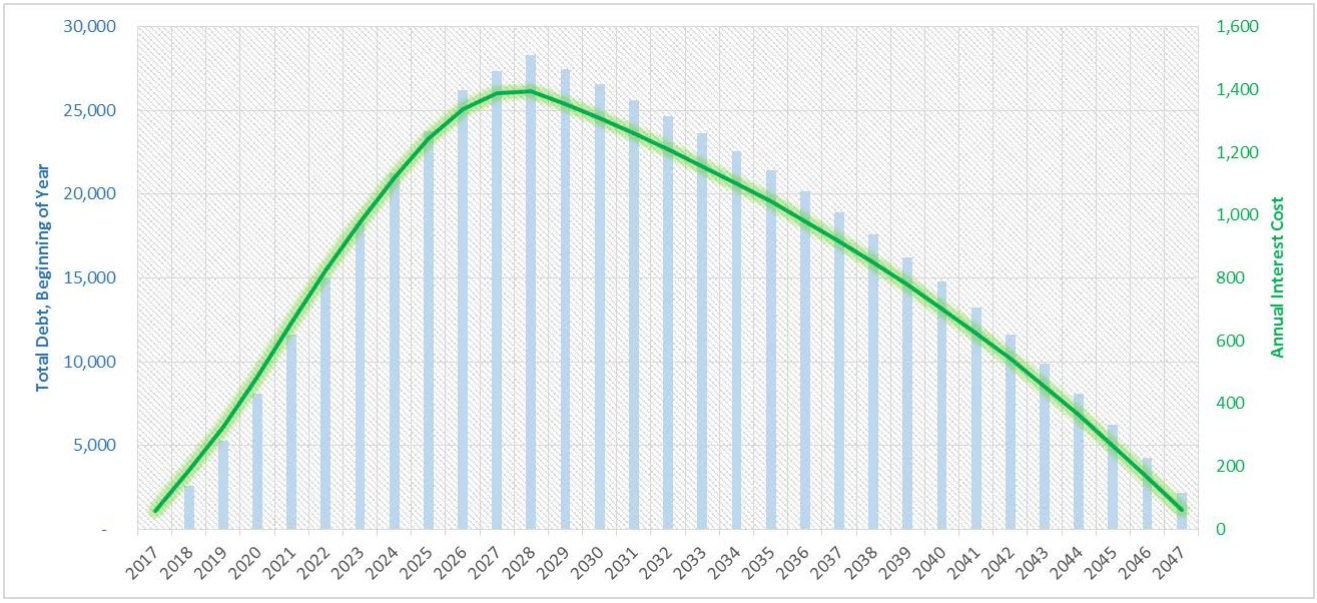
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	23,622	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	
Annual Interest Cost	1,156	1,101	1,043	981	917	849	778	703	624	541	454	363	267	166	60	**25,103**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	
Accumulated debt in present year	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	2	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.
2 Higher interest rates results in extended the term of the financing. It is assumed that a cap of $2.242 bn above the true cost of GA in any given year is continued to be applied to repay any remaining debt. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period.

DRAFT

GA Financing (Base) *(Calendar Year Basis)*

March 1 Deck



At an **Interest Rate of 5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2028 at approximately $1.4B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655
Annual Interest Cost	24	189	327	485	658	822	980	1,120	1,244	1,337	1,389	1,396	1,353	1,307	1,260	1,209
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655	23,622

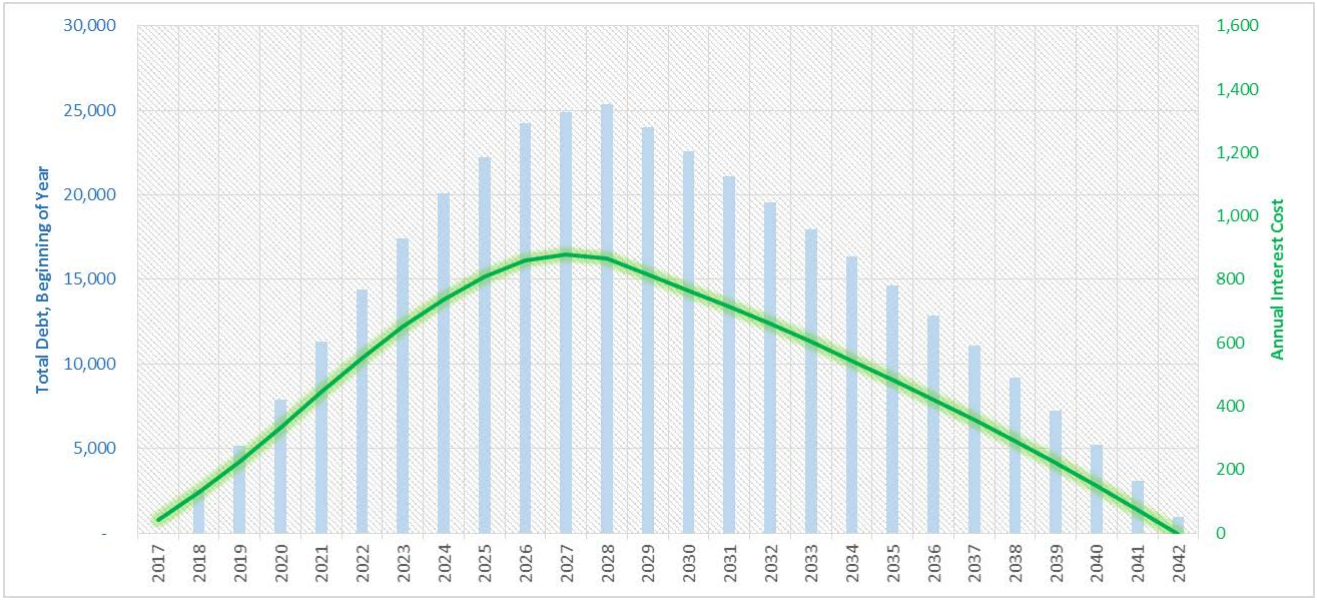
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	23,622	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	
Annual Interest Cost	1,156	1,101	1,043	981	917	849	778	703	624	541	454	363	267	166	60	**25,103**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	
Accumulated debt in present year	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	2	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.
2 To forecast the repayment of the remaining balance, a cap of $2.242 bn above the true cost of GA in any given year is applied. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period.

DRAFT

GA Financing *(Calendar Year Basis)*

March 1 Deck



At an **Interest Rate of 3.5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $879M.

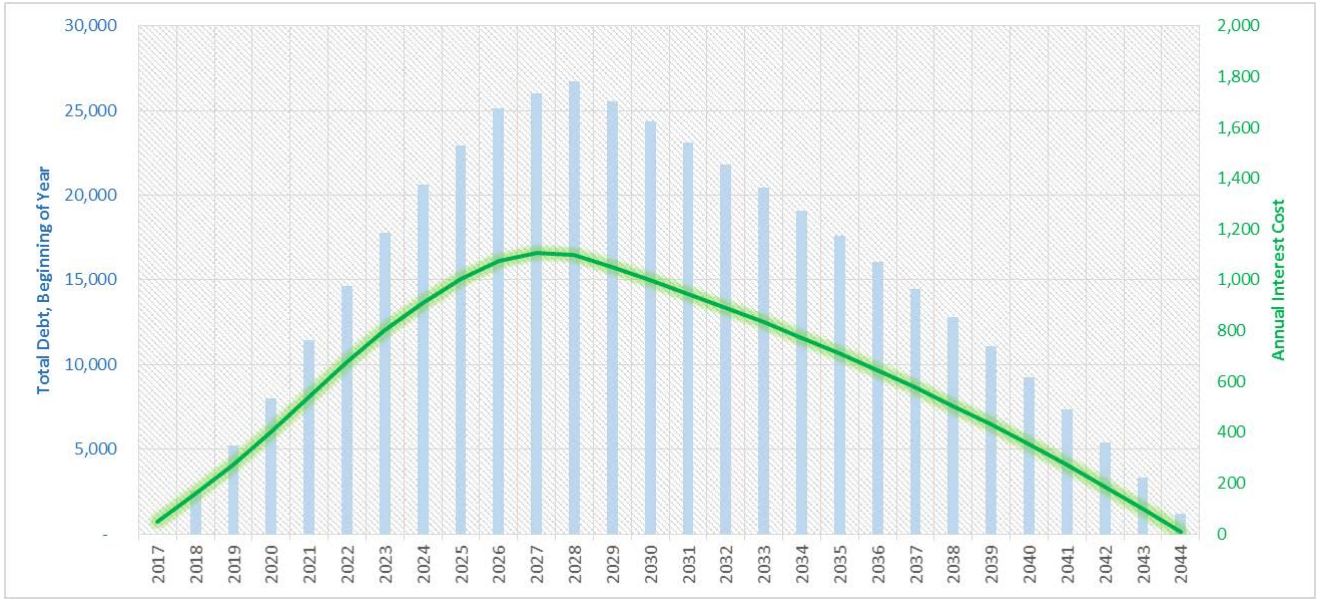
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,541	5,180	7,906	11,311	14,417	17,423	20,113	22,237	24,258	24,915	25,361	23,985	22,561	21,085	19,557
Annual Interest Cost	17	131	225	331	445	553	653	738	811	860	879	866	817	766	714	659
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,541	5,180	7,906	11,311	14,417	17,423	20,113	22,237	24,258	24,915	25,361	23,985	22,561	21,085	19,557	17,975

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	Total
Total Debt, Beginning of Year	17,975	16,336	14,639	12,882	11,063	9,178	7,227	5,206	3,113	946	
Annual Interest Cost	603	545	484	422	357	290	221	149	74	-3	**12,605**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-943	
Accumulated debt in present year	16,336	14,639	12,882	11,063	9,178	7,227	5,206	3,113	946	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 3.5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.

GA Financing *(Calendar Year Basis)*

March 1 Deck



At an **Interest Rate of 4.2%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $879M.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,549	5,215	7,988	11,465	14,667	17,797	20,637	22,933	25,149	26,019	26,692	25,550	24,358	23,116	21,821
Annual Interest Cost	20	158	272	402	543	676	802	911	1,006	1,073	1,106	1,099	1,050	999	946	891
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,549	5,215	7,988	11,465	14,667	17,797	20,637	22,933	25,149	26,019	26,692	25,550	24,358	23,116	21,821	20,470

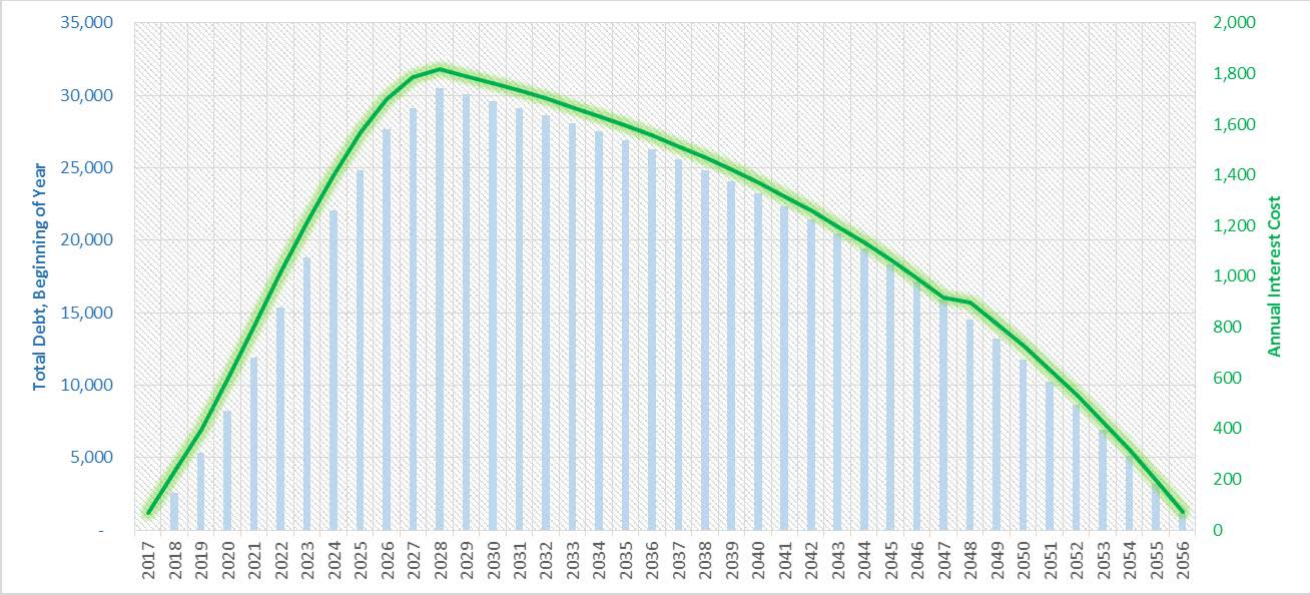
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	Total
Total Debt, Beginning of Year	20,470	19,061	17,592	16,060	14,462	12,797	11,059	9,248	7,358	5,388	3,334	1,191	
Annual Interest Cost	833	772	710	644	576	504	430	352	271	187	99	7	17,367
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,199	
Accumulated debt in present year	19,061	17,592	16,060	14,462	12,797	11,059	9,248	7,358	5,388	3,334	1,191	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 4.2%. Interest Cost in 2017 adjusted to represent implementation in July 2017.

DRAFT

GA Financing *(Calendar Year Basis)*

March 1 Deck



At an **Interest Rate of 6%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2028 at approximately $1.8B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,571	5,307	8,205	11,872	15,338	18,807	22,062	24,847	27,624	29,119	30,470	30,045	29,594	29,115	28,607
Annual Interest Cost	29	229	397	592	807	1,015	1,217	1,399	1,566	1,698	1,784	1,817	1,790	1,763	1,733	1,702
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,571	5,307	8,205	11,872	15,338	18,807	22,062	24,847	27,624	29,119	30,470	30,045	29,594	29,115	28,607	28,067

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	28,067	27,494	26,886	26,240	25,554	24,826	24,053	23,232	22,361	21,436	20,453	19,411	18,304	17,128	15,881	
Annual Interest Cost	1,668	1,633	1,596	1,556	1,513	1,469	1,421	1,370	1,316	1,259	1,199	1,135	1,066	994	917	44,315*
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	*(see note below)
Accumulated debt in present year	27,494	26,886	26,240	25,554	24,826	24,053	23,232	22,361	21,436	20,453	19,411	18,304	17,128	15,881	14,556	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.
2 To forecast the repayment of the remaining balance, a cap of $2.242 bn above the true cost of GA in any given year is applied. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period. In this Scenario, the repayment would be extended to Year 2056.

DRAFT

GA Financing – Interest Scenarios

March 1, 2017 Deck

Corporate and Electricity Finance Division

March 6, 2017

DRAFT

GA Financing Comparison *(Calendar Year Basis)* *March I Deck*

Interest Rate	Peak Annual Interest Cost	Total Accumulated Interest Costs
3.5%	$0.878 billion in 2027	$12.6 billion
4.2%	$1.1 billion in 2027	$17.3 billion
5.0%	$1.4 billion in 2028	$25.0 billion
6.0%	$1.8 billion in 2028	$43.9 billion[2]

Total amount being financed is approximately $20.3 billion

Base Scenario – *5% Interest Rate* with GA draw downs occurring on an equal monthly basis.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,530	5,225	8,052	11,610	14,925	18,200	21,216	23,719	26,172	27,303	28,257	27,409	26,518	25,581	24,596
Annual Interest Cost	29	188	325	483	656	821	978	1,118	1,242	1,334	1,387	1,394	1,350	1,305	1,257	1,206
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,530	5,225	8,052	11,610	14,925	18,200	21,216	23,719	26,172	27,303	28,257	27,409	26,518	25,581	24,596	23,561

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	23,561	22,473	21,329	20,126	18,862	17,534	16,137	14,669	13,126	11,504	9,799	8,007	6,123	4,142	2,061	
Annual Interest Cost	1,153	1,098	1,039	978	913	845	774	698	619	536	449	358	261	160	53	**25,007**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	
Accumulated debt in present year	22,473	21,329	20,126	18,862	17,534	16,137	14,669	13,126	11,504	9,799	8,007	6,123	4,142	2,061	0	

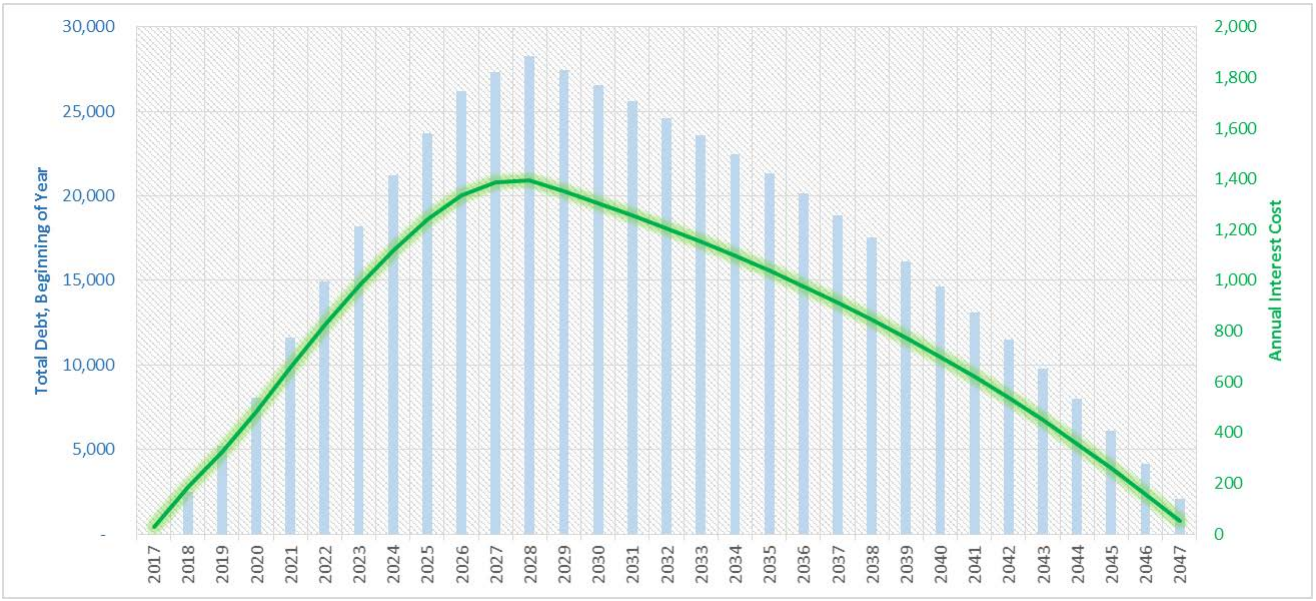
Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.
2 Higher interest rates results in extended the term of the financing. It is assumed that a cap of $2.242 bn above the true cost of GA in any given year is continued to be applied to repay any remaining debt. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period. In this Scenario, the term would be extended to Year 2056.

APPENDIX

DRAFT

GA Financing (Base) *(Calendar Year Basis)*

March 1 Deck



At an **Interest Rate of 5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2028 at approximately $1.4B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,530	5,225	8,052	11,610	14,925	18,200	21,216	23,719	26,172	27,303	28,257	27,409	26,518	25,581	24,596
Annual Interest Cost	29	188	325	483	656	821	978	1,118	1,242	1,334	1,387	1,394	1,350	1,305	1,257	1,206
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,530	5,225	8,052	11,610	14,925	18,200	21,216	23,719	26,172	27,303	28,257	27,409	26,518	25,581	24,596	23,561

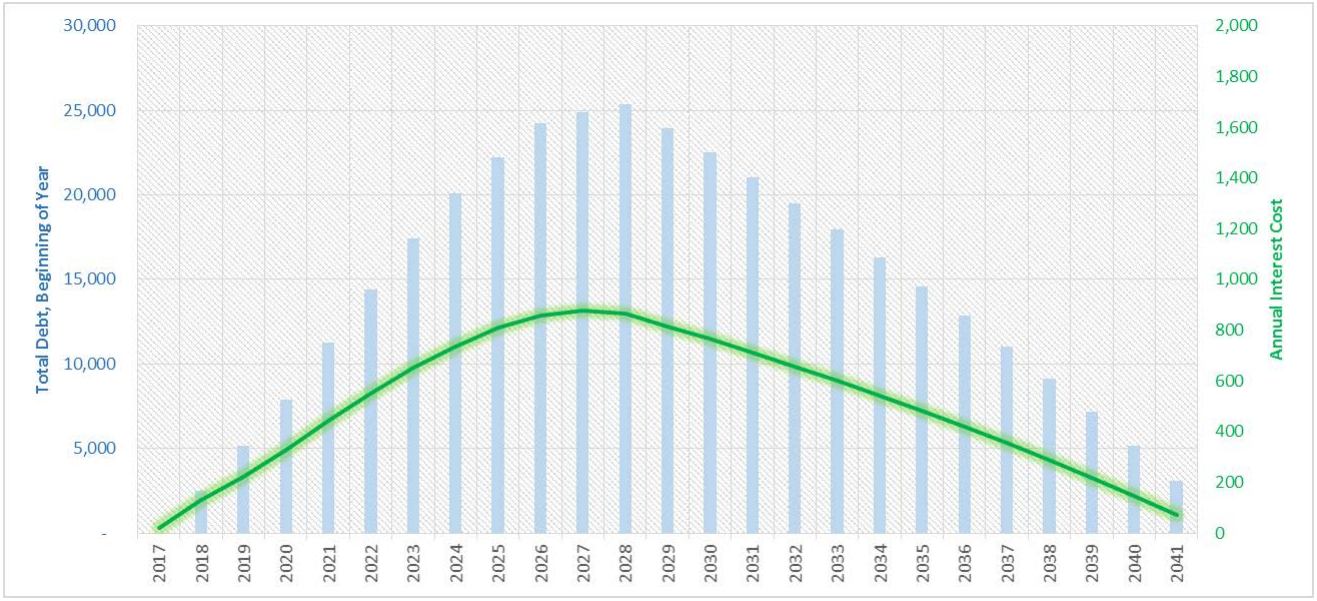
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	23,561	22,473	21,329	20,126	18,862	17,534	16,137	14,669	13,126	11,504	9,799	8,007	6,123	4,142	2,061	
Annual Interest Cost	1,153	1,098	1,039	978	913	845	774	698	619	536	449	358	261	160	53	**25,007**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	
Accumulated debt in present year	22,473	21,329	20,126	18,862	17,534	16,137	14,669	13,126	11,504	9,799	8,007	6,123	4,142	2,061	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.
2 To forecast the repayment of the remaining balance, a cap of $2.242 bn above the true cost of GA in any given year is applied. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period.

DRAFT

GA Financing *(Calendar Year Basis)*

March 1 Deck



At an **Interest Rate of 3.5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $878M.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,521	5,159	7,884	11,289	14,393	17,399	20,089	22,211	24,232	24,887	25,332	23,956	22,530	21,053	19,524
Annual Interest Cost	20	130	224	330	445	552	652	737	810	859	878	865	816	765	712	658
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,521	5,159	7,884	11,289	14,393	17,399	20,089	22,211	24,232	24,887	25,332	23,956	22,530	21,053	19,524	17,941

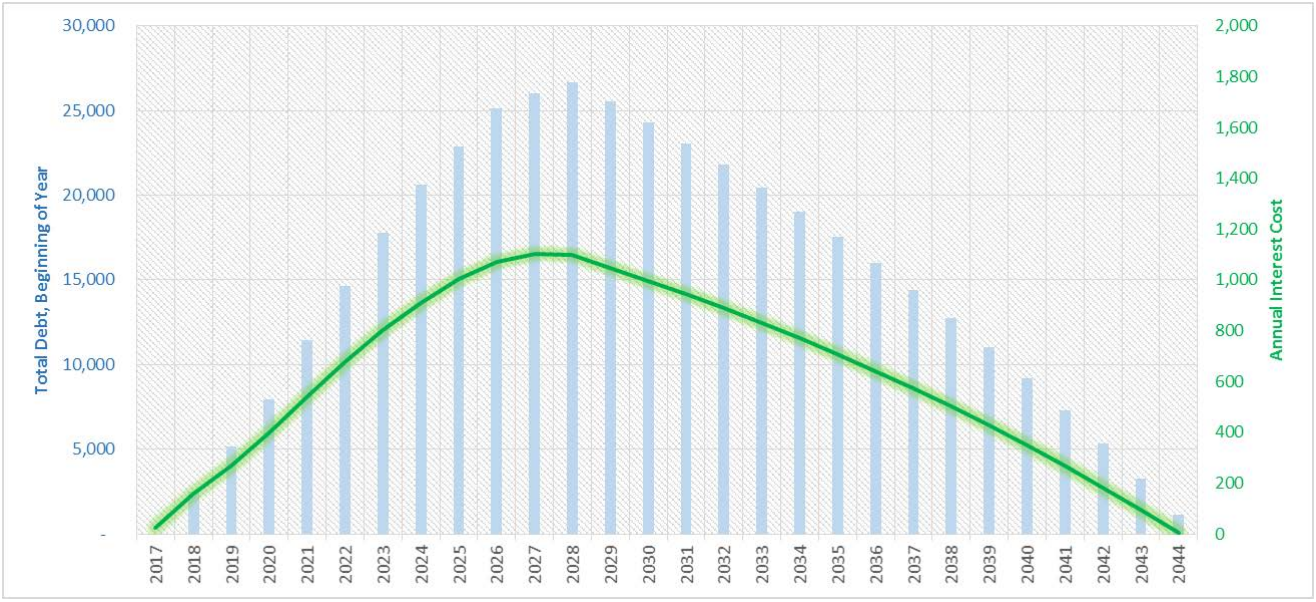
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	17,941	16,301	14,603	12,844	11,023	9,137	7,185	5,162	3,068							
Annual Interest Cost	602	543	483	421	356	289	219	147	73							12,585
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-3,141							
Accumulated debt in present year	16,301	14,603	12,844	11,023	9,137	7,185	5,162	3,068	0							

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 3.5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.

DRAFT

GA Financing *(Calendar Year Basis)*

March 1 Deck



At an **Interest Rate of 4.2%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $1.1B.

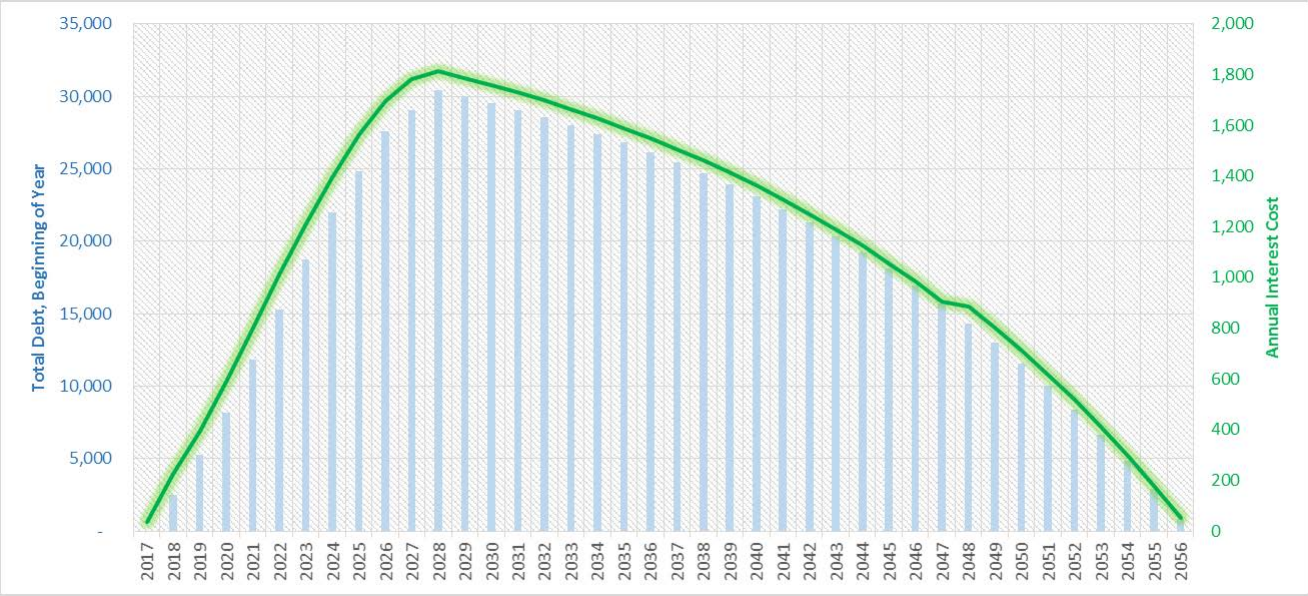
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,525	5,190	7,962	11,437	14,638	17,767	20,605	22,900	25,115	25,984	26,655	25,511	24,318	23,074	21,777
Annual Interest Cost	24	157	271	401	542	675	800	909	1,004	1,071	1,104	1,098	1,049	998	944	889
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,525	5,190	7,962	11,437	14,638	17,767	20,605	22,900	25,115	25,984	26,655	25,511	24,318	23,074	21,777	20,424

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	20,424	19,013	17,542	16,008	14,408	12,740	11,000	9,186	7,294	5,322	3,264	1,119				
Annual Interest Cost	831	770	707	642	573	502	427	350	269	184	96	4				**17,292**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,123				
Accumulated debt in present year	19,013	17,542	16,008	14,408	12,740	11,000	9,186	7,294	5,322	3,264	1,119	0				

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 4.2%. Interest Cost in 2017 adjusted to represent implementation in July 2017.

GA Financing *(Calendar Year Basis)*

March 1 Deck



At an **Interest Rate of 6%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2028 at approximately $1.8B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,536	5,270	8,166	11,830	15,294	18,760	22,012	24,794	27,568	29,059	30,407	29,978	29,523	29,039	28,526
Annual Interest Cost	35	227	395	590	804	1,012	1,214	1,396	1,563	1,695	1,780	1,813	1,786	1,758	1,728	1,697
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,536	5,270	8,166	11,830	15,294	18,760	22,012	24,794	27,568	29,059	30,407	29,978	29,523	29,039	28,526	27,981

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	27,981	27,403	26,789	26,137	25,445	24,710	23,930	23,101	22,222	21,288	20,297	19,245	18,128	16,942	15,682	
Annual Interest Cost	1,663	1,627	1,590	1,549	1,507	1,461	1,413	1,362	1,308	1,250	1,189	1,124	1,055	982	905	**43,954***
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	*(see note below)
Accumulated debt in present year	27,403	26,789	26,137	25,445	24,710	23,930	23,101	22,222	21,288	20,297	19,245	18,128	16,942	15,682	14,345	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 6%. Interest Cost in 2017 adjusted to represent implementation in July 2017.
2 To forecast the repayment of the remaining balance, a cap of $2.242 bn above the true cost of GA in any given year is applied. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period. In this Scenario, the term would be extended to Year 2056.

DRAFT

GA Financing – Interest Scenarios

March 1, 2017 Deck

Corporate and Electricity Finance Division

March 6, 2017

DRAFT

GA Financing Comparison *(Calendar Year Basis)* *March I Deck*

Interest Rate	Peak Annual Interest Cost	Total Accumulated Interest Costs
3.5%	$0.878 billion in 2027	$12.6 billion
4.2%	$1.1 billion in 2027	$17.3 billion
5.0%	$1.4 billion in 2028	$25.0 billion
6.0%	$1.8 billion in 2028	$43.9 billion[2]

Total amount being financed is approximately $20.3 billion

Base Scenario – *5% Interest Rate* with GA draw downs occurring on an equal monthly basis.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,530	5,225	8,052	11,610	14,925	18,200	21,216	23,719	26,172	27,303	28,257	27,409	26,518	25,581	24,596
Annual Interest Cost	29	188	325	483	656	821	978	1,118	1,242	1,334	1,387	1,394	1,350	1,305	1,257	1,206
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,530	5,225	8,052	11,610	14,925	18,200	21,216	23,719	26,172	27,303	28,257	27,409	26,518	25,581	24,596	23,561

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	23,561	22,473	21,329	20,126	18,862	17,534	16,137	14,669	13,126	11,504	9,799	8,007	6,123	4,142	2,061	
Annual Interest Cost	1,153	1,098	1,039	978	913	845	774	698	619	536	449	358	261	160	53	**25,007**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	
Accumulated debt in present year	22,473	21,329	20,126	18,862	17,534	16,137	14,669	13,126	11,504	9,799	8,007	6,123	4,142	2,061	0	

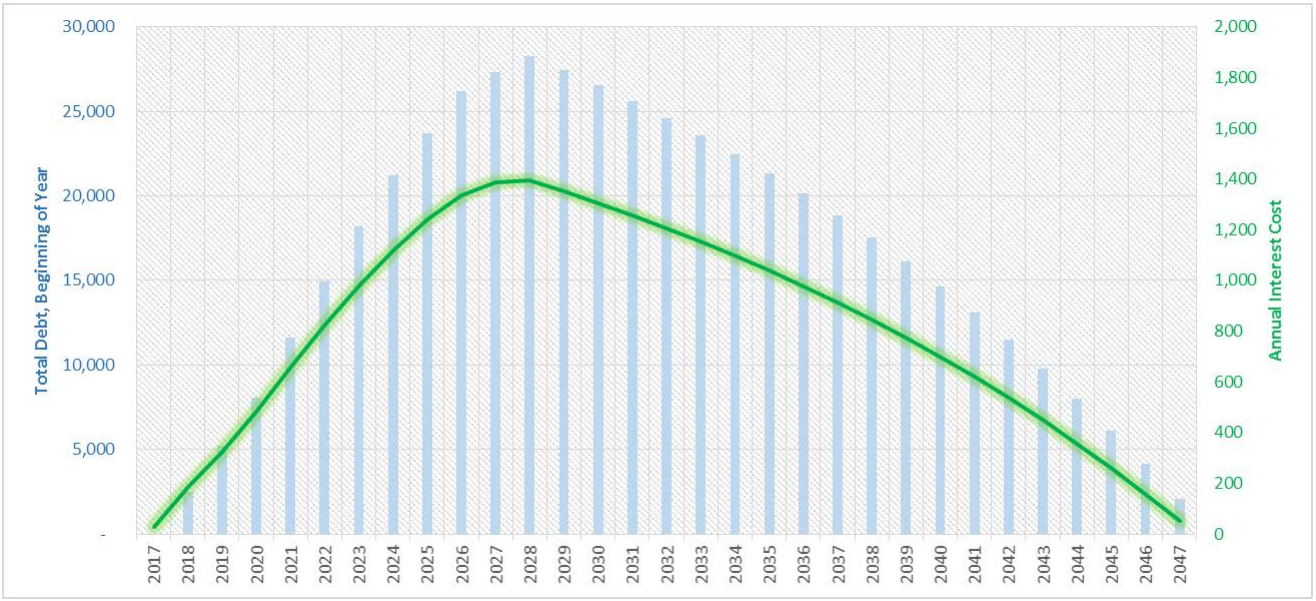
Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.
2 Higher interest rates results in extended the term of the financing. It is assumed that a cap of $2.242 bn above the true cost of GA in any given year is continued to be applied to repay any remaining debt. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period. In this Scenario, the term would be extended to Year 2056.

APPENDIX

DRAFT

GA Financing (Base) *(Calendar Year Basis)*

March 1 Deck



At an **Interest Rate of 5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2028 at approximately $1.4B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,530	5,225	8,052	11,610	14,925	18,200	21,216	23,719	26,172	27,303	28,257	27,409	26,518	25,581	24,596
Annual Interest Cost	29	188	325	483	656	821	978	1,118	1,242	1,334	1,387	1,394	1,350	1,305	1,257	1,206
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,530	5,225	8,052	11,610	14,925	18,200	21,216	23,719	26,172	27,303	28,257	27,409	26,518	25,581	24,596	23,561

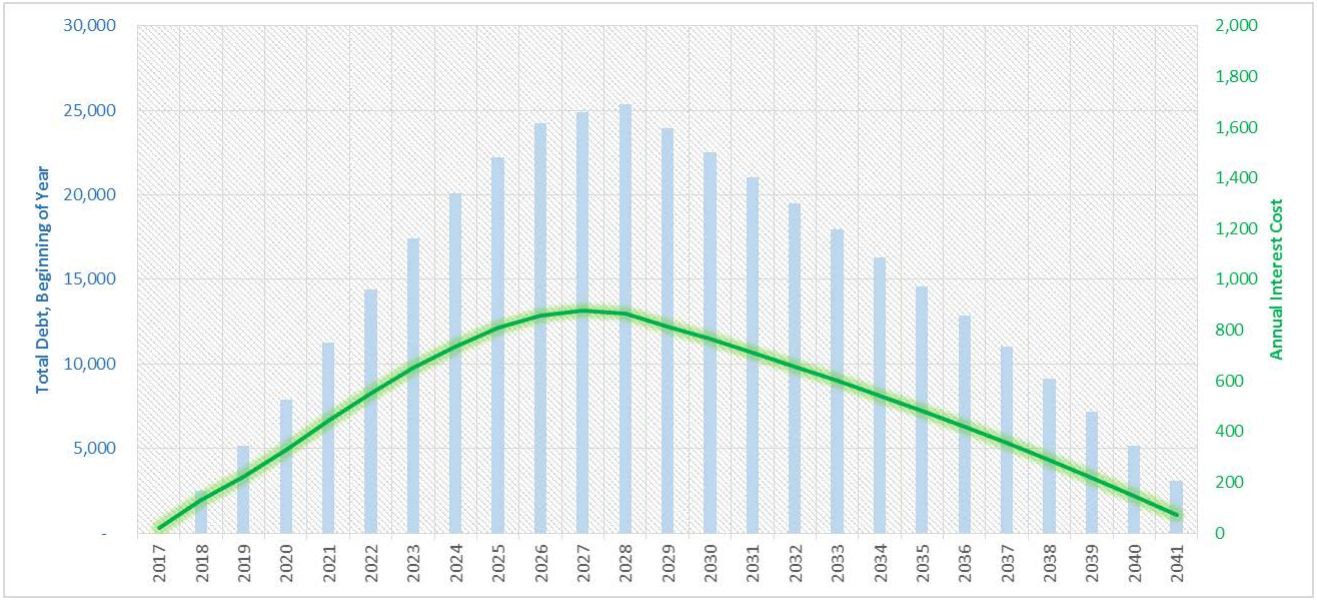
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	23,561	22,473	21,329	20,126	18,862	17,534	16,137	14,669	13,126	11,504	9,799	8,007	6,123	4,142	2,061	
Annual Interest Cost	1,153	1,098	1,039	978	913	845	774	698	619	536	449	358	261	160	53	**25,007**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	
Accumulated debt in present year	22,473	21,329	20,126	18,862	17,534	16,137	14,669	13,126	11,504	9,799	8,007	6,123	4,142	2,061	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.
2 To forecast the repayment of the remaining balance, a cap of $2.242 bn above the true cost of GA in any given year is applied. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period.

DRAFT

GA Financing *(Calendar Year Basis)*

March 1 Deck



At an **Interest Rate of 3.5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $878M.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,521	5,159	7,884	11,289	14,393	17,399	20,089	22,211	24,232	24,887	25,332	23,956	22,530	21,053	19,524
Annual Interest Cost	20	130	224	330	445	552	652	737	810	859	878	865	816	765	712	658
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,521	5,159	7,884	11,289	14,393	17,399	20,089	22,211	24,232	24,887	25,332	23,956	22,530	21,053	19,524	17,941

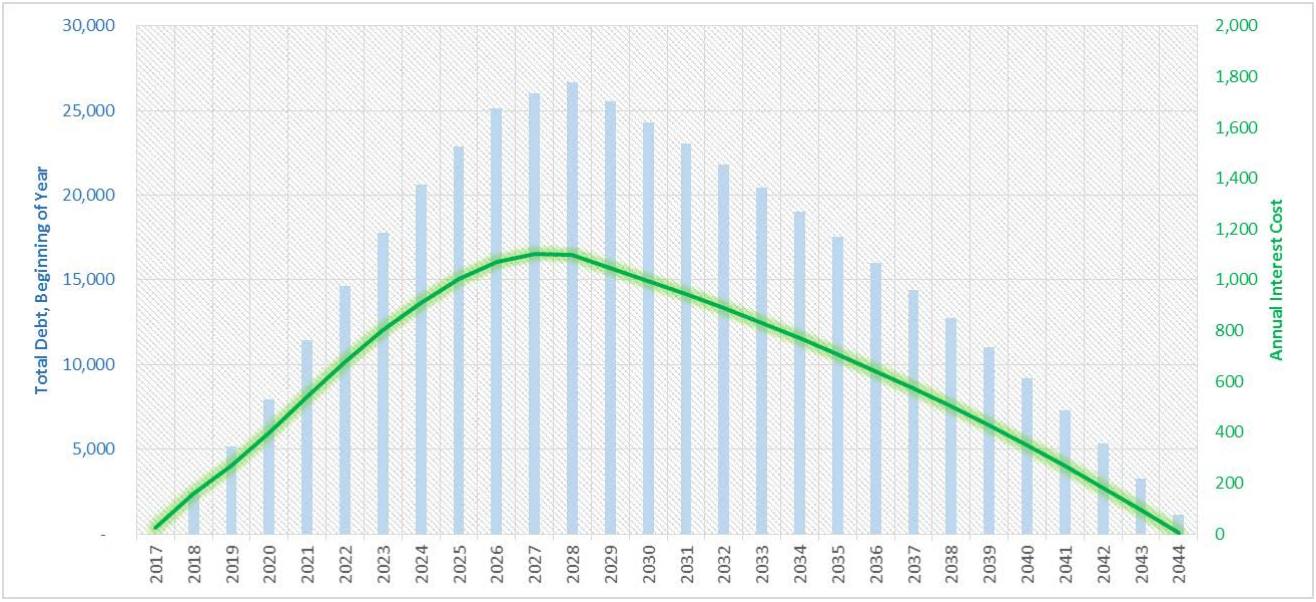
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	17,941	16,301	14,603	12,844	11,023	9,137	7,185	5,162	3,068							
Annual Interest Cost	602	543	483	421	356	289	219	147	73							12,585
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-3,141							
Accumulated debt in present year	16,301	14,603	12,844	11,023	9,137	7,185	5,162	3,068	0							

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 3.5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.

DRAFT

GA Financing *(Calendar Year Basis)*

March 1 Deck



At an **Interest Rate of 4.2%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $1.1B.

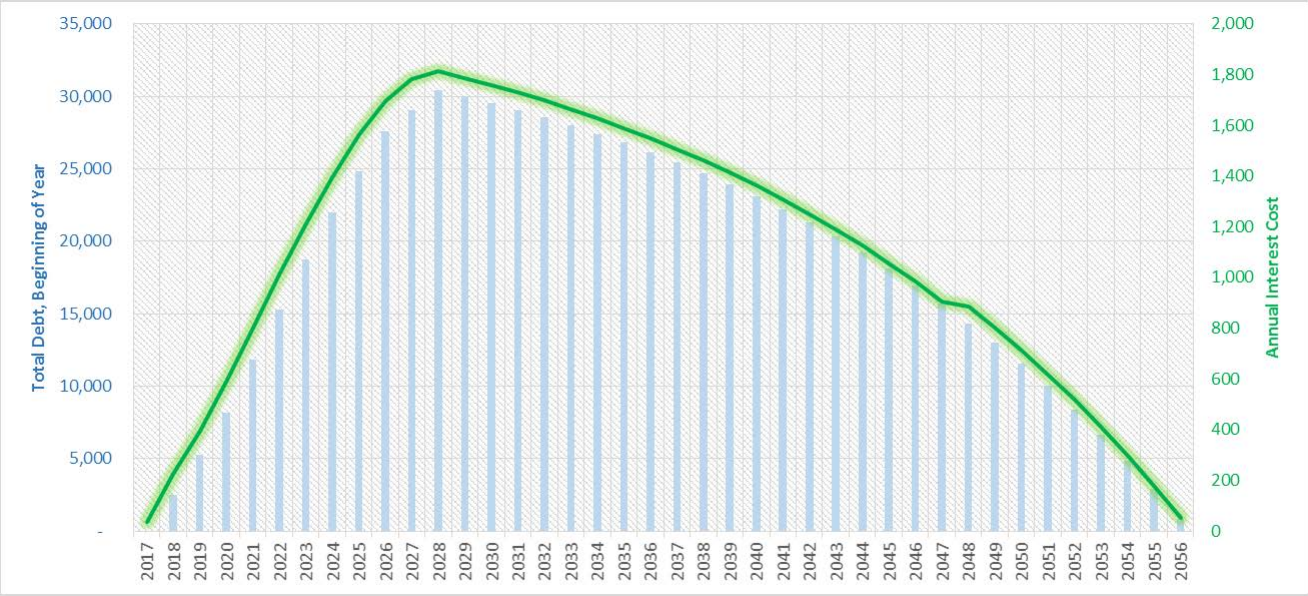
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,525	5,190	7,962	11,437	14,638	17,767	20,605	22,900	25,115	25,984	26,655	25,511	24,318	23,074	21,777
Annual Interest Cost	24	157	271	401	542	675	800	909	1,004	1,071	1,104	1,098	1,049	998	944	889
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,525	5,190	7,962	11,437	14,638	17,767	20,605	22,900	25,115	25,984	26,655	25,511	24,318	23,074	21,777	20,424

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	20,424	19,013	17,542	16,008	14,408	12,740	11,000	9,186	7,294	5,322	3,264	1,119				
Annual Interest Cost	831	770	707	642	573	502	427	350	269	184	96	4				**17,292**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,123				
Accumulated debt in present year	19,013	17,542	16,008	14,408	12,740	11,000	9,186	7,294	5,322	3,264	1,119	0				

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 4.2%. Interest Cost in 2017 adjusted to represent implementation in July 2017.

GA Financing *(Calendar Year Basis)*

March 1 Deck



At an **Interest Rate of 6%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2028 at approximately $1.8B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,536	5,270	8,166	11,830	15,294	18,760	22,012	24,794	27,568	29,059	30,407	29,978	29,523	29,039	28,526
Annual Interest Cost	35	227	395	590	804	1,012	1,214	1,396	1,563	1,695	1,780	1,813	1,786	1,758	1,728	1,697
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,536	5,270	8,166	11,830	15,294	18,760	22,012	24,794	27,568	29,059	30,407	29,978	29,523	29,039	28,526	27,981

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	27,981	27,403	26,789	26,137	25,445	24,710	23,930	23,101	22,222	21,288	20,297	19,245	18,128	16,942	15,682	
Annual Interest Cost	1,663	1,627	1,590	1,549	1,507	1,461	1,413	1,362	1,308	1,250	1,189	1,124	1,055	982	905	**43,954***
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	*(see note below)
Accumulated debt in present year	27,403	26,789	26,137	25,445	24,710	23,930	23,101	22,222	21,288	20,297	19,245	18,128	16,942	15,682	14,345	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 6%. Interest Cost in 2017 adjusted to represent implementation in July 2017.
2 To forecast the repayment of the remaining balance, a cap of $2.242 bn above the true cost of GA in any given year is applied. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period. In this Scenario, the term would be extended to Year 2056.

DRAFT

GA Financing – Interest Scenarios

March 1, 2017 Deck

Corporate and Electricity Finance Division

March 6, 2017

DRAFT

GA Financing *(Calendar Year Basis)*

March 1 Deck

- The following interest cost estimates are based on Ministry of Energy estimates of the Global Adjustment cost amounts to be deferred in its submission. GA deferral and interest cost estimates are subject to updates from the Ministry of Energy.
  - Actual interest costs are very sensitive to actual borrowing costs. Table below is illustrative.
  - Sensitivities on lower interest rates shown assume faster debt paydown. Alternatively, pay down could be stretched out, but would result in higher cumulative interest costs.
- Interest cost estimates are slightly adjusted from Ministry of Energy amounts, to show amounts starting in 2017 on an assumed July 1, 2017 implementation (affects all years, due to interest capitalisation and compounding) and equal monthly debt drawdown. Energy's base case interest costs shown were an assumed 5%, compounded monthly, with annual drawdowns.

Interest Rate	Peak Annual Interest Cost	Total Life-cycle Accumulated Interest Costs
3.5%	$0.878 billion in 2027	$12.6 billion
4.2%	$1.1 billion in 2027	$17.3 billion
5.0%	$1.4 billion in 2028	$25.0 billion

Total GA deferral amount being financed is approximately $20.3 billion (plus deferred, capitalised interest, that can increase peak debt to about $28 bn under the 5% scenario.

Base Scenario – *5% Interest Rate* with GA draw downs occurring on an equal monthly basis.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,530	5,225	8,052	11,610	14,925	18,200	21,216	23,719	26,172	27,303	28,257	27,409	26,518	25,581	24,596
Annual Interest Cost	29	188	325	483	656	821	978	1,118	1,242	1,334	1,387	1,394	1,350	1,305	1,257	1,206
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,530	5,225	8,052	11,610	14,925	18,200	21,216	23,719	26,172	27,303	28,257	27,409	26,518	25,581	24,596	23,561

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	23,561	22,473	21,329	20,126	18,862	17,534	16,137	14,669	13,126	11,504	9,799	8,007	6,123	4,142	2,061	
Annual Interest Cost	1,153	1,098	1,039	978	913	845	774	698	619	536	449	358	261	160	53	25,007
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	
Accumulated debt in present year	22,473	21,329	20,126	18,862	17,534	16,137	14,669	13,126	11,504	9,799	8,007	6,123	4,142	2,061	0	

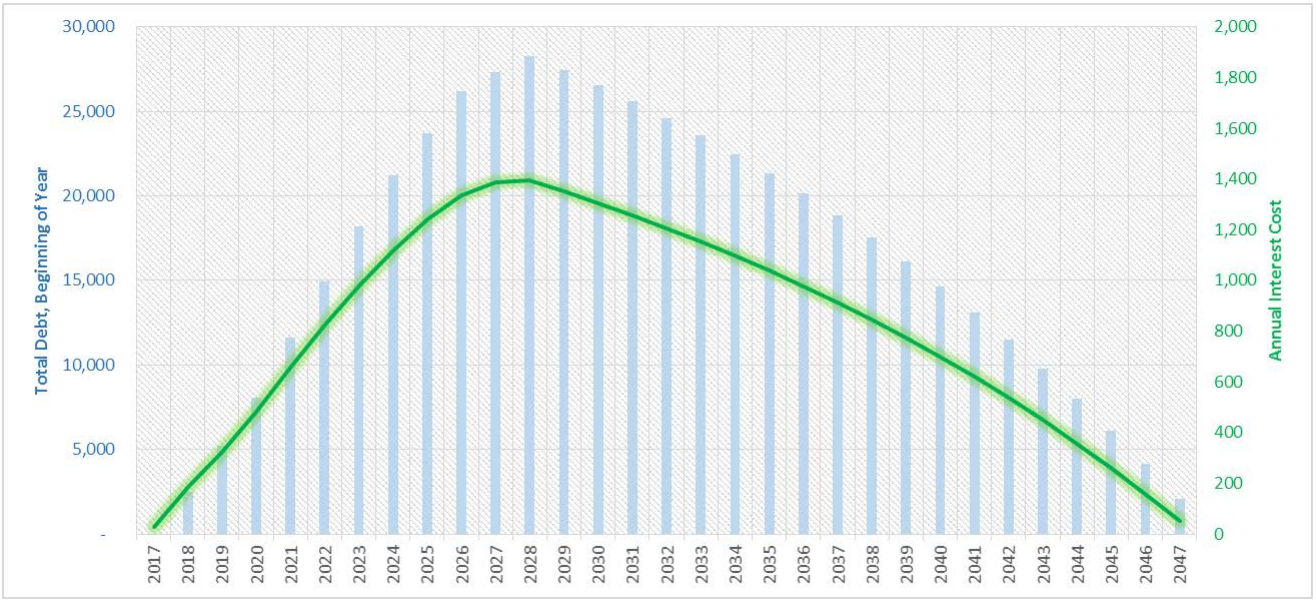
Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.
2 Higher interest rates results in extended the term of the financing. It is assumed that a cap of $2.242 bn above the true cost of GA in any given year is continued to be applied to repay any remaining debt. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period. In this Scenario, the term would be extended to Year 2056.

APPENDIX

DRAFT

GA Financing (Base) *(Calendar Year Basis)*

March 1 Deck



At an **Interest Rate of 5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2028 at approximately $1.4B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,530	5,225	8,052	11,610	14,925	18,200	21,216	23,719	26,172	27,303	28,257	27,409	26,518	25,581	24,596
Annual Interest Cost	29	188	325	483	656	821	978	1,118	1,242	1,334	1,387	1,394	1,350	1,305	1,257	1,206
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,530	5,225	8,052	11,610	14,925	18,200	21,216	23,719	26,172	27,303	28,257	27,409	26,518	25,581	24,596	23,561

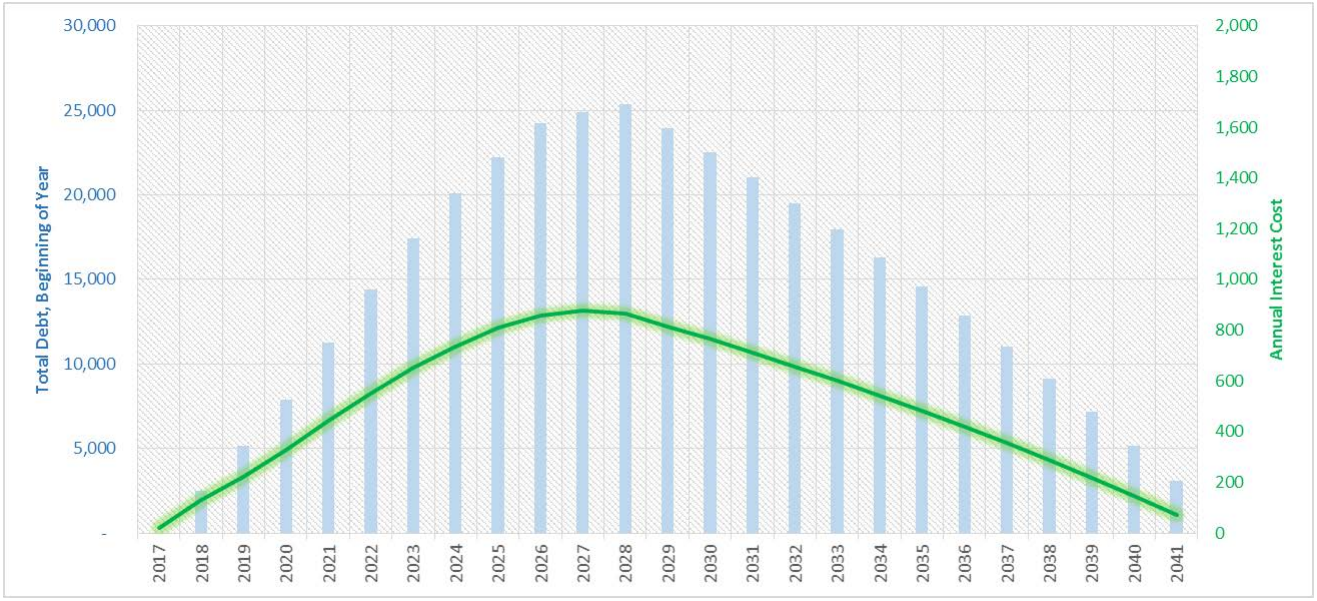
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	23,561	22,473	21,329	20,126	18,862	17,534	16,137	14,669	13,126	11,504	9,799	8,007	6,123	4,142	2,061	
Annual Interest Cost	1,153	1,098	1,039	978	913	845	774	698	619	536	449	358	261	160	53	**25,007**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	
Accumulated debt in present year	22,473	21,329	20,126	18,862	17,534	16,137	14,669	13,126	11,504	9,799	8,007	6,123	4,142	2,061	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.
2 To forecast the repayment of the remaining balance, a cap of $2.242 bn above the true cost of GA in any given year is applied. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period.

DRAFT

GA Financing *(Calendar Year Basis)*

March 1 Deck



At an **Interest Rate of 3.5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $878M.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,521	5,159	7,884	11,289	14,393	17,399	20,089	22,211	24,232	24,887	25,332	23,956	22,530	21,053	19,524
Annual Interest Cost	20	130	224	330	445	552	652	737	810	859	878	865	816	765	712	658
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,521	5,159	7,884	11,289	14,393	17,399	20,089	22,211	24,232	24,887	25,332	23,956	22,530	21,053	19,524	17,941

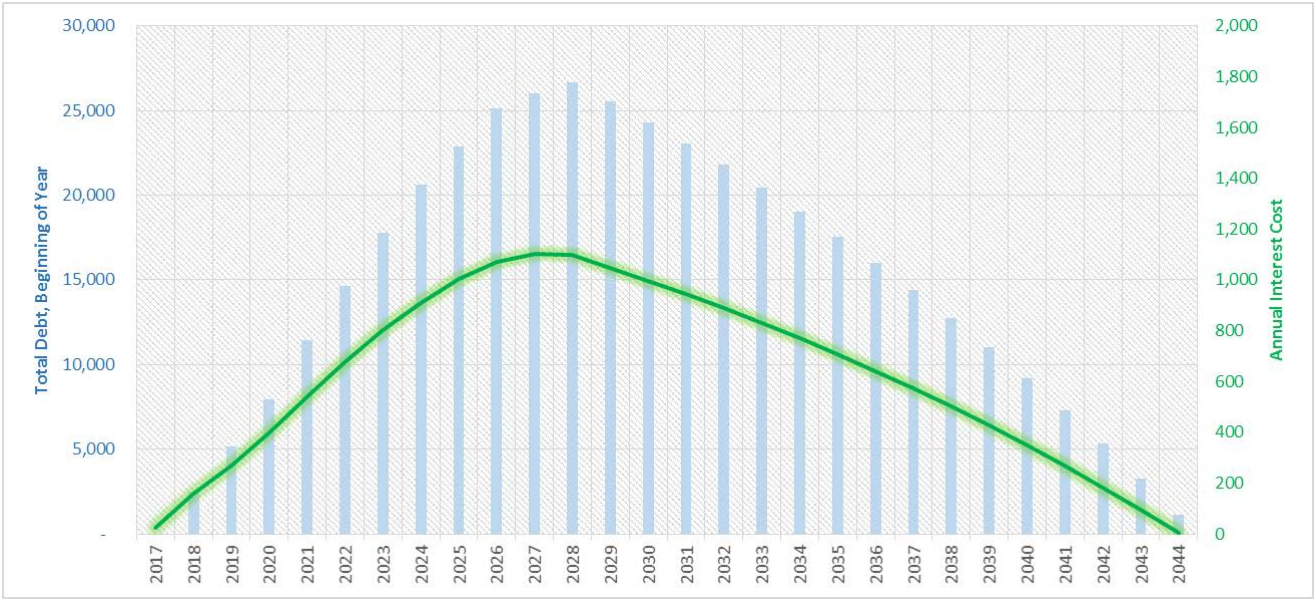
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	17,941	16,301	14,603	12,844	11,023	9,137	7,185	5,162	3,068							
Annual Interest Cost	602	543	483	421	356	289	219	147	73							12,585
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-3,141							
Accumulated debt in present year	16,301	14,603	12,844	11,023	9,137	7,185	5,162	3,068	0							

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 3.5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.

DRAFT

GA Financing *(Calendar Year Basis)*

March 1 Deck



At an **Interest Rate of 4.2%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $1.1B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,525	5,190	7,962	11,437	14,638	17,767	20,605	22,900	25,115	25,984	26,655	25,511	24,318	23,074	21,777
Annual Interest Cost	24	157	271	401	542	675	800	909	1,004	1,071	1,104	1,098	1,049	998	944	889
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,525	5,190	7,962	11,437	14,638	17,767	20,605	22,900	25,115	25,984	26,655	25,511	24,318	23,074	21,777	20,424

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	20,424	19,013	17,542	16,008	14,408	12,740	11,000	9,186	7,294	5,322	3,264	1,119				
Annual Interest Cost	831	770	707	642	573	502	427	350	269	184	96	4				**17,292**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,123				
Accumulated debt in present year	19,013	17,542	16,008	14,408	12,740	11,000	9,186	7,294	5,322	3,264	1,119	0				

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 4.2%. Interest Cost in 2017 adjusted to represent implementation in July 2017.

DRAFT

GA Financing – Interest Scenarios

March 1, 2017 Deck

Corporate and Electricity Finance Division

March 6, 2017

DRAFT

GA Financing *(Calendar Year Basis)*

March 1 Deck

- The following interest cost estimates are based on Ministry of Energy estimates of the Global Adjustment cost amounts to be deferred in its submission. GA deferral and interest cost estimates are subject to updates from the Ministry of Energy.
  - Actual interest costs are very sensitive to actual borrowing costs. Table below is illustrative.
  - Sensitivities on lower interest rates shown assume faster debt paydown. Alternatively, pay down could be stretched out, but would result in higher cumulative interest costs.
- Interest cost estimates are slightly adjusted from Ministry of Energy amounts, to show amounts starting in 2017 on an assumed July 1, 2017 implementation (affects all years, due to interest capitalisation and compounding). Energy's base case interest costs shown were an assumed 5%, compounded monthly.

Interest Rate	Peak Annual Interest Cost	Total Life-cycle Accumulated Interest Costs
3.5%	$0.878 billion in 2027	$12.6 billion
4.2%	$1.1 billion in 2027	$17.3 billion
5.0%	$1.4 billion in 2028	$25.0 billion

Total GA deferral amount being financed is approximately $20.3 billion (plus deferred, capitalised interest, that can increase peak debt to about $28 bn under the 5% scenario.

Base Scenario – *5% Interest Rate* with GA draw downs occurring on an equal monthly basis.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,530	5,225	8,052	11,610	14,925	18,200	21,216	23,719	26,172	27,303	28,257	27,409	26,518	25,581	24,596
Annual Interest Cost	29	188	325	483	656	821	978	1,118	1,242	1,334	1,387	1,394	1,350	1,305	1,257	1,206
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,530	5,225	8,052	11,610	14,925	18,200	21,216	23,719	26,172	27,303	28,257	27,409	26,518	25,581	24,596	23,561

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	23,561	22,473	21,329	20,126	18,862	17,534	16,137	14,669	13,126	11,504	9,799	8,007	6,123	4,142	2,061	
Annual Interest Cost	1,153	1,098	1,039	978	913	845	774	698	619	536	449	358	261	160	53	25,007
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	
Accumulated debt in present year	22,473	21,329	20,126	18,862	17,534	16,137	14,669	13,126	11,504	9,799	8,007	6,123	4,142	2,061	0	

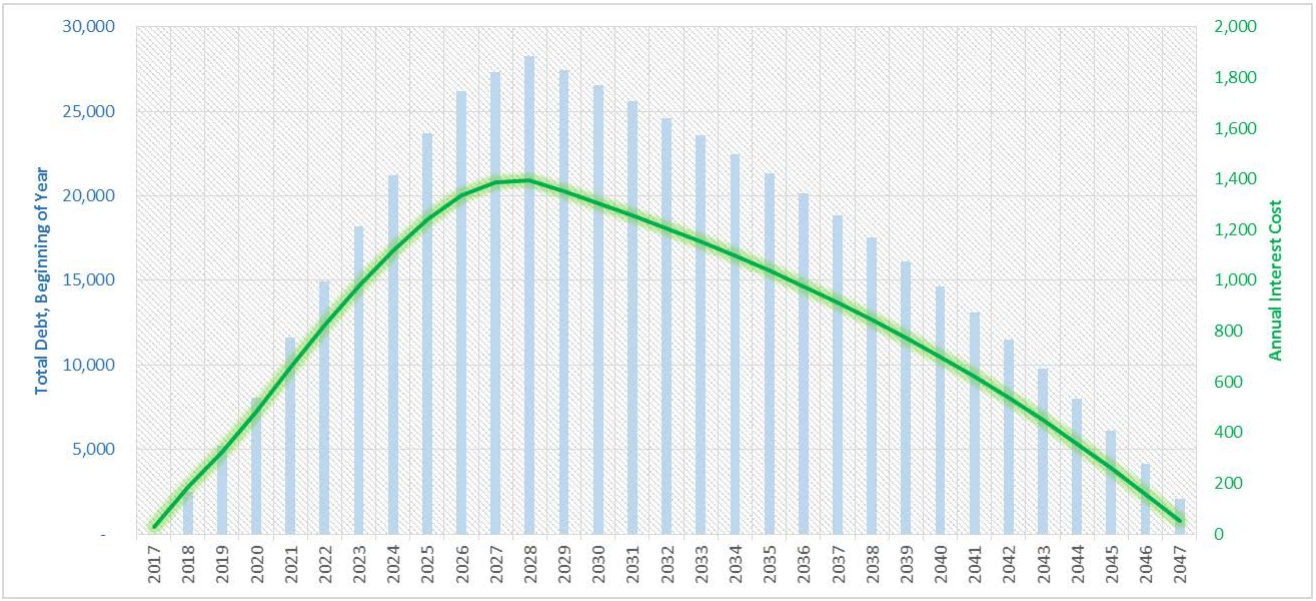
Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.
2 Higher interest rates results in extended the term of the financing. It is assumed that a cap of $2.242 bn above the true cost of GA in any given year is continued to be applied to repay any remaining debt. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period. In this Scenario, the term would be extended to Year 2056.

APPENDIX

DRAFT

GA Financing (Base) *(Calendar Year Basis)*

March 1 Deck



At an **Interest Rate of 5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2028 at approximately $1.4B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,530	5,225	8,052	11,610	14,925	18,200	21,216	23,719	26,172	27,303	28,257	27,409	26,518	25,581	24,596
Annual Interest Cost	29	188	325	483	656	821	978	1,118	1,242	1,334	1,387	1,394	1,350	1,305	1,257	1,206
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,530	5,225	8,052	11,610	14,925	18,200	21,216	23,719	26,172	27,303	28,257	27,409	26,518	25,581	24,596	23,561

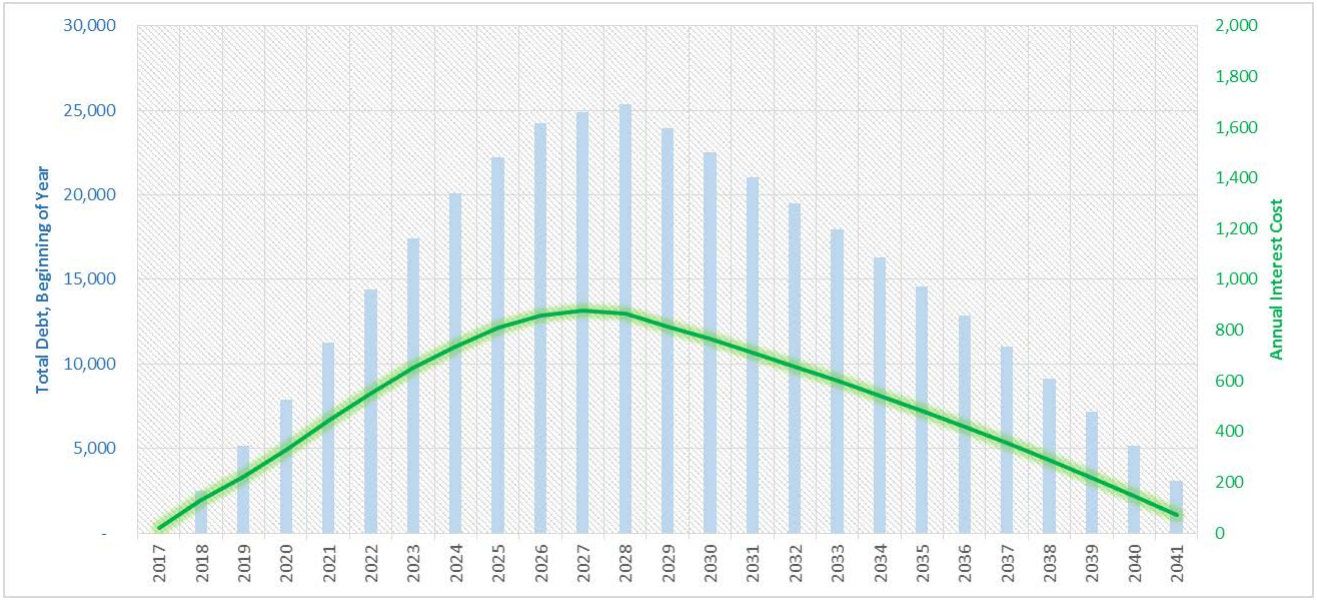
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	23,561	22,473	21,329	20,126	18,862	17,534	16,137	14,669	13,126	11,504	9,799	8,007	6,123	4,142	2,061	
Annual Interest Cost	1,153	1,098	1,039	978	913	845	774	698	619	536	449	358	261	160	53	**25,007**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	
Accumulated debt in present year	22,473	21,329	20,126	18,862	17,534	16,137	14,669	13,126	11,504	9,799	8,007	6,123	4,142	2,061	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.
2 To forecast the repayment of the remaining balance, a cap of $2.242 bn above the true cost of GA in any given year is applied. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period.

DRAFT

GA Financing *(Calendar Year Basis)*

March 1 Deck



At an **Interest Rate of 3.5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $878M.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,521	5,159	7,884	11,289	14,393	17,399	20,089	22,211	24,232	24,887	25,332	23,956	22,530	21,053	19,524
Annual Interest Cost	20	130	224	330	445	552	652	737	810	859	878	865	816	765	712	658
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,521	5,159	7,884	11,289	14,393	17,399	20,089	22,211	24,232	24,887	25,332	23,956	22,530	21,053	19,524	17,941

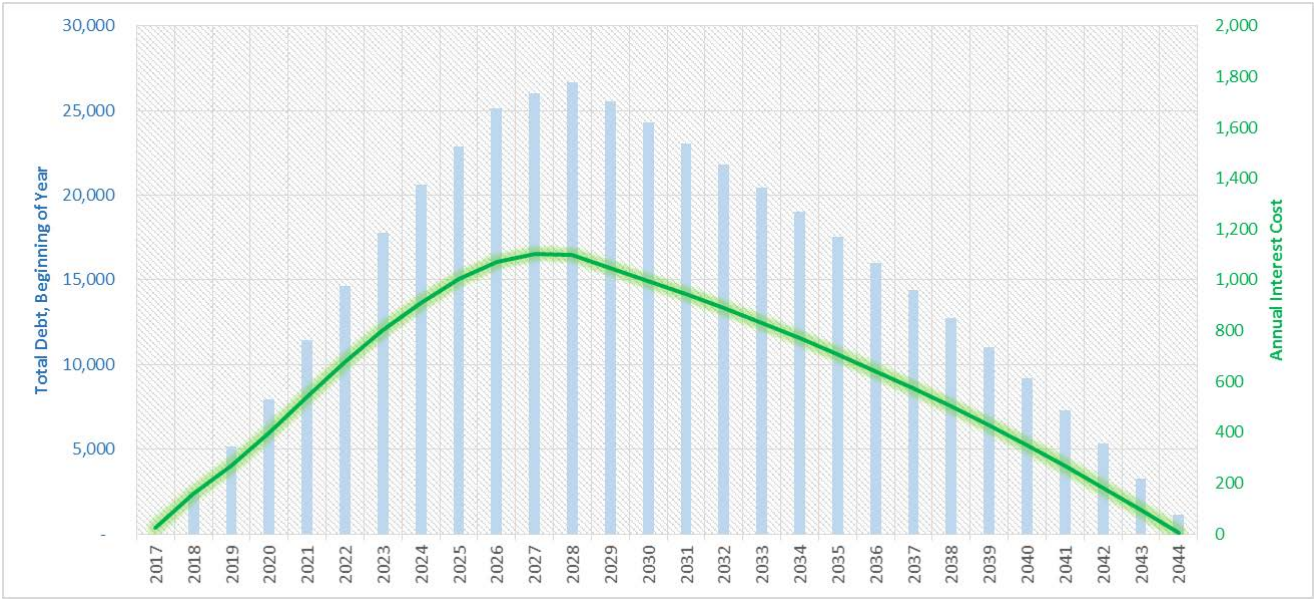
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	17,941	16,301	14,603	12,844	11,023	9,137	7,185	5,162	3,068							
Annual Interest Cost	602	543	483	421	356	289	219	147	73							12,585
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-3,141							
Accumulated debt in present year	16,301	14,603	12,844	11,023	9,137	7,185	5,162	3,068	0							

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 3.5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.

DRAFT

GA Financing *(Calendar Year Basis)*

March 1 Deck



At an **Interest Rate of 4.2%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $1.1B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,525	5,190	7,962	11,437	14,638	17,767	20,605	22,900	25,115	25,984	26,655	25,511	24,318	23,074	21,777
Annual Interest Cost	24	157	271	401	542	675	800	909	1,004	1,071	1,104	1,098	1,049	998	944	889
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,525	5,190	7,962	11,437	14,638	17,767	20,605	22,900	25,115	25,984	26,655	25,511	24,318	23,074	21,777	20,424

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	20,424	19,013	17,542	16,008	14,408	12,740	11,000	9,186	7,294	5,322	3,264	1,119				
Annual Interest Cost	831	770	707	642	573	502	427	350	269	184	96	4				**17,292**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,123				
Accumulated debt in present year	19,013	17,542	16,008	14,408	12,740	11,000	9,186	7,294	5,322	3,264	1,119	0				

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 4.2%. Interest Cost in 2017 adjusted to represent implementation in July 2017.

DRAFT

GA Financing – Interest Scenarios

March 1, 2017 Deck

Corporate and Electricity Finance Division

March 6, 2017

DRAFT

GA Financing *(Calendar Year Basis)*

March 1 Deck

- The following interest cost estimates are based on Ministry of Energy estimates of the Global Adjustment cost amounts to be deferred in its submission. GA deferral and interest cost estimates are subject to updates from the Ministry of Energy.
  - Actual interest costs are very sensitive to actual borrowing costs. Table below is illustrative.
  - Sensitivities on lower interest rates shown assume faster debt paydown. Alternatively, pay down could be kept the same (as the base scenario), but would result in higher cumulative interest costs.
- Interest cost estimates are slightly adjusted from Ministry of Energy amounts, to show amounts starting in 2017 on an assumed July 1, 2017 implementation ~~(affects all years, due to interest capitalisation and compounding)~~. Energy's base case interest costs shown were an assumed 5%, compounded monthly.

Interest Rate	Peak Annual Interest Cost	Total Life-cycle Accumulated Interest Costs
3.5%	$0.878 billion in 2027	$12.6 billion
4.2%	$1.1 billion in 2027	$17.3 billion
5.0%	$1.4 billion in 2028	$25.0 billion

Total GA deferral amount being financed is approximately $20.3 billion (plus deferred, capitalised interest, that can increase peak debt to about $28 bn under the 5% scenario.

Base Scenario – *5% Interest Rate* with GA draw downs occurring on an equal monthly basis.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,530	5,225	8,052	11,610	14,925	18,200	21,216	23,719	26,172	27,303	28,257	27,409	26,518	25,581	24,596
Annual Interest Cost	29	188	325	483	656	821	978	1,118	1,242	1,334	1,387	1,394	1,350	1,305	1,257	1,206
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,530	5,225	8,052	11,610	14,925	18,200	21,216	23,719	26,172	27,303	28,257	27,409	26,518	25,581	24,596	23,561

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	23,561	22,473	21,329	20,126	18,862	17,534	16,137	14,669	13,126	11,504	9,799	8,007	6,123	4,142	2,061	
Annual Interest Cost	1,153	1,098	1,039	978	913	845	774	698	619	536	449	358	261	160	53	25,007
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	
Accumulated debt in present year	22,473	21,329	20,126	18,862	17,534	16,137	14,669	13,126	11,504	9,799	8,007	6,123	4,142	2,061	0	

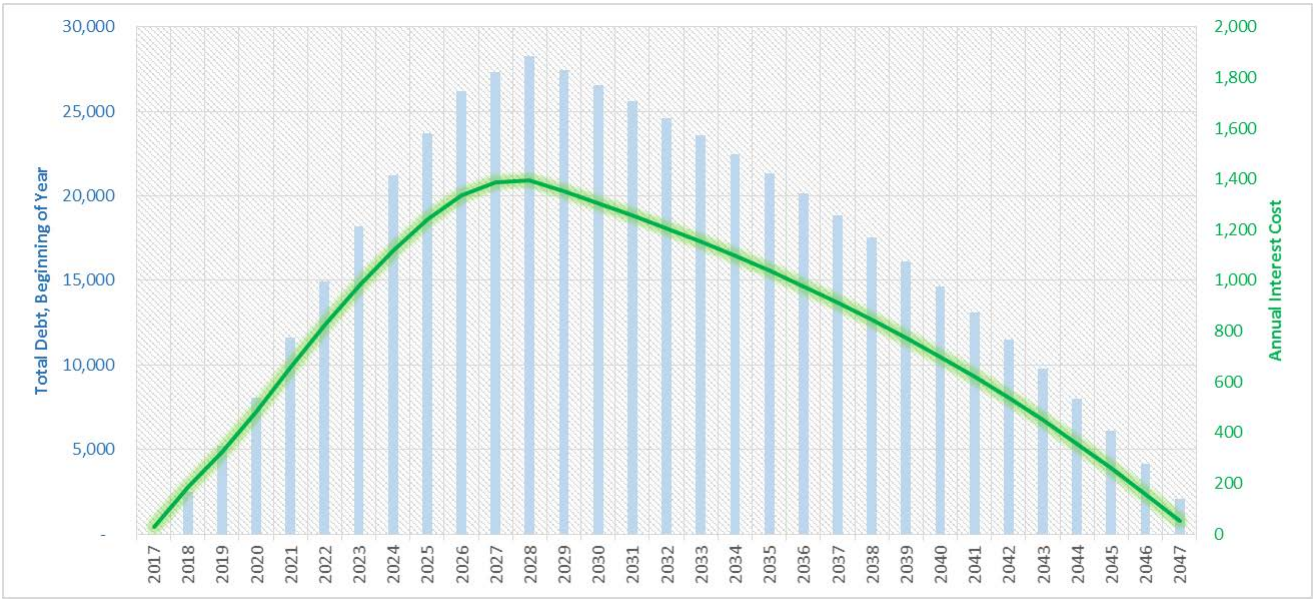
Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.
2 Higher interest rates results in extended the term of the financing. It is assumed that a cap of $2.242 bn above the true cost of GA in any given year is continued to be applied to repay any remaining debt. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period. In this Scenario, the term would be extended to Year 2056.

APPENDIX

DRAFT

GA Financing (Base) *(Calendar Year Basis)*

March 1 Deck



At an **Interest Rate of 5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2028 at approximately $1.4B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,530	5,225	8,052	11,610	14,925	18,200	21,216	23,719	26,172	27,303	28,257	27,409	26,518	25,581	24,596
Annual Interest Cost	29	188	325	483	656	821	978	1,118	1,242	1,334	1,387	1,394	1,350	1,305	1,257	1,206
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,530	5,225	8,052	11,610	14,925	18,200	21,216	23,719	26,172	27,303	28,257	27,409	26,518	25,581	24,596	23,561

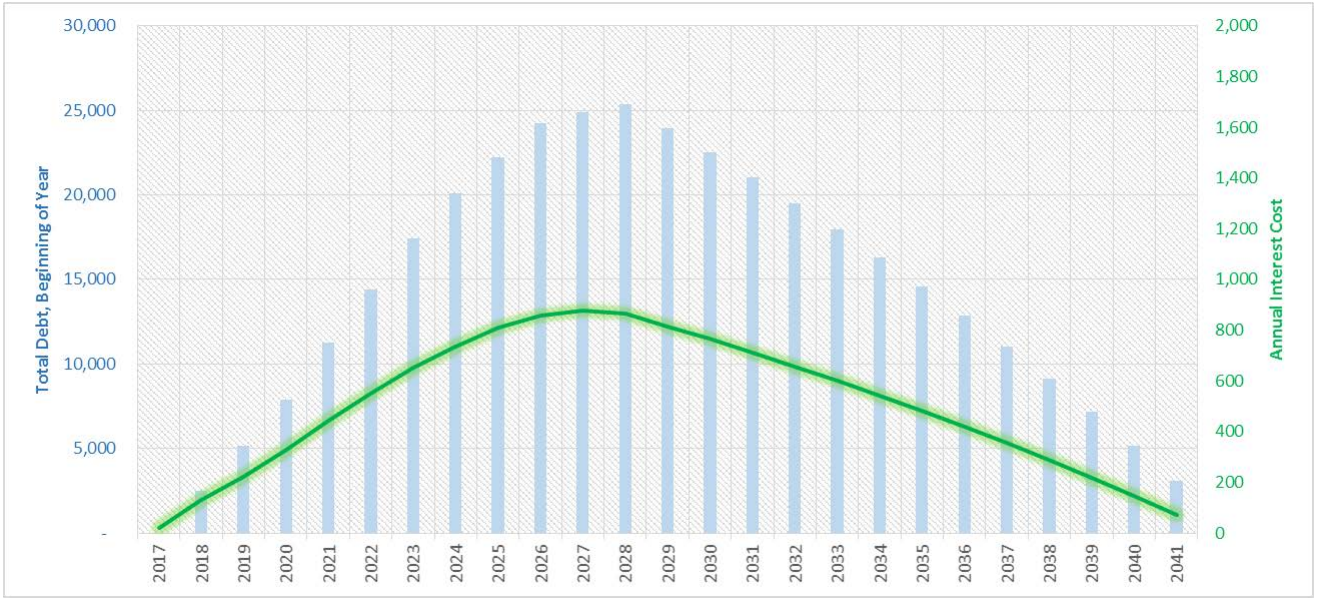
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	23,561	22,473	21,329	20,126	18,862	17,534	16,137	14,669	13,126	11,504	9,799	8,007	6,123	4,142	2,061	
Annual Interest Cost	1,153	1,098	1,039	978	913	845	774	698	619	536	449	358	261	160	53	**25,007**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	
Accumulated debt in present year	22,473	21,329	20,126	18,862	17,534	16,137	14,669	13,126	11,504	9,799	8,007	6,123	4,142	2,061	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.
2 To forecast the repayment of the remaining balance, a cap of $2.242 bn above the true cost of GA in any given year is applied. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period.

DRAFT

GA Financing *(Calendar Year Basis)*

March 1 Deck



At an **Interest Rate of 3.5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $878M.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,521	5,159	7,884	11,289	14,393	17,399	20,089	22,211	24,232	24,887	25,332	23,956	22,530	21,053	19,524
Annual Interest Cost	20	130	224	330	445	552	652	737	810	859	878	865	816	765	712	658
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,521	5,159	7,884	11,289	14,393	17,399	20,089	22,211	24,232	24,887	25,332	23,956	22,530	21,053	19,524	17,941

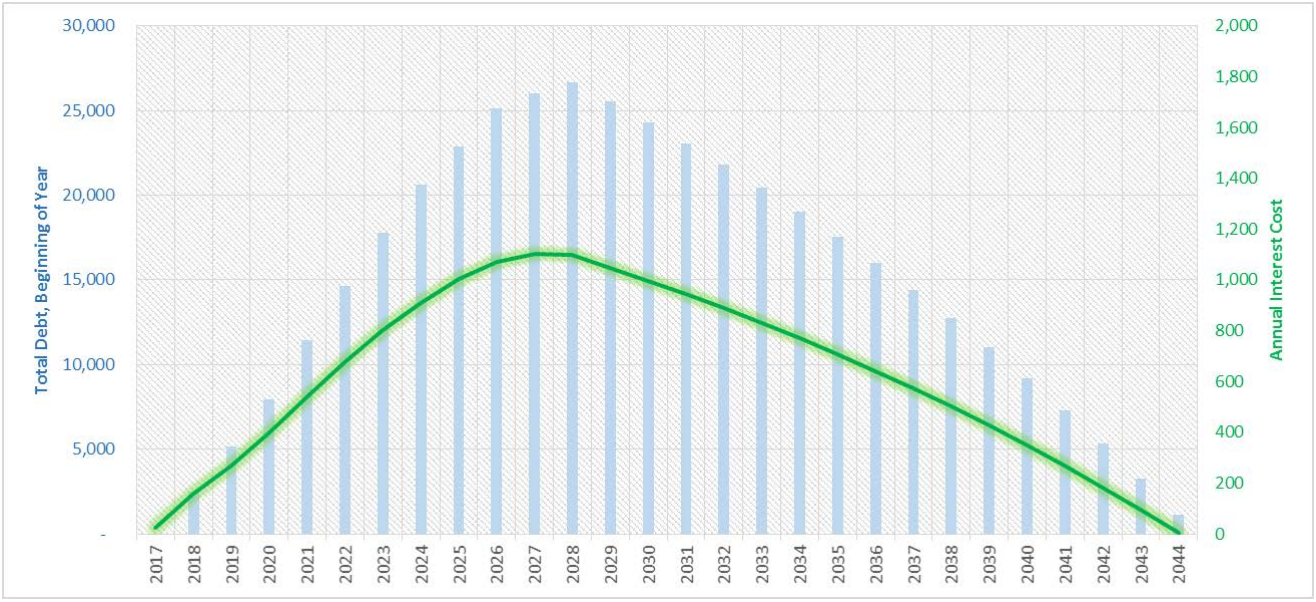
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	17,941	16,301	14,603	12,844	11,023	9,137	7,185	5,162	3,068							
Annual Interest Cost	602	543	483	421	356	289	219	147	73							12,585
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-3,141							
Accumulated debt in present year	16,301	14,603	12,844	11,023	9,137	7,185	5,162	3,068	0							

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 3.5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.

DRAFT

GA Financing *(Calendar Year Basis)*

March 1 Deck



At an **Interest Rate of 4.2%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $1.1B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,525	5,190	7,962	11,437	14,638	17,767	20,605	22,900	25,115	25,984	26,655	25,511	24,318	23,074	21,777
Annual Interest Cost	24	157	271	401	542	675	800	909	1,004	1,071	1,104	1,098	1,049	998	944	889
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,525	5,190	7,962	11,437	14,638	17,767	20,605	22,900	25,115	25,984	26,655	25,511	24,318	23,074	21,777	20,424

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	20,424	19,013	17,542	16,008	14,408	12,740	11,000	9,186	7,294	5,322	3,264	1,119				
Annual Interest Cost	831	770	707	642	573	502	427	350	269	184	96	4				**17,292**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,123				
Accumulated debt in present year	19,013	17,542	16,008	14,408	12,740	11,000	9,186	7,294	5,322	3,264	1,119	0				

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 4.2%. Interest Cost in 2017 adjusted to represent implementation in July 2017.

DRAFT

GA Financing – Interest Scenarios

March 1, 2017 Deck

Corporate and Electricity Finance Division

March 6, 2017

DRAFT

GA Financing *(Calendar Year Basis)*

March 1 Deck

- The ~~following~~ interest cost estimates ~~on the following slides~~ are based on Ministry of Energy estimates, in its Cabinet submission, of the Global Adjustment cost amounts to be deferred. ~~in its submission.~~ GA deferral and interest cost estimates are subject to updates from the Ministry of Energy.
  - Actual annual and cumulative interest costs are very sensitive to actual borrowing rates. Table below is illustrative.
  - Sensitivities shown on lower interest rates ~~scenarios~~ ~~shown~~ assume faster debt pay down. Alternatively, pay down could be stretched out, but would result in relatively higher cumulative interest costs than shown for that interest rate.
- Interest cost estimates are slightly adjusted from Ministry of Energy amounts, to reflect ~~show amounts starting in 2017 on~~ an assumed July 1, 2017 implementation date (affects all years, due to interest capitalisation and compounding). Energy's base case interest costs shown were an assumed 5%, compounded monthly.

Interest Rate	Peak Annual Interest Cost	Total Life-cycle Accumulated Interest Costs
3.5%	$0.878 billion in 2027	$12.6 billion
4.2%	$1.1 billion in 2027	$17.3 billion
5.0%	$1.4 billion in 2028	$25.0 billion

Total GA deferral amount being financed is approximately $20.3 billion (plus deferred, capitalised interest, that can increase peak debt to about $28 bn under the 5% scenario.

Base Scenario – *5% Interest Rate* with GA draw downs occurring on an equal monthly basis.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,530	5,225	8,052	11,610	14,925	18,200	21,216	23,719	26,172	27,303	28,257	27,409	26,518	25,581	24,596
Annual Interest Cost	29	188	325	483	656	821	978	1,118	1,242	1,334	1,387	1,394	1,350	1,305	1,257	1,206
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,530	5,225	8,052	11,610	14,925	18,200	21,216	23,719	26,172	27,303	28,257	27,409	26,518	25,581	24,596	23,561

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	23,561	22,473	21,329	20,126	18,862	17,534	16,137	14,669	13,126	11,504	9,799	8,007	6,123	4,142	2,061	
Annual Interest Cost	1,153	1,098	1,039	978	913	845	774	698	619	536	449	358	261	160	53	25,007
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	
Accumulated debt in present year	22,473	21,329	20,126	18,862	17,534	16,137	14,669	13,126	11,504	9,799	8,007	6,123	4,142	2,061	0	

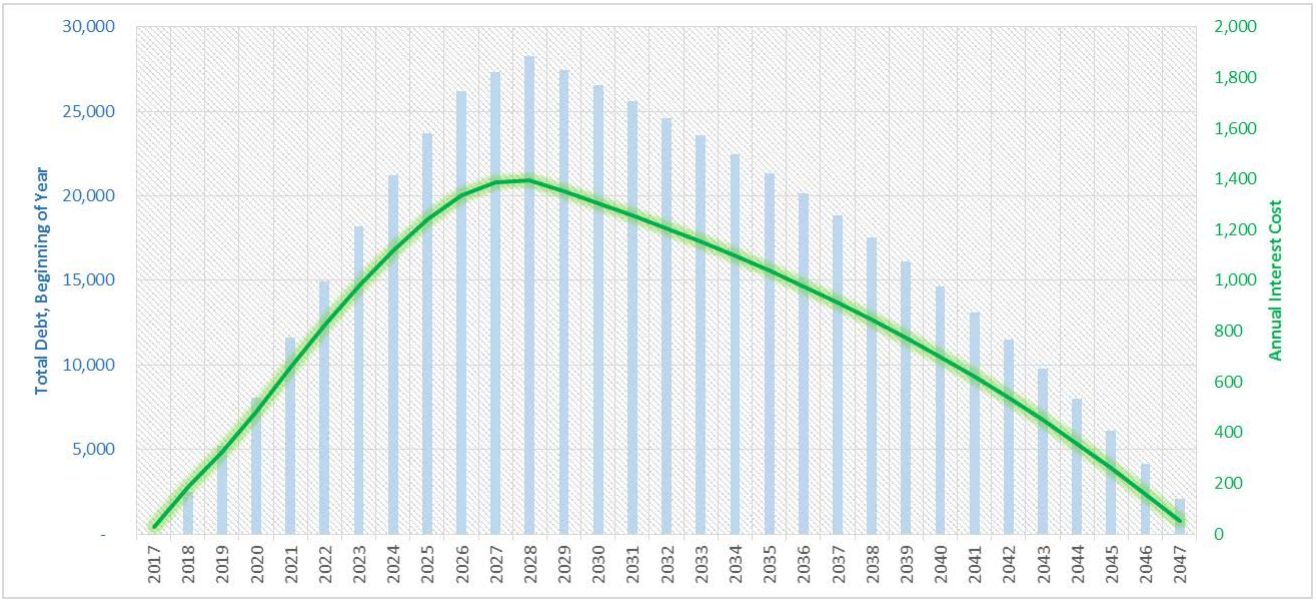
Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.
2 Higher interest rates results in extended the term of the financing. It is assumed that a cap of $2.242 bn above the true cost of GA in any given year is continued to be applied to repay any remaining debt. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period. In this Scenario, the term would be extended to Year 2056.

APPENDIX

DRAFT

GA Financing (Base) *(Calendar Year Basis)*

March 1 Deck



At an **Interest Rate of 5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2028 at approximately $1.4B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,530	5,225	8,052	11,610	14,925	18,200	21,216	23,719	26,172	27,303	28,257	27,409	26,518	25,581	24,596
Annual Interest Cost	29	188	325	483	656	821	978	1,118	1,242	1,334	1,387	1,394	1,350	1,305	1,257	1,206
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,530	5,225	8,052	11,610	14,925	18,200	21,216	23,719	26,172	27,303	28,257	27,409	26,518	25,581	24,596	23,561

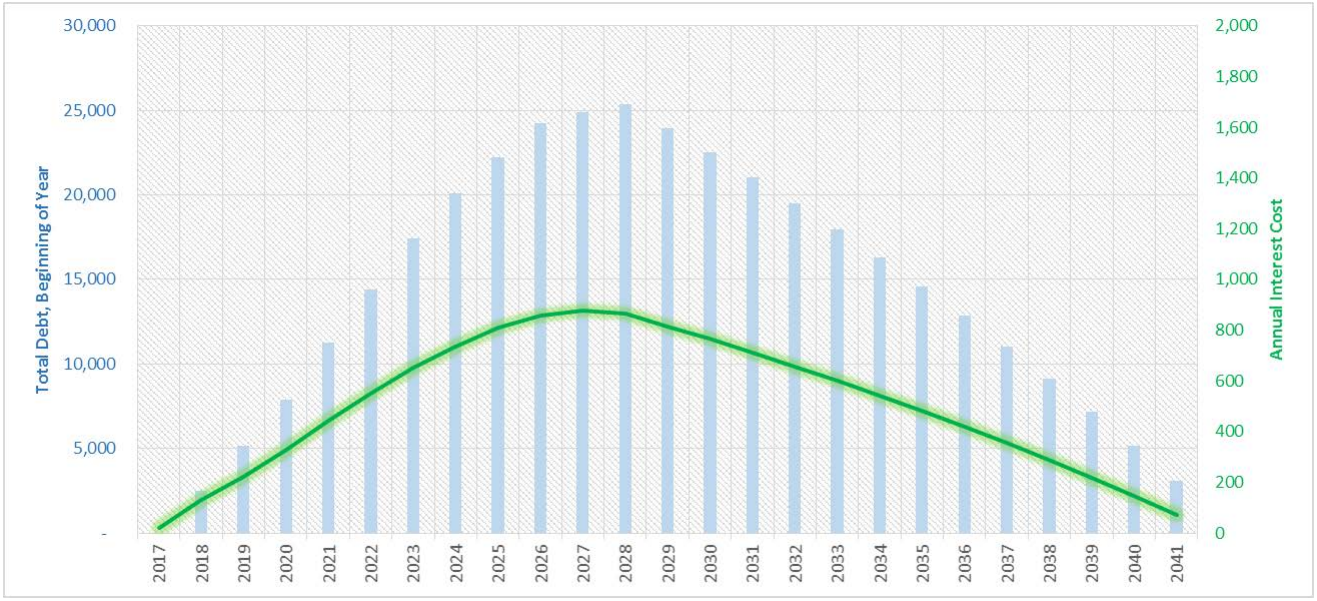
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	23,561	22,473	21,329	20,126	18,862	17,534	16,137	14,669	13,126	11,504	9,799	8,007	6,123	4,142	2,061	
Annual Interest Cost	1,153	1,098	1,039	978	913	845	774	698	619	536	449	358	261	160	53	**25,007**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	
Accumulated debt in present year	22,473	21,329	20,126	18,862	17,534	16,137	14,669	13,126	11,504	9,799	8,007	6,123	4,142	2,061	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.
2 To forecast the repayment of the remaining balance, a cap of $2.242 bn above the true cost of GA in any given year is applied. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period.

DRAFT

GA Financing *(Calendar Year Basis)*

March 1 Deck



At an **Interest Rate of 3.5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $878M.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,521	5,159	7,884	11,289	14,393	17,399	20,089	22,211	24,232	24,887	25,332	23,956	22,530	21,053	19,524
Annual Interest Cost	20	130	224	330	445	552	652	737	810	859	878	865	816	765	712	658
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,521	5,159	7,884	11,289	14,393	17,399	20,089	22,211	24,232	24,887	25,332	23,956	22,530	21,053	19,524	17,941

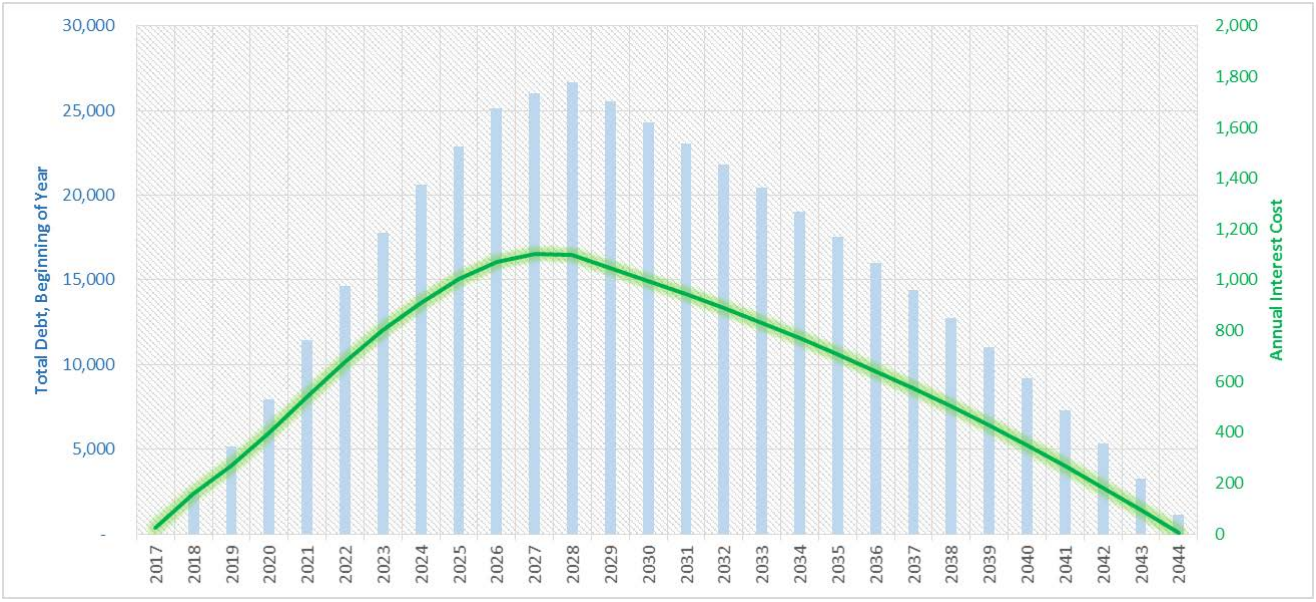
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	17,941	16,301	14,603	12,844	11,023	9,137	7,185	5,162	3,068							
Annual Interest Cost	602	543	483	421	356	289	219	147	73							12,585
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-3,141							
Accumulated debt in present year	16,301	14,603	12,844	11,023	9,137	7,185	5,162	3,068	0							

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 3.5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.

DRAFT

GA Financing *(Calendar Year Basis)*

March 1 Deck



At an **Interest Rate of 4.2%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $1.1B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,525	5,190	7,962	11,437	14,638	17,767	20,605	22,900	25,115	25,984	26,655	25,511	24,318	23,074	21,777
Annual Interest Cost	24	157	271	401	542	675	800	909	1,004	1,071	1,104	1,098	1,049	998	944	889
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,525	5,190	7,962	11,437	14,638	17,767	20,605	22,900	25,115	25,984	26,655	25,511	24,318	23,074	21,777	20,424

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	20,424	19,013	17,542	16,008	14,408	12,740	11,000	9,186	7,294	5,322	3,264	1,119				
Annual Interest Cost	831	770	707	642	573	502	427	350	269	184	96	4				**17,292**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,123				
Accumulated debt in present year	19,013	17,542	16,008	14,408	12,740	11,000	9,186	7,294	5,322	3,264	1,119	0				

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 4.2%. Interest Cost in 2017 adjusted to represent implementation in July 2017.

DRAFT

GA Financing – Interest Rate Scenarios
March 1, 2017 Deck

Corporate and Electricity Finance Division
March 6, 2017

DRAFT

GA Financing *(Calendar Year Basis) – (**Effective January 1, 2017**)* March 1 Deck

- The interest cost estimates are based on Ministry of Energy estimates, in its Cabinet submission, of the Global Adjustment cost amounts to be deferred. GA deferral and interest cost estimates are subject to updates from the Ministry of Energy.
  - Actual annual and cumulative interest costs are very sensitive to actual borrowing rates. Table below is illustrative.
  - Sensitivities shown on lower interest rates assume faster debt pay down. Alternatively, pay down could be stretched out, but would result in relatively higher cumulative interest costs than shown for that interest rate.
- Interest cost estimates are slightly adjusted from Ministry of Energy amounts, to reflect in-year interest costs. Energy's base case interest costs shown were an assumed 5%, compounded monthly, calculated in the following year, with a term of 30-years (2047).

Interest Rate	Peak Annual Interest Cost	Total Life-cycle Accumulated Interest Costs	Term (Approximate)
3.5%	$0.879 billion in 2027	$12.6 billion	2042 (25-year term)
4.2%	$1.1 billion in 2027	$17.4 billion	2044 (27-year term)
5.0%	$1.4 billion in 2028	$25.1 billion	2047 (30-year term)

Total GA deferral amount being financed is approximately $20.3 billion (plus deferred, capitalised interest, that can increase peak debt to about $28 bn under the 5% scenario.

Base Scenario – *5% Interest Rate* with GA draw downs occurring on an equal monthly basis.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655
Annual Interest Cost	58	189	327	485	658	822	980	1,120	1,244	1,337	1,389	1,396	1,353	1,307	1,260	1,209
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655	23,622

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	23,622	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	
Annual Interest Cost	1,156	1,101	1,043	981	917	849	778	703	624	541	454	363	267	166	60	**25,137**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	
Accumulated debt in present year	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	2	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.
2 Higher interest rates results in extended the term of the financing. It is assumed that a cap of $2.242 bn above the true cost of GA in any given year is continued to be applied to repay any remaining debt. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period. In this Scenario, the term would be extended to Year 2056.

DRAFT

GA Financing *(Calendar Year Basis) – (**Effective July 1, 2017**)* *March 1 Deck*

- The interest cost estimates are based on Ministry of Energy estimates, in its Cabinet submission, of the Global Adjustment cost amounts to be deferred. GA deferral and interest cost estimates are subject to updates from the Ministry of Energy.
  - Actual annual and cumulative interest costs are very sensitive to actual borrowing rates. Table below is illustrative.
  - Sensitivities shown on lower interest rates assume faster debt pay down. Alternatively, pay down could be stretched out, but would result in relatively higher cumulative interest costs than shown for that interest rate.
- Interest cost estimates are slightly adjusted from Ministry of Energy amounts, to reflect in-year interest costs and an assumed July 1, 2017 implementation date (affects all years, due to interest capitalisation and compounding). Energy's base case interest costs shown were an assumed 5%, compounded monthly, calculated in the following year, with a term of 30-years (2047)

Interest Rate	Peak Annual Interest Cost	Total Life-cycle Accumulated Interest Costs	Term (Approximate)
3.5%	$0.817 billion in 2027	$11 billion	2041 (24-year term)
4.2%	$1.0 billion in 2027	$14.9 billion	2042 (25-year term)
5.0%	$1.3 billion in 2028	$21.0 billion	2045 (28-year term)

Total GA deferral amount being financed is approximately $19.1 billion (plus deferred, capitalised interest, that can increase peak debt to about $26 bn under the 5% scenario.

Base Scenario – *5% Interest Rate* with GA draw downs occurring on an equal monthly basis.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	1,277	3,908	6,667	10,154	13,395	16,592	19,526	21,943	24,304	25,340	26,194	25,240	24,238	23,184	22,077
Annual Interest Cost	26	124	258	413	581	742	896	1,031	1,151	1,239	1,286	1,288	1,239	1,188	1,134	1,077
Additional GA Debt Drawdown Required	1,250	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	1,277	3,908	6,667	10,154	13,395	16,592	19,526	21,943	24,304	25,340	26,194	25,240	24,238	23,184	22,077	20,912

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	20,912	19,689	18,402	17,050	15,629	14,135	12,564	10,914	9,178	7,354	5,437	3,421	1,303	0	0	
Annual Interest Cost	1,018	955	889	820	748	671	591	506	417	324	226	123	15	0	0	**20,978**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,317	0	0	
Accumulated debt in present year	19,689	18,402	17,050	15,629	14,135	12,564	10,914	9,178	7,354	5,437	3,421	1,303	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.
2 Higher interest rates results in extended the term of the financing. It is assumed that a cap of $2.242 bn above the true cost of GA in any given year is continued to be applied to repay any remaining debt. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period. In this Scenario, the term would be extended to Year 2056.

APPENDIX

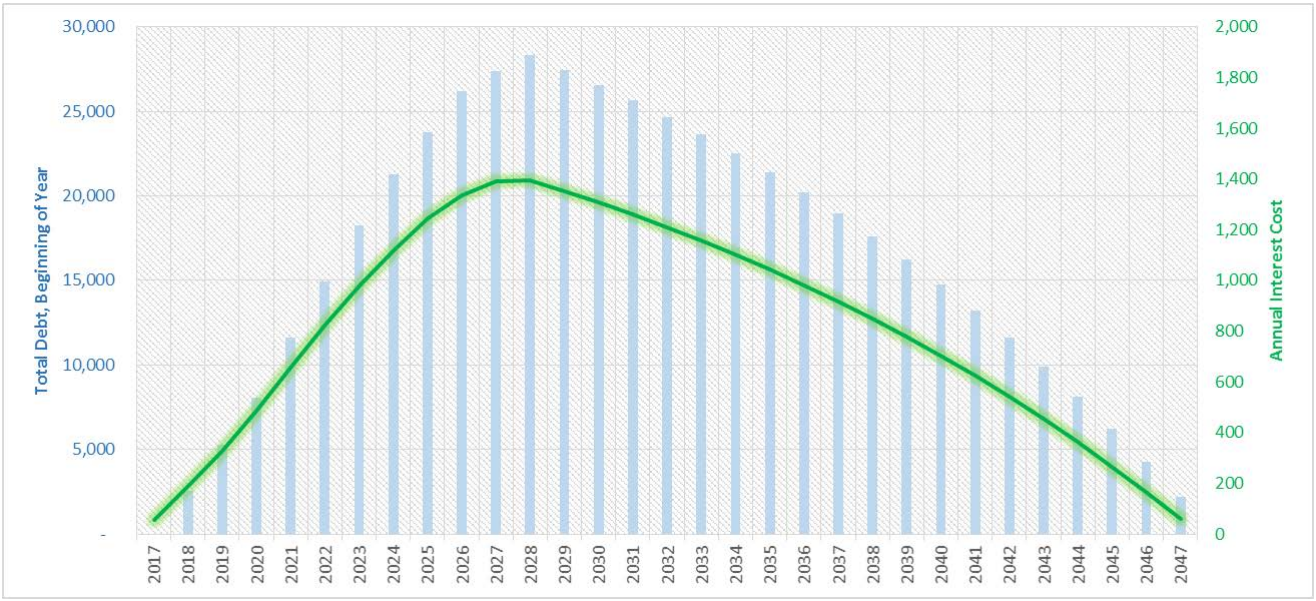
Effective Date: January 1, 2017

DRAFT

GA Financing (Base)

(Calendar Year Basis)
(Effective January 1, 2017)

March 1 Deck



At an **Interest Rate of 5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2028 at approximately $1.4B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655
Annual Interest Cost	58	189	327	485	658	822	980	1,120	1,244	1,337	1,389	1,396	1,353	1,307	1,260	1,209
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655	23,622

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	23,622	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	
Annual Interest Cost	1,156	1,101	1,043	981	917	849	778	703	624	541	454	363	267	166	60	**25,137**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	
Accumulated debt in present year	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	2	

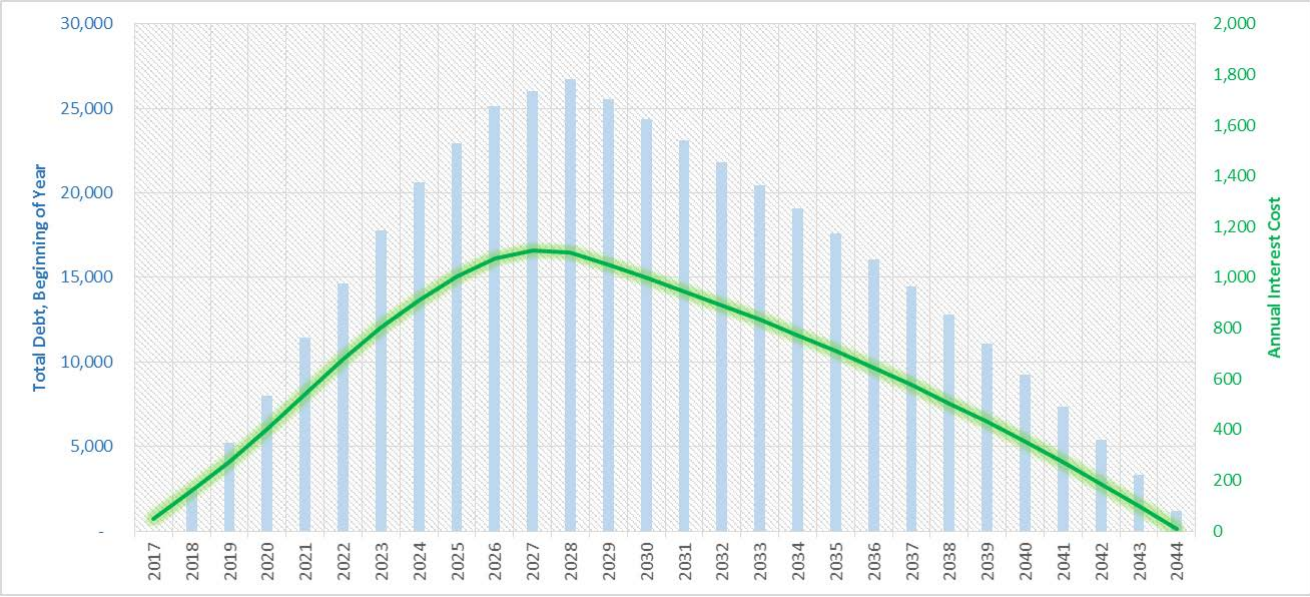
Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%.
2 To forecast the repayment of the remaining balance, a cap of $2.242 bn above the true cost of GA in any given year is applied. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period.

DRAFT

GA Financing

(Calendar Year Basis)
(Effective January 1, 2017)

March 1 Deck



At an **Interest Rate of 4.2%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $1.1B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,549	5,215	7,988	11,465	14,667	17,797	20,637	22,933	25,149	26,019	26,692	25,550	24,358	23,116	21,821
Annual Interest Cost	49	158	272	402	543	676	802	911	1,006	1,073	1,106	1,099	1,050	999	946	891
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,549	5,215	7,988	11,465	14,667	17,797	20,637	22,933	25,149	26,019	26,692	25,550	24,358	23,116	21,821	20,470

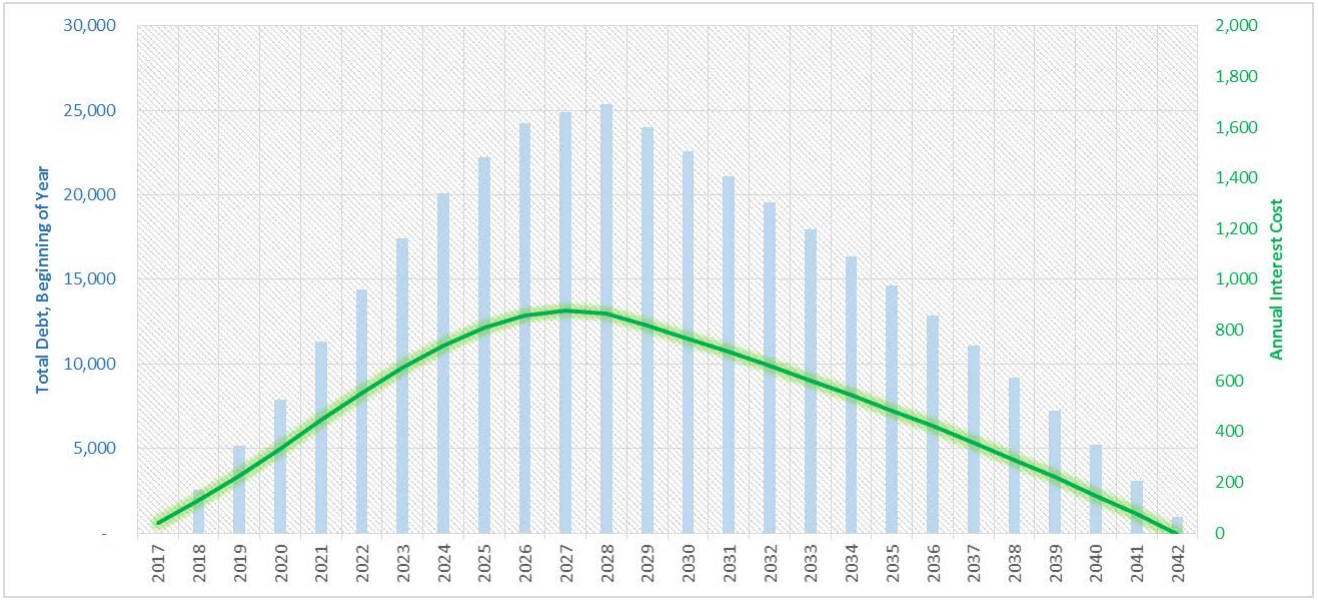
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	20,470	19,061	17,592	16,060	14,462	12,797	11,059	9,248	7,358	5,388	3,334	1,191	0	0	0	
Annual Interest Cost	833	772	710	644	576	504	430	352	271	187	99	7	0	0	0	17,367
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,199	0	0	0	
Accumulated debt in present year	19,061	17,592	16,060	14,462	12,797	11,059	9,248	7,358	5,388	3,334	1,191	0	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 4.2%.

GA Financing

(Calendar Year Basis)
(Effective January 1, 2017)

March 1 Deck



At an **Interest Rate of 3.5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $879M.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,541	5,180	7,906	11,311	14,417	17,423	20,113	22,237	24,258	24,915	25,361	23,985	22,561	21,085	19,557
Annual Interest Cost	41	131	225	331	445	553	653	738	811	860	879	866	817	766	714	659
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,541	5,180	7,906	11,311	14,417	17,423	20,113	22,237	24,258	24,915	25,361	23,985	22,561	21,085	19,557	17,975

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	17,975	16,336	14,639	12,882	11,063	9,178	7,227	5,206	3,113	946	0	0	0	0	0	
Annual Interest Cost	603	545	484	422	357	290	221	149	74	34	0	0	0	0	0	**12,665**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-980	0	0	0	0	0	
Accumulated debt in present year	16,336	14,639	12,882	11,063	9,178	7,227	5,206	3,113	946	0	0	0	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 3.5%.

APPENDIX

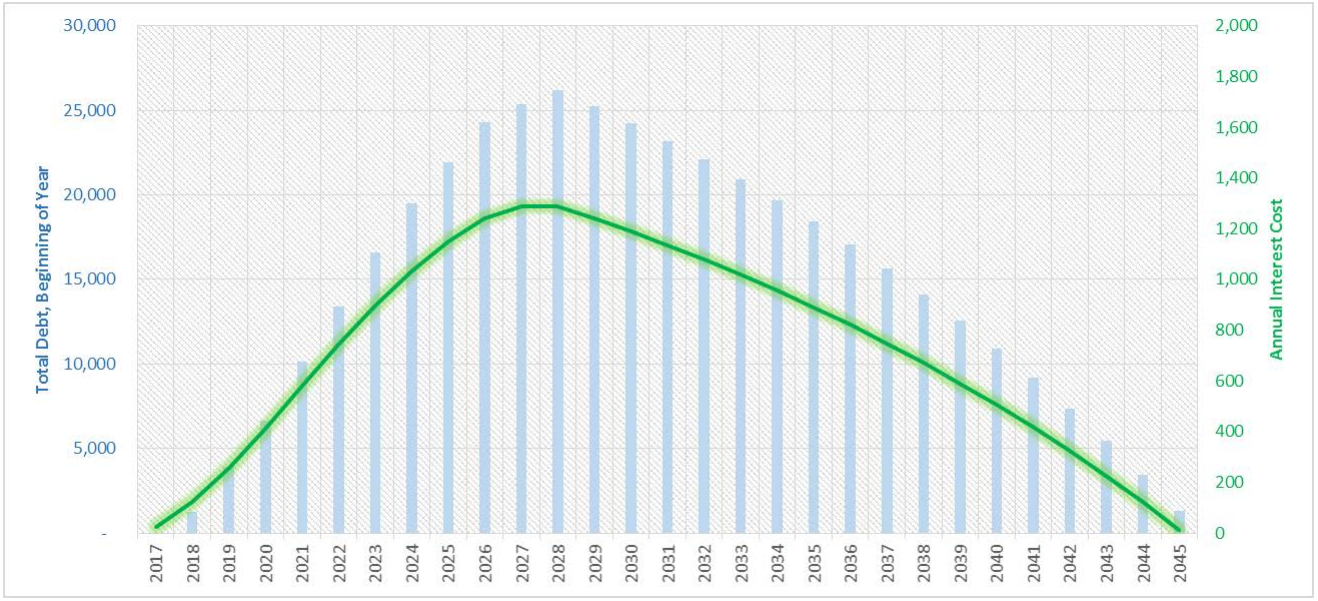
Effective Date: July 1, 2017

DRAFT

GA Financing (Base)

(Calendar Year Basis)
(Effective July 1, 2017)

March 1 Deck



At an **Interest Rate of 5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2028 at approximately $1.3B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	1,277	3,908	6,667	10,154	13,395	16,592	19,526	21,943	24,304	25,340	26,194	25,240	24,238	23,184	22,077
Annual Interest Cost	26	124	258	413	581	742	896	1,031	1,151	1,239	1,286	1,288	1,239	1,188	1,134	1,077
Additional GA Debt Drawdown Required	1,250	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	1,277	3,908	6,667	10,154	13,395	16,592	19,526	21,943	24,304	25,340	26,194	25,240	24,238	23,184	22,077	20,912

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	20,912	19,689	18,402	17,050	15,629	14,135	12,564	10,914	9,178	7,354	5,437	3,421	1,303	0	0	
Annual Interest Cost	1,018	955	889	820	748	671	591	506	417	324	226	123	15	0	0	**20,978**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,317	0	0	
Accumulated debt in present year	19,689	18,402	17,050	15,629	14,135	12,564	10,914	9,178	7,354	5,437	3,421	1,303	0	0	0	

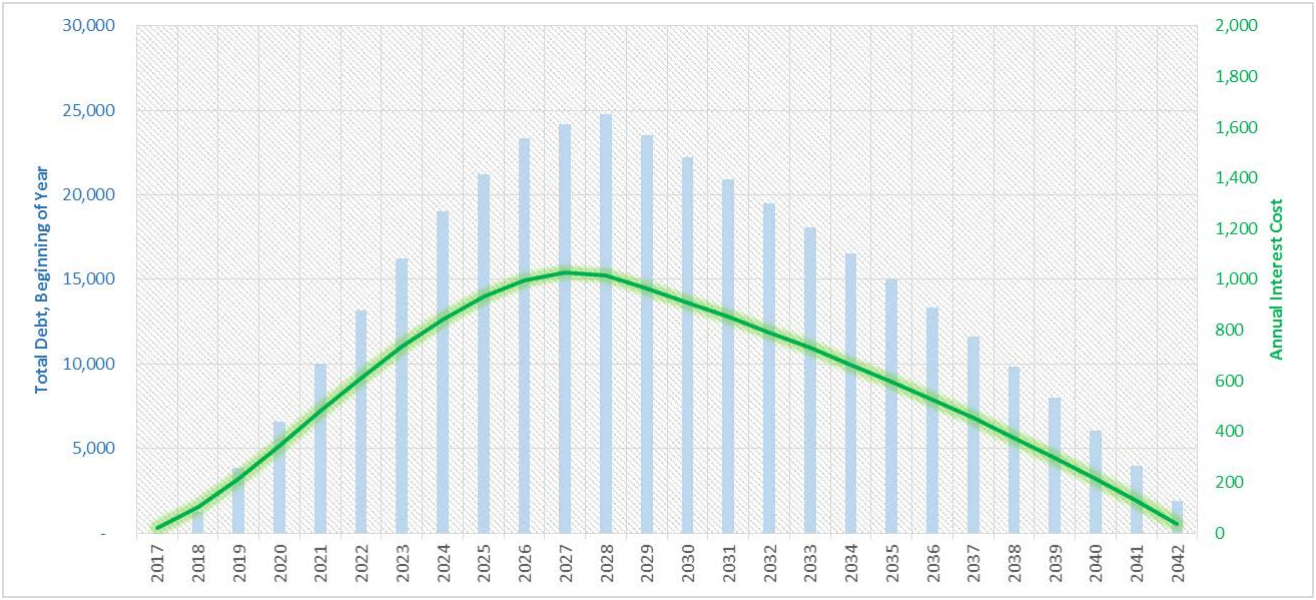
Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%.
2 To forecast the repayment of the remaining balance, a cap of $2.242 bn above the true cost of GA in any given year is applied. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period.

DRAFT

GA Financing

(Calendar Year Basis)
(Effective July 1, 2017)

March 1 Deck



At an **Interest Rate of 4.2%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $1B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	1,272	3,884	6,600	10,017	13,157	16,222	18,994	21,220	23,364	24,157	24,750	23,524	22,246	20,914	19,524
Annual Interest Cost	22	103	215	342	481	611	734	840	932	996	1,026	1,016	964	909	852	792
Additional GA Debt Drawdown Required	1,250	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	1,272	3,884	6,600	10,017	13,157	16,222	18,994	21,220	23,364	24,157	24,750	23,524	22,246	20,914	19,524	18,075

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	18,075	16,564	14,988	13,344	11,630	9,843	7,979	6,036	4,009	1,895	0	0	0	0	0	
Annual Interest Cost	730	666	598	528	454	378	298	215	128	38	0	0	0	0	0	**14,869**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,933	0	0	0	0	0	
Accumulated debt in present year	16,564	14,988	13,344	11,630	9,843	7,979	6,036	4,009	1,895	0	0	0	0	0	0	

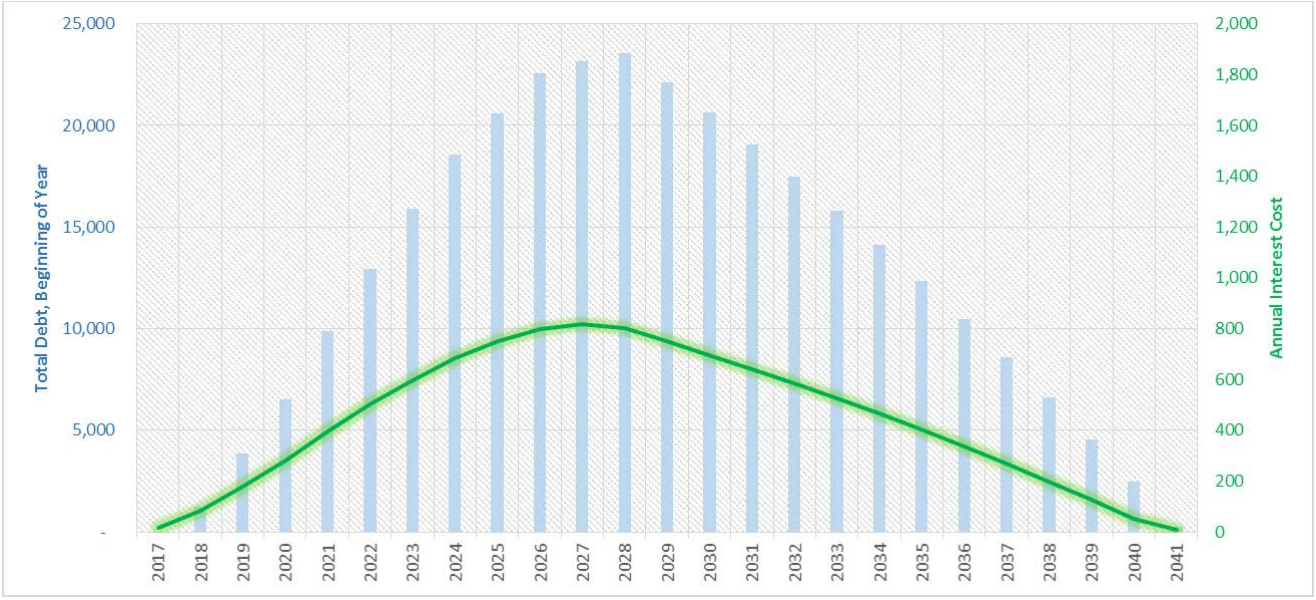
Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 4.2%.

DRAFT

GA Financing

(Calendar Year Basis)
(Effective July 1, 2017)

March 1 Deck



At an **Interest Rate of 3.5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $817M.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	1,269	3,862	6,541	9,898	12,953	15,908	18,544	20,612	22,576	23,172	23,556	22,116	20,625	19,081	17,482
Annual Interest Cost	18	86	178	282	395	500	599	682	753	800	817	802	750	697	642	585
Additional GA Debt Drawdown Required	1,250	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	1,269	3,862	6,541	9,898	12,953	15,908	18,544	20,612	22,576	23,172	23,556	22,116	20,625	19,081	17,482	15,825

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	15,825	14,111	12,335	10,495	8,591	6,618	4,576	2,461	271	0	0	0	0	0	0	
Annual Interest Cost	527	466	402	337	269	199	126	51	10	0	0	0	0	0	0	10,974
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-280	0	0	0	0	0	0	
Accumulated debt in present year	14,111	12,335	10,495	8,591	6,618	4,576	2,461	271	0	0	0	0	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 3.5%.

DRAFT

GA Financing:
Interest Rate Base Scenario & Sensitivities
March 1, 2017, Energy Deck Case

Corporate and Electricity Finance Division
March 6, 2017

DRAFT

GA Financing *(Calendar Year Basis) – (**Effective January 1, 2017**) March 1 Deck*

- The interest cost estimates are based on Ministry of Energy estimates of the Global Adjustment cost amounts to be deferred, per its March 1 Cabinet submission.
  - GA deferral estimates are subject to updates from the Ministry of Energy.
  - Actual annual and cumulative interest costs are very sensitive to actual borrowing rates. Table below is illustrative.
  - Sensitivities shown on lower interest rates assume faster debt pay down. Alternatively, pay down could be stretched out, but would result in relatively higher cumulative interest costs than shown for that interest rate.
- Interest cost estimates are slightly adjusted from Ministry of Energy amounts, to reflect in-year interest costs. Energy's base case interest costs shown were an assumed 5%, compounded monthly, calculated in the following year, with a term of 30-years (2047).

Interest Rate	Peak Annual Interest Cost	Total Life-cycle Accumulated Interest Costs	Term (Approximate)
3.5%	$0.879 billion in 2027	$12.6 billion	2042 (25-year term)
4.2%	$1.1 billion in 2027	$17.4 billion	2044 (27-year term)
5.0%	$1.4 billion in 2028	$25.1 billion	2047 (30-year term)

Total GA deferral amount being financed is approximately $20.3 billion (plus deferred, capitalised interest, that can increase peak debt to about $28 bn under the 5% scenario.

Base Scenario – *5% Interest Rate* with GA draw downs occurring on an equal monthly basis.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655
Annual Interest Cost	58	189	327	485	658	822	980	1,120	1,244	1,337	1,389	1,396	1,353	1,307	1,260	1,209
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655	23,622

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	23,622	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	
Annual Interest Cost	1,156	1,101	1,043	981	917	849	778	703	624	541	454	363	267	166	60	**25,137**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	
Accumulated debt in present year	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	2	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.
2 Higher interest rates results in extended the term of the financing. It is assumed that a cap of $2.242 bn above the true cost of GA in any given year is continued to be applied to repay any remaining debt. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period. In this Scenario, the term would be extended to Year 2056.

DRAFT

GA Financing *(Calendar Year Basis) – (**Effective July 1, 2017**)* *March 1 Deck*

- Ministry of Energy modelling estimates provided have been based on a full-year of GA deferral in 2017. Annual and cumulative interest and debt estimates would be sensitive to an in-year start date of, e.g., July 1, 2017, as below.
  - Otherwise, as before, modelling is based on Ministry of Energy estimates of the Global Adjustment cost amounts to be deferred in its March 1, 2017, Cabinet Submission.
  - GA deferral cost estimates are subject to updates from the Ministry of Energy.
  - Actual annual and cumulative interest costs are very sensitive to actual borrowing rates. Table below is illustrative.
  - Sensitivities shown on lower interest rates assume faster debt pay down. Alternatively, pay down could be stretched out, but would result in relatively higher cumulative interest costs than shown for that interest rate.
- Interest cost estimates are adjusted from Ministry of Energy amounts, to reflect in-year interest costs and an assumed July 1, 2017 implementation date. Half-a-year of reduced deferred GA significantly reduces estimated cumulative interest costs.

Interest Rate	Peak Annual Interest Cost	Total Life-cycle Accumulated Interest Costs	Term (Approximate)
3.5%	$0.817 billion in 2027	$11 billion	2041 (24-year term)
4.2%	$1.0 billion in 2027	$14.9 billion	2042 (25-year term)
5.0%	$1.3 billion in 2028	$21.0 billion	2045 (28-year term)

Total GA deferral amount being financed is approximately $19.1 billion (plus deferred, capitalised interest, that can increase peak debt to about $26 bn under the 5% scenario.

Base Scenario – *5% Interest Rate* with GA draw downs occurring on an equal monthly basis.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	1,277	3,908	6,667	10,154	13,395	16,592	19,526	21,943	24,304	25,340	26,194	25,240	24,238	23,184	22,077
Annual Interest Cost	26	124	258	413	581	742	896	1,031	1,151	1,239	1,286	1,288	1,239	1,188	1,134	1,077
Additional GA Debt Drawdown Required	1,250	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	1,277	3,908	6,667	10,154	13,395	16,592	19,526	21,943	24,304	25,340	26,194	25,240	24,238	23,184	22,077	20,912

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	20,912	19,689	18,402	17,050	15,629	14,135	12,564	10,914	9,178	7,354	5,437	3,421	1,303	0	0	
Annual Interest Cost	1,018	955	889	820	748	671	591	506	417	324	226	123	15	0	0	**20,978**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,317	0	0	
Accumulated debt in present year	19,689	18,402	17,050	15,629	14,135	12,564	10,914	9,178	7,354	5,437	3,421	1,303	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.
2 Higher interest rates results in extended the term of the financing. It is assumed that a cap of $2.242 bn above the true cost of GA in any given year is continued to be applied to repay any remaining debt. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period. In this Scenario, the term would be extended to Year 2056.

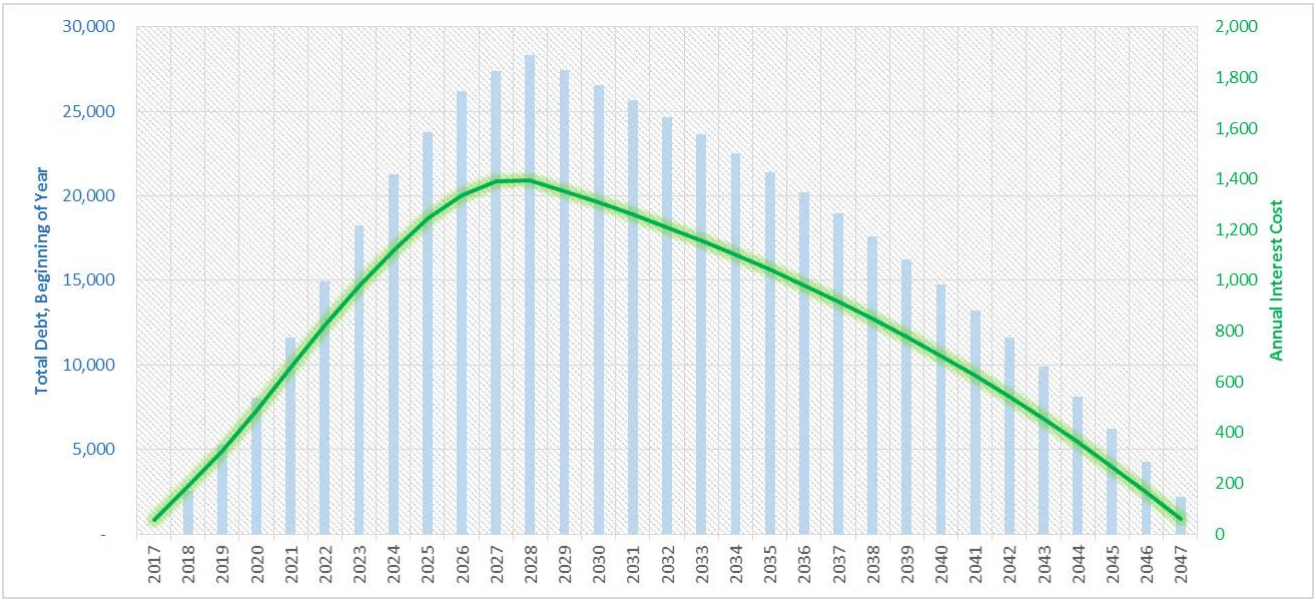
APPENDIX

Effective Date: January 1, 2017

DRAFT

GA Financing (Base, 5%)

(Calendar Year Basis)
*(**Effective January 1, 2017**)* *March 1 Deck*



At an **Interest Rate of 5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2028 at approximately $1.4B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655
Annual Interest Cost	58	189	327	485	658	822	980	1,120	1,244	1,337	1,389	1,396	1,353	1,307	1,260	1,209
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655	23,622

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	23,622	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	
Annual Interest Cost	1,156	1,101	1,043	981	917	849	778	703	624	541	454	363	267	166	60	**25,137**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	
Accumulated debt in present year	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	2	

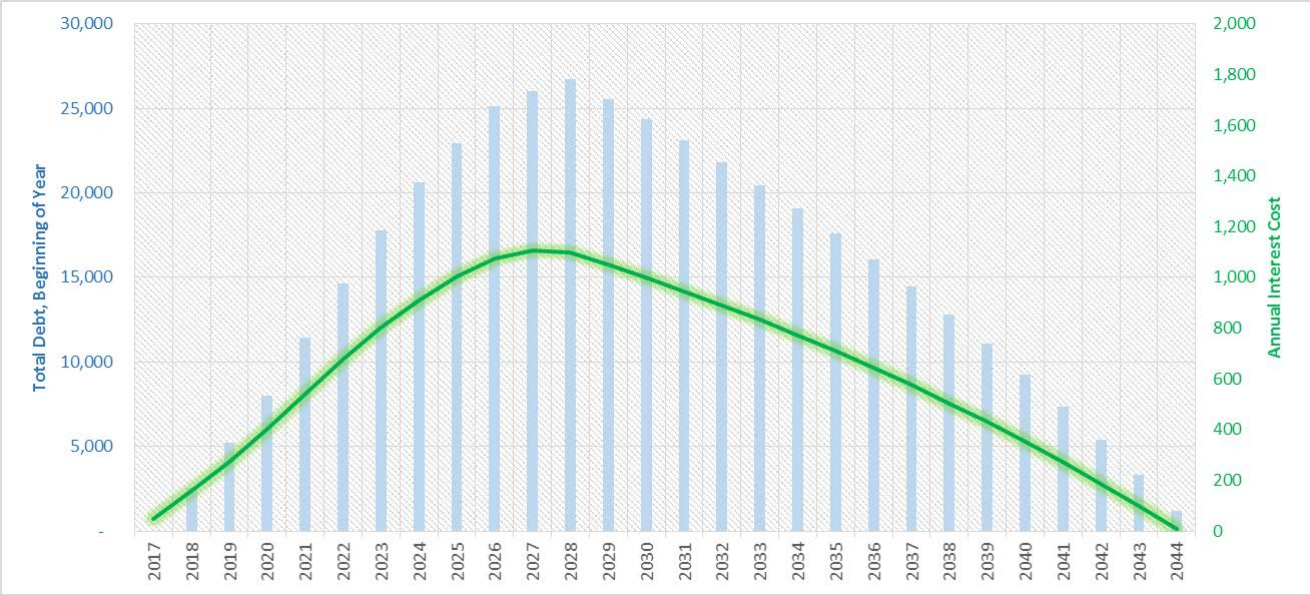
Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%.
2 To forecast the repayment of the remaining balance, a cap of $2.242 bn above the true cost of GA in any given year is applied. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period.

DRAFT

GA Financing: 4.2%

(Calendar Year Basis)
(Effective January 1, 2017)

March 1 Deck



At an **Interest Rate of 4.2%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $1.1B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,549	5,215	7,988	11,465	14,667	17,797	20,637	22,933	25,149	26,019	26,692	25,550	24,358	23,116	21,821
Annual Interest Cost	49	158	272	402	543	676	802	911	1,006	1,073	1,106	1,099	1,050	999	946	891
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,549	5,215	7,988	11,465	14,667	17,797	20,637	22,933	25,149	26,019	26,692	25,550	24,358	23,116	21,821	20,470

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	20,470	19,061	17,592	16,060	14,462	12,797	11,059	9,248	7,358	5,388	3,334	1,191	0	0	0	
Annual Interest Cost	833	772	710	644	576	504	430	352	271	187	99	7	0	0	0	**17,367**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,199	0	0	0	
Accumulated debt in present year	19,061	17,592	16,060	14,462	12,797	11,059	9,248	7,358	5,388	3,334	1,191	0	0	0	0	

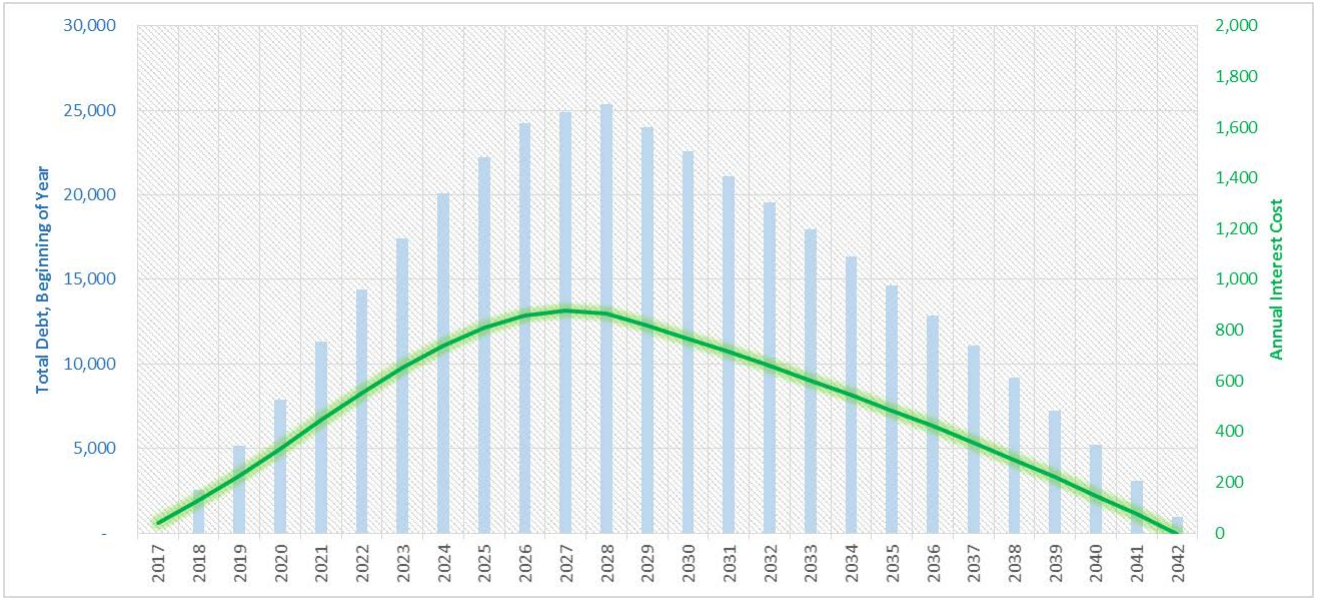
Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 4.2%.

DRAFT

GA Financing: 3.5%

(Calendar Year Basis)
(Effective January 1, 2017)

March 1 Deck



At an **Interest Rate of 3.5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $879M.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,541	5,180	7,906	11,311	14,417	17,423	20,113	22,237	24,258	24,915	25,361	23,985	22,561	21,085	19,557
Annual Interest Cost	41	131	225	331	445	553	653	738	811	860	879	866	817	766	714	659
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,541	5,180	7,906	11,311	14,417	17,423	20,113	22,237	24,258	24,915	25,361	23,985	22,561	21,085	19,557	17,975

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	17,975	16,336	14,639	12,882	11,063	9,178	7,227	5,206	3,113	946	0	0	0	0	0	
Annual Interest Cost	603	545	484	422	357	290	221	149	74	34	0	0	0	0	0	**12,665**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-980	0	0	0	0	0	
Accumulated debt in present year	16,336	14,639	12,882	11,063	9,178	7,227	5,206	3,113	946	0	0	0	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 3.5%.

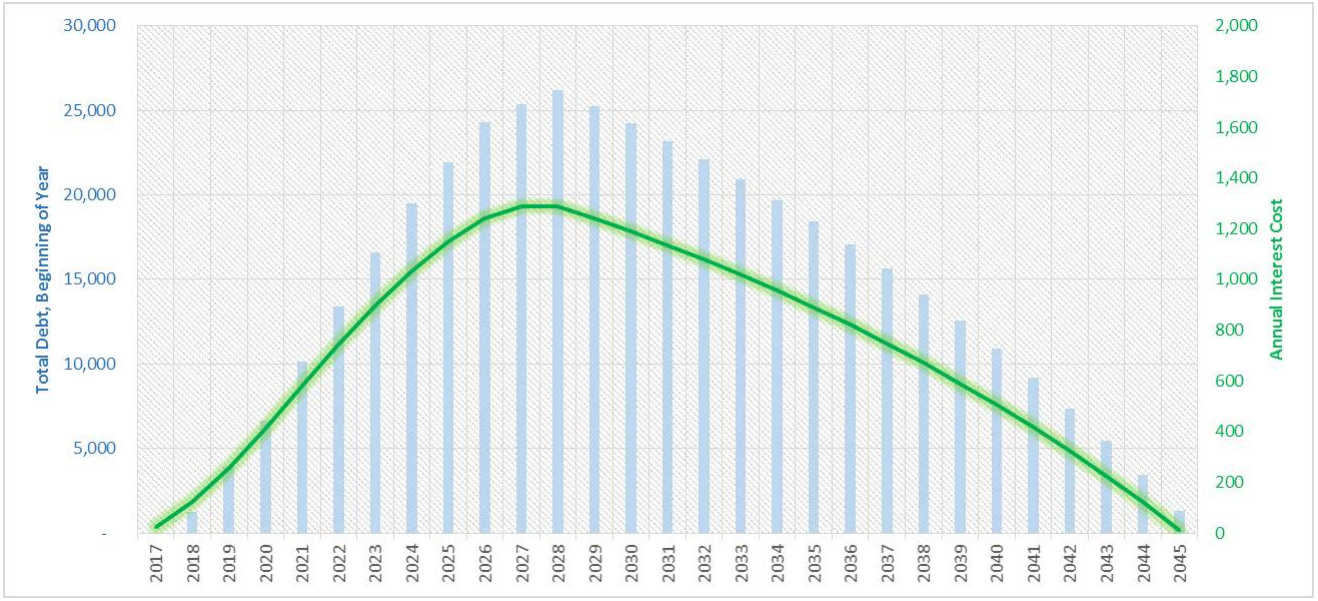
APPENDIX

Effective Date: July 1, 2017

DRAFT

GA Financing (Base, 5%) *(Calendar Year Basis)* ***(Effective July 1, 2017)***

March 1 Deck



At an **Interest Rate of 5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2028 at approximately $1.3B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	1,277	3,908	6,667	10,154	13,395	16,592	19,526	21,943	24,304	25,340	26,194	25,240	24,238	23,184	22,077
Annual Interest Cost	26	124	258	413	581	742	896	1,031	1,151	1,239	1,286	1,288	1,239	1,188	1,134	1,077
Additional GA Debt Drawdown Required	1,250	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	1,277	3,908	6,667	10,154	13,395	16,592	19,526	21,943	24,304	25,340	26,194	25,240	24,238	23,184	22,077	20,912

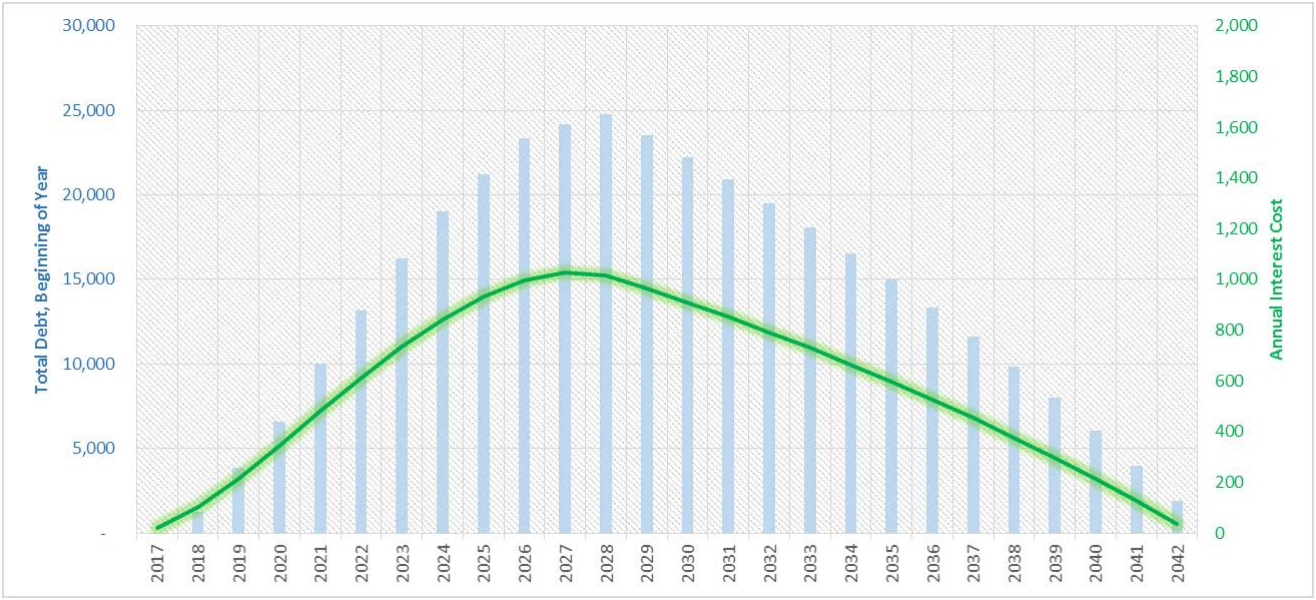
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	20,912	19,689	18,402	17,050	15,629	14,135	12,564	10,914	9,178	7,354	5,437	3,421	1,303	0	0	
Annual Interest Cost	1,018	955	889	820	748	671	591	506	417	324	226	123	15	0	0	**20,978**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,317	0	0	
Accumulated debt in present year	19,689	18,402	17,050	15,629	14,135	12,564	10,914	9,178	7,354	5,437	3,421	1,303	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%.
2 To forecast the repayment of the remaining balance, a cap of $2.242 bn above the true cost of GA in any given year is applied. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period.

GA Financing: 4.2%

(Calendar Year Basis)
(Effective July1, 2017)

March 1 Deck



At an **Interest Rate of 4.2%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $1B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	1,272	3,884	6,600	10,017	13,157	16,222	18,994	21,220	23,364	24,157	24,750	23,524	22,246	20,914	19,524
Annual Interest Cost	22	103	215	342	481	611	734	840	932	996	1,026	1,016	964	909	852	792
Additional GA Debt Drawdown Required	1,250	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	1,272	3,884	6,600	10,017	13,157	16,222	18,994	21,220	23,364	24,157	24,750	23,524	22,246	20,914	19,524	18,075

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	18,075	16,564	14,988	13,344	11,630	9,843	7,979	6,036	4,009	1,895	0	0	0	0	0	
Annual Interest Cost	730	666	598	528	454	378	298	215	128	38	0	0	0	0	0	**14,869**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,933	0	0	0	0	0	
Accumulated debt in present year	16,564	14,988	13,344	11,630	9,843	7,979	6,036	4,009	1,895	0	0	0	0	0	0	

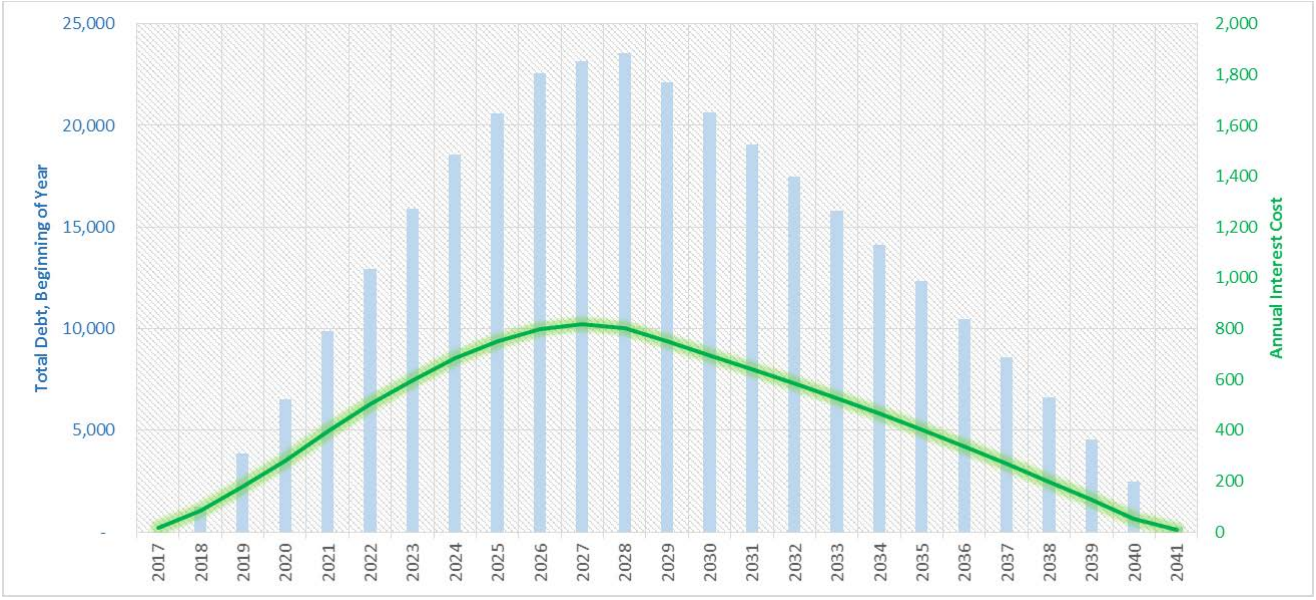
Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 4.2%.

DRAFT

GA Financing: 5%

(Calendar Year Basis)
(Effective July 1, 2017)

March 1 Deck



At an **Interest Rate of 3.5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $817M.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	1,269	3,862	6,541	9,898	12,953	15,908	18,544	20,612	22,576	23,172	23,556	22,116	20,625	19,081	17,482
Annual Interest Cost	18	86	178	282	395	500	599	682	753	800	817	802	750	697	642	585
Additional GA Debt Drawdown Required	1,250	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	1,269	3,862	6,541	9,898	12,953	15,908	18,544	20,612	22,576	23,172	23,556	22,116	20,625	19,081	17,482	15,825

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	15,825	14,111	12,335	10,495	8,591	6,618	4,576	2,461	271	0	0	0	0	0	0	
Annual Interest Cost	527	466	402	337	269	199	126	51	10	0	0	0	0	0	0	10,974
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-280	0	0	0	0	0	0	
Accumulated debt in present year	14,111	12,335	10,495	8,591	6,618	4,576	2,461	271	0	0	0	0	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 3.5%.

DRAFT

GA Financing:
Interest Rate Base Scenario & Sensitivities
March 1, 2017, Energy Deck Case

Corporate and Electricity Finance Division
March 6, 2017

DRAFT

GA Financing *(Calendar Year Basis) – (**Effective January 1, 2017**)* March 1 Deck

- The interest cost estimates are based on Ministry of Energy estimates of the Global Adjustment cost amounts to be deferred, per its March 1 Cabinet submission.
  - GA deferral estimates are subject to updates from the Ministry of Energy.
  - Actual annual and cumulative interest costs are very sensitive to actual borrowing rates. Table below is illustrative.
  - Sensitivities shown on lower interest rates assume faster debt pay down. Alternatively, pay down could be stretched out, but would result in relatively higher cumulative interest costs than shown for that interest rate.
- Interest cost estimates are slightly adjusted from Ministry of Energy amounts, to reflect in-year interest costs. Energy's base case interest costs shown were an assumed 5%, compounded monthly, calculated in the following year, with a term of 30-years (2047).

Interest Rate	Peak Annual Interest Cost	Total Life-cycle Accumulated Interest Costs	Term (Approximate)
3.5%	$0.879 billion in 2027	$12.6 billion	2042 (25-year term)
4.2%	$1.1 billion in 2027	$17.4 billion	2044 (27-year term)
5.0%	$1.4 billion in 2028	$25.1 billion	2047 (30-year term)

Total GA deferral amount being financed is approximately $20.3 billion (plus deferred, capitalised interest, that can increase peak debt to about $28 bn under the 5% scenario.

Base Scenario – *5% Interest Rate* with GA draw downs occurring on an equal monthly basis.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655
Annual Interest Cost	58	189	327	485	658	822	980	1,120	1,244	1,337	1,389	1,396	1,353	1,307	1,260	1,209
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655	23,622

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	23,622	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	
Annual Interest Cost	1,156	1,101	1,043	981	917	849	778	703	624	541	454	363	267	166	60	**25,137**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	
Accumulated debt in present year	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	2	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.
2 Higher interest rates results in extended the term of the financing. It is assumed that a cap of $2.242 bn above the true cost of GA in any given year is continued to be applied to repay any remaining debt. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period. In this Scenario, the term would be extended to Year 2056.

DRAFT

GA Financing *(Calendar Year Basis) – (**Effective July 1, 2017**)* *March 1 Deck*

- Ministry of Energy modelling estimates provided have been based on a full-year of GA deferral in 2017. Annual and cumulative interest and debt estimates would be sensitive to an in-year start date of, e.g., July 1, 2017, as below.
  - Otherwise, as before, modelling is based on Ministry of Energy estimates of the Global Adjustment cost amounts to be deferred in its March 1, 2017, Cabinet Submission.
  - GA deferral cost estimates are subject to updates from the Ministry of Energy.
  - Actual annual and cumulative interest costs are very sensitive to actual borrowing rates. Table below is illustrative.
  - Sensitivities shown on lower interest rates assume faster debt pay down. Alternatively, pay down could be stretched out, but would result in relatively higher cumulative interest costs than shown for that interest rate.
- Interest cost estimates are adjusted from Ministry of Energy amounts, to reflect in-year interest costs and an assumed July 1, 2017 implementation date. Half-a-year of reduced deferred GA significantly reduces estimated cumulative interest costs.

Interest Rate	Peak Annual Interest Cost	Total Life-cycle Accumulated Interest Costs	Term (Approximate)
3.5%	$0.817 billion in 2027	$11 billion	2041 (24-year term)
4.2%	$1.0 billion in 2027	$14.9 billion	2042 (25-year term)
5.0%	$1.3 billion in 2028	$21.0 billion	2045 (28-year term)

Total GA deferral amount being financed is approximately $19.1 billion (plus deferred, capitalised interest, that can increase peak debt to about $26 bn under the 5% scenario.

Base Scenario – *5% Interest Rate* with GA draw downs occurring on an equal monthly basis.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	1,277	3,908	6,667	10,154	13,395	16,592	19,526	21,943	24,304	25,340	26,194	25,240	24,238	23,184	22,077
Annual Interest Cost	26	124	258	413	581	742	896	1,031	1,151	1,239	1,286	1,288	1,239	1,188	1,134	1,077
Additional GA Debt Drawdown Required	1,250	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	1,277	3,908	6,667	10,154	13,395	16,592	19,526	21,943	24,304	25,340	26,194	25,240	24,238	23,184	22,077	20,912

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	20,912	19,689	18,402	17,050	15,629	14,135	12,564	10,914	9,178	7,354	5,437	3,421	1,303	0	0	
Annual Interest Cost	1,018	955	889	820	748	671	591	506	417	324	226	123	15	0	0	**20,978**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,317	0	0	
Accumulated debt in present year	19,689	18,402	17,050	15,629	14,135	12,564	10,914	9,178	7,354	5,437	3,421	1,303	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.
2 Higher interest rates results in extended the term of the financing. It is assumed that a cap of $2.242 bn above the true cost of GA in any given year is continued to be applied to repay any remaining debt. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period. In this Scenario, the term would be extended to Year 2056.

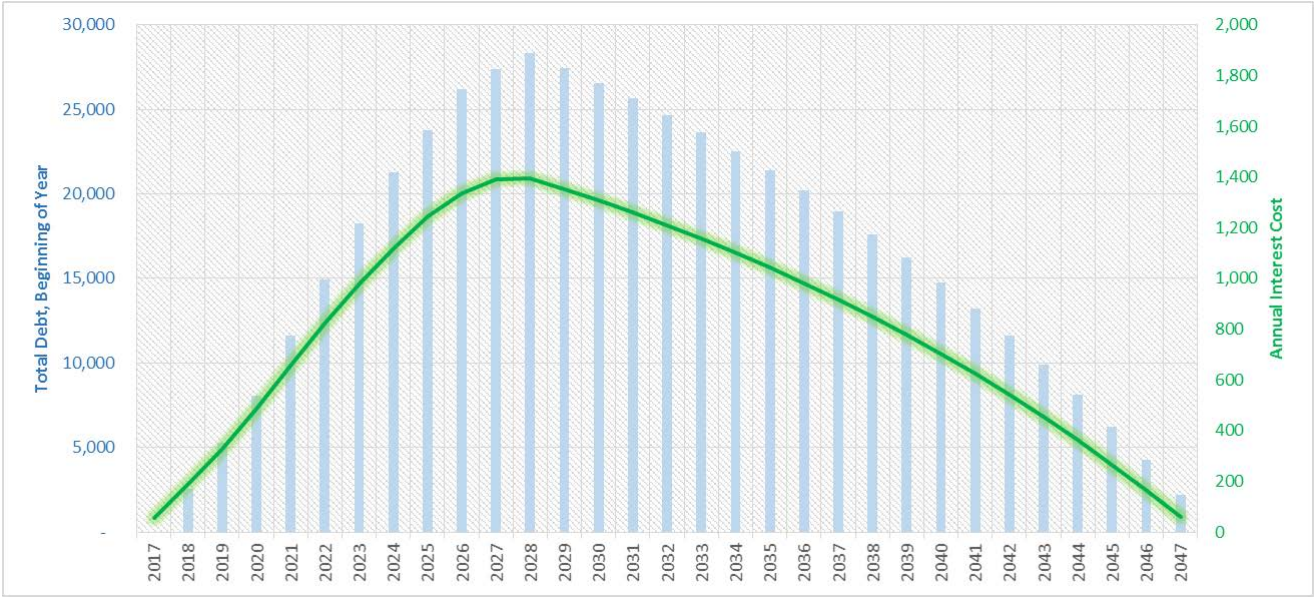
APPENDIX

Effective Date: January 1, 2017

DRAFT

GA Financing (Base, 5%)

(Calendar Year Basis)
*(**Effective January 1, 2017**)* *March 1 Deck*



At an **Interest Rate of 5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2028 at approximately $1.4B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655
Annual Interest Cost	58	189	327	485	658	822	980	1,120	1,244	1,337	1,389	1,396	1,353	1,307	1,260	1,209
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655	23,622

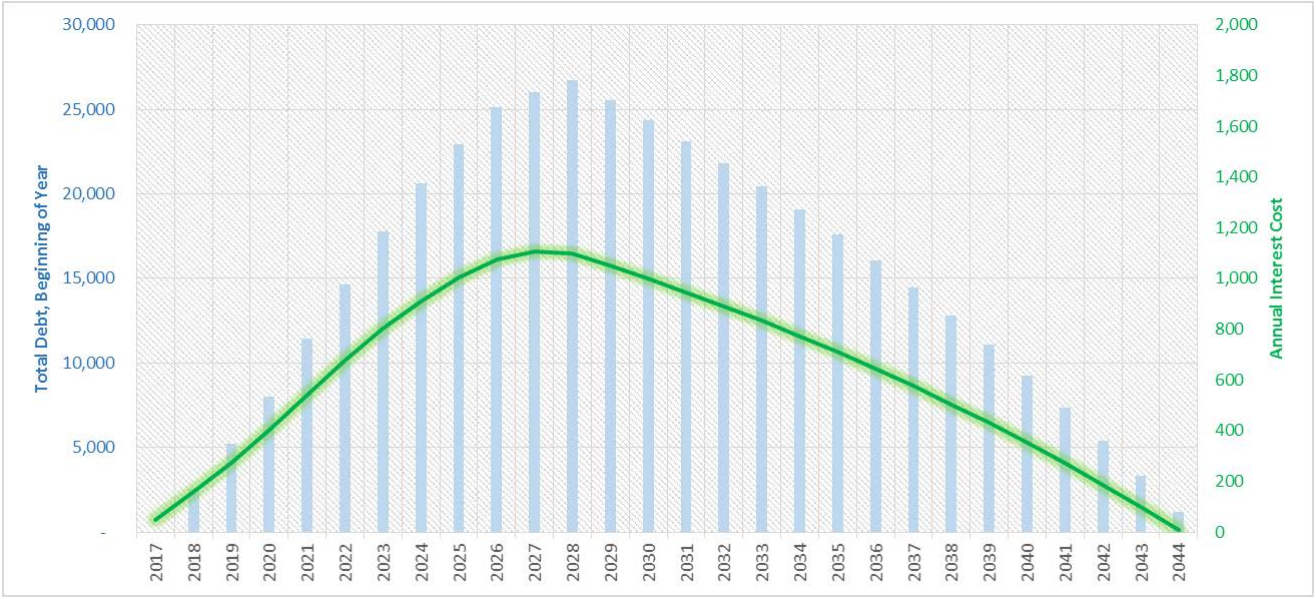
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	23,622	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	
Annual Interest Cost	1,156	1,101	1,043	981	917	849	778	703	624	541	454	363	267	166	60	**25,137**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	
Accumulated debt in present year	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	2	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%.
2 To forecast the repayment of the remaining balance, a cap of $2.242 bn above the true cost of GA in any given year is applied. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period.

GA Financing: 4.2%

(Calendar Year Basis)
(Effective January 1, 2017)

March 1 Deck



At an **Interest Rate of 4.2%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $1.1B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,549	5,215	7,988	11,465	14,667	17,797	20,637	22,933	25,149	26,019	26,692	25,550	24,358	23,116	21,821
Annual Interest Cost	49	158	272	402	543	676	802	911	1,006	1,073	1,106	1,099	1,050	999	946	891
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,549	5,215	7,988	11,465	14,667	17,797	20,637	22,933	25,149	26,019	26,692	25,550	24,358	23,116	21,821	20,470

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	20,470	19,061	17,592	16,060	14,462	12,797	11,059	9,248	7,358	5,388	3,334	1,191	0	0	0	
Annual Interest Cost	833	772	710	644	576	504	430	352	271	187	99	7	0	0	0	**17,367**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,199	0	0	0	
Accumulated debt in present year	19,061	17,592	16,060	14,462	12,797	11,059	9,248	7,358	5,388	3,334	1,191	0	0	0	0	

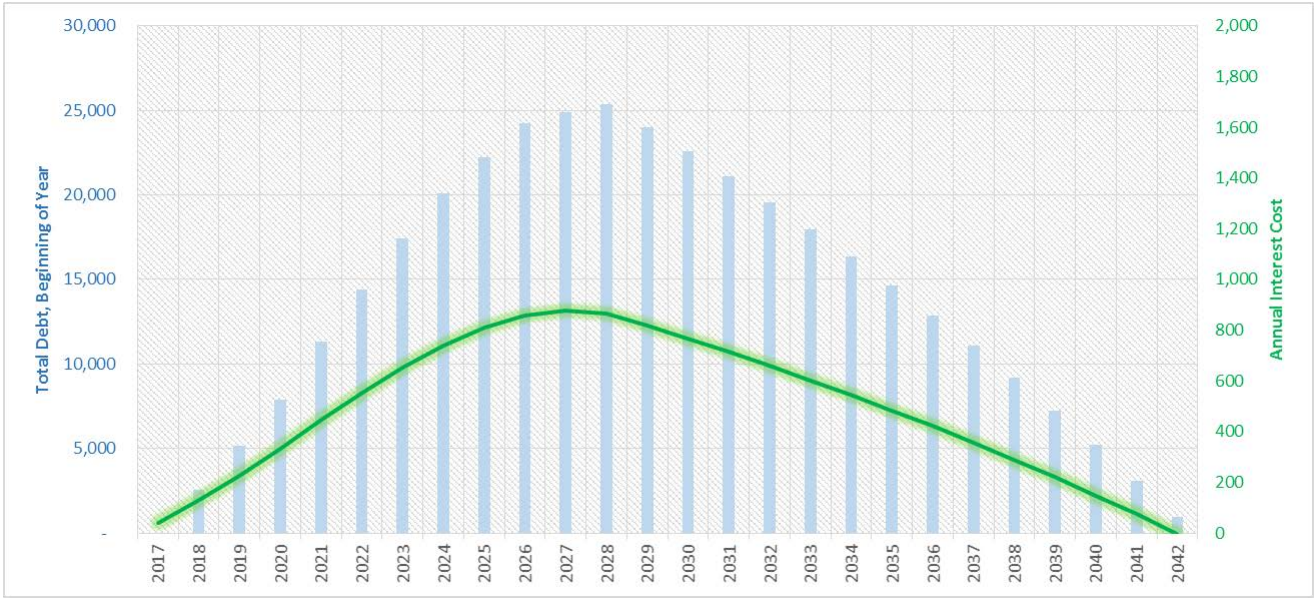
Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 4.2%.

DRAFT

GA Financing: 3.5%

(Calendar Year Basis)
(Effective January 1, 2017)

March 1 Deck



At an **Interest Rate of 3.5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $879M.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,541	5,180	7,906	11,311	14,417	17,423	20,113	22,237	24,258	24,915	25,361	23,985	22,561	21,085	19,557
Annual Interest Cost	41	131	225	331	445	553	653	738	811	860	879	866	817	766	714	659
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,541	5,180	7,906	11,311	14,417	17,423	20,113	22,237	24,258	24,915	25,361	23,985	22,561	21,085	19,557	17,975

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	17,975	16,336	14,639	12,882	11,063	9,178	7,227	5,206	3,113	946	0	0	0	0	0	
Annual Interest Cost	603	545	484	422	357	290	221	149	74	34	0	0	0	0	0	**12,665**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-980	0	0	0	0	0	
Accumulated debt in present year	16,336	14,639	12,882	11,063	9,178	7,227	5,206	3,113	946	0	0	0	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 3.5%.

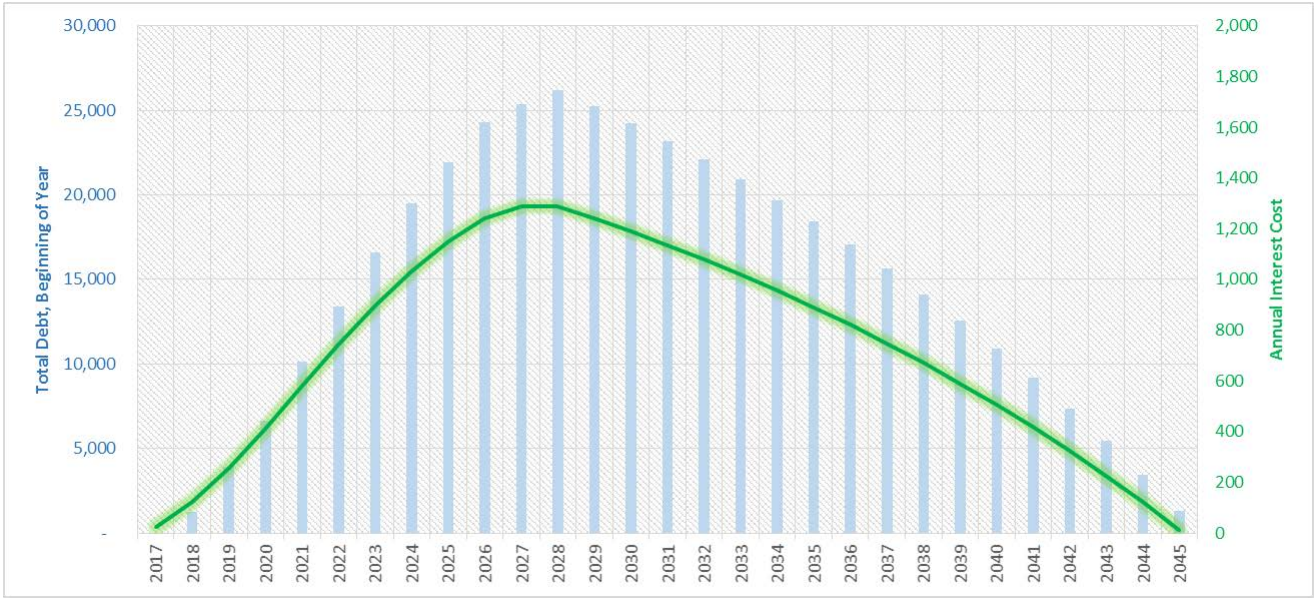
APPENDIX

Effective Date: July 1, 2017

DRAFT

GA Financing (Base, 5%) *(Calendar Year Basis)* ***(Effective July 1, 2017)***

March 1 Deck



At an **Interest Rate of 5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2028 at approximately $1.3B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	1,277	3,908	6,667	10,154	13,395	16,592	19,526	21,943	24,304	25,340	26,194	25,240	24,238	23,184	22,077
Annual Interest Cost	26	124	258	413	581	742	896	1,031	1,151	1,239	1,286	1,288	1,239	1,188	1,134	1,077
Additional GA Debt Drawdown Required	1,250	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	1,277	3,908	6,667	10,154	13,395	16,592	19,526	21,943	24,304	25,340	26,194	25,240	24,238	23,184	22,077	20,912

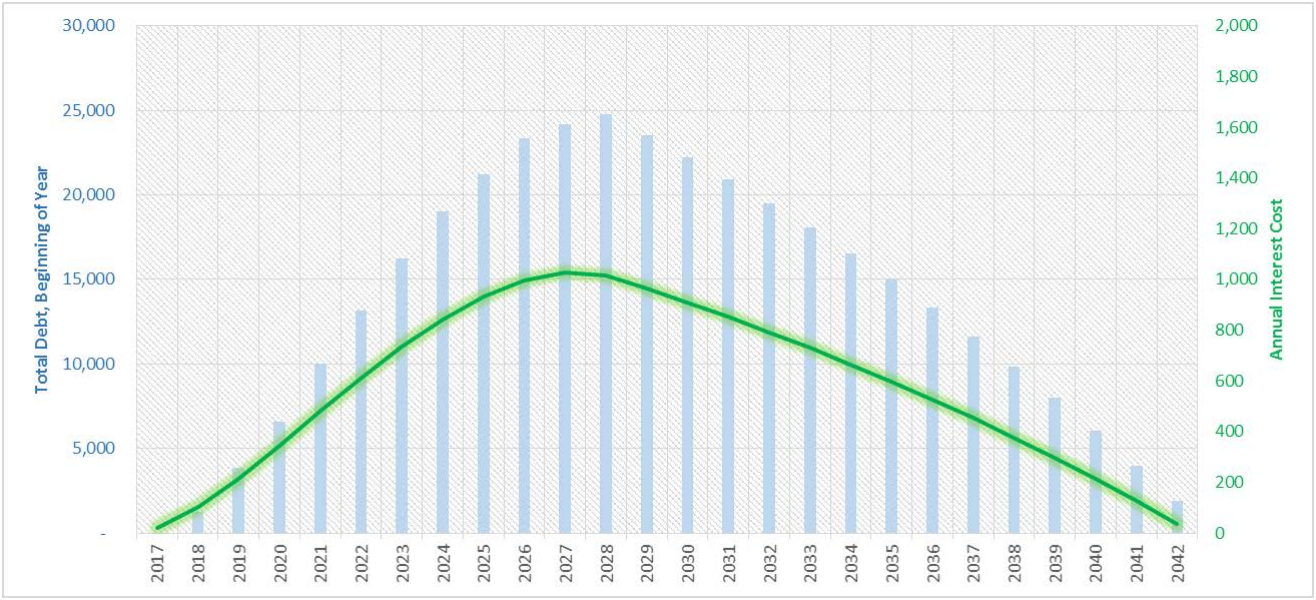
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	20,912	19,689	18,402	17,050	15,629	14,135	12,564	10,914	9,178	7,354	5,437	3,421	1,303	0	0	
Annual Interest Cost	1,018	955	889	820	748	671	591	506	417	324	226	123	15	0	0	**20,978**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,317	0	0	
Accumulated debt in present year	19,689	18,402	17,050	15,629	14,135	12,564	10,914	9,178	7,354	5,437	3,421	1,303	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%.
2 To forecast the repayment of the remaining balance, a cap of $2.242 bn above the true cost of GA in any given year is applied. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period.

GA Financing: 4.2%

(Calendar Year Basis)
(Effective July1, 2017)

March 1 Deck



At an **Interest Rate of 4.2%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $1B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	1,272	3,884	6,600	10,017	13,157	16,222	18,994	21,220	23,364	24,157	24,750	23,524	22,246	20,914	19,524
Annual Interest Cost	22	103	215	342	481	611	734	840	932	996	1,026	1,016	964	909	852	792
Additional GA Debt Drawdown Required	1,250	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	1,272	3,884	6,600	10,017	13,157	16,222	18,994	21,220	23,364	24,157	24,750	23,524	22,246	20,914	19,524	18,075

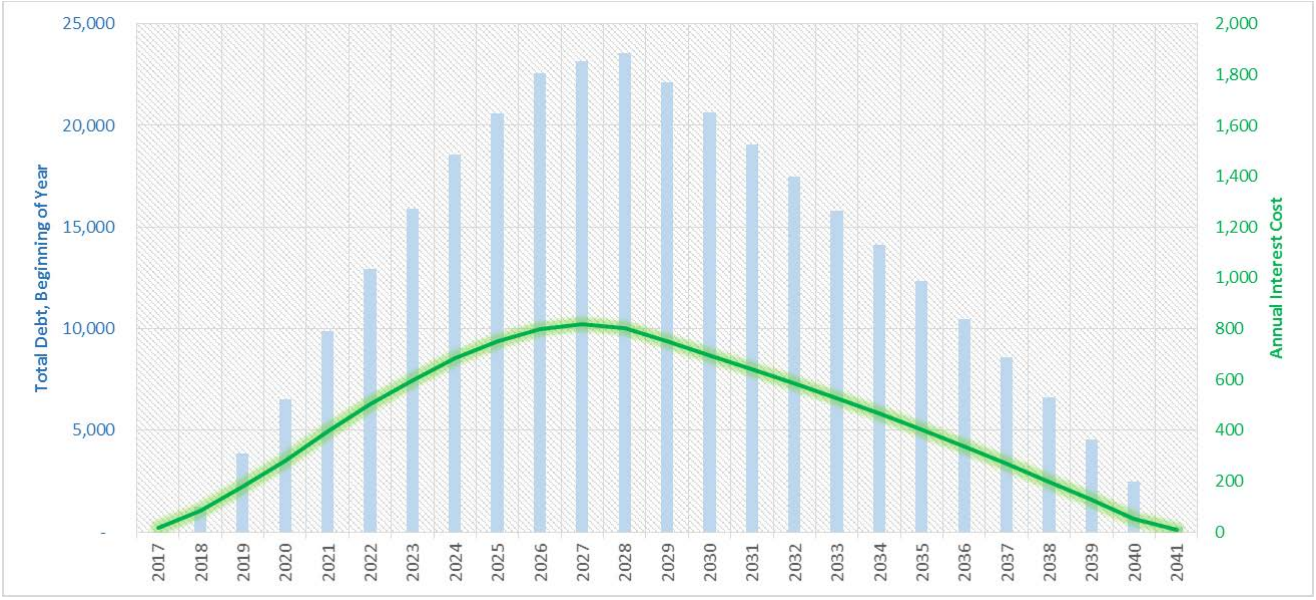
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	18,075	16,564	14,988	13,344	11,630	9,843	7,979	6,036	4,009	1,895	0	0	0	0	0	
Annual Interest Cost	730	666	598	528	454	378	298	215	128	38	0	0	0	0	0	**14,869**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,933	0	0	0	0	0	
Accumulated debt in present year	16,564	14,988	13,344	11,630	9,843	7,979	6,036	4,009	1,895	0	0	0	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 4.2%.

GA Financing: 5%

(Calendar Year Basis)
(Effective July1, 2017)

March 1 Deck



At an **Interest Rate of 3.5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $817M.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	1,269	3,862	6,541	9,898	12,953	15,908	18,544	20,612	22,576	23,172	23,556	22,116	20,625	19,081	17,482
Annual Interest Cost	18	86	178	282	395	500	599	682	753	800	817	802	750	697	642	585
Additional GA Debt Drawdown Required	1,250	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	1,269	3,862	6,541	9,898	12,953	15,908	18,544	20,612	22,576	23,172	23,556	22,116	20,625	19,081	17,482	15,825

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	15,825	14,111	12,335	10,495	8,591	6,618	4,576	2,461	271	0	0	0	0	0	0	
Annual Interest Cost	527	466	402	337	269	199	126	51	10	0	0	0	0	0	0	10,974
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-280	0	0	0	0	0	0	
Accumulated debt in present year	14,111	12,335	10,495	8,591	6,618	4,576	2,461	271	0	0	0	0	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 3.5%.

DRAFT

GA Financing:
Interest Rate Base Scenario & Sensitivities
March 1, 2017, Energy Deck Case

Corporate and Electricity Finance Division
March 6, 2017

DRAFT

GA Financing *(Calendar Year Basis) – (**Effective January 1, 2017**)* March 1 Deck

- The interest cost estimates are based on Ministry of Energy estimates of the Global Adjustment cost amounts to be deferred, per its March 1 Cabinet submission.
  - GA deferral estimates are subject to updates from the Ministry of Energy.
  - Actual annual and cumulative interest costs are very sensitive to actual borrowing rates. Table below is illustrative.
  - Sensitivities shown on lower interest rates assume faster debt pay down. Alternatively, pay down could be stretched out, but would result in relatively higher cumulative interest costs than shown for that interest rate.
- Interest cost estimates are slightly adjusted from Ministry of Energy amounts, to reflect in-year interest costs. Energy's base case interest costs shown were an assumed 5%, compounded monthly, calculated in the following year, with a term of 30-years (2047).

Interest Rate	Peak Annual Interest Cost	Total Life-cycle Accumulated Interest Costs	Term (Approximate)
3.5%	$0.879 billion in 2027	$12.6 billion	2042 (25-year term)
4.2%	$1.1 billion in 2027	$17.4 billion	2044 (27-year term)
5.0%	$1.4 billion in 2028	$25.1 billion	2047 (30-year term)

Total GA deferral amount being financed is approximately $20.3 billion (plus deferred, capitalised interest, that can increase peak debt to about $28 bn under the 5% scenario.

Base Scenario – *5% Interest Rate* with GA draw downs occurring on an equal monthly basis.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655
Annual Interest Cost	58	189	327	485	658	822	980	1,120	1,244	1,337	1,389	1,396	1,353	1,307	1,260	1,209
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655	23,622

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	23,622	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	
Annual Interest Cost	1,156	1,101	1,043	981	917	849	778	703	624	541	454	363	267	166	60	**25,137**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	
Accumulated debt in present year	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	2	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.
2 Higher interest rates results in extended the term of the financing. It is assumed that a cap of $2.242 bn above the true cost of GA in any given year is continued to be applied to repay any remaining debt. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period. In this Scenario, the term would be extended to Year 2056.

DRAFT

GA Financing *(Calendar Year Basis) – (**Effective July 1, 2017**)* *March 1 Deck*

- Ministry of Energy modelling estimates provided have been based on a full-year of GA deferral in 2017. Annual and cumulative interest and debt estimates would be sensitive to an in-year start date of, e.g., July 1, 2017, as below.
  - Otherwise, as before, modelling is based on Ministry of Energy estimates of the Global Adjustment cost amounts to be deferred in its March 1, 2017, Cabinet Submission.
  - GA deferral cost estimates are subject to updates from the Ministry of Energy.
  - Actual annual and cumulative interest costs are very sensitive to actual borrowing rates. Table below is illustrative.
  - Sensitivities shown on lower interest rates assume faster debt pay down. Alternatively, pay down could be stretched out, but would result in relatively higher cumulative interest costs than shown for that interest rate.
- Interest cost estimates are adjusted from Ministry of Energy amounts, to reflect in-year interest costs and an assumed July 1, 2017 implementation date. Half-a-year of reduced deferred GA significantly reduces estimated cumulative interest costs.

Interest Rate	Peak Annual Interest Cost	Total Life-cycle Accumulated Interest Costs	Term (Approximate)
3.5%	$0.817 billion in 2027	$11 billion	2041 (24-year term)
4.2%	$1.0 billion in 2027	$14.9 billion	2042 (25-year term)
5.0%	$1.3 billion in 2028	$21.0 billion	2045 (28-year term)

Total GA deferral amount being financed is approximately $19.1 billion (plus deferred, capitalised interest, that can increase peak debt to about $26 bn under the 5% scenario.

Base Scenario – *5% Interest Rate* with GA draw downs occurring on an equal monthly basis.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	1,277	3,908	6,667	10,154	13,395	16,592	19,526	21,943	24,304	25,340	26,194	25,240	24,238	23,184	22,077
Annual Interest Cost	26	124	258	413	581	742	896	1,031	1,151	1,239	1,286	1,288	1,239	1,188	1,134	1,077
Additional GA Debt Drawdown Required	1,250	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	1,277	3,908	6,667	10,154	13,395	16,592	19,526	21,943	24,304	25,340	26,194	25,240	24,238	23,184	22,077	20,912

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	20,912	19,689	18,402	17,050	15,629	14,135	12,564	10,914	9,178	7,354	5,437	3,421	1,303	0	0	
Annual Interest Cost	1,018	955	889	820	748	671	591	506	417	324	226	123	15	0	0	**20,978**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,317	0	0	
Accumulated debt in present year	19,689	18,402	17,050	15,629	14,135	12,564	10,914	9,178	7,354	5,437	3,421	1,303	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.
2 Higher interest rates results in extended the term of the financing. It is assumed that a cap of $2.242 bn above the true cost of GA in any given year is continued to be applied to repay any remaining debt. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period. In this Scenario, the term would be extended to Year 2056.

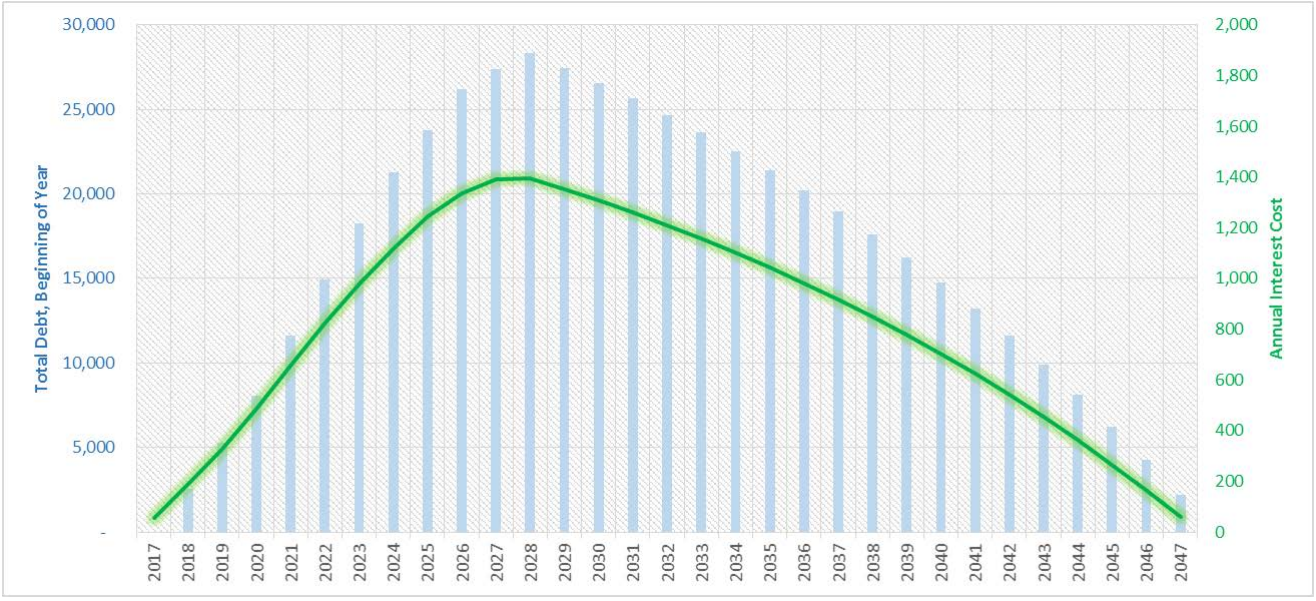
APPENDIX

Effective Date: January 1, 2017

DRAFT

GA Financing (Base, 5%)

(Calendar Year Basis)
*(**Effective January 1, 2017**)* *March 1 Deck*



At an **Interest Rate of 5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2028 at approximately $1.4B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655
Annual Interest Cost	58	189	327	485	658	822	980	1,120	1,244	1,337	1,389	1,396	1,353	1,307	1,260	1,209
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655	23,622

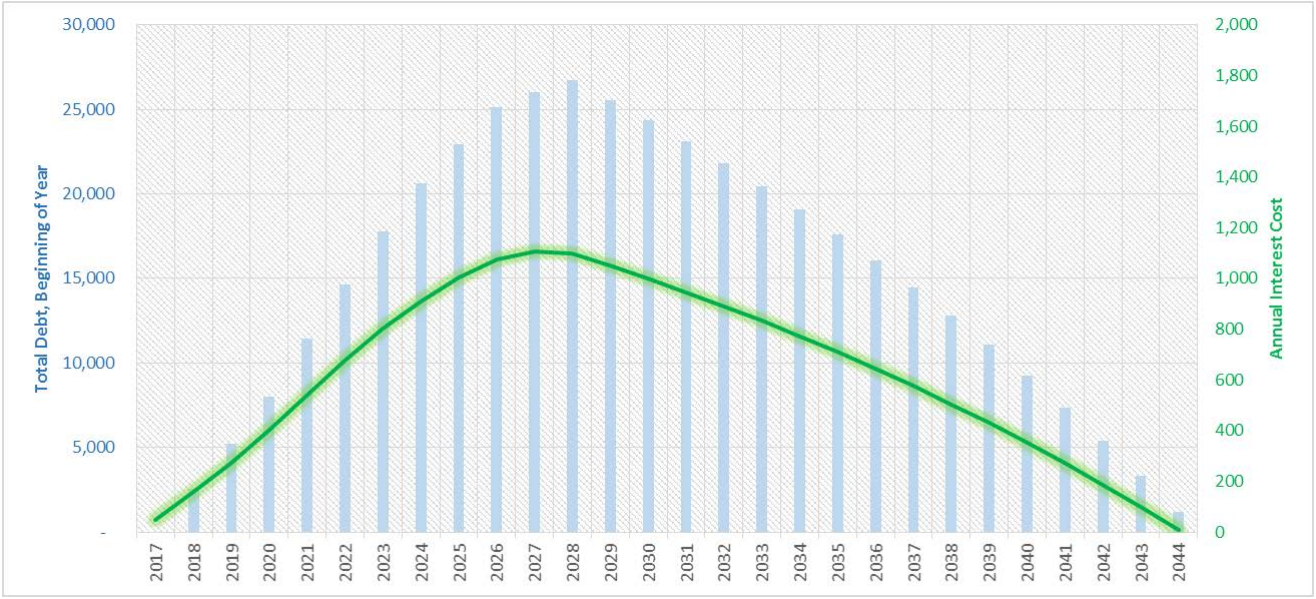
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	23,622	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	
Annual Interest Cost	1,156	1,101	1,043	981	917	849	778	703	624	541	454	363	267	166	60	**25,137**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	
Accumulated debt in present year	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	2	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%.
2 To forecast the repayment of the remaining balance, a cap of $2.242 bn above the true cost of GA in any given year is applied. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period.

GA Financing: 4.2%

(Calendar Year Basis)
(Effective January 1, 2017)

March 1 Deck



At an **Interest Rate of 4.2%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $1.1B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,549	5,215	7,988	11,465	14,667	17,797	20,637	22,933	25,149	26,019	26,692	25,550	24,358	23,116	21,821
Annual Interest Cost	49	158	272	402	543	676	802	911	1,006	1,073	1,106	1,099	1,050	999	946	891
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,549	5,215	7,988	11,465	14,667	17,797	20,637	22,933	25,149	26,019	26,692	25,550	24,358	23,116	21,821	20,470

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	20,470	19,061	17,592	16,060	14,462	12,797	11,059	9,248	7,358	5,388	3,334	1,191	0	0	0	
Annual Interest Cost	833	772	710	644	576	504	430	352	271	187	99	7	0	0	0	**17,367**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,199	0	0	0	
Accumulated debt in present year	19,061	17,592	16,060	14,462	12,797	11,059	9,248	7,358	5,388	3,334	1,191	0	0	0	0	

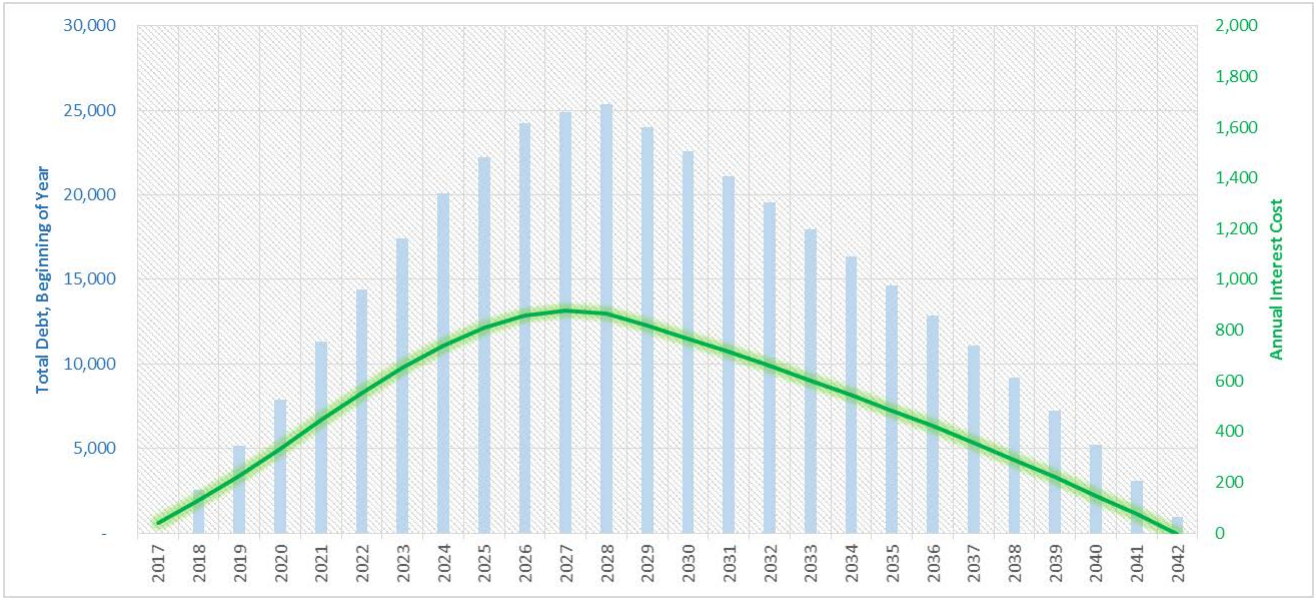
Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 4.2%.

DRAFT

GA Financing: 3.5%

(Calendar Year Basis)
(Effective January 1, 2017)

March 1 Deck



At an **Interest Rate of 3.5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $879M.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,541	5,180	7,906	11,311	14,417	17,423	20,113	22,237	24,258	24,915	25,361	23,985	22,561	21,085	19,557
Annual Interest Cost	41	131	225	331	445	553	653	738	811	860	879	866	817	766	714	659
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,541	5,180	7,906	11,311	14,417	17,423	20,113	22,237	24,258	24,915	25,361	23,985	22,561	21,085	19,557	17,975

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	17,975	16,336	14,639	12,882	11,063	9,178	7,227	5,206	3,113	946	0	0	0	0	0	
Annual Interest Cost	603	545	484	422	357	290	221	149	74	34	0	0	0	0	0	**12,665**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-980	0	0	0	0	0	
Accumulated debt in present year	16,336	14,639	12,882	11,063	9,178	7,227	5,206	3,113	946	0	0	0	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 3.5%.

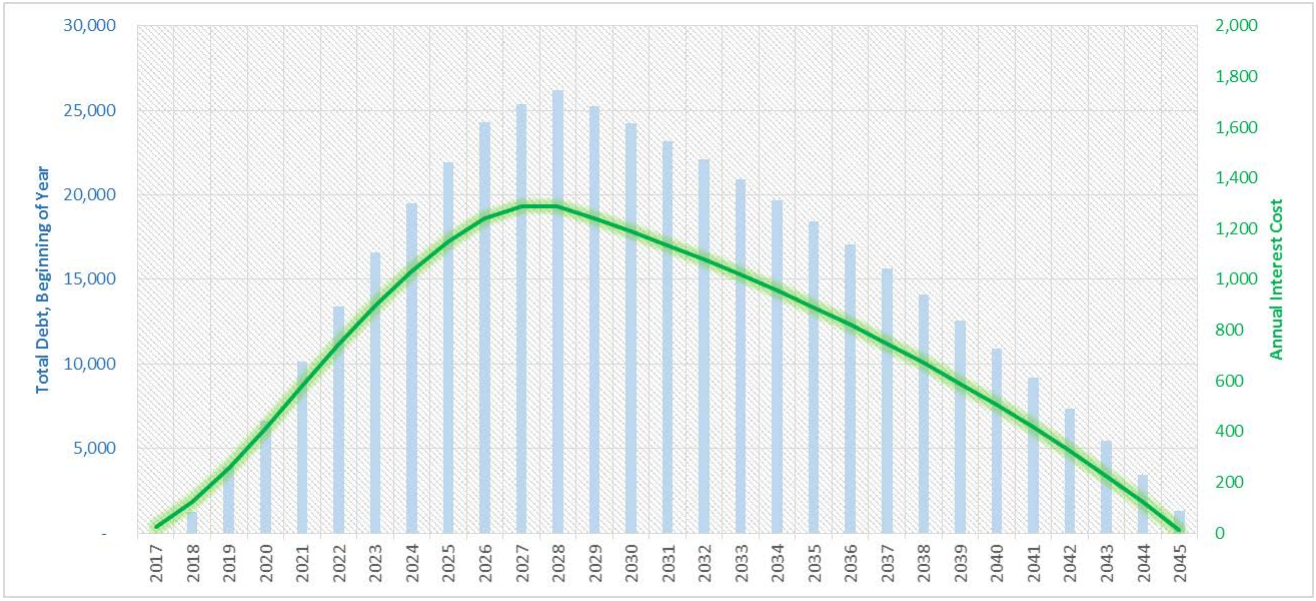
APPENDIX

Effective Date: July 1, 2017

DRAFT

GA Financing (Base, 5%) *(Calendar Year Basis)* ***(Effective July 1, 2017)***

March 1 Deck



At an **Interest Rate of 5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2028 at approximately $1.3B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	1,277	3,908	6,667	10,154	13,395	16,592	19,526	21,943	24,304	25,340	26,194	25,240	24,238	23,184	22,077
Annual Interest Cost	26	124	258	413	581	742	896	1,031	1,151	1,239	1,286	1,288	1,239	1,188	1,134	1,077
Additional GA Debt Drawdown Required	1,250	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	1,277	3,908	6,667	10,154	13,395	16,592	19,526	21,943	24,304	25,340	26,194	25,240	24,238	23,184	22,077	20,912

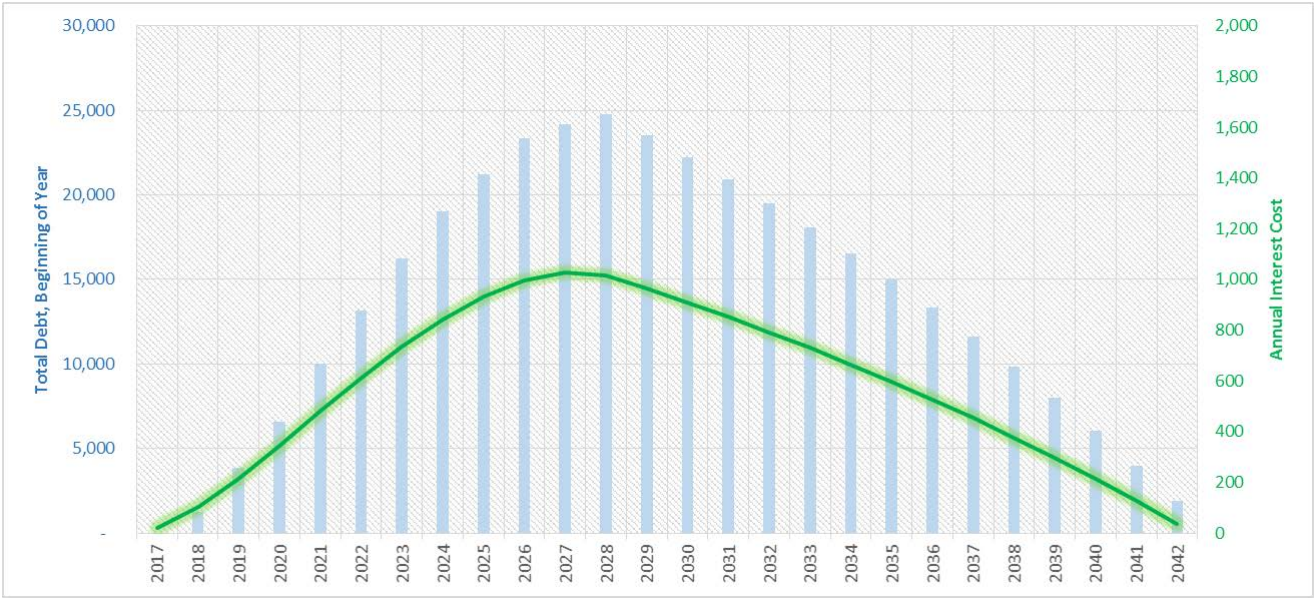
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	20,912	19,689	18,402	17,050	15,629	14,135	12,564	10,914	9,178	7,354	5,437	3,421	1,303	0	0	
Annual Interest Cost	1,018	955	889	820	748	671	591	506	417	324	226	123	15	0	0	**20,978**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,317	0	0	
Accumulated debt in present year	19,689	18,402	17,050	15,629	14,135	12,564	10,914	9,178	7,354	5,437	3,421	1,303	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%.
2 To forecast the repayment of the remaining balance, a cap of $2.242 bn above the true cost of GA in any given year is applied. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period.

GA Financing: 4.2%

(Calendar Year Basis)
(Effective July1, 2017)

March 1 Deck



At an **Interest Rate of 4.2%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $1B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	1,272	3,884	6,600	10,017	13,157	16,222	18,994	21,220	23,364	24,157	24,750	23,524	22,246	20,914	19,524
Annual Interest Cost	22	103	215	342	481	611	734	840	932	996	1,026	1,016	964	909	852	792
Additional GA Debt Drawdown Required	1,250	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	1,272	3,884	6,600	10,017	13,157	16,222	18,994	21,220	23,364	24,157	24,750	23,524	22,246	20,914	19,524	18,075

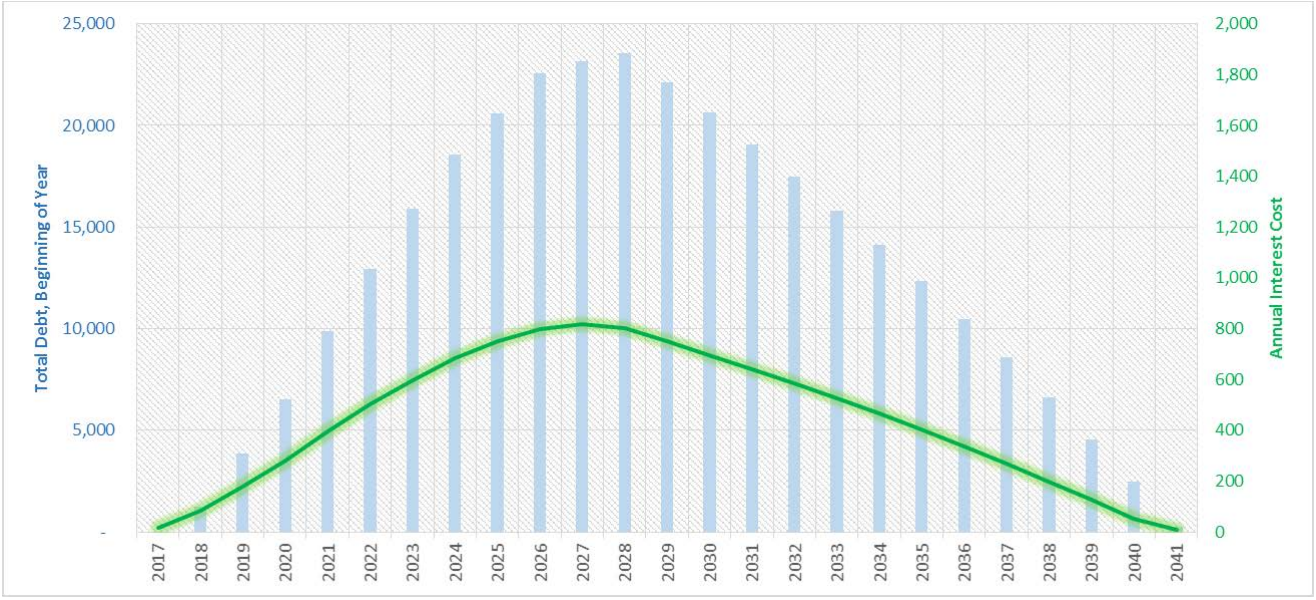
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	18,075	16,564	14,988	13,344	11,630	9,843	7,979	6,036	4,009	1,895	0	0	0	0	0	
Annual Interest Cost	730	666	598	528	454	378	298	215	128	38	0	0	0	0	0	**14,869**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,933	0	0	0	0	0	
Accumulated debt in present year	16,564	14,988	13,344	11,630	9,843	7,979	6,036	4,009	1,895	0	0	0	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 4.2%.

GA Financing: 5%

(Calendar Year Basis)
(Effective July1, 2017)

March 1 Deck



At an **Interest Rate of 3.5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $817M.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	1,269	3,862	6,541	9,898	12,953	15,908	18,544	20,612	22,576	23,172	23,556	22,116	20,625	19,081	17,482
Annual Interest Cost	18	86	178	282	395	500	599	682	753	800	817	802	750	697	642	585
Additional GA Debt Drawdown Required	1,250	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	1,269	3,862	6,541	9,898	12,953	15,908	18,544	20,612	22,576	23,172	23,556	22,116	20,625	19,081	17,482	15,825

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	15,825	14,111	12,335	10,495	8,591	6,618	4,576	2,461	271	0	0	0	0	0	0	
Annual Interest Cost	527	466	402	337	269	199	126	51	10	0	0	0	0	0	0	10,974
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-280	0	0	0	0	0	0	
Accumulated debt in present year	14,111	12,335	10,495	8,591	6,618	4,576	2,461	271	0	0	0	0	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 3.5%.

DRAFT

GA Financing:
Interest Rate Base Scenario & Sensitivities
March 1, 2017, Energy Deck Case

Corporate and Electricity Finance Division
March 2017

DRAFT

GA Financing *(Calendar Year Basis) – (**Effective January 1, 2017**)* March 1 Deck

- The interest cost estimates are based on Ministry of Energy estimates of the Global Adjustment cost amounts to be deferred, per its March 1 Cabinet submission.
  - GA deferral estimates are subject to updates from the Ministry of Energy.
  - Actual annual and cumulative interest costs are very sensitive to actual borrowing rates. Table below is illustrative.
  - Sensitivities shown on lower interest rates assume faster debt pay down. Alternatively, pay down could be stretched out, but would result in relatively higher cumulative interest costs than shown for that interest rate.
- Interest cost estimates are slightly adjusted from Ministry of Energy amounts, to reflect in-year interest costs. Energy's base case interest costs shown were an assumed 5%, compounded monthly, calculated in the following year, with a term of 30-years (2047).

Interest Rate	Peak Annual Interest Cost	Total Life-cycle Accumulated Interest Costs	Term (Approximate)
3.5%	$0.879 billion in 2027	$12.6 billion	2042 (25-year term)
4.2%	$1.1 billion in 2027	$17.4 billion	2044 (27-year term)
5.0%	$1.4 billion in 2028	$25.1 billion	2047 (30-year term)

Total GA deferral amount being financed is approximately $20.3 billion (plus deferred, capitalised interest, that can increase peak debt to about $28 bn under the 5% scenario.

Base Scenario – *5% Interest Rate* with GA draw downs occurring on an equal monthly basis.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655
Annual Interest Cost	58	189	327	485	658	822	980	1,120	1,244	1,337	1,389	1,396	1,353	1,307	1,260	1,209
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655	23,622

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	23,622	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	
Annual Interest Cost	1,156	1,101	1,043	981	917	849	778	703	624	541	454	363	267	166	60	**25,137**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	
Accumulated debt in present year	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	2	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.
2 Higher interest rates results in extended the term of the financing. It is assumed that a cap of $2.242 bn above the true cost of GA in any given year is continued to be applied to repay any remaining debt. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period. In this Scenario, the term would be extended to Year 2056.

DRAFT

GA Financing *(Calendar Year Basis) – (**Effective July 1, 2017**)* *March 1 Deck*

- Ministry of Energy modelling estimates provided have been based on a full-year of GA deferral in 2017. Annual and cumulative interest and debt estimates would be sensitive to an in-year start date of, e.g., July 1, 2017, as below.
  - Otherwise, as before, modelling is based on Ministry of Energy estimates of the Global Adjustment cost amounts to be deferred in its March 1, 2017, Cabinet Submission.
  - GA deferral cost estimates are subject to updates from the Ministry of Energy.
  - Actual annual and cumulative interest costs are very sensitive to actual borrowing rates. Table below is illustrative.
  - Sensitivities shown on lower interest rates assume faster debt pay down. Alternatively, pay down could be stretched out, but would result in relatively higher cumulative interest costs than shown for that interest rate.
- Interest cost estimates are adjusted from Ministry of Energy amounts, to reflect in-year interest costs and an assumed July 1, 2017 implementation date. Half-a-year of reduced deferred GA significantly reduces estimated cumulative interest costs.

Interest Rate	Peak Annual Interest Cost	Total Life-cycle Accumulated Interest Costs	Term (Approximate)
3.5%	$0.817 billion in 2027	$11 billion	2041 (24-year term)
4.2%	$1.0 billion in 2027	$14.9 billion	2042 (25-year term)
5.0%	$1.3 billion in 2028	$21.0 billion	2045 (28-year term)

Total GA deferral amount being financed is approximately $19.1 billion (plus deferred, capitalised interest, that can increase peak debt to about $26 bn under the 5% scenario.

Base Scenario – *5% Interest Rate* with GA draw downs occurring on an equal monthly basis.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	1,277	3,908	6,667	10,154	13,395	16,592	19,526	21,943	24,304	25,340	26,194	25,240	24,238	23,184	22,077
Annual Interest Cost	26	124	258	413	581	742	896	1,031	1,151	1,239	1,286	1,288	1,239	1,188	1,134	1,077
Additional GA Debt Drawdown Required	1,250	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	1,277	3,908	6,667	10,154	13,395	16,592	19,526	21,943	24,304	25,340	26,194	25,240	24,238	23,184	22,077	20,912

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	20,912	19,689	18,402	17,050	15,629	14,135	12,564	10,914	9,178	7,354	5,437	3,421	1,303	0	0	
Annual Interest Cost	1,018	955	889	820	748	671	591	506	417	324	226	123	15	0	0	**20,978**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,317	0	0	
Accumulated debt in present year	19,689	18,402	17,050	15,629	14,135	12,564	10,914	9,178	7,354	5,437	3,421	1,303	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%. Interest Cost in 2017 adjusted to represent implementation in July 2017.
2 Higher interest rates results in extended the term of the financing. It is assumed that a cap of $2.242 bn above the true cost of GA in any given year is continued to be applied to repay any remaining debt. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period. In this Scenario, the term would be extended to Year 2056.

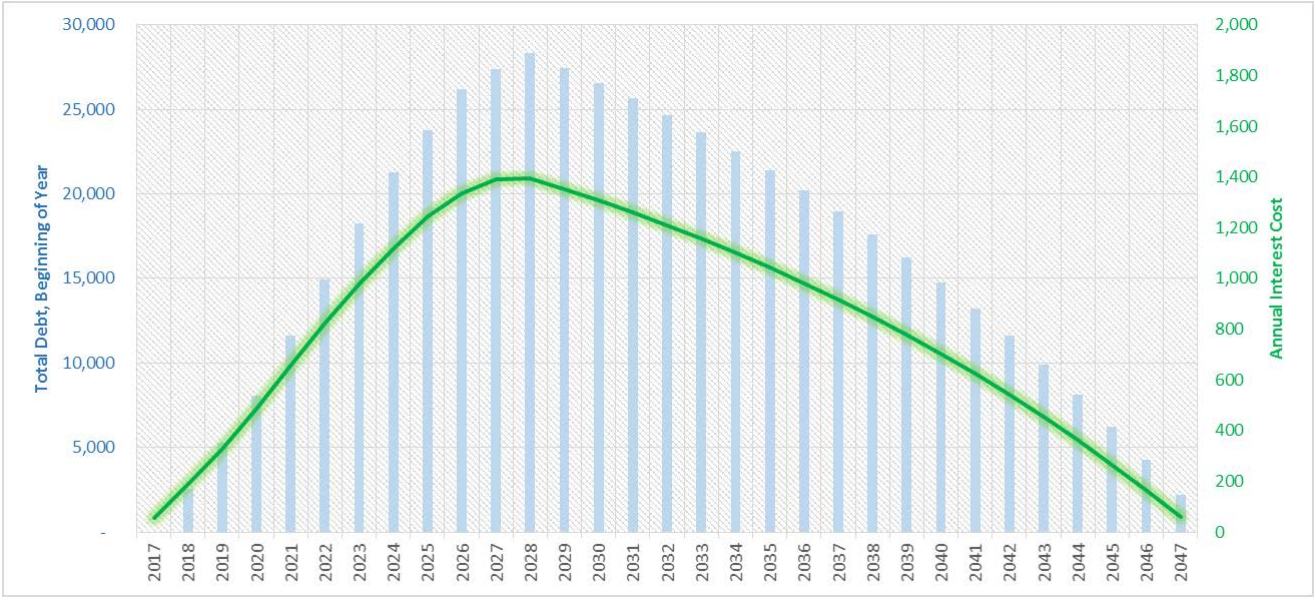
APPENDIX

Effective Date: January 1, 2017

DRAFT

GA Financing (Base, 5%)

(Calendar Year Basis)
*(**Effective January 1, 2017**)* *March 1 Deck*



At an **Interest Rate of 5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2028 at approximately $1.4B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655
Annual Interest Cost	58	189	327	485	658	822	980	1,120	1,244	1,337	1,389	1,396	1,353	1,307	1,260	1,209
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655	23,622

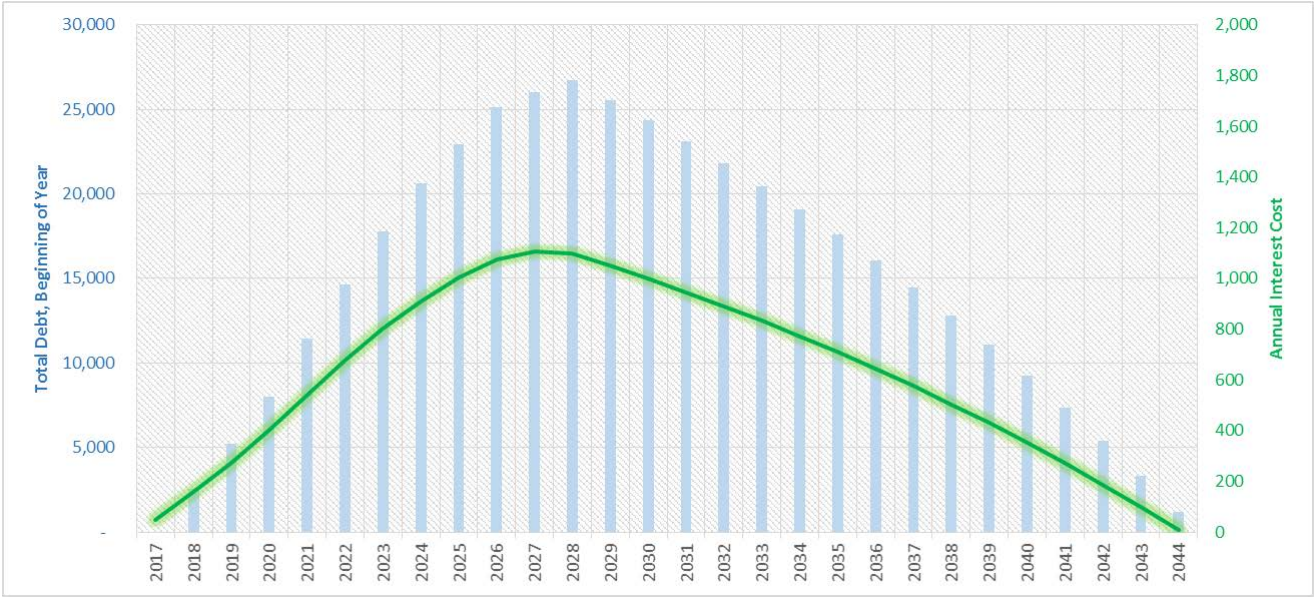
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	23,622	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	
Annual Interest Cost	1,156	1,101	1,043	981	917	849	778	703	624	541	454	363	267	166	60	**25,137**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	
Accumulated debt in present year	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	2	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%.
2 To forecast the repayment of the remaining balance, a cap of $2.242 bn above the true cost of GA in any given year is applied. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period.

GA Financing: 4.2%

(Calendar Year Basis)
(Effective January 1, 2017)

March 1 Deck



At an **Interest Rate of 4.2%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $1.1B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,549	5,215	7,988	11,465	14,667	17,797	20,637	22,933	25,149	26,019	26,692	25,550	24,358	23,116	21,821
Annual Interest Cost	49	158	272	402	543	676	802	911	1,006	1,073	1,106	1,099	1,050	999	946	891
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,549	5,215	7,988	11,465	14,667	17,797	20,637	22,933	25,149	26,019	26,692	25,550	24,358	23,116	21,821	20,470

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	20,470	19,061	17,592	16,060	14,462	12,797	11,059	9,248	7,358	5,388	3,334	1,191	0	0	0	
Annual Interest Cost	833	772	710	644	576	504	430	352	271	187	99	7	0	0	0	**17,367**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,199	0	0	0	
Accumulated debt in present year	19,061	17,592	16,060	14,462	12,797	11,059	9,248	7,358	5,388	3,334	1,191	0	0	0	0	

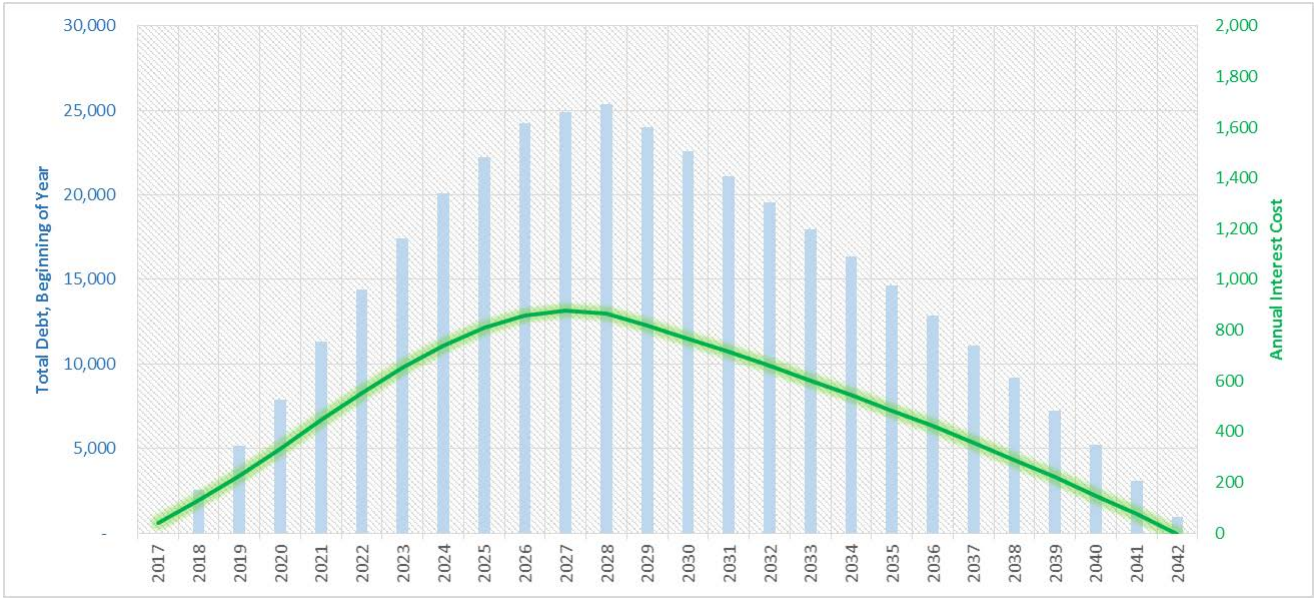
Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 4.2%.

DRAFT

GA Financing: 3.5%

(Calendar Year Basis)
(Effective January 1, 2017)

March 1 Deck



At an **Interest Rate of 3.5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $879M.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,541	5,180	7,906	11,311	14,417	17,423	20,113	22,237	24,258	24,915	25,361	23,985	22,561	21,085	19,557
Annual Interest Cost	41	131	225	331	445	553	653	738	811	860	879	866	817	766	714	659
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,541	5,180	7,906	11,311	14,417	17,423	20,113	22,237	24,258	24,915	25,361	23,985	22,561	21,085	19,557	17,975

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	17,975	16,336	14,639	12,882	11,063	9,178	7,227	5,206	3,113	946	0	0	0	0	0	
Annual Interest Cost	603	545	484	422	357	290	221	149	74	34	0	0	0	0	0	**12,665**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-980	0	0	0	0	0	
Accumulated debt in present year	16,336	14,639	12,882	11,063	9,178	7,227	5,206	3,113	946	0	0	0	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 3.5%.

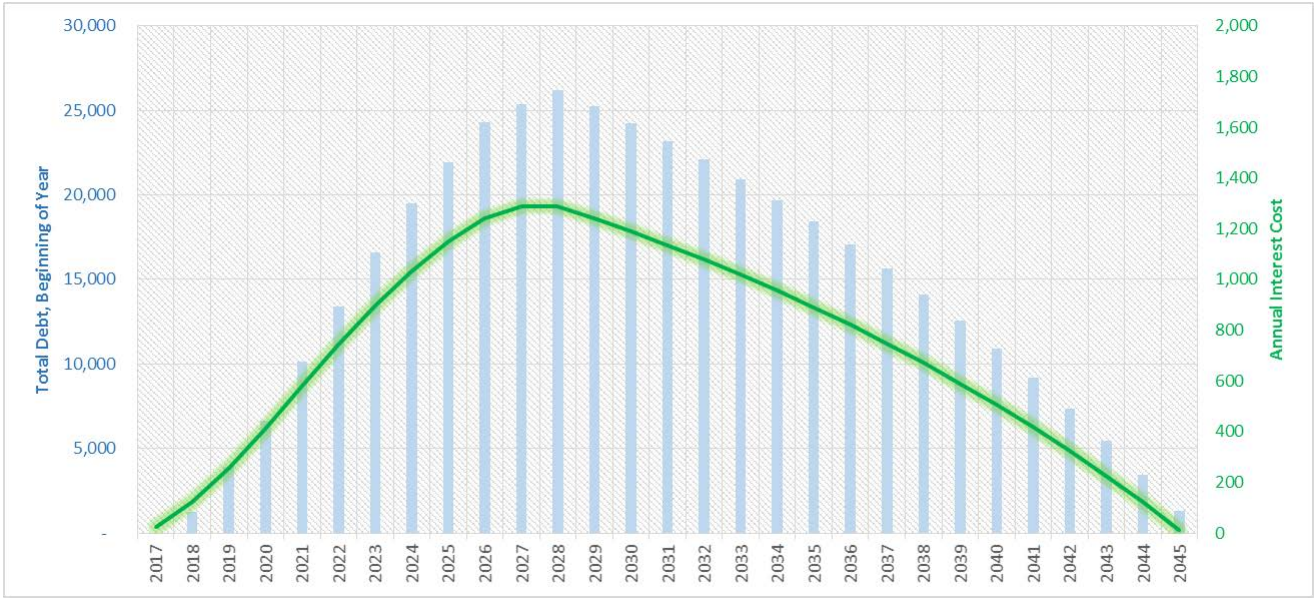
APPENDIX

Effective Date: July 1, 2017

DRAFT

GA Financing (Base, 5%) *(Calendar Year Basis)* ***(Effective July 1, 2017)***

March 1 Deck



At an **Interest Rate of 5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2028 at approximately $1.3B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	1,277	3,908	6,667	10,154	13,395	16,592	19,526	21,943	24,304	25,340	26,194	25,240	24,238	23,184	22,077
Annual Interest Cost	26	124	258	413	581	742	896	1,031	1,151	1,239	1,286	1,288	1,239	1,188	1,134	1,077
Additional GA Debt Drawdown Required	1,250	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	1,277	3,908	6,667	10,154	13,395	16,592	19,526	21,943	24,304	25,340	26,194	25,240	24,238	23,184	22,077	20,912

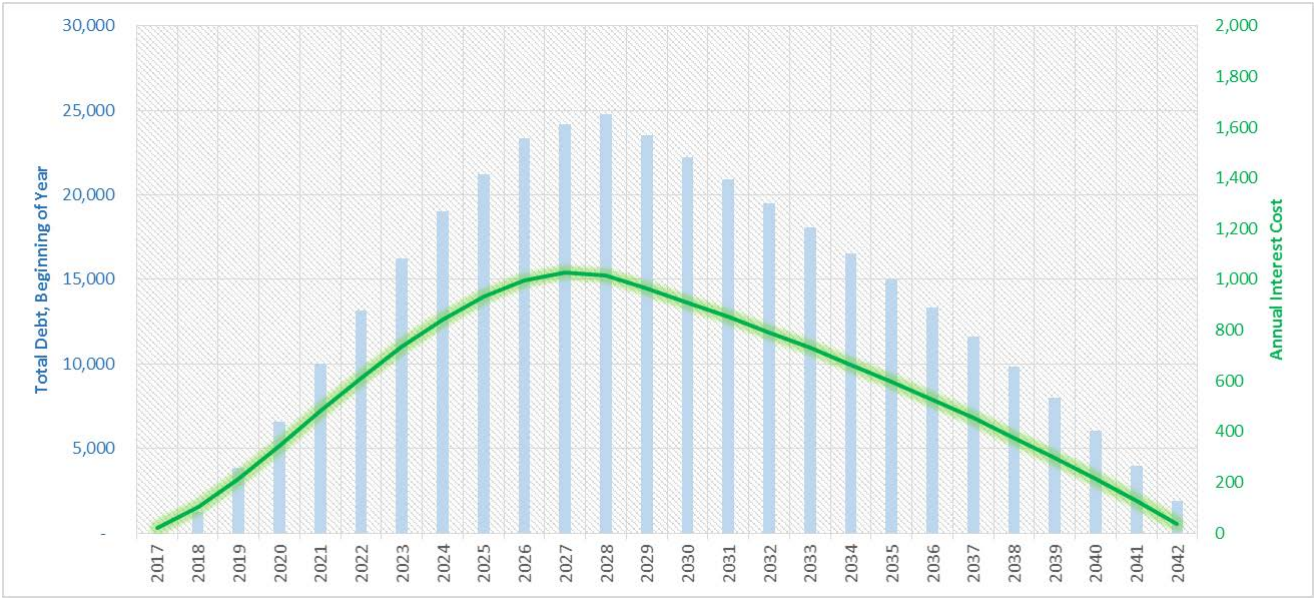
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	20,912	19,689	18,402	17,050	15,629	14,135	12,564	10,914	9,178	7,354	5,437	3,421	1,303	0	0	
Annual Interest Cost	1,018	955	889	820	748	671	591	506	417	324	226	123	15	0	0	**20,978**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,317	0	0	
Accumulated debt in present year	19,689	18,402	17,050	15,629	14,135	12,564	10,914	9,178	7,354	5,437	3,421	1,303	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%.
2 To forecast the repayment of the remaining balance, a cap of $2.242 bn above the true cost of GA in any given year is applied. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paid down, with interest still accumulating over this period.

GA Financing: 4.2%

(Calendar Year Basis)
(Effective July1, 2017)

March 1 Deck



At an **Interest Rate of 4.2%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $1B.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	1,272	3,884	6,600	10,017	13,157	16,222	18,994	21,220	23,364	24,157	24,750	23,524	22,246	20,914	19,524
Annual Interest Cost	22	103	215	342	481	611	734	840	932	996	1,026	1,016	964	909	852	792
Additional GA Debt Drawdown Required	1,250	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	1,272	3,884	6,600	10,017	13,157	16,222	18,994	21,220	23,364	24,157	24,750	23,524	22,246	20,914	19,524	18,075

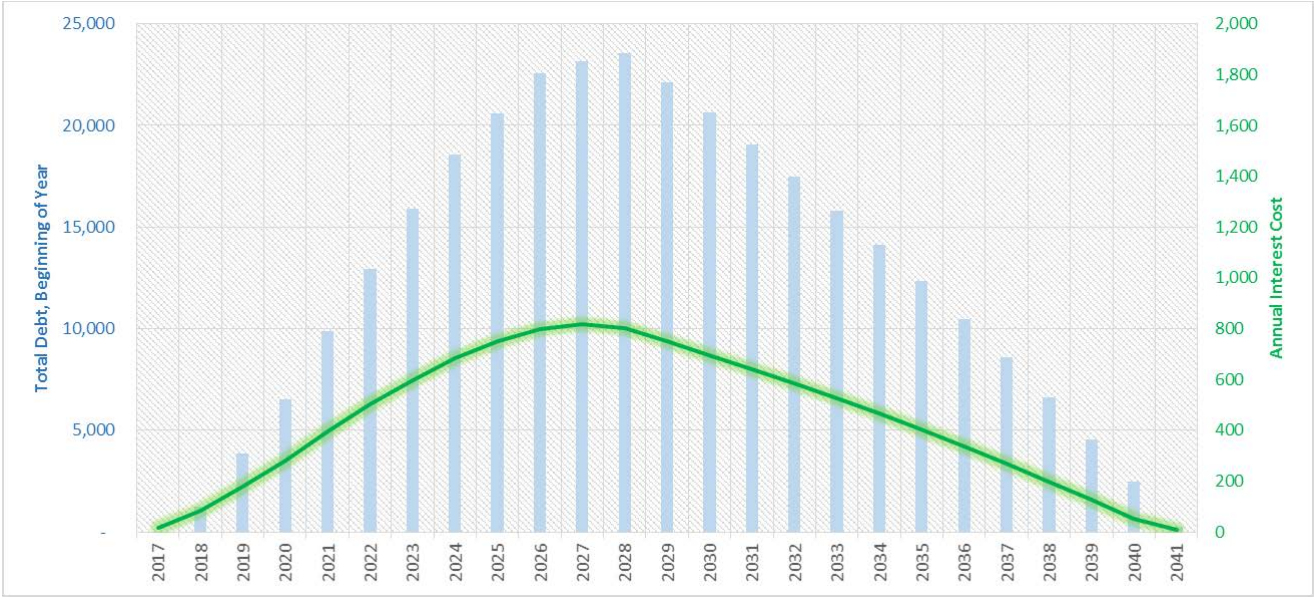
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	18,075	16,564	14,988	13,344	11,630	9,843	7,979	6,036	4,009	1,895	0	0	0	0	0	
Annual Interest Cost	730	666	598	528	454	378	298	215	128	38	0	0	0	0	0	**14,869**
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-1,933	0	0	0	0	0	
Accumulated debt in present year	16,564	14,988	13,344	11,630	9,843	7,979	6,036	4,009	1,895	0	0	0	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 4.2%.

GA Financing: 5%

(Calendar Year Basis)
(Effective July1, 2017)

March 1 Deck



At an **Interest Rate of 3.5%** with GA draw downs occurring on an equal monthly basis.

Annual Interest Cost peaks in 2027 at approximately $817M.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	1,269	3,862	6,541	9,898	12,953	15,908	18,544	20,612	22,576	23,172	23,556	22,116	20,625	19,081	17,482
Annual Interest Cost	18	86	178	282	395	500	599	682	753	800	817	802	750	697	642	585
Additional GA Debt Drawdown Required	1,250	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	1,269	3,862	6,541	9,898	12,953	15,908	18,544	20,612	22,576	23,172	23,556	22,116	20,625	19,081	17,482	15,825

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	15,825	14,111	12,335	10,495	8,591	6,618	4,576	2,461	271	0	0	0	0	0	0	
Annual Interest Cost	527	466	402	337	269	199	126	51	10	0	0	0	0	0	0	10,974
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-280	0	0	0	0	0	0	
Accumulated debt in present year	14,111	12,335	10,495	8,591	6,618	4,576	2,461	271	0	0	0	0	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 3.5%.

DRAFT

GA Financing – Interest Scenarios

March 1, 2017 Deck

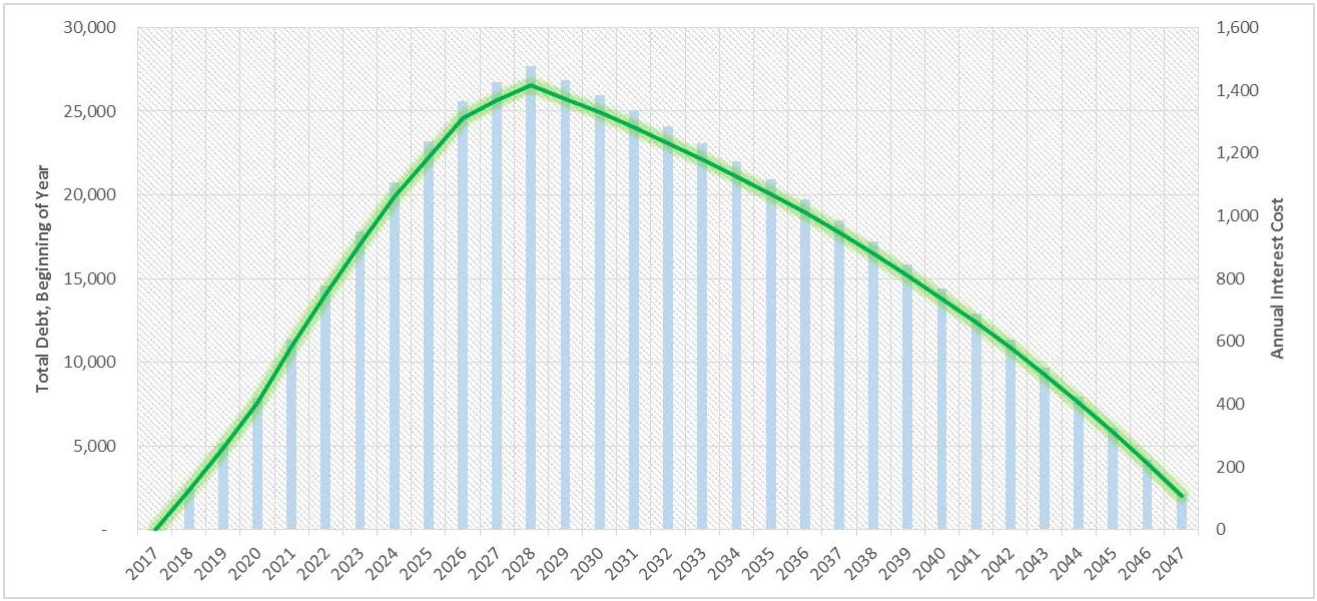
Corporate and Electricity Finance Division

March 6, 2017

DRAFT

GA Financing (Base) *(Calendar Year Basis)*

March 1 Deck



At an Interest Rate of 5%, compounded monthly.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,501	5,136	7,900	11,379	14,621	17,823	20,773	23,221	25,620	26,728	27,662	26,836	25,967	25,054	24,095
Annual Interest Cost	0	128	263	404	582	748	912	1,063	1,188	1,311	1,367	1,415	1,373	1,329	1,282	1,233
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,501	5,136	7,900	11,379	14,621	17,823	20,773	23,221	25,620	26,728	27,662	26,836	25,967	25,054	24,095	23,086

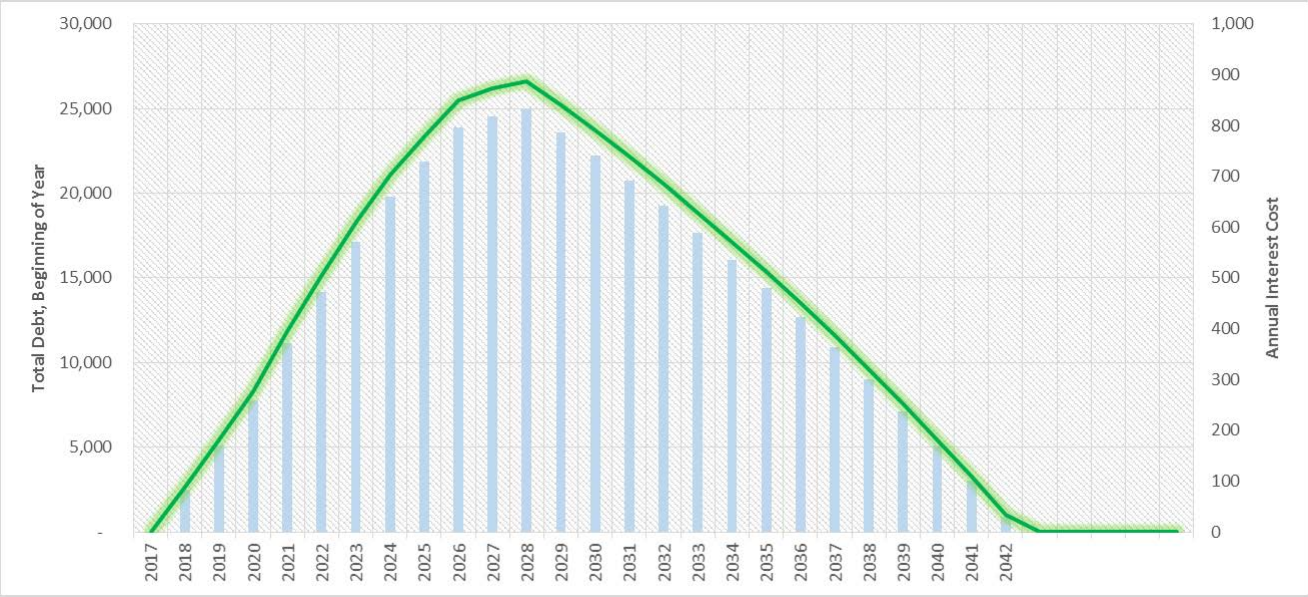
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	23,086	22,025	20,911	19,739	18,507	17,213	15,852	14,421	12,918	11,337	9,675	7,929	6,093	4,163	2,134	
Annual Interest Cost	1,181	1,127	1,070	1,010	947	881	811	738	661	580	495	406	312	213	109	25,137
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	
Accumulated debt in present year	22,025	20,911	19,739	18,507	17,213	15,852	14,421	12,918	11,337	9,675	7,929	6,093	4,163	2,134	2	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 5%, compounded monthly.

DRAFT

GA Financing *(Calendar Year Basis)*

March 1 Deck



At an Interest Rate of 3.5%, compounded monthly.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,501	5,097	7,780	11,131	14,187	17,145	19,793	21,882	23,872	24,518	24,957	23,603	22,201	20,749	19,245
Annual Interest Cost	0	89	181	277	396	505	610	704	778	849	872	888	839	790	738	684
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,501	5,097	7,780	11,131	14,187	17,145	19,793	21,882	23,872	24,518	24,957	23,603	22,201	20,749	19,245	17,688

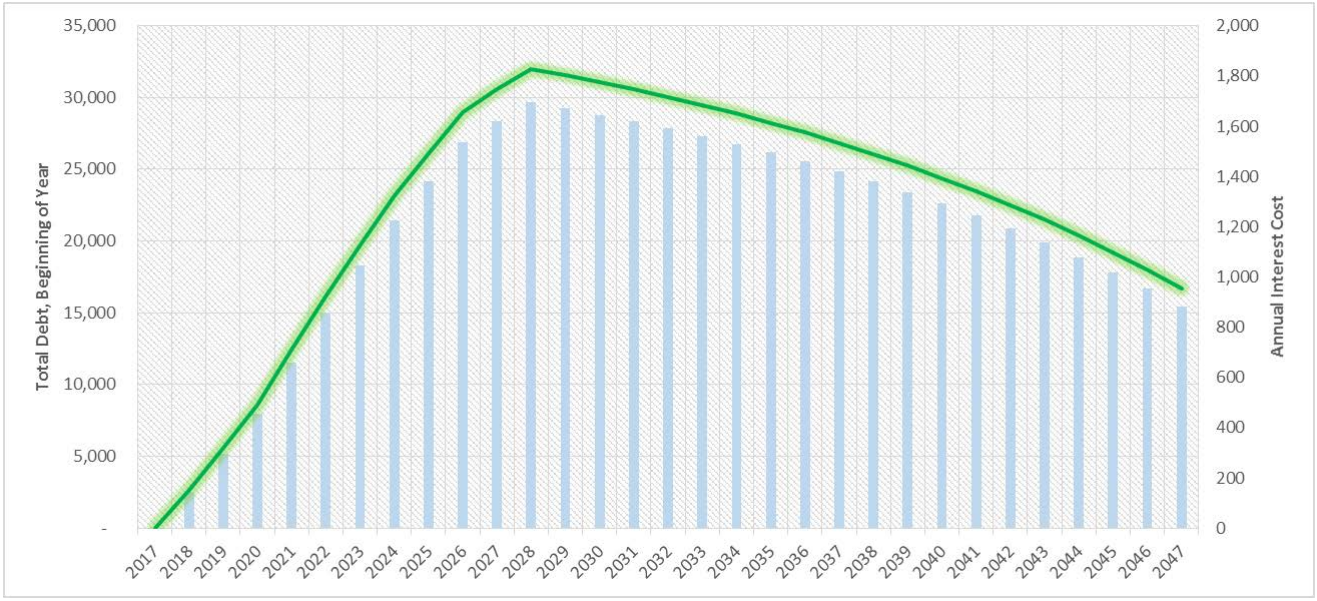
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	17,688	16,076	14,406	12,677	10,886	9,032	7,112	5,123	3,064	931	0	0	0	0	0	
Annual Interest Cost	629	572	512	451	387	321	253	182	109	33	0	0	0	0	0	12,650
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	0	0	0	
Accumulated debt in present year	16,076	14,406	12,677	10,886	9,032	7,112	5,123	3,064	931	-1,277	0	0	0	0	0	

Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 3.5%, compounded monthly.
2 Note that with a lower interest rate, the debt is paid off earlier, approximately in Year 2042 – five years earlier.

DRAFT

GA Financing *(Calendar Year Basis)*

March 1 Deck



At an Interest Rate of 6%, compounded monthly.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Debt, Beginning of Year	-	2,501	5,163	7,982	11,549	14,921	18,296	21,462	24,171	26,873	28,327	29,641	29,228	28,789	28,323	27,829
Annual Interest Cost	0	154	318	492	712	920	1,128	1,324	1,491	1,657	1,747	1,828	1,803	1,776	1,747	1,716
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	2,501	5,163	7,982	11,549	14,921	18,296	21,462	24,171	26,873	28,327	29,641	29,228	28,789	28,323	27,829	27,304

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	Total
Total Debt, Beginning of Year	27,304	26,746	26,154	25,526	24,859	24,150	23,398	22,600	21,752	20,852	19,897	18,883	17,806	16,662	15,449	
Annual Interest Cost	1,684	1,650	1,613	1,574	1,533	1,490	1,443	1,394	1,342	1,286	1,227	1,165	1,098	1,028	953	39,295
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	
Accumulated debt in present year	26,746	26,154	25,526	24,859	24,150	23,398	22,600	21,752	20,852	19,897	18,883	17,806	16,662	15,449	14,160	

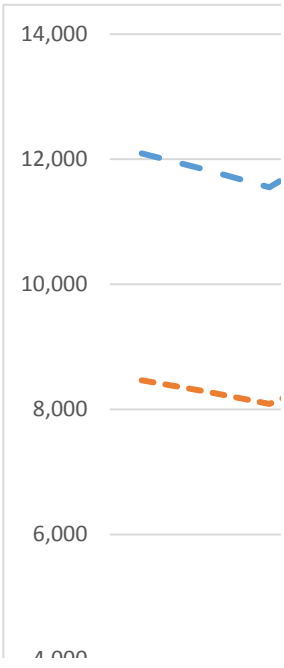
Actuals are subject to actual prices and actual interest rates.
1 Based on an interest rate of 6%, compounded monthly.
2 Note the remaining balance at the end of the 30-year period of approximately $14 billion.

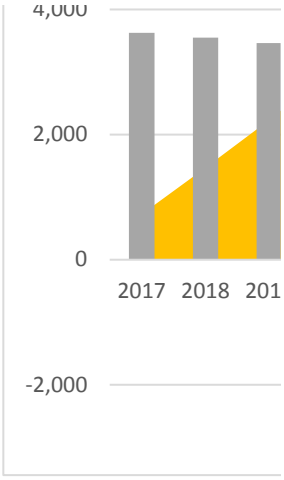
Fiscal Exposure

- Ministry of Energy provided data for two options under the GA financing scenario, Option 1a (30-year financing) and Option 1b (30-year financing with delayed increase in payments).
- Based on the data provided and assuming the debt drawdowns occur monthly at an annual interest rate of 5%, the maximum fiscal exposure expected would be:
    - Approx. $3.4 billion in 2017, under Option 1a
    - Approx. $4.0 billion in 2020, under Option 1b
- The highest debt accumulation would occur in 2028 of approximately $24 billion under both Option 1a and Option 1b.

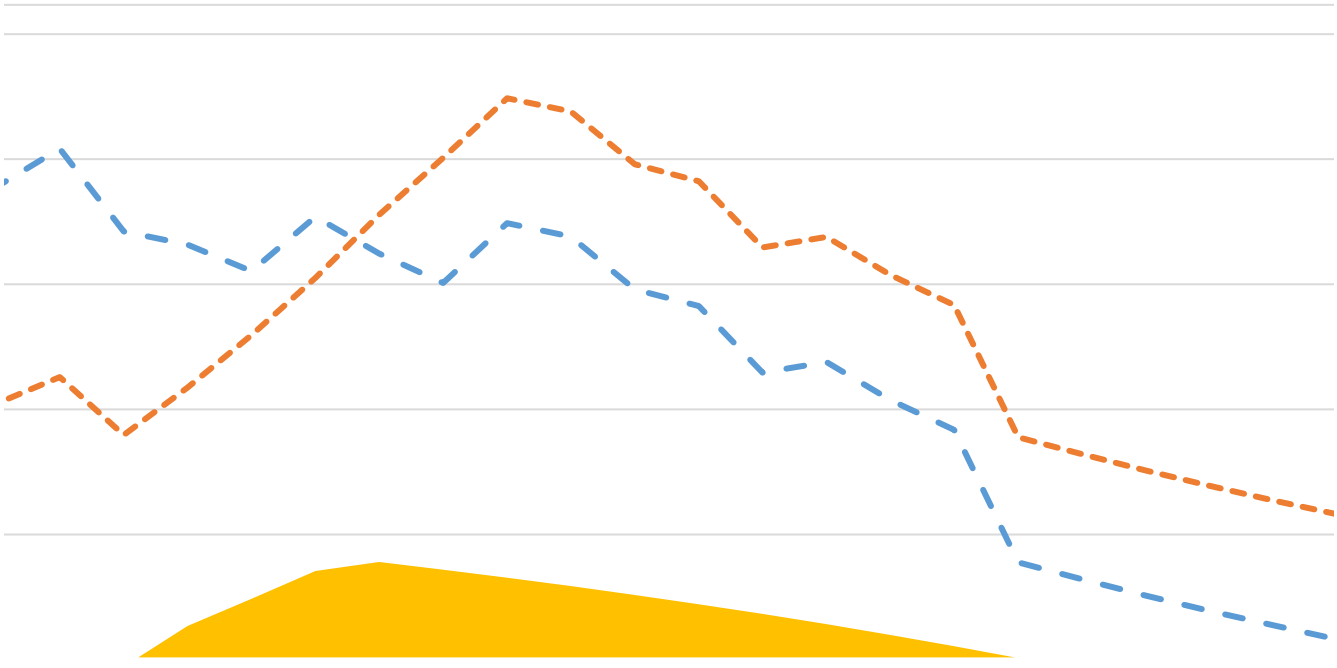
5%	Financing Rate
25	yrs
10%	Percentage rate increase
2000	Overpayment Cap
70%	5 year Reduction Amount

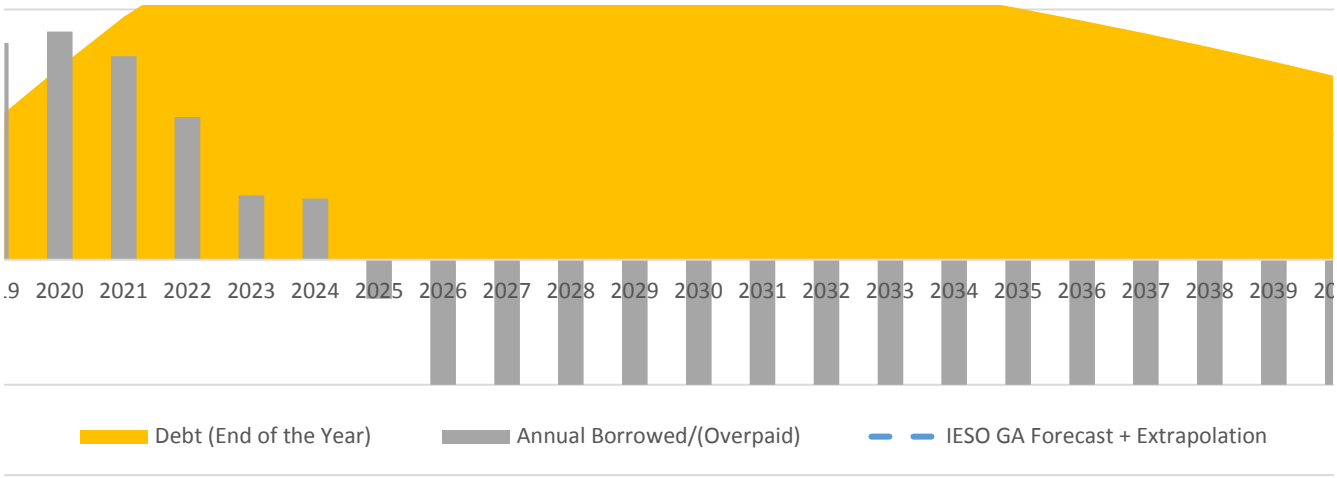
	2017	2018
IESO GA Forecast + Extrapolation	12,095	11,835
Reduction Amount	8,467	8,284
Percentage Rate Increase		
Capped Amount	14,095	13,835
Min of Percentage Increase and Capped Amount	14,095	13,835
Prior year debt payments this year		3,810
Amount Paid Each Year by Ratepayers	8,467	8,284
Annual Borrowed/(Overpaid)	3,629	3,550
Debt Beginning of the Year	0	3,629
		181
Additional GA Debt Draw Down, End of Year	3,629	3,550
Debt (End of the Year)	3,629	7,360



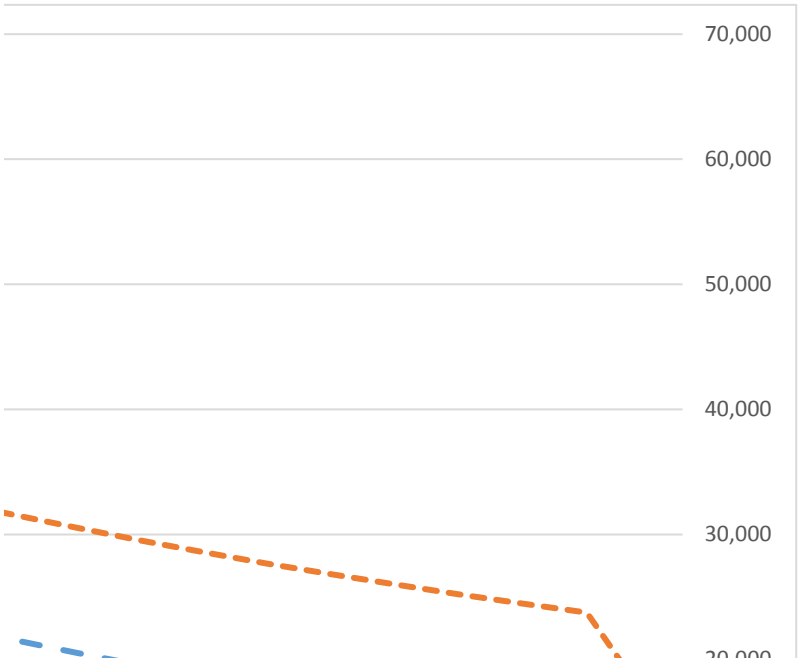

4,000
2,000
0
2017
2018
201
-2,000

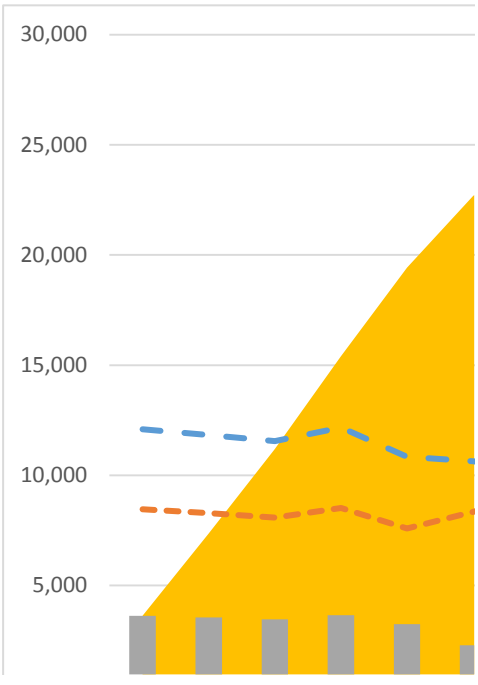
2019	2020	2021	2022	2023	2024	2025	2026	2027
11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975
8,086	8,518	7,590	7,444	7,149	7,757	7,343	7,014	7,683
			8,350	9,184	10,103	11,113	12,225	13,447
13,552	14,168	12,844	12,634	12,212	13,081	12,489	12,020	12,975
13,552	14,168	12,844	8,350	9,184	10,103	11,113	12,020	12,975
7,728	11,754	16,175	20,399	23,817	26,087	28,419	29,185	28,544
8,086	8,518	7,590	8,350	9,184	10,103	11,113	12,020	12,975
3,466	3,651	3,253	2,284	1,028	979	-624	-2,000	-2,000
7,360	11,194	15,404	19,428	22,683	24,845	27,066	27,795	27,185
368	560	770	971	1,134	1,242	1,353	1,390	1,359
3,466	3,651	3,253	2,284	1,028	979	-624	-2,000	-2,000
11,194	15,404	19,428	22,683	24,845	27,066	27,795	27,185	26,544

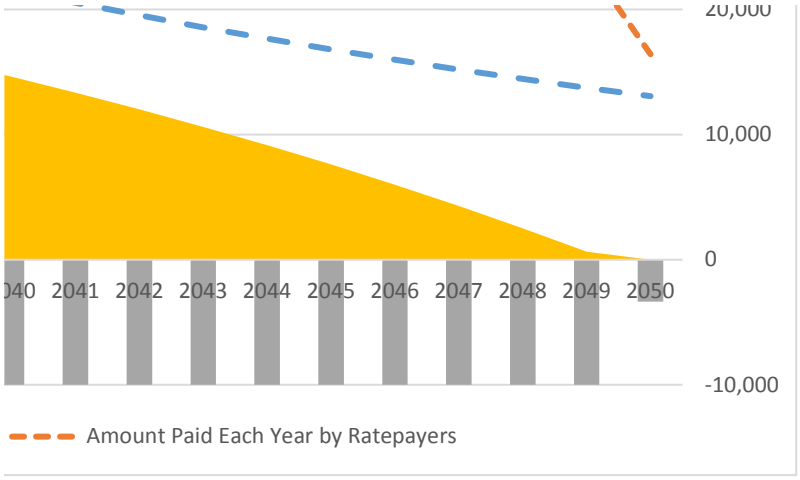


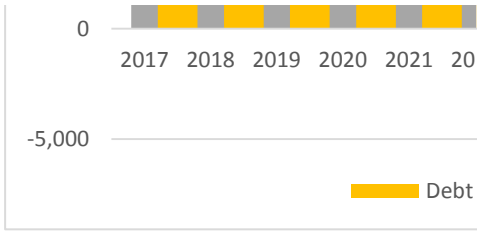

.9
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
2033
2034
2035
2036
2037
2038
2039
Debt (End of the Year)
Annual Borrowed/(Overpaid)
IESO GA Forecast + Extrapolation

2028	2029	2030	2031	2032	2033	2034	2035
10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553
7,535	6,943	6,755	6,011	6,130	5,703	5,369	3,887
14,792	16,271	17,898	19,688	21,657	23,822	26,204	28,825
12,764	11,919	11,650	10,587	10,758	10,147	9,670	7,553
12,764	11,919	11,650	10,587	10,758	10,147	9,670	7,553
27,871	27,165	26,423	25,644	24,826	23,968	23,066	22,119
12,764	11,919	11,650	10,587	10,758	10,147	9,670	7,553
-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000
26,544	25,871	25,165	24,423	23,644	22,826	21,968	21,066
1,327	1,294	1,258	1,221	1,182	1,141	1,098	1,053
-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000
25,871	25,165	24,423	23,644	22,826	21,968	21,066	20,119

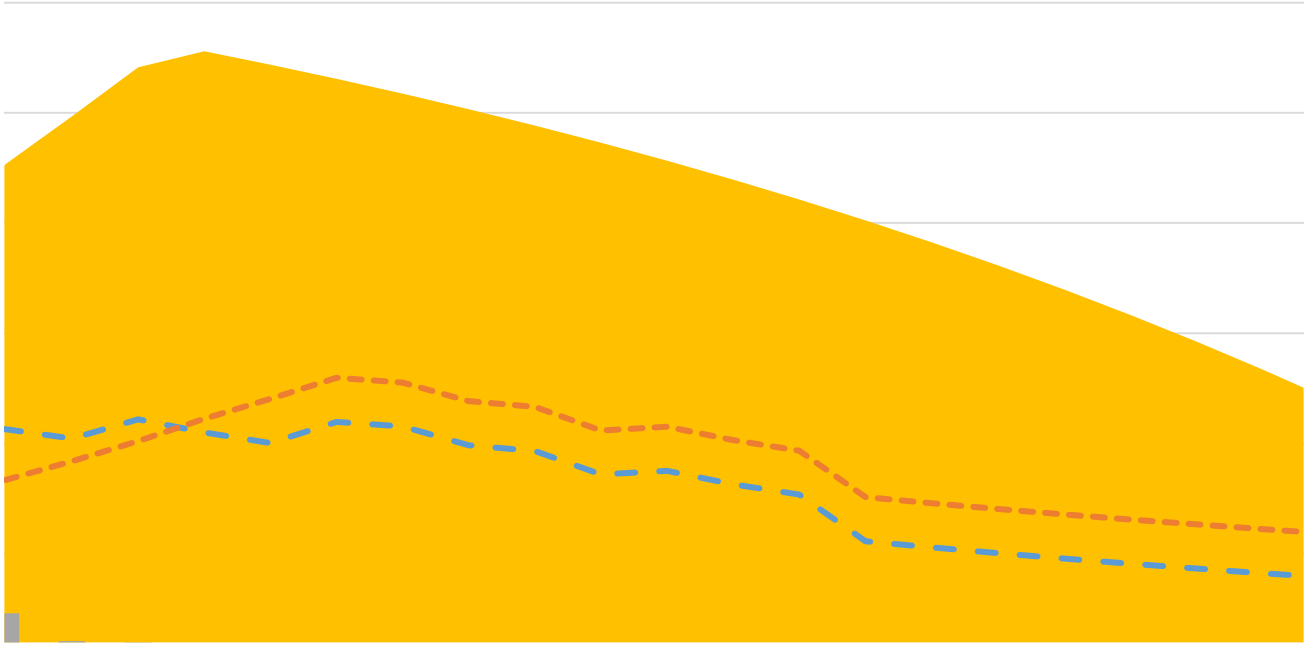


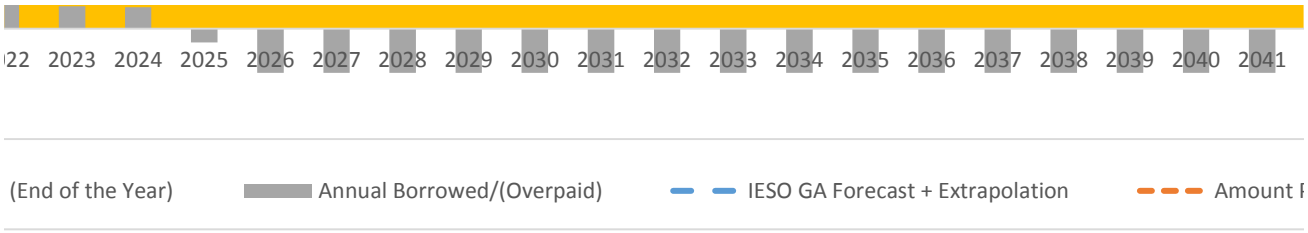



20,000
10,000
0
-10,000
040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
Amount Paid Each Year by Ratepayers

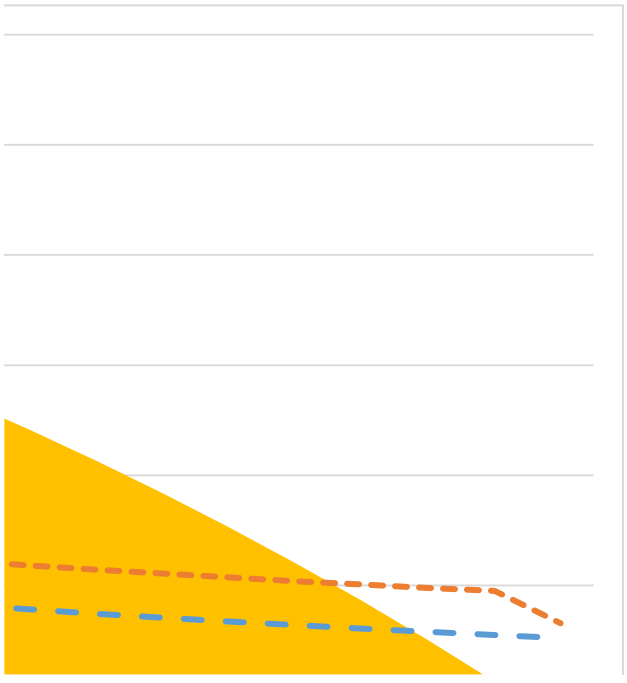

0
2017
2018
2019
2020
2021
20
-5,000
Debt

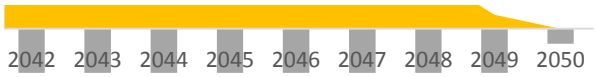
2036	2037	2038	2039	2040	2041	2042	2043
5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717
3,697	3,516	3,344	3,180	3,024	2,876	2,736	2,602
31,707	34,878	38,366	42,202	46,423	51,065	56,172	61,789
7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717
7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717
21,125	20,082	18,986	17,835	16,627	15,358	14,026	12,627
7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717
-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000
20,119	19,125	18,082	16,986	15,835	14,627	13,358	12,026
1,006	956	904	849	792	731	668	601
-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000
19,125	18,082	16,986	15,835	14,627	13,358	12,026	10,627




22 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041
(End of the Year)
Annual Borrowed/(Overpaid)
IESO GA Forecast + Extrapolation
Amount F

2044	2045	2046	2047	2048	2049	2050
3,535	3,362	3,197	3,041	2,892	2,750	2,616
2,474	2,353	2,238	2,129	2,024	1,925	1,831
67,968	74,764	82,241	90,465	99,511	109,462	120,409
5,535	5,362	5,197	5,041	4,892	4,750	4,616
5,535	5,362	5,197	5,041	4,892	4,750	4,616
11,159	9,617	7,998	6,297	4,512	2,638	670
5,535	5,362	5,197	5,041	4,892	4,750	3,286
-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-670
10,627	9,159	7,617	5,998	4,297	2,512	638
531	458	381	300	215	126	32
-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-670
9,159	7,617	5,998	4,297	2,512	638	0

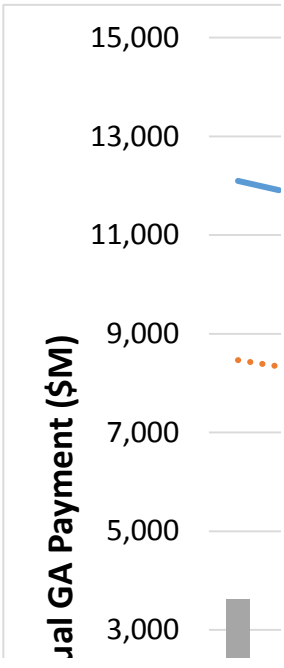


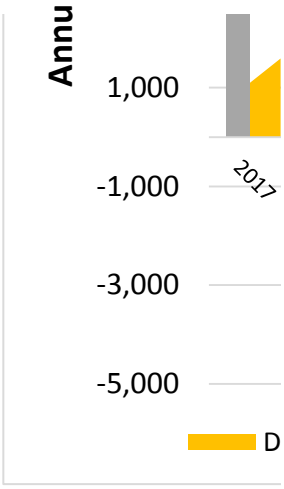


Paid Each Year by Ratepayers

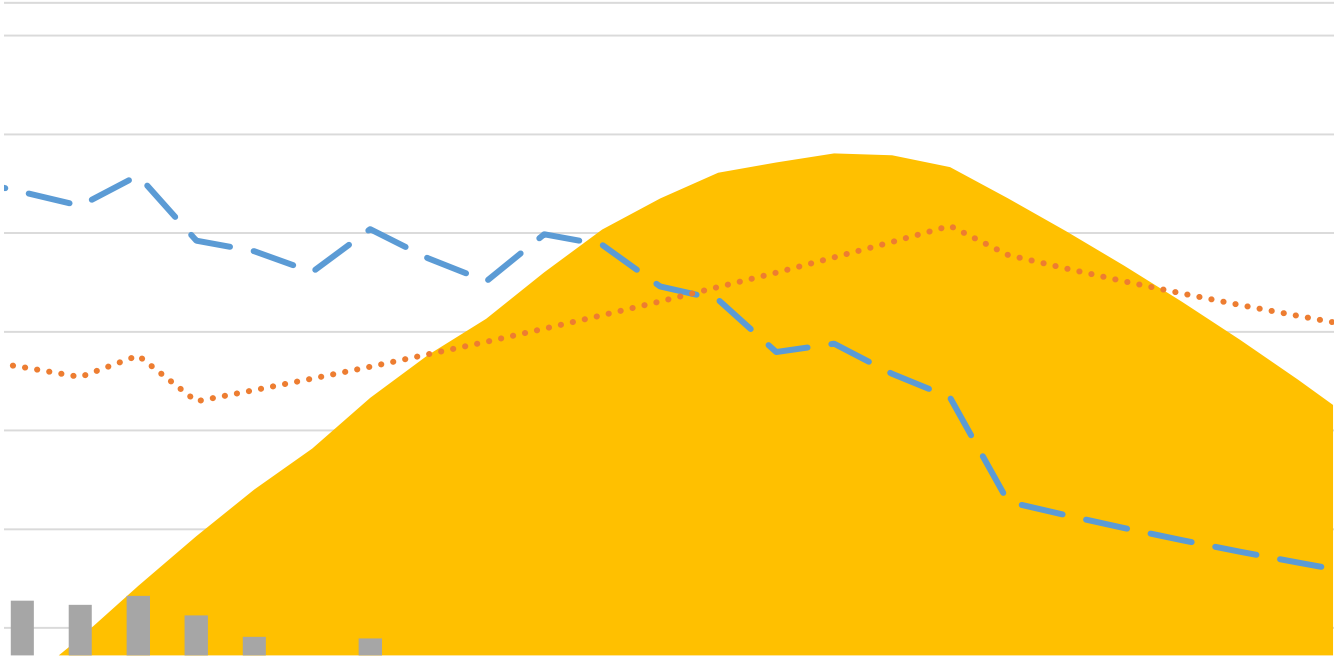
5%	Financing Rate
25	yrs
3%	Percentage rate increase
5000	Overpayment Cap
70%	5 year Reduction Amount

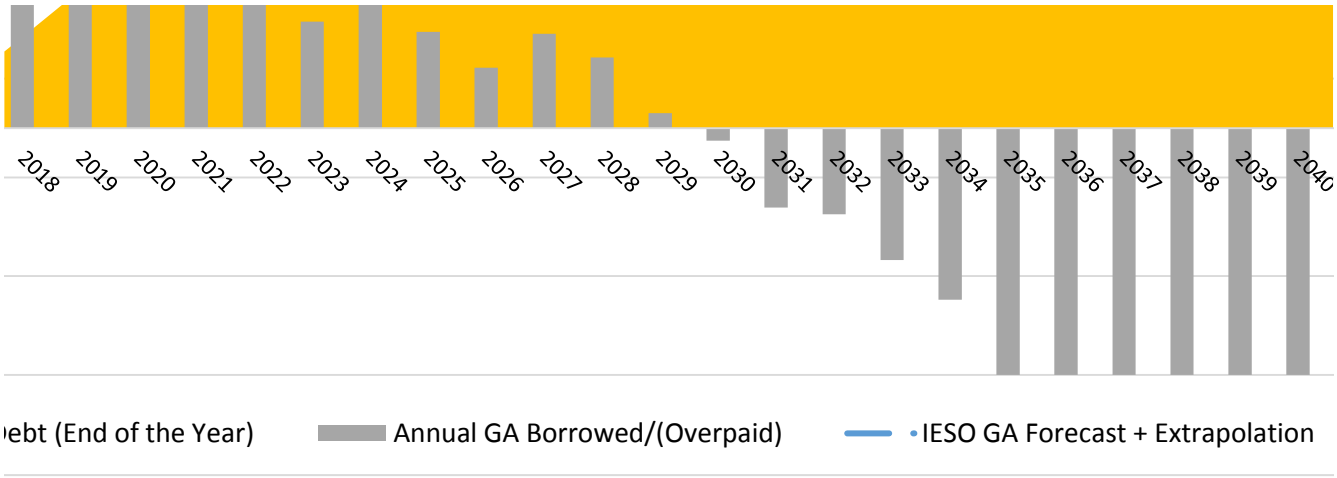
	2017	2018
IESO GA Forecast + Extrapolation	12,095	11,835
Reduction Amount	8,467	8,284
Percentage Rate Increase		
Capped Amount	17,095	16,835
Min of Percentage Increase and Capped Amount	17,095	16,835
Prior year debt payments this year		3,810
Amount GA Paid Each Year by Ratepayers	8,467	8,284
Annual GA Borrowed/(Overpaid)	3,629	3,550
Debt Beginning of the Year	0	3,629
		181
Additional GA Debt Draw Down, End of Year	3,629	3,550
Debt (End of the Year)	3,629	7,360




Annu
1,000
-1,000
-3,000
-5,000
2017
D

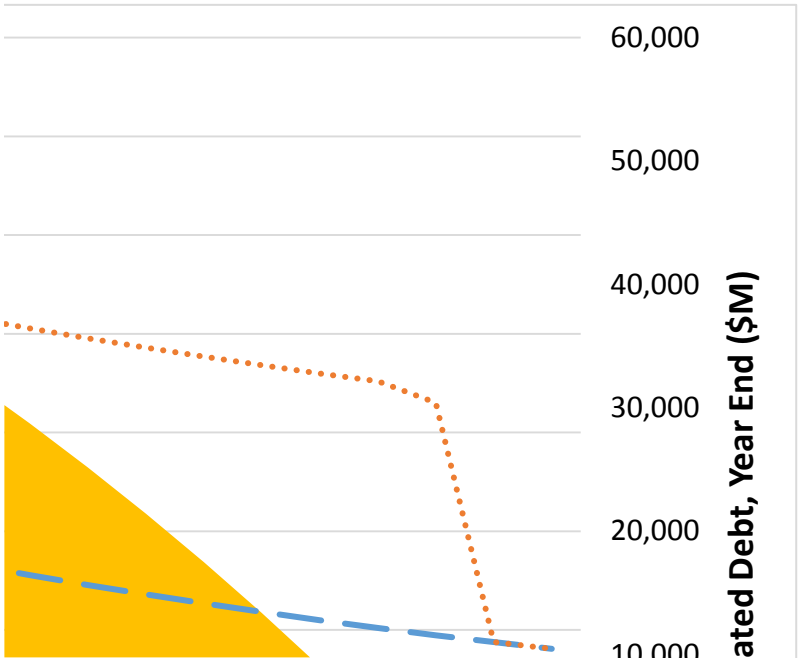
2019	2020	2021	2022	2023	2024	2025	2026	2027
11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975
8,086	8,518	7,590	7,444	7,149	7,757	7,343	7,014	7,683
			7,818	8,053	8,294	8,543	8,799	9,063
16,552	17,168	15,844	15,634	15,212	16,081	15,489	15,020	15,975
16,552	17,168	15,844	7,818	8,053	8,294	8,543	8,799	9,063
7,728	11,754	16,175	20,399	24,375	27,861	32,181	35,833	38,907
8,086	8,518	7,590	7,818	8,053	8,294	8,543	8,799	9,063
3,466	3,651	3,253	2,815	2,159	2,787	1,946	1,221	1,912
7,360	11,194	15,404	19,428	23,214	26,535	30,648	34,127	37,054
368	560	770	971	1,161	1,327	1,532	1,706	1,853
3,466	3,651	3,253	2,815	2,159	2,787	1,946	1,221	1,912
11,194	15,404	19,428	23,214	26,535	30,648	34,127	37,054	40,819

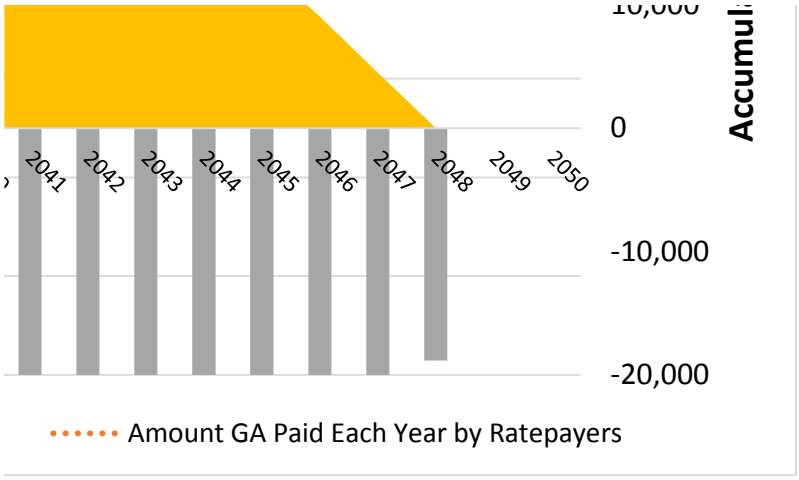




ebt (End of the Year) Annual GA Borrowed/(Overpaid) IESO GA Forecast + Extrapolation

2028	2029	2030	2031	2032	2033	2034	2035
10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553
7,535	6,943	6,755	6,011	6,130	5,703	5,369	3,887
9,335	9,615	9,904	10,201	10,507	10,822	11,147	11,481
15,764	14,919	14,650	13,587	13,758	13,147	12,670	10,553
9,335	9,615	9,904	10,201	10,507	10,822	11,147	10,553
42,860	46,503	49,147	51,337	52,210	52,983	52,823	51,813
9,335	9,615	9,904	10,201	10,507	10,822	11,147	10,553
1,429	303	-254	-1,614	-1,749	-2,675	-3,477	-5,000
40,819	44,288	46,806	48,893	49,723	50,460	50,308	49,346
2,041	2,214	2,340	2,445	2,486	2,523	2,515	2,467
1,429	303	-254	-1,614	-1,749	-2,675	-3,477	-5,000
44,288	46,806	48,893	49,723	50,460	50,308	49,346	46,813



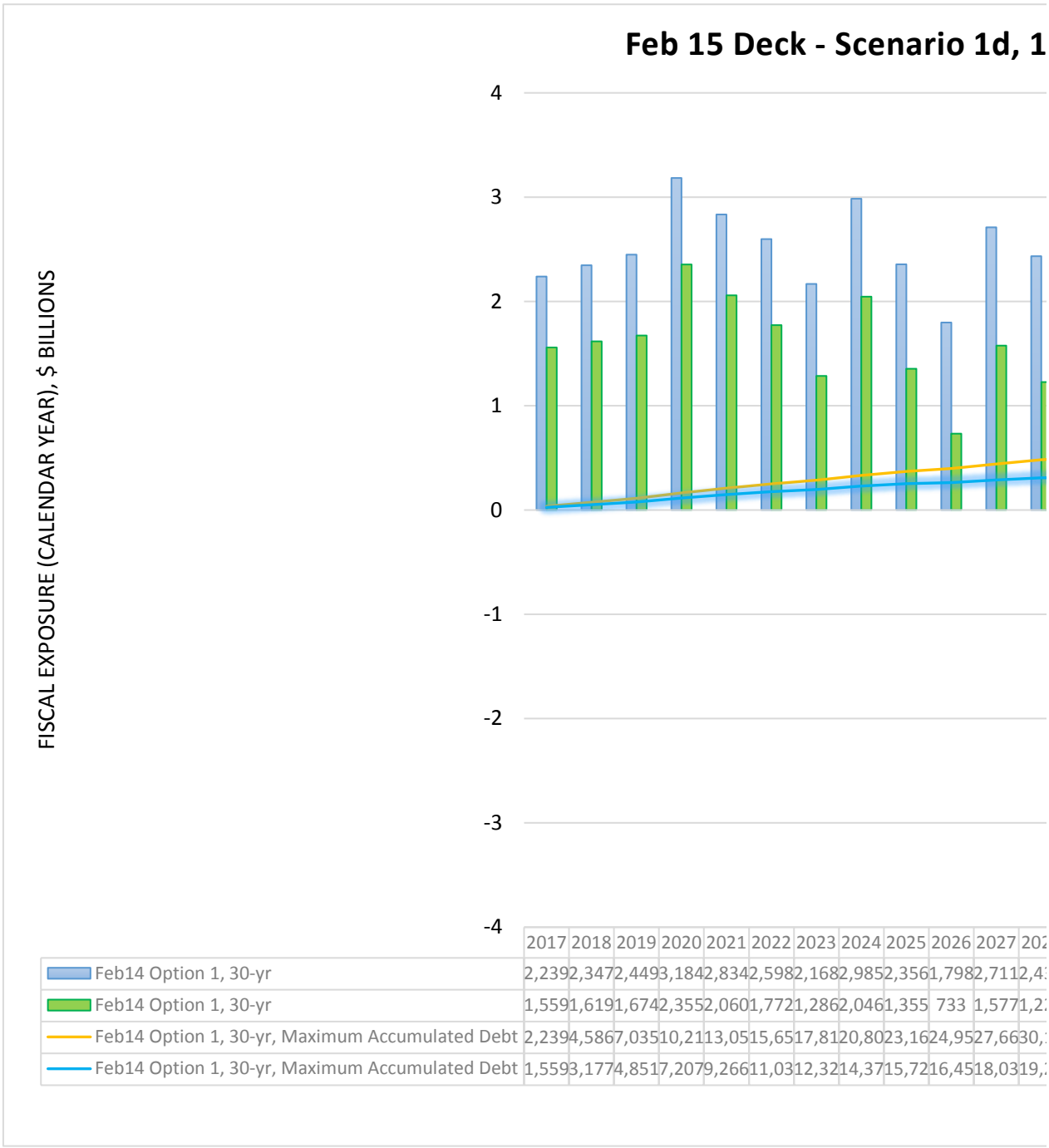

10,000
0
-10,000
-20,000
Accumul
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
Amount GA Paid Each Year by Ratepayers

2036	2037	2038	2039	2040	2041	2042	2043
5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717
3,697	3,516	3,344	3,180	3,024	2,876	2,736	2,602
11,826	12,181	12,546	12,922	13,310	13,709	14,121	14,544
10,281	10,022	9,777	9,543	9,320	9,109	8,908	8,717
10,281	10,022	9,777	9,543	9,320	9,109	8,908	8,717
49,154	46,362	43,430	40,351	37,119	33,725	30,161	26,419
10,281	10,022	9,777	9,543	9,320	9,109	8,908	8,717
-5,000	-5,000	-5,000	-5,000	-5,000	-5,000	-5,000	-5,000
46,813	44,154	41,362	38,430	35,351	32,119	28,725	25,161
2,341	2,208	2,068	1,921	1,768	1,606	1,436	1,258
-5,000	-5,000	-5,000	-5,000	-5,000	-5,000	-5,000	-5,000
44,154	41,362	38,430	35,351	32,119	28,725	25,161	21,419

2044	2045	2046	2047	2048	2049	2050
3,535	3,362	3,197	3,041	2,892	2,750	2,616
2,474	2,353	2,238	2,129	2,024	1,925	1,831
14,980	15,430	15,893	16,370	16,861	17,366	17,887
8,535	8,362	8,197	8,041	7,892	7,750	7,616
8,535	8,362	8,197	8,041	7,892	7,750	7,616
22,490	18,365	14,033	9,485	4,709	0	0
8,535	8,362	8,197	8,041	7,601	2,750	2,616
-5,000	-5,000	-5,000	-5,000	-4,709	0	0
21,419	17,490	13,365	9,033	4,485	0	0
1,071	875	668	452	224	0	0
-5,000	-5,000	-5,000	-5,000	-4,709	0	0
17,490	13,365	9,033	4,485	0	0	0

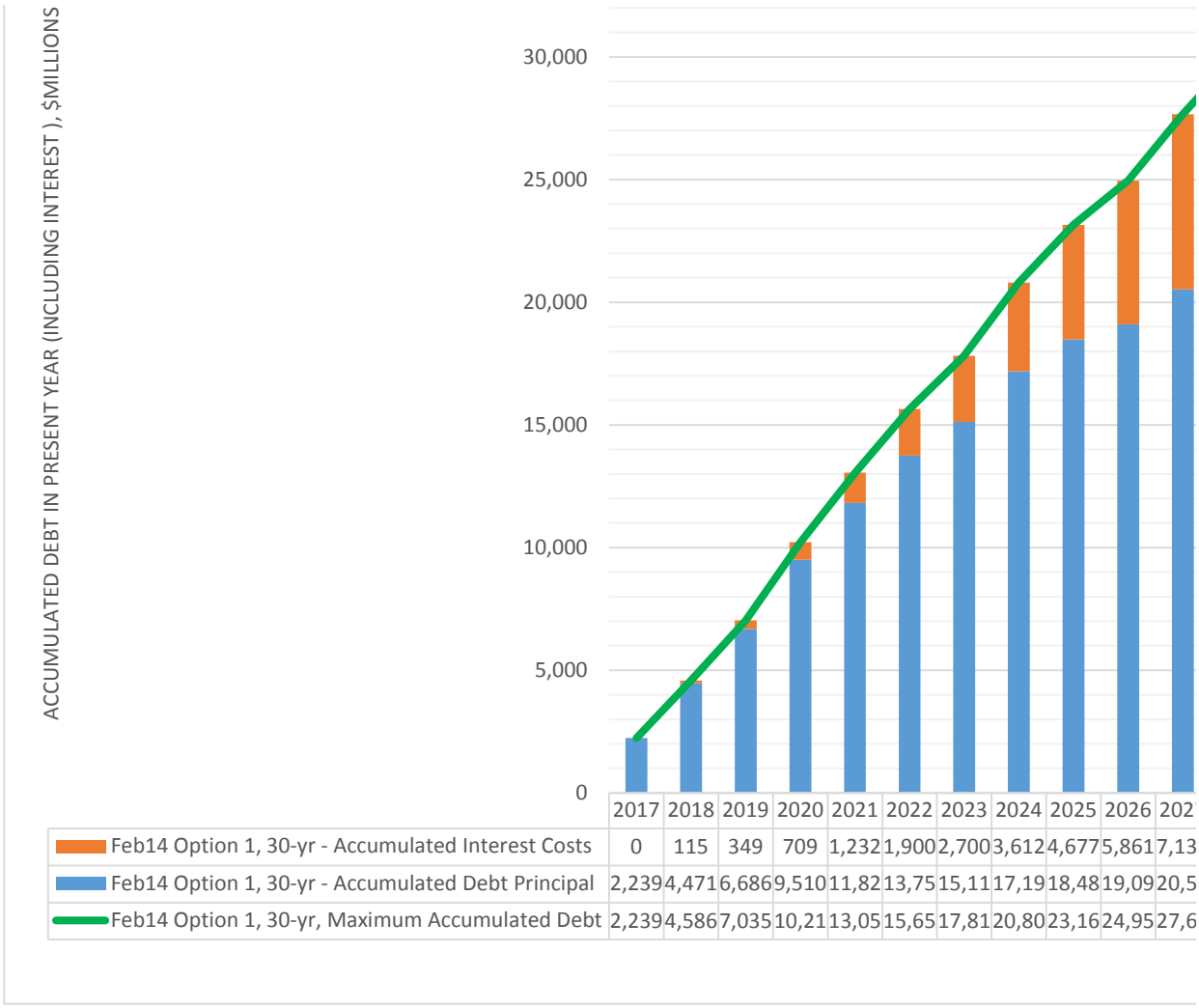
Feb 15 Deck

Feb 15 Deck - Scenario 1d, 1e - at 5.12% interest rate

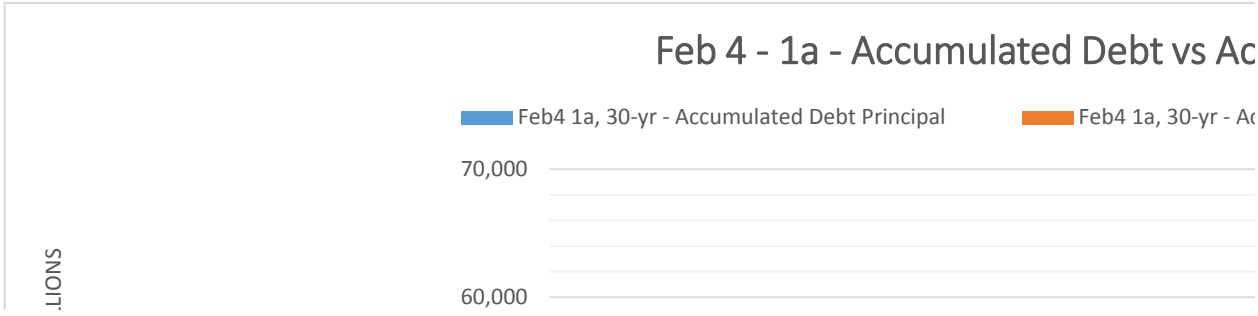


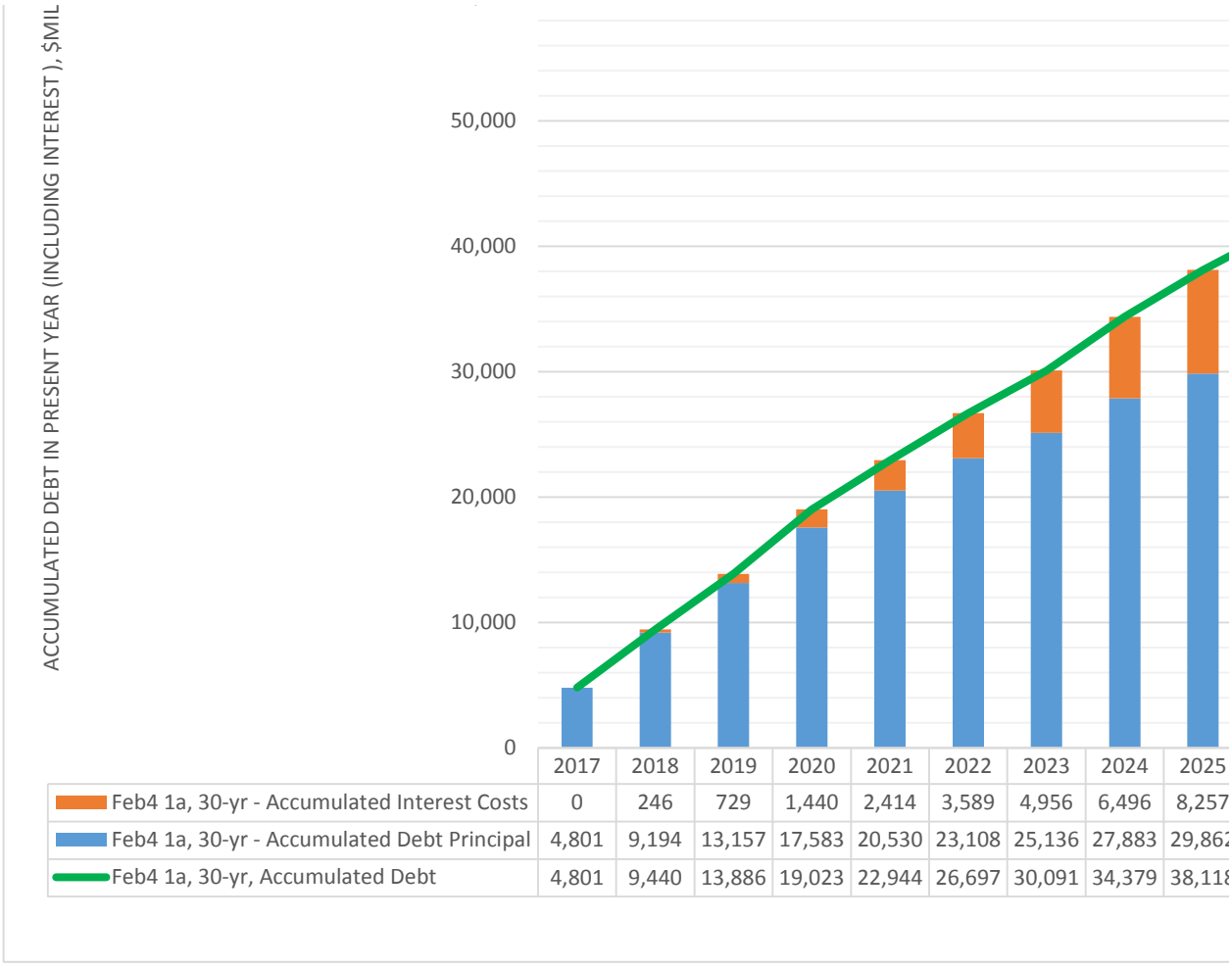
Feb 15 Deck - Option 1 - Accumulation of Debt (Principal and Interest)



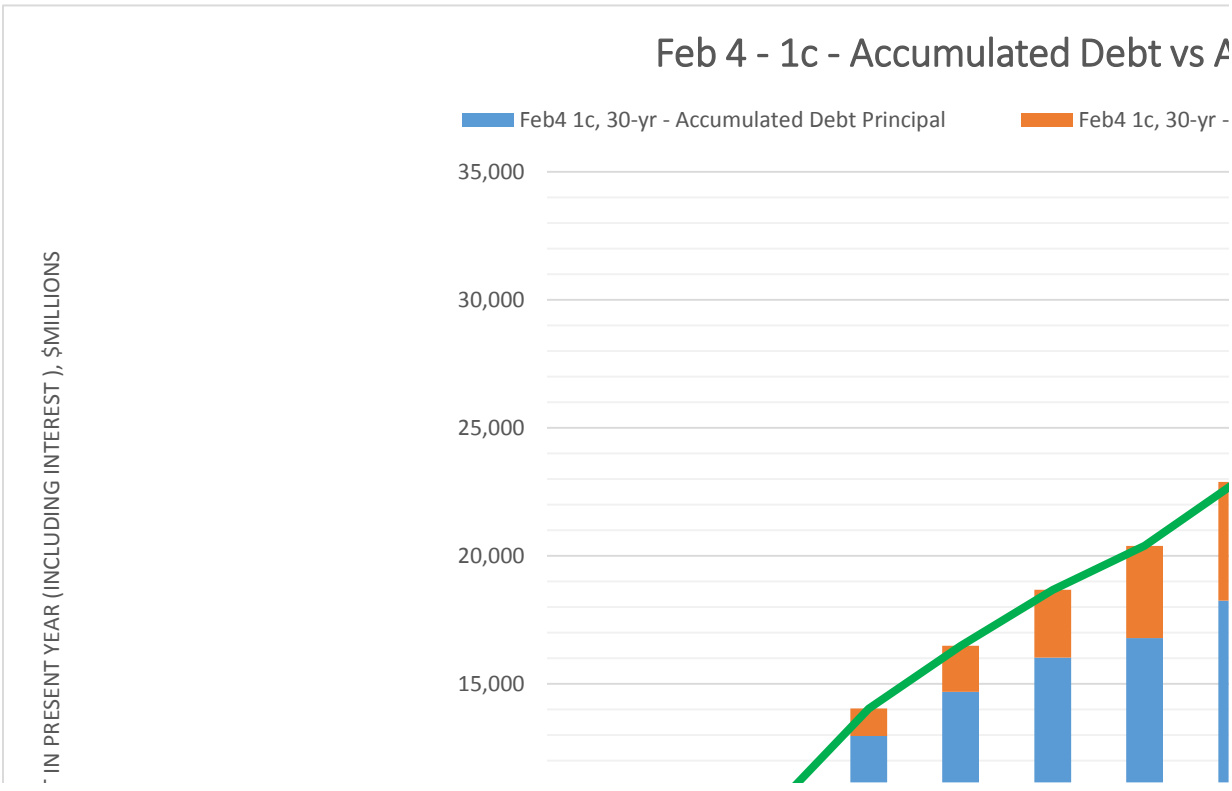


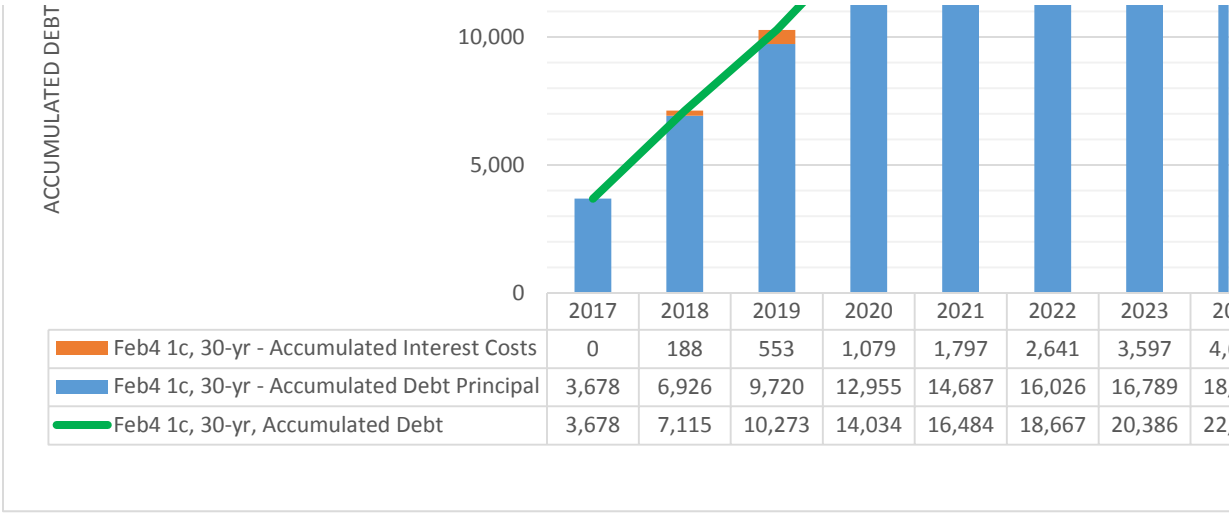
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	202
Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,677	5,861	7,13
Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,82	13,75	15,11	17,19	18,48	19,09	20,5
Feb14 Option 1, 30-yr, Maximum Accumulated Debt	2,239	4,586	7,035	10,21	13,05	15,65	17,81	20,80	23,16	24,95	27,6



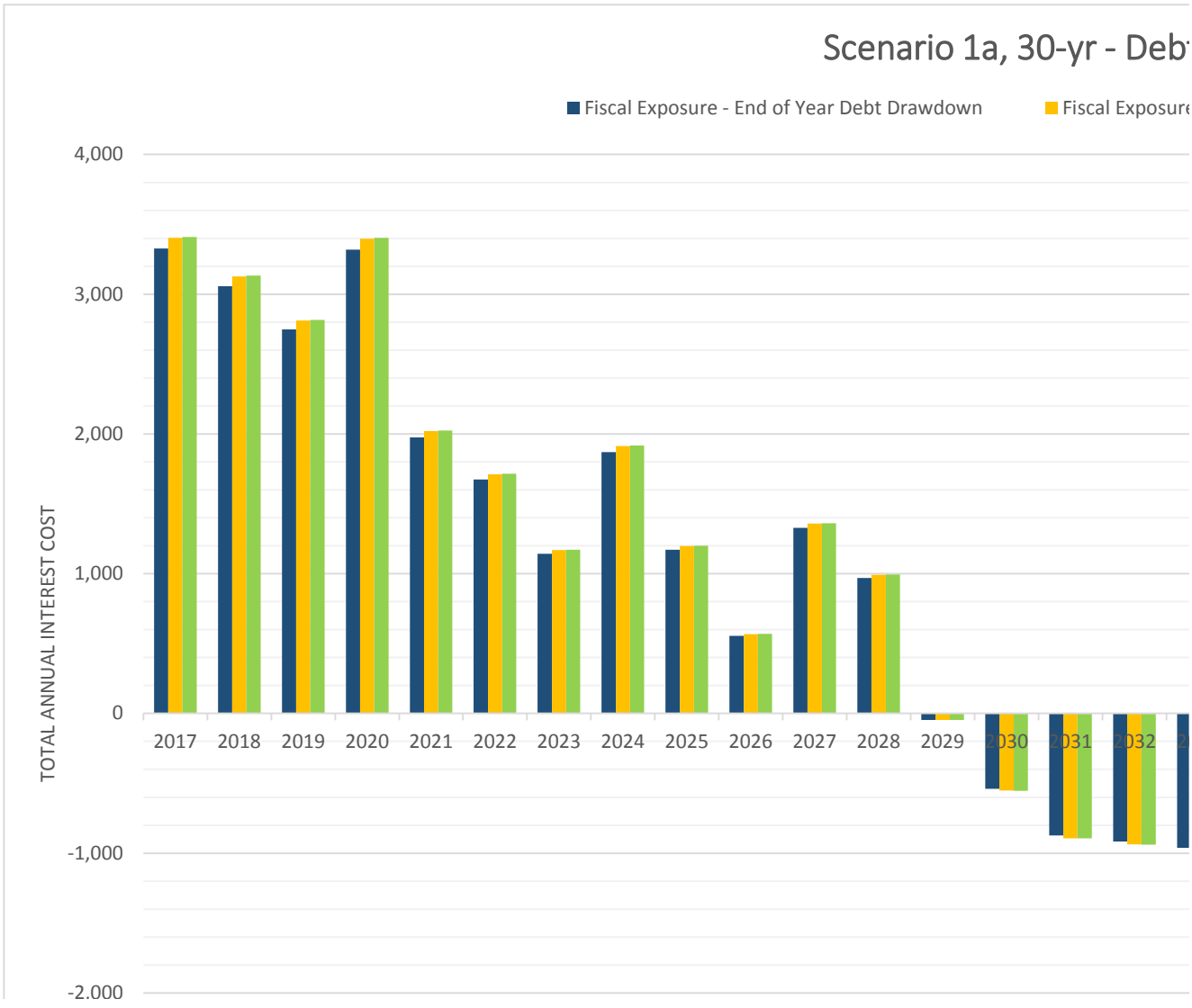


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



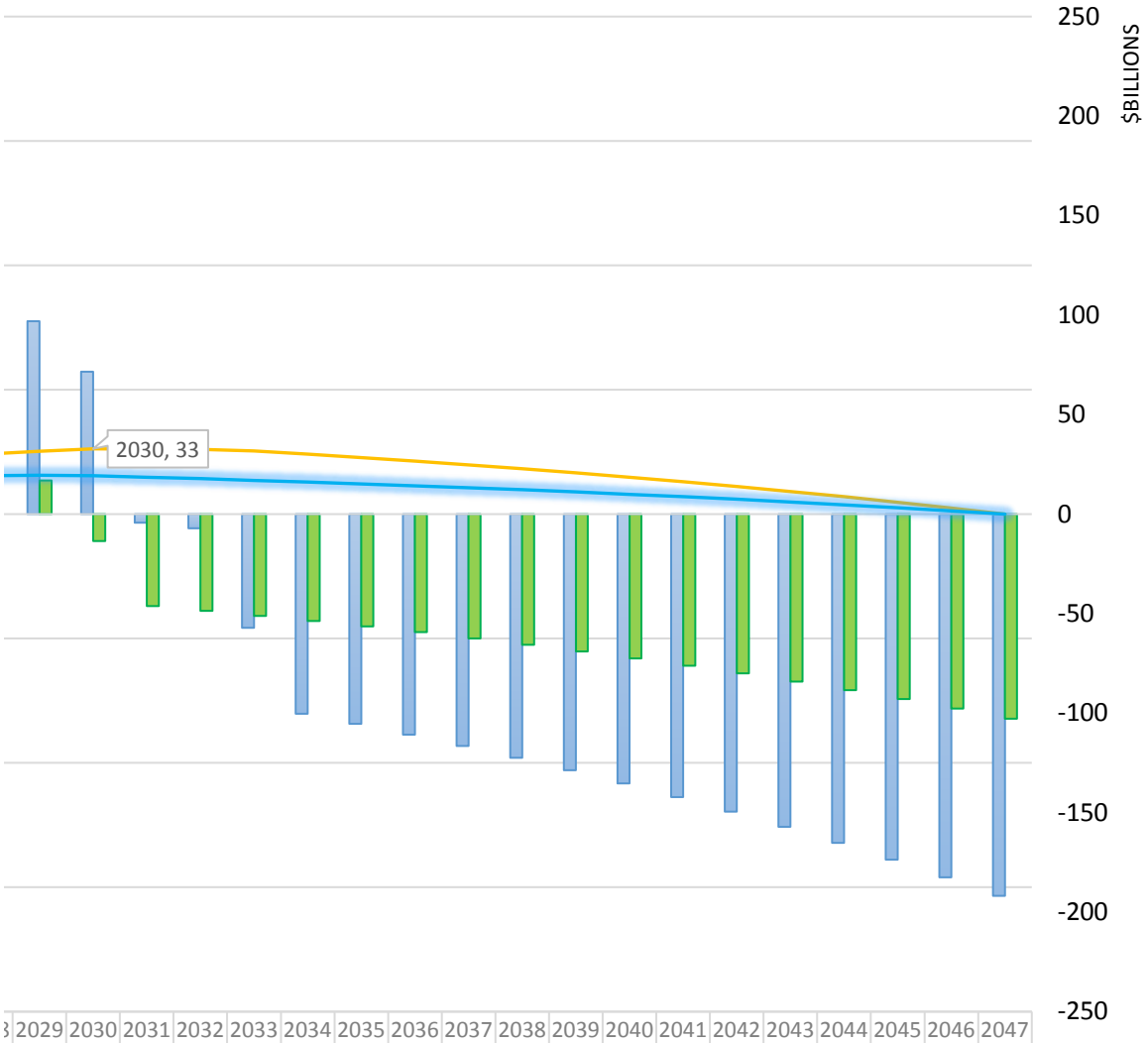


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

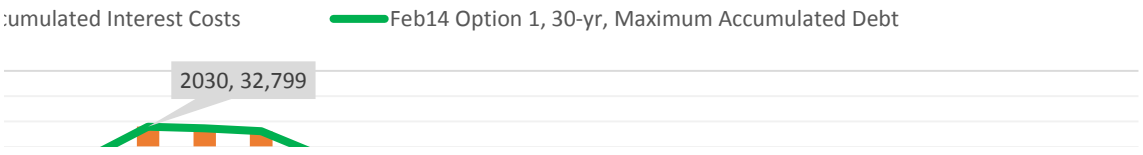
e - at 5.12% interest rate



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
41,551	1,145	-69	-114	-914	-1,60	-1,68	-1,77	-1,86	-1,95	-2,05	-2,16	-2,27	-2,39	-2,51	-2,64	-2,77	-2,92	-3,06
3 270	-217	-740	-778	-818	-859	-903	-950	-998	-1,04	-1,10	-1,15	-1,21	-1,28	-1,34	-1,41	-1,48	-1,56	-1,64
031,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,767	5,989	3,069	0
519,53	19,31	18,57	17,79	16,98	16,12	15,21	14,26	13,27	12,22	11,11	9,958	8,740	7,458	6,112	4,696	3,208	1,644	0

CALENDAR YEAR

n of Debt (Principal and Interest)

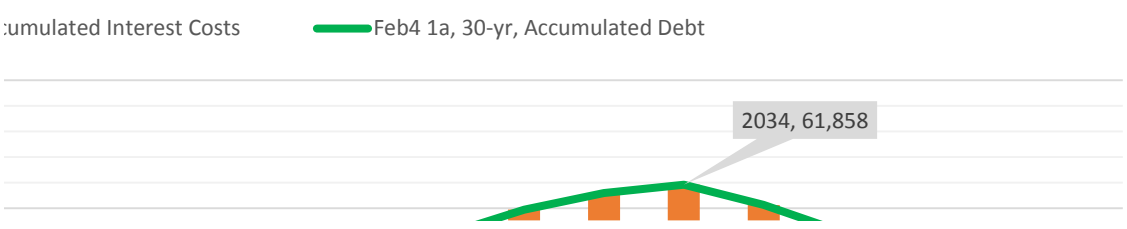




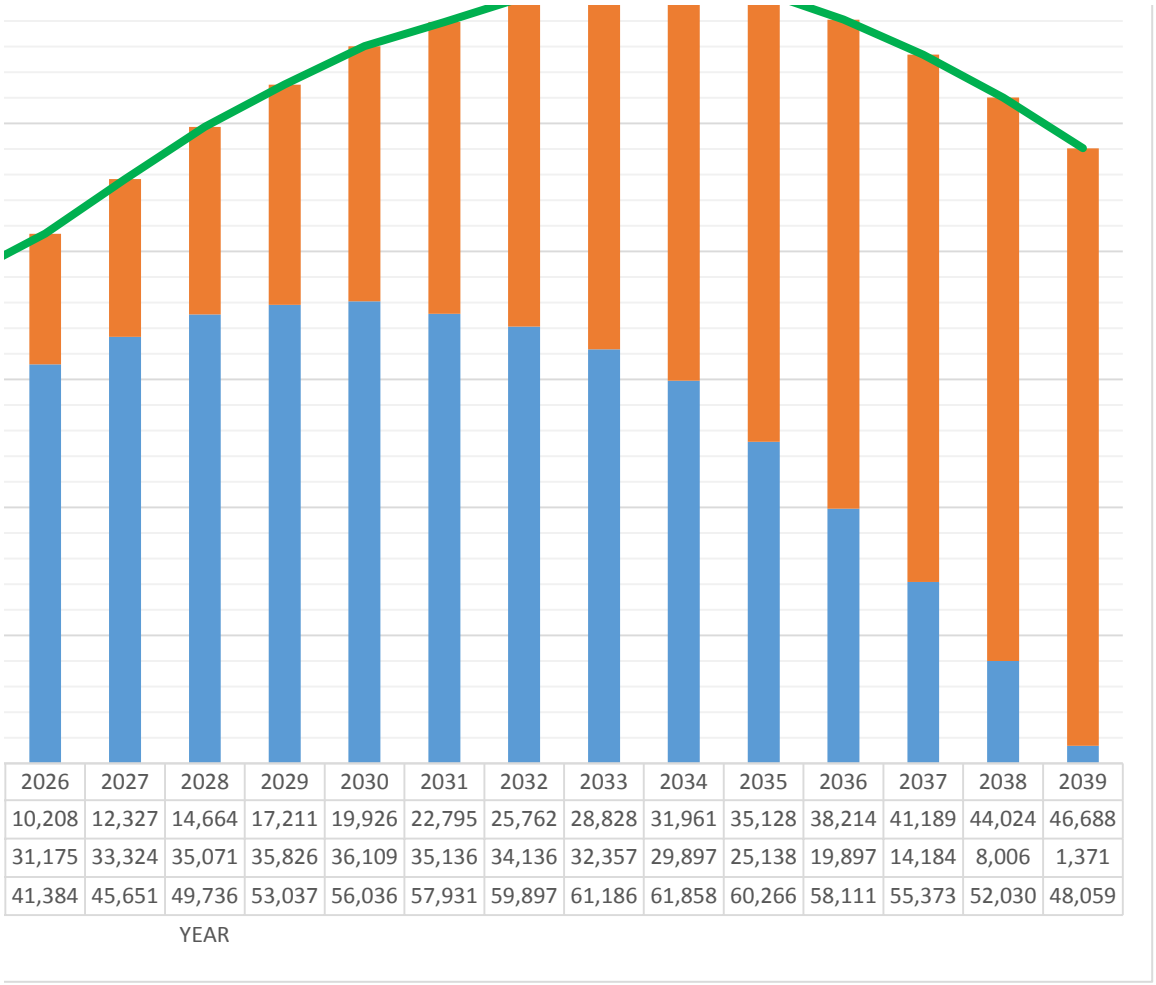
	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
	8,554	10,09	11,23	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	8,767	5,989	3,069	0
	21,54	21,56	21,56	21,56	21,44	20,53	18,92	17,24	15,46	13,60	11,64	9,586	7,421	5,146	2,754	240	0	0	0	0
	30,10	31,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,767	5,989	3,069	0

YEAR

cumulated Total Interest Costs



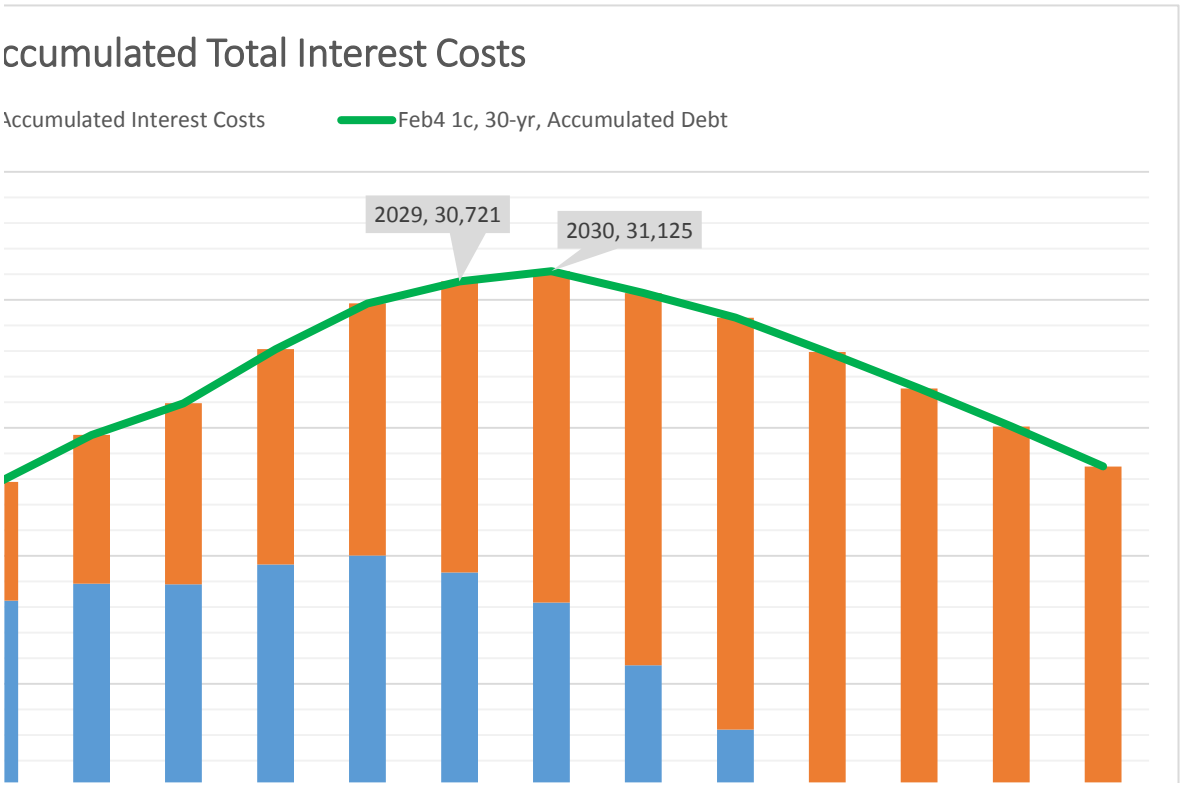
LIONS

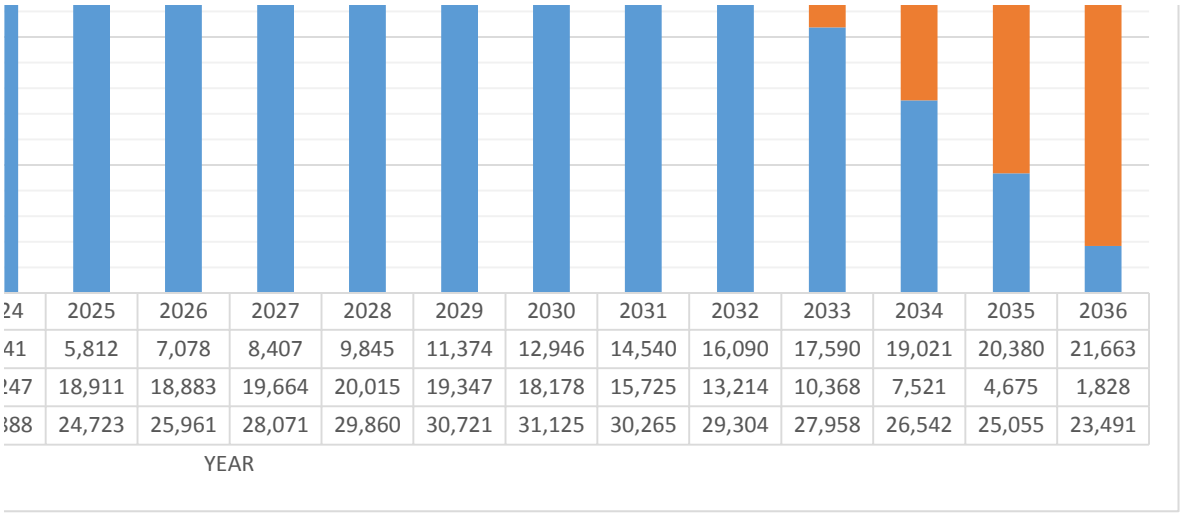


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

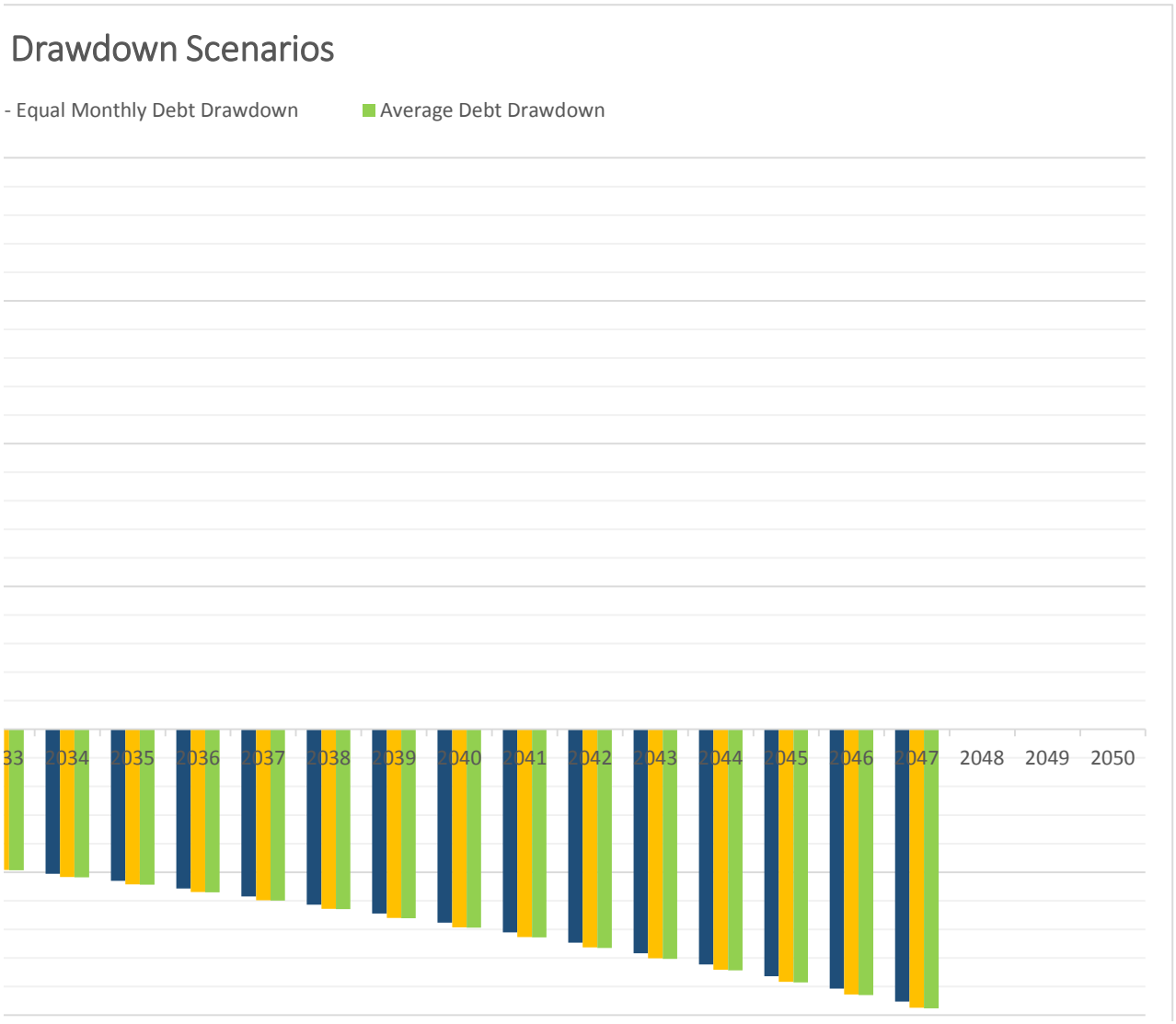
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





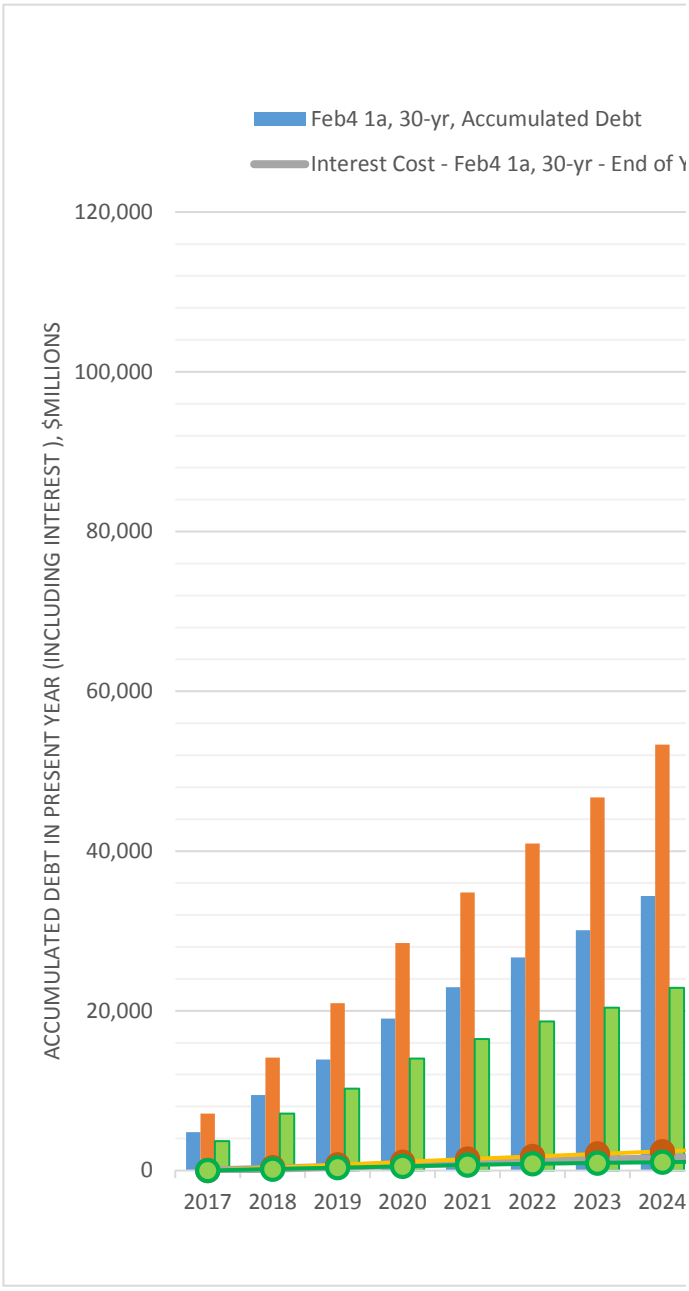
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

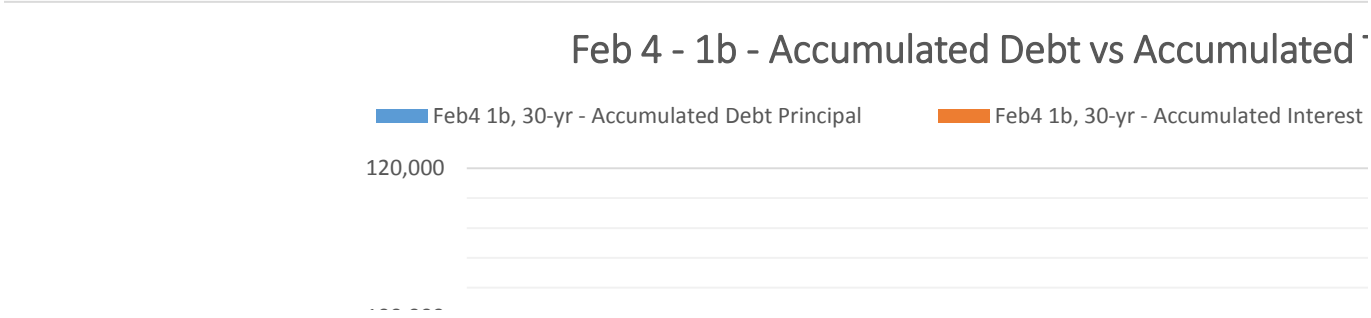
YEAR

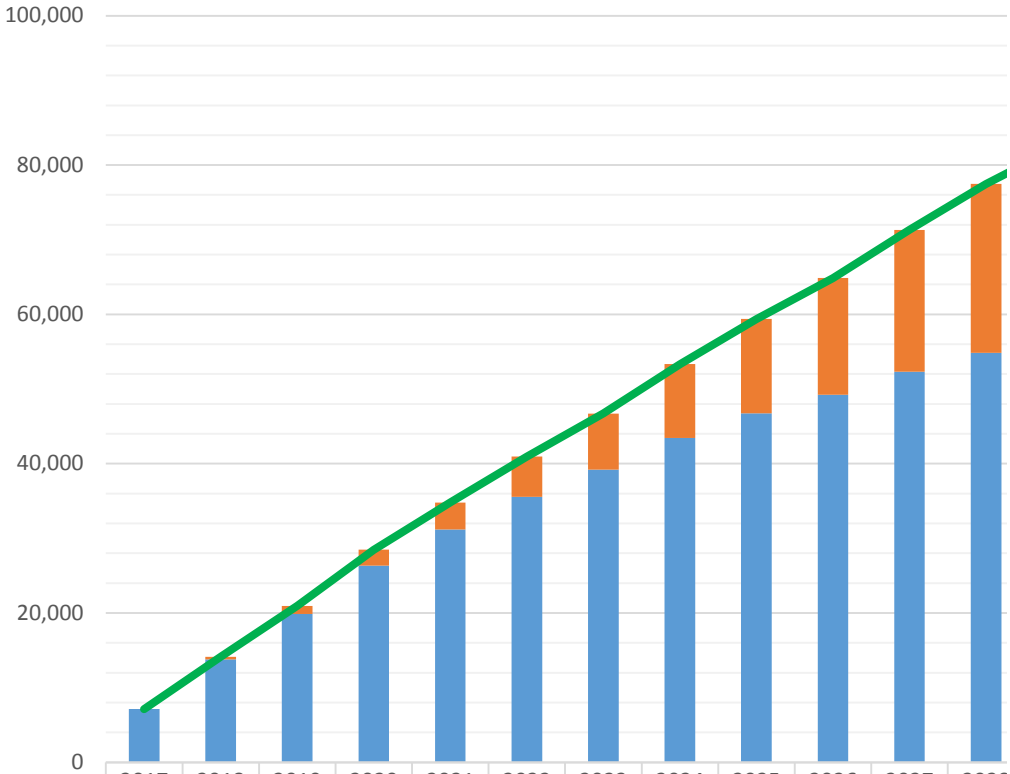


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate

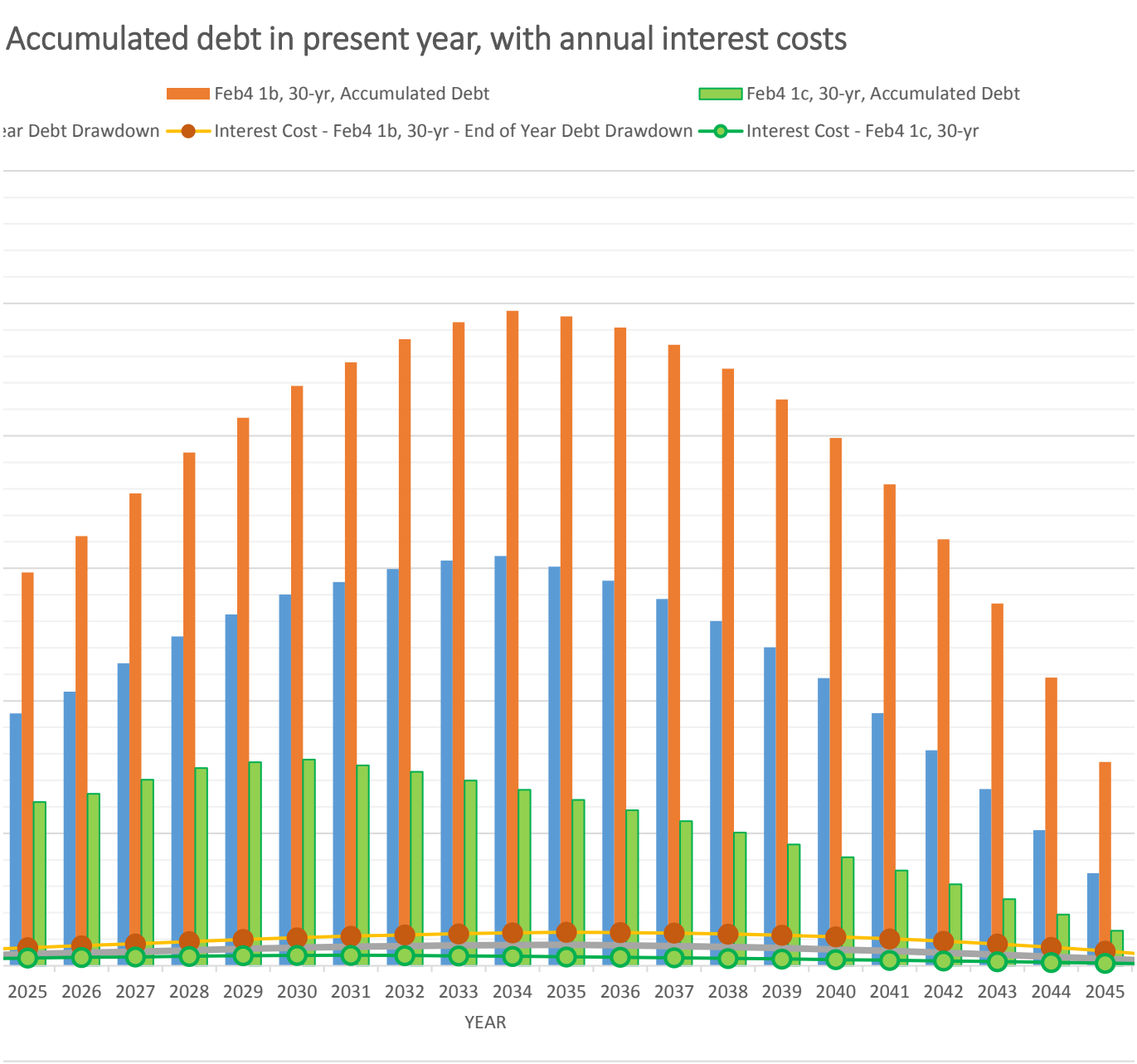


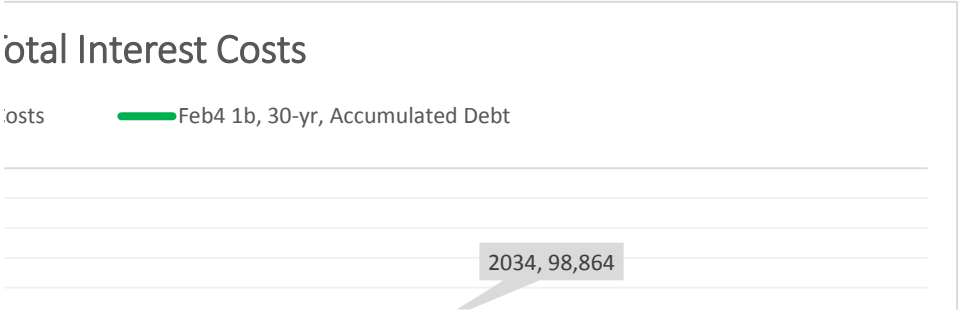

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

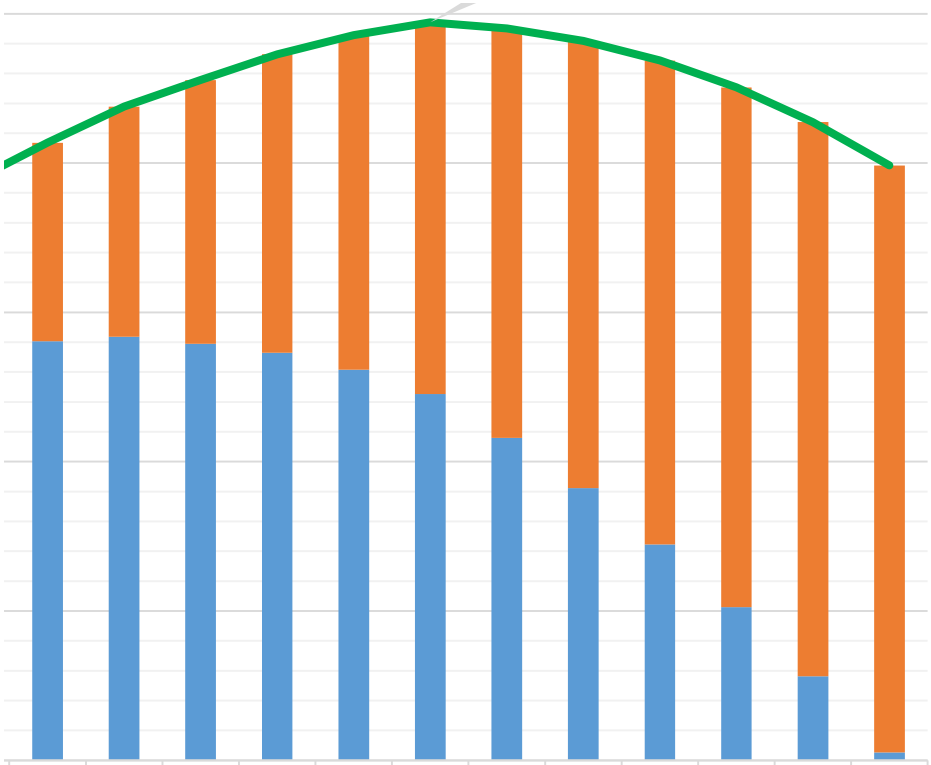


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y

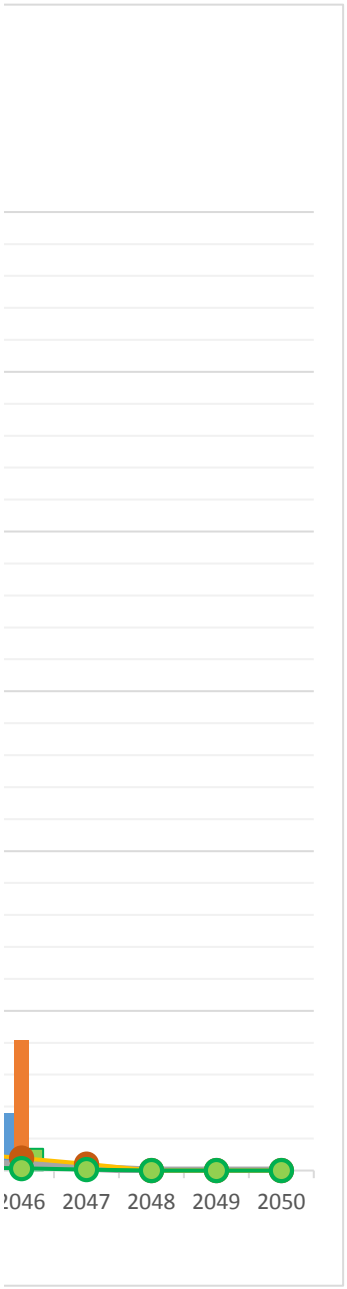

Accumulated debt in present year, with annual interest costs
Feb4 1b, 30-yr, Accumulated Debt
Feb4 1c, 30-yr, Accumulated Debt
ear Debt Drawdown
Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown
Interest Cost - Feb4 1c, 30-yr
2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045
YEAR


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

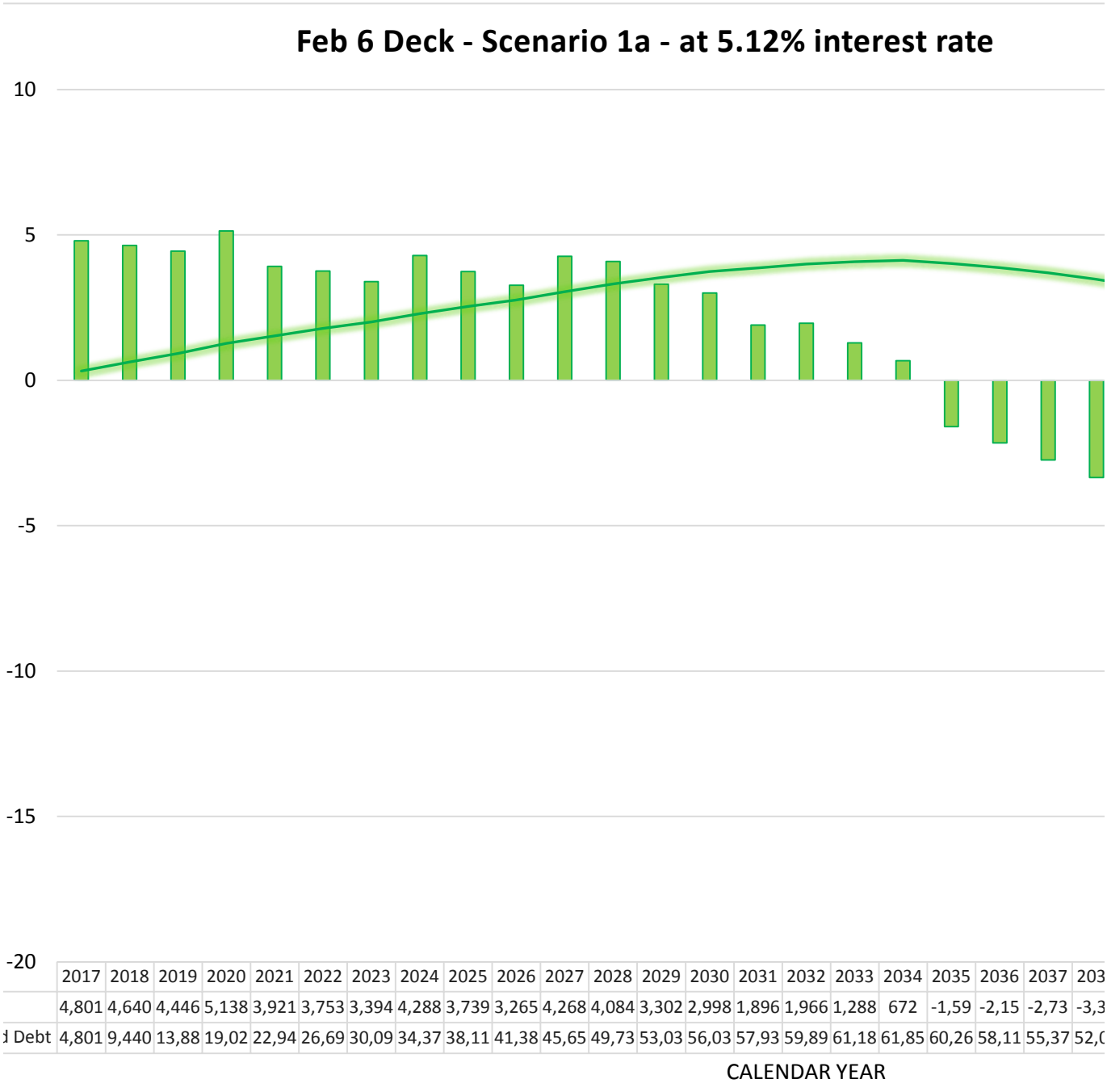
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

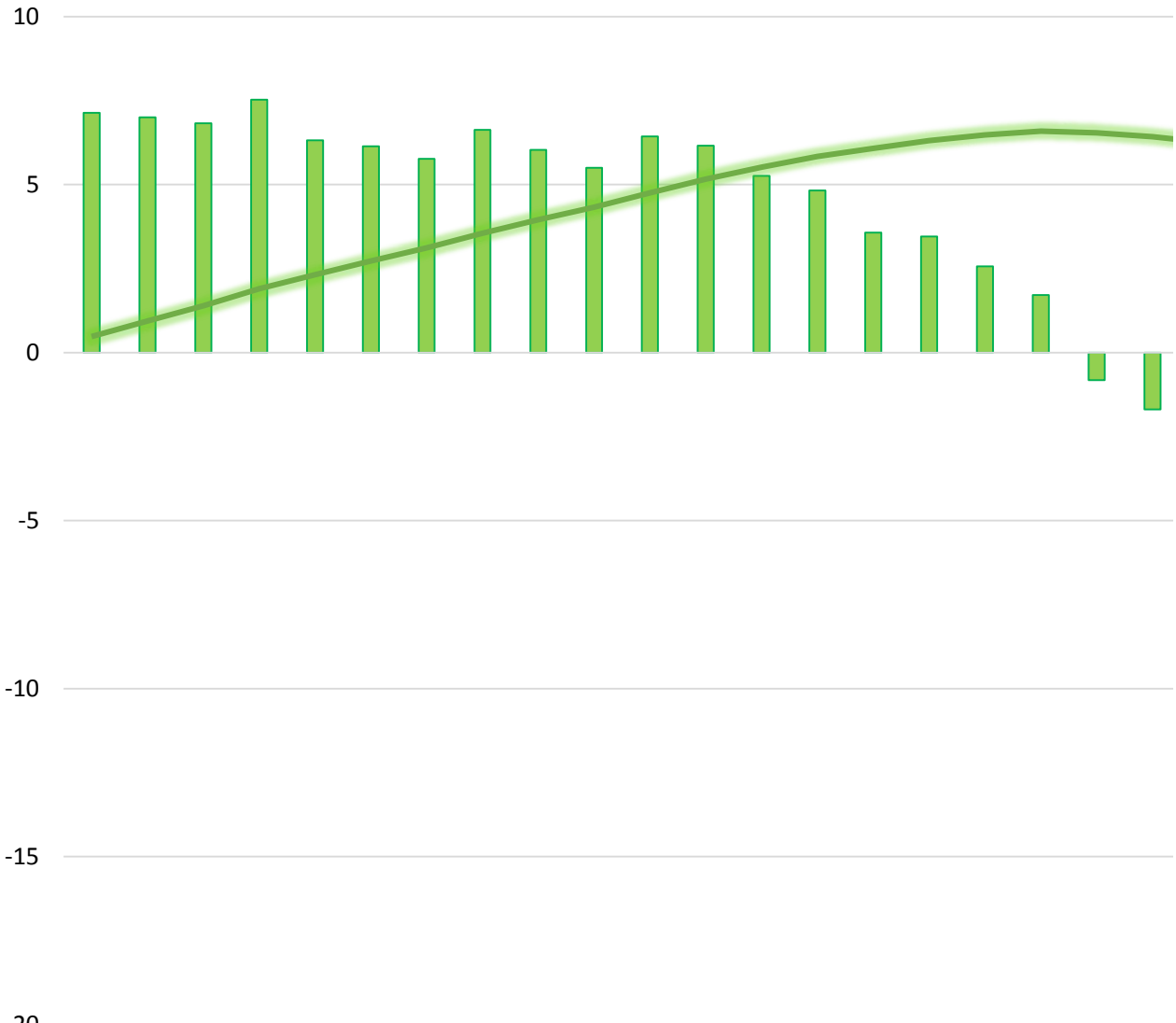
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

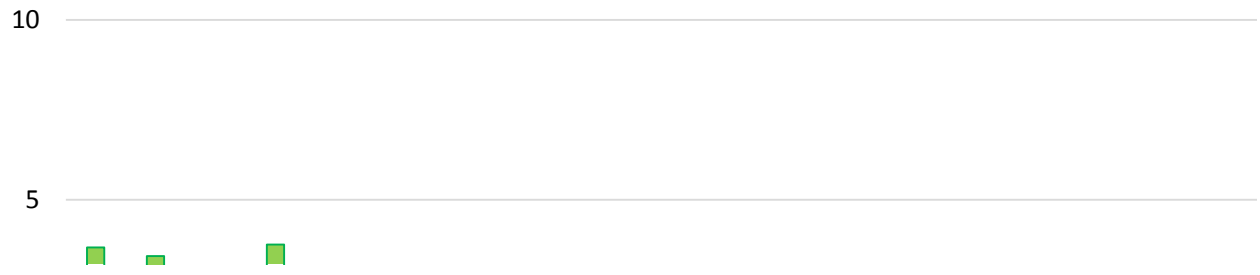
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

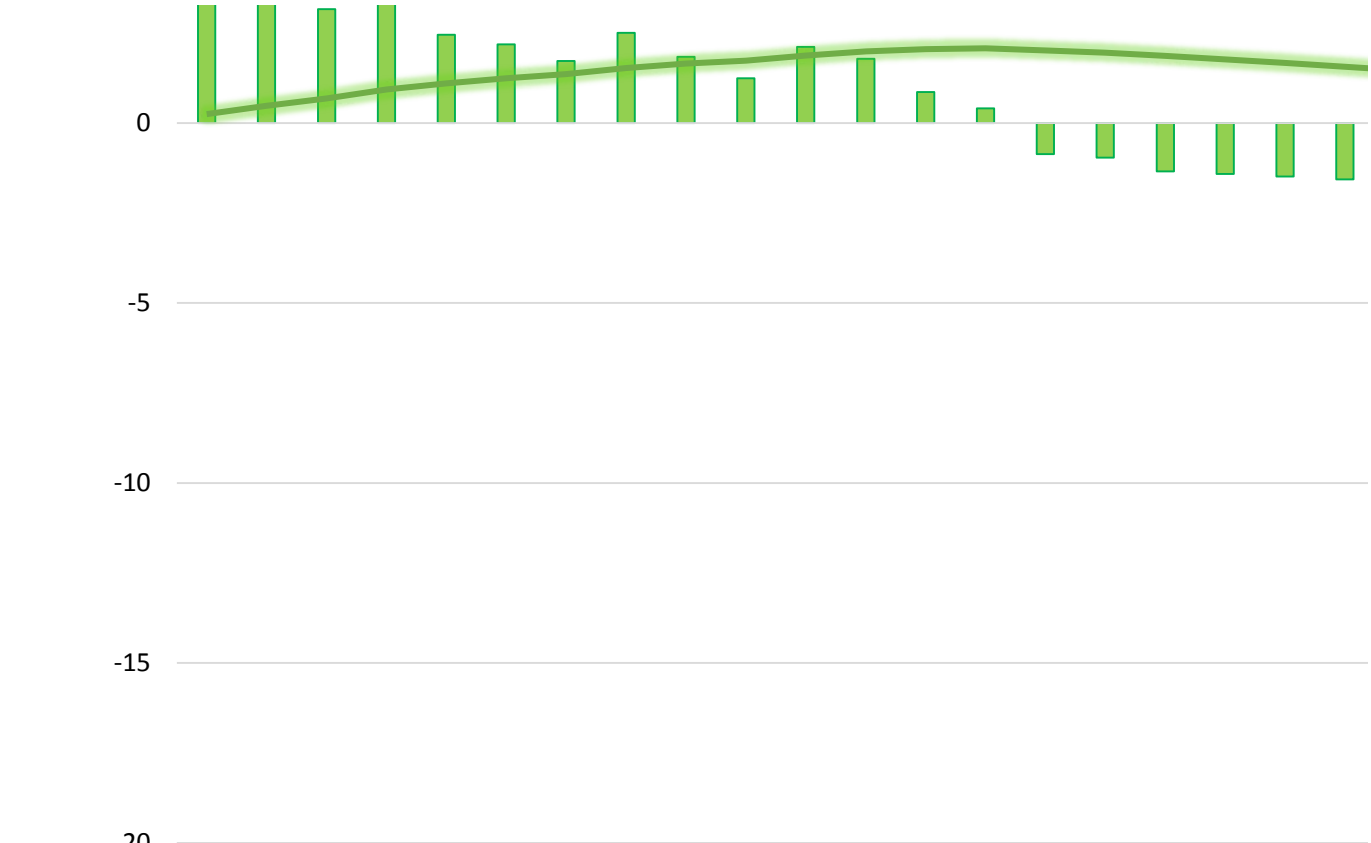


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



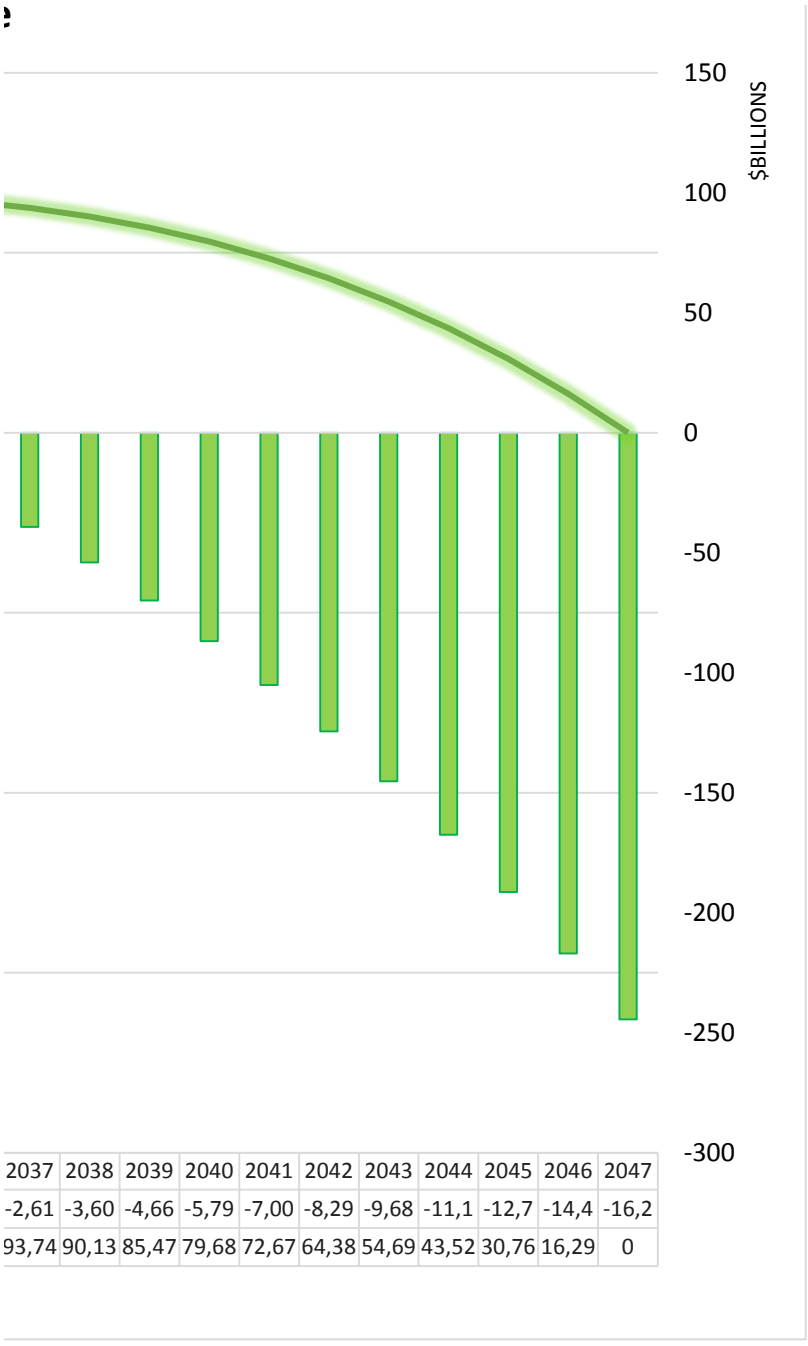


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

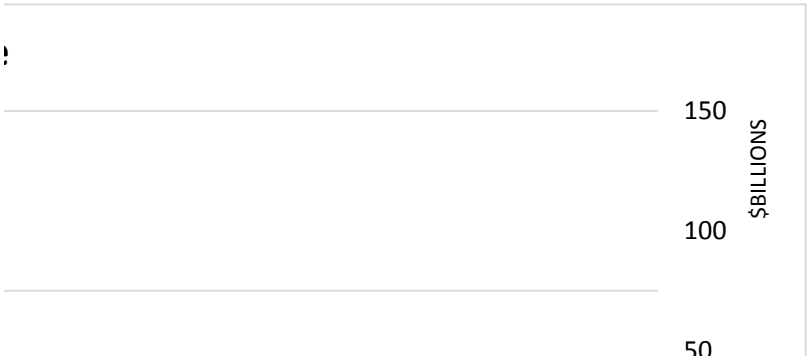
CALENDAR YEAR

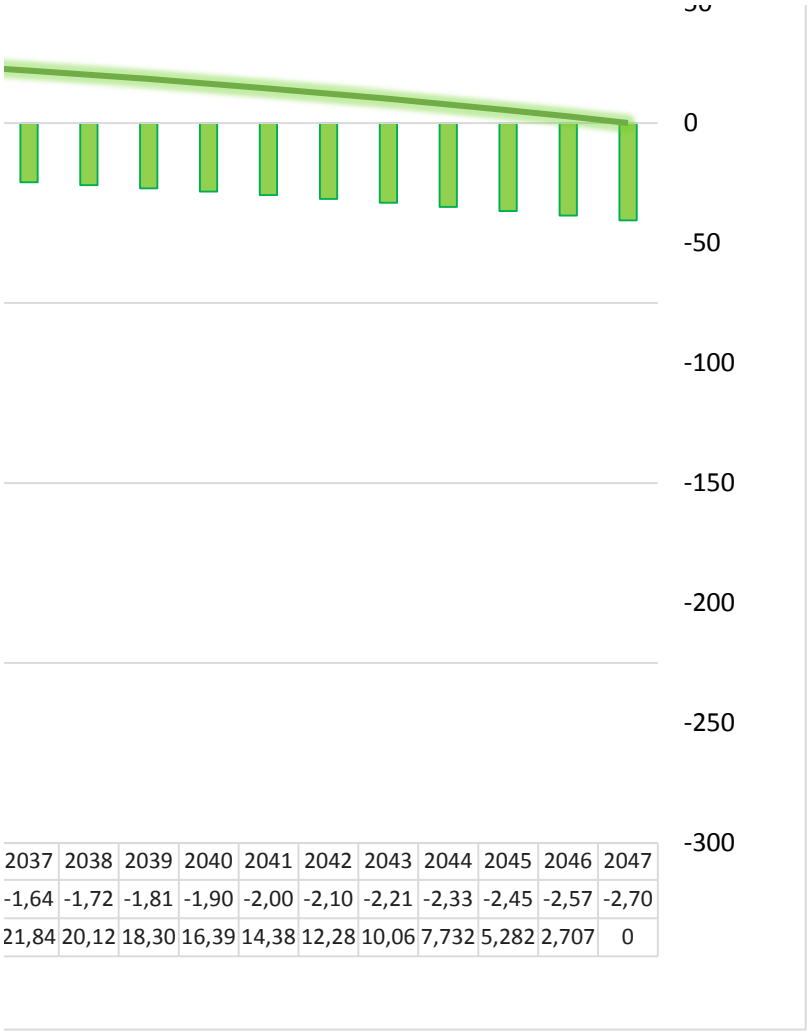


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

#REF!

#REF!

IESO GA cost forecast + extrapolation

Scenario
Option 1

Bills Lowered 25%, RPP Only

Option 2

Bills Lowered 20%, RPP Only

Option 3

Bills Lowered 18%, contract/conservation refinancing, RPP Only

	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
Ratepayer GA Payment	9,856	9,602	9,338	9,344
Total Accumulated Debt ($ billion)	2,239	4,586	7,035	10,219
Ratepayer GA Payment	10,537	10,296	10,041	10,061
Accumulated debt in present year (including 5% interest,	1,559	3,177	4,851	7,207
Ratepayer GA Payment	10,648	10,303	10,186	10,873
Accumulated debt in present year (including 5% interest,	1,447	3,053	4,575	6,105
	12095.37	11834.681	11552.105	12168.428

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801
13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103
9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513
9,266	11,038	12,324	14,370	15,725	16,458	18,035	19,263
9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253
7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876
10843.555	10633.626	10243.432	11128.119	10527.018	10033.287	11042.844	10819.098

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389

9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615
31,654	32,799	32,730	32,616	31,702	30,097	28,411	26,638
10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117
19,534	19,317	18,577	17,799	16,981	16,122	15,218	14,268
9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837
18,843	19,521	20,007	20,312	20,325	19,755	18,549	17,050
10008.692	9721.4381	8654.4847	8819.9388	8238.0383	7756.4351	5662.3212	5388.8445

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627

8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853
24,774	22,815	20,756	18,591	16,316	13,924	11,410	8,767
6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355
13,270	12,221	11,118	9,958	8,740	7,458	6,112	4,696
7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712
15,464	13,694	12,062	10,556	9,143	7,810	6,672	5,928
5128.5761	4880.878	4645.1432	4420.7938	4207.28	4004.0783	3810.6908	3626.6435

2045	2046	2047	2048

3,451	3,285	3,126	2,975	2,831	2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
6,678	6,511	6,353	2,975	2,831	2,695
5,989	3,069	0	0	0	0
5,180	5,013	4,854	2,975	2,831	2,695
3,208	1,644	0	-	-	-
4,007	3,619	3,425	3,156	3,011	2,878
5,676	5,633	5,623	5,730	5,843	5,959
3451.485	3284.787	3126.139	2975.154	2831.461	2694.708

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb14_1_30yr

Option 1 - Bills Lowered 25%, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,239	2,347

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	560	2,266

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $33 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb14_2_30yr

Option 2 - Bills Lowered 20%, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,559	1,619

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	390	1,574

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb14_3_30yr

Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606

	Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st		362	1,487

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	390 - 560	1,574 - 2,266

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	560	2266
Debt-Finance Global Adjustment Costs, Option 1a	390	1574
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		

Enhanced RPP Rebate		
Total, A	**560**	**2506**
Total, B	390	1814

Proposed Program Total:	390 - 560	1,814 - 2,506

ining

0	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Option 1
Option 2
Option 3

2019	2020	2021	2022
2,449	3,184	2,834	2,598

2018-19	2019-20	2020-21	2021-2022
2,373	2,633	3,097	2,775

2030.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,674	2,355	2,060	1,772

2018-19	2019-20	2020-21	2021-2022
1,632	1,844	2,282	1,988

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429

2033.

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022
1,632 - 2,373	1,844 - 2,633	2,282 - 3,097	1,988 - 2,775

/1

2018-19[1]	2019-20[1]	2020-21[1]
2373	2633	3097
1632	1844	2282
225	279	323
60	60	60
18	18	18

2676	**2990**	**3498**
1935	2201	2683

1,935 - 2,676 2,201 - 2,990 2,683 - 3,498

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
21,560	30,204	32,799	occurs in Year 2030
13,502	17,882	19,534	occurs in Year 2029
12,862	19,497	20,325	occurs in Year 2033

Tab Name
Feb14_1_30yr
Feb14_2_30yr
Feb14_3_30yr

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_1_30yr
Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,239	2,347	2,449	3,184	2,834	2,598	2,168	2,985	2,356	1,798	2,711	2,434	1,551	1,145	-69	-114	-914	-1,605	-1,686	-1,773	-1,864	-1,959	-2,059	-2,165	-2,275	-2,392	-2,514	-2,643	-2,778	-2,920	-3,069	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,292	2,403	2,507	3,260	2,901	2,660	2,220	3,056	2,412	1,841	2,775	2,492	1,588	1,172	-71	-117	-936	-1,643	-1,726	-1,815	-1,908	-2,006	-2,108	-2,216	-2,329	-2,449	-2,574	-2,706	-2,844	-2,989	-3,142	0	0	0
			53	56	58	76	67	62	52	71	56	43	64	58	37	27	-2	-3	-22	-38	-40	-42	-44	-47	-49	-51	-54	-57	-60	-63	-66	-69	-73	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,184	1,678	30,204
Equal Monthly Debt Drawdown	3,260	1,676	

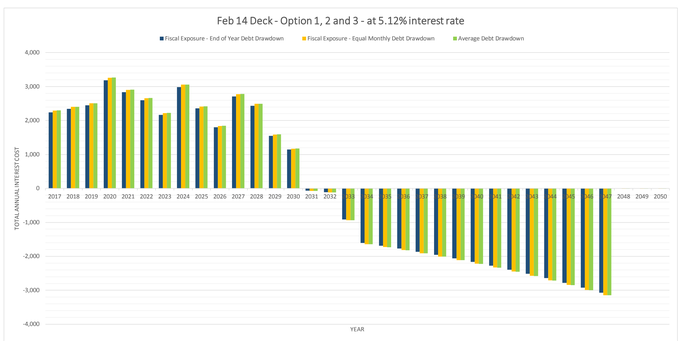
	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,799	2030	21,560
Equal Monthly Debt Drawdown	33,579		

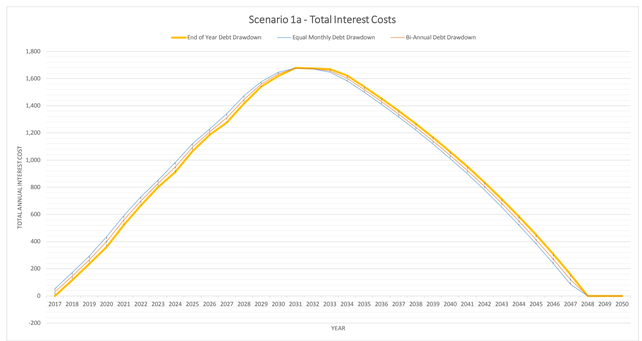
Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,876	9,055	9,235	9,420	9,609	9,801	9,998	10,196	10,402	10,608	10,821	10,983	8,888	8,615	8,355	8,107	7,871	7,648	7,433	7,231	7,037	6,853	6,678	6,511	6,352	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,930	1,367	2,073	1,292	613	1,434	1,018	11	-474	-1,747	-1,789	-2,583	-3,227	-3,226	-3,227	-3,227	-3,226	-3,226	-3,227	-3,226	-3,227	-3,227	-3,227	-3,227	-3,227	-3,226	-3,226	0	0	0	
a	Debt, Beginning of Year	0	2,239	4,586	7,035	10,219	13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103	31,654	32,799	32,730	32,616	31,702	30,097	28,411	26,638	24,774	22,815	20,756	18,591	16,316	13,924	11,410	8,767	5,989	3,069	0	0	0	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*115*	*235*	*360*	*523*	*668*	*801*	*912*	*1,064*	*1,185*	*1,277*	*1,416*	*1,540*	*1,619*	*1,678*	*1,675*	*1,669*	*1,622*	*1,540*	*1,454*	*1,363*	*1,267*	*1,167*	*1,062*	*951*	*835*	*712*	*584*	*449*	*306*	*157*	*0*	*0*	*0*	30,204
b	Additional GA Debt Drawdown, End of Year	2,239	2,232	2,214	2,824	2,311	1,930	1,367	2,073	1,292	613	1,434	1,018	11	-474	-1,747	-1,789	-2,583	-3,227	-3,226	-3,227	-3,227	-3,226	-3,226	-3,227	-3,226	-3,227	-3,227	-3,227	-3,227	-3,227	-3,226	-3,226	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,239	4,586	7,035	10,219	13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103	31,654	32,799	32,730	32,616	31,702	30,097	28,411	26,638	24,774	22,815	20,756	18,591	16,316	13,924	11,410	8,767	5,989	3,069	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,677	5,861	7,138	8,554	10,094	11,239	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	8,767	5,989	3,069	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,821	13,751	15,119	17,192	18,483	19,097	20,531	21,549	21,560	21,560	21,560	21,446	20,532	18,927	17,241	15,468	13,604	11,645	9,586	7,421	5,146	2,754	240	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,677	5,861	7,138	8,554	10,094	11,714	13,392	15,066	16,735	18,357	19,897	21,350	22,713	23,980	25,148	26,210	27,161	27,996	28,708	29,292	29,740	30,047	30,204				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,821	13,751	15,119	17,192	18,483	19,097	20,531	21,549	21,560	21,085	19,338	17,550	14,967	11,740	8,514	5,288	2,061	-1,165	-4,392	-7,619	-10,845	-14,072	-17,298	-20,525	-23,751	-26,978	-30,204				
Fiscal Exposure - End of Year Debt Drawdown		2,239	2,347	2,449	3,184	2,834	2,598	2,168	2,985	2,356	1,798	2,711	2,434	1,551	1,145	-69	-114	-914	-1,605	-1,686	-1,773	-1,864	-1,959	-2,059	-2,165	-2,275	-2,392	-2,514	-2,643	-2,778	-2,920	-3,069	0	0	0	

Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,876	9,055	9,235	9,420	9,609	9,801	9,998	10,196	10,402	10,608	10,821	10,983	8,888	8,615	8,355	8,107	7,871	7,648	7,433	7,231	7,037	6,853	6,678	6,511	6,352	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,930	1,367	2,073	1,292	613	1,434	1,018	11	-474	-1,747	-1,789	-2,583	-3,227	-3,226	-3,227	-3,227	-3,226	-3,226	-3,227	-3,226	-3,227	-3,227	-3,227	-3,227	-3,227	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,292	4,695	7,202	10,462	13,363	16,023	18,243	21,299	23,711	25,552	28,327	30,819	32,407	33,579	33,509	33,392	32,456	30,813	29,087	27,272	25,363	23,358	21,250	19,033	16,704	14,255	11,681	8,976	6,131	3,142	0	0	0	
1,676	*Interest Cost - Feb14 Option 1, 30-yr*	*53*	*170*	*293*	*436*	*590*	*730*	*852*	*983*	*1,120*	*1,228*	*1,341*	*1,473*	*1,577*	*1,647*	*1,676*	*1,672*	*1,647*	*1,584*	*1,500*	*1,411*	*1,319*	*1,221*	*1,118*	*1,010*	*897*	*778*	*653*	*521*	*382*	*237*	*84*	*0*	*0*	*0*	30,204
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,930	1,367	2,073	1,292	613	1,434	1,018	11	-474	-1,747	-1,789	-2,583	-3,227	-3,226	-3,227	-3,227	-3,226	-3,226	-3,227	-3,226	-3,227	-3,227	-3,227	-3,227	-3,227	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,292	4,695	7,202	10,462	13,363	16,023	18,243	21,299	23,711	25,552	28,327	30,819	32,407	33,579	33,509	33,392	32,456	30,813	29,087	27,272	25,363	23,358	21,250	19,033	16,704	14,255	11,681	8,976	6,131	3,142	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,292	2,403	2,507	3,260	2,901	2,660	2,220	3,056	2,412	1,841	2,775	2,492	1,588	1,172	-71	-117	-936	-1,643	-1,726	-1,815	-1,908	-2,006	-2,108	-2,216	-2,329	-2,449	-2,574	-2,706	-2,844	-2,989	-3,142	0	0	0	
	Monthly Drawdown	187	186	185	235	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	-	-	-	
	FV of Monthly Drawdown at 5%	2,292	2,286	2,267	2,891	2,366	1,976	1,400	2,123	1,322	628	1,468	1,043	11	(486)	(1,789)	(1,831)	(2,644)	(3,304)	(3,303)	(3,303)	(3,304)	(3,303)	(3,303)	(3,304)	(3,303)	(3,304)	(3,303)	(3,304)	(3,303)	(3,303)	(3,303)	(3,303)	-	-	-	
	Annual Interest Cost on New Drawdowns	53	53	53	67	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	-	-	-	
	Annual Interest Cost on Opening Balance	-	117	240	368	535	684	820	933	1,090	1,213	1,307	1,449	1,577	1,658	1,718	1,714	1,708	1,661	1,576	1,488	1,395	1,298	1,195	1,087	974	855	729	598	459	314	161	(0)	(0)	(0)	
	Total Annual Interest Cost	53	170	293	436	590	730	852	983	1,120	1,228	1,341	1,473	1,577	1,647	1,676	1,672	1,647	1,584	1,500	1,411	1,319	1,221	1,118	1,010	897	778	653	521	382	237	84	(0)	(0)	(0)	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,876	9,055	9,235	9,420	9,609	9,801	9,998	10,196	10,402	10,608	10,821	10,983	8,888	8,615	8,355	8,107	7,871	7,648	7,433	7,231	7,037	6,853	6,678	6,511	6,352	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,930	1,367	2,073	1,292	613	1,434	1,018	11	-474	-1,747	-1,789	-2,583	-3,227	-3,226	-3,227	-3,227	-3,226	-3,226	-3,227	-3,226	-3,227	-3,227	-3,227	-3,227	-3,227	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,268	4,645	7,125	10,350	13,220	15,851	18,047	21,070	23,456	25,277	28,023	30,488	32,059	33,219	33,149	33,033	32,107	30,482	28,774	26,979	25,091	23,107	21,021	18,829	16,525	14,102	11,556	8,879	6,066	3,108	0	0	0	
	Interest Cost - Feb14 Option 1, 30-yr	*29*	*145*	*266*	*401*	*559*	*701*	*828*	*950*	*1,095*	*1,208*	*1,312*	*1,447*	*1,560*	*1,634*	*1,677*	*1,673*	*1,657*	*1,601*	*1,518*	*1,431*	*1,339*	*1,242*	*1,141*	*1,034*	*922*	*804*	*680*	*550*	*413*	*269*	*118*	*0*	*0*	*0*	30,204
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,930	1,367	2,073	1,292	613	1,434	1,018	11	-474	-1,747	-1,789	-2,583	-3,227	-3,226	-3,227	-3,227	-3,226	-3,226	-3,227	-3,226	-3,227	-3,227	-3,227	-3,227	-3,227	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,268	4,645	7,125	10,350	13,220	15,851	18,047	21,070	23,456	25,277	28,023	30,488	32,059	33,219	33,149	33,033	32,107	30,482	28,774	26,979	25,091	23,107	21,021	18,829	16,525	14,102	11,556	8,879	6,066	3,108	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,268	2,377	2,480	3,225	2,870	2,631	2,196	3,023	2,386	1,821	2,746	2,465	1,571	1,160	-70	-115	-926	-1,626	-1,708	-1,796	-1,888	-1,984	-2,085	-2,193	-2,304	-2,423	-2,546	-2,677	-2,814	-2,957	-3,108	0	0	0	
	Bi-Annual Drawdown	1,120	1,116	1,107	1,412	1,156	965	684	1,037	646	307	717	509	5	(237)	(874)	(894)	(1,291)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,268	2,261	2,243	2,860	2,341	1,955	1,385	2,100	1,308	621	1,452	1,031	11	(481)	(1,769)	(1,811)	(2,616)	(3,268)	(3,267)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,267)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,267)	-	-	-	
	Annual Interest Cost on New Drawdowns	29	29	28	36	30	25	17	27	17	8	18	13	0	(6)	(22)	(23)	(33)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	-	-	-	
	Annual Interest Cost on Opening Balance	-	116	238	365	530	676	811	923	1,078	1,200	1,293	1,434	1,560	1,640	1,700	1,696	1,690	1,643	1,560	1,472	1,380	1,284	1,182	1,075	963	845	721	591	454	310	159	(0)	(0)	(0)	
	Total Annual Interest Cost	29	145	266	401	559	701	828	950	1,095	1,208	1,312	1,447	1,560	1,634	1,677	1,673	1,657	1,601	1,518	1,431	1,339	1,242	1,141	1,034	922	804	680	550	413	269	118	(0)	(0)	(0)	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,876	9,055	9,235	9,420	9,609	9,801	9,998	10,196	10,402	10,608	10,821	10,983	8,888	8,615	8,355	8,107	7,871	7,648	7,433	7,231	7,037	6,853	6,678	6,511	6,352	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,930	1,367	2,073	1,292	613	1,434	1,018	11	-474	-1,747	-1,789	-2,583	-3,227	-3,226	-3,227	-3,227	-3,226	-3,226	-3,227	-3,226	-3,227	-3,227	-3,227	-3,227	-3,227	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,296	4,703	7,215	10,480	13,387	16,051	18,275	21,336	23,752	25,596	28,377	30,873	32,464	33,638	33,567	33,450	32,513	30,867	29,138	27,319	25,408	23,399	21,287	19,067	16,733	14,280	11,702	8,991	6,142	3,148	0	0	0	
	Interest Cost - Feb14 Option 1, 30-yr	*57*	*175*	*297*	*441*	*595*	*724*	*856*	*988*	*1,125*	*1,231*	*1,346*	*1,478*	*1,580*	*1,649*	*1,676*	*1,672*	*1,645*	*1,581*	*1,497*	*1,408*	*1,315*	*1,217*	*1,115*	*1,007*	*893*	*774*	*648*	*516*	*377*	*232*	*79*	*0*	*0*	*0*	30,204
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,930	1,367	2,073	1,292	613	1,434	1,018	11	-474	-1,747	-1,789	-2,583	-3,227	-3,226	-3,227	-3,227	-3,226	-3,226	-3,227	-3,226	-3,227	-3,227	-3,227	-3,227	-3,227	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,296	4,703	7,215	10,480	13,387	16,051	18,275	21,336	23,752	25,596	28,377	30,873	32,464	33,638	33,567	33,450	32,513	30,867	29,138	27,319	25,408	23,399	21,287	19,067	16,733	14,280	11,702	8,991	6,142	3,148	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		2,296	2,407	2,512	3,265	2,906	2,664	2,223	3,061	2,416	1,844	2,780	2,496	1,591	1,174	-71	-117	-937	-1,646	-1,729	-1,818	-1,912	-2,009	-2,112	-2,220	-2,333	-2,453	-2,578	-2,711	-2,849	-2,995	-3,148	0	0	0	





Feb4 1a, 30-yr - Debt Drawdown Scenarios

-92,247 -94598.515 58,489 36109.18 0

Feb4_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0
			114	110	106	122	93	89	81	102	89	78	102	97	79	71	45	47	31	16	-38	-51	-65	-80	-95	-110	-126	-133	-140	-147	-155	-162	-171	0	0	0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	5,138	3,167	58,489
Equal Monthly Debt Drawdown	5,260	3,149	

Maximum Accumulated Debt — Feb4 1a, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

End of Year Debt Drawdown	61,858	36,109
Equal Monthly Debt Drawdown	63,330	

			40%	37%	34%	36%	27%	24%																												
Feb4 1a, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
a	Debt, Beginning of Year		0	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	
c = a*5%	*Interest Cost - Feb4 1a, 30-yr - End of Year Debt Drawdown*		*0*	*246*	*483*	*711*	*974*	*1,175*	*1,367*	*1,541*	*1,760*	*1,952*	*2,119*	*2,337*	*2,546*	*2,716*	*2,869*	*2,966*	*3,067*	*3,133*	*3,167*	*3,086*	*2,975*	*2,835*	*2,664*	*2,461*	*2,224*	*1,952*	*1,666*	*1,365*	*1,049*	*717*	*367*	*0*	*0*	*0*	58,489
b	Additional GA Debt Drawdown, End of Year		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	21,822	23,788	25,076	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	20,490	13,998	7,173	0	0	0	
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	36,109	36,109	36,109	36,109	34,517	32,362	29,624	26,281	22,311	17,687	12,383	6,793	918	0	0	0	0	0	0	0	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688	49,149	51,372	53,325	54,991	56,356	57,405	58,122	58,489				
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371	-5,713	-13,241	-20,783	-28,325	-35,866	-43,408	-50,949	-58,489				
Fiscal Exposure - End of Year Debt Drawdown			4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0	

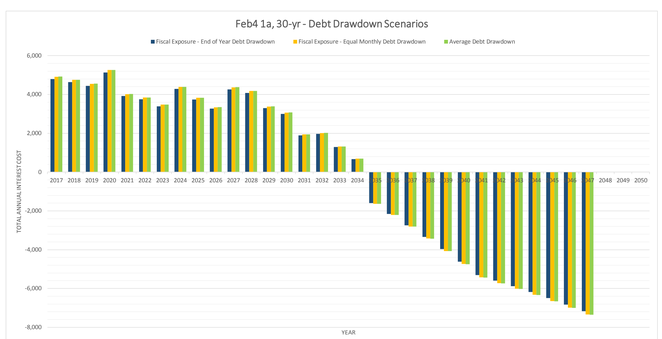
Feb4 1a, 30-yr	Equal Monthly Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			12																																		
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
3,149	*Interest Cost - Feb4 1a, 30-yr*		*114*	*356*	*589*	*833*	*1,067*	*1,264*	*1,448*	*1,643*	*1,849*	*2,029*	*2,220*	*2,435*	*2,625*	*2,787*	*2,914*	*3,013*	*3,097*	*3,149*	*3,129*	*3,034*	*2,910*	*2,756*	*2,569*	*2,351*	*2,098*	*1,819*	*1,526*	*1,218*	*895*	*554*	*197*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0	

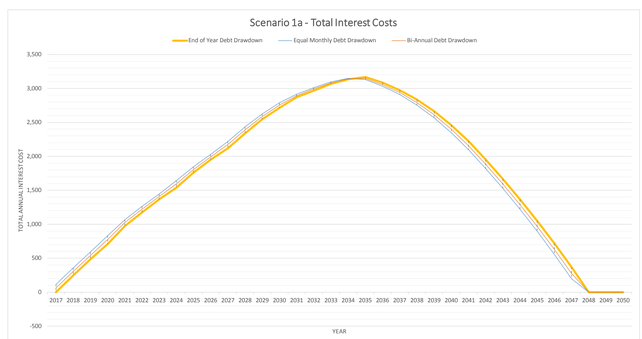
	Monthly Drawdown		400	366	330	369	246	215	169	229	165	109	179	146	63	24	(81)	(83)	(148)	(205)	(397)	(437)	(476)	(515)	(553)	(590)	(627)	(629)	(628)	(628)	(628)	(628)	(628)	-	-	-
	FV of Monthly Drawdown at 5%		4,915	4,498	4,057	4,532	3,017	2,640	2,075	2,813	2,026	1,345	2,200	1,789	773	289	(996)	(1,024)	(1,821)	(2,519)	(4,872)	(5,365)	(5,849)	(6,325)	(6,793)	(7,253)	(7,707)	(7,722)	(7,721)	(7,721)	(7,721)	(7,721)	(7,720)	-	-	-
	Annual Interest Cost on New Drawdowns		114	105	94	105	70	61	48	65	47	31	51	42	18	7	(23)	(24)	(42)	(59)	(113)	(125)	(136)	(147)	(158)	(169)	(179)	(180)	(180)	(180)	(180)	(180)	(179)	-	-	-
	Annual Interest Cost on Opening Balance		-	252	495	728	997	1,203	1,399	1,577	1,802	1,998	2,169	2,393	2,607	2,780	2,937	3,037	3,140	3,207	3,243	3,159	3,046	2,903	2,727	2,519	2,277	1,999	1,706	1,398	1,074	734	376	(0)	(0)	(0)
	Total Annual Interest Cost		114	356	589	833	1,067	1,264	1,448	1,643	1,849	2,029	2,220	2,435	2,625	2,787	2,914	3,013	3,097	3,149	3,129	3,034	2,910	2,756	2,569	2,351	2,098	1,819	1,526	1,218	895	554	197	(0)	(0)	(0)

Feb4 1a, 30-yr	Bi-Annual Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*61*	*305*	*540*	*777*	*1,024*	*1,223*	*1,410*	*1,596*	*1,808*	*1,993*	*2,173*	*2,390*	*2,589*	*2,754*	*2,893*	*2,991*	*3,083*	*3,141*	*3,147*	*3,058*	*2,940*	*2,792*	*2,613*	*2,401*	*2,156*	*1,881*	*1,591*	*1,286*	*966*	*629*	*275*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown			4,862	4,699	4,502	5,203	3,971	3,801	3,438	4,343	3,787	3,307	4,322	4,137	3,344	3,037	1,920	1,991	1,305	681	-1,612	-2,183	-2,773	-3,386	-4,021	-4,683	-5,372	-5,661	-5,951	-6,255	-6,575	-6,912	-7,265	0	0	0	

	Bi-Annual Drawdown		2,400	2,197	1,981	2,213	1,473	1,289	1,014	1,374	989	657	1,074	874	378	141	(487)	(500)	(889)	(1,230)	(2,379)	(2,620)	(2,857)	(3,089)	(3,317)	(3,542)	(3,764)	(3,771)	(3,771)	(3,771)	(3,771)	(3,771)	(3,770)	-	-	-
	FV of Bi-Annual Drawdown at 5%		4,862	4,450	4,013	4,483	2,984	2,612	2,053	2,783	2,004	1,331	2,176	1,769	765	286	(986)	(1,013)	(1,801)	(2,492)	(4,820)	(5,308)	(5,787)	(6,257)	(6,719)	(7,175)	(7,624)	(7,639)	(7,638)	(7,638)	(7,638)	(7,638)	(7,637)	-	-	-
	Annual Interest Cost on New Drawdowns		61	56	51	57	38	33	26	35	25	17	28	22	10	4	(12)	(13)	(23)	(31)	(61)	(67)	(73)	(79)	(85)	(91)	(96)	(97)	(97)	(97)	(97)	(97)	(97)	-	-	-
	Annual Interest Cost on Opening Balance		-	249	490	720	986	1,190	1,384	1,560	1,783	1,977	2,146	2,367	2,579	2,750	2,906	3,004	3,106	3,173	3,208	3,125	3,013	2,871	2,698	2,492	2,252	1,977	1,687	1,383	1,063	726	372	(0)	(0)	(0)
	Total Annual Interest Cost		61	305	540	777	1,024	1,223	1,410	1,596	1,808	1,993	2,173	2,390	2,589	2,754	2,893	2,991	3,083	3,141	3,147	3,058	2,940	2,792	2,613	2,401	2,156	1,881	1,591	1,286	966	629	275	(0)	(0)	(0)

Feb4 1a, 30-yr	Average Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*123*	*365*	*597*	*842*	*1,074*	*1,271*	*1,454*	*1,650*	*1,856*	*2,035*	*2,228*	*2,442*	*2,631*	*2,792*	*2,918*	*3,016*	*3,100*	*3,150*	*3,126*	*3,030*	*2,905*	*2,749*	*2,562*	*2,342*	*2,088*	*1,809*	*1,516*	*1,207*	*883*	*542*	*184*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
Fiscal Exposure - Average Debt Drawdown			4,923	4,758	4,559	5,269	4,021	3,849	3,481	4,398	3,835	3,349	4,377	4,189	3,386	3,075	1,944	2,016	1,321	689	-1,633	-2,210	-2,808	-3,428	-4,072	-4,742	-5,440	-5,733	-6,026	-6,334	-6,658	-6,999	-7,357	0	0	0	





Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,559	1,619	1,674	2,355	2,060	1,772	1,286	2,046	1,355	733	1,577	1,228	270	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,416	-1,488	-1,564	-1,644	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0
			37	38	40	56	49	42	31	49	32	17	38	29	6	-5	-18	-19	-19	-20	-21	-23	-24	-25	-26	-28	-29	-30	-32	-34	-35	-37	-39	0	0	0

0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,355	999	17,882
Equal Monthly Debt Drawdown	2,412	994	

	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,534	2029	13,502
Equal Monthly Debt Drawdown	19,999		

Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,514	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	735	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
a	Debt, Beginning of Year	0	1,559	3,177	4,851	7,207	9,266	11,038	12,324	14,370	15,725	16,458	18,035	19,263	19,534	19,317	18,577	17,799	16,981	16,122	15,218	14,268	13,270	12,221	11,118	9,958	8,740	7,458	6,112	4,696	3,208	1,644	0	0	0	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*80*	*163*	*248*	*369*	*474*	*565*	*631*	*735*	*805*	*842*	*923*	*986*	*999*	*988*	*950*	*911*	*869*	*825*	*779*	*730*	*679*	*625*	*569*	*509*	*447*	*382*	*313*	*240*	*164*	*84*	*0*	*0*	*0*	17,882
b	Additional GA Debt Drawdown, End of Year	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	735	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,559	3,177	4,851	7,207	9,266	11,038	12,324	14,370	15,725	16,458	18,035	19,263	19,534	19,317	18,577	17,799	16,981	16,122	15,218	14,268	13,270	12,221	11,118	9,958	8,740	7,458	6,112	4,696	3,208	1,644	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	7,818	7,078	6,300	5,482	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,696	3,208	1,644	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,841	12,461	12,389	13,125	13,430	12,715	11,499	11,499	11,499	11,499	11,499	10,595	9,645	8,647	7,598	6,495	5,335	4,117	2,835	1,489	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	7,818	8,806	9,757	10,667	11,536	12,361	13,139	13,869	14,548	15,174	15,742	16,252	16,699	17,081	17,393	17,634	17,798	17,882				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,841	12,461	12,389	13,125	13,430	12,715	11,499	9,770	8,042	6,314	4,585	2,857	1,129	-599	-2,328	-4,056	-5,784	-7,512	-9,241	-10,969	-12,697	-14,425	-16,154	-17,882				
Fiscal Exposure - End of Year Debt Drawdown		1,559	1,619	1,674	2,355	2,060	1,772	1,286	2,046	1,355	733	1,577	1,228	270	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,416	-1,488	-1,564	-1,644	0	0	0	

Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,514	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	735	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,018	18,222	17,385	16,505	15,580	14,608	13,586	12,511	11,382	10,195	8,947	7,636	6,257	4,808	3,285	1,683	0	0	0	
994	*Interest Cost - Feb14 Option 1, 30-yr*	*37*	*118*	*202*	*304*	*418*	*516*	*595*	*679*	*767*	*822*	*880*	*952*	*992*	*994*	*971*	*932*	*891*	*848*	*803*	*756*	*706*	*654*	*599*	*541*	*480*	*417*	*350*	*279*	*205*	*127*	*45*	*0*	*0*	*0*	17,882
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	735	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,018	18,222	17,385	16,505	15,580	14,608	13,586	12,511	11,382	10,195	8,947	7,636	6,257	4,808	3,285	1,683	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0	
	Monthly Drawdown	130	128	126	176	141	108	60	118	52	(6)	61	25	(60)	(101)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(0)	-	-	
	FV of Monthly Drawdown at 5%	1,596	1,575	1,548	2,157	1,731	1,329	738	1,449	635	(74)	753	313	(732)	(1,246)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	37	37	36	50	40	31	17	34	15	(2)	17	7	(17)	(29)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	82	166	254	377	485	578	646	753	824	862	945	1,009	1,023	1,012	973	932	889	844	797	747	695	640	582	522	458	391	320	246	168	86	-	(0)	(0)	
	Total Annual Interest Cost	37	118	202	304	418	516	595	679	767	822	880	952	992	994	971	932	891	848	803	756	706	654	599	541	480	417	350	279	205	127	45	(0)	(0)	(0)	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,514	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	735	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,814	18,026	17,198	16,328	15,413	14,451	13,440	12,377	11,260	10,086	8,851	7,554	6,190	4,756	3,249	1,665	0	0	0	
	Interest Cost - Feb14 Option 1, 30-yr	*20*	*100*	*184*	*278*	*395*	*497*	*581*	*657*	*753*	*814*	*862*	*938*	*989*	*997*	*979*	*940*	*900*	*858*	*813*	*766*	*717*	*666*	*611*	*554*	*494*	*431*	*364*	*295*	*221*	*144*	*63*	*0*	*0*	*0*	17,882
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	735	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,814	18,026	17,198	16,328	15,413	14,451	13,440	12,377	11,260	10,086	8,851	7,554	6,190	4,756	3,249	1,665	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,579	1,639	1,696	2,386	2,086	1,795	1,302	2,072	1,372	742	1,598	1,244	274	-220	-749	-788	-828	-870	-915	-962	-1,011	-1,063	-1,117	-1,174	-1,234	-1,298	-1,364	-1,434	-1,507	-1,584	-1,665	0	0	0	
	Bi-Annual Drawdown	779	769	756	1,054	845	649	361	708	310	(36)	368	153	(358)	(608)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(0)	-	-	
	FV of Bi-Annual Drawdown at 5%	1,579	1,558	1,531	2,134	1,713	1,315	730	1,433	628	(73)	745	309	(724)	(1,232)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	20	20	19	27	22	17	9	18	8	(1)	9	4	(9)	(16)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	81	165	251	373	480	572	639	745	815	853	935	998	1,012	1,001	963	922	880	835	789	739	688	633	576	516	453	386	317	243	166	85	0	(0)	(0)	
	Total Annual Interest Cost	20	100	184	278	395	497	581	657	753	814	862	938	989	997	979	940	900	858	813	766	717	666	611	554	494	431	364	295	221	144	63	(0)	(0)	(0)	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,514	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	735	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,599	3,258	4,975	7,391	9,503	11,321	12,640	14,738	16,127	16,879	18,497	19,756	20,034	19,811	19,052	18,254	17,415	16,534	15,607	14,633	13,610	12,533	11,402	10,213	8,963	7,649	6,268	4,816	3,290	1,686	0	0	0	
	Interest Cost - Feb14 Option 1, 30-yr	*40*	*121*	*205*	*308*	*421*	*519*	*598*	*683*	*770*	*823*	*882*	*954*	*992*	*994*	*969*	*931*	*890*	*847*	*802*	*754*	*704*	*652*	*597*	*539*	*478*	*414*	*347*	*276*	*202*	*124*	*42*	*0*	*0*	*0*	17,882
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	735	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,599	3,258	4,975	7,391	9,503	11,321	12,640	14,738	16,127	16,879	18,497	19,756	20,034	19,811	19,052	18,254	17,415	16,534	15,607	14,633	13,610	12,533	11,402	10,213	8,963	7,649	6,268	4,816	3,290	1,686	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,599	1,660	1,717	2,416	2,112	1,817	1,319	2,098	1,390	751	1,618	1,260	277	-223	-759	-798	-839	-881	-927	-974	-1,024	-1,076	-1,131	-1,189	-1,250	-1,314	-1,381	-1,452	-1,526	-1,604	-1,686	0	0	0	

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_3_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	678	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,633	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	115	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	
			34	38	36	36	34	34	35	36	36	35	35	34	23	16	12	7	0	-14	-29	-36	-38	-42	-39	-36	-34	-32	-27	-18	-6	-1	0	3	3	3	142

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	1,606	1,040	19,497
Equal Monthly Debt Drawdown	1,644	1,040	

	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	20,325	2033	12,862
Equal Monthly Debt Drawdown	20,809		

Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
a	Debt, Beginning of Year	0	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,325	19,755	18,549	17,050	15,464	13,694	12,062	10,556	9,143	7,810	6,672	5,928	5,676	5,633	5,623	5,730	5,843	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*74*	*156*	*234*	*312*	*385*	*459*	*534*	*612*	*690*	*766*	*842*	*915*	*964*	*999*	*1,024*	*1,039*	*1,040*	*1,011*	*949*	*872*	*791*	*701*	*617*	*540*	*468*	*400*	*341*	*303*	*290*	*288*	*288*	*293*	*299*	19,497
b	Additional GA Debt Drawdown, End of Year	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,325	19,755	18,549	17,050	15,464	13,694	12,062	10,556	9,143	7,810	6,672	5,928	5,676	5,633	5,623	5,730	5,843	5,959	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,223	5,066	5,981	6,945	7,430	7,735	7,749	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	5,928	5,676	5,633	5,623	5,730	5,843	5,959	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,577	12,577	12,577	11,371	9,871	8,285	6,516	4,883	3,377	1,965	632	-506	0	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,223	5,066	5,981	6,945	7,943	8,967	10,006	11,046	12,057	13,006	13,878	14,669	15,370	15,987	16,527	16,995	17,394	17,736	18,039	18,329	18,618				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,064	11,345	10,319	8,709	6,492	4,044	1,586	-975	-3,308	-5,431	-7,383	-9,184	-10,722	-11,807	-12,363	-12,696	-12,995				
Fiscal Exposure - End of Year Debt Drawdown		1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	678	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,633	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	115	

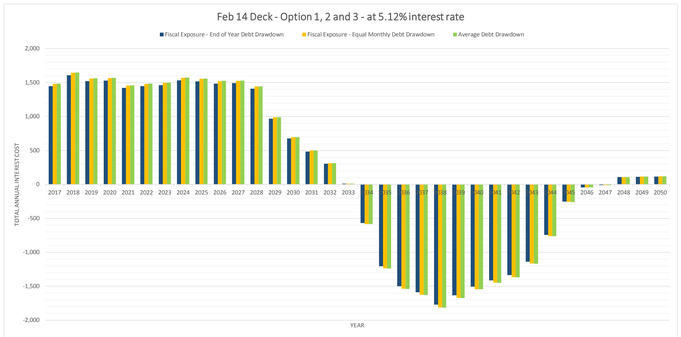
Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,985	20,483	20,795	20,809	20,225	18,990	17,455	15,831	14,020	12,349	10,807	9,361	7,996	6,831	6,069	5,811	5,767	5,756	5,866	5,982	
1,040	*Interest Cost - Feb14 Option 1, 30-yr*	*34*	*112*	*192*	*270*	*346*	*420*	*494*	*570*	*649*	*726*	*802*	*876*	*938*	*980*	*1,010*	*1,031*	*1,040*	*1,026*	*982*	*913*	*835*	*749*	*662*	*581*	*506*	*436*	*373*	*324*	*297*	*289*	*288*	*290*	*296*	*302*	19,639
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,985	20,483	20,795	20,809	20,225	18,990	17,455	15,831	14,020	12,349	10,807	9,361	7,996	6,831	6,069	5,811	5,767	5,756	5,866	5,982	6,101	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	

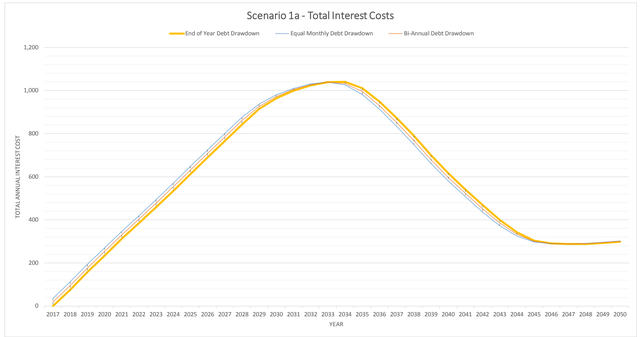
	Monthly Drawdown	121	128	114	108	93	88	84	83	76	66	60	47	4	(24)	(43)	(60)	(85)	(134)	(185)	(204)	(205)	(213)	(194)	(177)	(163)	(150)	(128)	(90)	(46)	(28)	(25)	(15)	(15)	(15)	
	FV of Monthly Drawdown at 5%	1,482	1,568	1,398	1,326	1,137	1,086	1,028	1,024	929	815	742	580	54	(292)	(525)	(736)	(1,050)	(1,648)	(2,269)	(2,506)	(2,517)	(2,621)	(2,389)	(2,174)	(1,999)	(1,844)	(1,574)	(1,111)	(568)	(342)	(306)	(185)	(184)	(188)	
	Annual Interest Cost on New Drawdowns	34	36	32	31	26	25	24	24	22	19	17	13	1	(7)	(12)	(17)	(24)	(38)	(53)	(58)	(58)	(61)	(55)	(51)	(46)	(43)	(37)	(26)	(13)	(8)	(7)	(4)	(4)	(4)	
	Annual Interest Cost on Opening Balance	-	76	160	240	320	394	470	547	627	707	784	863	936	987	1,022	1,048	1,064	1,065	1,035	972	893	810	717	632	553	479	409	349	311	297	295	295	300	306	
	Total Annual Interest Cost	34	112	192	270	346	420	494	570	649	726	802	876	938	980	1,010	1,031	1,040	1,026	982	913	835	749	662	581	506	436	373	324	297	289	288	290	296	302	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,466	3,092	4,633	6,183	7,623	9,088	10,570	12,123	13,662	15,167	16,678	18,104	19,084	19,771	20,263	20,572	20,585	20,008	18,786	17,268	15,661	13,870	12,216	10,691	9,260	7,910	6,758	6,004	5,749	5,705	5,695	5,803	5,918	
	Interest Cost - Feb14 Option 1, 30-yr	*19*	*95*	*176*	*254*	*331*	*404*	*478*	*554*	*632*	*709*	*785*	*861*	*927*	*973*	*1,005*	*1,027*	*1,039*	*1,033*	*995*	*930*	*852*	*769*	*680*	*598*	*522*	*451*	*385*	*332*	*300*	*290*	*288*	*289*	*295*	*300*	19,574
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,466	3,092	4,633	6,183	7,623	9,088	10,570	12,123	13,662	15,167	16,678	18,104	19,084	19,771	20,263	20,572	20,585	20,008	18,786	17,268	15,661	13,870	12,216	10,691	9,260	7,910	6,758	6,004	5,749	5,705	5,695	5,803	5,918	6,035	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,466	1,626	1,541	1,549	1,441	1,465	1,481	1,554	1,539	1,505	1,510	1,427	979	687	492	309	13	-577	-1,221	-1,518	-1,607	-1,792	-1,653	-1,525	-1,430	-1,350	-1,153	-754	-255	-44	-10	109	115	117	

	Bi-Annual Drawdown	724	766	683	648	555	530	502	500	454	398	363	283	26	(143)	(256)	(359)	(513)	(805)	(1,108)	(1,224)	(1,229)	(1,280)	(1,167)	(1,062)	(976)	(900)	(769)	(543)	(278)	(167)	(149)	(90)	(90)	(92)	
	FV of Bi-Annual Drawdown at 5%	1,466	1,551	1,383	1,312	1,125	1,074	1,017	1,013	919	806	734	573	53	(289)	(520)	(728)	(1,039)	(1,630)	(2,245)	(2,480)	(2,490)	(2,593)	(2,363)	(2,151)	(1,977)	(1,824)	(1,557)	(1,099)	(562)	(338)	(302)	(183)	(182)	(186)	
	Annual Interest Cost on New Drawdowns	19	20	17	17	14	14	13	13	12	10	9	7	1	(4)	(7)	(9)	(13)	(21)	(28)	(31)	(31)	(33)	(30)	(27)	(25)	(23)	(20)	(14)	(7)	(4)	(4)	(2)	(2)	(2)	
	Annual Interest Cost on Opening Balance	-	75	158	237	316	390	465	541	620	699	776	853	926	976	1,012	1,037	1,052	1,053	1,024	961	883	801	710	625	547	474	405	346	307	294	292	291	297	303	
	Total Annual Interest Cost	19	95	176	254	331	404	478	554	632	709	785	861	927	973	1,005	1,027	1,039	1,033	995	930	852	769	680	598	522	451	385	332	300	290	288	289	295	300	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,020	20,519	20,832	20,845	20,261	19,024	17,486	15,859	14,045	12,370	10,826	9,377	8,010	6,843	6,080	5,822	5,777	5,767	5,877	5,993	
	Interest Cost - Feb14 Option 1, 30-yr	*37*	*115*	*195*	*273*	*349*	*422*	*497*	*573*	*651*	*728*	*804*	*879*	*939*	*981*	*1,011*	*1,031*	*1,040*	*1,025*	*980*	*911*	*832*	*746*	*659*	*579*	*504*	*434*	*370*	*322*	*297*	*289*	*288*	*290*	*296*	*302*	19,650
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,020	20,519	20,832	20,845	20,261	19,024	17,486	15,859	14,045	12,370	10,826	9,377	8,010	6,843	6,080	5,822	5,777	5,767	5,877	5,993	6,111	
Fiscal Exposure - Average Debt Drawdown		1,484	1,647	1,561	1,569	1,459	1,483	1,500	1,573	1,559	1,524	1,530	1,445	992	696	498	313	14	-585	-1,237	-1,538	-1,627	-1,814	-1,674	-1,545	-1,448	-1,367	-1,167	-763	-258	-44	-11	110	116	118	





Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest ra

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest ra

IESO GA cost forecast + extrapolation

Scenario
Option 1

Option 2

ate	2017	2018	2019	2020
ate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	2200	4600	7000	10200

Total Accumulated Debt ($ billion)	2.2	4.6	7	10.2
	2,200	4,600	7,000	10,200

Total Accumulated Debt ($ billion)	1.6	3.2	4.9	7.2
	1,600	3,200	4,900	7,200

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
13100	15700	17800	20800	23200	25000	27700	30100

13.1 15.7 17.8 20.8 23.2 25 27.7 30.1
13,100 15,700 17,800 20,800 23,200 25,000 27,700 30,100

9.3 11 12.3 14.4 15.7 16.5 18 19.3
9,300 11,000 12,300 14,400 15,700 16,500 18,000 19,300

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
31700	32800	32700	32600	31700	30100	28400	26600

31.7	32.8	32.7	32.6	31.7	30.1	28.4	26.6
31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600

19.5	19.3	18.6	17.8	17	16.1	15.2	14.3
19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
24800	22800	20800	18600	16300	13900	11400	8800

24.8	22.8	20.8	18.6	16.3	13.9	11.4	8.8
24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800

13.3	12.2	11.1	10	8.7	7.5	6.1	4.7
13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	2046	2047	2048	2049	2050
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
6000	3100	0	0	0	0

6 3.1 0 0
6,000 3,100 - -

3.2 1.6 0 0
3,200 1,600 - -

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb9_1_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,200	2,400

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	550	2,250

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $33 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb9_2_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,600	1,600

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	400	1,600

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,169	4,668

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	545	2,203

Actuals are subject to actual prices and actual interest rates.

#N/A

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542

Fiscalized[3]	2016-17	2017-18
Start: January 1st	375	1,510

Actuals are subject to actual prices and actual interest rates.

#N/A

Rough		
	1	
	2	
	3	
	4 April	4
	5 May	5
	6 June	6
	7 July	7
	8 August	8
	9 September	9
	10 October	10
	11 November	11
	12 December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	400 - 550	1,600 - 2,250

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	550	2250
Debt-Finance Global Adjustment Costs, Option 1a	400	1600
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**550**	**2490**
Total, B	400	1840
Proposed Program Total:	400 - 550	1,840 - 2,490

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1
Scenario 2

2019	2020	2021	2022
2,400	3,200	2,900	2,600

2018-19	2019-20	2020-21	2021-2022
2,400	2,600	3,125	2,825

2030.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,700	2,300	2,100	1,700

2018-19	2019-20	2020-21	2021-2022
1,625	1,850	2,250	2,000

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
4,589	5,867	5,031	4,861

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988

› depend on decision on accounting treatment.

2019	2020	2021	2022
2,353	3,072	2,817	2,580

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757

2019	2020	2021	2022
1,578	2,243	1,931	1,635

2018-19	2019-20	2020-21	2021-2022
1,551	1,745	2,165	1,857



2018-19	2019-20	2020-21	2021-2022
1,625 - 2,400	1,850 - 2,600	2,250 - 3,125	2,000 - 2,825

/1

2018-19[1]	2019-20[1]	2020-21[1]
2400	2600	3125
1625	1850	2250
225	279	323
60	60	60
18	18	18
2703	**2957**	**3526**
1928	2207	2651

1,928 - 2,703 2,207 - 2,957 2,651 - 3,526

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
21,601	30,211	32,800	occurs in Year 2030
13,466	17,886	19,500	occurs in Year 2029
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!

2,200

Tab Name
Feb9_1_30yr
Feb9_2_30yr

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Feb9_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0	
			52	57	57	76	69	62	50	71	57	43	64	57	38	26	-2	-2	-21	-38	-40	-43	-43	-48	-48	-52	-55	-57	-59	-62	-67	-69	-74	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,200	1,678	30,211
Equal Monthly Debt Drawdown	3,276	1,676	

		Feb9 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,800	2030	21,601	
Equal Monthly Debt Drawdown	33,580			

Feb9 1, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
a	Debt, Beginning of Year	0	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	
c = a*5%	*Interest Cost - Feb9 1, 30-yr - End of Year Debt Drowdown*	*0*	*113*	*235*	*358*	*522*	*670*	*803*	*911*	*1,064*	*1,187*	*1,279*	*1,417*	*1,540*	*1,622*	*1,678*	*1,673*	*1,668*	*1,622*	*1,540*	*1,453*	*1,361*	*1,269*	*1,166*	*1,064*	*952*	*834*	*711*	*583*	*450*	*307*	*159*	*0*	*0*	*0*	30,211
b	Additional GA Debt Drawdown, End of Year	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	0
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	11,621	11,521	10,621	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	8,800	6,000	3,100	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	21,079	21,079	21,079	21,079	19,379	17,579	15,779	13,779	11,779	9,579	7,279	4,879	2,379	0	0	0	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	13,399	15,072	16,740	18,362	19,902	21,355	22,716	23,985	25,151	26,215	27,167	28,001	28,712	29,295	29,746	30,052	30,211				
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	19,301	17,528	14,960	11,738	8,498	5,245	2,084	-1,185	-4,351	-7,615	-10,867	-14,101	-17,312	-20,495	-23,746	-26,952	-30,211				
Fiscal Exposure - End of Year Debt Drawdown		2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0	

Feb9 1, 30-yr — Equal Monthly Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	
1,676	*Interest Cost - Feb9 1, 30-yr*	*52*	*170*	*292*	*434*	*591*	*732*	*853*	*982*	*1,121*	*1,230*	*1,343*	*1,474*	*1,578*	*1,648*	*1,676*	*1,671*	*1,646*	*1,584*	*1,500*	*1,410*	*1,318*	*1,221*	*1,119*	*1,012*	*897*	*777*	*652*	*521*	*384*	*238*	*85*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0	
	Monthly Drawdown	183	191	180	237	198	161	108	174	111	51	118	82	5	(43)	(148)	(148)	(214)	(268)	(270)	(271)	(263)	(272)	(264)	(272)	(271)	(269)	(268)	(265)	(271)	(267)	(272)	-	-	-	
	FV of Monthly Drawdown at 5%	2,252	2,342	2,216	2,909	2,435	1,976	1,328	2,139	1,368	628	1,455	1,006	61	(534)	(1,820)	(1,815)	(2,629)	(3,298)	(3,317)	(3,330)	(3,236)	(3,347)	(3,242)	(3,342)	(3,329)	(3,311)	(3,288)	(3,259)	(3,328)	(3,283)	(3,336)	-	-	-	
	Annual Interest Cost on New Drawdowns	52	54	51	68	57	46	31	50	32	15	34	23	1	(12)	(42)	(42)	(61)	(77)	(77)	(77)	(75)	(78)	(75)	(78)	(77)	(76)	(76)	(76)	(77)	(76)	(78)	-	-	-	
	Annual Interest Cost on Opening Balance	-	115	241	367	534	686	822	932	1,089	1,215	1,309	1,451	1,577	1,660	1,718	1,713	1,708	1,660	1,577	1,488	1,393	1,299	1,194	1,089	974	854	728	597	461	314	162	(0)	(0)	(0)	
	Total Annual Interest Cost	52	170	292	434	591	732	853	982	1,121	1,230	1,343	1,474	1,578	1,648	1,676	1,671	1,646	1,584	1,500	1,410	1,318	1,221	1,119	1,012	897	777	652	521	384	238	85	(0)	(0)	(0)	

Feb9 1, 30-yr — Bi-Annual Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*28*	*143*	*266*	*399*	*559*	*703*	*830*	*949*	*1,095*	*1,210*	*1,314*	*1,448*	*1,560*	*1,636*	*1,677*	*1,672*	*1,656*	*1,601*	*1,518*	*1,430*	*1,338*	*1,243*	*1,141*	*1,036*	*922*	*803*	*679*	*550*	*414*	*270*	*119*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,228	2,431	2,431	3,241	2,937	2,633	2,127	3,038	2,431	1,823	2,735	2,431	1,620	1,114	-101	-101	-912	-1,620	-1,722	-1,823	-1,823	-2,026	-2,026	-2,228	-2,329	-2,431	-2,532	-2,633	-2,836	-2,937	-3,140	0	0	0	
	Bi-Annual Drawdown	1,100	1,144	1,082	1,421	1,189	965	648	1,045	668	307	710	491	30	(261)	(889)	(886)	(1,284)	(1,611)	(1,620)	(1,626)	(1,580)	(1,634)	(1,583)	(1,632)	(1,626)	(1,617)	(1,606)	(1,592)	(1,625)	(1,603)	(1,629)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,228	2,317	2,192	2,878	2,409	1,954	1,313	2,116	1,353	621	1,439	995	61	(529)	(1,801)	(1,796)	(2,601)	(3,263)	(3,281)	(3,295)	(3,201)	(3,311)	(3,207)	(3,306)	(3,293)	(3,275)	(3,252)	(3,224)	(3,292)	(3,248)	(3,300)	-	-	-	
	Annual Interest Cost on New Drawdowns	28	29	28	36	30	25	17	27	17	8	18	13	1	(7)	(23)	(23)	(33)	(41)	(41)	(42)	(40)	(42)	(41)	(42)	(42)	(41)	(41)	(41)	(42)	(41)	(42)	-	-	-	
	Annual Interest Cost on Opening Balance	-	114	238	363	529	679	814	922	1,078	1,202	1,295	1,435	1,560	1,643	1,700	1,694	1,689	1,643	1,560	1,472	1,378	1,285	1,181	1,078	964	845	720	591	456	311	161	0	0	0	
	Total Annual Interest Cost	28	143	266	399	559	703	830	949	1,095	1,210	1,314	1,448	1,560	1,636	1,677	1,672	1,656	1,601	1,518	1,430	1,338	1,243	1,141	1,036	922	803	679	550	414	270	119	0	0	0	

Feb9 1, 30-yr — Average Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*56*	*174*	*297*	*440*	*596*	*737*	*857*	*987*	*1,126*	*1,233*	*1,348*	*1,479*	*1,581*	*1,650*	*1,676*	*1,670*	*1,645*	*1,581*	*1,496*	*1,407*	*1,315*	*1,218*	*1,115*	*1,008*	*893*	*773*	*647*	*517*	*379*	*233*	*79*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		2,256	2,461	2,461	3,282	2,974	2,667	2,154	3,077	2,461	1,846	2,769	2,461	1,641	1,128	-103	-103	-923	-1,641	-1,743	-1,846	-1,846	-2,051	-2,051	-2,256	-2,359	-2,461	-2,564	-2,667	-2,872	-2,974	-3,179	0	0	0	

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Feb9_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0
			38	38	40	55	50	40	31	50	31	19	36	31	5	-5	-17	-19	-19	-21	-21	-21	-24	-26	-26	-26	-31	-29	-33	-33	-36	-38	-38	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,300	998	17,886
Equal Monthly Debt Drawdown	2,355	993	

	Feb9 2, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,500	2029	13,466
Equal Monthly Debt Drawdown	19,964		

Feb9 2, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
a	Debt, Beginning of Year	0	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	
c = a*5%	*Interest Cost - Feb9 2, 30-yr - End of Year Debt Drowdown*	*0*	*82*	*164*	*251*	*368*	*476*	*563*	*629*	*737*	*803*	*844*	*921*	*987*	*998*	*987*	*952*	*911*	*870*	*824*	*778*	*732*	*680*	*624*	*568*	*512*	*445*	*384*	*312*	*240*	*164*	*82*	*0*	*0*	*0*	17,886
b	Additional GA Debt Drawdown, End of Year	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	7,123	6,323	5,523	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,700	3,200	1,600	0	0	0	
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	11,477	11,477	11,477	11,477	10,577	9,677	8,677	7,577	6,477	5,377	4,077	2,877	1,477	0	0	0	0	0	0	0	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	8,810	9,762	10,672	11,542	12,366	13,143	13,875	14,556	15,180	15,748	16,259	16,704	17,088	17,400	17,641	17,804	17,886				
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	9,790	8,038	6,328	4,558	2,834	1,157	-575	-2,356	-4,080	-5,748	-7,559	-9,204	-10,988	-12,700	-14,441	-16,204	-17,886				
Fiscal Exposure - End of Year Debt Drawdown		1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0	

Feb9 2, 30-yr — Equal Monthly Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	
993	*Interest Cost - Feb9 2, 30-yr*	*38*	*120*	*204*	*305*	*418*	*516*	*594*	*679*	*768*	*822*	*880*	*952*	*992*	*993*	*971*	*933*	*892*	*848*	*802*	*756*	*708*	*654*	*598*	*542*	*481*	*417*	*350*	*279*	*205*	*126*	*44*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0	
	Monthly Drawdown	133	127	128	171	144	102	61	123	47	(0)	55	32	(66)	(100)	(141)	(146)	(143)	(147)	(144)	(140)	(144)	(148)	(144)	(139)	(151)	(137)	(149)	(143)	(145)	(147)	(140)	-	-	-	
	FV of Monthly Drawdown at 5%	1,638	1,554	1,573	2,098	1,773	1,253	755	1,506	577	(3)	671	388	(806)	(1,226)	(1,728)	(1,793)	(1,751)	(1,812)	(1,765)	(1,718)	(1,773)	(1,823)	(1,765)	(1,708)	(1,855)	(1,684)	(1,826)	(1,753)	(1,782)	(1,806)	(1,722)	-	-	-	
	Annual Interest Cost on New Drawdowns	38	36	37	49	41	29	18	35	13	(0)	16	9	(19)	(28)	(40)	(42)	(41)	(42)	(41)	(40)	(41)	(42)	(41)	(40)	(43)	(39)	(42)	(41)	(41)	(42)	(40)	-	-	-	
	Annual Interest Cost on Opening Balance	-	84	168	257	377	487	576	644	754	822	864	943	1,011	1,021	1,011	974	932	890	843	796	749	697	639	581	524	456	393	320	246	168	84	0	0	0	
	Total Annual Interest Cost	38	120	204	305	418	516	594	679	768	822	880	952	992	993	971	933	892	848	802	756	708	654	598	542	481	417	350	279	205	126	44	0	0	0	

Feb9 2, 30-yr — Bi-Annual Debt Drawdown

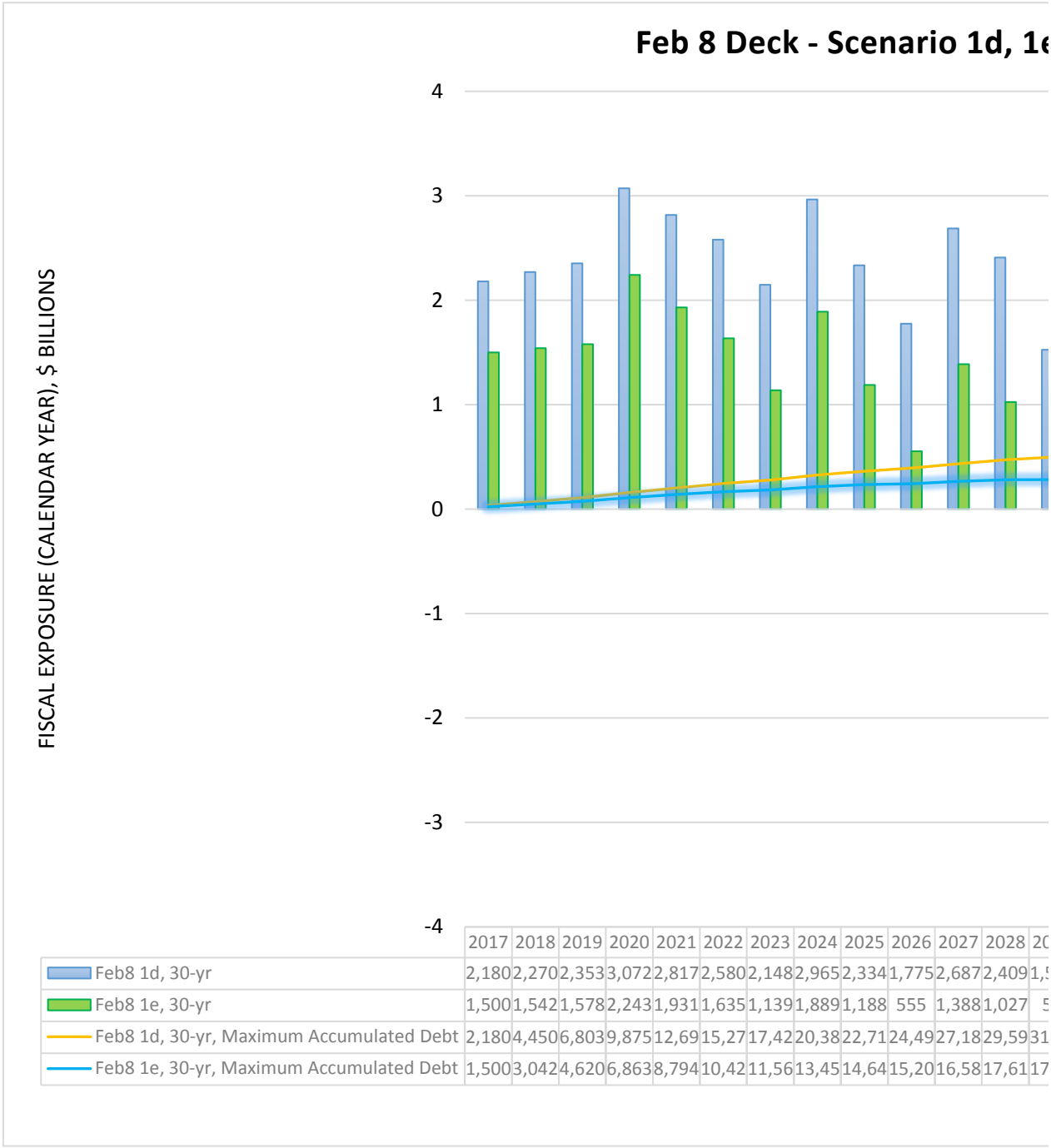
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*20*	*102*	*185*	*280*	*395*	*498*	*579*	*656*	*753*	*813*	*863*	*938*	*990*	*995*	*978*	*941*	*900*	*858*	*812*	*766*	*719*	*666*	*610*	*554*	*495*	*430*	*366*	*294*	*221*	*143*	*61*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,620	1,620	1,722	2,329	2,127	1,722	1,317	2,127	1,317	810	1,519	1,317	203	-203	-709	-810	-810	-912	-912	-912	-1,013	-1,114	-1,114	-1,114	-1,317	-1,215	-1,418	-1,418	-1,519	-1,620	-1,620	0	0	0	
	Bi-Annual Drawdown	800	759	768	1,025	866	612	369	735	282	(2)	328	190	(394)	(599)	(844)	(876)	(855)	(885)	(862)	(839)	(866)	(890)	(862)	(834)	(906)	(823)	(892)	(856)	(870)	(882)	(841)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,620	1,538	1,556	2,076	1,754	1,240	747	1,490	570	(3)	664	384	(797)	(1,213)	(1,709)	(1,774)	(1,733)	(1,792)	(1,746)	(1,699)	(1,754)	(1,803)	(1,746)	(1,689)	(1,835)	(1,666)	(1,807)	(1,734)	(1,763)	(1,786)	(1,703)	-	-	-	
	Annual Interest Cost on New Drawdowns	20	19	20	26	22	16	9	19	7	(0)	8	5	(10)	(15)	(22)	(22)	(22)	(23)	(22)	(21)	(22)	(23)	(22)	(21)	(23)	(21)	(23)	(22)	(22)	(23)	(22)	-	-	-	
	Annual Interest Cost on Opening Balance	-	83	166	254	373	482	570	637	746	814	855	933	1,000	1,010	1,000	964	922	881	834	788	741	689	632	575	518	451	389	316	244	166	83	0	0	0	
	Total Annual Interest Cost	20	102	185	280	395	498	579	656	753	813	863	938	990	995	978	941	900	858	812	766	719	666	610	554	495	430	366	294	221	143	61	0	0	0	

Feb9 2, 30-yr — Average Debt Drawdown

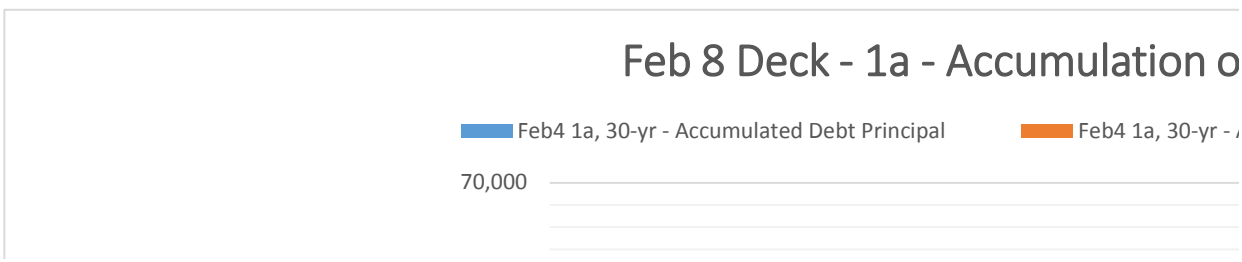
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*41*	*123*	*207*	*310*	*422*	*519*	*596*	*683*	*770*	*824*	*883*	*954*	*993*	*993*	*970*	*931*	*890*	*847*	*801*	*755*	*706*	*652*	*596*	*540*	*478*	*414*	*348*	*276*	*202*	*123*	*41*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,641	1,641	1,743	2,359	2,154	1,743	1,333	2,154	1,333	820	1,538	1,333	205	-205	-718	-820	-820	-923	-923	-923	-1,026	-1,128	-1,128	-1,128	-1,333	-1,231	-1,436	-1,436	-1,538	-1,641	-1,641	0	0	0	

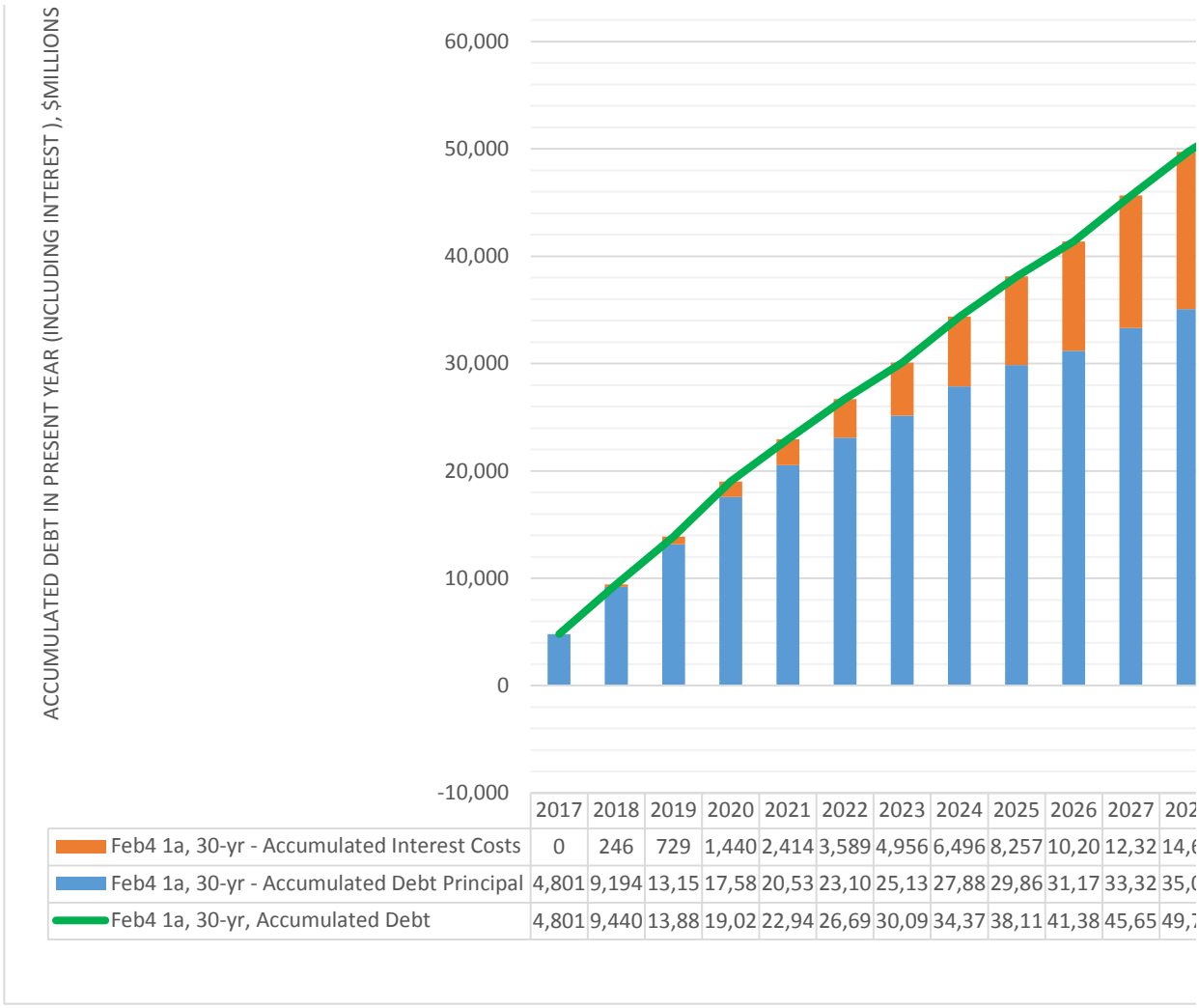
Feb 8 Deck

Feb 8 Deck - Scenario 1d, 1e - at 5.12% interest rate

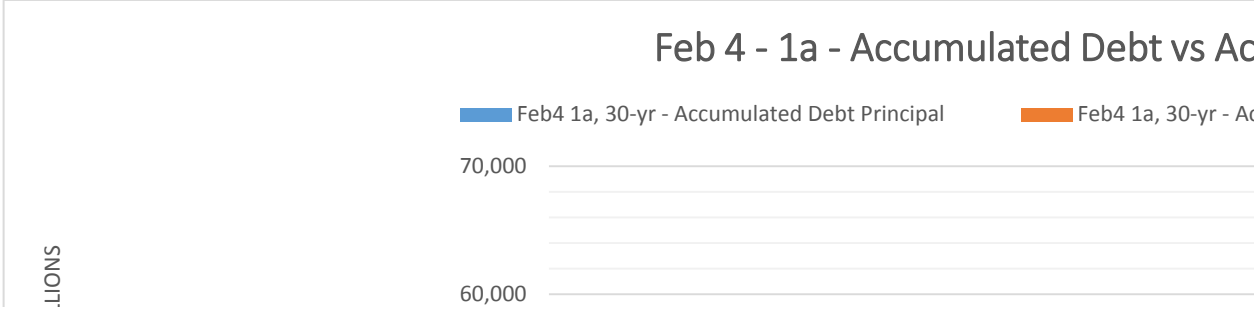


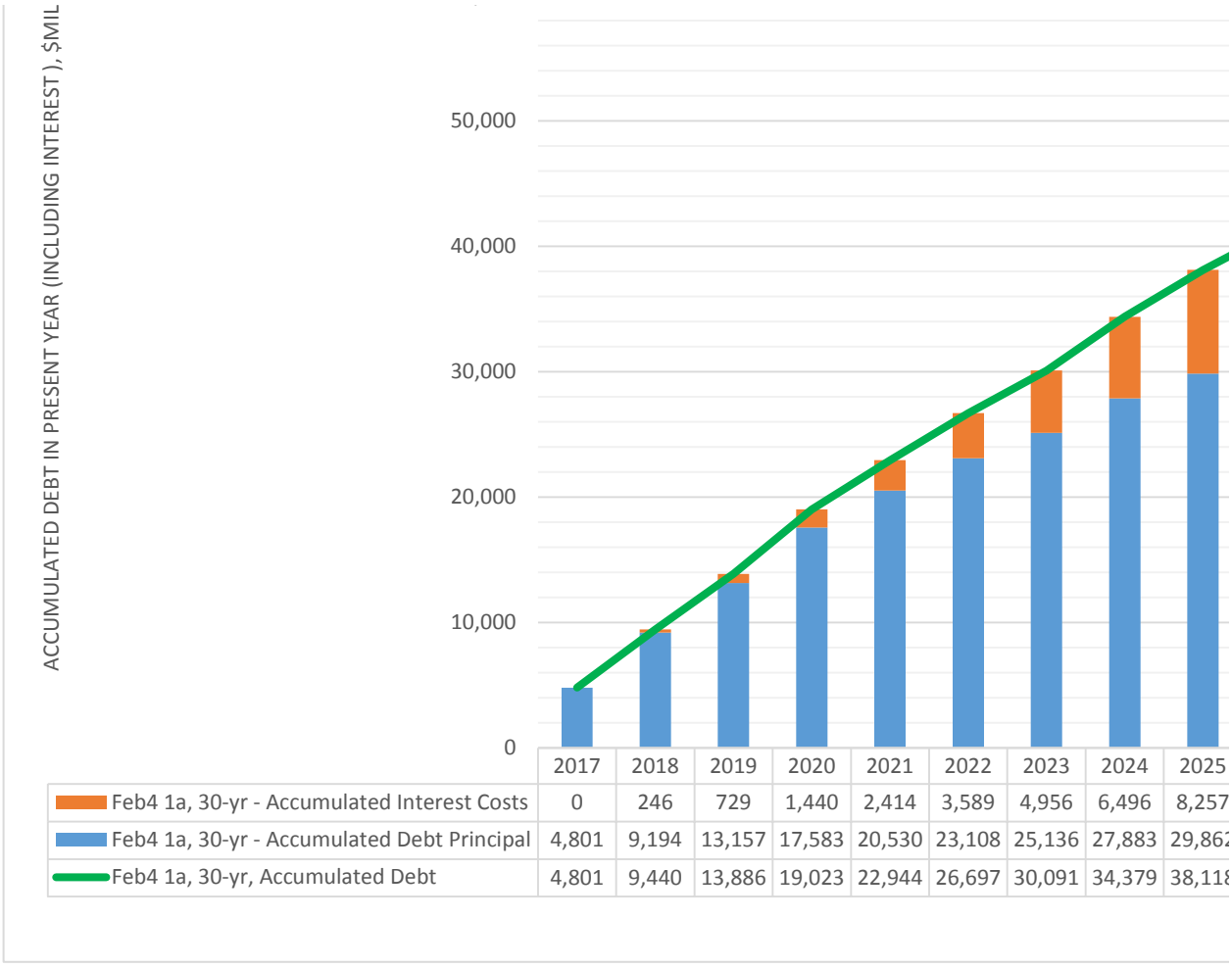
Feb 8 Deck - 1a - Accumulation of Debt (Principal and Interest)



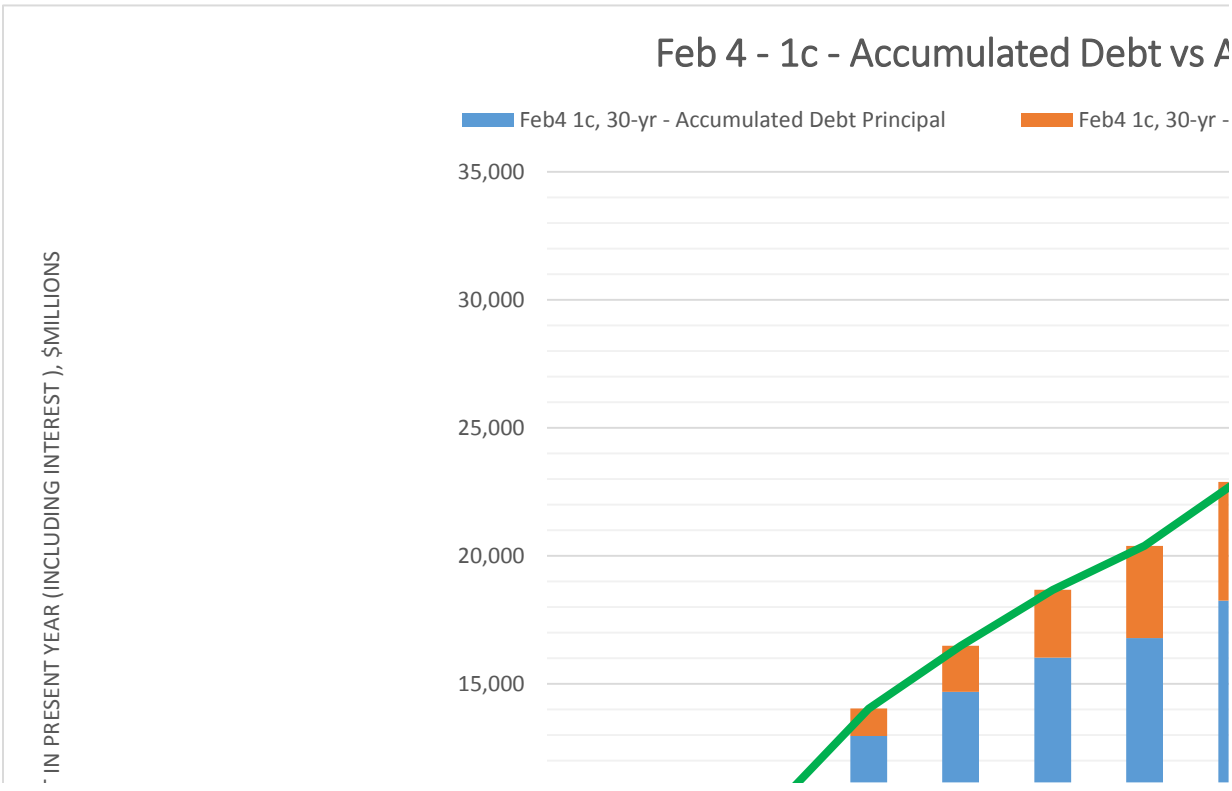


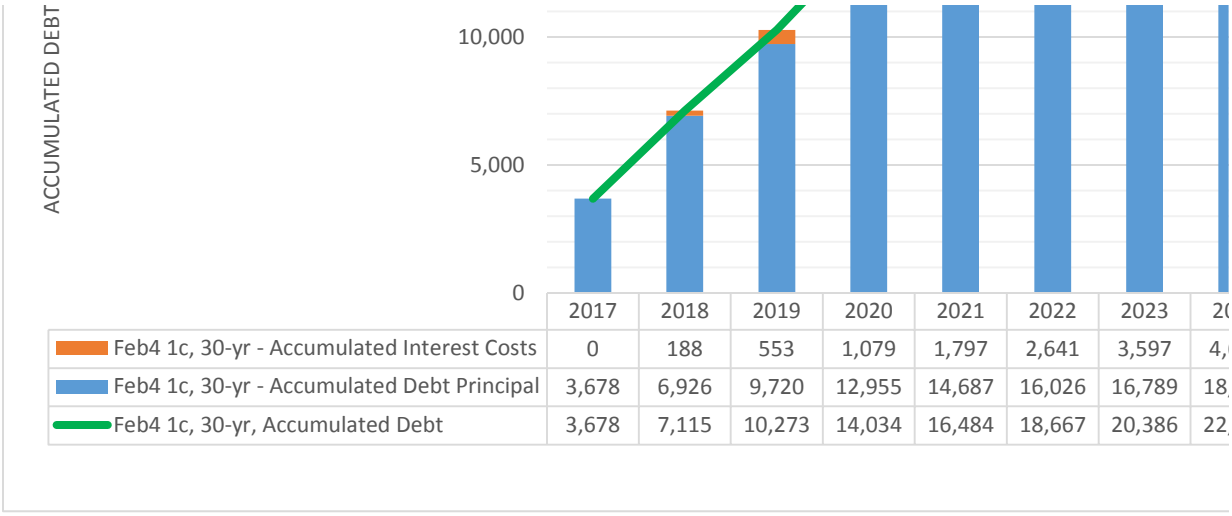
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	202
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,(
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,7



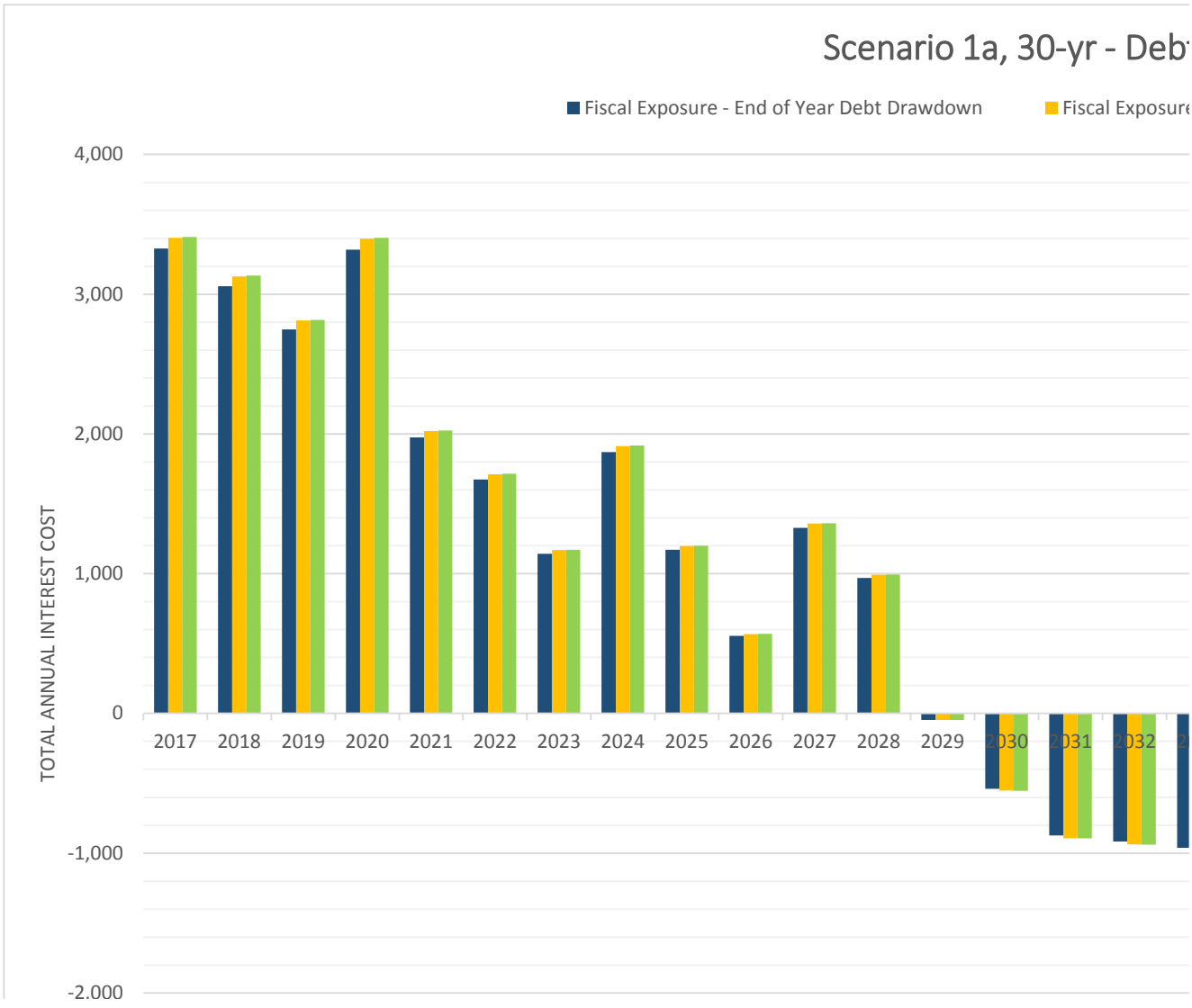


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



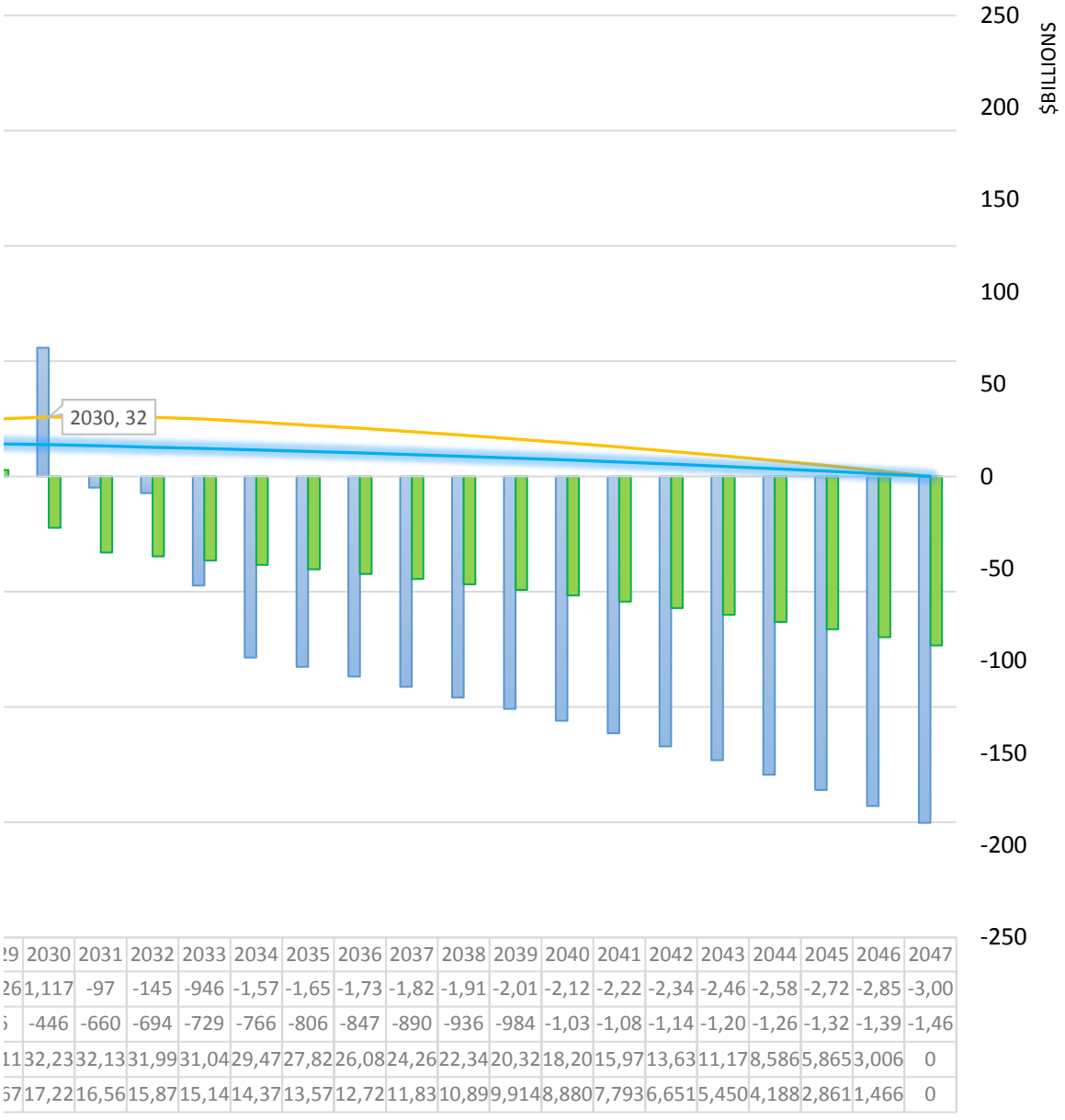


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

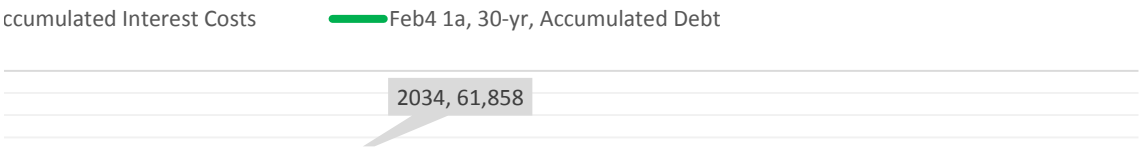
- at 5.12% interest rate

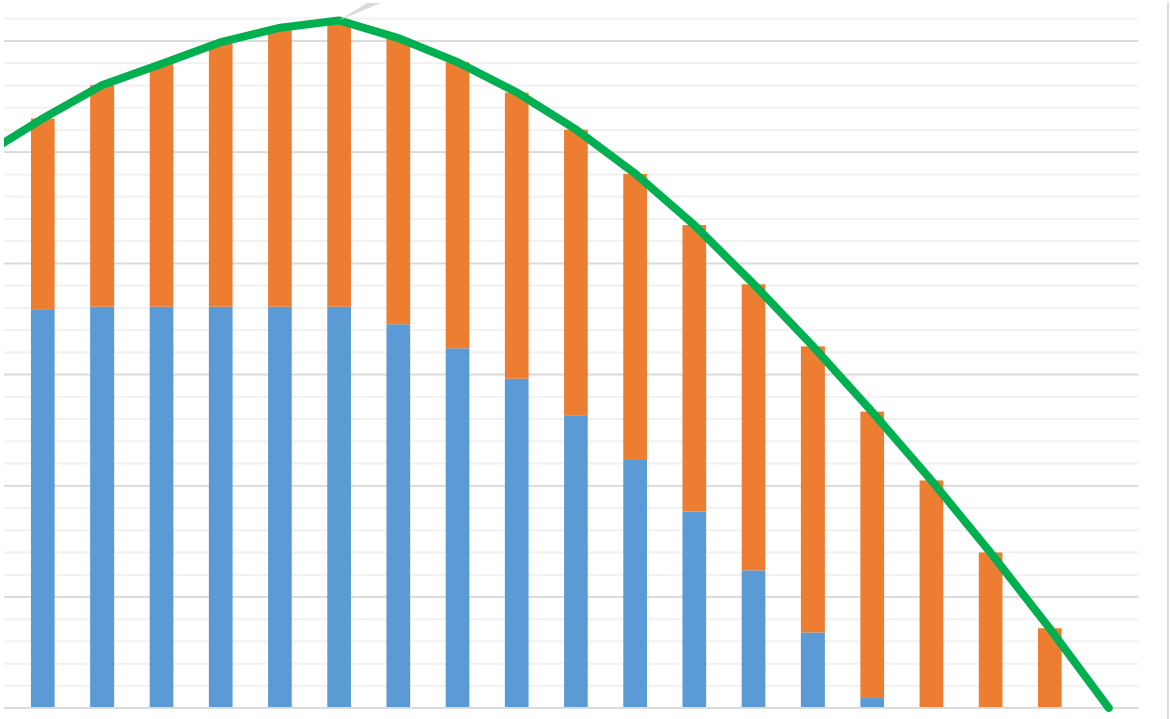


29	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
26	1,117	-97	-145	-946	-1,57	-1,65	-1,73	-1,82	-1,91	-2,01	-2,12	-2,22	-2,34	-2,46	-2,58	-2,72	-2,85	-3,00
5	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,03	-1,08	-1,14	-1,20	-1,26	-1,32	-1,39	-1,46
11	32,23	32,13	31,99	31,04	29,47	27,82	26,08	24,26	22,34	20,32	18,20	15,97	13,63	11,17	8,586	5,865	3,006	0
57	17,22	16,56	15,87	15,14	14,37	13,57	12,72	11,83	10,89	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0

CALENDAR YEAR

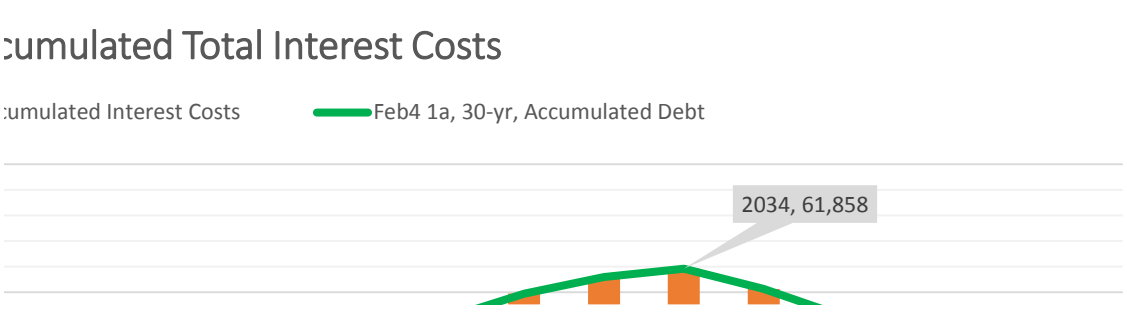
Debt (Principal and Interest)



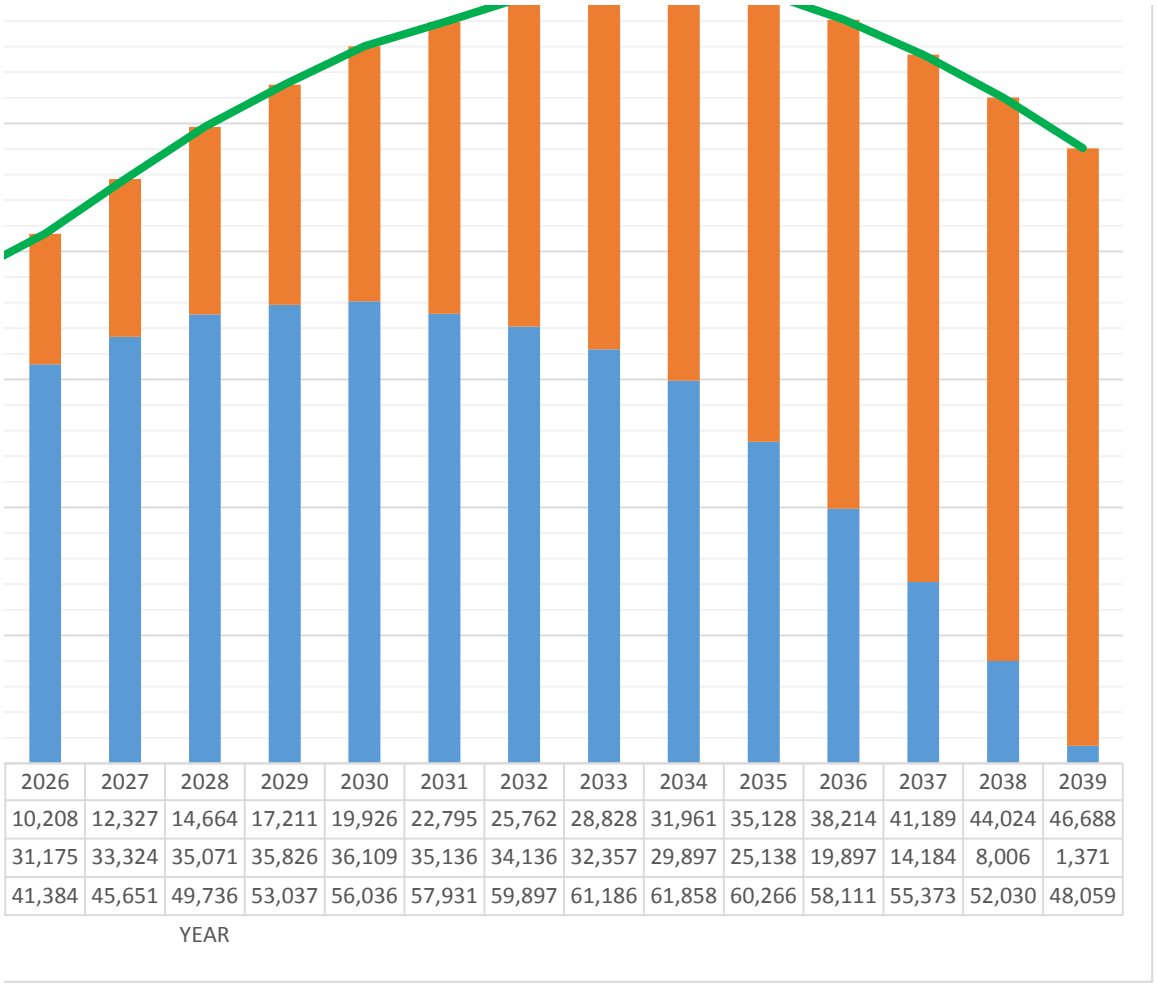


	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
5	17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
7	35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
3	53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



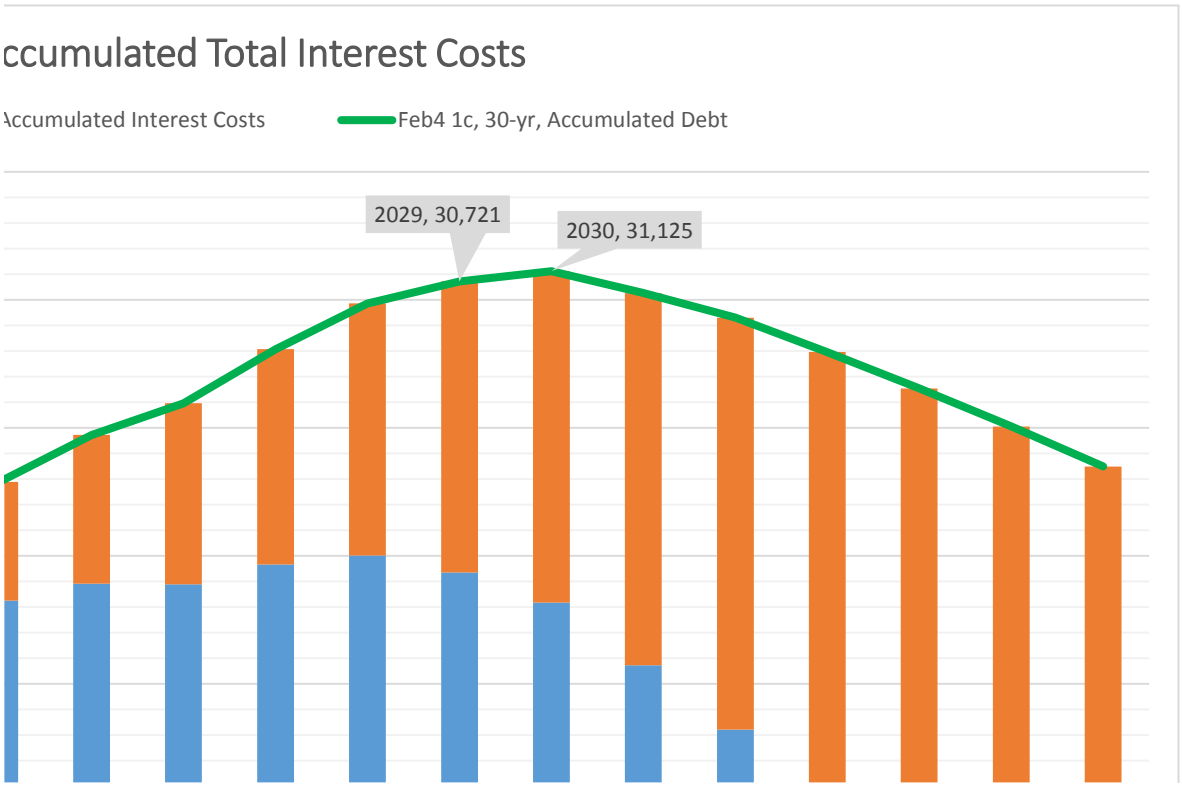
LIONS

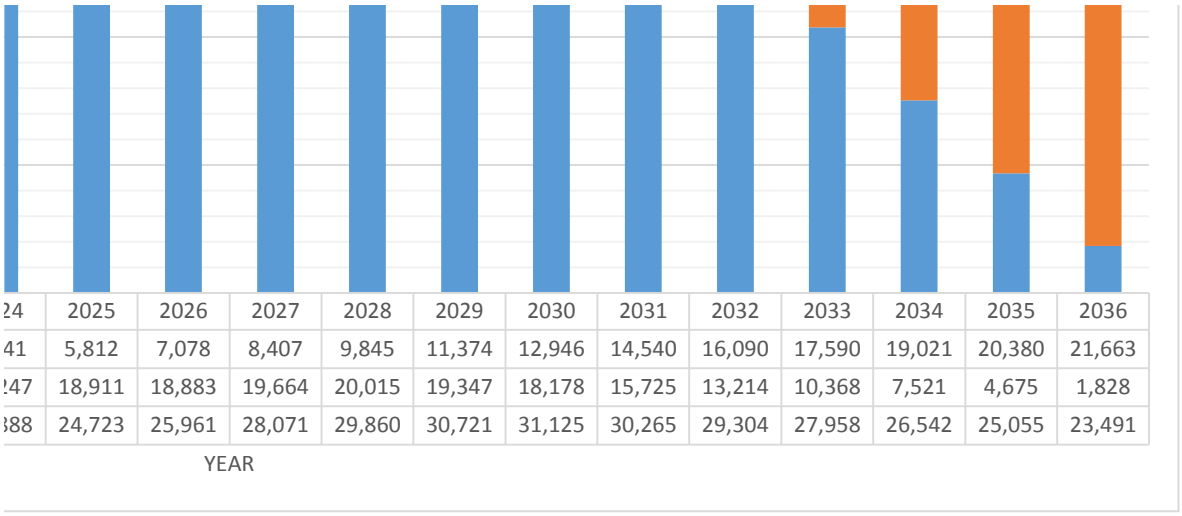


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

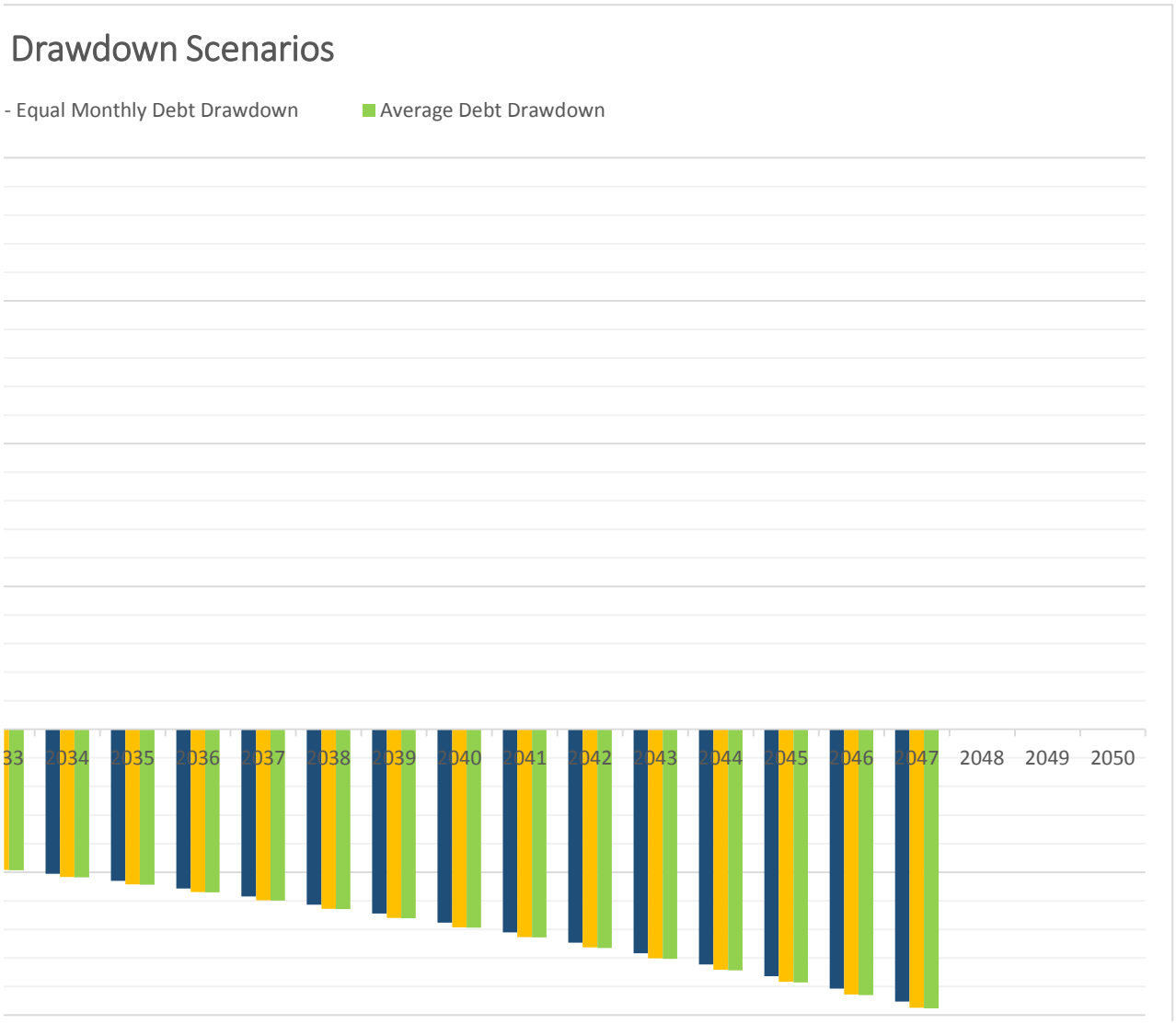
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





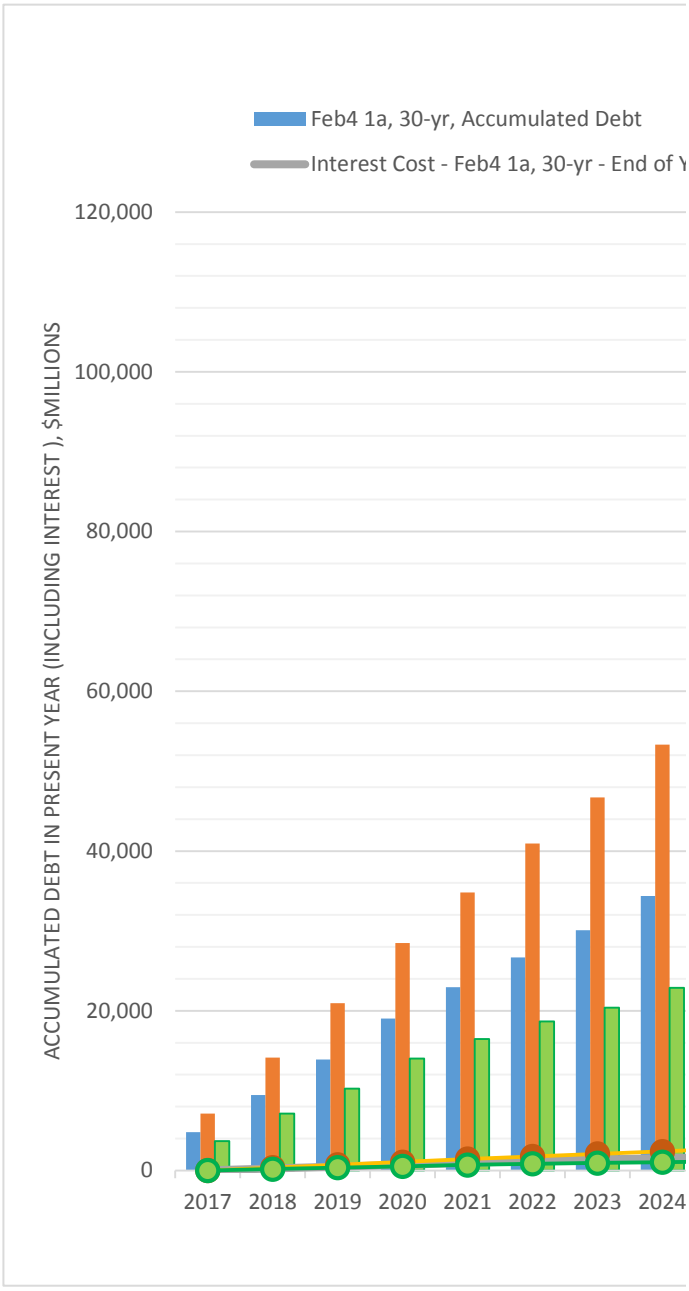
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

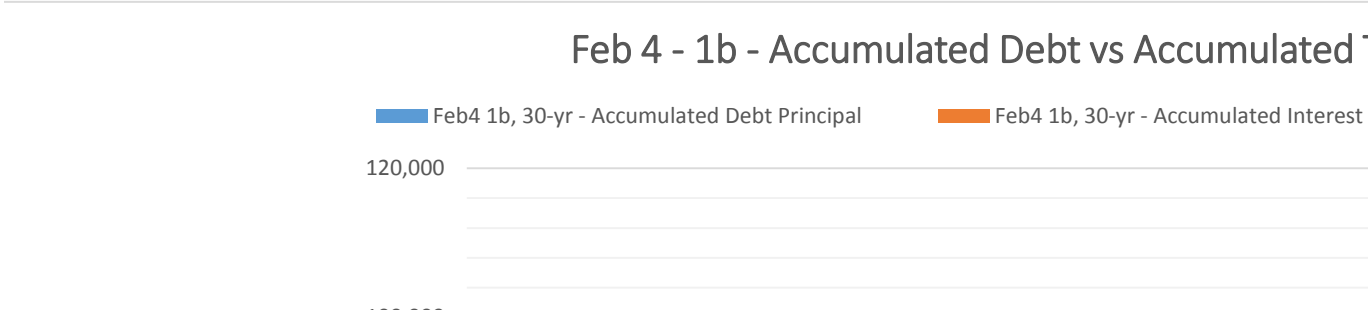
YEAR

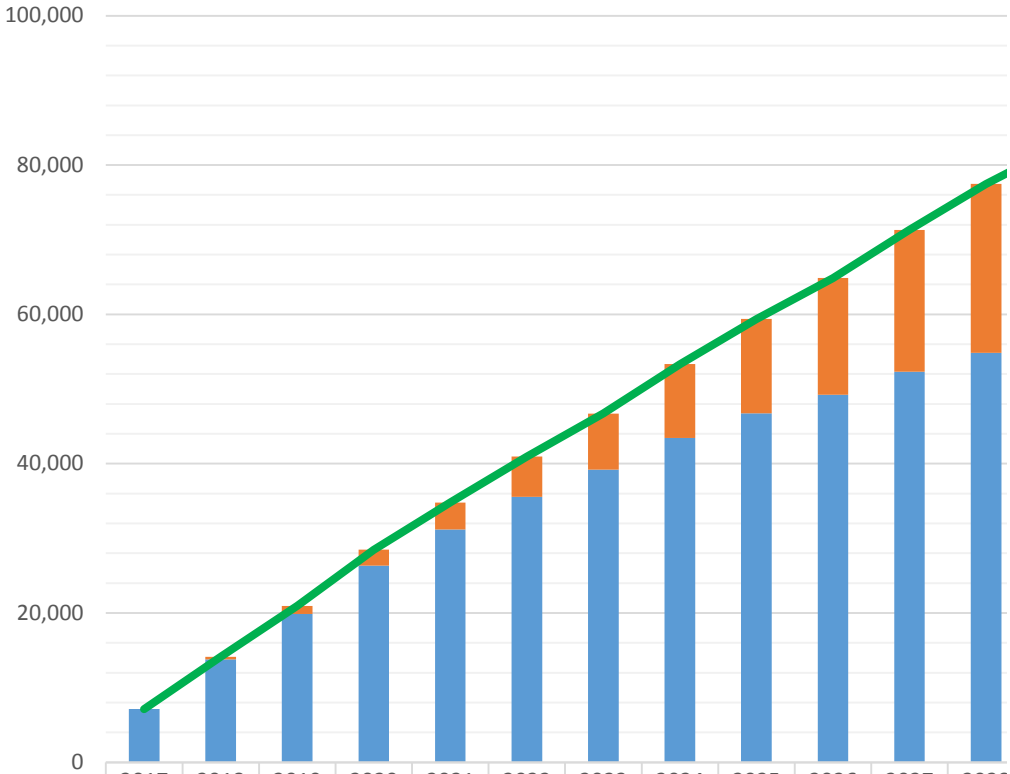


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate

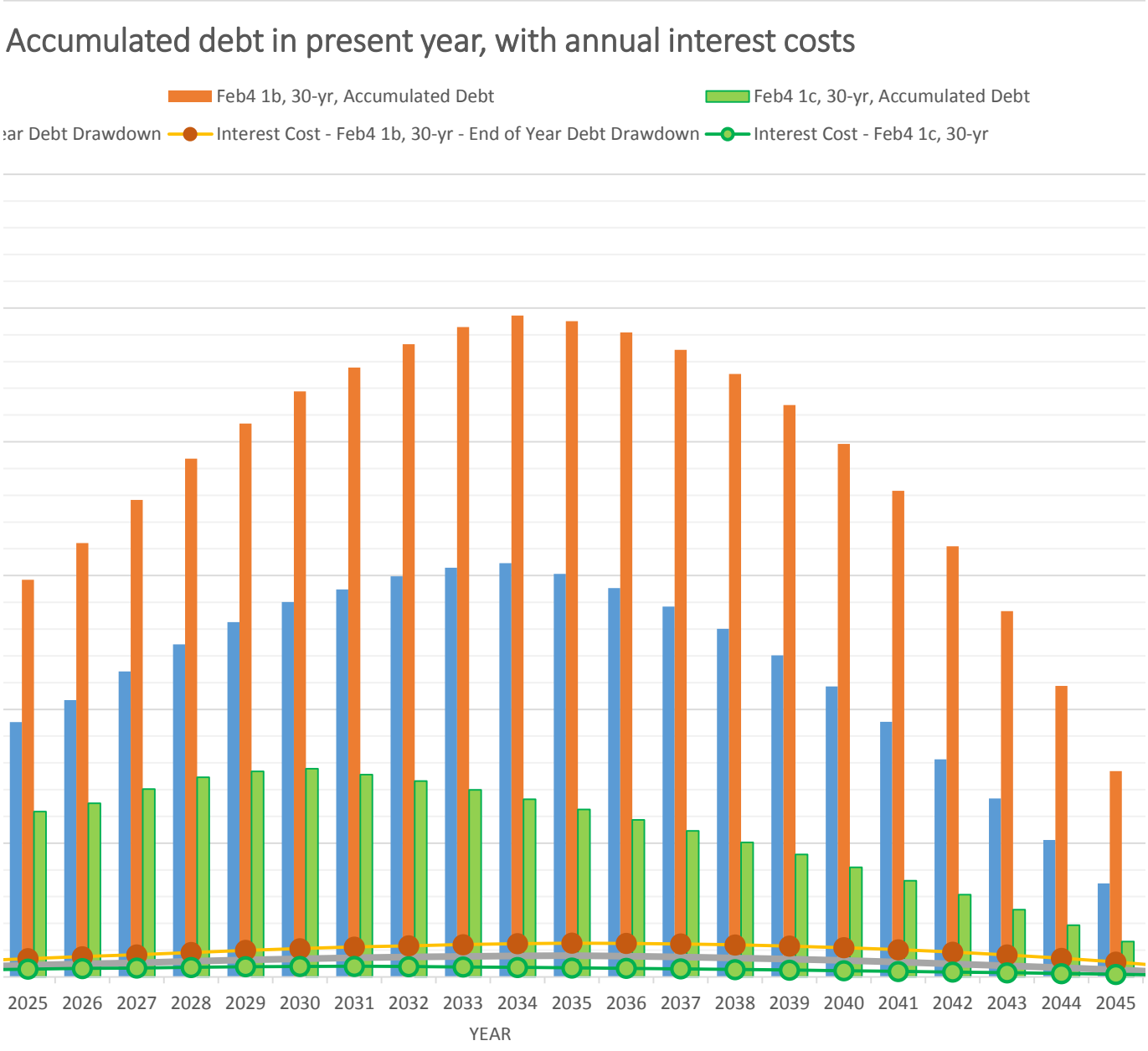


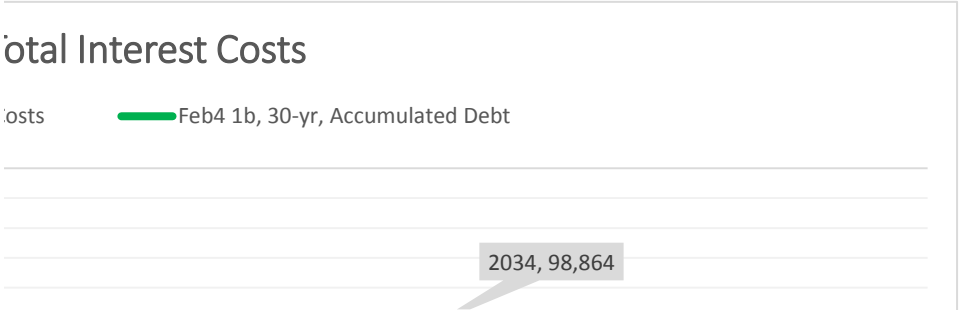

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

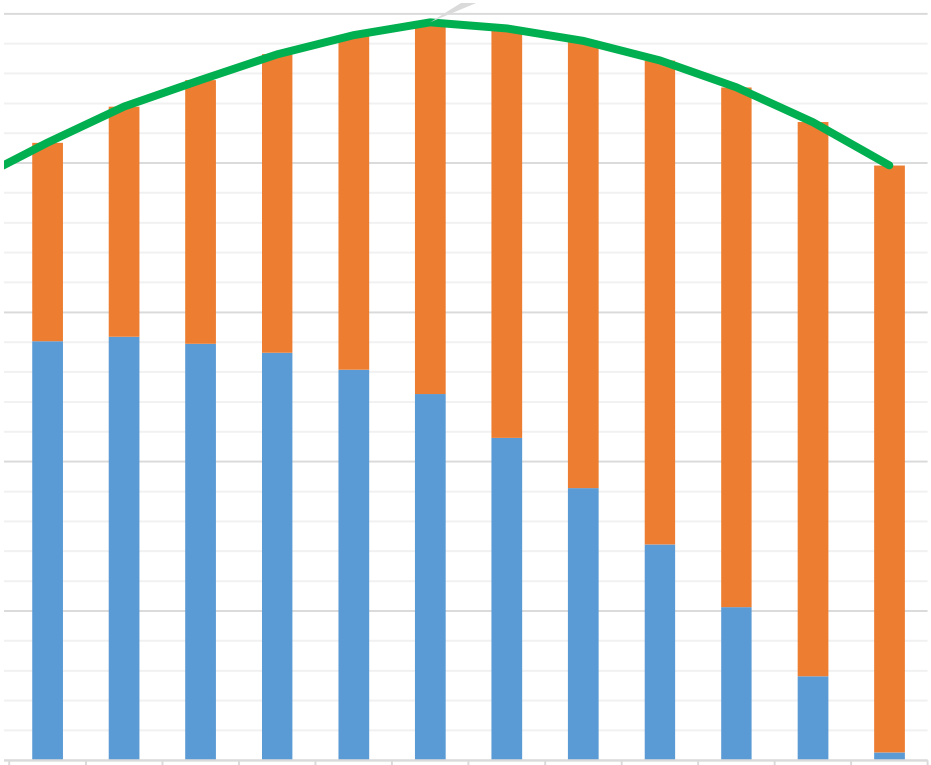


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y

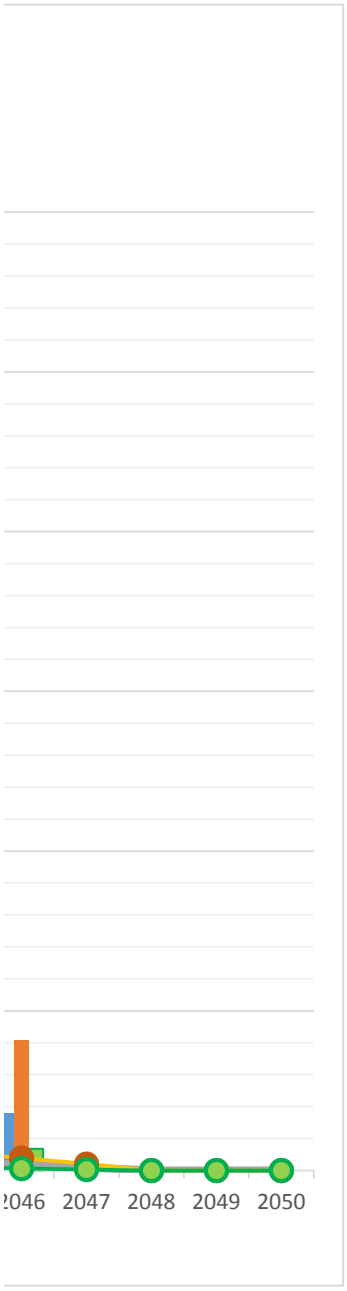

Accumulated debt in present year, with annual interest costs
Feb4 1b, 30-yr, Accumulated Debt
Feb4 1c, 30-yr, Accumulated Debt
ear Debt Drawdown
Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown
Interest Cost - Feb4 1c, 30-yr
2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045
YEAR


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

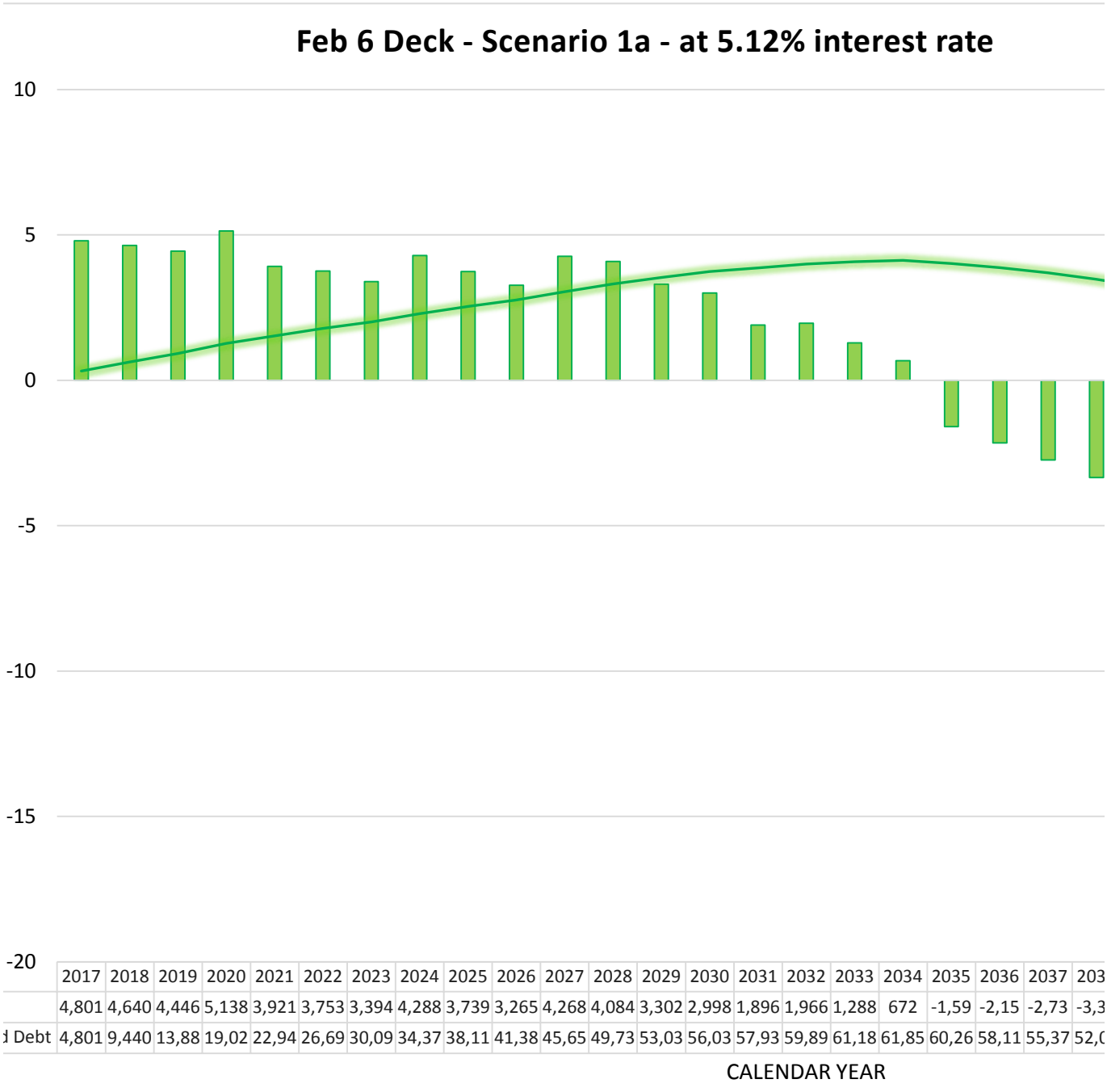
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

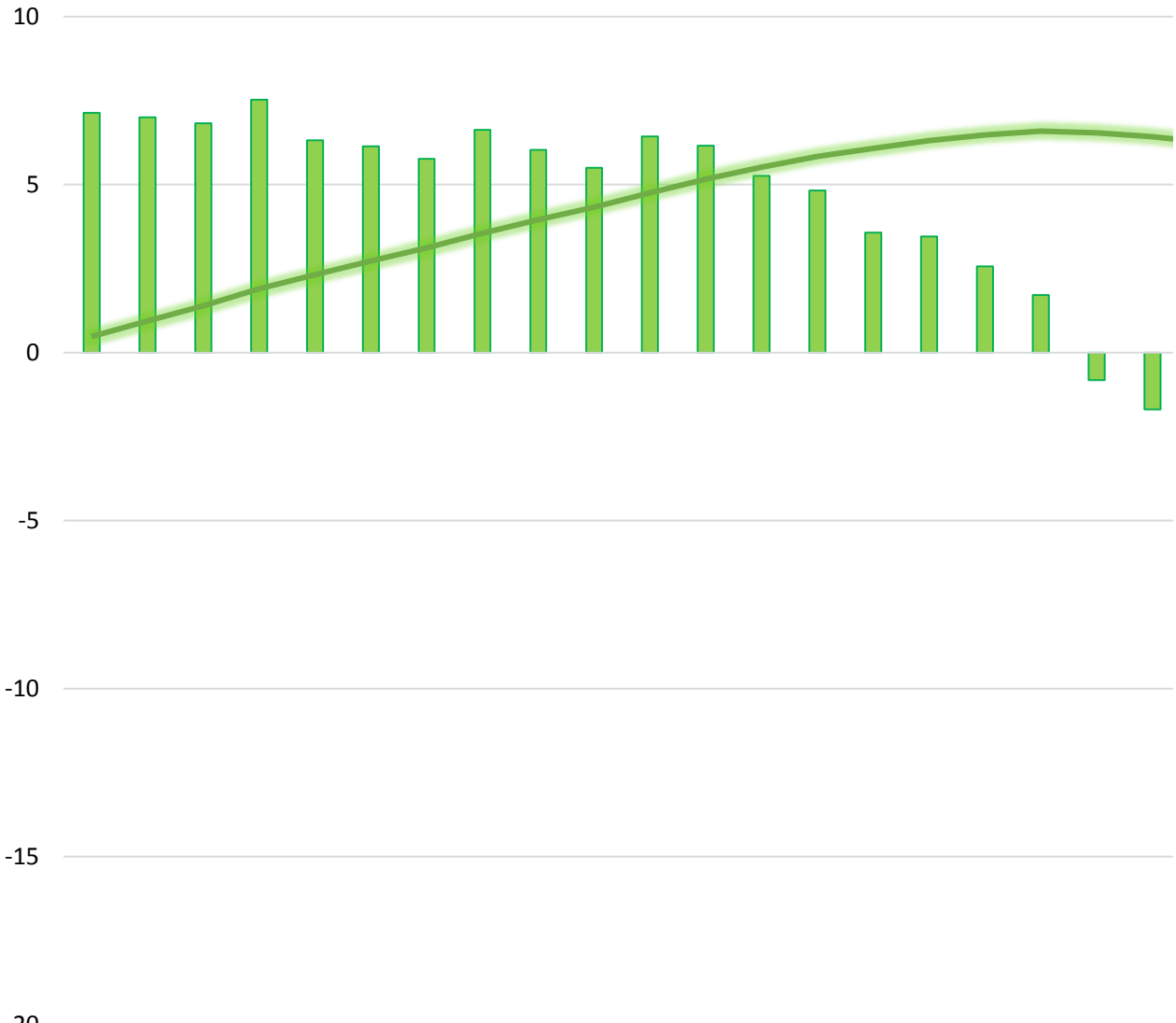
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

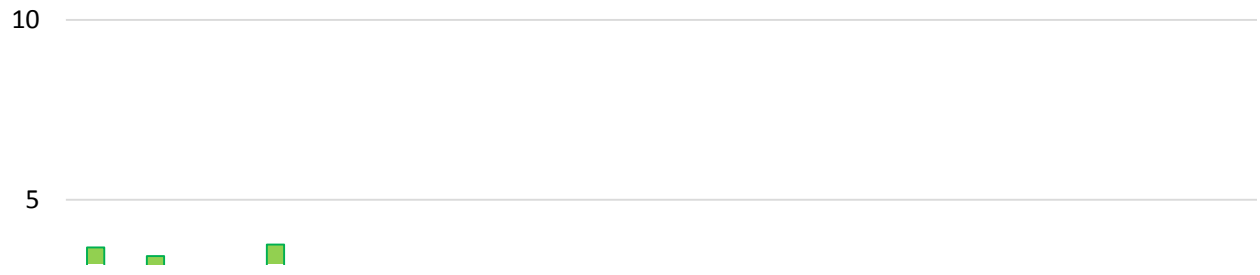
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

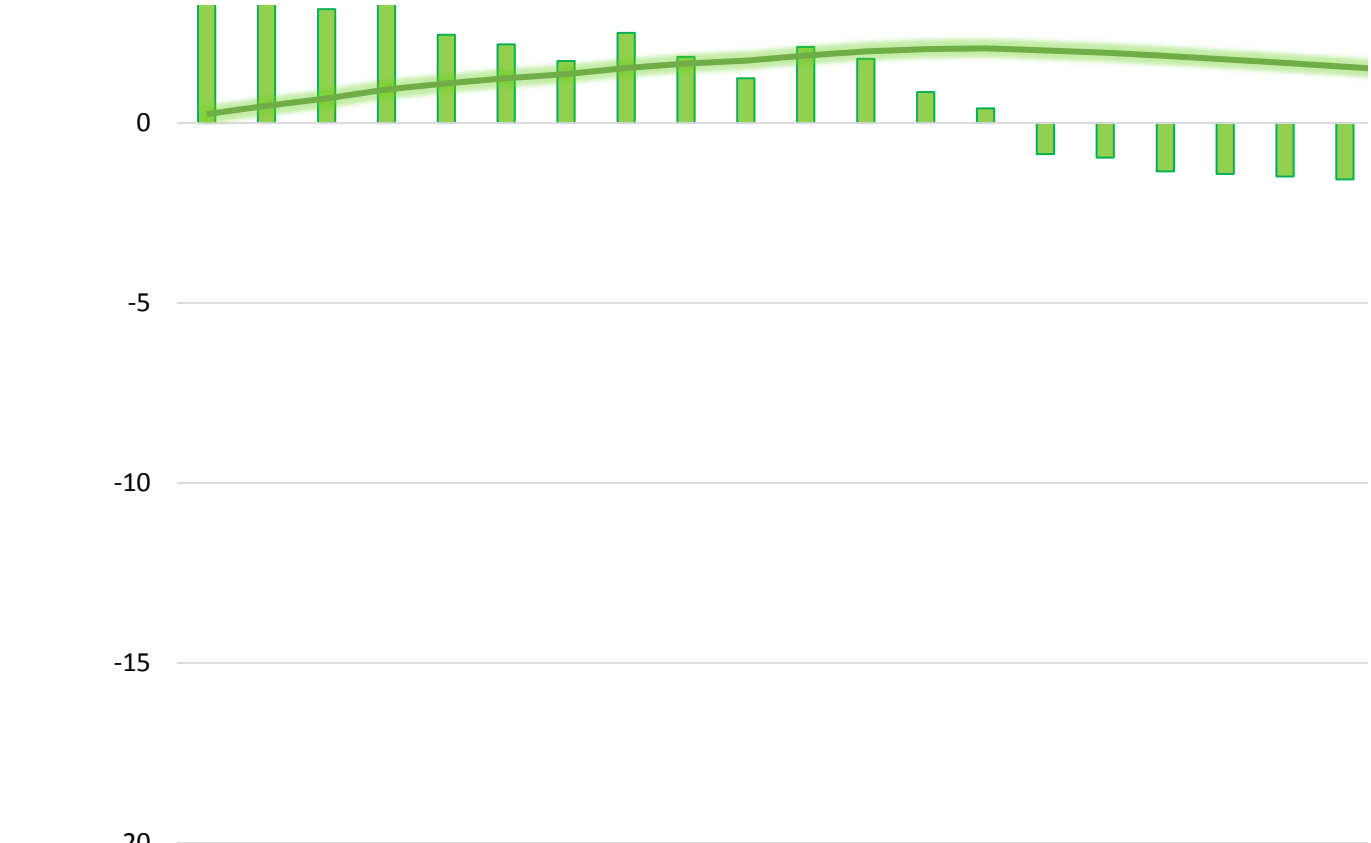


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



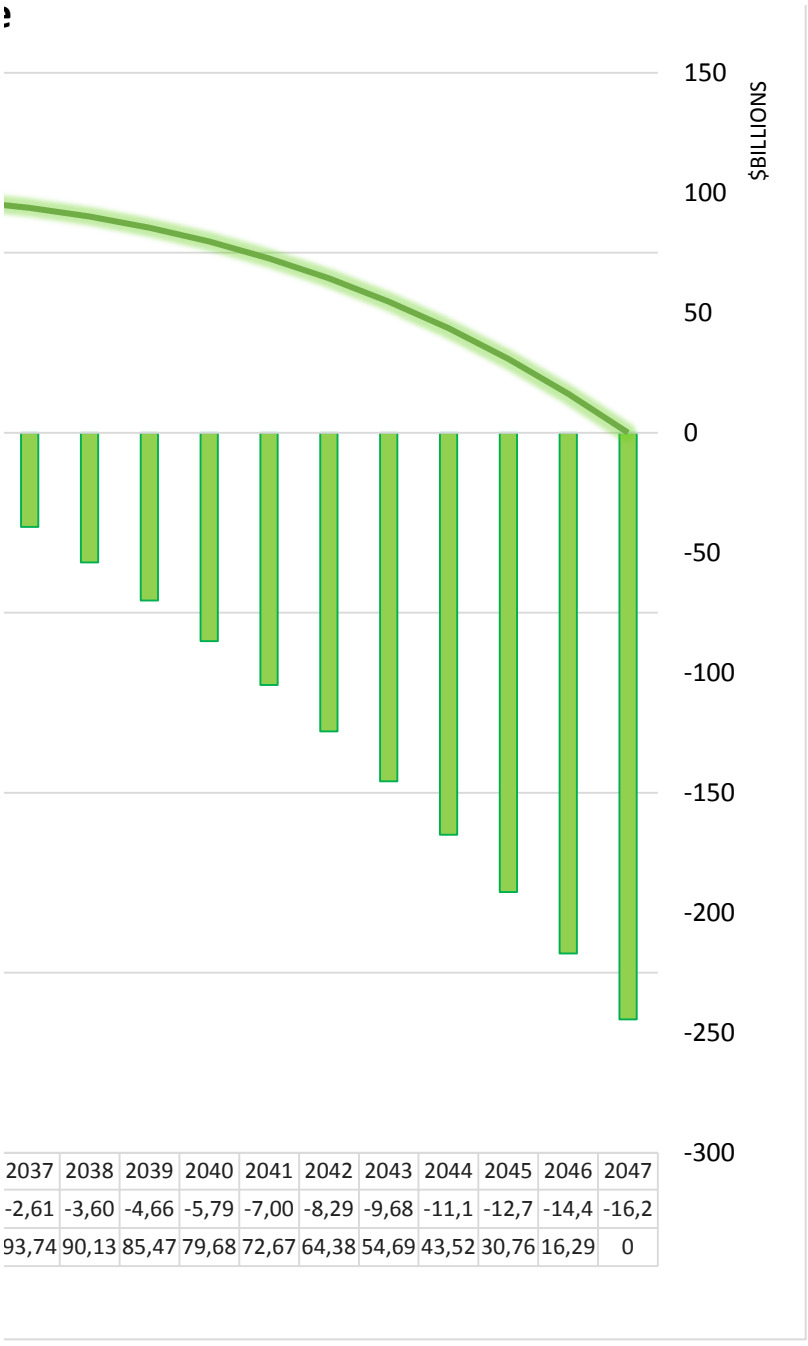


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

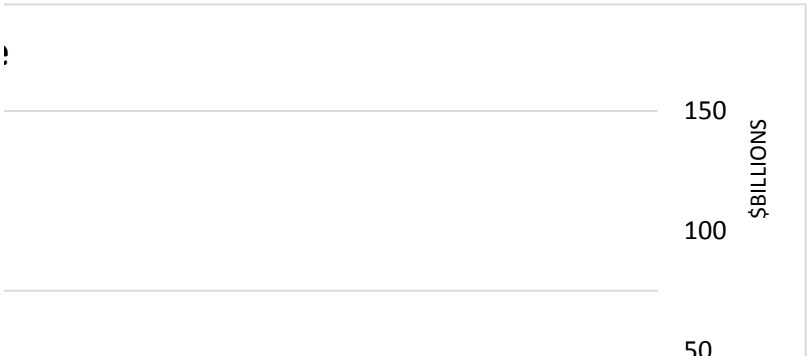
CALENDAR YEAR

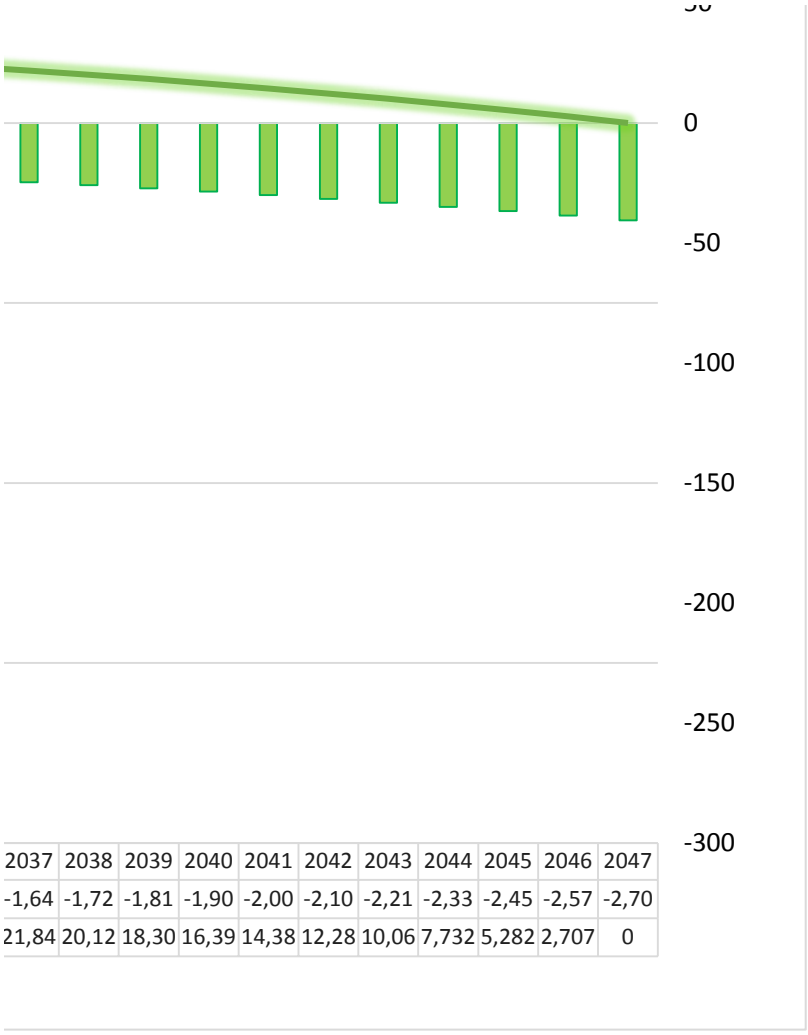


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Feb 8 Deck - Scenario 1a, 1b, 1c - at 5.12% interest
IESO GA cost forecast + extrapolation

Scenario
1a

1b

1c

1d

1e

	2017	2018	2019	2020
rate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	4674	9542	14587	21173

GA Payment from Impacted Rate Class	7421	7205	6995	6329
Accumulated debt in present year (including interest)	4674	9544	14589	21175

GA Payment from Impacted Rate Class	7421	7425	7440	7013
Accumulated debt in present year (including interest)	4674	9323	13913	19780

GA Payment from Impacted Rate Class	9915	9676	9427	9445
Accumulated debt in present year (including interest)	2180	4450	6803	9875

GA Payment from Impacted Rate Class	10596	10370	10129	10162
Accumulated debt in present year (including interest)	1500	3042	4620	6863

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
27212	33084	38588	44968	50769	56056	62291	68274

5890	6156	6434	6724	7028	7345	7677	8024
27212	33082	38585	44963	50762	56048	62281	68263

6825	7042	7266	7497	7736	7983	8237	8499
24810	29671	34167	39545	44359	48679	53976	59058

8532	8703	8877	9054	9236	9420	9609	9801
12692	15272	17420	20384	22719	24494	27181	29590

9264	9449	9638	9831	10027	10228	10432	10641
8794	10429	11568	13457	14645	15200	16588	17614

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
73391	78103	81594	85015	87596	89375	88679	87180

8386	8765	9160	9574	10006	10458	10931	11424
73378	78089	81578	84997	87577	89356	88659	87159

8770	9049	9337	9634	9941	10257	10584	10921
63318	67230	69987	72754	74773	76097	75068	73377

9997	10197	10401	10609	10821	10916	8822	8548
31116	32233	32135	31991	31045	29473	27822	26085

10854	11071	10196	10361	9779	9298	7203	6930
17670	17225	16565	15871	15142	14376	13570	12723

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
84828	81568	77341	72085	65730	58203	49425	39310

11940	12480	13043	13632	14248	14891	15564	16267
84806	81546	77320	72065	65711	58186	49409	39297

11269	11628	11998	12380	12774	13181	13600	14033
70990	67875	63995	59310	53778	47352	39985	31624

8288	8040	7805	7580	7367	7164	6970	6786
24260	22342	20325	18206	15978	13635	11173	8586

6670	6422	6186	5962	5748	5545	5352	5168
11833	10897	9914	8880	7793	6651	5450	4188

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
27767	14699	0	0	0	0

17001	17769	18572	2975	2831	2695
27758	14694	0	0	0	0

14480	14941	15417	2975	2831	2695
22213	11693	0	0	0	0

6611	6444	6286	2975	2831	2695
5865	3006	0	0	0	0

4993	4826	4667	2975	2831	2695
2861	1466	0	0	0	0

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb8_1a_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,867
Annual Exposure2 with start on July 1st	*2,337*	*4,867*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	3,554

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

1 Based on an interest rate of 5%.

2 Fiscal exposure based on equal monthly drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1b_30yr

1b. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,869
Annual Exposure2 with start on July 1st	*2,337*	*4,869*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	*3,554*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649
Annual Exposure2 with start on July 1st	*2,337*	*4,649*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,668
Start: July 1st	-	*3,499*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $76 billion peaking in

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270
Annual Exposure2 with start on July 1st	*1,090*	*2,270*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	545	2,203
Start: July 1st	-	*1,658*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $32 billion peaking in

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542
Annual Exposure2 with start on July 1st	*750*	*1,542*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	375	1,510
Start: July 1st	-	*1,135*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $18 billion peaking in

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	1,169 - 1,169	4,723 - 4,723

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1169**	**4963**
Total, B	1169	4963
Proposed Program Total:	1,169 - 1,169	4,963 - 4,963

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1a
Scenario 1b
Scenario 1c
Scenario 1d
Scenario 1e

2019	2020	2021	2022
5,045	6,586	6,039	5,872
5,045	*6,586*	*6,039*	*5,872*

2018-19	2019-20	2020-21	2021-2022
4,912	5,430	6,449	5,997
4,912	*5,430*	*6,449*	*5,997*

2034.

Actuals are subject t
- The highest debt ac
- Compared to a 5% i

[1] Based on an interes
[2] Fiscal exposure bas
[3] Fiscalized based on

depend on decision on accounting treatment.

2019	2020	2021	2022
5,045	6,586	6,037	5,870
5,045	*6,586*	*6,037*	*5,870*

2018-19	2019-20	2020-21	2021-2022
4,913	5,430	6,449	5,996
4,913	*5,430*	*6,449*	*5,996*

2034.

2019	2020	2021	2022
4,589	5,867	5,031	4,861
4,589	*5,867*	*5,031*	*4,861*

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988
4,634	*4,909*	*5,658*	*4,988*

2034.

2019	2020	2021	2022
2,353	3,072	2,817	2,580
2,353	*3,072*	*2,817*	*2,580*

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757
2,291	*2,533*	*3,008*	*2,757*

2030.

2019	2020	2021	2022
1,578	2,243	1,931	1,635
1,578	*2,243*	*1,931*	*1,635*

2018-19	2019-20	2020-21	2021-2022

1,551	1,745	2,165	1,857
1,551	*1,745*	*2,165*	*1,857*

2029.



2018-19	2019-20	2020-21	2021-2022
4,913 - 4,912	5,430 - 5,430	6,449 - 6,449	5,996 - 5,997

/1

2018-19[1]	2019-20[1]	2020-21[1]
4912	5430	6449
4913	5430	6449
225	279	323
60	60	60
18	18	18
5215	**5787**	**6850**
5216	5787	6850

5,216 - 5,215 5,787 - 5,787 6,850 - 6,850

Total Principal Debt	Total Accumulated Interest Costs	**Peak Total Debt**	
52,287	85,599	89,375	occurs in Year 2034
52,275	85,582	89,356	occurs in Year 2034
44,449	72,823	76,097	occurs in Year 2034
21,239	29,589	32,233	occurs in Year 2030
12,350	16,239	17,670	occurs in Year 2029

o actual prices and actual interest rates.
:cumulation (at 5% interest rate) is expected to be approximately $62 billion, peaking in 203 and $17-21 billion (at 3.5% interest
interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately $33-$36 million.

st rate of 5%.
sed on equal monthly drawdown of debt.
75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on mo

Feb8_1a_30yr
Feb8_1b_30yr
Feb8_1c_30yr
Feb8_1d_30yr
Feb8_1e_30yr

t rate), peaking in 2028.

nth of the year. Actuals may also depend on decision on accounting treatment.

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-275	-311	-350	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,573	85,599
Equal Monthly Debt Drawdown	6,743	4,556	

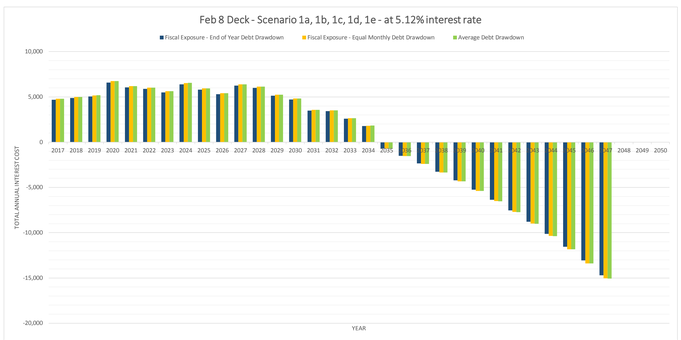
	Feb8 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,375	2034	52,287
Equal Monthly Debt Drawdown	91,501		

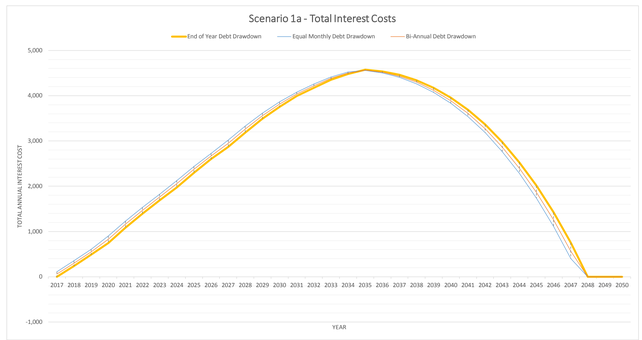
Feb8 1a, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	
c = a*5%	*Interest Cost - Feb8 1a, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,301*	*2,597*	*2,868*	*3,187*	*3,493*	*3,755*	*3,996*	*4,175*	*4,350*	*4,482*	*4,573*	*4,537*	*4,460*	*4,340*	*4,173*	*3,957*	*3,688*	*3,363*	*2,978*	*2,529*	*2,011*	*1,421*	*752*	*0*	*0*	*0*	85,599
b	Additional GA Debt Drawdown, End of Year	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,307	32,728	35,309	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	39,310	27,767	14,699	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	52,287	52,287	52,287	51,591	50,091	47,739	44,479	40,253	34,997	28,642	21,115	12,336	0	0	0	0	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,813	33,987	38,337	42,818	47,391	51,928	56,388	60,728	64,901	68,858	72,546	75,909	78,887	81,416	83,427	84,847	85,599				
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	51,781	51,028	49,259	46,557	41,288	35,252	28,440	20,840	12,440	3,227	-6,816	-17,706	-29,462	-42,106	-55,660	-70,149	-85,599				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	

Feb8 1a, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	
4,556	*Interest Cost - Feb8 1a, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,824*	*2,126*	*2,439*	*2,723*	*3,016*	*3,329*	*3,615*	*3,867*	*4,079*	*4,256*	*4,411*	*4,524*	*4,556*	*4,501*	*4,404*	*4,262*	*4,073*	*3,832*	*3,537*	*3,184*	*2,769*	*2,288*	*1,737*	*1,110*	*402*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
	Monthly Drawdown	390	386	380	487	413	373	318	367	292	224	281	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(980)	(1,054)	(1,129)	(1,207)	(1,288)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,738	4,665	5,979	5,074	4,586	3,902	4,510	3,584	2,753	3,447	2,863	1,662	980	(517)	(772)	(1,810)	(2,766)	(5,394)	(6,180)	(6,975)	(7,781)	(8,599)	(9,432)	(10,282)	(11,149)	(12,036)	(12,944)	(13,876)	(14,834)	(15,818)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	67	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(368)	-	-	-	
	Annual Interest Cost on Opening Balance	-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,263	3,576	3,844	4,091	4,274	4,453	4,588	4,681	4,645	4,566	4,443	4,272	4,051	3,776	3,443	3,049	2,589	2,059	1,454	770	(0)	(0)	(0)	
	Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,824	2,126	2,439	2,723	3,016	3,329	3,615	3,867	4,079	4,256	4,411	4,524	4,556	4,501	4,404	4,262	4,073	3,832	3,537	3,184	2,769	2,288	1,737	1,110	402	(0)	(0)	(0)	

Feb8 1a, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*60*	*301*	*553*	*831*	*1,160*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,948*	*3,263*	*3,558*	*3,815*	*4,041*	*4,218*	*4,383*	*4,504*	*4,564*	*4,518*	*4,430*	*4,298*	*4,119*	*3,890*	*3,607*	*3,267*	*2,866*	*2,399*	*1,864*	*1,253*	*564*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,930	5,110	6,670	6,116	5,947	5,575	6,461	5,875	5,354	6,315	6,060	5,182	4,773	3,535	3,464	2,614	1,802	-705	-1,518	-2,382	-3,302	-4,280	-5,324	-6,436	-7,623	-8,891	-10,244	-11,690	-13,236	-14,887	0	0	0	
	Bi-Annual Drawdown	2,337	2,314	2,279	2,920	2,478	2,240	1,906	2,203	1,750	1,345	1,684	1,398	812	479	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,800)	(4,200)	(4,607)	(5,021)	(5,445)	(5,878)	(6,322)	(6,777)	(7,245)	(7,725)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,687	4,615	5,914	5,019	4,537	3,860	4,462	3,545	2,724	3,410	2,832	1,644	970	(512)	(763)	(1,791)	(2,737)	(5,336)	(6,113)	(6,900)	(7,697)	(8,507)	(9,331)	(10,171)	(11,029)	(11,907)	(12,805)	(13,727)	(14,674)	(15,648)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	494	756	1,097	1,410	1,714	1,999	2,330	2,631	2,905	3,228	3,538	3,803	4,047	4,228	4,405	4,539	4,631	4,595	4,517	4,395	4,227	4,008	3,735	3,406	3,016	2,561	2,037	1,439	762	(0)	(0)	(0)	
	Total Annual Interest Cost	60	301	553	831	1,160	1,467	1,763	2,056	2,375	2,665	2,948	3,263	3,558	3,815	4,041	4,218	4,383	4,504	4,564	4,518	4,430	4,298	4,119	3,890	3,607	3,267	2,866	2,399	1,864	1,253	564	(0)	(0)	(0)	

Feb8 1a, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,723*	*3,027*	*3,340*	*3,624*	*3,875*	*4,085*	*4,262*	*4,416*	*4,527*	*4,555*	*4,499*	*4,400*	*4,257*	*4,065*	*3,822*	*3,525*	*3,170*	*2,753*	*2,270*	*1,716*	*1,086*	*376*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,992	5,174	6,754	6,193	6,022	5,645	6,543	5,950	5,422	6,395	6,137	5,248	4,833	3,580	3,508	2,647	1,825	-714	-1,537	-2,412	-3,343	-4,334	-5,391	-6,517	-7,720	-9,003	-10,374	-11,838	-13,403	-15,075	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-274	-311	-349	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,572	85,582
Equal Monthly Debt Drawdown	6,743	4,555	

	Feb8 1b, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,356	2034	52,275
Equal Monthly Debt Drawdown	91,481		

Feb8 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
a — Debt, Beginning of Year	0	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	
c = a*5% — *Interest Cost - Feb8 1b, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,300*	*2,597*	*2,867*	*3,186*	*3,492*	*3,754*	*3,995*	*4,174*	*4,349*	*4,481*	*4,572*	*4,536*	*4,459*	*4,339*	*4,172*	*3,956*	*3,687*	*3,362*	*2,977*	*2,528*	*2,011*	*1,420*	*752*	*0*	*0*	*0*	85,582
b — Additional GA Debt Drawdown, End of Year	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,303	32,722	35,302	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	39,297	27,758	14,694	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	52,275	52,275	52,275	52,275	51,578	50,078	47,725	44,465	40,239	34,984	28,630	21,105	12,328	0	0	0	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,809	33,983	38,331	42,812	47,384	51,920	56,379	60,718	64,890	68,846	72,533	75,895	78,871	81,399	83,410	84,830	85,582				
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	51,769	51,014	49,246	46,544	41,275	35,239	28,428	20,829	12,431	3,219	-6,822	-17,709	-29,462	-42,102	-55,652	-70,136	-85,582				
Fiscal Exposure - End of Year Debt Drawdown	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	

Feb8 1b, 30-yr — Equal Monthly Debt Drawdown

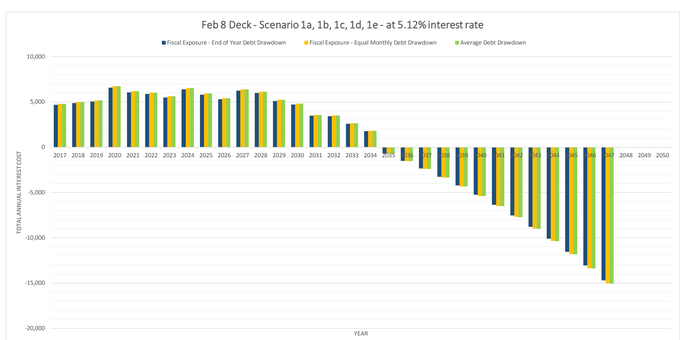
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	
4,555 — *Interest Cost - Feb8 1b, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,823*	*2,126*	*2,438*	*2,723*	*3,016*	*3,329*	*3,614*	*3,866*	*4,078*	*4,255*	*4,410*	*4,523*	*4,555*	*4,500*	*4,403*	*4,261*	*4,072*	*3,831*	*3,536*	*3,183*	*2,768*	*2,287*	*1,736*	*1,109*	*402*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
Monthly Drawdown	390	386	380	487	413	373	317	367	292	224	280	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(979)	(1,053)	(1,129)	(1,207)	(1,287)	(0)	-	-	
FV of Monthly Drawdown at 5%	4,786	4,740	4,665	5,979	5,072	4,585	3,900	4,509	3,582	2,752	3,446	2,862	1,661	979	(518)	(772)	(1,811)	(2,766)	(5,394)	(6,179)	(6,974)	(7,780)	(8,598)	(9,431)	(10,279)	(11,146)	(12,033)	(12,941)	(13,872)	(14,829)	(15,813)	(0)	-	-	
Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	66	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(367)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,262	3,576	3,843	4,090	4,273	4,452	4,587	4,680	4,644	4,565	4,442	4,271	4,050	3,775	3,442	3,048	2,588	2,058	1,454	770	0	0	0	
Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,823	2,126	2,438	2,723	3,016	3,329	3,614	3,866	4,078	4,255	4,410	4,523	4,555	4,500	4,403	4,261	4,072	3,831	3,536	3,183	2,768	2,287	1,736	1,109	402	0	0	0	

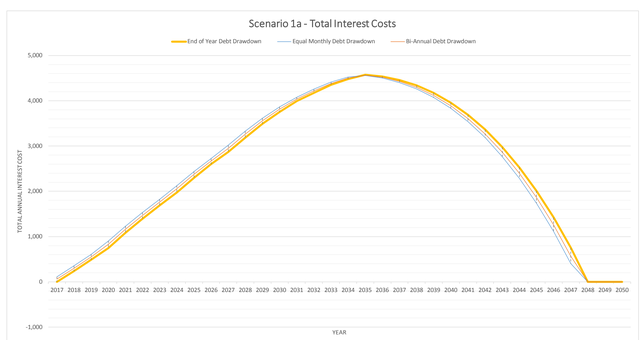
Feb8 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*60*	*301*	*553*	*831*	*1,161*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,947*	*3,263*	*3,558*	*3,814*	*4,040*	*4,217*	*4,382*	*4,503*	*4,563*	*4,517*	*4,429*	*4,297*	*4,118*	*3,889*	*3,606*	*3,266*	*2,865*	*2,399*	*1,863*	*1,253*	*564*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	4,734	4,931	5,110	6,670	6,115	5,945	5,573	6,460	5,874	5,353	6,313	6,058	5,181	4,771	3,534	3,463	2,613	1,801	-706	-1,519	-2,383	-3,302	-4,280	-5,323	-6,435	-7,622	-8,889	-10,242	-11,687	-13,231	-14,882	0	0	0	
Bi-Annual Drawdown	2,337	2,315	2,279	2,920	2,477	2,239	1,905	2,202	1,750	1,344	1,683	1,398	811	478	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,799)	(4,199)	(4,606)	(5,020)	(5,444)	(5,877)	(6,320)	(6,775)	(7,242)	(7,723)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	4,734	4,689	4,615	5,914	5,017	4,535	3,859	4,460	3,544	2,722	3,409	2,831	1,643	969	(513)	(764)	(1,791)	(2,737)	(5,336)	(6,113)	(6,899)	(7,696)	(8,506)	(9,329)	(10,169)	(11,027)	(11,904)	(12,802)	(13,723)	(14,670)	(15,643)	(0)	-	-	
Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	242	495	756	1,097	1,410	1,714	1,999	2,330	2,630	2,904	3,227	3,537	3,802	4,046	4,227	4,404	4,538	4,630	4,594	4,516	4,394	4,225	4,006	3,734	3,405	3,015	2,560	2,036	1,438	761	0	(0)	(0)	
Total Annual Interest Cost	60	301	553	831	1,161	1,467	1,763	2,056	2,375	2,665	2,947	3,263	3,558	3,814	4,040	4,217	4,382	4,503	4,563	4,517	4,429	4,297	4,118	3,889	3,606	3,266	2,865	2,399	1,863	1,253	564	0	(0)	(0)	

Feb8 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,732*	*3,027*	*3,339*	*3,623*	*3,875*	*4,084*	*4,261*	*4,415*	*4,526*	*4,554*	*4,498*	*4,399*	*4,255*	*4,064*	*3,821*	*3,524*	*3,169*	*2,752*	*2,269*	*1,715*	*1,086*	*376*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	4,794	4,994	5,174	6,754	6,192	6,020	5,643	6,541	5,948	5,420	6,393	6,135	5,246	4,831	3,578	3,507	2,646	1,824	-715	-1,538	-2,413	-3,343	-4,334	-5,390	-6,516	-7,718	-9,001	-10,371	-11,835	-13,398	-15,070	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1c_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	
			111	111	109	140	120	116	107	128	115	103	126	121	101	93	66	66	48	32	-24	-40	-57	-74	-92	-111	-132	-153	-175	-199	-224	-250	-278	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	5,867	3,893	72,823
Equal Monthly Debt Drawdown	6,006	3,869	

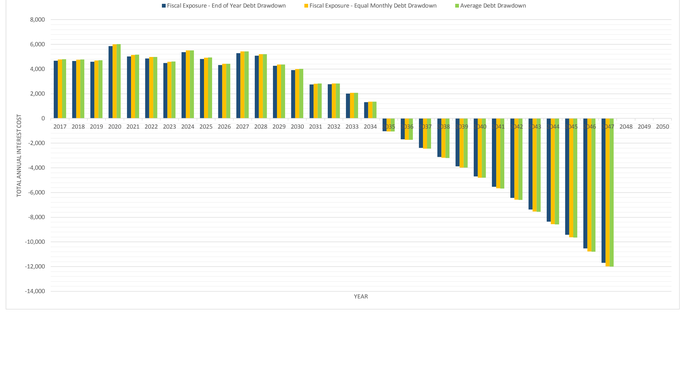
	Feb8 1c, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	76,097	2034	44,449
Equal Monthly Debt Drawdown	77,907		

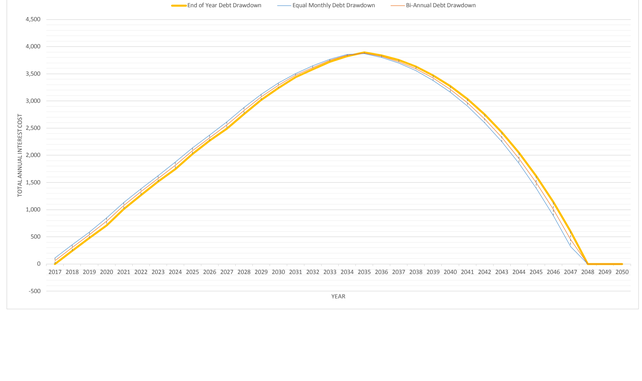
Feb8 1c, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	
c = a*5%	*Interest Cost - Feb8 1c, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*477*	*712*	*1,012*	*1,269*	*1,518*	*1,748*	*2,023*	*2,270*	*2,491*	*2,762*	*3,022*	*3,239*	*3,440*	*3,581*	*3,722*	*3,826*	*3,893*	*3,841*	*3,754*	*3,632*	*3,473*	*3,274*	*3,034*	*2,751*	*2,423*	*2,046*	*1,618*	*1,136*	*598*	*0*	*0*	*0*	72,823
b	Additional GA Debt Drawdown, End of Year	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	
	Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	25,538	28,304	30,324	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,624	22,213	11,693	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	44,449	44,449	44,449	44,449	43,420	41,729	39,342	36,228	32,347	27,662	22,130	15,704	8,337	0	0	0	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	26,221	29,801	33,524	37,349	41,242	45,083	48,837	52,469	55,942	59,216	62,250	65,002	67,424	69,470	71,088	72,224	72,823				
	Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	43,767	42,952	41,249	38,748	33,826	28,294	22,153	15,406	8,054	94	-8,473	-17,649	-27,439	-37,846	-48,875	-60,532	-72,823				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	

Feb8 1c, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
3,869	Debt, Beginning of Year	0	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*111*	*350*	*586*	*851*	*1,132*	*1,385*	*1,625*	*1,876*	*2,138*	*2,372*	*2,617*	*2,882*	*3,123*	*3,333*	*3,505*	*3,646*	*3,770*	*3,857*	*3,869*	*3,800*	*3,697*	*3,558*	*3,380*	*3,163*	*2,903*	*2,599*	*2,247*	*1,847*	*1,394*	*886*	*320*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	
	Monthly Drawdown	390	367	343	430	335	299	248	303	233	171	234	193	103	56	(57)	(68)	(142)	(208)	(410)	(461)	(512)	(562)	(613)	(663)	(714)	(765)	(816)	(867)	(919)	(971)	(1,024)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,515	4,210	5,278	4,114	3,677	3,048	3,717	2,857	2,099	2,873	2,375	1,268	689	(699)	(834)	(1,744)	(2,561)	(5,039)	(5,664)	(6,286)	(6,907)	(7,528)	(8,148)	(8,771)	(9,395)	(10,023)	(10,654)	(11,291)	(11,934)	(12,583)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	105	98	123	96	85	71	86	66	49	67	55	29	16	(16)	(19)	(41)	(59)	(117)	(132)	(146)	(160)	(175)	(189)	(204)	(218)	(233)	(248)	(262)	(277)	(292)	-	-	-	
	Annual Interest Cost on Opening Balance	-	245	488	729	1,036	1,300	1,554	1,790	2,071	2,323	2,550	2,827	3,093	3,317	3,521	3,666	3,811	3,917	3,986	3,932	3,843	3,718	3,555	3,352	3,107	2,817	2,480	2,094	1,656	1,163	612	(0)	(0)	(0)	
	Total Annual Interest Cost	111	350	586	851	1,132	1,385	1,625	1,876	2,138	2,372	2,617	2,882	3,123	3,333	3,505	3,646	3,770	3,857	3,869	3,800	3,697	3,558	3,380	3,163	2,903	2,599	2,247	1,847	1,394	886	320	(0)	(0)	(0)	

Feb8 1c, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*60*	*299*	*536*	*787*	*1,076*	*1,332*	*1,576*	*1,817*	*2,085*	*2,325*	*2,558*	*2,827*	*3,076*	*3,290*	*3,475*	*3,616*	*3,748*	*3,842*	*3,880*	*3,819*	*3,724*	*3,592*	*3,423*	*3,214*	*2,964*	*2,669*	*2,328*	*1,939*	*1,498*	*1,002*	*449*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,708	4,648	5,942	5,095	4,923	4,553	5,447	4,876	4,375	5,364	5,147	4,315	3,962	2,792	2,802	2,045	1,341	-1,042	-1,713	-2,417	-3,155	-3,930	-4,745	-5,603	-6,508	-7,461	-8,468	-9,531	-10,655	-11,842	0	0	0	
	Bi-Annual Drawdown	2,337	2,205	2,056	2,578	2,009	1,796	1,489	1,815	1,395	1,025	1,403	1,160	620	336	(341)	(407)	(852)	(1,251)	(2,461)	(2,766)	(3,070)	(3,373)	(3,676)	(3,980)	(4,283)	(4,588)	(4,895)	(5,203)	(5,514)	(5,828)	(6,146)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,466	4,165	5,221	4,070	3,638	3,015	3,677	2,826	2,077	2,842	2,350	1,255	681	(691)	(825)	(1,725)	(2,533)	(4,985)	(5,603)	(6,219)	(6,833)	(7,447)	(8,061)	(8,676)	(9,294)	(9,915)	(10,540)	(11,170)	(11,806)	(12,448)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	56	53	66	51	46	38	46	36	26	36	30	16	9	(9)	(10)	(22)	(32)	(63)	(71)	(79)	(86)	(94)	(102)	(110)	(117)	(125)	(133)	(141)	(149)	(157)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	483	721	1,025	1,286	1,537	1,770	2,049	2,299	2,522	2,797	3,060	3,281	3,484	3,626	3,770	3,874	3,943	3,890	3,802	3,678	3,517	3,316	3,073	2,787	2,454	2,072	1,639	1,151	606	(0)	(0)	(0)	
	Total Annual Interest Cost	60	299	536	787	1,076	1,332	1,576	1,817	2,085	2,325	2,558	2,827	3,076	3,290	3,475	3,616	3,748	3,842	3,880	3,819	3,724	3,592	3,423	3,214	2,964	2,669	2,328	1,939	1,498	1,002	449	(0)	(0)	(0)	

Feb8 1c, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*120*	*358*	*594*	*862*	*1,141*	*1,394*	*1,633*	*1,886*	*2,146*	*2,380*	*2,626*	*2,892*	*3,130*	*3,340*	*3,510*	*3,651*	*3,774*	*3,859*	*3,867*	*3,797*	*3,693*	*3,552*	*3,373*	*3,154*	*2,893*	*2,587*	*2,234*	*1,832*	*1,377*	*867*	*299*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,768	4,707	6,017	5,160	4,985	4,610	5,516	4,937	4,431	5,432	5,212	4,370	4,012	2,828	2,837	2,071	1,358	-1,055	-1,735	-2,447	-3,195	-3,979	-4,805	-5,674	-6,590	-7,556	-8,575	-9,652	-10,789	-11,992	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1d_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
			52	54	56	73	67	61	51	71	56	42	64	57	36	27	-2	-3	-23	-37	-39	-41	-43	-46	-48	-50	-53	-56	-59	-62	-65	-68	-71	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,072	1,649	29,589
Equal Monthly Debt Drawdown	3,145	1,647	

	Feb8 1d, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,233	2030	21,239
Equal Monthly Debt Drawdown	32,999		

Feb8 1d, 30-yr — End of Year Debt Drawdown

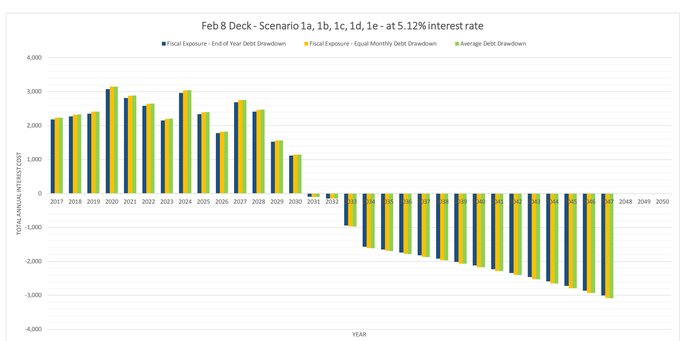
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
a Debt, Beginning of Year	0	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	
c = a*5% *Interest Cost - Feb8 1d, 30-yr - End of Year Debt Drawdown*	*0*	*112*	*228*	*348*	*505*	*649*	*781*	*891*	*1,043*	*1,162*	*1,253*	*1,391*	*1,514*	*1,592*	*1,649*	*1,644*	*1,637*	*1,588*	*1,508*	*1,423*	*1,335*	*1,241*	*1,143*	*1,040*	*931*	*817*	*698*	*572*	*439*	*300*	*154*	*0*	*0*	*0*	29,589
b Additional GA Debt Drawdown, End of Year	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
d = a+b+c Accumulated debt in present year (including 5.12% annual interest)	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	11,372	11,227	10,281	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,586	5,865	3,006	0	0	0	0	
Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	20,763	20,763	20,763	20,763	19,112	17,375	15,550	13,632	11,616	9,496	7,268	4,926	2,464	0	0	0	0	0	0	0	
Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	13,118	14,763	16,399	17,988	19,495	20,919	22,253	23,495	24,638	25,678	26,609	27,426	28,124	28,696	29,135	29,435	29,589				
Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	19,017	17,228	14,645	11,486	8,326	5,167	2,007	-1,153	-4,312	-7,472	-10,631	-13,791	-16,951	-20,110	-23,270	-26,429	-29,589				
Fiscal Exposure - End of Year Debt Drawdown	2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	

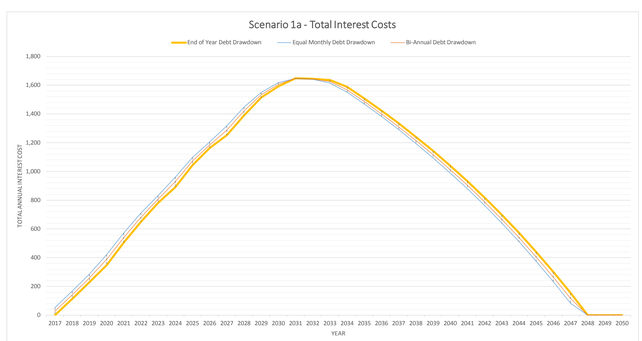
Feb8 1d, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Debt, Beginning of Year	0	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	
1,647 *Interest Cost - Feb8 1d, 30-yr*	*52*	*166*	*284*	*421*	*572*	*711*	*832*	*962*	*1,098*	*1,205*	*1,317*	*1,448*	*1,550*	*1,619*	*1,647*	*1,641*	*1,614*	*1,551*	*1,469*	*1,382*	*1,291*	*1,196*	*1,095*	*989*	*878*	*762*	*639*	*510*	*375*	*232*	*82*	*0*	*0*	*0*	29,589
Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
Monthly Drawdown	182	180	177	227	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	-	-	-	
FV of Monthly Drawdown at 5%	2,232	2,210	2,176	2,788	2,366	1,977	1,399	2,123	1,322	628	1,468	1,042	12	(487)	(1,788)	(1,831)	(2,644)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	-	-	-	
Annual Interest Cost on New Drawdowns	52	51	51	65	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	-	-	-	
Annual Interest Cost on Opening Balance	-	114	233	356	517	665	800	912	1,068	1,190	1,283	1,424	1,550	1,630	1,688	1,683	1,676	1,626	1,544	1,457	1,366	1,271	1,170	1,065	954	837	714	585	450	307	157	0	0	0	
Total Annual Interest Cost	52	166	284	421	572	711	832	962	1,098	1,205	1,317	1,448	1,550	1,619	1,647	1,641	1,614	1,551	1,469	1,382	1,291	1,196	1,095	989	878	762	639	510	375	232	82	0	0	0	

Feb8 1d, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Debt, Beginning of Year	0	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	
1,647 *Interest Cost - Feb8 1d, 30-yr*	*56*	*170*	*288*	*427*	*577*	*715*	*836*	*967*	*1,103*	*1,208*	*1,322*	*1,452*	*1,553*	*1,621*	*1,647*	*1,640*	*1,613*	*1,548*	*1,466*	*1,379*	*1,288*	*1,192*	*1,091*	*986*	*874*	*758*	*635*	*505*	*370*	*227*	*77*	*0*	*0*	*0*	29,589
Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	2,236	2,328	2,413	3,150	2,889	2,646	2,203	3,041	2,394	1,821	2,756	2,471	1,565	1,145	-100	-148	-970	-1,612	-1,694	-1,781	-1,872	-1,967	-2,068	-2,174	-2,285	-2,402	-2,525	-2,654	-2,790	-2,933	-3,083	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1e_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	
			36	37	38	53	46	39	27	45	28	13	33	24	1	-11	-16	-16	-17	-18	-19	-20	-21	-22	-23	-25	-26	-27	-29	-30	-32	-33	-35	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,243	904	16,239
Equal Monthly Debt Drawdown	2,297	903	

		Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	17,670	2029	12,350
Equal Monthly Debt Drawdown	18,091		

Feb8 1e, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	
c = a*5%	*Interest Cost - Feb8 1e, 30-yr - End of Year Debt Drawdown*		*0*	*77*	*156*	*236*	*351*	*450*	*534*	*592*	*688*	*749*	*778*	*849*	*901*	*904*	*881*	*847*	*812*	*775*	*735*	*694*	*651*	*605*	*558*	*507*	*454*	*399*	*340*	*279*	*214*	*146*	*75*	*0*	*0*	*0*	16,239
b	Additional GA Debt Drawdown, End of Year		1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)		1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
Feb8 1e, 30-yr - Accumulated Interest Costs			0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	6,605	5,911	5,182	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,188	2,861	1,466	0	0	0	0	
Feb8 1e, 30-yr - Accumulated Debt Principal			1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	9,960	9,960	9,960	9,960	9,155	8,308	7,418	6,482	5,498	4,465	3,378	2,235	1,035	0	0	0	0	0	0	0	
Feb8 1e, 30-yr - Accumulated Interest Costs			0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	8,146	8,993	9,805	10,580	11,315	12,010	12,661	13,266	13,824	14,331	14,785	15,184	15,524	15,803	16,017	16,164	16,239				
Feb8 1e, 30-yr - Accumulated Debt Principal			1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	8,419	6,878	5,337	3,796	2,255	714	-827	-2,369	-3,910	-5,451	-6,992	-8,533	-10,074	-11,615	-13,156	-14,697	-16,239				
Fiscal Exposure - End of Year Debt Drawdown			1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	

Feb8 1e, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	
Interest Cost - Feb8 1e, 30-yr			*36*	*113*	*193*	*290*	*397*	*489*	*561*	*637*	*717*	*762*	*811*	*873*	*903*	*893*	*866*	*831*	*795*	*756*	*716*	*674*	*630*	*583*	*534*	*483*	*428*	*372*	*312*	*249*	*183*	*113*	*40*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown			1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)			1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	0
Fiscal Exposure - Equal Monthly Debt Drawdown			1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	
Monthly Drawdown			125	122	119	167	132	99	50	108	42	(16)	51	15	(70)	(112)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	-	-	-	
FV of Monthly Drawdown at 5%			1,536	1,500	1,457	2,055	1,617	1,213	620	1,328	512	(199)	625	182	(865)	(1,382)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	-	-	-	
Annual Interest Cost on New Drawdowns			36	35	34	48	38	28	14	31	12	(5)	15	4	(20)	(32)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	-	-	-	
Annual Interest Cost on Opening Balance			-	79	159	242	359	461	546	606	705	767	796	869	923	926	902	868	831	793	753	711	666	620	571	519	465	408	348	285	219	150	77	0	0	0	
Total Annual Interest Cost			36	113	193	290	397	489	561	637	717	762	811	873	903	893	866	831	795	756	716	674	630	583	534	483	428	372	312	249	183	113	40	0	0	0	

Feb8 1e, 30-yr — Bi-Annual Debt Drawdown

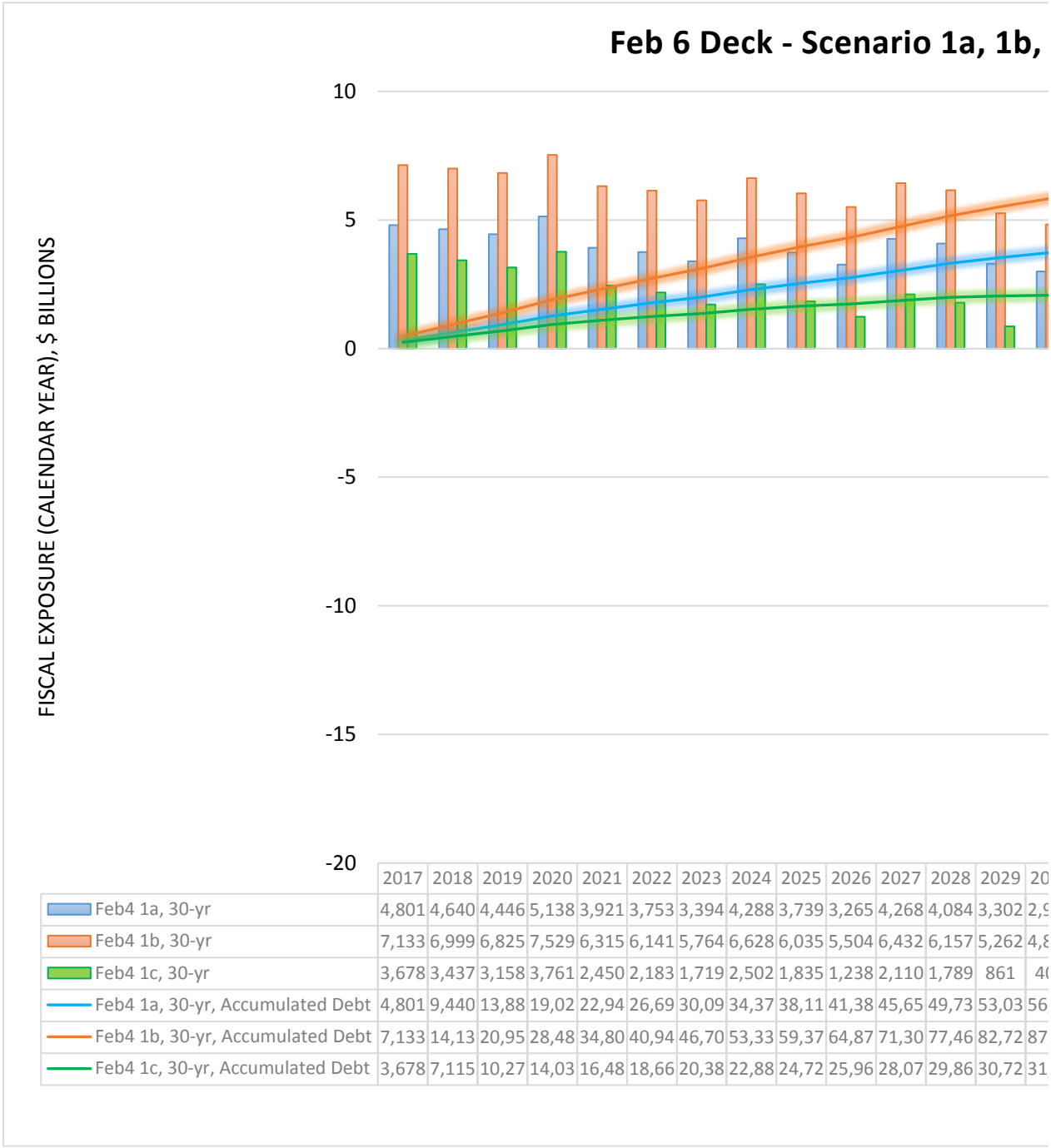
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	
Interest Cost - Feb8 1e, 30-yr			*19*	*96*	*176*	*265*	*376*	*471*	*548*	*616*	*704*	*756*	*795*	*862*	*902*	*898*	*873*	*839*	*803*	*765*	*725*	*683*	*640*	*593*	*545*	*494*	*440*	*384*	*325*	*263*	*197*	*129*	*56*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown			1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)			1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	0
Fiscal Exposure - Bi-Annual Debt Drawdown			1,519	1,561	1,598	2,272	1,956	1,655	1,154	1,913	1,203	562	1,406	1,040	57	-451	-668	-703	-738	-776	-816	-858	-902	-948	-996	-1,047	-1,101	-1,157	-1,216	-1,278	-1,344	-1,413	-1,485	0	0	0	
Bi-Annual Drawdown			750	733	711	1,003	790	592	303	649	250	(97)	305	89	(423)	(675)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	-	-	-	
FV of Bi-Annual Drawdown at 5%			1,519	1,484	1,441	2,033	1,600	1,200	613	1,314	506	(197)	618	180	(856)	(1,367)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	-	-	-	
Annual Interest Cost on New Drawdowns			19	19	18	26	20	15	8	17	6	(2)	8	2	(11)	(17)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	-	-	-	
Annual Interest Cost on Opening Balance			-	78	158	239	356	456	540	599	697	759	788	860	913	916	893	858	822	785	745	703	659	613	565	514	460	404	345	282	217	148	76	0	0	0	
Total Annual Interest Cost			19	96	176	265	376	471	548	616	704	756	795	862	902	898	873	839	803	765	725	683	640	593	545	494	440	384	325	263	197	129	56	0	0	0	

Feb8 1e, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	
Interest Cost - Feb8 1e, 30-yr			*38*	*116*	*196*	*294*	*401*	*492*	*563*	*640*	*719*	*763*	*813*	*875*	*903*	*893*	*864*	*830*	*793*	*755*	*715*	*673*	*628*	*581*	*532*	*481*	*427*	*369*	*310*	*247*	*180*	*111*	*38*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown			1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)			1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	0
Fiscal Exposure - Average Debt Drawdown			1,538	1,581	1,619	2,301	1,980	1,676	1,168	1,938	1,219	569	1,424	1,053	57	-457	-677	-711	-748	-786	-826	-869	-913	-960	-1,009	-1,060	-1,115	-1,172	-1,232	-1,295	-1,361	-1,430	-1,504	0	0	0	

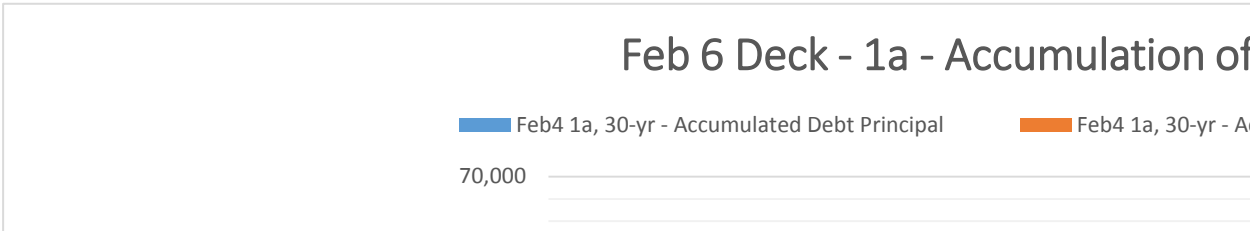
Feb 6 Deck

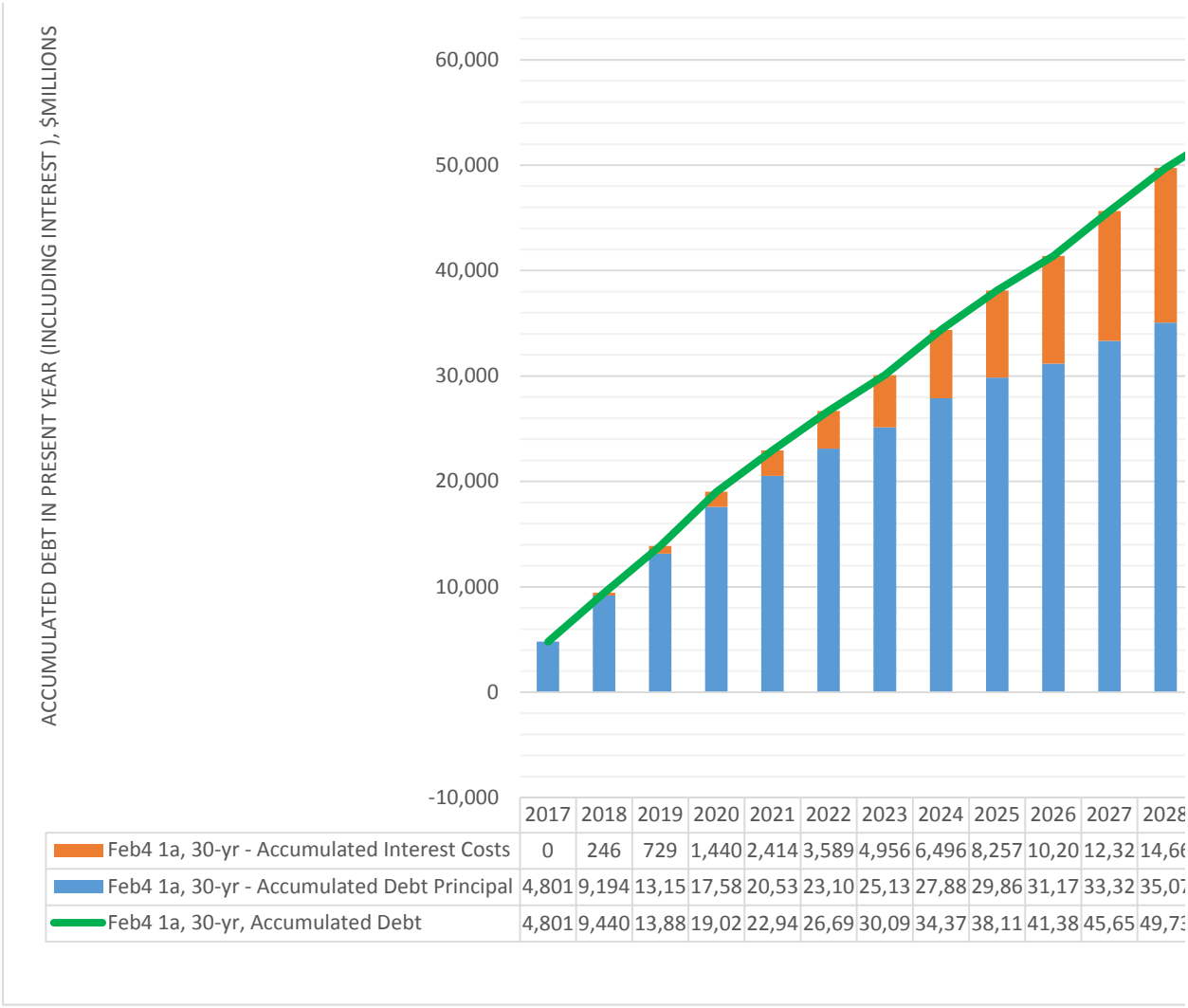
Feb 6 Deck - Scenario 1a, 1b, 1c - at 5.12% interest rate



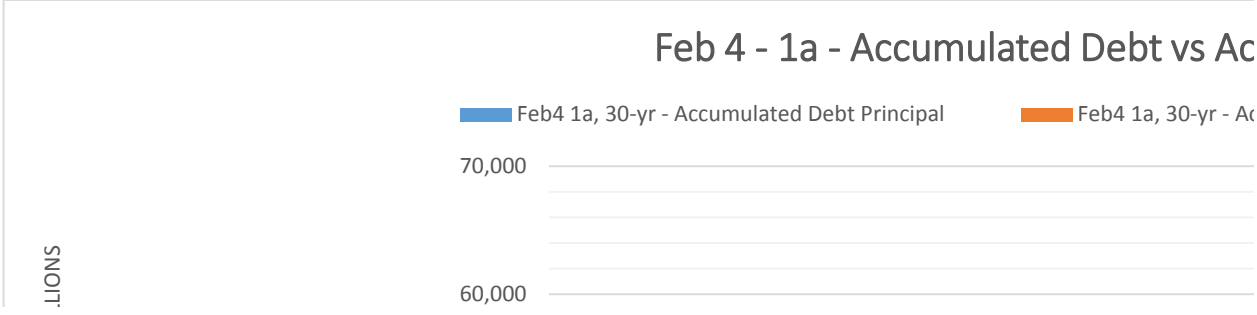
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	20
Feb4 1a, 30-yr	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,9
Feb4 1b, 30-yr	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,8
Feb4 1c, 30-yr	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	4(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73	53,03	56
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31

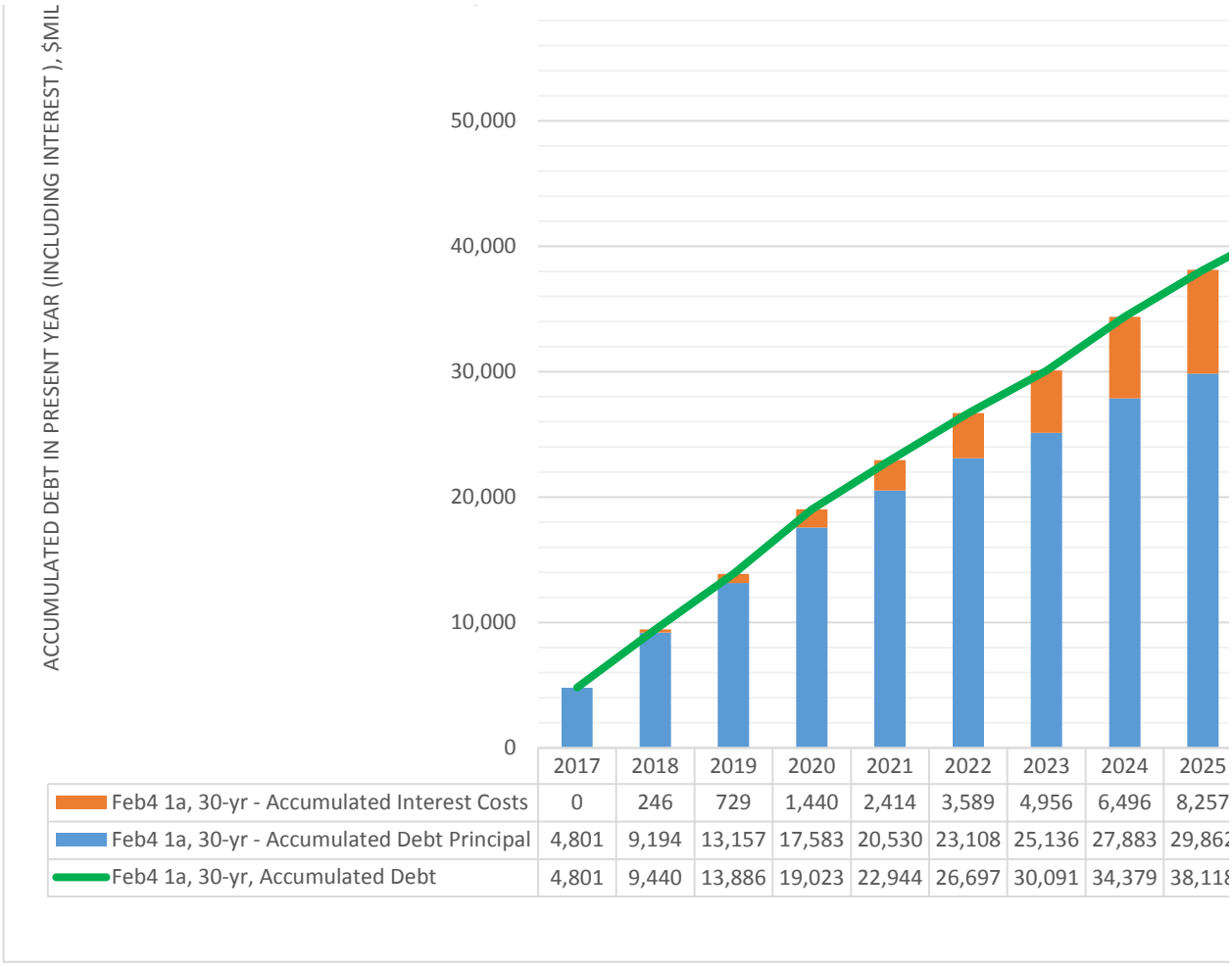
Feb 6 Deck - 1a - Accumulation of Debt (Principal and Interest)



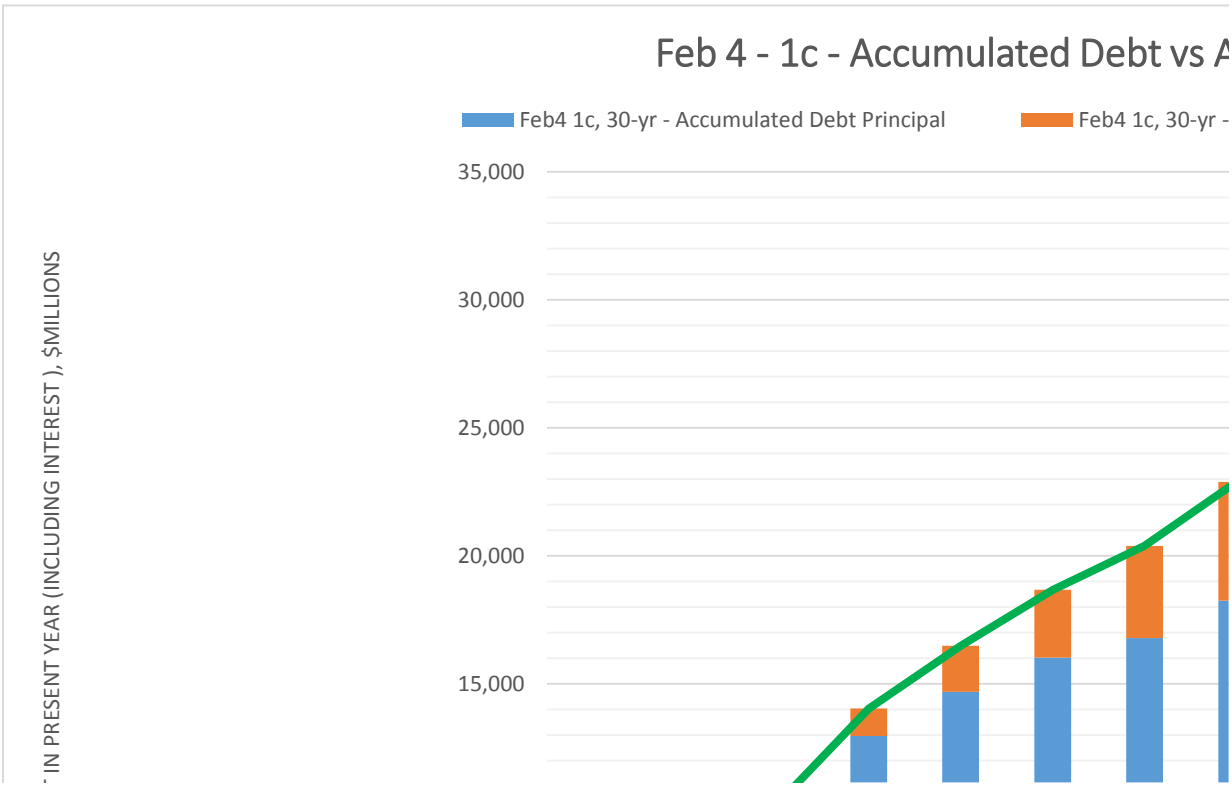


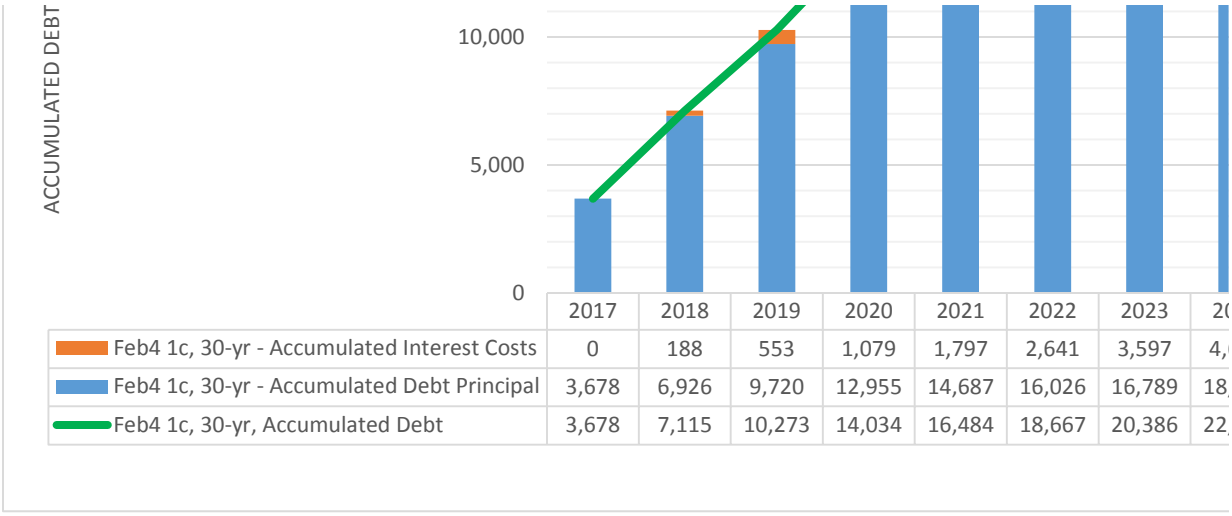
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,66
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,07
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73



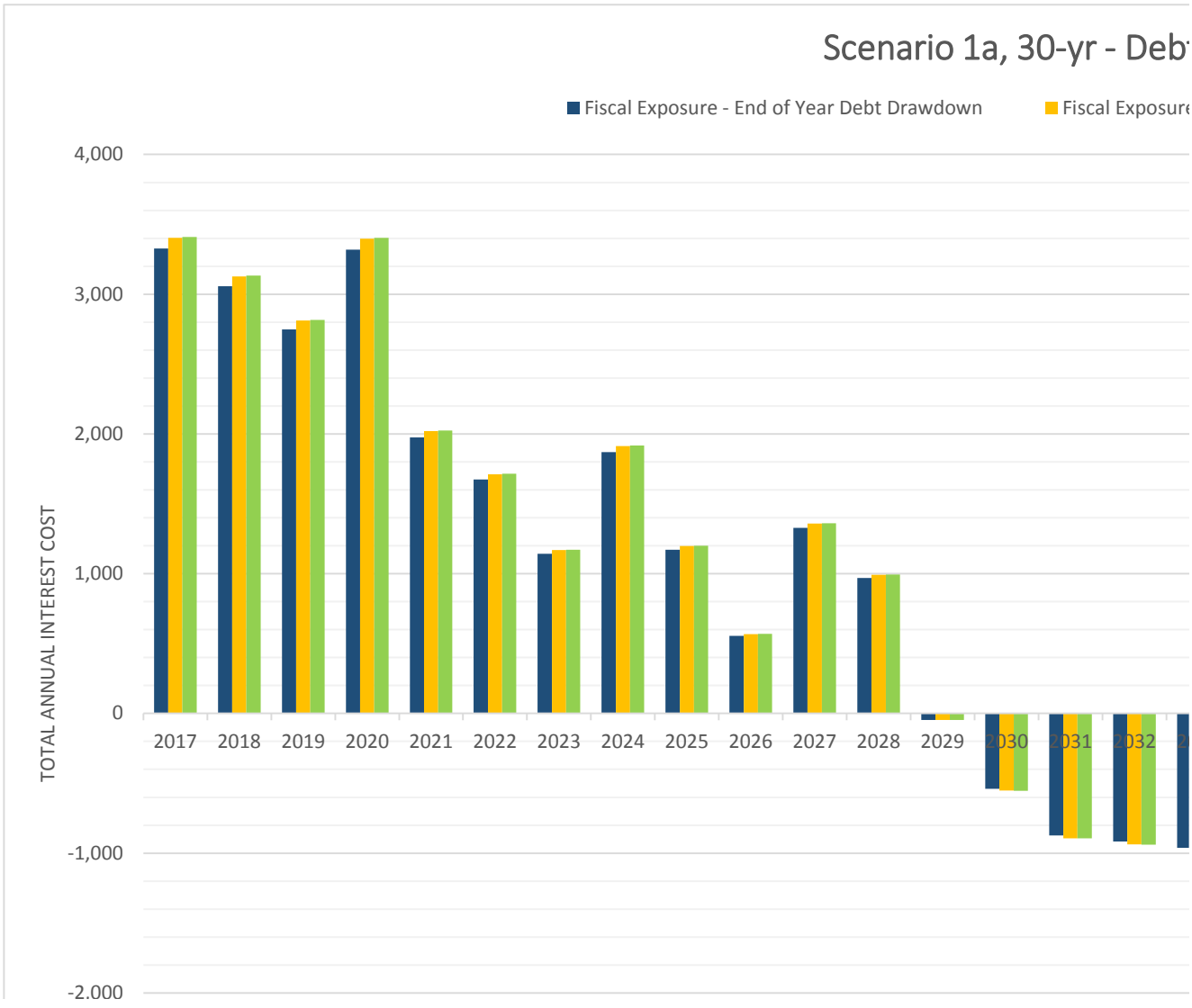


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



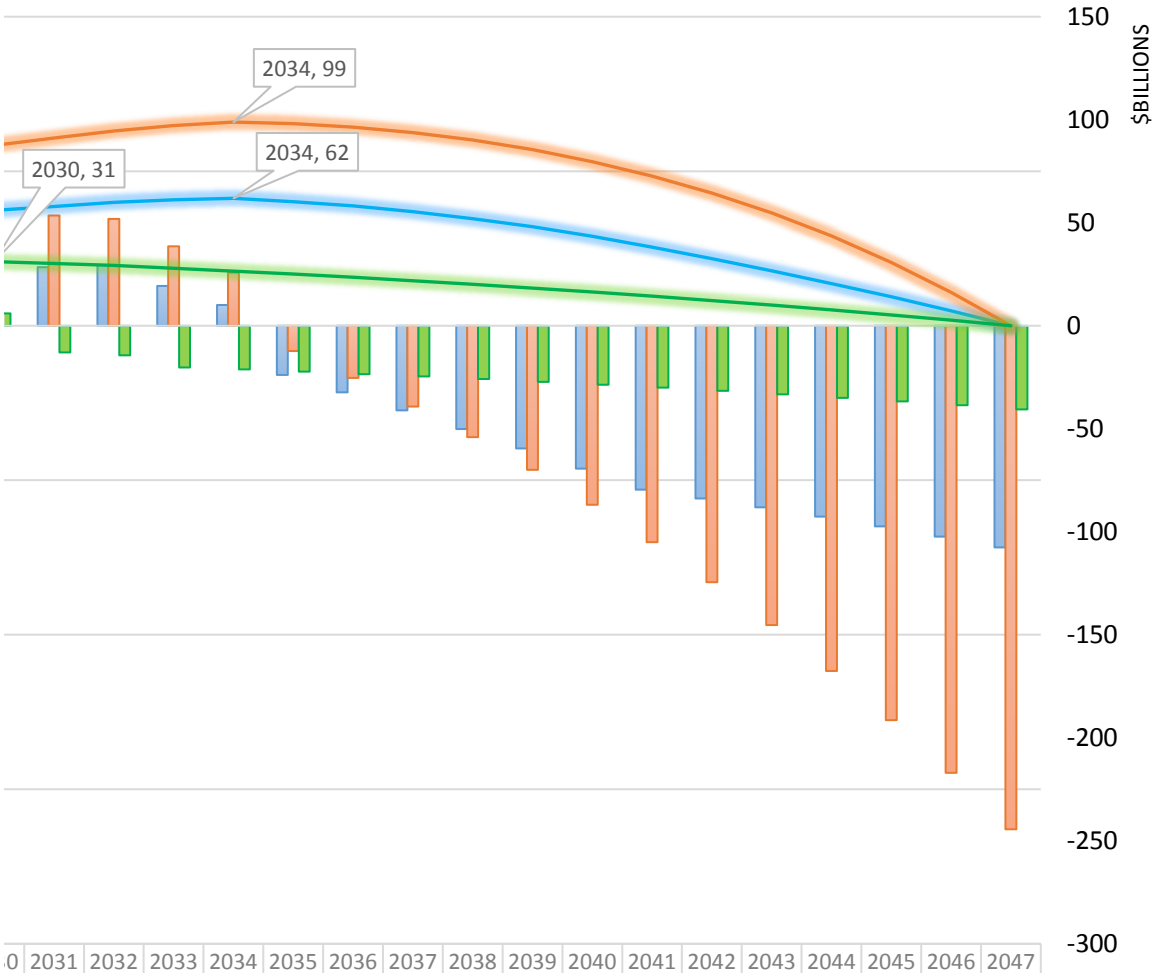


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22



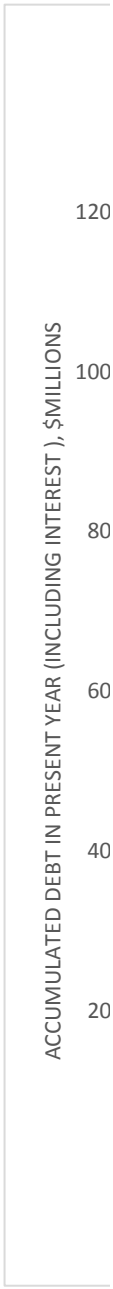

-3,000

lc - at 5.12% interest rate



0	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
98	1,896	1,966	1,288	672	-1,59	-2,15	-2,73	-3,34	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
26	3,568	3,457	2,571	1,716	-819	-1,68	-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
4	-860	-961	-1,34	-1,41	-1,48	-1,56	-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0
55	91,12	94,57	97,14	98,86	98,04	96,35	93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0
12	30,26	29,30	27,95	26,54	25,05	23,49	21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

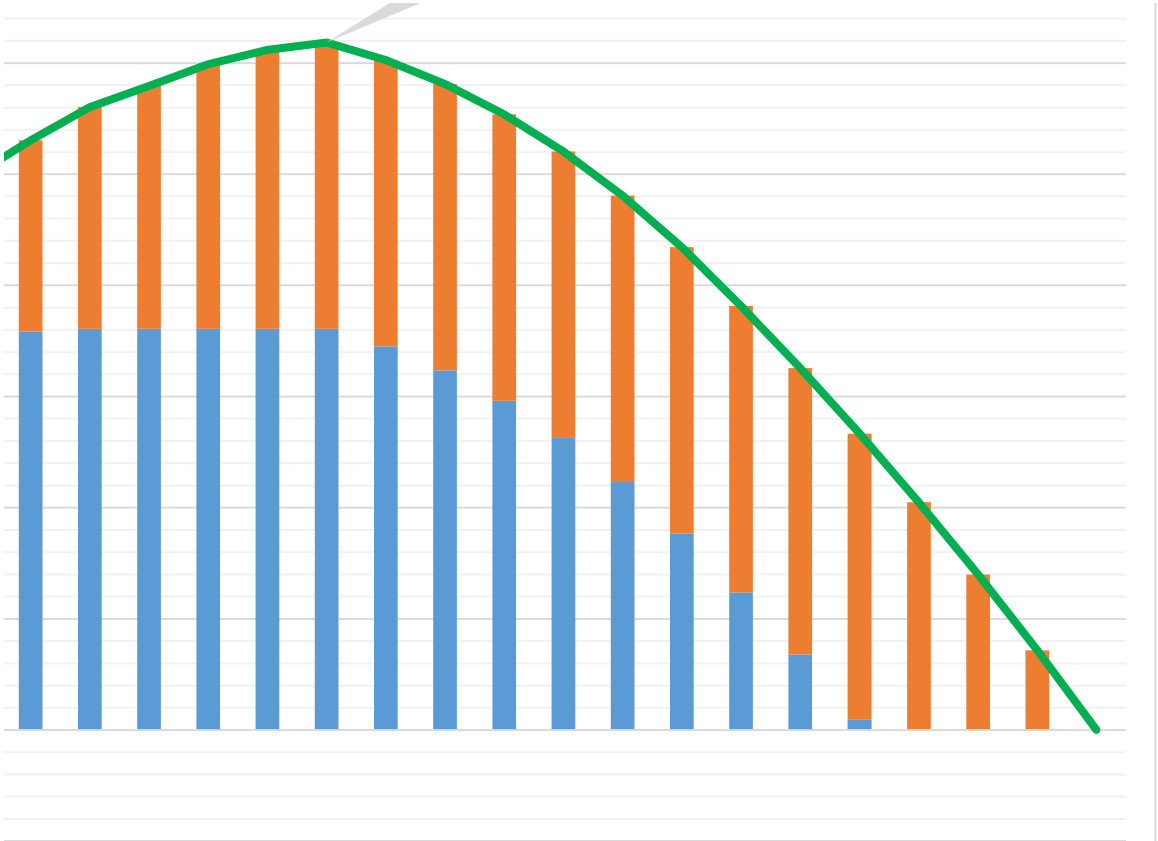
CALENDAR YEAR



Debt (Principal and Interest)

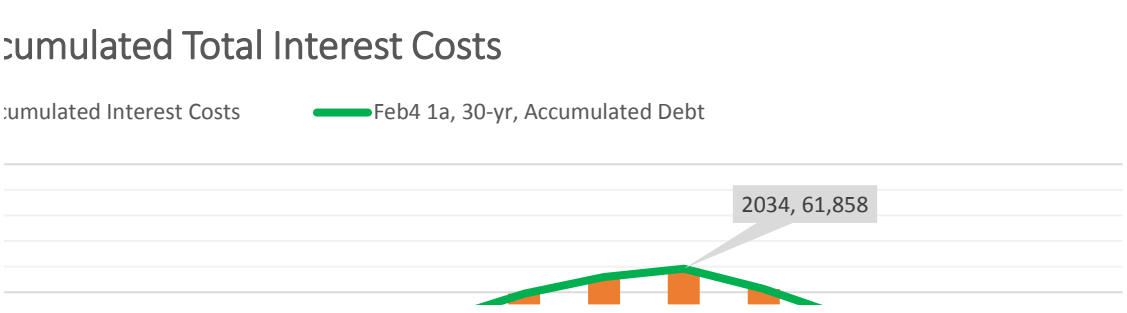
cumulated Interest Costs — Feb4 1a, 30-yr, Accumulated Debt

2034, 61,858

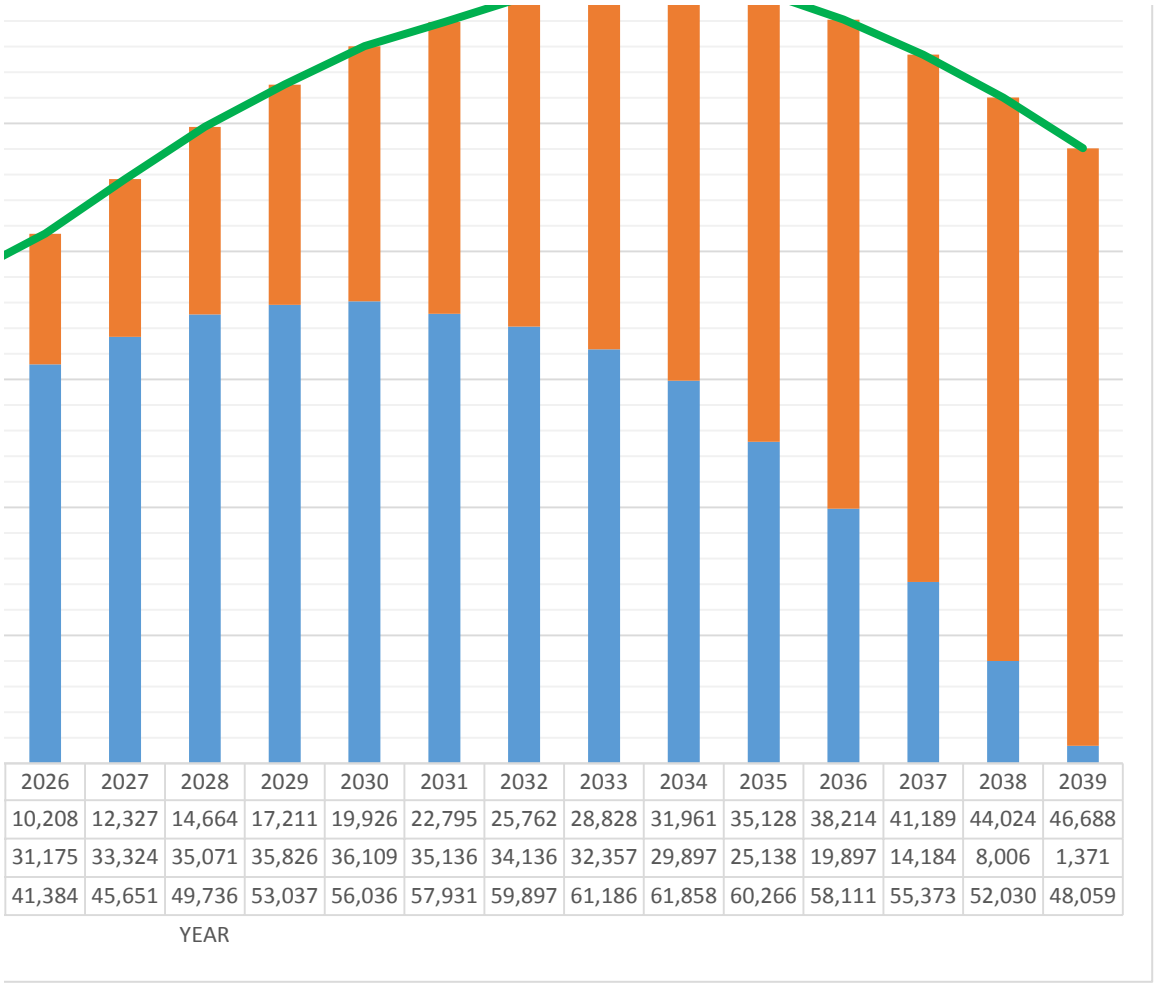


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



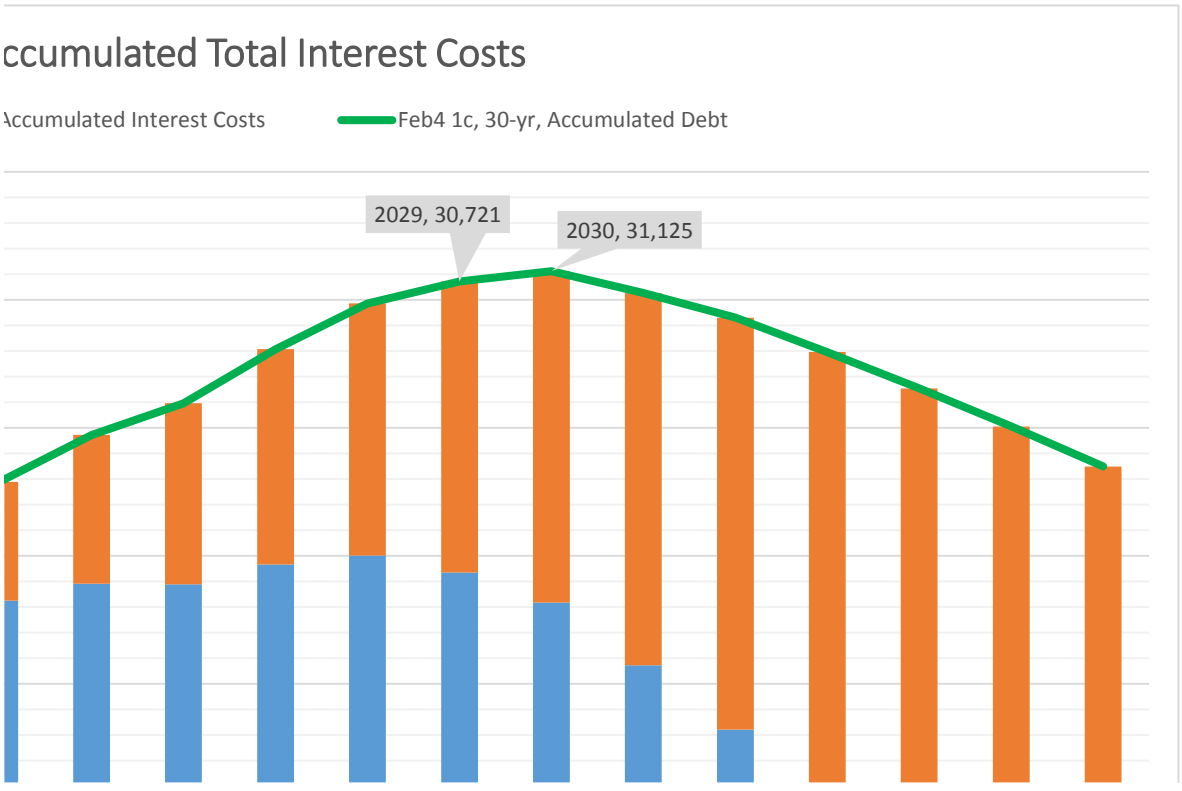
LIONS

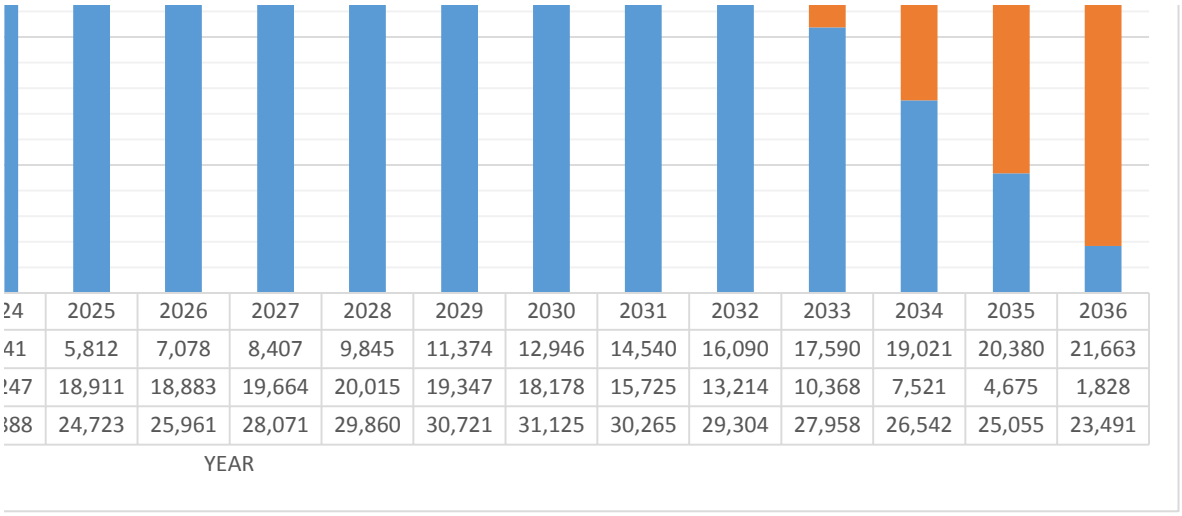


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

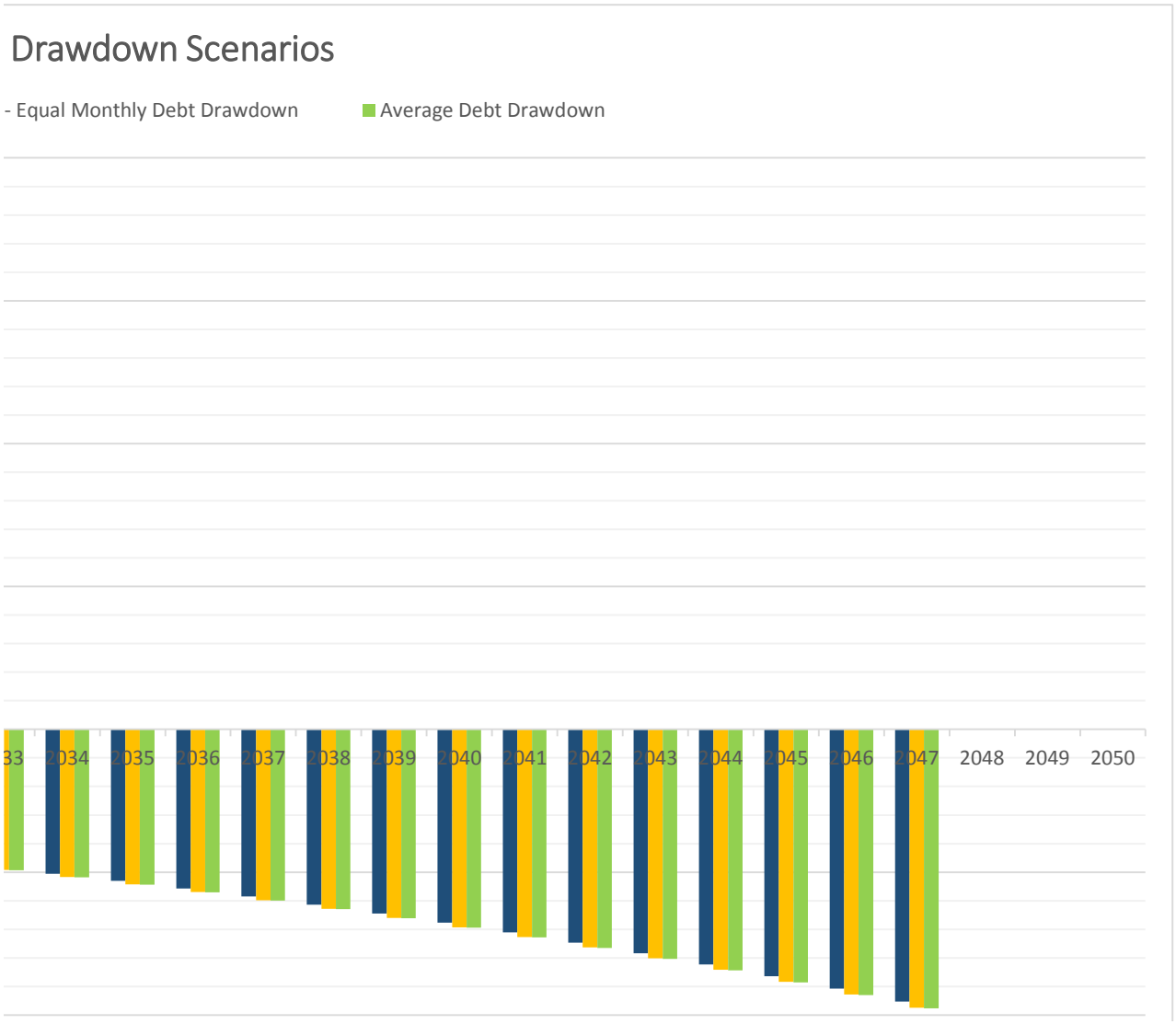
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





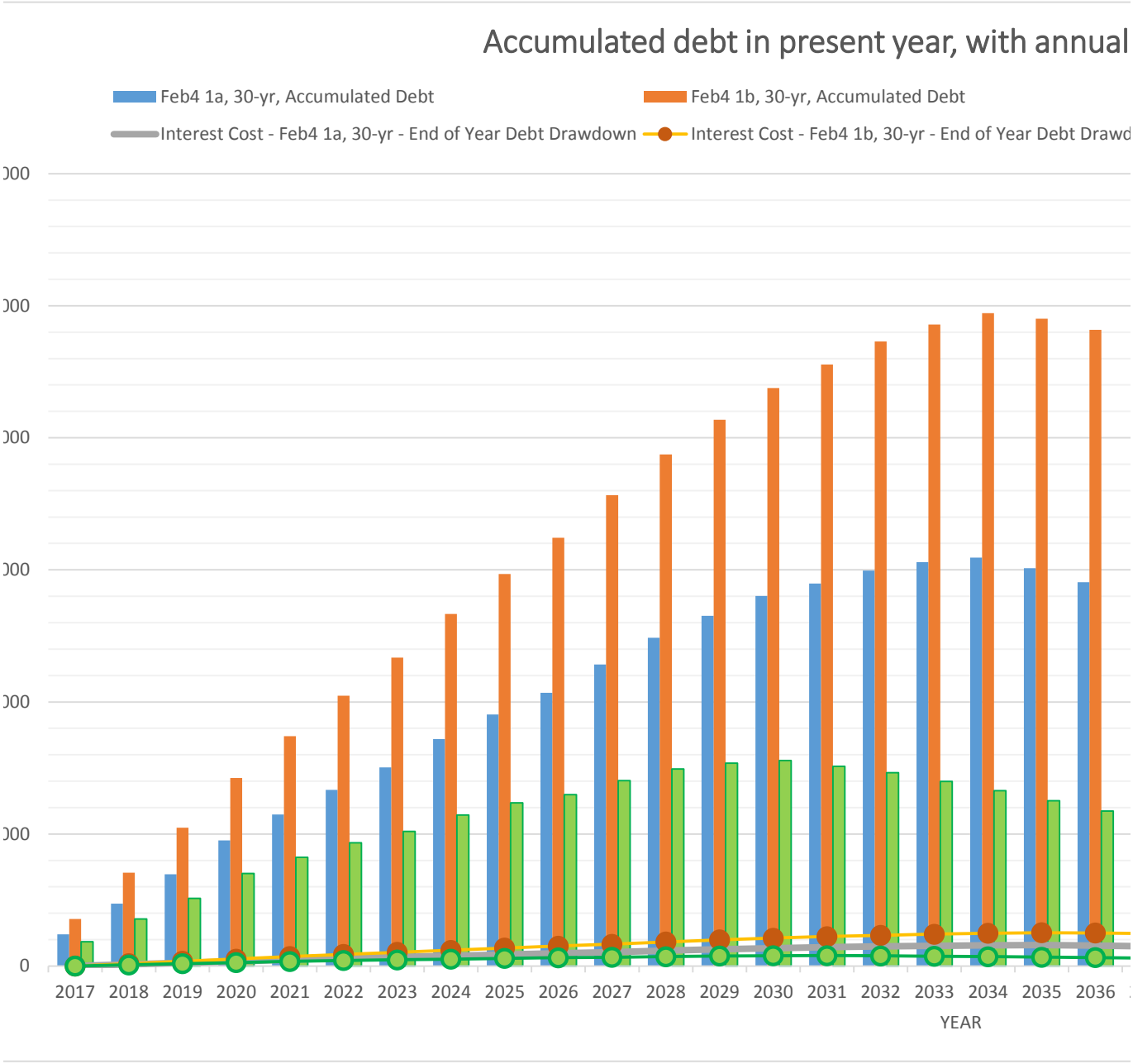
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

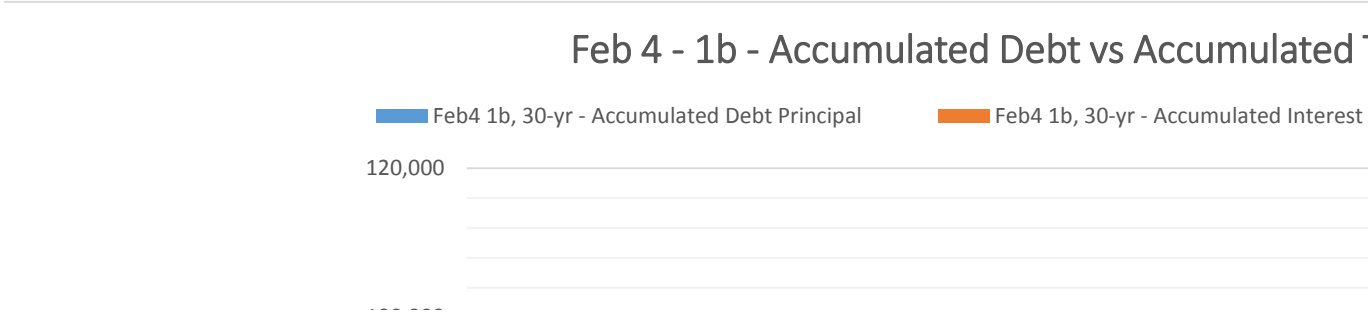
YEAR

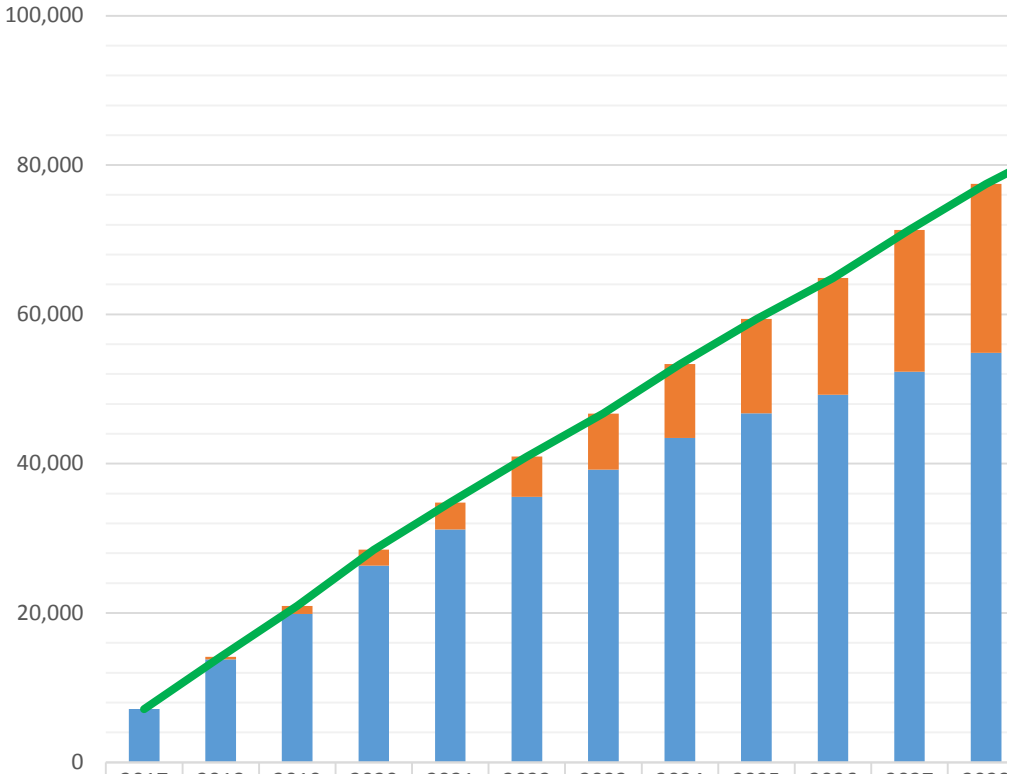


YEAR

ɜ - 25 year and 30 year Financing Terms, at 5% interest rate

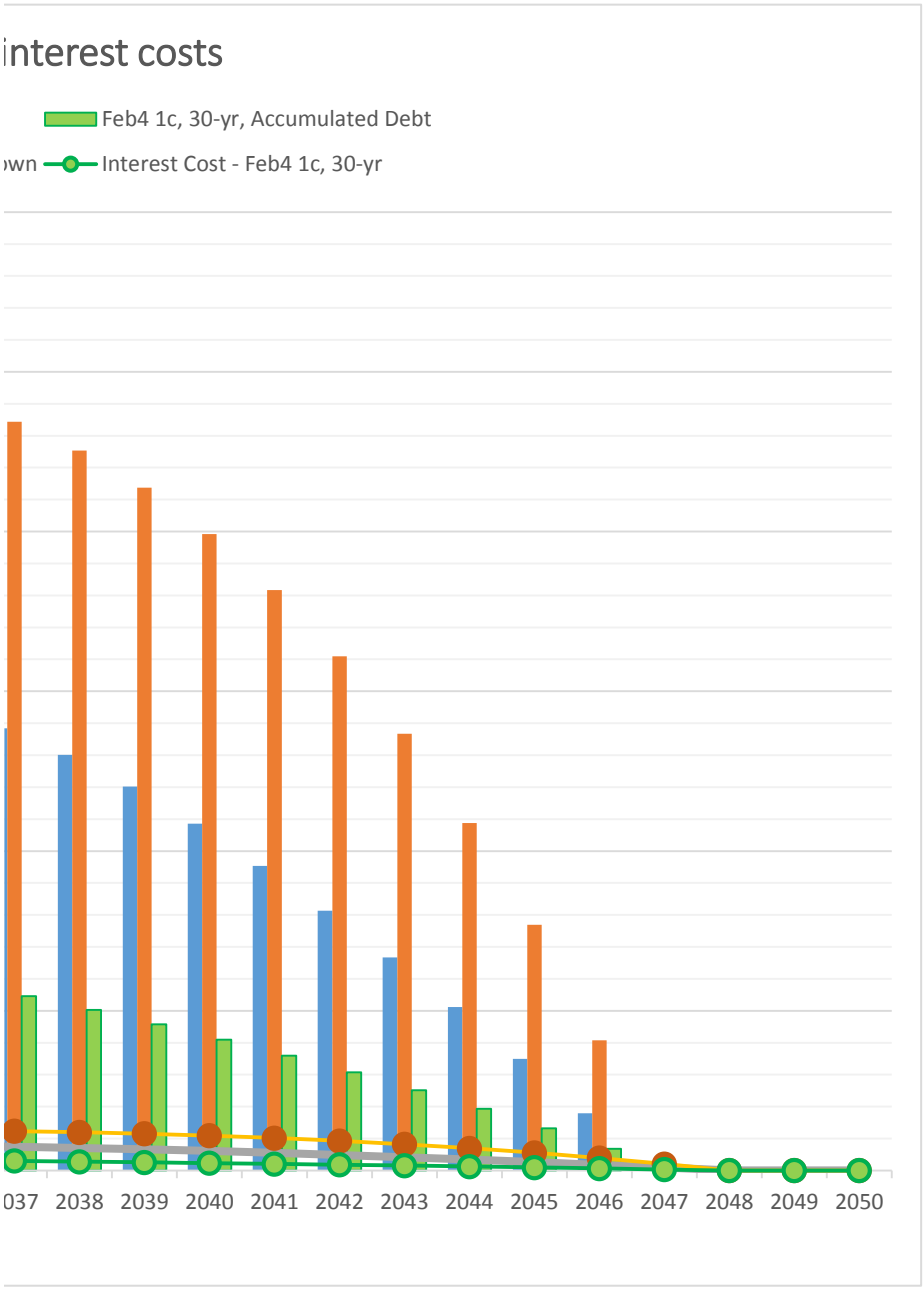


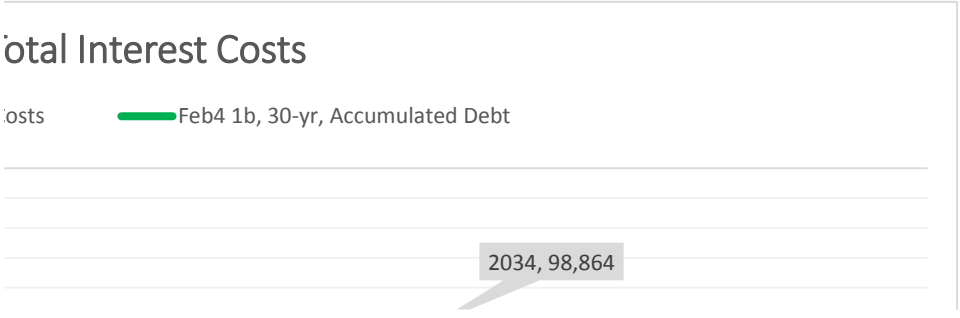

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

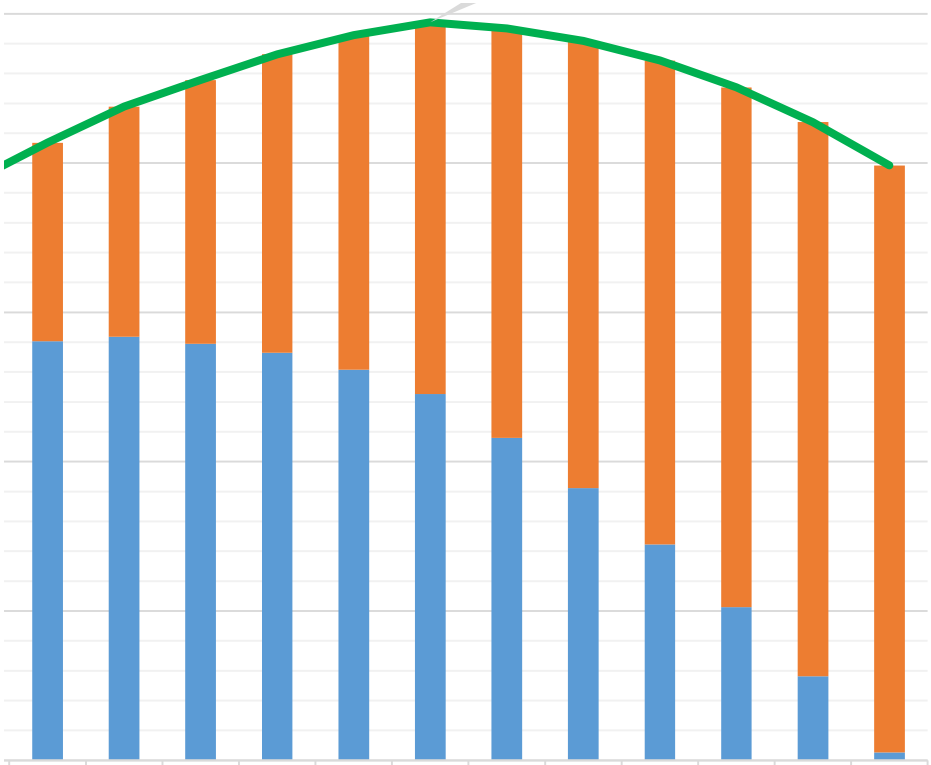


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y


interest costs
Feb4 1c, 30-yr, Accumulated Debt
wn
Interest Cost - Feb4 1c, 30-yr
037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR

Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

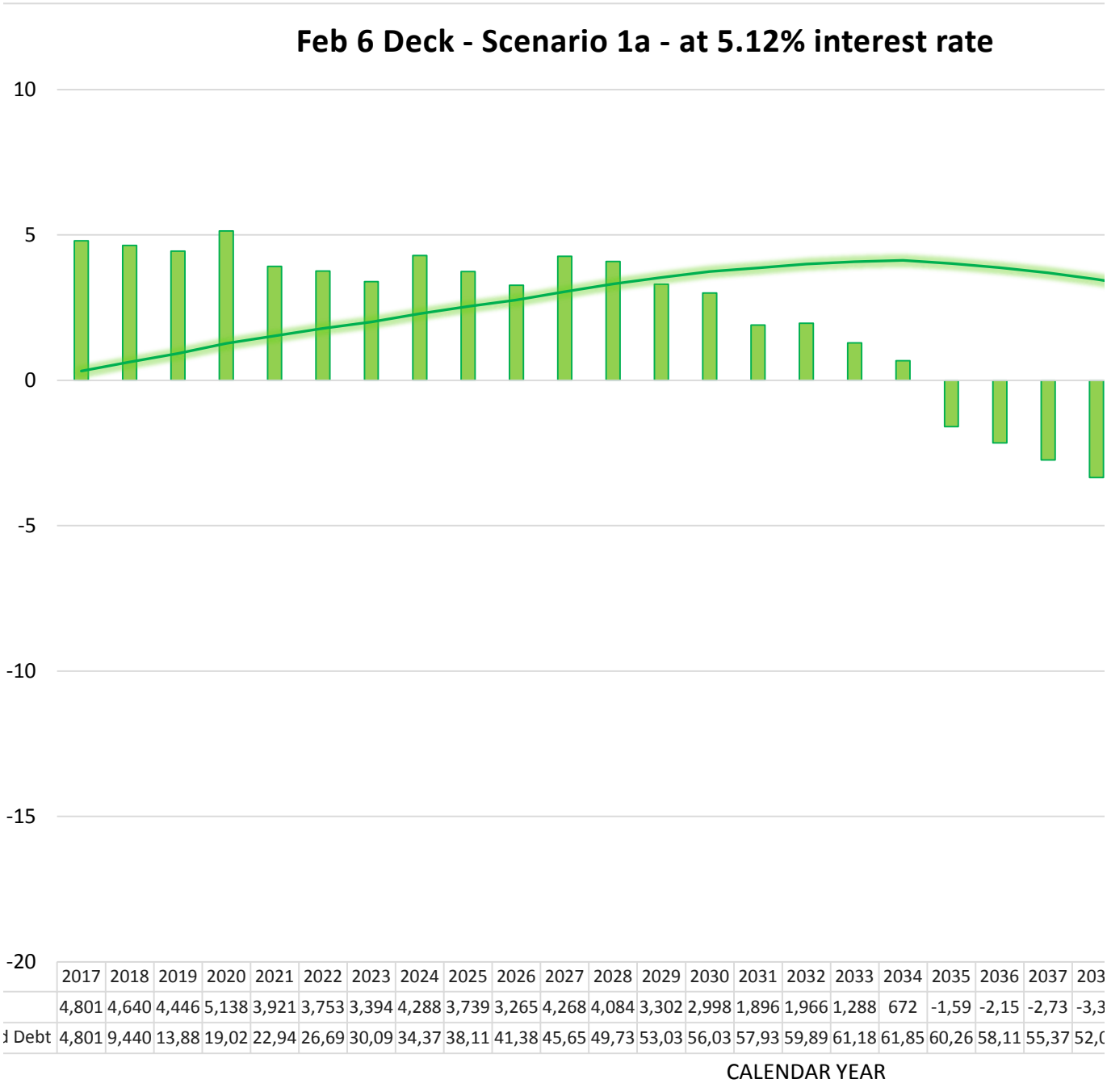
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

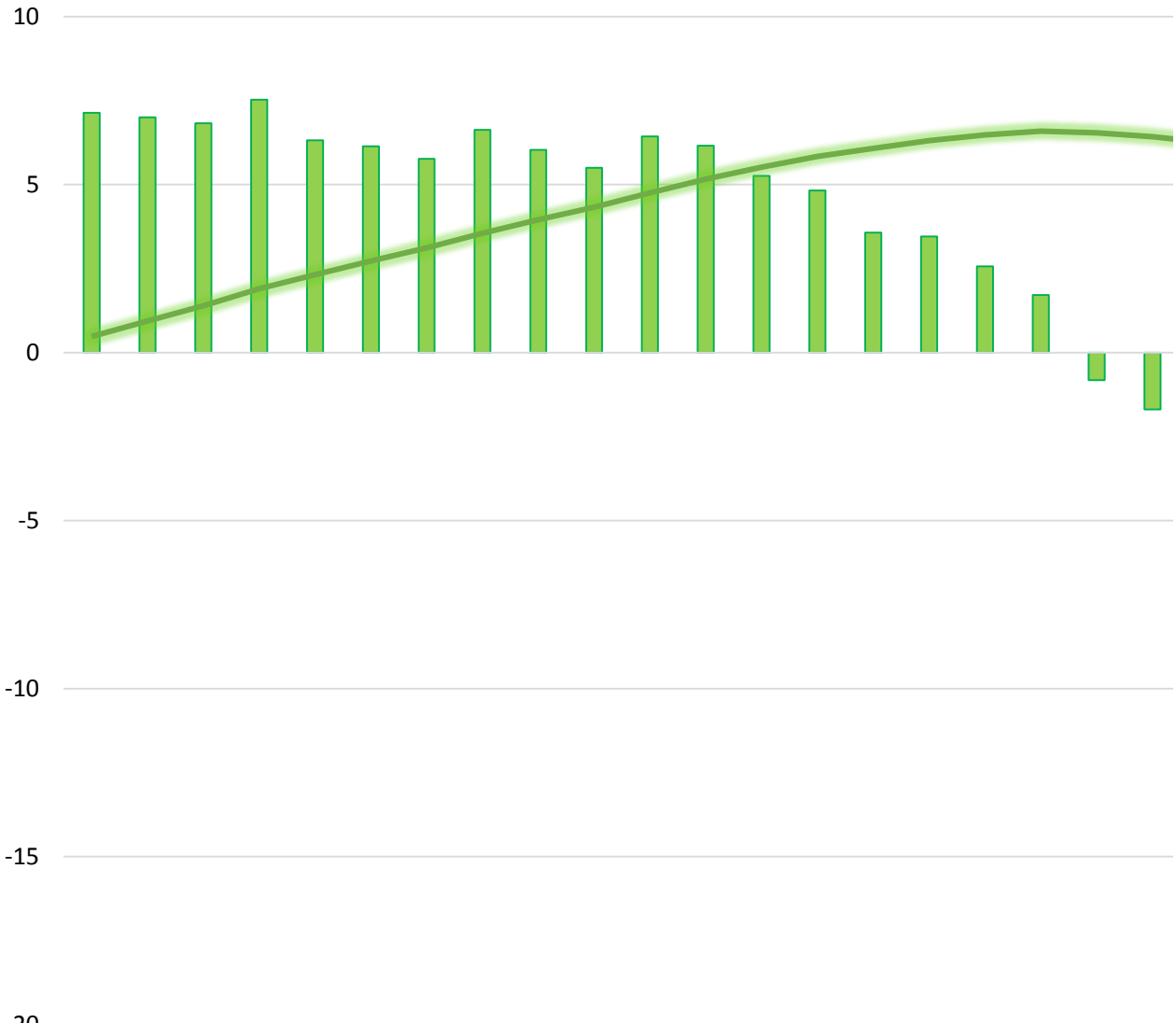
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

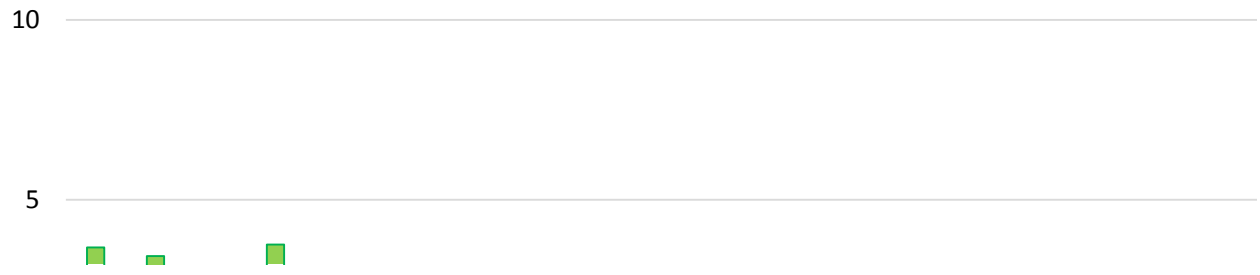
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

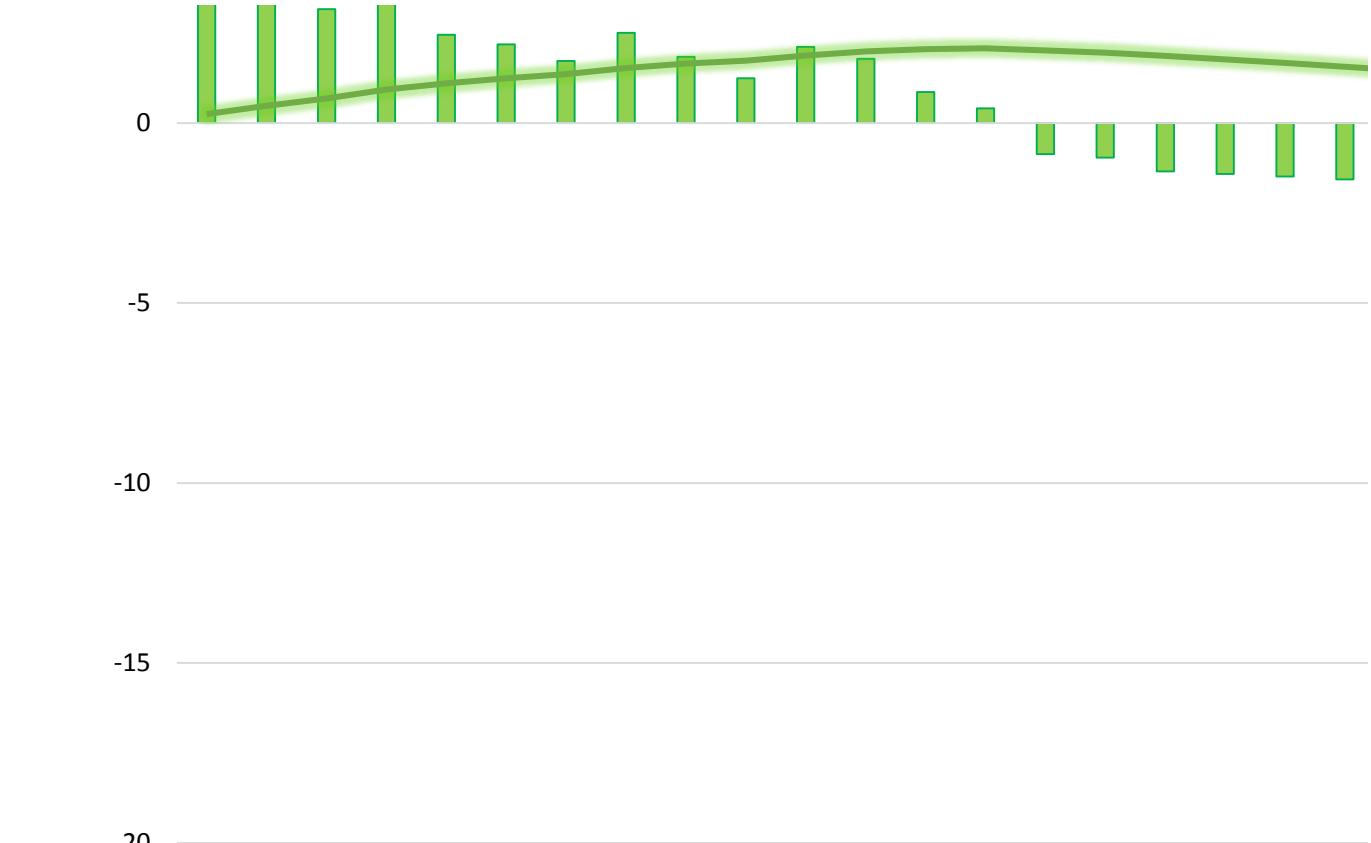


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



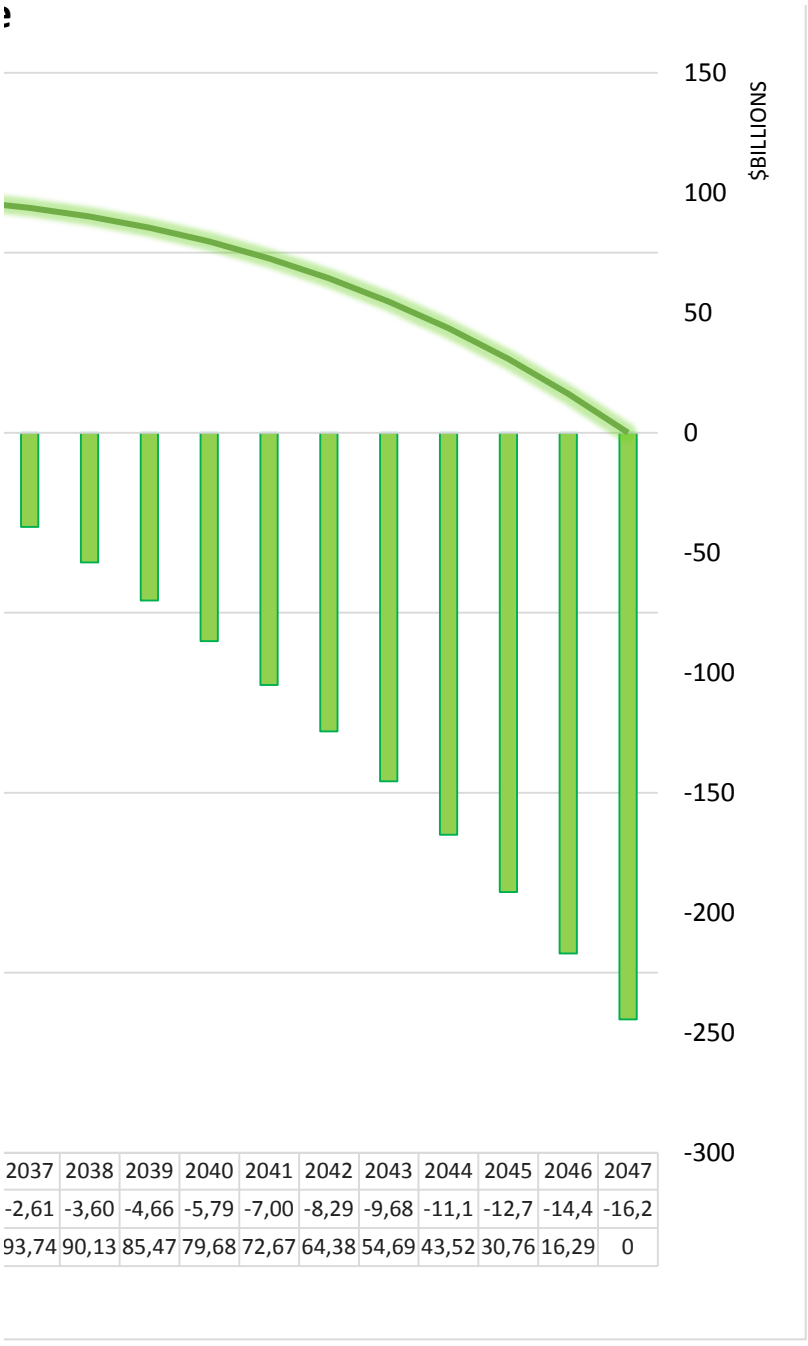


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

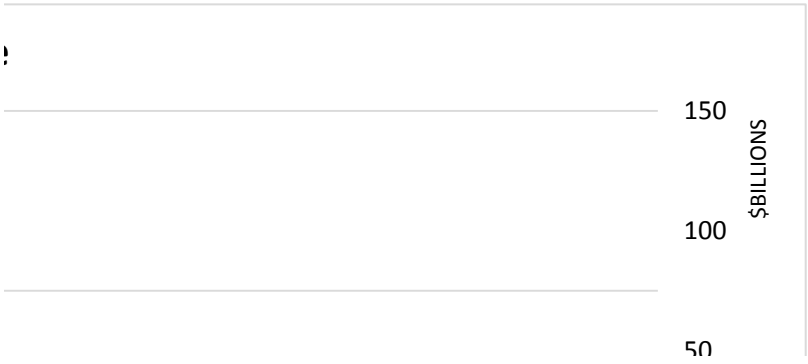
CALENDAR YEAR

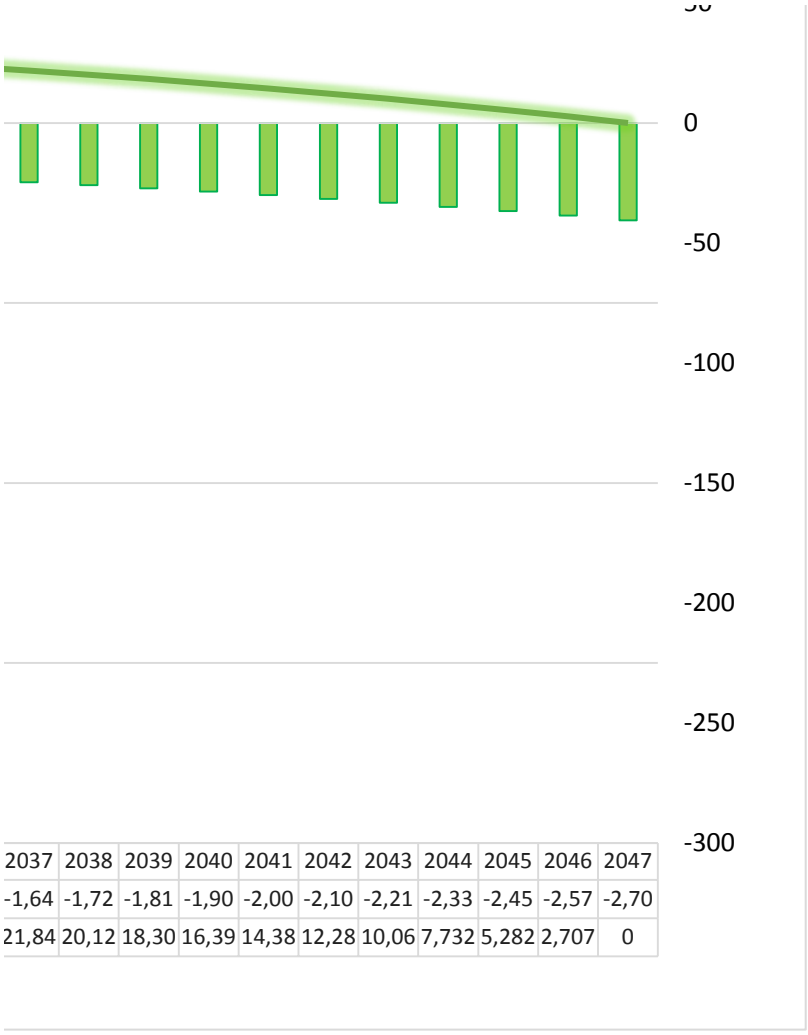


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Equal Monthly Debt Drawdown

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb4_1a_30yr

1a. GA Smoothing (Borrow ~$5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,801	4,640

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,200	4,760

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $62 billion, peakin
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary on accounting treatment.

7,133 7,133

Feb4_1b_30yr 7,133

1b. GA Smoothing (Borrow ~$7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	7,133	6,999

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,783	7,100

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $99 billion, peaking
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b on accounting treatment.

Feb4_1c_30yr

1c. GA Smoothing (Borrow ~$4 billion in 2017)

$ millions

Scenario 1C - 30-yr amortization	2017	2018
Annual Exposure[2]	3,678	3,437

	Fiscalized[3]	2016-17	2017-18
	Start: January 1st	919	3,617

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	1,783 - 1,200	7,100 - 4,760

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1200	4760
Debt-Finance Global Adjustment Costs, Option 1a	1783	7100
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18

Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1200**	**5000**
Total, B	1783	7340
Proposed Program Total:	1,783 - 1,200	7,340 - 5,000

ining

1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
4,446	5,138	3,921	3,753

2018-19	2019-20	2020-21	2021-2022
4,591	4,619	4,833	3,879

ng in 203 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
by approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
6,825	7,529	6,315	6,141

2018-19	2019-20	2020-21	2021-2022
6,956	7,001	7,226	6,272

g in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
3,158	3,761	2,450	2,183

2018-19	2019-20	2020-21	2021-2022
3,367	3,309	3,433	2,383

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
6,956 - 4,591	7,001 - 4,619	7,226 - 4,833	6,272 - 3,879

/1

2018-19[1]	2019-20[1]	2020-21[1]
4591	4619	4833
6956	7001	7226
225	279	323
60	60	60
18	18	18

4894	**4976**	**5234**
7259	7358	7627

7,259 - 4,894 7,358 - 4,976 7,627 - 5,234

1a. GA Smoothing (Borrow $5 billion in 2017)

	2017
IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	7,095
Additional GA Debt Drawdown, End of Year	5,000

Ratepayer GA Payment

Total Accumulated Debt *($ billion)*	5,000
Total Change in Accumulated Debt *($ billion)*	5000

1b. GA Smoothing (Borrow $7 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	5,095
Additional GA Debt Drawdown, End of Year	7,000

Total Accumulated Debt *($ billion)*	7000
Total Change in Accumulated Debt *($ billion)*	7000

1c. GA Smoothing (Borrow $4 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	8,095
Additional GA Debt Drawdown, End of Year	4,000

Total Accumulated Debt *($ billion)*	4000
Total Change in Accumulated Debt *($ billion)*	4000

2018	2019	2020	2021	2022	2023	2024	2025
11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
6,835	7,552	7,168	6,844	6,634	7,243	7,128	6,527
5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000

9,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000
5000	4000	5000	4000	4000	3000	4000	4000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
4,835	4,552	4,168	4,844	4,634	4,243	4,128	4,527
7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000

14000	21000	28000	35000	41000	47000	53000	59000
7000	7000	8000	6000	6000	6000	7000	6000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
8,835	8,552	8,168	8,844	8,634	8,243	8,128	8,527
3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000

7000	10000	14000	16000	19000	20000	23000	25000
3000	3000	4000	2000	2000	2000	3000	2000

2026	2027	2028	2029	2030	2031	2032	2033
10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
7,033	7,043	6,819	7,009	6,721	6,654	6,820	7,238
3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000

41,000	46,000	50,000	53,000	56,000	58,000	60,000	61,000
3000	4000	4000	3000	3000	2000	2000	1000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
4,033	5,043	4,819	5,009	4,721	4,654	5,820	5,238
6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000

65000	71000	77000	83000	88000	91000	95000	97000
6000	6000	6000	5000	5000	4000	3000	3000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
9,033	9,043	8,819	9,009	9,721	9,654	9,820	9,238
1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000

26000	28000	30000	31000	31000	30000	29000	28000
1000	2000	2000	1000	0	-1000	-1000	-1000

2034	2035	2036	2037	2038	2039	2040	2041
7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
6,756	7,662	7,389	8,129	7,881	8,645	9,421	9,207
1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000

62,000	60,000	58,000	55,000	52,000	48,000	43,000	38,000
1000	-2000	-2000	-3000	-3000	-4000	-5000	-5000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
5,756	6,662	7,389	8,129	8,881	9,645	10,421	11,207
2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000

99000	98000	96000	94000	90000	85000	80000	73000
2000	-1000	-2000	-3000	-4000	-5000	-6000	-7000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
8,756	6,662	7,389	7,129	6,881	6,645	6,421	6,207
-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000

27000	25000	23000	22000	20000	18000	16000	14000
-1000	-1000	-2000	-2000	-2000	-2000	-2000	-2000

2042	2043	2044	2045	2046	2047	2048		
4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
10,004	9,811	9,627	9,451	10,285	10,126	2,975		
-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0		

33,000	27,000	20,000	14,000	7,000	-	-	
-6000	-6000	-6000	-6000	-7000	-7000	0	

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
12,004	13,811	14,627	16,451	17,285	19,126	2,975		
-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0		

64000	55000	44000	31000	16000	0	0
-8000	-10000	-11000	-13000	-14000	-16000	0

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
6,004	5,811	5,627	5,451	6,285	6,126	2,975		
-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0		

12000	10000	8000	5000	3000	0	0
-2000	-2000	-2000	-2000	-3000	-3000	0

Feb4 1b, 30-yr - Debt Drawdown Scenarios

-149,507 -153857.97 97,141 56717.33 0

Feb4_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0
			170	167	162	179	150	146	137	158	144	131	153	147	125	115	85	82	61	41	-19	-40	-62	-86	-111	-138	-167	-198	-231	-266	-304	-344	-388	0	0	0

0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown 7,529	5,062	97,141
Equal Monthly Debt Drawdown 7,708	5,042	

Maximum Accumulated Debt	Feb4 1b, 30-yr, Accumulated Debt	Total Principal Debt Borrowed
End of Year Debt Drawdown	98,864	56,717
Equal Monthly Debt Drawdown	101,217	

Feb4 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
a Debt, Beginning of Year	0	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	
c = a*5% *Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown*	*0*	*365*	*724*	*1,073*	*1,459*	*1,782*	*2,096*	*2,391*	*2,731*	*3,040*	*3,322*	*3,651*	*3,966*	*4,236*	*4,483*	*4,665*	*4,842*	*4,974*	*5,062*	*5,020*	*4,933*	*4,800*	*4,615*	*4,376*	*4,080*	*3,721*	*3,296*	*2,800*	*2,228*	*1,575*	*834*	*0*	*0*	*0*	97,141
b Additional GA Debt Drawdown, End of Year	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
d = a+b+c Accumulated debt in present year (including 5% annual interest)	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	0	
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,633	26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606	82,685	86,406	89,703	92,503	94,731	96,306	97,141				
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,831	56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076	-10,007	-22,027	-35,008	-48,980	-63,971	-80,013	-97,141				
Fiscal Exposure - End of Year Debt Drawdown	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0	

Feb4 1b, 30-yr — Equal Monthly Debt Drawdown

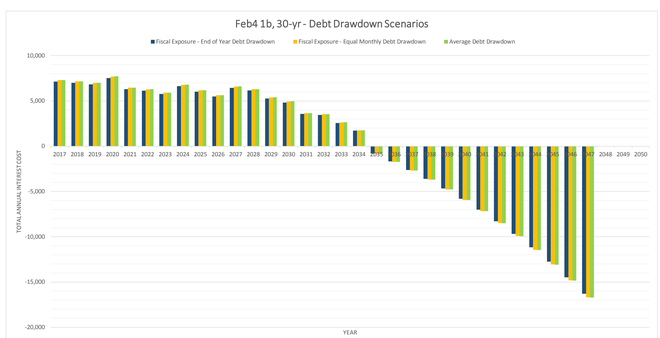
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	
5,042 *Interest Cost - Feb4 1b, 30-yr*	*170*	*532*	*886*	*1,252*	*1,609*	*1,928*	*2,234*	*2,549*	*2,874*	*3,171*	*3,475*	*3,797*	4,091	*4,350*	*4,568*	*4,748*	*4,904*	*5,015*	*5,042*	*4,980*	*4,871*	*4,714*	*4,504*	*4,238*	*3,913*	*3,524*	*3,066*	*2,534*	*1,925*	*1,231*	*446*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0	
Monthly Drawdown	594	553	508	538	405	363	306	353	275	205	259	209	108	49	(76)	(101)	(189)	(271)	(490)	(559)	(629)	(700)	(773)	(847)	(924)	(1,002)	(1,082)	(1,164)	(1,249)	(1,337)	(1,427)	(0)	-	-	
FV of Monthly Drawdown at 5%	7,303	6,792	6,247	6,610	4,972	4,463	3,755	4,338	3,383	2,523	3,184	2,565	1,327	605	(937)	(1,237)	(2,326)	(3,335)	(6,020)	(6,867)	(7,728)	(8,604)	(9,498)	(10,412)	(11,347)	(12,306)	(13,291)	(14,304)	(15,348)	(16,424)	(17,536)	(0)	-	-	
Annual Interest Cost on New Drawdowns	170	158	145	154	116	104	87	101	79	59	74	60	31	14	(22)	(29)	(54)	(78)	(140)	(160)	(180)	(200)	(221)	(242)	(264)	(286)	(309)	(333)	(357)	(382)	(408)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	374	741	1,099	1,493	1,824	2,146	2,448	2,796	3,112	3,401	3,738	4,061	4,336	4,589	4,776	4,958	5,092	5,182	5,139	5,051	4,914	4,725	4,481	4,177	3,810	3,375	2,867	2,281	1,612	854	0	(0)	(0)	
Total Annual Interest Cost	170	532	886	1,252	1,609	1,928	2,234	2,549	2,874	3,171	3,475	3,797	4,091	4,350	4,568	4,748	4,904	5,015	5,042	4,980	4,871	4,714	4,504	4,238	3,913	3,524	3,066	2,534	1,925	1,231	446	0	(0)	(0)	

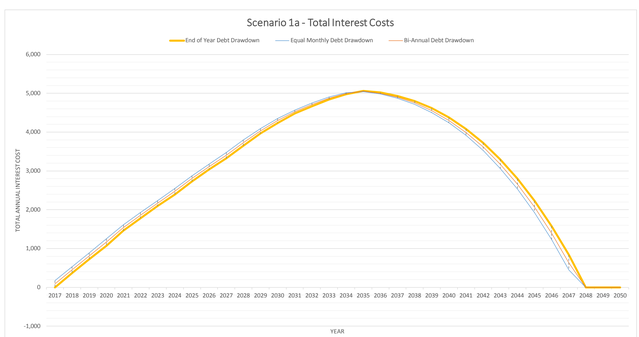
Feb4 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*91*	*455*	*811*	*1,169*	*1,539*	*1,861*	*2,170*	*2,476*	*2,808*	*3,110*	*3,404*	*3,730*	*4,034*	*4,297*	*4,528*	*4,710*	*4,875*	*4,996*	*5,051*	*4,998*	*4,900*	*4,753*	*4,555*	*4,302*	*3,990*	*3,615*	*3,172*	*2,657*	*2,065*	*1,390*	*626*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	7,225	7,089	6,913	7,626	6,396	6,220	5,838	6,713	6,113	5,574	6,514	6,235	5,330	4,888	3,614	3,501	2,603	1,738	-829	-1,709	-2,648	-3,651	-4,722	-5,867	-7,093	-8,405	-9,810	-11,314	-12,926	-14,652	-16,502	0	0	0	
Bi-Annual Drawdown	3,567	3,317	3,051	3,228	2,428	2,180	1,834	2,118	1,652	1,232	1,555	1,253	648	295	(457)	(604)	(1,136)	(1,629)	(2,940)	(3,354)	(3,774)	(4,202)	(4,639)	(5,085)	(5,542)	(6,010)	(6,491)	(6,986)	(7,495)	(8,021)	(8,564)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	7,225	6,719	6,180	6,539	4,919	4,415	3,715	4,291	3,347	2,496	3,150	2,538	1,313	598	(926)	(1,224)	(2,301)	(3,299)	(5,956)	(6,794)	(7,645)	(8,512)	(9,396)	(10,300)	(11,225)	(12,174)	(13,148)	(14,150)	(15,183)	(16,247)	(17,347)	(0)	-	-	
Annual Interest Cost on New Drawdowns	91	85	78	83	62	56	47	54	42	32	40	32	17	8	(12)	(15)	(29)	(42)	(75)	(86)	(97)	(108)	(119)	(130)	(142)	(154)	(166)	(179)	(192)	(205)	(219)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	370	733	1,087	1,477	1,805	2,123	2,422	2,766	3,079	3,364	3,698	4,017	4,290	4,540	4,725	4,904	5,038	5,127	5,084	4,997	4,861	4,674	4,432	4,132	3,769	3,338	2,836	2,257	1,595	845	0	0	0	
Total Annual Interest Cost	91	455	811	1,169	1,539	1,861	2,170	2,476	2,808	3,110	3,404	3,730	4,034	4,297	4,528	4,710	4,875	4,996	5,051	4,998	4,900	4,753	4,555	4,302	3,990	3,615	3,172	2,657	2,065	1,390	626	0	0	0	

Feb4 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*183*	*544*	*898*	*1,266*	*1,620*	*1,939*	*2,244*	*2,561*	*2,885*	*3,181*	*3,486*	*3,809*	*4,101*	*4,359*	*4,574*	*4,754*	*4,908*	*5,018*	*5,041*	*4,977*	*4,867*	*4,707*	*4,496*	*4,228*	*3,900*	*3,509*	*3,048*	*2,514*	*1,902*	*1,205*	*417*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	7,316	7,179	7,000	7,722	6,477	6,298	5,912	6,798	6,190	5,645	6,597	6,314	5,397	4,950	3,659	3,545	2,636	1,760	-840	-1,731	-2,682	-3,697	-4,782	-5,942	-7,183	-8,511	-9,934	-11,457	-13,089	-14,838	-16,711	0	0	0	





Feb4 1c, 30-yr - Debt Drawdown Scenarios

Feb4_1c_30yr

Annual Interest Rate = 5.1%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0
			88	82	75	90	58	52	41	60	44	29	50	43	20	10	-20	-23	-32	-34	-35	-37	-39	-41	-43	-45	-48	-50	-53	-55	-58	-61	-64	0	0	0

0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	3,761	1,594	29,477
Equal Monthly Debt Drawdown	3,851	1,583	

Maximum Accumulated Debt — Feb4 1c, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

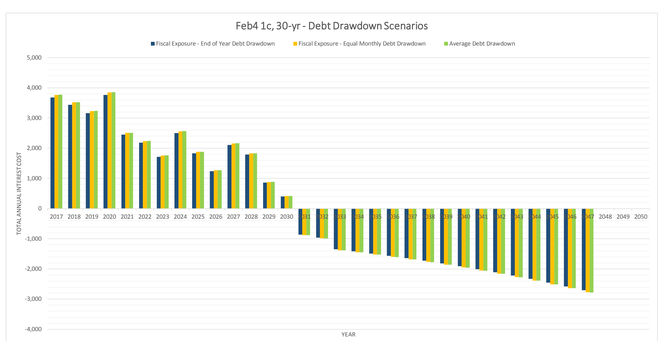
End of Year Debt Drawdown	31,125	20,043
Equal Monthly Debt Drawdown	31,866	

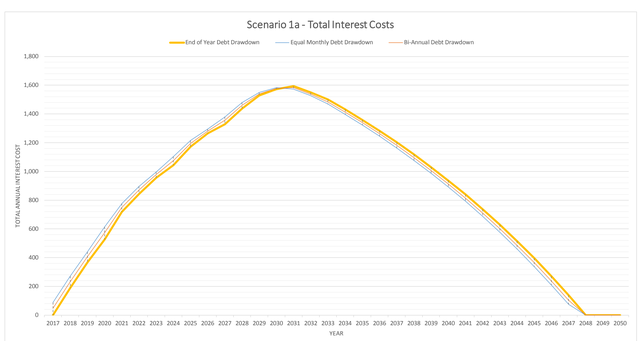
		30%	27%	24%	27%	16%	13%																														
Feb4 1c, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
a	Debt, Beginning of Year	0	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	
c = a*5%	*Interest Cost - Feb4 1c, 30-yr - End of Year Debt Drawdown*	*0*	*188*	*364*	*526*	*719*	*844*	*956*	*1,044*	*1,172*	*1,266*	*1,329*	*1,437*	*1,529*	*1,573*	*1,594*	*1,550*	*1,500*	*1,431*	*1,359*	*1,283*	*1,203*	*1,119*	*1,030*	*937*	*839*	*737*	*629*	*515*	*396*	*270*	*139*	*0*	*0*	*0*	*0*	29,477
b	Additional GA Debt Drawdown, End of Year	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	0	
	Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,641	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663	22,866	23,984	25,015	25,952	26,791	27,528	28,157	28,672	29,068	29,338	29,477				
	Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18,247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828	-1,018	-3,864	-6,710	-9,556	-12,402	-15,248	-18,094	-20,940	-23,786	-26,631	-29,477				
Fiscal Exposure - End of Year Debt Drawdown		3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0	

Feb4 1c, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	
1,583	*Interest Cost - Feb4 1c, 30-yr*	*88*	*270*	*439*	*615*	*777*	*896*	*997*	*1,103*	*1,216*	*1,295*	*1,379*	*1,480*	1,549	*1,583*	*1,573*	*1,527*	*1,468*	*1,398*	*1,324*	*1,246*	*1,164*	*1,077*	*987*	*892*	*792*	*686*	*576*	*460*	*338*	*209*	*74*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0	
	Monthly Drawdown	306	271	233	270	144	112	64	122	55	(2)	65	29	(56)	(97)	(204)	(209)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(0)	-	-	
	FV of Monthly Drawdown at 5%	3,765	3,326	2,861	3,312	1,773	1,371	781	1,493	679	(28)	799	360	(684)	(1,197)	(2,512)	(2,570)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,913)	(2,913)	(2,913)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	88	77	67	77	41	32	18	35	16	(1)	19	8	(16)	(28)	(58)	(60)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	193	373	538	736	864	979	1,069	1,200	1,296	1,361	1,471	1,565	1,610	1,632	1,586	1,536	1,465	1,391	1,313	1,231	1,145	1,055	959	859	754	644	527	405	277	142	0	0	0	
	Total Annual Interest Cost	88	270	439	615	777	896	997	1,103	1,216	1,295	1,379	1,480	1,549	1,583	1,573	1,527	1,468	1,398	1,324	1,246	1,164	1,077	987	892	792	686	576	460	338	209	74	0	0	0	

Feb4 1c, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*47*	*232*	*405*	*574*	*750*	*872*	*978*	*1,076*	*1,195*	*1,282*	*1,356*	*1,460*	*1,540*	*1,578*	*1,583*	*1,537*	*1,483*	*1,413*	*1,340*	*1,263*	*1,182*	*1,097*	*1,007*	*913*	*814*	*710*	*600*	*485*	*365*	*237*	*104*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,725	3,481	3,199	3,809	2,481	2,211	1,741	2,534	1,859	1,254	2,137	1,812	872	409	-871	-973	-1,363	-1,433	-1,506	-1,584	-1,665	-1,750	-1,839	-1,933	-2,032	-2,136	-2,246	-2,360	-2,481	-2,608	-2,742	0	0	0	
	Bi-Annual Drawdown	1,839	1,624	1,397	1,618	866	670	382	729	332	(14)	390	176	(334)	(584)	(1,227)	(1,255)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(0)	-	-	
	FV of Bi-Annual Drawdown at 5%	3,725	3,290	2,830	3,277	1,754	1,356	773	1,477	672	(28)	791	356	(677)	(1,184)	(2,485)	(2,542)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	47	42	36	41	22	17	10	19	8	(0)	10	5	(9)	(15)	(31)	(32)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	191	369	533	728	855	968	1,057	1,187	1,282	1,346	1,456	1,548	1,593	1,614	1,569	1,520	1,450	1,376	1,299	1,218	1,133	1,043	949	850	746	637	522	401	274	140	0	0	0	
	Total Annual Interest Cost	47	232	405	574	750	872	978	1,076	1,195	1,282	1,356	1,460	1,540	1,578	1,583	1,537	1,483	1,413	1,340	1,263	1,182	1,097	1,007	913	814	710	600	485	365	237	104	0	0	0	

Feb4 1c, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*94*	*276*	*445*	*622*	*781*	*900*	*1,000*	*1,108*	*1,219*	*1,298*	*1,383*	*1,483*	*1,551*	*1,583*	*1,572*	*1,525*	*1,466*	*1,395*	*1,321*	*1,243*	*1,161*	*1,074*	*984*	*888*	*788*	*683*	*572*	*456*	*333*	*205*	*69*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,772	3,525	3,239	3,857	2,513	2,239	1,763	2,566	1,882	1,270	2,164	1,835	883	414	-882	-985	-1,381	-1,451	-1,526	-1,604	-1,686	-1,772	-1,863	-1,958	-2,058	-2,163	-2,274	-2,390	-2,513	-2,641	-2,776	0	0	0	





30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

TO BE

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,556	3,123	1,728	1,400	836	1,560	821	167

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

E UPDATED

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

JK: Fixed the formula in the yellow highlighted cells. Pls. check. (SK: looks good to me)

	Tab
v16 GA Financing - Scenario 1a 1b v18 (with fiscal) - Feb 4_v2.xlsx	Powerpoint_Export Scenario tabs

Change Description

Added in trigger for later start in the year
Updated IESO forecast from Energy (IESO GA Cost Forecast 170207 (Feb 6 update).xlsx)

Equal Monthly Debt Drawdown

		Month	Months Remai
Scenario Start Date	**July**	7	6

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	3,180	2,888
Annual Exposure2 with start on July 1st	*1,590*	*2,888*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	795	3,107
Start: July 1st	-	*2,312*

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	851	3,335
Start: July 1st	-	*2,484*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	1,168	1,765
Annual Exposure2 with start on July 1st	*584*	*1,765*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	292	1,609
Start: July 1st	-	*1,025*

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,449	2,040
Annual Exposure2 with start on July 1st	*725*	*2,040*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,597
Start: July 1st	-	*1,959*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335
Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3575**
Total, B	362	1837
Proposed Program Total:	362 - 851	1,837 - 3,575

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,556	3,123	1,728	1,400
2,556	*3,123*	*1,728*	*1,400*

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646
2,805	*2,697*	*2,774*	*1,646*

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

ıking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
2,311	3,750	2,311	1,933
2,311	*3,750*	*2,311*	*1,933*

2018-19	2019-20	2020-21	2021-2022

1,901	2,671	3,391	2,217
1,901	*2,671*	*3,391*	*2,217*

2019	2020	2021	2022
2,581	4,016	2,598	2,241
2,581	*4,016*	*2,598*	*2,241*

2018-19	2019-20	2020-21	2021-2022
2,175	2,940	3,662	2,508
2,175	*2,940*	*3,662*	*2,508*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

/1

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052
2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

Equal Monthly Debt Drawdown

		Month	Months Remaining
Scenario Start Date	July	7	6

AS LONG AS >

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	3,180	2,888	2,556

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	795	3,107	2,805
Fiscal Exposure, 25%	199	777	701

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Annual Exposure[2]	3,404	3,128	2,812

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	851	3,335	3,049
Fiscal Exposure, 25%	213	834	762

Indicates year in which, similar to OPCD's exa
closest to 30%. As Fiscal 2016/17 is a partial y
month the GA deferral begins.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu
decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions	9%	14%	18%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	1,168	1,765	2,311

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	292	1,609	1,901
Fiscal Exposure, 25%	73	402	475

Scenario 1b - 30-yr amortization	2017	2018	2019
Annual Exposure[2]	1,449	2,040	2,581

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	362	1,597	2,175
Fiscal Exposure, 25%	91	399	544

Indicates year in which, similar to OPCD's exar closest to 30%.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 ar
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu on accounting treatment.

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]
Debt-Finance Global Adjustment Costs, Option 1a	213	834	762
Debt-Finance Global Adjustment Costs, Option 1b	91	399	544
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**213**	**1074**	**1065**
Total, B	91	639	847

Proposed Program Total:	91 - 213	639 - 1,074	847 - 1,065

($M)	2016-171	2017-181	2018-191
Debt-Finance Global Adjustment Costs, Option 1a	851	3335	3049
Debt-Finance Global Adjustment Costs, Option 1b	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**851**	**3575**	**3352**
Total, B	362	1837	2478

Proposed Program Total:	362 - 851	1,837 - 3,575	2,478 - 3,352

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6

7	July	7	
8	August	8	
9	September	9	
10	October	10	
11	November	11	
12	December	12	

30-year term	**2016-17**	**2017-18**	**2018-19**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335	2,175 - 3,049

ROWS HIDDEN

1	1 = Comparision Enabled

APRIL 1, 2017 25%

2020	2021	2022
3,123	1,728	1,400

2019-20	2020-21	2021-2022
2,697	2,774	1,646
674	693	412

2020	2021	2022
3,396	2,020	1,712

2019-20	2020-21	2021-2022
2,958	3,052	1,943
740	763	486

mple, the true cost of GA being deferred is
ear, exposure may be less subject to which

l $17-21 billion (at 3.5% interest rate), peaking in 2028.
$33-$36 million.

ıals per month based on month of the year. Actuals may also depend on

28%	17%	13%
2020	2021	2022
3,750	2,311	1,933

2019-20	2020-21	2021-2022
2,671	3,391	2,217
668	848	554

2020	2021	2022
4,016	2,598	2,241

2019-20	2020-21	2021-2022
2,940	3,662	2,508
735	915	627

mple, the true cost of GA being deferred is

ıd $17-21 billion (at 3.5% interest rate), peaking in 2028.
$118-$134 million.

ıals per month based on month of the year. Actuals may also depend on decision

2019-20[1]	2020-21[1]
740	763
735	915
279	323
60	60
18	18
1097	**1164**
1092	1316

1,092 - 1,097 1,316 - 1,164

2019-201	2020-211
2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453





2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964
Equal Monthly Debt Drawdown	3,180	952

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

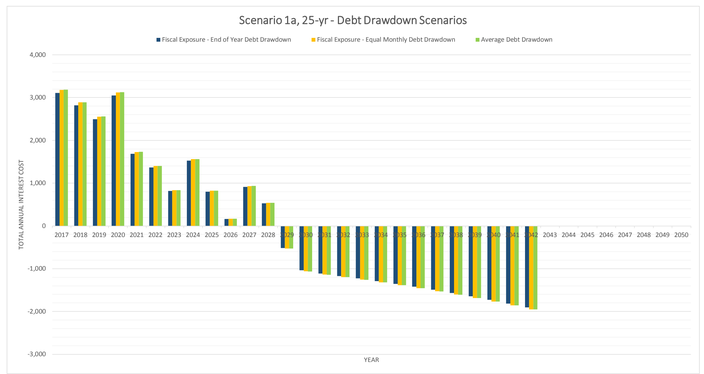
		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

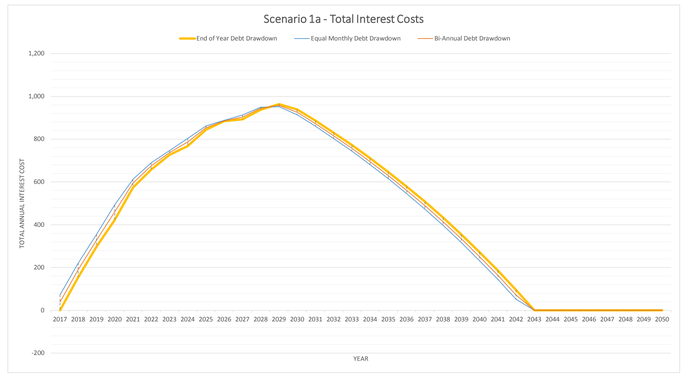
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	3,665	968	
Equal Monthly Debt Drawdown	3,750	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

		9%	14%	18%	28%	17%	13%																													
Scenario 1b, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

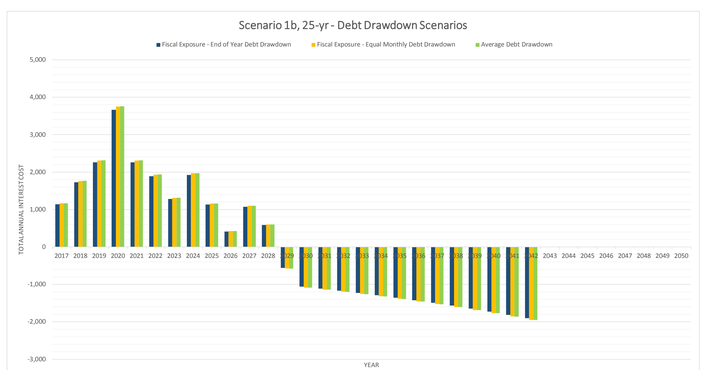
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	*954*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

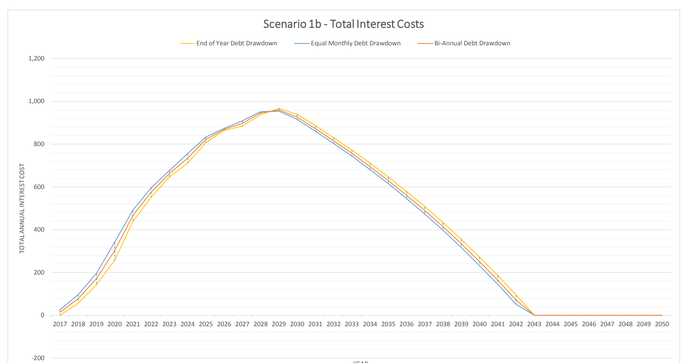
	Monthly Drawdown	95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

		28%	24%	21%	24%	12%	9%																													
Scenario 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1a, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	*1,156*	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

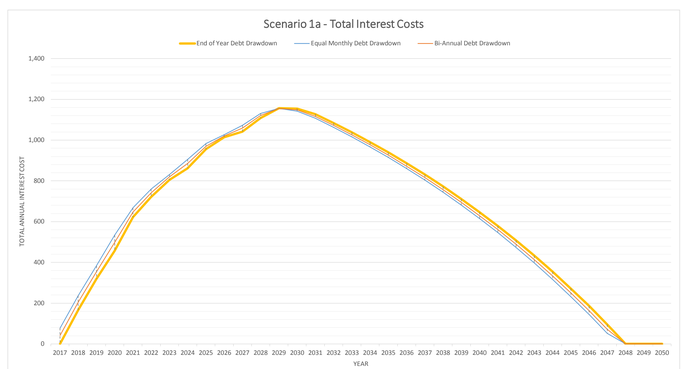
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

		12%	16%	20%	30%	19%	15%																													
Scenario 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

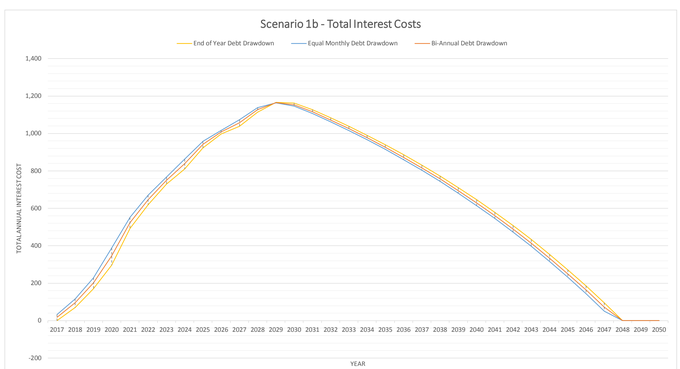
	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

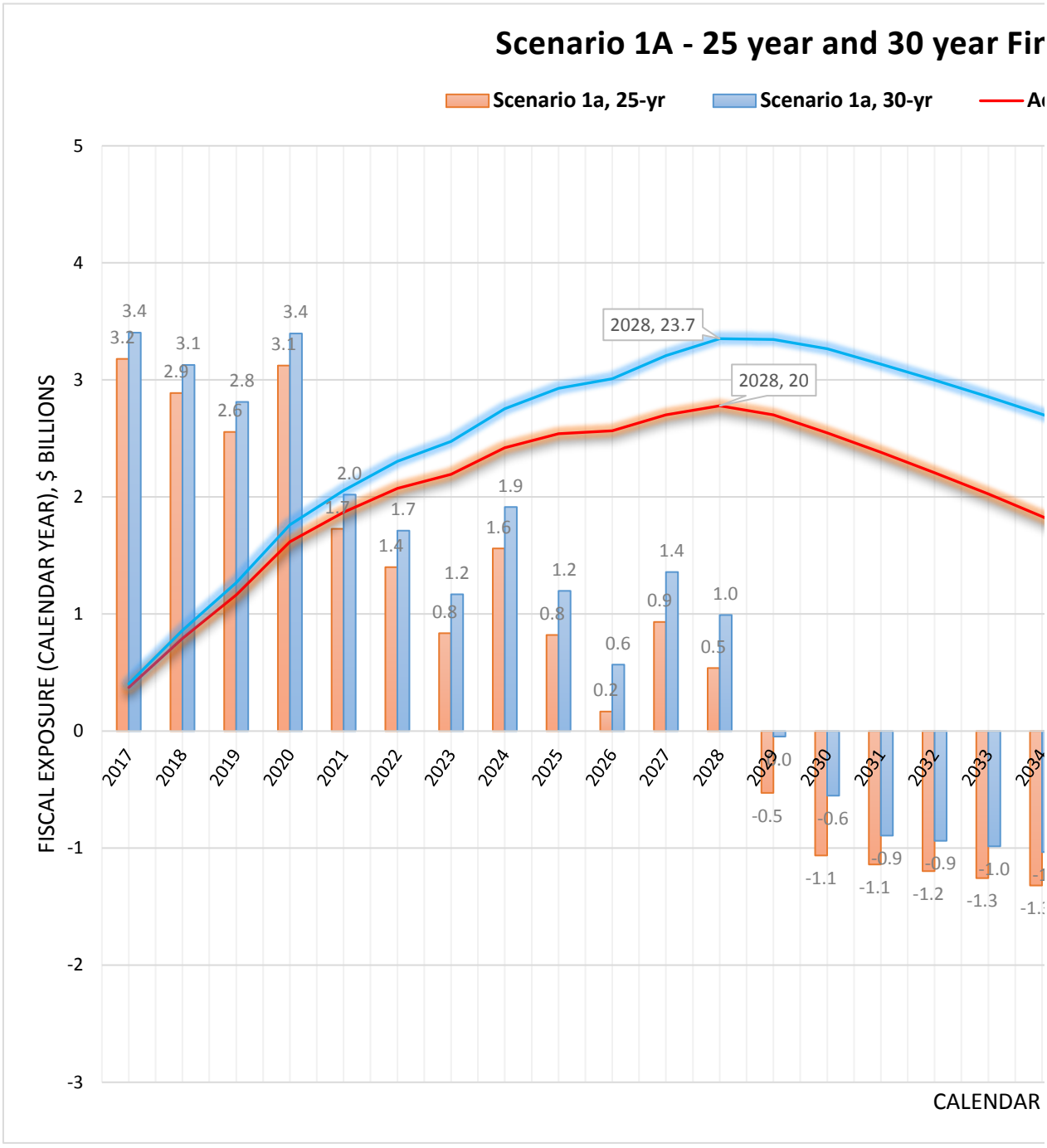
	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

Scenario 1b, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

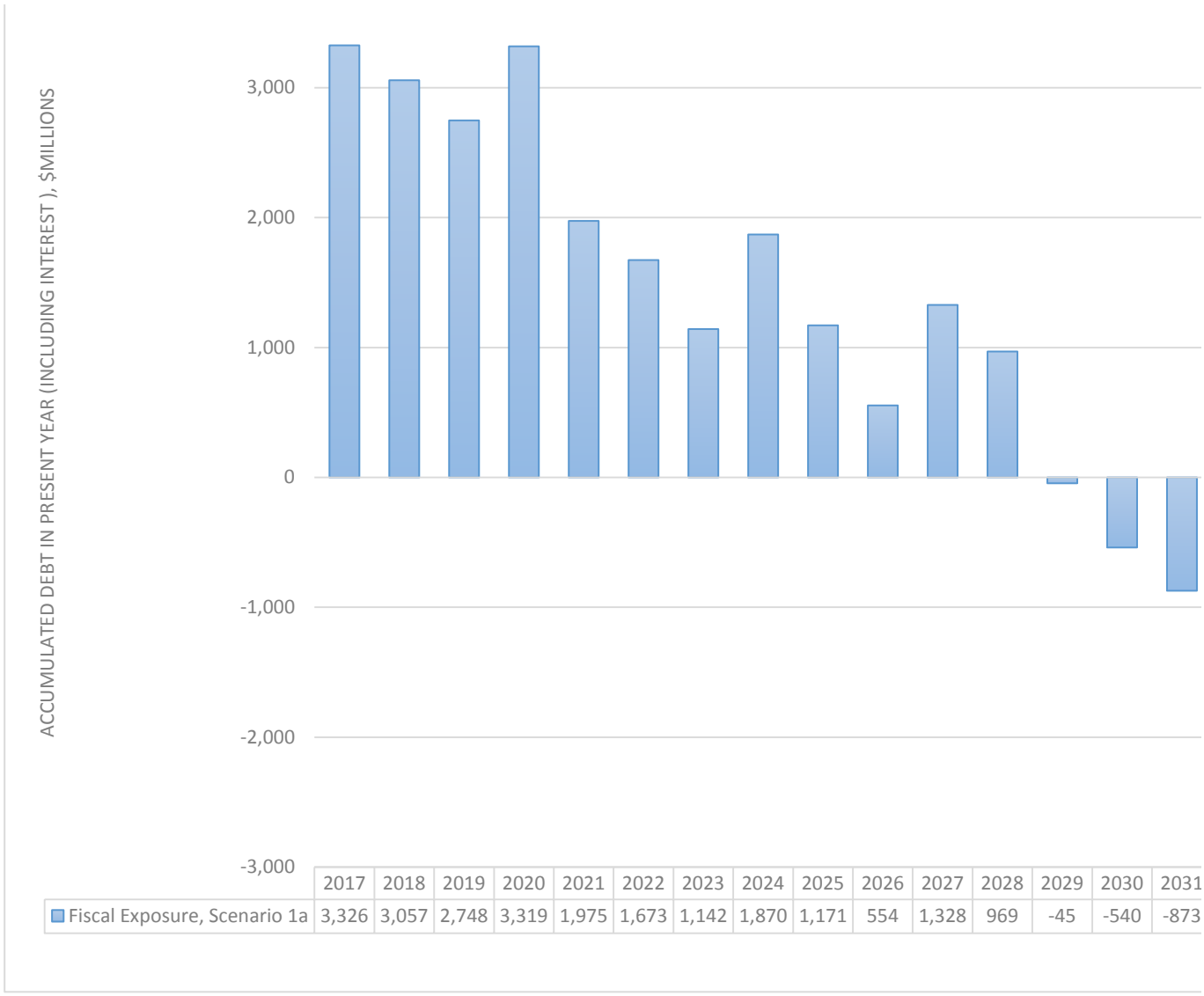




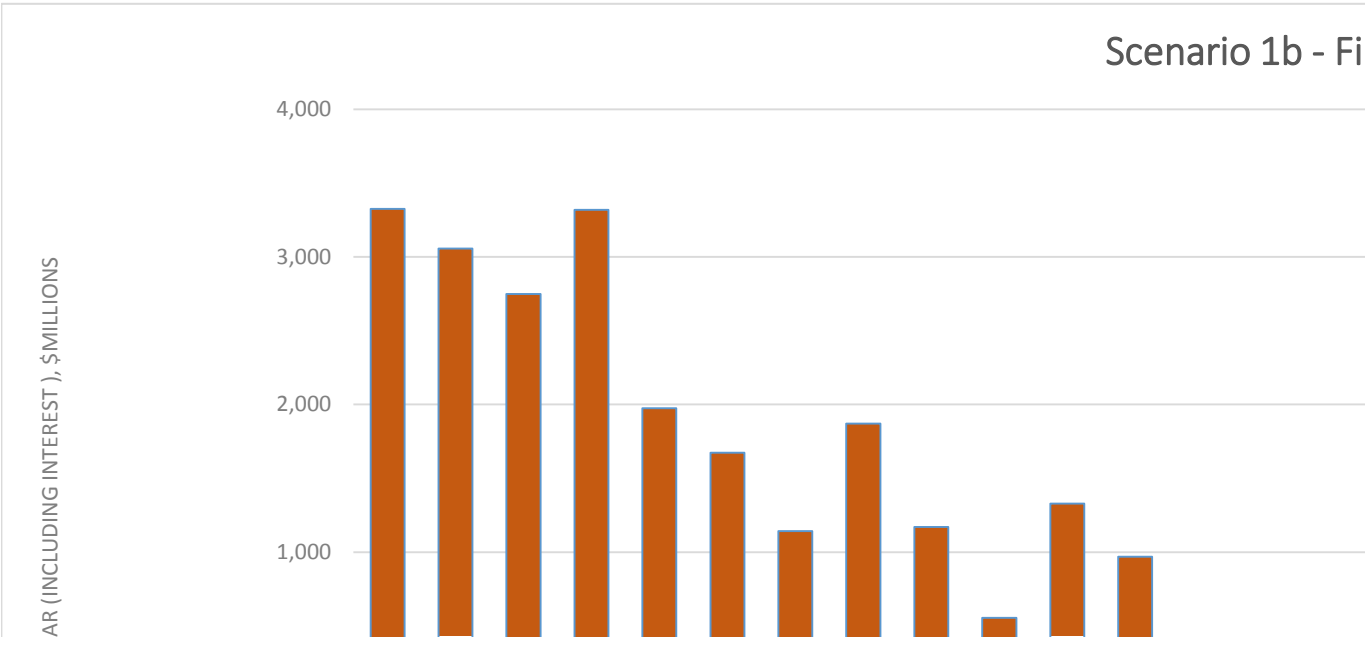
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

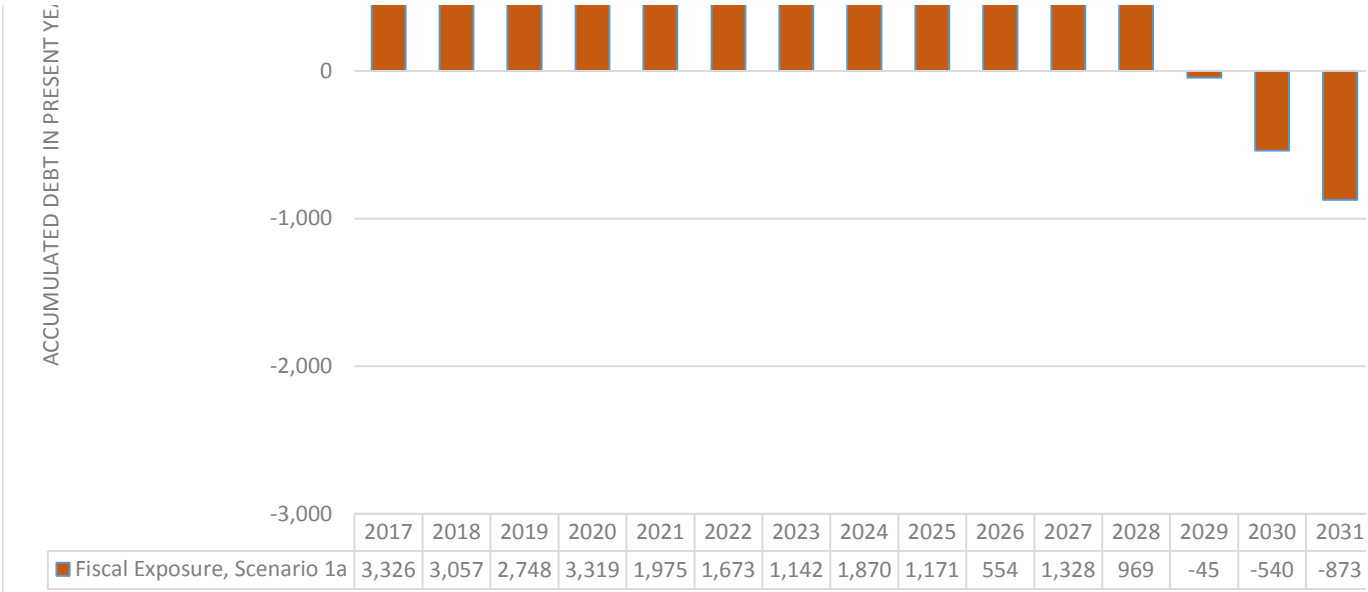




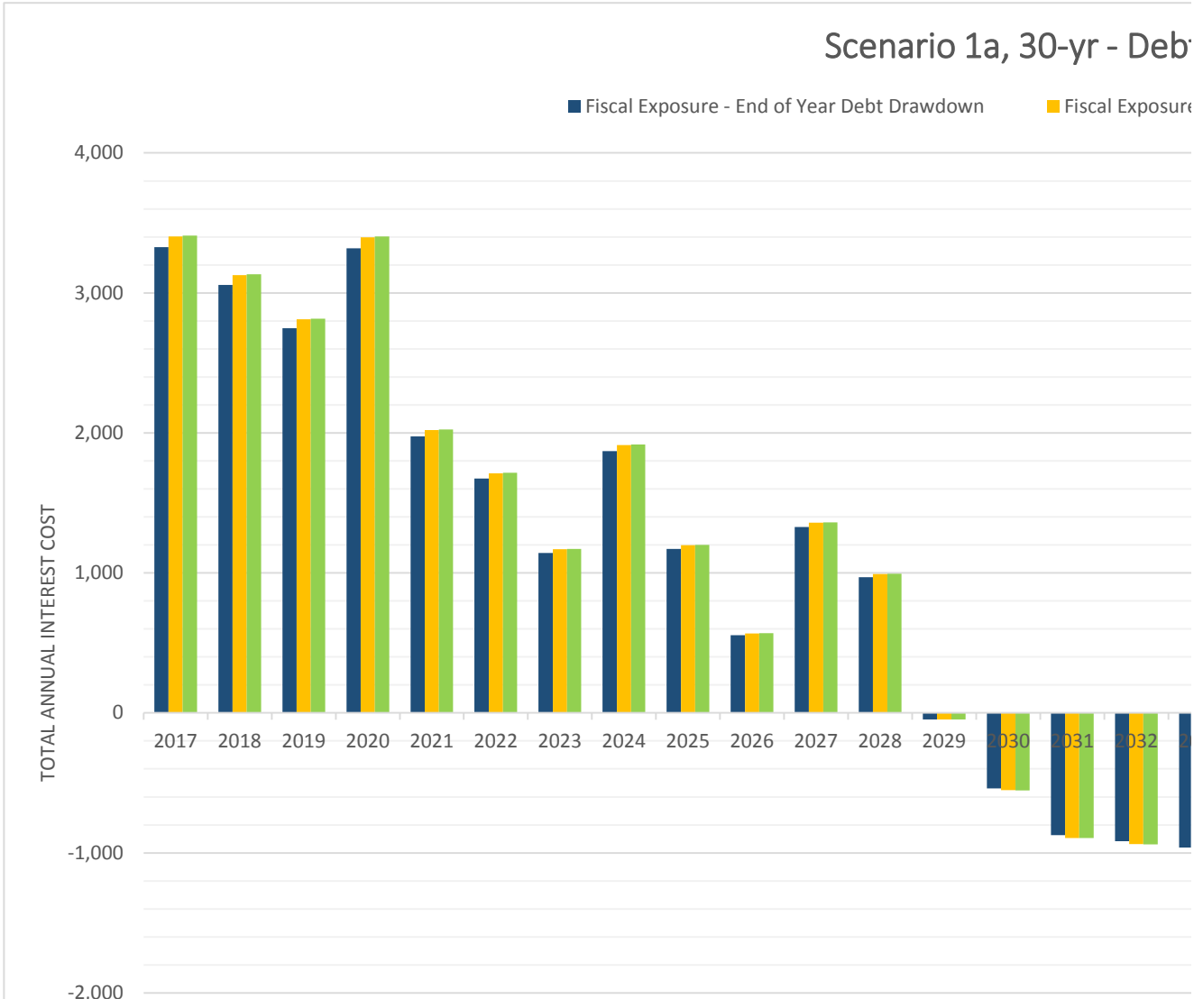


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



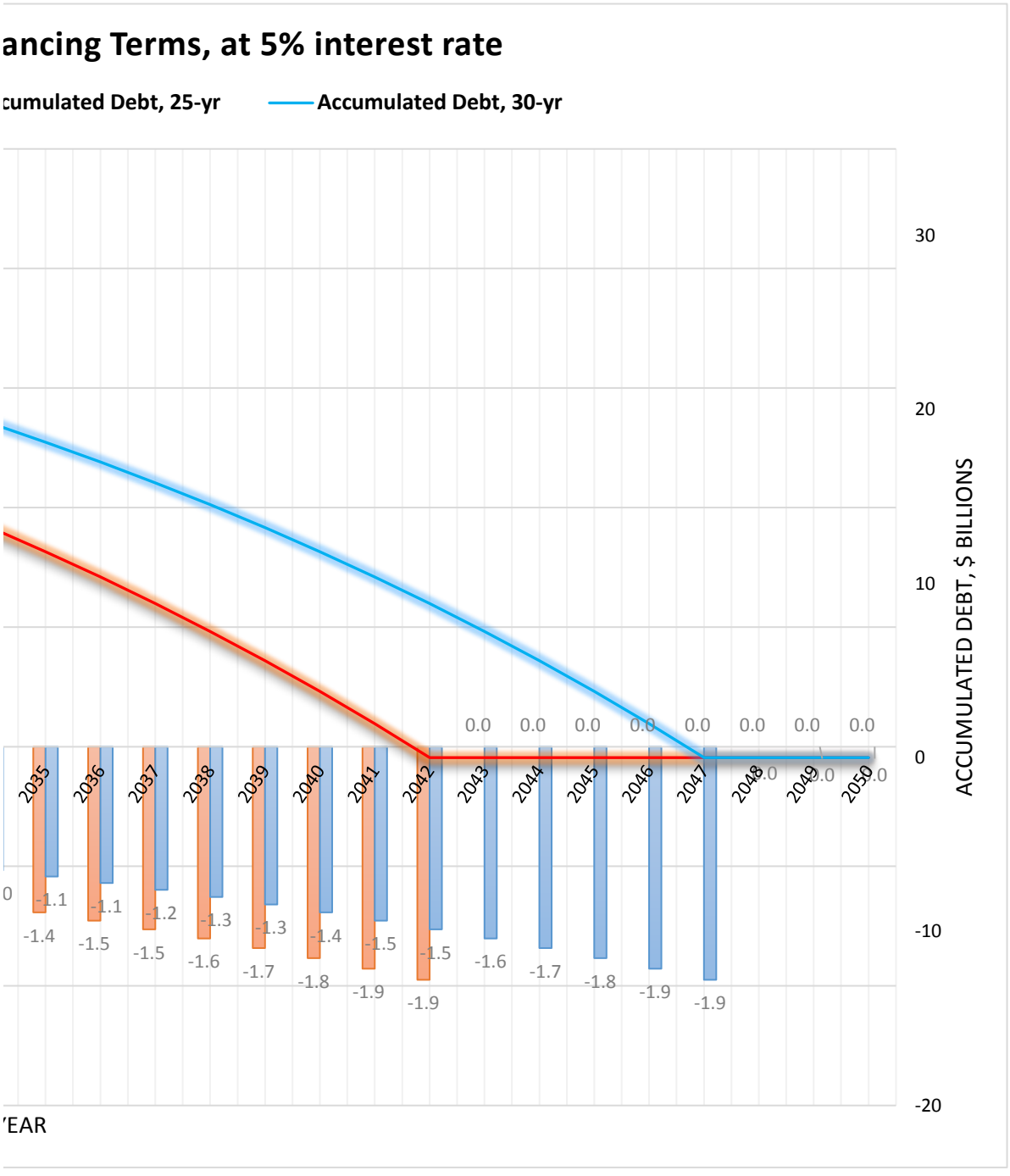


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



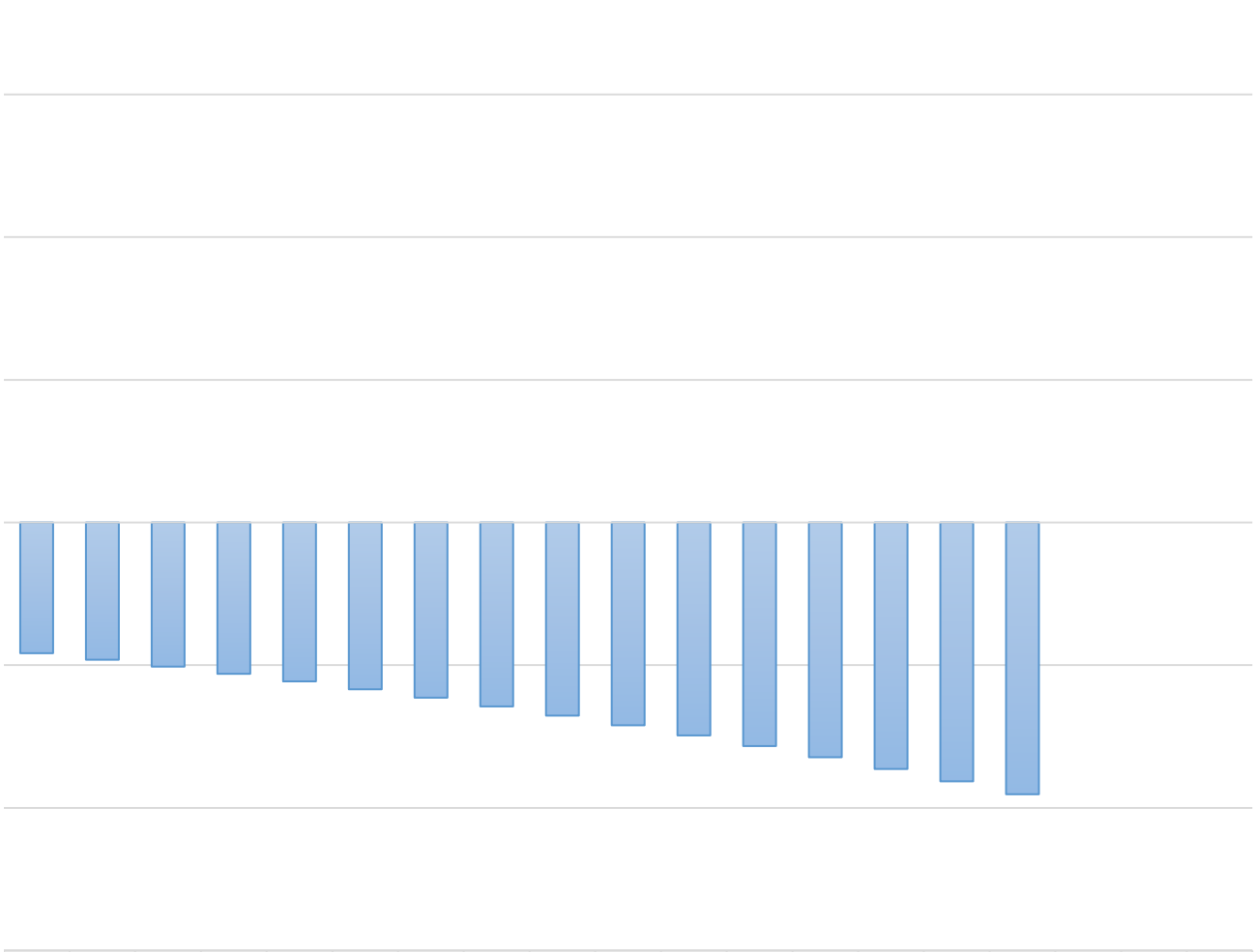

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

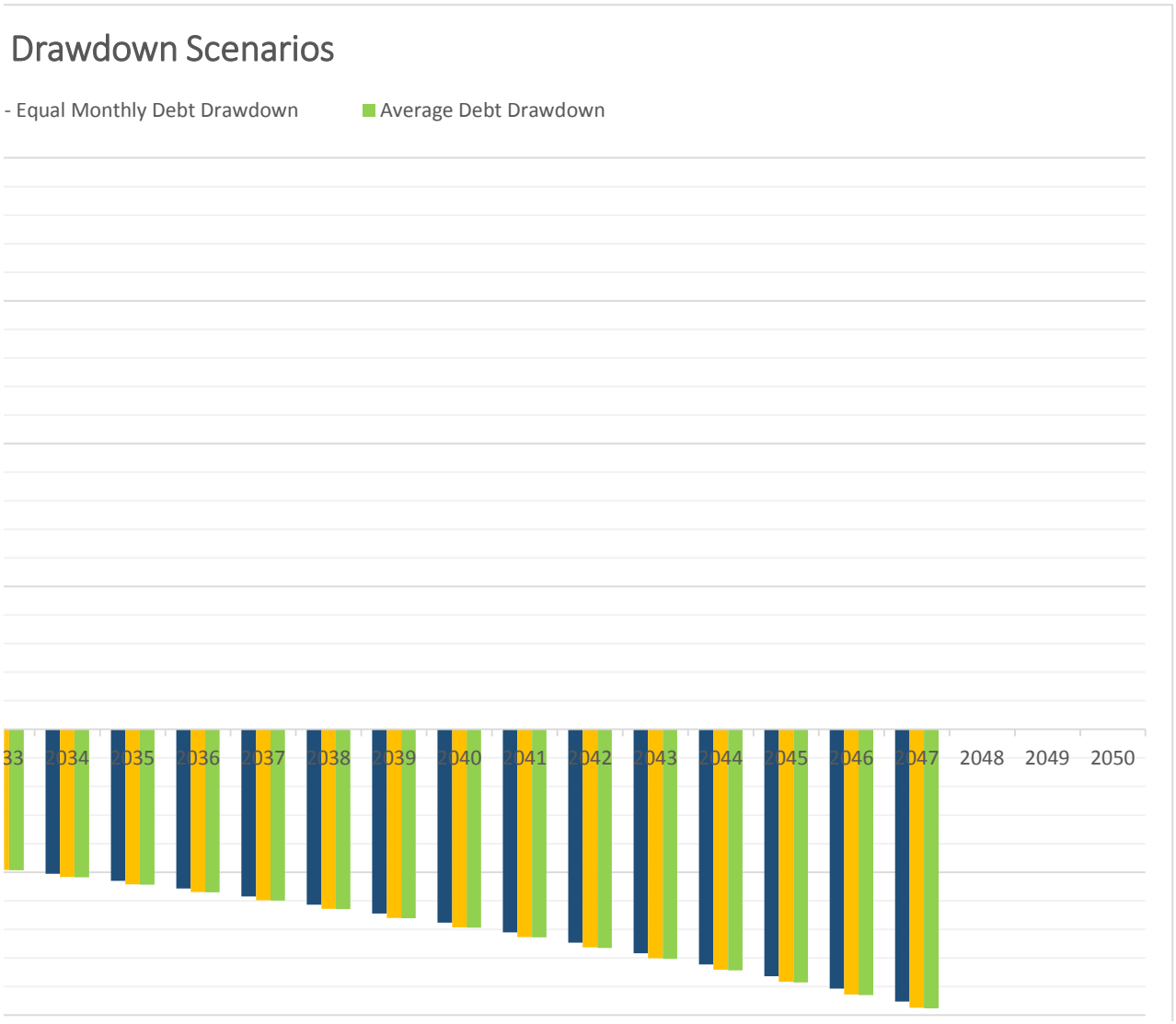
YEAR

cal Exposure



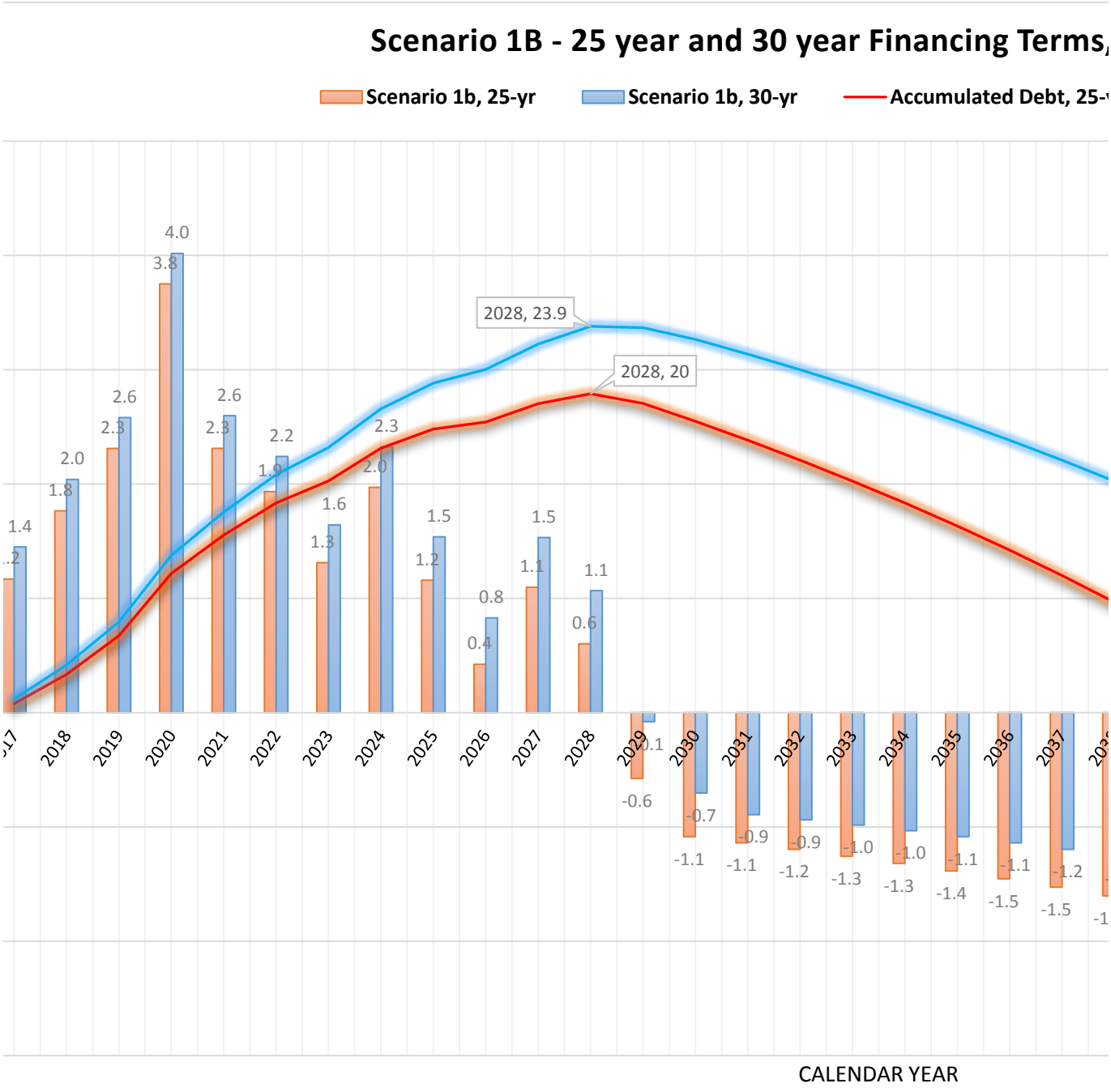
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

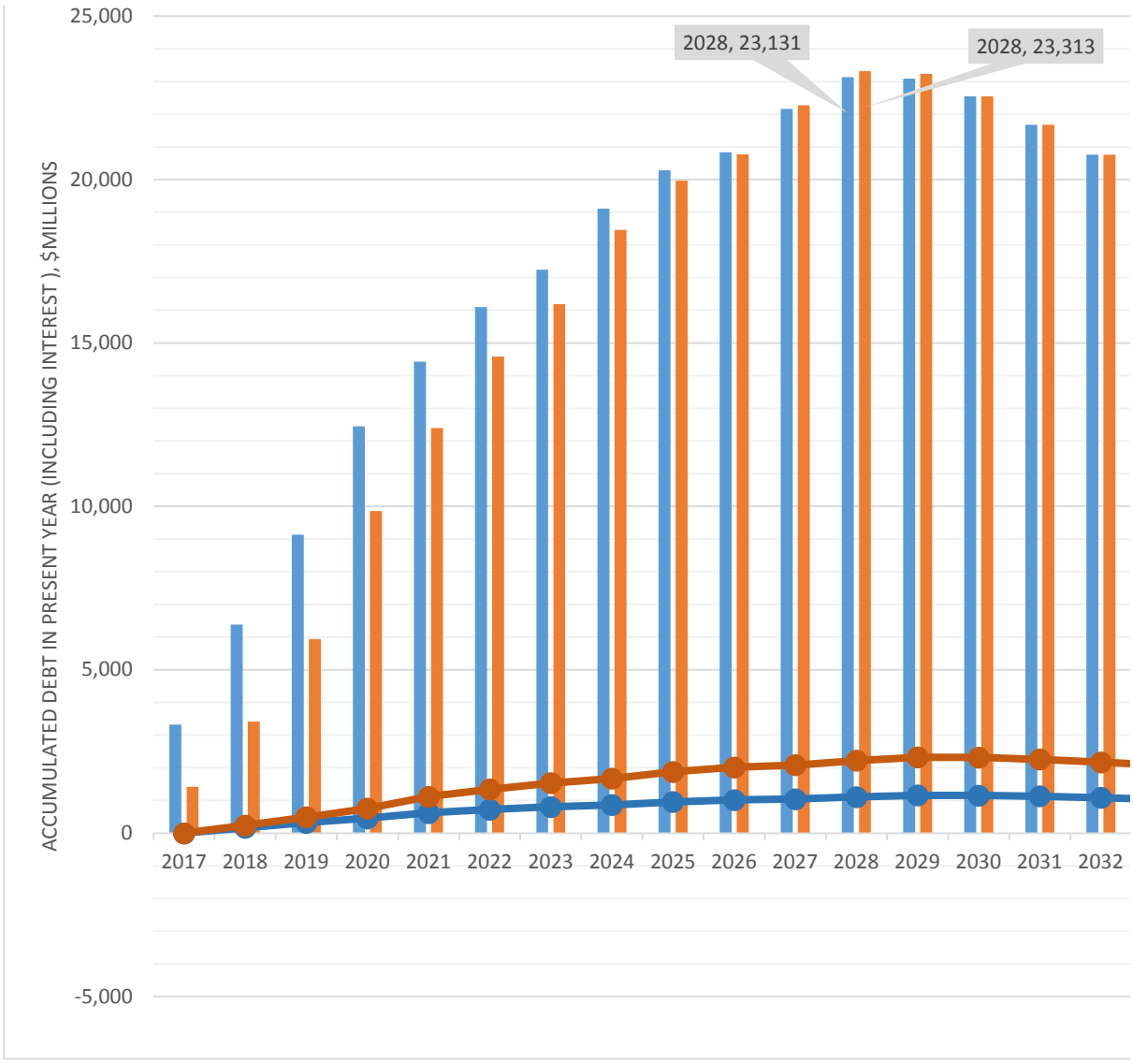


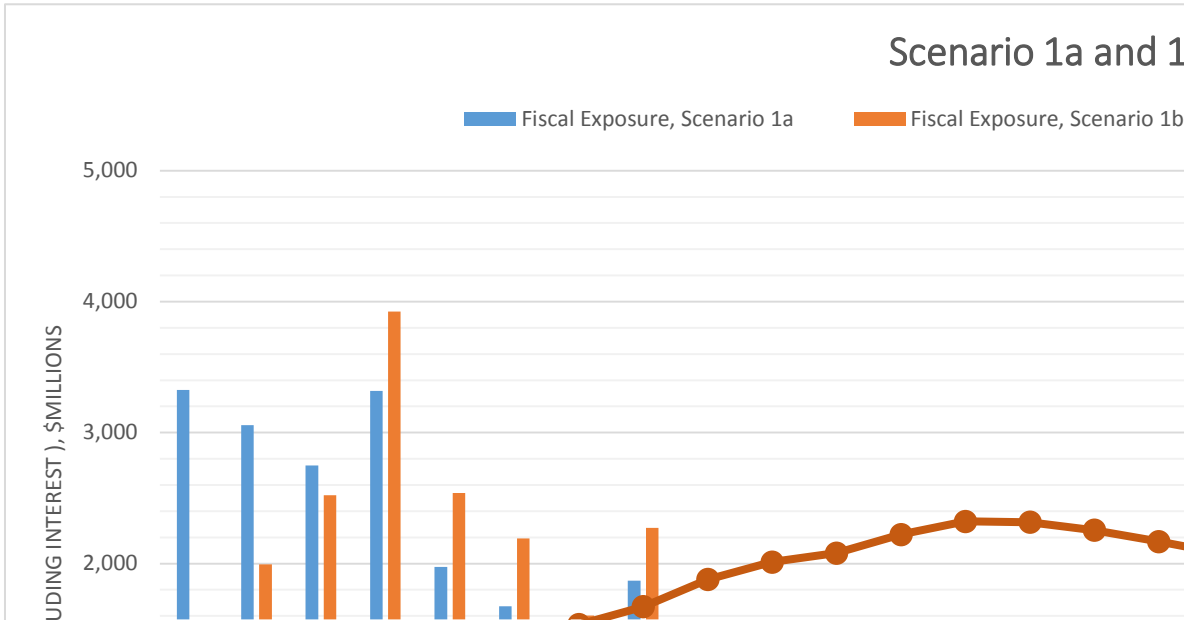
YEAR

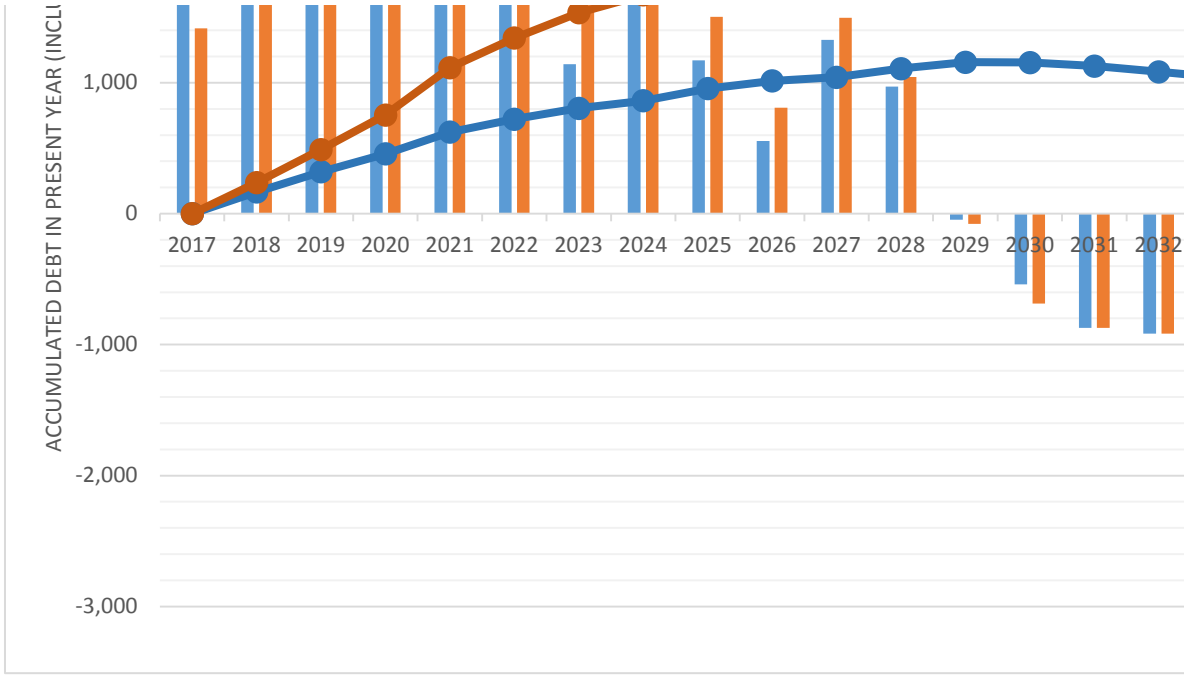
3 - 25 year and 30 year Financing Terms, at 5% interest rate

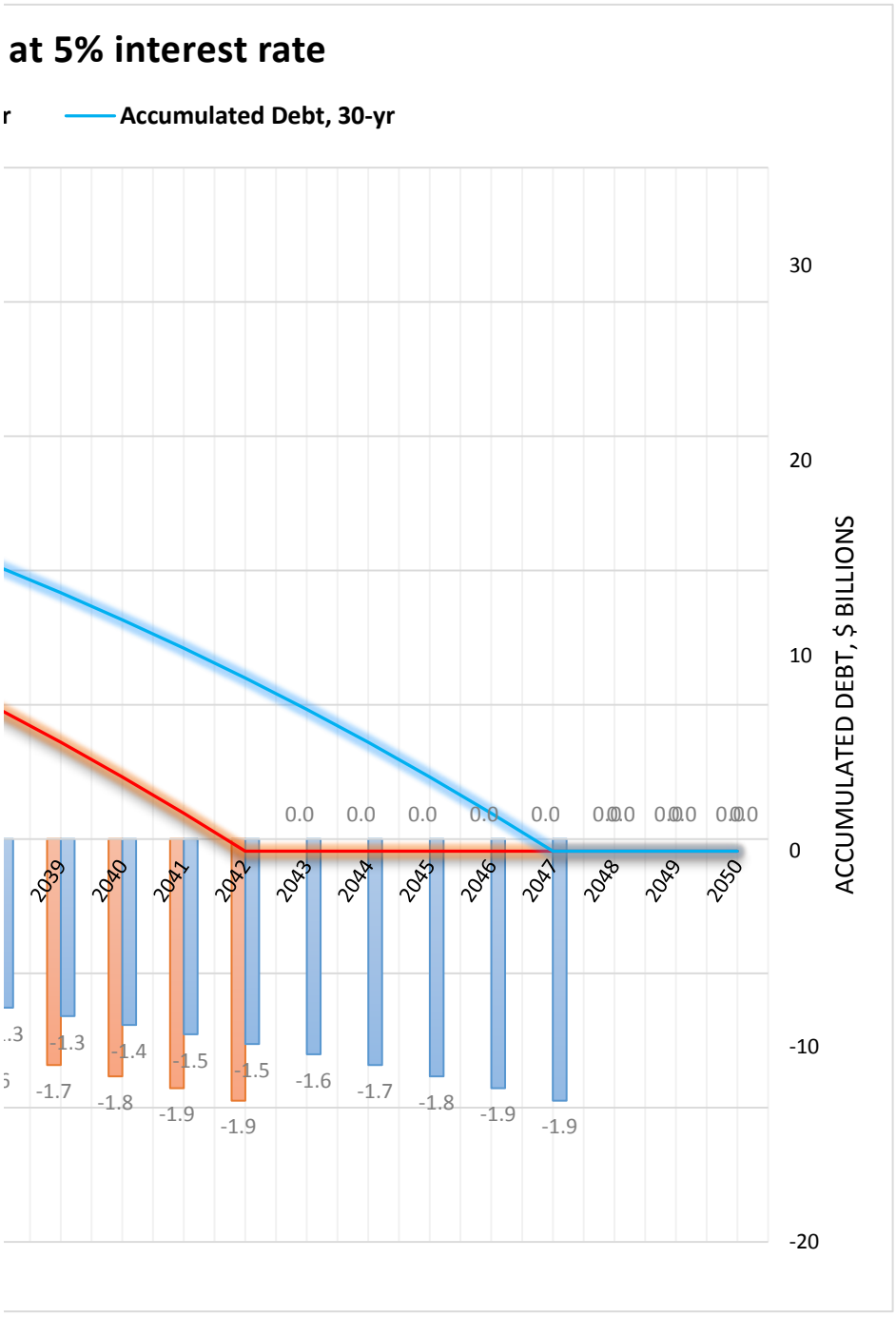





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

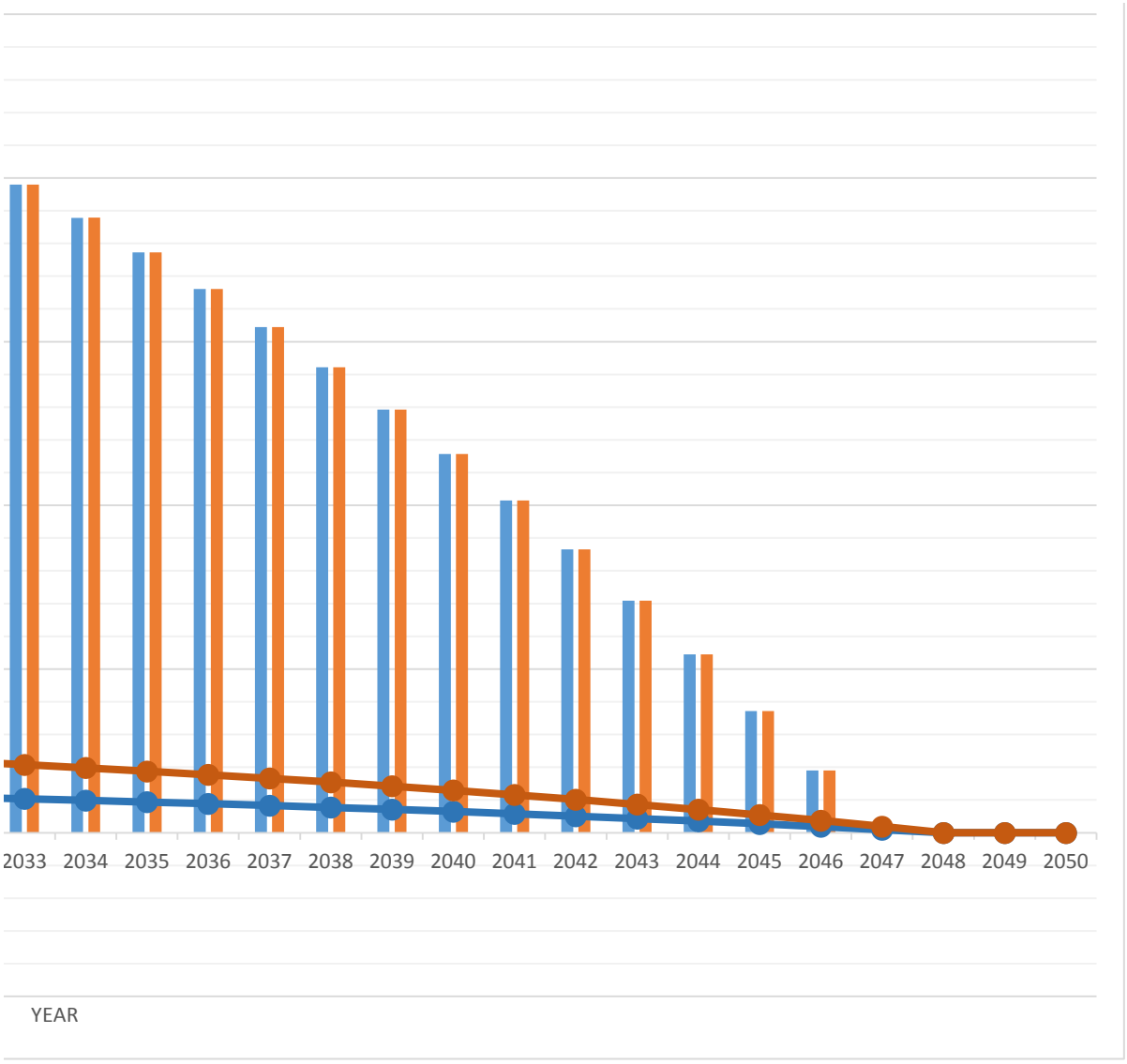

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

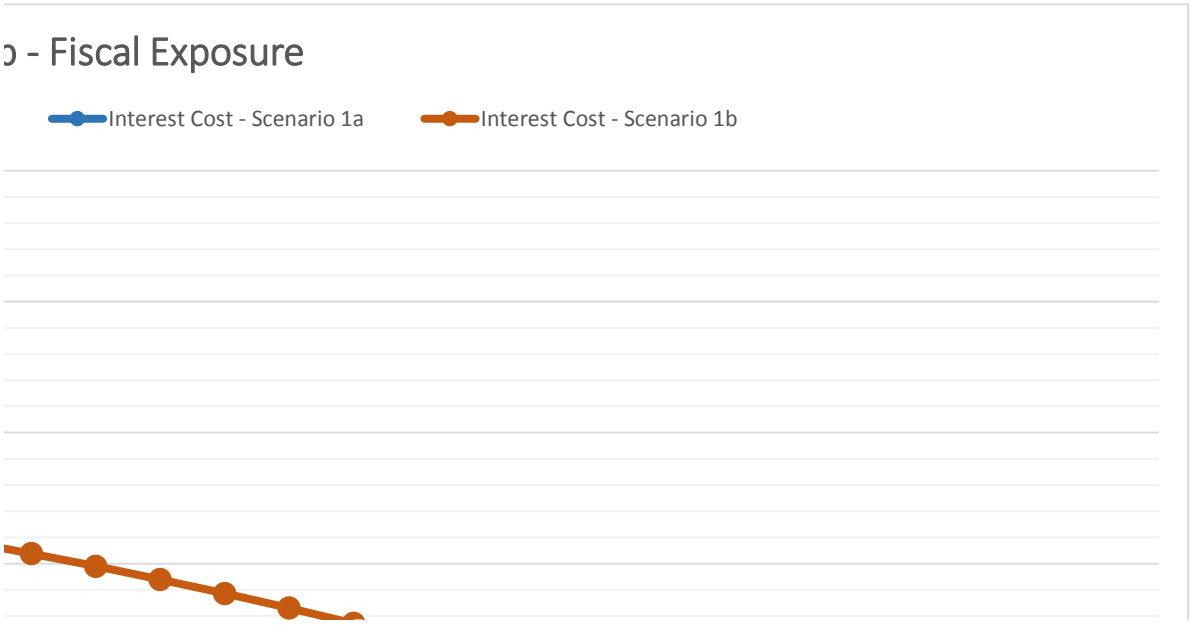

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

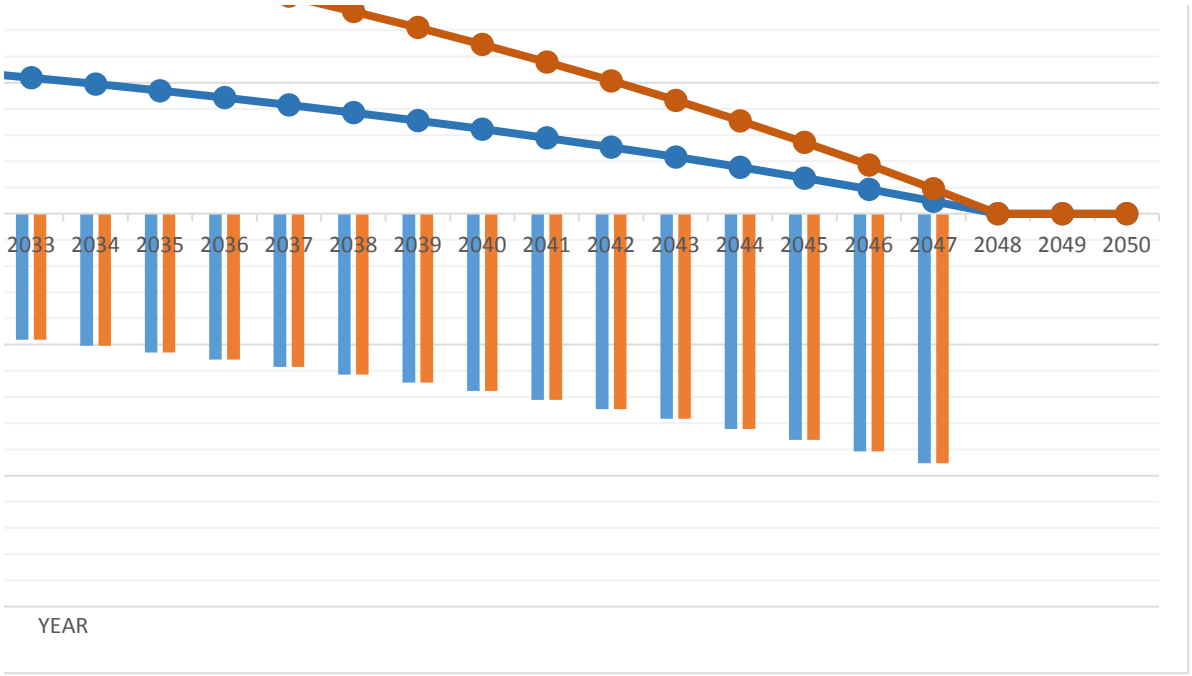


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

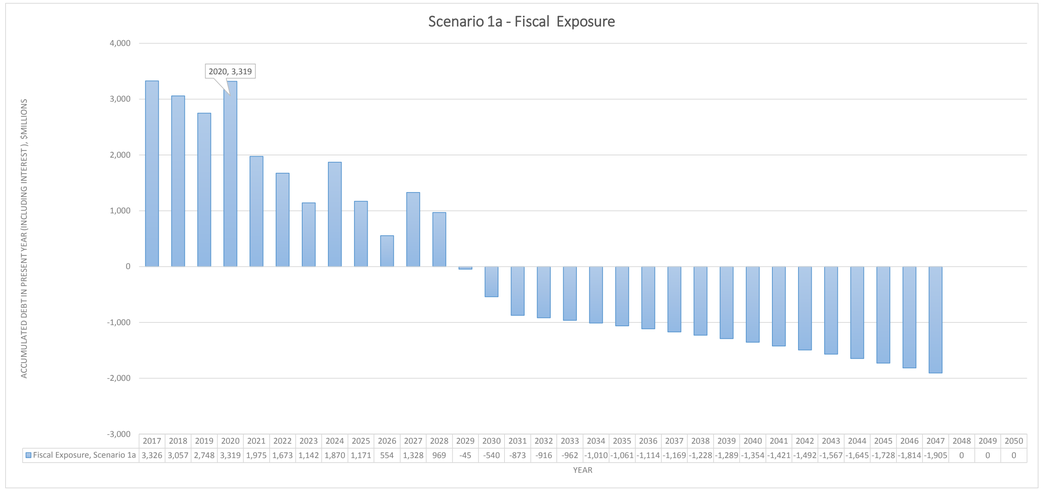
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

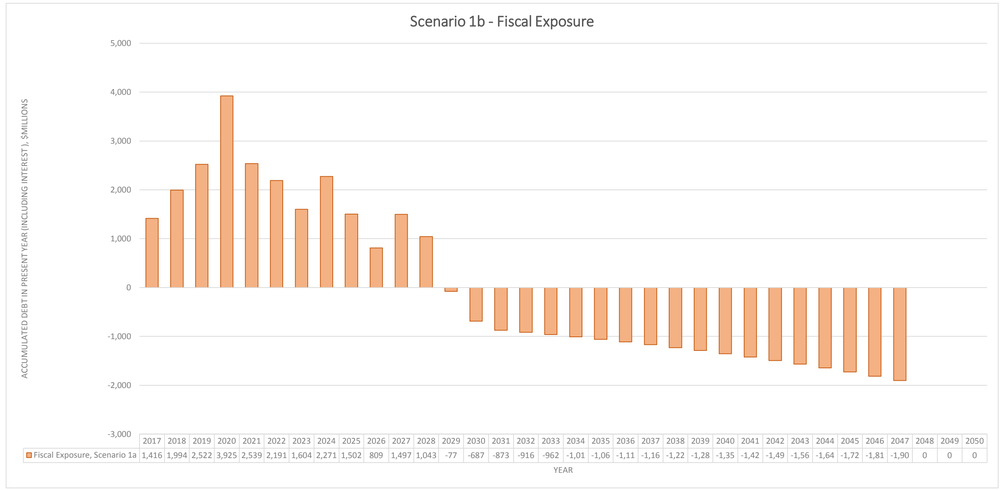
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

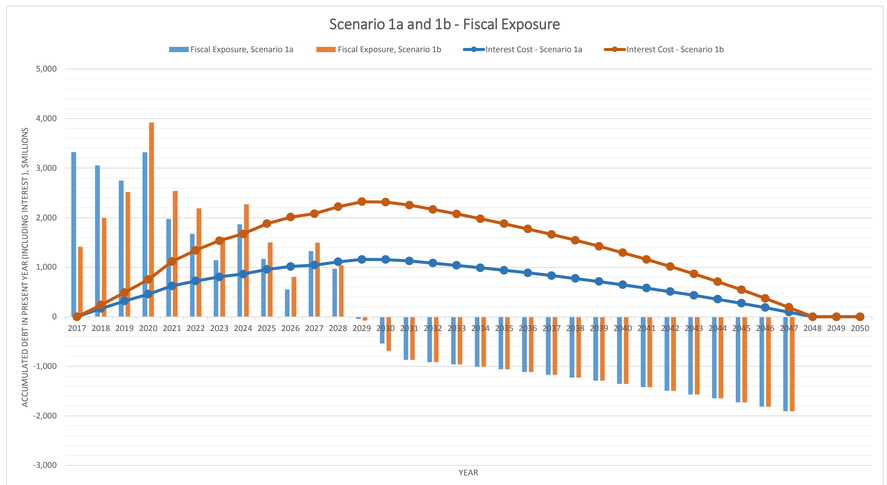
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

Notes:	Accounting treatment is to be determined.

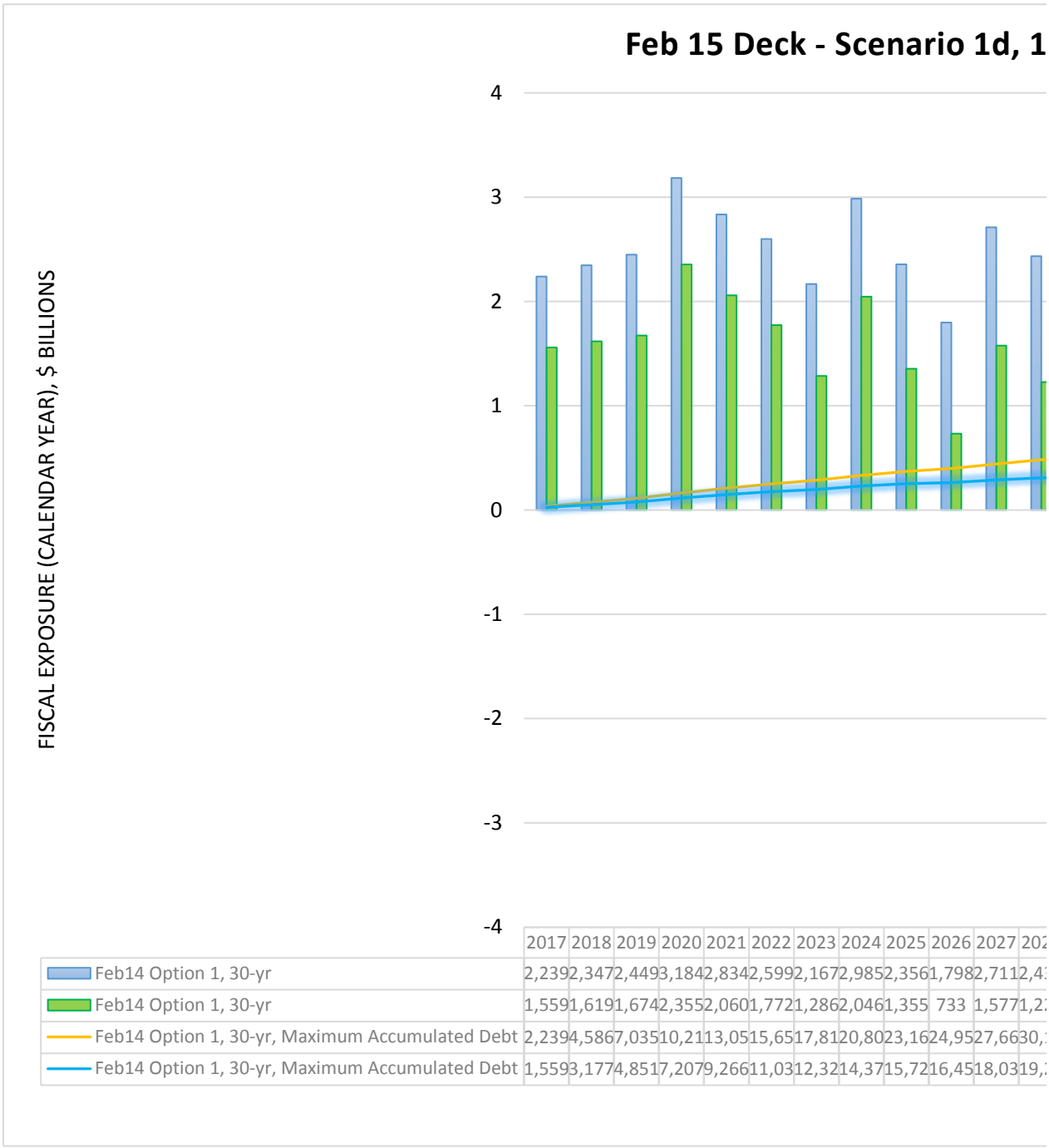

Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0


Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0

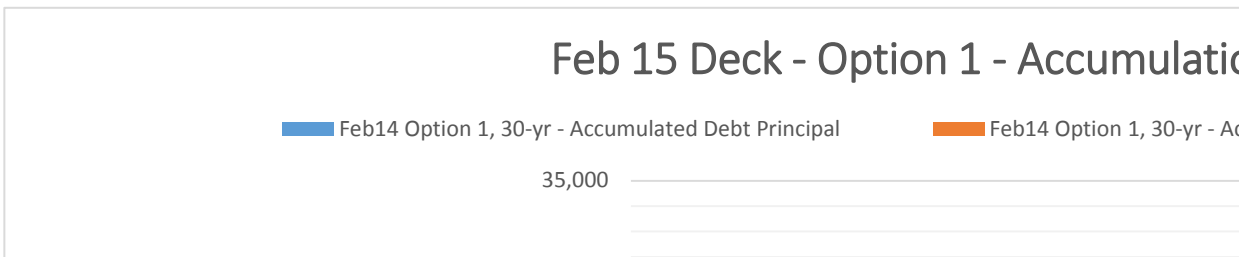

Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

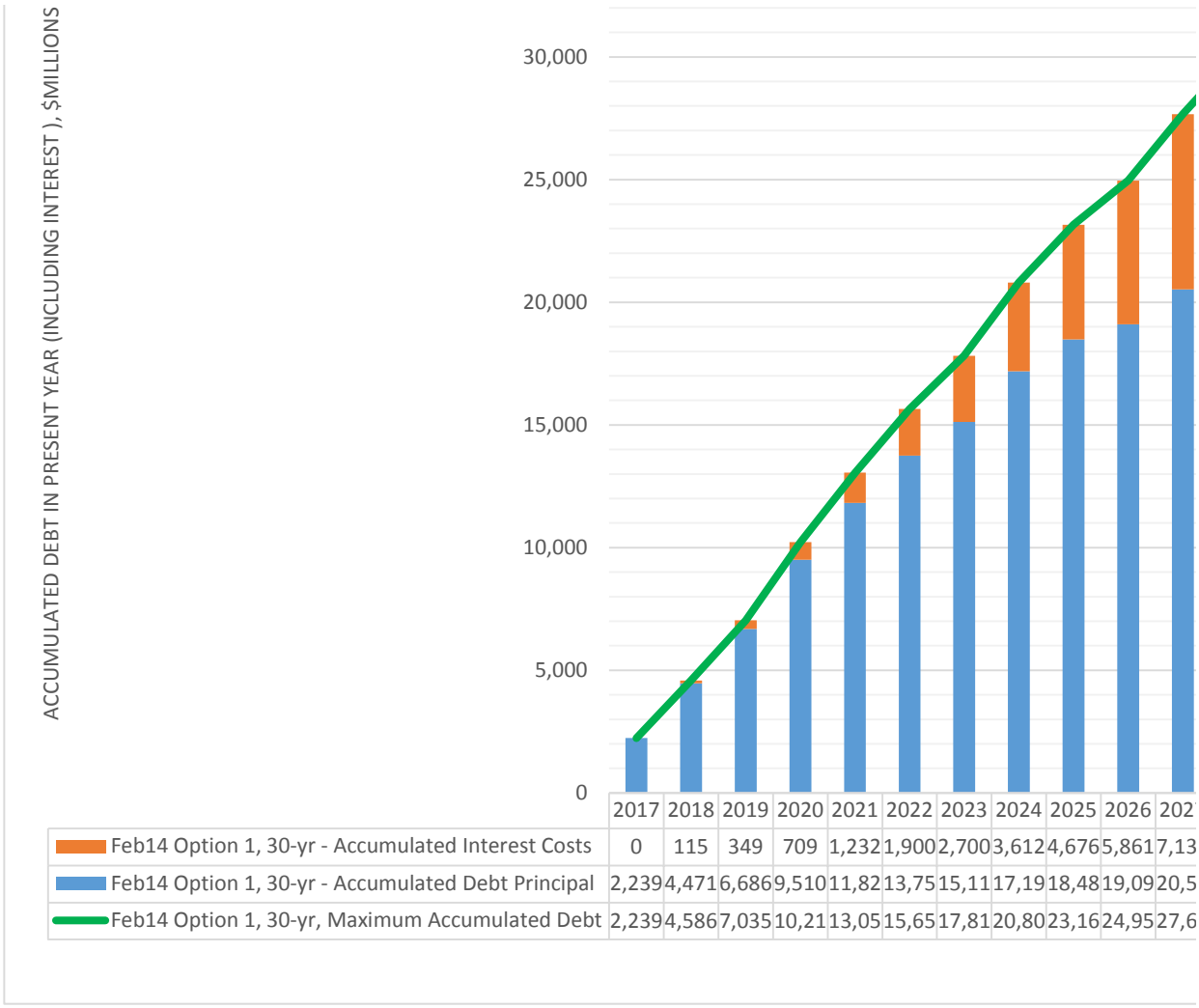
Feb 15 Deck

Feb 15 Deck - Scenario 1d, 1e - at 5.12% interest rate

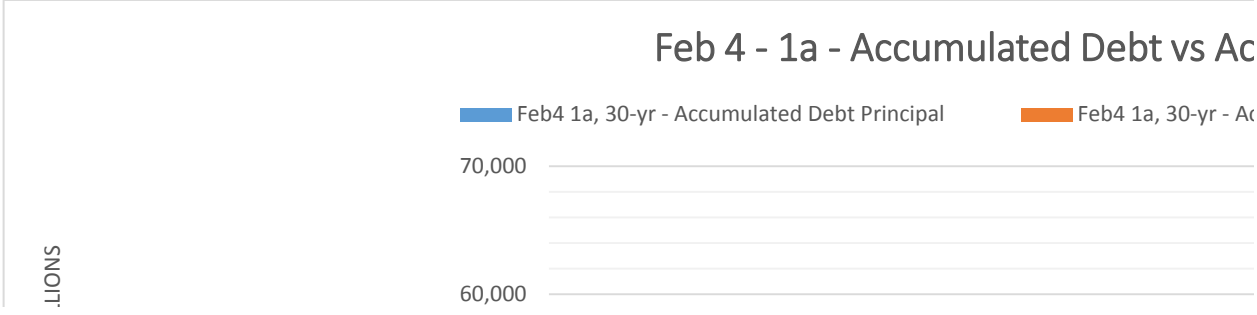


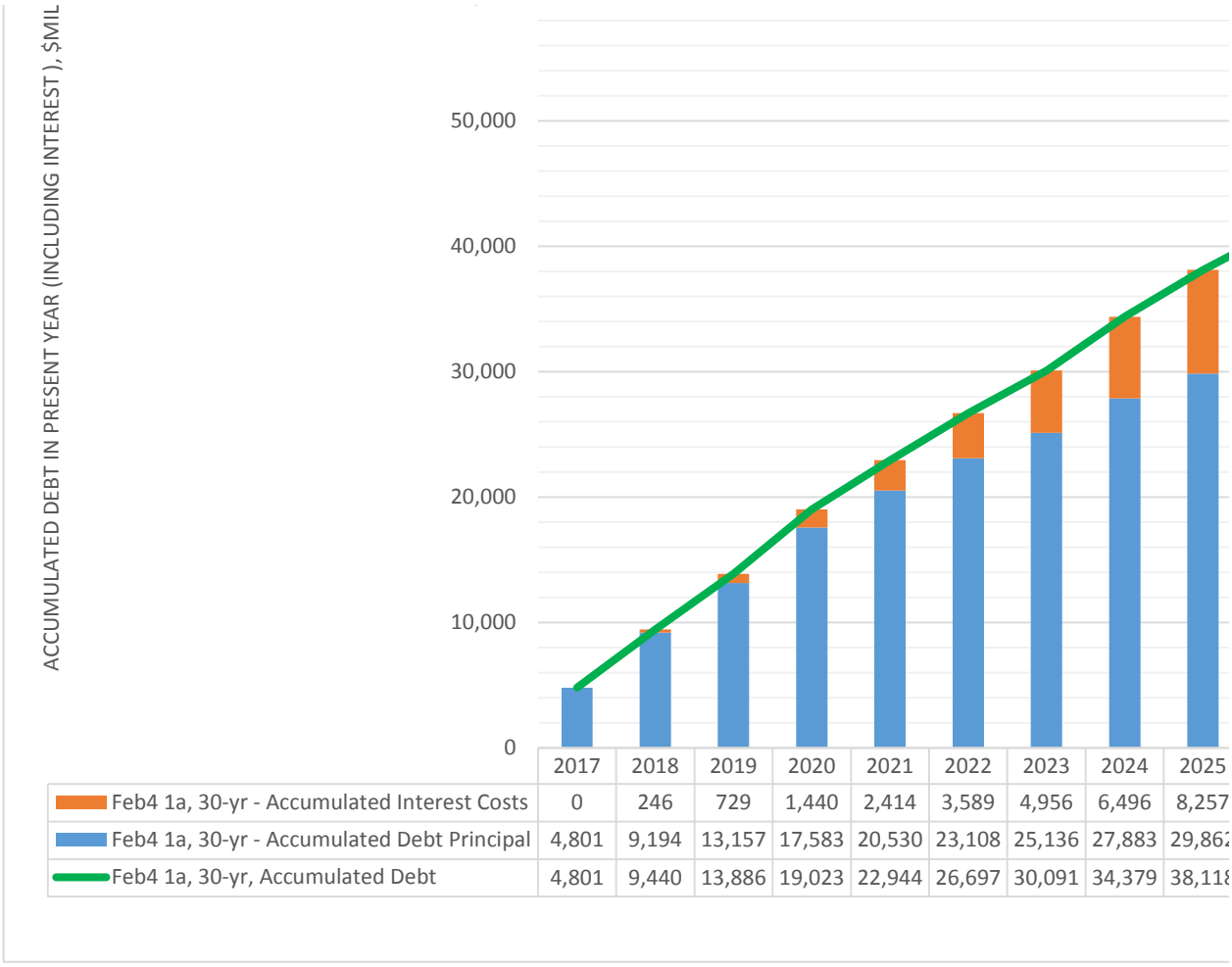
Feb 15 Deck - Option 1 - Accumulation of Debt (Principal and Interest)



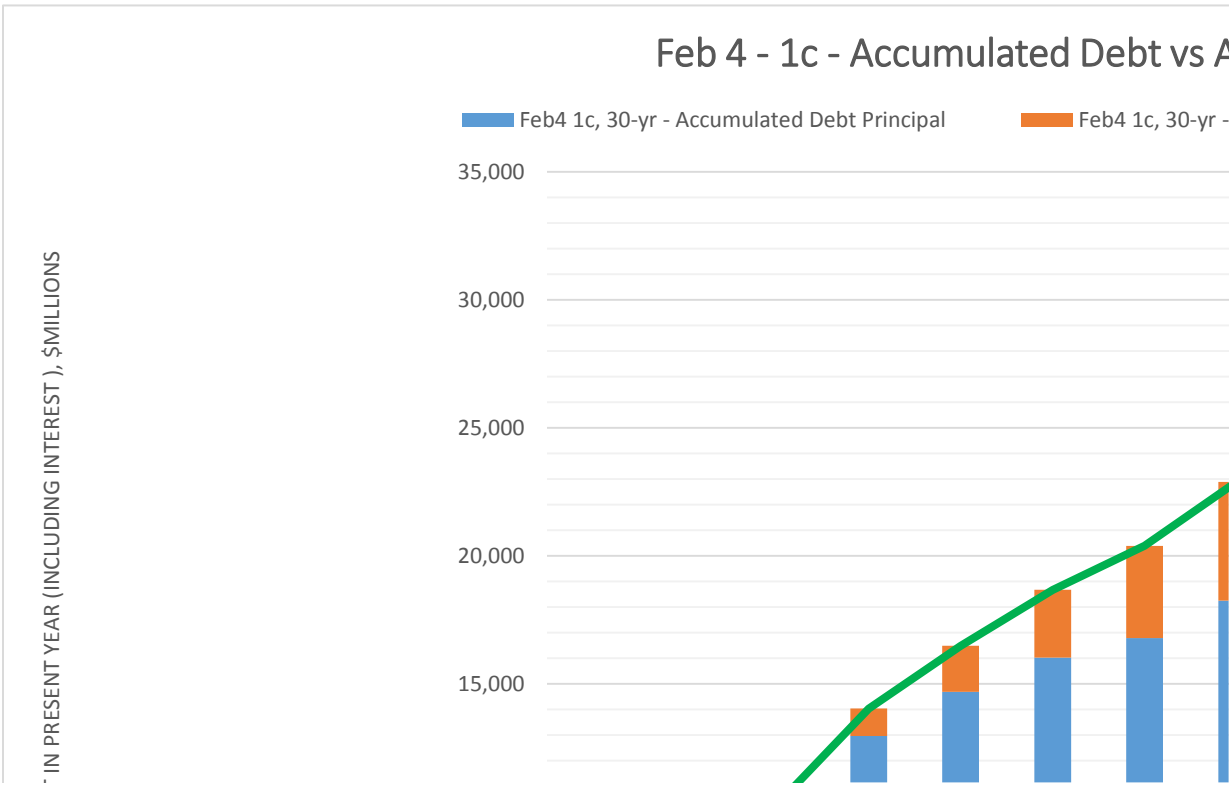


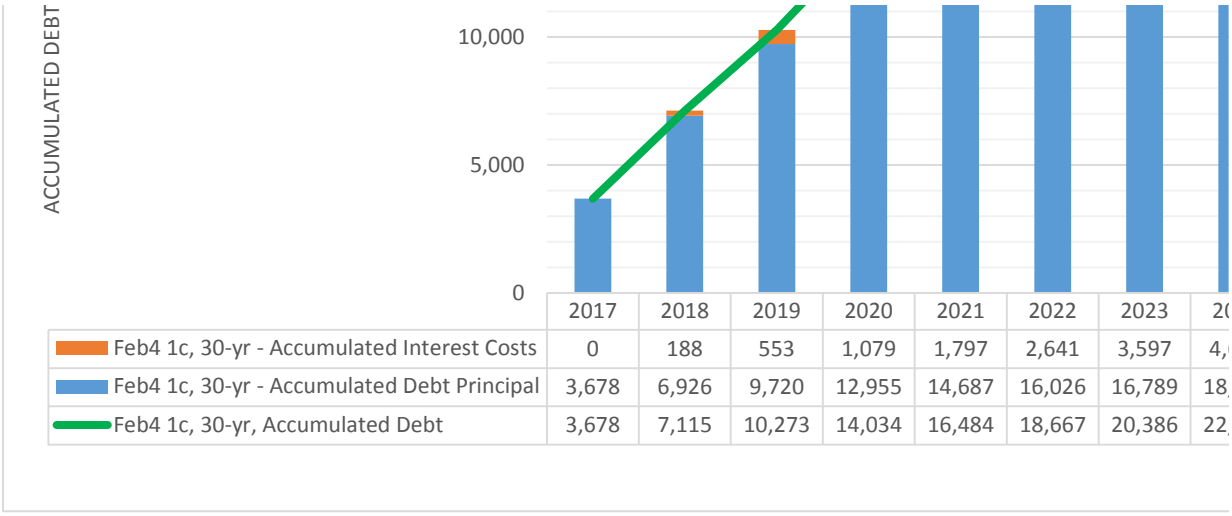
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	202
Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,13
Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,82	13,75	15,11	17,19	18,48	19,09	20,5
Feb14 Option 1, 30-yr, Maximum Accumulated Debt	2,239	4,586	7,035	10,21	13,05	15,65	17,81	20,80	23,16	24,95	27,6



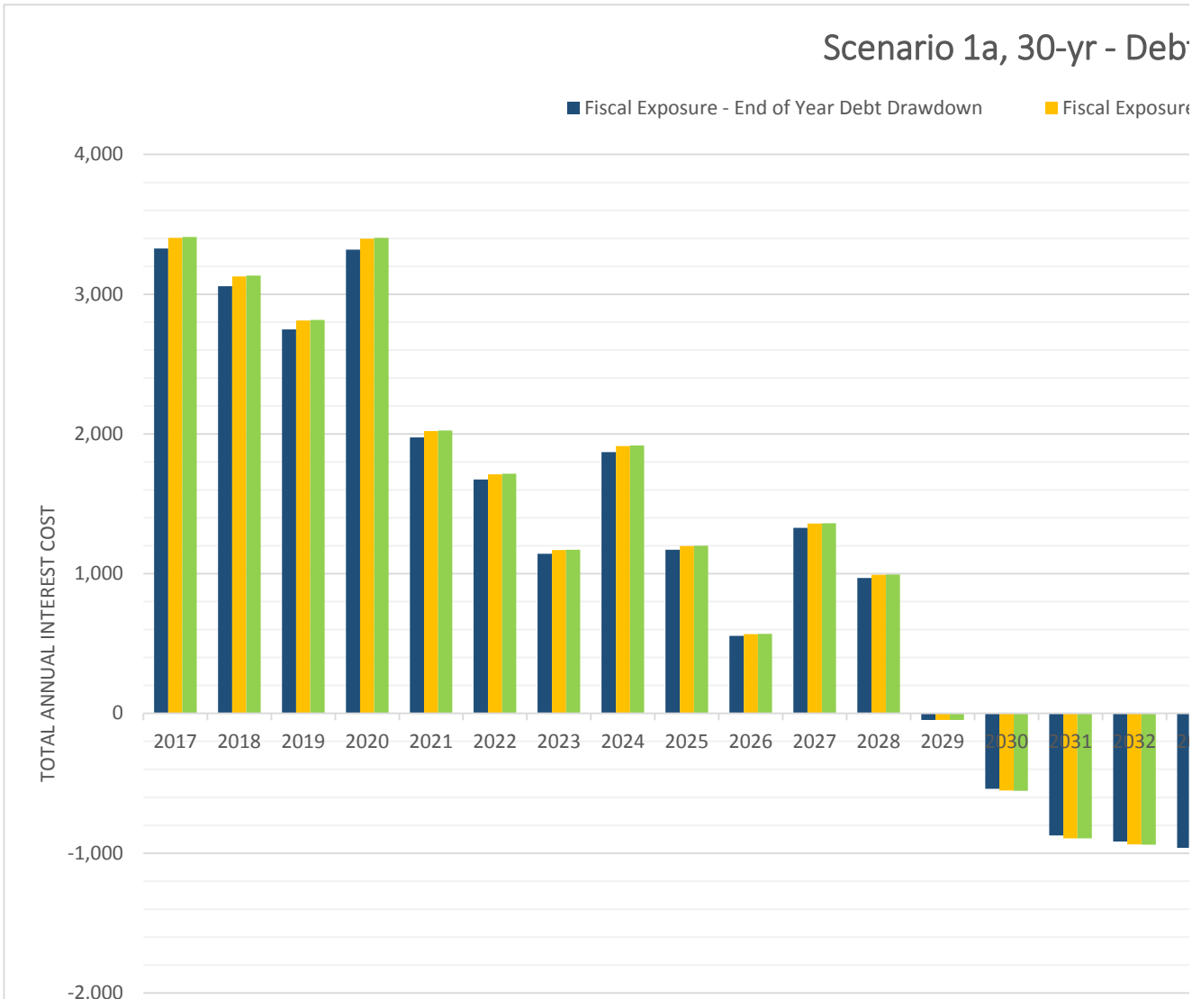


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



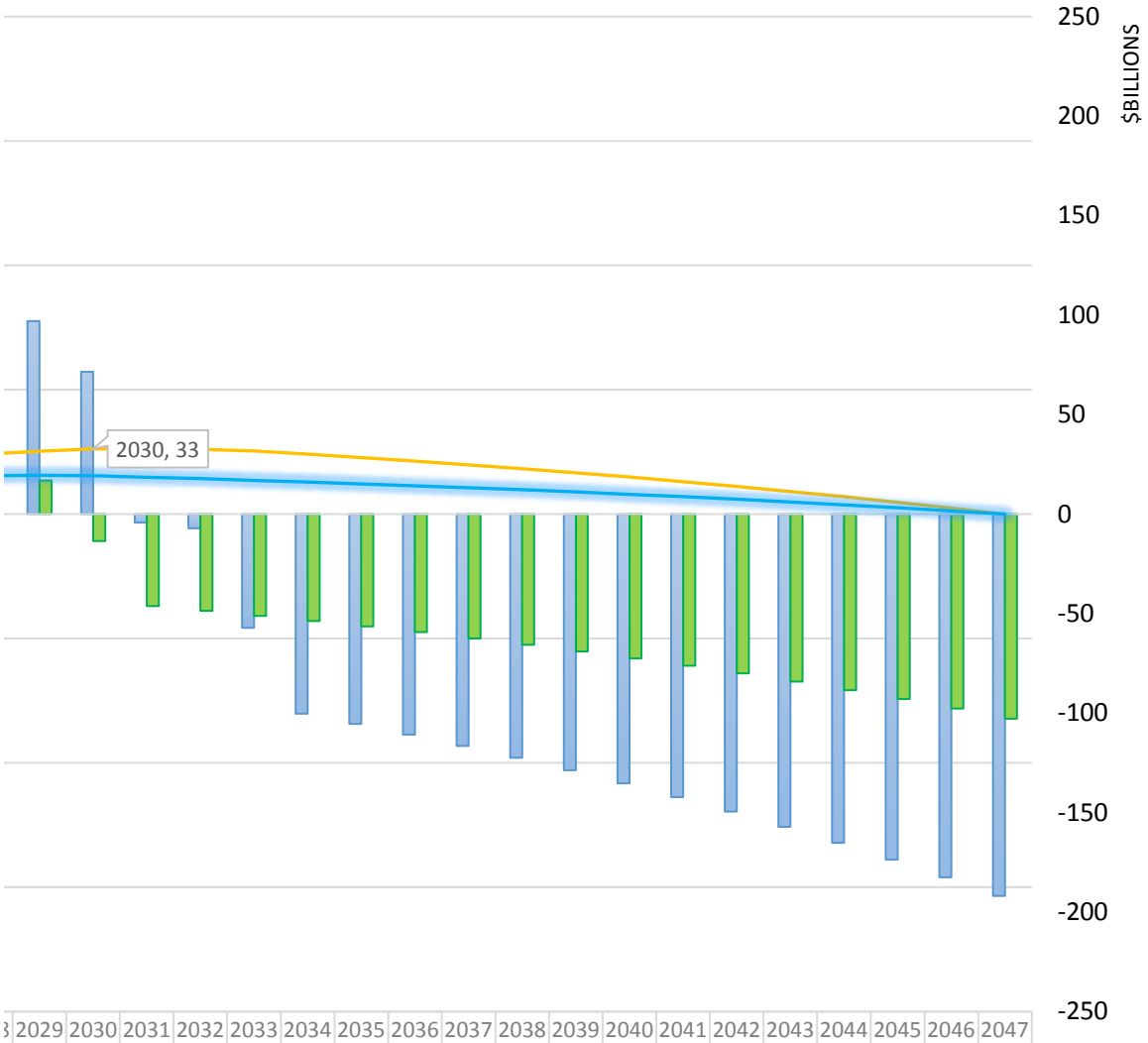


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

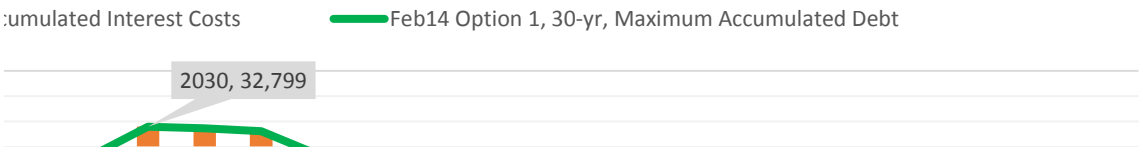
e - at 5.12% interest rate

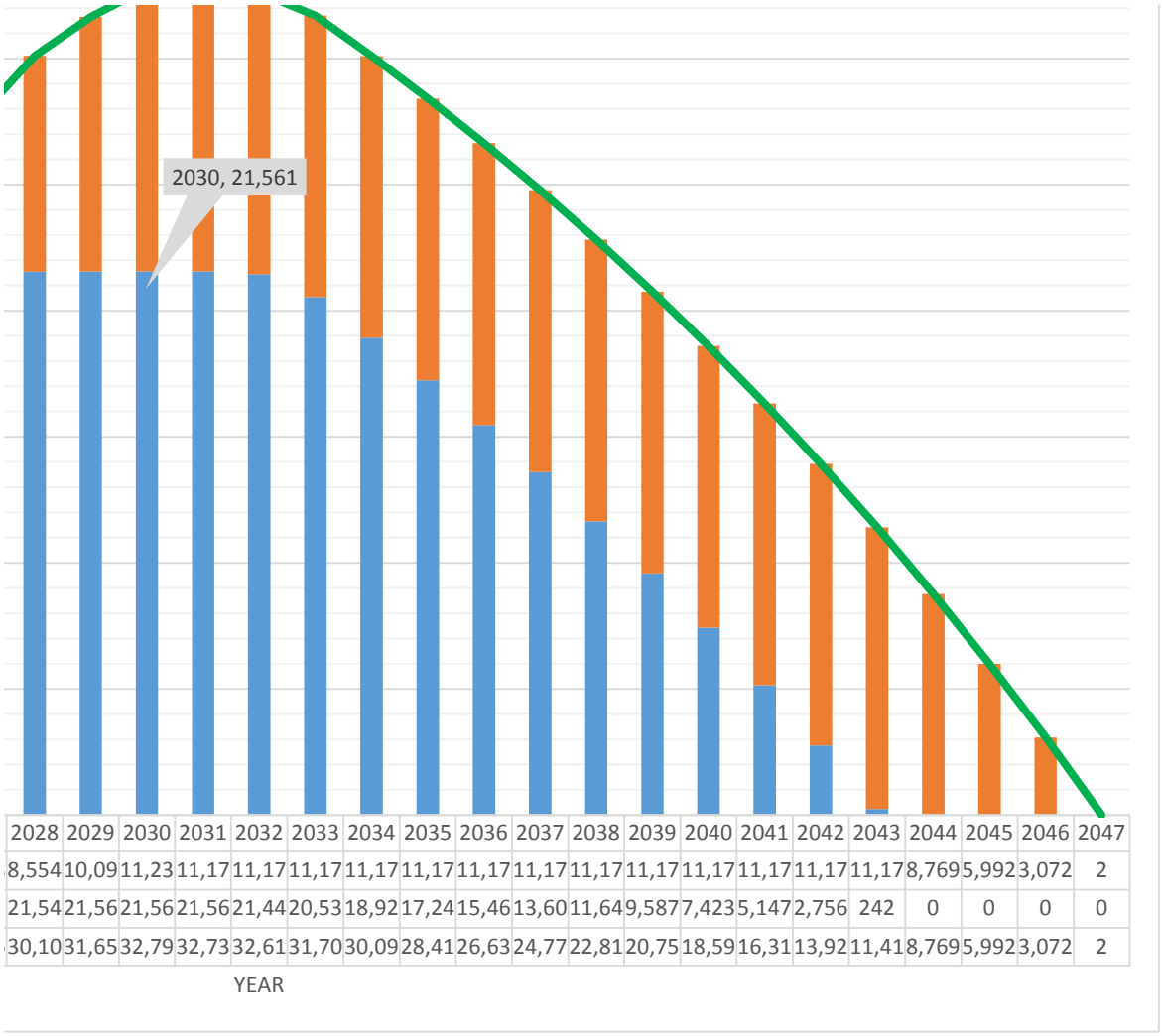


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
41,552	1,144	-68	-114	-914	-1,60	-1,68	-1,77	-1,86	-1,95	-2,05	-2,16	-2,27	-2,39	-2,51	-2,64	-2,77	-2,92	-3,06
3 270	-217	-740	-778	-818	-859	-903	-950	-998	-1,04	-1,10	-1,15	-1,21	-1,28	-1,34	-1,41	-1,48	-1,56	-1,64
031,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,769	5,992	3,072	2
519,53	19,31	18,57	17,79	16,98	16,12	15,21	14,26	13,27	12,22	11,11	9,958	8,740	7,458	6,112	4,696	3,208	1,644	0

CALENDAR YEAR

n of Debt (Principal and Interest)

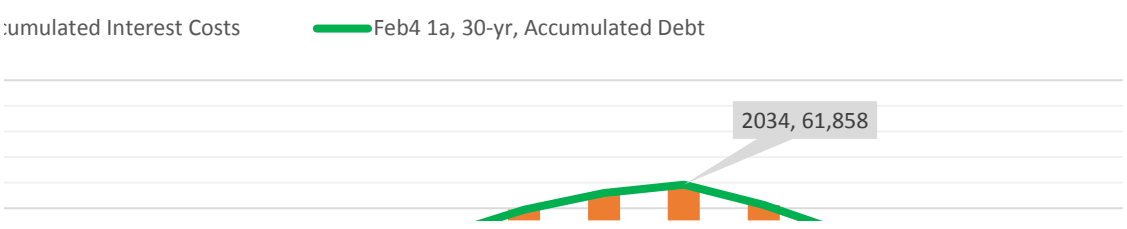




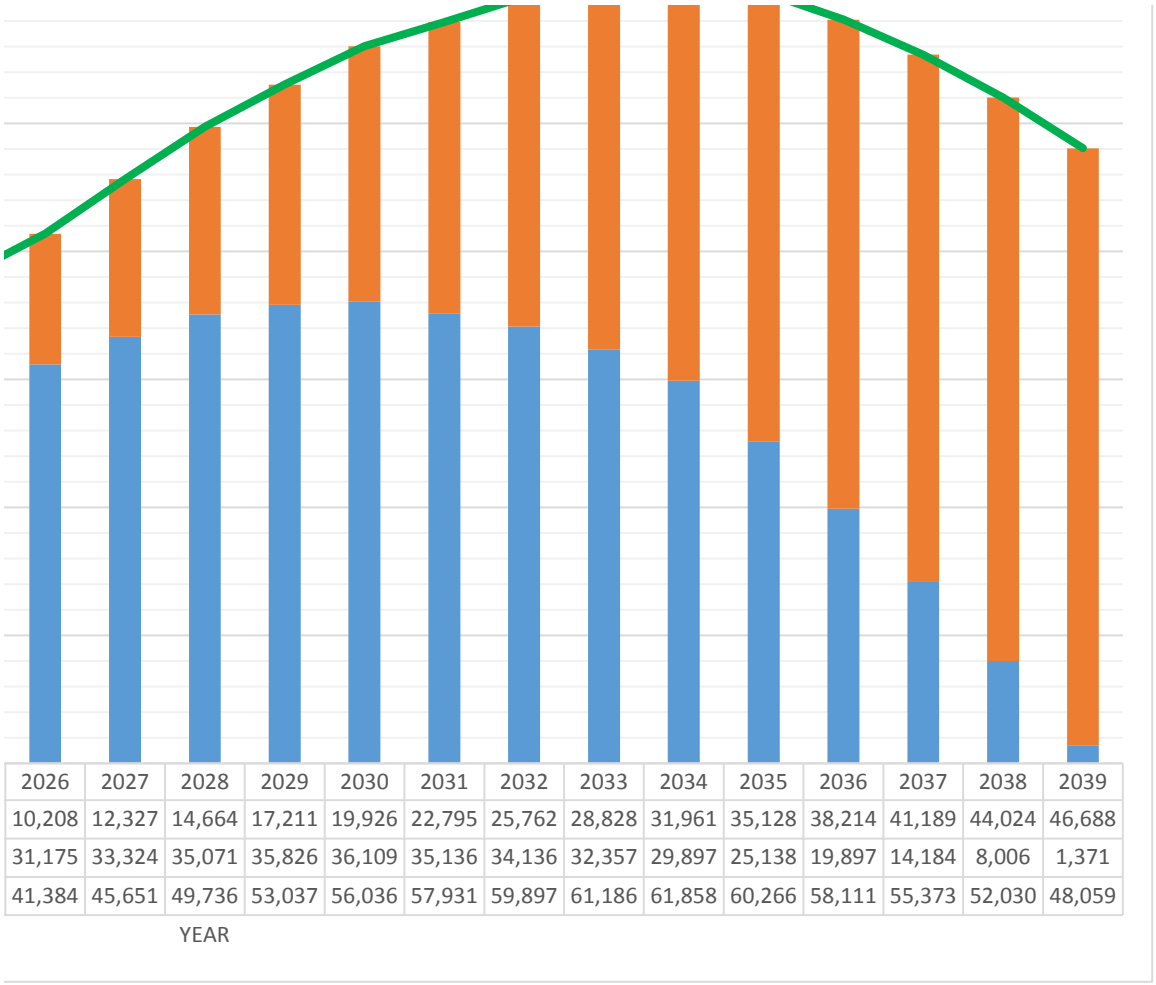
2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
8,554	10,09	11,23	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	8,769	5,992	3,072	2
21,54	21,56	21,56	21,56	21,44	20,53	18,92	17,24	15,46	13,60	11,64	9,587	7,423	5,147	2,756	242	0	0	0	0
30,10	31,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,769	5,992	3,072	2

YEAR

cumulated Total Interest Costs



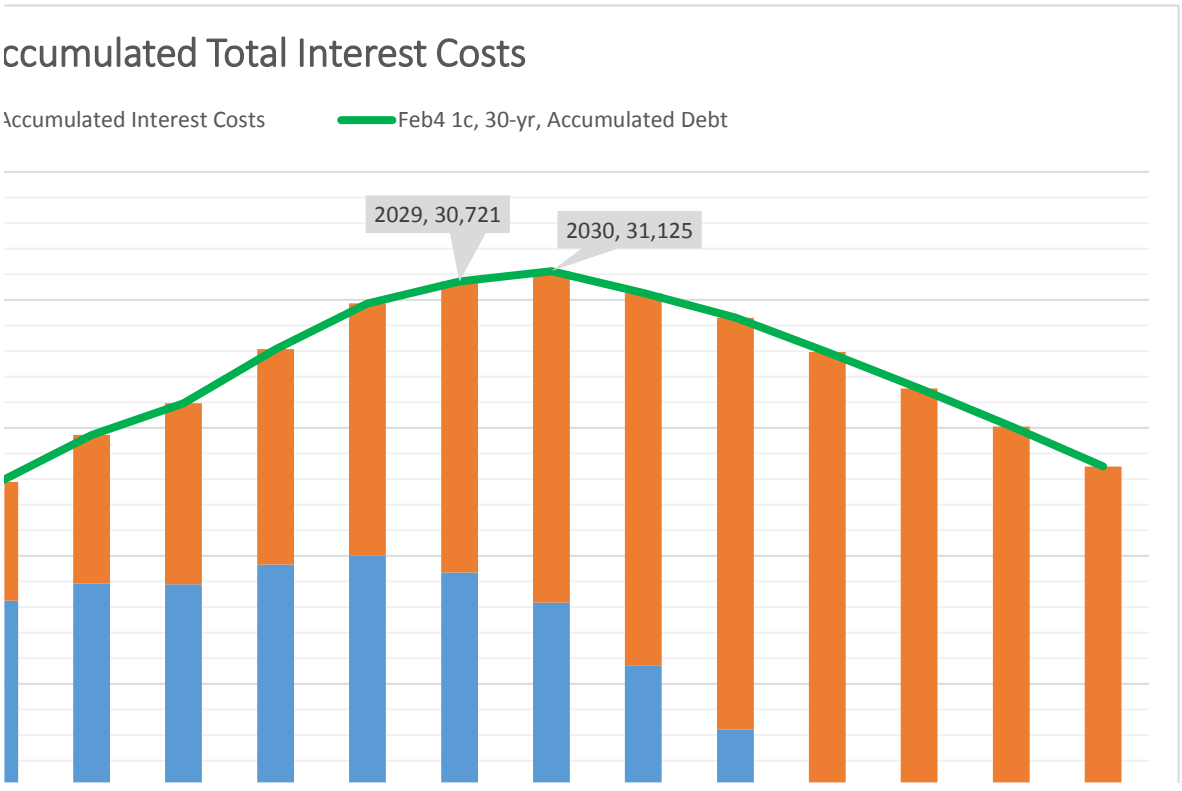
LIONS

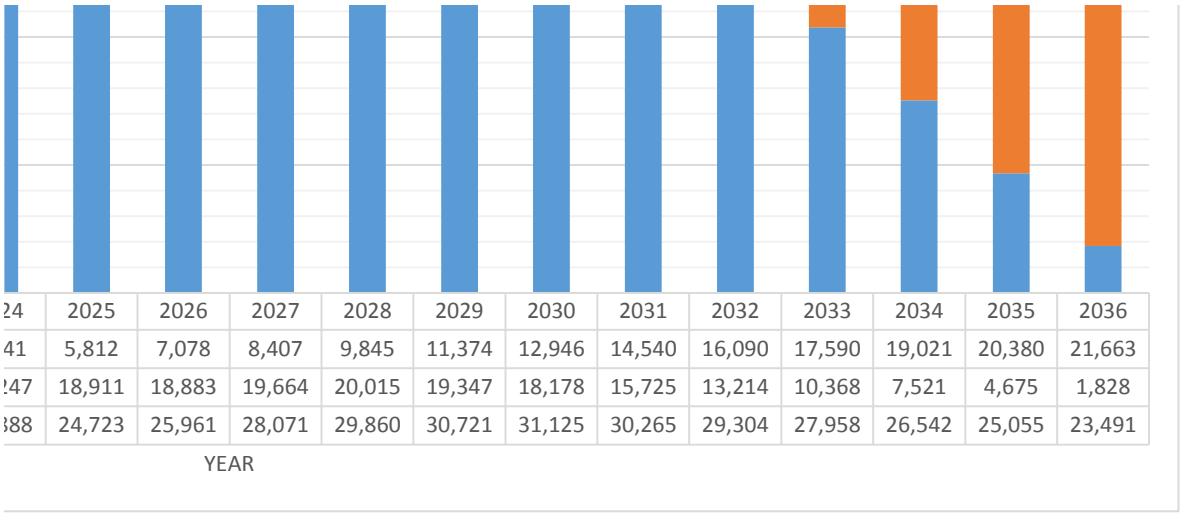


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

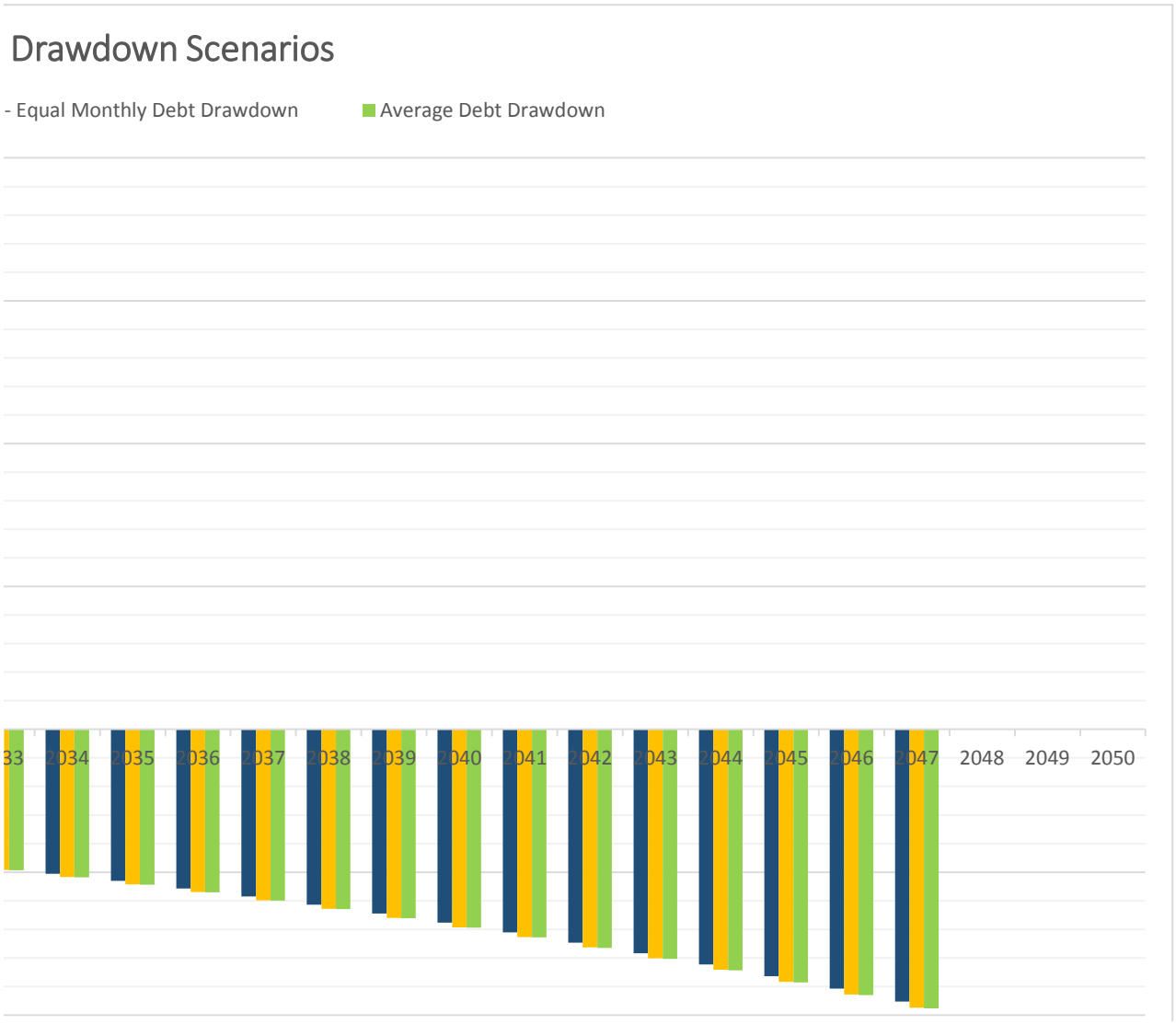
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





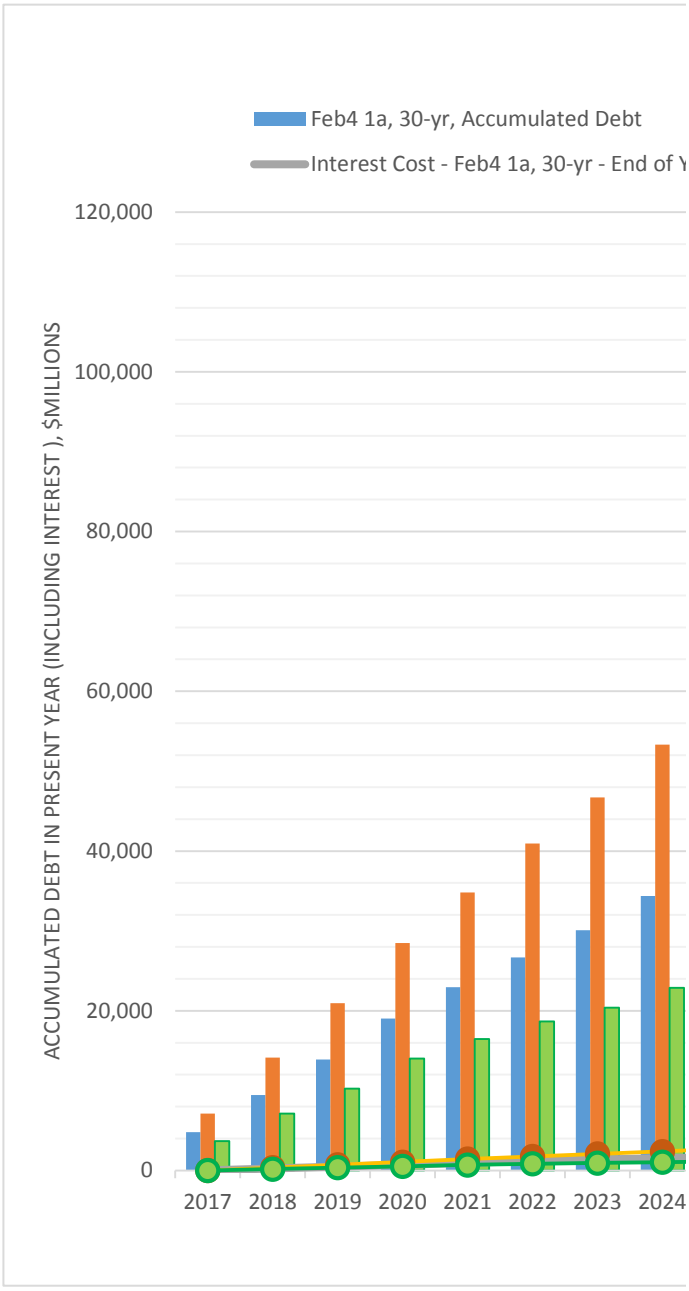
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

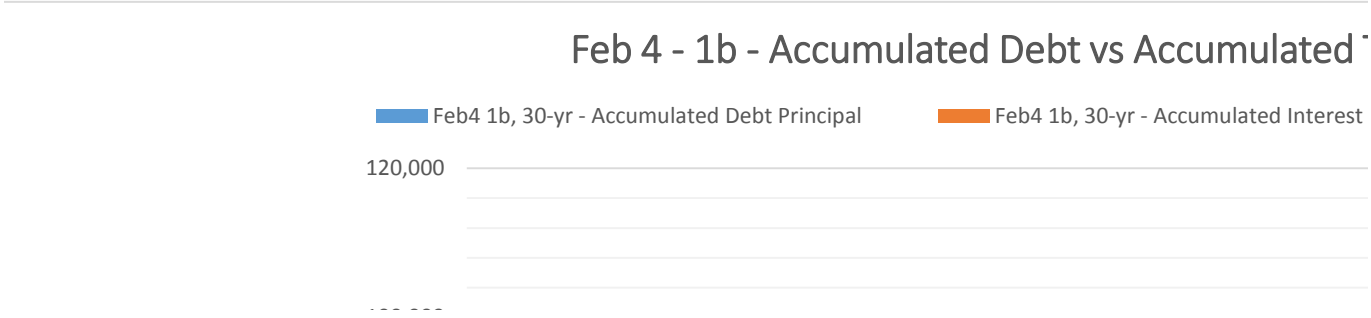
YEAR

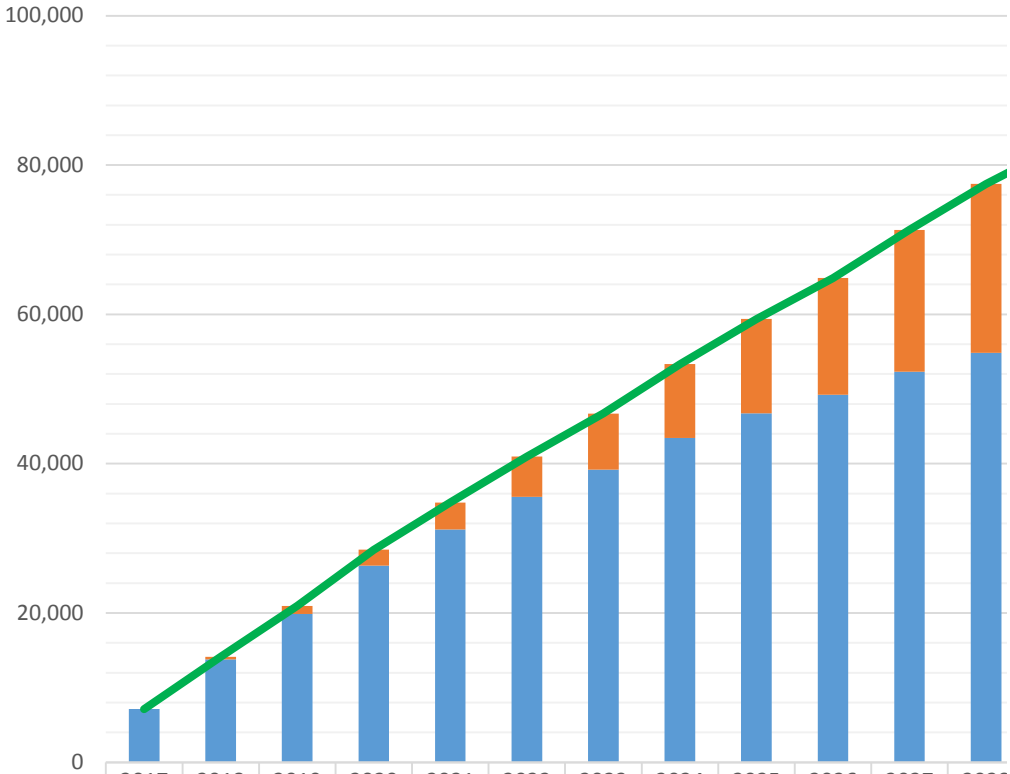


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate

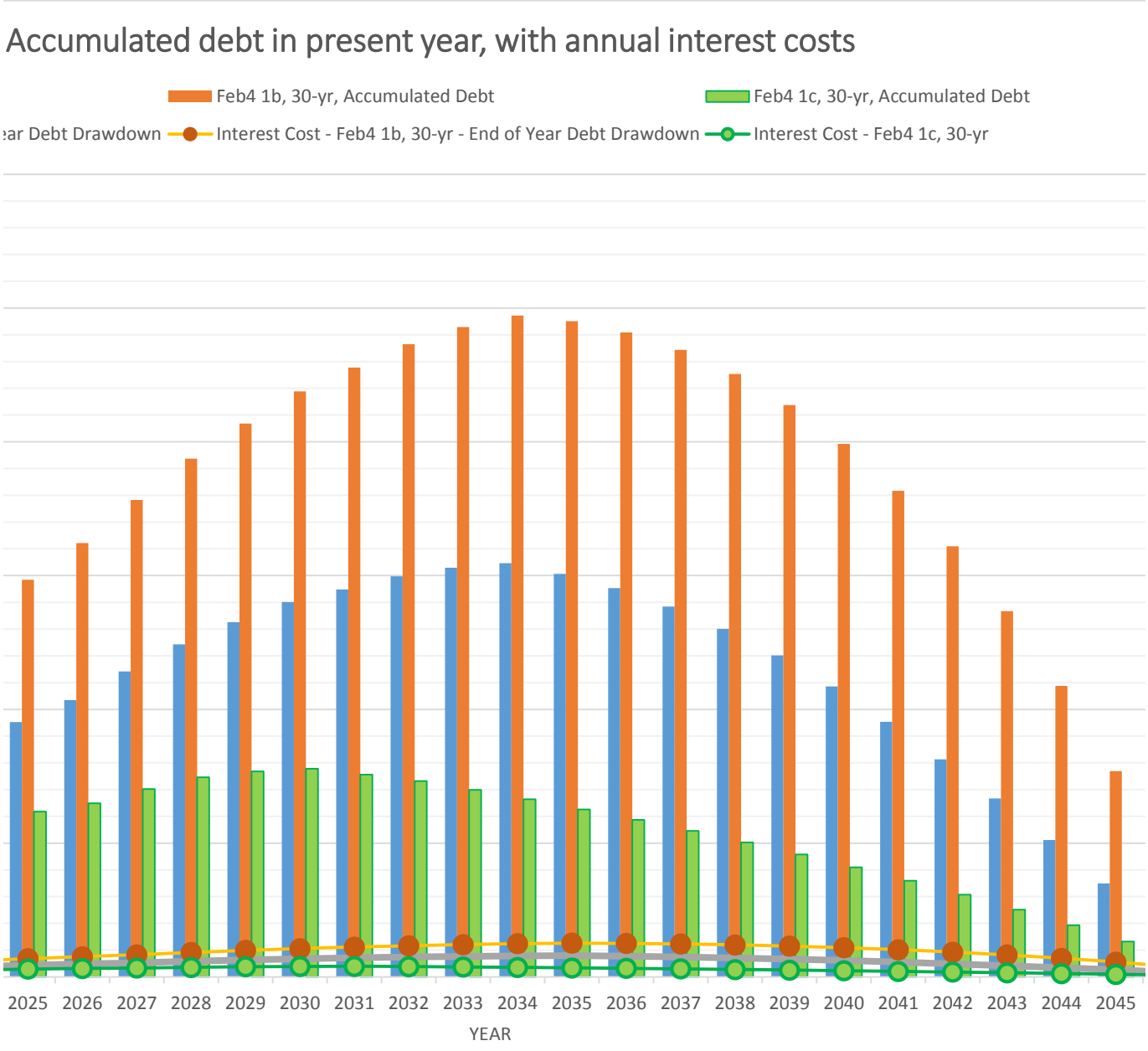


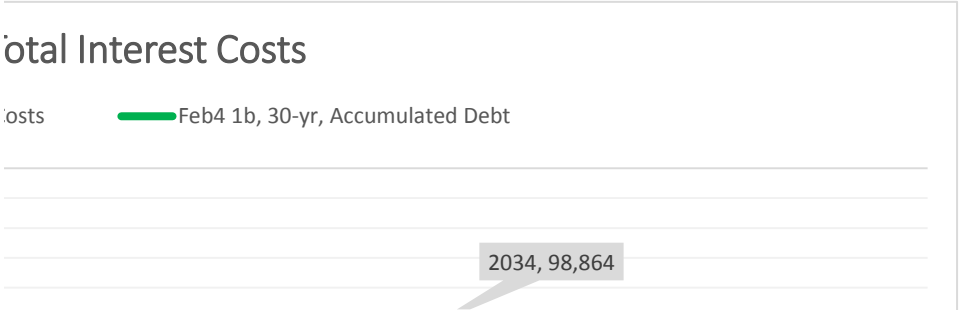

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

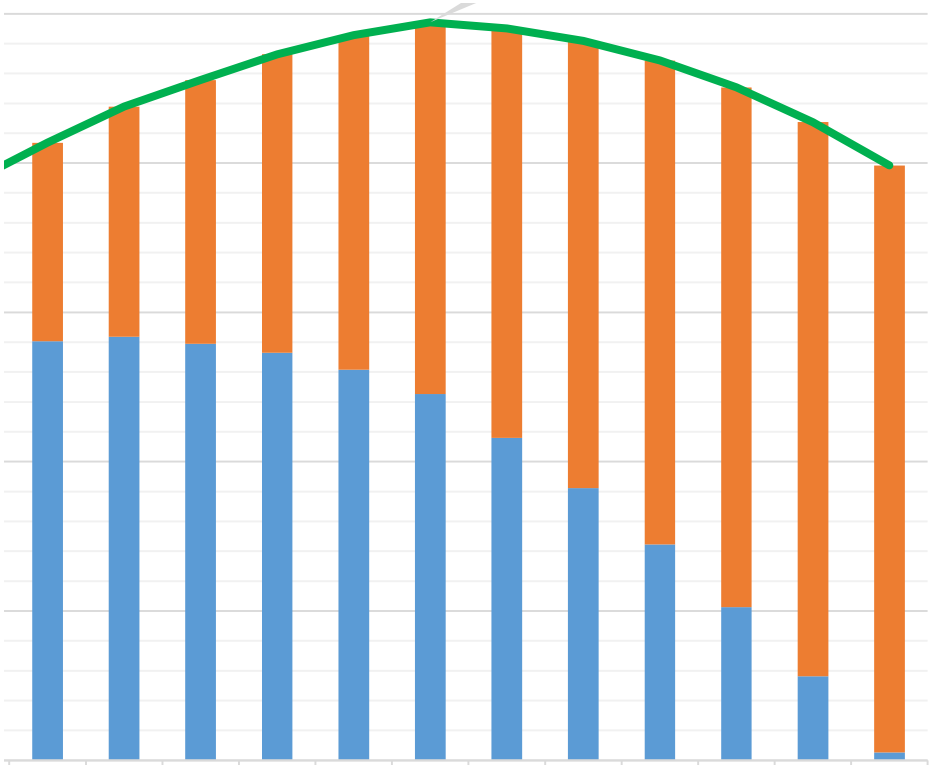


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y

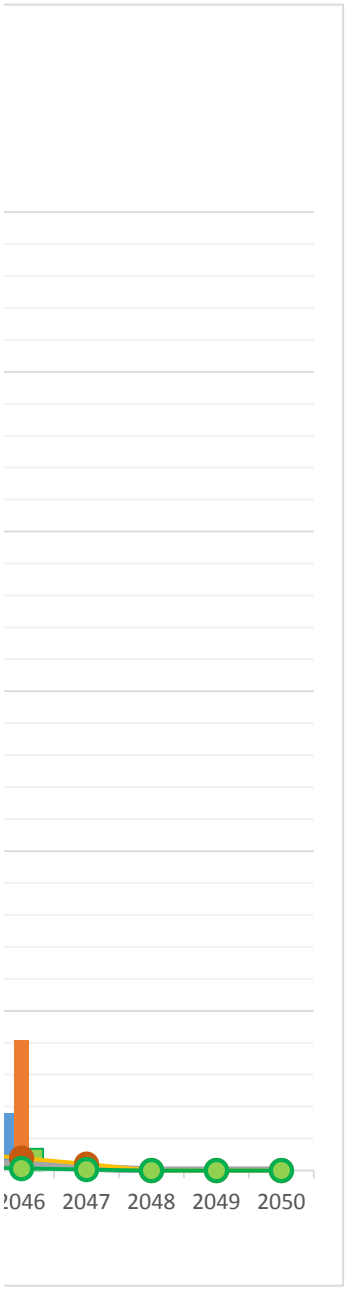

Accumulated debt in present year, with annual interest costs
Feb4 1b, 30-yr, Accumulated Debt
Feb4 1c, 30-yr, Accumulated Debt
ear Debt Drawdown
Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown
Interest Cost - Feb4 1c, 30-yr
2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045
YEAR


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

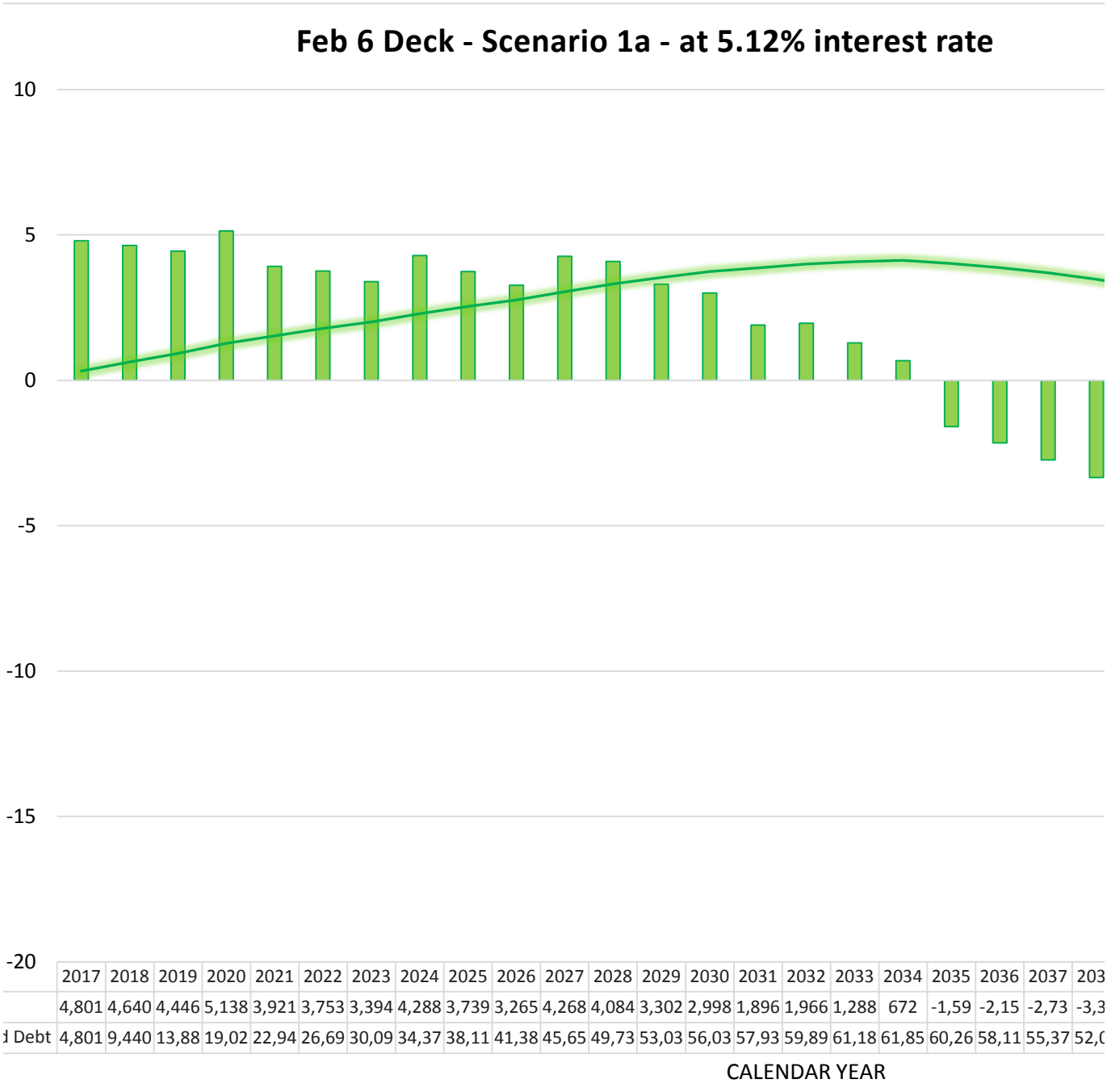
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

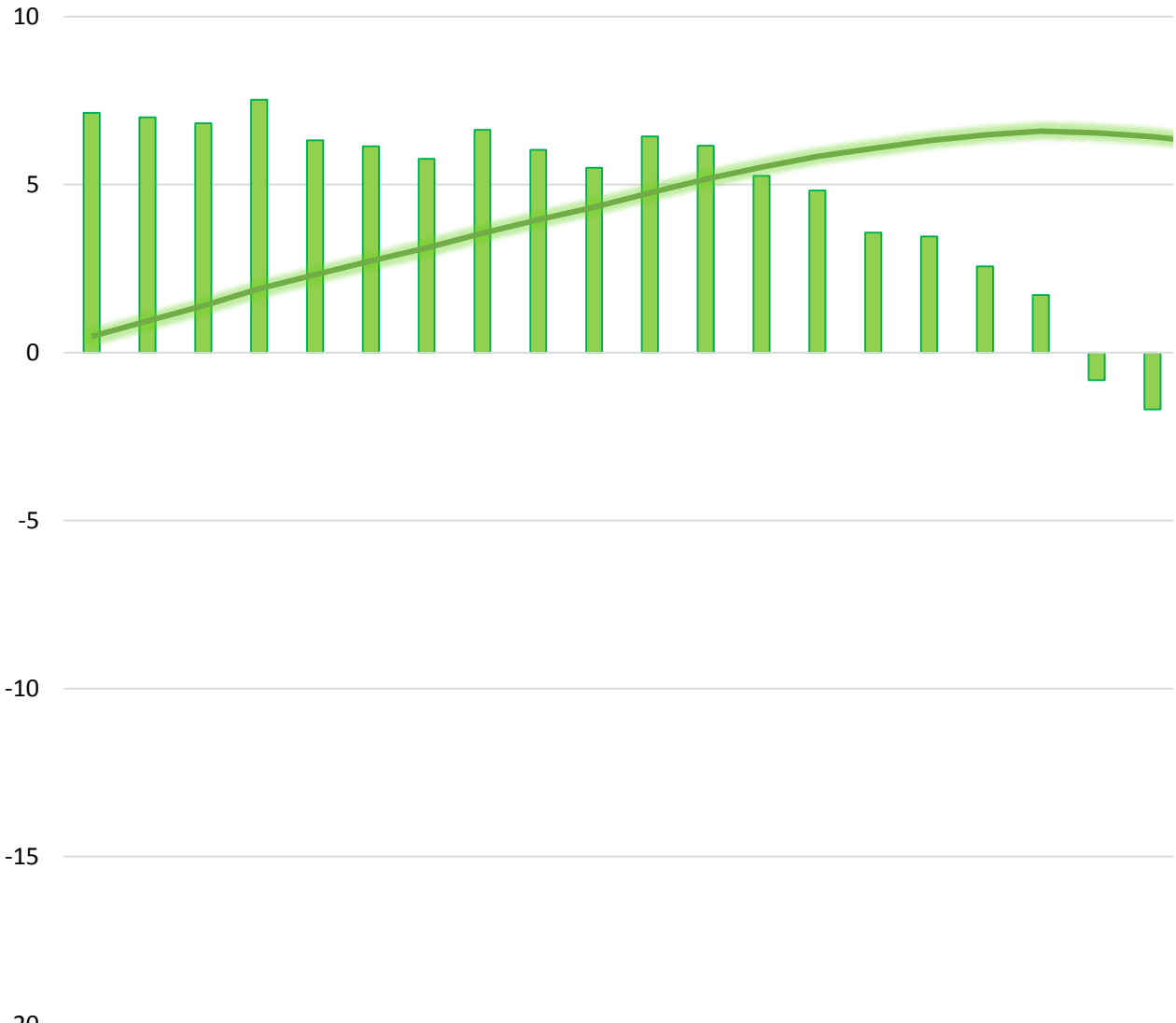
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

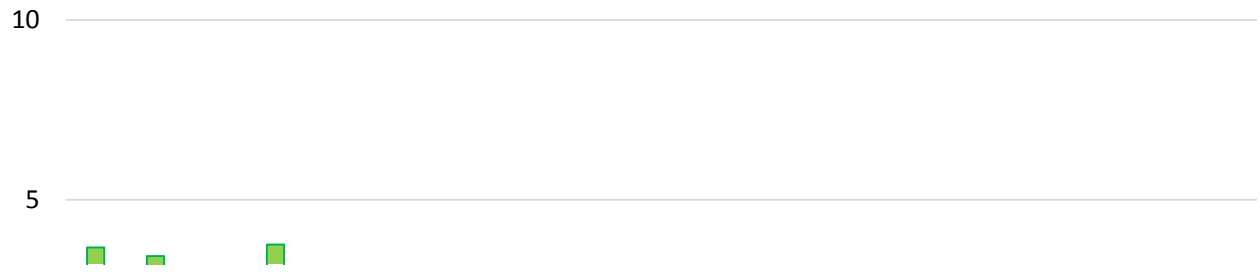
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

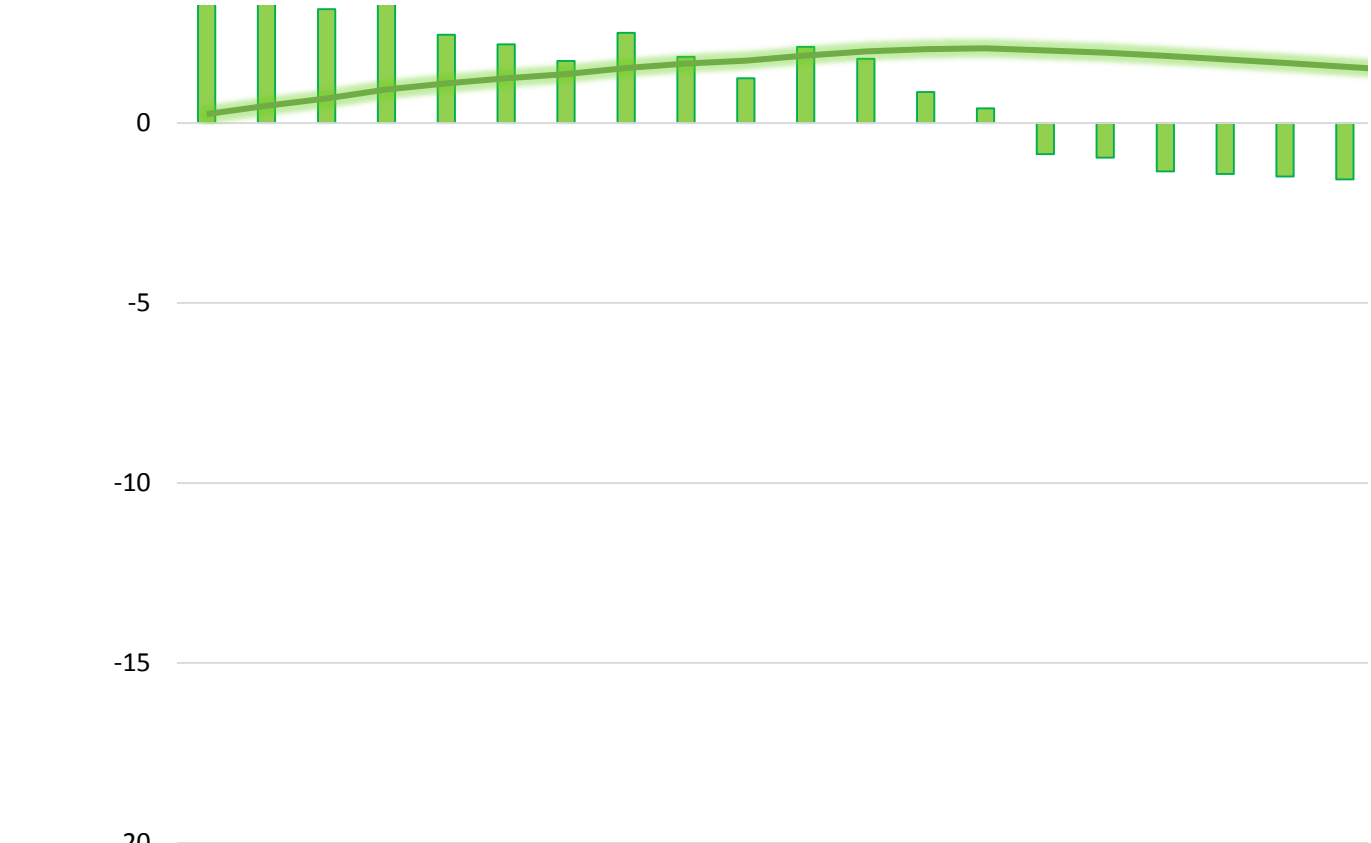


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



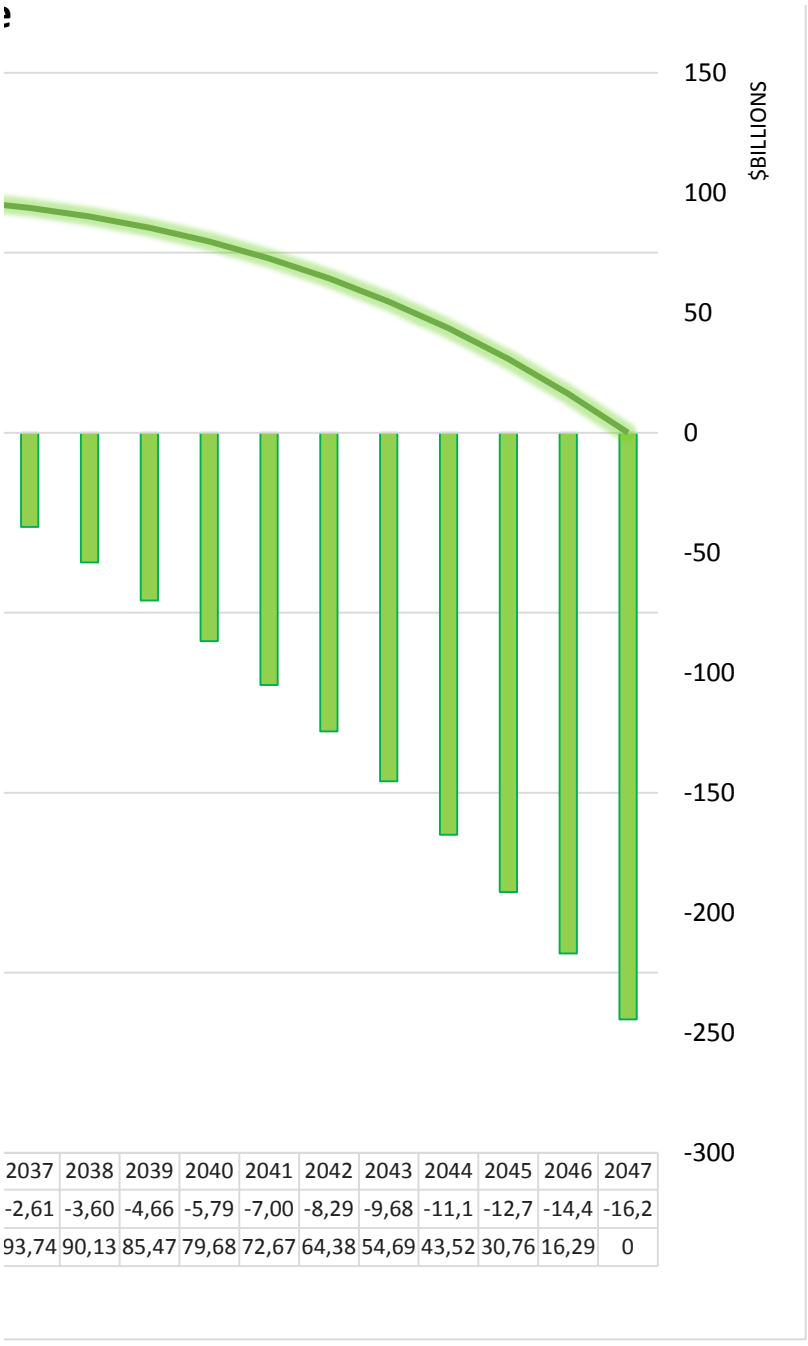


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

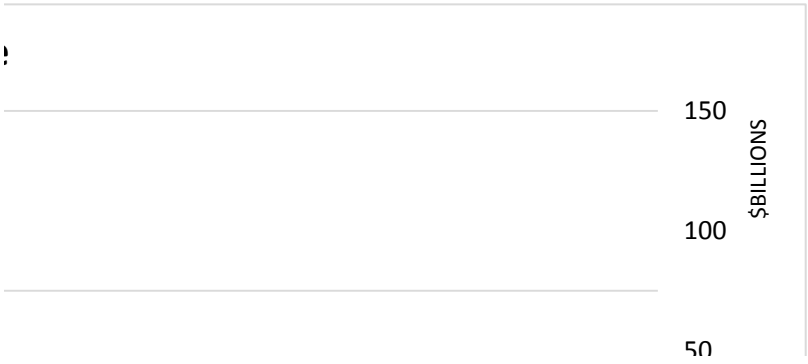
CALENDAR YEAR

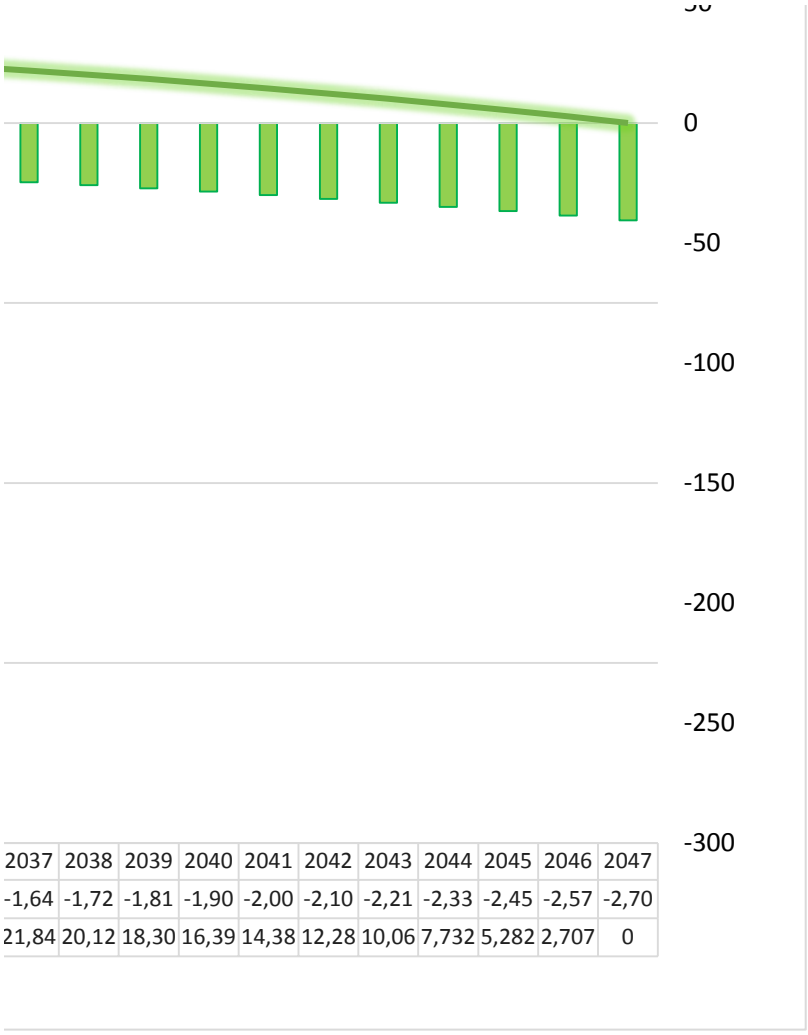


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

#REF!

#REF!

IESO GA cost forecast + extrapolation

Scenario
Option 1

Bills Lowered 25%, RPP Only

Option 2

Bills Lowered 20%, RPP Only

Option 3

Bills Lowered 18%, contract/conservation refinancing, RPP Only

	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
Ratepayer GA Payment	9,856	9,602	9,338	9,344
Total Accumulated Debt ($ billion)	2,239	4,586	7,035	10,219
Ratepayer GA Payment	10,537	10,296	10,041	10,061
Accumulated debt in present year (including 5% interest,	1,559	3,177	4,851	7,207
Ratepayer GA Payment	10,648	10,303	10,186	10,873
Accumulated debt in present year (including 5% interest,	1,447	3,053	4,575	6,105
	12095.37	11834.681	11552.105	12168.428

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801
13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103
9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513
9,266	11,038	12,324	14,370	15,725	16,458	18,035	19,263
9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253
7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876
10843.555	10633.626	10243.432	11128.119	10527.018	10033.287	11042.844	10819.098

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389

9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615
31,654	32,799	32,730	32,616	31,702	30,097	28,411	26,638
10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117
19,534	19,317	18,577	17,799	16,981	16,122	15,218	14,268
9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837
18,843	19,521	20,007	20,312	20,325	19,755	18,549	17,050
10008.692	9721.4381	8654.4847	8819.9388	8238.0383	7756.4351	5662.3212	5388.8445

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627

8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853
24,774	22,815	20,756	18,591	16,316	13,924	11,410	8,767
6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355
13,270	12,221	11,118	9,958	8,740	7,458	6,112	4,696
7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712
15,464	13,694	12,062	10,556	9,143	7,810	6,672	5,928
5128.5761	4880.878	4645.1432	4420.7938	4207.28	4004.0783	3810.6908	3626.6435

2045	2046	2047	2048

3,451	3,285	3,126	2,975	2,831	2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
6,678	6,511	6,353	2,975	2,831	2,695
5,989	3,069	0	0	0	0
5,180	5,013	4,854	2,975	2,831	2,695
3,208	1,644	0	-	-	-
4,007	3,619	3,425	3,156	3,011	2,878
5,676	5,633	5,623	5,730	5,843	5,959
3451.485	3284.787	3126.139	2975.154	2831.461	2694.708

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb14_1_30yr

Option 1 - Bills Lowered 25%, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,239	2,347

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	560	2,266

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $33 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb14_2_30yra

Option 2 - Bills Lowered 20%, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,559	1,619

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	390	1,574

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb14_3_30yr

Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606

	Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st		362	1,487

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	390 - 560	1,574 - 2,266

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	560	2266
Debt-Finance Global Adjustment Costs, Option 1a	390	1574
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		

Enhanced RPP Rebate		
Total, A	**560**	**2506**
Total, B	390	1814

Proposed Program Total:	390 - 560	1,814 - 2,506

ining

0	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Option 1
Option 2
Option 3

2019	2020	2021	2022
2,449	3,184	2,834	2,599

2018-19	2019-20	2020-21	2021-2022
2,372	2,633	3,096	2,775

2030.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,674	2,355	2,060	1,772

2018-19	2019-20	2020-21	2021-2022
1,632	1,844	2,282	1,988

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429

2033.

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022
1,632 - 2,372	1,844 - 2,633	2,282 - 3,096	1,988 - 2,775

/1

2018-19[1]	2019-20[1]	2020-21[1]
2372	2633	3096
1632	1844	2282
225	279	323
60	60	60
18	18	18

2675	**2990**	**3497**
1935	2201	2683

1,935 - 2,675 2,201 - 2,990 2,683 - 3,497

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
21,561	30,205	32,799	occurs in Year 2030
13,503	17,883	19,534	occurs in Year 2029
12,862	19,497	20,325	occurs in Year 2033
#REF!	#REF!	#REF!	#REF!

Tab Name
Feb14_1_30yr
Feb14_2_30yr
Feb14_3_30yr
Feb14_1a_30yr

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,239	2,347	2,449	3,184	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,604	-1,687	-1,773	-1,864	-1,959	-2,059	-2,164	-2,275	-2,392	-2,514	-2,643	-2,778	-2,920	-3,069	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,292	2,403	2,507	3,260	2,902	2,660	2,219	3,056	2,412	1,841	2,776	2,492	1,589	1,171	-70	-117	-936	-1,643	-1,727	-1,815	-1,908	-2,005	-2,108	-2,216	-2,329	-2,448	-2,574	-2,705	-2,844	-2,989	-3,142	0	0	0	
			53	56	58	76	67	62	52	71	56	43	64	58	37	27	-2	-3	-22	-38	-40	-42	-44	-47	-49	-51	-54	-57	-60	-63	-66	-69	-73	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,184	1,678	30,205
Equal Monthly Debt Drawdown	3,260	1,676	

	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,799	2030	21,561
Equal Monthly Debt Drawdown	33,579		

Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
a	Debt, Beginning of Year	0	2,239	4,586	7,035	10,219	13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103	31,655	32,799	32,731	32,617	31,703	30,098	28,412	26,639	24,775	22,816	20,757	18,593	16,318	13,926	11,412	8,769	5,992	3,072	2	3	3	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*115*	*235*	*360*	*523*	*668*	*801*	*912*	*1,064*	*1,185*	*1,277*	*1,416*	*1,540*	*1,620*	*1,678*	*1,675*	*1,669*	*1,622*	*1,540*	*1,454*	*1,363*	*1,268*	*1,167*	*1,062*	*951*	*835*	*712*	*584*	*449*	*307*	*157*	*0*	*0*	*0*	30,205
b	Additional GA Debt Drawdown, End of Year	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,239	4,586	7,035	10,219	13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103	31,655	32,799	32,731	32,617	31,703	30,098	28,412	26,639	24,775	22,816	20,757	18,593	16,318	13,926	11,412	8,769	5,992	3,072	2	3	3		
			FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,138	8,554	10,094	11,238	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	8,769	5,992	3,072	2	3	3	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,821	13,752	15,118	17,192	18,483	19,097	20,531	21,549	21,561	21,561	21,561	21,447	20,533	18,928	17,242	15,469	13,605	11,646	9,587	7,423	5,147	2,756	242	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,138	8,554	10,094	11,714	13,392	15,066	16,735	18,357	19,897	21,350	22,713	23,981	25,148	26,210	27,161	27,996	28,709	29,293	29,741	30,048	30,205				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,821	13,752	15,118	17,192	18,483	19,097	20,531	21,549	21,561	21,086	19,339	17,551	14,968	11,741	8,515	5,288	2,062	-1,164	-4,391	-7,617	-10,844	-14,070	-17,297	-20,523	-23,750	-26,976	-30,202				
Fiscal Exposure - End of Year Debt Drawdown		2,239	2,347	2,449	3,184	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,604	-1,687	-1,773	-1,864	-1,959	-2,059	-2,164	-2,275	-2,392	-2,514	-2,643	-2,778	-2,920	-3,069	0	0	0	

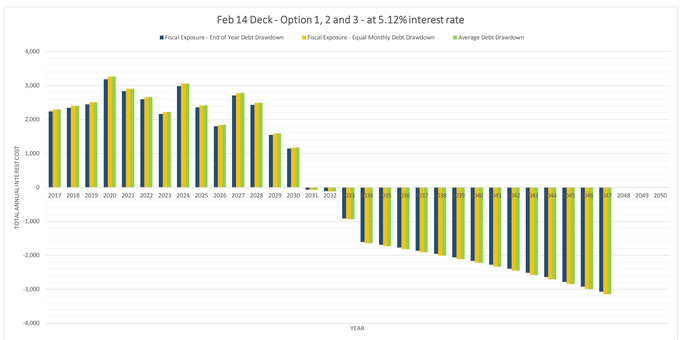
Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,292	4,695	7,202	10,462	13,363	16,024	18,243	21,299	23,711	25,552	28,327	30,819	32,408	33,579	33,510	33,393	32,457	30,814	29,087	27,272	25,365	23,359	21,251	19,035	16,706	14,257	11,683	8,978	6,134	3,145	2	3	3	
1,676	*Interest Cost - Feb14 Option 1, 30-yr*	*53*	*170*	*293*	*436*	*590*	*730*	*852*	*983*	*1,120*	*1,228*	*1,341*	*1,473*	*1,577*	*1,647*	*1,676*	*1,672*	*1,647*	*1,584*	*1,500*	*1,411*	*1,319*	*1,221*	*1,118*	*1,010*	*897*	*778*	*653*	*521*	*383*	*237*	*84*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,292	4,695	7,202	10,462	13,363	16,024	18,243	21,299	23,711	25,552	28,327	30,819	32,408	33,579	33,510	33,393	32,457	30,814	29,087	27,272	25,365	23,359	21,251	19,035	16,706	14,257	11,683	8,978	6,134	3,145	2	3	3		
Fiscal Exposure - Equal Monthly Debt Drawdown		2,292	2,403	2,507	3,260	2,902	2,660	2,219	3,056	2,412	1,841	2,776	2,492	1,589	1,171	-70	-117	-936	-1,643	-1,727	-1,815	-1,908	-2,005	-2,108	-2,216	-2,329	-2,448	-2,574	-2,705	-2,844	-2,989	-3,142	0	0	0	

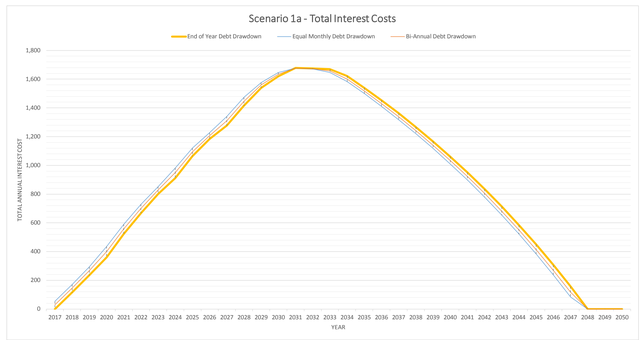
	Monthly Drawdown	187	186	185	235	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	-	-	-
	FV of Monthly Drawdown at 5%	2,292	2,285	2,267	2,891	2,366	1,977	1,399	2,123	1,322	628	1,468	1,043	12	(487)	(1,788)	(1,831)	(2,644)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	-	-	-	
	Annual Interest Cost on New Drawdowns	53	53	53	67	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	-	-	-	
	Annual Interest Cost on Opening Balance	-	117	240	368	535	684	820	933	1,090	1,213	1,307	1,449	1,577	1,658	1,718	1,714	1,708	1,661	1,577	1,488	1,395	1,298	1,195	1,087	974	855	729	598	459	314	161	0	0	0	
	Total Annual Interest Cost	53	170	293	436	590	730	852	983	1,120	1,228	1,341	1,473	1,577	1,647	1,676	1,672	1,647	1,584	1,500	1,411	1,319	1,221	1,118	1,010	897	778	653	521	383	237	84	0	0	0	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,268	4,645	7,125	10,349	13,220	15,852	18,047	21,070	23,456	25,277	28,023	30,488	32,060	33,219	33,150	33,034	32,108	30,483	28,775	26,980	25,092	23,108	21,023	18,831	16,526	14,104	11,558	8,882	6,068	3,111	2	3	3	
	Interest Cost - Feb14 Option 1, 30-yr	*29*	*145*	*266*	*401*	*559*	*701*	*828*	*950*	*1,095*	*1,208*	*1,312*	*1,447*	*1,560*	*1,634*	*1,677*	*1,673*	*1,657*	*1,601*	*1,518*	*1,431*	*1,339*	*1,242*	*1,141*	*1,034*	*922*	*804*	*680*	*550*	*413*	*269*	*118*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,268	4,645	7,125	10,349	13,220	15,852	18,047	21,070	23,456	25,277	28,023	30,488	32,060	33,219	33,150	33,034	32,108	30,483	28,775	26,980	25,092	23,108	21,023	18,831	16,526	14,104	11,558	8,882	6,068	3,111	2	3	3		
Fiscal Exposure - Bi-Annual Debt Drawdown		2,268	2,377	2,480	3,225	2,870	2,632	2,195	3,024	2,386	1,821	2,746	2,465	1,572	1,159	-69	-116	-926	-1,625	-1,708	-1,796	-1,887	-1,984	-2,085	-2,192	-2,304	-2,422	-2,546	-2,676	-2,813	-2,957	-3,109	0	0	0	

	Bi-Annual Drawdown	1,119	1,116	1,107	1,412	1,156	965	683	1,037	646	307	717	509	6	(238)	(873)	(894)	(1,291)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,268	2,261	2,243	2,860	2,341	1,955	1,384	2,100	1,308	621	1,453	1,031	12	(481)	(1,769)	(1,812)	(2,616)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	-	-	-	
	Annual Interest Cost on New Drawdowns	29	29	28	36	30	25	17	27	17	8	18	13	0	(6)	(22)	(23)	(33)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	-	-	-	
	Annual Interest Cost on Opening Balance	-	116	238	365	529	676	811	923	1,078	1,200	1,293	1,434	1,560	1,640	1,700	1,696	1,690	1,643	1,560	1,472	1,380	1,284	1,182	1,076	963	846	722	591	454	310	159	0	0	0	
	Total Annual Interest Cost	29	145	266	401	559	701	828	950	1,095	1,208	1,312	1,447	1,560	1,634	1,677	1,673	1,657	1,601	1,518	1,431	1,339	1,242	1,141	1,034	922	804	680	550	413	269	118	0	0	0	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,296	4,703	7,215	10,480	13,387	16,052	18,275	21,336	23,752	25,596	28,377	30,873	32,465	33,638	33,568	33,451	32,514	30,868	29,138	27,320	25,409	23,400	21,288	19,068	16,735	14,282	11,704	8,994	6,145	3,150	2	3	3	
	Interest Cost - Feb14 Option 1, 30-yr	*57*	*175*	*297*	*441*	*595*	*724*	*856*	*988*	*1,125*	*1,231*	*1,346*	*1,478*	*1,580*	*1,649*	*1,676*	*1,672*	*1,645*	*1,581*	*1,497*	*1,408*	*1,315*	*1,217*	*1,115*	*1,007*	*893*	*774*	*648*	*516*	*378*	*232*	*79*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,296	4,703	7,215	10,480	13,387	16,052	18,275	21,336	23,752	25,596	28,377	30,873	32,465	33,638	33,568	33,451	32,514	30,868	29,138	27,320	25,409	23,400	21,288	19,068	16,735	14,282	11,704	8,994	6,145	3,150	2	3	3		
Fiscal Exposure - Average Debt Drawdown		2,296	2,407	2,512	3,265	2,907	2,665	2,223	3,062	2,416	1,844	2,780	2,496	1,592	1,173	-70	-117	-937	-1,646	-1,730	-1,818	-1,911	-2,009	-2,112	-2,220	-2,333	-2,453	-2,578	-2,710	-2,849	-2,995	-3,148	0	0	0	





Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,559	1,619	1,674	2,356	2,060	1,772	1,286	2,046	1,355	733	1,578	1,228	271	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,415	-1,488	-1,564	-1,644	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0
			37	38	40	56	49	42	31	49	32	17	38	29	6	-5	-18	-19	-19	-20	-21	-23	-24	-25	-26	-28	-29	-30	-32	-34	-35	-37	-39	0	0	0

0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,356	999	17,883
Equal Monthly Debt Drawdown	2,412	994	

	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,534	2029	13,503
Equal Monthly Debt Drawdown	19,999		

Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
a	Debt, Beginning of Year	0	1,559	3,177	4,851	7,207	9,266	11,039	12,324	14,370	15,725	16,458	18,035	19,264	19,534	19,317	18,577	17,799	16,982	16,122	15,219	14,269	13,271	12,222	11,119	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1	2	2	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*80*	*163*	*248*	*369*	*474*	*565*	*631*	*735*	*805*	*842*	*923*	*986*	*999*	*988*	*950*	*911*	*869*	*825*	*779*	*730*	*679*	*625*	*569*	*510*	*447*	*382*	*313*	*240*	*164*	*84*	*0*	*0*	*0*	17,883
b	Additional GA Debt Drawdown, End of Year	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,559	3,177	4,851	7,207	9,266	11,039	12,324	14,370	15,725	16,458	18,035	19,264	19,534	19,317	18,577	17,799	16,982	16,122	15,219	14,269	13,271	12,222	11,119	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1	2	2	2	
			TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	6,601	5,861	5,861	5,861	5,861	5,861	5,861	5,861	5,861	5,861	5,861	5,861	5,861	5,861	4,697	3,210	1,646	1	2	2	2	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,842	12,461	12,390	13,125	13,431	12,716	12,716	12,716	11,938	11,120	10,261	9,357	8,408	7,410	6,360	5,257	4,098	2,879	1,598	252	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	7,818	8,806	9,757	10,667	11,536	12,361	13,140	13,870	14,549	15,174	15,743	16,252	16,700	17,081	17,394	17,634	17,798	17,883				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,842	12,461	12,390	13,125	13,431	12,716	11,499	9,771	8,042	6,314	4,586	2,858	1,129	-599	-2,327	-4,055	-5,784	-7,512	-9,240	-10,968	-12,696	-14,425	-16,153	-17,881				
Fiscal Exposure - End of Year Debt Drawdown		1,559	1,619	1,674	2,356	2,060	1,772	1,286	2,046	1,355	733	1,578	1,228	271	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,415	-1,488	-1,564	-1,644	0	0	0	

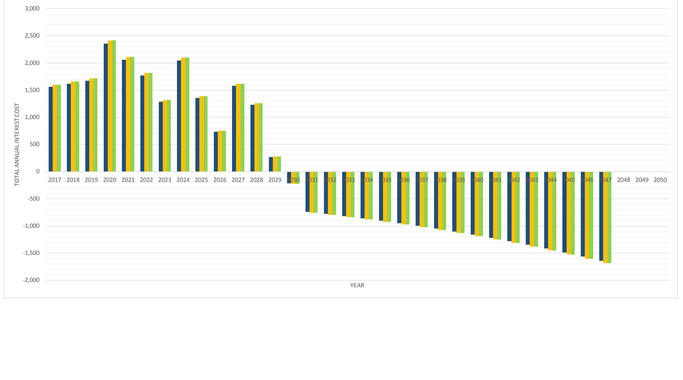
Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,019	18,223	17,385	16,506	15,581	14,609	13,587	12,512	11,383	10,196	8,948	7,637	6,258	4,809	3,286	1,685	2	2	2	
994	*Interest Cost - Feb14 Option 1, 30-yr*	*37*	*118*	*202*	*304*	*418*	*516*	*595*	*679*	*767*	*822*	*880*	*952*	*992*	*994*	*971*	*932*	*891*	*848*	*803*	*756*	*706*	*654*	*599*	*541*	*481*	*417*	*350*	*279*	*205*	*127*	*45*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,019	18,223	17,385	16,506	15,581	14,609	13,587	12,512	11,383	10,196	8,948	7,637	6,258	4,809	3,286	1,685	2	2	2	2	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0	

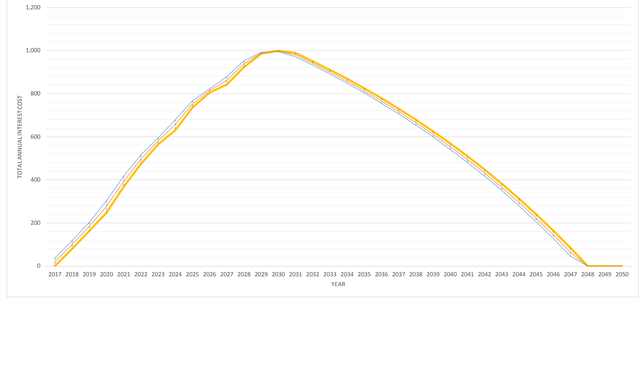
	Monthly Drawdown	130	128	126	176	141	108	60	118	52	(6)	61	25	(60)	(101)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	-	-	-	
	FV of Monthly Drawdown at 5%	1,596	1,575	1,548	2,157	1,731	1,329	738	1,449	635	(74)	753	313	(732)	(1,246)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	-	-	-	
	Annual Interest Cost on New Drawdowns	37	37	36	50	40	31	17	34	15	(2)	17	7	(17)	(29)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	-	-	-	
	Annual Interest Cost on Opening Balance	-	82	166	254	377	485	578	646	753	824	862	945	1,009	1,023	1,012	973	932	889	844	797	747	695	640	582	522	458	391	320	246	168	86	0	0	0	
	Total Annual Interest Cost	37	118	202	304	418	516	595	679	767	822	880	952	992	994	971	932	891	848	803	756	706	654	599	541	481	417	350	279	205	127	45	0	0	0	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,815	18,027	17,199	16,328	15,413	14,452	13,441	12,378	11,261	10,087	8,852	7,555	6,191	4,758	3,251	1,667	1	2	2	
	Interest Cost - Feb14 Option 1, 30-yr	*20*	*100*	*184*	*278*	*395*	*497*	*581*	*657*	*753*	*814*	*862*	*938*	*989*	*997*	*979*	*940*	*900*	*858*	*813*	*766*	*717*	*666*	*611*	*554*	*494*	*431*	*364*	*295*	*221*	*144*	*63*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,815	18,027	17,199	16,328	15,413	14,452	13,441	12,378	11,261	10,087	8,852	7,555	6,191	4,758	3,251	1,667	1	2	2	2	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,579	1,639	1,696	2,386	2,086	1,795	1,302	2,072	1,372	742	1,598	1,244	274	-220	-749	-788	-828	-870	-915	-962	-1,011	-1,063	-1,117	-1,174	-1,234	-1,297	-1,364	-1,434	-1,507	-1,584	-1,665	0	0	0	

	Bi-Annual Drawdown	779	769	756	1,054	845	649	361	708	310	(36)	368	153	(358)	(608)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,579	1,558	1,531	2,134	1,713	1,315	730	1,433	628	(73)	745	310	(724)	(1,232)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	-	-	-	
	Annual Interest Cost on New Drawdowns	20	20	19	27	22	17	9	18	8	(1)	9	4	(9)	(16)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	-	-	-	
	Annual Interest Cost on Opening Balance	-	81	165	251	373	480	572	639	745	815	853	935	998	1,012	1,001	963	922	880	835	789	739	688	633	576	516	453	387	317	243	166	85	0	0	0		
	Total Annual Interest Cost	20	100	184	278	395	497	581	657	753	814	862	938	989	997	979	940	900	858	813	766	717	666	611	554	494	431	364	295	221	144	63	0	0	0	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,599	3,258	4,975	7,391	9,504	11,321	12,640	14,738	16,128	16,879	18,497	19,757	20,034	19,811	19,052	18,254	17,416	16,535	15,608	14,634	13,610	12,534	11,403	10,214	8,964	7,650	6,269	4,818	3,292	1,688	2	2	2	
	Interest Cost - Feb14 Option 1, 30-yr	*40*	*121*	*205*	*308*	*421*	*519*	*598*	*683*	*770*	*823*	*882*	*954*	*992*	*994*	*969*	*931*	*890*	*847*	*802*	*754*	*704*	*652*	*597*	*539*	*478*	*414*	*347*	*277*	*202*	*124*	*42*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,599	3,258	4,975	7,391	9,504	11,321	12,640	14,738	16,128	16,879	18,497	19,757	20,034	19,811	19,052	18,254	17,416	16,535	15,608	14,634	13,610	12,534	11,403	10,214	8,964	7,650	6,269	4,818	3,292	1,688	2	2	2	2	
Fiscal Exposure - Average Debt Drawdown		1,599	1,660	1,717	2,416	2,112	1,817	1,319	2,098	1,390	751	1,618	1,260	277	-223	-759	-798	-839	-881	-927	-974	-1,024	-1,076	-1,131	-1,189	-1,250	-1,314	-1,381	-1,452	-1,526	-1,604	-1,686	0	0	0	





Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_2_30yra

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,559	1,619	1,674	2,355	2,060	1,772	1,286	2,046	1,355	733	1,577	1,228	270	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,416	-1,488	-1,564	-1,644	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0	
			37	38	40	56	49	42	31	49	32	17	38	29	6	-5	-18	-19	-19	-20	-21	-23	-24	-25	-26	-28	-29	-30	-32	-34	-35	-37	-39	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,355	999	17,882
Equal Monthly Debt Drawdown	2,412	994	

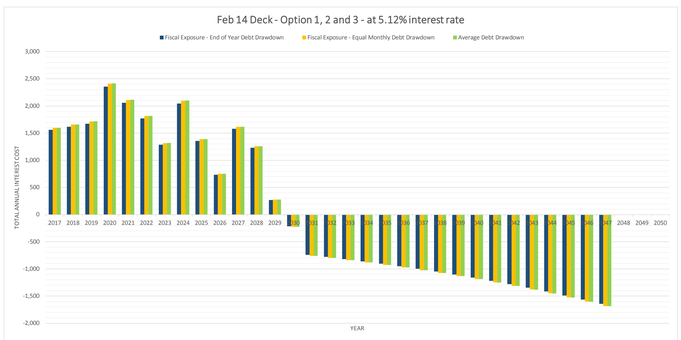
	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,534	2029	13,502
Equal Monthly Debt Drawdown	19,999		

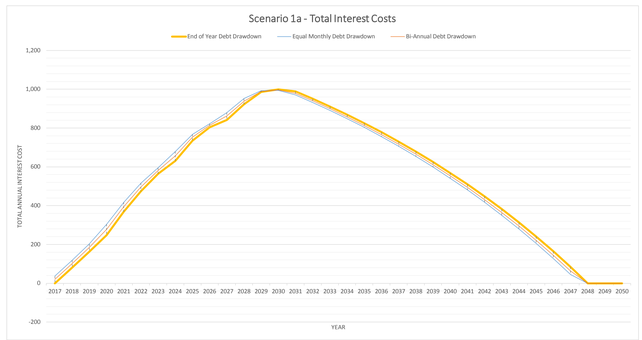
Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,514	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	735	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
a	Debt, Beginning of Year	0	1,559	3,177	4,851	7,207	9,266	11,038	12,324	14,370	15,725	16,458	18,035	19,263	19,534	19,317	18,577	17,799	16,981	16,122	15,218	14,268	13,270	12,221	11,118	9,958	8,740	7,458	6,112	4,696	3,208	1,644	0	0	0	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*80*	*163*	*248*	*369*	*474*	*565*	*631*	*735*	*805*	*842*	*923*	*986*	*999*	*988*	*950*	*911*	*869*	*825*	*779*	*730*	*679*	*625*	*569*	*509*	*447*	*382*	*313*	*240*	*164*	*84*	*0*	*0*	*0*	17,882
b	Additional GA Debt Drawdown, End of Year	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	735	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,559	3,177	4,851	7,207	9,266	11,038	12,324	14,370	15,725	16,458	18,035	19,263	19,534	19,317	18,577	17,799	16,981	16,122	15,218	14,268	13,270	12,221	11,118	9,958	8,740	7,458	6,112	4,696	3,208	1,644	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	7,818	7,078	6,300	5,482	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,696	3,208	1,644	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,841	12,461	12,389	13,125	13,430	12,715	11,499	11,499	11,499	11,499	11,499	10,595	9,645	8,647	7,598	6,495	5,335	4,117	2,835	1,489	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	7,818	8,806	9,757	10,667	11,536	12,361	13,139	13,869	14,548	15,174	15,742	16,252	16,699	17,081	17,393	17,634	17,798	17,882				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,841	12,461	12,389	13,125	13,430	12,715	11,499	9,770	8,042	6,314	4,585	2,857	1,129	-599	-2,328	-4,056	-5,784	-7,512	-9,241	-10,969	-12,697	-14,425	-16,154	-17,882				
Fiscal Exposure - End of Year Debt Drawdown		1,559	1,619	1,674	2,355	2,060	1,772	1,286	2,046	1,355	733	1,577	1,228	270	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,416	-1,488	-1,564	-1,644	0	0	0	

Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,514	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	735	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,018	18,222	17,385	16,505	15,580	14,608	13,586	12,511	11,382	10,195	8,947	7,636	6,257	4,808	3,285	1,683	0	0	0	
994	*Interest Cost - Feb14 Option 1, 30-yr*	*37*	*118*	*202*	*304*	*418*	*516*	*595*	*679*	*767*	*822*	*880*	*952*	*992*	*994*	*971*	*932*	*891*	*848*	*803*	*756*	*706*	*654*	*599*	*541*	*480*	*417*	*350*	*279*	*205*	*127*	*45*	*0*	*0*	*0*	17,882
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	735	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,018	18,222	17,385	16,505	15,580	14,608	13,586	12,511	11,382	10,195	8,947	7,636	6,257	4,808	3,285	1,683	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0	
	Monthly Drawdown	130	128	126	176	141	108	60	118	52	(6)	61	25	(60)	(101)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(0)	-	-	
	FV of Monthly Drawdown at 5%	1,596	1,575	1,548	2,157	1,731	1,329	738	1,449	635	(74)	753	313	(732)	(1,246)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	37	37	36	50	40	31	17	34	15	(2)	17	7	(17)	(29)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	82	166	254	377	485	578	646	753	824	862	945	1,009	1,023	1,012	973	932	889	844	797	747	695	640	582	522	458	391	320	246	168	86	-	(0)	(0)	
	Total Annual Interest Cost	37	118	202	304	418	516	595	679	767	822	880	952	992	994	971	932	891	848	803	756	706	654	599	541	480	417	350	279	205	127	45	(0)	(0)	(0)	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,514	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	735	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,814	18,026	17,198	16,328	15,413	14,451	13,440	12,377	11,260	10,086	8,851	7,554	6,190	4,756	3,249	1,665	0	0	0	
	Interest Cost - Feb14 Option 1, 30-yr	*20*	*100*	*184*	*278*	*395*	*497*	*581*	*657*	*753*	*814*	*862*	*938*	*989*	*997*	*979*	*940*	*900*	*858*	*813*	*766*	*717*	*666*	*611*	*554*	*494*	*431*	*364*	*295*	*221*	*144*	*63*	*0*	*0*	*0*	17,882
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	735	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,814	18,026	17,198	16,328	15,413	14,451	13,440	12,377	11,260	10,086	8,851	7,554	6,190	4,756	3,249	1,665	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,579	1,639	1,696	2,386	2,086	1,795	1,302	2,072	1,372	742	1,598	1,244	274	-220	-749	-788	-828	-870	-915	-962	-1,011	-1,063	-1,117	-1,174	-1,234	-1,298	-1,364	-1,434	-1,507	-1,584	-1,665	0	0	0	
	Bi-Annual Drawdown	779	769	756	1,054	845	649	361	708	310	(36)	368	153	(358)	(608)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(0)	-	-	
	FV of Bi-Annual Drawdown at 5%	1,579	1,558	1,531	2,134	1,713	1,315	730	1,433	628	(73)	745	309	(724)	(1,232)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	20	20	19	27	22	17	9	18	8	(1)	9	4	(9)	(16)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	81	165	251	373	480	572	639	745	815	853	935	998	1,012	1,001	963	922	880	835	789	739	688	633	576	516	453	386	317	243	166	85	0	(0)	(0)	
	Total Annual Interest Cost	20	100	184	278	395	497	581	657	753	814	862	938	989	997	979	940	900	858	813	766	717	666	611	554	494	431	364	295	221	144	63	(0)	(0)	(0)	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,514	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	735	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,599	3,258	4,975	7,391	9,503	11,321	12,640	14,738	16,127	16,879	18,497	19,756	20,034	19,811	19,052	18,254	17,415	16,534	15,607	14,633	13,610	12,533	11,402	10,213	8,963	7,649	6,268	4,816	3,290	1,686	0	0	0	
	Interest Cost - Feb14 Option 1, 30-yr	*40*	*121*	*205*	*308*	*421*	*519*	*598*	*683*	*770*	*823*	*882*	*954*	*992*	*994*	*969*	*931*	*890*	*847*	*802*	*754*	*704*	*652*	*597*	*539*	*478*	*414*	*347*	*276*	*202*	*124*	*42*	*0*	*0*	*0*	17,882
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	735	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,599	3,258	4,975	7,391	9,503	11,321	12,640	14,738	16,127	16,879	18,497	19,756	20,034	19,811	19,052	18,254	17,415	16,534	15,607	14,633	13,610	12,533	11,402	10,213	8,963	7,649	6,268	4,816	3,290	1,686	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,599	1,660	1,717	2,416	2,112	1,817	1,319	2,098	1,390	751	1,618	1,260	277	-223	-759	-798	-839	-881	-927	-974	-1,024	-1,076	-1,131	-1,189	-1,250	-1,314	-1,381	-1,452	-1,526	-1,604	-1,686	0	0	0	





Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_3_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	678	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,633	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	115	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	
			34	38	36	36	34	34	35	36	36	35	35	34	23	16	12	7	0	-14	-29	-36	-38	-42	-39	-36	-34	-32	-27	-18	-6	-1	0	3	3	3	142

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	1,606	1,040	19,497
Equal Monthly Debt Drawdown	1,644	1,040	

	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	20,325	2033	12,862
Equal Monthly Debt Drawdown	20,809		

Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
a	Debt, Beginning of Year	0	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,325	19,755	18,549	17,050	15,464	13,694	12,062	10,556	9,143	7,810	6,672	5,928	5,676	5,633	5,623	5,730	5,843	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*74*	*156*	*234*	*312*	*385*	*459*	*534*	*612*	*690*	*766*	*842*	*915*	*964*	*999*	*1,024*	*1,039*	*1,040*	*1,011*	*949*	*872*	*791*	*701*	*617*	*540*	*468*	*400*	*341*	*303*	*290*	*288*	*288*	*293*	*299*	19,497
b	Additional GA Debt Drawdown, End of Year	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,325	19,755	18,549	17,050	15,464	13,694	12,062	10,556	9,143	7,810	6,672	5,928	5,676	5,633	5,623	5,730	5,843	5,959	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,223	5,066	5,981	6,945	7,430	7,735	7,749	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	5,928	5,676	5,633	5,623	5,730	5,843	5,959	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,577	12,577	12,577	11,371	9,871	8,285	6,516	4,883	3,377	1,965	632	-506	0	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,223	5,066	5,981	6,945	7,943	8,967	10,006	11,046	12,057	13,006	13,878	14,669	15,370	15,987	16,527	16,995	17,394	17,736	18,039	18,329	18,618				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,064	11,345	10,319	8,709	6,492	4,044	1,586	-975	-3,308	-5,431	-7,383	-9,184	-10,722	-11,807	-12,363	-12,696	-12,995				
Fiscal Exposure - End of Year Debt Drawdown		1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	678	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,633	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	115	

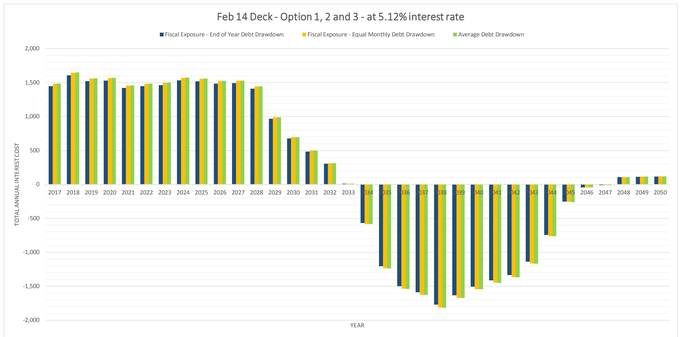
Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,985	20,483	20,795	20,809	20,225	18,990	17,455	15,831	14,020	12,349	10,807	9,361	7,996	6,831	6,069	5,811	5,767	5,756	5,866	5,982	
1,040	*Interest Cost - Feb14 Option 1, 30-yr*	*34*	*112*	*192*	*270*	*346*	*420*	*494*	*570*	*649*	*726*	*802*	*876*	*938*	*980*	*1,010*	*1,031*	*1,040*	*1,026*	*982*	*913*	*835*	*749*	*662*	*581*	*506*	*436*	*373*	*324*	*297*	*289*	*288*	*290*	*296*	*302*	19,639
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,985	20,483	20,795	20,809	20,225	18,990	17,455	15,831	14,020	12,349	10,807	9,361	7,996	6,831	6,069	5,811	5,767	5,756	5,866	5,982	6,101	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	

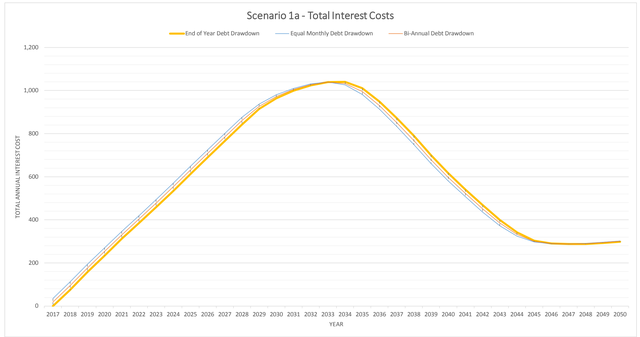
	Monthly Drawdown	121	128	114	108	93	88	84	83	76	66	60	47	4	(24)	(43)	(60)	(85)	(134)	(185)	(204)	(205)	(213)	(194)	(177)	(163)	(150)	(128)	(90)	(46)	(28)	(25)	(15)	(15)	(15)	
	FV of Monthly Drawdown at 5%	1,482	1,568	1,398	1,326	1,137	1,086	1,028	1,024	929	815	742	580	54	(292)	(525)	(736)	(1,050)	(1,648)	(2,269)	(2,506)	(2,517)	(2,621)	(2,389)	(2,174)	(1,999)	(1,844)	(1,574)	(1,111)	(568)	(342)	(306)	(185)	(184)	(188)	
	Annual Interest Cost on New Drawdowns	34	36	32	31	26	25	24	24	22	19	17	13	1	(7)	(12)	(17)	(24)	(38)	(53)	(58)	(58)	(61)	(55)	(51)	(46)	(43)	(37)	(26)	(13)	(8)	(7)	(4)	(4)	(4)	
	Annual Interest Cost on Opening Balance	-	76	160	240	320	394	470	547	627	707	784	863	936	987	1,022	1,048	1,064	1,065	1,035	972	893	810	717	632	553	479	409	349	311	297	295	295	300	306	
	Total Annual Interest Cost	34	112	192	270	346	420	494	570	649	726	802	876	938	980	1,010	1,031	1,040	1,026	982	913	835	749	662	581	506	436	373	324	297	289	288	290	296	302	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,466	3,092	4,633	6,183	7,623	9,088	10,570	12,123	13,662	15,167	16,678	18,104	19,084	19,771	20,263	20,572	20,585	20,008	18,786	17,268	15,661	13,870	12,216	10,691	9,260	7,910	6,758	6,004	5,749	5,705	5,695	5,803	5,918	
	Interest Cost - Feb14 Option 1, 30-yr	*19*	*95*	*176*	*254*	*331*	*404*	*478*	*554*	*632*	*709*	*785*	*861*	*927*	*973*	*1,005*	*1,027*	*1,039*	*1,033*	*995*	*930*	*852*	*769*	*680*	*598*	*522*	*451*	*385*	*332*	*300*	*290*	*288*	*289*	*295*	*300*	19,574
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,466	3,092	4,633	6,183	7,623	9,088	10,570	12,123	13,662	15,167	16,678	18,104	19,084	19,771	20,263	20,572	20,585	20,008	18,786	17,268	15,661	13,870	12,216	10,691	9,260	7,910	6,758	6,004	5,749	5,705	5,695	5,803	5,918	6,035	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,466	1,626	1,541	1,549	1,441	1,465	1,481	1,554	1,539	1,505	1,510	1,427	979	687	492	309	13	-577	-1,221	-1,518	-1,607	-1,792	-1,653	-1,525	-1,430	-1,350	-1,153	-754	-255	-44	-10	109	115	117	

	Bi-Annual Drawdown	724	766	683	648	555	530	502	500	454	398	363	283	26	(143)	(256)	(359)	(513)	(805)	(1,108)	(1,224)	(1,229)	(1,280)	(1,167)	(1,062)	(976)	(900)	(769)	(543)	(278)	(167)	(149)	(90)	(90)	(92)	
	FV of Bi-Annual Drawdown at 5%	1,466	1,551	1,383	1,312	1,125	1,074	1,017	1,013	919	806	734	573	53	(289)	(520)	(728)	(1,039)	(1,630)	(2,245)	(2,480)	(2,490)	(2,593)	(2,363)	(2,151)	(1,977)	(1,824)	(1,557)	(1,099)	(562)	(338)	(302)	(183)	(182)	(186)	
	Annual Interest Cost on New Drawdowns	19	20	17	17	14	14	13	13	12	10	9	7	1	(4)	(7)	(9)	(13)	(21)	(28)	(31)	(31)	(33)	(30)	(27)	(25)	(23)	(20)	(14)	(7)	(4)	(4)	(2)	(2)	(2)	
	Annual Interest Cost on Opening Balance	-	75	158	237	316	390	465	541	620	699	776	853	926	976	1,012	1,037	1,052	1,053	1,024	961	883	801	710	625	547	474	405	346	307	294	292	291	297	303	
	Total Annual Interest Cost	19	95	176	254	331	404	478	554	632	709	785	861	927	973	1,005	1,027	1,039	1,033	995	930	852	769	680	598	522	451	385	332	300	290	288	289	295	300	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,020	20,519	20,832	20,845	20,261	19,024	17,486	15,859	14,045	12,370	10,826	9,377	8,010	6,843	6,080	5,822	5,777	5,767	5,877	5,993	
	Interest Cost - Feb14 Option 1, 30-yr	*37*	*115*	*195*	*273*	*349*	*422*	*497*	*573*	*651*	*728*	*804*	*879*	*939*	*981*	*1,011*	*1,031*	*1,040*	*1,025*	*980*	*911*	*832*	*746*	*659*	*579*	*504*	*434*	*370*	*322*	*297*	*289*	*288*	*290*	*296*	*302*	19,650
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,020	20,519	20,832	20,845	20,261	19,024	17,486	15,859	14,045	12,370	10,826	9,377	8,010	6,843	6,080	5,822	5,777	5,767	5,877	5,993	6,111	
Fiscal Exposure - Average Debt Drawdown		1,484	1,647	1,561	1,569	1,459	1,483	1,500	1,573	1,559	1,524	1,530	1,445	992	696	498	313	14	-585	-1,237	-1,538	-1,627	-1,814	-1,674	-1,545	-1,448	-1,367	-1,167	-763	-258	-44	-11	110	116	118	





Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest ra

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest ra

IESO GA cost forecast + extrapolation

Scenario
Option 1

Option 2

ate	2017	2018	2019	2020
ate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	2200	4600	7000	10200

Total Accumulated Debt ($ billion)	2.2	4.6	7	10.2
	2,200	4,600	7,000	10,200

Total Accumulated Debt ($ billion)	1.6	3.2	4.9	7.2
	1,600	3,200	4,900	7,200

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
13100	15700	17800	20800	23200	25000	27700	30100

13.1 15.7 17.8 20.8 23.2 25 27.7 30.1
13,100 15,700 17,800 20,800 23,200 25,000 27,700 30,100

9.3 11 12.3 14.4 15.7 16.5 18 19.3
9,300 11,000 12,300 14,400 15,700 16,500 18,000 19,300

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
31700	32800	32700	32600	31700	30100	28400	26600

31.7	32.8	32.7	32.6	31.7	30.1	28.4	26.6
31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600

19.5	19.3	18.6	17.8	17	16.1	15.2	14.3
19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
24800	22800	20800	18600	16300	13900	11400	8800

24.8	22.8	20.8	18.6	16.3	13.9	11.4	8.8
24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800

13.3	12.2	11.1	10	8.7	7.5	6.1	4.7
13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	2046	2047	2048	2049	2050
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
6000	3100	0	0	0	0

6 3.1 0 0
6,000 3,100 - -

3.2 1.6 0 0
3,200 1,600 - -

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb9_1_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,200	2,400

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	550	2,250

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $33 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb9_2_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,600	1,600

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	400	1,600

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,169	4,668

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	545	2,203

Actuals are subject to actual prices and actual interest rates.

#N/A

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542

Fiscalized[3]	2016-17	2017-18
Start: January 1st	375	1,510

Actuals are subject to actual prices and actual interest rates.

#N/A

Rough		
	1	
	2	
	3	
	4 April	4
	5 May	5
	6 June	6
	7 July	7
	8 August	8
	9 September	9
	10 October	10
	11 November	11
	12 December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	400 - 550	1,600 - 2,250

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	550	2250
Debt-Finance Global Adjustment Costs, Option 1a	400	1600
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**550**	**2490**
Total, B	400	1840
Proposed Program Total:	400 - 550	1,840 - 2,490

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1
Scenario 2

2019	2020	2021	2022
2,400	3,200	2,900	2,600

2018-19	2019-20	2020-21	2021-2022
2,400	2,600	3,125	2,825

2030.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,700	2,300	2,100	1,700

2018-19	2019-20	2020-21	2021-2022
1,625	1,850	2,250	2,000

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
4,589	5,867	5,031	4,861

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988

› depend on decision on accounting treatment.

2019	2020	2021	2022
2,353	3,072	2,817	2,580

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757

2019	2020	2021	2022
1,578	2,243	1,931	1,635

2018-19	2019-20	2020-21	2021-2022
1,551	1,745	2,165	1,857



2018-19	2019-20	2020-21	2021-2022
1,625 - 2,400	1,850 - 2,600	2,250 - 3,125	2,000 - 2,825

/1

2018-19[1]	2019-20[1]	2020-21[1]
2400	2600	3125
1625	1850	2250
225	279	323
60	60	60
18	18	18
2703	**2957**	**3526**
1928	2207	2651

1,928 - 2,703 2,207 - 2,957 2,651 - 3,526

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
21,601	30,211	32,800	occurs in Year 2030
13,466	17,886	19,500	occurs in Year 2029
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!

2,200

Tab Name
Feb9_1_30yr
Feb9_2_30yr

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Feb9_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0	
			52	57	57	76	69	62	50	71	57	43	64	57	38	26	-2	-2	-21	-38	-40	-43	-43	-48	-48	-52	-55	-57	-59	-62	-67	-69	-74	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,200	1,678	30,211
Equal Monthly Debt Drawdown	3,276	1,676	

		Feb9 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,800	2030	21,601	
Equal Monthly Debt Drawdown	33,580			

Feb9 1, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
a	Debt, Beginning of Year	0	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	
c = a*5%	*Interest Cost - Feb9 1, 30-yr - End of Year Debt Drowdown*	*0*	*113*	*235*	*358*	*522*	*670*	*803*	*911*	*1,064*	*1,187*	*1,279*	*1,417*	*1,540*	*1,622*	*1,678*	*1,673*	*1,668*	*1,622*	*1,540*	*1,453*	*1,361*	*1,269*	*1,166*	*1,064*	*952*	*834*	*711*	*583*	*450*	*307*	*159*	*0*	*0*	*0*	30,211
b	Additional GA Debt Drawdown, End of Year	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	0
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	11,621	11,521	10,621	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	8,800	6,000	3,100	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	21,079	21,079	21,079	21,079	19,379	17,579	15,779	13,779	11,779	9,579	7,279	4,879	2,379	0	0	0	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	13,399	15,072	16,740	18,362	19,902	21,355	22,716	23,985	25,151	26,215	27,167	28,001	28,712	29,295	29,746	30,052	30,211				
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	19,301	17,528	14,960	11,738	8,498	5,245	2,084	-1,185	-4,351	-7,615	-10,867	-14,101	-17,312	-20,495	-23,746	-26,952	-30,211				
Fiscal Exposure - End of Year Debt Drawdown		2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0	

Feb9 1, 30-yr — Equal Monthly Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	
1,676	*Interest Cost - Feb9 1, 30-yr*	*52*	*170*	*292*	*434*	*591*	*732*	*853*	*982*	*1,121*	*1,230*	*1,343*	*1,474*	*1,578*	*1,648*	*1,676*	*1,671*	*1,646*	*1,584*	*1,500*	*1,410*	*1,318*	*1,221*	*1,119*	*1,012*	*897*	*777*	*652*	*521*	*384*	*238*	*85*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0	
	Monthly Drawdown	183	191	180	237	198	161	108	174	111	51	118	82	5	(43)	(148)	(148)	(214)	(268)	(270)	(271)	(263)	(272)	(264)	(272)	(271)	(269)	(268)	(265)	(271)	(267)	(272)	-	-	-	
	FV of Monthly Drawdown at 5%	2,252	2,342	2,216	2,909	2,435	1,976	1,328	2,139	1,368	628	1,455	1,006	61	(534)	(1,820)	(1,815)	(2,629)	(3,298)	(3,317)	(3,330)	(3,236)	(3,347)	(3,242)	(3,342)	(3,329)	(3,311)	(3,288)	(3,259)	(3,328)	(3,283)	(3,336)	-	-	-	
	Annual Interest Cost on New Drawdowns	52	54	51	68	57	46	31	50	32	15	34	23	1	(12)	(42)	(42)	(61)	(77)	(77)	(77)	(75)	(78)	(75)	(78)	(77)	(76)	(76)	(76)	(77)	(76)	(78)	-	-	-	
	Annual Interest Cost on Opening Balance	-	115	241	367	534	686	822	932	1,089	1,215	1,309	1,451	1,577	1,660	1,718	1,713	1,708	1,660	1,577	1,488	1,393	1,299	1,194	1,089	974	854	728	597	461	314	162	(0)	(0)	(0)	
	Total Annual Interest Cost	52	170	292	434	591	732	853	982	1,121	1,230	1,343	1,474	1,578	1,648	1,676	1,671	1,646	1,584	1,500	1,410	1,318	1,221	1,119	1,012	897	777	652	521	384	238	85	(0)	(0)	(0)	

Feb9 1, 30-yr — Bi-Annual Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*28*	*143*	*266*	*399*	*559*	*703*	*830*	*949*	*1,095*	*1,210*	*1,314*	*1,448*	*1,560*	*1,636*	*1,677*	*1,672*	*1,656*	*1,601*	*1,518*	*1,430*	*1,338*	*1,243*	*1,141*	*1,036*	*922*	*803*	*679*	*550*	*414*	*270*	*119*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,228	2,431	2,431	3,241	2,937	2,633	2,127	3,038	2,431	1,823	2,735	2,431	1,620	1,114	-101	-101	-912	-1,620	-1,722	-1,823	-1,823	-2,026	-2,026	-2,228	-2,329	-2,431	-2,532	-2,633	-2,836	-2,937	-3,140	0	0	0	
	Bi-Annual Drawdown	1,100	1,144	1,082	1,421	1,189	965	648	1,045	668	307	710	491	30	(261)	(889)	(886)	(1,284)	(1,611)	(1,620)	(1,626)	(1,580)	(1,634)	(1,583)	(1,632)	(1,626)	(1,617)	(1,606)	(1,592)	(1,625)	(1,603)	(1,629)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,228	2,317	2,192	2,878	2,409	1,954	1,313	2,116	1,353	621	1,439	995	61	(529)	(1,801)	(1,796)	(2,601)	(3,263)	(3,281)	(3,295)	(3,201)	(3,311)	(3,207)	(3,306)	(3,293)	(3,275)	(3,252)	(3,224)	(3,292)	(3,248)	(3,300)	-	-	-	
	Annual Interest Cost on New Drawdowns	28	29	28	36	30	25	17	27	17	8	18	13	1	(7)	(23)	(23)	(33)	(41)	(41)	(42)	(40)	(42)	(41)	(42)	(42)	(41)	(41)	(41)	(42)	(41)	(42)	-	-	-	
	Annual Interest Cost on Opening Balance	-	114	238	363	529	679	814	922	1,078	1,202	1,295	1,435	1,560	1,643	1,700	1,694	1,689	1,643	1,560	1,472	1,378	1,285	1,181	1,078	964	845	720	591	456	311	161	0	0	0	
	Total Annual Interest Cost	28	143	266	399	559	703	830	949	1,095	1,210	1,314	1,448	1,560	1,636	1,677	1,672	1,656	1,601	1,518	1,430	1,338	1,243	1,141	1,036	922	803	679	550	414	270	119	0	0	0	

Feb9 1, 30-yr — Average Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*56*	*174*	*297*	*440*	*596*	*737*	*857*	*987*	*1,126*	*1,233*	*1,348*	*1,479*	*1,581*	*1,650*	*1,676*	*1,670*	*1,645*	*1,581*	*1,496*	*1,407*	*1,315*	*1,218*	*1,115*	*1,008*	*893*	*773*	*647*	*517*	*379*	*233*	*79*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		2,256	2,461	2,461	3,282	2,974	2,667	2,154	3,077	2,461	1,846	2,769	2,461	1,641	1,128	-103	-103	-923	-1,641	-1,743	-1,846	-1,846	-2,051	-2,051	-2,256	-2,359	-2,461	-2,564	-2,667	-2,872	-2,974	-3,179	0	0	0	

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Feb9_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0
			38	38	40	55	50	40	31	50	31	19	36	31	5	-5	-17	-19	-19	-21	-21	-21	-24	-26	-26	-26	-31	-29	-33	-33	-36	-38	-38	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,300	998	17,886
Equal Monthly Debt Drawdown	2,355	993	

	Feb9 2, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,500	2029	13,466
Equal Monthly Debt Drawdown	19,964		

Feb9 2, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
a	Debt, Beginning of Year	0	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	
c = a*5%	*Interest Cost - Feb9 2, 30-yr - End of Year Debt Drowdown*	*0*	*82*	*164*	*251*	*368*	*476*	*563*	*629*	*737*	*803*	*844*	*921*	*987*	*998*	*987*	*952*	*911*	*870*	*824*	*778*	*732*	*680*	*624*	*568*	*512*	*445*	*384*	*312*	*240*	*164*	*82*	*0*	*0*	*0*	17,886
b	Additional GA Debt Drawdown, End of Year	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	7,123	6,323	5,523	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,700	3,200	1,600	0	0	0	
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	11,477	11,477	11,477	11,477	10,577	9,677	8,677	7,577	6,477	5,377	4,077	2,877	1,477	0	0	0	0	0	0	0	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	8,810	9,762	10,672	11,542	12,366	13,143	13,875	14,556	15,180	15,748	16,259	16,704	17,088	17,400	17,641	17,804	17,886				
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	9,790	8,038	6,328	4,558	2,834	1,157	-575	-2,356	-4,080	-5,748	-7,559	-9,204	-10,988	-12,700	-14,441	-16,204	-17,886				
Fiscal Exposure - End of Year Debt Drawdown		1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0	

Feb9 2, 30-yr — Equal Monthly Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	
993	*Interest Cost - Feb9 2, 30-yr*	*38*	*120*	*204*	*305*	*418*	*516*	*594*	*679*	*768*	*822*	*880*	*952*	*992*	*993*	*971*	*933*	*892*	*848*	*802*	*756*	*708*	*654*	*598*	*542*	*481*	*417*	*350*	*279*	*205*	*126*	*44*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0	
	Monthly Drawdown	133	127	128	171	144	102	61	123	47	(0)	55	32	(66)	(100)	(141)	(146)	(143)	(147)	(144)	(140)	(144)	(148)	(144)	(139)	(151)	(137)	(149)	(143)	(145)	(147)	(140)	-	-	-	
	FV of Monthly Drawdown at 5%	1,638	1,554	1,573	2,098	1,773	1,253	755	1,506	577	(3)	671	388	(806)	(1,226)	(1,728)	(1,793)	(1,751)	(1,812)	(1,765)	(1,718)	(1,773)	(1,823)	(1,765)	(1,708)	(1,855)	(1,684)	(1,826)	(1,753)	(1,782)	(1,806)	(1,722)	-	-	-	
	Annual Interest Cost on New Drawdowns	38	36	37	49	41	29	18	35	13	(0)	16	9	(19)	(28)	(40)	(42)	(41)	(42)	(41)	(40)	(41)	(42)	(41)	(40)	(43)	(39)	(42)	(41)	(41)	(42)	(40)	-	-	-	
	Annual Interest Cost on Opening Balance	-	84	168	257	377	487	576	644	754	822	864	943	1,011	1,021	1,011	974	932	890	843	796	749	697	639	581	524	456	393	320	246	168	84	0	0	0	
	Total Annual Interest Cost	38	120	204	305	418	516	594	679	768	822	880	952	992	993	971	933	892	848	802	756	708	654	598	542	481	417	350	279	205	126	44	0	0	0	

Feb9 2, 30-yr — Bi-Annual Debt Drawdown

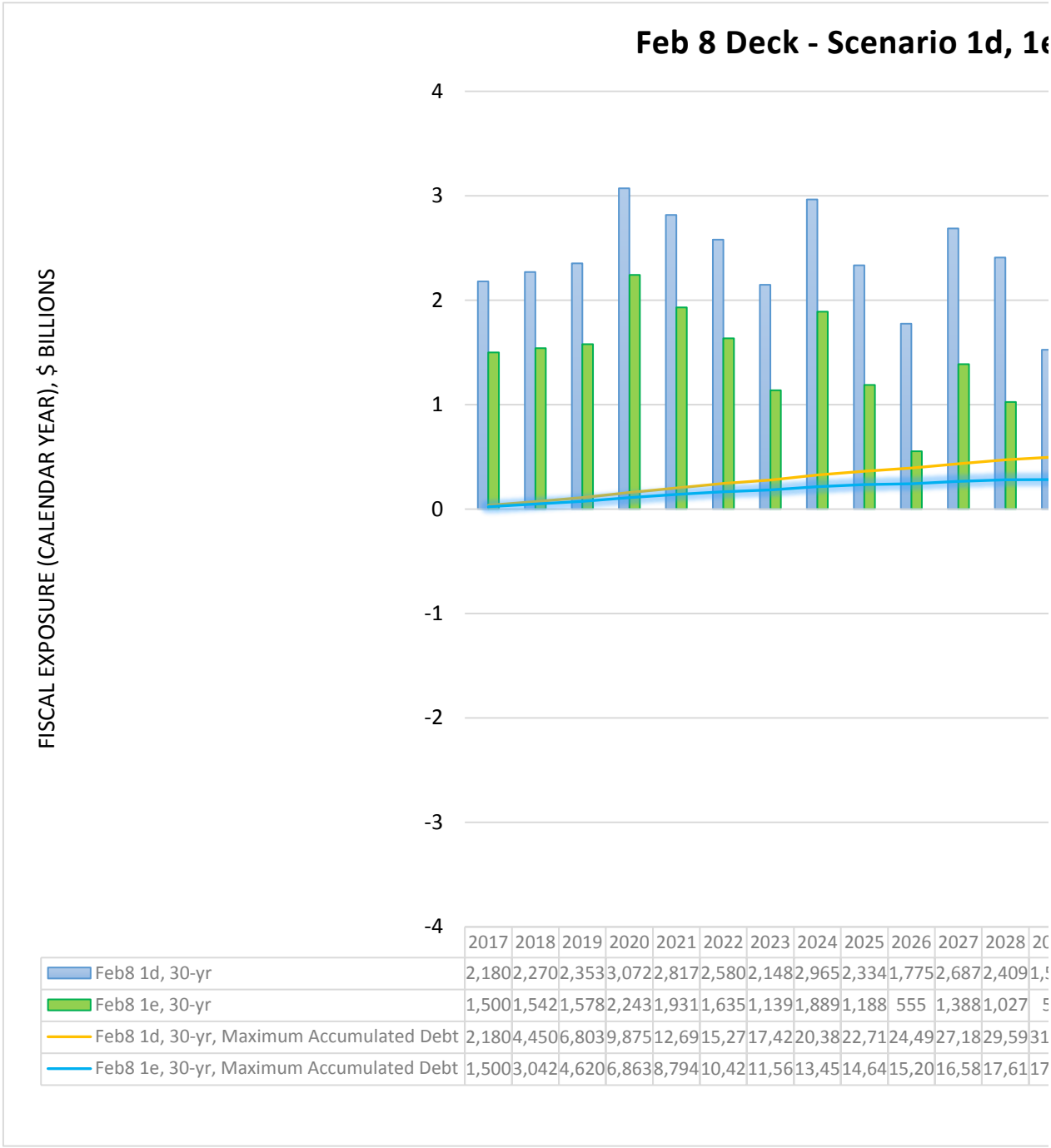
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*20*	*102*	*185*	*280*	*395*	*498*	*579*	*656*	*753*	*813*	*863*	*938*	*990*	*995*	*978*	*941*	*900*	*858*	*812*	*766*	*719*	*666*	*610*	*554*	*495*	*430*	*366*	*294*	*221*	*143*	*61*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,620	1,620	1,722	2,329	2,127	1,722	1,317	2,127	1,317	810	1,519	1,317	203	-203	-709	-810	-810	-912	-912	-912	-1,013	-1,114	-1,114	-1,114	-1,317	-1,215	-1,418	-1,418	-1,519	-1,620	-1,620	0	0	0	
	Bi-Annual Drawdown	800	759	768	1,025	866	612	369	735	282	(2)	328	190	(394)	(599)	(844)	(876)	(855)	(885)	(862)	(839)	(866)	(890)	(862)	(834)	(906)	(823)	(892)	(856)	(870)	(882)	(841)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,620	1,538	1,556	2,076	1,754	1,240	747	1,490	570	(3)	664	384	(797)	(1,213)	(1,709)	(1,774)	(1,733)	(1,792)	(1,746)	(1,699)	(1,754)	(1,803)	(1,746)	(1,689)	(1,835)	(1,666)	(1,807)	(1,734)	(1,763)	(1,786)	(1,703)	-	-	-	
	Annual Interest Cost on New Drawdowns	20	19	20	26	22	16	9	19	7	(0)	8	5	(10)	(15)	(22)	(22)	(22)	(23)	(22)	(21)	(22)	(23)	(22)	(21)	(23)	(21)	(23)	(22)	(22)	(23)	(22)	-	-	-	
	Annual Interest Cost on Opening Balance	-	83	166	254	373	482	570	637	746	814	855	933	1,000	1,010	1,000	964	922	881	834	788	741	689	632	575	518	451	389	316	244	166	83	0	0	0	
	Total Annual Interest Cost	20	102	185	280	395	498	579	656	753	813	863	938	990	995	978	941	900	858	812	766	719	666	610	554	495	430	366	294	221	143	61	0	0	0	

Feb9 2, 30-yr — Average Debt Drawdown

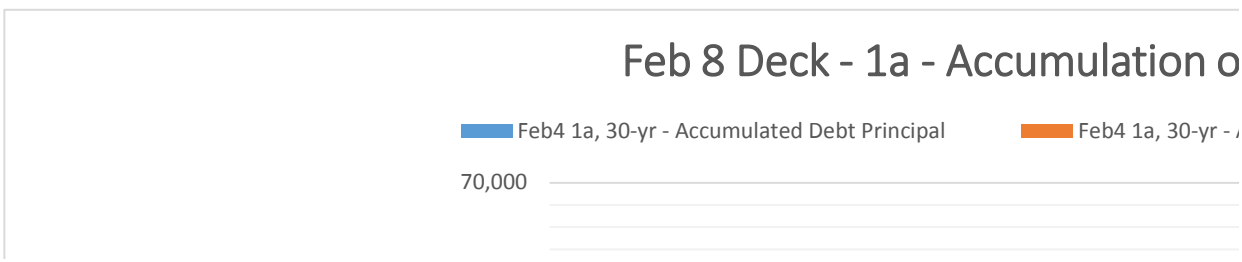
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*41*	*123*	*207*	*310*	*422*	*519*	*596*	*683*	*770*	*824*	*883*	*954*	*993*	*993*	*970*	*931*	*890*	*847*	*801*	*755*	*706*	*652*	*596*	*540*	*478*	*414*	*348*	*276*	*202*	*123*	*41*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,641	1,641	1,743	2,359	2,154	1,743	1,333	2,154	1,333	820	1,538	1,333	205	-205	-718	-820	-820	-923	-923	-923	-1,026	-1,128	-1,128	-1,128	-1,333	-1,231	-1,436	-1,436	-1,538	-1,641	-1,641	0	0	0	

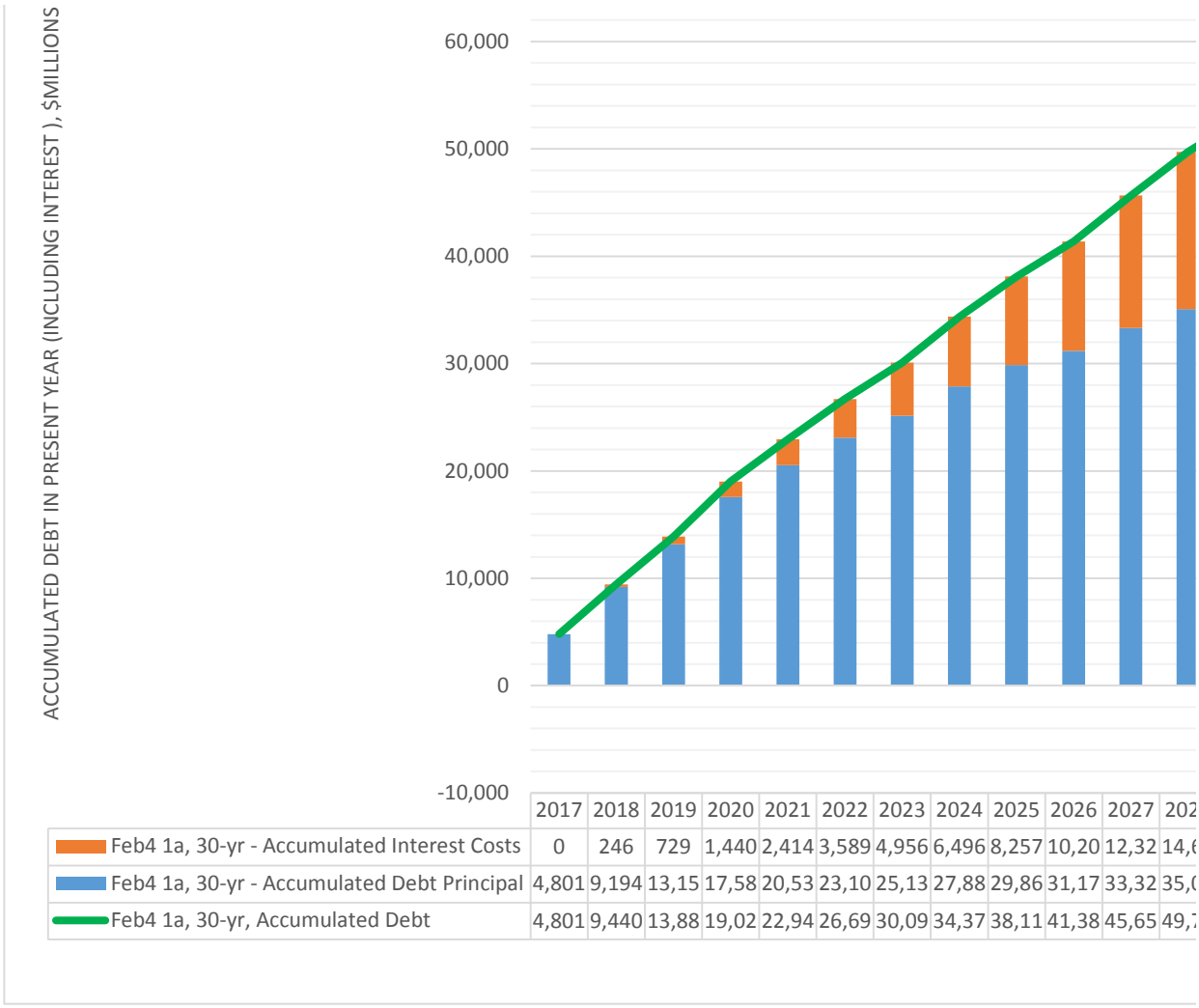
Feb 8 Deck

Feb 8 Deck - Scenario 1d, 1e - at 5.12% interest rate

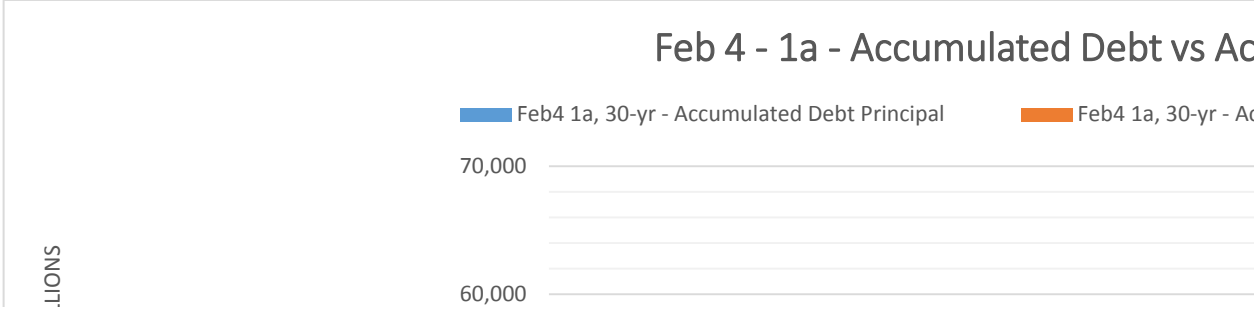


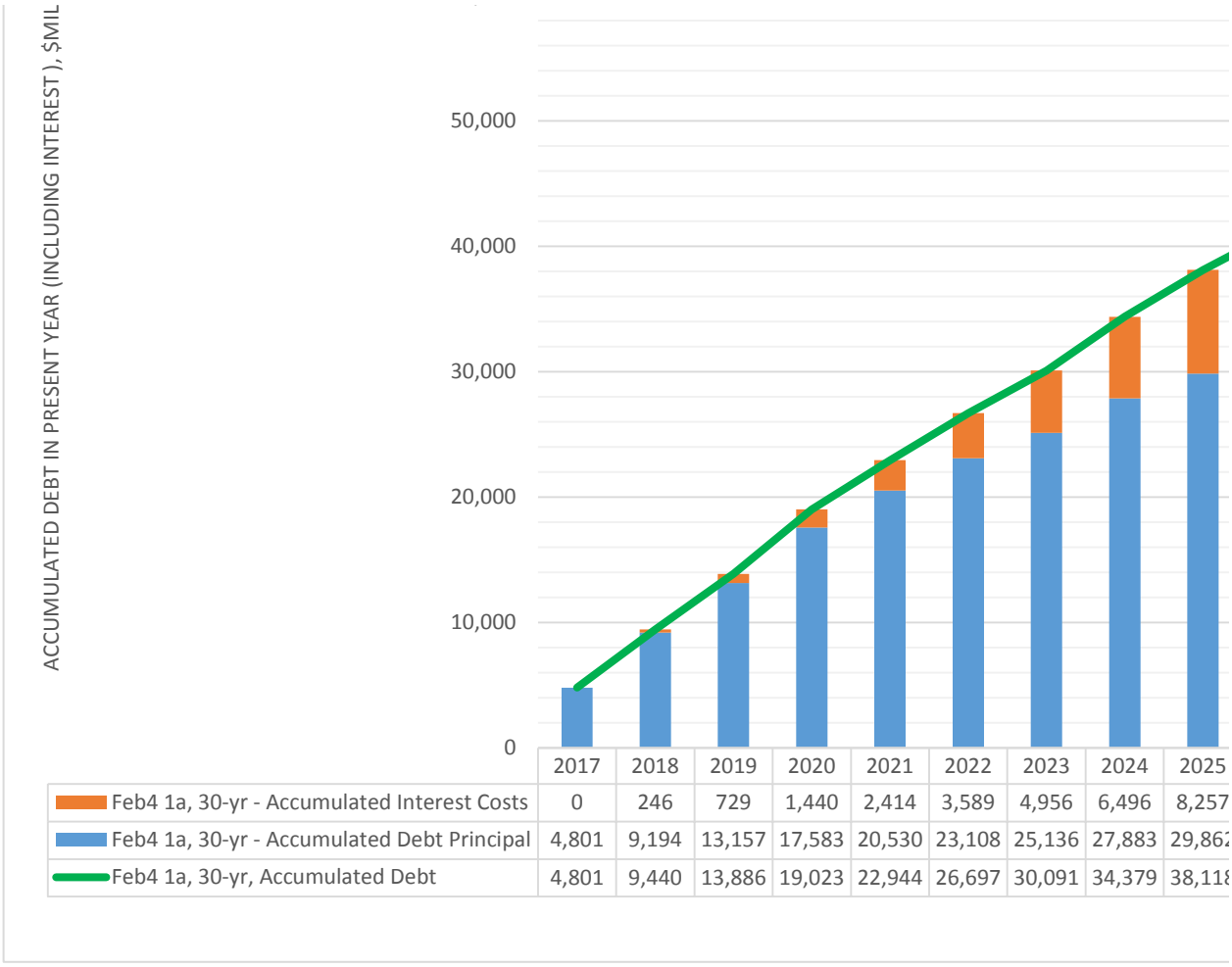
Feb 8 Deck - 1a - Accumulation of Debt (Principal and Interest)



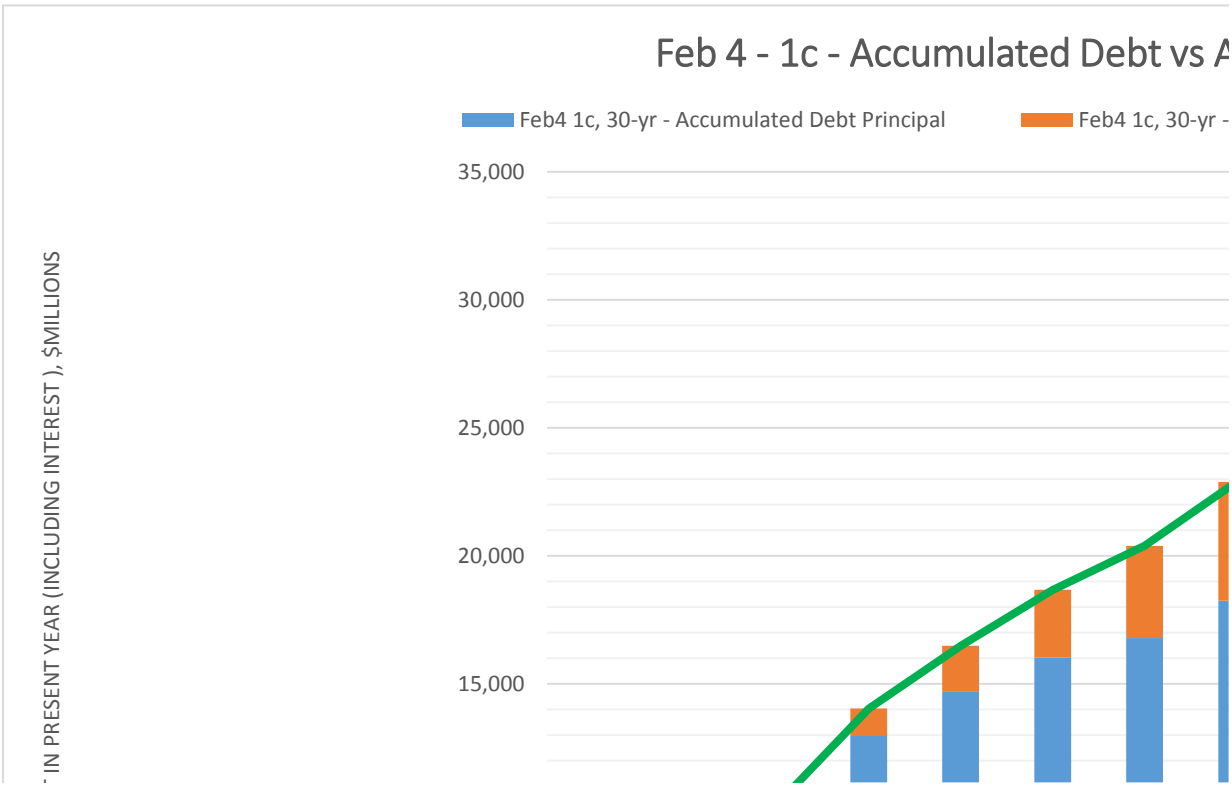


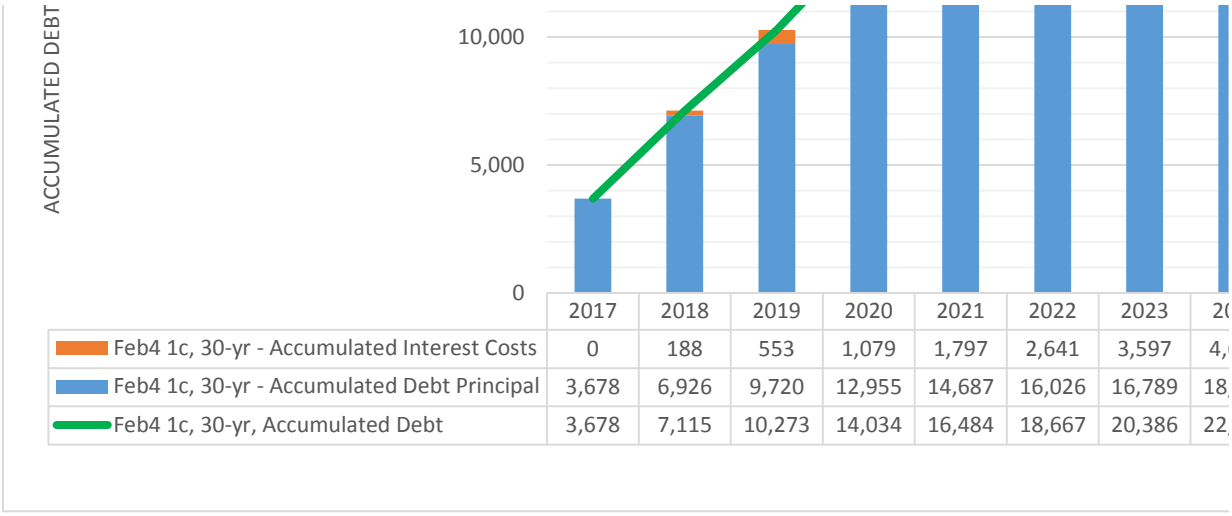
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	202
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,(
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,7



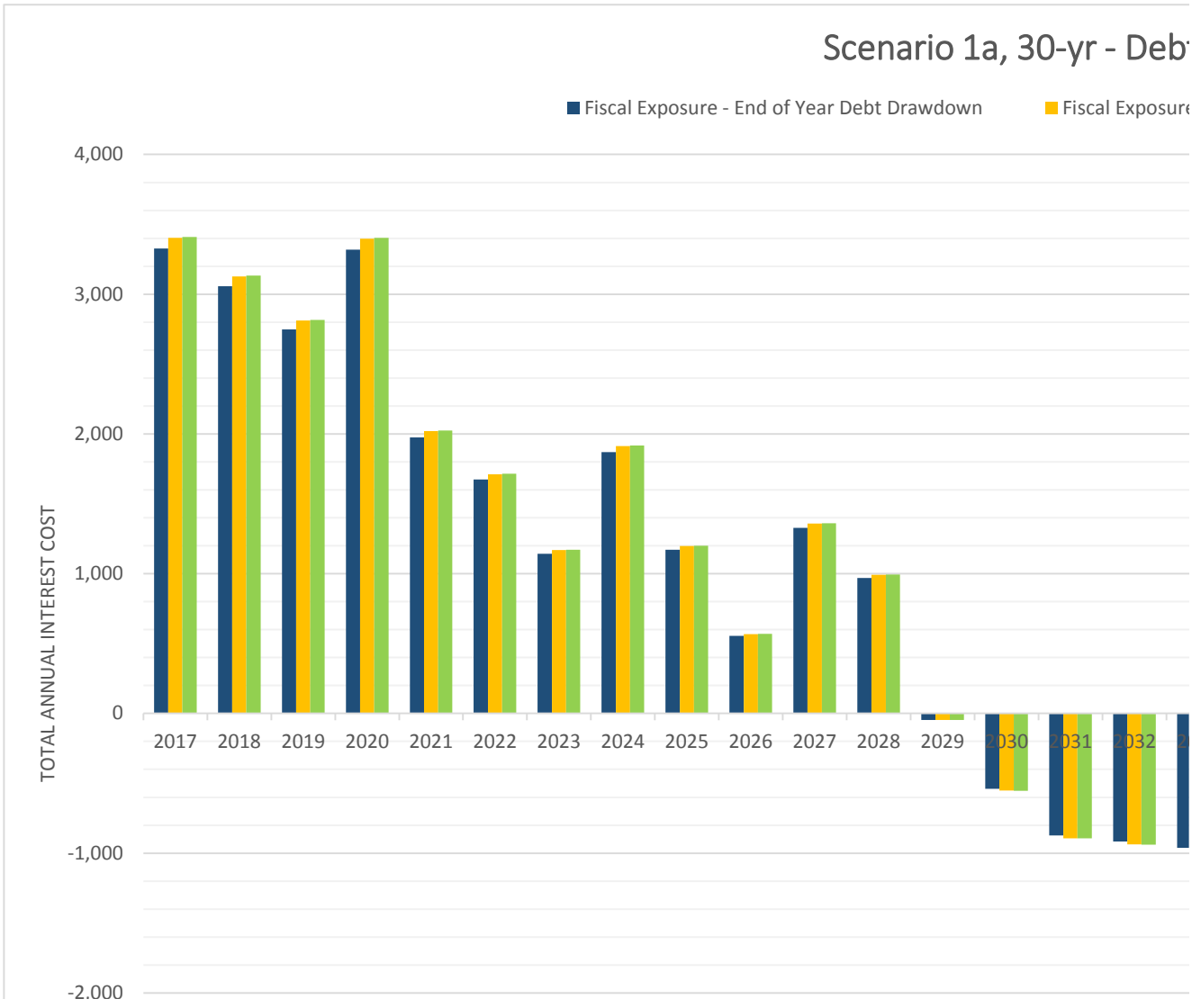


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



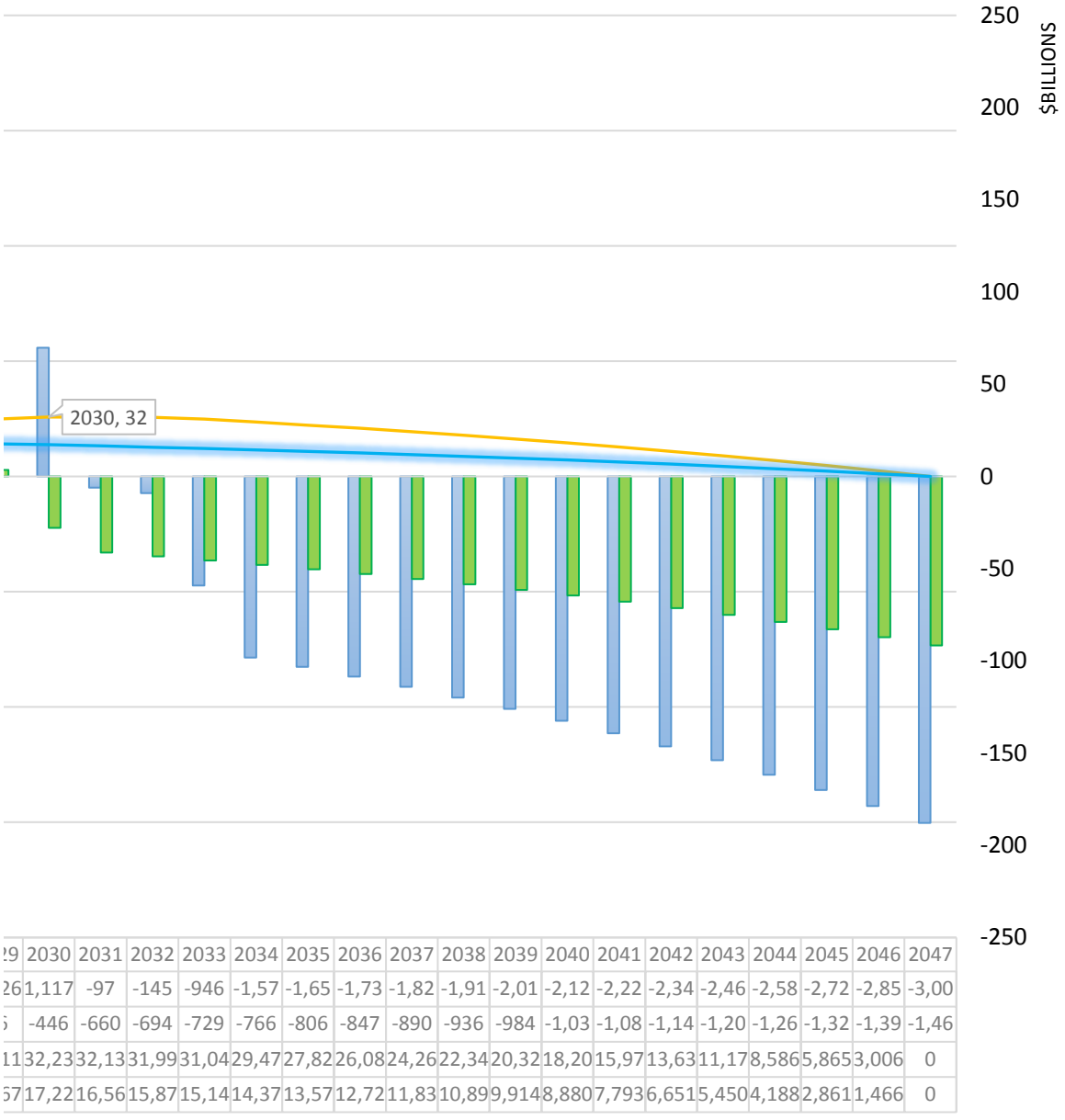


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

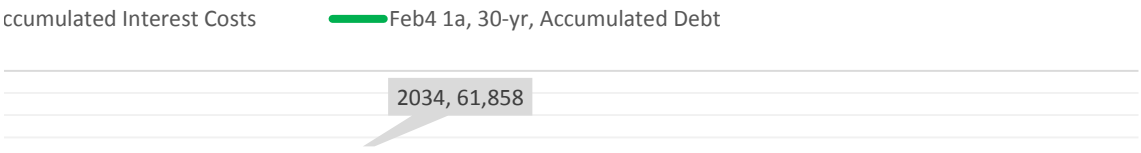
- at 5.12% interest rate

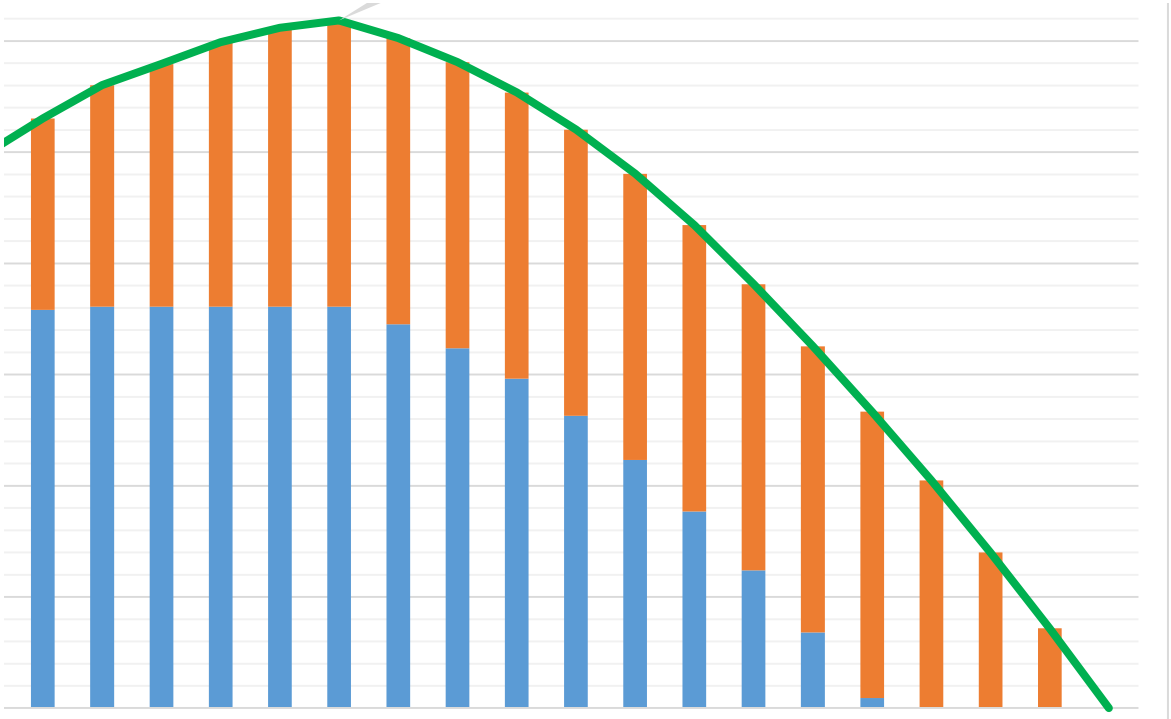


29	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
26	1,117	-97	-145	-946	-1,57	-1,65	-1,73	-1,82	-1,91	-2,01	-2,12	-2,22	-2,34	-2,46	-2,58	-2,72	-2,85	-3,00
5	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,03	-1,08	-1,14	-1,20	-1,26	-1,32	-1,39	-1,46
11	32,23	32,13	31,99	31,04	29,47	27,82	26,08	24,26	22,34	20,32	18,20	15,97	13,63	11,17	8,586	5,865	3,006	0
57	17,22	16,56	15,87	15,14	14,37	13,57	12,72	11,83	10,89	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0

CALENDAR YEAR

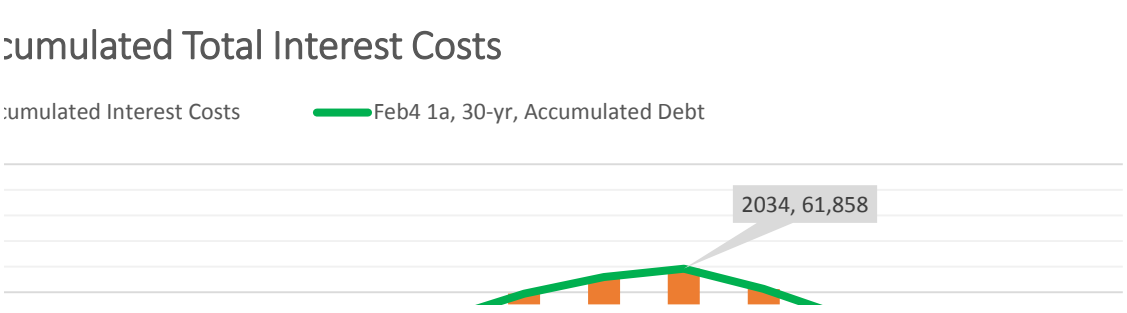
Debt (Principal and Interest)



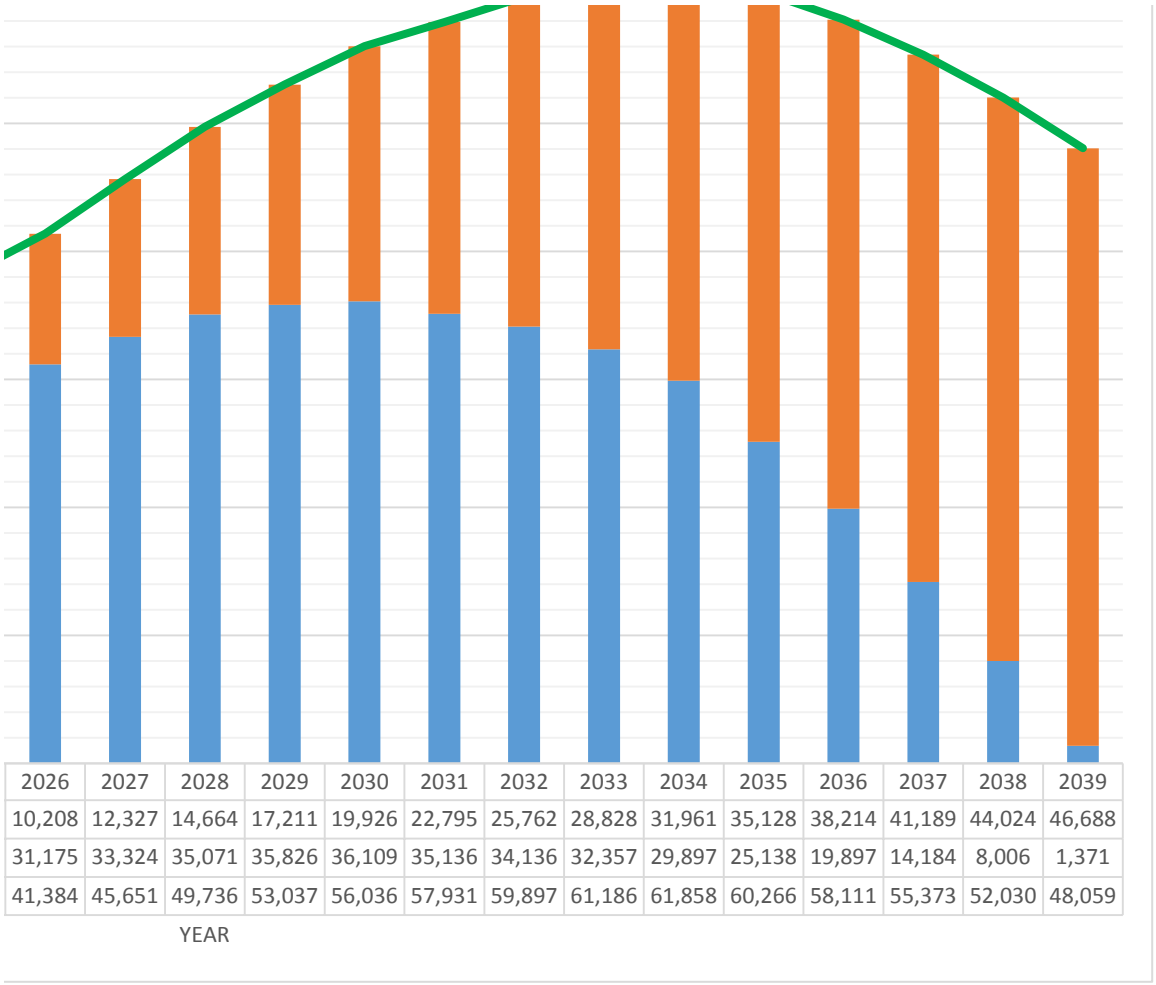


	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
5	17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
7	35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
3	53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



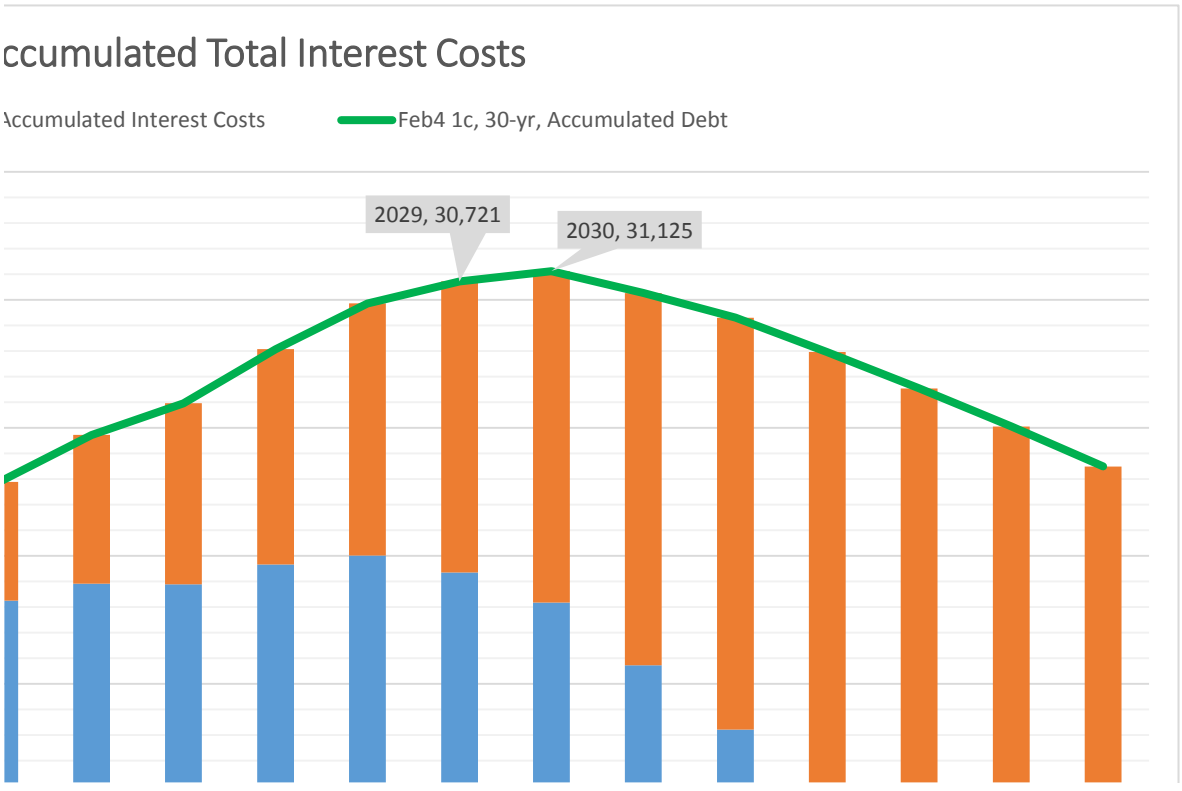
LIONS

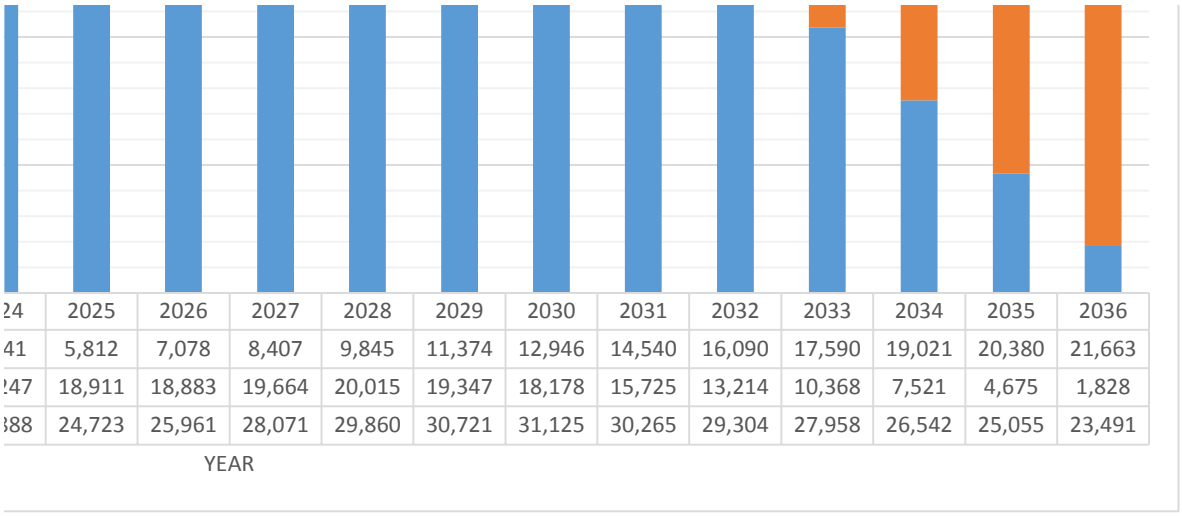


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

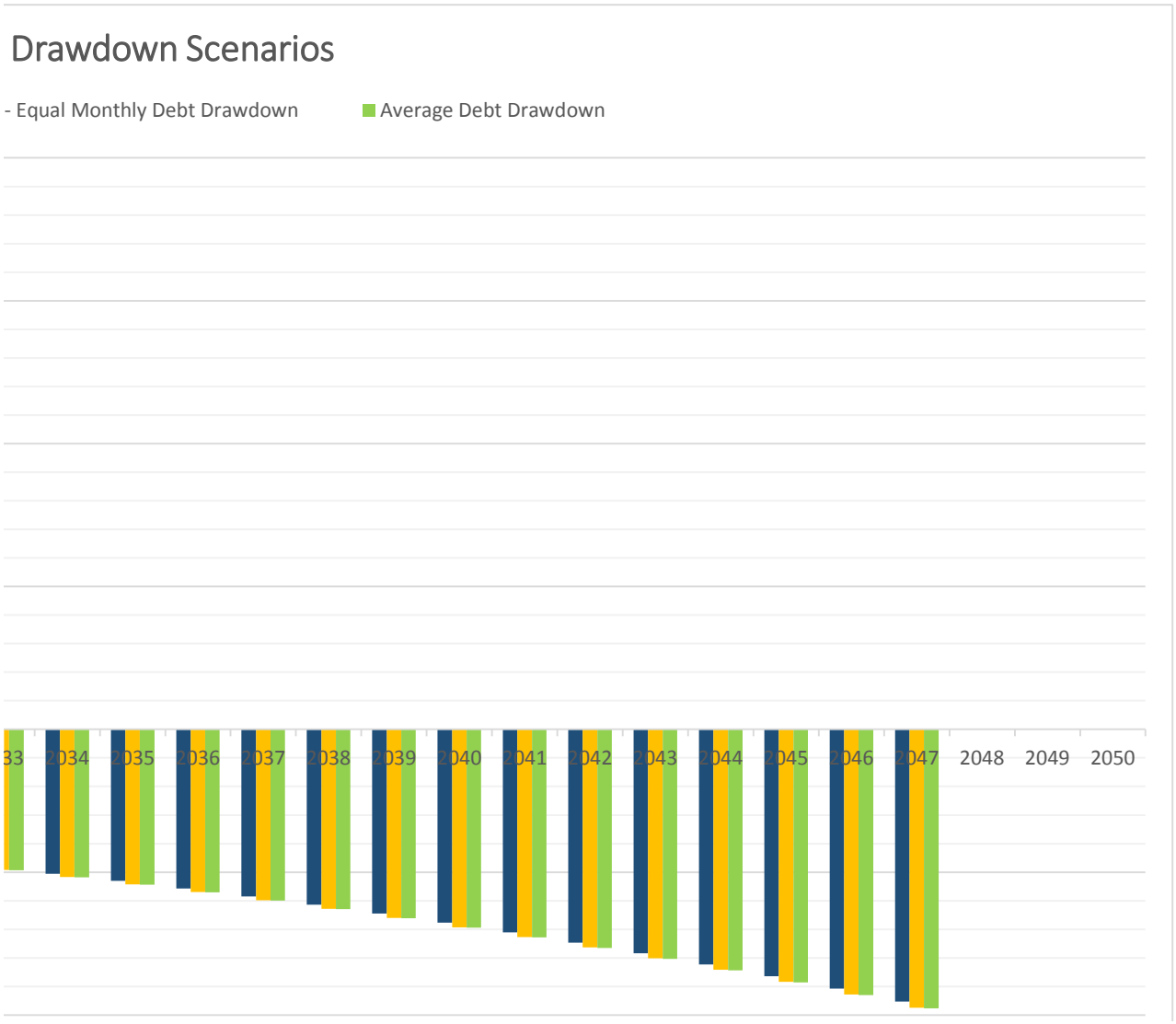
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





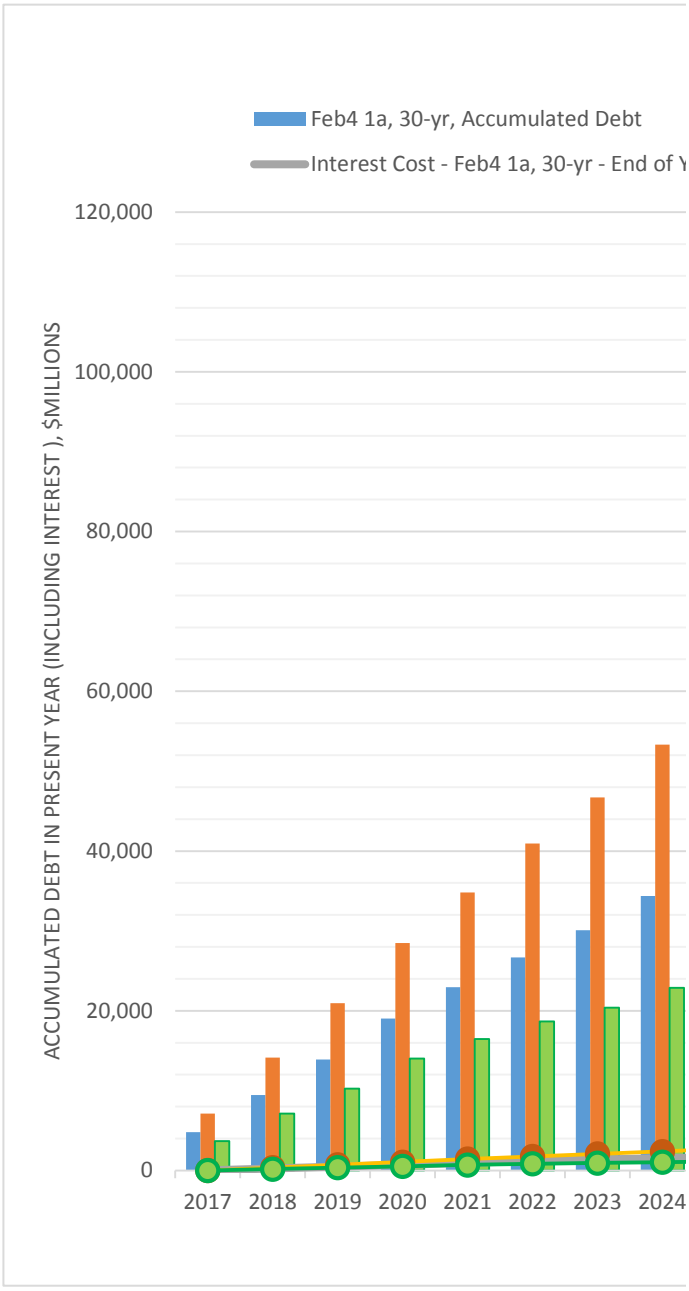
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

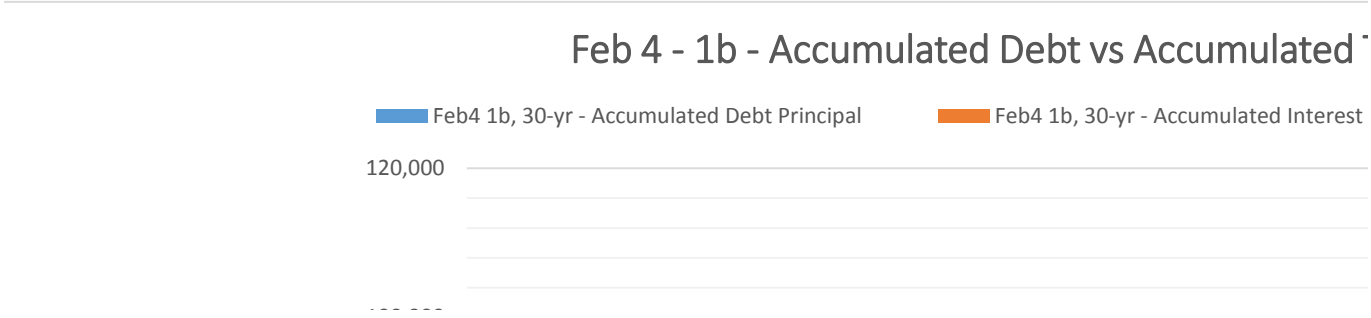
YEAR

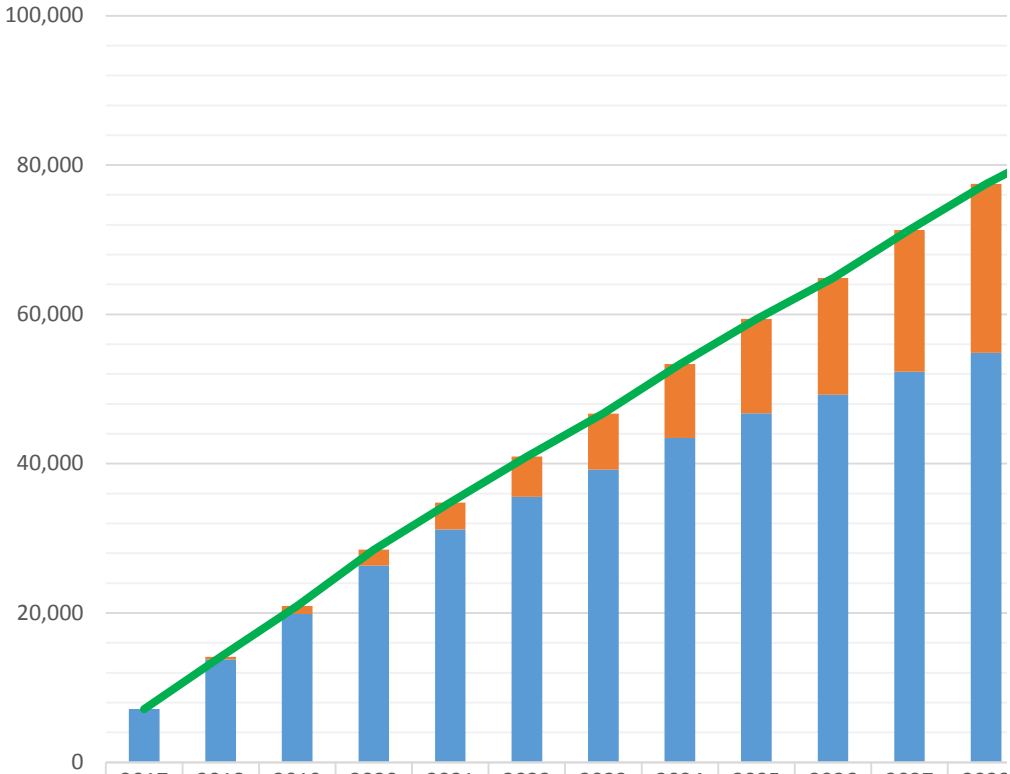


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate

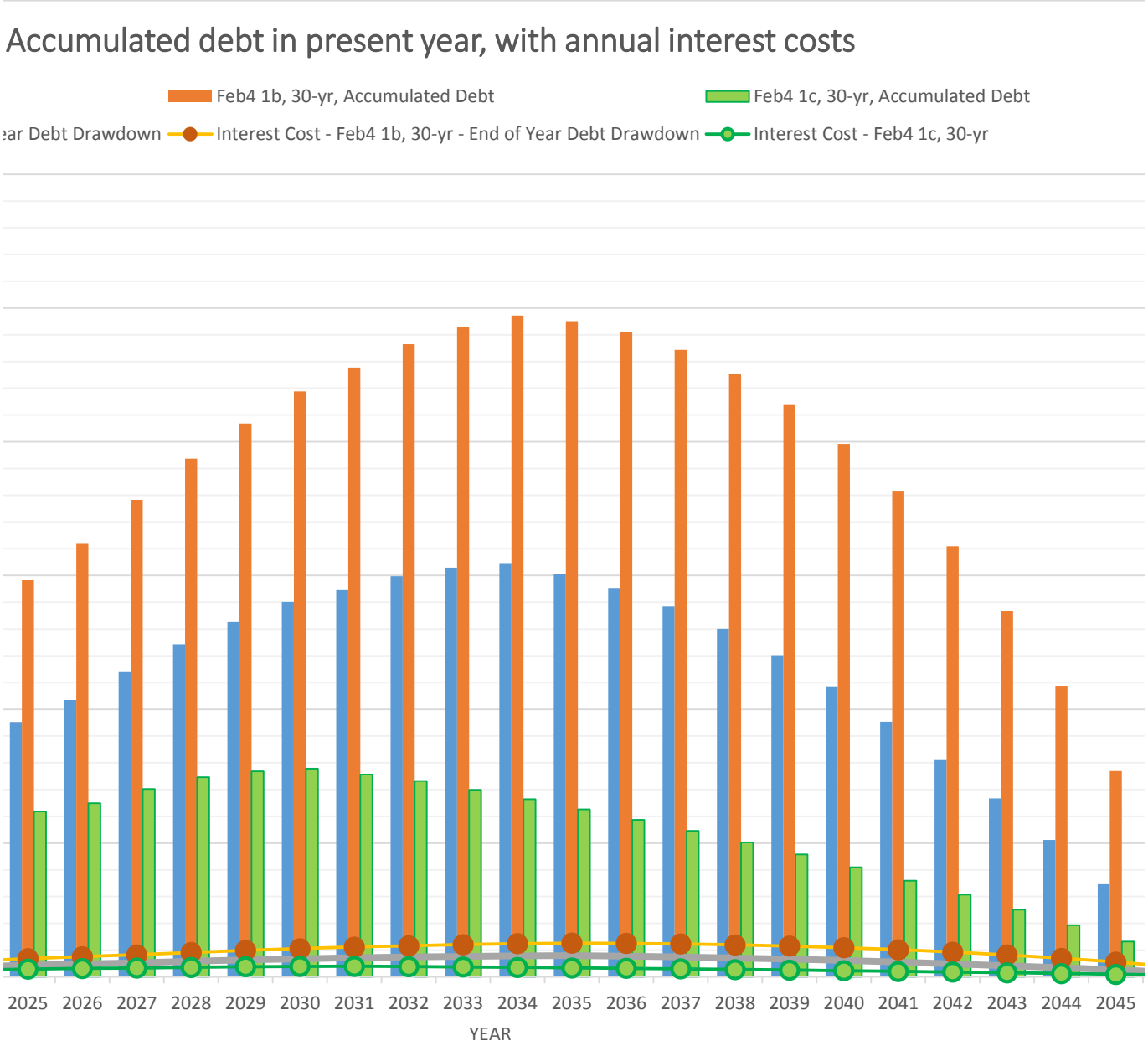


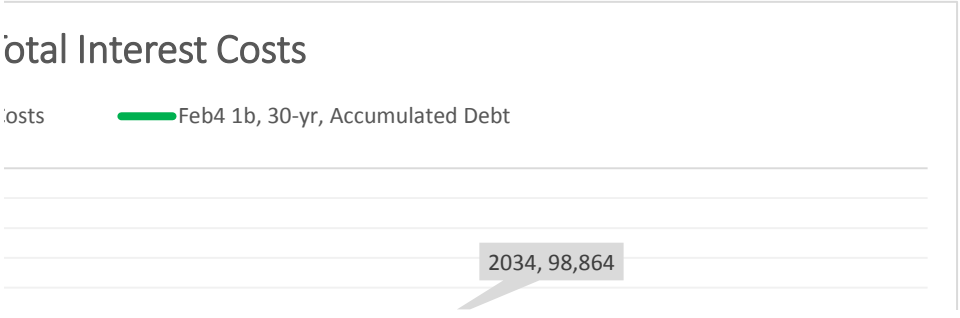

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

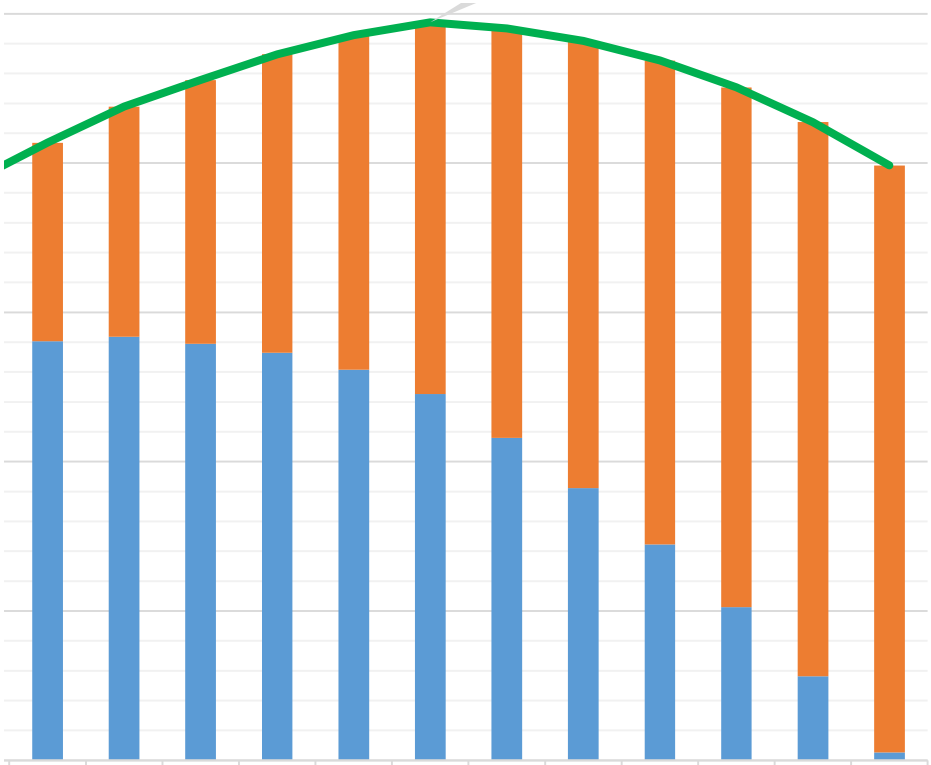


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y

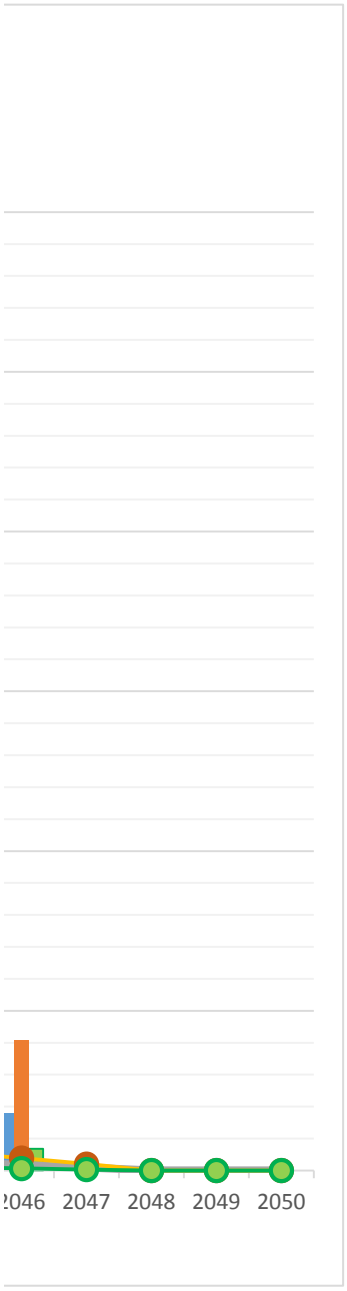

Accumulated debt in present year, with annual interest costs
Feb4 1b, 30-yr, Accumulated Debt
Feb4 1c, 30-yr, Accumulated Debt
ear Debt Drawdown
Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown
Interest Cost - Feb4 1c, 30-yr
2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045
YEAR


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

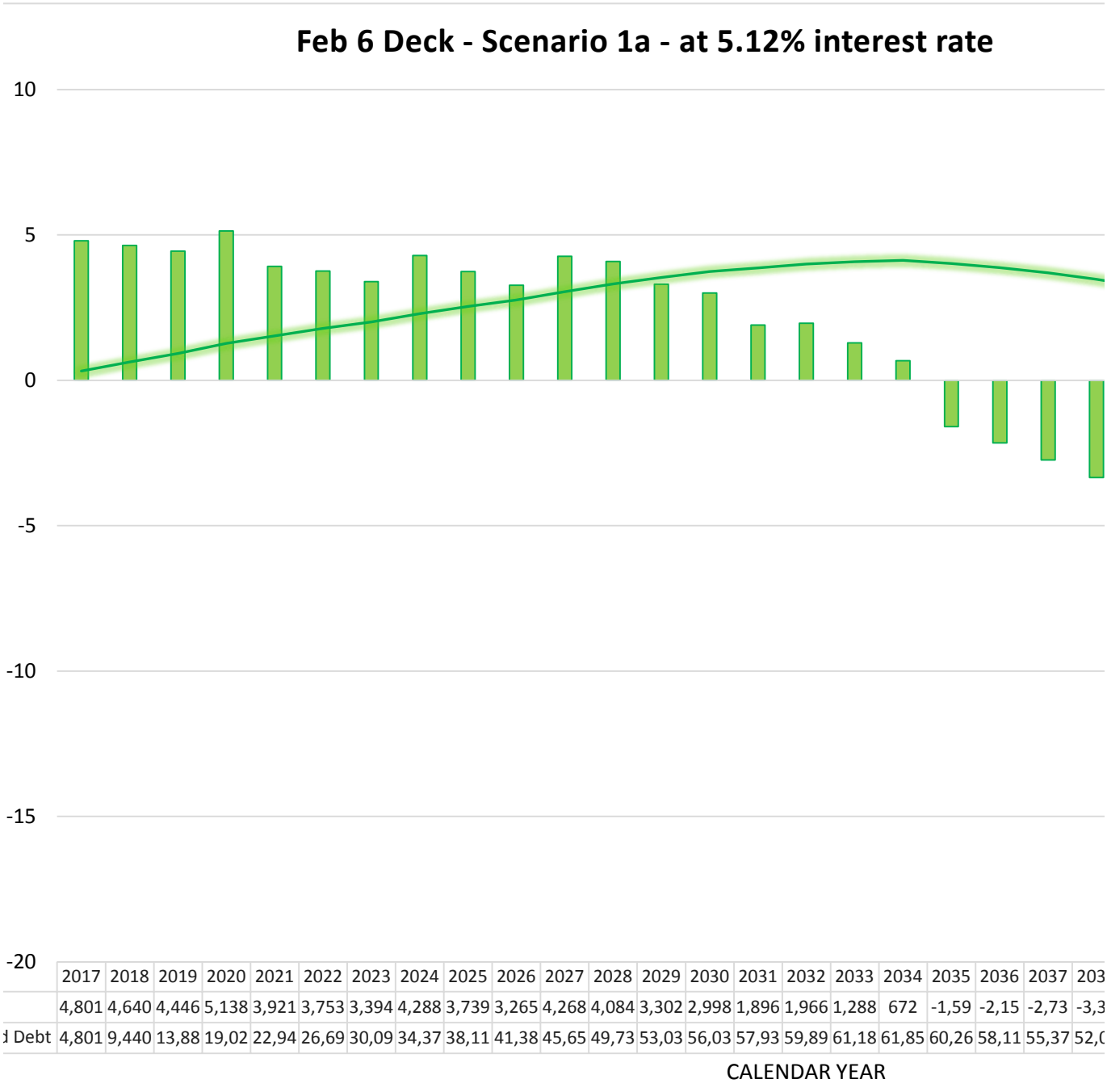
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

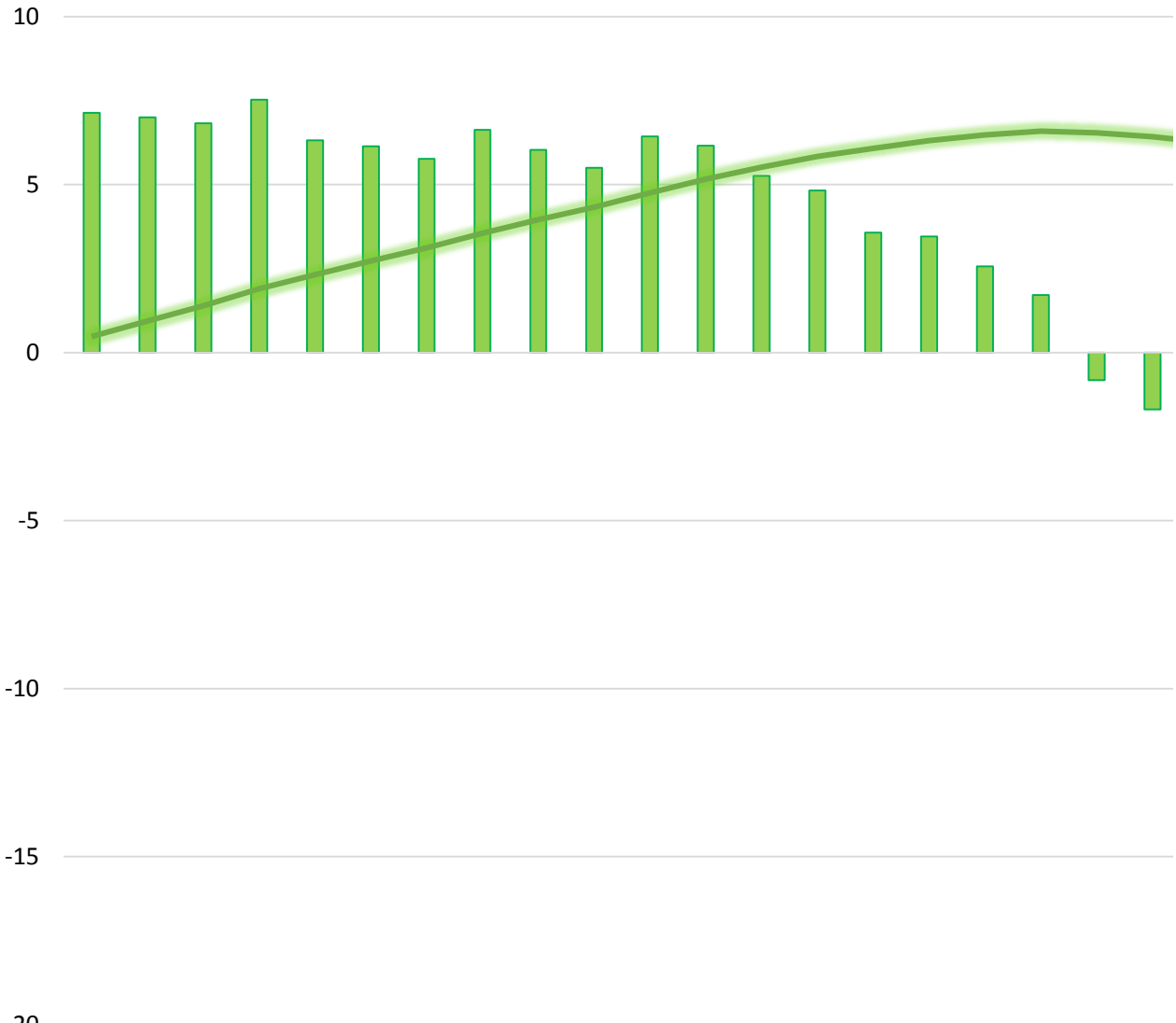
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

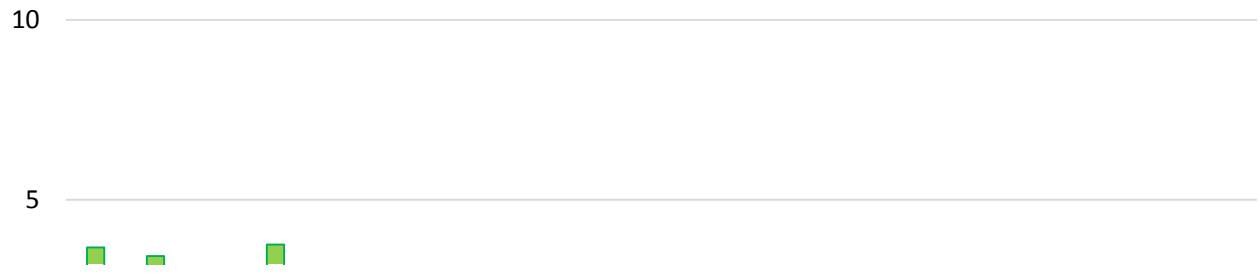
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

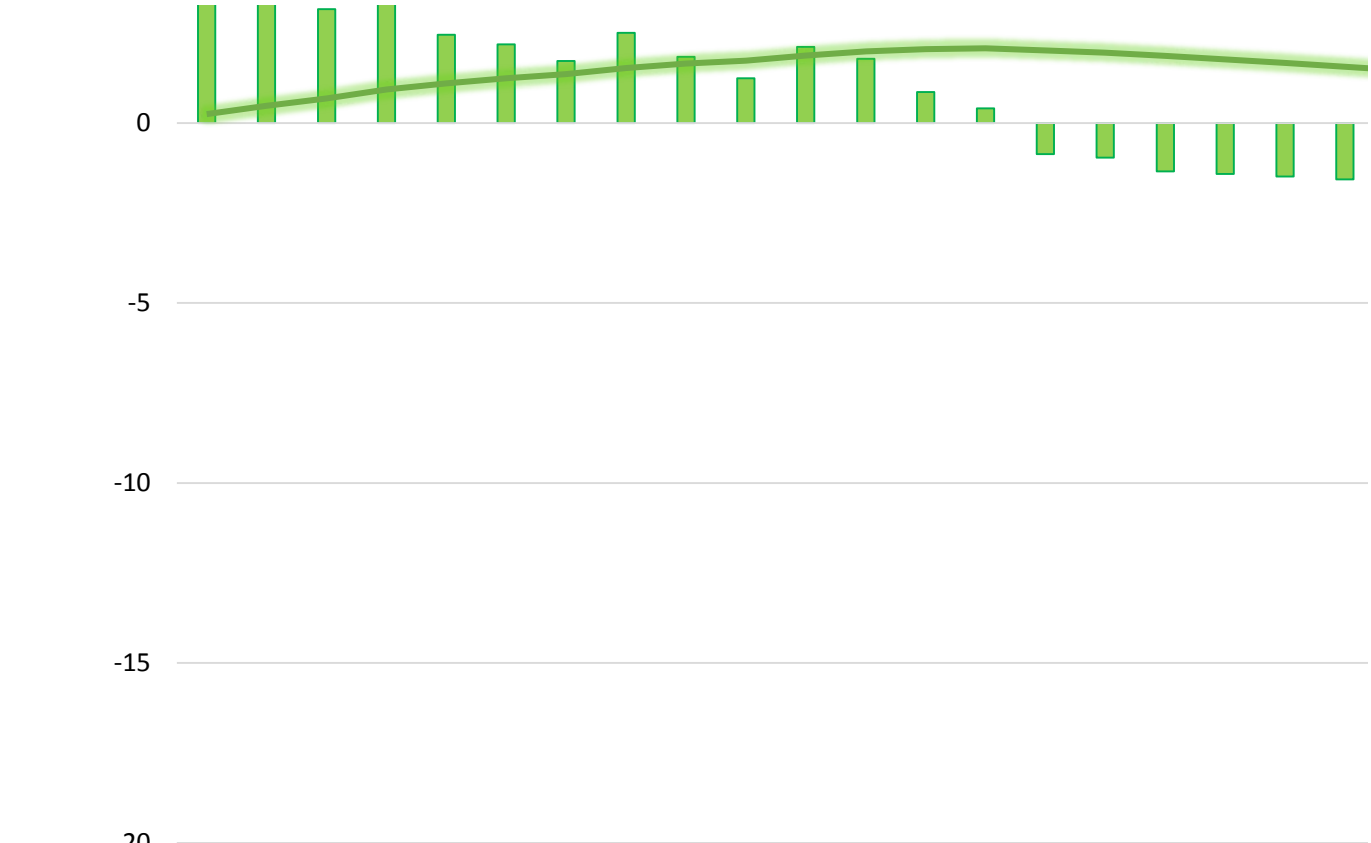


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



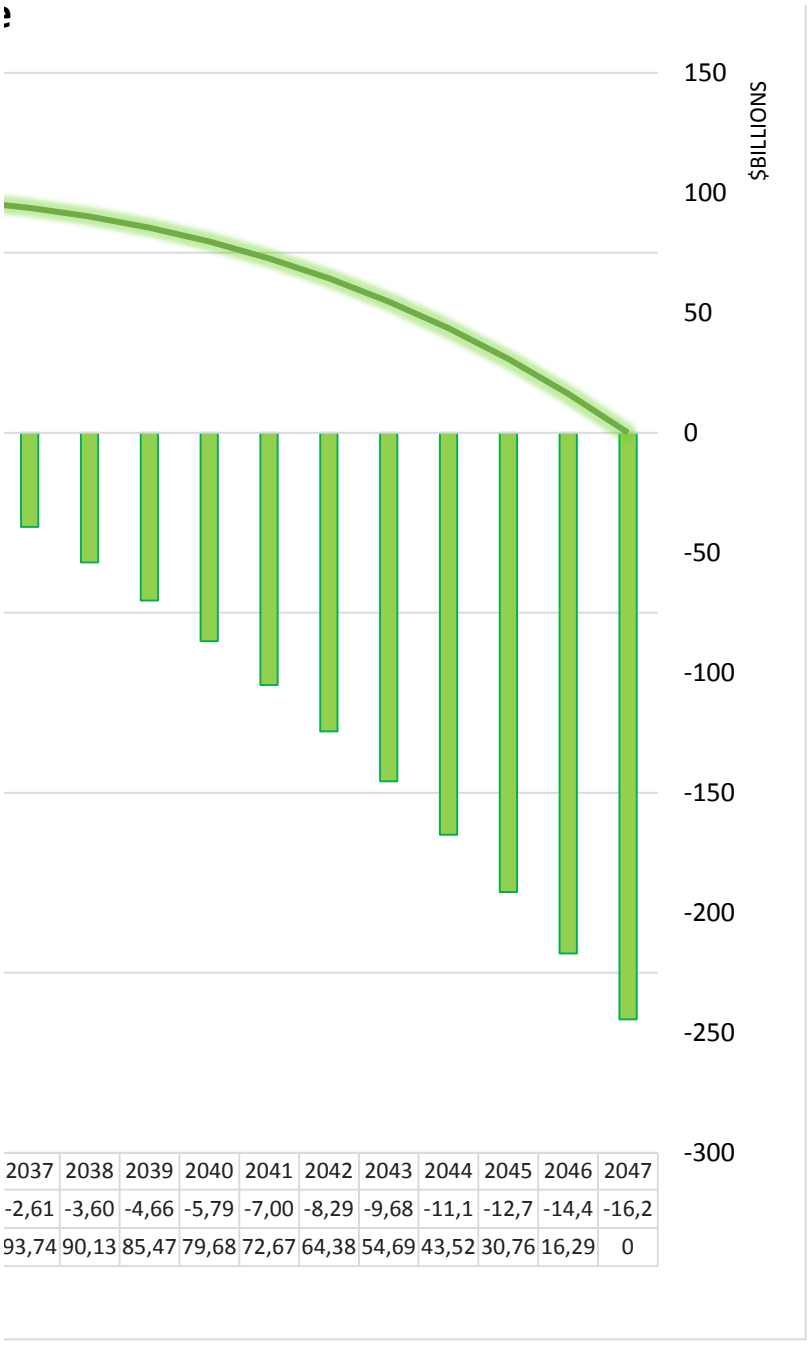


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

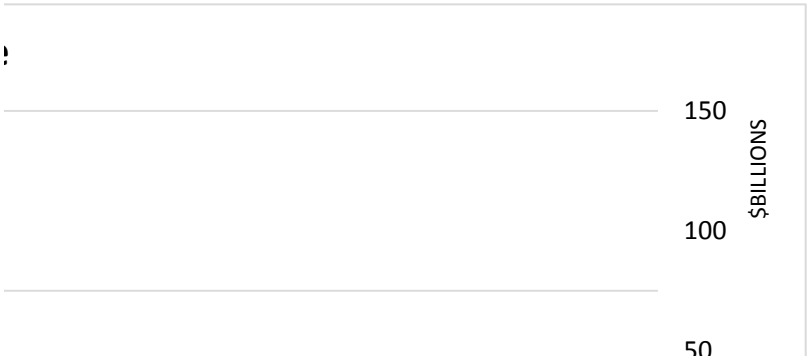
CALENDAR YEAR

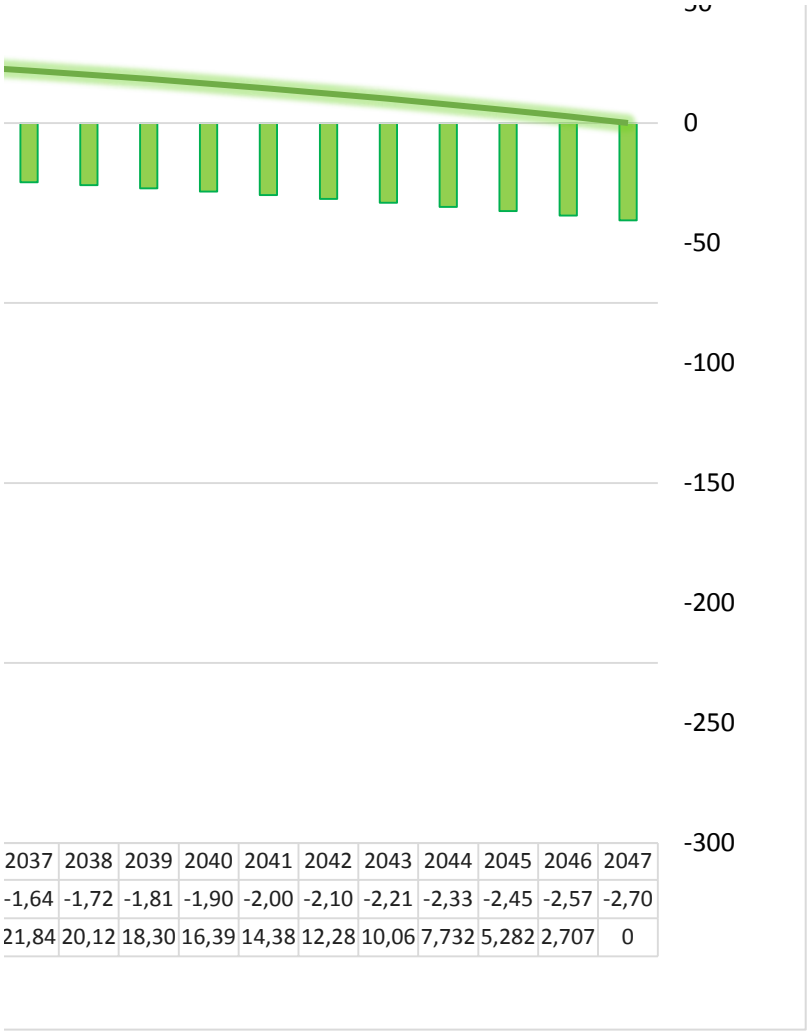


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Feb 8 Deck - Scenario 1a, 1b, 1c - at 5.12% interest
IESO GA cost forecast + extrapolation

Scenario
1a

1b

1c

1d

1e

	2017	2018	2019	2020
rate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	4674	9542	14587	21173

GA Payment from Impacted Rate Class	7421	7205	6995	6329
Accumulated debt in present year (including interest)	4674	9544	14589	21175

GA Payment from Impacted Rate Class	7421	7425	7440	7013
Accumulated debt in present year (including interest)	4674	9323	13913	19780

GA Payment from Impacted Rate Class	9915	9676	9427	9445
Accumulated debt in present year (including interest)	2180	4450	6803	9875

GA Payment from Impacted Rate Class	10596	10370	10129	10162
Accumulated debt in present year (including interest)	1500	3042	4620	6863

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
27212	33084	38588	44968	50769	56056	62291	68274

5890	6156	6434	6724	7028	7345	7677	8024
27212	33082	38585	44963	50762	56048	62281	68263

6825	7042	7266	7497	7736	7983	8237	8499
24810	29671	34167	39545	44359	48679	53976	59058

8532	8703	8877	9054	9236	9420	9609	9801
12692	15272	17420	20384	22719	24494	27181	29590

9264	9449	9638	9831	10027	10228	10432	10641
8794	10429	11568	13457	14645	15200	16588	17614

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
73391	78103	81594	85015	87596	89375	88679	87180

8386	8765	9160	9574	10006	10458	10931	11424
73378	78089	81578	84997	87577	89356	88659	87159

8770	9049	9337	9634	9941	10257	10584	10921
63318	67230	69987	72754	74773	76097	75068	73377

9997	10197	10401	10609	10821	10916	8822	8548
31116	32233	32135	31991	31045	29473	27822	26085

10854	11071	10196	10361	9779	9298	7203	6930
17670	17225	16565	15871	15142	14376	13570	12723

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
84828	81568	77341	72085	65730	58203	49425	39310

11940	12480	13043	13632	14248	14891	15564	16267
84806	81546	77320	72065	65711	58186	49409	39297

11269	11628	11998	12380	12774	13181	13600	14033
70990	67875	63995	59310	53778	47352	39985	31624

8288	8040	7805	7580	7367	7164	6970	6786
24260	22342	20325	18206	15978	13635	11173	8586

6670	6422	6186	5962	5748	5545	5352	5168
11833	10897	9914	8880	7793	6651	5450	4188

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
27767	14699	0	0	0	0

17001	17769	18572	2975	2831	2695
27758	14694	0	0	0	0

14480	14941	15417	2975	2831	2695
22213	11693	0	0	0	0

6611	6444	6286	2975	2831	2695
5865	3006	0	0	0	0

4993	4826	4667	2975	2831	2695
2861	1466	0	0	0	0

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb8_1a_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,867
Annual Exposure2 with start on July 1st	*2,337*	*4,867*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	3,554

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

1 Based on an interest rate of 5%.

2 Fiscal exposure based on equal monthly drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1b_30yr

1b. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,869
Annual Exposure2 with start on July 1st	*2,337*	*4,869*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	*3,554*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649
Annual Exposure2 with start on July 1st	*2,337*	*4,649*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,668
Start: July 1st	-	*3,499*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $76 billion peaking in

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270
Annual Exposure2 with start on July 1st	*1,090*	*2,270*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	545	2,203
Start: July 1st	-	*1,658*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $32 billion peaking in

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542
Annual Exposure2 with start on July 1st	*750*	*1,542*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	375	1,510
Start: July 1st	-	*1,135*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $18 billion peaking in

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	1,169 - 1,169	4,723 - 4,723

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1169**	**4963**
Total, B	1169	4963
Proposed Program Total:	1,169 - 1,169	4,963 - 4,963

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1a
Scenario 1b
Scenario 1c
Scenario 1d
Scenario 1e

2019	2020	2021	2022
5,045	6,586	6,039	5,872
5,045	*6,586*	*6,039*	*5,872*

2018-19	2019-20	2020-21	2021-2022
4,912	5,430	6,449	5,997
4,912	*5,430*	*6,449*	*5,997*

2034.

Actuals are subject t
- The highest debt ac
- Compared to a 5% i

[1] Based on an interes
[2] Fiscal exposure bas
[3] Fiscalized based on

depend on decision on accounting treatment.

2019	2020	2021	2022
5,045	6,586	6,037	5,870
5,045	*6,586*	*6,037*	*5,870*

2018-19	2019-20	2020-21	2021-2022
4,913	5,430	6,449	5,996
4,913	*5,430*	*6,449*	*5,996*

2034.

2019	2020	2021	2022
4,589	5,867	5,031	4,861
4,589	*5,867*	*5,031*	*4,861*

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988
4,634	*4,909*	*5,658*	*4,988*

2034.

2019	2020	2021	2022
2,353	3,072	2,817	2,580
2,353	*3,072*	*2,817*	*2,580*

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757
2,291	*2,533*	*3,008*	*2,757*

2030.

2019	2020	2021	2022
1,578	2,243	1,931	1,635
1,578	*2,243*	*1,931*	*1,635*

2018-19	2019-20	2020-21	2021-2022

1,551	1,745	2,165	1,857
1,551	*1,745*	*2,165*	*1,857*

2029.



2018-19	2019-20	2020-21	2021-2022
4,913 - 4,912	5,430 - 5,430	6,449 - 6,449	5,996 - 5,997

/1

2018-19[1]	2019-20[1]	2020-21[1]
4912	5430	6449
4913	5430	6449
225	279	323
60	60	60
18	18	18
5215	**5787**	**6850**
5216	5787	6850

5,216 - 5,215 5,787 - 5,787 6,850 - 6,850

Total Principal Debt	Total Accumulated Interest Costs	**Peak Total Debt**	
52,287	85,599	89,375	occurs in Year 2034
52,275	85,582	89,356	occurs in Year 2034
44,449	72,823	76,097	occurs in Year 2034
21,239	29,589	32,233	occurs in Year 2030
12,350	16,239	17,670	occurs in Year 2029

o actual prices and actual interest rates.
:cumulation (at 5% interest rate) is expected to be approximately $62 billion, peaking in 203 and $17-21 billion (at 3.5% interest
interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately $33-$36 million.

st rate of 5%.
sed on equal monthly drawdown of debt.
75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on mo

Feb8_1a_30yr
Feb8_1b_30yr
Feb8_1c_30yr
Feb8_1d_30yr
Feb8_1e_30yr

t rate), peaking in 2028.

nth of the year. Actuals may also depend on decision on accounting treatment.

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-275	-311	-350	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,573	85,599
Equal Monthly Debt Drawdown	6,743	4,556	

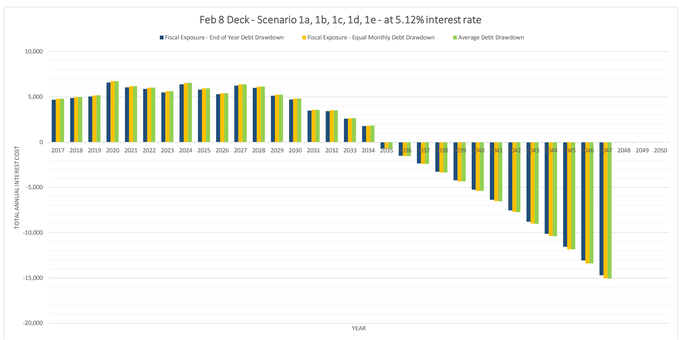
	Feb8 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,375	2034	52,287
Equal Monthly Debt Drawdown	91,501		

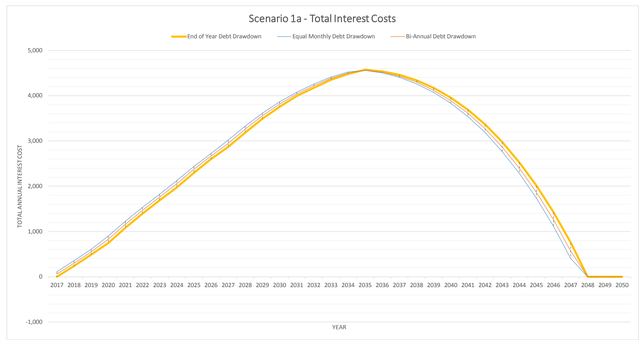
Feb8 1a, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	
c = a*5%	*Interest Cost - Feb8 1a, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,301*	*2,597*	*2,868*	*3,187*	*3,493*	*3,755*	*3,996*	*4,175*	*4,350*	*4,482*	*4,573*	*4,537*	*4,460*	*4,340*	*4,173*	*3,957*	*3,688*	*3,363*	*2,978*	*2,529*	*2,011*	*1,421*	*752*	*0*	*0*	*0*	85,599
b	Additional GA Debt Drawdown, End of Year	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,307	32,728	35,309	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	39,310	27,767	14,699	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	52,287	52,287	52,287	51,591	50,091	47,739	44,479	40,253	34,997	28,642	21,115	12,336	0	0	0	0	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,813	33,987	38,337	42,818	47,391	51,928	56,388	60,728	64,901	68,858	72,546	75,909	78,887	81,416	83,427	84,847	85,599				
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	51,781	51,028	49,259	46,557	41,288	35,252	28,440	20,840	12,440	3,227	-6,816	-17,706	-29,462	-42,106	-55,660	-70,149	-85,599				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	

Feb8 1a, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	
4,556	*Interest Cost - Feb8 1a, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,824*	*2,126*	*2,439*	*2,723*	*3,016*	*3,329*	*3,615*	*3,867*	*4,079*	*4,256*	*4,411*	*4,524*	*4,556*	*4,501*	*4,404*	*4,262*	*4,073*	*3,832*	*3,537*	*3,184*	*2,769*	*2,288*	*1,737*	*1,110*	*402*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
	Monthly Drawdown	390	386	380	487	413	373	318	367	292	224	281	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(980)	(1,054)	(1,129)	(1,207)	(1,288)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,738	4,665	5,979	5,074	4,586	3,902	4,510	3,584	2,753	3,447	2,863	1,662	980	(517)	(772)	(1,810)	(2,766)	(5,394)	(6,180)	(6,975)	(7,781)	(8,599)	(9,432)	(10,282)	(11,149)	(12,036)	(12,944)	(13,876)	(14,834)	(15,818)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	67	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(368)	-	-	-	
	Annual Interest Cost on Opening Balance	-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,263	3,576	3,844	4,091	4,274	4,453	4,588	4,681	4,645	4,566	4,443	4,272	4,051	3,776	3,443	3,049	2,589	2,059	1,454	770	(0)	(0)	(0)	
	Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,824	2,126	2,439	2,723	3,016	3,329	3,615	3,867	4,079	4,256	4,411	4,524	4,556	4,501	4,404	4,262	4,073	3,832	3,537	3,184	2,769	2,288	1,737	1,110	402	(0)	(0)	(0)	

Feb8 1a, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*60*	*301*	*553*	*831*	*1,160*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,948*	*3,263*	*3,558*	*3,815*	*4,041*	*4,218*	*4,383*	*4,504*	*4,564*	*4,518*	*4,430*	*4,298*	*4,119*	*3,890*	*3,607*	*3,267*	*2,866*	*2,399*	*1,864*	*1,253*	*564*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,930	5,110	6,670	6,116	5,947	5,575	6,461	5,875	5,354	6,315	6,060	5,182	4,773	3,535	3,464	2,614	1,802	-705	-1,518	-2,382	-3,302	-4,280	-5,324	-6,436	-7,623	-8,891	-10,244	-11,690	-13,236	-14,887	0	0	0	
	Bi-Annual Drawdown	2,337	2,314	2,279	2,920	2,478	2,240	1,906	2,203	1,750	1,345	1,684	1,398	812	479	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,800)	(4,200)	(4,607)	(5,021)	(5,445)	(5,878)	(6,322)	(6,777)	(7,245)	(7,725)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,687	4,615	5,914	5,019	4,537	3,860	4,462	3,545	2,724	3,410	2,832	1,644	970	(512)	(763)	(1,791)	(2,737)	(5,336)	(6,113)	(6,900)	(7,697)	(8,507)	(9,331)	(10,171)	(11,029)	(11,907)	(12,805)	(13,727)	(14,674)	(15,648)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	494	756	1,097	1,410	1,714	1,999	2,330	2,631	2,905	3,228	3,538	3,803	4,047	4,228	4,405	4,539	4,631	4,595	4,517	4,395	4,227	4,008	3,735	3,406	3,016	2,561	2,037	1,439	762	(0)	(0)	(0)	
	Total Annual Interest Cost	60	301	553	831	1,160	1,467	1,763	2,056	2,375	2,665	2,948	3,263	3,558	3,815	4,041	4,218	4,383	4,504	4,564	4,518	4,430	4,298	4,119	3,890	3,607	3,267	2,866	2,399	1,864	1,253	564	(0)	(0)	(0)	

Feb8 1a, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,723*	*3,027*	*3,340*	*3,624*	*3,875*	*4,085*	*4,262*	*4,416*	*4,527*	*4,555*	*4,499*	*4,400*	*4,257*	*4,065*	*3,822*	*3,525*	*3,170*	*2,753*	*2,270*	*1,716*	*1,086*	*376*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,992	5,174	6,754	6,193	6,022	5,645	6,543	5,950	5,422	6,395	6,137	5,248	4,833	3,580	3,508	2,647	1,825	-714	-1,537	-2,412	-3,343	-4,334	-5,391	-6,517	-7,720	-9,003	-10,374	-11,838	-13,403	-15,075	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-274	-311	-349	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,572	85,582
Equal Monthly Debt Drawdown	6,743	4,555	

	Feb8 1b, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,356	2034	52,275
Equal Monthly Debt Drawdown	91,481		

Feb8 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
a — Debt, Beginning of Year	0	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	
c = a*5% — *Interest Cost - Feb8 1b, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,300*	*2,597*	*2,867*	*3,186*	*3,492*	*3,754*	*3,995*	*4,174*	*4,349*	*4,481*	*4,572*	*4,536*	*4,459*	*4,339*	*4,172*	*3,956*	*3,687*	*3,362*	*2,977*	*2,528*	*2,011*	*1,420*	*752*	*0*	*0*	*0*	85,582
b — Additional GA Debt Drawdown, End of Year	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,303	32,722	35,302	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	39,297	27,758	14,694	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	52,275	52,275	52,275	52,275	51,578	50,078	47,725	44,465	40,239	34,984	28,630	21,105	12,328	0	0	0	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,809	33,983	38,331	42,812	47,384	51,920	56,379	60,718	64,890	68,846	72,533	75,895	78,871	81,399	83,410	84,830	85,582				
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	51,769	51,014	49,246	46,544	41,275	35,239	28,428	20,829	12,431	3,219	-6,822	-17,709	-29,462	-42,102	-55,652	-70,136	-85,582				
Fiscal Exposure - End of Year Debt Drawdown	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	

Feb8 1b, 30-yr — Equal Monthly Debt Drawdown

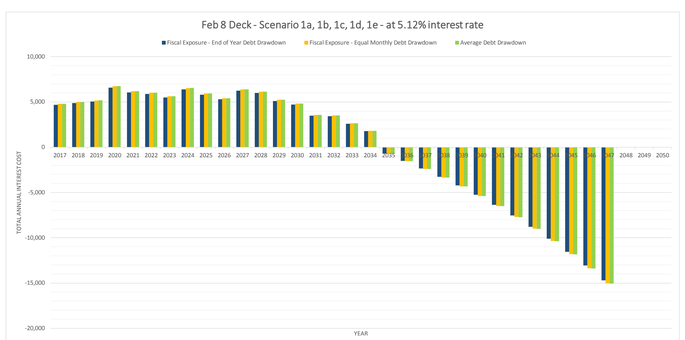
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	
4,555 — *Interest Cost - Feb8 1b, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,823*	*2,126*	*2,438*	*2,723*	*3,016*	*3,329*	*3,614*	*3,866*	*4,078*	*4,255*	*4,410*	*4,523*	*4,555*	*4,500*	*4,403*	*4,261*	*4,072*	*3,831*	*3,536*	*3,183*	*2,768*	*2,287*	*1,736*	*1,109*	*402*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
Monthly Drawdown	390	386	380	487	413	373	317	367	292	224	280	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(979)	(1,053)	(1,129)	(1,207)	(1,287)	(0)	-	-	
FV of Monthly Drawdown at 5%	4,786	4,740	4,665	5,979	5,072	4,585	3,900	4,509	3,582	2,752	3,446	2,862	1,661	979	(518)	(772)	(1,811)	(2,766)	(5,394)	(6,179)	(6,974)	(7,780)	(8,598)	(9,431)	(10,279)	(11,146)	(12,033)	(12,941)	(13,872)	(14,829)	(15,813)	(0)	-	-	
Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	66	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(367)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,262	3,576	3,843	4,090	4,273	4,452	4,587	4,680	4,644	4,565	4,442	4,271	4,050	3,775	3,442	3,048	2,588	2,058	1,454	770	0	0	0	
Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,823	2,126	2,438	2,723	3,016	3,329	3,614	3,866	4,078	4,255	4,410	4,523	4,555	4,500	4,403	4,261	4,072	3,831	3,536	3,183	2,768	2,287	1,736	1,109	402	0	0	0	

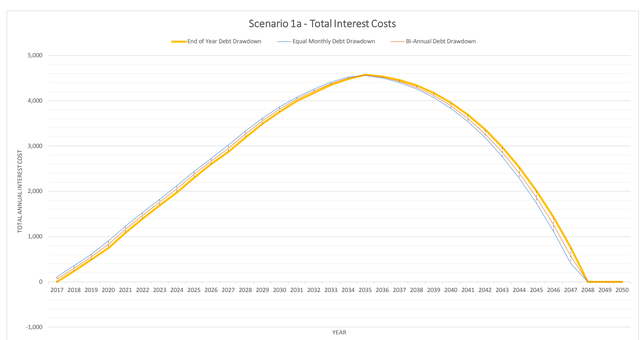
Feb8 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*60*	*301*	*553*	*831*	*1,161*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,947*	*3,263*	*3,558*	*3,814*	*4,040*	*4,217*	*4,382*	*4,503*	*4,563*	*4,517*	*4,429*	*4,297*	*4,118*	*3,889*	*3,606*	*3,266*	*2,865*	*2,399*	*1,863*	*1,253*	*564*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	4,734	4,931	5,110	6,670	6,115	5,945	5,573	6,460	5,874	5,353	6,313	6,058	5,181	4,771	3,534	3,463	2,613	1,801	-706	-1,519	-2,383	-3,302	-4,280	-5,323	-6,435	-7,622	-8,889	-10,242	-11,687	-13,231	-14,882	0	0	0	
Bi-Annual Drawdown	2,337	2,315	2,279	2,920	2,477	2,239	1,905	2,202	1,750	1,344	1,683	1,398	811	478	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,799)	(4,199)	(4,606)	(5,020)	(5,444)	(5,877)	(6,320)	(6,775)	(7,242)	(7,723)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	4,734	4,689	4,615	5,914	5,017	4,535	3,859	4,460	3,544	2,722	3,409	2,831	1,643	969	(513)	(764)	(1,791)	(2,737)	(5,336)	(6,113)	(6,899)	(7,696)	(8,506)	(9,329)	(10,169)	(11,027)	(11,904)	(12,802)	(13,723)	(14,670)	(15,643)	(0)	-	-	
Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	242	495	756	1,097	1,410	1,714	1,999	2,330	2,630	2,904	3,227	3,537	3,802	4,046	4,227	4,404	4,538	4,630	4,594	4,516	4,394	4,225	4,006	3,734	3,405	3,015	2,560	2,036	1,438	761	0	(0)	(0)	
Total Annual Interest Cost	60	301	553	831	1,161	1,467	1,763	2,056	2,375	2,665	2,947	3,263	3,558	3,814	4,040	4,217	4,382	4,503	4,563	4,517	4,429	4,297	4,118	3,889	3,606	3,266	2,865	2,399	1,863	1,253	564	0	(0)	(0)	

Feb8 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,732*	*3,027*	*3,339*	*3,623*	*3,875*	*4,084*	*4,261*	*4,415*	*4,526*	*4,554*	*4,498*	*4,399*	*4,255*	*4,064*	*3,821*	*3,524*	*3,169*	*2,752*	*2,269*	*1,715*	*1,086*	*376*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	4,794	4,994	5,174	6,754	6,192	6,020	5,643	6,541	5,948	5,420	6,393	6,135	5,246	4,831	3,578	3,507	2,646	1,824	-715	-1,538	-2,413	-3,343	-4,334	-5,390	-6,516	-7,718	-9,001	-10,371	-11,835	-13,398	-15,070	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1c_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	
			111	111	109	140	120	116	107	128	115	103	126	121	101	93	66	66	48	32	-24	-40	-57	-74	-92	-111	-132	-153	-175	-199	-224	-250	-278	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	5,867	3,893	72,823
Equal Monthly Debt Drawdown	6,006	3,869	

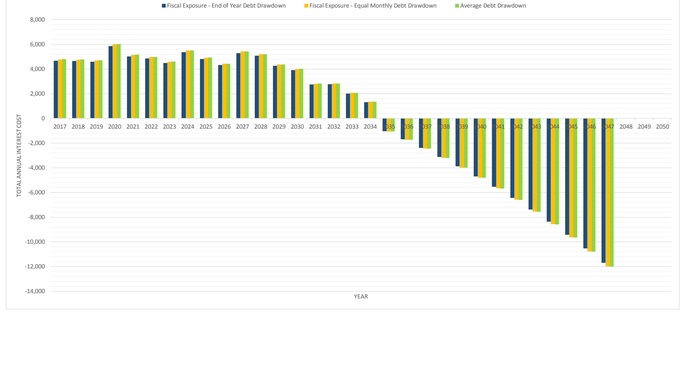
	Feb8 1c, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	76,097	2034	44,449
Equal Monthly Debt Drawdown	77,907		

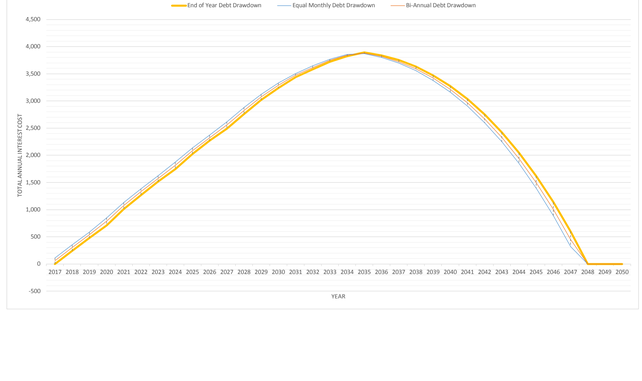
Feb8 1c, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	
c = a*5%	*Interest Cost - Feb8 1c, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*477*	*712*	*1,012*	*1,269*	*1,518*	*1,748*	*2,023*	*2,270*	*2,491*	*2,762*	*3,022*	*3,239*	*3,440*	*3,581*	*3,722*	*3,826*	*3,893*	*3,841*	*3,754*	*3,632*	*3,473*	*3,274*	*3,034*	*2,751*	*2,423*	*2,046*	*1,618*	*1,136*	*598*	*0*	*0*	*0*	72,823
b	Additional GA Debt Drawdown, End of Year	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	
	Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	25,538	28,304	30,324	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,624	22,213	11,693	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	44,449	44,449	44,449	44,449	43,420	41,729	39,342	36,228	32,347	27,662	22,130	15,704	8,337	0	0	0	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	26,221	29,801	33,524	37,349	41,242	45,083	48,837	52,469	55,942	59,216	62,250	65,002	67,424	69,470	71,088	72,224	72,823				
	Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	43,767	42,952	41,249	38,748	33,826	28,294	22,153	15,406	8,054	94	-8,473	-17,649	-27,439	-37,846	-48,875	-60,532	-72,823				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	

Feb8 1c, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
3,869	Debt, Beginning of Year	0	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*111*	*350*	*586*	*851*	*1,132*	*1,385*	*1,625*	*1,876*	*2,138*	*2,372*	*2,617*	*2,882*	*3,123*	*3,333*	*3,505*	*3,646*	*3,770*	*3,857*	*3,869*	*3,800*	*3,697*	*3,558*	*3,380*	*3,163*	*2,903*	*2,599*	*2,247*	*1,847*	*1,394*	*886*	*320*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	
	Monthly Drawdown	390	367	343	430	335	299	248	303	233	171	234	193	103	56	(57)	(68)	(142)	(208)	(410)	(461)	(512)	(562)	(613)	(663)	(714)	(765)	(816)	(867)	(919)	(971)	(1,024)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,515	4,210	5,278	4,114	3,677	3,048	3,717	2,857	2,099	2,873	2,375	1,268	689	(699)	(834)	(1,744)	(2,561)	(5,039)	(5,664)	(6,286)	(6,907)	(7,528)	(8,148)	(8,771)	(9,395)	(10,023)	(10,654)	(11,291)	(11,934)	(12,583)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	105	98	123	96	85	71	86	66	49	67	55	29	16	(16)	(19)	(41)	(59)	(117)	(132)	(146)	(160)	(175)	(189)	(204)	(218)	(233)	(248)	(262)	(277)	(292)	-	-	-	
	Annual Interest Cost on Opening Balance	-	245	488	729	1,036	1,300	1,554	1,790	2,071	2,323	2,550	2,827	3,093	3,317	3,521	3,666	3,811	3,917	3,986	3,932	3,843	3,718	3,555	3,352	3,107	2,817	2,480	2,094	1,656	1,163	612	(0)	(0)	(0)	
	Total Annual Interest Cost	111	350	586	851	1,132	1,385	1,625	1,876	2,138	2,372	2,617	2,882	3,123	3,333	3,505	3,646	3,770	3,857	3,869	3,800	3,697	3,558	3,380	3,163	2,903	2,599	2,247	1,847	1,394	886	320	(0)	(0)	(0)	

Feb8 1c, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*60*	*299*	*536*	*787*	*1,076*	*1,332*	*1,576*	*1,817*	*2,085*	*2,325*	*2,558*	*2,827*	*3,076*	*3,290*	*3,475*	*3,616*	*3,748*	*3,842*	*3,880*	*3,819*	*3,724*	*3,592*	*3,423*	*3,214*	*2,964*	*2,669*	*2,328*	*1,939*	*1,498*	*1,002*	*449*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,708	4,648	5,942	5,095	4,923	4,553	5,447	4,876	4,375	5,364	5,147	4,315	3,962	2,792	2,802	2,045	1,341	-1,042	-1,713	-2,417	-3,155	-3,930	-4,745	-5,603	-6,508	-7,461	-8,468	-9,531	-10,655	-11,842	0	0	0	
	Bi-Annual Drawdown	2,337	2,205	2,056	2,578	2,009	1,796	1,489	1,815	1,395	1,025	1,403	1,160	620	336	(341)	(407)	(852)	(1,251)	(2,461)	(2,766)	(3,070)	(3,373)	(3,676)	(3,980)	(4,283)	(4,588)	(4,895)	(5,203)	(5,514)	(5,828)	(6,146)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,466	4,165	5,221	4,070	3,638	3,015	3,677	2,826	2,077	2,842	2,350	1,255	681	(691)	(825)	(1,725)	(2,533)	(4,985)	(5,603)	(6,219)	(6,833)	(7,447)	(8,061)	(8,676)	(9,294)	(9,915)	(10,540)	(11,170)	(11,806)	(12,448)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	56	53	66	51	46	38	46	36	26	36	30	16	9	(9)	(10)	(22)	(32)	(63)	(71)	(79)	(86)	(94)	(102)	(110)	(117)	(125)	(133)	(141)	(149)	(157)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	483	721	1,025	1,286	1,537	1,770	2,049	2,299	2,522	2,797	3,060	3,281	3,484	3,626	3,770	3,874	3,943	3,890	3,802	3,678	3,517	3,316	3,073	2,787	2,454	2,072	1,639	1,151	606	(0)	(0)	(0)	
	Total Annual Interest Cost	60	299	536	787	1,076	1,332	1,576	1,817	2,085	2,325	2,558	2,827	3,076	3,290	3,475	3,616	3,748	3,842	3,880	3,819	3,724	3,592	3,423	3,214	2,964	2,669	2,328	1,939	1,498	1,002	449	(0)	(0)	(0)	

Feb8 1c, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*120*	*358*	*594*	*862*	*1,141*	*1,394*	*1,633*	*1,886*	*2,146*	*2,380*	*2,626*	*2,892*	*3,130*	*3,340*	*3,510*	*3,651*	*3,774*	*3,859*	*3,867*	*3,797*	*3,693*	*3,552*	*3,373*	*3,154*	*2,893*	*2,587*	*2,234*	*1,832*	*1,377*	*867*	*299*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,768	4,707	6,017	5,160	4,985	4,610	5,516	4,937	4,431	5,432	5,212	4,370	4,012	2,828	2,837	2,071	1,358	-1,055	-1,735	-2,447	-3,195	-3,979	-4,805	-5,674	-6,590	-7,556	-8,575	-9,652	-10,789	-11,992	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1d_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
			52	54	56	73	67	61	51	71	56	42	64	57	36	27	-2	-3	-23	-37	-39	-41	-43	-46	-48	-50	-53	-56	-59	-62	-65	-68	-71	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,072	1,649	29,589
Equal Monthly Debt Drawdown	3,145	1,647	

	Feb8 1d, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,233	2030	21,239
Equal Monthly Debt Drawdown	32,999		

Feb8 1d, 30-yr — End of Year Debt Drawdown

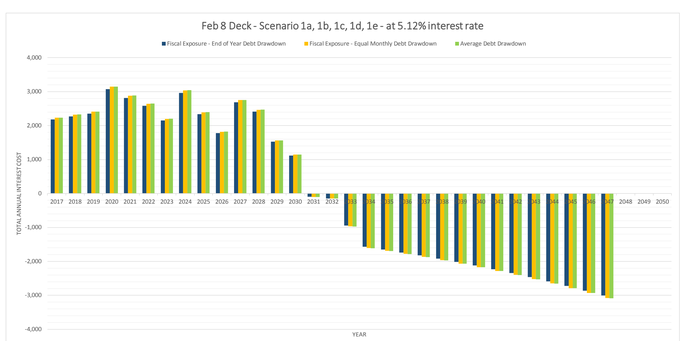
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
a Debt, Beginning of Year	0	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	
c = a*5% *Interest Cost - Feb8 1d, 30-yr - End of Year Debt Drawdown*	*0*	*112*	*228*	*348*	*505*	*649*	*781*	*891*	*1,043*	*1,162*	*1,253*	*1,391*	*1,514*	*1,592*	*1,649*	*1,644*	*1,637*	*1,588*	*1,508*	*1,423*	*1,335*	*1,241*	*1,143*	*1,040*	*931*	*817*	*698*	*572*	*439*	*300*	*154*	*0*	*0*	*0*	29,589
b Additional GA Debt Drawdown, End of Year	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
d = a+b+c Accumulated debt in present year (including 5.12% annual interest)	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	11,372	11,227	10,281	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,586	5,865	3,006	0	0	0	0	
Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	20,763	20,763	20,763	20,763	19,112	17,375	15,550	13,632	11,616	9,496	7,268	4,926	2,464	0	0	0	0	0	0	0	
Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	13,118	14,763	16,399	17,988	19,495	20,919	22,253	23,495	24,638	25,678	26,609	27,426	28,124	28,696	29,135	29,435	29,589				
Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	19,017	17,228	14,645	11,486	8,326	5,167	2,007	-1,153	-4,312	-7,472	-10,631	-13,791	-16,951	-20,110	-23,270	-26,429	-29,589				
Fiscal Exposure - End of Year Debt Drawdown	2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	

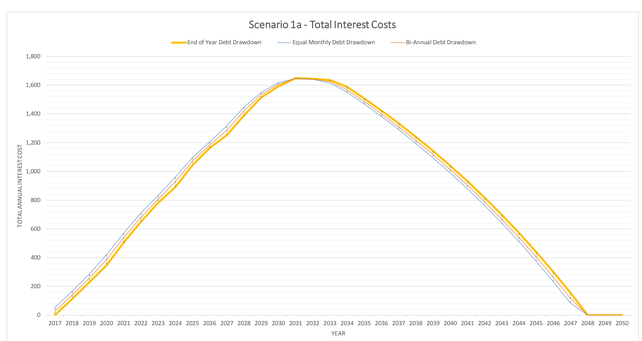
Feb8 1d, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Debt, Beginning of Year	0	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	
1,647 *Interest Cost - Feb8 1d, 30-yr*	*52*	*166*	*284*	*421*	*572*	*711*	*832*	*962*	*1,098*	*1,205*	*1,317*	*1,448*	*1,550*	*1,619*	*1,647*	*1,641*	*1,614*	*1,551*	*1,469*	*1,382*	*1,291*	*1,196*	*1,095*	*989*	*878*	*762*	*639*	*510*	*375*	*232*	*82*	*0*	*0*	*0*	29,589
Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
Monthly Drawdown	182	180	177	227	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	-	-	-	
FV of Monthly Drawdown at 5%	2,232	2,210	2,176	2,788	2,366	1,977	1,399	2,123	1,322	628	1,468	1,042	12	(487)	(1,788)	(1,831)	(2,644)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	-	-	-	
Annual Interest Cost on New Drawdowns	52	51	51	65	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	-	-	-	
Annual Interest Cost on Opening Balance	-	114	233	356	517	665	800	912	1,068	1,190	1,283	1,424	1,550	1,630	1,688	1,683	1,676	1,626	1,544	1,457	1,366	1,271	1,170	1,065	954	837	714	585	450	307	157	0	0	0	
Total Annual Interest Cost	52	166	284	421	572	711	832	962	1,098	1,205	1,317	1,448	1,550	1,619	1,647	1,641	1,614	1,551	1,469	1,382	1,291	1,196	1,095	989	878	762	639	510	375	232	82	0	0	0	

Feb8 1d, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Debt, Beginning of Year	0	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	
1,647 *Interest Cost - Feb8 1d, 30-yr*	*56*	*170*	*288*	*427*	*577*	*715*	*836*	*967*	*1,103*	*1,208*	*1,322*	*1,452*	*1,553*	*1,621*	*1,647*	*1,640*	*1,613*	*1,548*	*1,466*	*1,379*	*1,288*	*1,192*	*1,091*	*986*	*874*	*758*	*635*	*505*	*370*	*227*	*77*	*0*	*0*	*0*	29,589
Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	2,236	2,328	2,413	3,150	2,889	2,646	2,203	3,041	2,394	1,821	2,756	2,471	1,565	1,145	-100	-148	-970	-1,612	-1,694	-1,781	-1,872	-1,967	-2,068	-2,174	-2,285	-2,402	-2,525	-2,654	-2,790	-2,933	-3,083	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1e_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	
			36	37	38	53	46	39	27	45	28	13	33	24	1	-11	-16	-16	-17	-18	-19	-20	-21	-22	-23	-25	-26	-27	-29	-30	-32	-33	-35	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,243	904	16,239
Equal Monthly Debt Drawdown	2,297	903	

		Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	17,670	2029	12,350
Equal Monthly Debt Drawdown	18,091		

Feb8 1e, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	
c = a*5%	*Interest Cost - Feb8 1e, 30-yr - End of Year Debt Drawdown*		*0*	*77*	*156*	*236*	*351*	*450*	*534*	*592*	*688*	*749*	*778*	*849*	*901*	*904*	*881*	*847*	*812*	*775*	*735*	*694*	*651*	*605*	*558*	*507*	*454*	*399*	*340*	*279*	*214*	*146*	*75*	*0*	*0*	*0*	16,239
b	Additional GA Debt Drawdown, End of Year		1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)		1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
Feb8 1e, 30-yr - Accumulated Interest Costs			0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	6,605	5,911	5,182	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,188	2,861	1,466	0	0	0	0	
Feb8 1e, 30-yr - Accumulated Debt Principal			1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	9,960	9,960	9,960	9,960	9,155	8,308	7,418	6,482	5,498	4,465	3,378	2,235	1,035	0	0	0	0	0	0	0	
Feb8 1e, 30-yr - Accumulated Interest Costs			0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	8,146	8,993	9,805	10,580	11,315	12,010	12,661	13,266	13,824	14,331	14,785	15,184	15,524	15,803	16,017	16,164	16,239				
Feb8 1e, 30-yr - Accumulated Debt Principal			1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	8,419	6,878	5,337	3,796	2,255	714	-827	-2,369	-3,910	-5,451	-6,992	-8,533	-10,074	-11,615	-13,156	-14,697	-16,239				
Fiscal Exposure - End of Year Debt Drawdown			1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	

Feb8 1e, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	
Interest Cost - Feb8 1e, 30-yr			*36*	*113*	*193*	*290*	*397*	*489*	*561*	*637*	*717*	*762*	*811*	*873*	*903*	*893*	*866*	*831*	*795*	*756*	*716*	*674*	*630*	*583*	*534*	*483*	*428*	*372*	*312*	*249*	*183*	*113*	*40*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown			1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)			1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	0
Fiscal Exposure - Equal Monthly Debt Drawdown			1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	
Monthly Drawdown			125	122	119	167	132	99	50	108	42	(16)	51	15	(70)	(112)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	-	-	-	
FV of Monthly Drawdown at 5%			1,536	1,500	1,457	2,055	1,617	1,213	620	1,328	512	(199)	625	182	(865)	(1,382)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	-	-	-	
Annual Interest Cost on New Drawdowns			36	35	34	48	38	28	14	31	12	(5)	15	4	(20)	(32)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	-	-	-	
Annual Interest Cost on Opening Balance			-	79	159	242	359	461	546	606	705	767	796	869	923	926	902	868	831	793	753	711	666	620	571	519	465	408	348	285	219	150	77	0	0	0	
Total Annual Interest Cost			36	113	193	290	397	489	561	637	717	762	811	873	903	893	866	831	795	756	716	674	630	583	534	483	428	372	312	249	183	113	40	0	0	0	

Feb8 1e, 30-yr — Bi-Annual Debt Drawdown

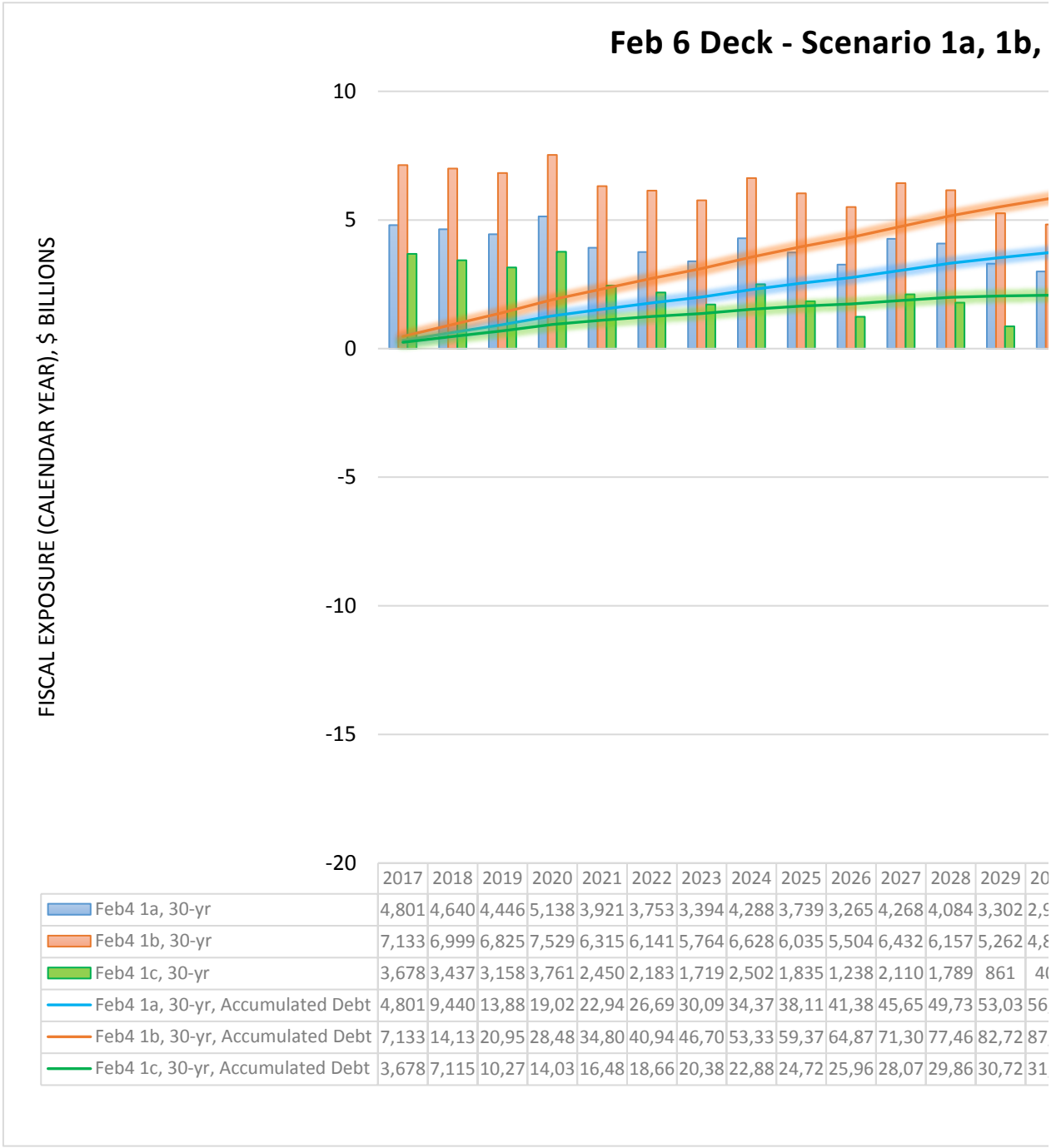
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	
Interest Cost - Feb8 1e, 30-yr			*19*	*96*	*176*	*265*	*376*	*471*	*548*	*616*	*704*	*756*	*795*	*862*	*902*	*898*	*873*	*839*	*803*	*765*	*725*	*683*	*640*	*593*	*545*	*494*	*440*	*384*	*325*	*263*	*197*	*129*	*56*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown			1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)			1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	0
Fiscal Exposure - Bi-Annual Debt Drawdown			1,519	1,561	1,598	2,272	1,956	1,655	1,154	1,913	1,203	562	1,406	1,040	57	-451	-668	-703	-738	-776	-816	-858	-902	-948	-996	-1,047	-1,101	-1,157	-1,216	-1,278	-1,344	-1,413	-1,485	0	0	0	
Bi-Annual Drawdown			750	733	711	1,003	790	592	303	649	250	(97)	305	89	(423)	(675)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	-	-	-	
FV of Bi-Annual Drawdown at 5%			1,519	1,484	1,441	2,033	1,600	1,200	613	1,314	506	(197)	618	180	(856)	(1,367)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	-	-	-	
Annual Interest Cost on New Drawdowns			19	19	18	26	20	15	8	17	6	(2)	8	2	(11)	(17)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	-	-	-	
Annual Interest Cost on Opening Balance			-	78	158	239	356	456	540	599	697	759	788	860	913	916	893	858	822	785	745	703	659	613	565	514	460	404	345	282	217	148	76	0	0	0	
Total Annual Interest Cost			19	96	176	265	376	471	548	616	704	756	795	862	902	898	873	839	803	765	725	683	640	593	545	494	440	384	325	263	197	129	56	0	0	0	

Feb8 1e, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	
Interest Cost - Feb8 1e, 30-yr			*38*	*116*	*196*	*294*	*401*	*492*	*563*	*640*	*719*	*763*	*813*	*875*	*903*	*893*	*864*	*830*	*793*	*755*	*715*	*673*	*628*	*581*	*532*	*481*	*427*	*369*	*310*	*247*	*180*	*111*	*38*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown			1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)			1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	0
Fiscal Exposure - Average Debt Drawdown			1,538	1,581	1,619	2,301	1,980	1,676	1,168	1,938	1,219	569	1,424	1,053	57	-457	-677	-711	-748	-786	-826	-869	-913	-960	-1,009	-1,060	-1,115	-1,172	-1,232	-1,295	-1,361	-1,430	-1,504	0	0	0	

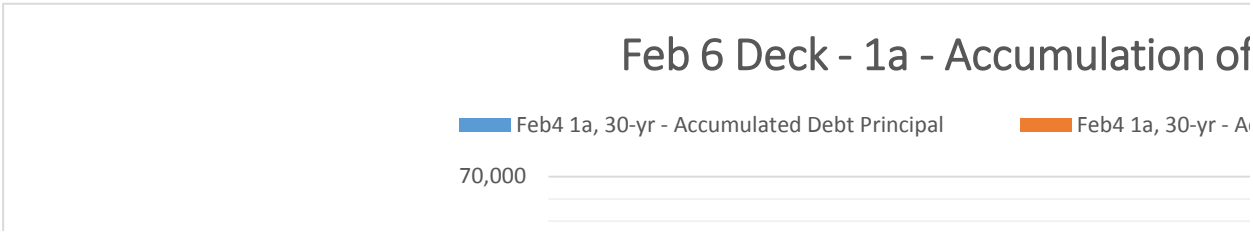
Feb 6 Deck

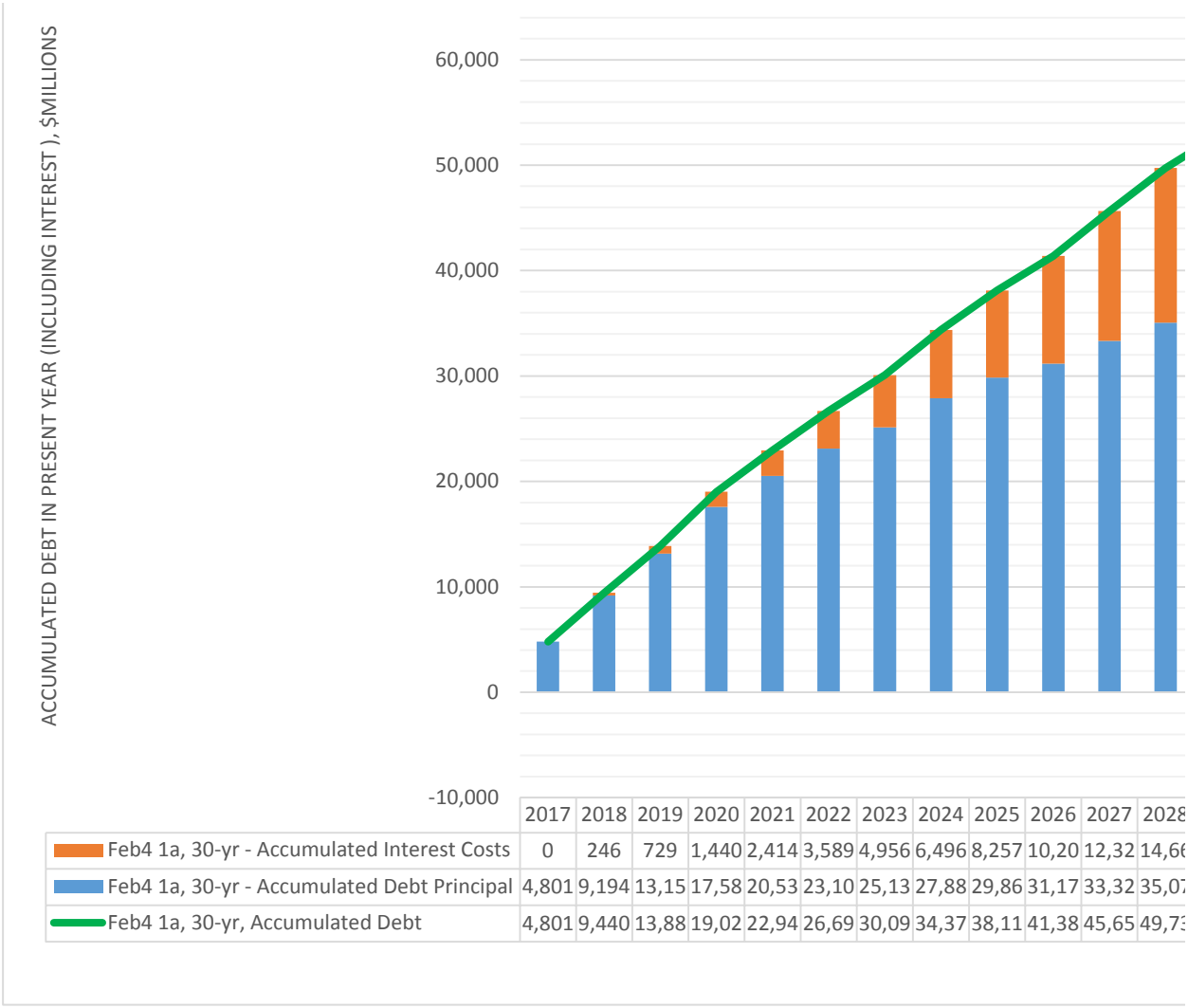
Feb 6 Deck - Scenario 1a, 1b, 1c - at 5.12% interest rate



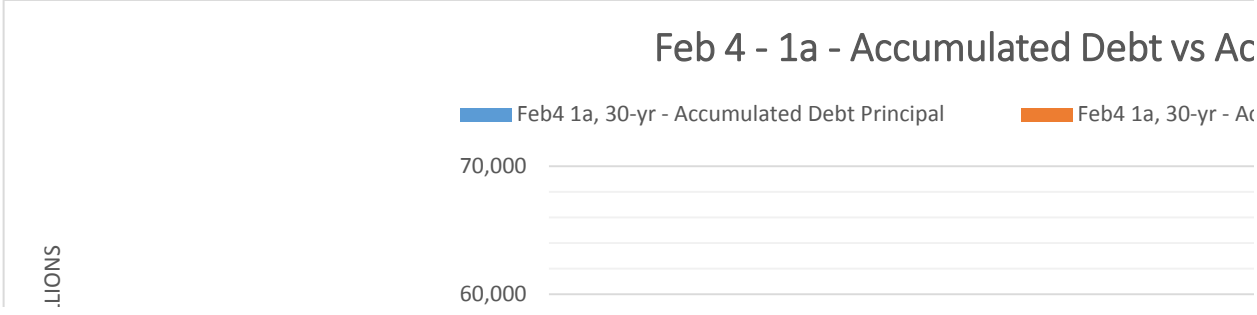
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	20
Feb4 1a, 30-yr	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,9
Feb4 1b, 30-yr	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,8
Feb4 1c, 30-yr	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	4(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73	53,03	56
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31

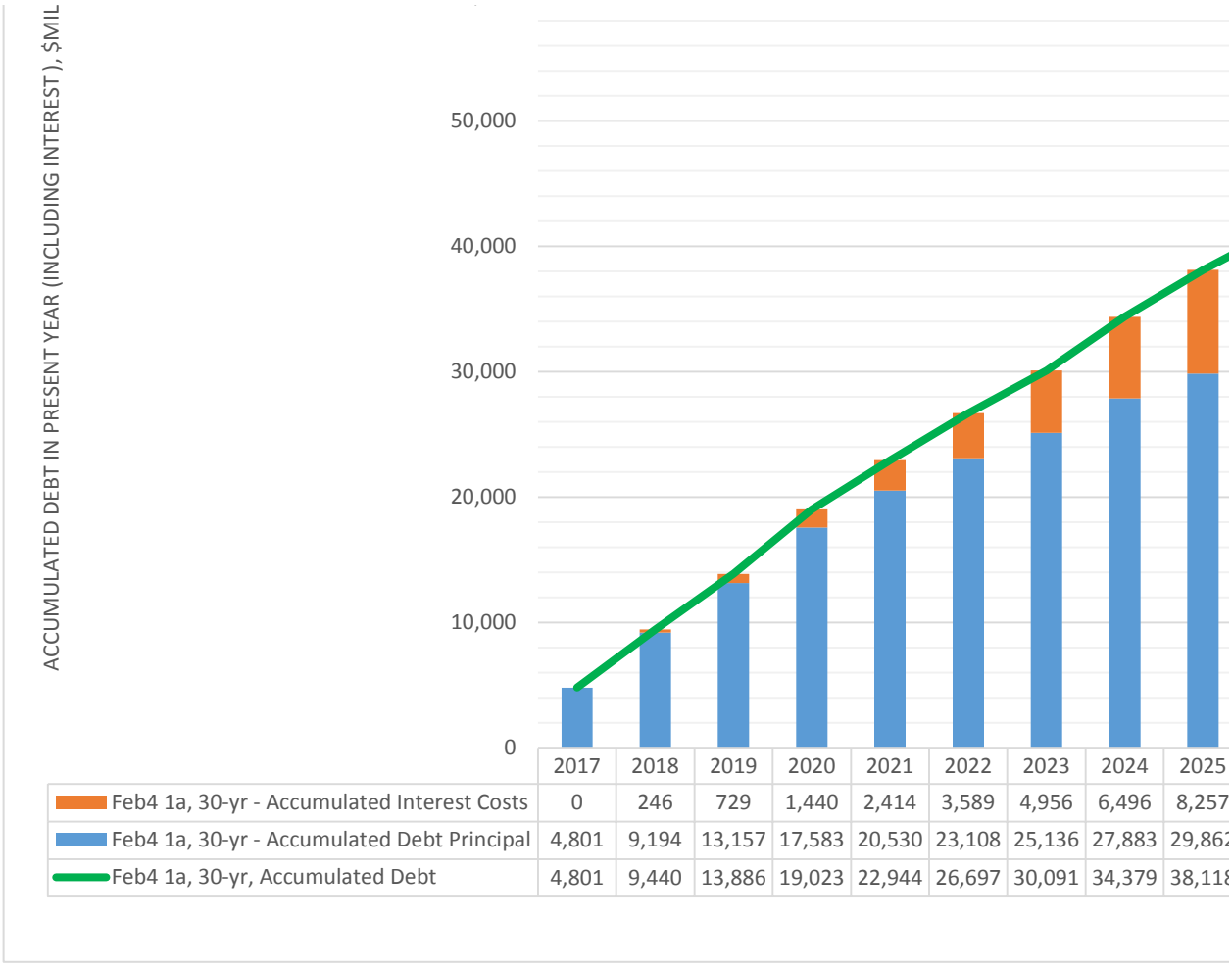
Feb 6 Deck - 1a - Accumulation of Debt (Principal and Interest)



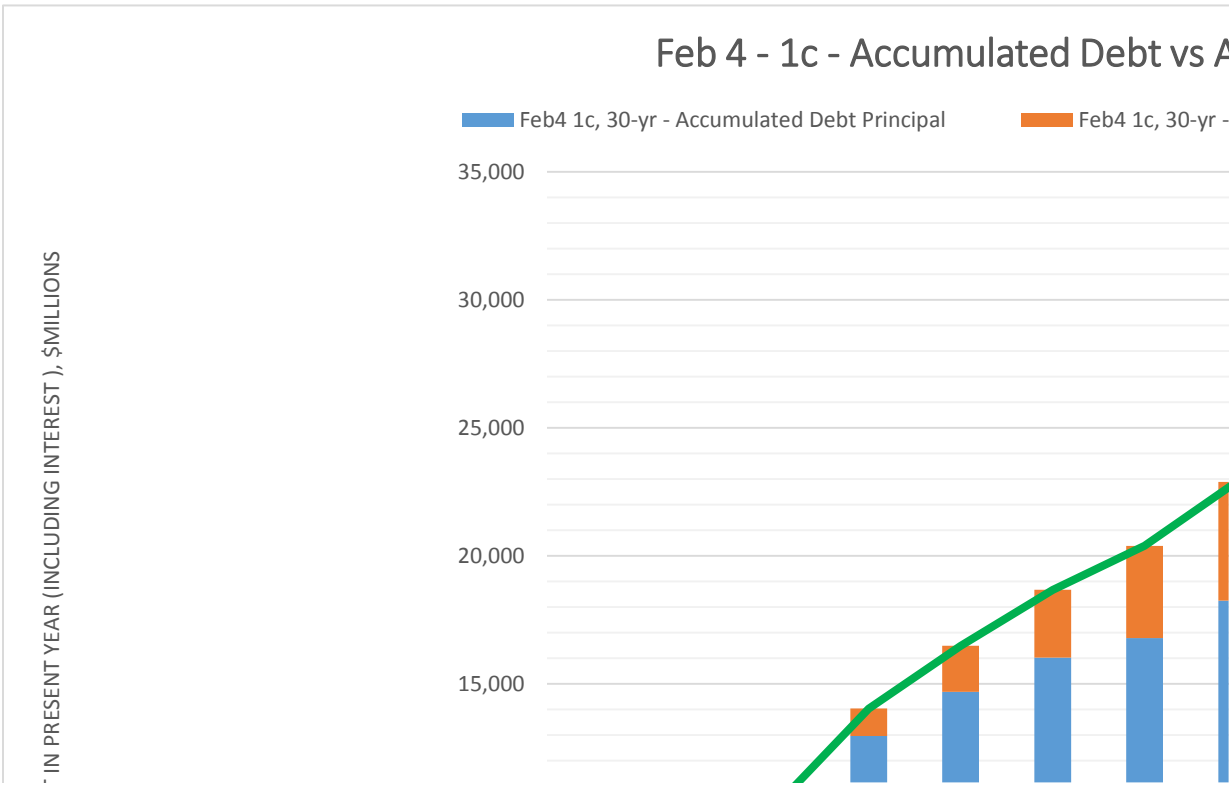


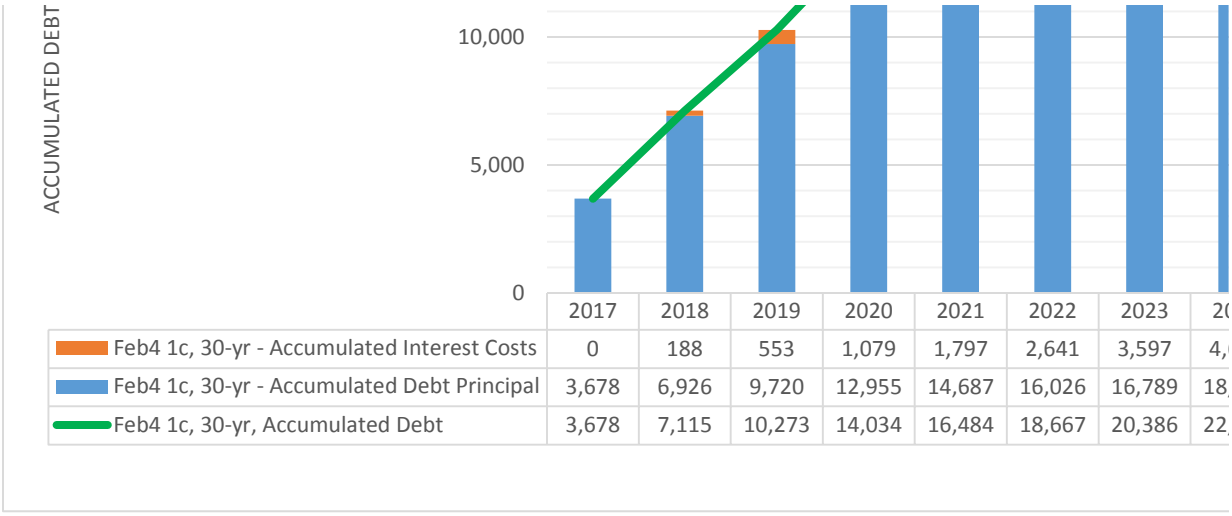
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,66
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,07
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73



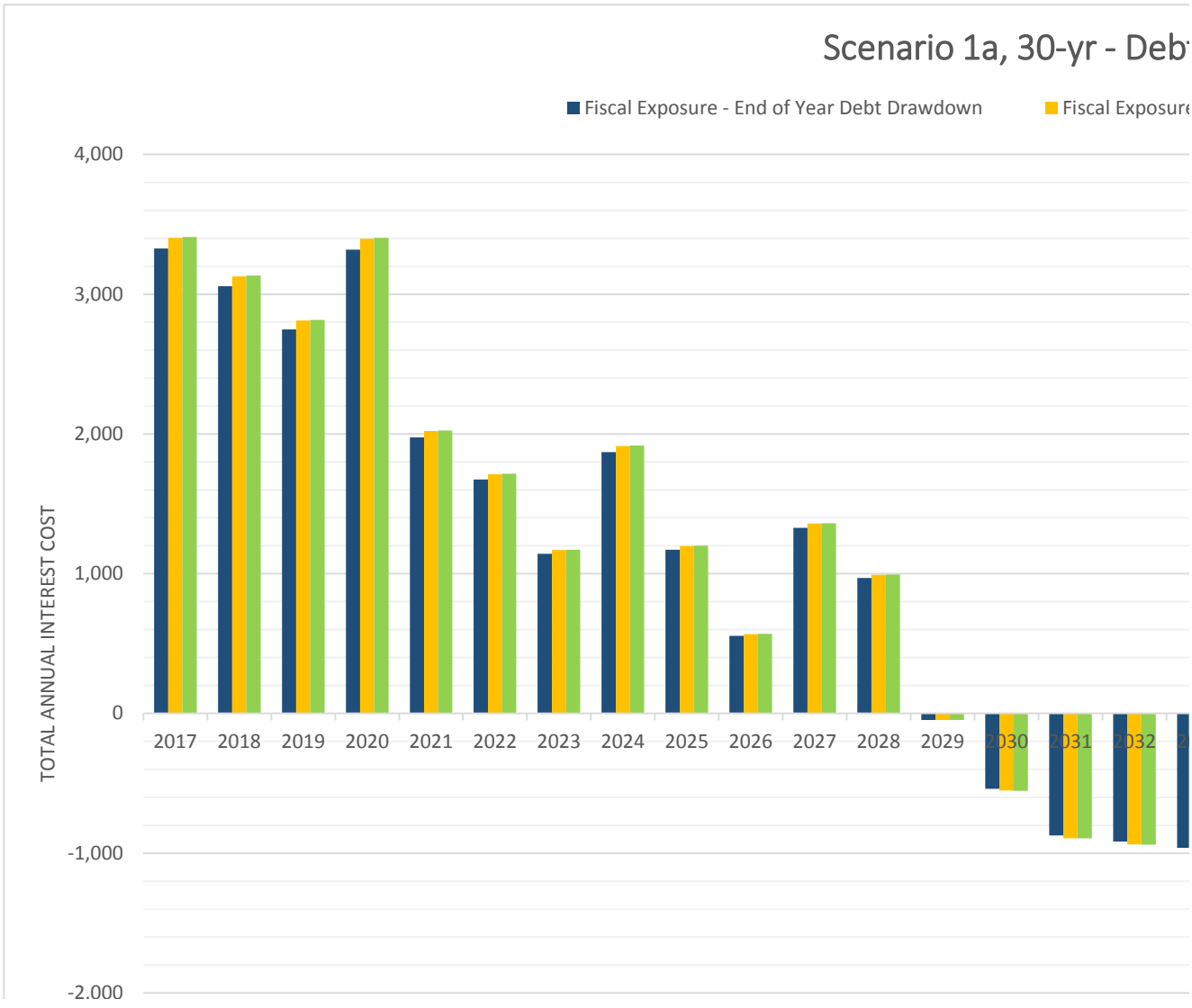


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



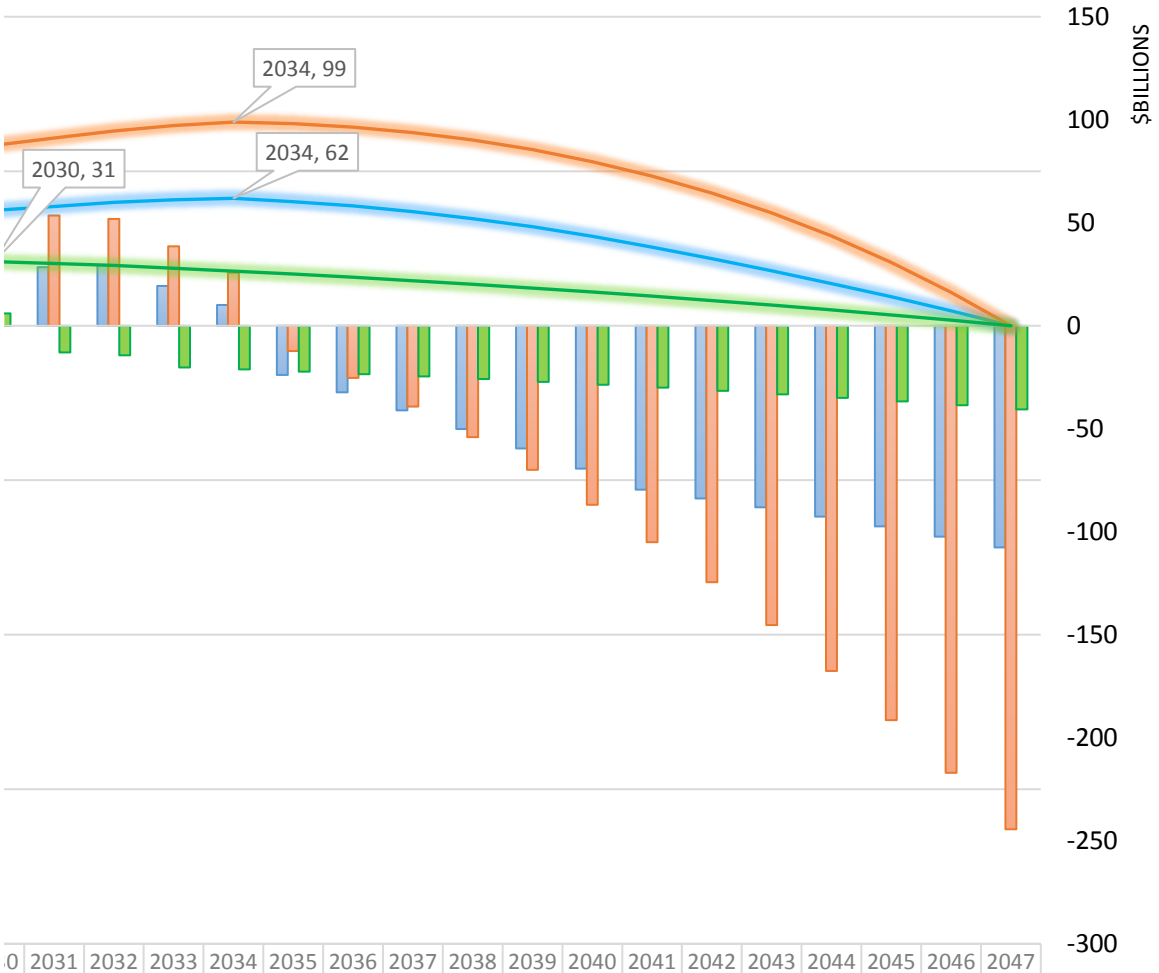


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22



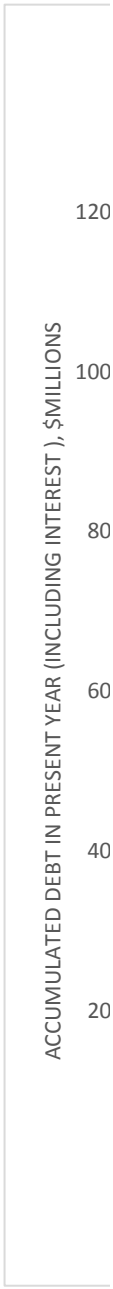

-3,000

lc - at 5.12% interest rate



0	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
98	1,896	1,966	1,288	672	-1,59	-2,15	-2,73	-3,34	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
26	3,568	3,457	2,571	1,716	-819	-1,68	-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
4	-860	-961	-1,34	-1,41	-1,48	-1,56	-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0
55	91,12	94,57	97,14	98,86	98,04	96,35	93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0
12	30,26	29,30	27,95	26,54	25,05	23,49	21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

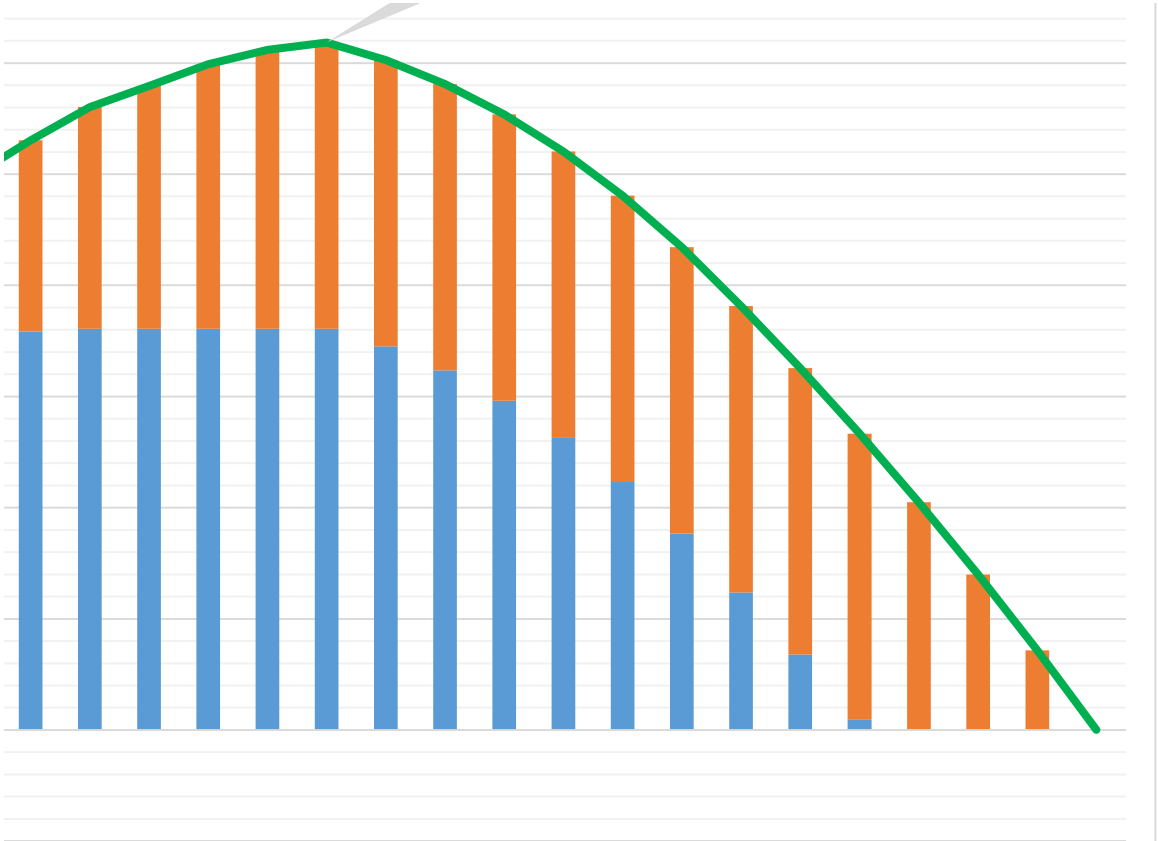
CALENDAR YEAR



Debt (Principal and Interest)

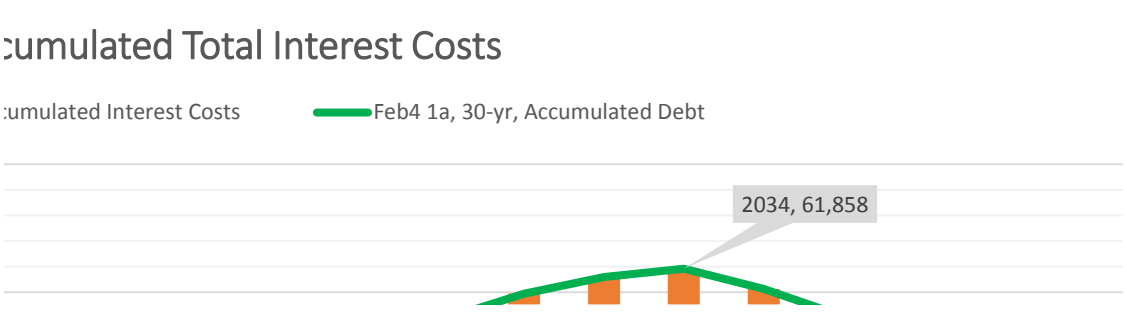
cumulated Interest Costs — Feb4 1a, 30-yr, Accumulated Debt

2034, 61,858

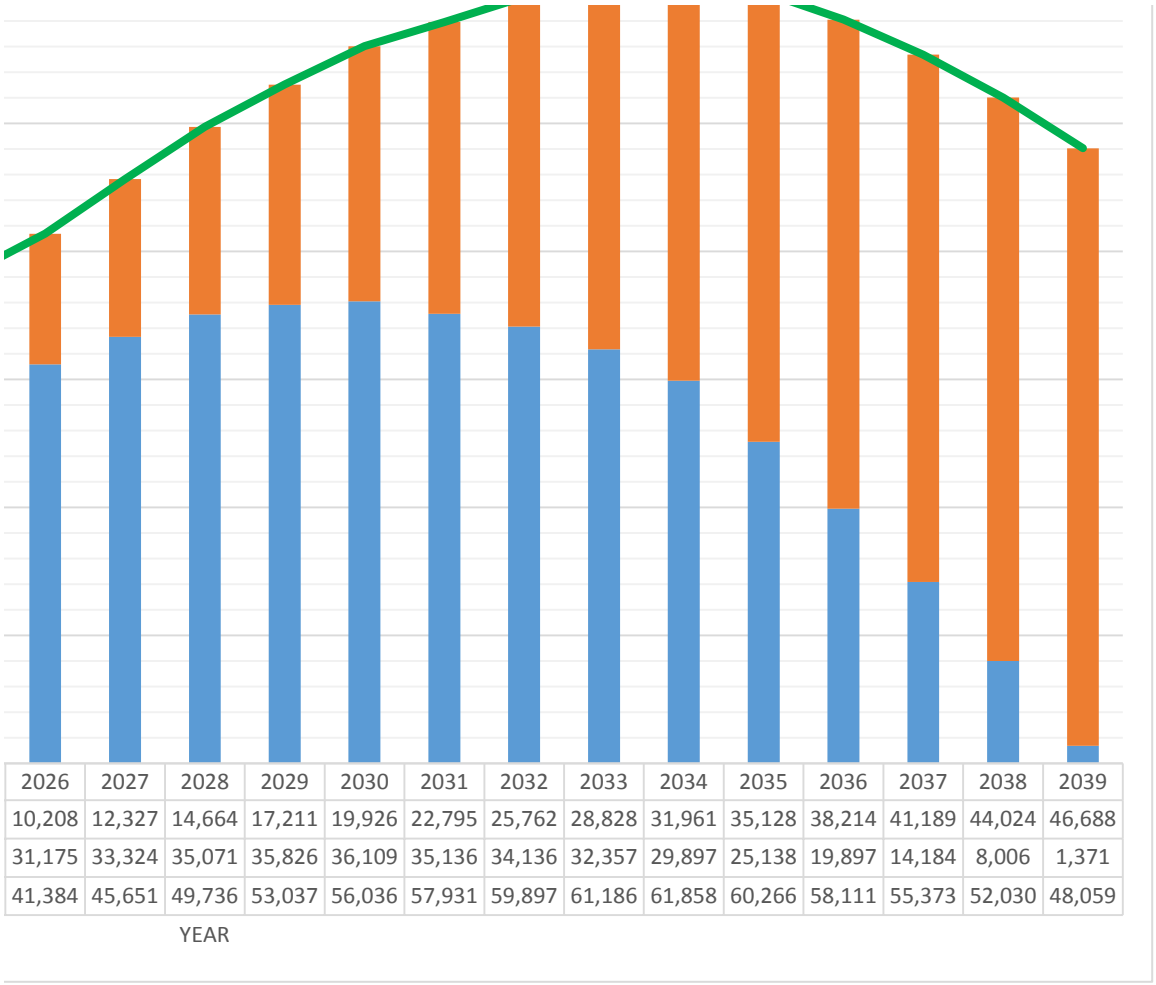


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



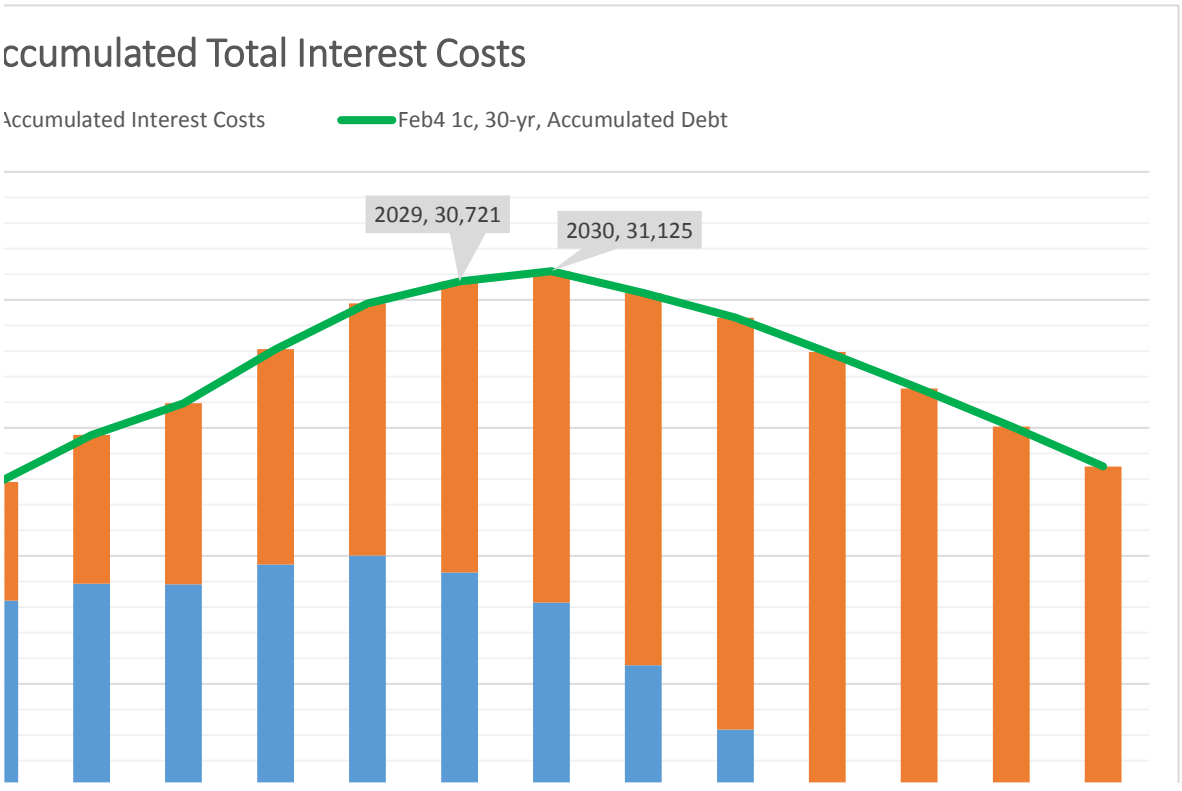
LIONS

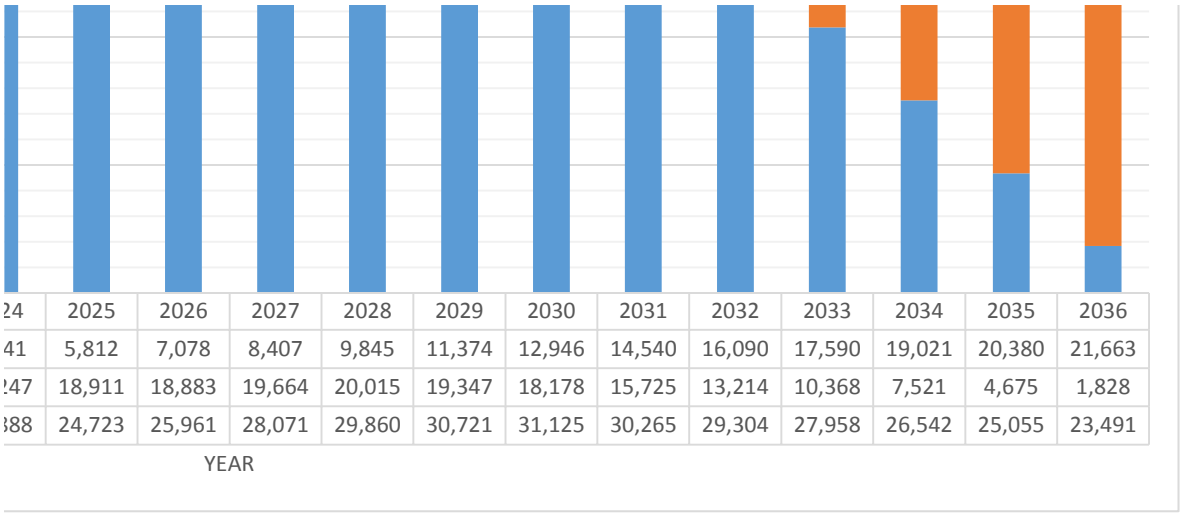


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

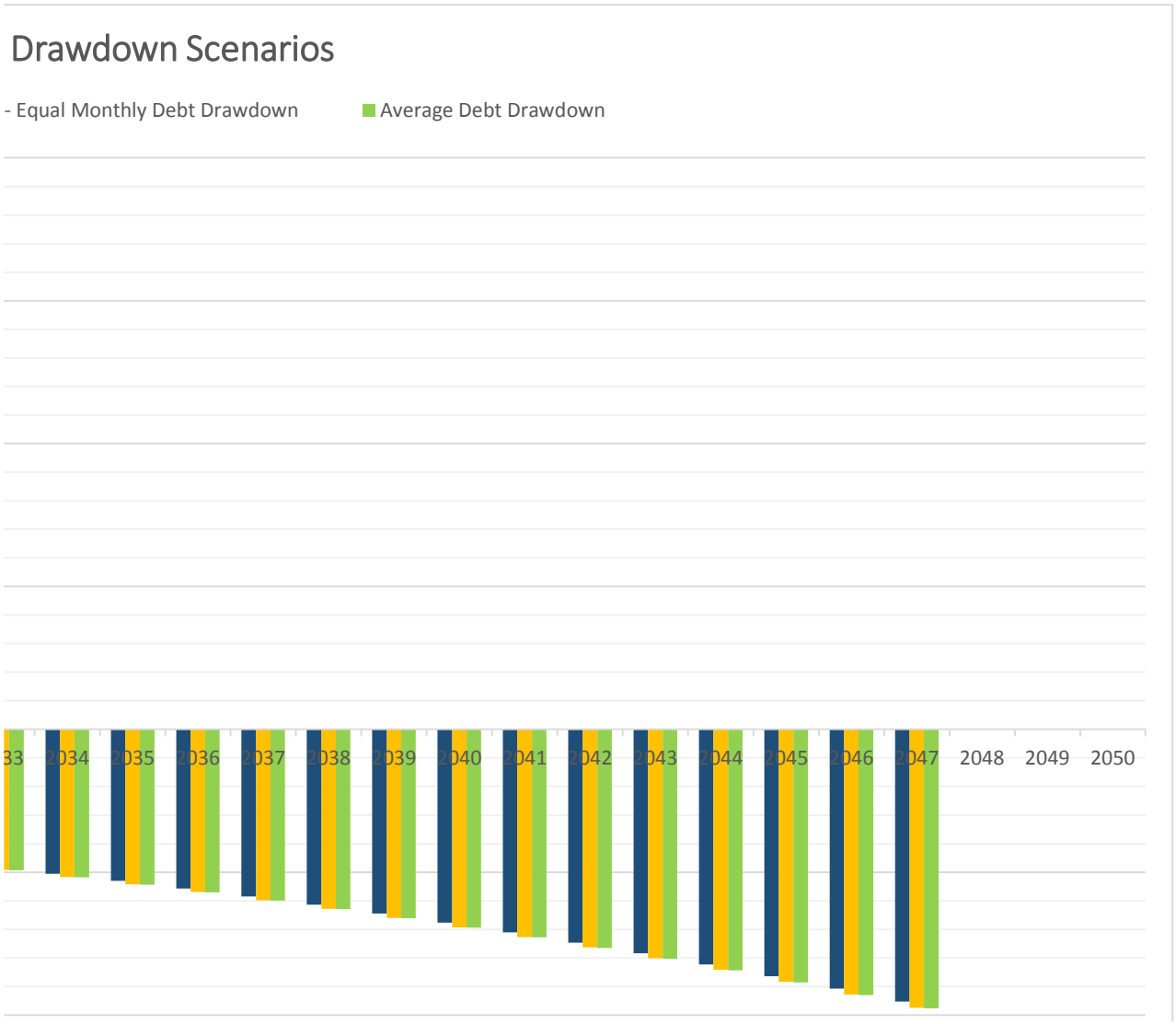
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





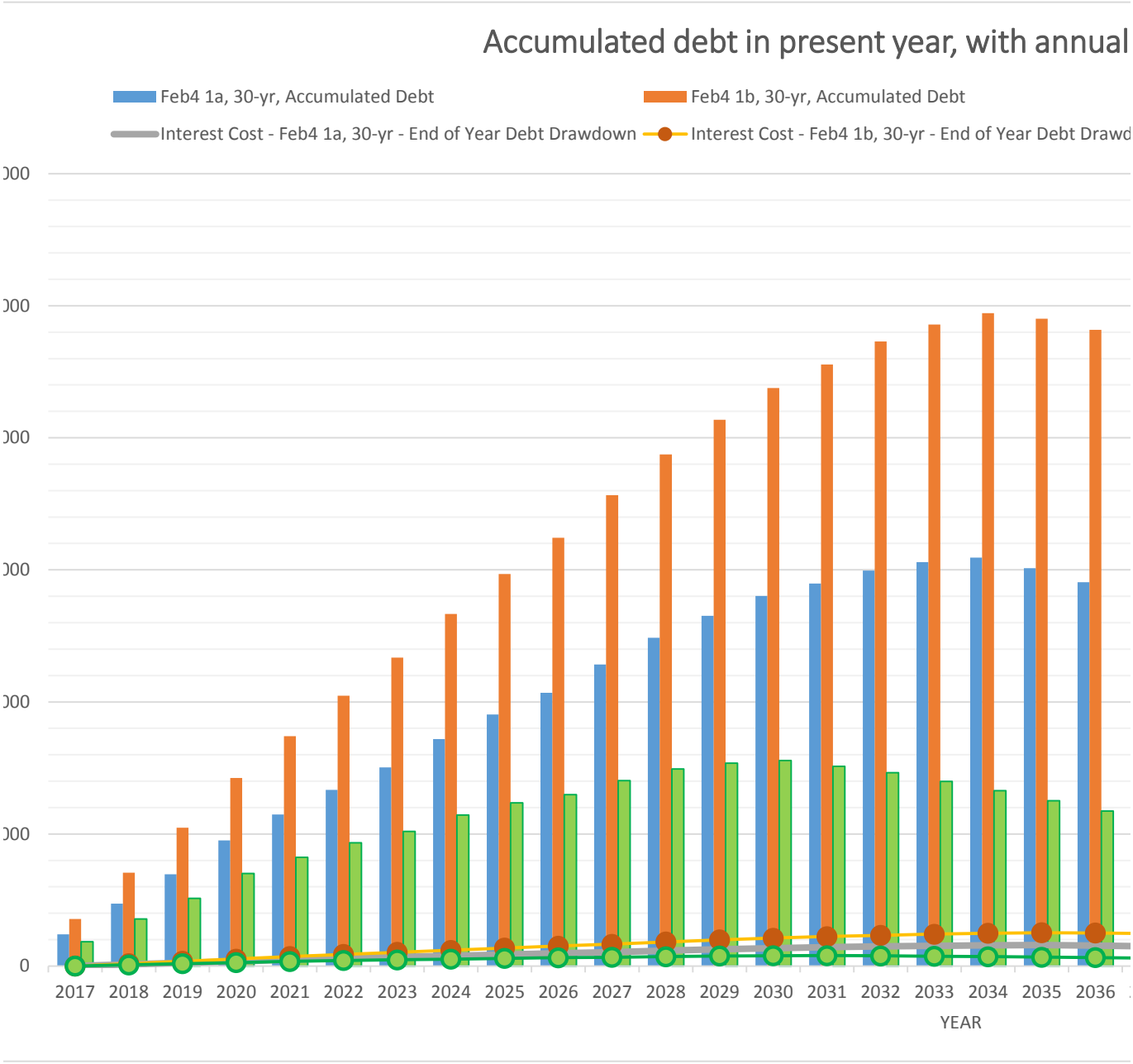
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

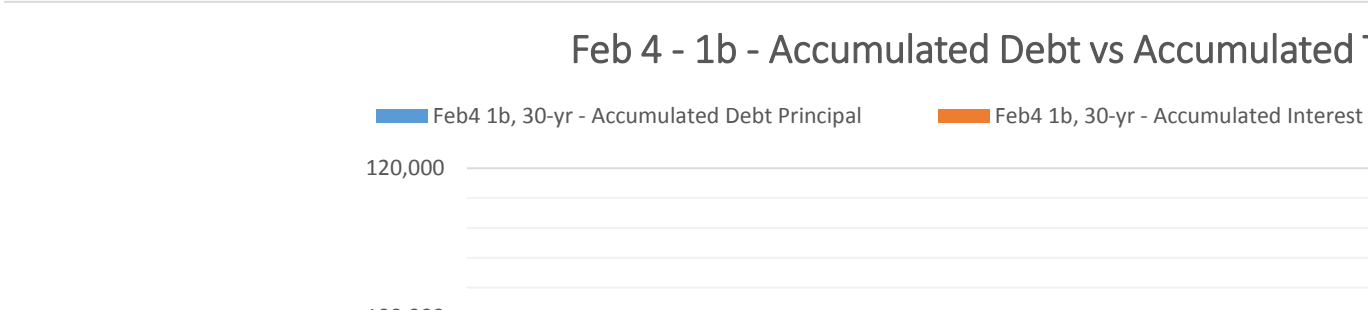
YEAR

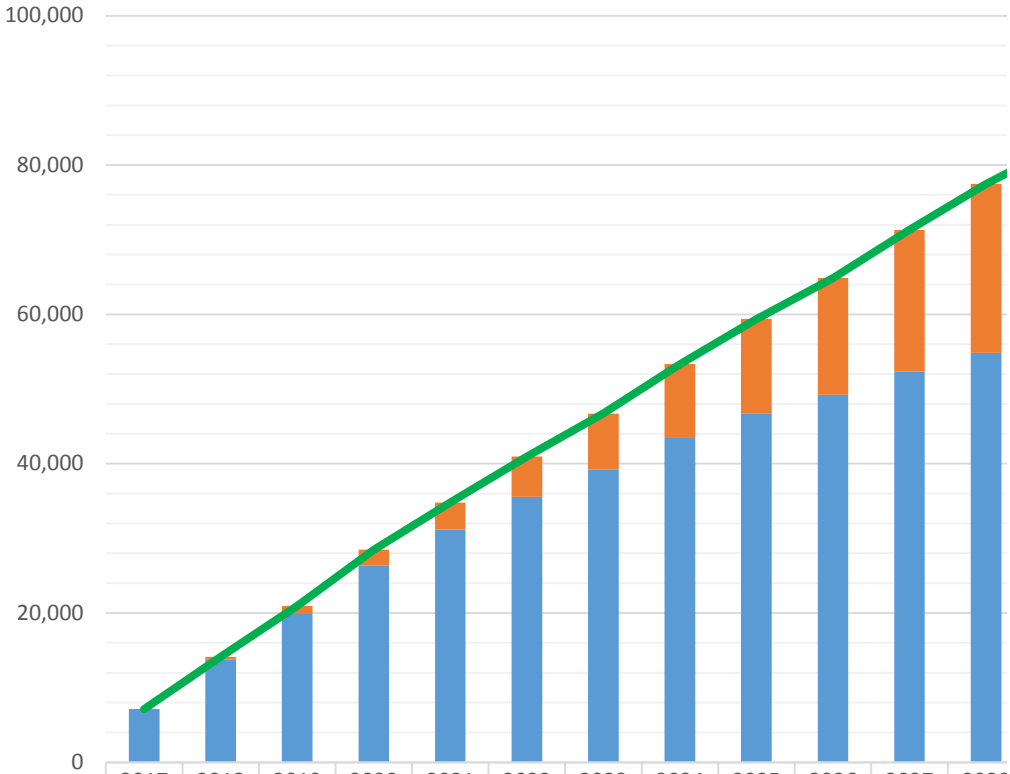


YEAR

ɜ - 25 year and 30 year Financing Terms, at 5% interest rate

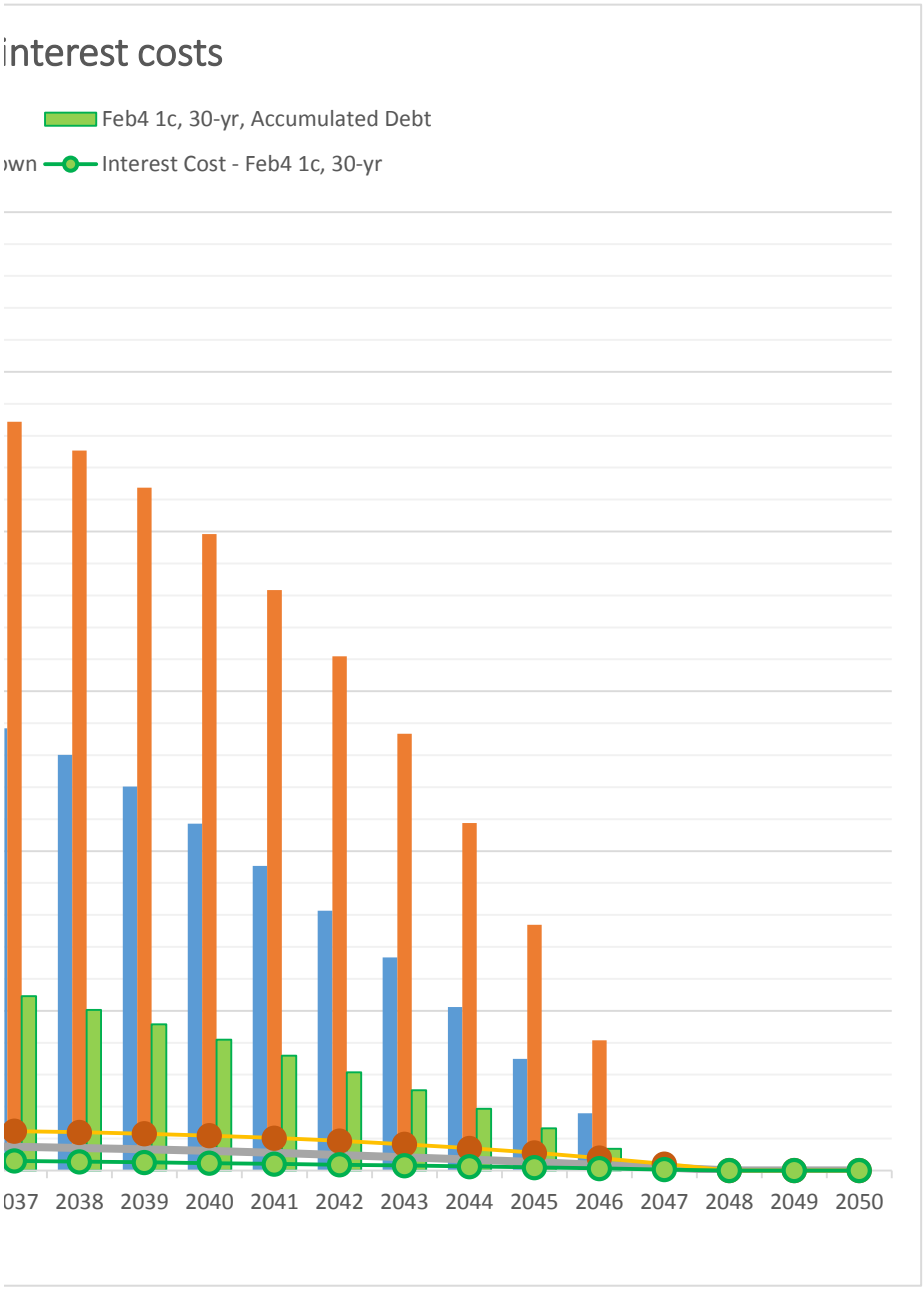


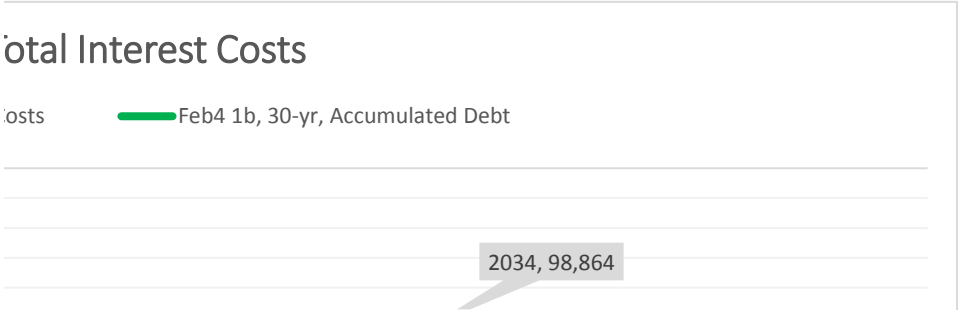

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

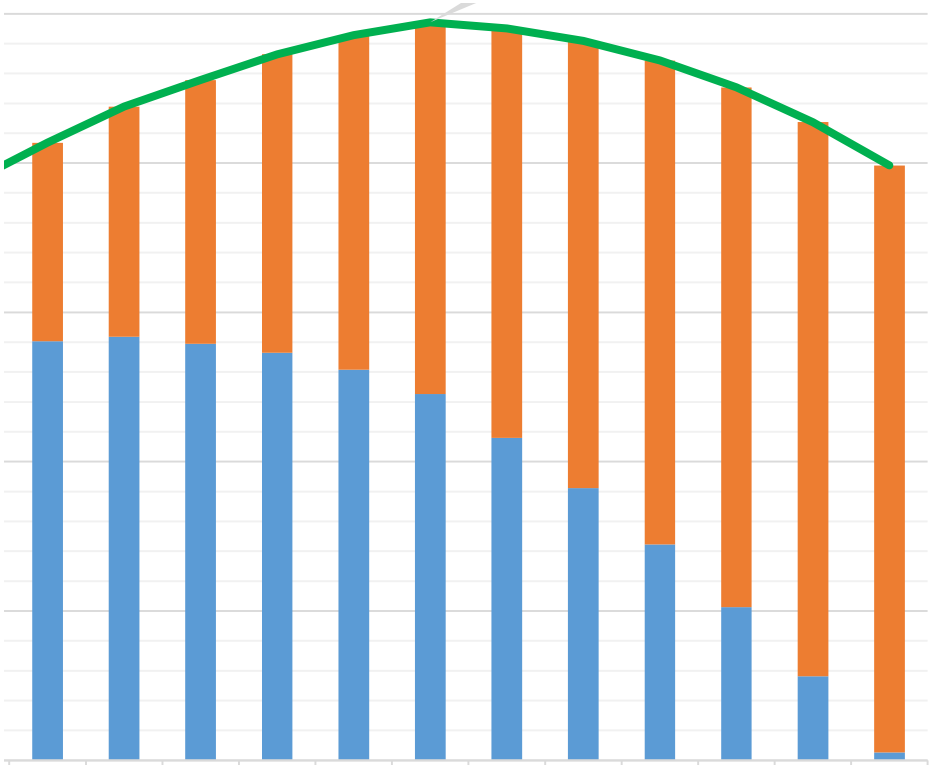


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y


interest costs
Feb4 1c, 30-yr, Accumulated Debt
wn
Interest Cost - Feb4 1c, 30-yr
037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR

Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

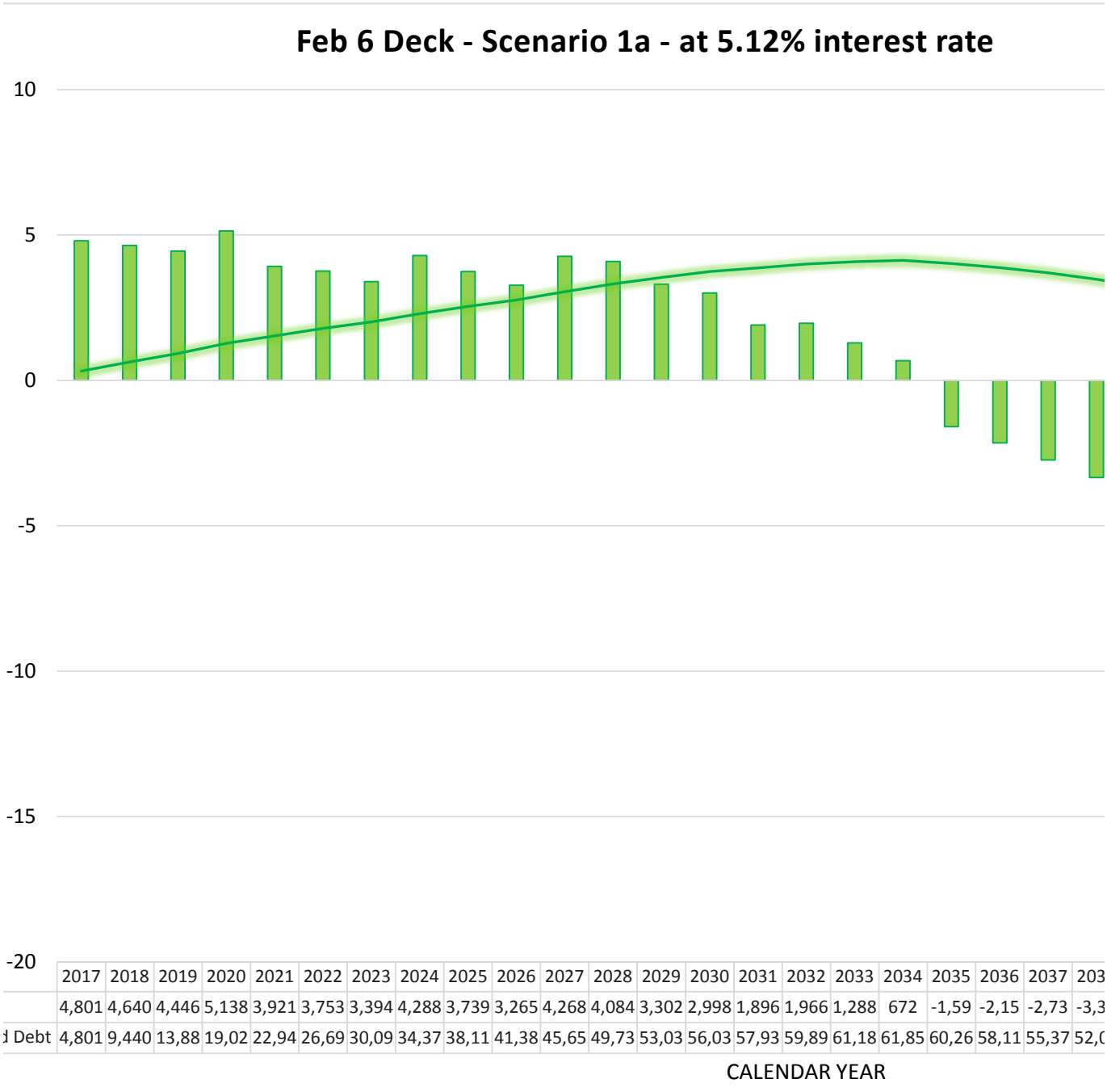
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

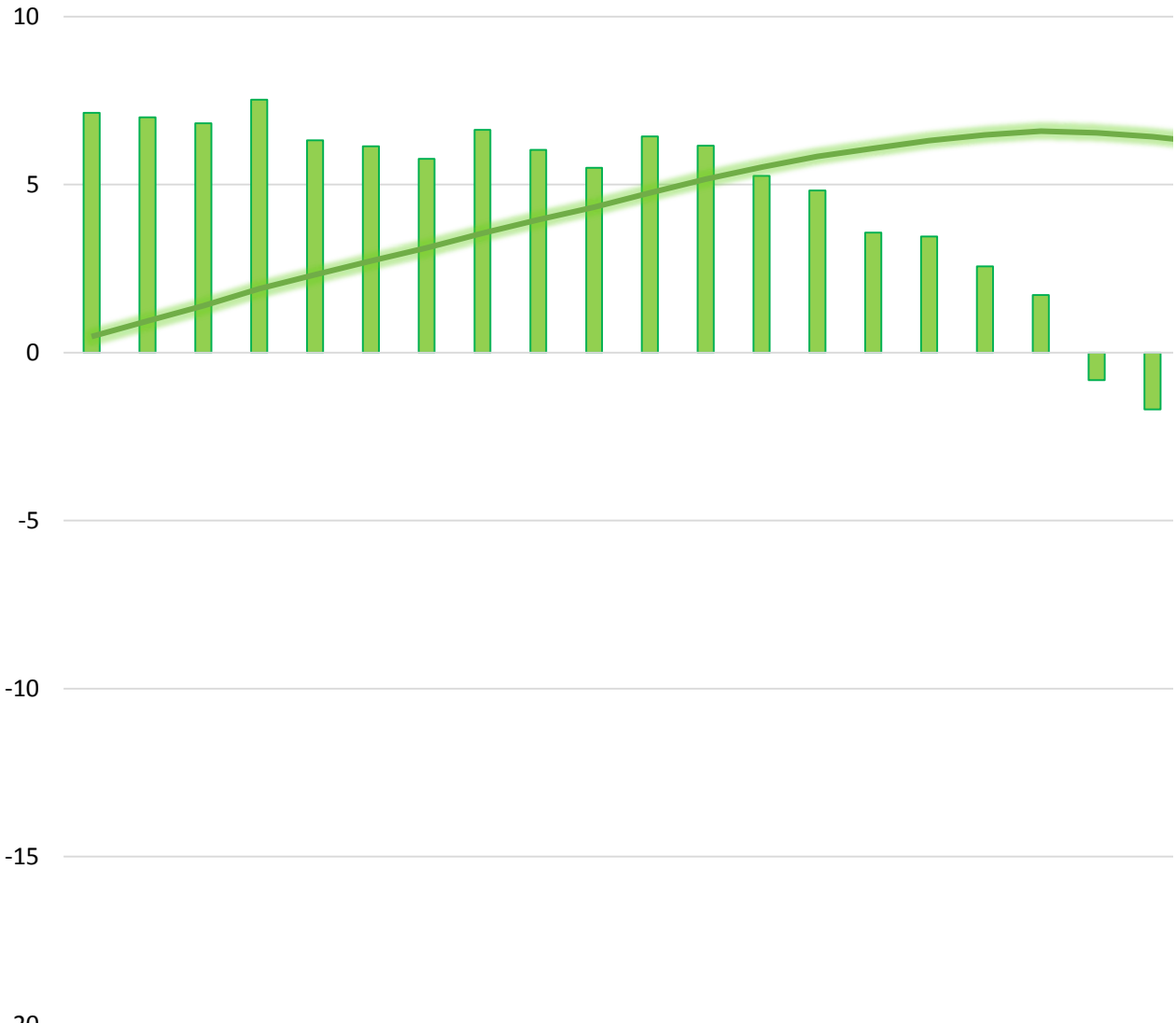
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

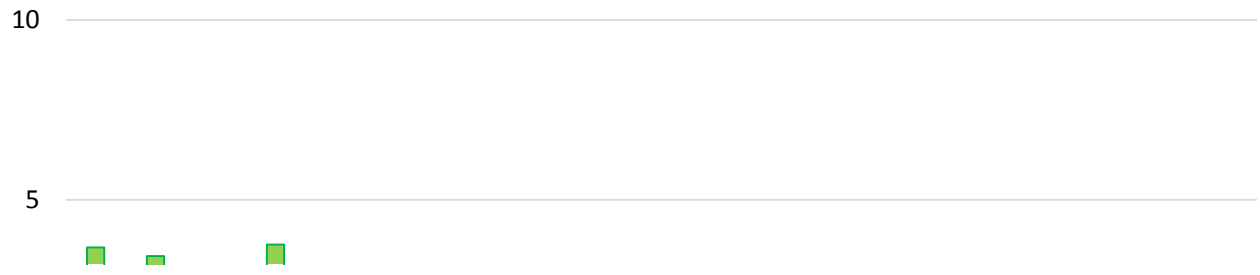
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

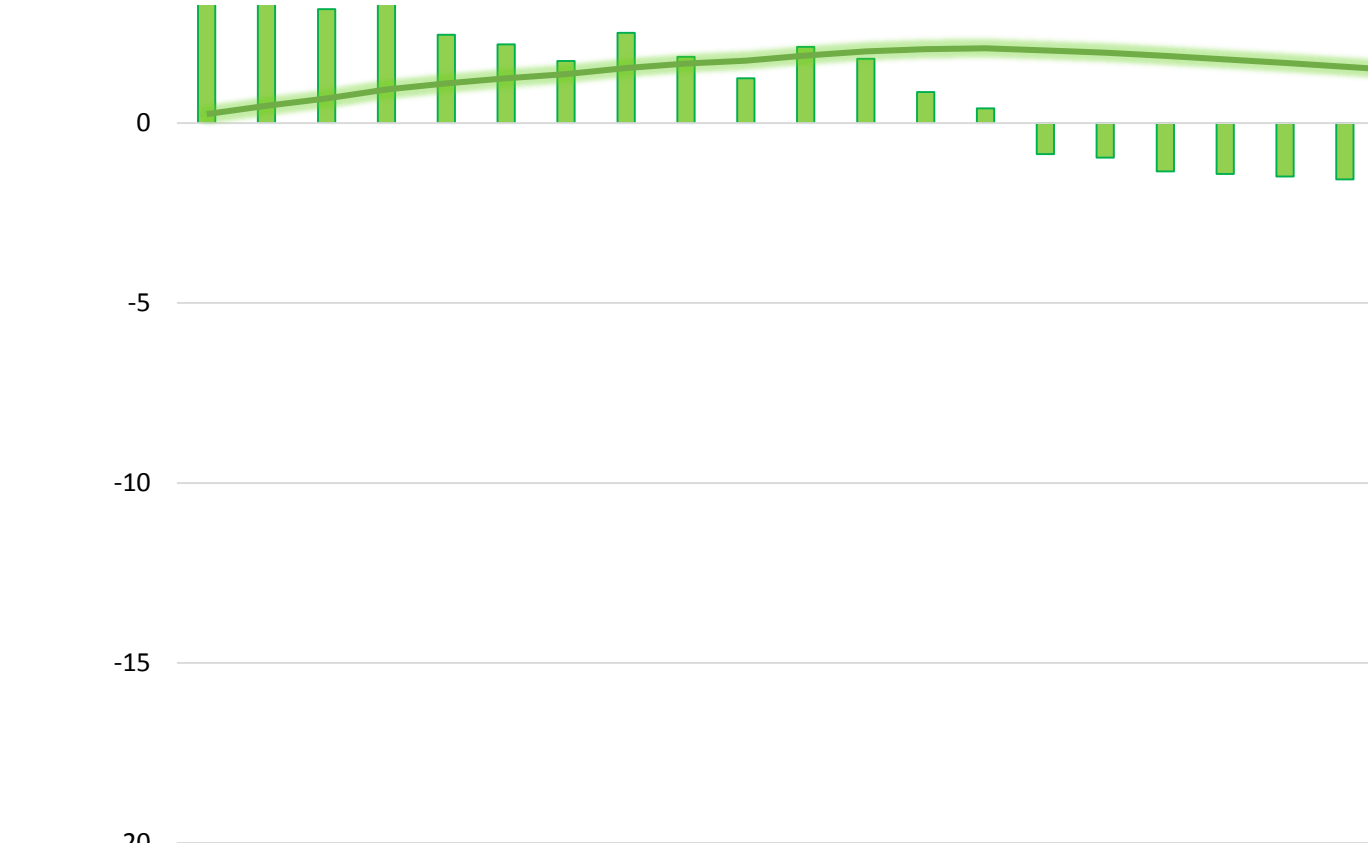


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



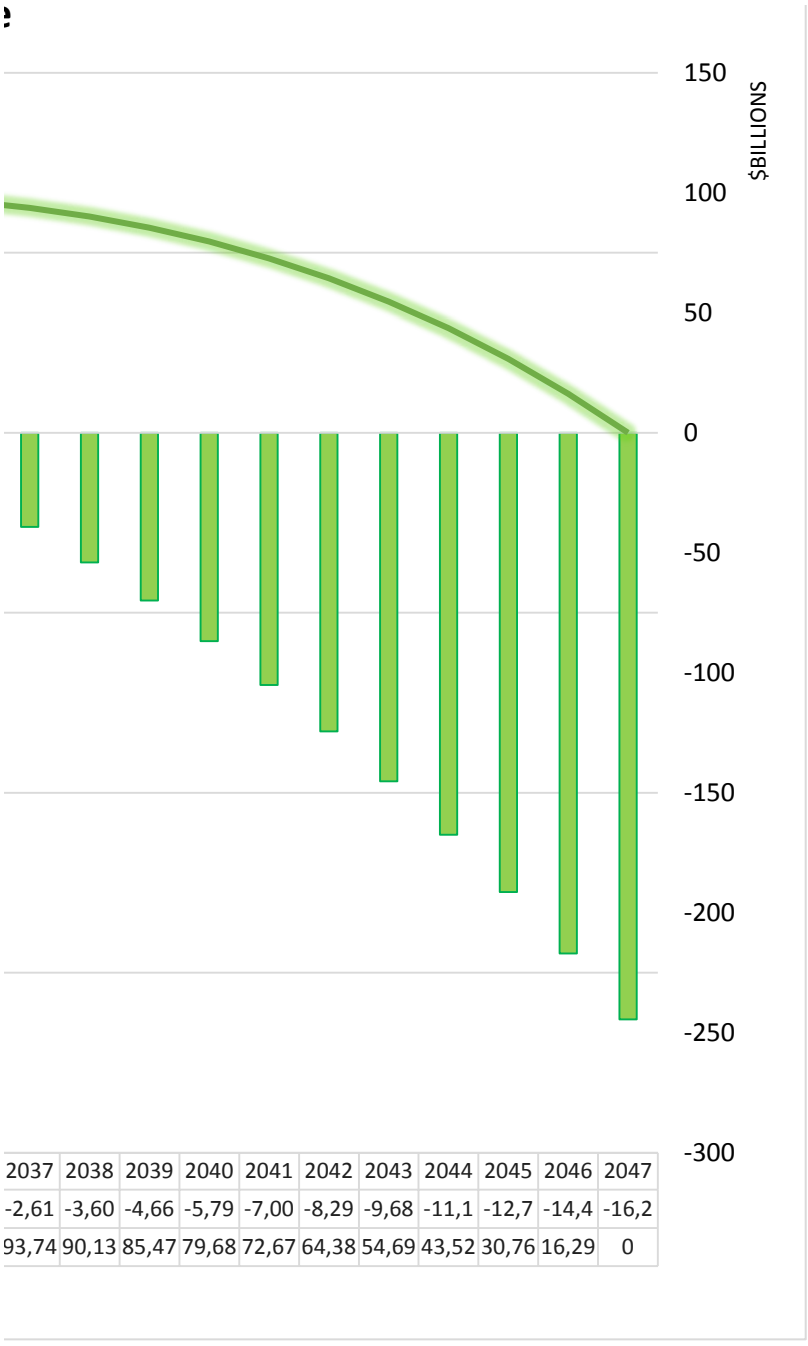


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

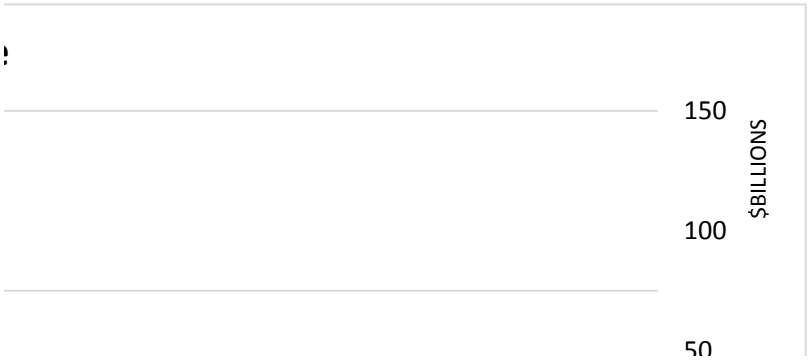
CALENDAR YEAR

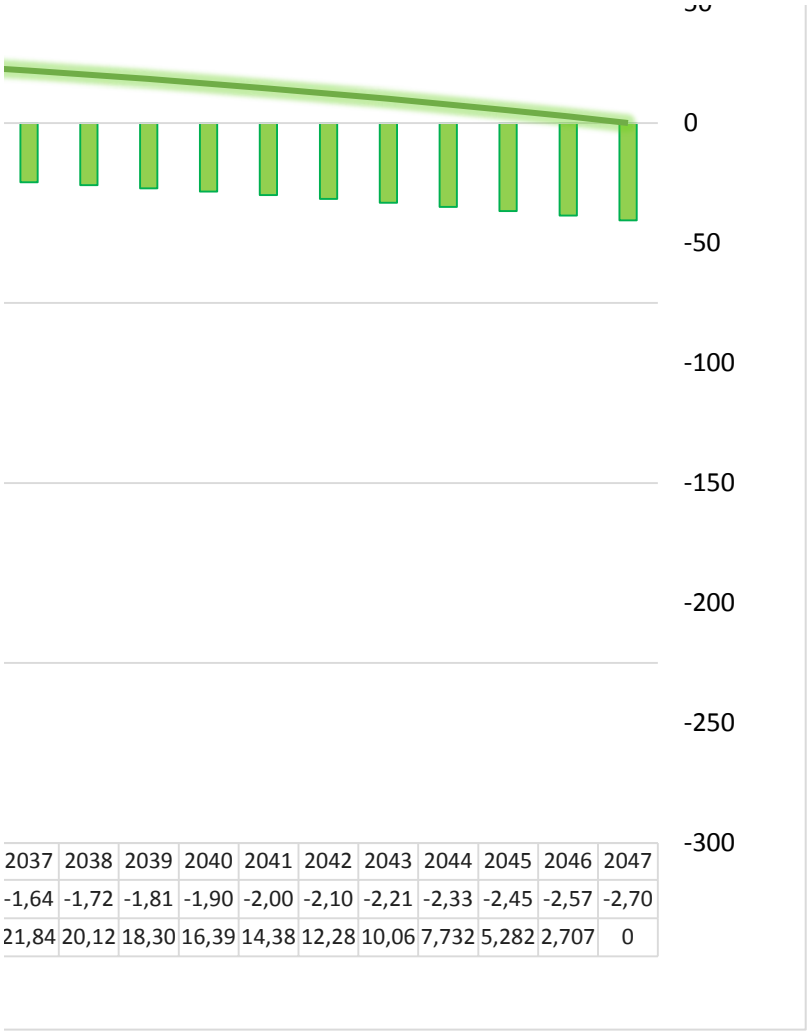


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Equal Monthly Debt Drawdown

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb4_1a_30yr

1a. GA Smoothing (Borrow ~$5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,801	4,640

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,200	4,760

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $62 billion, peakin
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary on accounting treatment.

7,133 7,133

Feb4_1b_30yr 7,133

1b. GA Smoothing (Borrow ~$7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	7,133	6,999

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,783	7,100

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $99 billion, peaking
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b on accounting treatment.

Feb4_1c_30yr

1c. GA Smoothing (Borrow ~$4 billion in 2017)

$ millions

Scenario 1C - 30-yr amortization	2017	2018
Annual Exposure[2]	3,678	3,437

	Fiscalized[3]	2016-17	2017-18
	Start: January 1st	919	3,617

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	1,783 - 1,200	7,100 - 4,760

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1200	4760
Debt-Finance Global Adjustment Costs, Option 1a	1783	7100
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18

Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1200**	**5000**
Total, B	1783	7340
Proposed Program Total:	1,783 - 1,200	7,340 - 5,000

ining

1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
4,446	5,138	3,921	3,753

2018-19	2019-20	2020-21	2021-2022
4,591	4,619	4,833	3,879

ng in 203 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
by approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
6,825	7,529	6,315	6,141

2018-19	2019-20	2020-21	2021-2022
6,956	7,001	7,226	6,272

g in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
3,158	3,761	2,450	2,183

2018-19	2019-20	2020-21	2021-2022
3,367	3,309	3,433	2,383

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
6,956 - 4,591	7,001 - 4,619	7,226 - 4,833	6,272 - 3,879

/1

2018-19[1]	2019-20[1]	2020-21[1]
4591	4619	4833
6956	7001	7226
225	279	323
60	60	60
18	18	18

4894	**4976**	**5234**
7259	7358	7627

7,259 - 4,894 7,358 - 4,976 7,627 - 5,234

1a. GA Smoothing (Borrow $5 billion in 2017)

	2017
IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	7,095
Additional GA Debt Drawdown, End of Year	5,000

Ratepayer GA Payment

Total Accumulated Debt *($ billion)*	5,000
Total Change in Accumulated Debt *($ billion)*	5000

1b. GA Smoothing (Borrow $7 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	5,095
Additional GA Debt Drawdown, End of Year	7,000

Total Accumulated Debt *($ billion)*	7000
Total Change in Accumulated Debt *($ billion)*	7000

1c. GA Smoothing (Borrow $4 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	8,095
Additional GA Debt Drawdown, End of Year	4,000

Total Accumulated Debt *($ billion)*	4000
Total Change in Accumulated Debt *($ billion)*	4000

2018	2019	2020	2021	2022	2023	2024	2025
11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
6,835	7,552	7,168	6,844	6,634	7,243	7,128	6,527
5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000

9,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000
5000	4000	5000	4000	4000	3000	4000	4000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
4,835	4,552	4,168	4,844	4,634	4,243	4,128	4,527
7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000

14000	21000	28000	35000	41000	47000	53000	59000
7000	7000	8000	6000	6000	6000	7000	6000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
8,835	8,552	8,168	8,844	8,634	8,243	8,128	8,527
3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000

7000	10000	14000	16000	19000	20000	23000	25000
3000	3000	4000	2000	2000	2000	3000	2000

2026	2027	2028	2029	2030	2031	2032	2033
10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
7,033	7,043	6,819	7,009	6,721	6,654	6,820	7,238
3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000

41,000	46,000	50,000	53,000	56,000	58,000	60,000	61,000
3000	4000	4000	3000	3000	2000	2000	1000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
4,033	5,043	4,819	5,009	4,721	4,654	5,820	5,238
6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000

65000	71000	77000	83000	88000	91000	95000	97000
6000	6000	6000	5000	5000	4000	3000	3000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
9,033	9,043	8,819	9,009	9,721	9,654	9,820	9,238
1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000

26000	28000	30000	31000	31000	30000	29000	28000
1000	2000	2000	1000	0	-1000	-1000	-1000

2034	2035	2036	2037	2038	2039	2040	2041
7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
6,756	7,662	7,389	8,129	7,881	8,645	9,421	9,207
1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000

62,000	60,000	58,000	55,000	52,000	48,000	43,000	38,000
1000	-2000	-2000	-3000	-3000	-4000	-5000	-5000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
5,756	6,662	7,389	8,129	8,881	9,645	10,421	11,207
2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000

99000	98000	96000	94000	90000	85000	80000	73000
2000	-1000	-2000	-3000	-4000	-5000	-6000	-7000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
8,756	6,662	7,389	7,129	6,881	6,645	6,421	6,207
-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000

27000	25000	23000	22000	20000	18000	16000	14000
-1000	-1000	-2000	-2000	-2000	-2000	-2000	-2000

2042	2043	2044	2045	2046	2047	2048		
4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
10,004	9,811	9,627	9,451	10,285	10,126	2,975		
-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0		

33,000	27,000	20,000	14,000	7,000	-	-	
-6000	-6000	-6000	-6000	-7000	-7000	0	

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
12,004	13,811	14,627	16,451	17,285	19,126	2,975		
-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0		

64000	55000	44000	31000	16000	0	0
-8000	-10000	-11000	-13000	-14000	-16000	0

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
6,004	5,811	5,627	5,451	6,285	6,126	2,975		
-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0		

12000	10000	8000	5000	3000	0	0
-2000	-2000	-2000	-2000	-3000	-3000	0

Feb4 1a, 30-yr - Debt Drawdown Scenarios

-92,247 -94598.515 58,489 36109.18 0

Feb4_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0
			114	110	106	122	93	89	81	102	89	78	102	97	79	71	45	47	31	16	-38	-51	-65	-80	-95	-110	-126	-133	-140	-147	-155	-162	-171	0	0	0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	5,138	3,167	58,489
Equal Monthly Debt Drawdown	5,260	3,149	

Maximum Accumulated Debt — Feb4 1a, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

End of Year Debt Drawdown	61,858	36,109
Equal Monthly Debt Drawdown	63,330	

			40%	37%	34%	36%	27%	24%																												
Feb4 1a, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
a	Debt, Beginning of Year		0	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	
c = a*5%	*Interest Cost - Feb4 1a, 30-yr - End of Year Debt Drawdown*		*0*	*246*	*483*	*711*	*974*	*1,175*	*1,367*	*1,541*	*1,760*	*1,952*	*2,119*	*2,337*	*2,546*	*2,716*	*2,869*	*2,966*	*3,067*	*3,133*	*3,167*	*3,086*	*2,975*	*2,835*	*2,664*	*2,461*	*2,224*	*1,952*	*1,666*	*1,365*	*1,049*	*717*	*367*	*0*	*0*	*0*	58,489
b	Additional GA Debt Drawdown, End of Year		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	21,822	23,788	25,076	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	20,490	13,998	7,173	0	0	0	
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	36,109	36,109	36,109	36,109	34,517	32,362	29,624	26,281	22,311	17,687	12,383	6,793	918	0	0	0	0	0	0	0	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688	49,149	51,372	53,325	54,991	56,356	57,405	58,122	58,489				
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371	-5,713	-13,241	-20,783	-28,325	-35,866	-43,408	-50,949	-58,489				
Fiscal Exposure - End of Year Debt Drawdown			4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0	

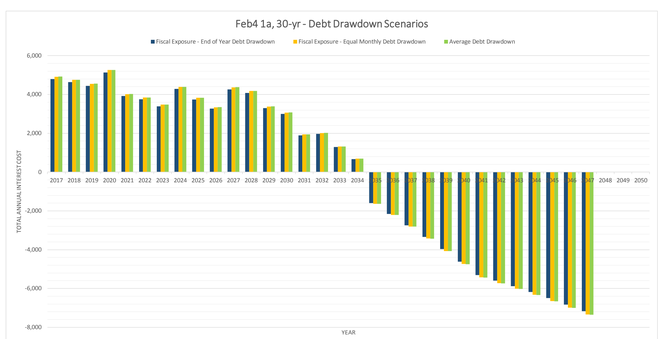
Feb4 1a, 30-yr	Equal Monthly Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			12																																		
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
3,149	*Interest Cost - Feb4 1a, 30-yr*		*114*	*356*	*589*	*833*	*1,067*	*1,264*	*1,448*	*1,643*	*1,849*	*2,029*	*2,220*	*2,435*	*2,625*	*2,787*	*2,914*	*3,013*	*3,097*	*3,149*	*3,129*	*3,034*	*2,910*	*2,756*	*2,569*	*2,351*	*2,098*	*1,819*	*1,526*	*1,218*	*895*	*554*	*197*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0	

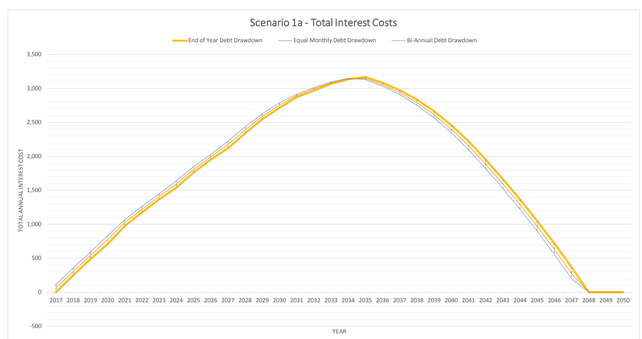
	Monthly Drawdown		400	366	330	369	246	215	169	229	165	109	179	146	63	24	(81)	(83)	(148)	(205)	(397)	(437)	(476)	(515)	(553)	(590)	(627)	(629)	(628)	(628)	(628)	(628)	(628)	-	-	-
	FV of Monthly Drawdown at 5%		4,915	4,498	4,057	4,532	3,017	2,640	2,075	2,813	2,026	1,345	2,200	1,789	773	289	(996)	(1,024)	(1,821)	(2,519)	(4,872)	(5,365)	(5,849)	(6,325)	(6,793)	(7,253)	(7,707)	(7,722)	(7,721)	(7,721)	(7,721)	(7,721)	(7,720)	-	-	-
	Annual Interest Cost on New Drawdowns		114	105	94	105	70	61	48	65	47	31	51	42	18	7	(23)	(24)	(42)	(59)	(113)	(125)	(136)	(147)	(158)	(169)	(179)	(180)	(180)	(180)	(180)	(180)	(179)	-	-	-
	Annual Interest Cost on Opening Balance		-	252	495	728	997	1,203	1,399	1,577	1,802	1,998	2,169	2,393	2,607	2,780	2,937	3,037	3,140	3,207	3,243	3,159	3,046	2,903	2,727	2,519	2,277	1,999	1,706	1,398	1,074	734	376	(0)	(0)	(0)
	Total Annual Interest Cost		114	356	589	833	1,067	1,264	1,448	1,643	1,849	2,029	2,220	2,435	2,625	2,787	2,914	3,013	3,097	3,149	3,129	3,034	2,910	2,756	2,569	2,351	2,098	1,819	1,526	1,218	895	554	197	(0)	(0)	(0)

Feb4 1a, 30-yr	Bi-Annual Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*61*	*305*	*540*	*777*	*1,024*	*1,223*	*1,410*	*1,596*	*1,808*	*1,993*	*2,173*	*2,390*	*2,589*	*2,754*	*2,893*	*2,991*	*3,083*	*3,141*	*3,147*	*3,058*	*2,940*	*2,792*	*2,613*	*2,401*	*2,156*	*1,881*	*1,591*	*1,286*	*966*	*629*	*275*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown			4,862	4,699	4,502	5,203	3,971	3,801	3,438	4,343	3,787	3,307	4,322	4,137	3,344	3,037	1,920	1,991	1,305	681	-1,612	-2,183	-2,773	-3,386	-4,021	-4,683	-5,372	-5,661	-5,951	-6,255	-6,575	-6,912	-7,265	0	0	0	

	Bi-Annual Drawdown		2,400	2,197	1,981	2,213	1,473	1,289	1,014	1,374	989	657	1,074	874	378	141	(487)	(500)	(889)	(1,230)	(2,379)	(2,620)	(2,857)	(3,089)	(3,317)	(3,542)	(3,764)	(3,771)	(3,771)	(3,771)	(3,771)	(3,771)	(3,770)	-	-	-
	FV of Bi-Annual Drawdown at 5%		4,862	4,450	4,013	4,483	2,984	2,612	2,053	2,783	2,004	1,331	2,176	1,769	765	286	(986)	(1,013)	(1,801)	(2,492)	(4,820)	(5,308)	(5,787)	(6,257)	(6,719)	(7,175)	(7,624)	(7,639)	(7,638)	(7,638)	(7,638)	(7,638)	(7,637)	-	-	-
	Annual Interest Cost on New Drawdowns		61	56	51	57	38	33	26	35	25	17	28	22	10	4	(12)	(13)	(23)	(31)	(61)	(67)	(73)	(79)	(85)	(91)	(96)	(97)	(97)	(97)	(97)	(97)	(97)	-	-	-
	Annual Interest Cost on Opening Balance		-	249	490	720	986	1,190	1,384	1,560	1,783	1,977	2,146	2,367	2,579	2,750	2,906	3,004	3,106	3,173	3,208	3,125	3,013	2,871	2,698	2,492	2,252	1,977	1,687	1,383	1,063	726	372	(0)	(0)	(0)
	Total Annual Interest Cost		61	305	540	777	1,024	1,223	1,410	1,596	1,808	1,993	2,173	2,390	2,589	2,754	2,893	2,991	3,083	3,141	3,147	3,058	2,940	2,792	2,613	2,401	2,156	1,881	1,591	1,286	966	629	275	(0)	(0)	(0)

Feb4 1a, 30-yr	Average Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*123*	*365*	*597*	*842*	*1,074*	*1,271*	*1,454*	*1,650*	*1,856*	*2,035*	*2,228*	*2,442*	*2,631*	*2,792*	*2,918*	*3,016*	*3,100*	*3,150*	*3,126*	*3,030*	*2,905*	*2,749*	*2,562*	*2,342*	*2,088*	*1,809*	*1,516*	*1,207*	*883*	*542*	*184*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
Fiscal Exposure - Average Debt Drawdown			4,923	4,758	4,559	5,269	4,021	3,849	3,481	4,398	3,835	3,349	4,377	4,189	3,386	3,075	1,944	2,016	1,321	689	-1,633	-2,210	-2,808	-3,428	-4,072	-4,742	-5,440	-5,733	-6,026	-6,334	-6,658	-6,999	-7,357	0	0	0	





Feb4 1b, 30-yr - Debt Drawdown Scenarios

-149,507 -153857.97 97,141 56717.33 0

Feb4_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0
			170	167	162	179	150	146	137	158	144	131	153	147	125	115	85	82	61	41	-19	-40	-62	-86	-111	-138	-167	-198	-231	-266	-304	-344	-388	0	0	0

0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown 7,529	5,062	97,141
Equal Monthly Debt Drawdown 7,708	5,042	

Maximum Accumulated Debt	Feb4 1b, 30-yr, Accumulated Debt	Total Principal Debt Borrowed
End of Year Debt Drawdown	98,864	56,717
Equal Monthly Debt Drawdown	101,217	

Feb4 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
a Debt, Beginning of Year	0	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	
c = a*5% *Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown*	*0*	*365*	*724*	*1,073*	*1,459*	*1,782*	*2,096*	*2,391*	*2,731*	*3,040*	*3,322*	*3,651*	*3,966*	*4,236*	*4,483*	*4,665*	*4,842*	*4,974*	*5,062*	*5,020*	*4,933*	*4,800*	*4,615*	*4,376*	*4,080*	*3,721*	*3,296*	*2,800*	*2,228*	*1,575*	*834*	*0*	*0*	*0*	97,141
b Additional GA Debt Drawdown, End of Year	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
d = a+b+c Accumulated debt in present year (including 5% annual interest)	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	0	
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,633	26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606	82,685	86,406	89,703	92,503	94,731	96,306	97,141				
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,831	56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076	-10,007	-22,027	-35,008	-48,980	-63,971	-80,013	-97,141				
Fiscal Exposure - End of Year Debt Drawdown	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0	

Feb4 1b, 30-yr — Equal Monthly Debt Drawdown

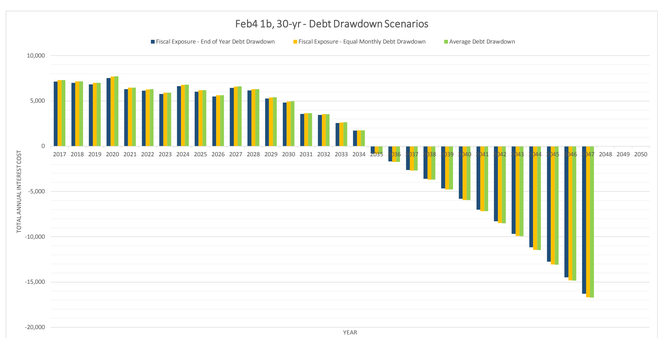
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	
5,042 *Interest Cost - Feb4 1b, 30-yr*	*170*	*532*	*886*	*1,252*	*1,609*	*1,928*	*2,234*	*2,549*	*2,874*	*3,171*	*3,475*	*3,797*	4,091	*4,350*	*4,568*	*4,748*	*4,904*	*5,015*	*5,042*	*4,980*	*4,871*	*4,714*	*4,504*	*4,238*	*3,913*	*3,524*	*3,066*	*2,534*	*1,925*	*1,231*	*446*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0	
Monthly Drawdown	594	553	508	538	405	363	306	353	275	205	259	209	108	49	(76)	(101)	(189)	(271)	(490)	(559)	(629)	(700)	(773)	(847)	(924)	(1,002)	(1,082)	(1,164)	(1,249)	(1,337)	(1,427)	(0)	-	-	
FV of Monthly Drawdown at 5%	7,303	6,792	6,247	6,610	4,972	4,463	3,755	4,338	3,383	2,523	3,184	2,565	1,327	605	(937)	(1,237)	(2,326)	(3,335)	(6,020)	(6,867)	(7,728)	(8,604)	(9,498)	(10,412)	(11,347)	(12,306)	(13,291)	(14,304)	(15,348)	(16,424)	(17,536)	(0)	-	-	
Annual Interest Cost on New Drawdowns	170	158	145	154	116	104	87	101	79	59	74	60	31	14	(22)	(29)	(54)	(78)	(140)	(160)	(180)	(200)	(221)	(242)	(264)	(286)	(309)	(333)	(357)	(382)	(408)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	374	741	1,099	1,493	1,824	2,146	2,448	2,796	3,112	3,401	3,738	4,061	4,336	4,589	4,776	4,958	5,092	5,182	5,139	5,051	4,914	4,725	4,481	4,177	3,810	3,375	2,867	2,281	1,612	854	0	(0)	(0)	
Total Annual Interest Cost	170	532	886	1,252	1,609	1,928	2,234	2,549	2,874	3,171	3,475	3,797	4,091	4,350	4,568	4,748	4,904	5,015	5,042	4,980	4,871	4,714	4,504	4,238	3,913	3,524	3,066	2,534	1,925	1,231	446	0	(0)	(0)	

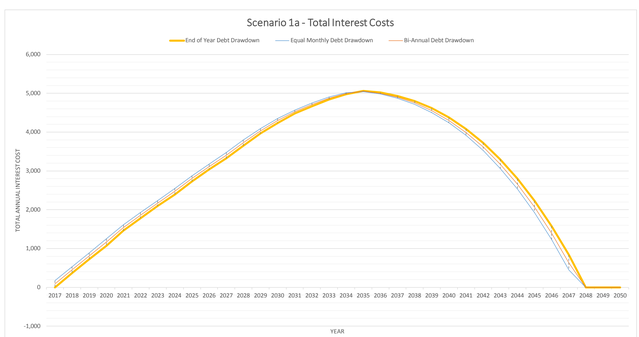
Feb4 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*91*	*455*	*811*	*1,169*	*1,539*	*1,861*	*2,170*	*2,476*	*2,808*	*3,110*	*3,404*	*3,730*	*4,034*	*4,297*	*4,528*	*4,710*	*4,875*	*4,996*	*5,051*	*4,998*	*4,900*	*4,753*	*4,555*	*4,302*	*3,990*	*3,615*	*3,172*	*2,657*	*2,065*	*1,390*	*626*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	7,225	7,089	6,913	7,626	6,396	6,220	5,838	6,713	6,113	5,574	6,514	6,235	5,330	4,888	3,614	3,501	2,603	1,738	-829	-1,709	-2,648	-3,651	-4,722	-5,867	-7,093	-8,405	-9,810	-11,314	-12,926	-14,652	-16,502	0	0	0	
Bi-Annual Drawdown	3,567	3,317	3,051	3,228	2,428	2,180	1,834	2,118	1,652	1,232	1,555	1,253	648	295	(457)	(604)	(1,136)	(1,629)	(2,940)	(3,354)	(3,774)	(4,202)	(4,639)	(5,085)	(5,542)	(6,010)	(6,491)	(6,986)	(7,495)	(8,021)	(8,564)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	7,225	6,719	6,180	6,539	4,919	4,415	3,715	4,291	3,347	2,496	3,150	2,538	1,313	598	(926)	(1,224)	(2,301)	(3,299)	(5,956)	(6,794)	(7,645)	(8,512)	(9,396)	(10,300)	(11,225)	(12,174)	(13,148)	(14,150)	(15,183)	(16,247)	(17,347)	(0)	-	-	
Annual Interest Cost on New Drawdowns	91	85	78	83	62	56	47	54	42	32	40	32	17	8	(12)	(15)	(29)	(42)	(75)	(86)	(97)	(108)	(119)	(130)	(142)	(154)	(166)	(179)	(192)	(205)	(219)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	370	733	1,087	1,477	1,805	2,123	2,422	2,766	3,079	3,364	3,698	4,017	4,290	4,540	4,725	4,904	5,038	5,127	5,084	4,997	4,861	4,674	4,432	4,132	3,769	3,338	2,836	2,257	1,595	845	0	0	0	
Total Annual Interest Cost	91	455	811	1,169	1,539	1,861	2,170	2,476	2,808	3,110	3,404	3,730	4,034	4,297	4,528	4,710	4,875	4,996	5,051	4,998	4,900	4,753	4,555	4,302	3,990	3,615	3,172	2,657	2,065	1,390	626	0	0	0	

Feb4 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*183*	*544*	*898*	*1,266*	*1,620*	*1,939*	*2,244*	*2,561*	*2,885*	*3,181*	*3,486*	*3,809*	*4,101*	*4,359*	*4,574*	*4,754*	*4,908*	*5,018*	*5,041*	*4,977*	*4,867*	*4,707*	*4,496*	*4,228*	*3,900*	*3,509*	*3,048*	*2,514*	*1,902*	*1,205*	*417*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	7,316	7,179	7,000	7,722	6,477	6,298	5,912	6,798	6,190	5,645	6,597	6,314	5,397	4,950	3,659	3,545	2,636	1,760	-840	-1,731	-2,682	-3,697	-4,782	-5,942	-7,183	-8,511	-9,934	-11,457	-13,089	-14,838	-16,711	0	0	0	





Feb4 1c, 30-yr - Debt Drawdown Scenarios

Feb4_1c_30yr

Annual Interest Rate = 5.1%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0
			88	82	75	90	58	52	41	60	44	29	50	43	20	10	-20	-23	-32	-34	-35	-37	-39	-41	-43	-45	-48	-50	-53	-55	-58	-61	-64	0	0	0

0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	3,761	1,594	29,477
Equal Monthly Debt Drawdown	3,851	1,583	

Maximum Accumulated Debt — Feb4 1c, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

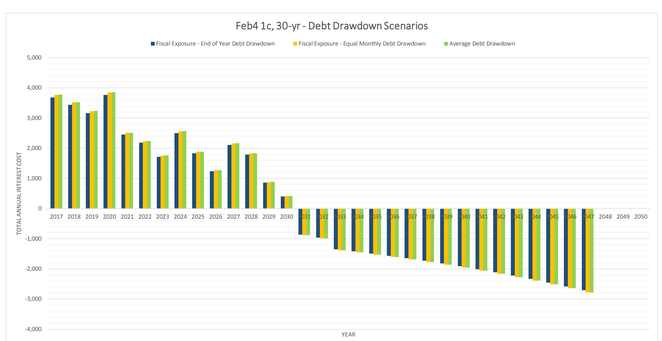
End of Year Debt Drawdown	31,125	20,043
Equal Monthly Debt Drawdown	31,866	

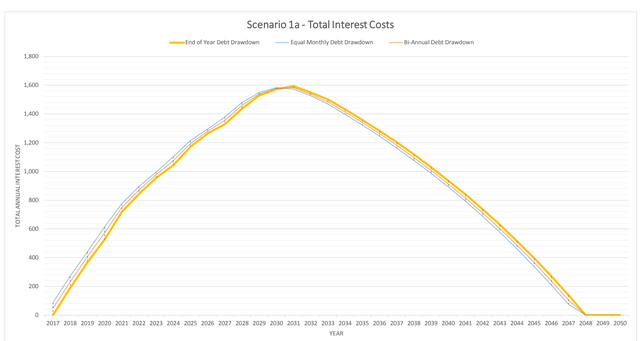
		30%	27%	24%	27%	16%	13%																														
Feb4 1c, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
a	Debt, Beginning of Year	0	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	
c = a*5%	*Interest Cost - Feb4 1c, 30-yr - End of Year Debt Drawdown*	*0*	*188*	*364*	*526*	*719*	*844*	*956*	*1,044*	*1,172*	*1,266*	*1,329*	*1,437*	*1,529*	*1,573*	*1,594*	*1,550*	*1,500*	*1,431*	*1,359*	*1,283*	*1,203*	*1,119*	*1,030*	*937*	*839*	*737*	*629*	*515*	*396*	*270*	*139*	*0*	*0*	*0*	*0*	29,477
b	Additional GA Debt Drawdown, End of Year	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	0	
	Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,641	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663	22,866	23,984	25,015	25,952	26,791	27,528	28,157	28,672	29,068	29,338	29,477				
	Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18,247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828	-1,018	-3,864	-6,710	-9,556	-12,402	-15,248	-18,094	-20,940	-23,786	-26,631	-29,477				
Fiscal Exposure - End of Year Debt Drawdown		3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0	

Feb4 1c, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	
1,583	*Interest Cost - Feb4 1c, 30-yr*	*88*	*270*	*439*	*615*	*777*	*896*	*997*	*1,103*	*1,216*	*1,295*	*1,379*	*1,480*	1,549	*1,583*	*1,573*	*1,527*	*1,468*	*1,398*	*1,324*	*1,246*	*1,164*	*1,077*	*987*	*892*	*792*	*686*	*576*	*460*	*338*	*209*	*74*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0	
	Monthly Drawdown	306	271	233	270	144	112	64	122	55	(2)	65	29	(56)	(97)	(204)	(209)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(0)	-	-	
	FV of Monthly Drawdown at 5%	3,765	3,326	2,861	3,312	1,773	1,371	781	1,493	679	(28)	799	360	(684)	(1,197)	(2,512)	(2,570)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,913)	(2,913)	(2,913)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	88	77	67	77	41	32	18	35	16	(1)	19	8	(16)	(28)	(58)	(60)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	193	373	538	736	864	979	1,069	1,200	1,296	1,361	1,471	1,565	1,610	1,632	1,586	1,536	1,465	1,391	1,313	1,231	1,145	1,055	959	859	754	644	527	405	277	142	0	0	0	
	Total Annual Interest Cost	88	270	439	615	777	896	997	1,103	1,216	1,295	1,379	1,480	1,549	1,583	1,573	1,527	1,468	1,398	1,324	1,246	1,164	1,077	987	892	792	686	576	460	338	209	74	0	0	0	

Feb4 1c, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*47*	*232*	*405*	*574*	*750*	*872*	*978*	*1,076*	*1,195*	*1,282*	*1,356*	*1,460*	*1,540*	*1,578*	*1,583*	*1,537*	*1,483*	*1,413*	*1,340*	*1,263*	*1,182*	*1,097*	*1,007*	*913*	*814*	*710*	*600*	*485*	*365*	*237*	*104*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,725	3,481	3,199	3,809	2,481	2,211	1,741	2,534	1,859	1,254	2,137	1,812	872	409	-871	-973	-1,363	-1,433	-1,506	-1,584	-1,665	-1,750	-1,839	-1,933	-2,032	-2,136	-2,246	-2,360	-2,481	-2,608	-2,742	0	0	0	
	Bi-Annual Drawdown	1,839	1,624	1,397	1,618	866	670	382	729	332	(14)	390	176	(334)	(584)	(1,227)	(1,255)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(0)	-	-	
	FV of Bi-Annual Drawdown at 5%	3,725	3,290	2,830	3,277	1,754	1,356	773	1,477	672	(28)	791	356	(677)	(1,184)	(2,485)	(2,542)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	47	42	36	41	22	17	10	19	8	(0)	10	5	(9)	(15)	(31)	(32)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	191	369	533	728	855	968	1,057	1,187	1,282	1,346	1,456	1,548	1,593	1,614	1,569	1,520	1,450	1,376	1,299	1,218	1,133	1,043	949	850	746	637	522	401	274	140	0	0	0	
	Total Annual Interest Cost	47	232	405	574	750	872	978	1,076	1,195	1,282	1,356	1,460	1,540	1,578	1,583	1,537	1,483	1,413	1,340	1,263	1,182	1,097	1,007	913	814	710	600	485	365	237	104	0	0	0	

Feb4 1c, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*94*	*276*	*445*	*622*	*781*	*900*	*1,000*	*1,108*	*1,219*	*1,298*	*1,383*	*1,483*	*1,551*	*1,583*	*1,572*	*1,525*	*1,466*	*1,395*	*1,321*	*1,243*	*1,161*	*1,074*	*984*	*888*	*788*	*683*	*572*	*456*	*333*	*205*	*69*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,772	3,525	3,239	3,857	2,513	2,239	1,763	2,566	1,882	1,270	2,164	1,835	883	414	-882	-985	-1,381	-1,451	-1,526	-1,604	-1,686	-1,772	-1,863	-1,958	-2,058	-2,163	-2,274	-2,390	-2,513	-2,641	-2,776	0	0	0	





30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

TO BE

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,556	3,123	1,728	1,400	836	1,560	821	167

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

E UPDATED

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

JK: Fixed the formula in the yellow highlighted cells. Pls. check. (SK: looks good to me)

	Tab
v16 GA Financing - Scenario 1a 1b v18 (with fiscal) - Feb 4_v2.xlsx	Powerpoint_Export Scenario tabs

Change Description

Added in trigger for later start in the year
Updated IESO forecast from Energy (IESO GA Cost Forecast 170207 (Feb 6 update).xlsx)

Equal Monthly Debt Drawdown

		Month	Months Remai
Scenario Start Date	**July**	7	6

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	3,180	2,888
Annual Exposure2 with start on July 1st	*1,590*	*2,888*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	795	3,107
Start: July 1st	-	*2,312*

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	851	3,335
Start: July 1st	-	*2,484*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	1,168	1,765
Annual Exposure2 with start on July 1st	*584*	*1,765*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	292	1,609
Start: July 1st	-	*1,025*

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,449	2,040
Annual Exposure2 with start on July 1st	*725*	*2,040*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,597
Start: July 1st	-	*1,959*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335
Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3575**
Total, B	362	1837
Proposed Program Total:	362 - 851	1,837 - 3,575

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,556	3,123	1,728	1,400
2,556	*3,123*	*1,728*	*1,400*

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646
2,805	*2,697*	*2,774*	*1,646*

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

ıking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
2,311	3,750	2,311	1,933
2,311	*3,750*	*2,311*	*1,933*

2018-19	2019-20	2020-21	2021-2022

1,901	2,671	3,391	2,217
1,901	*2,671*	*3,391*	*2,217*

2019	2020	2021	2022
2,581	4,016	2,598	2,241
2,581	*4,016*	*2,598*	*2,241*

2018-19	2019-20	2020-21	2021-2022
2,175	2,940	3,662	2,508
2,175	*2,940*	*3,662*	*2,508*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

/1

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052
2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

Equal Monthly Debt Drawdown

		Month	Months Remaining
Scenario Start Date	July	7	6

AS LONG AS >

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	3,180	2,888	2,556

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	795	3,107	2,805
Fiscal Exposure, 25%	199	777	701

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Annual Exposure[2]	3,404	3,128	2,812

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	851	3,335	3,049
Fiscal Exposure, 25%	213	834	762

Indicates year in which, similar to OPCD's exa
closest to 30%. As Fiscal 2016/17 is a partial y
month the GA deferral begins.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu
decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions	9%	14%	18%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	1,168	1,765	2,311

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	292	1,609	1,901
Fiscal Exposure, 25%	73	402	475

Scenario 1b - 30-yr amortization	2017	2018	2019
Annual Exposure[2]	1,449	2,040	2,581

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	362	1,597	2,175
Fiscal Exposure, 25%	91	399	544

Indicates year in which, similar to OPCD's exar closest to 30%.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 ar
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu on accounting treatment.

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]
Debt-Finance Global Adjustment Costs, Option 1a	213	834	762
Debt-Finance Global Adjustment Costs, Option 1b	91	399	544
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**213**	**1074**	**1065**
Total, B	91	639	847

Proposed Program Total:	91 - 213	639 - 1,074	847 - 1,065

($M)	2016-171	2017-181	2018-191
Debt-Finance Global Adjustment Costs, Option 1a	851	3335	3049
Debt-Finance Global Adjustment Costs, Option 1b	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**851**	**3575**	**3352**
Total, B	362	1837	2478

Proposed Program Total:	362 - 851	1,837 - 3,575	2,478 - 3,352

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6

7	July	7	
8	August	8	
9	September	9	
10	October	10	
11	November	11	
12	December	12	

30-year term	**2016-17**	**2017-18**	**2018-19**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335	2,175 - 3,049

ROWS HIDDEN

1	1 = Comparision Enabled

APRIL 1, 2017 25%

2020	2021	2022
3,123	1,728	1,400

2019-20	2020-21	2021-2022
2,697	2,774	1,646
674	693	412

2020	2021	2022
3,396	2,020	1,712

2019-20	2020-21	2021-2022
2,958	3,052	1,943
740	763	486

mple, the true cost of GA being deferred is
ear, exposure may be less subject to which

l $17-21 billion (at 3.5% interest rate), peaking in 2028.
$33-$36 million.

ıals per month based on month of the year. Actuals may also depend on

28%	17%	13%
2020	2021	2022
3,750	2,311	1,933

2019-20	2020-21	2021-2022
2,671	3,391	2,217
668	848	554

2020	2021	2022
4,016	2,598	2,241

2019-20	2020-21	2021-2022
2,940	3,662	2,508
735	915	627

mple, the true cost of GA being deferred is

ıd $17-21 billion (at 3.5% interest rate), peaking in 2028.
$118-$134 million.

ıals per month based on month of the year. Actuals may also depend on decision

2019-20[1]	2020-21[1]
740	763
735	915
279	323
60	60
18	18
1097	**1164**
1092	1316

1,092 - 1,097 1,316 - 1,164

2019-201	2020-211
2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453





2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964
Equal Monthly Debt Drawdown	3,180	952

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

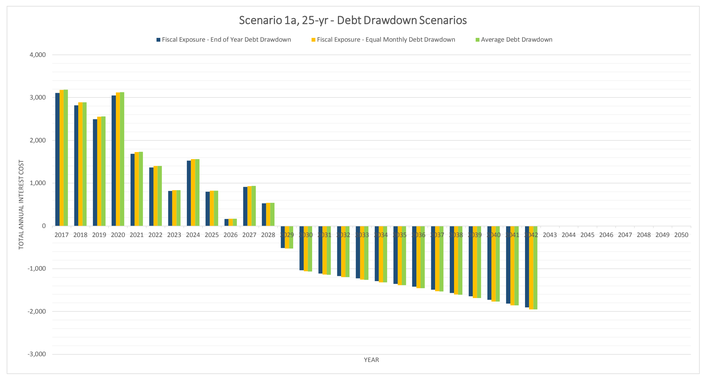
		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

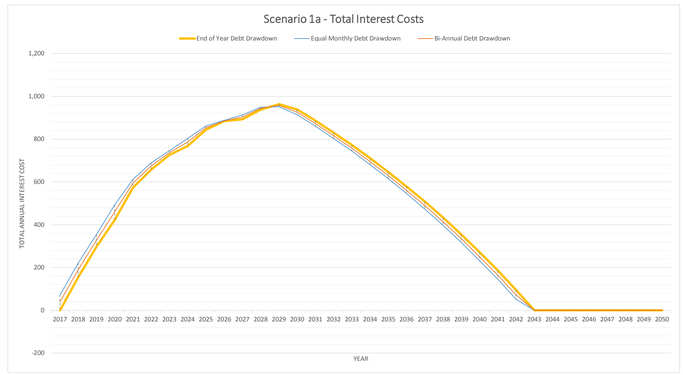
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	3,665	968	
Equal Monthly Debt Drawdown	3,750	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

		9%	14%	18%	28%	17%	13%																													
Scenario 1b, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

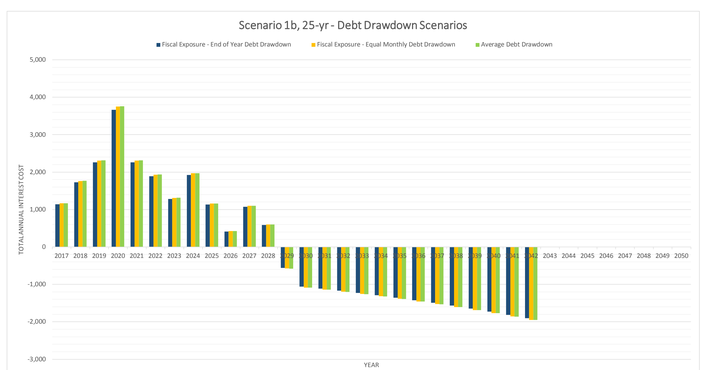
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	*954*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

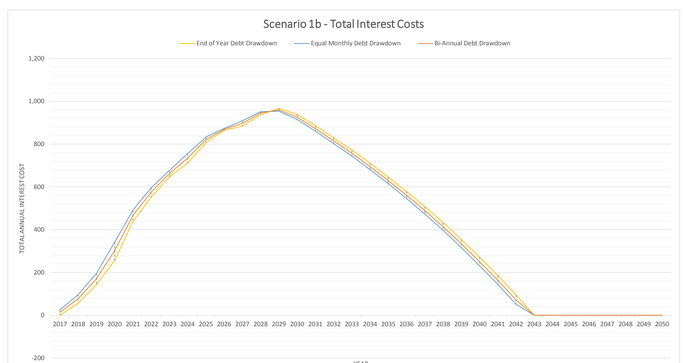
	Monthly Drawdown	95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

		28%	24%	21%	24%	12%	9%																													
Scenario 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1a, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	*1,156*	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

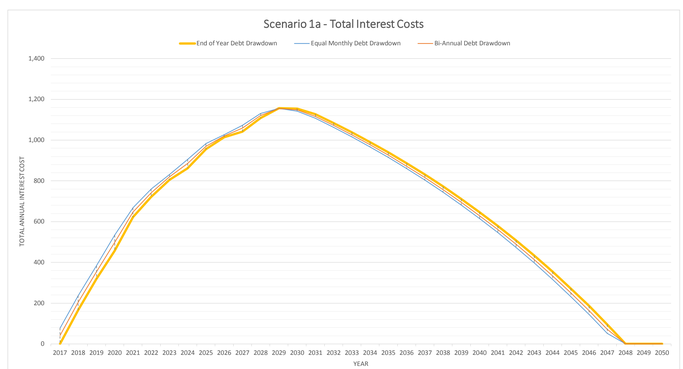
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

		12%	16%	20%	30%	19%	15%																													
Scenario 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

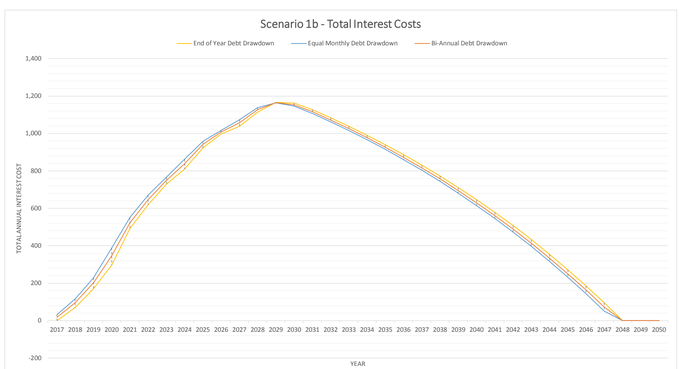
	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

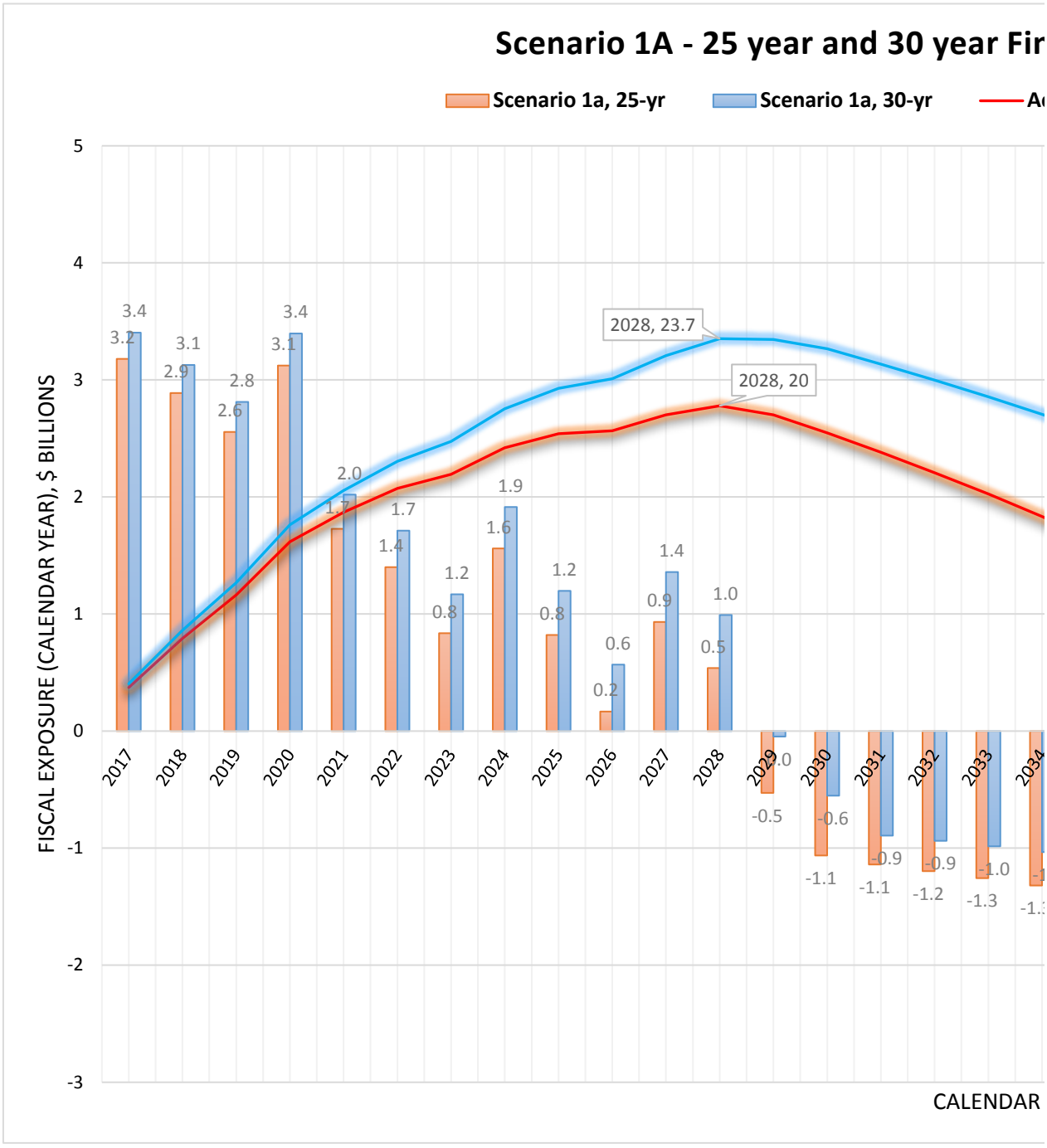
	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

Scenario 1b, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

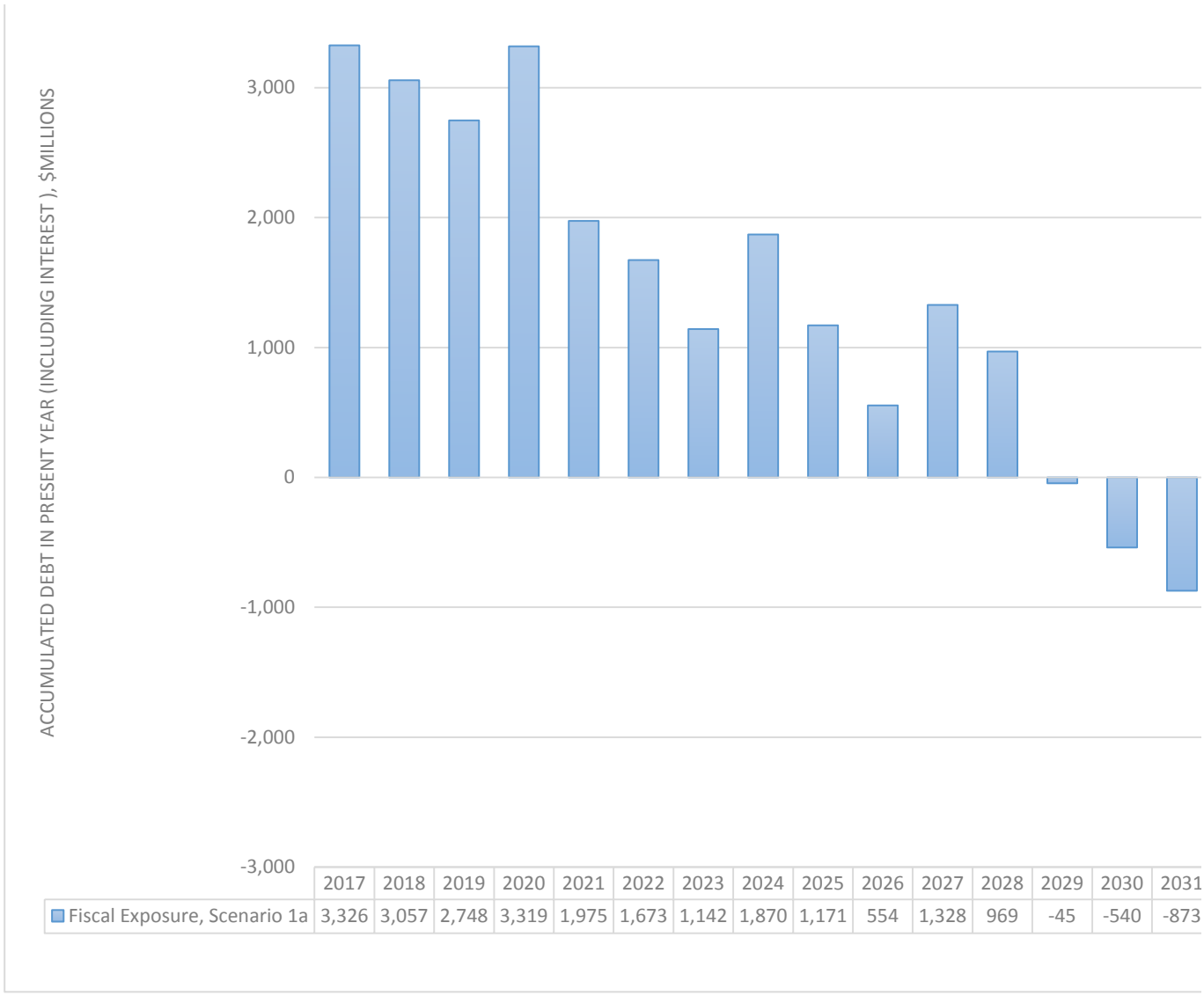




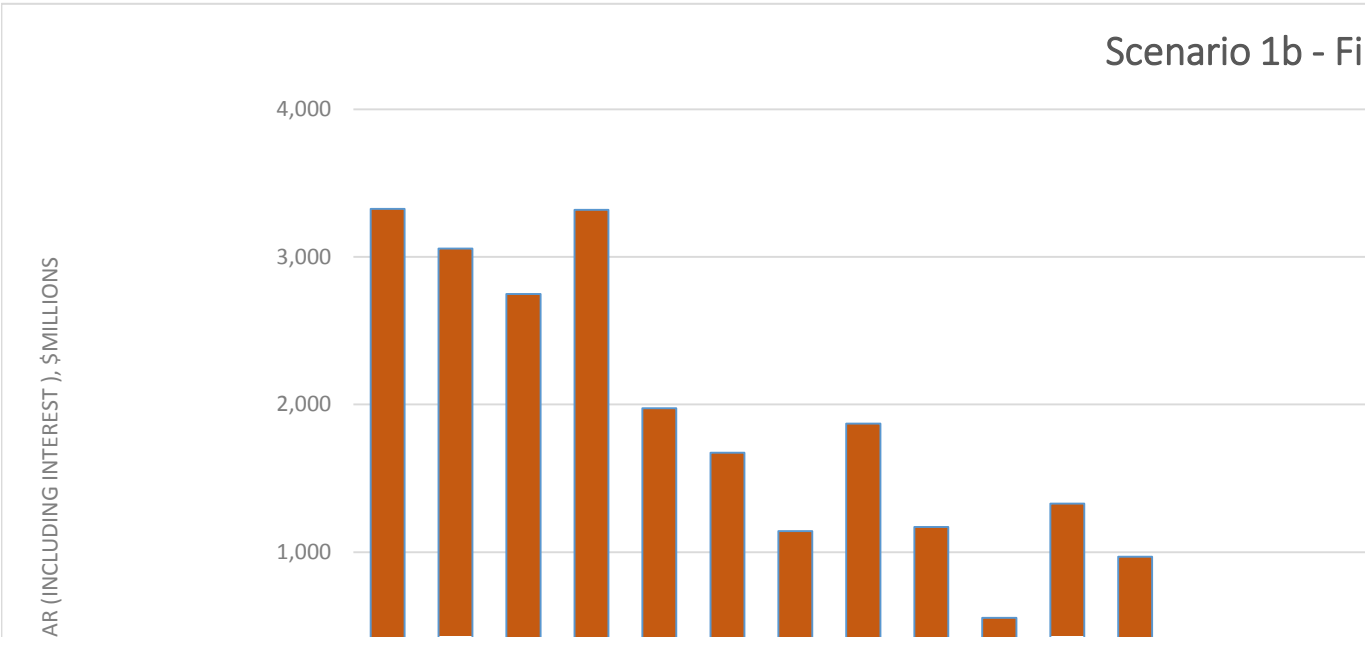
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

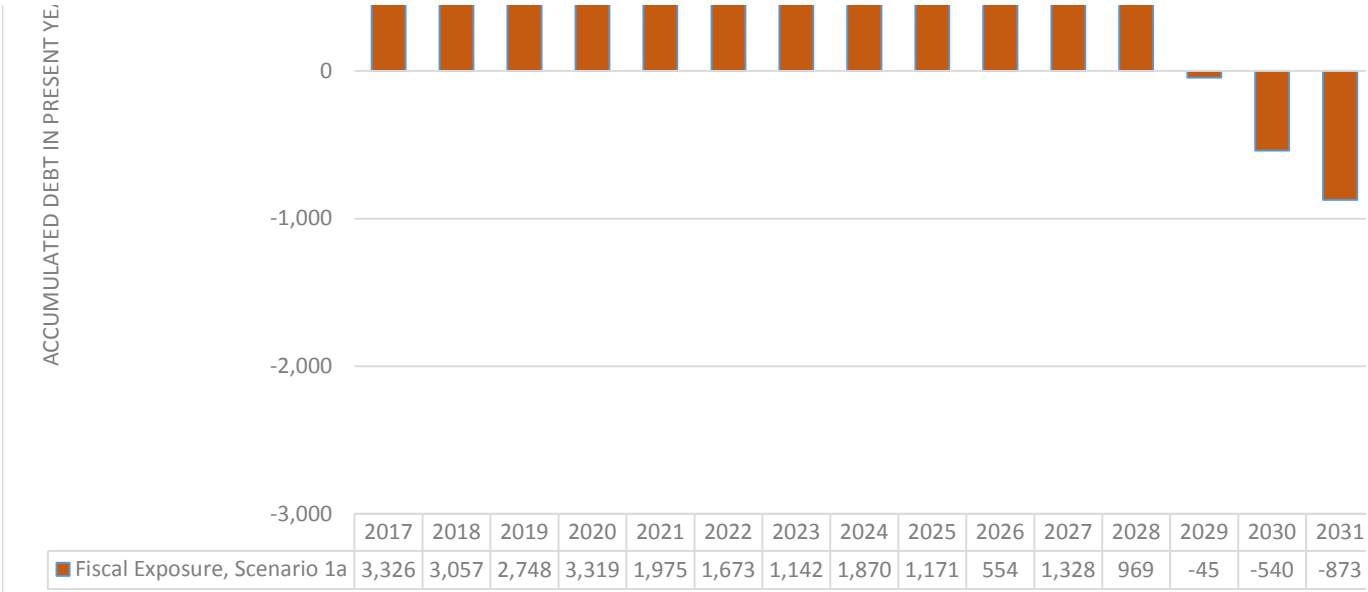




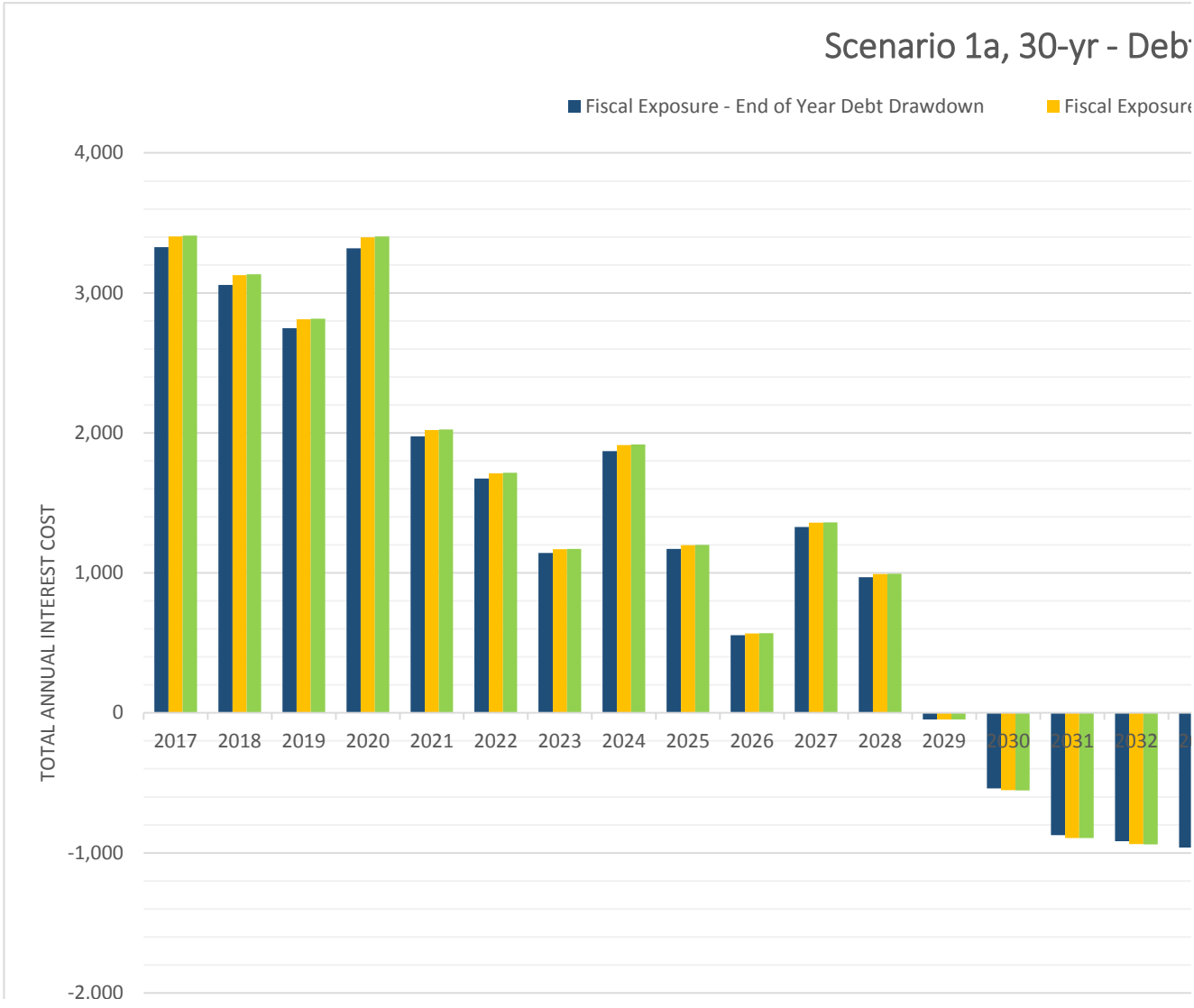


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



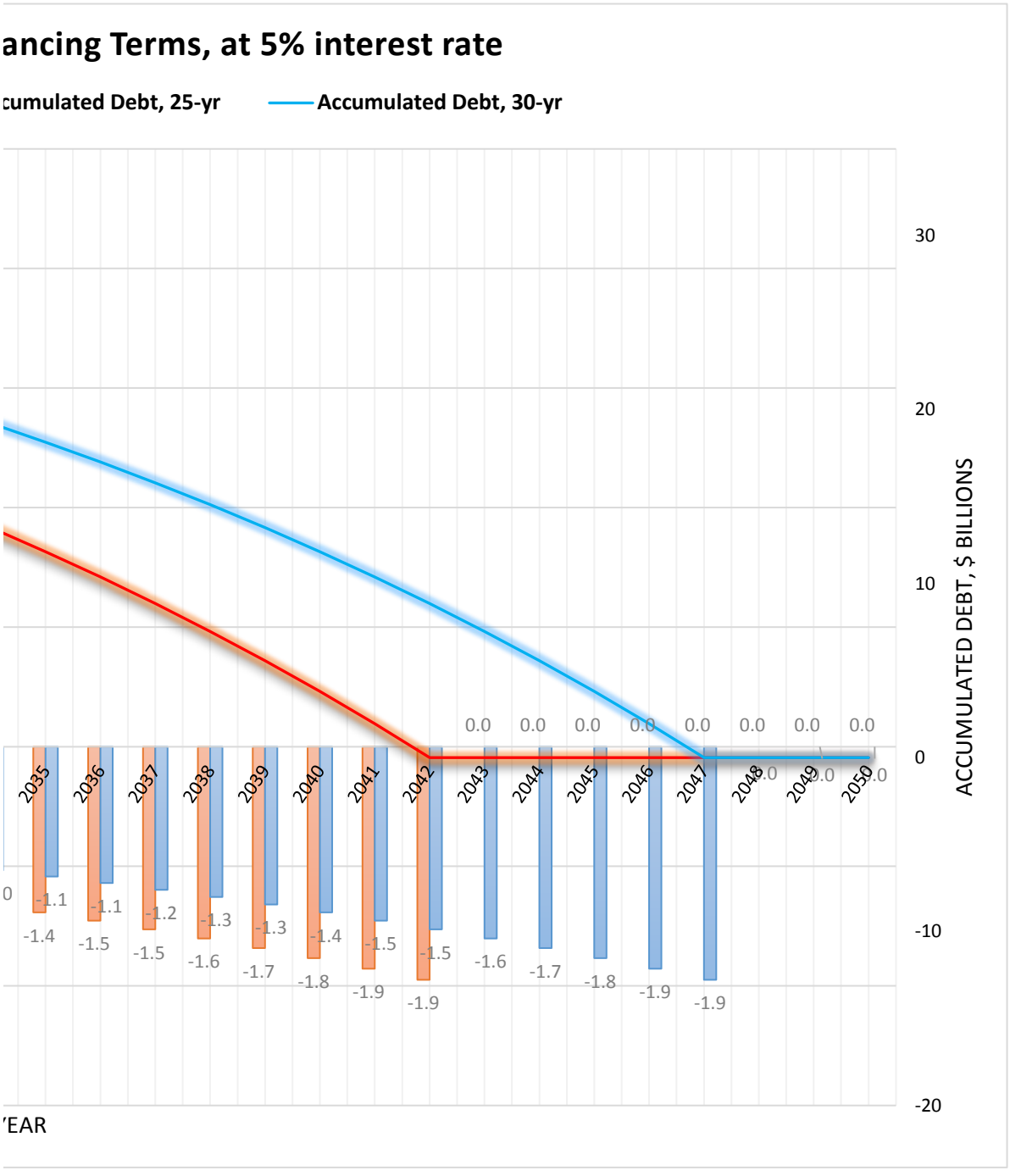


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



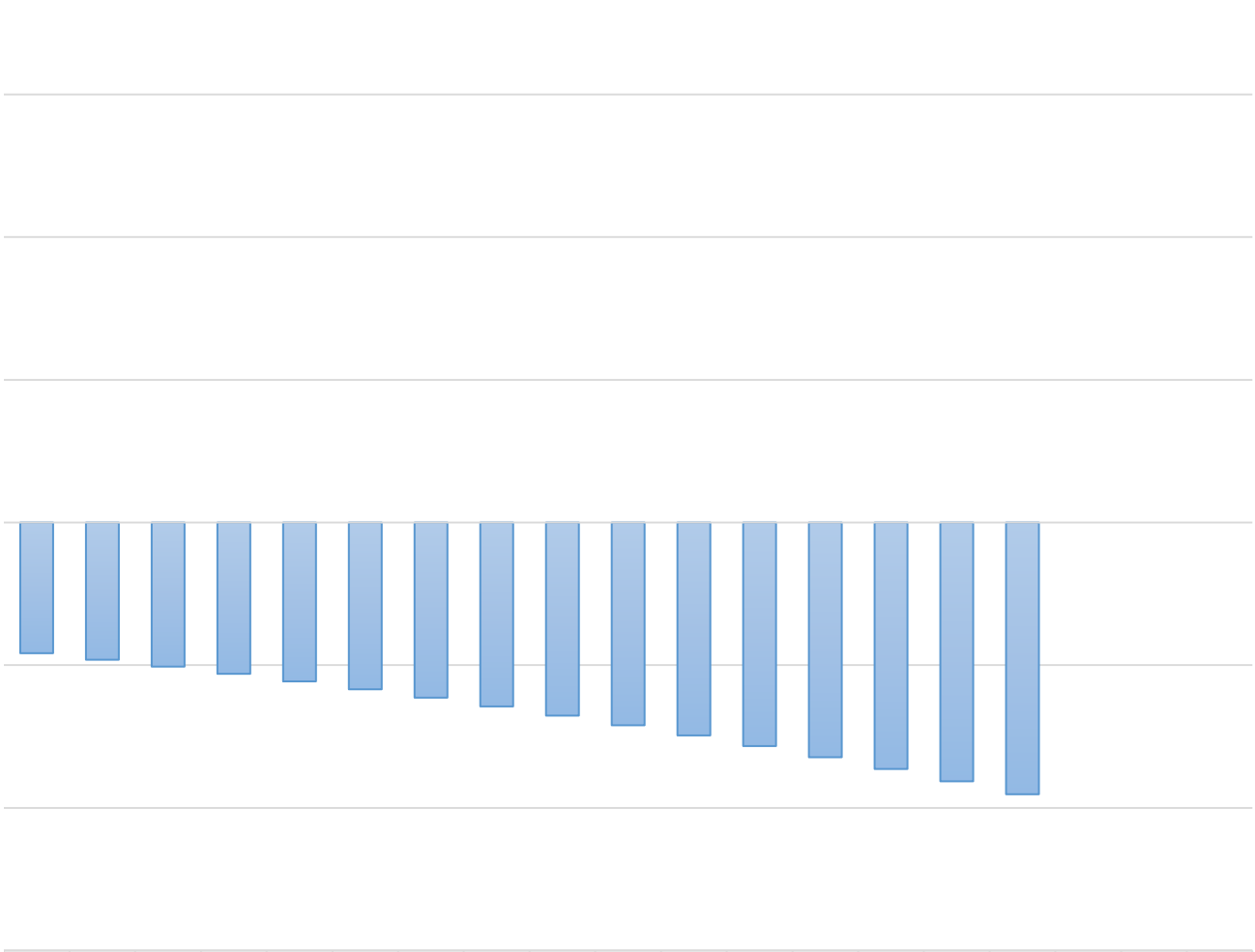

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

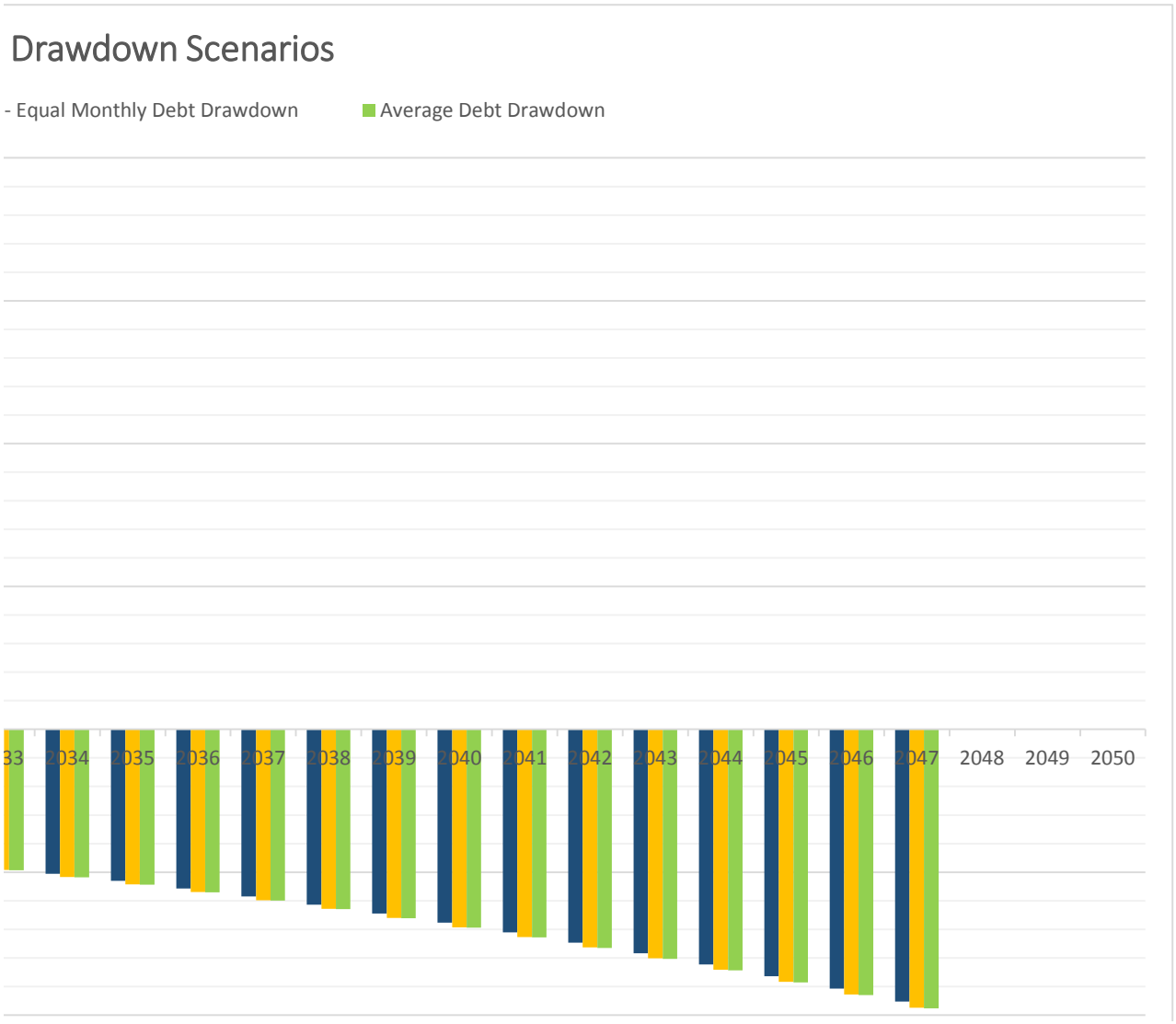
YEAR

cal Exposure



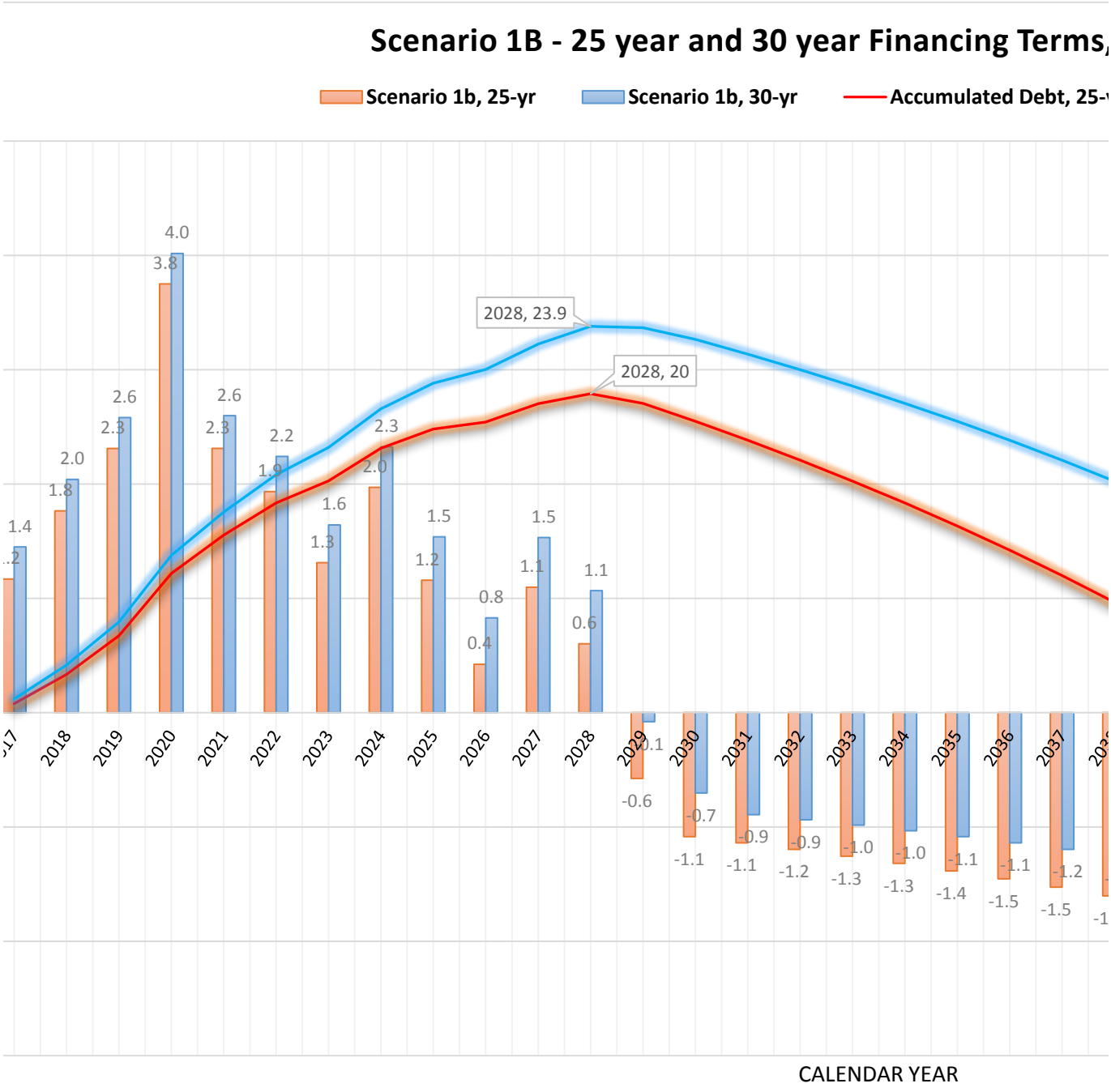
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

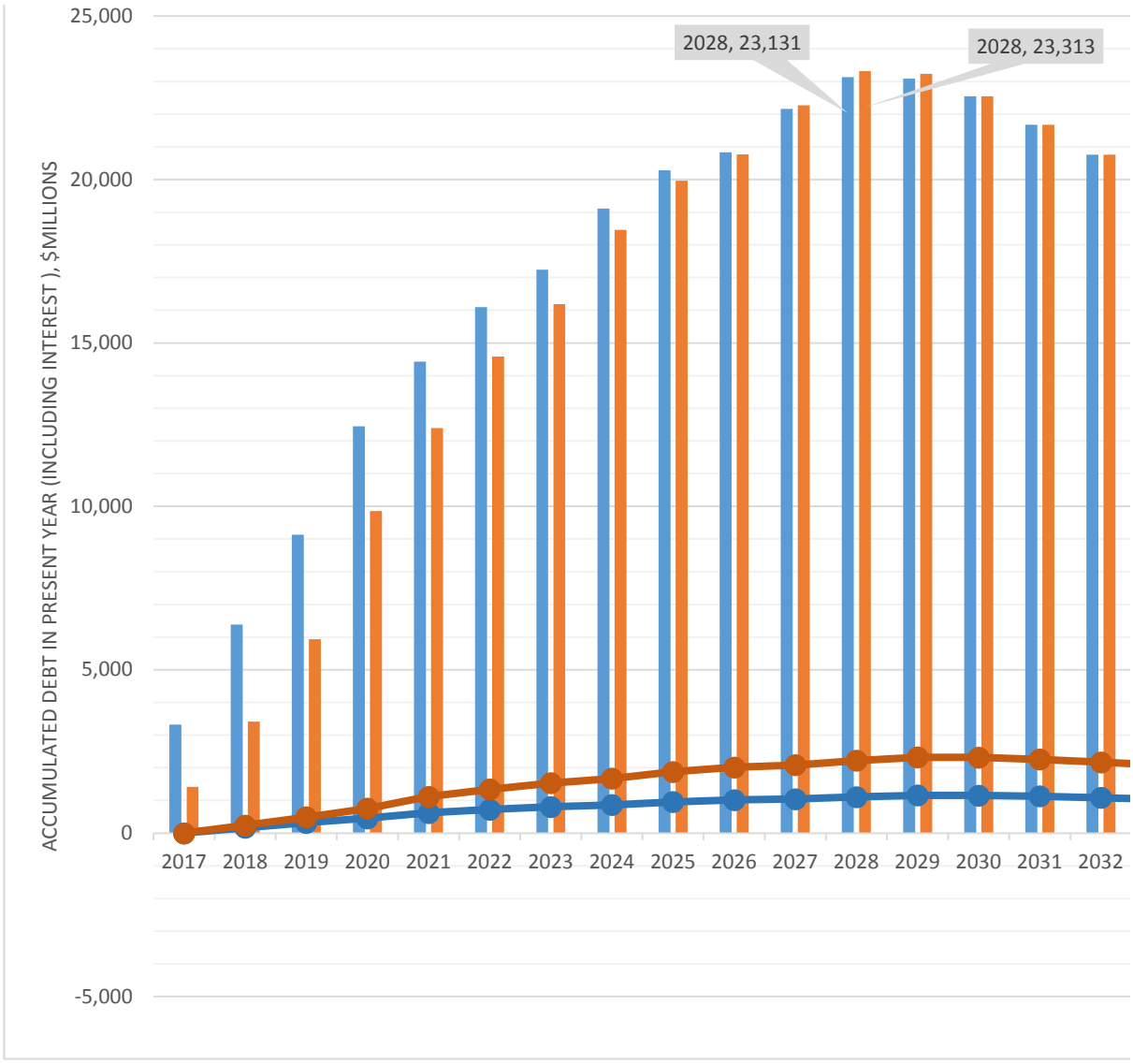


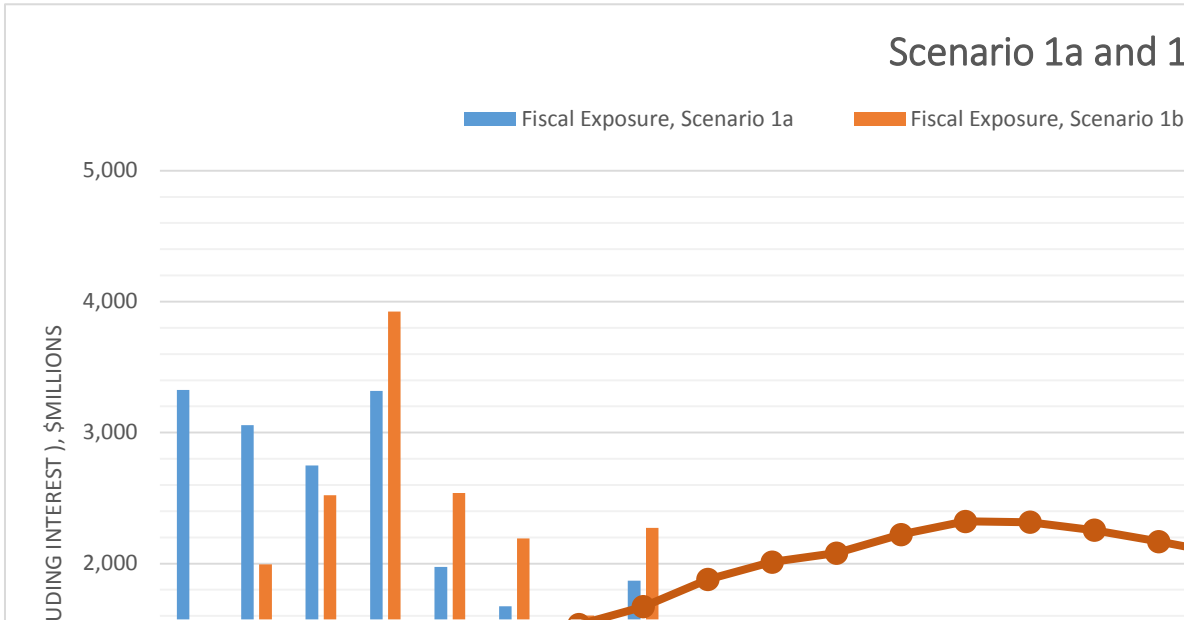
YEAR

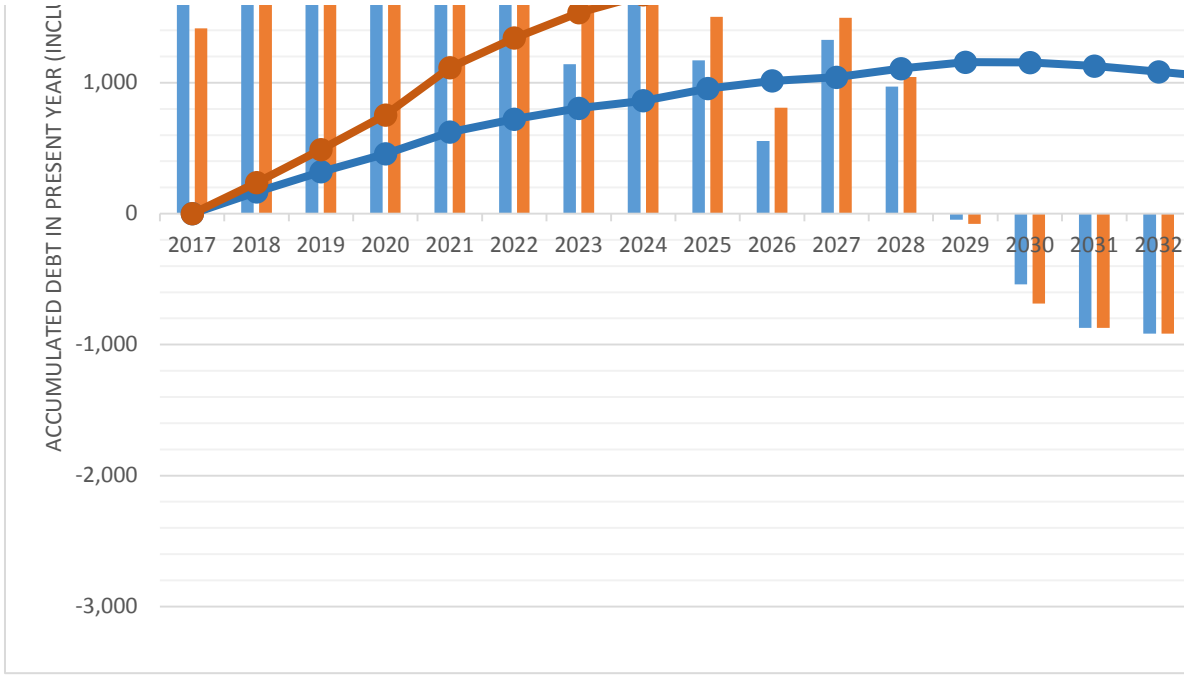
3 - 25 year and 30 year Financing Terms, at 5% interest rate

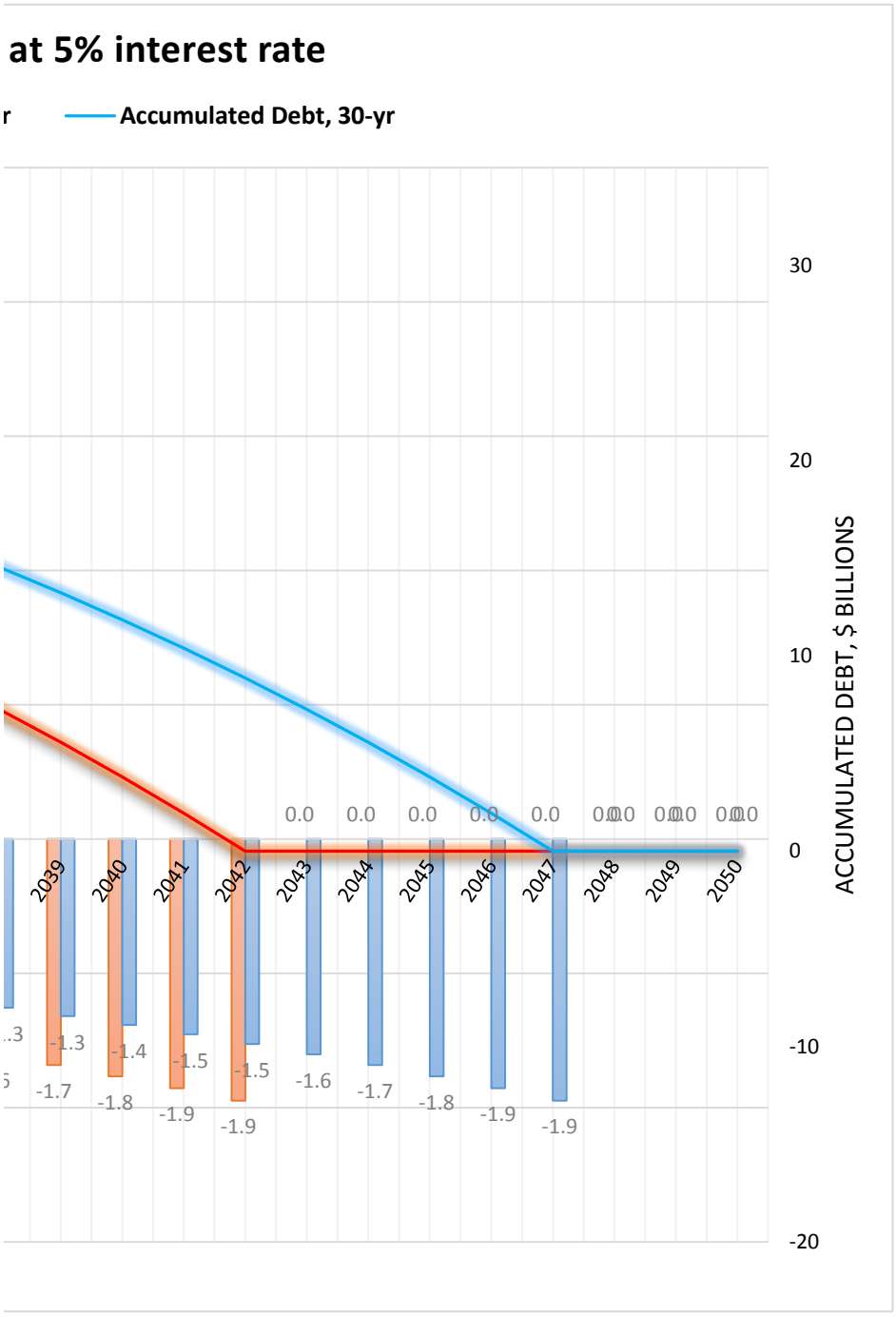





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

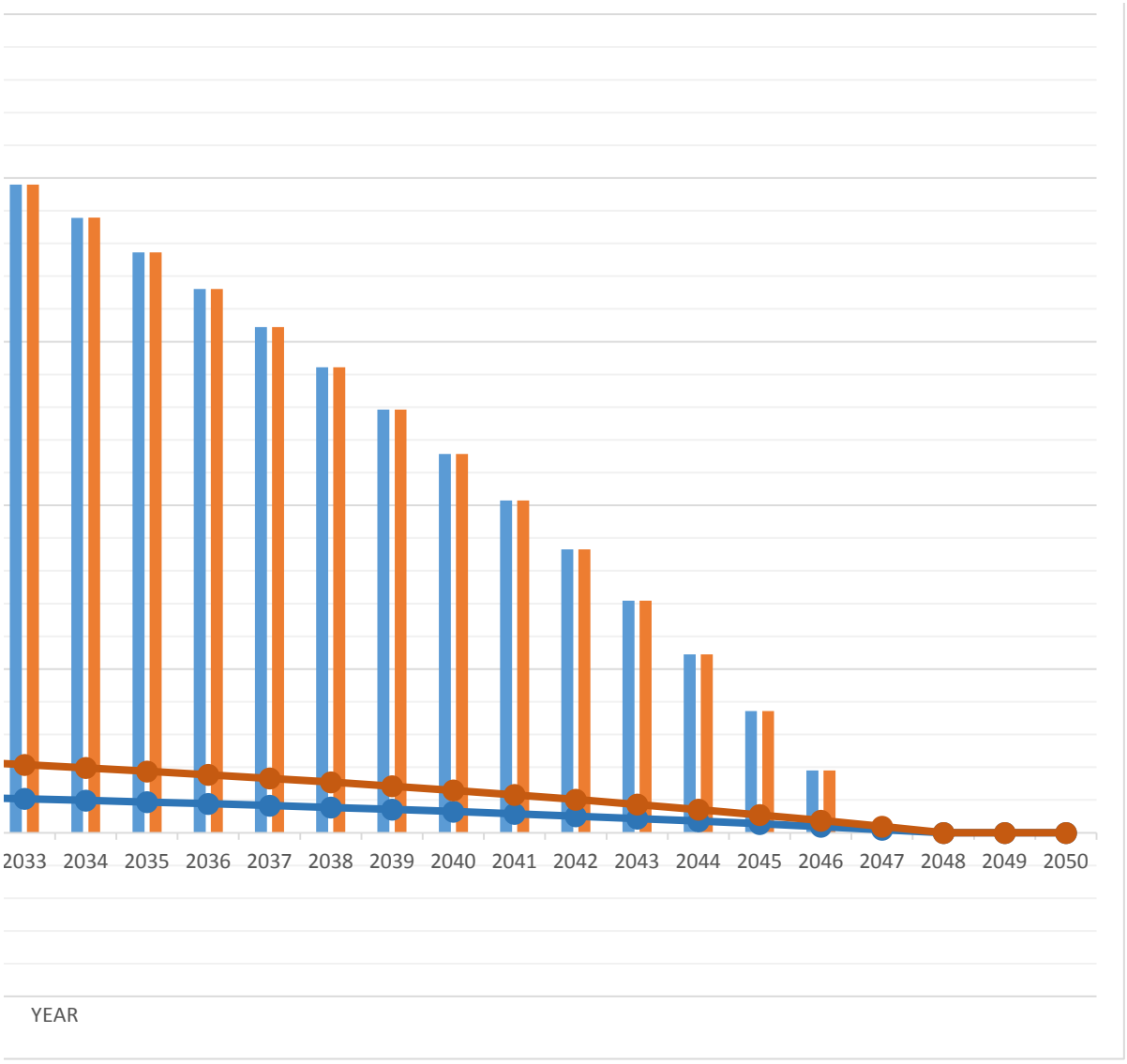

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

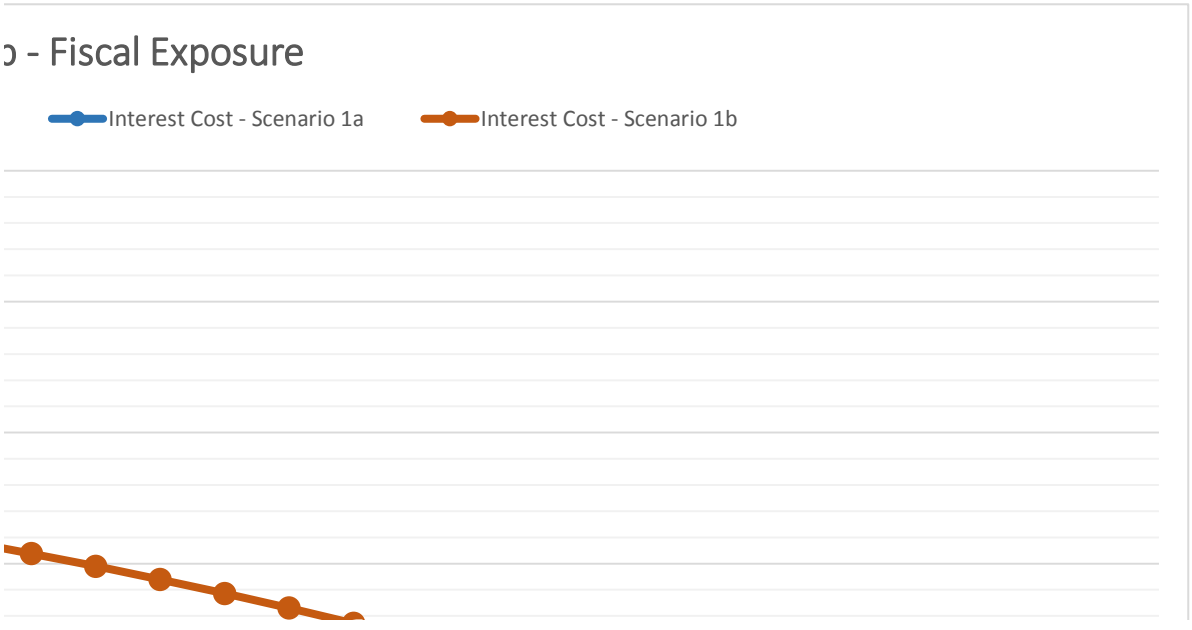

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

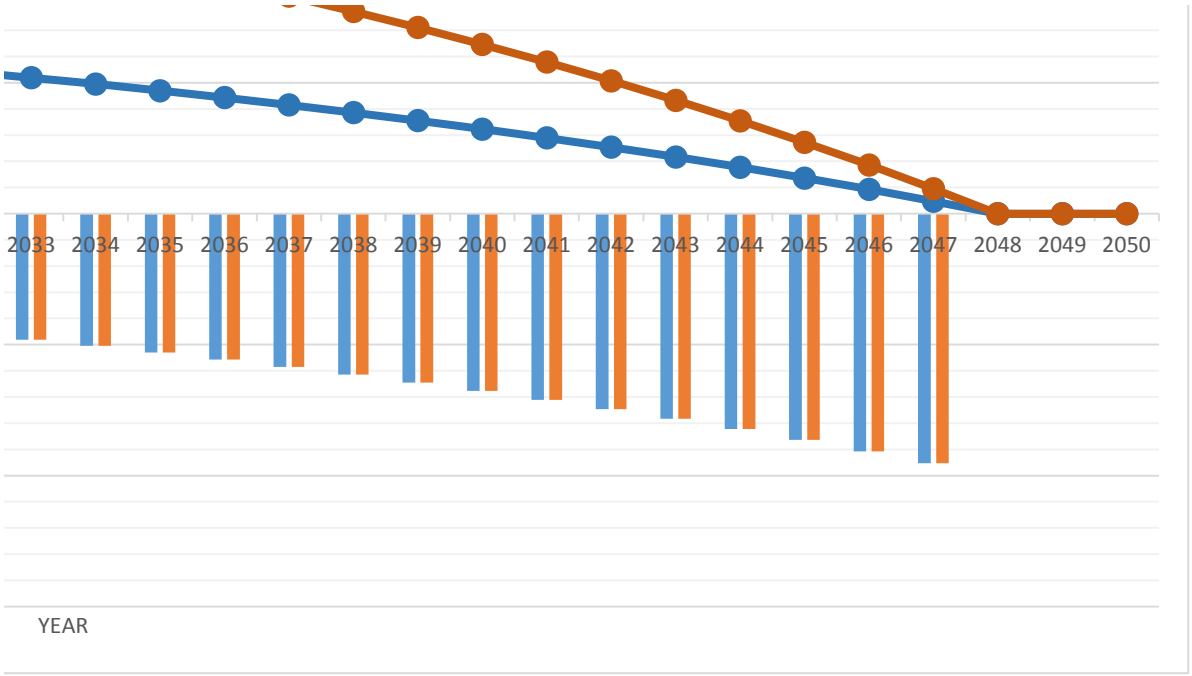


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

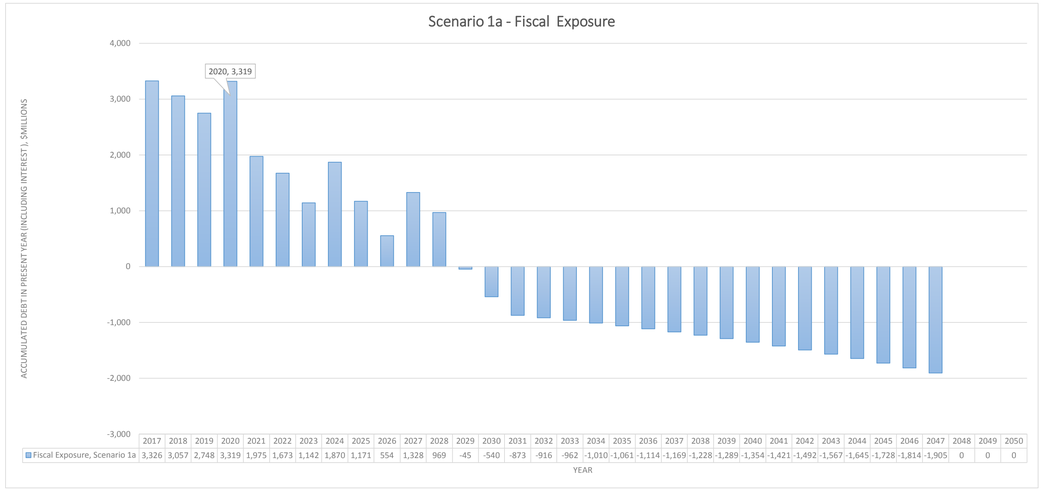
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

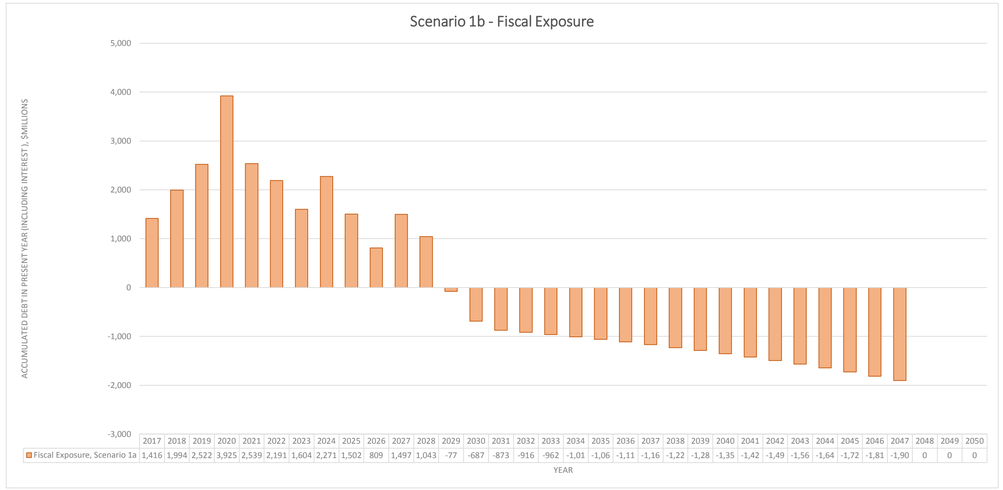
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

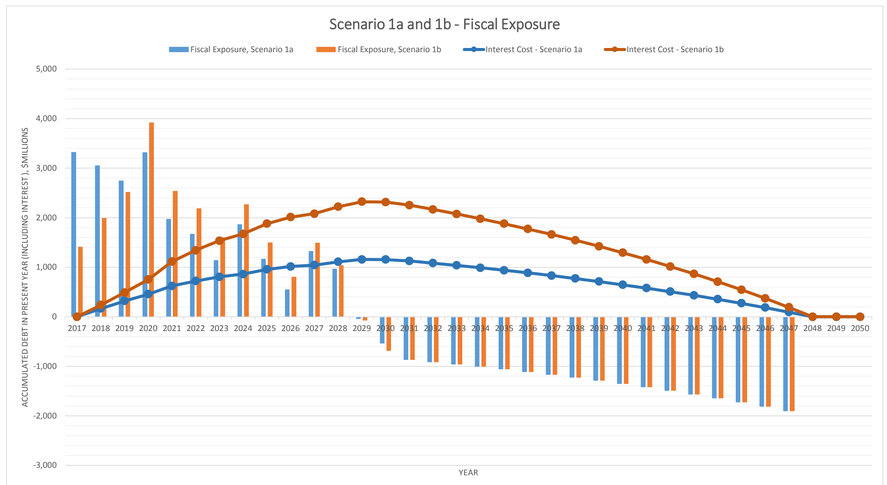
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

Notes:	Accounting treatment is to be determined.

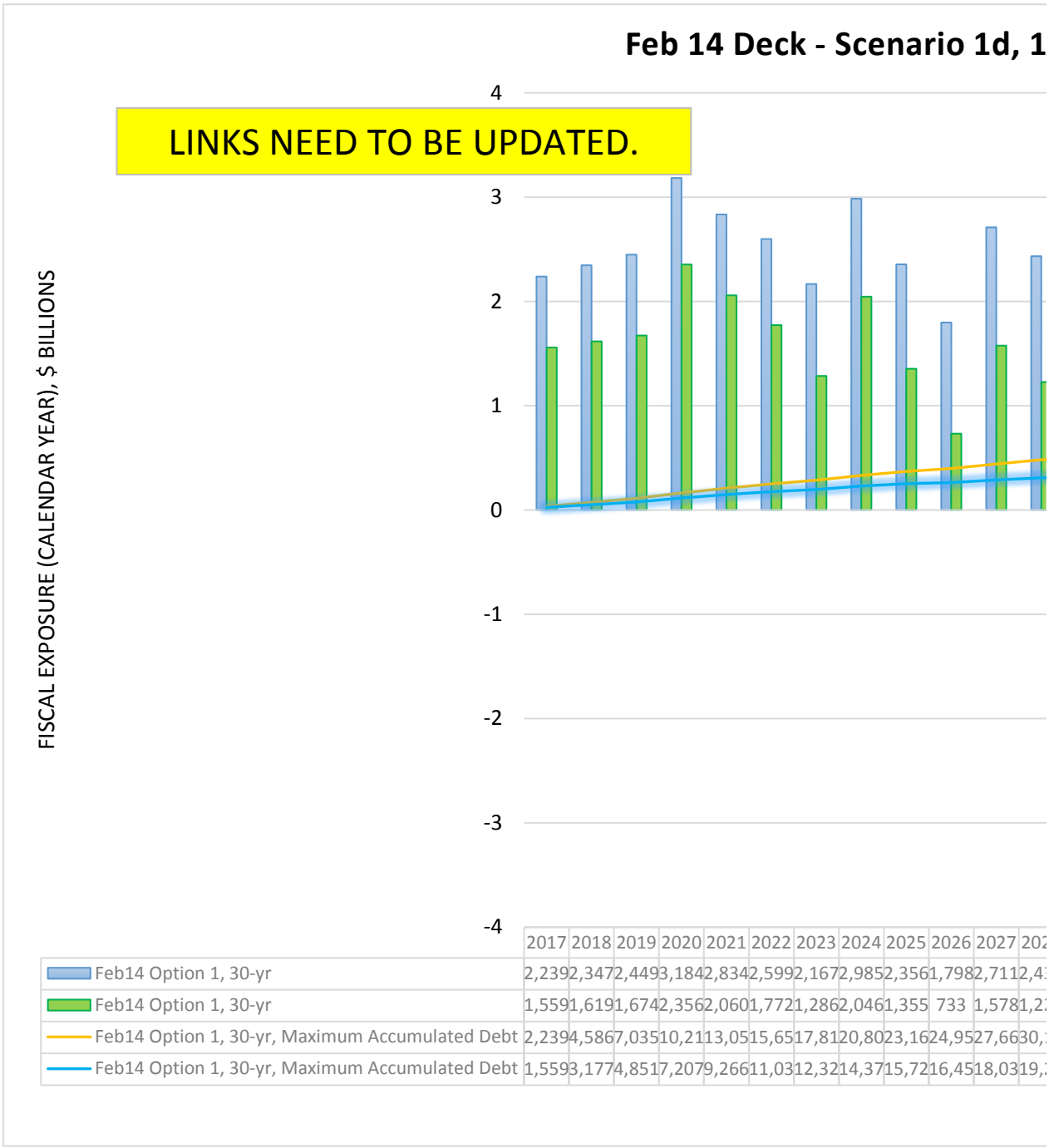

Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0


Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0

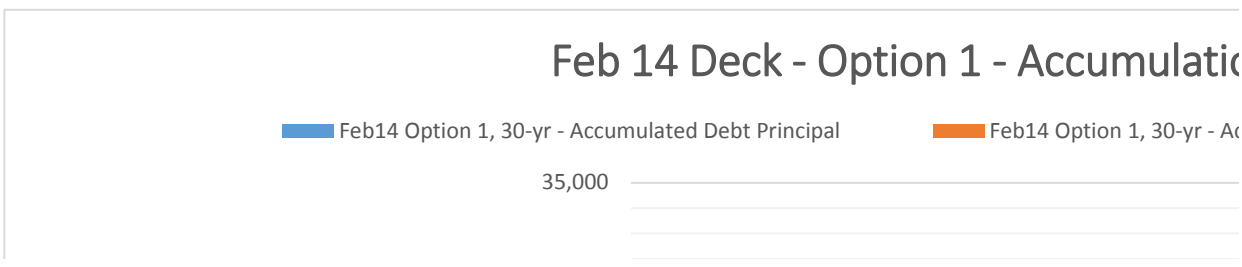

Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

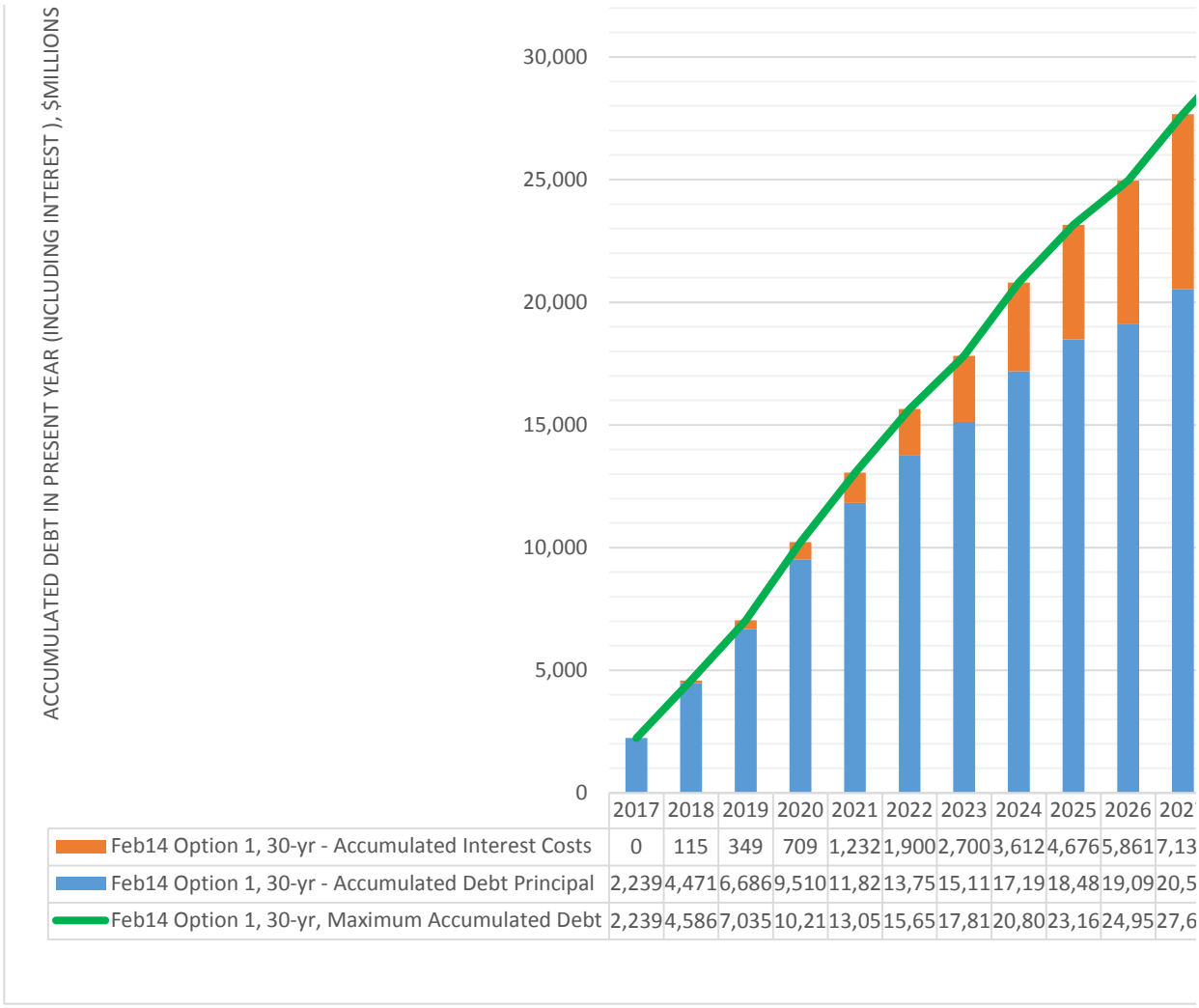
Feb 14 Deck

Feb 14 Deck - Scenario 1d, 1e - at 5.12% interest rate

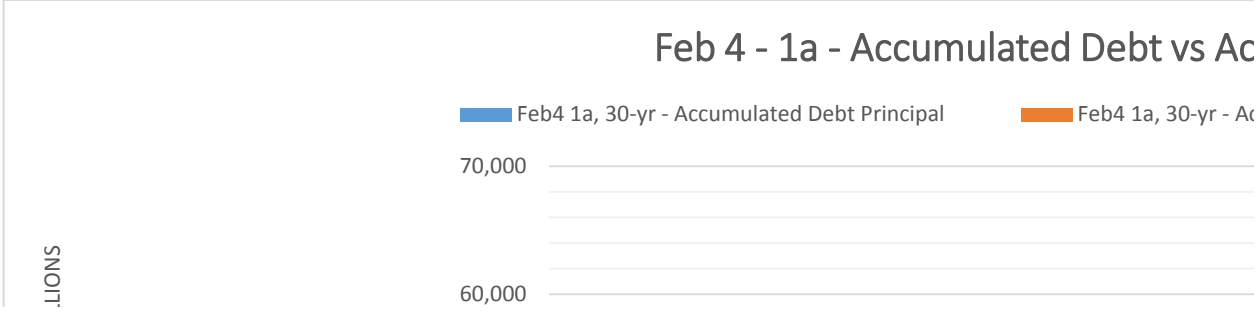


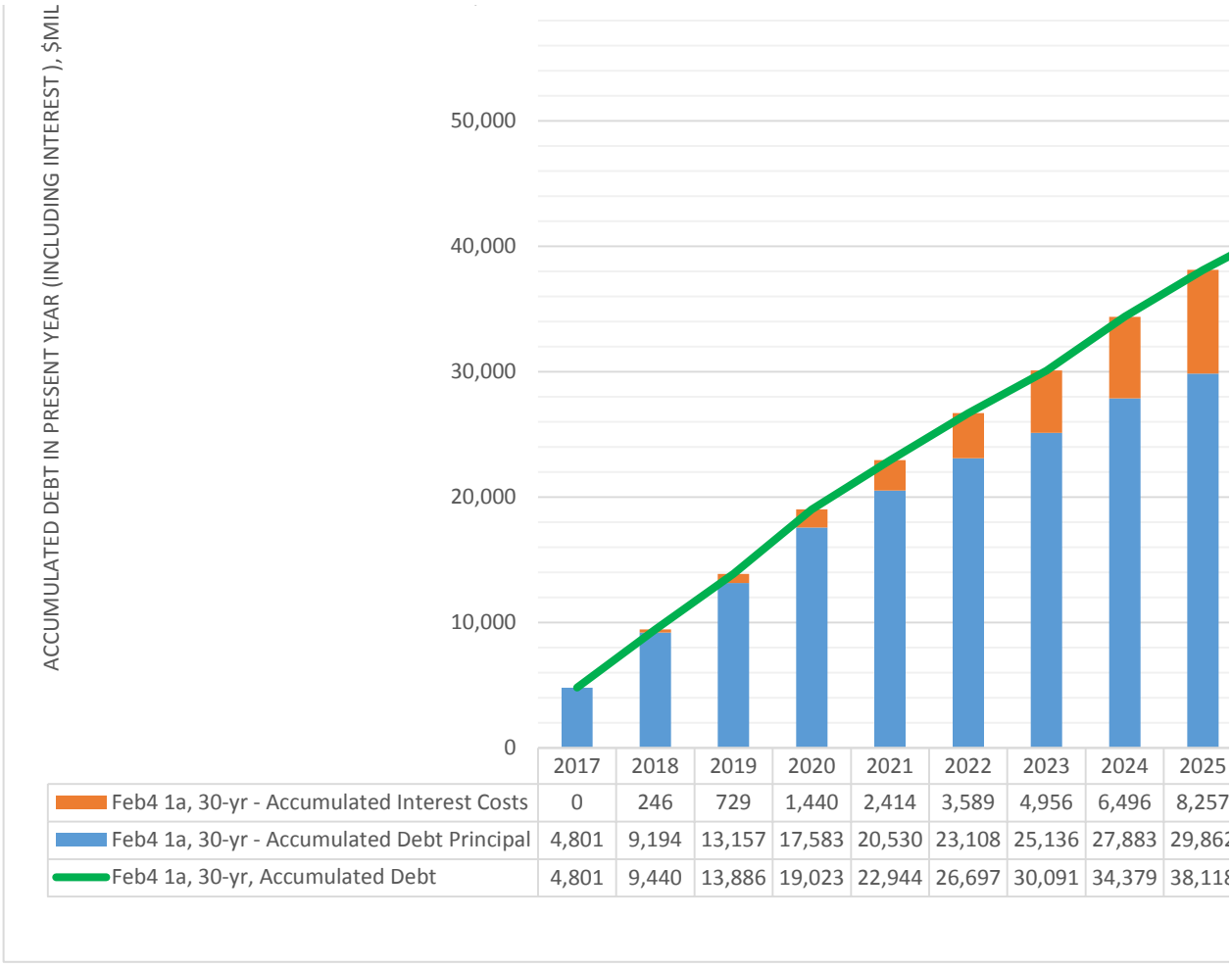
Feb 14 Deck - Option 1 - Accumulation of Debt (Principal and Interest)



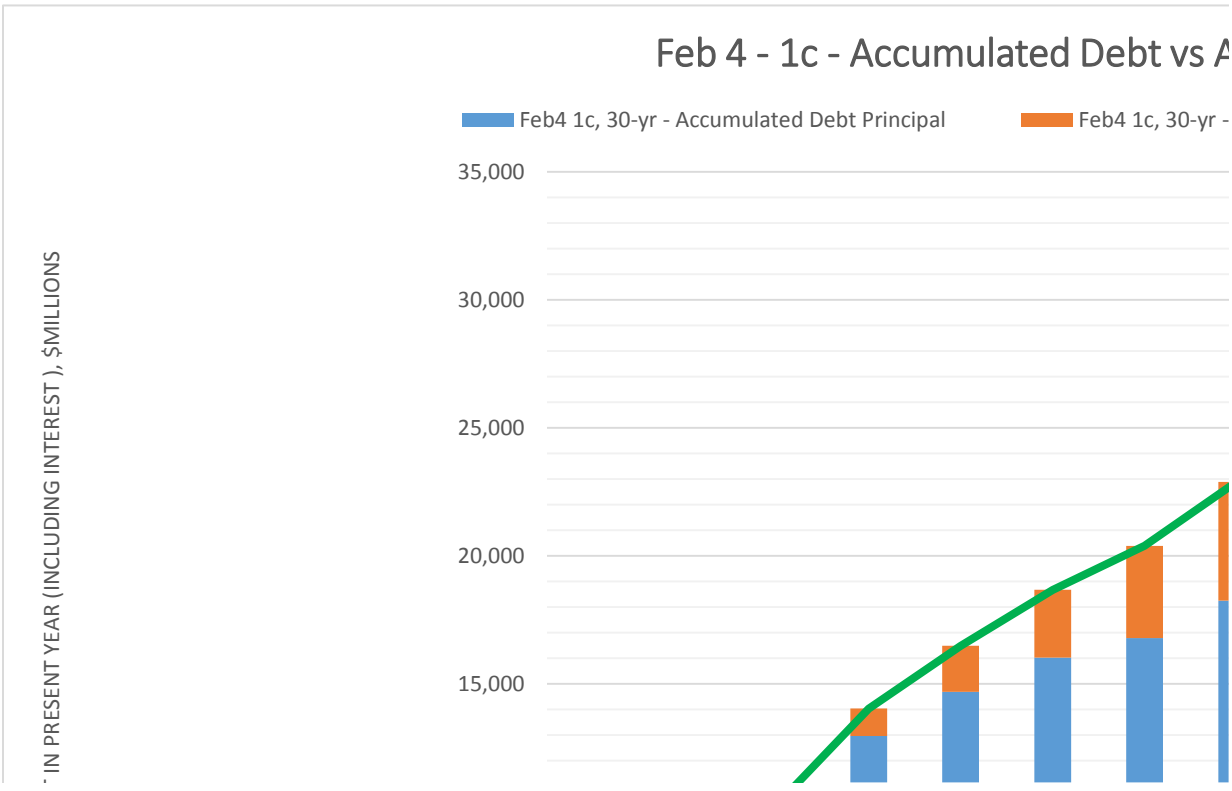


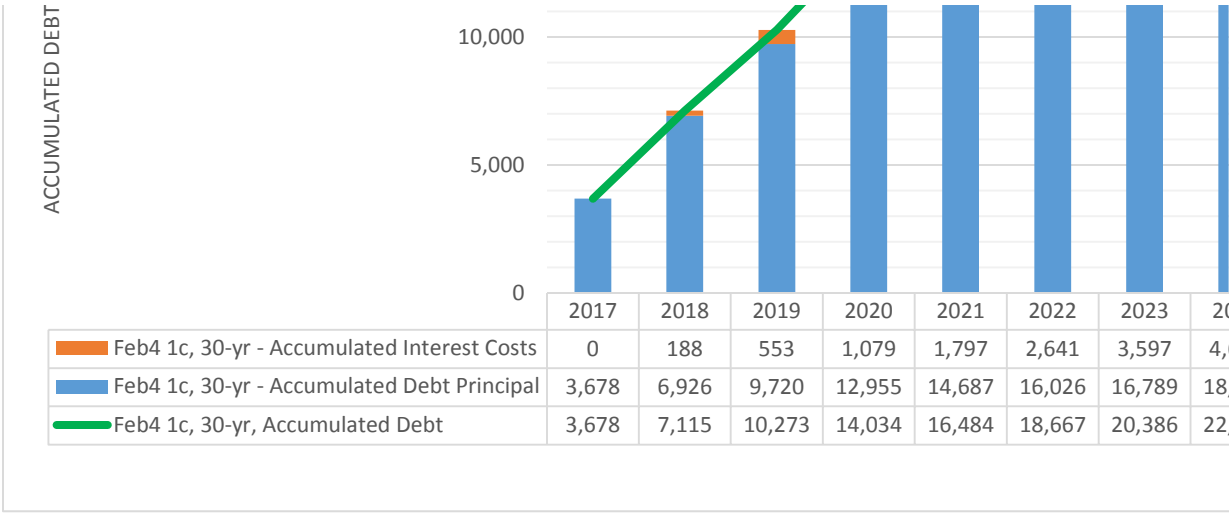
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	202
Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,13
Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,82	13,75	15,11	17,19	18,48	19,09	20,5
Feb14 Option 1, 30-yr, Maximum Accumulated Debt	2,239	4,586	7,035	10,21	13,05	15,65	17,81	20,80	23,16	24,95	27,6



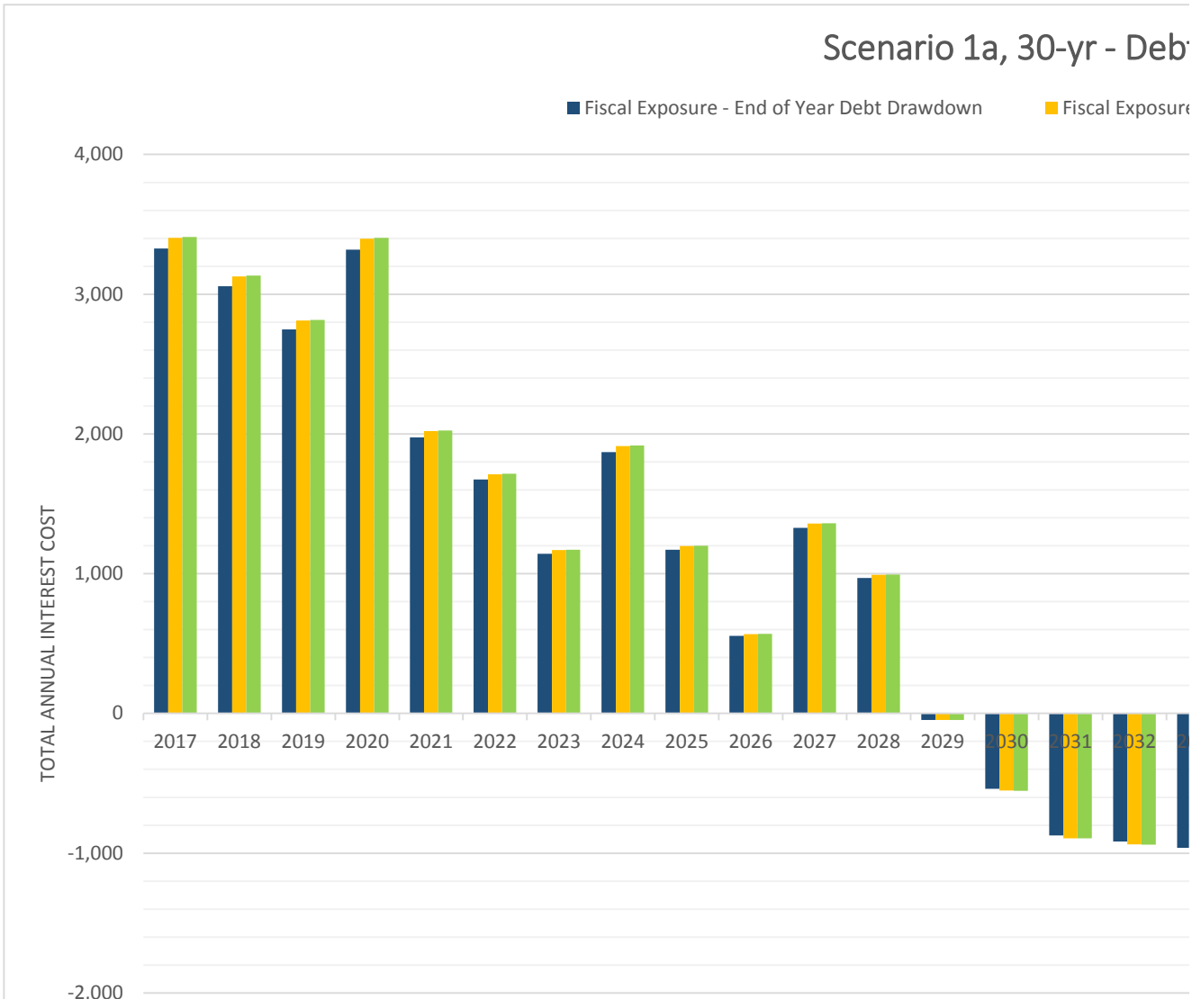


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



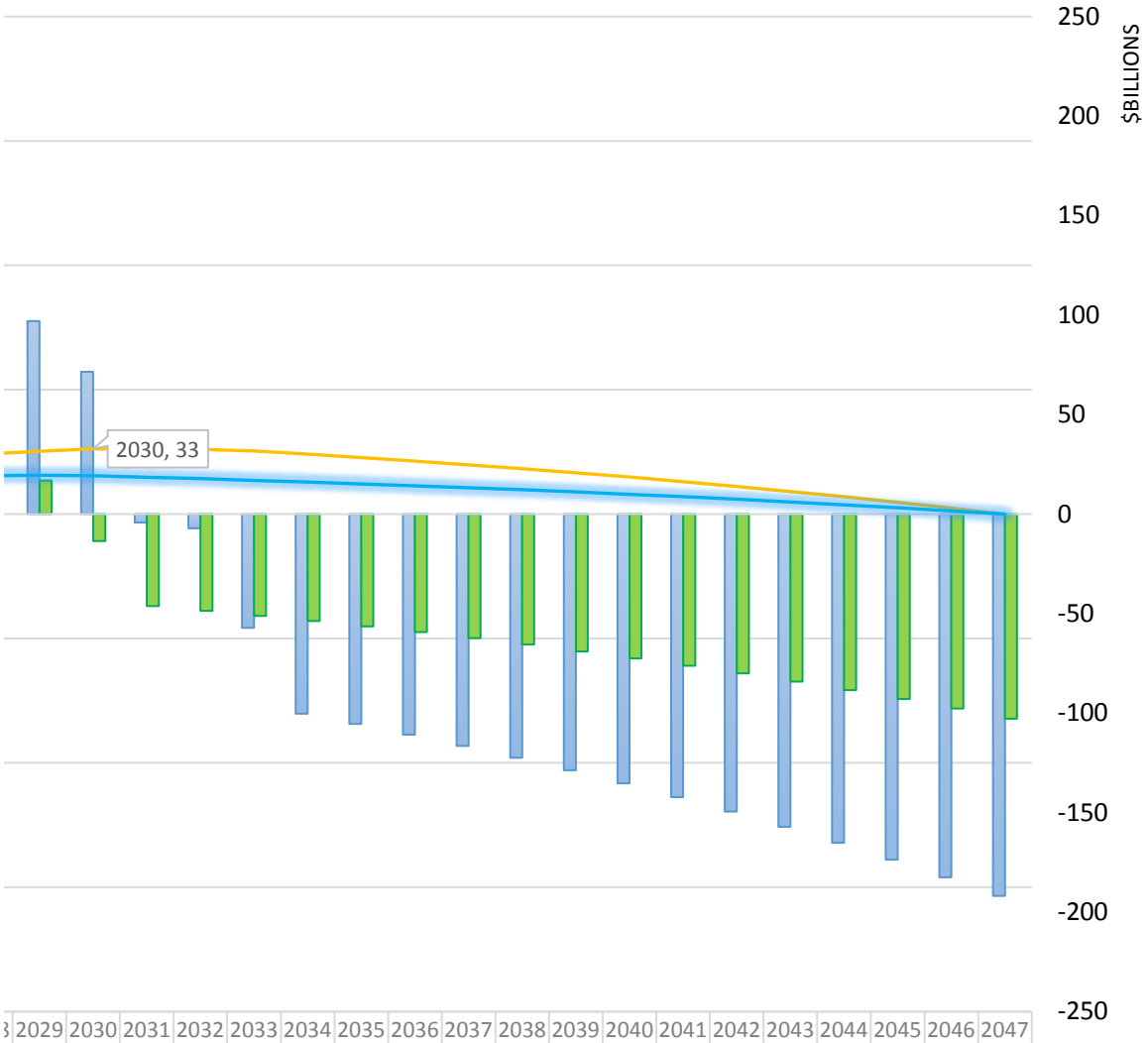


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

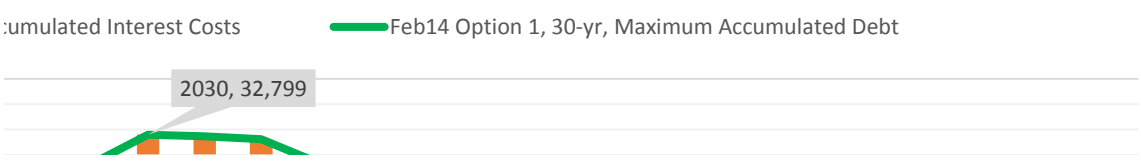
e - at 5.12% interest rate

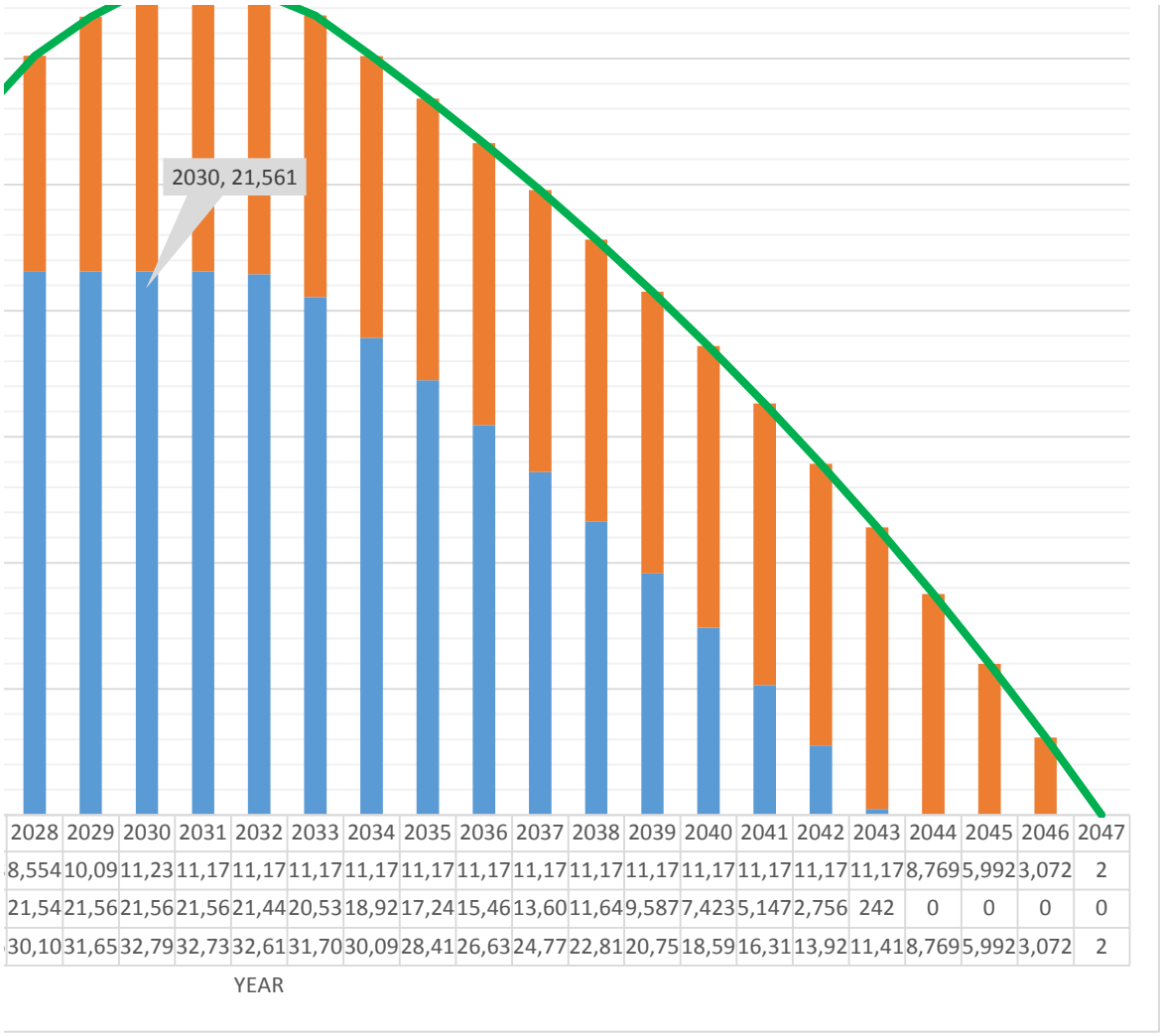


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
41,552	1,144	-68	-114	-914	-1,60	-1,68	-1,77	-1,86	-1,95	-2,05	-2,16	-2,27	-2,39	-2,51	-2,64	-2,77	-2,92	-3,06
3 271	-217	-740	-778	-818	-859	-903	-950	-998	-1,04	-1,10	-1,15	-1,21	-1,28	-1,34	-1,41	-1,48	-1,56	-1,64
031,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,769	5,992	3,072	2
519,53	19,31	18,57	17,79	16,98	16,12	15,21	14,26	13,27	12,22	11,11	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1

CALENDAR YEAR

n of Debt (Principal and Interest)

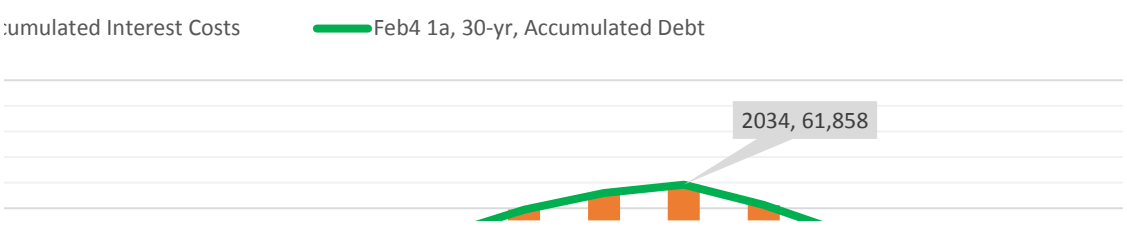




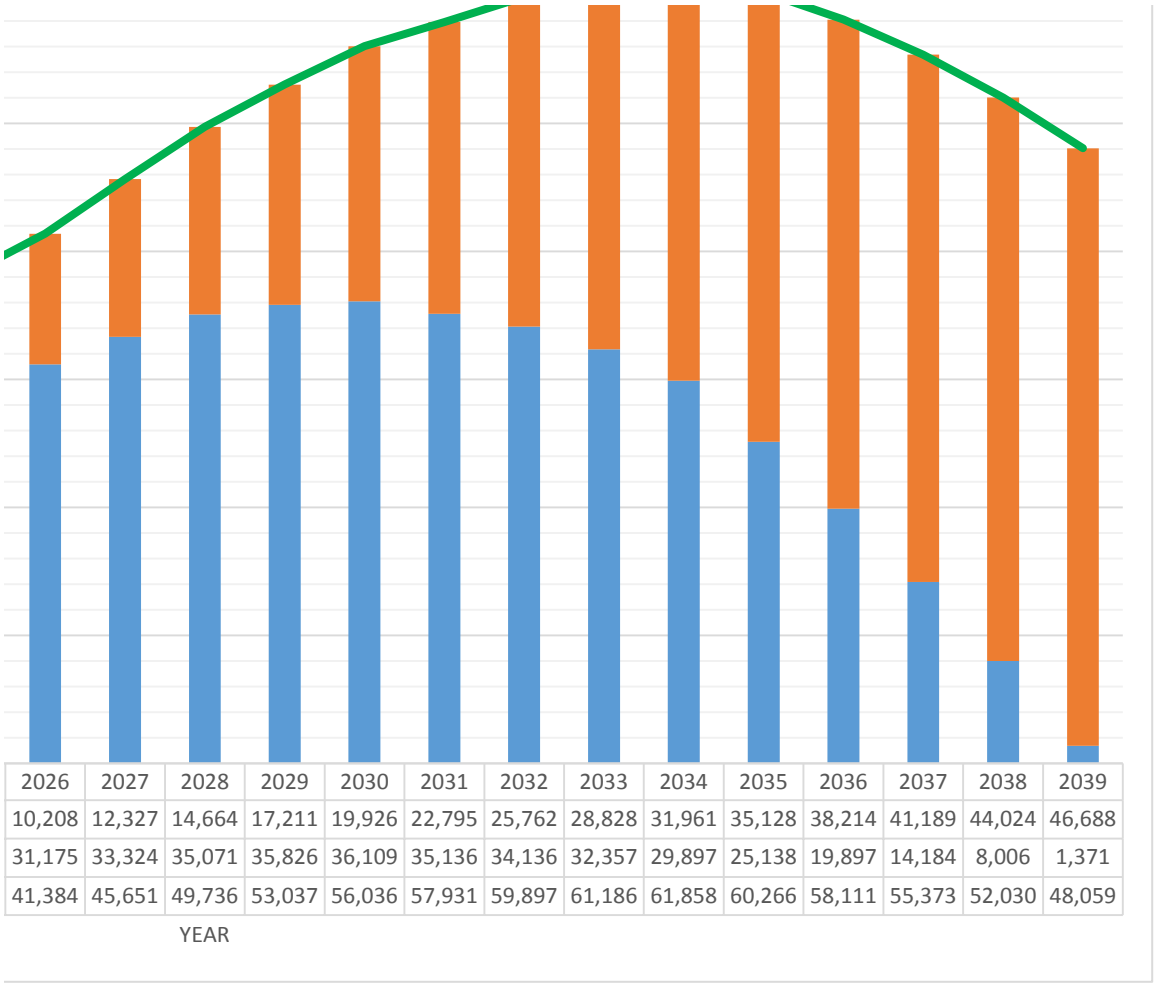
2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
8,554	10,09	11,23	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	8,769	5,992	3,072	2
21,54	21,56	21,56	21,56	21,44	20,53	18,92	17,24	15,46	13,60	11,64	9,587	7,423	5,147	2,756	242	0	0	0	0
30,10	31,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,769	5,992	3,072	2

YEAR

cumulated Total Interest Costs



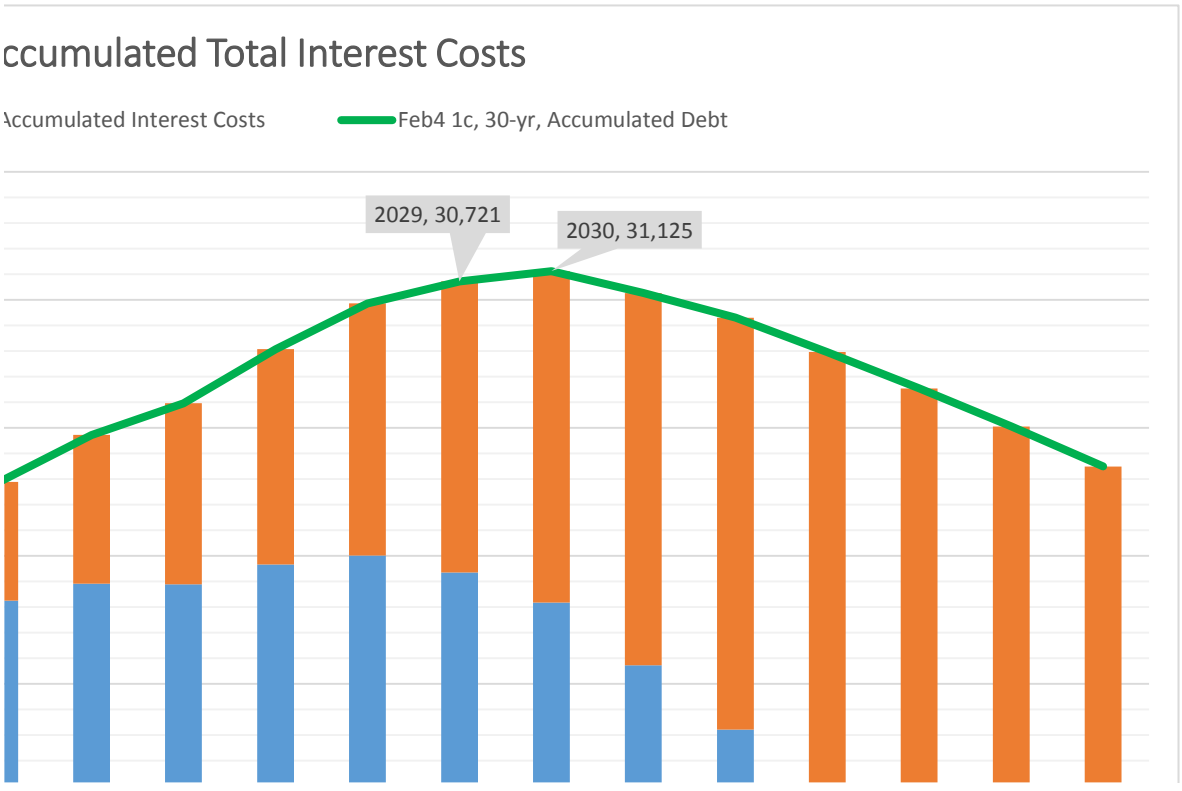
LIONS

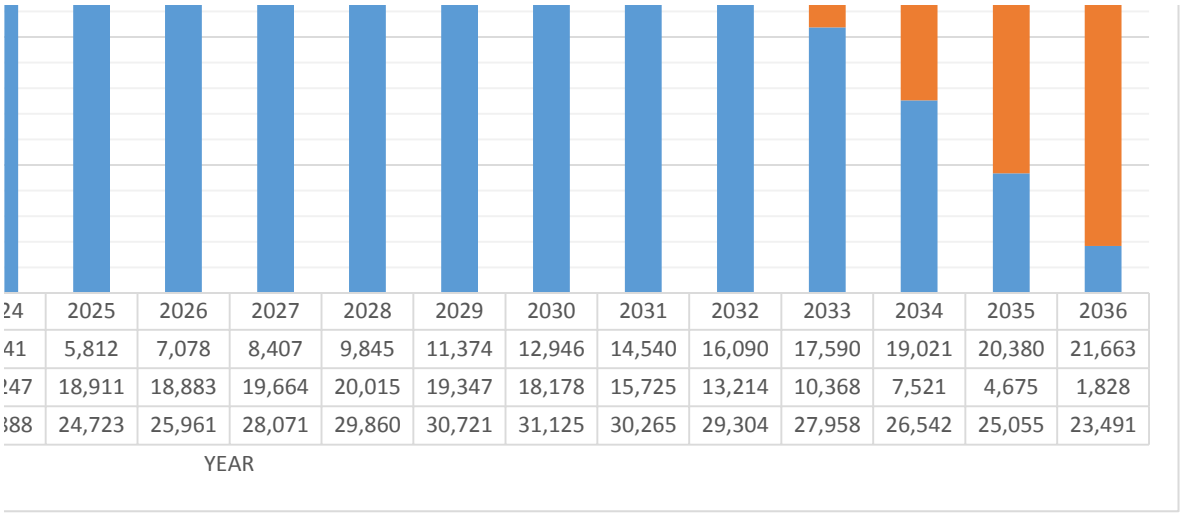


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

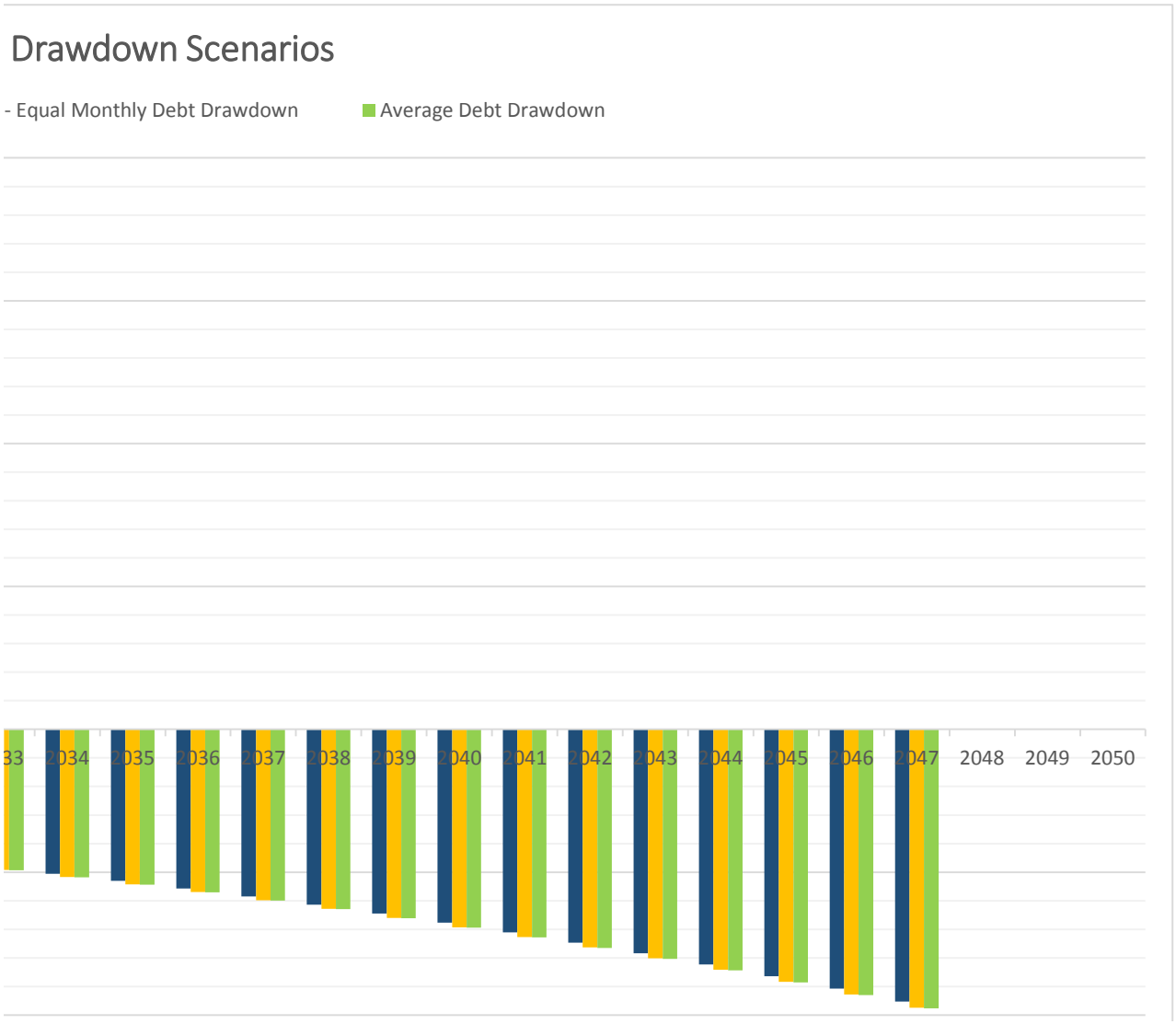
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





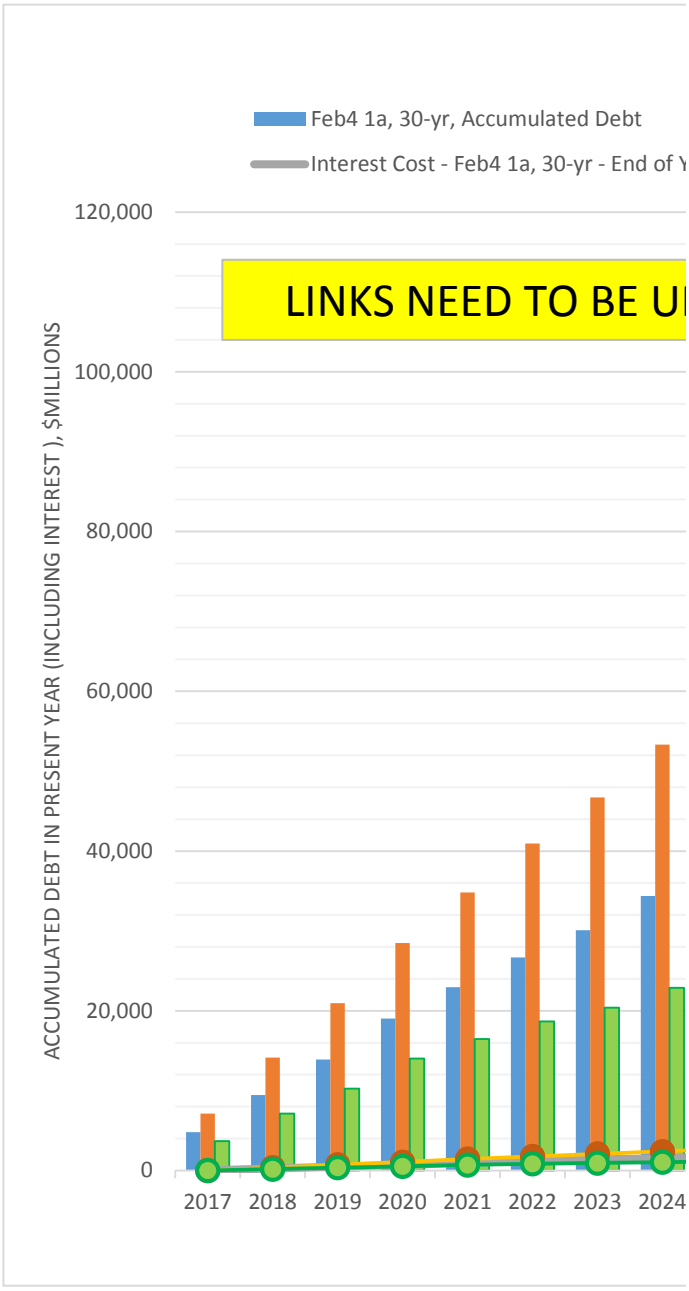
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

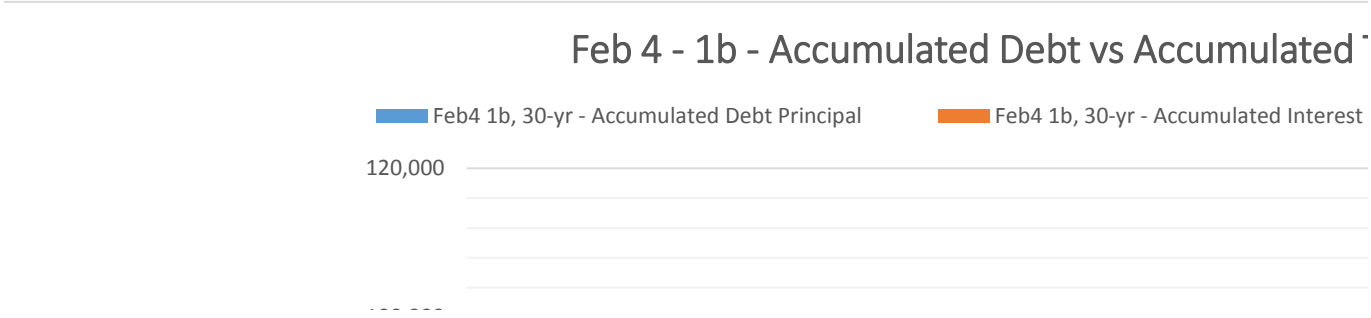
YEAR

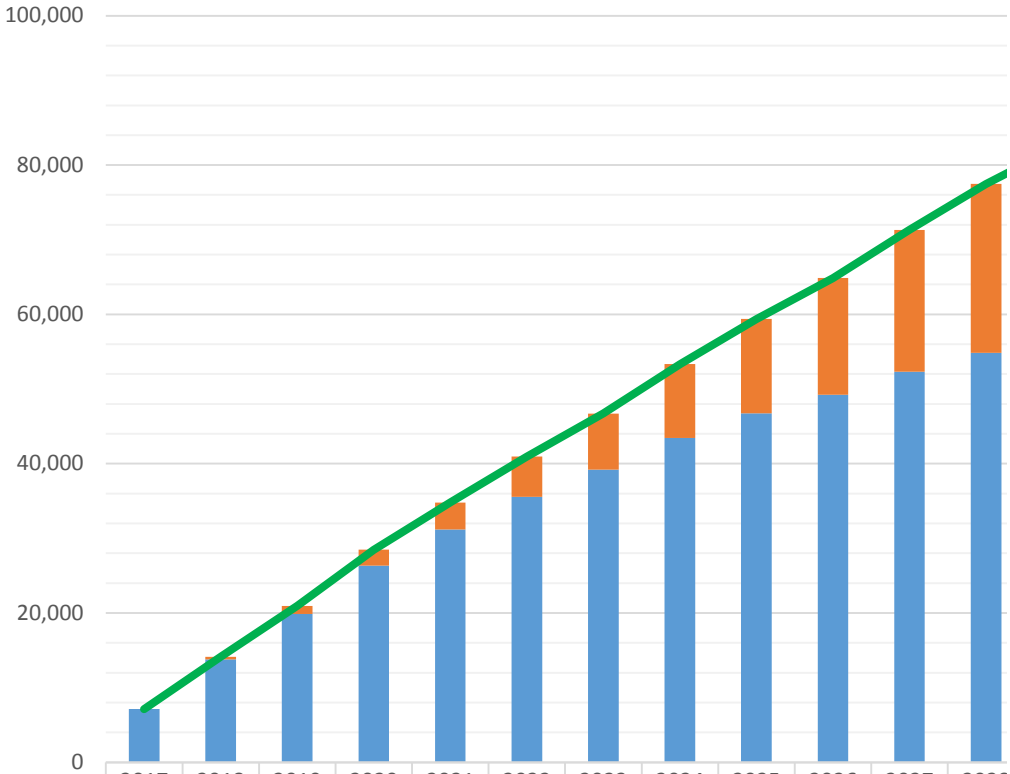


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate



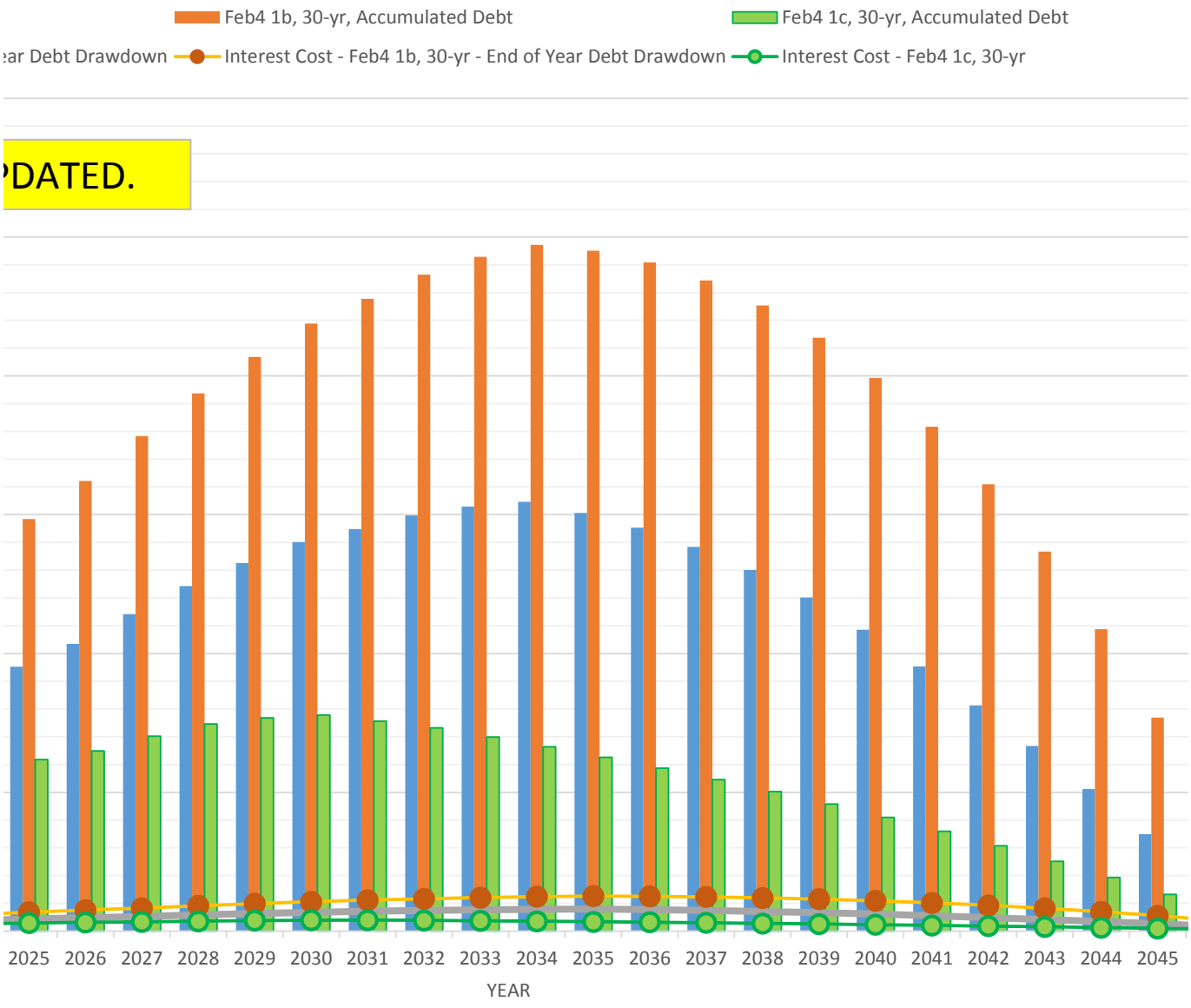

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000



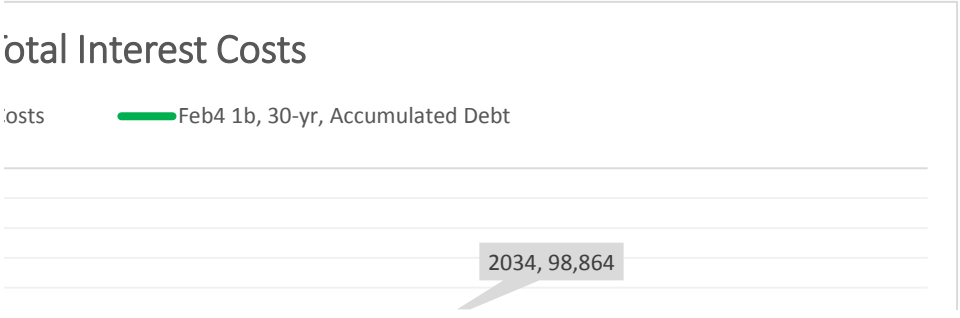
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

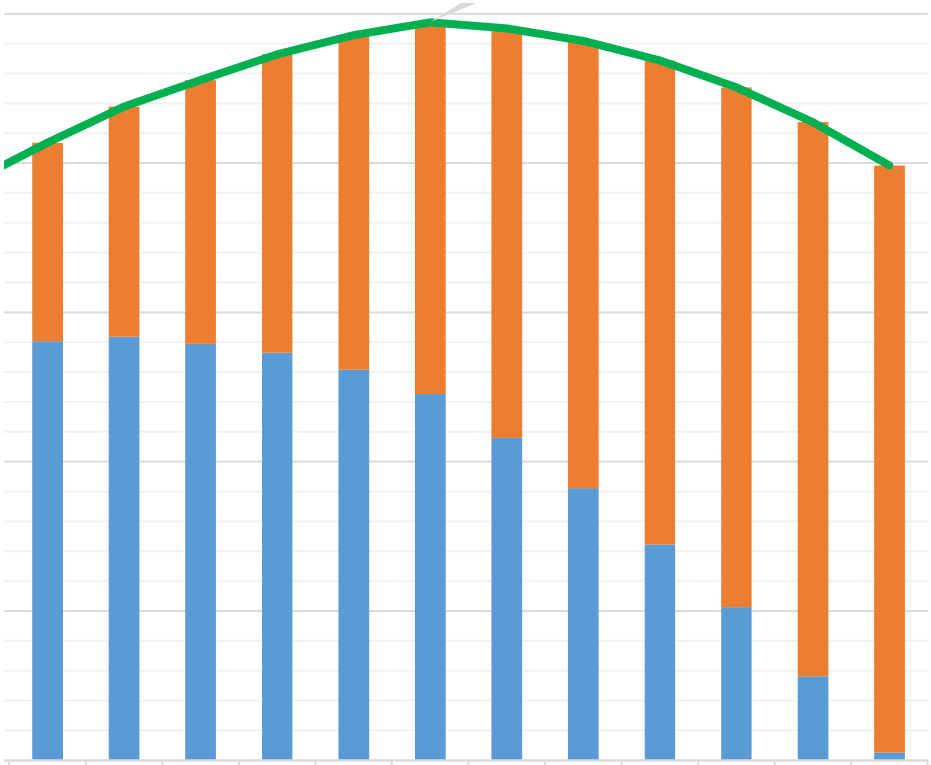
Y

Accumulated debt in present year, with annual interest costs



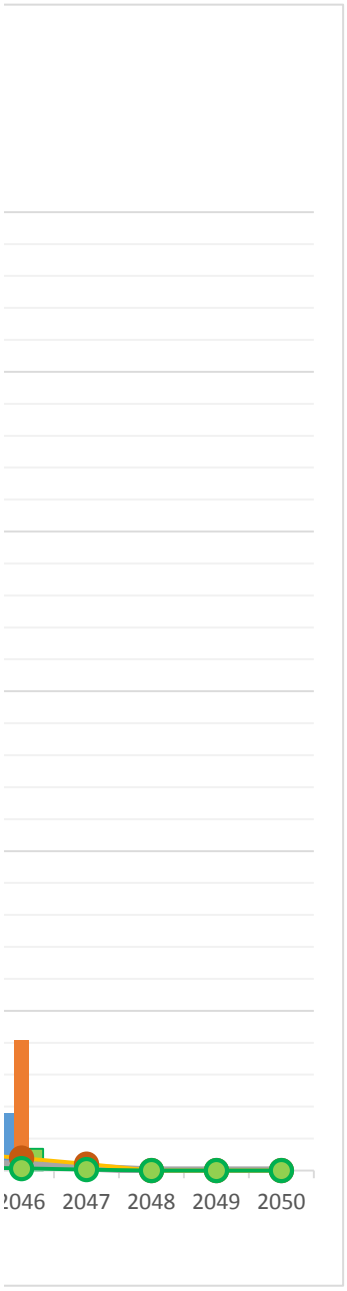
PDATED.


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

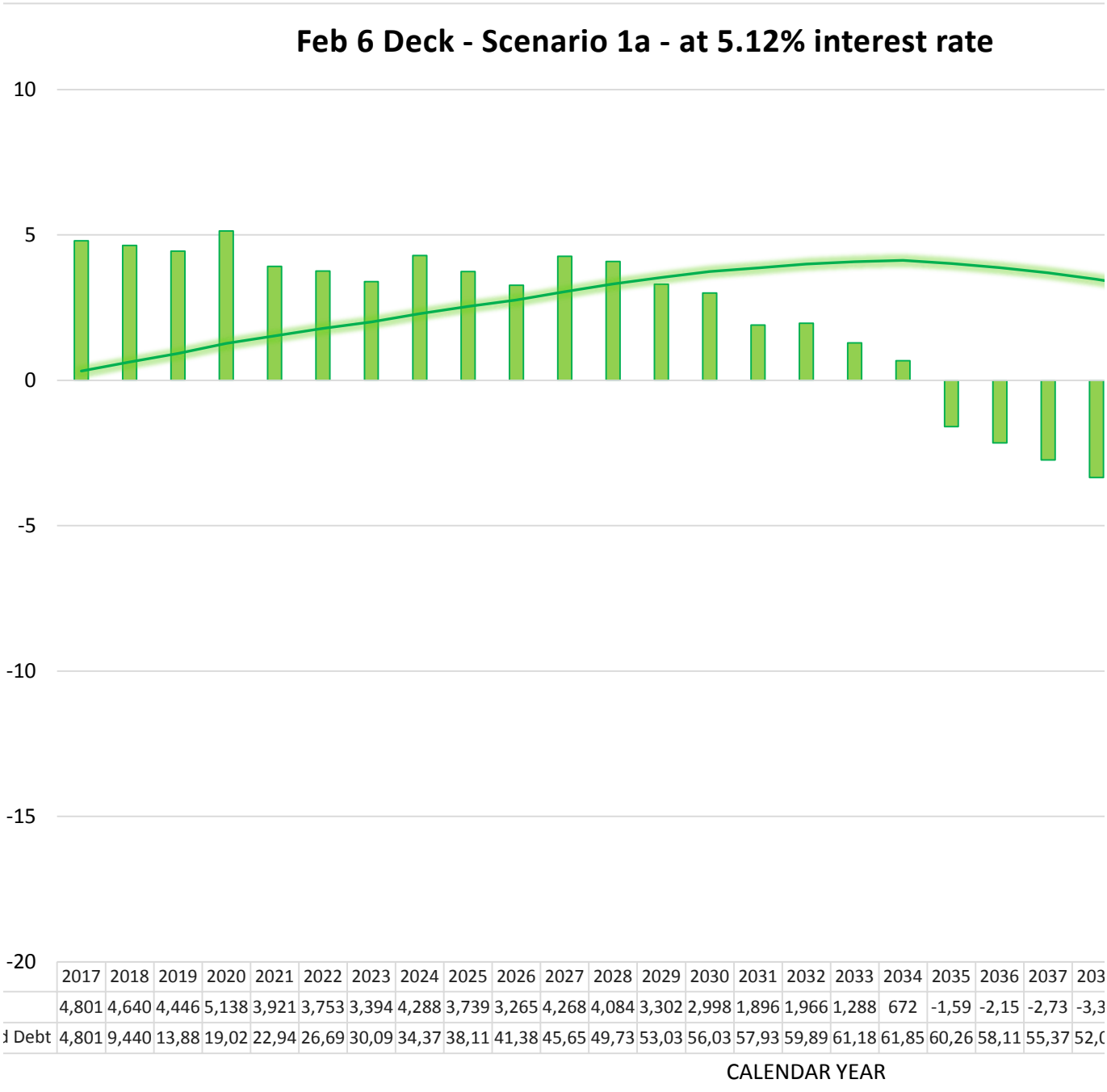
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

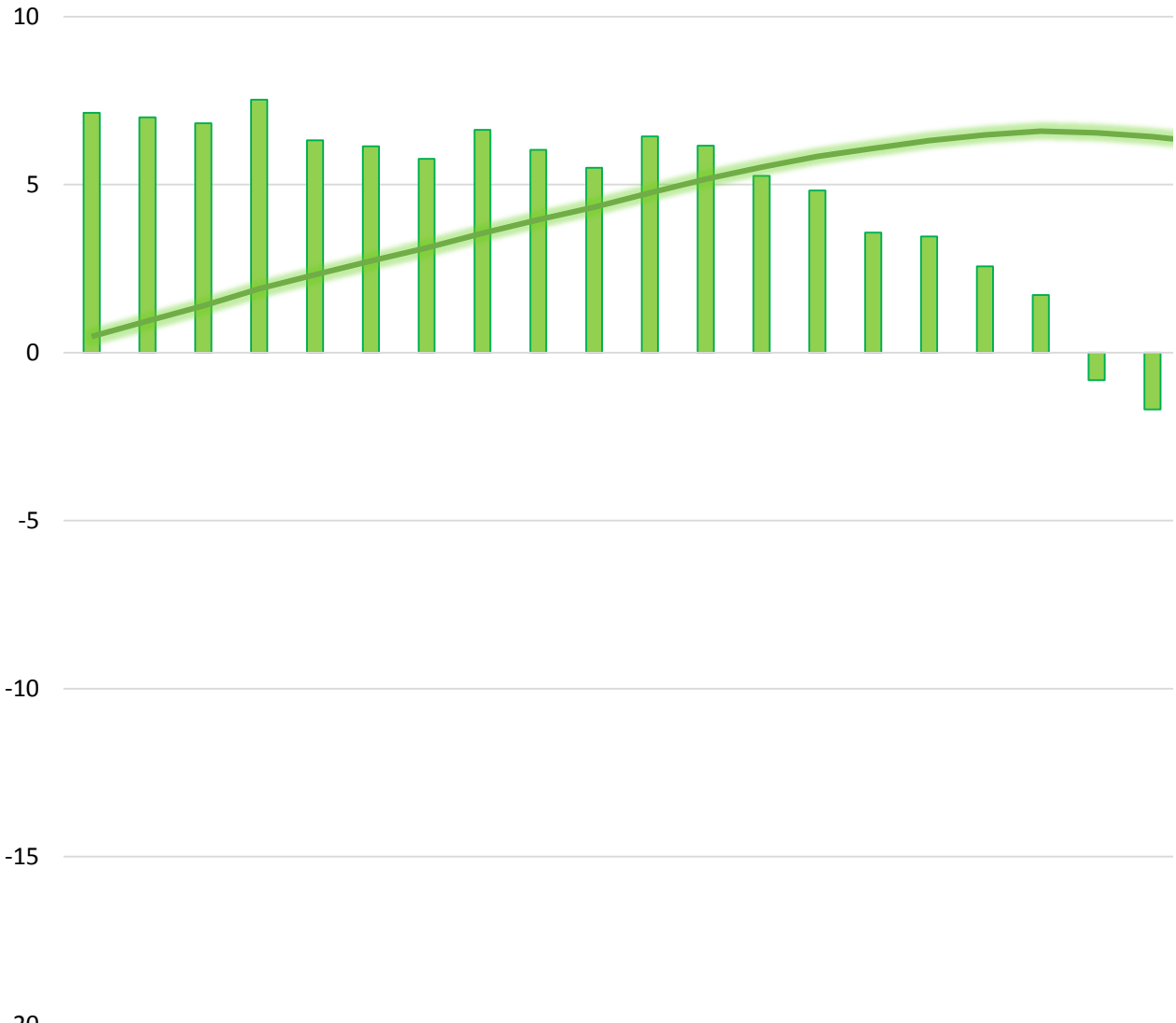
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

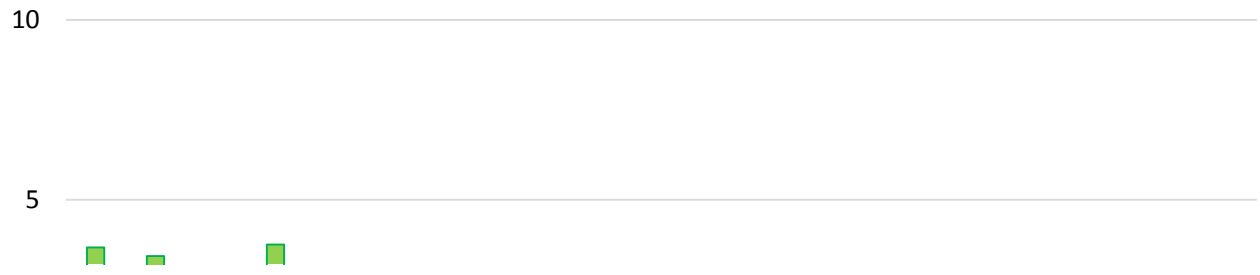
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

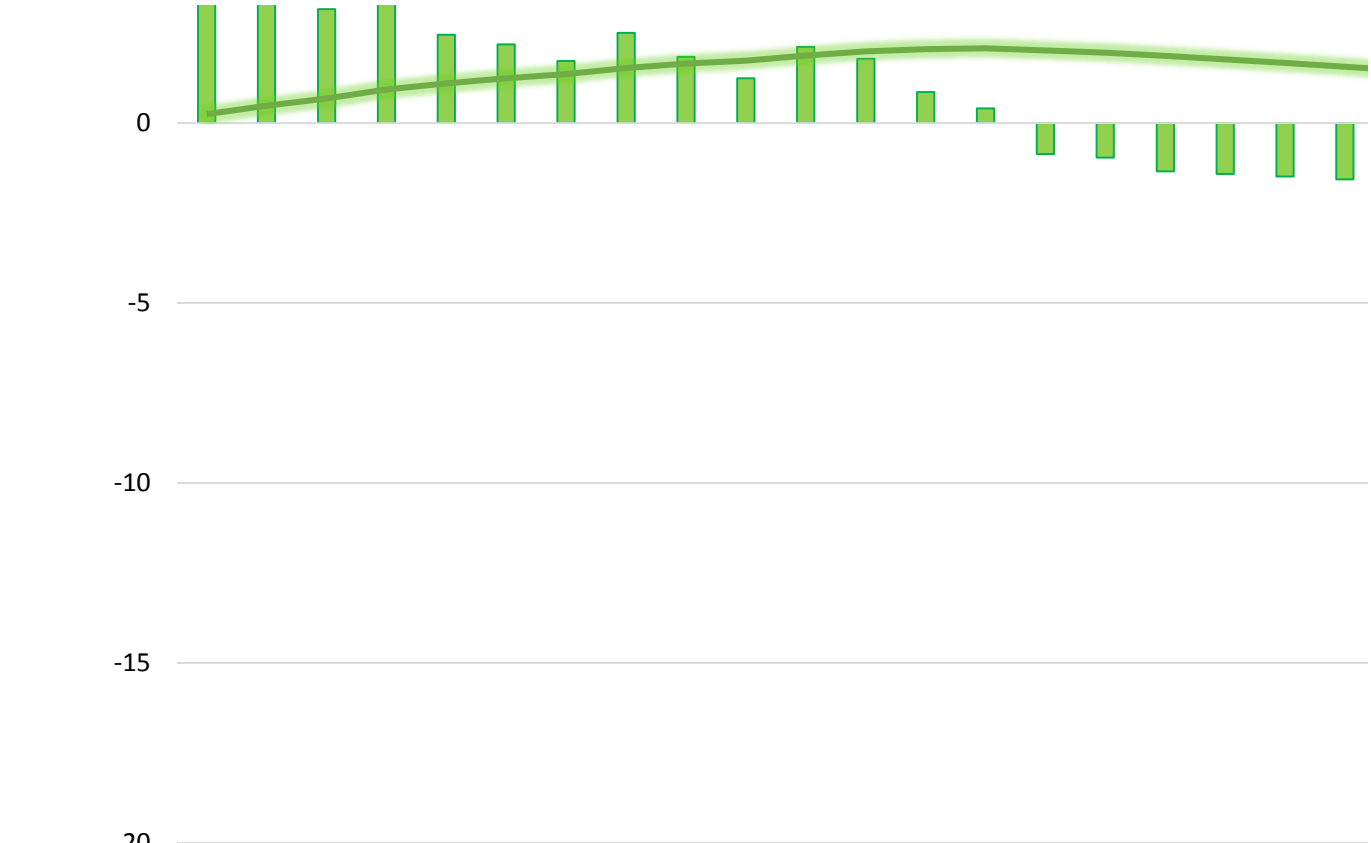


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



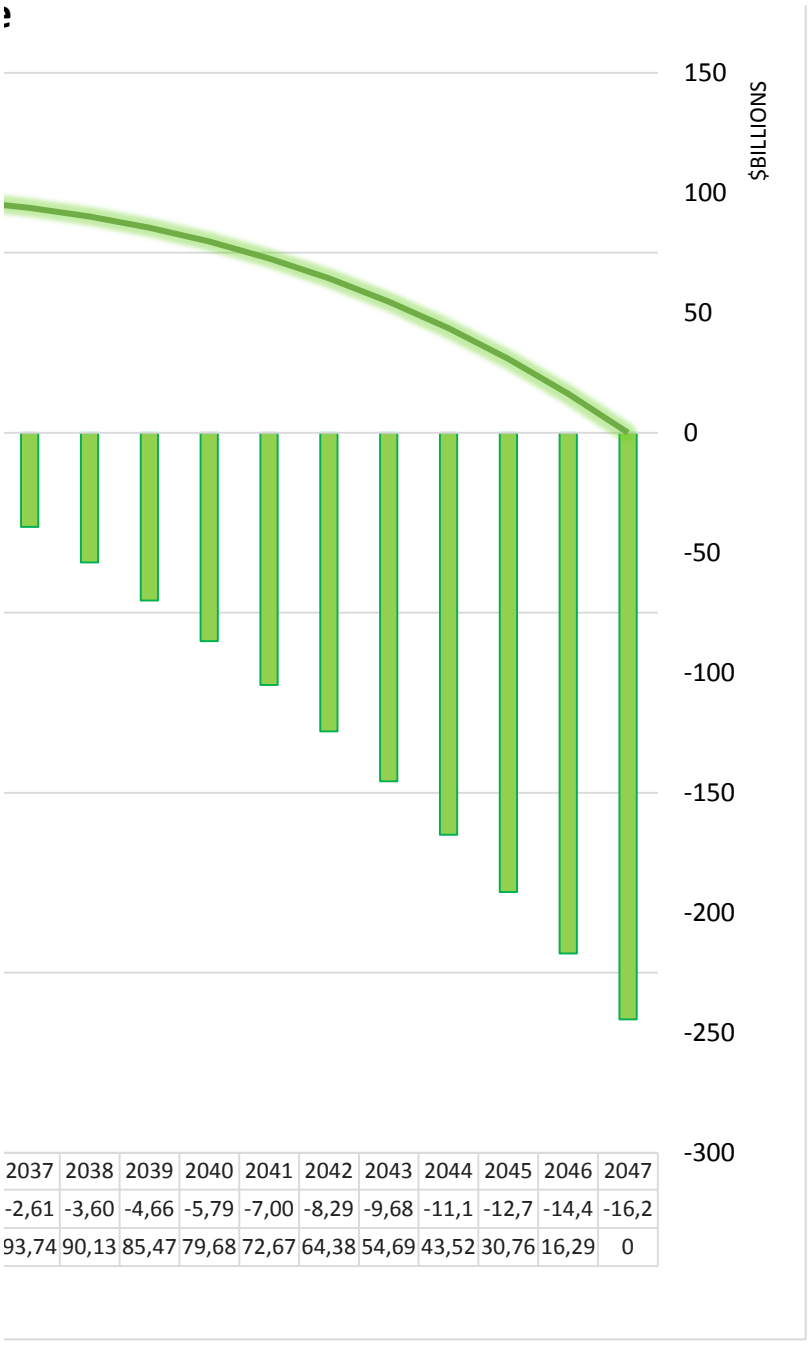


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

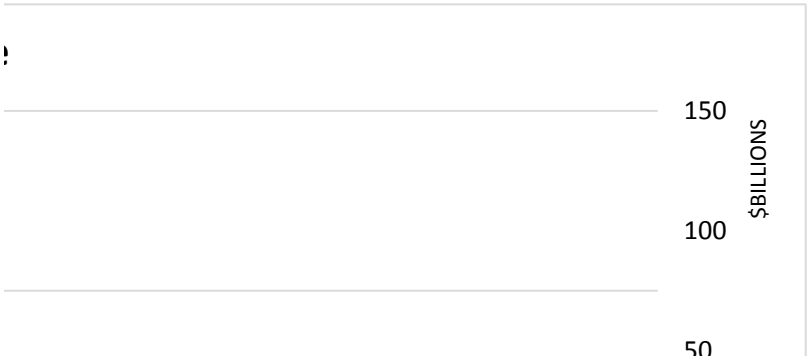
CALENDAR YEAR

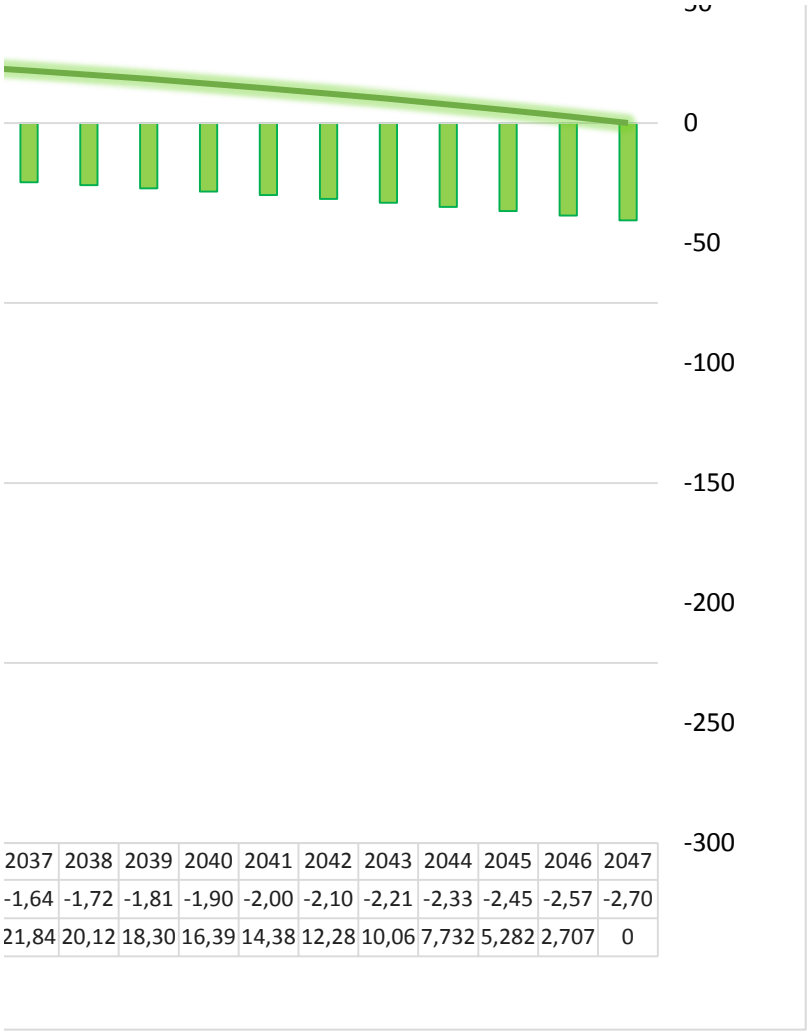


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

#REF!

#REF!

IESO GA cost forecast + extrapolation

Scenario
Option 1

Bills Lowered 25%, RPP Only

Option 2

Bills Lowered 20%, RPP Only

Option 3

Bills Lowered 18%, contract/conservation refinancing, RPP Only

	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
Ratepayer GA Payment	9,856	9,602	9,338	9,344
Total Accumulated Debt ($ billion)	2,239	4,586	7,035	10,219
Ratepayer GA Payment	10,537	10,296	10,041	10,061
Accumulated debt in present year (including 5% interest,	1,559	3,177	4,851	7,207
Ratepayer GA Payment	10,648	10,303	10,186	10,873
Accumulated debt in present year (including 5% interest,	1,447	3,053	4,575	6,105
	12095.37	11834.681	11552.105	12168.428

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801
13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103
9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513
9,266	11,038	12,324	14,370	15,725	16,458	18,035	19,263
9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253
7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876
10843.555	10633.626	10243.432	11128.119	10527.018	10033.287	11042.844	10819.098

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389

9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615
31,654	32,799	32,730	32,616	31,702	30,097	28,411	26,638
10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117
19,534	19,317	18,577	17,799	16,981	16,122	15,218	14,268
9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837
18,843	19,521	20,007	20,312	20,325	19,755	18,549	17,050
10008.692	9721.4381	8654.4847	8819.9388	8238.0383	7756.4351	5662.3212	5388.8445

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627

8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853
24,774	22,815	20,756	18,591	16,316	13,924	11,410	8,767
6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355
13,270	12,221	11,118	9,958	8,740	7,458	6,112	4,696
7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712
15,464	13,694	12,062	10,556	9,143	7,810	6,672	5,928
5128.5761	4880.878	4645.1432	4420.7938	4207.28	4004.0783	3810.6908	3626.6435

2045	2046	2047	2048

3,451	3,285	3,126	2,975	2,831	2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
6,678	6,511	6,353	2,975	2,831	2,695
5,989	3,069	0	0	0	0
5,180	5,013	4,854	2,975	2,831	2,695
3,208	1,644	0	-	-	-
4,007	3,619	3,425	3,156	3,011	2,878
5,676	5,633	5,623	5,730	5,843	5,959
3451.485	3284.787	3126.139	2975.154	2831.461	2694.708

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

	5.00%		
Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb14_1_30yr

Option 1 - Bills Lowered 25%, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,239	2,347

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	560	2,266

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $33 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb14_2_30yr

Option 2 - Bills Lowered 20%, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,559	1,619

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	390	1,574

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb14_3_30yr

Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606

	Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st		362	1,487

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	390 - 560	1,574 - 2,266

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	560	2266
Debt-Finance Global Adjustment Costs, Option 1a	390	1574
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		

Enhanced RPP Rebate		
Total, A	**560**	**2506**
Total, B	390	1814

Proposed Program Total:	390 - 560	1,814 - 2,506

ining

0	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,449	3,184	2,834	2,599

2018-19	2019-20	2020-21	2021-2022
2,372	2,633	3,096	2,775

$ millions

Option 1
Option 2
Option 3

Assumes an inte

2030.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,674	2,356	2,060	1,772

2018-19	2019-20	2020-21	2021-2022
1,632	1,844	2,282	1,988

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429

2033.

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022
1,632 - 2,372	1,844 - 2,633	2,282 - 3,096	1,988 - 2,775

/1

2018-19[1]	2019-20[1]	2020-21[1]
2372	2633	3096
1632	1844	2282
225	279	323
60	60	60
18	18	18

2675	**2990**	**3497**
1935	2201	2683

1,935 - 2,675 2,201 - 2,990 2,683 - 3,497

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$21,561	$30,205	$32,799	occurs in Year 2030
$13,503	$17,883	$19,534	occurs in Year 2029
$12,862	$19,498	$20,326	occurs in Year 2033

erest rate of 5.00% (compounded monthly).

Tab Name		Total Accumulated Interest Costs
Feb14_1_30yr	$26,517	$34,278
Feb14_2_30yr	$15,631	$20,378
Feb14_3_30yr	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$26,517 to $34,278
Option 2	$15,631 to $20,378
Option 3	$17,202 to $22,028

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,239	2,347	2,449	3,184	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,604	-1,687	-1,773	-1,864	-1,959	-2,059	-2,164	-2,275	-2,392	-2,514	-2,643	-2,778	-2,920	-3,069	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,292	2,403	2,507	3,260	2,902	2,660	2,219	3,056	2,412	1,841	2,776	2,492	1,589	1,171	-70	-117	-936	-1,643	-1,727	-1,815	-1,908	-2,005	-2,108	-2,216	-2,329	-2,448	-2,574	-2,705	-2,844	-2,989	-3,142	0	0	0	
			53	56	58	76	67	62	52	71	56	43	64	58	37	27	-2	-3	-22	-38	-40	-42	-44	-47	-49	-51	-54	-57	-60	-63	-66	-69	-73	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,184	1,678	30,205
Equal Monthly Debt Drawdown	3,260	1,676	

	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,799	2030	21,561
Equal Monthly Debt Drawdown	33,579		

Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
a	Debt, Beginning of Year	0	2,239	4,586	7,035	10,219	13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103	31,655	32,799	32,731	32,617	31,703	30,098	28,412	26,639	24,775	22,816	20,757	18,593	16,318	13,926	11,412	8,769	5,992	3,072	2	3	3	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*115*	*235*	*360*	*523*	*668*	*801*	*912*	*1,064*	*1,185*	*1,277*	*1,416*	*1,540*	*1,620*	*1,678*	*1,675*	*1,669*	*1,622*	*1,540*	*1,454*	*1,363*	*1,268*	*1,167*	*1,062*	*951*	*835*	*712*	*584*	*449*	*307*	*157*	*0*	*0*	*0*	30,205
b	Additional GA Debt Drawdown, End of Year	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,239	4,586	7,035	10,219	13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103	31,655	32,799	32,731	32,617	31,703	30,098	28,412	26,639	24,775	22,816	20,757	18,593	16,318	13,926	11,412	8,769	5,992	3,072	2	3	3		
			FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,138	8,554	10,094	11,238	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	8,769	5,992	3,072	2	3	3	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,821	13,752	15,118	17,192	18,483	19,097	20,531	21,549	21,561	21,561	21,561	21,447	20,533	18,928	17,242	15,469	13,605	11,646	9,587	7,423	5,147	2,756	242	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,138	8,554	10,094	11,714	13,392	15,066	16,735	18,357	19,897	21,350	22,713	23,981	25,148	26,210	27,161	27,996	28,709	29,293	29,741	30,048	30,205				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,821	13,752	15,118	17,192	18,483	19,097	20,531	21,549	21,561	21,086	19,339	17,551	14,968	11,741	8,515	5,288	2,062	-1,164	-4,391	-7,617	-10,844	-14,070	-17,297	-20,523	-23,750	-26,976	-30,202				
Fiscal Exposure - End of Year Debt Drawdown		2,239	2,347	2,449	3,184	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,604	-1,687	-1,773	-1,864	-1,959	-2,059	-2,164	-2,275	-2,392	-2,514	-2,643	-2,778	-2,920	-3,069	0	0	0	

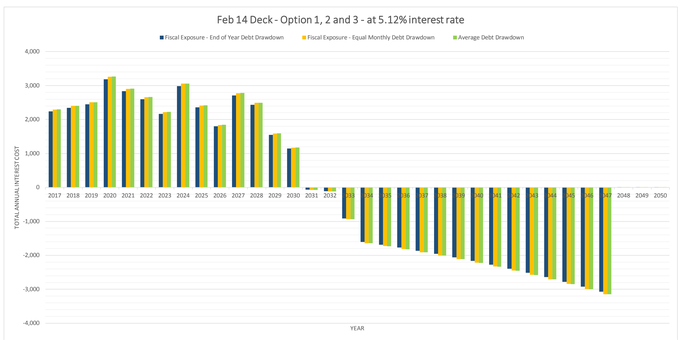
Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,292	4,695	7,202	10,462	13,363	16,024	18,243	21,299	23,711	25,552	28,327	30,819	32,408	33,579	33,510	33,393	32,457	30,814	29,087	27,272	25,365	23,359	21,251	19,035	16,706	14,257	11,683	8,978	6,134	3,145	2	3	3	
1,676	*Interest Cost - Feb14 Option 1, 30-yr*	*53*	*170*	*293*	*436*	*590*	*730*	*852*	*983*	*1,120*	*1,228*	*1,341*	*1,473*	*1,577*	*1,647*	*1,676*	*1,672*	*1,647*	*1,584*	*1,500*	*1,411*	*1,319*	*1,221*	*1,118*	*1,010*	*897*	*778*	*653*	*521*	*383*	*237*	*84*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,292	4,695	7,202	10,462	13,363	16,024	18,243	21,299	23,711	25,552	28,327	30,819	32,408	33,579	33,510	33,393	32,457	30,814	29,087	27,272	25,365	23,359	21,251	19,035	16,706	14,257	11,683	8,978	6,134	3,145	2	3	3		
Fiscal Exposure - Equal Monthly Debt Drawdown		2,292	2,403	2,507	3,260	2,902	2,660	2,219	3,056	2,412	1,841	2,776	2,492	1,589	1,171	-70	-117	-936	-1,643	-1,727	-1,815	-1,908	-2,005	-2,108	-2,216	-2,329	-2,448	-2,574	-2,705	-2,844	-2,989	-3,142	0	0	0	

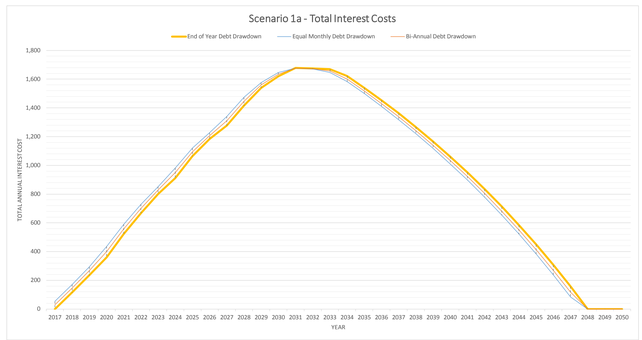
	Monthly Drawdown	187	186	185	235	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	-	-	-
	FV of Monthly Drawdown at 5%	2,292	2,285	2,267	2,891	2,366	1,977	1,399	2,123	1,322	628	1,468	1,043	12	(487)	(1,788)	(1,831)	(2,644)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	-	-	-	
	Annual Interest Cost on New Drawdowns	53	53	53	67	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	-	-	-	
	Annual Interest Cost on Opening Balance	-	117	240	368	535	684	820	933	1,090	1,213	1,307	1,449	1,577	1,658	1,718	1,714	1,708	1,661	1,577	1,488	1,395	1,298	1,195	1,087	974	855	729	598	459	314	161	0	0	0	
	Total Annual Interest Cost	53	170	293	436	590	730	852	983	1,120	1,228	1,341	1,473	1,577	1,647	1,676	1,672	1,647	1,584	1,500	1,411	1,319	1,221	1,118	1,010	897	778	653	521	383	237	84	0	0	0	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,268	4,645	7,125	10,349	13,220	15,852	18,047	21,070	23,456	25,277	28,023	30,488	32,060	33,219	33,150	33,034	32,108	30,483	28,775	26,980	25,092	23,108	21,023	18,831	16,526	14,104	11,558	8,882	6,068	3,111	2	3	3	
	Interest Cost - Feb14 Option 1, 30-yr	*29*	*145*	*266*	*401*	*559*	*701*	*828*	*950*	*1,095*	*1,208*	*1,312*	*1,447*	*1,560*	*1,634*	*1,677*	*1,673*	*1,657*	*1,601*	*1,518*	*1,431*	*1,339*	*1,242*	*1,141*	*1,034*	*922*	*804*	*680*	*550*	*413*	*269*	*118*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,268	4,645	7,125	10,349	13,220	15,852	18,047	21,070	23,456	25,277	28,023	30,488	32,060	33,219	33,150	33,034	32,108	30,483	28,775	26,980	25,092	23,108	21,023	18,831	16,526	14,104	11,558	8,882	6,068	3,111	2	3	3		
Fiscal Exposure - Bi-Annual Debt Drawdown		2,268	2,377	2,480	3,225	2,870	2,632	2,195	3,024	2,386	1,821	2,746	2,465	1,572	1,159	-69	-116	-926	-1,625	-1,708	-1,796	-1,887	-1,984	-2,085	-2,192	-2,304	-2,422	-2,546	-2,676	-2,813	-2,957	-3,109	0	0	0	

	Bi-Annual Drawdown	1,119	1,116	1,107	1,412	1,156	965	683	1,037	646	307	717	509	6	(238)	(873)	(894)	(1,291)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,268	2,261	2,243	2,860	2,341	1,955	1,384	2,100	1,308	621	1,453	1,031	12	(481)	(1,769)	(1,812)	(2,616)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	-	-	-	
	Annual Interest Cost on New Drawdowns	29	29	28	36	30	25	17	27	17	8	18	13	0	(6)	(22)	(23)	(33)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	-	-	-	
	Annual Interest Cost on Opening Balance	-	116	238	365	529	676	811	923	1,078	1,200	1,293	1,434	1,560	1,640	1,700	1,696	1,690	1,643	1,560	1,472	1,380	1,284	1,182	1,076	963	846	722	591	454	310	159	0	0	0	
	Total Annual Interest Cost	29	145	266	401	559	701	828	950	1,095	1,208	1,312	1,447	1,560	1,634	1,677	1,673	1,657	1,601	1,518	1,431	1,339	1,242	1,141	1,034	922	804	680	550	413	269	118	0	0	0	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,296	4,703	7,215	10,480	13,387	16,052	18,275	21,336	23,752	25,596	28,377	30,873	32,465	33,638	33,568	33,451	32,514	30,868	29,138	27,320	25,409	23,400	21,288	19,068	16,735	14,282	11,704	8,994	6,145	3,150	2	3	3	
	Interest Cost - Feb14 Option 1, 30-yr	*57*	*175*	*297*	*441*	*595*	*724*	*856*	*988*	*1,125*	*1,231*	*1,346*	*1,478*	*1,580*	*1,649*	*1,676*	*1,672*	*1,645*	*1,581*	*1,497*	*1,408*	*1,315*	*1,217*	*1,115*	*1,007*	*893*	*774*	*648*	*516*	*378*	*232*	*79*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,296	4,703	7,215	10,480	13,387	16,052	18,275	21,336	23,752	25,596	28,377	30,873	32,465	33,638	33,568	33,451	32,514	30,868	29,138	27,320	25,409	23,400	21,288	19,068	16,735	14,282	11,704	8,994	6,145	3,150	2	3	3		
Fiscal Exposure - Average Debt Drawdown		2,296	2,407	2,512	3,265	2,907	2,665	2,223	3,062	2,416	1,844	2,780	2,496	1,592	1,173	-70	-117	-937	-1,646	-1,730	-1,818	-1,911	-2,009	-2,112	-2,220	-2,333	-2,453	-2,578	-2,710	-2,849	-2,995	-3,148	0	0	0	





Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,559	1,619	1,674	2,356	2,060	1,772	1,286	2,046	1,355	733	1,578	1,228	271	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,415	-1,488	-1,564	-1,644	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0	
			37	38	40	56	49	42	31	49	32	17	38	29	6	-5	-18	-19	-19	-20	-21	-23	-24	-25	-26	-28	-29	-30	-32	-34	-35	-37	-39	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,356	999	17,883
Equal Monthly Debt Drawdown	2,412	994	

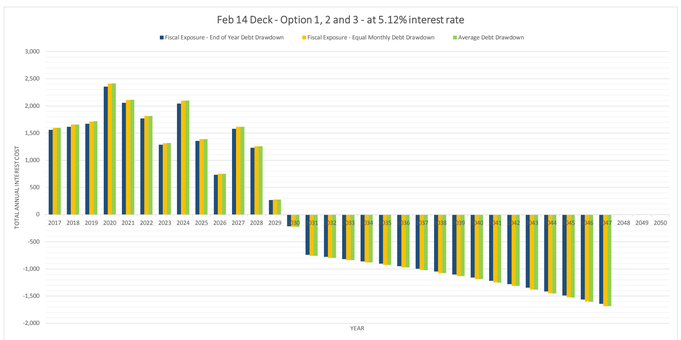
	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,534	2029	13,503
Equal Monthly Debt Drawdown	19,999		

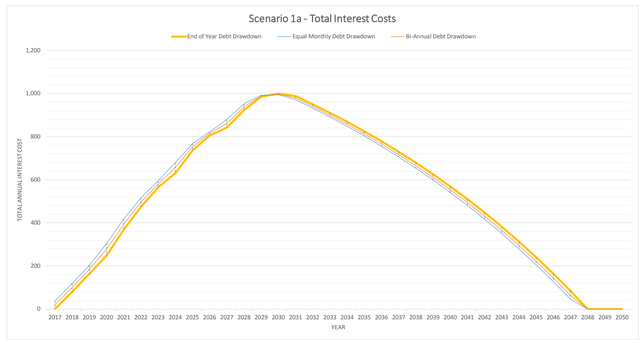
Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
a	Debt, Beginning of Year	0	1,559	3,177	4,851	7,207	9,266	11,039	12,324	14,370	15,725	16,458	18,035	19,264	19,534	19,317	18,577	17,799	16,982	16,122	15,219	14,269	13,271	12,222	11,119	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1	2	2	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*80*	*163*	*248*	*369*	*474*	*565*	*631*	*735*	*805*	*842*	*923*	*986*	*999*	*988*	*950*	*911*	*869*	*825*	*779*	*730*	*679*	*625*	*569*	*510*	*447*	*382*	*313*	*240*	*164*	*84*	*0*	*0*	*0*	17,883
b	Additional GA Debt Drawdown, End of Year	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,559	3,177	4,851	7,207	9,266	11,039	12,324	14,370	15,725	16,458	18,035	19,264	19,534	19,317	18,577	17,799	16,982	16,122	15,219	14,269	13,271	12,222	11,119	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1	2	2	2	
			TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	7,818	7,078	6,300	5,483	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,697	3,210	1,646	1	2	2	2	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,842	12,461	12,390	13,125	13,431	12,716	11,499	11,499	11,499	11,499	11,499	10,595	9,646	8,648	7,598	6,495	5,336	4,117	2,836	1,490	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	7,818	8,806	9,757	10,667	11,536	12,361	13,140	13,870	14,549	15,174	15,743	16,252	16,700	17,081	17,394	17,634	17,798	17,883				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,842	12,461	12,390	13,125	13,431	12,716	11,499	9,771	8,042	6,314	4,586	2,858	1,129	-599	-2,327	-4,055	-5,784	-7,512	-9,240	-10,968	-12,696	-14,425	-16,153	-17,881				
Fiscal Exposure - End of Year Debt Drawdown		1,559	1,619	1,674	2,356	2,060	1,772	1,286	2,046	1,355	733	1,578	1,228	271	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,415	-1,488	-1,564	-1,644	0	0	0	

Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,019	18,223	17,385	16,506	15,581	14,609	13,587	12,512	11,383	10,196	8,948	7,637	6,258	4,809	3,286	1,685	2	2	2	
994	*Interest Cost - Feb14 Option 1, 30-yr*	*37*	*118*	*202*	*304*	*418*	*516*	*595*	*679*	*767*	*822*	*880*	*952*	*992*	*994*	*971*	*932*	*891*	*848*	*803*	*756*	*706*	*654*	*599*	*541*	*481*	*417*	*350*	*279*	*205*	*127*	*45*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,019	18,223	17,385	16,506	15,581	14,609	13,587	12,512	11,383	10,196	8,948	7,637	6,258	4,809	3,286	1,685	2	2	2	2	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0	
	Monthly Drawdown	130	128	126	176	141	108	60	118	52	(6)	61	25	(60)	(101)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	-	-	-	
	FV of Monthly Drawdown at 5%	1,596	1,575	1,548	2,157	1,731	1,329	738	1,449	635	(74)	753	313	(732)	(1,246)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	-	-	-	
	Annual Interest Cost on New Drawdowns	37	37	36	50	40	31	17	34	15	(2)	17	7	(17)	(29)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	-	-	-	
	Annual Interest Cost on Opening Balance	-	82	166	254	377	485	578	646	753	824	862	945	1,009	1,023	1,012	973	932	889	844	797	747	695	640	582	522	458	391	320	246	168	86	0	0	0	
	Total Annual Interest Cost	37	118	202	304	418	516	595	679	767	822	880	952	992	994	971	932	891	848	803	756	706	654	599	541	481	417	350	279	205	127	45	0	0	0	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,815	18,027	17,199	16,328	15,413	14,452	13,441	12,378	11,261	10,087	8,852	7,555	6,191	4,758	3,251	1,667	1	2	2	
	Interest Cost - Feb14 Option 1, 30-yr	*20*	*100*	*184*	*278*	*395*	*497*	*581*	*657*	*753*	*814*	*862*	*938*	*989*	*997*	*979*	*940*	*900*	*858*	*813*	*766*	*717*	*666*	*611*	*554*	*494*	*431*	*364*	*295*	*221*	*144*	*63*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,815	18,027	17,199	16,328	15,413	14,452	13,441	12,378	11,261	10,087	8,852	7,555	6,191	4,758	3,251	1,667	1	2	2	2	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,579	1,639	1,696	2,386	2,086	1,795	1,302	2,072	1,372	742	1,598	1,244	274	-220	-749	-788	-828	-870	-915	-962	-1,011	-1,063	-1,117	-1,174	-1,234	-1,297	-1,364	-1,434	-1,507	-1,584	-1,665	0	0	0	
	Bi-Annual Drawdown	779	769	756	1,054	845	649	361	708	310	(36)	368	153	(358)	(608)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,579	1,558	1,531	2,134	1,713	1,315	730	1,433	628	(73)	745	310	(724)	(1,232)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	-	-	-	
	Annual Interest Cost on New Drawdowns	20	20	19	27	22	17	9	18	8	(1)	9	4	(9)	(16)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	-	-	-	
	Annual Interest Cost on Opening Balance	-	81	165	251	373	480	572	639	745	815	853	935	998	1,012	1,001	963	922	880	835	789	739	688	633	576	516	453	387	317	243	166	85	0	0	0	
	Total Annual Interest Cost	20	100	184	278	395	497	581	657	753	814	862	938	989	997	979	940	900	858	813	766	717	666	611	554	494	431	364	295	221	144	63	0	0	0	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,599	3,258	4,975	7,391	9,504	11,321	12,640	14,738	16,128	16,879	18,497	19,757	20,034	19,811	19,052	18,254	17,416	16,535	15,608	14,634	13,610	12,534	11,403	10,214	8,964	7,650	6,269	4,818	3,292	1,688	2	2	2	
	Interest Cost - Feb14 Option 1, 30-yr	*40*	*121*	*205*	*308*	*421*	*519*	*598*	*683*	*770*	*823*	*882*	*954*	*992*	*994*	*969*	*931*	*890*	*847*	*802*	*754*	*704*	*652*	*597*	*539*	*478*	*414*	*347*	*277*	*202*	*124*	*42*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,599	3,258	4,975	7,391	9,504	11,321	12,640	14,738	16,128	16,879	18,497	19,757	20,034	19,811	19,052	18,254	17,416	16,535	15,608	14,634	13,610	12,534	11,403	10,214	8,964	7,650	6,269	4,818	3,292	1,688	2	2	2	2	
Fiscal Exposure - Average Debt Drawdown		1,599	1,660	1,717	2,416	2,112	1,817	1,319	2,098	1,390	751	1,618	1,260	277	-223	-759	-798	-839	-881	-927	-974	-1,024	-1,076	-1,131	-1,189	-1,250	-1,314	-1,381	-1,452	-1,526	-1,604	-1,686	0	0	0	





Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_3_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	
			34	38	36	36	34	34	35	36	36	35	35	34	23	16	12	7	0	-14	-29	-36	-38	-42	-39	-36	-34	-32	-27	-18	-6	-1	0	3	3	3	142

		Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	1,606		1,040	19,498
Equal Monthly Debt Drawdown	1,644		1,040	

	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	20,326	2033	12,862
Equal Monthly Debt Drawdown	20,809		

Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
a	Debt, Beginning of Year	0	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*74*	*156*	*234*	*312*	*385*	*459*	*534*	*612*	*690*	*766*	*842*	*915*	*964*	*999*	*1,024*	*1,039*	*1,040*	*1,011*	*949*	*872*	*791*	*701*	*617*	*540*	*468*	*400*	*341*	*303*	*290*	*288*	*288*	*293*	*299*	19,498
b	Additional GA Debt Drawdown, End of Year	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,430	7,736	7,749	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,577	12,577	12,577	12,577	11,371	9,872	8,285	6,516	4,884	3,378	1,966	633	-506	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,943	8,967	10,006	11,046	12,057	13,006	13,878	14,669	15,370	15,987	16,527	16,995	17,395	17,736	18,040	18,330	18,618				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,064	11,345	10,319	8,710	6,493	4,045	1,586	-974	-3,307	-5,431	-7,383	-9,184	-10,721	-11,807	-12,362	-12,696	-12,994				
Fiscal Exposure - End of Year Debt Drawdown		1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	

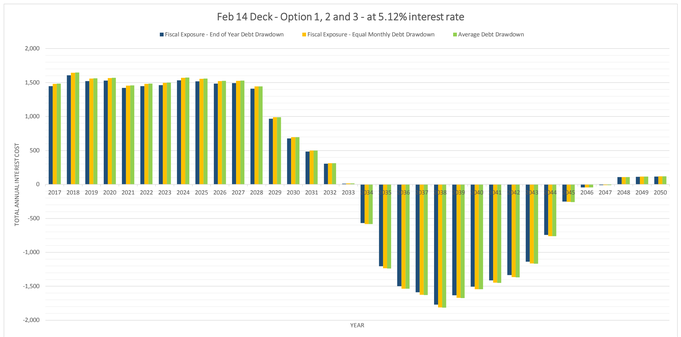
Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	
1,040	*Interest Cost - Feb14 Option 1, 30-yr*	*34*	*112*	*192*	*270*	*346*	*420*	*494*	*570*	*649*	*726*	*802*	*876*	*938*	*980*	*1,010*	*1,031*	*1,040*	*1,026*	*982*	*913*	*835*	*749*	*662*	*581*	*507*	*436*	*373*	*324*	*297*	*289*	*288*	*290*	*296*	*302*	19,640
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	6,102	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	

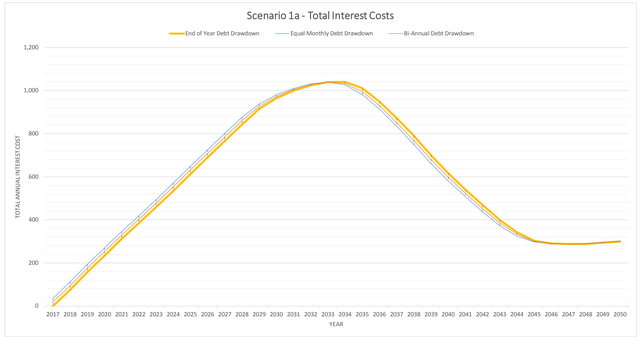
	Monthly Drawdown	121	128	114	108	93	88	84	83	76	66	60	47	4	(24)	(43)	(60)	(85)	(134)	(185)	(204)	(205)	(213)	(194)	(177)	(163)	(150)	(128)	(90)	(46)	(28)	(25)	(15)	(15)	(15)	
	FV of Monthly Drawdown at 5%	1,482	1,568	1,398	1,326	1,137	1,086	1,028	1,024	929	815	742	580	54	(292)	(525)	(736)	(1,050)	(1,648)	(2,269)	(2,506)	(2,517)	(2,621)	(2,389)	(2,174)	(1,999)	(1,844)	(1,574)	(1,111)	(568)	(342)	(306)	(185)	(184)	(188)	
	Annual Interest Cost on New Drawdowns	34	36	32	31	26	25	24	24	22	19	17	13	1	(7)	(12)	(17)	(24)	(38)	(53)	(58)	(58)	(61)	(55)	(51)	(46)	(43)	(37)	(26)	(13)	(8)	(7)	(4)	(4)	(4)	
	Annual Interest Cost on Opening Balance	-	76	160	240	320	394	470	547	627	707	784	863	936	987	1,023	1,048	1,064	1,065	1,035	972	893	810	717	632	553	479	409	350	311	297	295	295	300	306	
	Total Annual Interest Cost	34	112	192	270	346	420	494	570	649	726	802	876	938	980	1,010	1,031	1,040	1,026	982	913	835	749	662	581	507	436	373	324	297	289	288	290	296	302	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	
	Interest Cost - Feb14 Option 1, 30-yr	*19*	*95*	*176*	*254*	*331*	*404*	*478*	*554*	*632*	*709*	*785*	*861*	*927*	*973*	*1,005*	*1,028*	*1,039*	*1,033*	*995*	*930*	*852*	*769*	*680*	*598*	*522*	*451*	*385*	*332*	*300*	*290*	*288*	*289*	*295*	*301*	19,575
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	6,037	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,466	1,626	1,541	1,549	1,441	1,465	1,482	1,554	1,539	1,505	1,510	1,427	979	687	492	309	13	-577	-1,221	-1,518	-1,607	-1,792	-1,653	-1,525	-1,430	-1,350	-1,153	-753	-255	-44	-10	109	115	117	

	Bi-Annual Drawdown	724	766	683	648	555	530	502	500	454	398	363	283	26	(143)	(256)	(359)	(513)	(805)	(1,108)	(1,224)	(1,229)	(1,280)	(1,167)	(1,062)	(976)	(900)	(769)	(543)	(278)	(167)	(149)	(90)	(90)	(92)	
	FV of Bi-Annual Drawdown at 5%	1,466	1,551	1,383	1,312	1,125	1,075	1,017	1,013	919	806	735	573	53	(289)	(519)	(728)	(1,039)	(1,630)	(2,245)	(2,479)	(2,490)	(2,593)	(2,363)	(2,150)	(1,977)	(1,824)	(1,557)	(1,099)	(562)	(338)	(302)	(183)	(182)	(186)	
	Annual Interest Cost on New Drawdowns	19	20	17	17	14	14	13	13	12	10	9	7	1	(4)	(7)	(9)	(13)	(21)	(28)	(31)	(31)	(33)	(30)	(27)	(25)	(23)	(20)	(14)	(7)	(4)	(4)	(2)	(2)	(2)	
	Annual Interest Cost on Opening Balance	-	75	158	237	316	390	465	541	620	699	776	853	926	976	1,012	1,037	1,053	1,053	1,024	961	884	801	710	625	547	474	405	346	307	294	292	291	297	303	
	Total Annual Interest Cost	19	95	176	254	331	404	478	554	632	709	785	861	927	973	1,005	1,028	1,039	1,033	995	930	852	769	680	598	522	451	385	332	300	290	288	289	295	301	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	
	Interest Cost - Feb14 Option 1, 30-yr	*37*	*115*	*195*	*273*	*349*	*422*	*497*	*573*	*651*	*728*	*804*	*879*	*939*	*981*	*1,011*	*1,031*	*1,040*	*1,025*	*980*	*911*	*832*	*746*	*659*	*579*	*504*	*434*	*371*	*322*	*297*	*289*	*288*	*290*	*296*	*302*	19,651
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	6,113	
Fiscal Exposure - Average Debt Drawdown		1,484	1,647	1,561	1,569	1,459	1,483	1,500	1,573	1,559	1,524	1,530	1,445	992	696	498	313	14	-585	-1,237	-1,537	-1,627	-1,814	-1,674	-1,545	-1,448	-1,367	-1,167	-763	-258	-44	-10	110	116	119	





Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest ra

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest ra

IESO GA cost forecast + extrapolation

Scenario
Option 1

Option 2

ate	2017	2018	2019	2020
ate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	2200	4600	7000	10200

Total Accumulated Debt ($ billion)	2.2	4.6	7	10.2
	2,200	4,600	7,000	10,200

Total Accumulated Debt ($ billion)	1.6	3.2	4.9	7.2
	1,600	3,200	4,900	7,200

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
13100	15700	17800	20800	23200	25000	27700	30100

13.1 15.7 17.8 20.8 23.2 25 27.7 30.1
13,100 15,700 17,800 20,800 23,200 25,000 27,700 30,100

9.3 11 12.3 14.4 15.7 16.5 18 19.3
9,300 11,000 12,300 14,400 15,700 16,500 18,000 19,300

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
31700	32800	32700	32600	31700	30100	28400	26600

31.7	32.8	32.7	32.6	31.7	30.1	28.4	26.6
31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600

19.5	19.3	18.6	17.8	17	16.1	15.2	14.3
19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
24800	22800	20800	18600	16300	13900	11400	8800

24.8	22.8	20.8	18.6	16.3	13.9	11.4	8.8
24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800

13.3	12.2	11.1	10	8.7	7.5	6.1	4.7
13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	2046	2047	2048	2049	2050
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
6000	3100	0	0	0	0

6 3.1 0 0
6,000 3,100 - -

3.2 1.6 0 0
3,200 1,600 - -

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb9_1_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,200	2,400

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	550	2,250

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $33 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb9_2_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,600	1,600

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	400	1,600

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,169	4,668

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	545	2,203

Actuals are subject to actual prices and actual interest rates.

#N/A

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542

Fiscalized[3]	2016-17	2017-18
Start: January 1st	375	1,510

Actuals are subject to actual prices and actual interest rates.

#N/A

Rough		
	1	
	2	
	3	
	4 April	4
	5 May	5
	6 June	6
	7 July	7
	8 August	8
	9 September	9
	10 October	10
	11 November	11
	12 December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	400 - 550	1,600 - 2,250

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	550	2250
Debt-Finance Global Adjustment Costs, Option 1a	400	1600
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**550**	**2490**
Total, B	400	1840

Proposed Program Total:	400 - 550	1,840 - 2,490

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1
Scenario 2

2019	2020	2021	2022
2,400	3,200	2,900	2,600

2018-19	2019-20	2020-21	2021-2022
2,400	2,600	3,125	2,825

2030.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,700	2,300	2,100	1,700

2018-19	2019-20	2020-21	2021-2022
1,625	1,850	2,250	2,000

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
4,589	5,867	5,031	4,861

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988

› depend on decision on accounting treatment.

2019	2020	2021	2022
2,353	3,072	2,817	2,580

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757

2019	2020	2021	2022
1,578	2,243	1,931	1,635

2018-19	2019-20	2020-21	2021-2022
1,551	1,745	2,165	1,857



2018-19	2019-20	2020-21	2021-2022
1,625 - 2,400	1,850 - 2,600	2,250 - 3,125	2,000 - 2,825

/1

2018-19[1]	2019-20[1]	2020-21[1]
2400	2600	3125
1625	1850	2250
225	279	323
60	60	60
18	18	18
2703	**2957**	**3526**
1928	2207	2651

1,928 - 2,703 2,207 - 2,957 2,651 - 3,526

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
21,601	30,211	32,800	occurs in Year 2030
13,466	17,886	19,500	occurs in Year 2029
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!

2,200

Tab Name
Feb9_1_30yr
Feb9_2_30yr

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Feb9_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0	
			52	57	57	76	69	62	50	71	57	43	64	57	38	26	-2	-2	-21	-38	-40	-43	-43	-48	-48	-52	-55	-57	-59	-62	-67	-69	-74	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,200	1,678	30,211
Equal Monthly Debt Drawdown	3,276	1,676	

		Feb9 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,800	2030	21,601	
Equal Monthly Debt Drawdown	33,580			

Feb9 1, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
a	Debt, Beginning of Year	0	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	
c = a*5%	*Interest Cost - Feb9 1, 30-yr - End of Year Debt Drowdown*	*0*	*113*	*235*	*358*	*522*	*670*	*803*	*911*	*1,064*	*1,187*	*1,279*	*1,417*	*1,540*	*1,622*	*1,678*	*1,673*	*1,668*	*1,622*	*1,540*	*1,453*	*1,361*	*1,269*	*1,166*	*1,064*	*952*	*834*	*711*	*583*	*450*	*307*	*159*	*0*	*0*	*0*	30,211
b	Additional GA Debt Drawdown, End of Year	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	0
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	11,621	11,521	10,621	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	8,800	6,000	3,100	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	21,079	21,079	21,079	21,079	19,379	17,579	15,779	13,779	11,779	9,579	7,279	4,879	2,379	0	0	0	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	13,399	15,072	16,740	18,362	19,902	21,355	22,716	23,985	25,151	26,215	27,167	28,001	28,712	29,295	29,746	30,052	30,211				
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	19,301	17,528	14,960	11,738	8,498	5,245	2,084	-1,185	-4,351	-7,615	-10,867	-14,101	-17,312	-20,495	-23,746	-26,952	-30,211				
Fiscal Exposure - End of Year Debt Drawdown		2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0	

Feb9 1, 30-yr — Equal Monthly Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	
1,676	*Interest Cost - Feb9 1, 30-yr*	*52*	*170*	*292*	*434*	*591*	*732*	*853*	*982*	*1,121*	*1,230*	*1,343*	*1,474*	*1,578*	*1,648*	*1,676*	*1,671*	*1,646*	*1,584*	*1,500*	*1,410*	*1,318*	*1,221*	*1,119*	*1,012*	*897*	*777*	*652*	*521*	*384*	*238*	*85*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0	
	Monthly Drawdown	183	191	180	237	198	161	108	174	111	51	118	82	5	(43)	(148)	(148)	(214)	(268)	(270)	(271)	(263)	(272)	(264)	(272)	(271)	(269)	(268)	(265)	(271)	(267)	(272)	-	-	-	
	FV of Monthly Drawdown at 5%	2,252	2,342	2,216	2,909	2,435	1,976	1,328	2,139	1,368	628	1,455	1,006	61	(534)	(1,820)	(1,815)	(2,629)	(3,298)	(3,317)	(3,330)	(3,236)	(3,347)	(3,242)	(3,342)	(3,329)	(3,311)	(3,288)	(3,259)	(3,328)	(3,283)	(3,336)	-	-	-	
	Annual Interest Cost on New Drawdowns	52	54	51	68	57	46	31	50	32	15	34	23	1	(12)	(42)	(42)	(61)	(77)	(77)	(77)	(75)	(78)	(75)	(78)	(77)	(76)	(76)	(76)	(77)	(76)	(78)	-	-	-	
	Annual Interest Cost on Opening Balance	-	115	241	367	534	686	822	932	1,089	1,215	1,309	1,451	1,577	1,660	1,718	1,713	1,708	1,660	1,577	1,488	1,393	1,299	1,194	1,089	974	854	728	597	461	314	162	(0)	(0)	(0)	
	Total Annual Interest Cost	52	170	292	434	591	732	853	982	1,121	1,230	1,343	1,474	1,578	1,648	1,676	1,671	1,646	1,584	1,500	1,410	1,318	1,221	1,119	1,012	897	777	652	521	384	238	85	(0)	(0)	(0)	

Feb9 1, 30-yr — Bi-Annual Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*28*	*143*	*266*	*399*	*559*	*703*	*830*	*949*	*1,095*	*1,210*	*1,314*	*1,448*	*1,560*	*1,636*	*1,677*	*1,672*	*1,656*	*1,601*	*1,518*	*1,430*	*1,338*	*1,243*	*1,141*	*1,036*	*922*	*803*	*679*	*550*	*414*	*270*	*119*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,228	2,431	2,431	3,241	2,937	2,633	2,127	3,038	2,431	1,823	2,735	2,431	1,620	1,114	-101	-101	-912	-1,620	-1,722	-1,823	-1,823	-2,026	-2,026	-2,228	-2,329	-2,431	-2,532	-2,633	-2,836	-2,937	-3,140	0	0	0	
	Bi-Annual Drawdown	1,100	1,144	1,082	1,421	1,189	965	648	1,045	668	307	710	491	30	(261)	(889)	(886)	(1,284)	(1,611)	(1,620)	(1,626)	(1,580)	(1,634)	(1,583)	(1,632)	(1,626)	(1,617)	(1,606)	(1,592)	(1,625)	(1,603)	(1,629)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,228	2,317	2,192	2,878	2,409	1,954	1,313	2,116	1,353	621	1,439	995	61	(529)	(1,801)	(1,796)	(2,601)	(3,263)	(3,281)	(3,295)	(3,201)	(3,311)	(3,207)	(3,306)	(3,293)	(3,275)	(3,252)	(3,224)	(3,292)	(3,248)	(3,300)	-	-	-	
	Annual Interest Cost on New Drawdowns	28	29	28	36	30	25	17	27	17	8	18	13	1	(7)	(23)	(23)	(33)	(41)	(41)	(42)	(40)	(42)	(41)	(42)	(42)	(41)	(41)	(41)	(42)	(41)	(42)	-	-	-	
	Annual Interest Cost on Opening Balance	-	114	238	363	529	679	814	922	1,078	1,202	1,295	1,435	1,560	1,643	1,700	1,694	1,689	1,643	1,560	1,472	1,378	1,285	1,181	1,078	964	845	720	591	456	311	161	0	0	0	
	Total Annual Interest Cost	28	143	266	399	559	703	830	949	1,095	1,210	1,314	1,448	1,560	1,636	1,677	1,672	1,656	1,601	1,518	1,430	1,338	1,243	1,141	1,036	922	803	679	550	414	270	119	0	0	0	

Feb9 1, 30-yr — Average Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*56*	*174*	*297*	*440*	*596*	*737*	*857*	*987*	*1,126*	*1,233*	*1,348*	*1,479*	*1,581*	*1,650*	*1,676*	*1,670*	*1,645*	*1,581*	*1,496*	*1,407*	*1,315*	*1,218*	*1,115*	*1,008*	*893*	*773*	*647*	*517*	*379*	*233*	*79*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		2,256	2,461	2,461	3,282	2,974	2,667	2,154	3,077	2,461	1,846	2,769	2,461	1,641	1,128	-103	-103	-923	-1,641	-1,743	-1,846	-1,846	-2,051	-2,051	-2,256	-2,359	-2,461	-2,564	-2,667	-2,872	-2,974	-3,179	0	0	0	

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Feb9_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0
			38	38	40	55	50	40	31	50	31	19	36	31	5	-5	-17	-19	-19	-21	-21	-21	-24	-26	-26	-26	-31	-29	-33	-33	-36	-38	-38	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,300	998	17,886
Equal Monthly Debt Drawdown	2,355	993	

	Feb9 2, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,500	2029	13,466
Equal Monthly Debt Drawdown	19,964		

Feb9 2, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
a	Debt, Beginning of Year	0	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	
c = a*5%	*Interest Cost - Feb9 2, 30-yr - End of Year Debt Drowdown*	*0*	*82*	*164*	*251*	*368*	*476*	*563*	*629*	*737*	*803*	*844*	*921*	*987*	*998*	*987*	*952*	*911*	*870*	*824*	*778*	*732*	*680*	*624*	*568*	*512*	*445*	*384*	*312*	*240*	*164*	*82*	*0*	*0*	*0*	17,886
b	Additional GA Debt Drawdown, End of Year	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	7,123	6,323	5,523	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,700	3,200	1,600	0	0	0	
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	11,477	11,477	11,477	11,477	10,577	9,677	8,677	7,577	6,477	5,377	4,077	2,877	1,477	0	0	0	0	0	0	0	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	8,810	9,762	10,672	11,542	12,366	13,143	13,875	14,556	15,180	15,748	16,259	16,704	17,088	17,400	17,641	17,804	17,886				
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	9,790	8,038	6,328	4,558	2,834	1,157	-575	-2,356	-4,080	-5,748	-7,559	-9,204	-10,988	-12,700	-14,441	-16,204	-17,886				
Fiscal Exposure - End of Year Debt Drawdown		1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0	

Feb9 2, 30-yr — Equal Monthly Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	
993	*Interest Cost - Feb9 2, 30-yr*	*38*	*120*	*204*	*305*	*418*	*516*	*594*	*679*	*768*	*822*	*880*	*952*	*992*	*993*	*971*	*933*	*892*	*848*	*802*	*756*	*708*	*654*	*598*	*542*	*481*	*417*	*350*	*279*	*205*	*126*	*44*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0	
	Monthly Drawdown	133	127	128	171	144	102	61	123	47	(0)	55	32	(66)	(100)	(141)	(146)	(143)	(147)	(144)	(140)	(144)	(148)	(144)	(139)	(151)	(137)	(149)	(143)	(145)	(147)	(140)	-	-	-	
	FV of Monthly Drawdown at 5%	1,638	1,554	1,573	2,098	1,773	1,253	755	1,506	577	(3)	671	388	(806)	(1,226)	(1,728)	(1,793)	(1,751)	(1,812)	(1,765)	(1,718)	(1,773)	(1,823)	(1,765)	(1,708)	(1,855)	(1,684)	(1,826)	(1,753)	(1,782)	(1,806)	(1,722)	-	-	-	
	Annual Interest Cost on New Drawdowns	38	36	37	49	41	29	18	35	13	(0)	16	9	(19)	(28)	(40)	(42)	(41)	(42)	(41)	(40)	(41)	(42)	(41)	(40)	(43)	(39)	(42)	(41)	(41)	(42)	(40)	-	-	-	
	Annual Interest Cost on Opening Balance	-	84	168	257	377	487	576	644	754	822	864	943	1,011	1,021	1,011	974	932	890	843	796	749	697	639	581	524	456	393	320	246	168	84	0	0	0	
	Total Annual Interest Cost	38	120	204	305	418	516	594	679	768	822	880	952	992	993	971	933	892	848	802	756	708	654	598	542	481	417	350	279	205	126	44	0	0	0	

Feb9 2, 30-yr — Bi-Annual Debt Drawdown

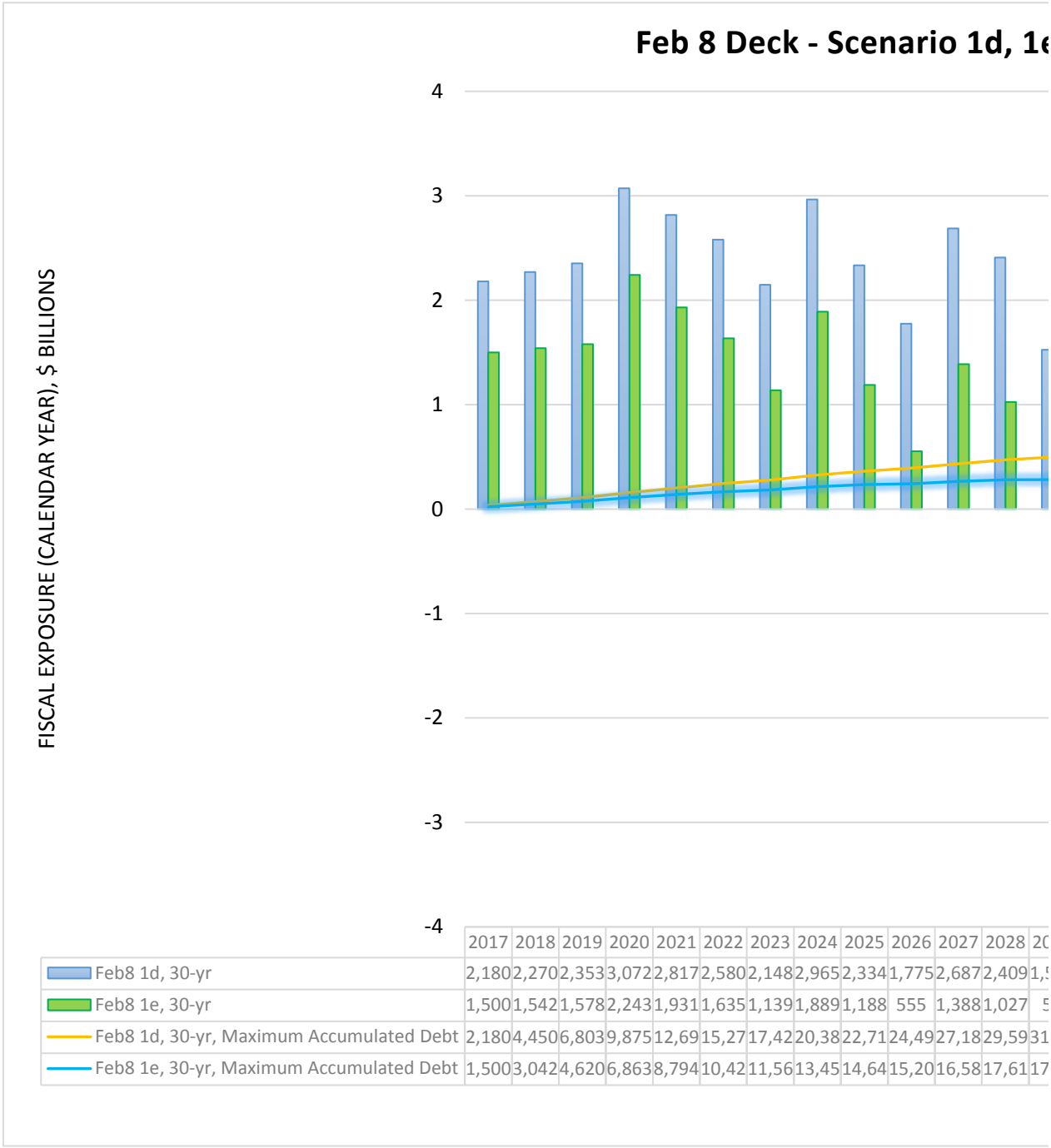
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*20*	*102*	*185*	*280*	*395*	*498*	*579*	*656*	*753*	*813*	*863*	*938*	*990*	*995*	*978*	*941*	*900*	*858*	*812*	*766*	*719*	*666*	*610*	*554*	*495*	*430*	*366*	*294*	*221*	*143*	*61*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,620	1,620	1,722	2,329	2,127	1,722	1,317	2,127	1,317	810	1,519	1,317	203	-203	-709	-810	-810	-912	-912	-912	-1,013	-1,114	-1,114	-1,114	-1,317	-1,215	-1,418	-1,418	-1,519	-1,620	-1,620	0	0	0	
	Bi-Annual Drawdown	800	759	768	1,025	866	612	369	735	282	(2)	328	190	(394)	(599)	(844)	(876)	(855)	(885)	(862)	(839)	(866)	(890)	(862)	(834)	(906)	(823)	(892)	(856)	(870)	(882)	(841)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,620	1,538	1,556	2,076	1,754	1,240	747	1,490	570	(3)	664	384	(797)	(1,213)	(1,709)	(1,774)	(1,733)	(1,792)	(1,746)	(1,699)	(1,754)	(1,803)	(1,746)	(1,689)	(1,835)	(1,666)	(1,807)	(1,734)	(1,763)	(1,786)	(1,703)	-	-	-	
	Annual Interest Cost on New Drawdowns	20	19	20	26	22	16	9	19	7	(0)	8	5	(10)	(15)	(22)	(22)	(22)	(23)	(22)	(21)	(22)	(23)	(22)	(21)	(23)	(21)	(23)	(22)	(22)	(23)	(22)	-	-	-	
	Annual Interest Cost on Opening Balance	-	83	166	254	373	482	570	637	746	814	855	933	1,000	1,010	1,000	964	922	881	834	788	741	689	632	575	518	451	389	316	244	166	83	0	0	0	
	Total Annual Interest Cost	20	102	185	280	395	498	579	656	753	813	863	938	990	995	978	941	900	858	812	766	719	666	610	554	495	430	366	294	221	143	61	0	0	0	

Feb9 2, 30-yr — Average Debt Drawdown

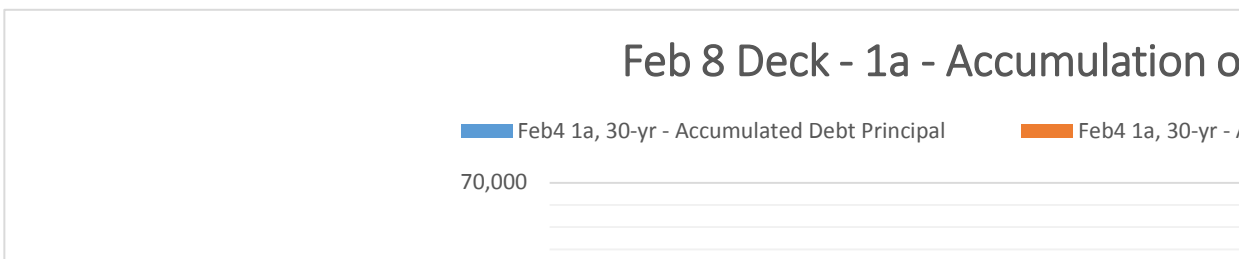
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*41*	*123*	*207*	*310*	*422*	*519*	*596*	*683*	*770*	*824*	*883*	*954*	*993*	*993*	*970*	*931*	*890*	*847*	*801*	*755*	*706*	*652*	*596*	*540*	*478*	*414*	*348*	*276*	*202*	*123*	*41*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,641	1,641	1,743	2,359	2,154	1,743	1,333	2,154	1,333	820	1,538	1,333	205	-205	-718	-820	-820	-923	-923	-923	-1,026	-1,128	-1,128	-1,128	-1,333	-1,231	-1,436	-1,436	-1,538	-1,641	-1,641	0	0	0	

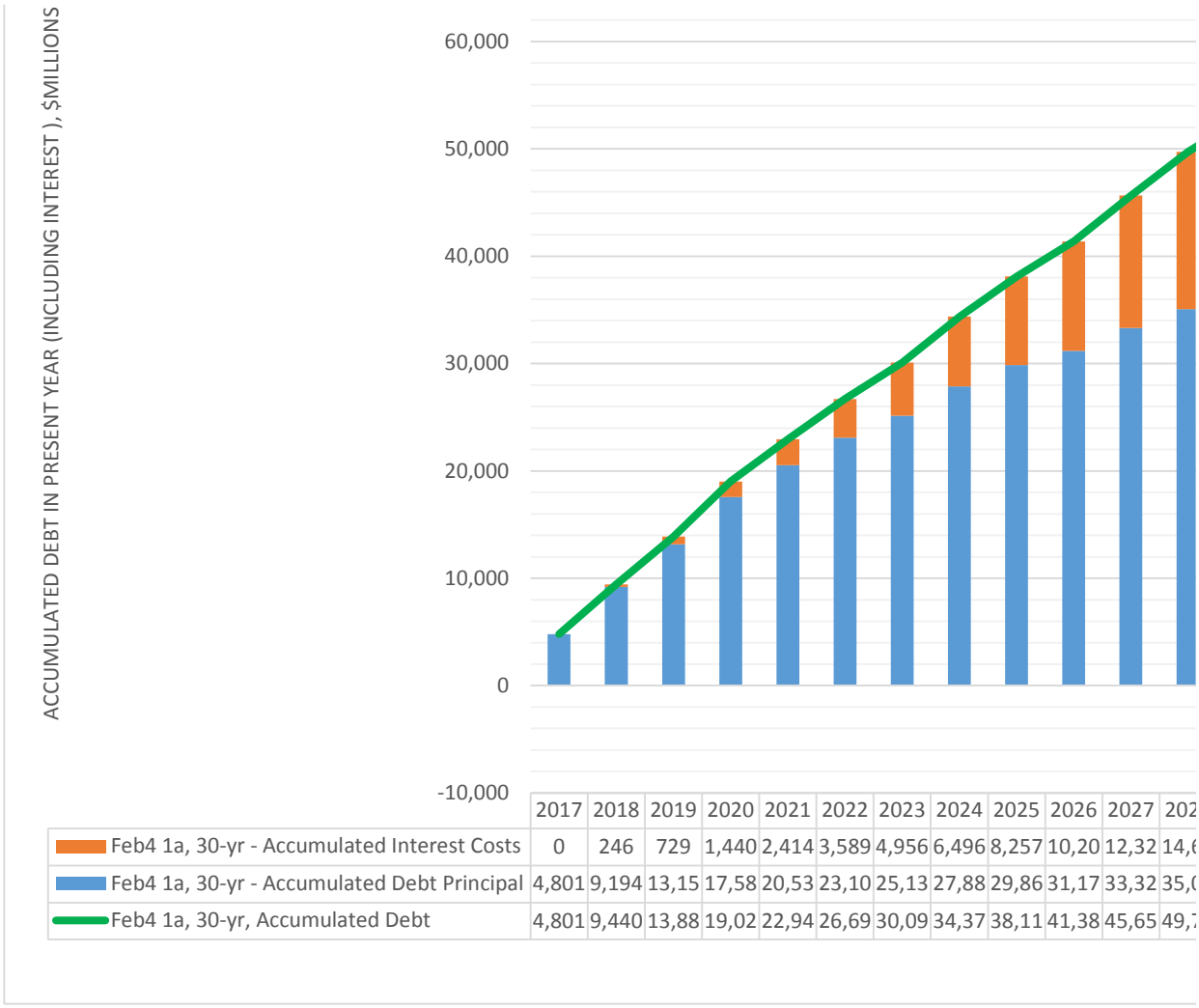
Feb 8 Deck

Feb 8 Deck - Scenario 1d, 1e - at 5.12% interest rate

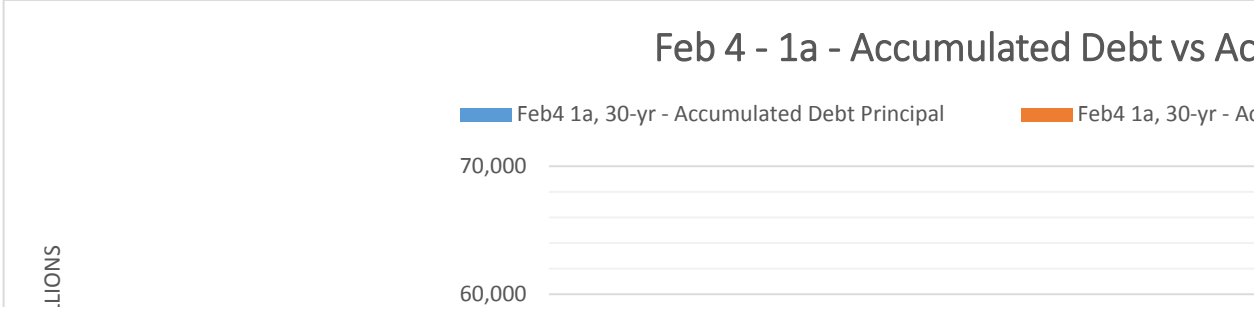


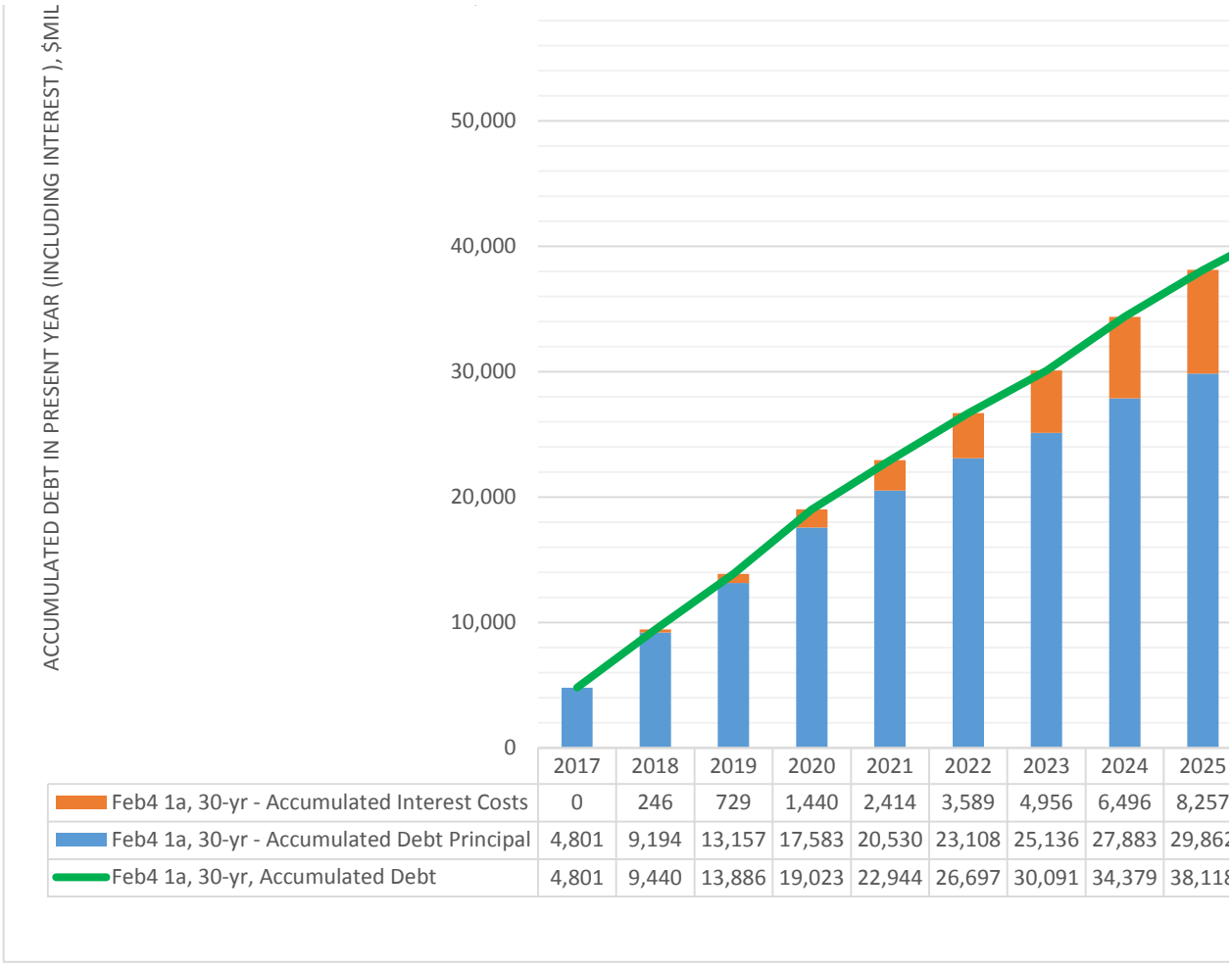
Feb 8 Deck - 1a - Accumulation of Debt (Principal and Interest)



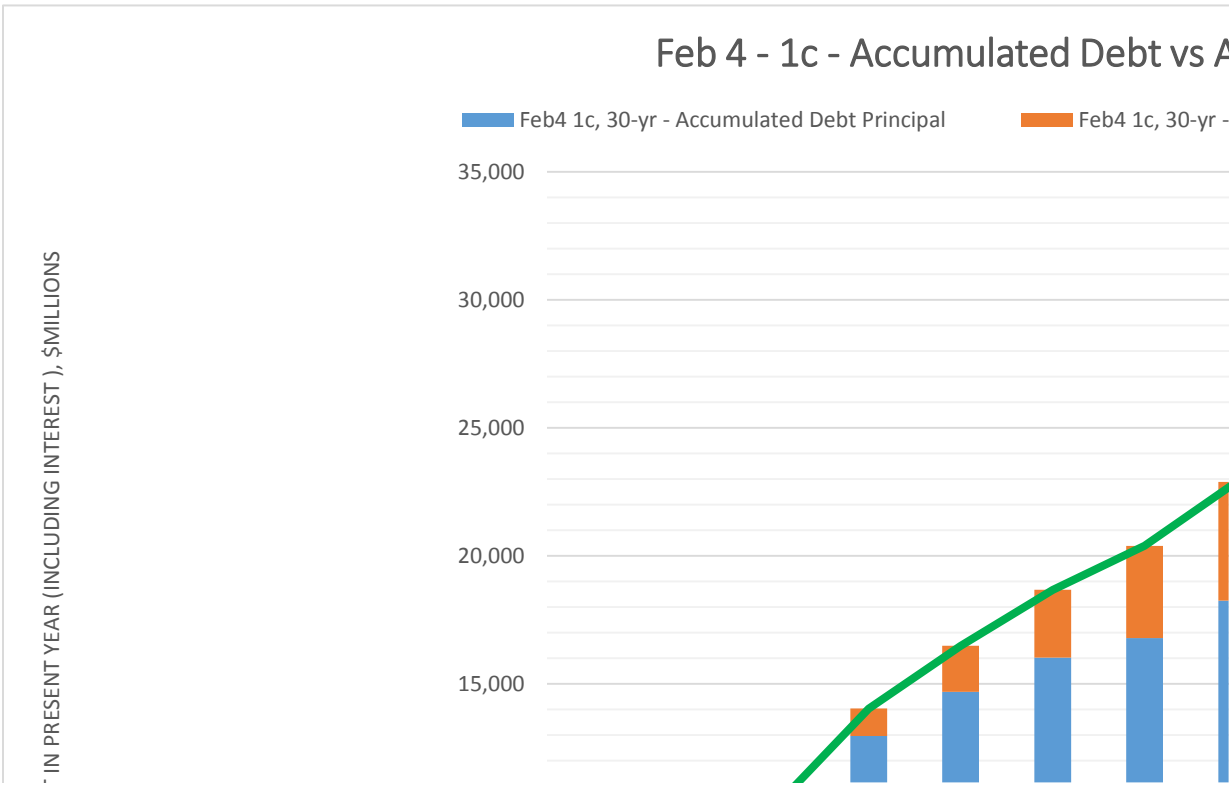


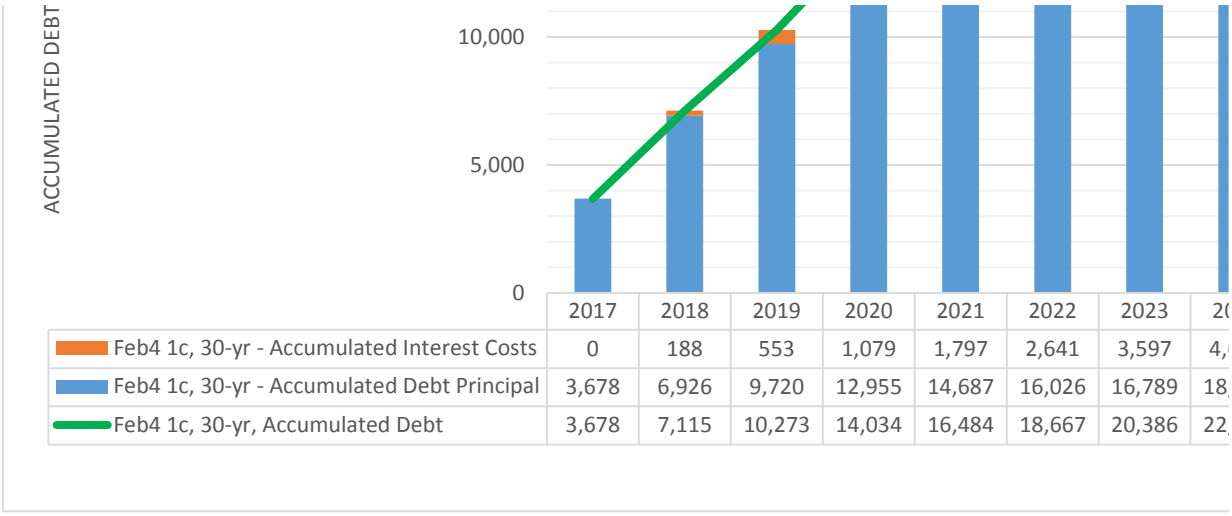
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	202
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,(
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,7



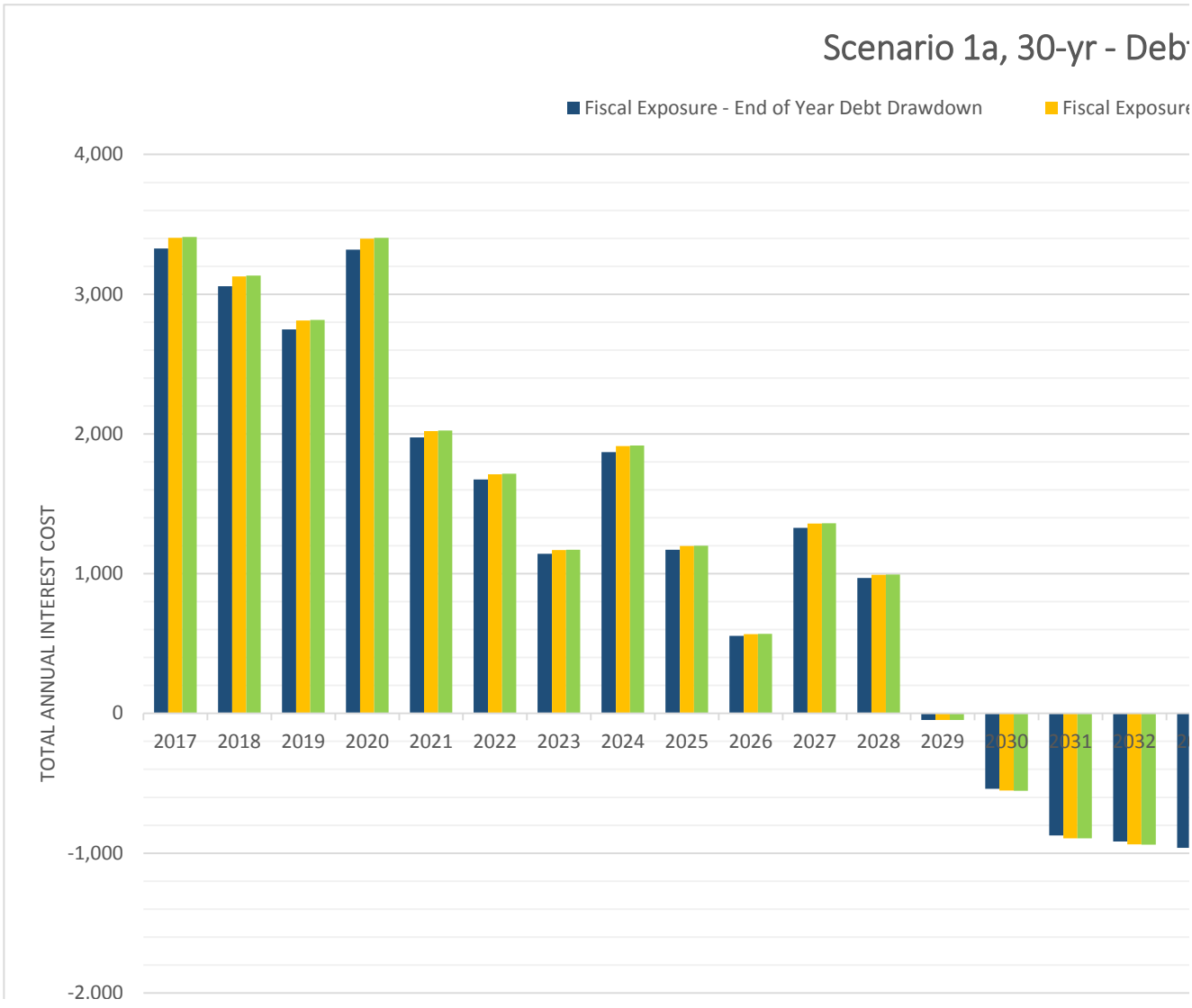


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



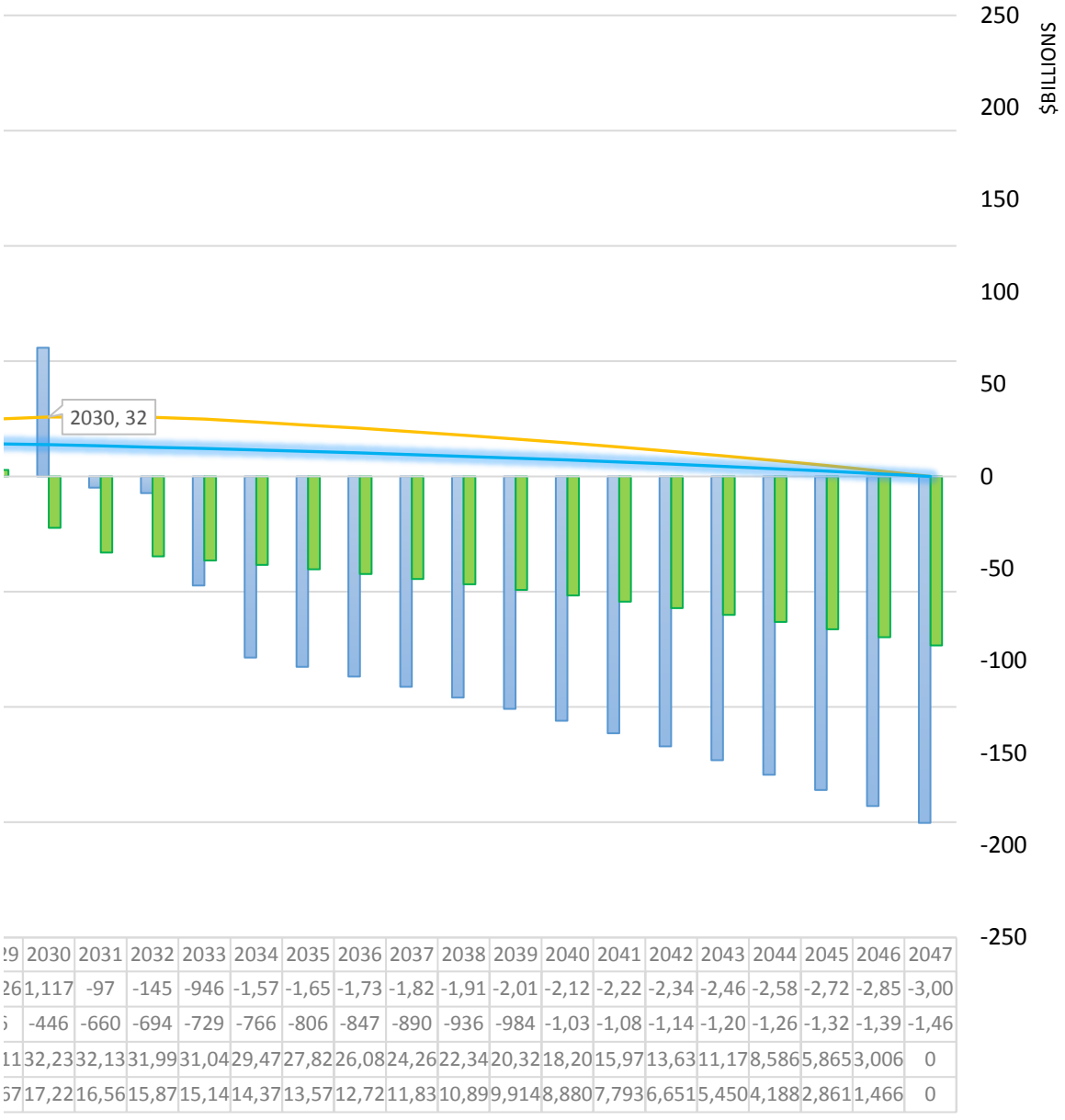


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

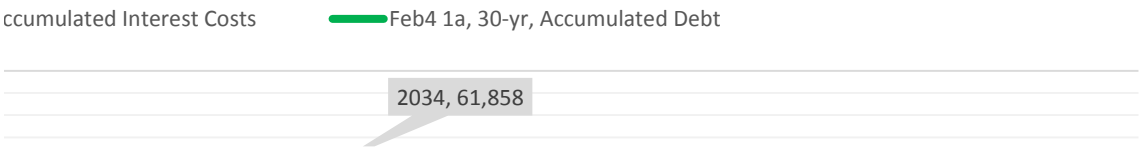
- at 5.12% interest rate

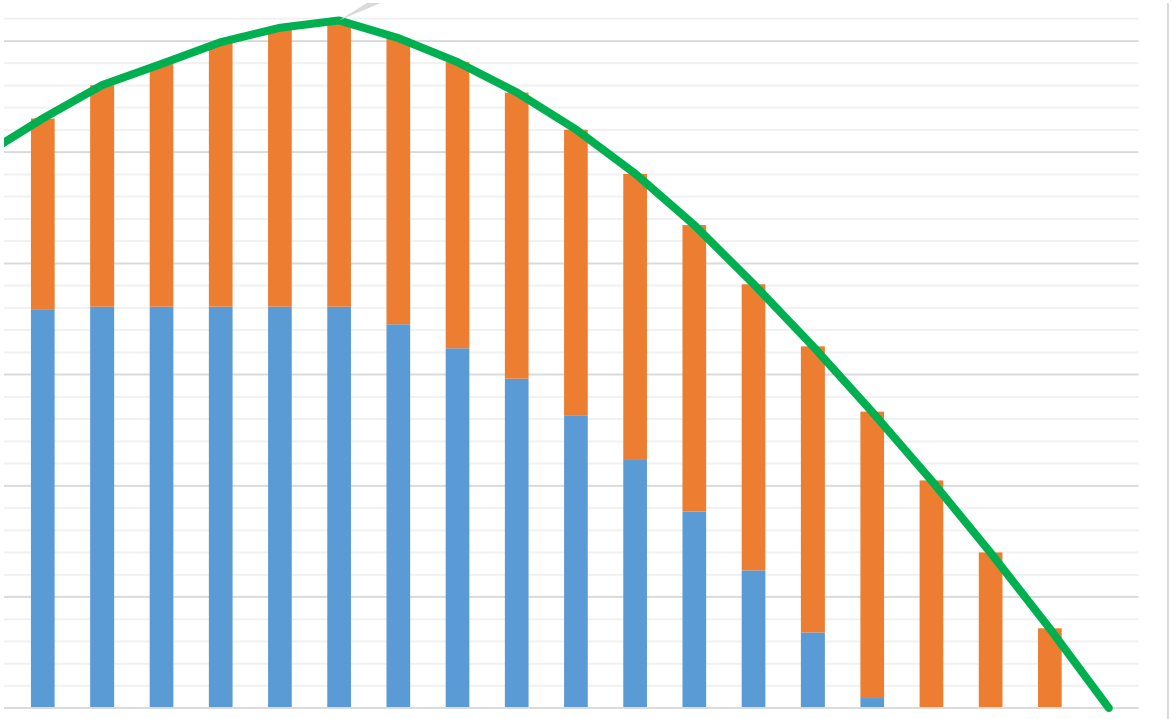


29	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
26	1,117	-97	-145	-946	-1,57	-1,65	-1,73	-1,82	-1,91	-2,01	-2,12	-2,22	-2,34	-2,46	-2,58	-2,72	-2,85	-3,00
5	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,03	-1,08	-1,14	-1,20	-1,26	-1,32	-1,39	-1,46
11	32,23	32,13	31,99	31,04	29,47	27,82	26,08	24,26	22,34	20,32	18,20	15,97	13,63	11,17	8,586	5,865	3,006	0
57	17,22	16,56	15,87	15,14	14,37	13,57	12,72	11,83	10,89	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0

CALENDAR YEAR

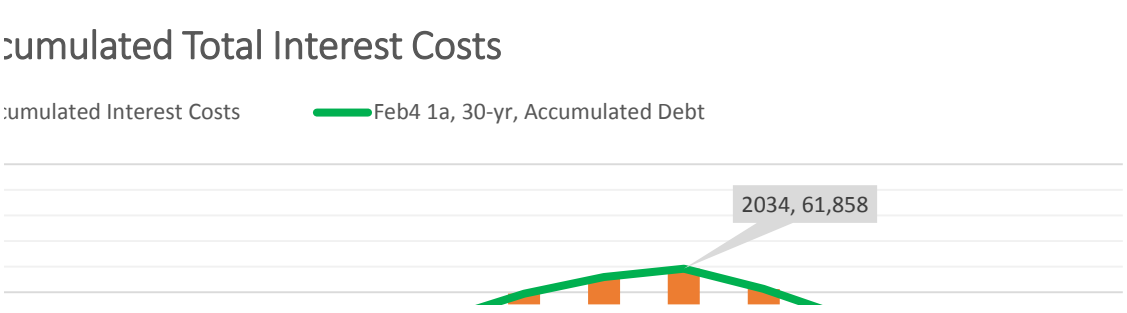
Debt (Principal and Interest)



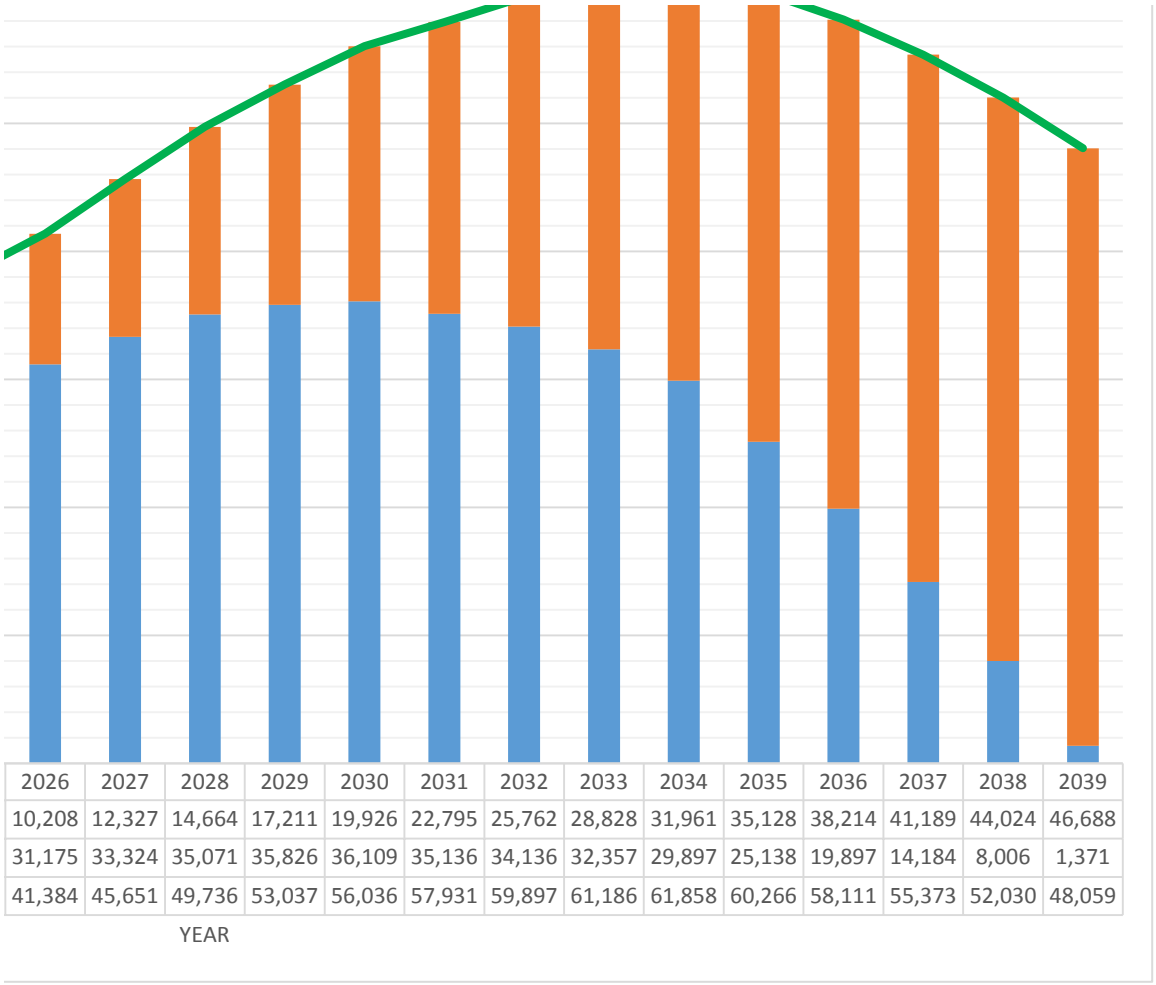


	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
5	17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
7	35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
3	53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



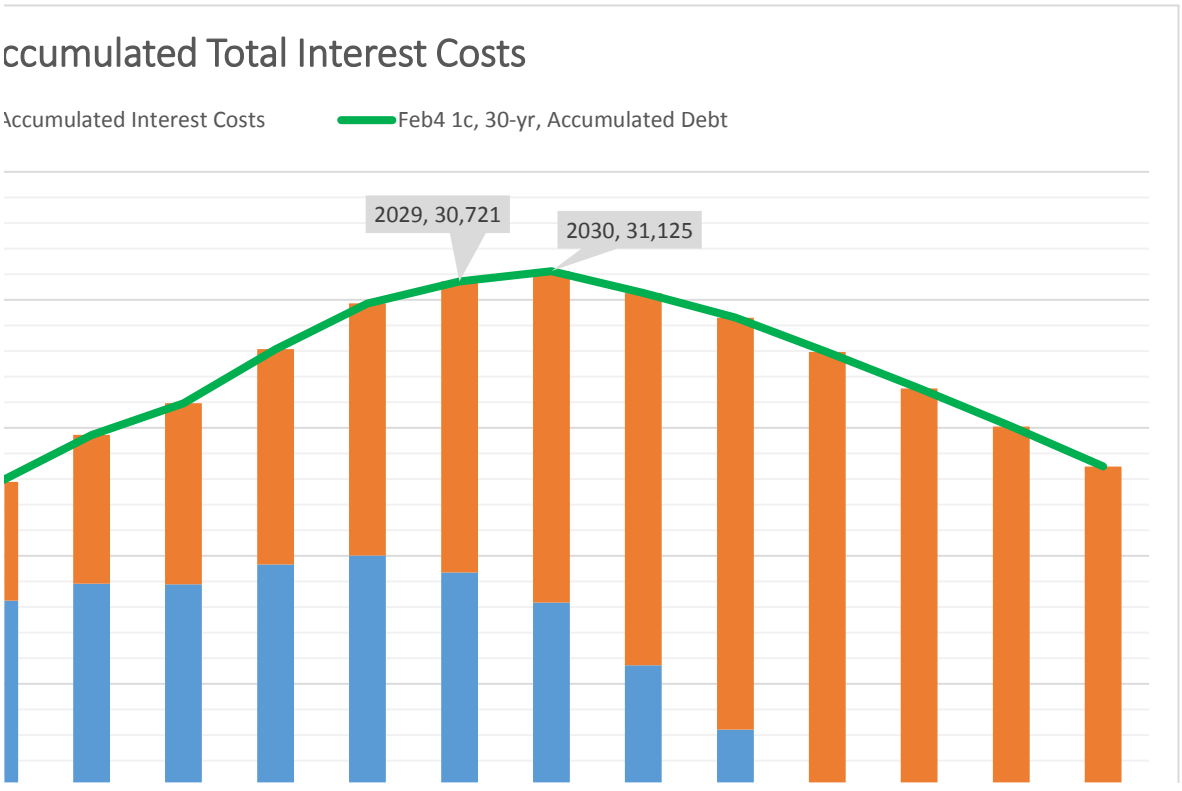
LIONS

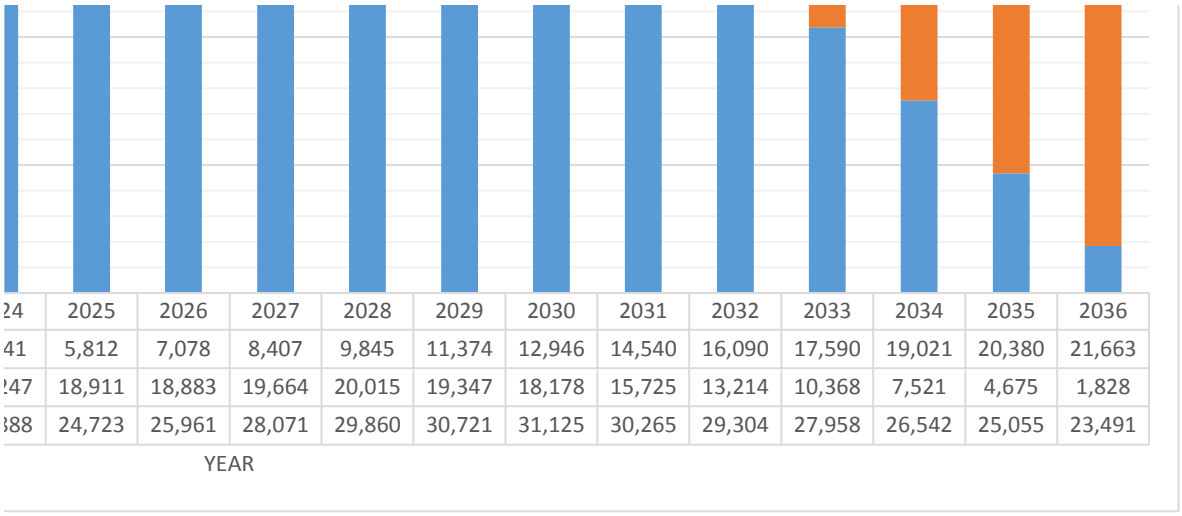


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

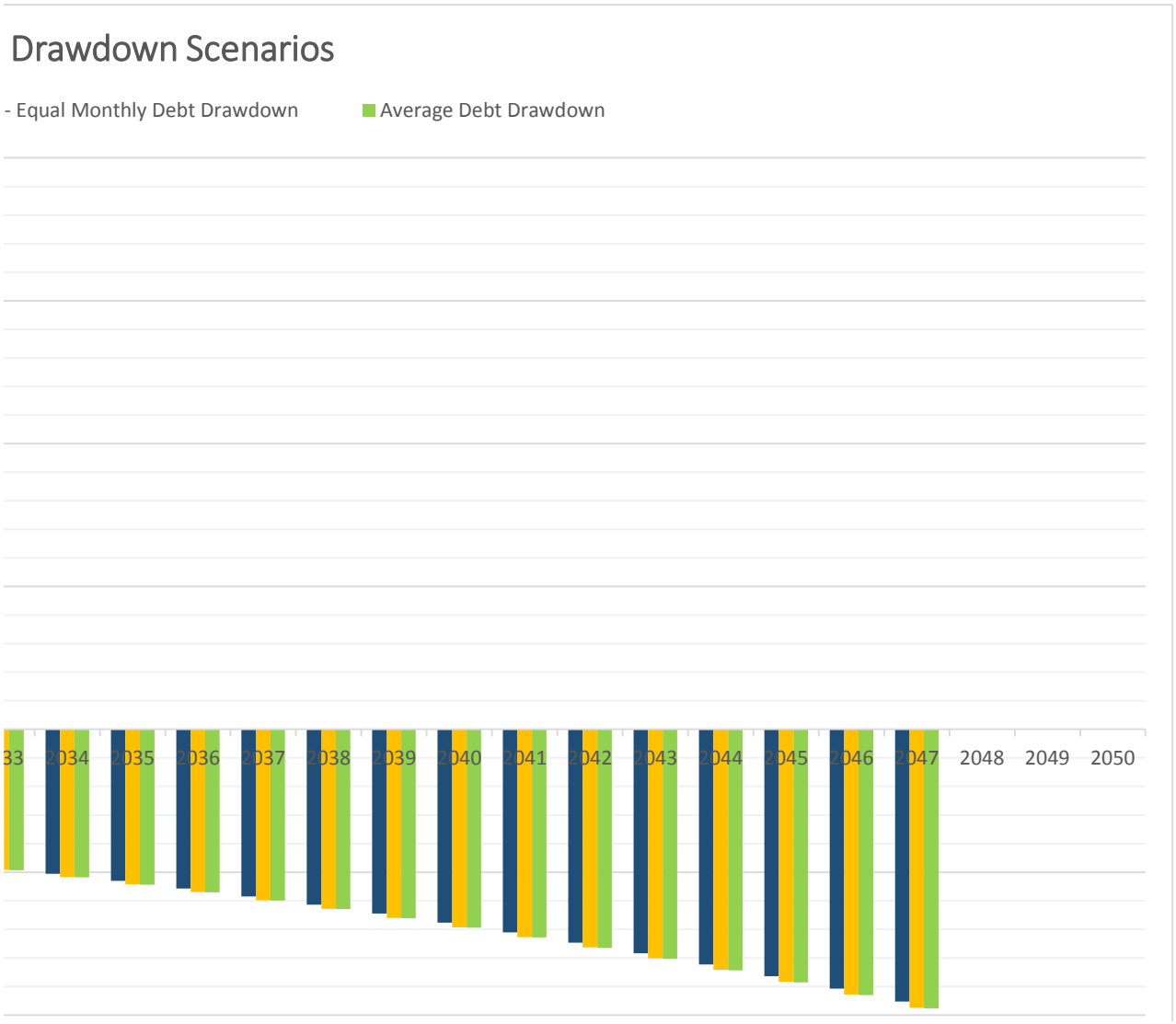
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





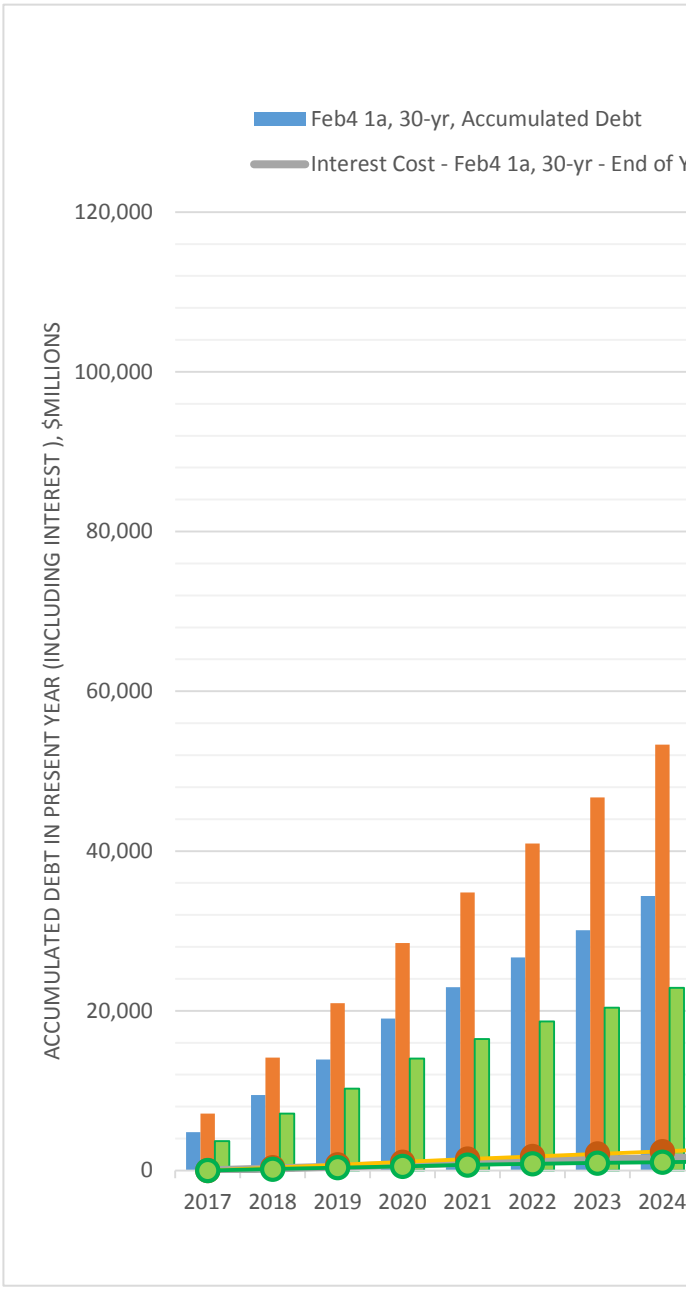
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

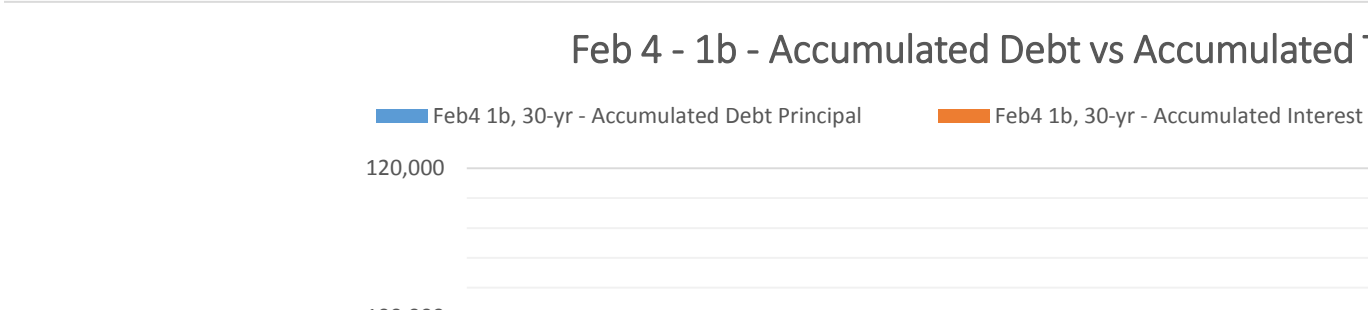
YEAR

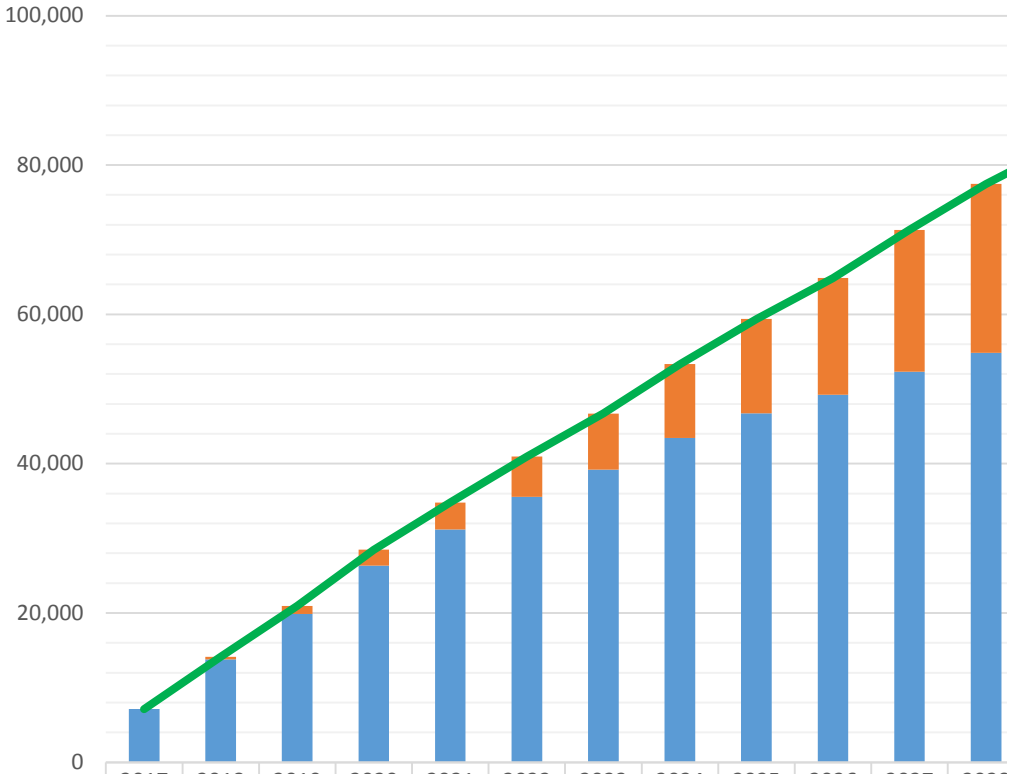


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate

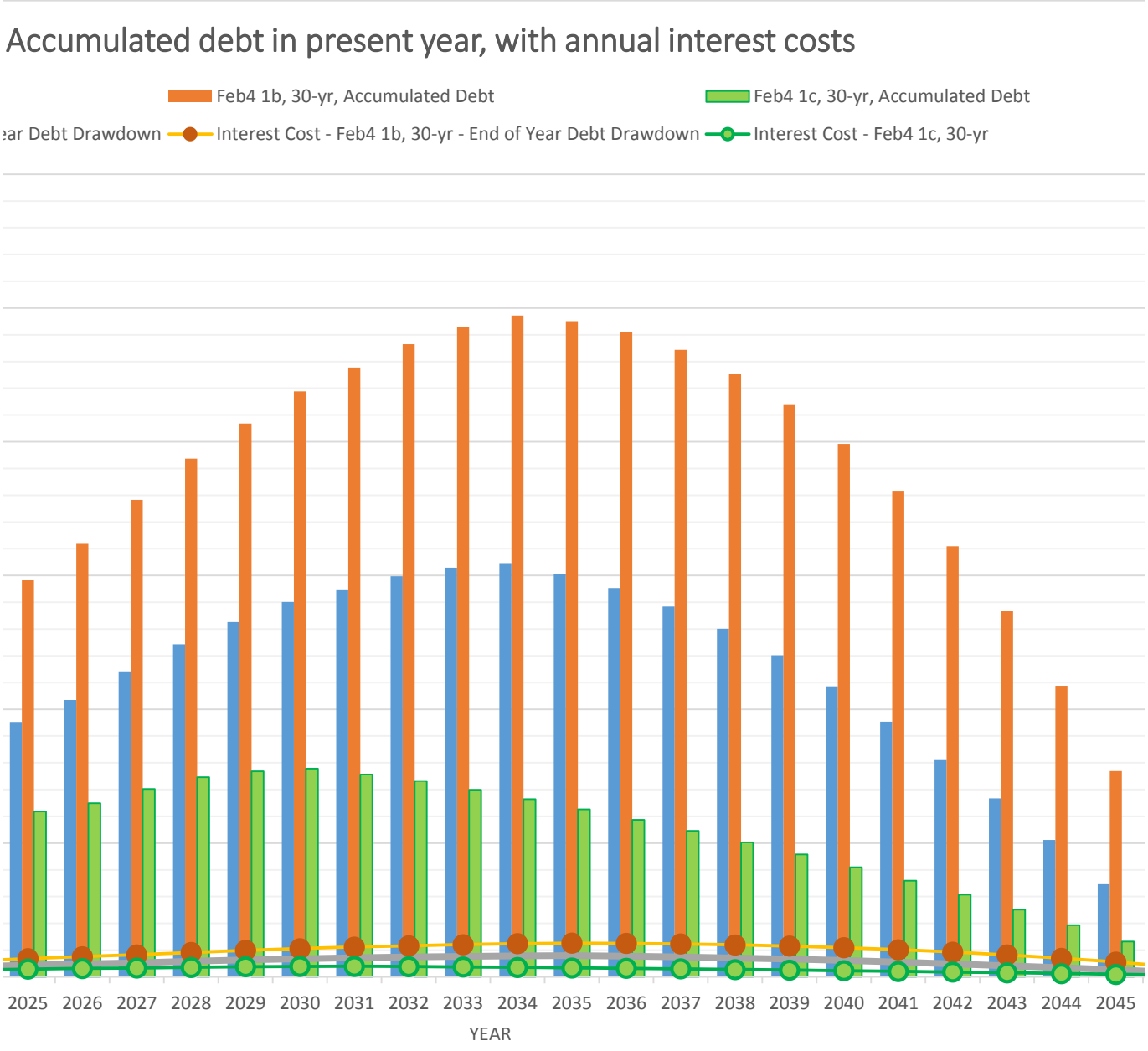


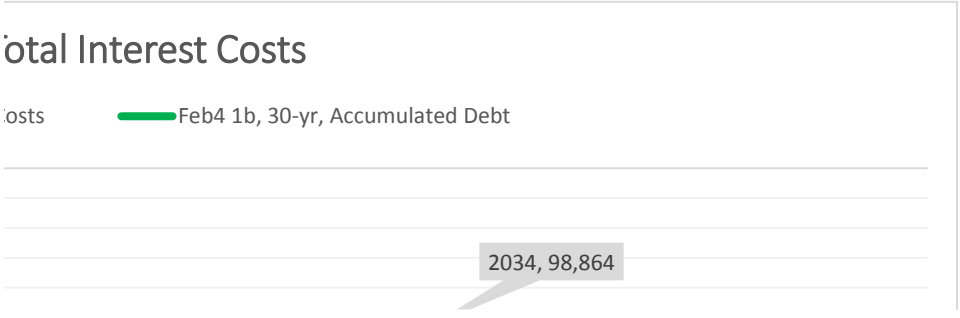

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

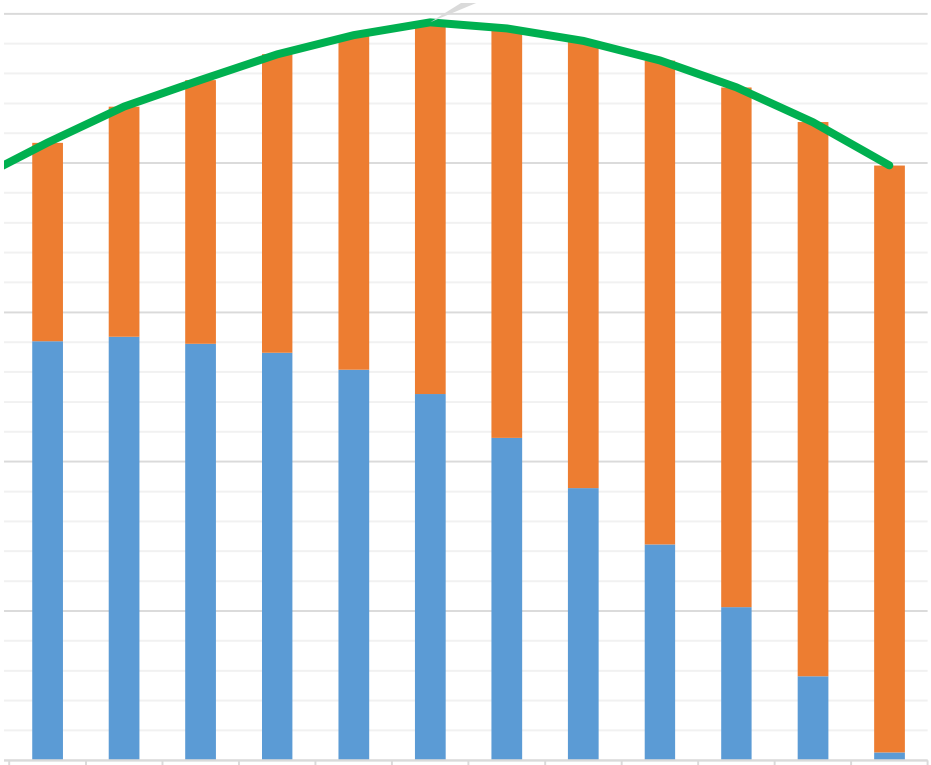


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y

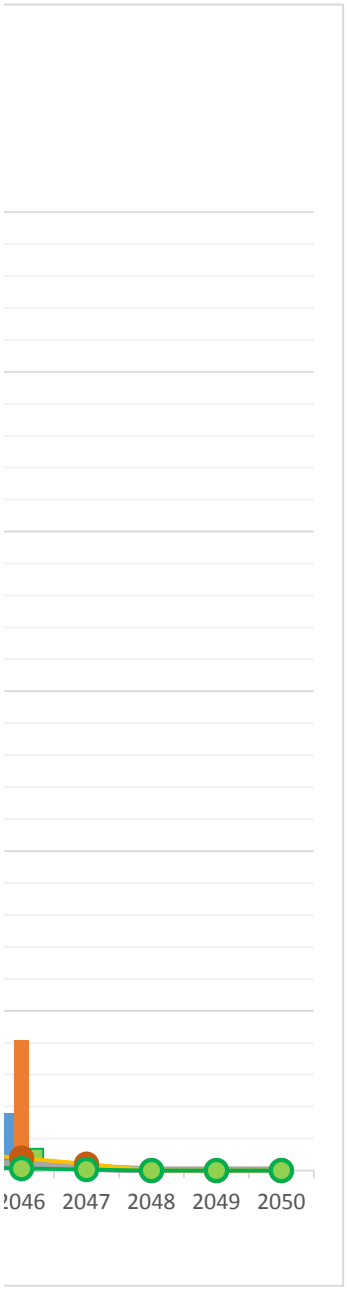

Accumulated debt in present year, with annual interest costs
Feb4 1b, 30-yr, Accumulated Debt
Feb4 1c, 30-yr, Accumulated Debt
ear Debt Drawdown
Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown
Interest Cost - Feb4 1c, 30-yr
2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045
YEAR


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

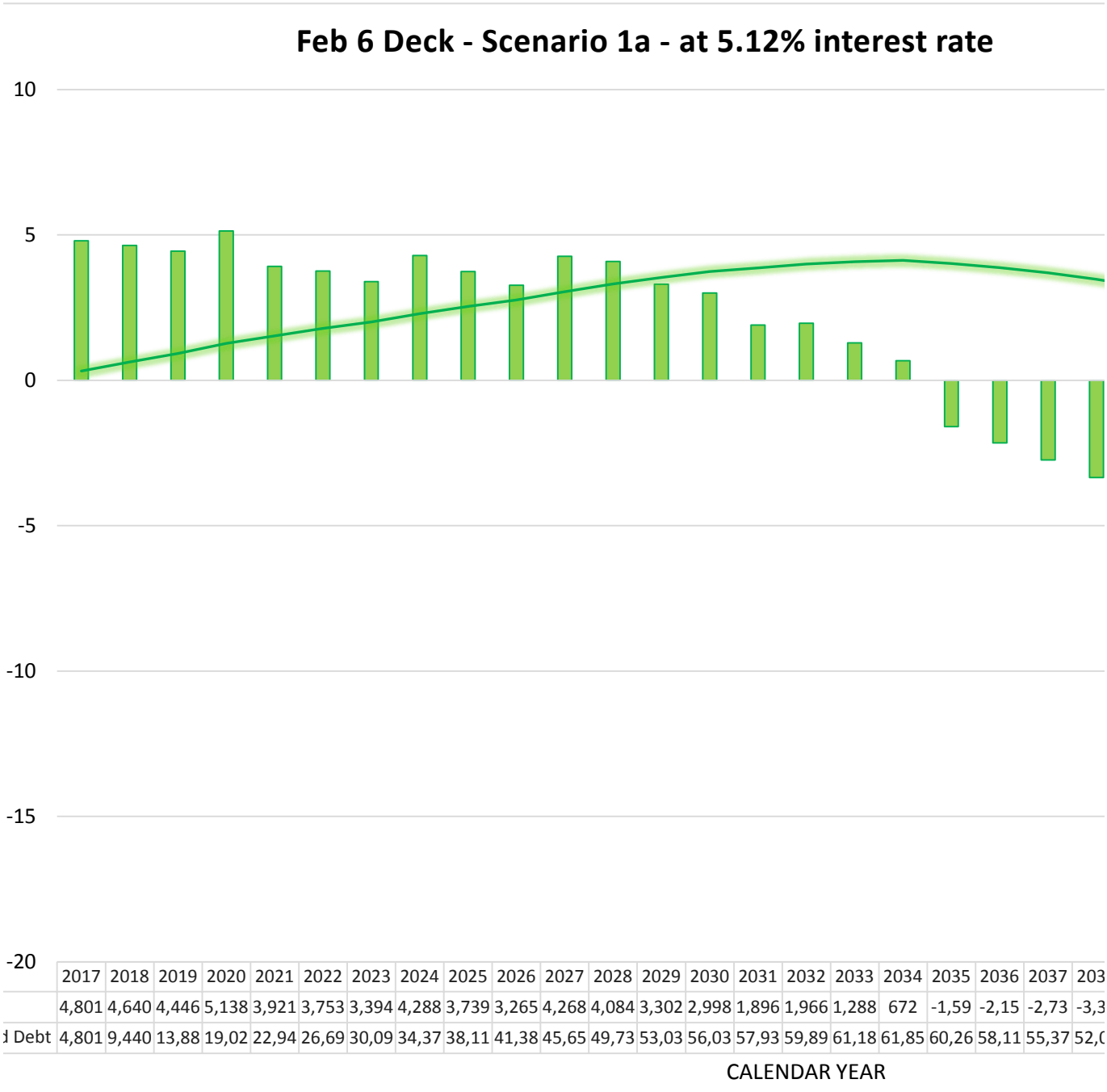
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

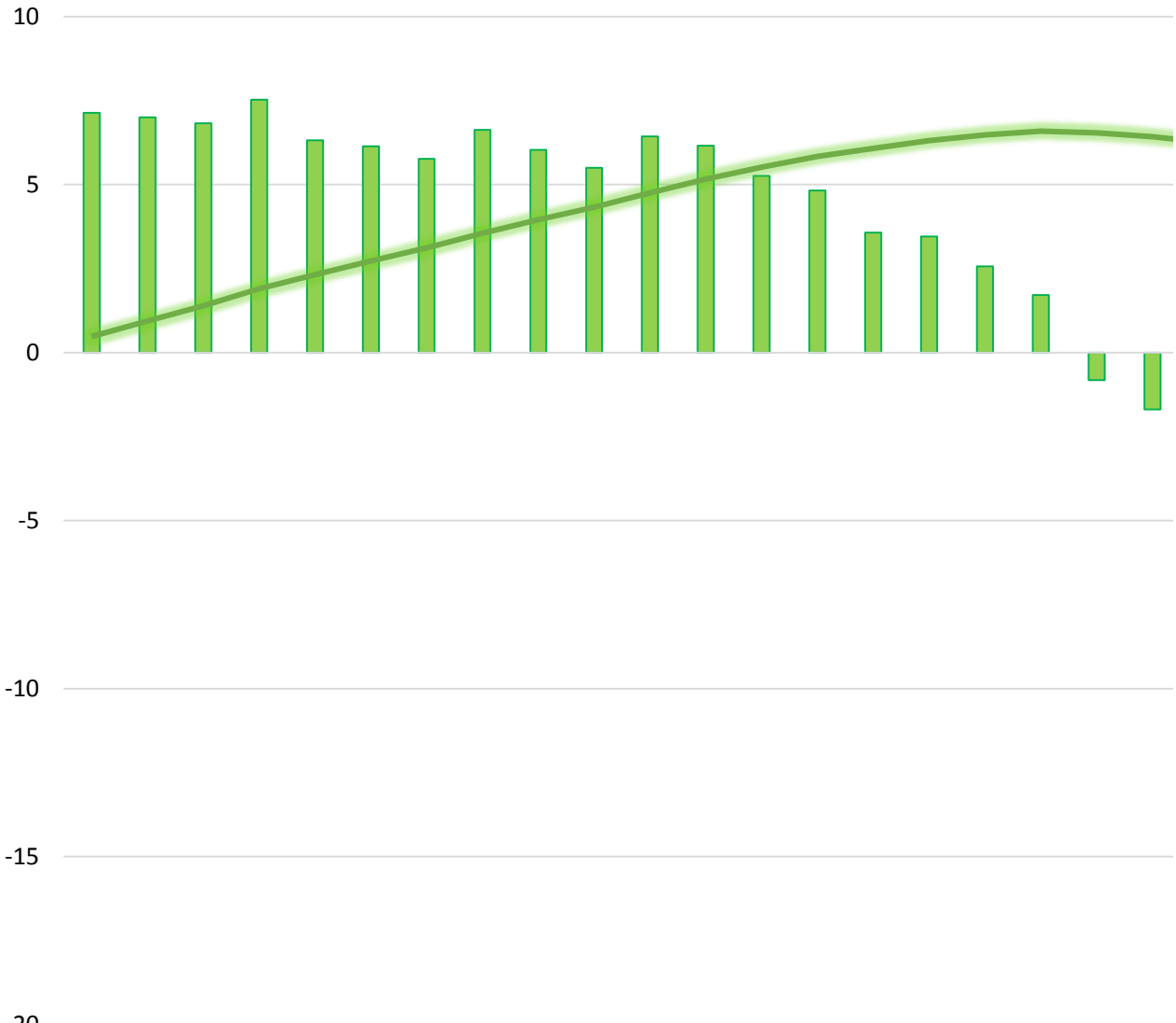
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

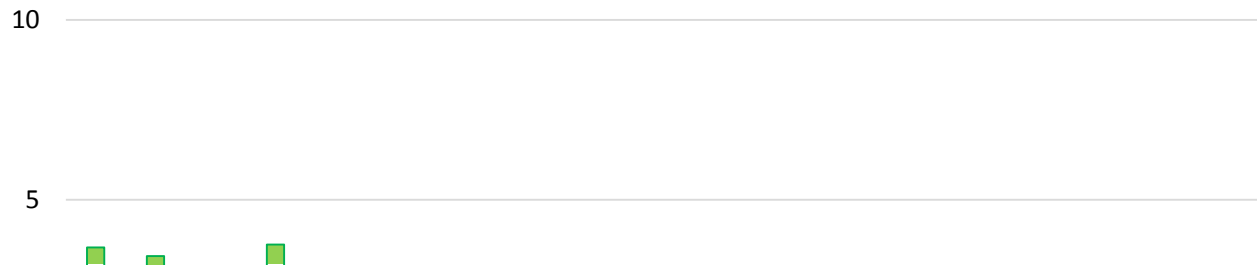
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

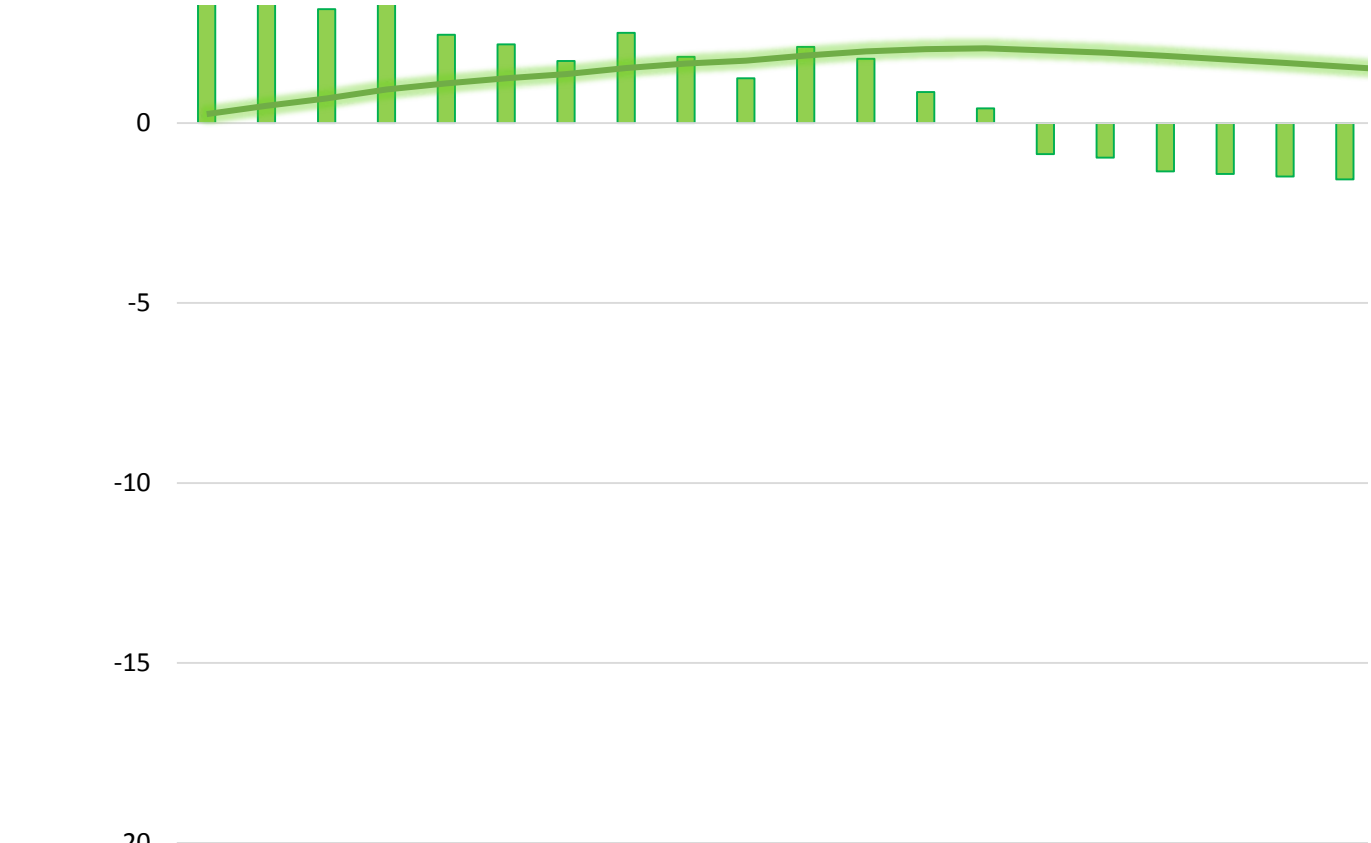


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



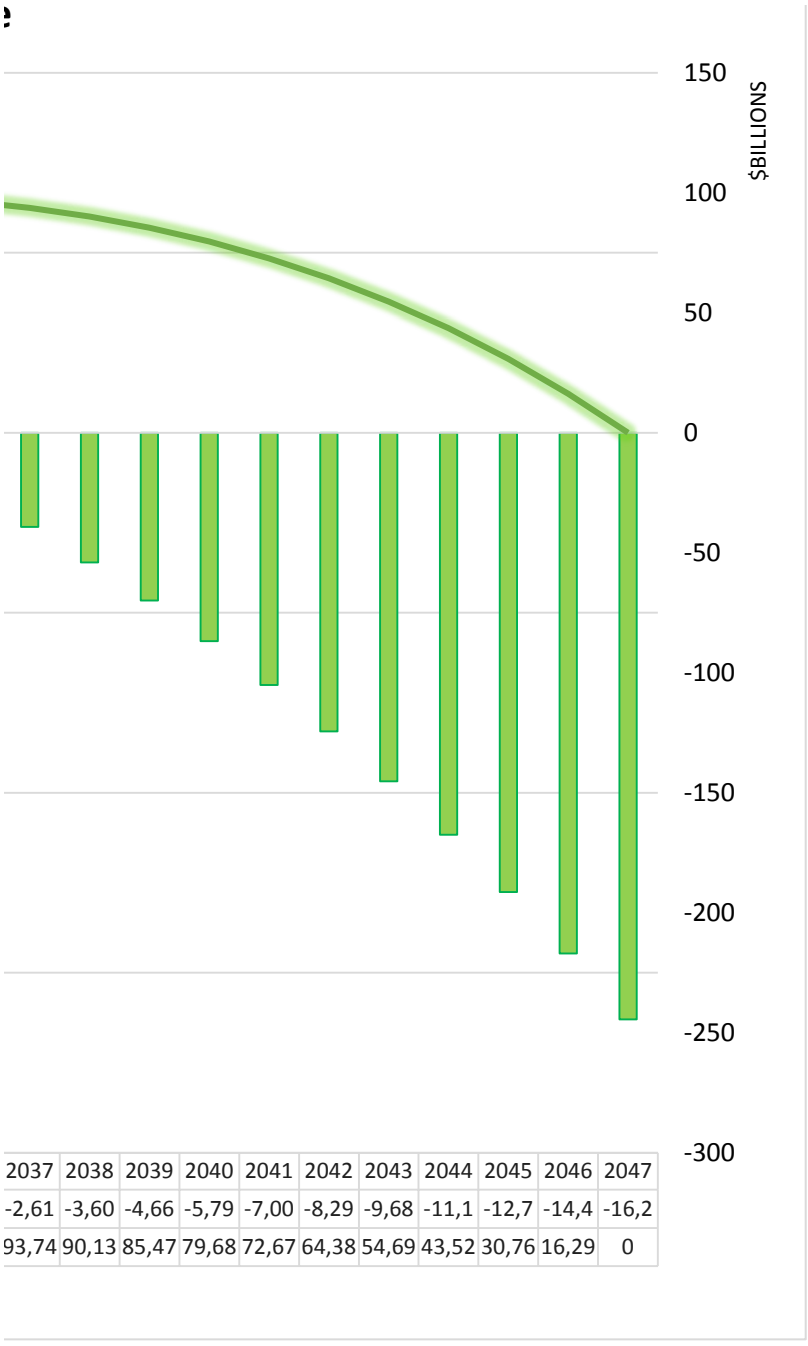


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

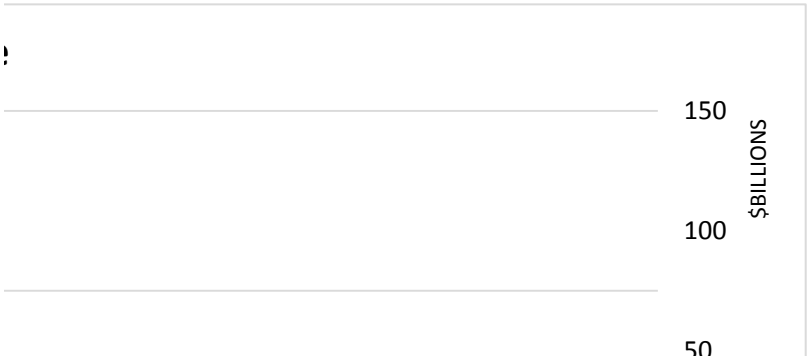
CALENDAR YEAR

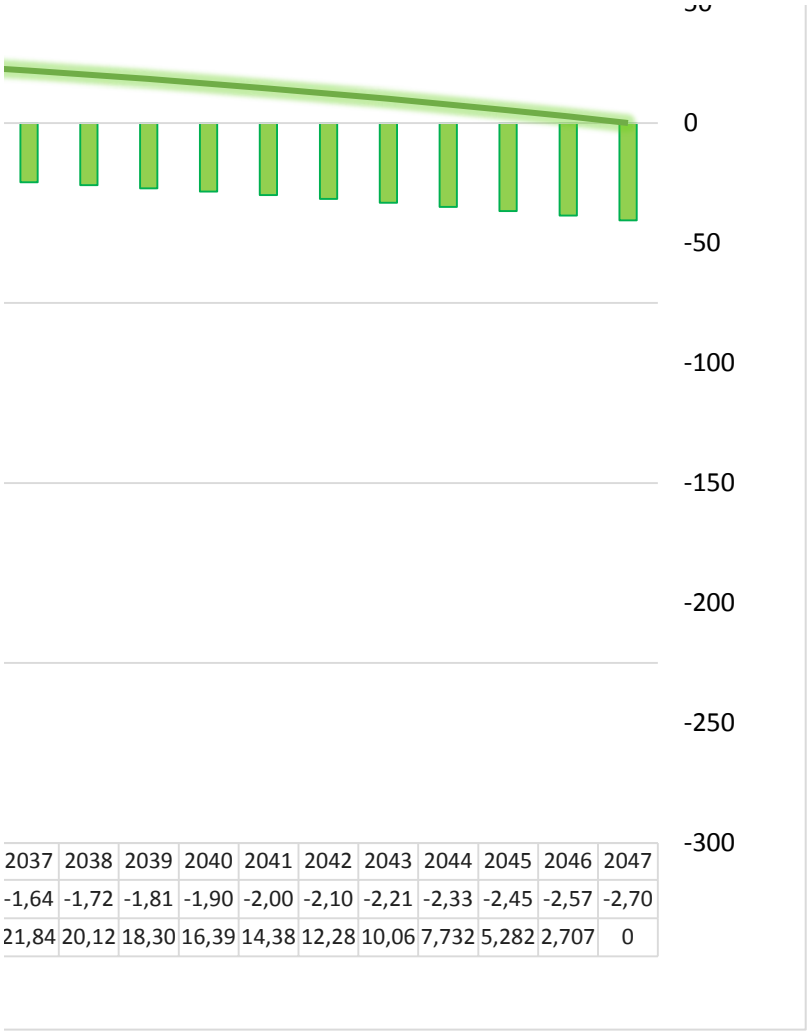


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Feb 8 Deck - Scenario 1a, 1b, 1c - at 5.12% interest
IESO GA cost forecast + extrapolation

Scenario
1a

1b

1c

1d

1e

	2017	2018	2019	2020
rate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	4674	9542	14587	21173

GA Payment from Impacted Rate Class	7421	7205	6995	6329
Accumulated debt in present year (including interest)	4674	9544	14589	21175

GA Payment from Impacted Rate Class	7421	7425	7440	7013
Accumulated debt in present year (including interest)	4674	9323	13913	19780

GA Payment from Impacted Rate Class	9915	9676	9427	9445
Accumulated debt in present year (including interest)	2180	4450	6803	9875

GA Payment from Impacted Rate Class	10596	10370	10129	10162
Accumulated debt in present year (including interest)	1500	3042	4620	6863

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
27212	33084	38588	44968	50769	56056	62291	68274

5890	6156	6434	6724	7028	7345	7677	8024
27212	33082	38585	44963	50762	56048	62281	68263

6825	7042	7266	7497	7736	7983	8237	8499
24810	29671	34167	39545	44359	48679	53976	59058

8532	8703	8877	9054	9236	9420	9609	9801
12692	15272	17420	20384	22719	24494	27181	29590

9264	9449	9638	9831	10027	10228	10432	10641
8794	10429	11568	13457	14645	15200	16588	17614

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
73391	78103	81594	85015	87596	89375	88679	87180

8386	8765	9160	9574	10006	10458	10931	11424
73378	78089	81578	84997	87577	89356	88659	87159

8770	9049	9337	9634	9941	10257	10584	10921
63318	67230	69987	72754	74773	76097	75068	73377

9997	10197	10401	10609	10821	10916	8822	8548
31116	32233	32135	31991	31045	29473	27822	26085

10854	11071	10196	10361	9779	9298	7203	6930
17670	17225	16565	15871	15142	14376	13570	12723

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
84828	81568	77341	72085	65730	58203	49425	39310

11940	12480	13043	13632	14248	14891	15564	16267
84806	81546	77320	72065	65711	58186	49409	39297

11269	11628	11998	12380	12774	13181	13600	14033
70990	67875	63995	59310	53778	47352	39985	31624

8288	8040	7805	7580	7367	7164	6970	6786
24260	22342	20325	18206	15978	13635	11173	8586

6670	6422	6186	5962	5748	5545	5352	5168
11833	10897	9914	8880	7793	6651	5450	4188

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
27767	14699	0	0	0	0

17001	17769	18572	2975	2831	2695
27758	14694	0	0	0	0

14480	14941	15417	2975	2831	2695
22213	11693	0	0	0	0

6611	6444	6286	2975	2831	2695
5865	3006	0	0	0	0

4993	4826	4667	2975	2831	2695
2861	1466	0	0	0	0

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb8_1a_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,867
Annual Exposure2 with start on July 1st	*2,337*	*4,867*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	3,554

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

1 Based on an interest rate of 5%.

2 Fiscal exposure based on equal monthly drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1b_30yr

1b. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,869
Annual Exposure2 with start on July 1st	*2,337*	*4,869*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	*3,554*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649
Annual Exposure2 with start on July 1st	*2,337*	*4,649*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,668
Start: July 1st	-	*3,499*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $76 billion peaking in

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270
Annual Exposure2 with start on July 1st	*1,090*	*2,270*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	545	2,203
Start: July 1st	-	*1,658*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $32 billion peaking in

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542
Annual Exposure2 with start on July 1st	*750*	*1,542*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	375	1,510
Start: July 1st	-	*1,135*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $18 billion peaking in

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	1,169 - 1,169	4,723 - 4,723

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1169**	**4963**
Total, B	1169	4963
Proposed Program Total:	1,169 - 1,169	4,963 - 4,963

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1a
Scenario 1b
Scenario 1c
Scenario 1d
Scenario 1e

2019	2020	2021	2022
5,045	6,586	6,039	5,872
5,045	*6,586*	*6,039*	*5,872*

2018-19	2019-20	2020-21	2021-2022
4,912	5,430	6,449	5,997
4,912	*5,430*	*6,449*	*5,997*

2034.

Actuals are subject t
- The highest debt ac
- Compared to a 5% i

[1] Based on an interes
[2] Fiscal exposure bas
[3] Fiscalized based on

depend on decision on accounting treatment.

2019	2020	2021	2022
5,045	6,586	6,037	5,870
5,045	*6,586*	*6,037*	*5,870*

2018-19	2019-20	2020-21	2021-2022
4,913	5,430	6,449	5,996
4,913	*5,430*	*6,449*	*5,996*

2034.

2019	2020	2021	2022
4,589	5,867	5,031	4,861
4,589	*5,867*	*5,031*	*4,861*

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988
4,634	*4,909*	*5,658*	*4,988*

2034.

2019	2020	2021	2022
2,353	3,072	2,817	2,580
2,353	*3,072*	*2,817*	*2,580*

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757
2,291	*2,533*	*3,008*	*2,757*

2030.

2019	2020	2021	2022
1,578	2,243	1,931	1,635
1,578	*2,243*	*1,931*	*1,635*

2018-19	2019-20	2020-21	2021-2022

1,551	1,745	2,165	1,857
1,551	*1,745*	*2,165*	*1,857*

2029.



2018-19	2019-20	2020-21	2021-2022
4,913 - 4,912	5,430 - 5,430	6,449 - 6,449	5,996 - 5,997

/1

2018-19[1]	2019-20[1]	2020-21[1]
4912	5430	6449
4913	5430	6449
225	279	323
60	60	60
18	18	18
5215	**5787**	**6850**
5216	5787	6850

5,216 - 5,215 5,787 - 5,787 6,850 - 6,850

Total Principal Debt	Total Accumulated Interest Costs	**Peak Total Debt**	
52,287	85,599	89,375	occurs in Year 2034
52,275	85,582	89,356	occurs in Year 2034
44,449	72,823	76,097	occurs in Year 2034
21,239	29,589	32,233	occurs in Year 2030
12,350	16,239	17,670	occurs in Year 2029

o actual prices and actual interest rates.
:cumulation (at 5% interest rate) is expected to be approximately $62 billion, peaking in 203 and $17-21 billion (at 3.5% interest
interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately $33-$36 million.

st rate of 5%.
sed on equal monthly drawdown of debt.
75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on mo

Feb8_1a_30yr
Feb8_1b_30yr
Feb8_1c_30yr
Feb8_1d_30yr
Feb8_1e_30yr

t rate), peaking in 2028.

nth of the year. Actuals may also depend on decision on accounting treatment.

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-275	-311	-350	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,573	85,599
Equal Monthly Debt Drawdown	6,743	4,556	

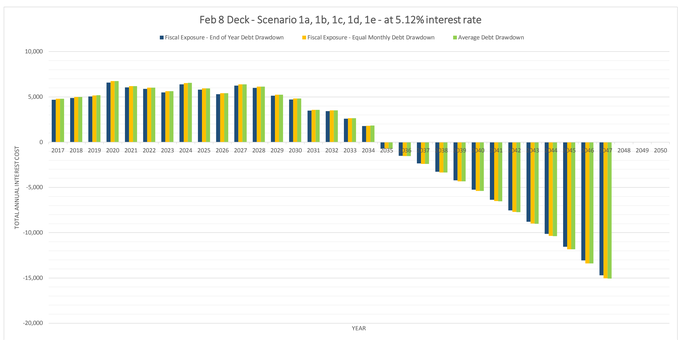
	Feb8 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,375	2034	52,287
Equal Monthly Debt Drawdown	91,501		

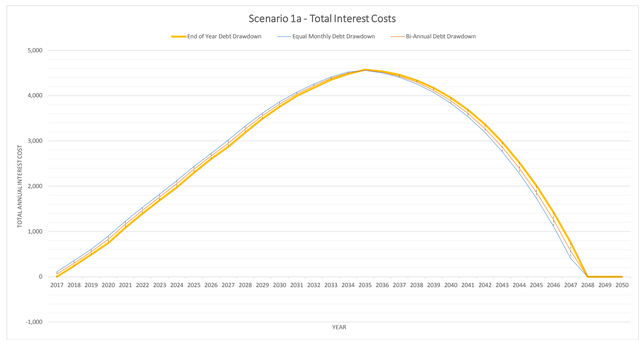
Feb8 1a, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	
c = a*5%	*Interest Cost - Feb8 1a, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,301*	*2,597*	*2,868*	*3,187*	*3,493*	*3,755*	*3,996*	*4,175*	*4,350*	*4,482*	*4,573*	*4,537*	*4,460*	*4,340*	*4,173*	*3,957*	*3,688*	*3,363*	*2,978*	*2,529*	*2,011*	*1,421*	*752*	*0*	*0*	*0*	85,599
b	Additional GA Debt Drawdown, End of Year	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,307	32,728	35,309	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	39,310	27,767	14,699	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	52,287	52,287	52,287	51,591	50,091	47,739	44,479	40,253	34,997	28,642	21,115	12,336	0	0	0	0	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,813	33,987	38,337	42,818	47,391	51,928	56,388	60,728	64,901	68,858	72,546	75,909	78,887	81,416	83,427	84,847	85,599				
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	51,781	51,028	49,259	46,557	41,288	35,252	28,440	20,840	12,440	3,227	-6,816	-17,706	-29,462	-42,106	-55,660	-70,149	-85,599				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	

Feb8 1a, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	
4,556	*Interest Cost - Feb8 1a, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,824*	*2,126*	*2,439*	*2,723*	*3,016*	*3,329*	*3,615*	*3,867*	*4,079*	*4,256*	*4,411*	*4,524*	*4,556*	*4,501*	*4,404*	*4,262*	*4,073*	*3,832*	*3,537*	*3,184*	*2,769*	*2,288*	*1,737*	*1,110*	*402*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
	Monthly Drawdown	390	386	380	487	413	373	318	367	292	224	281	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(980)	(1,054)	(1,129)	(1,207)	(1,288)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,738	4,665	5,979	5,074	4,586	3,902	4,510	3,584	2,753	3,447	2,863	1,662	980	(517)	(772)	(1,810)	(2,766)	(5,394)	(6,180)	(6,975)	(7,781)	(8,599)	(9,432)	(10,282)	(11,149)	(12,036)	(12,944)	(13,876)	(14,834)	(15,818)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	67	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(368)	-	-	-	
	Annual Interest Cost on Opening Balance	-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,263	3,576	3,844	4,091	4,274	4,453	4,588	4,681	4,645	4,566	4,443	4,272	4,051	3,776	3,443	3,049	2,589	2,059	1,454	770	(0)	(0)	(0)	
	Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,824	2,126	2,439	2,723	3,016	3,329	3,615	3,867	4,079	4,256	4,411	4,524	4,556	4,501	4,404	4,262	4,073	3,832	3,537	3,184	2,769	2,288	1,737	1,110	402	(0)	(0)	(0)	

Feb8 1a, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*60*	*301*	*553*	*831*	*1,160*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,948*	*3,263*	*3,558*	*3,815*	*4,041*	*4,218*	*4,383*	*4,504*	*4,564*	*4,518*	*4,430*	*4,298*	*4,119*	*3,890*	*3,607*	*3,267*	*2,866*	*2,399*	*1,864*	*1,253*	*564*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,930	5,110	6,670	6,116	5,947	5,575	6,461	5,875	5,354	6,315	6,060	5,182	4,773	3,535	3,464	2,614	1,802	-705	-1,518	-2,382	-3,302	-4,280	-5,324	-6,436	-7,623	-8,891	-10,244	-11,690	-13,236	-14,887	0	0	0	
	Bi-Annual Drawdown	2,337	2,314	2,279	2,920	2,478	2,240	1,906	2,203	1,750	1,345	1,684	1,398	812	479	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,800)	(4,200)	(4,607)	(5,021)	(5,445)	(5,878)	(6,322)	(6,777)	(7,245)	(7,725)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,687	4,615	5,914	5,019	4,537	3,860	4,462	3,545	2,724	3,410	2,832	1,644	970	(512)	(763)	(1,791)	(2,737)	(5,336)	(6,113)	(6,900)	(7,697)	(8,507)	(9,331)	(10,171)	(11,029)	(11,907)	(12,805)	(13,727)	(14,674)	(15,648)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	494	756	1,097	1,410	1,714	1,999	2,330	2,631	2,905	3,228	3,538	3,803	4,047	4,228	4,405	4,539	4,631	4,595	4,517	4,395	4,227	4,008	3,735	3,406	3,016	2,561	2,037	1,439	762	(0)	(0)	(0)	
	Total Annual Interest Cost	60	301	553	831	1,160	1,467	1,763	2,056	2,375	2,665	2,948	3,263	3,558	3,815	4,041	4,218	4,383	4,504	4,564	4,518	4,430	4,298	4,119	3,890	3,607	3,267	2,866	2,399	1,864	1,253	564	(0)	(0)	(0)	

Feb8 1a, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,723*	*3,027*	*3,340*	*3,624*	*3,875*	*4,085*	*4,262*	*4,416*	*4,527*	*4,555*	*4,499*	*4,400*	*4,257*	*4,065*	*3,822*	*3,525*	*3,170*	*2,753*	*2,270*	*1,716*	*1,086*	*376*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,992	5,174	6,754	6,193	6,022	5,645	6,543	5,950	5,422	6,395	6,137	5,248	4,833	3,580	3,508	2,647	1,825	-714	-1,537	-2,412	-3,343	-4,334	-5,391	-6,517	-7,720	-9,003	-10,374	-11,838	-13,403	-15,075	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-274	-311	-349	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,572	85,582
Equal Monthly Debt Drawdown	6,743	4,555	

	Feb8 1b, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,356	2034	52,275
Equal Monthly Debt Drawdown	91,481		

Feb8 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
a — Debt, Beginning of Year	0	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	
c = a*5% — *Interest Cost - Feb8 1b, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,300*	*2,597*	*2,867*	*3,186*	*3,492*	*3,754*	*3,995*	*4,174*	*4,349*	*4,481*	*4,572*	*4,536*	*4,459*	*4,339*	*4,172*	*3,956*	*3,687*	*3,362*	*2,977*	*2,528*	*2,011*	*1,420*	*752*	*0*	*0*	*0*	85,582
b — Additional GA Debt Drawdown, End of Year	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,303	32,722	35,302	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	39,297	27,758	14,694	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	52,275	52,275	52,275	52,275	51,578	50,078	47,725	44,465	40,239	34,984	28,630	21,105	12,328	0	0	0	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,809	33,983	38,331	42,812	47,384	51,920	56,379	60,718	64,890	68,846	72,533	75,895	78,871	81,399	83,410	84,830	85,582				
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	51,769	51,014	49,246	46,544	41,275	35,239	28,428	20,829	12,431	3,219	-6,822	-17,709	-29,462	-42,102	-55,652	-70,136	-85,582				
Fiscal Exposure - End of Year Debt Drawdown	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	

Feb8 1b, 30-yr — Equal Monthly Debt Drawdown

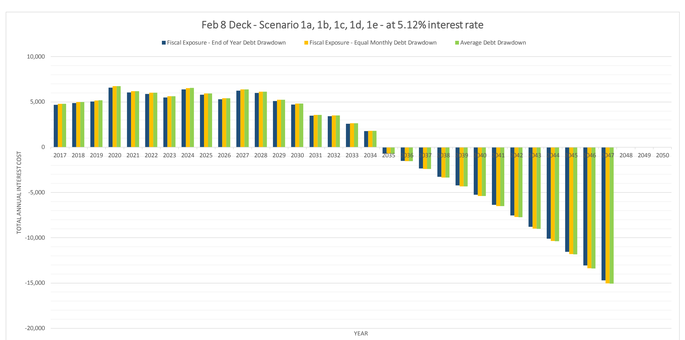
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	
4,555 — *Interest Cost - Feb8 1b, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,823*	*2,126*	*2,438*	*2,723*	*3,016*	*3,329*	*3,614*	*3,866*	*4,078*	*4,255*	*4,410*	*4,523*	*4,555*	*4,500*	*4,403*	*4,261*	*4,072*	*3,831*	*3,536*	*3,183*	*2,768*	*2,287*	*1,736*	*1,109*	*402*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
Monthly Drawdown	390	386	380	487	413	373	317	367	292	224	280	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(979)	(1,053)	(1,129)	(1,207)	(1,287)	(0)	-	-	
FV of Monthly Drawdown at 5%	4,786	4,740	4,665	5,979	5,072	4,585	3,900	4,509	3,582	2,752	3,446	2,862	1,661	979	(518)	(772)	(1,811)	(2,766)	(5,394)	(6,179)	(6,974)	(7,780)	(8,598)	(9,431)	(10,279)	(11,146)	(12,033)	(12,941)	(13,872)	(14,829)	(15,813)	(0)	-	-	
Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	66	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(367)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,262	3,576	3,843	4,090	4,273	4,452	4,587	4,680	4,644	4,565	4,442	4,271	4,050	3,775	3,442	3,048	2,588	2,058	1,454	770	0	0	0	
Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,823	2,126	2,438	2,723	3,016	3,329	3,614	3,866	4,078	4,255	4,410	4,523	4,555	4,500	4,403	4,261	4,072	3,831	3,536	3,183	2,768	2,287	1,736	1,109	402	0	0	0	

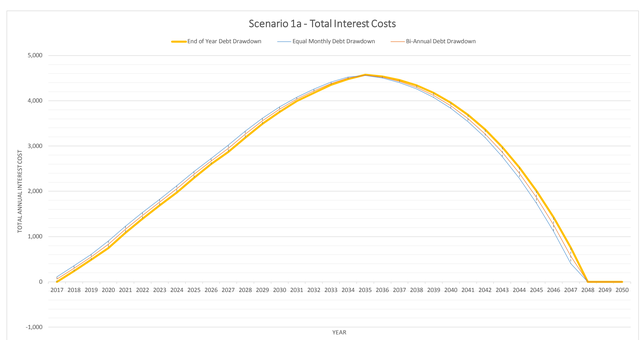
Feb8 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*60*	*301*	*553*	*831*	*1,161*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,947*	*3,263*	*3,558*	*3,814*	*4,040*	*4,217*	*4,382*	*4,503*	*4,563*	*4,517*	*4,429*	*4,297*	*4,118*	*3,889*	*3,606*	*3,266*	*2,865*	*2,399*	*1,863*	*1,253*	*564*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	4,734	4,931	5,110	6,670	6,115	5,945	5,573	6,460	5,874	5,353	6,313	6,058	5,181	4,771	3,534	3,463	2,613	1,801	-706	-1,519	-2,383	-3,302	-4,280	-5,323	-6,435	-7,622	-8,889	-10,242	-11,687	-13,231	-14,882	0	0	0	
Bi-Annual Drawdown	2,337	2,315	2,279	2,920	2,477	2,239	1,905	2,202	1,750	1,344	1,683	1,398	811	478	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,799)	(4,199)	(4,606)	(5,020)	(5,444)	(5,877)	(6,320)	(6,775)	(7,242)	(7,723)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	4,734	4,689	4,615	5,914	5,017	4,535	3,859	4,460	3,544	2,722	3,409	2,831	1,643	969	(513)	(764)	(1,791)	(2,737)	(5,336)	(6,113)	(6,899)	(7,696)	(8,506)	(9,329)	(10,169)	(11,027)	(11,904)	(12,802)	(13,723)	(14,670)	(15,643)	(0)	-	-	
Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	242	495	756	1,097	1,410	1,714	1,999	2,330	2,630	2,904	3,227	3,537	3,802	4,046	4,227	4,404	4,538	4,630	4,594	4,516	4,394	4,225	4,006	3,734	3,405	3,015	2,560	2,036	1,438	761	0	(0)	(0)	
Total Annual Interest Cost	60	301	553	831	1,161	1,467	1,763	2,056	2,375	2,665	2,947	3,263	3,558	3,814	4,040	4,217	4,382	4,503	4,563	4,517	4,429	4,297	4,118	3,889	3,606	3,266	2,865	2,399	1,863	1,253	564	0	(0)	(0)	

Feb8 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,732*	*3,027*	*3,339*	*3,623*	*3,875*	*4,084*	*4,261*	*4,415*	*4,526*	*4,554*	*4,498*	*4,399*	*4,255*	*4,064*	*3,821*	*3,524*	*3,169*	*2,752*	*2,269*	*1,715*	*1,086*	*376*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	4,794	4,994	5,174	6,754	6,192	6,020	5,643	6,541	5,948	5,420	6,393	6,135	5,246	4,831	3,578	3,507	2,646	1,824	-715	-1,538	-2,413	-3,343	-4,334	-5,390	-6,516	-7,718	-9,001	-10,371	-11,835	-13,398	-15,070	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1c_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	
			111	111	109	140	120	116	107	128	115	103	126	121	101	93	66	66	48	32	-24	-40	-57	-74	-92	-111	-132	-153	-175	-199	-224	-250	-278	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	5,867	3,893	72,823
Equal Monthly Debt Drawdown	6,006	3,869	

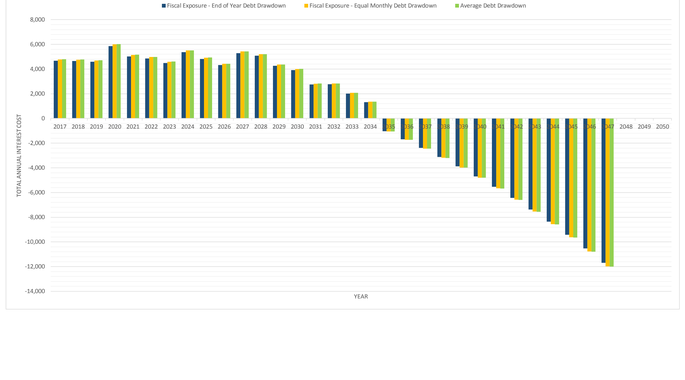
	Feb8 1c, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	76,097	2034	44,449
Equal Monthly Debt Drawdown	77,907		

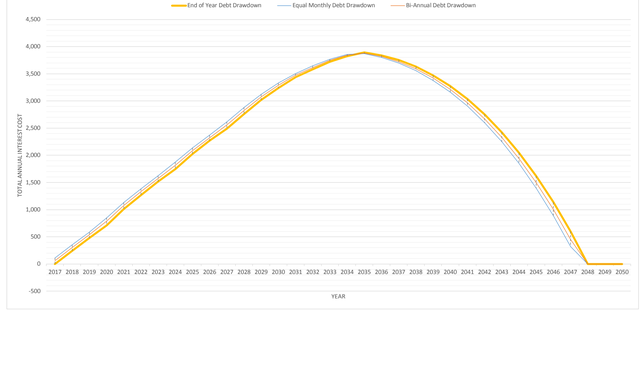
Feb8 1c, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	
c = a*5%	*Interest Cost - Feb8 1c, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*477*	*712*	*1,012*	*1,269*	*1,518*	*1,748*	*2,023*	*2,270*	*2,491*	*2,762*	*3,022*	*3,239*	*3,440*	*3,581*	*3,722*	*3,826*	*3,893*	*3,841*	*3,754*	*3,632*	*3,473*	*3,274*	*3,034*	*2,751*	*2,423*	*2,046*	*1,618*	*1,136*	*598*	*0*	*0*	*0*	72,823
b	Additional GA Debt Drawdown, End of Year	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	
	Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	25,538	28,304	30,324	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,624	22,213	11,693	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	44,449	44,449	44,449	44,449	43,420	41,729	39,342	36,228	32,347	27,662	22,130	15,704	8,337	0	0	0	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	26,221	29,801	33,524	37,349	41,242	45,083	48,837	52,469	55,942	59,216	62,250	65,002	67,424	69,470	71,088	72,224	72,823				
	Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	43,767	42,952	41,249	38,748	33,826	28,294	22,153	15,406	8,054	94	-8,473	-17,649	-27,439	-37,846	-48,875	-60,532	-72,823				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	

Feb8 1c, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
3,869	Debt, Beginning of Year	0	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*111*	*350*	*586*	*851*	*1,132*	*1,385*	*1,625*	*1,876*	*2,138*	*2,372*	*2,617*	*2,882*	*3,123*	*3,333*	*3,505*	*3,646*	*3,770*	*3,857*	*3,869*	*3,800*	*3,697*	*3,558*	*3,380*	*3,163*	*2,903*	*2,599*	*2,247*	*1,847*	*1,394*	*886*	*320*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	
	Monthly Drawdown	390	367	343	430	335	299	248	303	233	171	234	193	103	56	(57)	(68)	(142)	(208)	(410)	(461)	(512)	(562)	(613)	(663)	(714)	(765)	(816)	(867)	(919)	(971)	(1,024)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,515	4,210	5,278	4,114	3,677	3,048	3,717	2,857	2,099	2,873	2,375	1,268	689	(699)	(834)	(1,744)	(2,561)	(5,039)	(5,664)	(6,286)	(6,907)	(7,528)	(8,148)	(8,771)	(9,395)	(10,023)	(10,654)	(11,291)	(11,934)	(12,583)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	105	98	123	96	85	71	86	66	49	67	55	29	16	(16)	(19)	(41)	(59)	(117)	(132)	(146)	(160)	(175)	(189)	(204)	(218)	(233)	(248)	(262)	(277)	(292)	-	-	-	
	Annual Interest Cost on Opening Balance	-	245	488	729	1,036	1,300	1,554	1,790	2,071	2,323	2,550	2,827	3,093	3,317	3,521	3,666	3,811	3,917	3,986	3,932	3,843	3,718	3,555	3,352	3,107	2,817	2,480	2,094	1,656	1,163	612	(0)	(0)	(0)	
	Total Annual Interest Cost	111	350	586	851	1,132	1,385	1,625	1,876	2,138	2,372	2,617	2,882	3,123	3,333	3,505	3,646	3,770	3,857	3,869	3,800	3,697	3,558	3,380	3,163	2,903	2,599	2,247	1,847	1,394	886	320	(0)	(0)	(0)	

Feb8 1c, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*60*	*299*	*536*	*787*	*1,076*	*1,332*	*1,576*	*1,817*	*2,085*	*2,325*	*2,558*	*2,827*	*3,076*	*3,290*	*3,475*	*3,616*	*3,748*	*3,842*	*3,880*	*3,819*	*3,724*	*3,592*	*3,423*	*3,214*	*2,964*	*2,669*	*2,328*	*1,939*	*1,498*	*1,002*	*449*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,708	4,648	5,942	5,095	4,923	4,553	5,447	4,876	4,375	5,364	5,147	4,315	3,962	2,792	2,802	2,045	1,341	-1,042	-1,713	-2,417	-3,155	-3,930	-4,745	-5,603	-6,508	-7,461	-8,468	-9,531	-10,655	-11,842	0	0	0	
	Bi-Annual Drawdown	2,337	2,205	2,056	2,578	2,009	1,796	1,489	1,815	1,395	1,025	1,403	1,160	620	336	(341)	(407)	(852)	(1,251)	(2,461)	(2,766)	(3,070)	(3,373)	(3,676)	(3,980)	(4,283)	(4,588)	(4,895)	(5,203)	(5,514)	(5,828)	(6,146)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,466	4,165	5,221	4,070	3,638	3,015	3,677	2,826	2,077	2,842	2,350	1,255	681	(691)	(825)	(1,725)	(2,533)	(4,985)	(5,603)	(6,219)	(6,833)	(7,447)	(8,061)	(8,676)	(9,294)	(9,915)	(10,540)	(11,170)	(11,806)	(12,448)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	56	53	66	51	46	38	46	36	26	36	30	16	9	(9)	(10)	(22)	(32)	(63)	(71)	(79)	(86)	(94)	(102)	(110)	(117)	(125)	(133)	(141)	(149)	(157)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	483	721	1,025	1,286	1,537	1,770	2,049	2,299	2,522	2,797	3,060	3,281	3,484	3,626	3,770	3,874	3,943	3,890	3,802	3,678	3,517	3,316	3,073	2,787	2,454	2,072	1,639	1,151	606	(0)	(0)	(0)	
	Total Annual Interest Cost	60	299	536	787	1,076	1,332	1,576	1,817	2,085	2,325	2,558	2,827	3,076	3,290	3,475	3,616	3,748	3,842	3,880	3,819	3,724	3,592	3,423	3,214	2,964	2,669	2,328	1,939	1,498	1,002	449	(0)	(0)	(0)	

Feb8 1c, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*120*	*358*	*594*	*862*	*1,141*	*1,394*	*1,633*	*1,886*	*2,146*	*2,380*	*2,626*	*2,892*	*3,130*	*3,340*	*3,510*	*3,651*	*3,774*	*3,859*	*3,867*	*3,797*	*3,693*	*3,552*	*3,373*	*3,154*	*2,893*	*2,587*	*2,234*	*1,832*	*1,377*	*867*	*299*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,768	4,707	6,017	5,160	4,985	4,610	5,516	4,937	4,431	5,432	5,212	4,370	4,012	2,828	2,837	2,071	1,358	-1,055	-1,735	-2,447	-3,195	-3,979	-4,805	-5,674	-6,590	-7,556	-8,575	-9,652	-10,789	-11,992	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1d_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
			52	54	56	73	67	61	51	71	56	42	64	57	36	27	-2	-3	-23	-37	-39	-41	-43	-46	-48	-50	-53	-56	-59	-62	-65	-68	-71	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,072	1,649	29,589
Equal Monthly Debt Drawdown	3,145	1,647	

	Feb8 1d, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,233	2030	21,239
Equal Monthly Debt Drawdown	32,999		

Feb8 1d, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
a Debt, Beginning of Year	0	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	
c = a*5% *Interest Cost - Feb8 1d, 30-yr - End of Year Debt Drawdown*	*0*	*112*	*228*	*348*	*505*	*649*	*781*	*891*	*1,043*	*1,162*	*1,253*	*1,391*	*1,514*	*1,592*	*1,649*	*1,644*	*1,637*	*1,588*	*1,508*	*1,423*	*1,335*	*1,241*	*1,143*	*1,040*	*931*	*817*	*698*	*572*	*439*	*300*	*154*	*0*	*0*	*0*	29,589
b Additional GA Debt Drawdown, End of Year	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
d = a+b+c Accumulated debt in present year (including 5.12% annual interest)	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	11,372	11,227	10,281	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,586	5,865	3,006	0	0	0	0	
Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	20,763	20,763	20,763	20,763	19,112	17,375	15,550	13,632	11,616	9,496	7,268	4,926	2,464	0	0	0	0	0	0	0	
Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	13,118	14,763	16,399	17,988	19,495	20,919	22,253	23,495	24,638	25,678	26,609	27,426	28,124	28,696	29,135	29,435	29,589				
Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	19,017	17,228	14,645	11,486	8,326	5,167	2,007	-1,153	-4,312	-7,472	-10,631	-13,791	-16,951	-20,110	-23,270	-26,429	-29,589				
Fiscal Exposure - End of Year Debt Drawdown	2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	

Feb8 1d, 30-yr — Equal Monthly Debt Drawdown

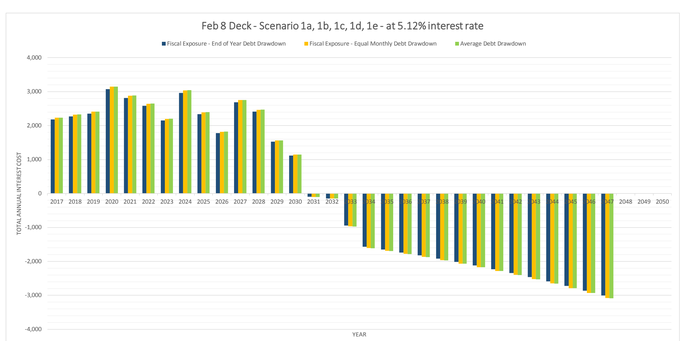
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Debt, Beginning of Year	0	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	
1,647 *Interest Cost - Feb8 1d, 30-yr*	*52*	*166*	*284*	*421*	*572*	*711*	*832*	*962*	*1,098*	*1,205*	*1,317*	*1,448*	*1,550*	*1,619*	*1,647*	*1,641*	*1,614*	*1,551*	*1,469*	*1,382*	*1,291*	*1,196*	*1,095*	*989*	*878*	*762*	*639*	*510*	*375*	*232*	*82*	*0*	*0*	*0*	29,589
Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
Monthly Drawdown	182	180	177	227	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	-	-	-	
FV of Monthly Drawdown at 5%	2,232	2,210	2,176	2,788	2,366	1,977	1,399	2,123	1,322	628	1,468	1,042	12	(487)	(1,788)	(1,831)	(2,644)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	-	-	-	
Annual Interest Cost on New Drawdowns	52	51	51	65	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	-	-	-	
Annual Interest Cost on Opening Balance	-	114	233	356	517	665	800	912	1,068	1,190	1,283	1,424	1,550	1,630	1,688	1,683	1,676	1,626	1,544	1,457	1,366	1,271	1,170	1,065	954	837	714	585	450	307	157	0	0	0	
Total Annual Interest Cost	52	166	284	421	572	711	832	962	1,098	1,205	1,317	1,448	1,550	1,619	1,647	1,641	1,614	1,551	1,469	1,382	1,291	1,196	1,095	989	878	762	639	510	375	232	82	0	0	0	

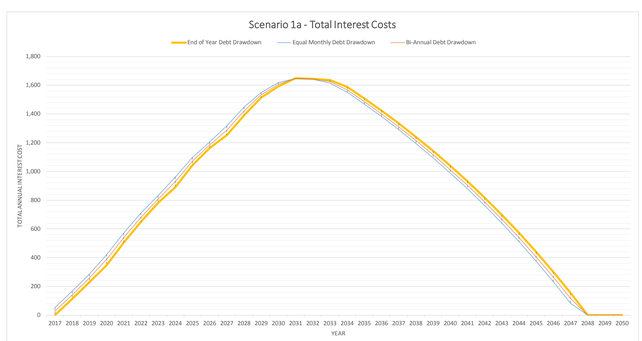
Feb8 1d, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Debt, Beginning of Year	0	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	
Interest Cost - Feb8 1d, 30-yr	*56*	*170*	*288*	*427*	*577*	*715*	*836*	*967*	*1,103*	*1,208*	*1,322*	*1,452*	*1,553*	*1,621*	*1,647*	*1,640*	*1,613*	*1,548*	*1,466*	*1,379*	*1,288*	*1,192*	*1,091*	*986*	*874*	*758*	*635*	*505*	*370*	*227*	*77*	*0*	*0*	*0*	29,589
Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	2,236	2,328	2,413	3,150	2,889	2,646	2,203	3,041	2,394	1,821	2,756	2,471	1,565	1,145	-100	-148	-970	-1,612	-1,694	-1,781	-1,872	-1,967	-2,068	-2,174	-2,285	-2,402	-2,525	-2,654	-2,790	-2,933	-3,083	0	0	0	
Bi-Annual Drawdown	1,090	1,079	1,063	1,362	1,156	965	683	1,037	646	307	717	509	6	(238)	(873)	(894)	(1,291)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	-	-	-	
FV of Bi-Annual Drawdown at 5%	2,208	2,186	2,153	2,758	2,341	1,955	1,384	2,100	1,308	621	1,453	1,031	12	(481)	(1,769)	(1,812)	(2,616)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	-	-	-	
Annual Interest Cost on New Drawdowns	28	28	27	35	30	25	17	27	17	8	18	13	0	(6)	(22)	(23)	(33)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	-	-	-	
Annual Interest Cost on Opening Balance	-	113	231	353	512	658	791	903	1,056	1,177	1,269	1,408	1,533	1,612	1,670	1,665	1,658	1,609	1,527	1,442	1,352	1,257	1,158	1,053	943	828	707	579	445	304	156	0	0	0	
Total Annual Interest Cost	28	141	258	387	541	682	809	929	1,073	1,185	1,288	1,421	1,533	1,606	1,648	1,642	1,625	1,568	1,487	1,401	1,311	1,217	1,117	1,013	903	787	666	539	404	264	115	0	0	0	

Feb8 1d, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Debt, Beginning of Year	0	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	
Interest Cost - Feb8 1d, 30-yr	*56*	*170*	*288*	*427*	*577*	*715*	*836*	*967*	*1,103*	*1,208*	*1,322*	*1,452*	*1,553*	*1,621*	*1,647*	*1,640*	*1,613*	*1,548*	*1,466*	*1,379*	*1,288*	*1,192*	*1,091*	*986*	*874*	*758*	*635*	*505*	*370*	*227*	*77*	*0*	*0*	*0*	29,589
Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	2,236	2,328	2,413	3,150	2,889	2,646	2,203	3,041	2,394	1,821	2,756	2,471	1,565	1,145	-100	-148	-970	-1,612	-1,694	-1,781	-1,872	-1,967	-2,068	-2,174	-2,285	-2,402	-2,525	-2,654	-2,790	-2,933	-3,083	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1e_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	
			36	37	38	53	46	39	27	45	28	13	33	24	1	-11	-16	-16	-17	-18	-19	-20	-21	-22	-23	-25	-26	-27	-29	-30	-32	-33	-35	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,243	904	16,239
Equal Monthly Debt Drawdown	2,297	903	

		Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	17,670	2029	12,350
Equal Monthly Debt Drawdown	18,091		

Feb8 1e, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	
c = a*5%	*Interest Cost - Feb8 1e, 30-yr - End of Year Debt Drawdown*		*0*	*77*	*156*	*236*	*351*	*450*	*534*	*592*	*688*	*749*	*778*	*849*	*901*	*904*	*881*	*847*	*812*	*775*	*735*	*694*	*651*	*605*	*558*	*507*	*454*	*399*	*340*	*279*	*214*	*146*	*75*	*0*	*0*	*0*	16,239
b	Additional GA Debt Drawdown, End of Year		1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)		1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
Feb8 1e, 30-yr - Accumulated Interest Costs			0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	6,605	5,911	5,182	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,188	2,861	1,466	0	0	0	0	
Feb8 1e, 30-yr - Accumulated Debt Principal			1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	9,960	9,960	9,960	9,960	9,155	8,308	7,418	6,482	5,498	4,465	3,378	2,235	1,035	0	0	0	0	0	0	0	
Feb8 1e, 30-yr - Accumulated Interest Costs			0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	8,146	8,993	9,805	10,580	11,315	12,010	12,661	13,266	13,824	14,331	14,785	15,184	15,524	15,803	16,017	16,164	16,239				
Feb8 1e, 30-yr - Accumulated Debt Principal			1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	8,419	6,878	5,337	3,796	2,255	714	-827	-2,369	-3,910	-5,451	-6,992	-8,533	-10,074	-11,615	-13,156	-14,697	-16,239				
Fiscal Exposure - End of Year Debt Drawdown			1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	

Feb8 1e, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	
Interest Cost - Feb8 1e, 30-yr			*36*	*113*	*193*	*290*	*397*	*489*	*561*	*637*	*717*	*762*	*811*	*873*	*903*	*893*	*866*	*831*	*795*	*756*	*716*	*674*	*630*	*583*	*534*	*483*	*428*	*372*	*312*	*249*	*183*	*113*	*40*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown			1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)			1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	0
Fiscal Exposure - Equal Monthly Debt Drawdown			1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	
Monthly Drawdown			125	122	119	167	132	99	50	108	42	(16)	51	15	(70)	(112)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	-	-	-	
FV of Monthly Drawdown at 5%			1,536	1,500	1,457	2,055	1,617	1,213	620	1,328	512	(199)	625	182	(865)	(1,382)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	-	-	-	
Annual Interest Cost on New Drawdowns			36	35	34	48	38	28	14	31	12	(5)	15	4	(20)	(32)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	-	-	-	
Annual Interest Cost on Opening Balance			-	79	159	242	359	461	546	606	705	767	796	869	923	926	902	868	831	793	753	711	666	620	571	519	465	408	348	285	219	150	77	0	0	0	
Total Annual Interest Cost			36	113	193	290	397	489	561	637	717	762	811	873	903	893	866	831	795	756	716	674	630	583	534	483	428	372	312	249	183	113	40	0	0	0	

Feb8 1e, 30-yr — Bi-Annual Debt Drawdown

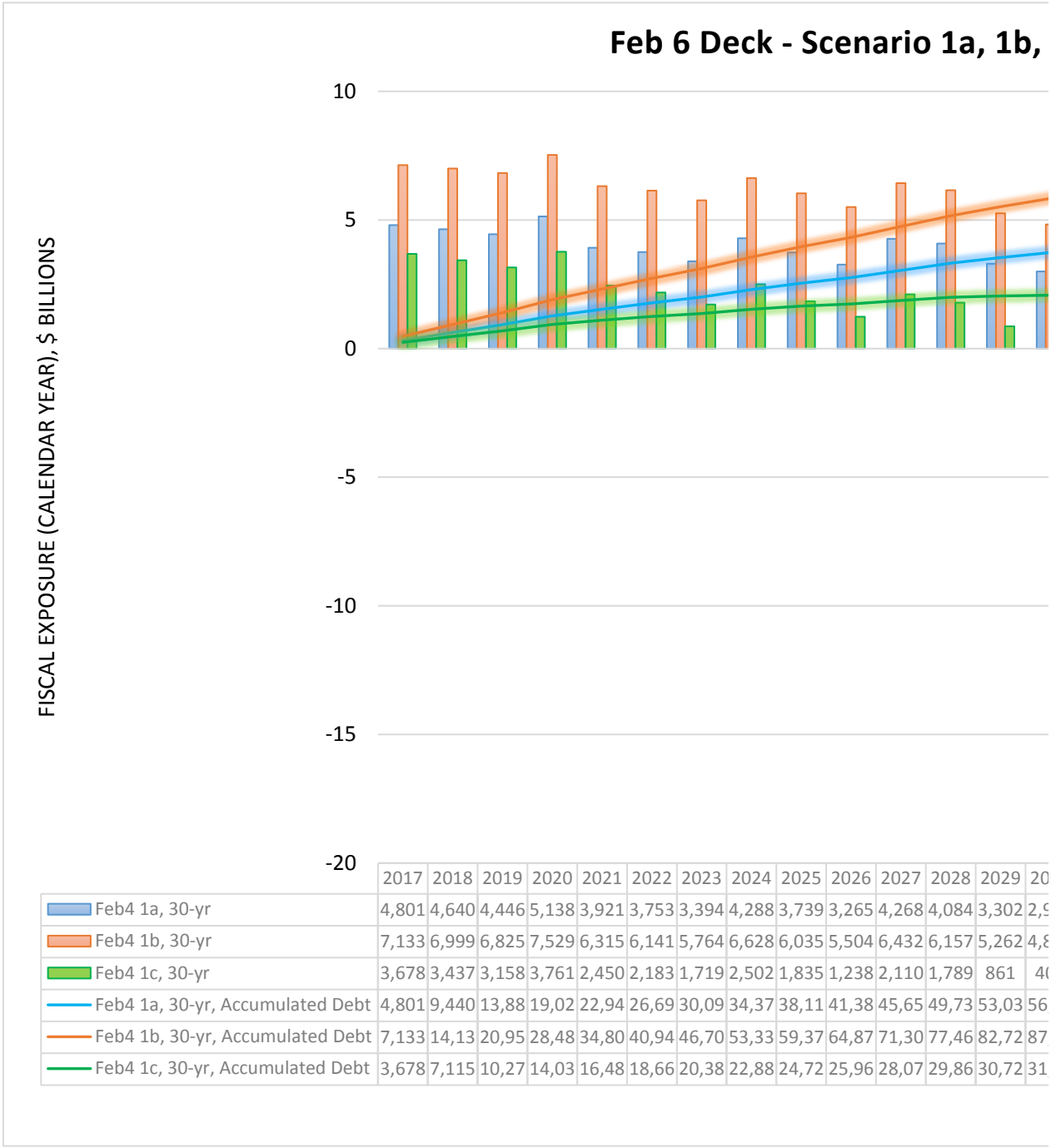
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	
Interest Cost - Feb8 1e, 30-yr			*19*	*96*	*176*	*265*	*376*	*471*	*548*	*616*	*704*	*756*	*795*	*862*	*902*	*898*	*873*	*839*	*803*	*765*	*725*	*683*	*640*	*593*	*545*	*494*	*440*	*384*	*325*	*263*	*197*	*129*	*56*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown			1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)			1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	0
Fiscal Exposure - Bi-Annual Debt Drawdown			1,519	1,561	1,598	2,272	1,956	1,655	1,154	1,913	1,203	562	1,406	1,040	57	-451	-668	-703	-738	-776	-816	-858	-902	-948	-996	-1,047	-1,101	-1,157	-1,216	-1,278	-1,344	-1,413	-1,485	0	0	0	
Bi-Annual Drawdown			750	733	711	1,003	790	592	303	649	250	(97)	305	89	(423)	(675)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	-	-	-	
FV of Bi-Annual Drawdown at 5%			1,519	1,484	1,441	2,033	1,600	1,200	613	1,314	506	(197)	618	180	(856)	(1,367)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	-	-	-	
Annual Interest Cost on New Drawdowns			19	19	18	26	20	15	8	17	6	(2)	8	2	(11)	(17)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	-	-	-	
Annual Interest Cost on Opening Balance			-	78	158	239	356	456	540	599	697	759	788	860	913	916	893	858	822	785	745	703	659	613	565	514	460	404	345	282	217	148	76	0	0	0	
Total Annual Interest Cost			19	96	176	265	376	471	548	616	704	756	795	862	902	898	873	839	803	765	725	683	640	593	545	494	440	384	325	263	197	129	56	0	0	0	

Feb8 1e, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	
Interest Cost - Feb8 1e, 30-yr			*38*	*116*	*196*	*294*	*401*	*492*	*563*	*640*	*719*	*763*	*813*	*875*	*903*	*893*	*864*	*830*	*793*	*755*	*715*	*673*	*628*	*581*	*532*	*481*	*427*	*369*	*310*	*247*	*180*	*111*	*38*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown			1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)			1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	0
Fiscal Exposure - Average Debt Drawdown			1,538	1,581	1,619	2,301	1,980	1,676	1,168	1,938	1,219	569	1,424	1,053	57	-457	-677	-711	-748	-786	-826	-869	-913	-960	-1,009	-1,060	-1,115	-1,172	-1,232	-1,295	-1,361	-1,430	-1,504	0	0	0	

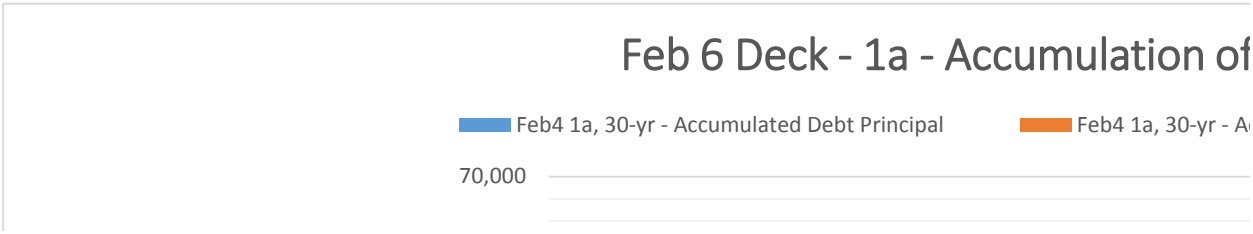
Feb 6 Deck

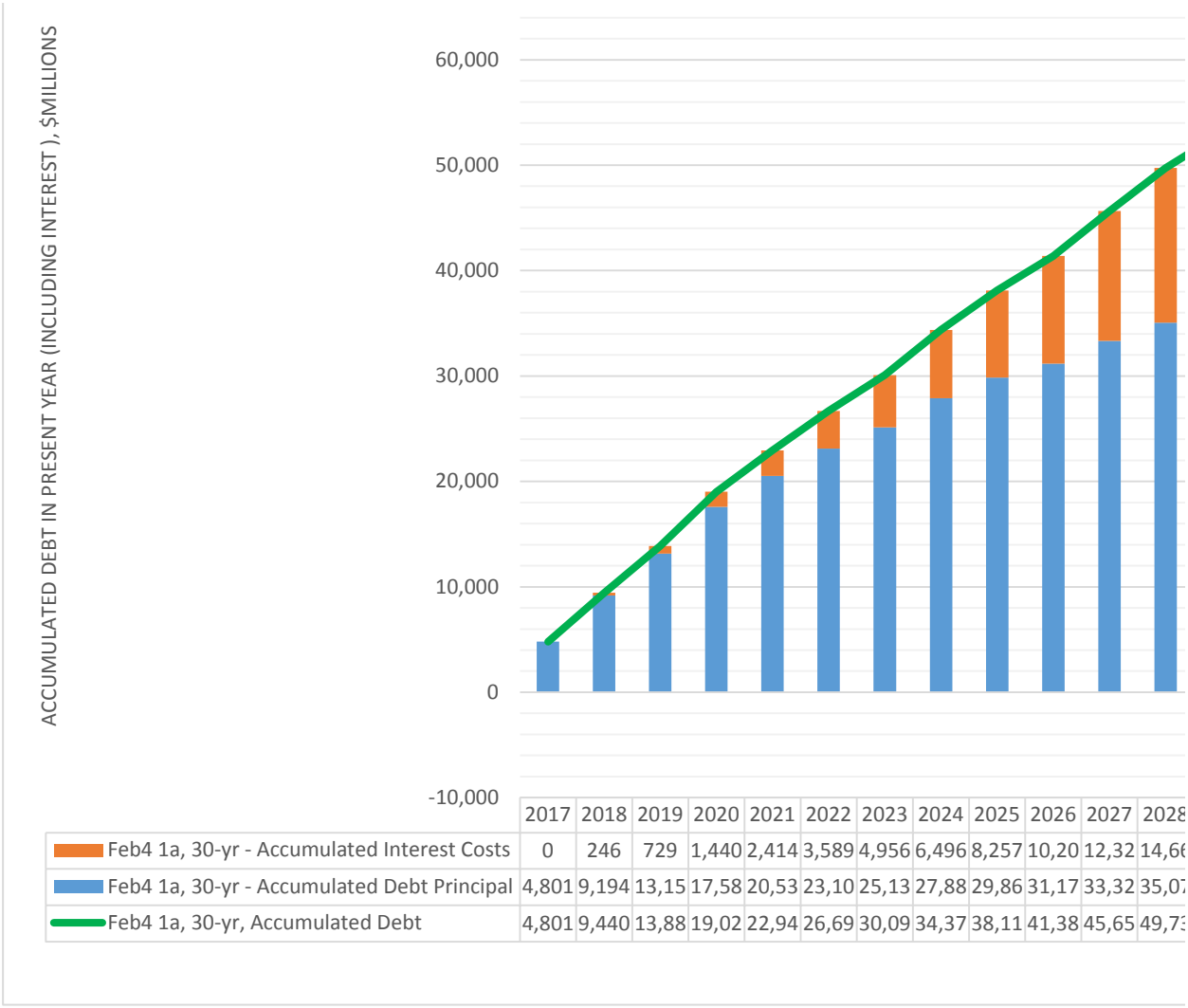
Feb 6 Deck - Scenario 1a, 1b, 1c - at 5.12% interest rate



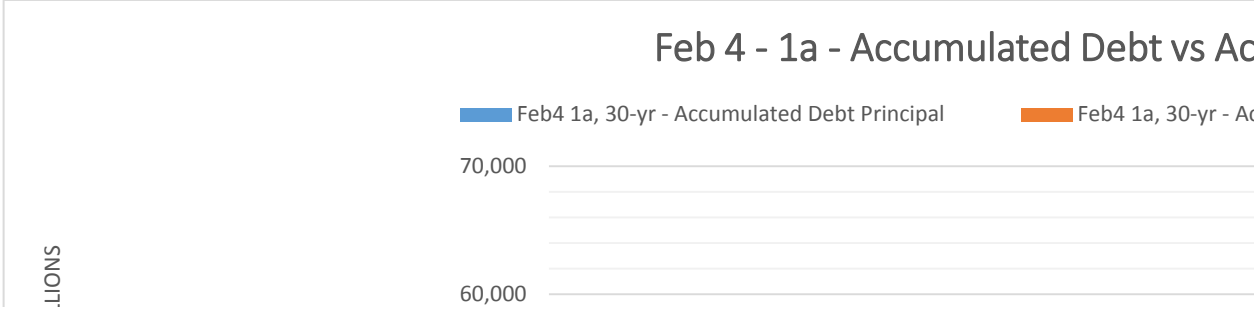
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	20
Feb4 1a, 30-yr	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,9
Feb4 1b, 30-yr	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,8
Feb4 1c, 30-yr	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	4(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73	53,03	56
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31

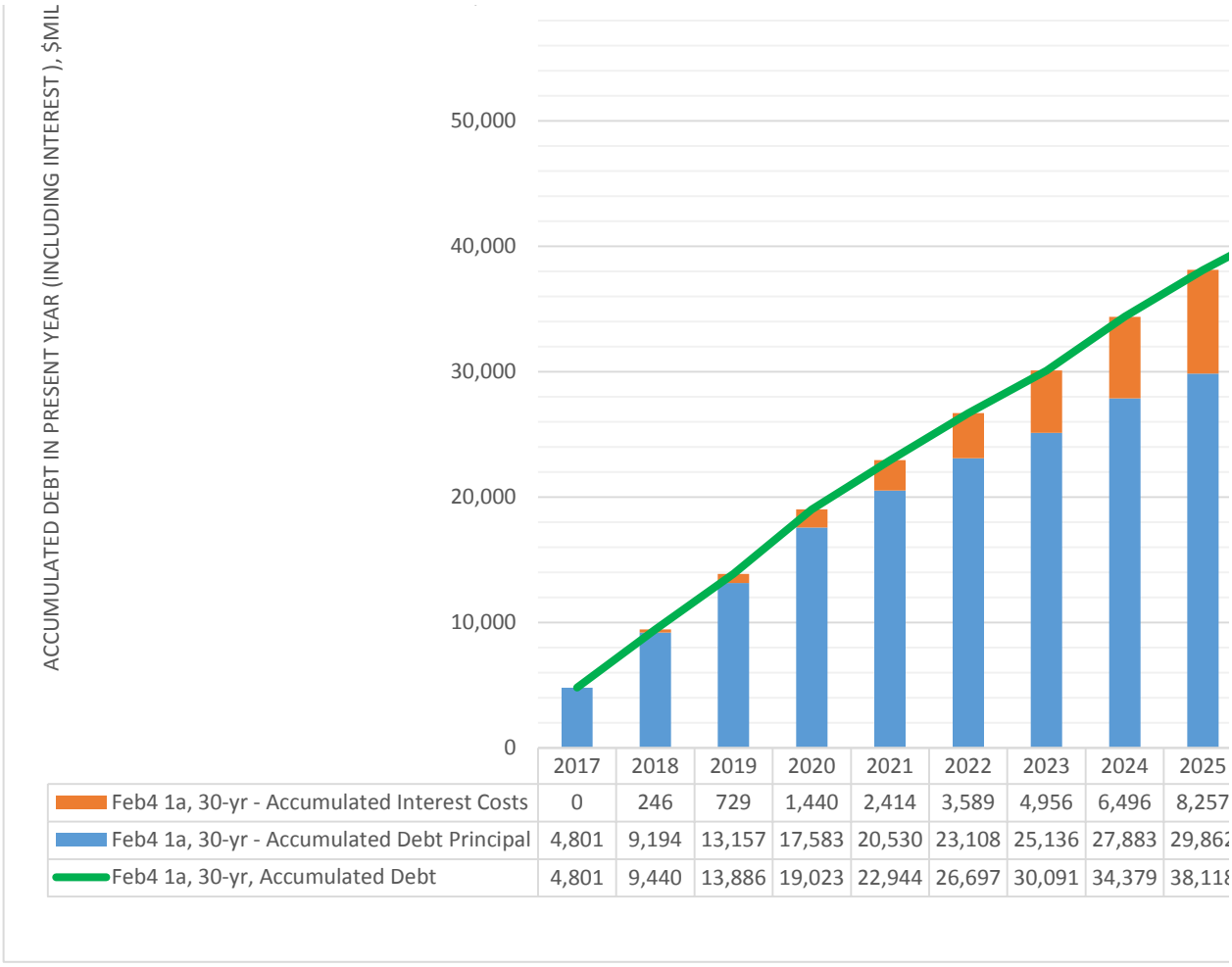
Feb 6 Deck - 1a - Accumulation of Debt (Principal and Interest)



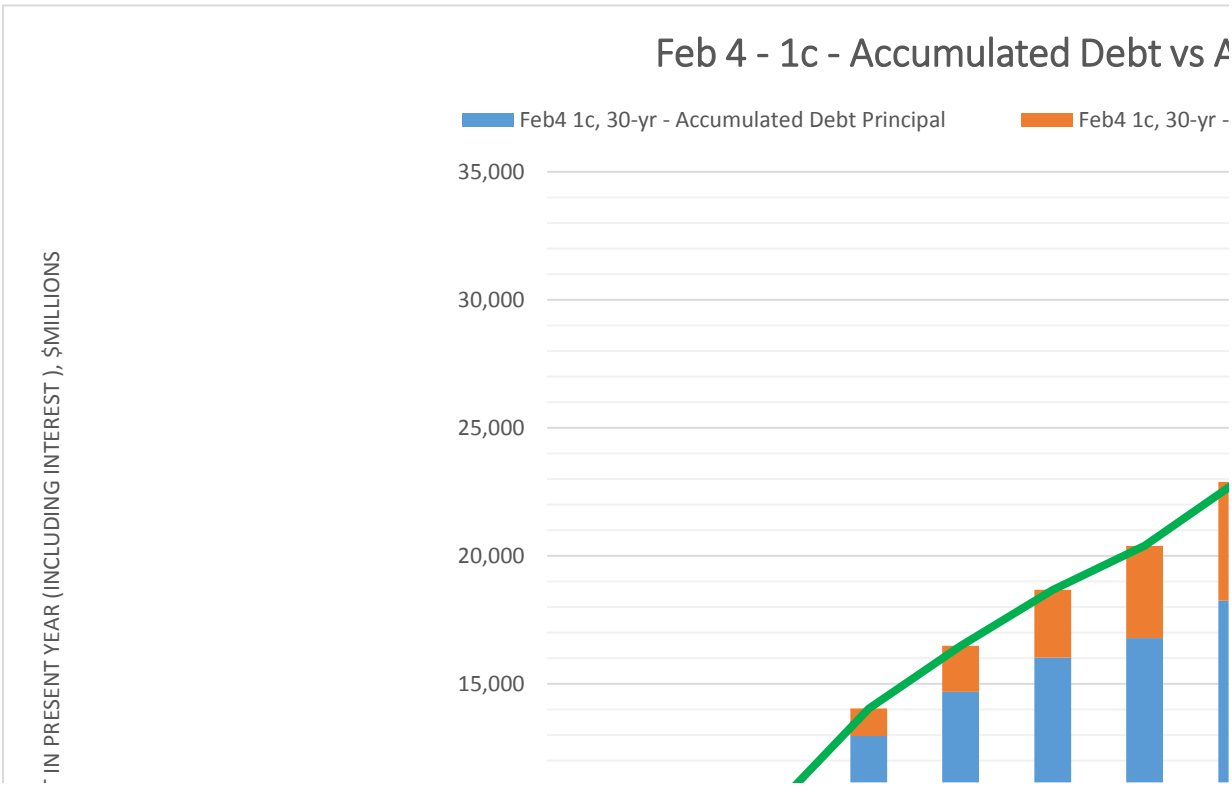


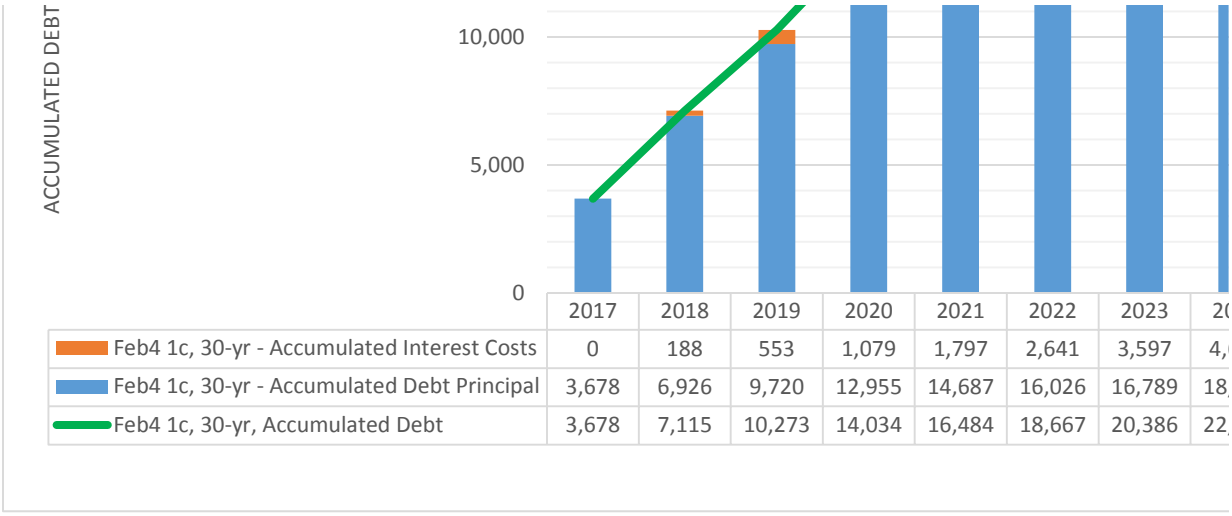
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,66
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,07
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73



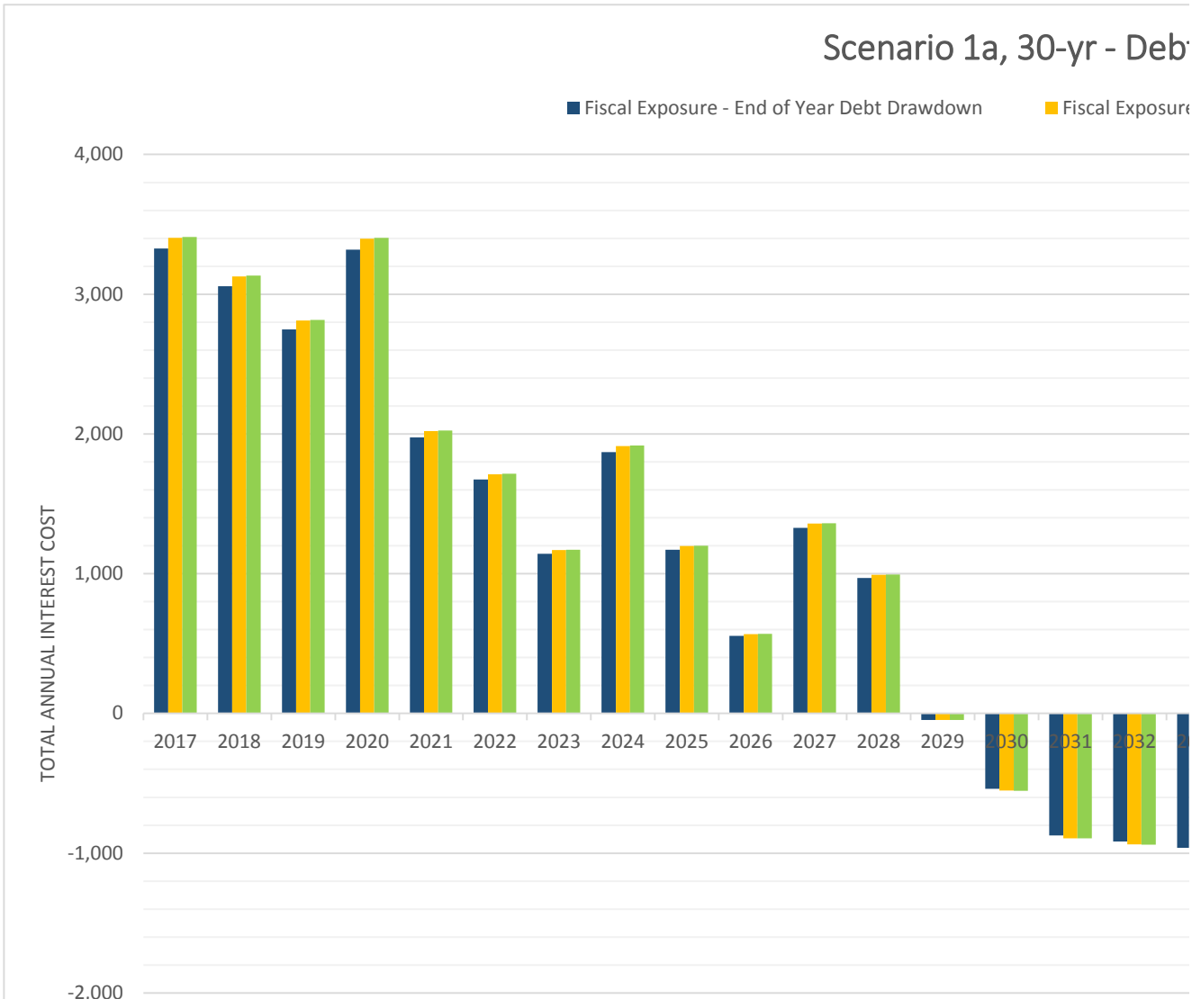


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



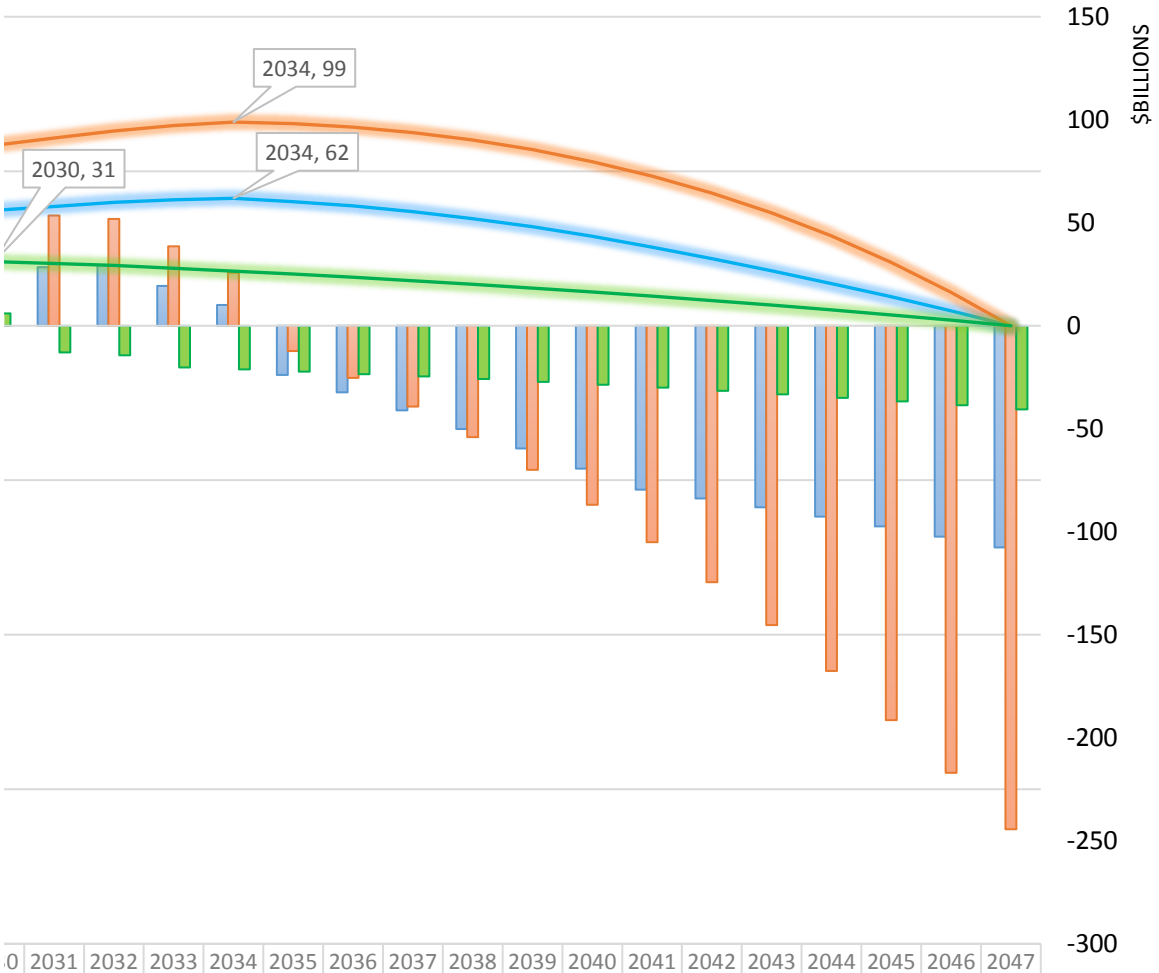


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22



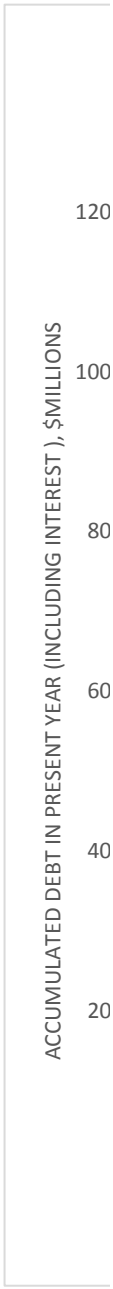

-3,000

lc - at 5.12% interest rate



0	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
98	1,896	1,966	1,288	672	-1,59	-2,15	-2,73	-3,34	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
26	3,568	3,457	2,571	1,716	-819	-1,68	-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
4	-860	-961	-1,34	-1,41	-1,48	-1,56	-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0
55	91,12	94,57	97,14	98,86	98,04	96,35	93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0
12	30,26	29,30	27,95	26,54	25,05	23,49	21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

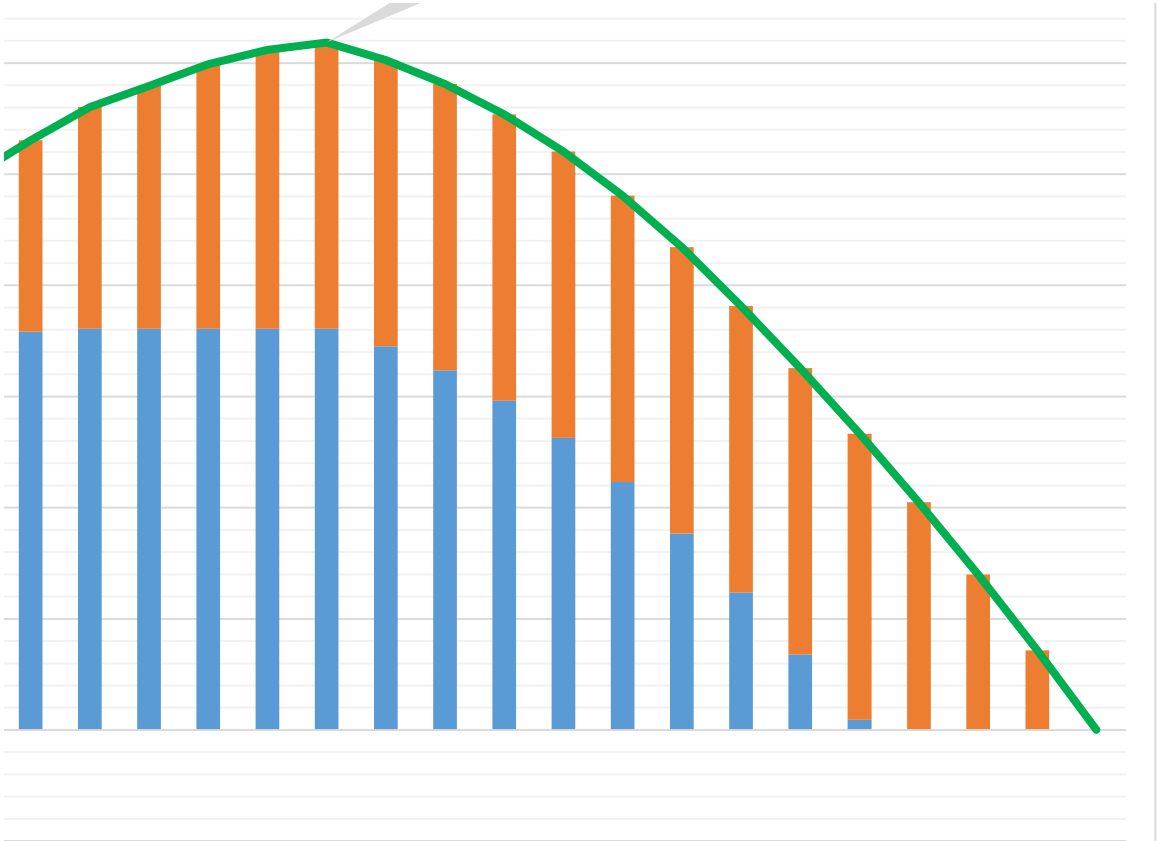
CALENDAR YEAR



Debt (Principal and Interest)

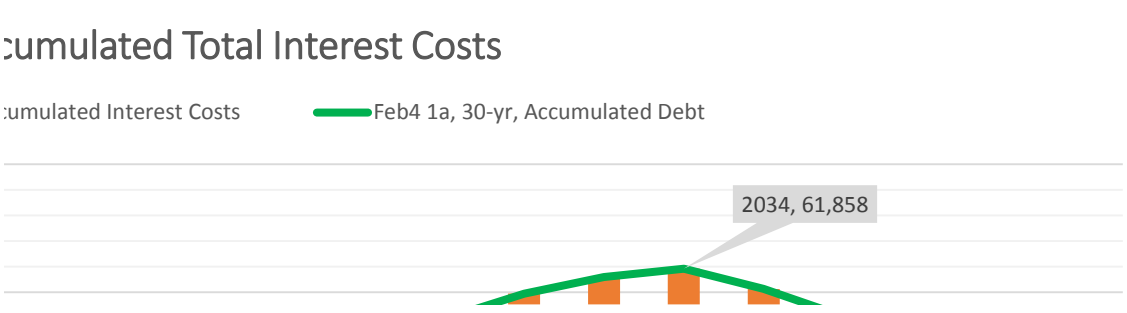
cumulated Interest Costs — Feb4 1a, 30-yr, Accumulated Debt

2034, 61,858

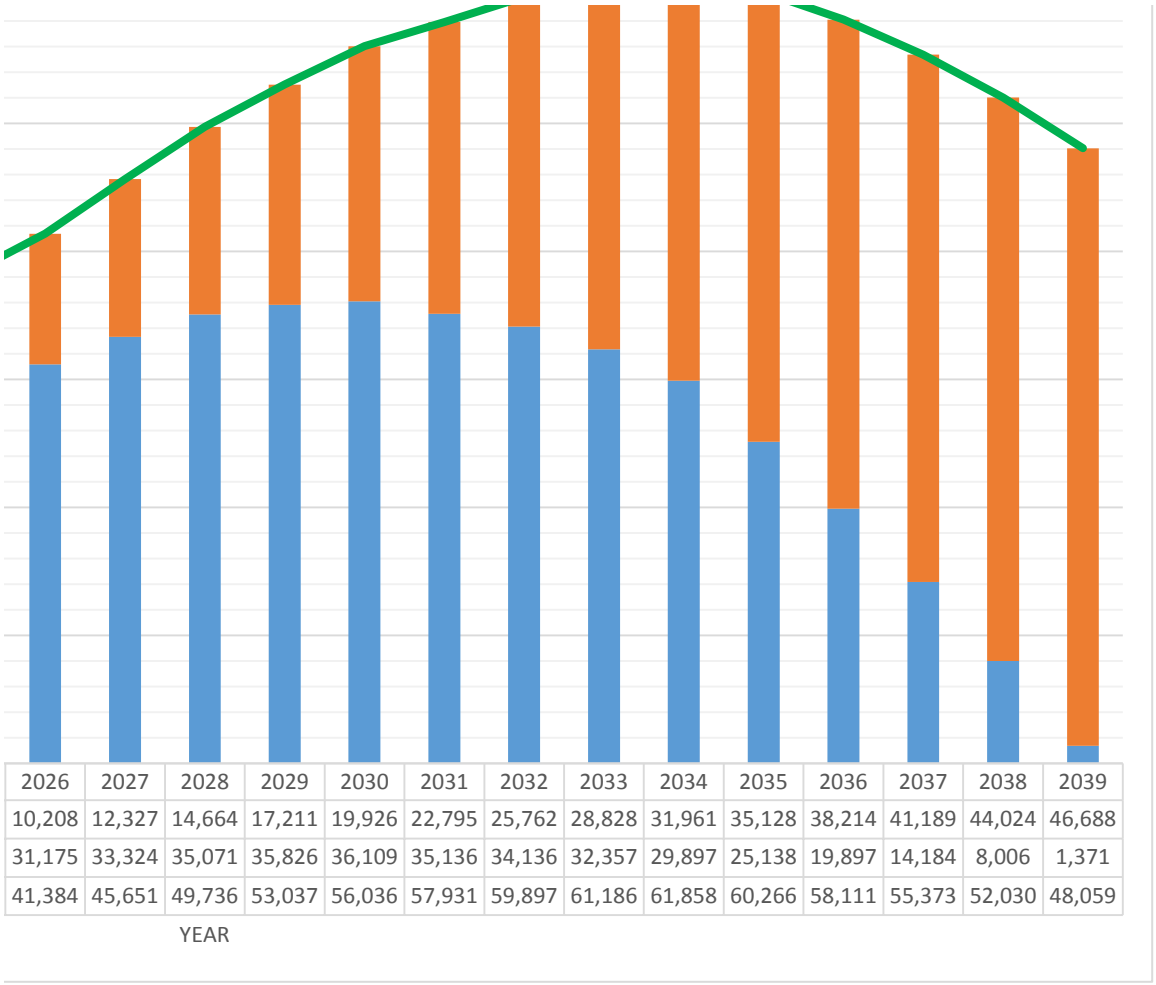


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



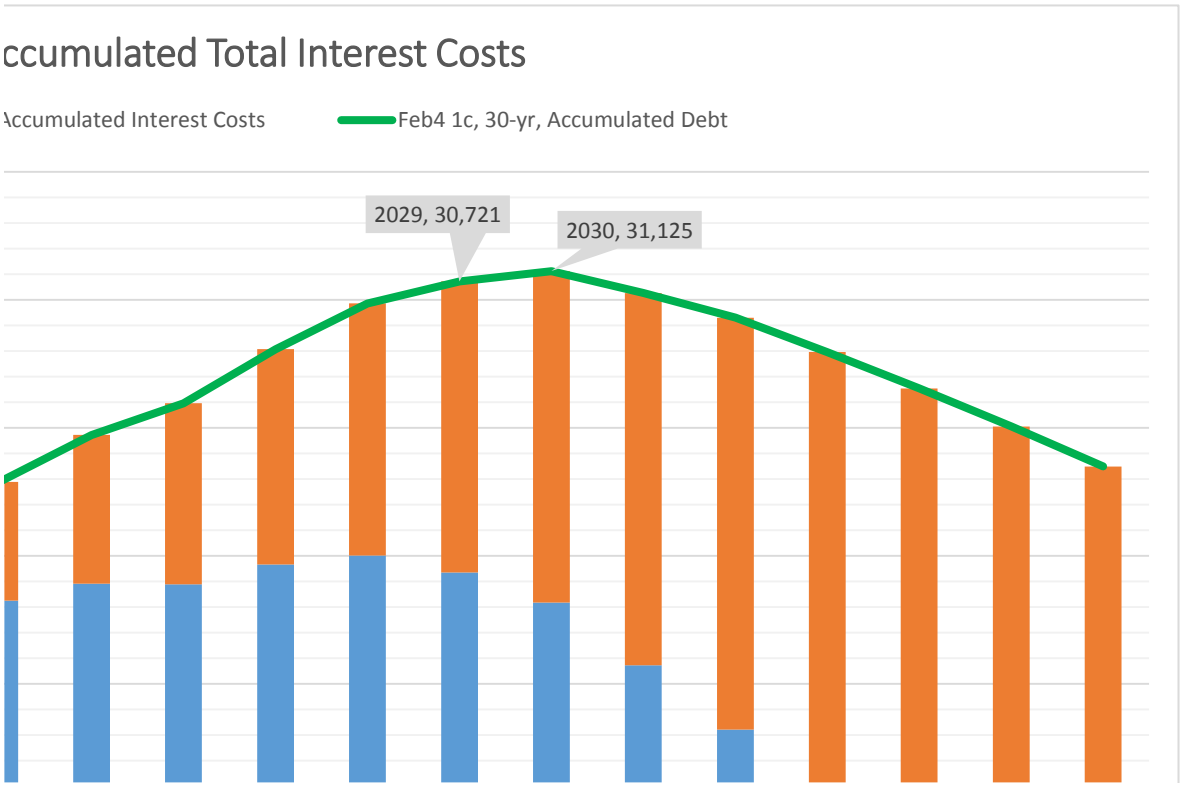
LIONS

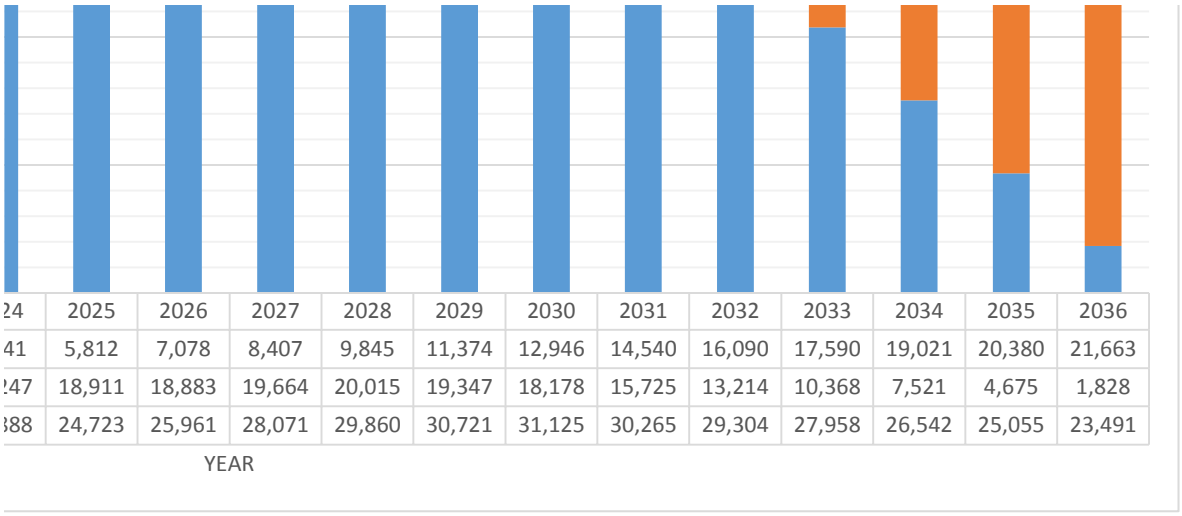


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

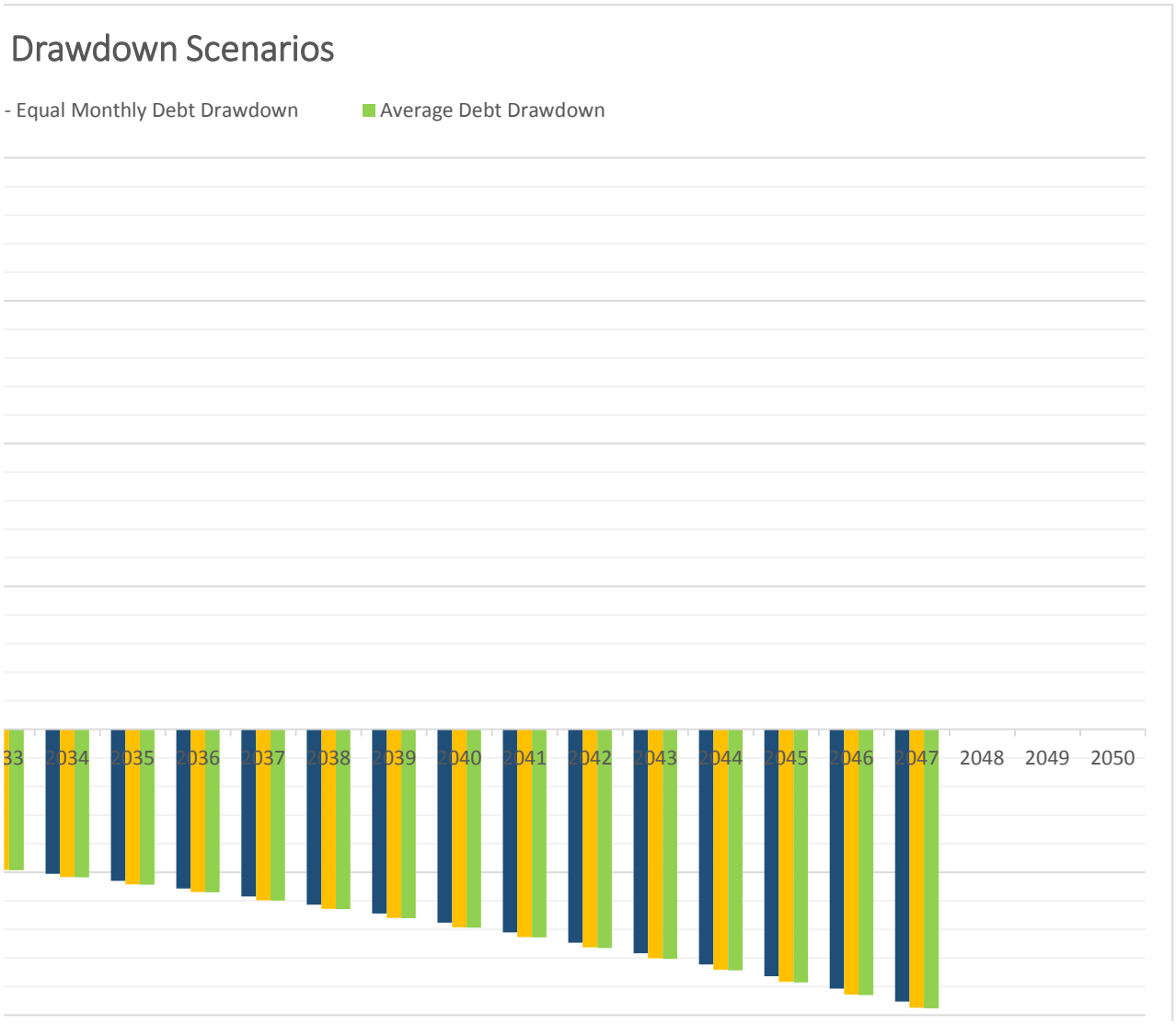
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





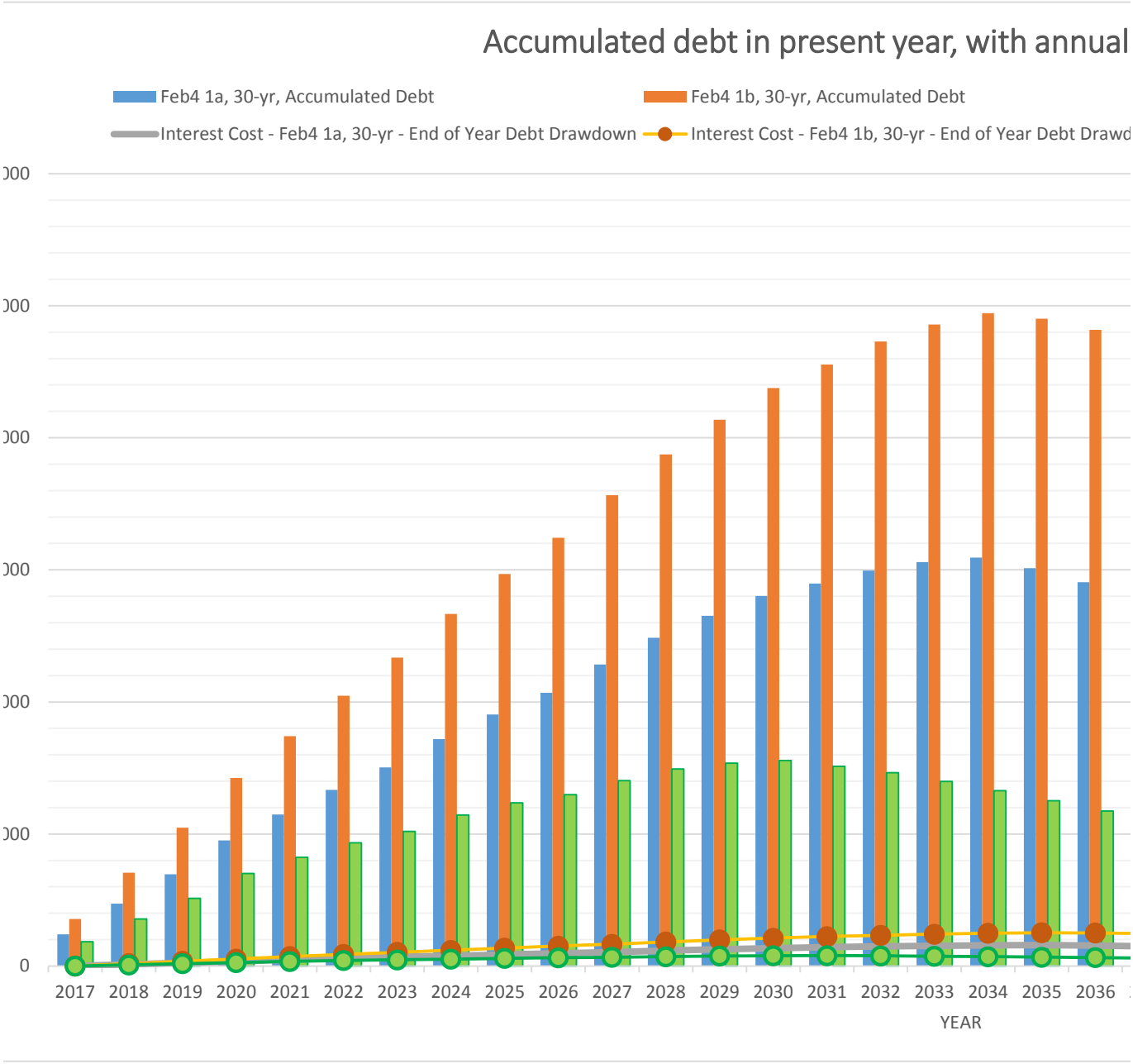
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

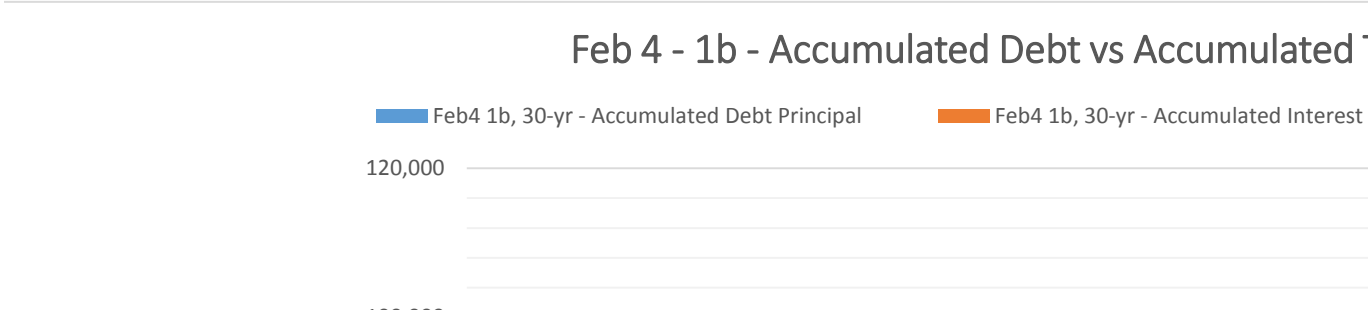
YEAR

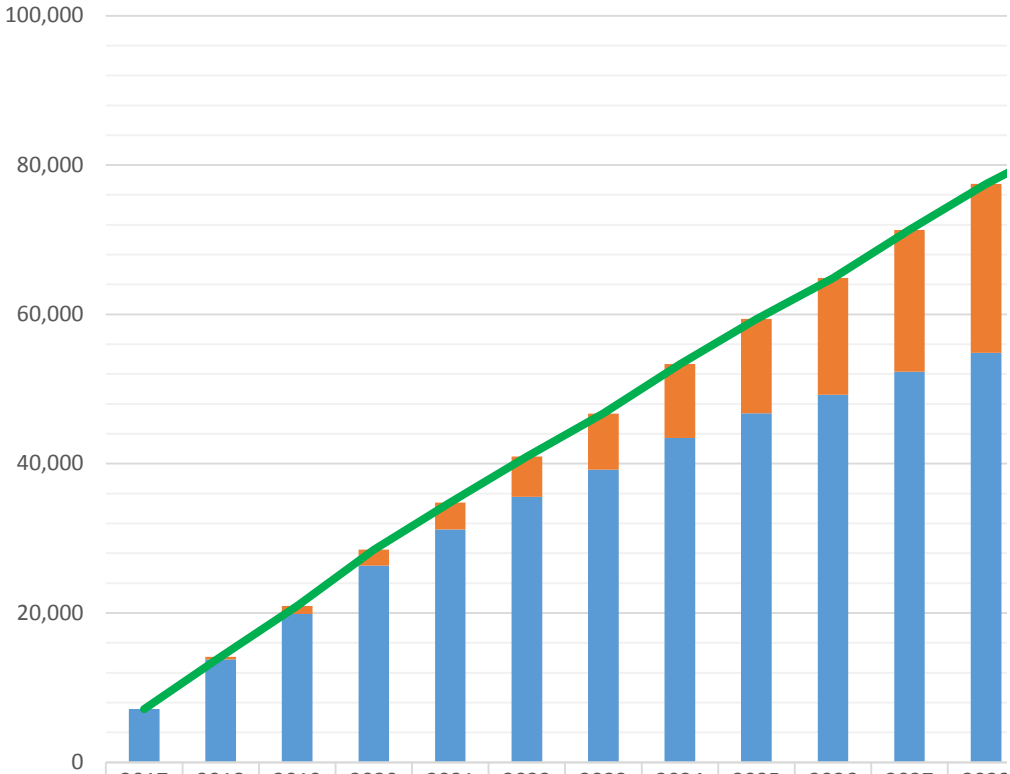


YEAR

ɜ - 25 year and 30 year Financing Terms, at 5% interest rate

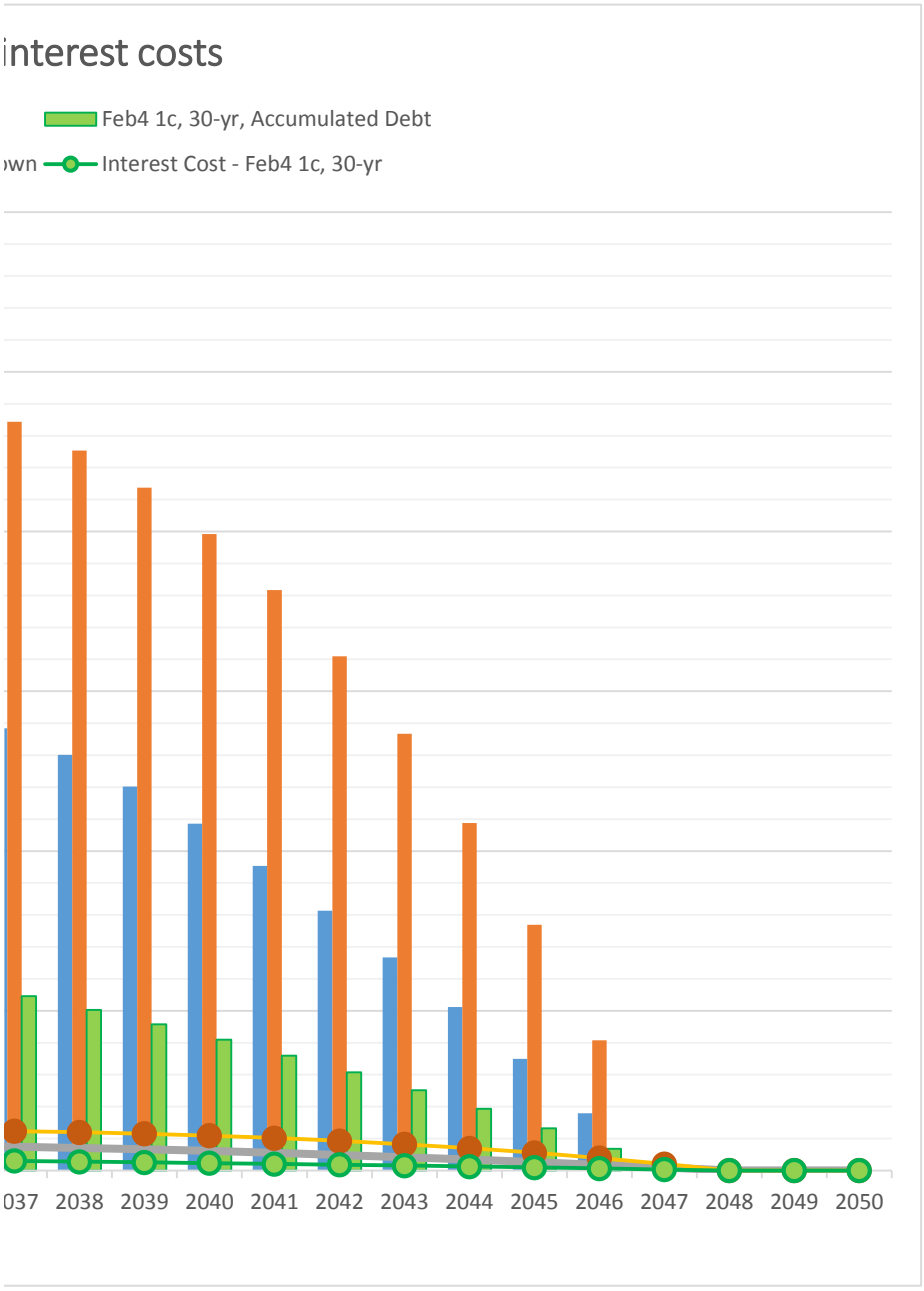


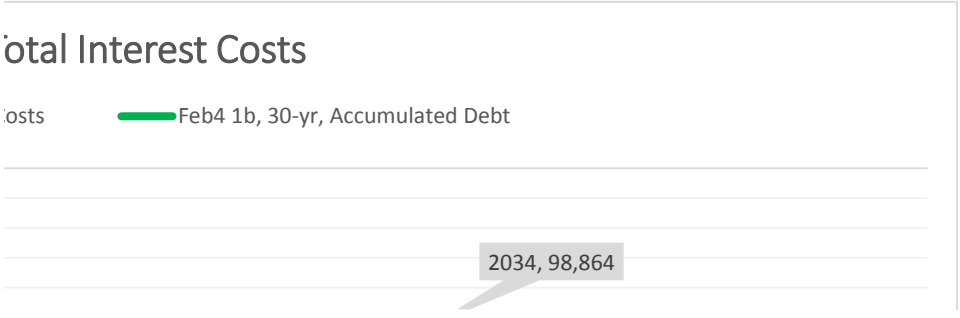

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

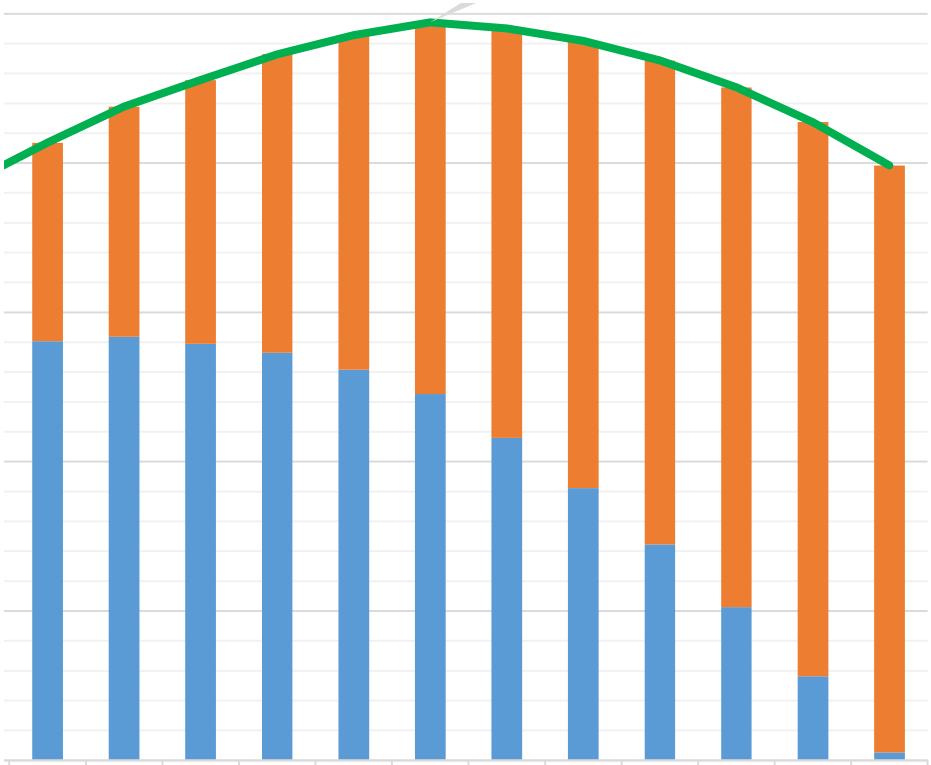


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y


interest costs
Feb4 1c, 30-yr, Accumulated Debt
wn
Interest Cost - Feb4 1c, 30-yr
037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR

Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

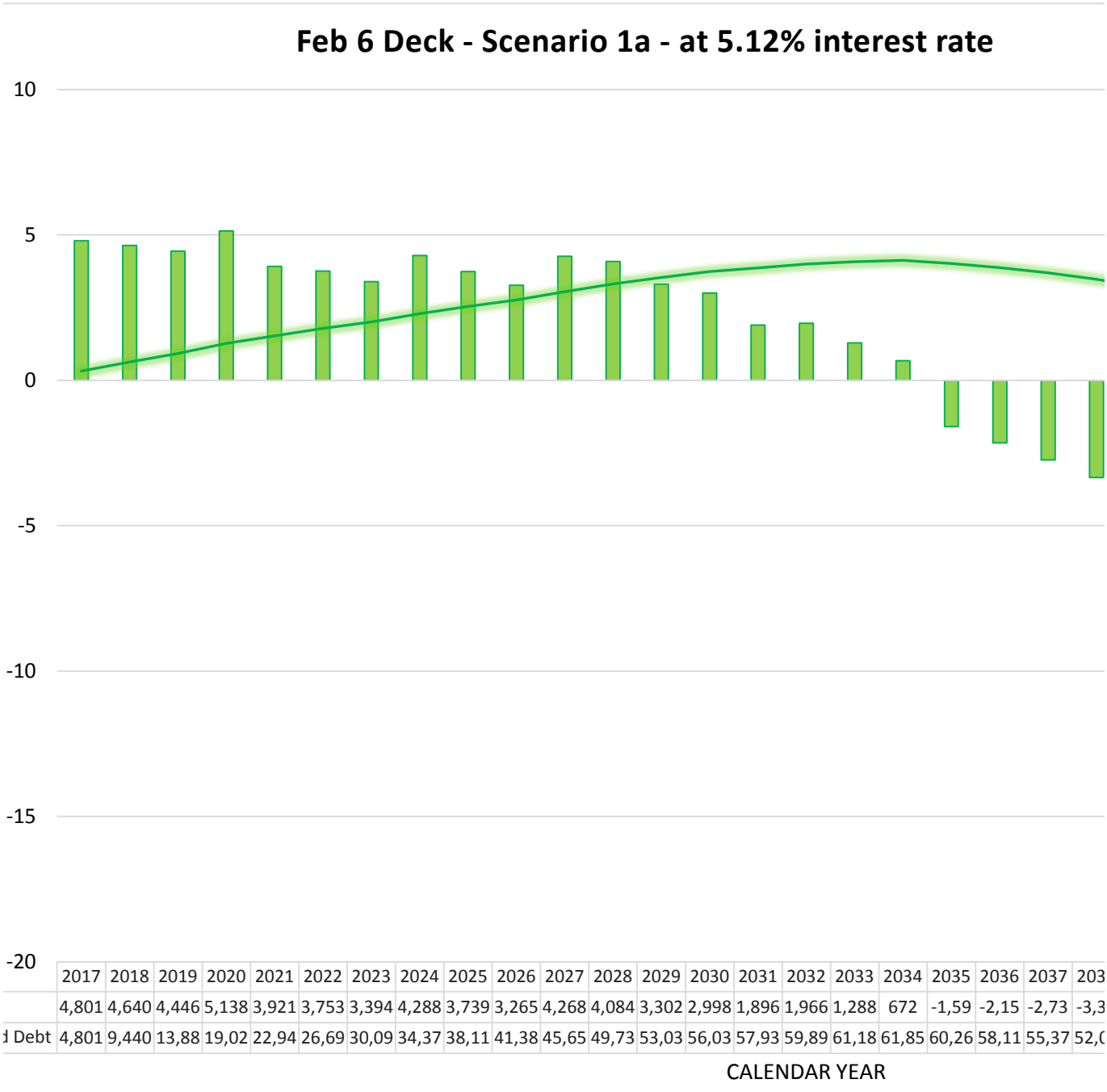
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

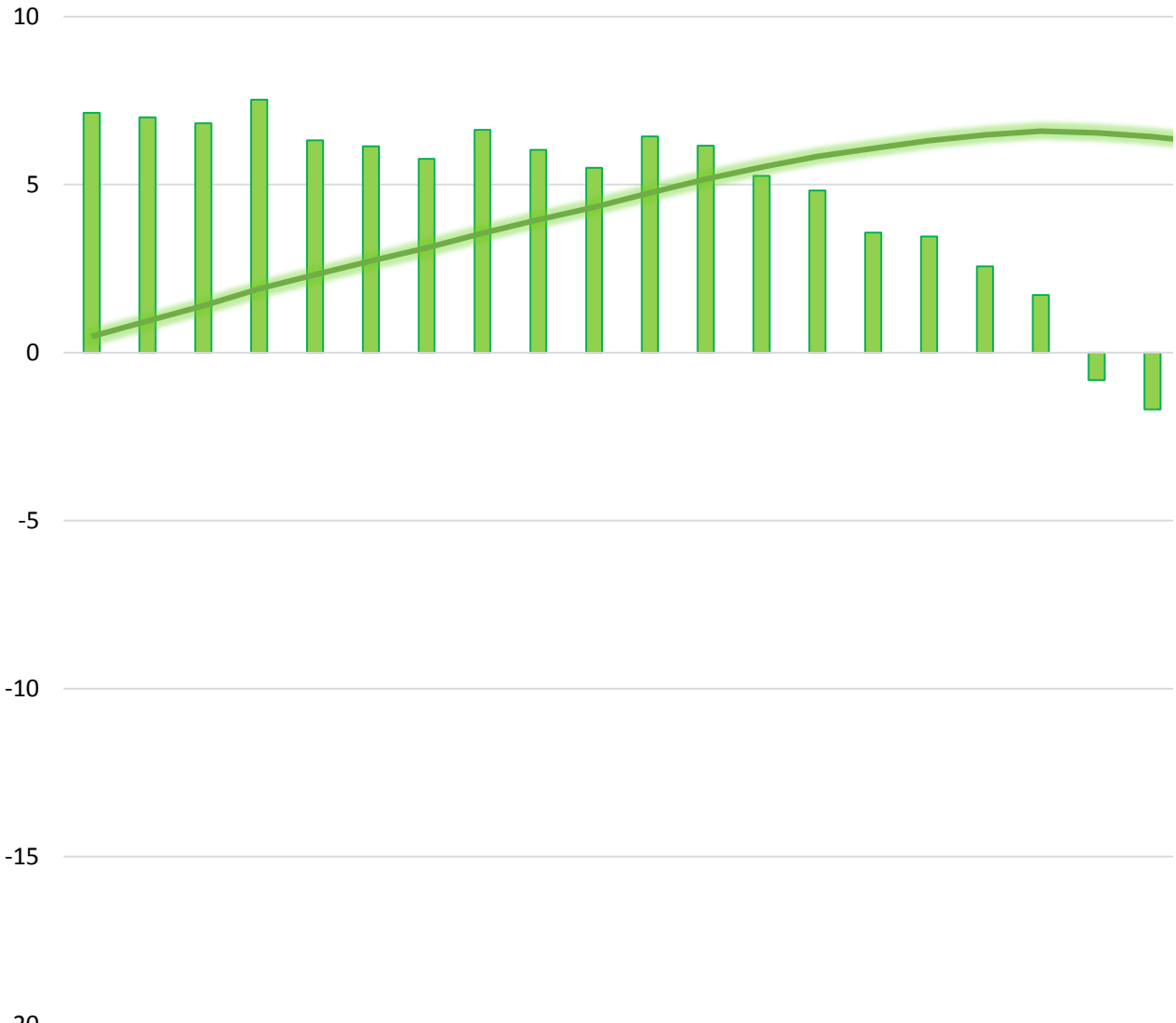
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

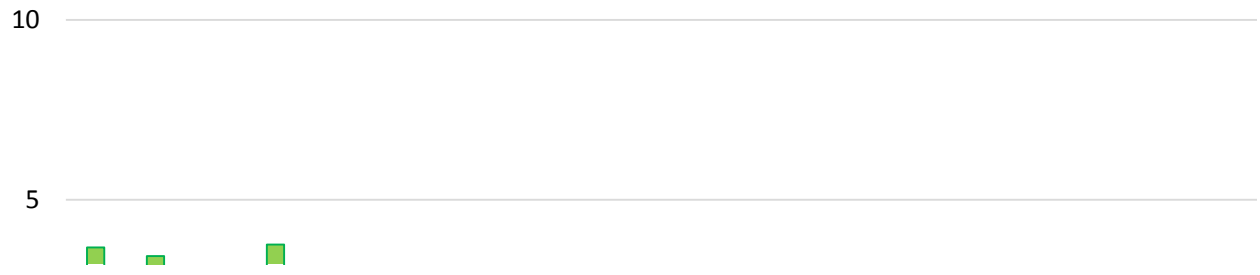
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

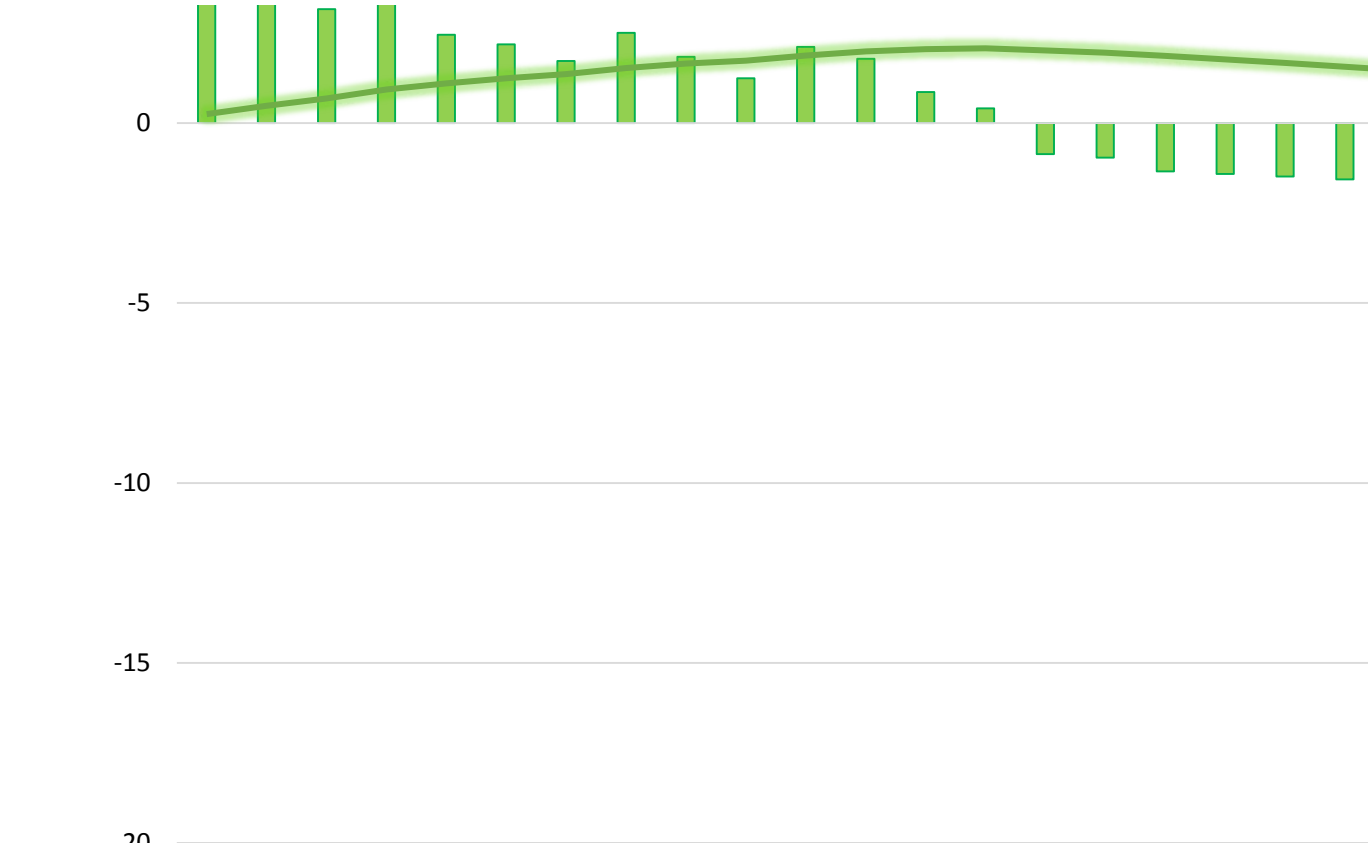


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



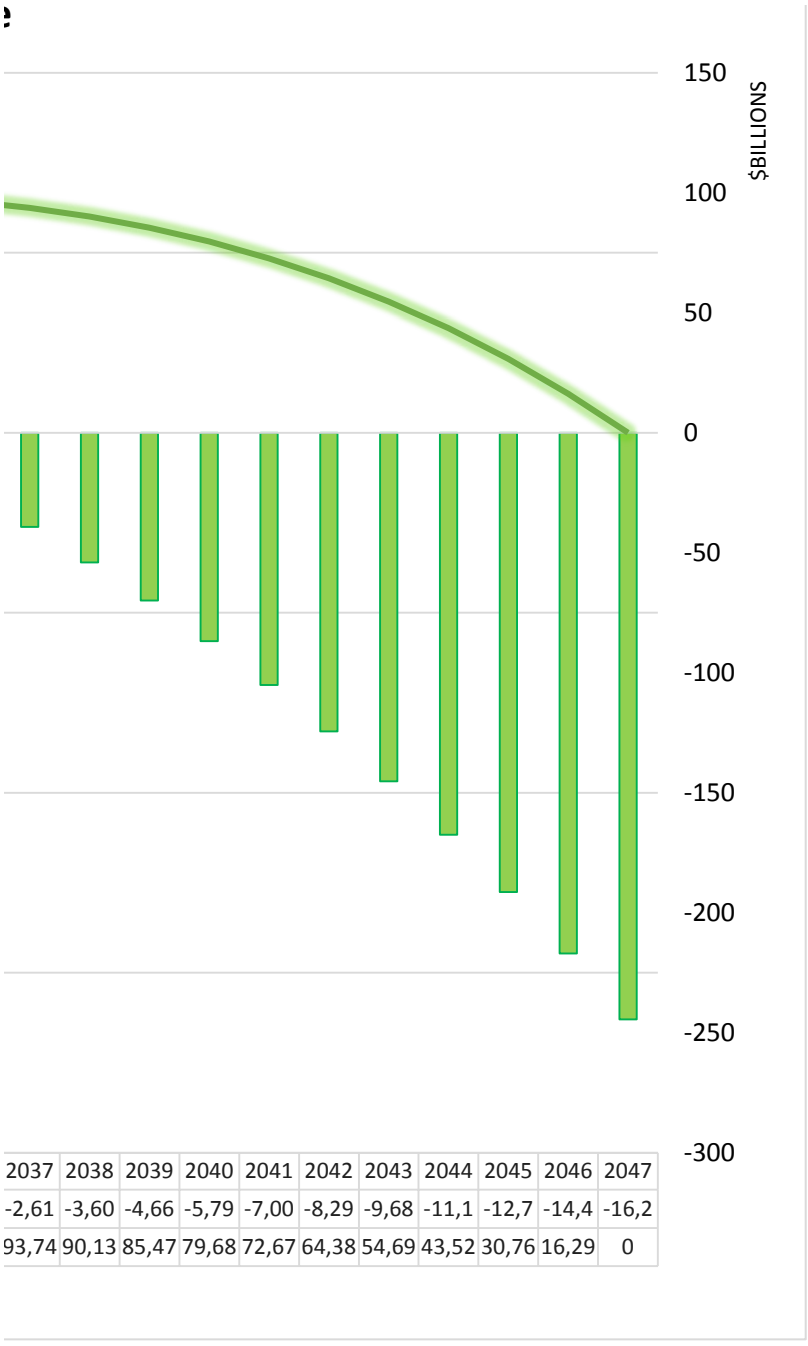


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

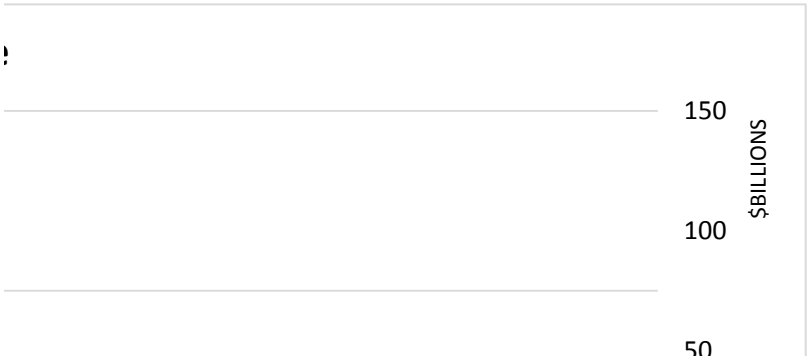
CALENDAR YEAR

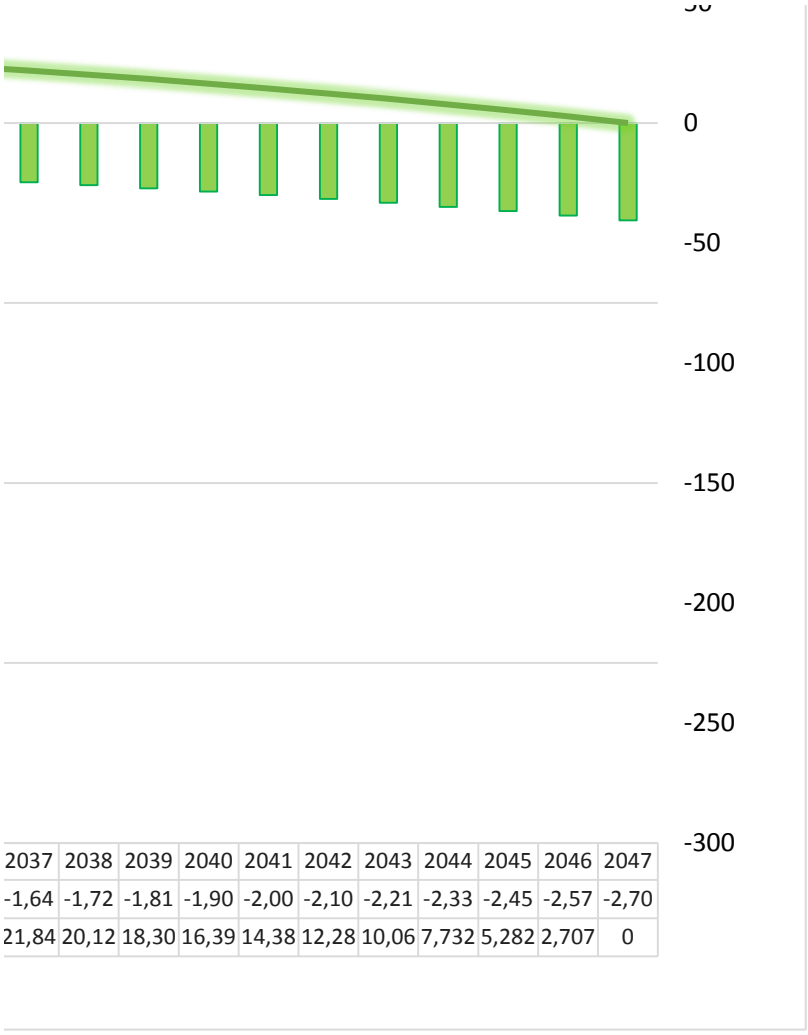


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Equal Monthly Debt Drawdown

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb4_1a_30yr

1a. GA Smoothing (Borrow ~$5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,801	4,640

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,200	4,760

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $62 billion, peakin
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary on accounting treatment.

7,133 7,133

Feb4_1b_30yr 7,133

1b. GA Smoothing (Borrow ~$7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	7,133	6,999

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,783	7,100

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $99 billion, peaking
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b on accounting treatment.

Feb4_1c_30yr

1c. GA Smoothing (Borrow ~$4 billion in 2017)

$ millions

Scenario 1C - 30-yr amortization	2017	2018
Annual Exposure[2]	3,678	3,437

	Fiscalized[3]	2016-17	2017-18
	Start: January 1st	919	3,617

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	1,783 - 1,200	7,100 - 4,760

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1200	4760
Debt-Finance Global Adjustment Costs, Option 1a	1783	7100
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18

Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1200**	**5000**
Total, B	1783	7340
Proposed Program Total:	1,783 - 1,200	7,340 - 5,000

ining

1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
4,446	5,138	3,921	3,753

2018-19	2019-20	2020-21	2021-2022
4,591	4,619	4,833	3,879

ng in 203 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
by approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
6,825	7,529	6,315	6,141

2018-19	2019-20	2020-21	2021-2022
6,956	7,001	7,226	6,272

g in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
3,158	3,761	2,450	2,183

2018-19	2019-20	2020-21	2021-2022
3,367	3,309	3,433	2,383

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
6,956 - 4,591	7,001 - 4,619	7,226 - 4,833	6,272 - 3,879

/1

2018-19[1]	2019-20[1]	2020-21[1]
4591	4619	4833
6956	7001	7226
225	279	323
60	60	60
18	18	18

4894	**4976**	**5234**
7259	7358	7627

7,259 - 4,894 7,358 - 4,976 7,627 - 5,234

1a. GA Smoothing (Borrow $5 billion in 2017)

	2017
IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	7,095
Additional GA Debt Drawdown, End of Year	5,000

Ratepayer GA Payment

Total Accumulated Debt *($ billion)*	5,000
Total Change in Accumulated Debt *($ billion)*	5000

1b. GA Smoothing (Borrow $7 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	5,095
Additional GA Debt Drawdown, End of Year	7,000

Total Accumulated Debt *($ billion)*	7000
Total Change in Accumulated Debt *($ billion)*	7000

1c. GA Smoothing (Borrow $4 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	8,095
Additional GA Debt Drawdown, End of Year	4,000

Total Accumulated Debt *($ billion)*	4000
Total Change in Accumulated Debt *($ billion)*	4000

2018	2019	2020	2021	2022	2023	2024	2025
11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
6,835	7,552	7,168	6,844	6,634	7,243	7,128	6,527
5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000

9,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000
5000	4000	5000	4000	4000	3000	4000	4000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
4,835	4,552	4,168	4,844	4,634	4,243	4,128	4,527
7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000

14000	21000	28000	35000	41000	47000	53000	59000
7000	7000	8000	6000	6000	6000	7000	6000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
8,835	8,552	8,168	8,844	8,634	8,243	8,128	8,527
3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000

7000	10000	14000	16000	19000	20000	23000	25000
3000	3000	4000	2000	2000	2000	3000	2000

2026	2027	2028	2029	2030	2031	2032	2033
10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
7,033	7,043	6,819	7,009	6,721	6,654	6,820	7,238
3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000

41,000	46,000	50,000	53,000	56,000	58,000	60,000	61,000
3000	4000	4000	3000	3000	2000	2000	1000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
4,033	5,043	4,819	5,009	4,721	4,654	5,820	5,238
6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000

65000	71000	77000	83000	88000	91000	95000	97000
6000	6000	6000	5000	5000	4000	3000	3000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
9,033	9,043	8,819	9,009	9,721	9,654	9,820	9,238
1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000

26000	28000	30000	31000	31000	30000	29000	28000
1000	2000	2000	1000	0	-1000	-1000	-1000

2034	2035	2036	2037	2038	2039	2040	2041
7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
6,756	7,662	7,389	8,129	7,881	8,645	9,421	9,207
1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000

62,000	60,000	58,000	55,000	52,000	48,000	43,000	38,000
1000	-2000	-2000	-3000	-3000	-4000	-5000	-5000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
5,756	6,662	7,389	8,129	8,881	9,645	10,421	11,207
2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000

99000	98000	96000	94000	90000	85000	80000	73000
2000	-1000	-2000	-3000	-4000	-5000	-6000	-7000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
8,756	6,662	7,389	7,129	6,881	6,645	6,421	6,207
-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000

27000	25000	23000	22000	20000	18000	16000	14000
-1000	-1000	-2000	-2000	-2000	-2000	-2000	-2000

2042	2043	2044	2045	2046	2047	2048		
4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
10,004	9,811	9,627	9,451	10,285	10,126	2,975		
-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0		

33,000	27,000	20,000	14,000	7,000	-	-	
-6000	-6000	-6000	-6000	-7000	-7000	0	

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
12,004	13,811	14,627	16,451	17,285	19,126	2,975		
-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0		

64000	55000	44000	31000	16000	0	0
-8000	-10000	-11000	-13000	-14000	-16000	0

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
6,004	5,811	5,627	5,451	6,285	6,126	2,975		
-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0		

12000	10000	8000	5000	3000	0	0
-2000	-2000	-2000	-2000	-3000	-3000	0

Feb4 1a, 30-yr - Debt Drawdown Scenarios

-92,247 -94598.515 58,489 36109.18 0

Feb4_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0
			114	110	106	122	93	89	81	102	89	78	102	97	79	71	45	47	31	16	-38	-51	-65	-80	-95	-110	-126	-133	-140	-147	-155	-162	-171	0	0	0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	5,138	3,167	58,489
Equal Monthly Debt Drawdown	5,260	3,149	

Maximum Accumulated Debt — Feb4 1a, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

End of Year Debt Drawdown	61,858	36,109
Equal Monthly Debt Drawdown	63,330	

			40%	37%	34%	36%	27%	24%																												
Feb4 1a, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
a	Debt, Beginning of Year		0	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	
c = a*5%	*Interest Cost - Feb4 1a, 30-yr - End of Year Debt Drawdown*		*0*	*246*	*483*	*711*	*974*	*1,175*	*1,367*	*1,541*	*1,760*	*1,952*	*2,119*	*2,337*	*2,546*	*2,716*	*2,869*	*2,966*	*3,067*	*3,133*	*3,167*	*3,086*	*2,975*	*2,835*	*2,664*	*2,461*	*2,224*	*1,952*	*1,666*	*1,365*	*1,049*	*717*	*367*	*0*	*0*	*0*	58,489
b	Additional GA Debt Drawdown, End of Year		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	21,822	23,788	25,076	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	20,490	13,998	7,173	0	0	0	
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	36,109	36,109	36,109	36,109	34,517	32,362	29,624	26,281	22,311	17,687	12,383	6,793	918	0	0	0	0	0	0	0	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688	49,149	51,372	53,325	54,991	56,356	57,405	58,122	58,489				
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371	-5,713	-13,241	-20,783	-28,325	-35,866	-43,408	-50,949	-58,489				
Fiscal Exposure - End of Year Debt Drawdown			4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0	

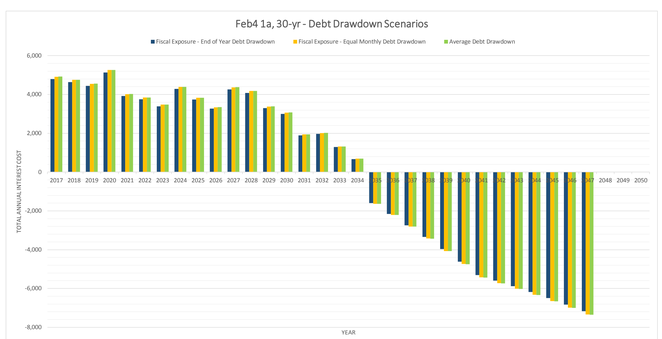
Feb4 1a, 30-yr	Equal Monthly Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			12																																		
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
3,149	*Interest Cost - Feb4 1a, 30-yr*		*114*	*356*	*589*	*833*	*1,067*	*1,264*	*1,448*	*1,643*	*1,849*	*2,029*	*2,220*	*2,435*	*2,625*	*2,787*	*2,914*	*3,013*	*3,097*	*3,149*	*3,129*	*3,034*	*2,910*	*2,756*	*2,569*	*2,351*	*2,098*	*1,819*	*1,526*	*1,218*	*895*	*554*	*197*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0	

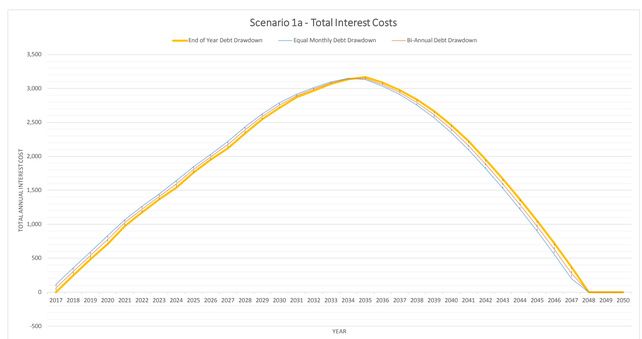
	Monthly Drawdown		400	366	330	369	246	215	169	229	165	109	179	146	63	24	(81)	(83)	(148)	(205)	(397)	(437)	(476)	(515)	(553)	(590)	(627)	(629)	(628)	(628)	(628)	(628)	(628)	-	-	-
	FV of Monthly Drawdown at 5%		4,915	4,498	4,057	4,532	3,017	2,640	2,075	2,813	2,026	1,345	2,200	1,789	773	289	(996)	(1,024)	(1,821)	(2,519)	(4,872)	(5,365)	(5,849)	(6,325)	(6,793)	(7,253)	(7,707)	(7,722)	(7,721)	(7,721)	(7,721)	(7,721)	(7,720)	-	-	-
	Annual Interest Cost on New Drawdowns		114	105	94	105	70	61	48	65	47	31	51	42	18	7	(23)	(24)	(42)	(59)	(113)	(125)	(136)	(147)	(158)	(169)	(179)	(180)	(180)	(180)	(180)	(180)	(179)	-	-	-
	Annual Interest Cost on Opening Balance		-	252	495	728	997	1,203	1,399	1,577	1,802	1,998	2,169	2,393	2,607	2,780	2,937	3,037	3,140	3,207	3,243	3,159	3,046	2,903	2,727	2,519	2,277	1,999	1,706	1,398	1,074	734	376	(0)	(0)	(0)
	Total Annual Interest Cost		114	356	589	833	1,067	1,264	1,448	1,643	1,849	2,029	2,220	2,435	2,625	2,787	2,914	3,013	3,097	3,149	3,129	3,034	2,910	2,756	2,569	2,351	2,098	1,819	1,526	1,218	895	554	197	(0)	(0)	(0)

Feb4 1a, 30-yr	Bi-Annual Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*61*	*305*	*540*	*777*	*1,024*	*1,223*	*1,410*	*1,596*	*1,808*	*1,993*	*2,173*	*2,390*	*2,589*	*2,754*	*2,893*	*2,991*	*3,083*	*3,141*	*3,147*	*3,058*	*2,940*	*2,792*	*2,613*	*2,401*	*2,156*	*1,881*	*1,591*	*1,286*	*966*	*629*	*275*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown			4,862	4,699	4,502	5,203	3,971	3,801	3,438	4,343	3,787	3,307	4,322	4,137	3,344	3,037	1,920	1,991	1,305	681	-1,612	-2,183	-2,773	-3,386	-4,021	-4,683	-5,372	-5,661	-5,951	-6,255	-6,575	-6,912	-7,265	0	0	0	

	Bi-Annual Drawdown		2,400	2,197	1,981	2,213	1,473	1,289	1,014	1,374	989	657	1,074	874	378	141	(487)	(500)	(889)	(1,230)	(2,379)	(2,620)	(2,857)	(3,089)	(3,317)	(3,542)	(3,764)	(3,771)	(3,771)	(3,771)	(3,771)	(3,771)	(3,770)	-	-	-
	FV of Bi-Annual Drawdown at 5%		4,862	4,450	4,013	4,483	2,984	2,612	2,053	2,783	2,004	1,331	2,176	1,769	765	286	(986)	(1,013)	(1,801)	(2,492)	(4,820)	(5,308)	(5,787)	(6,257)	(6,719)	(7,175)	(7,624)	(7,639)	(7,638)	(7,638)	(7,638)	(7,638)	(7,637)	-	-	-
	Annual Interest Cost on New Drawdowns		61	56	51	57	38	33	26	35	25	17	28	22	10	4	(12)	(13)	(23)	(31)	(61)	(67)	(73)	(79)	(85)	(91)	(96)	(97)	(97)	(97)	(97)	(97)	(97)	-	-	-
	Annual Interest Cost on Opening Balance		-	249	490	720	986	1,190	1,384	1,560	1,783	1,977	2,146	2,367	2,579	2,750	2,906	3,004	3,106	3,173	3,208	3,125	3,013	2,871	2,698	2,492	2,252	1,977	1,687	1,383	1,063	726	372	(0)	(0)	(0)
	Total Annual Interest Cost		61	305	540	777	1,024	1,223	1,410	1,596	1,808	1,993	2,173	2,390	2,589	2,754	2,893	2,991	3,083	3,141	3,147	3,058	2,940	2,792	2,613	2,401	2,156	1,881	1,591	1,286	966	629	275	(0)	(0)	(0)

Feb4 1a, 30-yr	Average Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*123*	*365*	*597*	*842*	*1,074*	*1,271*	*1,454*	*1,650*	*1,856*	*2,035*	*2,228*	*2,442*	*2,631*	*2,792*	*2,918*	*3,016*	*3,100*	*3,150*	*3,126*	*3,030*	*2,905*	*2,749*	*2,562*	*2,342*	*2,088*	*1,809*	*1,516*	*1,207*	*883*	*542*	*184*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
Fiscal Exposure - Average Debt Drawdown			4,923	4,758	4,559	5,269	4,021	3,849	3,481	4,398	3,835	3,349	4,377	4,189	3,386	3,075	1,944	2,016	1,321	689	-1,633	-2,210	-2,808	-3,428	-4,072	-4,742	-5,440	-5,733	-6,026	-6,334	-6,658	-6,999	-7,357	0	0	0	





Feb4 1b, 30-yr - Debt Drawdown Scenarios

-149,507 -153857.97 97,141 56717.33 0

Feb4_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0
			170	167	162	179	150	146	137	158	144	131	153	147	125	115	85	82	61	41	-19	-40	-62	-86	-111	-138	-167	-198	-231	-266	-304	-344	-388	0	0	0

0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown 7,529	5,062	97,141
Equal Monthly Debt Drawdown 7,708	5,042	

Maximum Accumulated Debt	Feb4 1b, 30-yr, Accumulated Debt	Total Principal Debt Borrowed
End of Year Debt Drawdown	98,864	56,717
Equal Monthly Debt Drawdown	101,217	

Feb4 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
a Debt, Beginning of Year	0	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	
c = a*5% *Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown*	*0*	*365*	*724*	*1,073*	*1,459*	*1,782*	*2,096*	*2,391*	*2,731*	*3,040*	*3,322*	*3,651*	*3,966*	*4,236*	*4,483*	*4,665*	*4,842*	*4,974*	*5,062*	*5,020*	*4,933*	*4,800*	*4,615*	*4,376*	*4,080*	*3,721*	*3,296*	*2,800*	*2,228*	*1,575*	*834*	*0*	*0*	*0*	97,141
b Additional GA Debt Drawdown, End of Year	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
d = a+b+c Accumulated debt in present year (including 5% annual interest)	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	0	
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,633	26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606	82,685	86,406	89,703	92,503	94,731	96,306	97,141				
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,831	56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076	-10,007	-22,027	-35,008	-48,980	-63,971	-80,013	-97,141				
Fiscal Exposure - End of Year Debt Drawdown	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0	

Feb4 1b, 30-yr — Equal Monthly Debt Drawdown

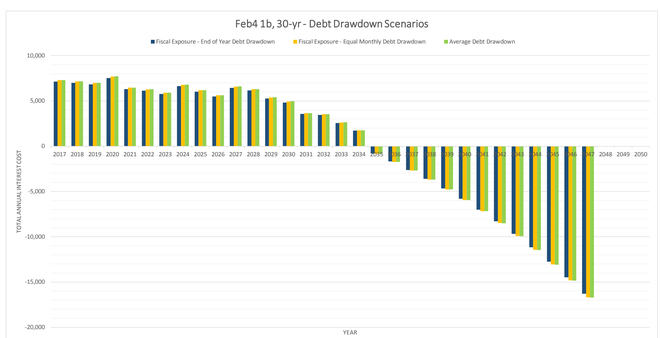
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	
5,042 *Interest Cost - Feb4 1b, 30-yr*	*170*	*532*	*886*	*1,252*	*1,609*	*1,928*	*2,234*	*2,549*	*2,874*	*3,171*	*3,475*	*3,797*	4,091	*4,350*	*4,568*	*4,748*	*4,904*	*5,015*	*5,042*	*4,980*	*4,871*	*4,714*	*4,504*	*4,238*	*3,913*	*3,524*	*3,066*	*2,534*	*1,925*	*1,231*	*446*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0	
Monthly Drawdown	594	553	508	538	405	363	306	353	275	205	259	209	108	49	(76)	(101)	(189)	(271)	(490)	(559)	(629)	(700)	(773)	(847)	(924)	(1,002)	(1,082)	(1,164)	(1,249)	(1,337)	(1,427)	(0)	-	-	
FV of Monthly Drawdown at 5%	7,303	6,792	6,247	6,610	4,972	4,463	3,755	4,338	3,383	2,523	3,184	2,565	1,327	605	(937)	(1,237)	(2,326)	(3,335)	(6,020)	(6,867)	(7,728)	(8,604)	(9,498)	(10,412)	(11,347)	(12,306)	(13,291)	(14,304)	(15,348)	(16,424)	(17,536)	(0)	-	-	
Annual Interest Cost on New Drawdowns	170	158	145	154	116	104	87	101	79	59	74	60	31	14	(22)	(29)	(54)	(78)	(140)	(160)	(180)	(200)	(221)	(242)	(264)	(286)	(309)	(333)	(357)	(382)	(408)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	374	741	1,099	1,493	1,824	2,146	2,448	2,796	3,112	3,401	3,738	4,061	4,336	4,589	4,776	4,958	5,092	5,182	5,139	5,051	4,914	4,725	4,481	4,177	3,810	3,375	2,867	2,281	1,612	854	0	(0)	(0)	
Total Annual Interest Cost	170	532	886	1,252	1,609	1,928	2,234	2,549	2,874	3,171	3,475	3,797	4,091	4,350	4,568	4,748	4,904	5,015	5,042	4,980	4,871	4,714	4,504	4,238	3,913	3,524	3,066	2,534	1,925	1,231	446	0	(0)	(0)	

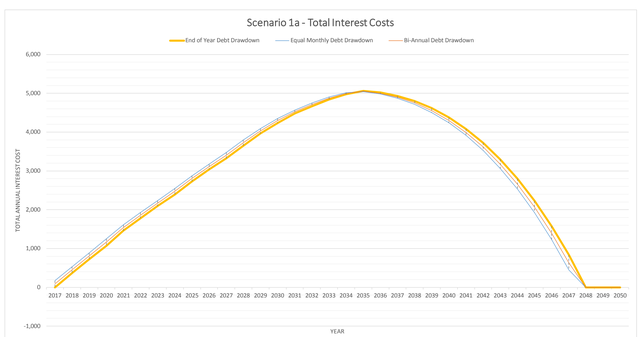
Feb4 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*91*	*455*	*811*	*1,169*	*1,539*	*1,861*	*2,170*	*2,476*	*2,808*	*3,110*	*3,404*	*3,730*	*4,034*	*4,297*	*4,528*	*4,710*	*4,875*	*4,996*	*5,051*	*4,998*	*4,900*	*4,753*	*4,555*	*4,302*	*3,990*	*3,615*	*3,172*	*2,657*	*2,065*	*1,390*	*626*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	7,225	7,089	6,913	7,626	6,396	6,220	5,838	6,713	6,113	5,574	6,514	6,235	5,330	4,888	3,614	3,501	2,603	1,738	-829	-1,709	-2,648	-3,651	-4,722	-5,867	-7,093	-8,405	-9,810	-11,314	-12,926	-14,652	-16,502	0	0	0	
Bi-Annual Drawdown	3,567	3,317	3,051	3,228	2,428	2,180	1,834	2,118	1,652	1,232	1,555	1,253	648	295	(457)	(604)	(1,136)	(1,629)	(2,940)	(3,354)	(3,774)	(4,202)	(4,639)	(5,085)	(5,542)	(6,010)	(6,491)	(6,986)	(7,495)	(8,021)	(8,564)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	7,225	6,719	6,180	6,539	4,919	4,415	3,715	4,291	3,347	2,496	3,150	2,538	1,313	598	(926)	(1,224)	(2,301)	(3,299)	(5,956)	(6,794)	(7,645)	(8,512)	(9,396)	(10,300)	(11,225)	(12,174)	(13,148)	(14,150)	(15,183)	(16,247)	(17,347)	(0)	-	-	
Annual Interest Cost on New Drawdowns	91	85	78	83	62	56	47	54	42	32	40	32	17	8	(12)	(15)	(29)	(42)	(75)	(86)	(97)	(108)	(119)	(130)	(142)	(154)	(166)	(179)	(192)	(205)	(219)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	370	733	1,087	1,477	1,805	2,123	2,422	2,766	3,079	3,364	3,698	4,017	4,290	4,540	4,725	4,904	5,038	5,127	5,084	4,997	4,861	4,674	4,432	4,132	3,769	3,338	2,836	2,257	1,595	845	0	0	0	
Total Annual Interest Cost	91	455	811	1,169	1,539	1,861	2,170	2,476	2,808	3,110	3,404	3,730	4,034	4,297	4,528	4,710	4,875	4,996	5,051	4,998	4,900	4,753	4,555	4,302	3,990	3,615	3,172	2,657	2,065	1,390	626	0	0	0	

Feb4 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*183*	*544*	*898*	*1,266*	*1,620*	*1,939*	*2,244*	*2,561*	*2,885*	*3,181*	*3,486*	*3,809*	*4,101*	*4,359*	*4,574*	*4,754*	*4,908*	*5,018*	*5,041*	*4,977*	*4,867*	*4,707*	*4,496*	*4,228*	*3,900*	*3,509*	*3,048*	*2,514*	*1,902*	*1,205*	*417*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	7,316	7,179	7,000	7,722	6,477	6,298	5,912	6,798	6,190	5,645	6,597	6,314	5,397	4,950	3,659	3,545	2,636	1,760	-840	-1,731	-2,682	-3,697	-4,782	-5,942	-7,183	-8,511	-9,934	-11,457	-13,089	-14,838	-16,711	0	0	0	





Feb4 1c, 30-yr - Debt Drawdown Scenarios

Feb4_1c_30yr

Annual Interest Rate = 5.1%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0
			88	82	75	90	58	52	41	60	44	29	50	43	20	10	-20	-23	-32	-34	-35	-37	-39	-41	-43	-45	-48	-50	-53	-55	-58	-61	-64	0	0	0

0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	3,761	1,594	29,477
Equal Monthly Debt Drawdown	3,851	1,583	

Maximum Accumulated Debt — Feb4 1c, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

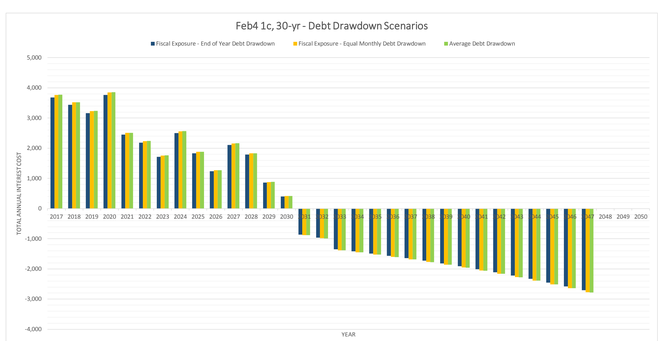
End of Year Debt Drawdown	31,125	20,043
Equal Monthly Debt Drawdown	31,866	

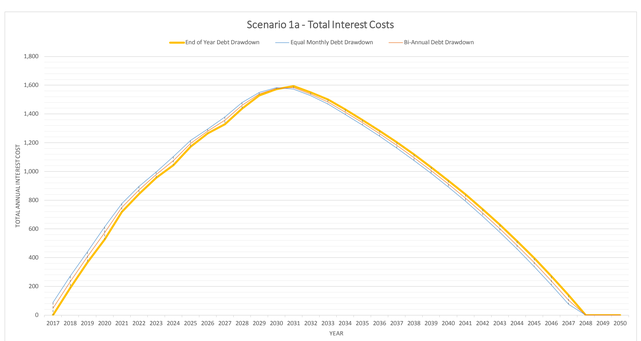
		30%	27%	24%	27%	16%	13%																														
Feb4 1c, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
a	Debt, Beginning of Year	0	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	
c = a*5%	*Interest Cost - Feb4 1c, 30-yr - End of Year Debt Drawdown*	*0*	*188*	*364*	*526*	*719*	*844*	*956*	*1,044*	*1,172*	*1,266*	*1,329*	*1,437*	*1,529*	*1,573*	*1,594*	*1,550*	*1,500*	*1,431*	*1,359*	*1,283*	*1,203*	*1,119*	*1,030*	*937*	*839*	*737*	*629*	*515*	*396*	*270*	*139*	*0*	*0*	*0*	*0*	29,477
b	Additional GA Debt Drawdown, End of Year	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	0	
	Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,641	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663	22,866	23,984	25,015	25,952	26,791	27,528	28,157	28,672	29,068	29,338	29,477				
	Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18,247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828	-1,018	-3,864	-6,710	-9,556	-12,402	-15,248	-18,094	-20,940	-23,786	-26,631	-29,477				
Fiscal Exposure - End of Year Debt Drawdown		3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0	

Feb4 1c, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	
1,583	*Interest Cost - Feb4 1c, 30-yr*	*88*	*270*	*439*	*615*	*777*	*896*	*997*	*1,103*	*1,216*	*1,295*	*1,379*	*1,480*	1,549	*1,583*	*1,573*	*1,527*	*1,468*	*1,398*	*1,324*	*1,246*	*1,164*	*1,077*	*987*	*892*	*792*	*686*	*576*	*460*	*338*	*209*	*74*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0	
	Monthly Drawdown	306	271	233	270	144	112	64	122	55	(2)	65	29	(56)	(97)	(204)	(209)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(0)	-	-	
	FV of Monthly Drawdown at 5%	3,765	3,326	2,861	3,312	1,773	1,371	781	1,493	679	(28)	799	360	(684)	(1,197)	(2,512)	(2,570)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,913)	(2,913)	(2,913)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	88	77	67	77	41	32	18	35	16	(1)	19	8	(16)	(28)	(58)	(60)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	193	373	538	736	864	979	1,069	1,200	1,296	1,361	1,471	1,565	1,610	1,632	1,586	1,536	1,465	1,391	1,313	1,231	1,145	1,055	959	859	754	644	527	405	277	142	0	0	0	
	Total Annual Interest Cost	88	270	439	615	777	896	997	1,103	1,216	1,295	1,379	1,480	1,549	1,583	1,573	1,527	1,468	1,398	1,324	1,246	1,164	1,077	987	892	792	686	576	460	338	209	74	0	0	0	

Feb4 1c, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*47*	*232*	*405*	*574*	*750*	*872*	*978*	*1,076*	*1,195*	*1,282*	*1,356*	*1,460*	*1,540*	*1,578*	*1,583*	*1,537*	*1,483*	*1,413*	*1,340*	*1,263*	*1,182*	*1,097*	*1,007*	*913*	*814*	*710*	*600*	*485*	*365*	*237*	*104*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,725	3,481	3,199	3,809	2,481	2,211	1,741	2,534	1,859	1,254	2,137	1,812	872	409	-871	-973	-1,363	-1,433	-1,506	-1,584	-1,665	-1,750	-1,839	-1,933	-2,032	-2,136	-2,246	-2,360	-2,481	-2,608	-2,742	0	0	0	
	Bi-Annual Drawdown	1,839	1,624	1,397	1,618	866	670	382	729	332	(14)	390	176	(334)	(584)	(1,227)	(1,255)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(0)	-	-	
	FV of Bi-Annual Drawdown at 5%	3,725	3,290	2,830	3,277	1,754	1,356	773	1,477	672	(28)	791	356	(677)	(1,184)	(2,485)	(2,542)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	47	42	36	41	22	17	10	19	8	(0)	10	5	(9)	(15)	(31)	(32)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	191	369	533	728	855	968	1,057	1,187	1,282	1,346	1,456	1,548	1,593	1,614	1,569	1,520	1,450	1,376	1,299	1,218	1,133	1,043	949	850	746	637	522	401	274	140	0	0	0	
	Total Annual Interest Cost	47	232	405	574	750	872	978	1,076	1,195	1,282	1,356	1,460	1,540	1,578	1,583	1,537	1,483	1,413	1,340	1,263	1,182	1,097	1,007	913	814	710	600	485	365	237	104	0	0	0	

Feb4 1c, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*94*	*276*	*445*	*622*	*781*	*900*	*1,000*	*1,108*	*1,219*	*1,298*	*1,383*	*1,483*	*1,551*	*1,583*	*1,572*	*1,525*	*1,466*	*1,395*	*1,321*	*1,243*	*1,161*	*1,074*	*984*	*888*	*788*	*683*	*572*	*456*	*333*	*205*	*69*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,772	3,525	3,239	3,857	2,513	2,239	1,763	2,566	1,882	1,270	2,164	1,835	883	414	-882	-985	-1,381	-1,451	-1,526	-1,604	-1,686	-1,772	-1,863	-1,958	-2,058	-2,163	-2,274	-2,390	-2,513	-2,641	-2,776	0	0	0	





30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

TO BE

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,556	3,123	1,728	1,400	836	1,560	821	167

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

E UPDATED

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

JK: Fixed the formula in the yellow highlighted cells. Pls. check. (SK: looks good to me)

	Tab
v16 GA Financing - Scenario 1a 1b v18 (with fiscal) - Feb 4_v2.xlsx	Powerpoint_Export Scenario tabs

Change Description

Added in trigger for later start in the year
Updated IESO forecast from Energy (IESO GA Cost Forecast 170207 (Feb 6 update).xlsx)

Equal Monthly Debt Drawdown

		Month	Months Remai
Scenario Start Date	**July**	7	6

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	3,180	2,888
Annual Exposure2 with start on July 1st	*1,590*	*2,888*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	795	3,107
Start: July 1st	-	*2,312*

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	851	3,335
Start: July 1st	-	*2,484*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	1,168	1,765
Annual Exposure2 with start on July 1st	*584*	*1,765*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	292	1,609
Start: July 1st	-	*1,025*

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,449	2,040
Annual Exposure2 with start on July 1st	*725*	*2,040*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,597
Start: July 1st	-	*1,959*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335
Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3575**
Total, B	362	1837
Proposed Program Total:	362 - 851	1,837 - 3,575

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,556	3,123	1,728	1,400
2,556	*3,123*	*1,728*	*1,400*

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646
2,805	*2,697*	*2,774*	*1,646*

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

ıking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
2,311	3,750	2,311	1,933
2,311	*3,750*	*2,311*	*1,933*

2018-19	2019-20	2020-21	2021-2022

1,901	2,671	3,391	2,217
1,901	*2,671*	*3,391*	*2,217*

2019	2020	2021	2022
2,581	4,016	2,598	2,241
2,581	*4,016*	*2,598*	*2,241*

2018-19	2019-20	2020-21	2021-2022
2,175	2,940	3,662	2,508
2,175	*2,940*	*3,662*	*2,508*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

/1

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052
2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

Equal Monthly Debt Drawdown

		Month	Months Remaining
Scenario Start Date	July	7	6

AS LONG AS >

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	3,180	2,888	2,556

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	795	3,107	2,805
Fiscal Exposure, 25%	199	777	701

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Annual Exposure[2]	3,404	3,128	2,812

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	851	3,335	3,049
Fiscal Exposure, 25%	213	834	762

Indicates year in which, similar to OPCD's exa
closest to 30%. As Fiscal 2016/17 is a partial y
month the GA deferral begins.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu
decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions	9%	14%	18%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	1,168	1,765	2,311

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	292	1,609	1,901
Fiscal Exposure, 25%	73	402	475

Scenario 1b - 30-yr amortization	2017	2018	2019
Annual Exposure[2]	1,449	2,040	2,581

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	362	1,597	2,175
Fiscal Exposure, 25%	91	399	544

Indicates year in which, similar to OPCD's exar closest to 30%.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 ar
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu on accounting treatment.

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]
Debt-Finance Global Adjustment Costs, Option 1a	213	834	762
Debt-Finance Global Adjustment Costs, Option 1b	91	399	544
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**213**	**1074**	**1065**
Total, B	91	639	847

Proposed Program Total:	91 - 213	639 - 1,074	847 - 1,065

($M)	2016-171	2017-181	2018-191
Debt-Finance Global Adjustment Costs, Option 1a	851	3335	3049
Debt-Finance Global Adjustment Costs, Option 1b	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**851**	**3575**	**3352**
Total, B	362	1837	2478

Proposed Program Total:	362 - 851	1,837 - 3,575	2,478 - 3,352

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6

7	July	7	
8	August	8	
9	September	9	
10	October	10	
11	November	11	
12	December	12	

30-year term	**2016-17**	**2017-18**	**2018-19**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335	2,175 - 3,049

ROWS HIDDEN

1	1 = Comparision Enabled

APRIL 1, 2017 25%

2020	2021	2022
3,123	1,728	1,400

2019-20	2020-21	2021-2022
2,697	2,774	1,646
674	693	412

2020	2021	2022
3,396	2,020	1,712

2019-20	2020-21	2021-2022
2,958	3,052	1,943
740	763	486

mple, the true cost of GA being deferred is
ear, exposure may be less subject to which

l $17-21 billion (at 3.5% interest rate), peaking in 2028.
$33-$36 million.

ıals per month based on month of the year. Actuals may also depend on

28%	17%	13%
2020	2021	2022
3,750	2,311	1,933

2019-20	2020-21	2021-2022
2,671	3,391	2,217
668	848	554

2020	2021	2022
4,016	2,598	2,241

2019-20	2020-21	2021-2022
2,940	3,662	2,508
735	915	627

mple, the true cost of GA being deferred is

ıd $17-21 billion (at 3.5% interest rate), peaking in 2028.
$118-$134 million.

ıals per month based on month of the year. Actuals may also depend on decision

2019-20[1]	2020-21[1]
740	763
735	915
279	323
60	60
18	18
1097	**1164**
1092	1316

1,092 - 1,097 1,316 - 1,164

2019-201	2020-211
2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453





2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964
Equal Monthly Debt Drawdown	3,180	952

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

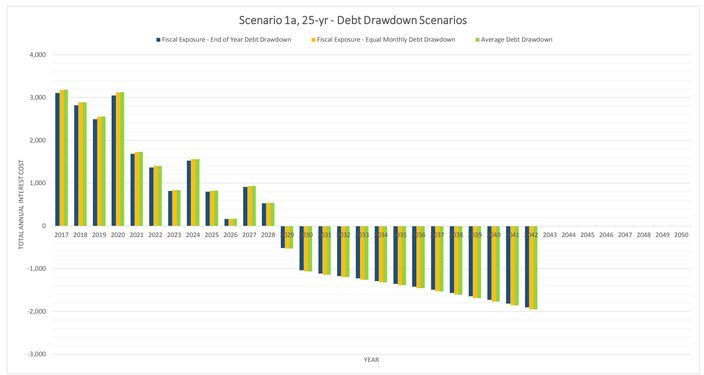
		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

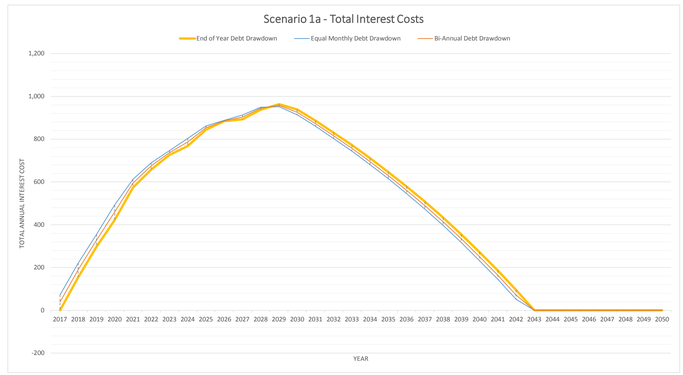
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	3,665	968	
Equal Monthly Debt Drawdown	3,750	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

		9%	14%	18%	28%	17%	13%																													
Scenario 1b, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

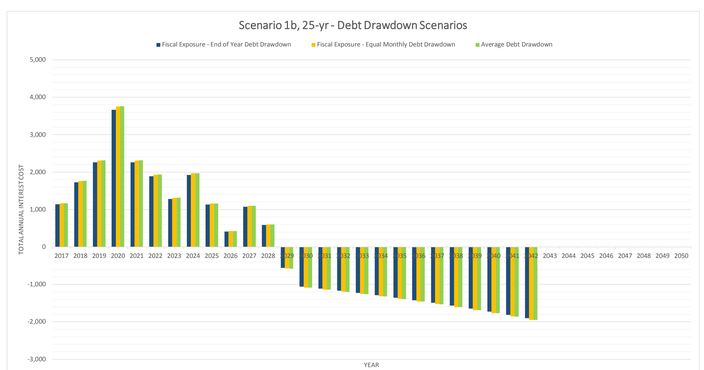
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	*954*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

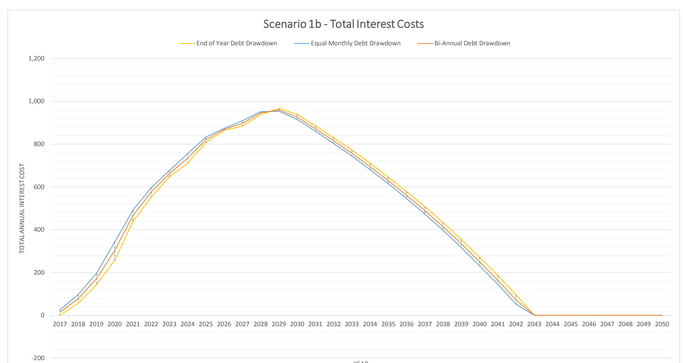
	Monthly Drawdown	95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

		28%	24%	21%	24%	12%	9%																													
Scenario 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1a, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	*1,156*	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

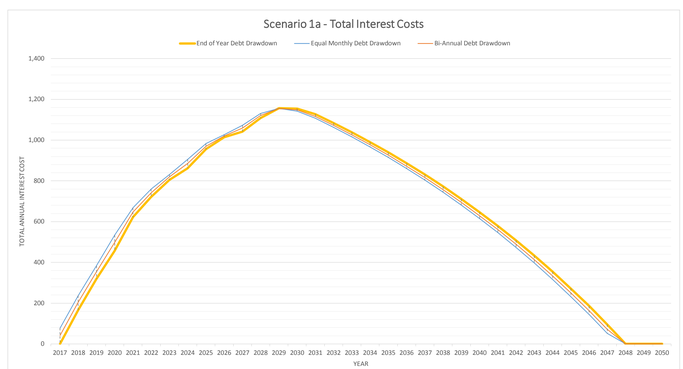
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

		12%	16%	20%	30%	19%	15%																													
Scenario 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

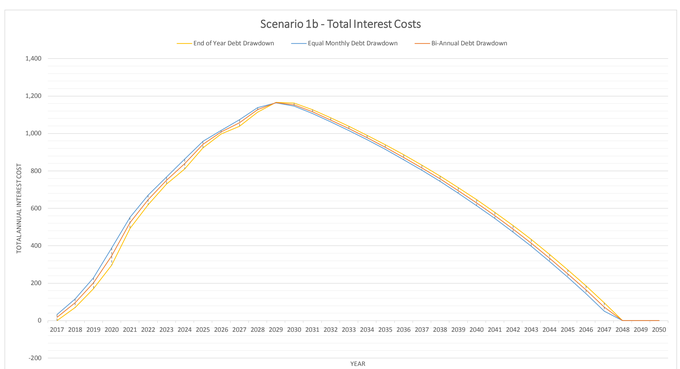
	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

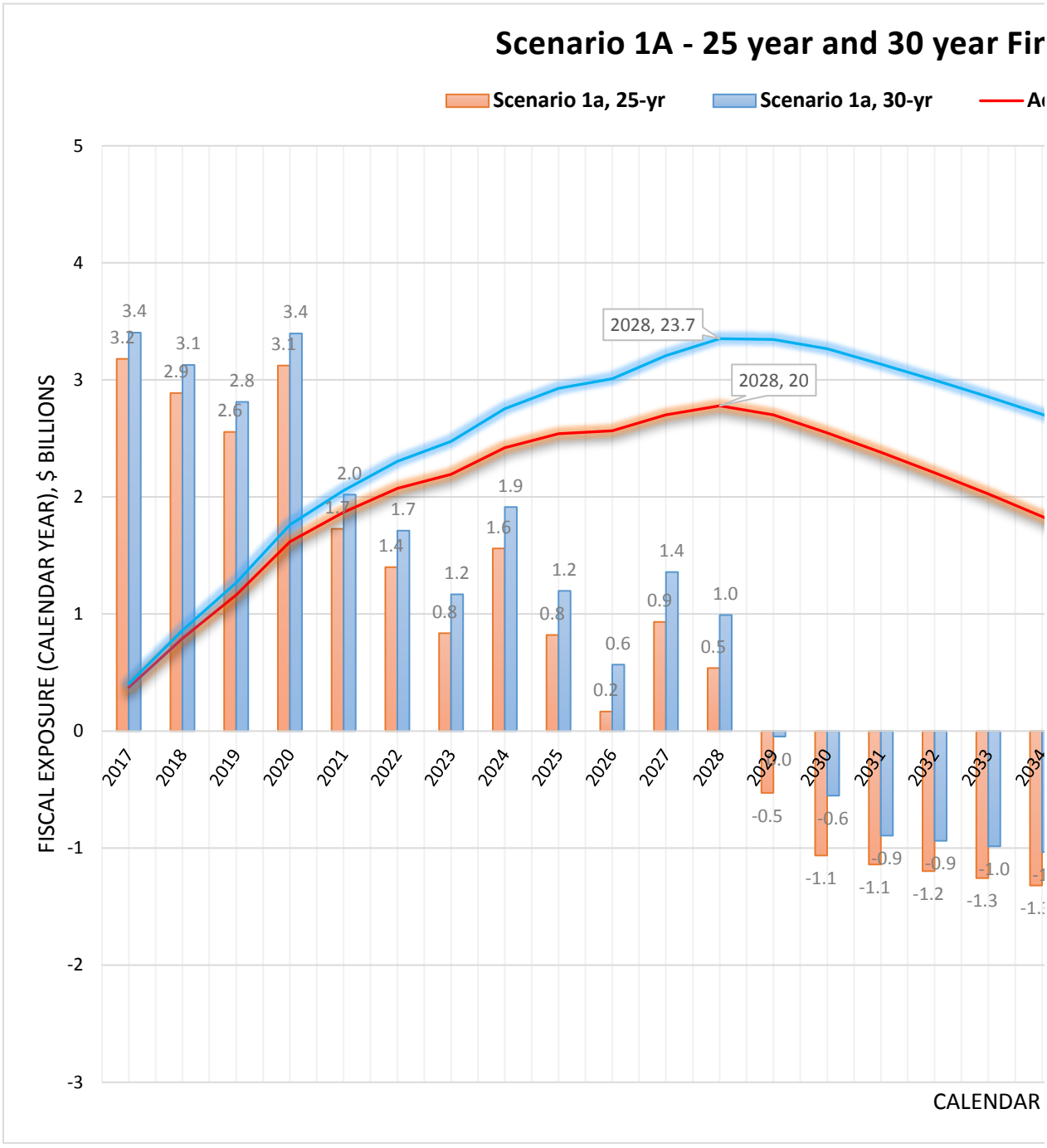
	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

Scenario 1b, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

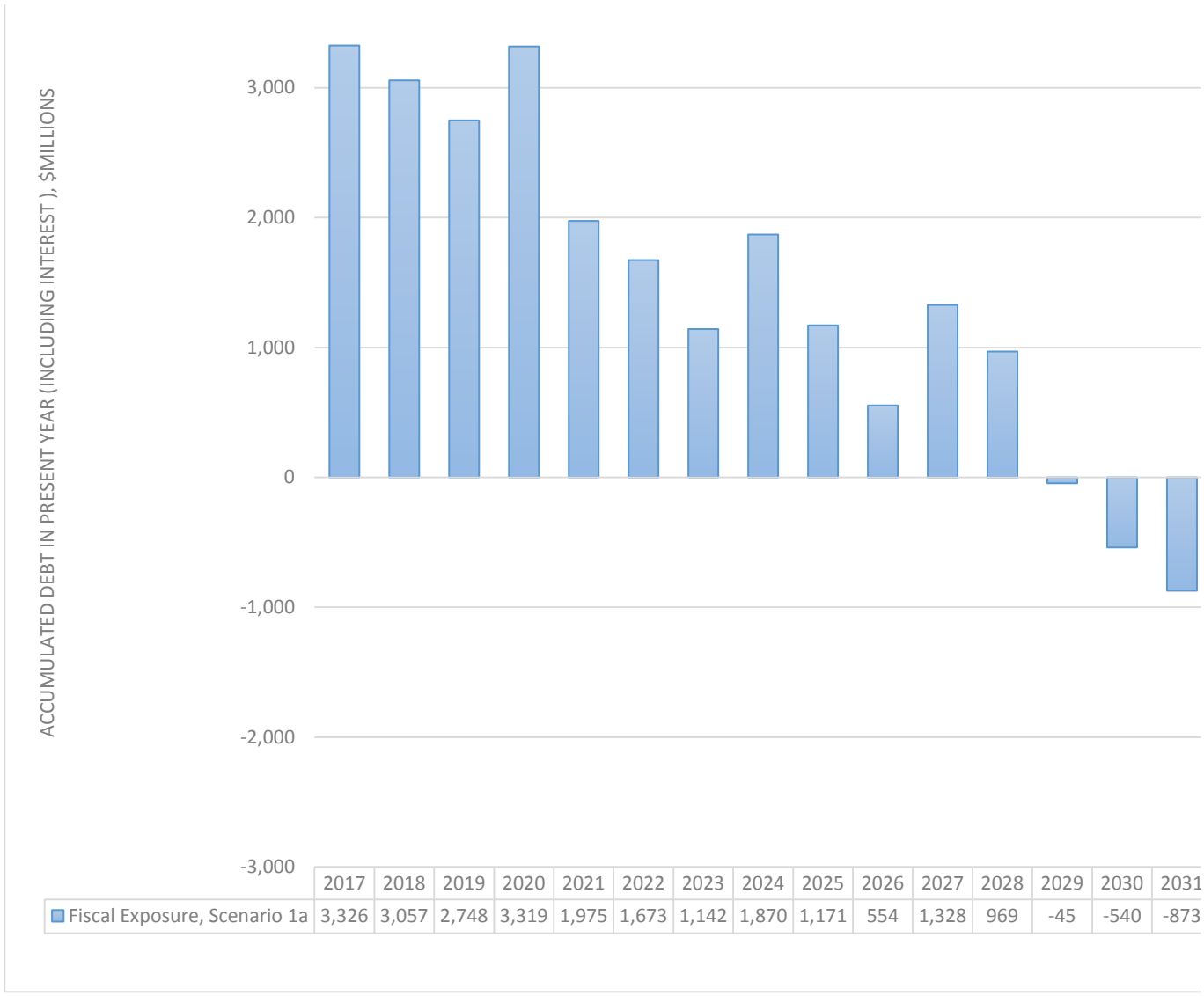




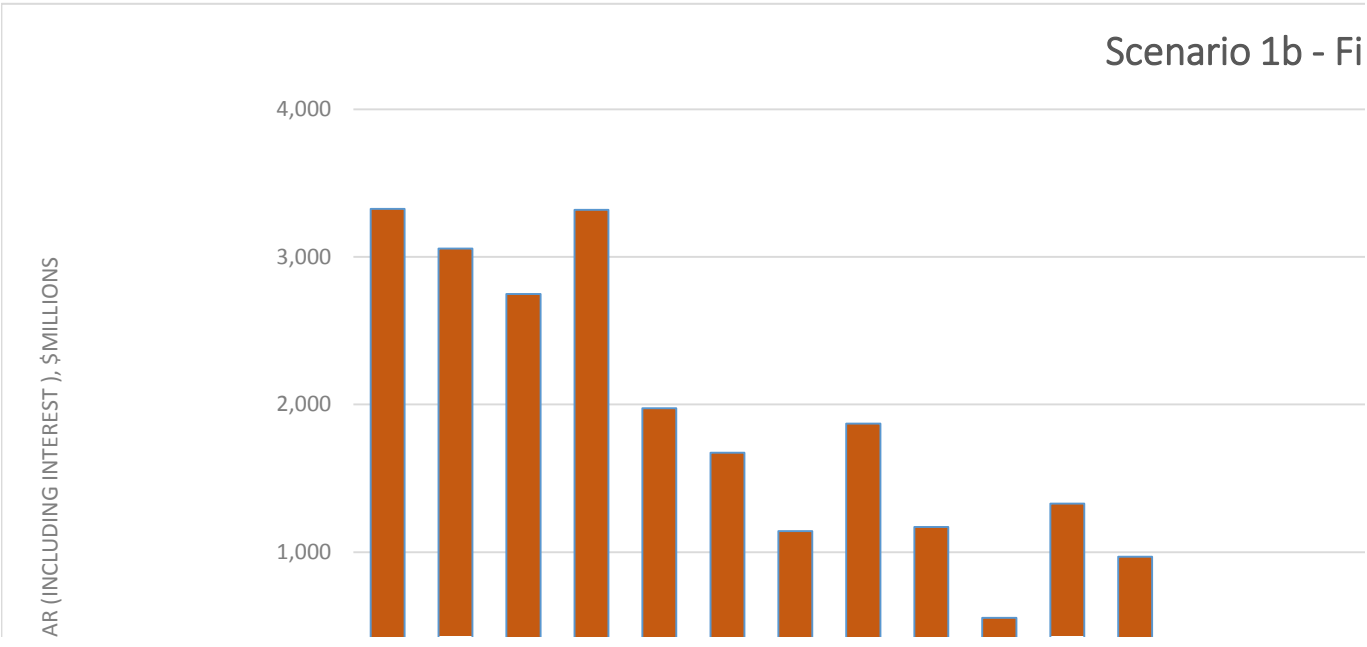
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

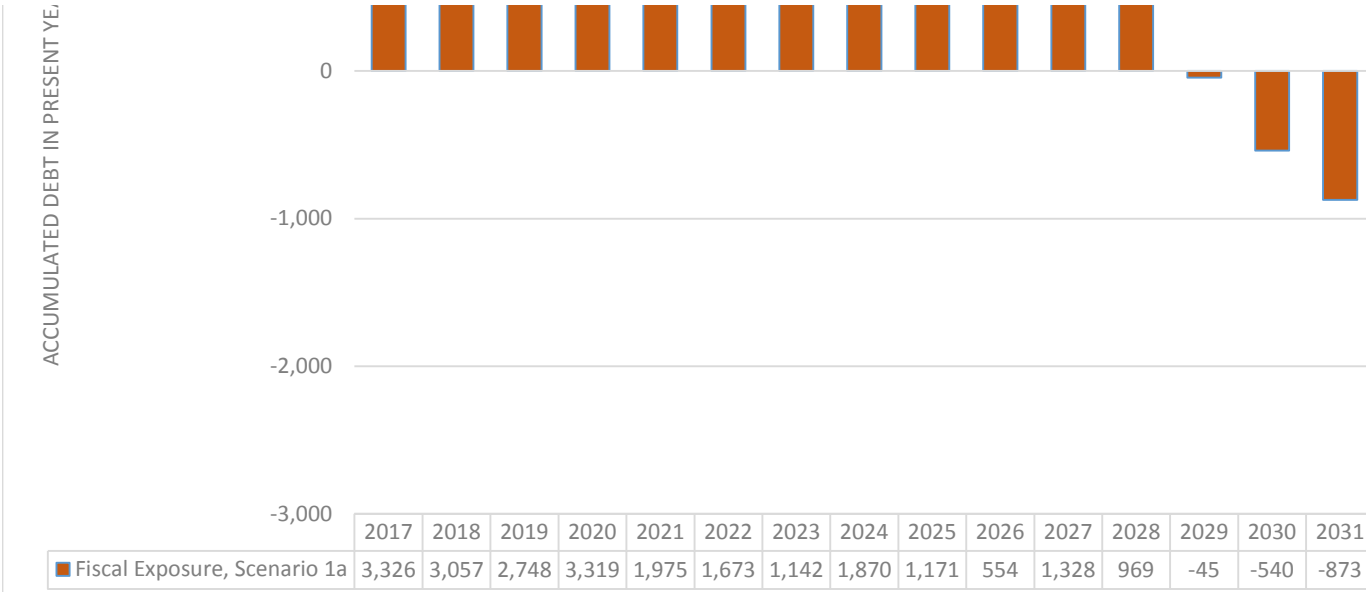




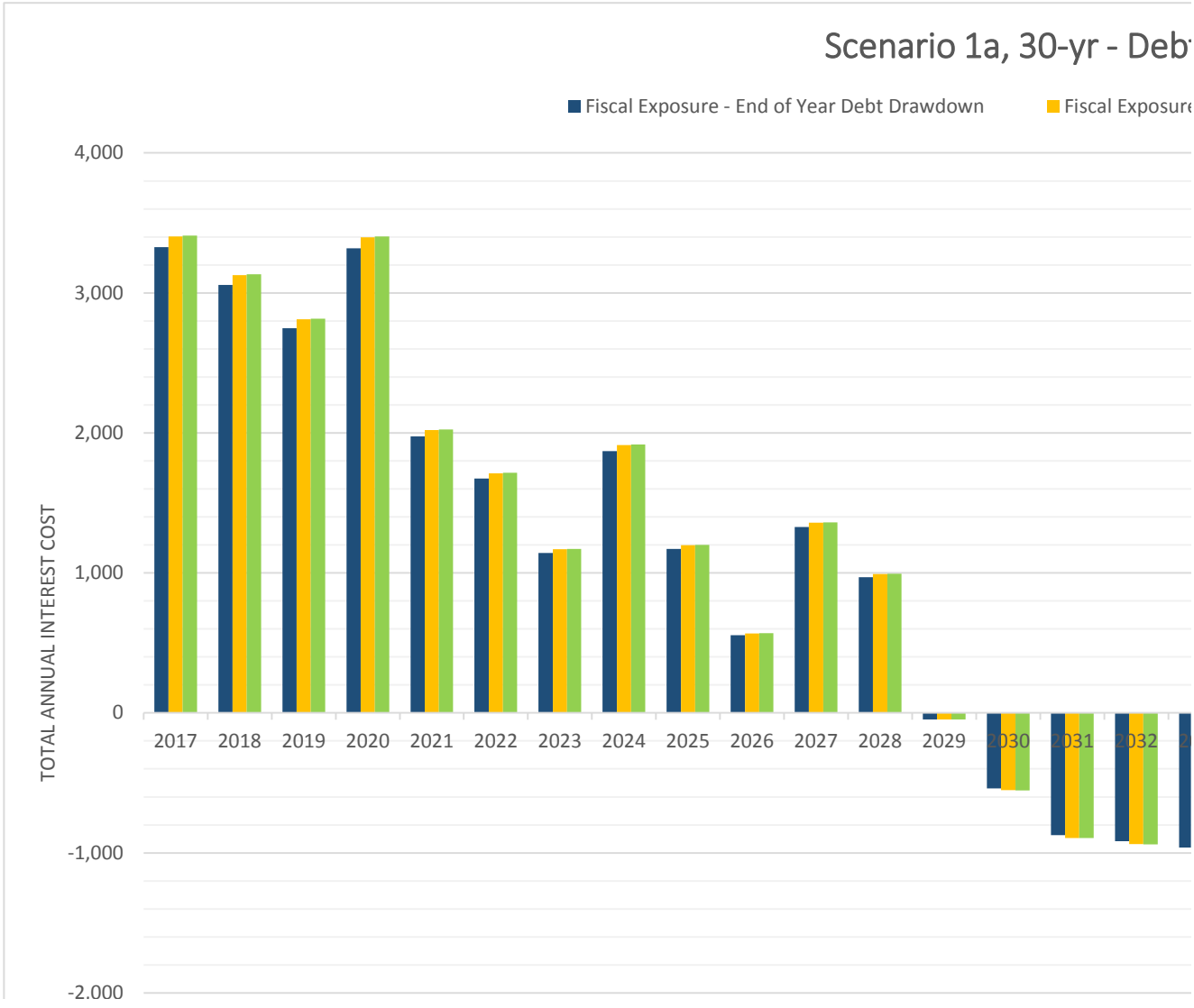


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



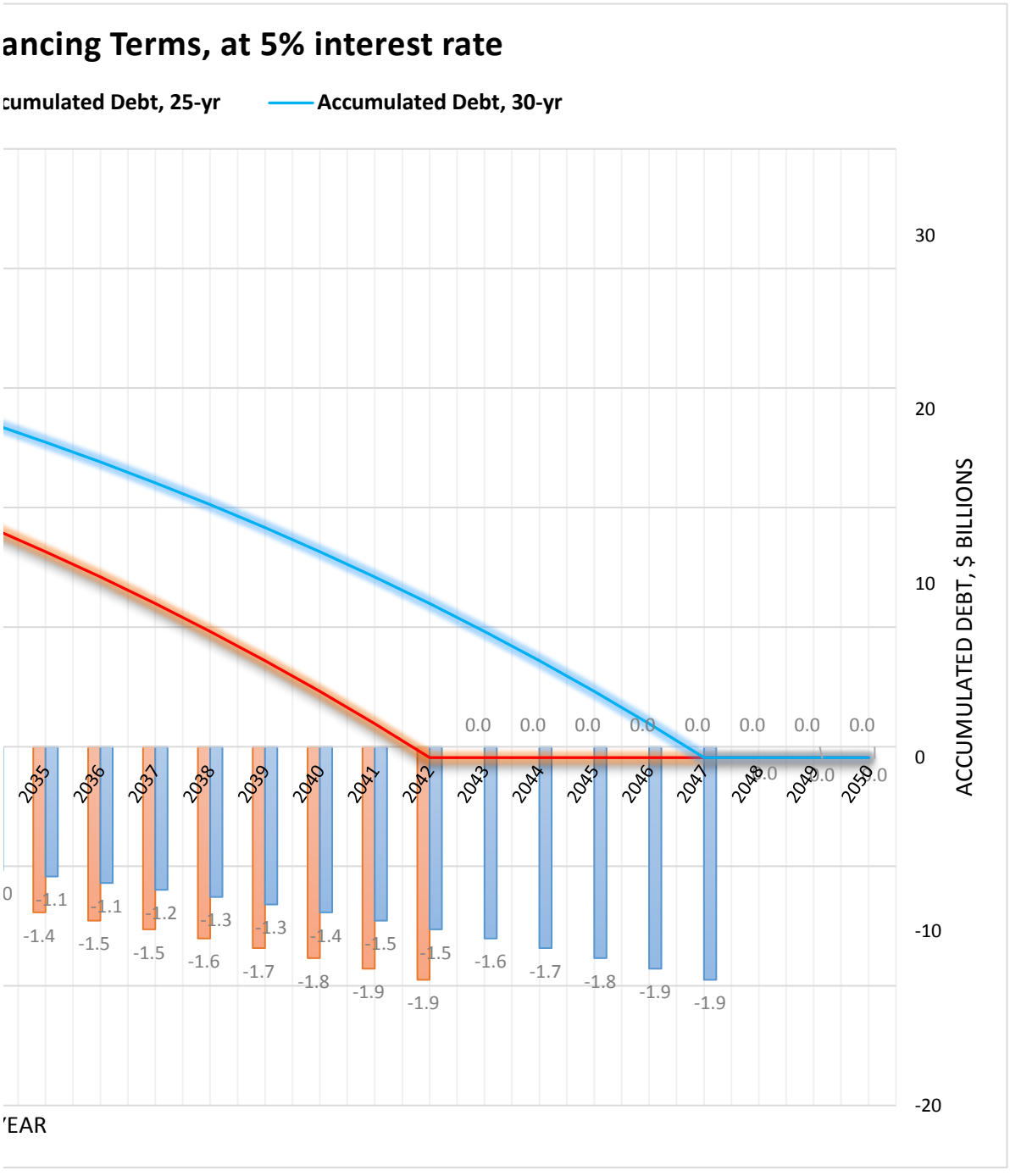


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



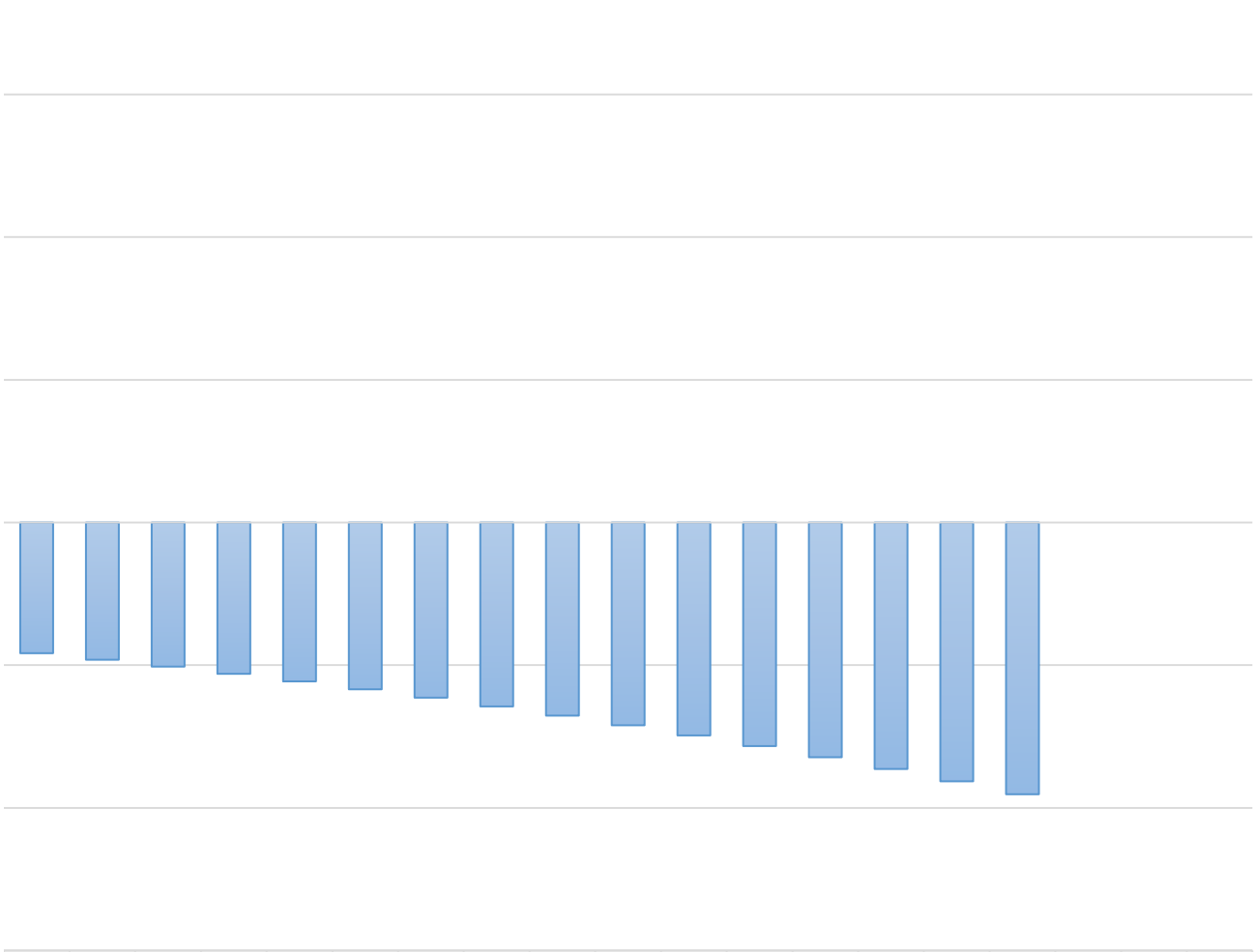

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

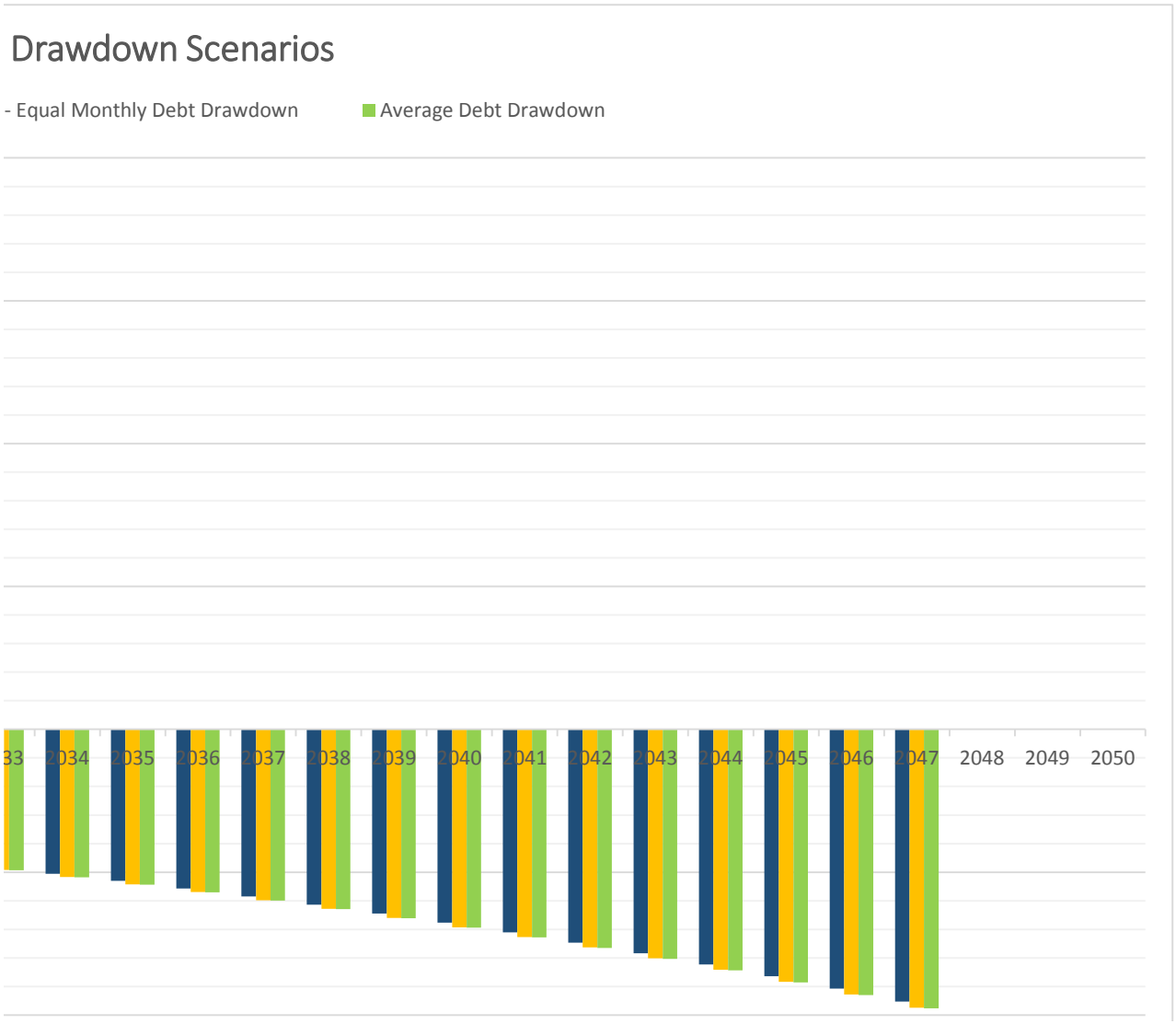
YEAR

cal Exposure



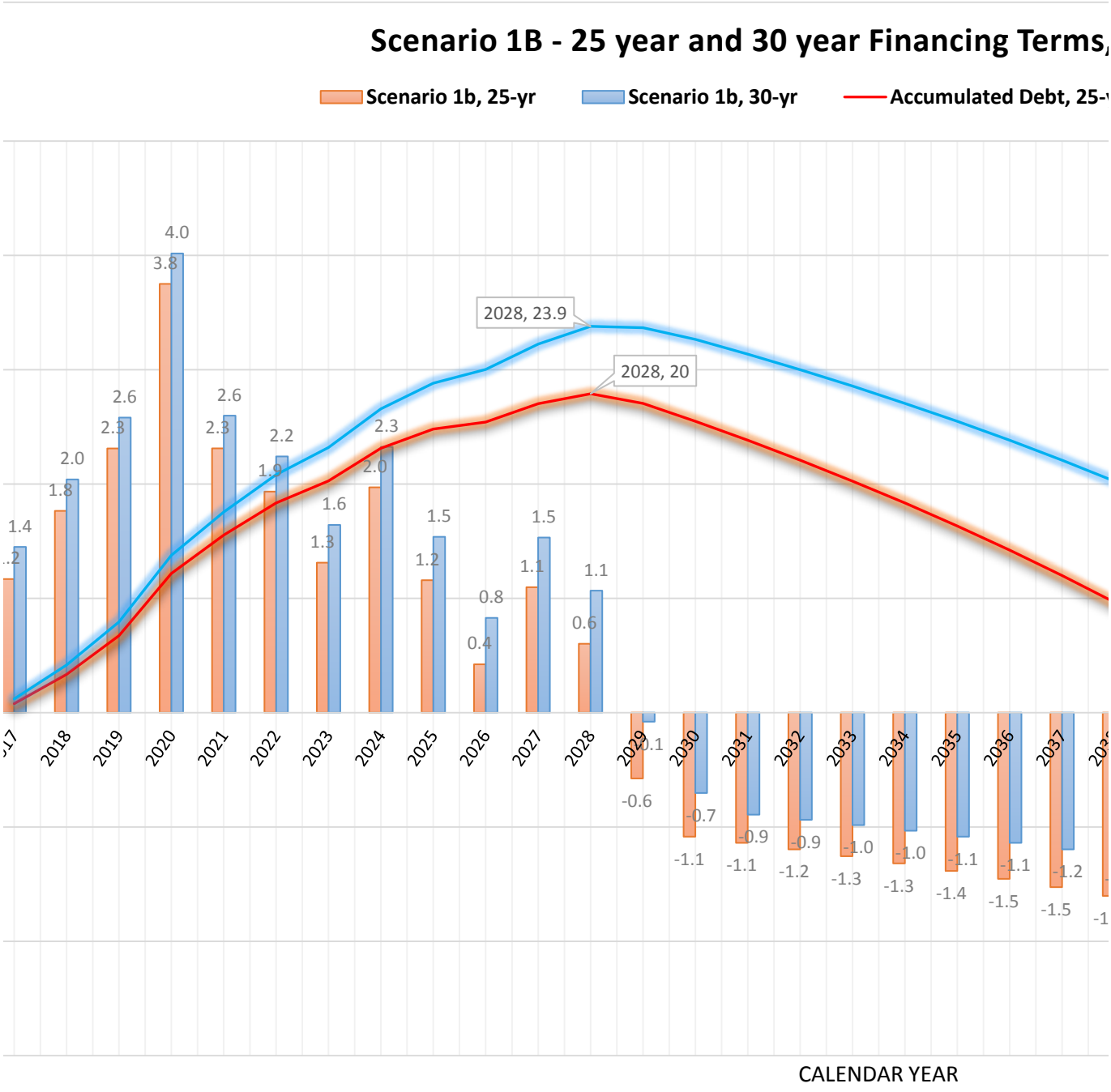
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

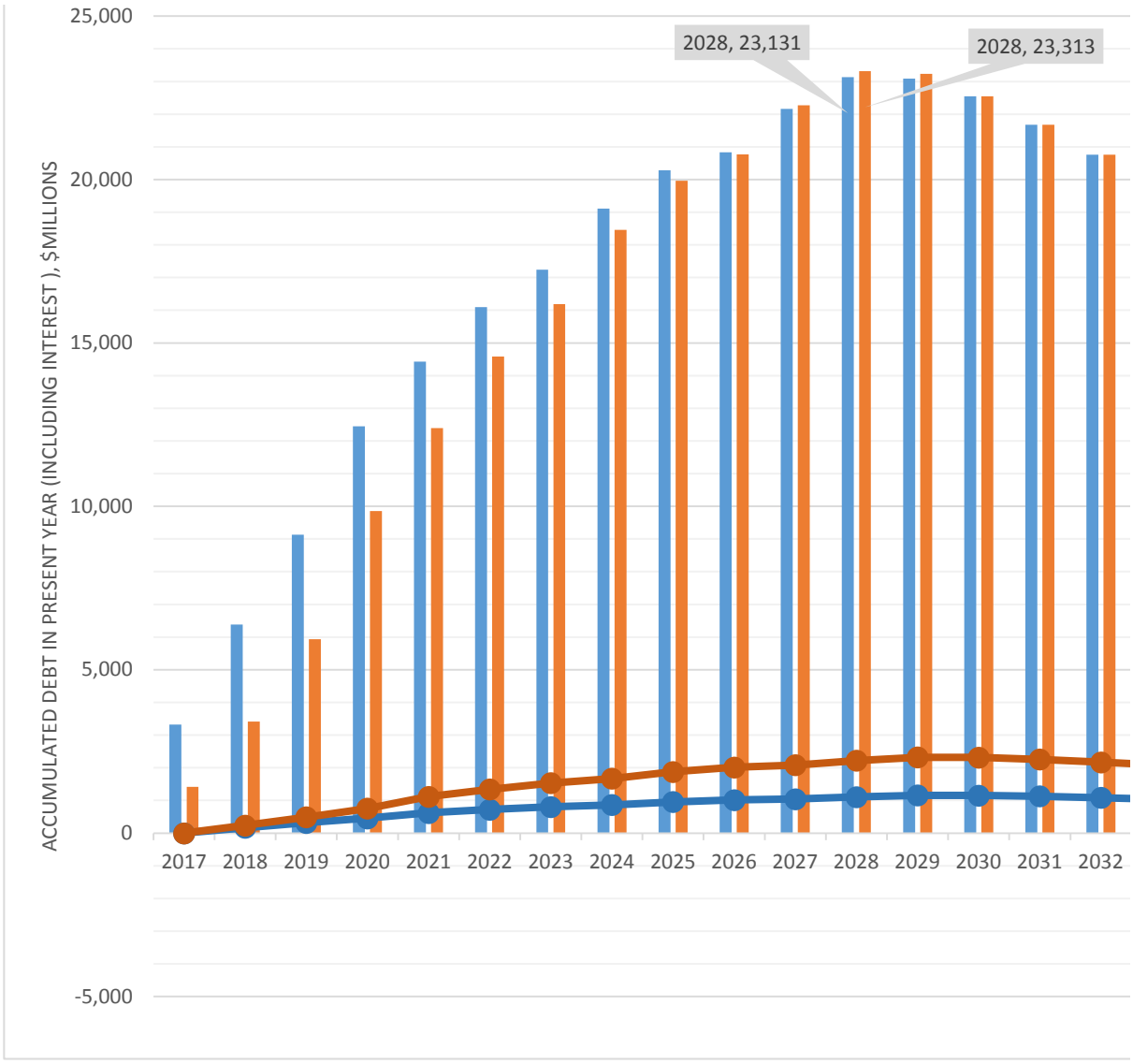


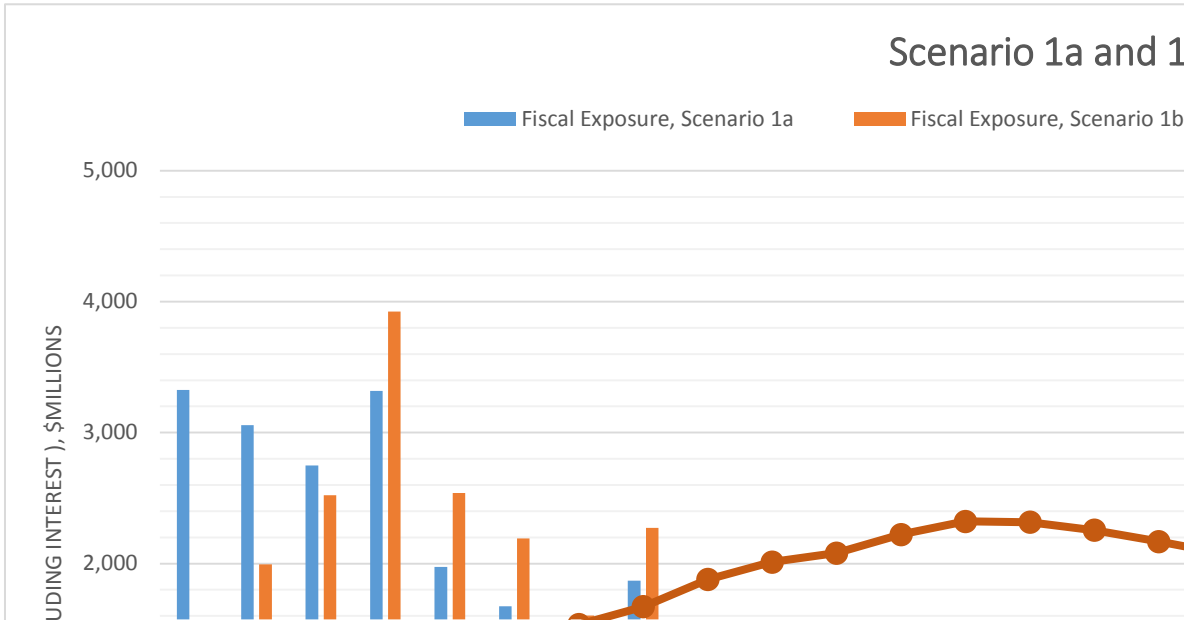
YEAR

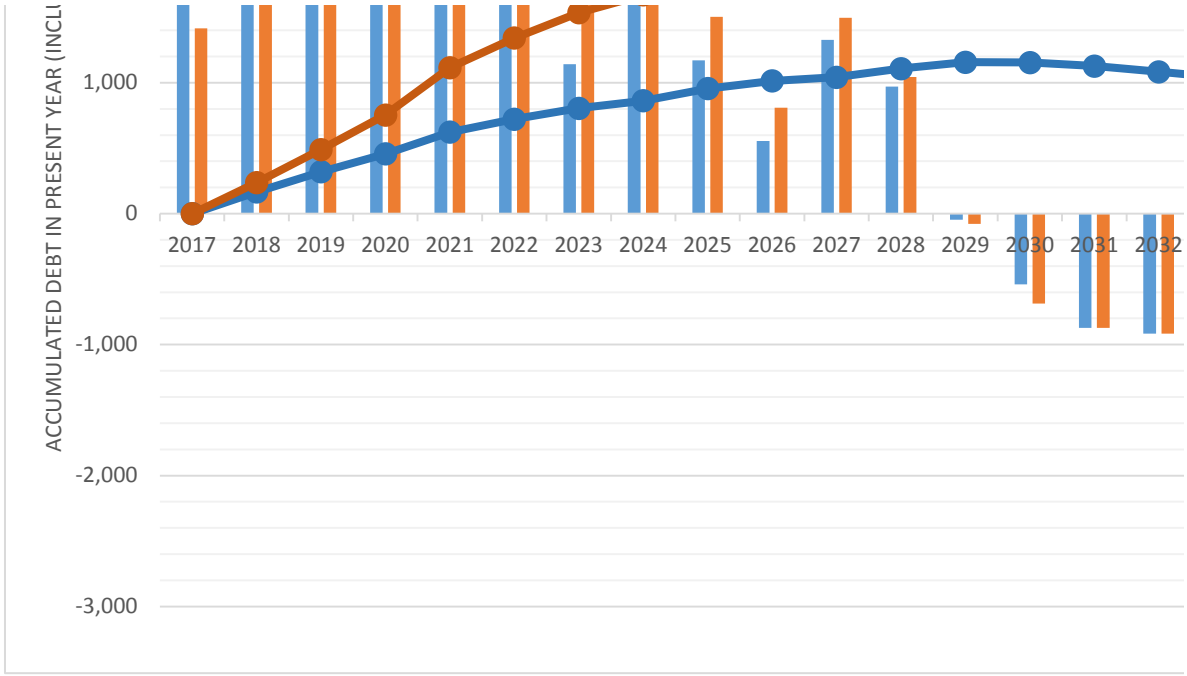
3 - 25 year and 30 year Financing Terms, at 5% interest rate

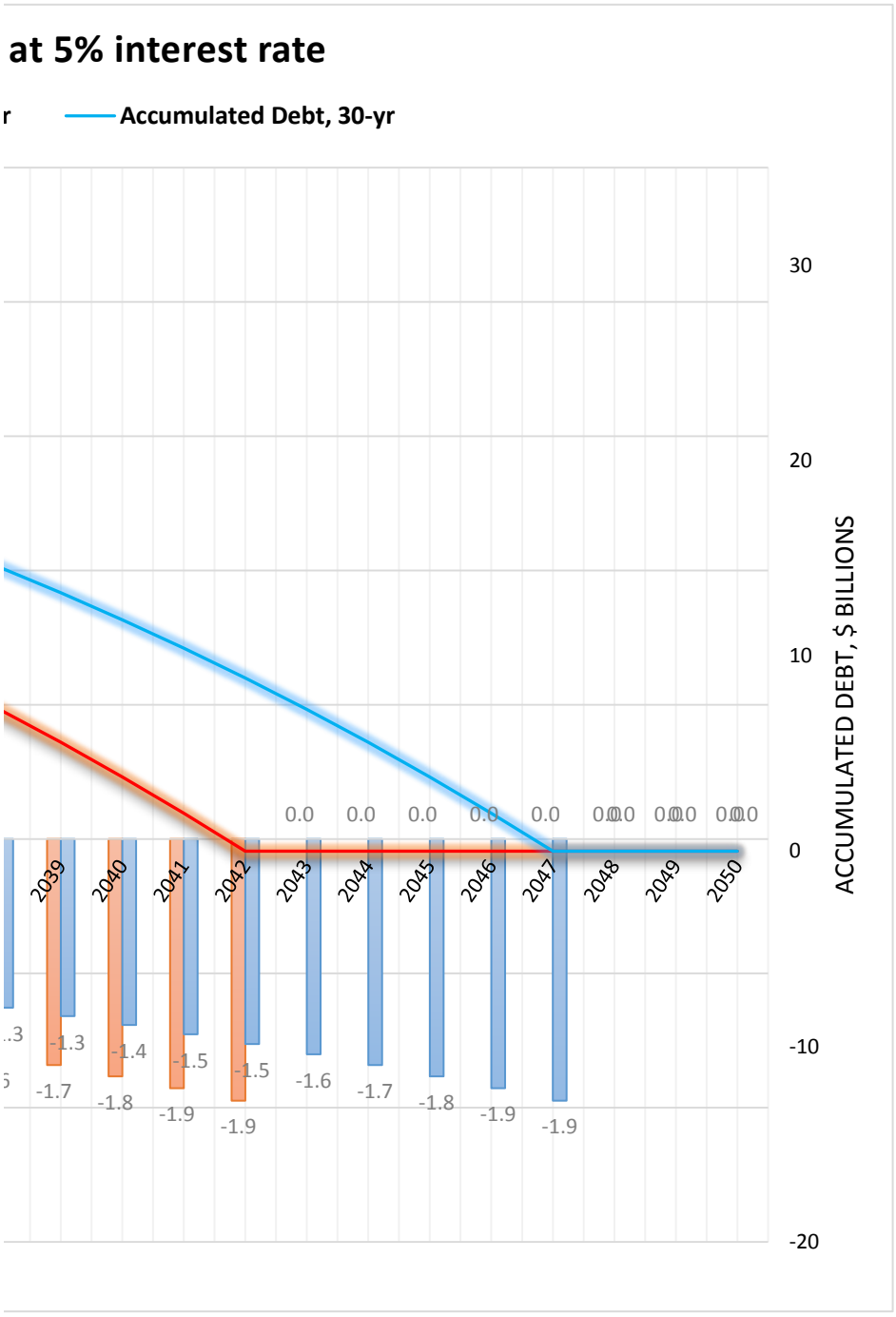





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

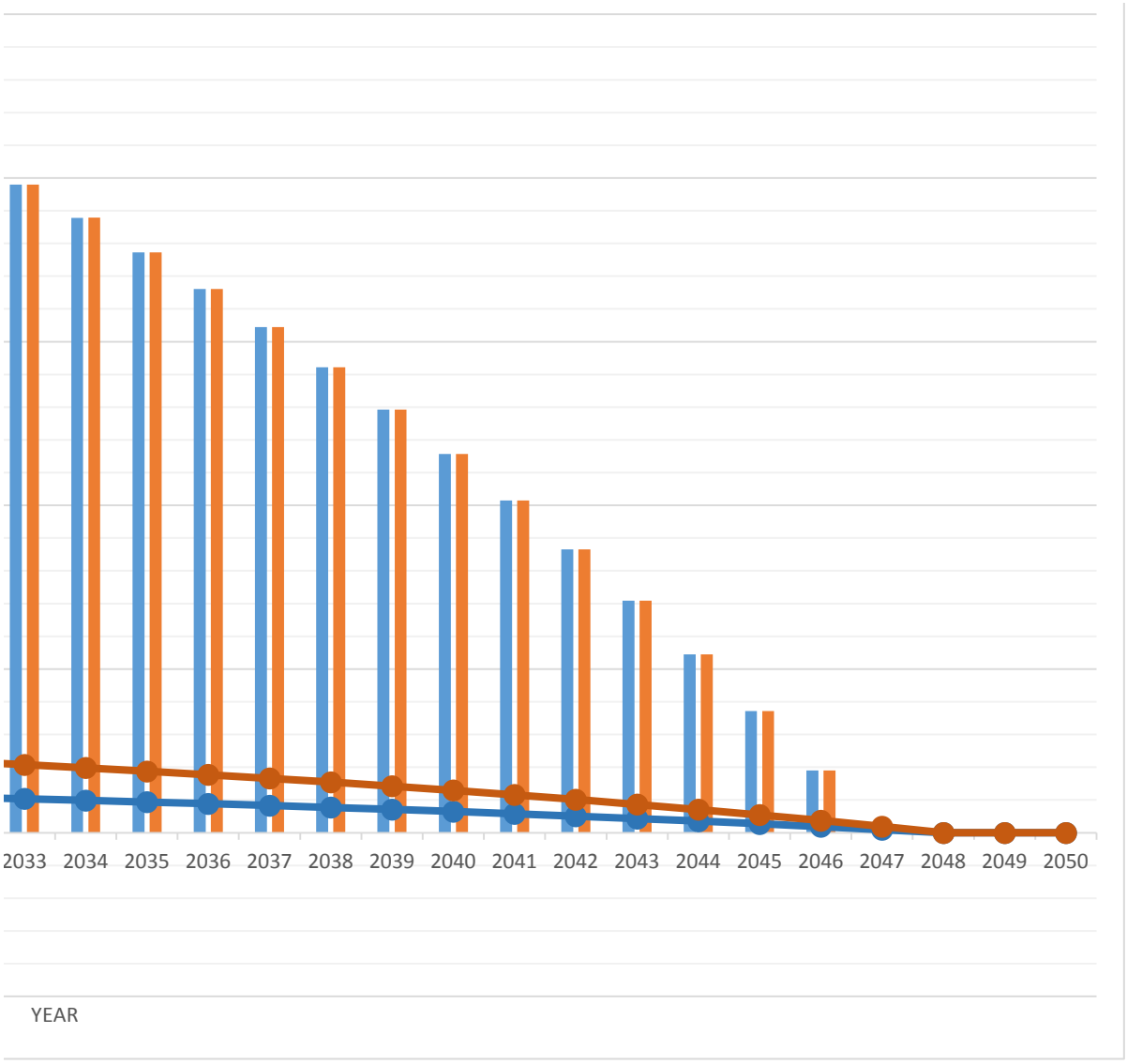

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

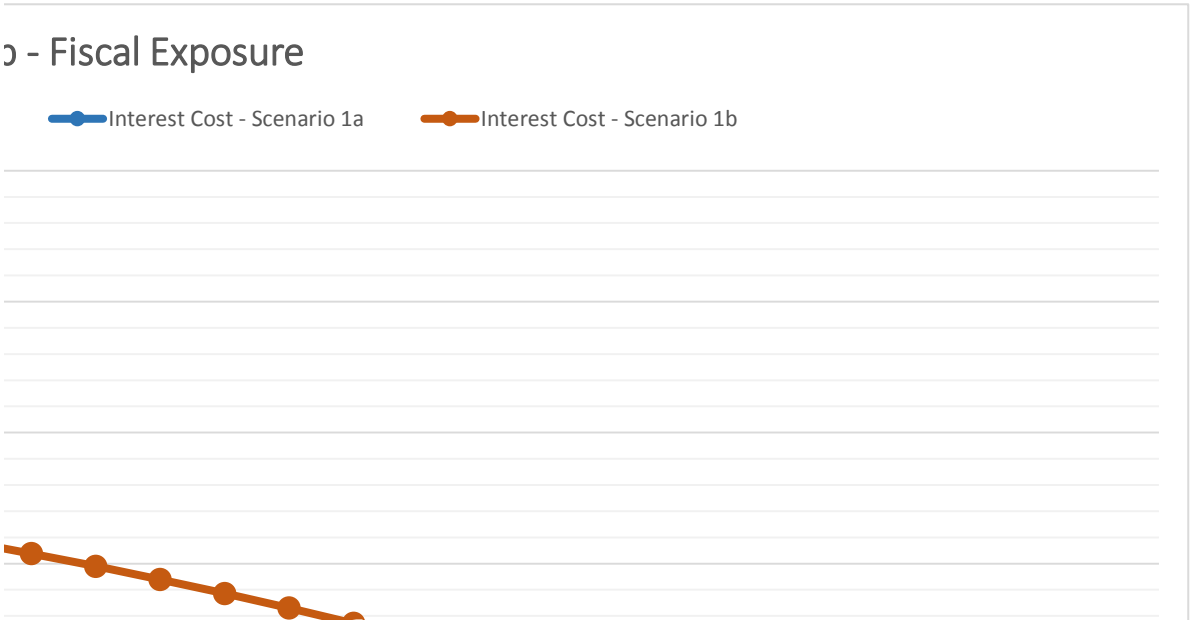

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

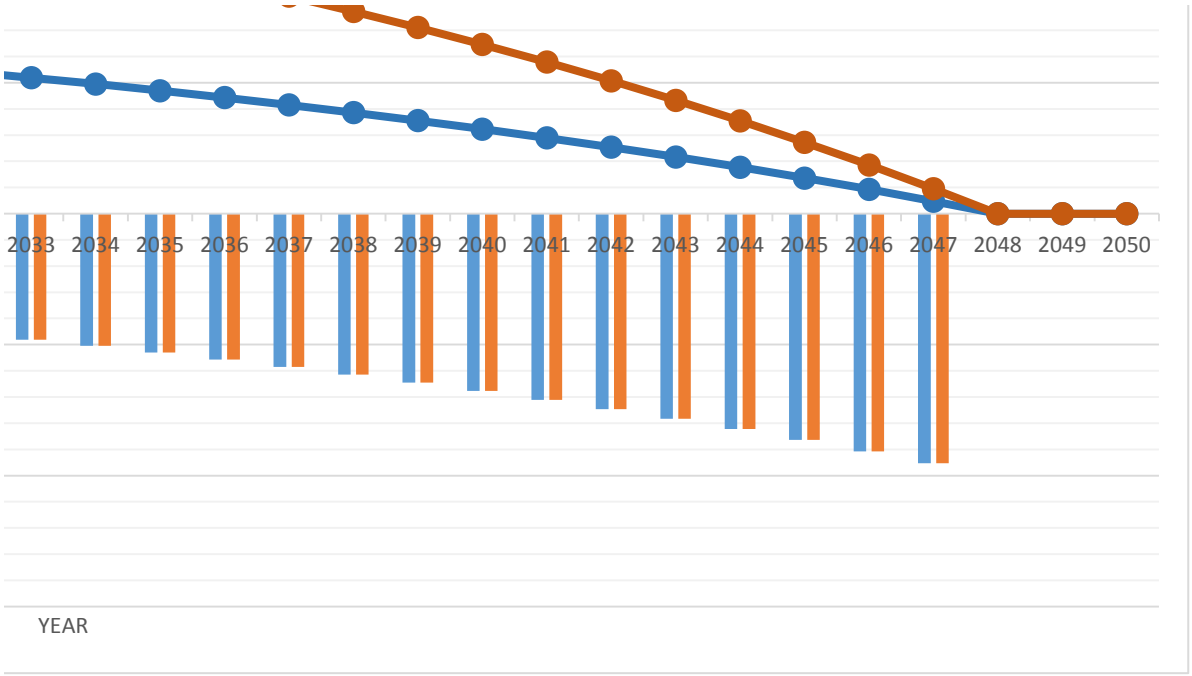


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

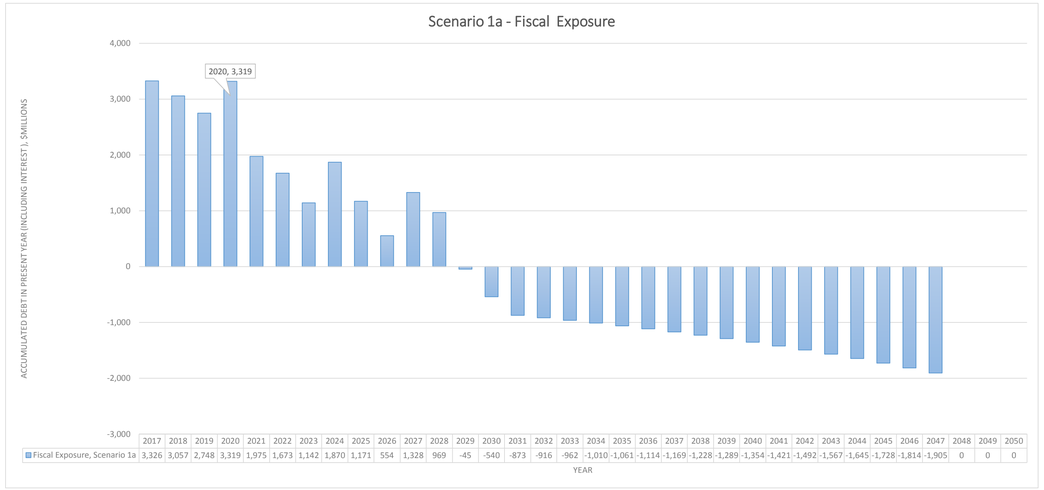
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

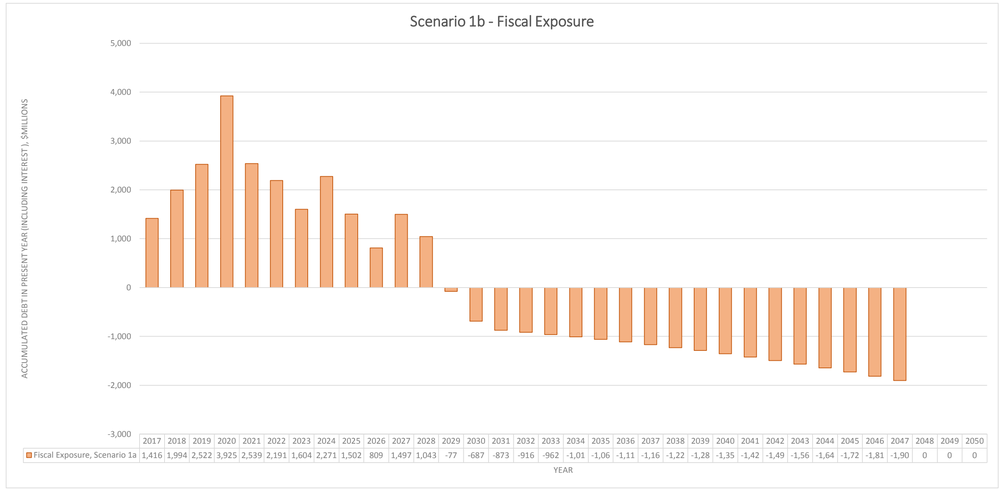
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

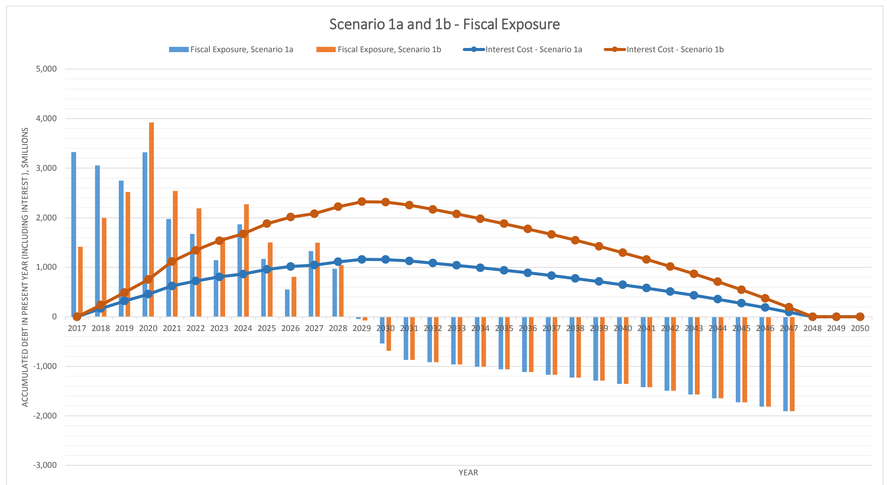
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

Notes:	Accounting treatment is to be determined.


Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0


Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0


Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest

IESO GA cost forecast + extrapolation

Scenario
Option 1
Bills Lowered 25%, RPP-Eligible Only
Option 2
Bills Lowered 20%, RPP-Eligible Only
Option 3
Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only

rate	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
Ratepayer GA Payment	9,595	9,327	9,051	9,094
Total Accumulated Debt ($ billion)	2,501	5,136	7,900	11,379
Ratepayer GA Payment	10,346	10,093	9,827	9,886
Accumulated debt in present year (including 5% interest,	1,749	3,580	5,488	8,052
Ratepayer GA Payment	10,648	10,303	10,186	10,873
Accumulated debt in present year (including 5% interest,	1,447	3,053	4,575	6,105

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	2022	2023	2024	2025	2026	2027	2028
10844	10634	10243	11128	10527	10033	11043	10819
8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612
14,621	17,629	20,205	23,599	26,362	28,564	31,674	34,502
8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560
10,316	12,278	13,735	15,933	17,418	18,256	19,913	21,190
9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253
7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**
10009	9721	8654	8820	8238	7756	5662	5389

9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311
36,440	37,962	38,260	38,500	37,925	36,589	34,538	32,383
10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289
21,477	21,240	20,426	19,571	18,672	17,727	16,733	15,689
9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837
18,843	19,521	20,007	20,312	20,325	19,755	18,549	17,050

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627

9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549
30,117	27,736	25,232	22,601	19,835	16,927	13,871	10,658
7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527
14,591	13,438	12,225	10,950	9,610	8,201	6,720	5,164
7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712
15,464	13,694	12,062	10,556	9,143	7,810	6,672	5,928

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	2046	2047	2048	2049	2050
3451	3285	3126	2975	2831	2695

7,374 7,207 7,048 2,975 2,831 2,695
7,281 3,731 0 0 0 0

5,352 5,185 5,026 2,975 2,831 2,695
3,528 1,808 - - - -

4,007 3,619 3,425 3,156 3,011 2,878
5,676 5,633 5,623 5,730 5,843 5,959

Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Interest Rate, monthly comp.	**5.000000%**		
Annual Interest Rate	5.12%	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb22_1_30yr

Option 1 - Bills Lowered 25%, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,501	2,636
Interest Portion	0	128

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	625	2,534
Interest Portion	-	32

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $39 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb22_2_30yr

Option 2 - Bills Lowered 20%, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,749	1,831
Interest Portion	0	89

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	437	1,770
Interest Portion	-	22

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $21 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb22_3_30yr

Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606
Interest Portion	0	74

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,487
Interest Portion	-	19

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	437 - 625	1,770 - 2,534

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	625	2534
Debt-Finance Global Adjustment Costs, Option 1a	437	1770
RRRP		
OESP – Enhance Benefit		162

Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**625**	**2774**
Total, B	437	2010

Proposed Program Total:	437 - 625	2,010 - 2,774

ining

0	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Option 1
Option 2
Option 3

Assumes an inte

2019	2020	2021	2022	
				CheckInt
2,764	3,479	3,242	3,008	
263	404	582	748	

2018-19	2019-20	2020-21	2021-2022
2,668	2,942	3,420	3,183
162	298	449	624

Option 1
Option 2
Option 3

2032.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,908	2,564	2,264	1,961
183	281	412	528

2018-19	2019-20	2020-21	2021-2022
1,850	2,072	2,489	2,189
113	208	314	441

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446
156	234	312	385

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429
95	176	254	331

2033.

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022
1,850 - 2,668	2,072 - 2,942	2,489 - 3,420	2,189 - 3,183

/1

2018-19[1]	2019-20[1]	2020-21[1]
2668	2942	3420
1850	2072	2489
225	279	323

60	60	60
18	18	18
2971	**3299**	**3821**
2153	2429	2890

2,153 - 2,971	2,429 - 3,299	2,890 - 3,821

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$24,977	$35,542	$38,501	occurs in Year 2032
$14,760	$19,733	$21,477	occurs in Year 2029
$12,862	$19,498	$20,326	occurs in Year 2033

erest rate of 5.00% (compounded monthly).

			5000
5.00000%	5.00005%	0.00005%	0.25%
35,542	35,543	0.90	4,518.21
19,733	19,734	0.52	2,619.41
19,498	19,499	0.48	2,410.01
0.249950%			

Tab Name		Total Accumulated Interest Costs
Feb22_1_30yr	$31,810	$40,288
Feb22_2_30yr	$17,586	$22,491
Feb22_3_30yr	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$31,810 to $40,288**
Option 2	$17,586 to $22,491**
Option 3	$17,202 to $22,028**

** With a higher interest rate, the amortization period extend beyond the 30-year forecast

ted period resulting in a remaining balance at the end of the 30-year period. For specifics, see details belo

w.

Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb22_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,501	2,636	2,764	3,479	3,242	3,008	2,577	3,394	2,763	2,202	3,111	2,828	1,938	1,522	299	240	-575	-1,336	-2,050	-2,155	-2,265	-2,381	-2,503	-2,631	-2,766	-2,907	-3,056	-3,213	-3,377	-3,550	-3,731	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,560	2,699	2,829	3,561	3,319	3,079	2,638	3,475	2,828	2,254	3,185	2,895	1,985	1,558	306	246	-588	-1,368	-2,099	-2,206	-2,319	-2,438	-2,563	-2,694	-2,832	-2,977	-3,129	-3,289	-3,457	-3,634	-3,820	0	0	0
			59	63	66	83	77	72	61	81	66	52	74	67	46	36	7	6	-14	-32	-49	-51	-54	-57	-60	-63	-66	-69	-73	-76	-80	-84	-89	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,479	1,970	35,542
Equal Monthly Debt Drawdown	3,561	1,963	

	Feb22 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	38,501	2032	24,977
Equal Monthly Debt Drawdown	39,417		

Feb22 Option 1, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																			26
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
a — Debt, Beginning of Year	0	2,501	5,136	7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675	34,502	36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,384	30,119	27,737	25,234	22,603	19,837	16,929	13,873	10,661	7,284	3,734	3	3	3	
c = a*5% — *Interest Cost - Feb22 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*128*	*263*	*404*	*582*	*748*	*902*	*1,034*	*1,207*	*1,349*	*1,461*	*1,621*	*1,765*	*1,864*	*1,942*	*1,957*	*1,970*	*1,940*	*1,872*	*1,767*	*1,657*	*1,541*	*1,419*	*1,291*	*1,156*	*1,015*	*866*	*710*	*545*	*373*	*191*	*0*	*0*	*0*	35,542
b — Additional GA Debt Drawdown, End of Year	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	2,501	5,136	7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675	34,502	36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,384	30,119	27,737	25,234	22,603	19,837	16,929	13,873	10,661	7,284	3,734	3	3	3	3	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
Feb22 Option 1, 30-yr - Accumulated Interest Costs	0	128	391	795	1,377	2,125	3,027	4,061	5,268	6,617	8,078	9,699	11,464	12,986	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	10,661	7,284	3,734	3	3	3	3	
Feb22 Option 1, 30-yr - Accumulated Debt Principal	2,501	5,009	7,509	10,584	13,244	15,504	17,178	19,539	21,094	21,947	23,596	24,803	24,977	24,977	24,977	25,216	24,642	23,306	21,255	19,100	16,835	14,453	11,950	9,319	6,553	3,645	589	0	0	0	0	0	0	0	
Feb22 Option 1, 30-yr - Accumulated Interest Costs	0	128	391	795	1,377	2,125	3,027	4,061	5,268	6,617	8,078	9,699	11,464	13,328	15,271	17,228	19,198	21,138	23,010	24,777	26,434	27,975	29,394	30,685	31,842	32,857	33,723	34,433	34,978	35,351	35,542				
Feb22 Option 1, 30-yr - Accumulated Debt Principal	2,501	5,009	7,509	10,584	13,244	15,504	17,178	19,539	21,094	21,947	23,596	24,803	24,977	24,634	22,990	21,273	18,728	15,452	11,529	7,607	3,685	-238	-4,160	-8,082	-12,005	-15,927	-19,849	-23,772	-27,694	-31,616	-35,539				
Fiscal Exposure - End of Year Debt Drawdown	2,501	2,636	2,764	3,479	3,242	3,008	2,577	3,394	2,763	2,202	3,111	2,828	1,938	1,522	299	240	-575	-1,336	-2,050	-2,155	-2,265	-2,381	-2,503	-2,631	-2,766	-2,907	-3,056	-3,213	-3,377	-3,550	-3,731	0	0	0	

Feb22 Option 1, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
Debt, Beginning of Year	0	2,560	5,259	8,088	11,650	14,969	18,048	20,686	24,161	26,989	29,243	32,428	35,323	37,307	38,865	39,171	39,417	38,828	37,460	35,361	33,155	30,835	28,397	25,834	23,140	20,309	17,332	14,203	10,914	7,457	3,823	3	3	3	
1,963 — *Interest Cost - Feb22 Option 1, 30-yr*	*59*	*191*	*329*	*487*	*659*	*820*	*963*	*1,114*	*1,273*	*1,401*	*1,535*	*1,688*	*1,811*	*1,901*	*1,949*	*1,963*	*1,956*	*1,909*	*1,823*	*1,716*	*1,603*	*1,484*	*1,360*	*1,228*	*1,091*	*946*	*793*	*633*	*465*	*288*	*102*	*0*	*0*	*0*	35,542
Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,560	5,259	8,088	11,650	14,969	18,048	20,686	24,161	26,989	29,243	32,428	35,323	37,307	38,865	39,171	39,417	38,828	37,460	35,361	33,155	30,835	28,397	25,834	23,140	20,309	17,332	14,203	10,914	7,457	3,823	3	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown	2,560	2,699	2,829	3,561	3,319	3,079	2,638	3,475	2,828	2,254	3,185	2,895	1,985	1,558	306	246	-588	-1,368	-2,099	-2,206	-2,319	-2,438	-2,563	-2,694	-2,832	-2,977	-3,129	-3,289	-3,457	-3,634	-3,820	0	0	0	
Monthly Drawdown	208	209	208	256	222	188	140	197	130	71	137	101	14	(29)	(137)	(143)	(212)	(273)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	-	-	-	
FV of Monthly Drawdown at 5%	2,560	2,568	2,560	3,148	2,723	2,313	1,715	2,416	1,592	873	1,688	1,236	177	(351)	(1,683)	(1,758)	(2,605)	(3,355)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	-	-	-	
Annual Interest Cost on New Drawdowns	59	60	59	73	63	54	40	56	37	20	39	29	4	(8)	(39)	(41)	(61)	(78)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	-	-	-	
Annual Interest Cost on Opening Balance	-	131	269	414	596	766	923	1,058	1,236	1,381	1,496	1,659	1,807	1,909	1,988	2,004	2,017	1,987	1,917	1,809	1,696	1,578	1,453	1,322	1,184	1,039	887	727	558	382	196	0	0	0	
Total Annual Interest Cost	59	191	329	487	659	820	963	1,114	1,273	1,401	1,535	1,688	1,811	1,901	1,949	1,963	1,956	1,909	1,823	1,716	1,603	1,484	1,360	1,228	1,091	946	793	633	465	288	102	0	0	0	

Feb22 Option 1, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
Debt, Beginning of Year	0	2,533	5,202	8,001	11,524	14,808	17,854	20,464	23,901	26,699	28,929	32,080	34,943	36,907	38,448	38,750	38,993	38,411	37,058	34,981	32,799	30,504	28,092	25,557	22,892	20,091	17,146	14,051	10,797	7,377	3,782	3	3	3	
Interest Cost - Feb22 Option 1, 30-yr	*32*	*162*	*298*	*449*	*624*	*787*	*935*	*1,077*	*1,243*	*1,377*	*1,501*	*1,657*	*1,790*	*1,884*	*1,946*	*1,961*	*1,962*	*1,923*	*1,846*	*1,740*	*1,628*	*1,510*	*1,387*	*1,257*	*1,121*	*978*	*827*	*669*	*502*	*327*	*143*	*0*	*0*	*0*	35,542
Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,533	5,202	8,001	11,524	14,808	17,854	20,464	23,901	26,699	28,929	32,080	34,943	36,907	38,448	38,750	38,993	38,411	37,058	34,981	32,799	30,504	28,092	25,557	22,892	20,091	17,146	14,051	10,797	7,377	3,782	3	3	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown	2,533	2,670	2,799	3,523	3,283	3,046	2,610	3,437	2,798	2,230	3,150	2,864	1,963	1,541	302	243	-582	-1,353	-2,077	-2,183	-2,294	-2,412	-2,535	-2,665	-2,801	-2,945	-3,095	-3,254	-3,420	-3,595	-3,779	0	0	0	
Bi-Annual Drawdown	1,250	1,254	1,250	1,537	1,330	1,130	837	1,180	778	427	825	604	87	(171)	(822)	(859)	(1,272)	(1,638)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	-	-	-	
FV of Bi-Annual Drawdown at 5%	2,533	2,540	2,533	3,114	2,694	2,289	1,696	2,390	1,575	864	1,670	1,223	175	(347)	(1,665)	(1,740)	(2,577)	(3,319)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	-	-	-	
Annual Interest Cost on New Drawdowns	32	32	32	39	34	29	21	30	20	11	21	15	2	(4)	(21)	(22)	(33)	(42)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	-	-	-	
Annual Interest Cost on Opening Balance	-	130	266	409	590	758	913	1,047	1,223	1,366	1,480	1,641	1,788	1,888	1,967	1,983	1,995	1,965	1,896	1,790	1,678	1,561	1,437	1,308	1,171	1,028	877	719	552	377	193	0	0	0	
Total Annual Interest Cost	32	162	298	449	624	787	935	1,077	1,243	1,377	1,501	1,657	1,790	1,884	1,946	1,961	1,962	1,923	1,846	1,740	1,628	1,510	1,387	1,257	1,121	978	827	669	502	327	143	0	0	0	

Feb22 Option 1, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
Debt, Beginning of Year	0	2,565	5,268	8,102	11,670	14,995	18,080	20,722	24,203	27,036	29,295	32,485	35,385	37,373	38,933	39,240	39,486	38,896	37,526	35,423	33,213	30,889	28,447	25,880	23,181	20,344	17,363	14,228	10,933	7,470	3,830	3	3	3	
Interest Cost - Feb22 Option 1, 30-yr	*64*	*195*	*333*	*493*	*665*	*825*	*968*	*1,121*	*1,278*	*1,405*	*1,541*	*1,693*	*1,815*	*1,903*	*1,950*	*1,964*	*1,955*	*1,906*	*1,820*	*1,712*	*1,599*	*1,480*	*1,355*	*1,224*	*1,086*	*941*	*788*	*628*	*459*	*282*	*96*	*0*	*0*	*0*	35,542
Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,565	5,268	8,102	11,670	14,995	18,080	20,722	24,203	27,036	29,295	32,485	35,385	37,373	38,933	39,240	39,486	38,896	37,526	35,423	33,213	30,889	28,447	25,880	23,181	20,344	17,363	14,228	10,933	7,470	3,830	3	3	3	3	
Fiscal Exposure - Average Debt Drawdown	2,565	2,703	2,834	3,568	3,325	3,085	2,643	3,481	2,833	2,258	3,190	2,900	1,988	1,561	306	246	-589	-1,370	-2,103	-2,210	-2,323	-2,442	-2,567	-2,699	-2,837	-2,982	-3,134	-3,295	-3,463	-3,640	-3,827	0	0	0	

Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb22_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,749	1,831	1,908	2,564	2,264	1,961	1,457	2,198	1,485	838	1,656	1,277	287	-237	-814	-855	-899	-945	-993	-1,044	-1,098	-1,154	-1,213	-1,275	-1,340	-1,409	-1,481	-1,556	-1,636	-1,720	-1,808	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,791	1,875	1,953	2,625	2,318	2,008	1,492	2,250	1,521	858	1,696	1,308	294	-243	-833	-876	-920	-967	-1,017	-1,069	-1,124	-1,181	-1,242	-1,305	-1,372	-1,442	-1,516	-1,593	-1,675	-1,761	-1,851	0	0	0	
			42	44	45	61	54	47	35	52	35	20	39	30	7	-6	-19	-20	-21	-22	-24	-25	-26	-27	-29	-30	-32	-34	-35	-37	-39	-41	-43	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,564	1,099	19,733
Equal Monthly Debt Drawdown	2,625	1,093	

	Feb22 Option 2, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	21,477	2029	14,760
Equal Monthly Debt Drawdown	21,988		

Feb22 Option 2, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				26
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
a	Debt, Beginning of Year	0	1,749	3,580	5,488	8,052	10,316	12,278	13,735	15,933	17,418	18,256	19,913	21,190	21,477	21,240	20,427	19,571	18,672	17,727	16,734	15,690	14,592	13,438	12,226	10,951	9,611	8,202	6,722	5,165	3,529	1,809	2	2	2	
c = a*5%	*Interest Cost - Feb22 Option 2, 30-yr - End of Year Debt Drawdown*	*0*	*89*	*183*	*281*	*412*	*528*	*628*	*703*	*815*	*891*	*934*	*1,019*	*1,084*	*1,099*	*1,087*	*1,045*	*1,001*	*955*	*907*	*856*	*803*	*747*	*688*	*625*	*560*	*492*	*420*	*344*	*264*	*181*	*93*	*0*	*0*	*0*	*0*	19,733
b	Additional GA Debt Drawdown, End of Year	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,749	3,580	5,488	8,052	10,316	12,278	13,735	15,933	17,418	18,256	19,913	21,190	21,477	21,240	20,427	19,571	18,672	17,727	16,734	15,690	14,592	13,438	12,226	10,951	9,611	8,202	6,722	5,165	3,529	1,809	2	2	2	2	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	
	Feb22 Option 2, 30-yr - Accumulated Interest Costs	0	89	273	553	965	1,493	2,121	2,824	3,639	4,530	5,464	6,483	7,567	7,330	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	5,165	3,529	1,809	2	2	2	
	Feb22 Option 2, 30-yr - Accumulated Debt Principal	1,749	3,491	5,216	7,499	9,351	10,784	11,614	13,109	13,779	13,726	14,448	14,707	13,910	13,910	13,910	13,055	12,156	11,211	10,217	9,173	8,075	6,922	5,709	4,434	3,094	1,685	205	0	0	0	0	0	0	0	
	Feb22 Option 2, 30-yr - Accumulated Interest Costs	0	89	273	553	965	1,493	2,121	2,824	3,639	4,530	5,464	6,483	7,567	8,666	9,753	10,798	11,799	12,755	13,661	14,518	15,320	16,067	16,754	17,380	17,940	18,432	18,852	19,195	19,460	19,640	19,733				
	Feb22 Option 2, 30-yr - Accumulated Debt Principal	1,749	3,491	5,216	7,499	9,351	10,784	11,614	13,109	13,779	13,726	14,448	14,707	13,910	12,574	10,674	8,773	6,873	4,973	3,072	1,172	-728	-2,628	-4,529	-6,429	-8,329	-10,230	-12,130	-14,030	-15,931	-17,831	-19,731				
Fiscal Exposure - End of Year Debt Drawdown		1,749	1,831	1,908	2,564	2,264	1,961	1,457	2,198	1,485	838	1,656	1,277	287	-237	-814	-855	-899	-945	-993	-1,044	-1,098	-1,154	-1,213	-1,275	-1,340	-1,409	-1,481	-1,556	-1,636	-1,720	-1,808	0	0	0	

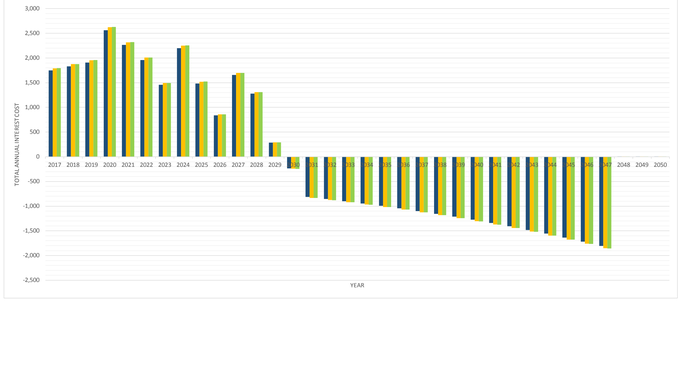
Feb22 Option 2, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Debt, Beginning of Year	0	1,791	3,666	5,619	8,244	10,562	12,570	14,062	16,312	17,832	18,691	20,386	21,694	21,988	21,745	20,912	20,037	19,116	18,149	17,132	16,063	14,939	13,758	12,517	11,211	9,839	8,397	6,881	5,288	3,613	1,852	2	2	2	
1,093	*Interest Cost - Feb22 Option 2, 30-yr*	*42*	*133*	*229*	*342*	*466*	*574*	*663*	*755*	*850*	*911*	*973*	*1,049*	*1,091*	*1,093*	*1,067*	*1,025*	*980*	*933*	*883*	*831*	*777*	*719*	*659*	*595*	*528*	*458*	*384*	*307*	*225*	*140*	*50*	*0*	*0*	*0*	19,733
	Additional GA Debt Drawdown	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,791	3,666	5,619	8,244	10,562	12,570	14,062	16,312	17,832	18,691	20,386	21,694	21,988	21,745	20,912	20,037	19,116	18,149	17,132	16,063	14,939	13,758	12,517	11,211	9,839	8,397	6,881	5,288	3,613	1,852	2	2	2	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,791	1,875	1,953	2,625	2,318	2,008	1,492	2,250	1,521	858	1,696	1,308	294	-243	-833	-876	-920	-967	-1,017	-1,069	-1,124	-1,181	-1,242	-1,305	-1,372	-1,442	-1,516	-1,593	-1,675	-1,761	-1,851	0	0	0	

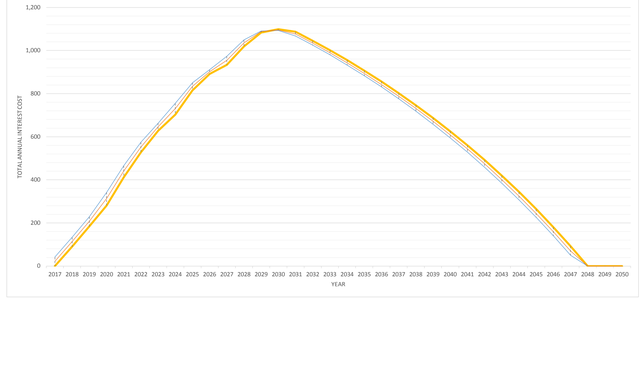
	Monthly Drawdown	146	145	144	190	154	119	69	125	56	(4)	60	22	(66)	(111)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	-	-	-	
	FV of Monthly Drawdown at 5%	1,791	1,783	1,766	2,337	1,896	1,467	849	1,531	686	(54)	739	265	(816)	(1,368)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	41	41	54	44	34	20	36	16	(1)	17	6	(19)	(32)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	-	-	-	
	Annual Interest Cost on Opening Balance	-	92	188	287	422	540	643	719	835	912	956	1,043	1,110	1,125	1,113	1,070	1,025	978	929	877	822	764	704	640	574	503	430	352	271	185	95	0	0	0	
	Total Annual Interest Cost	42	133	229	342	466	574	663	755	850	911	973	1,049	1,091	1,093	1,067	1,025	980	933	883	831	777	719	659	595	528	458	384	307	225	140	50	0	0	0	

Feb22 Option 2, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Debt, Beginning of Year	0	1,772	3,626	5,559	8,155	10,448	12,435	13,911	16,137	17,641	18,490	20,168	21,461	21,752	21,512	20,688	19,822	18,911	17,954	16,948	15,890	14,779	13,610	12,382	11,091	9,734	8,307	6,808	5,231	3,574	1,833	2	2	2	
	Interest Cost - Feb22 Option 2, 30-yr	*22*	*113*	*208*	*314*	*441*	*553*	*647*	*731*	*834*	*902*	*955*	*1,035*	*1,088*	*1,096*	*1,076*	*1,034*	*990*	*943*	*894*	*843*	*789*	*732*	*672*	*609*	*543*	*474*	*401*	*324*	*243*	*159*	*69*	*0*	*0*	*0*	19,733
	Additional GA Debt Drawdown	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,772	3,626	5,559	8,155	10,448	12,435	13,911	16,137	17,641	18,490	20,168	21,461	21,752	21,512	20,688	19,822	18,911	17,954	16,948	15,890	14,779	13,610	12,382	11,091	9,734	8,307	6,808	5,231	3,574	1,833	2	2	2	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,772	1,855	1,932	2,596	2,293	1,986	1,476	2,226	1,504	849	1,678	1,294	291	-240	-824	-866	-911	-957	-1,006	-1,058	-1,112	-1,168	-1,228	-1,291	-1,357	-1,427	-1,500	-1,576	-1,657	-1,742	-1,831	0	0	0	

	Bi-Annual Drawdown	875	871	862	1,141	926	717	415	748	335	(26)	361	129	(399)	(668)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,772	1,764	1,747	2,312	1,876	1,452	840	1,514	679	(53)	732	262	(807)	(1,353)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	-	-	-	
	Annual Interest Cost on New Drawdowns	22	22	22	29	24	18	11	19	9	(1)	9	3	(10)	(17)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	-	-	-	
	Annual Interest Cost on Opening Balance	-	91	186	284	417	535	636	712	826	903	946	1,032	1,098	1,113	1,101	1,058	1,014	968	919	867	813	756	696	633	567	498	425	348	268	183	94	0	0	0	
	Total Annual Interest Cost	22	113	208	314	441	553	647	731	834	902	955	1,035	1,088	1,096	1,076	1,034	990	943	894	843	789	732	672	609	543	474	401	324	243	159	69	0	0	0	

Feb22 Option 2, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Debt, Beginning of Year	0	1,794	3,672	5,629	8,258	10,580	12,592	14,086	16,340	17,864	18,724	20,422	21,732	22,027	21,784	20,949	20,072	19,150	18,181	17,162	16,091	14,965	13,782	12,538	11,231	9,857	8,412	6,894	5,297	3,619	1,856	2	2	2	
	Interest Cost - Feb22 Option 2, 30-yr	*45*	*136*	*232*	*346*	*470*	*578*	*665*	*759*	*853*	*913*	*976*	*1,051*	*1,091*	*1,093*	*1,066*	*1,023*	*978*	*931*	*882*	*829*	*775*	*717*	*657*	*593*	*526*	*456*	*382*	*304*	*222*	*137*	*46*	*0*	*0*	*0*	19,733
	Additional GA Debt Drawdown	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,794	3,672	5,629	8,258	10,580	12,592	14,086	16,340	17,864	18,724	20,422	21,732	22,027	21,784	20,949	20,072	19,150	18,181	17,162	16,091	14,965	13,782	12,538	11,231	9,857	8,412	6,894	5,297	3,619	1,856	2	2	2	
Fiscal Exposure - Average Debt Drawdown		1,794	1,878	1,957	2,629	2,322	2,011	1,495	2,254	1,523	860	1,699	1,310	294	-243	-834	-877	-922	-969	-1,019	-1,071	-1,126	-1,183	-1,244	-1,307	-1,374	-1,445	-1,519	-1,596	-1,678	-1,764	-1,854	0	0	0	





Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb22_3_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	
			34	38	36	36	34	34	35	36	36	35	35	34	23	16	12	7	0	-14	-29	-36	-38	-42	-39	-36	-34	-32	-27	-18	-6	-1	0	3	3	3	142

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	1,606	1,040	19,498
Equal Monthly Debt Drawdown	1,644	1,040	

	Feb22 Option 3, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	20,326	2033	12,862
Equal Monthly Debt Drawdown	20,809		

Feb22 Option 3, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
																																					26
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
a	Debt, Beginning of Year	0	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	
c = a*5%	*Interest Cost - Feb22 Option 3, 30-yr - End of Year Debt Drawdown*	*0*	*74*	*156*	*234*	*312*	*385*	*459*	*534*	*612*	*690*	*766*	*842*	*915*	*964*	*999*	*1,024*	*1,039*	*1,040*	*1,011*	*949*	*872*	*791*	*701*	*617*	*540*	*468*	*400*	*341*	*303*	*290*	*288*	*288*	*293*	*299*	19,498
b	Additional GA Debt Drawdown, End of Year	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
	Feb22 Option 3, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,659	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
	Feb22 Option 3, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,862	12,862	13,167	13,181	12,611	11,405	9,906	8,320	6,550	4,918	3,412	2,000	667	-472	0	0	0	0	0	0	0	
	Feb22 Option 3, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,943	8,967	10,006	11,046	12,057	13,006	13,878	14,669	15,370	15,987	16,527	16,995	17,395	17,736	18,040	18,330	18,618				
	Feb22 Option 3, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,064	11,345	10,319	8,710	6,493	4,045	1,586	-974	-3,307	-5,431	-7,383	-9,184	-10,721	-11,807	-12,362	-12,696	-12,994				
Fiscal Exposure - End of Year Debt Drawdown		1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	

Feb22 Option 3, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	
1,040	*Interest Cost - Feb22 Option 3, 30-yr*	*34*	*112*	*192*	*270*	*346*	*420*	*494*	*570*	*649*	*726*	*802*	*876*	*938*	*980*	*1,010*	*1,031*	*1,040*	*1,026*	*982*	*913*	*835*	*749*	*662*	*581*	*507*	*436*	*373*	*324*	*297*	*289*	*288*	*290*	*296*	*302*	19,640
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	6,102	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	

	Monthly Drawdown	121	128	114	108	93	88	84	83	76	66	60	47	4	(24)	(43)	(60)	(85)	(134)	(185)	(204)	(205)	(213)	(194)	(177)	(163)	(150)	(128)	(90)	(46)	(28)	(25)	(15)	(15)	(15)	
	FV of Monthly Drawdown at 5%	1,482	1,568	1,398	1,326	1,137	1,086	1,028	1,024	929	815	742	580	54	(292)	(525)	(736)	(1,050)	(1,648)	(2,269)	(2,506)	(2,517)	(2,621)	(2,389)	(2,174)	(1,999)	(1,844)	(1,574)	(1,111)	(568)	(342)	(306)	(185)	(184)	(188)	
	Annual Interest Cost on New Drawdowns	34	36	32	31	26	25	24	24	22	19	17	13	1	(7)	(12)	(17)	(24)	(38)	(53)	(58)	(58)	(61)	(55)	(51)	(46)	(43)	(37)	(26)	(13)	(8)	(7)	(4)	(4)	(4)	
	Annual Interest Cost on Opening Balance	-	76	160	240	320	394	470	547	627	707	784	863	936	987	1,023	1,048	1,064	1,065	1,035	972	893	810	717	632	553	479	409	350	311	297	295	295	300	306	
	Total Annual Interest Cost	34	112	192	270	346	420	494	570	649	726	802	876	938	980	1,010	1,031	1,040	1,026	982	913	835	749	662	581	507	436	373	324	297	289	288	290	296	302	

Feb22 Option 3, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	
	Interest Cost - Feb22 Option 3, 30-yr	*19*	*95*	*176*	*254*	*331*	*404*	*478*	*554*	*632*	*709*	*785*	*861*	*927*	*973*	*1,005*	*1,028*	*1,039*	*1,033*	*995*	*930*	*852*	*769*	*680*	*598*	*522*	*451*	*385*	*332*	*300*	*290*	*288*	*289*	*295*	*301*	19,575
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	6,037	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,466	1,626	1,541	1,549	1,441	1,465	1,482	1,554	1,539	1,505	1,510	1,427	979	687	492	309	13	-577	-1,221	-1,518	-1,607	-1,792	-1,653	-1,525	-1,430	-1,350	-1,153	-753	-255	-44	-10	109	115	117	

	Bi-Annual Drawdown	724	766	683	648	555	530	502	500	454	398	363	283	26	(143)	(256)	(359)	(513)	(805)	(1,108)	(1,224)	(1,229)	(1,280)	(1,167)	(1,062)	(976)	(900)	(769)	(543)	(278)	(167)	(149)	(90)	(90)	(92)	
	FV of Bi-Annual Drawdown at 5%	1,466	1,551	1,383	1,312	1,125	1,075	1,017	1,013	919	806	735	573	53	(289)	(519)	(728)	(1,039)	(1,630)	(2,245)	(2,479)	(2,490)	(2,593)	(2,363)	(2,150)	(1,977)	(1,824)	(1,557)	(1,099)	(562)	(338)	(302)	(183)	(182)	(186)	
	Annual Interest Cost on New Drawdowns	19	20	17	17	14	14	13	13	12	10	9	7	1	(4)	(7)	(9)	(13)	(21)	(28)	(31)	(31)	(33)	(30)	(27)	(25)	(23)	(20)	(14)	(7)	(4)	(4)	(2)	(2)	(2)	
	Annual Interest Cost on Opening Balance	-	75	158	237	316	390	465	541	620	699	776	853	926	976	1,012	1,037	1,053	1,053	1,024	961	884	801	710	625	547	474	405	346	307	294	292	291	297	303	
	Total Annual Interest Cost	19	95	176	254	331	404	478	554	632	709	785	861	927	973	1,005	1,028	1,039	1,033	995	930	852	769	680	598	522	451	385	332	300	290	288	289	295	301	

Feb22 Option 3, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	
	Interest Cost - Feb22 Option 3, 30-yr	*37*	*115*	*195*	*273*	*349*	*422*	*497*	*573*	*651*	*728*	*804*	*879*	*939*	*981*	*1,011*	*1,031*	*1,040*	*1,025*	*980*	*911*	*832*	*746*	*659*	*579*	*504*	*434*	*371*	*322*	*297*	*289*	*288*	*290*	*296*	*302*	19,651
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	6,113	
Fiscal Exposure - Average Debt Drawdown		1,484	1,647	1,561	1,569	1,459	1,483	1,500	1,573	1,559	1,524	1,530	1,445	992	696	498	313	14	-585	-1,237	-1,537	-1,627	-1,814	-1,674	-1,545	-1,448	-1,367	-1,167	-763	-258	-44	-10	110	116	119	

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

IESO GA cost forecast + extrapolation

Scenario
Option 1a
Borrow $3.3B, Bills Lowered 20%, No Cap

Option 1b
Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B

	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168

Ratepayer GA Payment	8,753	8,535	8,311	7,650
Total Accumulated Debt ($ billion)	3,342	6,812	10,402	15,452

Ratepayer GA Payment	9,781	9,661	9,367	8,733
Accumulated debt in present year (including 5% interest,	2,314	4,606	7,027	10,822

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528
19,868	24,126	28,033	32,843	37,110	40,911	45,720	50,350
8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717
13,761	16,470	18,755	21,866	24,355	26,295	29,156	31,750

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**
10009	9721	8654	8820	8238	7756	5662	5389

8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319
54,201	57,751	60,200	62,719	64,559	65,780	64,732	63,114
9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913
33,472	34,796	34,919	35,008	34,309	32,878	31,035	29,098

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627

10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485
60,904	58,078	54,611	50,476	45,641	40,076	33,745	26,613
8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151
27,063	24,923	22,673	20,309	17,823	15,210	12,464	9,577

2045	2046	2047	2048

3,451	3,285	3,126	2,975	2,831	2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695

12,786	13,095	13410.34	2975.154	2831.461	2694.708
18,640	9,784	4.85E-06	0	0	0

6,976	6,809	6650.631	2975.154	2831.461	2694.708
6,543	3,353	5E-12	0	0	0

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

		5.00%	
Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb15_1a_30yr

Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,342	3,470
Interest Portion	0	171

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	835	3,374
Interest Portion	-	43

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $66 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb15_1b_30yr

Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,314	2,292
Interest Portion	0	118

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	579	2,309
Interest Portion	-	30

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $35 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

#REF!		
$ millions		
30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	362	1,487

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
	1	
	2	
	3	
	4 April	4
	5 May	5
	6 June	6
	7 July	7
	8 August	8
	9 September	9
	10 October	10
	11 November	11
	12 December	12
30-year term	**2016-17**	**2017-18**

Fiscal Exposure - Equal Monthly Debt Drawdown 579 - 835 2,309 - 3,374

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	835	3374
Debt-Finance Global Adjustment Costs, Option 1a	579	2309
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60

First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**835**	**3614**
Total, B	579	2549
Proposed Program Total:	579 - 835	2,549 - 3,614

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Option 1a
Option 2b

Assumes an inte

2019	2020	2021	2022
3,589	5,050	4,416	4,258
349	532	791	1,016

2018-19	2019-20	2020-21	2021-2022
3,500	3,955	4,892	4,377
215	394	597	847

2034.

depend on decision on accounting treatment.

2019	2020	2021	2022
2,421	3,795	2,938	2,709
236	360	554	704

2018-19	2019-20	2020-21	2021-2022
2,324	2,765	3,581	2,881
148	267	408	591

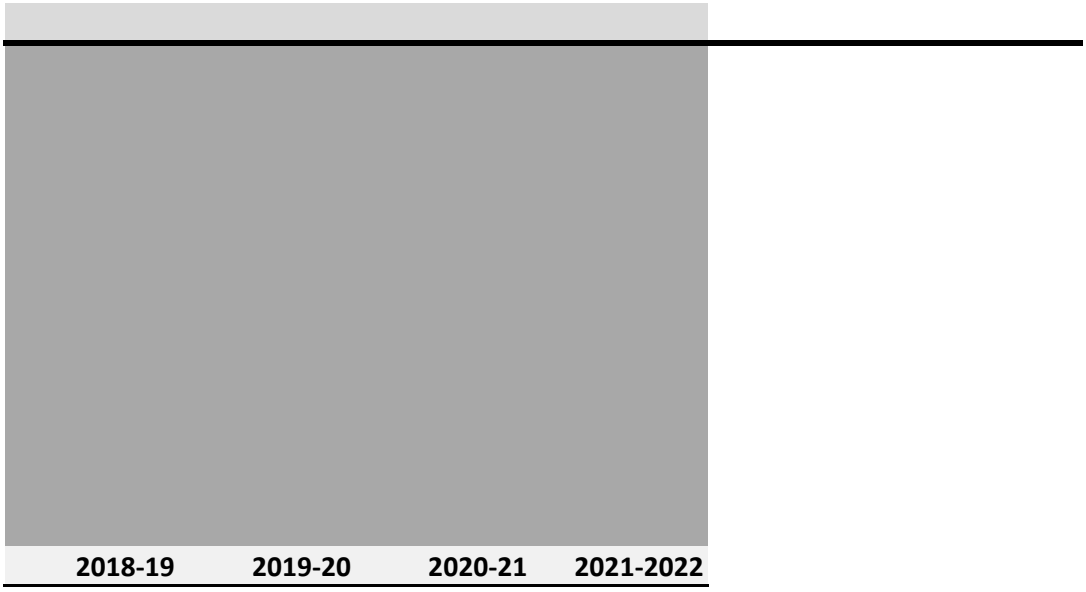
2032.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022

2,324 - 3,500 2,765 - 3,955 3,581 - 4,892 2,881 - 4,377

/1

2018-19[1]	2019-20[1]	2020-21[1]
3500	3955	4892
2324	2765	3581
225	279	323
60	60	60

18	18	18
3803	**4312**	**5293**
2627	3122	3982

2,627 - 3,803	3,122 - 4,312	3,982 - 5,293

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$38,864	$61,735	$65,781	occurs in Year 2034
$22,873	$32,368	$35,009	occurs in Year 2032

erest rate of 5.00% (compounded monthly).

Tab Name		Total Accumulated Interest Costs
Feb15_1a_30yr	$26,517	$34,278
Feb15_1b_30yr	$15,631	$20,378
	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$26,517 to $34,278
Option 2	$15,631 to $20,378
Option 3	$17,202 to $22,028

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

Feb15_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,342	3,470	3,589	5,050	4,416	4,258	3,907	4,810	4,268	3,801	4,809	4,630	3,851	3,550	2,449	2,519	1,840	1,221	-1,048	-1,618	-2,210	-2,825	-3,467	-4,135	-4,834	-5,565	-6,330	-7,132	-7,973	-8,856	-9,783	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,421	3,553	3,675	5,171	4,521	4,359	4,000	4,924	4,369	3,891	4,923	4,740	3,943	3,635	2,508	2,579	1,884	1,250	-1,073	-1,656	-2,262	-2,893	-3,549	-4,234	-4,949	-5,697	-6,481	-7,302	-8,163	-9,067	-10,016	0	0	0	
			79	83	85	120	105	101	93	114	102	90	114	110	92	84	58	60	44	29	-25	-38	-53	-67	-82	-98	-115	-132	-151	-170	-190	-211	-233	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	5,050	3,365	61,735
Equal Monthly Debt Drawdown	5,171	3,341	

	Feb15 Option 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	65,781	2034	38,864
Equal Monthly Debt Drawdown	67,346		

Feb15 Option 1a, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
a	Debt, Beginning of Year	0	3,342	6,812	10,402	15,452	19,868	24,126	28,034	32,843	37,111	40,911	45,720	50,350	54,201	57,752	60,201	62,720	64,560	65,781	64,733	63,115	60,906	58,080	54,614	50,478	45,644	40,079	33,749	26,617	18,644	9,788	5	5	5	
c = a*5%	*Interest Cost - Feb15 Option 1a, 30-yr - End of Year Debt Drawdown*	*0*	*171*	*349*	*532*	*791*	*1,016*	*1,234*	*1,434*	*1,680*	*1,899*	*2,093*	*2,339*	*2,576*	*2,773*	*2,955*	*3,080*	*3,209*	*3,303*	*3,365*	*3,312*	*3,229*	*3,116*	*2,972*	*2,794*	*2,583*	*2,335*	*2,051*	*1,727*	*1,362*	*954*	*501*	*0*	*0*	*0*	61,735
b	Additional GA Debt Drawdown, End of Year	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	3,342	6,812	10,402	15,452	19,868	24,126	28,034	32,843	37,111	40,911	45,720	50,350	54,201	57,752	60,201	62,720	64,560	65,781	64,733	63,115	60,906	58,080	54,614	50,478	45,644	40,079	33,749	26,617	18,644	9,788	5	5	5	5	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	171	520	1,052	1,842	2,859	4,093	5,527	7,208	9,106	11,199	13,539	16,115	19,665	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	26,617	18,644	9,788	5	5	5	5	
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal	3,342	6,641	9,882	14,400	18,026	21,267	23,941	27,316	29,903	31,805	34,521	36,812	38,087	38,087	38,087	40,606	42,446	43,667	42,619	41,001	38,792	35,966	32,500	28,364	23,530	17,965	11,635	0	0	0	0	0	0	0	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	171	520	1,052	1,842	2,859	4,093	5,527	7,208	9,106	11,199	13,539	16,115	18,888	21,842	24,922	28,131	31,434	34,800	38,112	41,341	44,457	47,428	50,222	52,805	55,140	57,191	58,917	60,279	61,233	61,734				
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal	3,342	6,641	9,882	14,400	18,026	21,267	23,941	27,316	29,903	31,805	34,521	36,812	38,087	38,864	38,359	37,798	36,429	34,347	29,934	25,004	19,565	13,624	7,186	256	-7,161	-15,061	-23,442	-32,300	-41,635	-51,445	-61,729				
Fiscal Exposure - End of Year Debt Drawdown		3,342	3,470	3,589	5,050	4,416	4,258	3,907	4,810	4,268	3,801	4,809	4,630	3,851	3,550	2,449	2,519	1,840	1,221	-1,048	-1,618	-2,210	-2,825	-3,467	-4,135	-4,834	-5,565	-6,330	-7,132	-7,973	-8,856	-9,783	0	0	0	

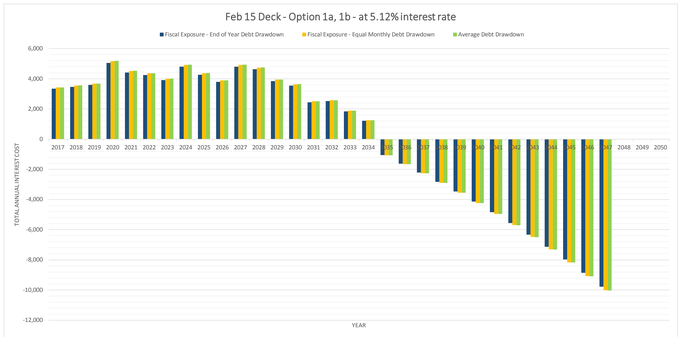
Feb15 Option 1a, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,421	6,974	10,649	15,820	20,341	24,700	28,700	33,624	37,993	41,885	46,808	51,548	55,491	59,125	61,633	64,212	66,096	67,346	66,273	64,617	62,354	59,462	55,913	51,679	46,730	41,033	34,552	27,250	19,087	10,021	5	5	5	
3,341	*Interest Cost - Feb15 Option 1a, 30-yr*	*79*	*254*	*434*	*652*	*896*	*1,118*	*1,327*	*1,549*	*1,782*	*1,989*	*2,207*	*2,449*	*2,668*	*2,857*	*3,013*	*3,140*	*3,253*	*3,332*	*3,341*	*3,273*	*3,177*	*3,049*	*2,889*	*2,696*	*2,468*	*2,203*	*1,900*	*1,557*	*1,172*	*743*	*268*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,421	6,974	10,649	15,820	20,341	24,700	28,700	33,624	37,993	41,885	46,808	51,548	55,491	59,125	61,633	64,212	66,096	67,346	66,273	64,617	62,354	59,462	55,913	51,679	46,730	41,033	34,552	27,250	19,087	10,021	5	5	5	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,421	3,553	3,675	5,171	4,521	4,359	4,000	4,924	4,369	3,891	4,923	4,740	3,943	3,635	2,508	2,579	1,884	1,250	-1,073	-1,656	-2,262	-2,893	-3,549	-4,234	-4,949	-5,697	-6,481	-7,302	-8,163	-9,067	-10,016	0	0	0	

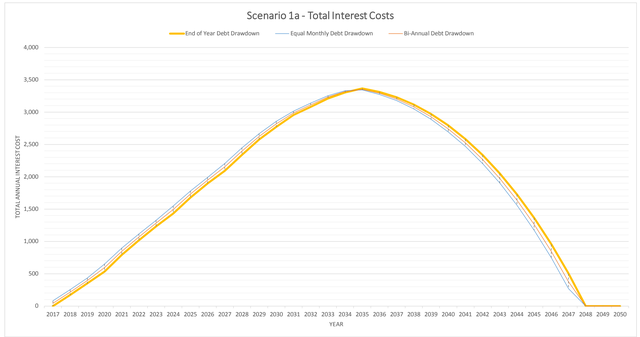
	Monthly Drawdown	278	275	270	377	302	270	223	281	216	159	226	191	106	65	(42)	(47)	(114)	(174)	(368)	(411)	(453)	(495)	(537)	(577)	(618)	(658)	(698)	(738)	(778)	(817)	(857)	-	-	-	
	FV of Monthly Drawdown at 5%	3,421	3,378	3,318	4,626	3,712	3,319	2,737	3,456	2,649	1,947	2,780	2,346	1,305	796	(517)	(574)	(1,401)	(2,132)	(4,518)	(5,047)	(5,568)	(6,083)	(6,591)	(7,094)	(7,593)	(8,088)	(8,580)	(9,069)	(9,557)	(10,043)	(10,529)	-	-	-	
	Annual Interest Cost on New Drawdowns	79	78	77	107	86	77	64	80	62	45	65	54	30	18	(12)	(13)	(33)	(50)	(105)	(117)	(129)	(141)	(153)	(165)	(176)	(188)	(199)	(211)	(222)	(233)	(245)	-	-	-	
	Annual Interest Cost on Opening Balance	-	175	357	545	809	1,041	1,264	1,468	1,720	1,944	2,143	2,395	2,637	2,839	3,025	3,153	3,285	3,382	3,446	3,391	3,306	3,190	3,042	2,861	2,644	2,391	2,099	1,768	1,394	977	513	0	0	0	
	Total Annual Interest Cost	79	254	434	652	896	1,118	1,327	1,549	1,782	1,989	2,207	2,449	2,668	2,857	3,013	3,140	3,253	3,332	3,341	3,273	3,177	3,049	2,889	2,696	2,468	2,203	1,900	1,557	1,172	743	268	0	0	0	

Feb15 Option 1a, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,385	6,899	10,535	15,650	20,122	24,435	28,392	33,263	37,585	41,435	46,305	50,994	54,895	58,490	60,971	63,523	65,386	66,623	65,561	63,923	61,685	58,823	55,312	51,124	46,228	40,592	34,181	26,958	18,882	9,913	5	5	5	
	Interest Cost - Feb15 Option 1a, 30-yr	*43*	*215*	*394*	*597*	*847*	*1,071*	*1,284*	*1,496*	*1,735*	*1,947*	*2,155*	*2,398*	*2,625*	*2,818*	*2,986*	*3,112*	*3,232*	*3,319*	*3,352*	*3,291*	*3,201*	*3,080*	*2,927*	*2,741*	*2,521*	*2,264*	*1,970*	*1,635*	*1,260*	*841*	*376*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,385	6,899	10,535	15,650	20,122	24,435	28,392	33,263	37,585	41,435	46,305	50,994	54,895	58,490	60,971	63,523	65,386	66,623	65,561	63,923	61,685	58,823	55,312	51,124	46,228	40,592	34,181	26,958	18,882	9,913	5	5	5	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,385	3,515	3,635	5,115	4,473	4,313	3,957	4,871	4,322	3,849	4,870	4,689	3,900	3,596	2,481	2,551	1,864	1,237	-1,061	-1,639	-2,238	-2,861	-3,511	-4,188	-4,896	-5,636	-6,411	-7,223	-8,075	-8,969	-9,909	0	0	0	

	Bi-Annual Drawdown	1,671	1,650	1,620	2,259	1,813	1,621	1,337	1,688	1,294	951	1,358	1,146	638	389	(253)	(280)	(684)	(1,041)	(2,207)	(2,465)	(2,719)	(2,971)	(3,219)	(3,465)	(3,708)	(3,950)	(4,190)	(4,429)	(4,667)	(4,905)	(5,142)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,385	3,341	3,282	4,576	3,672	3,283	2,707	3,418	2,620	1,926	2,750	2,320	1,291	787	(512)	(568)	(1,386)	(2,109)	(4,470)	(4,993)	(5,508)	(6,017)	(6,520)	(7,018)	(7,512)	(8,001)	(8,488)	(8,972)	(9,454)	(9,935)	(10,416)	-	-	-	
	Annual Interest Cost on New Drawdowns	43	42	41	58	46	41	34	43	33	24	35	29	16	10	(6)	(7)	(18)	(27)	(56)	(63)	(70)	(76)	(82)	(89)	(95)	(101)	(107)	(113)	(119)	(125)	(132)	-	-	-	
	Annual Interest Cost on Opening Balance	-	173	353	539	801	1,029	1,250	1,453	1,702	1,923	2,120	2,369	2,609	2,809	2,992	3,119	3,250	3,345	3,409	3,354	3,270	3,156	3,010	2,830	2,616	2,365	2,077	1,749	1,379	966	507	0	0	0	
	Total Annual Interest Cost	43	215	394	597	847	1,071	1,284	1,496	1,735	1,947	2,155	2,398	2,625	2,818	2,986	3,112	3,232	3,319	3,352	3,291	3,201	3,080	2,927	2,741	2,521	2,264	1,970	1,635	1,260	841	376	0	0	0	

Feb15 Option 1a, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,427	6,986	10,668	15,847	20,376	24,743	28,751	33,683	38,060	41,958	46,890	51,638	55,588	59,229	61,741	64,325	66,212	67,464	66,389	64,730	62,464	59,566	56,011	51,770	46,812	41,104	34,612	27,298	19,121	10,038	5	5	5	
	Interest Cost - Feb15 Option 1a, 30-yr	*85*	*260*	*440*	*661*	*904*	*1,125*	*1,334*	*1,557*	*1,789*	*1,996*	*2,216*	*2,458*	*2,675*	*2,864*	*3,017*	*3,144*	*3,256*	*3,334*	*3,339*	*3,270*	*3,173*	*3,044*	*2,883*	*2,688*	*2,459*	*2,193*	*1,889*	*1,544*	*1,158*	*727*	*251*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,427	6,986	10,668	15,847	20,376	24,743	28,751	33,683	38,060	41,958	46,890	51,638	55,588	59,229	61,741	64,325	66,212	67,464	66,389	64,730	62,464	59,566	56,011	51,770	46,812	41,104	34,612	27,298	19,121	10,038	5	5	5	6	
Fiscal Exposure - Average Debt Drawdown		3,427	3,559	3,681	5,180	4,529	4,367	4,007	4,933	4,377	3,898	4,932	4,749	3,950	3,641	2,512	2,584	1,887	1,252	-1,075	-1,659	-2,266	-2,898	-3,555	-4,241	-4,958	-5,707	-6,492	-7,314	-8,177	-9,083	-10,034	0	0	0	





Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

Feb15_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,314	2,292	2,421	3,795	2,938	2,709	2,285	3,111	2,489	1,940	2,862	2,594	1,722	1,324	123	89	-699	-1,431	-1,842	-1,937	-2,036	-2,140	-2,249	-2,364	-2,485	-2,613	-2,746	-2,887	-3,034	-3,190	-3,353	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,369	2,346	2,479	3,886	3,008	2,774	2,340	3,185	2,548	1,986	2,930	2,656	1,763	1,356	126	91	-716	-1,465	-1,886	-1,983	-2,084	-2,191	-2,303	-2,421	-2,544	-2,675	-2,812	-2,955	-3,107	-3,266	-3,433	0	0	0
			55	55	58	90	70	64	54	74	59	46	68	62	41	32	3	2	-17	-34	-44	-46	-48	-51	-54	-56	-59	-62	-65	-69	-72	-76	-80	0	0	0

0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,795	1,791	32,368
Equal Monthly Debt Drawdown	3,886	1,789	

	Feb15 Option 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	35,009	2032	22,873
Equal Monthly Debt Drawdown	35,841		

Feb15 Option 1a, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
a — Debt, Beginning of Year	0	2,314	4,606	7,027	10,822	13,761	16,470	18,755	21,866	24,355	26,295	29,157	31,751	33,472	34,797	34,920	35,009	34,310	32,879	31,036	29,100	27,064	24,924	22,675	20,310	17,825	15,212	12,466	9,579	6,545	3,355	3	3	3	
c = a*5% — *Interest Cost - Feb15 Option 1a, 30-yr - End of Year Debt Drawdown*	*0*	*118*	*236*	*360*	*554*	*704*	*843*	*960*	*1,119*	*1,246*	*1,345*	*1,492*	*1,624*	*1,713*	*1,780*	*1,787*	*1,791*	*1,755*	*1,682*	*1,588*	*1,489*	*1,385*	*1,275*	*1,160*	*1,039*	*912*	*778*	*638*	*490*	*335*	*172*	*0*	*0*	*0*	32,368
b — Additional GA Debt Drawdown, End of Year	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	2,314	4,606	7,027	10,822	13,761	16,470	18,755	21,866	24,355	26,295	29,157	31,751	33,472	34,797	34,920	35,009	34,310	32,879	31,036	29,100	27,064	24,924	22,675	20,310	17,825	15,212	12,466	9,579	6,545	3,355	3	3	3	3	
	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	
Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	118	354	714	1,267	1,971	2,814	3,773	4,892	6,138	7,484	8,975	10,600	11,924	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	9,579	6,545	3,355	3	3	3	3	
Feb15 Option 1a, 30-yr - Accumulated Debt Principal	2,314	4,488	6,673	10,109	12,493	14,499	15,941	18,092	19,463	20,157	21,673	22,775	22,873	22,873	22,873	22,961	22,262	20,831	18,989	17,052	15,017	12,877	10,627	8,263	5,778	3,165	419	0	0	0	0	0	0	0	
Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	118	354	714	1,267	1,971	2,814	3,773	4,892	6,138	7,484	8,975	10,600	12,312	14,092	15,879	17,670	19,425	21,108	22,695	24,184	25,569	26,844	28,004	29,043	29,955	30,733	31,371	31,861	32,196	32,368				
Feb15 Option 1a, 30-yr - Accumulated Debt Principal	2,314	4,488	6,673	10,109	12,493	14,499	15,941	18,092	19,463	20,157	21,673	22,775	22,873	22,485	20,828	19,130	16,639	13,453	9,929	6,404	2,880	-645	-4,169	-7,694	-11,218	-14,743	-18,267	-21,792	-25,316	-28,841	-32,365				
Fiscal Exposure - End of Year Debt Drawdown	2,314	2,292	2,421	3,795	2,938	2,709	2,285	3,111	2,489	1,940	2,862	2,594	1,722	1,324	123	89	-699	-1,431	-1,842	-1,937	-2,036	-2,140	-2,249	-2,364	-2,485	-2,613	-2,746	-2,887	-3,034	-3,190	-3,353	0	0	0	

Feb15 Option 1a, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Debt, Beginning of Year	0	2,369	4,716	7,194	11,080	14,088	16,862	19,201	22,386	24,934	26,920	29,850	32,506	34,269	35,625	35,751	35,841	35,126	33,661	31,774	29,792	27,708	25,517	23,214	20,793	18,249	15,574	12,763	9,807	6,701	3,435	3	3	3	
1,789 — *Interest Cost - Feb15 Option 1a, 30-yr*	*55*	*173*	*293*	*450*	*624*	*768*	*897*	*1,034*	*1,178*	*1,292*	*1,413*	*1,553*	*1,665*	*1,744*	*1,783*	*1,789*	*1,774*	*1,721*	*1,638*	*1,542*	*1,440*	*1,334*	*1,222*	*1,104*	*980*	*850*	*713*	*569*	*418*	*259*	*92*	*0*	*0*	*0*	32,368
Additional GA Debt Drawdown	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,369	4,716	7,194	11,080	14,088	16,862	19,201	22,386	24,934	26,920	29,850	32,506	34,269	35,625	35,751	35,841	35,126	33,661	31,774	29,792	27,708	25,517	23,214	20,793	18,249	15,574	12,763	9,807	6,701	3,435	3	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown	2,369	2,346	2,479	3,886	3,008	2,774	2,340	3,185	2,548	1,986	2,930	2,656	1,763	1,356	126	91	-716	-1,465	-1,886	-1,983	-2,084	-2,191	-2,303	-2,421	-2,544	-2,675	-2,812	-2,955	-3,107	-3,266	-3,433	0	0	0	

Monthly Drawdown	193	181	182	286	199	167	120	179	114	58	126	92	8	(32)	(138)	(141)	(208)	(266)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	-	-	-	
FV of Monthly Drawdown at 5%	2,369	2,225	2,237	3,518	2,441	2,053	1,477	2,202	1,403	710	1,553	1,128	100	(397)	(1,697)	(1,738)	(2,549)	(3,262)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	-	-	-	
Annual Interest Cost on New Drawdowns	55	52	52	82	57	48	34	51	33	17	36	26	2	(9)	(39)	(40)	(59)	(76)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	-	-	-	
Annual Interest Cost on Opening Balance	-	121	241	368	567	721	863	982	1,145	1,276	1,377	1,527	1,663	1,753	1,823	1,829	1,834	1,797	1,722	1,626	1,524	1,418	1,305	1,188	1,064	934	797	653	502	343	176	0	0	0	
Total Annual Interest Cost	55	173	293	450	624	768	897	1,034	1,178	1,292	1,413	1,553	1,665	1,744	1,783	1,789	1,774	1,721	1,638	1,542	1,440	1,334	1,222	1,104	980	850	713	569	418	259	92	0	0	0	

Feb15 Option 1a, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Debt, Beginning of Year	0	2,344	4,665	7,117	10,961	13,937	16,681	18,995	22,146	24,667	26,631	29,530	32,157	33,901	35,242	35,367	35,456	34,748	33,299	31,433	29,472	27,410	25,243	22,965	20,570	18,053	15,407	12,626	9,702	6,629	3,398	3	3	3	
Interest Cost - Feb15 Option 1a, 30-yr	*30*	*148*	*267*	*408*	*591*	*739*	*872*	*999*	*1,151*	*1,271*	*1,382*	*1,525*	*1,646*	*1,729*	*1,782*	*1,788*	*1,782*	*1,737*	*1,659*	*1,563*	*1,463*	*1,357*	*1,246*	*1,130*	*1,007*	*879*	*743*	*601*	*451*	*294*	*129*	*0*	*0*	*0*	32,368
Additional GA Debt Drawdown	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,344	4,665	7,117	10,961	13,937	16,681	18,995	22,146	24,667	26,631	29,530	32,157	33,901	35,242	35,367	35,456	34,748	33,299	31,433	29,472	27,410	25,243	22,965	20,570	18,053	15,407	12,626	9,702	6,629	3,398	3	3	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown	2,344	2,321	2,452	3,844	2,976	2,744	2,314	3,151	2,521	1,965	2,898	2,627	1,744	1,341	125	90	-708	-1,449	-1,866	-1,961	-2,062	-2,167	-2,278	-2,395	-2,517	-2,646	-2,781	-2,924	-3,073	-3,230	-3,396	0	0	0	

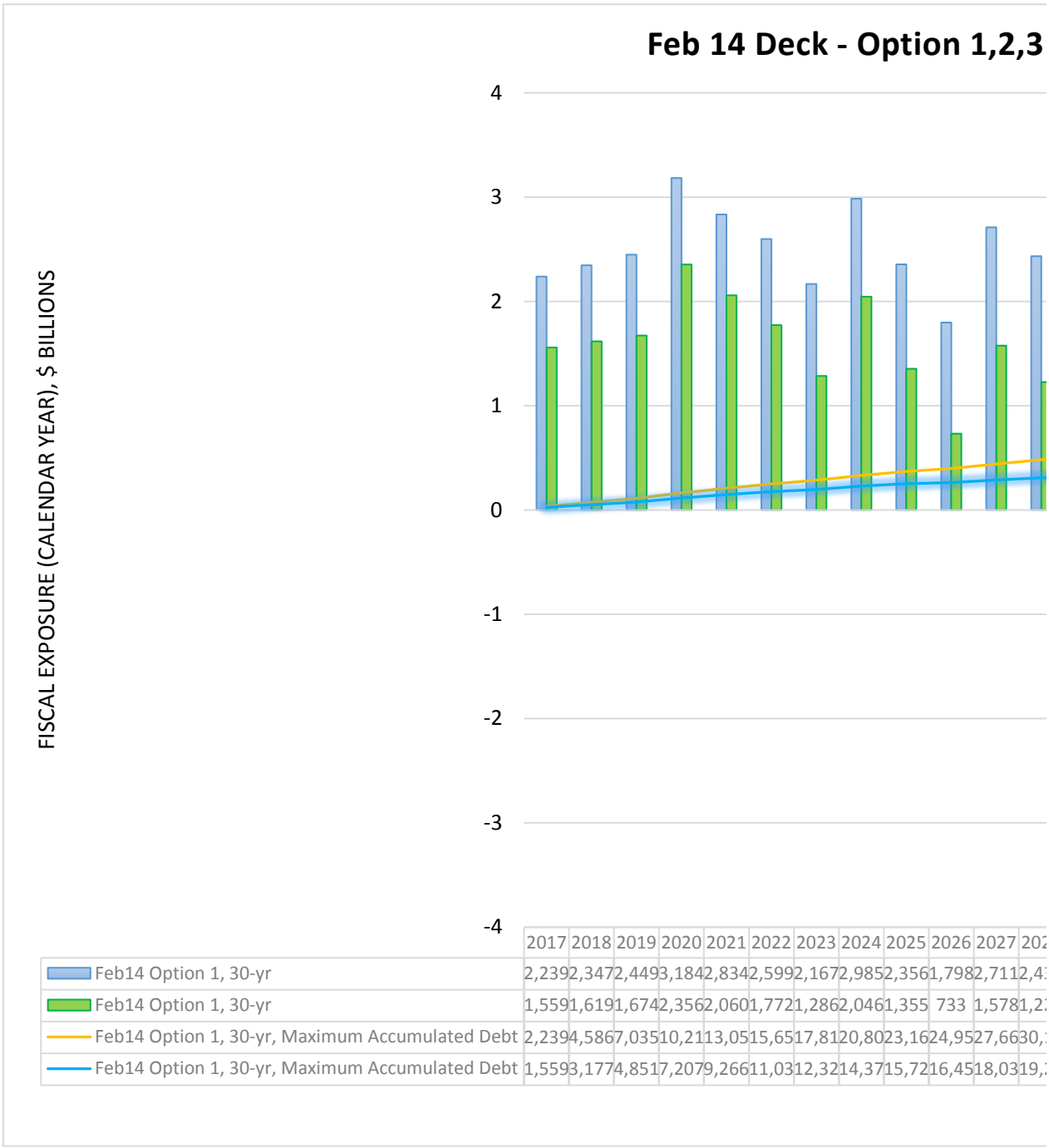
Bi-Annual Drawdown	1,157	1,087	1,093	1,718	1,192	1,003	721	1,076	685	347	758	551	49	(194)	(829)	(849)	(1,245)	(1,593)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	-	-	-	
FV of Bi-Annual Drawdown at 5%	2,344	2,201	2,213	3,480	2,415	2,031	1,461	2,179	1,388	703	1,536	1,116	99	(393)	(1,678)	(1,720)	(2,522)	(3,227)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	-	-	-	
Annual Interest Cost on New Drawdowns	30	28	28	44	30	26	18	28	18	9	19	14	1	(5)	(21)	(22)	(32)	(41)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	-	-	-	
Annual Interest Cost on Opening Balance	-	120	239	364	561	713	853	972	1,133	1,262	1,363	1,511	1,645	1,734	1,803	1,809	1,814	1,778	1,704	1,608	1,508	1,402	1,291	1,175	1,052	924	788	646	496	339	174	0	0	0	
Total Annual Interest Cost	30	148	267	408	591	739	872	999	1,151	1,271	1,382	1,525	1,646	1,729	1,782	1,788	1,782	1,737	1,659	1,563	1,463	1,357	1,246	1,130	1,007	879	743	601	451	294	129	0	0	0	

Feb15 Option 1a, 30-yr — Average Debt Drawdown

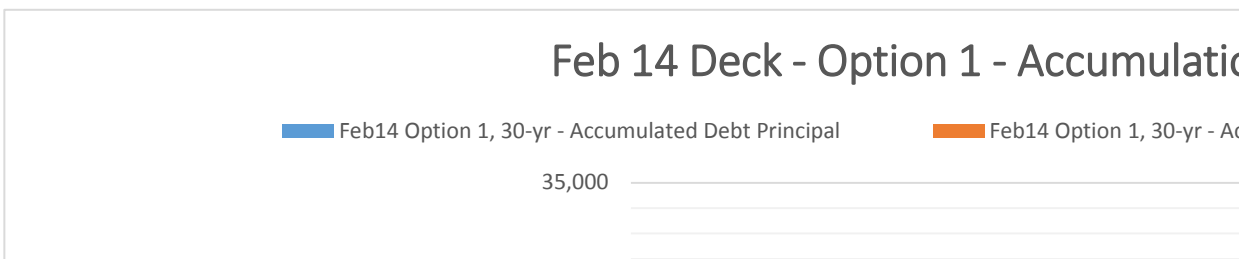
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Debt, Beginning of Year	0	2,373	4,724	7,207	11,099	14,113	16,891	19,235	22,425	24,978	26,968	29,902	32,563	34,329	35,687	35,813	35,904	35,187	33,720	31,830	29,844	27,756	25,562	23,255	20,830	18,281	15,601	12,785	9,824	6,712	3,441	3	3	3	
Interest Cost - Feb15 Option 1a, 30-yr	*59*	*177*	*298*	*457*	*629*	*773*	*901*	*1,039*	*1,182*	*1,296*	*1,419*	*1,558*	*1,668*	*1,746*	*1,783*	*1,789*	*1,773*	*1,719*	*1,635*	*1,538*	*1,437*	*1,330*	*1,218*	*1,100*	*976*	*845*	*708*	*564*	*412*	*253*	*86*	*0*	*0*	*0*	32,368
Additional GA Debt Drawdown	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,373	4,724	7,207	11,099	14,113	16,891	19,235	22,425	24,978	26,968	29,902	32,563	34,329	35,687	35,813	35,904	35,187	33,720	31,830	29,844	27,756	25,562	23,255	20,830	18,281	15,601	12,785	9,824	6,712	3,441	3	3	3	3	
Fiscal Exposure - Average Debt Drawdown	2,373	2,351	2,483	3,892	3,013	2,779	2,344	3,190	2,553	1,989	2,935	2,660	1,766	1,358	126	91	-717	-1,468	-1,889	-1,986	-2,088	-2,195	-2,307	-2,425	-2,549	-2,679	-2,816	-2,961	-3,112	-3,271	-3,439	0	0	0	

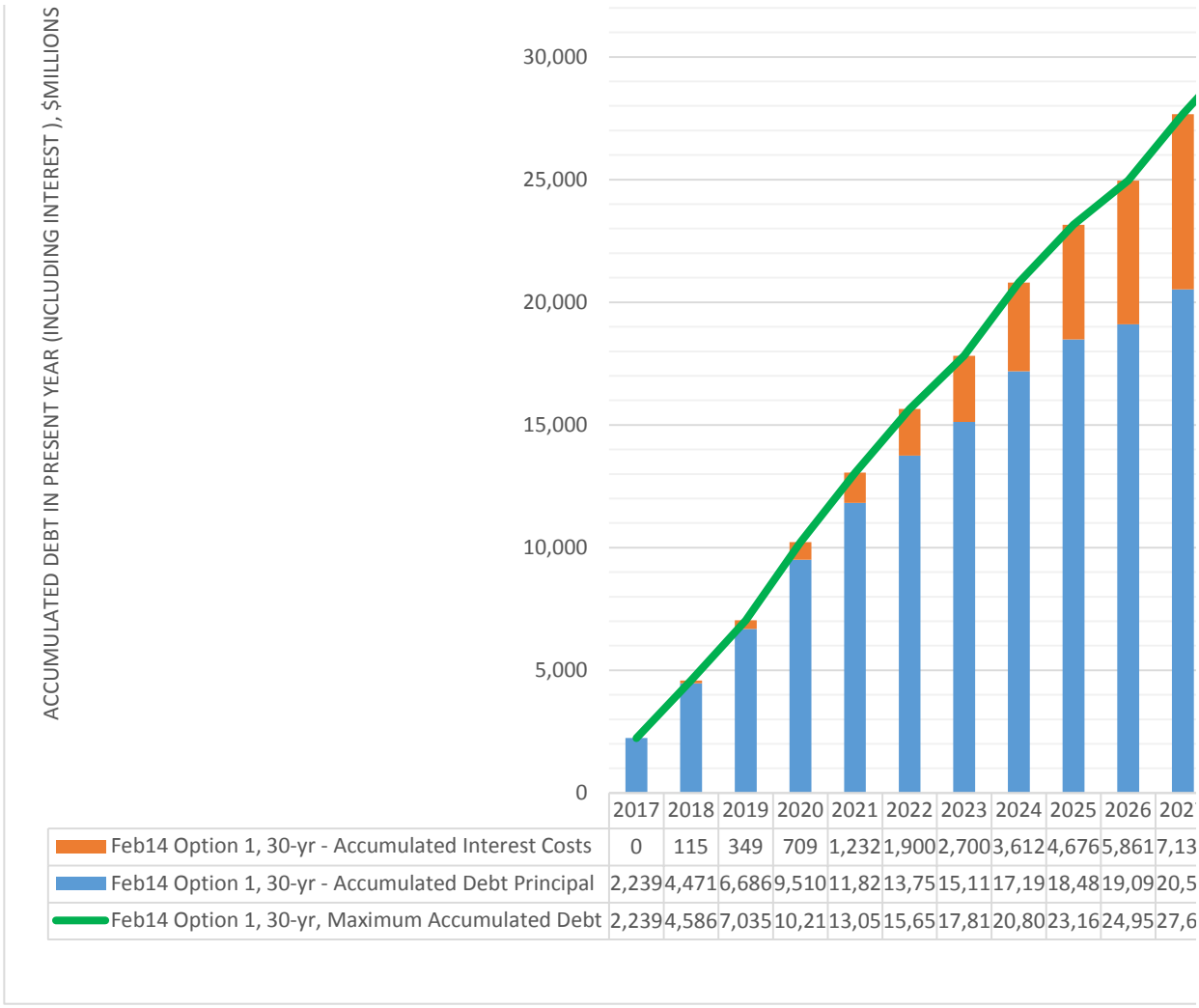
Feb 14 Deck

Feb 14 Deck - Option 1,2,3 - at 5.12% interest rate

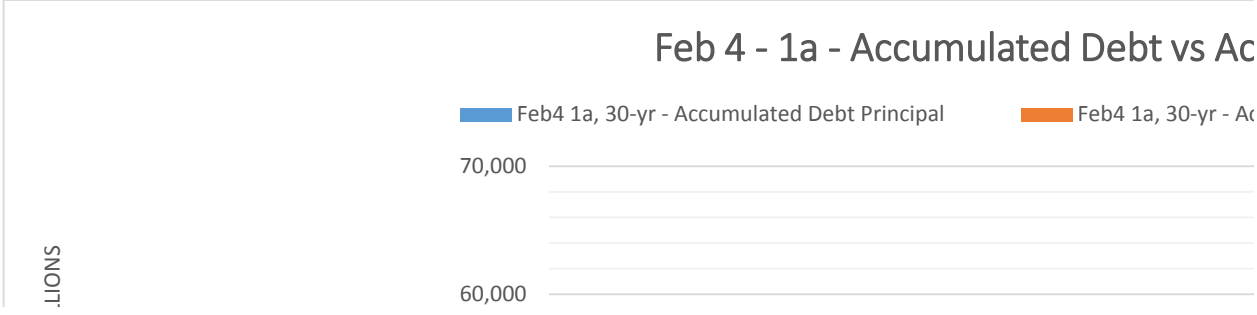


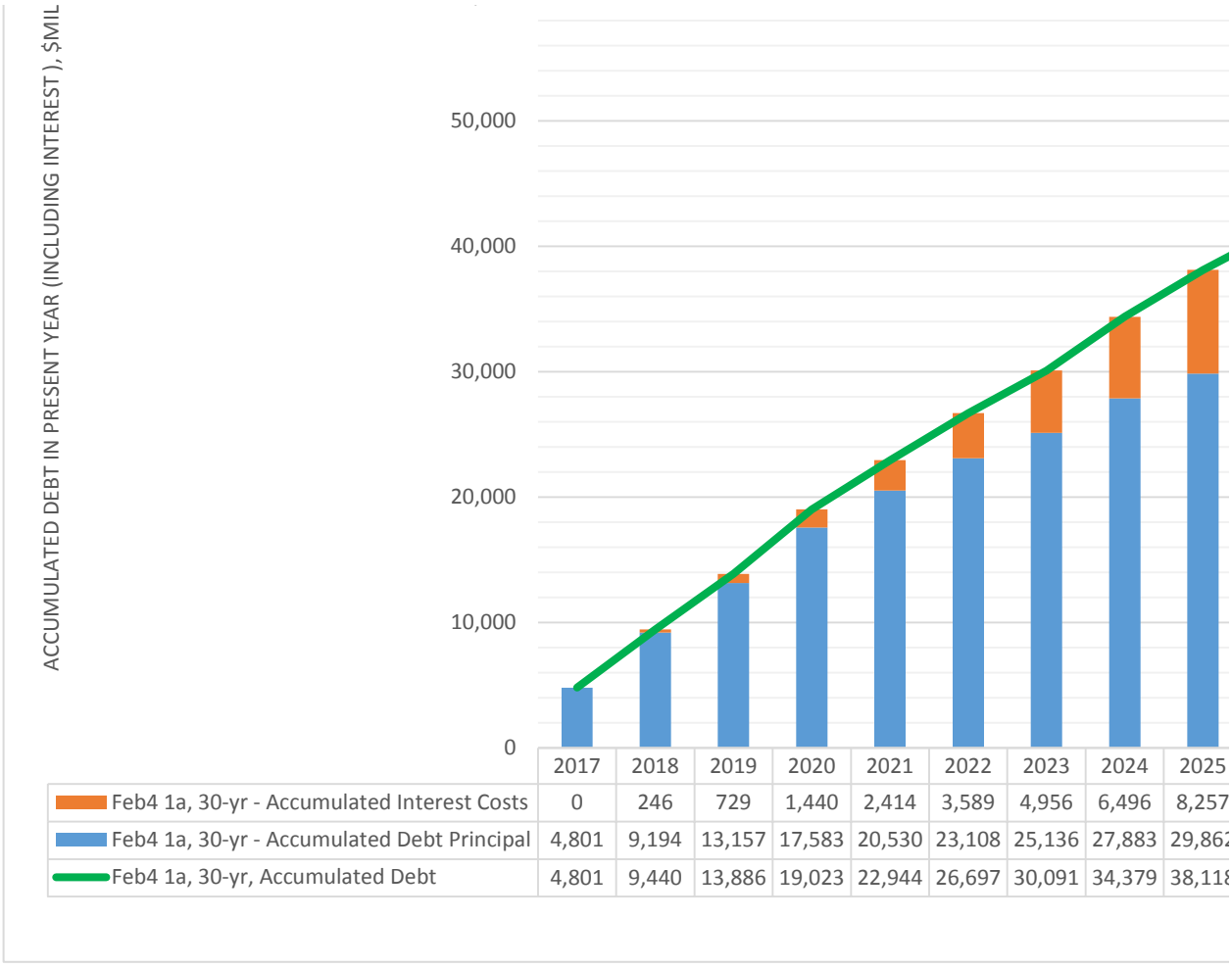
Feb 14 Deck - Option 1 - Accumulation of Debt (Principal and Interest)



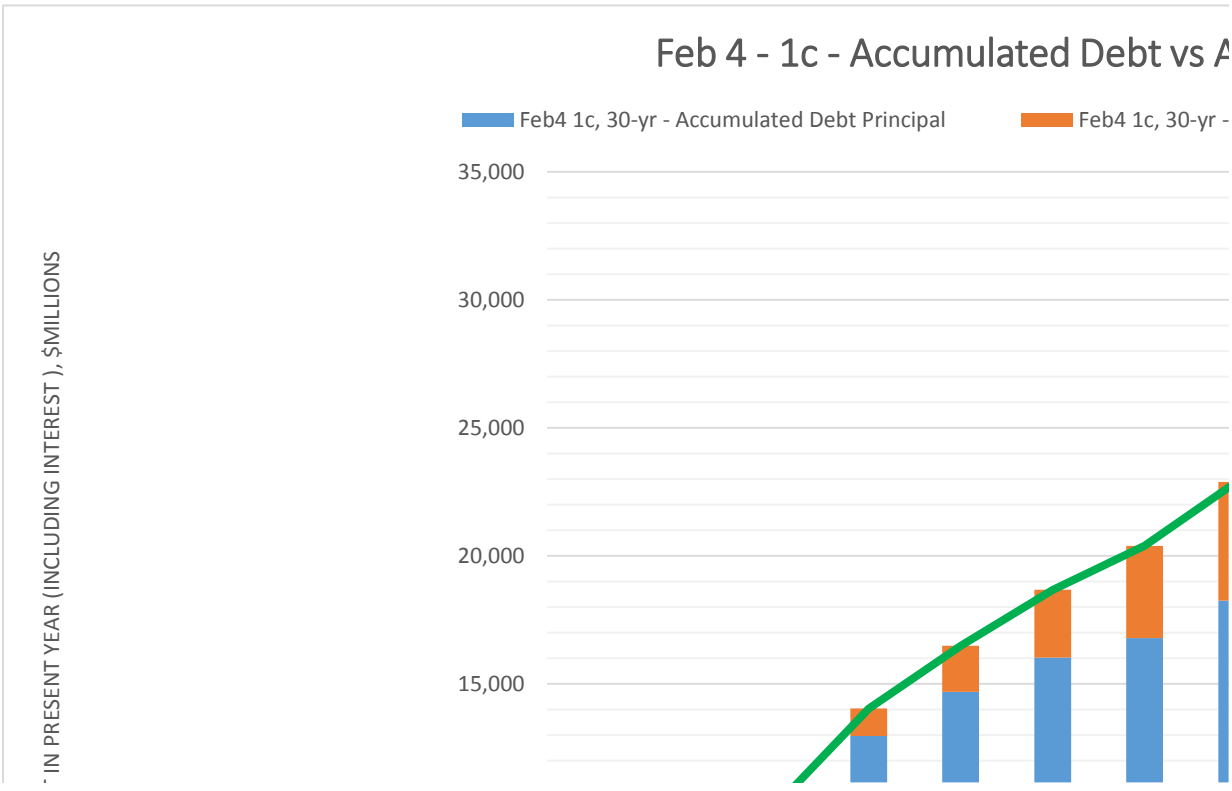


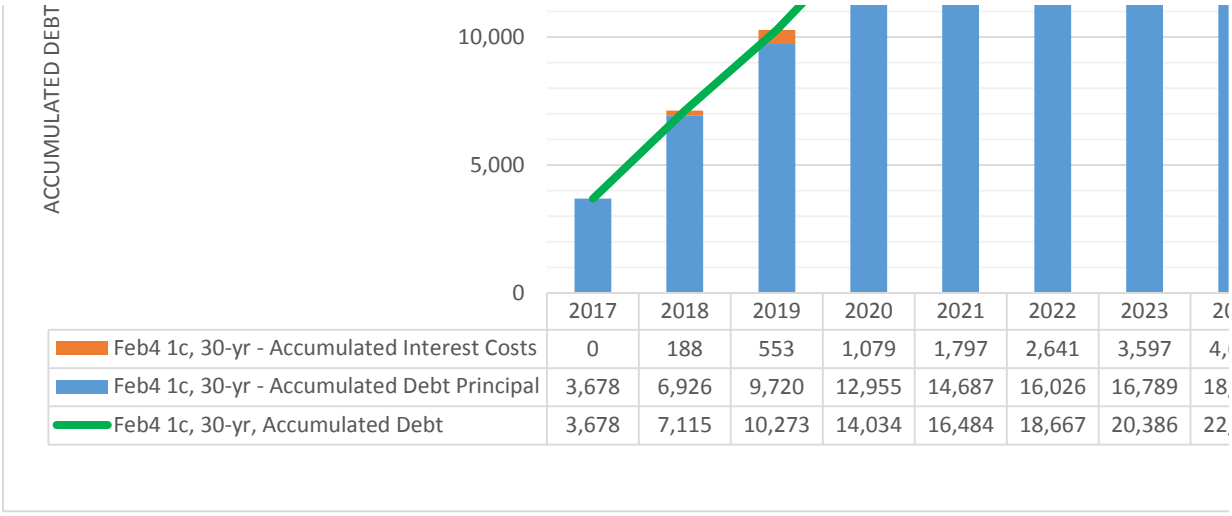
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	202
Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,13
Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,82	13,75	15,11	17,19	18,48	19,09	20,5
Feb14 Option 1, 30-yr, Maximum Accumulated Debt	2,239	4,586	7,035	10,21	13,05	15,65	17,81	20,80	23,16	24,95	27,6



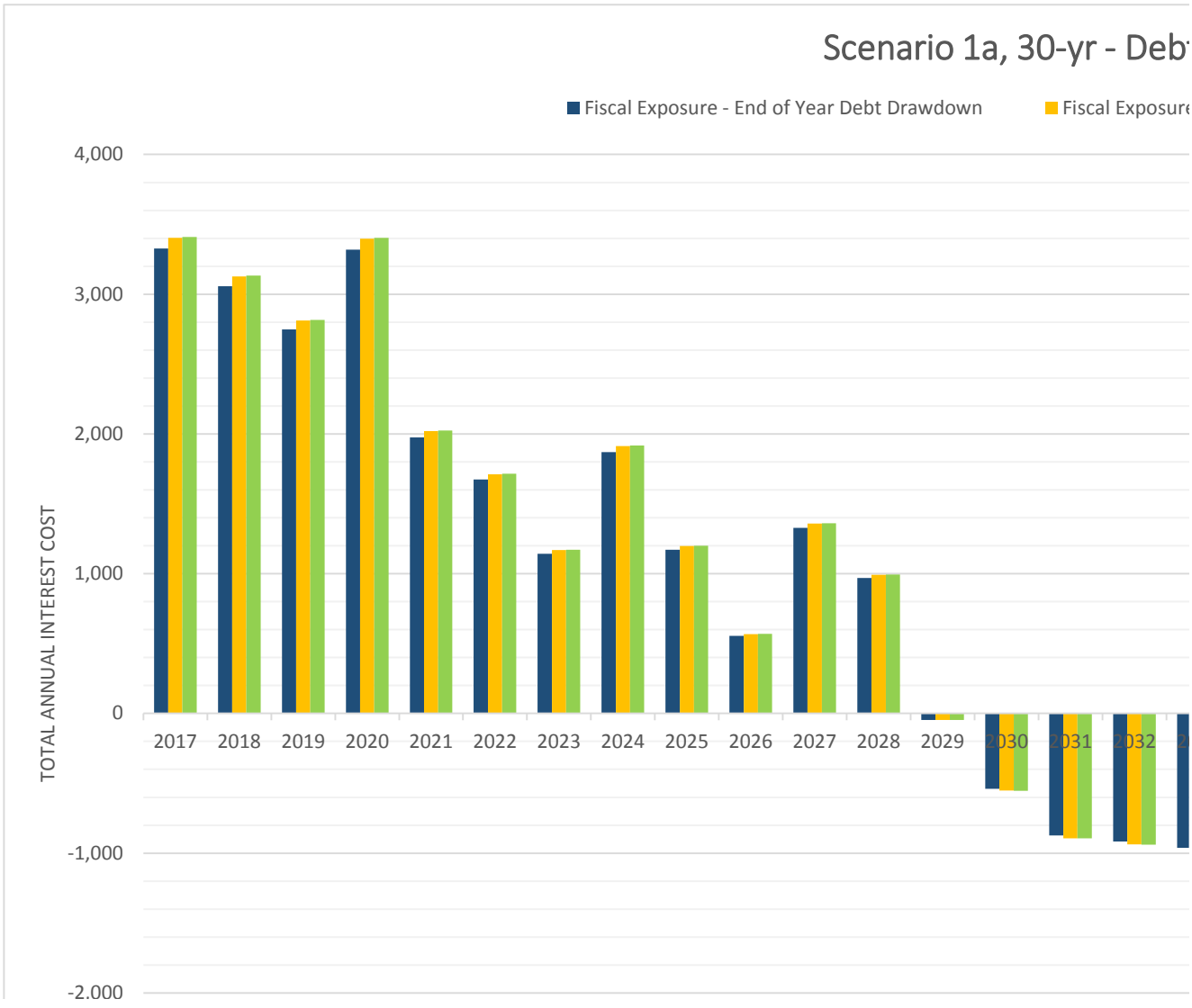


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



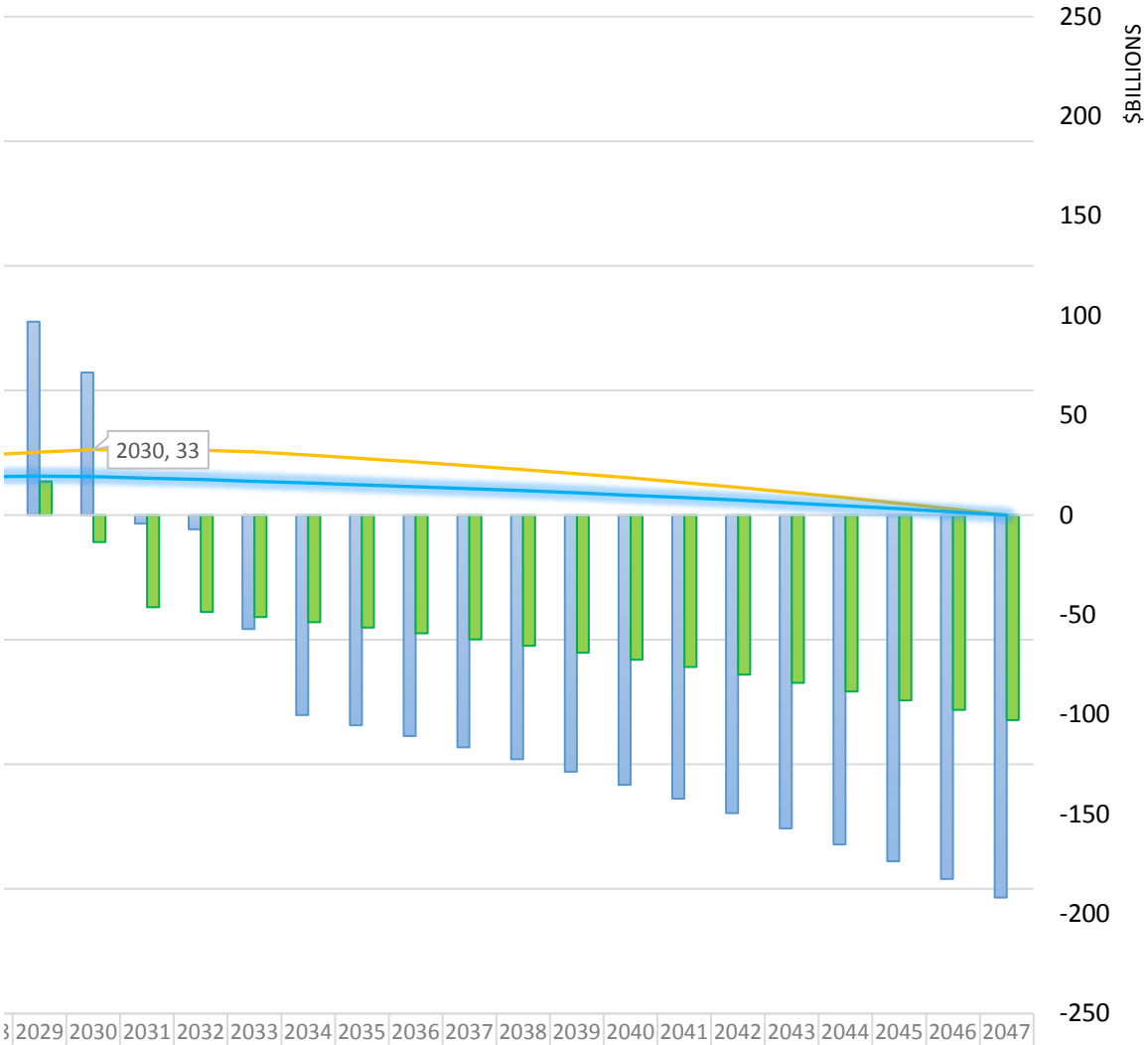


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

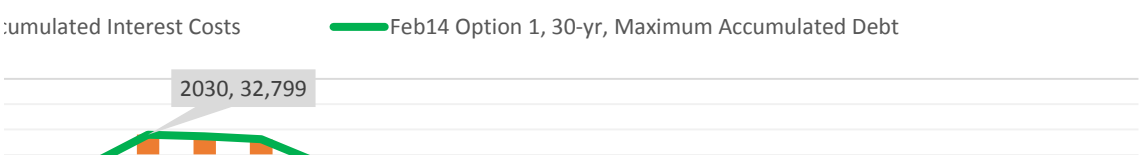
- at 5.12% interest rate

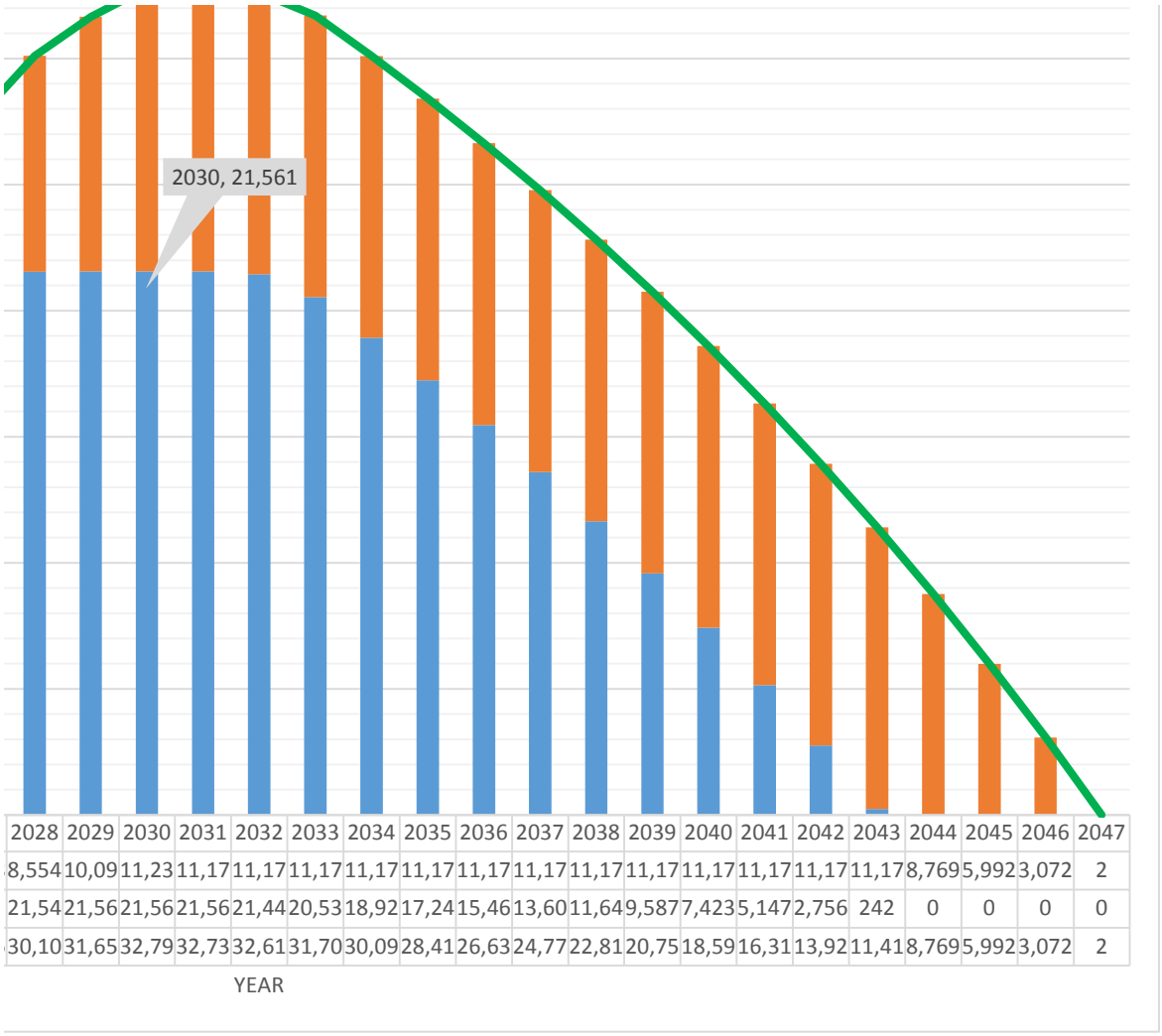


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
41,552	1,144	-68	-114	-914	-1,60	-1,68	-1,77	-1,86	-1,95	-2,05	-2,16	-2,27	-2,39	-2,51	-2,64	-2,77	-2,92	-3,06
3 271	-217	-740	-778	-818	-859	-903	-950	-998	-1,04	-1,10	-1,15	-1,21	-1,28	-1,34	-1,41	-1,48	-1,56	-1,64
031,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,769	5,992	3,072	2
519,53	19,31	18,57	17,79	16,98	16,12	15,21	14,26	13,27	12,22	11,11	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1

CALENDAR YEAR

n of Debt (Principal and Interest)

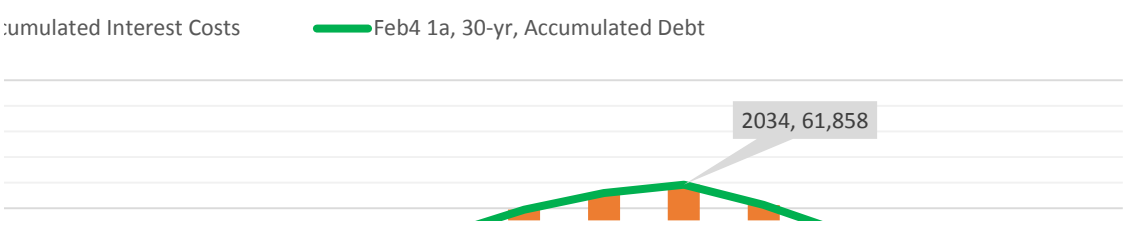




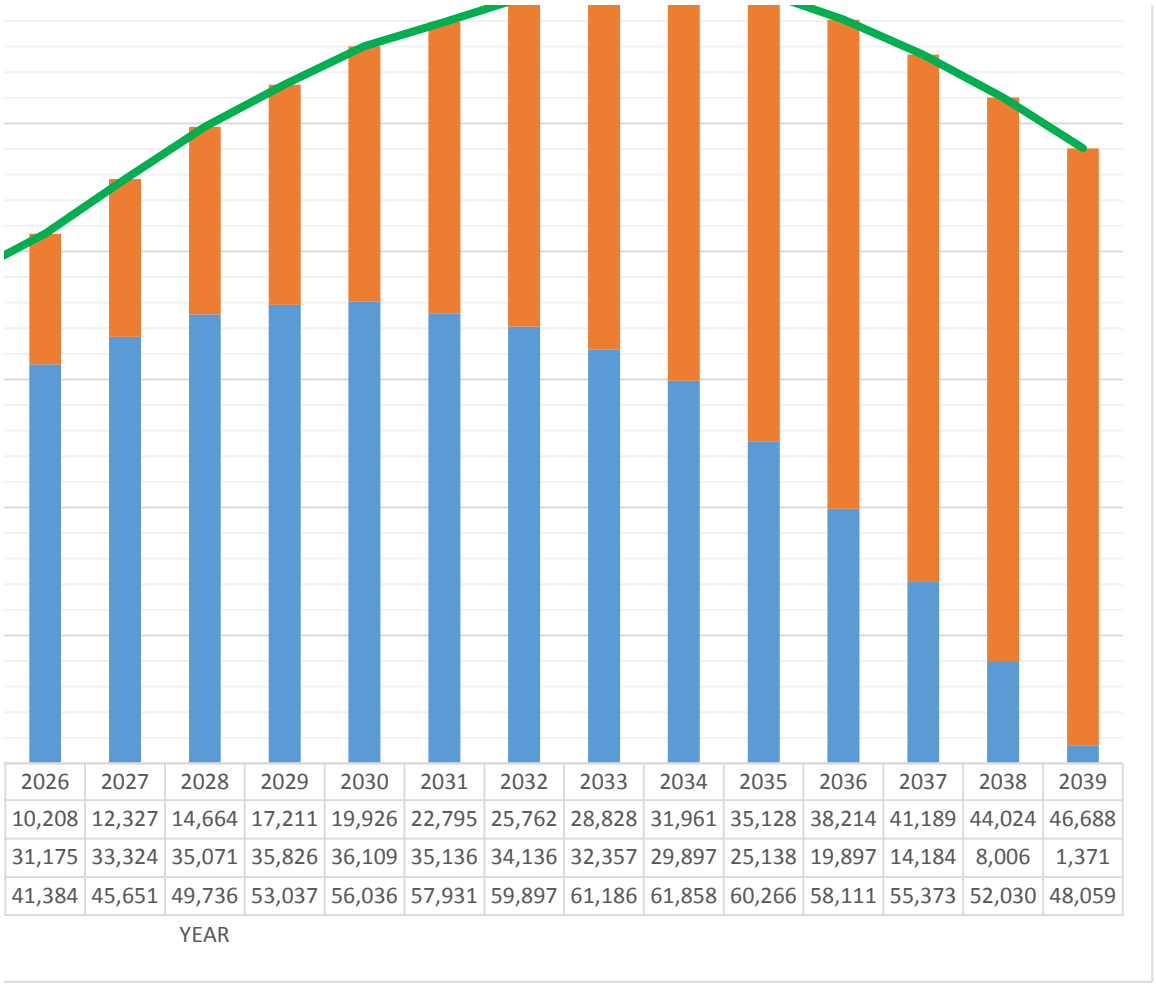
2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
8,554	10,09	11,23	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	8,769	5,992	3,072	2
21,54	21,56	21,56	21,56	21,44	20,53	18,92	17,24	15,46	13,60	11,64	9,587	7,423	5,147	2,756	242	0	0	0	0
30,10	31,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,769	5,992	3,072	2

YEAR

cumulated Total Interest Costs



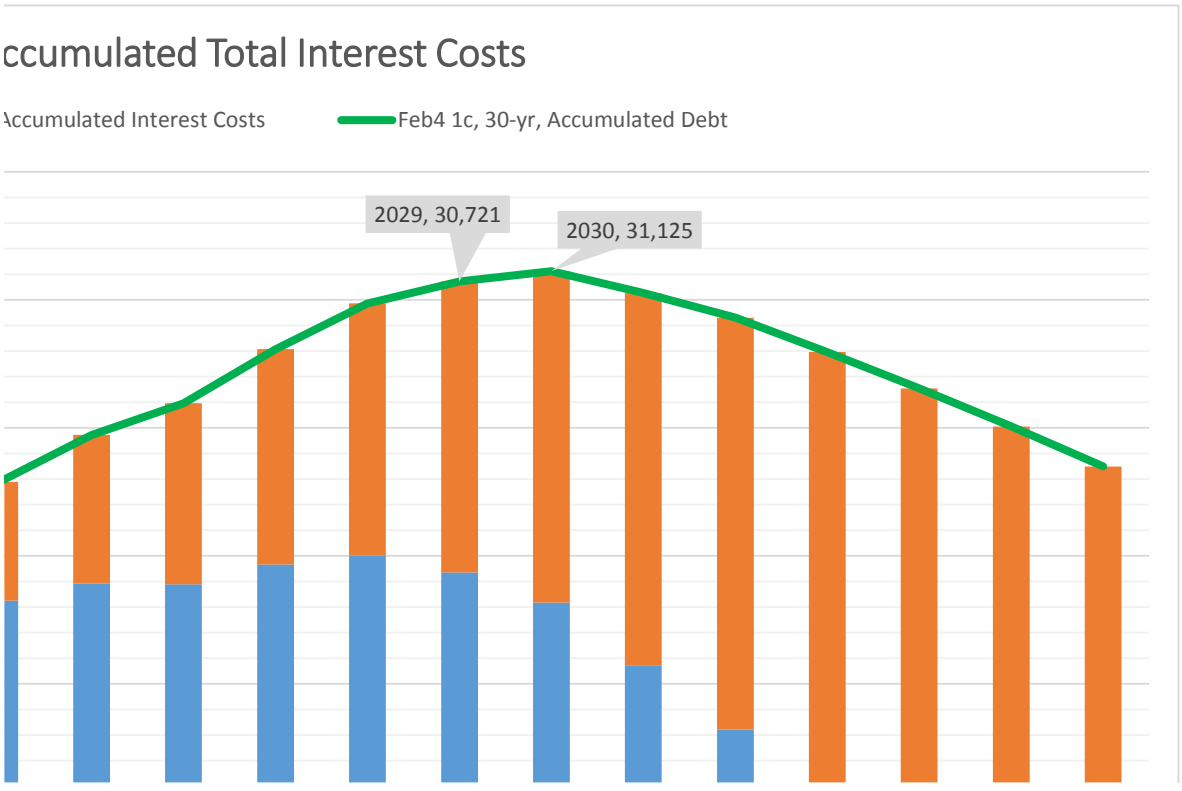
LIONS

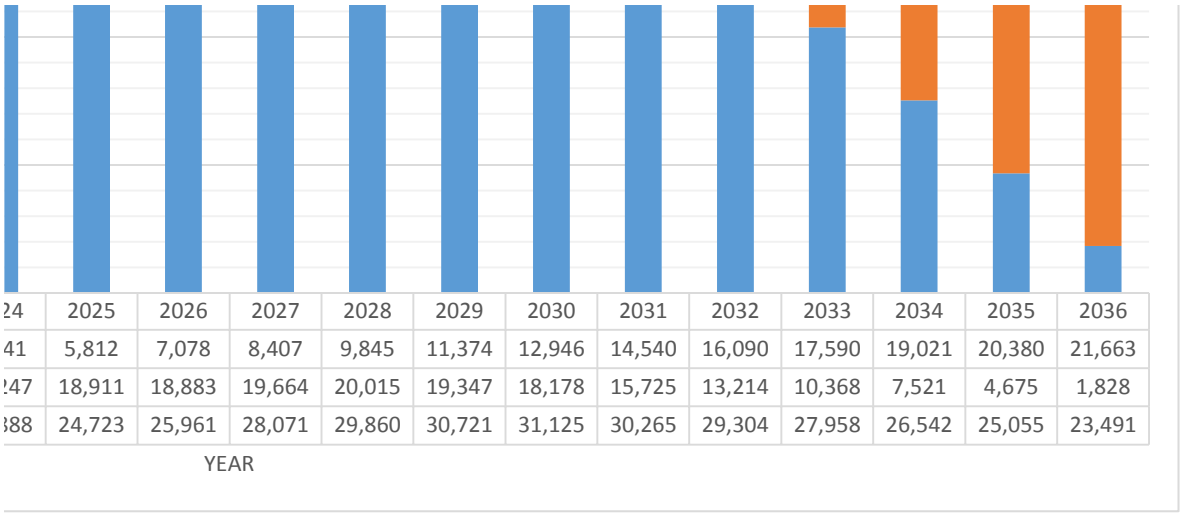


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

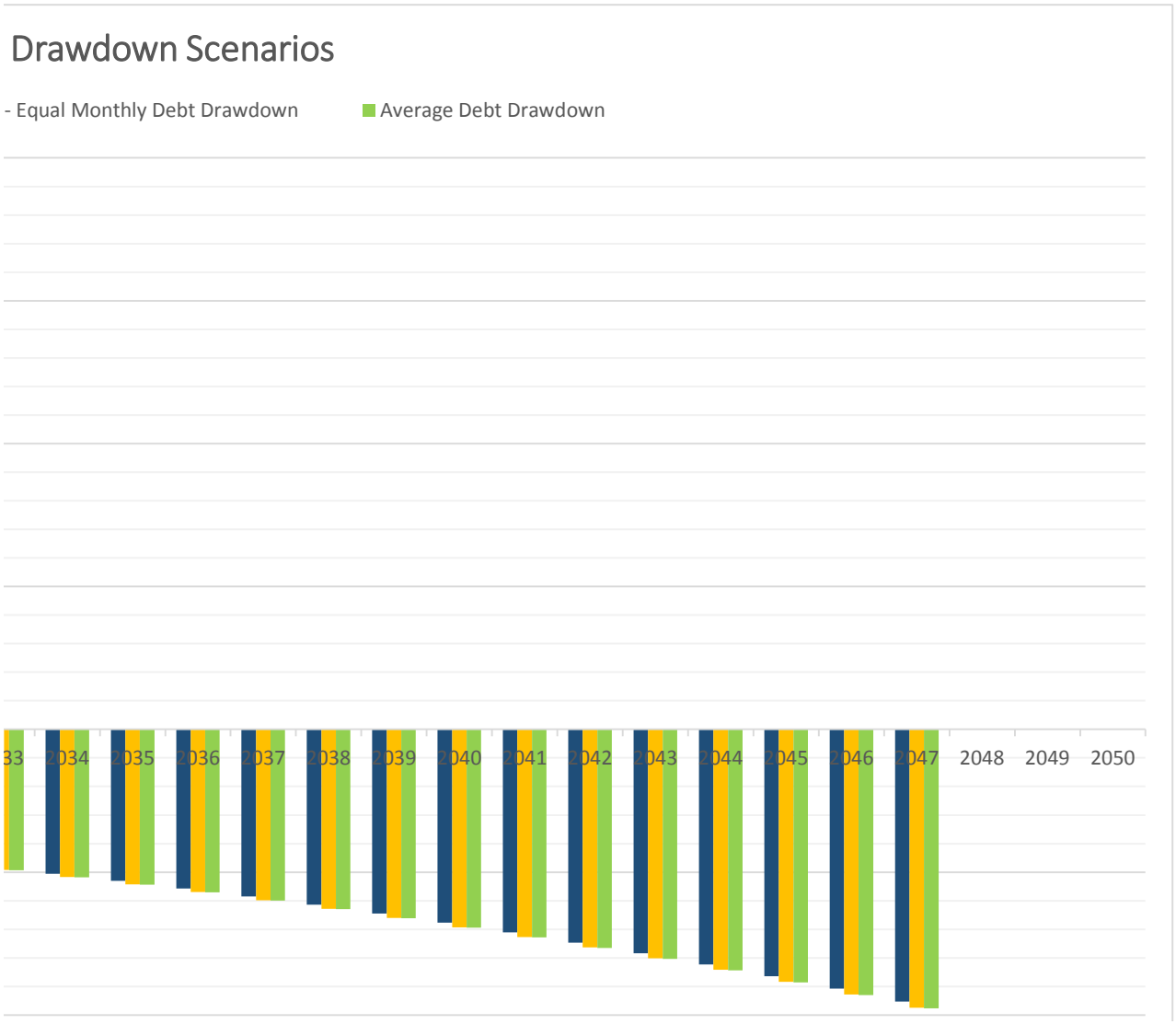
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





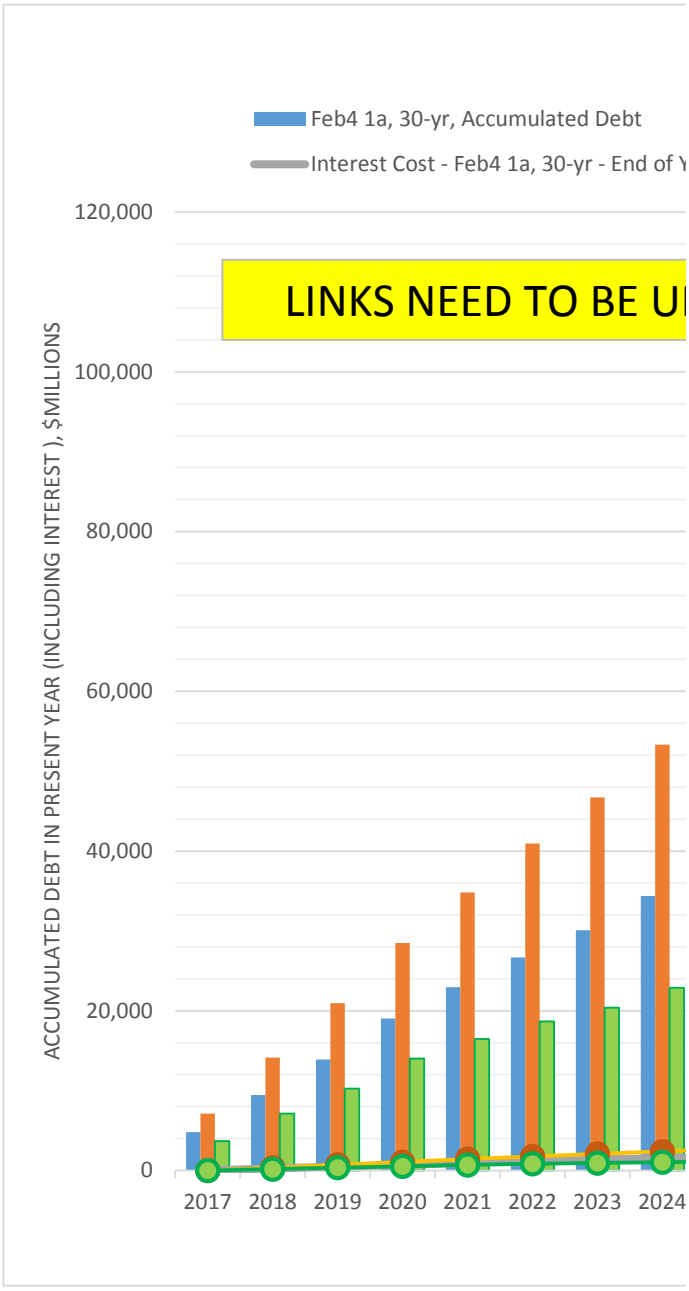
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

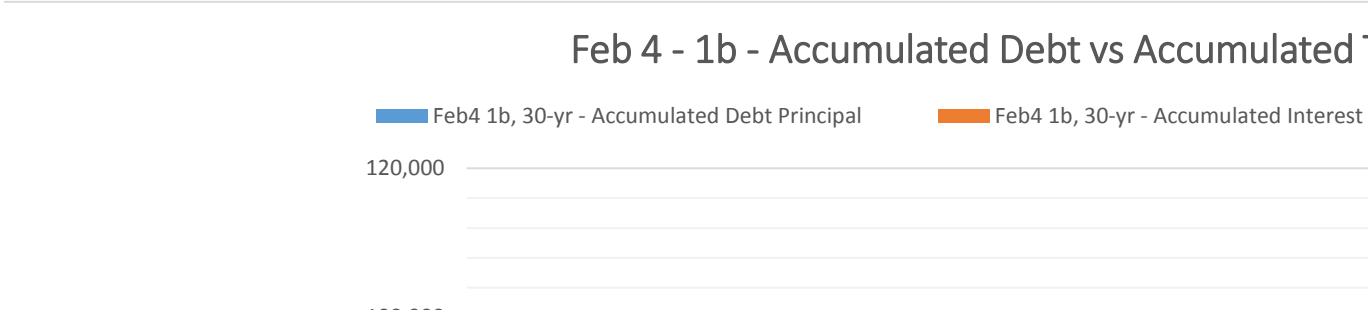
YEAR

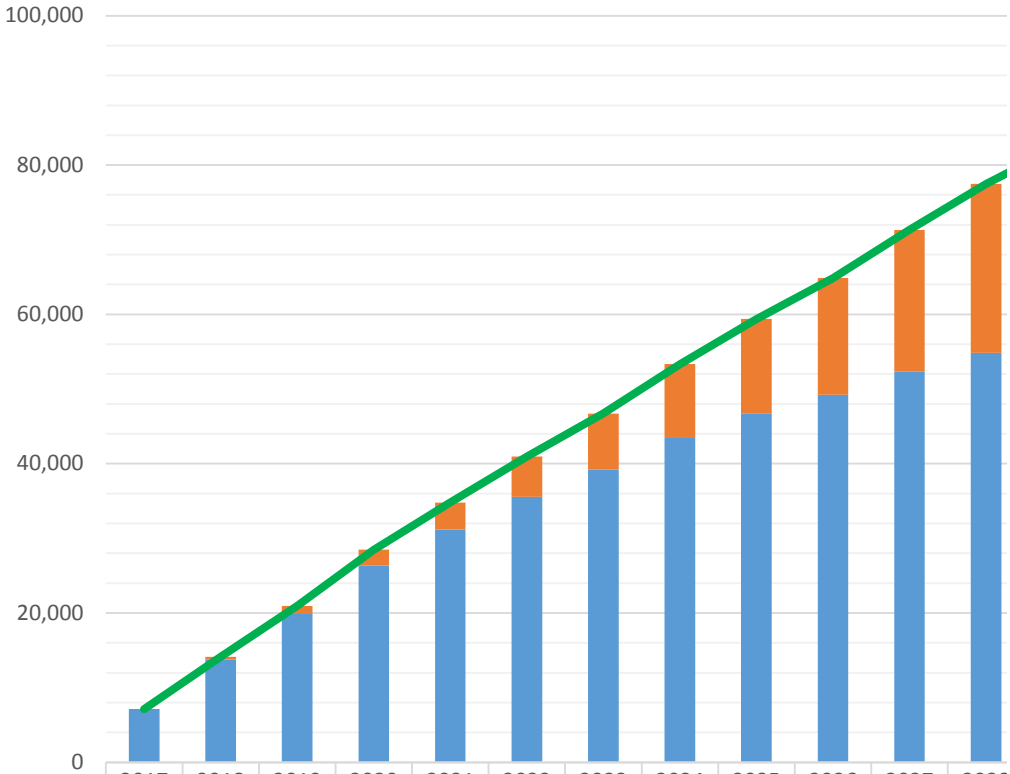


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate



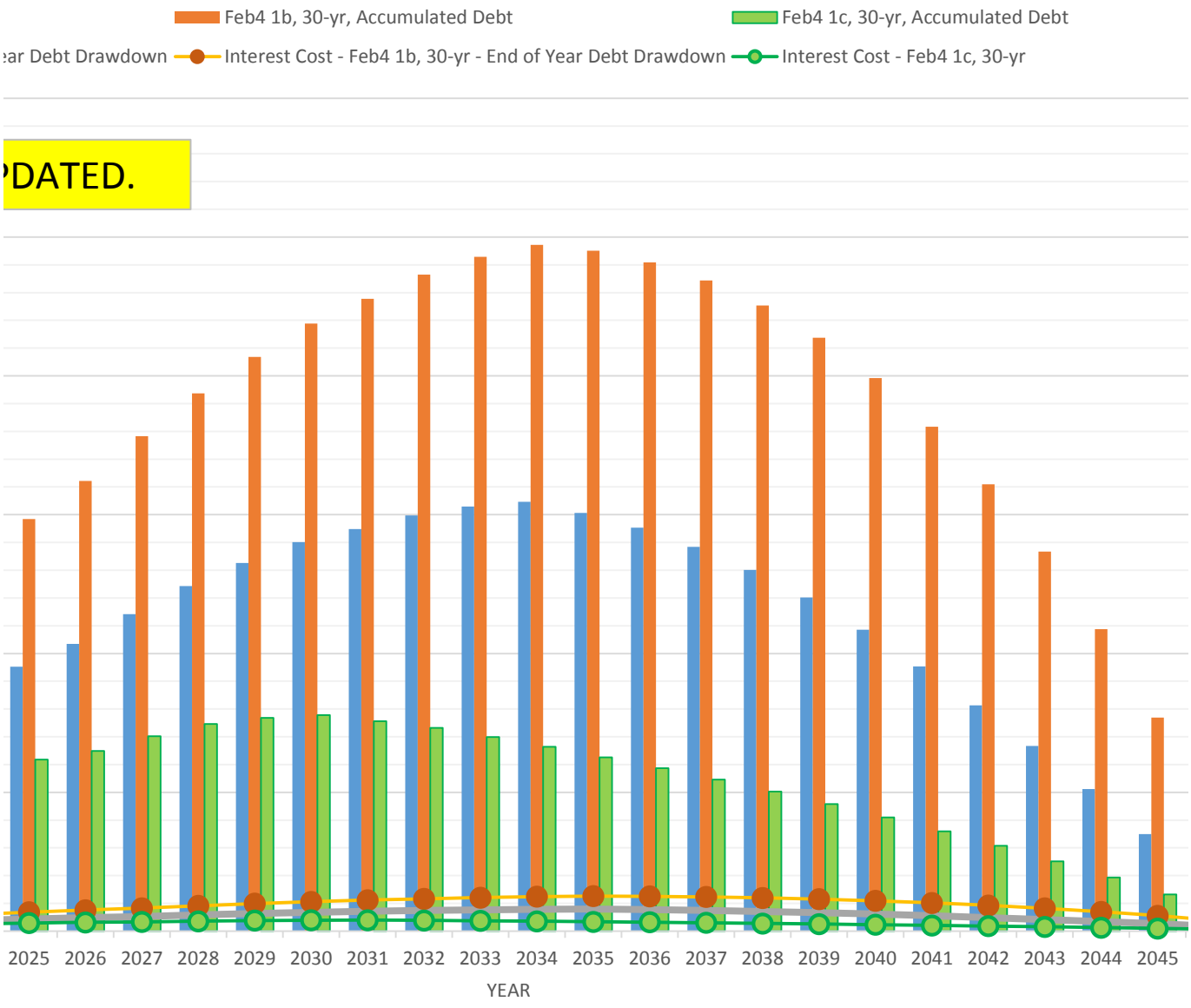

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000



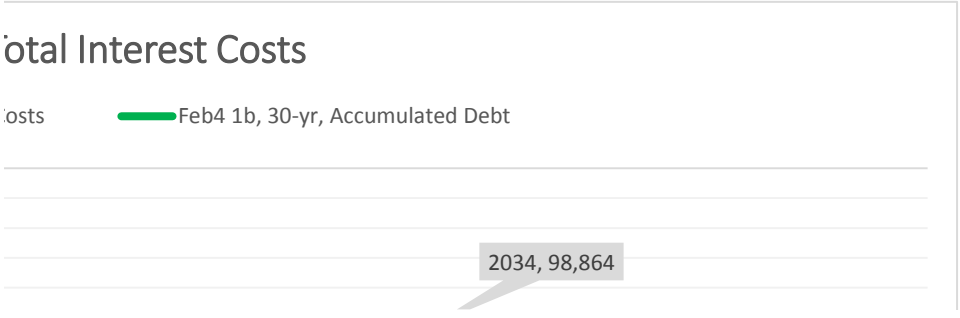
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

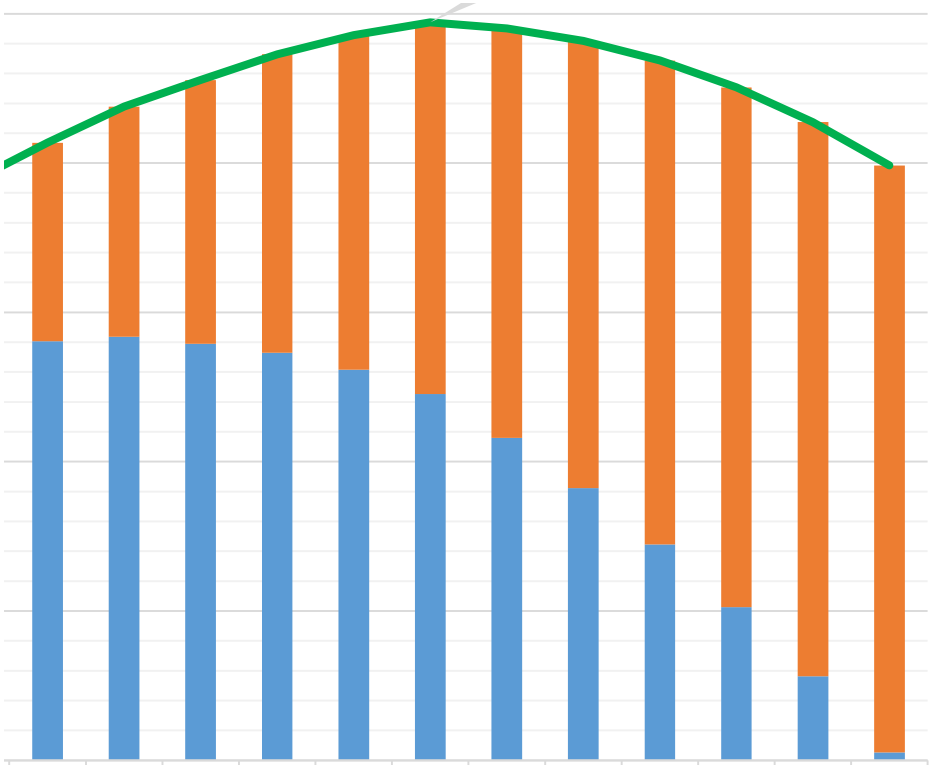
Y

Accumulated debt in present year, with annual interest costs



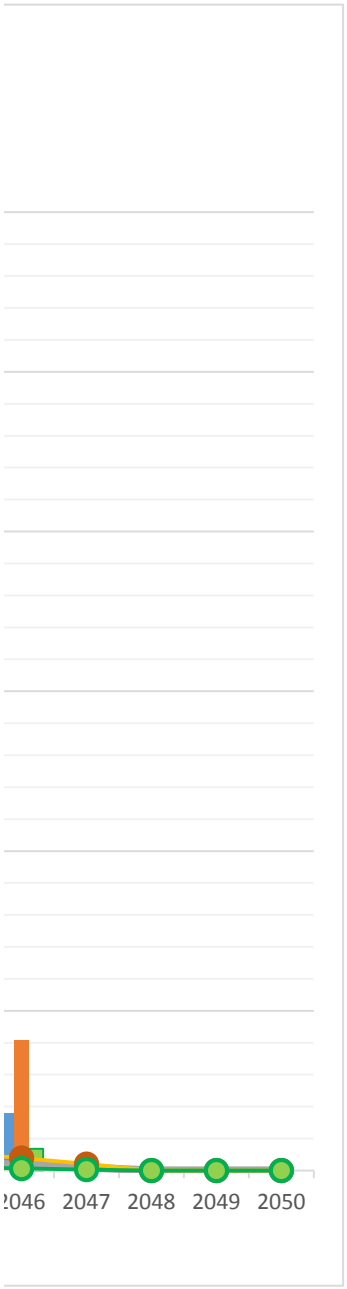
PDATED.


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864

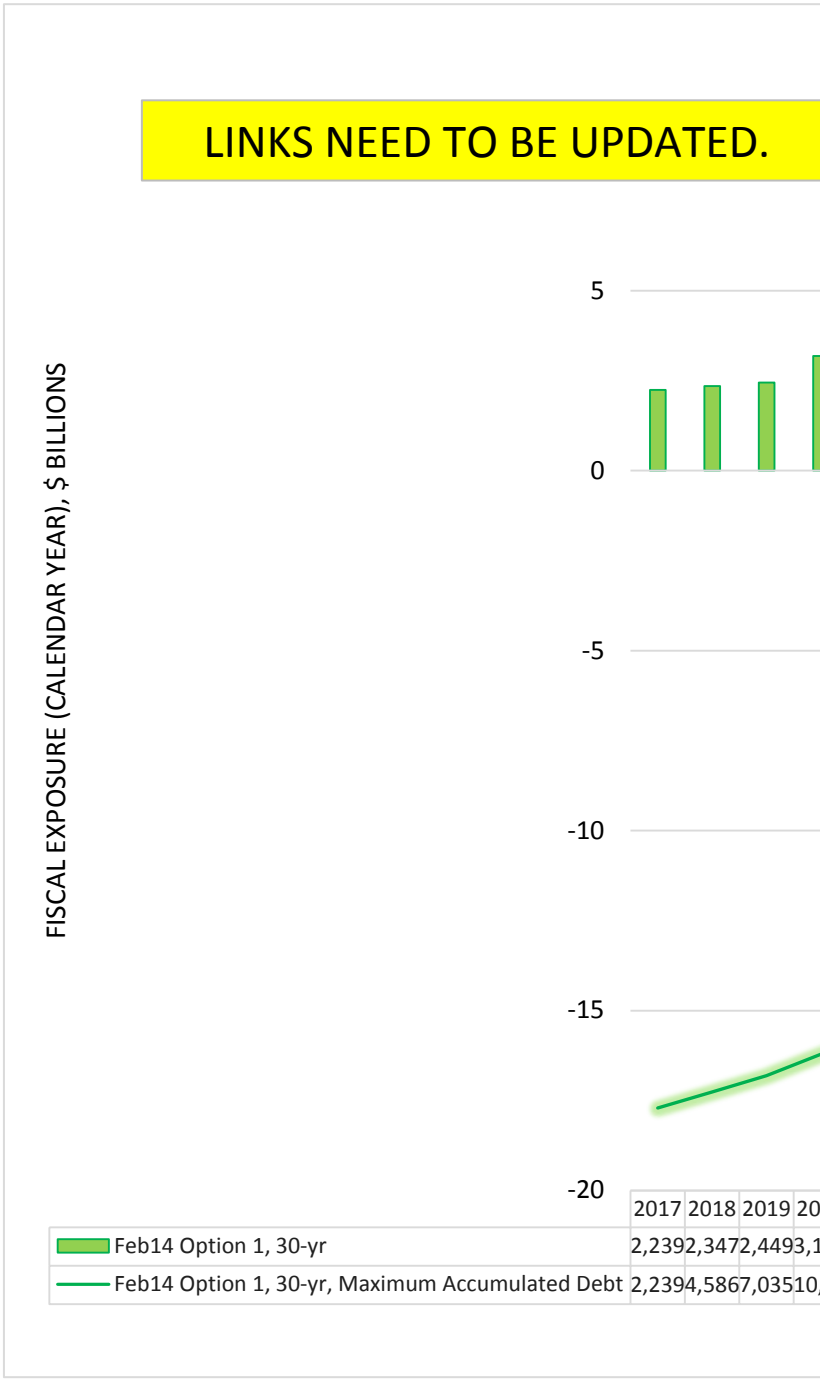


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



LINKS NEED TO BE UPDATED.



FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1b, 30-yr

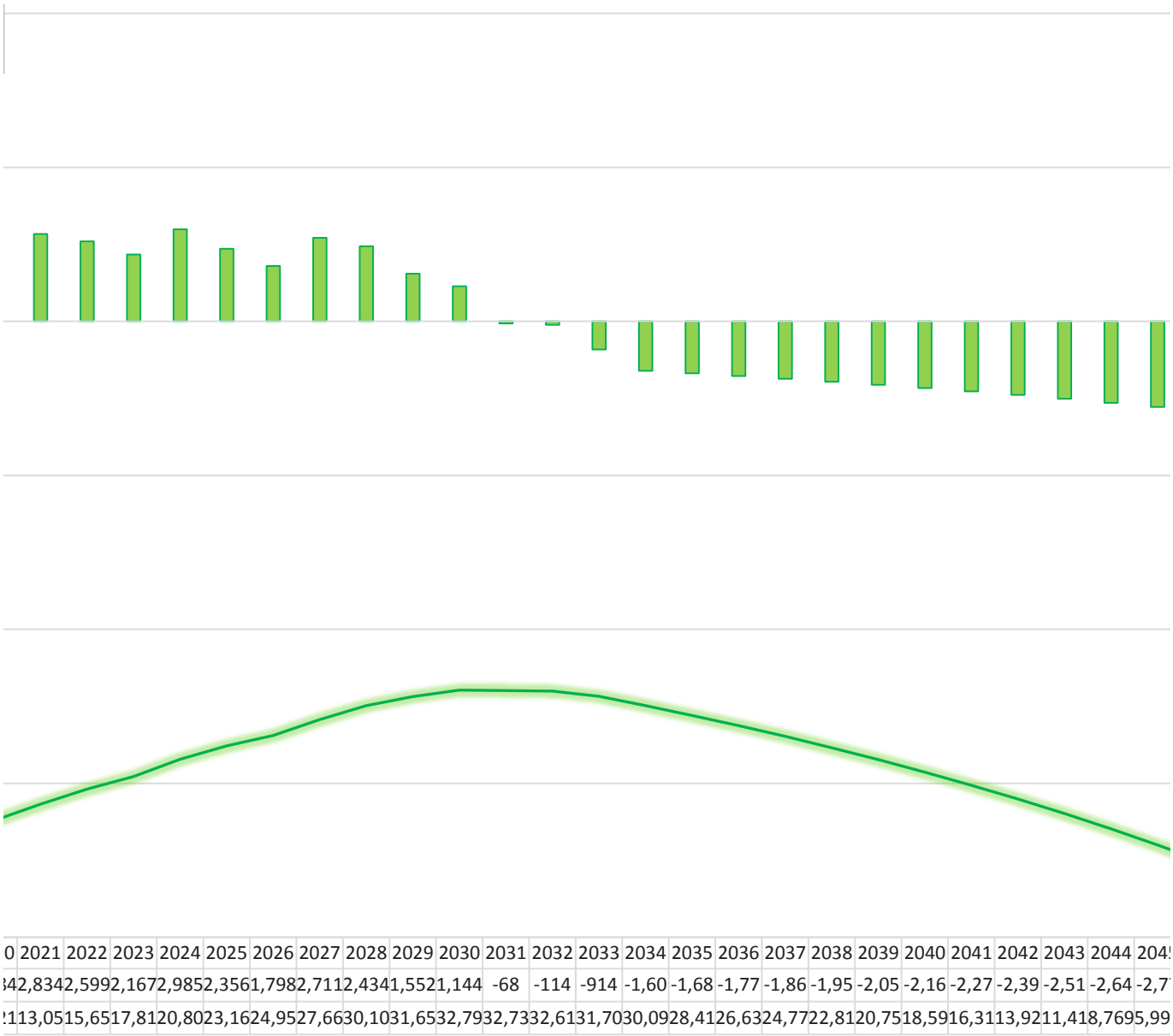
Feb4 1b, 30-yr,

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,

Feb 14 Deck - Option 1

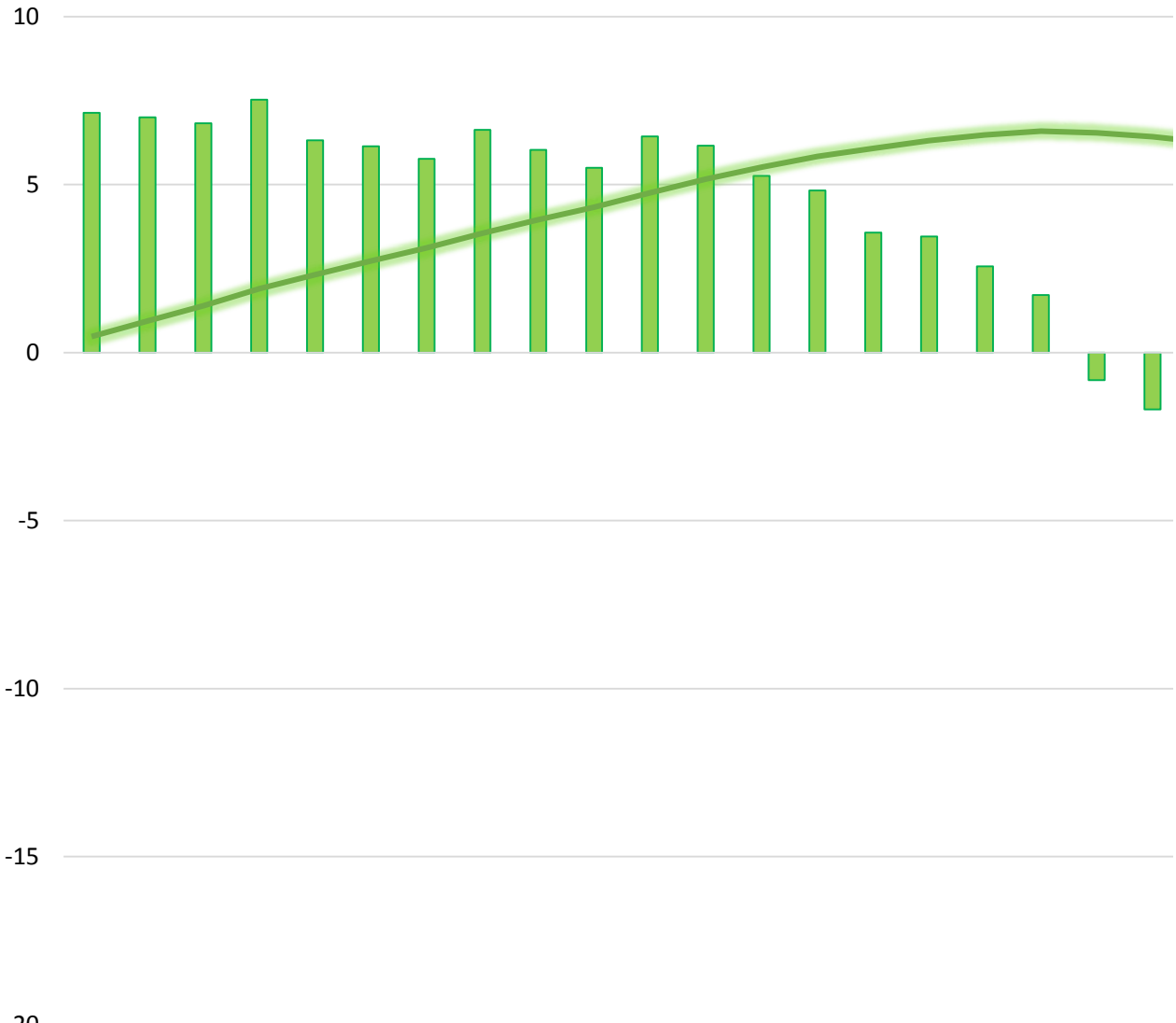


0	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	204
42	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,60	-1,68	-1,77	-1,86	-1,95	-2,05	-2,16	-2,27	-2,39	-2,51	-2,64	-2,7
113	05	15,65	17,81	20,80	23,16	24,95	27,66	30,10	31,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,76	95,99

CALENDAR YEAR

Feb 6 Deck - Scenario 1b - at 5.13% interest rat

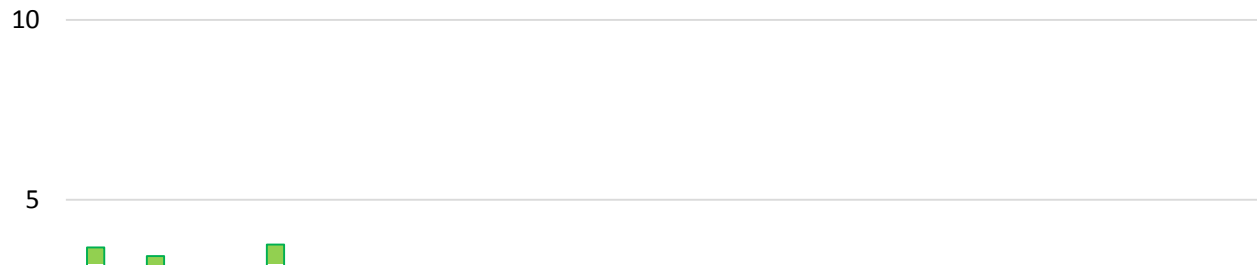
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

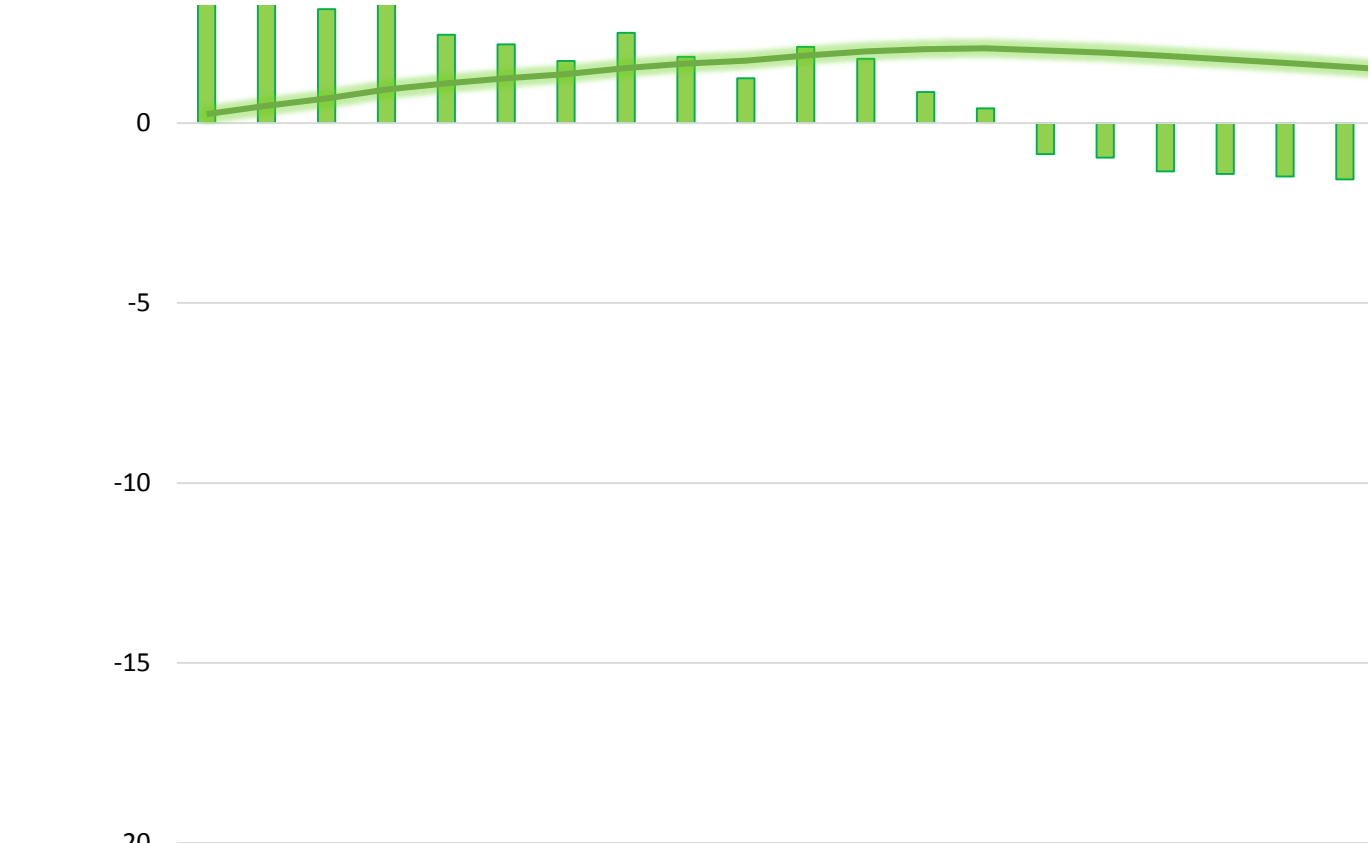


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

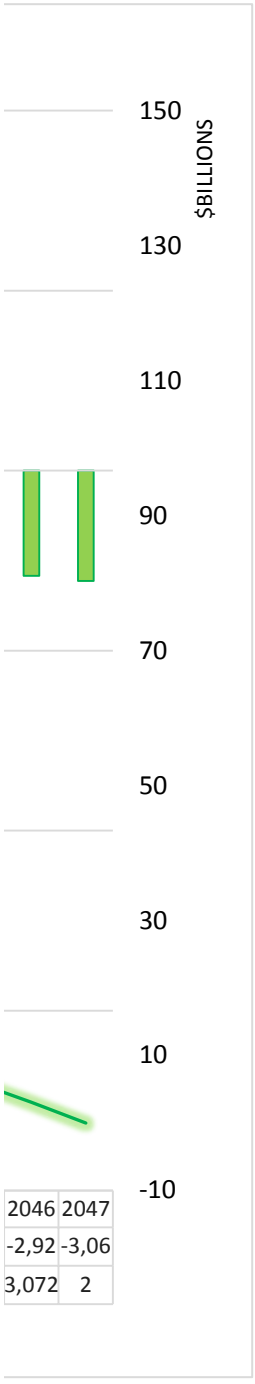
Feb 6 Deck - Scenario 1c - at 5.12% interest rat

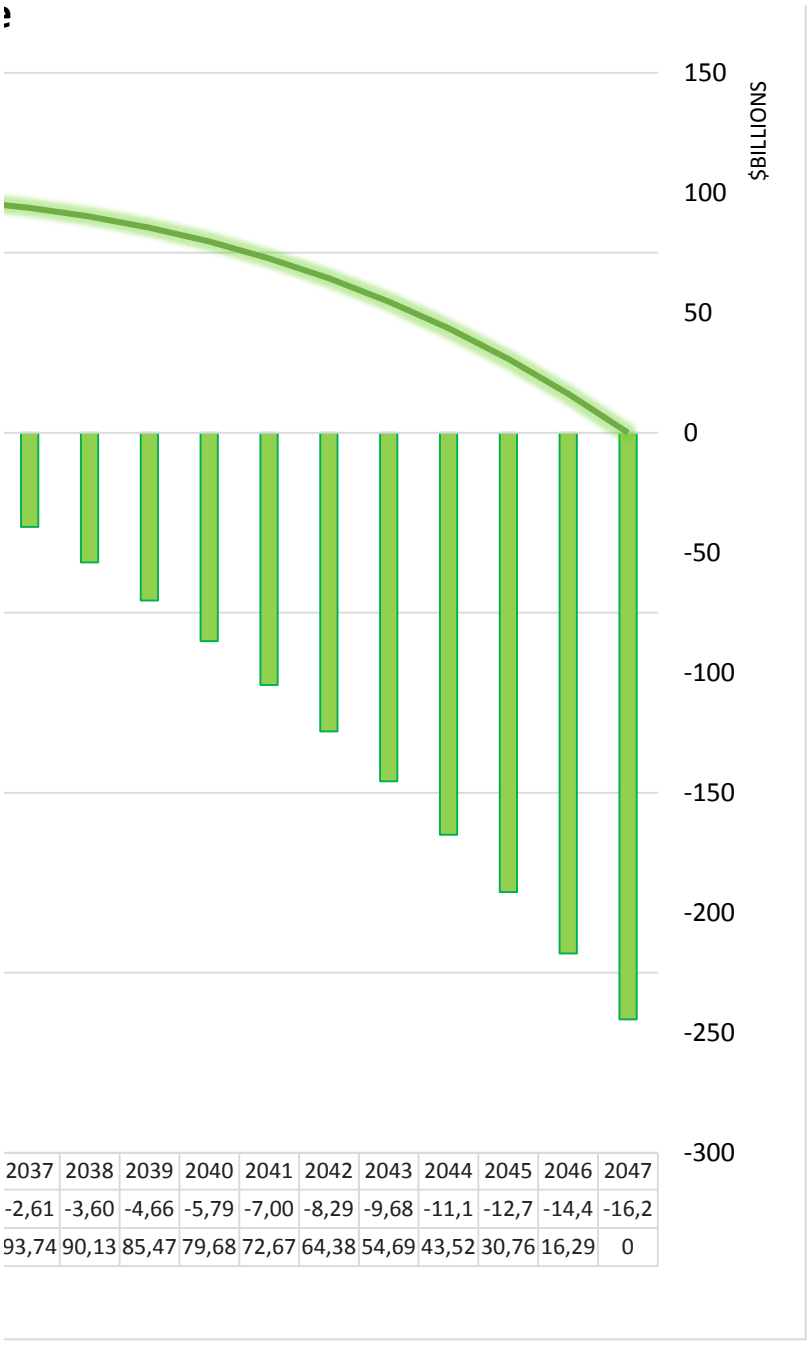




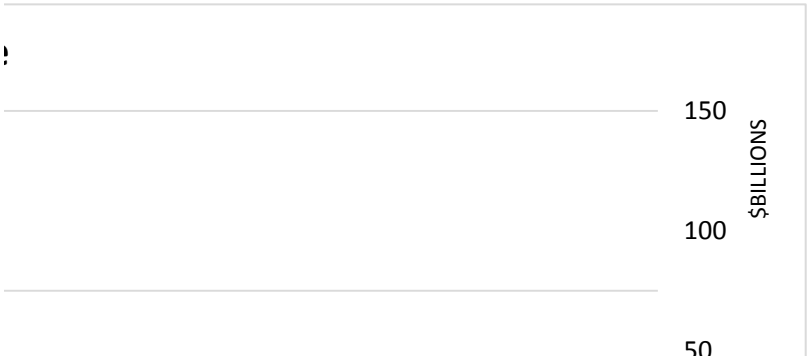
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

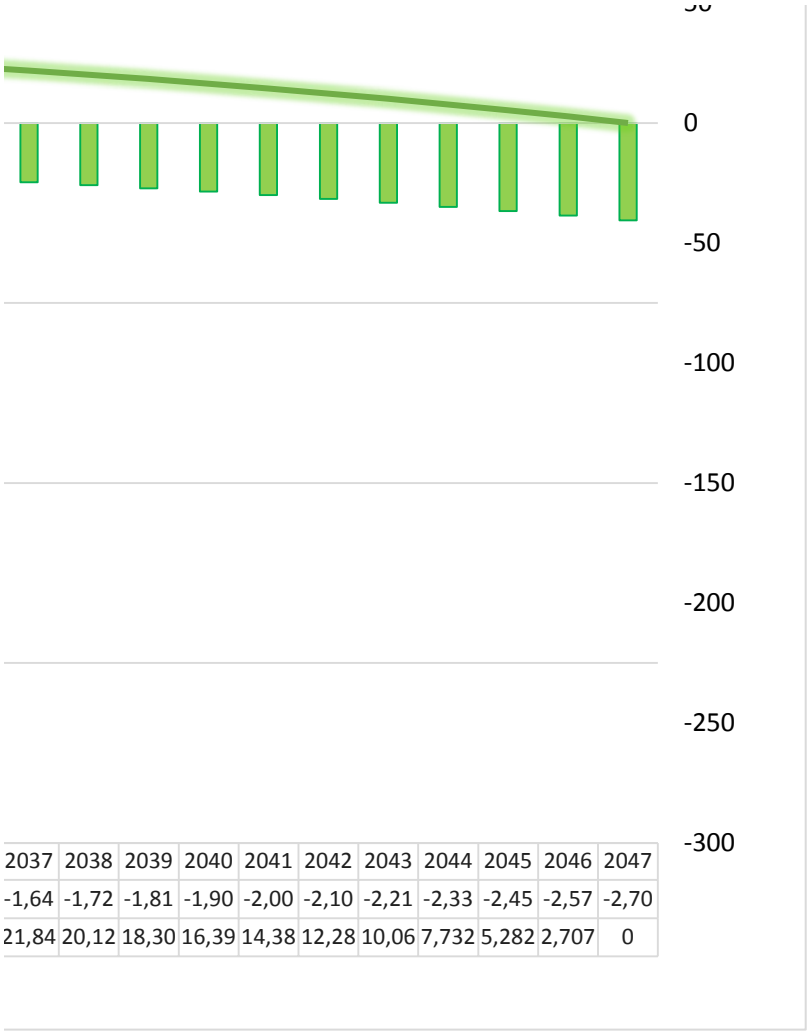
CALENDAR YEAR


150
130
110
90
70
50
30
10
-10
$BILLIONS
2046 2047
-2,92 -3,06
3,072 2



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest

IESO GA cost forecast + extrapolation

Scenario
Option 1
Bills Lowered 25%, RPP Only
Option 2
Bills Lowered 20%, RPP Only
Option 3
Bills Lowered 18%, contract/conservation refinancing, RPP Only

rate	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
Ratepayer GA Payment	9,856	9,602	9,338	9,344
Total Accumulated Debt ($ billion)	2,239	4,586	7,035	10,219
Ratepayer GA Payment	10,537	10,296	10,041	10,061
Accumulated debt in present year (including 5% interest,	1,559	3,177	4,851	7,207
Ratepayer GA Payment	10,648	10,303	10,186	10,873
Accumulated debt in present year (including 5% interest,	1,447	3,053	4,575	6,105
	12095.37	11834.681	11552.105	12168.428

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801
13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103
9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513
9,266	11,038	12,324	14,370	15,725	16,458	18,035	19,263
9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253
7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876
10843.555	10633.626	10243.432	11128.119	10527.018	10033.287	11042.844	10819.098

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389

9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615
31,654	32,799	32,730	32,616	31,702	30,097	28,411	26,638
10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117
19,534	19,317	18,577	17,799	16,981	16,122	15,218	14,268
9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837
18,843	19,521	20,007	20,312	20,325	19,755	18,549	17,050
10008.692	9721.4381	8654.4847	8819.9388	8238.0383	7756.4351	5662.3212	5388.8445

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627

8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853
24,774	22,815	20,756	18,591	16,316	13,924	11,410	8,767
6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355
13,270	12,221	11,118	9,958	8,740	7,458	6,112	4,696
7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712
15,464	13,694	12,062	10,556	9,143	7,810	6,672	5,928
5128.5761	4880.878	4645.1432	4420.7938	4207.28	4004.0783	3810.6908	3626.6435

2045	2046	2047	2048

3,451	3,285	3,126	2,975	2,831	2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
6,678	6,511	6,353	2,975	2,831	2,695
5,989	3,069	0	0	0	0
5,180	5,013	4,854	2,975	2,831	2,695
3,208	1,644	0	-	-	-
4,007	3,619	3,425	3,156	3,011	2,878
5,676	5,633	5,623	5,730	5,843	5,959
3451.485	3284.787	3126.139	2975.154	2831.461	2694.708

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

		5.00%	
Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb14_1_30yr

Option 1 - Bills Lowered 25%, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,239	2,347
Interest Portion	0	115

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	560	2,266
Interest Portion	-	29

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $33 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb14_2_30yr

Option 2 - Bills Lowered 20%, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,559	1,619
Interest Portion	0	80

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	390	1,574
Interest Portion	-	20

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb14_3_30yr

Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606
Interest Portion	0	74

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,487
Interest Portion	-	19

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	390 - 560	1,574 - 2,266

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	560	2266
Debt-Finance Global Adjustment Costs, Option 1a	390	1574
RRRP		
OESP – Enhance Benefit		162

Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**560**	**2506**
Total, B	390	1814

Proposed Program Total:	390 - 560	1,814 - 2,506

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Option 1
Option 2
Option 3

Assumes an inte

2019	2020	2021	2022
2,449	3,184	2,834	2,599
235	360	523	668

2018-19	2019-20	2020-21	2021-2022
2,372	2,633	3,096	2,775
145	266	401	559

2030.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,674	2,356	2,060	1,772
163	248	369	474

2018-19	2019-20	2020-21	2021-2022
1,632	1,844	2,282	1,988
100	184	278	395

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446
156	234	312	385

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429
95	176	254	331

2033.

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022
1,632 - 2,372	1,844 - 2,633	2,282 - 3,096	1,988 - 2,775

/1

2018-19[1]	2019-20[1]	2020-21[1]
2372	2633	3096
1632	1844	2282
225	279	323

60	60	60
18	18	18
2675	**2990**	**3497**
1935	2201	2683

1,935 - 2,675	2,201 - 2,990	2,683 - 3,497

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$21,561	$30,205	$32,799	occurs in Year 2030
$13,503	$17,883	$19,534	occurs in Year 2029
$12,862	$19,498	$20,326	occurs in Year 2033

erest rate of 5.00% (compounded monthly).

Tab Name		Total Accumulated Interest Costs
Feb14_1_30yr	$27,005	$34,278
Feb14_2_30yr	$15,940	$20,378
Feb14_3_30yr	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$27,005 to $34,278**
Option 2	$15,940 to $20,378**
Option 3	$17,202 to $22,028**

** With a higher interest rate, the amortization period extend beyond the 30-year forecast

ted period resulting in a remaining balance at the end of the 30-year period. For specifics, see details belo

w.

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,239	2,347	2,449	3,184	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,604	-1,687	-1,773	-1,864	-1,959	-2,059	-2,164	-2,275	-2,392	-2,514	-2,643	-2,778	-2,920	-3,069	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,292	2,403	2,507	3,260	2,902	2,660	2,219	3,056	2,412	1,841	2,776	2,492	1,589	1,171	-70	-117	-936	-1,643	-1,727	-1,815	-1,908	-2,005	-2,108	-2,216	-2,329	-2,448	-2,574	-2,705	-2,844	-2,989	-3,142	0	0	0
			53	56	58	76	67	62	52	71	56	43	64	58	37	27	-2	-3	-22	-38	-40	-42	-44	-47	-49	-51	-54	-57	-60	-63	-66	-69	-73	0	0	0

0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,184	1,678	30,205
Equal Monthly Debt Drawdown	3,260	1,676	

		Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,799	2030	21,561
Equal Monthly Debt Drawdown	33,579		

Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				26
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
a	Debt, Beginning of Year	0	2,239	4,586	7,035	10,219	13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103	31,655	32,799	32,731	32,617	31,703	30,098	28,412	26,639	24,775	22,816	20,757	18,593	16,318	13,926	11,412	8,769	5,992	3,072	2	3	3	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*115*	*235*	*360*	*523*	*668*	*801*	*912*	*1,064*	*1,185*	*1,277*	*1,416*	*1,540*	*1,620*	*1,678*	*1,675*	*1,669*	*1,622*	*1,540*	*1,454*	*1,363*	*1,268*	*1,167*	*1,062*	*951*	*835*	*712*	*584*	*449*	*307*	*157*	*0*	*0*	*0*	30,205
b	Additional GA Debt Drawdown, End of Year	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,239	4,586	7,035	10,219	13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103	31,655	32,799	32,731	32,617	31,703	30,098	28,412	26,639	24,775	22,816	20,757	18,593	16,318	13,926	11,412	8,769	5,992	3,072	2	3	3	3	
			FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,138	8,554	10,094	11,238	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	8,769	5,992	3,072	2	3	3	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,821	13,752	15,118	17,192	18,483	19,097	20,531	21,549	21,561	21,561	21,561	21,447	20,533	18,928	17,242	15,469	13,605	11,646	9,587	7,423	5,147	2,756	242	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,138	8,554	10,094	11,714	13,392	15,066	16,735	18,357	19,897	21,350	22,713	23,981	25,148	26,210	27,161	27,996	28,709	29,293	29,741	30,048	30,205				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,821	13,752	15,118	17,192	18,483	19,097	20,531	21,549	21,561	21,086	19,339	17,551	14,968	11,741	8,515	5,288	2,062	-1,164	-4,391	-7,617	-10,844	-14,070	-17,297	-20,523	-23,750	-26,976	-30,202				
Fiscal Exposure - End of Year Debt Drawdown		2,239	2,347	2,449	3,184	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,604	-1,687	-1,773	-1,864	-1,959	-2,059	-2,164	-2,275	-2,392	-2,514	-2,643	-2,778	-2,920	-3,069	0	0	0	

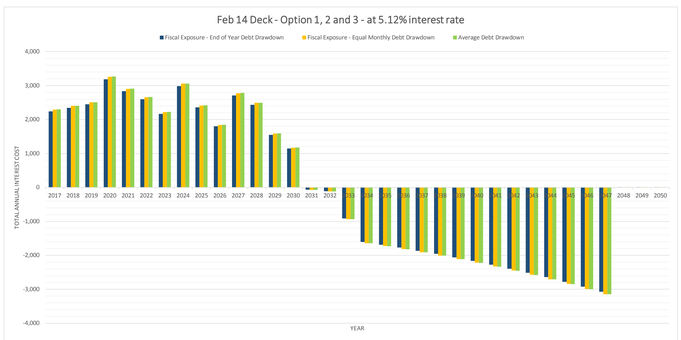
Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,292	4,695	7,202	10,462	13,363	16,024	18,243	21,299	23,711	25,552	28,327	30,819	32,408	33,579	33,510	33,393	32,457	30,814	29,087	27,272	25,365	23,359	21,251	19,035	16,706	14,257	11,683	8,978	6,134	3,145	2	3	3	
1,676	*Interest Cost - Feb14 Option 1, 30-yr*	*53*	*170*	*293*	*436*	*590*	*730*	*852*	*983*	*1,120*	*1,228*	*1,341*	*1,473*	*1,577*	*1,647*	*1,676*	*1,672*	*1,647*	*1,584*	*1,500*	*1,411*	*1,319*	*1,221*	*1,118*	*1,010*	*897*	*778*	*653*	*521*	*383*	*237*	*84*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,292	4,695	7,202	10,462	13,363	16,024	18,243	21,299	23,711	25,552	28,327	30,819	32,408	33,579	33,510	33,393	32,457	30,814	29,087	27,272	25,365	23,359	21,251	19,035	16,706	14,257	11,683	8,978	6,134	3,145	2	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,292	2,403	2,507	3,260	2,902	2,660	2,219	3,056	2,412	1,841	2,776	2,492	1,589	1,171	-70	-117	-936	-1,643	-1,727	-1,815	-1,908	-2,005	-2,108	-2,216	-2,329	-2,448	-2,574	-2,705	-2,844	-2,989	-3,142	0	0	0	

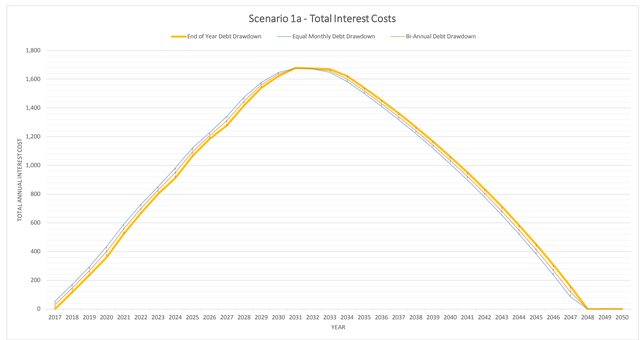
	Monthly Drawdown	187	186	185	235	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	-	-	-
	FV of Monthly Drawdown at 5%	2,292	2,285	2,267	2,891	2,366	1,977	1,399	2,123	1,322	628	1,468	1,043	12	(487)	(1,788)	(1,831)	(2,644)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	-	-	-
	Annual Interest Cost on New Drawdowns	53	53	53	67	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	-	-	-
	Annual Interest Cost on Opening Balance	-	117	240	368	535	684	820	933	1,090	1,213	1,307	1,449	1,577	1,658	1,718	1,714	1,708	1,661	1,577	1,488	1,395	1,298	1,195	1,087	974	855	729	598	459	314	161	0	0	0	
	Total Annual Interest Cost	53	170	293	436	590	730	852	983	1,120	1,228	1,341	1,473	1,577	1,647	1,676	1,672	1,647	1,584	1,500	1,411	1,319	1,221	1,118	1,010	897	778	653	521	383	237	84	0	0	0	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,268	4,645	7,125	10,349	13,220	15,852	18,047	21,070	23,456	25,277	28,023	30,488	32,060	33,219	33,150	33,034	32,108	30,483	28,775	26,980	25,092	23,108	21,023	18,831	16,526	14,104	11,558	8,882	6,068	3,111	2	3	3	
	Interest Cost - Feb14 Option 1, 30-yr	*29*	*145*	*266*	*401*	*559*	*701*	*828*	*950*	*1,095*	*1,208*	*1,312*	*1,447*	*1,560*	*1,634*	*1,677*	*1,673*	*1,657*	*1,601*	*1,518*	*1,431*	*1,339*	*1,242*	*1,141*	*1,034*	*922*	*804*	*680*	*550*	*413*	*269*	*118*	*0*	*0*	*0*	30,205
	Accumulated debt in present year (including 5% annual interest)	2,268	4,645	7,125	10,349	13,220	15,852	18,047	21,070	23,456	25,277	28,023	30,488	32,060	33,219	33,150	33,034	32,108	30,483	28,775	26,980	25,092	23,108	21,023	18,831	16,526	14,104	11,558	8,882	6,068	3,111	2	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,268	2,377	2,480	3,225	2,870	2,632	2,195	3,024	2,386	1,821	2,746	2,465	1,572	1,159	-69	-116	-926	-1,625	-1,708	-1,796	-1,887	-1,984	-2,085	-2,192	-2,304	-2,422	-2,546	-2,676	-2,813	-2,957	-3,109	0	0	0	

	Bi-Annual Drawdown	1,119	1,116	1,107	1,412	1,156	965	683	1,037	646	307	717	509	6	(238)	(873)	(894)	(1,291)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	-	-	-
	FV of Bi-Annual Drawdown at 5%	2,268	2,261	2,243	2,860	2,341	1,955	1,384	2,100	1,308	621	1,453	1,031	12	(481)	(1,769)	(1,812)	(2,616)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	-	-	-
	Annual Interest Cost on New Drawdowns	29	29	28	36	30	25	17	27	17	8	18	13	0	(6)	(22)	(23)	(33)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	-	-	-
	Annual Interest Cost on Opening Balance	-	116	238	365	529	676	811	923	1,078	1,200	1,293	1,434	1,560	1,640	1,700	1,696	1,690	1,643	1,560	1,472	1,380	1,284	1,182	1,076	963	846	722	591	454	310	159	0	0	0	
	Total Annual Interest Cost	29	145	266	401	559	701	828	950	1,095	1,208	1,312	1,447	1,560	1,634	1,677	1,673	1,657	1,601	1,518	1,431	1,339	1,242	1,141	1,034	922	804	680	550	413	269	118	0	0	0	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,296	4,703	7,215	10,480	13,387	16,052	18,275	21,336	23,752	25,596	28,377	30,873	32,465	33,638	33,568	33,451	32,514	30,868	29,138	27,320	25,409	23,400	21,288	19,068	16,735	14,282	11,704	8,994	6,145	3,150	2	3	3	
	Interest Cost - Feb14 Option 1, 30-yr	*57*	*175*	*297*	*441*	*595*	*734*	*856*	*988*	*1,125*	*1,231*	*1,346*	*1,478*	*1,580*	*1,649*	*1,676*	*1,672*	*1,645*	*1,581*	*1,497*	*1,408*	*1,315*	*1,217*	*1,115*	*1,007*	*893*	*774*	*648*	*516*	*378*	*232*	*79*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,296	4,703	7,215	10,480	13,387	16,052	18,275	21,336	23,752	25,596	28,377	30,873	32,465	33,638	33,568	33,451	32,514	30,868	29,138	27,320	25,409	23,400	21,288	19,068	16,735	14,282	11,704	8,994	6,145	3,150	2	3	3	3	
Fiscal Exposure - Average Debt Drawdown		2,296	2,407	2,512	3,265	2,907	2,665	2,223	3,062	2,416	1,844	2,780	2,496	1,592	1,173	-70	-117	-937	-1,646	-1,730	-1,818	-1,911	-2,009	-2,112	-2,220	-2,333	-2,453	-2,578	-2,710	-2,849	-2,995	-3,148	0	0	0	





Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,559	1,619	1,674	2,356	2,060	1,772	1,286	2,046	1,355	733	1,578	1,228	271	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,415	-1,488	-1,564	-1,644	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0	
			37	38	40	56	49	42	31	49	32	17	38	29	6	-5	-18	-19	-19	-20	-21	-23	-24	-25	-26	-28	-29	-30	-32	-34	-35	-37	-39	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,356	999	17,883
Equal Monthly Debt Drawdown	2,412	994	

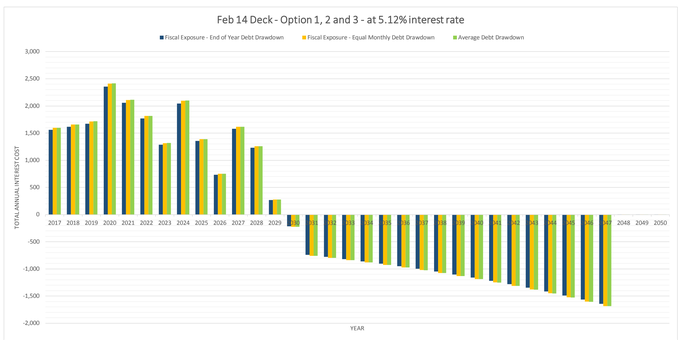
	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,534	2029	13,503
Equal Monthly Debt Drawdown	19,999		

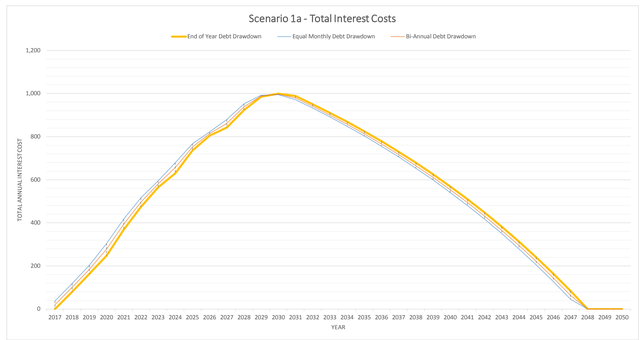
Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP Only																																				26
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
a	Debt, Beginning of Year	0	1,559	3,177	4,851	7,207	9,266	11,039	12,324	14,370	15,725	16,458	18,035	19,264	19,534	19,317	18,577	17,799	16,982	16,122	15,219	14,269	13,271	12,222	11,119	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1	2	2	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*80*	*163*	*248*	*369*	*474*	*565*	*631*	*735*	*805*	*842*	*923*	*986*	*999*	*988*	*950*	*911*	*869*	*825*	*779*	*730*	*679*	*625*	*569*	*510*	*447*	*382*	*313*	*240*	*164*	*84*	*0*	*0*	*0*	17,883
b	Additional GA Debt Drawdown, End of Year	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,559	3,177	4,851	7,207	9,266	11,039	12,324	14,370	15,725	16,458	18,035	19,264	19,534	19,317	18,577	17,799	16,982	16,122	15,219	14,269	13,271	12,222	11,119	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1	2	2	2	
			TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE		
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	7,818	7,078	6,300	5,483	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,697	3,210	1,646	1	2	2	2	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,842	12,461	12,390	13,125	13,431	12,716	11,499	11,499	11,499	11,499	11,499	10,595	9,646	8,648	7,598	6,495	5,336	4,117	2,836	1,490	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	7,818	8,806	9,757	10,667	11,536	12,361	13,140	13,870	14,549	15,174	15,743	16,252	16,700	17,081	17,394	17,634	17,798	17,883				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,842	12,461	12,390	13,125	13,431	12,716	11,499	9,771	8,042	6,314	4,586	2,858	1,129	-599	-2,327	-4,055	-5,784	-7,512	-9,240	-10,968	-12,696	-14,425	-16,153	-17,881				
Fiscal Exposure - End of Year Debt Drawdown		1,559	1,619	1,674	2,356	2,060	1,772	1,286	2,046	1,355	733	1,578	1,228	271	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,415	-1,488	-1,564	-1,644	0	0	0	

Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,019	18,223	17,385	16,506	15,581	14,609	13,587	12,512	11,383	10,196	8,948	7,637	6,258	4,809	3,286	1,685	2	2	2	
994	*Interest Cost - Feb14 Option 1, 30-yr*	*37*	*118*	*202*	*304*	*418*	*516*	*595*	*679*	*767*	*822*	*880*	*952*	*992*	*994*	*971*	*932*	*891*	*848*	*803*	*756*	*706*	*654*	*599*	*541*	*481*	*417*	*350*	*279*	*205*	*127*	*45*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,019	18,223	17,385	16,506	15,581	14,609	13,587	12,512	11,383	10,196	8,948	7,637	6,258	4,809	3,286	1,685	2	2	2	2	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0	
	Monthly Drawdown	130	128	126	176	141	108	60	118	52	(6)	61	25	(60)	(101)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	-	-	-	
	FV of Monthly Drawdown at 5%	1,596	1,575	1,548	2,157	1,731	1,329	738	1,449	635	(74)	753	313	(732)	(1,246)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	-	-	-	
	Annual Interest Cost on New Drawdowns	37	37	36	50	40	31	17	34	15	(2)	17	7	(17)	(29)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	-	-	-	
	Annual Interest Cost on Opening Balance	-	82	166	254	377	485	578	646	753	824	862	945	1,009	1,023	1,012	973	932	889	844	797	747	695	640	582	522	458	391	320	246	168	86	0	0	0	
	Total Annual Interest Cost	37	118	202	304	418	516	595	679	767	822	880	952	992	994	971	932	891	848	803	756	706	654	599	541	481	417	350	279	205	127	45	0	0	0	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,815	18,027	17,199	16,328	15,413	14,452	13,441	12,378	11,261	10,087	8,852	7,555	6,191	4,758	3,251	1,667	1	2	2	
	Interest Cost - Feb14 Option 1, 30-yr	*20*	*100*	*184*	*278*	*395*	*497*	*581*	*657*	*753*	*814*	*862*	*938*	*989*	*997*	*979*	*940*	*900*	*858*	*813*	*766*	*717*	*666*	*611*	*554*	*494*	*431*	*364*	*295*	*221*	*144*	*63*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,815	18,027	17,199	16,328	15,413	14,452	13,441	12,378	11,261	10,087	8,852	7,555	6,191	4,758	3,251	1,667	1	2	2	2	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,579	1,639	1,696	2,386	2,086	1,795	1,302	2,072	1,372	742	1,598	1,244	274	-220	-749	-788	-828	-870	-915	-962	-1,011	-1,063	-1,117	-1,174	-1,234	-1,297	-1,364	-1,434	-1,507	-1,584	-1,665	0	0	0	
	Bi-Annual Drawdown	779	769	756	1,054	845	649	361	708	310	(36)	368	153	(358)	(608)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,579	1,558	1,531	2,134	1,713	1,315	730	1,433	628	(73)	745	310	(724)	(1,232)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	-	-	-	
	Annual Interest Cost on New Drawdowns	20	20	19	27	22	17	9	18	8	(1)	9	4	(9)	(16)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	-	-	-	
	Annual Interest Cost on Opening Balance	-	81	165	251	373	480	572	639	745	815	853	935	998	1,012	1,001	963	922	880	835	789	739	688	633	576	516	453	387	317	243	166	85	0	0	0	
	Total Annual Interest Cost	20	100	184	278	395	497	581	657	753	814	862	938	989	997	979	940	900	858	813	766	717	666	611	554	494	431	364	295	221	144	63	0	0	0	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,599	3,258	4,975	7,391	9,504	11,321	12,640	14,738	16,128	16,879	18,497	19,757	20,034	19,811	19,052	18,254	17,416	16,535	15,608	14,634	13,610	12,534	11,403	10,214	8,964	7,650	6,269	4,818	3,292	1,688	2	2	2	
	Interest Cost - Feb14 Option 1, 30-yr	*40*	*121*	*205*	*308*	*421*	*519*	*598*	*683*	*770*	*823*	*882*	*954*	*992*	*994*	*969*	*931*	*890*	*847*	*802*	*754*	*704*	*652*	*597*	*539*	*478*	*414*	*347*	*277*	*202*	*124*	*42*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,599	3,258	4,975	7,391	9,504	11,321	12,640	14,738	16,128	16,879	18,497	19,757	20,034	19,811	19,052	18,254	17,416	16,535	15,608	14,634	13,610	12,534	11,403	10,214	8,964	7,650	6,269	4,818	3,292	1,688	2	2	2	2	
Fiscal Exposure - Average Debt Drawdown		1,599	1,660	1,717	2,416	2,112	1,817	1,319	2,098	1,390	751	1,618	1,260	277	-223	-759	-798	-839	-881	-927	-974	-1,024	-1,076	-1,131	-1,189	-1,250	-1,314	-1,381	-1,452	-1,526	-1,604	-1,686	0	0	0	





Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_3_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	
			34	38	36	36	34	34	35	36	36	35	35	34	23	16	12	7	0	-14	-29	-36	-38	-42	-39	-36	-34	-32	-27	-18	-6	-1	0	3	3	3	142

		Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	1,606		1,040	19,498
Equal Monthly Debt Drawdown	1,644		1,040	

	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	20,326	2033	12,862
Equal Monthly Debt Drawdown	20,809		

Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
a	Debt, Beginning of Year	0	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*74*	*156*	*234*	*312*	*385*	*459*	*534*	*612*	*690*	*766*	*842*	*915*	*964*	*999*	*1,024*	*1,039*	*1,040*	*1,011*	*949*	*872*	*791*	*701*	*617*	*540*	*468*	*400*	*341*	*303*	*290*	*288*	*288*	*293*	*299*	19,498
b	Additional GA Debt Drawdown, End of Year	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,430	7,736	7,749	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,577	12,577	12,577	12,577	11,371	9,872	8,285	6,516	4,884	3,378	1,966	633	-506	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,943	8,967	10,006	11,046	12,057	13,006	13,878	14,669	15,370	15,987	16,527	16,995	17,395	17,736	18,040	18,330	18,618				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,064	11,345	10,319	8,710	6,493	4,045	1,586	-974	-3,307	-5,431	-7,383	-9,184	-10,721	-11,807	-12,362	-12,696	-12,994				
Fiscal Exposure - End of Year Debt Drawdown		1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	

Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	
1,040	*Interest Cost - Feb14 Option 1, 30-yr*	*34*	*112*	*192*	*270*	*346*	*420*	*494*	*570*	*649*	*726*	*802*	*876*	*938*	*980*	*1,010*	*1,031*	*1,040*	*1,026*	*982*	*913*	*835*	*749*	*662*	*581*	*507*	*436*	*373*	*324*	*297*	*289*	*288*	*290*	*296*	*302*	19,640
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	6,102	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	

	Monthly Drawdown	121	128	114	108	93	88	84	83	76	66	60	47	4	(24)	(43)	(60)	(85)	(134)	(185)	(204)	(205)	(213)	(194)	(177)	(163)	(150)	(128)	(90)	(46)	(28)	(25)	(15)	(15)	(15)	
	FV of Monthly Drawdown at 5%	1,482	1,568	1,398	1,326	1,137	1,086	1,028	1,024	929	815	742	580	54	(292)	(525)	(736)	(1,050)	(1,648)	(2,269)	(2,506)	(2,517)	(2,621)	(2,389)	(2,174)	(1,999)	(1,844)	(1,574)	(1,111)	(568)	(342)	(306)	(185)	(184)	(188)	
	Annual Interest Cost on New Drawdowns	34	36	32	31	26	25	24	24	22	19	17	13	1	(7)	(12)	(17)	(24)	(38)	(53)	(58)	(58)	(61)	(55)	(51)	(46)	(43)	(37)	(26)	(13)	(8)	(7)	(4)	(4)	(4)	
	Annual Interest Cost on Opening Balance	-	76	160	240	320	394	470	547	627	707	784	863	936	987	1,023	1,048	1,064	1,065	1,035	972	893	810	717	632	553	479	409	350	311	297	295	295	300	306	
	Total Annual Interest Cost	34	112	192	270	346	420	494	570	649	726	802	876	938	980	1,010	1,031	1,040	1,026	982	913	835	749	662	581	507	436	373	324	297	289	288	290	296	302	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	
	Interest Cost - Feb14 Option 1, 30-yr	*19*	*95*	*176*	*254*	*331*	*404*	*478*	*554*	*632*	*709*	*785*	*861*	*927*	*973*	*1,005*	*1,028*	*1,039*	*1,033*	*995*	*930*	*852*	*769*	*680*	*598*	*522*	*451*	*385*	*332*	*300*	*290*	*288*	*289*	*295*	*301*	19,575
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	6,037	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,466	1,626	1,541	1,549	1,441	1,465	1,482	1,554	1,539	1,505	1,510	1,427	979	687	492	309	13	-577	-1,221	-1,518	-1,607	-1,792	-1,653	-1,525	-1,430	-1,350	-1,153	-753	-255	-44	-10	109	115	117	

	Bi-Annual Drawdown	724	766	683	648	555	530	502	500	454	398	363	283	26	(143)	(256)	(359)	(513)	(805)	(1,108)	(1,224)	(1,229)	(1,280)	(1,167)	(1,062)	(976)	(900)	(769)	(543)	(278)	(167)	(149)	(90)	(90)	(92)	
	FV of Bi-Annual Drawdown at 5%	1,466	1,551	1,383	1,312	1,125	1,075	1,017	1,013	919	806	735	573	53	(289)	(519)	(728)	(1,039)	(1,630)	(2,245)	(2,479)	(2,490)	(2,593)	(2,363)	(2,150)	(1,977)	(1,824)	(1,557)	(1,099)	(562)	(338)	(302)	(183)	(182)	(186)	
	Annual Interest Cost on New Drawdowns	19	20	17	17	14	14	13	13	12	10	9	7	1	(4)	(7)	(9)	(13)	(21)	(28)	(31)	(31)	(33)	(30)	(27)	(25)	(23)	(20)	(14)	(7)	(4)	(4)	(2)	(2)	(2)	
	Annual Interest Cost on Opening Balance	-	75	158	237	316	390	465	541	620	699	776	853	926	976	1,012	1,037	1,053	1,053	1,024	961	884	801	710	625	547	474	405	346	307	294	292	291	297	303	
	Total Annual Interest Cost	19	95	176	254	331	404	478	554	632	709	785	861	927	973	1,005	1,028	1,039	1,033	995	930	852	769	680	598	522	451	385	332	300	290	288	289	295	301	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	
	Interest Cost - Feb14 Option 1, 30-yr	*37*	*115*	*195*	*273*	*349*	*422*	*497*	*573*	*651*	*728*	*804*	*879*	*939*	*981*	*1,011*	*1,031*	*1,040*	*1,025*	*980*	*911*	*832*	*746*	*659*	*579*	*504*	*434*	*371*	*322*	*297*	*289*	*288*	*290*	*296*	*302*	19,651
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	6,113	
Fiscal Exposure - Average Debt Drawdown		1,484	1,647	1,561	1,569	1,459	1,483	1,500	1,573	1,559	1,524	1,530	1,445	992	696	498	313	14	-585	-1,237	-1,537	-1,627	-1,814	-1,674	-1,545	-1,448	-1,367	-1,167	-763	-258	-44	-10	110	116	119	

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest ra

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest ra

IESO GA cost forecast + extrapolation

Scenario
Option 1

Option 2

ate	2017	2018	2019	2020
ate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	2200	4600	7000	10200

Total Accumulated Debt ($ billion)	2.2	4.6	7	10.2
	2,200	4,600	7,000	10,200

Total Accumulated Debt ($ billion)	1.6	3.2	4.9	7.2
	1,600	3,200	4,900	7,200

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
13100	15700	17800	20800	23200	25000	27700	30100

13.1 15.7 17.8 20.8 23.2 25 27.7 30.1
13,100 15,700 17,800 20,800 23,200 25,000 27,700 30,100

9.3 11 12.3 14.4 15.7 16.5 18 19.3
9,300 11,000 12,300 14,400 15,700 16,500 18,000 19,300

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
31700	32800	32700	32600	31700	30100	28400	26600

31.7	32.8	32.7	32.6	31.7	30.1	28.4	26.6
31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600

19.5	19.3	18.6	17.8	17	16.1	15.2	14.3
19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
24800	22800	20800	18600	16300	13900	11400	8800

24.8	22.8	20.8	18.6	16.3	13.9	11.4	8.8
24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800

13.3	12.2	11.1	10	8.7	7.5	6.1	4.7
13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	2046	2047	2048	2049	2050
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
6000	3100	0	0	0	0

6 3.1 0 0
6,000 3,100 - -

3.2 1.6 0 0
3,200 1,600 - -

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb9_1_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,200	2,400

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	550	2,250

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $33 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb9_2_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,600	1,600

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	400	1,600

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,169	4,668

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	545	2,203

Actuals are subject to actual prices and actual interest rates.

#N/A

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542

Fiscalized[3]	2016-17	2017-18
Start: January 1st	375	1,510

Actuals are subject to actual prices and actual interest rates.

#N/A

Rough		
	1	
	2	
	3	
	4 April	4
	5 May	5
	6 June	6
	7 July	7
	8 August	8
	9 September	9
	10 October	10
	11 November	11
	12 December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	400 - 550	1,600 - 2,250

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	550	2250
Debt-Finance Global Adjustment Costs, Option 1a	400	1600
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**550**	**2490**
Total, B	400	1840
Proposed Program Total:	400 - 550	1,840 - 2,490

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1
Scenario 2

2019	2020	2021	2022
2,400	3,200	2,900	2,600

2018-19	2019-20	2020-21	2021-2022
2,400	2,600	3,125	2,825

2030.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,700	2,300	2,100	1,700

2018-19	2019-20	2020-21	2021-2022
1,625	1,850	2,250	2,000

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
4,589	5,867	5,031	4,861

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988

› depend on decision on accounting treatment.

2019	2020	2021	2022
2,353	3,072	2,817	2,580

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757

2019	2020	2021	2022
1,578	2,243	1,931	1,635

2018-19	2019-20	2020-21	2021-2022
1,551	1,745	2,165	1,857



2018-19	2019-20	2020-21	2021-2022
1,625 - 2,400	1,850 - 2,600	2,250 - 3,125	2,000 - 2,825

/1

2018-19[1]	2019-20[1]	2020-21[1]
2400	2600	3125
1625	1850	2250
225	279	323
60	60	60
18	18	18
2703	**2957**	**3526**
1928	2207	2651

1,928 - 2,703 2,207 - 2,957 2,651 - 3,526

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
21,601	30,211	32,800	occurs in Year 2030
13,466	17,886	19,500	occurs in Year 2029
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!

2,200

Tab Name
Feb9_1_30yr
Feb9_2_30yr

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Feb9_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0	
			52	57	57	76	69	62	50	71	57	43	64	57	38	26	-2	-2	-21	-38	-40	-43	-43	-48	-48	-52	-55	-57	-59	-62	-67	-69	-74	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,200	1,678	30,211
Equal Monthly Debt Drawdown	3,276	1,676	

		Feb9 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,800	2030	21,601	
Equal Monthly Debt Drawdown	33,580			

Feb9 1, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
	($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
a	Debt, Beginning of Year	0	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	
c = a*5%	*Interest Cost - Feb9 1, 30-yr - End of Year Debt Drowdown*	*0*	*113*	*235*	*358*	*522*	*670*	*803*	*911*	*1,064*	*1,187*	*1,279*	*1,417*	*1,540*	*1,622*	*1,678*	*1,673*	*1,668*	*1,622*	*1,540*	*1,453*	*1,361*	*1,269*	*1,166*	*1,064*	*952*	*834*	*711*	*583*	*450*	*307*	*159*	*0*	*0*	*0*	30,211
b	Additional GA Debt Drawdown, End of Year	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	0
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	11,621	11,521	10,621	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	8,800	6,000	3,100	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	21,079	21,079	21,079	21,079	19,379	17,579	15,779	13,779	11,779	9,579	7,279	4,879	2,379	0	0	0	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	13,399	15,072	16,740	18,362	19,902	21,355	22,716	23,985	25,151	26,215	27,167	28,001	28,712	29,295	29,746	30,052	30,211				
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	19,301	17,528	14,960	11,738	8,498	5,245	2,084	-1,185	-4,351	-7,615	-10,867	-14,101	-17,312	-20,495	-23,746	-26,952	-30,211				
Fiscal Exposure - End of Year Debt Drawdown		2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0	

Feb9 1, 30-yr — Equal Monthly Debt Drawdown

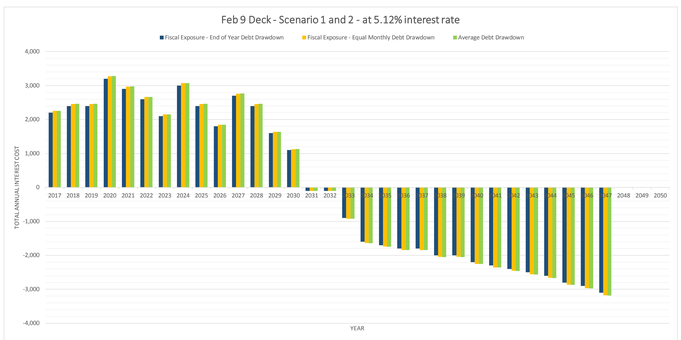
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
	1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
	($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	
1,676	*Interest Cost - Feb9 1, 30-yr*	*52*	*170*	*292*	*434*	*591*	*732*	*853*	*982*	*1,121*	*1,230*	*1,343*	*1,474*	*1,578*	*1,648*	*1,676*	*1,671*	*1,646*	*1,584*	*1,500*	*1,410*	*1,318*	*1,221*	*1,119*	*1,012*	*897*	*777*	*652*	*521*	*384*	*238*	*85*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0	
	Monthly Drawdown	183	191	180	237	198	161	108	174	111	51	118	82	5	(43)	(148)	(148)	(214)	(268)	(270)	(271)	(263)	(272)	(264)	(272)	(271)	(269)	(268)	(265)	(271)	(267)	(272)	-	-	-	
	FV of Monthly Drawdown at 5%	2,252	2,342	2,216	2,909	2,435	1,976	1,328	2,139	1,368	628	1,455	1,006	61	(534)	(1,820)	(1,815)	(2,629)	(3,298)	(3,317)	(3,330)	(3,236)	(3,347)	(3,242)	(3,342)	(3,329)	(3,311)	(3,288)	(3,259)	(3,328)	(3,283)	(3,336)	-	-	-	
	Annual Interest Cost on New Drawdowns	52	54	51	68	57	46	31	50	32	15	34	23	1	(12)	(42)	(42)	(61)	(77)	(77)	(77)	(75)	(78)	(75)	(78)	(77)	(76)	(76)	(76)	(77)	(76)	(78)	-	-	-	
	Annual Interest Cost on Opening Balance	-	115	241	367	534	686	822	932	1,089	1,215	1,309	1,451	1,577	1,660	1,718	1,713	1,708	1,660	1,577	1,488	1,393	1,299	1,194	1,089	974	854	728	597	461	314	162	(0)	(0)	(0)	
	Total Annual Interest Cost	52	170	292	434	591	732	853	982	1,121	1,230	1,343	1,474	1,578	1,648	1,676	1,671	1,646	1,584	1,500	1,410	1,318	1,221	1,119	1,012	897	777	652	521	384	238	85	(0)	(0)	(0)	

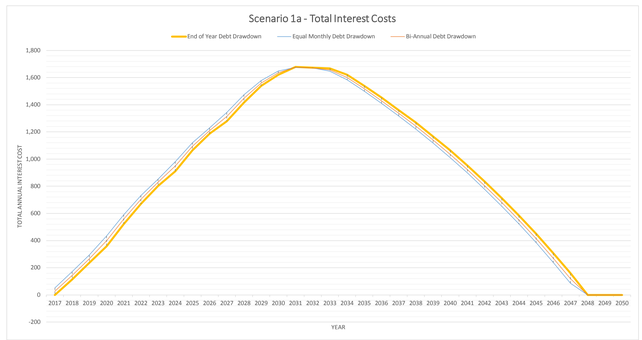
Feb9 1, 30-yr — Bi-Annual Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
	1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
	($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*28*	*143*	*266*	*399*	*559*	*703*	*830*	*949*	*1,095*	*1,210*	*1,314*	*1,448*	*1,560*	*1,636*	*1,677*	*1,672*	*1,656*	*1,601*	*1,518*	*1,430*	*1,338*	*1,243*	*1,141*	*1,036*	*922*	*803*	*679*	*550*	*414*	*270*	*119*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,228	2,431	2,431	3,241	2,937	2,633	2,127	3,038	2,431	1,823	2,735	2,431	1,620	1,114	-101	-101	-912	-1,620	-1,722	-1,823	-1,823	-2,026	-2,026	-2,228	-2,329	-2,431	-2,532	-2,633	-2,836	-2,937	-3,140	0	0	0	
	Bi-Annual Drawdown	1,100	1,144	1,082	1,421	1,189	965	648	1,045	668	307	710	491	30	(261)	(889)	(886)	(1,284)	(1,611)	(1,620)	(1,626)	(1,580)	(1,634)	(1,583)	(1,632)	(1,626)	(1,617)	(1,606)	(1,592)	(1,625)	(1,603)	(1,629)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,228	2,317	2,192	2,878	2,409	1,954	1,313	2,116	1,353	621	1,439	995	61	(529)	(1,801)	(1,796)	(2,601)	(3,263)	(3,281)	(3,295)	(3,201)	(3,311)	(3,207)	(3,306)	(3,293)	(3,275)	(3,252)	(3,224)	(3,292)	(3,248)	(3,300)	-	-	-	
	Annual Interest Cost on New Drawdowns	28	29	28	36	30	25	17	27	17	8	18	13	1	(7)	(23)	(23)	(33)	(41)	(41)	(42)	(40)	(42)	(41)	(42)	(42)	(41)	(41)	(41)	(42)	(41)	(42)	-	-	-	
	Annual Interest Cost on Opening Balance	-	114	238	363	529	679	814	922	1,078	1,202	1,295	1,435	1,560	1,643	1,700	1,694	1,689	1,643	1,560	1,472	1,378	1,285	1,181	1,078	964	845	720	591	456	311	161	0	0	0	
	Total Annual Interest Cost	28	143	266	399	559	703	830	949	1,095	1,210	1,314	1,448	1,560	1,636	1,677	1,672	1,656	1,601	1,518	1,430	1,338	1,243	1,141	1,036	922	803	679	550	414	270	119	0	0	0	

Feb9 1, 30-yr — Average Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
	($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*56*	*174*	*297*	*440*	*596*	*737*	*857*	*987*	*1,126*	*1,233*	*1,348*	*1,479*	*1,581*	*1,650*	*1,676*	*1,670*	*1,645*	*1,581*	*1,496*	*1,407*	*1,315*	*1,218*	*1,115*	*1,008*	*893*	*773*	*647*	*517*	*379*	*233*	*79*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		2,256	2,461	2,461	3,282	2,974	2,667	2,154	3,077	2,461	1,846	2,769	2,461	1,641	1,128	-103	-103	-923	-1,641	-1,743	-1,846	-1,846	-2,051	-2,051	-2,256	-2,359	-2,461	-2,564	-2,667	-2,872	-2,974	-3,179	0	0	0	





Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Feb9_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0
			38	38	40	55	50	40	31	50	31	19	36	31	5	-5	-17	-19	-19	-21	-21	-21	-24	-26	-26	-26	-31	-29	-33	-33	-36	-38	-38	0	0	0

0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,300	998	17,886
Equal Monthly Debt Drawdown	2,355	993	

	Feb9 2, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,500	2029	13,466
Equal Monthly Debt Drawdown	19,964		

Feb9 2, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
a	Debt, Beginning of Year	0	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	
c = a*5%	*Interest Cost - Feb9 2, 30-yr - End of Year Debt Drawdown*	*0*	*82*	*164*	*251*	*368*	*476*	*563*	*629*	*737*	*803*	*844*	*921*	*987*	*998*	*987*	*952*	*911*	*870*	*824*	*778*	*732*	*680*	*624*	*568*	*512*	*445*	*384*	*312*	*240*	*164*	*82*	*0*	*0*	*0*	17,886
b	Additional GA Debt Drawdown, End of Year	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	7,123	6,323	5,523	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,700	3,200	1,600	0	0	0	
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	11,477	11,477	11,477	11,477	10,577	9,677	8,677	7,577	6,477	5,377	4,077	2,877	1,477	0	0	0	0	0	0	0	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	8,810	9,762	10,672	11,542	12,366	13,143	13,875	14,556	15,180	15,748	16,259	16,704	17,088	17,400	17,641	17,804	17,886				
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	9,790	8,038	6,328	4,558	2,834	1,157	-575	-2,356	-4,080	-5,748	-7,559	-9,204	-10,988	-12,700	-14,441	-16,204	-17,886				
Fiscal Exposure - End of Year Debt Drawdown		1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0	

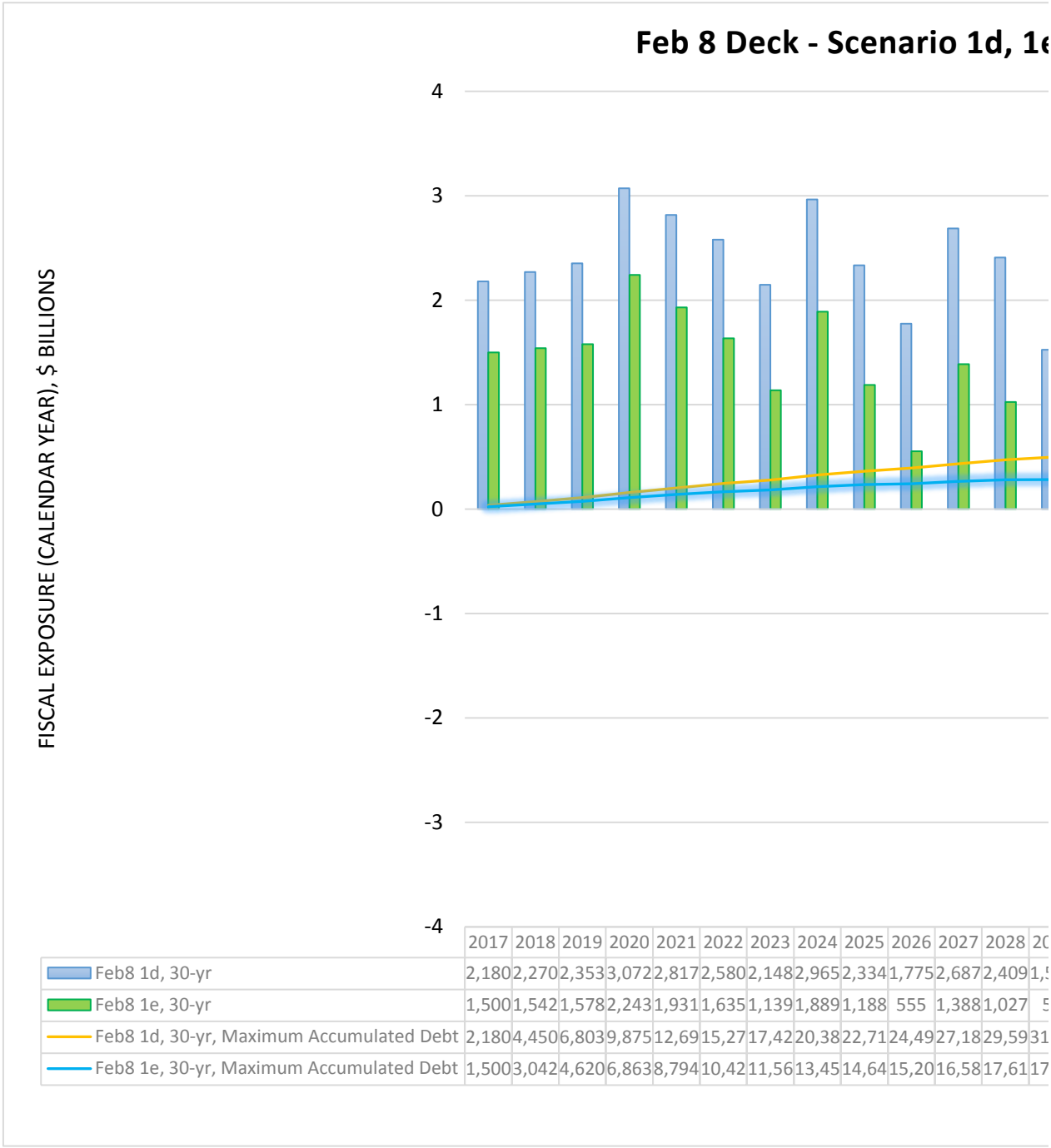
Feb9 2, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	
993	*Interest Cost - Feb9 2, 30-yr*	*38*	*120*	*204*	*305*	*418*	*516*	*594*	*679*	*768*	*822*	*880*	*952*	*992*	*993*	*971*	*933*	*892*	*848*	*802*	*756*	*708*	*654*	*598*	*542*	*481*	*417*	*350*	*279*	*205*	*126*	*44*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0	
	Monthly Drawdown	133	127	128	171	144	102	61	123	47	(0)	55	32	(66)	(100)	(141)	(146)	(143)	(147)	(144)	(140)	(144)	(148)	(144)	(139)	(151)	(137)	(149)	(143)	(145)	(147)	(140)	-	-	-	
	FV of Monthly Drawdown at 5%	1,638	1,554	1,573	2,098	1,773	1,253	755	1,506	577	(3)	671	388	(806)	(1,226)	(1,728)	(1,793)	(1,751)	(1,812)	(1,765)	(1,718)	(1,773)	(1,823)	(1,765)	(1,708)	(1,855)	(1,684)	(1,826)	(1,753)	(1,782)	(1,806)	(1,722)	-	-	-	
	Annual Interest Cost on New Drawdowns	38	36	37	49	41	29	18	35	13	(0)	16	9	(19)	(28)	(40)	(42)	(41)	(42)	(41)	(40)	(41)	(42)	(41)	(40)	(43)	(39)	(42)	(41)	(41)	(42)	(40)	-	-	-	
	Annual Interest Cost on Opening Balance	-	84	168	257	377	487	576	644	754	822	864	943	1,011	1,021	1,011	974	932	890	843	796	749	697	639	581	524	456	393	320	246	168	84	0	0	0	
	Total Annual Interest Cost	38	120	204	305	418	516	594	679	768	822	880	952	992	993	971	933	892	848	802	756	708	654	598	542	481	417	350	279	205	126	44	0	0	0	

Feb9 2, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*20*	*102*	*185*	*280*	*395*	*498*	*579*	*656*	*753*	*813*	*863*	*938*	*990*	*995*	*978*	*941*	*900*	*858*	*812*	*766*	*719*	*666*	*610*	*554*	*495*	*430*	*366*	*294*	*221*	*143*	*61*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,620	1,620	1,722	2,329	2,127	1,722	1,317	2,127	1,317	810	1,519	1,317	203	-203	-709	-810	-810	-912	-912	-912	-1,013	-1,114	-1,114	-1,114	-1,317	-1,215	-1,418	-1,418	-1,519	-1,620	-1,620	0	0	0	
	Bi-Annual Drawdown	800	759	768	1,025	866	612	369	735	282	(2)	328	190	(394)	(599)	(844)	(876)	(855)	(885)	(862)	(839)	(866)	(890)	(862)	(834)	(906)	(823)	(892)	(856)	(870)	(882)	(841)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,620	1,538	1,556	2,076	1,754	1,240	747	1,490	570	(3)	664	384	(797)	(1,213)	(1,709)	(1,774)	(1,733)	(1,792)	(1,746)	(1,699)	(1,754)	(1,803)	(1,746)	(1,689)	(1,835)	(1,666)	(1,807)	(1,734)	(1,763)	(1,786)	(1,703)	-	-	-	
	Annual Interest Cost on New Drawdowns	20	19	20	26	22	16	9	19	7	(0)	8	5	(10)	(15)	(22)	(22)	(22)	(23)	(22)	(21)	(22)	(23)	(22)	(21)	(23)	(21)	(23)	(22)	(22)	(23)	(22)	-	-	-	
	Annual Interest Cost on Opening Balance	-	83	166	254	373	482	570	637	746	814	855	933	1,000	1,010	1,000	964	922	881	834	788	741	689	632	575	518	451	389	316	244	166	83	0	0	0	
	Total Annual Interest Cost	20	102	185	280	395	498	579	656	753	813	863	938	990	995	978	941	900	858	812	766	719	666	610	554	495	430	366	294	221	143	61	0	0	0	

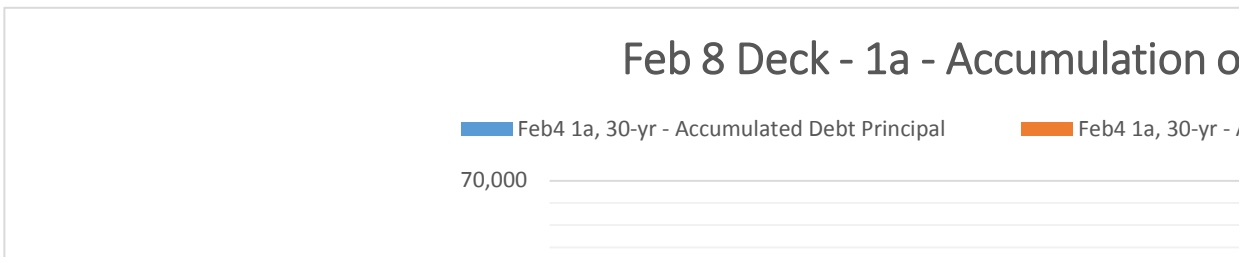
Feb9 2, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*41*	*123*	*207*	*310*	*422*	*519*	*596*	*683*	*770*	*824*	*883*	*954*	*993*	*993*	*970*	*931*	*890*	*847*	*801*	*755*	*706*	*652*	*596*	*540*	*478*	*414*	*348*	*276*	*202*	*123*	*41*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,641	1,641	1,743	2,359	2,154	1,743	1,333	2,154	1,333	820	1,538	1,333	205	-205	-718	-820	-820	-923	-923	-923	-1,026	-1,128	-1,128	-1,128	-1,333	-1,231	-1,436	-1,436	-1,538	-1,641	-1,641	0	0	0	

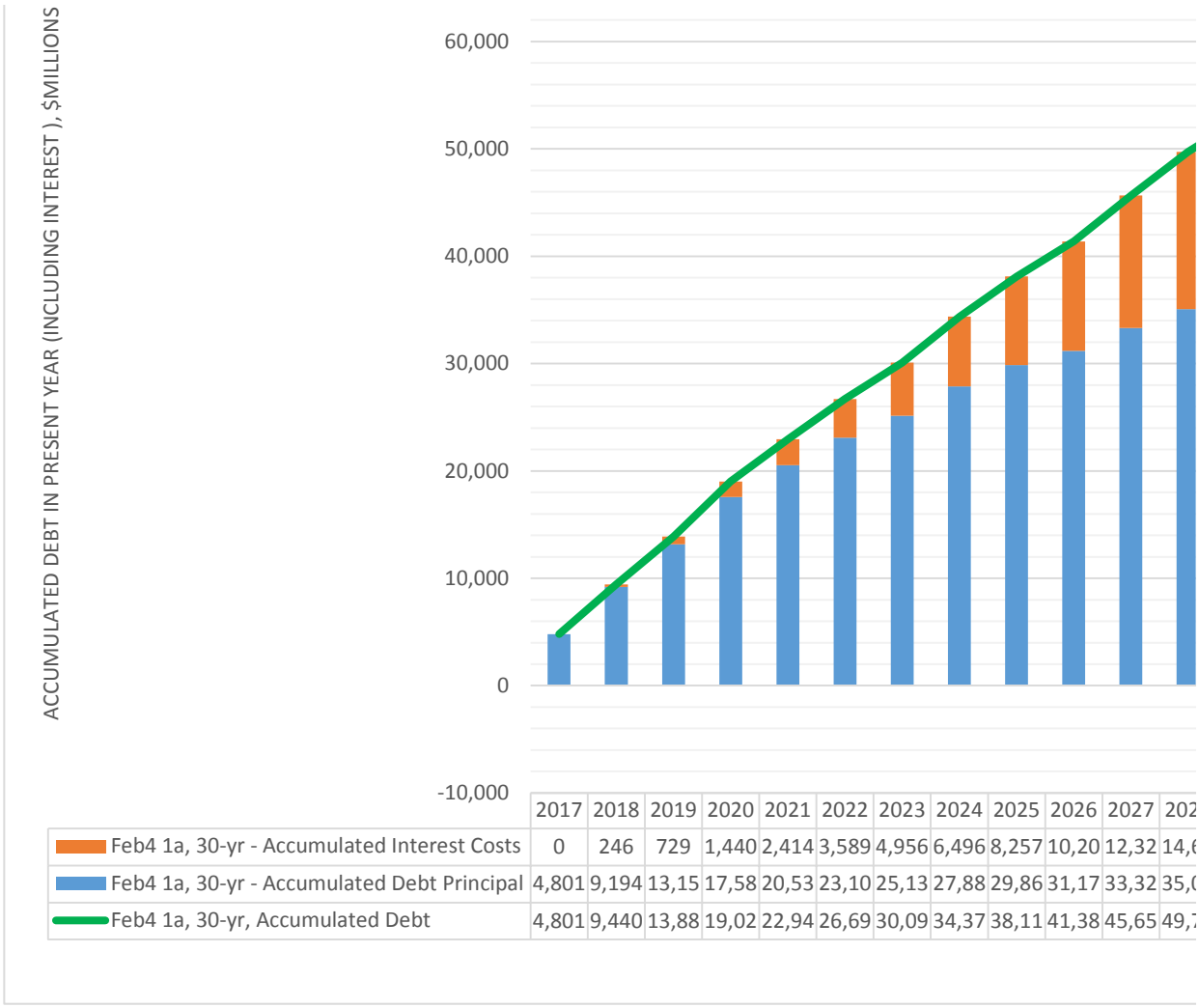
Feb 8 Deck

Feb 8 Deck - Scenario 1d, 1e - at 5.12% interest rate

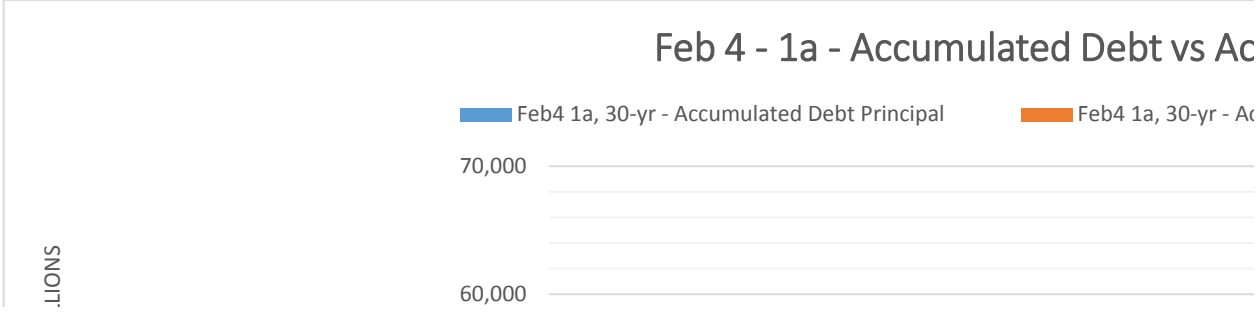


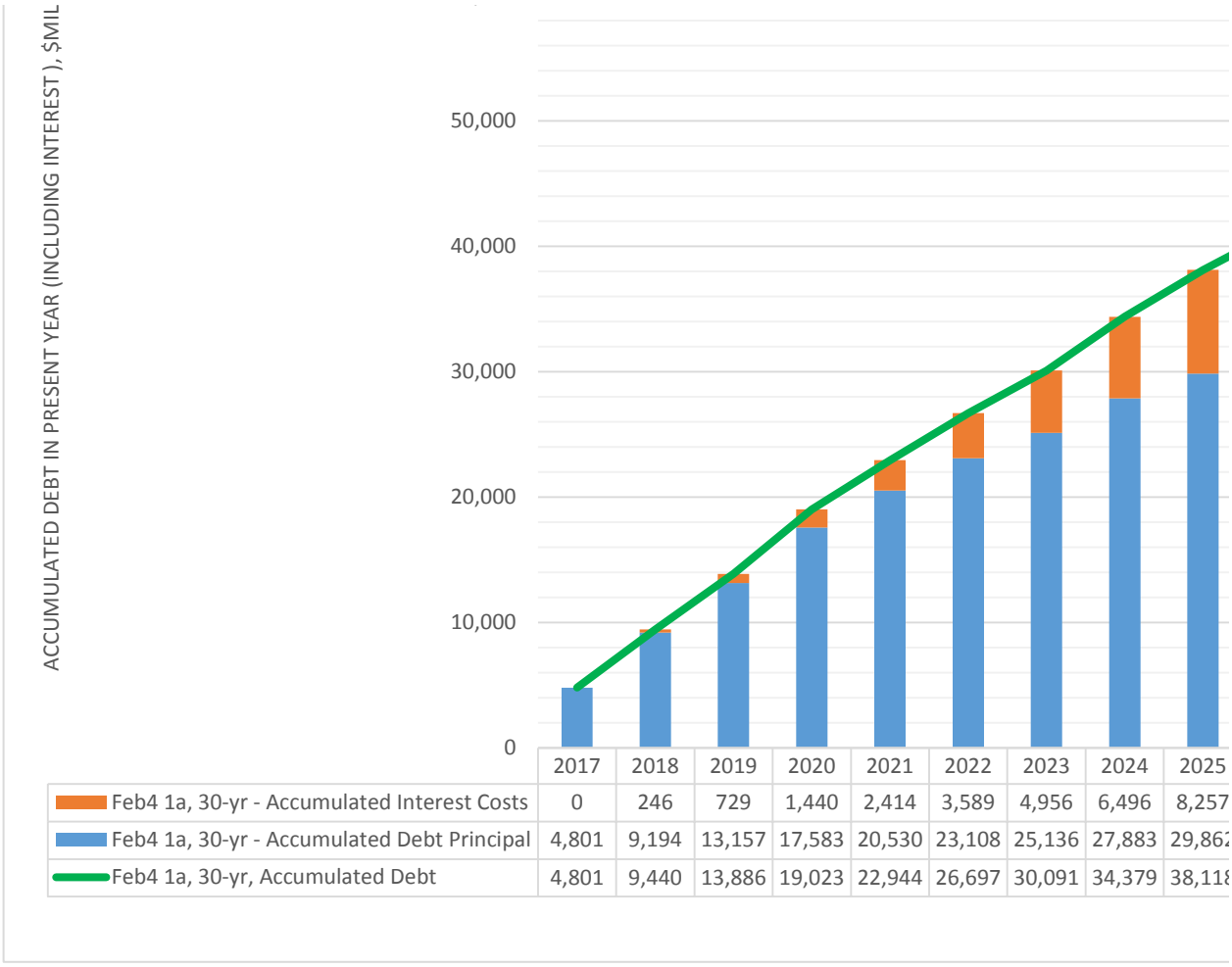
Feb 8 Deck - 1a - Accumulation of Debt (Principal and Interest)



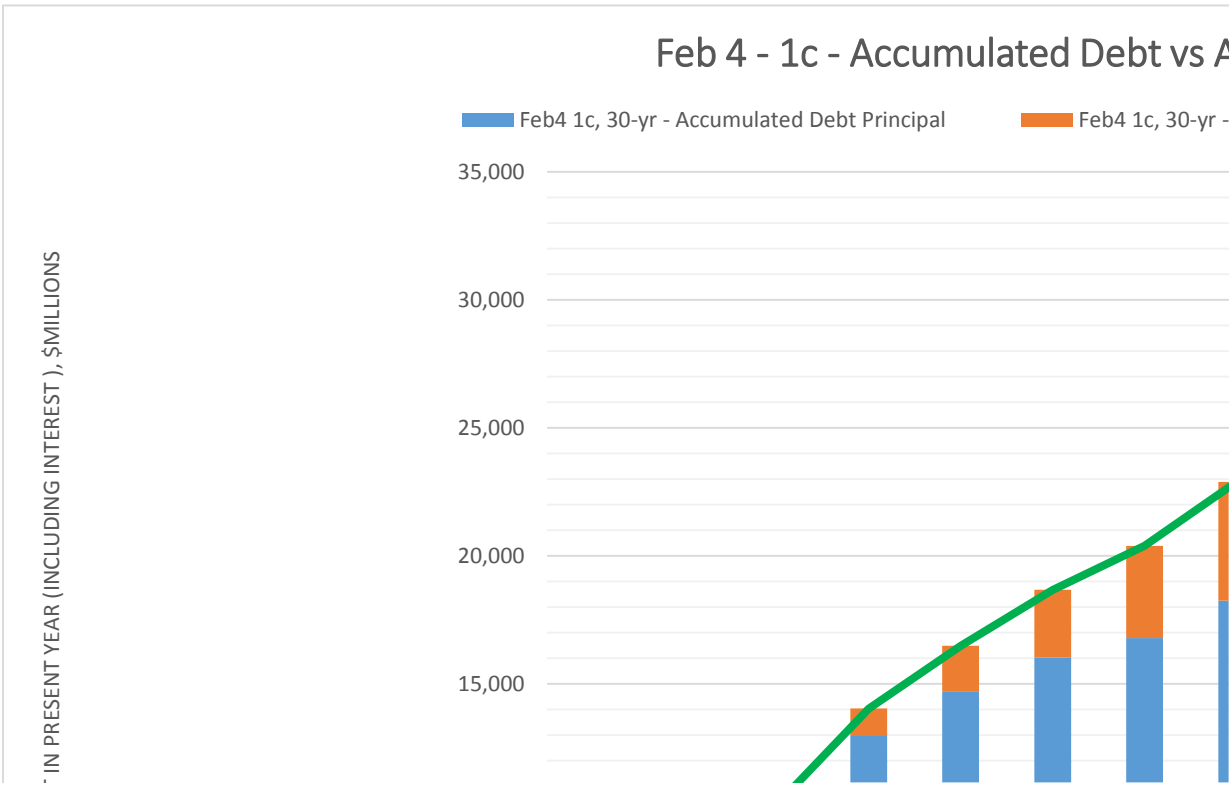


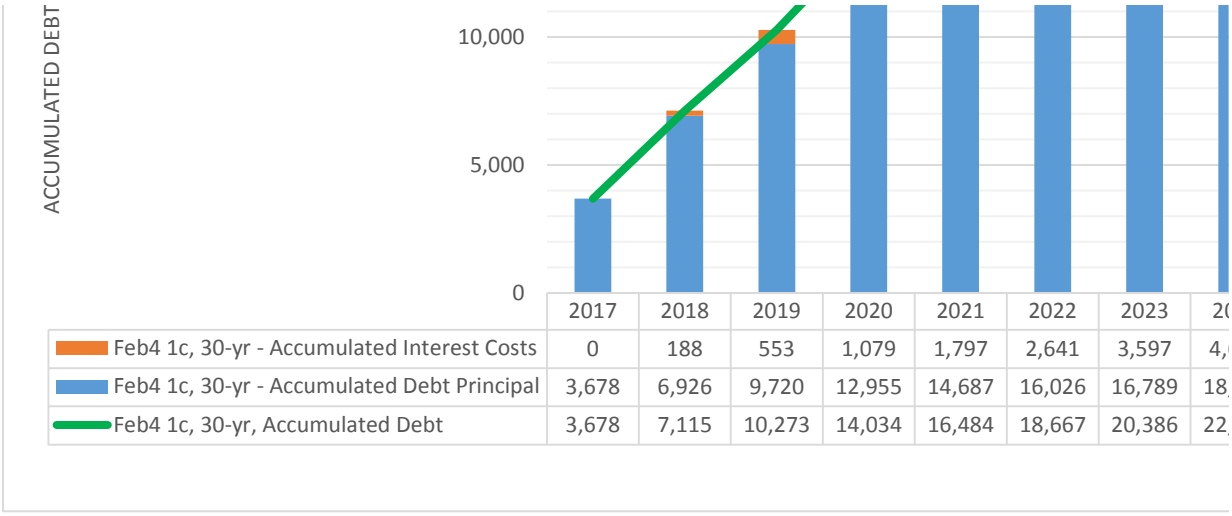
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	202
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,(
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,7



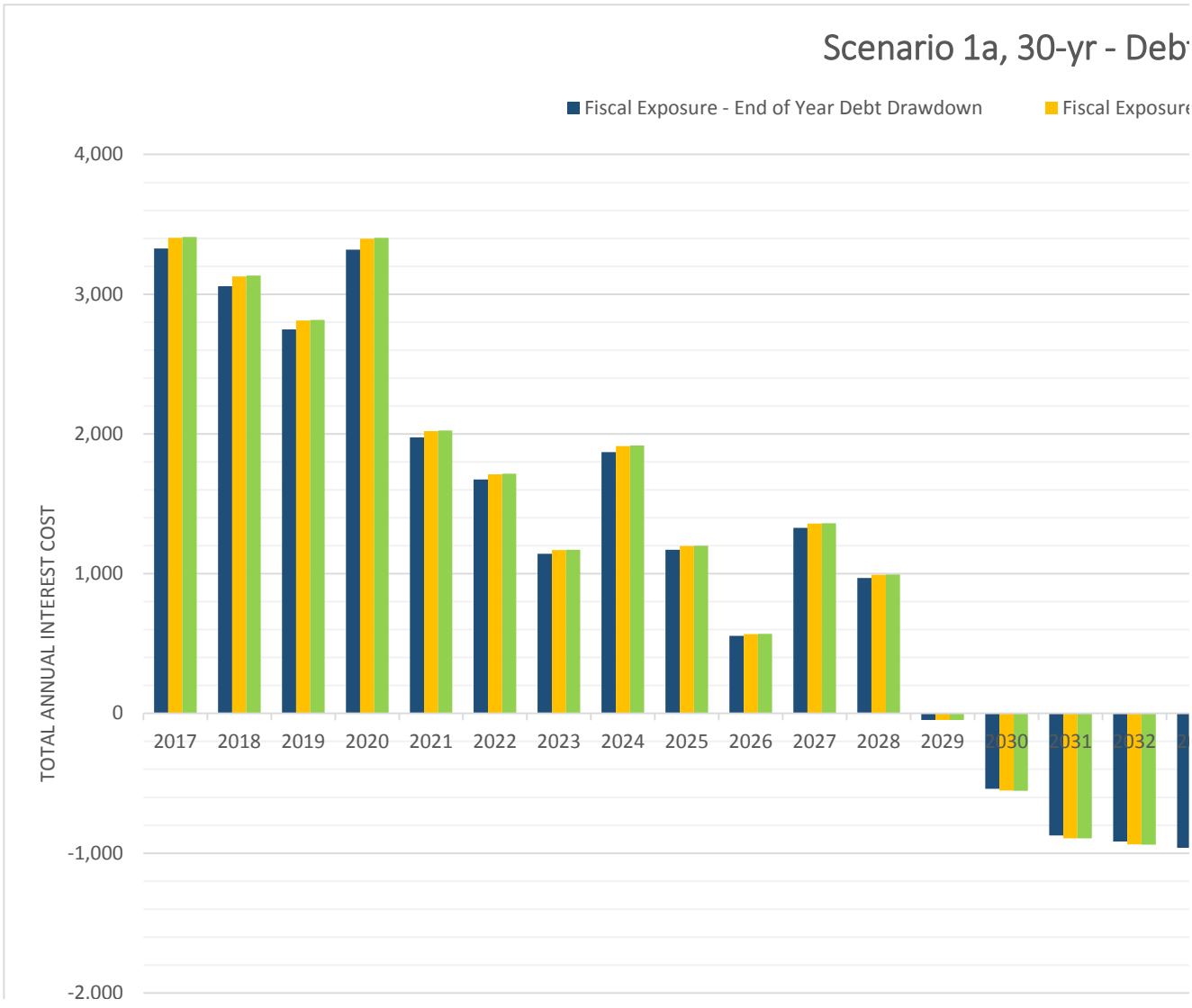


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



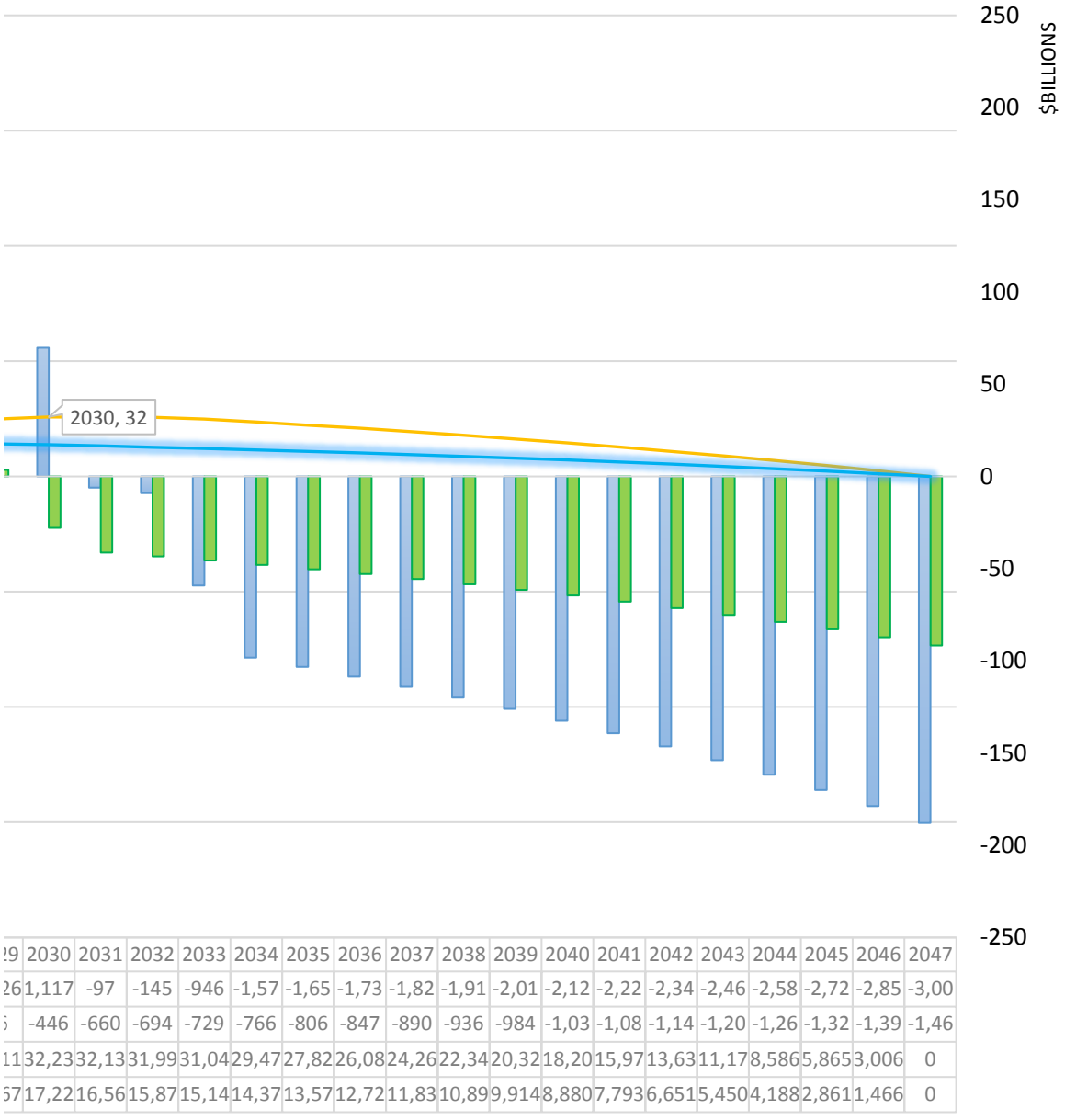


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

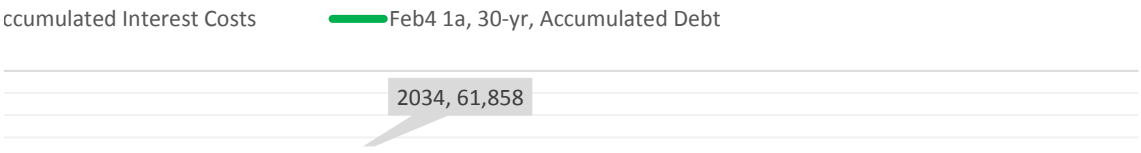
- at 5.12% interest rate

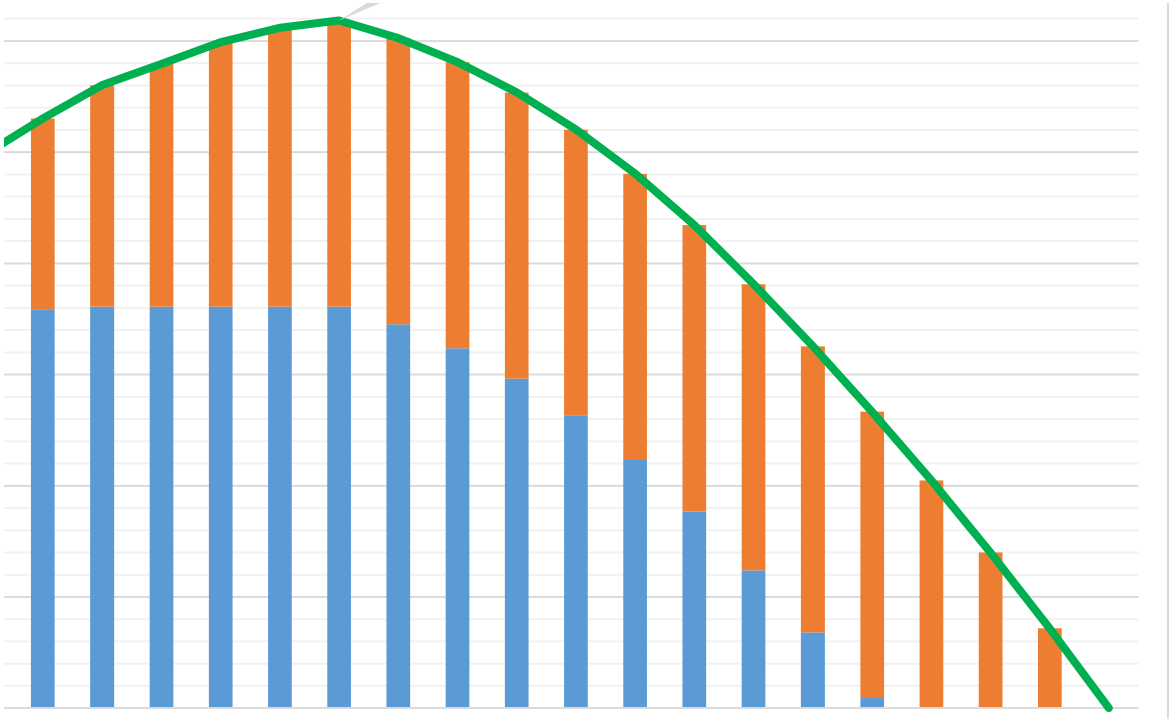


29	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
26	1,117	-97	-145	-946	-1,57	-1,65	-1,73	-1,82	-1,91	-2,01	-2,12	-2,22	-2,34	-2,46	-2,58	-2,72	-2,85	-3,00
5	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,03	-1,08	-1,14	-1,20	-1,26	-1,32	-1,39	-1,46
11	32,23	32,13	31,99	31,04	29,47	27,82	26,08	24,26	22,34	20,32	18,20	15,97	13,63	11,17	8,586	5,865	3,006	0
57	17,22	16,56	15,87	15,14	14,37	13,57	12,72	11,83	10,89	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0

CALENDAR YEAR

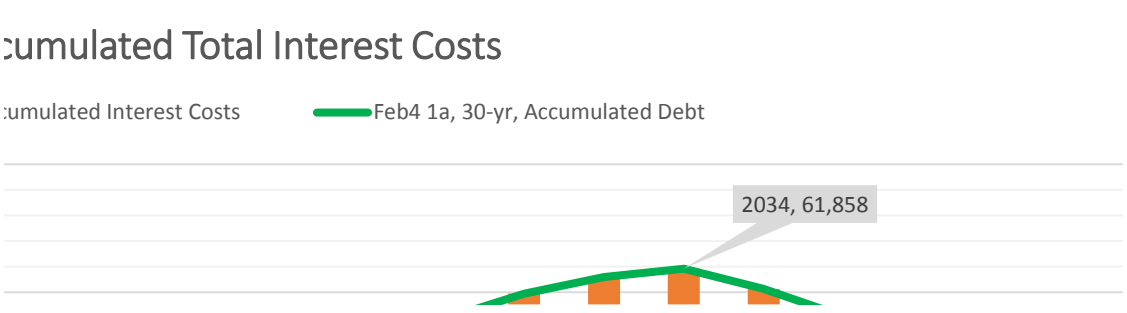
Debt (Principal and Interest)



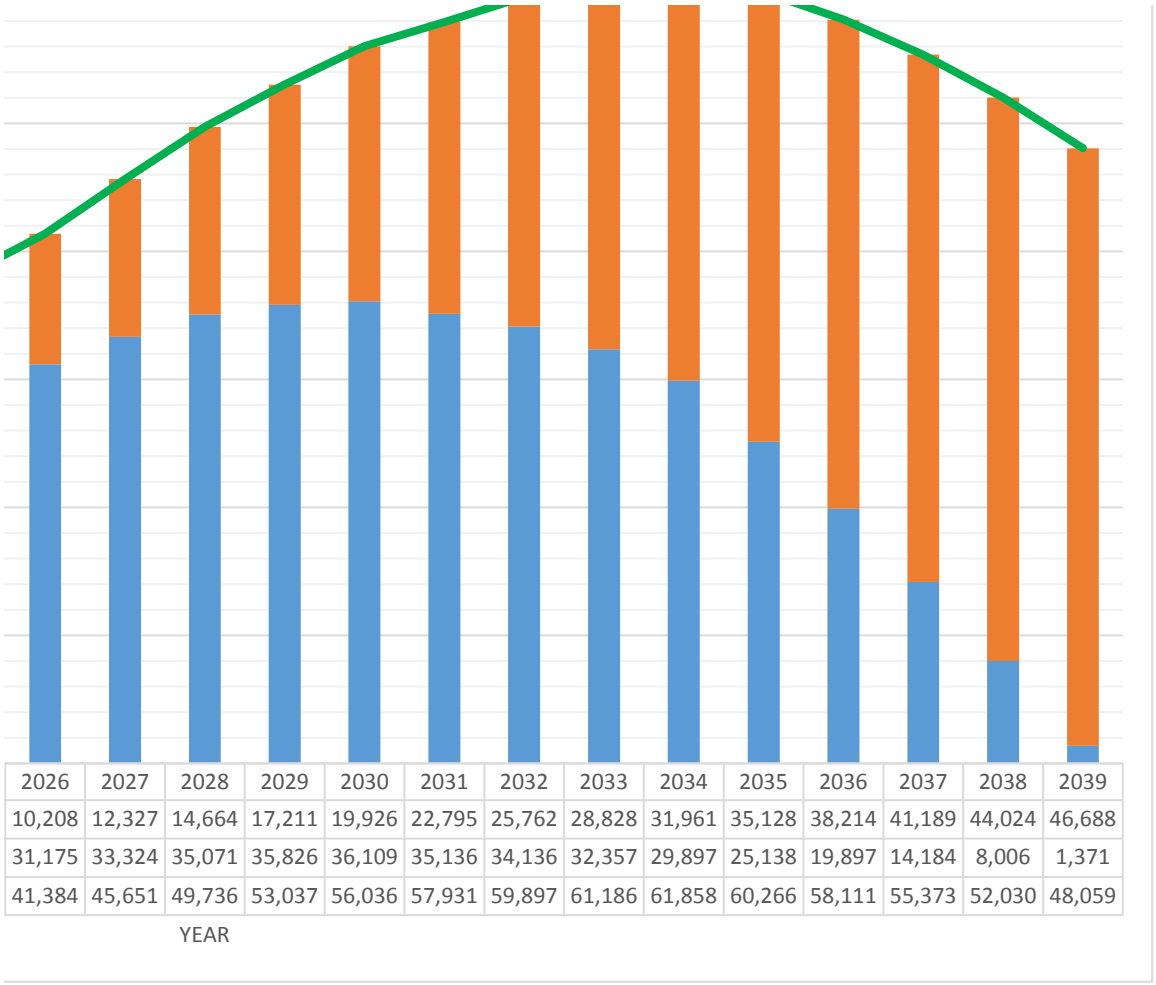


	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
5	17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
7	35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
3	53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



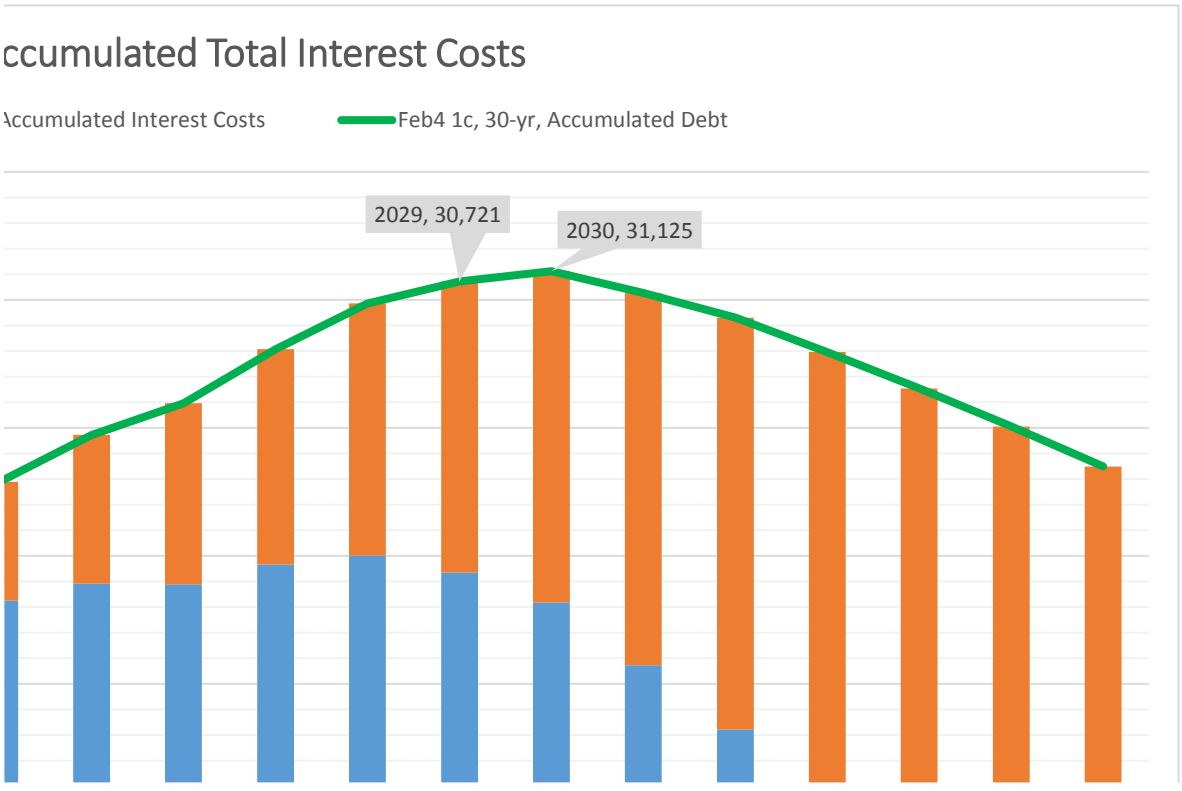
LIONS

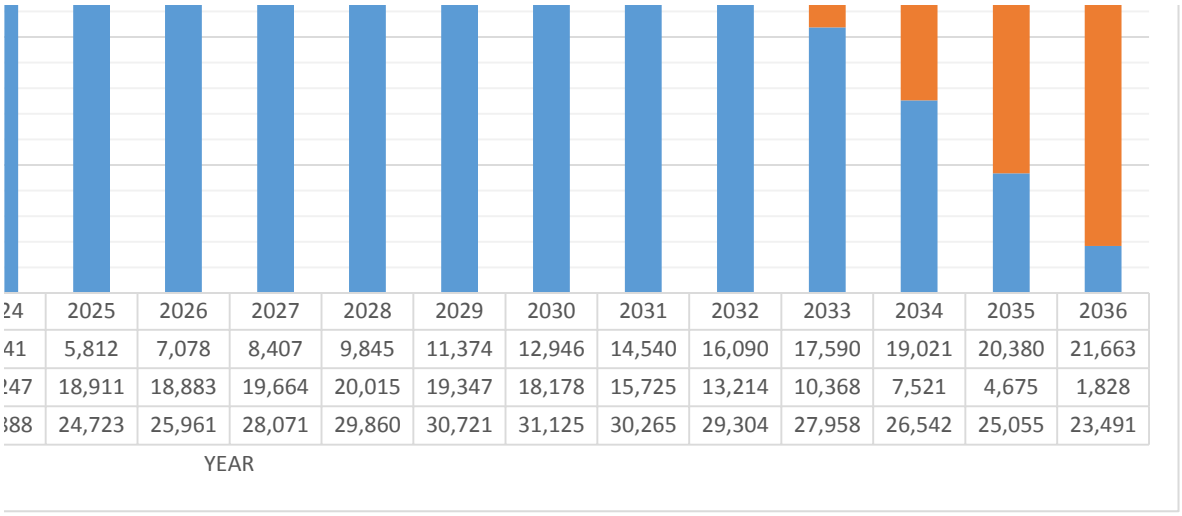


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

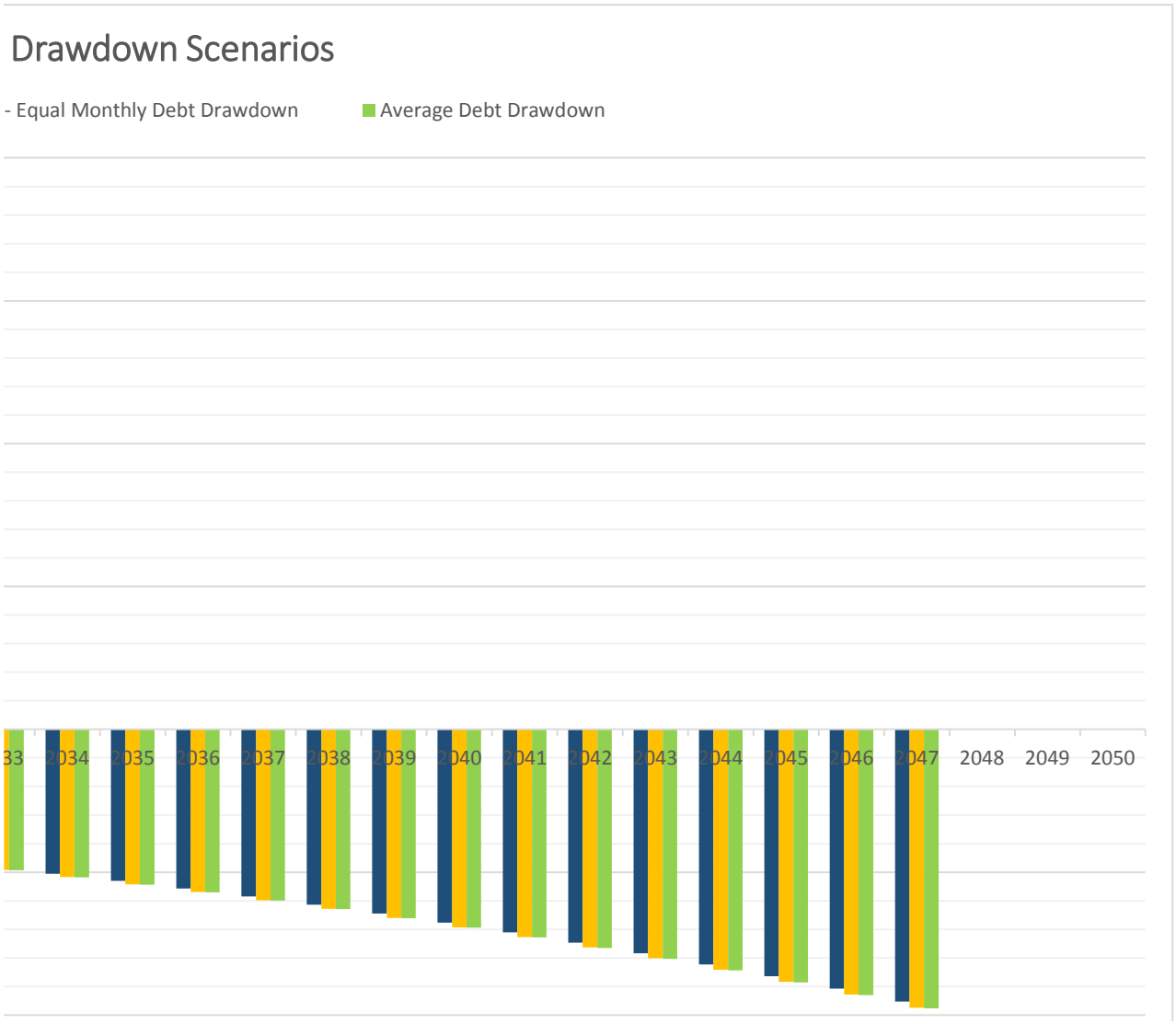
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





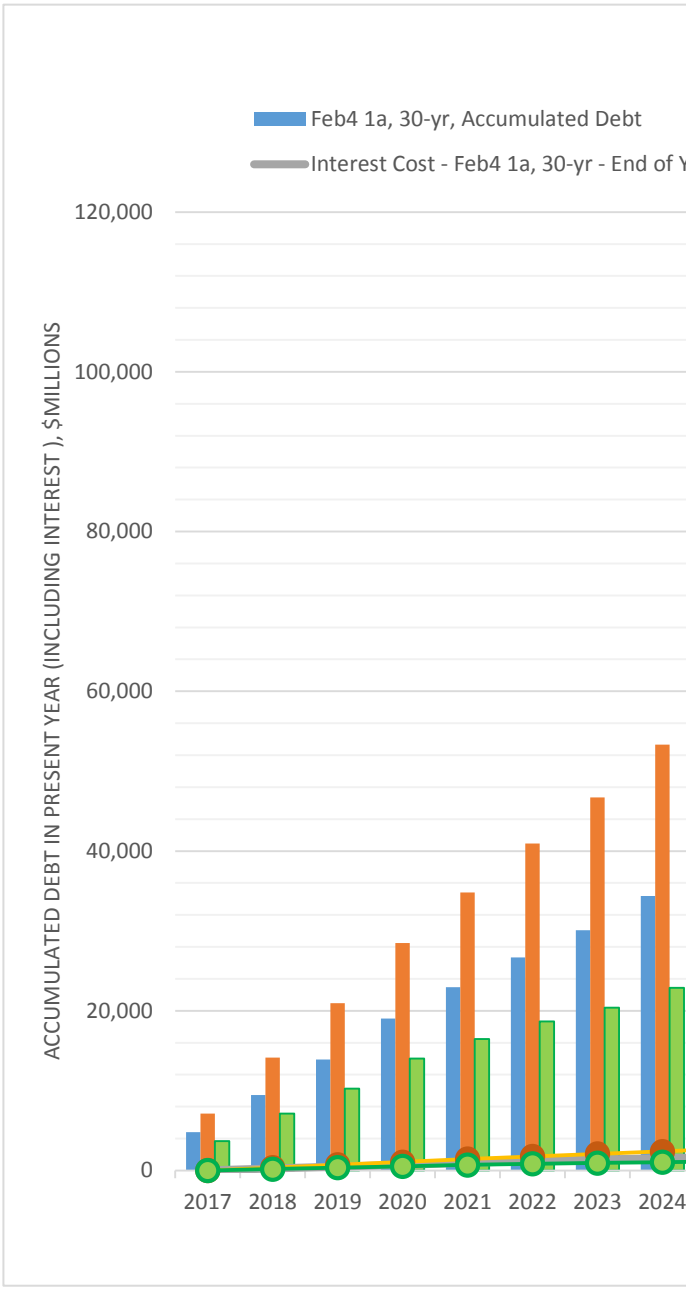
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

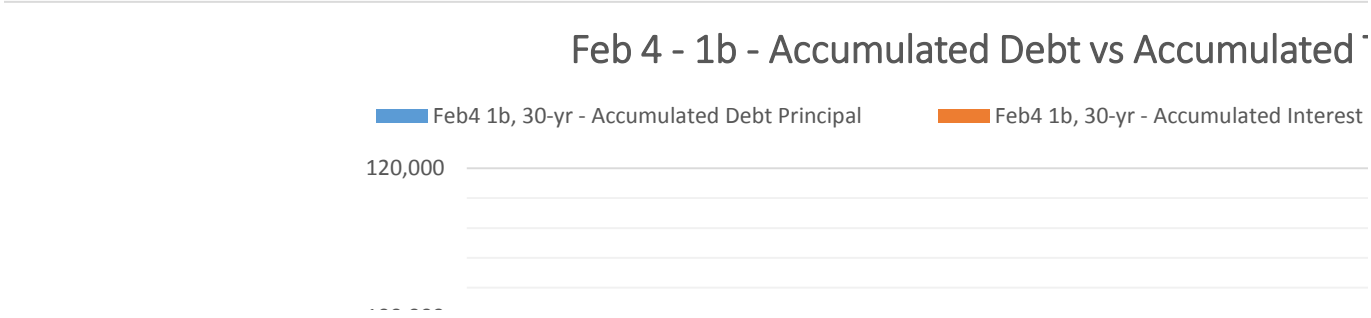
YEAR

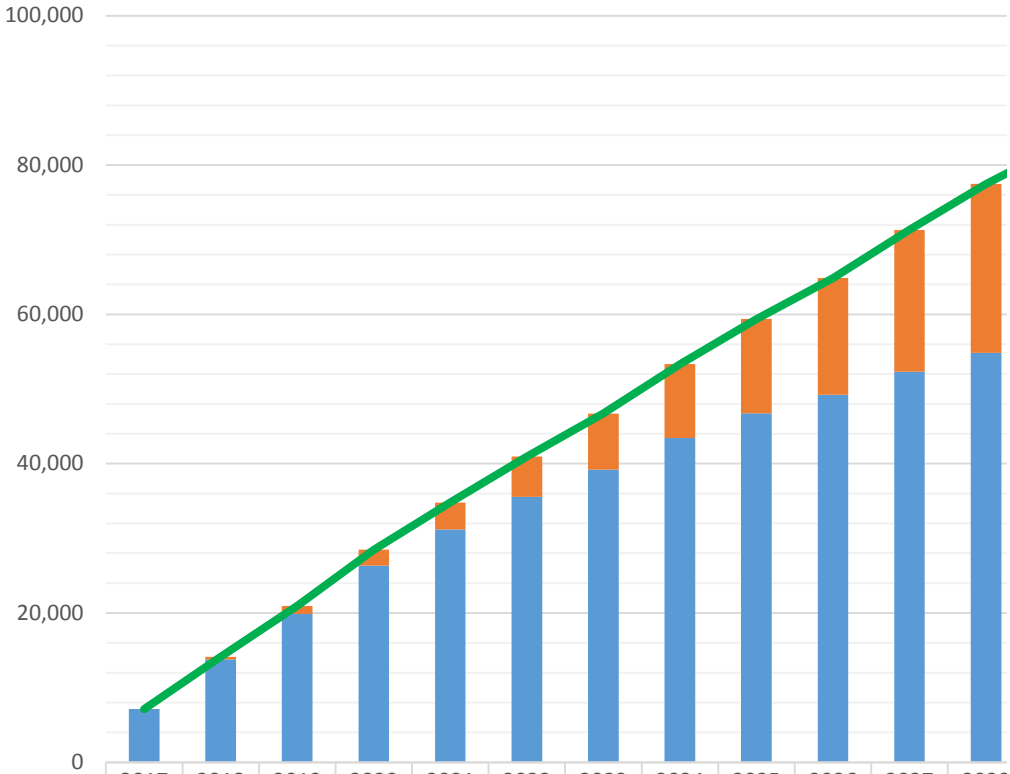


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate

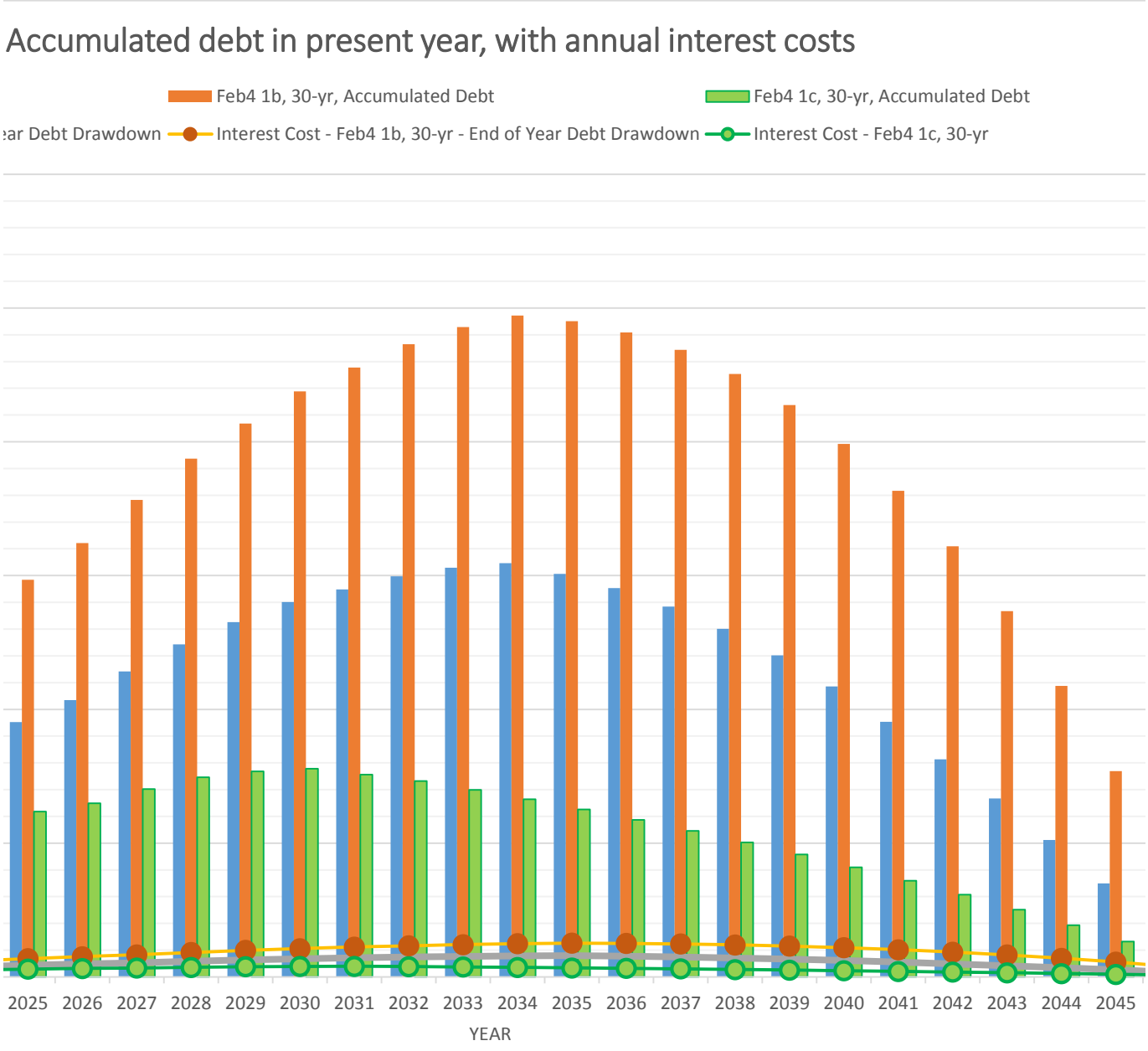


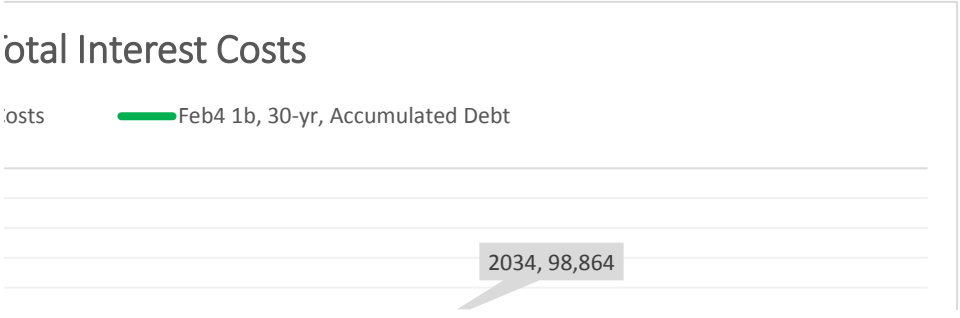

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

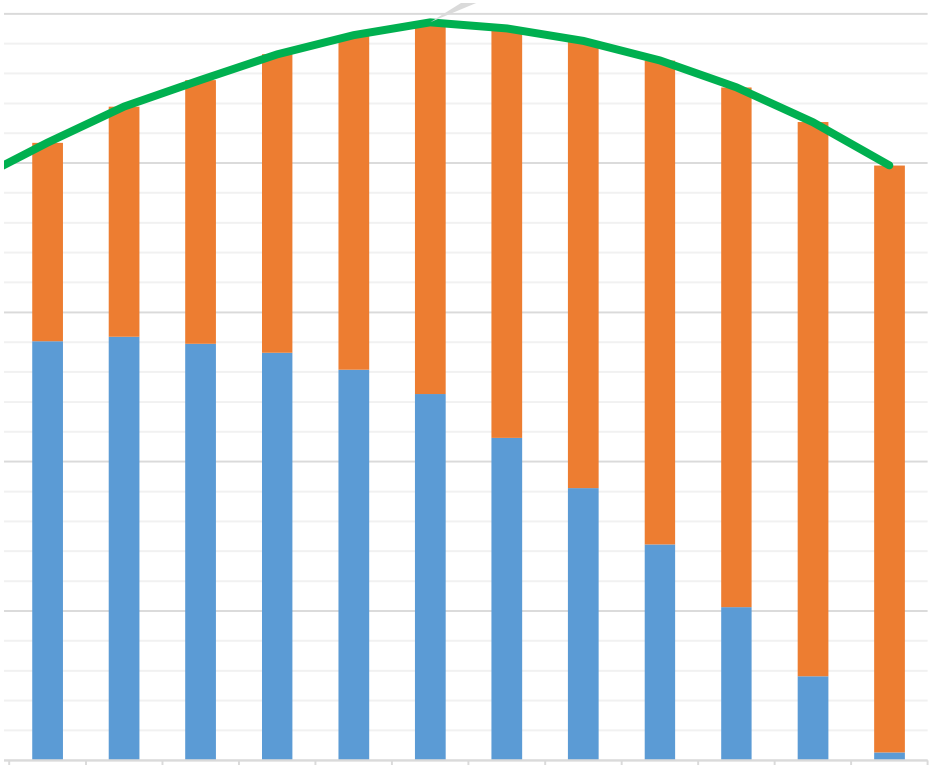


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y

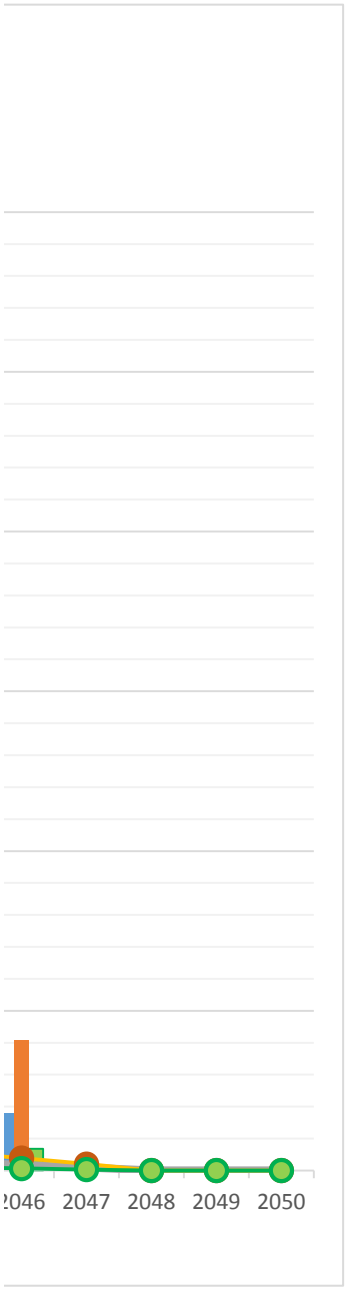

Accumulated debt in present year, with annual interest costs
Feb4 1b, 30-yr, Accumulated Debt
Feb4 1c, 30-yr, Accumulated Debt
ear Debt Drawdown
Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown
Interest Cost - Feb4 1c, 30-yr
2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045
YEAR


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

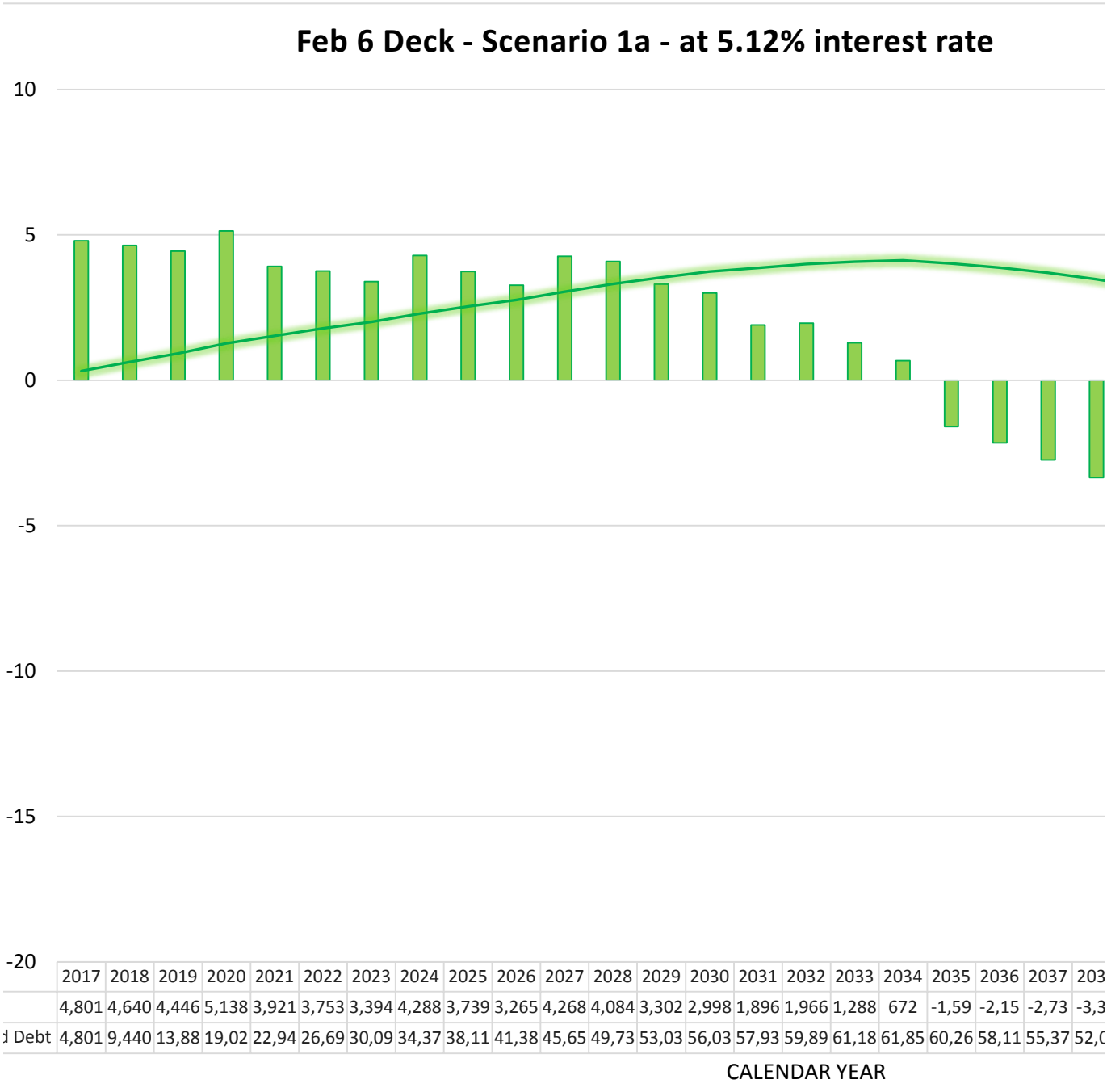
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

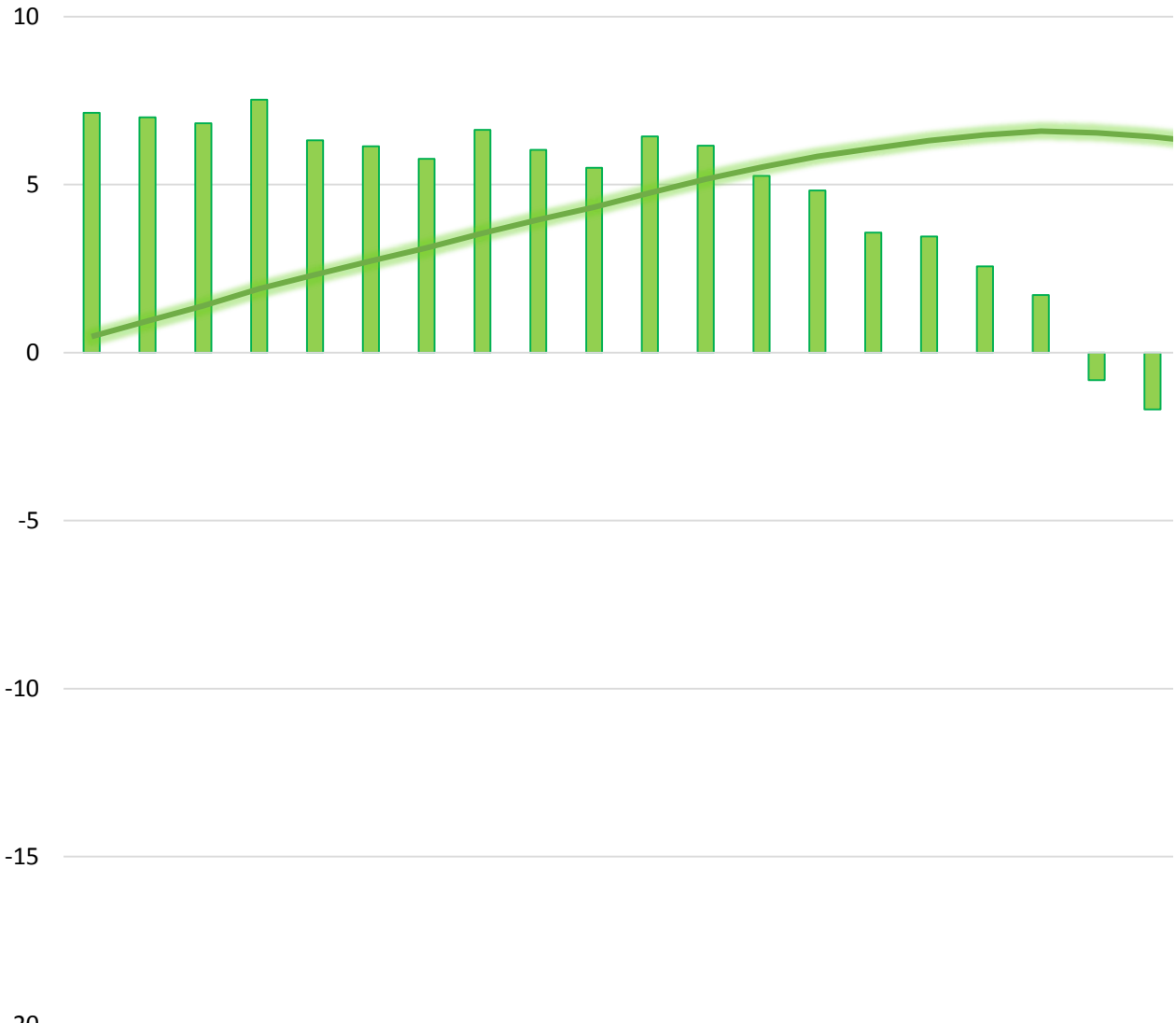
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

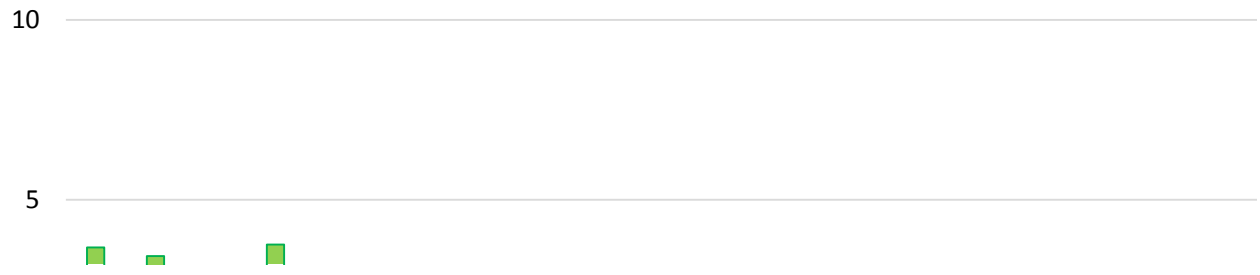
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

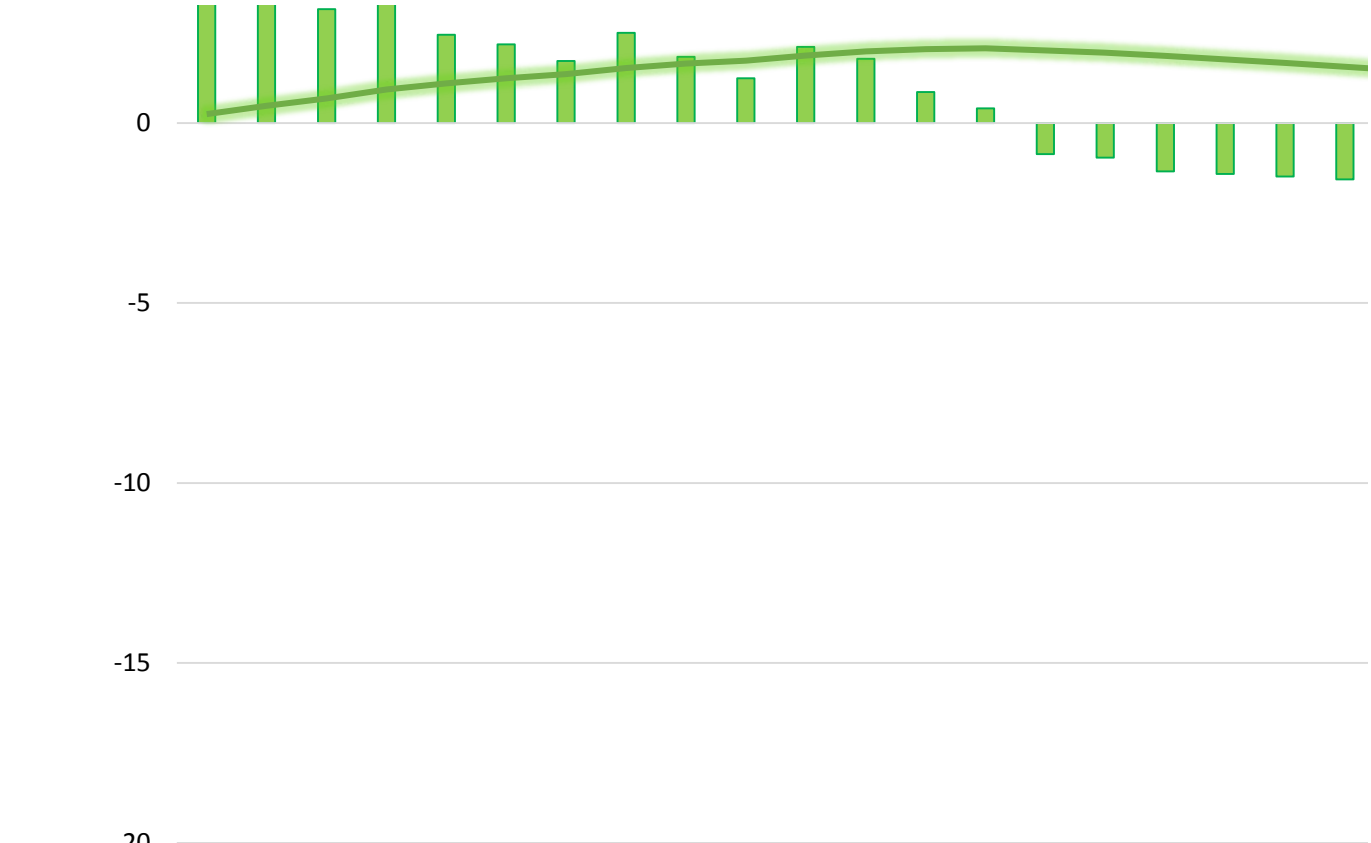


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



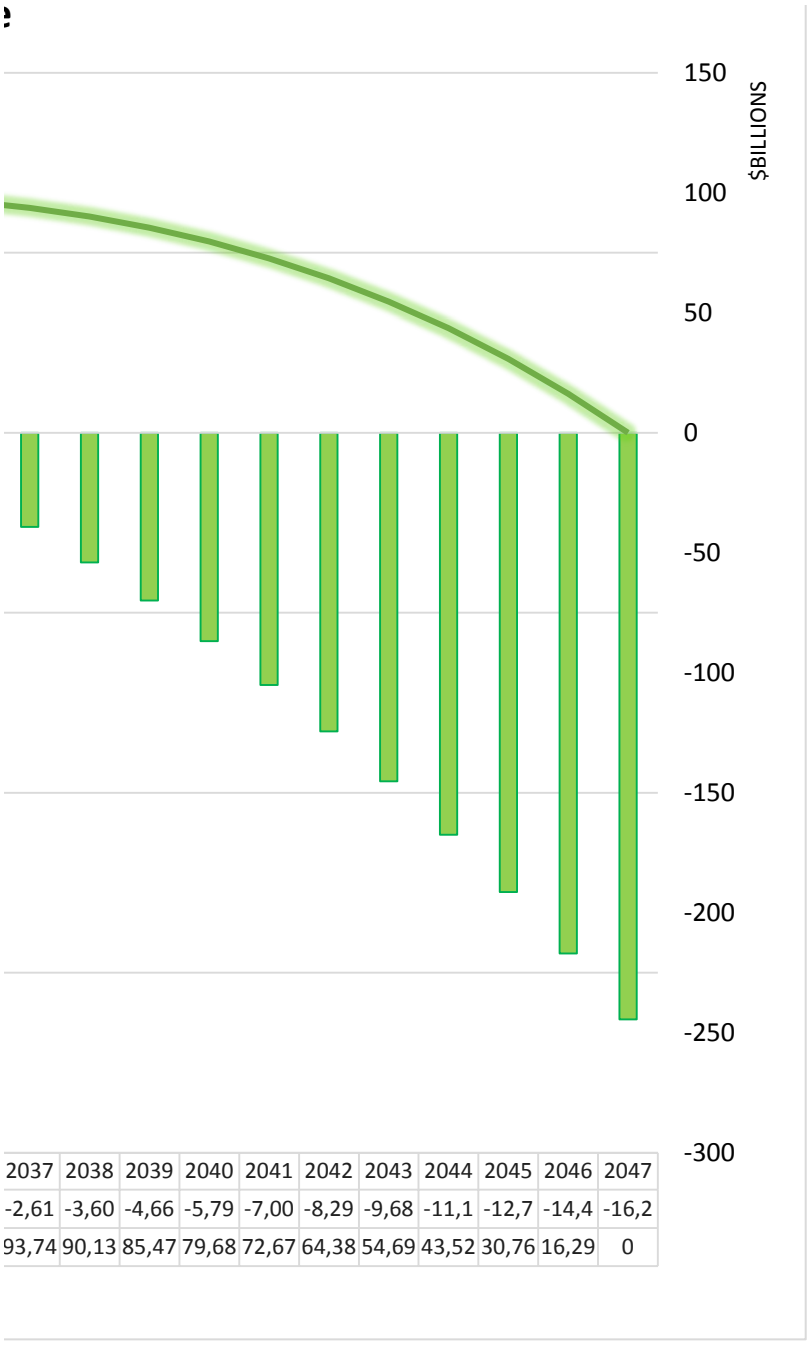


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

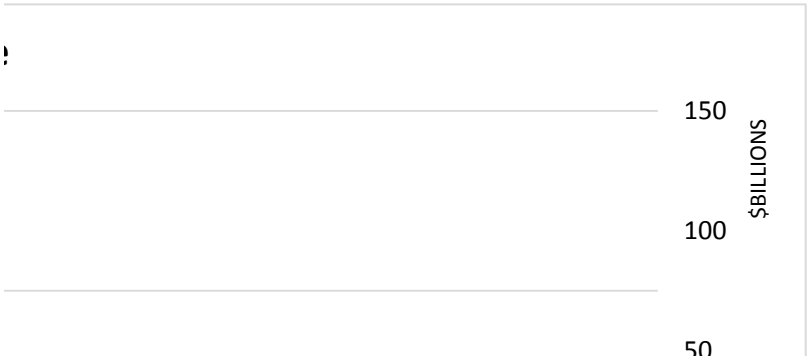
CALENDAR YEAR

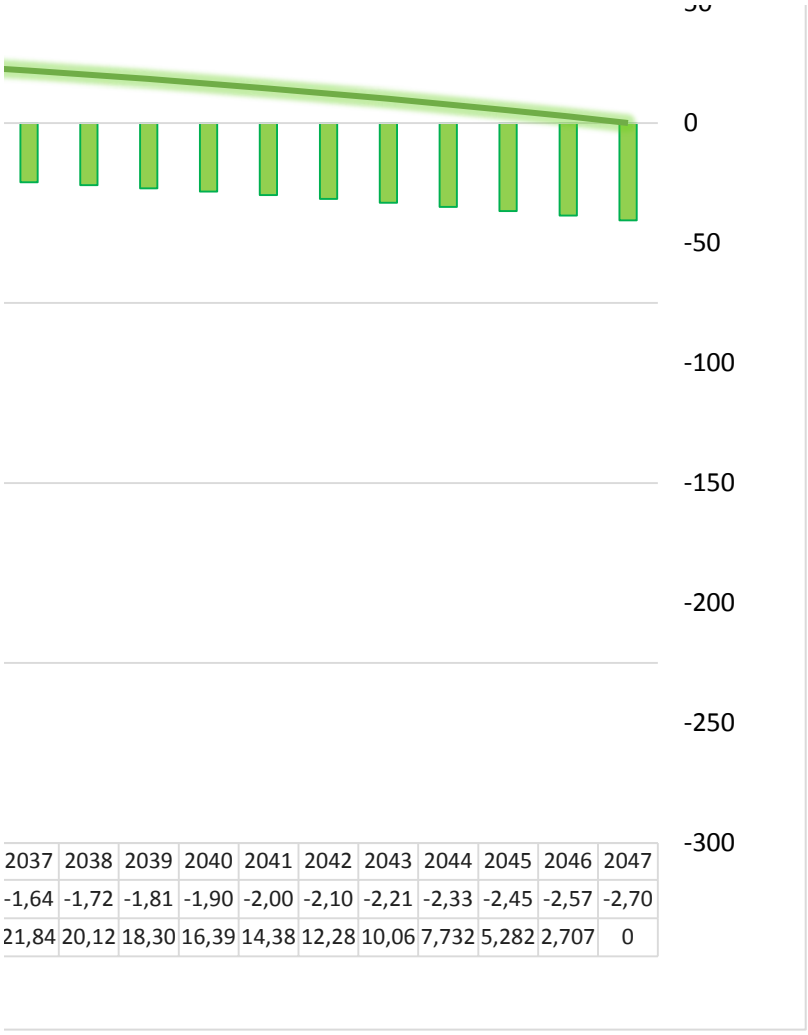


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Feb 8 Deck - Scenario 1a, 1b, 1c - at 5.12% interest
IESO GA cost forecast + extrapolation

Scenario
1a

1b

1c

1d

1e

	2017	2018	2019	2020
rate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	4674	9542	14587	21173

GA Payment from Impacted Rate Class	7421	7205	6995	6329
Accumulated debt in present year (including interest)	4674	9544	14589	21175

GA Payment from Impacted Rate Class	7421	7425	7440	7013
Accumulated debt in present year (including interest)	4674	9323	13913	19780

GA Payment from Impacted Rate Class	9915	9676	9427	9445
Accumulated debt in present year (including interest)	2180	4450	6803	9875

GA Payment from Impacted Rate Class	10596	10370	10129	10162
Accumulated debt in present year (including interest)	1500	3042	4620	6863

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
27212	33084	38588	44968	50769	56056	62291	68274

5890	6156	6434	6724	7028	7345	7677	8024
27212	33082	38585	44963	50762	56048	62281	68263

6825	7042	7266	7497	7736	7983	8237	8499
24810	29671	34167	39545	44359	48679	53976	59058

8532	8703	8877	9054	9236	9420	9609	9801
12692	15272	17420	20384	22719	24494	27181	29590

9264	9449	9638	9831	10027	10228	10432	10641
8794	10429	11568	13457	14645	15200	16588	17614

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
73391	78103	81594	85015	87596	89375	88679	87180

8386	8765	9160	9574	10006	10458	10931	11424
73378	78089	81578	84997	87577	89356	88659	87159

8770	9049	9337	9634	9941	10257	10584	10921
63318	67230	69987	72754	74773	76097	75068	73377

9997	10197	10401	10609	10821	10916	8822	8548
31116	32233	32135	31991	31045	29473	27822	26085

10854	11071	10196	10361	9779	9298	7203	6930
17670	17225	16565	15871	15142	14376	13570	12723

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
84828	81568	77341	72085	65730	58203	49425	39310

11940	12480	13043	13632	14248	14891	15564	16267
84806	81546	77320	72065	65711	58186	49409	39297

11269	11628	11998	12380	12774	13181	13600	14033
70990	67875	63995	59310	53778	47352	39985	31624

8288	8040	7805	7580	7367	7164	6970	6786
24260	22342	20325	18206	15978	13635	11173	8586

6670	6422	6186	5962	5748	5545	5352	5168
11833	10897	9914	8880	7793	6651	5450	4188

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
27767	14699	0	0	0	0

17001	17769	18572	2975	2831	2695
27758	14694	0	0	0	0

14480	14941	15417	2975	2831	2695
22213	11693	0	0	0	0

6611	6444	6286	2975	2831	2695
5865	3006	0	0	0	0

4993	4826	4667	2975	2831	2695
2861	1466	0	0	0	0

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb8_1a_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,867
Annual Exposure2 with start on July 1st	*2,337*	*4,867*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	3,554

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

1 Based on an interest rate of 5%.

2 Fiscal exposure based on equal monthly drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1b_30yr

1b. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,869
Annual Exposure2 with start on July 1st	*2,337*	*4,869*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	*3,554*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649
Annual Exposure2 with start on July 1st	*2,337*	*4,649*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,668
Start: July 1st	-	*3,499*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $76 billion peaking in

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270
Annual Exposure2 with start on July 1st	*1,090*	*2,270*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	545	2,203
Start: July 1st	-	*1,658*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $32 billion peaking in

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542
Annual Exposure2 with start on July 1st	*750*	*1,542*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	375	1,510
Start: July 1st	-	*1,135*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $18 billion peaking in

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	1,169 - 1,169	4,723 - 4,723

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1169**	**4963**
Total, B	1169	4963
Proposed Program Total:	1,169 - 1,169	4,963 - 4,963

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1a
Scenario 1b
Scenario 1c
Scenario 1d
Scenario 1e

2019	2020	2021	2022
5,045	6,586	6,039	5,872
5,045	*6,586*	*6,039*	*5,872*

2018-19	2019-20	2020-21	2021-2022
4,912	5,430	6,449	5,997
4,912	*5,430*	*6,449*	*5,997*

2034.

Actuals are subject t
- The highest debt ac
- Compared to a 5% i

[1] Based on an interes
[2] Fiscal exposure bas
[3] Fiscalized based on

depend on decision on accounting treatment.

2019	2020	2021	2022
5,045	6,586	6,037	5,870
5,045	*6,586*	*6,037*	*5,870*

2018-19	2019-20	2020-21	2021-2022
4,913	5,430	6,449	5,996
4,913	*5,430*	*6,449*	*5,996*

2034.

2019	2020	2021	2022
4,589	5,867	5,031	4,861
4,589	*5,867*	*5,031*	*4,861*

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988
4,634	*4,909*	*5,658*	*4,988*

2034.

2019	2020	2021	2022
2,353	3,072	2,817	2,580
2,353	*3,072*	*2,817*	*2,580*

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757
2,291	*2,533*	*3,008*	*2,757*

2030.

2019	2020	2021	2022
1,578	2,243	1,931	1,635
1,578	*2,243*	*1,931*	*1,635*

2018-19	2019-20	2020-21	2021-2022

1,551	1,745	2,165	1,857
1,551	*1,745*	*2,165*	*1,857*

2029.



2018-19	2019-20	2020-21	2021-2022
4,913 - 4,912	5,430 - 5,430	6,449 - 6,449	5,996 - 5,997

/1

2018-19[1]	2019-20[1]	2020-21[1]
4912	5430	6449
4913	5430	6449
225	279	323
60	60	60
18	18	18
5215	**5787**	**6850**
5216	5787	6850

5,216 - 5,215 5,787 - 5,787 6,850 - 6,850

Total Principal Debt	Total Accumulated Interest Costs	**Peak Total Debt**	
52,287	85,599	89,375	occurs in Year 2034
52,275	85,582	89,356	occurs in Year 2034
44,449	72,823	76,097	occurs in Year 2034
21,239	29,589	32,233	occurs in Year 2030
12,350	16,239	17,670	occurs in Year 2029

o actual prices and actual interest rates.
:cumulation (at 5% interest rate) is expected to be approximately $62 billion, peaking in 203 and $17-21 billion (at 3.5% interest
interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately $33-$36 million.

st rate of 5%.
sed on equal monthly drawdown of debt.
75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on mo

Feb8_1a_30yr
Feb8_1b_30yr
Feb8_1c_30yr
Feb8_1d_30yr
Feb8_1e_30yr

t rate), peaking in 2028.

nth of the year. Actuals may also depend on decision on accounting treatment.

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-275	-311	-350	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,573	85,599
Equal Monthly Debt Drawdown	6,743	4,556	

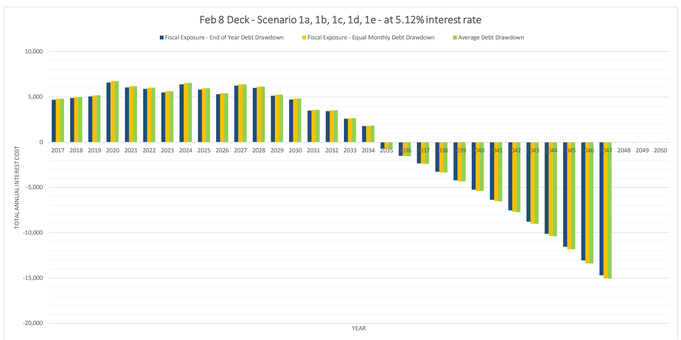
	Feb8 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,375	2034	52,287
Equal Monthly Debt Drawdown	91,501		

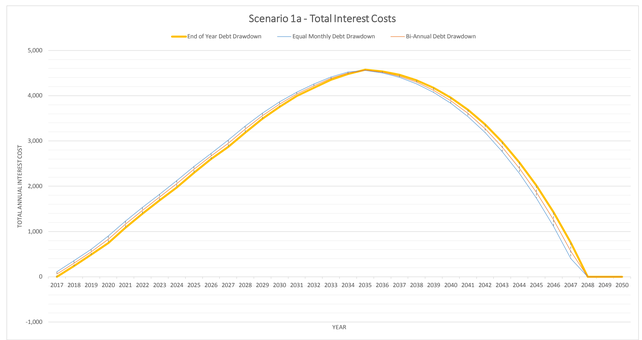
Feb8 1a, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	
c = a*5%	*Interest Cost - Feb8 1a, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,301*	*2,597*	*2,868*	*3,187*	*3,493*	*3,755*	*3,996*	*4,175*	*4,350*	*4,482*	*4,573*	*4,537*	*4,460*	*4,340*	*4,173*	*3,957*	*3,688*	*3,363*	*2,978*	*2,529*	*2,011*	*1,421*	*752*	*0*	*0*	*0*	85,599
b	Additional GA Debt Drawdown, End of Year	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,307	32,728	35,309	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	39,310	27,767	14,699	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	52,287	52,287	52,287	51,591	50,091	47,739	44,479	40,253	34,997	28,642	21,115	12,336	0	0	0	0	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,813	33,987	38,337	42,818	47,391	51,928	56,388	60,728	64,901	68,858	72,546	75,909	78,887	81,416	83,427	84,847	85,599				
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	51,781	51,028	49,259	46,557	41,288	35,252	28,440	20,840	12,440	3,227	-6,816	-17,706	-29,462	-42,106	-55,660	-70,149	-85,599				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	

Feb8 1a, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	
4,556	*Interest Cost - Feb8 1a, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,824*	*2,126*	*2,439*	*2,723*	*3,016*	*3,329*	*3,615*	*3,867*	*4,079*	*4,256*	*4,411*	*4,524*	*4,556*	*4,501*	*4,404*	*4,262*	*4,073*	*3,832*	*3,537*	*3,184*	*2,769*	*2,288*	*1,737*	*1,110*	*402*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
	Monthly Drawdown	390	386	380	487	413	373	318	367	292	224	281	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(980)	(1,054)	(1,129)	(1,207)	(1,288)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,738	4,665	5,979	5,074	4,586	3,902	4,510	3,584	2,753	3,447	2,863	1,662	980	(517)	(772)	(1,810)	(2,766)	(5,394)	(6,180)	(6,975)	(7,781)	(8,599)	(9,432)	(10,282)	(11,149)	(12,036)	(12,944)	(13,876)	(14,834)	(15,818)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	67	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(368)	-	-	-	
	Annual Interest Cost on Opening Balance		245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,263	3,576	3,844	4,091	4,274	4,453	4,588	4,681	4,645	4,566	4,443	4,272	4,051	3,776	3,443	3,049	2,589	2,059	1,454	770	(0)	(0)	(0)	
	Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,824	2,126	2,439	2,723	3,016	3,329	3,615	3,867	4,079	4,256	4,411	4,524	4,556	4,501	4,404	4,262	4,073	3,832	3,537	3,184	2,769	2,288	1,737	1,110	402	(0)	(0)	(0)	

Feb8 1a, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*60*	*301*	*553*	*831*	*1,160*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,948*	*3,263*	*3,558*	*3,815*	*4,041*	*4,218*	*4,383*	*4,504*	*4,564*	*4,518*	*4,430*	*4,298*	*4,119*	*3,890*	*3,607*	*3,267*	*2,866*	*2,399*	*1,864*	*1,253*	*564*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,930	5,110	6,670	6,116	5,947	5,575	6,461	5,875	5,354	6,315	6,060	5,182	4,773	3,535	3,464	2,614	1,802	-705	-1,518	-2,382	-3,302	-4,280	-5,324	-6,436	-7,623	-8,891	-10,244	-11,690	-13,236	-14,887	0	0	0	
	Bi-Annual Drawdown	2,337	2,314	2,279	2,920	2,478	2,240	1,906	2,203	1,750	1,345	1,684	1,398	812	479	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,800)	(4,200)	(4,607)	(5,021)	(5,445)	(5,878)	(6,322)	(6,777)	(7,245)	(7,725)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,687	4,615	5,914	5,019	4,537	3,860	4,462	3,545	2,724	3,410	2,832	1,644	970	(512)	(763)	(1,791)	(2,737)	(5,336)	(6,113)	(6,900)	(7,697)	(8,507)	(9,331)	(10,171)	(11,029)	(11,907)	(12,805)	(13,727)	(14,674)	(15,648)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	494	756	1,097	1,410	1,714	1,999	2,330	2,631	2,905	3,228	3,538	3,803	4,047	4,228	4,405	4,539	4,631	4,595	4,517	4,395	4,227	4,008	3,735	3,406	3,016	2,561	2,037	1,439	762	(0)	(0)	(0)	
	Total Annual Interest Cost	60	301	553	831	1,160	1,467	1,763	2,056	2,375	2,665	2,948	3,263	3,558	3,815	4,041	4,218	4,383	4,504	4,564	4,518	4,430	4,298	4,119	3,890	3,607	3,267	2,866	2,399	1,864	1,253	564	(0)	(0)	(0)	

Feb8 1a, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,723*	*3,027*	*3,340*	*3,624*	*3,875*	*4,085*	*4,262*	*4,416*	*4,527*	*4,555*	*4,499*	*4,400*	*4,257*	*4,065*	*3,822*	*3,525*	*3,170*	*2,753*	*2,270*	*1,716*	*1,086*	*376*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,992	5,174	6,754	6,193	6,022	5,645	6,543	5,950	5,422	6,395	6,137	5,248	4,833	3,580	3,508	2,647	1,825	-714	-1,537	-2,412	-3,343	-4,334	-5,391	-6,517	-7,720	-9,003	-10,374	-11,838	-13,403	-15,075	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-274	-311	-349	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,572	85,582
Equal Monthly Debt Drawdown	6,743	4,555	

	Feb8 1b, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,356	2034	52,275
Equal Monthly Debt Drawdown	91,481		

Feb8 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
a — Debt, Beginning of Year	0	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	
c = a*5% — *Interest Cost - Feb8 1b, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,300*	*2,597*	*2,867*	*3,186*	*3,492*	*3,754*	*3,995*	*4,174*	*4,349*	*4,481*	*4,572*	*4,536*	*4,459*	*4,339*	*4,172*	*3,956*	*3,687*	*3,362*	*2,977*	*2,528*	*2,011*	*1,420*	*752*	*0*	*0*	*0*	85,582
b — Additional GA Debt Drawdown, End of Year	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,309	32,722	35,302	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	39,297	27,758	14,694	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	52,275	52,275	52,275	52,275	51,578	50,078	47,725	44,465	40,239	34,984	28,630	21,105	12,328	0	0	0	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,809	33,983	38,331	42,812	47,384	51,920	56,379	60,718	64,890	68,846	72,533	75,895	78,871	81,399	83,410	84,830	85,582				
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	51,769	51,014	49,246	46,544	41,275	35,239	28,428	20,829	12,431	3,219	-6,822	-17,709	-29,462	-42,102	-55,652	-70,136	-85,582				
Fiscal Exposure - End of Year Debt Drawdown	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	

Feb8 1b, 30-yr — Equal Monthly Debt Drawdown

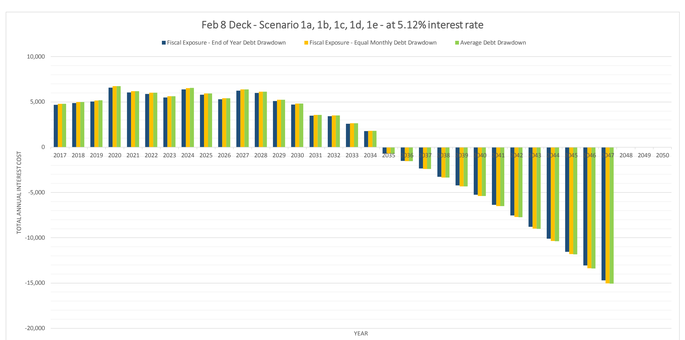
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	
4,555 — *Interest Cost - Feb8 1b, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,823*	*2,126*	*2,438*	*2,723*	*3,016*	*3,329*	*3,614*	*3,866*	*4,078*	*4,255*	*4,410*	*4,523*	*4,555*	*4,500*	*4,403*	*4,261*	*4,072*	*3,831*	*3,536*	*3,183*	*2,768*	*2,287*	*1,736*	*1,109*	*402*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
Monthly Drawdown	390	386	380	487	413	373	317	367	292	224	280	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(979)	(1,053)	(1,129)	(1,207)	(1,287)	(0)	-	-	
FV of Monthly Drawdown at 5%	4,786	4,740	4,665	5,979	5,072	4,585	3,900	4,509	3,582	2,752	3,446	2,862	1,661	979	(518)	(772)	(1,811)	(2,766)	(5,394)	(6,179)	(6,974)	(7,780)	(8,598)	(9,431)	(10,279)	(11,146)	(12,033)	(12,941)	(13,872)	(14,829)	(15,813)	(0)	-	-	
Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	66	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(367)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,262	3,576	3,843	4,090	4,273	4,452	4,587	4,680	4,644	4,565	4,442	4,271	4,050	3,775	3,442	3,048	2,588	2,058	1,454	770	0	0	0	
Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,823	2,126	2,438	2,723	3,016	3,329	3,614	3,866	4,078	4,255	4,410	4,523	4,555	4,500	4,403	4,261	4,072	3,831	3,536	3,183	2,768	2,287	1,736	1,109	402	0	0	0	

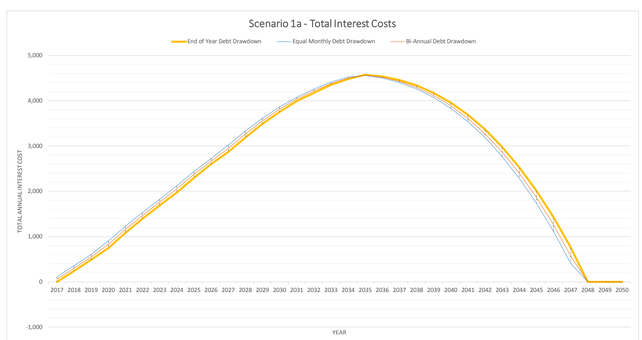
Feb8 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*60*	*301*	*553*	*831*	*1,161*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,947*	*3,263*	*3,558*	*3,814*	*4,040*	*4,217*	*4,382*	*4,503*	*4,563*	*4,517*	*4,429*	*4,297*	*4,118*	*3,889*	*3,606*	*3,266*	*2,865*	*2,399*	*1,863*	*1,253*	*564*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	4,734	4,931	5,110	6,670	6,115	5,945	5,573	6,460	5,874	5,353	6,313	6,058	5,181	4,771	3,534	3,463	2,613	1,801	-706	-1,519	-2,383	-3,302	-4,280	-5,323	-6,435	-7,622	-8,889	-10,242	-11,687	-13,231	-14,882	0	0	0	
Bi-Annual Drawdown	2,337	2,315	2,279	2,920	2,477	2,239	1,905	2,202	1,750	1,344	1,683	1,398	811	478	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,799)	(4,199)	(4,606)	(5,020)	(5,444)	(5,877)	(6,320)	(6,775)	(7,242)	(7,723)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	4,734	4,689	4,615	5,914	5,017	4,535	3,859	4,460	3,544	2,722	3,409	2,831	1,643	969	(513)	(764)	(1,791)	(2,737)	(5,336)	(6,113)	(6,899)	(7,696)	(8,506)	(9,329)	(10,169)	(11,027)	(11,904)	(12,802)	(13,723)	(14,670)	(15,643)	(0)	-	-	
Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	242	495	756	1,097	1,410	1,714	1,999	2,330	2,630	2,904	3,227	3,537	3,802	4,046	4,227	4,404	4,538	4,630	4,594	4,516	4,394	4,225	4,006	3,734	3,405	3,015	2,560	2,036	1,438	761	0	(0)	(0)	
Total Annual Interest Cost	60	301	553	831	1,161	1,467	1,763	2,056	2,375	2,665	2,947	3,263	3,558	3,814	4,040	4,217	4,382	4,503	4,563	4,517	4,429	4,297	4,118	3,889	3,606	3,266	2,865	2,399	1,863	1,253	564	0	(0)	(0)	

Feb8 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,732*	*3,027*	*3,339*	*3,623*	*3,875*	*4,084*	*4,261*	*4,415*	*4,526*	*4,554*	*4,498*	*4,399*	*4,255*	*4,064*	*3,821*	*3,524*	*3,169*	*2,752*	*2,269*	*1,715*	*1,086*	*376*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	4,794	4,994	5,174	6,754	6,192	6,020	5,643	6,541	5,948	5,420	6,393	6,135	5,246	4,831	3,578	3,507	2,646	1,824	-715	-1,538	-2,413	-3,343	-4,334	-5,390	-6,516	-7,718	-9,001	-10,371	-11,835	-13,398	-15,070	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1c_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	
			111	111	109	140	120	116	107	128	115	103	126	121	101	93	66	66	48	32	-24	-40	-57	-74	-92	-111	-132	-153	-175	-199	-224	-250	-278	0	0	0	0

		Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	5,867		3,893	72,823
Equal Monthly Debt Drawdown	6,006		3,869	

		Feb8 1c, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	76,097		2034	44,449
Equal Monthly Debt Drawdown	77,907			

Feb8 1c, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	
c = a*5%	*Interest Cost - Feb8 1c, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*477*	*712*	*1,012*	*1,269*	*1,518*	*1,748*	*2,023*	*2,270*	*2,491*	*2,762*	*3,022*	*3,239*	*3,440*	*3,581*	*3,722*	*3,826*	*3,893*	*3,841*	*3,754*	*3,632*	*3,473*	*3,274*	*3,034*	*2,751*	*2,423*	*2,046*	*1,618*	*1,136*	*598*	*0*	*0*	*0*	72,823
b	Additional GA Debt Drawdown, End of Year	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	
	Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	25,538	28,304	30,324	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,624	22,213	11,693	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	44,449	44,449	44,449	44,449	43,420	41,729	39,342	36,228	32,347	27,662	22,130	15,704	8,337	0	0	0	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	26,221	29,801	33,524	37,349	41,242	45,083	48,837	52,469	55,942	59,216	62,250	65,002	67,424	69,470	71,088	72,224	72,823				
	Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	43,767	42,952	41,249	38,748	33,826	28,294	22,153	15,406	8,054	94	-8,473	-17,649	-27,439	-37,846	-48,875	-60,532	-72,823				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	

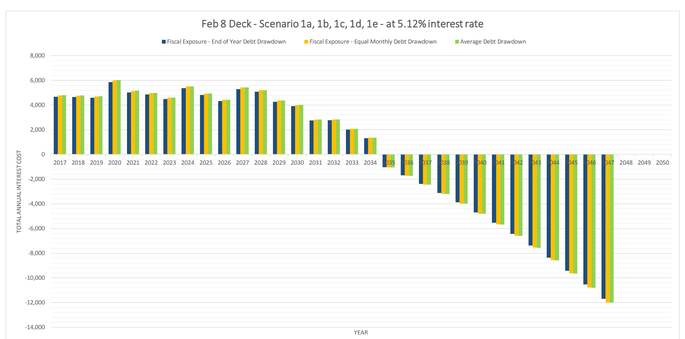
Feb8 1c, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
3,869	Debt, Beginning of Year	0	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*111*	*350*	*586*	*851*	*1,132*	*1,385*	*1,625*	*1,876*	*2,138*	*2,372*	*2,617*	*2,882*	*3,123*	*3,333*	*3,505*	*3,646*	*3,770*	*3,857*	*3,869*	*3,800*	*3,697*	*3,558*	*3,380*	*3,163*	*2,903*	*2,599*	*2,247*	*1,847*	*1,394*	*886*	*320*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	

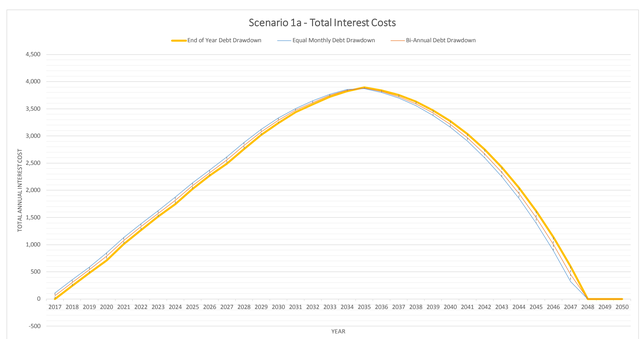
	Monthly Drawdown	390	367	343	430	335	299	248	303	233	171	234	193	103	56	(57)	(68)	(142)	(208)	(410)	(461)	(512)	(562)	(613)	(663)	(714)	(765)	(816)	(867)	(919)	(971)	(1,024)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,515	4,210	5,278	4,114	3,677	3,048	3,717	2,857	2,099	2,873	2,375	1,268	689	(699)	(834)	(1,744)	(2,561)	(5,039)	(5,664)	(6,286)	(6,907)	(7,528)	(8,148)	(8,771)	(9,395)	(10,023)	(10,654)	(11,291)	(11,934)	(12,583)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	105	98	123	96	85	71	86	66	49	67	55	29	16	(16)	(19)	(41)	(59)	(117)	(132)	(146)	(160)	(175)	(189)	(204)	(218)	(233)	(248)	(262)	(277)	(292)	-	-	-	
	Annual Interest Cost on Opening Balance	-	245	488	729	1,036	1,300	1,554	1,790	2,071	2,323	2,550	2,827	3,093	3,317	3,521	3,666	3,811	3,917	3,986	3,932	3,843	3,718	3,555	3,352	3,107	2,817	2,480	2,094	1,656	1,163	612	(0)	(0)	(0)	
	Total Annual Interest Cost	111	350	586	851	1,132	1,385	1,625	1,876	2,138	2,372	2,617	2,882	3,123	3,333	3,505	3,646	3,770	3,857	3,869	3,800	3,697	3,558	3,380	3,163	2,903	2,599	2,247	1,847	1,394	886	320	(0)	(0)	(0)	

Feb8 1c, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*60*	*299*	*536*	*787*	*1,076*	*1,332*	*1,576*	*1,817*	*2,085*	*2,325*	*2,558*	*2,827*	*3,076*	*3,290*	*3,475*	*3,616*	*3,748*	*3,842*	*3,880*	*3,819*	*3,724*	*3,592*	*3,423*	*3,214*	*2,964*	*2,669*	*2,328*	*1,939*	*1,498*	*1,002*	*449*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,708	4,648	5,942	5,095	4,923	4,553	5,447	4,876	4,375	5,364	5,147	4,315	3,962	2,792	2,802	2,045	1,341	-1,042	-1,713	-2,417	-3,155	-3,930	-4,745	-5,603	-6,508	-7,461	-8,468	-9,531	-10,655	-11,842	0	0	0	

	Bi-Annual Drawdown	2,337	2,205	2,056	2,578	2,009	1,796	1,489	1,815	1,395	1,025	1,403	1,160	620	336	(341)	(407)	(852)	(1,251)	(2,461)	(2,766)	(3,070)	(3,373)	(3,676)	(3,980)	(4,283)	(4,588)	(4,895)	(5,203)	(5,514)	(5,828)	(6,146)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,466	4,165	5,221	4,070	3,638	3,015	3,677	2,826	2,077	2,842	2,350	1,255	681	(691)	(825)	(1,725)	(2,533)	(4,985)	(5,603)	(6,219)	(6,833)	(7,447)	(8,061)	(8,676)	(9,294)	(9,915)	(10,540)	(11,170)	(11,806)	(12,448)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	56	53	66	51	46	38	46	36	26	36	30	16	9	(9)	(10)	(22)	(32)	(63)	(71)	(79)	(86)	(94)	(102)	(110)	(117)	(125)	(133)	(141)	(149)	(157)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	483	721	1,025	1,286	1,537	1,770	2,049	2,299	2,522	2,797	3,060	3,281	3,484	3,626	3,770	3,874	3,943	3,890	3,802	3,678	3,517	3,316	3,073	2,787	2,454	2,072	1,639	1,151	606	(0)	(0)	(0)	
	Total Annual Interest Cost	60	299	536	787	1,076	1,332	1,576	1,817	2,085	2,325	2,558	2,827	3,076	3,290	3,475	3,616	3,748	3,842	3,880	3,819	3,724	3,592	3,423	3,214	2,964	2,669	2,328	1,939	1,498	1,002	449	(0)	(0)	(0)	

Feb8 1c, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*120*	*358*	*594*	*862*	*1,141*	*1,394*	*1,633*	*1,886*	*2,146*	*2,380*	*2,626*	*2,892*	*3,130*	*3,340*	*3,510*	*3,651*	*3,774*	*3,859*	*3,867*	*3,797*	*3,693*	*3,552*	*3,373*	*3,154*	*2,893*	*2,587*	*2,234*	*1,832*	*1,377*	*867*	*299*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,768	4,707	6,017	5,160	4,985	4,610	5,516	4,937	4,431	5,432	5,212	4,370	4,012	2,828	2,837	2,071	1,358	-1,055	-1,735	-2,447	-3,195	-3,979	-4,805	-5,674	-6,590	-7,556	-8,575	-9,652	-10,789	-11,992	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1d_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
			52	54	56	73	67	61	51	71	56	42	64	57	36	27	-2	-3	-23	-37	-39	-41	-43	-46	-48	-50	-53	-56	-59	-62	-65	-68	-71	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,072	1,649	29,589
Equal Monthly Debt Drawdown	3,145	1,647	

	Feb8 1d, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,233	2030	21,239
Equal Monthly Debt Drawdown	32,999		

Feb8 1d, 30-yr — End of Year Debt Drawdown

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
a	Debt, Beginning of Year	0	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	
c = a*5%	*Interest Cost - Feb8 1d, 30-yr - End of Year Debt Drawdown*	*0*	*112*	*228*	*348*	*505*	*649*	*781*	*891*	*1,043*	*1,162*	*1,253*	*1,391*	*1,514*	*1,592*	*1,649*	*1,644*	*1,637*	*1,588*	*1,508*	*1,423*	*1,335*	*1,241*	*1,143*	*1,040*	*931*	*817*	*698*	*572*	*439*	*300*	*154*	*0*	*0*	*0*	29,589
b	Additional GA Debt Drawdown, End of Year	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	11,372	11,227	10,281	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,586	5,865	3,006	0	0	0	0	
	Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	20,763	20,763	20,763	20,763	19,112	17,375	15,550	13,632	11,616	9,496	7,268	4,926	2,464	0	0	0	0	0	0	0	
	Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	13,118	14,763	16,399	17,988	19,495	20,919	22,253	23,495	24,638	25,678	26,609	27,426	28,124	28,696	29,135	29,435	29,589				
	Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	19,017	17,228	14,645	11,486	8,326	5,167	2,007	-1,153	-4,312	-7,472	-10,631	-13,791	-16,951	-20,110	-23,270	-26,429	-29,589				
Fiscal Exposure - End of Year Debt Drawdown		2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	

Feb8 1d, 30-yr — Equal Monthly Debt Drawdown

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Debt, Beginning of Year	0	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	
1,647	*Interest Cost - Feb8 1d, 30-yr*	*52*	*166*	*284*	*421*	*572*	*711*	*832*	*962*	*1,098*	*1,205*	*1,317*	*1,448*	*1,550*	*1,619*	*1,647*	*1,641*	*1,614*	*1,551*	*1,469*	*1,382*	*1,291*	*1,196*	*1,095*	*989*	*878*	*762*	*639*	*510*	*375*	*232*	*82*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
	Monthly Drawdown	182	180	177	227	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	-	-	-	
	FV of Monthly Drawdown at 5%	2,232	2,210	2,176	2,788	2,366	1,977	1,399	2,123	1,322	628	1,468	1,042	12	(487)	(1,788)	(1,831)	(2,644)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	-	-	-	
	Annual Interest Cost on New Drawdowns	52	51	51	65	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	-	-	-	
	Annual Interest Cost on Opening Balance	-	114	233	356	517	665	800	912	1,068	1,190	1,283	1,424	1,550	1,630	1,688	1,683	1,676	1,626	1,544	1,457	1,366	1,271	1,170	1,065	954	837	714	585	450	307	157	0	0	0	
	Total Annual Interest Cost	52	166	284	421	572	711	832	962	1,098	1,205	1,317	1,448	1,550	1,619	1,647	1,641	1,614	1,551	1,469	1,382	1,291	1,196	1,095	989	878	762	639	510	375	232	82	0	0	0	

Feb8 1d, 30-yr — Bi-Annual Debt Drawdown

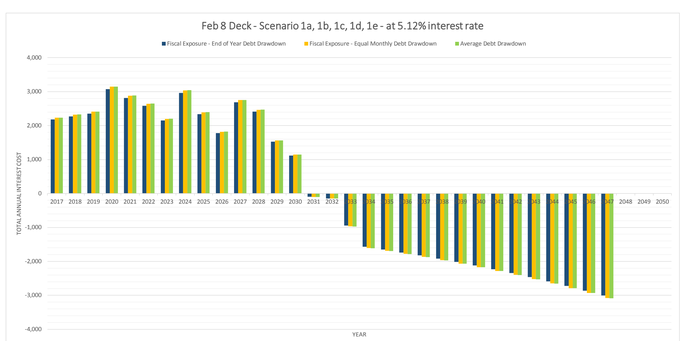
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

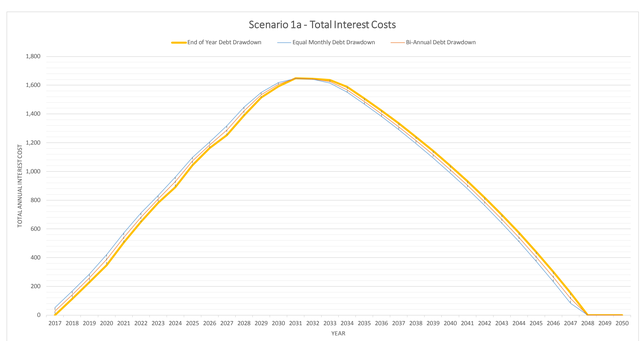
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Debt, Beginning of Year	0	2,208	4,507	6,890	10,001	12,854	15,467	17,642	20,645	23,009	24,807	27,529	29,969	31,514	32,645	32,546	32,400	31,442	29,850	28,177	26,419	24,571	22,628	20,585	18,439	16,182	13,810	11,316	8,695	5,940	3,044	0	0	0	
	Interest Cost - Feb8 1d, 30-yr	*28*	*141*	*258*	*387*	*541*	*682*	*809*	*929*	*1,073*	*1,185*	*1,288*	*1,421*	*1,533*	*1,606*	*1,648*	*1,642*	*1,625*	*1,568*	*1,487*	*1,401*	*1,311*	*1,217*	*1,117*	*1,013*	*903*	*787*	*666*	*539*	*404*	*264*	*115*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,208	4,507	6,890	10,001	12,854	15,467	17,642	20,645	23,009	24,807	27,529	29,969	31,514	32,645	32,546	32,400	31,442	29,850	28,177	26,419	24,571	22,628	20,585	18,439	16,182	13,810	11,316	8,695	5,940	3,044	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,208	2,299	2,383	3,111	2,853	2,613	2,175	3,003	2,364	1,798	2,722	2,440	1,545	1,131	-98	-147	-958	-1,591	-1,673	-1,758	-1,848	-1,943	-2,042	-2,147	-2,257	-2,372	-2,493	-2,621	-2,755	-2,896	-3,044	0	0	0	
	Bi-Annual Drawdown	1,090	1,079	1,063	1,362	1,156	965	683	1,037	646	307	717	509	6	(238)	(873)	(894)	(1,291)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,208	2,186	2,153	2,758	2,341	1,955	1,384	2,100	1,308	621	1,453	1,031	12	(481)	(1,769)	(1,812)	(2,616)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	-	-	-	
	Annual Interest Cost on New Drawdowns	28	28	27	35	30	25	17	27	17	8	18	13	0	(6)	(22)	(23)	(33)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	-	-	-	
	Annual Interest Cost on Opening Balance	-	113	231	353	512	658	791	903	1,056	1,177	1,269	1,408	1,533	1,612	1,670	1,665	1,658	1,609	1,527	1,442	1,352	1,257	1,158	1,053	943	828	707	579	445	304	156	0	0	0	
	Total Annual Interest Cost	28	141	258	387	541	682	809	929	1,073	1,185	1,288	1,421	1,533	1,606	1,648	1,642	1,625	1,568	1,487	1,401	1,311	1,217	1,117	1,013	903	787	666	539	404	264	115	0	0	0	

Feb8 1d, 30-yr — Average Debt Drawdown

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Debt, Beginning of Year	0	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	
	Interest Cost - Feb8 1d, 30-yr	*56*	*170*	*288*	*427*	*577*	*715*	*836*	*967*	*1,103*	*1,208*	*1,322*	*1,452*	*1,553*	*1,621*	*1,647*	*1,640*	*1,613*	*1,548*	*1,466*	*1,379*	*1,288*	*1,192*	*1,091*	*986*	*874*	*758*	*635*	*505*	*370*	*227*	*77*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		2,236	2,328	2,413	3,150	2,889	2,646	2,203	3,041	2,394	1,821	2,756	2,471	1,565	1,145	-100	-148	-970	-1,612	-1,694	-1,781	-1,872	-1,967	-2,068	-2,174	-2,285	-2,402	-2,525	-2,654	-2,790	-2,933	-3,083	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1e_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0
			36	37	38	53	46	39	27	45	28	13	33	24	1	-11	-16	-16	-17	-18	-19	-20	-21	-22	-23	-25	-26	-27	-29	-30	-32	-33	-35	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,243	904	16,239
Equal Monthly Debt Drawdown	2,297	903	

	Feb8 1e, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	17,670	2029	12,350
Equal Monthly Debt Drawdown	18,091		

Feb8 1e, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
a Debt, Beginning of Year	0	1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	
c = a*5% *Interest Cost - Feb8 1e, 30-yr - End of Year Debt Drawdown*	*0*	*77*	*156*	*236*	*351*	*450*	*534*	*592*	*688*	*749*	*778*	*849*	*901*	*904*	*881*	*847*	*812*	*775*	*735*	*694*	*651*	*605*	*558*	*507*	*454*	*399*	*340*	*279*	*214*	*146*	*75*	*0*	*0*	*0*	16,239
b Additional GA Debt Drawdown, End of Year	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
d = a+b+c Accumulated debt in present year (including 5.12% annual interest)	1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
Feb8 1e, 30-yr - Accumulated Interest Costs	0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	6,605	5,911	5,182	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,188	2,861	1,466	0	0	0	0
Feb8 1e, 30-yr - Accumulated Debt Principal	1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	9,960	9,960	9,960	9,960	9,155	8,308	7,418	6,482	5,498	4,465	3,378	2,235	1,035	0	0	0	0	0	0	0	
Feb8 1e, 30-yr - Accumulated Interest Costs	0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	8,146	8,993	9,805	10,580	11,315	12,010	12,661	13,266	13,824	14,331	14,785	15,184	15,524	15,803	16,017	16,164	16,239				
Feb8 1e, 30-yr - Accumulated Debt Principal	1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	8,419	6,878	5,337	3,796	2,255	714	-827	-2,369	-3,910	-5,451	-6,992	-8,533	-10,074	-11,615	-13,156	-14,697	-16,239				
Fiscal Exposure - End of Year Debt Drawdown	1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	

Feb8 1e, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	
903 *Interest Cost - Feb8 1e, 30-yr*	*36*	*113*	*193*	*290*	*397*	*489*	*561*	*637*	*717*	*762*	*811*	*873*	*903*	*893*	*866*	*831*	*795*	*756*	*716*	*674*	*630*	*583*	*534*	*483*	*428*	*372*	*312*	*249*	*183*	*113*	*40*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	
Monthly Drawdown	125	122	119	167	132	99	50	108	42	(16)	51	15	(70)	(112)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	-	-	-	
FV of Monthly Drawdown at 5%	1,536	1,500	1,457	2,055	1,617	1,213	620	1,328	512	(199)	625	182	(865)	(1,382)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	-	-	-	
Annual Interest Cost on New Drawdowns	36	35	34	48	38	28	14	31	12	(5)	15	4	(20)	(32)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	-	-	-	
Annual Interest Cost on Opening Balance	-	79	159	242	359	461	546	606	705	767	796	869	923	926	902	868	831	793	753	711	666	620	571	519	465	408	348	285	219	150	77	0	0	0	
Total Annual Interest Cost	36	113	193	290	397	489	561	637	717	762	811	873	903	893	866	831	795	756	716	674	630	583	534	483	428	372	312	249	183	113	40	0	0	0	

Feb8 1e, 30-yr — Bi-Annual Debt Drawdown

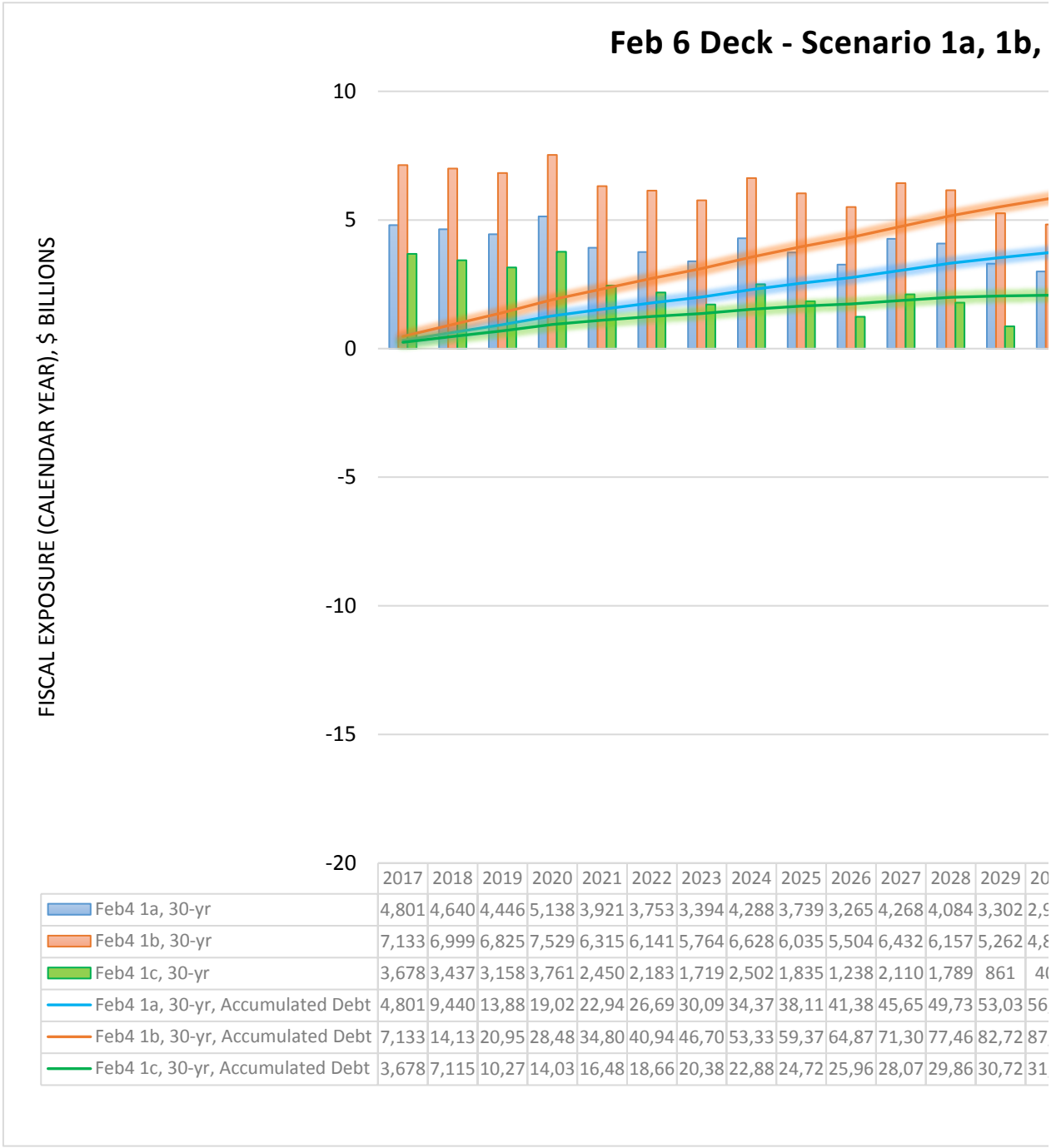
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	
Interest Cost - Feb8 1e, 30-yr	*19*	*96*	*176*	*265*	*376*	*471*	*548*	*616*	*704*	*756*	*795*	*862*	*902*	*898*	*873*	*839*	*803*	*765*	*725*	*683*	*640*	*593*	*545*	*494*	*440*	*384*	*325*	*263*	*197*	*129*	*56*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	1,519	1,561	1,598	2,272	1,956	1,655	1,154	1,913	1,203	562	1,406	1,040	57	-451	-668	-703	-738	-776	-816	-858	-902	-948	-996	-1,047	-1,101	-1,157	-1,216	-1,278	-1,344	-1,413	-1,485	0	0	0	
Bi-Annual Drawdown	750	733	711	1,003	790	592	303	649	250	(97)	305	89	(423)	(675)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	-	-	-	
FV of Bi-Annual Drawdown at 5%	1,519	1,484	1,441	2,033	1,600	1,200	613	1,314	506	(197)	618	180	(856)	(1,367)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	-	-	-	
Annual Interest Cost on New Drawdowns	19	19	18	26	20	15	8	17	6	(2)	8	2	(11)	(17)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	-	-	-	
Annual Interest Cost on Opening Balance	-	78	158	239	356	456	540	599	697	759	788	860	913	916	893	858	822	785	745	703	659	613	565	514	460	404	345	282	217	148	76	0	0	0	
Total Annual Interest Cost	19	96	176	265	376	471	548	616	704	756	795	862	902	898	873	839	803	765	725	683	640	593	545	494	440	384	325	263	197	129	56	0	0	0	

Feb8 1e, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	
Interest Cost - Feb8 1e, 30-yr	*38*	*116*	*196*	*294*	*401*	*492*	*563*	*640*	*719*	*763*	*813*	*875*	*903*	*893*	*864*	*830*	*793*	*755*	*715*	*673*	*628*	*581*	*532*	*481*	*427*	*369*	*310*	*247*	*180*	*111*	*38*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	1,538	1,581	1,619	2,301	1,980	1,676	1,168	1,938	1,219	569	1,424	1,053	57	-457	-677	-711	-748	-786	-826	-869	-913	-960	-1,009	-1,060	-1,115	-1,172	-1,232	-1,295	-1,361	-1,430	-1,504	0	0	0	

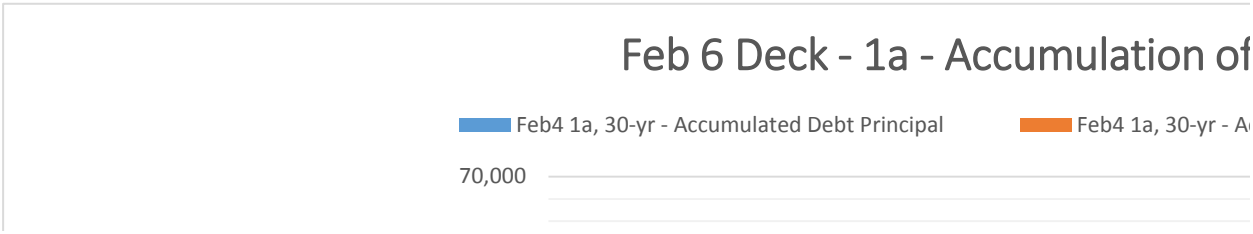
Feb 6 Deck

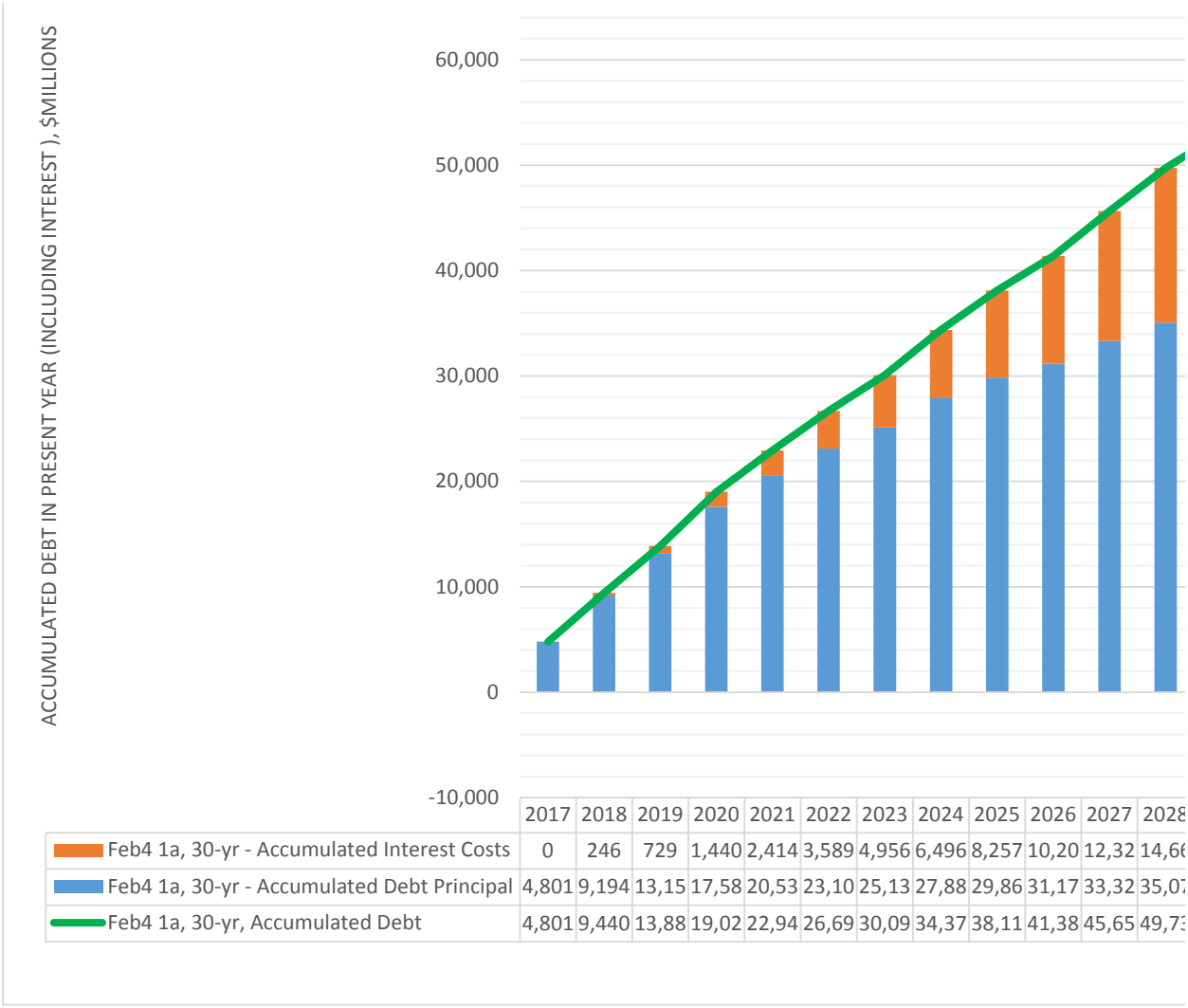
Feb 6 Deck - Scenario 1a, 1b, 1c - at 5.12% interest rate



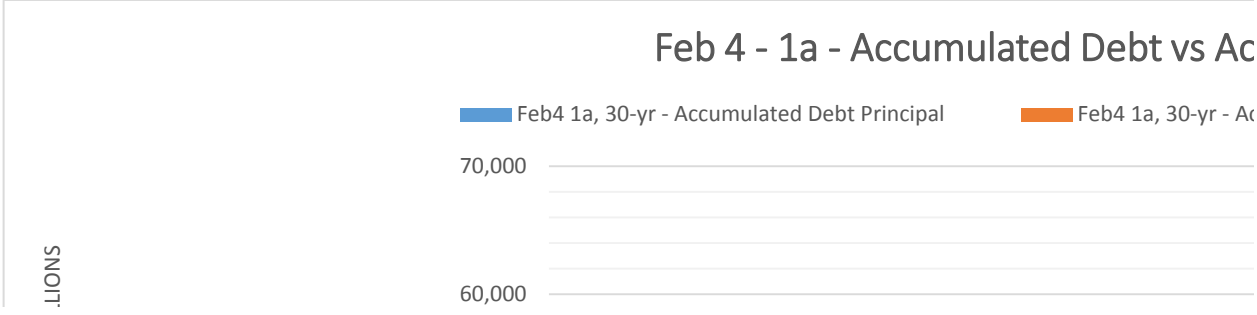
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	20
Feb4 1a, 30-yr	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,9
Feb4 1b, 30-yr	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,8
Feb4 1c, 30-yr	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	4(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73	53,03	56
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31

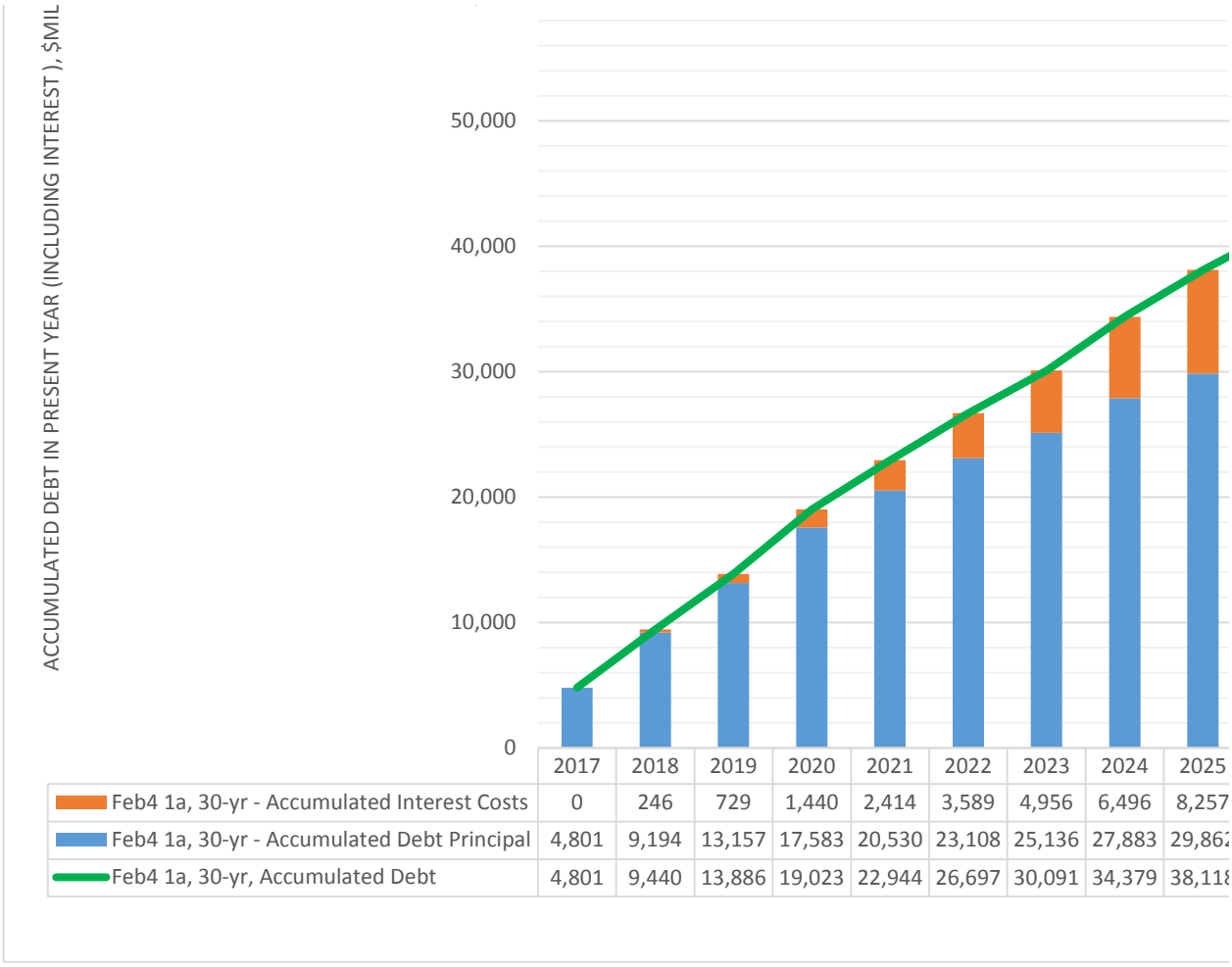
Feb 6 Deck - 1a - Accumulation of Debt (Principal and Interest)



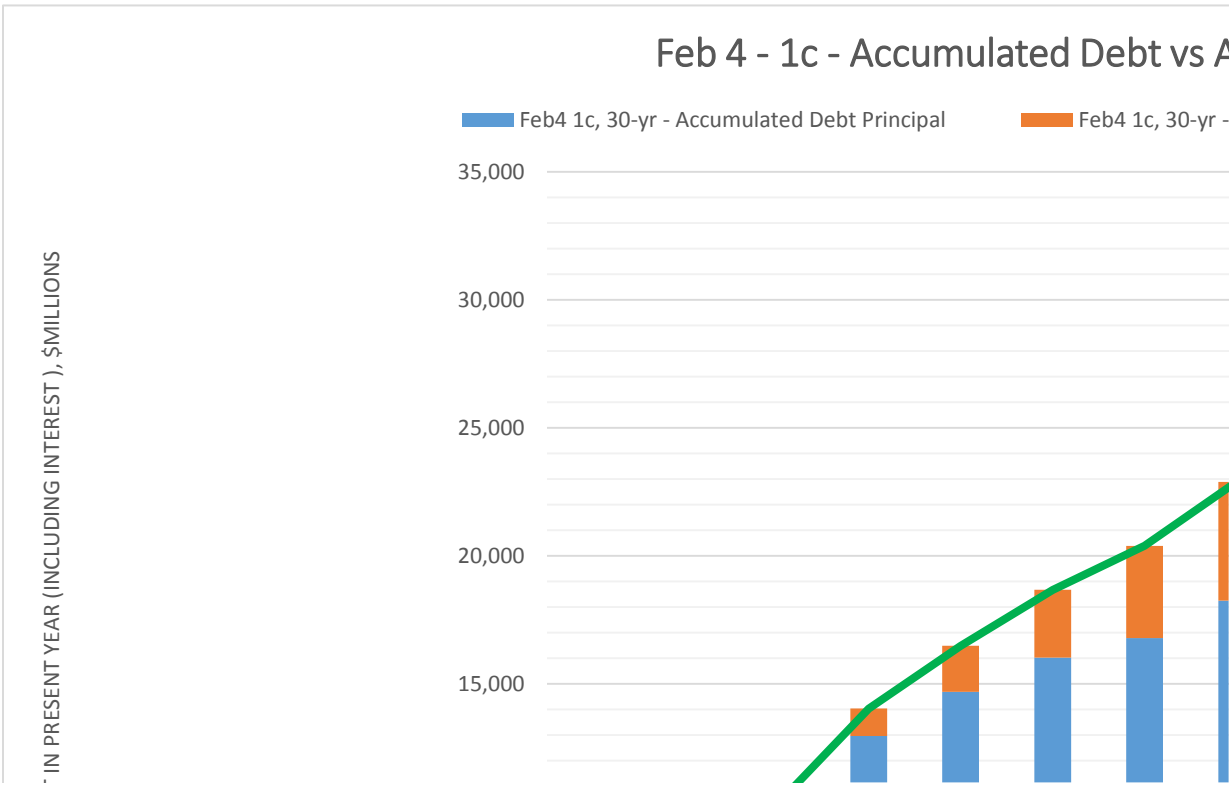


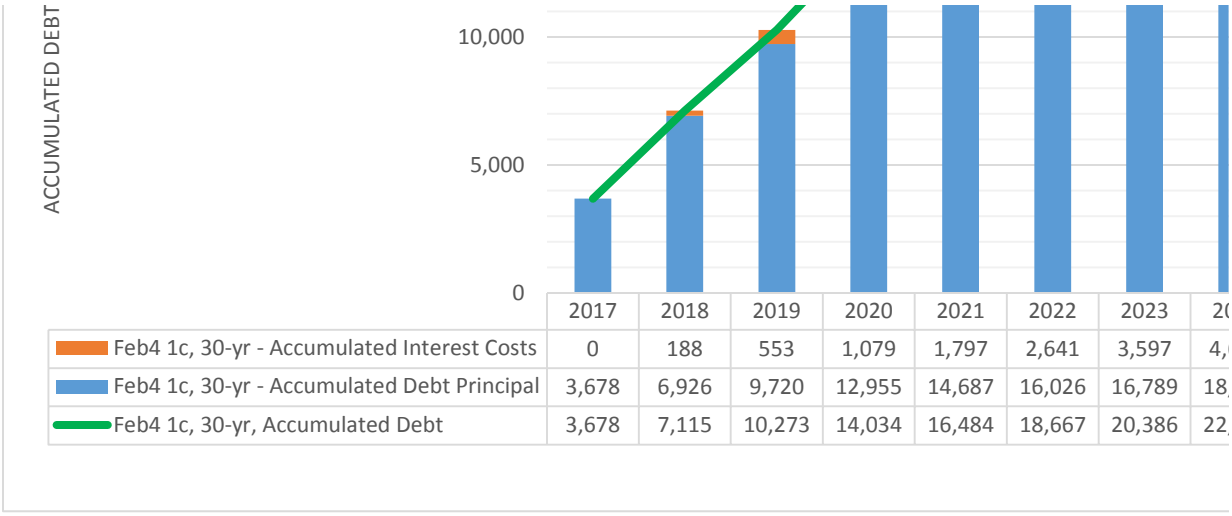
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,66
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,07
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73



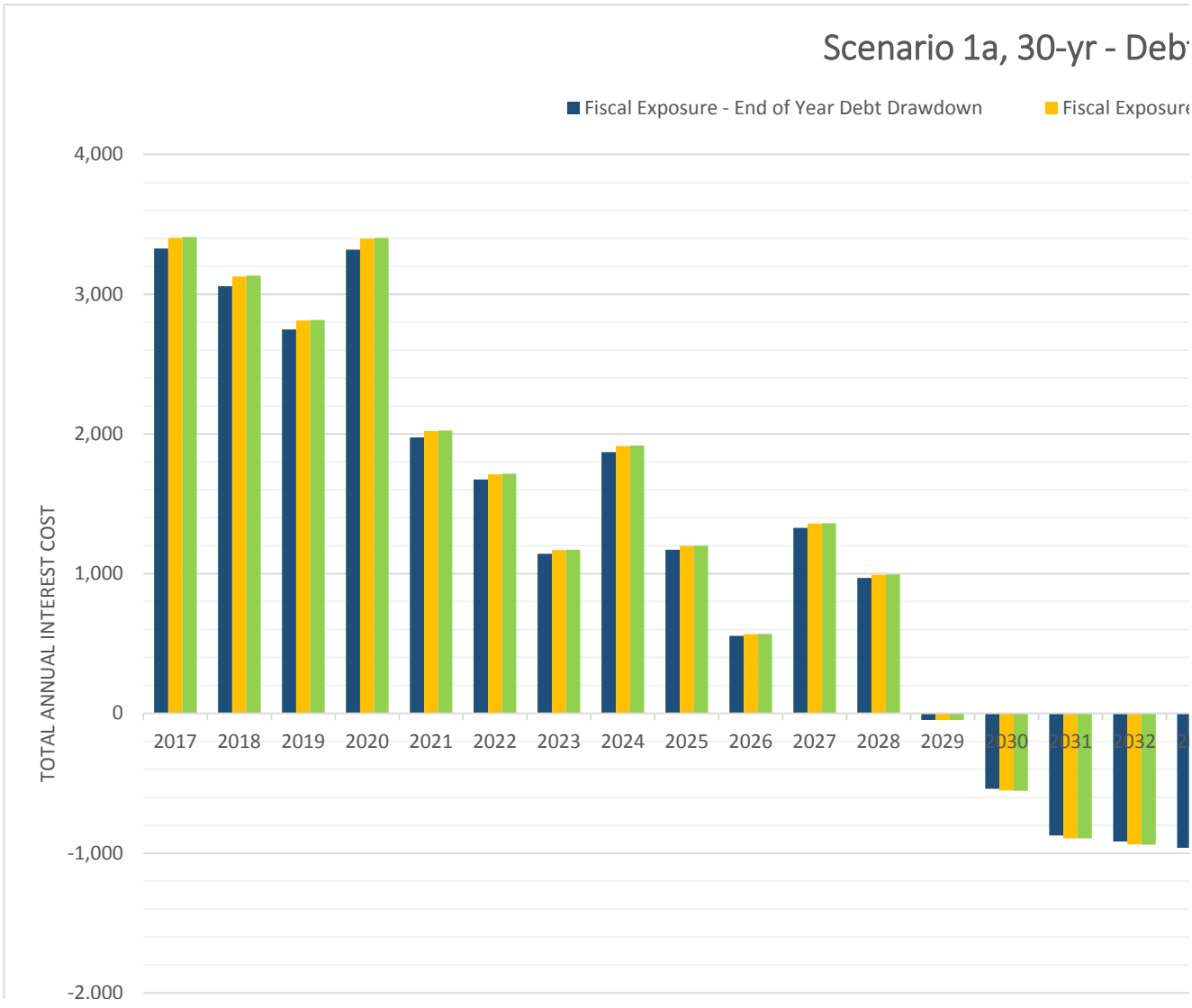


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



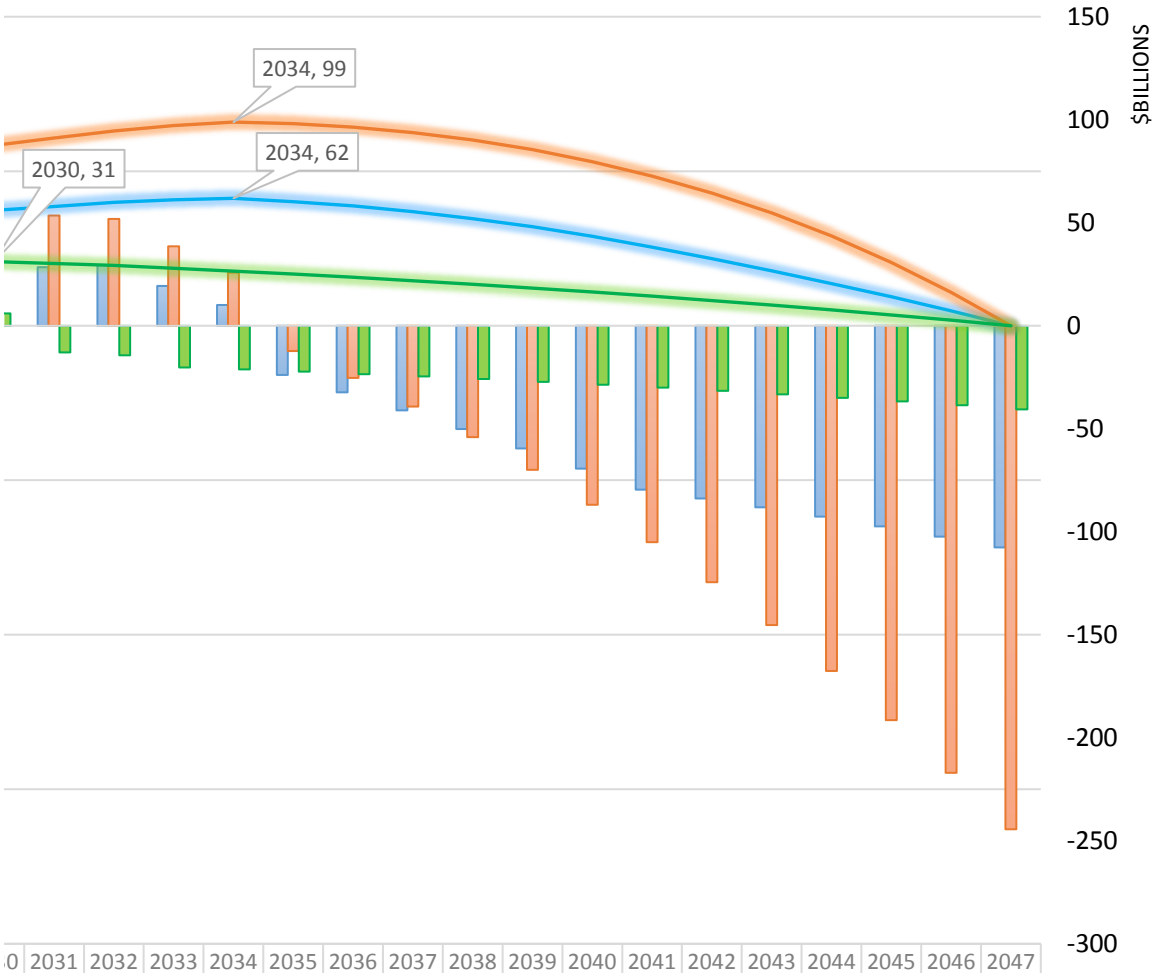


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22



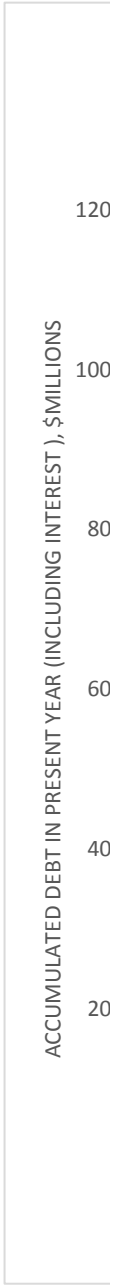

-3,000

lc - at 5.12% interest rate



0	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
98	1,896	1,966	1,288	672	-1,59	-2,15	-2,73	-3,34	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
26	3,568	3,457	2,571	1,716	-819	-1,68	-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
4	-860	-961	-1,34	-1,41	-1,48	-1,56	-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0
55	91,12	94,57	97,14	98,86	98,04	96,35	93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0
12	30,26	29,30	27,95	26,54	25,05	23,49	21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

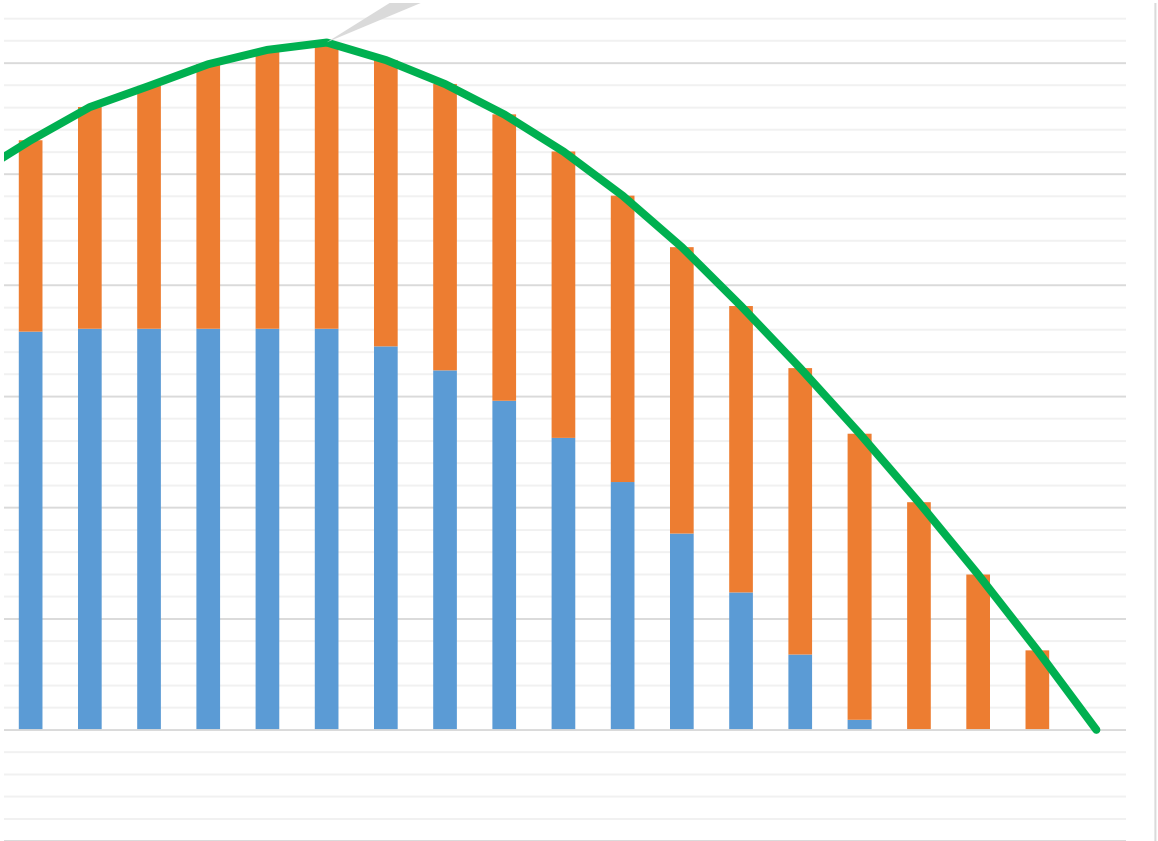
CALENDAR YEAR



Debt (Principal and Interest)

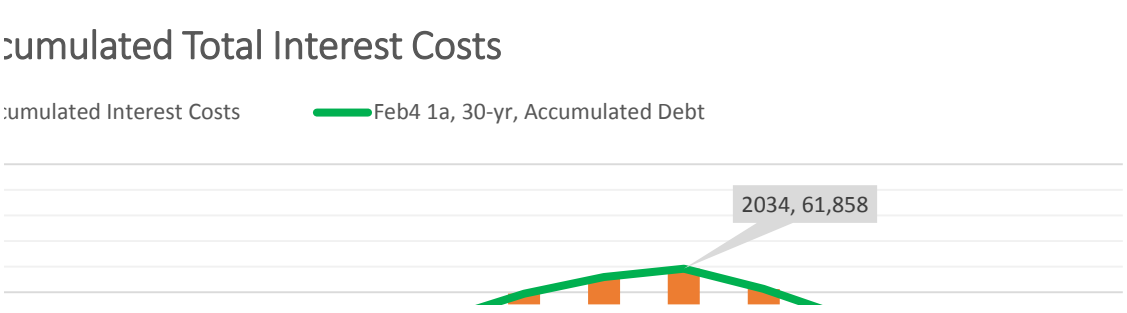
cumulated Interest Costs — Feb4 1a, 30-yr, Accumulated Debt

2034, 61,858

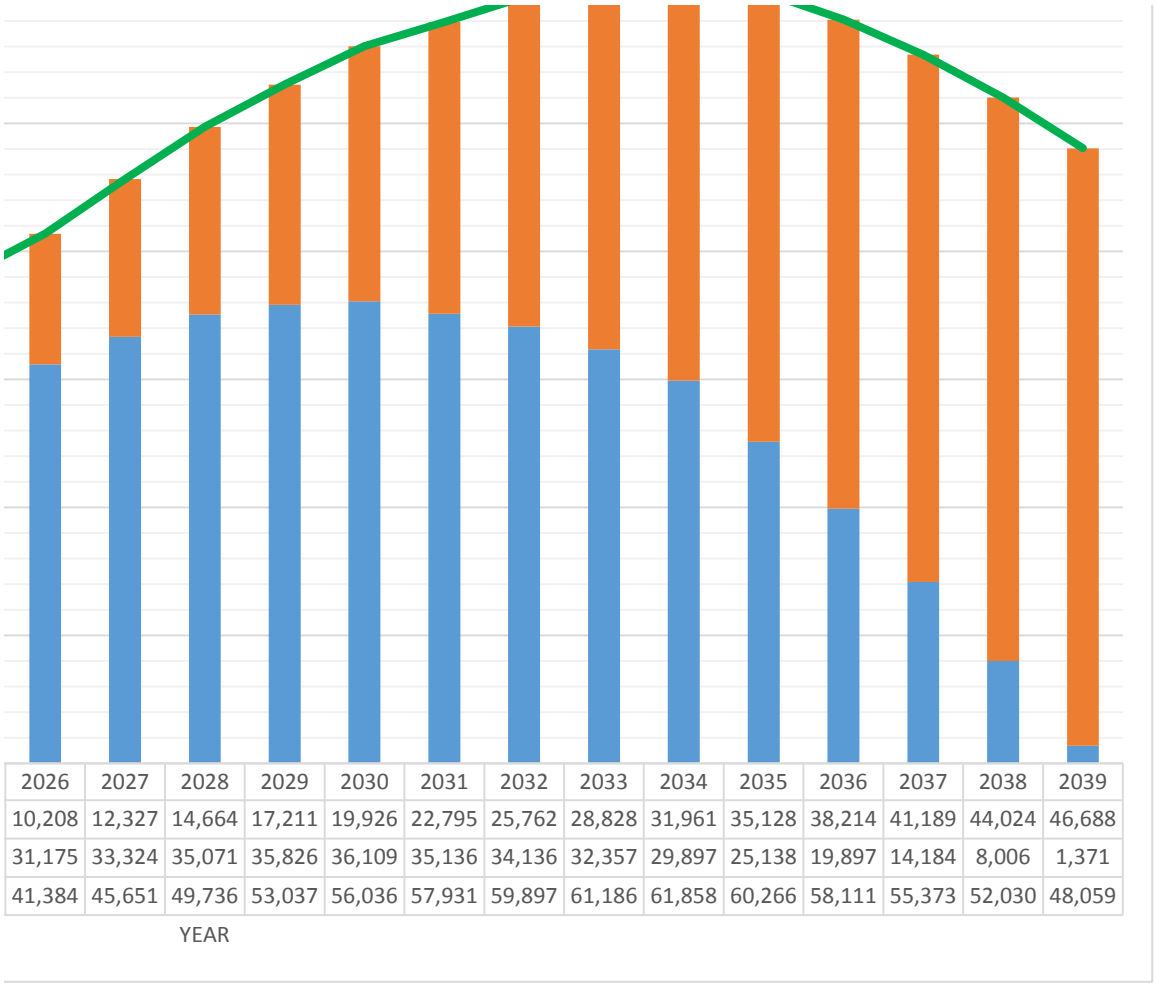


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



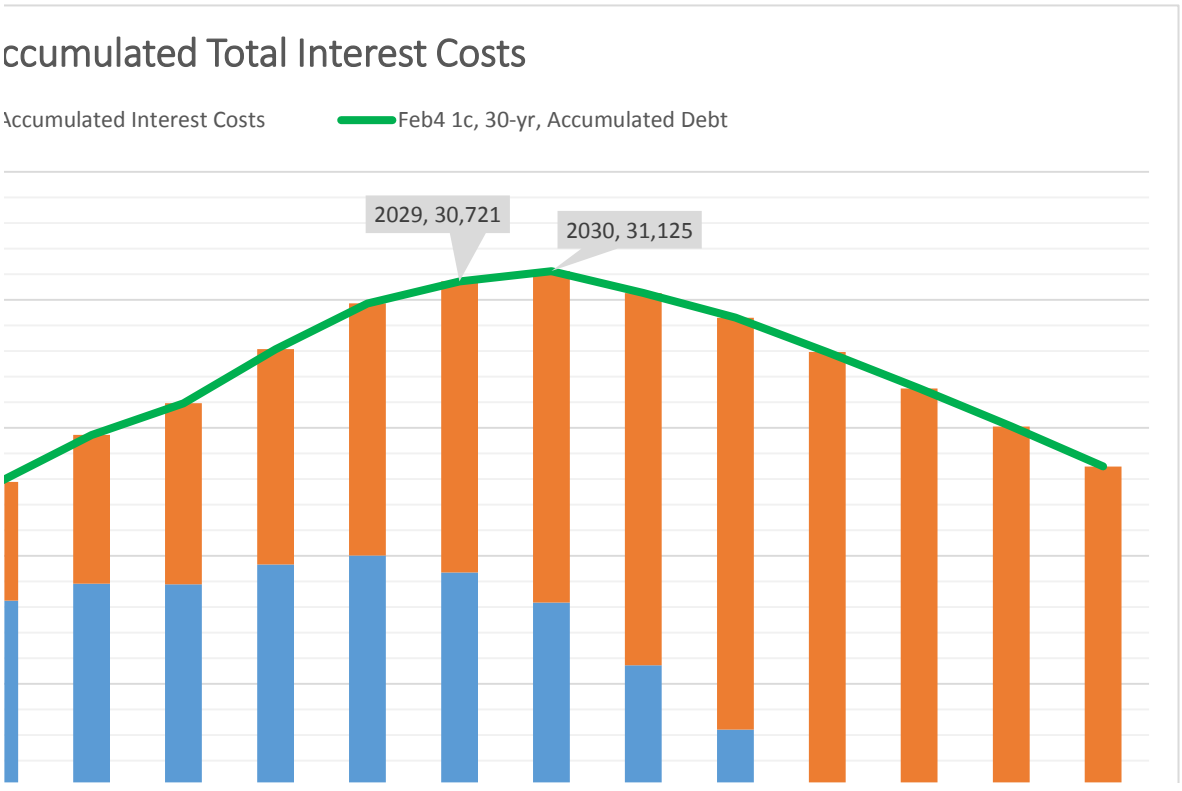
LIONS

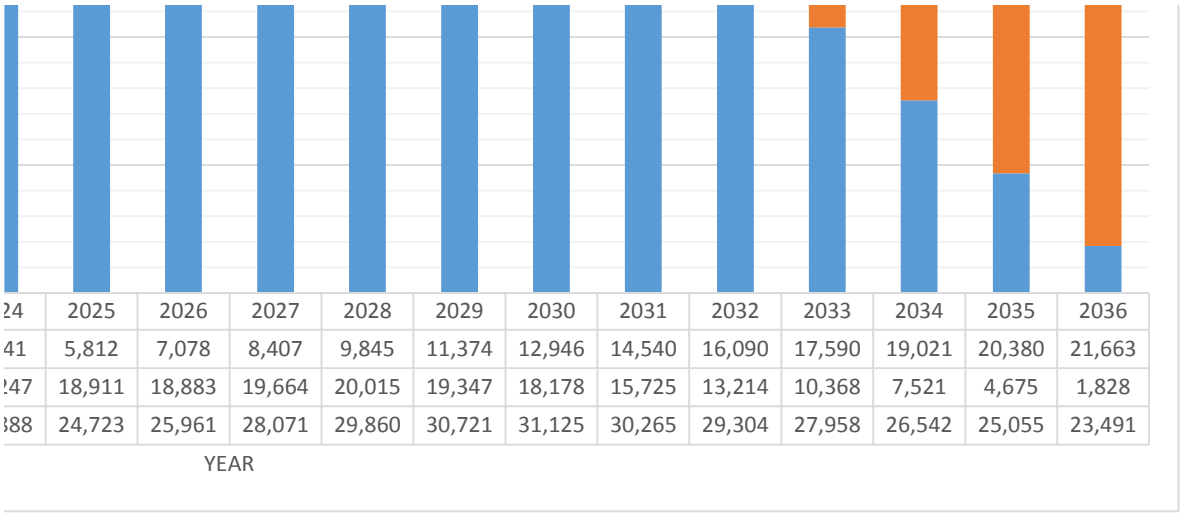


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

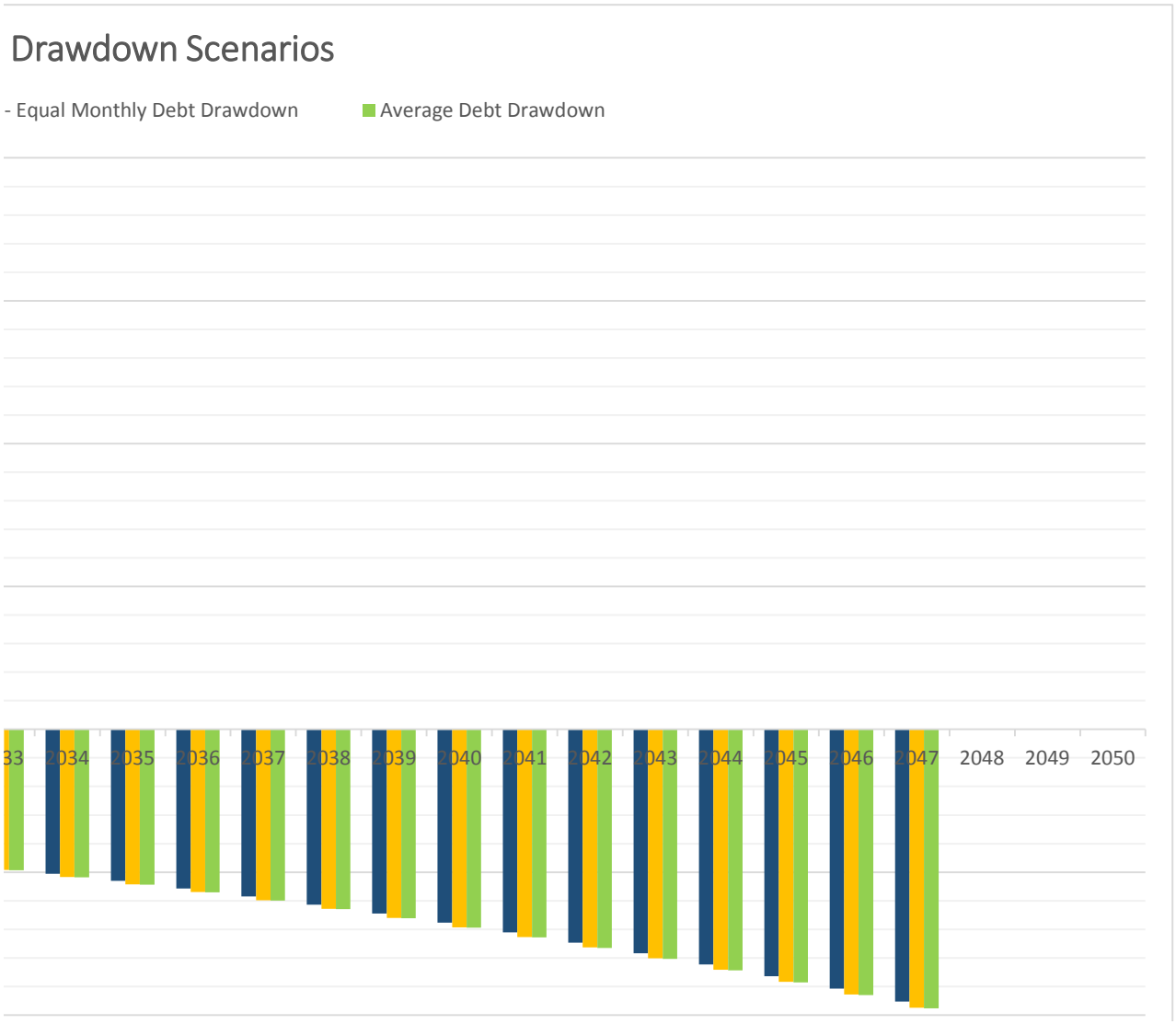
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





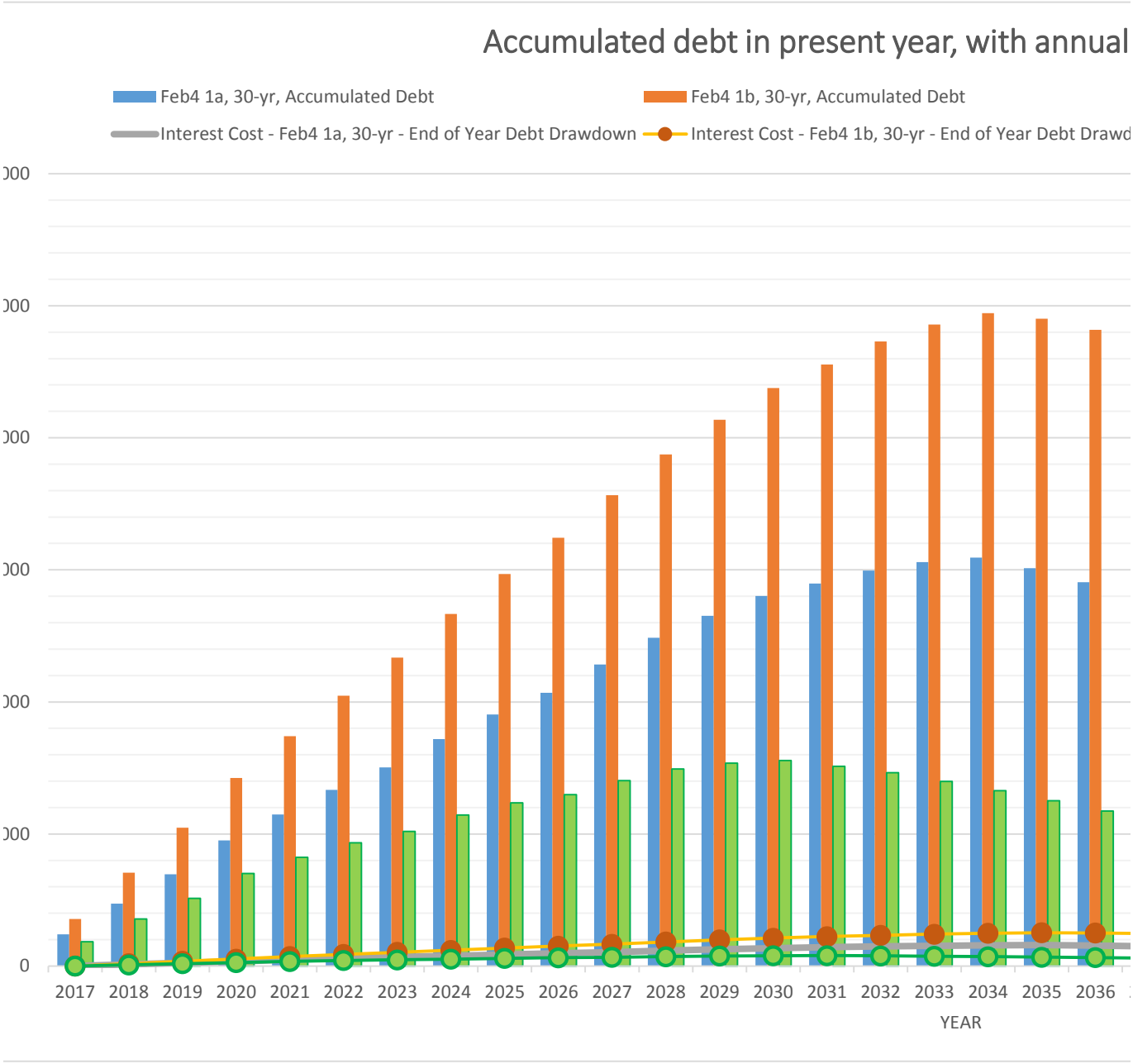
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

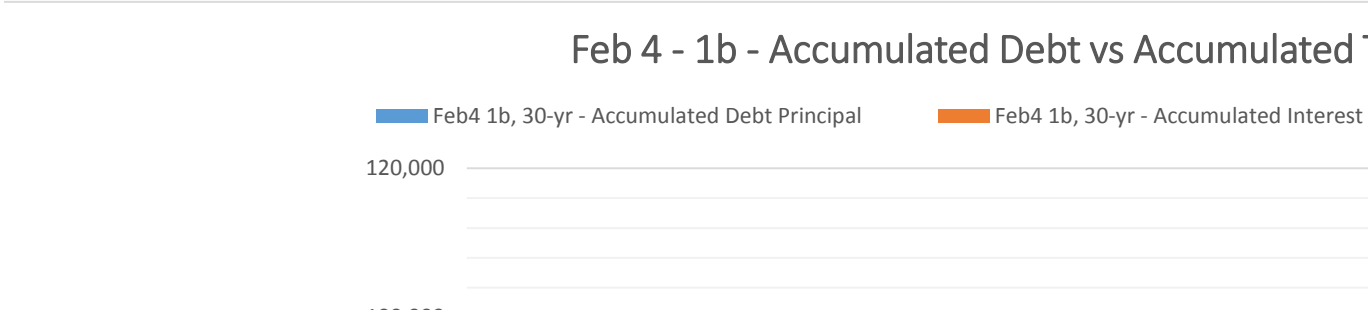
YEAR

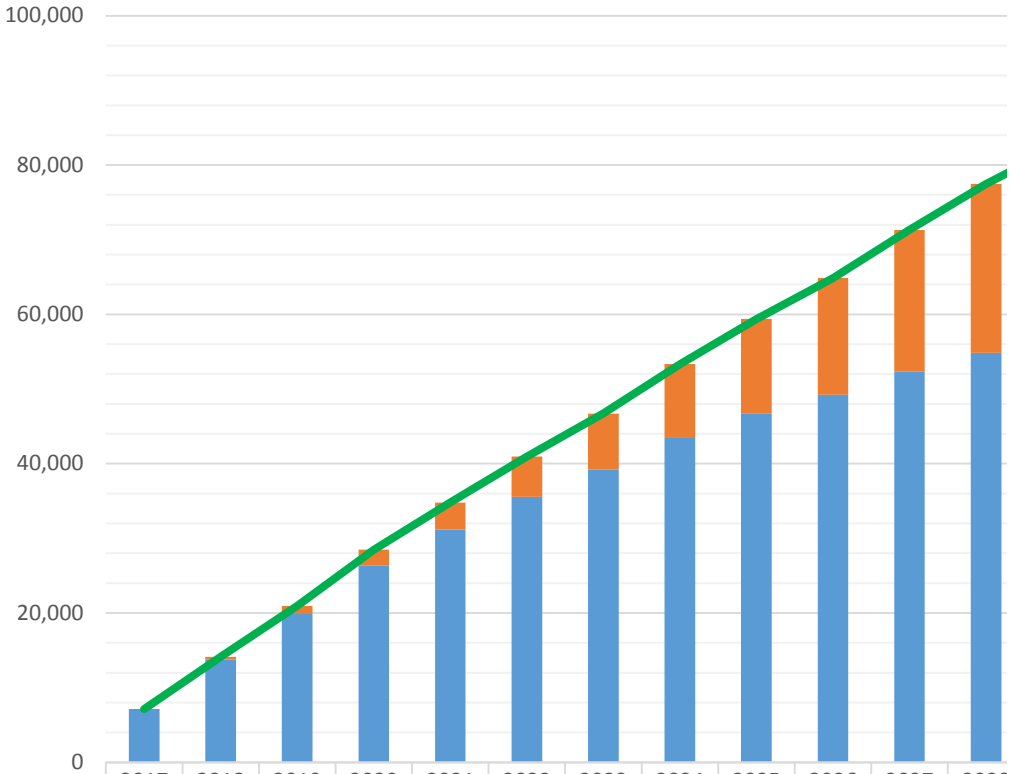


YEAR

ɜ - 25 year and 30 year Financing Terms, at 5% interest rate

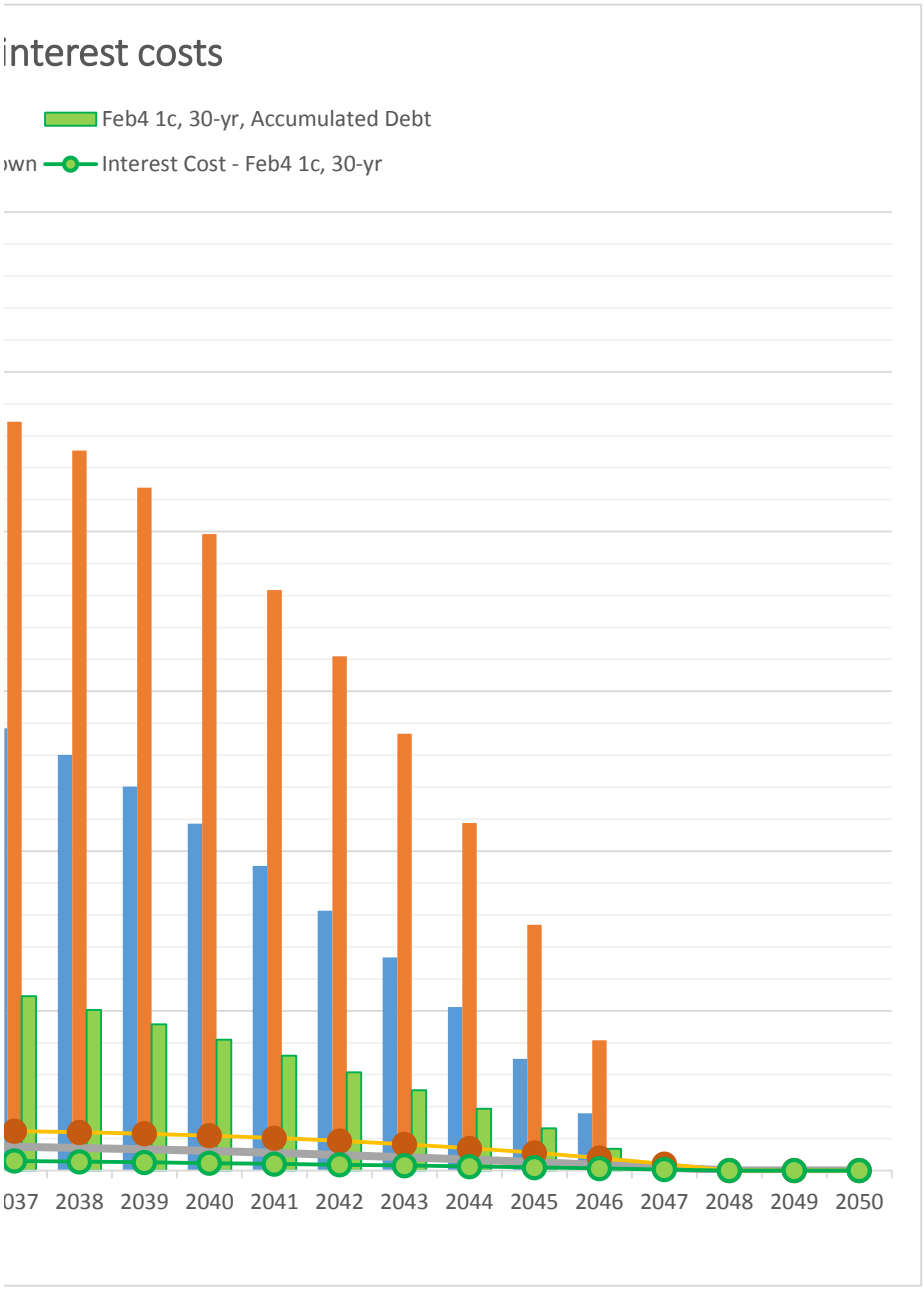


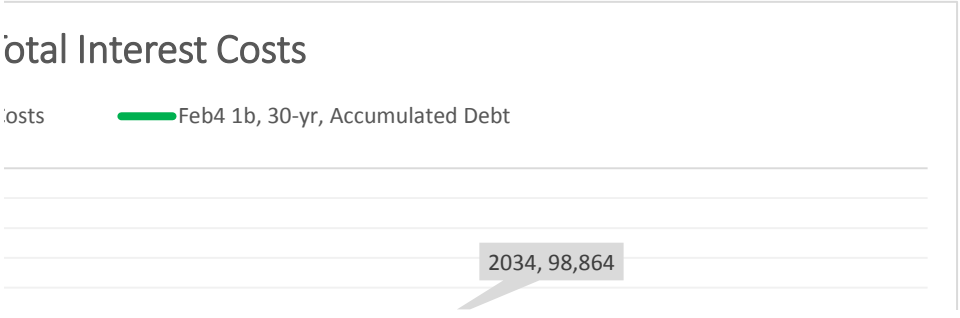

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

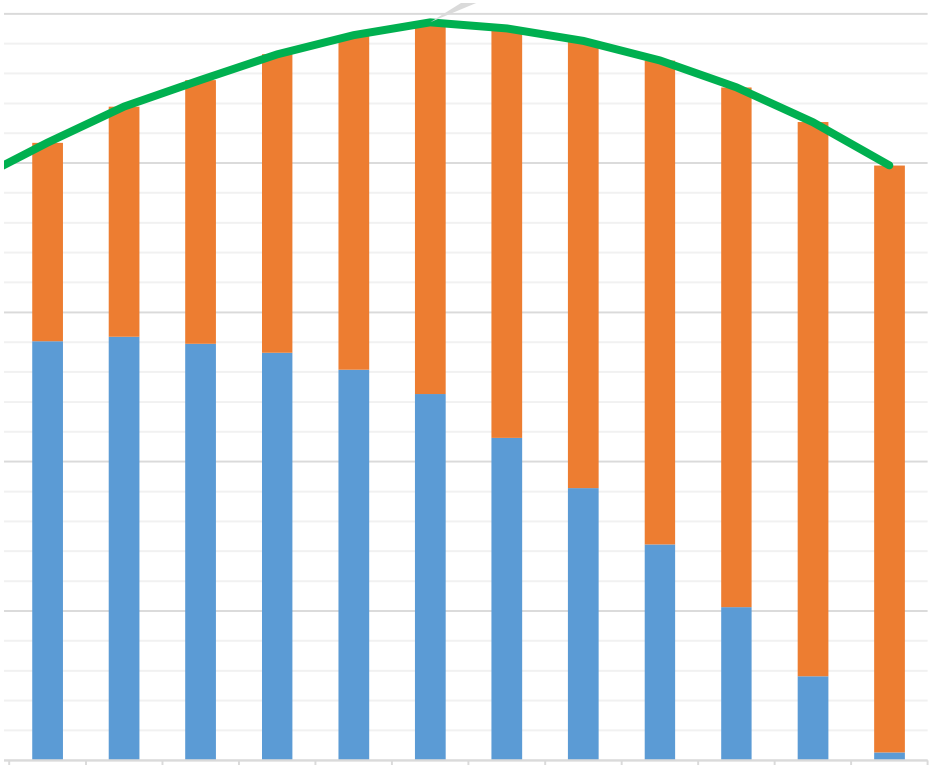


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y


interest costs
Feb4 1c, 30-yr, Accumulated Debt
wn
Interest Cost - Feb4 1c, 30-yr
037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR

Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

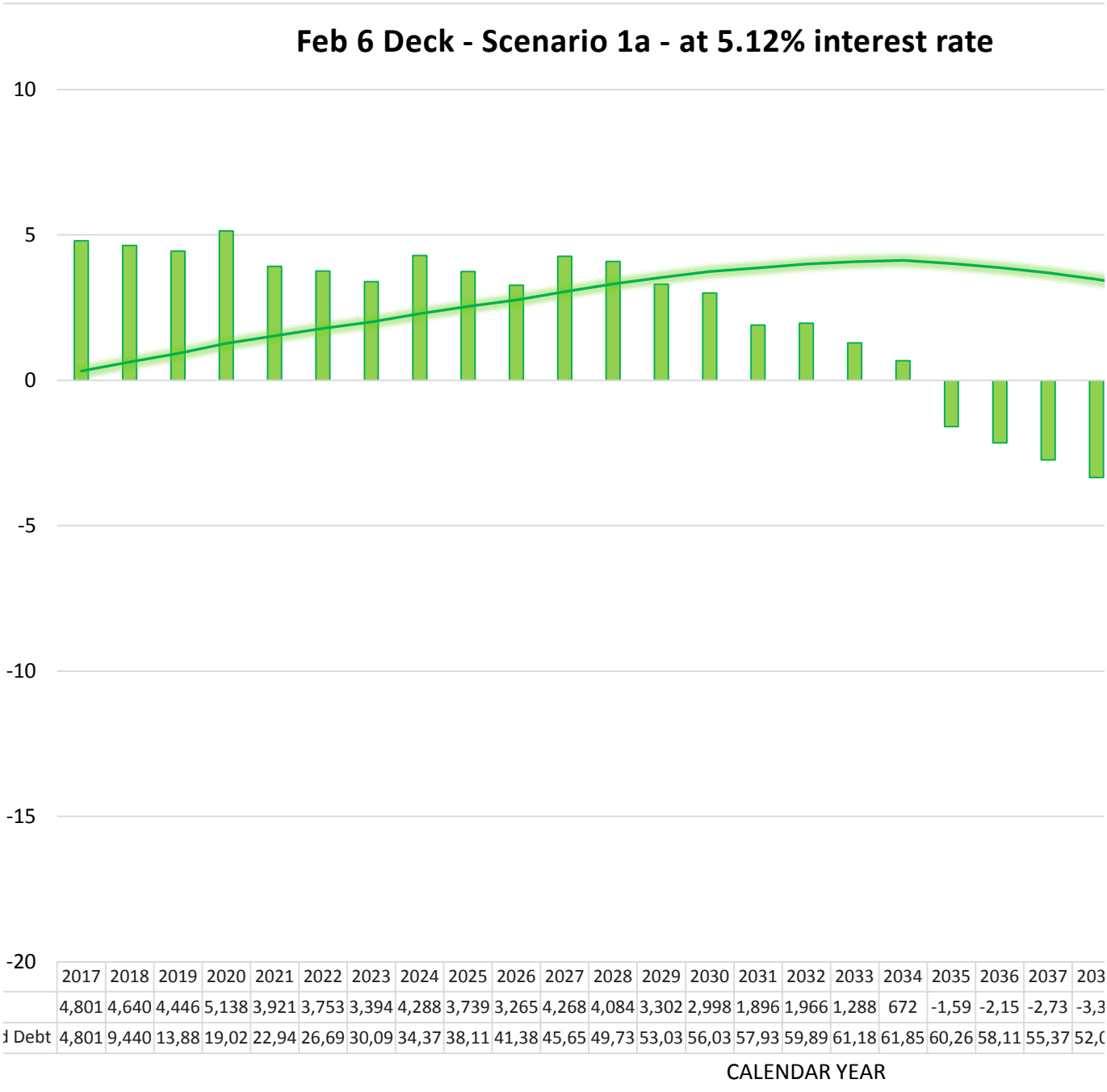
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

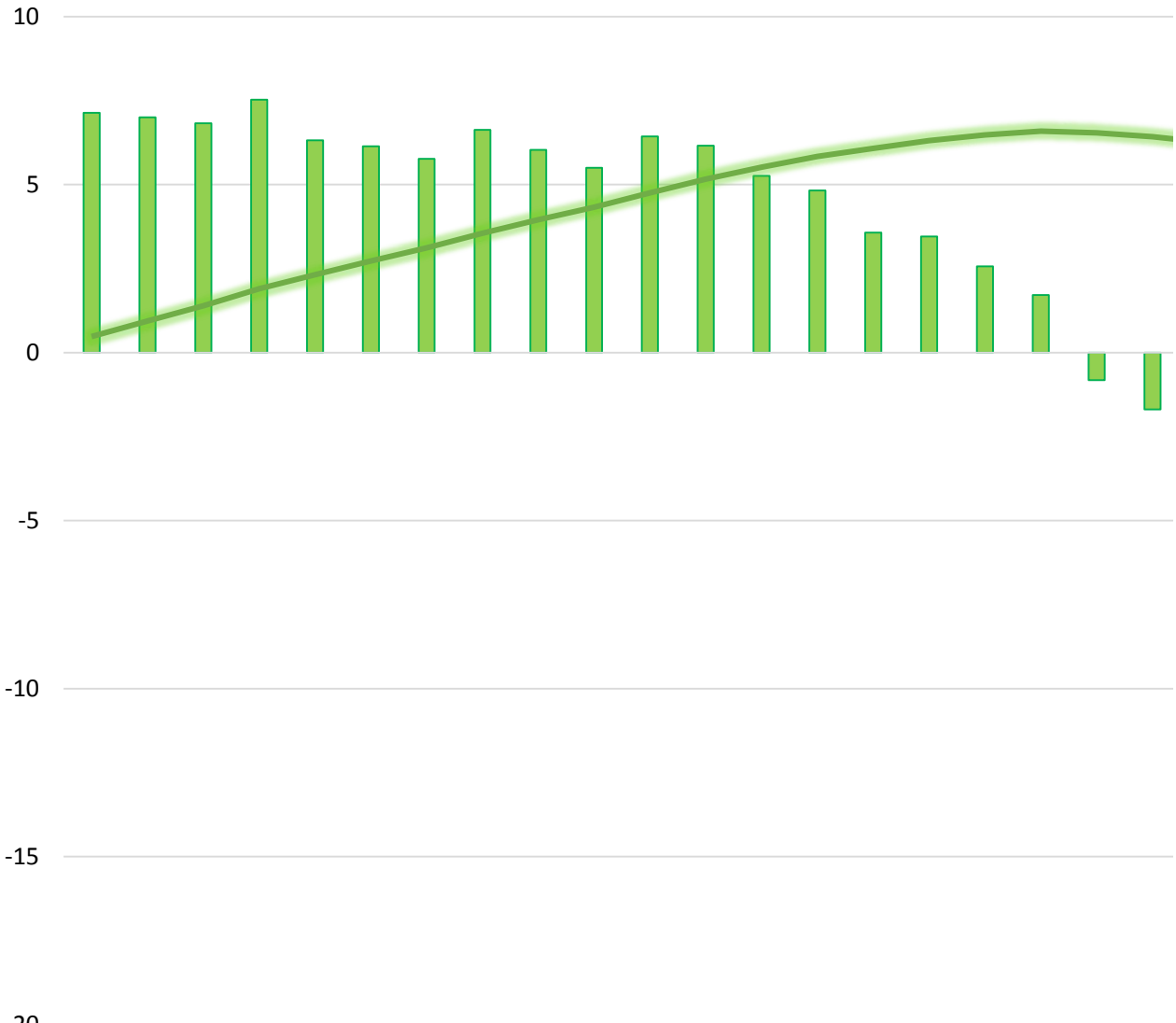
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

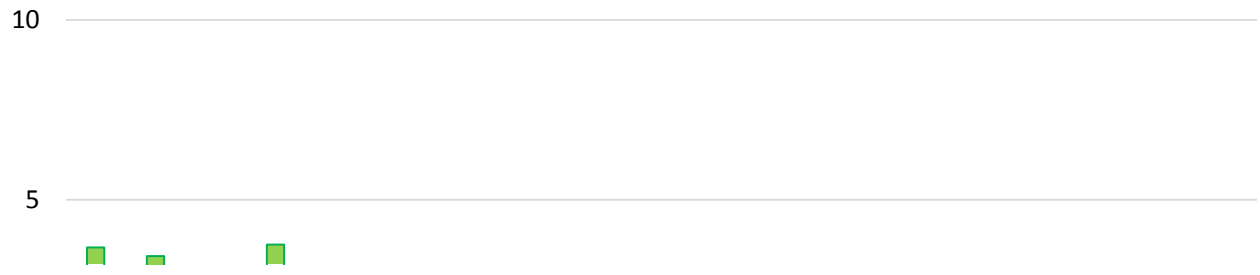
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

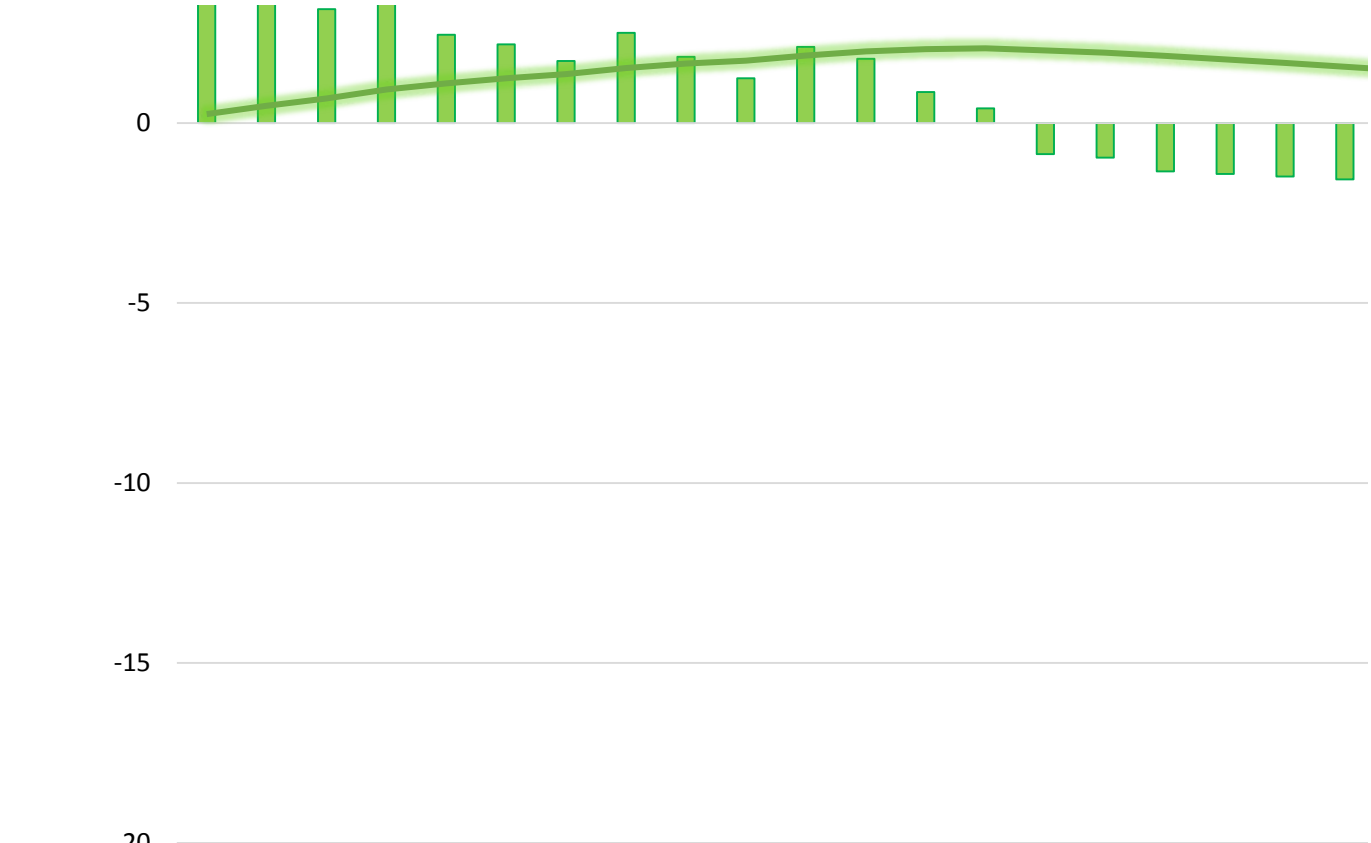


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



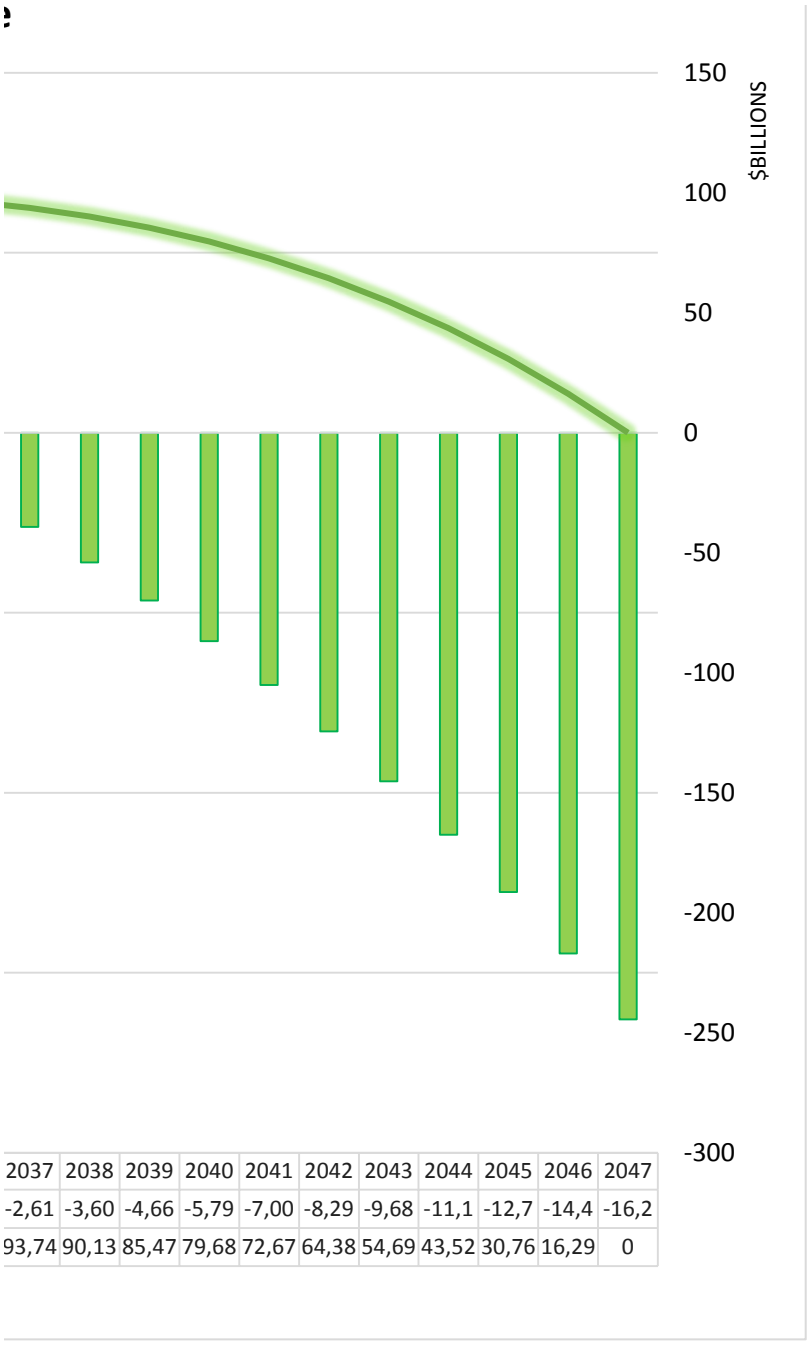


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

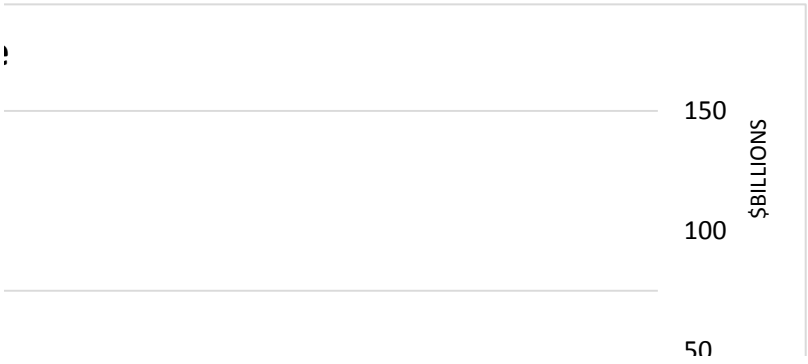
CALENDAR YEAR

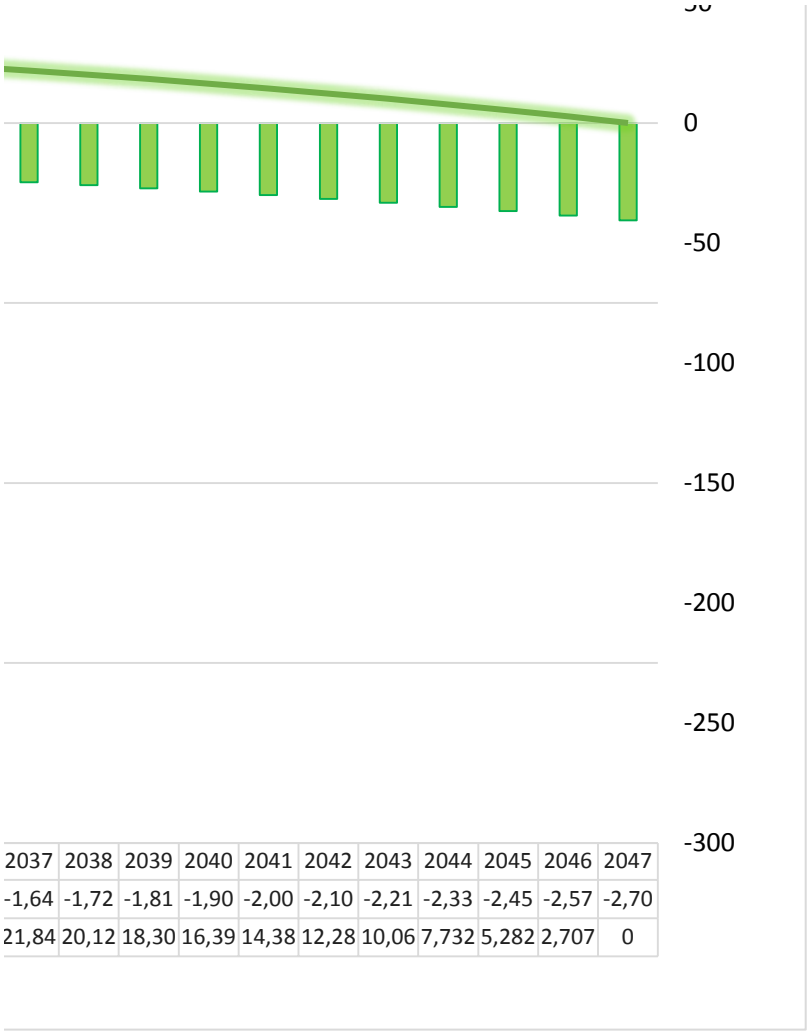


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Equal Monthly Debt Drawdown

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb4_1a_30yr

1a. GA Smoothing (Borrow ~$5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,801	4,640

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,200	4,760

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $62 billion, peakin
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary on accounting treatment.

7,133 7,133

Feb4_1b_30yr 7,133

1b. GA Smoothing (Borrow ~$7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	7,133	6,999

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,783	7,100

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $99 billion, peaking
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b on accounting treatment.

Feb4_1c_30yr

1c. GA Smoothing (Borrow ~$4 billion in 2017)

$ millions

Scenario 1C - 30-yr amortization	2017	2018
Annual Exposure[2]	3,678	3,437

	Fiscalized[3]	2016-17	2017-18
	Start: January 1st	919	3,617

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	1,783 - 1,200	7,100 - 4,760

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1200	4760
Debt-Finance Global Adjustment Costs, Option 1a	1783	7100
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18

Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1200**	**5000**
Total, B	1783	7340
Proposed Program Total:	1,783 - 1,200	7,340 - 5,000

ining

1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
4,446	5,138	3,921	3,753

2018-19	2019-20	2020-21	2021-2022
4,591	4,619	4,833	3,879

ng in 203 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
by approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
6,825	7,529	6,315	6,141

2018-19	2019-20	2020-21	2021-2022
6,956	7,001	7,226	6,272

g in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
3,158	3,761	2,450	2,183

2018-19	2019-20	2020-21	2021-2022
3,367	3,309	3,433	2,383

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
6,956 - 4,591	7,001 - 4,619	7,226 - 4,833	6,272 - 3,879

/1

2018-19[1]	2019-20[1]	2020-21[1]
4591	4619	4833
6956	7001	7226
225	279	323
60	60	60
18	18	18

4894	**4976**	**5234**
7259	7358	7627

7,259 - 4,894 7,358 - 4,976 7,627 - 5,234

1a. GA Smoothing (Borrow $5 billion in 2017)

	2017
IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	7,095
Additional GA Debt Drawdown, End of Year	5,000

Ratepayer GA Payment

Total Accumulated Debt *($ billion)*	5,000
Total Change in Accumulated Debt *($ billion)*	5000

1b. GA Smoothing (Borrow $7 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	5,095
Additional GA Debt Drawdown, End of Year	7,000

Total Accumulated Debt *($ billion)*	7000
Total Change in Accumulated Debt *($ billion)*	7000

1c. GA Smoothing (Borrow $4 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	8,095
Additional GA Debt Drawdown, End of Year	4,000

Total Accumulated Debt *($ billion)*	4000
Total Change in Accumulated Debt *($ billion)*	4000

2018	2019	2020	2021	2022	2023	2024	2025
11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
6,835	7,552	7,168	6,844	6,634	7,243	7,128	6,527
5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000

9,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000
5000	4000	5000	4000	4000	3000	4000	4000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
4,835	4,552	4,168	4,844	4,634	4,243	4,128	4,527
7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000

14000	21000	28000	35000	41000	47000	53000	59000
7000	7000	8000	6000	6000	6000	7000	6000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
8,835	8,552	8,168	8,844	8,634	8,243	8,128	8,527
3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000

7000	10000	14000	16000	19000	20000	23000	25000
3000	3000	4000	2000	2000	2000	3000	2000

2026	2027	2028	2029	2030	2031	2032	2033
10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
7,033	7,043	6,819	7,009	6,721	6,654	6,820	7,238
3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000

41,000	46,000	50,000	53,000	56,000	58,000	60,000	61,000
3000	4000	4000	3000	3000	2000	2000	1000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
4,033	5,043	4,819	5,009	4,721	4,654	5,820	5,238
6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000

65000	71000	77000	83000	88000	91000	95000	97000
6000	6000	6000	5000	5000	4000	3000	3000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
9,033	9,043	8,819	9,009	9,721	9,654	9,820	9,238
1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000

26000	28000	30000	31000	31000	30000	29000	28000
1000	2000	2000	1000	0	-1000	-1000	-1000

2034	2035	2036	2037	2038	2039	2040	2041
7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
6,756	7,662	7,389	8,129	7,881	8,645	9,421	9,207
1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000

62,000	60,000	58,000	55,000	52,000	48,000	43,000	38,000
1000	-2000	-2000	-3000	-3000	-4000	-5000	-5000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
5,756	6,662	7,389	8,129	8,881	9,645	10,421	11,207
2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000

99000	98000	96000	94000	90000	85000	80000	73000
2000	-1000	-2000	-3000	-4000	-5000	-6000	-7000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
8,756	6,662	7,389	7,129	6,881	6,645	6,421	6,207
-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000

27000	25000	23000	22000	20000	18000	16000	14000
-1000	-1000	-2000	-2000	-2000	-2000	-2000	-2000

2042	2043	2044	2045	2046	2047	2048		
4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
10,004	9,811	9,627	9,451	10,285	10,126	2,975		
-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0		

33,000	27,000	20,000	14,000	7,000	-	-	
-6000	-6000	-6000	-6000	-7000	-7000	0	

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
12,004	13,811	14,627	16,451	17,285	19,126	2,975		
-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0		

64000	55000	44000	31000	16000	0	0
-8000	-10000	-11000	-13000	-14000	-16000	0

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
6,004	5,811	5,627	5,451	6,285	6,126	2,975		
-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0		

12000	10000	8000	5000	3000	0	0
-2000	-2000	-2000	-2000	-3000	-3000	0

Feb4 1a, 30-yr - Debt Drawdown Scenarios

-92,247 -94598.515 58,489 36109.18 0

Feb4_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0
			114	110	106	122	93	89	81	102	89	78	102	97	79	71	45	47	31	16	-38	-51	-65	-80	-95	-110	-126	-133	-140	-147	-155	-162	-171	0	0	0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	5,138	3,167	58,489
Equal Monthly Debt Drawdown	5,260	3,149	

Maximum Accumulated Debt — Feb4 1a, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

End of Year Debt Drawdown	61,858	36,109
Equal Monthly Debt Drawdown	63,330	

			40%	37%	34%	36%	27%	24%																													
Feb4 1a, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
a	Debt, Beginning of Year		0	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	
c = a*5%	*Interest Cost - Feb4 1a, 30-yr - End of Year Debt Drawdown*		*0*	*246*	*483*	*711*	*974*	*1,175*	*1,367*	*1,541*	*1,760*	*1,952*	*2,119*	*2,337*	*2,546*	*2,716*	*2,869*	*2,966*	*3,067*	*3,133*	*3,167*	*3,086*	*2,975*	*2,835*	*2,664*	*2,461*	*2,224*	*1,952*	*1,666*	*1,365*	*1,049*	*717*	*367*	*0*	*0*	*0*	58,489
b	Additional GA Debt Drawdown, End of Year		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	21,822	23,788	25,076	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	20,490	13,998	7,173	0	0	0	
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	36,109	36,109	36,109	36,109	34,517	32,362	29,624	26,281	22,311	17,687	12,383	6,793	918	0	0	0	0	0	0	0	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688	49,149	51,372	53,325	54,991	56,356	57,405	58,122	58,489				
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371	-5,713	-13,241	-20,783	-28,325	-35,866	-43,408	-50,949	-58,489				
Fiscal Exposure - End of Year Debt Drawdown			4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0	

Feb4 1a, 30-yr	Equal Monthly Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			12																																		
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
3,149	*Interest Cost - Feb4 1a, 30-yr*		*114*	*356*	*589*	*833*	*1,067*	*1,264*	*1,448*	*1,643*	*1,849*	*2,029*	*2,220*	*2,435*	*2,625*	*2,787*	*2,914*	*3,013*	*3,097*	*3,149*	*3,129*	*3,034*	*2,910*	*2,756*	*2,569*	*2,351*	*2,098*	*1,819*	*1,526*	*1,218*	*895*	*554*	*197*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0	

	Monthly Drawdown		400	366	330	369	246	215	169	229	165	109	179	146	63	24	(81)	(83)	(148)	(205)	(397)	(437)	(476)	(515)	(553)	(590)	(627)	(629)	(628)	(628)	(628)	(628)	(628)	-	-	-
	FV of Monthly Drawdown at 5%		4,915	4,498	4,057	4,532	3,017	2,640	2,075	2,813	2,026	1,345	2,200	1,789	773	289	(996)	(1,024)	(1,821)	(2,519)	(4,872)	(5,365)	(5,849)	(6,325)	(6,793)	(7,253)	(7,707)	(7,722)	(7,721)	(7,721)	(7,721)	(7,721)	(7,720)	-	-	-
	Annual Interest Cost on New Drawdowns		114	105	94	105	70	61	48	65	47	31	51	42	18	7	(23)	(24)	(42)	(59)	(113)	(125)	(136)	(147)	(158)	(169)	(179)	(180)	(180)	(180)	(180)	(180)	(179)	-	-	-
	Annual Interest Cost on Opening Balance		-	252	495	728	997	1,203	1,399	1,577	1,802	1,998	2,169	2,393	2,607	2,780	2,937	3,037	3,140	3,207	3,243	3,159	3,046	2,903	2,727	2,519	2,277	1,999	1,706	1,398	1,074	734	376	(0)	(0)	(0)
	Total Annual Interest Cost		114	356	589	833	1,067	1,264	1,448	1,643	1,849	2,029	2,220	2,435	2,625	2,787	2,914	3,013	3,097	3,149	3,129	3,034	2,910	2,756	2,569	2,351	2,098	1,819	1,526	1,218	895	554	197	(0)	(0)	(0)

Feb4 1a, 30-yr	Bi-Annual Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			2																																		
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*61*	*305*	*540*	*777*	*1,024*	*1,223*	*1,410*	*1,596*	*1,808*	*1,993*	*2,173*	*2,390*	*2,589*	*2,754*	*2,893*	*2,991*	*3,083*	*3,141*	*3,147*	*3,058*	*2,940*	*2,792*	*2,613*	*2,401*	*2,156*	*1,881*	*1,591*	*1,286*	*966*	*629*	*275*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown			4,862	4,699	4,502	5,203	3,971	3,801	3,438	4,343	3,787	3,307	4,322	4,137	3,344	3,037	1,920	1,991	1,305	681	-1,612	-2,183	-2,773	-3,386	-4,021	-4,683	-5,372	-5,661	-5,951	-6,255	-6,575	-6,912	-7,265	0	0	0	

	Bi-Annual Drawdown		2,400	2,197	1,981	2,213	1,473	1,289	1,014	1,374	989	657	1,074	874	378	141	(487)	(500)	(889)	(1,230)	(2,379)	(2,620)	(2,857)	(3,089)	(3,317)	(3,542)	(3,764)	(3,771)	(3,771)	(3,771)	(3,771)	(3,771)	(3,770)	-	-	-
	FV of Bi-Annual Drawdown at 5%		4,862	4,450	4,013	4,483	2,984	2,612	2,053	2,783	2,004	1,331	2,176	1,769	765	286	(986)	(1,013)	(1,801)	(2,492)	(4,820)	(5,308)	(5,787)	(6,257)	(6,719)	(7,175)	(7,624)	(7,639)	(7,638)	(7,638)	(7,638)	(7,638)	(7,637)	-	-	-
	Annual Interest Cost on New Drawdowns		61	56	51	57	38	33	26	35	25	17	28	22	10	4	(12)	(13)	(23)	(31)	(61)	(67)	(73)	(79)	(85)	(91)	(96)	(97)	(97)	(97)	(97)	(97)	(97)	-	-	-
	Annual Interest Cost on Opening Balance		-	249	490	720	986	1,190	1,384	1,560	1,783	1,977	2,146	2,367	2,579	2,750	2,906	3,004	3,106	3,173	3,208	3,125	3,013	2,871	2,698	2,492	2,252	1,977	1,687	1,383	1,063	726	372	(0)	(0)	(0)
	Total Annual Interest Cost		61	305	540	777	1,024	1,223	1,410	1,596	1,808	1,993	2,173	2,390	2,589	2,754	2,893	2,991	3,083	3,141	3,147	3,058	2,940	2,792	2,613	2,401	2,156	1,881	1,591	1,286	966	629	275	(0)	(0)	(0)

Feb4 1a, 30-yr	Average Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*123*	*365*	*597*	*842*	*1,074*	*1,271*	*1,454*	*1,650*	*1,856*	*2,035*	*2,228*	*2,442*	*2,631*	*2,792*	*2,918*	*3,016*	*3,100*	*3,150*	*3,126*	*3,030*	*2,905*	*2,749*	*2,562*	*2,342*	*2,088*	*1,809*	*1,516*	*1,207*	*883*	*542*	*184*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
Fiscal Exposure - Average Debt Drawdown			4,923	4,758	4,559	5,269	4,021	3,849	3,481	4,398	3,835	3,349	4,377	4,189	3,386	3,075	1,944	2,016	1,321	689	-1,633	-2,210	-2,808	-3,428	-4,072	-4,742	-5,440	-5,733	-6,026	-6,334	-6,658	-6,999	-7,357	0	0	0	

Feb4 1b, 30-yr - Debt Drawdown Scenarios

-149,507 -153857.97 97,141 56717.33 0

Feb4_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0
			170	167	162	179	150	146	137	158	144	131	153	147	125	115	85	82	61	41	-19	-40	-62	-86	-111	-138	-167	-198	-231	-266	-304	-344	-388	0	0	0

0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown 7,529	5,062	97,141
Equal Monthly Debt Drawdown 7,708	5,042	

Maximum Accumulated Debt	Feb4 1b, 30-yr, Accumulated Debt	Total Principal Debt Borrowed
End of Year Debt Drawdown	98,864	56,717
Equal Monthly Debt Drawdown	101,217	

Feb4 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
a Debt, Beginning of Year	0	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	
c = a*5% *Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown*	*0*	*365*	*724*	*1,073*	*1,459*	*1,782*	*2,096*	*2,391*	*2,731*	*3,040*	*3,322*	*3,651*	*3,966*	*4,236*	*4,483*	*4,665*	*4,842*	*4,974*	*5,062*	*5,020*	*4,933*	*4,800*	*4,615*	*4,376*	*4,080*	*3,721*	*3,296*	*2,800*	*2,228*	*1,575*	*834*	*0*	*0*	*0*	97,141
b Additional GA Debt Drawdown, End of Year	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
d = a+b+c Accumulated debt in present year (including 5% annual interest)	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	0	
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,633	26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606	82,685	86,406	89,703	92,503	94,731	96,306	97,141				
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,831	56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076	-10,007	-22,027	-35,008	-48,980	-63,971	-80,013	-97,141				
Fiscal Exposure - End of Year Debt Drawdown	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0	

Feb4 1b, 30-yr — Equal Monthly Debt Drawdown

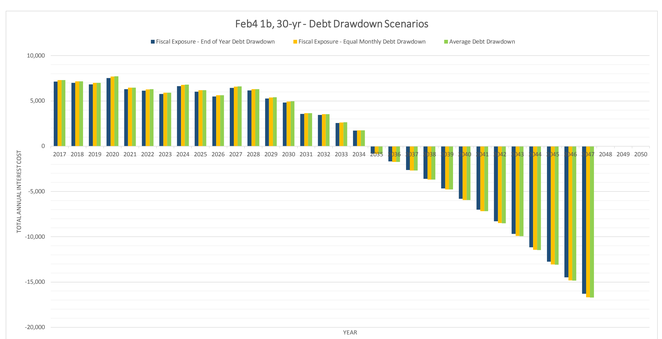
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	
5,042 *Interest Cost - Feb4 1b, 30-yr*	*170*	*532*	*886*	*1,252*	*1,609*	*1,928*	*2,234*	*2,549*	*2,874*	*3,171*	*3,475*	*3,797*	4,091	*4,350*	*4,568*	*4,748*	*4,904*	*5,015*	*5,042*	*4,980*	*4,871*	*4,714*	*4,504*	*4,238*	*3,913*	*3,524*	*3,066*	*2,534*	*1,925*	*1,231*	*446*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0	
Monthly Drawdown	594	553	508	538	405	363	306	353	275	205	259	209	108	49	(76)	(101)	(189)	(271)	(490)	(559)	(629)	(700)	(773)	(847)	(924)	(1,002)	(1,082)	(1,164)	(1,249)	(1,337)	(1,427)	(0)	-	-	
FV of Monthly Drawdown at 5%	7,303	6,792	6,247	6,610	4,972	4,463	3,755	4,338	3,383	2,523	3,184	2,565	1,327	605	(937)	(1,237)	(2,326)	(3,335)	(6,020)	(6,867)	(7,728)	(8,604)	(9,498)	(10,412)	(11,347)	(12,306)	(13,291)	(14,304)	(15,348)	(16,424)	(17,536)	(0)	-	-	
Annual Interest Cost on New Drawdowns	170	158	145	154	116	104	87	101	79	59	74	60	31	14	(22)	(29)	(54)	(78)	(140)	(160)	(180)	(200)	(221)	(242)	(264)	(286)	(309)	(333)	(357)	(382)	(408)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	374	741	1,099	1,493	1,824	2,146	2,448	2,796	3,112	3,401	3,738	4,061	4,336	4,589	4,776	4,958	5,092	5,182	5,139	5,051	4,914	4,725	4,481	4,177	3,810	3,375	2,867	2,281	1,612	854	0	(0)	(0)	
Total Annual Interest Cost	170	532	886	1,252	1,609	1,928	2,234	2,549	2,874	3,171	3,475	3,797	4,091	4,350	4,568	4,748	4,904	5,015	5,042	4,980	4,871	4,714	4,504	4,238	3,913	3,524	3,066	2,534	1,925	1,231	446	0	(0)	(0)	

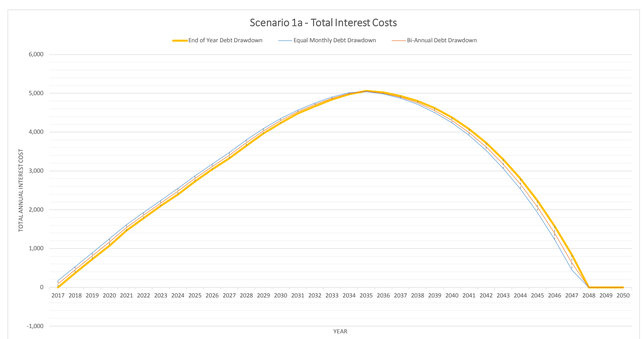
Feb4 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*91*	*455*	*811*	*1,169*	*1,539*	*1,861*	*2,170*	*2,476*	*2,808*	*3,110*	*3,404*	*3,730*	*4,034*	*4,297*	*4,528*	*4,710*	*4,875*	*4,996*	*5,051*	*4,998*	*4,900*	*4,753*	*4,555*	*4,302*	*3,990*	*3,615*	*3,172*	*2,657*	*2,065*	*1,390*	*626*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	7,225	7,089	6,913	7,626	6,396	6,220	5,838	6,713	6,113	5,574	6,514	6,235	5,330	4,888	3,614	3,501	2,603	1,738	-829	-1,709	-2,648	-3,651	-4,722	-5,867	-7,093	-8,405	-9,810	-11,314	-12,926	-14,652	-16,502	0	0	0	
Bi-Annual Drawdown	3,567	3,317	3,051	3,228	2,428	2,180	1,834	2,118	1,652	1,232	1,555	1,253	648	295	(457)	(604)	(1,136)	(1,629)	(2,940)	(3,354)	(3,774)	(4,202)	(4,639)	(5,085)	(5,542)	(6,010)	(6,491)	(6,986)	(7,495)	(8,021)	(8,564)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	7,225	6,719	6,180	6,539	4,919	4,415	3,715	4,291	3,347	2,496	3,150	2,538	1,313	598	(926)	(1,224)	(2,301)	(3,299)	(5,956)	(6,794)	(7,645)	(8,512)	(9,396)	(10,300)	(11,225)	(12,174)	(13,148)	(14,150)	(15,183)	(16,247)	(17,347)	(0)	-	-	
Annual Interest Cost on New Drawdowns	91	85	78	83	62	56	47	54	42	32	40	32	17	8	(12)	(15)	(29)	(42)	(75)	(86)	(97)	(108)	(119)	(130)	(142)	(154)	(166)	(179)	(192)	(205)	(219)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	370	733	1,087	1,477	1,805	2,123	2,422	2,766	3,079	3,364	3,698	4,017	4,290	4,540	4,725	4,904	5,038	5,127	5,084	4,997	4,861	4,674	4,432	4,132	3,769	3,338	2,836	2,257	1,595	845	0	0	0	
Total Annual Interest Cost	91	455	811	1,169	1,539	1,861	2,170	2,476	2,808	3,110	3,404	3,730	4,034	4,297	4,528	4,710	4,875	4,996	5,051	4,998	4,900	4,753	4,555	4,302	3,990	3,615	3,172	2,657	2,065	1,390	626	0	0	0	

Feb4 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*183*	*544*	*898*	*1,266*	*1,620*	*1,939*	*2,244*	*2,561*	*2,885*	*3,181*	*3,486*	*3,809*	*4,101*	*4,359*	*4,574*	*4,754*	*4,908*	*5,018*	*5,041*	*4,977*	*4,867*	*4,707*	*4,496*	*4,228*	*3,900*	*3,509*	*3,048*	*2,514*	*1,902*	*1,205*	*417*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	7,316	7,179	7,000	7,722	6,477	6,298	5,912	6,798	6,190	5,645	6,597	6,314	5,397	4,950	3,659	3,545	2,636	1,760	-840	-1,731	-2,682	-3,697	-4,782	-5,942	-7,183	-8,511	-9,934	-11,457	-13,089	-14,838	-16,711	0	0	0	





Feb4 1c, 30-yr - Debt Drawdown Scenarios

Feb4_1c_30yr

Annual Interest Rate = 5.1%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0
			88	82	75	90	58	52	41	60	44	29	50	43	20	10	-20	-23	-32	-34	-35	-37	-39	-41	-43	-45	-48	-50	-53	-55	-58	-61	-64	0	0	0

0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	3,761	1,594	29,477
Equal Monthly Debt Drawdown	3,851	1,583	

Maximum Accumulated Debt — Feb4 1c, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

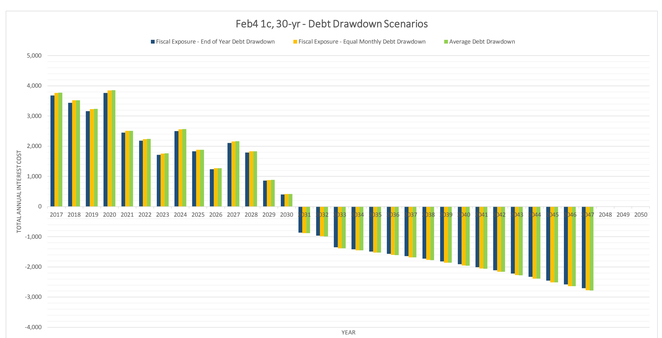
End of Year Debt Drawdown	31,125	20,043
Equal Monthly Debt Drawdown	31,866	

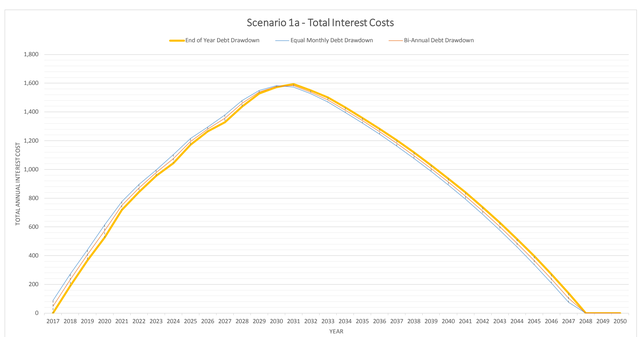
		30%	27%	24%	27%	16%	13%																														
Feb4 1c, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
a	Debt, Beginning of Year	0	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	
c = a*5%	*Interest Cost - Feb4 1c, 30-yr - End of Year Debt Drawdown*	*0*	*188*	*364*	*526*	*719*	*844*	*956*	*1,044*	*1,172*	*1,266*	*1,329*	*1,437*	*1,529*	*1,573*	*1,594*	*1,550*	*1,500*	*1,431*	*1,359*	*1,283*	*1,203*	*1,119*	*1,030*	*937*	*839*	*737*	*629*	*515*	*396*	*270*	*139*	*0*	*0*	*0*	*0*	29,477
b	Additional GA Debt Drawdown, End of Year	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	0	
	Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,641	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663	22,866	23,984	25,015	25,952	26,791	27,528	28,157	28,672	29,068	29,338	29,477				
	Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18,247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828	-1,018	-3,864	-6,710	-9,556	-12,402	-15,248	-18,094	-20,940	-23,786	-26,631	-29,477				
Fiscal Exposure - End of Year Debt Drawdown		3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0	

Feb4 1c, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	
1,583	*Interest Cost - Feb4 1c, 30-yr*	*88*	*270*	*439*	*615*	*777*	*896*	*997*	*1,103*	*1,216*	*1,295*	*1,379*	*1,480*	1,549	*1,583*	*1,573*	*1,527*	*1,468*	*1,398*	*1,324*	*1,246*	*1,164*	*1,077*	*987*	*892*	*792*	*686*	*576*	*460*	*338*	*209*	*74*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0	
	Monthly Drawdown	306	271	233	270	144	112	64	122	55	(2)	65	29	(56)	(97)	(204)	(209)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(0)	-	-	
	FV of Monthly Drawdown at 5%	3,765	3,326	2,861	3,312	1,773	1,371	781	1,493	679	(28)	799	360	(684)	(1,197)	(2,512)	(2,570)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,913)	(2,913)	(2,913)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	88	77	67	77	41	32	18	35	16	(1)	19	8	(16)	(28)	(58)	(60)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	193	373	538	736	864	979	1,069	1,200	1,296	1,361	1,471	1,565	1,610	1,632	1,586	1,536	1,465	1,391	1,313	1,231	1,145	1,055	959	859	754	644	527	405	277	142	0	0	0	
	Total Annual Interest Cost	88	270	439	615	777	896	997	1,103	1,216	1,295	1,379	1,480	1,549	1,583	1,573	1,527	1,468	1,398	1,324	1,246	1,164	1,077	987	892	792	686	576	460	338	209	74	0	0	0	

Feb4 1c, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*47*	*232*	*405*	*574*	*750*	*872*	*978*	*1,076*	*1,195*	*1,282*	*1,356*	*1,460*	*1,540*	*1,578*	*1,583*	*1,537*	*1,483*	*1,413*	*1,340*	*1,263*	*1,182*	*1,097*	*1,007*	*913*	*814*	*710*	*600*	*485*	*365*	*237*	*104*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,725	3,481	3,199	3,809	2,481	2,211	1,741	2,534	1,859	1,254	2,137	1,812	872	409	-871	-973	-1,363	-1,433	-1,506	-1,584	-1,665	-1,750	-1,839	-1,933	-2,032	-2,136	-2,246	-2,360	-2,481	-2,608	-2,742	0	0	0	
	Bi-Annual Drawdown	1,839	1,624	1,397	1,618	866	670	382	729	332	(14)	390	176	(334)	(584)	(1,227)	(1,255)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(0)	-	-	
	FV of Bi-Annual Drawdown at 5%	3,725	3,290	2,830	3,277	1,754	1,356	773	1,477	672	(28)	791	356	(677)	(1,184)	(2,485)	(2,542)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	47	42	36	41	22	17	10	19	8	(0)	10	5	(9)	(15)	(31)	(32)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	191	369	533	728	855	968	1,057	1,187	1,282	1,346	1,456	1,548	1,593	1,614	1,569	1,520	1,450	1,376	1,299	1,218	1,133	1,043	949	850	746	637	522	401	274	140	0	0	0	
	Total Annual Interest Cost	47	232	405	574	750	872	978	1,076	1,195	1,282	1,356	1,460	1,540	1,578	1,583	1,537	1,483	1,413	1,340	1,263	1,182	1,097	1,007	913	814	710	600	485	365	237	104	0	0	0	

Feb4 1c, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*94*	*276*	*445*	*622*	*781*	*900*	*1,000*	*1,108*	*1,219*	*1,298*	*1,383*	*1,483*	*1,551*	*1,583*	*1,572*	*1,525*	*1,466*	*1,395*	*1,321*	*1,243*	*1,161*	*1,074*	*984*	*888*	*788*	*683*	*572*	*456*	*333*	*205*	*69*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,772	3,525	3,239	3,857	2,513	2,239	1,763	2,566	1,882	1,270	2,164	1,835	883	414	-882	-985	-1,381	-1,451	-1,526	-1,604	-1,686	-1,772	-1,863	-1,958	-2,058	-2,163	-2,274	-2,390	-2,513	-2,641	-2,776	0	0	0	





30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

TO BE

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,556	3,123	1,728	1,400	836	1,560	821	167

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

E UPDATED

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

JK: Fixed the formula in the yellow highlighted cells. Pls. check. (SK: looks good to me)

	Tab
v16 GA Financing - Scenario 1a 1b v18 (with fiscal) - Feb 4_v2.xlsx	Powerpoint_Export Scenario tabs

Change Description

Added in trigger for later start in the year
Updated IESO forecast from Energy (IESO GA Cost Forecast 170207 (Feb 6 update).xlsx)

Equal Monthly Debt Drawdown

		Month	Months Remai
Scenario Start Date	**July**	7	6

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	3,180	2,888
Annual Exposure2 with start on July 1st	*1,590*	*2,888*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	795	3,107
Start: July 1st	-	*2,312*

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	851	3,335
Start: July 1st	-	*2,484*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	1,168	1,765
Annual Exposure2 with start on July 1st	*584*	*1,765*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	292	1,609
Start: July 1st	-	*1,025*

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,449	2,040
Annual Exposure2 with start on July 1st	*725*	*2,040*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,597
Start: July 1st	-	*1,959*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335
Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3575**
Total, B	362	1837
Proposed Program Total:	362 - 851	1,837 - 3,575

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,556	3,123	1,728	1,400
2,556	*3,123*	*1,728*	*1,400*

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646
2,805	*2,697*	*2,774*	*1,646*

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

ıking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
2,311	3,750	2,311	1,933
2,311	*3,750*	*2,311*	*1,933*

2018-19	2019-20	2020-21	2021-2022

1,901	2,671	3,391	2,217
1,901	*2,671*	*3,391*	*2,217*

2019	2020	2021	2022
2,581	4,016	2,598	2,241
2,581	*4,016*	*2,598*	*2,241*

2018-19	2019-20	2020-21	2021-2022
2,175	2,940	3,662	2,508
2,175	*2,940*	*3,662*	*2,508*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

/1

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052
2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

Equal Monthly Debt Drawdown

		Month	Months Remaining
Scenario Start Date	July	7	6

AS LONG AS >

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	3,180	2,888	2,556

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	795	3,107	2,805
Fiscal Exposure, 25%	199	777	701

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Annual Exposure[2]	3,404	3,128	2,812

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	851	3,335	3,049
Fiscal Exposure, 25%	213	834	762

Indicates year in which, similar to OPCD's exa
closest to 30%. As Fiscal 2016/17 is a partial y
month the GA deferral begins.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu
decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions	9%	14%	18%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	1,168	1,765	2,311

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	292	1,609	1,901
Fiscal Exposure, 25%	73	402	475

Scenario 1b - 30-yr amortization	2017	2018	2019
Annual Exposure[2]	1,449	2,040	2,581

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	362	1,597	2,175
Fiscal Exposure, 25%	91	399	544

Indicates year in which, similar to OPCD's exar closest to 30%.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 ar
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu on accounting treatment.

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]
Debt-Finance Global Adjustment Costs, Option 1a	213	834	762
Debt-Finance Global Adjustment Costs, Option 1b	91	399	544
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**213**	**1074**	**1065**
Total, B	91	639	847

Proposed Program Total:	91 - 213	639 - 1,074	847 - 1,065

($M)	2016-171	2017-181	2018-191
Debt-Finance Global Adjustment Costs, Option 1a	851	3335	3049
Debt-Finance Global Adjustment Costs, Option 1b	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**851**	**3575**	**3352**
Total, B	362	1837	2478

Proposed Program Total:	362 - 851	1,837 - 3,575	2,478 - 3,352

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6

7	July	7	
8	August	8	
9	September	9	
10	October	10	
11	November	11	
12	December	12	

30-year term	**2016-17**	**2017-18**	**2018-19**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335	2,175 - 3,049

ROWS HIDDEN

1	1 = Comparision Enabled

APRIL 1, 2017 25%

2020	2021	2022
3,123	1,728	1,400

2019-20	2020-21	2021-2022
2,697	2,774	1,646
674	693	412

2020	2021	2022
3,396	2,020	1,712

2019-20	2020-21	2021-2022
2,958	3,052	1,943
740	763	486

mple, the true cost of GA being deferred is
ear, exposure may be less subject to which

l $17-21 billion (at 3.5% interest rate), peaking in 2028.
$33-$36 million.

ıals per month based on month of the year. Actuals may also depend on

28%	17%	13%
2020	2021	2022
3,750	2,311	1,933

2019-20	2020-21	2021-2022
2,671	3,391	2,217
668	848	554

2020	2021	2022
4,016	2,598	2,241

2019-20	2020-21	2021-2022
2,940	3,662	2,508
735	915	627

mple, the true cost of GA being deferred is

ıd $17-21 billion (at 3.5% interest rate), peaking in 2028.
$118-$134 million.

ıals per month based on month of the year. Actuals may also depend on decision

2019-20[1]	2020-21[1]
740	763
735	915
279	323
60	60
18	18
1097	**1164**
1092	1316

1,092 - 1,097 1,316 - 1,164

2019-201	2020-211
2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453





2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964
Equal Monthly Debt Drawdown	3,180	952

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

		26%	23%	19%	22%	10%	7%																													
Scenario 1a, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

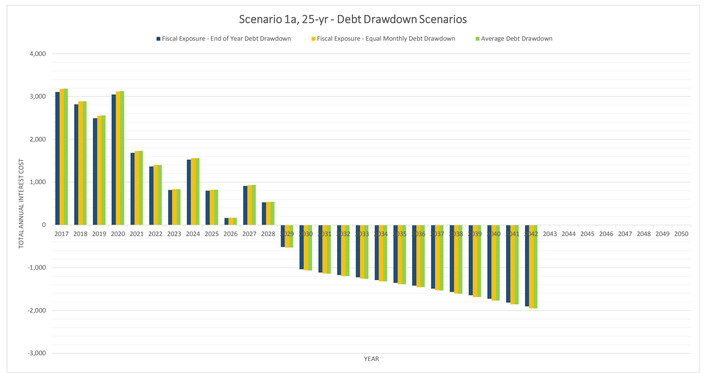
		26%	23%	19%	22%	10%	7%																													
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

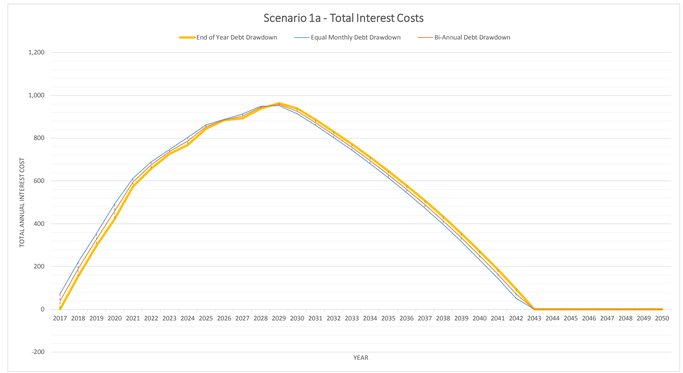
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

		26%	23%	19%	22%	10%	7%																													
Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1a, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	968	
Equal Monthly Debt Drawdown	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

			9%	14%	18%	28%	17%	13%																														
Scenario 1b, 25-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year		0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*		*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown			1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		**12**																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year		0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*		*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	[redacted]	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

	Monthly Drawdown		95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%		1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns		27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance		-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost		27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Scenario 1b, 25-yr	Bi-Annual Debt Drawdown		**2**																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year		0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr		*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown			1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown		571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%		1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns		14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance		-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost		14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Scenario 1b, 25-yr	Average Debt Drawdown																																				
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year		0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr		*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown			1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	

Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

		28%	24%	21%	24%	12%	9%																														
Scenario 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

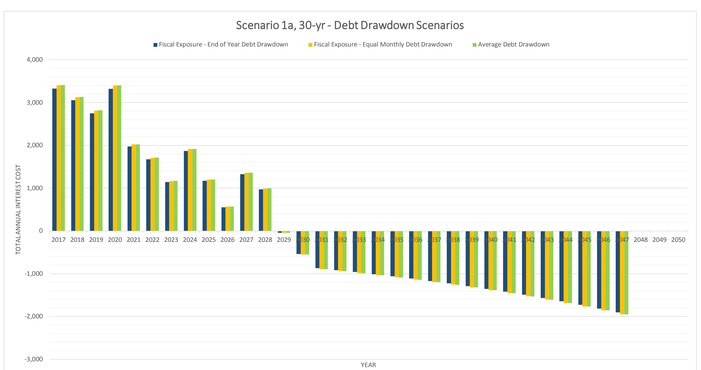
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	1,156	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

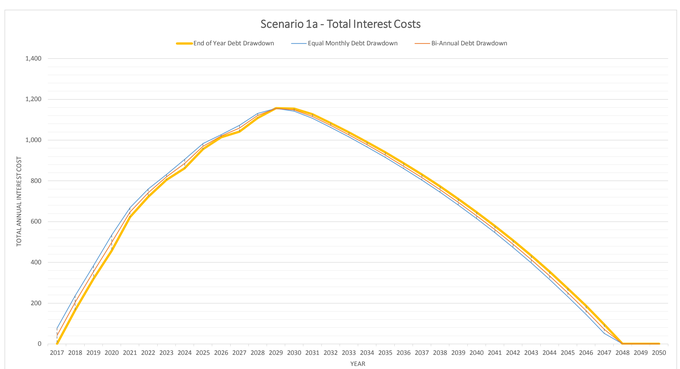
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

		12%	16%	20%	30%	19%	15%																													
Scenario 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

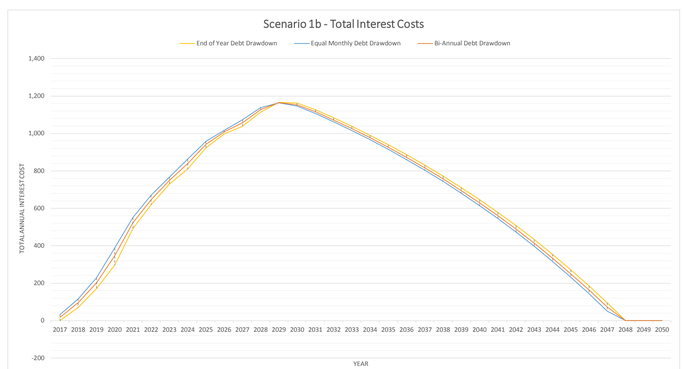
	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

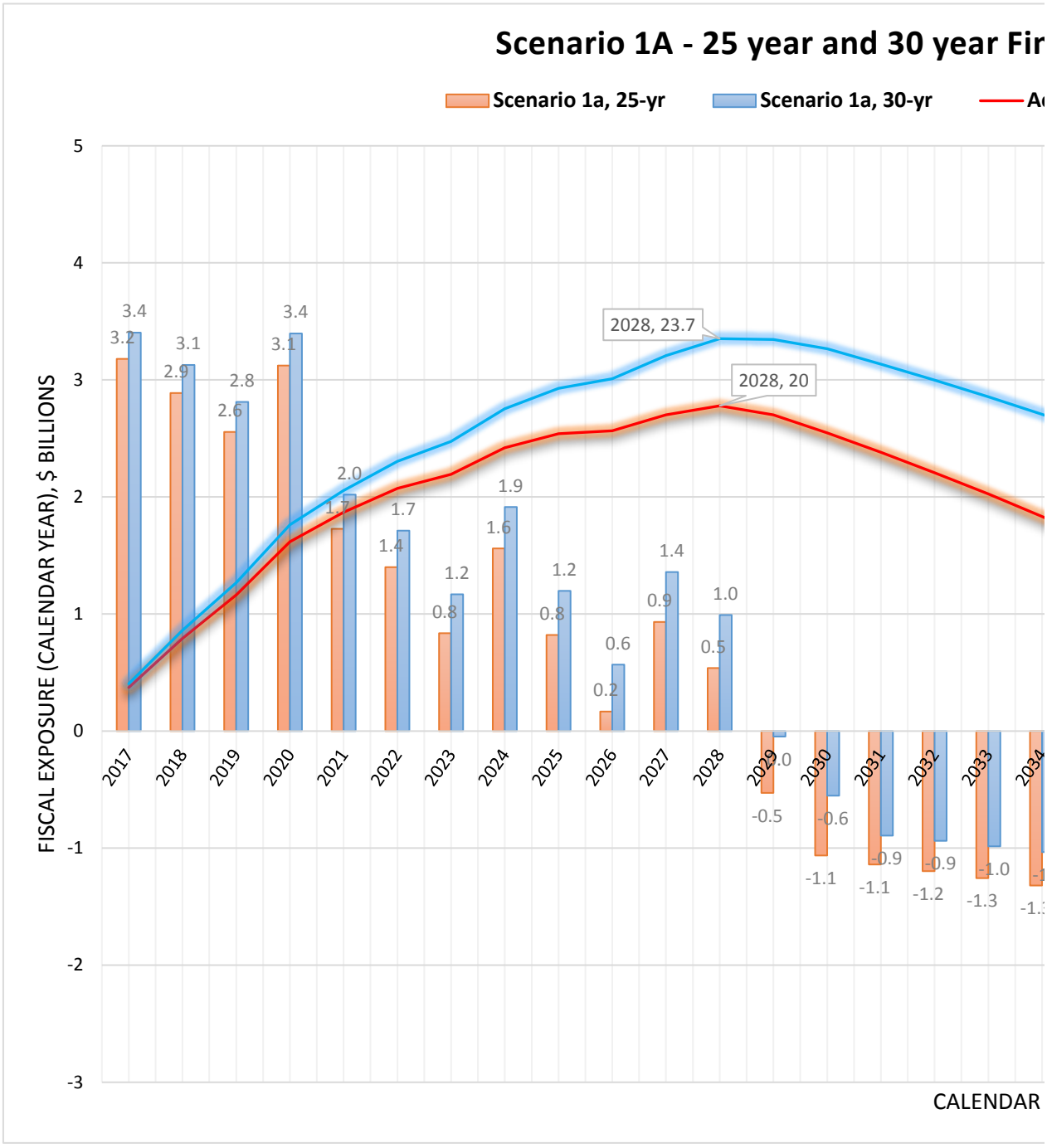
	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

Scenario 1b, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

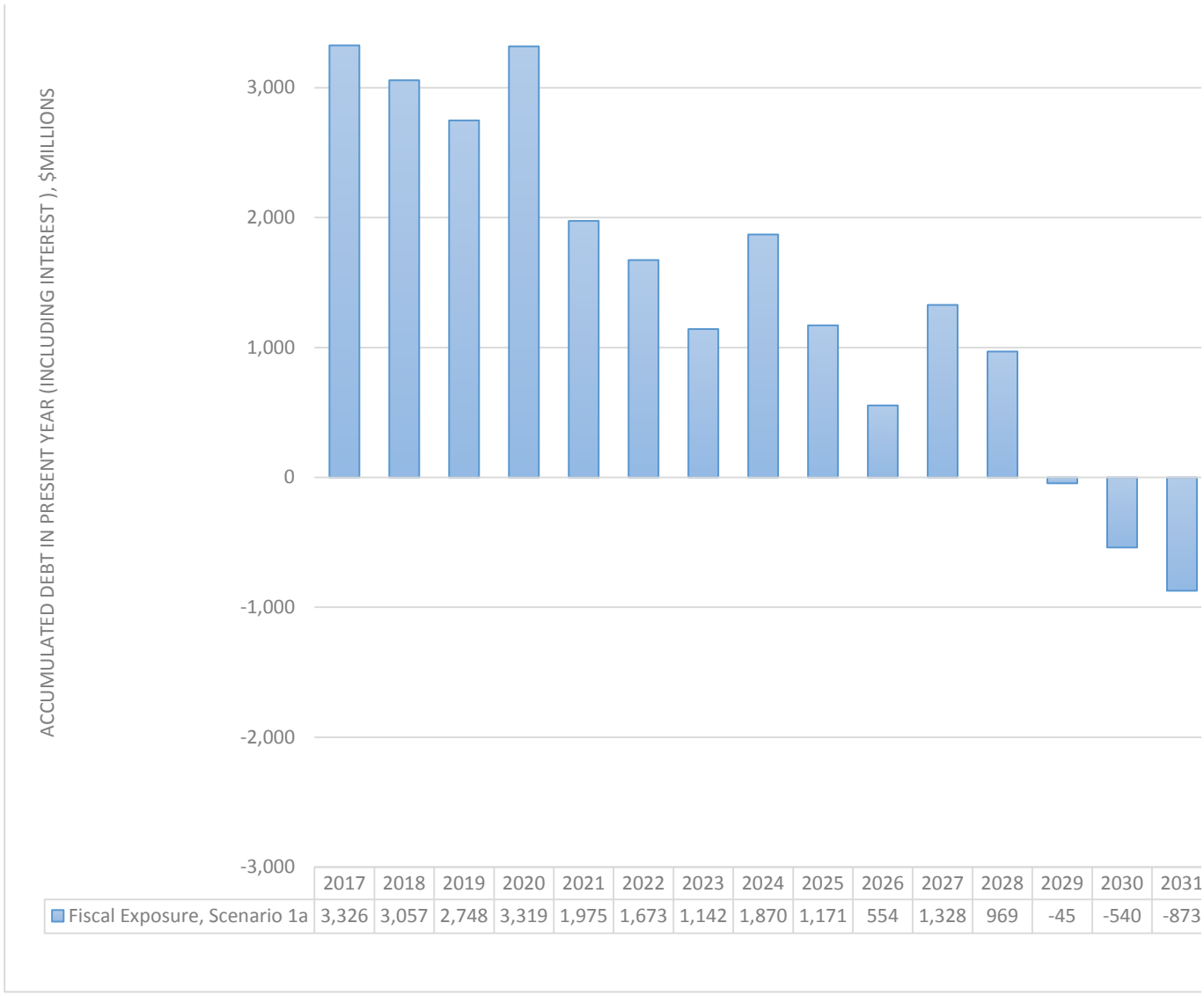




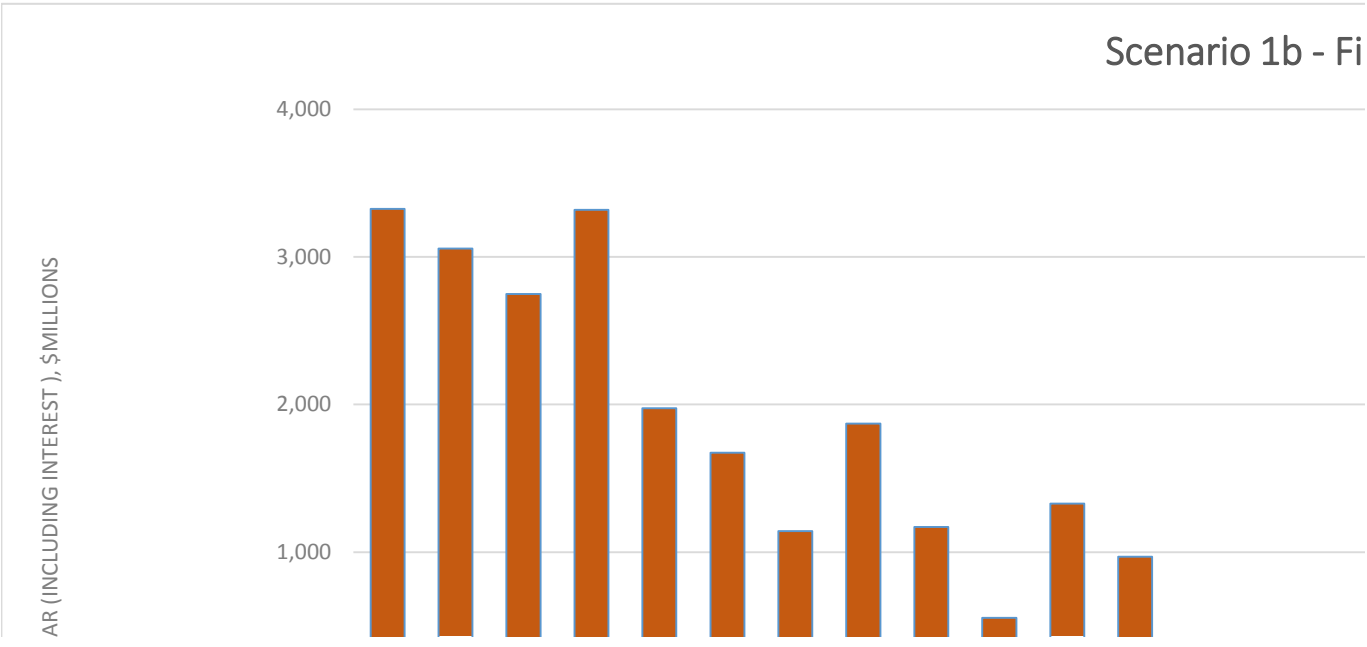
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

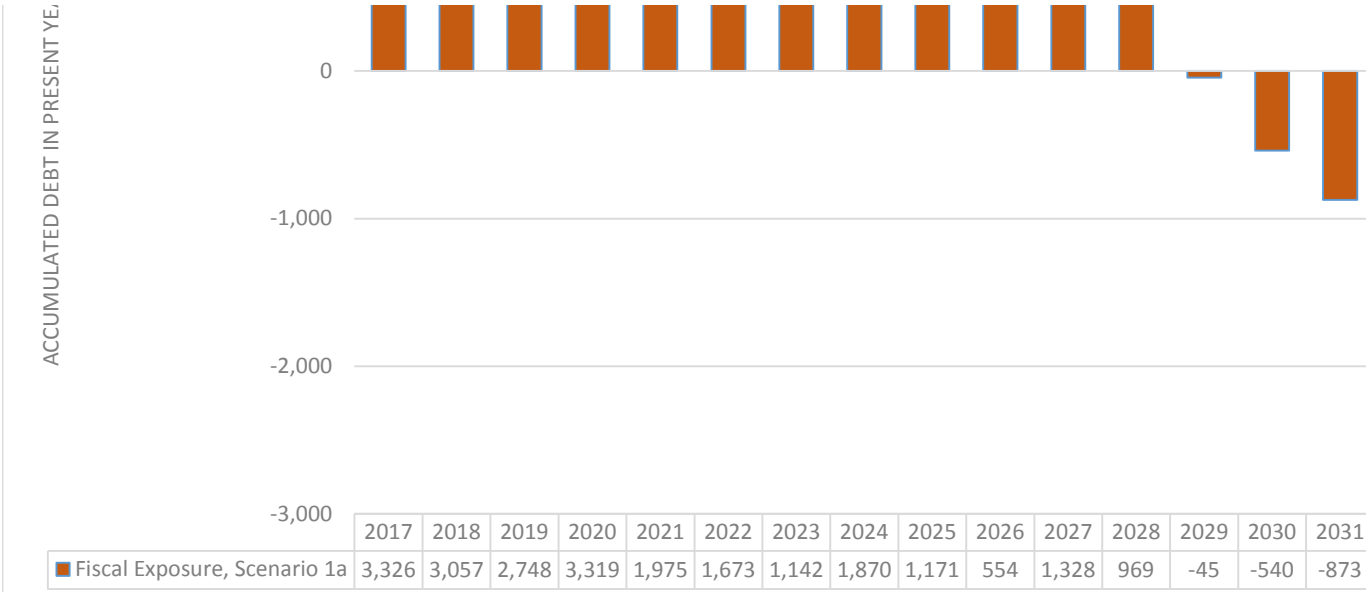




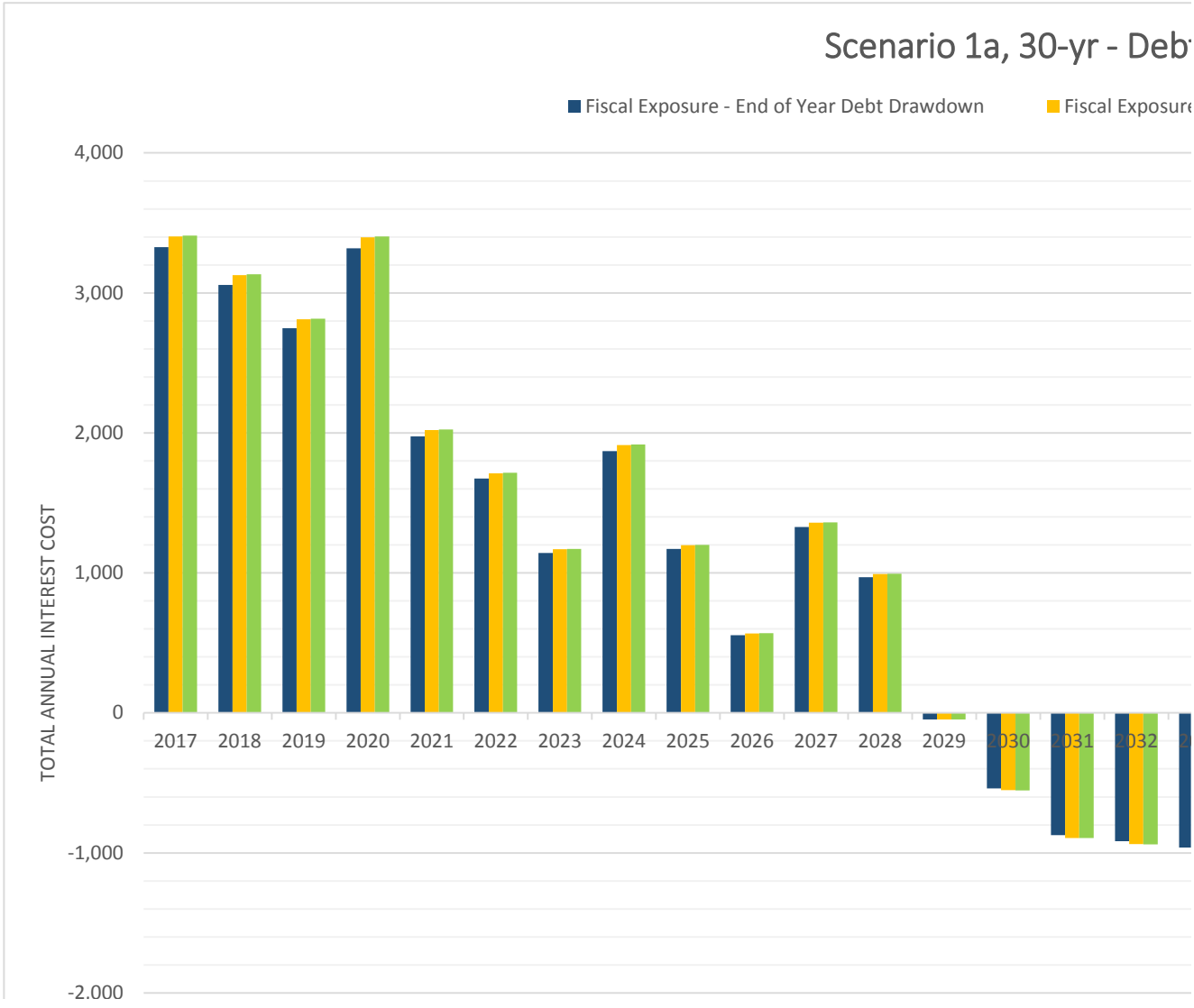


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



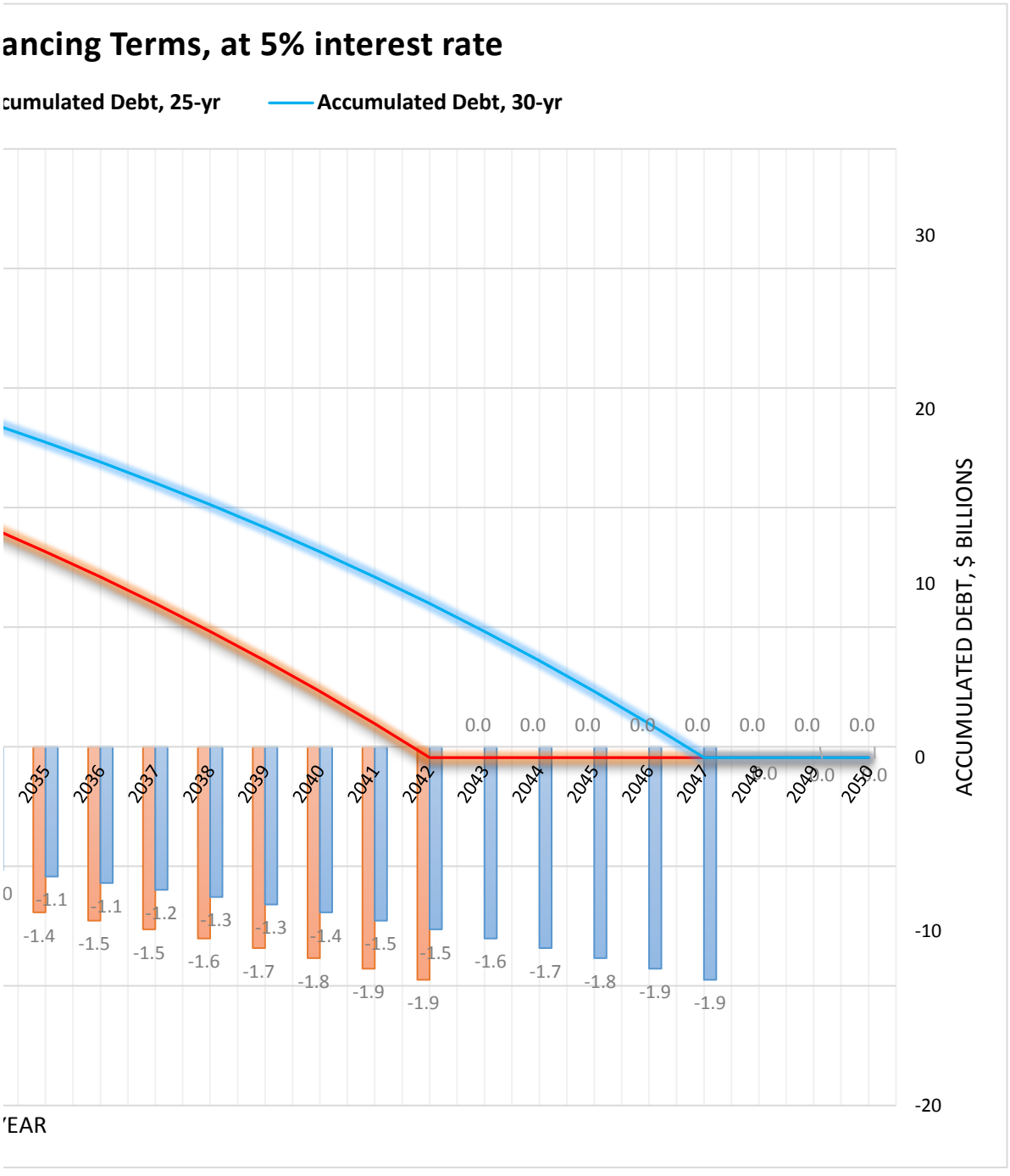


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



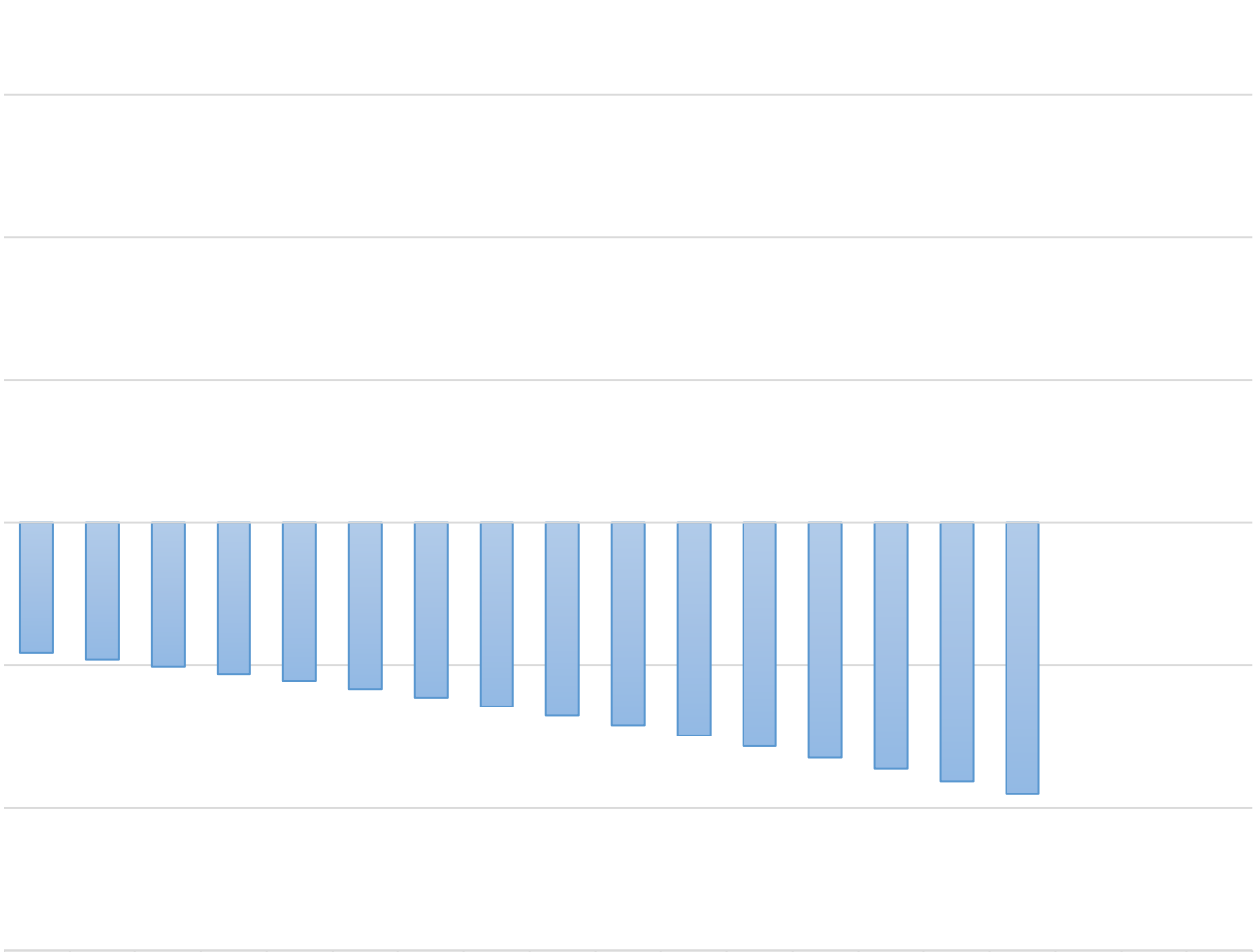

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

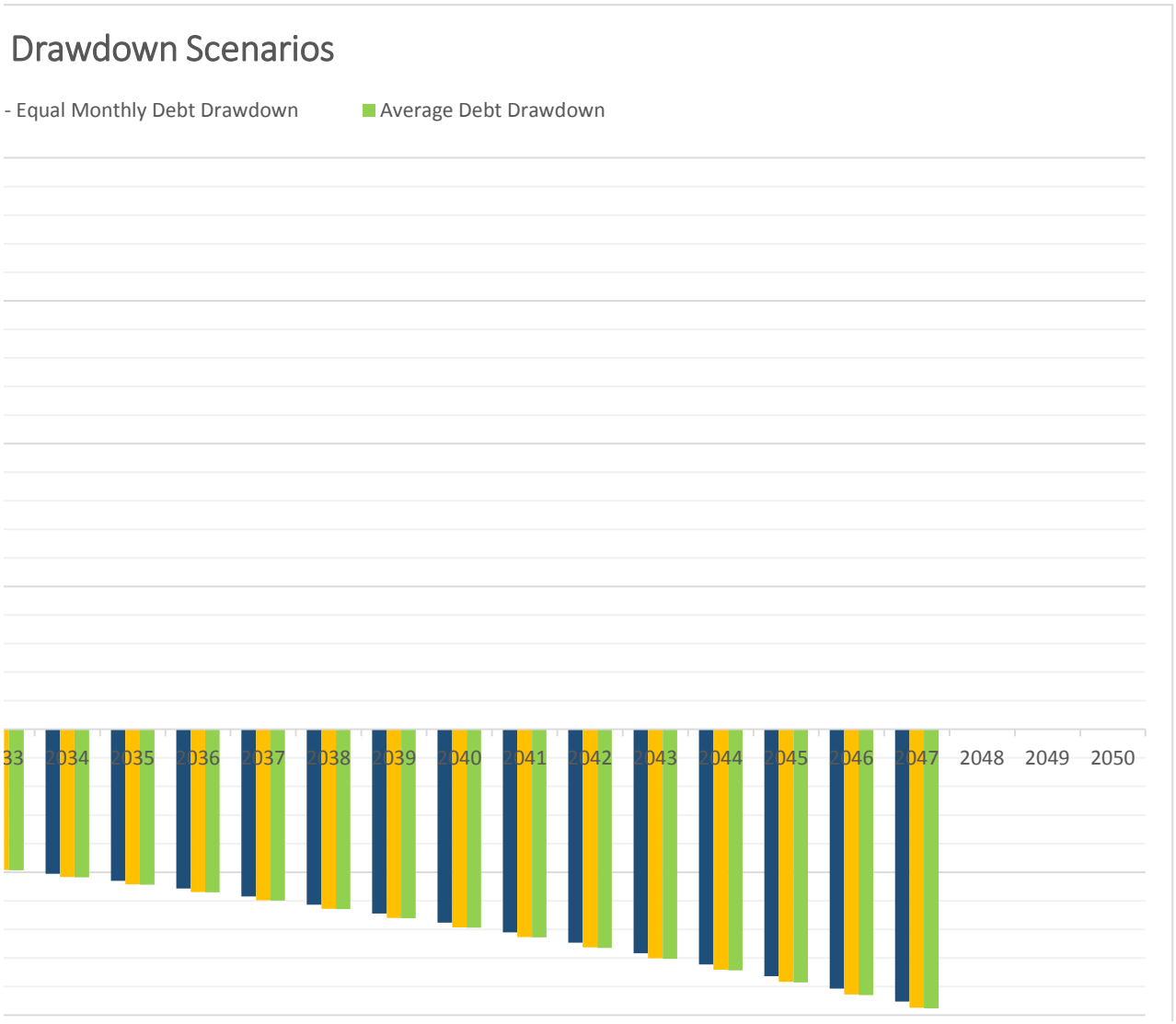
YEAR

cal Exposure



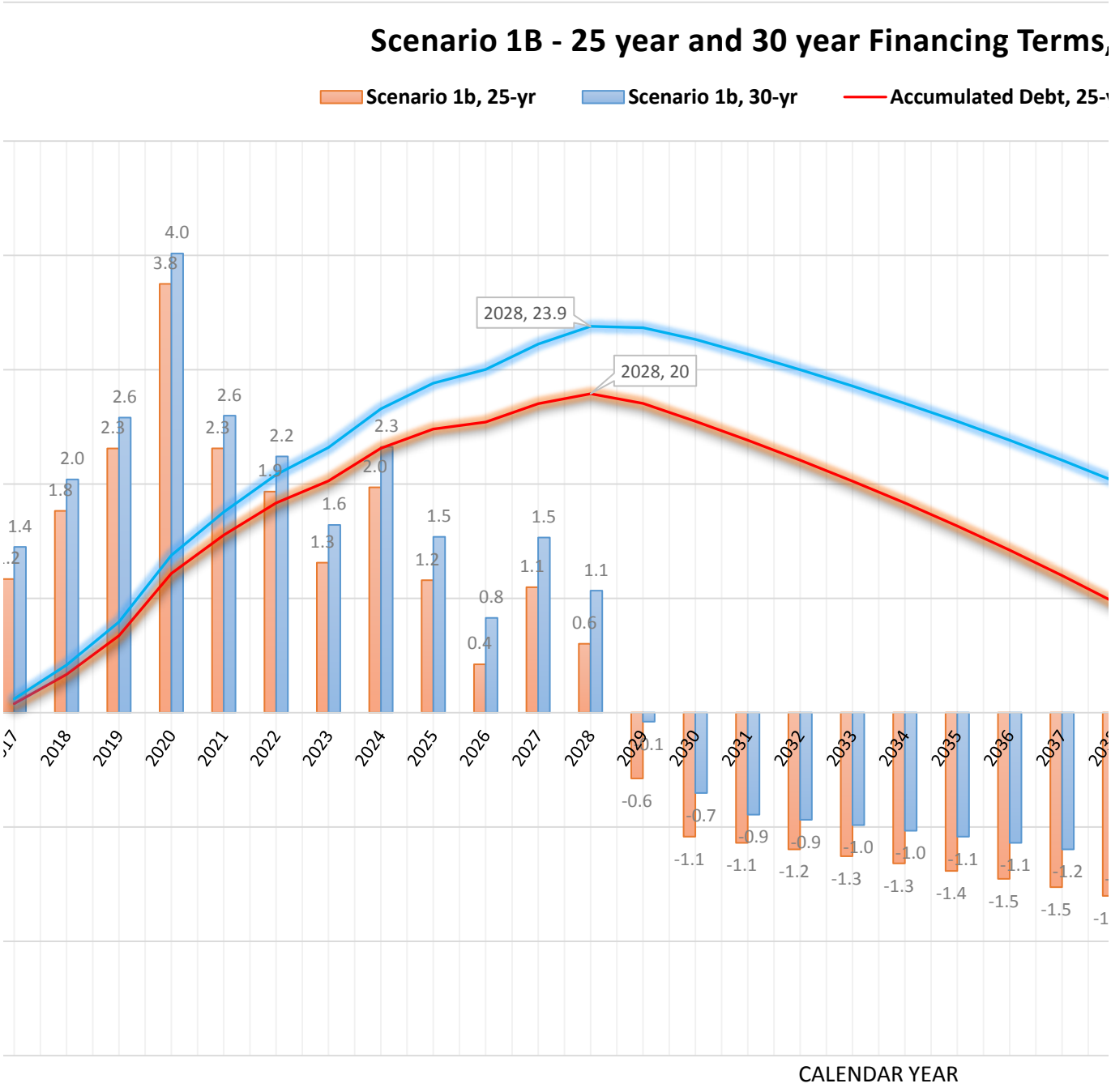
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

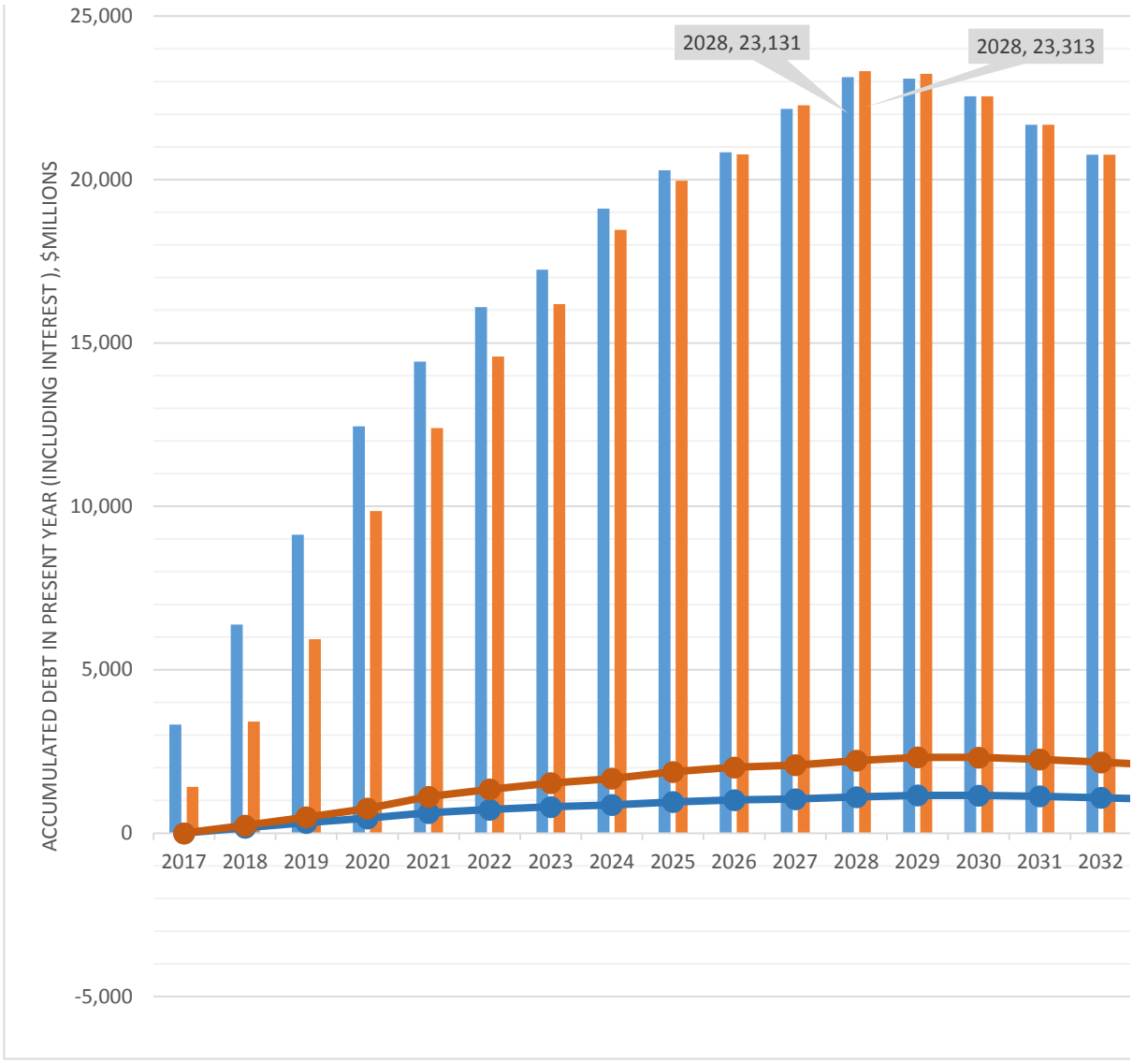


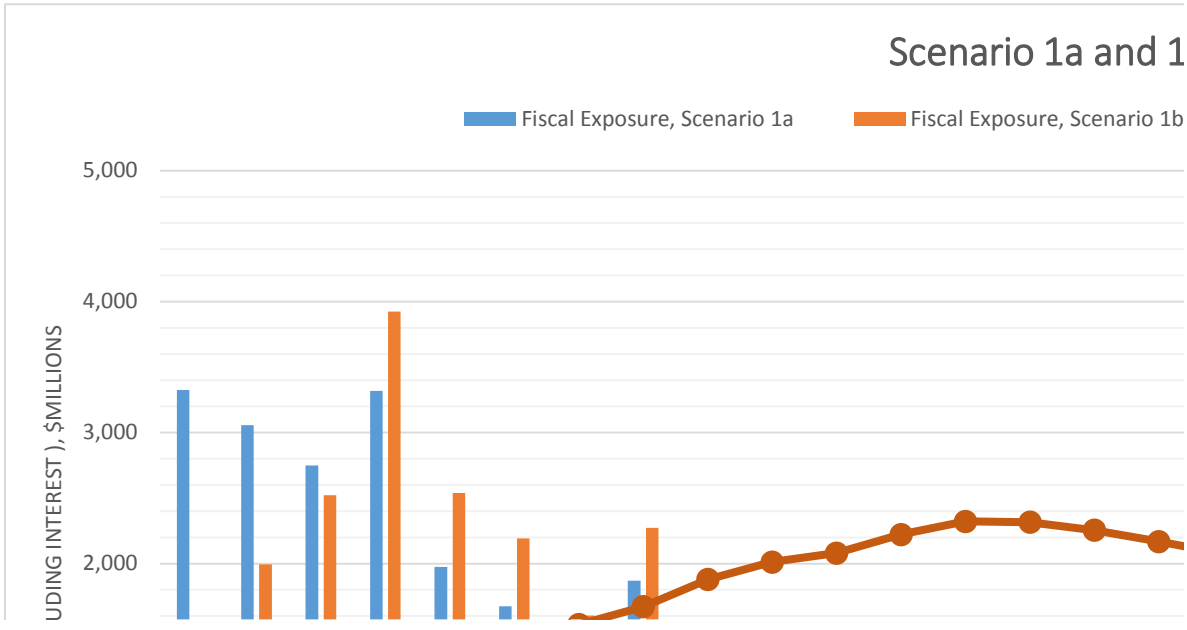
YEAR

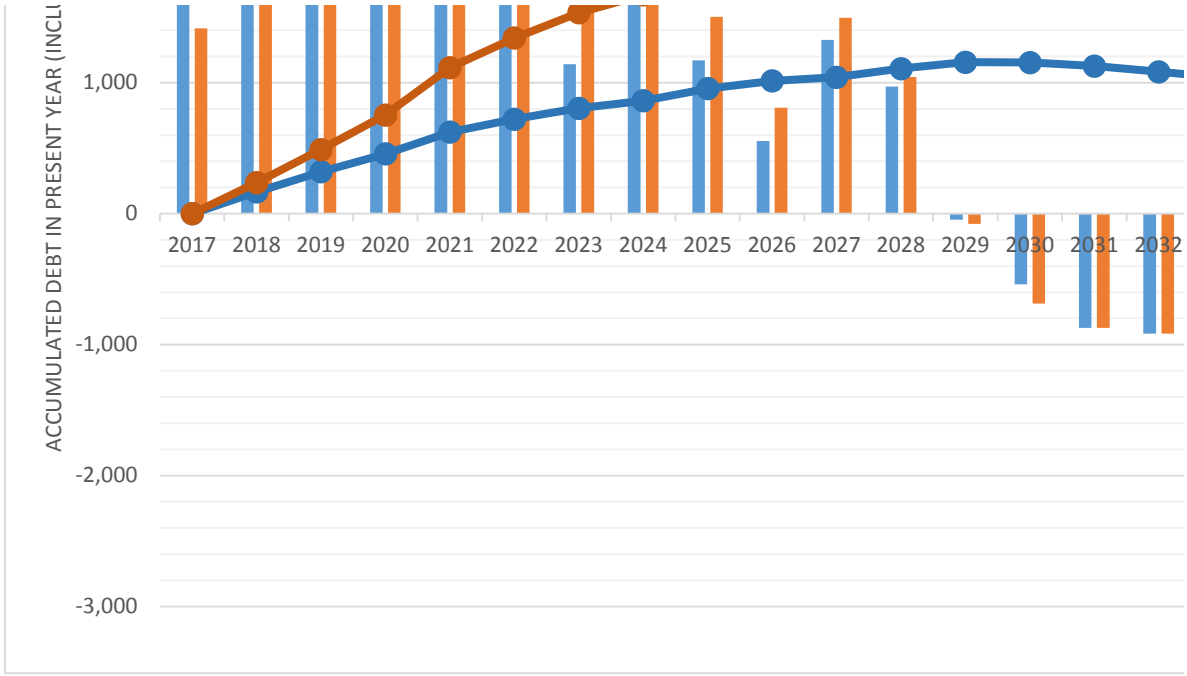
3 - 25 year and 30 year Financing Terms, at 5% interest rate

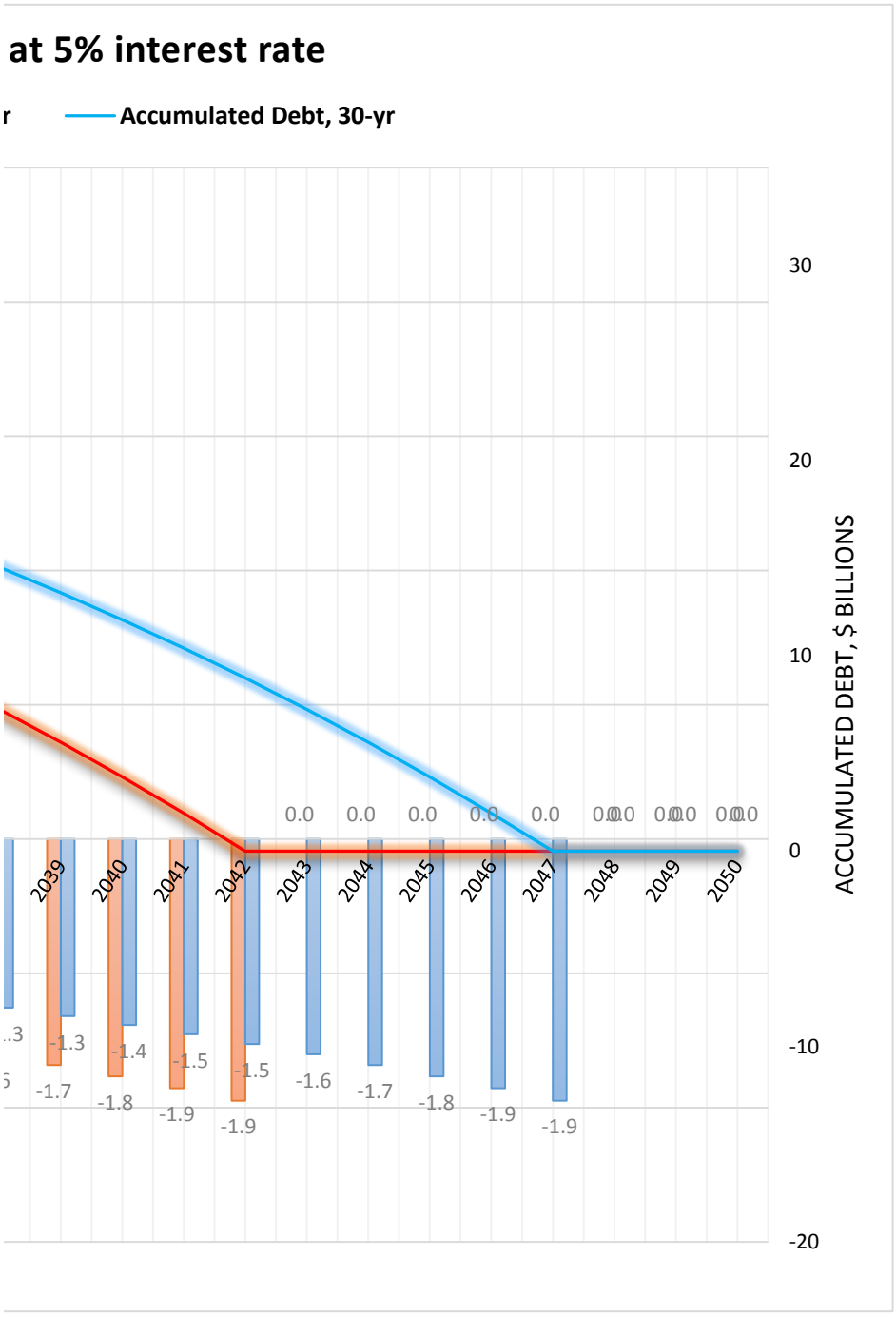





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

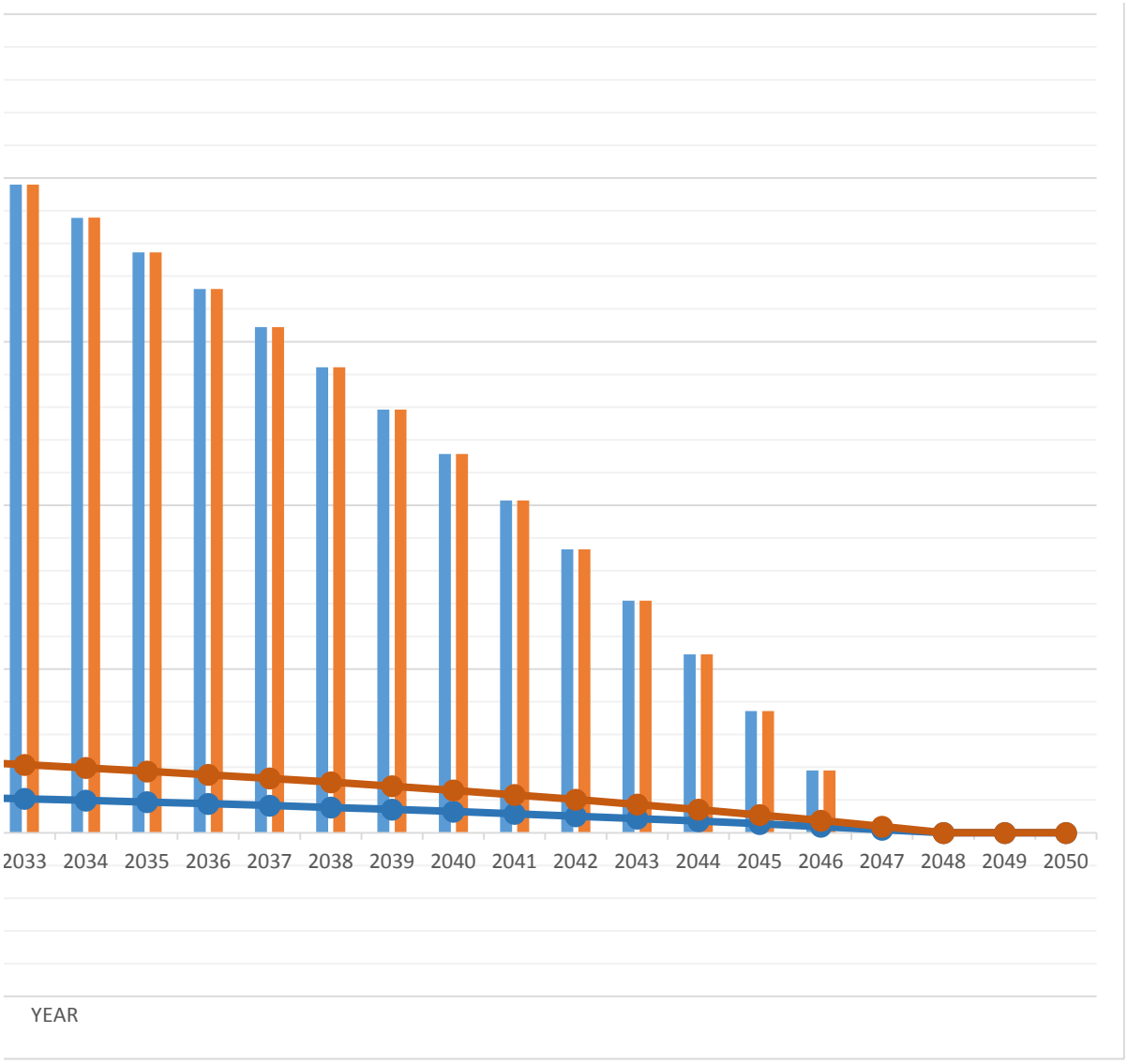

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

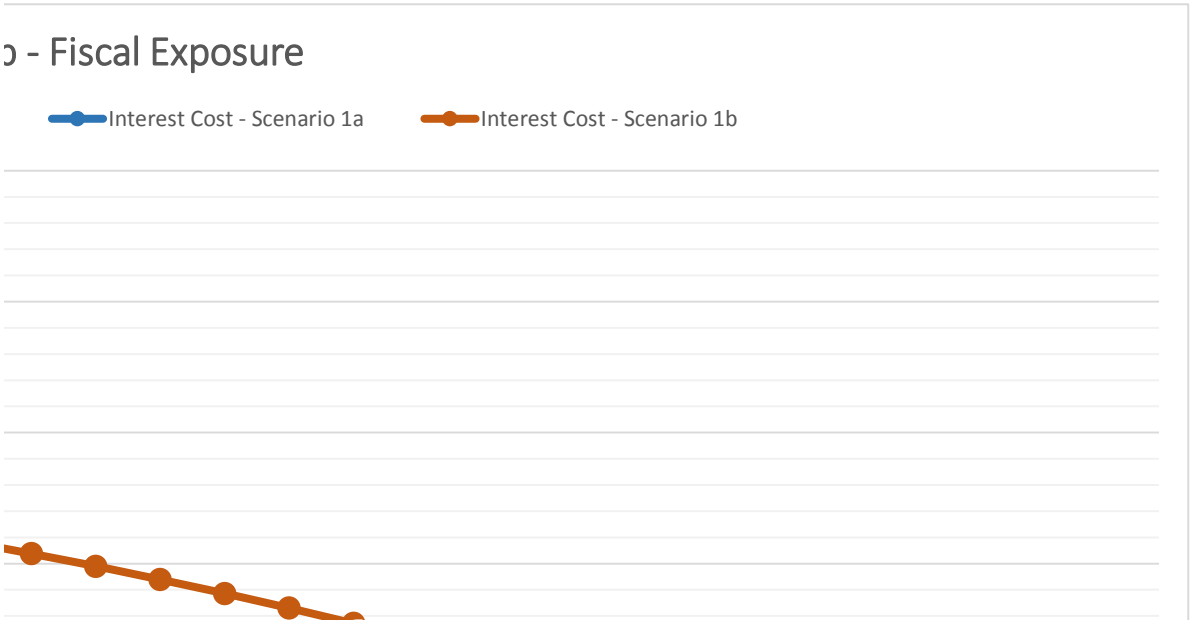

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

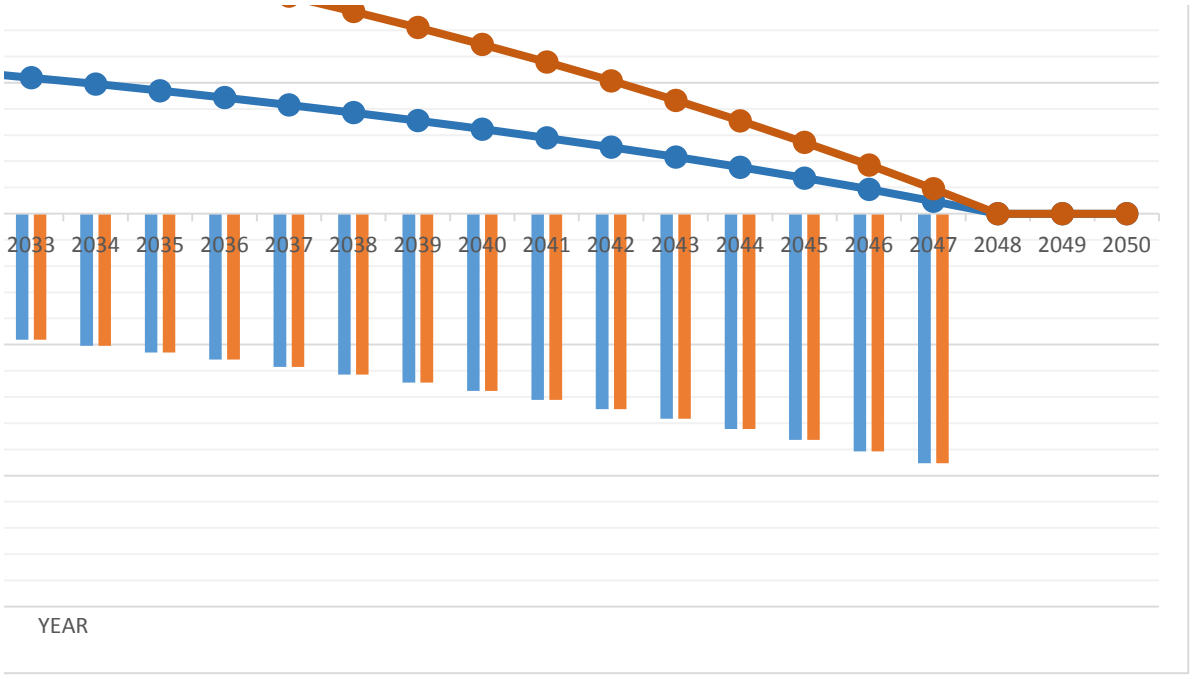


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

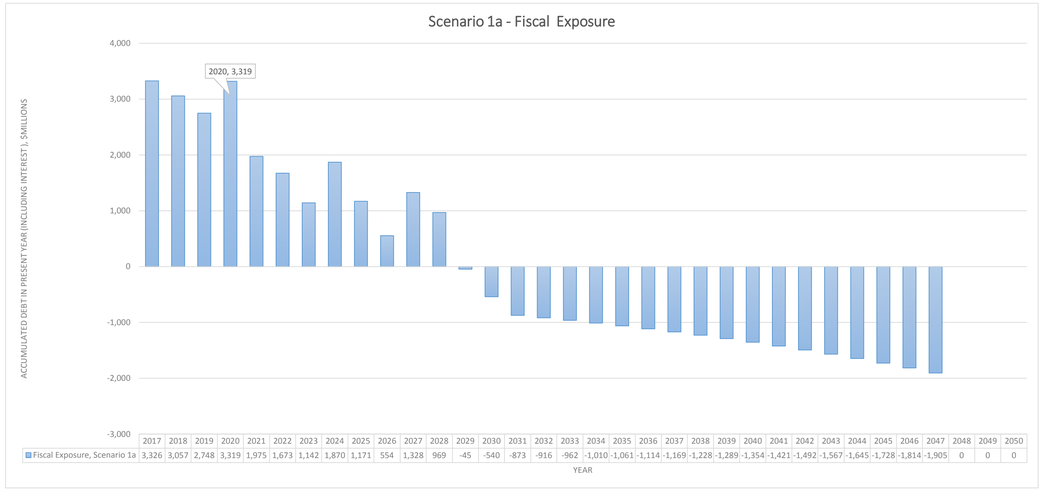
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

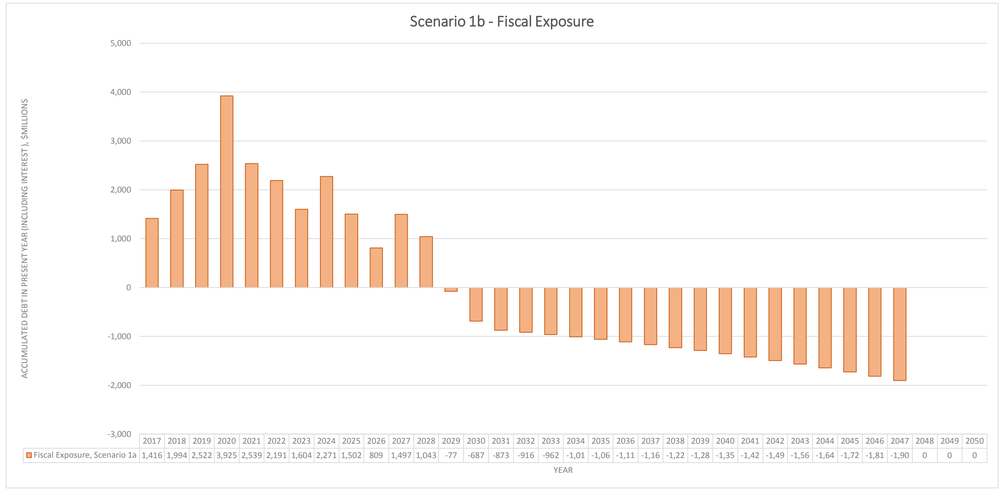
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

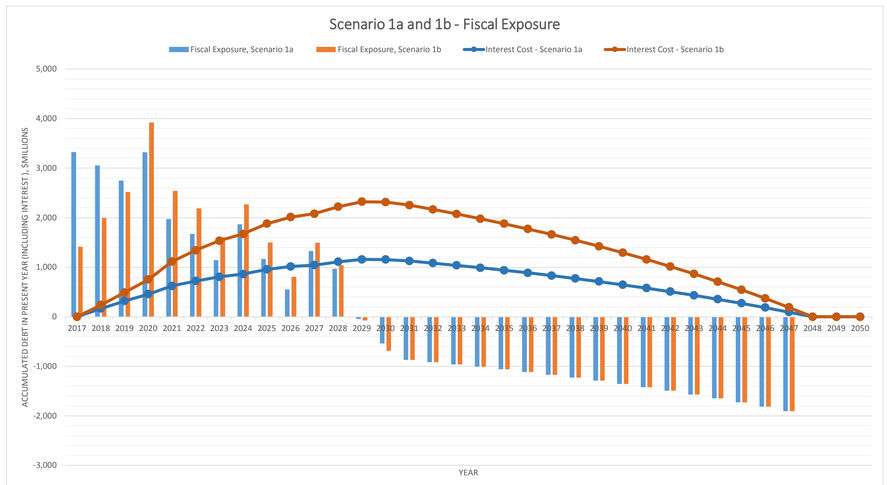
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

Notes:	Accounting treatment is to be determined.


Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0


Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0


Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest

IESO GA cost forecast + extrapolation

Scenario
Option 1
Bills Lowered 25%, RPP-Eligible Only
Option 2
Bills Lowered 20%, RPP-Eligible Only
Option 3
Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only

rate	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
Ratepayer GA Payment	9,595	9,327	9,051	9,094
Total Accumulated Debt ($ billion)	2,501	5,136	7,900	11,379
		-2.8%	-3.0%	0.5%
Ratepayer GA Payment	10,346	10,093	9,827	9,886
Accumulated debt in present year (including 5% interest,	1,749	3,580	5,488	8,052
Ratepayer GA Payment	10,648	10,303	10,186	10,873
Accumulated debt in present year (including 5% interest,	1,447	3,053	4,575	6,105

2021	2022	2023	2024	2025	2026	2027
10,844	10,634	10,243	11,128	10,527	10,033	11,043

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
10844	10634	10243	11128	10527	10033	11043
8,184	8,374	8,569	8,768	8,972	9,180	9,394
14,621	17,629	20,205	23,599	26,362	28,564	31,674
-10.0%	2.3%	2.3247180421718900000%	2.3%	2.3%	2.3%	2.3%
	TRUE	FALSE	FALSE	FALSE	FALSE	
8,991	9,200	9,414	9,633	9,857	10,086	10,321
10,316	12,278	13,735	15,933	17,418	18,256	19,913
9,733	9,573	9,240	10,128	9,620	9,238	10,318
7,527	8,973	10,436	11,970	13,490	14,976	16,467

2028	2029	2030	2031	2032	2033	2034	2035
10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662

2028	2029	2030	2031	2032	2033	2034	2035
10819	10009	9721	8654	8820	8238	7756	5662
9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585
34,502	36,440	37,962	38,260	38,500	37,925	36,589	34,538
2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	-13.1%
10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563
21,190	21,477	21,240	20,426	19,571	18,672	17,727	16,733
10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879
17,876	18,843	19,521	20,007	20,312	20,325	19,755	18,549

2036	2037	2038	2039	2040	2041	2042	2043
5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811

2036	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**
5389	5129	4881	4645	4421	4207	4004	3811
9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733
32,383	30,117	27,736	25,232	22,601	19,835	16,927	13,871
-2.9%	-2.8%	-2.7%	-2.7%	-2.6%	-2.6%	-2.5%	-2.4%
7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711
15,689	14,591	13,438	12,225	10,950	9,610	8,201	6,720
7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348
17,050	15,464	13,694	12,062	10,556	9,143	7,810	6,672

2044	2045	2046	2047	2048

3,627 3,451 3,285 3,126 2,975 2,831 2,695

2044	2045	2046	2047	2048	2049	2050
3627	3451	3285	3126	2975	2831	2695

7,549	7,374	7,207	7,048	2,975	2,831	2,695
10,658	7,281	3,731	0	0	0	0
-2.4%	-2.3%	-2.3%				
5,527	5,352	5,185	5,026	2,975	2,831	2,695
5,164	3,528	1,808	-	-	-	-
4,712	4,007	3,619	3,425	3,156	3,011	2,878
5,928	5,676	5,633	5,623	5,730	5,843	5,959

5%	End of Year	2017	2018	2019	2020	2021	2022	2023
					22.9%			
					0.5%	-10.0%	2.3%	2.3%
	IESO GA co	12,095	11,835	11,552	12,168	10,844	10,634	10,243
	Ratepayer	9,595	9,327	9,051	9,094	8,184	8,374	8,569
	GA Debt Re	2,501	2,508	2,501	3,075	2,660	2,260	1,675
	Debt, Begir	0	2,501	5,136	7,900	11,379	14,621	17,629
	Interest Co	*0*	*128*	*263*	*404*	*582*	*748*	*902*
	Additional	2,501	2,508	2,501	3,075	2,660	2,260	1,675
	Accumulate	2,501	5,136	7,900	11,379	14,621	17,629	20,205

5.000050%	End of Year	2017	2018	2019	2020	2021	2022	2023
	IESO GA co	12,095	11,835	11,552	12,168	10,844	10,634	10,243
	Ratepayer	9,595	9,327	9,051	9,094	8,184	8,374	8,569
	GA Debt Re	2,501	2,508	2,501	3,075	2,660	2,260	1,675
	Debt, Begir	0	2,501	5,136	7,900	11,379	14,621	17,629
	Interest Co	*0*	*128*	*263*	*404*	*582*	*748*	*902*
	Additional	2,501	2,508	2,501	3,075	2,660	2,260	1,675
	Accumulate	2,501	5,136	7,900	11,379	14,621	17,629	20,205
		0.00	0.00	0.00	0.00	0.01	0.01	0.01
		0.90	for 0.00005%					
		4518.213	for 0.25%	5000				

5.250000%	End of Year	2017	2018	2019	2020	2021	2022	2023
	IESO GA co	12,095	11,835	11,552	12,168	10,844	10,634	10,243
	Ratepayer	9,595	9,327	9,051	9,094	8,184	8,374	8,569
	GA Debt Re	2,501	2,508	2,501	3,075	2,660	2,260	1,675
	Debt, Begir	0	2,501	5,143	7,921	11,421	14,695	17,745
	Interest Co	*0*	*134*	*277*	*426*	*614*	*790*	*954*
	Additional	2,501	2,508	2,501	3,075	2,660	2,260	1,675
	Accumulate	2,501	5,143	7,921	11,421	14,695	17,745	20,374

5.25% and 5.0%	0	7	14	22	32	42	52
	0	6.544088	13.77695	21.71447	31.92933	42.04725	52.06963
	-4746.31						

2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	
11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782
2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544
20,205	23,599	26,362	28,564	31,675	34,502	36,441	37,962	38,261	38,501
1,034	*1,207*	*1,349*	*1,461*	*1,621*	*1,765*	*1,864*	*1,942*	*1,957*	*1,970*
2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544
23,599	26,362	28,564	31,675	34,502	36,441	37,962	38,261	38,501	37,926

2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782
2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544
20,205	23,599	26,362	28,564	31,675	34,502	36,441	37,962	38,261	38,501
1,034	*1,207*	*1,349*	*1,461*	*1,621*	*1,765*	*1,864*	*1,942*	*1,958*	*1,970*
2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544
23,599	26,362	28,564	31,675	34,502	36,441	37,962	38,261	38,501	37,926
0.01	0.01	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03

2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782
2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544
20,374	23,830	26,667	28,955	32,161	35,098	37,159	38,815	39,258	39,652
1,096	*1,282*	*1,434*	*1,557*	*1,730*	*1,888*	*1,998*	*2,088*	*2,111*	*2,133*
2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544
23,830	26,667	28,955	32,161	35,098	37,159	38,815	39,258	39,652	39,240

62	74	85	96	109	122	134	145	154	163
61.4769	73.50439	84.49516	94.58025	107.5596	120.4625	131.6985	142.4188	150.4868	158.814

2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811
11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733
-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922
37,926	36,590	34,540	32,384	30,119	27,737	25,234	22,603	19,837	16,929
1,940	*1,872*	*1,767*	*1,657*	*1,541*	*1,419*	*1,291*	*1,156*	*1,015*	*866*
-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922
36,590	34,540	32,384	30,119	27,737	25,234	22,603	19,837	16,929	13,873

2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811
11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733
-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922
37,926	36,590	34,540	32,385	30,119	27,738	25,235	22,603	19,837	16,930
1,940	*1,872*	*1,767*	*1,657*	*1,541*	*1,419*	*1,291*	*1,156*	*1,015*	*866*
-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922
36,590	34,540	32,385	30,119	27,738	25,235	22,603	19,837	16,930	13,874
0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04

2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811
11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733
-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922
39,240	38,074	36,200	34,224	32,142	29,949	27,637	25,201	22,634	19,929
2,110	*2,048*	*1,947*	*1,841*	*1,729*	*1,611*	*1,486*	*1,355*	*1,217*	*1,072*
-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922
38,074	36,200	34,224	32,142	29,949	27,637	25,201	22,634	19,929	17,079

170	176	180	184	188	192	195	199	202	206
165.4355	170.4025	173.755	177.0044	180.1316	183.1154	185.9331	188.5597	190.9684	193.13

2044	2045	2046	2047	2048	2049	2050
3,627	3,451	3,285	3,126	2,975	2,831	2,695
7,549	7,374	7,207	7,048	2,975	2,831	2,695
-3,922	-3,922	-3,922	-3,922	0	0	0
13,873	10,661	7,284	3,734	3	3	3
710	*545*	*373*	*191*	*0*	*0*	*0*
-3,922	-3,922	-3,922	-3,922	0	0	0
10,661	7,284	3,734	3	3	3	3

2044	2045	2046	2047	2048	2049	2050
3,627	3,451	3,285	3,126	2,975	2,831	2,695
7,549	7,374	7,207	7,048	2,975	2,831	2,695
-3,922	-3,922	-3,922	-3,922	0	0	0
13,874	10,661	7,285	3,735	4	4	4
710	*545*	*373*	*191*	*0*	*0*	*0*
-3,922	-3,922	-3,922	-3,922	0	0	0
10,661	7,285	3,735	4	4	4	4
0.04	0.04	0.04	0.04	0.04	0.04	0.04

2044	2045	2046	2047	2048	2049	2050
3,627	3,451	3,285	3,126	2,975	2,831	2,695
7,549	7,374	7,207	7,048	2,975	2,831	2,695
-3,922	-3,922	-3,922	-3,922	0	0	0
17,079	14,075	10,909	7,574	4,059	4,277	4,507
919	*757*	*587*	*407*	*218*	*230*	*242*
-3,922	-3,922	-3,922	-3,922	0	0	0
14,075	10,909	7,574	4,059	4,277	4,507	4,750

209	212	214	216	218	230	242
195.013	196.583	197.8033	198.6338	199.0316	209.2149	219.9193

Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Interest Rate, monthly comp.	**5.000000%**		
Annual Interest Rate	5.12%	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb22_1_30yr

Option 1 - Bills Lowered 25%, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,501	2,636
Interest Portion	0	128

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	625	2,534
Interest Portion	-	32

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $39 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb22_2_30yr

Option 2 - Bills Lowered 20%, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,749	1,831
Interest Portion	0	89

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	437	1,770
Interest Portion	-	22

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $21 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb22_3_30yr

Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606
Interest Portion	0	74

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,487
Interest Portion	-	19

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	437 - 625	1,770 - 2,534

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	625	2534
Debt-Finance Global Adjustment Costs, Option 1a	437	1770
RRRP		
OESP – Enhance Benefit		162

Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**625**	**2774**
Total, B	437	2010

Proposed Program Total:	437 - 625	2,010 - 2,774

ining

0	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Option 1
Option 2
Option 3

Assumes an inte

2019	2020	2021	2022	
				CheckInt
2,764	3,479	3,242	3,008	
263	404	582	748	

2018-19	2019-20	2020-21	2021-2022
2,668	2,942	3,420	3,183
162	298	449	624

Option 1
Option 2
Option 3

2032.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,908	2,564	2,264	1,961
183	281	412	528

2018-19	2019-20	2020-21	2021-2022
1,850	2,072	2,489	2,189
113	208	314	441

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446
156	234	312	385

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429
95	176	254	331

2033.

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022
1,850 - 2,668	2,072 - 2,942	2,489 - 3,420	2,189 - 3,183

/1

2018-19[1]	2019-20[1]	2020-21[1]
2668	2942	3420
1850	2072	2489
225	279	323

60	60	60
18	18	18
2971	**3299**	**3821**
2153	2429	2890

2,153 - 2,971	2,429 - 3,299	2,890 - 3,821

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$24,977	$35,542	$38,501	occurs in Year 2032
$14,760	$19,733	$21,477	occurs in Year 2029
$12,862	$19,498	$20,326	occurs in Year 2033

erest rate of 5.00% (compounded monthly).

			5000
5.00000%	5.00005%	0.00005%	0.25%
35,542	35,543	0.90	4,518.21
19,733	19,734	0.52	2,619.41
19,498	19,499	0.48	2,410.01
0.249950%			

Tab Name		Total Accumulated Interest Costs
Feb22_1_30yr	$31,810	$40,288
Feb22_2_30yr	$17,586	$22,491
Feb22_3_30yr	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$31,810 to $40,288**
Option 2	$17,586 to $22,491**
Option 3	$17,202 to $22,028**

** With a higher interest rate, the amortization period extend beyond the 30-year forecast

ted period resulting in a remaining balance at the end of the 30-year period. For specifics, see details belo

w.

Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb22_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,501	2,636	2,764	3,479	3,242	3,008	2,577	3,394	2,763	2,202	3,111	2,828	1,938	1,522	299	240	-575	-1,336	-2,050	-2,155	-2,265	-2,381	-2,503	-2,631	-2,766	-2,907	-3,056	-3,213	-3,377	-3,550	-3,731	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,560	2,699	2,829	3,561	3,319	3,079	2,638	3,475	2,828	2,254	3,185	2,895	1,985	1,558	306	246	-588	-1,368	-2,099	-2,206	-2,319	-2,438	-2,563	-2,694	-2,832	-2,977	-3,129	-3,289	-3,457	-3,634	-3,820	0	0	0
			59	63	66	83	77	72	61	81	66	52	74	67	46	36	7	6	-14	-32	-49	-51	-54	-57	-60	-63	-66	-69	-73	-76	-80	-84	-89	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,479	1,970	35,542
Equal Monthly Debt Drawdown	3,561	1,963	

	Feb22 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	38,501	2032	24,977
Equal Monthly Debt Drawdown	39,417		

Feb22 Option 1, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																			26
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
a — Debt, Beginning of Year	0	2,501	5,136	7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675	34,502	36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,384	30,119	27,737	25,234	22,603	19,837	16,929	13,873	10,661	7,284	3,734	3	3	3	
c = a*5% — *Interest Cost - Feb22 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*128*	*263*	*404*	*582*	*748*	*902*	*1,034*	*1,207*	*1,349*	*1,461*	*1,621*	*1,765*	*1,864*	*1,942*	*1,957*	*1,970*	*1,940*	*1,872*	*1,767*	*1,657*	*1,541*	*1,419*	*1,291*	*1,156*	*1,015*	*866*	*710*	*545*	*373*	*191*	*0*	*0*	*0*	35,542
b — Additional GA Debt Drawdown, End of Year	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	2,501	5,136	7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675	34,502	36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,384	30,119	27,737	25,234	22,603	19,837	16,929	13,873	10,661	7,284	3,734	3	3	3	3	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
Feb22 Option 1, 30-yr - Accumulated Interest Costs	0	128	391	795	1,377	2,125	3,027	4,061	5,268	6,617	8,078	9,699	11,464	12,986	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	10,661	7,284	3,734	3	3	3	3	
Feb22 Option 1, 30-yr - Accumulated Debt Principal	2,501	5,009	7,509	10,584	13,244	15,504	17,178	19,539	21,094	21,947	23,596	24,803	24,977	24,977	24,977	25,216	24,642	23,306	21,255	19,100	16,835	14,453	11,950	9,319	6,553	3,645	589	0	0	0	0	0	0	0	
Feb22 Option 1, 30-yr - Accumulated Interest Costs	0	128	391	795	1,377	2,125	3,027	4,061	5,268	6,617	8,078	9,699	11,464	13,328	15,271	17,228	19,198	21,138	23,010	24,777	26,434	27,975	29,394	30,685	31,842	32,857	33,723	34,433	34,978	35,351	35,542				
Feb22 Option 1, 30-yr - Accumulated Debt Principal	2,501	5,009	7,509	10,584	13,244	15,504	17,178	19,539	21,094	21,947	23,596	24,803	24,977	24,634	22,990	21,273	18,728	15,452	11,529	7,607	3,685	-238	-4,160	-8,082	-12,005	-15,927	-19,849	-23,772	-27,694	-31,616	-35,539				
Fiscal Exposure - End of Year Debt Drawdown	2,501	2,636	2,764	3,479	3,242	3,008	2,577	3,394	2,763	2,202	3,111	2,828	1,938	1,522	299	240	-575	-1,336	-2,050	-2,155	-2,265	-2,381	-2,503	-2,631	-2,766	-2,907	-3,056	-3,213	-3,377	-3,550	-3,731	0	0	0	

Feb22 Option 1, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
Debt, Beginning of Year	0	2,560	5,259	8,088	11,650	14,969	18,048	20,686	24,161	26,989	29,243	32,428	35,323	37,307	38,865	39,171	39,417	38,828	37,460	35,361	33,155	30,835	28,397	25,834	23,140	20,309	17,332	14,203	10,914	7,457	3,823	3	3	3	
1,963 — *Interest Cost - Feb22 Option 1, 30-yr*	*59*	*191*	*329*	*487*	*659*	*820*	*963*	*1,114*	*1,273*	*1,401*	*1,535*	*1,688*	*1,811*	*1,901*	*1,949*	*1,963*	*1,956*	*1,909*	*1,823*	*1,716*	*1,603*	*1,484*	*1,360*	*1,228*	*1,091*	*946*	*793*	*633*	*465*	*288*	*102*	*0*	*0*	*0*	35,542
Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,560	5,259	8,088	11,650	14,969	18,048	20,686	24,161	26,989	29,243	32,428	35,323	37,307	38,865	39,171	39,417	38,828	37,460	35,361	33,155	30,835	28,397	25,834	23,140	20,309	17,332	14,203	10,914	7,457	3,823	3	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown	2,560	2,699	2,829	3,561	3,319	3,079	2,638	3,475	2,828	2,254	3,185	2,895	1,985	1,558	306	246	-588	-1,368	-2,099	-2,206	-2,319	-2,438	-2,563	-2,694	-2,832	-2,977	-3,129	-3,289	-3,457	-3,634	-3,820	0	0	0	
Monthly Drawdown	208	209	208	256	222	188	140	197	130	71	137	101	14	(29)	(137)	(143)	(212)	(273)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	-	-	-	
FV of Monthly Drawdown at 5%	2,560	2,568	2,560	3,148	2,723	2,313	1,715	2,416	1,592	873	1,688	1,236	177	(351)	(1,683)	(1,758)	(2,605)	(3,355)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	-	-	-	
Annual Interest Cost on New Drawdowns	59	60	59	73	63	54	40	56	37	20	39	29	4	(8)	(39)	(41)	(61)	(78)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	-	-	-	
Annual Interest Cost on Opening Balance	-	131	269	414	596	766	923	1,058	1,236	1,381	1,496	1,659	1,807	1,909	1,988	2,004	2,017	1,987	1,917	1,809	1,696	1,578	1,453	1,322	1,184	1,039	887	727	558	382	196	0	0	0	
Total Annual Interest Cost	59	191	329	487	659	820	963	1,114	1,273	1,401	1,535	1,688	1,811	1,901	1,949	1,963	1,956	1,909	1,823	1,716	1,603	1,484	1,360	1,228	1,091	946	793	633	465	288	102	0	0	0	

Feb22 Option 1, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
Debt, Beginning of Year	0	2,533	5,202	8,001	11,524	14,808	17,854	20,464	23,901	26,699	28,929	32,080	34,943	36,907	38,448	38,750	38,993	38,411	37,058	34,981	32,799	30,504	28,092	25,557	22,892	20,091	17,146	14,051	10,797	7,377	3,782	3	3	3	
Interest Cost - Feb22 Option 1, 30-yr	*32*	*162*	*298*	*449*	*624*	*787*	*935*	*1,077*	*1,243*	*1,377*	*1,501*	*1,657*	*1,790*	*1,884*	*1,946*	*1,961*	*1,962*	*1,923*	*1,846*	*1,740*	*1,628*	*1,510*	*1,387*	*1,257*	*1,121*	*978*	*827*	*669*	*502*	*327*	*143*	*0*	*0*	*0*	35,542
Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,533	5,202	8,001	11,524	14,808	17,854	20,464	23,901	26,699	28,929	32,080	34,943	36,907	38,448	38,750	38,993	38,411	37,058	34,981	32,799	30,504	28,092	25,557	22,892	20,091	17,146	14,051	10,797	7,377	3,782	3	3	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown	2,533	2,670	2,799	3,523	3,283	3,046	2,610	3,437	2,798	2,230	3,150	2,864	1,963	1,541	302	243	-582	-1,353	-2,077	-2,183	-2,294	-2,412	-2,535	-2,665	-2,801	-2,945	-3,095	-3,254	-3,420	-3,595	-3,779	0	0	0	
Bi-Annual Drawdown	1,250	1,254	1,250	1,537	1,330	1,130	837	1,180	778	427	825	604	87	(171)	(822)	(859)	(1,272)	(1,638)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	-	-	-	
FV of Bi-Annual Drawdown at 5%	2,533	2,540	2,533	3,114	2,694	2,289	1,696	2,390	1,575	864	1,670	1,223	175	(347)	(1,665)	(1,740)	(2,577)	(3,319)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	-	-	-	
Annual Interest Cost on New Drawdowns	32	32	32	39	34	29	21	30	20	11	21	15	2	(4)	(21)	(22)	(33)	(42)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	-	-	-	
Annual Interest Cost on Opening Balance	-	130	266	409	590	758	913	1,047	1,223	1,366	1,480	1,641	1,788	1,888	1,967	1,983	1,995	1,965	1,896	1,790	1,678	1,561	1,437	1,308	1,171	1,028	877	719	552	377	193	0	0	0	
Total Annual Interest Cost	32	162	298	449	624	787	935	1,077	1,243	1,377	1,501	1,657	1,790	1,884	1,946	1,961	1,962	1,923	1,846	1,740	1,628	1,510	1,387	1,257	1,121	978	827	669	502	327	143	0	0	0	

Feb22 Option 1, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
Debt, Beginning of Year	0	2,565	5,268	8,102	11,670	14,995	18,080	20,722	24,203	27,036	29,295	32,485	35,385	37,373	38,933	39,240	39,486	38,896	37,526	35,423	33,213	30,889	28,447	25,880	23,181	20,344	17,363	14,228	10,933	7,470	3,830	3	3	3	
Interest Cost - Feb22 Option 1, 30-yr	*64*	*195*	*333*	*493*	*665*	*825*	*968*	*1,121*	*1,278*	*1,405*	*1,541*	*1,693*	*1,815*	*1,903*	*1,950*	*1,964*	*1,955*	*1,906*	*1,820*	*1,712*	*1,599*	*1,480*	*1,355*	*1,224*	*1,086*	*941*	*788*	*628*	*459*	*282*	*96*	*0*	*0*	*0*	35,542
Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,565	5,268	8,102	11,670	14,995	18,080	20,722	24,203	27,036	29,295	32,485	35,385	37,373	38,933	39,240	39,486	38,896	37,526	35,423	33,213	30,889	28,447	25,880	23,181	20,344	17,363	14,228	10,933	7,470	3,830	3	3	3	3	
Fiscal Exposure - Average Debt Drawdown	2,565	2,703	2,834	3,568	3,325	3,085	2,643	3,481	2,833	2,258	3,190	2,900	1,988	1,561	306	246	-589	-1,370	-2,103	-2,210	-2,323	-2,442	-2,567	-2,699	-2,837	-2,982	-3,134	-3,295	-3,463	-3,640	-3,827	0	0	0	

Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb22_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,749	1,831	1,908	2,564	2,264	1,961	1,457	2,198	1,485	838	1,656	1,277	287	-237	-814	-855	-899	-945	-993	-1,044	-1,098	-1,154	-1,213	-1,275	-1,340	-1,409	-1,481	-1,556	-1,636	-1,720	-1,808	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,791	1,875	1,953	2,625	2,318	2,008	1,492	2,250	1,521	858	1,696	1,308	294	-243	-833	-876	-920	-967	-1,017	-1,069	-1,124	-1,181	-1,242	-1,305	-1,372	-1,442	-1,516	-1,593	-1,675	-1,761	-1,851	0	0	0	
			42	44	45	61	54	47	35	52	35	20	39	30	7	-6	-19	-20	-21	-22	-24	-25	-26	-27	-29	-30	-32	-34	-35	-37	-39	-41	-43	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,564	1,099	19,733
Equal Monthly Debt Drawdown	2,625	1,093	

	Feb22 Option 2, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	21,477	2029	14,760
Equal Monthly Debt Drawdown	21,988		

Feb22 Option 2, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				26
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
a	Debt, Beginning of Year	0	1,749	3,580	5,488	8,052	10,316	12,278	13,735	15,933	17,418	18,256	19,913	21,190	21,477	21,240	20,427	19,571	18,672	17,727	16,734	15,690	14,592	13,438	12,226	10,951	9,611	8,202	6,722	5,165	3,529	1,809	2	2	2	
c = a*5%	*Interest Cost - Feb22 Option 2, 30-yr - End of Year Debt Drawdown*	*0*	*89*	*183*	*281*	*412*	*528*	*628*	*703*	*815*	*891*	*934*	*1,019*	*1,084*	*1,099*	*1,087*	*1,045*	*1,001*	*955*	*907*	*856*	*803*	*747*	*688*	*625*	*560*	*492*	*420*	*344*	*264*	*181*	*93*	*0*	*0*	*0*	*0*	19,733
b	Additional GA Debt Drawdown, End of Year	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,749	3,580	5,488	8,052	10,316	12,278	13,735	15,933	17,418	18,256	19,913	21,190	21,477	21,240	20,427	19,571	18,672	17,727	16,734	15,690	14,592	13,438	12,226	10,951	9,611	8,202	6,722	5,165	3,529	1,809	2	2	2	2	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	
	Feb22 Option 2, 30-yr - Accumulated Interest Costs	0	89	273	553	965	1,493	2,121	2,824	3,639	4,530	5,464	6,483	7,567	7,330	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	5,165	3,529	1,809	2	2	2	
	Feb22 Option 2, 30-yr - Accumulated Debt Principal	1,749	3,491	5,216	7,499	9,351	10,784	11,614	13,109	13,779	13,726	14,448	14,707	13,910	13,910	13,910	13,055	12,156	11,211	10,217	9,173	8,075	6,922	5,709	4,434	3,094	1,685	205	0	0	0	0	0	0	0	
	Feb22 Option 2, 30-yr - Accumulated Interest Costs	0	89	273	553	965	1,493	2,121	2,824	3,639	4,530	5,464	6,483	7,567	8,666	9,753	10,798	11,799	12,755	13,661	14,518	15,320	16,067	16,754	17,380	17,940	18,432	18,852	19,195	19,460	19,640	19,733				
	Feb22 Option 2, 30-yr - Accumulated Debt Principal	1,749	3,491	5,216	7,499	9,351	10,784	11,614	13,109	13,779	13,726	14,448	14,707	13,910	12,574	10,674	8,773	6,873	4,973	3,072	1,172	-728	-2,628	-4,529	-6,429	-8,329	-10,230	-12,130	-14,030	-15,931	-17,831	-19,731				
Fiscal Exposure - End of Year Debt Drawdown		1,749	1,831	1,908	2,564	2,264	1,961	1,457	2,198	1,485	838	1,656	1,277	287	-237	-814	-855	-899	-945	-993	-1,044	-1,098	-1,154	-1,213	-1,275	-1,340	-1,409	-1,481	-1,556	-1,636	-1,720	-1,808	0	0	0	

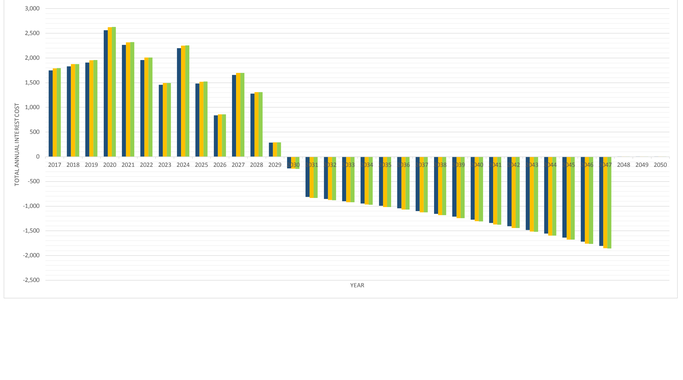
Feb22 Option 2, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Debt, Beginning of Year	0	1,791	3,666	5,619	8,244	10,562	12,570	14,062	16,312	17,832	18,691	20,386	21,694	21,988	21,745	20,912	20,037	19,116	18,149	17,132	16,063	14,939	13,758	12,517	11,211	9,839	8,397	6,881	5,288	3,613	1,852	2	2	2	
1,093	*Interest Cost - Feb22 Option 2, 30-yr*	*42*	*133*	*229*	*342*	*466*	*574*	*663*	*755*	*850*	*911*	*973*	*1,049*	*1,091*	*1,093*	*1,067*	*1,025*	*980*	*933*	*883*	*831*	*777*	*719*	*659*	*595*	*528*	*458*	*384*	*307*	*225*	*140*	*50*	*0*	*0*	*0*	19,733
	Additional GA Debt Drawdown	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,791	3,666	5,619	8,244	10,562	12,570	14,062	16,312	17,832	18,691	20,386	21,694	21,988	21,745	20,912	20,037	19,116	18,149	17,132	16,063	14,939	13,758	12,517	11,211	9,839	8,397	6,881	5,288	3,613	1,852	2	2	2	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,791	1,875	1,953	2,625	2,318	2,008	1,492	2,250	1,521	858	1,696	1,308	294	-243	-833	-876	-920	-967	-1,017	-1,069	-1,124	-1,181	-1,242	-1,305	-1,372	-1,442	-1,516	-1,593	-1,675	-1,761	-1,851	0	0	0	

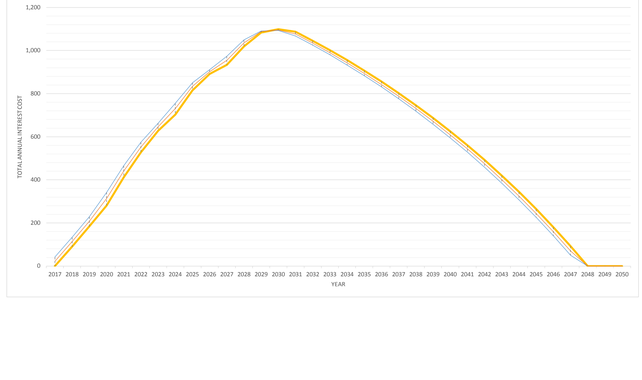
	Monthly Drawdown	146	145	144	190	154	119	69	125	56	(4)	60	22	(66)	(111)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	-	-	-	
	FV of Monthly Drawdown at 5%	1,791	1,783	1,766	2,337	1,896	1,467	849	1,531	686	(54)	739	265	(816)	(1,368)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	41	41	54	44	34	20	36	16	(1)	17	6	(19)	(32)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	-	-	-	
	Annual Interest Cost on Opening Balance	-	92	188	287	422	540	643	719	835	912	956	1,043	1,110	1,125	1,113	1,070	1,025	978	929	877	822	764	704	640	574	503	430	352	271	185	95	0	0	0	
	Total Annual Interest Cost	42	133	229	342	466	574	663	755	850	911	973	1,049	1,091	1,093	1,067	1,025	980	933	883	831	777	719	659	595	528	458	384	307	225	140	50	0	0	0	

Feb22 Option 2, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Debt, Beginning of Year	0	1,772	3,626	5,559	8,155	10,448	12,435	13,911	16,137	17,641	18,490	20,168	21,461	21,752	21,512	20,688	19,822	18,911	17,954	16,948	15,890	14,779	13,610	12,382	11,091	9,734	8,307	6,808	5,231	3,574	1,833	2	2	2	
	Interest Cost - Feb22 Option 2, 30-yr	*22*	*113*	*208*	*314*	*441*	*553*	*647*	*731*	*834*	*902*	*955*	*1,035*	*1,088*	*1,096*	*1,076*	*1,034*	*990*	*943*	*894*	*843*	*789*	*732*	*672*	*609*	*543*	*474*	*401*	*324*	*243*	*159*	*69*	*0*	*0*	*0*	19,733
	Additional GA Debt Drawdown	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,772	3,626	5,559	8,155	10,448	12,435	13,911	16,137	17,641	18,490	20,168	21,461	21,752	21,512	20,688	19,822	18,911	17,954	16,948	15,890	14,779	13,610	12,382	11,091	9,734	8,307	6,808	5,231	3,574	1,833	2	2	2	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,772	1,855	1,932	2,596	2,293	1,986	1,476	2,226	1,504	849	1,678	1,294	291	-240	-824	-866	-911	-957	-1,006	-1,058	-1,112	-1,168	-1,228	-1,291	-1,357	-1,427	-1,500	-1,576	-1,657	-1,742	-1,831	0	0	0	

	Bi-Annual Drawdown	875	871	862	1,141	926	717	415	748	335	(26)	361	129	(399)	(668)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,772	1,764	1,747	2,312	1,876	1,452	840	1,514	679	(53)	732	262	(807)	(1,353)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	-	-	-	
	Annual Interest Cost on New Drawdowns	22	22	22	29	24	18	11	19	9	(1)	9	3	(10)	(17)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	-	-	-	
	Annual Interest Cost on Opening Balance	-	91	186	284	417	535	636	712	826	903	946	1,032	1,098	1,113	1,101	1,058	1,014	968	919	867	813	756	696	633	567	498	425	348	268	183	94	0	0	0	
	Total Annual Interest Cost	22	113	208	314	441	553	647	731	834	902	955	1,035	1,088	1,096	1,076	1,034	990	943	894	843	789	732	672	609	543	474	401	324	243	159	69	0	0	0	

Feb22 Option 2, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Debt, Beginning of Year	0	1,794	3,672	5,629	8,258	10,580	12,592	14,086	16,340	17,864	18,724	20,422	21,732	22,027	21,784	20,949	20,072	19,150	18,181	17,162	16,091	14,965	13,782	12,538	11,231	9,857	8,412	6,894	5,297	3,619	1,856	2	2	2	
	Interest Cost - Feb22 Option 2, 30-yr	*45*	*136*	*232*	*346*	*470*	*578*	*665*	*759*	*853*	*913*	*976*	*1,051*	*1,091*	*1,093*	*1,066*	*1,023*	*978*	*931*	*882*	*829*	*775*	*717*	*657*	*593*	*526*	*456*	*382*	*304*	*222*	*137*	*46*	*0*	*0*	*0*	19,733
	Additional GA Debt Drawdown	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,794	3,672	5,629	8,258	10,580	12,592	14,086	16,340	17,864	18,724	20,422	21,732	22,027	21,784	20,949	20,072	19,150	18,181	17,162	16,091	14,965	13,782	12,538	11,231	9,857	8,412	6,894	5,297	3,619	1,856	2	2	2	
Fiscal Exposure - Average Debt Drawdown		1,794	1,878	1,957	2,629	2,322	2,011	1,495	2,254	1,523	860	1,699	1,310	294	-243	-834	-877	-922	-969	-1,019	-1,071	-1,126	-1,183	-1,244	-1,307	-1,374	-1,445	-1,519	-1,596	-1,678	-1,764	-1,854	0	0	0	





Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb22_3_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	
			34	38	36	36	34	34	35	36	36	35	35	34	23	16	12	7	0	-14	-29	-36	-38	-42	-39	-36	-34	-32	-27	-18	-6	-1	0	3	3	3	142

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	1,606	1,040	19,498
Equal Monthly Debt Drawdown	1,644	1,040	

	Feb22 Option 3, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	20,326	2033	12,862
Equal Monthly Debt Drawdown	20,809		

Feb22 Option 3, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
																																					26
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
a	Debt, Beginning of Year	0	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	
c = a*5%	*Interest Cost - Feb22 Option 3, 30-yr - End of Year Debt Drawdown*	*0*	*74*	*156*	*234*	*312*	*385*	*459*	*534*	*612*	*690*	*766*	*842*	*915*	*964*	*999*	*1,024*	*1,039*	*1,040*	*1,011*	*949*	*872*	*791*	*701*	*617*	*540*	*468*	*400*	*341*	*303*	*290*	*288*	*288*	*293*	*299*	19,498
b	Additional GA Debt Drawdown, End of Year	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
	Feb22 Option 3, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,659	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
	Feb22 Option 3, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,862	12,862	13,167	13,181	12,611	11,405	9,906	8,320	6,550	4,918	3,412	2,000	667	-472	0	0	0	0	0	0	0	
	Feb22 Option 3, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,943	8,967	10,006	11,046	12,057	13,006	13,878	14,669	15,370	15,987	16,527	16,995	17,395	17,736	18,040	18,330	18,618				
	Feb22 Option 3, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,064	11,345	10,319	8,710	6,493	4,045	1,586	-974	-3,307	-5,431	-7,383	-9,184	-10,721	-11,807	-12,362	-12,696	-12,994				
Fiscal Exposure - End of Year Debt Drawdown		1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	

Feb22 Option 3, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	
1,040	*Interest Cost - Feb22 Option 3, 30-yr*	*34*	*112*	*192*	*270*	*346*	*420*	*494*	*570*	*649*	*726*	*802*	*876*	*938*	*980*	*1,010*	*1,031*	*1,040*	*1,026*	*982*	*913*	*835*	*749*	*662*	*581*	*507*	*436*	*373*	*324*	*297*	*289*	*288*	*290*	*296*	*302*	19,640
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	6,102	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	

	Monthly Drawdown	121	128	114	108	93	88	84	83	76	66	60	47	4	(24)	(43)	(60)	(85)	(134)	(185)	(204)	(205)	(213)	(194)	(177)	(163)	(150)	(128)	(90)	(46)	(28)	(25)	(15)	(15)	(15)	
	FV of Monthly Drawdown at 5%	1,482	1,568	1,398	1,326	1,137	1,086	1,028	1,024	929	815	742	580	54	(292)	(525)	(736)	(1,050)	(1,648)	(2,269)	(2,506)	(2,517)	(2,621)	(2,389)	(2,174)	(1,999)	(1,844)	(1,574)	(1,111)	(568)	(342)	(306)	(185)	(184)	(188)	
	Annual Interest Cost on New Drawdowns	34	36	32	31	26	25	24	24	22	19	17	13	1	(7)	(12)	(17)	(24)	(38)	(53)	(58)	(58)	(61)	(55)	(51)	(46)	(43)	(37)	(26)	(13)	(8)	(7)	(4)	(4)	(4)	
	Annual Interest Cost on Opening Balance	-	76	160	240	320	394	470	547	627	707	784	863	936	987	1,023	1,048	1,064	1,065	1,035	972	893	810	717	632	553	479	409	350	311	297	295	295	300	306	
	Total Annual Interest Cost	34	112	192	270	346	420	494	570	649	726	802	876	938	980	1,010	1,031	1,040	1,026	982	913	835	749	662	581	507	436	373	324	297	289	288	290	296	302	

Feb22 Option 3, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	
	Interest Cost - Feb22 Option 3, 30-yr	*19*	*95*	*176*	*254*	*331*	*404*	*478*	*554*	*632*	*709*	*785*	*861*	*927*	*973*	*1,005*	*1,028*	*1,039*	*1,033*	*995*	*930*	*852*	*769*	*680*	*598*	*522*	*451*	*385*	*332*	*300*	*290*	*288*	*289*	*295*	*301*	19,575
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	6,037	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,466	1,626	1,541	1,549	1,441	1,465	1,482	1,554	1,539	1,505	1,510	1,427	979	687	492	309	13	-577	-1,221	-1,518	-1,607	-1,792	-1,653	-1,525	-1,430	-1,350	-1,153	-753	-255	-44	-10	109	115	117	

	Bi-Annual Drawdown	724	766	683	648	555	530	502	500	454	398	363	283	26	(143)	(256)	(359)	(513)	(805)	(1,108)	(1,224)	(1,229)	(1,280)	(1,167)	(1,062)	(976)	(900)	(769)	(543)	(278)	(167)	(149)	(90)	(90)	(92)	
	FV of Bi-Annual Drawdown at 5%	1,466	1,551	1,383	1,312	1,125	1,075	1,017	1,013	919	806	735	573	53	(289)	(519)	(728)	(1,039)	(1,630)	(2,245)	(2,479)	(2,490)	(2,593)	(2,363)	(2,150)	(1,977)	(1,824)	(1,557)	(1,099)	(562)	(338)	(302)	(183)	(182)	(186)	
	Annual Interest Cost on New Drawdowns	19	20	17	17	14	14	13	13	12	10	9	7	1	(4)	(7)	(9)	(13)	(21)	(28)	(31)	(31)	(33)	(30)	(27)	(25)	(23)	(20)	(14)	(7)	(4)	(4)	(2)	(2)	(2)	
	Annual Interest Cost on Opening Balance	-	75	158	237	316	390	465	541	620	699	776	853	926	976	1,012	1,037	1,053	1,053	1,024	961	884	801	710	625	547	474	405	346	307	294	292	291	297	303	
	Total Annual Interest Cost	19	95	176	254	331	404	478	554	632	709	785	861	927	973	1,005	1,028	1,039	1,033	995	930	852	769	680	598	522	451	385	332	300	290	288	289	295	301	

Feb22 Option 3, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	
	Interest Cost - Feb22 Option 3, 30-yr	*37*	*115*	*195*	*273*	*349*	*422*	*497*	*573*	*651*	*728*	*804*	*879*	*939*	*981*	*1,011*	*1,031*	*1,040*	*1,025*	*980*	*911*	*832*	*746*	*659*	*579*	*504*	*434*	*371*	*322*	*297*	*289*	*288*	*290*	*296*	*302*	19,651
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	6,113	
Fiscal Exposure - Average Debt Drawdown		1,484	1,647	1,561	1,569	1,459	1,483	1,500	1,573	1,559	1,524	1,530	1,445	992	696	498	313	14	-585	-1,237	-1,537	-1,627	-1,814	-1,674	-1,545	-1,448	-1,367	-1,167	-763	-258	-44	-10	110	116	119	

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

IESO GA cost forecast + extrapolation

Scenario
Option 1a
Borrow $3.3B, Bills Lowered 20%, No Cap

Option 1b
Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B

	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168

Ratepayer GA Payment	8,753	8,535	8,311	7,650
Total Accumulated Debt ($ billion)	3,342	6,812	10,402	15,452

Ratepayer GA Payment	9,781	9,661	9,367	8,733
Accumulated debt in present year (including 5% interest,	2,314	4,606	7,027	10,822

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528
19,868	24,126	28,033	32,843	37,110	40,911	45,720	50,350
8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717
13,761	16,470	18,755	21,866	24,355	26,295	29,156	31,750

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**
10009	9721	8654	8820	8238	7756	5662	5389

8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319
54,201	57,751	60,200	62,719	64,559	65,780	64,732	63,114
9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913
33,472	34,796	34,919	35,008	34,309	32,878	31,035	29,098

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627

10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485
60,904	58,078	54,611	50,476	45,641	40,076	33,745	26,613
8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151
27,063	24,923	22,673	20,309	17,823	15,210	12,464	9,577

2045	2046	2047	2048

3,451	3,285	3,126	2,975	2,831	2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695

12,786	13,095	13410.34	2975.154	2831.461	2694.708
18,640	9,784	4.85E-06	0	0	0

6,976	6,809	6650.631	2975.154	2831.461	2694.708
6,543	3,353	5E-12	0	0	0

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

		5.00%	
Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb15_1a_30yr

Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,342	3,470
Interest Portion	0	171

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	835	3,374
Interest Portion	-	43

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $66 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb15_1b_30yr

Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,314	2,292
Interest Portion	0	118

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	579	2,309
Interest Portion	-	30

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $35 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

#REF!		
$ millions		
30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	362	1,487

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
	1	
	2	
	3	
	4 April	4
	5 May	5
	6 June	6
	7 July	7
	8 August	8
	9 September	9
	10 October	10
	11 November	11
	12 December	12
30-year term	**2016-17**	**2017-18**

Fiscal Exposure - Equal Monthly Debt Drawdown 579 - 835 2,309 - 3,374

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	835	3374
Debt-Finance Global Adjustment Costs, Option 1a	579	2309
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60

First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**835**	**3614**
Total, B	579	2549
Proposed Program Total:	579 - 835	2,549 - 3,614

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Option 1a
Option 2b

Assumes an inte

2019	2020	2021	2022
3,589	5,050	4,416	4,258
349	532	791	1,016

2018-19	2019-20	2020-21	2021-2022
3,500	3,955	4,892	4,377
215	394	597	847

2034.

depend on decision on accounting treatment.

2019	2020	2021	2022
2,421	3,795	2,938	2,709
236	360	554	704

2018-19	2019-20	2020-21	2021-2022
2,324	2,765	3,581	2,881
148	267	408	591

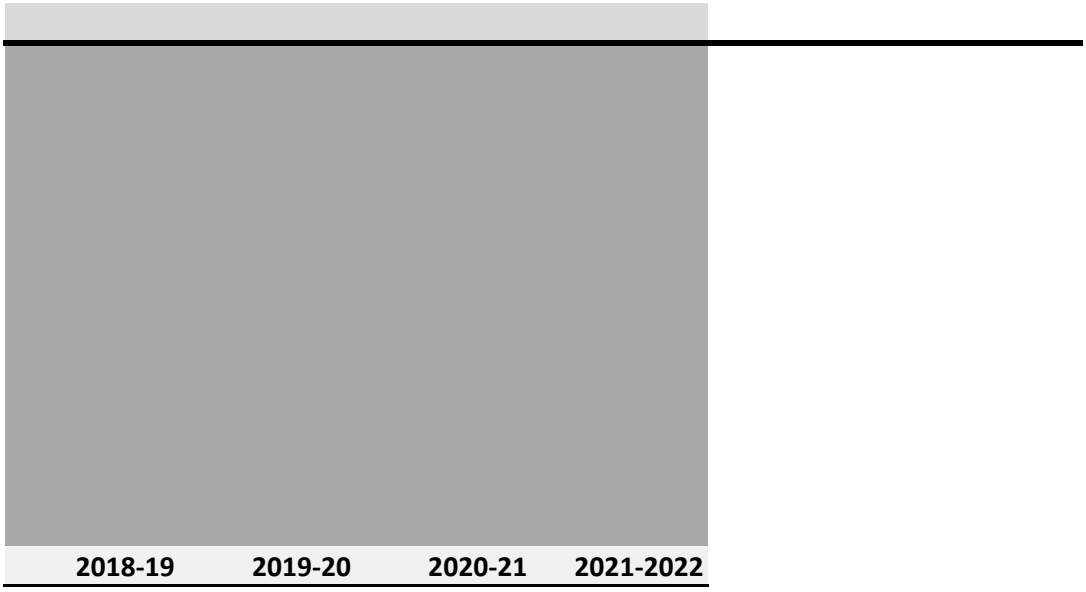
2032.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022

2,324 - 3,500 2,765 - 3,955 3,581 - 4,892 2,881 - 4,377

/1

2018-19[1]	2019-20[1]	2020-21[1]
3500	3955	4892
2324	2765	3581
225	279	323
60	60	60

18	18	18
3803	**4312**	**5293**
2627	3122	3982

2,627 - 3,803	3,122 - 4,312	3,982 - 5,293

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$38,864	$61,735	$65,781	occurs in Year 2034
$22,873	$32,368	$35,009	occurs in Year 2032

erest rate of 5.00% (compounded monthly).

Tab Name		Total Accumulated Interest Costs
Feb15_1a_30yr	$26,517	$34,278
Feb15_1b_30yr	$15,631	$20,378
	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$26,517 to $34,278
Option 2	$15,631 to $20,378
Option 3	$17,202 to $22,028

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

Feb15_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,342	3,470	3,589	5,050	4,416	4,258	3,907	4,810	4,268	3,801	4,809	4,630	3,851	3,550	2,449	2,519	1,840	1,221	-1,048	-1,618	-2,210	-2,825	-3,467	-4,135	-4,834	-5,565	-6,330	-7,132	-7,973	-8,856	-9,783	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,421	3,553	3,675	5,171	4,521	4,359	4,000	4,924	4,369	3,891	4,923	4,740	3,943	3,635	2,508	2,579	1,884	1,250	-1,073	-1,656	-2,262	-2,893	-3,549	-4,234	-4,949	-5,697	-6,481	-7,302	-8,163	-9,067	-10,016	0	0	0	
			79	83	85	120	105	101	93	114	102	90	114	110	92	84	58	60	44	29	-25	-38	-53	-67	-82	-98	-115	-132	-151	-170	-190	-211	-233	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	5,050	3,365	61,735
Equal Monthly Debt Drawdown	5,171	3,341	

	Feb15 Option 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	65,781	2034	38,864
Equal Monthly Debt Drawdown	67,346		

Feb15 Option 1a, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
a	Debt, Beginning of Year	0	3,342	6,812	10,402	15,452	19,868	24,126	28,034	32,843	37,111	40,911	45,720	50,350	54,201	57,752	60,201	62,720	64,560	65,781	64,733	63,115	60,906	58,080	54,614	50,478	45,644	40,079	33,749	26,617	18,644	9,788	5	5	5	
c = a*5%	*Interest Cost - Feb15 Option 1a, 30-yr - End of Year Debt Drawdown*	*0*	*171*	*349*	*532*	*791*	*1,016*	*1,234*	*1,434*	*1,680*	*1,899*	*2,093*	*2,339*	*2,576*	*2,773*	*2,955*	*3,080*	*3,209*	*3,303*	*3,365*	*3,312*	*3,229*	*3,116*	*2,972*	*2,794*	*2,583*	*2,335*	*2,051*	*1,727*	*1,362*	*954*	*501*	*0*	*0*	*0*	61,735
b	Additional GA Debt Drawdown, End of Year	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	3,342	6,812	10,402	15,452	19,868	24,126	28,034	32,843	37,111	40,911	45,720	50,350	54,201	57,752	60,201	62,720	64,560	65,781	64,733	63,115	60,906	58,080	54,614	50,478	45,644	40,079	33,749	26,617	18,644	9,788	5	5	5	5	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	171	520	1,052	1,842	2,859	4,093	5,527	7,208	9,106	11,199	13,539	16,115	19,665	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	26,617	18,644	9,788	5	5	5	5	
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal	3,342	6,641	9,882	14,400	18,026	21,267	23,941	27,316	29,903	31,805	34,521	36,812	38,087	38,087	38,087	40,606	42,446	43,667	42,619	41,001	38,792	35,966	32,500	28,364	23,530	17,965	11,635	0	0	0	0	0	0	0	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	171	520	1,052	1,842	2,859	4,093	5,527	7,208	9,106	11,199	13,539	16,115	18,888	21,842	24,922	28,131	31,434	34,800	38,112	41,341	44,457	47,428	50,222	52,805	55,140	57,191	58,917	60,279	61,233	61,734				
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal	3,342	6,641	9,882	14,400	18,026	21,267	23,941	27,316	29,903	31,805	34,521	36,812	38,087	38,864	38,359	37,798	36,429	34,347	29,934	25,004	19,565	13,624	7,186	256	-7,161	-15,061	-23,442	-32,300	-41,635	-51,445	-61,729				
Fiscal Exposure - End of Year Debt Drawdown		3,342	3,470	3,589	5,050	4,416	4,258	3,907	4,810	4,268	3,801	4,809	4,630	3,851	3,550	2,449	2,519	1,840	1,221	-1,048	-1,618	-2,210	-2,825	-3,467	-4,135	-4,834	-5,565	-6,330	-7,132	-7,973	-8,856	-9,783	0	0	0	

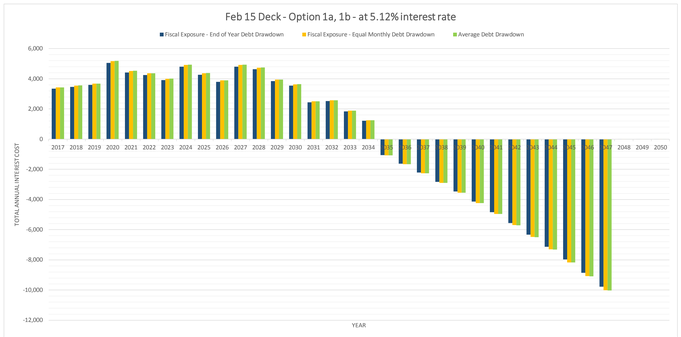
Feb15 Option 1a, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,421	6,974	10,649	15,820	20,341	24,700	28,700	33,624	37,993	41,885	46,808	51,548	55,491	59,125	61,633	64,212	66,096	67,346	66,273	64,617	62,354	59,462	55,913	51,679	46,730	41,033	34,552	27,250	19,087	10,021	5	5	5	
3,341	*Interest Cost - Feb15 Option 1a, 30-yr*	*79*	*254*	*434*	*652*	*896*	*1,118*	*1,327*	*1,549*	*1,782*	*1,989*	*2,207*	*2,449*	*2,668*	*2,857*	*3,013*	*3,140*	*3,253*	*3,332*	*3,341*	*3,273*	*3,177*	*3,049*	*2,889*	*2,696*	*2,468*	*2,203*	*1,900*	*1,557*	*1,172*	*743*	*268*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,421	6,974	10,649	15,820	20,341	24,700	28,700	33,624	37,993	41,885	46,808	51,548	55,491	59,125	61,633	64,212	66,096	67,346	66,273	64,617	62,354	59,462	55,913	51,679	46,730	41,033	34,552	27,250	19,087	10,021	5	5	5	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,421	3,553	3,675	5,171	4,521	4,359	4,000	4,924	4,369	3,891	4,923	4,740	3,943	3,635	2,508	2,579	1,884	1,250	-1,073	-1,656	-2,262	-2,893	-3,549	-4,234	-4,949	-5,697	-6,481	-7,302	-8,163	-9,067	-10,016	0	0	0	

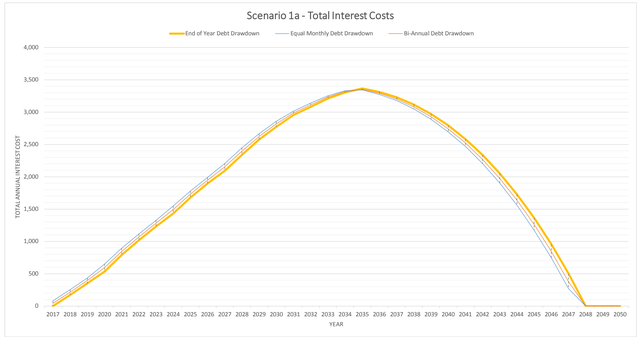
	Monthly Drawdown	278	275	270	377	302	270	223	281	216	159	226	191	106	65	(42)	(47)	(114)	(174)	(368)	(411)	(453)	(495)	(537)	(577)	(618)	(658)	(698)	(738)	(778)	(817)	(857)	-	-	-	
	FV of Monthly Drawdown at 5%	3,421	3,378	3,318	4,626	3,712	3,319	2,737	3,456	2,649	1,947	2,780	2,346	1,305	796	(517)	(574)	(1,401)	(2,132)	(4,518)	(5,047)	(5,568)	(6,083)	(6,591)	(7,094)	(7,593)	(8,088)	(8,580)	(9,069)	(9,557)	(10,043)	(10,529)	-	-	-	
	Annual Interest Cost on New Drawdowns	79	78	77	107	86	77	64	80	62	45	65	54	30	18	(12)	(13)	(33)	(50)	(105)	(117)	(129)	(141)	(153)	(165)	(176)	(188)	(199)	(211)	(222)	(233)	(245)	-	-	-	
	Annual Interest Cost on Opening Balance	-	175	357	545	809	1,041	1,264	1,468	1,720	1,944	2,143	2,395	2,637	2,839	3,025	3,153	3,285	3,382	3,446	3,391	3,306	3,190	3,042	2,861	2,644	2,391	2,099	1,768	1,394	977	513	0	0	0	
	Total Annual Interest Cost	79	254	434	652	896	1,118	1,327	1,549	1,782	1,989	2,207	2,449	2,668	2,857	3,013	3,140	3,253	3,332	3,341	3,273	3,177	3,049	2,889	2,696	2,468	2,203	1,900	1,557	1,172	743	268	0	0	0	

Feb15 Option 1a, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,385	6,899	10,535	15,650	20,122	24,435	28,392	33,263	37,585	41,435	46,305	50,994	54,895	58,490	60,971	63,523	65,386	66,623	65,561	63,923	61,685	58,823	55,312	51,124	46,228	40,592	34,181	26,958	18,882	9,913	5	5	5	
	Interest Cost - Feb15 Option 1a, 30-yr	*43*	*215*	*394*	*597*	*847*	*1,071*	*1,284*	*1,496*	*1,735*	*1,947*	*2,155*	*2,398*	*2,625*	*2,818*	*2,986*	*3,112*	*3,232*	*3,319*	*3,352*	*3,291*	*3,201*	*3,080*	*2,927*	*2,741*	*2,521*	*2,264*	*1,970*	*1,635*	*1,260*	*841*	*376*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,385	6,899	10,535	15,650	20,122	24,435	28,392	33,263	37,585	41,435	46,305	50,994	54,895	58,490	60,971	63,523	65,386	66,623	65,561	63,923	61,685	58,823	55,312	51,124	46,228	40,592	34,181	26,958	18,882	9,913	5	5	5	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,385	3,515	3,635	5,115	4,473	4,313	3,957	4,871	4,322	3,849	4,870	4,689	3,900	3,596	2,481	2,551	1,864	1,237	-1,061	-1,639	-2,238	-2,861	-3,511	-4,188	-4,896	-5,636	-6,411	-7,223	-8,075	-8,969	-9,909	0	0	0	

	Bi-Annual Drawdown	1,671	1,650	1,620	2,259	1,813	1,621	1,337	1,688	1,294	951	1,358	1,146	638	389	(253)	(280)	(684)	(1,041)	(2,207)	(2,465)	(2,719)	(2,971)	(3,219)	(3,465)	(3,708)	(3,950)	(4,190)	(4,429)	(4,667)	(4,905)	(5,142)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,385	3,341	3,282	4,576	3,672	3,283	2,707	3,418	2,620	1,926	2,750	2,320	1,291	787	(512)	(568)	(1,386)	(2,109)	(4,470)	(4,993)	(5,508)	(6,017)	(6,520)	(7,018)	(7,512)	(8,001)	(8,488)	(8,972)	(9,454)	(9,935)	(10,416)	-	-	-	
	Annual Interest Cost on New Drawdowns	43	42	41	58	46	41	34	43	33	24	35	29	16	10	(6)	(7)	(18)	(27)	(56)	(63)	(70)	(76)	(82)	(89)	(95)	(101)	(107)	(113)	(119)	(125)	(132)	-	-	-	
	Annual Interest Cost on Opening Balance	-	173	353	539	801	1,029	1,250	1,453	1,702	1,923	2,120	2,369	2,609	2,809	2,992	3,119	3,250	3,345	3,409	3,354	3,270	3,156	3,010	2,830	2,616	2,365	2,077	1,749	1,379	966	507	0	0	0	
	Total Annual Interest Cost	43	215	394	597	847	1,071	1,284	1,496	1,735	1,947	2,155	2,398	2,625	2,818	2,986	3,112	3,232	3,319	3,352	3,291	3,201	3,080	2,927	2,741	2,521	2,264	1,970	1,635	1,260	841	376	0	0	0	

Feb15 Option 1a, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,427	6,986	10,668	15,847	20,376	24,743	28,751	33,683	38,060	41,958	46,890	51,638	55,588	59,229	61,741	64,325	66,212	67,464	66,389	64,730	62,464	59,566	56,011	51,770	46,812	41,104	34,612	27,298	19,121	10,038	5	5	5	
	Interest Cost - Feb15 Option 1a, 30-yr	*85*	*260*	*440*	*661*	*904*	*1,125*	*1,334*	*1,557*	*1,789*	*1,996*	*2,216*	*2,458*	*2,675*	*2,864*	*3,017*	*3,144*	*3,256*	*3,334*	*3,339*	*3,270*	*3,173*	*3,044*	*2,883*	*2,688*	*2,459*	*2,193*	*1,889*	*1,544*	*1,158*	*727*	*251*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,427	6,986	10,668	15,847	20,376	24,743	28,751	33,683	38,060	41,958	46,890	51,638	55,588	59,229	61,741	64,325	66,212	67,464	66,389	64,730	62,464	59,566	56,011	51,770	46,812	41,104	34,612	27,298	19,121	10,038	5	5	5	6	
Fiscal Exposure - Average Debt Drawdown		3,427	3,559	3,681	5,180	4,529	4,367	4,007	4,933	4,377	3,898	4,932	4,749	3,950	3,641	2,512	2,584	1,887	1,252	-1,075	-1,659	-2,266	-2,898	-3,555	-4,241	-4,958	-5,707	-6,492	-7,314	-8,177	-9,083	-10,034	0	0	0	





Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

Feb15_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,314	2,292	2,421	3,795	2,938	2,709	2,285	3,111	2,489	1,940	2,862	2,594	1,722	1,324	123	89	-699	-1,431	-1,842	-1,937	-2,036	-2,140	-2,249	-2,364	-2,485	-2,613	-2,746	-2,887	-3,034	-3,190	-3,353	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,369	2,346	2,479	3,886	3,008	2,774	2,340	3,185	2,548	1,986	2,930	2,656	1,763	1,356	126	91	-716	-1,465	-1,886	-1,983	-2,084	-2,191	-2,303	-2,421	-2,544	-2,675	-2,812	-2,955	-3,107	-3,266	-3,433	0	0	0
			55	55	58	90	70	64	54	74	59	46	68	62	41	32	3	2	-17	-34	-44	-46	-48	-51	-54	-56	-59	-62	-65	-69	-72	-76	-80	0	0	0

0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,795	1,791	32,368
Equal Monthly Debt Drawdown	3,886	1,789	

	Feb15 Option 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	35,009	2032	22,873
Equal Monthly Debt Drawdown	35,841		

Feb15 Option 1a, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
a — Debt, Beginning of Year	0	2,314	4,606	7,027	10,822	13,761	16,470	18,755	21,866	24,355	26,295	29,157	31,751	33,472	34,797	34,920	35,009	34,310	32,879	31,036	29,100	27,064	24,924	22,675	20,310	17,825	15,212	12,466	9,579	6,545	3,355	3	3	3	
c = a*5% — *Interest Cost - Feb15 Option 1a, 30-yr - End of Year Debt Drawdown*	*0*	*118*	*236*	*360*	*554*	*704*	*843*	*960*	*1,119*	*1,246*	*1,345*	*1,492*	*1,624*	*1,713*	*1,780*	*1,787*	*1,791*	*1,755*	*1,682*	*1,588*	*1,489*	*1,385*	*1,275*	*1,160*	*1,039*	*912*	*778*	*638*	*490*	*335*	*172*	*0*	*0*	*0*	32,368
b — Additional GA Debt Drawdown, End of Year	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	2,314	4,606	7,027	10,822	13,761	16,470	18,755	21,866	24,355	26,295	29,157	31,751	33,472	34,797	34,920	35,009	34,310	32,879	31,036	29,100	27,064	24,924	22,675	20,310	17,825	15,212	12,466	9,579	6,545	3,355	3	3	3	3	
	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	
Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	118	354	714	1,267	1,971	2,814	3,773	4,892	6,138	7,484	8,975	10,600	11,924	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	9,579	6,545	3,355	3	3	3	3	
Feb15 Option 1a, 30-yr - Accumulated Debt Principal	2,314	4,488	6,673	10,109	12,493	14,499	15,941	18,092	19,463	20,157	21,673	22,775	22,873	22,873	22,873	22,961	22,262	20,831	18,989	17,052	15,017	12,877	10,627	8,263	5,778	3,165	419	0	0	0	0	0	0	0	
Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	118	354	714	1,267	1,971	2,814	3,773	4,892	6,138	7,484	8,975	10,600	12,312	14,092	15,879	17,670	19,425	21,108	22,695	24,184	25,569	26,844	28,004	29,043	29,955	30,733	31,371	31,861	32,196	32,368				
Feb15 Option 1a, 30-yr - Accumulated Debt Principal	2,314	4,488	6,673	10,109	12,493	14,499	15,941	18,092	19,463	20,157	21,673	22,775	22,873	22,485	20,828	19,130	16,639	13,453	9,929	6,404	2,880	-645	-4,169	-7,694	-11,218	-14,743	-18,267	-21,792	-25,316	-28,841	-32,365				
Fiscal Exposure - End of Year Debt Drawdown	2,314	2,292	2,421	3,795	2,938	2,709	2,285	3,111	2,489	1,940	2,862	2,594	1,722	1,324	123	89	-699	-1,431	-1,842	-1,937	-2,036	-2,140	-2,249	-2,364	-2,485	-2,613	-2,746	-2,887	-3,034	-3,190	-3,353	0	0	0	

Feb15 Option 1a, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Debt, Beginning of Year	0	2,369	4,716	7,194	11,080	14,088	16,862	19,201	22,386	24,934	26,920	29,850	32,506	34,269	35,625	35,751	35,841	35,126	33,661	31,774	29,792	27,708	25,517	23,214	20,793	18,249	15,574	12,763	9,807	6,701	3,435	3	3	3	
1,789 — *Interest Cost - Feb15 Option 1a, 30-yr*	*55*	*173*	*293*	*450*	*624*	*768*	*897*	*1,034*	*1,178*	*1,292*	*1,413*	*1,553*	*1,665*	*1,744*	*1,783*	*1,789*	*1,774*	*1,721*	*1,638*	*1,542*	*1,440*	*1,334*	*1,222*	*1,104*	*980*	*850*	*713*	*569*	*418*	*259*	*92*	*0*	*0*	*0*	32,368
Additional GA Debt Drawdown	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,369	4,716	7,194	11,080	14,088	16,862	19,201	22,386	24,934	26,920	29,850	32,506	34,269	35,625	35,751	35,841	35,126	33,661	31,774	29,792	27,708	25,517	23,214	20,793	18,249	15,574	12,763	9,807	6,701	3,435	3	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown	2,369	2,346	2,479	3,886	3,008	2,774	2,340	3,185	2,548	1,986	2,930	2,656	1,763	1,356	126	91	-716	-1,465	-1,886	-1,983	-2,084	-2,191	-2,303	-2,421	-2,544	-2,675	-2,812	-2,955	-3,107	-3,266	-3,433	0	0	0	

Monthly Drawdown	193	181	182	286	199	167	120	179	114	58	126	92	8	(32)	(138)	(141)	(208)	(266)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	-	-	-	
FV of Monthly Drawdown at 5%	2,369	2,225	2,237	3,518	2,441	2,053	1,477	2,202	1,403	710	1,553	1,128	100	(397)	(1,697)	(1,738)	(2,549)	(3,262)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	-	-	-	
Annual Interest Cost on New Drawdowns	55	52	52	82	57	48	34	51	33	17	36	26	2	(9)	(39)	(40)	(59)	(76)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	-	-	-	
Annual Interest Cost on Opening Balance	-	121	241	368	567	721	863	982	1,145	1,276	1,377	1,527	1,663	1,753	1,823	1,829	1,834	1,797	1,722	1,626	1,524	1,418	1,305	1,188	1,064	934	797	653	502	343	176	0	0	0	
Total Annual Interest Cost	55	173	293	450	624	768	897	1,034	1,178	1,292	1,413	1,553	1,665	1,744	1,783	1,789	1,774	1,721	1,638	1,542	1,440	1,334	1,222	1,104	980	850	713	569	418	259	92	0	0	0	

Feb15 Option 1a, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Debt, Beginning of Year	0	2,344	4,665	7,117	10,961	13,937	16,681	18,995	22,146	24,667	26,631	29,530	32,157	33,901	35,242	35,367	35,456	34,748	33,299	31,433	29,472	27,410	25,243	22,965	20,570	18,053	15,407	12,626	9,702	6,629	3,398	3	3	3	
Interest Cost - Feb15 Option 1a, 30-yr	*30*	*148*	*267*	*408*	*591*	*739*	*872*	*999*	*1,151*	*1,271*	*1,382*	*1,525*	*1,646*	*1,729*	*1,782*	*1,788*	*1,782*	*1,737*	*1,659*	*1,563*	*1,463*	*1,357*	*1,246*	*1,130*	*1,007*	*879*	*743*	*601*	*451*	*294*	*129*	*0*	*0*	*0*	32,368
Additional GA Debt Drawdown	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,344	4,665	7,117	10,961	13,937	16,681	18,995	22,146	24,667	26,631	29,530	32,157	33,901	35,242	35,367	35,456	34,748	33,299	31,433	29,472	27,410	25,243	22,965	20,570	18,053	15,407	12,626	9,702	6,629	3,398	3	3	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown	2,344	2,321	2,452	3,844	2,976	2,744	2,314	3,151	2,521	1,965	2,898	2,627	1,744	1,341	125	90	-708	-1,449	-1,866	-1,961	-2,062	-2,167	-2,278	-2,395	-2,517	-2,646	-2,781	-2,924	-3,073	-3,230	-3,396	0	0	0	

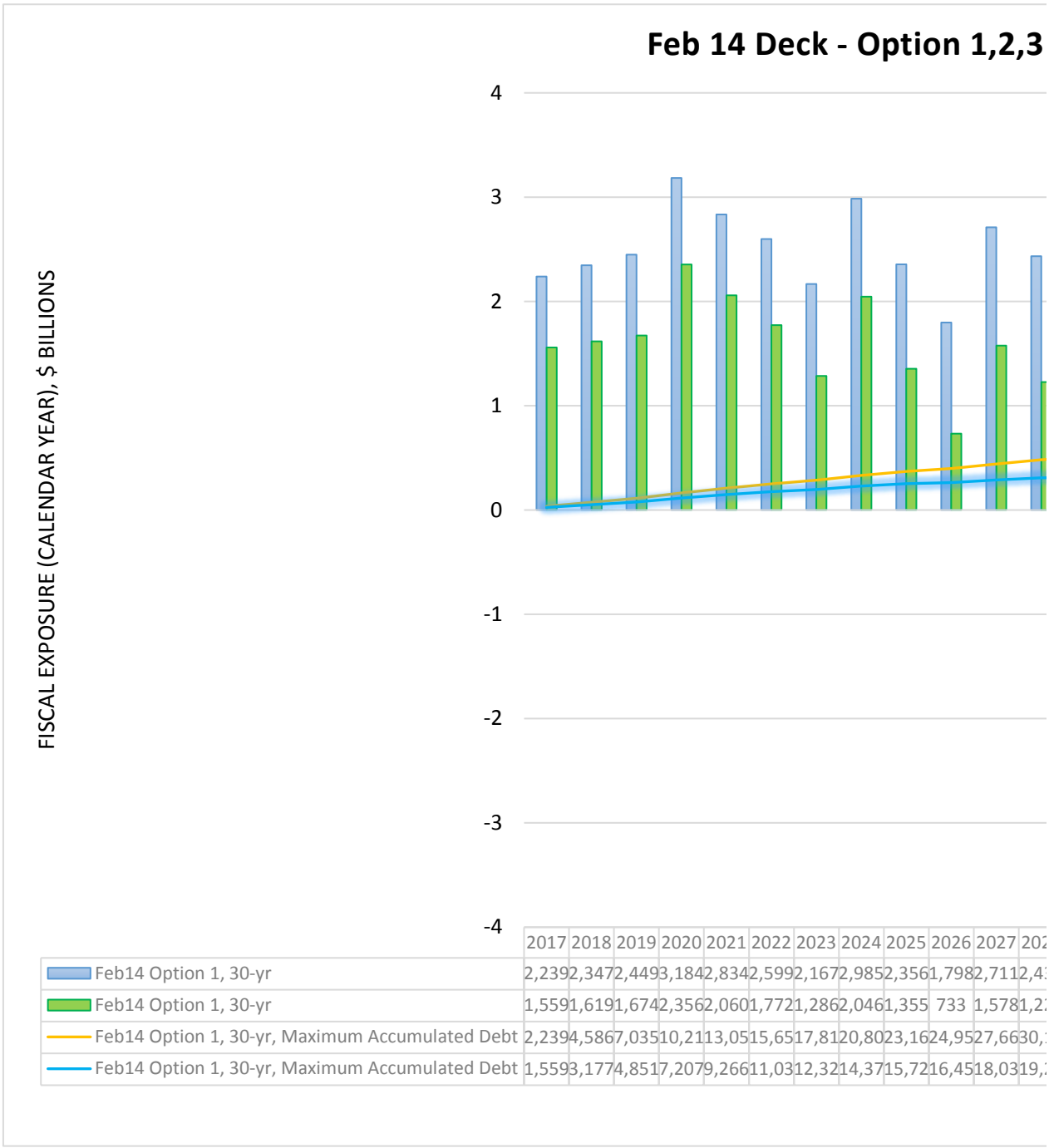
Bi-Annual Drawdown	1,157	1,087	1,093	1,718	1,192	1,003	721	1,076	685	347	758	551	49	(194)	(829)	(849)	(1,245)	(1,593)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	-	-	-	
FV of Bi-Annual Drawdown at 5%	2,344	2,201	2,213	3,480	2,415	2,031	1,461	2,179	1,388	703	1,536	1,116	99	(393)	(1,678)	(1,720)	(2,522)	(3,227)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	-	-	-	
Annual Interest Cost on New Drawdowns	30	28	28	44	30	26	18	28	18	9	19	14	1	(5)	(21)	(22)	(32)	(41)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	-	-	-	
Annual Interest Cost on Opening Balance	-	120	239	364	561	713	853	972	1,133	1,262	1,363	1,511	1,645	1,734	1,803	1,809	1,814	1,778	1,704	1,608	1,508	1,402	1,291	1,175	1,052	924	788	646	496	339	174	0	0	0	
Total Annual Interest Cost	30	148	267	408	591	739	872	999	1,151	1,271	1,382	1,525	1,646	1,729	1,782	1,788	1,782	1,737	1,659	1,563	1,463	1,357	1,246	1,130	1,007	879	743	601	451	294	129	0	0	0	

Feb15 Option 1a, 30-yr — Average Debt Drawdown

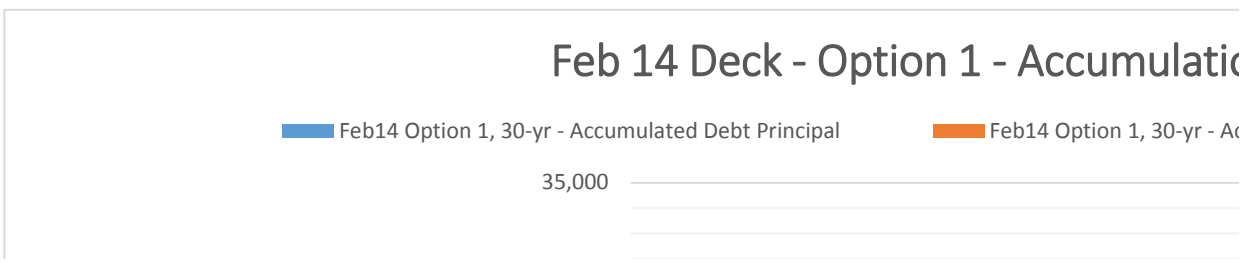
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Debt, Beginning of Year	0	2,373	4,724	7,207	11,099	14,113	16,891	19,235	22,425	24,978	26,968	29,902	32,563	34,329	35,687	35,813	35,904	35,187	33,720	31,830	29,844	27,756	25,562	23,255	20,830	18,281	15,601	12,785	9,824	6,712	3,441	3	3	3	
Interest Cost - Feb15 Option 1a, 30-yr	*59*	*177*	*298*	*457*	*629*	*773*	*901*	*1,039*	*1,182*	*1,296*	*1,419*	*1,558*	*1,668*	*1,746*	*1,783*	*1,789*	*1,773*	*1,719*	*1,635*	*1,538*	*1,437*	*1,330*	*1,218*	*1,100*	*976*	*845*	*708*	*564*	*412*	*253*	*86*	*0*	*0*	*0*	32,368
Additional GA Debt Drawdown	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,373	4,724	7,207	11,099	14,113	16,891	19,235	22,425	24,978	26,968	29,902	32,563	34,329	35,687	35,813	35,904	35,187	33,720	31,830	29,844	27,756	25,562	23,255	20,830	18,281	15,601	12,785	9,824	6,712	3,441	3	3	3	3	
Fiscal Exposure - Average Debt Drawdown	2,373	2,351	2,483	3,892	3,013	2,779	2,344	3,190	2,553	1,989	2,935	2,660	1,766	1,358	126	91	-717	-1,468	-1,889	-1,986	-2,088	-2,195	-2,307	-2,425	-2,549	-2,679	-2,816	-2,961	-3,112	-3,271	-3,439	0	0	0	

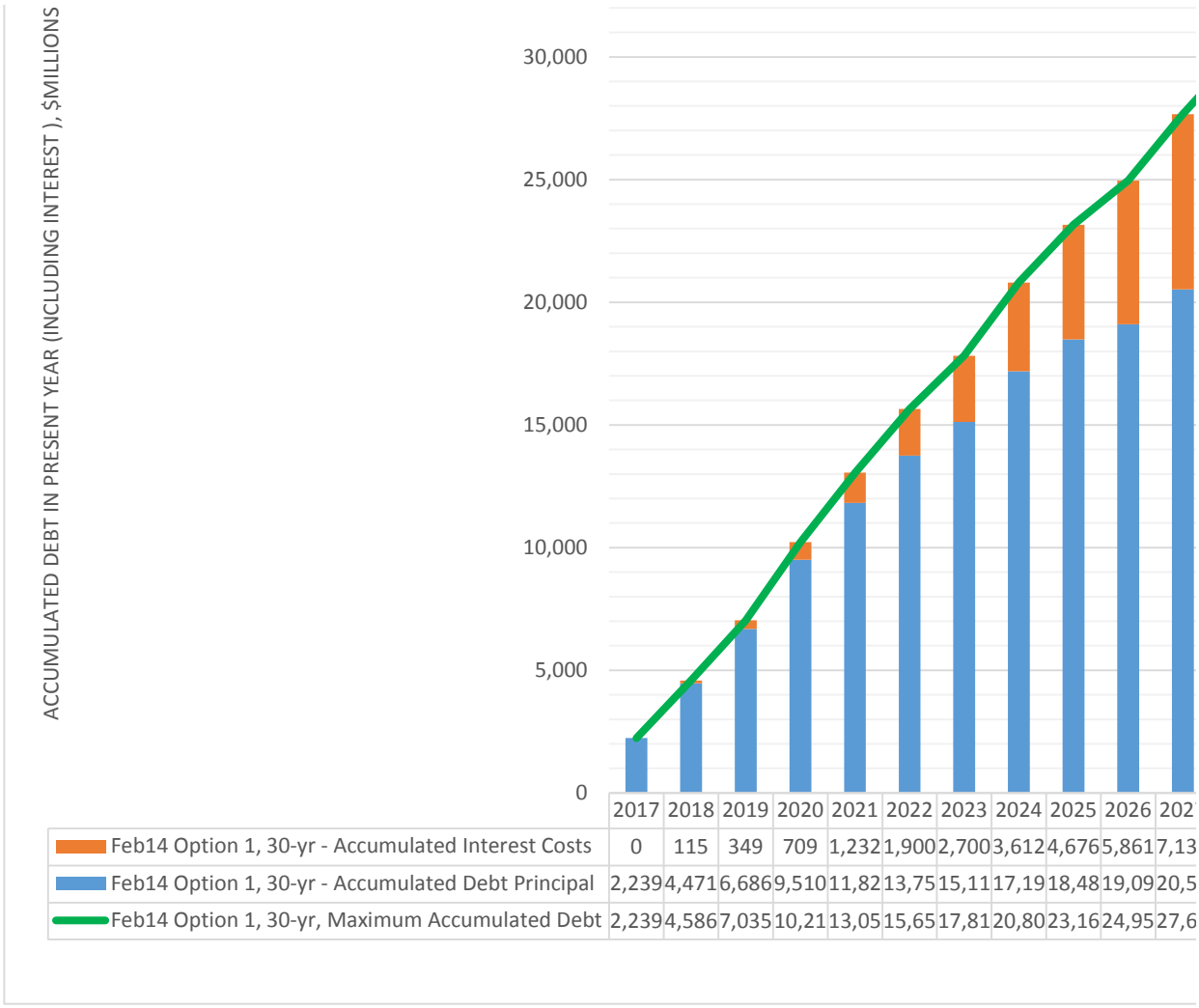
Feb 14 Deck

Feb 14 Deck - Option 1,2,3 - at 5.12% interest rate

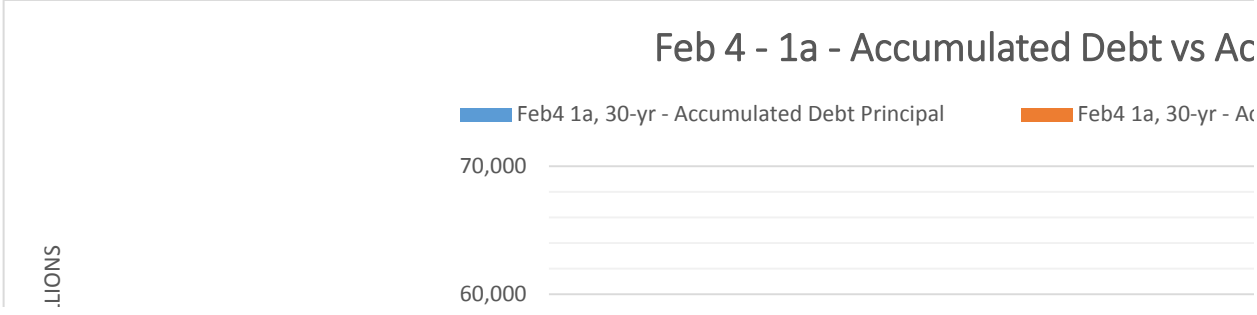


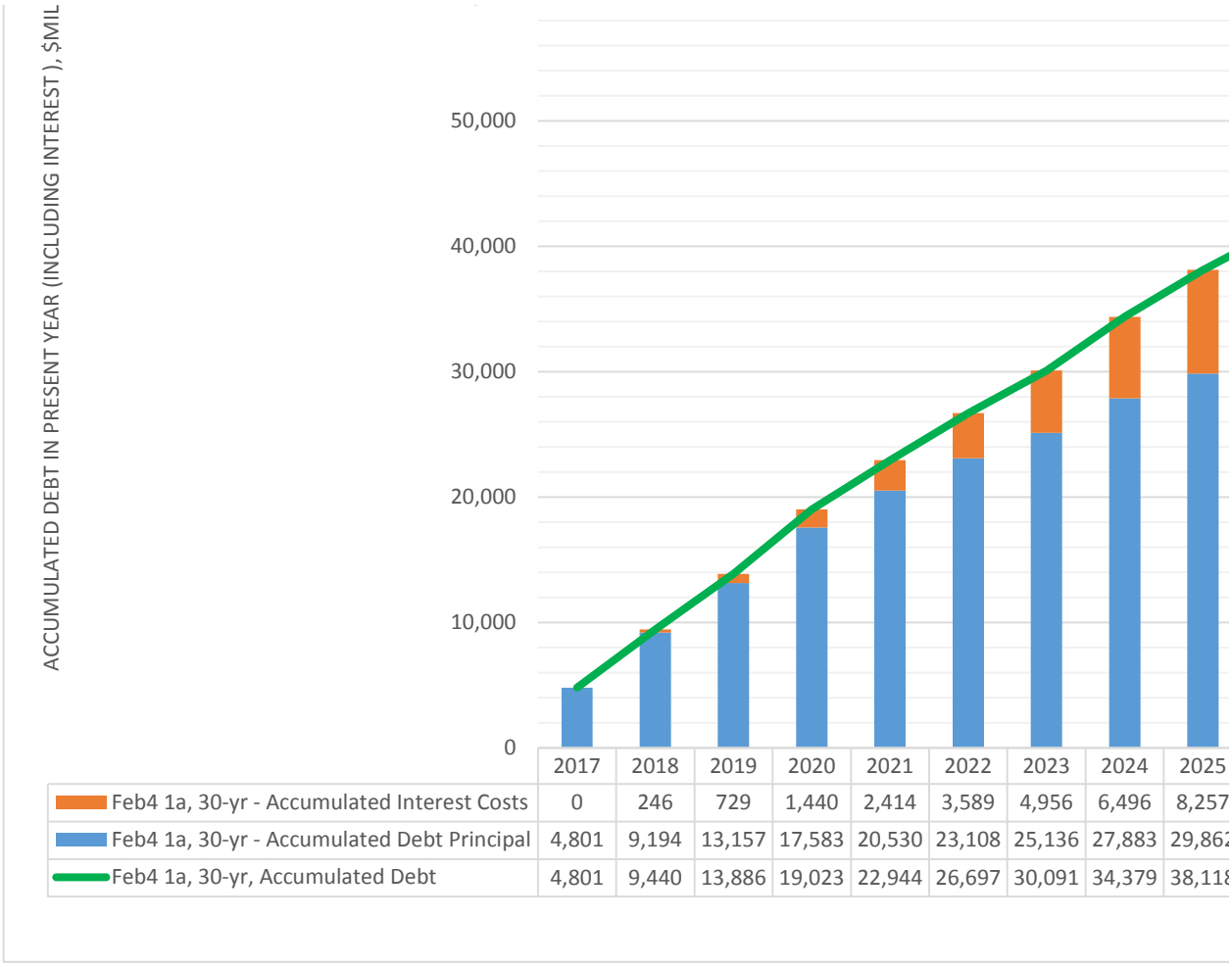
Feb 14 Deck - Option 1 - Accumulation of Debt (Principal and Interest)



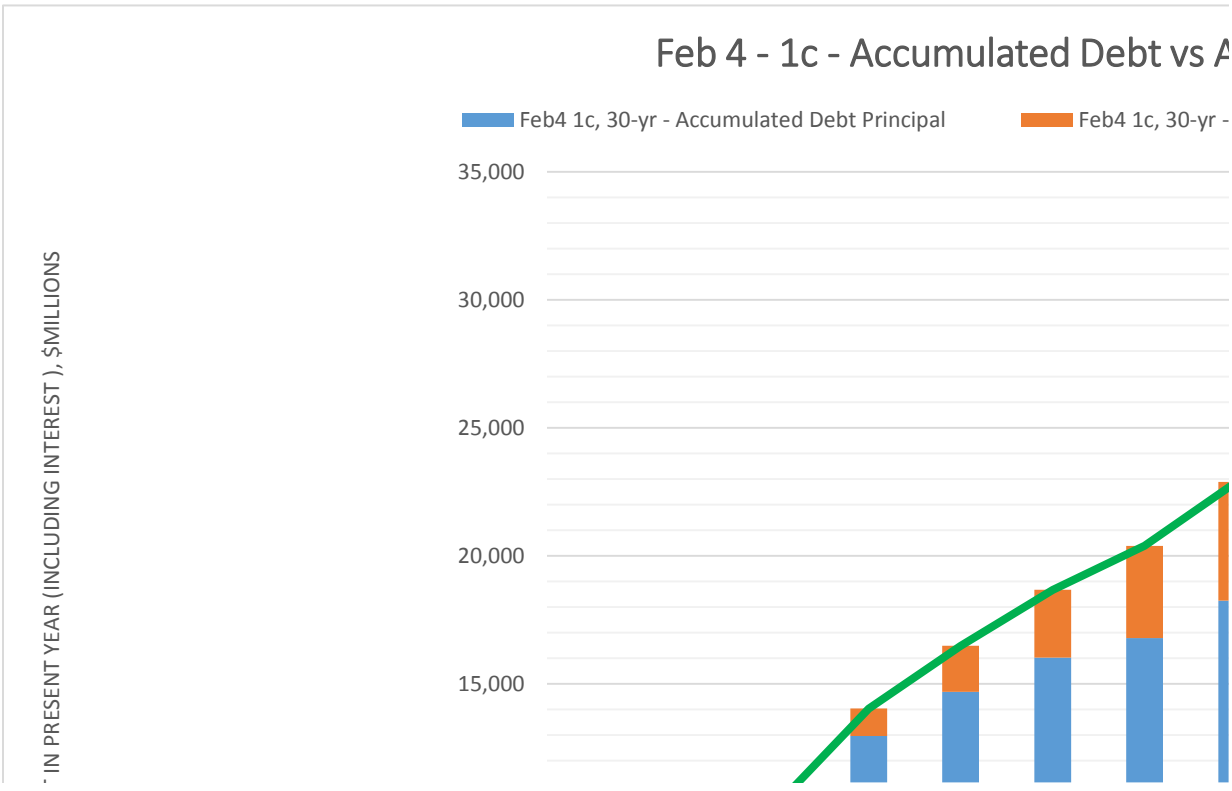


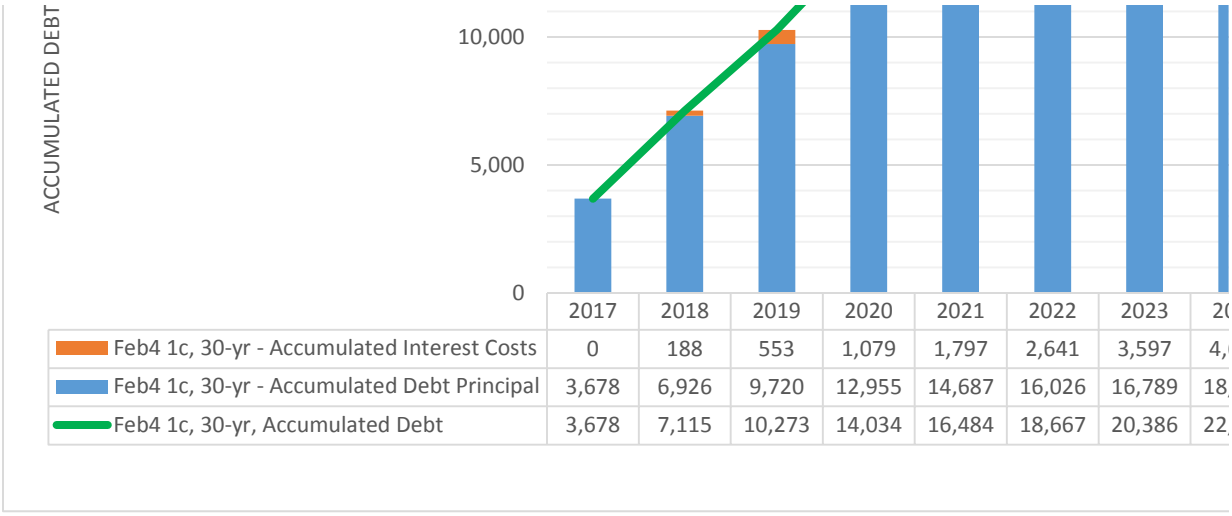
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	202
Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,13
Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,82	13,75	15,11	17,19	18,48	19,09	20,5
Feb14 Option 1, 30-yr, Maximum Accumulated Debt	2,239	4,586	7,035	10,21	13,05	15,65	17,81	20,80	23,16	24,95	27,6



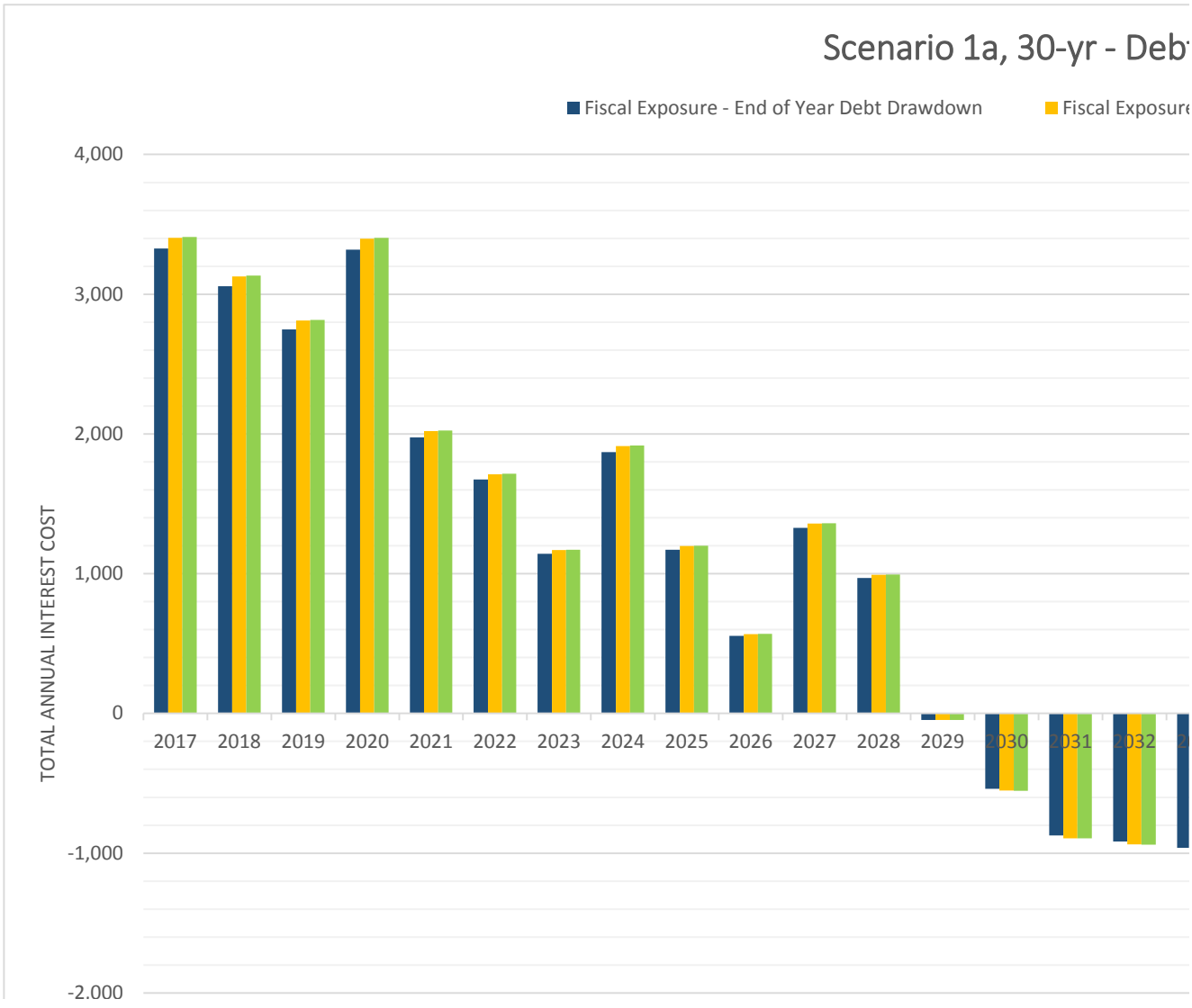


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



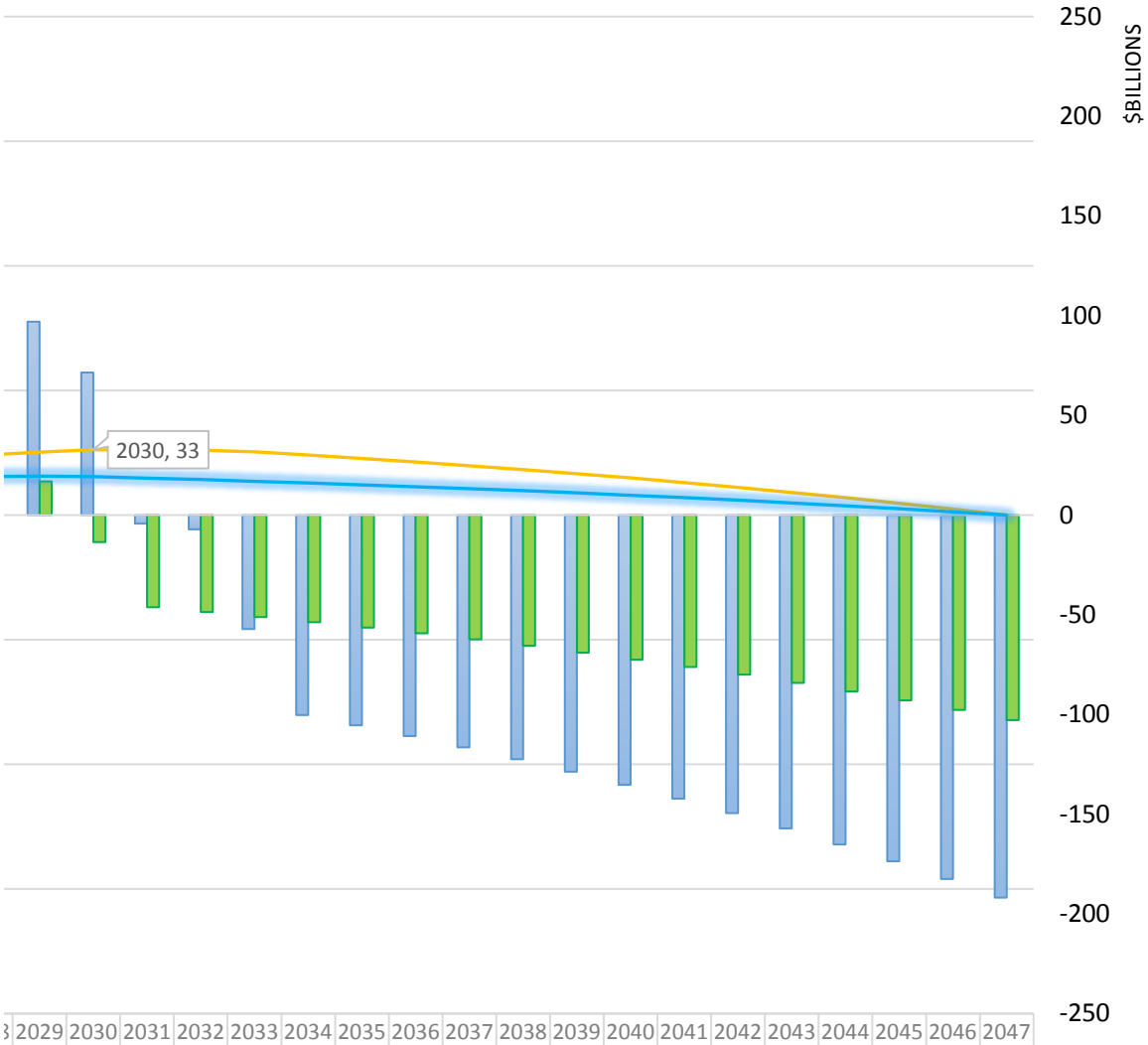


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

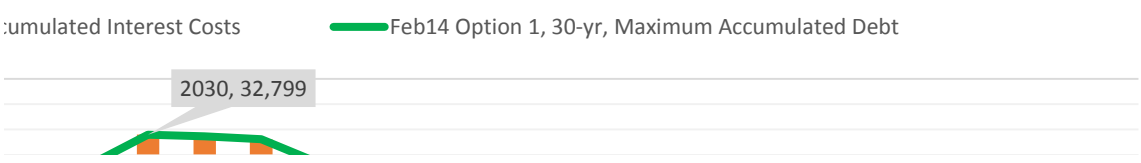
- at 5.12% interest rate

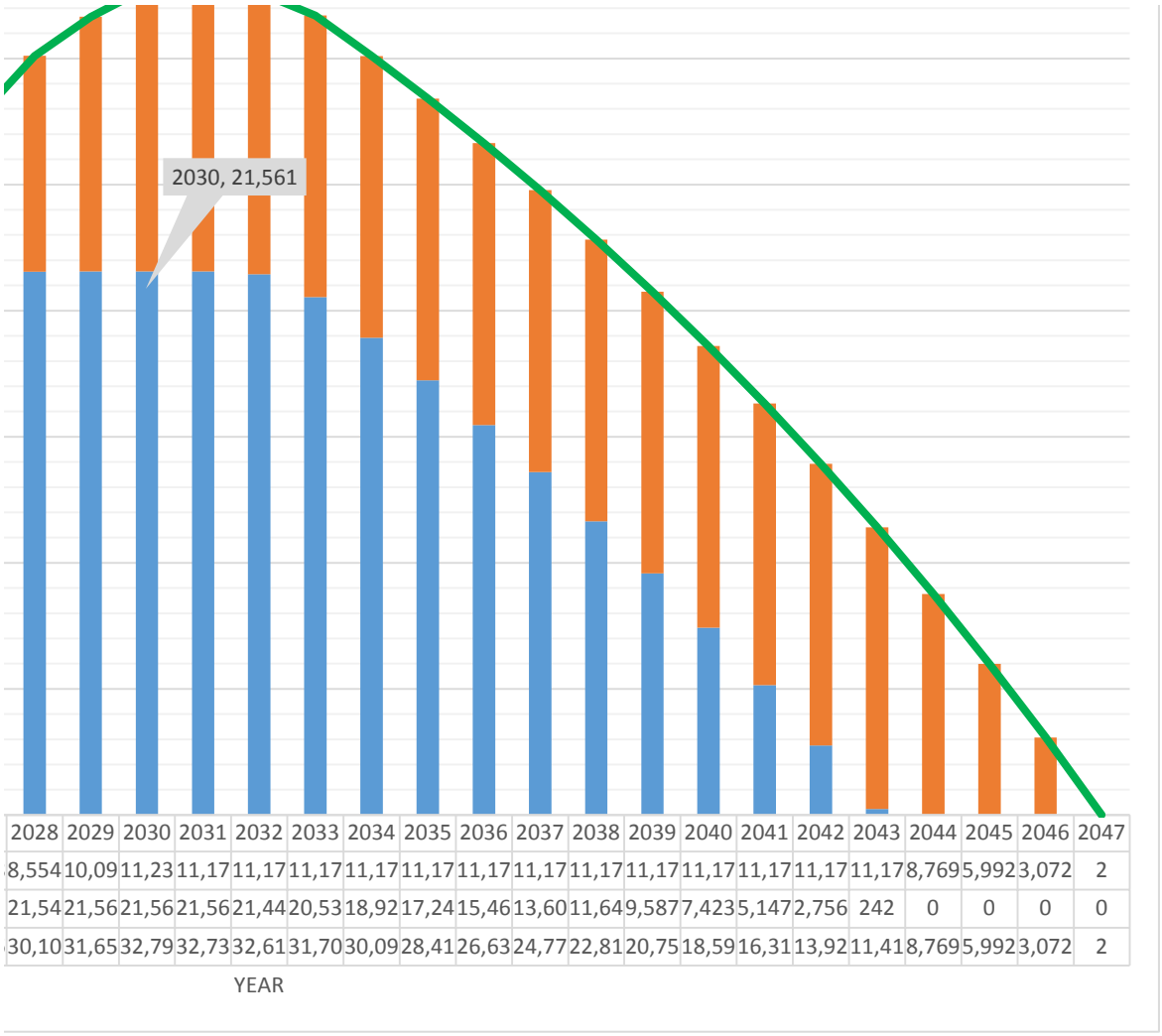


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
41,552	1,144	-68	-114	-914	-1,60	-1,68	-1,77	-1,86	-1,95	-2,05	-2,16	-2,27	-2,39	-2,51	-2,64	-2,77	-2,92	-3,06
3 271	-217	-740	-778	-818	-859	-903	-950	-998	-1,04	-1,10	-1,15	-1,21	-1,28	-1,34	-1,41	-1,48	-1,56	-1,64
031,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,769	5,992	3,072	2
519,53	19,31	18,57	17,79	16,98	16,12	15,21	14,26	13,27	12,22	11,11	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1

CALENDAR YEAR

n of Debt (Principal and Interest)

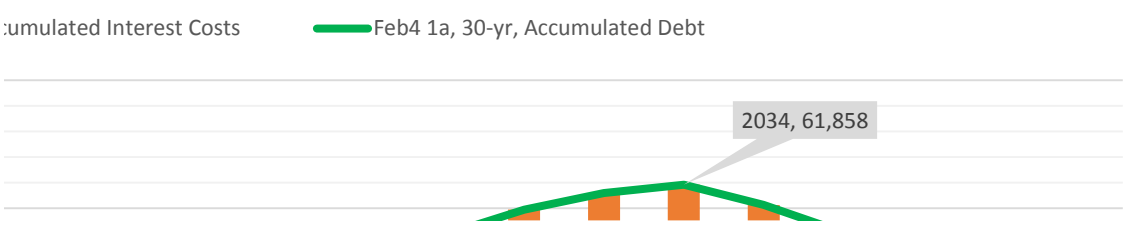




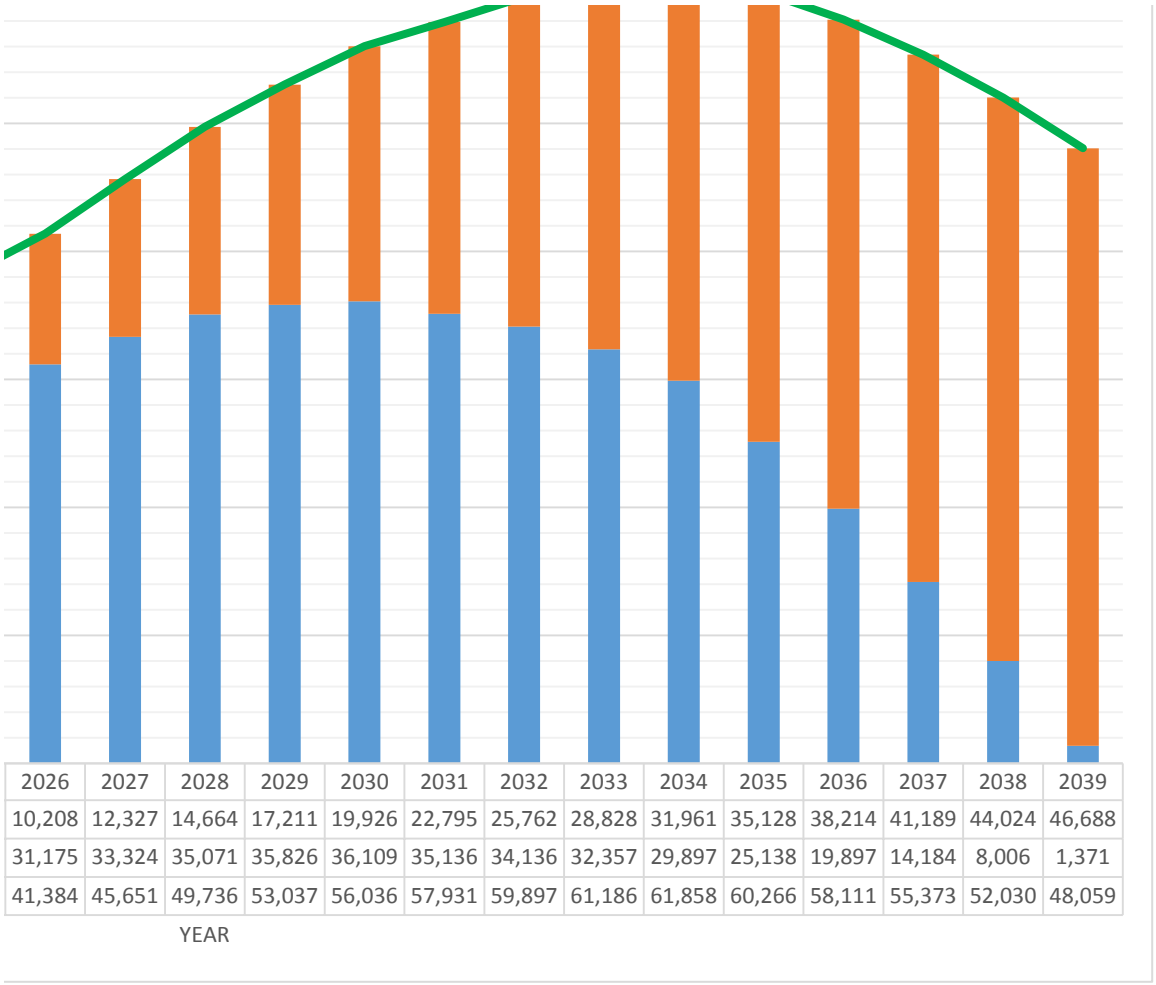
2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
8,554	10,09	11,23	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	8,769	5,992	3,072	2
21,54	21,56	21,56	21,56	21,44	20,53	18,92	17,24	15,46	13,60	11,64	9,587	7,423	5,147	2,756	242	0	0	0	0
30,10	31,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,769	5,992	3,072	2

YEAR

cumulated Total Interest Costs



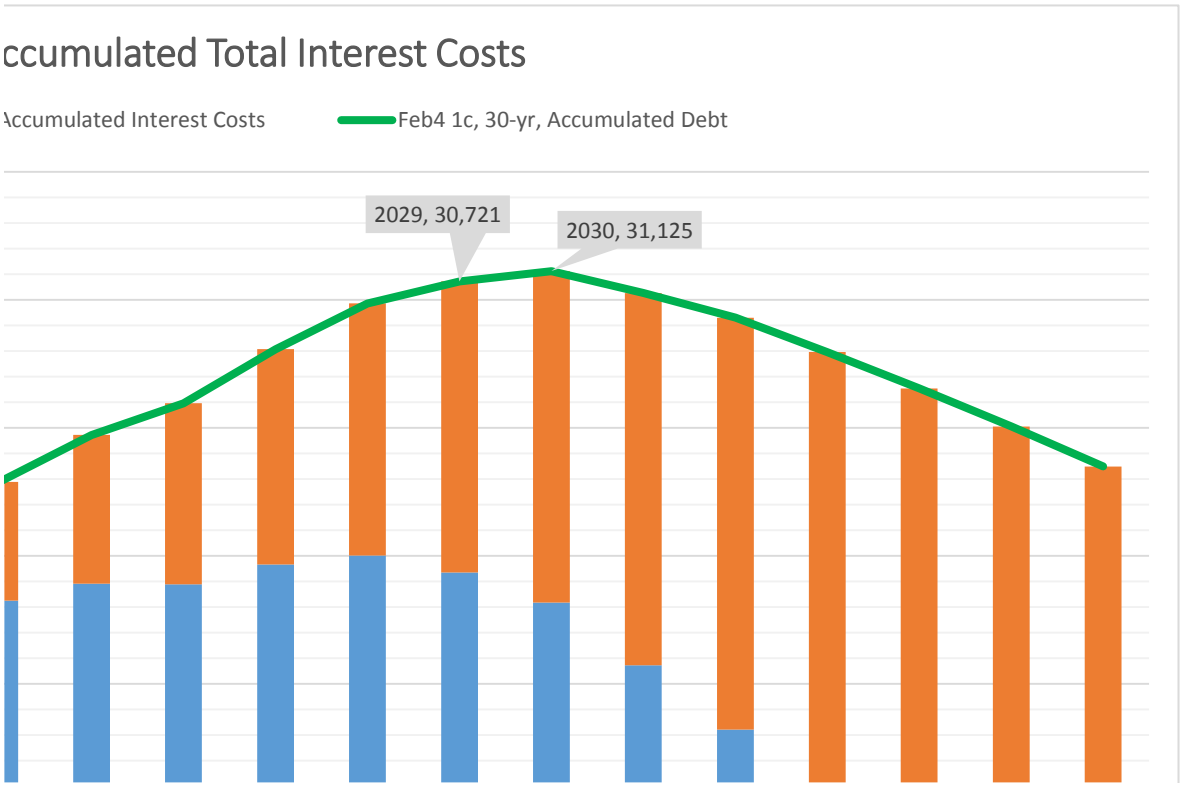
LIONS

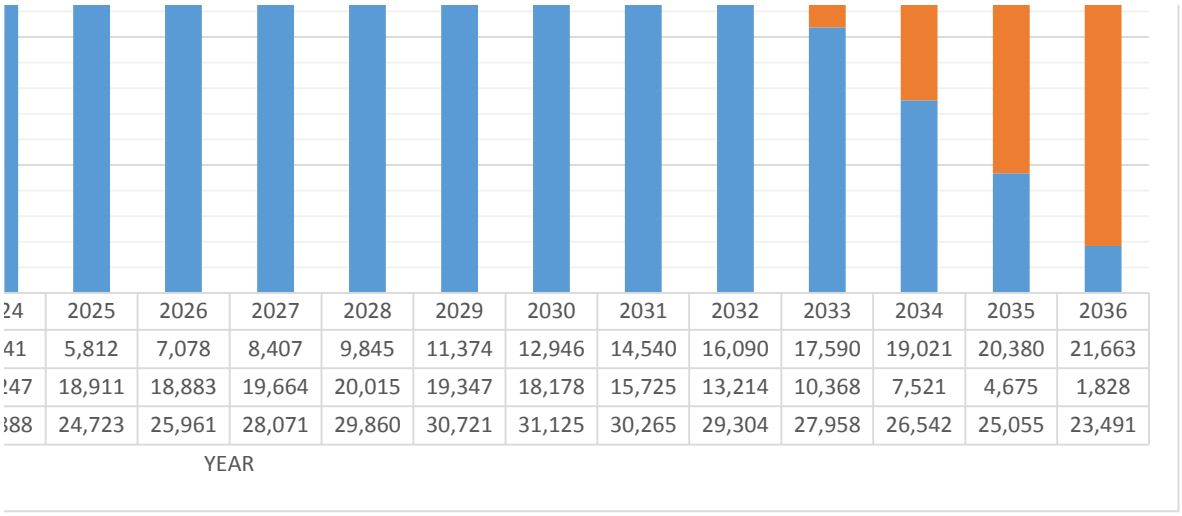


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

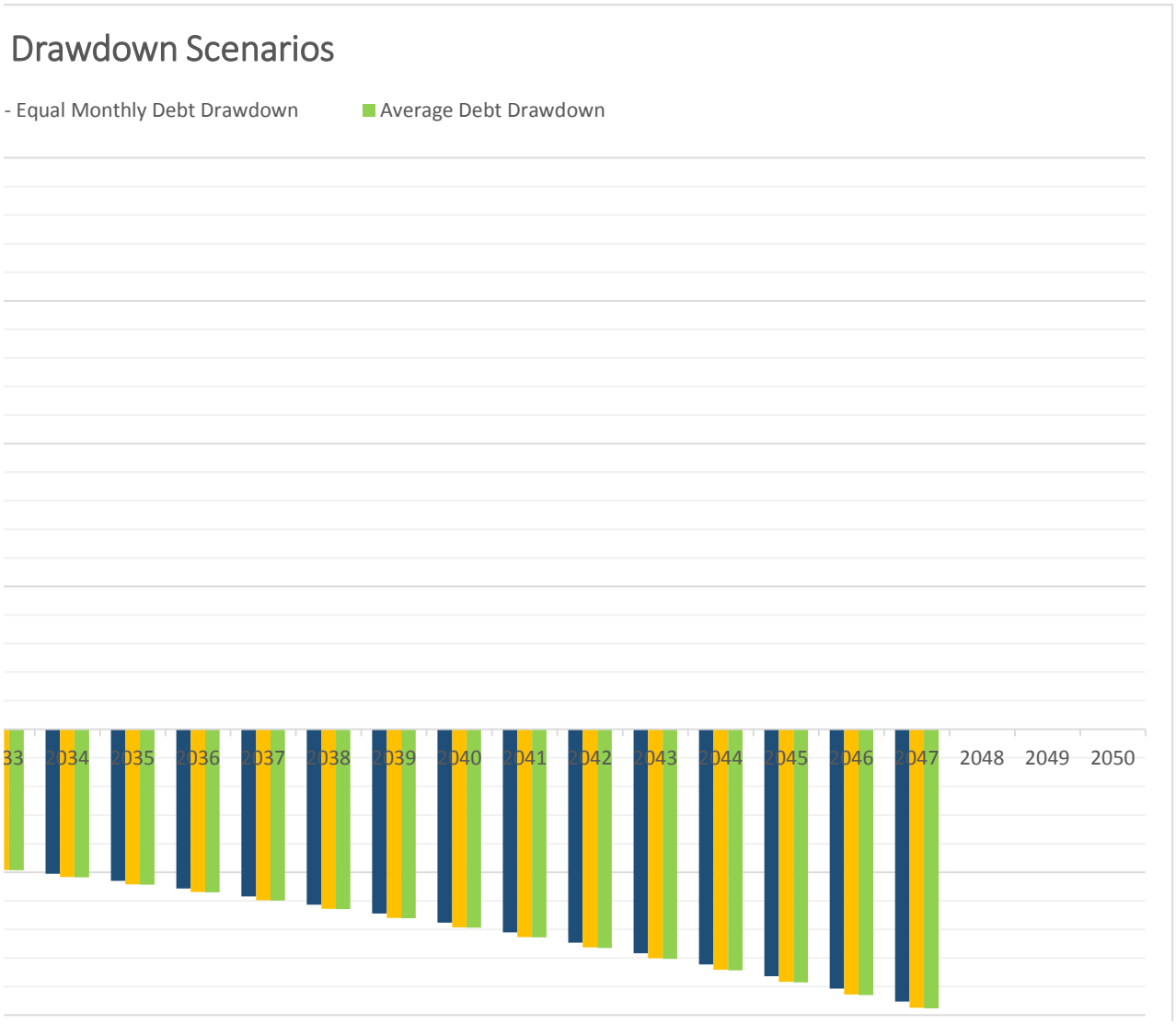
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





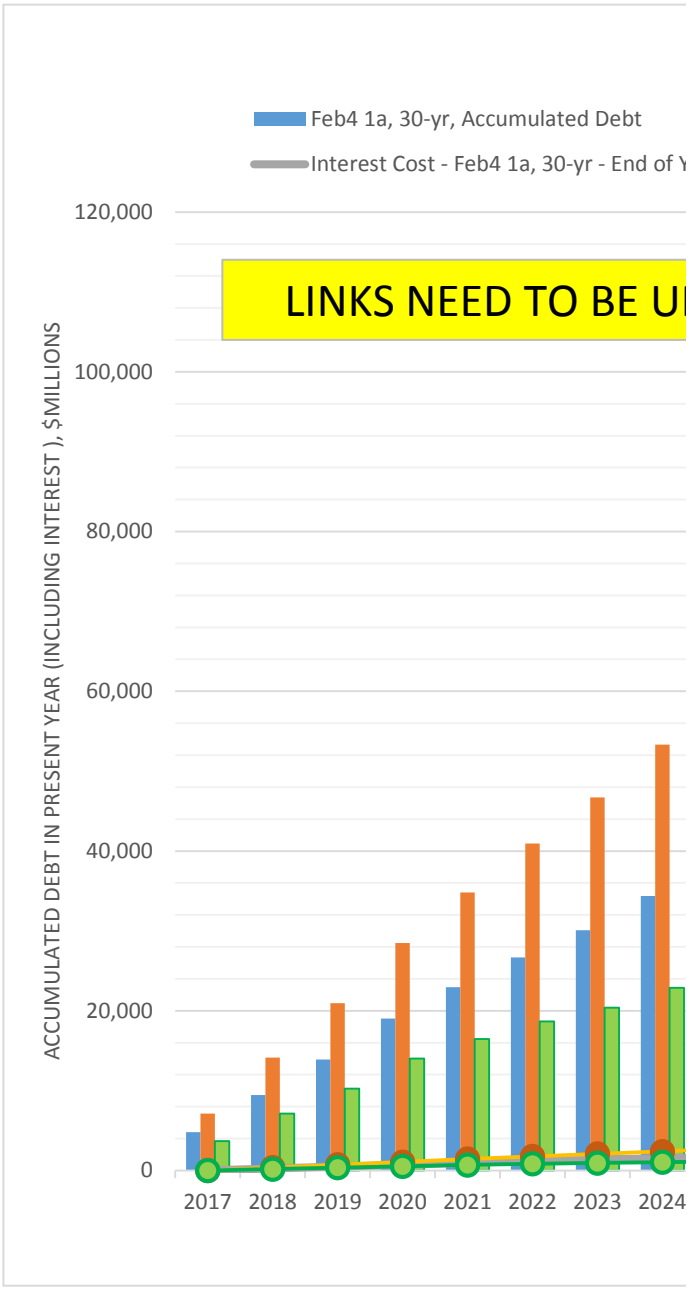
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

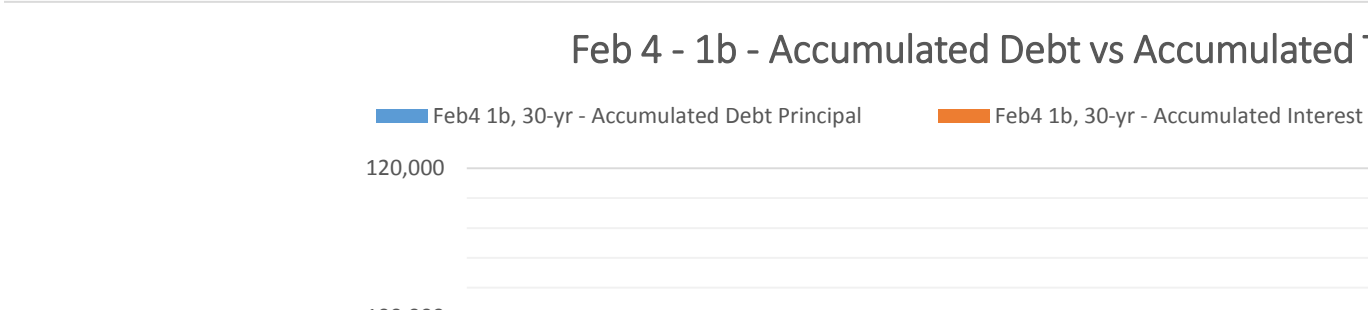
YEAR

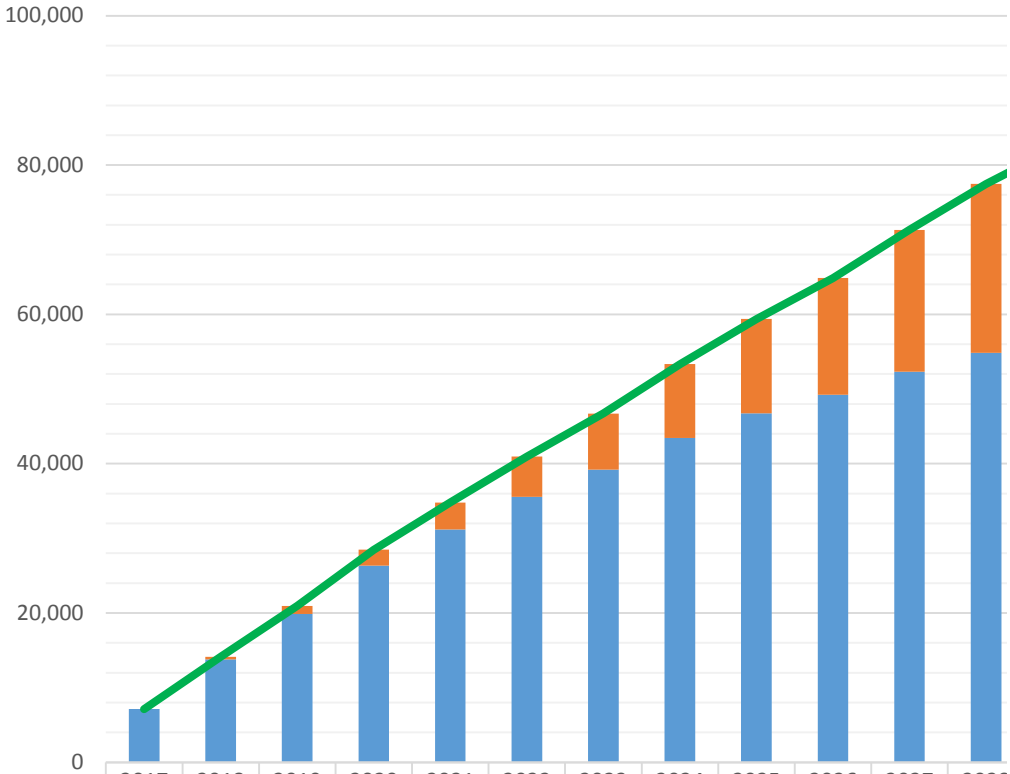


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate



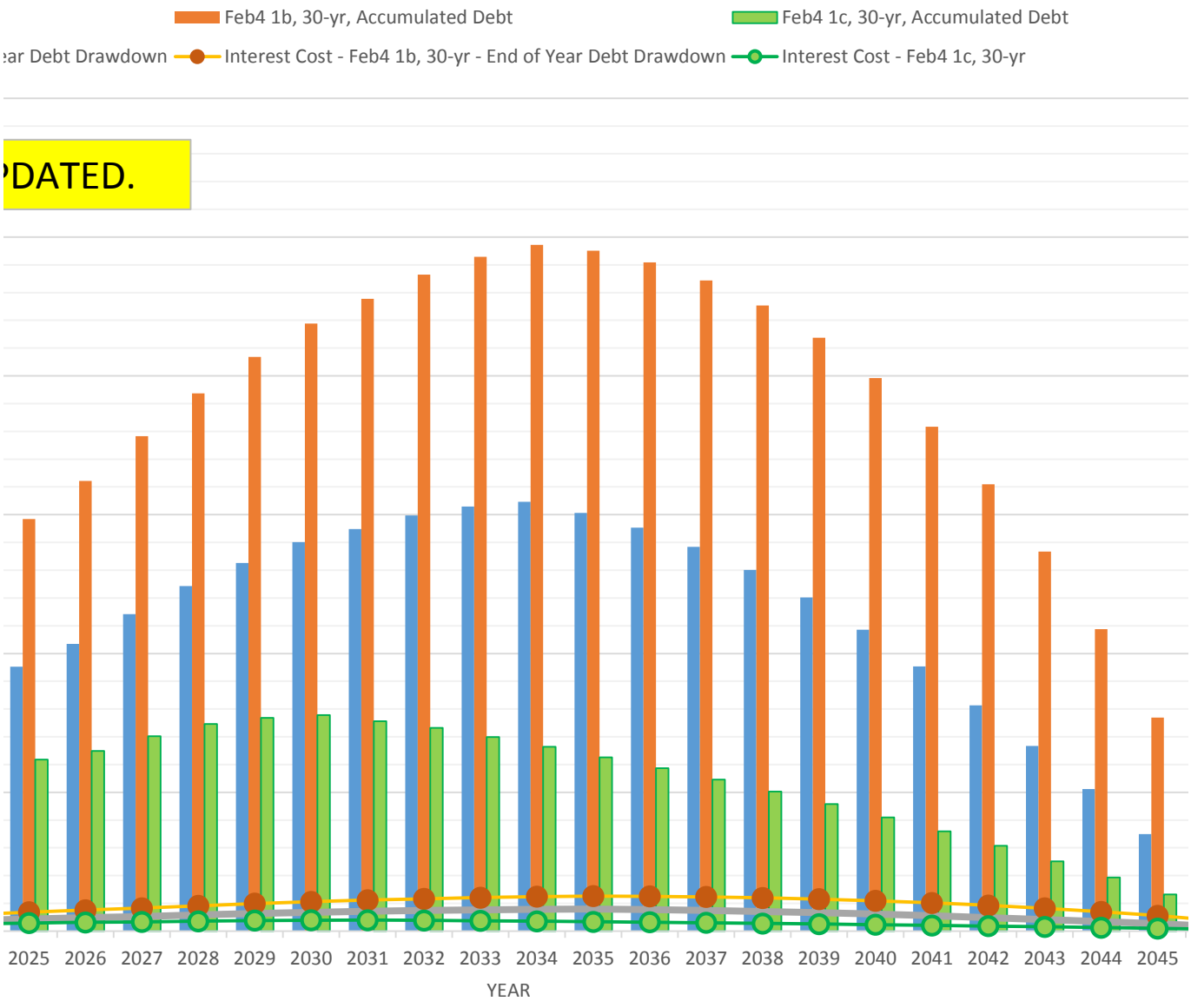

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000



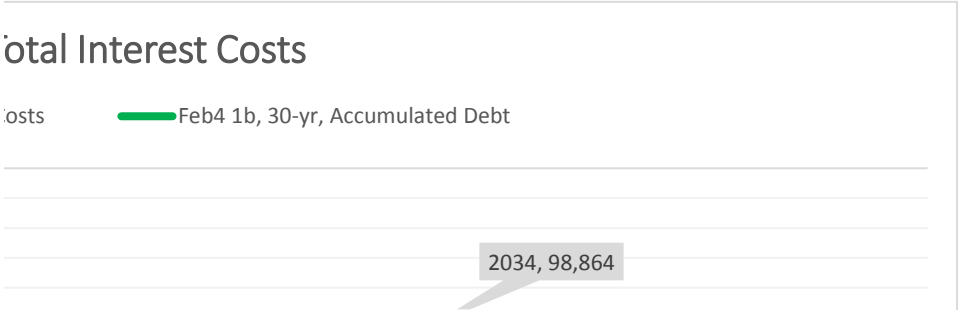
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

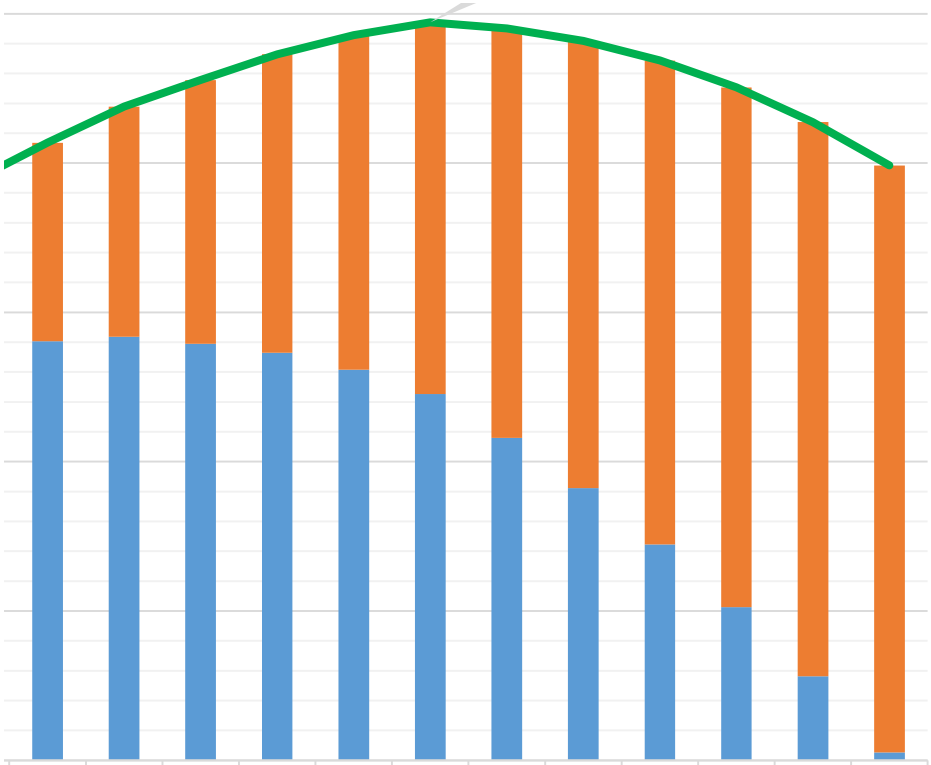
Y

Accumulated debt in present year, with annual interest costs



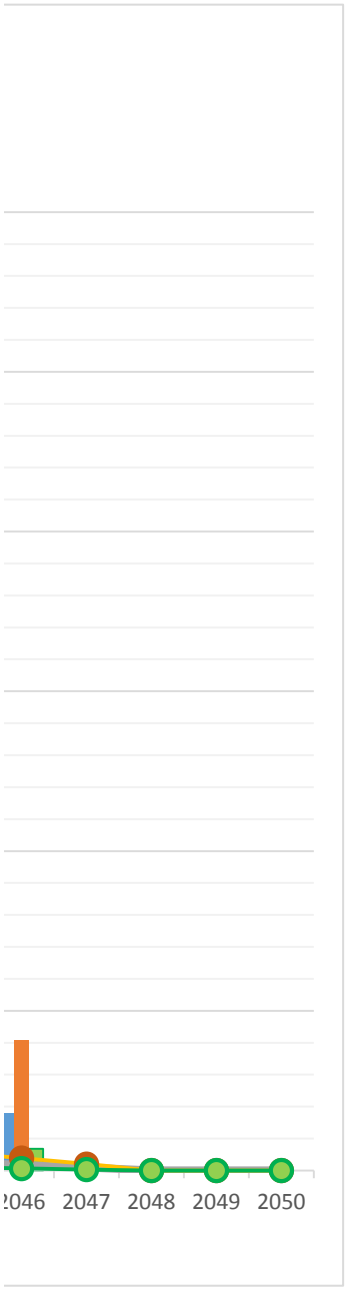
PDATED.


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864

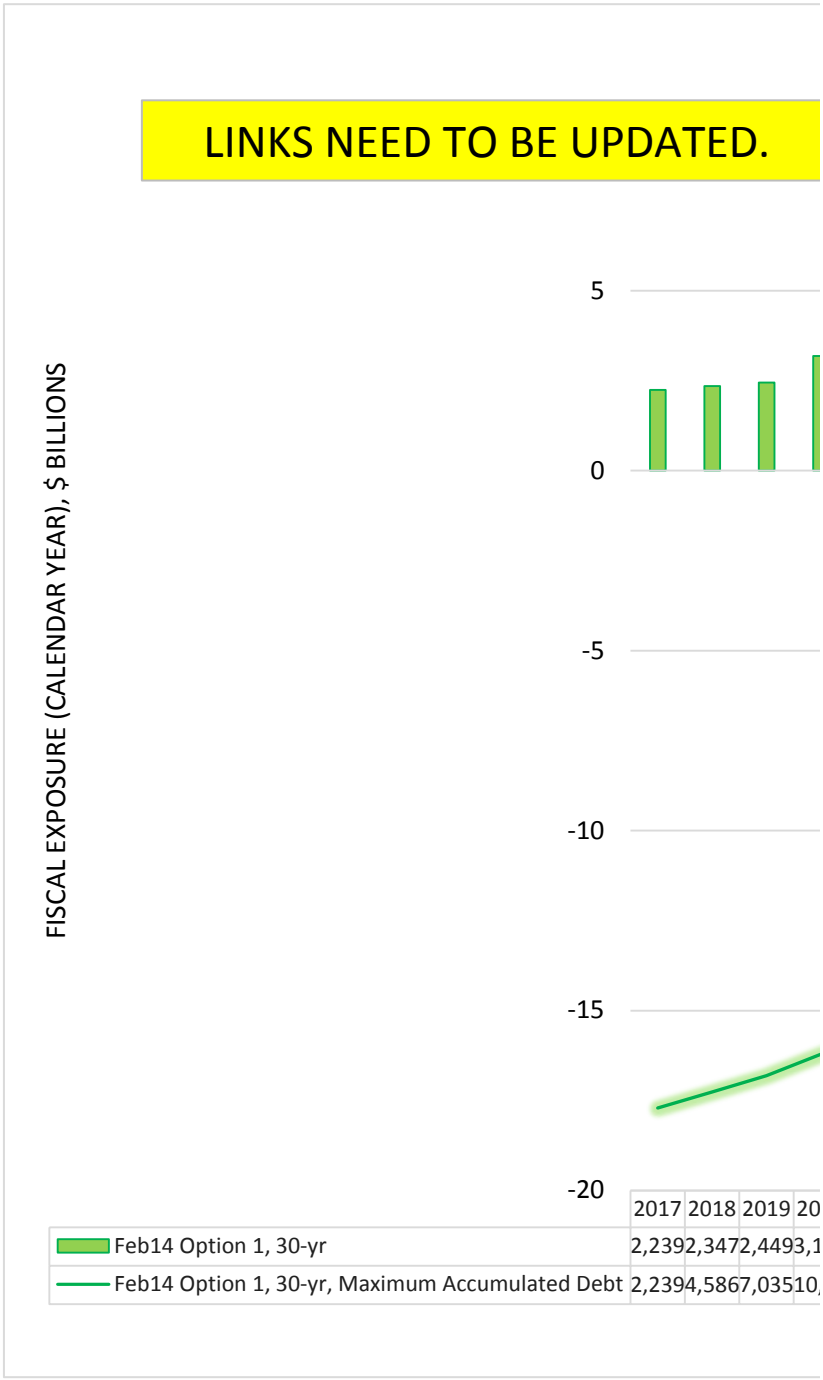


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



LINKS NEED TO BE UPDATED.



FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1b, 30-yr

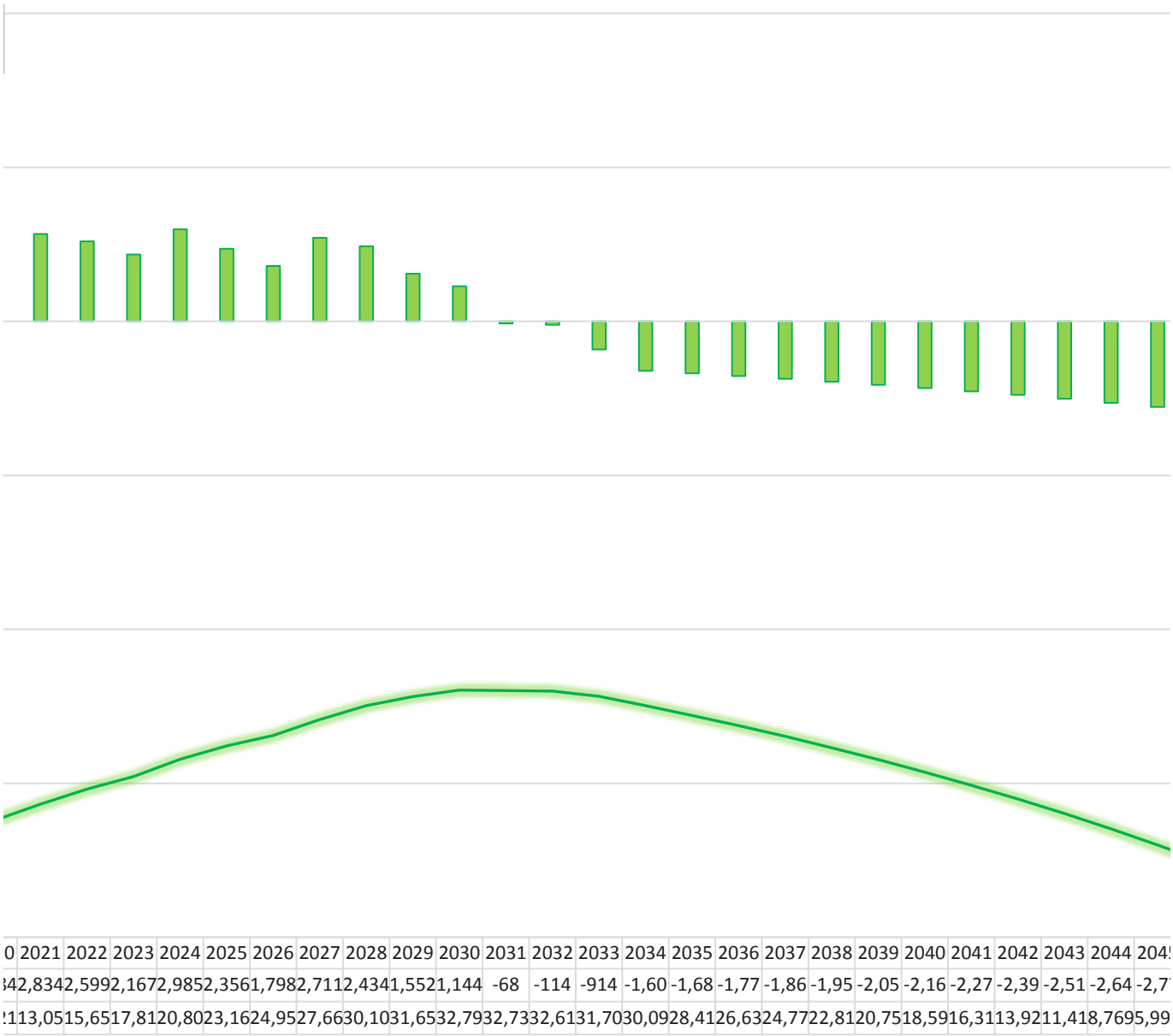
Feb4 1b, 30-yr,

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,

Feb 14 Deck - Option 1

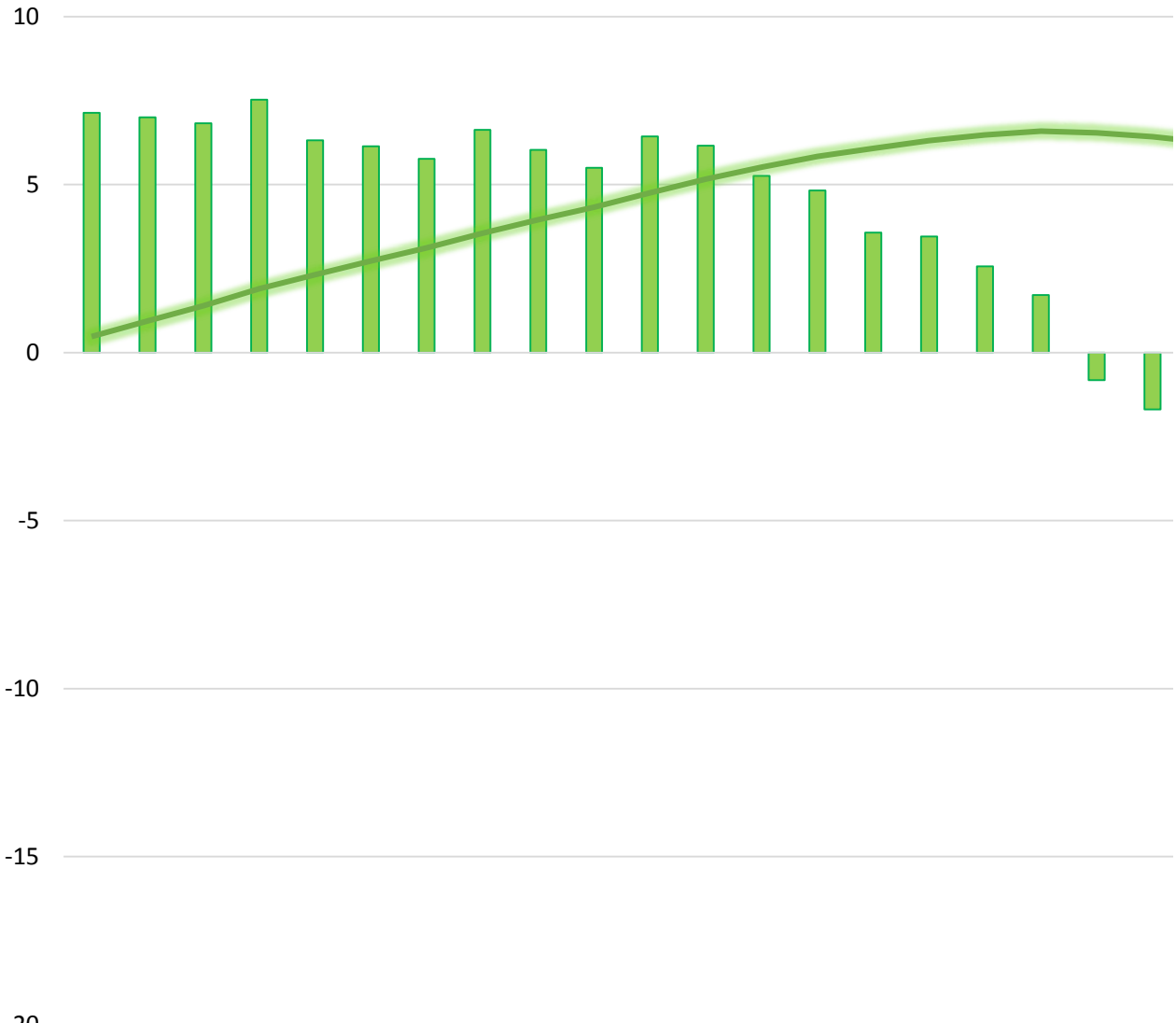


0	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	204
42	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,60	-1,68	-1,77	-1,86	-1,95	-2,05	-2,16	-2,27	-2,39	-2,51	-2,64	-2,7
113	05	15,65	17,81	20,80	23,16	24,95	27,66	30,10	31,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,76	95,99

CALENDAR YEAR

Feb 6 Deck - Scenario 1b - at 5.13% interest rat

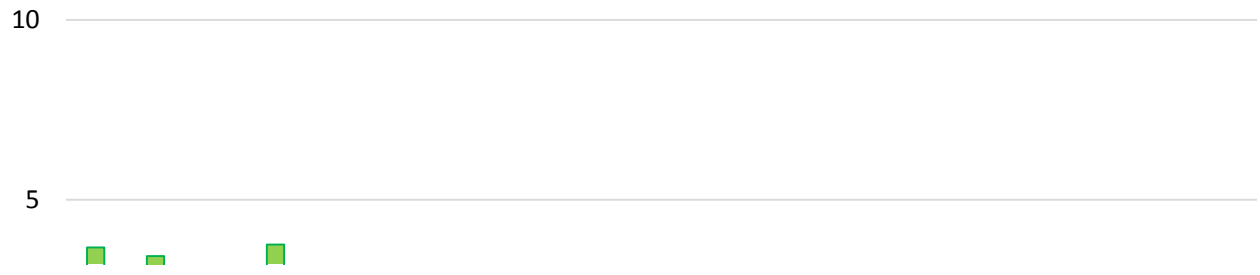
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

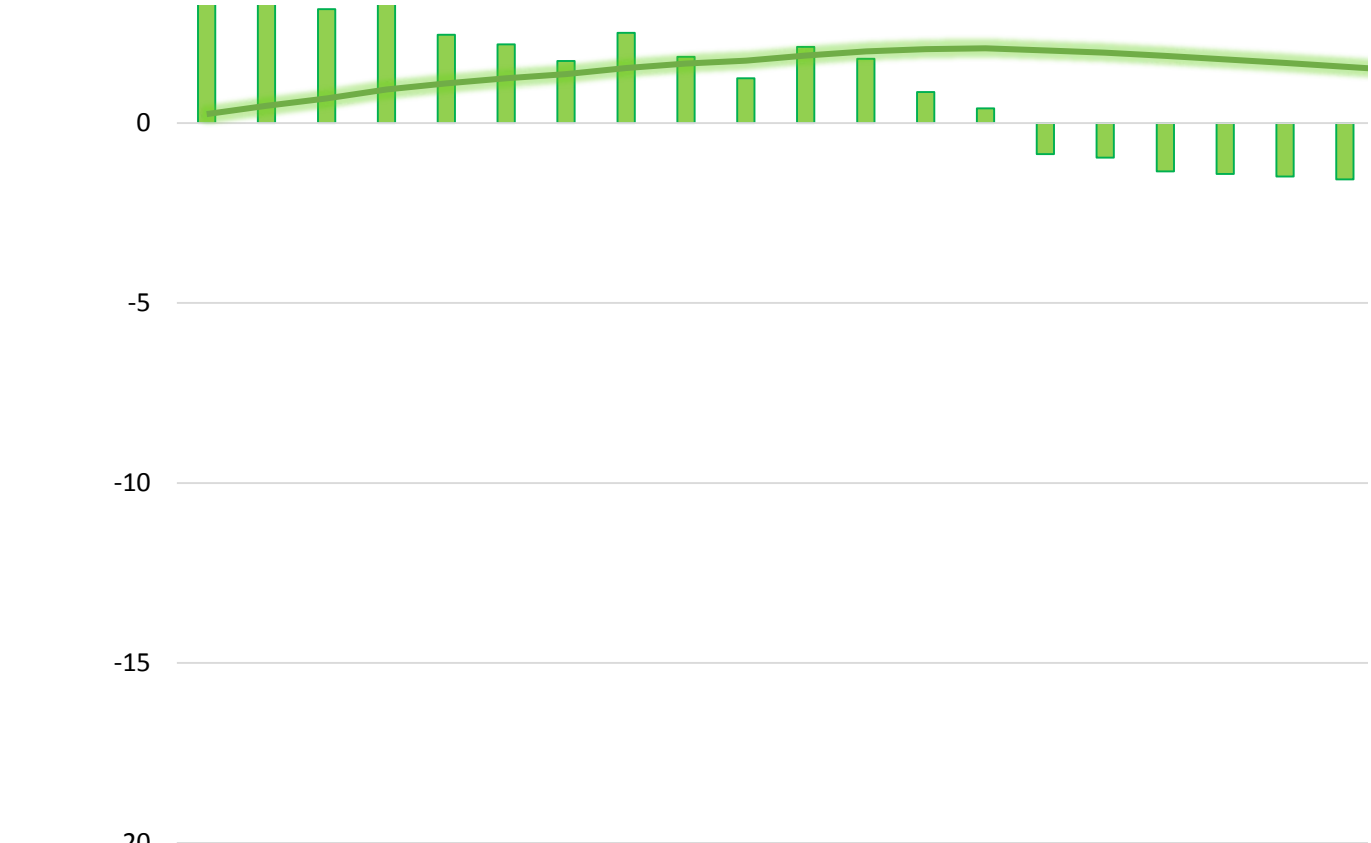


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

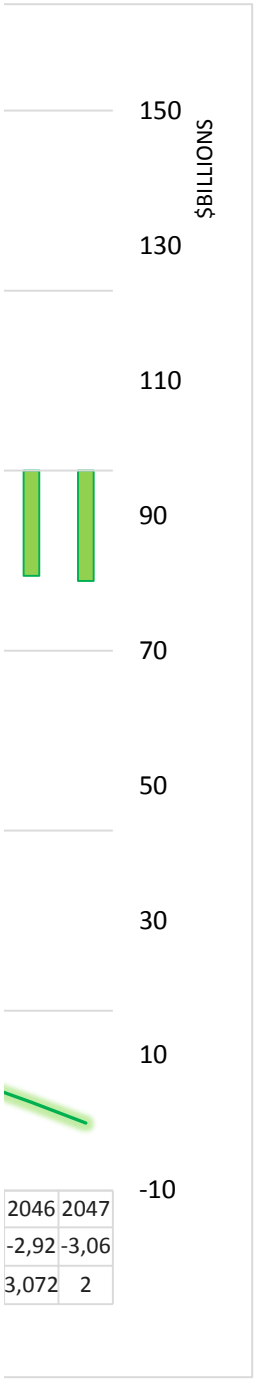
Feb 6 Deck - Scenario 1c - at 5.12% interest rat

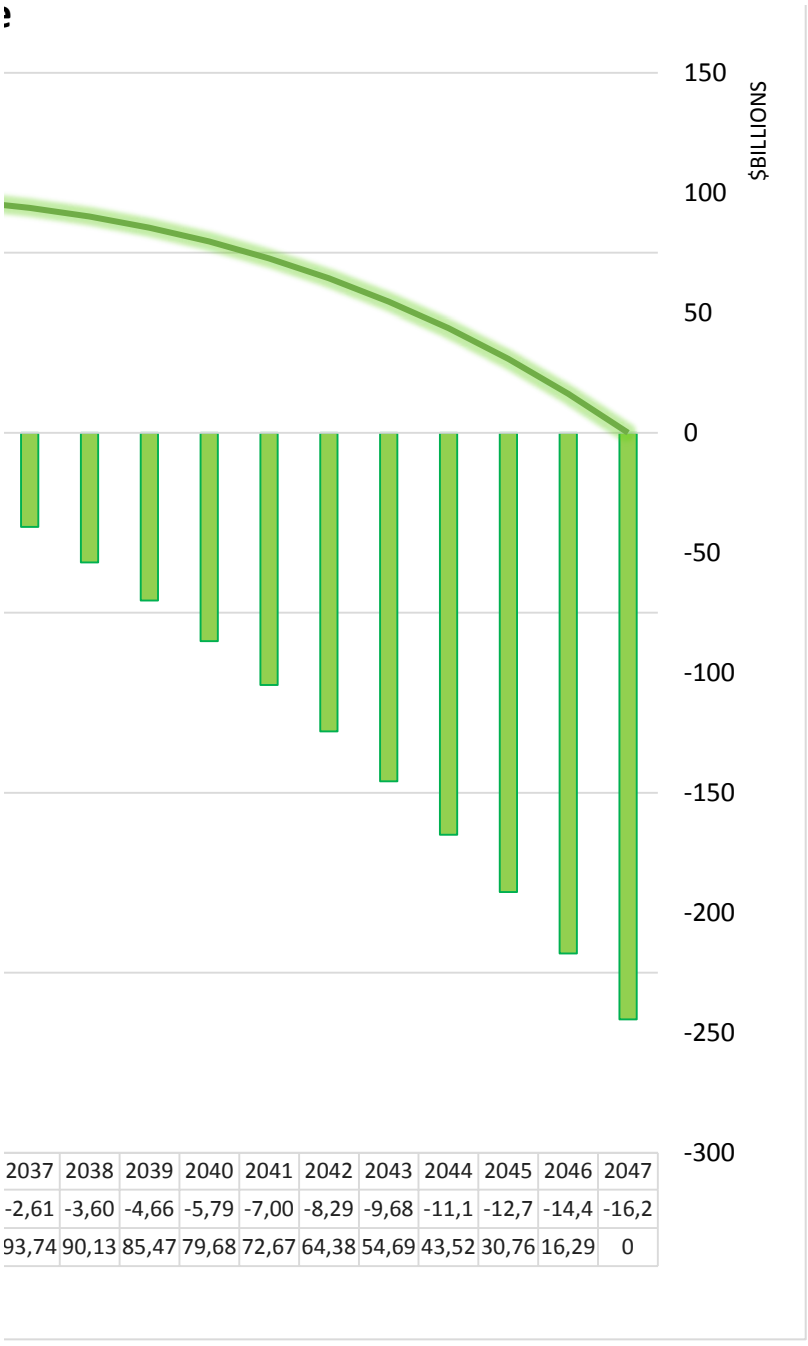




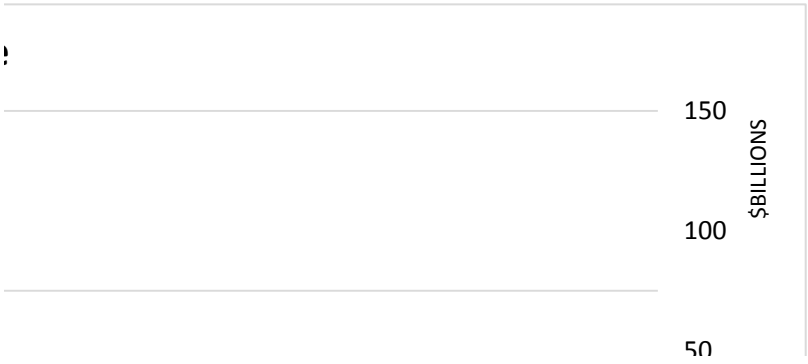
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

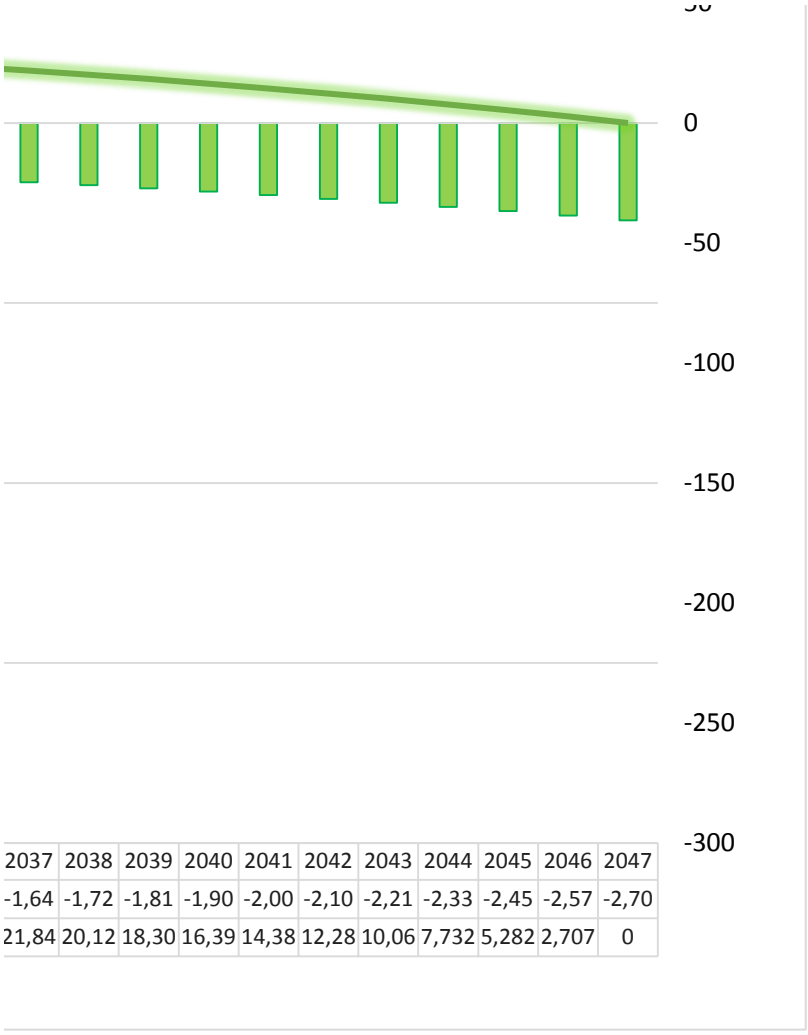
CALENDAR YEAR


150
130
110
90
70
50
30
10
-10
$BILLIONS
2046 2047
-2,92 -3,06
3,072 2



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest

IESO GA cost forecast + extrapolation

Scenario
Option 1
Bills Lowered 25%, RPP Only
Option 2
Bills Lowered 20%, RPP Only
Option 3
Bills Lowered 18%, contract/conservation refinancing, RPP Only

rate	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
Ratepayer GA Payment	9,856	9,602	9,338	9,344
Total Accumulated Debt ($ billion)	2,239	4,586	7,035	10,219
Ratepayer GA Payment	10,537	10,296	10,041	10,061
Accumulated debt in present year (including 5% interest,	1,559	3,177	4,851	7,207
Ratepayer GA Payment	10,648	10,303	10,186	10,873
Accumulated debt in present year (including 5% interest,	1,447	3,053	4,575	6,105
	12095.37	11834.681	11552.105	12168.428

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801
13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103
9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513
9,266	11,038	12,324	14,370	15,725	16,458	18,035	19,263
9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253
7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876
10843.555	10633.626	10243.432	11128.119	10527.018	10033.287	11042.844	10819.098

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389

9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615
31,654	32,799	32,730	32,616	31,702	30,097	28,411	26,638
10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117
19,534	19,317	18,577	17,799	16,981	16,122	15,218	14,268
9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837
18,843	19,521	20,007	20,312	20,325	19,755	18,549	17,050
10008.692	9721.4381	8654.4847	8819.9388	8238.0383	7756.4351	5662.3212	5388.8445

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627

8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853
24,774	22,815	20,756	18,591	16,316	13,924	11,410	8,767
6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355
13,270	12,221	11,118	9,958	8,740	7,458	6,112	4,696
7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712
15,464	13,694	12,062	10,556	9,143	7,810	6,672	5,928
5128.5761	4880.878	4645.1432	4420.7938	4207.28	4004.0783	3810.6908	3626.6435

2045	2046	2047	2048

3,451	3,285	3,126	2,975	2,831	2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
6,678	6,511	6,353	2,975	2,831	2,695
5,989	3,069	0	0	0	0
5,180	5,013	4,854	2,975	2,831	2,695
3,208	1,644	0	-	-	-
4,007	3,619	3,425	3,156	3,011	2,878
5,676	5,633	5,623	5,730	5,843	5,959
3451.485	3284.787	3126.139	2975.154	2831.461	2694.708

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

		5.00%	
Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb14_1_30yr

Option 1 - Bills Lowered 25%, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,239	2,347
Interest Portion	0	115

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	560	2,266
Interest Portion	-	29

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $33 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb14_2_30yr

Option 2 - Bills Lowered 20%, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,559	1,619
Interest Portion	0	80

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	390	1,574
Interest Portion	-	20

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb14_3_30yr

Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606
Interest Portion	0	74

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,487
Interest Portion	-	19

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	390 - 560	1,574 - 2,266

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	560	2266
Debt-Finance Global Adjustment Costs, Option 1a	390	1574
RRRP		
OESP – Enhance Benefit		162

Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**560**	**2506**
Total, B	390	1814

Proposed Program Total:	390 - 560	1,814 - 2,506

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Option 1
Option 2
Option 3

Assumes an inte

2019	2020	2021	2022
2,449	3,184	2,834	2,599
235	360	523	668

2018-19	2019-20	2020-21	2021-2022
2,372	2,633	3,096	2,775
145	266	401	559

2030.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,674	2,356	2,060	1,772
163	248	369	474

2018-19	2019-20	2020-21	2021-2022
1,632	1,844	2,282	1,988
100	184	278	395

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446
156	234	312	385

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429
95	176	254	331

2033.

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022
1,632 - 2,372	1,844 - 2,633	2,282 - 3,096	1,988 - 2,775

/1

2018-19[1]	2019-20[1]	2020-21[1]
2372	2633	3096
1632	1844	2282
225	279	323

60	60	60
18	18	18
2675	**2990**	**3497**
1935	2201	2683

1,935 - 2,675	2,201 - 2,990	2,683 - 3,497

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$21,561	$30,205	$32,799	occurs in Year 2030
$13,503	$17,883	$19,534	occurs in Year 2029
$12,862	$19,498	$20,326	occurs in Year 2033

erest rate of 5.00% (compounded monthly).

Tab Name		Total Accumulated Interest Costs
Feb14_1_30yr	$27,005	$34,278
Feb14_2_30yr	$15,940	$20,378
Feb14_3_30yr	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$27,005 to $34,278**
Option 2	$15,940 to $20,378**
Option 3	$17,202 to $22,028**

** With a higher interest rate, the amortization period extend beyond the 30-year forecast

ted period resulting in a remaining balance at the end of the 30-year period. For specifics, see details belo

w.

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,239	2,347	2,449	3,184	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,604	-1,687	-1,773	-1,864	-1,959	-2,059	-2,164	-2,275	-2,392	-2,514	-2,643	-2,778	-2,920	-3,069	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,292	2,403	2,507	3,260	2,902	2,660	2,219	3,056	2,412	1,841	2,776	2,492	1,589	1,171	-70	-117	-936	-1,643	-1,727	-1,815	-1,908	-2,005	-2,108	-2,216	-2,329	-2,448	-2,574	-2,705	-2,844	-2,989	-3,142	0	0	0
			53	56	58	76	67	62	52	71	56	43	64	58	37	27	-2	-3	-22	-38	-40	-42	-44	-47	-49	-51	-54	-57	-60	-63	-66	-69	-73	0	0	0

0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,184	1,678	30,205
Equal Monthly Debt Drawdown	3,260	1,676	

		Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,799	2030	21,561
Equal Monthly Debt Drawdown	33,579		

Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				26
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
a	Debt, Beginning of Year	0	2,239	4,586	7,035	10,219	13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103	31,655	32,799	32,731	32,617	31,703	30,098	28,412	26,639	24,775	22,816	20,757	18,593	16,318	13,926	11,412	8,769	5,992	3,072	2	3	3	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*115*	*235*	*360*	*523*	*668*	*801*	*912*	*1,064*	*1,185*	*1,277*	*1,416*	*1,540*	*1,620*	*1,678*	*1,675*	*1,669*	*1,622*	*1,540*	*1,454*	*1,363*	*1,268*	*1,167*	*1,062*	*951*	*835*	*712*	*584*	*449*	*307*	*157*	*0*	*0*	*0*	30,205
b	Additional GA Debt Drawdown, End of Year	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,239	4,586	7,035	10,219	13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103	31,655	32,799	32,731	32,617	31,703	30,098	28,412	26,639	24,775	22,816	20,757	18,593	16,318	13,926	11,412	8,769	5,992	3,072	2	3	3	3	
			FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,138	8,554	10,094	11,238	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	8,769	5,992	3,072	2	3	3	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,821	13,752	15,118	17,192	18,483	19,097	20,531	21,549	21,561	21,561	21,561	21,447	20,533	18,928	17,242	15,469	13,605	11,646	9,587	7,423	5,147	2,756	242	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,138	8,554	10,094	11,714	13,392	15,066	16,735	18,357	19,897	21,350	22,713	23,981	25,148	26,210	27,161	27,996	28,709	29,293	29,741	30,048	30,205				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,821	13,752	15,118	17,192	18,483	19,097	20,531	21,549	21,561	21,086	19,339	17,551	14,968	11,741	8,515	5,288	2,062	-1,164	-4,391	-7,617	-10,844	-14,070	-17,297	-20,523	-23,750	-26,976	-30,202				
Fiscal Exposure - End of Year Debt Drawdown		2,239	2,347	2,449	3,184	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,604	-1,687	-1,773	-1,864	-1,959	-2,059	-2,164	-2,275	-2,392	-2,514	-2,643	-2,778	-2,920	-3,069	0	0	0	

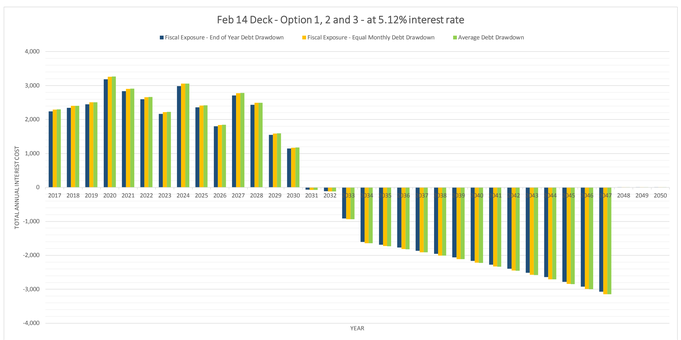
Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,292	4,695	7,202	10,462	13,363	16,024	18,243	21,299	23,711	25,552	28,327	30,819	32,408	33,579	33,510	33,393	32,457	30,814	29,087	27,272	25,365	23,359	21,251	19,035	16,706	14,257	11,683	8,978	6,134	3,145	2	3	3	
1,676	*Interest Cost - Feb14 Option 1, 30-yr*	*53*	*170*	*293*	*436*	*590*	*730*	*852*	*983*	*1,120*	*1,228*	*1,341*	*1,473*	*1,577*	*1,647*	*1,676*	*1,672*	*1,647*	*1,584*	*1,500*	*1,411*	*1,319*	*1,221*	*1,118*	*1,010*	*897*	*778*	*653*	*521*	*383*	*237*	*84*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,292	4,695	7,202	10,462	13,363	16,024	18,243	21,299	23,711	25,552	28,327	30,819	32,408	33,579	33,510	33,393	32,457	30,814	29,087	27,272	25,365	23,359	21,251	19,035	16,706	14,257	11,683	8,978	6,134	3,145	2	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,292	2,403	2,507	3,260	2,902	2,660	2,219	3,056	2,412	1,841	2,776	2,492	1,589	1,171	-70	-117	-936	-1,643	-1,727	-1,815	-1,908	-2,005	-2,108	-2,216	-2,329	-2,448	-2,574	-2,705	-2,844	-2,989	-3,142	0	0	0	

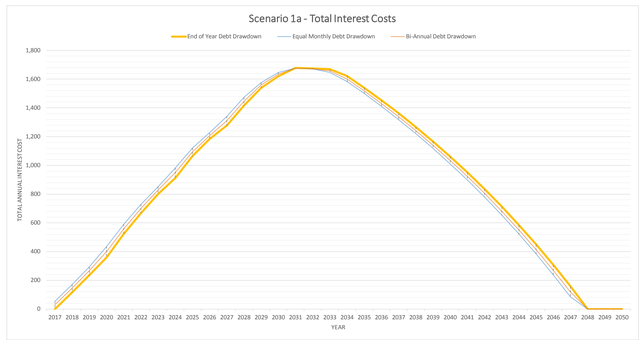
	Monthly Drawdown	187	186	185	235	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	-	-	-
	FV of Monthly Drawdown at 5%	2,292	2,285	2,267	2,891	2,366	1,977	1,399	2,123	1,322	628	1,468	1,043	12	(487)	(1,788)	(1,831)	(2,644)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	-	-	-
	Annual Interest Cost on New Drawdowns	53	53	53	67	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	-	-	-
	Annual Interest Cost on Opening Balance	-	117	240	368	535	684	820	933	1,090	1,213	1,307	1,449	1,577	1,658	1,718	1,714	1,708	1,661	1,577	1,488	1,395	1,298	1,195	1,087	974	855	729	598	459	314	161	0	0	0	
	Total Annual Interest Cost	53	170	293	436	590	730	852	983	1,120	1,228	1,341	1,473	1,577	1,647	1,676	1,672	1,647	1,584	1,500	1,411	1,319	1,221	1,118	1,010	897	778	653	521	383	237	84	0	0	0	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,268	4,645	7,125	10,349	13,220	15,852	18,047	21,070	23,456	25,277	28,023	30,488	32,060	33,219	33,150	33,034	32,108	30,483	28,775	26,980	25,092	23,108	21,023	18,831	16,526	14,104	11,558	8,882	6,068	3,111	2	3	3	
	Interest Cost - Feb14 Option 1, 30-yr	*29*	*145*	*266*	*401*	*559*	*701*	*828*	*950*	*1,095*	*1,208*	*1,312*	*1,447*	*1,560*	*1,634*	*1,677*	*1,673*	*1,657*	*1,601*	*1,518*	*1,431*	*1,339*	*1,242*	*1,141*	*1,034*	*922*	*804*	*680*	*550*	*413*	*269*	*118*	*0*	*0*	*0*	30,205
	Accumulated debt in present year (including 5% annual interest)	2,268	4,645	7,125	10,349	13,220	15,852	18,047	21,070	23,456	25,277	28,023	30,488	32,060	33,219	33,150	33,034	32,108	30,483	28,775	26,980	25,092	23,108	21,023	18,831	16,526	14,104	11,558	8,882	6,068	3,111	2	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,268	2,377	2,480	3,225	2,870	2,632	2,195	3,024	2,386	1,821	2,746	2,465	1,572	1,159	-69	-116	-926	-1,625	-1,708	-1,796	-1,887	-1,984	-2,085	-2,192	-2,304	-2,422	-2,546	-2,676	-2,813	-2,957	-3,109	0	0	0	

	Bi-Annual Drawdown	1,119	1,116	1,107	1,412	1,156	965	683	1,037	646	307	717	509	6	(238)	(873)	(894)	(1,291)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	-	-	-
	FV of Bi-Annual Drawdown at 5%	2,268	2,261	2,243	2,860	2,341	1,955	1,384	2,100	1,308	621	1,453	1,031	12	(481)	(1,769)	(1,812)	(2,616)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	-	-	-
	Annual Interest Cost on New Drawdowns	29	29	28	36	30	25	17	27	17	8	18	13	0	(6)	(22)	(23)	(33)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	-	-	-
	Annual Interest Cost on Opening Balance	-	116	238	365	529	676	811	923	1,078	1,200	1,293	1,434	1,560	1,640	1,700	1,696	1,690	1,643	1,560	1,472	1,380	1,284	1,182	1,076	963	846	722	591	454	310	159	0	0	0	
	Total Annual Interest Cost	29	145	266	401	559	701	828	950	1,095	1,208	1,312	1,447	1,560	1,634	1,677	1,673	1,657	1,601	1,518	1,431	1,339	1,242	1,141	1,034	922	804	680	550	413	269	118	0	0	0	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,296	4,703	7,215	10,480	13,387	16,052	18,275	21,336	23,752	25,596	28,377	30,873	32,465	33,638	33,568	33,451	32,514	30,868	29,138	27,320	25,409	23,400	21,288	19,068	16,735	14,282	11,704	8,994	6,145	3,150	2	3	3	
	Interest Cost - Feb14 Option 1, 30-yr	*57*	*175*	*297*	*441*	*595*	*734*	*856*	*988*	*1,125*	*1,231*	*1,346*	*1,478*	*1,580*	*1,649*	*1,676*	*1,672*	*1,645*	*1,581*	*1,497*	*1,408*	*1,315*	*1,217*	*1,115*	*1,007*	*893*	*774*	*648*	*516*	*378*	*232*	*79*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,296	4,703	7,215	10,480	13,387	16,052	18,275	21,336	23,752	25,596	28,377	30,873	32,465	33,638	33,568	33,451	32,514	30,868	29,138	27,320	25,409	23,400	21,288	19,068	16,735	14,282	11,704	8,994	6,145	3,150	2	3	3	3	
Fiscal Exposure - Average Debt Drawdown		2,296	2,407	2,512	3,265	2,907	2,665	2,223	3,062	2,416	1,844	2,780	2,496	1,592	1,173	-70	-117	-937	-1,646	-1,730	-1,818	-1,911	-2,009	-2,112	-2,220	-2,333	-2,453	-2,578	-2,710	-2,849	-2,995	-3,148	0	0	0	





Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,559	1,619	1,674	2,356	2,060	1,772	1,286	2,046	1,355	733	1,578	1,228	271	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,415	-1,488	-1,564	-1,644	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0	
			37	38	40	56	49	42	31	49	32	17	38	29	6	-5	-18	-19	-19	-20	-21	-23	-24	-25	-26	-28	-29	-30	-32	-34	-35	-37	-39	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,356	999	17,883
Equal Monthly Debt Drawdown	2,412	994	

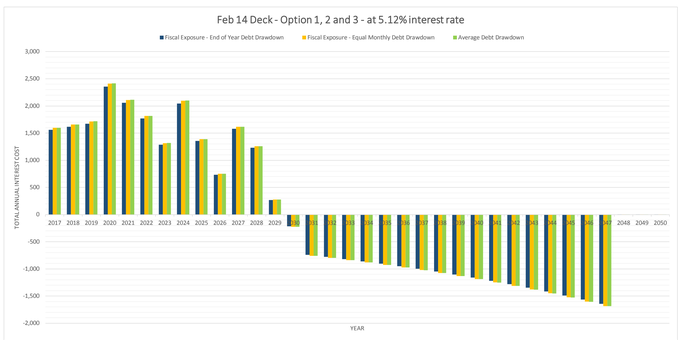
	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,534	2029	13,503
Equal Monthly Debt Drawdown	19,999		

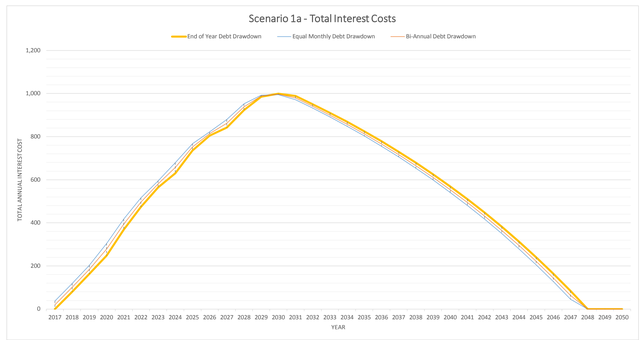
Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP Only																																				26
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
a	Debt, Beginning of Year	0	1,559	3,177	4,851	7,207	9,266	11,039	12,324	14,370	15,725	16,458	18,035	19,264	19,534	19,317	18,577	17,799	16,982	16,122	15,219	14,269	13,271	12,222	11,119	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1	2	2	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*80*	*163*	*248*	*369*	*474*	*565*	*631*	*735*	*805*	*842*	*923*	*986*	*999*	*988*	*950*	*911*	*869*	*825*	*779*	*730*	*679*	*625*	*569*	*510*	*447*	*382*	*313*	*240*	*164*	*84*	*0*	*0*	*0*	17,883
b	Additional GA Debt Drawdown, End of Year	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,559	3,177	4,851	7,207	9,266	11,039	12,324	14,370	15,725	16,458	18,035	19,264	19,534	19,317	18,577	17,799	16,982	16,122	15,219	14,269	13,271	12,222	11,119	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1	2	2	2	
			TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE		
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	7,818	7,078	6,300	5,483	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,697	3,210	1,646	1	2	2	2	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,842	12,461	12,390	13,125	13,431	12,716	11,499	11,499	11,499	11,499	11,499	10,595	9,646	8,648	7,598	6,495	5,336	4,117	2,836	1,490	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	7,818	8,806	9,757	10,667	11,536	12,361	13,140	13,870	14,549	15,174	15,743	16,252	16,700	17,081	17,394	17,634	17,798	17,883				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,842	12,461	12,390	13,125	13,431	12,716	11,499	9,771	8,042	6,314	4,586	2,858	1,129	-599	-2,327	-4,055	-5,784	-7,512	-9,240	-10,968	-12,696	-14,425	-16,153	-17,881				
Fiscal Exposure - End of Year Debt Drawdown		1,559	1,619	1,674	2,356	2,060	1,772	1,286	2,046	1,355	733	1,578	1,228	271	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,415	-1,488	-1,564	-1,644	0	0	0	

Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,019	18,223	17,385	16,506	15,581	14,609	13,587	12,512	11,383	10,196	8,948	7,637	6,258	4,809	3,286	1,685	2	2	2	
994	*Interest Cost - Feb14 Option 1, 30-yr*	*37*	*118*	*202*	*304*	*418*	*516*	*595*	*679*	*767*	*822*	*880*	*952*	*992*	*994*	*971*	*932*	*891*	*848*	*803*	*756*	*706*	*654*	*599*	*541*	*481*	*417*	*350*	*279*	*205*	*127*	*45*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,019	18,223	17,385	16,506	15,581	14,609	13,587	12,512	11,383	10,196	8,948	7,637	6,258	4,809	3,286	1,685	2	2	2	2	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0	
	Monthly Drawdown	130	128	126	176	141	108	60	118	52	(6)	61	25	(60)	(101)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	-	-	-	
	FV of Monthly Drawdown at 5%	1,596	1,575	1,548	2,157	1,731	1,329	738	1,449	635	(74)	753	313	(732)	(1,246)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	-	-	-	
	Annual Interest Cost on New Drawdowns	37	37	36	50	40	31	17	34	15	(2)	17	7	(17)	(29)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	-	-	-	
	Annual Interest Cost on Opening Balance	-	82	166	254	377	485	578	646	753	824	862	945	1,009	1,023	1,012	973	932	889	844	797	747	695	640	582	522	458	391	320	246	168	86	0	0	0	
	Total Annual Interest Cost	37	118	202	304	418	516	595	679	767	822	880	952	992	994	971	932	891	848	803	756	706	654	599	541	481	417	350	279	205	127	45	0	0	0	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,815	18,027	17,199	16,328	15,413	14,452	13,441	12,378	11,261	10,087	8,852	7,555	6,191	4,758	3,251	1,667	1	2	2	
	Interest Cost - Feb14 Option 1, 30-yr	*20*	*100*	*184*	*278*	*395*	*497*	*581*	*657*	*753*	*814*	*862*	*938*	*989*	*997*	*979*	*940*	*900*	*858*	*813*	*766*	*717*	*666*	*611*	*554*	*494*	*431*	*364*	*295*	*221*	*144*	*63*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,815	18,027	17,199	16,328	15,413	14,452	13,441	12,378	11,261	10,087	8,852	7,555	6,191	4,758	3,251	1,667	1	2	2	2	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,579	1,639	1,696	2,386	2,086	1,795	1,302	2,072	1,372	742	1,598	1,244	274	-220	-749	-788	-828	-870	-915	-962	-1,011	-1,063	-1,117	-1,174	-1,234	-1,297	-1,364	-1,434	-1,507	-1,584	-1,665	0	0	0	
	Bi-Annual Drawdown	779	769	756	1,054	845	649	361	708	310	(36)	368	153	(358)	(608)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,579	1,558	1,531	2,134	1,713	1,315	730	1,433	628	(73)	745	310	(724)	(1,232)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	-	-	-	
	Annual Interest Cost on New Drawdowns	20	20	19	27	22	17	9	18	8	(1)	9	4	(9)	(16)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	-	-	-	
	Annual Interest Cost on Opening Balance	-	81	165	251	373	480	572	639	745	815	853	935	998	1,012	1,001	963	922	880	835	789	739	688	633	576	516	453	387	317	243	166	85	0	0	0	
	Total Annual Interest Cost	20	100	184	278	395	497	581	657	753	814	862	938	989	997	979	940	900	858	813	766	717	666	611	554	494	431	364	295	221	144	63	0	0	0	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,599	3,258	4,975	7,391	9,504	11,321	12,640	14,738	16,128	16,879	18,497	19,757	20,034	19,811	19,052	18,254	17,416	16,535	15,608	14,634	13,610	12,534	11,403	10,214	8,964	7,650	6,269	4,818	3,292	1,688	2	2	2	
	Interest Cost - Feb14 Option 1, 30-yr	*40*	*121*	*205*	*308*	*421*	*519*	*598*	*683*	*770*	*823*	*882*	*954*	*992*	*994*	*969*	*931*	*890*	*847*	*802*	*754*	*704*	*652*	*597*	*539*	*478*	*414*	*347*	*277*	*202*	*124*	*42*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,599	3,258	4,975	7,391	9,504	11,321	12,640	14,738	16,128	16,879	18,497	19,757	20,034	19,811	19,052	18,254	17,416	16,535	15,608	14,634	13,610	12,534	11,403	10,214	8,964	7,650	6,269	4,818	3,292	1,688	2	2	2	2	
Fiscal Exposure - Average Debt Drawdown		1,599	1,660	1,717	2,416	2,112	1,817	1,319	2,098	1,390	751	1,618	1,260	277	-223	-759	-798	-839	-881	-927	-974	-1,024	-1,076	-1,131	-1,189	-1,250	-1,314	-1,381	-1,452	-1,526	-1,604	-1,686	0	0	0	





Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_3_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	
			34	38	36	36	34	34	35	36	36	35	35	34	23	16	12	7	0	-14	-29	-36	-38	-42	-39	-36	-34	-32	-27	-18	-6	-1	0	3	3	3	142

		Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	1,606		1,040	19,498
Equal Monthly Debt Drawdown	1,644		1,040	

	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	20,326	2033	12,862
Equal Monthly Debt Drawdown	20,809		

Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
a	Debt, Beginning of Year	0	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*74*	*156*	*234*	*312*	*385*	*459*	*534*	*612*	*690*	*766*	*842*	*915*	*964*	*999*	*1,024*	*1,039*	*1,040*	*1,011*	*949*	*872*	*791*	*701*	*617*	*540*	*468*	*400*	*341*	*303*	*290*	*288*	*288*	*293*	*299*	19,498
b	Additional GA Debt Drawdown, End of Year	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,430	7,736	7,749	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,577	12,577	12,577	12,577	11,371	9,872	8,285	6,516	4,884	3,378	1,966	633	-506	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,943	8,967	10,006	11,046	12,057	13,006	13,878	14,669	15,370	15,987	16,527	16,995	17,395	17,736	18,040	18,330	18,618				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,064	11,345	10,319	8,710	6,493	4,045	1,586	-974	-3,307	-5,431	-7,383	-9,184	-10,721	-11,807	-12,362	-12,696	-12,994				
Fiscal Exposure - End of Year Debt Drawdown		1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	

Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	
1,040	*Interest Cost - Feb14 Option 1, 30-yr*	*34*	*112*	*192*	*270*	*346*	*420*	*494*	*570*	*649*	*726*	*802*	*876*	*938*	*980*	*1,010*	*1,031*	*1,040*	*1,026*	*982*	*913*	*835*	*749*	*662*	*581*	*507*	*436*	*373*	*324*	*297*	*289*	*288*	*290*	*296*	*302*	19,640
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	6,102	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	

	Monthly Drawdown	121	128	114	108	93	88	84	83	76	66	60	47	4	(24)	(43)	(60)	(85)	(134)	(185)	(204)	(205)	(213)	(194)	(177)	(163)	(150)	(128)	(90)	(46)	(28)	(25)	(15)	(15)	(15)	
	FV of Monthly Drawdown at 5%	1,482	1,568	1,398	1,326	1,137	1,086	1,028	1,024	929	815	742	580	54	(292)	(525)	(736)	(1,050)	(1,648)	(2,269)	(2,506)	(2,517)	(2,621)	(2,389)	(2,174)	(1,999)	(1,844)	(1,574)	(1,111)	(568)	(342)	(306)	(185)	(184)	(188)	
	Annual Interest Cost on New Drawdowns	34	36	32	31	26	25	24	24	22	19	17	13	1	(7)	(12)	(17)	(24)	(38)	(53)	(58)	(58)	(61)	(55)	(51)	(46)	(43)	(37)	(26)	(13)	(8)	(7)	(4)	(4)	(4)	
	Annual Interest Cost on Opening Balance	-	76	160	240	320	394	470	547	627	707	784	863	936	987	1,023	1,048	1,064	1,065	1,035	972	893	810	717	632	553	479	409	350	311	297	295	295	300	306	
	Total Annual Interest Cost	34	112	192	270	346	420	494	570	649	726	802	876	938	980	1,010	1,031	1,040	1,026	982	913	835	749	662	581	507	436	373	324	297	289	288	290	296	302	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	
	Interest Cost - Feb14 Option 1, 30-yr	*19*	*95*	*176*	*254*	*331*	*404*	*478*	*554*	*632*	*709*	*785*	*861*	*927*	*973*	*1,005*	*1,028*	*1,039*	*1,033*	*995*	*930*	*852*	*769*	*680*	*598*	*522*	*451*	*385*	*332*	*300*	*290*	*288*	*289*	*295*	*301*	19,575
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	6,037	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,466	1,626	1,541	1,549	1,441	1,465	1,482	1,554	1,539	1,505	1,510	1,427	979	687	492	309	13	-577	-1,221	-1,518	-1,607	-1,792	-1,653	-1,525	-1,430	-1,350	-1,153	-753	-255	-44	-10	109	115	117	

	Bi-Annual Drawdown	724	766	683	648	555	530	502	500	454	398	363	283	26	(143)	(256)	(359)	(513)	(805)	(1,108)	(1,224)	(1,229)	(1,280)	(1,167)	(1,062)	(976)	(900)	(769)	(543)	(278)	(167)	(149)	(90)	(90)	(92)	
	FV of Bi-Annual Drawdown at 5%	1,466	1,551	1,383	1,312	1,125	1,075	1,017	1,013	919	806	735	573	53	(289)	(519)	(728)	(1,039)	(1,630)	(2,245)	(2,479)	(2,490)	(2,593)	(2,363)	(2,150)	(1,977)	(1,824)	(1,557)	(1,099)	(562)	(338)	(302)	(183)	(182)	(186)	
	Annual Interest Cost on New Drawdowns	19	20	17	17	14	14	13	13	12	10	9	7	1	(4)	(7)	(9)	(13)	(21)	(28)	(31)	(31)	(33)	(30)	(27)	(25)	(23)	(20)	(14)	(7)	(4)	(4)	(2)	(2)	(2)	
	Annual Interest Cost on Opening Balance	-	75	158	237	316	390	465	541	620	699	776	853	926	976	1,012	1,037	1,053	1,053	1,024	961	884	801	710	625	547	474	405	346	307	294	292	291	297	303	
	Total Annual Interest Cost	19	95	176	254	331	404	478	554	632	709	785	861	927	973	1,005	1,028	1,039	1,033	995	930	852	769	680	598	522	451	385	332	300	290	288	289	295	301	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	
	Interest Cost - Feb14 Option 1, 30-yr	*37*	*115*	*195*	*273*	*349*	*422*	*497*	*573*	*651*	*728*	*804*	*879*	*939*	*981*	*1,011*	*1,031*	*1,040*	*1,025*	*980*	*911*	*832*	*746*	*659*	*579*	*504*	*434*	*371*	*322*	*297*	*289*	*288*	*290*	*296*	*302*	19,651
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	6,113	
Fiscal Exposure - Average Debt Drawdown		1,484	1,647	1,561	1,569	1,459	1,483	1,500	1,573	1,559	1,524	1,530	1,445	992	696	498	313	14	-585	-1,237	-1,537	-1,627	-1,814	-1,674	-1,545	-1,448	-1,367	-1,167	-763	-258	-44	-10	110	116	119	

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest ra

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest ra

IESO GA cost forecast + extrapolation

Scenario
Option 1

Option 2

ate	2017	2018	2019	2020
ate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	2200	4600	7000	10200

Total Accumulated Debt ($ billion)	2.2	4.6	7	10.2
	2,200	4,600	7,000	10,200

Total Accumulated Debt ($ billion)	1.6	3.2	4.9	7.2
	1,600	3,200	4,900	7,200

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
13100	15700	17800	20800	23200	25000	27700	30100

13.1 15.7 17.8 20.8 23.2 25 27.7 30.1
13,100 15,700 17,800 20,800 23,200 25,000 27,700 30,100

9.3 11 12.3 14.4 15.7 16.5 18 19.3
9,300 11,000 12,300 14,400 15,700 16,500 18,000 19,300

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
31700	32800	32700	32600	31700	30100	28400	26600

31.7	32.8	32.7	32.6	31.7	30.1	28.4	26.6
31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600

19.5	19.3	18.6	17.8	17	16.1	15.2	14.3
19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
24800	22800	20800	18600	16300	13900	11400	8800

24.8	22.8	20.8	18.6	16.3	13.9	11.4	8.8
24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800

13.3	12.2	11.1	10	8.7	7.5	6.1	4.7
13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	2046	2047	2048	2049	2050
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
6000	3100	0	0	0	0

6 3.1 0 0
6,000 3,100 - -

3.2 1.6 0 0
3,200 1,600 - -

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb9_1_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,200	2,400

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	550	2,250

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $33 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb9_2_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,600	1,600

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	400	1,600

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,169	4,668

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	545	2,203

Actuals are subject to actual prices and actual interest rates.

#N/A

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542

Fiscalized[3]	2016-17	2017-18
Start: January 1st	375	1,510

Actuals are subject to actual prices and actual interest rates.

#N/A

Rough		
	1	
	2	
	3	
	4 April	4
	5 May	5
	6 June	6
	7 July	7
	8 August	8
	9 September	9
	10 October	10
	11 November	11
	12 December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	400 - 550	1,600 - 2,250

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	550	2250
Debt-Finance Global Adjustment Costs, Option 1a	400	1600
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**550**	**2490**
Total, B	400	1840

Proposed Program Total:	400 - 550	1,840 - 2,490

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1
Scenario 2

2019	2020	2021	2022
2,400	3,200	2,900	2,600

2018-19	2019-20	2020-21	2021-2022
2,400	2,600	3,125	2,825

2030.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,700	2,300	2,100	1,700

2018-19	2019-20	2020-21	2021-2022
1,625	1,850	2,250	2,000

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
4,589	5,867	5,031	4,861

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988

› depend on decision on accounting treatment.

2019	2020	2021	2022
2,353	3,072	2,817	2,580

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757

2019	2020	2021	2022
1,578	2,243	1,931	1,635

2018-19	2019-20	2020-21	2021-2022
1,551	1,745	2,165	1,857



2018-19	2019-20	2020-21	2021-2022
1,625 - 2,400	1,850 - 2,600	2,250 - 3,125	2,000 - 2,825

/1

2018-19[1]	2019-20[1]	2020-21[1]
2400	2600	3125
1625	1850	2250
225	279	323
60	60	60
18	18	18
2703	**2957**	**3526**
1928	2207	2651

1,928 - 2,703 2,207 - 2,957 2,651 - 3,526

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
21,601	30,211	32,800	occurs in Year 2030
13,466	17,886	19,500	occurs in Year 2029
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!

2,200

Tab Name
Feb9_1_30yr
Feb9_2_30yr

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Feb9_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0	
			52	57	57	76	69	62	50	71	57	43	64	57	38	26	-2	-2	-21	-38	-40	-43	-43	-48	-48	-52	-55	-57	-59	-62	-67	-69	-74	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,200	1,678	30,211
Equal Monthly Debt Drawdown	3,276	1,676	

		Feb9 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,800	2030	21,601	
Equal Monthly Debt Drawdown	33,580			

Feb9 1, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
	($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
a	Debt, Beginning of Year	0	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	
c = a*5%	*Interest Cost - Feb9 1, 30-yr - End of Year Debt Drowdown*	*0*	*113*	*235*	*358*	*522*	*670*	*803*	*911*	*1,064*	*1,187*	*1,279*	*1,417*	*1,540*	*1,622*	*1,678*	*1,673*	*1,668*	*1,622*	*1,540*	*1,453*	*1,361*	*1,269*	*1,166*	*1,064*	*952*	*834*	*711*	*583*	*450*	*307*	*159*	*0*	*0*	*0*	30,211
b	Additional GA Debt Drawdown, End of Year	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	0
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	11,621	11,521	10,621	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	8,800	6,000	3,100	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	21,079	21,079	21,079	21,079	19,379	17,579	15,779	13,779	11,779	9,579	7,279	4,879	2,379	0	0	0	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	13,399	15,072	16,740	18,362	19,902	21,355	22,716	23,985	25,151	26,215	27,167	28,001	28,712	29,295	29,746	30,052	30,211				
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	19,301	17,528	14,960	11,738	8,498	5,245	2,084	-1,185	-4,351	-7,615	-10,867	-14,101	-17,312	-20,495	-23,746	-26,952	-30,211				
Fiscal Exposure - End of Year Debt Drawdown		2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0	

Feb9 1, 30-yr — Equal Monthly Debt Drawdown

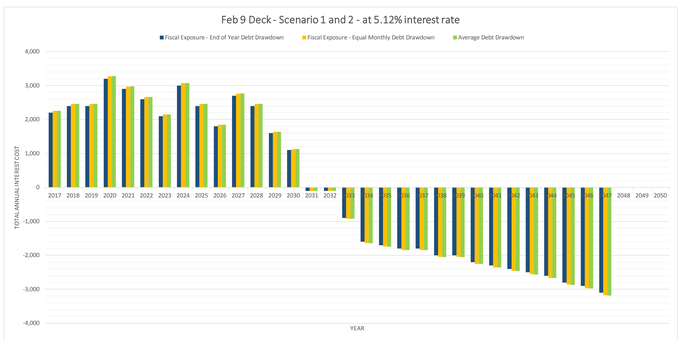
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
	1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
	($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	
1,676	*Interest Cost - Feb9 1, 30-yr*	*52*	*170*	*292*	*434*	*591*	*732*	*853*	*982*	*1,121*	*1,230*	*1,343*	*1,474*	*1,578*	*1,648*	*1,676*	*1,671*	*1,646*	*1,584*	*1,500*	*1,410*	*1,318*	*1,221*	*1,119*	*1,012*	*897*	*777*	*652*	*521*	*384*	*238*	*85*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0	
	Monthly Drawdown	183	191	180	237	198	161	108	174	111	51	118	82	5	(43)	(148)	(148)	(214)	(268)	(270)	(271)	(263)	(272)	(264)	(272)	(271)	(269)	(268)	(265)	(271)	(267)	(272)	-	-	-	
	FV of Monthly Drawdown at 5%	2,252	2,342	2,216	2,909	2,435	1,976	1,328	2,139	1,368	628	1,455	1,006	61	(534)	(1,820)	(1,815)	(2,629)	(3,298)	(3,317)	(3,330)	(3,236)	(3,347)	(3,242)	(3,342)	(3,329)	(3,311)	(3,288)	(3,259)	(3,328)	(3,283)	(3,336)	-	-	-	
	Annual Interest Cost on New Drawdowns	52	54	51	68	57	46	31	50	32	15	34	23	1	(12)	(42)	(42)	(61)	(77)	(77)	(77)	(75)	(78)	(75)	(78)	(77)	(76)	(76)	(76)	(77)	(76)	(78)	-	-	-	
	Annual Interest Cost on Opening Balance	-	115	241	367	534	686	822	932	1,089	1,215	1,309	1,451	1,577	1,660	1,718	1,713	1,708	1,660	1,577	1,488	1,393	1,299	1,194	1,089	974	854	728	597	461	314	162	(0)	(0)	(0)	
	Total Annual Interest Cost	52	170	292	434	591	732	853	982	1,121	1,230	1,343	1,474	1,578	1,648	1,676	1,671	1,646	1,584	1,500	1,410	1,318	1,221	1,119	1,012	897	777	652	521	384	238	85	(0)	(0)	(0)	

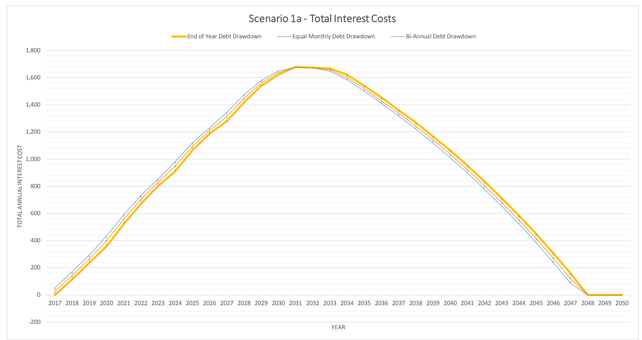
Feb9 1, 30-yr — Bi-Annual Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
	1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
	($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*28*	*143*	*266*	*399*	*559*	*703*	*830*	*949*	*1,095*	*1,210*	*1,314*	*1,448*	*1,560*	*1,636*	*1,677*	*1,672*	*1,656*	*1,601*	*1,518*	*1,430*	*1,338*	*1,243*	*1,141*	*1,036*	*922*	*803*	*679*	*550*	*414*	*270*	*119*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,228	2,431	2,431	3,241	2,937	2,633	2,127	3,038	2,431	1,823	2,735	2,431	1,620	1,114	-101	-101	-912	-1,620	-1,722	-1,823	-1,823	-2,026	-2,026	-2,228	-2,329	-2,431	-2,532	-2,633	-2,836	-2,937	-3,140	0	0	0	
	Bi-Annual Drawdown	1,100	1,144	1,082	1,421	1,189	965	648	1,045	668	307	710	491	30	(261)	(889)	(886)	(1,284)	(1,611)	(1,620)	(1,626)	(1,580)	(1,634)	(1,583)	(1,632)	(1,626)	(1,617)	(1,606)	(1,592)	(1,625)	(1,603)	(1,629)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,228	2,317	2,192	2,878	2,409	1,954	1,313	2,116	1,353	621	1,439	995	61	(529)	(1,801)	(1,796)	(2,601)	(3,263)	(3,281)	(3,295)	(3,201)	(3,311)	(3,207)	(3,306)	(3,293)	(3,275)	(3,252)	(3,224)	(3,292)	(3,248)	(3,300)	-	-	-	
	Annual Interest Cost on New Drawdowns	28	29	28	36	30	25	17	27	17	8	18	13	1	(7)	(23)	(23)	(33)	(41)	(41)	(42)	(40)	(42)	(41)	(42)	(42)	(41)	(41)	(41)	(42)	(41)	(42)	-	-	-	
	Annual Interest Cost on Opening Balance	-	114	238	363	529	679	814	922	1,078	1,202	1,295	1,435	1,560	1,643	1,700	1,694	1,689	1,643	1,560	1,472	1,378	1,285	1,181	1,078	964	845	720	591	456	311	161	0	0	0	
	Total Annual Interest Cost	28	143	266	399	559	703	830	949	1,095	1,210	1,314	1,448	1,560	1,636	1,677	1,672	1,656	1,601	1,518	1,430	1,338	1,243	1,141	1,036	922	803	679	550	414	270	119	0	0	0	

Feb9 1, 30-yr — Average Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
	($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*56*	*174*	*297*	*440*	*596*	*737*	*857*	*987*	*1,126*	*1,233*	*1,348*	*1,479*	*1,581*	*1,650*	*1,676*	*1,670*	*1,645*	*1,581*	*1,496*	*1,407*	*1,315*	*1,218*	*1,115*	*1,008*	*893*	*773*	*647*	*517*	*379*	*233*	*79*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		2,256	2,461	2,461	3,282	2,974	2,667	2,154	3,077	2,461	1,846	2,769	2,461	1,641	1,128	-103	-103	-923	-1,641	-1,743	-1,846	-1,846	-2,051	-2,051	-2,256	-2,359	-2,461	-2,564	-2,667	-2,872	-2,974	-3,179	0	0	0	





Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Feb9_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0
			38	38	40	55	50	40	31	50	31	19	36	31	5	-5	-17	-19	-19	-21	-21	-21	-24	-26	-26	-26	-31	-29	-33	-33	-36	-38	-38	0	0	0

0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,300	998	17,886
Equal Monthly Debt Drawdown	2,355	993	

	Feb9 2, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,500	2029	13,466
Equal Monthly Debt Drawdown	19,964		

Feb9 2, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
a	Debt, Beginning of Year	0	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	
c = a*5%	*Interest Cost - Feb9 2, 30-yr - End of Year Debt Drawdown*	*0*	*82*	*164*	*251*	*368*	*476*	*563*	*629*	*737*	*803*	*844*	*921*	*987*	*998*	*987*	*952*	*911*	*870*	*824*	*778*	*732*	*680*	*624*	*568*	*512*	*445*	*384*	*312*	*240*	*164*	*82*	*0*	*0*	*0*	17,886
b	Additional GA Debt Drawdown, End of Year	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	7,123	6,323	5,523	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,700	3,200	1,600	0	0	0	
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	11,477	11,477	11,477	11,477	10,577	9,677	8,677	7,577	6,477	5,377	4,077	2,877	1,477	0	0	0	0	0	0	0	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	8,810	9,762	10,672	11,542	12,366	13,143	13,875	14,556	15,180	15,748	16,259	16,704	17,088	17,400	17,641	17,804	17,886				
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	9,790	8,038	6,328	4,558	2,834	1,157	-575	-2,356	-4,080	-5,748	-7,559	-9,204	-10,988	-12,700	-14,441	-16,204	-17,886				
Fiscal Exposure - End of Year Debt Drawdown		1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0	

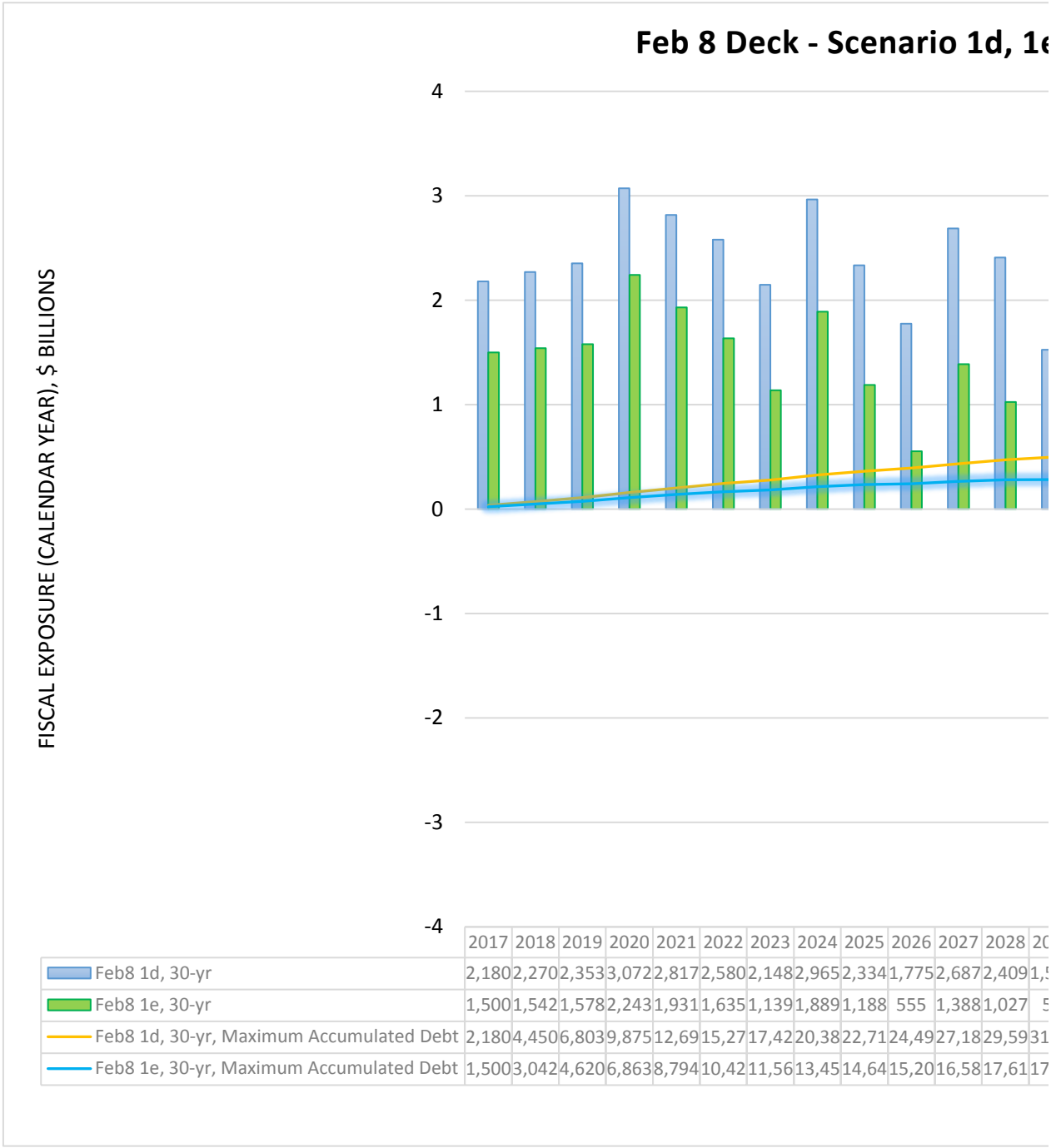
Feb9 2, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	
993	*Interest Cost - Feb9 2, 30-yr*	*38*	*120*	*204*	*305*	*418*	*516*	*594*	*679*	*768*	*822*	*880*	*952*	*992*	*993*	*971*	*933*	*892*	*848*	*802*	*756*	*708*	*654*	*598*	*542*	*481*	*417*	*350*	*279*	*205*	*126*	*44*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0	
	Monthly Drawdown	133	127	128	171	144	102	61	123	47	(0)	55	32	(66)	(100)	(141)	(146)	(143)	(147)	(144)	(140)	(144)	(148)	(144)	(139)	(151)	(137)	(149)	(143)	(145)	(147)	(140)	-	-	-	
	FV of Monthly Drawdown at 5%	1,638	1,554	1,573	2,098	1,773	1,253	755	1,506	577	(3)	671	388	(806)	(1,226)	(1,728)	(1,793)	(1,751)	(1,812)	(1,765)	(1,718)	(1,773)	(1,823)	(1,765)	(1,708)	(1,855)	(1,684)	(1,826)	(1,753)	(1,782)	(1,806)	(1,722)	-	-	-	
	Annual Interest Cost on New Drawdowns	38	36	37	49	41	29	18	35	13	(0)	16	9	(19)	(28)	(40)	(42)	(41)	(42)	(41)	(40)	(41)	(42)	(41)	(40)	(43)	(39)	(42)	(41)	(41)	(42)	(40)	-	-	-	
	Annual Interest Cost on Opening Balance	-	84	168	257	377	487	576	644	754	822	864	943	1,011	1,021	1,011	974	932	890	843	796	749	697	639	581	524	456	393	320	246	168	84	0	0	0	
	Total Annual Interest Cost	38	120	204	305	418	516	594	679	768	822	880	952	992	993	971	933	892	848	802	756	708	654	598	542	481	417	350	279	205	126	44	0	0	0	

Feb9 2, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*20*	*102*	*185*	*280*	*395*	*498*	*579*	*656*	*753*	*813*	*863*	*938*	*990*	*995*	*978*	*941*	*900*	*858*	*812*	*766*	*719*	*666*	*610*	*554*	*495*	*430*	*366*	*294*	*221*	*143*	*61*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,620	1,620	1,722	2,329	2,127	1,722	1,317	2,127	1,317	810	1,519	1,317	203	-203	-709	-810	-810	-912	-912	-912	-1,013	-1,114	-1,114	-1,114	-1,317	-1,215	-1,418	-1,418	-1,519	-1,620	-1,620	0	0	0	
	Bi-Annual Drawdown	800	759	768	1,025	866	612	369	735	282	(2)	328	190	(394)	(599)	(844)	(876)	(855)	(885)	(862)	(839)	(866)	(890)	(862)	(834)	(906)	(823)	(892)	(856)	(870)	(882)	(841)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,620	1,538	1,556	2,076	1,754	1,240	747	1,490	570	(3)	664	384	(797)	(1,213)	(1,709)	(1,774)	(1,733)	(1,792)	(1,746)	(1,699)	(1,754)	(1,803)	(1,746)	(1,689)	(1,835)	(1,666)	(1,807)	(1,734)	(1,763)	(1,786)	(1,703)	-	-	-	
	Annual Interest Cost on New Drawdowns	20	19	20	26	22	16	9	19	7	(0)	8	5	(10)	(15)	(22)	(22)	(22)	(23)	(22)	(21)	(22)	(23)	(22)	(21)	(23)	(21)	(23)	(22)	(22)	(23)	(22)	-	-	-	
	Annual Interest Cost on Opening Balance	-	83	166	254	373	482	570	637	746	814	855	933	1,000	1,010	1,000	964	922	881	834	788	741	689	632	575	518	451	389	316	244	166	83	0	0	0	
	Total Annual Interest Cost	20	102	185	280	395	498	579	656	753	813	863	938	990	995	978	941	900	858	812	766	719	666	610	554	495	430	366	294	221	143	61	0	0	0	

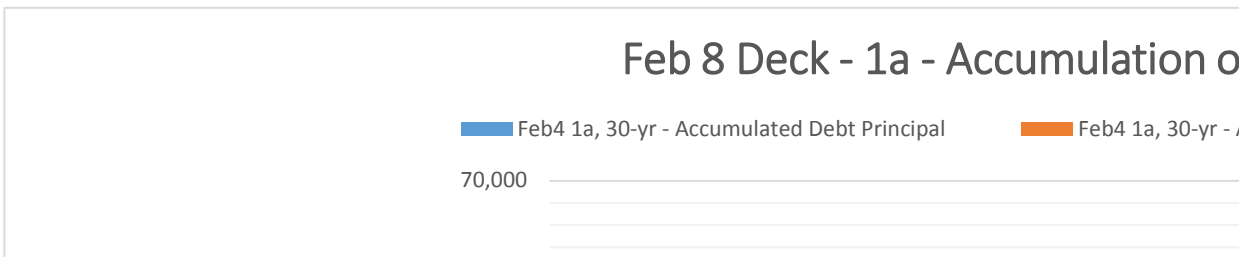
Feb9 2, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*41*	*123*	*207*	*310*	*422*	*519*	*596*	*683*	*770*	*824*	*883*	*954*	*993*	*993*	*970*	*931*	*890*	*847*	*801*	*755*	*706*	*652*	*596*	*540*	*478*	*414*	*348*	*276*	*202*	*123*	*41*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,641	1,641	1,743	2,359	2,154	1,743	1,333	2,154	1,333	820	1,538	1,333	205	-205	-718	-820	-820	-923	-923	-923	-1,026	-1,128	-1,128	-1,128	-1,333	-1,231	-1,436	-1,436	-1,538	-1,641	-1,641	0	0	0	

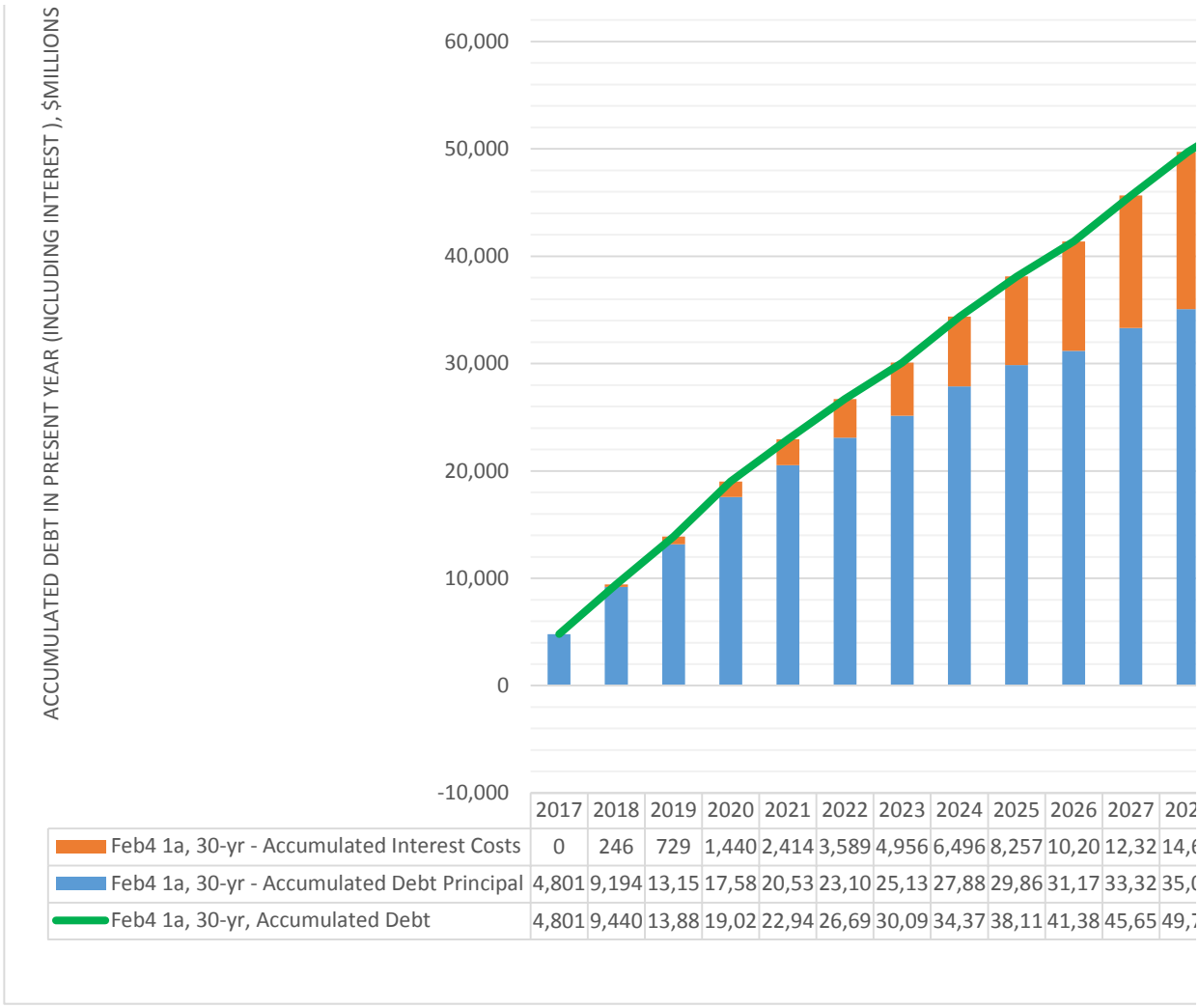
Feb 8 Deck

Feb 8 Deck - Scenario 1d, 1e - at 5.12% interest rate

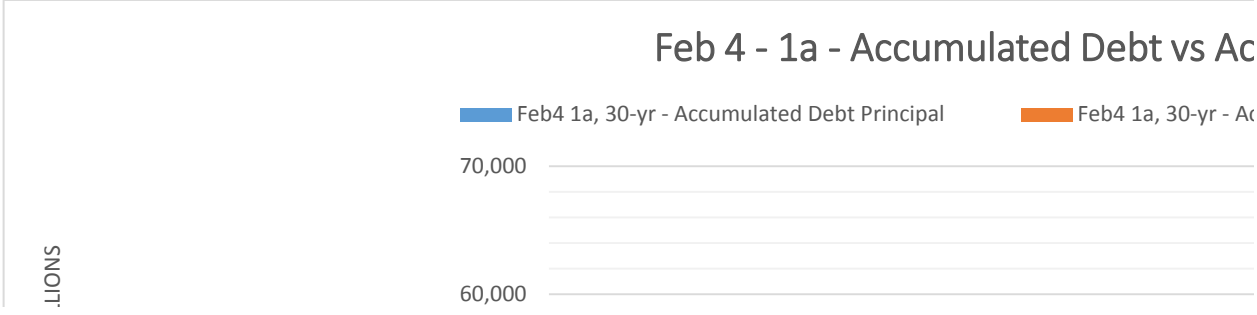


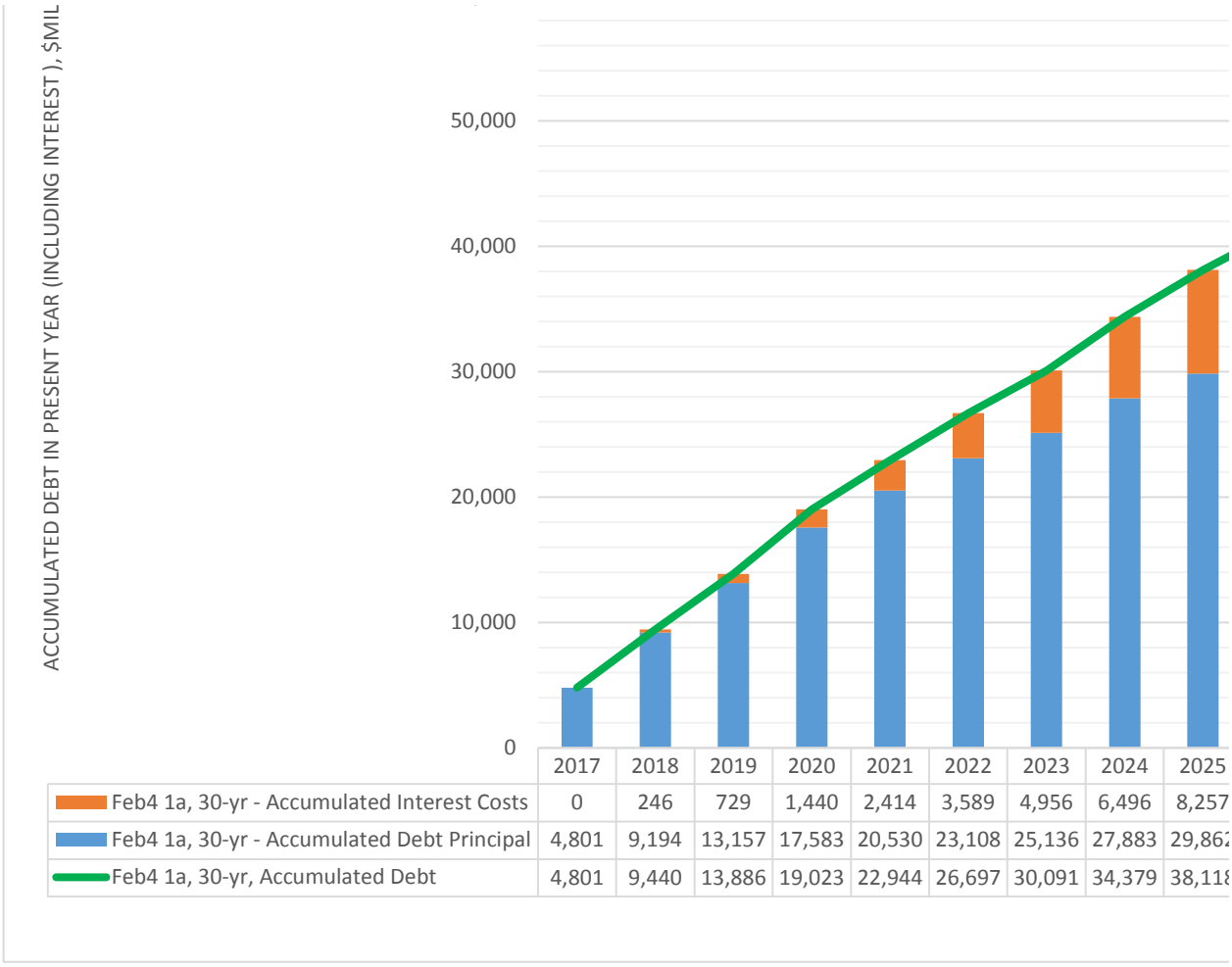
Feb 8 Deck - 1a - Accumulation of Debt (Principal and Interest)



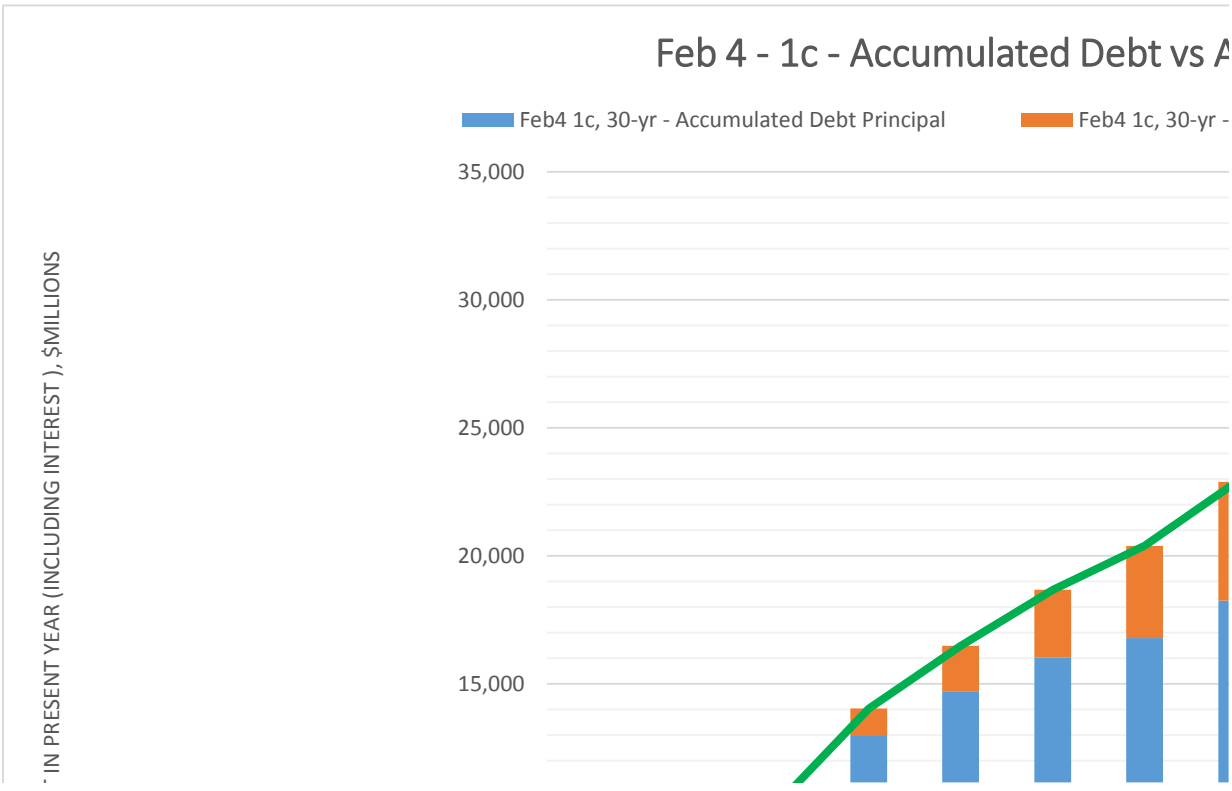


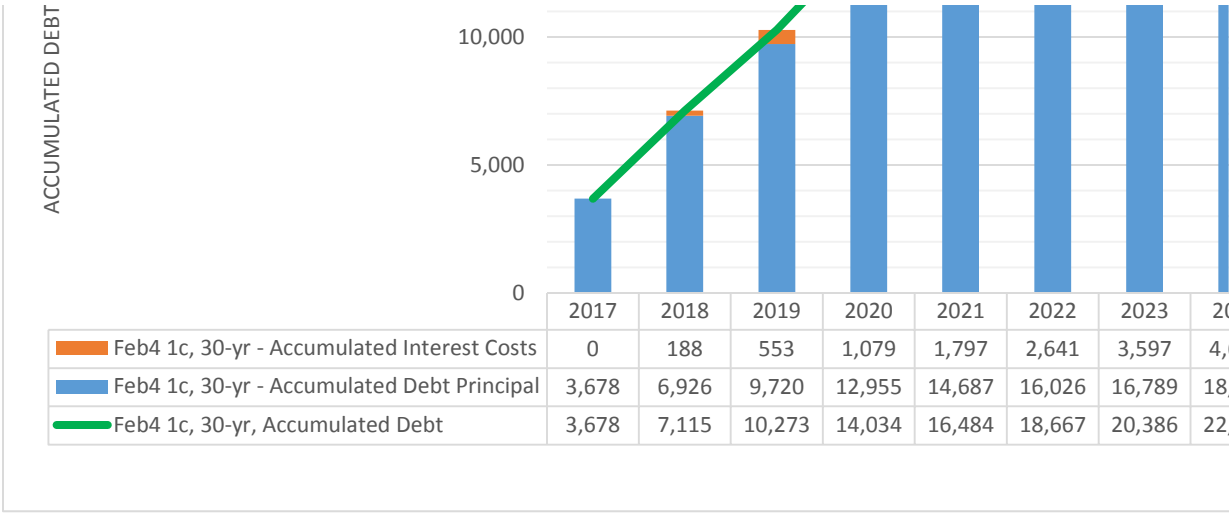
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	202
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,(
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,7



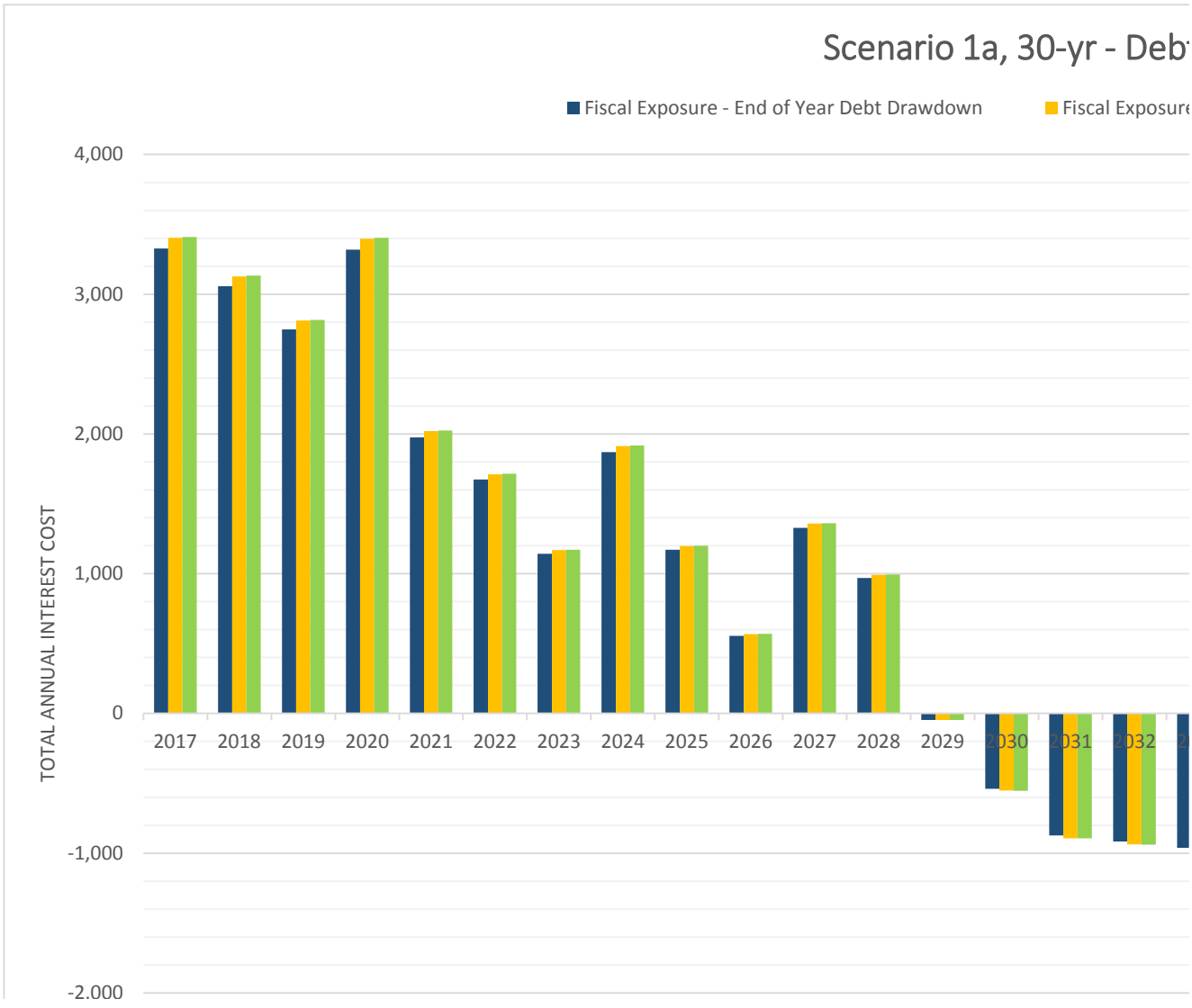


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



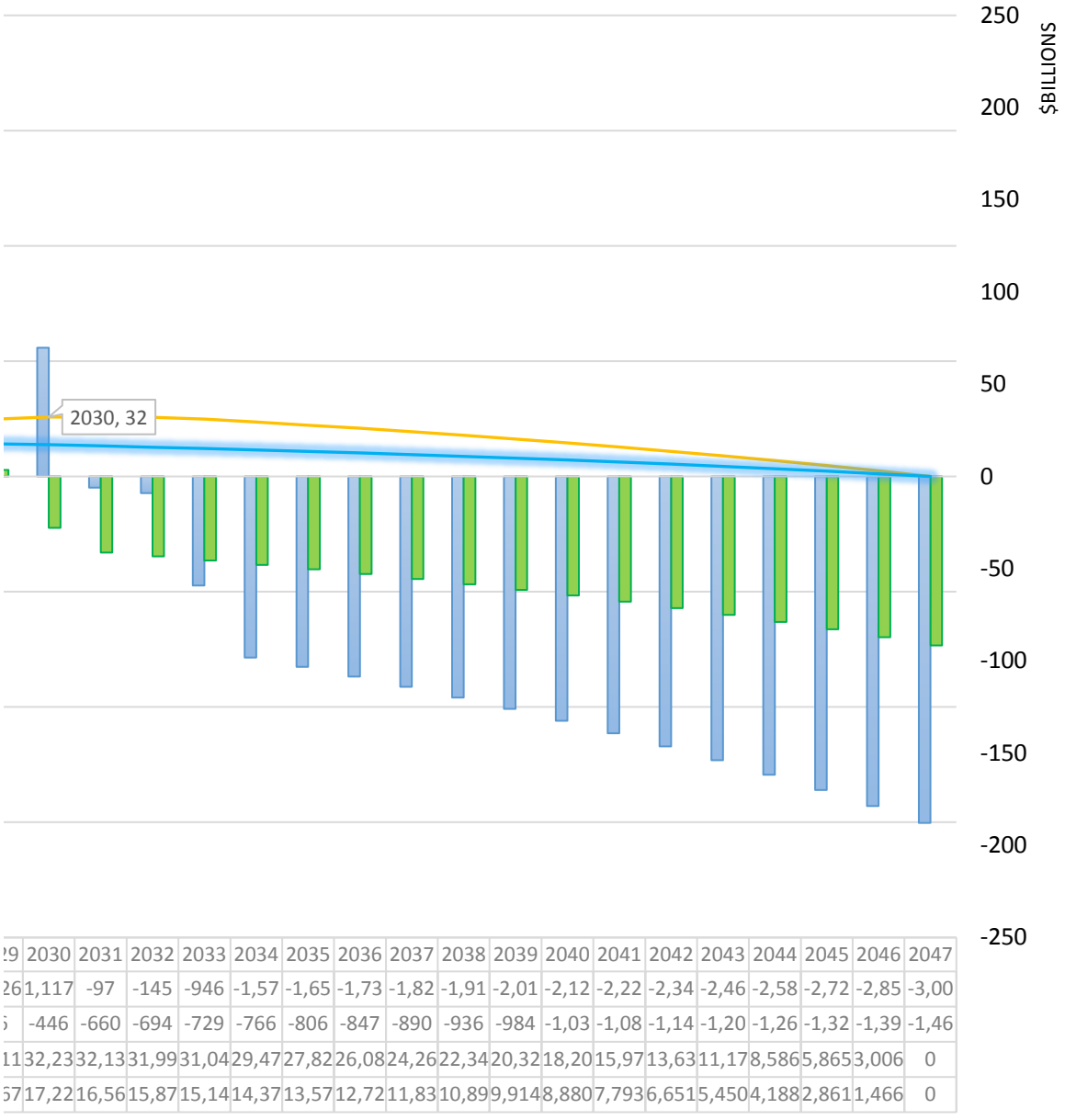


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

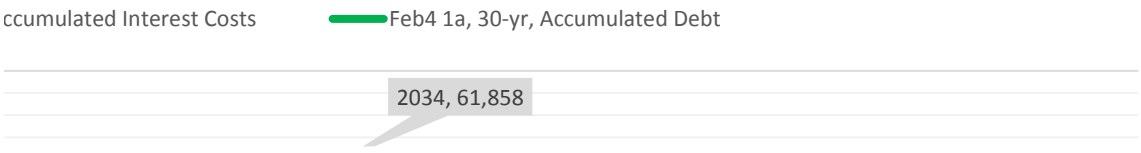
- at 5.12% interest rate

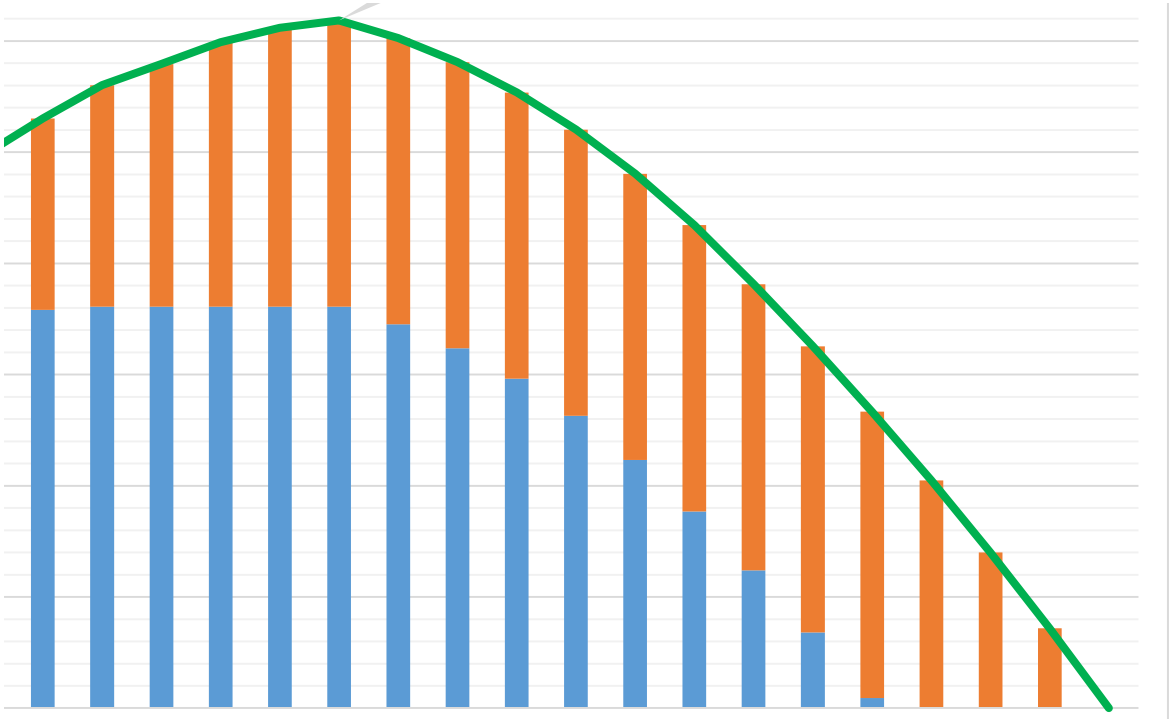


29	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
26	1,117	-97	-145	-946	-1,57	-1,65	-1,73	-1,82	-1,91	-2,01	-2,12	-2,22	-2,34	-2,46	-2,58	-2,72	-2,85	-3,00
5	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,03	-1,08	-1,14	-1,20	-1,26	-1,32	-1,39	-1,46
11	32,23	32,13	31,99	31,04	29,47	27,82	26,08	24,26	22,34	20,32	18,20	15,97	13,63	11,17	8,586	5,865	3,006	0
57	17,22	16,56	15,87	15,14	14,37	13,57	12,72	11,83	10,89	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0

CALENDAR YEAR

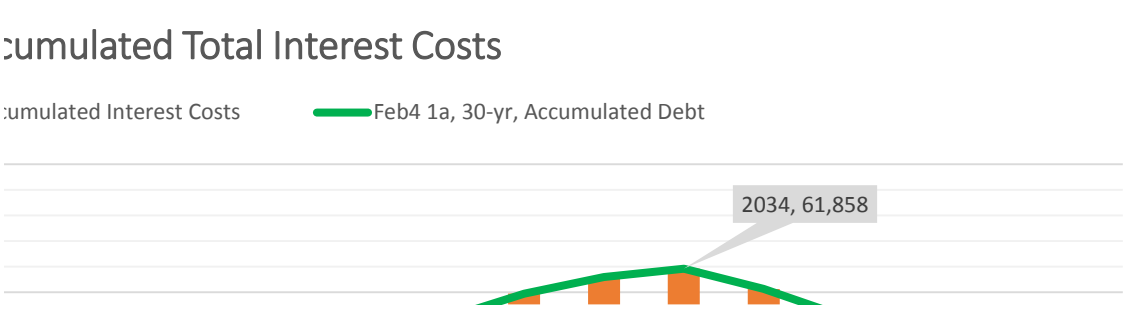
Debt (Principal and Interest)



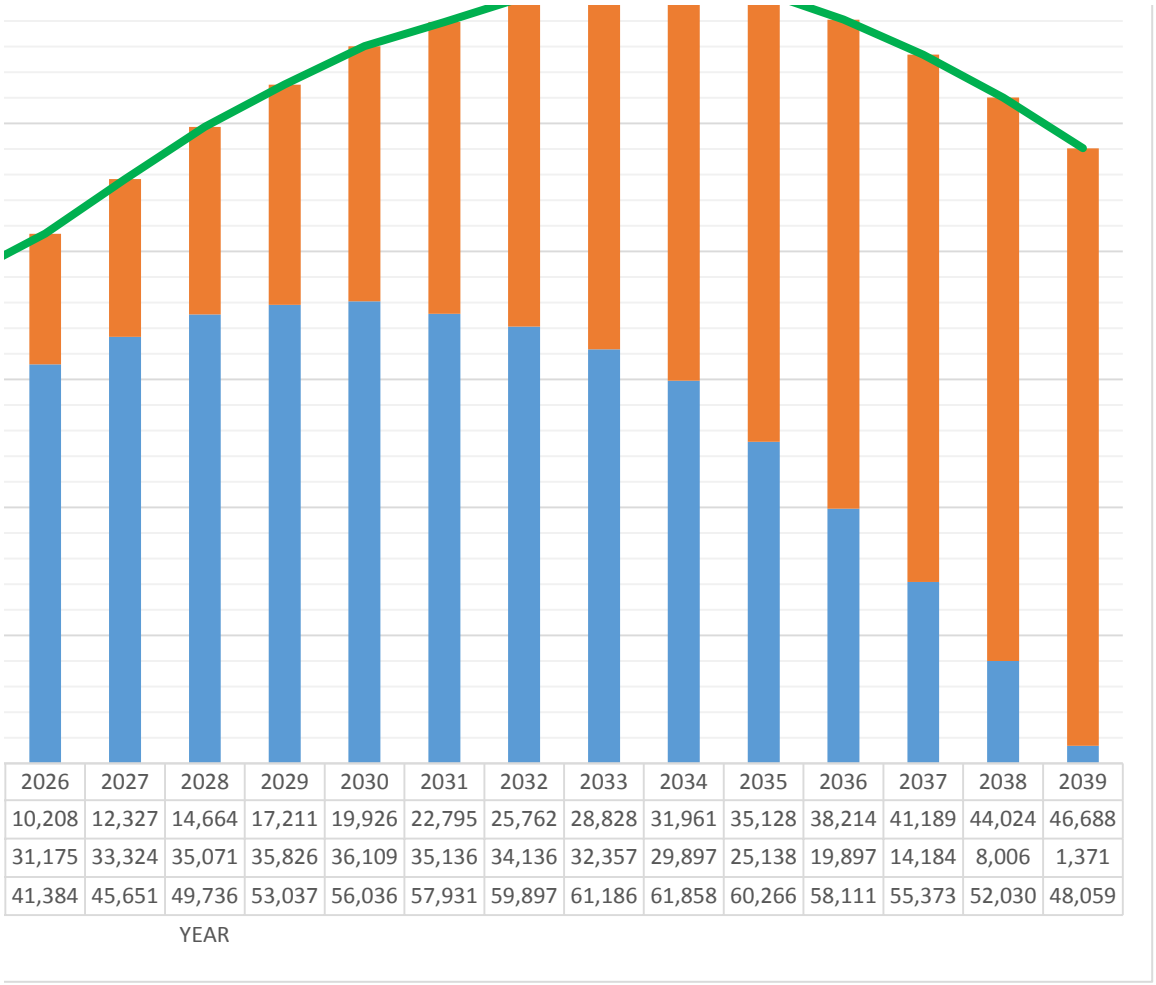


	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
5	17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
7	35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
3	53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



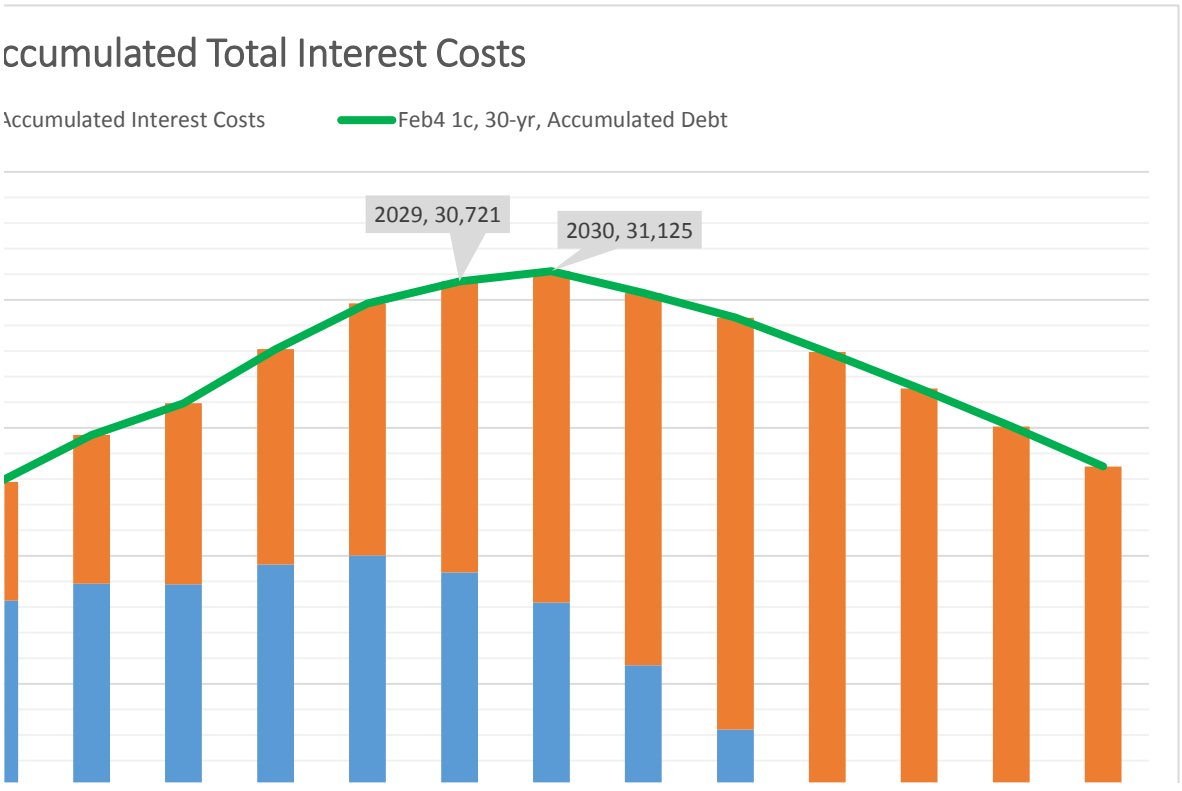
LIONS

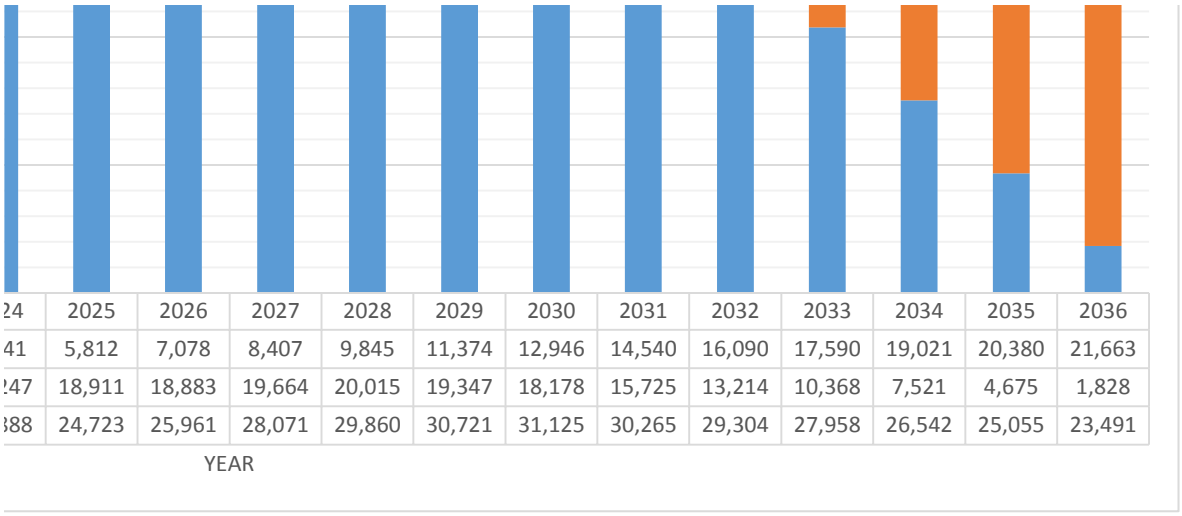


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

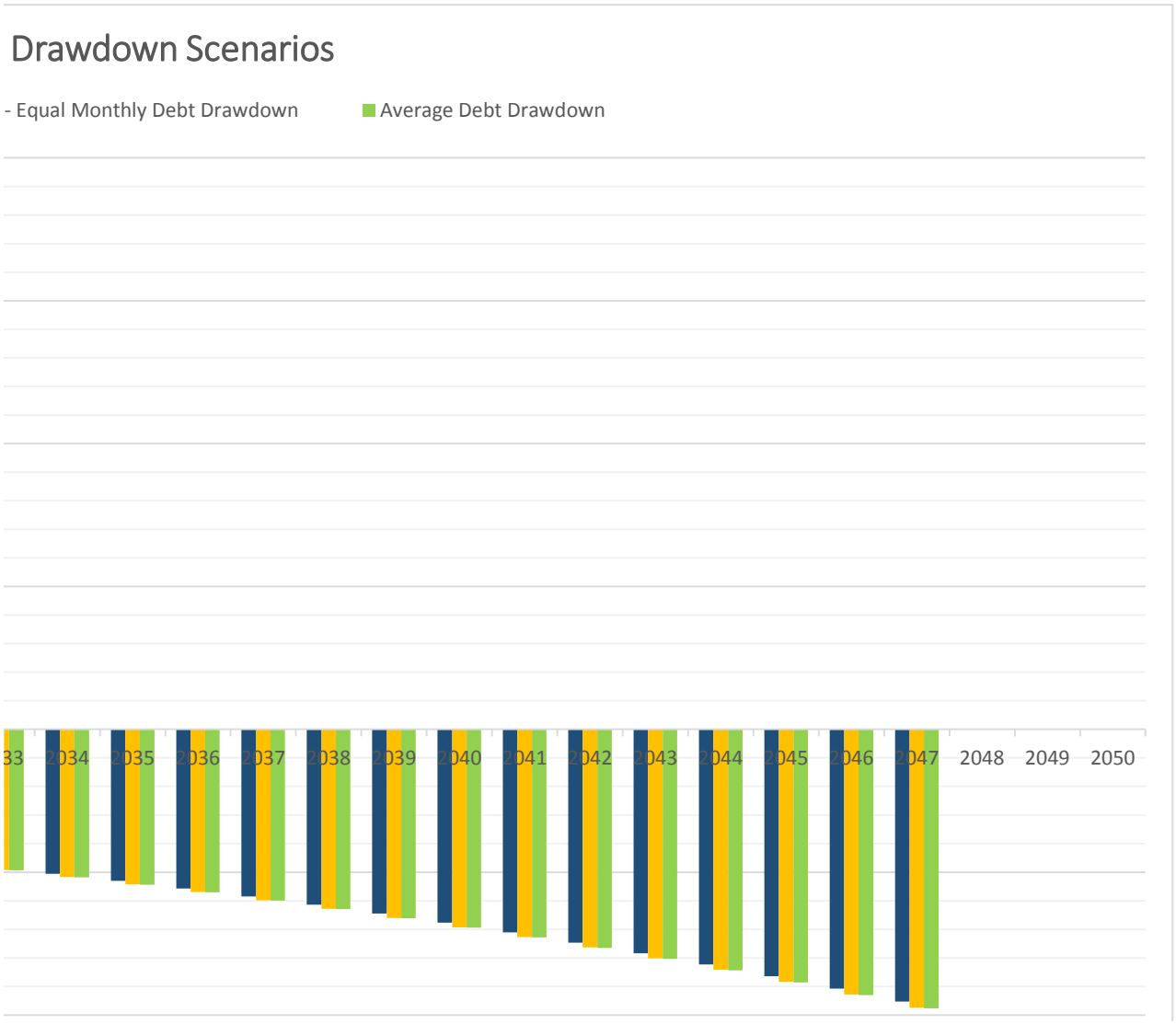
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





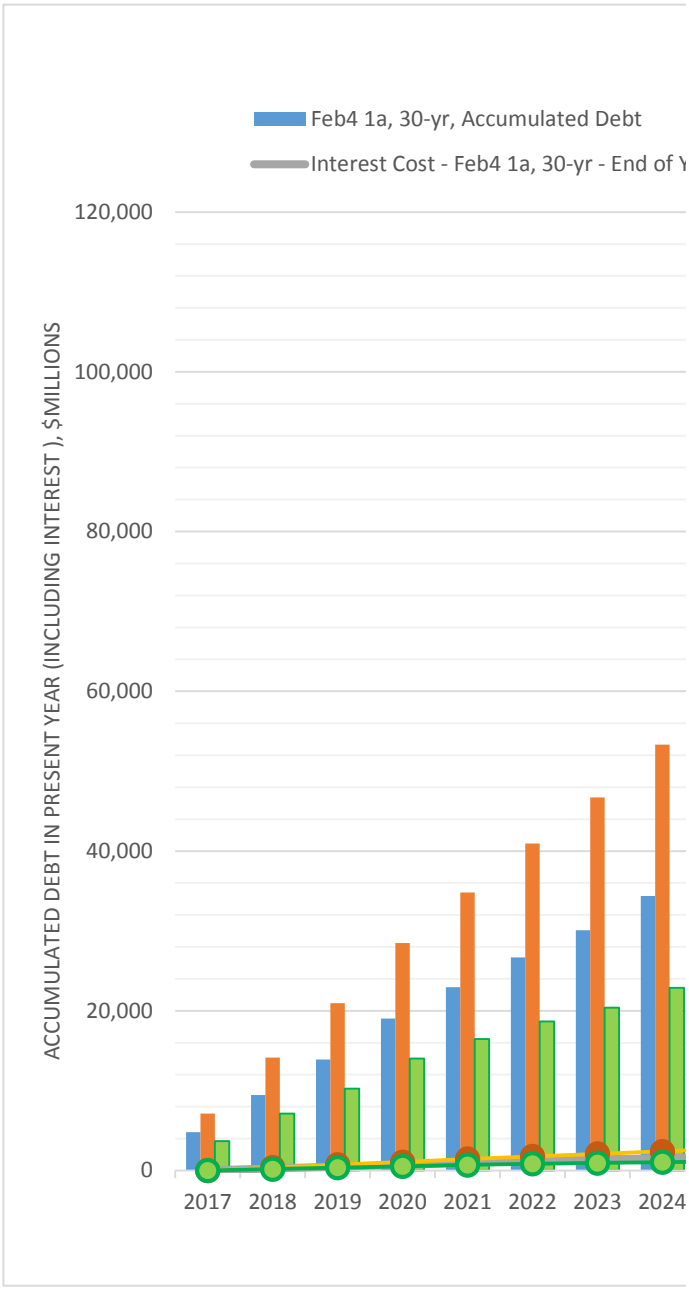
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

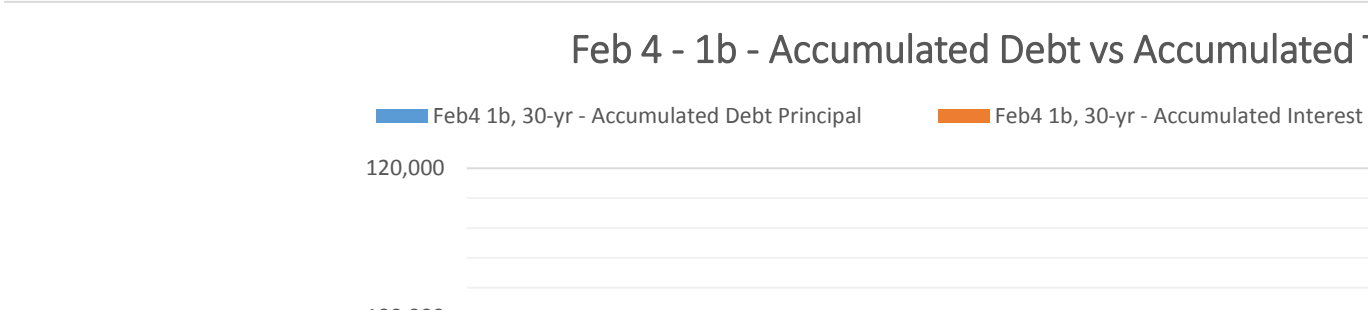
YEAR

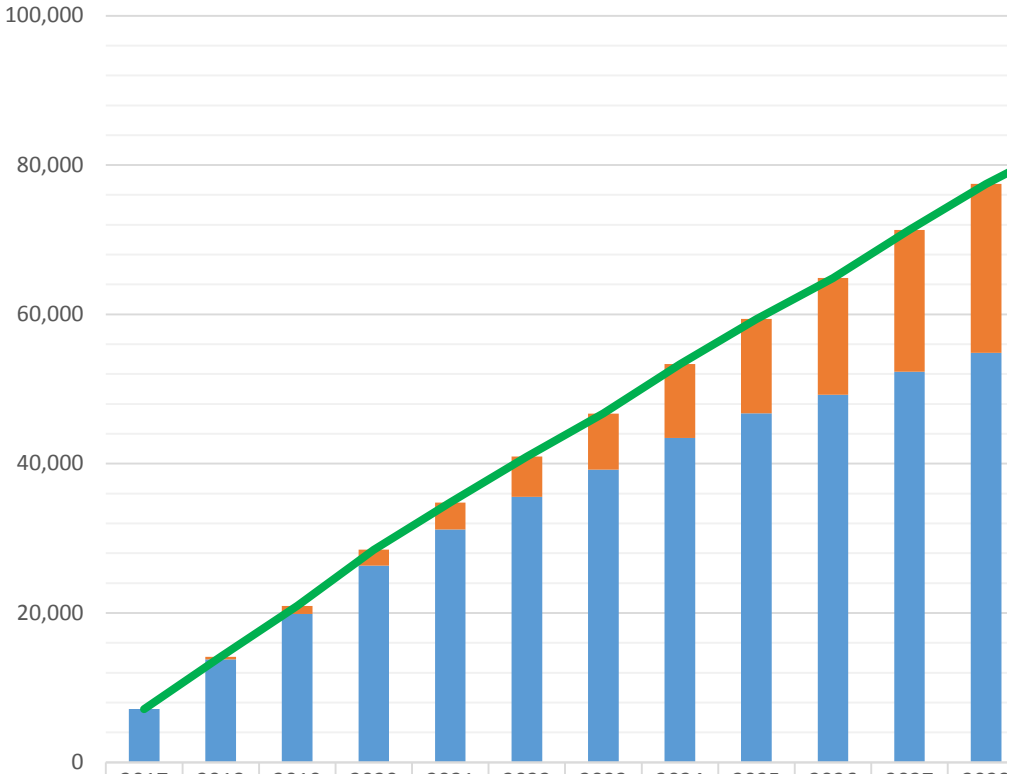


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate

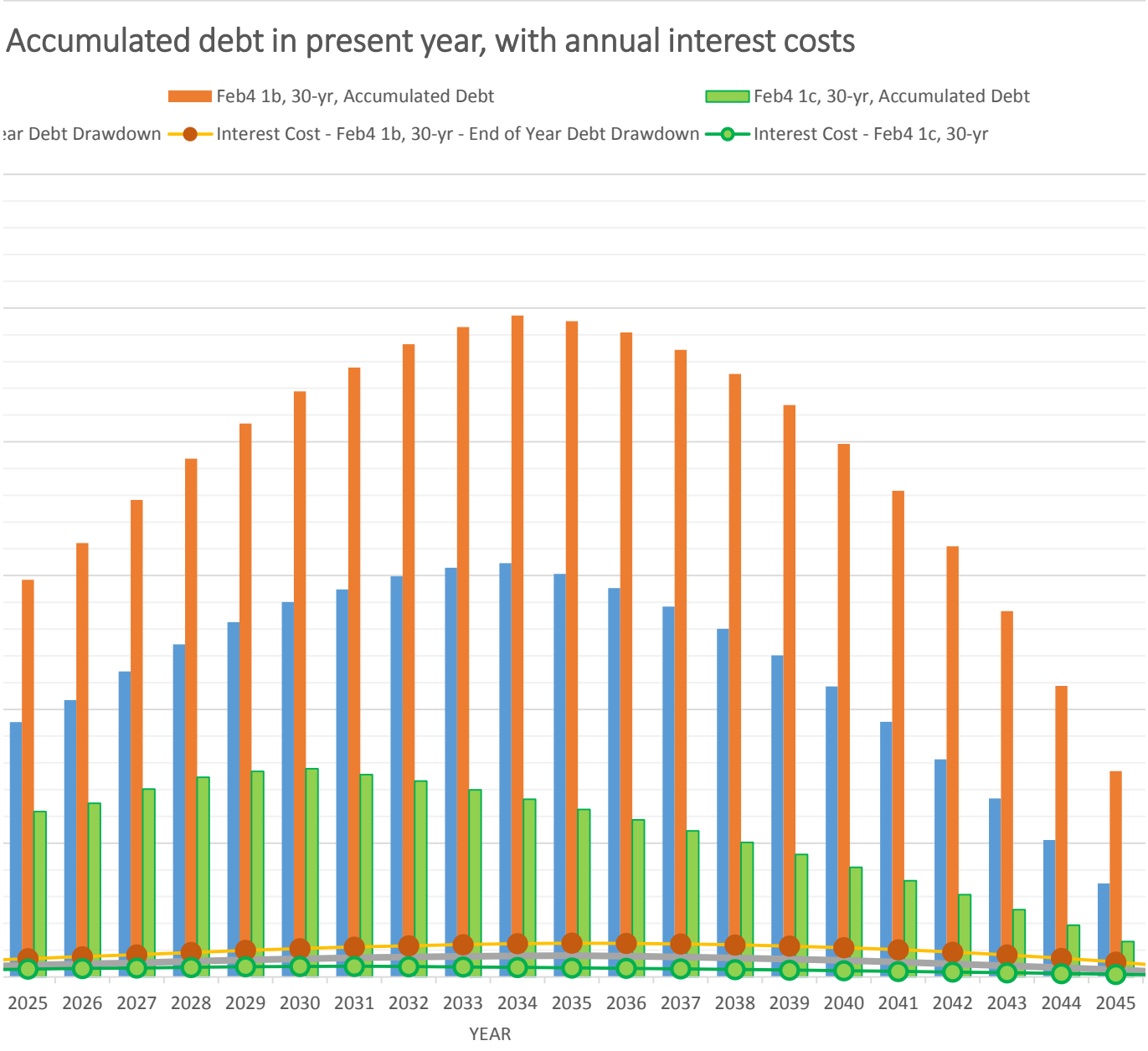


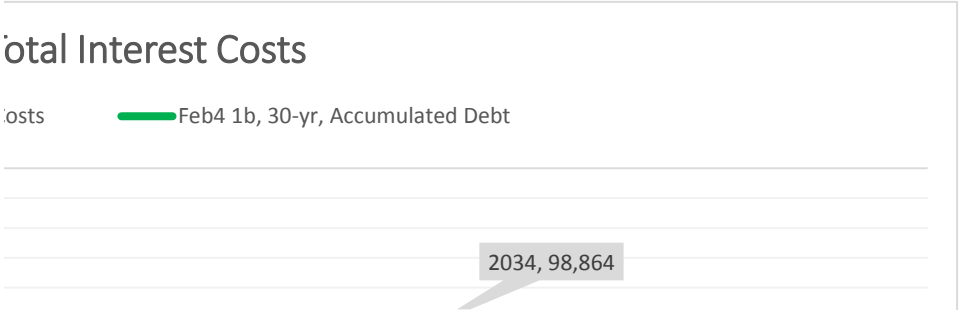

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

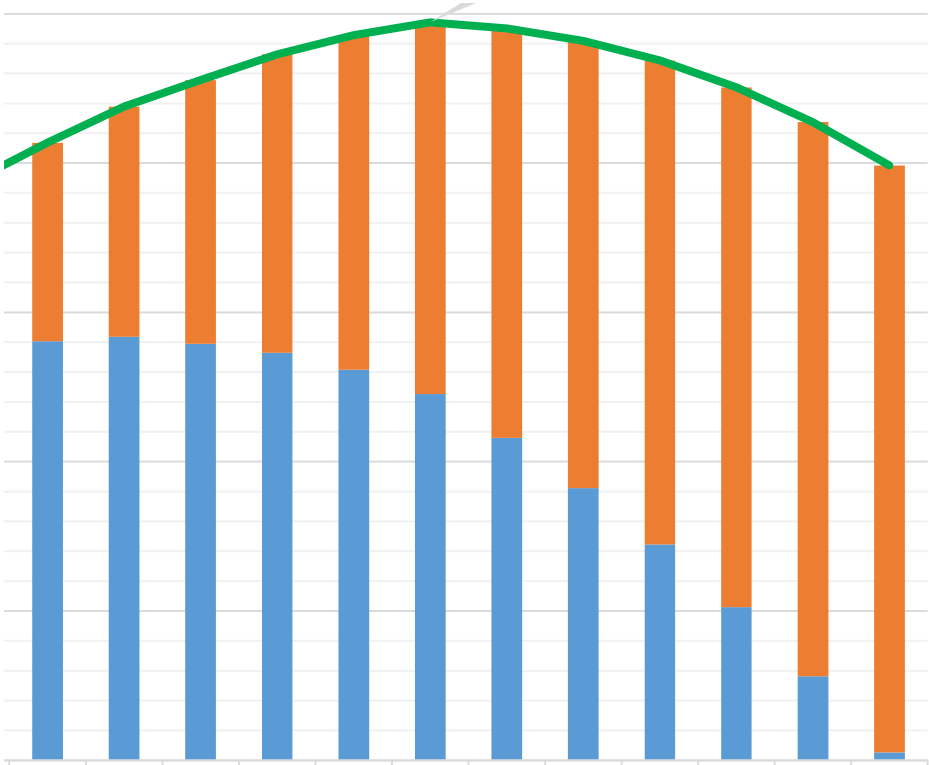


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y

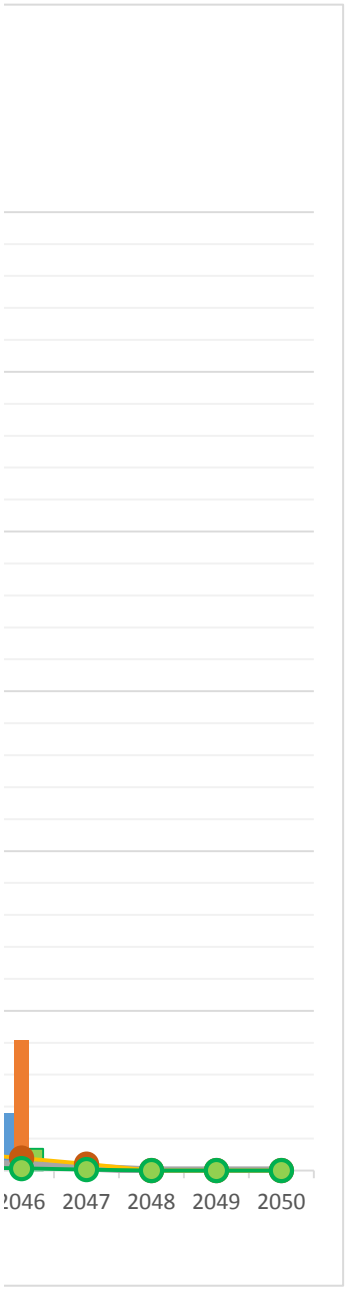

Accumulated debt in present year, with annual interest costs
Feb4 1b, 30-yr, Accumulated Debt
Feb4 1c, 30-yr, Accumulated Debt
ear Debt Drawdown
Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown
Interest Cost - Feb4 1c, 30-yr
2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045
YEAR


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

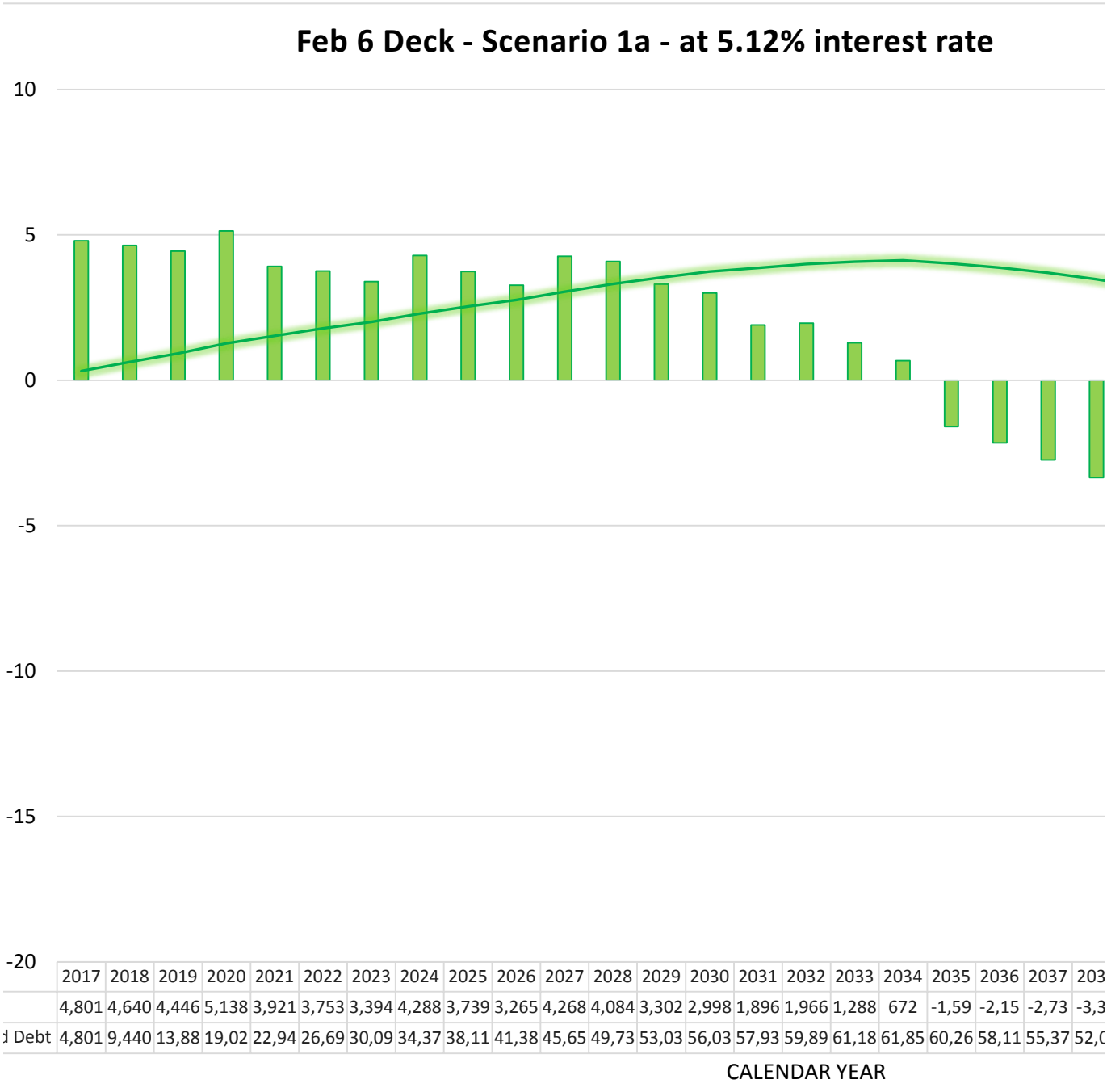
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

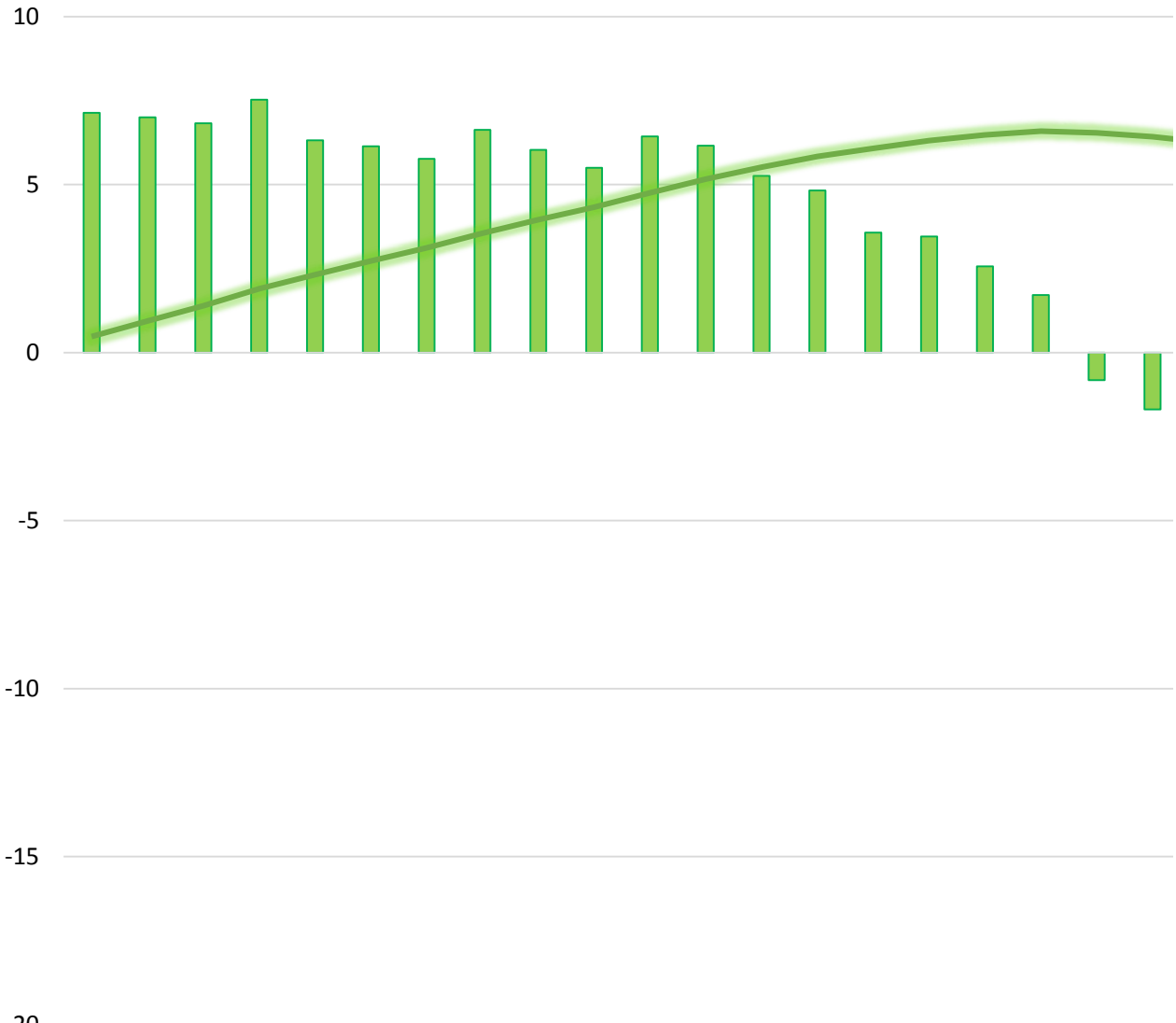
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

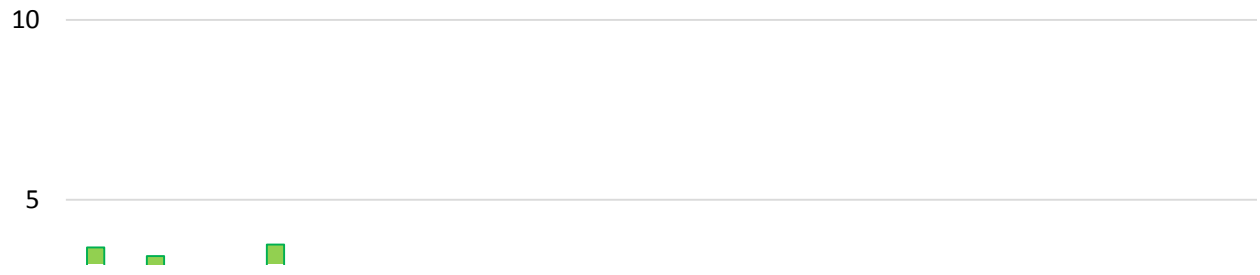
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

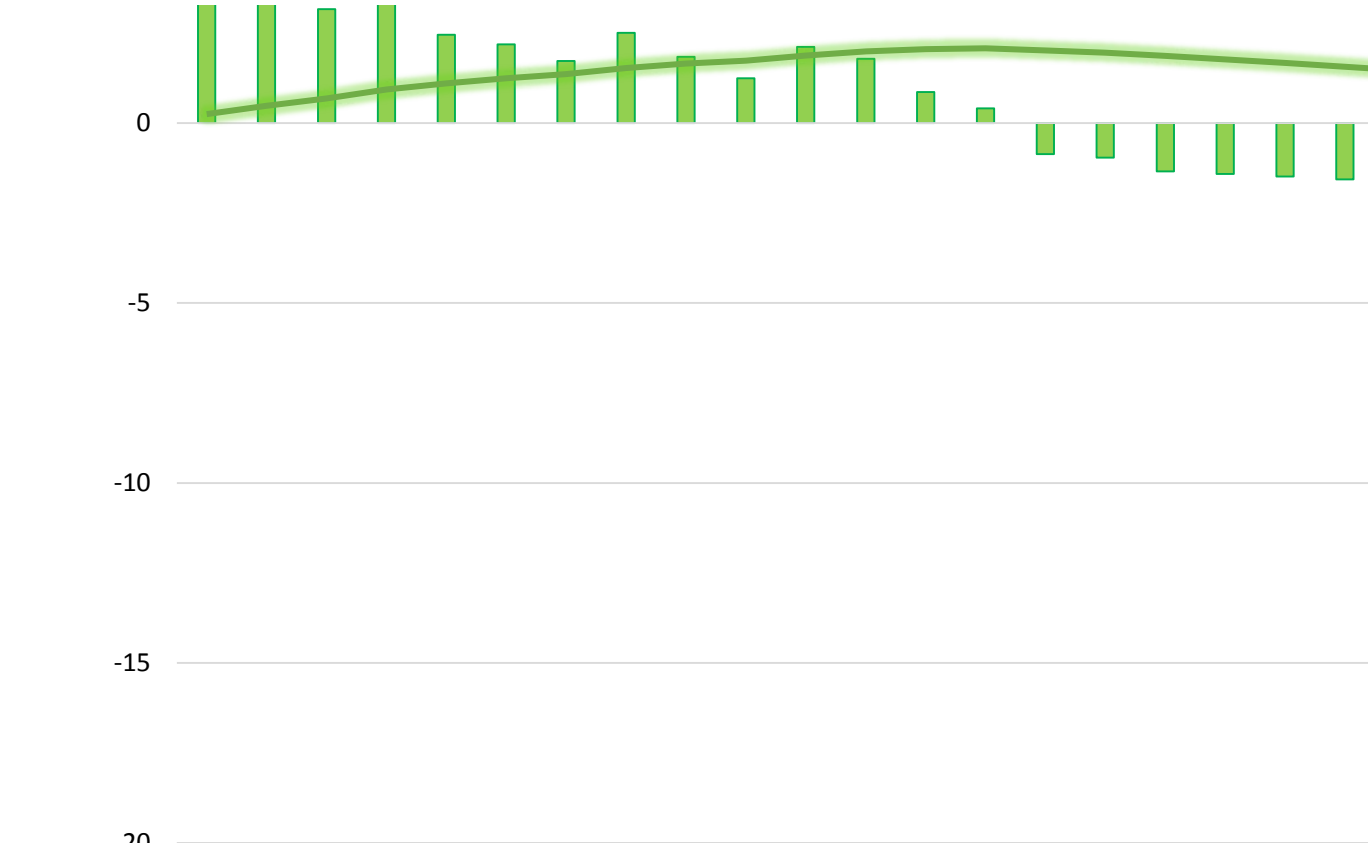


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



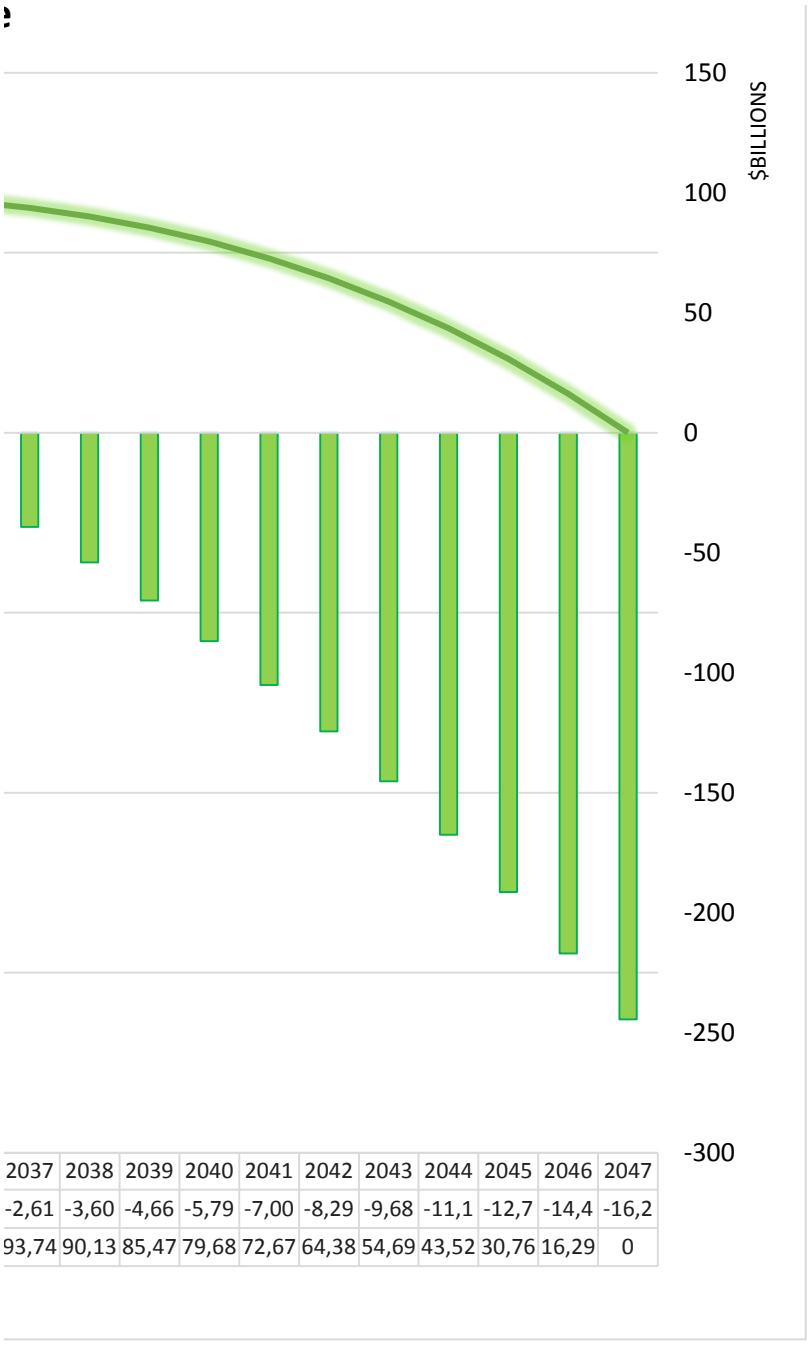


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

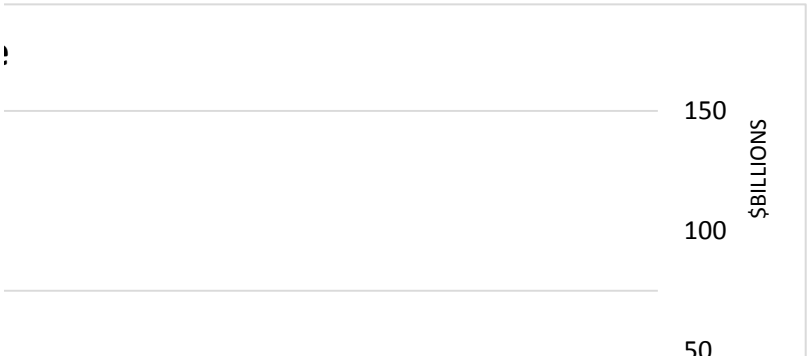
CALENDAR YEAR

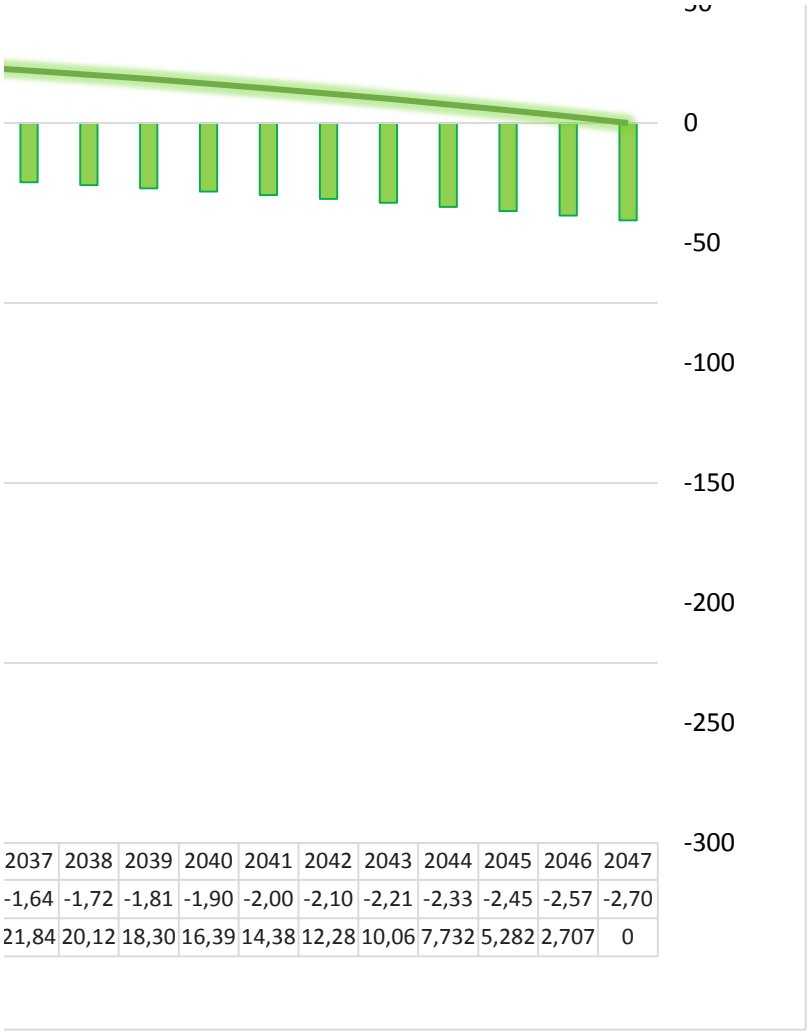


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Feb 8 Deck - Scenario 1a, 1b, 1c - at 5.12% interest
IESO GA cost forecast + extrapolation

Scenario
1a

1b

1c

1d

1e

	2017	2018	2019	2020
rate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	4674	9542	14587	21173

GA Payment from Impacted Rate Class	7421	7205	6995	6329
Accumulated debt in present year (including interest)	4674	9544	14589	21175

GA Payment from Impacted Rate Class	7421	7425	7440	7013
Accumulated debt in present year (including interest)	4674	9323	13913	19780

GA Payment from Impacted Rate Class	9915	9676	9427	9445
Accumulated debt in present year (including interest)	2180	4450	6803	9875

GA Payment from Impacted Rate Class	10596	10370	10129	10162
Accumulated debt in present year (including interest)	1500	3042	4620	6863

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
27212	33084	38588	44968	50769	56056	62291	68274

5890	6156	6434	6724	7028	7345	7677	8024
27212	33082	38585	44963	50762	56048	62281	68263

6825	7042	7266	7497	7736	7983	8237	8499
24810	29671	34167	39545	44359	48679	53976	59058

8532	8703	8877	9054	9236	9420	9609	9801
12692	15272	17420	20384	22719	24494	27181	29590

9264	9449	9638	9831	10027	10228	10432	10641
8794	10429	11568	13457	14645	15200	16588	17614

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
73391	78103	81594	85015	87596	89375	88679	87180

8386	8765	9160	9574	10006	10458	10931	11424
73378	78089	81578	84997	87577	89356	88659	87159

8770	9049	9337	9634	9941	10257	10584	10921
63318	67230	69987	72754	74773	76097	75068	73377

9997	10197	10401	10609	10821	10916	8822	8548
31116	32233	32135	31991	31045	29473	27822	26085

10854	11071	10196	10361	9779	9298	7203	6930
17670	17225	16565	15871	15142	14376	13570	12723

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
84828	81568	77341	72085	65730	58203	49425	39310

11940	12480	13043	13632	14248	14891	15564	16267
84806	81546	77320	72065	65711	58186	49409	39297

11269	11628	11998	12380	12774	13181	13600	14033
70990	67875	63995	59310	53778	47352	39985	31624

8288	8040	7805	7580	7367	7164	6970	6786
24260	22342	20325	18206	15978	13635	11173	8586

6670	6422	6186	5962	5748	5545	5352	5168
11833	10897	9914	8880	7793	6651	5450	4188

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
27767	14699	0	0	0	0

17001	17769	18572	2975	2831	2695
27758	14694	0	0	0	0

14480	14941	15417	2975	2831	2695
22213	11693	0	0	0	0

6611	6444	6286	2975	2831	2695
5865	3006	0	0	0	0

4993	4826	4667	2975	2831	2695
2861	1466	0	0	0	0

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb8_1a_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,867
Annual Exposure2 with start on July 1st	*2,337*	*4,867*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	3,554

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

1 Based on an interest rate of 5%.

2 Fiscal exposure based on equal monthly drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1b_30yr

1b. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,869
Annual Exposure2 with start on July 1st	*2,337*	*4,869*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	*3,554*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649
Annual Exposure2 with start on July 1st	*2,337*	*4,649*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,668
Start: July 1st	-	*3,499*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $76 billion peaking in

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270
Annual Exposure2 with start on July 1st	*1,090*	*2,270*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	545	2,203
Start: July 1st	-	*1,658*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $32 billion peaking in

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542
Annual Exposure2 with start on July 1st	*750*	*1,542*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	375	1,510
Start: July 1st	-	*1,135*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $18 billion peaking in

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	1,169 - 1,169	4,723 - 4,723

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1169**	**4963**
Total, B	1169	4963
Proposed Program Total:	1,169 - 1,169	4,963 - 4,963

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1a
Scenario 1b
Scenario 1c
Scenario 1d
Scenario 1e

2019	2020	2021	2022
5,045	6,586	6,039	5,872
5,045	*6,586*	*6,039*	*5,872*

2018-19	2019-20	2020-21	2021-2022
4,912	5,430	6,449	5,997
4,912	*5,430*	*6,449*	*5,997*

2034.

Actuals are subject t
- The highest debt ac
- Compared to a 5% i

[1] Based on an interes
[2] Fiscal exposure bas
[3] Fiscalized based on

depend on decision on accounting treatment.

2019	2020	2021	2022
5,045	6,586	6,037	5,870
5,045	*6,586*	*6,037*	*5,870*

2018-19	2019-20	2020-21	2021-2022
4,913	5,430	6,449	5,996
4,913	*5,430*	*6,449*	*5,996*

2034.

2019	2020	2021	2022
4,589	5,867	5,031	4,861
4,589	*5,867*	*5,031*	*4,861*

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988
4,634	*4,909*	*5,658*	*4,988*

2034.

2019	2020	2021	2022
2,353	3,072	2,817	2,580
2,353	*3,072*	*2,817*	*2,580*

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757
2,291	*2,533*	*3,008*	*2,757*

2030.

2019	2020	2021	2022
1,578	2,243	1,931	1,635
1,578	*2,243*	*1,931*	*1,635*

2018-19	2019-20	2020-21	2021-2022

1,551	1,745	2,165	1,857
1,551	*1,745*	*2,165*	*1,857*

2029.



2018-19	2019-20	2020-21	2021-2022
4,913 - 4,912	5,430 - 5,430	6,449 - 6,449	5,996 - 5,997

/1

2018-19[1]	2019-20[1]	2020-21[1]
4912	5430	6449
4913	5430	6449
225	279	323
60	60	60
18	18	18
5215	**5787**	**6850**
5216	5787	6850

5,216 - 5,215 5,787 - 5,787 6,850 - 6,850

Total Principal Debt	Total Accumulated Interest Costs	**Peak Total Debt**	
52,287	85,599	89,375	occurs in Year 2034
52,275	85,582	89,356	occurs in Year 2034
44,449	72,823	76,097	occurs in Year 2034
21,239	29,589	32,233	occurs in Year 2030
12,350	16,239	17,670	occurs in Year 2029

o actual prices and actual interest rates.
:cumulation (at 5% interest rate) is expected to be approximately $62 billion, peaking in 203 and $17-21 billion (at 3.5% interest
interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately $33-$36 million.

st rate of 5%.
sed on equal monthly drawdown of debt.
75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on mo

Feb8_1a_30yr
Feb8_1b_30yr
Feb8_1c_30yr
Feb8_1d_30yr
Feb8_1e_30yr

t rate), peaking in 2028.

nth of the year. Actuals may also depend on decision on accounting treatment.

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-275	-311	-350	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,573	85,599
Equal Monthly Debt Drawdown	6,743	4,556	

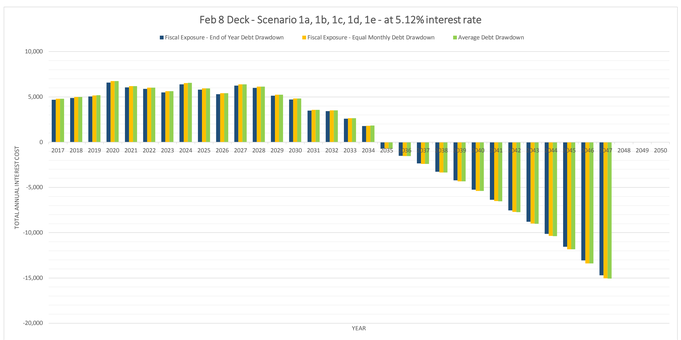
	Feb8 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,375	2034	52,287
Equal Monthly Debt Drawdown	91,501		

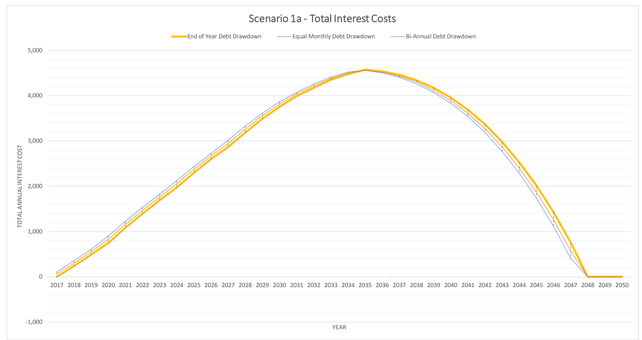
Feb8 1a, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	
c = a*5%	*Interest Cost - Feb8 1a, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,301*	*2,597*	*2,868*	*3,187*	*3,493*	*3,755*	*3,996*	*4,175*	*4,350*	*4,482*	*4,573*	*4,537*	*4,460*	*4,340*	*4,173*	*3,957*	*3,688*	*3,363*	*2,978*	*2,529*	*2,011*	*1,421*	*752*	*0*	*0*	*0*	85,599
b	Additional GA Debt Drawdown, End of Year	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,307	32,728	35,309	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	39,310	27,767	14,699	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	52,287	52,287	52,287	51,591	50,091	47,739	44,479	40,253	34,997	28,642	21,115	12,336	0	0	0	0	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,813	33,987	38,337	42,818	47,391	51,928	56,388	60,728	64,901	68,858	72,546	75,909	78,887	81,416	83,427	84,847	85,599				
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	51,781	51,028	49,259	46,557	41,288	35,252	28,440	20,840	12,440	3,227	-6,816	-17,706	-29,462	-42,106	-55,660	-70,149	-85,599				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	

Feb8 1a, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	
4,556	*Interest Cost - Feb8 1a, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,824*	*2,126*	*2,439*	*2,723*	*3,016*	*3,329*	*3,615*	*3,867*	*4,079*	*4,256*	*4,411*	*4,524*	*4,556*	*4,501*	*4,404*	*4,262*	*4,073*	*3,832*	*3,537*	*3,184*	*2,769*	*2,288*	*1,737*	*1,110*	*402*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
	Monthly Drawdown	390	386	380	487	413	373	318	367	292	224	281	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(980)	(1,054)	(1,129)	(1,207)	(1,288)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,738	4,665	5,979	5,074	4,586	3,902	4,510	3,584	2,753	3,447	2,863	1,662	980	(517)	(772)	(1,810)	(2,766)	(5,394)	(6,180)	(6,975)	(7,781)	(8,599)	(9,432)	(10,282)	(11,149)	(12,036)	(12,944)	(13,876)	(14,834)	(15,818)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	67	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(368)	-	-	-	
	Annual Interest Cost on Opening Balance		245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,263	3,576	3,844	4,091	4,274	4,453	4,588	4,681	4,645	4,566	4,443	4,272	4,051	3,776	3,443	3,049	2,589	2,059	1,454	770	(0)	(0)	(0)	
	Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,824	2,126	2,439	2,723	3,016	3,329	3,615	3,867	4,079	4,256	4,411	4,524	4,556	4,501	4,404	4,262	4,073	3,832	3,537	3,184	2,769	2,288	1,737	1,110	402	(0)	(0)	(0)	

Feb8 1a, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*60*	*301*	*553*	*831*	*1,160*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,948*	*3,263*	*3,558*	*3,815*	*4,041*	*4,218*	*4,383*	*4,504*	*4,564*	*4,518*	*4,430*	*4,298*	*4,119*	*3,890*	*3,607*	*3,267*	*2,866*	*2,399*	*1,864*	*1,253*	*564*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,930	5,110	6,670	6,116	5,947	5,575	6,461	5,875	5,354	6,315	6,060	5,182	4,773	3,535	3,464	2,614	1,802	-705	-1,518	-2,382	-3,302	-4,280	-5,324	-6,436	-7,623	-8,891	-10,244	-11,690	-13,236	-14,887	0	0	0	
	Bi-Annual Drawdown	2,337	2,314	2,279	2,920	2,478	2,240	1,906	2,203	1,750	1,345	1,684	1,398	812	479	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,800)	(4,200)	(4,607)	(5,021)	(5,445)	(5,878)	(6,322)	(6,777)	(7,245)	(7,725)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,687	4,615	5,914	5,019	4,537	3,860	4,462	3,545	2,724	3,410	2,832	1,644	970	(512)	(763)	(1,791)	(2,737)	(5,336)	(6,113)	(6,900)	(7,697)	(8,507)	(9,331)	(10,171)	(11,029)	(11,907)	(12,805)	(13,727)	(14,674)	(15,648)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	494	756	1,097	1,410	1,714	1,999	2,330	2,631	2,905	3,228	3,538	3,803	4,047	4,228	4,405	4,539	4,631	4,595	4,517	4,395	4,227	4,008	3,735	3,406	3,016	2,561	2,037	1,439	762	(0)	(0)	(0)	
	Total Annual Interest Cost	60	301	553	831	1,160	1,467	1,763	2,056	2,375	2,665	2,948	3,263	3,558	3,815	4,041	4,218	4,383	4,504	4,564	4,518	4,430	4,298	4,119	3,890	3,607	3,267	2,866	2,399	1,864	1,253	564	(0)	(0)	(0)	

Feb8 1a, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,723*	*3,027*	*3,340*	*3,624*	*3,875*	*4,085*	*4,262*	*4,416*	*4,527*	*4,555*	*4,499*	*4,400*	*4,257*	*4,065*	*3,822*	*3,525*	*3,170*	*2,753*	*2,270*	*1,716*	*1,086*	*376*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,992	5,174	6,754	6,193	6,022	5,645	6,543	5,950	5,422	6,395	6,137	5,248	4,833	3,580	3,508	2,647	1,825	-714	-1,537	-2,412	-3,343	-4,334	-5,391	-6,517	-7,720	-9,003	-10,374	-11,838	-13,403	-15,075	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-274	-311	-349	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,572	85,582
Equal Monthly Debt Drawdown	6,743	4,555	

	Feb8 1b, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,356	2034	52,275
Equal Monthly Debt Drawdown	91,481		

Feb8 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
a — Debt, Beginning of Year	0	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	
c = a*5% — *Interest Cost - Feb8 1b, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,300*	*2,597*	*2,867*	*3,186*	*3,492*	*3,754*	*3,995*	*4,174*	*4,349*	*4,481*	*4,572*	*4,536*	*4,459*	*4,339*	*4,172*	*3,956*	*3,687*	*3,362*	*2,977*	*2,528*	*2,011*	*1,420*	*752*	*0*	*0*	*0*	85,582
b — Additional GA Debt Drawdown, End of Year	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,309	32,722	35,302	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	39,297	27,758	14,694	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	52,275	52,275	52,275	52,275	51,578	50,078	47,725	44,465	40,239	34,984	28,630	21,105	12,328	0	0	0	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,809	33,983	38,331	42,812	47,384	51,920	56,379	60,718	64,890	68,846	72,533	75,895	78,871	81,399	83,410	84,830	85,582				
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	51,769	51,014	49,246	46,544	41,275	35,239	28,428	20,829	12,431	3,219	-6,822	-17,709	-29,462	-42,102	-55,652	-70,136	-85,582				
Fiscal Exposure - End of Year Debt Drawdown	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	

Feb8 1b, 30-yr — Equal Monthly Debt Drawdown

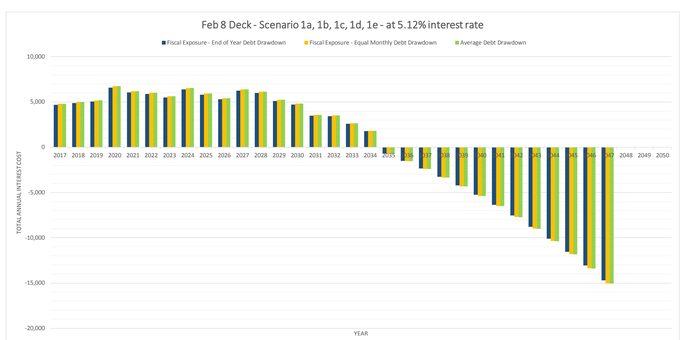
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	
4,555 — *Interest Cost - Feb8 1b, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,823*	*2,126*	*2,438*	*2,723*	*3,016*	*3,329*	*3,614*	*3,866*	*4,078*	*4,255*	*4,410*	*4,523*	*4,555*	*4,500*	*4,403*	*4,261*	*4,072*	*3,831*	*3,536*	*3,183*	*2,768*	*2,287*	*1,736*	*1,109*	*402*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
Monthly Drawdown	390	386	380	487	413	373	317	367	292	224	280	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(979)	(1,053)	(1,129)	(1,207)	(1,287)	(0)	-	-	
FV of Monthly Drawdown at 5%	4,786	4,740	4,665	5,979	5,072	4,585	3,900	4,509	3,582	2,752	3,446	2,862	1,661	979	(518)	(772)	(1,811)	(2,766)	(5,394)	(6,179)	(6,974)	(7,780)	(8,598)	(9,431)	(10,279)	(11,146)	(12,033)	(12,941)	(13,872)	(14,829)	(15,813)	(0)	-	-	
Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	66	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(367)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,262	3,576	3,843	4,090	4,273	4,452	4,587	4,680	4,644	4,565	4,442	4,271	4,050	3,775	3,442	3,048	2,588	2,058	1,454	770	0	0	0	
Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,823	2,126	2,438	2,723	3,016	3,329	3,614	3,866	4,078	4,255	4,410	4,523	4,555	4,500	4,403	4,261	4,072	3,831	3,536	3,183	2,768	2,287	1,736	1,109	402	0	0	0	

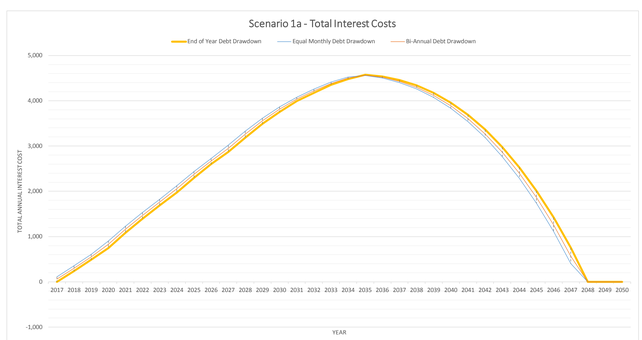
Feb8 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*60*	*301*	*553*	*831*	*1,161*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,947*	*3,263*	*3,558*	*3,814*	*4,040*	*4,217*	*4,382*	*4,503*	*4,563*	*4,517*	*4,429*	*4,297*	*4,118*	*3,889*	*3,606*	*3,266*	*2,865*	*2,399*	*1,863*	*1,253*	*564*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	4,734	4,931	5,110	6,670	6,115	5,945	5,573	6,460	5,874	5,353	6,313	6,058	5,181	4,771	3,534	3,463	2,613	1,801	-706	-1,519	-2,383	-3,302	-4,280	-5,323	-6,435	-7,622	-8,889	-10,242	-11,687	-13,231	-14,882	0	0	0	
Bi-Annual Drawdown	2,337	2,315	2,279	2,920	2,477	2,239	1,905	2,202	1,750	1,344	1,683	1,398	811	478	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,799)	(4,199)	(4,606)	(5,020)	(5,444)	(5,877)	(6,320)	(6,775)	(7,242)	(7,723)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	4,734	4,689	4,615	5,914	5,017	4,535	3,859	4,460	3,544	2,722	3,409	2,831	1,643	969	(513)	(764)	(1,791)	(2,737)	(5,336)	(6,113)	(6,899)	(7,696)	(8,506)	(9,329)	(10,169)	(11,027)	(11,904)	(12,802)	(13,723)	(14,670)	(15,643)	(0)	-	-	
Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	242	495	756	1,097	1,410	1,714	1,999	2,330	2,630	2,904	3,227	3,537	3,802	4,046	4,227	4,404	4,538	4,630	4,594	4,516	4,394	4,225	4,006	3,734	3,405	3,015	2,560	2,036	1,438	761	0	(0)	(0)	
Total Annual Interest Cost	60	301	553	831	1,161	1,467	1,763	2,056	2,375	2,665	2,947	3,263	3,558	3,814	4,040	4,217	4,382	4,503	4,563	4,517	4,429	4,297	4,118	3,889	3,606	3,266	2,865	2,399	1,863	1,253	564	0	(0)	(0)	

Feb8 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,732*	*3,027*	*3,339*	*3,623*	*3,875*	*4,084*	*4,261*	*4,415*	*4,526*	*4,554*	*4,498*	*4,399*	*4,255*	*4,064*	*3,821*	*3,524*	*3,169*	*2,752*	*2,269*	*1,715*	*1,086*	*376*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	4,794	4,994	5,174	6,754	6,192	6,020	5,643	6,541	5,948	5,420	6,393	6,135	5,246	4,831	3,578	3,507	2,646	1,824	-715	-1,538	-2,413	-3,343	-4,334	-5,390	-6,516	-7,718	-9,001	-10,371	-11,835	-13,398	-15,070	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1c_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	
			111	111	109	140	120	116	107	128	115	103	126	121	101	93	66	66	48	32	-24	-40	-57	-74	-92	-111	-132	-153	-175	-199	-224	-250	-278	0	0	0	0

		Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	5,867		3,893	72,823
Equal Monthly Debt Drawdown	6,006		3,869	

		Feb8 1c, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	76,097		2034	44,449
Equal Monthly Debt Drawdown	77,907			

Feb8 1c, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	
c = a*5%	*Interest Cost - Feb8 1c, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*477*	*712*	*1,012*	*1,269*	*1,518*	*1,748*	*2,023*	*2,270*	*2,491*	*2,762*	*3,022*	*3,239*	*3,440*	*3,581*	*3,722*	*3,826*	*3,893*	*3,841*	*3,754*	*3,632*	*3,473*	*3,274*	*3,034*	*2,751*	*2,423*	*2,046*	*1,618*	*1,136*	*598*	*0*	*0*	*0*	72,823
b	Additional GA Debt Drawdown, End of Year	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	
	Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	25,538	28,304	30,324	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,624	22,213	11,693	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	44,449	44,449	44,449	44,449	43,420	41,729	39,342	36,228	32,347	27,662	22,130	15,704	8,337	0	0	0	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	26,221	29,801	33,524	37,349	41,242	45,083	48,837	52,469	55,942	59,216	62,250	65,002	67,424	69,470	71,088	72,224	72,823				
	Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	43,767	42,952	41,249	38,748	33,826	28,294	22,153	15,406	8,054	94	-8,473	-17,649	-27,439	-37,846	-48,875	-60,532	-72,823				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	

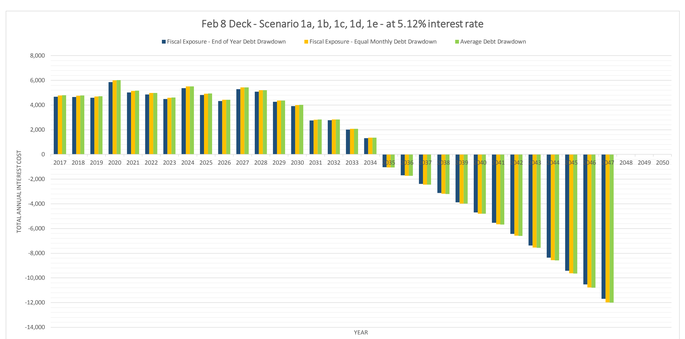
Feb8 1c, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
3,869	Debt, Beginning of Year	0	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*111*	*350*	*586*	*851*	*1,132*	*1,385*	*1,625*	*1,876*	*2,138*	*2,372*	*2,617*	*2,882*	*3,123*	*3,333*	*3,505*	*3,646*	*3,770*	*3,857*	*3,869*	*3,800*	*3,697*	*3,558*	*3,380*	*3,163*	*2,903*	*2,599*	*2,247*	*1,847*	*1,394*	*886*	*320*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	

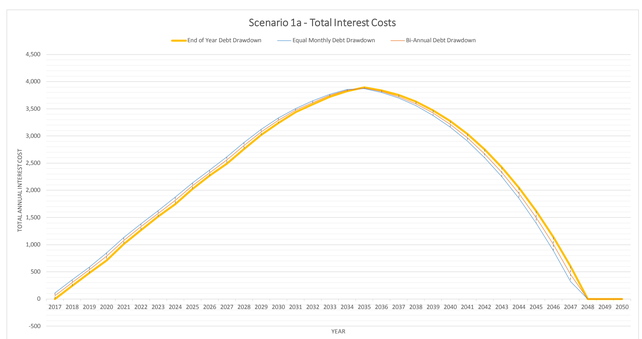
	Monthly Drawdown	390	367	343	430	335	299	248	303	233	171	234	193	103	56	(57)	(68)	(142)	(208)	(410)	(461)	(512)	(562)	(613)	(663)	(714)	(765)	(816)	(867)	(919)	(971)	(1,024)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,515	4,210	5,278	4,114	3,677	3,048	3,717	2,857	2,099	2,873	2,375	1,268	689	(699)	(834)	(1,744)	(2,561)	(5,039)	(5,664)	(6,286)	(6,907)	(7,528)	(8,148)	(8,771)	(9,395)	(10,023)	(10,654)	(11,291)	(11,934)	(12,583)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	105	98	123	96	85	71	86	66	49	67	55	29	16	(16)	(19)	(41)	(59)	(117)	(132)	(146)	(160)	(175)	(189)	(204)	(218)	(233)	(248)	(262)	(277)	(292)	-	-	-	
	Annual Interest Cost on Opening Balance	-	245	488	729	1,036	1,300	1,554	1,790	2,071	2,323	2,550	2,827	3,093	3,317	3,521	3,666	3,811	3,917	3,986	3,932	3,843	3,718	3,555	3,352	3,107	2,817	2,480	2,094	1,656	1,163	612	(0)	(0)	(0)	
	Total Annual Interest Cost	111	350	586	851	1,132	1,385	1,625	1,876	2,138	2,372	2,617	2,882	3,123	3,333	3,505	3,646	3,770	3,857	3,869	3,800	3,697	3,558	3,380	3,163	2,903	2,599	2,247	1,847	1,394	886	320	(0)	(0)	(0)	

Feb8 1c, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*60*	*299*	*536*	*787*	*1,076*	*1,332*	*1,576*	*1,817*	*2,085*	*2,325*	*2,558*	*2,827*	*3,076*	*3,290*	*3,475*	*3,616*	*3,748*	*3,842*	*3,880*	*3,819*	*3,724*	*3,592*	*3,423*	*3,214*	*2,964*	*2,669*	*2,328*	*1,939*	*1,498*	*1,002*	*449*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,708	4,648	5,942	5,095	4,923	4,553	5,447	4,876	4,375	5,364	5,147	4,315	3,962	2,792	2,802	2,045	1,341	-1,042	-1,713	-2,417	-3,155	-3,930	-4,745	-5,603	-6,508	-7,461	-8,468	-9,531	-10,655	-11,842	0	0	0	

	Bi-Annual Drawdown	2,337	2,205	2,056	2,578	2,009	1,796	1,489	1,815	1,395	1,025	1,403	1,160	620	336	(341)	(407)	(852)	(1,251)	(2,461)	(2,766)	(3,070)	(3,373)	(3,676)	(3,980)	(4,283)	(4,588)	(4,895)	(5,203)	(5,514)	(5,828)	(6,146)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,466	4,165	5,221	4,070	3,638	3,015	3,677	2,826	2,077	2,842	2,350	1,255	681	(691)	(825)	(1,725)	(2,533)	(4,985)	(5,603)	(6,219)	(6,833)	(7,447)	(8,061)	(8,676)	(9,294)	(9,915)	(10,540)	(11,170)	(11,806)	(12,448)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	56	53	66	51	46	38	46	36	26	36	30	16	9	(9)	(10)	(22)	(32)	(63)	(71)	(79)	(86)	(94)	(102)	(110)	(117)	(125)	(133)	(141)	(149)	(157)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	483	721	1,025	1,286	1,537	1,770	2,049	2,299	2,522	2,797	3,060	3,281	3,484	3,626	3,770	3,874	3,943	3,890	3,802	3,678	3,517	3,316	3,073	2,787	2,454	2,072	1,639	1,151	606	(0)	(0)	(0)	
	Total Annual Interest Cost	60	299	536	787	1,076	1,332	1,576	1,817	2,085	2,325	2,558	2,827	3,076	3,290	3,475	3,616	3,748	3,842	3,880	3,819	3,724	3,592	3,423	3,214	2,964	2,669	2,328	1,939	1,498	1,002	449	(0)	(0)	(0)	

Feb8 1c, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*120*	*358*	*594*	*862*	*1,141*	*1,394*	*1,633*	*1,886*	*2,146*	*2,380*	*2,626*	*2,892*	*3,130*	*3,340*	*3,510*	*3,651*	*3,774*	*3,859*	*3,867*	*3,797*	*3,693*	*3,552*	*3,373*	*3,154*	*2,893*	*2,587*	*2,234*	*1,832*	*1,377*	*867*	*299*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,768	4,707	6,017	5,160	4,985	4,610	5,516	4,937	4,431	5,432	5,212	4,370	4,012	2,828	2,837	2,071	1,358	-1,055	-1,735	-2,447	-3,195	-3,979	-4,805	-5,674	-6,590	-7,556	-8,575	-9,652	-10,789	-11,992	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1d_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
			52	54	56	73	67	61	51	71	56	42	64	57	36	27	-2	-3	-23	-37	-39	-41	-43	-46	-48	-50	-53	-56	-59	-62	-65	-68	-71	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,072	1,649	29,589
Equal Monthly Debt Drawdown	3,145	1,647	

	Feb8 1d, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,233	2030	21,239
Equal Monthly Debt Drawdown	32,999		

Feb8 1d, 30-yr — End of Year Debt Drawdown

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
a	Debt, Beginning of Year	0	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	
c = a*5%	*Interest Cost - Feb8 1d, 30-yr - End of Year Debt Drawdown*	*0*	*112*	*228*	*348*	*505*	*649*	*781*	*891*	*1,043*	*1,162*	*1,253*	*1,391*	*1,514*	*1,592*	*1,649*	*1,644*	*1,637*	*1,588*	*1,508*	*1,423*	*1,335*	*1,241*	*1,143*	*1,040*	*931*	*817*	*698*	*572*	*439*	*300*	*154*	*0*	*0*	*0*	29,589
b	Additional GA Debt Drawdown, End of Year	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	11,372	11,227	10,281	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,586	5,865	3,006	0	0	0	0	
	Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	20,763	20,763	20,763	20,763	19,112	17,375	15,550	13,632	11,616	9,496	7,268	4,926	2,464	0	0	0	0	0	0	0	
	Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	13,118	14,763	16,399	17,988	19,495	20,919	22,253	23,495	24,638	25,678	26,609	27,426	28,124	28,696	29,135	29,435	29,589				
	Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	19,017	17,228	14,645	11,486	8,326	5,167	2,007	-1,153	-4,312	-7,472	-10,631	-13,791	-16,951	-20,110	-23,270	-26,429	-29,589				
Fiscal Exposure - End of Year Debt Drawdown		2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	

Feb8 1d, 30-yr — Equal Monthly Debt Drawdown

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Debt, Beginning of Year	0	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	
1,647	*Interest Cost - Feb8 1d, 30-yr*	*52*	*166*	*284*	*421*	*572*	*711*	*832*	*962*	*1,098*	*1,205*	*1,317*	*1,448*	*1,550*	*1,619*	*1,647*	*1,641*	*1,614*	*1,551*	*1,469*	*1,382*	*1,291*	*1,196*	*1,095*	*989*	*878*	*762*	*639*	*510*	*375*	*232*	*82*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
	Monthly Drawdown	182	180	177	227	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	-	-	-	
	FV of Monthly Drawdown at 5%	2,232	2,210	2,176	2,788	2,366	1,977	1,399	2,123	1,322	628	1,468	1,042	12	(487)	(1,788)	(1,831)	(2,644)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	-	-	-	
	Annual Interest Cost on New Drawdowns	52	51	51	65	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	-	-	-	
	Annual Interest Cost on Opening Balance	-	114	233	356	517	665	800	912	1,068	1,190	1,283	1,424	1,550	1,630	1,688	1,683	1,676	1,626	1,544	1,457	1,366	1,271	1,170	1,065	954	837	714	585	450	307	157	0	0	0	
	Total Annual Interest Cost	52	166	284	421	572	711	832	962	1,098	1,205	1,317	1,448	1,550	1,619	1,647	1,641	1,614	1,551	1,469	1,382	1,291	1,196	1,095	989	878	762	639	510	375	232	82	0	0	0	

Feb8 1d, 30-yr — Bi-Annual Debt Drawdown

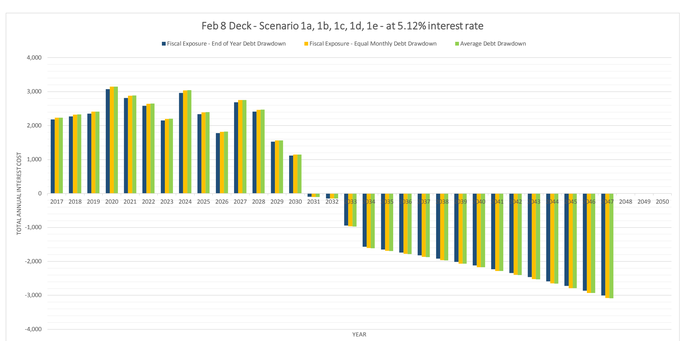
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

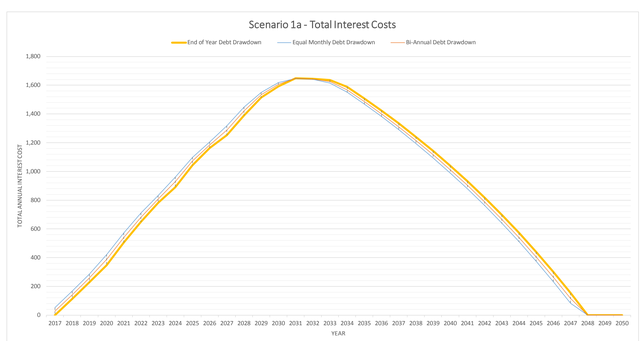
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Debt, Beginning of Year	0	2,208	4,507	6,890	10,001	12,854	15,467	17,642	20,645	23,009	24,807	27,529	29,969	31,514	32,645	32,546	32,400	31,442	29,850	28,177	26,419	24,571	22,628	20,585	18,439	16,182	13,810	11,316	8,695	5,940	3,044	0	0	0	
	Interest Cost - Feb8 1d, 30-yr	*28*	*141*	*258*	*387*	*541*	*682*	*809*	*929*	*1,073*	*1,185*	*1,288*	*1,421*	*1,533*	*1,606*	*1,648*	*1,642*	*1,625*	*1,568*	*1,487*	*1,401*	*1,311*	*1,217*	*1,117*	*1,013*	*903*	*787*	*666*	*539*	*404*	*264*	*115*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,208	4,507	6,890	10,001	12,854	15,467	17,642	20,645	23,009	24,807	27,529	29,969	31,514	32,645	32,546	32,400	31,442	29,850	28,177	26,419	24,571	22,628	20,585	18,439	16,182	13,810	11,316	8,695	5,940	3,044	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,208	2,299	2,383	3,111	2,853	2,613	2,175	3,003	2,364	1,798	2,722	2,440	1,545	1,131	-98	-147	-958	-1,591	-1,673	-1,758	-1,848	-1,943	-2,042	-2,147	-2,257	-2,372	-2,493	-2,621	-2,755	-2,896	-3,044	0	0	0	
	Bi-Annual Drawdown	1,090	1,079	1,063	1,362	1,156	965	683	1,037	646	307	717	509	6	(238)	(873)	(894)	(1,291)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,208	2,186	2,153	2,758	2,341	1,955	1,384	2,100	1,308	621	1,453	1,031	12	(481)	(1,769)	(1,812)	(2,616)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	-	-	-	
	Annual Interest Cost on New Drawdowns	28	28	27	35	30	25	17	27	17	8	18	13	0	(6)	(22)	(23)	(33)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	-	-	-	
	Annual Interest Cost on Opening Balance	-	113	231	353	512	658	791	903	1,056	1,177	1,269	1,408	1,533	1,612	1,670	1,665	1,658	1,609	1,527	1,442	1,352	1,257	1,158	1,053	943	828	707	579	445	304	156	0	0	0	
	Total Annual Interest Cost	28	141	258	387	541	682	809	929	1,073	1,185	1,288	1,421	1,533	1,606	1,648	1,642	1,625	1,568	1,487	1,401	1,311	1,217	1,117	1,013	903	787	666	539	404	264	115	0	0	0	

Feb8 1d, 30-yr — Average Debt Drawdown

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Debt, Beginning of Year	0	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	
	Interest Cost - Feb8 1d, 30-yr	*56*	*170*	*288*	*427*	*577*	*715*	*836*	*967*	*1,103*	*1,208*	*1,322*	*1,452*	*1,553*	*1,621*	*1,647*	*1,640*	*1,613*	*1,548*	*1,466*	*1,379*	*1,288*	*1,192*	*1,091*	*986*	*874*	*758*	*635*	*505*	*370*	*227*	*77*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		2,236	2,328	2,413	3,150	2,889	2,646	2,203	3,041	2,394	1,821	2,756	2,471	1,565	1,145	-100	-148	-970	-1,612	-1,694	-1,781	-1,872	-1,967	-2,068	-2,174	-2,285	-2,402	-2,525	-2,654	-2,790	-2,933	-3,083	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1e_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0
			36	37	38	53	46	39	27	45	28	13	33	24	1	-11	-16	-16	-17	-18	-19	-20	-21	-22	-23	-25	-26	-27	-29	-30	-32	-33	-35	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,243	904	16,239
Equal Monthly Debt Drawdown	2,297	903	

	Feb8 1e, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	17,670	2029	12,350
Equal Monthly Debt Drawdown	18,091		

Feb8 1e, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
a Debt, Beginning of Year	0	1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	
c = a*5% *Interest Cost - Feb8 1e, 30-yr - End of Year Debt Drawdown*	*0*	*77*	*156*	*236*	*351*	*450*	*534*	*592*	*688*	*749*	*778*	*849*	*901*	*904*	*881*	*847*	*812*	*775*	*735*	*694*	*651*	*605*	*558*	*507*	*454*	*399*	*340*	*279*	*214*	*146*	*75*	*0*	*0*	*0*	16,239
b Additional GA Debt Drawdown, End of Year	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
d = a+b+c Accumulated debt in present year (including 5.12% annual interest)	1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
Feb8 1e, 30-yr - Accumulated Interest Costs	0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	6,605	5,911	5,182	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,188	2,861	1,466	0	0	0	0
Feb8 1e, 30-yr - Accumulated Debt Principal	1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	9,960	9,960	9,960	9,960	9,155	8,308	7,418	6,482	5,498	4,465	3,378	2,235	1,035	0	0	0	0	0	0	0	
Feb8 1e, 30-yr - Accumulated Interest Costs	0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	8,146	8,993	9,805	10,580	11,315	12,010	12,661	13,266	13,824	14,331	14,785	15,184	15,524	15,803	16,017	16,164	16,239				
Feb8 1e, 30-yr - Accumulated Debt Principal	1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	8,419	6,878	5,337	3,796	2,255	714	-827	-2,369	-3,910	-5,451	-6,992	-8,533	-10,074	-11,615	-13,156	-14,697	-16,239				
Fiscal Exposure - End of Year Debt Drawdown	1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	

Feb8 1e, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	
903 *Interest Cost - Feb8 1e, 30-yr*	*36*	*113*	*193*	*290*	*397*	*489*	*561*	*637*	*717*	*762*	*811*	*873*	*903*	*893*	*866*	*831*	*795*	*756*	*716*	*674*	*630*	*583*	*534*	*483*	*428*	*372*	*312*	*249*	*183*	*113*	*40*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	
Monthly Drawdown	125	122	119	167	132	99	50	108	42	(16)	51	15	(70)	(112)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	-	-	-	
FV of Monthly Drawdown at 5%	1,536	1,500	1,457	2,055	1,617	1,213	620	1,328	512	(199)	625	182	(865)	(1,382)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	-	-	-	
Annual Interest Cost on New Drawdowns	36	35	34	48	38	28	14	31	12	(5)	15	4	(20)	(32)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	-	-	-	
Annual Interest Cost on Opening Balance	-	79	159	242	359	461	546	606	705	767	796	869	923	926	902	868	831	793	753	711	666	620	571	519	465	408	348	285	219	150	77	0	0	0	
Total Annual Interest Cost	36	113	193	290	397	489	561	637	717	762	811	873	903	893	866	831	795	756	716	674	630	583	534	483	428	372	312	249	183	113	40	0	0	0	

Feb8 1e, 30-yr — Bi-Annual Debt Drawdown

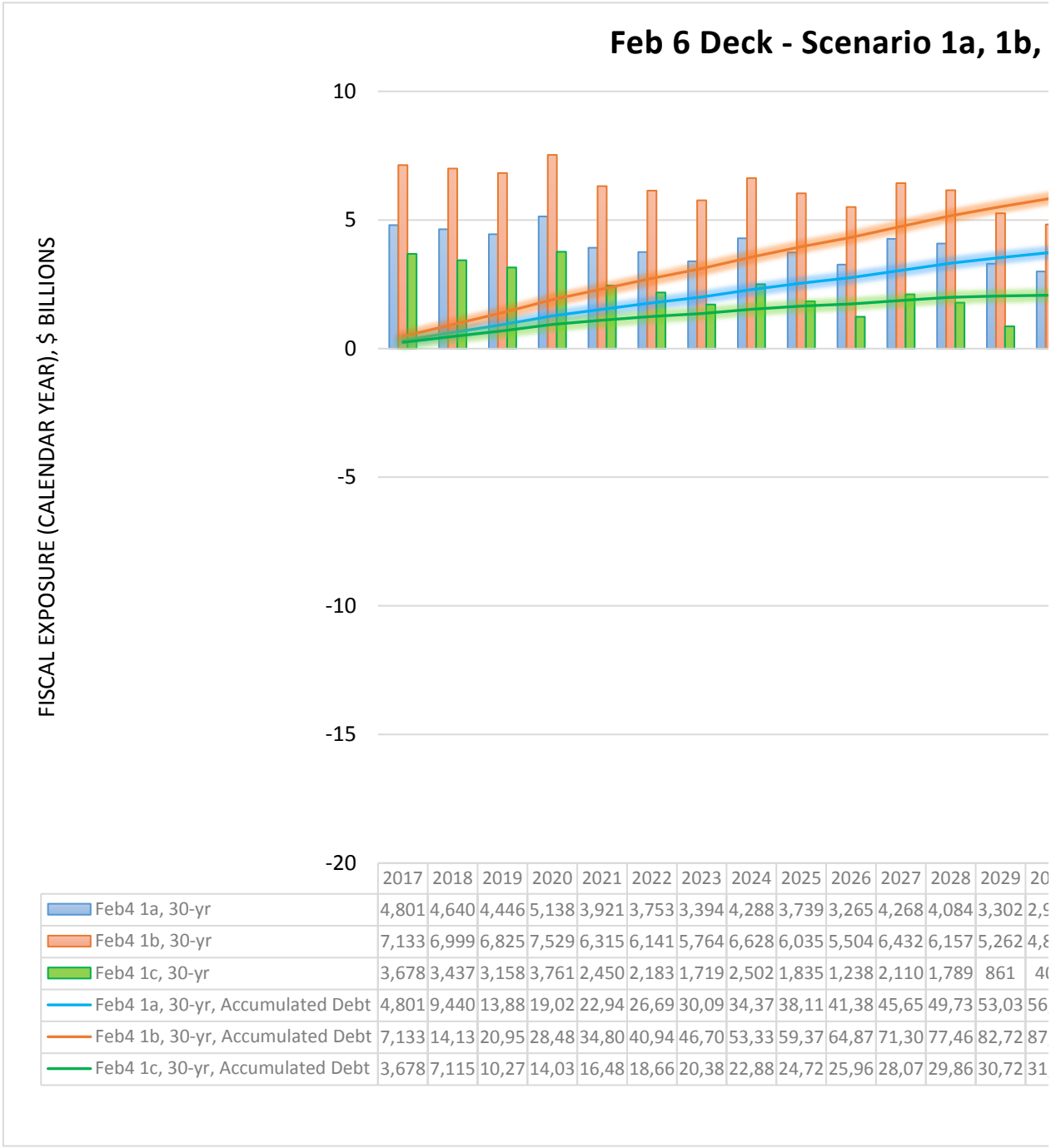
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	
Interest Cost - Feb8 1e, 30-yr	*19*	*96*	*176*	*265*	*376*	*471*	*548*	*616*	*704*	*756*	*795*	*862*	*902*	*898*	*873*	*839*	*803*	*765*	*725*	*683*	*640*	*593*	*545*	*494*	*440*	*384*	*325*	*263*	*197*	*129*	*56*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	1,519	1,561	1,598	2,272	1,956	1,655	1,154	1,913	1,203	562	1,406	1,040	57	-451	-668	-703	-738	-776	-816	-858	-902	-948	-996	-1,047	-1,101	-1,157	-1,216	-1,278	-1,344	-1,413	-1,485	0	0	0	
Bi-Annual Drawdown	750	733	711	1,003	790	592	303	649	250	(97)	305	89	(423)	(675)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	-	-	-	
FV of Bi-Annual Drawdown at 5%	1,519	1,484	1,441	2,033	1,600	1,200	613	1,314	506	(197)	618	180	(856)	(1,367)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	-	-	-	
Annual Interest Cost on New Drawdowns	19	19	18	26	20	15	8	17	6	(2)	8	2	(11)	(17)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	-	-	-	
Annual Interest Cost on Opening Balance	-	78	158	239	356	456	540	599	697	759	788	860	913	916	893	858	822	785	745	703	659	613	565	514	460	404	345	282	217	148	76	0	0	0	
Total Annual Interest Cost	19	96	176	265	376	471	548	616	704	756	795	862	902	898	873	839	803	765	725	683	640	593	545	494	440	384	325	263	197	129	56	0	0	0	

Feb8 1e, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	
Interest Cost - Feb8 1e, 30-yr	*38*	*116*	*196*	*294*	*401*	*492*	*563*	*640*	*719*	*763*	*813*	*875*	*903*	*893*	*864*	*830*	*793*	*755*	*715*	*673*	*628*	*581*	*532*	*481*	*427*	*369*	*310*	*247*	*180*	*111*	*38*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	1,538	1,581	1,619	2,301	1,980	1,676	1,168	1,938	1,219	569	1,424	1,053	57	-457	-677	-711	-748	-786	-826	-869	-913	-960	-1,009	-1,060	-1,115	-1,172	-1,232	-1,295	-1,361	-1,430	-1,504	0	0	0	

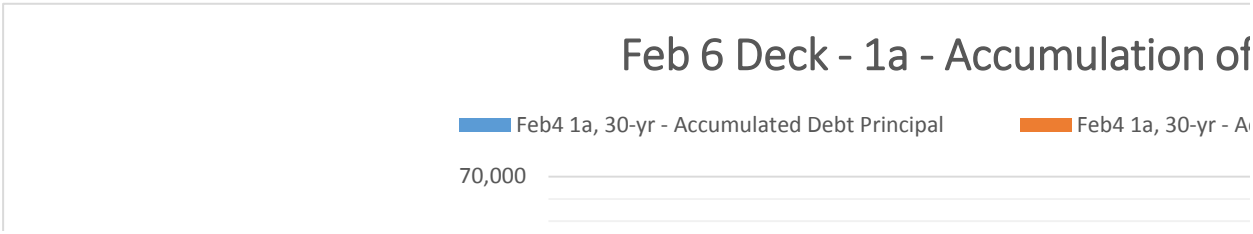
Feb 6 Deck

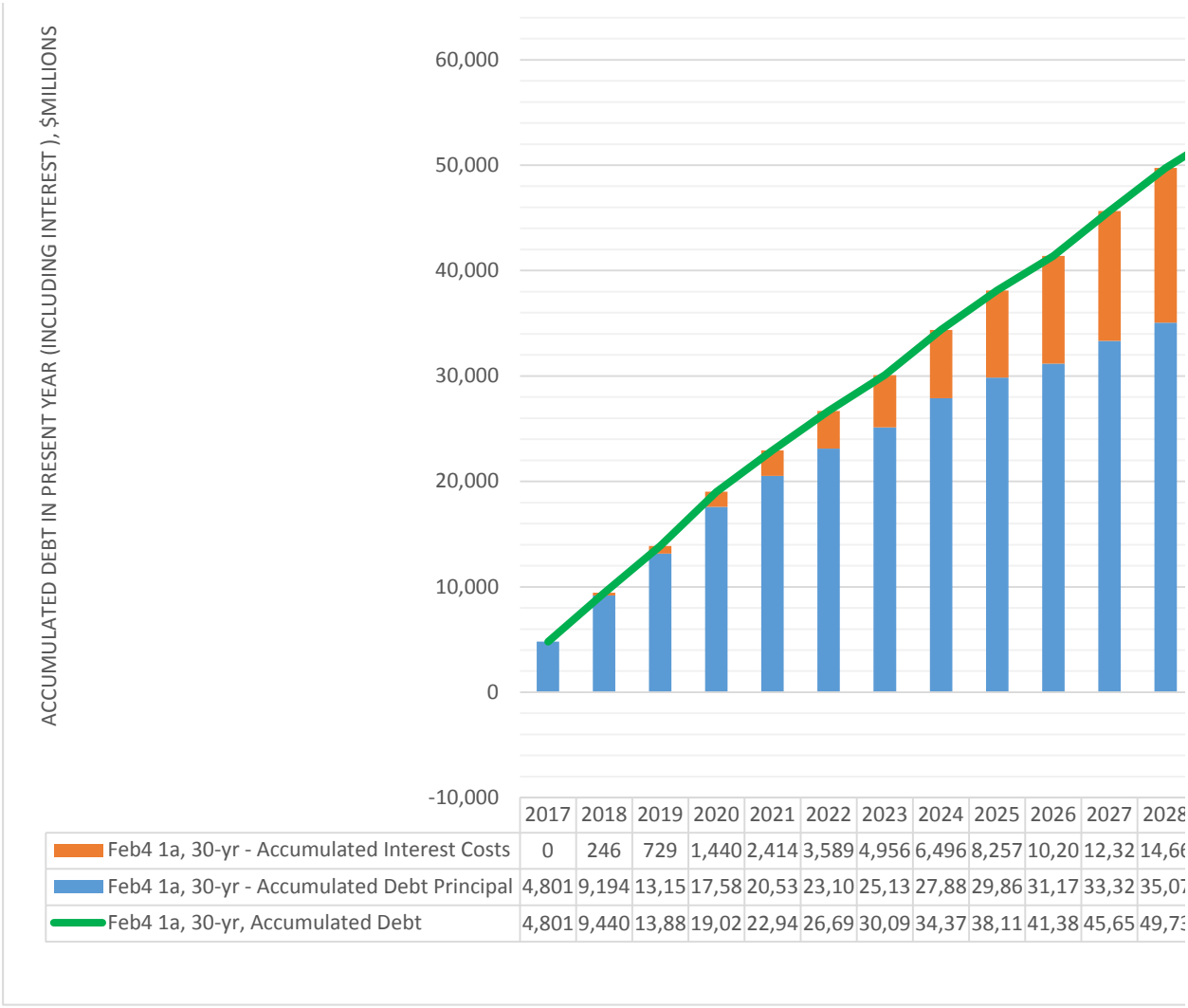
Feb 6 Deck - Scenario 1a, 1b, 1c - at 5.12% interest rate



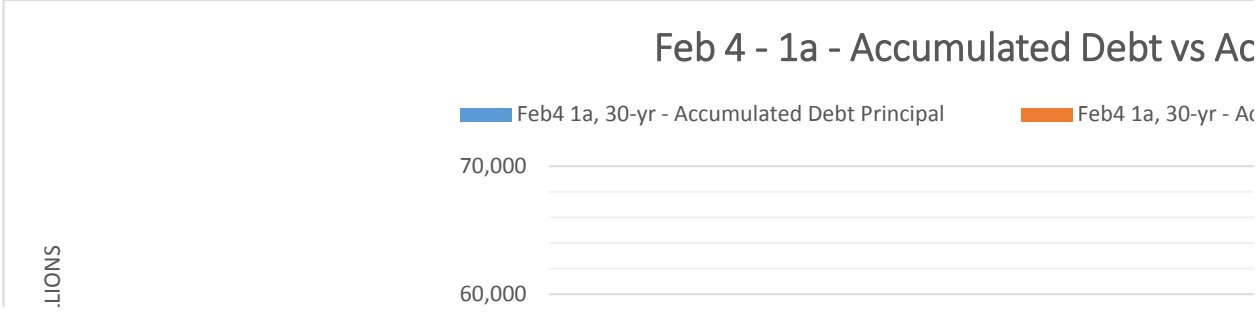
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	20
Feb4 1a, 30-yr	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,9
Feb4 1b, 30-yr	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,8
Feb4 1c, 30-yr	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	4(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73	53,03	56
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31

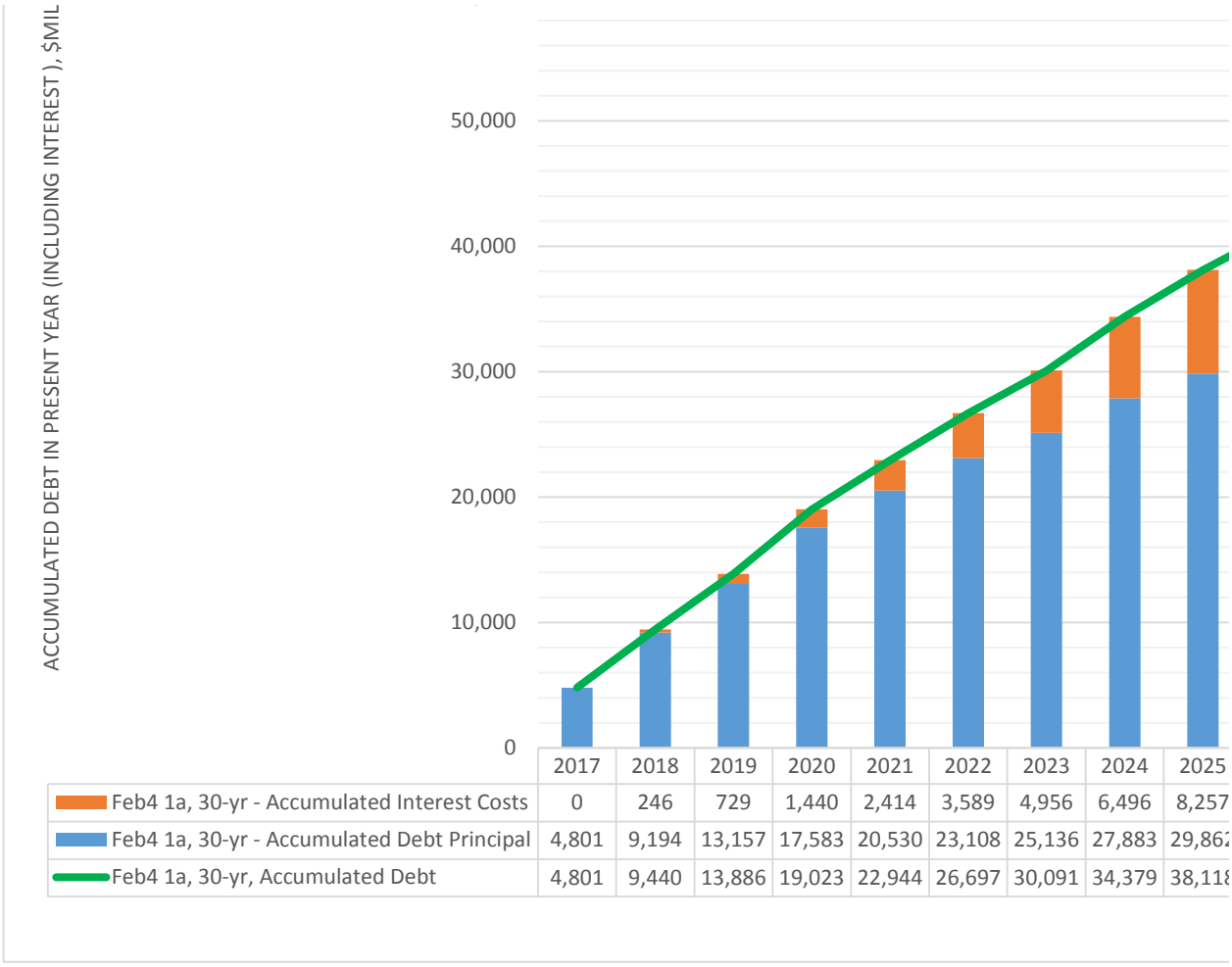
Feb 6 Deck - 1a - Accumulation of Debt (Principal and Interest)



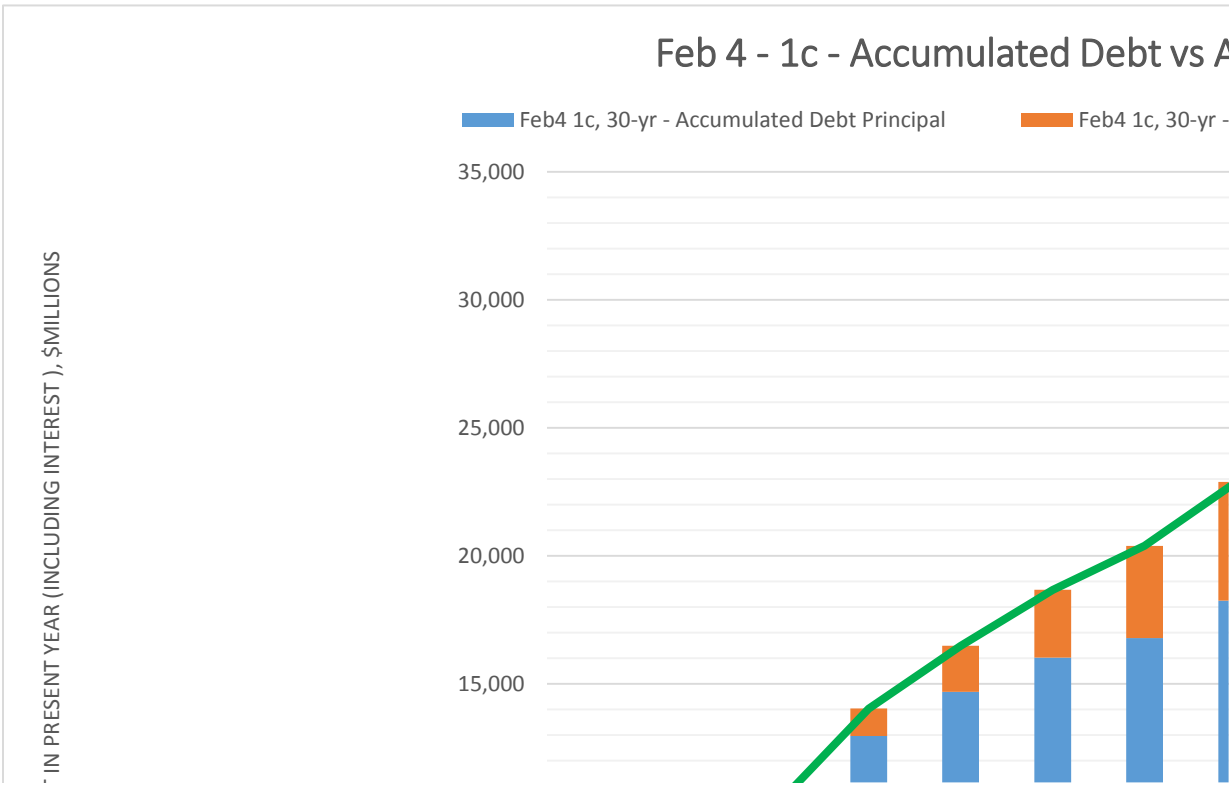


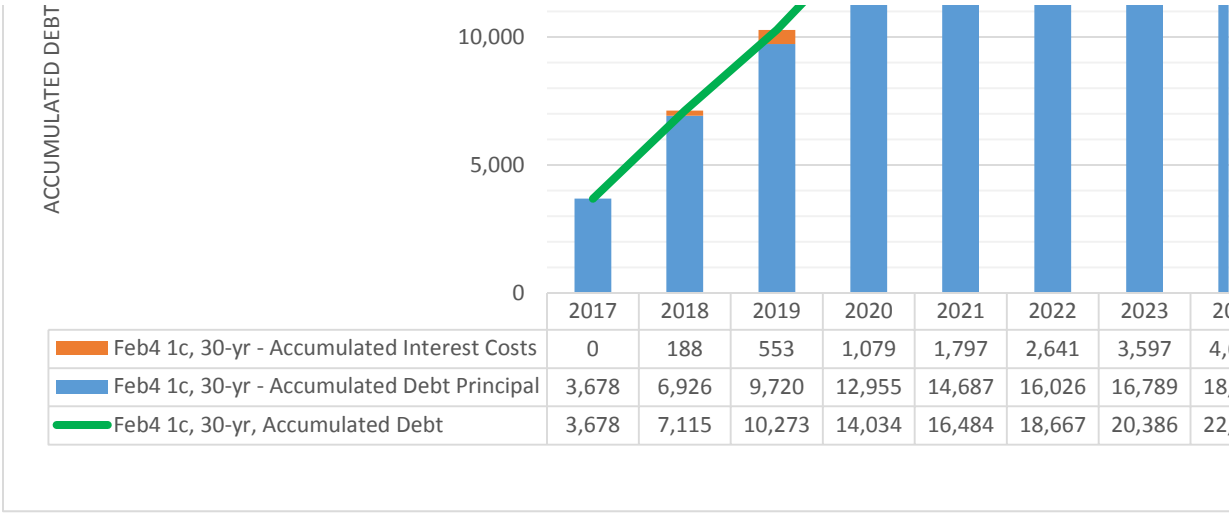
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,66
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,07
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73



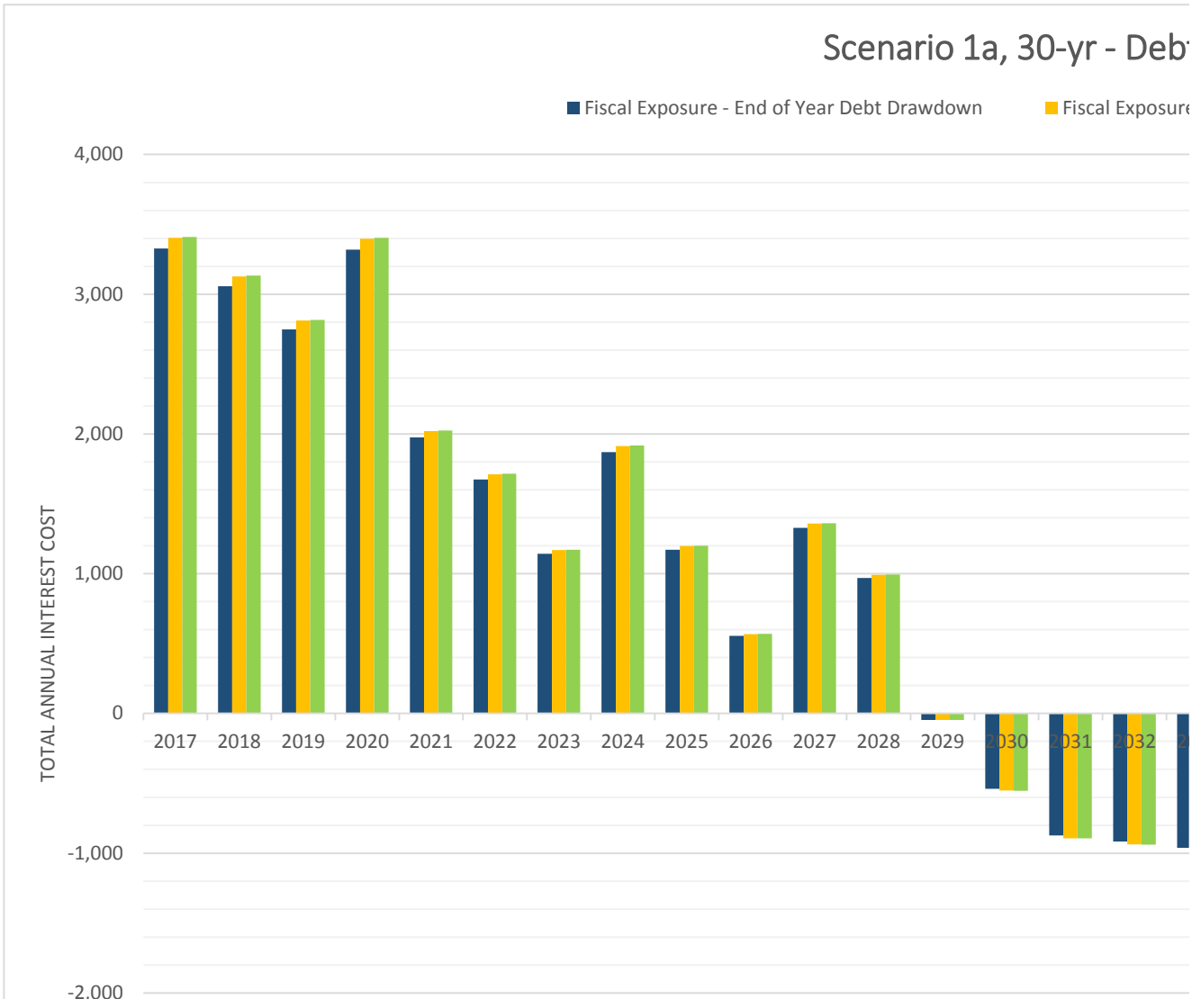


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



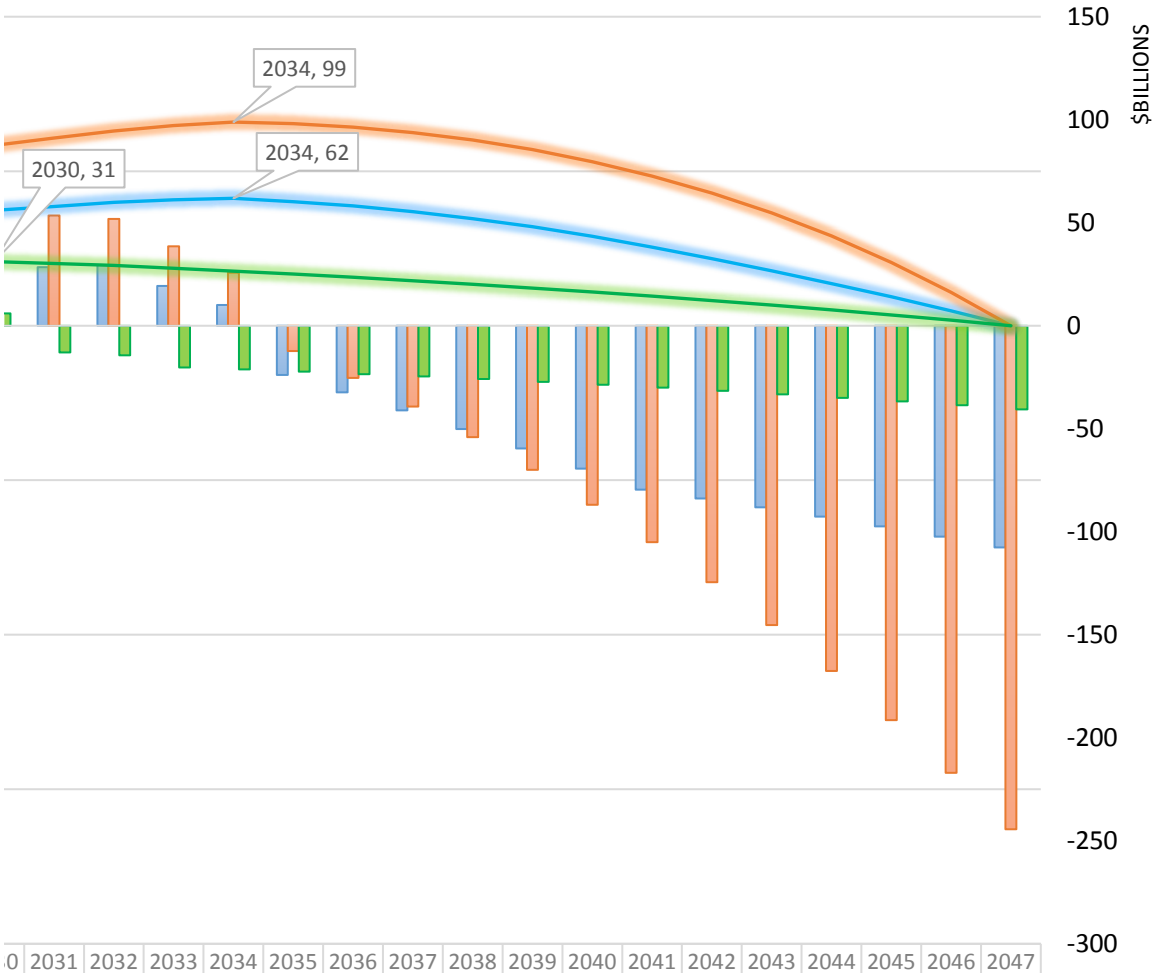


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22



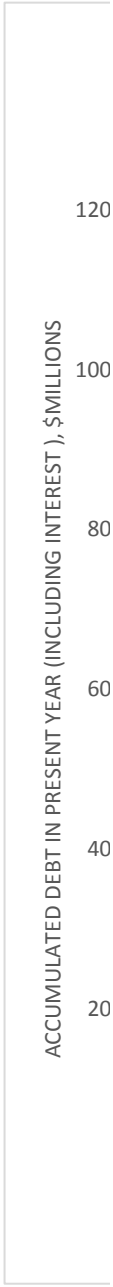

-3,000

lc - at 5.12% interest rate



0	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
98	1,896	1,966	1,288	672	-1,59	-2,15	-2,73	-3,34	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
26	3,568	3,457	2,571	1,716	-819	-1,68	-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
4	-860	-961	-1,34	-1,41	-1,48	-1,56	-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0
55	91,12	94,57	97,14	98,86	98,04	96,35	93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0
12	30,26	29,30	27,95	26,54	25,05	23,49	21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

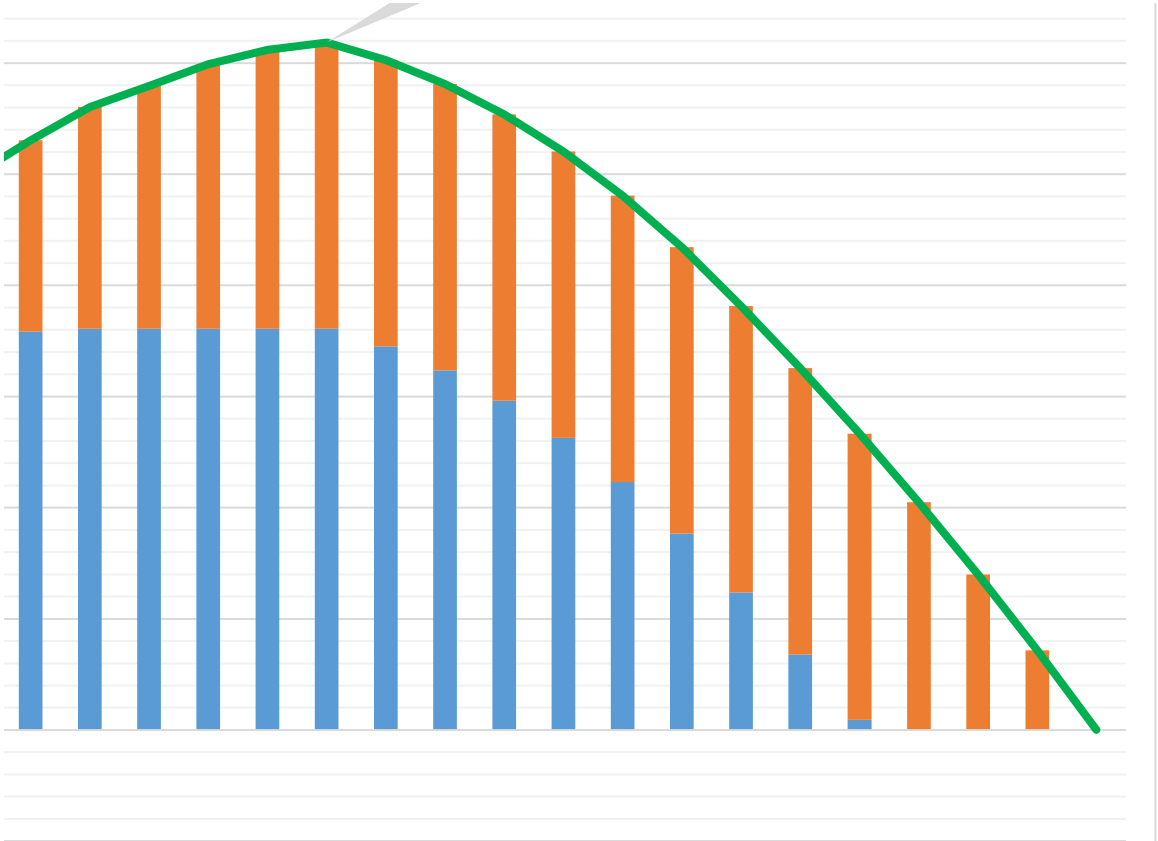
CALENDAR YEAR



Debt (Principal and Interest)

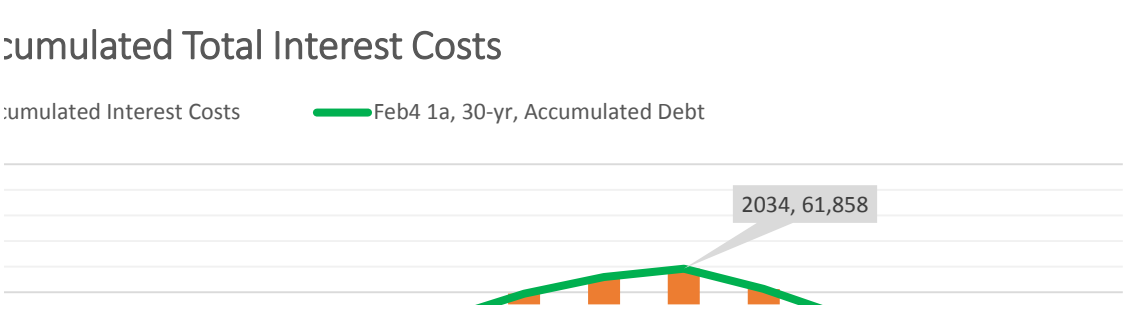
cumulated Interest Costs — Feb4 1a, 30-yr, Accumulated Debt

2034, 61,858

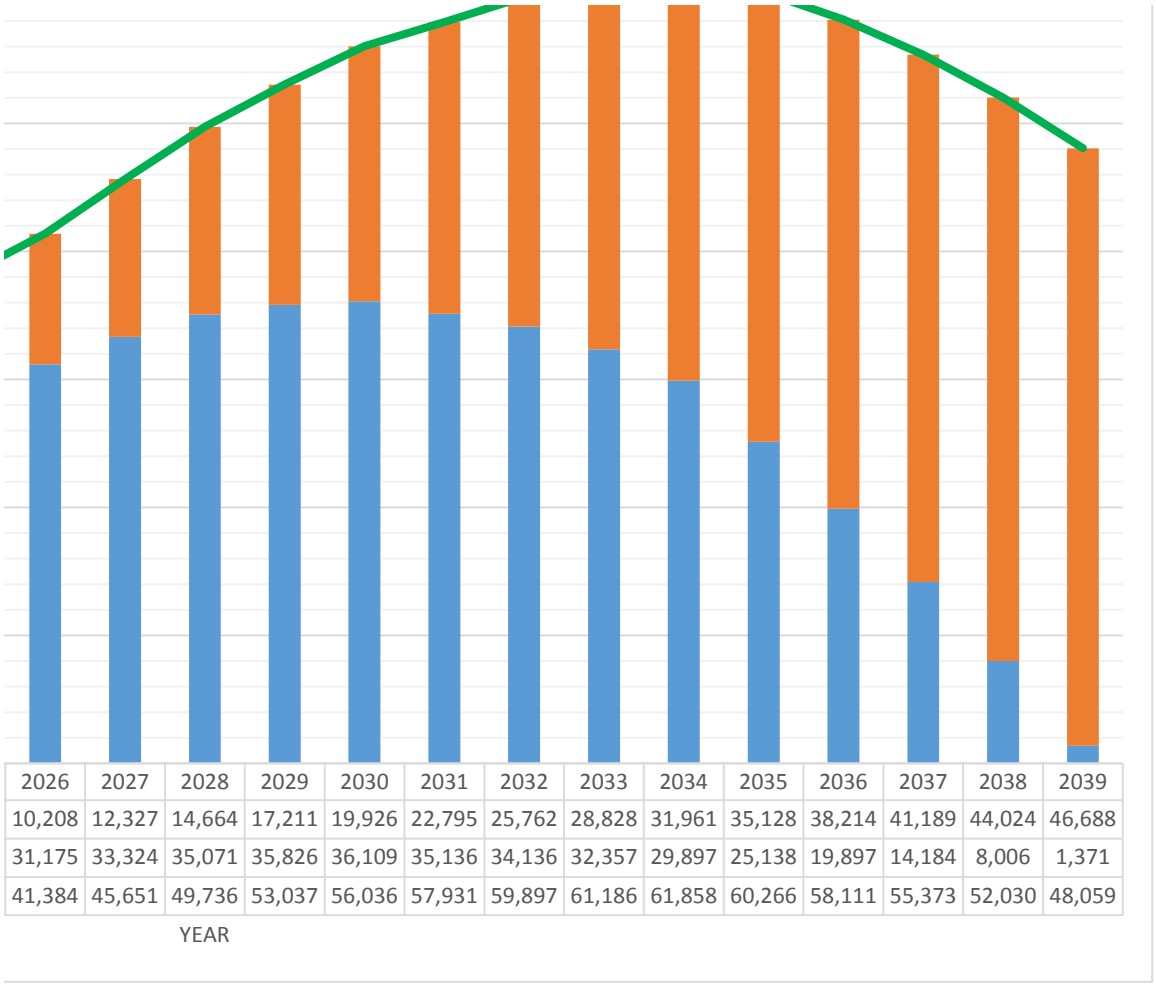


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



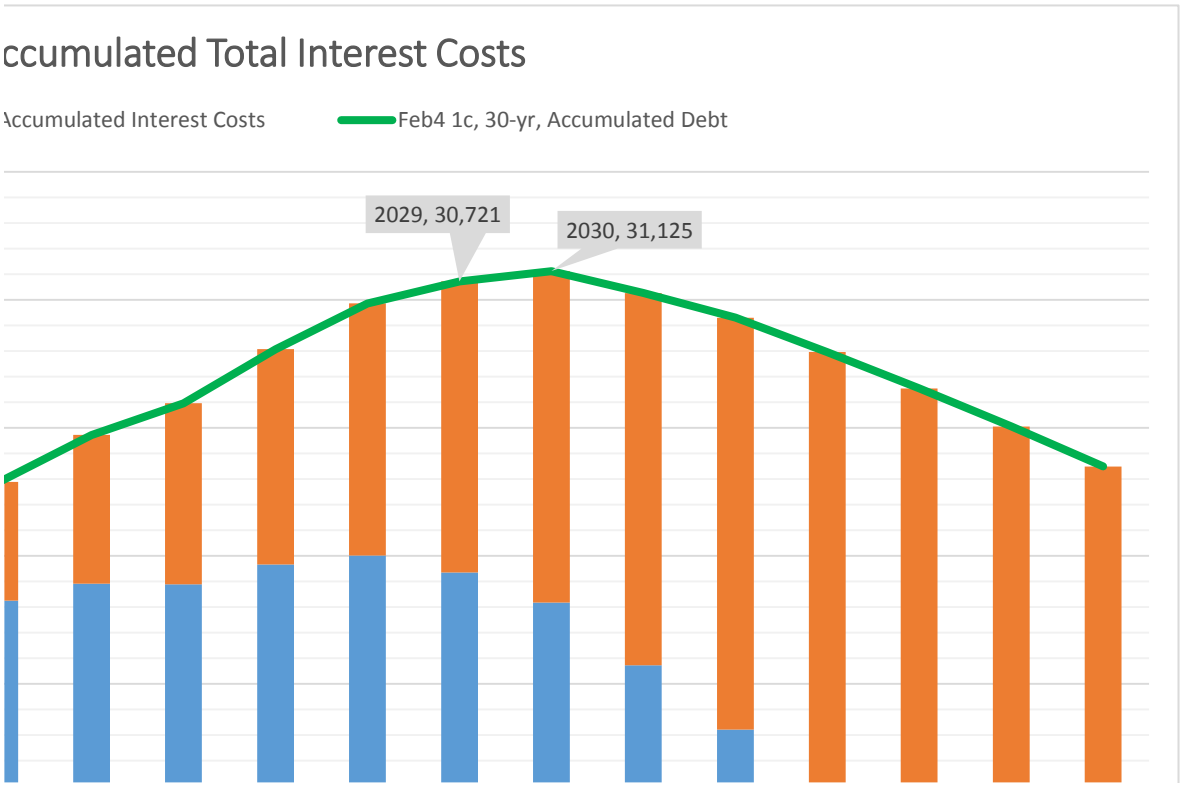
LIONS

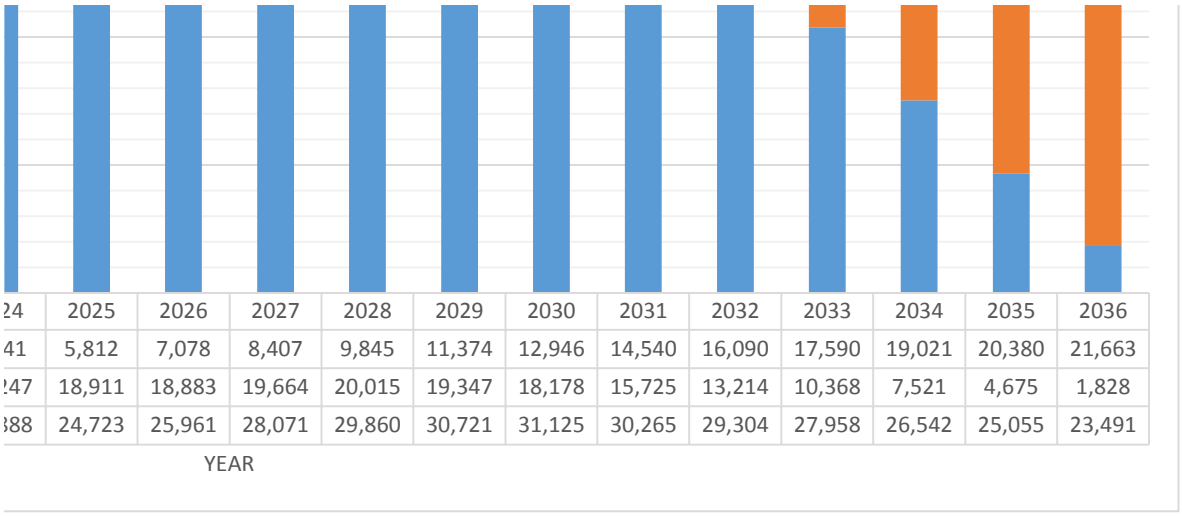


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

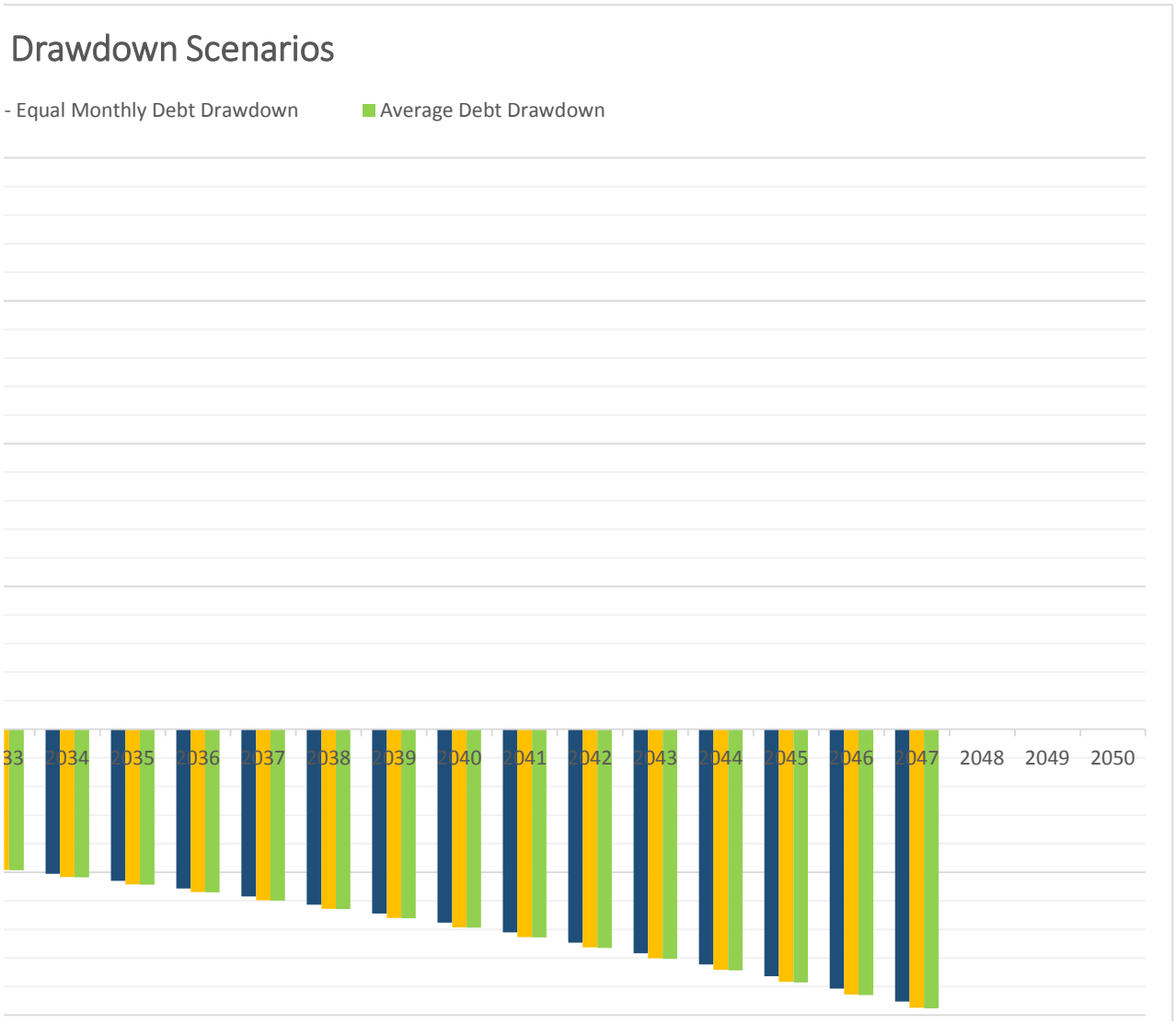
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





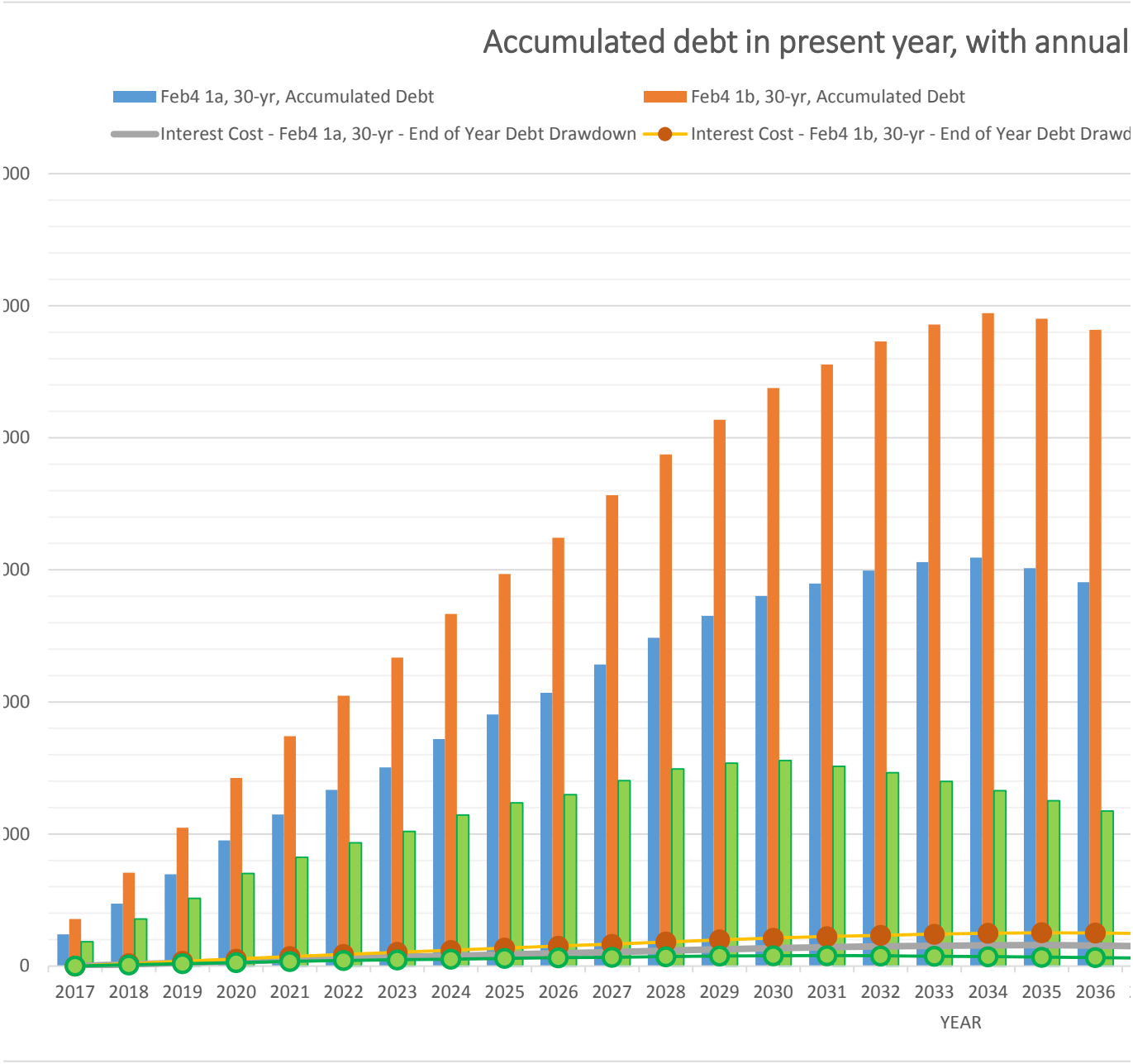
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

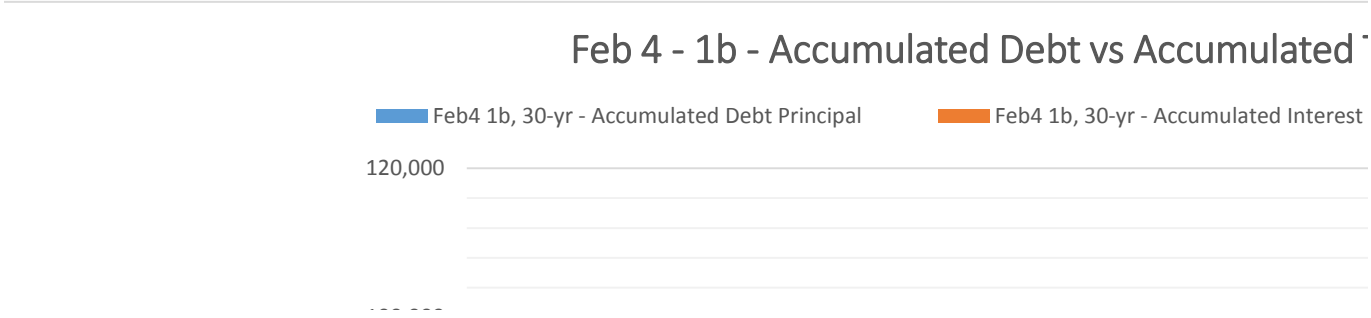
YEAR

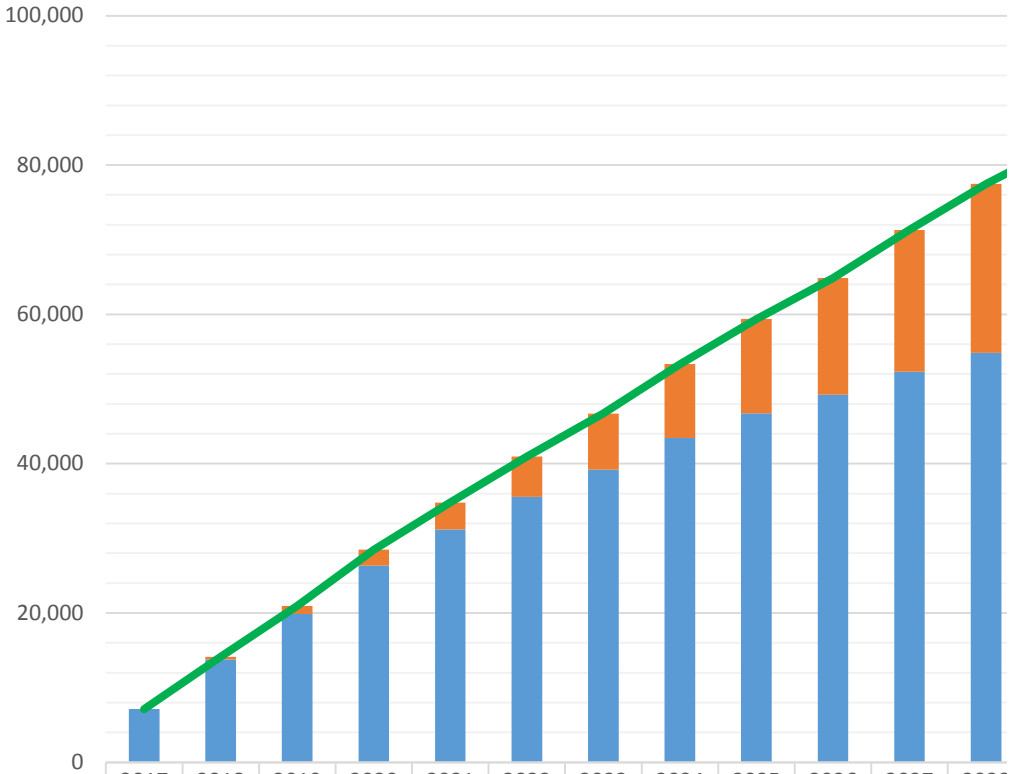


YEAR

ɜ - 25 year and 30 year Financing Terms, at 5% interest rate

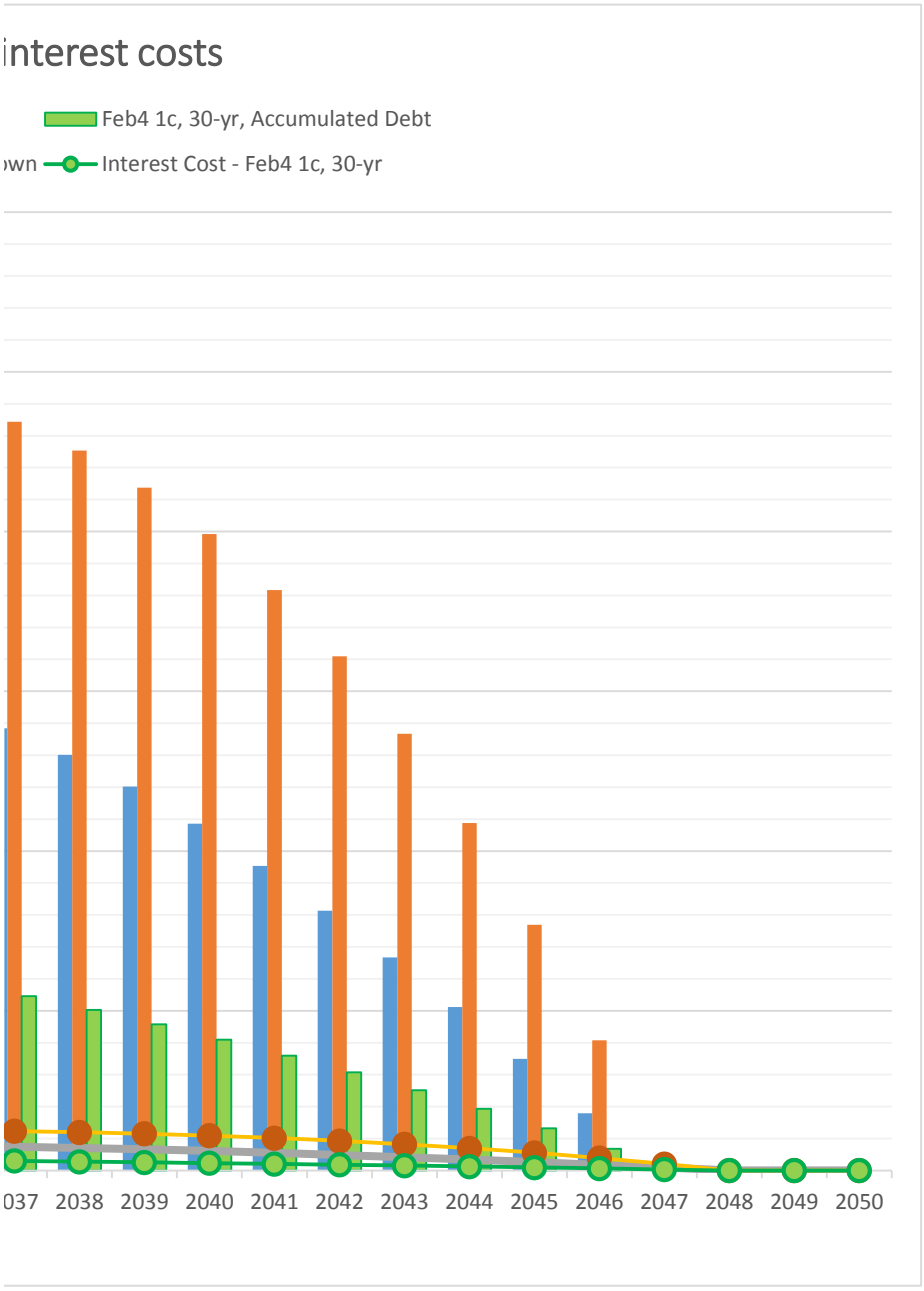


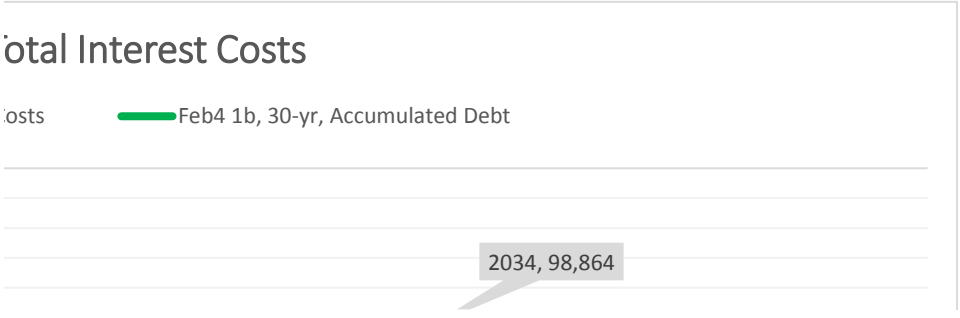

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

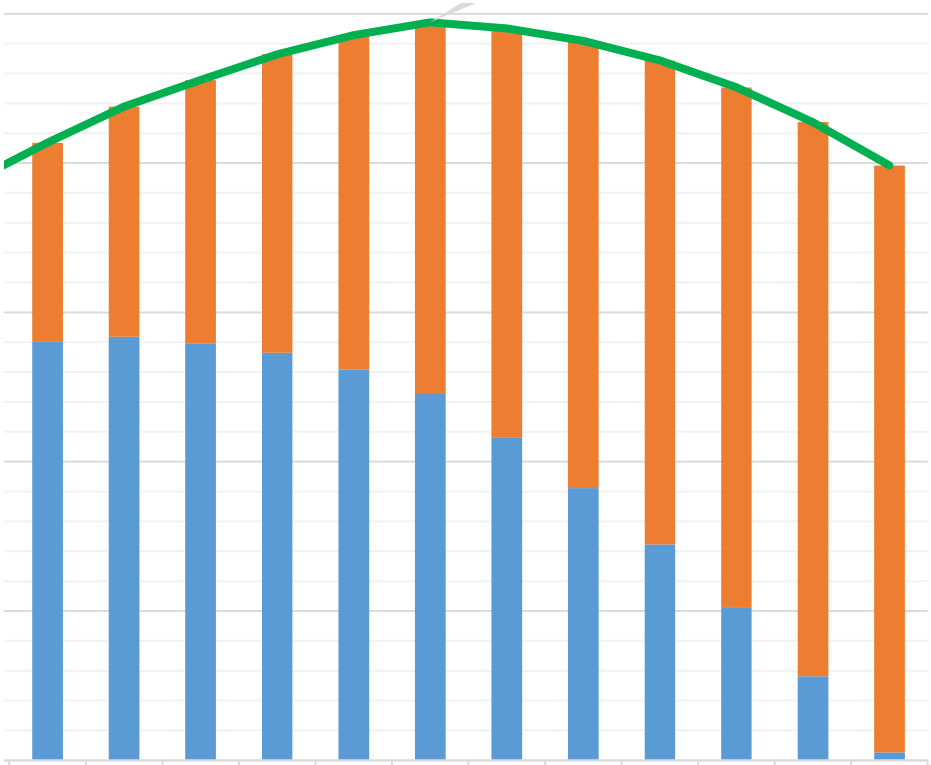


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y


interest costs
Feb4 1c, 30-yr, Accumulated Debt
wn
Interest Cost - Feb4 1c, 30-yr
037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR

Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

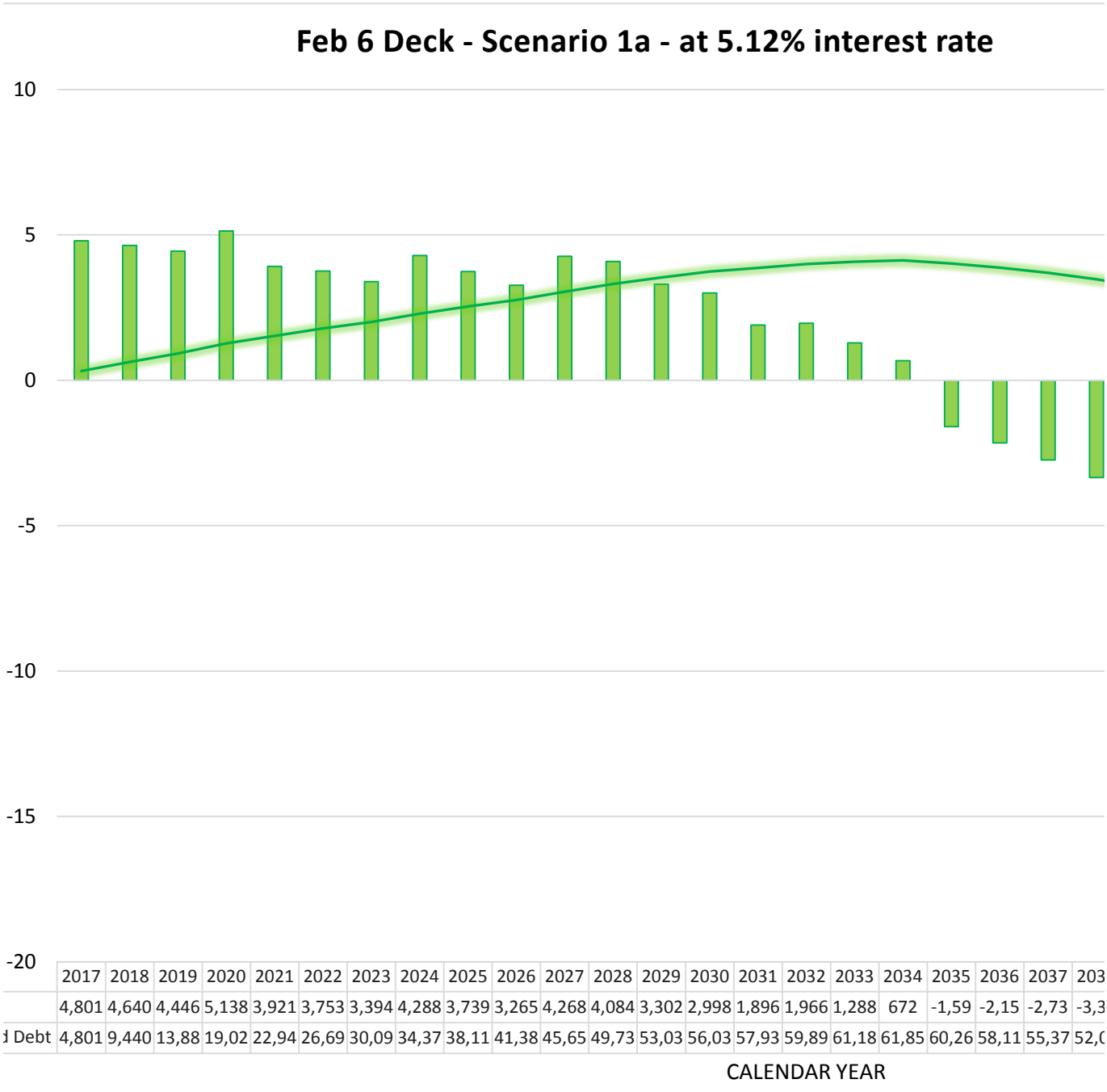
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

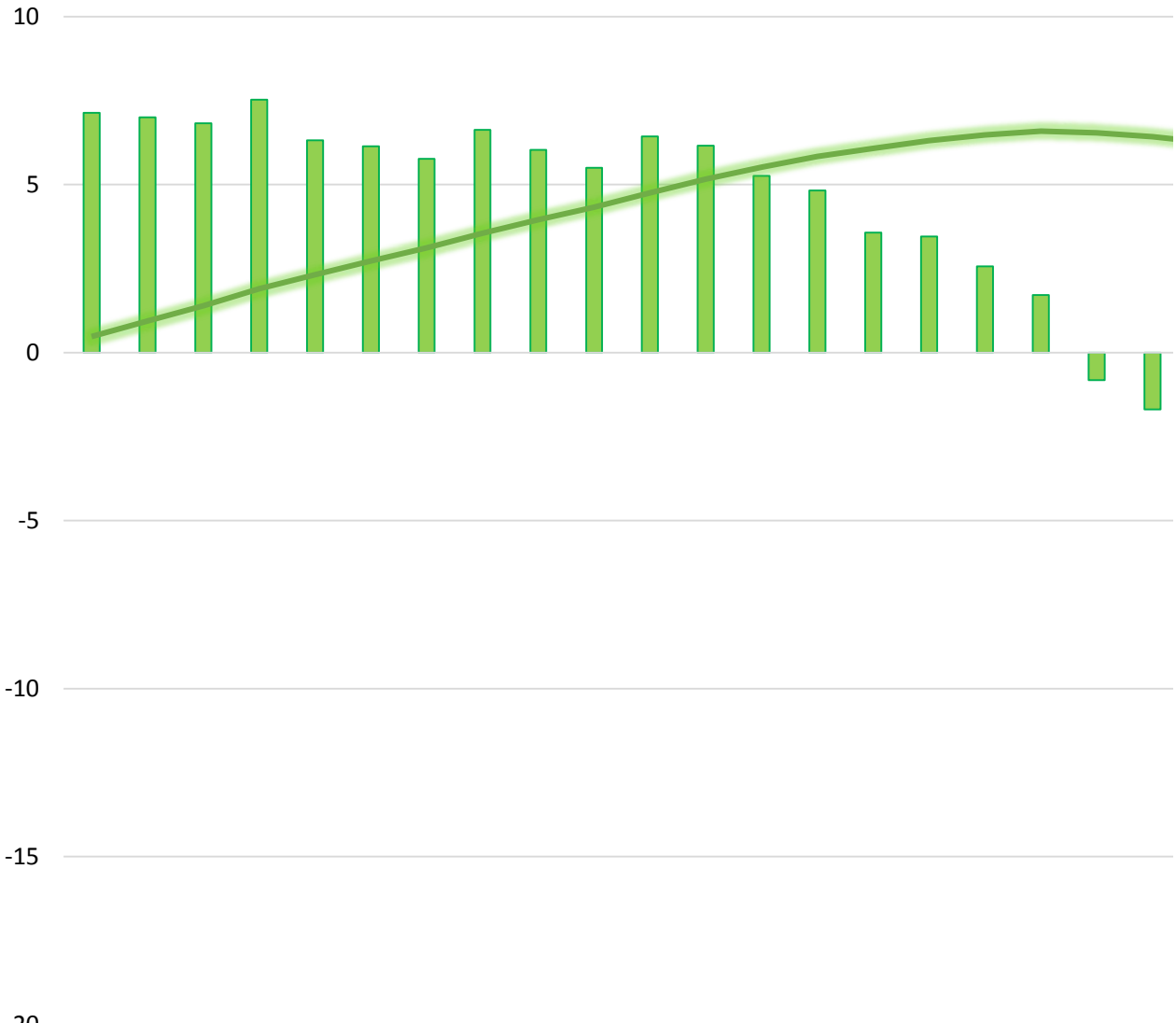
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

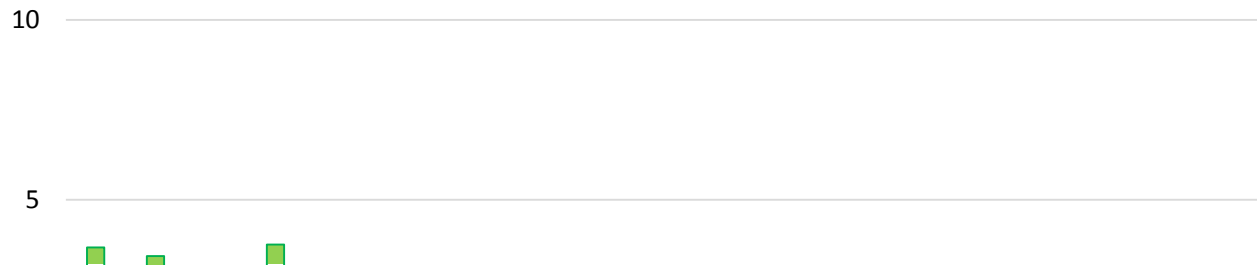
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

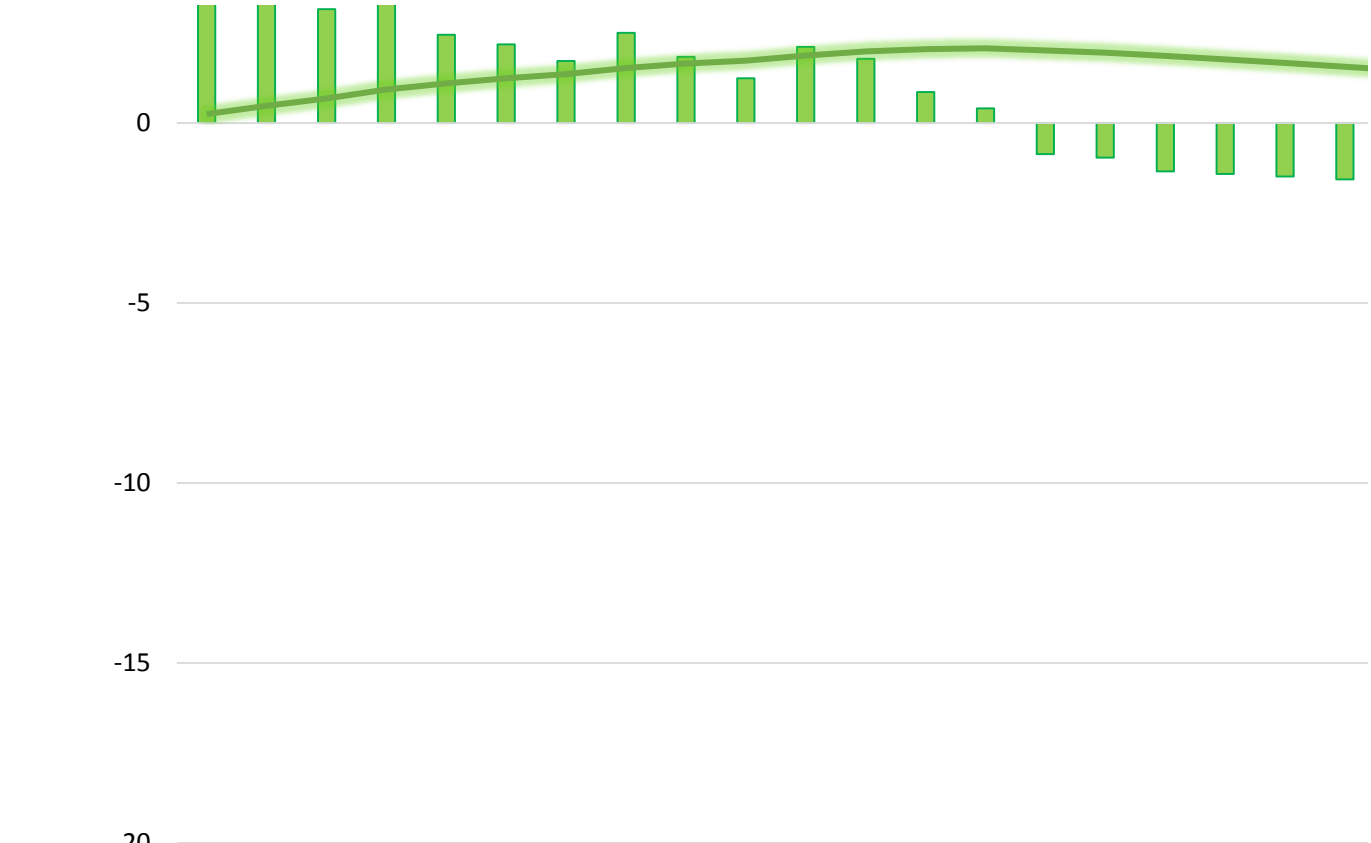


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



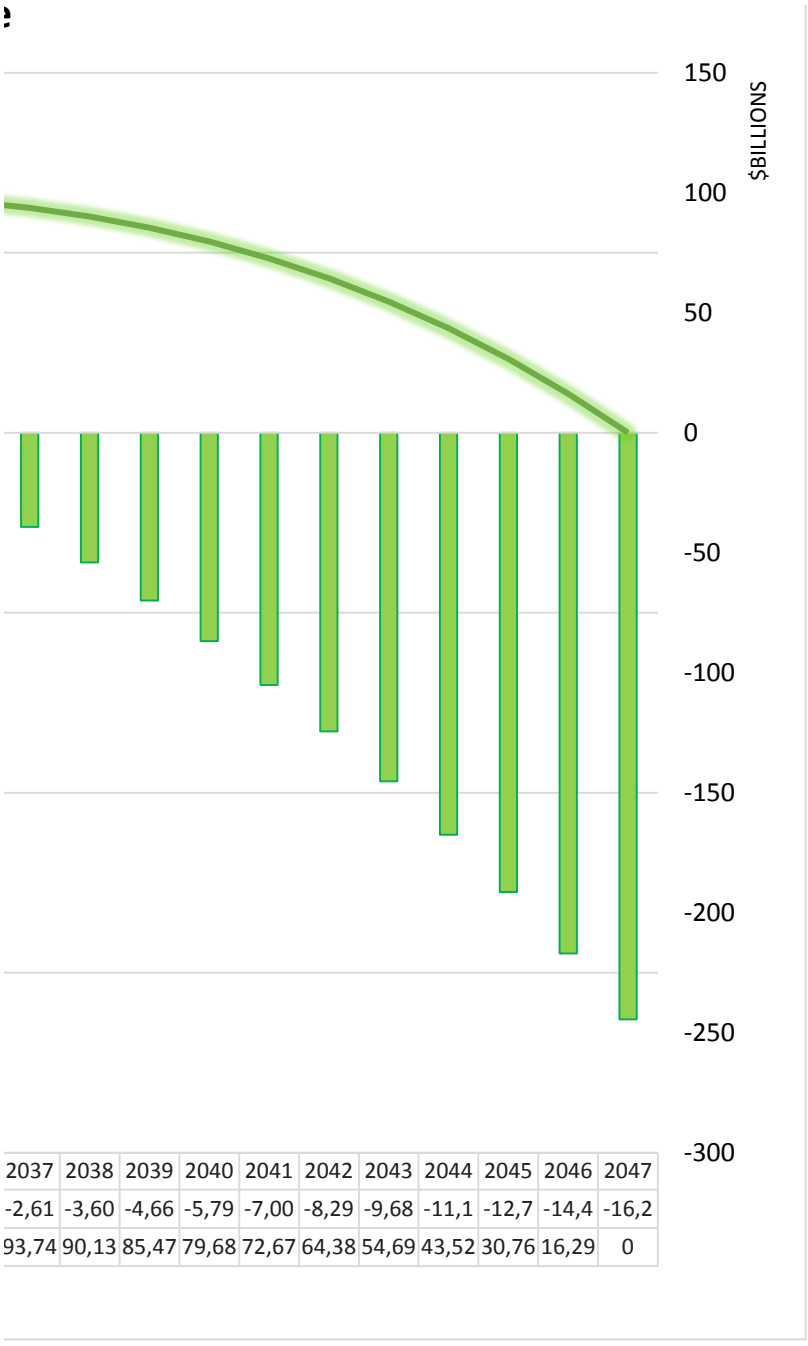


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

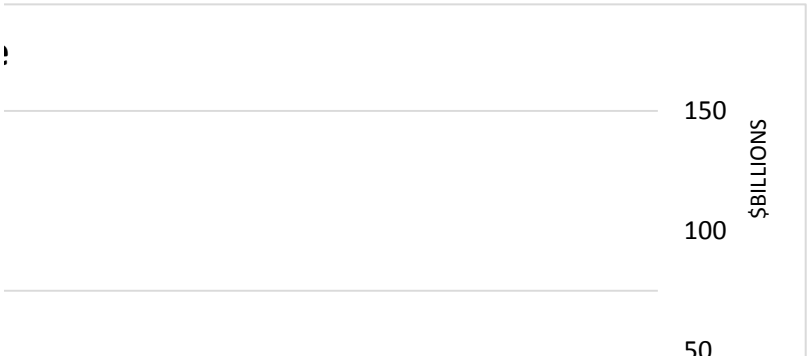
CALENDAR YEAR

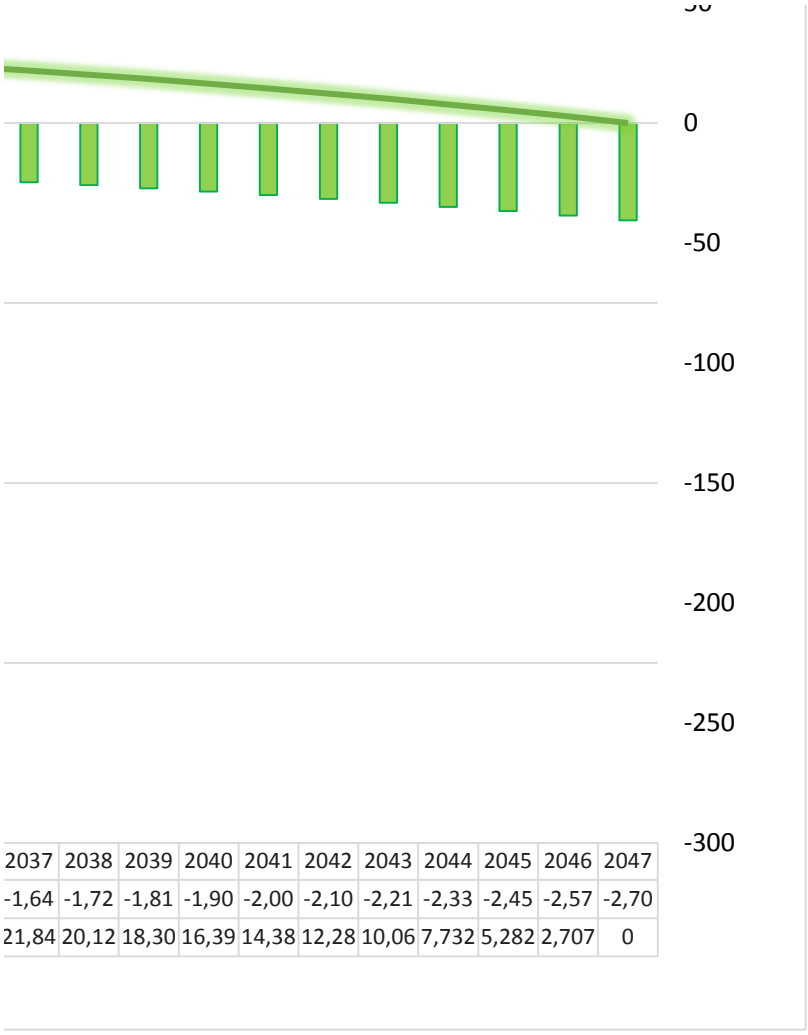


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Equal Monthly Debt Drawdown

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb4_1a_30yr

1a. GA Smoothing (Borrow ~$5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,801	4,640

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,200	4,760

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $62 billion, peakin
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary on accounting treatment.

7,133 7,133

Feb4_1b_30yr 7,133

1b. GA Smoothing (Borrow ~$7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	7,133	6,999

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,783	7,100

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $99 billion, peaking
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b on accounting treatment.

Feb4_1c_30yr

1c. GA Smoothing (Borrow ~$4 billion in 2017)

$ millions

Scenario 1C - 30-yr amortization	2017	2018
Annual Exposure[2]	3,678	3,437

	Fiscalized[3]	2016-17	2017-18
	Start: January 1st	919	3,617

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	1,783 - 1,200	7,100 - 4,760

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1200	4760
Debt-Finance Global Adjustment Costs, Option 1a	1783	7100
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18

Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1200**	**5000**
Total, B	1783	7340
Proposed Program Total:	1,783 - 1,200	7,340 - 5,000

ining

1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
4,446	5,138	3,921	3,753

2018-19	2019-20	2020-21	2021-2022
4,591	4,619	4,833	3,879

ng in 203 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
by approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
6,825	7,529	6,315	6,141

2018-19	2019-20	2020-21	2021-2022
6,956	7,001	7,226	6,272

g in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
3,158	3,761	2,450	2,183

2018-19	2019-20	2020-21	2021-2022
3,367	3,309	3,433	2,383

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
6,956 - 4,591	7,001 - 4,619	7,226 - 4,833	6,272 - 3,879

/1

2018-19[1]	2019-20[1]	2020-21[1]
4591	4619	4833
6956	7001	7226
225	279	323
60	60	60
18	18	18

4894	**4976**	**5234**
7259	7358	7627

7,259 - 4,894 7,358 - 4,976 7,627 - 5,234

1a. GA Smoothing (Borrow $5 billion in 2017)

	2017
IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	7,095
Additional GA Debt Drawdown, End of Year	5,000

Ratepayer GA Payment

Total Accumulated Debt *($ billion)*	5,000
Total Change in Accumulated Debt *($ billion)*	5000

1b. GA Smoothing (Borrow $7 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	5,095
Additional GA Debt Drawdown, End of Year	7,000

Total Accumulated Debt *($ billion)*	7000
Total Change in Accumulated Debt *($ billion)*	7000

1c. GA Smoothing (Borrow $4 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	8,095
Additional GA Debt Drawdown, End of Year	4,000

Total Accumulated Debt *($ billion)*	4000
Total Change in Accumulated Debt *($ billion)*	4000

2018	2019	2020	2021	2022	2023	2024	2025
11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
6,835	7,552	7,168	6,844	6,634	7,243	7,128	6,527
5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000

9,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000
5000	4000	5000	4000	4000	3000	4000	4000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
4,835	4,552	4,168	4,844	4,634	4,243	4,128	4,527
7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000

14000	21000	28000	35000	41000	47000	53000	59000
7000	7000	8000	6000	6000	6000	7000	6000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
8,835	8,552	8,168	8,844	8,634	8,243	8,128	8,527
3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000

7000	10000	14000	16000	19000	20000	23000	25000
3000	3000	4000	2000	2000	2000	3000	2000

2026	2027	2028	2029	2030	2031	2032	2033
10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
7,033	7,043	6,819	7,009	6,721	6,654	6,820	7,238
3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000

41,000	46,000	50,000	53,000	56,000	58,000	60,000	61,000
3000	4000	4000	3000	3000	2000	2000	1000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
4,033	5,043	4,819	5,009	4,721	4,654	5,820	5,238
6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000

65000	71000	77000	83000	88000	91000	95000	97000
6000	6000	6000	5000	5000	4000	3000	3000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
9,033	9,043	8,819	9,009	9,721	9,654	9,820	9,238
1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000

26000	28000	30000	31000	31000	30000	29000	28000
1000	2000	2000	1000	0	-1000	-1000	-1000

2034	2035	2036	2037	2038	2039	2040	2041
7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
6,756	7,662	7,389	8,129	7,881	8,645	9,421	9,207
1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000

62,000	60,000	58,000	55,000	52,000	48,000	43,000	38,000
1000	-2000	-2000	-3000	-3000	-4000	-5000	-5000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
5,756	6,662	7,389	8,129	8,881	9,645	10,421	11,207
2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000

99000	98000	96000	94000	90000	85000	80000	73000
2000	-1000	-2000	-3000	-4000	-5000	-6000	-7000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
8,756	6,662	7,389	7,129	6,881	6,645	6,421	6,207
-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000

27000	25000	23000	22000	20000	18000	16000	14000
-1000	-1000	-2000	-2000	-2000	-2000	-2000	-2000

2042	2043	2044	2045	2046	2047	2048		
4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
10,004	9,811	9,627	9,451	10,285	10,126	2,975		
-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0		

33,000	27,000	20,000	14,000	7,000	-	-	
-6000	-6000	-6000	-6000	-7000	-7000	0	

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
12,004	13,811	14,627	16,451	17,285	19,126	2,975		
-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0		

64000	55000	44000	31000	16000	0	0
-8000	-10000	-11000	-13000	-14000	-16000	0

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
6,004	5,811	5,627	5,451	6,285	6,126	2,975		
-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0		

12000	10000	8000	5000	3000	0	0
-2000	-2000	-2000	-2000	-3000	-3000	0

Feb4 1a, 30-yr - Debt Drawdown Scenarios

-92,247 -94598.515 58,489 36109.18 0

Feb4_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0
			114	110	106	122	93	89	81	102	89	78	102	97	79	71	45	47	31	16	-38	-51	-65	-80	-95	-110	-126	-133	-140	-147	-155	-162	-171	0	0	0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	5,138	3,167	58,489
Equal Monthly Debt Drawdown	5,260	3,149	

Maximum Accumulated Debt — Feb4 1a, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

End of Year Debt Drawdown	61,858	36,109
Equal Monthly Debt Drawdown	63,330	

			40%	37%	34%	36%	27%	24%																													
Feb4 1a, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
a	Debt, Beginning of Year		0	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	
c = a*5%	*Interest Cost - Feb4 1a, 30-yr - End of Year Debt Drawdown*		*0*	*246*	*483*	*711*	*974*	*1,175*	*1,367*	*1,541*	*1,760*	*1,952*	*2,119*	*2,337*	*2,546*	*2,716*	*2,869*	*2,966*	*3,067*	*3,133*	*3,167*	*3,086*	*2,975*	*2,835*	*2,664*	*2,461*	*2,224*	*1,952*	*1,666*	*1,365*	*1,049*	*717*	*367*	*0*	*0*	*0*	58,489
b	Additional GA Debt Drawdown, End of Year		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	21,822	23,788	25,076	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	20,490	13,998	7,173	0	0	0	
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	36,109	36,109	36,109	36,109	34,517	32,362	29,624	26,281	22,311	17,687	12,383	6,793	918	0	0	0	0	0	0	0	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688	49,149	51,372	53,325	54,991	56,356	57,405	58,122	58,489				
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371	-5,713	-13,241	-20,783	-28,325	-35,866	-43,408	-50,949	-58,489				
Fiscal Exposure - End of Year Debt Drawdown			4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0	

Feb4 1a, 30-yr	Equal Monthly Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			12																																		
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
3,149	*Interest Cost - Feb4 1a, 30-yr*		*114*	*356*	*589*	*833*	*1,067*	*1,264*	*1,448*	*1,643*	*1,849*	*2,029*	*2,220*	*2,435*	*2,625*	*2,787*	*2,914*	*3,013*	*3,097*	*3,149*	*3,129*	*3,034*	*2,910*	*2,756*	*2,569*	*2,351*	*2,098*	*1,819*	*1,526*	*1,218*	*895*	*554*	*197*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0	

	Monthly Drawdown		400	366	330	369	246	215	169	229	165	109	179	146	63	24	(81)	(83)	(148)	(205)	(397)	(437)	(476)	(515)	(553)	(590)	(627)	(629)	(628)	(628)	(628)	(628)	(628)	-	-	-
	FV of Monthly Drawdown at 5%		4,915	4,498	4,057	4,532	3,017	2,640	2,075	2,813	2,026	1,345	2,200	1,789	773	289	(996)	(1,024)	(1,821)	(2,519)	(4,872)	(5,365)	(5,849)	(6,325)	(6,793)	(7,253)	(7,707)	(7,722)	(7,721)	(7,721)	(7,721)	(7,721)	(7,720)	-	-	-
	Annual Interest Cost on New Drawdowns		114	105	94	105	70	61	48	65	47	31	51	42	18	7	(23)	(24)	(42)	(59)	(113)	(125)	(136)	(147)	(158)	(169)	(179)	(180)	(180)	(180)	(180)	(180)	(179)	-	-	-
	Annual Interest Cost on Opening Balance		-	252	495	728	997	1,203	1,399	1,577	1,802	1,998	2,169	2,393	2,607	2,780	2,937	3,037	3,140	3,207	3,243	3,159	3,046	2,903	2,727	2,519	2,277	1,999	1,706	1,398	1,074	734	376	(0)	(0)	(0)
	Total Annual Interest Cost		114	356	589	833	1,067	1,264	1,448	1,643	1,849	2,029	2,220	2,435	2,625	2,787	2,914	3,013	3,097	3,149	3,129	3,034	2,910	2,756	2,569	2,351	2,098	1,819	1,526	1,218	895	554	197	(0)	(0)	(0)

Feb4 1a, 30-yr	Bi-Annual Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			2																																		
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*61*	*305*	*540*	*777*	*1,024*	*1,223*	*1,410*	*1,596*	*1,808*	*1,993*	*2,173*	*2,390*	*2,589*	*2,754*	*2,893*	*2,991*	*3,083*	*3,141*	*3,147*	*3,058*	*2,940*	*2,792*	*2,613*	*2,401*	*2,156*	*1,881*	*1,591*	*1,286*	*966*	*629*	*275*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown			4,862	4,699	4,502	5,203	3,971	3,801	3,438	4,343	3,787	3,307	4,322	4,137	3,344	3,037	1,920	1,991	1,305	681	-1,612	-2,183	-2,773	-3,386	-4,021	-4,683	-5,372	-5,661	-5,951	-6,255	-6,575	-6,912	-7,265	0	0	0	

	Bi-Annual Drawdown		2,400	2,197	1,981	2,213	1,473	1,289	1,014	1,374	989	657	1,074	874	378	141	(487)	(500)	(889)	(1,230)	(2,379)	(2,620)	(2,857)	(3,089)	(3,317)	(3,542)	(3,764)	(3,771)	(3,771)	(3,771)	(3,771)	(3,771)	(3,770)	-	-	-
	FV of Bi-Annual Drawdown at 5%		4,862	4,450	4,013	4,483	2,984	2,612	2,053	2,783	2,004	1,331	2,176	1,769	765	286	(986)	(1,013)	(1,801)	(2,492)	(4,820)	(5,308)	(5,787)	(6,257)	(6,719)	(7,175)	(7,624)	(7,639)	(7,638)	(7,638)	(7,638)	(7,638)	(7,637)	-	-	-
	Annual Interest Cost on New Drawdowns		61	56	51	57	38	33	26	35	25	17	28	22	10	4	(12)	(13)	(23)	(31)	(61)	(67)	(73)	(79)	(85)	(91)	(96)	(97)	(97)	(97)	(97)	(97)	(97)	-	-	-
	Annual Interest Cost on Opening Balance		-	249	490	720	986	1,190	1,384	1,560	1,783	1,977	2,146	2,367	2,579	2,750	2,906	3,004	3,106	3,173	3,208	3,125	3,013	2,871	2,698	2,492	2,252	1,977	1,687	1,383	1,063	726	372	(0)	(0)	(0)
	Total Annual Interest Cost		61	305	540	777	1,024	1,223	1,410	1,596	1,808	1,993	2,173	2,390	2,589	2,754	2,893	2,991	3,083	3,141	3,147	3,058	2,940	2,792	2,613	2,401	2,156	1,881	1,591	1,286	966	629	275	(0)	(0)	(0)

Feb4 1a, 30-yr	Average Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*123*	*365*	*597*	*842*	*1,074*	*1,271*	*1,454*	*1,650*	*1,856*	*2,035*	*2,228*	*2,442*	*2,631*	*2,792*	*2,918*	*3,016*	*3,100*	*3,150*	*3,126*	*3,030*	*2,905*	*2,749*	*2,562*	*2,342*	*2,088*	*1,809*	*1,516*	*1,207*	*883*	*542*	*184*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
Fiscal Exposure - Average Debt Drawdown			4,923	4,758	4,559	5,269	4,021	3,849	3,481	4,398	3,835	3,349	4,377	4,189	3,386	3,075	1,944	2,016	1,321	689	-1,633	-2,210	-2,808	-3,428	-4,072	-4,742	-5,440	-5,733	-6,026	-6,334	-6,658	-6,999	-7,357	0	0	0	

Feb4 1b, 30-yr - Debt Drawdown Scenarios

-149,507 -153857.97 97,141 56717.33 0

Feb4_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0
			170	167	162	179	150	146	137	158	144	131	153	147	125	115	85	82	61	41	-19	-40	-62	-86	-111	-138	-167	-198	-231	-266	-304	-344	-388	0	0	0

0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown 7,529	5,062	97,141
Equal Monthly Debt Drawdown 7,708	5,042	

Maximum Accumulated Debt	Feb4 1b, 30-yr, Accumulated Debt	Total Principal Debt Borrowed
End of Year Debt Drawdown	98,864	56,717
Equal Monthly Debt Drawdown	101,217	

Feb4 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
a Debt, Beginning of Year	0	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	
c = a*5% *Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown*	*0*	*365*	*724*	*1,073*	*1,459*	*1,782*	*2,096*	*2,391*	*2,731*	*3,040*	*3,322*	*3,651*	*3,966*	*4,236*	*4,483*	*4,665*	*4,842*	*4,974*	*5,062*	*5,020*	*4,933*	*4,800*	*4,615*	*4,376*	*4,080*	*3,721*	*3,296*	*2,800*	*2,228*	*1,575*	*834*	*0*	*0*	*0*	97,141
b Additional GA Debt Drawdown, End of Year	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
d = a+b+c Accumulated debt in present year (including 5% annual interest)	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	0	
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,633	26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606	82,685	86,406	89,703	92,503	94,731	96,306	97,141				
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,831	56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076	-10,007	-22,027	-35,008	-48,980	-63,971	-80,013	-97,141				
Fiscal Exposure - End of Year Debt Drawdown	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0	

Feb4 1b, 30-yr — Equal Monthly Debt Drawdown

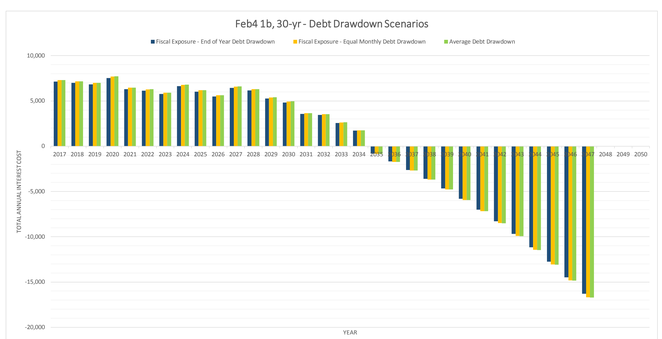
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	
5,042 *Interest Cost - Feb4 1b, 30-yr*	*170*	*532*	*886*	*1,252*	*1,609*	*1,928*	*2,234*	*2,549*	*2,874*	*3,171*	*3,475*	*3,797*	4,091	*4,350*	*4,568*	*4,748*	*4,904*	*5,015*	*5,042*	*4,980*	*4,871*	*4,714*	*4,504*	*4,238*	*3,913*	*3,524*	*3,066*	*2,534*	*1,925*	*1,231*	*446*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0	
Monthly Drawdown	594	553	508	538	405	363	306	353	275	205	259	209	108	49	(76)	(101)	(189)	(271)	(490)	(559)	(629)	(700)	(773)	(847)	(924)	(1,002)	(1,082)	(1,164)	(1,249)	(1,337)	(1,427)	(0)	-	-	
FV of Monthly Drawdown at 5%	7,303	6,792	6,247	6,610	4,972	4,463	3,755	4,338	3,383	2,523	3,184	2,565	1,327	605	(937)	(1,237)	(2,326)	(3,335)	(6,020)	(6,867)	(7,728)	(8,604)	(9,498)	(10,412)	(11,347)	(12,306)	(13,291)	(14,304)	(15,348)	(16,424)	(17,536)	(0)	-	-	
Annual Interest Cost on New Drawdowns	170	158	145	154	116	104	87	101	79	59	74	60	31	14	(22)	(29)	(54)	(78)	(140)	(160)	(180)	(200)	(221)	(242)	(264)	(286)	(309)	(333)	(357)	(382)	(408)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	374	741	1,099	1,493	1,824	2,146	2,448	2,796	3,112	3,401	3,738	4,061	4,336	4,589	4,776	4,958	5,092	5,182	5,139	5,051	4,914	4,725	4,481	4,177	3,810	3,375	2,867	2,281	1,612	854	0	(0)	(0)	
Total Annual Interest Cost	170	532	886	1,252	1,609	1,928	2,234	2,549	2,874	3,171	3,475	3,797	4,091	4,350	4,568	4,748	4,904	5,015	5,042	4,980	4,871	4,714	4,504	4,238	3,913	3,524	3,066	2,534	1,925	1,231	446	0	(0)	(0)	

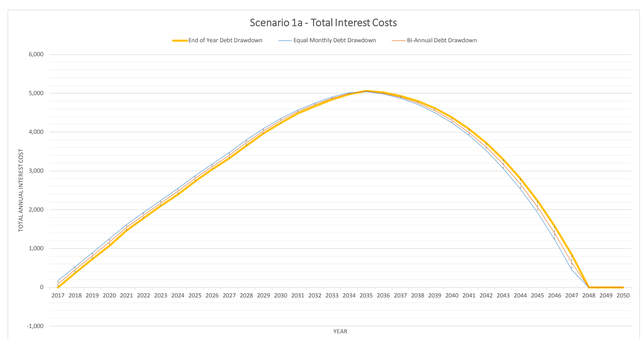
Feb4 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*91*	*455*	*811*	*1,169*	*1,539*	*1,861*	*2,170*	*2,476*	*2,808*	*3,110*	*3,404*	*3,730*	*4,034*	*4,297*	*4,528*	*4,710*	*4,875*	*4,996*	*5,051*	*4,998*	*4,900*	*4,753*	*4,555*	*4,302*	*3,990*	*3,615*	*3,172*	*2,657*	*2,065*	*1,390*	*626*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	7,225	7,089	6,913	7,626	6,396	6,220	5,838	6,713	6,113	5,574	6,514	6,235	5,330	4,888	3,614	3,501	2,603	1,738	-829	-1,709	-2,648	-3,651	-4,722	-5,867	-7,093	-8,405	-9,810	-11,314	-12,926	-14,652	-16,502	0	0	0	
Bi-Annual Drawdown	3,567	3,317	3,051	3,228	2,428	2,180	1,834	2,118	1,652	1,232	1,555	1,253	648	295	(457)	(604)	(1,136)	(1,629)	(2,940)	(3,354)	(3,774)	(4,202)	(4,639)	(5,085)	(5,542)	(6,010)	(6,491)	(6,986)	(7,495)	(8,021)	(8,564)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	7,225	6,719	6,180	6,539	4,919	4,415	3,715	4,291	3,347	2,496	3,150	2,538	1,313	598	(926)	(1,224)	(2,301)	(3,299)	(5,956)	(6,794)	(7,645)	(8,512)	(9,396)	(10,300)	(11,225)	(12,174)	(13,148)	(14,150)	(15,183)	(16,247)	(17,347)	(0)	-	-	
Annual Interest Cost on New Drawdowns	91	85	78	83	62	56	47	54	42	32	40	32	17	8	(12)	(15)	(29)	(42)	(75)	(86)	(97)	(108)	(119)	(130)	(142)	(154)	(166)	(179)	(192)	(205)	(219)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	370	733	1,087	1,477	1,805	2,123	2,422	2,766	3,079	3,364	3,698	4,017	4,290	4,540	4,725	4,904	5,038	5,127	5,084	4,997	4,861	4,674	4,432	4,132	3,769	3,338	2,836	2,257	1,595	845	0	0	0	
Total Annual Interest Cost	91	455	811	1,169	1,539	1,861	2,170	2,476	2,808	3,110	3,404	3,730	4,034	4,297	4,528	4,710	4,875	4,996	5,051	4,998	4,900	4,753	4,555	4,302	3,990	3,615	3,172	2,657	2,065	1,390	626	0	0	0	

Feb4 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*183*	*544*	*898*	*1,266*	*1,620*	*1,939*	*2,244*	*2,561*	*2,885*	*3,181*	*3,486*	*3,809*	*4,101*	*4,359*	*4,574*	*4,754*	*4,908*	*5,018*	*5,041*	*4,977*	*4,867*	*4,707*	*4,496*	*4,228*	*3,900*	*3,509*	*3,048*	*2,514*	*1,902*	*1,205*	*417*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	7,316	7,179	7,000	7,722	6,477	6,298	5,912	6,798	6,190	5,645	6,597	6,314	5,397	4,950	3,659	3,545	2,636	1,760	-840	-1,731	-2,682	-3,697	-4,782	-5,942	-7,183	-8,511	-9,934	-11,457	-13,089	-14,838	-16,711	0	0	0	





Feb4 1c, 30-yr - Debt Drawdown Scenarios

Feb4_1c_30yr

Annual Interest Rate = 5.1%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0
			88	82	75	90	58	52	41	60	44	29	50	43	20	10	-20	-23	-32	-34	-35	-37	-39	-41	-43	-45	-48	-50	-53	-55	-58	-61	-64	0	0	0

0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	3,761	1,594	29,477
Equal Monthly Debt Drawdown	3,851	1,583	

Maximum Accumulated Debt — Feb4 1c, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

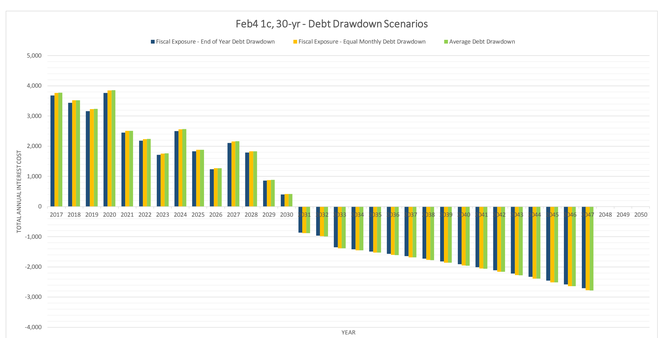
End of Year Debt Drawdown	31,125	20,043
Equal Monthly Debt Drawdown	31,866	

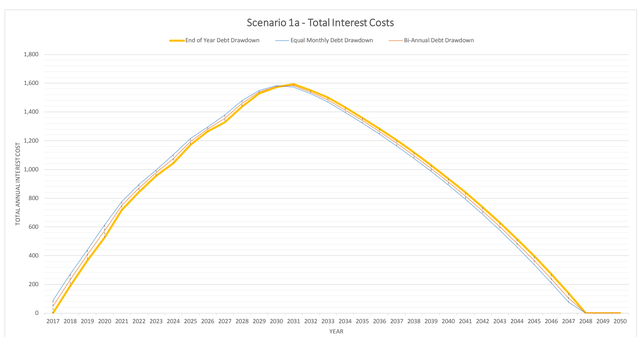
		30%	27%	24%	27%	16%	13%																														
Feb4 1c, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
a	Debt, Beginning of Year	0	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	
c = a*5%	*Interest Cost - Feb4 1c, 30-yr - End of Year Debt Drawdown*	*0*	*188*	*364*	*526*	*719*	*844*	*956*	*1,044*	*1,172*	*1,266*	*1,329*	*1,437*	*1,529*	*1,573*	*1,594*	*1,550*	*1,500*	*1,431*	*1,359*	*1,283*	*1,203*	*1,119*	*1,030*	*937*	*839*	*737*	*629*	*515*	*396*	*270*	*139*	*0*	*0*	*0*	*0*	29,477
b	Additional GA Debt Drawdown, End of Year	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	0	
	Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,641	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663	22,866	23,984	25,015	25,952	26,791	27,528	28,157	28,672	29,068	29,338	29,477				
	Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18,247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828	-1,018	-3,864	-6,710	-9,556	-12,402	-15,248	-18,094	-20,940	-23,786	-26,631	-29,477				
Fiscal Exposure - End of Year Debt Drawdown		3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0	

Feb4 1c, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	
1,583	*Interest Cost - Feb4 1c, 30-yr*	*88*	*270*	*439*	*615*	*777*	*896*	*997*	*1,103*	*1,216*	*1,295*	*1,379*	*1,480*	1,549	*1,583*	*1,573*	*1,527*	*1,468*	*1,398*	*1,324*	*1,246*	*1,164*	*1,077*	*987*	*892*	*792*	*686*	*576*	*460*	*338*	*209*	*74*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0	
	Monthly Drawdown	306	271	233	270	144	112	64	122	55	(2)	65	29	(56)	(97)	(204)	(209)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(0)	-	-	
	FV of Monthly Drawdown at 5%	3,765	3,326	2,861	3,312	1,773	1,371	781	1,493	679	(28)	799	360	(684)	(1,197)	(2,512)	(2,570)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,913)	(2,913)	(2,913)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	88	77	67	77	41	32	18	35	16	(1)	19	8	(16)	(28)	(58)	(60)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	193	373	538	736	864	979	1,069	1,200	1,296	1,361	1,471	1,565	1,610	1,632	1,586	1,536	1,465	1,391	1,313	1,231	1,145	1,055	959	859	754	644	527	405	277	142	0	0	0	
	Total Annual Interest Cost	88	270	439	615	777	896	997	1,103	1,216	1,295	1,379	1,480	1,549	1,583	1,573	1,527	1,468	1,398	1,324	1,246	1,164	1,077	987	892	792	686	576	460	338	209	74	0	0	0	

Feb4 1c, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*47*	*232*	*405*	*574*	*750*	*872*	*978*	*1,076*	*1,195*	*1,282*	*1,356*	*1,460*	*1,540*	*1,578*	*1,583*	*1,537*	*1,483*	*1,413*	*1,340*	*1,263*	*1,182*	*1,097*	*1,007*	*913*	*814*	*710*	*600*	*485*	*365*	*237*	*104*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,725	3,481	3,199	3,809	2,481	2,211	1,741	2,534	1,859	1,254	2,137	1,812	872	409	-871	-973	-1,363	-1,433	-1,506	-1,584	-1,665	-1,750	-1,839	-1,933	-2,032	-2,136	-2,246	-2,360	-2,481	-2,608	-2,742	0	0	0	
	Bi-Annual Drawdown	1,839	1,624	1,397	1,618	866	670	382	729	332	(14)	390	176	(334)	(584)	(1,227)	(1,255)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(0)	-	-	
	FV of Bi-Annual Drawdown at 5%	3,725	3,290	2,830	3,277	1,754	1,356	773	1,477	672	(28)	791	356	(677)	(1,184)	(2,485)	(2,542)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	47	42	36	41	22	17	10	19	8	(0)	10	5	(9)	(15)	(31)	(32)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	191	369	533	728	855	968	1,057	1,187	1,282	1,346	1,456	1,548	1,593	1,614	1,569	1,520	1,450	1,376	1,299	1,218	1,133	1,043	949	850	746	637	522	401	274	140	0	0	0	
	Total Annual Interest Cost	47	232	405	574	750	872	978	1,076	1,195	1,282	1,356	1,460	1,540	1,578	1,583	1,537	1,483	1,413	1,340	1,263	1,182	1,097	1,007	913	814	710	600	485	365	237	104	0	0	0	

Feb4 1c, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*94*	*276*	*445*	*622*	*781*	*900*	*1,000*	*1,108*	*1,219*	*1,298*	*1,383*	*1,483*	*1,551*	*1,583*	*1,572*	*1,525*	*1,466*	*1,395*	*1,321*	*1,243*	*1,161*	*1,074*	*984*	*888*	*788*	*683*	*572*	*456*	*333*	*205*	*69*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,772	3,525	3,239	3,857	2,513	2,239	1,763	2,566	1,882	1,270	2,164	1,835	883	414	-882	-985	-1,381	-1,451	-1,526	-1,604	-1,686	-1,772	-1,863	-1,958	-2,058	-2,163	-2,274	-2,390	-2,513	-2,641	-2,776	0	0	0	





30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

TO BE

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,556	3,123	1,728	1,400	836	1,560	821	167

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

E UPDATED

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

JK: Fixed the formula in the yellow highlighted cells. Pls. check. (SK: looks good to me)

	Tab
v16 GA Financing - Scenario 1a 1b v18 (with fiscal) - Feb 4_v2.xlsx	Powerpoint_Export Scenario tabs

Change Description

Added in trigger for later start in the year
Updated IESO forecast from Energy (IESO GA Cost Forecast 170207 (Feb 6 update).xlsx)

Equal Monthly Debt Drawdown

		Month	Months Remai
Scenario Start Date	**July**	7	6

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	3,180	2,888
Annual Exposure2 with start on July 1st	*1,590*	*2,888*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	795	3,107
Start: July 1st	-	*2,312*

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	851	3,335
Start: July 1st	-	*2,484*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	1,168	1,765
Annual Exposure2 with start on July 1st	*584*	*1,765*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	292	1,609
Start: July 1st	-	*1,025*

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,449	2,040
Annual Exposure2 with start on July 1st	*725*	*2,040*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,597
Start: July 1st	-	*1,959*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335
Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3575**
Total, B	362	1837
Proposed Program Total:	362 - 851	1,837 - 3,575

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,556	3,123	1,728	1,400
2,556	*3,123*	*1,728*	*1,400*

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646
2,805	*2,697*	*2,774*	*1,646*

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

ıking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
2,311	3,750	2,311	1,933
2,311	*3,750*	*2,311*	*1,933*

2018-19	2019-20	2020-21	2021-2022

1,901	2,671	3,391	2,217
1,901	*2,671*	*3,391*	*2,217*

2019	2020	2021	2022
2,581	4,016	2,598	2,241
2,581	*4,016*	*2,598*	*2,241*

2018-19	2019-20	2020-21	2021-2022
2,175	2,940	3,662	2,508
2,175	*2,940*	*3,662*	*2,508*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

/1

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052
2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

Equal Monthly Debt Drawdown

		Month	Months Remaining
Scenario Start Date	July	7	6

AS LONG AS >

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	3,180	2,888	2,556

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	795	3,107	2,805
Fiscal Exposure, 25%	199	777	701

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Annual Exposure[2]	3,404	3,128	2,812

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	851	3,335	3,049
Fiscal Exposure, 25%	213	834	762

Indicates year in which, similar to OPCD's exa
closest to 30%. As Fiscal 2016/17 is a partial y
month the GA deferral begins.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu
decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions	9%	14%	18%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	1,168	1,765	2,311

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	292	1,609	1,901
Fiscal Exposure, 25%	73	402	475

Scenario 1b - 30-yr amortization	2017	2018	2019
Annual Exposure[2]	1,449	2,040	2,581

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	362	1,597	2,175
Fiscal Exposure, 25%	91	399	544

Indicates year in which, similar to OPCD's exar closest to 30%.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 ar
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu on accounting treatment.

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]
Debt-Finance Global Adjustment Costs, Option 1a	213	834	762
Debt-Finance Global Adjustment Costs, Option 1b	91	399	544
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**213**	**1074**	**1065**
Total, B	91	639	847

Proposed Program Total:	91 - 213	639 - 1,074	847 - 1,065

($M)	2016-171	2017-181	2018-191
Debt-Finance Global Adjustment Costs, Option 1a	851	3335	3049
Debt-Finance Global Adjustment Costs, Option 1b	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**851**	**3575**	**3352**
Total, B	362	1837	2478

Proposed Program Total:	362 - 851	1,837 - 3,575	2,478 - 3,352

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6

7	July	7	
8	August	8	
9	September	9	
10	October	10	
11	November	11	
12	December	12	

30-year term	**2016-17**	**2017-18**	**2018-19**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335	2,175 - 3,049

ROWS HIDDEN

1	1 = Comparision Enabled

APRIL 1, 2017 25%

2020	2021	2022
3,123	1,728	1,400

2019-20	2020-21	2021-2022
2,697	2,774	1,646
674	693	412

2020	2021	2022
3,396	2,020	1,712

2019-20	2020-21	2021-2022
2,958	3,052	1,943
740	763	486

mple, the true cost of GA being deferred is
ear, exposure may be less subject to which

l $17-21 billion (at 3.5% interest rate), peaking in 2028.
$33-$36 million.

ıals per month based on month of the year. Actuals may also depend on

28%	17%	13%
2020	2021	2022
3,750	2,311	1,933

2019-20	2020-21	2021-2022
2,671	3,391	2,217
668	848	554

2020	2021	2022
4,016	2,598	2,241

2019-20	2020-21	2021-2022
2,940	3,662	2,508
735	915	627

mple, the true cost of GA being deferred is

ıd $17-21 billion (at 3.5% interest rate), peaking in 2028.
$118-$134 million.

ıals per month based on month of the year. Actuals may also depend on decision

2019-20[1]	2020-21[1]
740	763
735	915
279	323
60	60
18	18
1097	**1164**
1092	1316

1,092 - 1,097 1,316 - 1,164

2019-201	2020-211
2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453





2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964
Equal Monthly Debt Drawdown	3,180	952

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

		26%	23%	19%	22%	10%	7%																													
Scenario 1a, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

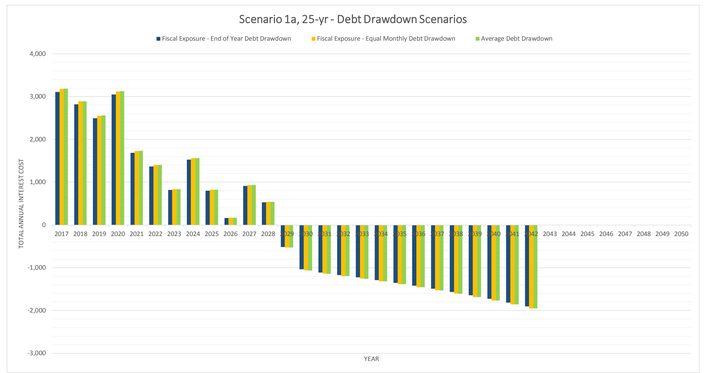
		26%	23%	19%	22%	10%	7%																													
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

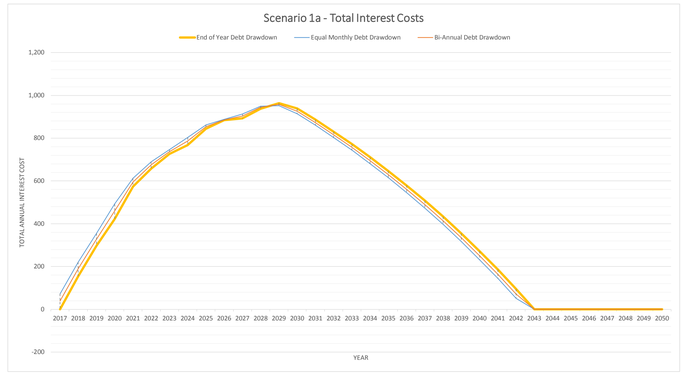
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

		26%	23%	19%	22%	10%	7%																													
Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1a, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	968	
Equal Monthly Debt Drawdown	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

			9%	14%	18%	28%	17%	13%																														
Scenario 1b, 25-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year		0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*		*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown			1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		**12**																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year		0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*		*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	[redacted]	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

	Monthly Drawdown		95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%		1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns		27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance		-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost		27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Scenario 1b, 25-yr	Bi-Annual Debt Drawdown		**2**																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year		0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr		*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown			1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown		571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%		1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns		14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance		-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost		14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Scenario 1b, 25-yr	Average Debt Drawdown																																				
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year		0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr		*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown			1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	

Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

		28%	24%	21%	24%	12%	9%																														
Scenario 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

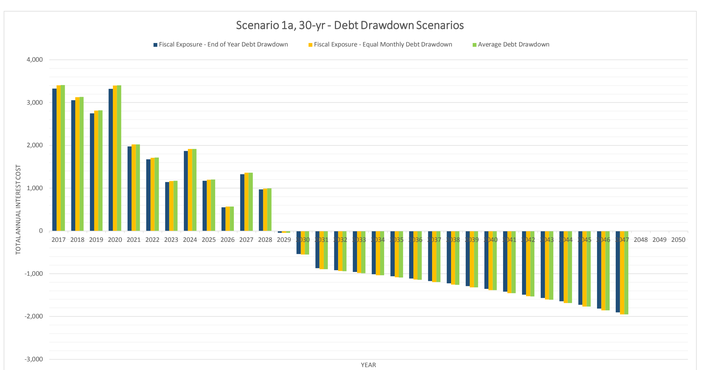
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	1,156	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

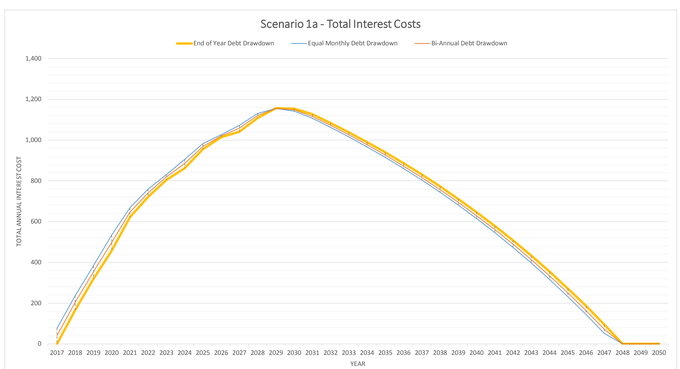
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

		12%	16%	20%	30%	19%	15%																													
Scenario 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

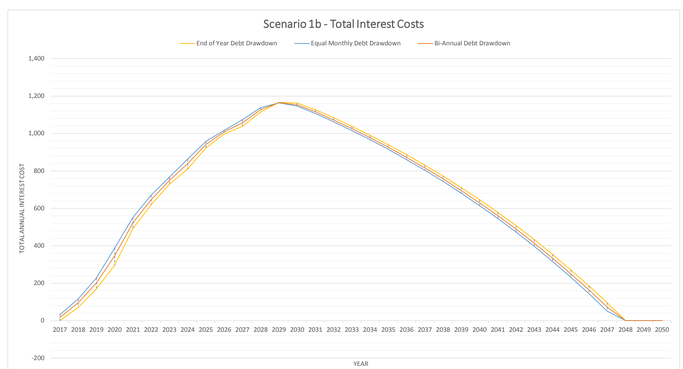
	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

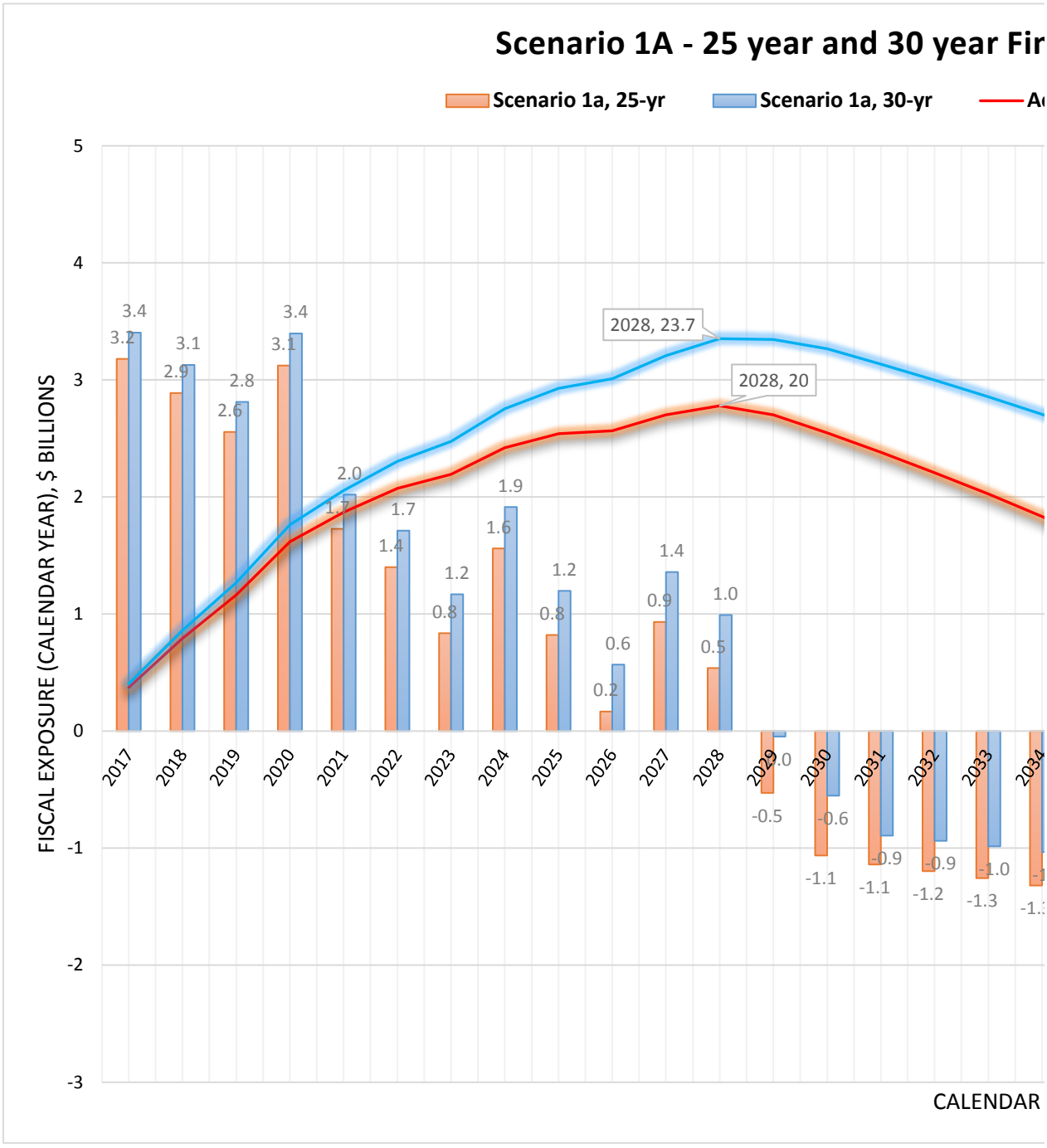
	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

Scenario 1b, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

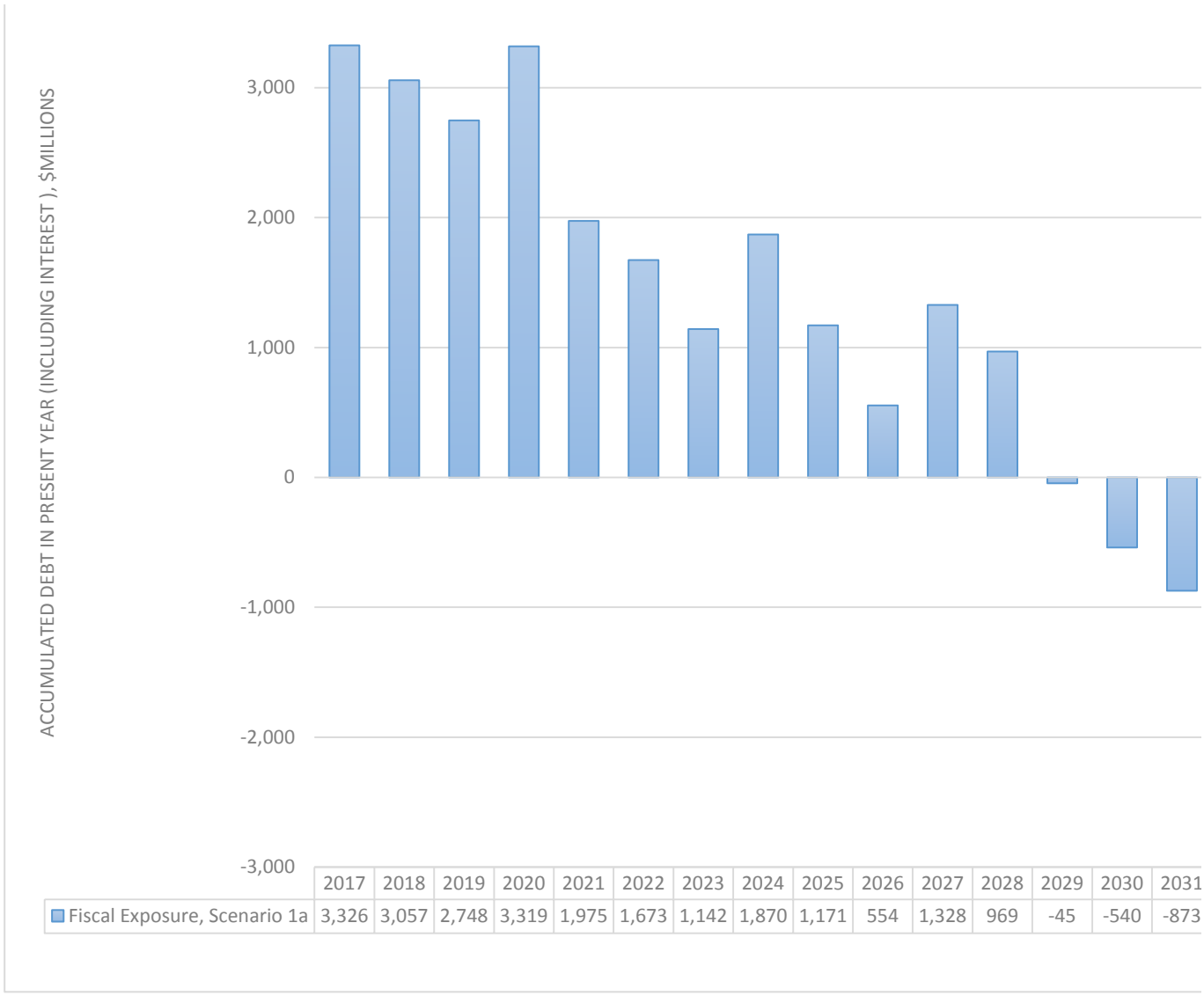




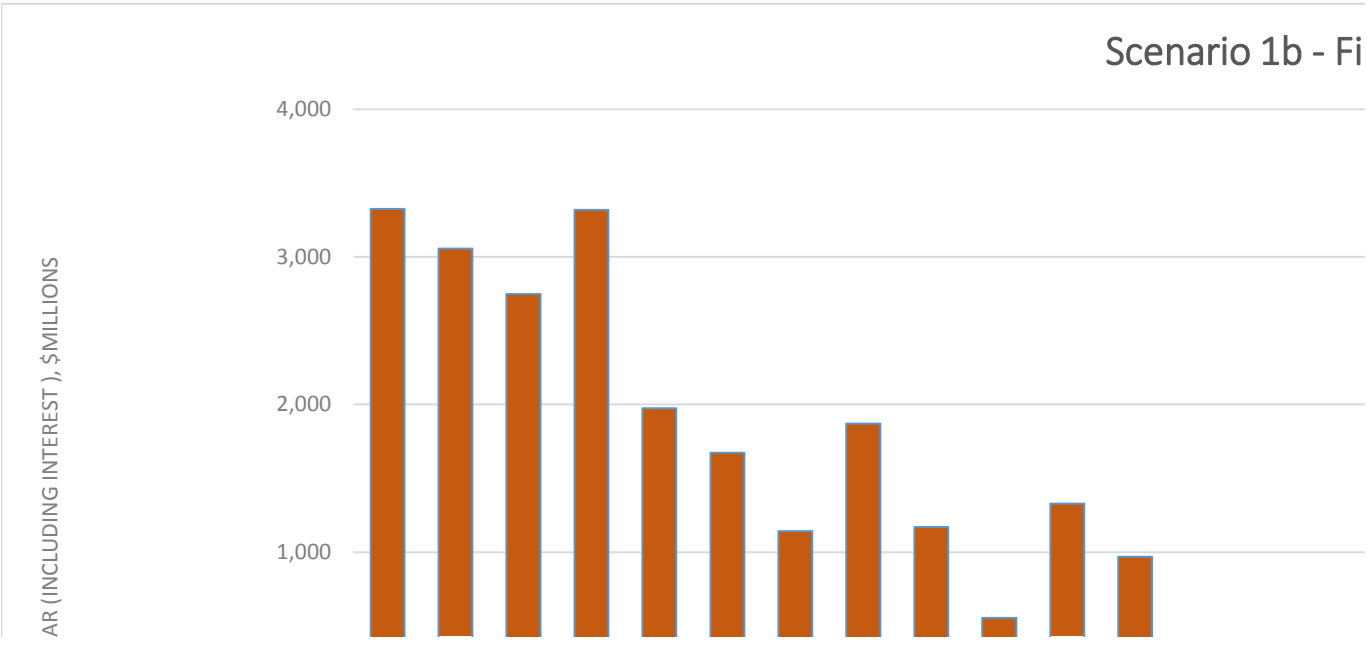
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

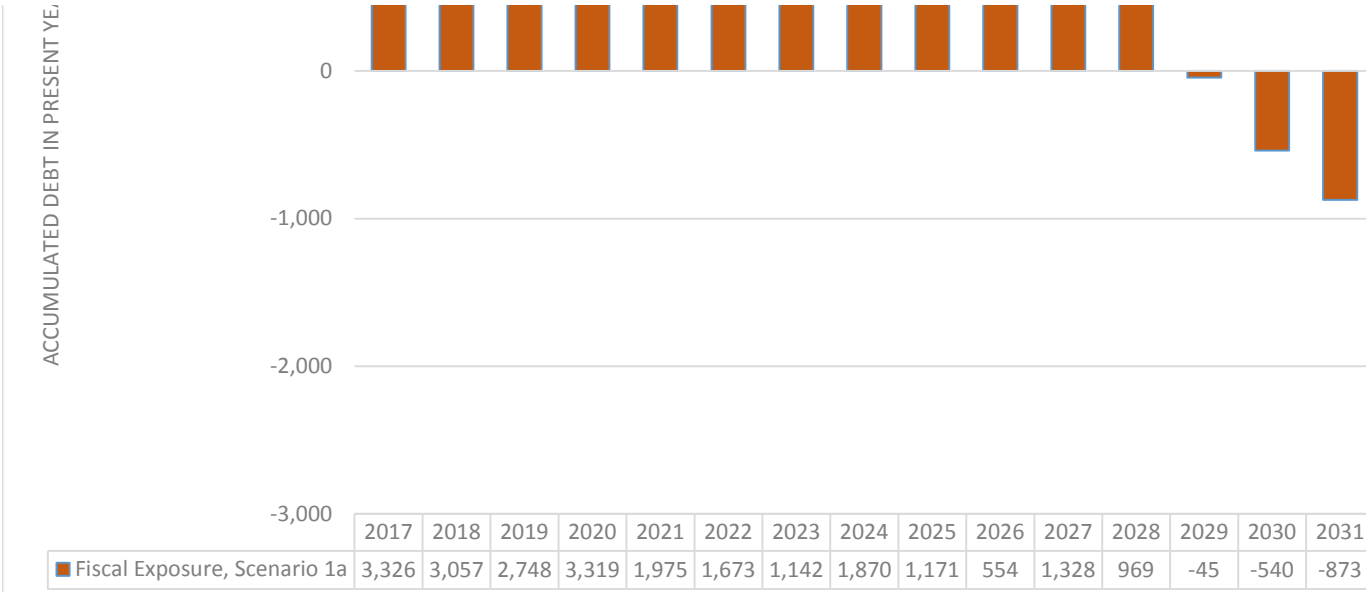




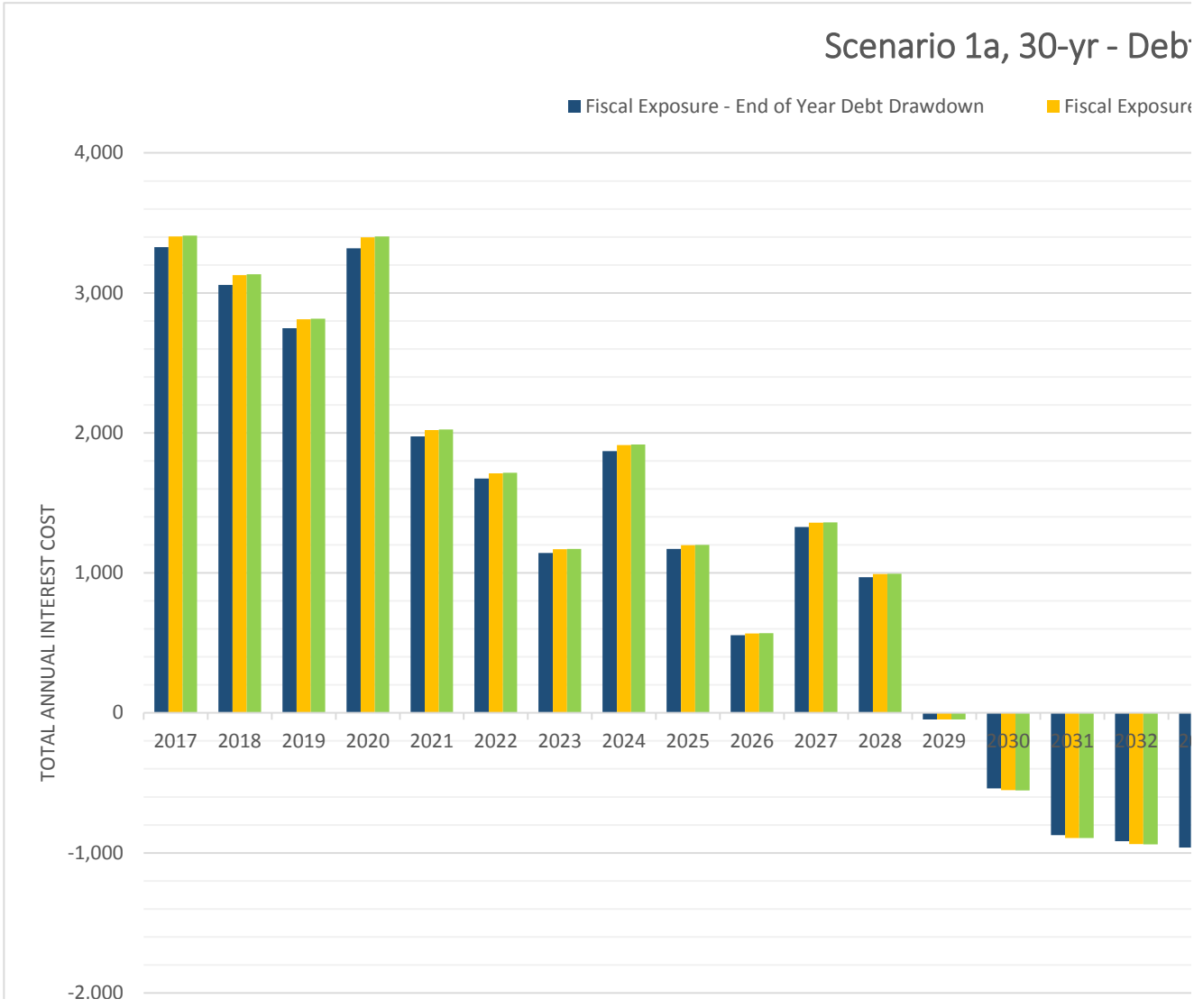


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



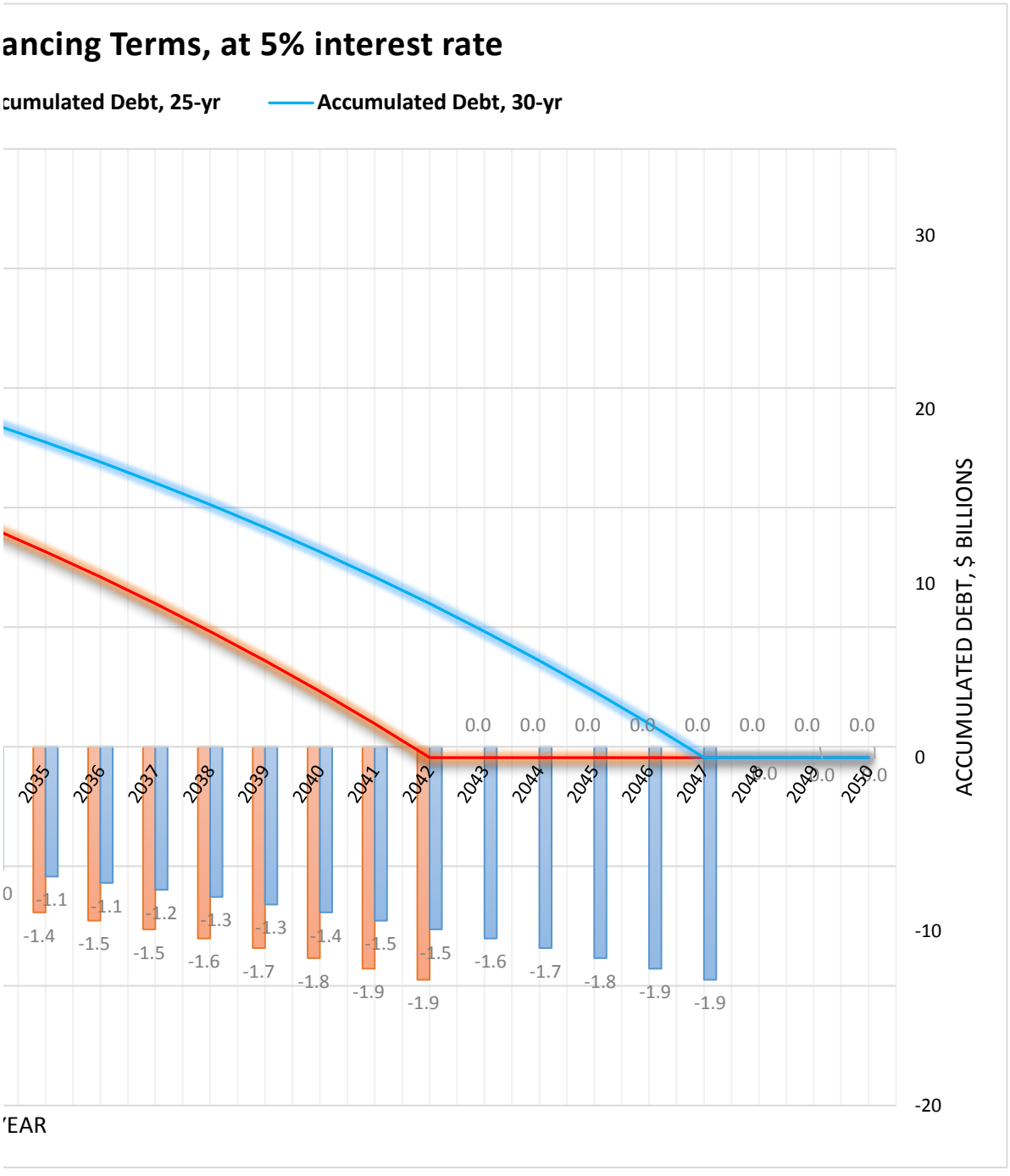


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



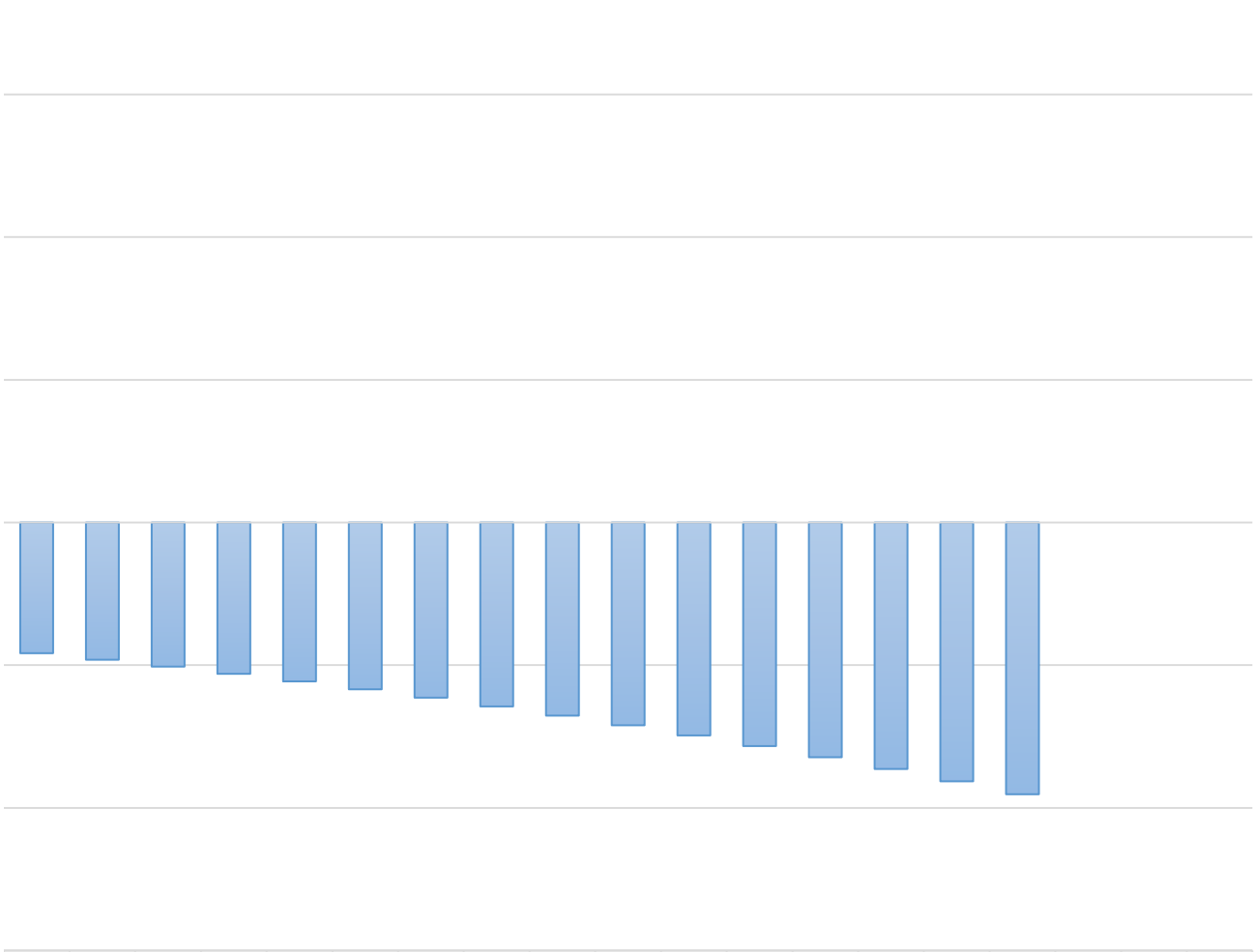

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

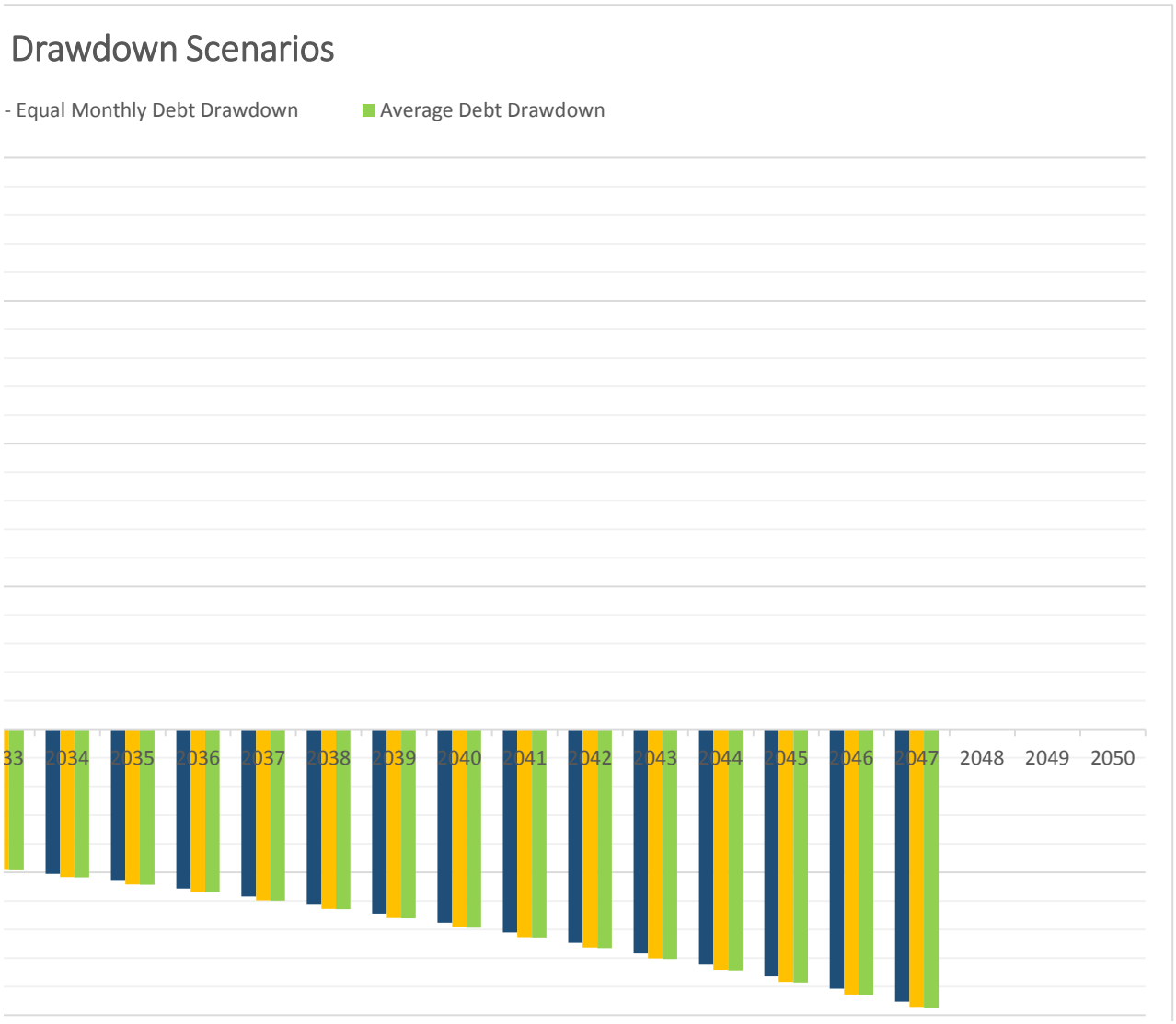
YEAR

cal Exposure



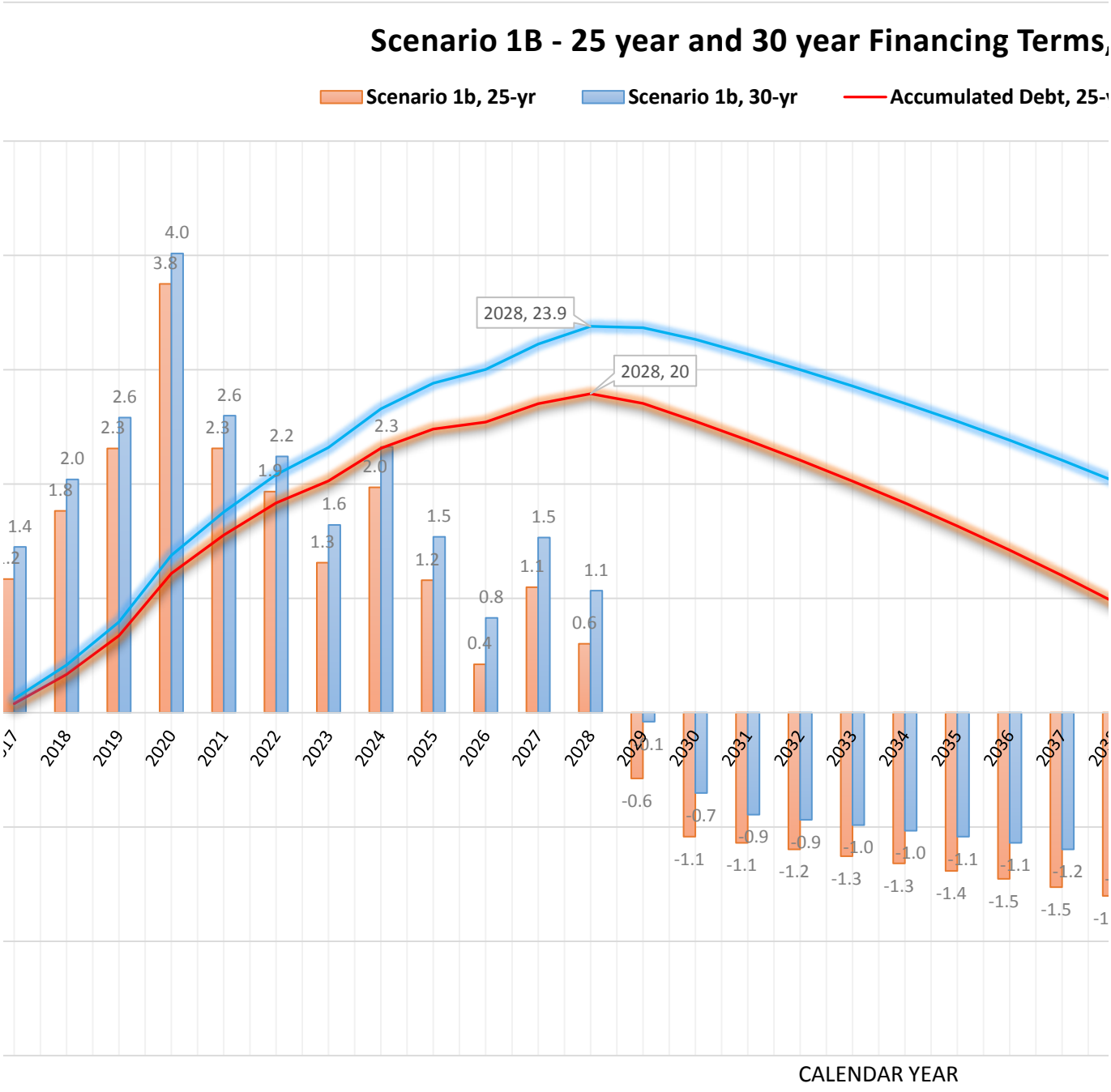
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

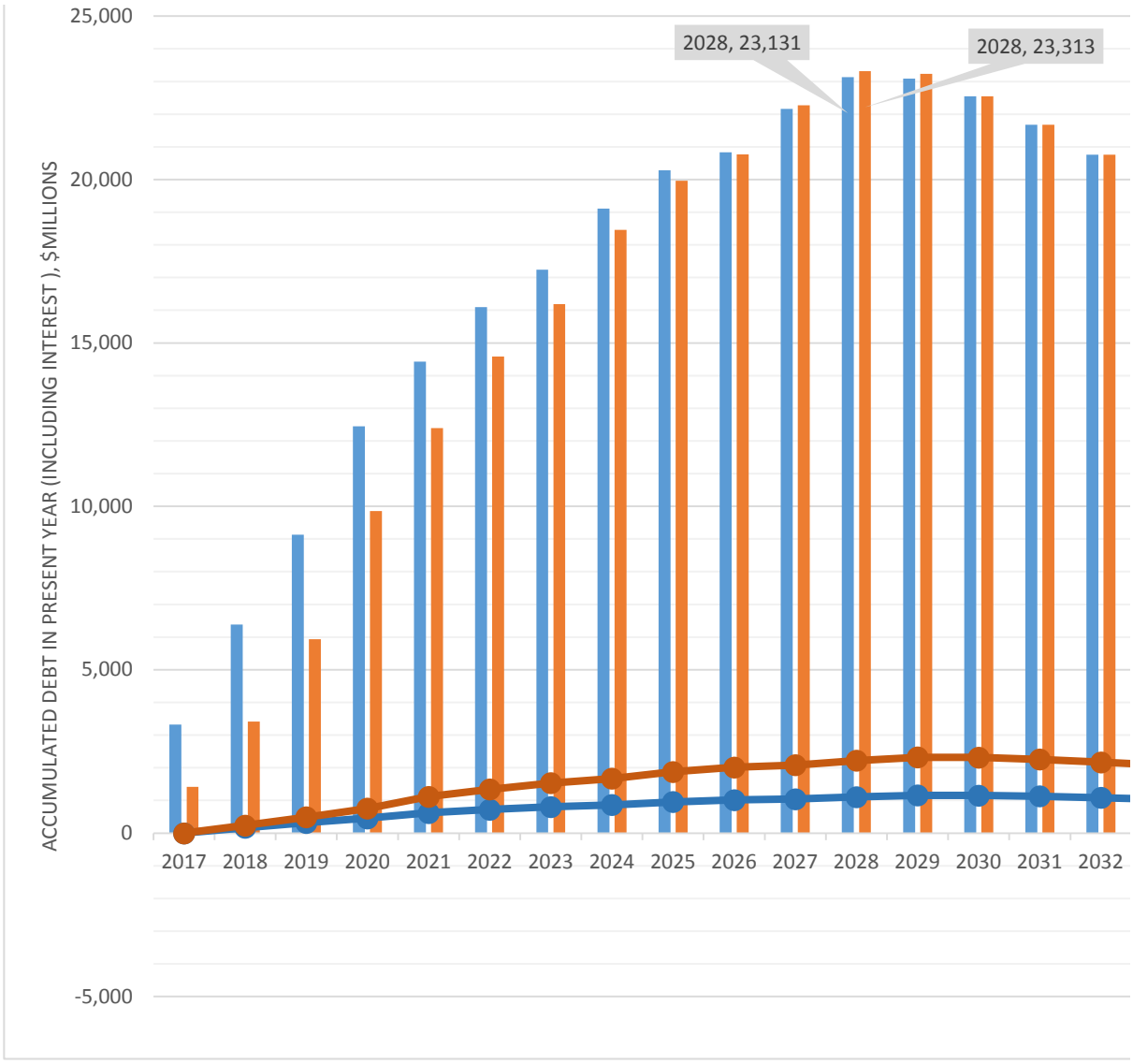


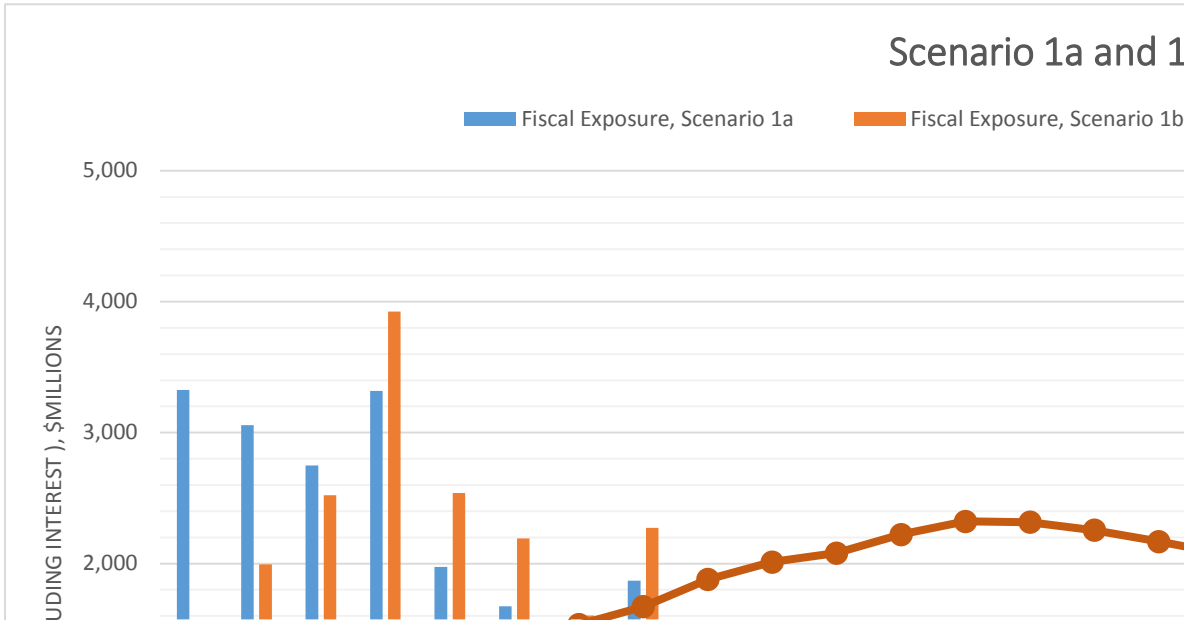
YEAR

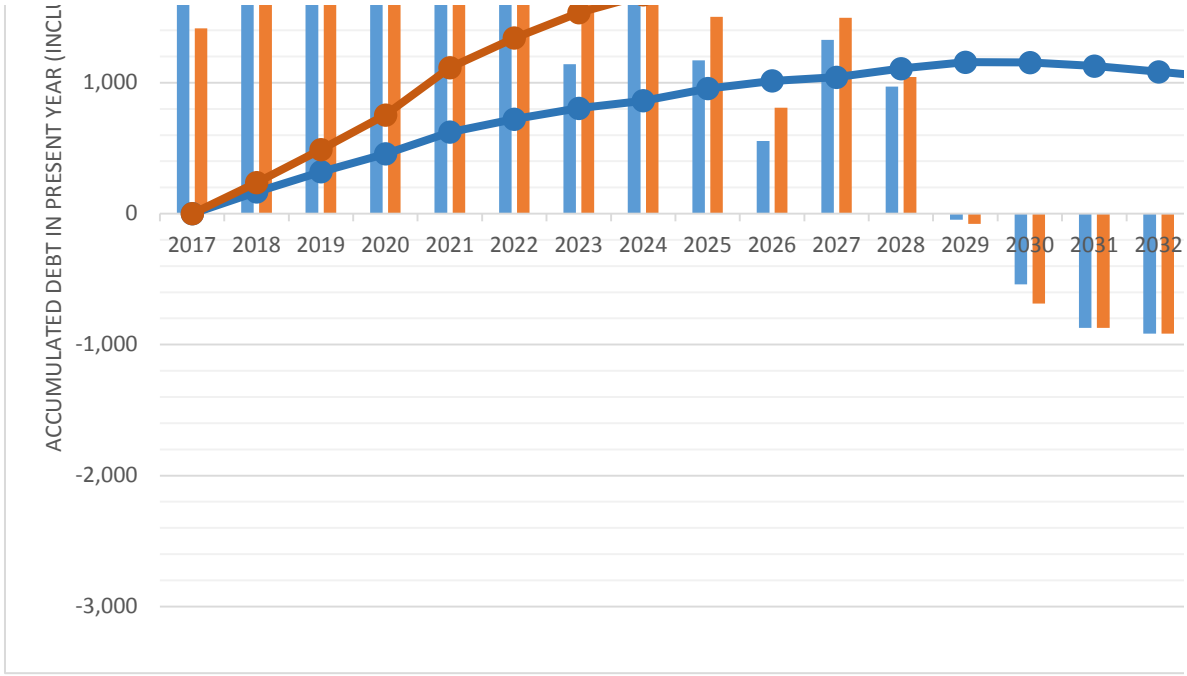
3 - 25 year and 30 year Financing Terms, at 5% interest rate

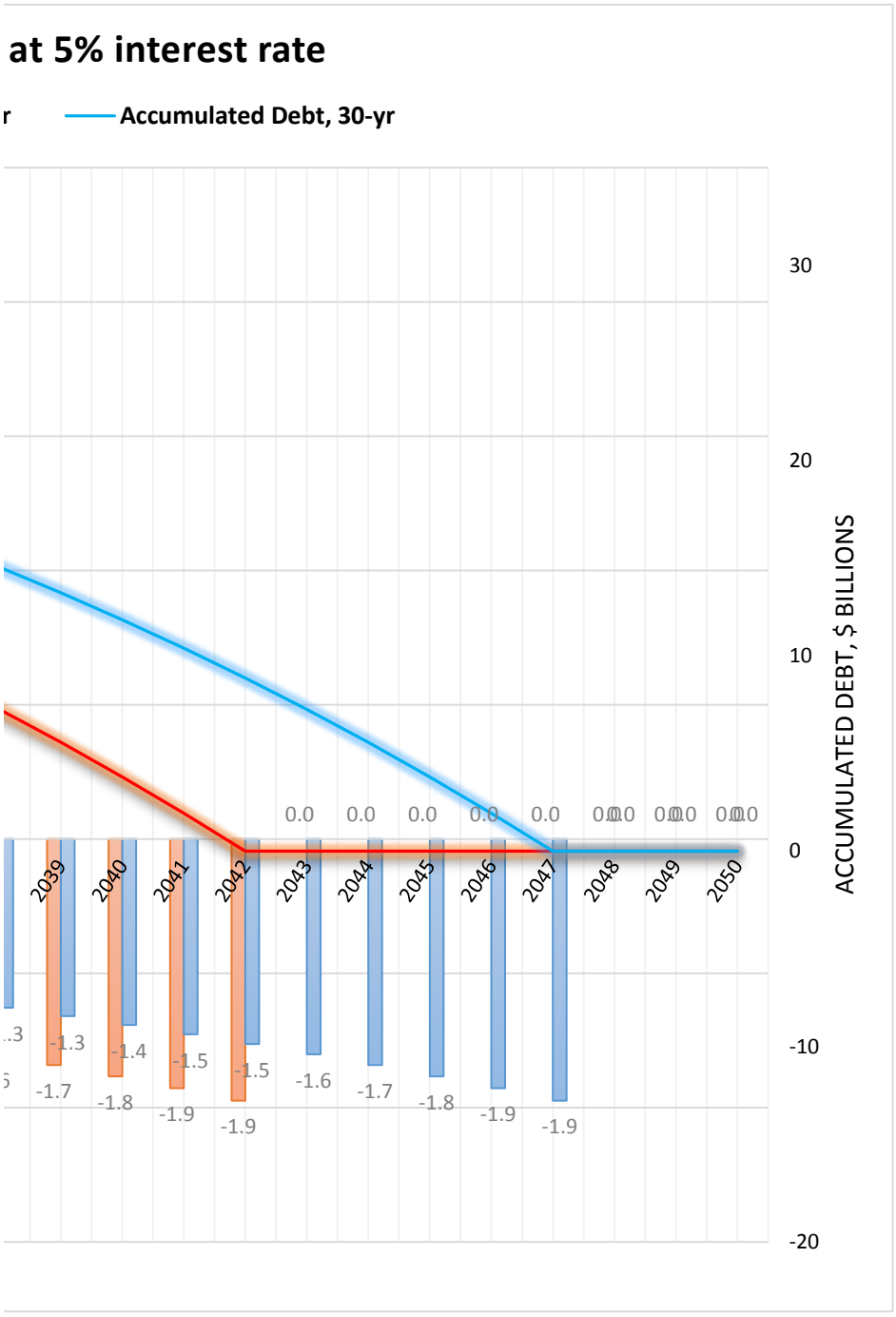





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

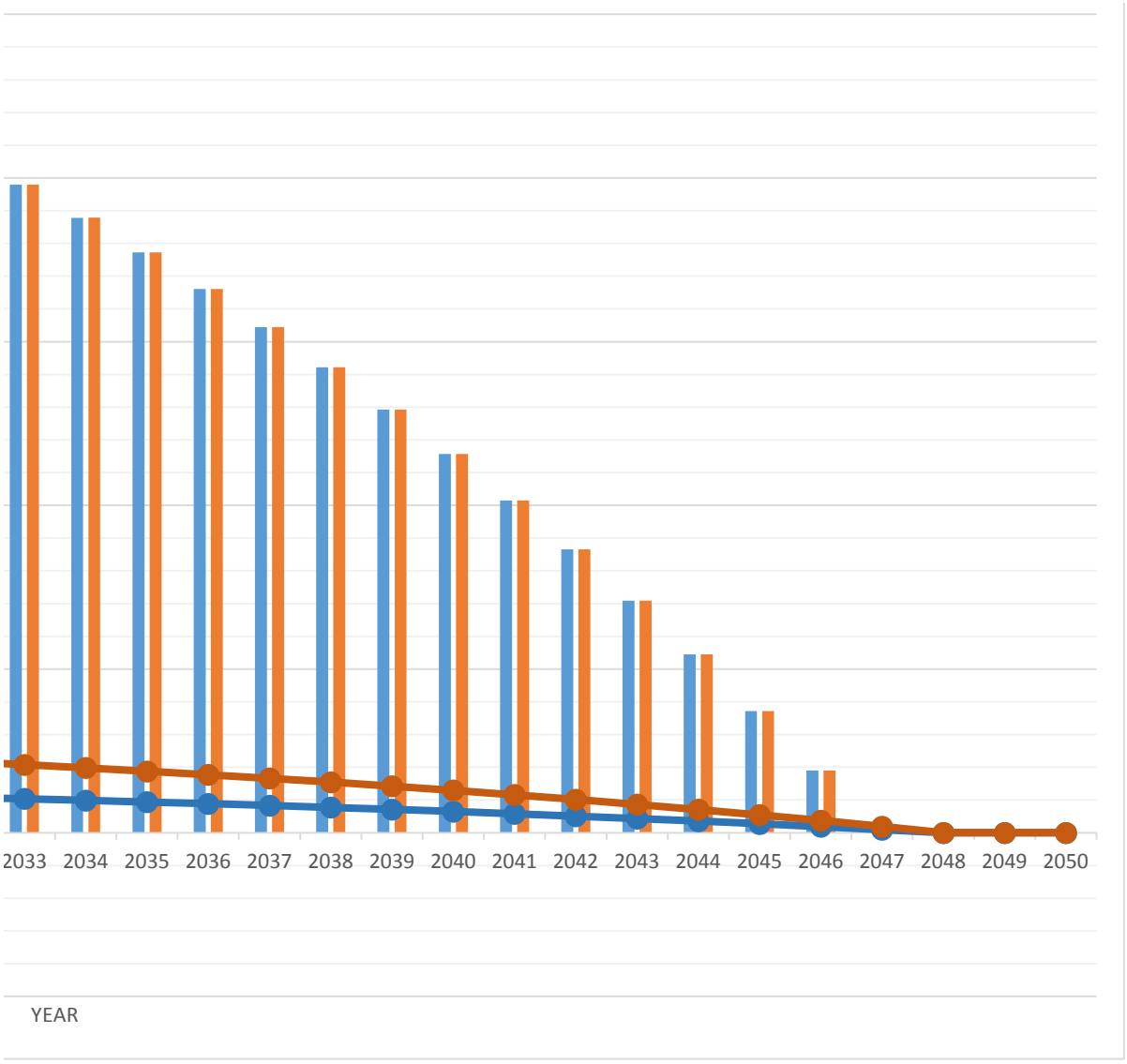

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

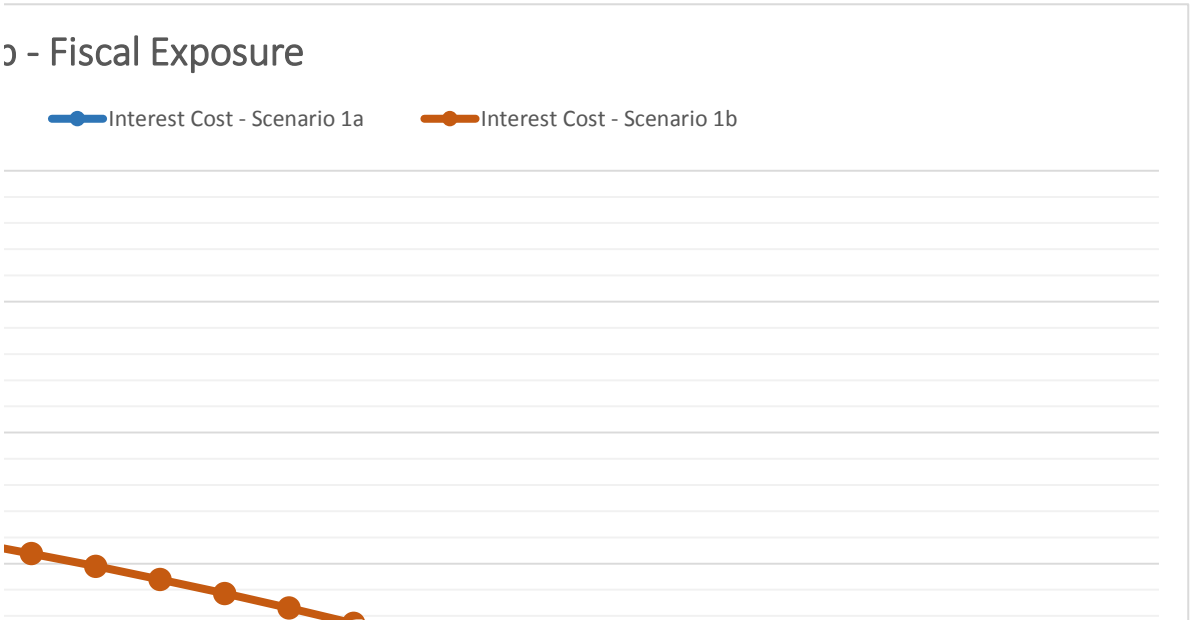

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

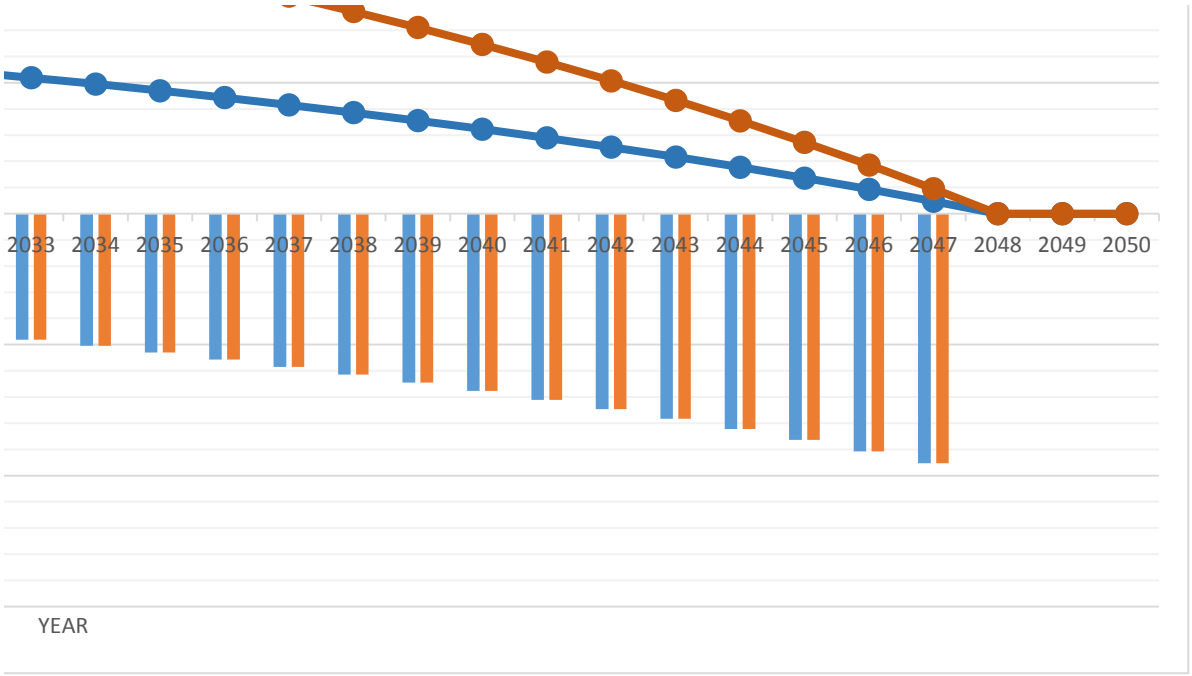


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

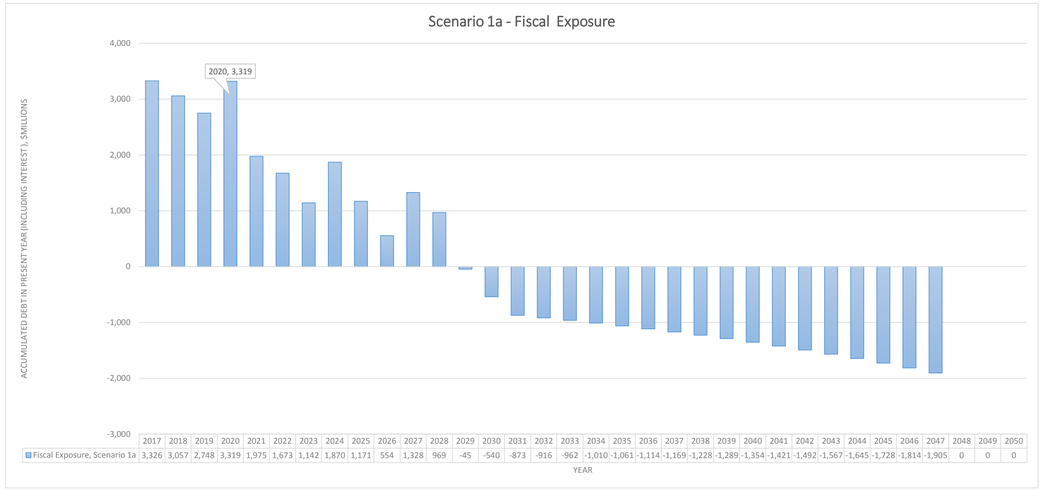
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

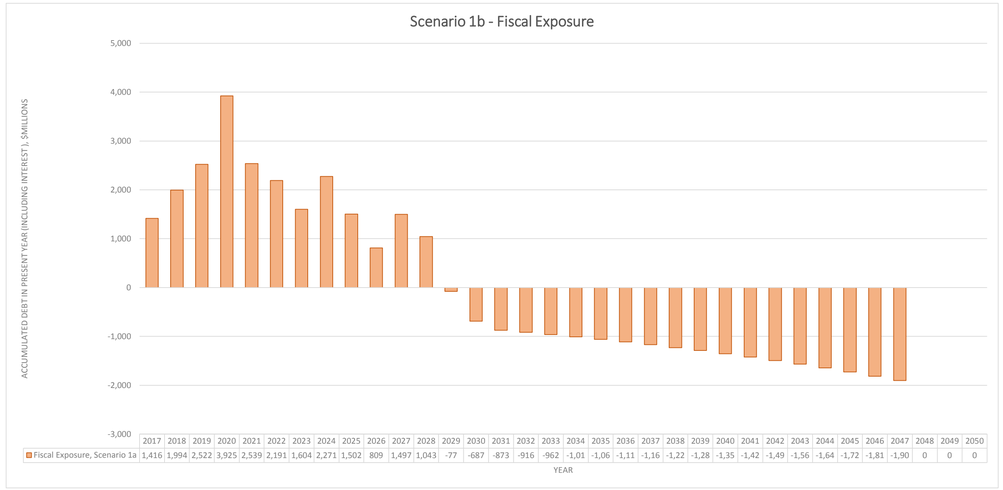
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

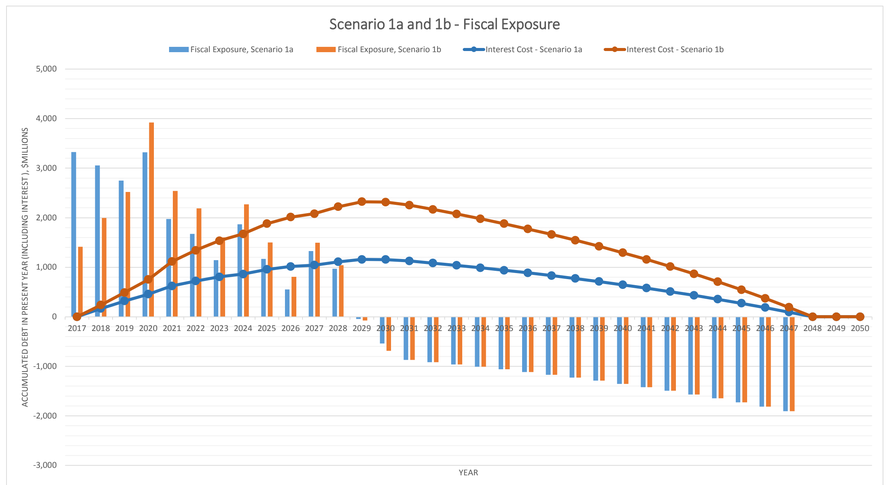
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

Notes:	Accounting treatment is to be determined.


Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0


Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0


Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest

IESO GA cost forecast + extrapolation

Scenario
Option 1
Bills Lowered 25%, RPP-Eligible Only
Option 2
Bills Lowered 20%, RPP-Eligible Only
Option 3
Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only

rate	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
Ratepayer GA Payment	9,595	9,327	9,051	9,094
Total Accumulated Debt ($ billion)	2,501	5,136	7,900	11,379
		-2.8%	-3.0%	0.5%
Ratepayer GA Payment	10,346	10,093	9,827	9,886
Accumulated debt in present year (including 5% interest,	1,749	3,580	5,488	8,052
Ratepayer GA Payment	10,648	10,303	10,186	10,873
Accumulated debt in present year (including 5% interest,	1,447	3,053	4,575	6,105

2021	2022	2023	2024	2025	2026	2027
10,844	10,634	10,243	11,128	10,527	10,033	11,043

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
10844	10634	10243	11128	10527	10033	11043
8,184	8,374	8,569	8,768	8,972	9,180	9,394
14,621	17,629	20,205	23,599	26,362	28,564	31,674
-10.0%	2.3%	2.3247180421718900000%	2.3%	2.3%	2.3%	2.3%
	TRUE	FALSE	FALSE	FALSE	FALSE	
8,991	9,200	9,414	9,633	9,857	10,086	10,321
10,316	12,278	13,735	15,933	17,418	18,256	19,913
9,733	9,573	9,240	10,128	9,620	9,238	10,318
7,527	8,973	10,436	11,970	13,490	14,976	16,467

2028	2029	2030	2031	2032	2033	2034	2035
10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662

2028	2029	2030	2031	2032	2033	2034	2035
10819	10009	9721	8654	8820	8238	7756	5662
9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585
34,502	36,440	37,962	38,260	38,500	37,925	36,589	34,538
2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	-13.1%
10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563
21,190	21,477	21,240	20,426	19,571	18,672	17,727	16,733
10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879
17,876	18,843	19,521	20,007	20,312	20,325	19,755	18,549

2036	2037	2038	2039	2040	2041	2042	2043
5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811

2036	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**
5389	5129	4881	4645	4421	4207	4004	3811
9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733
32,383	30,117	27,736	25,232	22,601	19,835	16,927	13,871
-2.9%	-2.8%	-2.7%	-2.7%	-2.6%	-2.6%	-2.5%	-2.4%
7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711
15,689	14,591	13,438	12,225	10,950	9,610	8,201	6,720
7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348
17,050	15,464	13,694	12,062	10,556	9,143	7,810	6,672

2044	2045	2046	2047	2048

3,627 3,451 3,285 3,126 2,975 2,831 2,695

2044	2045	2046	2047	2048	2049	2050
3627	3451	3285	3126	2975	2831	2695

7,549	7,374	7,207	7,048	2,975	2,831	2,695
10,658	7,281	3,731	0	0	0	0
-2.4%	-2.3%	-2.3%				
5,527	5,352	5,185	5,026	2,975	2,831	2,695
5,164	3,528	1,808	-	-	-	-
4,712	4,007	3,619	3,425	3,156	3,011	2,878
5,928	5,676	5,633	5,623	5,730	5,843	5,959

5%	End of Year Debt Drawdown	2017	2018
	IESO GA cost forecast + extrapolation	12,095	11,835
	Ratepayer GA Payment	9,595	9,327
	GA Debt Requirement	2,501	2,508
	Debt, Beginning of Year	0	2,501
	Interest Cost - Feb22 Option 1, 30-yr - End of Year Debt Drawdown	*0*	*128*
	Additional GA Debt Drawdown, End of Year	2,501	2,508
	Accumulated debt in present year (including 5.12% annual interest)	2,501	5,136

5.000050%	End of Year Debt Drawdown	2017	2018
			-2.16%
			-2.79%
	IESO GA cost forecast + extrapolation	12,095	11,835
	Ratepayer GA Payment	9,595	9,327
	GA Debt Requirement	2,501	2,508
	Debt, Beginning of Year	0	2,501
	Interest Cost - Feb22 Option 1, 30-yr - End of Year Debt Drawdown	*0*	*128*
	Additional GA Debt Drawdown, End of Year	2,501	2,508
	Accumulated debt in present year (including 5.12% annual interest)	2,501	5,136
		0.00	0.00
		0.90	for 0.00005
		4518.213	for 0.25%

5.250000%	End of Year Debt Drawdown	2017	2018
	IESO GA cost forecast + extrapolation	12,095	11,835
	Ratepayer GA Payment	9,595	9,327
	GA Debt Requirement	2,501	2,508
	Debt, Beginning of Year	0	2,501
	Interest Cost - Feb22 Option 1, 30-yr - End of Year Debt Drawdown	*0*	*134*
	Additional GA Debt Drawdown, End of Year	2,501	2,508
	Accumulated debt in present year (including 5.12% annual interest)	2,501	5,143

5.25% and 5.0%	0	7
	0	6.544088
	-4746.31	

2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
	22.9%								
	0.5%	-10.0%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%
11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819
9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
5,136	7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675
263	*404*	*582*	*748*	*902*	*1,034*	*1,207*	*1,349*	*1,461*	*1,621*
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675	34,502

2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
-2.39%	5.34%	-10.89%	-1.94%	-3.67%	8.64%	-5.40%	-4.69%	10.06%	-2.03%
-2.95%	0.47%	-10.01%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%
11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819
9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
5,136	7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675
263	*404*	*582*	*748*	*902*	*1,034*	*1,207*	*1,349*	*1,461*	*1,621*
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675	34,502
0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02

5%

5000

2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819
9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
5,143	7,921	11,421	14,695	17,745	20,374	23,830	26,667	28,955	32,161
277	*426*	*614*	*790*	*954*	*1,096*	*1,282*	*1,434*	*1,557*	*1,730*
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
7,921	11,421	14,695	17,745	20,374	23,830	26,667	28,955	32,161	35,098

14	22	32	42	52	62	74	85	96	109
13.77695	21.71447	31.92933	42.04725	52.06963	61.4769	73.50439	84.49516	94.58025	107.5596

2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
2.3%	2.3%	2.3%	2.3%						
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881
9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
34,502	36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,384	30,119
1,765	*1,864*	*1,942*	*1,957*	*1,970*	*1,940*	*1,872*	*1,767*	*1,657*	*1,541*
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,384	30,119	27,737

2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
-7.49%	-2.87%	-10.98%	1.91%	-6.60%	-5.85%	-27.00%	-4.83%	-4.83%	-4.83%
2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	-13.13%	-2.85%	-2.80%	-2.74%
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881
9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
34,502	36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,385	30,119
1,765	*1,864*	*1,942*	*1,958*	*1,970*	*1,940*	*1,872*	*1,767*	*1,657*	*1,541*
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,385	30,119	27,738
0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04

2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881
9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
35,098	37,159	38,815	39,258	39,652	39,240	38,074	36,200	34,224	32,142
1,888	*1,998*	*2,088*	*2,111*	*2,133*	*2,110*	*2,048*	*1,947*	*1,841*	*1,729*
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
37,159	38,815	39,258	39,652	39,240	38,074	36,200	34,224	32,142	29,949

122	134	145	154	163	170	176	180	184	188
120.4625	131.6985	142.4188	150.4868	158.814	165.4355	170.4025	173.755	177.0044	180.1316

2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975
8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
27,737	25,234	22,603	19,837	16,929	13,873	10,661	7,284	3,734	3
1,419	*1,291*	*1,156*	*1,015*	*866*	*710*	*545*	*373*	*191*	*0*
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
25,234	22,603	19,837	16,929	13,873	10,661	7,284	3,734	3	3

2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%
-2.68%	-2.62%	-2.56%	-2.50%	-2.44%	-2.38%	-2.32%	-2.26%	-2.20%	-57.79%
4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975
8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
27,738	25,235	22,603	19,837	16,930	13,874	10,661	7,285	3,735	4
1,419	*1,291*	*1,156*	*1,015*	*866*	*710*	*545*	*373*	*191*	*0*
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
25,235	22,603	19,837	16,930	13,874	10,661	7,285	3,735	4	4
0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04

2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975
8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
29,949	27,637	25,201	22,634	19,929	17,079	14,075	10,909	7,574	4,059
1,611	*1,486*	*1,355*	*1,217*	*1,072*	*919*	*757*	*587*	*407*	*218*
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
27,637	25,201	22,634	19,929	17,079	14,075	10,909	7,574	4,059	4,277

192	195	199	202	206	209	212	214	216	218
183.1154	185.9331	188.5597	190.9684	193.13	195.013	196.583	197.8033	198.6338	199.0316

2049	2050
2,831	2,695
2,831	2,695
0	0
3	3
0	*0*
0	0
3	3

2049	2050
-4.83%	-4.83%
-4.83%	-4.83%
2,831	2,695
2,831	2,695
0	0
4	4
0	*0*
0	0
4	4
0.04	0.04

2049	2050
2,831	2,695
2,831	2,695
0	0
4,277	4,507
230	*242*
0	0
4,507	4,750

230	242
209.2149	219.9193

Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Interest Rate, monthly comp.	**5.000000%**		
Annual Interest Rate	5.12%	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb22_1_30yr

Option 1 - Bills Lowered 25%, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,501	2,636
Interest Portion	0	128

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	625	2,534
Interest Portion	-	32

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $39 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb22_2_30yr

Option 2 - Bills Lowered 20%, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,749	1,831
Interest Portion	0	89

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	437	1,770
Interest Portion	-	22

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $21 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb22_3_30yr

Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606
Interest Portion	0	74

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,487
Interest Portion	-	19

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	437 - 625	1,770 - 2,534

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	625	2534
Debt-Finance Global Adjustment Costs, Option 1a	437	1770
RRRP		
OESP – Enhance Benefit		162

Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**625**	**2774**
Total, B	437	2010

Proposed Program Total:	437 - 625	2,010 - 2,774

ining

0	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Option 1
Option 2
Option 3

Assumes an inte

2019	2020	2021	2022	
				CheckInt
2,764	3,479	3,242	3,008	
263	404	582	748	

2018-19	2019-20	2020-21	2021-2022
2,668	2,942	3,420	3,183
162	298	449	624

Option 1
Option 2
Option 3

2032.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,908	2,564	2,264	1,961
183	281	412	528

2018-19	2019-20	2020-21	2021-2022
1,850	2,072	2,489	2,189
113	208	314	441

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446
156	234	312	385

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429
95	176	254	331

2033.

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022
1,850 - 2,668	2,072 - 2,942	2,489 - 3,420	2,189 - 3,183

/1

2018-19[1]	2019-20[1]	2020-21[1]
2668	2942	3420
1850	2072	2489
225	279	323

60	60	60
18	18	18
2971	**3299**	**3821**
2153	2429	2890

2,153 - 2,971	2,429 - 3,299	2,890 - 3,821

	$35,723	
	$35,542	
	0.51%	27.00%

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$24,976.5	$35,542.1	$38,501	occurs in Year 2032
$14,759.8	$19,733.1	$21,477	occurs in Year 2029
$12,862.3	$19,498.4	$20,326	occurs in Year 2033

erest rate of 5.00% (compounded monthly).

			5000
5.00000%	5.00005%	0.00005%	0.25%
35,542	35,543	0.90	4,518.21
19,733	19,734	0.52	2,619.41
19,498	19,499	0.48	2,410.01
0.249950%			

Tab Name		Total Accumulated Interest Costs
Feb22_1_30yr	$31,810	$40,288
Feb22_2_30yr	$17,586	$22,491
Feb22_3_30yr	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$31,810 to $40,288**
Option 2	$17,586 to $22,491**
Option 3	$17,202 to $22,028**

** With a higher interest rate, the amortization period extend beyond the 30-year forecast

ted period resulting in a remaining balance at the end of the 30-year period. For specifics, see details belo

w.

Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb22_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,501	2,636	2,764	3,479	3,242	3,008	2,577	3,394	2,763	2,202	3,111	2,828	1,938	1,522	299	240	-575	-1,336	-2,050	-2,155	-2,265	-2,381	-2,503	-2,631	-2,766	-2,907	-3,056	-3,213	-3,377	-3,550	-3,731	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,560	2,699	2,829	3,561	3,319	3,079	2,638	3,475	2,828	2,254	3,185	2,895	1,985	1,558	306	246	-588	-1,368	-2,099	-2,206	-2,319	-2,438	-2,563	-2,694	-2,832	-2,977	-3,129	-3,289	-3,457	-3,634	-3,820	0	0	0
			59	63	66	83	77	72	61	81	66	52	74	67	46	36	7	6	-14	-32	-49	-51	-54	-57	-60	-63	-66	-69	-73	-76	-80	-84	-89	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,479	1,970	35,542.1
Equal Monthly Debt Drawdown	3,561	1,963	

	Feb22 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	38,500.8	2032	24,977
Equal Monthly Debt Drawdown	39,416.6		

Feb22 Option 1, 30-yr — End of Year Debt Drawdown

Option 1 - Bills Lowered 25%, RPP-Eligible Only
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
a	Debt, Beginning of Year	0	2,501	5,136	7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675	34,502	36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,384	30,119	27,737	25,234	22,603	19,837	16,929	13,873	10,661	7,284	3,734	3	3	3	
c = a*5%	*Interest Cost - Feb22 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*128*	*263*	*404*	*582*	*748*	*902*	*1,034*	*1,207*	*1,349*	*1,461*	*1,621*	*1,765*	*1,864*	*1,942*	*1,957*	*1,970*	*1,940*	*1,872*	*1,767*	*1,657*	*1,541*	*1,419*	*1,291*	*1,156*	*1,015*	*866*	*710*	*545*	*373*	*191*	*0*	*0*	*0*	35,542
b	Additional GA Debt Drawdown, End of Year	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,501	5,136	7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675	34,502	36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,384	30,119	27,737	25,234	22,603	19,837	16,929	13,873	10,661	7,284	3,734	3	3	3	3	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb22 Option 1, 30-yr - Accumulated Interest Costs	0	128	391	795	1,377	2,125	3,027	4,061	5,268	6,617	8,078	9,699	11,464	12,986	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	10,661	7,284	3,734	3	3	3	
	Feb22 Option 1, 30-yr - Accumulated Debt Principal	2,501	5,009	7,509	10,584	13,244	15,504	17,178	19,539	21,094	21,947	23,596	24,803	24,977	24,977	24,977	25,216	24,642	23,306	21,255	19,100	16,835	14,453	11,950	9,319	6,553	3,645	589	0	0	0	0	0	0	0	
	Feb22 Option 1, 30-yr - Accumulated Interest Costs	0	128	391	795	1,377	2,125	3,027	4,061	5,268	6,617	8,078	9,699	11,464	13,328	15,271	17,228	19,198	21,138	23,010	24,777	26,434	27,975	29,394	30,685	31,842	32,857	33,723	34,433	34,978	35,351	35,542				
	Feb22 Option 1, 30-yr - Accumulated Debt Principal	2,501	5,009	7,509	10,584	13,244	15,504	17,178	19,539	21,094	21,947	23,596	24,803	24,977	24,634	22,990	21,273	18,728	15,452	11,529	7,607	3,685	-238	-4,160	-8,082	-12,005	-15,927	-19,849	-23,772	-27,694	-31,616	-35,539				
Fiscal Exposure - End of Year Debt Drawdown		2,501	2,636	2,764	3,479	3,242	3,008	2,577	3,394	2,763	2,202	3,111	2,828	1,938	1,522	299	240	-575	-1,336	-2,050	-2,155	-2,265	-2,381	-2,503	-2,631	-2,766	-2,907	-3,056	-3,213	-3,377	-3,550	-3,731	0	0	0	

Feb22 Option 1, 30-yr — Equal Monthly Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
	Option 1 - Bills Lowered 25%, RPP-Eligible Only																																			
	($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Debt, Beginning of Year	0	2,560	5,259	8,088	11,650	14,969	18,048	20,686	24,161	26,989	29,243	32,428	35,323	37,307	38,865	39,171	39,417	38,828	37,460	35,361	33,155	30,835	28,397	25,834	23,140	20,309	17,332	14,203	10,914	7,457	3,823	3	3	3	
1,963	*Interest Cost - Feb22 Option 1, 30-yr*	*59*	*191*	*329*	*487*	*659*	*820*	*963*	*1,114*	*1,273*	*1,401*	*1,535*	*1,688*	*1,811*	*1,901*	*1,949*	*1,963*	*1,956*	*1,909*	*1,823*	*1,716*	*1,603*	*1,484*	*1,360*	*1,228*	*1,091*	*946*	*793*	*633*	*465*	*288*	*102*	*0*	*0*	*0*	35,542
	Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,560	5,259	8,088	11,650	14,969	18,048	20,686	24,161	26,989	29,243	32,428	35,323	37,307	38,865	39,171	39,417	38,828	37,460	35,361	33,155	30,835	28,397	25,834	23,140	20,309	17,332	14,203	10,914	7,457	3,823	3	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,560	2,699	2,829	3,561	3,319	3,079	2,638	3,475	2,828	2,254	3,185	2,895	1,985	1,558	306	246	-588	-1,368	-2,099	-2,206	-2,319	-2,438	-2,563	-2,694	-2,832	-2,977	-3,129	-3,289	-3,457	-3,634	-3,820	0	0	0	

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
	Monthly Drawdown	208	209	208	256	222	188	140	197	130	71	137	101	14	(29)	(137)	(143)	(212)	(273)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	-	-	-
	FV of Monthly Drawdown at 5%	2,560	2,568	2,560	3,148	2,723	2,313	1,715	2,416	1,592	873	1,688	1,236	177	(351)	(1,683)	(1,758)	(2,605)	(3,355)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	-	-	-
	Annual Interest Cost on New Drawdowns	59	60	59	73	63	54	40	56	37	20	39	29	4	(8)	(39)	(41)	(61)	(78)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	-	-	-
	Annual Interest Cost on Opening Balance	-	131	269	414	596	766	923	1,058	1,236	1,381	1,496	1,659	1,807	1,909	1,988	2,004	2,017	1,987	1,917	1,809	1,696	1,578	1,453	1,322	1,184	1,039	887	727	558	382	196	0	0	0
	Total Annual Interest Cost	59	191	329	487	659	820	963	1,114	1,273	1,401	1,535	1,688	1,811	1,901	1,949	1,963	1,956	1,909	1,823	1,716	1,603	1,484	1,360	1,228	1,091	946	793	633	465	288	102	0	0	0

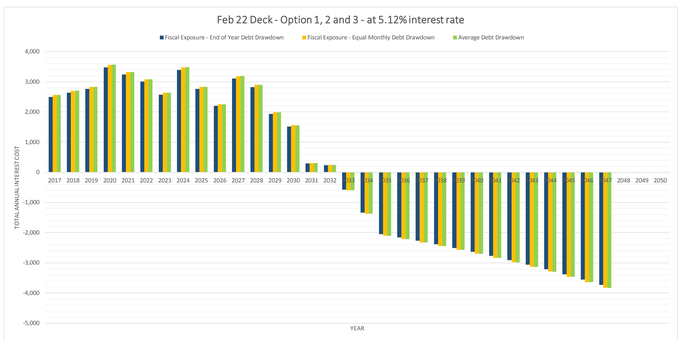
Feb22 Option 1, 30-yr — Bi-Annual Debt Drawdown

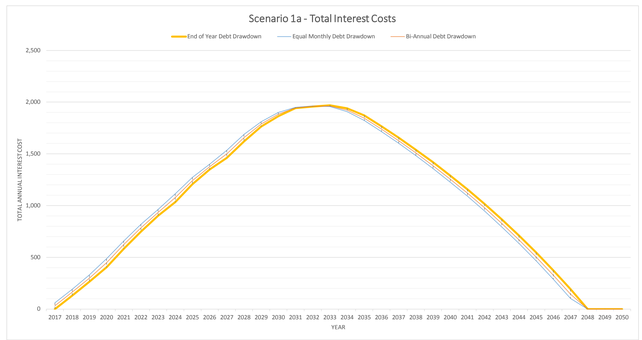
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
	Option 1 - Bills Lowered 25%, RPP-Eligible Only																																			
	($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Debt, Beginning of Year	0	2,533	5,202	8,001	11,524	14,808	17,854	20,464	23,901	26,699	28,929	32,080	34,943	36,907	38,448	38,750	38,993	38,411	37,058	34,981	32,799	30,504	28,092	25,557	22,892	20,091	17,146	14,051	10,797	7,377	3,782	3	3	3	
	Interest Cost - Feb22 Option 1, 30-yr	*32*	*162*	*298*	*449*	*624*	*787*	*935*	*1,077*	*1,243*	*1,377*	*1,501*	*1,657*	*1,790*	*1,884*	*1,946*	*1,946*	*1,962*	*1,923*	*1,846*	*1,740*	*1,628*	*1,510*	*1,387*	*1,257*	*1,121*	*978*	*827*	*669*	*502*	*327*	*143*	*0*	*0*	*0*	35,542
	Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,533	5,202	8,001	11,524	14,808	17,854	20,464	23,901	26,699	28,929	32,080	34,943	36,907	38,448	38,750	38,993	38,411	37,058	34,981	32,799	30,504	28,092	25,557	22,892	20,091	17,146	14,051	10,797	7,377	3,782	3	3	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,533	2,670	2,799	3,523	3,283	3,046	2,610	3,437	2,798	2,230	3,150	2,864	1,963	1,541	302	243	-582	-1,353	-2,077	-2,183	-2,294	-2,412	-2,535	-2,665	-2,801	-2,945	-3,095	-3,254	-3,420	-3,595	-3,779	0	0	0	

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
	Bi-Annual Drawdown	1,250	1,254	1,250	1,537	1,330	1,130	837	1,180	778	427	825	604	87	(171)	(822)	(859)	(1,272)	(1,638)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	-	-	-
	FV of Bi-Annual Drawdown at 5%	2,533	2,540	2,533	3,114	2,694	2,289	1,696	2,390	1,575	864	1,670	1,223	175	(347)	(1,665)	(1,740)	(2,577)	(3,319)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	-	-	-
	Annual Interest Cost on New Drawdowns	32	32	32	39	34	29	21	30	20	11	21	15	2	(4)	(21)	(22)	(33)	(42)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	-	-	-
	Annual Interest Cost on Opening Balance	-	130	266	409	590	758	913	1,047	1,223	1,366	1,480	1,641	1,788	1,888	1,967	1,983	1,995	1,965	1,896	1,790	1,678	1,561	1,437	1,308	1,171	1,028	877	719	552	377	193	0	0	0
	Total Annual Interest Cost	32	162	298	449	624	787	935	1,077	1,243	1,377	1,501	1,657	1,790	1,884	1,946	1,961	1,962	1,923	1,846	1,740	1,628	1,510	1,387	1,257	1,121	978	827	669	502	327	143	0	0	0

Feb22 Option 1, 30-yr — Average Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	Option 1 - Bills Lowered 25%, RPP-Eligible Only																																			
	($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Debt, Beginning of Year	0	2,565	5,268	8,102	11,670	14,995	18,080	20,722	24,203	27,036	29,295	32,485	35,385	37,373	38,933	39,240	39,486	38,896	37,526	35,423	33,213	30,889	28,447	25,880	23,181	20,344	17,363	14,228	10,933	7,470	3,830	3	3	3	
	Interest Cost - Feb22 Option 1, 30-yr	*64*	*195*	*333*	*493*	*665*	*825*	*968*	*1,121*	*1,278*	*1,405*	*1,541*	*1,693*	*1,815*	*1,903*	*1,950*	*1,964*	*1,955*	*1,906*	*1,820*	*1,712*	*1,599*	*1,480*	*1,355*	*1,224*	*1,086*	*941*	*788*	*628*	*459*	*282*	*96*	*0*	*0*	*0*	35,542
	Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,565	5,268	8,102	11,670	14,995	18,080	20,722	24,203	27,036	29,295	32,485	35,385	37,373	38,933	39,240	39,486	38,896	37,526	35,423	33,213	30,889	28,447	25,880	23,181	20,344	17,363	14,228	10,933	7,470	3,830	3	3	3	3	
Fiscal Exposure - Average Debt Drawdown		2,565	2,703	2,834	3,568	3,325	3,085	2,643	3,481	2,833	2,258	3,190	2,900	1,988	1,561	306	246	-589	-1,370	-2,103	-2,210	-2,323	-2,442	-2,567	-2,699	-2,837	-2,982	-3,134	-3,295	-3,463	-3,640	-3,827	0	0	0	





Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb22_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,749	1,831	1,908	2,564	2,264	1,961	1,457	2,198	1,485	838	1,656	1,277	287	-237	-814	-855	-899	-945	-993	-1,044	-1,098	-1,154	-1,213	-1,275	-1,340	-1,409	-1,481	-1,556	-1,636	-1,720	-1,808	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,791	1,875	1,953	2,625	2,318	2,008	1,492	2,250	1,521	858	1,696	1,308	294	-243	-833	-876	-920	-967	-1,017	-1,069	-1,124	-1,181	-1,242	-1,305	-1,372	-1,442	-1,516	-1,593	-1,675	-1,761	-1,851	0	0	0	
			42	44	45	61	54	47	35	52	35	20	39	30	7	-6	-19	-20	-21	-22	-24	-25	-26	-27	-29	-30	-32	-34	-35	-37	-39	-41	-43	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,564	1,099	19,733
Equal Monthly Debt Drawdown	2,625	1,093	

	Feb22 Option 2, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	21,477.1	2029	14,760
Equal Monthly Debt Drawdown	21,988		

Feb22 Option 2, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				26
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
a	Debt, Beginning of Year	0	1,749	3,580	5,488	8,052	10,316	12,278	13,735	15,933	17,418	18,256	19,913	21,190	21,477	21,240	20,427	19,571	18,672	17,727	16,734	15,690	14,592	13,438	12,226	10,951	9,611	8,202	6,722	5,165	3,529	1,809	2	2	2	
c = a*5%	*Interest Cost - Feb22 Option 2, 30-yr - End of Year Debt Drawdown*	*0*	*89*	*183*	*281*	*412*	*528*	*628*	*703*	*815*	*891*	*934*	*1,019*	*1,084*	*1,099*	*1,087*	*1,045*	*1,001*	*955*	*907*	*856*	*803*	*747*	*688*	*625*	*560*	*492*	*420*	*344*	*264*	*181*	*93*	*0*	*0*	*0*	*0*	19,733
b	Additional GA Debt Drawdown, End of Year	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,749	3,580	5,488	8,052	10,316	12,278	13,735	15,933	17,418	18,256	19,913	21,190	21,477	21,240	20,427	19,571	18,672	17,727	16,734	15,690	14,592	13,438	12,226	10,951	9,611	8,202	6,722	5,165	3,529	1,809	2	2	2	2	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	
	Feb22 Option 2, 30-yr - Accumulated Interest Costs	0	89	273	553	965	1,493	2,121	2,824	3,639	4,530	5,464	6,483	7,567	7,330	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	5,165	3,529	1,809	2	2	2	
	Feb22 Option 2, 30-yr - Accumulated Debt Principal	1,749	3,491	5,216	7,499	9,351	10,784	11,614	13,109	13,779	13,726	14,448	14,707	13,910	13,910	13,910	13,055	12,156	11,211	10,217	9,173	8,075	6,922	5,709	4,434	3,094	1,685	205	0	0	0	0	0	0	0	
	Feb22 Option 2, 30-yr - Accumulated Interest Costs	0	89	273	553	965	1,493	2,121	2,824	3,639	4,530	5,464	6,483	7,567	8,666	9,753	10,798	11,799	12,755	13,661	14,518	15,320	16,067	16,754	17,380	17,940	18,432	18,852	19,195	19,460	19,640	19,733				
	Feb22 Option 2, 30-yr - Accumulated Debt Principal	1,749	3,491	5,216	7,499	9,351	10,784	11,614	13,109	13,779	13,726	14,448	14,707	13,910	12,574	10,674	8,773	6,873	4,973	3,072	1,172	-728	-2,628	-4,529	-6,429	-8,329	-10,230	-12,130	-14,030	-15,931	-17,831	-19,731				
Fiscal Exposure - End of Year Debt Drawdown		1,749	1,831	1,908	2,564	2,264	1,961	1,457	2,198	1,485	838	1,656	1,277	287	-237	-814	-855	-899	-945	-993	-1,044	-1,098	-1,154	-1,213	-1,275	-1,340	-1,409	-1,481	-1,556	-1,636	-1,720	-1,808	0	0	0	

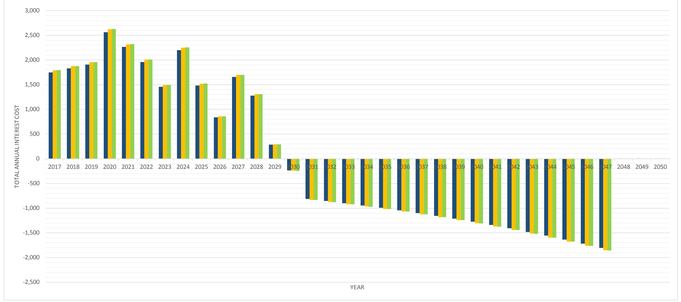
Feb22 Option 2, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Debt, Beginning of Year	0	1,791	3,666	5,619	8,244	10,562	12,570	14,062	16,312	17,832	18,691	20,386	21,694	21,988	21,745	20,912	20,037	19,116	18,149	17,132	16,063	14,939	13,758	12,517	11,211	9,839	8,397	6,881	5,288	3,613	1,852	2	2	2	
1,093	*Interest Cost - Feb22 Option 2, 30-yr*	*42*	*133*	*229*	*342*	*466*	*574*	*663*	*755*	*850*	*911*	*973*	*1,049*	*1,091*	*1,093*	*1,067*	*1,025*	*980*	*933*	*883*	*831*	*777*	*719*	*659*	*595*	*528*	*458*	*384*	*307*	*225*	*140*	*50*	*0*	*0*	*0*	19,733
	Additional GA Debt Drawdown	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,791	3,666	5,619	8,244	10,562	12,570	14,062	16,312	17,832	18,691	20,386	21,694	21,988	21,745	20,912	20,037	19,116	18,149	17,132	16,063	14,939	13,758	12,517	11,211	9,839	8,397	6,881	5,288	3,613	1,852	2	2	2	2	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,791	1,875	1,953	2,625	2,318	2,008	1,492	2,250	1,521	858	1,696	1,308	294	-243	-833	-876	-920	-967	-1,017	-1,069	-1,124	-1,181	-1,242	-1,305	-1,372	-1,442	-1,516	-1,593	-1,675	-1,761	-1,851	0	0	0	

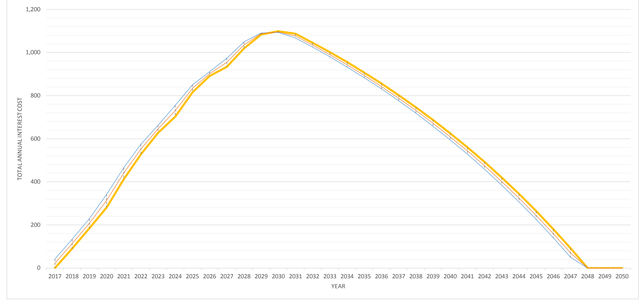
	Monthly Drawdown	146	145	144	190	154	119	69	125	56	(4)	60	22	(66)	(111)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	-	-	-	
	FV of Monthly Drawdown at 5%	1,791	1,783	1,766	2,337	1,896	1,467	849	1,531	686	(54)	739	265	(816)	(1,368)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	41	41	54	44	34	20	36	16	(1)	17	6	(19)	(32)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	-	-	-	
	Annual Interest Cost on Opening Balance	-	92	188	287	422	540	643	719	835	912	956	1,043	1,110	1,125	1,113	1,070	1,025	978	929	877	822	764	704	640	574	503	430	352	271	185	95	0	0	0	
	Total Annual Interest Cost	42	133	229	342	466	574	663	755	850	911	973	1,049	1,091	1,093	1,067	1,025	980	933	883	831	777	719	659	595	528	458	384	307	225	140	50	0	0	0	

Feb22 Option 2, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Debt, Beginning of Year	0	1,772	3,626	5,559	8,155	10,448	12,435	13,911	16,137	17,641	18,490	20,168	21,461	21,752	21,512	20,688	19,822	18,911	17,954	16,948	15,890	14,779	13,610	12,382	11,091	9,734	8,307	6,808	5,231	3,574	1,833	2	2	2	
	Interest Cost - Feb22 Option 2, 30-yr	*22*	*113*	*208*	*314*	*441*	*553*	*647*	*731*	*834*	*902*	*955*	*1,035*	*1,088*	*1,096*	*1,076*	*1,034*	*990*	*943*	*894*	*843*	*789*	*732*	*672*	*609*	*543*	*474*	*401*	*324*	*243*	*159*	*69*	*0*	*0*	*0*	19,733
	Additional GA Debt Drawdown	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,772	3,626	5,559	8,155	10,448	12,435	13,911	16,137	17,641	18,490	20,168	21,461	21,752	21,512	20,688	19,822	18,911	17,954	16,948	15,890	14,779	13,610	12,382	11,091	9,734	8,307	6,808	5,231	3,574	1,833	2	2	2	2	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,772	1,855	1,932	2,596	2,293	1,986	1,476	2,226	1,504	849	1,678	1,294	291	-240	-824	-866	-911	-957	-1,006	-1,058	-1,112	-1,168	-1,228	-1,291	-1,357	-1,427	-1,500	-1,576	-1,657	-1,742	-1,831	0	0	0	

	Bi-Annual Drawdown	875	871	862	1,141	926	717	415	748	335	(26)	361	129	(399)	(668)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,772	1,764	1,747	2,312	1,876	1,452	840	1,514	679	(53)	732	262	(807)	(1,353)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	-	-	-	
	Annual Interest Cost on New Drawdowns	22	22	22	29	24	18	11	19	9	(1)	9	3	(10)	(17)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	-	-	-	
	Annual Interest Cost on Opening Balance	-	91	186	284	417	535	636	712	826	903	946	1,032	1,098	1,113	1,101	1,058	1,014	968	919	867	813	756	696	633	567	498	425	348	268	183	94	0	0	0	
	Total Annual Interest Cost	22	113	208	314	441	553	647	731	834	902	955	1,035	1,088	1,096	1,076	1,034	990	943	894	843	789	732	672	609	543	474	401	324	243	159	69	0	0	0	

Feb22 Option 2, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Debt, Beginning of Year	0	1,794	3,672	5,629	8,258	10,580	12,592	14,086	16,340	17,864	18,724	20,422	21,732	22,027	21,784	20,949	20,072	19,150	18,181	17,162	16,091	14,965	13,782	12,538	11,231	9,857	8,412	6,894	5,297	3,619	1,856	2	2	2	
	Interest Cost - Feb22 Option 2, 30-yr	*45*	*136*	*232*	*346*	*470*	*578*	*665*	*759*	*853*	*913*	*976*	*1,051*	*1,091*	*1,093*	*1,066*	*1,023*	*978*	*931*	*882*	*829*	*775*	*717*	*657*	*593*	*526*	*456*	*382*	*304*	*222*	*137*	*46*	*0*	*0*	*0*	19,733
	Additional GA Debt Drawdown	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,794	3,672	5,629	8,258	10,580	12,592	14,086	16,340	17,864	18,724	20,422	21,732	22,027	21,784	20,949	20,072	19,150	18,181	17,162	16,091	14,965	13,782	12,538	11,231	9,857	8,412	6,894	5,297	3,619	1,856	2	2	2	2	
Fiscal Exposure - Average Debt Drawdown		1,794	1,878	1,957	2,629	2,322	2,011	1,495	2,254	1,523	860	1,699	1,310	294	-243	-834	-877	-922	-969	-1,019	-1,071	-1,126	-1,183	-1,244	-1,307	-1,374	-1,445	-1,519	-1,596	-1,678	-1,764	-1,854	0	0	0	





Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb22_3_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	
			34	38	36	36	34	34	35	36	36	35	35	34	23	16	12	7	0	-14	-29	-36	-38	-42	-39	-36	-34	-32	-27	-18	-6	-1	0	3	3	3	142

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	1,606	1,040	19,498
Equal Monthly Debt Drawdown	1,644	1,040	

	Feb22 Option 3, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	20,325.7	2033	12,862
Equal Monthly Debt Drawdown	20,809		

Feb22 Option 3, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				26
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
a	Debt, Beginning of Year	0	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	
c = a*5%	*Interest Cost - Feb22 Option 3, 30-yr - End of Year Debt Drawdown*	*0*	*74*	*156*	*234*	*312*	*385*	*459*	*534*	*612*	*690*	*766*	*842*	*915*	*964*	*999*	*1,024*	*1,039*	*1,040*	*1,011*	*949*	*872*	*791*	*701*	*617*	*540*	*468*	*400*	*341*	*303*	*290*	*288*	*288*	*293*	*299*	19,498
b	Additional GA Debt Drawdown, End of Year	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
	Feb22 Option 3, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,659	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
	Feb22 Option 3, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,862	12,862	13,167	13,181	12,611	11,405	9,906	8,320	6,550	4,918	3,412	2,000	667	-472	0	0	0	0	0	0	0	
	Feb22 Option 3, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,943	8,967	10,006	11,046	12,057	13,006	13,878	14,669	15,370	15,987	16,527	16,995	17,395	17,736	18,040	18,330	18,618				
	Feb22 Option 3, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,064	11,345	10,319	8,710	6,493	4,045	1,586	-974	-3,307	-5,431	-7,383	-9,184	-10,721	-11,807	-12,362	-12,696	-12,994				
Fiscal Exposure - End of Year Debt Drawdown		1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	

Feb22 Option 3, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	
1,040	*Interest Cost - Feb22 Option 3, 30-yr*	*34*	*112*	*192*	*270*	*346*	*420*	*494*	*570*	*649*	*726*	*802*	*876*	*938*	*980*	*1,010*	*1,031*	*1,040*	*1,026*	*982*	*913*	*835*	*749*	*662*	*581*	*507*	*436*	*373*	*324*	*297*	*289*	*288*	*290*	*296*	*302*	19,640
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	6,102	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	

	Monthly Drawdown	121	128	114	108	93	88	84	83	76	66	60	47	4	(24)	(43)	(60)	(85)	(134)	(185)	(204)	(205)	(213)	(194)	(177)	(163)	(150)	(128)	(90)	(46)	(28)	(25)	(15)	(15)	(15)	
	FV of Monthly Drawdown at 5%	1,482	1,568	1,398	1,326	1,137	1,086	1,028	1,024	929	815	742	580	54	(292)	(525)	(736)	(1,050)	(1,648)	(2,269)	(2,506)	(2,517)	(2,621)	(2,389)	(2,174)	(1,999)	(1,844)	(1,574)	(1,111)	(568)	(342)	(306)	(185)	(184)	(188)	
	Annual Interest Cost on New Drawdowns	34	36	32	31	26	25	24	24	22	19	17	13	1	(7)	(12)	(17)	(24)	(38)	(53)	(58)	(58)	(61)	(55)	(51)	(46)	(43)	(37)	(26)	(13)	(8)	(7)	(4)	(4)	(4)	
	Annual Interest Cost on Opening Balance	-	76	160	240	320	394	470	547	627	707	784	863	936	987	1,023	1,048	1,064	1,065	1,035	972	893	810	717	632	553	479	409	350	311	297	295	295	300	306	
	Total Annual Interest Cost	34	112	192	270	346	420	494	570	649	726	802	876	938	980	1,010	1,031	1,040	1,026	982	913	835	749	662	581	507	436	373	324	297	289	288	290	296	302	

Feb22 Option 3, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	
	Interest Cost - Feb22 Option 3, 30-yr	*19*	*95*	*176*	*254*	*331*	*404*	*478*	*554*	*632*	*709*	*785*	*861*	*927*	*973*	*1,005*	*1,028*	*1,039*	*1,033*	*995*	*930*	*852*	*769*	*680*	*598*	*522*	*451*	*385*	*332*	*300*	*290*	*288*	*289*	*295*	*301*	19,575
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	6,037	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,466	1,626	1,541	1,549	1,441	1,465	1,482	1,554	1,539	1,505	1,510	1,427	979	687	492	309	13	-577	-1,221	-1,518	-1,607	-1,792	-1,653	-1,525	-1,430	-1,350	-1,153	-753	-255	-44	-10	109	115	117	

	Bi-Annual Drawdown	724	766	683	648	555	530	502	500	454	398	363	283	26	(143)	(256)	(359)	(513)	(805)	(1,108)	(1,224)	(1,229)	(1,280)	(1,167)	(1,062)	(976)	(900)	(769)	(543)	(278)	(167)	(149)	(90)	(90)	(92)	
	FV of Bi-Annual Drawdown at 5%	1,466	1,551	1,383	1,312	1,125	1,075	1,017	1,013	919	806	735	573	53	(289)	(519)	(728)	(1,039)	(1,630)	(2,245)	(2,479)	(2,490)	(2,593)	(2,363)	(2,150)	(1,977)	(1,824)	(1,557)	(1,099)	(562)	(338)	(302)	(183)	(182)	(186)	
	Annual Interest Cost on New Drawdowns	19	20	17	17	14	14	13	13	12	10	9	7	1	(4)	(7)	(9)	(13)	(21)	(28)	(31)	(31)	(33)	(30)	(27)	(25)	(23)	(20)	(14)	(7)	(4)	(4)	(2)	(2)	(2)	
	Annual Interest Cost on Opening Balance	-	75	158	237	316	390	465	541	620	699	776	853	926	976	1,012	1,037	1,053	1,053	1,024	961	884	801	710	625	547	474	405	346	307	294	292	291	297	303	
	Total Annual Interest Cost	19	95	176	254	331	404	478	554	632	709	785	861	927	973	1,005	1,028	1,039	1,033	995	930	852	769	680	598	522	451	385	332	300	290	288	289	295	301	

Feb22 Option 3, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	
	Interest Cost - Feb22 Option 3, 30-yr	*37*	*115*	*195*	*273*	*349*	*422*	*497*	*573*	*651*	*728*	*804*	*879*	*939*	*981*	*1,011*	*1,031*	*1,040*	*1,025*	*980*	*911*	*832*	*746*	*659*	*579*	*504*	*434*	*371*	*322*	*297*	*289*	*288*	*290*	*296*	*302*	19,651
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	6,113	
Fiscal Exposure - Average Debt Drawdown		1,484	1,647	1,561	1,569	1,459	1,483	1,500	1,573	1,559	1,524	1,530	1,445	992	696	498	313	14	-585	-1,237	-1,537	-1,627	-1,814	-1,674	-1,545	-1,448	-1,367	-1,167	-763	-258	-44	-10	110	116	119	

3.00%	$	35,542.08

Option 1		
3.00%	$	35,542.08
3.00%	$	35,542.08
3.01%	$	35,542.08
3.02%	$	35,542.08
3.03%	$	35,542.08
3.04%	$	35,542.08
3.05%	$	35,542.08
3.06%	$	35,542.08
3.07%	$	35,542.08
3.08%	$	35,542.08
3.09%	$	35,542.08
3.10%	$	35,542.08
3.11%	$	35,542.08
3.12%	$	35,542.08
3.13%	$	35,542.08
3.14%	$	35,542.08
3.15%	$	35,542.08
3.16%	$	35,542.08
3.17%	$	35,542.08
3.18%	$	35,542.08
3.19%	$	35,542.08
3.20%	$	35,542.08
3.21%	$	35,542.08
3.22%	$	35,542.08
3.23%	$	35,542.08
3.24%	$	35,542.08
3.25%	$	35,542.08
3.26%	$	35,542.08
3.27%	$	35,542.08
3.28%	$	35,542.08
3.29%	$	35,542.08
3.30%	$	35,542.08
3.31%	$	35,542.08
3.32%	$	35,542.08
3.33%	$	35,542.08
3.34%	$	35,542.08
3.35%	$	35,542.08
3.36%	$	35,542.08
3.37%	$	35,542.08
3.38%	$	35,542.08

3.39%	$	35,542.08
3.40%	$	35,542.08
3.41%	$	35,542.08
3.42%	$	35,542.08
3.43%	$	35,542.08
3.44%	$	35,542.08
3.45%	$	35,542.08
3.46%	$	35,542.08
3.47%	$	35,542.08
3.48%	$	35,542.08
3.49%	$	35,542.08
3.50%	$	35,542.08
3.51%	$	35,542.08
3.52%	$	35,542.08
3.53%	$	35,542.08
3.54%	$	35,542.08
3.55%	$	35,542.08
3.56%	$	35,542.08
3.57%	$	35,542.08
3.58%	$	35,542.08
3.59%	$	35,542.08
3.60%	$	35,542.08
3.61%	$	35,542.08
3.62%	$	35,542.08
3.63%	$	35,542.08
3.64%	$	35,542.08
3.65%	$	35,542.08
3.66%	$	35,542.08
3.67%	$	35,542.08
3.68%	$	35,542.08
3.69%	$	35,542.08
3.70%	$	35,542.08
3.71%	$	35,542.08
3.72%	$	35,542.08
3.73%	$	35,542.08
3.74%	$	35,542.08
3.75%	$	35,542.08
3.76%	$	35,542.08
3.77%	$	35,542.08
3.78%	$	35,542.08
3.79%	$	35,542.08
3.80%	$	35,542.08
3.81%	$	35,542.08
3.82%	$	35,542.08
3.83%	$	35,542.08
3.84%	$	35,542.08
3.85%	$	35,542.08

3.86%	$	35,542.08
3.87%	$	35,542.08
3.88%	$	35,542.08
3.89%	$	35,542.08
3.90%	$	35,542.08
3.91%	$	35,542.08
3.92%	$	35,542.08
3.93%	$	35,542.08
3.94%	$	35,542.08
3.95%	$	35,542.08
3.96%	$	35,542.08
3.97%	$	35,542.08
3.98%	$	35,542.08
3.99%	$	35,542.08
4.00%	$	35,542.08
4.01%	$	35,542.08
4.02%	$	35,542.08
4.03%	$	35,542.08
4.04%	$	35,542.08
4.05%	$	35,542.08
4.06%	$	35,542.08
4.07%	$	35,542.08
4.08%	$	35,542.08
4.09%	$	35,542.08
4.10%	$	35,542.08
4.11%	$	35,542.08
4.12%	$	35,542.08
4.13%	$	35,542.08
4.14%	$	35,542.08
4.15%	$	35,542.08
4.16%	$	35,542.08
4.17%	$	35,542.08
4.18%	$	35,542.08
4.19%	$	35,542.08
4.20%	$	35,542.08
4.21%	$	35,542.08
4.22%	$	35,542.08
4.23%	$	35,542.08
4.24%	$	35,542.08
4.25%	$	35,542.08
4.26%	$	35,542.08
4.27%	$	35,542.08
4.28%	$	35,542.08
4.29%	$	35,542.08
4.30%	$	35,542.08
4.31%	$	35,542.08
4.32%	$	35,542.08

4.33%	$	35,542.08
4.34%	$	35,542.08
4.35%	$	35,542.08
4.36%	$	35,542.08
4.37%	$	35,542.08
4.38%	$	35,542.08
4.39%	$	35,542.08
4.40%	$	35,542.08
4.41%	$	35,542.08
4.42%	$	35,542.08
4.43%	$	35,542.08
4.44%	$	35,542.08
4.45%	$	35,542.08
4.46%	$	35,542.08
4.47%	$	35,542.08
4.48%	$	35,542.08
4.49%	$	35,542.08
4.50%	$	35,542.08
4.51%	$	35,542.08
4.52%	$	35,542.08
4.53%	$	35,542.08
4.54%	$	35,542.08
4.55%	$	35,542.08
4.56%	$	35,542.08
4.57%	$	35,542.08
4.58%	$	35,542.08
4.59%	$	35,542.08
4.60%	$	35,542.08
4.61%	$	35,542.08
4.62%	$	35,542.08
4.63%	$	35,542.08
4.64%	$	35,542.08
4.65%	$	35,542.08
4.66%	$	35,542.08
4.67%	$	35,542.08
4.68%	$	35,542.08
4.69%	$	35,542.08
4.70%	$	35,542.08
4.71%	$	35,542.08
4.72%	$	35,542.08
4.73%	$	35,542.08
4.74%	$	35,542.08
4.75%	$	35,542.08
4.76%	$	35,542.08
4.77%	$	35,542.08
4.78%	$	35,542.08
4.79%	$	35,542.08

4.80%	$	35,542.08
4.81%	$	35,542.08
4.82%	$	35,542.08
4.83%	$	35,542.08
4.84%	$	35,542.08
4.85%	$	35,542.08
4.86%	$	35,542.08
4.87%	$	35,542.08
4.88%	$	35,542.08
4.89%	$	35,542.08
4.90%	$	35,542.08
4.91%	$	35,542.08
4.92%	$	35,542.08
4.93%	$	35,542.08
4.94%	$	35,542.08
4.95%	$	35,542.08
4.96%	$	35,542.08
4.97%	$	35,542.08
4.98%	$	35,542.08
4.99%	$	35,542.08
5.00%	$	35,542.08
5.01%	$	35,542.08
5.02%	$	35,542.08
5.03%	$	35,542.08
5.04%	$	35,542.08
5.05%	$	35,542.08
5.06%	$	35,542.08
5.07%	$	35,542.08
5.08%	$	35,542.08
5.09%	$	35,542.08
5.10%	$	35,542.08
5.11%	$	35,542.08
5.12%	$	35,542.08
5.13%	$	35,542.08
5.14%	$	35,542.08
5.15%	$	35,542.08
5.16%	$	35,542.08
5.17%	$	35,542.08
5.18%	$	35,542.08
5.19%	$	35,542.08
5.20%	$	35,542.08
5.21%	$	35,542.08
5.22%	$	35,542.08
5.23%	$	35,542.08
5.24%	$	35,542.08
5.25%	$	35,542.08
5.26%	$	35,542.08

5.27%	$	35,542.08
5.28%	$	35,542.08
5.29%	$	35,542.08
5.30%	$	35,542.08
5.31%	$	35,542.08
5.32%	$	35,542.08
5.33%	$	35,542.08
5.34%	$	35,542.08
5.35%	$	35,542.08
5.36%	$	35,542.08
5.37%	$	35,542.08
5.38%	$	35,542.08
5.39%	$	35,542.08
5.40%	$	35,542.08
5.41%	$	35,542.08
5.42%	$	35,542.08
5.43%	$	35,542.08
5.44%	$	35,542.08
5.45%	$	35,542.08
5.46%	$	35,542.08
5.47%	$	35,542.08
5.48%	$	35,542.08
5.49%	$	35,542.08
5.50%	$	35,542.08

$	19,733.10	$	19,498.37				
Option 2		Option 3					
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.00%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.00%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.01%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.02%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.03%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.04%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.05%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.06%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.07%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.08%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.09%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.10%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.11%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.12%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.13%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.14%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.15%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.16%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.17%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.18%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.19%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.20%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.21%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.22%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.23%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.24%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.25%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.26%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.27%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.28%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.29%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.30%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.31%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.32%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.33%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.34%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.35%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.36%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.37%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.38%

$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.39%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.40%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.41%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.42%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.43%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.44%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.45%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.46%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.47%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.48%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.49%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.50%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.51%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.52%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.53%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.54%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.55%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.56%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.57%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.58%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.59%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.60%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.61%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.62%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.63%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.64%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.65%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.66%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.67%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.68%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.69%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.70%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.71%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.72%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.73%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.74%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.75%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.76%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.77%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.78%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.79%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.80%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.81%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.82%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.83%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.84%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.85%

$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.86%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.87%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.88%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.89%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.90%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.91%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.92%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.93%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.94%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.95%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.96%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.97%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.98%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.99%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.00%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.01%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.02%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.03%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.04%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.05%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.06%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.07%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.08%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.09%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.10%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.11%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.12%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.13%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.14%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.15%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.16%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.17%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.18%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.19%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.20%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.21%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.22%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.23%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.24%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.25%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.26%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.27%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.28%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.29%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.30%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.31%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.32%

$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.33%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.34%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.35%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.36%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.37%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.38%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.39%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.40%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.41%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.42%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.43%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.44%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.45%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.46%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.47%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.48%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.49%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.50%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.51%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.52%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.53%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.54%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.55%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.56%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.57%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.58%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.59%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.60%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.61%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.62%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.63%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.64%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.65%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.66%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.67%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.68%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.69%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.70%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.71%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.72%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.73%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.74%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.75%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.76%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.77%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.78%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.79%

$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.80%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.81%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.82%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.83%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.84%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.85%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.86%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.87%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.88%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.89%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.90%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.91%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.92%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.93%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.94%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.95%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.96%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.97%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.98%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.99%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.00%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.01%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.02%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.03%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.04%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.05%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.06%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.07%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.08%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.09%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.10%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.11%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.12%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.13%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.14%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.15%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.16%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.17%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.18%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.19%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.20%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.21%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.22%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.23%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.24%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.25%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.26%

$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.27%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.28%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.29%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.30%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.31%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.32%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.33%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.34%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.35%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.36%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.37%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.38%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.39%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.40%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.41%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.42%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.43%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.44%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.45%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.46%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.47%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.48%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.49%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.50%

Option 1	Option 2	Option 3
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -

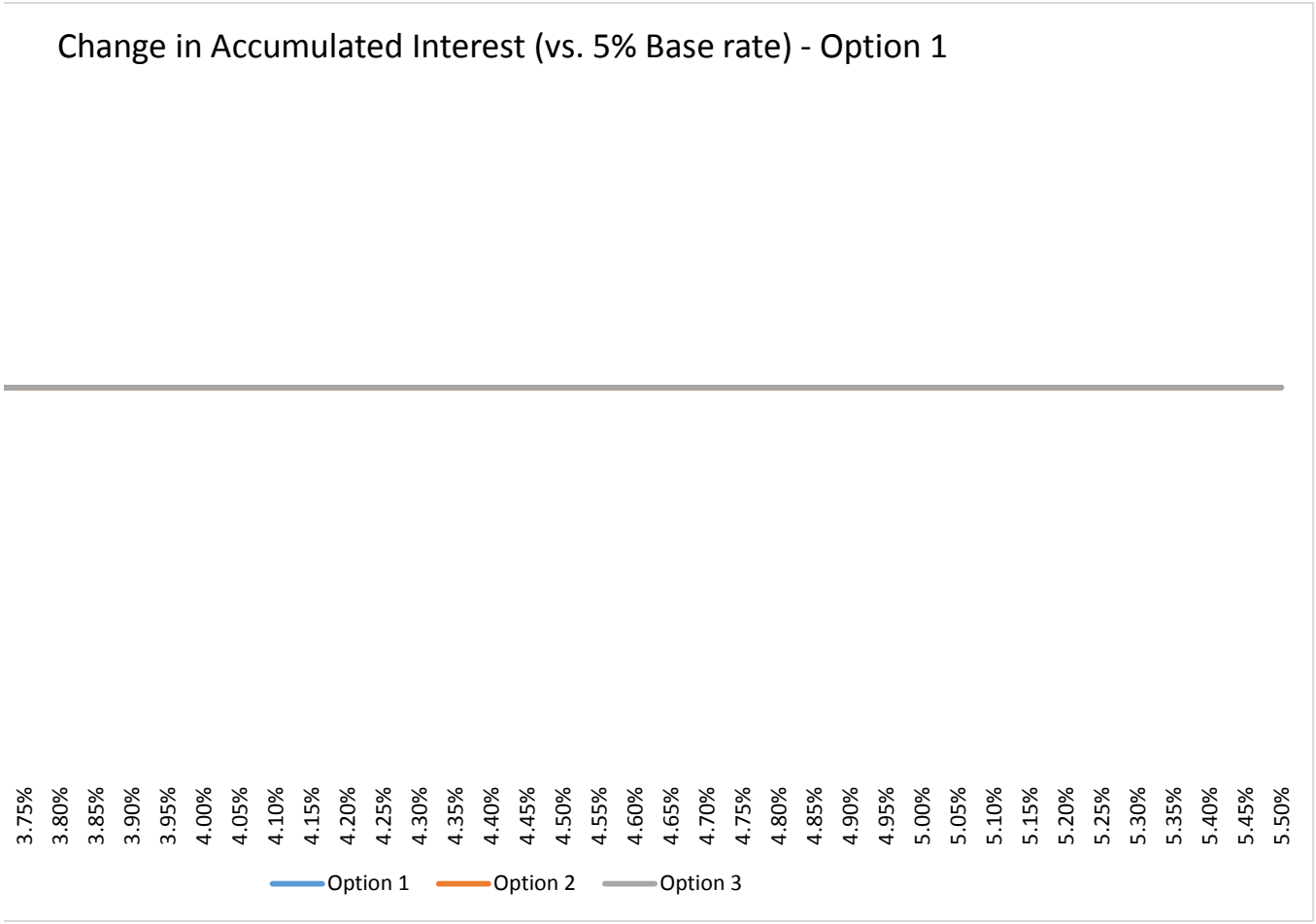
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -

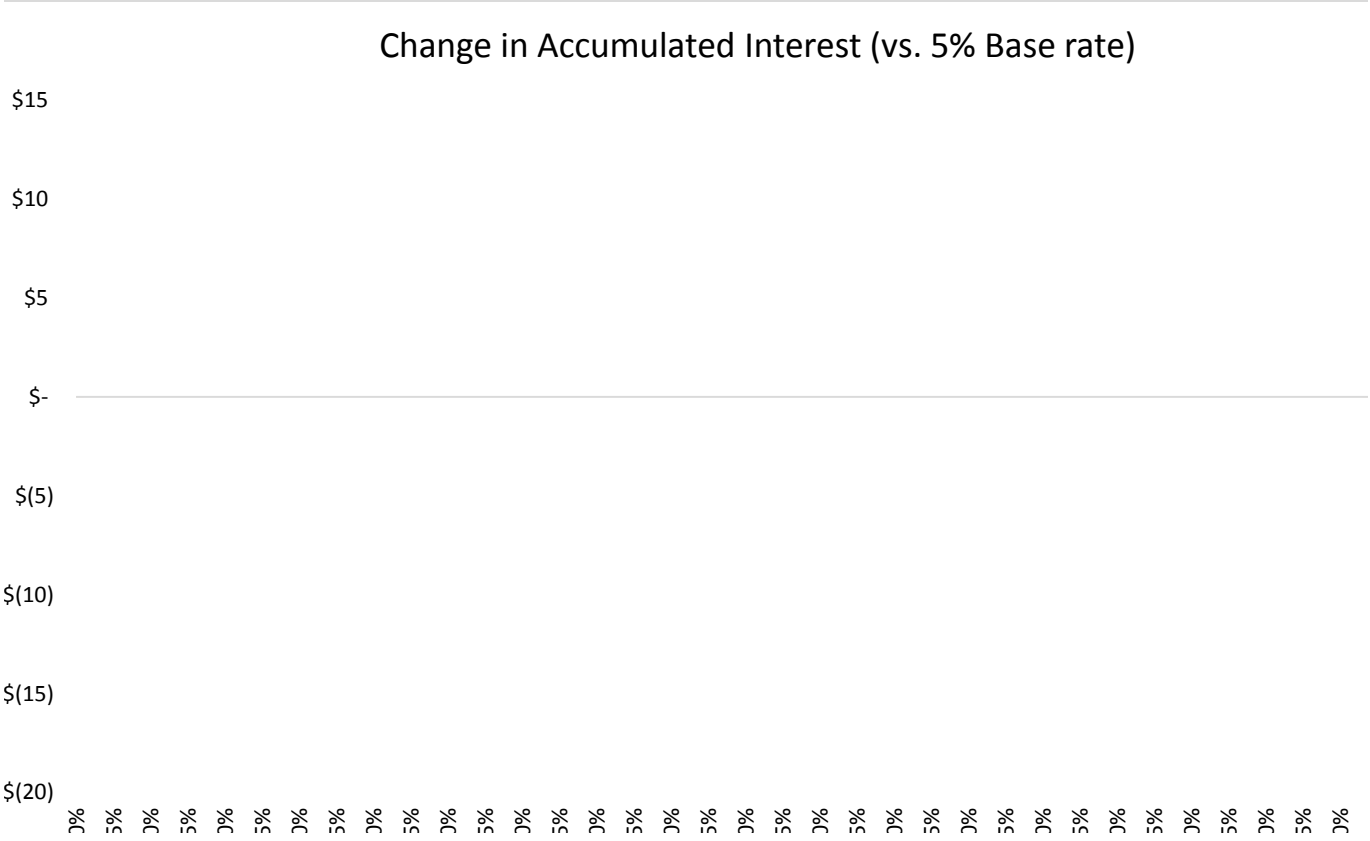
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -

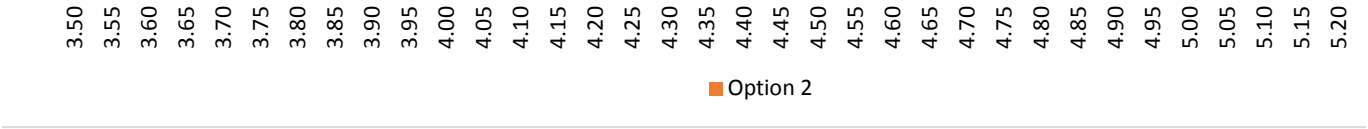
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -

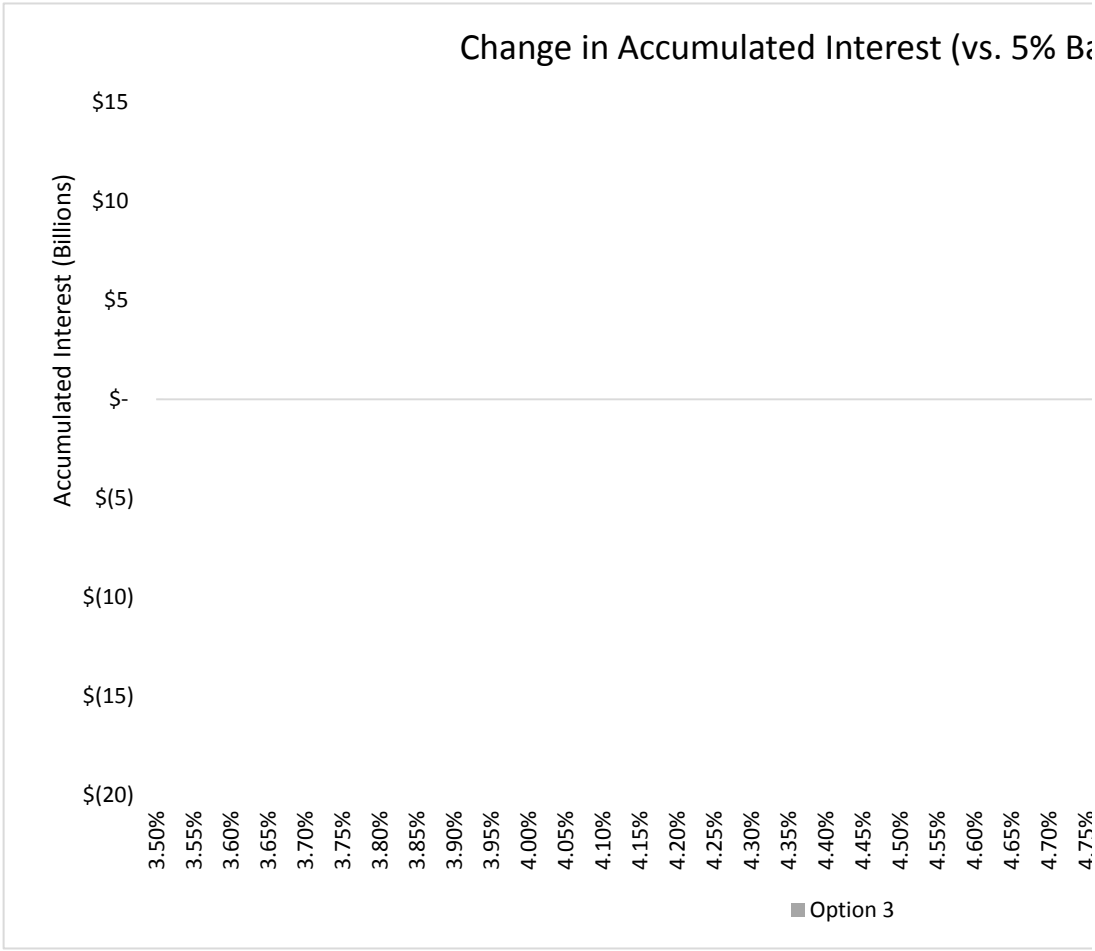
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -

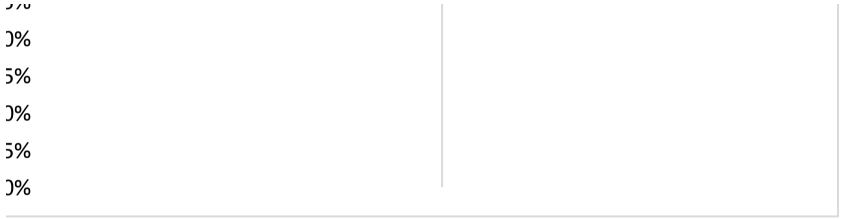
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -


Change in Accumulated Interest (vs. 5% Base rate) - Option 1
3.75%
3.80%
3.85%
3.90%
3.95%
4.00%
4.05%
4.10%
4.15%
4.20%
4.25%
4.30%
4.35%
4.40%
4.45%
4.50%
4.55%
4.60%
4.65%
4.70%
4.75%
4.80%
4.85%
4.90%
4.95%
5.00%
5.05%
5.10%
5.15%
5.20%
5.25%
5.30%
5.35%
5.40%
5.45%
5.50%
Option 1
Option 2
Option 3


Change in Accumulated Interest (vs. 5% Base rate)
$15
$10
$5
$-
$(5)
$(10)
$(15)
$(20)


3.50
3.55
3.60
3.65
3.70
3.75
3.80
3.85
3.90
3.95
4.00
4.05
4.10
4.15
4.20
4.25
4.30
4.35
4.40
4.45
4.50
4.55
4.60
4.65
4.70
4.75
4.80
4.85
4.90
4.95
5.00
5.05
5.10
5.15
5.20
Option 2


Change in Accumulated Interest (vs. 5% Ba
Accumulated Interest (Billions)
$15
$10
$5
$-
$(5)
$(10)
$(15)
$(20)
3.50%
3.55%
3.60%
3.65%
3.70%
3.75%
3.80%
3.85%
3.90%
3.95%
4.00%
4.05%
4.10%
4.15%
4.20%
4.25%
4.30%
4.35%
4.40%
4.45%
4.50%
4.55%
4.60%
4.65%
4.70%
4.75%
Option 3


0%
5%
0%
5%
0%

4.80%
4.85%
4.90%
4.95%
5.00%
5.05%
5.10%
5.15%
5.20%
5.25%
5.30%
5.35%
5.40%
5.45%
5.50%

se rate)

5.30
5.35
5.40
5.45
5.50

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

IESO GA cost forecast + extrapolation

Scenario
Option 1a
Borrow $3.3B, Bills Lowered 20%, No Cap

Option 1b
Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B

	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168

Ratepayer GA Payment	8,753	8,535	8,311	7,650
Total Accumulated Debt ($ billion)	3,342	6,812	10,402	15,452

Ratepayer GA Payment	9,781	9,661	9,367	8,733
Accumulated debt in present year (including 5% interest,	2,314	4,606	7,027	10,822

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528
19,868	24,126	28,033	32,843	37,110	40,911	45,720	50,350
8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717
13,761	16,470	18,755	21,866	24,355	26,295	29,156	31,750

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**
10009	9721	8654	8820	8238	7756	5662	5389

8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319
54,201	57,751	60,200	62,719	64,559	65,780	64,732	63,114
9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913
33,472	34,796	34,919	35,008	34,309	32,878	31,035	29,098

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627

10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485
60,904	58,078	54,611	50,476	45,641	40,076	33,745	26,613
8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151
27,063	24,923	22,673	20,309	17,823	15,210	12,464	9,577

2045	2046	2047	2048

3,451	3,285	3,126	2,975	2,831	2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695

12,786	13,095	13410.34	2975.154	2831.461	2694.708
18,640	9,784	4.85E-06	0	0	0

6,976	6,809	6650.631	2975.154	2831.461	2694.708
6,543	3,353	5E-12	0	0	0

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

		5.00%	
Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb15_1a_30yr

Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,342	3,470
Interest Portion	0	171

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	835	3,374
Interest Portion	-	43

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $66 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb15_1b_30yr

Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,314	2,292
Interest Portion	0	118

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	579	2,309
Interest Portion	-	30

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $35 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

#REF!		
$ millions		
30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	362	1,487

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
	1	
	2	
	3	
	4 April	4
	5 May	5
	6 June	6
	7 July	7
	8 August	8
	9 September	9
	10 October	10
	11 November	11
	12 December	12
30-year term	**2016-17**	**2017-18**

Fiscal Exposure - Equal Monthly Debt Drawdown 579 - 835 2,309 - 3,374

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	835	3374
Debt-Finance Global Adjustment Costs, Option 1a	579	2309
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60

First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**835**	**3614**
Total, B	579	2549
Proposed Program Total:	579 - 835	2,549 - 3,614

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Option 1a
Option 2b

Assumes an inte

2019	2020	2021	2022
3,589	5,050	4,416	4,258
349	532	791	1,016

2018-19	2019-20	2020-21	2021-2022
3,500	3,955	4,892	4,377
215	394	597	847

2034.

depend on decision on accounting treatment.

2019	2020	2021	2022
2,421	3,795	2,938	2,709
236	360	554	704

2018-19	2019-20	2020-21	2021-2022
2,324	2,765	3,581	2,881
148	267	408	591

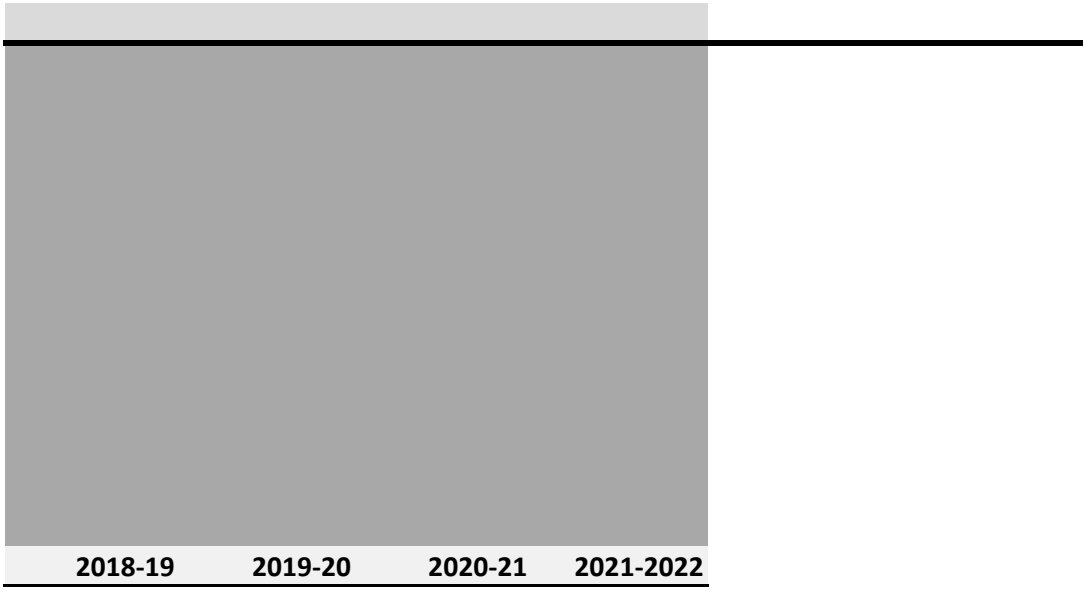
2032.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022

2,324 - 3,500 2,765 - 3,955 3,581 - 4,892 2,881 - 4,377

/1

2018-19[1]	2019-20[1]	2020-21[1]
3500	3955	4892
2324	2765	3581
225	279	323
60	60	60

18	18	18
3803	**4312**	**5293**
2627	3122	3982

2,627 - 3,803	3,122 - 4,312	3,982 - 5,293

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$38,864	$61,735	$65,781	occurs in Year 2034
$22,873	$32,368	$35,009	occurs in Year 2032

erest rate of 5.00% (compounded monthly).

Tab Name		Total Accumulated Interest Costs
Feb15_1a_30yr	$26,517	$34,278
Feb15_1b_30yr	$15,631	$20,378
	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$26,517 to $34,278
Option 2	$15,631 to $20,378
Option 3	$17,202 to $22,028

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

Feb15_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,342	3,470	3,589	5,050	4,416	4,258	3,907	4,810	4,268	3,801	4,809	4,630	3,851	3,550	2,449	2,519	1,840	1,221	-1,048	-1,618	-2,210	-2,825	-3,467	-4,135	-4,834	-5,565	-6,330	-7,132	-7,973	-8,856	-9,783	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,421	3,553	3,675	5,171	4,521	4,359	4,000	4,924	4,369	3,891	4,923	4,740	3,943	3,635	2,508	2,579	1,884	1,250	-1,073	-1,656	-2,262	-2,893	-3,549	-4,234	-4,949	-5,697	-6,481	-7,302	-8,163	-9,067	-10,016	0	0	0	
			79	83	85	120	105	101	93	114	102	90	114	110	92	84	58	60	44	29	-25	-38	-53	-67	-82	-98	-115	-132	-151	-170	-190	-211	-233	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	5,050	3,365	61,735
Equal Monthly Debt Drawdown	5,171	3,341	

	Feb15 Option 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	65,781	2034	38,864
Equal Monthly Debt Drawdown	67,346		

Feb15 Option 1a, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
a	Debt, Beginning of Year	0	3,342	6,812	10,402	15,452	19,868	24,126	28,034	32,843	37,111	40,911	45,720	50,350	54,201	57,752	60,201	62,720	64,560	65,781	64,733	63,115	60,906	58,080	54,614	50,478	45,644	40,079	33,749	26,617	18,644	9,788	5	5	5	
c = a*5%	*Interest Cost - Feb15 Option 1a, 30-yr - End of Year Debt Drawdown*	0	171	349	532	791	1,016	1,234	1,434	1,680	1,899	2,093	2,339	2,576	2,773	2,955	3,080	3,209	3,303	3,365	3,312	3,229	3,116	2,972	2,794	2,583	2,335	2,051	1,727	1,362	954	501	0	0	0	61,735
b	Additional GA Debt Drawdown, End of Year	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	3,342	6,812	10,402	15,452	19,868	24,126	28,034	32,843	37,111	40,911	45,720	50,350	54,201	57,752	60,201	62,720	64,560	65,781	64,733	63,115	60,906	58,080	54,614	50,478	45,644	40,079	33,749	26,617	18,644	9,788	5	5	5	5	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	171	520	1,052	1,842	2,859	4,093	5,527	7,208	9,106	11,199	13,539	16,115	19,665	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	26,617	18,644	9,788	5	5	5	5	
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal	3,342	6,641	9,882	14,400	18,026	21,267	23,941	27,316	29,903	31,805	34,521	36,812	38,087	38,087	38,087	40,606	42,446	43,667	42,619	41,001	38,792	35,966	32,500	28,364	23,530	17,965	11,635	0	0	0	0	0	0	0	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	171	520	1,052	1,842	2,859	4,093	5,527	7,208	9,106	11,199	13,539	16,115	18,888	21,842	24,922	28,131	31,434	34,800	38,112	41,341	44,457	47,428	50,222	52,805	55,140	57,191	58,917	60,279	61,233	61,734				
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal	3,342	6,641	9,882	14,400	18,026	21,267	23,941	27,316	29,903	31,805	34,521	36,812	38,087	38,864	38,359	37,798	36,429	34,347	29,934	25,004	19,565	13,624	7,186	256	-7,161	-15,061	-23,442	-32,300	-41,635	-51,445	-61,729				
Fiscal Exposure - End of Year Debt Drawdown		3,342	3,470	3,589	5,050	4,416	4,258	3,907	4,810	4,268	3,801	4,809	4,630	3,851	3,550	2,449	2,519	1,840	1,221	-1,048	-1,618	-2,210	-2,825	-3,467	-4,135	-4,834	-5,565	-6,330	-7,132	-7,973	-8,856	-9,783	0	0	0	

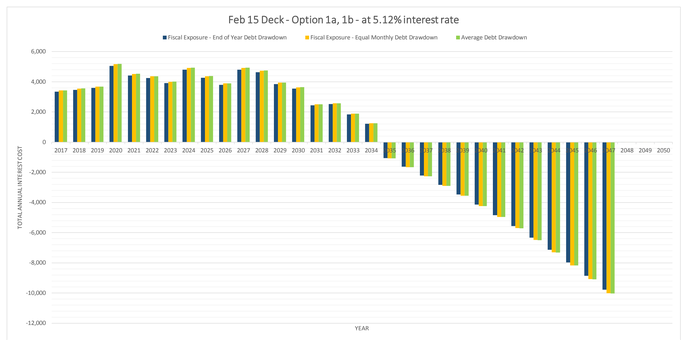
Feb15 Option 1a, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,421	6,974	10,649	15,820	20,341	24,700	28,700	33,624	37,993	41,885	46,808	51,548	55,491	59,125	61,633	64,212	66,096	67,346	66,273	64,617	62,354	59,462	55,913	51,679	46,730	41,033	34,552	27,250	19,087	10,021	5	5	5	
3,341	*Interest Cost - Feb15 Option 1a, 30-yr*	*79*	*254*	*434*	*652*	*896*	*1,118*	*1,327*	*1,549*	*1,782*	*1,989*	*2,207*	*2,449*	*2,668*	*2,857*	*3,013*	*3,140*	*3,253*	*3,332*	*3,341*	*3,273*	*3,177*	*3,049*	*2,889*	*2,696*	*2,468*	*2,203*	*1,900*	*1,557*	*1,172*	*743*	*268*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,421	6,974	10,649	15,820	20,341	24,700	28,700	33,624	37,993	41,885	46,808	51,548	55,491	59,125	61,633	64,212	66,096	67,346	66,273	64,617	62,354	59,462	55,913	51,679	46,730	41,033	34,552	27,250	19,087	10,021	5	5	5	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,421	3,553	3,675	5,171	4,521	4,359	4,000	4,924	4,369	3,891	4,923	4,740	3,943	3,635	2,508	2,579	1,884	1,250	-1,073	-1,656	-2,262	-2,893	-3,549	-4,234	-4,949	-5,697	-6,481	-7,302	-8,163	-9,067	-10,016	0	0	0	

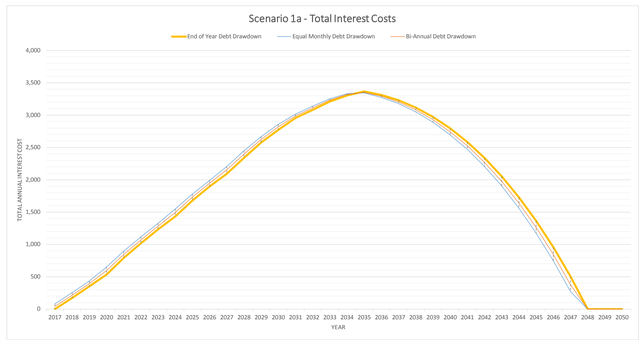
	Monthly Drawdown	278	275	270	377	302	270	223	281	216	159	226	191	106	65	(42)	(47)	(114)	(174)	(368)	(411)	(453)	(495)	(537)	(577)	(618)	(658)	(698)	(738)	(778)	(817)	(857)	-	-	-	
	FV of Monthly Drawdown at 5%	3,421	3,378	3,318	4,626	3,712	3,319	2,737	3,456	2,649	1,947	2,780	2,346	1,305	796	(517)	(574)	(1,401)	(2,132)	(4,518)	(5,047)	(5,568)	(6,083)	(6,591)	(7,094)	(7,593)	(8,088)	(8,580)	(9,069)	(9,557)	(10,043)	(10,529)	-	-	-	
	Annual Interest Cost on New Drawdowns	79	78	77	107	86	77	64	80	62	45	65	54	30	18	(12)	(13)	(33)	(50)	(105)	(117)	(129)	(141)	(153)	(165)	(176)	(188)	(199)	(211)	(222)	(233)	(245)	-	-	-	
	Annual Interest Cost on Opening Balance	-	175	357	545	809	1,041	1,264	1,468	1,720	1,944	2,143	2,395	2,637	2,839	3,025	3,153	3,285	3,382	3,446	3,391	3,306	3,190	3,042	2,861	2,644	2,391	2,099	1,768	1,394	977	513	0	0	0	
	Total Annual Interest Cost	79	254	434	652	896	1,118	1,327	1,549	1,782	1,989	2,207	2,449	2,668	2,857	3,013	3,140	3,253	3,332	3,341	3,273	3,177	3,049	2,889	2,696	2,468	2,203	1,900	1,557	1,172	743	268	0	0	0	

Feb15 Option 1a, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,385	6,899	10,535	15,650	20,122	24,435	28,392	33,263	37,585	41,435	46,305	50,994	54,895	58,490	60,971	63,523	65,386	66,623	65,561	63,923	61,685	58,823	55,312	51,124	46,228	40,592	34,181	26,958	18,882	9,913	5	5	5	
	Interest Cost - Feb15 Option 1a, 30-yr	*43*	*215*	*394*	*597*	*847*	*1,071*	*1,284*	*1,496*	*1,735*	*1,947*	*2,155*	*2,398*	*2,625*	*2,818*	*2,986*	*3,112*	*3,232*	*3,319*	*3,352*	*3,291*	*3,201*	*3,080*	*2,927*	*2,741*	*2,521*	*2,264*	*1,970*	*1,635*	*1,260*	*841*	*376*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,385	6,899	10,535	15,650	20,122	24,435	28,392	33,263	37,585	41,435	46,305	50,994	54,895	58,490	60,971	63,523	65,386	66,623	65,561	63,923	61,685	58,823	55,312	51,124	46,228	40,592	34,181	26,958	18,882	9,913	5	5	5	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,385	3,515	3,635	5,115	4,473	4,313	3,957	4,871	4,322	3,849	4,870	4,689	3,900	3,596	2,481	2,551	1,864	1,237	-1,061	-1,639	-2,238	-2,861	-3,511	-4,188	-4,896	-5,636	-6,411	-7,223	-8,075	-8,969	-9,909	0	0	0	

	Bi-Annual Drawdown	1,671	1,650	1,620	2,259	1,813	1,621	1,337	1,688	1,294	951	1,358	1,146	638	389	(253)	(280)	(684)	(1,041)	(2,207)	(2,465)	(2,719)	(2,971)	(3,219)	(3,465)	(3,708)	(3,950)	(4,190)	(4,429)	(4,667)	(4,905)	(5,142)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,385	3,341	3,282	4,576	3,672	3,283	2,707	3,418	2,620	1,926	2,750	2,320	1,291	787	(512)	(568)	(1,386)	(2,109)	(4,470)	(4,993)	(5,508)	(6,017)	(6,520)	(7,018)	(7,512)	(8,001)	(8,488)	(8,972)	(9,454)	(9,935)	(10,416)	-	-	-	
	Annual Interest Cost on New Drawdowns	43	42	41	58	46	41	34	43	33	24	35	29	16	10	(6)	(7)	(18)	(27)	(56)	(63)	(70)	(76)	(82)	(89)	(95)	(101)	(107)	(113)	(119)	(125)	(132)	-	-	-	
	Annual Interest Cost on Opening Balance	-	173	353	539	801	1,029	1,250	1,453	1,702	1,923	2,120	2,369	2,609	2,809	2,992	3,119	3,250	3,345	3,409	3,354	3,270	3,156	3,010	2,830	2,616	2,365	2,077	1,749	1,379	966	507	0	0	0	
	Total Annual Interest Cost	43	215	394	597	847	1,071	1,284	1,496	1,735	1,947	2,155	2,398	2,625	2,818	2,986	3,112	3,232	3,319	3,352	3,291	3,201	3,080	2,927	2,741	2,521	2,264	1,970	1,635	1,260	841	376	0	0	0	

Feb15 Option 1a, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,427	6,986	10,668	15,847	20,376	24,743	28,751	33,683	38,060	41,958	46,890	51,638	55,588	59,229	61,741	64,325	66,212	67,464	66,389	64,730	62,464	59,566	56,011	51,770	46,812	41,104	34,612	27,298	19,121	10,038	5	5	5	
	Interest Cost - Feb15 Option 1a, 30-yr	*85*	*260*	*440*	*661*	*904*	*1,125*	*1,334*	*1,557*	*1,789*	*1,996*	*2,216*	*2,458*	*2,675*	*2,864*	*3,017*	*3,144*	*3,256*	*3,334*	*3,339*	*3,270*	*3,173*	*3,044*	*2,883*	*2,688*	*2,459*	*2,193*	*1,889*	*1,544*	*1,158*	*727*	*251*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,427	6,986	10,668	15,847	20,376	24,743	28,751	33,683	38,060	41,958	46,890	51,638	55,588	59,229	61,741	64,325	66,212	67,464	66,389	64,730	62,464	59,566	56,011	51,770	46,812	41,104	34,612	27,298	19,121	10,038	5	5	5	6	
Fiscal Exposure - Average Debt Drawdown		3,427	3,559	3,681	5,180	4,529	4,367	4,007	4,933	4,377	3,898	4,932	4,749	3,950	3,641	2,512	2,584	1,887	1,252	-1,075	-1,659	-2,266	-2,898	-3,555	-4,241	-4,958	-5,707	-6,492	-7,314	-8,177	-9,083	-10,034	0	0	0	





Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

Feb15_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,314	2,292	2,421	3,795	2,938	2,709	2,285	3,111	2,489	1,940	2,862	2,594	1,722	1,324	123	89	-699	-1,431	-1,842	-1,937	-2,036	-2,140	-2,249	-2,364	-2,485	-2,613	-2,746	-2,887	-3,034	-3,190	-3,353	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,369	2,346	2,479	3,886	3,008	2,774	2,340	3,185	2,548	1,986	2,930	2,656	1,763	1,356	126	91	-716	-1,465	-1,886	-1,983	-2,084	-2,191	-2,303	-2,421	-2,544	-2,675	-2,812	-2,955	-3,107	-3,266	-3,433	0	0	0
			55	55	58	90	70	64	54	74	59	46	68	62	41	32	3	2	-17	-34	-44	-46	-48	-51	-54	-56	-59	-62	-65	-69	-72	-76	-80	0	0	0

0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,795	1,791	32,368
Equal Monthly Debt Drawdown	3,886	1,789	

	Feb15 Option 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	35,009	2032	22,873
Equal Monthly Debt Drawdown	35,841		

Feb15 Option 1a, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
a	Debt, Beginning of Year		0	2,314	4,606	7,027	10,822	13,761	16,470	18,755	21,866	24,355	26,295	29,157	31,751	33,472	34,797	34,920	35,009	34,310	32,879	31,036	29,100	27,064	24,924	22,675	20,310	17,825	15,212	12,466	9,579	6,545	3,355	3	3	3	
c = a*5%	*Interest Cost - Feb15 Option 1a, 30-yr - End of Year Debt Drawdown*		*0*	*118*	*236*	*360*	*554*	*704*	*843*	*960*	*1,119*	*1,246*	*1,345*	*1,492*	*1,624*	*1,713*	*1,780*	*1,787*	*1,791*	*1,755*	*1,682*	*1,588*	*1,489*	*1,385*	*1,275*	*1,160*	*1,039*	*912*	*778*	*638*	*490*	*335*	*172*	*0*	*0*	*0*	32,368
b	Additional GA Debt Drawdown, End of Year		2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)		2,314	4,606	7,027	10,822	13,761	16,470	18,755	21,866	24,355	26,295	29,157	31,751	33,472	34,797	34,920	35,009	34,310	32,879	31,036	29,100	27,064	24,924	22,675	20,310	17,825	15,212	12,466	9,579	6,545	3,355	3	3	3	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs		0	118	354	714	1,267	1,971	2,814	3,773	4,892	6,138	7,484	8,975	10,600	11,924	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	9,579	6,545	3,355	3	3	3	3	
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal		2,314	4,488	6,673	10,109	12,493	14,499	15,941	18,092	19,463	20,157	21,673	22,775	22,873	22,873	22,873	22,961	22,262	20,831	18,989	17,052	15,017	12,877	10,627	8,263	5,778	3,165	419	0	0	0	0	0	0	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs		0	118	354	714	1,267	1,971	2,814	3,773	4,892	6,138	7,484	8,975	10,600	12,312	14,092	15,879	17,670	19,425	21,108	22,695	24,184	25,569	26,844	28,004	29,043	29,955	30,733	31,371	31,861	32,196	32,368			
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal		2,314	4,488	6,673	10,109	12,493	14,499	15,941	18,092	19,463	20,157	21,673	22,775	22,873	22,485	20,828	19,130	16,639	13,453	9,929	6,404	2,880	-645	-4,169	-7,694	-11,218	-14,743	-18,267	-21,792	-25,316	-28,841	-32,365			
Fiscal Exposure - End of Year Debt Drawdown			2,314	2,292	2,421	3,795	2,938	2,709	2,285	3,111	2,489	1,940	2,862	2,594	1,722	1,324	123	89	-699	-1,431	-1,842	-1,937	-2,036	-2,140	-2,249	-2,364	-2,485	-2,613	-2,746	-2,887	-3,034	-3,190	-3,353	0	0	0	

Feb15 Option 1a, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Debt, Beginning of Year		0	2,369	4,716	7,194	11,080	14,088	16,862	19,201	22,386	24,934	26,920	29,850	32,506	34,269	35,625	35,751	35,841	35,126	33,661	31,774	29,792	27,708	25,517	23,214	20,793	18,249	15,574	12,763	9,807	6,701	3,435	3	3	3	
1,789	*Interest Cost - Feb15 Option 1a, 30-yr*		*55*	*173*	*293*	*450*	*624*	*768*	*897*	*1,034*	*1,178*	*1,292*	*1,413*	*1,553*	*1,665*	*1,744*	*1,783*	*1,789*	*1,774*	*1,721*	*1,638*	*1,542*	*1,440*	*1,334*	*1,222*	*1,104*	*980*	*850*	*713*	*569*	*418*	*259*	*92*	*0*	*0*	*0*	32,368
	Additional GA Debt Drawdown		2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		2,369	4,716	7,194	11,080	14,088	16,862	19,201	22,386	24,934	26,920	29,850	32,506	34,269	35,625	35,751	35,841	35,126	33,661	31,774	29,792	27,708	25,517	23,214	20,793	18,249	15,574	12,763	9,807	6,701	3,435	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown			2,369	2,346	2,479	3,886	3,008	2,774	2,340	3,185	2,548	1,986	2,930	2,656	1,763	1,356	126	91	-716	-1,465	-1,886	-1,983	-2,084	-2,191	-2,303	-2,421	-2,544	-2,675	-2,812	-2,955	-3,107	-3,266	-3,433	0	0	0	
	Monthly Drawdown		193	181	182	286	199	167	120	179	114	58	126	92	8	(32)	(138)	(141)	(208)	(266)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	-	-	-	
	FV of Monthly Drawdown at 5%		2,369	2,225	2,237	3,518	2,441	2,053	1,477	2,202	1,403	710	1,553	1,128	100	(397)	(1,697)	(1,738)	(2,549)	(3,262)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	-	-	-	
	Annual Interest Cost on New Drawdowns		55	52	52	82	57	48	34	51	33	17	36	26	2	(9)	(39)	(40)	(59)	(76)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	-	-	-	
	Annual Interest Cost on Opening Balance		-	121	241	368	567	721	863	982	1,145	1,276	1,377	1,527	1,663	1,753	1,823	1,829	1,834	1,797	1,722	1,626	1,524	1,418	1,305	1,188	1,064	934	797	653	502	343	176	0	0	0	
	Total Annual Interest Cost		55	173	293	450	624	768	897	1,034	1,178	1,292	1,413	1,553	1,665	1,744	1,783	1,789	1,774	1,721	1,638	1,542	1,440	1,334	1,222	1,104	980	850	713	569	418	259	92	0	0	0	

Feb15 Option 1a, 30-yr — Bi-Annual Debt Drawdown

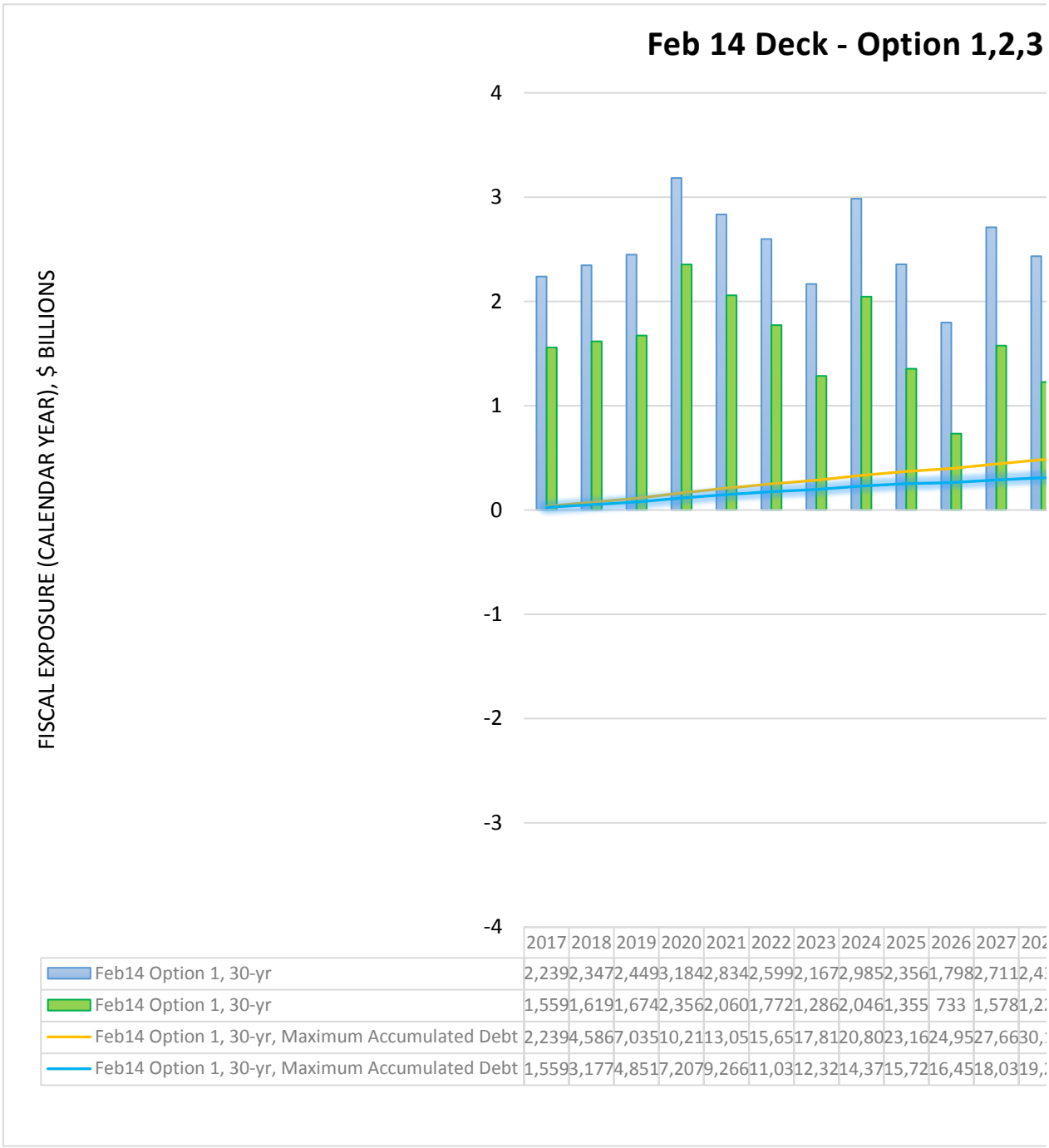
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Debt, Beginning of Year		0	2,344	4,665	7,117	10,961	13,937	16,681	18,995	22,146	24,667	26,631	29,530	32,157	33,901	35,242	35,367	35,456	34,748	33,299	31,433	29,472	27,410	25,243	22,965	20,570	18,053	15,407	12,626	9,702	6,629	3,398	3	3	3	
	Interest Cost - Feb15 Option 1a, 30-yr		*30*	*148*	*267*	*408*	*591*	*739*	*872*	*999*	*1,151*	*1,271*	*1,382*	*1,525*	*1,646*	*1,729*	*1,782*	*1,788*	*1,782*	*1,737*	*1,659*	*1,563*	*1,463*	*1,357*	*1,246*	*1,130*	*1,007*	*879*	*743*	*601*	*451*	*294*	*129*	*0*	*0*	*0*	32,368
	Additional GA Debt Drawdown		2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		2,344	4,665	7,117	10,961	13,937	16,681	18,995	22,146	24,667	26,631	29,530	32,157	33,901	35,242	35,367	35,456	34,748	33,299	31,433	29,472	27,410	25,243	22,965	20,570	18,053	15,407	12,626	9,702	6,629	3,398	3	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown			2,344	2,321	2,452	3,844	2,976	2,744	2,314	3,151	2,521	1,965	2,898	2,627	1,744	1,341	125	90	-708	-1,449	-1,866	-1,961	-2,062	-2,167	-2,278	-2,395	-2,517	-2,646	-2,781	-2,924	-3,073	-3,230	-3,396	0	0	0	
	Bi-Annual Drawdown		1,157	1,087	1,093	1,718	1,192	1,003	721	1,076	685	347	758	551	49	(194)	(829)	(849)	(1,245)	(1,593)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	-	-	-	
	FV of Bi-Annual Drawdown at 5%		2,344	2,201	2,213	3,480	2,415	2,031	1,461	2,179	1,388	703	1,536	1,116	99	(393)	(1,678)	(1,720)	(2,522)	(3,227)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	-	-	-	
	Annual Interest Cost on New Drawdowns		30	28	28	44	30	26	18	28	18	9	19	14	1	(5)	(21)	(22)	(32)	(41)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	-	-	-	
	Annual Interest Cost on Opening Balance		-	120	239	364	561	713	853	972	1,133	1,262	1,363	1,511	1,645	1,734	1,803	1,809	1,814	1,778	1,704	1,608	1,508	1,402	1,291	1,175	1,052	924	788	646	496	339	174	0	0	0	
	Total Annual Interest Cost		30	148	267	408	591	739	872	999	1,151	1,271	1,382	1,525	1,646	1,729	1,782	1,788	1,782	1,737	1,659	1,563	1,463	1,357	1,246	1,130	1,007	879	743	601	451	294	129	0	0	0	

Feb15 Option 1a, 30-yr — Average Debt Drawdown

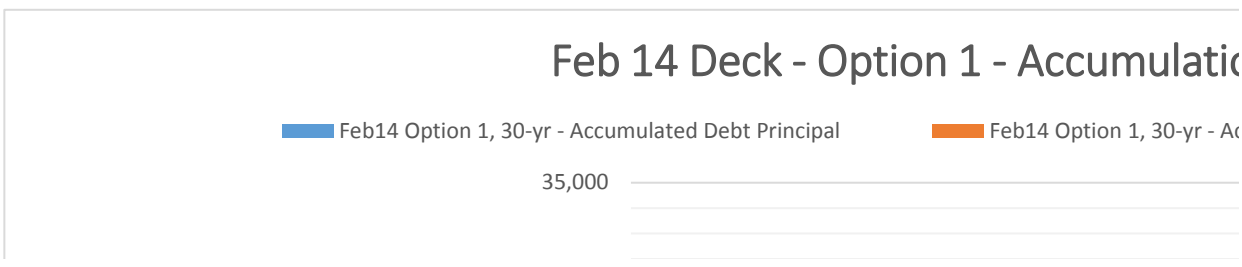
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Debt, Beginning of Year		0	2,373	4,724	7,207	11,099	14,113	16,891	19,235	22,425	24,978	26,968	29,902	32,563	34,329	35,687	35,813	35,904	35,187	33,720	31,830	29,844	27,756	25,562	23,255	20,830	18,281	15,601	12,785	9,824	6,712	3,441	3	3	3	
	Interest Cost - Feb15 Option 1a, 30-yr		*59*	*177*	*298*	*457*	*629*	*773*	*901*	*1,039*	*1,182*	*1,296*	*1,419*	*1,558*	*1,668*	*1,746*	*1,783*	*1,789*	*1,773*	*1,719*	*1,635*	*1,538*	*1,437*	*1,330*	*1,218*	*1,100*	*976*	*845*	*708*	*564*	*412*	*253*	*86*	*0*	*0*	*0*	32,368
	Additional GA Debt Drawdown		2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		2,373	4,724	7,207	11,099	14,113	16,891	19,235	22,425	24,978	26,968	29,902	32,563	34,329	35,687	35,813	35,904	35,187	33,720	31,830	29,844	27,756	25,562	23,255	20,830	18,281	15,601	12,785	9,824	6,712	3,441	3	3	3	
Fiscal Exposure - Average Debt Drawdown			2,373	2,351	2,483	3,892	3,013	2,779	2,344	3,190	2,553	1,989	2,935	2,660	1,766	1,358	126	91	-717	-1,468	-1,889	-1,986	-2,088	-2,195	-2,307	-2,425	-2,549	-2,679	-2,816	-2,961	-3,112	-3,271	-3,439	0	0	0	

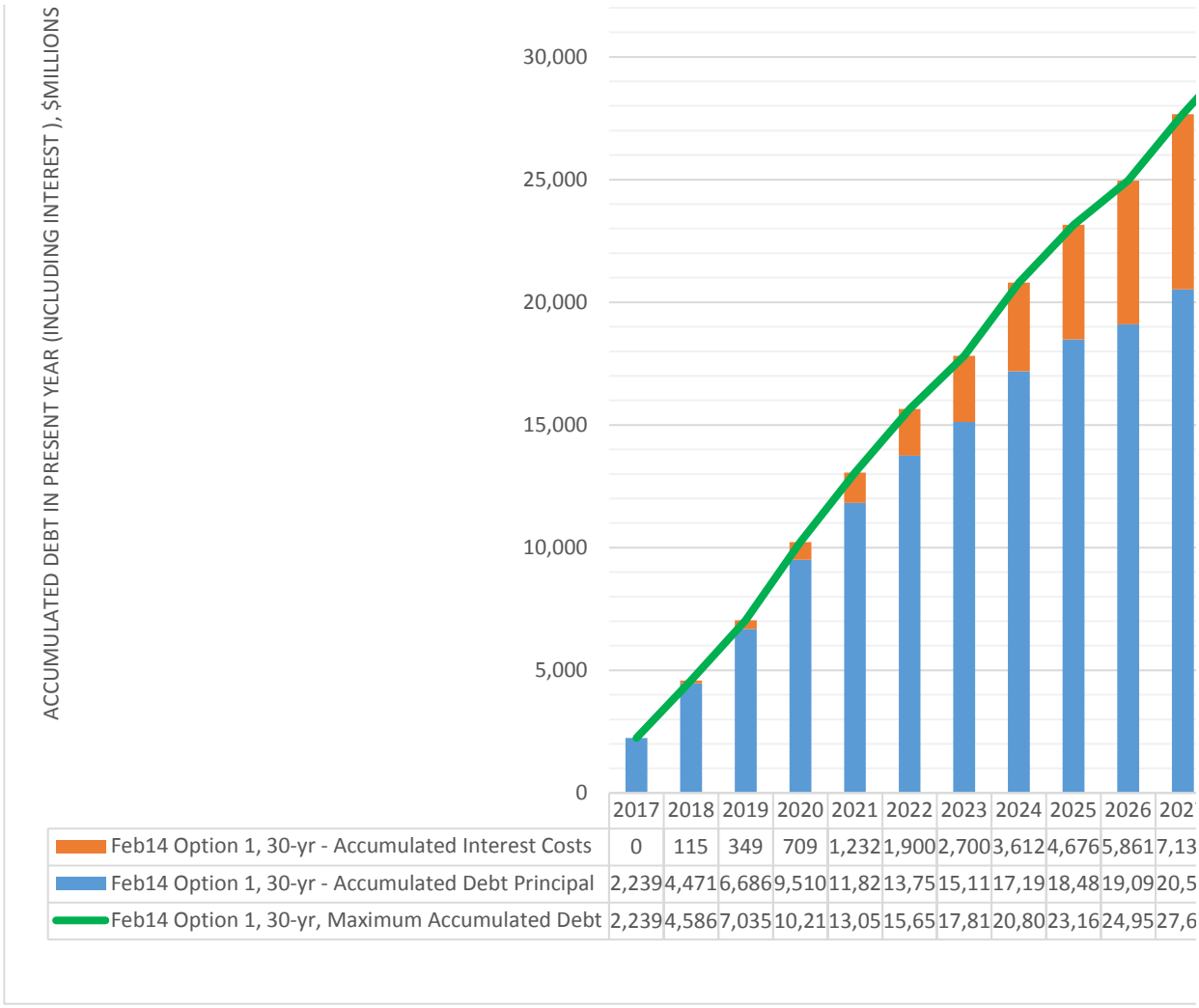
Feb 14 Deck

Feb 14 Deck - Option 1,2,3 - at 5.12% interest rate

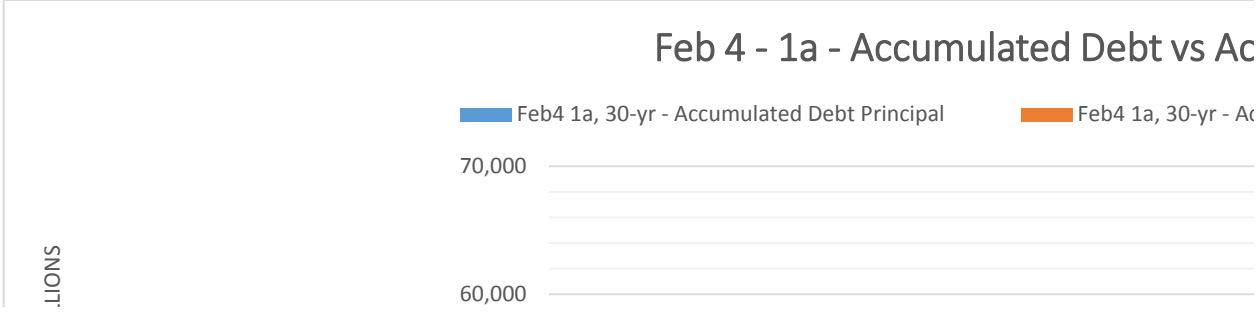


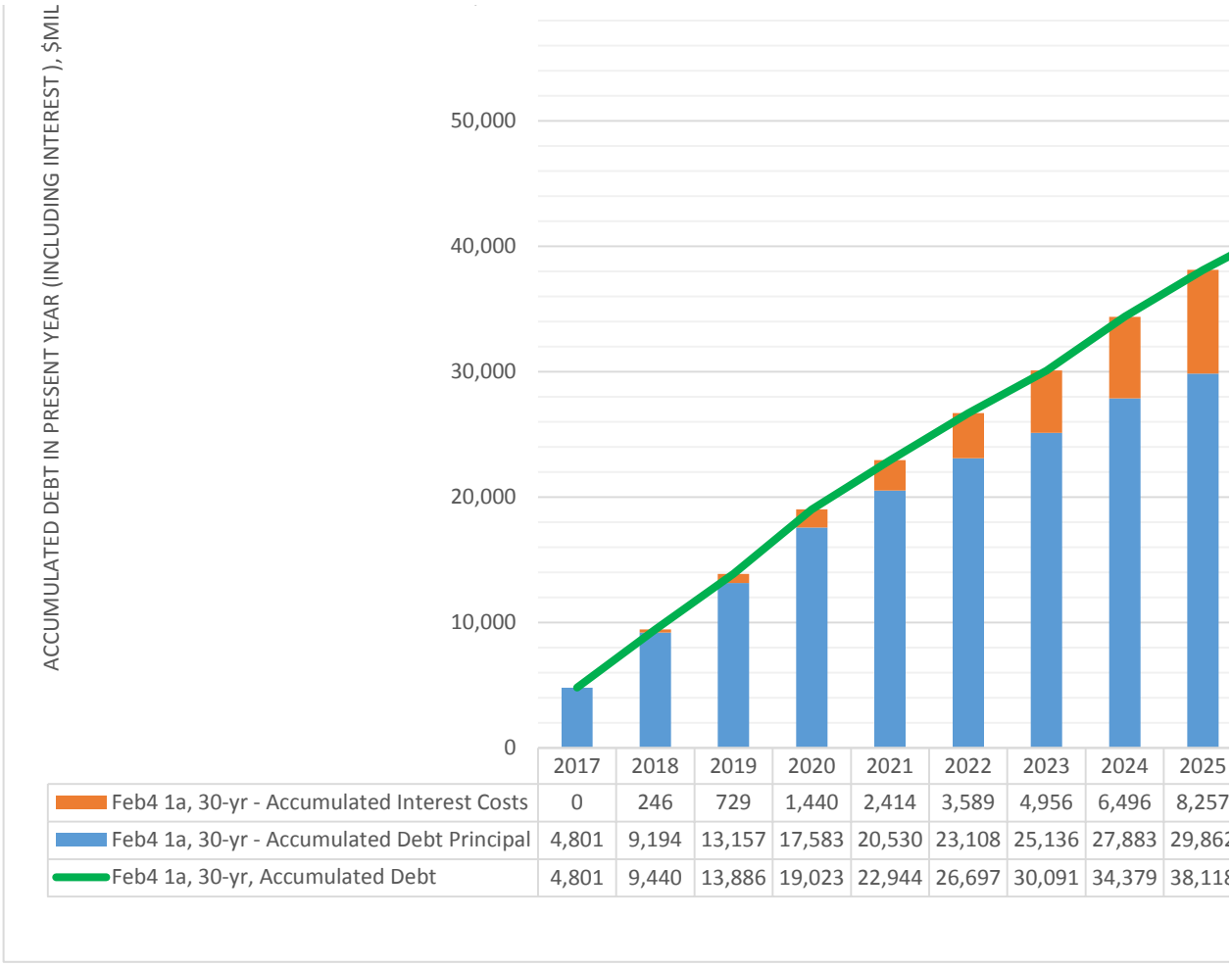
Feb 14 Deck - Option 1 - Accumulation of Debt (Principal and Interest)



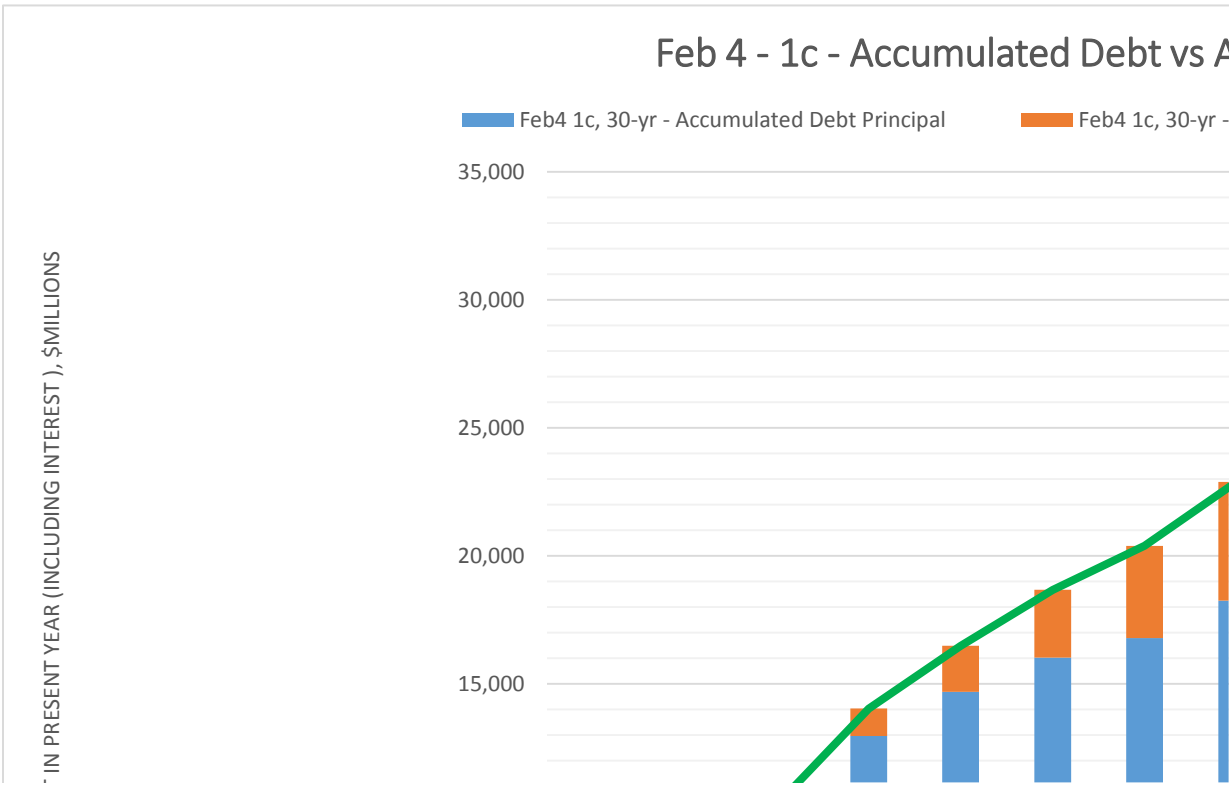


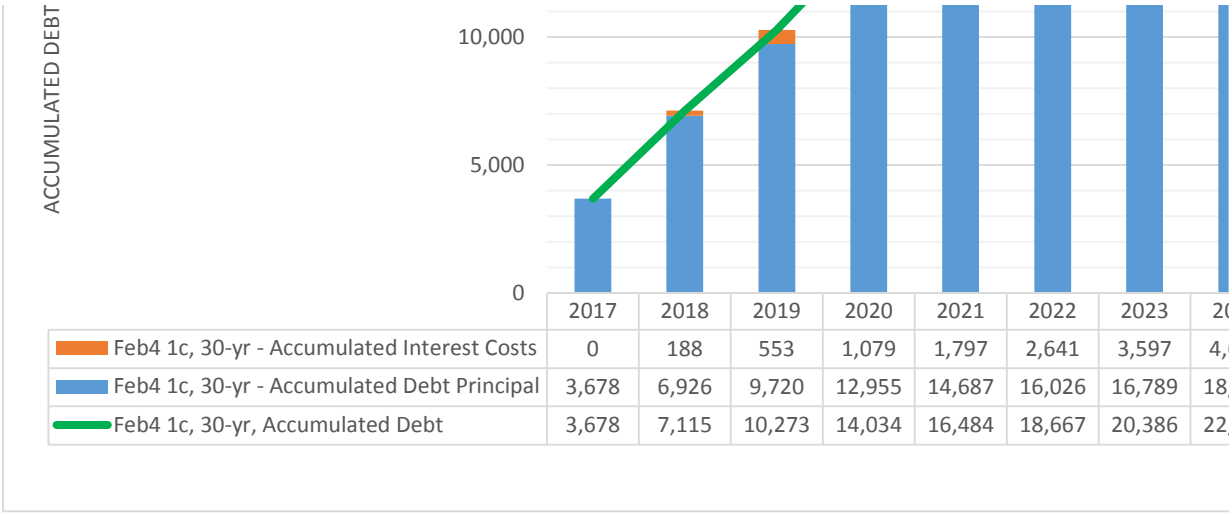
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	202
Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,13
Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,82	13,75	15,11	17,19	18,48	19,09	20,5
Feb14 Option 1, 30-yr, Maximum Accumulated Debt	2,239	4,586	7,035	10,21	13,05	15,65	17,81	20,80	23,16	24,95	27,6



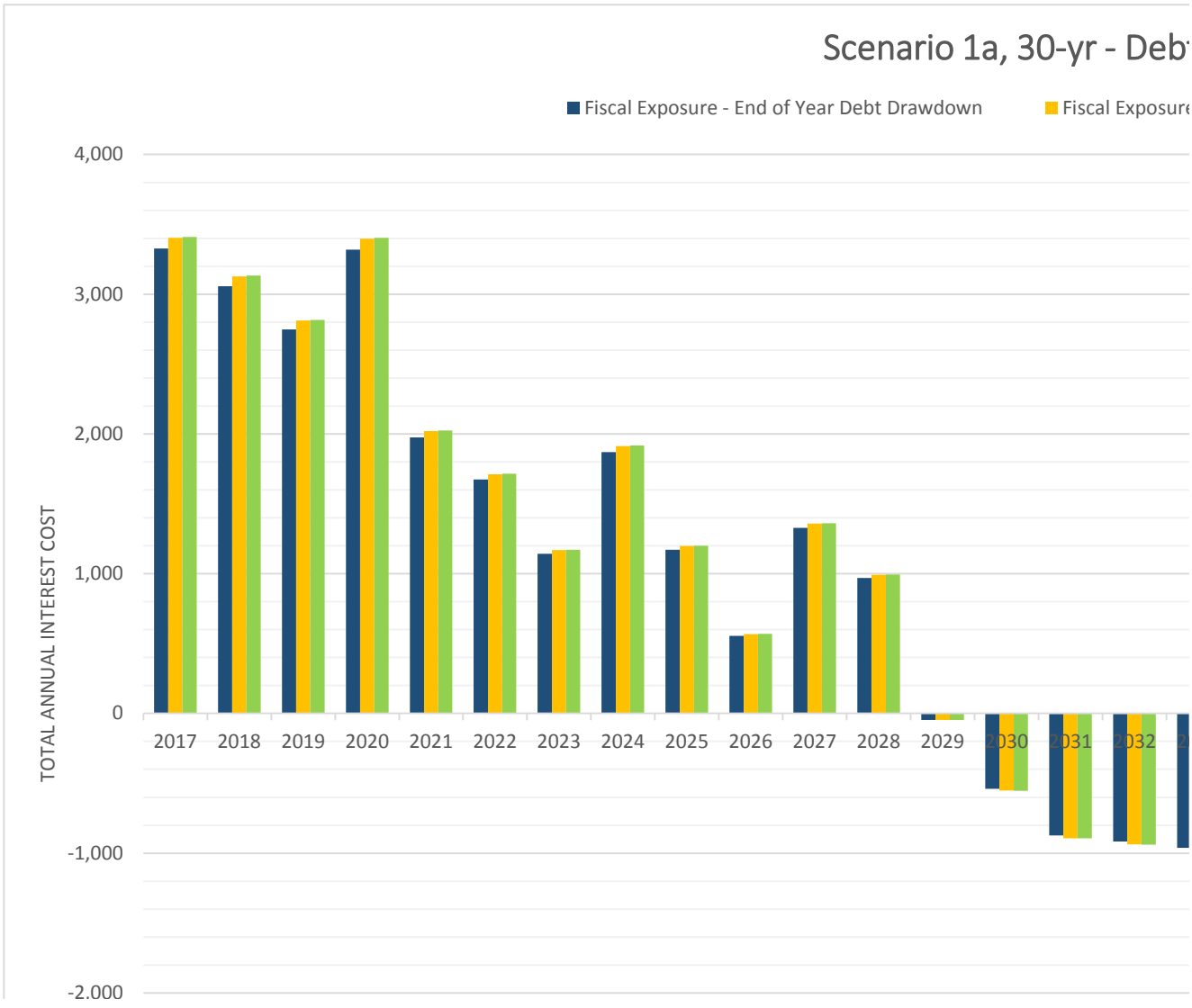


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



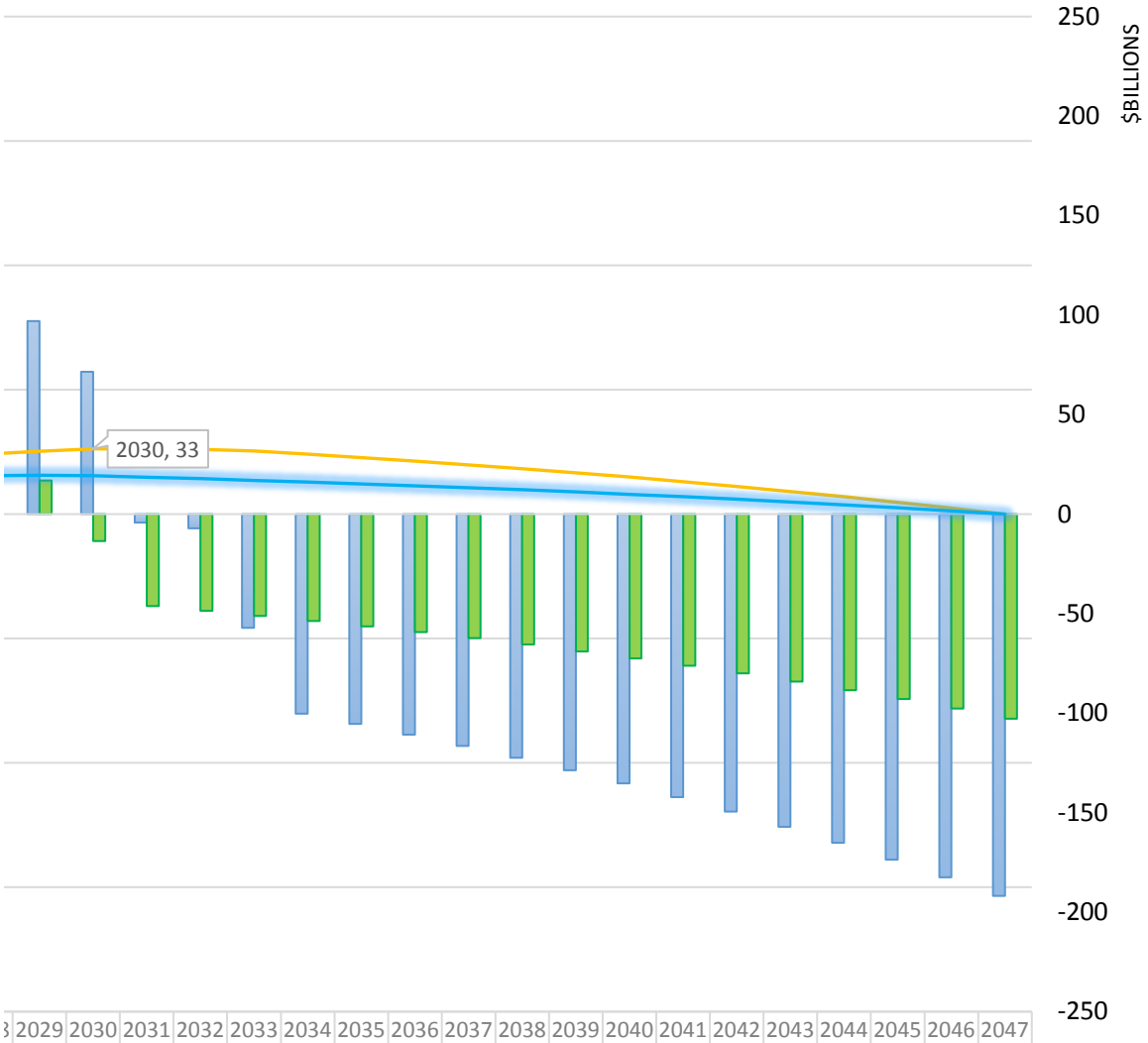


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

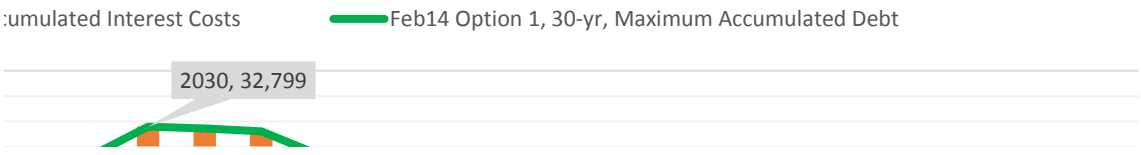
- at 5.12% interest rate

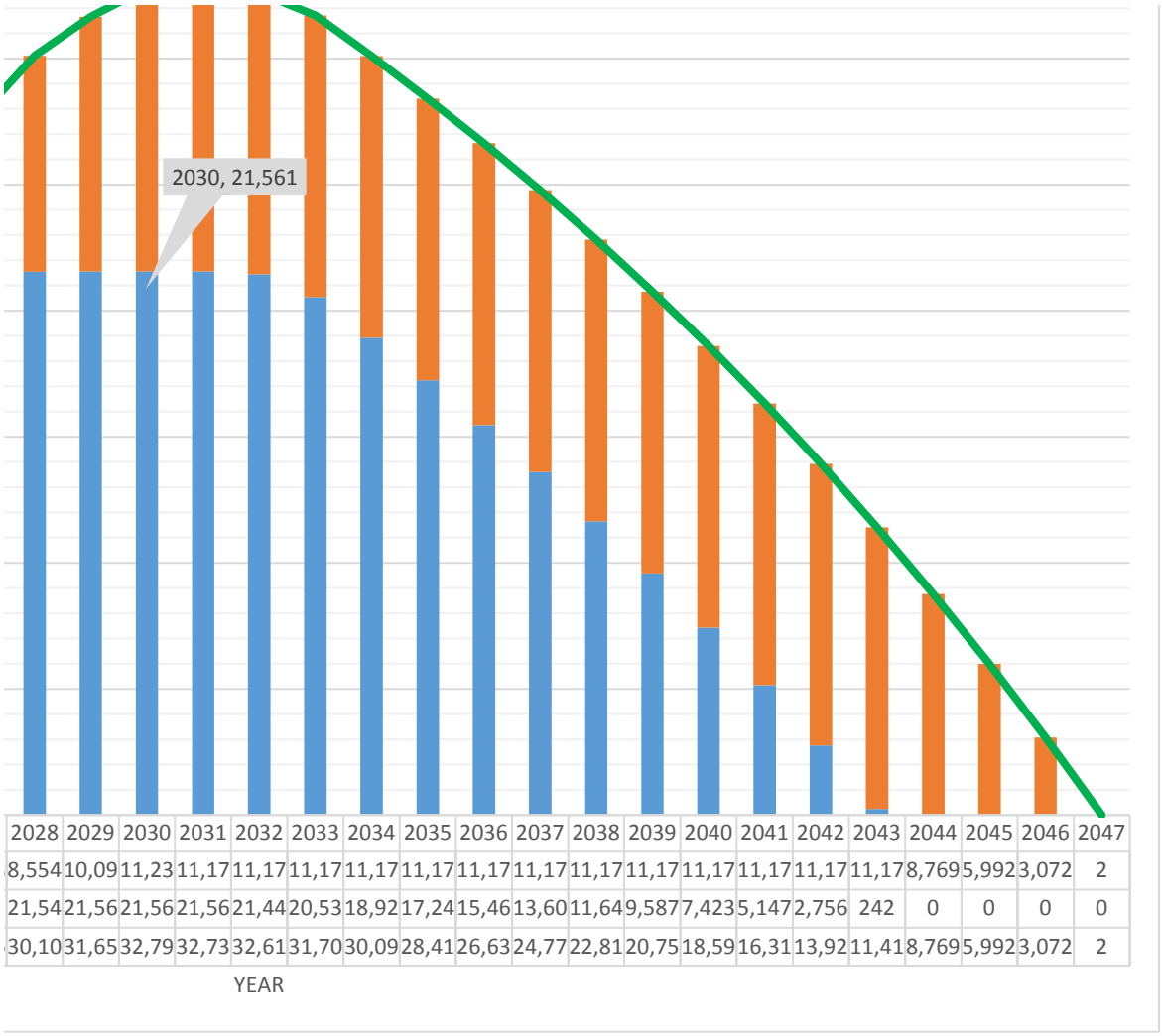


	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
	41,552	1,144	-68	-114	-914	-1,60	-1,68	-1,77	-1,86	-1,95	-2,05	-2,16	-2,27	-2,39	-2,51	-2,64	-2,77	-2,92	-3,06
	3 271	-217	-740	-778	-818	-859	-903	-950	-998	-1,04	-1,10	-1,15	-1,21	-1,28	-1,34	-1,41	-1,48	-1,56	-1,64
	031,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,769	5,992	3,072	2
	519,53	19,31	18,57	17,79	16,98	16,12	15,21	14,26	13,27	12,22	11,11	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1

CALENDAR YEAR

n of Debt (Principal and Interest)

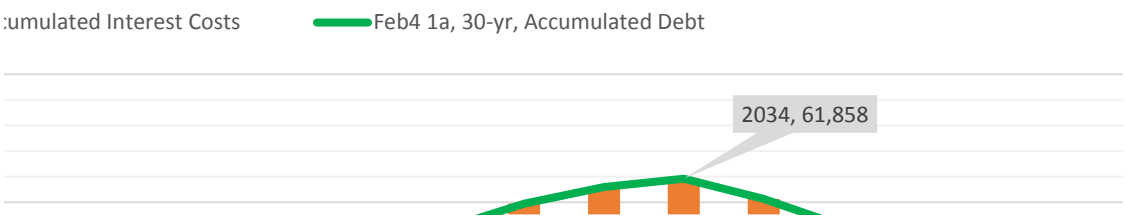




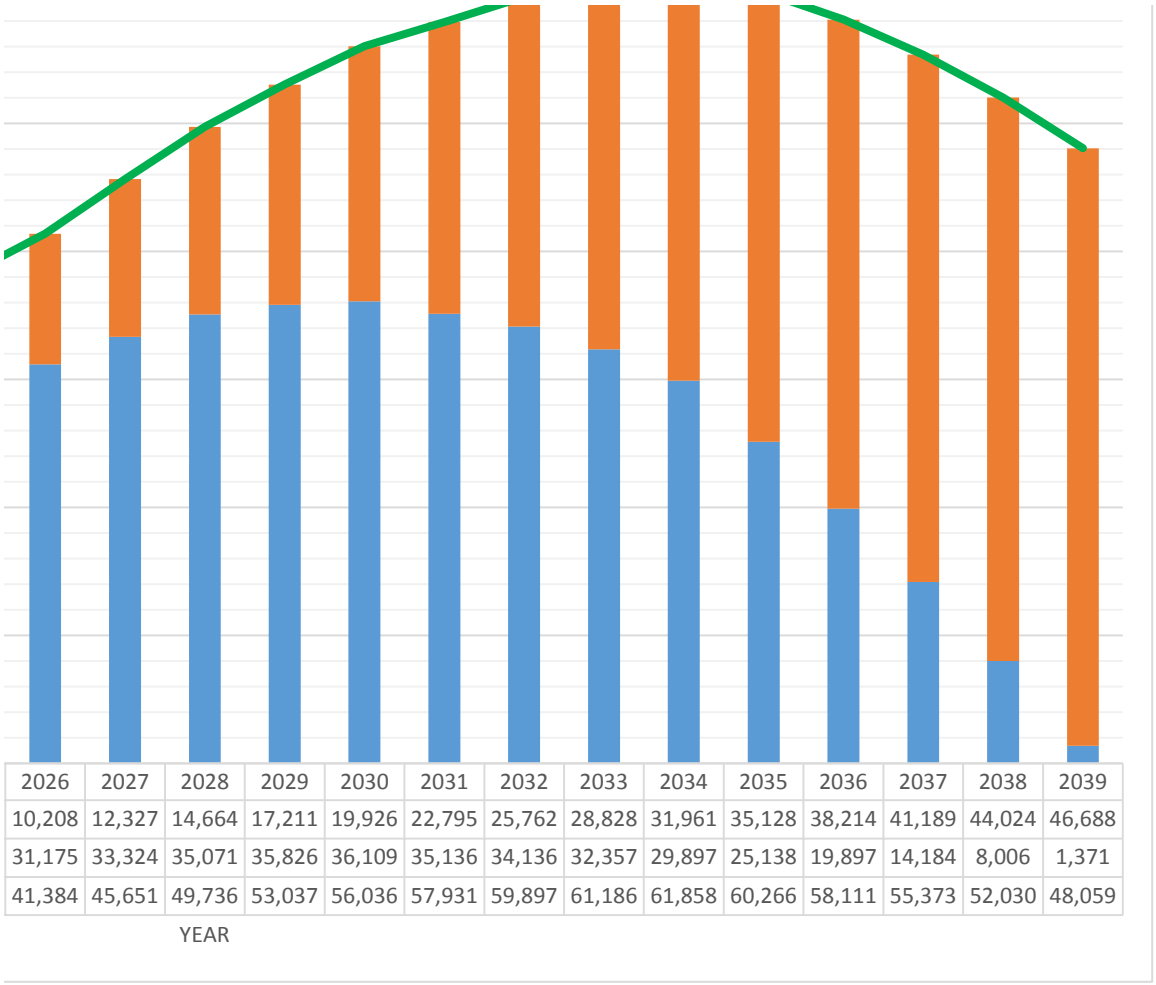
2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
8,554	10,09	11,23	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	8,769	5,992	3,072	2
21,54	21,56	21,56	21,56	21,44	20,53	18,92	17,24	15,46	13,60	11,64	9,587	7,423	5,147	2,756	242	0	0	0	0
30,10	31,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,769	5,992	3,072	2

YEAR

cumulated Total Interest Costs



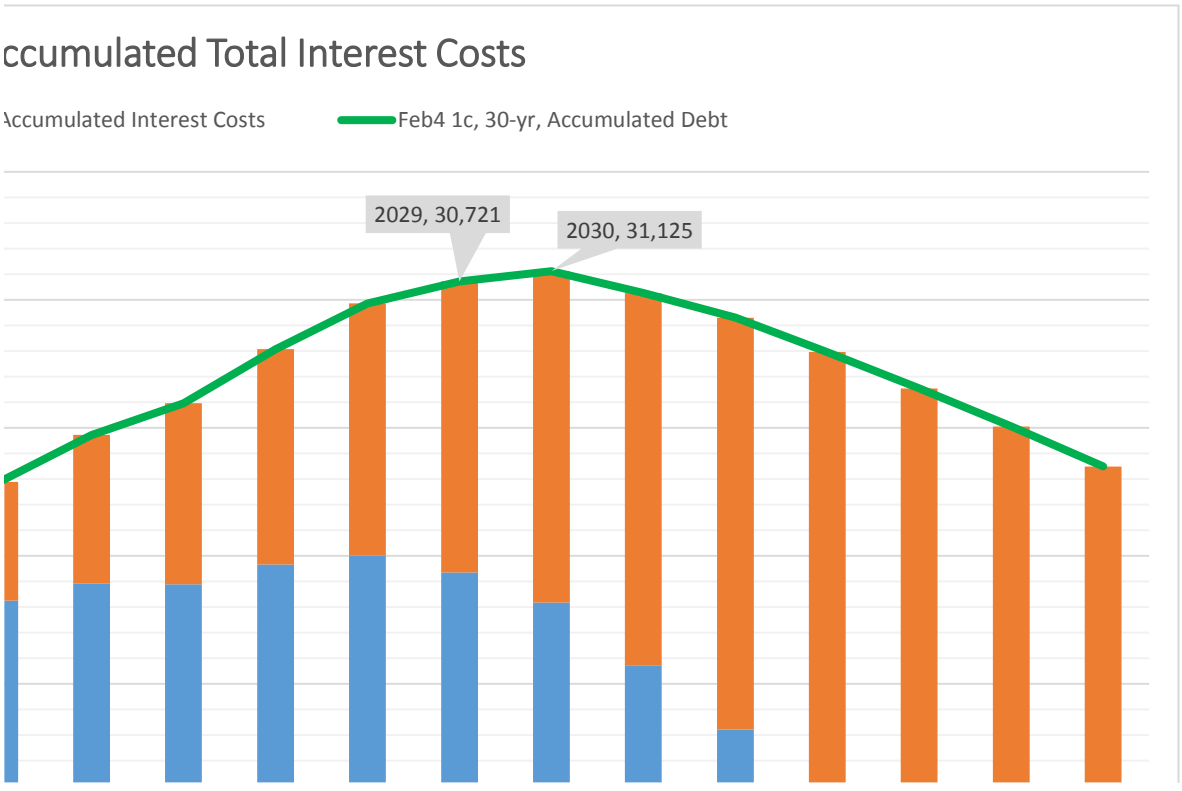
LIONS

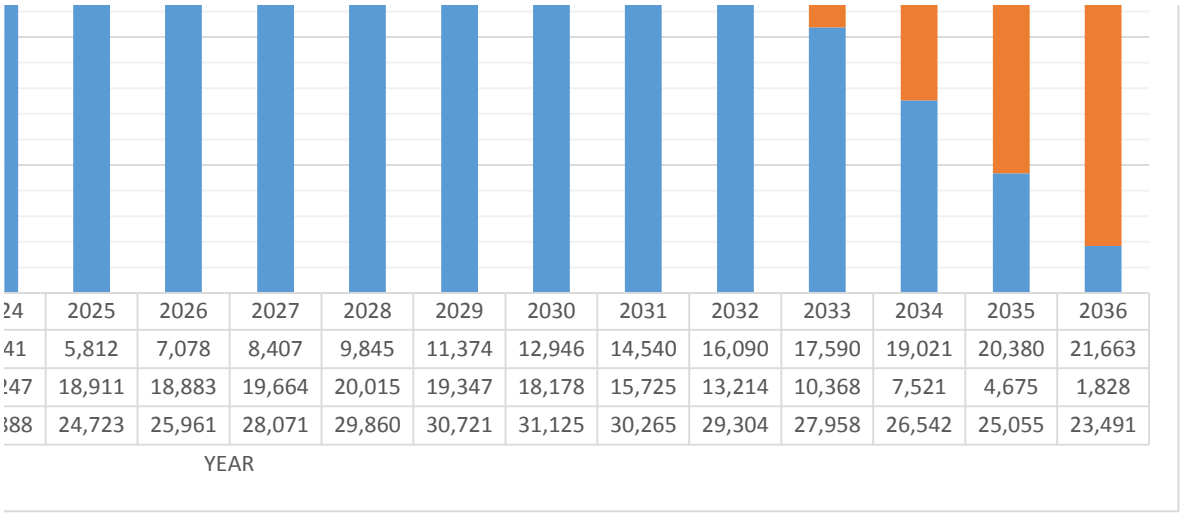


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

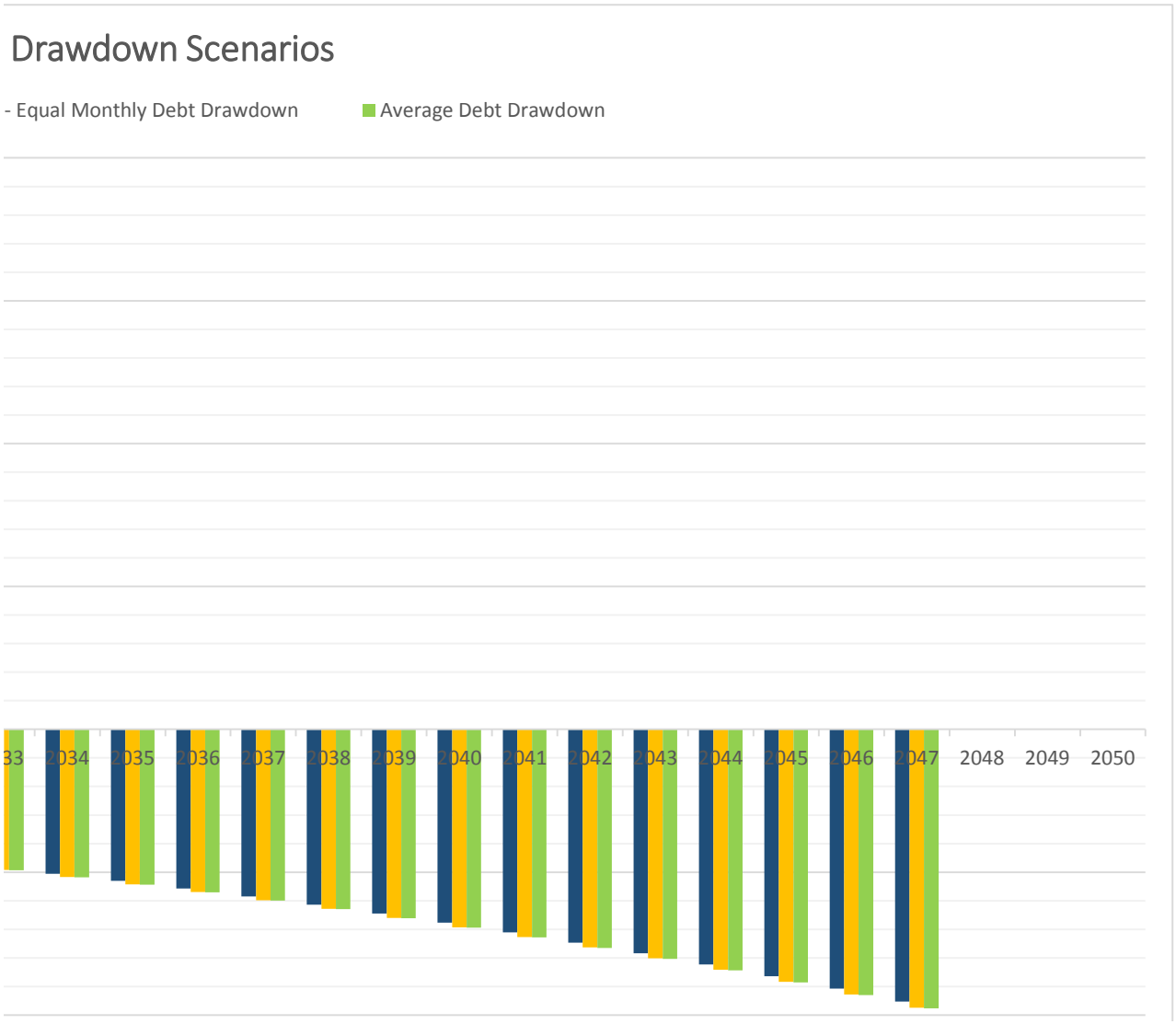
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





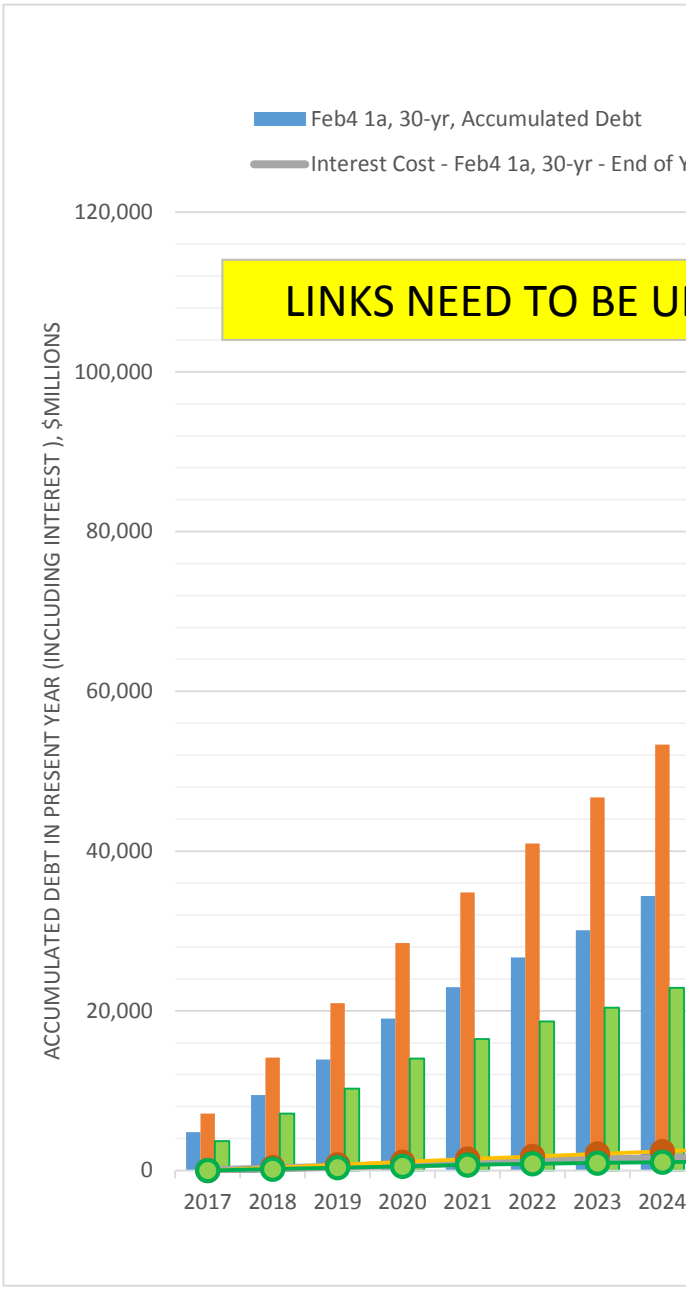
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

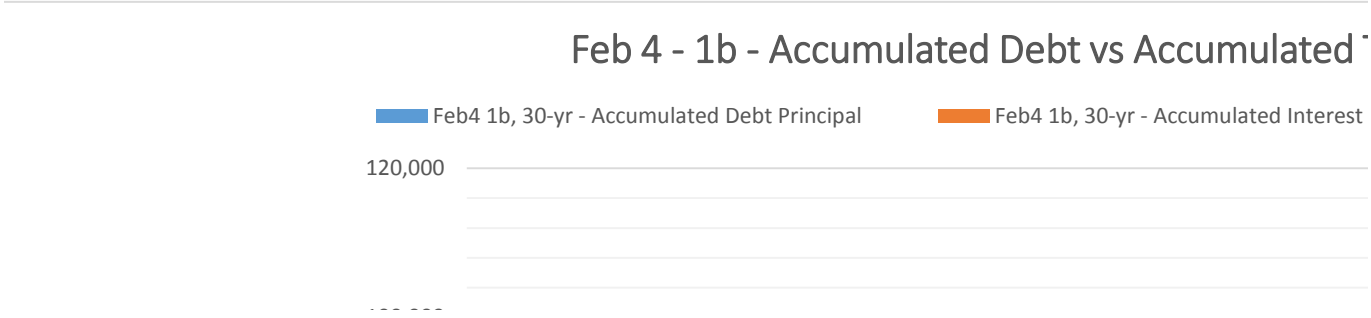
YEAR

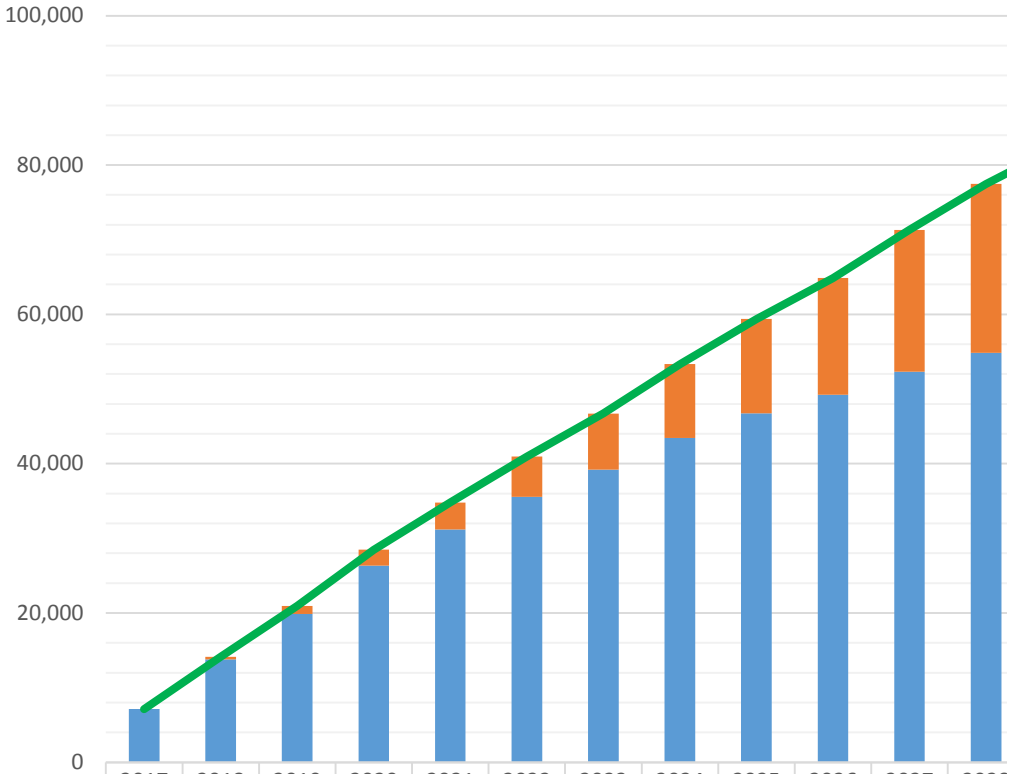


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate



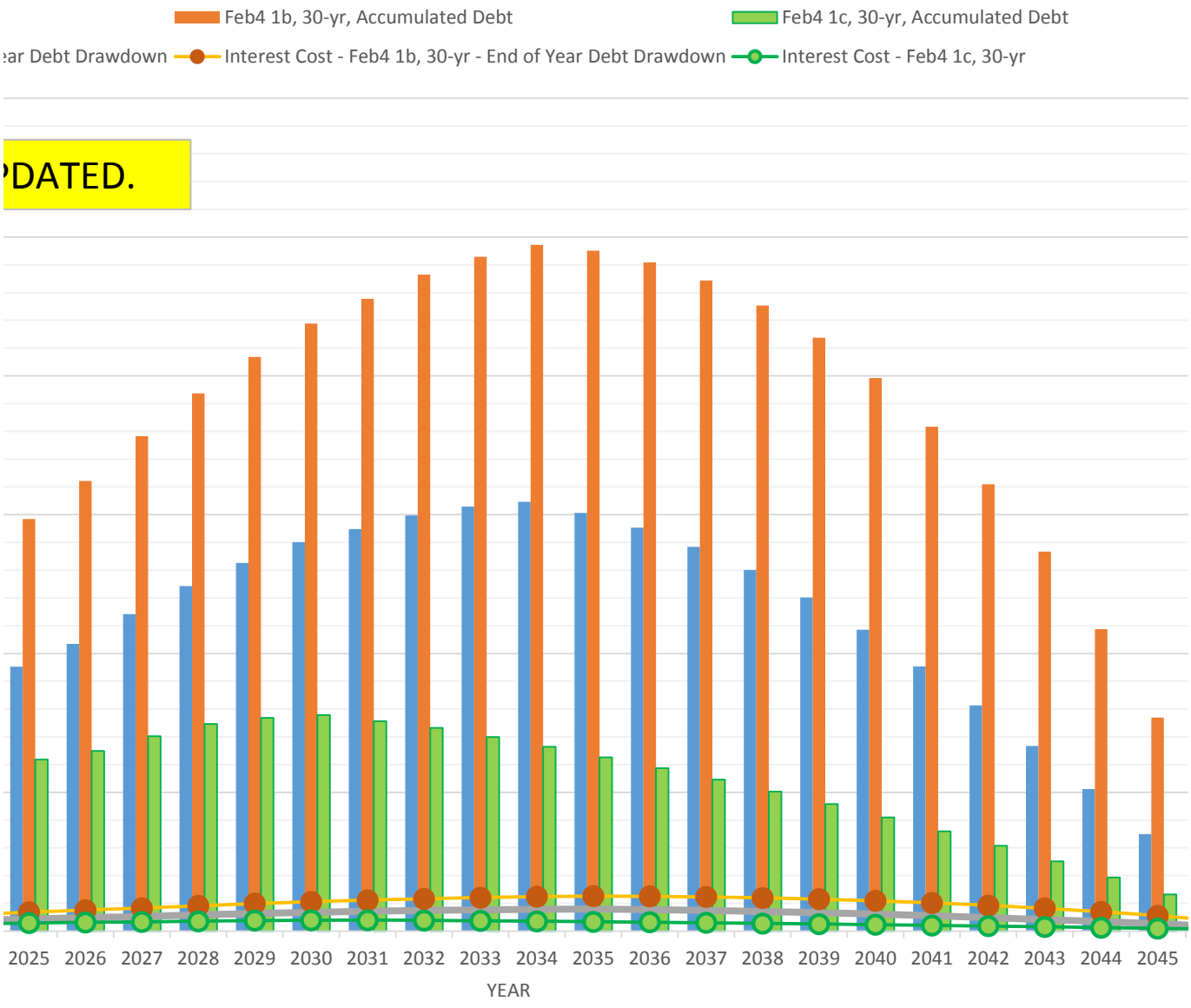

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000



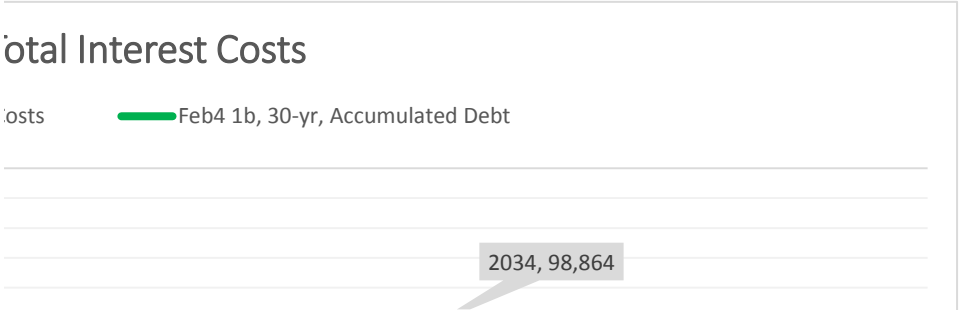
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

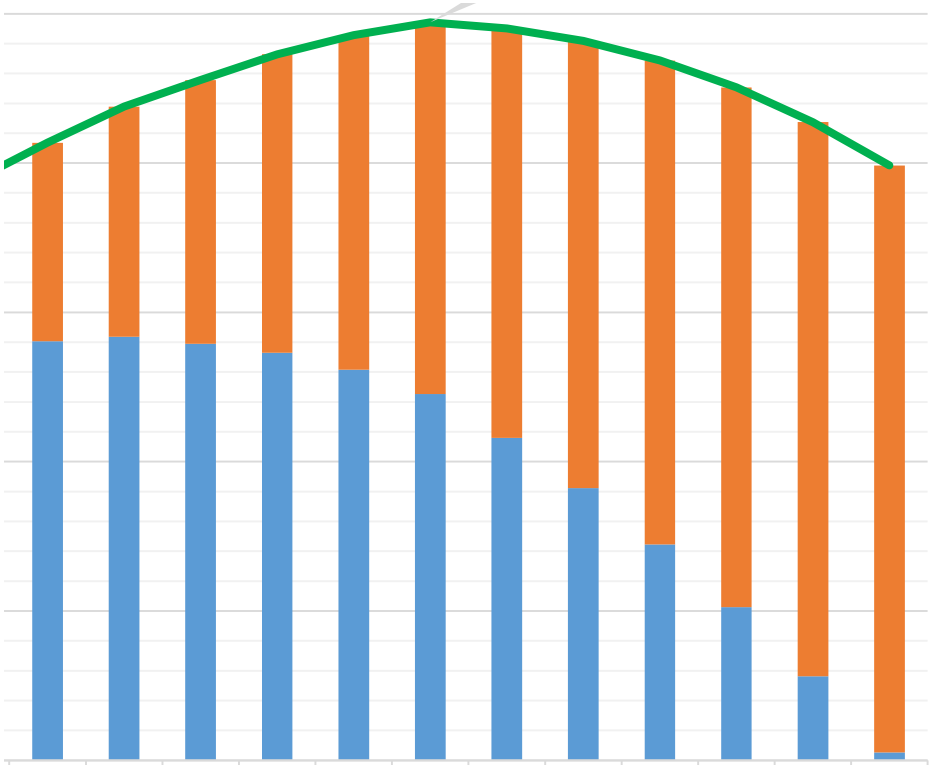
Y

Accumulated debt in present year, with annual interest costs



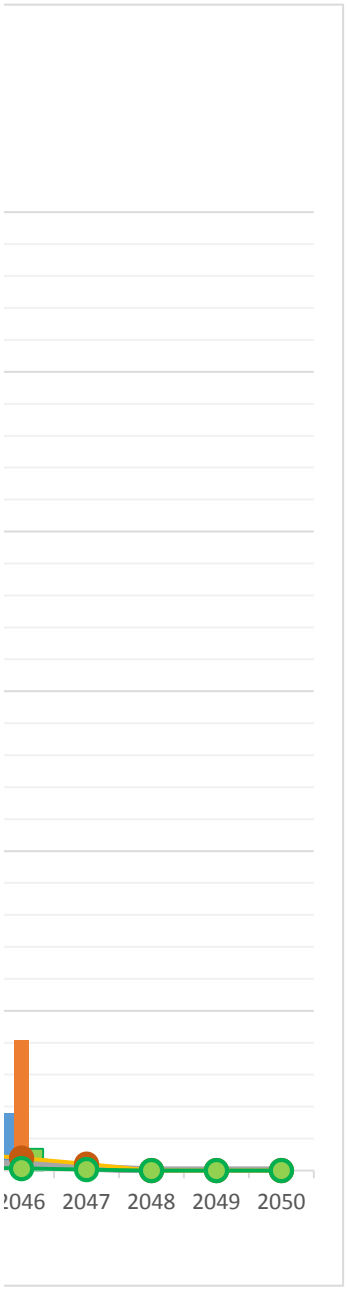
PDATED.


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864

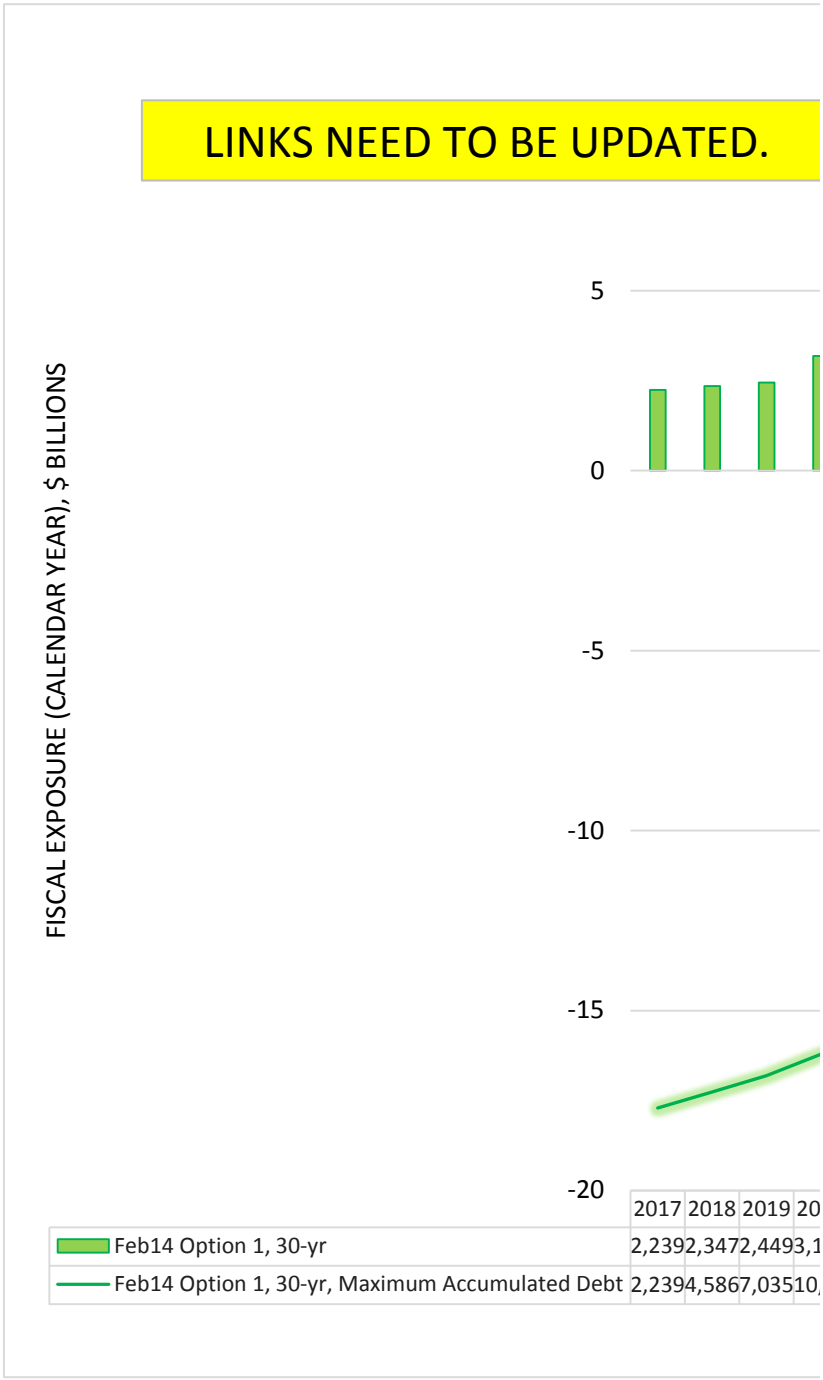


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



LINKS NEED TO BE UPDATED.



FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1b, 30-yr

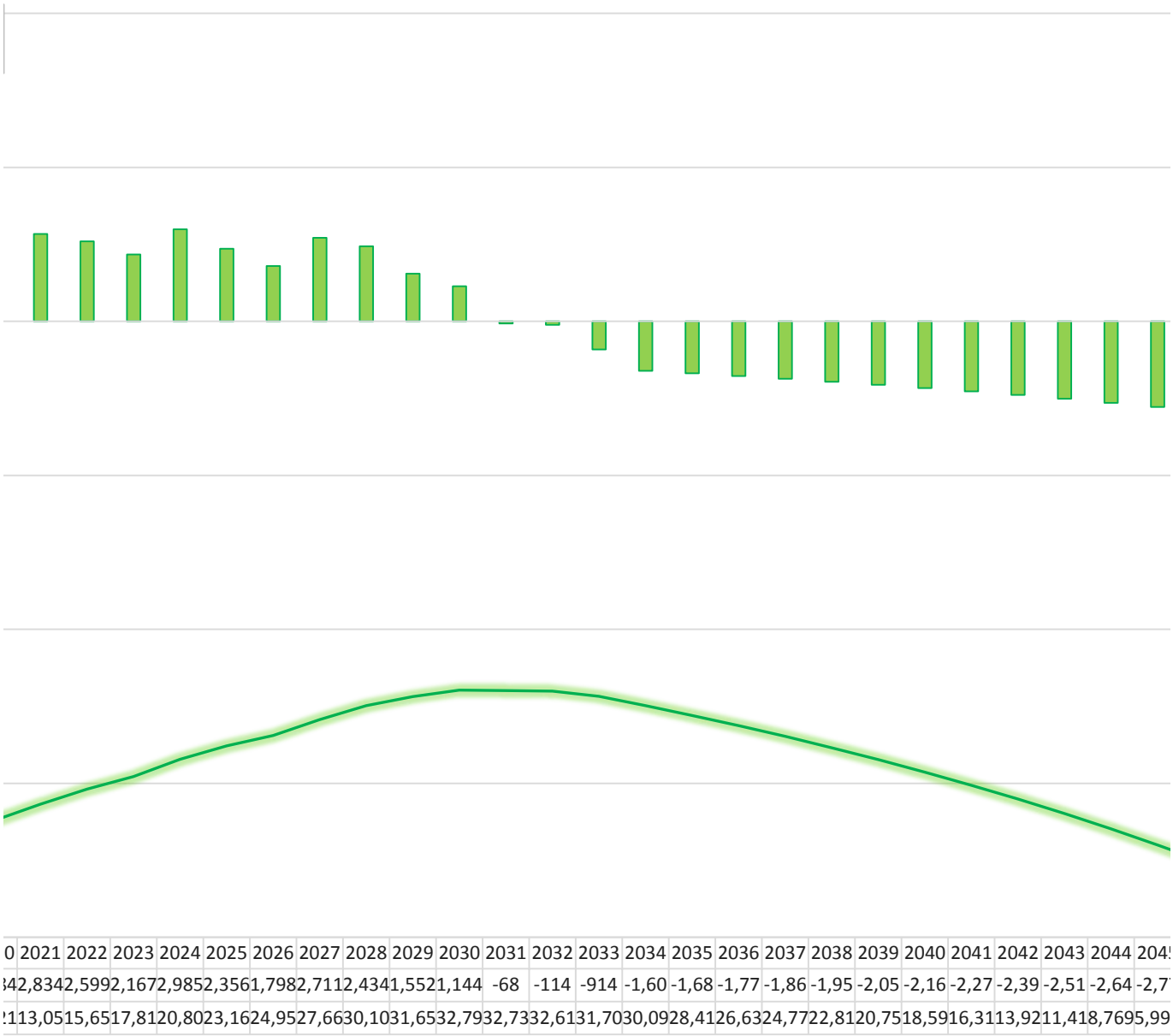
Feb4 1b, 30-yr,

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,

Feb 14 Deck - Option 1

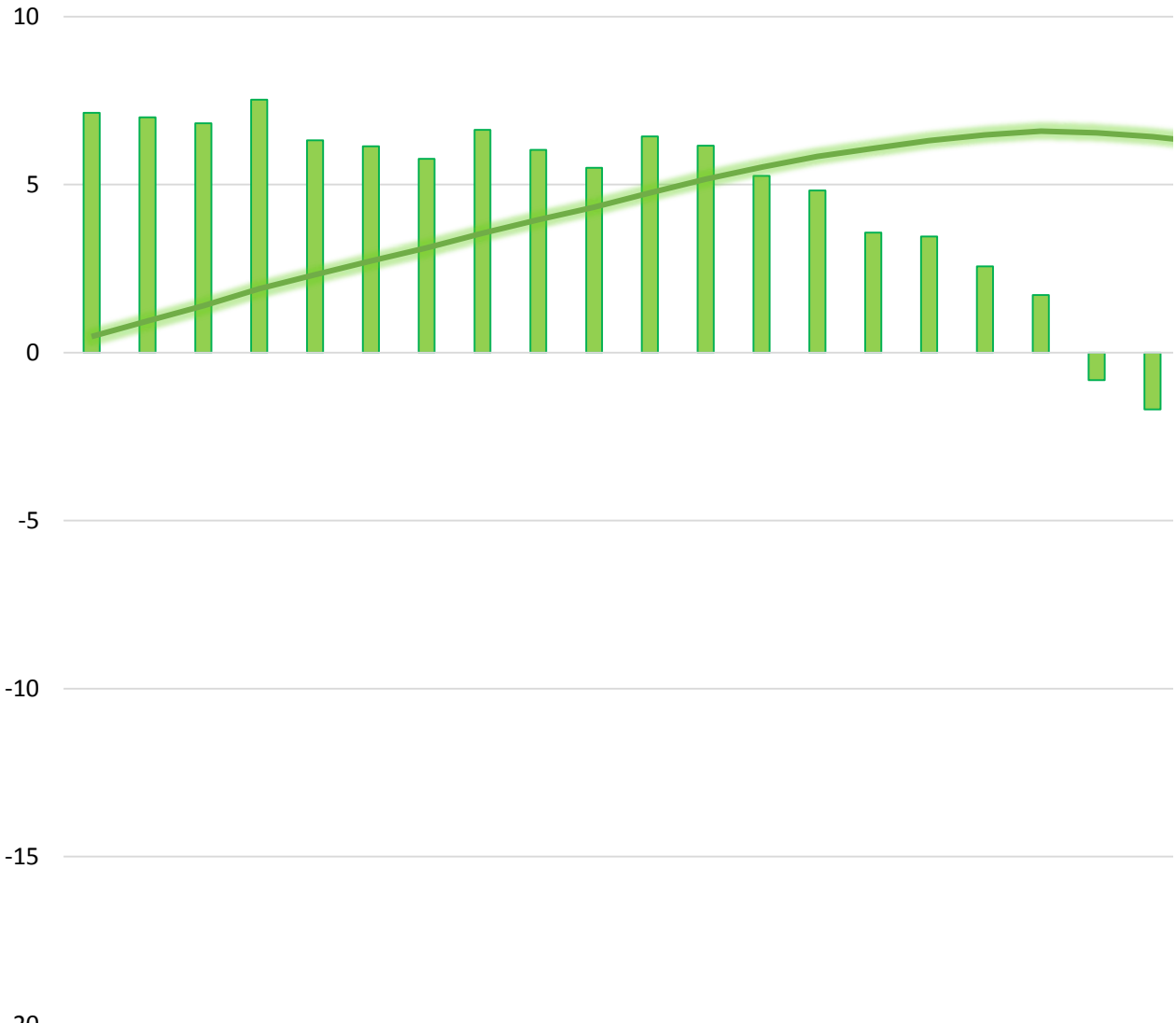


0	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	204
42	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,60	-1,68	-1,77	-1,86	-1,95	-2,05	-2,16	-2,27	-2,39	-2,51	-2,64	-2,7
113	05	15,65	17,81	20,80	23,16	24,95	27,66	30,10	31,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,76	95,99

CALENDAR YEAR

Feb 6 Deck - Scenario 1b - at 5.13% interest rat

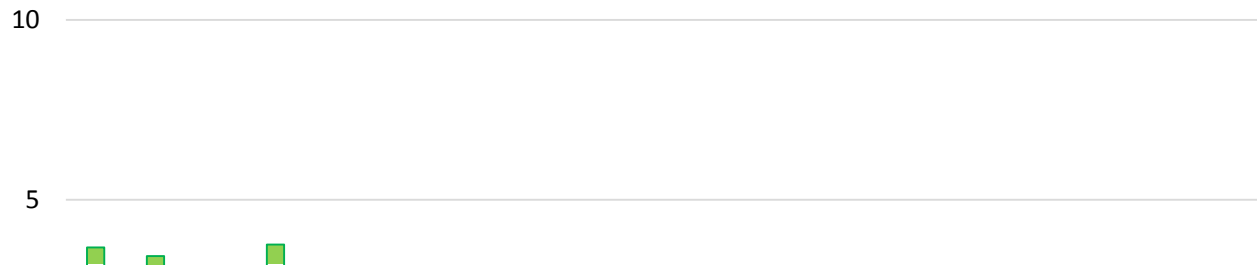
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

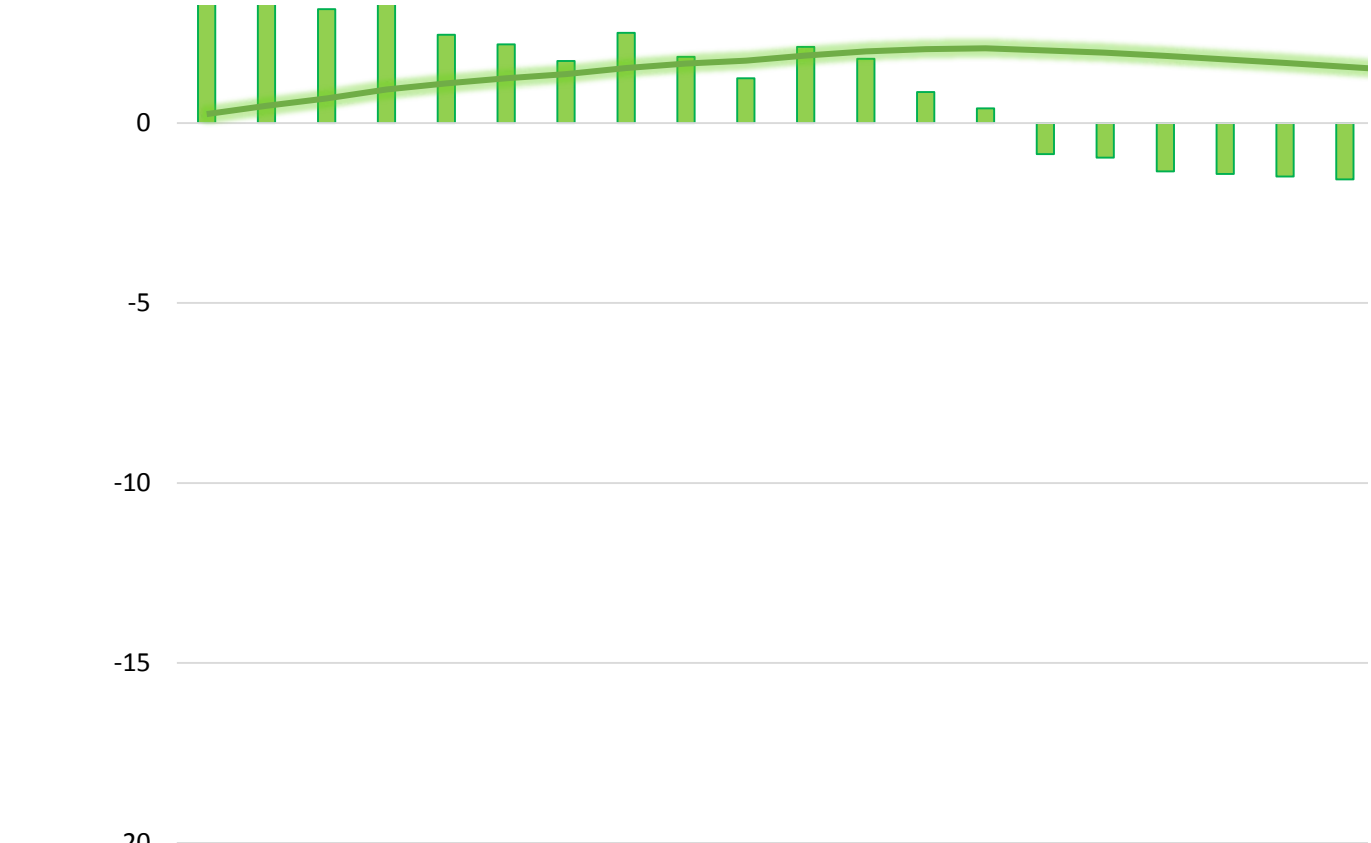


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

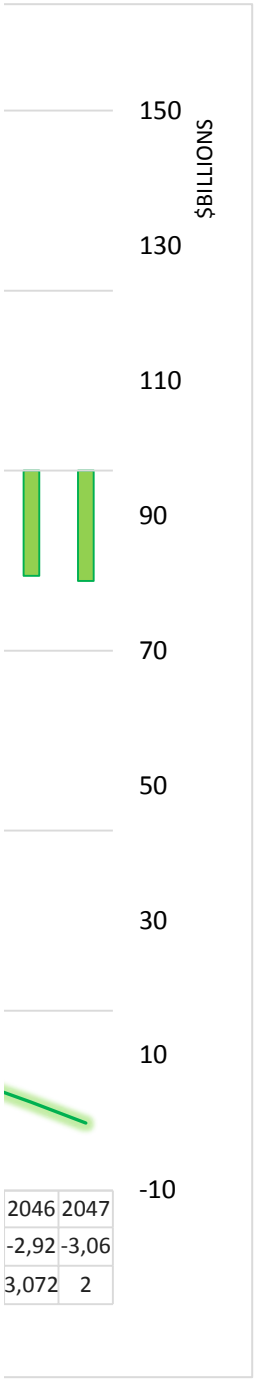
Feb 6 Deck - Scenario 1c - at 5.12% interest rat

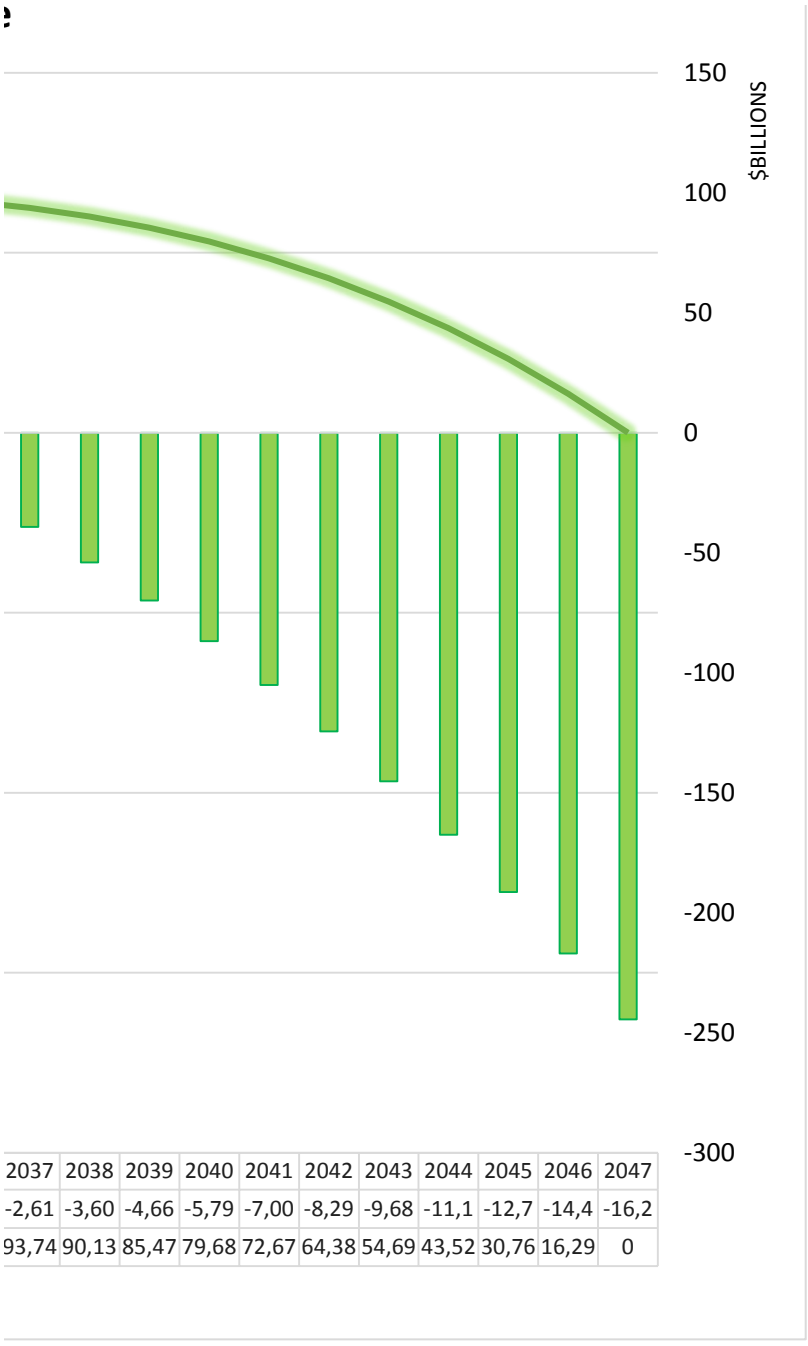




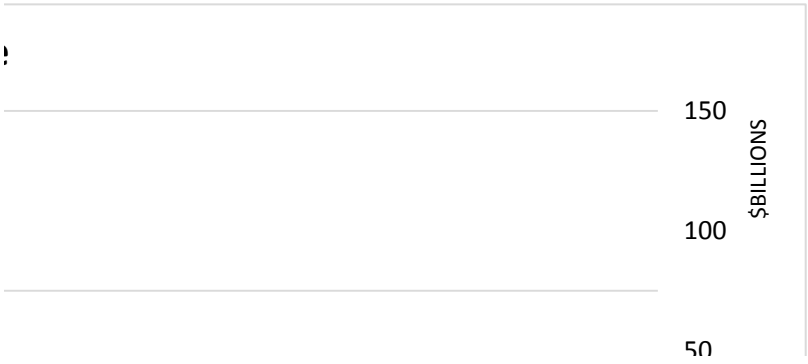
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

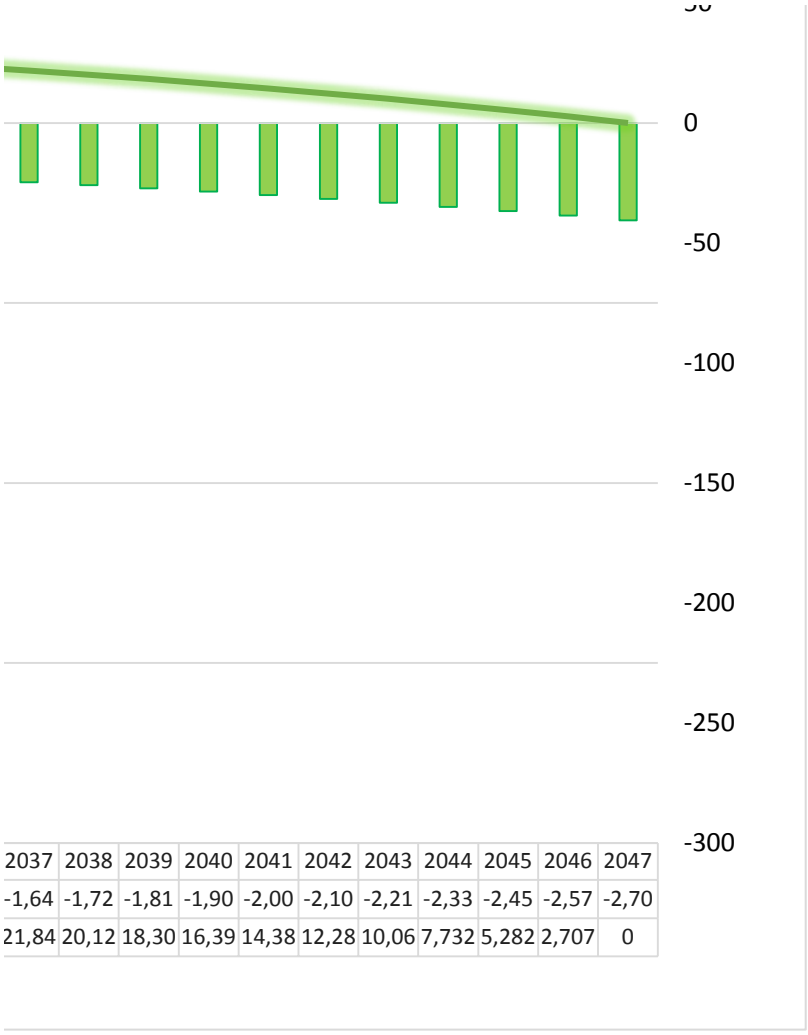
CALENDAR YEAR


150
130
110
90
70
50
30
10
-10
$BILLIONS
2046 2047
-2,92 -3,06
3,072 2



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest

IESO GA cost forecast + extrapolation

Scenario
Option 1
Bills Lowered 25%, RPP Only
Option 2
Bills Lowered 20%, RPP Only
Option 3
Bills Lowered 18%, contract/conservation refinancing, RPP Only

rate	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
Ratepayer GA Payment	9,856	9,602	9,338	9,344
Total Accumulated Debt ($ billion)	2,239	4,586	7,035	10,219
Ratepayer GA Payment	10,537	10,296	10,041	10,061
Accumulated debt in present year (including 5% interest,	1,559	3,177	4,851	7,207
Ratepayer GA Payment	10,648	10,303	10,186	10,873
Accumulated debt in present year (including 5% interest,	1,447	3,053	4,575	6,105
	12095.37	11834.681	11552.105	12168.428

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801
13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103
9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513
9,266	11,038	12,324	14,370	15,725	16,458	18,035	19,263
9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253
7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876
10843.555	10633.626	10243.432	11128.119	10527.018	10033.287	11042.844	10819.098

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389

9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615
31,654	32,799	32,730	32,616	31,702	30,097	28,411	26,638
10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117
19,534	19,317	18,577	17,799	16,981	16,122	15,218	14,268
9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837
18,843	19,521	20,007	20,312	20,325	19,755	18,549	17,050
10008.692	9721.4381	8654.4847	8819.9388	8238.0383	7756.4351	5662.3212	5388.8445

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627

8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853
24,774	22,815	20,756	18,591	16,316	13,924	11,410	8,767
6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355
13,270	12,221	11,118	9,958	8,740	7,458	6,112	4,696
7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712
15,464	13,694	12,062	10,556	9,143	7,810	6,672	5,928
5128.5761	4880.878	4645.1432	4420.7938	4207.28	4004.0783	3810.6908	3626.6435

2045	2046	2047	2048

3,451	3,285	3,126	2,975	2,831	2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
6,678	6,511	6,353	2,975	2,831	2,695
5,989	3,069	0	0	0	0
5,180	5,013	4,854	2,975	2,831	2,695
3,208	1,644	0	-	-	-
4,007	3,619	3,425	3,156	3,011	2,878
5,676	5,633	5,623	5,730	5,843	5,959
3451.485	3284.787	3126.139	2975.154	2831.461	2694.708

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

		5.00%	
Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb14_1_30yr

Option 1 - Bills Lowered 25%, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,239	2,347
Interest Portion	0	115

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	560	2,266
Interest Portion	-	29

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $33 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb14_2_30yr

Option 2 - Bills Lowered 20%, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,559	1,619
Interest Portion	0	80

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	390	1,574
Interest Portion	-	20

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb14_3_30yr

Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606
Interest Portion	0	74

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,487
Interest Portion	-	19

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	390 - 560	1,574 - 2,266

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	560	2266
Debt-Finance Global Adjustment Costs, Option 1a	390	1574
RRRP		
OESP – Enhance Benefit		162

Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**560**	**2506**
Total, B	390	1814

Proposed Program Total:	390 - 560	1,814 - 2,506

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Option 1
Option 2
Option 3

Assumes an inte

2019	2020	2021	2022
2,449	3,184	2,834	2,599
235	360	523	668

2018-19	2019-20	2020-21	2021-2022
2,372	2,633	3,096	2,775
145	266	401	559

2030.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,674	2,356	2,060	1,772
163	248	369	474

2018-19	2019-20	2020-21	2021-2022
1,632	1,844	2,282	1,988
100	184	278	395

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446
156	234	312	385

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429
95	176	254	331

2033.

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022
1,632 - 2,372	1,844 - 2,633	2,282 - 3,096	1,988 - 2,775

/1

2018-19[1]	2019-20[1]	2020-21[1]
2372	2633	3096
1632	1844	2282
225	279	323

60	60	60
18	18	18
2675	**2990**	**3497**
1935	2201	2683

1,935 - 2,675	2,201 - 2,990	2,683 - 3,497

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$21,561	$30,205	$32,799	occurs in Year 2030
$13,503	$17,883	$19,534	occurs in Year 2029
$12,862	$19,498	$20,326	occurs in Year 2033

erest rate of 5.00% (compounded monthly).

Tab Name		Total Accumulated Interest Costs
Feb14_1_30yr	$27,005	$34,278
Feb14_2_30yr	$15,940	$20,378
Feb14_3_30yr	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$27,005 to $34,278**
Option 2	$15,940 to $20,378**
Option 3	$17,202 to $22,028**

** With a higher interest rate, the amortization period extend beyond the 30-year forecast

ted period resulting in a remaining balance at the end of the 30-year period. For specifics, see details belo

w.

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,239	2,347	2,449	3,184	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,604	-1,687	-1,773	-1,864	-1,959	-2,059	-2,164	-2,275	-2,392	-2,514	-2,643	-2,778	-2,920	-3,069	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,292	2,403	2,507	3,260	2,902	2,660	2,219	3,056	2,412	1,841	2,776	2,492	1,589	1,171	-70	-117	-936	-1,643	-1,727	-1,815	-1,908	-2,005	-2,108	-2,216	-2,329	-2,448	-2,574	-2,705	-2,844	-2,989	-3,142	0	0	0
			53	56	58	76	67	62	52	71	56	43	64	58	37	27	-2	-3	-22	-38	-40	-42	-44	-47	-49	-51	-54	-57	-60	-63	-66	-69	-73	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,184	1,678	30,205
Equal Monthly Debt Drawdown	3,260	1,676	

		Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,799	2030	21,561
Equal Monthly Debt Drawdown	33,579		

Feb14 Option 1, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				26
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
a	Debt, Beginning of Year	0	2,239	4,586	7,035	10,219	13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103	31,655	32,799	32,731	32,617	31,703	30,098	28,412	26,639	24,775	22,816	20,757	18,593	16,318	13,926	11,412	8,769	5,992	3,072	2	3	3	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*115*	*235*	*360*	*523*	*668*	*801*	*912*	*1,064*	*1,185*	*1,277*	*1,416*	*1,540*	*1,620*	*1,678*	*1,675*	*1,669*	*1,622*	*1,540*	*1,454*	*1,363*	*1,268*	*1,167*	*1,062*	*951*	*835*	*712*	*584*	*449*	*307*	*157*	*0*	*0*	*0*	30,205
b	Additional GA Debt Drawdown, End of Year	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,239	4,586	7,035	10,219	13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103	31,655	32,799	32,731	32,617	31,703	30,098	28,412	26,639	24,775	22,816	20,757	18,593	16,318	13,926	11,412	8,769	5,992	3,072	2	3	3	3	
			FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,138	8,554	10,094	11,238	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	8,769	5,992	3,072	2	3	3	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,821	13,752	15,118	17,192	18,483	19,097	20,531	21,549	21,561	21,561	21,561	21,447	20,533	18,928	17,242	15,469	13,605	11,646	9,587	7,423	5,147	2,756	242	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,138	8,554	10,094	11,714	13,392	15,066	16,735	18,357	19,897	21,350	22,713	23,981	25,148	26,210	27,161	27,996	28,709	29,293	29,741	30,048	30,205				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,821	13,752	15,118	17,192	18,483	19,097	20,531	21,549	21,561	21,086	19,339	17,551	14,968	11,741	8,515	5,288	2,062	-1,164	-4,391	-7,617	-10,844	-14,070	-17,297	-20,523	-23,750	-26,976	-30,202				
Fiscal Exposure - End of Year Debt Drawdown		2,239	2,347	2,449	3,184	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,604	-1,687	-1,773	-1,864	-1,959	-2,059	-2,164	-2,275	-2,392	-2,514	-2,643	-2,778	-2,920	-3,069	0	0	0	

Feb14 Option 1, 30-yr — Equal Monthly Debt Drawdown

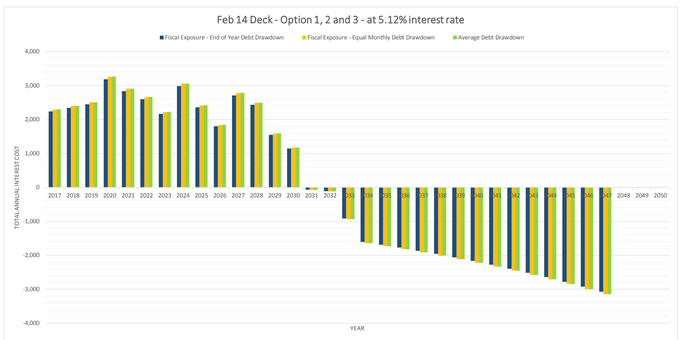
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,292	4,695	7,202	10,462	13,363	16,024	18,243	21,299	23,711	25,552	28,327	30,819	32,408	33,579	33,510	33,393	32,457	30,814	29,087	27,272	25,365	23,359	21,251	19,035	16,706	14,257	11,683	8,978	6,134	3,145	2	3	3	
1,676	*Interest Cost - Feb14 Option 1, 30-yr*	*53*	*170*	*293*	*436*	*590*	*730*	*852*	*983*	*1,120*	*1,228*	*1,341*	*1,473*	*1,577*	*1,647*	*1,676*	*1,672*	*1,647*	*1,584*	*1,500*	*1,411*	*1,319*	*1,221*	*1,118*	*1,010*	*897*	*778*	*653*	*521*	*383*	*237*	*84*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,292	4,695	7,202	10,462	13,363	16,024	18,243	21,299	23,711	25,552	28,327	30,819	32,408	33,579	33,510	33,393	32,457	30,814	29,087	27,272	25,365	23,359	21,251	19,035	16,706	14,257	11,683	8,978	6,134	3,145	2	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,292	2,403	2,507	3,260	2,902	2,660	2,219	3,056	2,412	1,841	2,776	2,492	1,589	1,171	-70	-117	-936	-1,643	-1,727	-1,815	-1,908	-2,005	-2,108	-2,216	-2,329	-2,448	-2,574	-2,705	-2,844	-2,989	-3,142	0	0	0	
	Monthly Drawdown	187	186	185	235	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	-	-	-	
	FV of Monthly Drawdown at 5%	2,292	2,285	2,267	2,891	2,366	1,977	1,399	2,123	1,322	628	1,468	1,043	12	(487)	(1,788)	(1,831)	(2,644)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	-	-	-	
	Annual Interest Cost on New Drawdowns	53	53	53	67	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	-	-	-	
	Annual Interest Cost on Opening Balance	-	117	240	368	535	684	820	933	1,090	1,213	1,307	1,449	1,577	1,658	1,718	1,714	1,708	1,661	1,577	1,488	1,395	1,298	1,195	1,087	974	855	729	598	459	314	161	0	0	0	
	Total Annual Interest Cost	53	170	293	436	590	730	852	983	1,120	1,228	1,341	1,473	1,577	1,647	1,676	1,672	1,647	1,584	1,500	1,411	1,319	1,221	1,118	1,010	897	778	653	521	383	237	84	0	0	0	

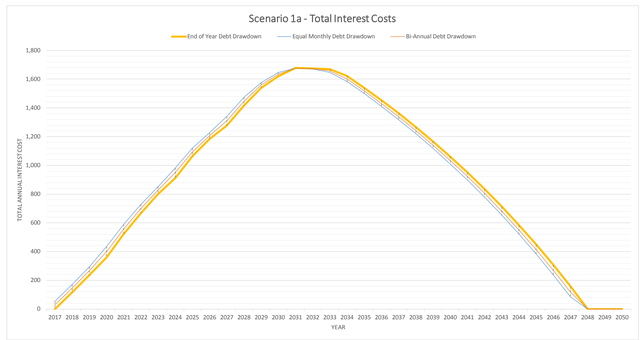
Feb14 Option 1, 30-yr — Bi-Annual Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,268	4,645	7,125	10,349	13,220	15,852	18,047	21,070	23,456	25,277	28,023	30,488	32,060	33,219	33,150	33,034	32,108	30,483	28,775	26,980	25,092	23,108	21,023	18,831	16,526	14,104	11,558	8,882	6,068	3,111	2	3	3	
	Interest Cost - Feb14 Option 1, 30-yr	*29*	*145*	*266*	*401*	*559*	*701*	*828*	*950*	*1,095*	*1,208*	*1,312*	*1,447*	*1,560*	*1,634*	*1,677*	*1,673*	*1,657*	*1,601*	*1,518*	*1,431*	*1,339*	*1,242*	*1,141*	*1,034*	*922*	*804*	*680*	*550*	*413*	*269*	*118*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,268	4,645	7,125	10,349	13,220	15,852	18,047	21,070	23,456	25,277	28,023	30,488	32,060	33,219	33,150	33,034	32,108	30,483	28,775	26,980	25,092	23,108	21,023	18,831	16,526	14,104	11,558	8,882	6,068	3,111	2	3	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,268	2,377	2,480	3,225	2,870	2,632	2,195	3,024	2,386	1,821	2,746	2,465	1,572	1,159	-69	-116	-926	-1,625	-1,708	-1,796	-1,887	-1,984	-2,085	-2,192	-2,304	-2,422	-2,546	-2,676	-2,813	-2,957	-3,109	0	0	0	
	Bi-Annual Drawdown	1,119	1,116	1,107	1,412	1,156	965	683	1,037	646	307	717	509	6	(238)	(873)	(894)	(1,291)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,268	2,261	2,243	2,860	2,341	1,955	1,384	2,100	1,308	621	1,453	1,031	12	(481)	(1,769)	(1,812)	(2,616)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	-	-	-	
	Annual Interest Cost on New Drawdowns	29	29	28	36	30	25	17	27	17	8	18	13	0	(6)	(22)	(23)	(33)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	-	-	-	
	Annual Interest Cost on Opening Balance	-	116	238	365	529	676	811	923	1,078	1,200	1,293	1,434	1,560	1,640	1,700	1,696	1,690	1,643	1,560	1,472	1,380	1,284	1,182	1,076	963	846	722	591	454	310	159	0	0	0	
	Total Annual Interest Cost	29	145	266	401	559	701	828	950	1,095	1,208	1,312	1,447	1,560	1,634	1,677	1,673	1,657	1,601	1,518	1,431	1,339	1,242	1,141	1,034	922	804	680	550	413	269	118	0	0	0	

Feb14 Option 1, 30-yr — Average Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,296	4,703	7,215	10,480	13,387	16,052	18,275	21,336	23,752	25,596	28,377	30,873	32,465	33,638	33,568	33,451	32,514	30,868	29,138	27,320	25,409	23,400	21,288	19,068	16,735	14,282	11,704	8,994	6,145	3,150	2	3	3	
	Interest Cost - Feb14 Option 1, 30-yr	*57*	*175*	*297*	*441*	*595*	*734*	*856*	*988*	*1,125*	*1,231*	*1,346*	*1,478*	*1,580*	*1,649*	*1,676*	*1,672*	*1,645*	*1,581*	*1,497*	*1,408*	*1,315*	*1,217*	*1,115*	*1,007*	*893*	*774*	*648*	*516*	*378*	*232*	*79*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,296	4,703	7,215	10,480	13,387	16,052	18,275	21,336	23,752	25,596	28,377	30,873	32,465	33,638	33,568	33,451	32,514	30,868	29,138	27,320	25,409	23,400	21,288	19,068	16,735	14,282	11,704	8,994	6,145	3,150	2	3	3	3	
Fiscal Exposure - Average Debt Drawdown		2,296	2,407	2,512	3,265	2,907	2,665	2,223	3,062	2,416	1,844	2,780	2,496	1,592	1,173	-70	-117	-937	-1,646	-1,730	-1,818	-1,911	-2,009	-2,112	-2,220	-2,333	-2,453	-2,578	-2,710	-2,849	-2,995	-3,148	0	0	0	





Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,559	1,619	1,674	2,356	2,060	1,772	1,286	2,046	1,355	733	1,578	1,228	271	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,415	-1,488	-1,564	-1,644	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0	
			37	38	40	56	49	42	31	49	32	17	38	29	6	-5	-18	-19	-19	-20	-21	-23	-24	-25	-26	-28	-29	-30	-32	-34	-35	-37	-39	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,356	999	17,883
Equal Monthly Debt Drawdown	2,412	994	

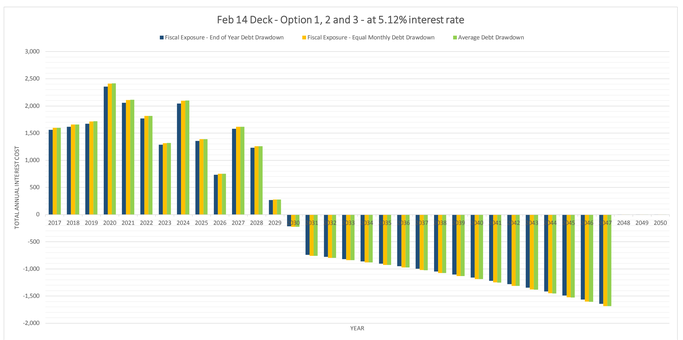
	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,534	2029	13,503
Equal Monthly Debt Drawdown	19,999		

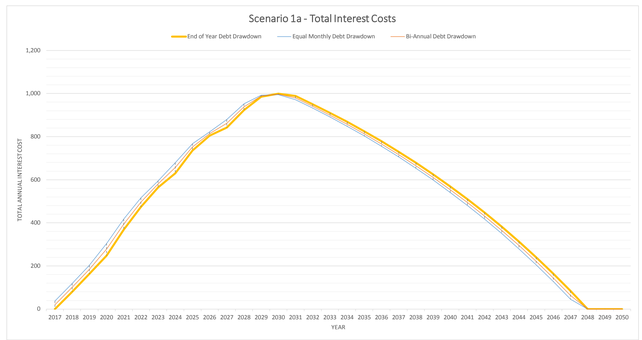
Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP Only																																				26
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
a	Debt, Beginning of Year	0	1,559	3,177	4,851	7,207	9,266	11,039	12,324	14,370	15,725	16,458	18,035	19,264	19,534	19,317	18,577	17,799	16,982	16,122	15,219	14,269	13,271	12,222	11,119	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1	2	2	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*80*	*163*	*248*	*369*	*474*	*565*	*631*	*735*	*805*	*842*	*923*	*986*	*999*	*988*	*950*	*911*	*869*	*825*	*779*	*730*	*679*	*625*	*569*	*510*	*447*	*382*	*313*	*240*	*164*	*84*	*0*	*0*	*0*	17,883
b	Additional GA Debt Drawdown, End of Year	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,559	3,177	4,851	7,207	9,266	11,039	12,324	14,370	15,725	16,458	18,035	19,264	19,534	19,317	18,577	17,799	16,982	16,122	15,219	14,269	13,271	12,222	11,119	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1	2	2	2	
			TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE		
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	7,818	7,078	6,300	5,483	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,697	3,210	1,646	1	2	2	2	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,842	12,461	12,390	13,125	13,431	12,716	11,499	11,499	11,499	11,499	11,499	10,595	9,646	8,648	7,598	6,495	5,336	4,117	2,836	1,490	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	7,818	8,805	9,757	10,667	11,536	12,361	13,140	13,870	14,549	15,174	15,743	16,252	16,700	17,081	17,394	17,634	17,798	17,883				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,842	12,461	12,390	13,125	13,431	12,716	11,499	9,771	8,042	6,314	4,586	2,858	1,129	-599	-2,327	-4,055	-5,784	-7,512	-9,240	-10,968	-12,696	-14,425	-16,153	-17,881				
Fiscal Exposure - End of Year Debt Drawdown		1,559	1,619	1,674	2,356	2,060	1,772	1,286	2,046	1,355	733	1,578	1,228	271	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,415	-1,488	-1,564	-1,644	0	0	0	

Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,019	18,223	17,385	16,506	15,581	14,609	13,587	12,512	11,383	10,196	8,948	7,637	6,258	4,809	3,286	1,685	2	2	2	
994	*Interest Cost - Feb14 Option 1, 30-yr*	*37*	*118*	*202*	*304*	*418*	*516*	*595*	*679*	*767*	*822*	*880*	*952*	*992*	*994*	*971*	*932*	*891*	*848*	*803*	*756*	*706*	*654*	*599*	*541*	*481*	*417*	*350*	*279*	*205*	*127*	*45*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,019	18,223	17,385	16,506	15,581	14,609	13,587	12,512	11,383	10,196	8,948	7,637	6,258	4,809	3,286	1,685	2	2	2	2	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0	
	Monthly Drawdown	130	128	126	176	141	108	60	118	52	(6)	61	25	(60)	(101)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	-	-	-	
	FV of Monthly Drawdown at 5%	1,596	1,575	1,548	2,157	1,731	1,329	738	1,449	635	(74)	753	313	(732)	(1,246)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	-	-	-	
	Annual Interest Cost on New Drawdowns	37	37	36	50	40	31	17	34	15	(2)	17	7	(17)	(29)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	-	-	-	
	Annual Interest Cost on Opening Balance	-	82	166	254	377	485	578	646	753	824	862	945	1,009	1,023	1,012	973	932	889	844	797	747	695	640	582	522	458	391	320	246	168	86	0	0	0	
	Total Annual Interest Cost	37	118	202	304	418	516	595	679	767	822	880	952	992	994	971	932	891	848	803	756	706	654	599	541	481	417	350	279	205	127	45	0	0	0	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,815	18,027	17,199	16,328	15,413	14,452	13,441	12,378	11,261	10,087	8,852	7,555	6,191	4,758	3,251	1,667	1	2	2	
	Interest Cost - Feb14 Option 1, 30-yr	*20*	*100*	*184*	*278*	*395*	*497*	*581*	*657*	*753*	*814*	*862*	*938*	*989*	*997*	*979*	*940*	*900*	*858*	*813*	*766*	*717*	*666*	*611*	*554*	*494*	*431*	*364*	*295*	*221*	*144*	*63*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,815	18,027	17,199	16,328	15,413	14,452	13,441	12,378	11,261	10,087	8,852	7,555	6,191	4,758	3,251	1,667	1	2	2	2	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,579	1,639	1,696	2,386	2,086	1,795	1,302	2,072	1,372	742	1,598	1,244	274	-220	-749	-788	-828	-870	-915	-962	-1,011	-1,063	-1,117	-1,174	-1,234	-1,297	-1,364	-1,434	-1,507	-1,584	-1,665	0	0	0	
	Bi-Annual Drawdown	779	769	756	1,054	845	649	361	708	310	(36)	368	153	(358)	(608)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,579	1,558	1,531	2,134	1,713	1,315	730	1,433	628	(73)	745	310	(724)	(1,232)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	-	-	-	
	Annual Interest Cost on New Drawdowns	20	20	19	27	22	17	9	18	8	(1)	9	4	(9)	(16)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	-	-	-	
	Annual Interest Cost on Opening Balance	-	81	165	251	373	480	572	639	745	815	853	935	998	1,012	1,001	963	922	880	835	789	739	688	633	576	516	453	387	317	243	166	85	0	0	0	
	Total Annual Interest Cost	20	100	184	278	395	497	581	657	753	814	862	938	989	997	979	940	900	858	813	766	717	666	611	554	494	431	364	295	221	144	63	0	0	0	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,599	3,258	4,975	7,391	9,504	11,321	12,640	14,738	16,128	16,879	18,497	19,757	20,034	19,811	19,052	18,254	17,416	16,535	15,608	14,634	13,610	12,534	11,403	10,214	8,964	7,650	6,269	4,818	3,292	1,688	2	2	2	
	Interest Cost - Feb14 Option 1, 30-yr	*40*	*121*	*205*	*308*	*421*	*519*	*598*	*683*	*770*	*823*	*882*	*954*	*992*	*994*	*969*	*931*	*890*	*847*	*802*	*754*	*704*	*652*	*597*	*539*	*478*	*414*	*347*	*277*	*202*	*124*	*42*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,599	3,258	4,975	7,391	9,504	11,321	12,640	14,738	16,128	16,879	18,497	19,757	20,034	19,811	19,052	18,254	17,416	16,535	15,608	14,634	13,610	12,534	11,403	10,214	8,964	7,650	6,269	4,818	3,292	1,688	2	2	2	2	
Fiscal Exposure - Average Debt Drawdown		1,599	1,660	1,717	2,416	2,112	1,817	1,319	2,098	1,390	751	1,618	1,260	277	-223	-759	-798	-839	-881	-927	-974	-1,024	-1,076	-1,131	-1,189	-1,250	-1,314	-1,381	-1,452	-1,526	-1,604	-1,686	0	0	0	





Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_3_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	
			34	38	36	36	34	34	35	36	36	35	35	34	23	16	12	7	0	-14	-29	-36	-38	-42	-39	-36	-34	-32	-27	-18	-6	-1	0	3	3	3	142

		Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	1,606		1,040	19,498
Equal Monthly Debt Drawdown	1,644		1,040	

	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	20,326	2033	12,862
Equal Monthly Debt Drawdown	20,809		

Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
a	Debt, Beginning of Year	0	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*74*	*156*	*234*	*312*	*385*	*459*	*534*	*612*	*690*	*766*	*842*	*915*	*964*	*999*	*1,024*	*1,039*	*1,040*	*1,011*	*949*	*872*	*791*	*701*	*617*	*540*	*468*	*400*	*341*	*303*	*290*	*288*	*288*	*293*	*299*	19,498
b	Additional GA Debt Drawdown, End of Year	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,430	7,736	7,749	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,577	12,577	12,577	12,577	11,371	9,872	8,285	6,516	4,884	3,378	1,966	633	-506	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,943	8,967	10,006	11,046	12,057	13,006	13,878	14,669	15,370	15,987	16,527	16,995	17,395	17,736	18,040	18,330	18,618				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,064	11,345	10,319	8,710	6,493	4,045	1,586	-974	-3,307	-5,431	-7,383	-9,184	-10,721	-11,807	-12,362	-12,696	-12,994				
Fiscal Exposure - End of Year Debt Drawdown		1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	

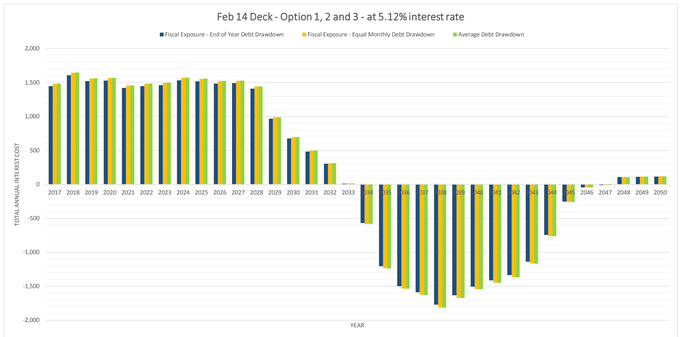
Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	
1,040	*Interest Cost - Feb14 Option 1, 30-yr*	*34*	*112*	*192*	*270*	*346*	*420*	*494*	*570*	*649*	*726*	*802*	*876*	*938*	*980*	*1,010*	*1,031*	*1,040*	*1,026*	*982*	*913*	*835*	*749*	*662*	*581*	*507*	*436*	*373*	*324*	*297*	*289*	*288*	*290*	*296*	*302*	19,640
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	6,102	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	

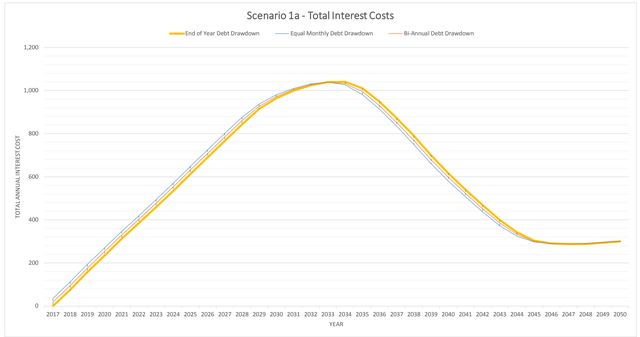
	Monthly Drawdown	121	128	114	108	93	88	84	83	76	66	60	47	4	(24)	(43)	(60)	(85)	(134)	(185)	(204)	(205)	(213)	(194)	(177)	(163)	(150)	(128)	(90)	(46)	(28)	(25)	(15)	(15)	(15)	
	FV of Monthly Drawdown at 5%	1,482	1,568	1,398	1,326	1,137	1,086	1,028	1,024	929	815	742	580	54	(292)	(525)	(736)	(1,050)	(1,648)	(2,269)	(2,506)	(2,517)	(2,621)	(2,389)	(2,174)	(1,999)	(1,844)	(1,574)	(1,111)	(568)	(342)	(306)	(185)	(184)	(188)	
	Annual Interest Cost on New Drawdowns	34	36	32	31	26	25	24	24	22	19	17	13	1	(7)	(12)	(17)	(24)	(38)	(53)	(58)	(58)	(61)	(55)	(51)	(46)	(43)	(37)	(26)	(13)	(8)	(7)	(4)	(4)	(4)	
	Annual Interest Cost on Opening Balance	-	76	160	240	320	394	470	547	627	707	784	863	936	987	1,023	1,048	1,064	1,065	1,035	972	893	810	717	632	553	479	409	350	311	297	295	295	300	306	
	Total Annual Interest Cost	34	112	192	270	346	420	494	570	649	726	802	876	938	980	1,010	1,031	1,040	1,026	982	913	835	749	662	581	507	436	373	324	297	289	288	290	296	302	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	
	Interest Cost - Feb14 Option 1, 30-yr	*19*	*95*	*176*	*254*	*331*	*404*	*478*	*554*	*632*	*709*	*785*	*861*	*927*	*973*	*1,005*	*1,028*	*1,039*	*1,033*	*995*	*930*	*852*	*769*	*680*	*598*	*522*	*451*	*385*	*332*	*300*	*290*	*288*	*289*	*295*	*301*	19,575
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	6,037	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,466	1,626	1,541	1,549	1,441	1,465	1,482	1,554	1,539	1,505	1,510	1,427	979	687	492	309	13	-577	-1,221	-1,518	-1,607	-1,792	-1,653	-1,525	-1,430	-1,350	-1,153	-753	-255	-44	-10	109	115	117	

	Bi-Annual Drawdown	724	766	683	648	555	530	502	500	454	398	363	283	26	(143)	(256)	(359)	(513)	(805)	(1,108)	(1,224)	(1,229)	(1,280)	(1,167)	(1,062)	(976)	(900)	(769)	(543)	(278)	(167)	(149)	(90)	(90)	(92)	
	FV of Bi-Annual Drawdown at 5%	1,466	1,551	1,383	1,312	1,125	1,075	1,017	1,013	919	806	735	573	53	(289)	(519)	(728)	(1,039)	(1,630)	(2,245)	(2,479)	(2,490)	(2,593)	(2,363)	(2,150)	(1,977)	(1,824)	(1,557)	(1,099)	(562)	(338)	(302)	(183)	(182)	(186)	
	Annual Interest Cost on New Drawdowns	19	20	17	17	14	14	13	13	12	10	9	7	1	(4)	(7)	(9)	(13)	(21)	(28)	(31)	(31)	(33)	(30)	(27)	(25)	(23)	(20)	(14)	(7)	(4)	(4)	(2)	(2)	(2)	
	Annual Interest Cost on Opening Balance	-	75	158	237	316	390	465	541	620	699	776	853	926	976	1,012	1,037	1,053	1,053	1,024	961	884	801	710	625	547	474	405	346	307	294	292	291	297	303	
	Total Annual Interest Cost	19	95	176	254	331	404	478	554	632	709	785	861	927	973	1,005	1,028	1,039	1,033	995	930	852	769	680	598	522	451	385	332	300	290	288	289	295	301	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	
	Interest Cost - Feb14 Option 1, 30-yr	*37*	*115*	*195*	*273*	*349*	*422*	*497*	*573*	*651*	*728*	*804*	*879*	*939*	*981*	*1,011*	*1,031*	*1,040*	*1,025*	*980*	*911*	*832*	*746*	*659*	*579*	*504*	*434*	*371*	*322*	*297*	*289*	*288*	*290*	*296*	*302*	19,651
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	6,113	
Fiscal Exposure - Average Debt Drawdown		1,484	1,647	1,561	1,569	1,459	1,483	1,500	1,573	1,559	1,524	1,530	1,445	992	696	498	313	14	-585	-1,237	-1,537	-1,627	-1,814	-1,674	-1,545	-1,448	-1,367	-1,167	-763	-258	-44	-10	110	116	119	





Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest ra

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest ra

IESO GA cost forecast + extrapolation

Scenario
Option 1

Option 2

ate	2017	2018	2019	2020
ate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	2200	4600	7000	10200

Total Accumulated Debt ($ billion)	2.2	4.6	7	10.2
	2,200	4,600	7,000	10,200

Total Accumulated Debt ($ billion)	1.6	3.2	4.9	7.2
	1,600	3,200	4,900	7,200

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
13100	15700	17800	20800	23200	25000	27700	30100

13.1 15.7 17.8 20.8 23.2 25 27.7 30.1
13,100 15,700 17,800 20,800 23,200 25,000 27,700 30,100

9.3 11 12.3 14.4 15.7 16.5 18 19.3
9,300 11,000 12,300 14,400 15,700 16,500 18,000 19,300

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
31700	32800	32700	32600	31700	30100	28400	26600

31.7	32.8	32.7	32.6	31.7	30.1	28.4	26.6
31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600

19.5	19.3	18.6	17.8	17	16.1	15.2	14.3
19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
24800	22800	20800	18600	16300	13900	11400	8800

24.8	22.8	20.8	18.6	16.3	13.9	11.4	8.8
24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800

13.3	12.2	11.1	10	8.7	7.5	6.1	4.7
13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	2046	2047	2048	2049	2050
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
6000	3100	0	0	0	0

6 3.1 0 0
6,000 3,100 - -

3.2 1.6 0 0
3,200 1,600 - -

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb9_1_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,200	2,400

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	550	2,250

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $33 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb9_2_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,600	1,600

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	400	1,600

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,169	4,668

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	545	2,203

Actuals are subject to actual prices and actual interest rates.

#N/A

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542

Fiscalized[3]	2016-17	2017-18
Start: January 1st	375	1,510

Actuals are subject to actual prices and actual interest rates.

#N/A

Rough		
	1	
	2	
	3	
	4 April	4
	5 May	5
	6 June	6
	7 July	7
	8 August	8
	9 September	9
	10 October	10
	11 November	11
	12 December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	400 - 550	1,600 - 2,250

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	550	2250
Debt-Finance Global Adjustment Costs, Option 1a	400	1600
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**550**	**2490**
Total, B	400	1840
Proposed Program Total:	400 - 550	1,840 - 2,490

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1
Scenario 2

2019	2020	2021	2022
2,400	3,200	2,900	2,600

2018-19	2019-20	2020-21	2021-2022
2,400	2,600	3,125	2,825

2030.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,700	2,300	2,100	1,700

2018-19	2019-20	2020-21	2021-2022
1,625	1,850	2,250	2,000

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
4,589	5,867	5,031	4,861

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988

› depend on decision on accounting treatment.

2019	2020	2021	2022
2,353	3,072	2,817	2,580

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757

2019	2020	2021	2022
1,578	2,243	1,931	1,635

2018-19	2019-20	2020-21	2021-2022
1,551	1,745	2,165	1,857



2018-19	2019-20	2020-21	2021-2022
1,625 - 2,400	1,850 - 2,600	2,250 - 3,125	2,000 - 2,825

/1

2018-19[1]	2019-20[1]	2020-21[1]
2400	2600	3125
1625	1850	2250
225	279	323
60	60	60
18	18	18
2703	**2957**	**3526**
1928	2207	2651

1,928 - 2,703 2,207 - 2,957 2,651 - 3,526

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
21,601	30,211	32,800	occurs in Year 2030
13,466	17,886	19,500	occurs in Year 2029
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!

2,200

Tab Name
Feb9_1_30yr
Feb9_2_30yr

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Feb9_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0	
			52	57	57	76	69	62	50	71	57	43	64	57	38	26	-2	-2	-21	-38	-40	-43	-43	-48	-48	-52	-55	-57	-59	-62	-67	-69	-74	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,200	1,678	30,211
Equal Monthly Debt Drawdown	3,276	1,676	

		Feb9 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,800	2030	21,601	
Equal Monthly Debt Drawdown	33,580			

Feb9 1, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
a	Debt, Beginning of Year	0	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	
c = a*5%	*Interest Cost - Feb9 1, 30-yr - End of Year Debt Drowdown*	*0*	*113*	*235*	*358*	*522*	*670*	*803*	*911*	*1,064*	*1,187*	*1,279*	*1,417*	*1,540*	*1,622*	*1,678*	*1,673*	*1,668*	*1,622*	*1,540*	*1,453*	*1,361*	*1,269*	*1,166*	*1,064*	*952*	*834*	*711*	*583*	*450*	*307*	*159*	*0*	*0*	*0*	30,211
b	Additional GA Debt Drawdown, End of Year	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	0
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	11,621	11,521	10,621	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	8,800	6,000	3,100	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	21,079	21,079	21,079	21,079	19,379	17,579	15,779	13,779	11,779	9,579	7,279	4,879	2,379	0	0	0	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	13,399	15,072	16,740	18,362	19,902	21,355	22,716	23,985	25,151	26,215	27,167	28,001	28,712	29,295	29,746	30,052	30,211				
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	19,301	17,528	14,960	11,738	8,498	5,245	2,084	-1,185	-4,351	-7,615	-10,867	-14,101	-17,312	-20,495	-23,746	-26,952	-30,211				
Fiscal Exposure - End of Year Debt Drawdown		2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0	

Feb9 1, 30-yr — Equal Monthly Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	
1,676	*Interest Cost - Feb9 1, 30-yr*	*52*	*170*	*292*	*434*	*591*	*732*	*853*	*982*	*1,121*	*1,230*	*1,343*	*1,474*	*1,578*	*1,648*	*1,676*	*1,671*	*1,646*	*1,584*	*1,500*	*1,410*	*1,318*	*1,221*	*1,119*	*1,012*	*897*	*777*	*652*	*521*	*384*	*238*	*85*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0	
	Monthly Drawdown	183	191	180	237	198	161	108	174	111	51	118	82	5	(43)	(148)	(148)	(214)	(268)	(270)	(271)	(263)	(272)	(264)	(272)	(271)	(269)	(268)	(265)	(271)	(267)	(272)	-	-	-	
	FV of Monthly Drawdown at 5%	2,252	2,342	2,216	2,909	2,435	1,976	1,328	2,139	1,368	628	1,455	1,006	61	(534)	(1,820)	(1,815)	(2,629)	(3,298)	(3,317)	(3,330)	(3,236)	(3,347)	(3,242)	(3,342)	(3,329)	(3,311)	(3,288)	(3,259)	(3,328)	(3,283)	(3,336)	-	-	-	
	Annual Interest Cost on New Drawdowns	52	54	51	68	57	46	31	50	32	15	34	23	1	(12)	(42)	(42)	(61)	(77)	(77)	(77)	(75)	(78)	(75)	(78)	(77)	(76)	(76)	(76)	(77)	(76)	(78)	-	-	-	
	Annual Interest Cost on Opening Balance	-	115	241	367	534	686	822	932	1,089	1,215	1,309	1,451	1,577	1,660	1,718	1,713	1,708	1,660	1,577	1,488	1,393	1,299	1,194	1,089	974	854	728	597	461	314	162	(0)	(0)	(0)	
	Total Annual Interest Cost	52	170	292	434	591	732	853	982	1,121	1,230	1,343	1,474	1,578	1,648	1,676	1,671	1,646	1,584	1,500	1,410	1,318	1,221	1,119	1,012	897	777	652	521	384	238	85	(0)	(0)	(0)	

Feb9 1, 30-yr — Bi-Annual Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*28*	*143*	*266*	*399*	*559*	*703*	*830*	*949*	*1,095*	*1,210*	*1,314*	*1,448*	*1,560*	*1,636*	*1,677*	*1,672*	*1,656*	*1,601*	*1,518*	*1,430*	*1,338*	*1,243*	*1,141*	*1,036*	*922*	*803*	*679*	*550*	*414*	*270*	*119*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,228	2,431	2,431	3,241	2,937	2,633	2,127	3,038	2,431	1,823	2,735	2,431	1,620	1,114	-101	-101	-912	-1,620	-1,722	-1,823	-1,823	-2,026	-2,026	-2,228	-2,329	-2,431	-2,532	-2,633	-2,836	-2,937	-3,140	0	0	0	
	Bi-Annual Drawdown	1,100	1,144	1,082	1,421	1,189	965	648	1,045	668	307	710	491	30	(261)	(889)	(886)	(1,284)	(1,611)	(1,620)	(1,626)	(1,580)	(1,634)	(1,583)	(1,632)	(1,626)	(1,617)	(1,606)	(1,592)	(1,625)	(1,603)	(1,629)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,228	2,317	2,192	2,878	2,409	1,954	1,313	2,116	1,353	621	1,439	995	61	(529)	(1,801)	(1,796)	(2,601)	(3,263)	(3,281)	(3,295)	(3,201)	(3,311)	(3,207)	(3,306)	(3,293)	(3,275)	(3,252)	(3,224)	(3,292)	(3,248)	(3,300)	-	-	-	
	Annual Interest Cost on New Drawdowns	28	29	28	36	30	25	17	27	17	8	18	13	1	(7)	(23)	(23)	(33)	(41)	(41)	(42)	(40)	(42)	(41)	(42)	(42)	(41)	(41)	(41)	(42)	(41)	(42)	-	-	-	
	Annual Interest Cost on Opening Balance	-	114	238	363	529	679	814	922	1,078	1,202	1,295	1,435	1,560	1,643	1,700	1,694	1,689	1,643	1,560	1,472	1,378	1,285	1,181	1,078	964	845	720	591	456	311	161	0	0	0	
	Total Annual Interest Cost	28	143	266	399	559	703	830	949	1,095	1,210	1,314	1,448	1,560	1,636	1,677	1,672	1,656	1,601	1,518	1,430	1,338	1,243	1,141	1,036	922	803	679	550	414	270	119	0	0	0	

Feb9 1, 30-yr — Average Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*56*	*174*	*297*	*440*	*596*	*737*	*857*	*987*	*1,126*	*1,233*	*1,348*	*1,479*	*1,581*	*1,650*	*1,676*	*1,670*	*1,645*	*1,581*	*1,496*	*1,407*	*1,315*	*1,218*	*1,115*	*1,008*	*893*	*773*	*647*	*517*	*379*	*233*	*79*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		2,256	2,461	2,461	3,282	2,974	2,667	2,154	3,077	2,461	1,846	2,769	2,461	1,641	1,128	-103	-103	-923	-1,641	-1,743	-1,846	-1,846	-2,051	-2,051	-2,256	-2,359	-2,461	-2,564	-2,667	-2,872	-2,974	-3,179	0	0	0	

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Feb9_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0
			38	38	40	55	50	40	31	50	31	19	36	31	5	-5	-17	-19	-19	-21	-21	-21	-24	-26	-26	-26	-31	-29	-33	-33	-36	-38	-38	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,300	998	17,886
Equal Monthly Debt Drawdown	2,355	993	

	Feb9 2, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,500	2029	13,466
Equal Monthly Debt Drawdown	19,964		

Feb9 2, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
a	Debt, Beginning of Year	0	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	
c = a*5%	*Interest Cost - Feb9 2, 30-yr - End of Year Debt Drowdown*	*0*	*82*	*164*	*251*	*368*	*476*	*563*	*629*	*737*	*803*	*844*	*921*	*987*	*998*	*987*	*952*	*911*	*870*	*824*	*778*	*732*	*680*	*624*	*568*	*512*	*445*	*384*	*312*	*240*	*164*	*82*	*0*	*0*	*0*	17,886
b	Additional GA Debt Drawdown, End of Year	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	7,123	6,323	5,523	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,700	3,200	1,600	0	0	0	
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	11,477	11,477	11,477	11,477	10,577	9,677	8,677	7,577	6,477	5,377	4,077	2,877	1,477	0	0	0	0	0	0	0	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	8,810	9,762	10,672	11,542	12,366	13,143	13,875	14,556	15,180	15,748	16,259	16,704	17,088	17,400	17,641	17,804	17,886				
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	9,790	8,038	6,328	4,558	2,834	1,157	-575	-2,356	-4,080	-5,748	-7,559	-9,204	-10,988	-12,700	-14,441	-16,204	-17,886				
Fiscal Exposure - End of Year Debt Drawdown		1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0	

Feb9 2, 30-yr — Equal Monthly Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	
993	*Interest Cost - Feb9 2, 30-yr*	*38*	*120*	*204*	*305*	*418*	*516*	*594*	*679*	*768*	*822*	*880*	*952*	*992*	*993*	*971*	*933*	*892*	*848*	*802*	*756*	*708*	*654*	*598*	*542*	*481*	*417*	*350*	*279*	*205*	*126*	*44*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0	
	Monthly Drawdown	133	127	128	171	144	102	61	123	47	(0)	55	32	(66)	(100)	(141)	(146)	(143)	(147)	(144)	(140)	(144)	(148)	(144)	(139)	(151)	(137)	(149)	(143)	(145)	(147)	(140)	-	-	-	
	FV of Monthly Drawdown at 5%	1,638	1,554	1,573	2,098	1,773	1,253	755	1,506	577	(3)	671	388	(806)	(1,226)	(1,728)	(1,793)	(1,751)	(1,812)	(1,765)	(1,718)	(1,773)	(1,823)	(1,765)	(1,708)	(1,855)	(1,684)	(1,826)	(1,753)	(1,782)	(1,806)	(1,722)	-	-	-	
	Annual Interest Cost on New Drawdowns	38	36	37	49	41	29	18	35	13	(0)	16	9	(19)	(28)	(40)	(42)	(41)	(42)	(41)	(40)	(41)	(42)	(41)	(40)	(43)	(39)	(42)	(41)	(41)	(42)	(40)	-	-	-	
	Annual Interest Cost on Opening Balance	-	84	168	257	377	487	576	644	754	822	864	943	1,011	1,021	1,011	974	932	890	843	796	749	697	639	581	524	456	393	320	246	168	84	0	0	0	
	Total Annual Interest Cost	38	120	204	305	418	516	594	679	768	822	880	952	992	993	971	933	892	848	802	756	708	654	598	542	481	417	350	279	205	126	44	0	0	0	

Feb9 2, 30-yr — Bi-Annual Debt Drawdown

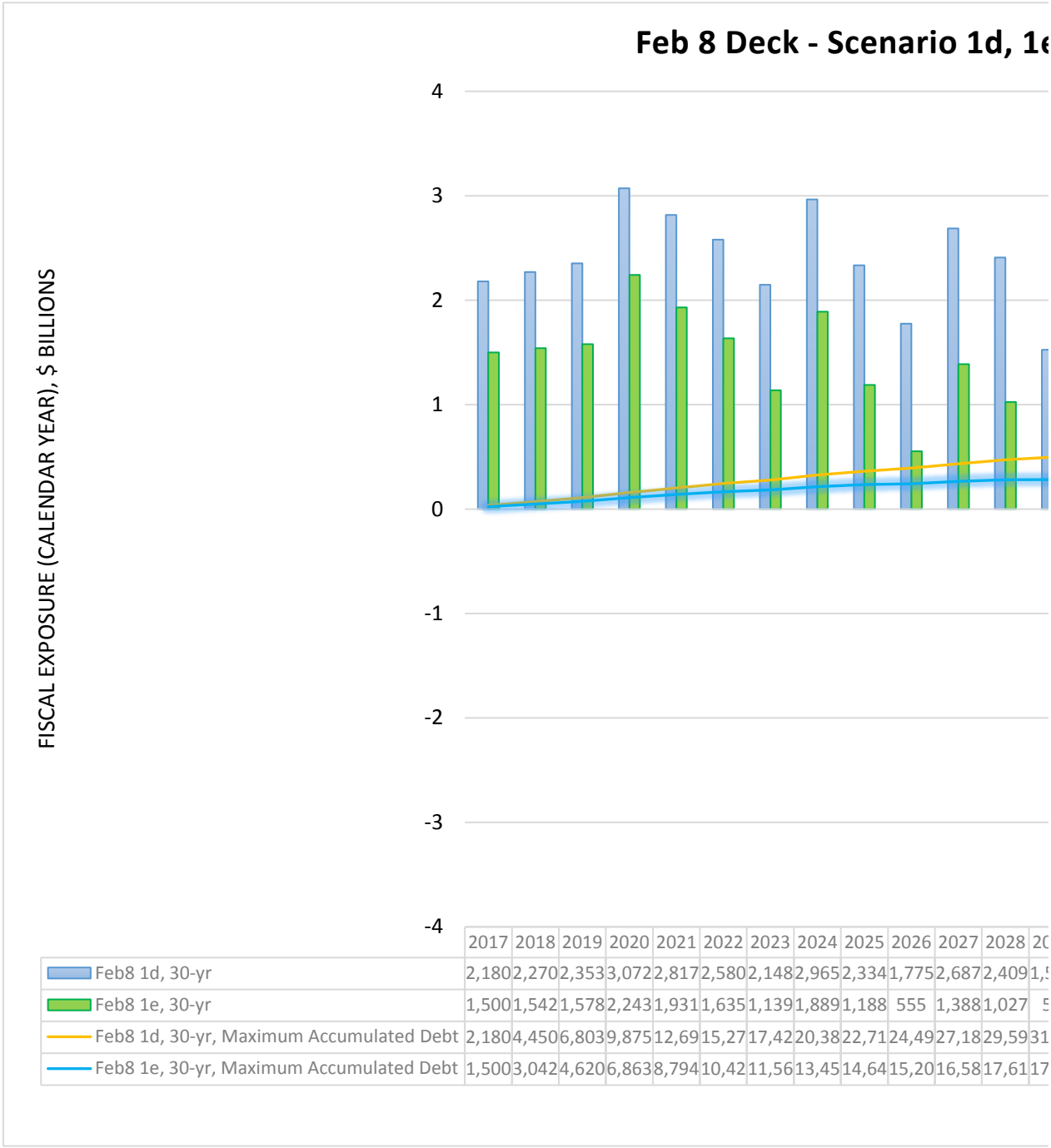
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*20*	*102*	*185*	*280*	*395*	*498*	*579*	*656*	*753*	*813*	*863*	*938*	*990*	*995*	*978*	*941*	*900*	*858*	*812*	*766*	*719*	*666*	*610*	*554*	*495*	*430*	*366*	*294*	*221*	*143*	*61*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,620	1,620	1,722	2,329	2,127	1,722	1,317	2,127	1,317	810	1,519	1,317	203	-203	-709	-810	-810	-912	-912	-912	-1,013	-1,114	-1,114	-1,114	-1,317	-1,215	-1,418	-1,418	-1,519	-1,620	-1,620	0	0	0	
	Bi-Annual Drawdown	800	759	768	1,025	866	612	369	735	282	(2)	328	190	(394)	(599)	(844)	(876)	(855)	(885)	(862)	(839)	(866)	(890)	(862)	(834)	(906)	(823)	(892)	(856)	(870)	(882)	(841)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,620	1,538	1,556	2,076	1,754	1,240	747	1,490	570	(3)	664	384	(797)	(1,213)	(1,709)	(1,774)	(1,733)	(1,792)	(1,746)	(1,699)	(1,754)	(1,803)	(1,746)	(1,689)	(1,835)	(1,666)	(1,807)	(1,734)	(1,763)	(1,786)	(1,703)	-	-	-	
	Annual Interest Cost on New Drawdowns	20	19	20	26	22	16	9	19	7	(0)	8	5	(10)	(15)	(22)	(22)	(22)	(23)	(22)	(21)	(22)	(23)	(22)	(21)	(23)	(21)	(23)	(22)	(22)	(23)	(22)	-	-	-	
	Annual Interest Cost on Opening Balance	-	83	166	254	373	482	570	637	746	814	855	933	1,000	1,010	1,000	964	922	881	834	788	741	689	632	575	518	451	389	316	244	166	83	0	0	0	
	Total Annual Interest Cost	20	102	185	280	395	498	579	656	753	813	863	938	990	995	978	941	900	858	812	766	719	666	610	554	495	430	366	294	221	143	61	0	0	0	

Feb9 2, 30-yr — Average Debt Drawdown

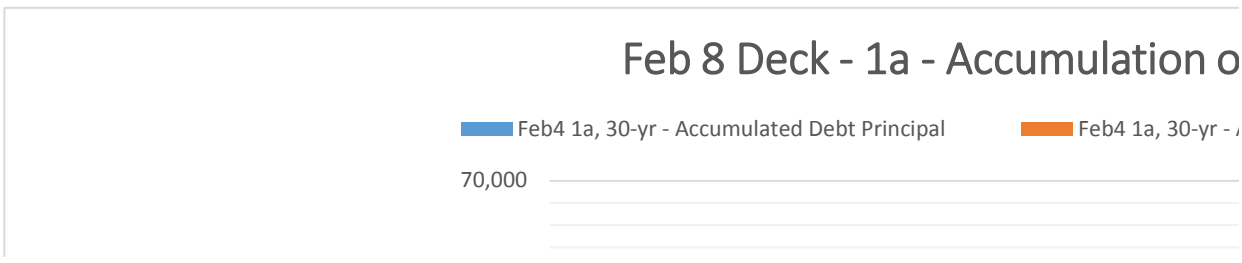
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*41*	*123*	*207*	*310*	*422*	*519*	*596*	*683*	*770*	*824*	*883*	*954*	*993*	*993*	*970*	*931*	*890*	*847*	*801*	*755*	*706*	*652*	*596*	*540*	*478*	*414*	*348*	*276*	*202*	*123*	*41*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,641	1,641	1,743	2,359	2,154	1,743	1,333	2,154	1,333	820	1,538	1,333	205	-205	-718	-820	-820	-923	-923	-923	-1,026	-1,128	-1,128	-1,128	-1,333	-1,231	-1,436	-1,436	-1,538	-1,641	-1,641	0	0	0	

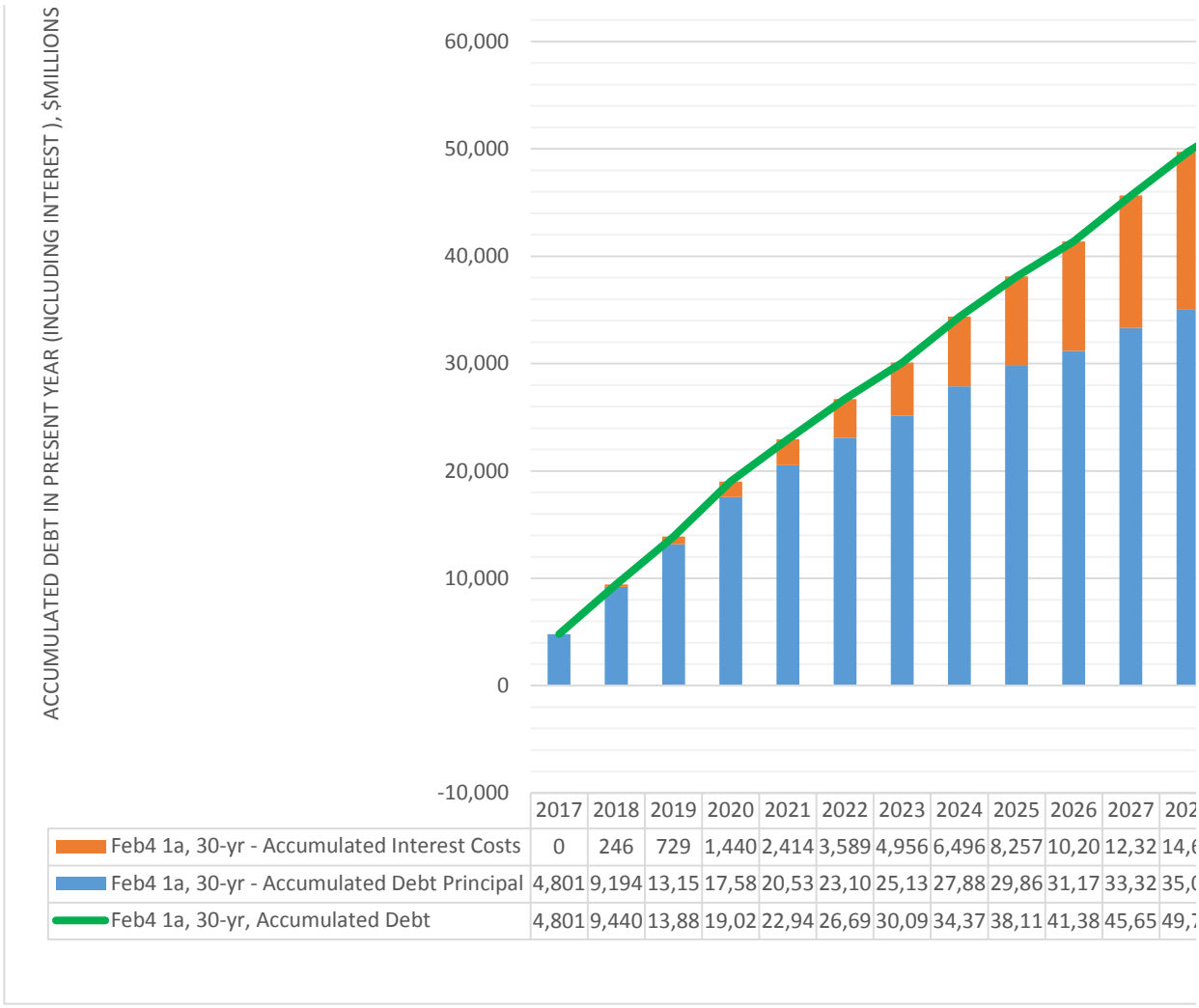
Feb 8 Deck

Feb 8 Deck - Scenario 1d, 1e - at 5.12% interest rate

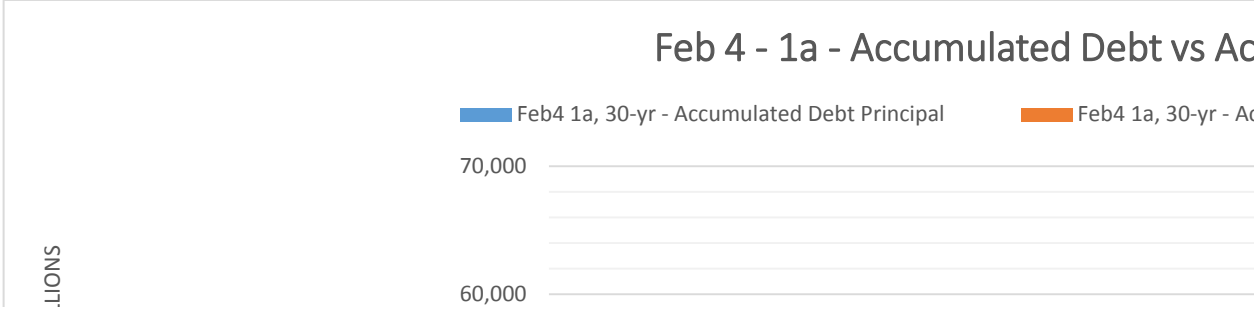


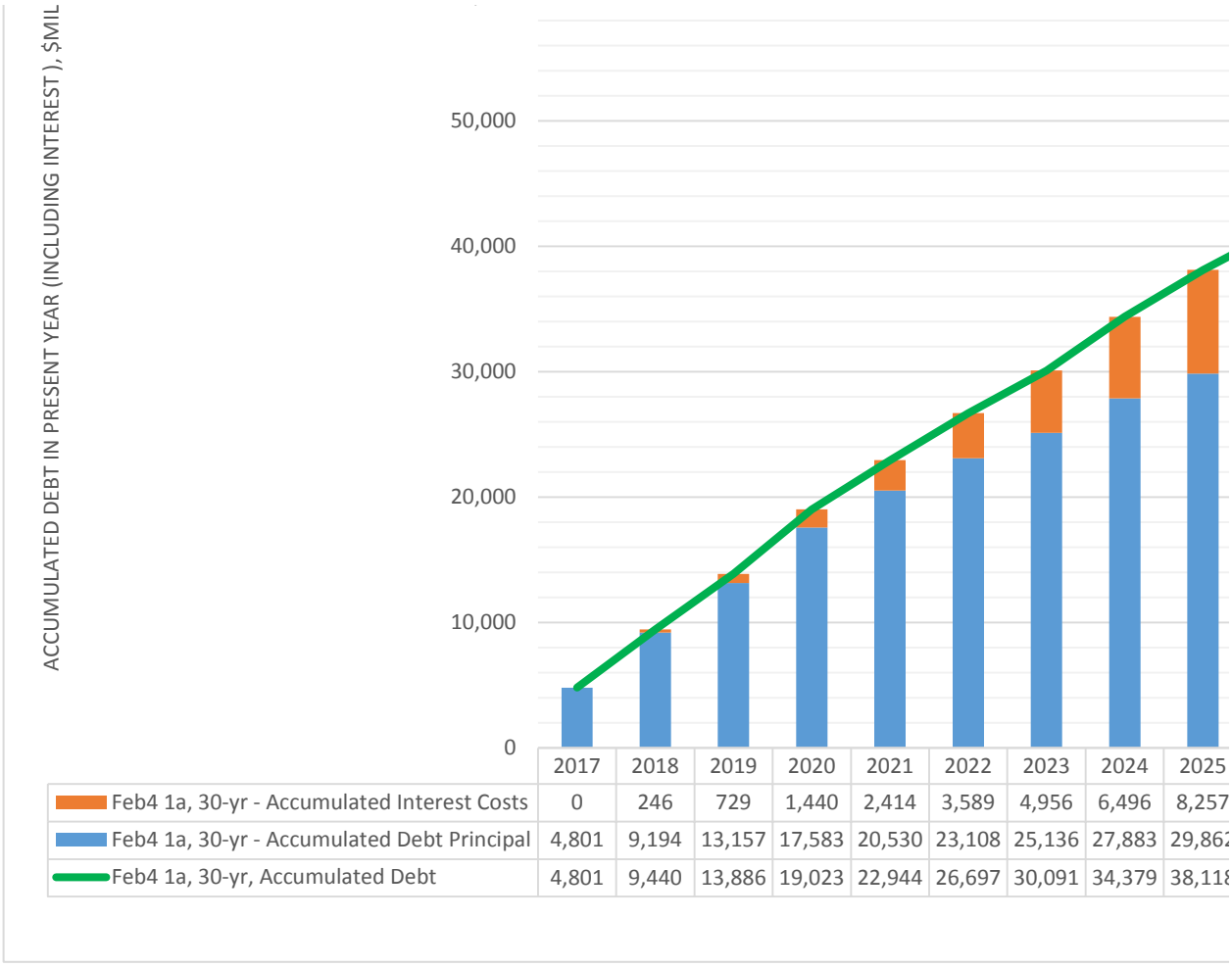
Feb 8 Deck - 1a - Accumulation of Debt (Principal and Interest)



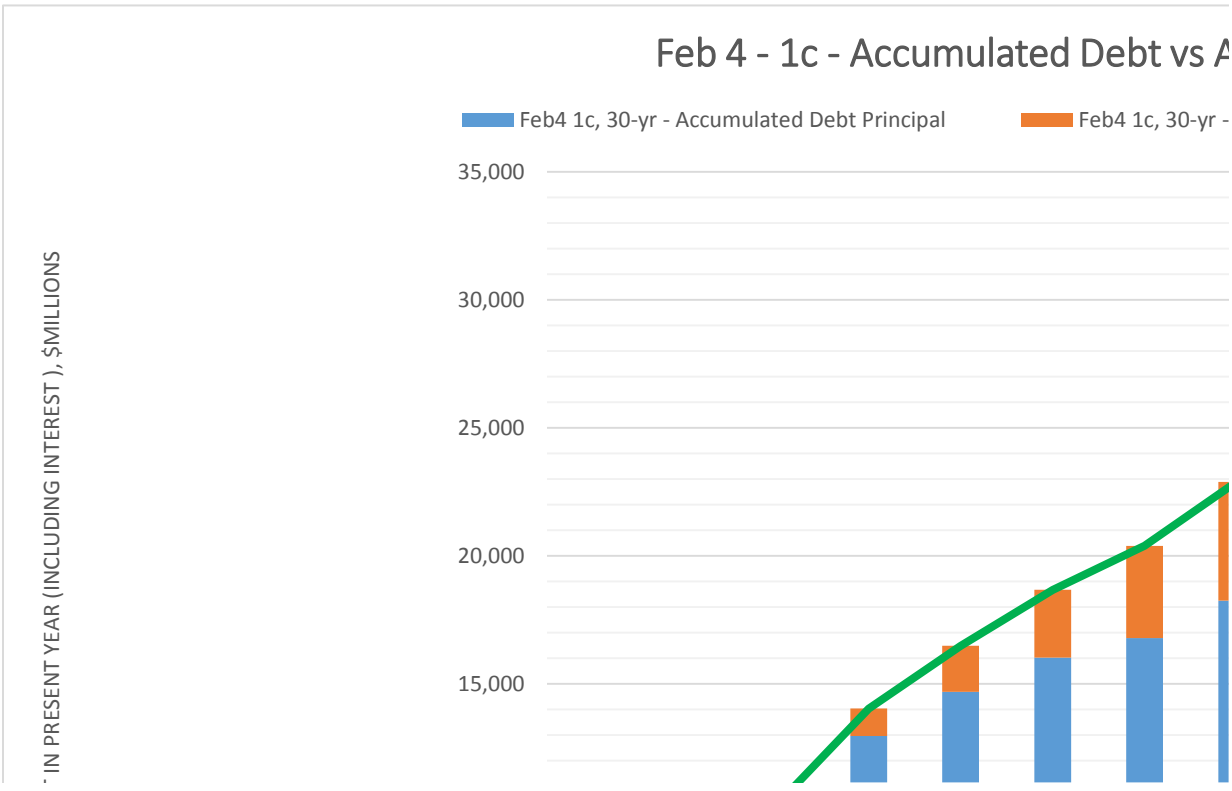


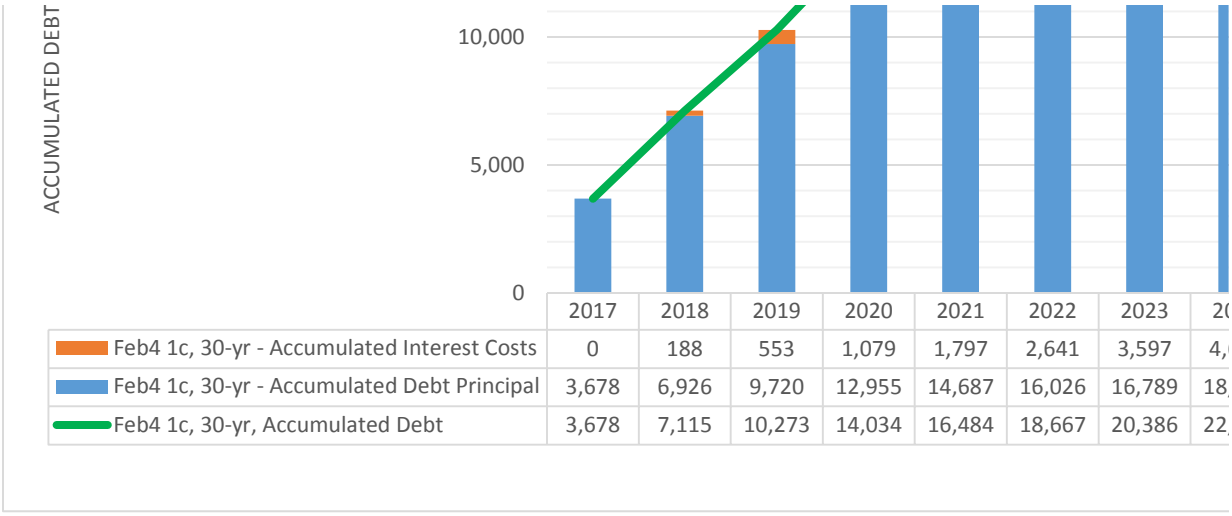
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	202
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,(
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,7



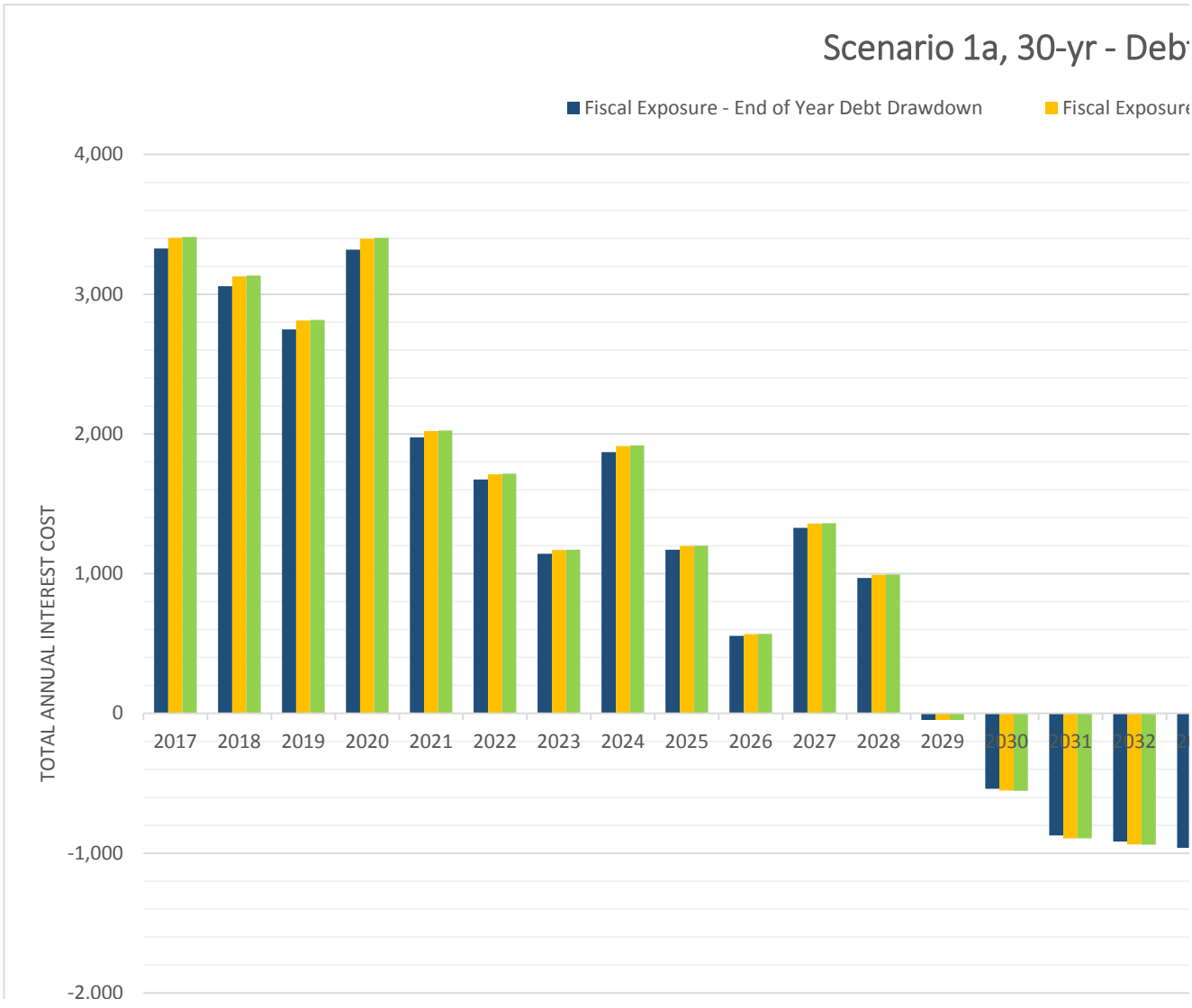


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



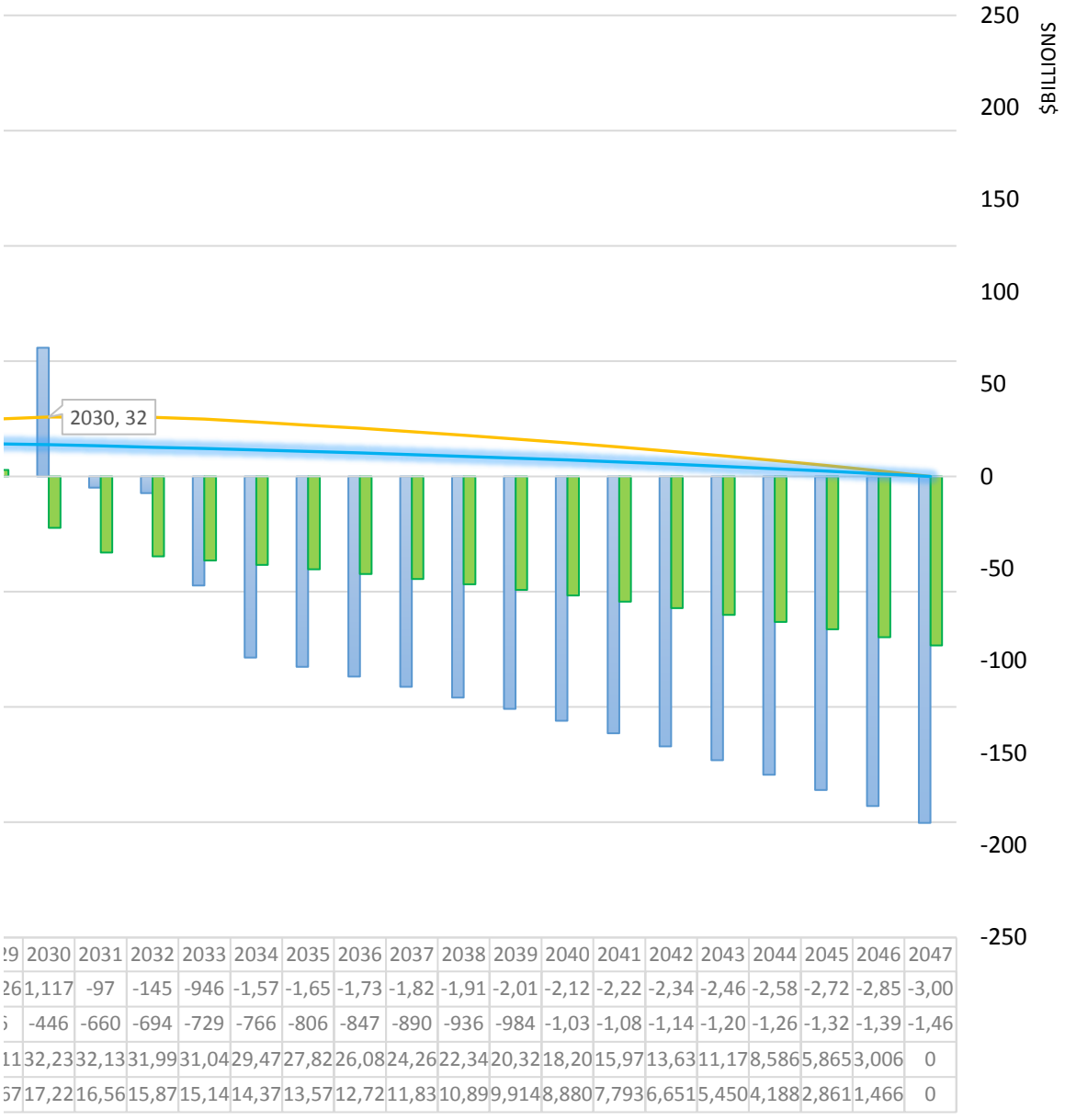


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

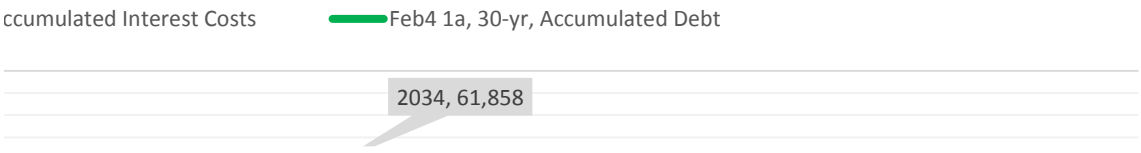
- at 5.12% interest rate

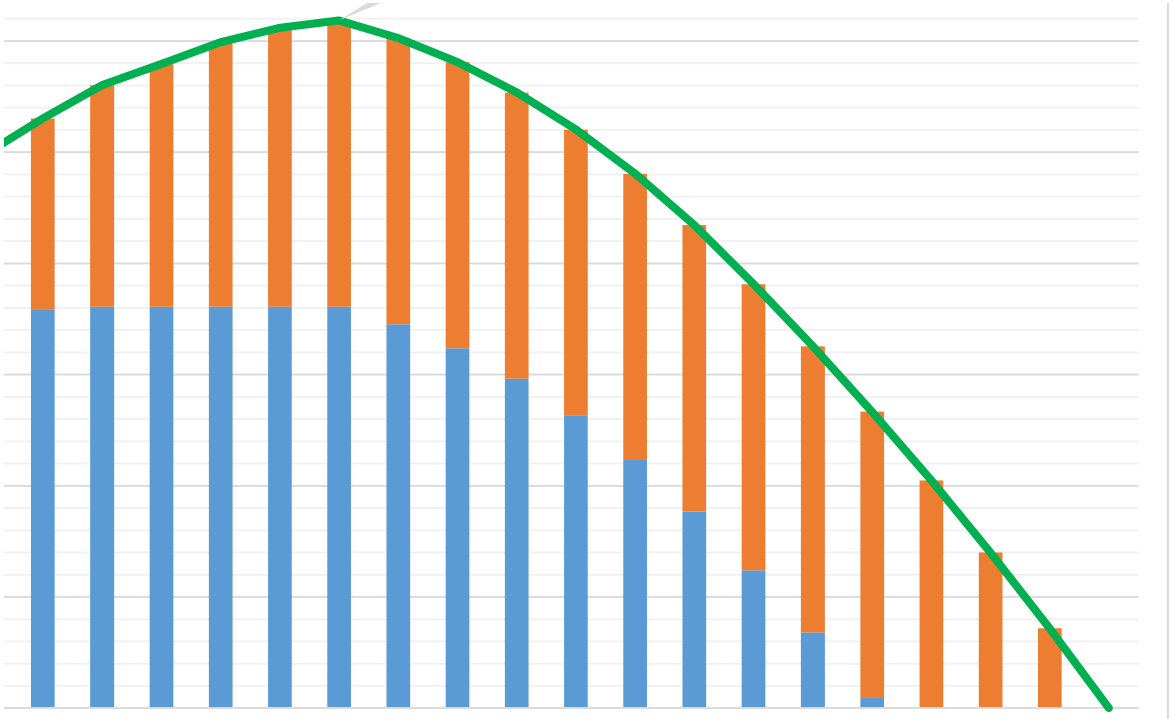


29	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
26	1,117	-97	-145	-946	-1,57	-1,65	-1,73	-1,82	-1,91	-2,01	-2,12	-2,22	-2,34	-2,46	-2,58	-2,72	-2,85	-3,00
5	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,03	-1,08	-1,14	-1,20	-1,26	-1,32	-1,39	-1,46
11	32,23	32,13	31,99	31,04	29,47	27,82	26,08	24,26	22,34	20,32	18,20	15,97	13,63	11,17	8,586	5,865	3,006	0
57	17,22	16,56	15,87	15,14	14,37	13,57	12,72	11,83	10,89	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0

CALENDAR YEAR

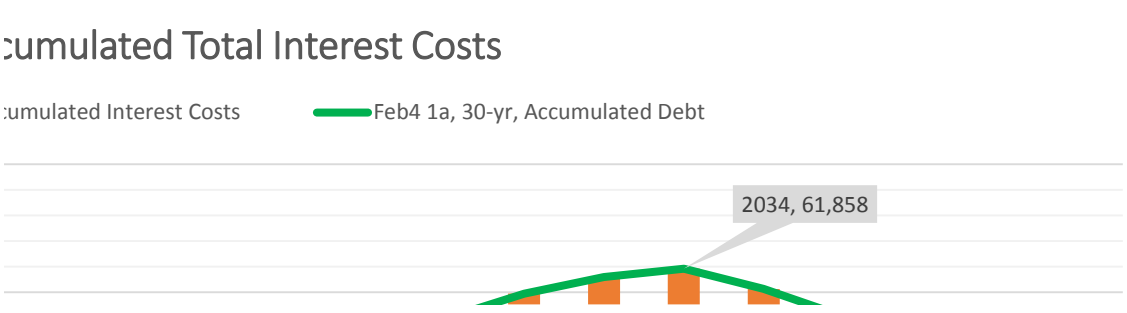
Debt (Principal and Interest)



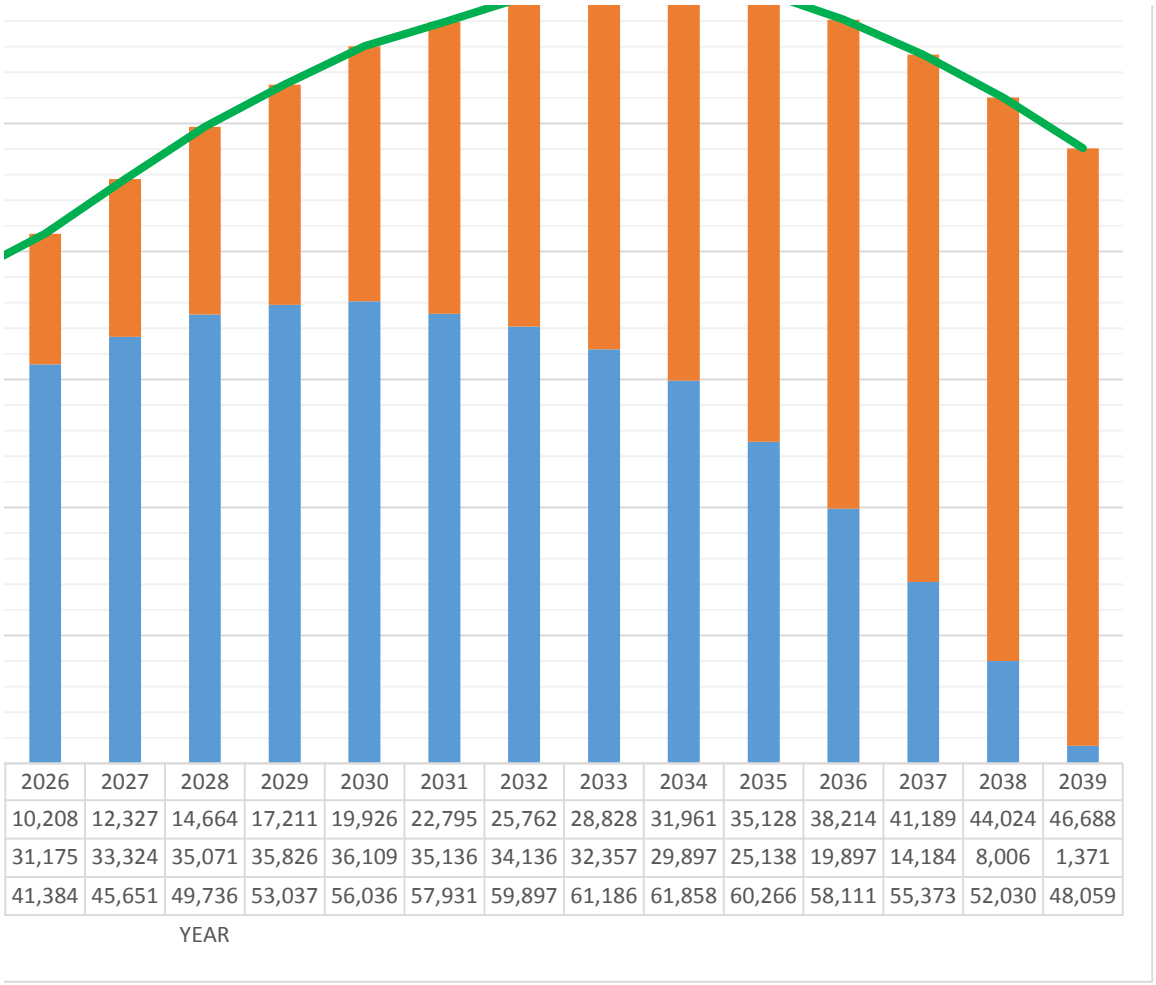


	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
5	17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
7	35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
3	53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



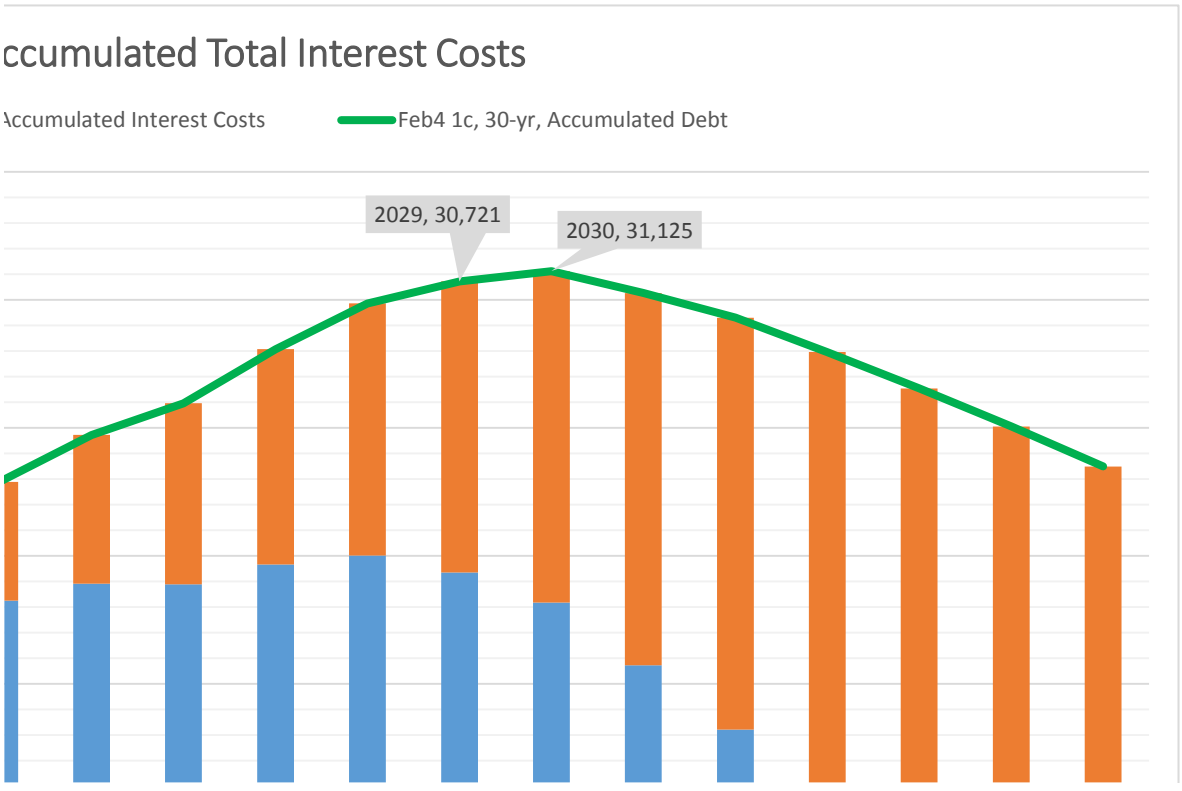
LIONS

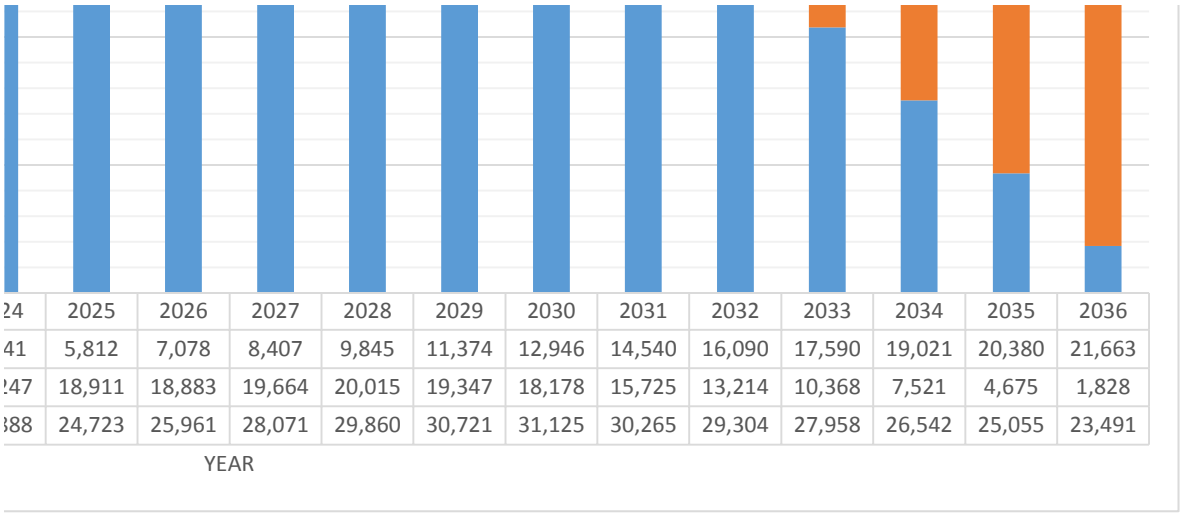


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

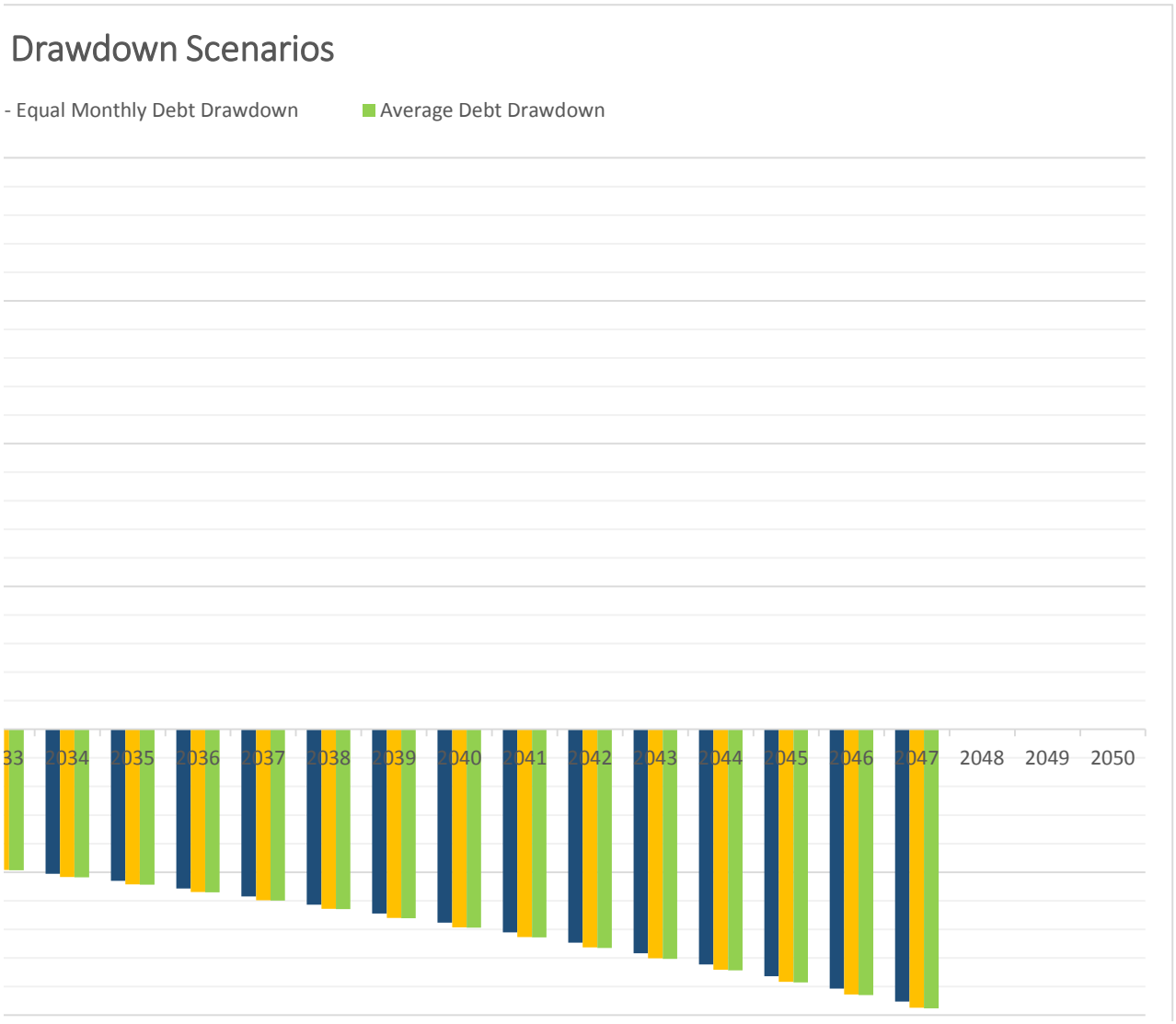
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





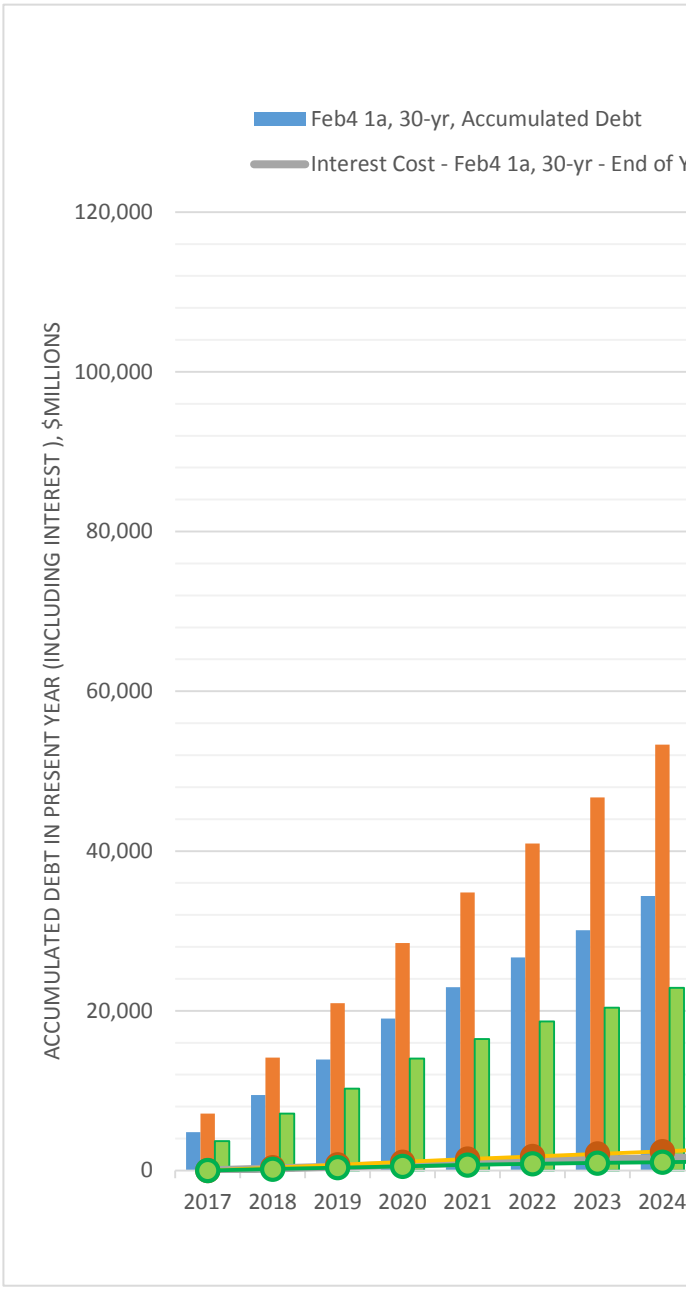
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

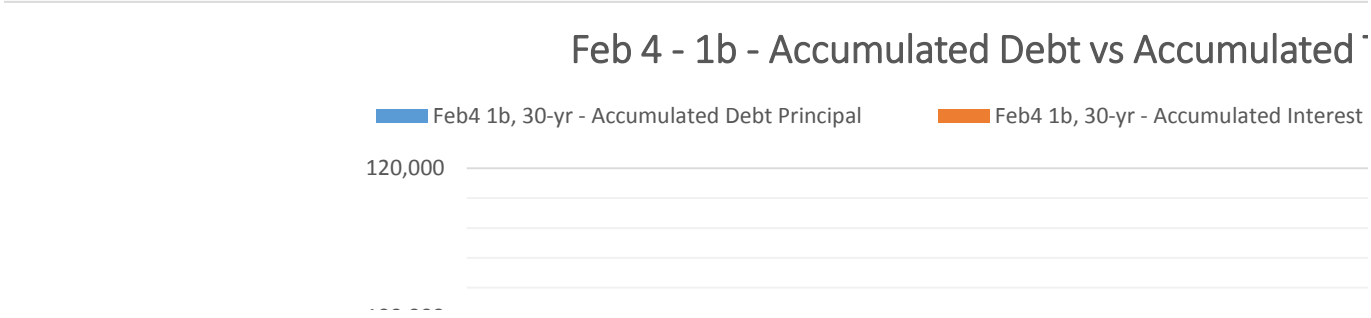
YEAR

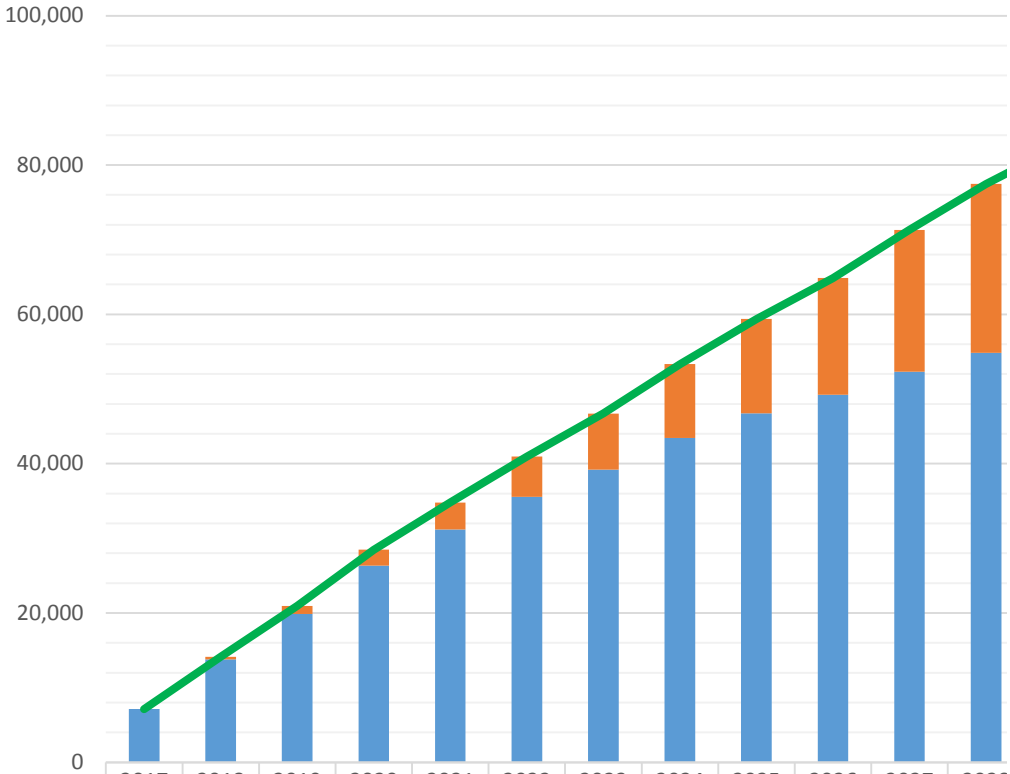


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate

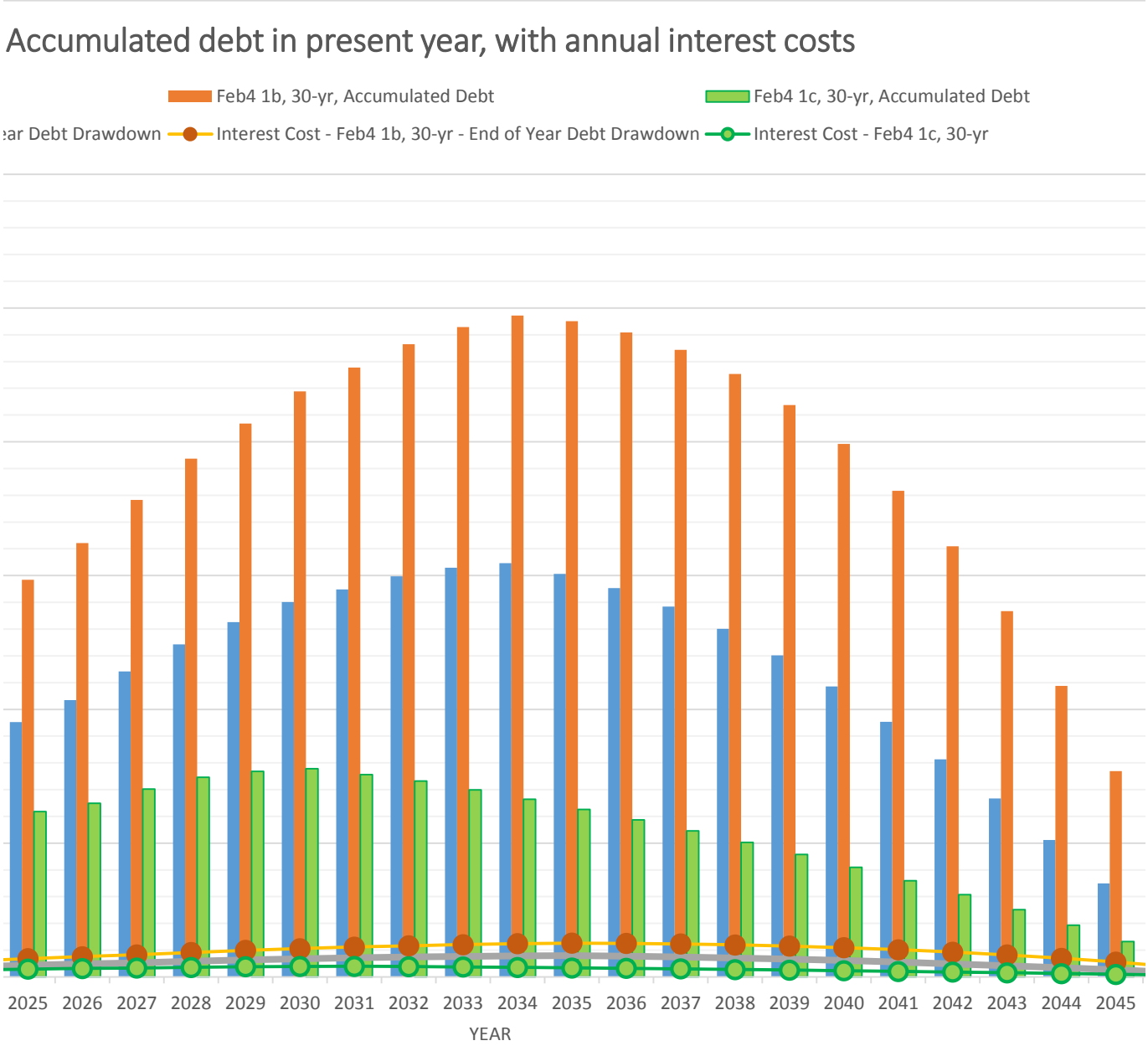


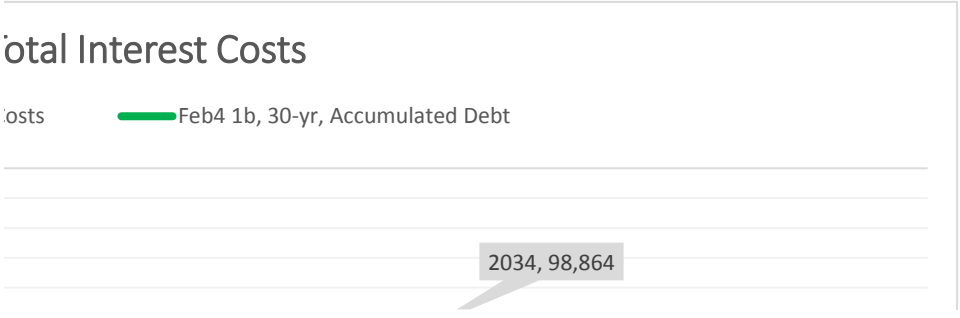

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

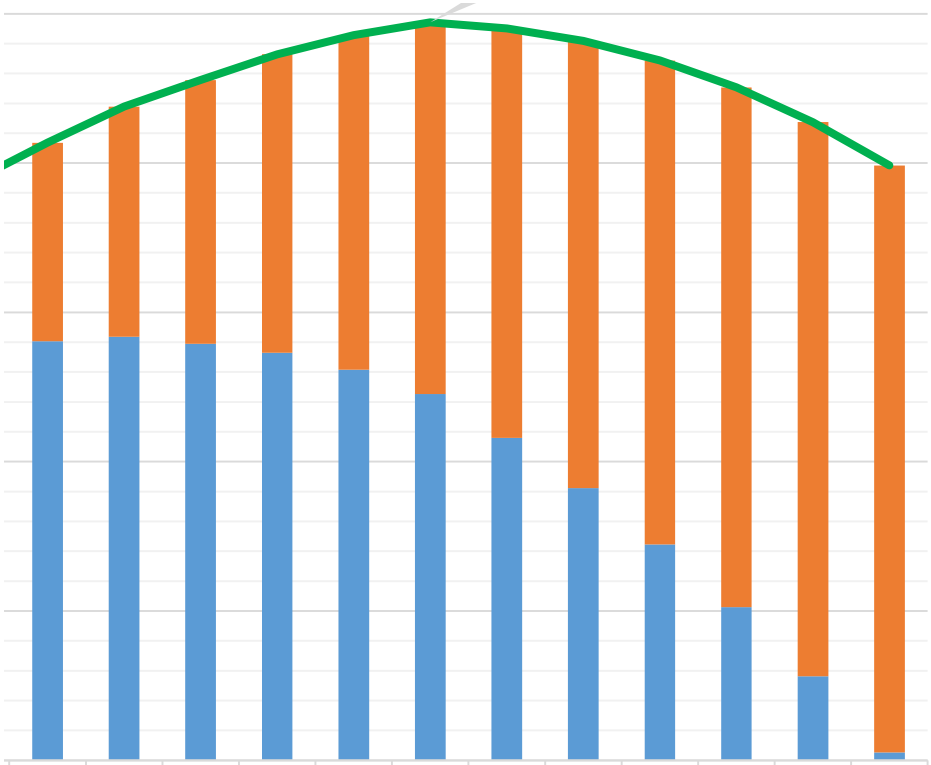


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y

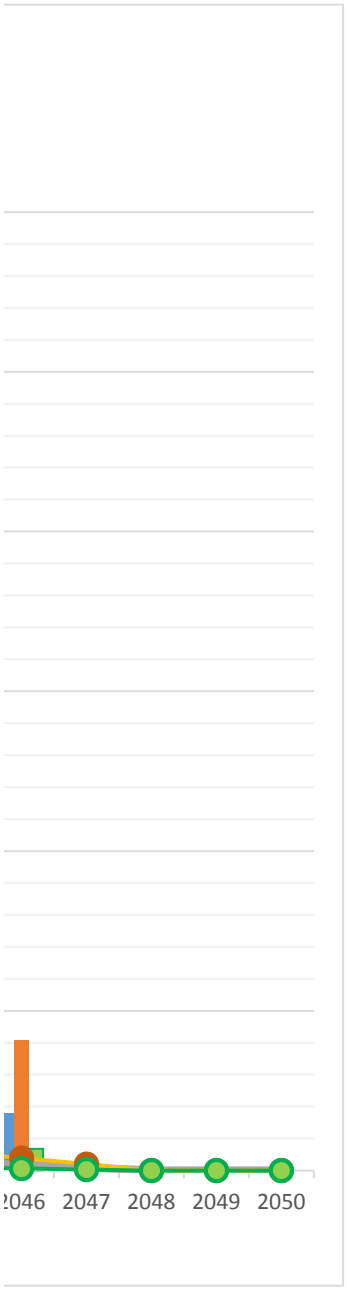

Accumulated debt in present year, with annual interest costs
Feb4 1b, 30-yr, Accumulated Debt
Feb4 1c, 30-yr, Accumulated Debt
ear Debt Drawdown
Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown
Interest Cost - Feb4 1c, 30-yr
2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045
YEAR


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

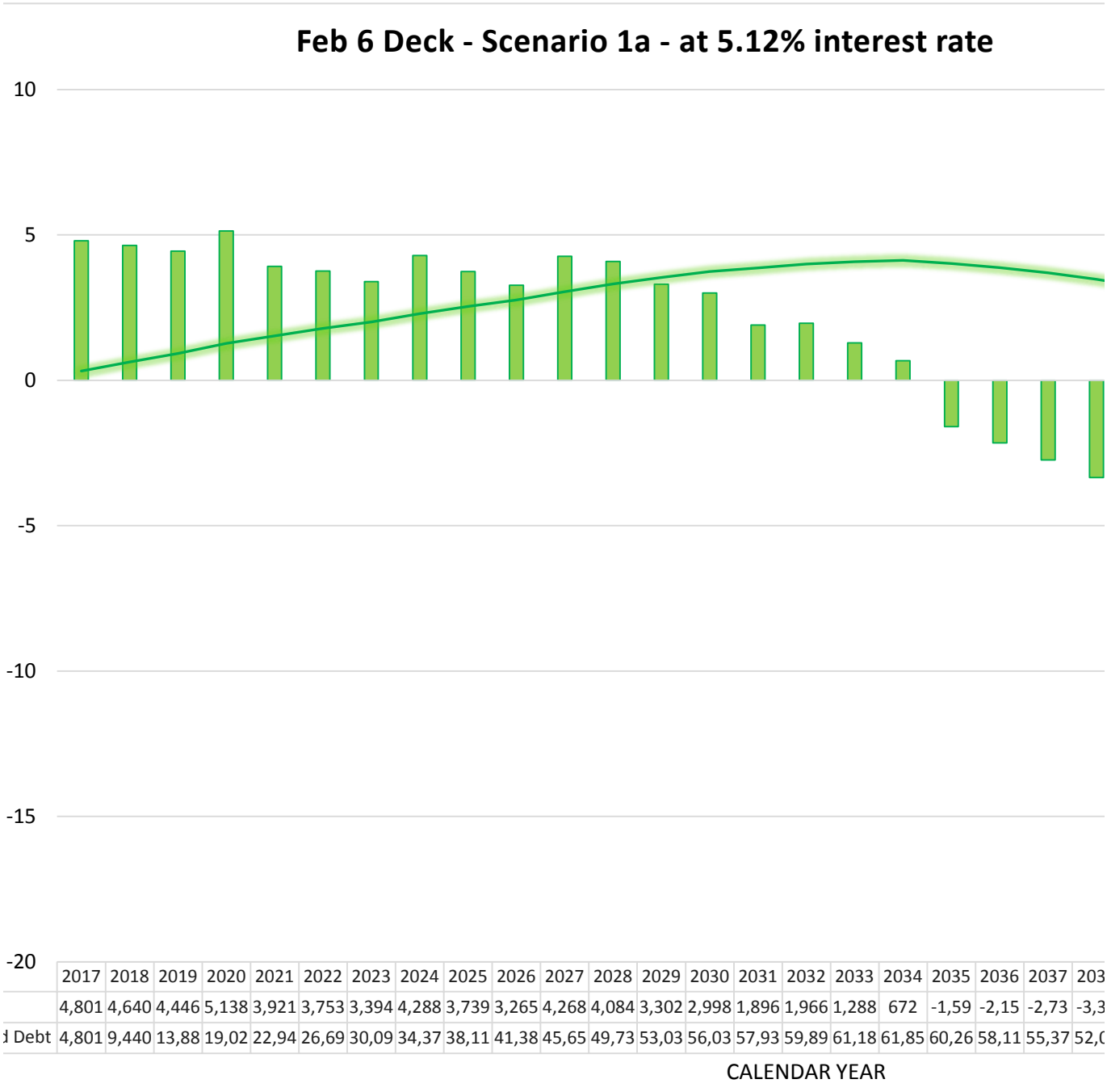
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

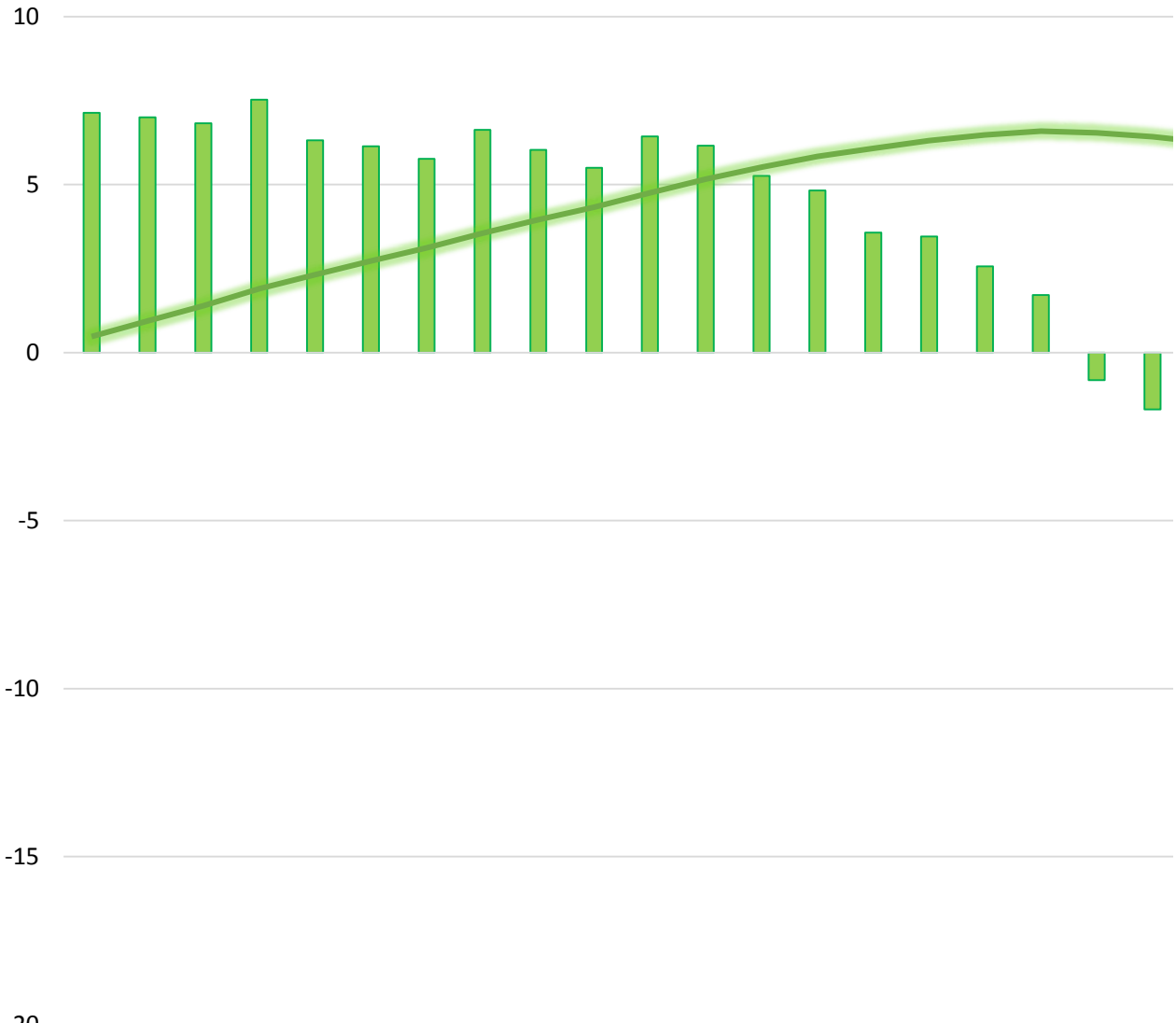
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

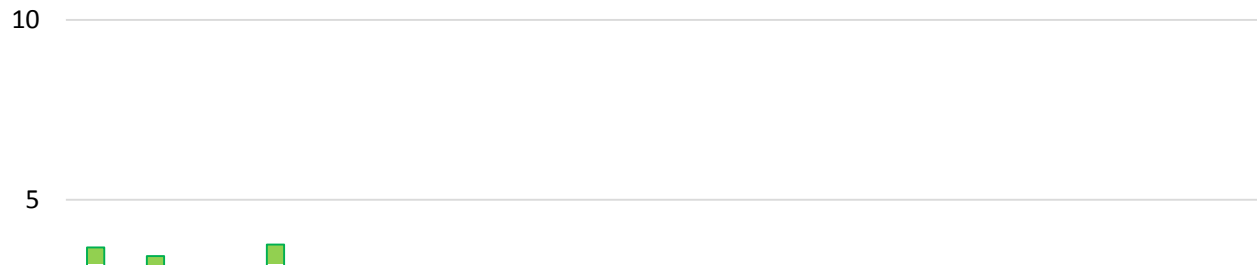
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

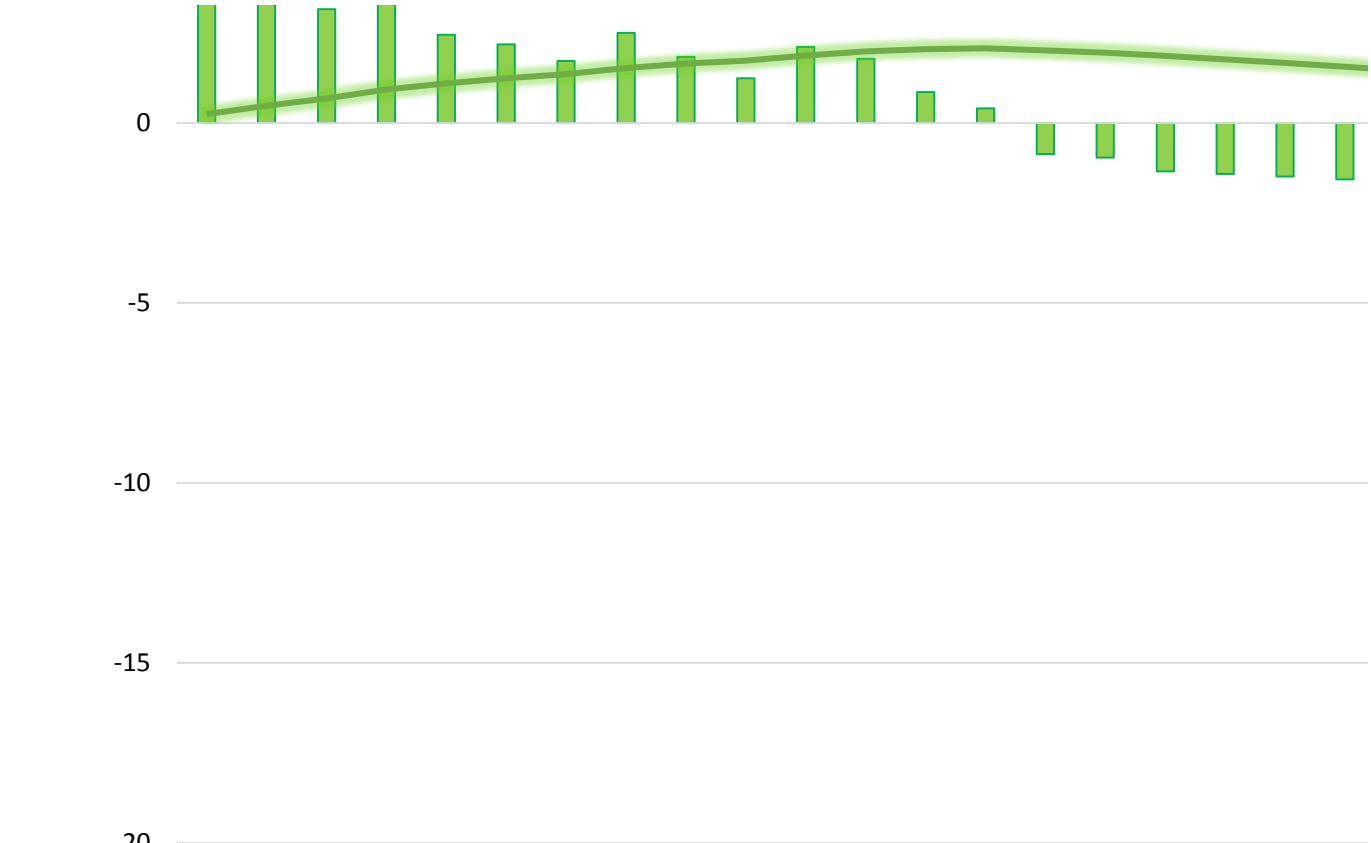


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



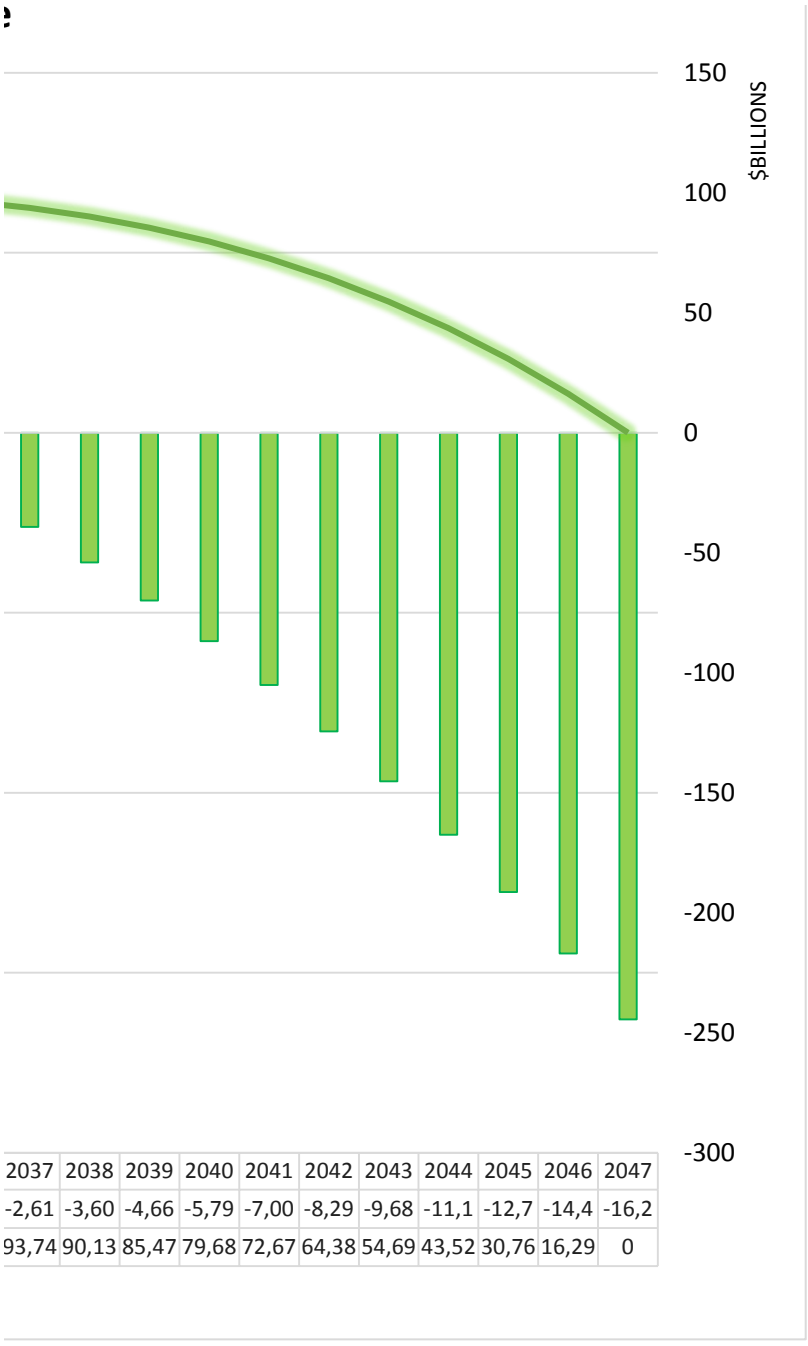


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

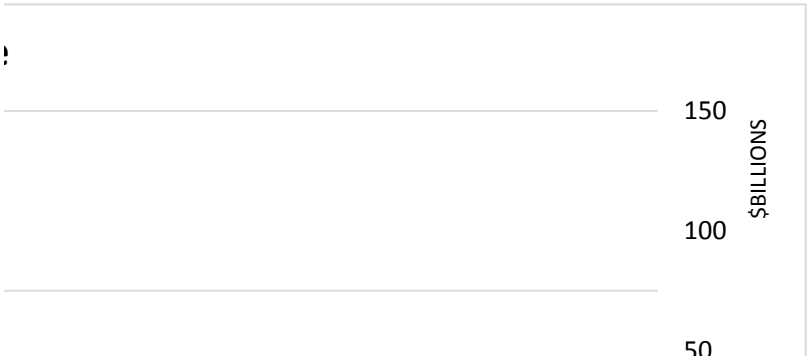
CALENDAR YEAR

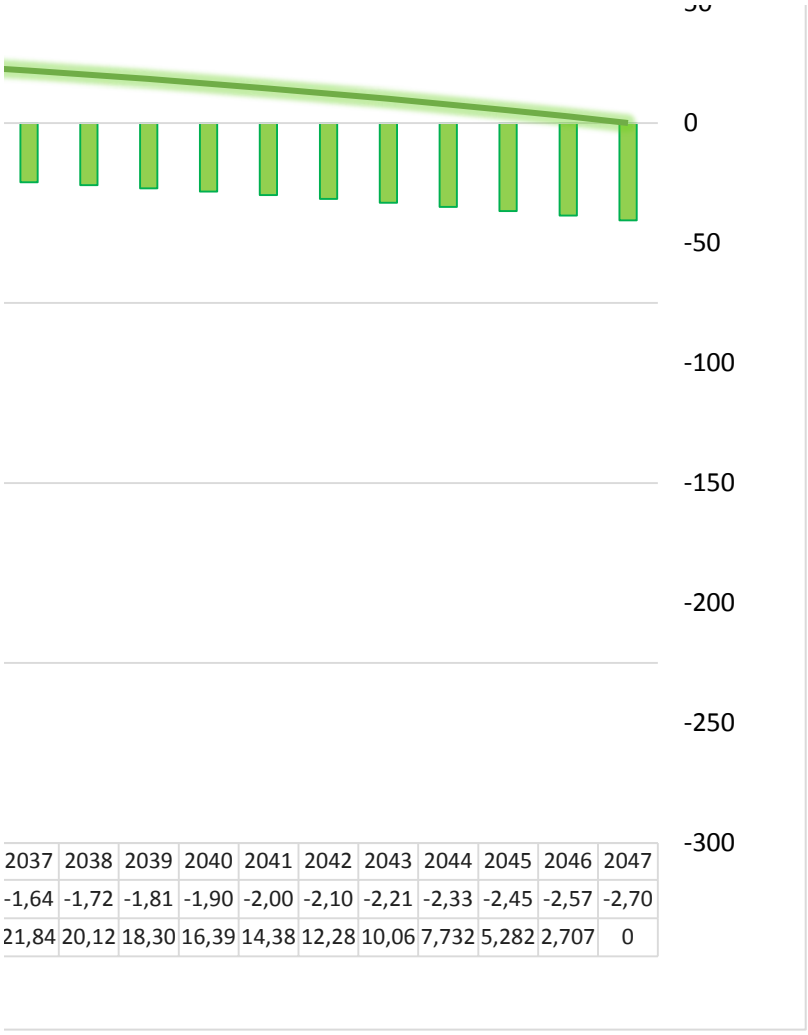


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Feb 8 Deck - Scenario 1a, 1b, 1c - at 5.12% interest
IESO GA cost forecast + extrapolation

Scenario
1a

1b

1c

1d

1e

	2017	2018	2019	2020
rate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	4674	9542	14587	21173

GA Payment from Impacted Rate Class	7421	7205	6995	6329
Accumulated debt in present year (including interest)	4674	9544	14589	21175

GA Payment from Impacted Rate Class	7421	7425	7440	7013
Accumulated debt in present year (including interest)	4674	9323	13913	19780

GA Payment from Impacted Rate Class	9915	9676	9427	9445
Accumulated debt in present year (including interest)	2180	4450	6803	9875

GA Payment from Impacted Rate Class	10596	10370	10129	10162
Accumulated debt in present year (including interest)	1500	3042	4620	6863

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
27212	33084	38588	44968	50769	56056	62291	68274

5890	6156	6434	6724	7028	7345	7677	8024
27212	33082	38585	44963	50762	56048	62281	68263

6825	7042	7266	7497	7736	7983	8237	8499
24810	29671	34167	39545	44359	48679	53976	59058

8532	8703	8877	9054	9236	9420	9609	9801
12692	15272	17420	20384	22719	24494	27181	29590

9264	9449	9638	9831	10027	10228	10432	10641
8794	10429	11568	13457	14645	15200	16588	17614

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
73391	78103	81594	85015	87596	89375	88679	87180

8386	8765	9160	9574	10006	10458	10931	11424
73378	78089	81578	84997	87577	89356	88659	87159

8770	9049	9337	9634	9941	10257	10584	10921
63318	67230	69987	72754	74773	76097	75068	73377

9997	10197	10401	10609	10821	10916	8822	8548
31116	32233	32135	31991	31045	29473	27822	26085

10854	11071	10196	10361	9779	9298	7203	6930
17670	17225	16565	15871	15142	14376	13570	12723

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
84828	81568	77341	72085	65730	58203	49425	39310

11940	12480	13043	13632	14248	14891	15564	16267
84806	81546	77320	72065	65711	58186	49409	39297

11269	11628	11998	12380	12774	13181	13600	14033
70990	67875	63995	59310	53778	47352	39985	31624

8288	8040	7805	7580	7367	7164	6970	6786
24260	22342	20325	18206	15978	13635	11173	8586

6670	6422	6186	5962	5748	5545	5352	5168
11833	10897	9914	8880	7793	6651	5450	4188

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
27767	14699	0	0	0	0

17001	17769	18572	2975	2831	2695
27758	14694	0	0	0	0

14480	14941	15417	2975	2831	2695
22213	11693	0	0	0	0

6611	6444	6286	2975	2831	2695
5865	3006	0	0	0	0

4993	4826	4667	2975	2831	2695
2861	1466	0	0	0	0

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb8_1a_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,867
Annual Exposure2 with start on July 1st	*2,337*	*4,867*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	3,554

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

1 Based on an interest rate of 5%.

2 Fiscal exposure based on equal monthly drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1b_30yr

1b. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,869
Annual Exposure2 with start on July 1st	*2,337*	*4,869*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	*3,554*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649
Annual Exposure2 with start on July 1st	*2,337*	*4,649*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,668
Start: July 1st	-	*3,499*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $76 billion peaking in

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270
Annual Exposure2 with start on July 1st	*1,090*	*2,270*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	545	2,203
Start: July 1st	-	*1,658*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $32 billion peaking in

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542
Annual Exposure2 with start on July 1st	*750*	*1,542*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	375	1,510
Start: July 1st	-	*1,135*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $18 billion peaking in

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	1,169 - 1,169	4,723 - 4,723

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1169**	**4963**
Total, B	1169	4963
Proposed Program Total:	1,169 - 1,169	4,963 - 4,963

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1a
Scenario 1b
Scenario 1c
Scenario 1d
Scenario 1e

2019	2020	2021	2022
5,045	6,586	6,039	5,872
5,045	*6,586*	*6,039*	*5,872*

2018-19	2019-20	2020-21	2021-2022
4,912	5,430	6,449	5,997
4,912	*5,430*	*6,449*	*5,997*

2034.

Actuals are subject t
- The highest debt ac
- Compared to a 5% i

[1] Based on an interes
[2] Fiscal exposure bas
[3] Fiscalized based on

depend on decision on accounting treatment.

2019	2020	2021	2022
5,045	6,586	6,037	5,870
5,045	*6,586*	*6,037*	*5,870*

2018-19	2019-20	2020-21	2021-2022
4,913	5,430	6,449	5,996
4,913	*5,430*	*6,449*	*5,996*

2034.

2019	2020	2021	2022
4,589	5,867	5,031	4,861
4,589	*5,867*	*5,031*	*4,861*

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988
4,634	*4,909*	*5,658*	*4,988*

2034.

2019	2020	2021	2022
2,353	3,072	2,817	2,580
2,353	*3,072*	*2,817*	*2,580*

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757
2,291	*2,533*	*3,008*	*2,757*

2030.

2019	2020	2021	2022
1,578	2,243	1,931	1,635
1,578	*2,243*	*1,931*	*1,635*

2018-19	2019-20	2020-21	2021-2022

1,551	1,745	2,165	1,857
1,551	*1,745*	*2,165*	*1,857*

2029.



2018-19	2019-20	2020-21	2021-2022
4,913 - 4,912	5,430 - 5,430	6,449 - 6,449	5,996 - 5,997

/1

2018-19[1]	2019-20[1]	2020-21[1]
4912	5430	6449
4913	5430	6449
225	279	323
60	60	60
18	18	18
5215	**5787**	**6850**
5216	5787	6850

5,216 - 5,215 5,787 - 5,787 6,850 - 6,850

Total Principal Debt	Total Accumulated Interest Costs	**Peak Total Debt**	
52,287	85,599	89,375	occurs in Year 2034
52,275	85,582	89,356	occurs in Year 2034
44,449	72,823	76,097	occurs in Year 2034
21,239	29,589	32,233	occurs in Year 2030
12,350	16,239	17,670	occurs in Year 2029

o actual prices and actual interest rates.
:cumulation (at 5% interest rate) is expected to be approximately $62 billion, peaking in 203 and $17-21 billion (at 3.5% interest
interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately $33-$36 million.

st rate of 5%.
sed on equal monthly drawdown of debt.
75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on mo

Feb8_1a_30yr
Feb8_1b_30yr
Feb8_1c_30yr
Feb8_1d_30yr
Feb8_1e_30yr

t rate), peaking in 2028.

nth of the year. Actuals may also depend on decision on accounting treatment.

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-275	-311	-350	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,573	85,599
Equal Monthly Debt Drawdown	6,743	4,556	

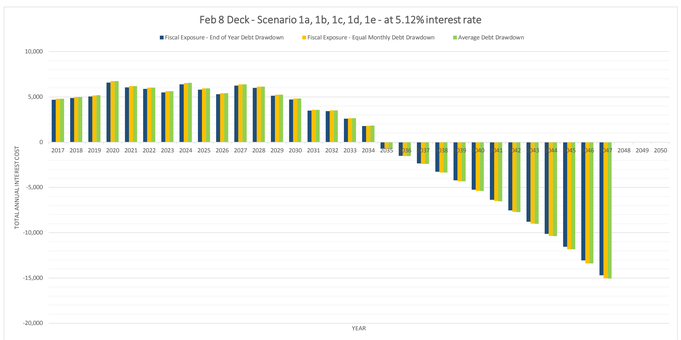
	Feb8 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,375	2034	52,287
Equal Monthly Debt Drawdown	91,501		

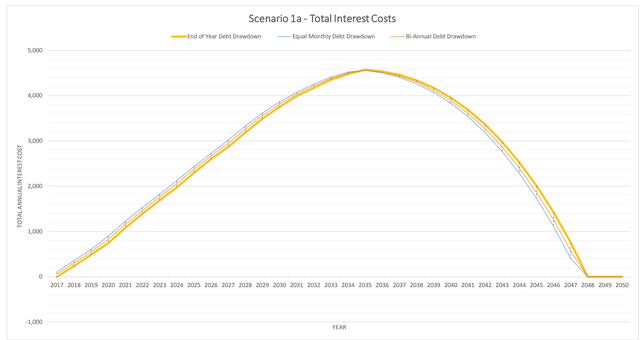
Feb8 1a, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	
c = a*5%	*Interest Cost - Feb8 1a, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,301*	*2,597*	*2,868*	*3,187*	*3,493*	*3,755*	*3,996*	*4,175*	*4,350*	*4,482*	*4,573*	*4,537*	*4,460*	*4,340*	*4,173*	*3,957*	*3,688*	*3,363*	*2,978*	*2,529*	*2,011*	*1,421*	*752*	*0*	*0*	*0*	85,599
b	Additional GA Debt Drawdown, End of Year	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,307	32,728	35,309	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	39,310	27,767	14,699	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	52,287	52,287	52,287	51,591	50,091	47,739	44,479	40,253	34,997	28,642	21,115	12,336	0	0	0	0	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,813	33,987	38,337	42,818	47,391	51,928	56,388	60,728	64,901	68,858	72,546	75,909	78,887	81,416	83,427	84,847	85,599				
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	51,781	51,028	49,259	46,557	41,288	35,252	28,440	20,840	12,440	3,227	-6,816	-17,706	-29,462	-42,106	-55,660	-70,149	-85,599				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	

Feb8 1a, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	
4,556	*Interest Cost - Feb8 1a, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,824*	*2,126*	*2,439*	*2,723*	*3,016*	*3,329*	*3,615*	*3,867*	*4,079*	*4,256*	*4,411*	*4,524*	*4,556*	*4,501*	*4,404*	*4,262*	*4,073*	*3,832*	*3,537*	*3,184*	*2,769*	*2,288*	*1,737*	*1,110*	*402*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
	Monthly Drawdown	390	386	380	487	413	373	318	367	292	224	281	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(980)	(1,054)	(1,129)	(1,207)	(1,288)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,738	4,665	5,979	5,074	4,586	3,902	4,510	3,584	2,753	3,447	2,863	1,662	980	(517)	(772)	(1,810)	(2,766)	(5,394)	(6,180)	(6,975)	(7,781)	(8,599)	(9,432)	(10,282)	(11,149)	(12,036)	(12,944)	(13,876)	(14,834)	(15,818)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	67	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(368)	-	-	-	
	Annual Interest Cost on Opening Balance	-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,263	3,576	3,844	4,091	4,274	4,453	4,588	4,681	4,645	4,566	4,443	4,272	4,051	3,776	3,443	3,049	2,589	2,059	1,454	770	(0)	(0)	(0)	
	Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,824	2,126	2,439	2,723	3,016	3,329	3,615	3,867	4,079	4,256	4,411	4,524	4,556	4,501	4,404	4,262	4,073	3,832	3,537	3,184	2,769	2,288	1,737	1,110	402	(0)	(0)	(0)	

Feb8 1a, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*60*	*301*	*553*	*831*	*1,160*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,948*	*3,263*	*3,558*	*3,815*	*4,041*	*4,218*	*4,383*	*4,504*	*4,564*	*4,518*	*4,430*	*4,298*	*4,119*	*3,890*	*3,607*	*3,267*	*2,866*	*2,399*	*1,864*	*1,253*	*564*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,930	5,110	6,670	6,116	5,947	5,575	6,461	5,875	5,354	6,315	6,060	5,182	4,773	3,535	3,464	2,614	1,802	-705	-1,518	-2,382	-3,302	-4,280	-5,324	-6,436	-7,623	-8,891	-10,244	-11,690	-13,236	-14,887	0	0	0	
	Bi-Annual Drawdown	2,337	2,314	2,279	2,920	2,478	2,240	1,906	2,203	1,750	1,345	1,684	1,398	812	479	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,800)	(4,200)	(4,607)	(5,021)	(5,445)	(5,878)	(6,322)	(6,777)	(7,245)	(7,725)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,687	4,615	5,914	5,019	4,537	3,860	4,462	3,545	2,724	3,410	2,832	1,644	970	(512)	(763)	(1,791)	(2,737)	(5,336)	(6,113)	(6,900)	(7,697)	(8,507)	(9,331)	(10,171)	(11,029)	(11,907)	(12,805)	(13,727)	(14,674)	(15,648)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	494	756	1,097	1,410	1,714	1,999	2,330	2,631	2,905	3,228	3,538	3,803	4,047	4,228	4,405	4,539	4,631	4,595	4,517	4,395	4,227	4,008	3,735	3,406	3,016	2,561	2,037	1,439	762	(0)	(0)	(0)	
	Total Annual Interest Cost	60	301	553	831	1,160	1,467	1,763	2,056	2,375	2,665	2,948	3,263	3,558	3,815	4,041	4,218	4,383	4,504	4,564	4,518	4,430	4,298	4,119	3,890	3,607	3,267	2,866	2,399	1,864	1,253	564	(0)	(0)	(0)	

Feb8 1a, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,723*	*3,027*	*3,340*	*3,624*	*3,875*	*4,085*	*4,262*	*4,416*	*4,527*	*4,555*	*4,499*	*4,400*	*4,257*	*4,065*	*3,822*	*3,525*	*3,170*	*2,753*	*2,270*	*1,716*	*1,086*	*376*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,992	5,174	6,754	6,193	6,022	5,645	6,543	5,950	5,422	6,395	6,137	5,248	4,833	3,580	3,508	2,647	1,825	-714	-1,537	-2,412	-3,343	-4,334	-5,391	-6,517	-7,720	-9,003	-10,374	-11,838	-13,403	-15,075	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-274	-311	-349	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,572	85,582
Equal Monthly Debt Drawdown	6,743	4,555	

	Feb8 1b, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,356	2034	52,275
Equal Monthly Debt Drawdown	91,481		

Feb8 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
a — Debt, Beginning of Year	0	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	
c = a*5% — *Interest Cost - Feb8 1b, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,300*	*2,597*	*2,867*	*3,186*	*3,492*	*3,754*	*3,995*	*4,174*	*4,349*	*4,481*	*4,572*	*4,536*	*4,459*	*4,339*	*4,172*	*3,956*	*3,687*	*3,362*	*2,977*	*2,528*	*2,011*	*1,420*	*752*	*0*	*0*	*0*	85,582
b — Additional GA Debt Drawdown, End of Year	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,309	32,722	35,302	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	39,297	27,758	14,694	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	52,275	52,275	52,275	52,275	51,578	50,078	47,725	44,465	40,239	34,984	28,630	21,105	12,328	0	0	0	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,809	33,983	38,331	42,812	47,384	51,920	56,379	60,718	64,890	68,846	72,533	75,895	78,871	81,399	83,410	84,830	85,582				
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	51,769	51,014	49,246	46,544	41,275	35,239	28,428	20,829	12,431	3,219	-6,822	-17,709	-29,462	-42,102	-55,652	-70,136	-85,582				
Fiscal Exposure - End of Year Debt Drawdown	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	

Feb8 1b, 30-yr — Equal Monthly Debt Drawdown

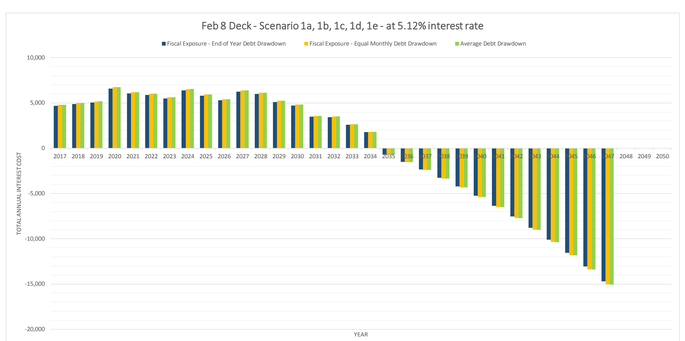
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,823*	*2,126*	*2,438*	*2,723*	*3,016*	*3,329*	*3,614*	*3,866*	*4,078*	*4,255*	*4,410*	*4,523*	*4,555*	*4,500*	*4,403*	*4,261*	*4,072*	*3,831*	*3,536*	*3,183*	*2,768*	*2,287*	*1,736*	*1,109*	*402*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
Monthly Drawdown	390	386	380	487	413	373	317	367	292	224	280	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(979)	(1,053)	(1,129)	(1,207)	(1,287)	(0)	-	-	
FV of Monthly Drawdown at 5%	4,786	4,740	4,665	5,979	5,072	4,585	3,900	4,509	3,582	2,752	3,446	2,862	1,661	979	(518)	(772)	(1,811)	(2,766)	(5,394)	(6,179)	(6,974)	(7,780)	(8,598)	(9,431)	(10,279)	(11,146)	(12,033)	(12,941)	(13,872)	(14,829)	(15,813)	(0)	-	-	
Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	66	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(367)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,262	3,576	3,843	4,090	4,273	4,452	4,587	4,680	4,644	4,565	4,442	4,271	4,050	3,775	3,442	3,048	2,588	2,058	1,454	770	0	0	0	
Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,823	2,126	2,438	2,723	3,016	3,329	3,614	3,866	4,078	4,255	4,410	4,523	4,555	4,500	4,403	4,261	4,072	3,831	3,536	3,183	2,768	2,287	1,736	1,109	402	0	0	0	

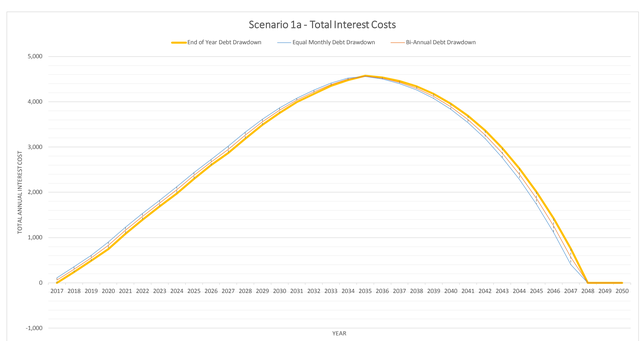
Feb8 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*60*	*301*	*553*	*831*	*1,161*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,947*	*3,263*	*3,558*	*3,814*	*4,040*	*4,217*	*4,382*	*4,503*	*4,563*	*4,517*	*4,429*	*4,297*	*4,118*	*3,889*	*3,606*	*3,266*	*2,865*	*2,399*	*1,863*	*1,253*	*564*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	4,734	4,931	5,110	6,670	6,115	5,945	5,573	6,460	5,874	5,353	6,313	6,058	5,181	4,771	3,534	3,463	2,613	1,801	-706	-1,519	-2,383	-3,302	-4,280	-5,323	-6,435	-7,622	-8,889	-10,242	-11,687	-13,231	-14,882	0	0	0	
Bi-Annual Drawdown	2,337	2,315	2,279	2,920	2,477	2,239	1,905	2,202	1,750	1,344	1,683	1,398	811	478	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,799)	(4,199)	(4,606)	(5,020)	(5,444)	(5,877)	(6,320)	(6,775)	(7,242)	(7,723)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	4,734	4,689	4,615	5,914	5,017	4,535	3,859	4,460	3,544	2,722	3,409	2,831	1,643	969	(513)	(764)	(1,791)	(2,737)	(5,336)	(6,113)	(6,899)	(7,696)	(8,506)	(9,329)	(10,169)	(11,027)	(11,904)	(12,802)	(13,723)	(14,670)	(15,643)	(0)	-	-	
Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	242	495	756	1,097	1,410	1,714	1,999	2,330	2,630	2,904	3,227	3,537	3,802	4,046	4,227	4,404	4,538	4,630	4,594	4,516	4,394	4,225	4,006	3,734	3,405	3,015	2,560	2,036	1,438	761	0	(0)	(0)	
Total Annual Interest Cost	60	301	553	831	1,161	1,467	1,763	2,056	2,375	2,665	2,947	3,263	3,558	3,814	4,040	4,217	4,382	4,503	4,563	4,517	4,429	4,297	4,118	3,889	3,606	3,266	2,865	2,399	1,863	1,253	564	0	(0)	(0)	

Feb8 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,732*	*3,027*	*3,339*	*3,623*	*3,875*	*4,084*	*4,261*	*4,415*	*4,526*	*4,554*	*4,498*	*4,399*	*4,255*	*4,064*	*3,821*	*3,524*	*3,169*	*2,752*	*2,269*	*1,715*	*1,086*	*376*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	4,794	4,994	5,174	6,754	6,192	6,020	5,643	6,541	5,948	5,420	6,393	6,135	5,246	4,831	3,578	3,507	2,646	1,824	-715	-1,538	-2,413	-3,343	-4,334	-5,390	-6,516	-7,718	-9,001	-10,371	-11,835	-13,398	-15,070	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1c_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	
			111	111	109	140	120	116	107	128	115	103	126	121	101	93	66	66	48	32	-24	-40	-57	-74	-92	-111	-132	-153	-175	-199	-224	-250	-278	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	5,867	3,893	72,823
Equal Monthly Debt Drawdown	6,006	3,869	

		Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	76,097	2034	44,449
Equal Monthly Debt Drawdown	77,907		

Feb8 1c, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
a — Debt, Beginning of Year	0	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	
c = a*5% — *Interest Cost - Feb8 1c, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*477*	*712*	*1,012*	*1,269*	*1,518*	*1,748*	*2,023*	*2,270*	*2,491*	*2,762*	*3,022*	*3,239*	*3,440*	*3,581*	*3,722*	*3,826*	*3,893*	*3,841*	*3,754*	*3,632*	*3,473*	*3,274*	*3,034*	*2,751*	*2,423*	*2,046*	*1,618*	*1,136*	*598*	*0*	*0*	*0*	72,823
b — Additional GA Debt Drawdown, End of Year	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	
Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	25,538	28,304	30,324	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,624	22,213	11,693	0	0	0	0	
Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	44,449	44,449	44,449	44,449	43,420	41,729	39,342	36,228	32,347	27,662	22,130	15,704	8,337	0	0	0	0	0	0	0	
Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	26,221	29,801	33,524	37,349	41,242	45,083	48,837	52,469	55,942	59,216	62,250	65,002	67,424	69,470	71,088	72,224	72,823				
Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	43,767	42,952	41,249	38,748	33,826	28,294	22,153	15,406	8,054	94	-8,473	-17,649	-27,439	-37,846	-48,875	-60,532	-72,823				
Fiscal Exposure - End of Year Debt Drawdown	4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	

Feb8 1c, 30-yr — Equal Monthly Debt Drawdown

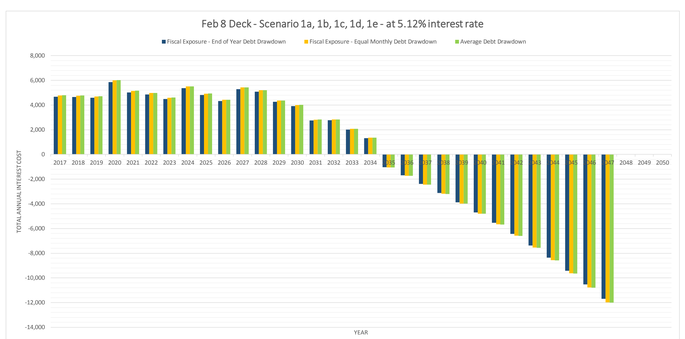
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
Debt, Beginning of Year	0	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	
3,869 — *Interest Cost - Feb8 1c, 30-yr*	*111*	*350*	*586*	*851*	*1,132*	*1,385*	*1,625*	*1,876*	*2,138*	*2,372*	*2,617*	*2,882*	*3,123*	*3,333*	*3,505*	*3,646*	*3,770*	*3,857*	*3,869*	*3,800*	*3,697*	*3,558*	*3,380*	*3,163*	*2,903*	*2,599*	*2,247*	*1,847*	*1,394*	*886*	*320*	*0*	*0*	*0*	72,823
Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	
Monthly Drawdown	390	367	343	430	335	299	248	303	233	171	234	193	103	56	(57)	(68)	(142)	(208)	(410)	(461)	(512)	(562)	(613)	(663)	(714)	(765)	(816)	(867)	(919)	(971)	(1,024)	-	-	-	
FV of Monthly Drawdown at 5%	4,786	4,515	4,210	5,278	4,114	3,677	3,048	3,717	2,857	2,099	2,873	2,375	1,268	689	(699)	(834)	(1,744)	(2,561)	(5,039)	(5,664)	(6,286)	(6,907)	(7,528)	(8,148)	(8,771)	(9,395)	(10,023)	(10,654)	(11,291)	(11,934)	(12,583)	-	-	-	
Annual Interest Cost on New Drawdowns	111	105	98	123	96	85	71	86	66	49	67	55	29	16	(16)	(19)	(41)	(59)	(117)	(132)	(146)	(160)	(175)	(189)	(204)	(218)	(233)	(248)	(262)	(277)	(292)	-	-	-	
Annual Interest Cost on Opening Balance	-	245	488	729	1,036	1,300	1,554	1,790	2,071	2,323	2,550	2,827	3,093	3,317	3,521	3,666	3,811	3,917	3,986	3,932	3,843	3,718	3,555	3,352	3,107	2,817	2,480	2,094	1,656	1,163	612	(0)	(0)	(0)	
Total Annual Interest Cost	111	350	586	851	1,132	1,385	1,625	1,876	2,138	2,372	2,617	2,882	3,123	3,333	3,505	3,646	3,770	3,857	3,869	3,800	3,697	3,558	3,380	3,163	2,903	2,599	2,247	1,847	1,394	886	320	(0)	(0)	(0)	

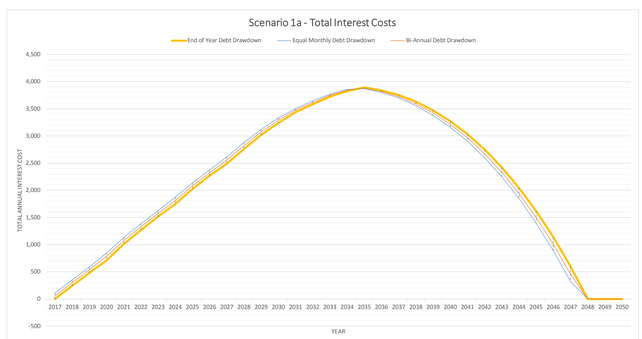
Feb8 1c, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
Debt, Beginning of Year	0	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	
Interest Cost - Feb8 1c, 30-yr	*60*	*299*	*536*	*787*	*1,076*	*1,332*	*1,576*	*1,817*	*2,085*	*2,325*	*2,558*	*2,827*	*3,076*	*3,290*	*3,475*	*3,616*	*3,748*	*3,842*	*3,880*	*3,819*	*3,724*	*3,592*	*3,423*	*3,214*	*2,964*	*2,669*	*2,328*	*1,939*	*1,498*	*1,002*	*449*	*0*	*0*	*0*	72,823
Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	4,734	4,708	4,648	5,942	5,095	4,923	4,553	5,447	4,876	4,375	5,364	5,147	4,315	3,962	2,792	2,802	2,045	1,341	-1,042	-1,713	-2,417	-3,155	-3,930	-4,745	-5,603	-6,508	-7,461	-8,468	-9,531	-10,655	-11,842	0	0	0	
Bi-Annual Drawdown	2,337	2,205	2,056	2,578	2,009	1,796	1,489	1,815	1,395	1,025	1,403	1,160	620	336	(341)	(407)	(852)	(1,251)	(2,461)	(2,766)	(3,070)	(3,373)	(3,676)	(3,980)	(4,283)	(4,588)	(4,895)	(5,203)	(5,514)	(5,828)	(6,146)	-	-	-	
FV of Bi-Annual Drawdown at 5%	4,734	4,466	4,165	5,221	4,070	3,638	3,015	3,677	2,826	2,077	2,842	2,350	1,255	681	(691)	(825)	(1,725)	(2,533)	(4,985)	(5,603)	(6,219)	(6,833)	(7,447)	(8,061)	(8,676)	(9,294)	(9,915)	(10,540)	(11,170)	(11,806)	(12,448)	-	-	-	
Annual Interest Cost on New Drawdowns	60	56	53	66	51	46	38	46	36	26	36	30	16	9	(9)	(10)	(22)	(32)	(63)	(71)	(79)	(86)	(94)	(102)	(110)	(117)	(125)	(133)	(141)	(149)	(157)	-	-	-	
Annual Interest Cost on Opening Balance	-	242	483	721	1,025	1,286	1,537	1,770	2,049	2,299	2,522	2,797	3,060	3,281	3,484	3,626	3,770	3,874	3,943	3,890	3,802	3,678	3,517	3,316	3,073	2,787	2,454	2,072	1,639	1,151	606	(0)	(0)	(0)	
Total Annual Interest Cost	60	299	536	787	1,076	1,332	1,576	1,817	2,085	2,325	2,558	2,827	3,076	3,290	3,475	3,616	3,748	3,842	3,880	3,819	3,724	3,592	3,423	3,214	2,964	2,669	2,328	1,939	1,498	1,002	449	(0)	(0)	(0)	

Feb8 1c, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
Debt, Beginning of Year	0	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	
Interest Cost - Feb8 1c, 30-yr	*120*	*358*	*594*	*862*	*1,141*	*1,394*	*1,633*	*1,886*	*2,146*	*2,380*	*2,626*	*2,892*	*3,130*	*3,340*	*3,510*	*3,651*	*3,774*	*3,859*	*3,867*	*3,797*	*3,693*	*3,552*	*3,373*	*3,154*	*2,893*	*2,587*	*2,234*	*1,832*	*1,377*	*867*	*299*	*0*	*0*	*0*	72,823
Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	4,794	4,768	4,707	6,017	5,160	4,985	4,610	5,516	4,937	4,431	5,432	5,212	4,370	4,012	2,828	2,837	2,071	1,358	-1,055	-1,735	-2,447	-3,195	-3,979	-4,805	-5,674	-6,590	-7,556	-8,575	-9,652	-10,789	-11,992	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1d_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
			52	54	56	73	67	61	51	71	56	42	64	57	36	27	-2	-3	-23	-37	-39	-41	-43	-46	-48	-50	-53	-56	-59	-62	-65	-68	-71	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,072	1,649	29,589
Equal Monthly Debt Drawdown	3,145	1,647	

	Feb8 1d, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,233	2030	21,239
Equal Monthly Debt Drawdown	32,999		

Feb8 1d, 30-yr — End of Year Debt Drawdown

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
a	Debt, Beginning of Year	0	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	
c = a*5%	*Interest Cost - Feb8 1d, 30-yr - End of Year Debt Drawdown*	*0*	*112*	*228*	*348*	*505*	*649*	*781*	*891*	*1,043*	*1,162*	*1,253*	*1,391*	*1,514*	*1,592*	*1,649*	*1,644*	*1,637*	*1,588*	*1,508*	*1,423*	*1,335*	*1,241*	*1,143*	*1,040*	*931*	*817*	*698*	*572*	*439*	*300*	*154*	*0*	*0*	*0*	29,589
b	Additional GA Debt Drawdown, End of Year	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	11,372	11,227	10,281	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,586	5,865	3,006	0	0	0	0	
	Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	20,763	20,763	20,763	20,763	19,112	17,375	15,550	13,632	11,616	9,496	7,268	4,926	2,464	0	0	0	0	0	0	0	
	Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	13,118	14,763	16,399	17,988	19,495	20,919	22,253	23,495	24,638	25,678	26,609	27,426	28,124	28,696	29,135	29,435	29,589				
	Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	19,017	17,228	14,645	11,486	8,326	5,167	2,007	-1,153	-4,312	-7,472	-10,631	-13,791	-16,951	-20,110	-23,270	-26,429	-29,589				
Fiscal Exposure - End of Year Debt Drawdown		2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	

Feb8 1d, 30-yr — Equal Monthly Debt Drawdown

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Debt, Beginning of Year	0	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	
1,647	*Interest Cost - Feb8 1d, 30-yr*	*52*	*166*	*284*	*421*	*572*	*711*	*832*	*962*	*1,098*	*1,205*	*1,317*	*1,448*	*1,550*	*1,619*	*1,647*	*1,641*	*1,614*	*1,551*	*1,469*	*1,382*	*1,291*	*1,196*	*1,095*	*989*	*878*	*762*	*639*	*510*	*375*	*232*	*82*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
	Monthly Drawdown	182	180	177	227	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	-	-	-	
	FV of Monthly Drawdown at 5%	2,232	2,210	2,176	2,788	2,366	1,977	1,399	2,123	1,322	628	1,468	1,042	12	(487)	(1,788)	(1,831)	(2,644)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	-	-	-	
	Annual Interest Cost on New Drawdowns	52	51	51	65	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	-	-	-	
	Annual Interest Cost on Opening Balance	-	114	233	356	517	665	800	912	1,068	1,190	1,283	1,424	1,550	1,630	1,688	1,683	1,676	1,626	1,544	1,457	1,366	1,271	1,170	1,065	954	837	714	585	450	307	157	0	0	0	
	Total Annual Interest Cost	52	166	284	421	572	711	832	962	1,098	1,205	1,317	1,448	1,550	1,619	1,647	1,641	1,614	1,551	1,469	1,382	1,291	1,196	1,095	989	878	762	639	510	375	232	82	0	0	0	

Feb8 1d, 30-yr — Bi-Annual Debt Drawdown

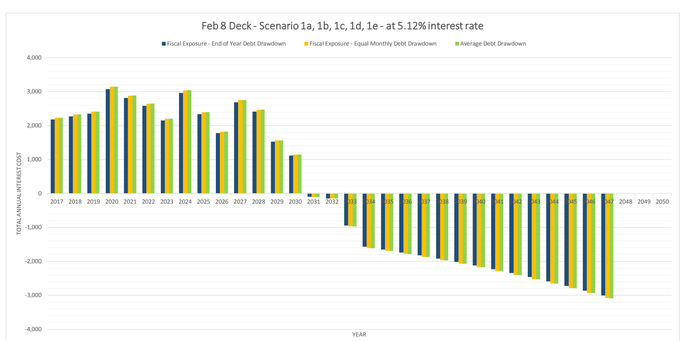
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

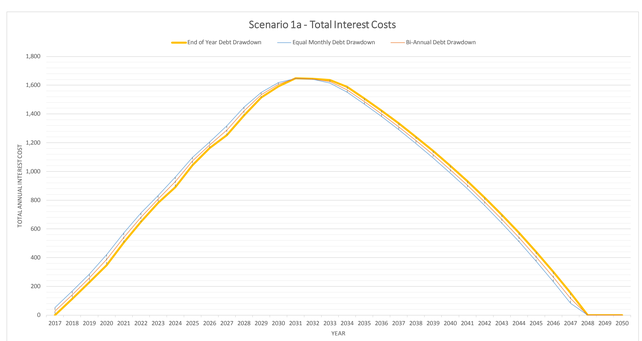
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Debt, Beginning of Year	0	2,208	4,507	6,890	10,001	12,854	15,467	17,642	20,645	23,009	24,807	27,529	29,969	31,514	32,645	32,546	32,400	31,442	29,850	28,177	26,419	24,571	22,628	20,585	18,439	16,182	13,810	11,316	8,695	5,940	3,044	0	0	0	
	Interest Cost - Feb8 1d, 30-yr	*28*	*141*	*258*	*387*	*541*	*682*	*809*	*929*	*1,073*	*1,185*	*1,288*	*1,421*	*1,533*	*1,606*	*1,648*	*1,642*	*1,625*	*1,568*	*1,487*	*1,401*	*1,311*	*1,217*	*1,117*	*1,013*	*903*	*787*	*666*	*539*	*404*	*264*	*115*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,208	4,507	6,890	10,001	12,854	15,467	17,642	20,645	23,009	24,807	27,529	29,969	31,514	32,645	32,546	32,400	31,442	29,850	28,177	26,419	24,571	22,628	20,585	18,439	16,182	13,810	11,316	8,695	5,940	3,044	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,208	2,299	2,383	3,111	2,853	2,613	2,175	3,003	2,364	1,798	2,722	2,440	1,545	1,131	-98	-147	-958	-1,591	-1,673	-1,758	-1,848	-1,943	-2,042	-2,147	-2,257	-2,372	-2,493	-2,621	-2,755	-2,896	-3,044	0	0	0	
	Bi-Annual Drawdown	1,090	1,079	1,063	1,362	1,156	965	683	1,037	646	307	717	509	6	(238)	(873)	(894)	(1,291)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,208	2,186	2,153	2,758	2,341	1,955	1,384	2,100	1,308	621	1,453	1,031	12	(481)	(1,769)	(1,812)	(2,616)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	-	-	-	
	Annual Interest Cost on New Drawdowns	28	28	27	35	30	25	17	27	17	8	18	13	0	(6)	(22)	(23)	(33)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	-	-	-	
	Annual Interest Cost on Opening Balance	-	113	231	353	512	658	791	903	1,056	1,177	1,269	1,408	1,533	1,612	1,670	1,665	1,658	1,609	1,527	1,442	1,352	1,257	1,158	1,053	943	828	707	579	445	304	156	0	0	0	
	Total Annual Interest Cost	28	141	258	387	541	682	809	929	1,073	1,185	1,288	1,421	1,533	1,606	1,648	1,642	1,625	1,568	1,487	1,401	1,311	1,217	1,117	1,013	903	787	666	539	404	264	115	0	0	0	

Feb8 1d, 30-yr — Average Debt Drawdown

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Debt, Beginning of Year	0	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	
	Interest Cost - Feb8 1d, 30-yr	*56*	*170*	*288*	*427*	*577*	*715*	*836*	*967*	*1,103*	*1,208*	*1,322*	*1,452*	*1,553*	*1,621*	*1,647*	*1,640*	*1,613*	*1,548*	*1,466*	*1,379*	*1,288*	*1,192*	*1,091*	*986*	*874*	*758*	*635*	*505*	*370*	*227*	*77*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		2,236	2,328	2,413	3,150	2,889	2,646	2,203	3,041	2,394	1,821	2,756	2,471	1,565	1,145	-100	-148	-970	-1,612	-1,694	-1,781	-1,872	-1,967	-2,068	-2,174	-2,285	-2,402	-2,525	-2,654	-2,790	-2,933	-3,083	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1e_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	
			36	37	38	53	46	39	27	45	28	13	33	24	1	-11	-16	-16	-17	-18	-19	-20	-21	-22	-23	-25	-26	-27	-29	-30	-32	-33	-35	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,243	904	16,239
Equal Monthly Debt Drawdown	2,297	903	

		Feb8 1e, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown		17,670	2029	12,350
Equal Monthly Debt Drawdown		18,091		

Feb8 1e, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
a Debt, Beginning of Year	0	1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	
c = a*5% *Interest Cost - Feb8 1e, 30-yr - End of Year Debt Drawdown*	*0*	*77*	*156*	*236*	*351*	*450*	*534*	*592*	*688*	*749*	*778*	*849*	*901*	*904*	*881*	*847*	*812*	*775*	*735*	*694*	*651*	*605*	*558*	*507*	*454*	*399*	*340*	*279*	*214*	*146*	*75*	*0*	*0*	*0*	16,239
b Additional GA Debt Drawdown, End of Year	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
d = a+b+c Accumulated debt in present year (including 5.12% annual interest)	1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
Feb8 1e, 30-yr - Accumulated Interest Costs	0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	6,605	5,911	5,182	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,188	2,861	1,466	0	0	0	0	
Feb8 1e, 30-yr - Accumulated Debt Principal	1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	9,960	9,960	9,960	9,960	9,155	8,308	7,418	6,482	5,498	4,465	3,378	2,235	1,035	0	0	0	0	0	0	0	
Feb8 1e, 30-yr - Accumulated Interest Costs	0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	8,146	8,993	9,805	10,580	11,315	12,010	12,661	13,266	13,824	14,331	14,785	15,184	15,524	15,803	16,017	16,164	16,239				
Feb8 1e, 30-yr - Accumulated Debt Principal	1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	8,419	6,878	5,337	3,796	2,255	714	-827	-2,369	-3,910	-5,451	-6,992	-8,533	-10,074	-11,615	-13,156	-14,697	-16,239				
Fiscal Exposure - End of Year Debt Drawdown	1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	

Feb8 1e, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	
903 *Interest Cost - Feb8 1e, 30-yr*	*36*	*113*	*193*	*290*	*397*	*489*	*561*	*637*	*717*	*762*	*811*	*873*	*903*	*893*	*866*	*831*	*795*	*756*	*716*	*674*	*630*	*583*	*534*	*483*	*428*	*372*	*312*	*249*	*183*	*113*	*40*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	
Monthly Drawdown	125	122	119	167	132	99	50	108	42	(16)	51	15	(70)	(112)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	-	-	-	
FV of Monthly Drawdown at 5%	1,536	1,500	1,457	2,055	1,617	1,213	620	1,328	512	(199)	625	182	(865)	(1,382)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	-	-	-	
Annual Interest Cost on New Drawdowns	36	35	34	48	38	28	14	31	12	(5)	15	4	(20)	(32)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	-	-	-	
Annual Interest Cost on Opening Balance	-	79	159	242	359	461	546	606	705	767	796	869	923	926	902	868	831	793	753	711	666	620	571	519	465	408	348	285	219	150	77	0	0	0	
Total Annual Interest Cost	36	113	193	290	397	489	561	637	717	762	811	873	903	893	866	831	795	756	716	674	630	583	534	483	428	372	312	249	183	113	40	0	0	0	

Feb8 1e, 30-yr — Bi-Annual Debt Drawdown

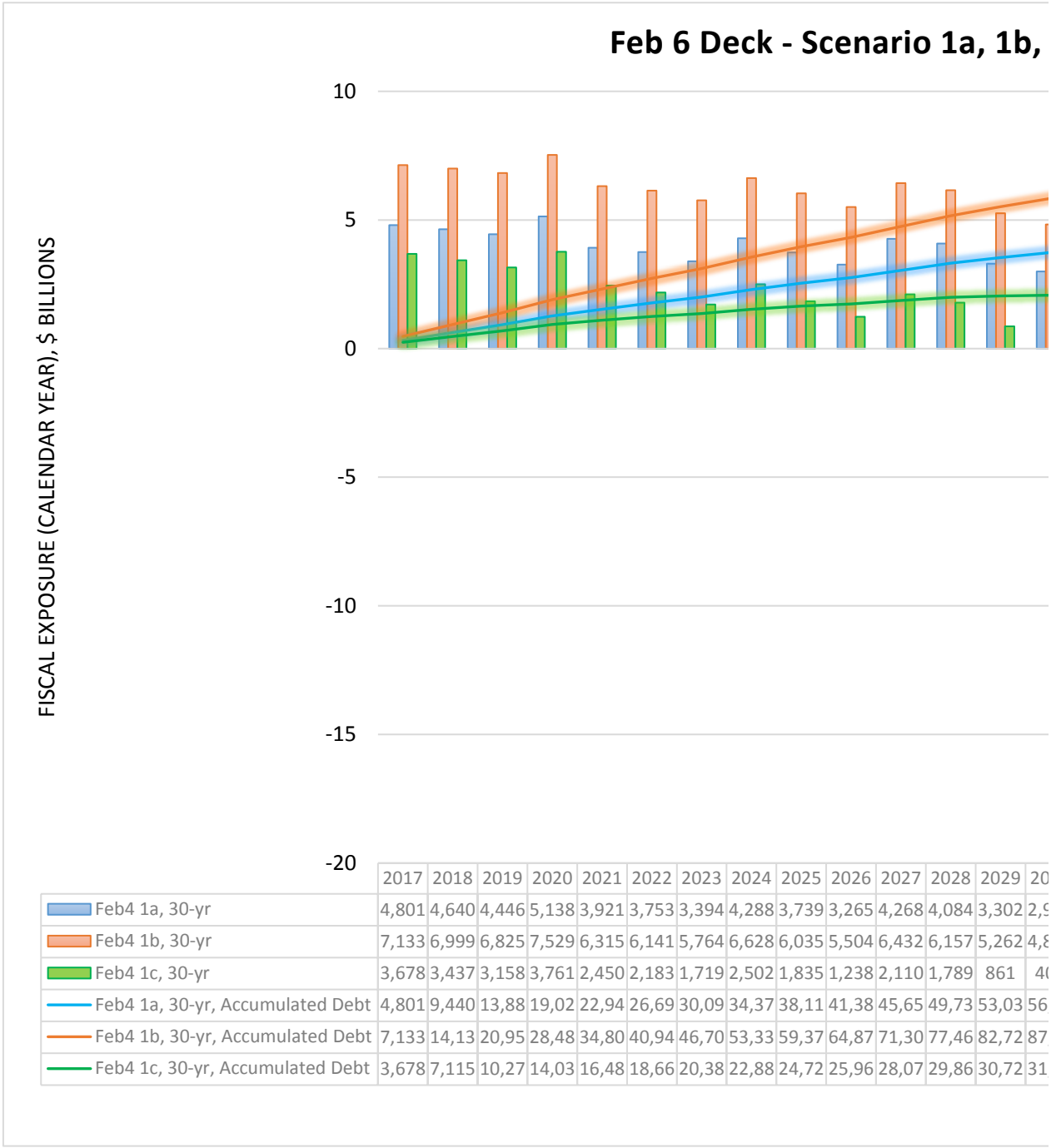
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	
Interest Cost - Feb8 1e, 30-yr	*19*	*96*	*176*	*265*	*376*	*471*	*548*	*616*	*704*	*756*	*795*	*862*	*902*	*898*	*873*	*839*	*803*	*765*	*725*	*683*	*640*	*593*	*545*	*494*	*440*	*384*	*325*	*263*	*197*	*129*	*56*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	1,519	1,561	1,598	2,272	1,956	1,655	1,154	1,913	1,203	562	1,406	1,040	57	-451	-668	-703	-738	-776	-816	-858	-902	-948	-996	-1,047	-1,101	-1,157	-1,216	-1,278	-1,344	-1,413	-1,485	0	0	0	
Bi-Annual Drawdown	750	733	711	1,003	790	592	303	649	250	(97)	305	89	(423)	(675)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	-	-	-	
FV of Bi-Annual Drawdown at 5%	1,519	1,484	1,441	2,033	1,600	1,200	613	1,314	506	(197)	618	180	(856)	(1,367)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	-	-	-	
Annual Interest Cost on New Drawdowns	19	19	18	26	20	15	8	17	6	(2)	8	2	(11)	(17)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	-	-	-	
Annual Interest Cost on Opening Balance	-	78	158	239	356	456	540	599	697	759	788	860	913	916	893	858	822	785	745	703	659	613	565	514	460	404	345	282	217	148	76	0	0	0	
Total Annual Interest Cost	19	96	176	265	376	471	548	616	704	756	795	862	902	898	873	839	803	765	725	683	640	593	545	494	440	384	325	263	197	129	56	0	0	0	

Feb8 1e, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	
Interest Cost - Feb8 1e, 30-yr	*38*	*116*	*196*	*294*	*401*	*492*	*563*	*640*	*719*	*763*	*813*	*875*	*903*	*893*	*864*	*830*	*793*	*755*	*715*	*673*	*628*	*581*	*532*	*481*	*427*	*369*	*310*	*247*	*180*	*111*	*38*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	1,538	1,581	1,619	2,301	1,980	1,676	1,168	1,938	1,219	569	1,424	1,053	57	-457	-677	-711	-748	-786	-826	-869	-913	-960	-1,009	-1,060	-1,115	-1,172	-1,232	-1,295	-1,361	-1,430	-1,504	0	0	0	

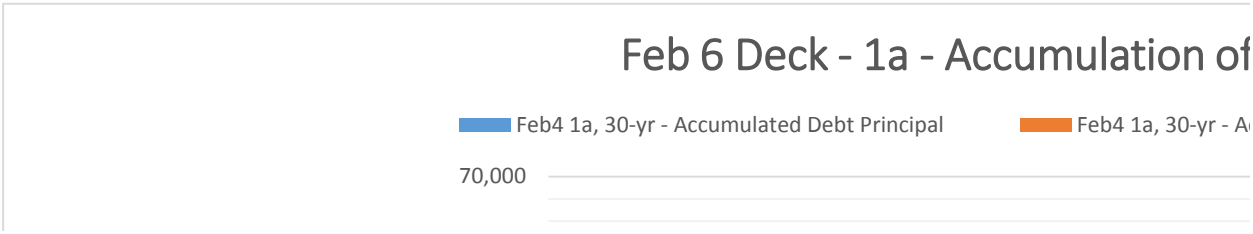
Feb 6 Deck

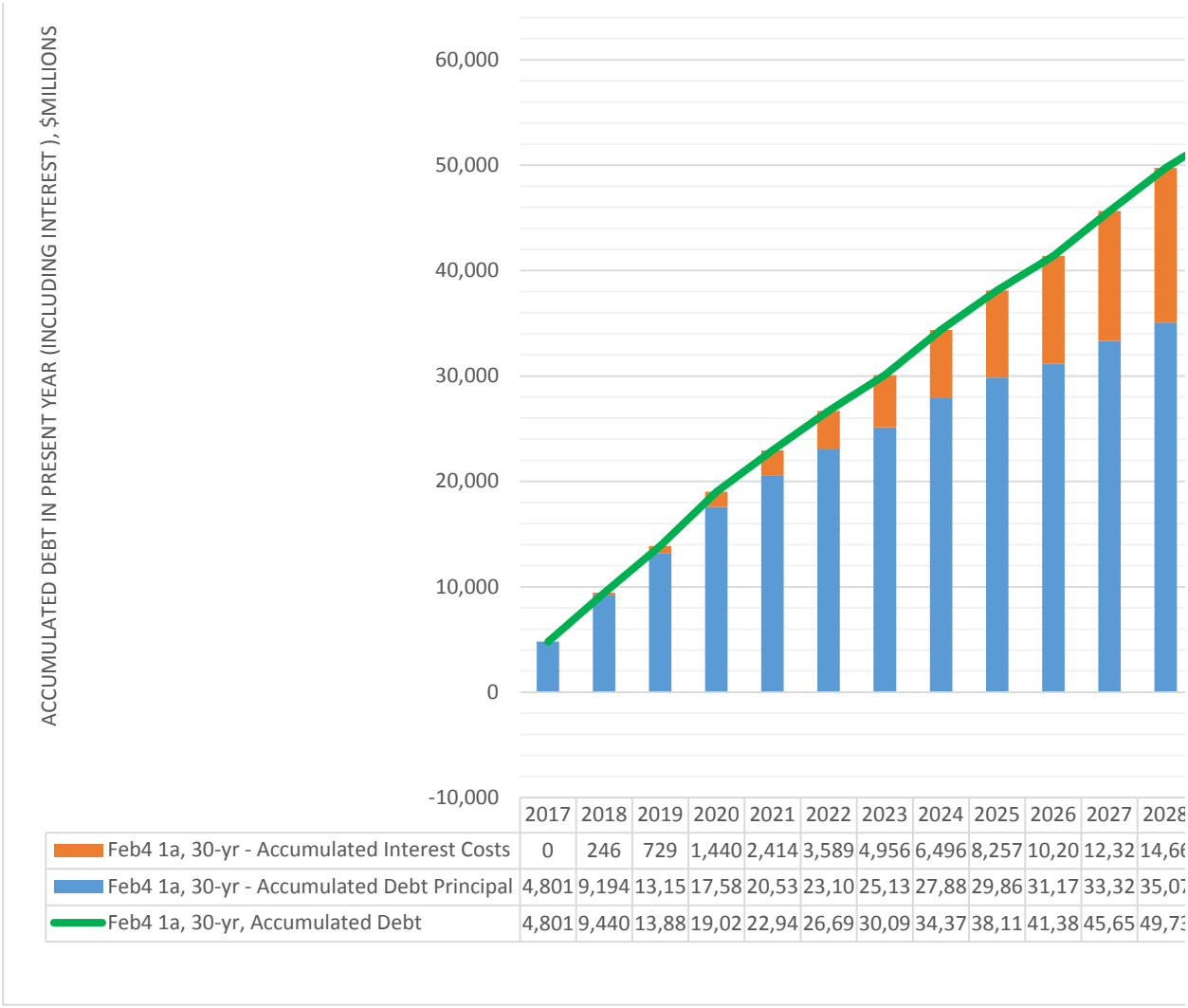
Feb 6 Deck - Scenario 1a, 1b, 1c - at 5.12% interest rate



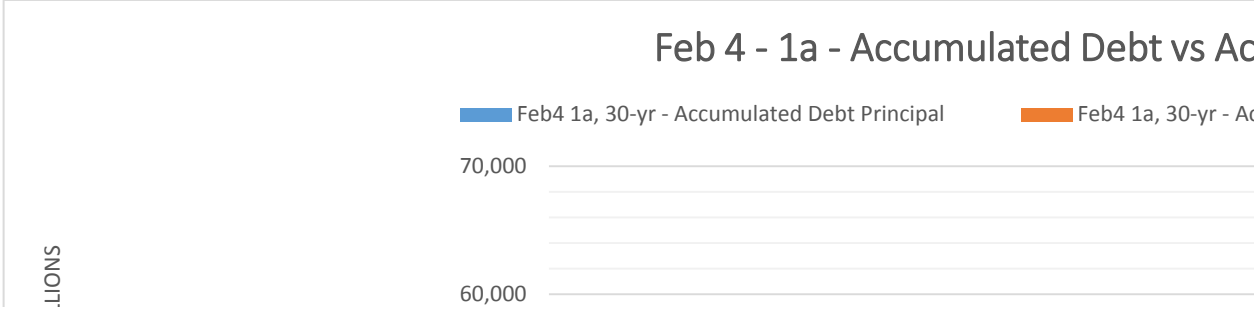
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	20
Feb4 1a, 30-yr	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,9
Feb4 1b, 30-yr	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,8
Feb4 1c, 30-yr	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	4(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73	53,03	56
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31

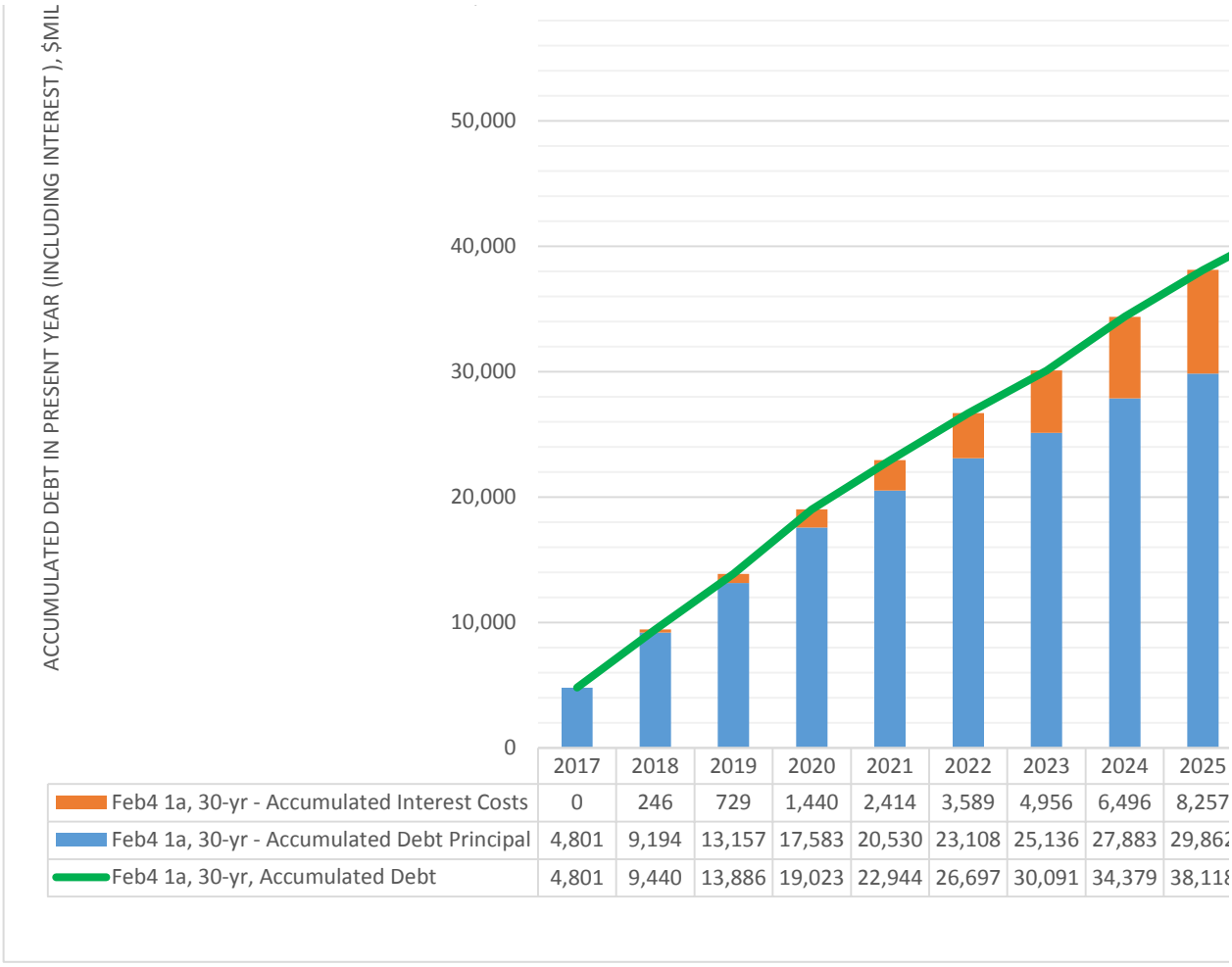
Feb 6 Deck - 1a - Accumulation of Debt (Principal and Interest)



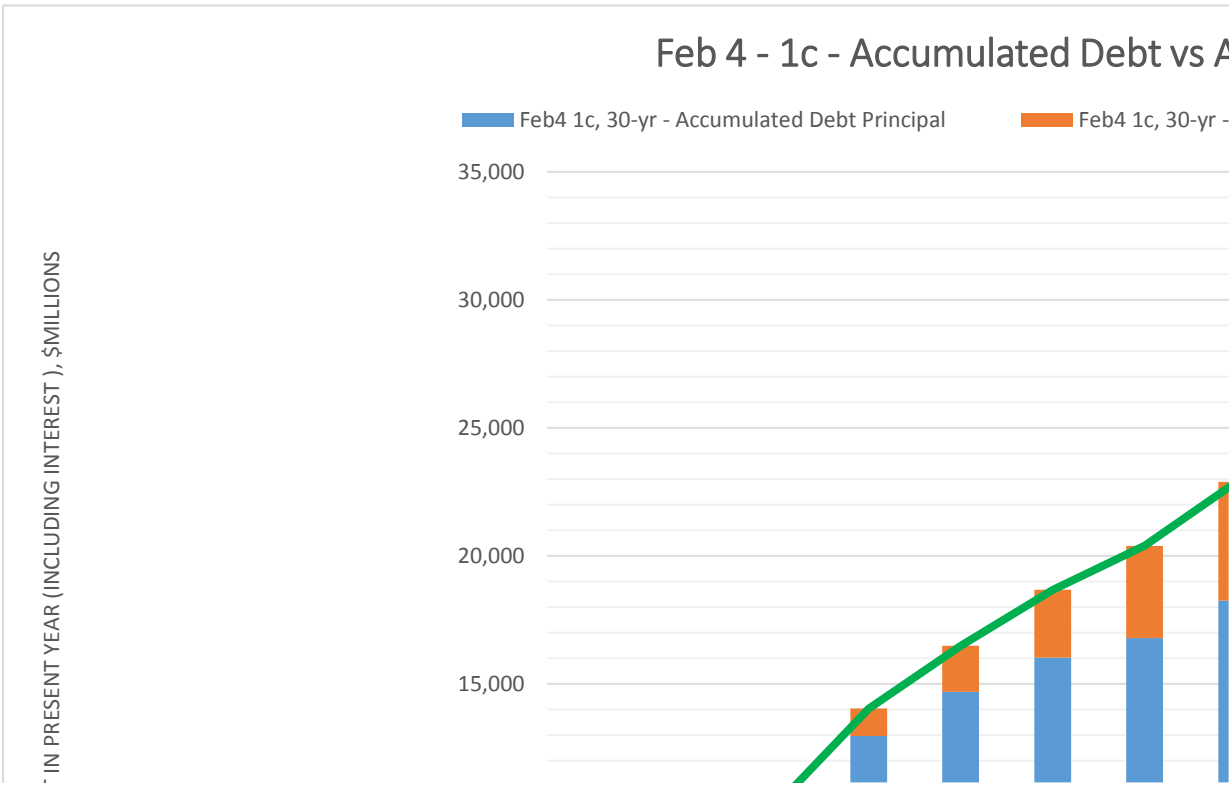


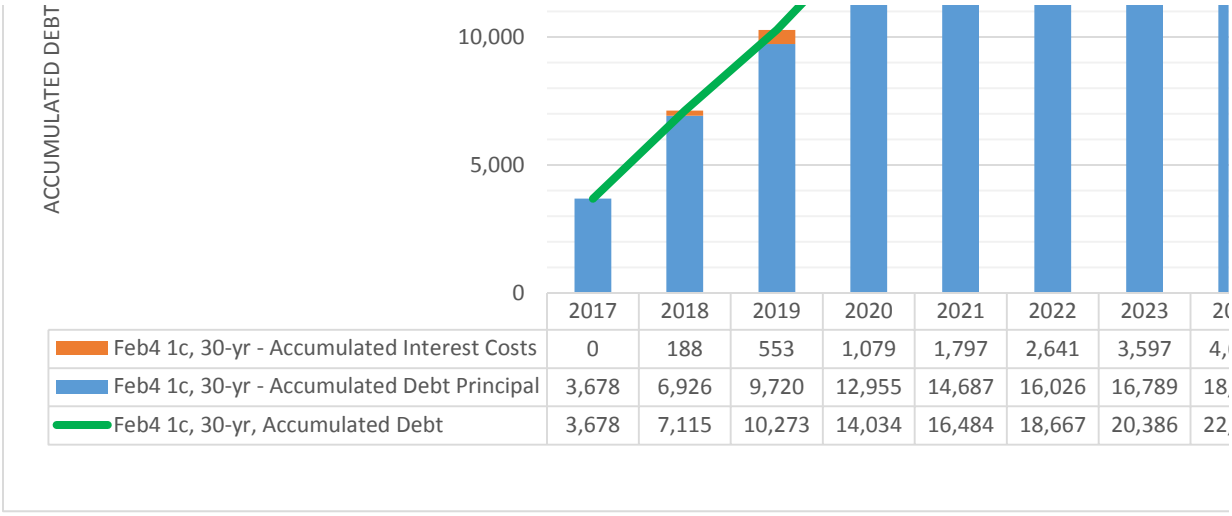
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,66
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,07
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73



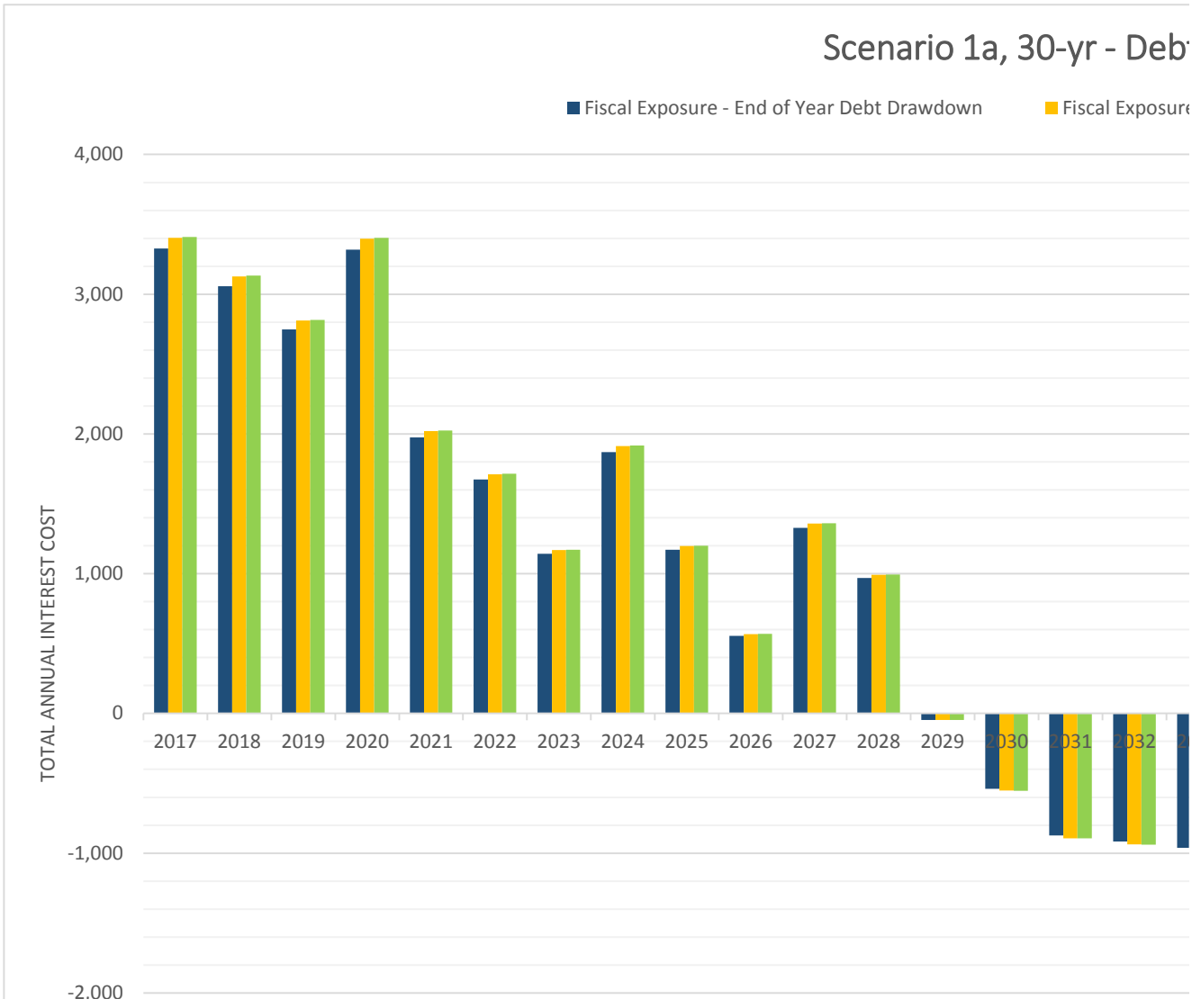


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



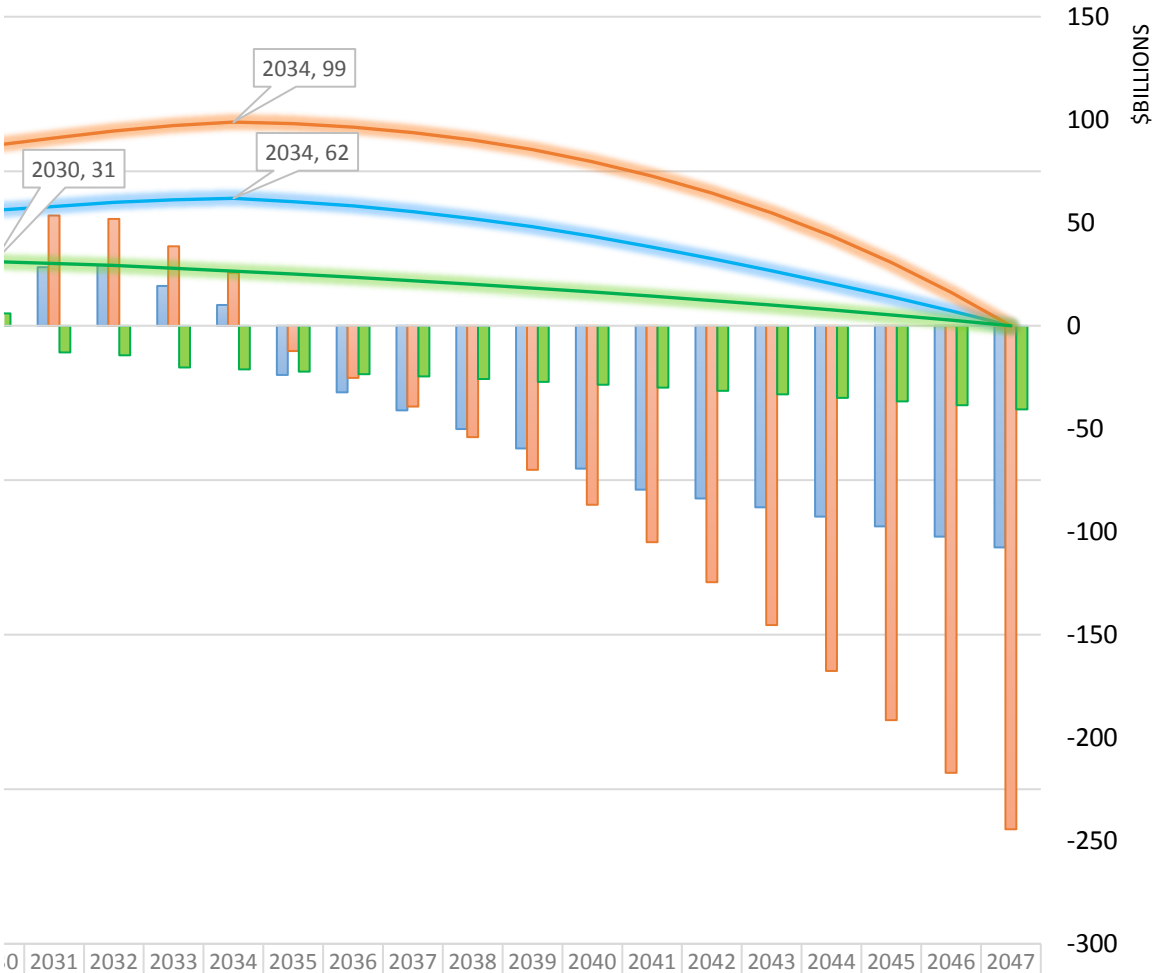


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22



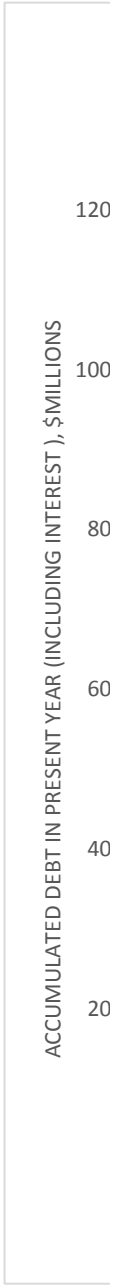

-3,000

lc - at 5.12% interest rate



0	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
98	1,896	1,966	1,288	672	-1,59	-2,15	-2,73	-3,34	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
26	3,568	3,457	2,571	1,716	-819	-1,68	-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
4	-860	-961	-1,34	-1,41	-1,48	-1,56	-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0
55	91,12	94,57	97,14	98,86	98,04	96,35	93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0
12	30,26	29,30	27,95	26,54	25,05	23,49	21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

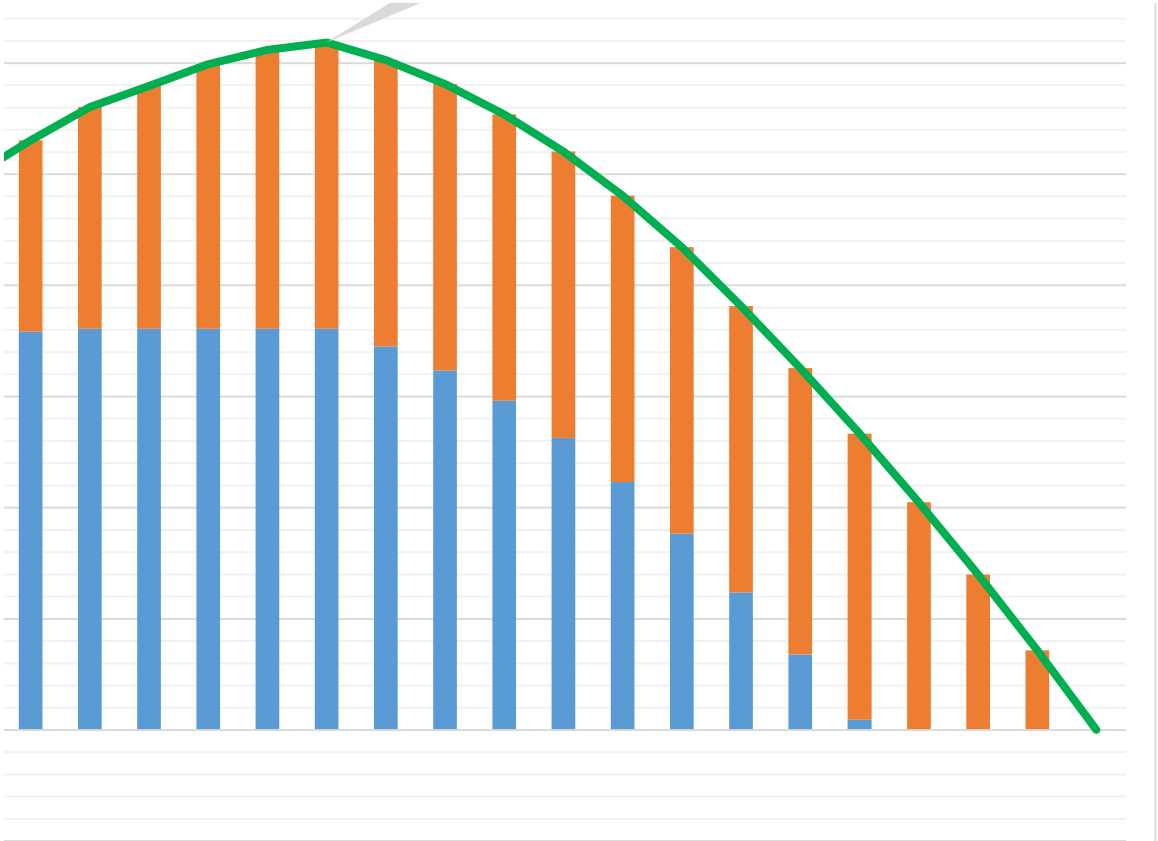
CALENDAR YEAR



Debt (Principal and Interest)

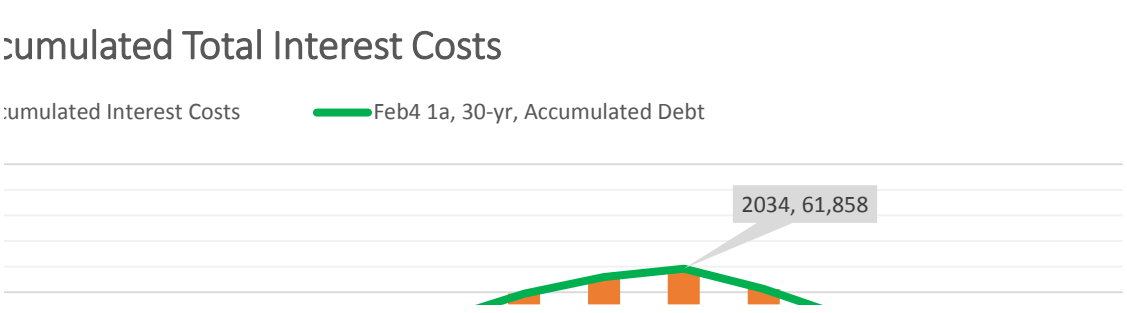
cumulated Interest Costs — Feb4 1a, 30-yr, Accumulated Debt

2034, 61,858

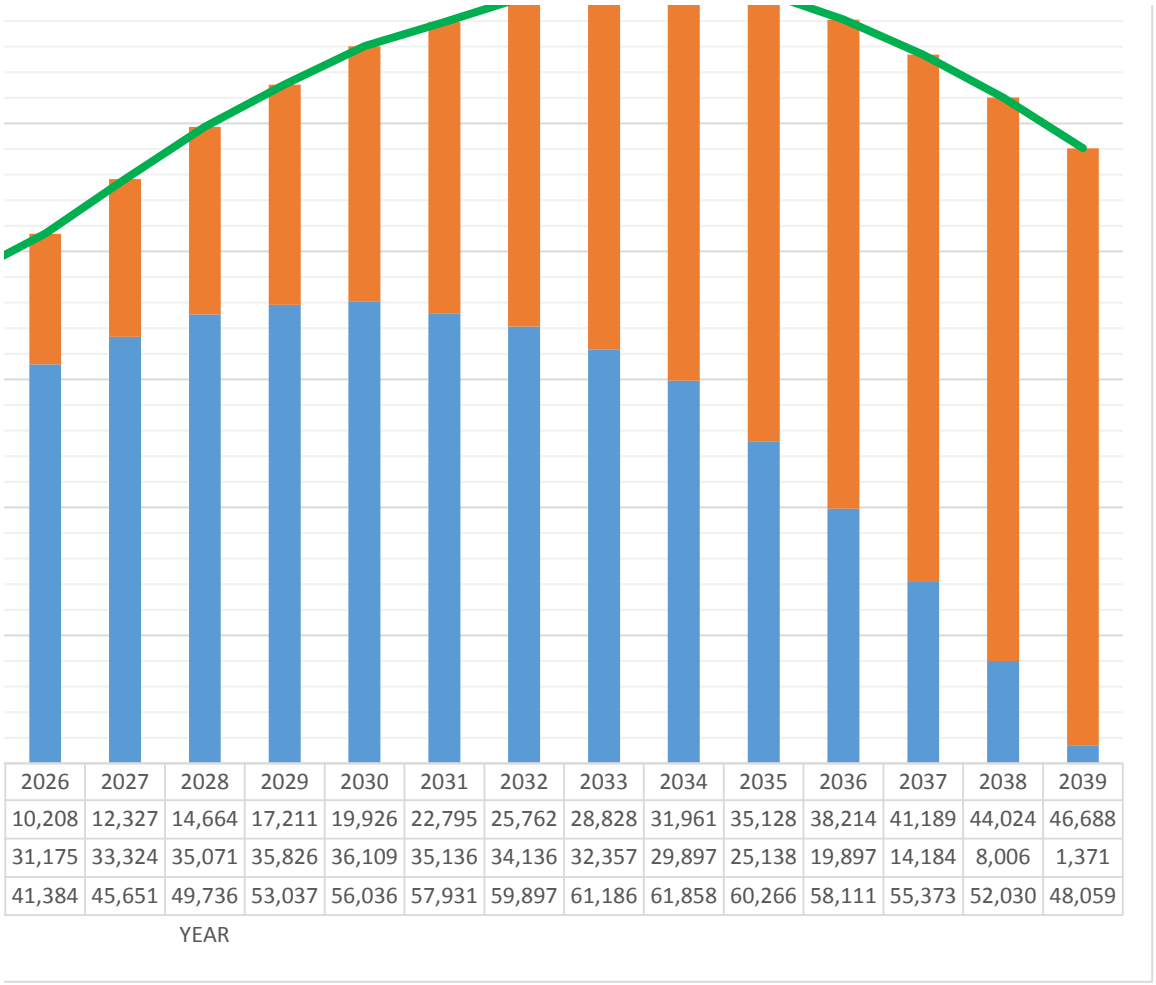


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



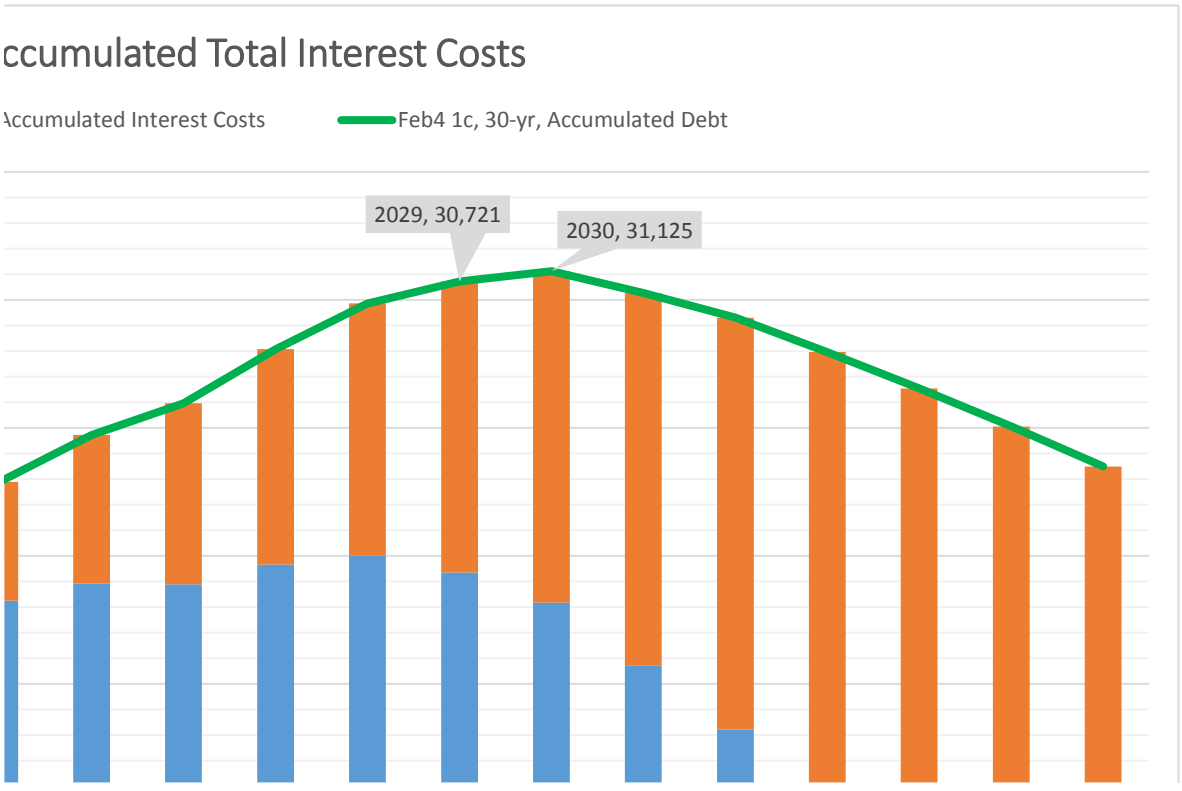
LIONS

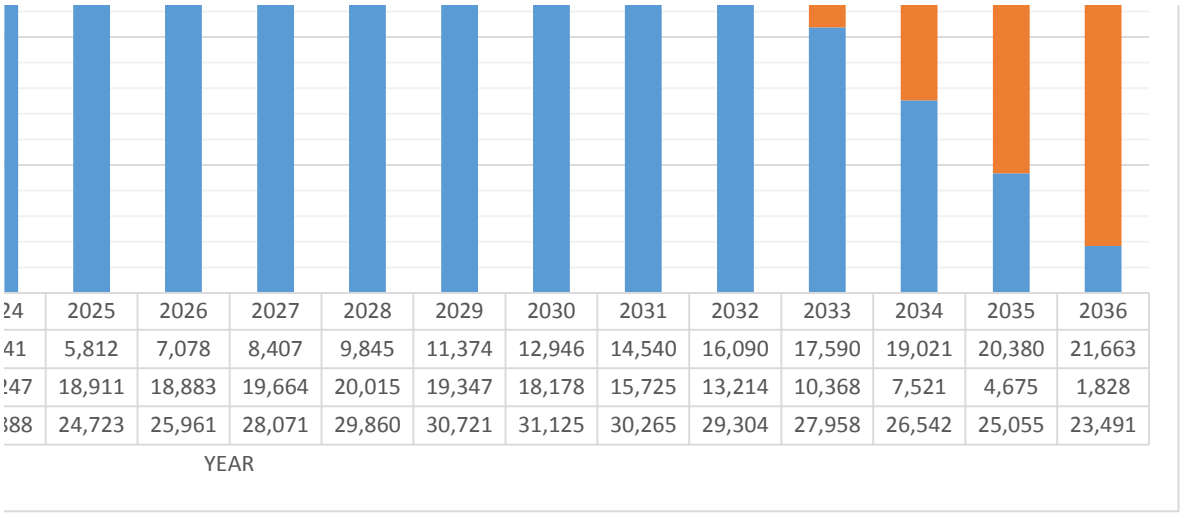


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

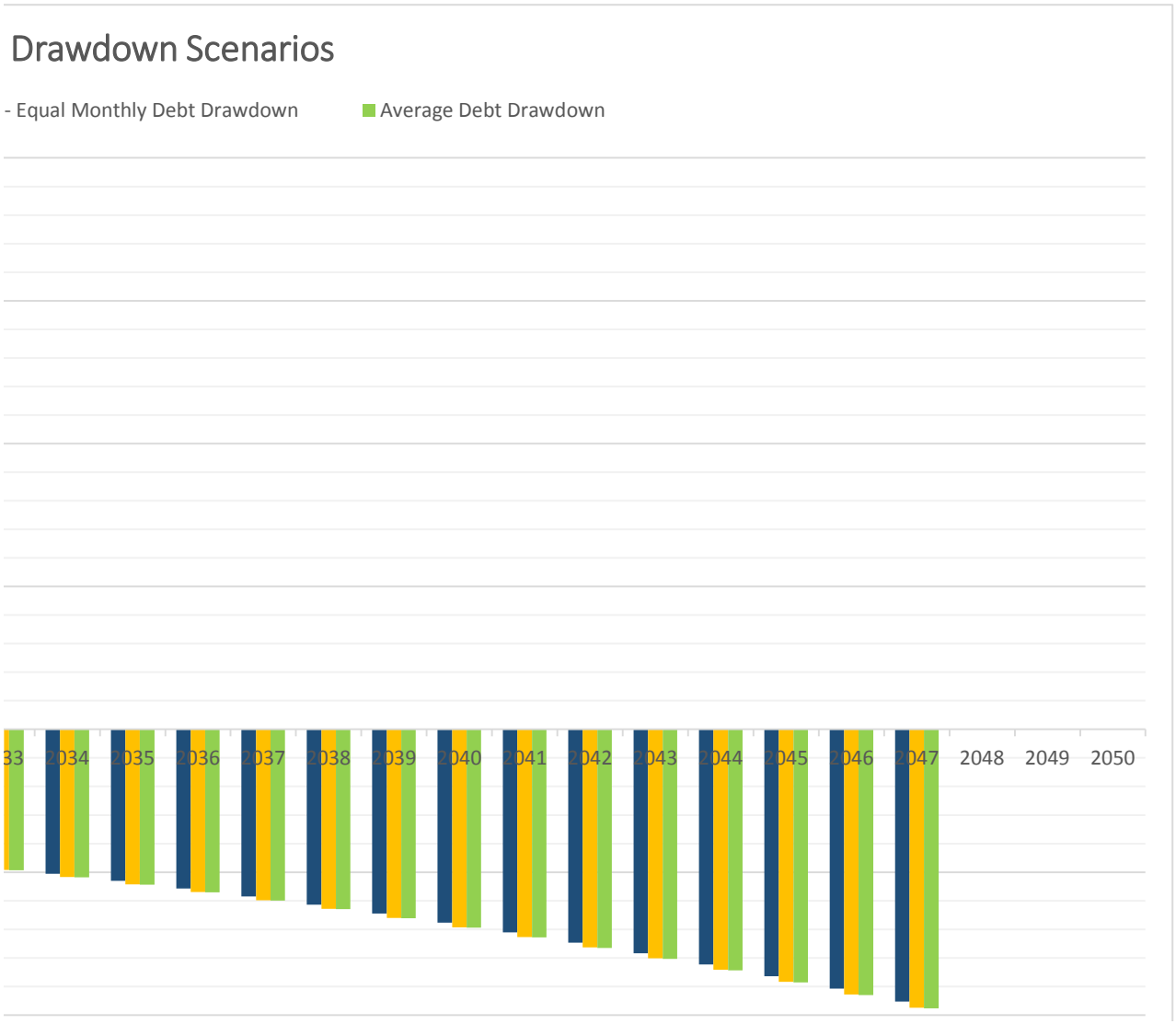
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





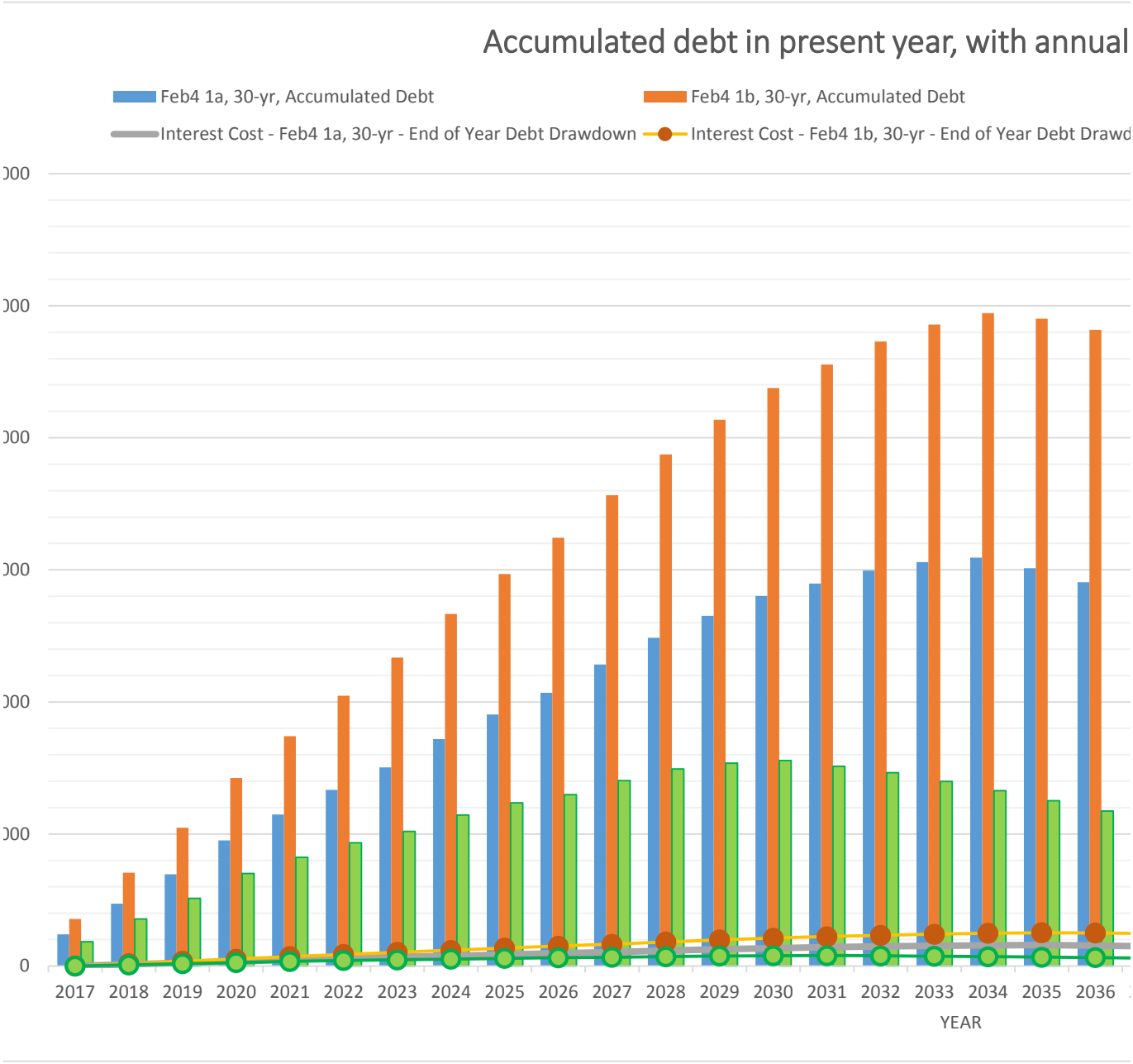
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

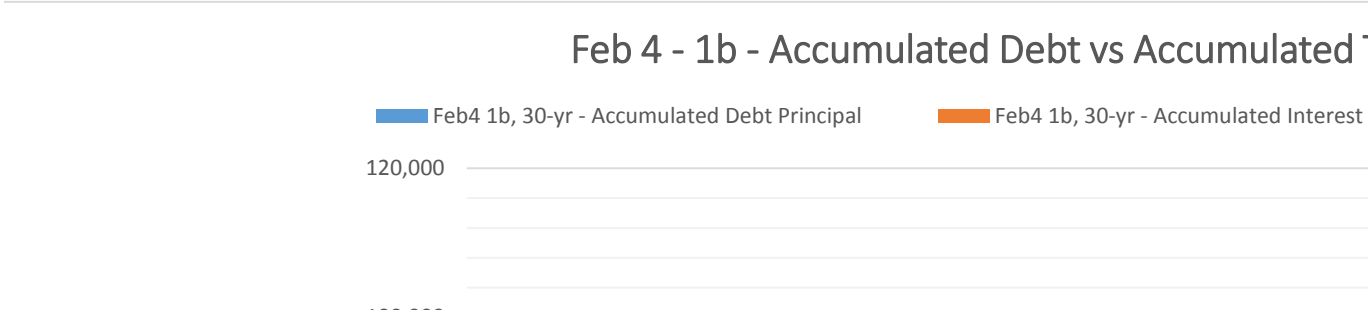
YEAR

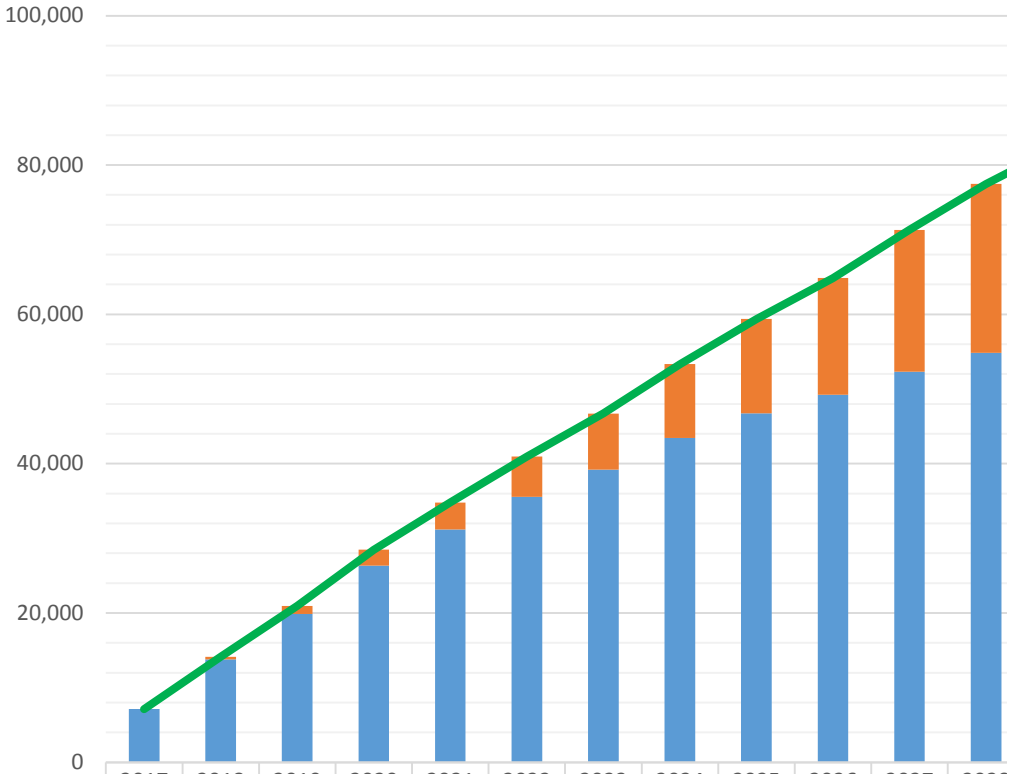


YEAR

ɜ - 25 year and 30 year Financing Terms, at 5% interest rate

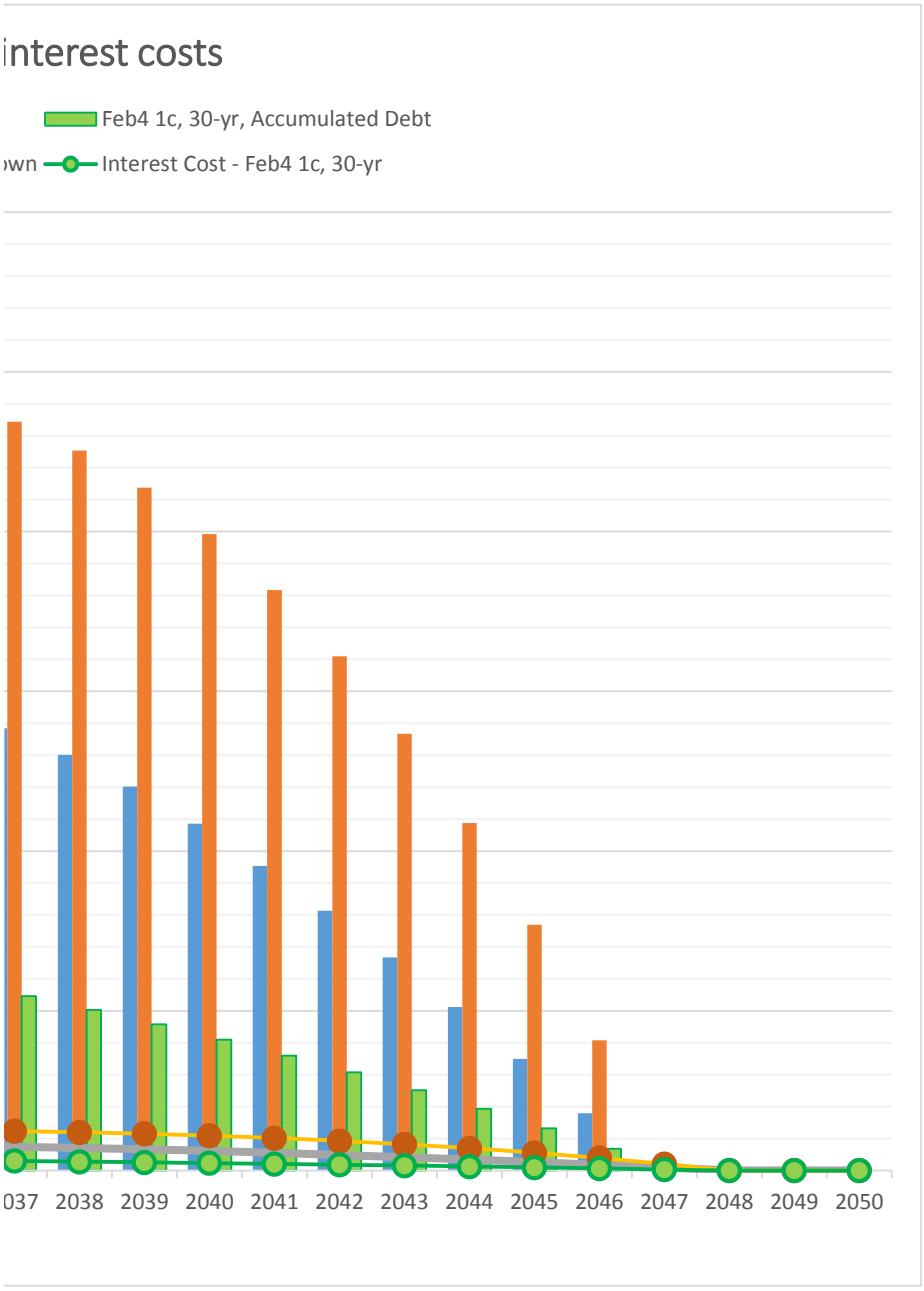


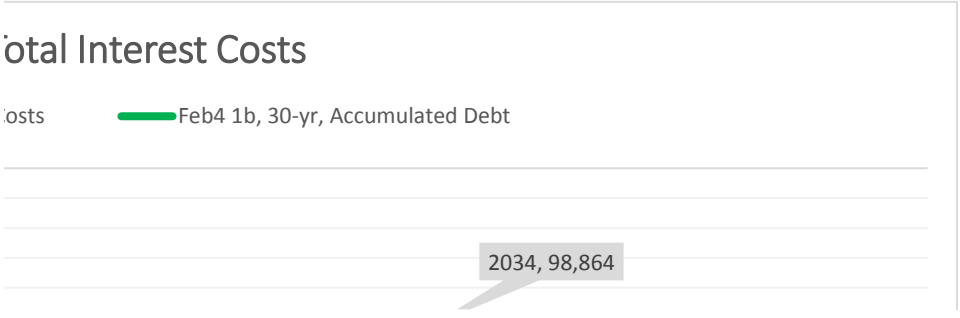

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

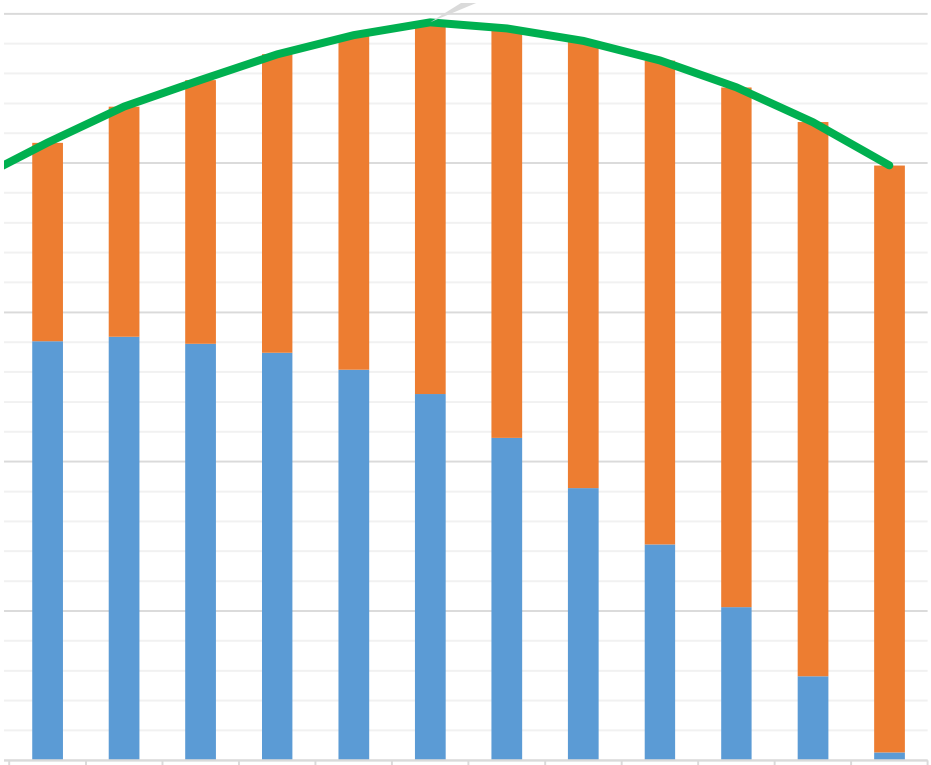


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y


interest costs
Feb4 1c, 30-yr, Accumulated Debt
wn
Interest Cost - Feb4 1c, 30-yr
037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR

Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

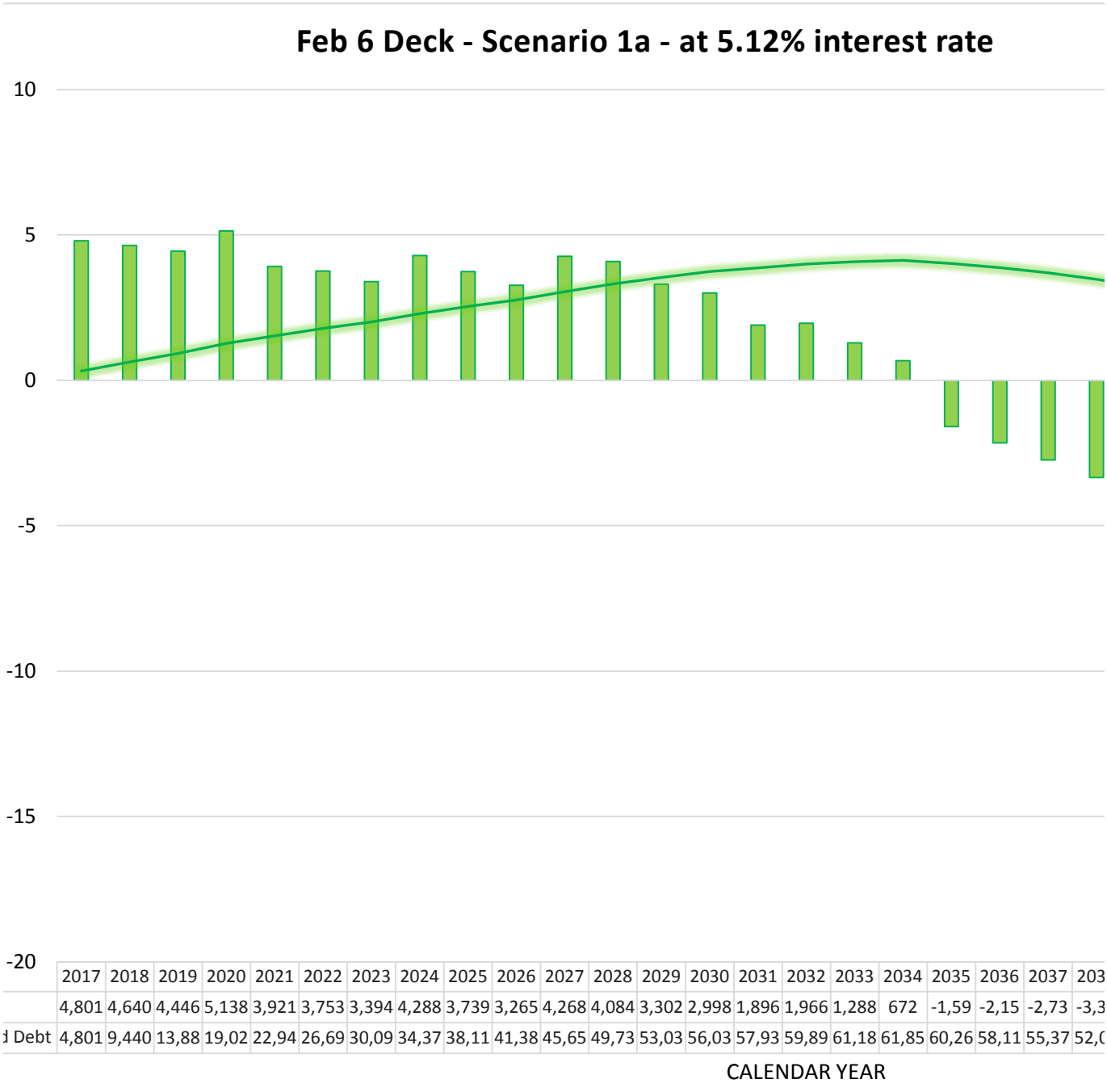
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

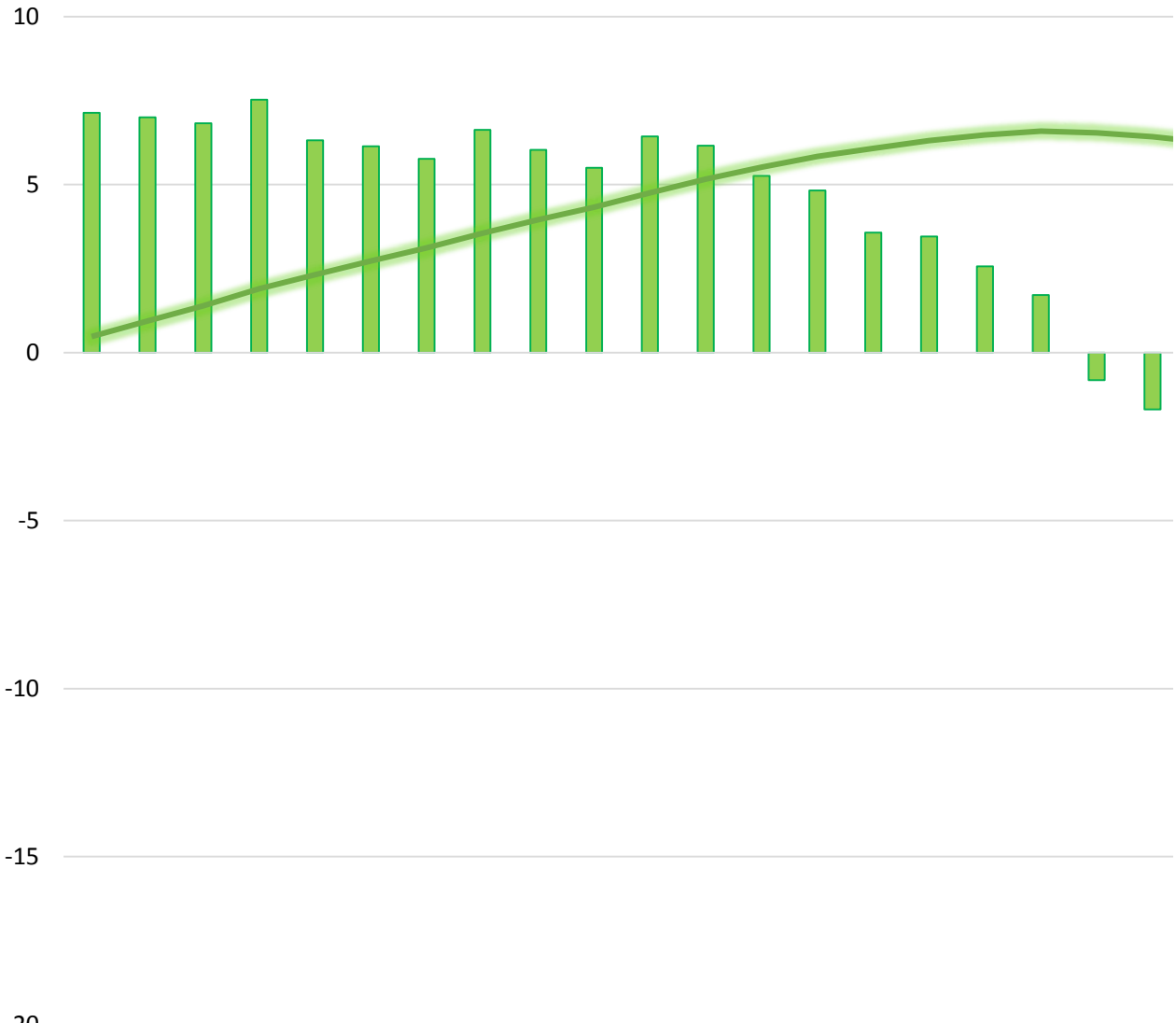
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

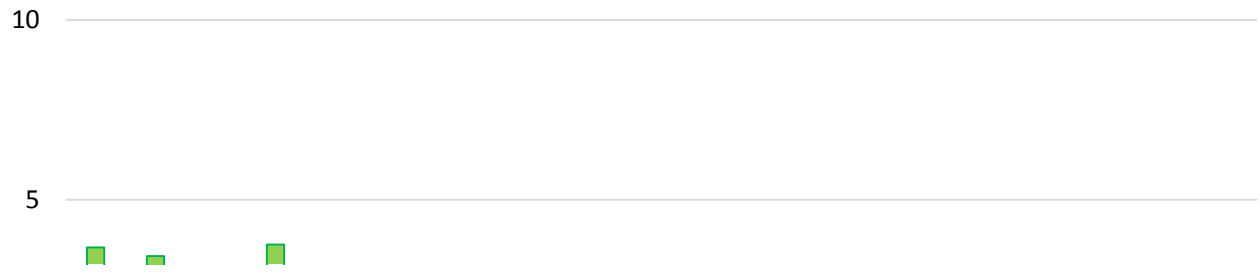
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

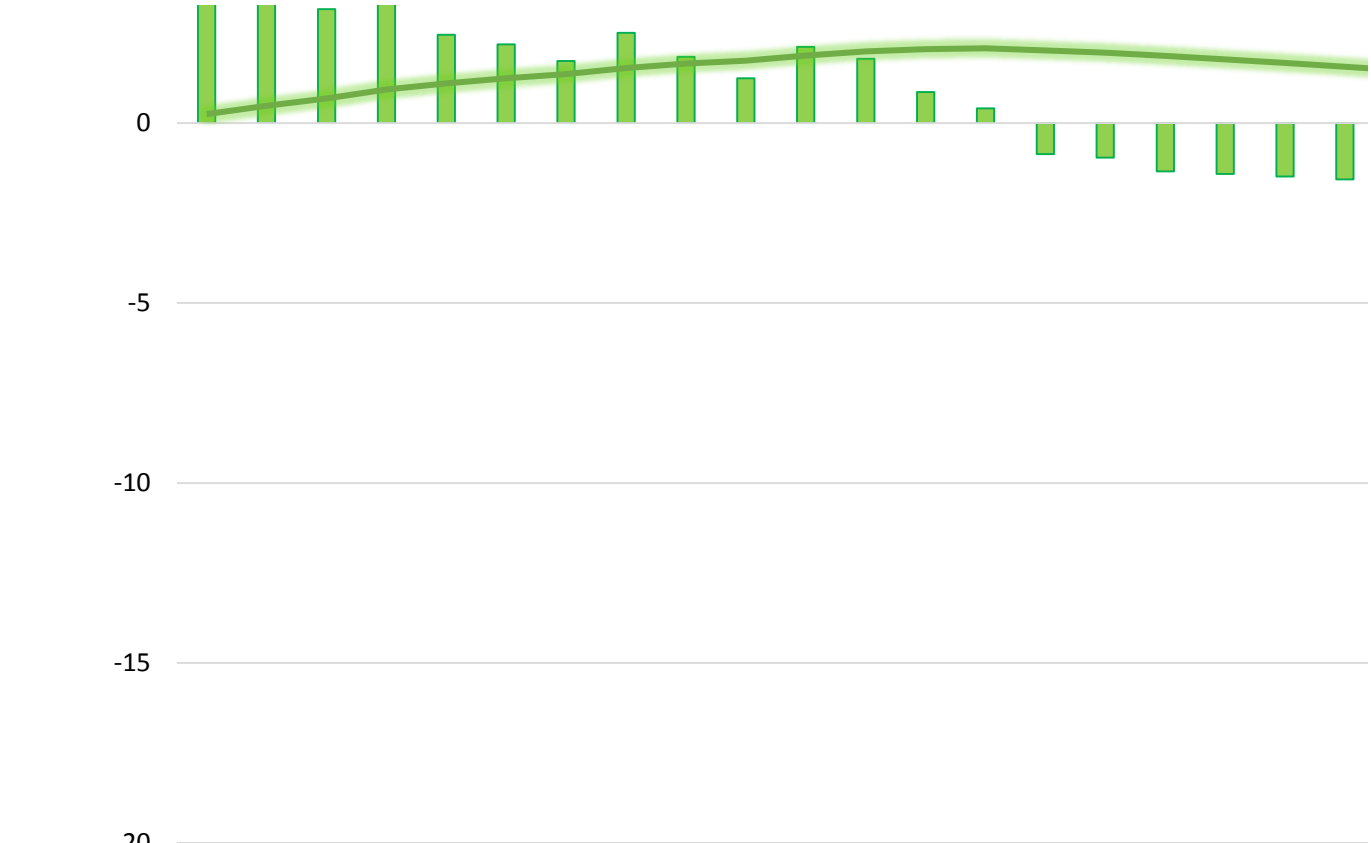


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



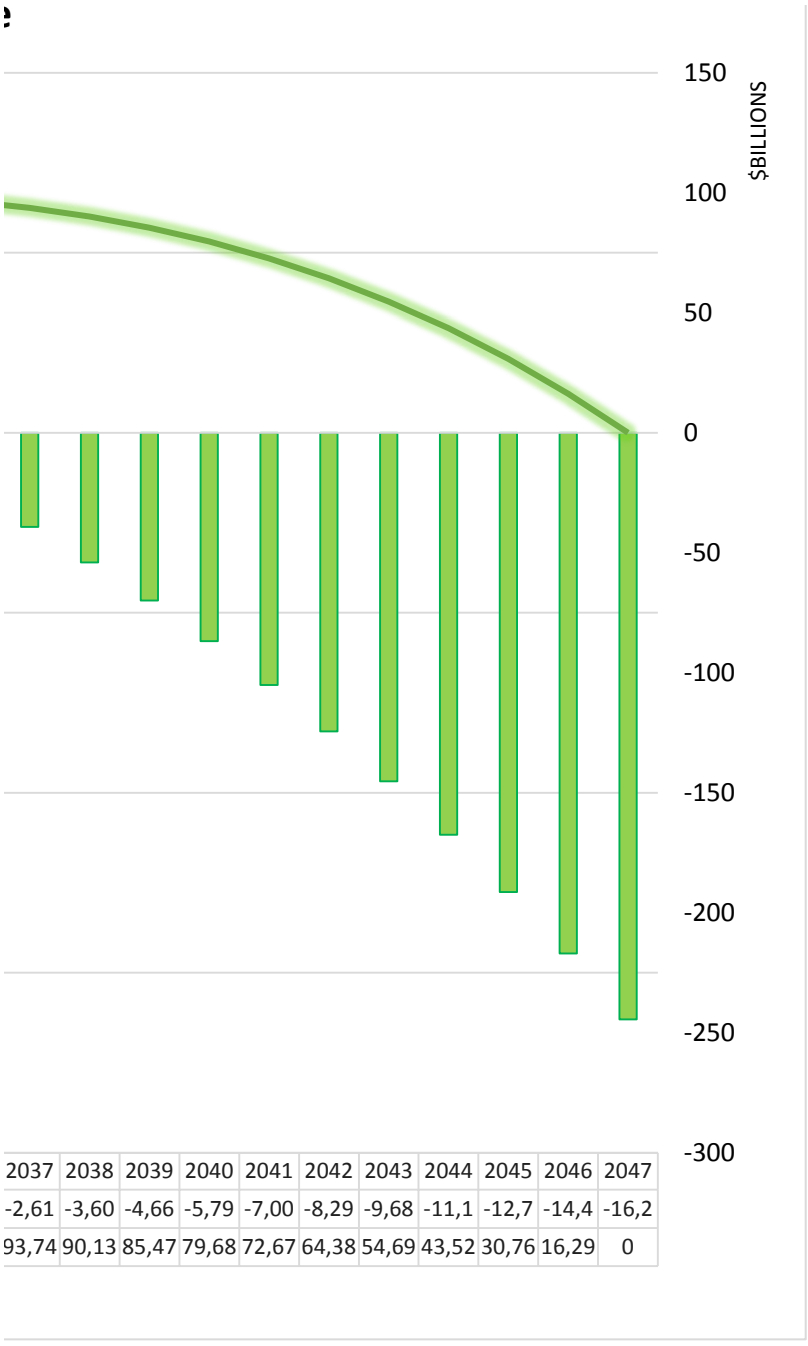


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

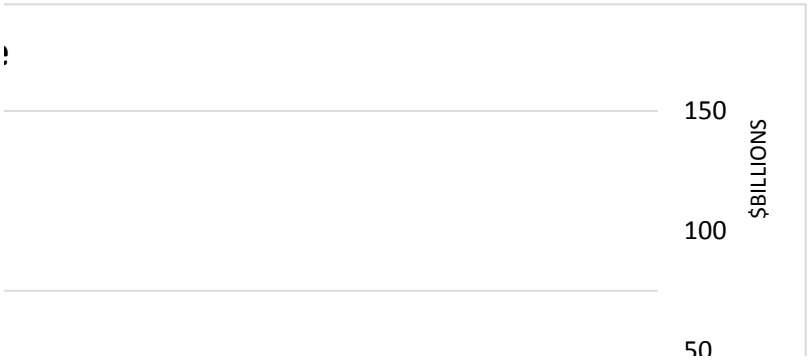
CALENDAR YEAR

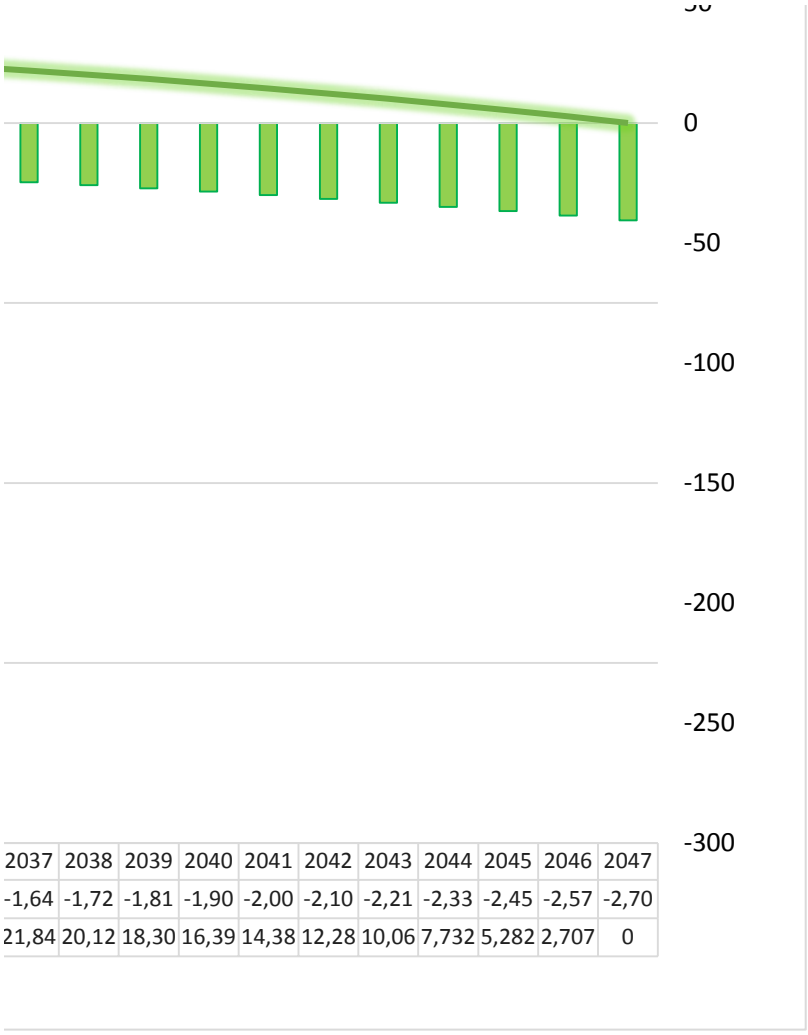


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Equal Monthly Debt Drawdown

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb4_1a_30yr

1a. GA Smoothing (Borrow ~$5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,801	4,640

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,200	4,760

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $62 billion, peakin
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary on accounting treatment.

7,133 7,133

Feb4_1b_30yr 7,133

1b. GA Smoothing (Borrow ~$7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	7,133	6,999

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,783	7,100

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $99 billion, peaking
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b on accounting treatment.

Feb4_1c_30yr

1c. GA Smoothing (Borrow ~$4 billion in 2017)

$ millions

Scenario 1C - 30-yr amortization	2017	2018
Annual Exposure[2]	3,678	3,437

	Fiscalized[3]	2016-17	2017-18
	Start: January 1st	919	3,617

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	1,783 - 1,200	7,100 - 4,760

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1200	4760
Debt-Finance Global Adjustment Costs, Option 1a	1783	7100
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18

Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1200**	**5000**
Total, B	1783	7340
Proposed Program Total:	1,783 - 1,200	7,340 - 5,000

ining

1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
4,446	5,138	3,921	3,753

2018-19	2019-20	2020-21	2021-2022
4,591	4,619	4,833	3,879

ng in 203 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
by approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
6,825	7,529	6,315	6,141

2018-19	2019-20	2020-21	2021-2022
6,956	7,001	7,226	6,272

g in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
3,158	3,761	2,450	2,183

2018-19	2019-20	2020-21	2021-2022
3,367	3,309	3,433	2,383

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
6,956 - 4,591	7,001 - 4,619	7,226 - 4,833	6,272 - 3,879

/1

2018-19[1]	2019-20[1]	2020-21[1]
4591	4619	4833
6956	7001	7226
225	279	323
60	60	60
18	18	18

4894	**4976**	**5234**
7259	7358	7627

7,259 - 4,894 7,358 - 4,976 7,627 - 5,234

1a. GA Smoothing (Borrow $5 billion in 2017)

	2017
IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	7,095
Additional GA Debt Drawdown, End of Year	5,000

Ratepayer GA Payment

Total Accumulated Debt *($ billion)*	5,000
Total Change in Accumulated Debt *($ billion)*	5000

1b. GA Smoothing (Borrow $7 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	5,095
Additional GA Debt Drawdown, End of Year	7,000

Total Accumulated Debt *($ billion)*	7000
Total Change in Accumulated Debt *($ billion)*	7000

1c. GA Smoothing (Borrow $4 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	8,095
Additional GA Debt Drawdown, End of Year	4,000

Total Accumulated Debt *($ billion)*	4000
Total Change in Accumulated Debt *($ billion)*	4000

2018	2019	2020	2021	2022	2023	2024	2025
11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
6,835	7,552	7,168	6,844	6,634	7,243	7,128	6,527
5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000

9,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000
5000	4000	5000	4000	4000	3000	4000	4000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
4,835	4,552	4,168	4,844	4,634	4,243	4,128	4,527
7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000

14000	21000	28000	35000	41000	47000	53000	59000
7000	7000	8000	6000	6000	6000	7000	6000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
8,835	8,552	8,168	8,844	8,634	8,243	8,128	8,527
3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000

7000	10000	14000	16000	19000	20000	23000	25000
3000	3000	4000	2000	2000	2000	3000	2000

2026	2027	2028	2029	2030	2031	2032	2033
10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
7,033	7,043	6,819	7,009	6,721	6,654	6,820	7,238
3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000

41,000	46,000	50,000	53,000	56,000	58,000	60,000	61,000
3000	4000	4000	3000	3000	2000	2000	1000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
4,033	5,043	4,819	5,009	4,721	4,654	5,820	5,238
6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000

65000	71000	77000	83000	88000	91000	95000	97000
6000	6000	6000	5000	5000	4000	3000	3000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
9,033	9,043	8,819	9,009	9,721	9,654	9,820	9,238
1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000

26000	28000	30000	31000	31000	30000	29000	28000
1000	2000	2000	1000	0	-1000	-1000	-1000

2034	2035	2036	2037	2038	2039	2040	2041
7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
6,756	7,662	7,389	8,129	7,881	8,645	9,421	9,207
1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000

62,000	60,000	58,000	55,000	52,000	48,000	43,000	38,000
1000	-2000	-2000	-3000	-3000	-4000	-5000	-5000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
5,756	6,662	7,389	8,129	8,881	9,645	10,421	11,207
2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000

99000	98000	96000	94000	90000	85000	80000	73000
2000	-1000	-2000	-3000	-4000	-5000	-6000	-7000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
8,756	6,662	7,389	7,129	6,881	6,645	6,421	6,207
-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000

27000	25000	23000	22000	20000	18000	16000	14000
-1000	-1000	-2000	-2000	-2000	-2000	-2000	-2000

2042	2043	2044	2045	2046	2047	2048		
4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
10,004	9,811	9,627	9,451	10,285	10,126	2,975		
-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0		

33,000	27,000	20,000	14,000	7,000	-	-	
-6000	-6000	-6000	-6000	-7000	-7000	0	

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
12,004	13,811	14,627	16,451	17,285	19,126	2,975		
-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0		

64000	55000	44000	31000	16000	0	0
-8000	-10000	-11000	-13000	-14000	-16000	0

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
6,004	5,811	5,627	5,451	6,285	6,126	2,975		
-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0		

12000	10000	8000	5000	3000	0	0
-2000	-2000	-2000	-2000	-3000	-3000	0

Feb4 1a, 30-yr - Debt Drawdown Scenarios

-92,247 -94598.515 58,489 36109.18 0

Feb4_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0
			114	110	106	122	93	89	81	102	89	78	102	97	79	71	45	47	31	16	-38	-51	-65	-80	-95	-110	-126	-133	-140	-147	-155	-162	-171	0	0	0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	5,138	3,167	58,489
Equal Monthly Debt Drawdown	5,260	3,149	

Maximum Accumulated Debt — Feb4 1a, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

End of Year Debt Drawdown	61,858	36,109
Equal Monthly Debt Drawdown	63,330	

			40%	37%	34%	36%	27%	24%																												
Feb4 1a, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
a	Debt, Beginning of Year		0	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	
c = a*5%	*Interest Cost - Feb4 1a, 30-yr - End of Year Debt Drawdown*		*0*	*246*	*483*	*711*	*974*	*1,175*	*1,367*	*1,541*	*1,760*	*1,952*	*2,119*	*2,337*	*2,546*	*2,716*	*2,869*	*2,966*	*3,067*	*3,133*	*3,167*	*3,086*	*2,975*	*2,835*	*2,664*	*2,461*	*2,224*	*1,952*	*1,666*	*1,365*	*1,049*	*717*	*367*	*0*	*0*	*0*	58,489
b	Additional GA Debt Drawdown, End of Year		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	21,822	23,788	25,076	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	20,490	13,998	7,173	0	0	0	
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	36,109	36,109	36,109	36,109	34,517	32,362	29,624	26,281	22,311	17,687	12,383	6,793	918	0	0	0	0	0	0	0	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688	49,149	51,372	53,325	54,991	56,356	57,405	58,122	58,489				
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371	-5,713	-13,241	-20,783	-28,325	-35,866	-43,408	-50,949	-58,489				
Fiscal Exposure - End of Year Debt Drawdown			4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0	

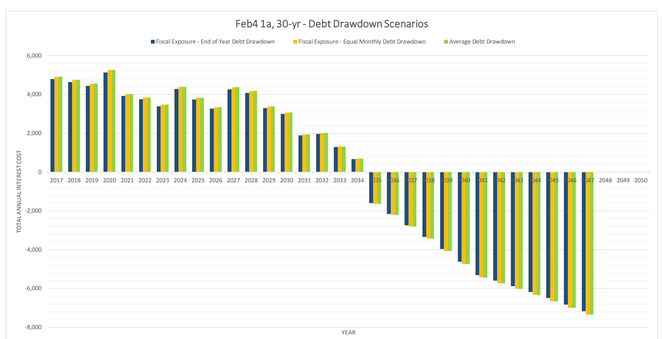
Feb4 1a, 30-yr	Equal Monthly Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			12																																		
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
3,149	*Interest Cost - Feb4 1a, 30-yr*		*114*	*356*	*589*	*833*	*1,067*	*1,264*	*1,448*	*1,643*	*1,849*	*2,029*	*2,220*	*2,435*	*2,625*	*2,787*	*2,914*	*3,013*	*3,097*	*3,149*	*3,129*	*3,034*	*2,910*	*2,756*	*2,569*	*2,351*	*2,098*	*1,819*	*1,526*	*1,218*	*895*	*554*	*197*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0	

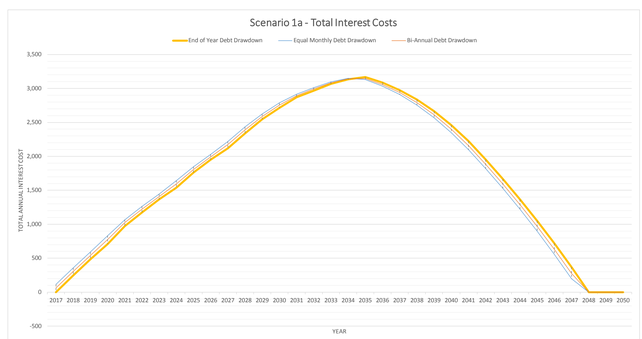
	Monthly Drawdown		400	366	330	369	246	215	169	229	165	109	179	146	63	24	(81)	(83)	(148)	(205)	(397)	(437)	(476)	(515)	(553)	(590)	(627)	(629)	(628)	(628)	(628)	(628)	(628)	-	-	-
	FV of Monthly Drawdown at 5%		4,915	4,498	4,057	4,532	3,017	2,640	2,075	2,813	2,026	1,345	2,200	1,789	773	289	(996)	(1,024)	(1,821)	(2,519)	(4,872)	(5,365)	(5,849)	(6,325)	(6,793)	(7,253)	(7,707)	(7,722)	(7,721)	(7,721)	(7,721)	(7,721)	(7,720)	-	-	-
	Annual Interest Cost on New Drawdowns		114	105	94	105	70	61	48	65	47	31	51	42	18	7	(23)	(24)	(42)	(59)	(113)	(125)	(136)	(147)	(158)	(169)	(179)	(180)	(180)	(180)	(180)	(180)	(179)	-	-	-
	Annual Interest Cost on Opening Balance		-	252	495	728	997	1,203	1,399	1,577	1,802	1,998	2,169	2,393	2,607	2,780	2,937	3,037	3,140	3,207	3,243	3,159	3,046	2,903	2,727	2,519	2,277	1,999	1,706	1,398	1,074	734	376	(0)	(0)	(0)
	Total Annual Interest Cost		114	356	589	833	1,067	1,264	1,448	1,643	1,849	2,029	2,220	2,435	2,625	2,787	2,914	3,013	3,097	3,149	3,129	3,034	2,910	2,756	2,569	2,351	2,098	1,819	1,526	1,218	895	554	197	(0)	(0)	(0)

Feb4 1a, 30-yr	Bi-Annual Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*61*	*305*	*540*	*777*	*1,024*	*1,223*	*1,410*	*1,596*	*1,808*	*1,993*	*2,173*	*2,390*	*2,589*	*2,754*	*2,893*	*2,991*	*3,083*	*3,141*	*3,147*	*3,058*	*2,940*	*2,792*	*2,613*	*2,401*	*2,156*	*1,881*	*1,591*	*1,286*	*966*	*629*	*275*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown			4,862	4,699	4,502	5,203	3,971	3,801	3,438	4,343	3,787	3,307	4,322	4,137	3,344	3,037	1,920	1,991	1,305	681	-1,612	-2,183	-2,773	-3,386	-4,021	-4,683	-5,372	-5,661	-5,951	-6,255	-6,575	-6,912	-7,265	0	0	0	

	Bi-Annual Drawdown		2,400	2,197	1,981	2,213	1,473	1,289	1,014	1,374	989	657	1,074	874	378	141	(487)	(500)	(889)	(1,230)	(2,379)	(2,620)	(2,857)	(3,089)	(3,317)	(3,542)	(3,764)	(3,771)	(3,771)	(3,771)	(3,771)	(3,771)	(3,770)	-	-	-
	FV of Bi-Annual Drawdown at 5%		4,862	4,450	4,013	4,483	2,984	2,612	2,053	2,783	2,004	1,331	2,176	1,769	765	286	(986)	(1,013)	(1,801)	(2,492)	(4,820)	(5,308)	(5,787)	(6,257)	(6,719)	(7,175)	(7,624)	(7,639)	(7,638)	(7,638)	(7,638)	(7,638)	(7,637)	-	-	-
	Annual Interest Cost on New Drawdowns		61	56	51	57	38	33	26	35	25	17	28	22	10	4	(12)	(13)	(23)	(31)	(61)	(67)	(73)	(79)	(85)	(91)	(96)	(97)	(97)	(97)	(97)	(97)	(97)	-	-	-
	Annual Interest Cost on Opening Balance		-	249	490	720	986	1,190	1,384	1,560	1,783	1,977	2,146	2,367	2,579	2,750	2,906	3,004	3,106	3,173	3,208	3,125	3,013	2,871	2,698	2,492	2,252	1,977	1,687	1,383	1,063	726	372	(0)	(0)	(0)
	Total Annual Interest Cost		61	305	540	777	1,024	1,223	1,410	1,596	1,808	1,993	2,173	2,390	2,589	2,754	2,893	2,991	3,083	3,141	3,147	3,058	2,940	2,792	2,613	2,401	2,156	1,881	1,591	1,286	966	629	275	(0)	(0)	(0)

Feb4 1a, 30-yr	Average Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*123*	*365*	*597*	*842*	*1,074*	*1,271*	*1,454*	*1,650*	*1,856*	*2,035*	*2,228*	*2,442*	*2,631*	*2,792*	*2,918*	*3,016*	*3,100*	*3,150*	*3,126*	*3,030*	*2,905*	*2,749*	*2,562*	*2,342*	*2,088*	*1,809*	*1,516*	*1,207*	*883*	*542*	*184*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
Fiscal Exposure - Average Debt Drawdown			4,923	4,758	4,559	5,269	4,021	3,849	3,481	4,398	3,835	3,349	4,377	4,189	3,386	3,075	1,944	2,016	1,321	689	-1,633	-2,210	-2,808	-3,428	-4,072	-4,742	-5,440	-5,733	-6,026	-6,334	-6,658	-6,999	-7,357	0	0	0	





Feb4 1b, 30-yr - Debt Drawdown Scenarios

-149,507 -153857.97 97,141 56717.33 0

Feb4_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0
			170	167	162	179	150	146	137	158	144	131	153	147	125	115	85	82	61	41	-19	-40	-62	-86	-111	-138	-167	-198	-231	-266	-304	-344	-388	0	0	0

0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown 7,529	5,062	97,141
Equal Monthly Debt Drawdown 7,708	5,042	

Maximum Accumulated Debt	Feb4 1b, 30-yr, Accumulated Debt	Total Principal Debt Borrowed
End of Year Debt Drawdown	98,864	56,717
Equal Monthly Debt Drawdown	101,217	

Feb4 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
a Debt, Beginning of Year	0	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	
c = a*5% *Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown*	*0*	*365*	*724*	*1,073*	*1,459*	*1,782*	*2,096*	*2,391*	*2,731*	*3,040*	*3,322*	*3,651*	*3,966*	*4,236*	*4,483*	*4,665*	*4,842*	*4,974*	*5,062*	*5,020*	*4,933*	*4,800*	*4,615*	*4,376*	*4,080*	*3,721*	*3,296*	*2,800*	*2,228*	*1,575*	*834*	*0*	*0*	*0*	97,141
b Additional GA Debt Drawdown, End of Year	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
d = a+b+c Accumulated debt in present year (including 5% annual interest)	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	0	
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,633	26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606	82,685	86,406	89,703	92,503	94,731	96,306	97,141				
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,831	56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076	-10,007	-22,027	-35,008	-48,980	-63,971	-80,013	-97,141				
Fiscal Exposure - End of Year Debt Drawdown	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0	

Feb4 1b, 30-yr — Equal Monthly Debt Drawdown

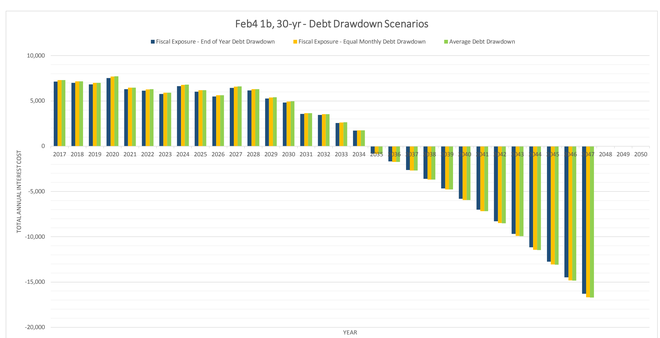
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	
5,042 *Interest Cost - Feb4 1b, 30-yr*	*170*	*532*	*886*	*1,252*	*1,609*	*1,928*	*2,234*	*2,549*	*2,874*	*3,171*	*3,475*	*3,797*	4,091	*4,350*	*4,568*	*4,748*	*4,904*	*5,015*	*5,042*	*4,980*	*4,871*	*4,714*	*4,504*	*4,238*	*3,913*	*3,524*	*3,066*	*2,534*	*1,925*	*1,231*	*446*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0	
Monthly Drawdown	594	553	508	538	405	363	306	353	275	205	259	209	108	49	(76)	(101)	(189)	(271)	(490)	(559)	(629)	(700)	(773)	(847)	(924)	(1,002)	(1,082)	(1,164)	(1,249)	(1,337)	(1,427)	(0)	-	-	
FV of Monthly Drawdown at 5%	7,303	6,792	6,247	6,610	4,972	4,463	3,755	4,338	3,383	2,523	3,184	2,565	1,327	605	(937)	(1,237)	(2,326)	(3,335)	(6,020)	(6,867)	(7,728)	(8,604)	(9,498)	(10,412)	(11,347)	(12,306)	(13,291)	(14,304)	(15,348)	(16,424)	(17,536)	(0)	-	-	
Annual Interest Cost on New Drawdowns	170	158	145	154	116	104	87	101	79	59	74	60	31	14	(22)	(29)	(54)	(78)	(140)	(160)	(180)	(200)	(221)	(242)	(264)	(286)	(309)	(333)	(357)	(382)	(408)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	374	741	1,099	1,493	1,824	2,146	2,448	2,796	3,112	3,401	3,738	4,061	4,336	4,589	4,776	4,958	5,092	5,182	5,139	5,051	4,914	4,725	4,481	4,177	3,810	3,375	2,867	2,281	1,612	854	0	(0)	(0)	
Total Annual Interest Cost	170	532	886	1,252	1,609	1,928	2,234	2,549	2,874	3,171	3,475	3,797	4,091	4,350	4,568	4,748	4,904	5,015	5,042	4,980	4,871	4,714	4,504	4,238	3,913	3,524	3,066	2,534	1,925	1,231	446	0	(0)	(0)	

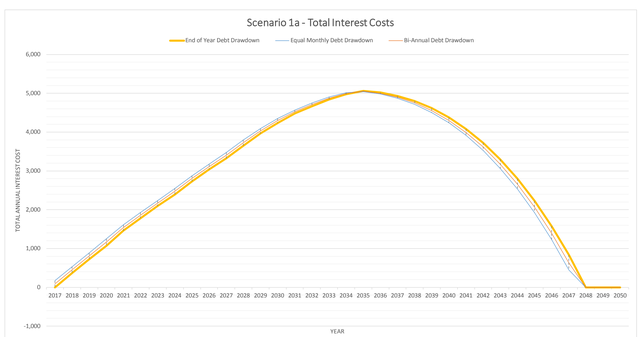
Feb4 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*91*	*455*	*811*	*1,169*	*1,539*	*1,861*	*2,170*	*2,476*	*2,808*	*3,110*	*3,404*	*3,730*	*4,034*	*4,297*	*4,528*	*4,710*	*4,875*	*4,996*	*5,051*	*4,998*	*4,900*	*4,753*	*4,555*	*4,302*	*3,990*	*3,615*	*3,172*	*2,657*	*2,065*	*1,390*	*626*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	7,225	7,089	6,913	7,626	6,396	6,220	5,838	6,713	6,113	5,574	6,514	6,235	5,330	4,888	3,614	3,501	2,603	1,738	-829	-1,709	-2,648	-3,651	-4,722	-5,867	-7,093	-8,405	-9,810	-11,314	-12,926	-14,652	-16,502	0	0	0	
Bi-Annual Drawdown	3,567	3,317	3,051	3,228	2,428	2,180	1,834	2,118	1,652	1,232	1,555	1,253	648	295	(457)	(604)	(1,136)	(1,629)	(2,940)	(3,354)	(3,774)	(4,202)	(4,639)	(5,085)	(5,542)	(6,010)	(6,491)	(6,986)	(7,495)	(8,021)	(8,564)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	7,225	6,719	6,180	6,539	4,919	4,415	3,715	4,291	3,347	2,496	3,150	2,538	1,313	598	(926)	(1,224)	(2,301)	(3,299)	(5,956)	(6,794)	(7,645)	(8,512)	(9,396)	(10,300)	(11,225)	(12,174)	(13,148)	(14,150)	(15,183)	(16,247)	(17,347)	(0)	-	-	
Annual Interest Cost on New Drawdowns	91	85	78	83	62	56	47	54	42	32	40	32	17	8	(12)	(15)	(29)	(42)	(75)	(86)	(97)	(108)	(119)	(130)	(142)	(154)	(166)	(179)	(192)	(205)	(219)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	370	733	1,087	1,477	1,805	2,123	2,422	2,766	3,079	3,364	3,698	4,017	4,290	4,540	4,725	4,904	5,038	5,127	5,084	4,997	4,861	4,674	4,432	4,132	3,769	3,338	2,836	2,257	1,595	845	0	0	0	
Total Annual Interest Cost	91	455	811	1,169	1,539	1,861	2,170	2,476	2,808	3,110	3,404	3,730	4,034	4,297	4,528	4,710	4,875	4,996	5,051	4,998	4,900	4,753	4,555	4,302	3,990	3,615	3,172	2,657	2,065	1,390	626	0	0	0	

Feb4 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*183*	*544*	*898*	*1,266*	*1,620*	*1,939*	*2,244*	*2,561*	*2,885*	*3,181*	*3,486*	*3,809*	*4,101*	*4,359*	*4,574*	*4,754*	*4,908*	*5,018*	*5,041*	*4,977*	*4,867*	*4,707*	*4,496*	*4,228*	*3,900*	*3,509*	*3,048*	*2,514*	*1,902*	*1,205*	*417*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	7,316	7,179	7,000	7,722	6,477	6,298	5,912	6,798	6,190	5,645	6,597	6,314	5,397	4,950	3,659	3,545	2,636	1,760	-840	-1,731	-2,682	-3,697	-4,782	-5,942	-7,183	-8,511	-9,934	-11,457	-13,089	-14,838	-16,711	0	0	0	





Feb4 1c, 30-yr - Debt Drawdown Scenarios

Feb4_1c_30yr

Annual Interest Rate = 5.1%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0
			88	82	75	90	58	52	41	60	44	29	50	43	20	10	-20	-23	-32	-34	-35	-37	-39	-41	-43	-45	-48	-50	-53	-55	-58	-61	-64	0	0	0

0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	3,761	1,594	29,477
Equal Monthly Debt Drawdown	3,851	1,583	

Maximum Accumulated Debt — Feb4 1c, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

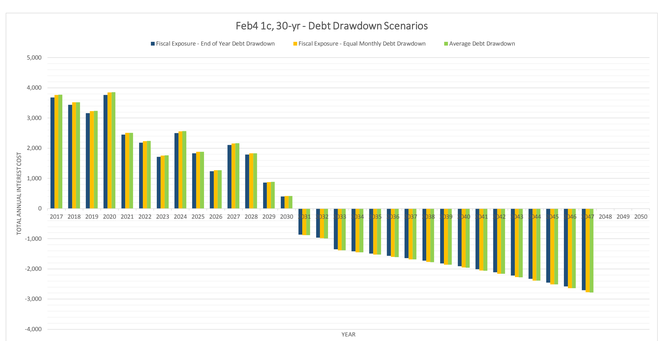
End of Year Debt Drawdown	31,125	20,043
Equal Monthly Debt Drawdown	31,866	

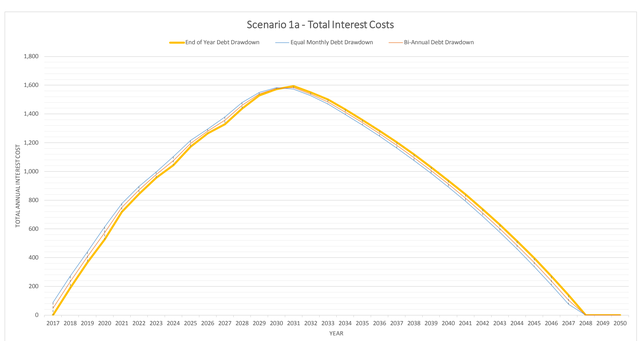
		30%	27%	24%	27%	16%	13%																														
Feb4 1c, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
a	Debt, Beginning of Year	0	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	
c = a*5%	*Interest Cost - Feb4 1c, 30-yr - End of Year Debt Drawdown*	*0*	*188*	*364*	*526*	*719*	*844*	*956*	*1,044*	*1,172*	*1,266*	*1,329*	*1,437*	*1,529*	*1,573*	*1,594*	*1,550*	*1,500*	*1,431*	*1,359*	*1,283*	*1,203*	*1,119*	*1,030*	*937*	*839*	*737*	*629*	*515*	*396*	*270*	*139*	*0*	*0*	*0*	*0*	29,477
b	Additional GA Debt Drawdown, End of Year	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	0	
	Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,641	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663	22,866	23,984	25,015	25,952	26,791	27,528	28,157	28,672	29,068	29,338	29,477				
	Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18,247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828	-1,018	-3,864	-6,710	-9,556	-12,402	-15,248	-18,094	-20,940	-23,786	-26,631	-29,477				
Fiscal Exposure - End of Year Debt Drawdown		3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0	

Feb4 1c, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	
1,583	*Interest Cost - Feb4 1c, 30-yr*	*88*	*270*	*439*	*615*	*777*	*896*	*997*	*1,103*	*1,216*	*1,295*	*1,379*	*1,480*	1,549	*1,583*	*1,573*	*1,527*	*1,468*	*1,398*	*1,324*	*1,246*	*1,164*	*1,077*	*987*	*892*	*792*	*686*	*576*	*460*	*338*	*209*	*74*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0	
	Monthly Drawdown	306	271	233	270	144	112	64	122	55	(2)	65	29	(56)	(97)	(204)	(209)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(0)	-	-	
	FV of Monthly Drawdown at 5%	3,765	3,326	2,861	3,312	1,773	1,371	781	1,493	679	(28)	799	360	(684)	(1,197)	(2,512)	(2,570)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,913)	(2,913)	(2,913)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	88	77	67	77	41	32	18	35	16	(1)	19	8	(16)	(28)	(58)	(60)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	193	373	538	736	864	979	1,069	1,200	1,296	1,361	1,471	1,565	1,610	1,632	1,586	1,536	1,465	1,391	1,313	1,231	1,145	1,055	959	859	754	644	527	405	277	142	0	0	0	
	Total Annual Interest Cost	88	270	439	615	777	896	997	1,103	1,216	1,295	1,379	1,480	1,549	1,583	1,573	1,527	1,468	1,398	1,324	1,246	1,164	1,077	987	892	792	686	576	460	338	209	74	0	0	0	

Feb4 1c, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*47*	*232*	*405*	*574*	*750*	*872*	*978*	*1,076*	*1,195*	*1,282*	*1,356*	*1,460*	*1,540*	*1,578*	*1,583*	*1,537*	*1,483*	*1,413*	*1,340*	*1,263*	*1,182*	*1,097*	*1,007*	*913*	*814*	*710*	*600*	*485*	*365*	*237*	*104*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,725	3,481	3,199	3,809	2,481	2,211	1,741	2,534	1,859	1,254	2,137	1,812	872	409	-871	-973	-1,363	-1,433	-1,506	-1,584	-1,665	-1,750	-1,839	-1,933	-2,032	-2,136	-2,246	-2,360	-2,481	-2,608	-2,742	0	0	0	
	Bi-Annual Drawdown	1,839	1,624	1,397	1,618	866	670	382	729	332	(14)	390	176	(334)	(584)	(1,227)	(1,255)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(0)	-	-	
	FV of Bi-Annual Drawdown at 5%	3,725	3,290	2,830	3,277	1,754	1,356	773	1,477	672	(28)	791	356	(677)	(1,184)	(2,485)	(2,542)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	47	42	36	41	22	17	10	19	8	(0)	10	5	(9)	(15)	(31)	(32)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	191	369	533	728	855	968	1,057	1,187	1,282	1,346	1,456	1,548	1,593	1,614	1,569	1,520	1,450	1,376	1,299	1,218	1,133	1,043	949	850	746	637	522	401	274	140	0	0	0	
	Total Annual Interest Cost	47	232	405	574	750	872	978	1,076	1,195	1,282	1,356	1,460	1,540	1,578	1,583	1,537	1,483	1,413	1,340	1,263	1,182	1,097	1,007	913	814	710	600	485	365	237	104	0	0	0	

Feb4 1c, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*94*	*276*	*445*	*622*	*781*	*900*	*1,000*	*1,108*	*1,219*	*1,298*	*1,383*	*1,483*	*1,551*	*1,583*	*1,572*	*1,525*	*1,466*	*1,395*	*1,321*	*1,243*	*1,161*	*1,074*	*984*	*888*	*788*	*683*	*572*	*456*	*333*	*205*	*69*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,772	3,525	3,239	3,857	2,513	2,239	1,763	2,566	1,882	1,270	2,164	1,835	883	414	-882	-985	-1,381	-1,451	-1,526	-1,604	-1,686	-1,772	-1,863	-1,958	-2,058	-2,163	-2,274	-2,390	-2,513	-2,641	-2,776	0	0	0	





30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

TO BE

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,556	3,123	1,728	1,400	836	1,560	821	167

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

E UPDATED

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

JK: Fixed the formula in the yellow highlighted cells. Pls. check. (SK: looks good to me)

	Tab
v16 GA Financing - Scenario 1a 1b v18 (with fiscal) - Feb 4_v2.xlsx	Powerpoint_Export Scenario tabs

Change Description

Added in trigger for later start in the year
Updated IESO forecast from Energy (IESO GA Cost Forecast 170207 (Feb 6 update).xlsx)

Equal Monthly Debt Drawdown

		Month	Months Remai
Scenario Start Date	**July**	7	6

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	3,180	2,888
Annual Exposure2 with start on July 1st	*1,590*	*2,888*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	795	3,107
Start: July 1st	-	*2,312*

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	851	3,335
Start: July 1st	-	*2,484*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	1,168	1,765
Annual Exposure2 with start on July 1st	*584*	*1,765*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	292	1,609
Start: July 1st	-	*1,025*

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,449	2,040
Annual Exposure2 with start on July 1st	*725*	*2,040*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,597
Start: July 1st	-	*1,959*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335
Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3575**
Total, B	362	1837
Proposed Program Total:	362 - 851	1,837 - 3,575

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,556	3,123	1,728	1,400
2,556	*3,123*	*1,728*	*1,400*

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646
2,805	*2,697*	*2,774*	*1,646*

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

ıking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
2,311	3,750	2,311	1,933
2,311	*3,750*	*2,311*	*1,933*

2018-19	2019-20	2020-21	2021-2022

1,901	2,671	3,391	2,217
1,901	*2,671*	*3,391*	*2,217*

2019	2020	2021	2022
2,581	4,016	2,598	2,241
2,581	*4,016*	*2,598*	*2,241*

2018-19	2019-20	2020-21	2021-2022
2,175	2,940	3,662	2,508
2,175	*2,940*	*3,662*	*2,508*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

/1

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052
2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

Equal Monthly Debt Drawdown

		Month	Months Remaining
Scenario Start Date	July	7	6

AS LONG AS >

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	3,180	2,888	2,556

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	795	3,107	2,805
Fiscal Exposure, 25%	199	777	701

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Annual Exposure[2]	3,404	3,128	2,812

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	851	3,335	3,049
Fiscal Exposure, 25%	213	834	762

Indicates year in which, similar to OPCD's exa
closest to 30%. As Fiscal 2016/17 is a partial y
month the GA deferral begins.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu
decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions	9%	14%	18%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	1,168	1,765	2,311

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	292	1,609	1,901
Fiscal Exposure, 25%	73	402	475

Scenario 1b - 30-yr amortization	2017	2018	2019
Annual Exposure[2]	1,449	2,040	2,581

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	362	1,597	2,175
Fiscal Exposure, 25%	91	399	544

Indicates year in which, similar to OPCD's exar closest to 30%.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 ar
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu on accounting treatment.

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]
Debt-Finance Global Adjustment Costs, Option 1a	213	834	762
Debt-Finance Global Adjustment Costs, Option 1b	91	399	544
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**213**	**1074**	**1065**
Total, B	91	639	847

Proposed Program Total:	91 - 213	639 - 1,074	847 - 1,065

($M)	2016-171	2017-181	2018-191
Debt-Finance Global Adjustment Costs, Option 1a	851	3335	3049
Debt-Finance Global Adjustment Costs, Option 1b	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**851**	**3575**	**3352**
Total, B	362	1837	2478

Proposed Program Total:	362 - 851	1,837 - 3,575	2,478 - 3,352

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6

7	July	7	
8	August	8	
9	September	9	
10	October	10	
11	November	11	
12	December	12	

30-year term	**2016-17**	**2017-18**	**2018-19**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335	2,175 - 3,049

ROWS HIDDEN

1	1 = Comparision Enabled

APRIL 1, 2017 25%

2020	2021	2022
3,123	1,728	1,400

2019-20	2020-21	2021-2022
2,697	2,774	1,646
674	693	412

2020	2021	2022
3,396	2,020	1,712

2019-20	2020-21	2021-2022
2,958	3,052	1,943
740	763	486

mple, the true cost of GA being deferred is
ear, exposure may be less subject to which

l $17-21 billion (at 3.5% interest rate), peaking in 2028.
$33-$36 million.

ıals per month based on month of the year. Actuals may also depend on

28%	17%	13%
2020	2021	2022
3,750	2,311	1,933

2019-20	2020-21	2021-2022
2,671	3,391	2,217
668	848	554

2020	2021	2022
4,016	2,598	2,241

2019-20	2020-21	2021-2022
2,940	3,662	2,508
735	915	627

mple, the true cost of GA being deferred is

ıd $17-21 billion (at 3.5% interest rate), peaking in 2028.
$118-$134 million.

ıals per month based on month of the year. Actuals may also depend on decision

2019-20[1]	2020-21[1]
740	763
735	915
279	323
60	60
18	18
1097	**1164**
1092	1316

1,092 - 1,097 1,316 - 1,164

2019-201	2020-211
2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453





2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964
Equal Monthly Debt Drawdown	3,180	952

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

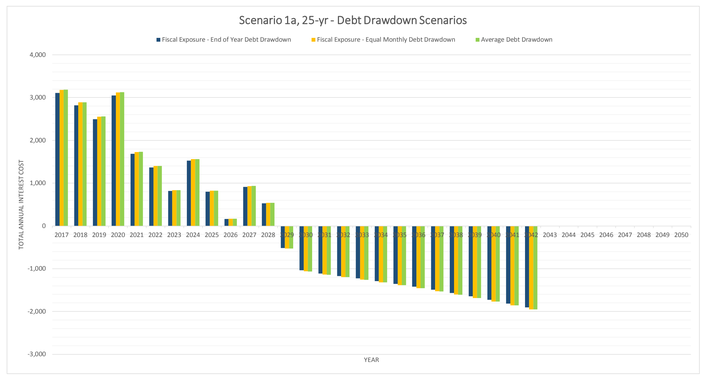
		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

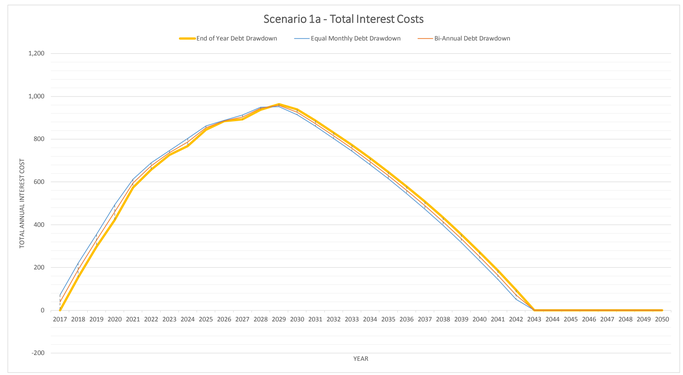
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	3,665	968	
Equal Monthly Debt Drawdown	3,750	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

		9%	14%	18%	28%	17%	13%																													
Scenario 1b, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

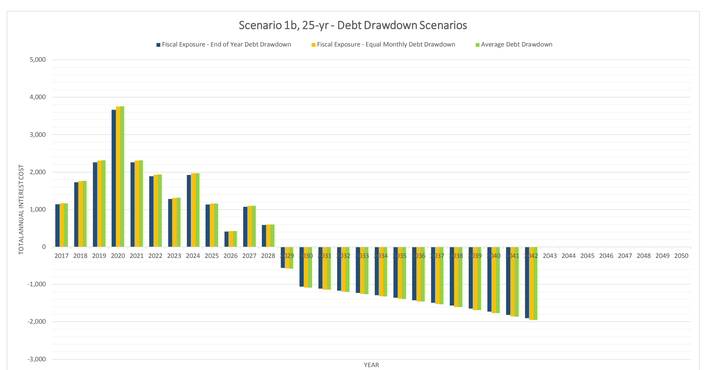
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	*954*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

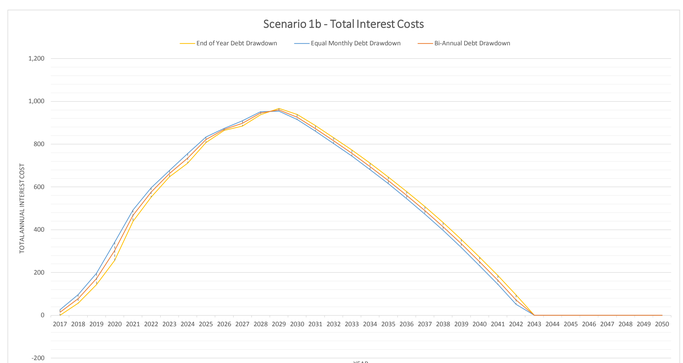
	Monthly Drawdown	95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

		28%	24%	21%	24%	12%	9%																													
Scenario 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1a, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	*1,156*	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

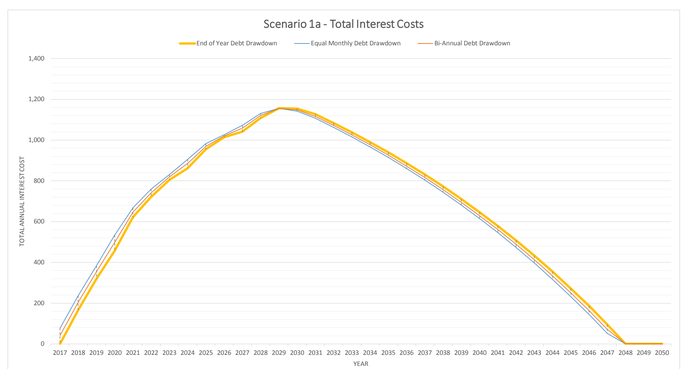
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

		12%	16%	20%	30%	19%	15%																													
Scenario 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

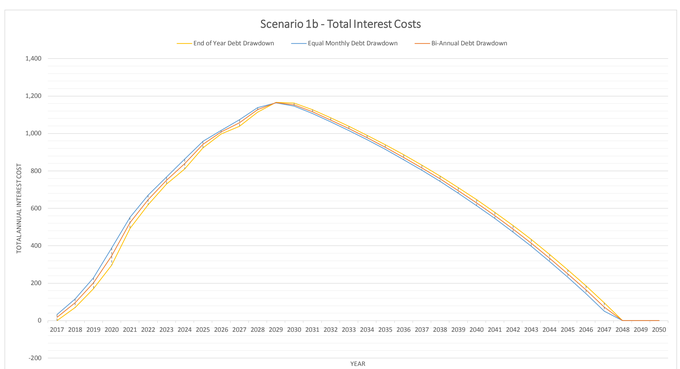
	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

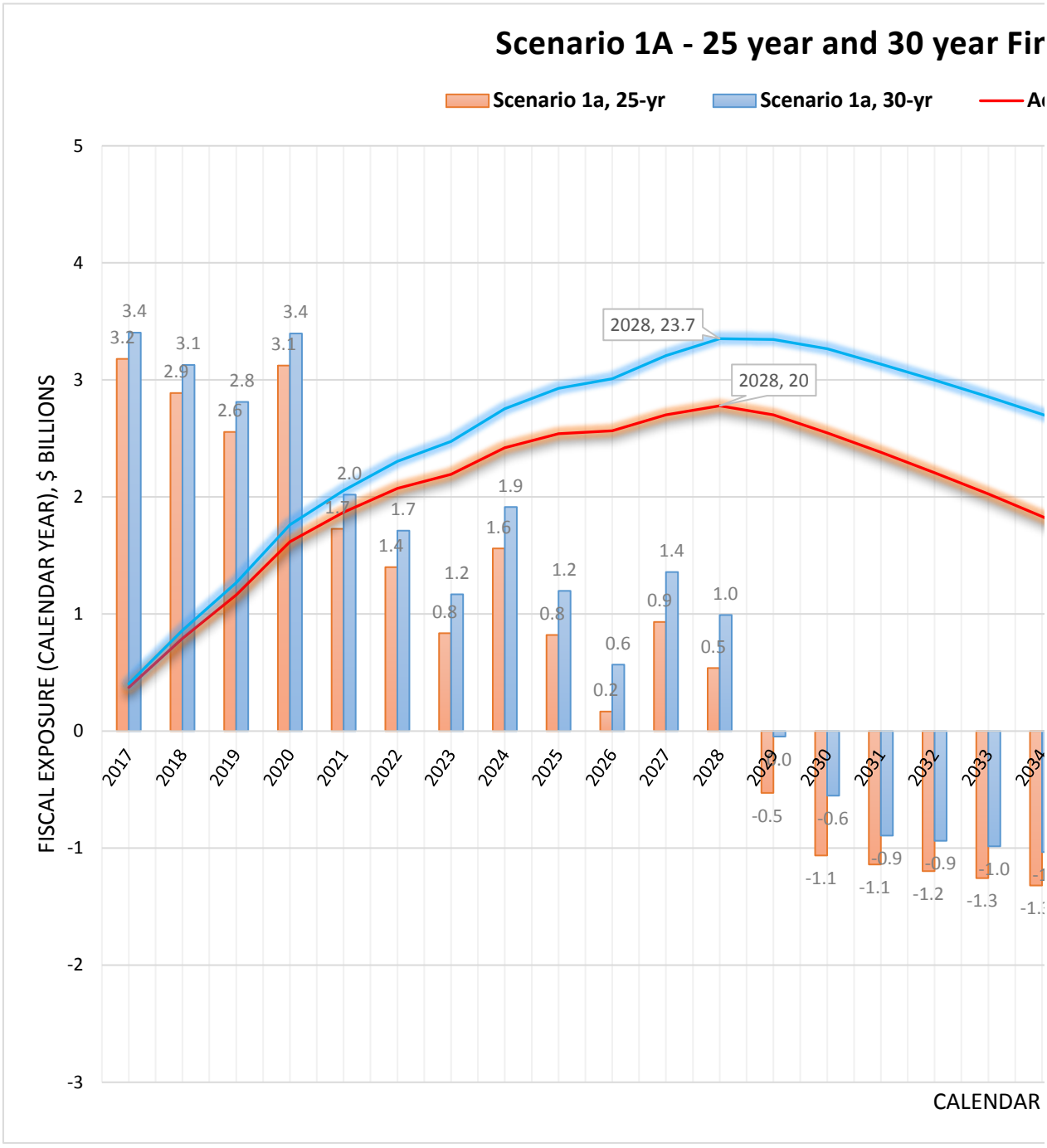
	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

Scenario 1b, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

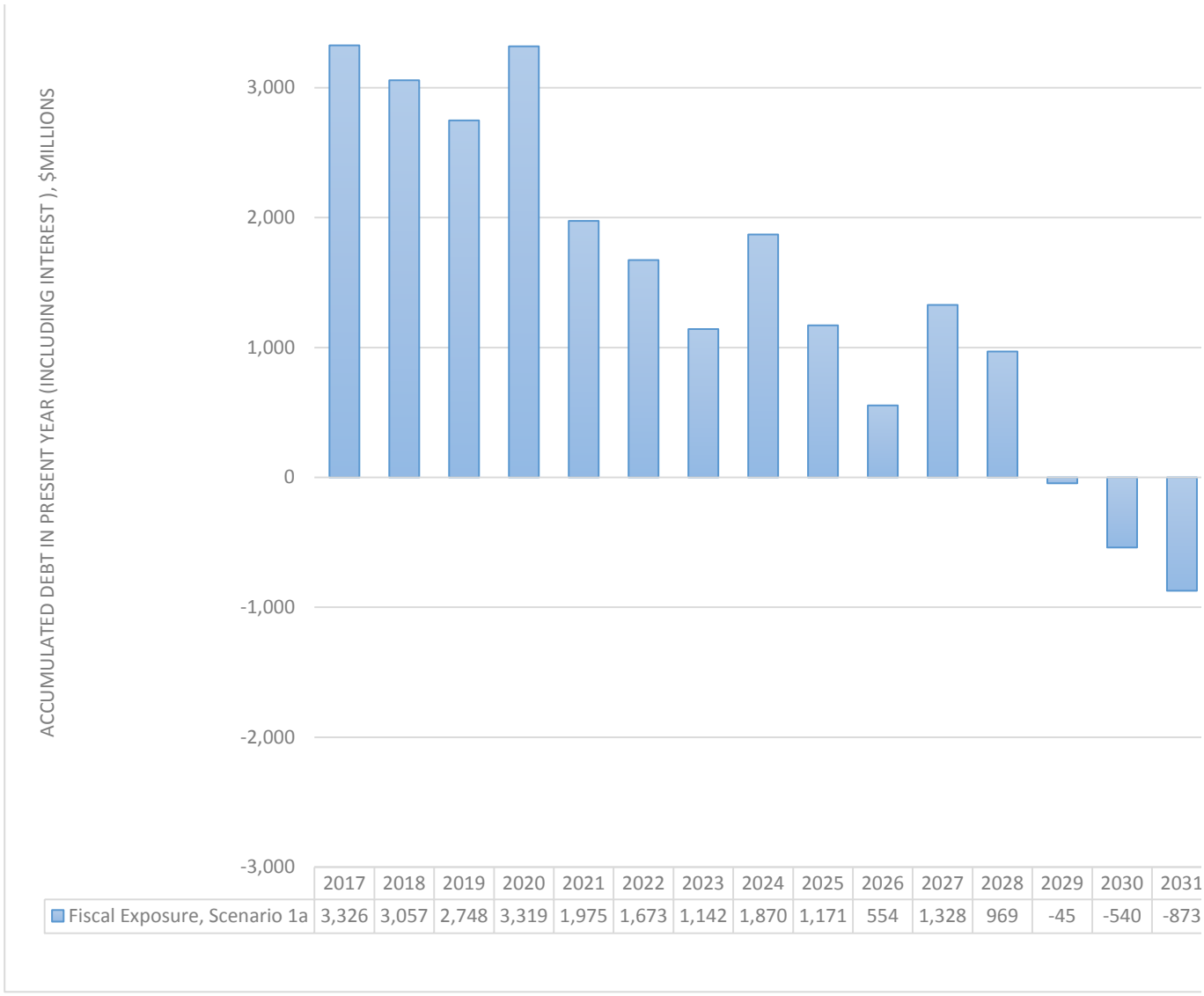




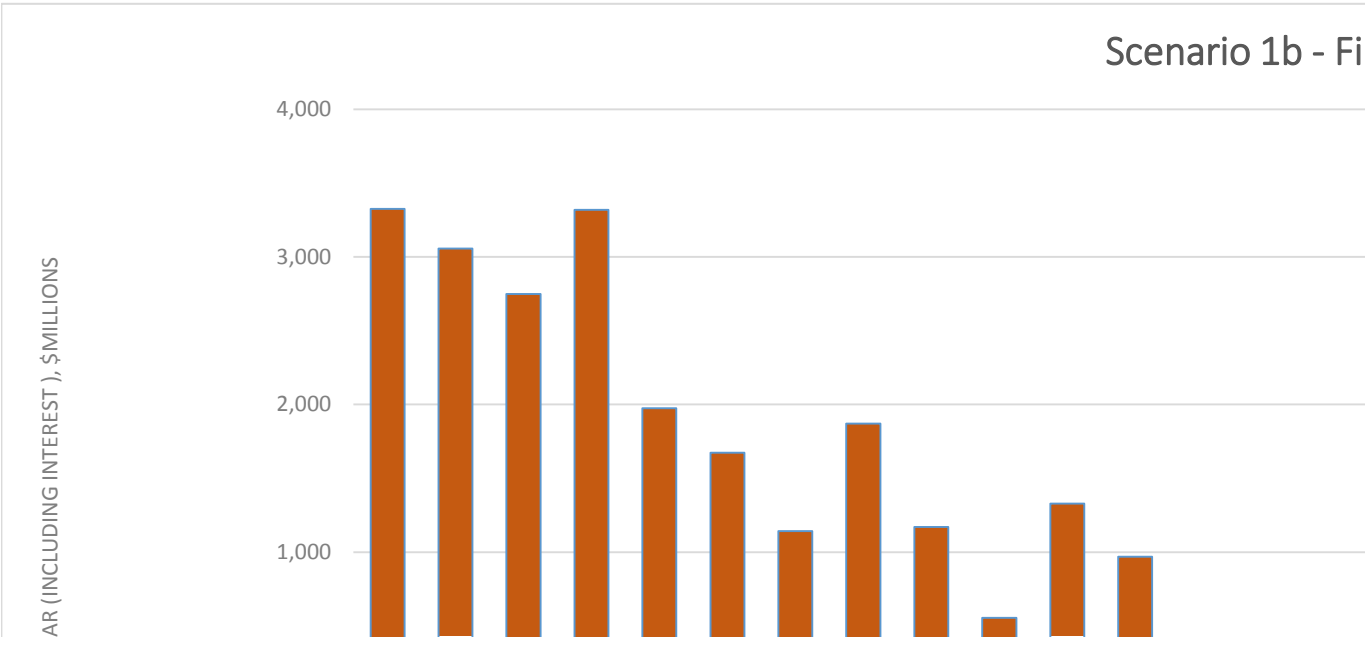
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

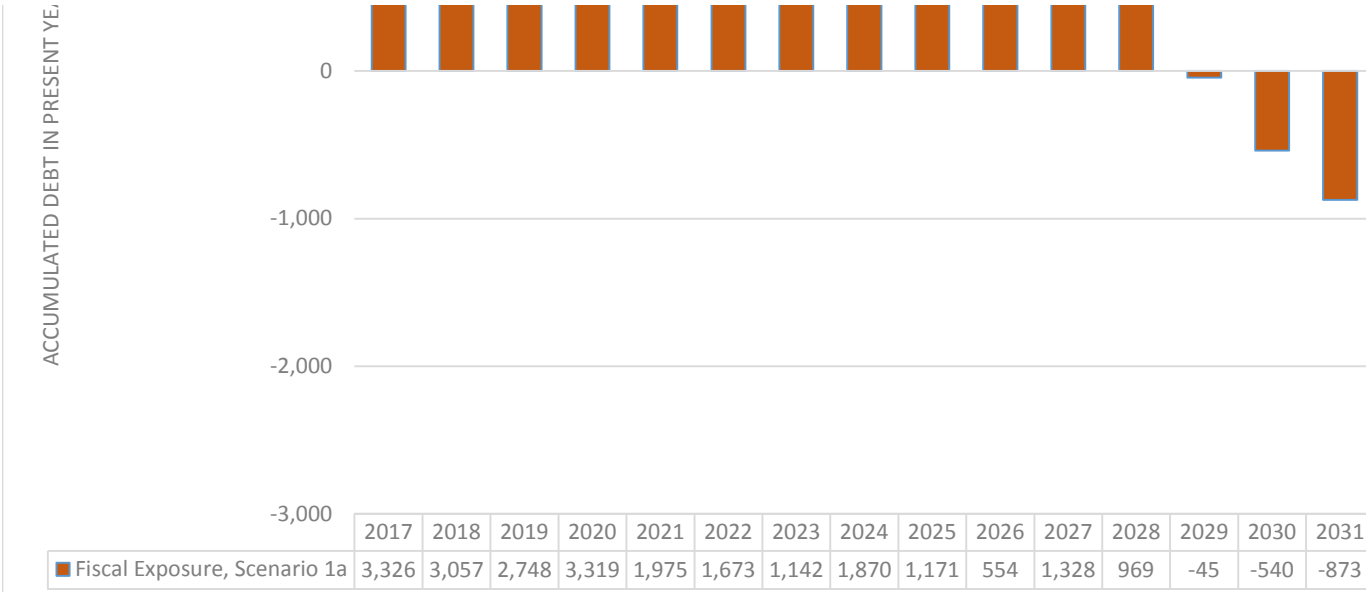




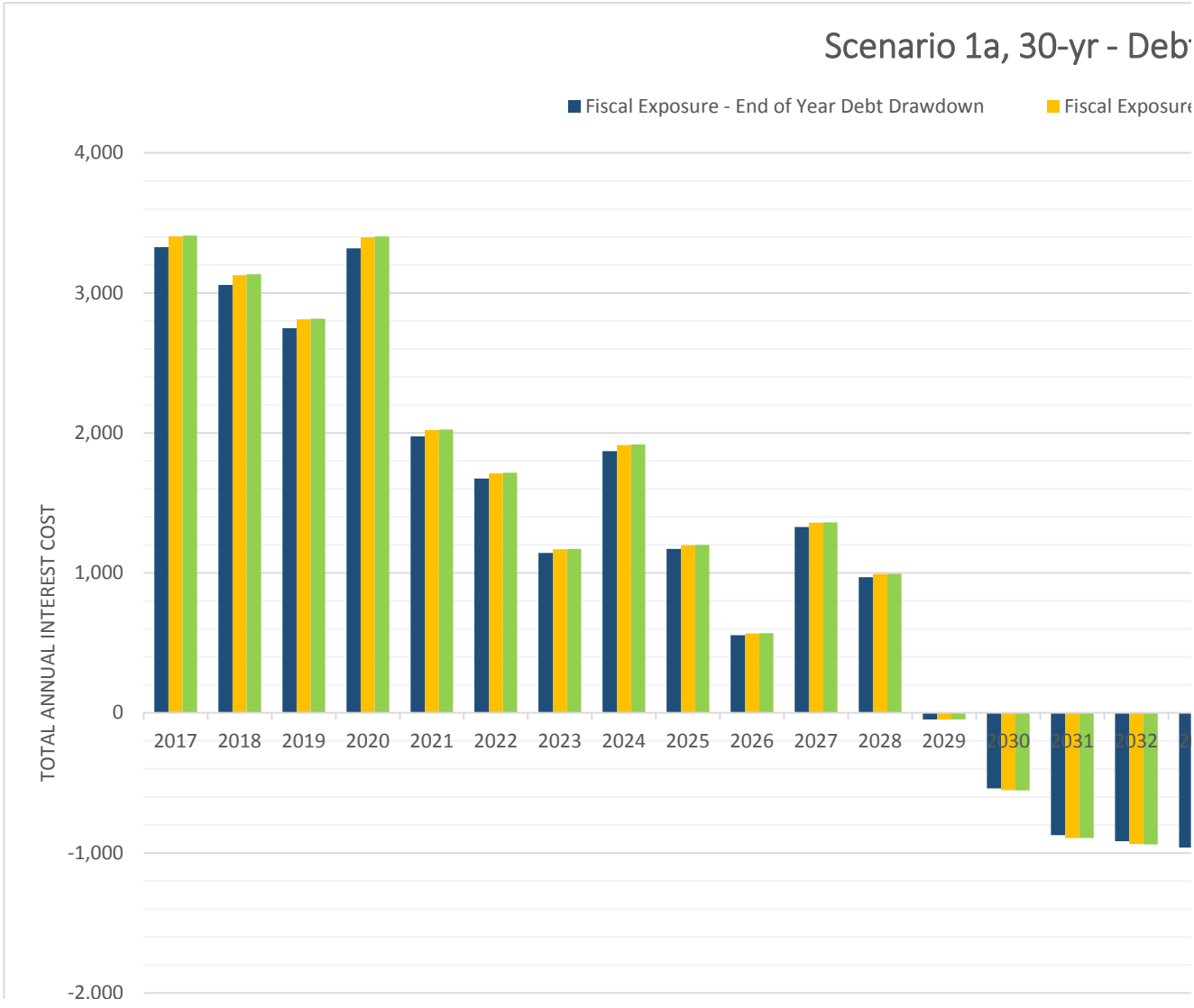


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



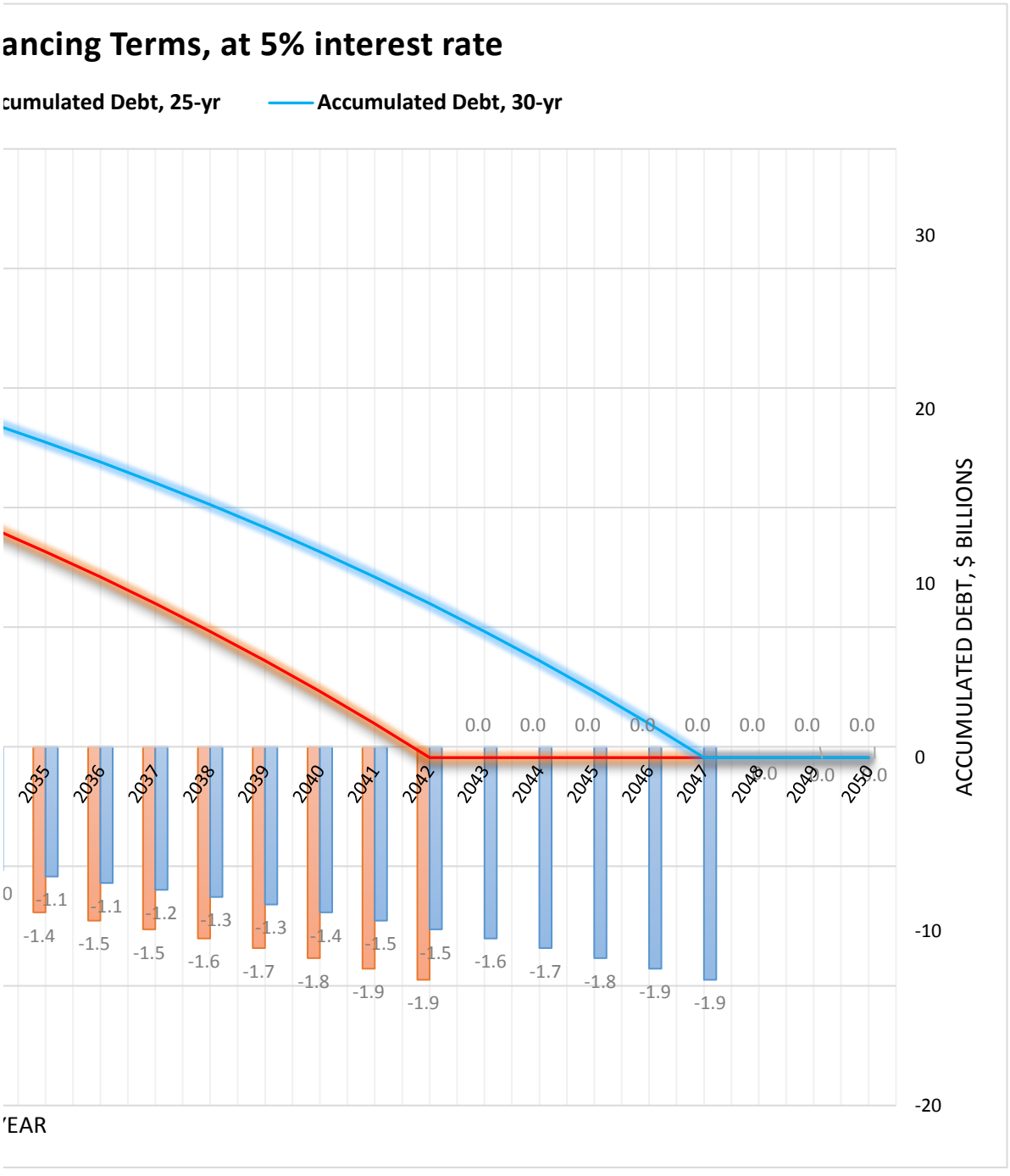


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



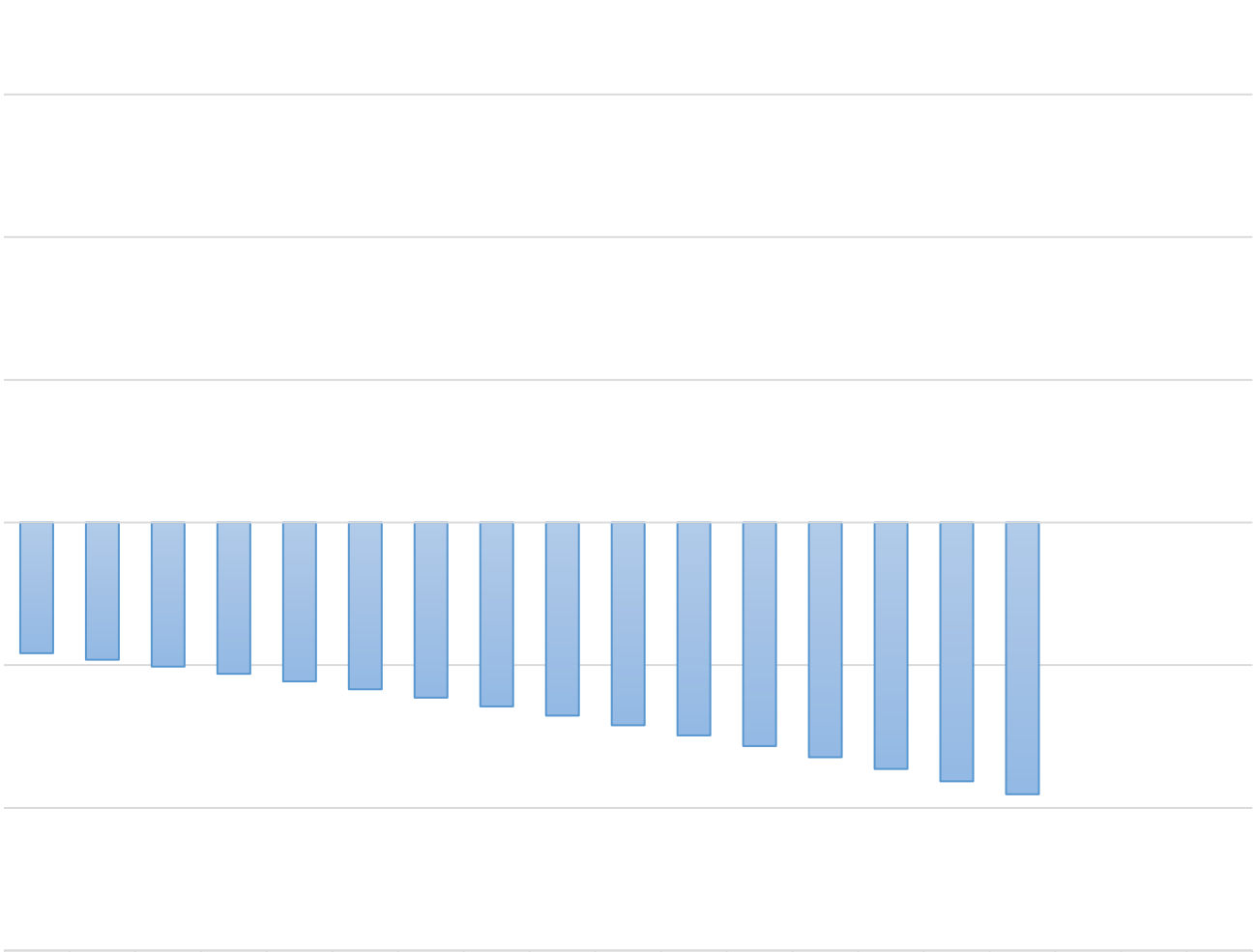

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

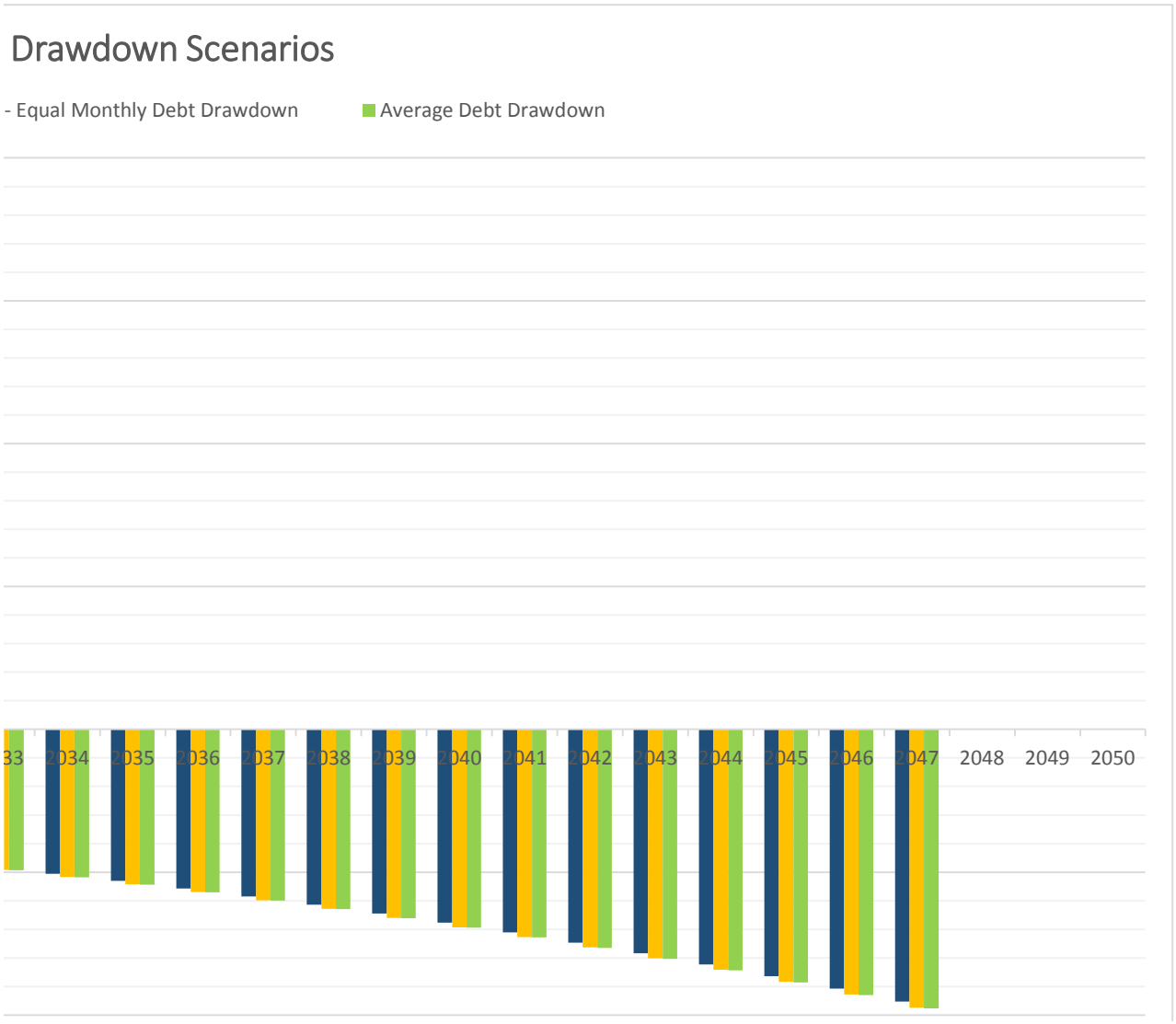
YEAR

cal Exposure



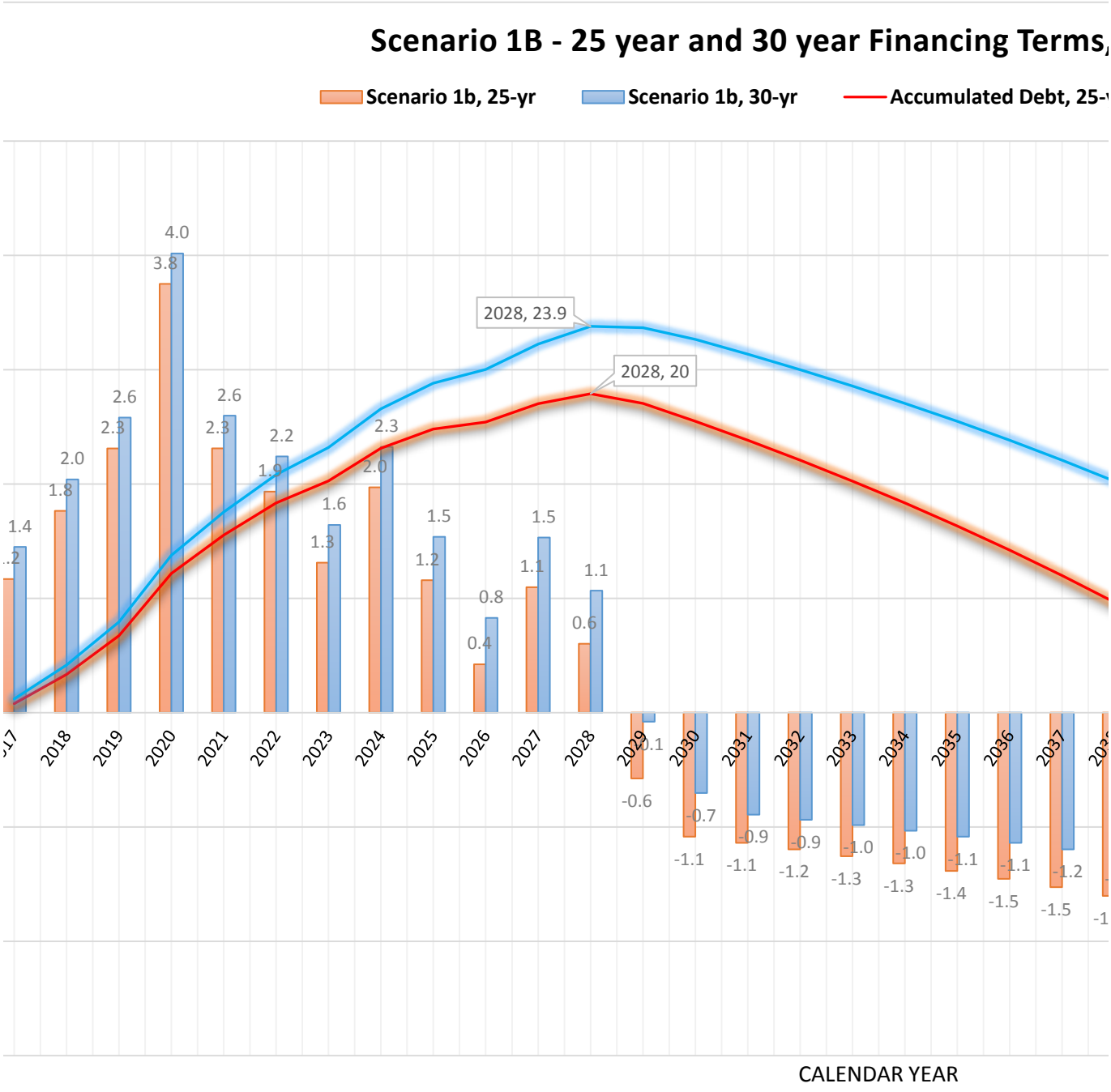
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

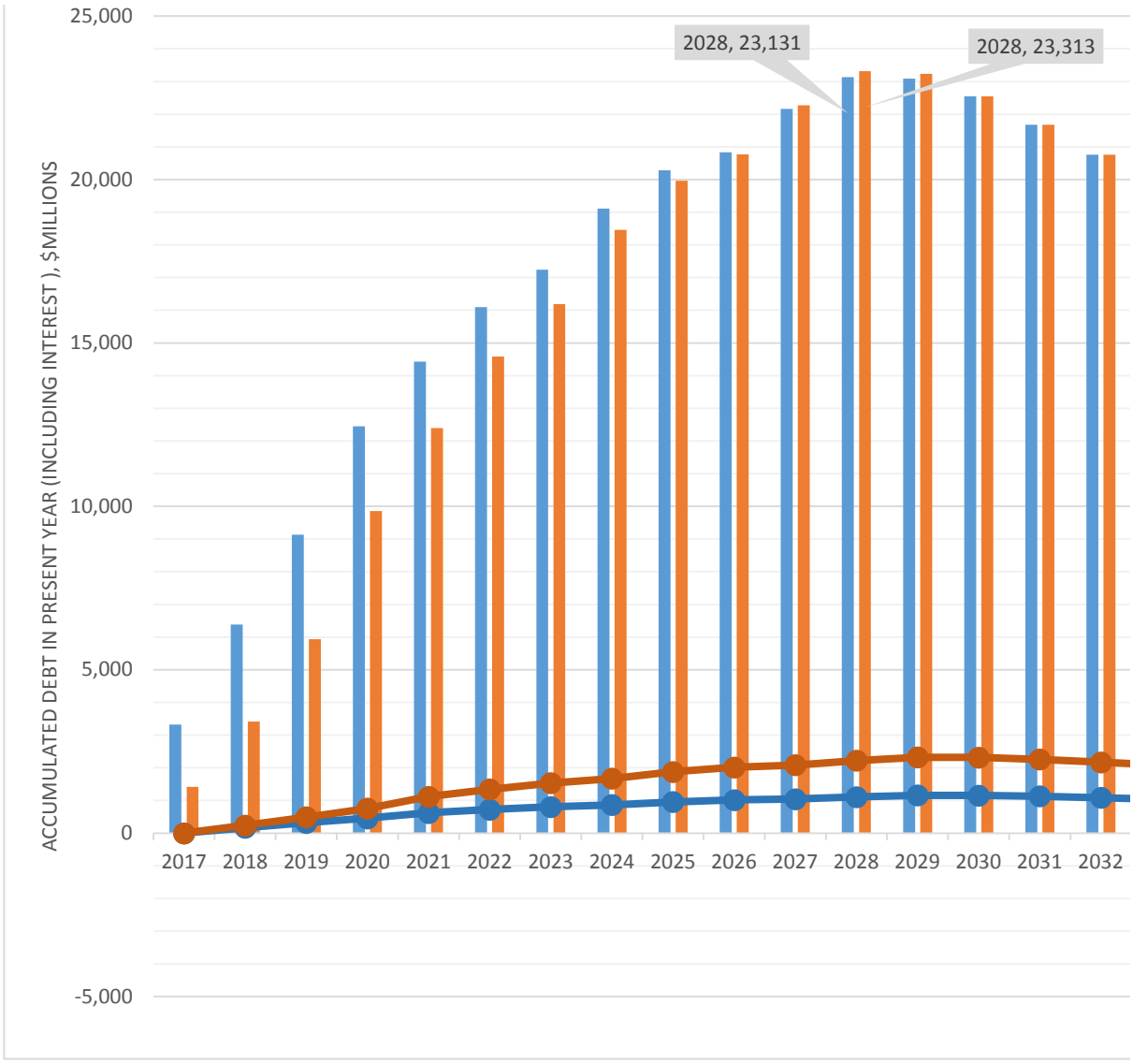


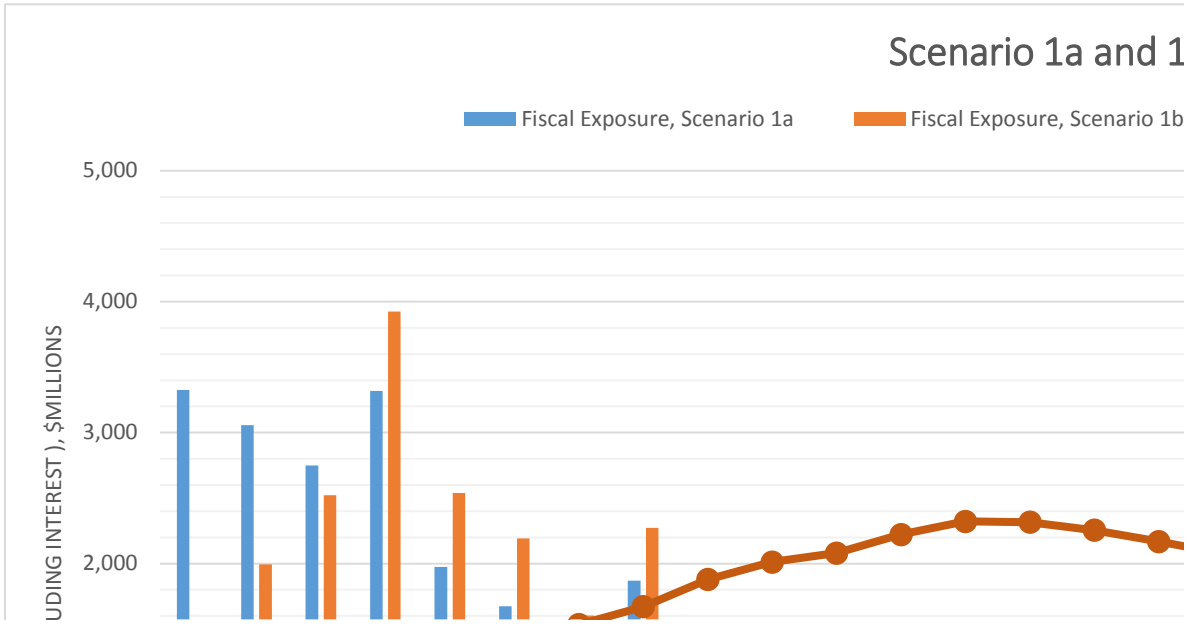
YEAR

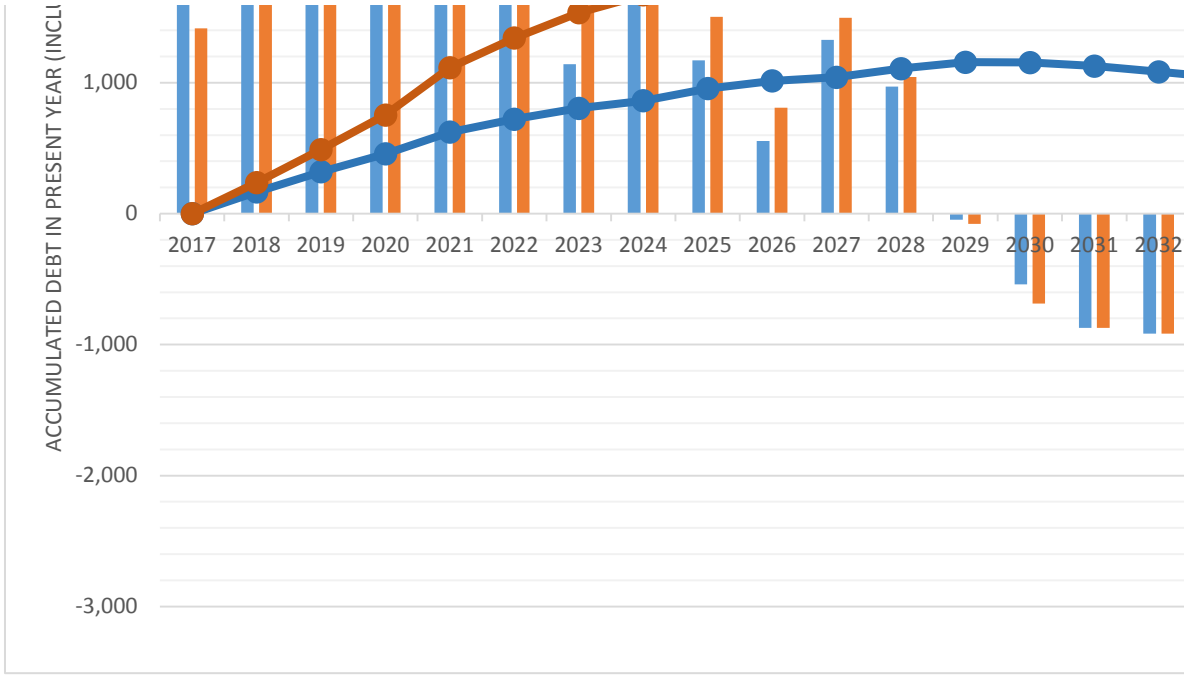
3 - 25 year and 30 year Financing Terms, at 5% interest rate

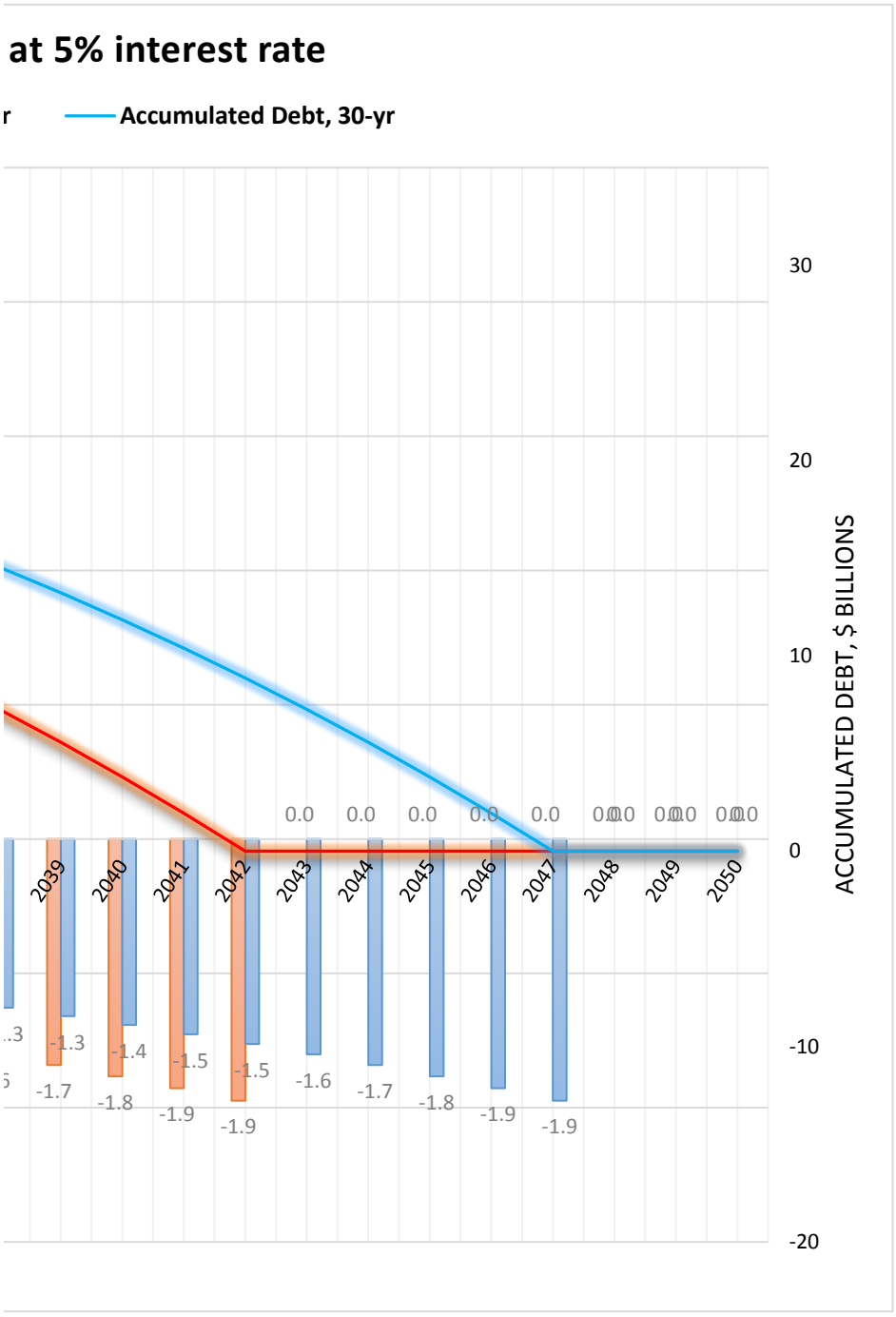





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

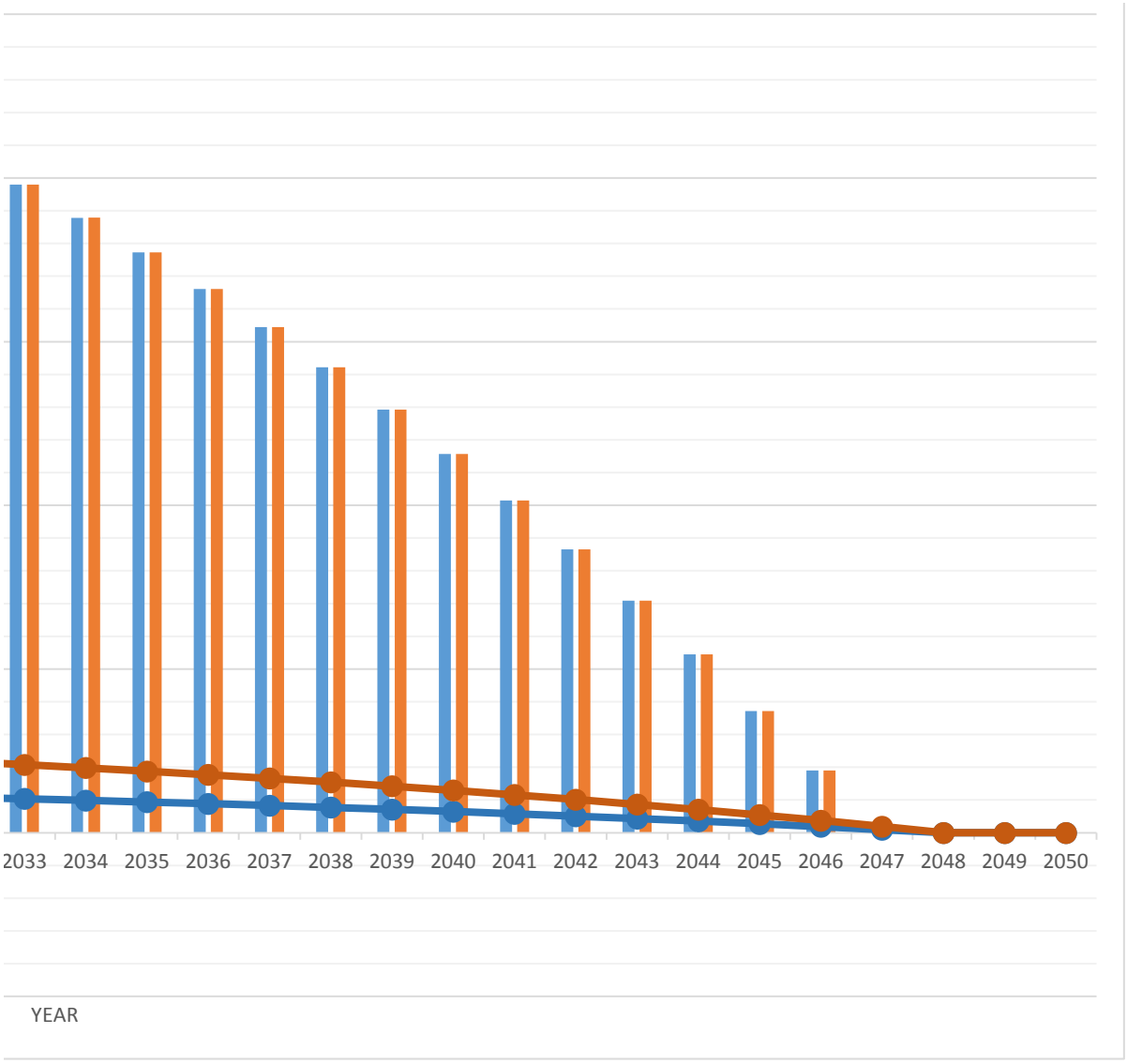

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

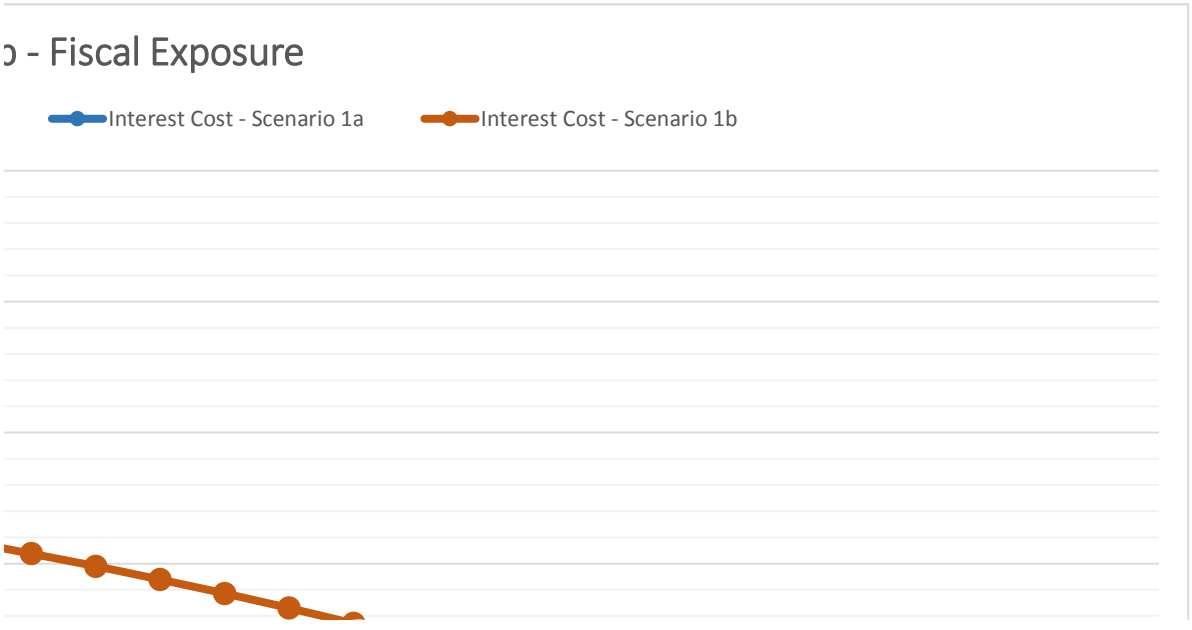

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

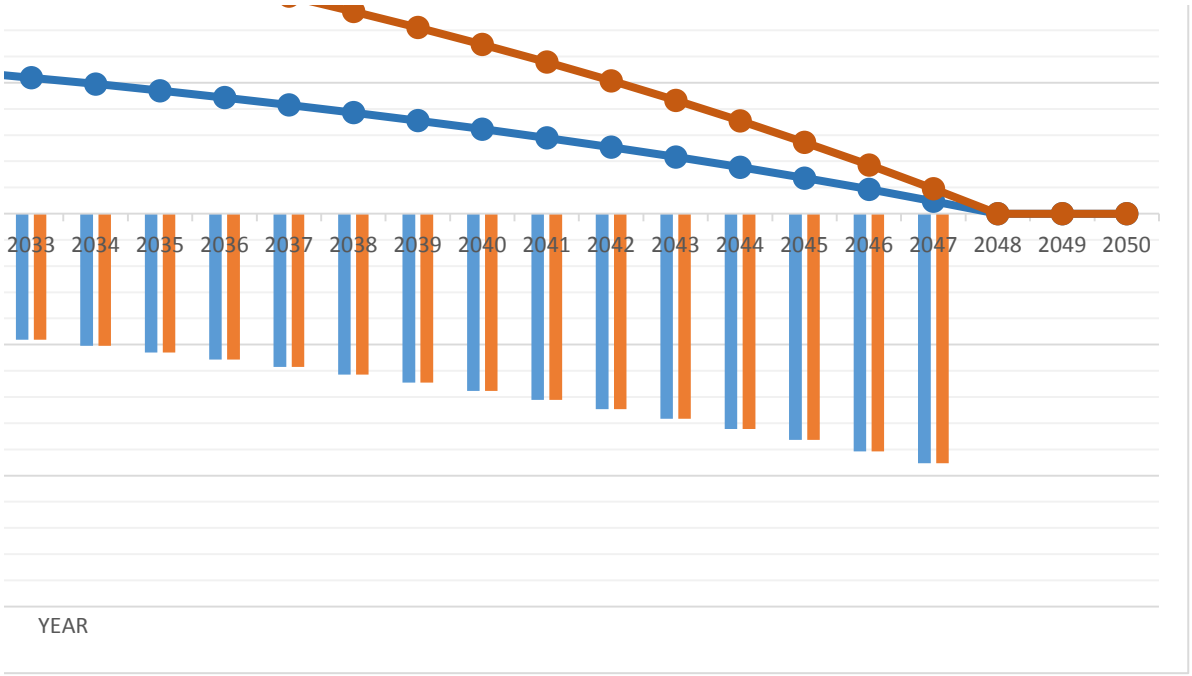


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

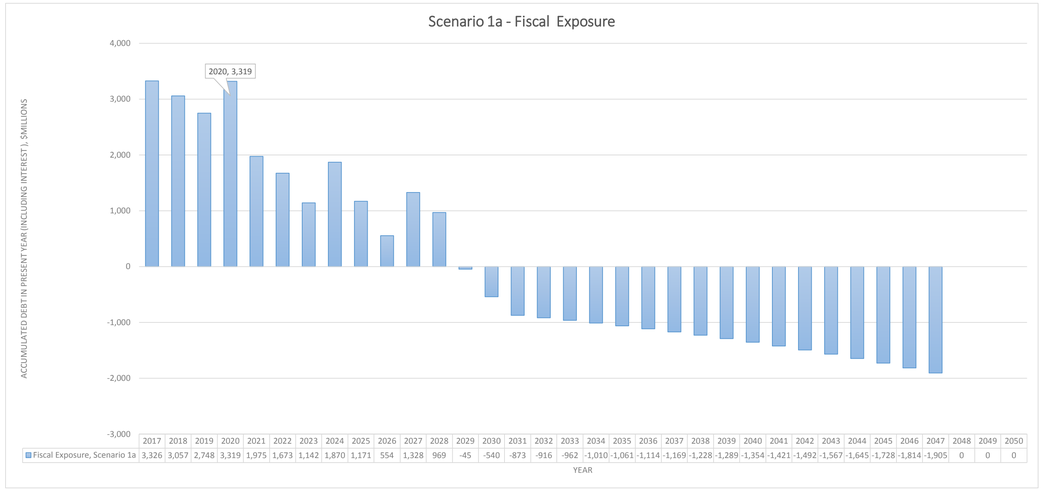
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

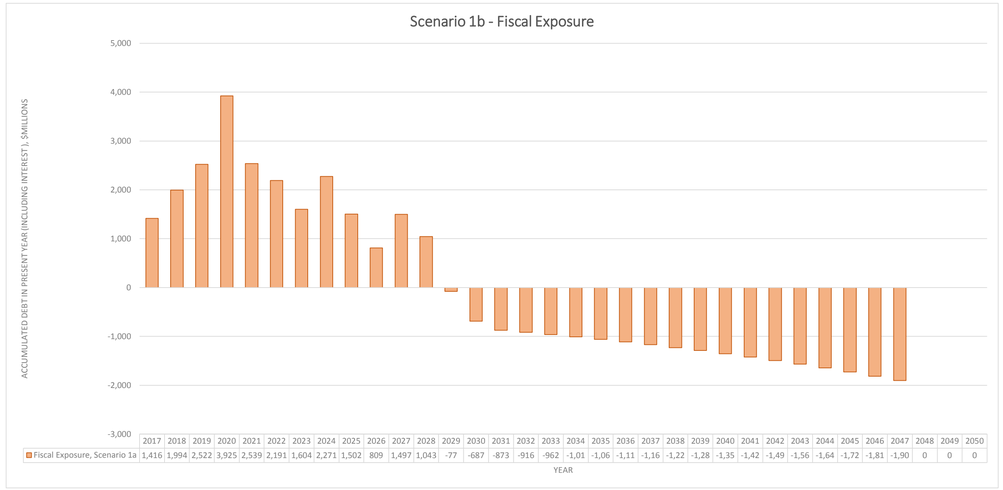
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

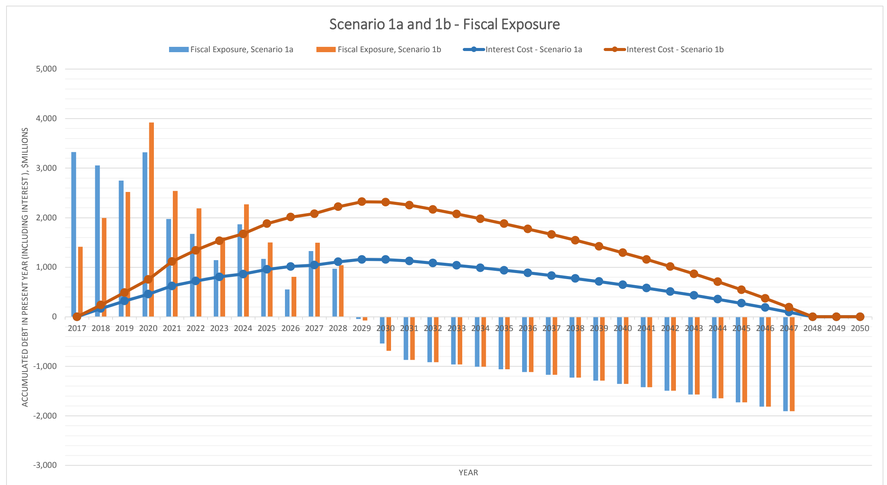
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

Notes:	Accounting treatment is to be determined.


Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0


Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0


Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest

IESO GA cost forecast + extrapolation

Scenario
Option 1
Bills Lowered 25%, RPP-Eligible Only
Option 2
Bills Lowered 20%, RPP-Eligible Only
Option 3
Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only

rate	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
Ratepayer GA Payment	9,595	9,327	9,051	9,094
Total Accumulated Debt ($ billion)	2,501	5,136	7,900	11,379
		-2.8%	-3.0%	0.5%
Ratepayer GA Payment	10,346	10,093	9,827	9,886
Accumulated debt in present year (including 5% interest,	1,749	3,580	5,488	8,052
Ratepayer GA Payment	10,648	10,303	10,186	10,873
Accumulated debt in present year (including 5% interest,	1,447	3,053	4,575	6,105

2021	2022	2023	2024	2025	2026	2027
10,844	10,634	10,243	11,128	10,527	10,033	11,043

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
10844	10634	10243	11128	10527	10033	11043
8,184	8,374	8,569	8,768	8,972	9,180	9,394
14,621	17,629	20,205	23,599	26,362	28,564	31,674
-10.0%	2.3%	2.3247180421718900000%	2.3%	2.3%	2.3%	2.3%
	TRUE	FALSE	FALSE	FALSE	FALSE	
8,991	9,200	9,414	9,633	9,857	10,086	10,321
10,316	12,278	13,735	15,933	17,418	18,256	19,913
9,733	9,573	9,240	10,128	9,620	9,238	10,318
7,527	8,973	10,436	11,970	13,490	14,976	16,467

2028	2029	2030	2031	2032	2033	2034	2035
10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662

2028	2029	2030	2031	2032	2033	2034	2035
10819	10009	9721	8654	8820	8238	7756	5662
9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585
34,502	36,440	37,962	38,260	38,500	37,925	36,589	34,538
2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	-13.1%
10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563
21,190	21,477	21,240	20,426	19,571	18,672	17,727	16,733
10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879
17,876	18,843	19,521	20,007	20,312	20,325	19,755	18,549

2036	2037	2038	2039	2040	2041	2042	2043
5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811

2036	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**
5389	5129	4881	4645	4421	4207	4004	3811
9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733
32,383	30,117	27,736	25,232	22,601	19,835	16,927	13,871
-2.9%	-2.8%	-2.7%	-2.7%	-2.6%	-2.6%	-2.5%	-2.4%
7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711
15,689	14,591	13,438	12,225	10,950	9,610	8,201	6,720
7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348
17,050	15,464	13,694	12,062	10,556	9,143	7,810	6,672

2044	2045	2046	2047	2048

3,627 3,451 3,285 3,126 2,975 2,831 2,695

2044	2045	2046	2047	2048	2049	2050
3627	3451	3285	3126	2975	2831	2695

7,549	7,374	7,207	7,048	2,975	2,831	2,695
10,658	7,281	3,731	0	0	0	0
-2.4%	-2.3%	-2.3%				
5,527	5,352	5,185	5,026	2,975	2,831	2,695
5,164	3,528	1,808	-	-	-	-
4,712	4,007	3,619	3,425	3,156	3,011	2,878
5,928	5,676	5,633	5,623	5,730	5,843	5,959

5%	End of Year Debt Drawdown	2017	2018
	IESO GA cost forecast + extrapolation	12,095	11,835
	Ratepayer GA Payment	9,595	9,327
	GA Debt Requirement	2,501	2,508
	Debt, Beginning of Year	0	2,501
	Interest Cost - Feb22 Option 1, 30-yr - End of Year Debt Drawdown	*0*	*128*
	Additional GA Debt Drawdown, End of Year	2,501	2,508
	Accumulated debt in present year (including 5.12% annual interest)	2,501	5,136

5.000050%	End of Year Debt Drawdown	2017	2018
			-2.16%
			-2.79%
	IESO GA cost forecast + extrapolation	12,095	11,835
	Ratepayer GA Payment	9,595	9,327
	GA Debt Requirement	2,501	2,508
	Debt, Beginning of Year	0	2,501
	Interest Cost - Feb22 Option 1, 30-yr - End of Year Debt Drawdown	*0*	*128*
	Additional GA Debt Drawdown, End of Year	2,501	2,508
	Accumulated debt in present year (including 5.12% annual interest)	2,501	5,136
		0.00	0.00
		0.90	for 0.00005
		4518.213	for 0.25%

5.250000%	End of Year Debt Drawdown	2017	2018
	IESO GA cost forecast + extrapolation	12,095	11,835
	Ratepayer GA Payment	9,595	9,327
	GA Debt Requirement	2,501	2,508
	Debt, Beginning of Year	0	2,501
	Interest Cost - Feb22 Option 1, 30-yr - End of Year Debt Drawdown	*0*	*134*
	Additional GA Debt Drawdown, End of Year	2,501	2,508
	Accumulated debt in present year (including 5.12% annual interest)	2,501	5,143

5.25% and 5.0%	0	7
	0	6.544088
	-4746.31	

2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
	22.9%								
	0.5%	-10.0%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%
11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819
9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
5,136	7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675
263	*404*	*582*	*748*	*902*	*1,034*	*1,207*	*1,349*	*1,461*	*1,621*
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675	34,502

2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
-2.39%	5.34%	-10.89%	-1.94%	-3.67%	8.64%	-5.40%	-4.69%	10.06%	-2.03%
-2.95%	0.47%	-10.01%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%
11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819
9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
5,136	7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675
263	*404*	*582*	*748*	*902*	*1,034*	*1,207*	*1,349*	*1,461*	*1,621*
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675	34,502
0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02

5%

5000

2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819
9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
5,143	7,921	11,421	14,695	17,745	20,374	23,830	26,667	28,955	32,161
277	*426*	*614*	*790*	*954*	*1,096*	*1,282*	*1,434*	*1,557*	*1,730*
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
7,921	11,421	14,695	17,745	20,374	23,830	26,667	28,955	32,161	35,098

14	22	32	42	52	62	74	85	96	109
13.77695	21.71447	31.92933	42.04725	52.06963	61.4769	73.50439	84.49516	94.58025	107.5596

2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
2.3%	2.3%	2.3%	2.3%						
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881
9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
34,502	36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,384	30,119
1,765	*1,864*	*1,942*	*1,957*	*1,970*	*1,940*	*1,872*	*1,767*	*1,657*	*1,541*
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,384	30,119	27,737

2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
-7.49%	-2.87%	-10.98%	1.91%	-6.60%	-5.85%	-27.00%	-4.83%	-4.83%	-4.83%
2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	-13.13%	-2.85%	-2.80%	-2.74%
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881
9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
34,502	36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,385	30,119
1,765	*1,864*	*1,942*	*1,958*	*1,970*	*1,940*	*1,872*	*1,767*	*1,657*	*1,541*
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,385	30,119	27,738
0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04

2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881
9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
35,098	37,159	38,815	39,258	39,652	39,240	38,074	36,200	34,224	32,142
1,888	*1,998*	*2,088*	*2,111*	*2,133*	*2,110*	*2,048*	*1,947*	*1,841*	*1,729*
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
37,159	38,815	39,258	39,652	39,240	38,074	36,200	34,224	32,142	29,949

122	134	145	154	163	170	176	180	184	188
120.4625	131.6985	142.4188	150.4868	158.814	165.4355	170.4025	173.755	177.0044	180.1316

2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975
8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
27,737	25,234	22,603	19,837	16,929	13,873	10,661	7,284	3,734	3
1,419	*1,291*	*1,156*	*1,015*	*866*	*710*	*545*	*373*	*191*	*0*
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
25,234	22,603	19,837	16,929	13,873	10,661	7,284	3,734	3	3

2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%
-2.68%	-2.62%	-2.56%	-2.50%	-2.44%	-2.38%	-2.32%	-2.26%	-2.20%	-57.79%
4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975
8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
27,738	25,235	22,603	19,837	16,930	13,874	10,661	7,285	3,735	4
1,419	*1,291*	*1,156*	*1,015*	*866*	*710*	*545*	*373*	*191*	*0*
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
25,235	22,603	19,837	16,930	13,874	10,661	7,285	3,735	4	4
0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04

2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975
8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
29,949	27,637	25,201	22,634	19,929	17,079	14,075	10,909	7,574	4,059
1,611	*1,486*	*1,355*	*1,217*	*1,072*	*919*	*757*	*587*	*407*	*218*
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
27,637	25,201	22,634	19,929	17,079	14,075	10,909	7,574	4,059	4,277

192	195	199	202	206	209	212	214	216	218
183.1154	185.9331	188.5597	190.9684	193.13	195.013	196.583	197.8033	198.6338	199.0316

2049	2050
2,831	2,695
2,831	2,695
0	0
3	3
0	*0*
0	0
3	3

2049	2050
-4.83%	-4.83%
-4.83%	-4.83%
2,831	2,695
2,831	2,695
0	0
4	4
0	*0*
0	0
4	4
0.04	0.04

2049	2050
2,831	2,695
2,831	2,695
0	0
4,277	4,507
230	*242*
0	0
4,507	4,750

230	242
209.2149	219.9193

Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Interest Rate, monthly comp.	**5.000000%**		
Annual Interest Rate	5.12%	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb22_1_30yr

Option 1 - Bills Lowered 25%, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,501	2,636
Interest Portion	0	128

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	625	2,534
Interest Portion	-	32

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $39 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb22_2_30yr

Option 2 - Bills Lowered 20%, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,749	1,831
Interest Portion	0	89

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	437	1,770
Interest Portion	-	22

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $21 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb22_3_30yr

Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606
Interest Portion	0	74

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,487
Interest Portion	-	19

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	437 - 625	1,770 - 2,534

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	625	2534
Debt-Finance Global Adjustment Costs, Option 1a	437	1770
RRRP		
OESP – Enhance Benefit		162

Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**625**	**2774**
Total, B	437	2010

Proposed Program Total:	437 - 625	2,010 - 2,774

ining

0	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Option 1
Option 2
Option 3

Assumes an inte

2019	2020	2021	2022	
				CheckInt
2,764	3,479	3,242	3,008	
263	404	582	748	

2018-19	2019-20	2020-21	2021-2022
2,668	2,942	3,420	3,183
162	298	449	624

Option 1
Option 2
Option 3

2032.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,908	2,564	2,264	1,961
183	281	412	528

2018-19	2019-20	2020-21	2021-2022
1,850	2,072	2,489	2,189
113	208	314	441

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446
156	234	312	385

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429
95	176	254	331

2033.

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022
1,850 - 2,668	2,072 - 2,942	2,489 - 3,420	2,189 - 3,183

/1

2018-19[1]	2019-20[1]	2020-21[1]
2668	2942	3420
1850	2072	2489
225	279	323

60	60	60
18	18	18
2971	**3299**	**3821**
2153	2429	2890

2,153 - 2,971	2,429 - 3,299	2,890 - 3,821

	$35,723	
	$35,542	
	0.51%	27.00%

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$24,976.5	$35,542.1	$38,501	occurs in Year 2032
$14,759.8	$19,733.1	$21,477	occurs in Year 2029
$12,862.3	$19,498.4	$20,326	occurs in Year 2033

erest rate of 5.00% (compounded monthly).

			5000
5.00000%	5.00005%	0.00005%	0.25%
35,542	35,543	0.90	4,518.21
19,733	19,734	0.52	2,619.41
19,498	19,499	0.48	2,410.01
0.249950%			

Tab Name		Total Accumulated Interest Costs
Feb22_1_30yr	$31,810	$40,288
Feb22_2_30yr	$17,586	$22,491
Feb22_3_30yr	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$31,810 to $40,288**
Option 2	$17,586 to $22,491**
Option 3	$17,202 to $22,028**

** With a higher interest rate, the amortization period extend beyond the 30-year forecast

ted period resulting in a remaining balance at the end of the 30-year period. For specifics, see details belo

w.

Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb22_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,501	2,636	2,764	3,479	3,242	3,008	2,577	3,394	2,763	2,202	3,111	2,828	1,938	1,522	299	240	-575	-1,336	-2,050	-2,155	-2,265	-2,381	-2,503	-2,631	-2,766	-2,907	-3,056	-3,213	-3,377	-3,550	-3,731	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,560	2,699	2,829	3,561	3,319	3,079	2,638	3,475	2,828	2,254	3,185	2,895	1,985	1,558	306	246	-588	-1,368	-2,099	-2,206	-2,319	-2,438	-2,563	-2,694	-2,832	-2,977	-3,129	-3,289	-3,457	-3,634	-3,820	0	0	0
			59	63	66	83	77	72	61	81	66	52	74	67	46	36	7	6	-14	-32	-49	-51	-54	-57	-60	-63	-66	-69	-73	-76	-80	-84	-89	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,479	1,970	35,542.1
Equal Monthly Debt Drawdown	3,561	1,963	

	Feb22 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	38,500.8	2032	24,977
Equal Monthly Debt Drawdown	39,416.6		

Feb22 Option 1, 30-yr — End of Year Debt Drawdown

Option 1 - Bills Lowered 25%, RPP-Eligible Only
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
a	Debt, Beginning of Year	0	2,501	5,136	7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675	34,502	36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,384	30,119	27,737	25,234	22,603	19,837	16,929	13,873	10,661	7,284	3,734	3	3	3	
c = a*5%	*Interest Cost - Feb22 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*128*	*263*	*404*	*582*	*748*	*902*	*1,034*	*1,207*	*1,349*	*1,461*	*1,621*	*1,765*	*1,864*	*1,942*	*1,957*	*1,970*	*1,940*	*1,872*	*1,767*	*1,657*	*1,541*	*1,419*	*1,291*	*1,156*	*1,015*	*866*	*710*	*545*	*373*	*191*	*0*	*0*	*0*	35,542
b	Additional GA Debt Drawdown, End of Year	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,501	5,136	7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675	34,502	36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,384	30,119	27,737	25,234	22,603	19,837	16,929	13,873	10,661	7,284	3,734	3	3	3	3	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb22 Option 1, 30-yr - Accumulated Interest Costs	0	128	391	795	1,377	2,125	3,027	4,061	5,268	6,617	8,078	9,699	11,464	12,986	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	10,661	7,284	3,734	3	3	3	
	Feb22 Option 1, 30-yr - Accumulated Debt Principal	2,501	5,009	7,509	10,584	13,244	15,504	17,178	19,539	21,094	21,947	23,596	24,803	24,977	24,977	24,977	25,216	24,642	23,306	21,255	19,100	16,835	14,453	11,950	9,319	6,553	3,645	589	0	0	0	0	0	0	0	
	Feb22 Option 1, 30-yr - Accumulated Interest Costs	0	128	391	795	1,377	2,125	3,027	4,061	5,268	6,617	8,078	9,699	11,464	13,328	15,271	17,228	19,198	21,138	23,010	24,777	26,434	27,975	29,394	30,685	31,842	32,857	33,723	34,433	34,978	35,351	35,542				
	Feb22 Option 1, 30-yr - Accumulated Debt Principal	2,501	5,009	7,509	10,584	13,244	15,504	17,178	19,539	21,094	21,947	23,596	24,803	24,977	24,634	22,990	21,273	18,728	15,452	11,529	7,607	3,685	-238	-4,160	-8,082	-12,005	-15,927	-19,849	-23,772	-27,694	-31,616	-35,539				
Fiscal Exposure - End of Year Debt Drawdown		2,501	2,636	2,764	3,479	3,242	3,008	2,577	3,394	2,763	2,202	3,111	2,828	1,938	1,522	299	240	-575	-1,336	-2,050	-2,155	-2,265	-2,381	-2,503	-2,631	-2,766	-2,907	-3,056	-3,213	-3,377	-3,550	-3,731	0	0	0	

Feb22 Option 1, 30-yr — Equal Monthly Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
	Option 1 - Bills Lowered 25%, RPP-Eligible Only																																			
	($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Debt, Beginning of Year	0	2,560	5,259	8,088	11,650	14,969	18,048	20,686	24,161	26,989	29,243	32,428	35,323	37,307	38,865	39,171	39,417	38,828	37,460	35,361	33,155	30,835	28,397	25,834	23,140	20,309	17,332	14,203	10,914	7,457	3,823	3	3	3	
1,963	*Interest Cost - Feb22 Option 1, 30-yr*	*59*	*191*	*329*	*487*	*659*	*820*	*963*	*1,114*	*1,273*	*1,401*	*1,535*	*1,688*	*1,811*	*1,901*	*1,949*	*1,963*	*1,956*	*1,909*	*1,823*	*1,716*	*1,603*	*1,484*	*1,360*	*1,228*	*1,091*	*946*	*793*	*633*	*465*	*288*	*102*	*0*	*0*	*0*	35,542
	Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,560	5,259	8,088	11,650	14,969	18,048	20,686	24,161	26,989	29,243	32,428	35,323	37,307	38,865	39,171	39,417	38,828	37,460	35,361	33,155	30,835	28,397	25,834	23,140	20,309	17,332	14,203	10,914	7,457	3,823	3	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,560	2,699	2,829	3,561	3,319	3,079	2,638	3,475	2,828	2,254	3,185	2,895	1,985	1,558	306	246	-588	-1,368	-2,099	-2,206	-2,319	-2,438	-2,563	-2,694	-2,832	-2,977	-3,129	-3,289	-3,457	-3,634	-3,820	0	0	0	

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
	Monthly Drawdown	208	209	208	256	222	188	140	197	130	71	137	101	14	(29)	(137)	(143)	(212)	(273)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	-	-	-
	FV of Monthly Drawdown at 5%	2,560	2,568	2,560	3,148	2,723	2,313	1,715	2,416	1,592	873	1,688	1,236	177	(351)	(1,683)	(1,758)	(2,605)	(3,355)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	-	-	-
	Annual Interest Cost on New Drawdowns	59	60	59	73	63	54	40	56	37	20	39	29	4	(8)	(39)	(41)	(61)	(78)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	-	-	-
	Annual Interest Cost on Opening Balance	-	131	269	414	596	766	923	1,058	1,236	1,381	1,496	1,659	1,807	1,909	1,988	2,004	2,017	1,987	1,917	1,809	1,696	1,578	1,453	1,322	1,184	1,039	887	727	558	382	196	0	0	0
	Total Annual Interest Cost	59	191	329	487	659	820	963	1,114	1,273	1,401	1,535	1,688	1,811	1,901	1,949	1,963	1,956	1,909	1,823	1,716	1,603	1,484	1,360	1,228	1,091	946	793	633	465	288	102	0	0	0

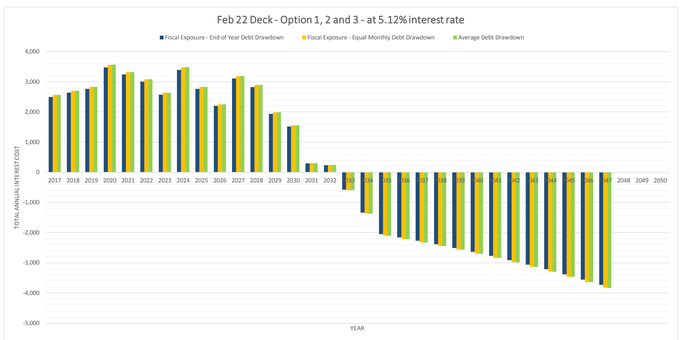
Feb22 Option 1, 30-yr — Bi-Annual Debt Drawdown

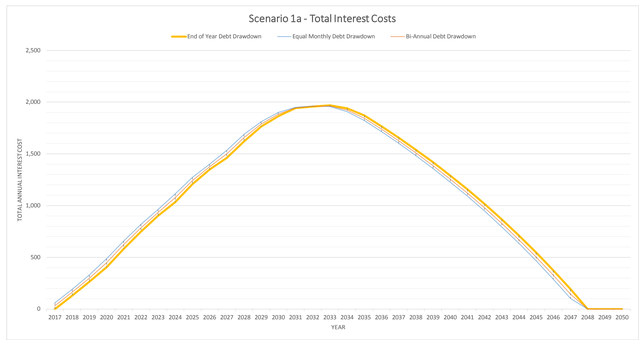
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
	Option 1 - Bills Lowered 25%, RPP-Eligible Only																																			
	($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Debt, Beginning of Year	0	2,533	5,202	8,001	11,524	14,808	17,854	20,464	23,901	26,699	28,929	32,080	34,943	36,907	38,448	38,750	38,993	38,411	37,058	34,981	32,799	30,504	28,092	25,557	22,892	20,091	17,146	14,051	10,797	7,377	3,782	3	3	3	
	Interest Cost - Feb22 Option 1, 30-yr	*32*	*162*	*298*	*449*	*624*	*787*	*935*	*1,077*	*1,243*	*1,377*	*1,501*	*1,657*	*1,790*	*1,884*	*1,946*	*1,946*	*1,962*	*1,923*	*1,846*	*1,740*	*1,628*	*1,510*	*1,387*	*1,257*	*1,121*	*978*	*827*	*669*	*502*	*327*	*143*	*0*	*0*	*0*	35,542
	Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,533	5,202	8,001	11,524	14,808	17,854	20,464	23,901	26,699	28,929	32,080	34,943	36,907	38,448	38,750	38,993	38,411	37,058	34,981	32,799	30,504	28,092	25,557	22,892	20,091	17,146	14,051	10,797	7,377	3,782	3	3	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,533	2,670	2,799	3,523	3,283	3,046	2,610	3,437	2,798	2,230	3,150	2,864	1,963	1,541	302	243	-582	-1,353	-2,077	-2,183	-2,294	-2,412	-2,535	-2,665	-2,801	-2,945	-3,095	-3,254	-3,420	-3,595	-3,779	0	0	0	

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
	Bi-Annual Drawdown	1,250	1,254	1,250	1,537	1,330	1,130	837	1,180	778	427	825	604	87	(171)	(822)	(859)	(1,272)	(1,638)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	-	-	-
	FV of Bi-Annual Drawdown at 5%	2,533	2,540	2,533	3,114	2,694	2,289	1,696	2,390	1,575	864	1,670	1,223	175	(347)	(1,665)	(1,740)	(2,577)	(3,319)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	-	-	-
	Annual Interest Cost on New Drawdowns	32	32	32	39	34	29	21	30	20	11	21	15	2	(4)	(21)	(22)	(33)	(42)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	-	-	-
	Annual Interest Cost on Opening Balance	-	130	266	409	590	758	913	1,047	1,223	1,366	1,480	1,641	1,788	1,888	1,967	1,983	1,995	1,965	1,896	1,790	1,678	1,561	1,437	1,308	1,171	1,028	877	719	552	377	193	0	0	0
	Total Annual Interest Cost	32	162	298	449	624	787	935	1,077	1,243	1,377	1,501	1,657	1,790	1,884	1,946	1,961	1,962	1,923	1,846	1,740	1,628	1,510	1,387	1,257	1,121	978	827	669	502	327	143	0	0	0

Feb22 Option 1, 30-yr — Average Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	Option 1 - Bills Lowered 25%, RPP-Eligible Only																																			
	($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Debt, Beginning of Year	0	2,565	5,268	8,102	11,670	14,995	18,080	20,722	24,203	27,036	29,295	32,485	35,385	37,373	38,933	39,240	39,486	38,896	37,526	35,423	33,213	30,889	28,447	25,880	23,181	20,344	17,363	14,228	10,933	7,470	3,830	3	3	3	
	Interest Cost - Feb22 Option 1, 30-yr	*64*	*195*	*333*	*493*	*665*	*825*	*968*	*1,121*	*1,278*	*1,405*	*1,541*	*1,693*	*1,815*	*1,903*	*1,950*	*1,964*	*1,955*	*1,906*	*1,820*	*1,712*	*1,599*	*1,480*	*1,355*	*1,224*	*1,086*	*941*	*788*	*628*	*459*	*282*	*96*	*0*	*0*	*0*	35,542
	Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,565	5,268	8,102	11,670	14,995	18,080	20,722	24,203	27,036	29,295	32,485	35,385	37,373	38,933	39,240	39,486	38,896	37,526	35,423	33,213	30,889	28,447	25,880	23,181	20,344	17,363	14,228	10,933	7,470	3,830	3	3	3	3	
Fiscal Exposure - Average Debt Drawdown		2,565	2,703	2,834	3,568	3,325	3,085	2,643	3,481	2,833	2,258	3,190	2,900	1,988	1,561	306	246	-589	-1,370	-2,103	-2,210	-2,323	-2,442	-2,567	-2,699	-2,837	-2,982	-3,134	-3,295	-3,463	-3,640	-3,827	0	0	0	





Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb22_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,749	1,831	1,908	2,564	2,264	1,961	1,457	2,198	1,485	838	1,656	1,277	287	-237	-814	-855	-899	-945	-993	-1,044	-1,098	-1,154	-1,213	-1,275	-1,340	-1,409	-1,481	-1,556	-1,636	-1,720	-1,808	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,791	1,875	1,953	2,625	2,318	2,008	1,492	2,250	1,521	858	1,696	1,308	294	-243	-833	-876	-920	-967	-1,017	-1,069	-1,124	-1,181	-1,242	-1,305	-1,372	-1,442	-1,516	-1,593	-1,675	-1,761	-1,851	0	0	0	
			42	44	45	61	54	47	35	52	35	20	39	30	7	-6	-19	-20	-21	-22	-24	-25	-26	-27	-29	-30	-32	-34	-35	-37	-39	-41	-43	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,564	1,099	19,733
Equal Monthly Debt Drawdown	2,625	1,093	

	Feb22 Option 2, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	21,477.1	2029	14,760
Equal Monthly Debt Drawdown	21,988		

Feb22 Option 2, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				26
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
a	Debt, Beginning of Year	0	1,749	3,580	5,488	8,052	10,316	12,278	13,735	15,933	17,418	18,256	19,913	21,190	21,477	21,240	20,427	19,571	18,672	17,727	16,734	15,690	14,592	13,438	12,226	10,951	9,611	8,202	6,722	5,165	3,529	1,809	2	2	2	
c = a*5%	*Interest Cost - Feb22 Option 2, 30-yr - End of Year Debt Drawdown*	*0*	*89*	*183*	*281*	*412*	*528*	*628*	*703*	*815*	*891*	*934*	*1,019*	*1,084*	*1,099*	*1,087*	*1,045*	*1,001*	*955*	*907*	*856*	*803*	*747*	*688*	*625*	*560*	*492*	*420*	*344*	*264*	*181*	*93*	*0*	*0*	*0*	*0*	19,733
b	Additional GA Debt Drawdown, End of Year	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,749	3,580	5,488	8,052	10,316	12,278	13,735	15,933	17,418	18,256	19,913	21,190	21,477	21,240	20,427	19,571	18,672	17,727	16,734	15,690	14,592	13,438	12,226	10,951	9,611	8,202	6,722	5,165	3,529	1,809	2	2	2	2	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	
	Feb22 Option 2, 30-yr - Accumulated Interest Costs	0	89	273	553	965	1,493	2,121	2,824	3,639	4,530	5,464	6,483	7,567	7,330	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	5,165	3,529	1,809	2	2	2	
	Feb22 Option 2, 30-yr - Accumulated Debt Principal	1,749	3,491	5,216	7,499	9,351	10,784	11,614	13,109	13,779	13,726	14,448	14,707	13,910	13,910	13,910	13,055	12,156	11,211	10,217	9,173	8,075	6,922	5,709	4,434	3,094	1,685	205	0	0	0	0	0	0	0	
	Feb22 Option 2, 30-yr - Accumulated Interest Costs	0	89	273	553	965	1,493	2,121	2,824	3,639	4,530	5,464	6,483	7,567	8,666	9,753	10,798	11,799	12,755	13,661	14,518	15,320	16,067	16,754	17,380	17,940	18,432	18,852	19,195	19,460	19,640	19,733				
	Feb22 Option 2, 30-yr - Accumulated Debt Principal	1,749	3,491	5,216	7,499	9,351	10,784	11,614	13,109	13,779	13,726	14,448	14,707	13,910	12,574	10,674	8,773	6,873	4,973	3,072	1,172	-728	-2,628	-4,529	-6,429	-8,329	-10,230	-12,130	-14,030	-15,931	-17,831	-19,731				
Fiscal Exposure - End of Year Debt Drawdown		1,749	1,831	1,908	2,564	2,264	1,961	1,457	2,198	1,485	838	1,656	1,277	287	-237	-814	-855	-899	-945	-993	-1,044	-1,098	-1,154	-1,213	-1,275	-1,340	-1,409	-1,481	-1,556	-1,636	-1,720	-1,808	0	0	0	

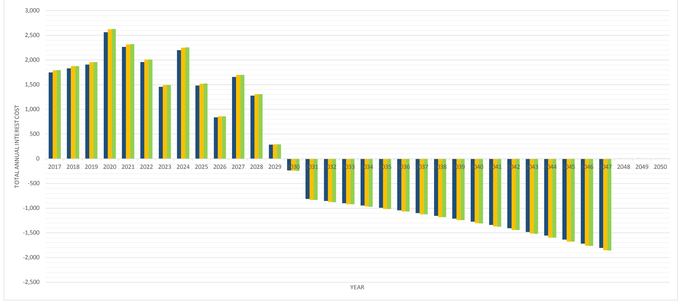
Feb22 Option 2, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Debt, Beginning of Year	0	1,791	3,666	5,619	8,244	10,562	12,570	14,062	16,312	17,832	18,691	20,386	21,694	21,988	21,745	20,912	20,037	19,116	18,149	17,132	16,063	14,939	13,758	12,517	11,211	9,839	8,397	6,881	5,288	3,613	1,852	2	2	2	
1,093	*Interest Cost - Feb22 Option 2, 30-yr*	*42*	*133*	*229*	*342*	*466*	*574*	*663*	*755*	*850*	*911*	*973*	*1,049*	*1,091*	*1,093*	*1,067*	*1,025*	*980*	*933*	*883*	*831*	*777*	*719*	*659*	*595*	*528*	*458*	*384*	*307*	*225*	*140*	*50*	*0*	*0*	*0*	19,733
	Additional GA Debt Drawdown	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,791	3,666	5,619	8,244	10,562	12,570	14,062	16,312	17,832	18,691	20,386	21,694	21,988	21,745	20,912	20,037	19,116	18,149	17,132	16,063	14,939	13,758	12,517	11,211	9,839	8,397	6,881	5,288	3,613	1,852	2	2	2	2	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,791	1,875	1,953	2,625	2,318	2,008	1,492	2,250	1,521	858	1,696	1,308	294	-243	-833	-876	-920	-967	-1,017	-1,069	-1,124	-1,181	-1,242	-1,305	-1,372	-1,442	-1,516	-1,593	-1,675	-1,761	-1,851	0	0	0	

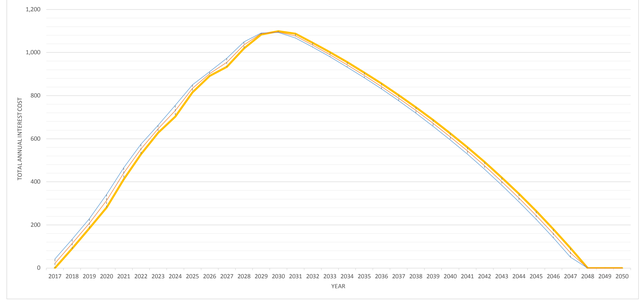
	Monthly Drawdown	146	145	144	190	154	119	69	125	56	(4)	60	22	(66)	(111)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	-	-	-	
	FV of Monthly Drawdown at 5%	1,791	1,783	1,766	2,337	1,896	1,467	849	1,531	686	(54)	739	265	(816)	(1,368)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	41	41	54	44	34	20	36	16	(1)	17	6	(19)	(32)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	-	-	-	
	Annual Interest Cost on Opening Balance	-	92	188	287	422	540	643	719	835	912	956	1,043	1,110	1,125	1,113	1,070	1,025	978	929	877	822	764	704	640	574	503	430	352	271	185	95	0	0	0	
	Total Annual Interest Cost	42	133	229	342	466	574	663	755	850	911	973	1,049	1,091	1,093	1,067	1,025	980	933	883	831	777	719	659	595	528	458	384	307	225	140	50	0	0	0	

Feb22 Option 2, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Debt, Beginning of Year	0	1,772	3,626	5,559	8,155	10,448	12,435	13,911	16,137	17,641	18,490	20,168	21,461	21,752	21,512	20,688	19,822	18,911	17,954	16,948	15,890	14,779	13,610	12,382	11,091	9,734	8,307	6,808	5,231	3,574	1,833	2	2	2	
	Interest Cost - Feb22 Option 2, 30-yr	*22*	*113*	*208*	*314*	*441*	*553*	*647*	*731*	*834*	*902*	*955*	*1,035*	*1,088*	*1,096*	*1,076*	*1,034*	*990*	*943*	*894*	*843*	*789*	*732*	*672*	*609*	*543*	*474*	*401*	*324*	*243*	*159*	*69*	*0*	*0*	*0*	19,733
	Additional GA Debt Drawdown	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,772	3,626	5,559	8,155	10,448	12,435	13,911	16,137	17,641	18,490	20,168	21,461	21,752	21,512	20,688	19,822	18,911	17,954	16,948	15,890	14,779	13,610	12,382	11,091	9,734	8,307	6,808	5,231	3,574	1,833	2	2	2	2	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,772	1,855	1,932	2,596	2,293	1,986	1,476	2,226	1,504	849	1,678	1,294	291	-240	-824	-866	-911	-957	-1,006	-1,058	-1,112	-1,168	-1,228	-1,291	-1,357	-1,427	-1,500	-1,576	-1,657	-1,742	-1,831	0	0	0	

	Bi-Annual Drawdown	875	871	862	1,141	926	717	415	748	335	(26)	361	129	(399)	(668)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,772	1,764	1,747	2,312	1,876	1,452	840	1,514	679	(53)	732	262	(807)	(1,353)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	-	-	-	
	Annual Interest Cost on New Drawdowns	22	22	22	29	24	18	11	19	9	(1)	9	3	(10)	(17)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	-	-	-	
	Annual Interest Cost on Opening Balance	-	91	186	284	417	535	636	712	826	903	946	1,032	1,098	1,113	1,101	1,058	1,014	968	919	867	813	756	696	633	567	498	425	348	268	183	94	0	0	0	
	Total Annual Interest Cost	22	113	208	314	441	553	647	731	834	902	955	1,035	1,088	1,096	1,076	1,034	990	943	894	843	789	732	672	609	543	474	401	324	243	159	69	0	0	0	

Feb22 Option 2, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Debt, Beginning of Year	0	1,794	3,672	5,629	8,258	10,580	12,592	14,086	16,340	17,864	18,724	20,422	21,732	22,027	21,784	20,949	20,072	19,150	18,181	17,162	16,091	14,965	13,782	12,538	11,231	9,857	8,412	6,894	5,297	3,619	1,856	2	2	2	
	Interest Cost - Feb22 Option 2, 30-yr	*45*	*136*	*232*	*346*	*470*	*578*	*665*	*759*	*853*	*913*	*976*	*1,051*	*1,091*	*1,093*	*1,066*	*1,023*	*978*	*931*	*882*	*829*	*775*	*717*	*657*	*593*	*526*	*456*	*382*	*304*	*222*	*137*	*46*	*0*	*0*	*0*	19,733
	Additional GA Debt Drawdown	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,794	3,672	5,629	8,258	10,580	12,592	14,086	16,340	17,864	18,724	20,422	21,732	22,027	21,784	20,949	20,072	19,150	18,181	17,162	16,091	14,965	13,782	12,538	11,231	9,857	8,412	6,894	5,297	3,619	1,856	2	2	2	2	
Fiscal Exposure - Average Debt Drawdown		1,794	1,878	1,957	2,629	2,322	2,011	1,495	2,254	1,523	860	1,699	1,310	294	-243	-834	-877	-922	-969	-1,019	-1,071	-1,126	-1,183	-1,244	-1,307	-1,374	-1,445	-1,519	-1,596	-1,678	-1,764	-1,854	0	0	0	





Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb22_3_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	
			34	38	36	36	34	34	35	36	36	35	35	34	23	16	12	7	0	-14	-29	-36	-38	-42	-39	-36	-34	-32	-27	-18	-6	-1	0	3	3	3	142

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	1,606	1,040	19,498
Equal Monthly Debt Drawdown	1,644	1,040	

	Feb22 Option 3, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	20,325.7	2033	12,862
Equal Monthly Debt Drawdown	20,809		

Feb22 Option 3, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				26
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
a	Debt, Beginning of Year	0	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	
c = a*5%	*Interest Cost - Feb22 Option 3, 30-yr - End of Year Debt Drawdown*	*0*	*74*	*156*	*234*	*312*	*385*	*459*	*534*	*612*	*690*	*766*	*842*	*915*	*964*	*999*	*1,024*	*1,039*	*1,040*	*1,011*	*949*	*872*	*791*	*701*	*617*	*540*	*468*	*400*	*341*	*303*	*290*	*288*	*288*	*293*	*299*	19,498
b	Additional GA Debt Drawdown, End of Year	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
	Feb22 Option 3, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,659	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
	Feb22 Option 3, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,862	12,862	13,167	13,181	12,611	11,405	9,906	8,320	6,550	4,918	3,412	2,000	667	-472	0	0	0	0	0	0	0	
	Feb22 Option 3, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,943	8,967	10,006	11,046	12,057	13,006	13,878	14,669	15,370	15,987	16,527	16,995	17,395	17,736	18,040	18,330	18,618				
	Feb22 Option 3, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,064	11,345	10,319	8,710	6,493	4,045	1,586	-974	-3,307	-5,431	-7,383	-9,184	-10,721	-11,807	-12,362	-12,696	-12,994				
Fiscal Exposure - End of Year Debt Drawdown		1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	

Feb22 Option 3, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	
1,040	*Interest Cost - Feb22 Option 3, 30-yr*	*34*	*112*	*192*	*270*	*346*	*420*	*494*	*570*	*649*	*726*	*802*	*876*	*938*	*980*	*1,010*	*1,031*	*1,040*	*1,026*	*982*	*913*	*835*	*749*	*662*	*581*	*507*	*436*	*373*	*324*	*297*	*289*	*288*	*290*	*296*	*302*	19,640
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	6,102	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	

	Monthly Drawdown	121	128	114	108	93	88	84	83	76	66	60	47	4	(24)	(43)	(60)	(85)	(134)	(185)	(204)	(205)	(213)	(194)	(177)	(163)	(150)	(128)	(90)	(46)	(28)	(25)	(15)	(15)	(15)	
	FV of Monthly Drawdown at 5%	1,482	1,568	1,398	1,326	1,137	1,086	1,028	1,024	929	815	742	580	54	(292)	(525)	(736)	(1,050)	(1,648)	(2,269)	(2,506)	(2,517)	(2,621)	(2,389)	(2,174)	(1,999)	(1,844)	(1,574)	(1,111)	(568)	(342)	(306)	(185)	(184)	(188)	
	Annual Interest Cost on New Drawdowns	34	36	32	31	26	25	24	24	22	19	17	13	1	(7)	(12)	(17)	(24)	(38)	(53)	(58)	(58)	(61)	(55)	(51)	(46)	(43)	(37)	(26)	(13)	(8)	(7)	(4)	(4)	(4)	
	Annual Interest Cost on Opening Balance	-	76	160	240	320	394	470	547	627	707	784	863	936	987	1,023	1,048	1,064	1,065	1,035	972	893	810	717	632	553	479	409	350	311	297	295	295	300	306	
	Total Annual Interest Cost	34	112	192	270	346	420	494	570	649	726	802	876	938	980	1,010	1,031	1,040	1,026	982	913	835	749	662	581	507	436	373	324	297	289	288	290	296	302	

Feb22 Option 3, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	
	Interest Cost - Feb22 Option 3, 30-yr	*19*	*95*	*176*	*254*	*331*	*404*	*478*	*554*	*632*	*709*	*785*	*861*	*927*	*973*	*1,005*	*1,028*	*1,039*	*1,033*	*995*	*930*	*852*	*769*	*680*	*598*	*522*	*451*	*385*	*332*	*300*	*290*	*288*	*289*	*295*	*301*	19,575
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	6,037	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,466	1,626	1,541	1,549	1,441	1,465	1,482	1,554	1,539	1,505	1,510	1,427	979	687	492	309	13	-577	-1,221	-1,518	-1,607	-1,792	-1,653	-1,525	-1,430	-1,350	-1,153	-753	-255	-44	-10	109	115	117	

	Bi-Annual Drawdown	724	766	683	648	555	530	502	500	454	398	363	283	26	(143)	(256)	(359)	(513)	(805)	(1,108)	(1,224)	(1,229)	(1,280)	(1,167)	(1,062)	(976)	(900)	(769)	(543)	(278)	(167)	(149)	(90)	(90)	(92)	
	FV of Bi-Annual Drawdown at 5%	1,466	1,551	1,383	1,312	1,125	1,075	1,017	1,013	919	806	735	573	53	(289)	(519)	(728)	(1,039)	(1,630)	(2,245)	(2,479)	(2,490)	(2,593)	(2,363)	(2,150)	(1,977)	(1,824)	(1,557)	(1,099)	(562)	(338)	(302)	(183)	(182)	(186)	
	Annual Interest Cost on New Drawdowns	19	20	17	17	14	14	13	13	12	10	9	7	1	(4)	(7)	(9)	(13)	(21)	(28)	(31)	(31)	(33)	(30)	(27)	(25)	(23)	(20)	(14)	(7)	(4)	(4)	(2)	(2)	(2)	
	Annual Interest Cost on Opening Balance	-	75	158	237	316	390	465	541	620	699	776	853	926	976	1,012	1,037	1,053	1,053	1,024	961	884	801	710	625	547	474	405	346	307	294	292	291	297	303	
	Total Annual Interest Cost	19	95	176	254	331	404	478	554	632	709	785	861	927	973	1,005	1,028	1,039	1,033	995	930	852	769	680	598	522	451	385	332	300	290	288	289	295	301	

Feb22 Option 3, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	
	Interest Cost - Feb22 Option 3, 30-yr	*37*	*115*	*195*	*273*	*349*	*422*	*497*	*573*	*651*	*728*	*804*	*879*	*939*	*981*	*1,011*	*1,031*	*1,040*	*1,025*	*980*	*911*	*832*	*746*	*659*	*579*	*504*	*434*	*371*	*322*	*297*	*289*	*288*	*290*	*296*	*302*	19,651
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	6,113	
Fiscal Exposure - Average Debt Drawdown		1,484	1,647	1,561	1,569	1,459	1,483	1,500	1,573	1,559	1,524	1,530	1,445	992	696	498	313	14	-585	-1,237	-1,537	-1,627	-1,814	-1,674	-1,545	-1,448	-1,367	-1,167	-763	-258	-44	-10	110	116	119	

3.00%	$	35,542.08

Option 1		
3.00%	$	35,542.08
3.00%	$	35,542.08
3.01%	$	35,542.08
3.02%	$	35,542.08
3.03%	$	35,542.08
3.04%	$	35,542.08
3.05%	$	35,542.08
3.06%	$	35,542.08
3.07%	$	35,542.08
3.08%	$	35,542.08
3.09%	$	35,542.08
3.10%	$	35,542.08
3.11%	$	35,542.08
3.12%	$	35,542.08
3.13%	$	35,542.08
3.14%	$	35,542.08
3.15%	$	35,542.08
3.16%	$	35,542.08
3.17%	$	35,542.08
3.18%	$	35,542.08
3.19%	$	35,542.08
3.20%	$	35,542.08
3.21%	$	35,542.08
3.22%	$	35,542.08
3.23%	$	35,542.08
3.24%	$	35,542.08
3.25%	$	35,542.08
3.26%	$	35,542.08
3.27%	$	35,542.08
3.28%	$	35,542.08
3.29%	$	35,542.08
3.30%	$	35,542.08
3.31%	$	35,542.08
3.32%	$	35,542.08
3.33%	$	35,542.08
3.34%	$	35,542.08
3.35%	$	35,542.08
3.36%	$	35,542.08
3.37%	$	35,542.08
3.38%	$	35,542.08

3.39%	$	35,542.08
3.40%	$	35,542.08
3.41%	$	35,542.08
3.42%	$	35,542.08
3.43%	$	35,542.08
3.44%	$	35,542.08
3.45%	$	35,542.08
3.46%	$	35,542.08
3.47%	$	35,542.08
3.48%	$	35,542.08
3.49%	$	35,542.08
3.50%	$	35,542.08
3.51%	$	35,542.08
3.52%	$	35,542.08
3.53%	$	35,542.08
3.54%	$	35,542.08
3.55%	$	35,542.08
3.56%	$	35,542.08
3.57%	$	35,542.08
3.58%	$	35,542.08
3.59%	$	35,542.08
3.60%	$	35,542.08
3.61%	$	35,542.08
3.62%	$	35,542.08
3.63%	$	35,542.08
3.64%	$	35,542.08
3.65%	$	35,542.08
3.66%	$	35,542.08
3.67%	$	35,542.08
3.68%	$	35,542.08
3.69%	$	35,542.08
3.70%	$	35,542.08
3.71%	$	35,542.08
3.72%	$	35,542.08
3.73%	$	35,542.08
3.74%	$	35,542.08
3.75%	$	35,542.08
3.76%	$	35,542.08
3.77%	$	35,542.08
3.78%	$	35,542.08
3.79%	$	35,542.08
3.80%	$	35,542.08
3.81%	$	35,542.08
3.82%	$	35,542.08
3.83%	$	35,542.08
3.84%	$	35,542.08
3.85%	$	35,542.08

3.86%	$	35,542.08
3.87%	$	35,542.08
3.88%	$	35,542.08
3.89%	$	35,542.08
3.90%	$	35,542.08
3.91%	$	35,542.08
3.92%	$	35,542.08
3.93%	$	35,542.08
3.94%	$	35,542.08
3.95%	$	35,542.08
3.96%	$	35,542.08
3.97%	$	35,542.08
3.98%	$	35,542.08
3.99%	$	35,542.08
4.00%	$	35,542.08
4.01%	$	35,542.08
4.02%	$	35,542.08
4.03%	$	35,542.08
4.04%	$	35,542.08
4.05%	$	35,542.08
4.06%	$	35,542.08
4.07%	$	35,542.08
4.08%	$	35,542.08
4.09%	$	35,542.08
4.10%	$	35,542.08
4.11%	$	35,542.08
4.12%	$	35,542.08
4.13%	$	35,542.08
4.14%	$	35,542.08
4.15%	$	35,542.08
4.16%	$	35,542.08
4.17%	$	35,542.08
4.18%	$	35,542.08
4.19%	$	35,542.08
4.20%	$	35,542.08
4.21%	$	35,542.08
4.22%	$	35,542.08
4.23%	$	35,542.08
4.24%	$	35,542.08
4.25%	$	35,542.08
4.26%	$	35,542.08
4.27%	$	35,542.08
4.28%	$	35,542.08
4.29%	$	35,542.08
4.30%	$	35,542.08
4.31%	$	35,542.08
4.32%	$	35,542.08

4.33%	$	35,542.08
4.34%	$	35,542.08
4.35%	$	35,542.08
4.36%	$	35,542.08
4.37%	$	35,542.08
4.38%	$	35,542.08
4.39%	$	35,542.08
4.40%	$	35,542.08
4.41%	$	35,542.08
4.42%	$	35,542.08
4.43%	$	35,542.08
4.44%	$	35,542.08
4.45%	$	35,542.08
4.46%	$	35,542.08
4.47%	$	35,542.08
4.48%	$	35,542.08
4.49%	$	35,542.08
4.50%	$	35,542.08
4.51%	$	35,542.08
4.52%	$	35,542.08
4.53%	$	35,542.08
4.54%	$	35,542.08
4.55%	$	35,542.08
4.56%	$	35,542.08
4.57%	$	35,542.08
4.58%	$	35,542.08
4.59%	$	35,542.08
4.60%	$	35,542.08
4.61%	$	35,542.08
4.62%	$	35,542.08
4.63%	$	35,542.08
4.64%	$	35,542.08
4.65%	$	35,542.08
4.66%	$	35,542.08
4.67%	$	35,542.08
4.68%	$	35,542.08
4.69%	$	35,542.08
4.70%	$	35,542.08
4.71%	$	35,542.08
4.72%	$	35,542.08
4.73%	$	35,542.08
4.74%	$	35,542.08
4.75%	$	35,542.08
4.76%	$	35,542.08
4.77%	$	35,542.08
4.78%	$	35,542.08
4.79%	$	35,542.08

4.80%	$	35,542.08
4.81%	$	35,542.08
4.82%	$	35,542.08
4.83%	$	35,542.08
4.84%	$	35,542.08
4.85%	$	35,542.08
4.86%	$	35,542.08
4.87%	$	35,542.08
4.88%	$	35,542.08
4.89%	$	35,542.08
4.90%	$	35,542.08
4.91%	$	35,542.08
4.92%	$	35,542.08
4.93%	$	35,542.08
4.94%	$	35,542.08
4.95%	$	35,542.08
4.96%	$	35,542.08
4.97%	$	35,542.08
4.98%	$	35,542.08
4.99%	$	35,542.08
5.00%	$	35,542.08
5.01%	$	35,542.08
5.02%	$	35,542.08
5.03%	$	35,542.08
5.04%	$	35,542.08
5.05%	$	35,542.08
5.06%	$	35,542.08
5.07%	$	35,542.08
5.08%	$	35,542.08
5.09%	$	35,542.08
5.10%	$	35,542.08
5.11%	$	35,542.08
5.12%	$	35,542.08
5.13%	$	35,542.08
5.14%	$	35,542.08
5.15%	$	35,542.08
5.16%	$	35,542.08
5.17%	$	35,542.08
5.18%	$	35,542.08
5.19%	$	35,542.08
5.20%	$	35,542.08
5.21%	$	35,542.08
5.22%	$	35,542.08
5.23%	$	35,542.08
5.24%	$	35,542.08
5.25%	$	35,542.08
5.26%	$	35,542.08

5.27%	$	35,542.08
5.28%	$	35,542.08
5.29%	$	35,542.08
5.30%	$	35,542.08
5.31%	$	35,542.08
5.32%	$	35,542.08
5.33%	$	35,542.08
5.34%	$	35,542.08
5.35%	$	35,542.08
5.36%	$	35,542.08
5.37%	$	35,542.08
5.38%	$	35,542.08
5.39%	$	35,542.08
5.40%	$	35,542.08
5.41%	$	35,542.08
5.42%	$	35,542.08
5.43%	$	35,542.08
5.44%	$	35,542.08
5.45%	$	35,542.08
5.46%	$	35,542.08
5.47%	$	35,542.08
5.48%	$	35,542.08
5.49%	$	35,542.08
5.50%	$	35,542.08

$	19,733.10	$	19,498.37				
Option 2		Option 3					
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.00%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.00%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.01%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.02%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.03%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.04%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.05%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.06%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.07%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.08%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.09%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.10%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.11%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.12%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.13%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.14%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.15%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.16%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.17%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.18%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.19%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.20%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.21%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.22%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.23%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.24%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.25%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.26%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.27%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.28%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.29%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.30%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.31%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.32%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.33%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.34%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.35%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.36%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.37%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.38%

$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.39%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.40%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.41%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.42%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.43%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.44%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.45%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.46%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.47%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.48%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.49%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.50%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.51%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.52%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.53%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.54%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.55%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.56%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.57%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.58%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.59%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.60%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.61%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.62%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.63%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.64%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.65%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.66%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.67%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.68%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.69%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.70%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.71%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.72%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.73%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.74%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.75%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.76%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.77%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.78%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.79%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.80%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.81%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.82%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.83%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.84%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.85%

$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.86%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.87%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.88%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.89%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.90%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.91%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.92%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.93%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.94%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.95%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.96%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.97%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.98%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.99%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.00%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.01%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.02%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.03%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.04%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.05%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.06%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.07%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.08%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.09%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.10%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.11%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.12%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.13%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.14%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.15%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.16%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.17%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.18%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.19%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.20%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.21%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.22%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.23%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.24%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.25%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.26%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.27%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.28%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.29%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.30%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.31%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.32%

$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.33%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.34%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.35%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.36%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.37%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.38%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.39%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.40%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.41%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.42%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.43%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.44%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.45%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.46%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.47%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.48%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.49%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.50%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.51%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.52%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.53%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.54%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.55%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.56%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.57%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.58%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.59%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.60%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.61%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.62%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.63%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.64%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.65%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.66%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.67%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.68%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.69%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.70%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.71%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.72%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.73%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.74%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.75%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.76%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.77%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.78%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.79%

$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.80%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.81%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.82%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.83%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.84%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.85%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.86%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.87%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.88%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.89%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.90%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.91%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.92%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.93%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.94%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.95%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.96%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.97%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.98%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.99%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.00%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.01%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.02%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.03%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.04%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.05%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.06%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.07%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.08%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.09%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.10%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.11%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.12%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.13%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.14%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.15%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.16%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.17%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.18%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.19%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.20%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.21%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.22%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.23%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.24%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.25%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.26%

$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.27%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.28%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.29%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.30%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.31%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.32%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.33%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.34%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.35%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.36%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.37%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.38%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.39%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.40%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.41%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.42%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.43%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.44%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.45%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.46%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.47%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.48%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.49%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.50%

Option 1	Option 2	Option 3
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -

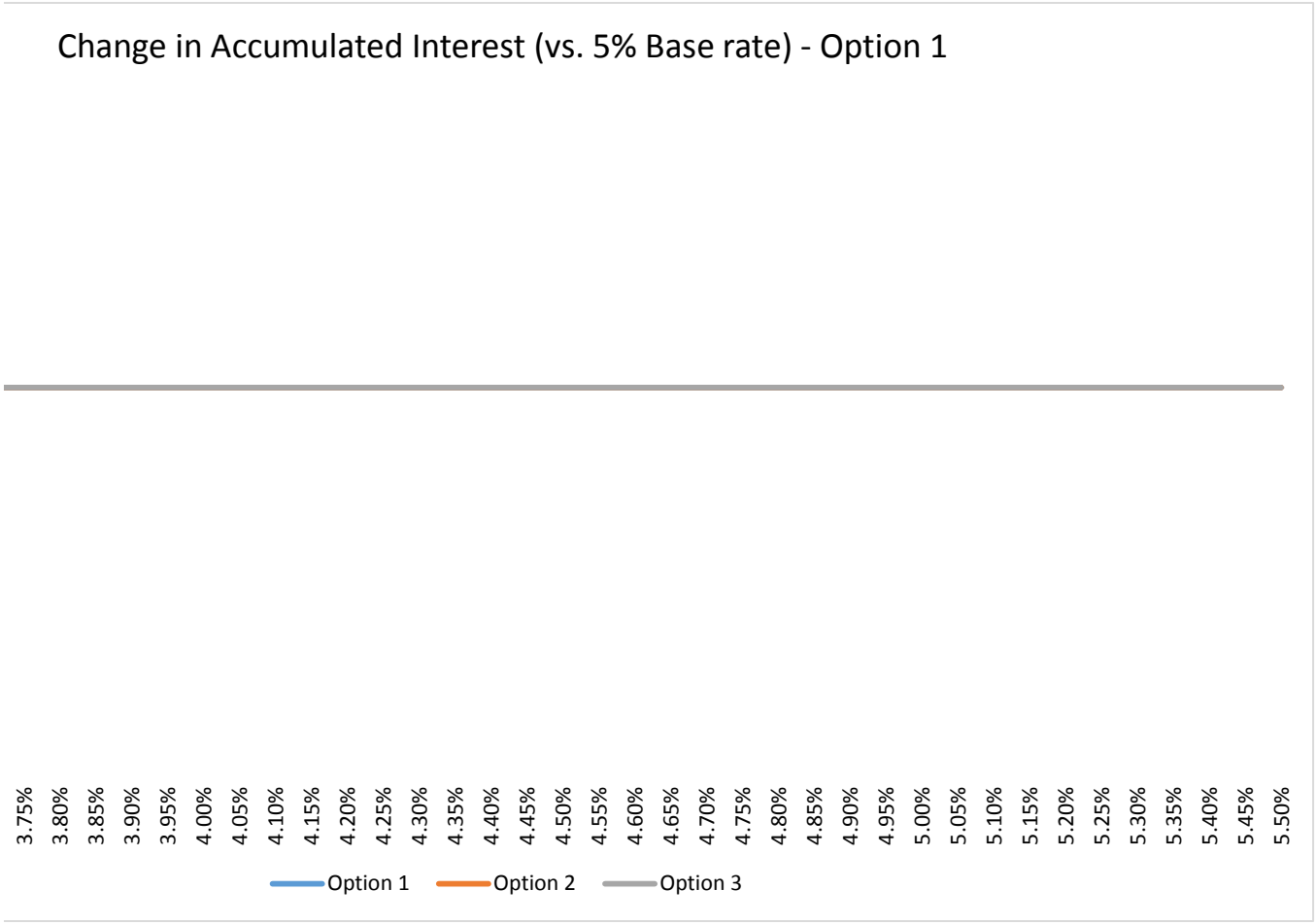
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -

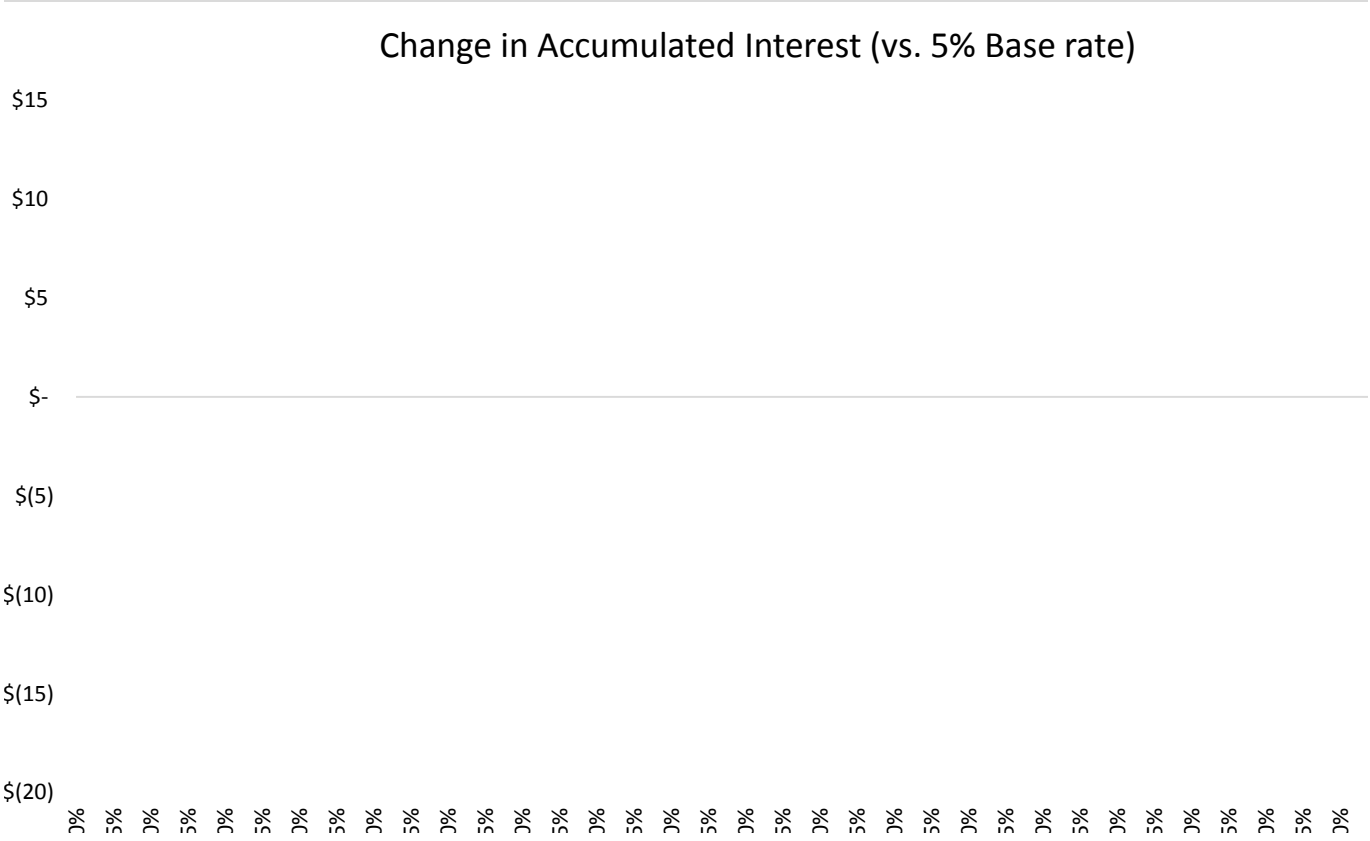
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -

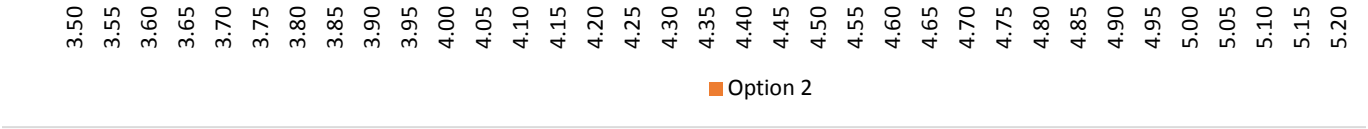
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -

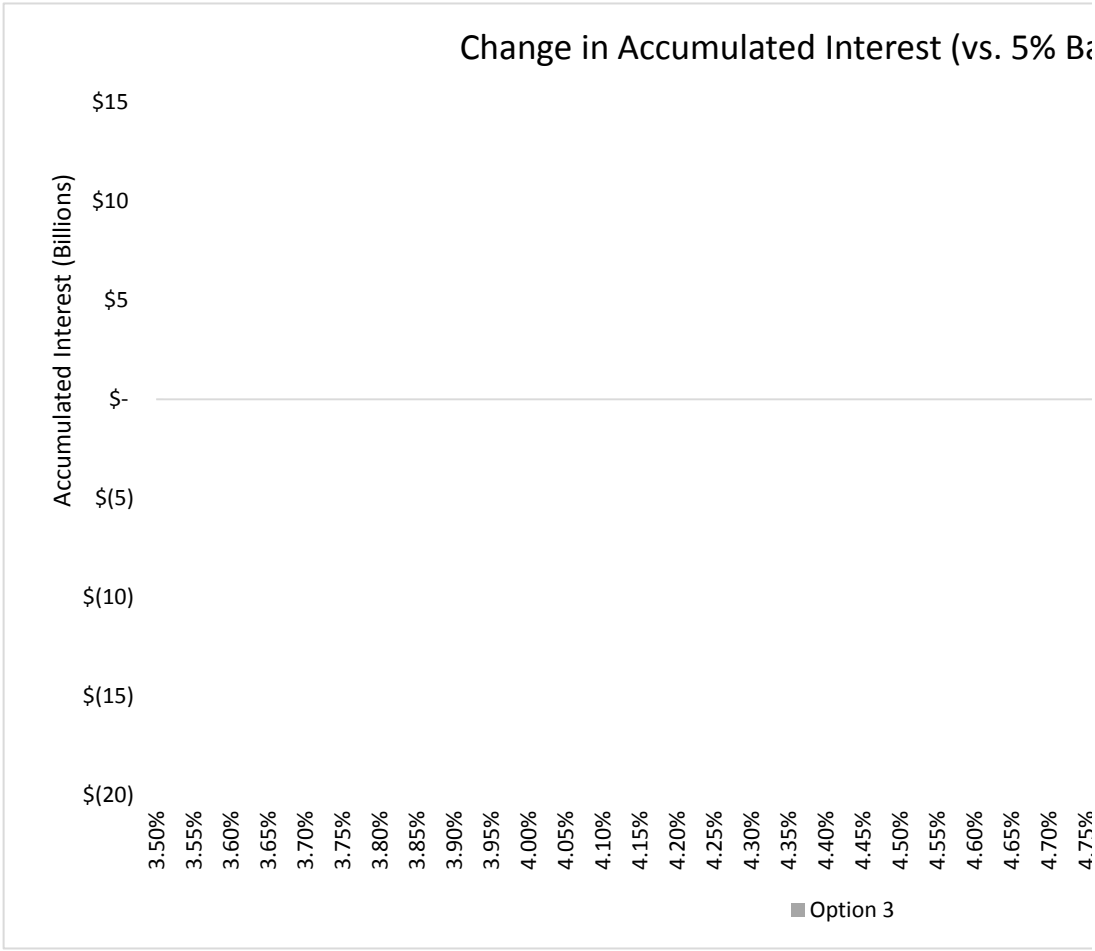
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -

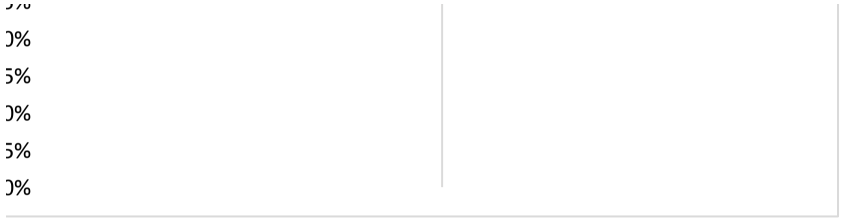
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -


Change in Accumulated Interest (vs. 5% Base rate) - Option 1
3.75%
3.80%
3.85%
3.90%
3.95%
4.00%
4.05%
4.10%
4.15%
4.20%
4.25%
4.30%
4.35%
4.40%
4.45%
4.50%
4.55%
4.60%
4.65%
4.70%
4.75%
4.80%
4.85%
4.90%
4.95%
5.00%
5.05%
5.10%
5.15%
5.20%
5.25%
5.30%
5.35%
5.40%
5.45%
5.50%
Option 1
Option 2
Option 3


Change in Accumulated Interest (vs. 5% Base rate)
$15
$10
$5
$-
$(5)
$(10)
$(15)
$(20)


3.50
3.55
3.60
3.65
3.70
3.75
3.80
3.85
3.90
3.95
4.00
4.05
4.10
4.15
4.20
4.25
4.30
4.35
4.40
4.45
4.50
4.55
4.60
4.65
4.70
4.75
4.80
4.85
4.90
4.95
5.00
5.05
5.10
5.15
5.20
Option 2


Change in Accumulated Interest (vs. 5% Ba
Accumulated Interest (Billions)
$15
$10
$5
$-
$(5)
$(10)
$(15)
$(20)
3.50%
3.55%
3.60%
3.65%
3.70%
3.75%
3.80%
3.85%
3.90%
3.95%
4.00%
4.05%
4.10%
4.15%
4.20%
4.25%
4.30%
4.35%
4.40%
4.45%
4.50%
4.55%
4.60%
4.65%
4.70%
4.75%
Option 3


0%
5%
0%
5%
0%

4.80%
4.85%
4.90%
4.95%
5.00%
5.05%
5.10%
5.15%
5.20%
5.25%
5.30%
5.35%
5.40%
5.45%
5.50%

se rate)

5.30
5.35
5.40
5.45
5.50

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

IESO GA cost forecast + extrapolation

Scenario
Option 1a
Borrow $3.3B, Bills Lowered 20%, No Cap

Option 1b
Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B

	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168

Ratepayer GA Payment	8,753	8,535	8,311	7,650
Total Accumulated Debt ($ billion)	3,342	6,812	10,402	15,452

Ratepayer GA Payment	9,781	9,661	9,367	8,733
Accumulated debt in present year (including 5% interest,	2,314	4,606	7,027	10,822

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528
19,868	24,126	28,033	32,843	37,110	40,911	45,720	50,350
8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717
13,761	16,470	18,755	21,866	24,355	26,295	29,156	31,750

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**
10009	9721	8654	8820	8238	7756	5662	5389

8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319
54,201	57,751	60,200	62,719	64,559	65,780	64,732	63,114
9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913
33,472	34,796	34,919	35,008	34,309	32,878	31,035	29,098

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627

10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485
60,904	58,078	54,611	50,476	45,641	40,076	33,745	26,613
8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151
27,063	24,923	22,673	20,309	17,823	15,210	12,464	9,577

2045	2046	2047	2048

3,451	3,285	3,126	2,975	2,831	2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695

12,786	13,095	13410.34	2975.154	2831.461	2694.708
18,640	9,784	4.85E-06	0	0	0

6,976	6,809	6650.631	2975.154	2831.461	2694.708
6,543	3,353	5E-12	0	0	0

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

		5.00%	
Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb15_1a_30yr

Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,342	3,470
Interest Portion	0	171

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	835	3,374
Interest Portion	-	43

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $66 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb15_1b_30yr

Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,314	2,292
Interest Portion	0	118

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	579	2,309
Interest Portion	-	30

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $35 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

#REF!		
$ millions		
30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	362	1,487

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
	1	
	2	
	3	
	4 April	4
	5 May	5
	6 June	6
	7 July	7
	8 August	8
	9 September	9
	10 October	10
	11 November	11
	12 December	12
30-year term	**2016-17**	**2017-18**

Fiscal Exposure - Equal Monthly Debt Drawdown 579 - 835 2,309 - 3,374

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	835	3374
Debt-Finance Global Adjustment Costs, Option 1a	579	2309
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60

First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**835**	**3614**
Total, B	579	2549
Proposed Program Total:	579 - 835	2,549 - 3,614

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Option 1a
Option 2b

Assumes an inte

2019	2020	2021	2022
3,589	5,050	4,416	4,258
349	532	791	1,016

2018-19	2019-20	2020-21	2021-2022
3,500	3,955	4,892	4,377
215	394	597	847

2034.

depend on decision on accounting treatment.

2019	2020	2021	2022
2,421	3,795	2,938	2,709
236	360	554	704

2018-19	2019-20	2020-21	2021-2022
2,324	2,765	3,581	2,881
148	267	408	591

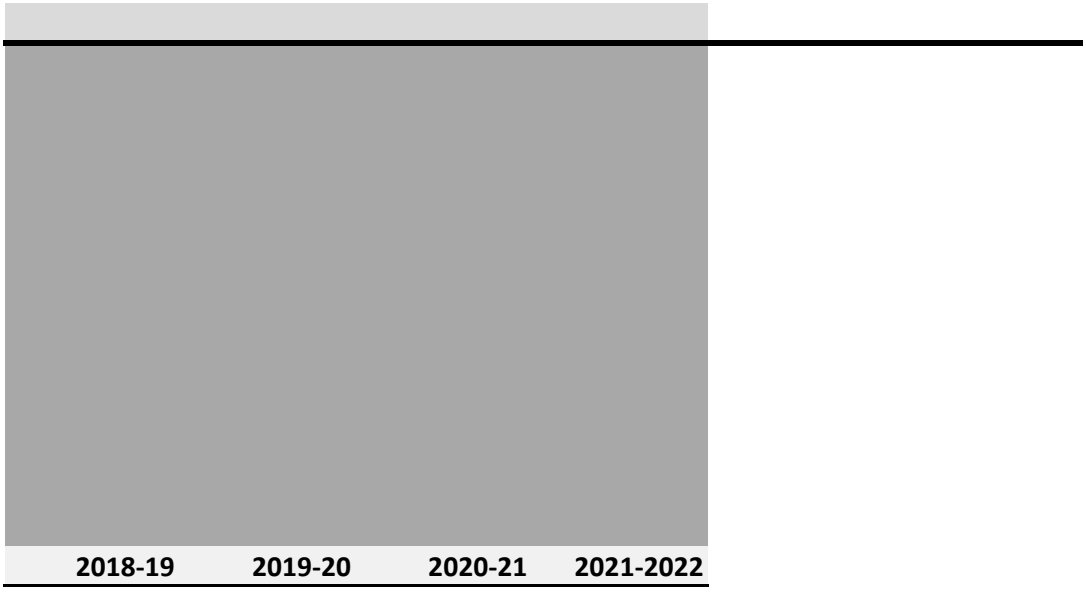
2032.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022

2,324 - 3,500 2,765 - 3,955 3,581 - 4,892 2,881 - 4,377

/1

2018-19[1]	2019-20[1]	2020-21[1]
3500	3955	4892
2324	2765	3581
225	279	323
60	60	60

18	18	18
3803	**4312**	**5293**
2627	3122	3982

2,627 - 3,803	3,122 - 4,312	3,982 - 5,293

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$38,864	$61,735	$65,781	occurs in Year 2034
$22,873	$32,368	$35,009	occurs in Year 2032

erest rate of 5.00% (compounded monthly).

Tab Name		Total Accumulated Interest Costs
Feb15_1a_30yr	$26,517	$34,278
Feb15_1b_30yr	$15,631	$20,378
	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$26,517 to $34,278
Option 2	$15,631 to $20,378
Option 3	$17,202 to $22,028

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

Feb15_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,342	3,470	3,589	5,050	4,416	4,258	3,907	4,810	4,268	3,801	4,809	4,630	3,851	3,550	2,449	2,519	1,840	1,221	-1,048	-1,618	-2,210	-2,825	-3,467	-4,135	-4,834	-5,565	-6,330	-7,132	-7,973	-8,856	-9,783	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,421	3,553	3,675	5,171	4,521	4,359	4,000	4,924	4,369	3,891	4,923	4,740	3,943	3,635	2,508	2,579	1,884	1,250	-1,073	-1,656	-2,262	-2,893	-3,549	-4,234	-4,949	-5,697	-6,481	-7,302	-8,163	-9,067	-10,016	0	0	0	
			79	83	85	120	105	101	93	114	102	90	114	110	92	84	58	60	44	29	-25	-38	-53	-67	-82	-98	-115	-132	-151	-170	-190	-211	-233	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	5,050	3,365	61,735
Equal Monthly Debt Drawdown	5,171	3,341	

	Feb15 Option 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	65,781	2034	38,864
Equal Monthly Debt Drawdown	67,346		

Feb15 Option 1a, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
a	Debt, Beginning of Year	0	3,342	6,812	10,402	15,452	19,868	24,126	28,034	32,843	37,111	40,911	45,720	50,350	54,201	57,752	60,201	62,720	64,560	65,781	64,733	63,115	60,906	58,080	54,614	50,478	45,644	40,079	33,749	26,617	18,644	9,788	5	5	5	
c = a*5%	*Interest Cost - Feb15 Option 1a, 30-yr - End of Year Debt Drawdown*	0	171	349	532	791	1,016	1,234	1,434	1,680	1,899	2,093	2,339	2,576	2,773	2,955	3,080	3,209	3,303	3,365	3,312	3,229	3,116	2,972	2,794	2,583	2,335	2,051	1,727	1,362	954	501	0	0	0	61,735
b	Additional GA Debt Drawdown, End of Year	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	3,342	6,812	10,402	15,452	19,868	24,126	28,034	32,843	37,111	40,911	45,720	50,350	54,201	57,752	60,201	62,720	64,560	65,781	64,733	63,115	60,906	58,080	54,614	50,478	45,644	40,079	33,749	26,617	18,644	9,788	5	5	5	5	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	171	520	1,052	1,842	2,859	4,093	5,527	7,208	9,106	11,199	13,539	16,115	19,665	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	26,617	18,644	9,788	5	5	5	5	
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal	3,342	6,641	9,882	14,400	18,026	21,267	23,941	27,316	29,903	31,805	34,521	36,812	38,087	38,087	38,087	40,606	42,446	43,667	42,619	41,001	38,792	35,966	32,500	28,364	23,530	17,965	11,635	0	0	0	0	0	0	0	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	171	520	1,052	1,842	2,859	4,093	5,527	7,208	9,106	11,199	13,539	16,115	18,888	21,842	24,922	28,131	31,434	34,800	38,112	41,341	44,457	47,428	50,222	52,805	55,140	57,191	58,917	60,279	61,233	61,734				
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal	3,342	6,641	9,882	14,400	18,026	21,267	23,941	27,316	29,903	31,805	34,521	36,812	38,087	38,864	38,359	37,798	36,429	34,347	29,934	25,004	19,565	13,624	7,186	256	-7,161	-15,061	-23,442	-32,300	-41,635	-51,445	-61,729				
Fiscal Exposure - End of Year Debt Drawdown		3,342	3,470	3,589	5,050	4,416	4,258	3,907	4,810	4,268	3,801	4,809	4,630	3,851	3,550	2,449	2,519	1,840	1,221	-1,048	-1,618	-2,210	-2,825	-3,467	-4,135	-4,834	-5,565	-6,330	-7,132	-7,973	-8,856	-9,783	0	0	0	

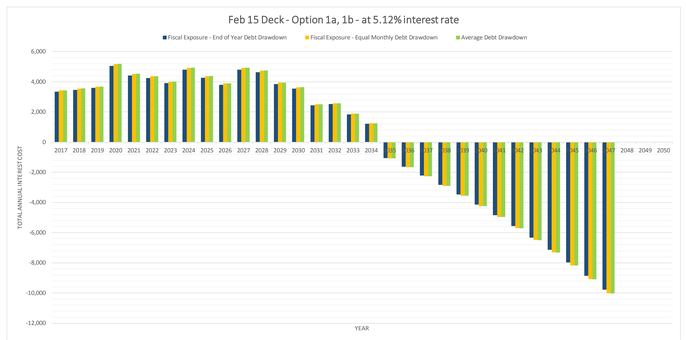
Feb15 Option 1a, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,421	6,974	10,649	15,820	20,341	24,700	28,700	33,624	37,993	41,885	46,808	51,548	55,491	59,125	61,633	64,212	66,096	67,346	66,273	64,617	62,354	59,462	55,913	51,679	46,730	41,033	34,552	27,250	19,087	10,021	5	5	5	
3,341	*Interest Cost - Feb15 Option 1a, 30-yr*	*79*	*254*	*434*	*652*	*896*	*1,118*	*1,327*	*1,549*	*1,782*	*1,989*	*2,207*	*2,449*	*2,668*	*2,857*	*3,013*	*3,140*	*3,253*	*3,332*	*3,341*	*3,273*	*3,177*	*3,049*	*2,889*	*2,696*	*2,468*	*2,203*	*1,900*	*1,557*	*1,172*	*743*	*268*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,421	6,974	10,649	15,820	20,341	24,700	28,700	33,624	37,993	41,885	46,808	51,548	55,491	59,125	61,633	64,212	66,096	67,346	66,273	64,617	62,354	59,462	55,913	51,679	46,730	41,033	34,552	27,250	19,087	10,021	5	5	5	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,421	3,553	3,675	5,171	4,521	4,359	4,000	4,924	4,369	3,891	4,923	4,740	3,943	3,635	2,508	2,579	1,884	1,250	-1,073	-1,656	-2,262	-2,893	-3,549	-4,234	-4,949	-5,697	-6,481	-7,302	-8,163	-9,067	-10,016	0	0	0	

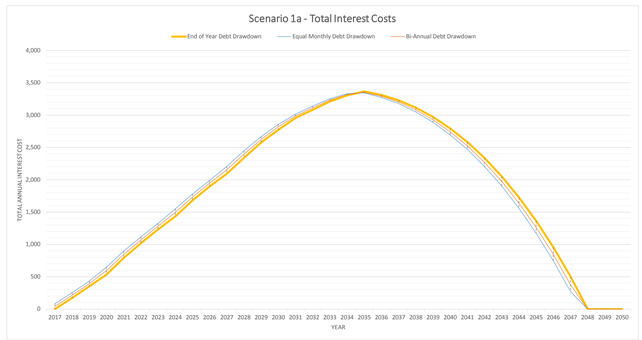
	Monthly Drawdown	278	275	270	377	302	270	223	281	216	159	226	191	106	65	(42)	(47)	(114)	(174)	(368)	(411)	(453)	(495)	(537)	(577)	(618)	(658)	(698)	(738)	(778)	(817)	(857)	-	-	-	
	FV of Monthly Drawdown at 5%	3,421	3,378	3,318	4,626	3,712	3,319	2,737	3,456	2,649	1,947	2,780	2,346	1,305	796	(517)	(574)	(1,401)	(2,132)	(4,518)	(5,047)	(5,568)	(6,083)	(6,591)	(7,094)	(7,593)	(8,088)	(8,580)	(9,069)	(9,557)	(10,043)	(10,529)	-	-	-	
	Annual Interest Cost on New Drawdowns	79	78	77	107	86	77	64	80	62	45	65	54	30	18	(12)	(13)	(33)	(50)	(105)	(117)	(129)	(141)	(153)	(165)	(176)	(188)	(199)	(211)	(222)	(233)	(245)	-	-	-	
	Annual Interest Cost on Opening Balance	-	175	357	545	809	1,041	1,264	1,468	1,720	1,944	2,143	2,395	2,637	2,839	3,025	3,153	3,285	3,382	3,446	3,391	3,306	3,190	3,042	2,861	2,644	2,391	2,099	1,768	1,394	977	513	0	0	0	
	Total Annual Interest Cost	79	254	434	652	896	1,118	1,327	1,549	1,782	1,989	2,207	2,449	2,668	2,857	3,013	3,140	3,253	3,332	3,341	3,273	3,177	3,049	2,889	2,696	2,468	2,203	1,900	1,557	1,172	743	268	0	0	0	

Feb15 Option 1a, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,385	6,899	10,535	15,650	20,122	24,435	28,392	33,263	37,585	41,435	46,305	50,994	54,895	58,490	60,971	63,523	65,386	66,623	65,561	63,923	61,685	58,823	55,312	51,124	46,228	40,592	34,181	26,958	18,882	9,913	5	5	5	
	Interest Cost - Feb15 Option 1a, 30-yr	*43*	*215*	*394*	*597*	*847*	*1,071*	*1,284*	*1,496*	*1,735*	*1,947*	*2,155*	*2,398*	*2,625*	*2,818*	*2,986*	*3,112*	*3,232*	*3,319*	*3,352*	*3,291*	*3,201*	*3,080*	*2,927*	*2,741*	*2,521*	*2,264*	*1,970*	*1,635*	*1,260*	*841*	*376*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,385	6,899	10,535	15,650	20,122	24,435	28,392	33,263	37,585	41,435	46,305	50,994	54,895	58,490	60,971	63,523	65,386	66,623	65,561	63,923	61,685	58,823	55,312	51,124	46,228	40,592	34,181	26,958	18,882	9,913	5	5	5	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,385	3,515	3,635	5,115	4,473	4,313	3,957	4,871	4,322	3,849	4,870	4,689	3,900	3,596	2,481	2,551	1,864	1,237	-1,061	-1,639	-2,238	-2,861	-3,511	-4,188	-4,896	-5,636	-6,411	-7,223	-8,075	-8,969	-9,909	0	0	0	

	Bi-Annual Drawdown	1,671	1,650	1,620	2,259	1,813	1,621	1,337	1,688	1,294	951	1,358	1,146	638	389	(253)	(280)	(684)	(1,041)	(2,207)	(2,465)	(2,719)	(2,971)	(3,219)	(3,465)	(3,708)	(3,950)	(4,190)	(4,429)	(4,667)	(4,905)	(5,142)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,385	3,341	3,282	4,576	3,672	3,283	2,707	3,418	2,620	1,926	2,750	2,320	1,291	787	(512)	(568)	(1,386)	(2,109)	(4,470)	(4,993)	(5,508)	(6,017)	(6,520)	(7,018)	(7,512)	(8,001)	(8,488)	(8,972)	(9,454)	(9,935)	(10,416)	-	-	-	
	Annual Interest Cost on New Drawdowns	43	42	41	58	46	41	34	43	33	24	35	29	16	10	(6)	(7)	(18)	(27)	(56)	(63)	(70)	(76)	(82)	(89)	(95)	(101)	(107)	(113)	(119)	(125)	(132)	-	-	-	
	Annual Interest Cost on Opening Balance	-	173	353	539	801	1,029	1,250	1,453	1,702	1,923	2,120	2,369	2,609	2,809	2,992	3,119	3,250	3,345	3,409	3,354	3,270	3,156	3,010	2,830	2,616	2,365	2,077	1,749	1,379	966	507	0	0	0	
	Total Annual Interest Cost	43	215	394	597	847	1,071	1,284	1,496	1,735	1,947	2,155	2,398	2,625	2,818	2,986	3,112	3,232	3,319	3,352	3,291	3,201	3,080	2,927	2,741	2,521	2,264	1,970	1,635	1,260	841	376	0	0	0	

Feb15 Option 1a, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,427	6,986	10,668	15,847	20,376	24,743	28,751	33,683	38,060	41,958	46,890	51,638	55,588	59,229	61,741	64,325	66,212	67,464	66,389	64,730	62,464	59,566	56,011	51,770	46,812	41,104	34,612	27,298	19,121	10,038	5	5	5	
	Interest Cost - Feb15 Option 1a, 30-yr	*85*	*260*	*440*	*661*	*904*	*1,125*	*1,334*	*1,557*	*1,789*	*1,996*	*2,216*	*2,458*	*2,675*	*2,864*	*3,017*	*3,144*	*3,256*	*3,334*	*3,339*	*3,270*	*3,173*	*3,044*	*2,883*	*2,688*	*2,459*	*2,193*	*1,889*	*1,544*	*1,158*	*727*	*251*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,427	6,986	10,668	15,847	20,376	24,743	28,751	33,683	38,060	41,958	46,890	51,638	55,588	59,229	61,741	64,325	66,212	67,464	66,389	64,730	62,464	59,566	56,011	51,770	46,812	41,104	34,612	27,298	19,121	10,038	5	5	5	6	
Fiscal Exposure - Average Debt Drawdown		3,427	3,559	3,681	5,180	4,529	4,367	4,007	4,933	4,377	3,898	4,932	4,749	3,950	3,641	2,512	2,584	1,887	1,252	-1,075	-1,659	-2,266	-2,898	-3,555	-4,241	-4,958	-5,707	-6,492	-7,314	-8,177	-9,083	-10,034	0	0	0	





Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

Feb15_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,314	2,292	2,421	3,795	2,938	2,709	2,285	3,111	2,489	1,940	2,862	2,594	1,722	1,324	123	89	-699	-1,431	-1,842	-1,937	-2,036	-2,140	-2,249	-2,364	-2,485	-2,613	-2,746	-2,887	-3,034	-3,190	-3,353	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,369	2,346	2,479	3,886	3,008	2,774	2,340	3,185	2,548	1,986	2,930	2,656	1,763	1,356	126	91	-716	-1,465	-1,886	-1,983	-2,084	-2,191	-2,303	-2,421	-2,544	-2,675	-2,812	-2,955	-3,107	-3,266	-3,433	0	0	0
			55	55	58	90	70	64	54	74	59	46	68	62	41	32	3	2	-17	-34	-44	-46	-48	-51	-54	-56	-59	-62	-65	-69	-72	-76	-80	0	0	0

0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,795	1,791	32,368
Equal Monthly Debt Drawdown	3,886	1,789	

	Feb15 Option 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	35,009	2032	22,873
Equal Monthly Debt Drawdown	35,841		

Feb15 Option 1a, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
a	Debt, Beginning of Year		0	2,314	4,606	7,027	10,822	13,761	16,470	18,755	21,866	24,355	26,295	29,157	31,751	33,472	34,797	34,920	35,009	34,310	32,879	31,036	29,100	27,064	24,924	22,675	20,310	17,825	15,212	12,466	9,579	6,545	3,355	3	3	3	
c = a*5%	*Interest Cost - Feb15 Option 1a, 30-yr - End of Year Debt Drawdown*		*0*	*118*	*236*	*360*	*554*	*704*	*843*	*960*	*1,119*	*1,246*	*1,345*	*1,492*	*1,624*	*1,713*	*1,780*	*1,787*	*1,791*	*1,755*	*1,682*	*1,588*	*1,489*	*1,385*	*1,275*	*1,160*	*1,039*	*912*	*778*	*638*	*490*	*335*	*172*	*0*	*0*	*0*	32,368
b	Additional GA Debt Drawdown, End of Year		2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)		2,314	4,606	7,027	10,822	13,761	16,470	18,755	21,866	24,355	26,295	29,157	31,751	33,472	34,797	34,920	35,009	34,310	32,879	31,036	29,100	27,064	24,924	22,675	20,310	17,825	15,212	12,466	9,579	6,545	3,355	3	3	3	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs		0	118	354	714	1,267	1,971	2,814	3,773	4,892	6,138	7,484	8,975	10,600	11,924	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	9,579	6,545	3,355	3	3	3	3	
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal		2,314	4,488	6,673	10,109	12,493	14,499	15,941	18,092	19,463	20,157	21,673	22,775	22,873	22,873	22,873	22,961	22,262	20,831	18,989	17,052	15,017	12,877	10,627	8,263	5,778	3,165	419	0	0	0	0	0	0	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs		0	118	354	714	1,267	1,971	2,814	3,773	4,892	6,138	7,484	8,975	10,600	12,312	14,092	15,879	17,670	19,425	21,108	22,695	24,184	25,569	26,844	28,004	29,043	29,955	30,733	31,371	31,861	32,196	32,368			
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal		2,314	4,488	6,673	10,109	12,493	14,499	15,941	18,092	19,463	20,157	21,673	22,775	22,873	22,485	20,828	19,130	16,639	13,453	9,929	6,404	2,880	-645	-4,169	-7,694	-11,218	-14,743	-18,267	-21,792	-25,316	-28,841	-32,365			
Fiscal Exposure - End of Year Debt Drawdown			2,314	2,292	2,421	3,795	2,938	2,709	2,285	3,111	2,489	1,940	2,862	2,594	1,722	1,324	123	89	-699	-1,431	-1,842	-1,937	-2,036	-2,140	-2,249	-2,364	-2,485	-2,613	-2,746	-2,887	-3,034	-3,190	-3,353	0	0	0	

Feb15 Option 1a, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Debt, Beginning of Year		0	2,369	4,716	7,194	11,080	14,088	16,862	19,201	22,386	24,934	26,920	29,850	32,506	34,269	35,625	35,751	35,841	35,126	33,661	31,774	29,792	27,708	25,517	23,214	20,793	18,249	15,574	12,763	9,807	6,701	3,435	3	3	3	
1,789	*Interest Cost - Feb15 Option 1a, 30-yr*		*55*	*173*	*293*	*450*	*624*	*768*	*897*	*1,034*	*1,178*	*1,292*	*1,413*	*1,553*	*1,665*	*1,744*	*1,783*	*1,789*	*1,774*	*1,721*	*1,638*	*1,542*	*1,440*	*1,334*	*1,222*	*1,104*	*980*	*850*	*713*	*569*	*418*	*259*	*92*	*0*	*0*	*0*	32,368
	Additional GA Debt Drawdown		2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		2,369	4,716	7,194	11,080	14,088	16,862	19,201	22,386	24,934	26,920	29,850	32,506	34,269	35,625	35,751	35,841	35,126	33,661	31,774	29,792	27,708	25,517	23,214	20,793	18,249	15,574	12,763	9,807	6,701	3,435	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown			2,369	2,346	2,479	3,886	3,008	2,774	2,340	3,185	2,548	1,986	2,930	2,656	1,763	1,356	126	91	-716	-1,465	-1,886	-1,983	-2,084	-2,191	-2,303	-2,421	-2,544	-2,675	-2,812	-2,955	-3,107	-3,266	-3,433	0	0	0	
	Monthly Drawdown		193	181	182	286	199	167	120	179	114	58	126	92	8	(32)	(138)	(141)	(208)	(266)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	-	-	-	
	FV of Monthly Drawdown at 5%		2,369	2,225	2,237	3,518	2,441	2,053	1,477	2,202	1,403	710	1,553	1,128	100	(397)	(1,697)	(1,738)	(2,549)	(3,262)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	-	-	-	
	Annual Interest Cost on New Drawdowns		55	52	52	82	57	48	34	51	33	17	36	26	2	(9)	(39)	(40)	(59)	(76)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	-	-	-	
	Annual Interest Cost on Opening Balance		-	121	241	368	567	721	863	982	1,145	1,276	1,377	1,527	1,663	1,753	1,823	1,829	1,834	1,797	1,722	1,626	1,524	1,418	1,305	1,188	1,064	934	797	653	502	343	176	0	0	0	
	Total Annual Interest Cost		55	173	293	450	624	768	897	1,034	1,178	1,292	1,413	1,553	1,665	1,744	1,783	1,789	1,774	1,721	1,638	1,542	1,440	1,334	1,222	1,104	980	850	713	569	418	259	92	0	0	0	

Feb15 Option 1a, 30-yr — Bi-Annual Debt Drawdown

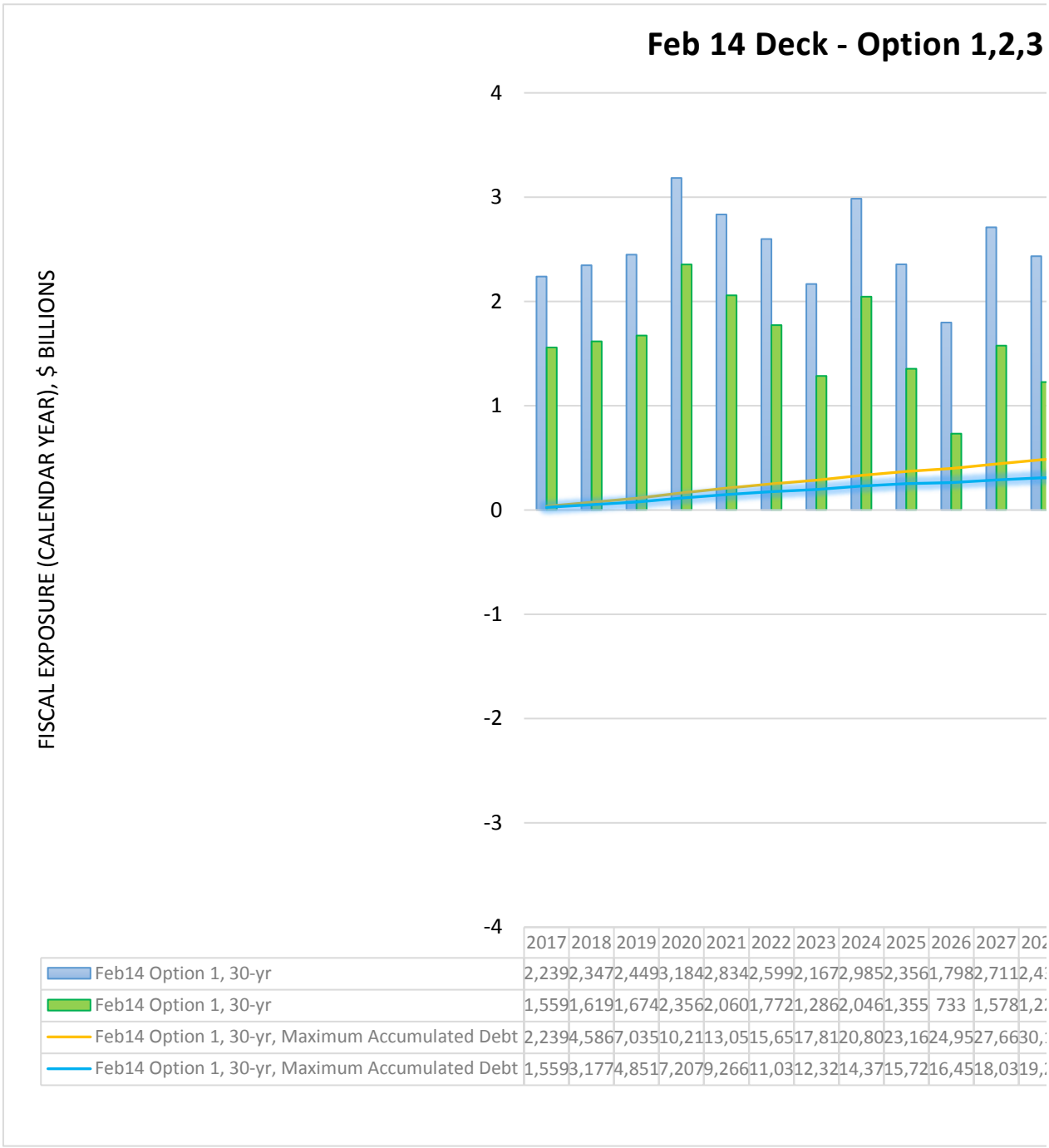
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Debt, Beginning of Year		0	2,344	4,665	7,117	10,961	13,937	16,681	18,995	22,146	24,667	26,631	29,530	32,157	33,901	35,242	35,367	35,456	34,748	33,299	31,433	29,472	27,410	25,243	22,965	20,570	18,053	15,407	12,626	9,702	6,629	3,398	3	3	3	
	Interest Cost - Feb15 Option 1a, 30-yr		*30*	*148*	*267*	*408*	*591*	*739*	*872*	*999*	*1,151*	*1,271*	*1,382*	*1,525*	*1,646*	*1,729*	*1,782*	*1,788*	*1,782*	*1,737*	*1,659*	*1,563*	*1,463*	*1,357*	*1,246*	*1,130*	*1,007*	*879*	*743*	*601*	*451*	*294*	*129*	*0*	*0*	*0*	32,368
	Additional GA Debt Drawdown		2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		2,344	4,665	7,117	10,961	13,937	16,681	18,995	22,146	24,667	26,631	29,530	32,157	33,901	35,242	35,367	35,456	34,748	33,299	31,433	29,472	27,410	25,243	22,965	20,570	18,053	15,407	12,626	9,702	6,629	3,398	3	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown			2,344	2,321	2,452	3,844	2,976	2,744	2,314	3,151	2,521	1,965	2,898	2,627	1,744	1,341	125	90	-708	-1,449	-1,866	-1,961	-2,062	-2,167	-2,278	-2,395	-2,517	-2,646	-2,781	-2,924	-3,073	-3,230	-3,396	0	0	0	
	Bi-Annual Drawdown		1,157	1,087	1,093	1,718	1,192	1,003	721	1,076	685	347	758	551	49	(194)	(829)	(849)	(1,245)	(1,593)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	-	-	-	
	FV of Bi-Annual Drawdown at 5%		2,344	2,201	2,213	3,480	2,415	2,031	1,461	2,179	1,388	703	1,536	1,116	99	(393)	(1,678)	(1,720)	(2,522)	(3,227)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	-	-	-	
	Annual Interest Cost on New Drawdowns		30	28	28	44	30	26	18	28	18	9	19	14	1	(5)	(21)	(22)	(32)	(41)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	-	-	-	
	Annual Interest Cost on Opening Balance		-	120	239	364	561	713	853	972	1,133	1,262	1,363	1,511	1,645	1,734	1,803	1,809	1,814	1,778	1,704	1,608	1,508	1,402	1,291	1,175	1,052	924	788	646	496	339	174	0	0	0	
	Total Annual Interest Cost		30	148	267	408	591	739	872	999	1,151	1,271	1,382	1,525	1,646	1,729	1,782	1,788	1,782	1,737	1,659	1,563	1,463	1,357	1,246	1,130	1,007	879	743	601	451	294	129	0	0	0	

Feb15 Option 1a, 30-yr — Average Debt Drawdown

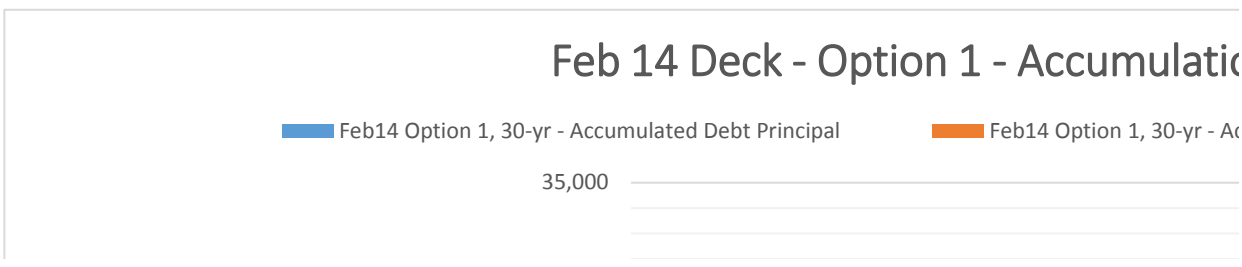
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Debt, Beginning of Year		0	2,373	4,724	7,207	11,099	14,113	16,891	19,235	22,425	24,978	26,968	29,902	32,563	34,329	35,687	35,813	35,904	35,187	33,720	31,830	29,844	27,756	25,562	23,255	20,830	18,281	15,601	12,785	9,824	6,712	3,441	3	3	3	
	Interest Cost - Feb15 Option 1a, 30-yr		*59*	*177*	*298*	*457*	*629*	*773*	*901*	*1,039*	*1,182*	*1,296*	*1,419*	*1,558*	*1,668*	*1,746*	*1,783*	*1,789*	*1,773*	*1,719*	*1,635*	*1,538*	*1,437*	*1,330*	*1,218*	*1,100*	*976*	*845*	*708*	*564*	*412*	*253*	*86*	*0*	*0*	*0*	32,368
	Additional GA Debt Drawdown		2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		2,373	4,724	7,207	11,099	14,113	16,891	19,235	22,425	24,978	26,968	29,902	32,563	34,329	35,687	35,813	35,904	35,187	33,720	31,830	29,844	27,756	25,562	23,255	20,830	18,281	15,601	12,785	9,824	6,712	3,441	3	3	3	
Fiscal Exposure - Average Debt Drawdown			2,373	2,351	2,483	3,892	3,013	2,779	2,344	3,190	2,553	1,989	2,935	2,660	1,766	1,358	126	91	-717	-1,468	-1,889	-1,986	-2,088	-2,195	-2,307	-2,425	-2,549	-2,679	-2,816	-2,961	-3,112	-3,271	-3,439	0	0	0	

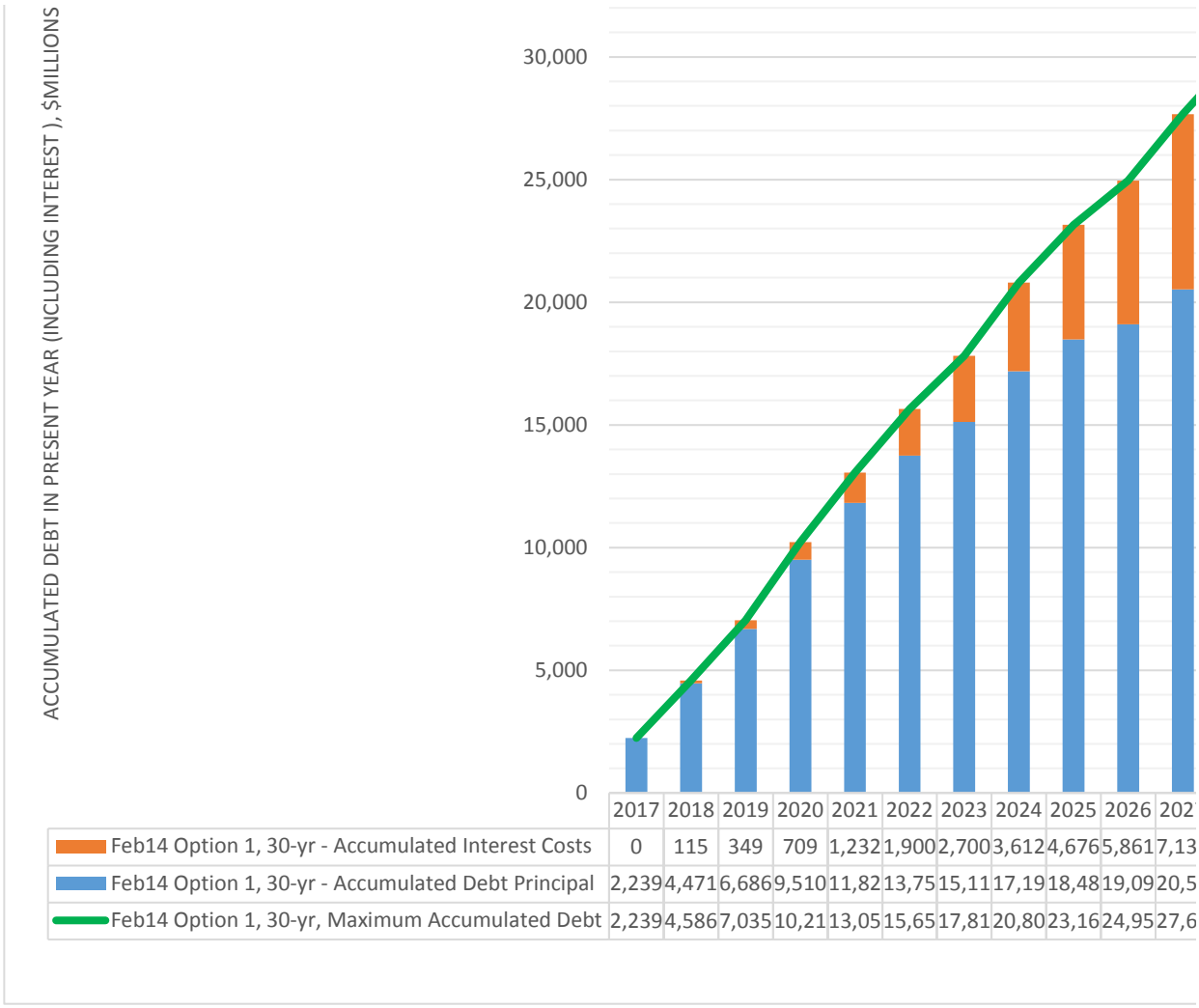
Feb 14 Deck

Feb 14 Deck - Option 1,2,3 - at 5.12% interest rate

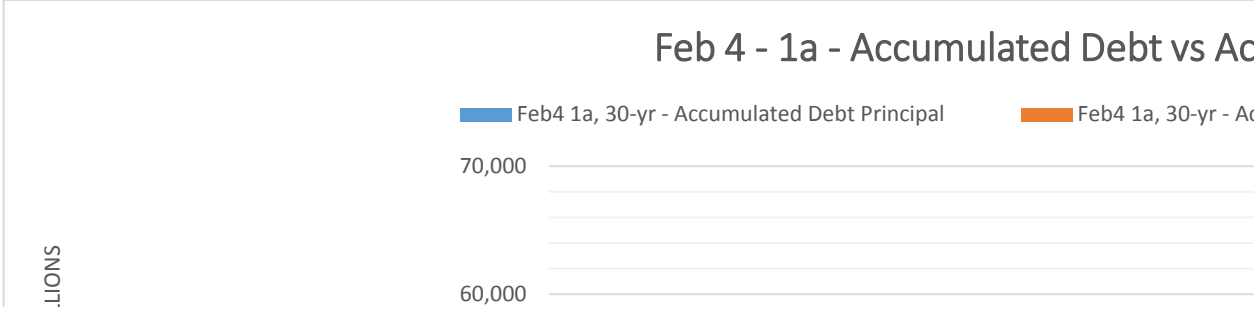


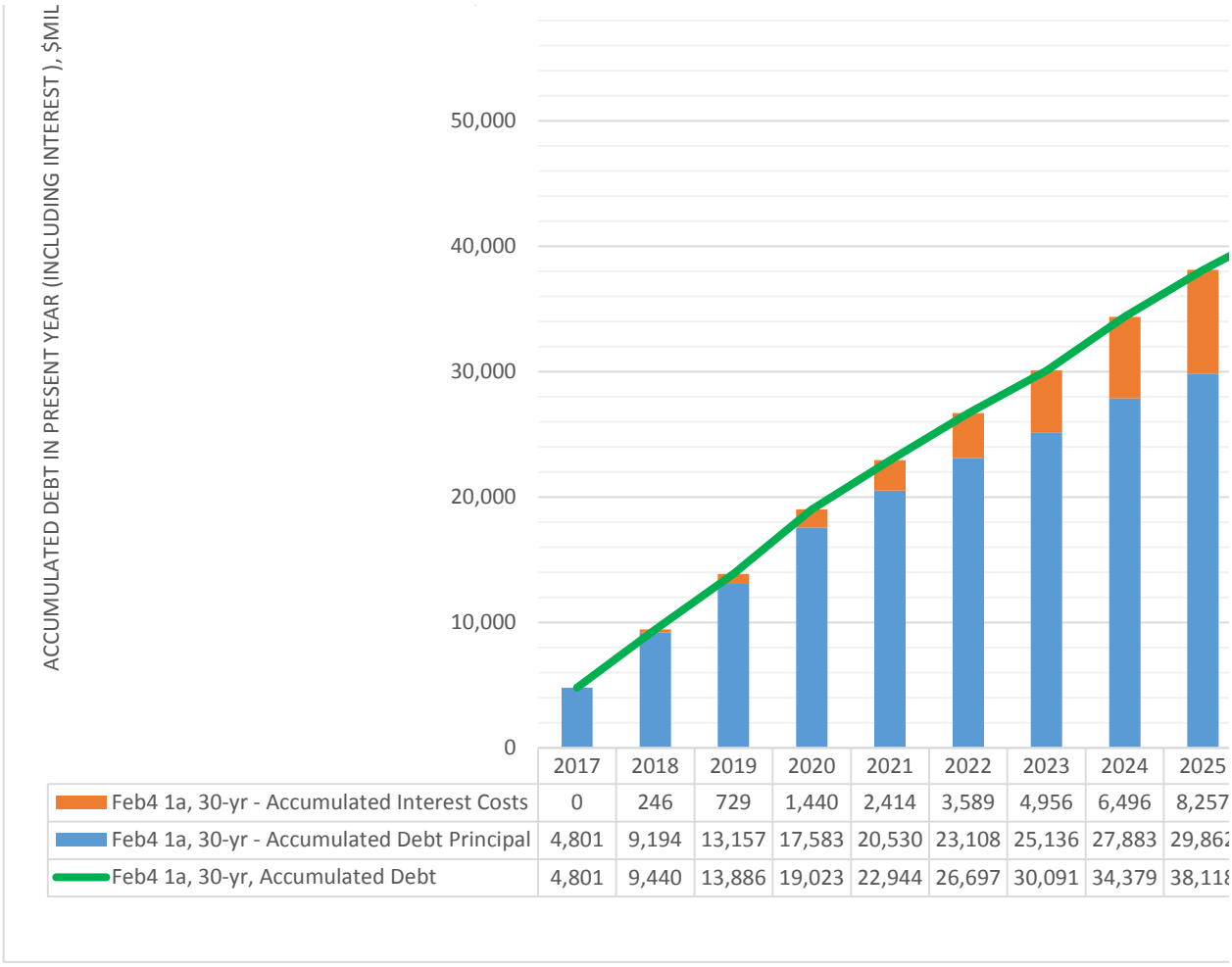
Feb 14 Deck - Option 1 - Accumulation of Debt (Principal and Interest)



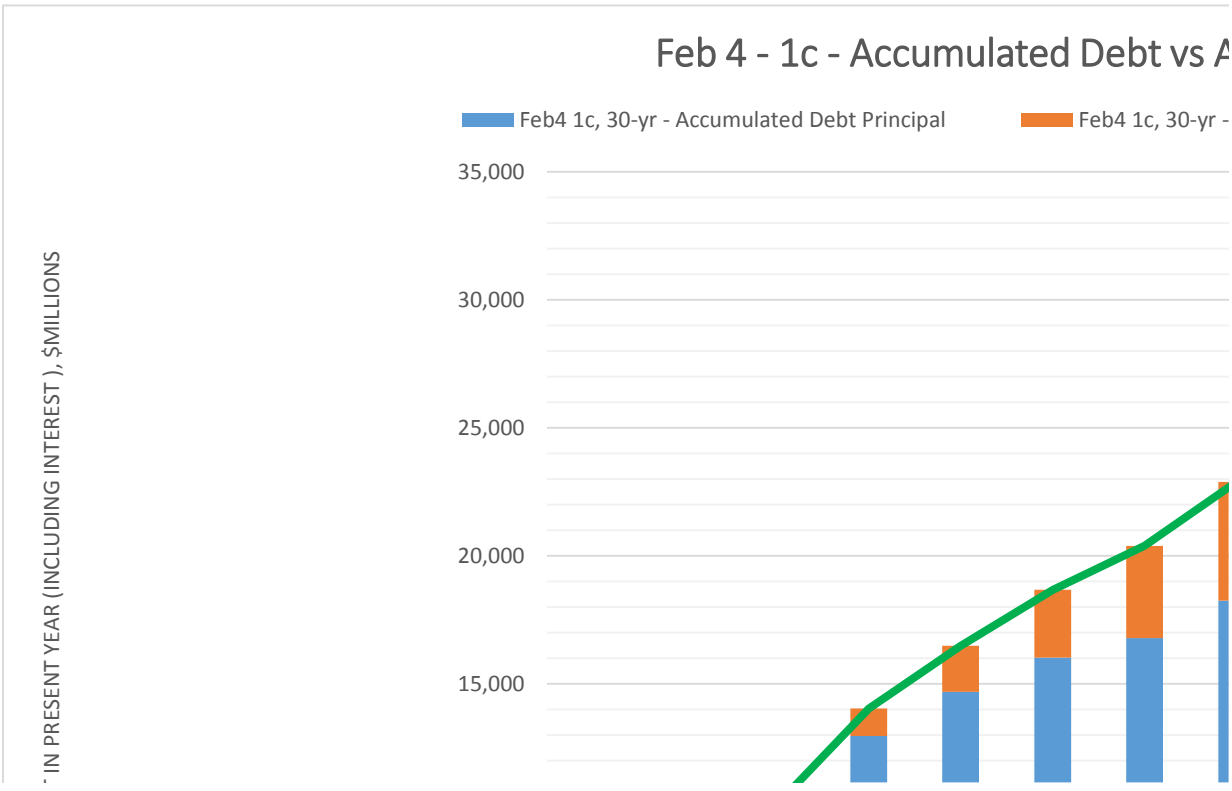


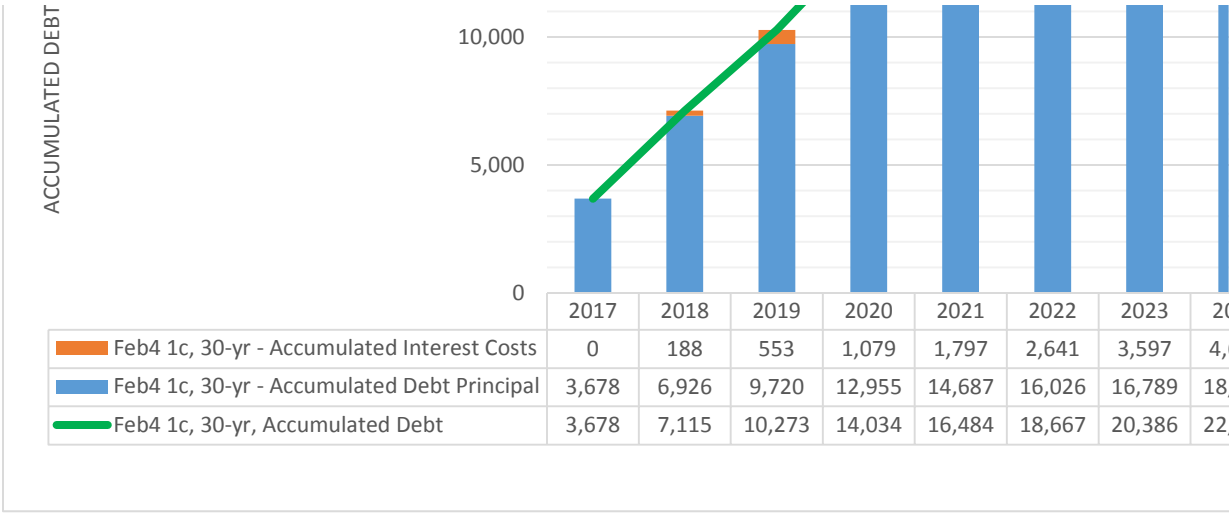
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	202
Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,13
Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,82	13,75	15,11	17,19	18,48	19,09	20,5
Feb14 Option 1, 30-yr, Maximum Accumulated Debt	2,239	4,586	7,035	10,21	13,05	15,65	17,81	20,80	23,16	24,95	27,6



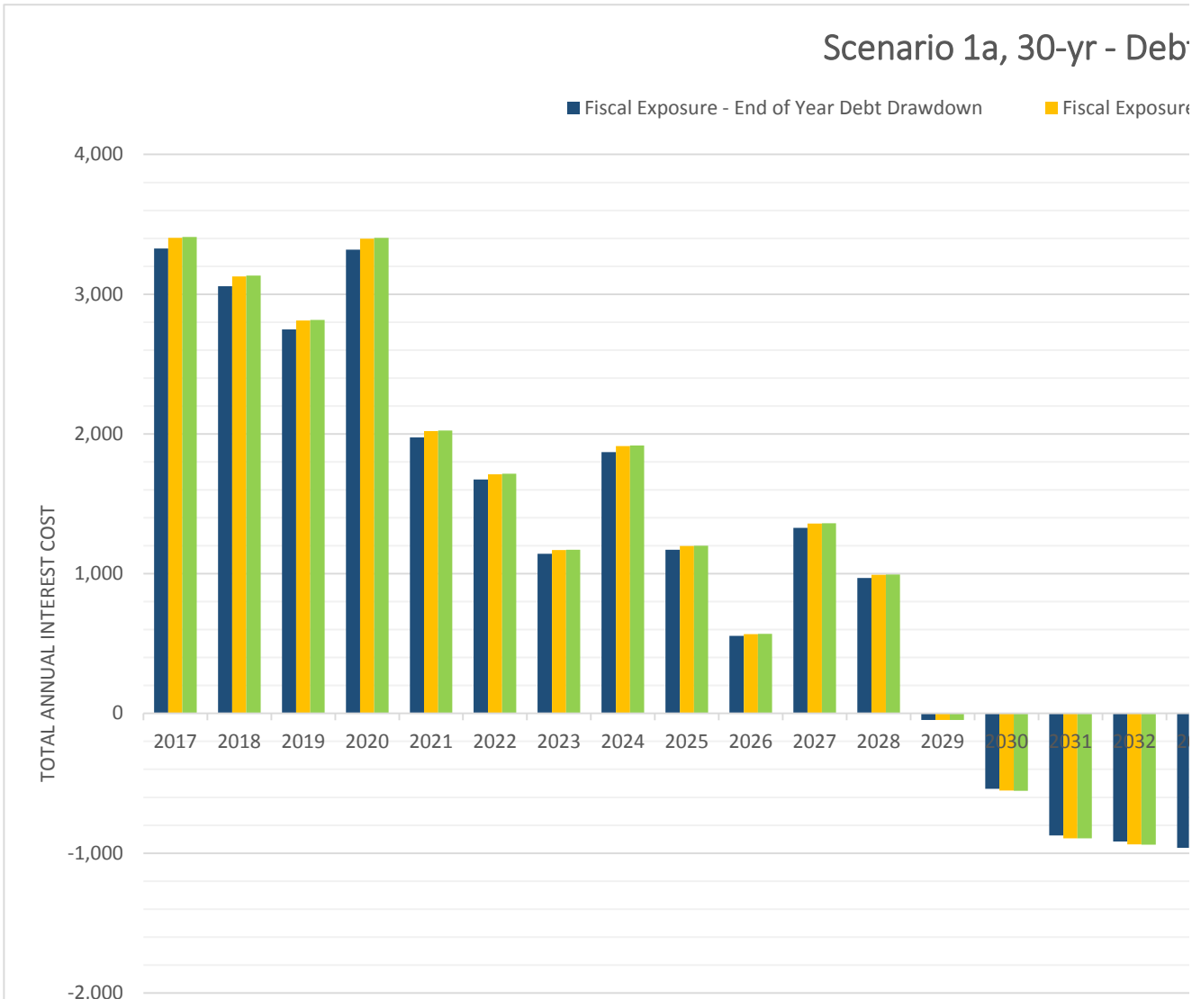


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



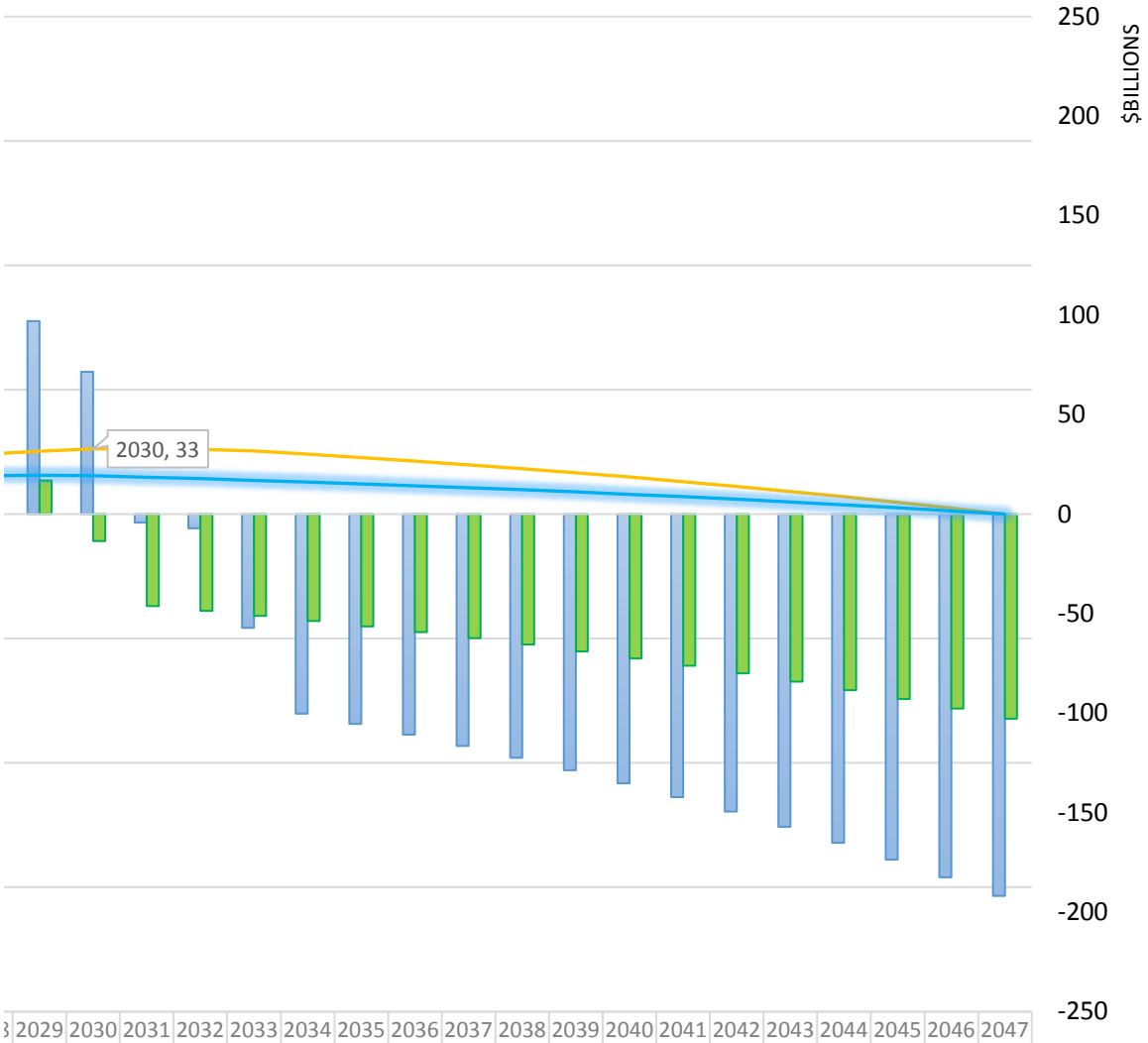


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

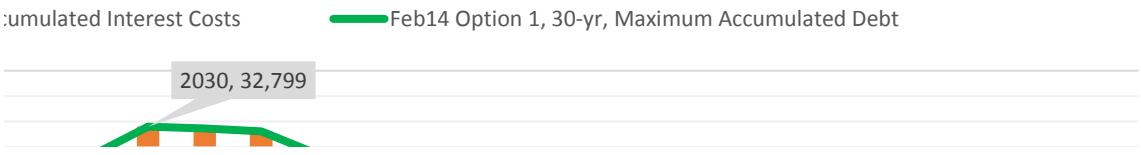
- at 5.12% interest rate

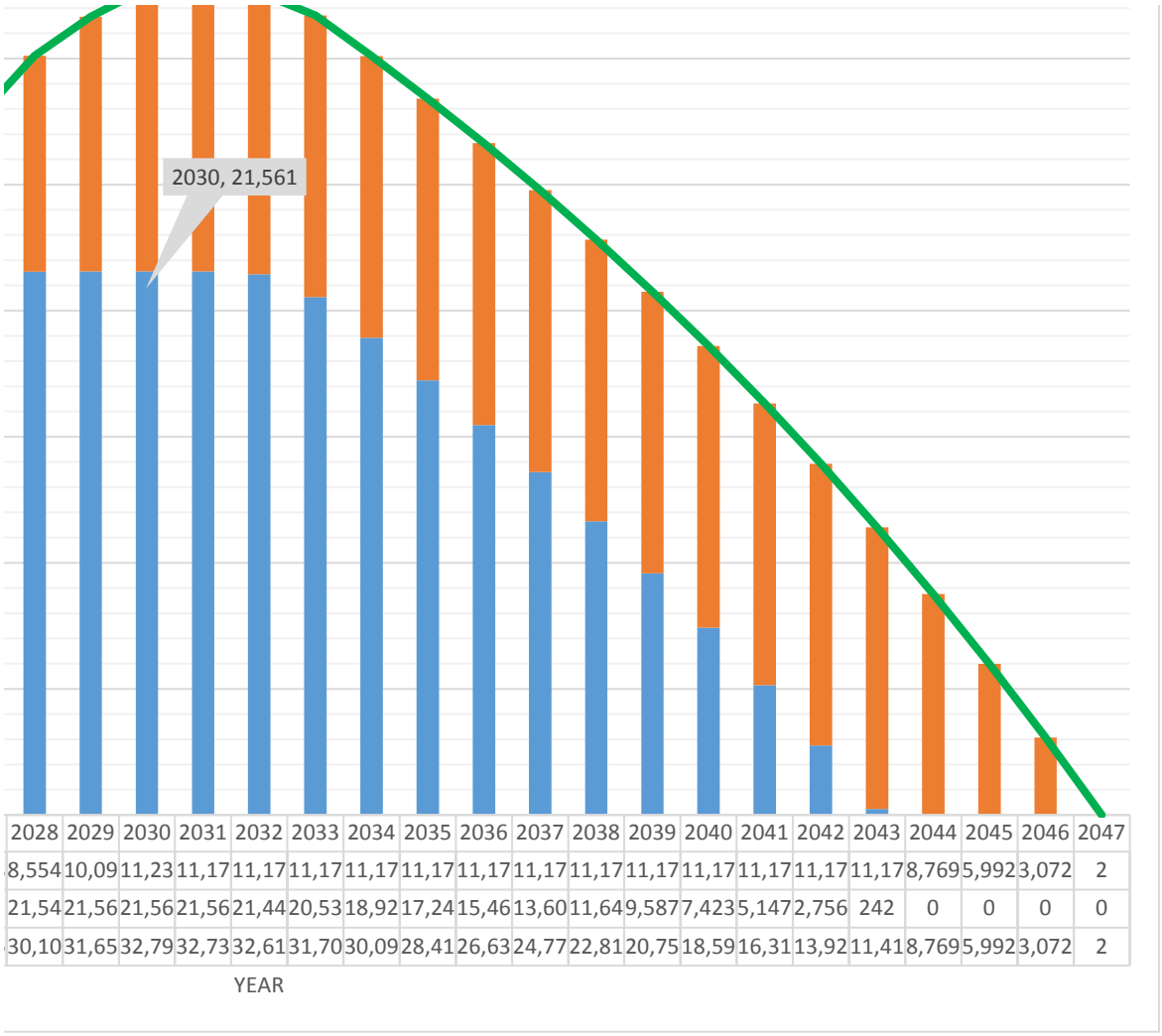


	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
	41,552	1,144	-68	-114	-914	-1,60	-1,68	-1,77	-1,86	-1,95	-2,05	-2,16	-2,27	-2,39	-2,51	-2,64	-2,77	-2,92	-3,06
	3 271	-217	-740	-778	-818	-859	-903	-950	-998	-1,04	-1,10	-1,15	-1,21	-1,28	-1,34	-1,41	-1,48	-1,56	-1,64
	031,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,769	5,992	3,072	2
	519,53	19,31	18,57	17,79	16,98	16,12	15,21	14,26	13,27	12,22	11,11	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1

CALENDAR YEAR

n of Debt (Principal and Interest)

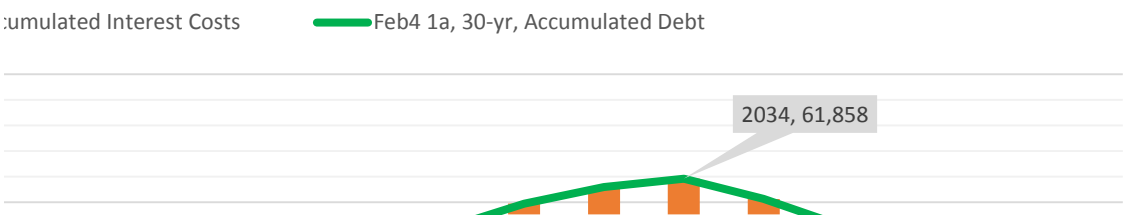




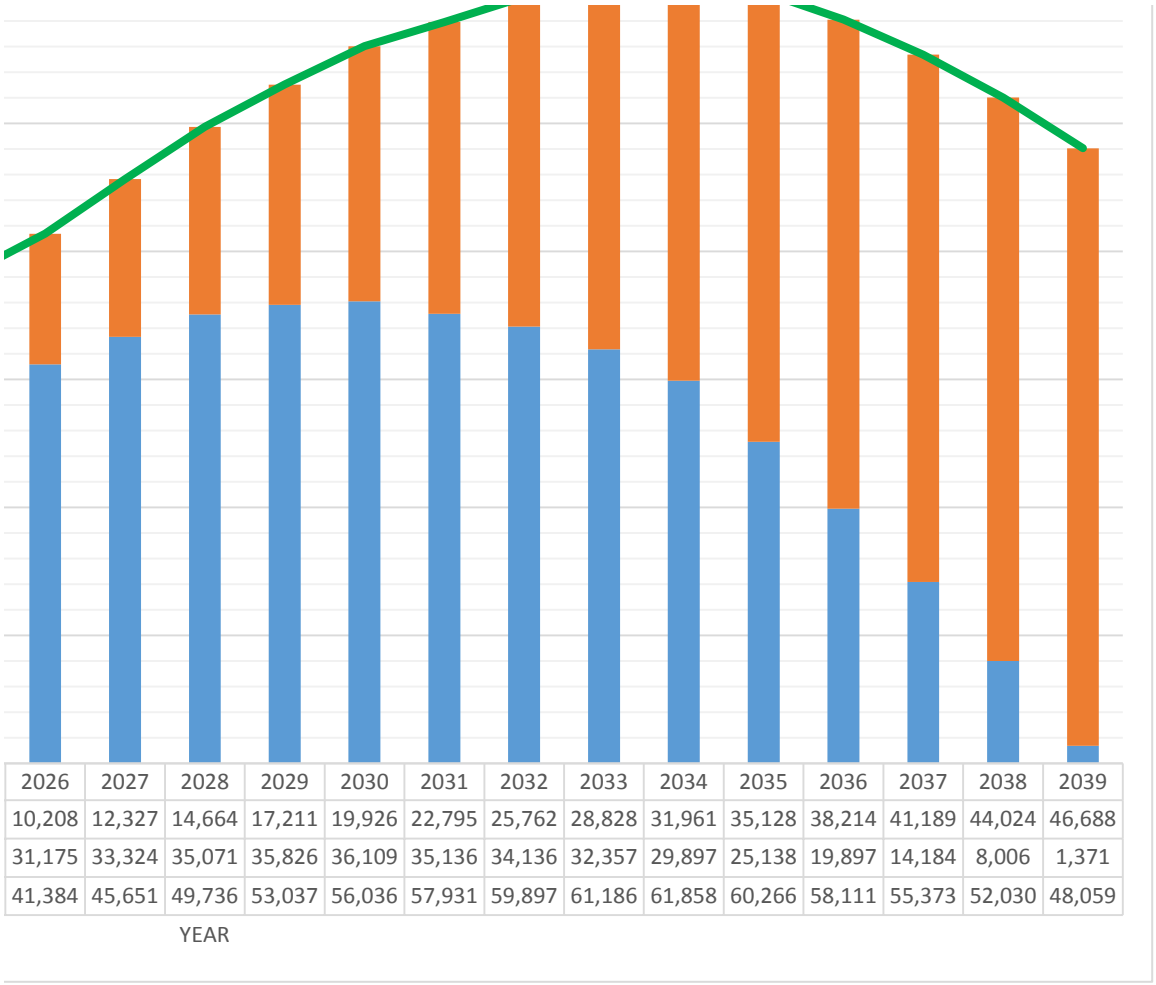
2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
8,554	10,09	11,23	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	8,769	5,992	3,072	2
21,54	21,56	21,56	21,56	21,44	20,53	18,92	17,24	15,46	13,60	11,64	9,587	7,423	5,147	2,756	242	0	0	0	0
30,10	31,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,769	5,992	3,072	2

YEAR

cumulated Total Interest Costs



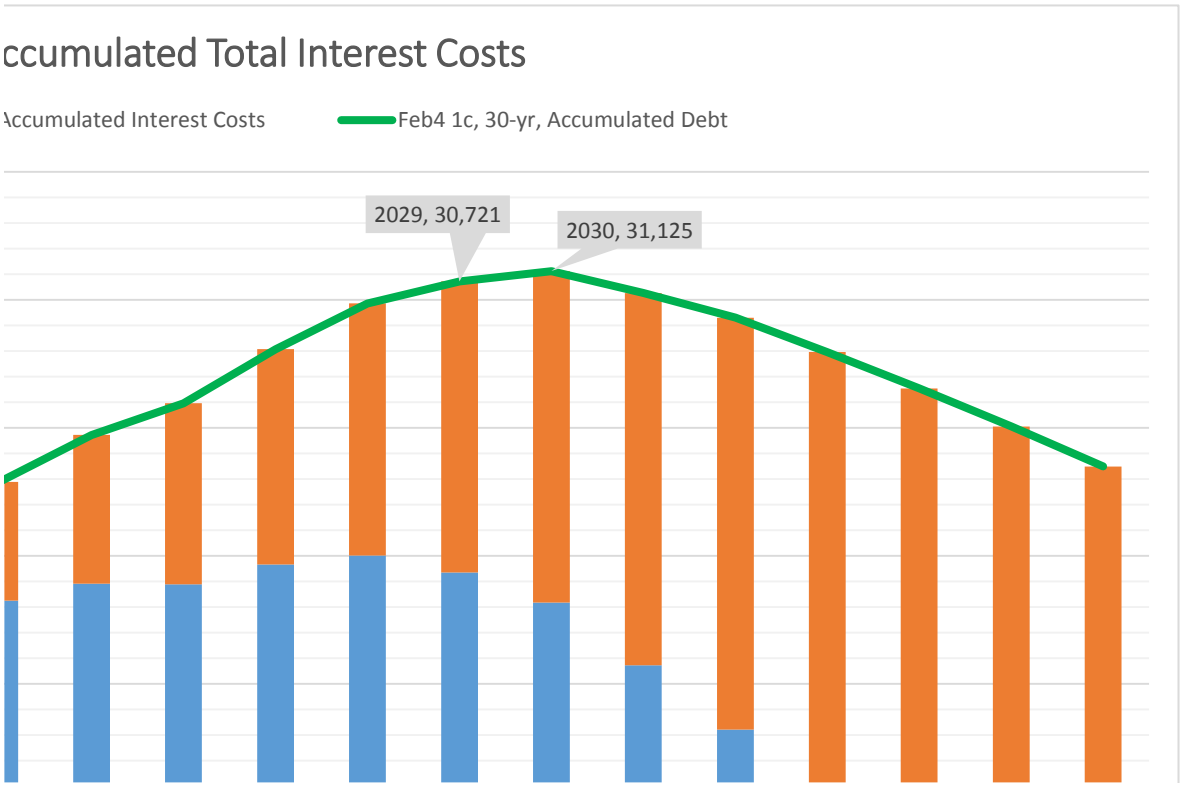
LIONS

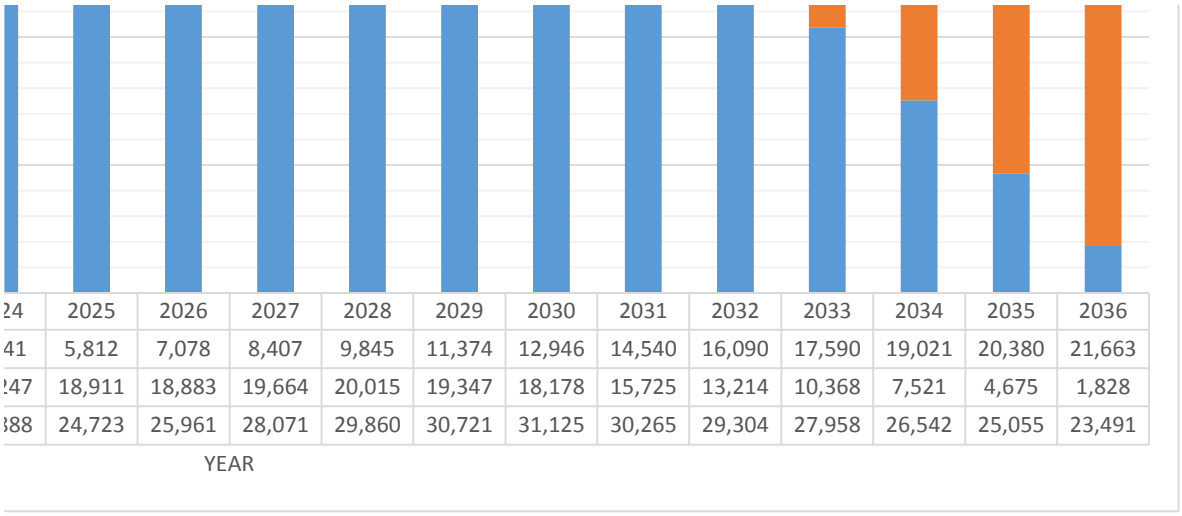


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

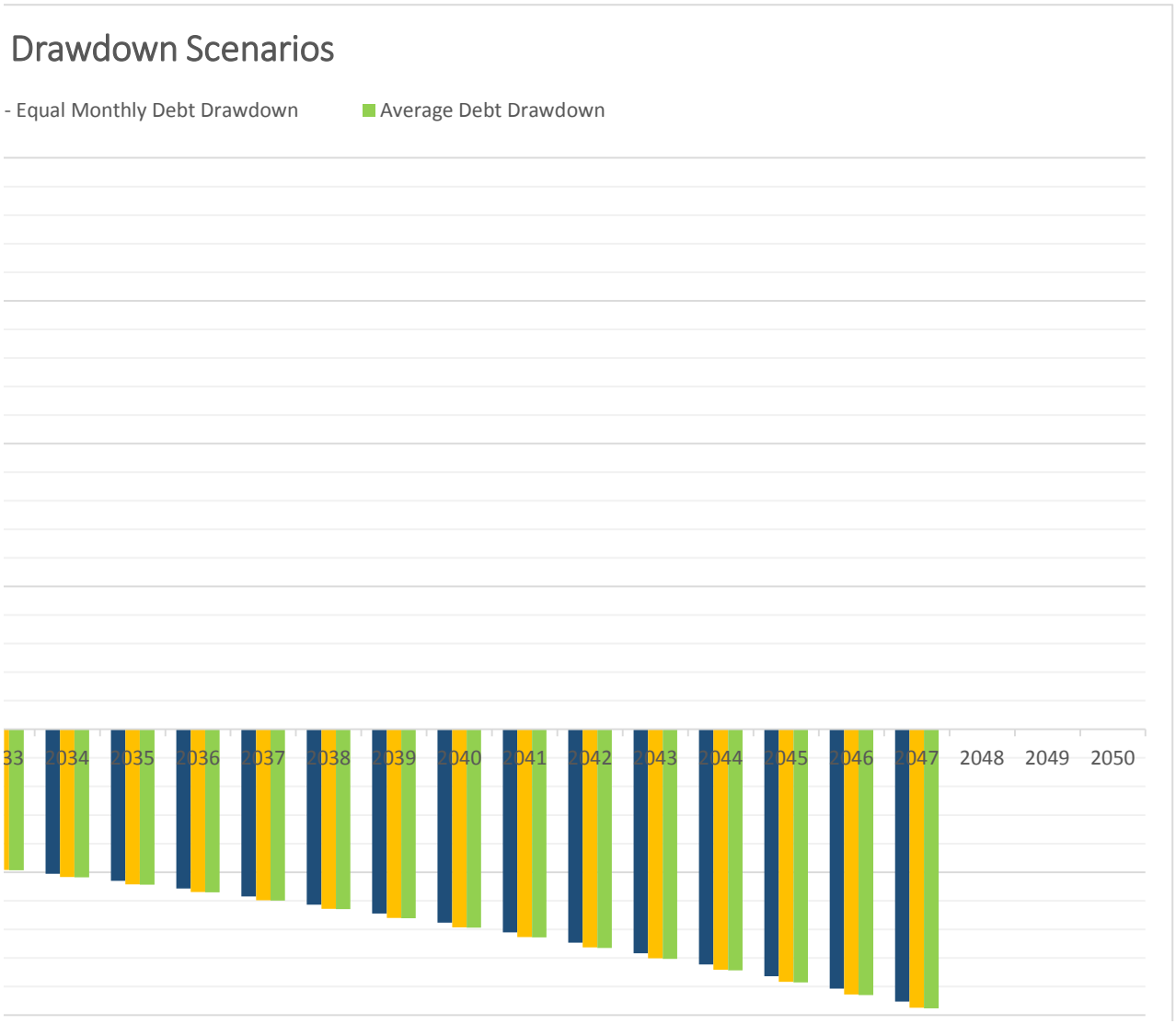
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





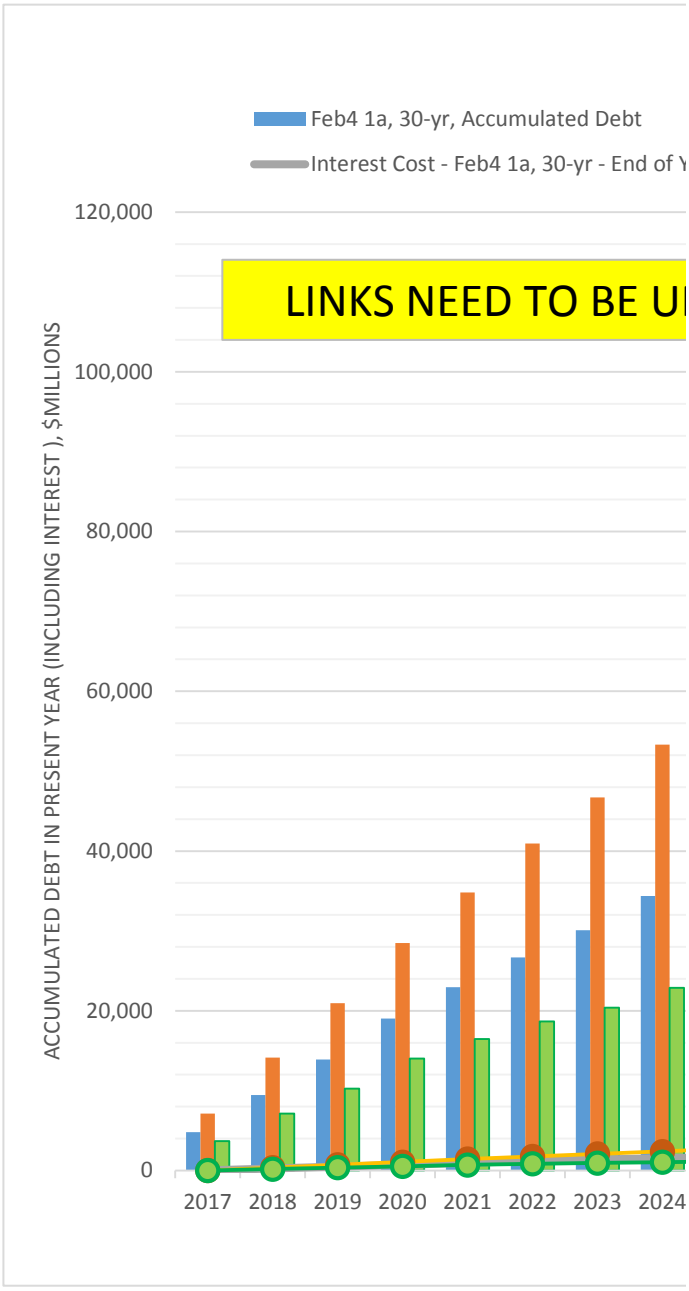
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

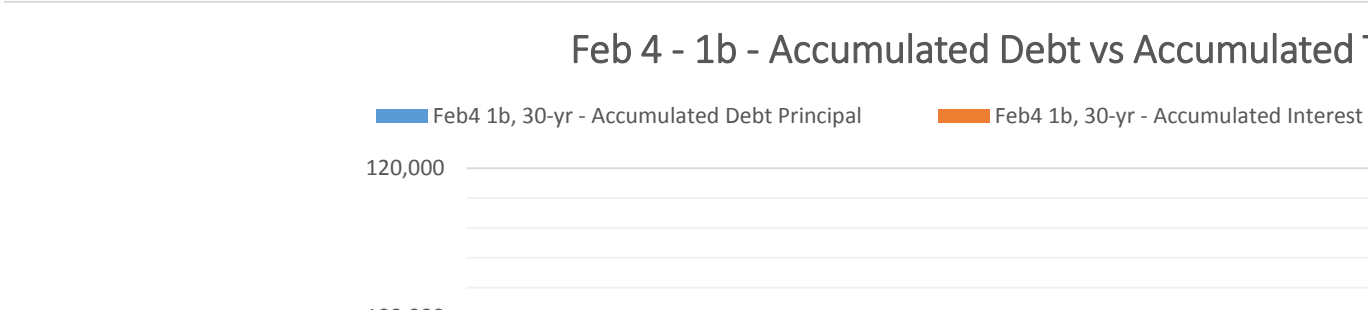
YEAR

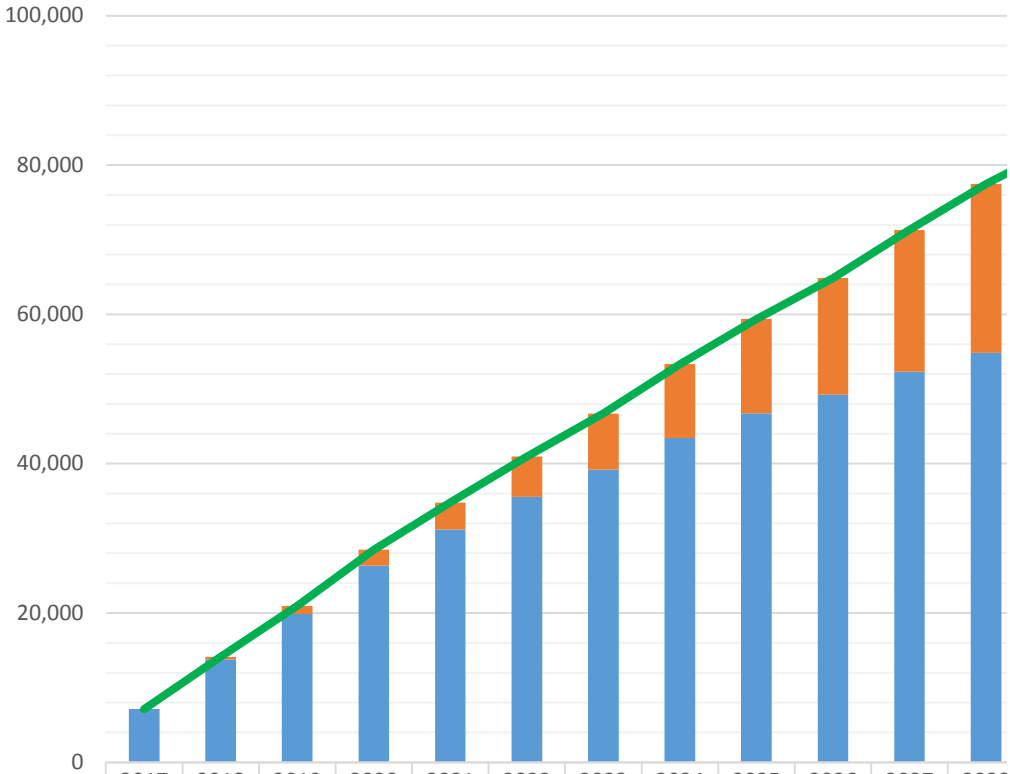


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate



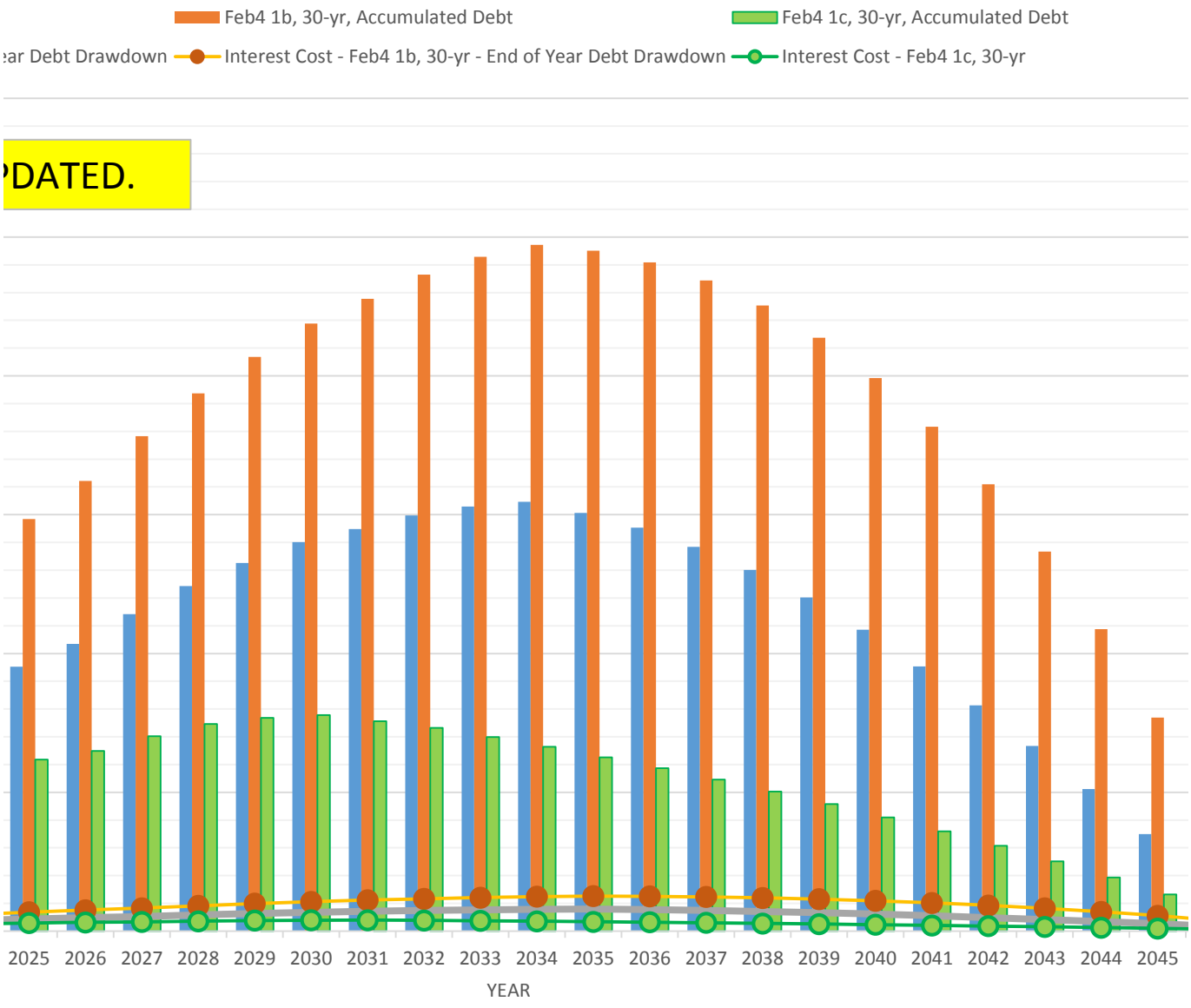

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000



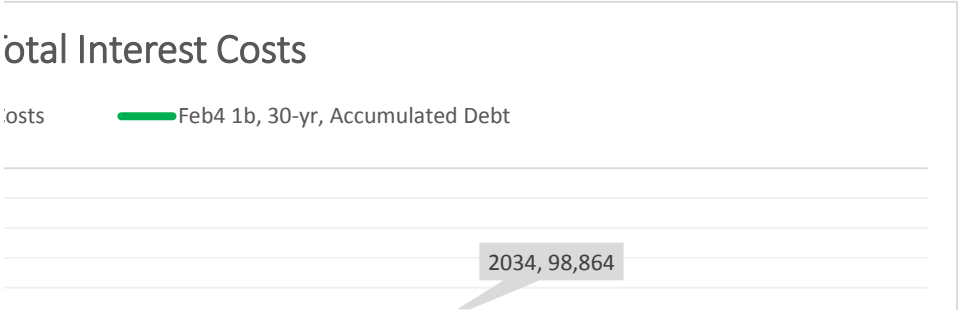
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

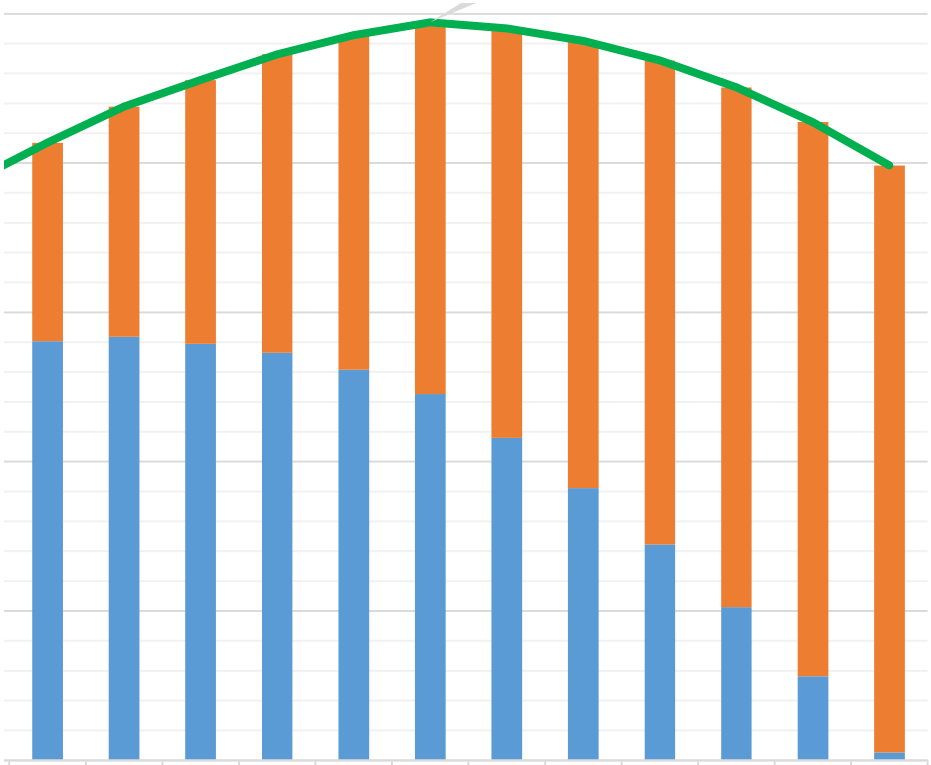
Y

Accumulated debt in present year, with annual interest costs



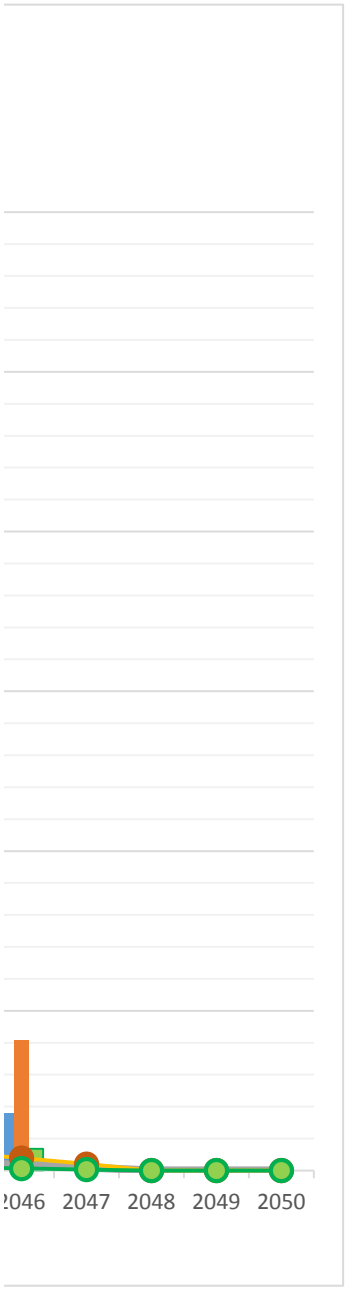
PDATED.


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864

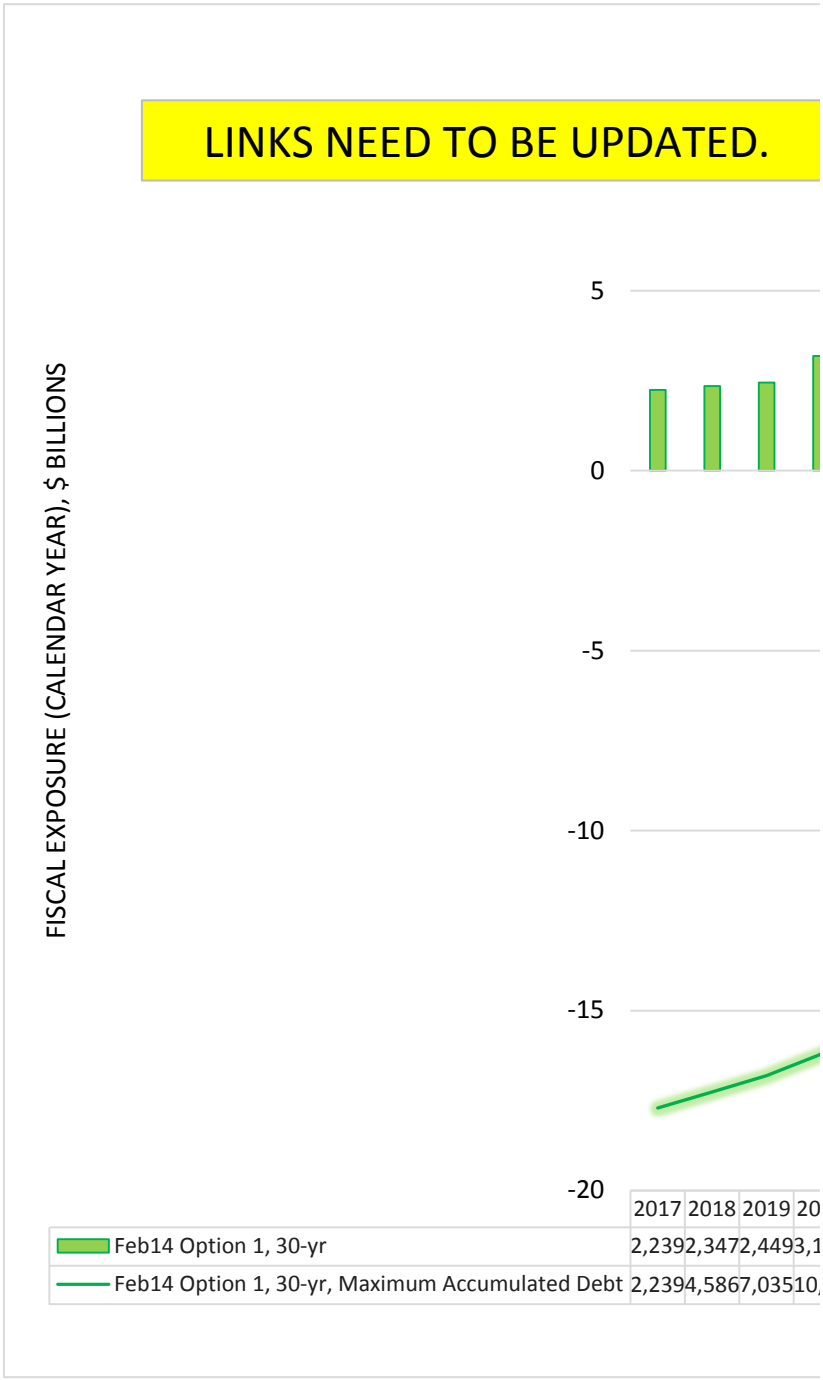


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



LINKS NEED TO BE UPDATED.



FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1b, 30-yr

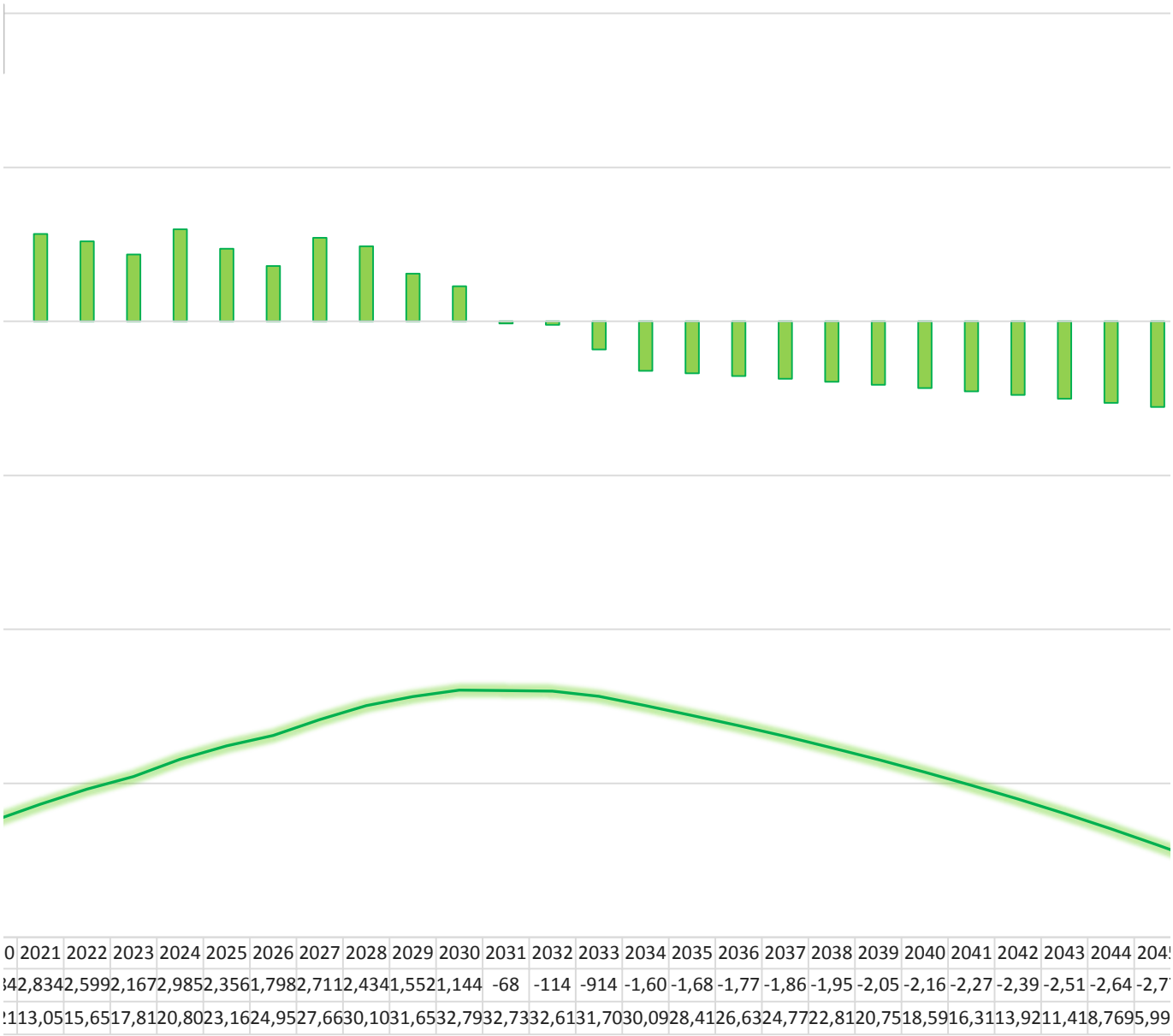
Feb4 1b, 30-yr,

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,

Feb 14 Deck - Option 1

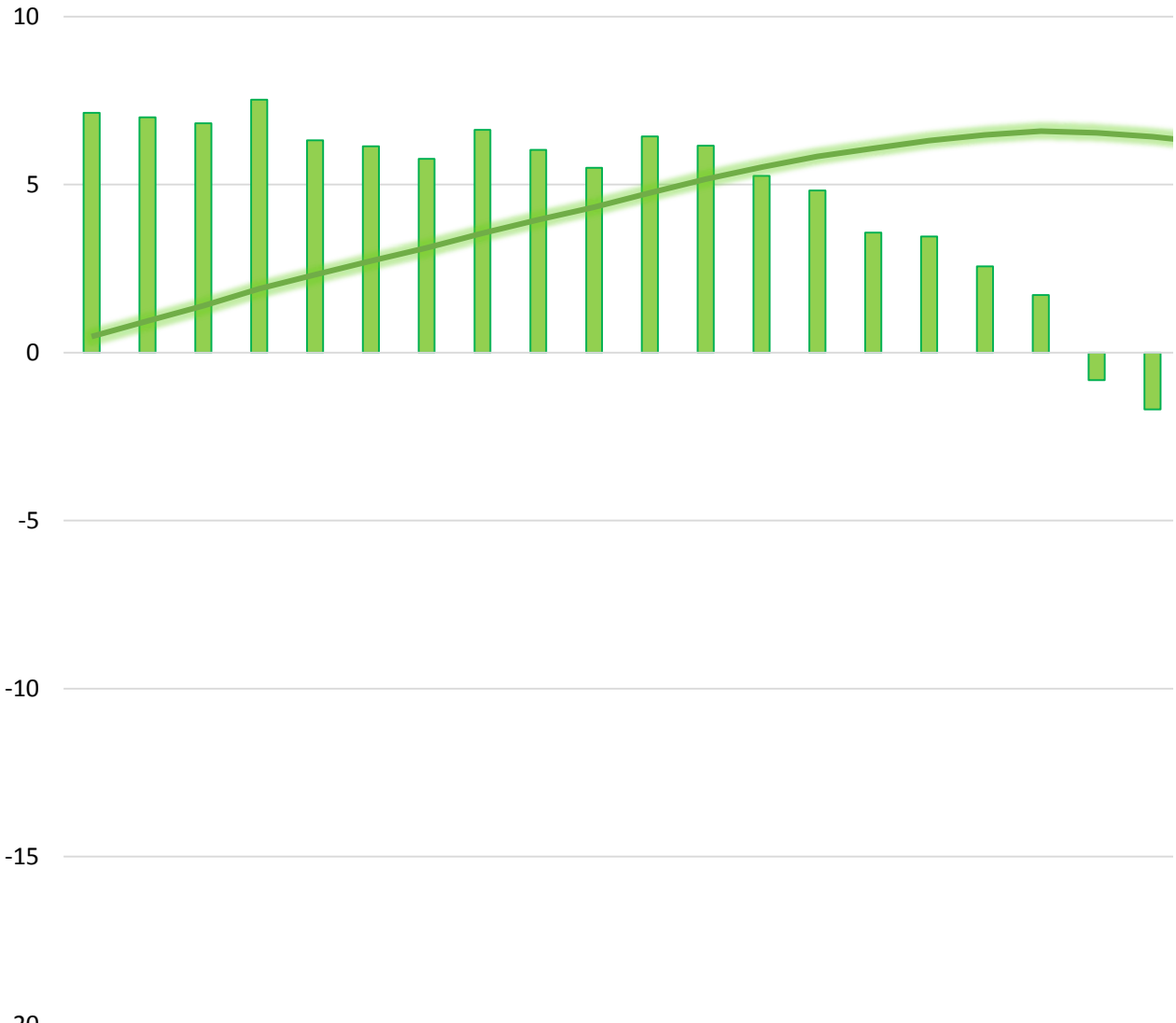


0	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	204
42	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,60	-1,68	-1,77	-1,86	-1,95	-2,05	-2,16	-2,27	-2,39	-2,51	-2,64	-2,7
113	05	15,65	17,81	20,80	23,16	24,95	27,66	30,10	31,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,76	95,99

CALENDAR YEAR

Feb 6 Deck - Scenario 1b - at 5.13% interest rat

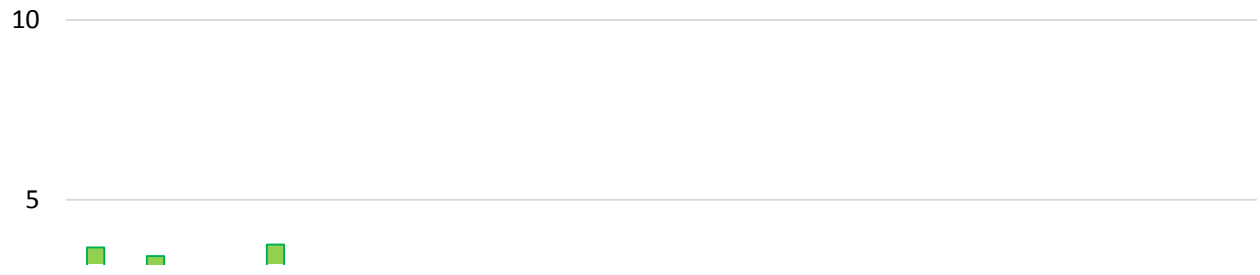
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

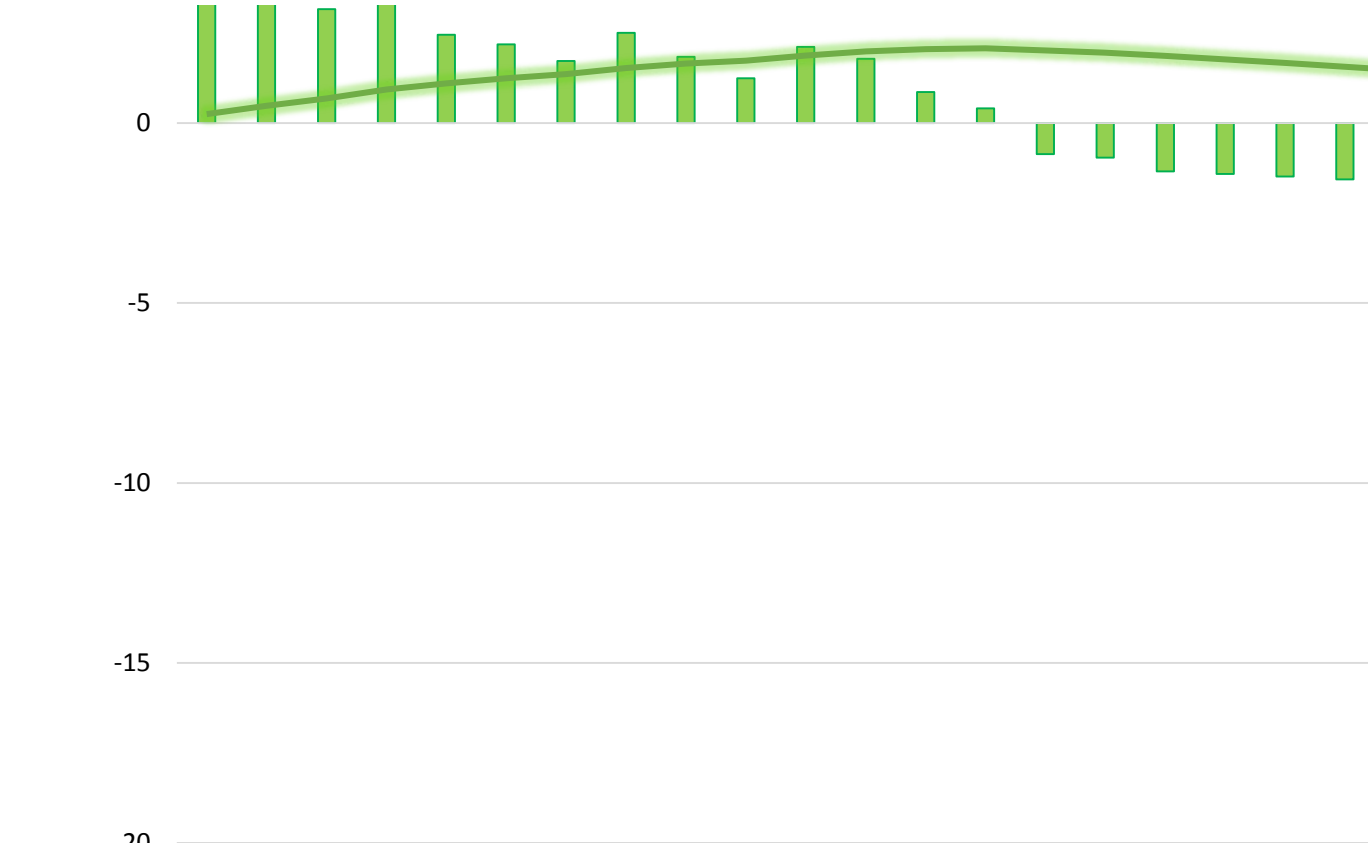


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

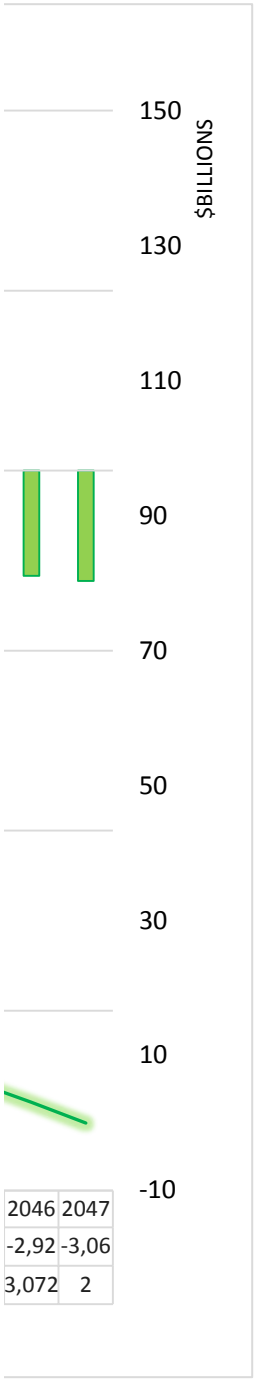
Feb 6 Deck - Scenario 1c - at 5.12% interest rat

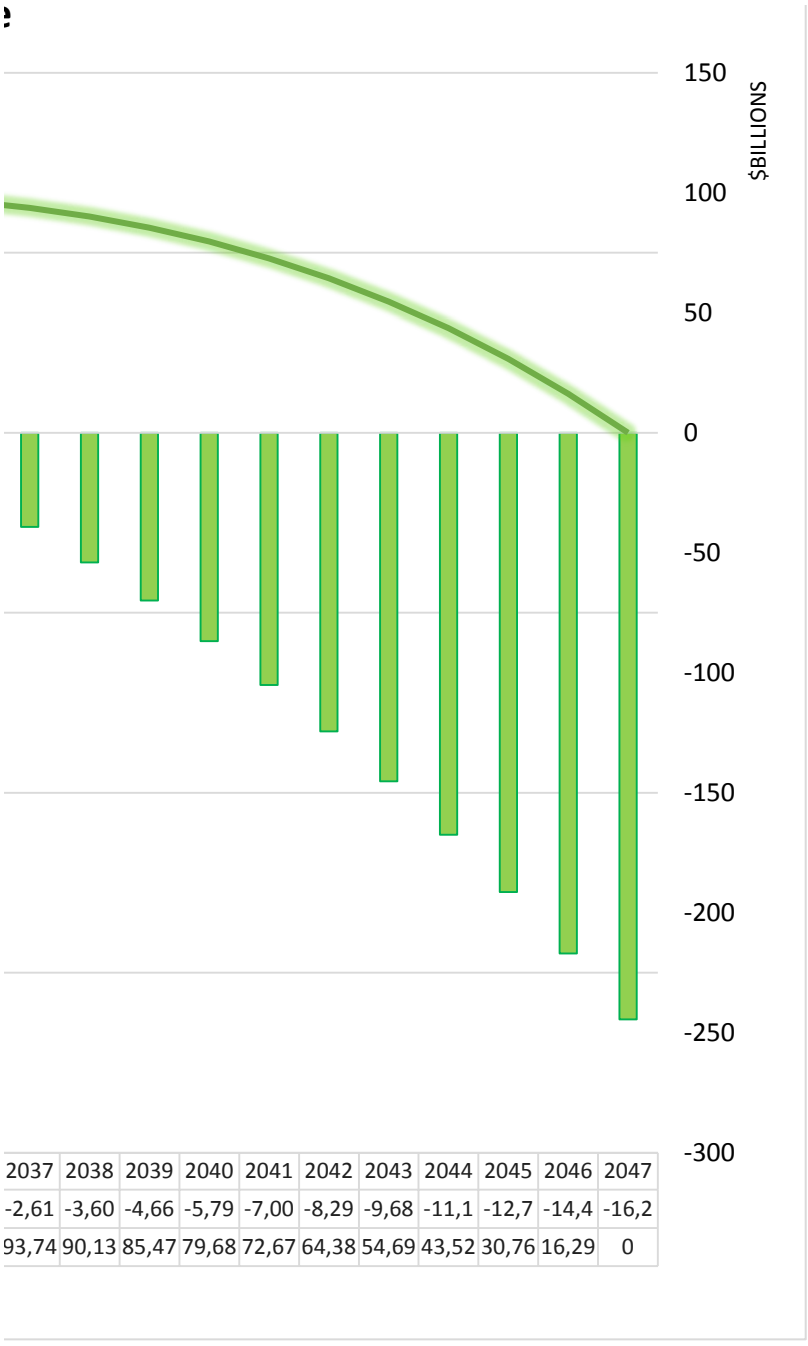




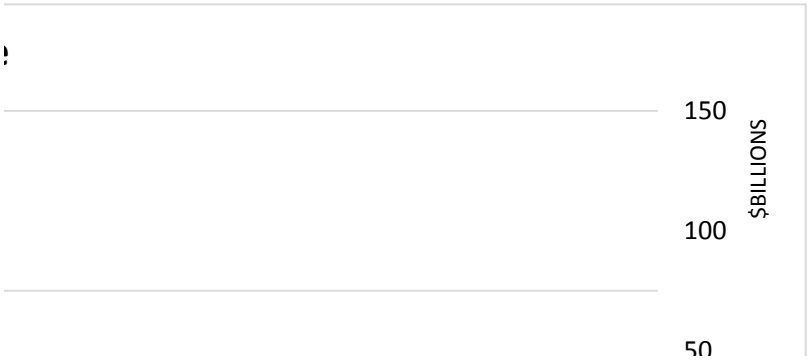
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

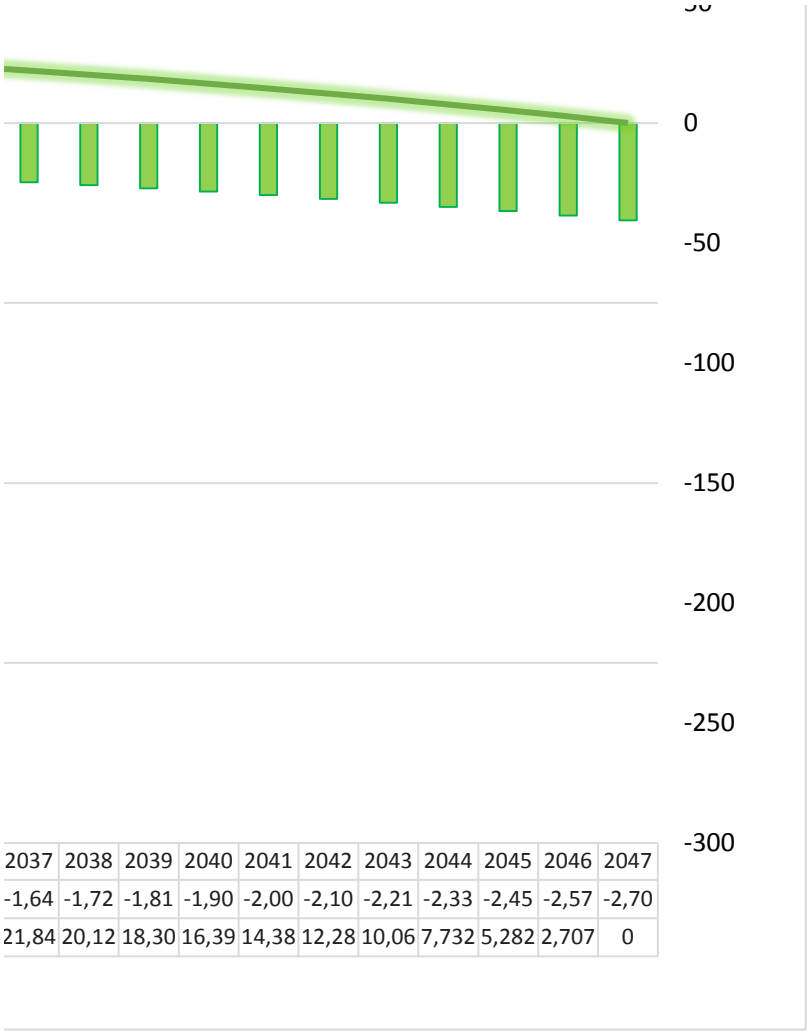
CALENDAR YEAR


150
130
110
90
70
50
30
10
-10
$BILLIONS
2046 2047
-2,92 -3,06
3,072 2



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest

IESO GA cost forecast + extrapolation

Scenario
Option 1
Bills Lowered 25%, RPP Only
Option 2
Bills Lowered 20%, RPP Only
Option 3
Bills Lowered 18%, contract/conservation refinancing, RPP Only

rate	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
Ratepayer GA Payment	9,856	9,602	9,338	9,344
Total Accumulated Debt ($ billion)	2,239	4,586	7,035	10,219
Ratepayer GA Payment	10,537	10,296	10,041	10,061
Accumulated debt in present year (including 5% interest,	1,559	3,177	4,851	7,207
Ratepayer GA Payment	10,648	10,303	10,186	10,873
Accumulated debt in present year (including 5% interest,	1,447	3,053	4,575	6,105
	12095.37	11834.681	11552.105	12168.428

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801
13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103
9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513
9,266	11,038	12,324	14,370	15,725	16,458	18,035	19,263
9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253
7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876
10843.555	10633.626	10243.432	11128.119	10527.018	10033.287	11042.844	10819.098

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389

9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615
31,654	32,799	32,730	32,616	31,702	30,097	28,411	26,638
10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117
19,534	19,317	18,577	17,799	16,981	16,122	15,218	14,268
9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837
18,843	19,521	20,007	20,312	20,325	19,755	18,549	17,050
10008.692	9721.4381	8654.4847	8819.9388	8238.0383	7756.4351	5662.3212	5388.8445

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627

8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853
24,774	22,815	20,756	18,591	16,316	13,924	11,410	8,767
6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355
13,270	12,221	11,118	9,958	8,740	7,458	6,112	4,696
7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712
15,464	13,694	12,062	10,556	9,143	7,810	6,672	5,928
5128.5761	4880.878	4645.1432	4420.7938	4207.28	4004.0783	3810.6908	3626.6435

2045	2046	2047	2048

3,451	3,285	3,126	2,975	2,831	2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
6,678	6,511	6,353	2,975	2,831	2,695
5,989	3,069	0	0	0	0
5,180	5,013	4,854	2,975	2,831	2,695
3,208	1,644	0	-	-	-
4,007	3,619	3,425	3,156	3,011	2,878
5,676	5,633	5,623	5,730	5,843	5,959
3451.485	3284.787	3126.139	2975.154	2831.461	2694.708

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

		5.00%	
Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb14_1_30yr

Option 1 - Bills Lowered 25%, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,239	2,347
Interest Portion	0	115

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	560	2,266
Interest Portion	-	29

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $33 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb14_2_30yr

Option 2 - Bills Lowered 20%, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,559	1,619
Interest Portion	0	80

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	390	1,574
Interest Portion	-	20

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb14_3_30yr

Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606
Interest Portion	0	74

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,487
Interest Portion	-	19

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	390 - 560	1,574 - 2,266

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	560	2266
Debt-Finance Global Adjustment Costs, Option 1a	390	1574
RRRP		
OESP – Enhance Benefit		162

Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**560**	**2506**
Total, B	390	1814

Proposed Program Total:	390 - 560	1,814 - 2,506

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Option 1
Option 2
Option 3

Assumes an inte

2019	2020	2021	2022
2,449	3,184	2,834	2,599
235	360	523	668

2018-19	2019-20	2020-21	2021-2022
2,372	2,633	3,096	2,775
145	266	401	559

2030.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,674	2,356	2,060	1,772
163	248	369	474

2018-19	2019-20	2020-21	2021-2022
1,632	1,844	2,282	1,988
100	184	278	395

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446
156	234	312	385

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429
95	176	254	331

2033.

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022
1,632 - 2,372	1,844 - 2,633	2,282 - 3,096	1,988 - 2,775

/1

2018-19[1]	2019-20[1]	2020-21[1]
2372	2633	3096
1632	1844	2282
225	279	323

60	60	60
18	18	18
2675	**2990**	**3497**
1935	2201	2683

1,935 - 2,675	2,201 - 2,990	2,683 - 3,497

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$21,561	$30,205	$32,799	occurs in Year 2030
$13,503	$17,883	$19,534	occurs in Year 2029
$12,862	$19,498	$20,326	occurs in Year 2033

erest rate of 5.00% (compounded monthly).

Tab Name		Total Accumulated Interest Costs
Feb14_1_30yr	$27,005	$34,278
Feb14_2_30yr	$15,940	$20,378
Feb14_3_30yr	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$27,005 to $34,278**
Option 2	$15,940 to $20,378**
Option 3	$17,202 to $22,028**

** With a higher interest rate, the amortization period extend beyond the 30-year forecast

ted period resulting in a remaining balance at the end of the 30-year period. For specifics, see details belo

w.

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,239	2,347	2,449	3,184	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,604	-1,687	-1,773	-1,864	-1,959	-2,059	-2,164	-2,275	-2,392	-2,514	-2,643	-2,778	-2,920	-3,069	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,292	2,403	2,507	3,260	2,902	2,660	2,219	3,056	2,412	1,841	2,776	2,492	1,589	1,171	-70	-117	-936	-1,643	-1,727	-1,815	-1,908	-2,005	-2,108	-2,216	-2,329	-2,448	-2,574	-2,705	-2,844	-2,989	-3,142	0	0	0
			53	56	58	76	67	62	52	71	56	43	64	58	37	27	-2	-3	-22	-38	-40	-42	-44	-47	-49	-51	-54	-57	-60	-63	-66	-69	-73	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,184	1,678	30,205
Equal Monthly Debt Drawdown	3,260	1,676	

		Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,799	2030	21,561
Equal Monthly Debt Drawdown	33,579		

Feb14 Option 1, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				26
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
a	Debt, Beginning of Year	0	2,239	4,586	7,035	10,219	13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103	31,655	32,799	32,731	32,617	31,703	30,098	28,412	26,639	24,775	22,816	20,757	18,593	16,318	13,926	11,412	8,769	5,992	3,072	2	3	3	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*115*	*235*	*360*	*523*	*668*	*801*	*912*	*1,064*	*1,185*	*1,277*	*1,416*	*1,540*	*1,620*	*1,678*	*1,675*	*1,669*	*1,622*	*1,540*	*1,454*	*1,363*	*1,268*	*1,167*	*1,062*	*951*	*835*	*712*	*584*	*449*	*307*	*157*	*0*	*0*	*0*	30,205
b	Additional GA Debt Drawdown, End of Year	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,239	4,586	7,035	10,219	13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103	31,655	32,799	32,731	32,617	31,703	30,098	28,412	26,639	24,775	22,816	20,757	18,593	16,318	13,926	11,412	8,769	5,992	3,072	2	3	3	3	
			FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,138	8,554	10,094	11,238	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	8,769	5,992	3,072	2	3	3	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,821	13,752	15,118	17,192	18,483	19,097	20,531	21,549	21,561	21,561	21,561	21,447	20,533	18,928	17,242	15,469	13,605	11,646	9,587	7,423	5,147	2,756	242	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,138	8,554	10,094	11,714	13,392	15,066	16,735	18,357	19,897	21,350	22,713	23,981	25,148	26,210	27,161	27,996	28,709	29,293	29,741	30,048	30,205				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,821	13,752	15,118	17,192	18,483	19,097	20,531	21,549	21,561	21,086	19,339	17,551	14,968	11,741	8,515	5,288	2,062	-1,164	-4,391	-7,617	-10,844	-14,070	-17,297	-20,523	-23,750	-26,976	-30,202				
Fiscal Exposure - End of Year Debt Drawdown		2,239	2,347	2,449	3,184	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,604	-1,687	-1,773	-1,864	-1,959	-2,059	-2,164	-2,275	-2,392	-2,514	-2,643	-2,778	-2,920	-3,069	0	0	0	

Feb14 Option 1, 30-yr — Equal Monthly Debt Drawdown

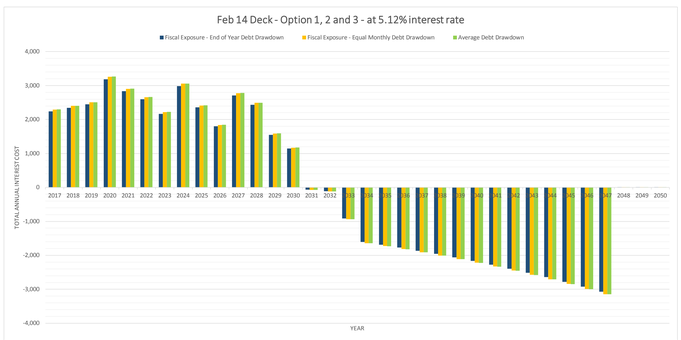
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,292	4,695	7,202	10,462	13,363	16,024	18,243	21,299	23,711	25,552	28,327	30,819	32,408	33,579	33,510	33,393	32,457	30,814	29,087	27,272	25,365	23,359	21,251	19,035	16,706	14,257	11,683	8,978	6,134	3,145	2	3	3	
1,676	*Interest Cost - Feb14 Option 1, 30-yr*	*53*	*170*	*293*	*436*	*590*	*730*	*852*	*983*	*1,120*	*1,228*	*1,341*	*1,473*	*1,577*	*1,647*	*1,676*	*1,672*	*1,647*	*1,584*	*1,500*	*1,411*	*1,319*	*1,221*	*1,118*	*1,010*	*897*	*778*	*653*	*521*	*383*	*237*	*84*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,292	4,695	7,202	10,462	13,363	16,024	18,243	21,299	23,711	25,552	28,327	30,819	32,408	33,579	33,510	33,393	32,457	30,814	29,087	27,272	25,365	23,359	21,251	19,035	16,706	14,257	11,683	8,978	6,134	3,145	2	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,292	2,403	2,507	3,260	2,902	2,660	2,219	3,056	2,412	1,841	2,776	2,492	1,589	1,171	-70	-117	-936	-1,643	-1,727	-1,815	-1,908	-2,005	-2,108	-2,216	-2,329	-2,448	-2,574	-2,705	-2,844	-2,989	-3,142	0	0	0	
	Monthly Drawdown	187	186	185	235	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	-	-	-	
	FV of Monthly Drawdown at 5%	2,292	2,285	2,267	2,891	2,366	1,977	1,399	2,123	1,322	628	1,468	1,043	12	(487)	(1,788)	(1,831)	(2,644)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	-	-	-	
	Annual Interest Cost on New Drawdowns	53	53	53	67	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	-	-	-	
	Annual Interest Cost on Opening Balance	-	117	240	368	535	684	820	933	1,090	1,213	1,307	1,449	1,577	1,658	1,718	1,714	1,708	1,661	1,577	1,488	1,395	1,298	1,195	1,087	974	855	729	598	459	314	161	0	0	0	
	Total Annual Interest Cost	53	170	293	436	590	730	852	983	1,120	1,228	1,341	1,473	1,577	1,647	1,676	1,672	1,647	1,584	1,500	1,411	1,319	1,221	1,118	1,010	897	778	653	521	383	237	84	0	0	0	

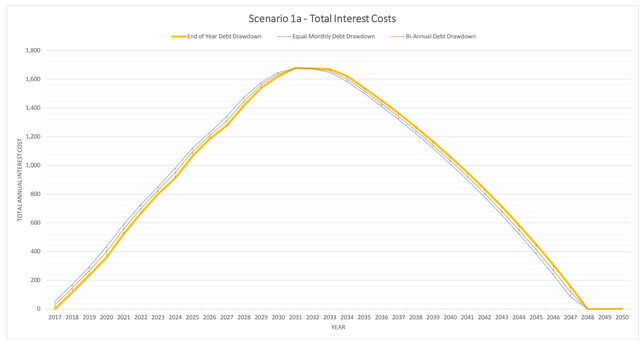
Feb14 Option 1, 30-yr — Bi-Annual Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,268	4,645	7,125	10,349	13,220	15,852	18,047	21,070	23,456	25,277	28,023	30,488	32,060	33,219	33,150	33,034	32,108	30,483	28,775	26,980	25,092	23,108	21,023	18,831	16,526	14,104	11,558	8,882	6,068	3,111	2	3	3	
	Interest Cost - Feb14 Option 1, 30-yr	*29*	*145*	*266*	*401*	*559*	*701*	*828*	*950*	*1,095*	*1,208*	*1,312*	*1,447*	*1,560*	*1,634*	*1,677*	*1,673*	*1,657*	*1,601*	*1,518*	*1,431*	*1,339*	*1,242*	*1,141*	*1,034*	*922*	*804*	*680*	*550*	*413*	*269*	*118*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,268	4,645	7,125	10,349	13,220	15,852	18,047	21,070	23,456	25,277	28,023	30,488	32,060	33,219	33,150	33,034	32,108	30,483	28,775	26,980	25,092	23,108	21,023	18,831	16,526	14,104	11,558	8,882	6,068	3,111	2	3	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,268	2,377	2,480	3,225	2,870	2,632	2,195	3,024	2,386	1,821	2,746	2,465	1,572	1,159	-69	-116	-926	-1,625	-1,708	-1,796	-1,887	-1,984	-2,085	-2,192	-2,304	-2,422	-2,546	-2,676	-2,813	-2,957	-3,109	0	0	0	
	Bi-Annual Drawdown	1,119	1,116	1,107	1,412	1,156	965	683	1,037	646	307	717	509	6	(238)	(873)	(894)	(1,291)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,268	2,261	2,243	2,860	2,341	1,955	1,384	2,100	1,308	621	1,453	1,031	12	(481)	(1,769)	(1,812)	(2,616)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	-	-	-	
	Annual Interest Cost on New Drawdowns	29	29	28	36	30	25	17	27	17	8	18	13	0	(6)	(22)	(23)	(33)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	-	-	-	
	Annual Interest Cost on Opening Balance	-	116	238	365	529	676	811	923	1,078	1,200	1,293	1,434	1,560	1,640	1,700	1,696	1,690	1,643	1,560	1,472	1,380	1,284	1,182	1,076	963	846	722	591	454	310	159	0	0	0	
	Total Annual Interest Cost	29	145	266	401	559	701	828	950	1,095	1,208	1,312	1,447	1,560	1,634	1,677	1,673	1,657	1,601	1,518	1,431	1,339	1,242	1,141	1,034	922	804	680	550	413	269	118	0	0	0	

Feb14 Option 1, 30-yr — Average Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,296	4,703	7,215	10,480	13,387	16,052	18,275	21,336	23,752	25,596	28,377	30,873	32,465	33,638	33,568	33,451	32,514	30,868	29,138	27,320	25,409	23,400	21,288	19,068	16,735	14,282	11,704	8,994	6,145	3,150	2	3	3	
	Interest Cost - Feb14 Option 1, 30-yr	*57*	*175*	*297*	*441*	*595*	*734*	*856*	*988*	*1,125*	*1,231*	*1,346*	*1,478*	*1,580*	*1,649*	*1,676*	*1,672*	*1,645*	*1,581*	*1,497*	*1,408*	*1,315*	*1,217*	*1,115*	*1,007*	*893*	*774*	*648*	*516*	*378*	*232*	*79*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,296	4,703	7,215	10,480	13,387	16,052	18,275	21,336	23,752	25,596	28,377	30,873	32,465	33,638	33,568	33,451	32,514	30,868	29,138	27,320	25,409	23,400	21,288	19,068	16,735	14,282	11,704	8,994	6,145	3,150	2	3	3	3	
Fiscal Exposure - Average Debt Drawdown		2,296	2,407	2,512	3,265	2,907	2,665	2,223	3,062	2,416	1,844	2,780	2,496	1,592	1,173	-70	-117	-937	-1,646	-1,730	-1,818	-1,911	-2,009	-2,112	-2,220	-2,333	-2,453	-2,578	-2,710	-2,849	-2,995	-3,148	0	0	0	





Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,559	1,619	1,674	2,356	2,060	1,772	1,286	2,046	1,355	733	1,578	1,228	271	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,415	-1,488	-1,564	-1,644	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0	
			37	38	40	56	49	42	31	49	32	17	38	29	6	-5	-18	-19	-19	-20	-21	-23	-24	-25	-26	-28	-29	-30	-32	-34	-35	-37	-39	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,356	999	17,883
Equal Monthly Debt Drawdown	2,412	994	

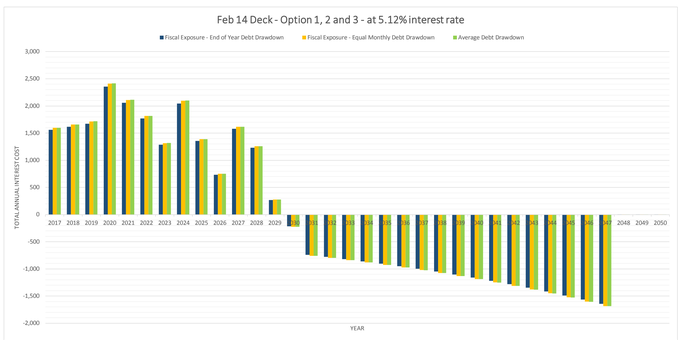
	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,534	2029	13,503
Equal Monthly Debt Drawdown	19,999		

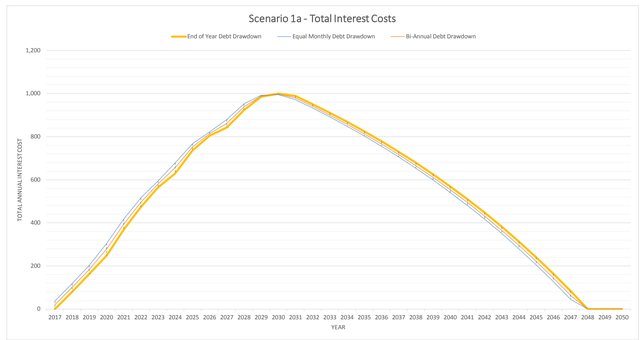
Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP Only																																				26
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
a	Debt, Beginning of Year	0	1,559	3,177	4,851	7,207	9,266	11,039	12,324	14,370	15,725	16,458	18,035	19,264	19,534	19,317	18,577	17,799	16,982	16,122	15,219	14,269	13,271	12,222	11,119	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1	2	2	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*80*	*163*	*248*	*369*	*474*	*565*	*631*	*735*	*805*	*842*	*923*	*986*	*999*	*988*	*950*	*911*	*869*	*825*	*779*	*730*	*679*	*625*	*569*	*510*	*447*	*382*	*313*	*240*	*164*	*84*	*0*	*0*	*0*	17,883
b	Additional GA Debt Drawdown, End of Year	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,559	3,177	4,851	7,207	9,266	11,039	12,324	14,370	15,725	16,458	18,035	19,264	19,534	19,317	18,577	17,799	16,982	16,122	15,219	14,269	13,271	12,222	11,119	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1	2	2	2	
			TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE		
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	7,818	7,078	6,300	5,483	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,697	3,210	1,646	1	2	2	2	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,842	12,461	12,390	13,125	13,431	12,716	11,499	11,499	11,499	11,499	11,499	10,595	9,646	8,648	7,598	6,495	5,336	4,117	2,836	1,490	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	7,818	8,805	9,757	10,667	11,536	12,361	13,140	13,870	14,549	15,174	15,743	16,252	16,700	17,081	17,394	17,634	17,798	17,883				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,842	12,461	12,390	13,125	13,431	12,716	11,499	9,771	8,042	6,314	4,586	2,858	1,129	-599	-2,327	-4,055	-5,784	-7,512	-9,240	-10,968	-12,696	-14,425	-16,153	-17,881				
Fiscal Exposure - End of Year Debt Drawdown		1,559	1,619	1,674	2,356	2,060	1,772	1,286	2,046	1,355	733	1,578	1,228	271	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,415	-1,488	-1,564	-1,644	0	0	0	

Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,019	18,223	17,385	16,506	15,581	14,609	13,587	12,512	11,383	10,196	8,948	7,637	6,258	4,809	3,286	1,685	2	2	2	
994	*Interest Cost - Feb14 Option 1, 30-yr*	*37*	*118*	*202*	*304*	*418*	*516*	*595*	*679*	*767*	*822*	*880*	*952*	*992*	*994*	*971*	*932*	*891*	*848*	*803*	*756*	*706*	*654*	*599*	*541*	*481*	*417*	*350*	*279*	*205*	*127*	*45*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,019	18,223	17,385	16,506	15,581	14,609	13,587	12,512	11,383	10,196	8,948	7,637	6,258	4,809	3,286	1,685	2	2	2	2	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0	
	Monthly Drawdown	130	128	126	176	141	108	60	118	52	(6)	61	25	(60)	(101)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	-	-	-	
	FV of Monthly Drawdown at 5%	1,596	1,575	1,548	2,157	1,731	1,329	738	1,449	635	(74)	753	313	(732)	(1,246)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	-	-	-	
	Annual Interest Cost on New Drawdowns	37	37	36	50	40	31	17	34	15	(2)	17	7	(17)	(29)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	-	-	-	
	Annual Interest Cost on Opening Balance	-	82	166	254	377	485	578	646	753	824	862	945	1,009	1,023	1,012	973	932	889	844	797	747	695	640	582	522	458	391	320	246	168	86	0	0	0	
	Total Annual Interest Cost	37	118	202	304	418	516	595	679	767	822	880	952	992	994	971	932	891	848	803	756	706	654	599	541	481	417	350	279	205	127	45	0	0	0	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,815	18,027	17,199	16,328	15,413	14,452	13,441	12,378	11,261	10,087	8,852	7,555	6,191	4,758	3,251	1,667	1	2	2	
	Interest Cost - Feb14 Option 1, 30-yr	*20*	*100*	*184*	*278*	*395*	*497*	*581*	*657*	*753*	*814*	*862*	*938*	*989*	*997*	*979*	*940*	*900*	*858*	*813*	*766*	*717*	*666*	*611*	*554*	*494*	*431*	*364*	*295*	*221*	*144*	*63*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,815	18,027	17,199	16,328	15,413	14,452	13,441	12,378	11,261	10,087	8,852	7,555	6,191	4,758	3,251	1,667	1	2	2	2	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,579	1,639	1,696	2,386	2,086	1,795	1,302	2,072	1,372	742	1,598	1,244	274	-220	-749	-788	-828	-870	-915	-962	-1,011	-1,063	-1,117	-1,174	-1,234	-1,297	-1,364	-1,434	-1,507	-1,584	-1,665	0	0	0	
	Bi-Annual Drawdown	779	769	756	1,054	845	649	361	708	310	(36)	368	153	(358)	(608)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,579	1,558	1,531	2,134	1,713	1,315	730	1,433	628	(73)	745	310	(724)	(1,232)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	-	-	-	
	Annual Interest Cost on New Drawdowns	20	20	19	27	22	17	9	18	8	(1)	9	4	(9)	(16)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	-	-	-	
	Annual Interest Cost on Opening Balance	-	81	165	251	373	480	572	639	745	815	853	935	998	1,012	1,001	963	922	880	835	789	739	688	633	576	516	453	387	317	243	166	85	0	0	0	
	Total Annual Interest Cost	20	100	184	278	395	497	581	657	753	814	862	938	989	997	979	940	900	858	813	766	717	666	611	554	494	431	364	295	221	144	63	0	0	0	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,599	3,258	4,975	7,391	9,504	11,321	12,640	14,738	16,128	16,879	18,497	19,757	20,034	19,811	19,052	18,254	17,416	16,535	15,608	14,634	13,610	12,534	11,403	10,214	8,964	7,650	6,269	4,818	3,292	1,688	2	2	2	
	Interest Cost - Feb14 Option 1, 30-yr	*40*	*121*	*205*	*308*	*421*	*519*	*598*	*683*	*770*	*823*	*882*	*954*	*992*	*994*	*969*	*931*	*890*	*847*	*802*	*754*	*704*	*652*	*597*	*539*	*478*	*414*	*347*	*277*	*202*	*124*	*42*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,599	3,258	4,975	7,391	9,504	11,321	12,640	14,738	16,128	16,879	18,497	19,757	20,034	19,811	19,052	18,254	17,416	16,535	15,608	14,634	13,610	12,534	11,403	10,214	8,964	7,650	6,269	4,818	3,292	1,688	2	2	2	2	
Fiscal Exposure - Average Debt Drawdown		1,599	1,660	1,717	2,416	2,112	1,817	1,319	2,098	1,390	751	1,618	1,260	277	-223	-759	-798	-839	-881	-927	-974	-1,024	-1,076	-1,131	-1,189	-1,250	-1,314	-1,381	-1,452	-1,526	-1,604	-1,686	0	0	0	





Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_3_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	
			34	38	36	36	34	34	35	36	36	35	35	34	23	16	12	7	0	-14	-29	-36	-38	-42	-39	-36	-34	-32	-27	-18	-6	-1	0	3	3	3	142

		Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	1,606		1,040	19,498
Equal Monthly Debt Drawdown	1,644		1,040	

	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	20,326	2033	12,862
Equal Monthly Debt Drawdown	20,809		

Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
a	Debt, Beginning of Year	0	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*74*	*156*	*234*	*312*	*385*	*459*	*534*	*612*	*690*	*766*	*842*	*915*	*964*	*999*	*1,024*	*1,039*	*1,040*	*1,011*	*949*	*872*	*791*	*701*	*617*	*540*	*468*	*400*	*341*	*303*	*290*	*288*	*288*	*293*	*299*	19,498
b	Additional GA Debt Drawdown, End of Year	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,430	7,736	7,749	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,577	12,577	12,577	12,577	11,371	9,872	8,285	6,516	4,884	3,378	1,966	633	-506	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,943	8,967	10,006	11,046	12,057	13,006	13,878	14,669	15,370	15,987	16,527	16,995	17,395	17,736	18,040	18,330	18,618				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,064	11,345	10,319	8,710	6,493	4,045	1,586	-974	-3,307	-5,431	-7,383	-9,184	-10,721	-11,807	-12,362	-12,696	-12,994				
Fiscal Exposure - End of Year Debt Drawdown		1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	

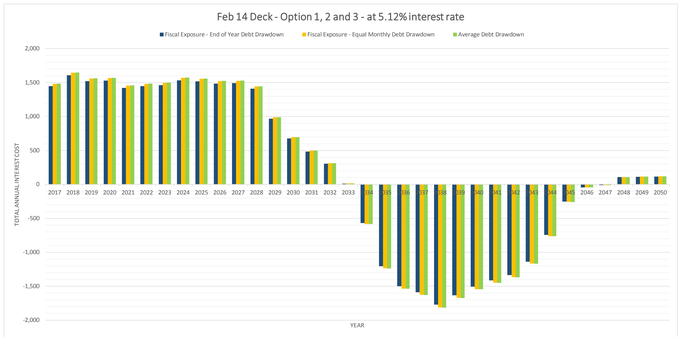
Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	
1,040	*Interest Cost - Feb14 Option 1, 30-yr*	*34*	*112*	*192*	*270*	*346*	*420*	*494*	*570*	*649*	*726*	*802*	*876*	*938*	*980*	*1,010*	*1,031*	*1,040*	*1,026*	*982*	*913*	*835*	*749*	*662*	*581*	*507*	*436*	*373*	*324*	*297*	*289*	*288*	*290*	*296*	*302*	19,640
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	6,102	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	

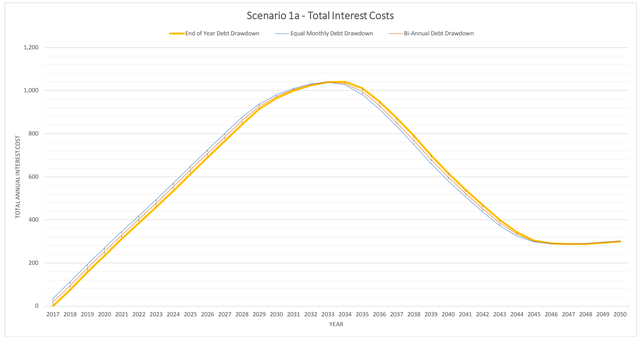
	Monthly Drawdown	121	128	114	108	93	88	84	83	76	66	60	47	4	(24)	(43)	(60)	(85)	(134)	(185)	(204)	(205)	(213)	(194)	(177)	(163)	(150)	(128)	(90)	(46)	(28)	(25)	(15)	(15)	(15)	
	FV of Monthly Drawdown at 5%	1,482	1,568	1,398	1,326	1,137	1,086	1,028	1,024	929	815	742	580	54	(292)	(525)	(736)	(1,050)	(1,648)	(2,269)	(2,506)	(2,517)	(2,621)	(2,389)	(2,174)	(1,999)	(1,844)	(1,574)	(1,111)	(568)	(342)	(306)	(185)	(184)	(188)	
	Annual Interest Cost on New Drawdowns	34	36	32	31	26	25	24	24	22	19	17	13	1	(7)	(12)	(17)	(24)	(38)	(53)	(58)	(58)	(61)	(55)	(51)	(46)	(43)	(37)	(26)	(13)	(8)	(7)	(4)	(4)	(4)	
	Annual Interest Cost on Opening Balance	-	76	160	240	320	394	470	547	627	707	784	863	936	987	1,023	1,048	1,064	1,065	1,035	972	893	810	717	632	553	479	409	350	311	297	295	295	300	306	
	Total Annual Interest Cost	34	112	192	270	346	420	494	570	649	726	802	876	938	980	1,010	1,031	1,040	1,026	982	913	835	749	662	581	507	436	373	324	297	289	288	290	296	302	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	
	Interest Cost - Feb14 Option 1, 30-yr	*19*	*95*	*176*	*254*	*331*	*404*	*478*	*554*	*632*	*709*	*785*	*861*	*927*	*973*	*1,005*	*1,028*	*1,039*	*1,033*	*995*	*930*	*852*	*769*	*680*	*598*	*522*	*451*	*385*	*332*	*300*	*290*	*288*	*289*	*295*	*301*	19,575
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	6,037	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,466	1,626	1,541	1,549	1,441	1,465	1,482	1,554	1,539	1,505	1,510	1,427	979	687	492	309	13	-577	-1,221	-1,518	-1,607	-1,792	-1,653	-1,525	-1,430	-1,350	-1,153	-753	-255	-44	-10	109	115	117	

	Bi-Annual Drawdown	724	766	683	648	555	530	502	500	454	398	363	283	26	(143)	(256)	(359)	(513)	(805)	(1,108)	(1,224)	(1,229)	(1,280)	(1,167)	(1,062)	(976)	(900)	(769)	(543)	(278)	(167)	(149)	(90)	(90)	(92)	
	FV of Bi-Annual Drawdown at 5%	1,466	1,551	1,383	1,312	1,125	1,075	1,017	1,013	919	806	735	573	53	(289)	(519)	(728)	(1,039)	(1,630)	(2,245)	(2,479)	(2,490)	(2,593)	(2,363)	(2,150)	(1,977)	(1,824)	(1,557)	(1,099)	(562)	(338)	(302)	(183)	(182)	(186)	
	Annual Interest Cost on New Drawdowns	19	20	17	17	14	14	13	13	12	10	9	7	1	(4)	(7)	(9)	(13)	(21)	(28)	(31)	(31)	(33)	(30)	(27)	(25)	(23)	(20)	(14)	(7)	(4)	(4)	(2)	(2)	(2)	
	Annual Interest Cost on Opening Balance	-	75	158	237	316	390	465	541	620	699	776	853	926	976	1,012	1,037	1,053	1,053	1,024	961	884	801	710	625	547	474	405	346	307	294	292	291	297	303	
	Total Annual Interest Cost	19	95	176	254	331	404	478	554	632	709	785	861	927	973	1,005	1,028	1,039	1,033	995	930	852	769	680	598	522	451	385	332	300	290	288	289	295	301	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	
	Interest Cost - Feb14 Option 1, 30-yr	*37*	*115*	*195*	*273*	*349*	*422*	*497*	*573*	*651*	*728*	*804*	*879*	*939*	*981*	*1,011*	*1,031*	*1,040*	*1,025*	*980*	*911*	*832*	*746*	*659*	*579*	*504*	*434*	*371*	*322*	*297*	*289*	*288*	*290*	*296*	*302*	19,651
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	6,113	
Fiscal Exposure - Average Debt Drawdown		1,484	1,647	1,561	1,569	1,459	1,483	1,500	1,573	1,559	1,524	1,530	1,445	992	696	498	313	14	-585	-1,237	-1,537	-1,627	-1,814	-1,674	-1,545	-1,448	-1,367	-1,167	-763	-258	-44	-10	110	116	119	





Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest ra

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest ra

IESO GA cost forecast + extrapolation

Scenario
Option 1

Option 2

ate	2017	2018	2019	2020
ate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	2200	4600	7000	10200

Total Accumulated Debt ($ billion)	2.2	4.6	7	10.2
	2,200	4,600	7,000	10,200

Total Accumulated Debt ($ billion)	1.6	3.2	4.9	7.2
	1,600	3,200	4,900	7,200

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
13100	15700	17800	20800	23200	25000	27700	30100

13.1 15.7 17.8 20.8 23.2 25 27.7 30.1
13,100 15,700 17,800 20,800 23,200 25,000 27,700 30,100

9.3 11 12.3 14.4 15.7 16.5 18 19.3
9,300 11,000 12,300 14,400 15,700 16,500 18,000 19,300

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
31700	32800	32700	32600	31700	30100	28400	26600

31.7	32.8	32.7	32.6	31.7	30.1	28.4	26.6
31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600

19.5	19.3	18.6	17.8	17	16.1	15.2	14.3
19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
24800	22800	20800	18600	16300	13900	11400	8800

24.8	22.8	20.8	18.6	16.3	13.9	11.4	8.8
24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800

13.3	12.2	11.1	10	8.7	7.5	6.1	4.7
13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	2046	2047	2048	2049	2050
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
6000	3100	0	0	0	0

6 3.1 0 0
6,000 3,100 - -

3.2 1.6 0 0
3,200 1,600 - -

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb9_1_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,200	2,400

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	550	2,250

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $33 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb9_2_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,600	1,600

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	400	1,600

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,169	4,668

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	545	2,203

Actuals are subject to actual prices and actual interest rates.

#N/A

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542

Fiscalized[3]	2016-17	2017-18
Start: January 1st	375	1,510

Actuals are subject to actual prices and actual interest rates.

#N/A

Rough		
	1	
	2	
	3	
	4 April	4
	5 May	5
	6 June	6
	7 July	7
	8 August	8
	9 September	9
	10 October	10
	11 November	11
	12 December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	400 - 550	1,600 - 2,250

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	550	2250
Debt-Finance Global Adjustment Costs, Option 1a	400	1600
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**550**	**2490**
Total, B	400	1840
Proposed Program Total:	400 - 550	1,840 - 2,490

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1
Scenario 2

2019	2020	2021	2022
2,400	3,200	2,900	2,600

2018-19	2019-20	2020-21	2021-2022
2,400	2,600	3,125	2,825

2030.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,700	2,300	2,100	1,700

2018-19	2019-20	2020-21	2021-2022
1,625	1,850	2,250	2,000

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
4,589	5,867	5,031	4,861

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988

› depend on decision on accounting treatment.

2019	2020	2021	2022
2,353	3,072	2,817	2,580

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757

2019	2020	2021	2022
1,578	2,243	1,931	1,635

2018-19	2019-20	2020-21	2021-2022
1,551	1,745	2,165	1,857



2018-19	2019-20	2020-21	2021-2022
1,625 - 2,400	1,850 - 2,600	2,250 - 3,125	2,000 - 2,825

/1

2018-19[1]	2019-20[1]	2020-21[1]
2400	2600	3125
1625	1850	2250
225	279	323
60	60	60
18	18	18
2703	**2957**	**3526**
1928	2207	2651

1,928 - 2,703 2,207 - 2,957 2,651 - 3,526

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
21,601	30,211	32,800	occurs in Year 2030
13,466	17,886	19,500	occurs in Year 2029
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!

2,200

Tab Name
Feb9_1_30yr
Feb9_2_30yr

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Feb9_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0	
			52	57	57	76	69	62	50	71	57	43	64	57	38	26	-2	-2	-21	-38	-40	-43	-43	-48	-48	-52	-55	-57	-59	-62	-67	-69	-74	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,200	1,678	30,211
Equal Monthly Debt Drawdown	3,276	1,676	

		Feb9 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,800	2030	21,601	
Equal Monthly Debt Drawdown	33,580			

Feb9 1, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
a	Debt, Beginning of Year	0	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	
c = a*5%	*Interest Cost - Feb9 1, 30-yr - End of Year Debt Drowdown*	*0*	*113*	*235*	*358*	*522*	*670*	*803*	*911*	*1,064*	*1,187*	*1,279*	*1,417*	*1,540*	*1,622*	*1,678*	*1,673*	*1,668*	*1,622*	*1,540*	*1,453*	*1,361*	*1,269*	*1,166*	*1,064*	*952*	*834*	*711*	*583*	*450*	*307*	*159*	*0*	*0*	*0*	30,211
b	Additional GA Debt Drawdown, End of Year	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	0
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	11,621	11,521	10,621	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	8,800	6,000	3,100	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	21,079	21,079	21,079	21,079	19,379	17,579	15,779	13,779	11,779	9,579	7,279	4,879	2,379	0	0	0	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	13,399	15,072	16,740	18,362	19,902	21,355	22,716	23,985	25,151	26,215	27,167	28,001	28,712	29,295	29,746	30,052	30,211				
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	19,301	17,528	14,960	11,738	8,498	5,245	2,084	-1,185	-4,351	-7,615	-10,867	-14,101	-17,312	-20,495	-23,746	-26,952	-30,211				
Fiscal Exposure - End of Year Debt Drawdown		2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0	

Feb9 1, 30-yr — Equal Monthly Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	
1,676	*Interest Cost - Feb9 1, 30-yr*	*52*	*170*	*292*	*434*	*591*	*732*	*853*	*982*	*1,121*	*1,230*	*1,343*	*1,474*	*1,578*	*1,648*	*1,676*	*1,671*	*1,646*	*1,584*	*1,500*	*1,410*	*1,318*	*1,221*	*1,119*	*1,012*	*897*	*777*	*652*	*521*	*384*	*238*	*85*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0	
	Monthly Drawdown	183	191	180	237	198	161	108	174	111	51	118	82	5	(43)	(148)	(148)	(214)	(268)	(270)	(271)	(263)	(272)	(264)	(272)	(271)	(269)	(268)	(265)	(271)	(267)	(272)	-	-	-	
	FV of Monthly Drawdown at 5%	2,252	2,342	2,216	2,909	2,435	1,976	1,328	2,139	1,368	628	1,455	1,006	61	(534)	(1,820)	(1,815)	(2,629)	(3,298)	(3,317)	(3,330)	(3,236)	(3,347)	(3,242)	(3,342)	(3,329)	(3,311)	(3,288)	(3,259)	(3,328)	(3,283)	(3,336)	-	-	-	
	Annual Interest Cost on New Drawdowns	52	54	51	68	57	46	31	50	32	15	34	23	1	(12)	(42)	(42)	(61)	(77)	(77)	(77)	(75)	(78)	(75)	(78)	(77)	(76)	(76)	(76)	(77)	(76)	(78)	-	-	-	
	Annual Interest Cost on Opening Balance	-	115	241	367	534	686	822	932	1,089	1,215	1,309	1,451	1,577	1,660	1,718	1,713	1,708	1,660	1,577	1,488	1,393	1,299	1,194	1,089	974	854	728	597	461	314	162	(0)	(0)	(0)	
	Total Annual Interest Cost	52	170	292	434	591	732	853	982	1,121	1,230	1,343	1,474	1,578	1,648	1,676	1,671	1,646	1,584	1,500	1,410	1,318	1,221	1,119	1,012	897	777	652	521	384	238	85	(0)	(0)	(0)	

Feb9 1, 30-yr — Bi-Annual Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*28*	*143*	*266*	*399*	*559*	*703*	*830*	*949*	*1,095*	*1,210*	*1,314*	*1,448*	*1,560*	*1,636*	*1,677*	*1,672*	*1,656*	*1,601*	*1,518*	*1,430*	*1,338*	*1,243*	*1,141*	*1,036*	*922*	*803*	*679*	*550*	*414*	*270*	*119*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,228	2,431	2,431	3,241	2,937	2,633	2,127	3,038	2,431	1,823	2,735	2,431	1,620	1,114	-101	-101	-912	-1,620	-1,722	-1,823	-1,823	-2,026	-2,026	-2,228	-2,329	-2,431	-2,532	-2,633	-2,836	-2,937	-3,140	0	0	0	
	Bi-Annual Drawdown	1,100	1,144	1,082	1,421	1,189	965	648	1,045	668	307	710	491	30	(261)	(889)	(886)	(1,284)	(1,611)	(1,620)	(1,626)	(1,580)	(1,634)	(1,583)	(1,632)	(1,626)	(1,617)	(1,606)	(1,592)	(1,625)	(1,603)	(1,629)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,228	2,317	2,192	2,878	2,409	1,954	1,313	2,116	1,353	621	1,439	995	61	(529)	(1,801)	(1,796)	(2,601)	(3,263)	(3,281)	(3,295)	(3,201)	(3,311)	(3,207)	(3,306)	(3,293)	(3,275)	(3,252)	(3,224)	(3,292)	(3,248)	(3,300)	-	-	-	
	Annual Interest Cost on New Drawdowns	28	29	28	36	30	25	17	27	17	8	18	13	1	(7)	(23)	(23)	(33)	(41)	(41)	(42)	(40)	(42)	(41)	(42)	(42)	(41)	(41)	(41)	(42)	(41)	(42)	-	-	-	
	Annual Interest Cost on Opening Balance	-	114	238	363	529	679	814	922	1,078	1,202	1,295	1,435	1,560	1,643	1,700	1,694	1,689	1,643	1,560	1,472	1,378	1,285	1,181	1,078	964	845	720	591	456	311	161	0	0	0	
	Total Annual Interest Cost	28	143	266	399	559	703	830	949	1,095	1,210	1,314	1,448	1,560	1,636	1,677	1,672	1,656	1,601	1,518	1,430	1,338	1,243	1,141	1,036	922	803	679	550	414	270	119	0	0	0	

Feb9 1, 30-yr — Average Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*56*	*174*	*297*	*440*	*596*	*737*	*857*	*987*	*1,126*	*1,233*	*1,348*	*1,479*	*1,581*	*1,650*	*1,676*	*1,670*	*1,645*	*1,581*	*1,496*	*1,407*	*1,315*	*1,218*	*1,115*	*1,008*	*893*	*773*	*647*	*517*	*379*	*233*	*79*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		2,256	2,461	2,461	3,282	2,974	2,667	2,154	3,077	2,461	1,846	2,769	2,461	1,641	1,128	-103	-103	-923	-1,641	-1,743	-1,846	-1,846	-2,051	-2,051	-2,256	-2,359	-2,461	-2,564	-2,667	-2,872	-2,974	-3,179	0	0	0	

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Feb9_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0
			38	38	40	55	50	40	31	50	31	19	36	31	5	-5	-17	-19	-19	-21	-21	-21	-24	-26	-26	-26	-31	-29	-33	-33	-36	-38	-38	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,300	998	17,886
Equal Monthly Debt Drawdown	2,355	993	

	Feb9 2, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,500	2029	13,466
Equal Monthly Debt Drawdown	19,964		

Feb9 2, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
a	Debt, Beginning of Year	0	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	
c = a*5%	*Interest Cost - Feb9 2, 30-yr - End of Year Debt Drowdown*	*0*	*82*	*164*	*251*	*368*	*476*	*563*	*629*	*737*	*803*	*844*	*921*	*987*	*998*	*987*	*952*	*911*	*870*	*824*	*778*	*732*	*680*	*624*	*568*	*512*	*445*	*384*	*312*	*240*	*164*	*82*	*0*	*0*	*0*	17,886
b	Additional GA Debt Drawdown, End of Year	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	7,123	6,323	5,523	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,700	3,200	1,600	0	0	0	
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	11,477	11,477	11,477	11,477	10,577	9,677	8,677	7,577	6,477	5,377	4,077	2,877	1,477	0	0	0	0	0	0	0	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	8,810	9,762	10,672	11,542	12,366	13,143	13,875	14,556	15,180	15,748	16,259	16,704	17,088	17,400	17,641	17,804	17,886				
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	9,790	8,038	6,328	4,558	2,834	1,157	-575	-2,356	-4,080	-5,748	-7,559	-9,204	-10,988	-12,700	-14,441	-16,204	-17,886				
Fiscal Exposure - End of Year Debt Drawdown		1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0	

Feb9 2, 30-yr — Equal Monthly Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	
993	*Interest Cost - Feb9 2, 30-yr*	*38*	*120*	*204*	*305*	*418*	*516*	*594*	*679*	*768*	*822*	*880*	*952*	*992*	*993*	*971*	*933*	*892*	*848*	*802*	*756*	*708*	*654*	*598*	*542*	*481*	*417*	*350*	*279*	*205*	*126*	*44*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0	
	Monthly Drawdown	133	127	128	171	144	102	61	123	47	(0)	55	32	(66)	(100)	(141)	(146)	(143)	(147)	(144)	(140)	(144)	(148)	(144)	(139)	(151)	(137)	(149)	(143)	(145)	(147)	(140)	-	-	-	
	FV of Monthly Drawdown at 5%	1,638	1,554	1,573	2,098	1,773	1,253	755	1,506	577	(3)	671	388	(806)	(1,226)	(1,728)	(1,793)	(1,751)	(1,812)	(1,765)	(1,718)	(1,773)	(1,823)	(1,765)	(1,708)	(1,855)	(1,684)	(1,826)	(1,753)	(1,782)	(1,806)	(1,722)	-	-	-	
	Annual Interest Cost on New Drawdowns	38	36	37	49	41	29	18	35	13	(0)	16	9	(19)	(28)	(40)	(42)	(41)	(42)	(41)	(40)	(41)	(42)	(41)	(40)	(43)	(39)	(42)	(41)	(41)	(42)	(40)	-	-	-	
	Annual Interest Cost on Opening Balance	-	84	168	257	377	487	576	644	754	822	864	943	1,011	1,021	1,011	974	932	890	843	796	749	697	639	581	524	456	393	320	246	168	84	0	0	0	
	Total Annual Interest Cost	38	120	204	305	418	516	594	679	768	822	880	952	992	993	971	933	892	848	802	756	708	654	598	542	481	417	350	279	205	126	44	0	0	0	

Feb9 2, 30-yr — Bi-Annual Debt Drawdown

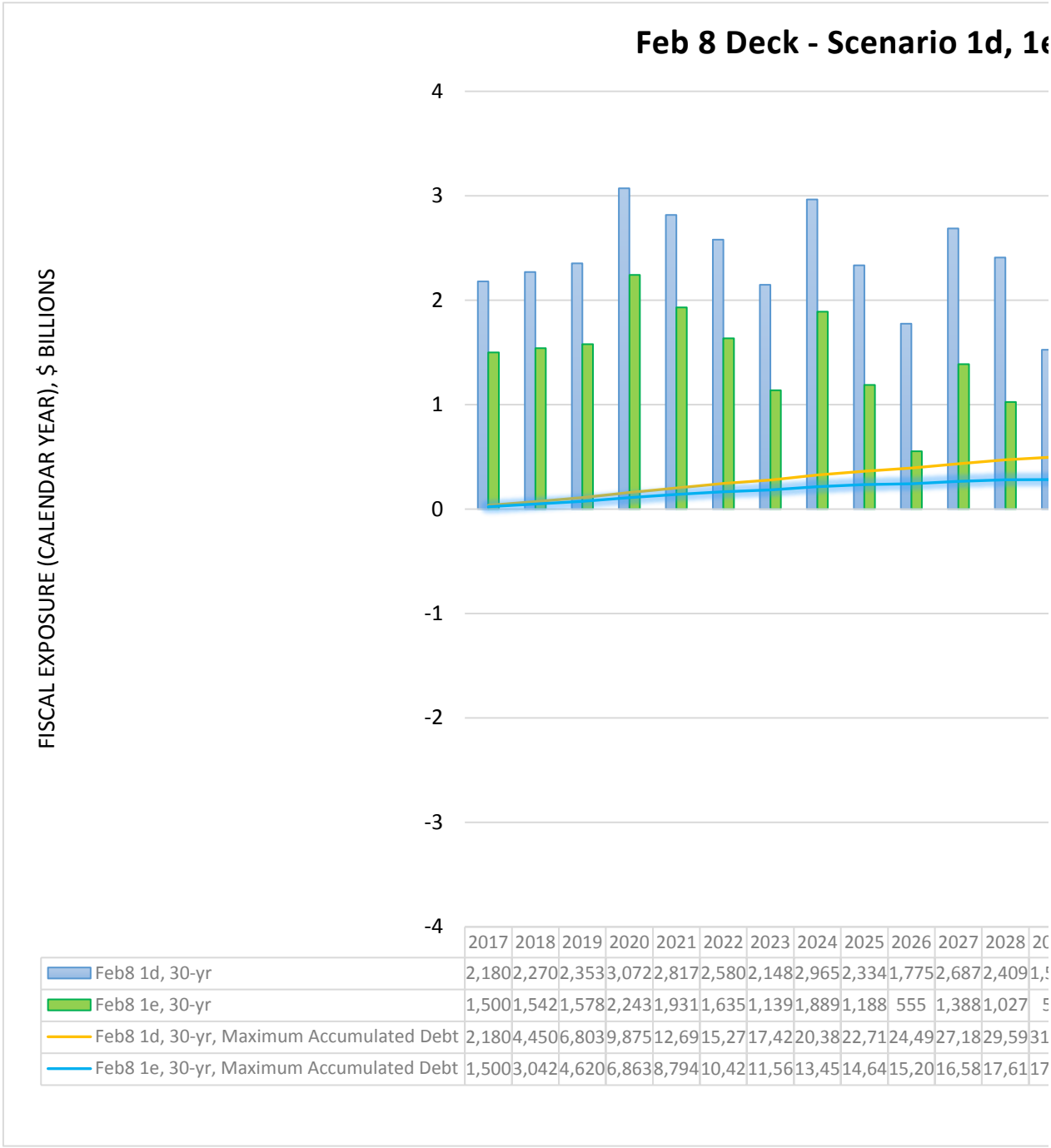
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*20*	*102*	*185*	*280*	*395*	*498*	*579*	*656*	*753*	*813*	*863*	*938*	*990*	*995*	*978*	*941*	*900*	*858*	*812*	*766*	*719*	*666*	*610*	*554*	*495*	*430*	*366*	*294*	*221*	*143*	*61*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,620	1,620	1,722	2,329	2,127	1,722	1,317	2,127	1,317	810	1,519	1,317	203	-203	-709	-810	-810	-912	-912	-912	-1,013	-1,114	-1,114	-1,114	-1,317	-1,215	-1,418	-1,418	-1,519	-1,620	-1,620	0	0	0	
	Bi-Annual Drawdown	800	759	768	1,025	866	612	369	735	282	(2)	328	190	(394)	(599)	(844)	(876)	(855)	(885)	(862)	(839)	(866)	(890)	(862)	(834)	(906)	(823)	(892)	(856)	(870)	(882)	(841)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,620	1,538	1,556	2,076	1,754	1,240	747	1,490	570	(3)	664	384	(797)	(1,213)	(1,709)	(1,774)	(1,733)	(1,792)	(1,746)	(1,699)	(1,754)	(1,803)	(1,746)	(1,689)	(1,835)	(1,666)	(1,807)	(1,734)	(1,763)	(1,786)	(1,703)	-	-	-	
	Annual Interest Cost on New Drawdowns	20	19	20	26	22	16	9	19	7	(0)	8	5	(10)	(15)	(22)	(22)	(22)	(23)	(22)	(21)	(22)	(23)	(22)	(21)	(23)	(21)	(23)	(22)	(22)	(23)	(22)	-	-	-	
	Annual Interest Cost on Opening Balance	-	83	166	254	373	482	570	637	746	814	855	933	1,000	1,010	1,000	964	922	881	834	788	741	689	632	575	518	451	389	316	244	166	83	0	0	0	
	Total Annual Interest Cost	20	102	185	280	395	498	579	656	753	813	863	938	990	995	978	941	900	858	812	766	719	666	610	554	495	430	366	294	221	143	61	0	0	0	

Feb9 2, 30-yr — Average Debt Drawdown

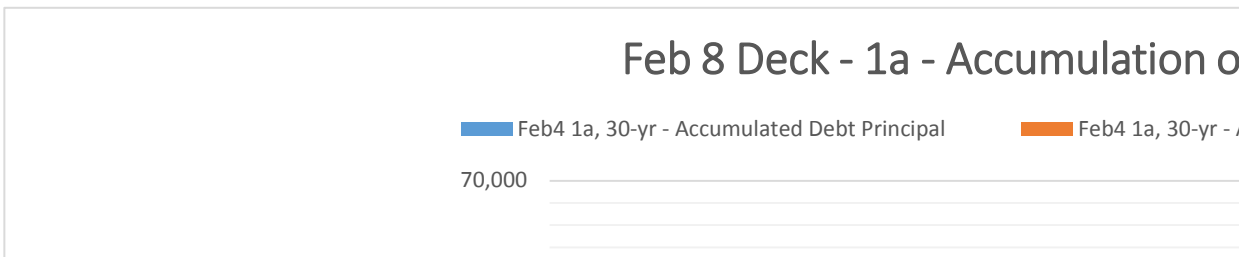
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*41*	*123*	*207*	*310*	*422*	*519*	*596*	*683*	*770*	*824*	*883*	*954*	*993*	*993*	*970*	*931*	*890*	*847*	*801*	*755*	*706*	*652*	*596*	*540*	*478*	*414*	*348*	*276*	*202*	*123*	*41*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,641	1,641	1,743	2,359	2,154	1,743	1,333	2,154	1,333	820	1,538	1,333	205	-205	-718	-820	-820	-923	-923	-923	-1,026	-1,128	-1,128	-1,128	-1,333	-1,231	-1,436	-1,436	-1,538	-1,641	-1,641	0	0	0	

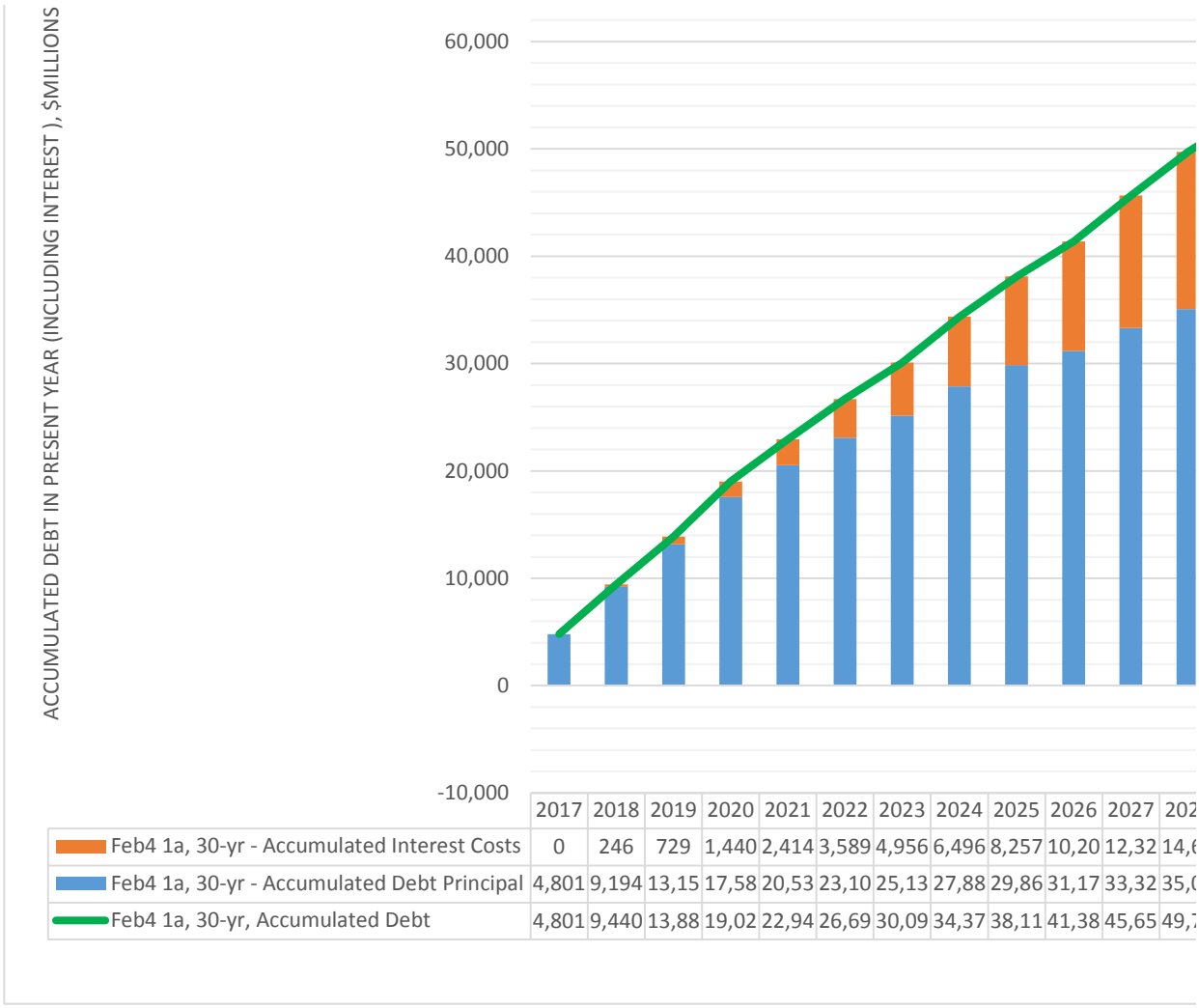
Feb 8 Deck

Feb 8 Deck - Scenario 1d, 1e - at 5.12% interest rate

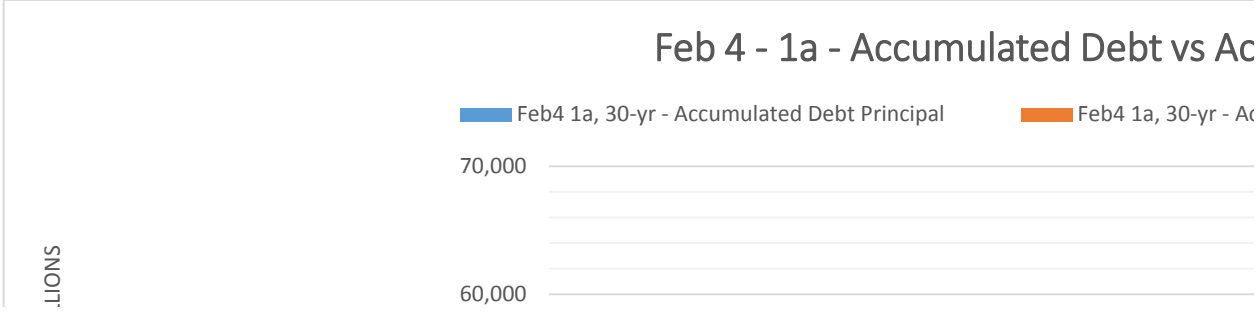


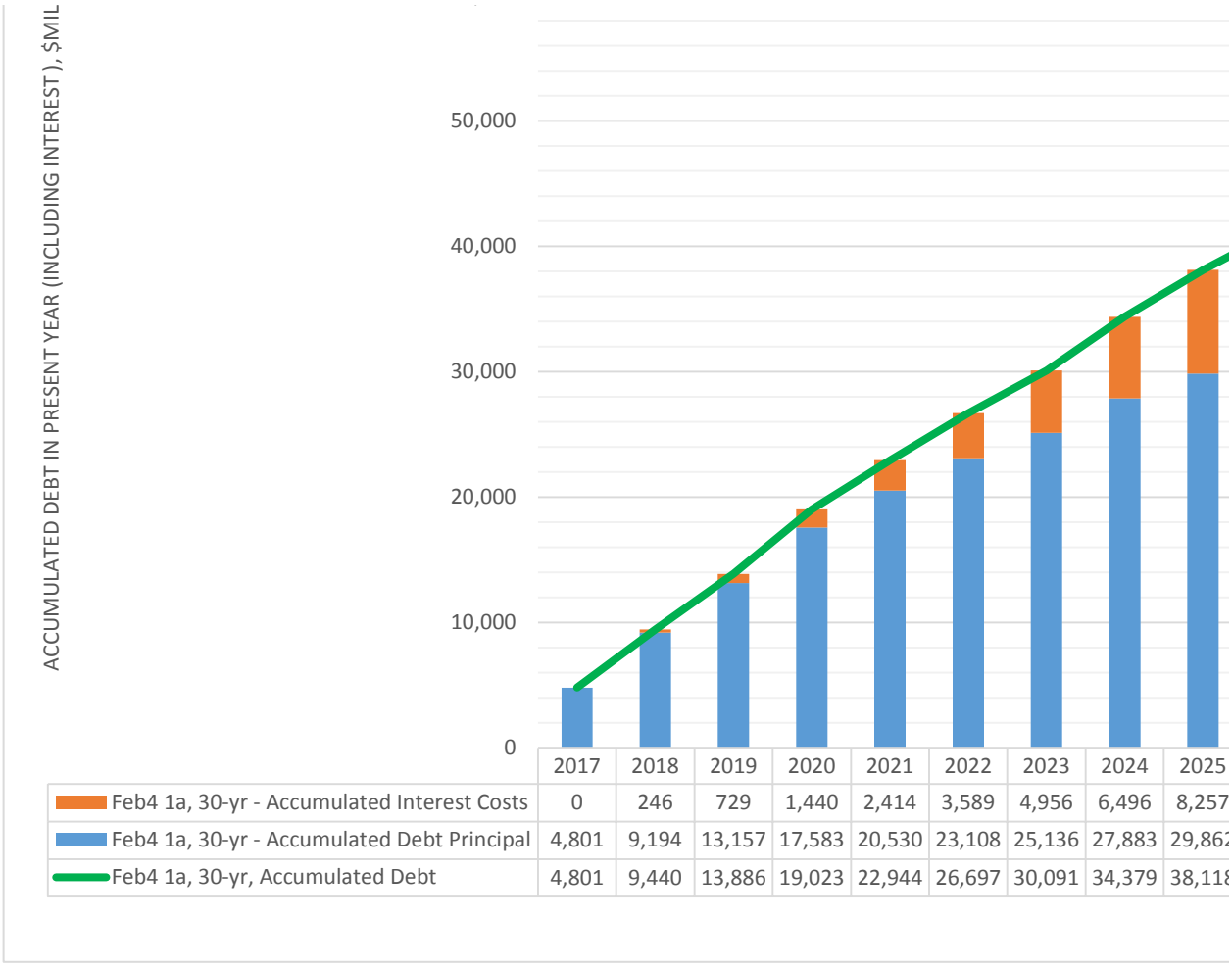
Feb 8 Deck - 1a - Accumulation of Debt (Principal and Interest)



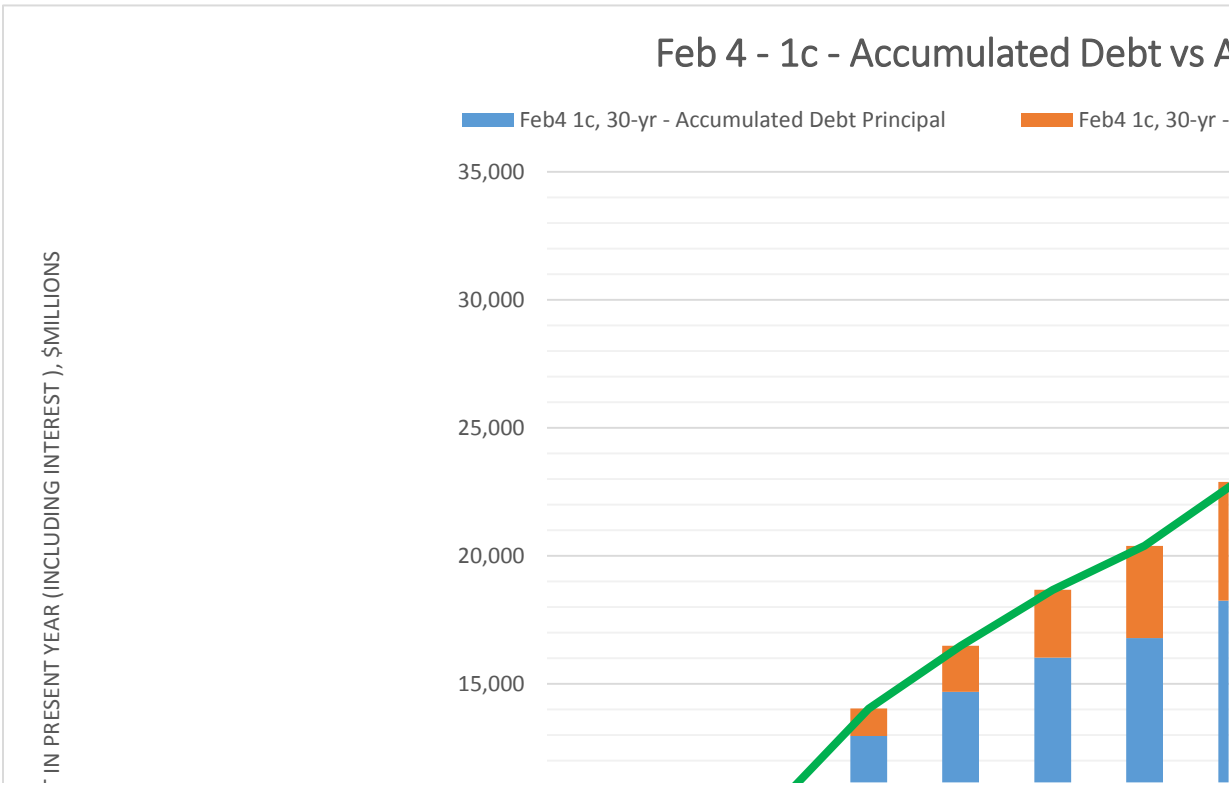


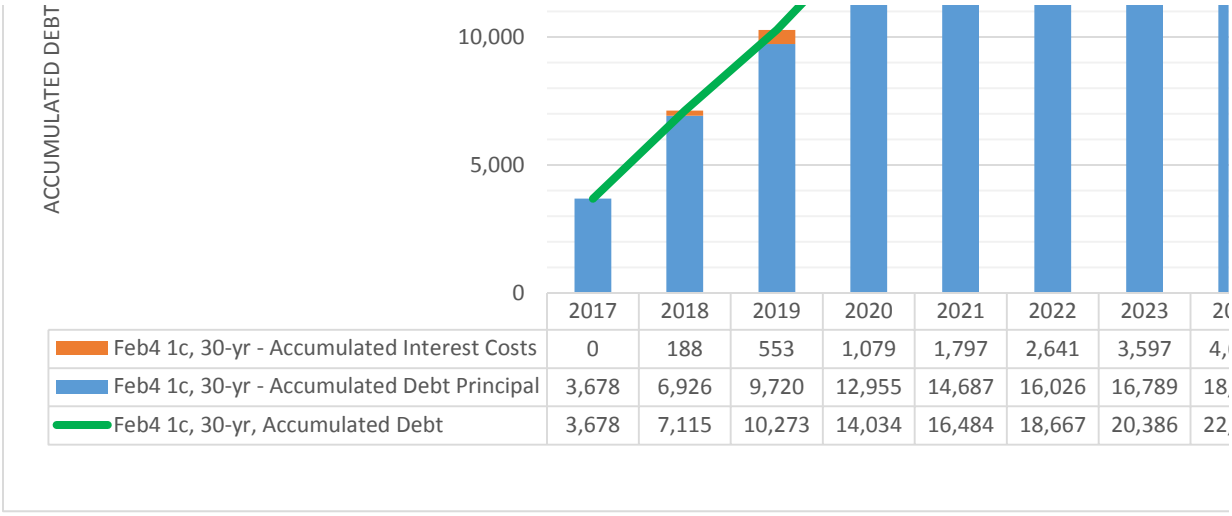
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	202
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,(
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,7



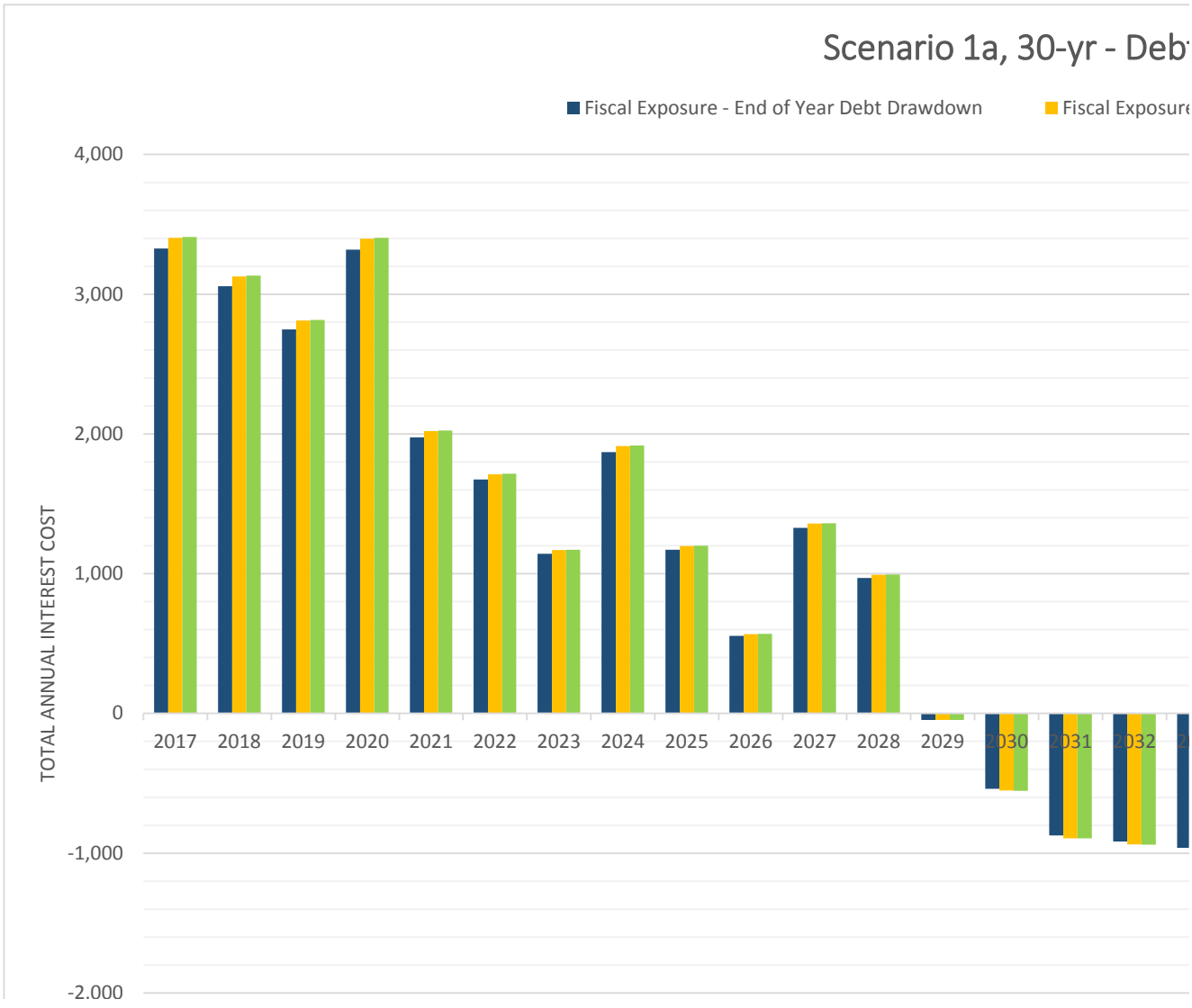


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



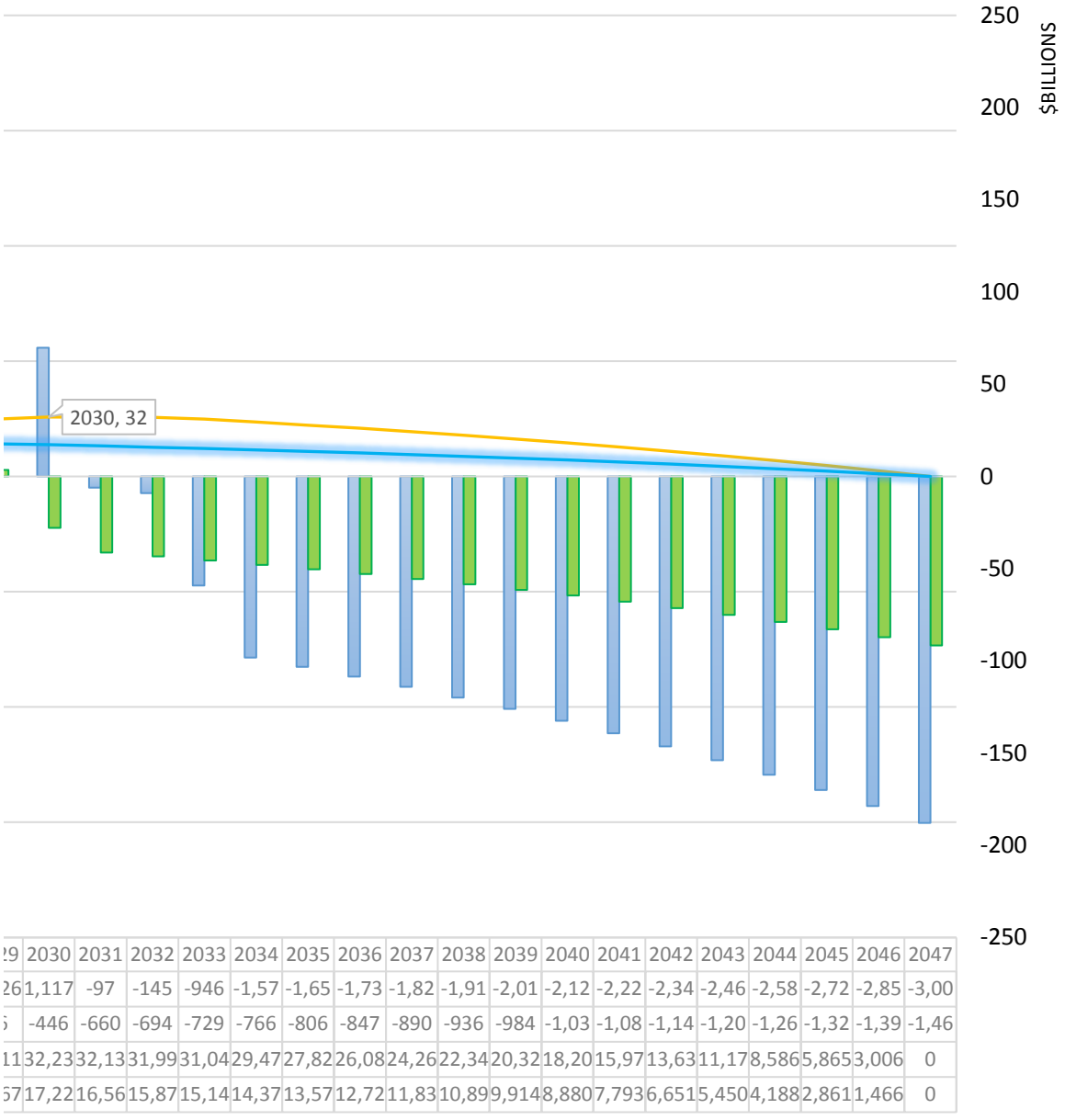


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

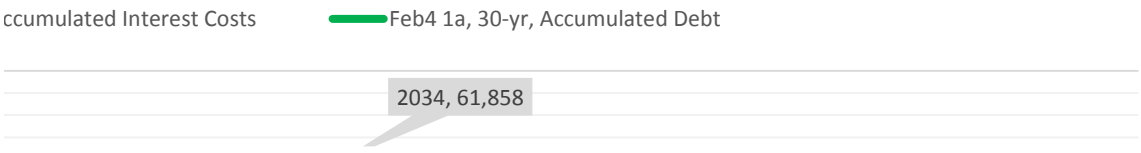
- at 5.12% interest rate

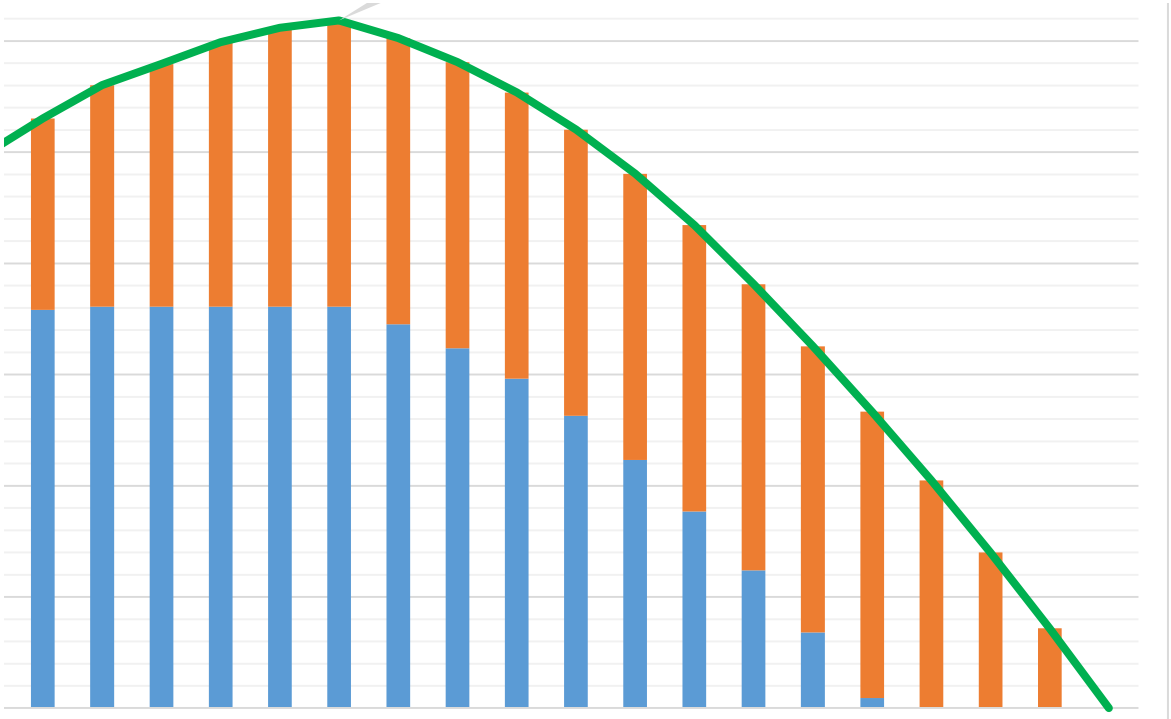


29	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
26	1,117	-97	-145	-946	-1,57	-1,65	-1,73	-1,82	-1,91	-2,01	-2,12	-2,22	-2,34	-2,46	-2,58	-2,72	-2,85	-3,00
5	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,03	-1,08	-1,14	-1,20	-1,26	-1,32	-1,39	-1,46
11	32,23	32,13	31,99	31,04	29,47	27,82	26,08	24,26	22,34	20,32	18,20	15,97	13,63	11,17	8,586	5,865	3,006	0
57	17,22	16,56	15,87	15,14	14,37	13,57	12,72	11,83	10,89	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0

CALENDAR YEAR

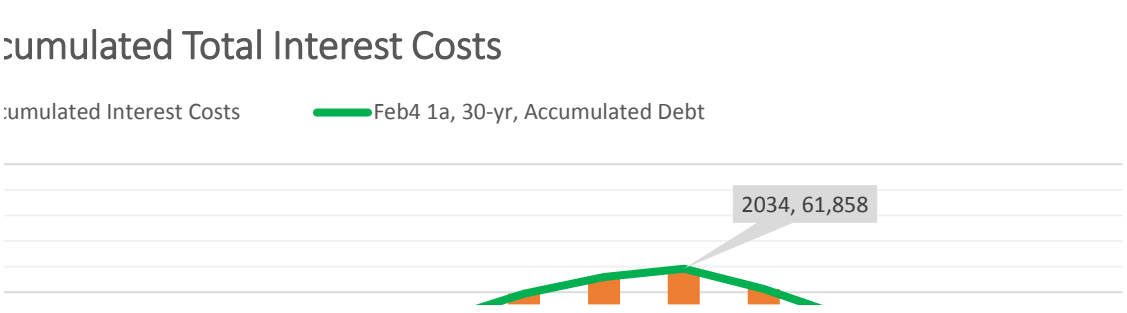
Debt (Principal and Interest)



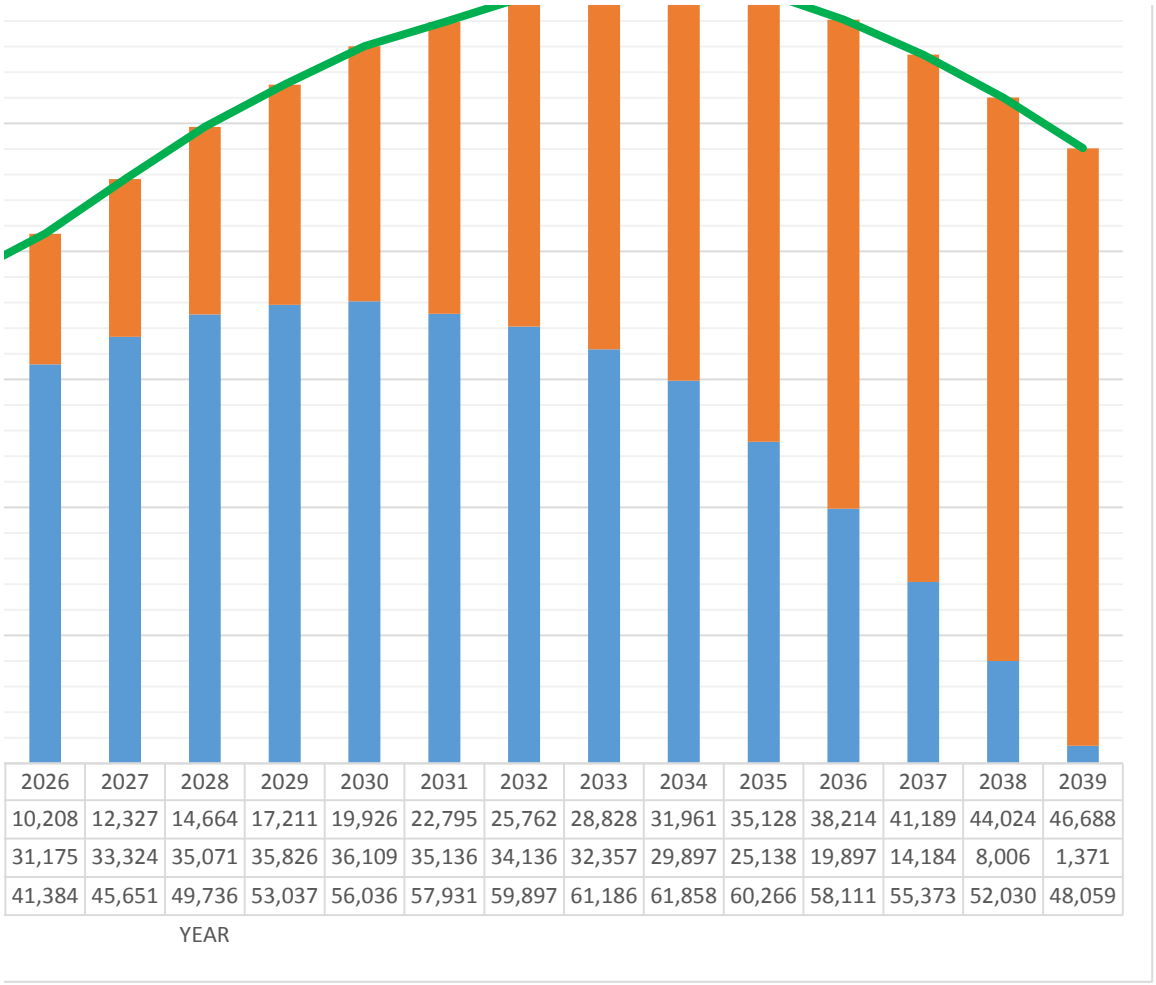


	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
5	17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
7	35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
3	53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



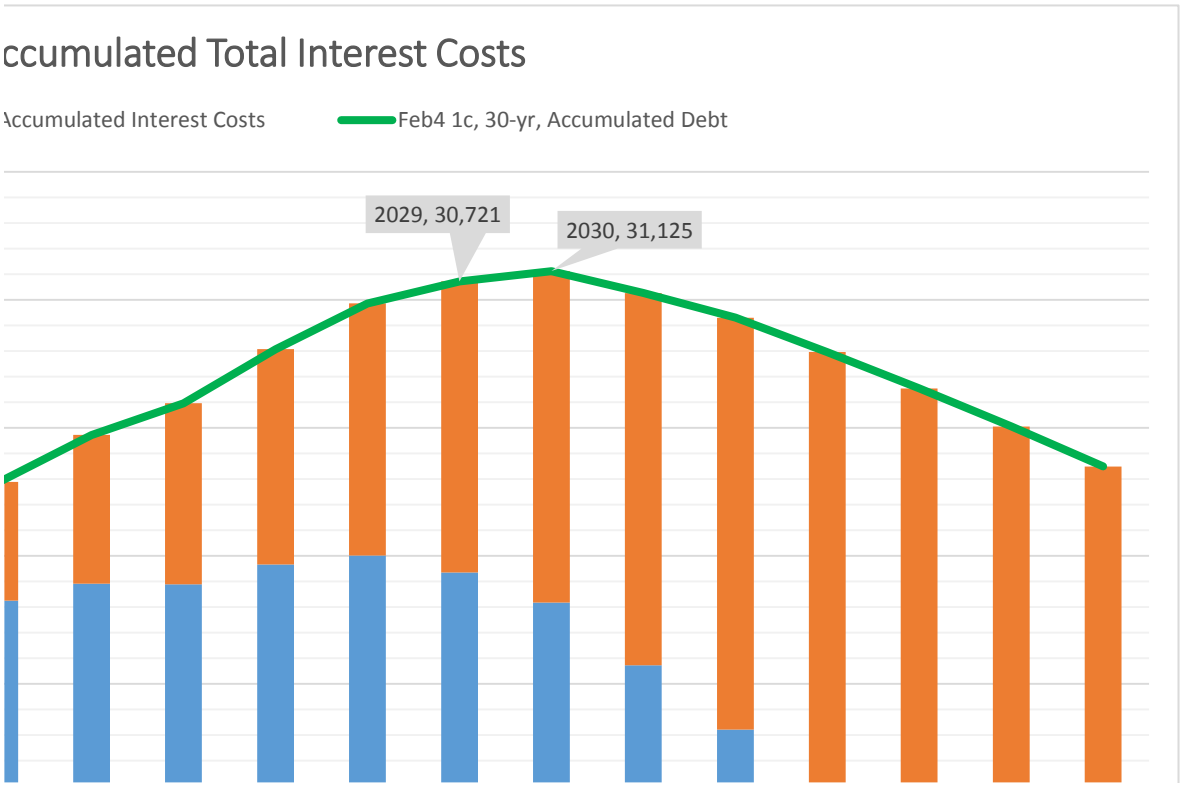
LIONS

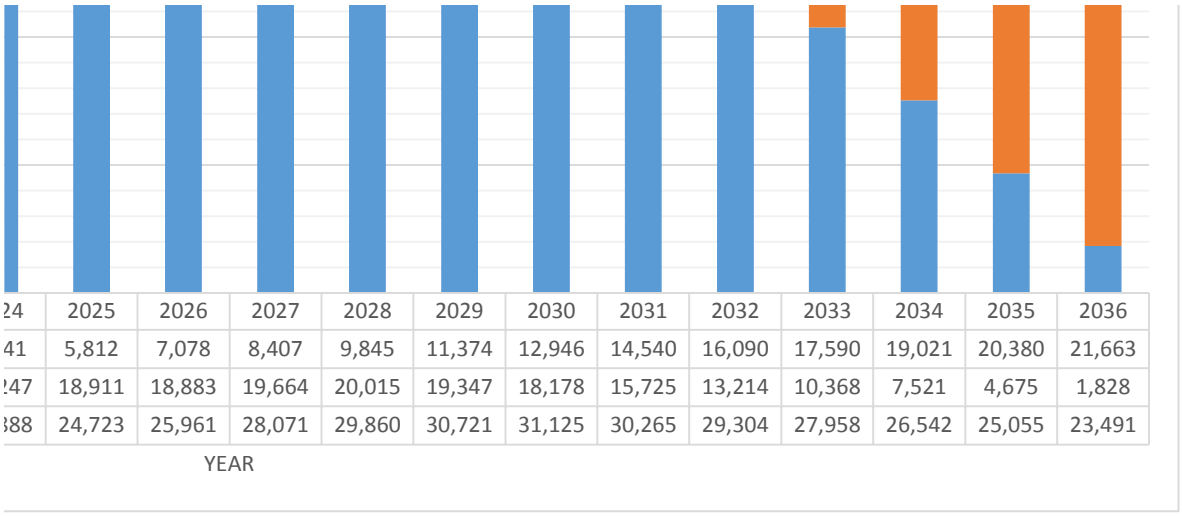


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

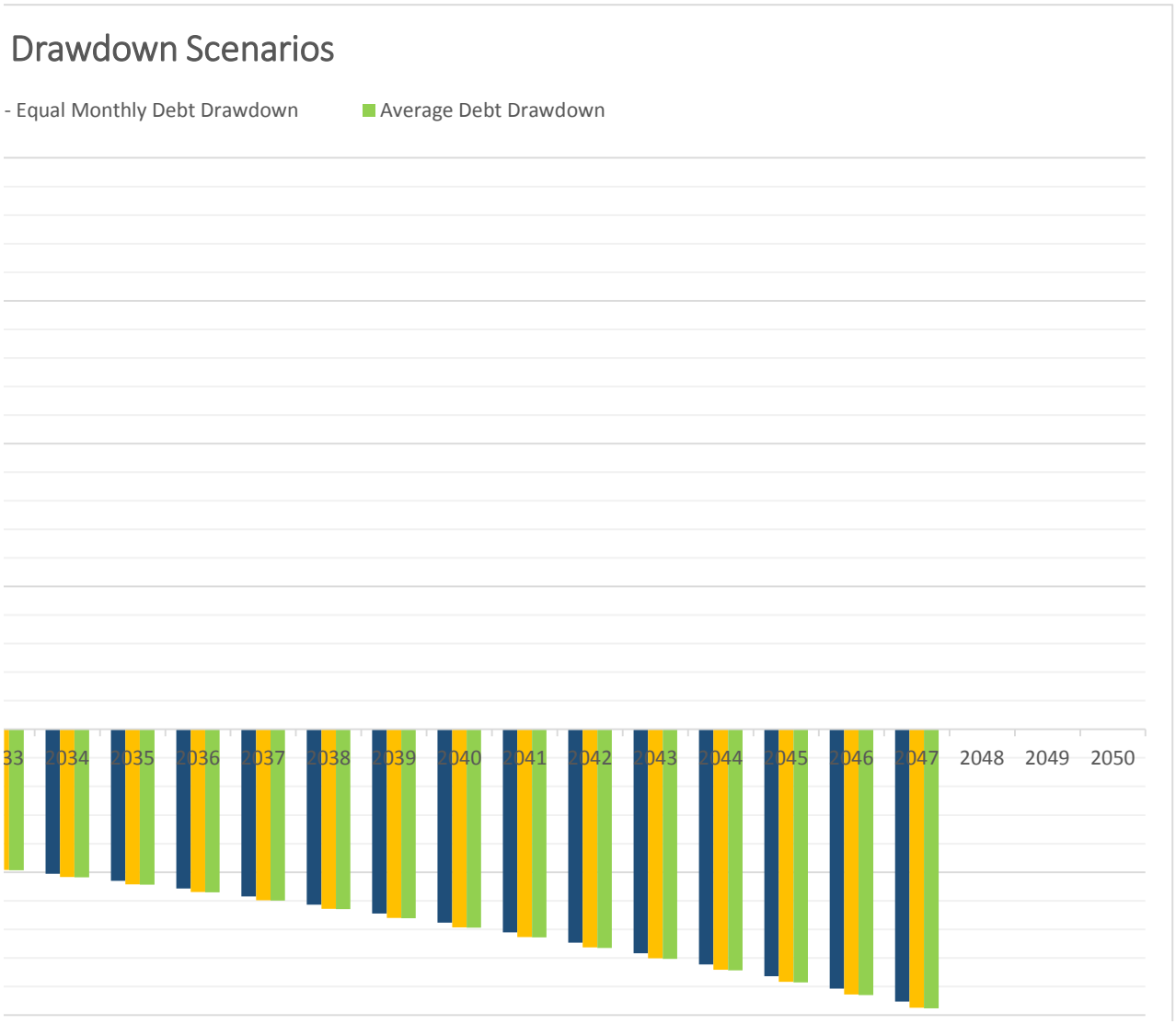
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





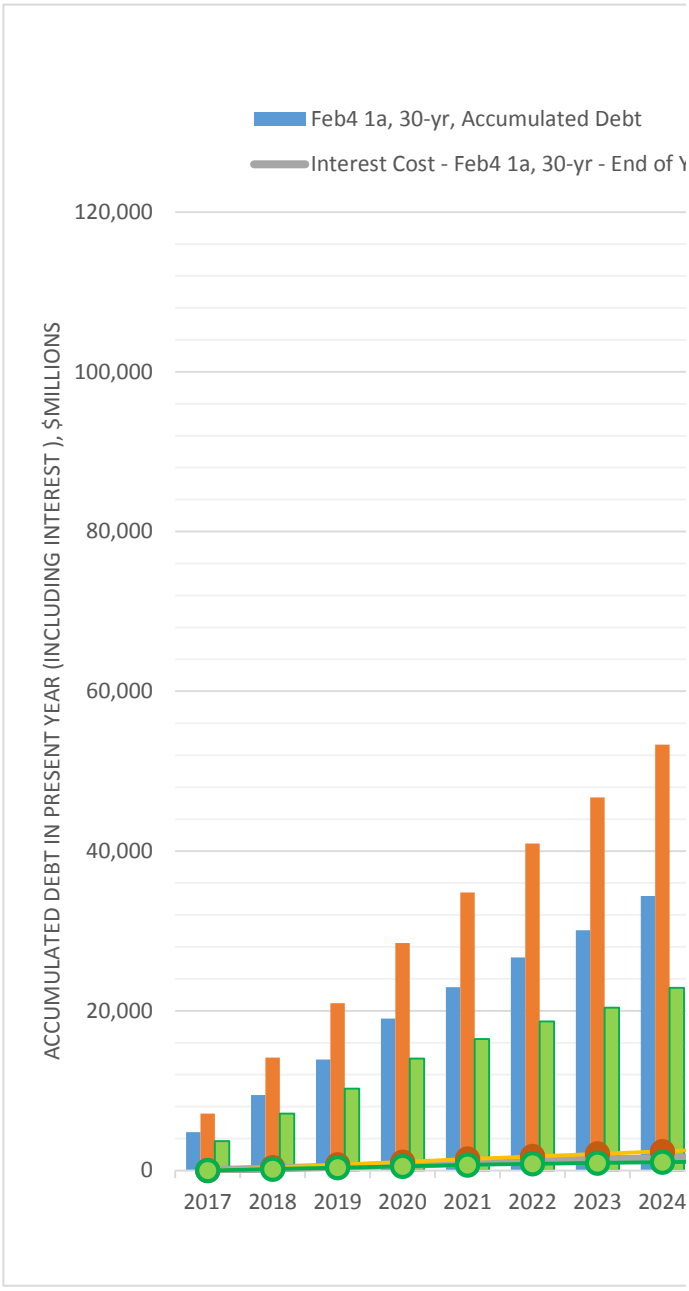
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

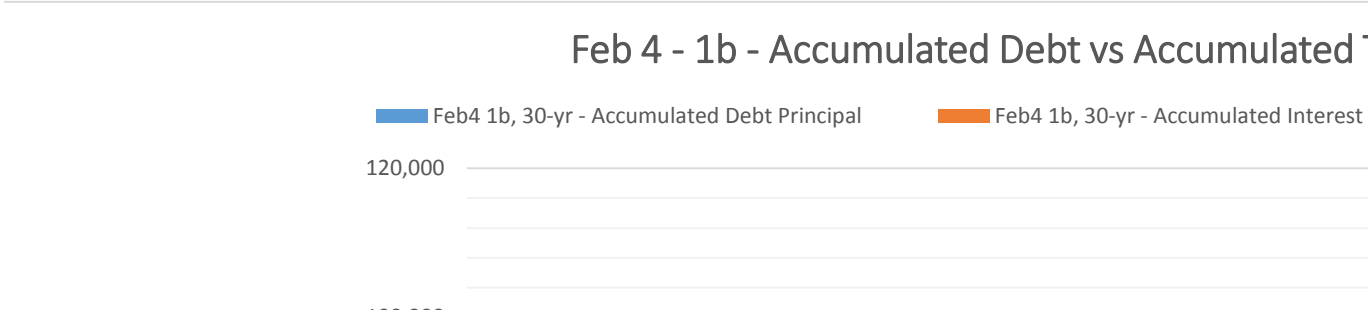
YEAR

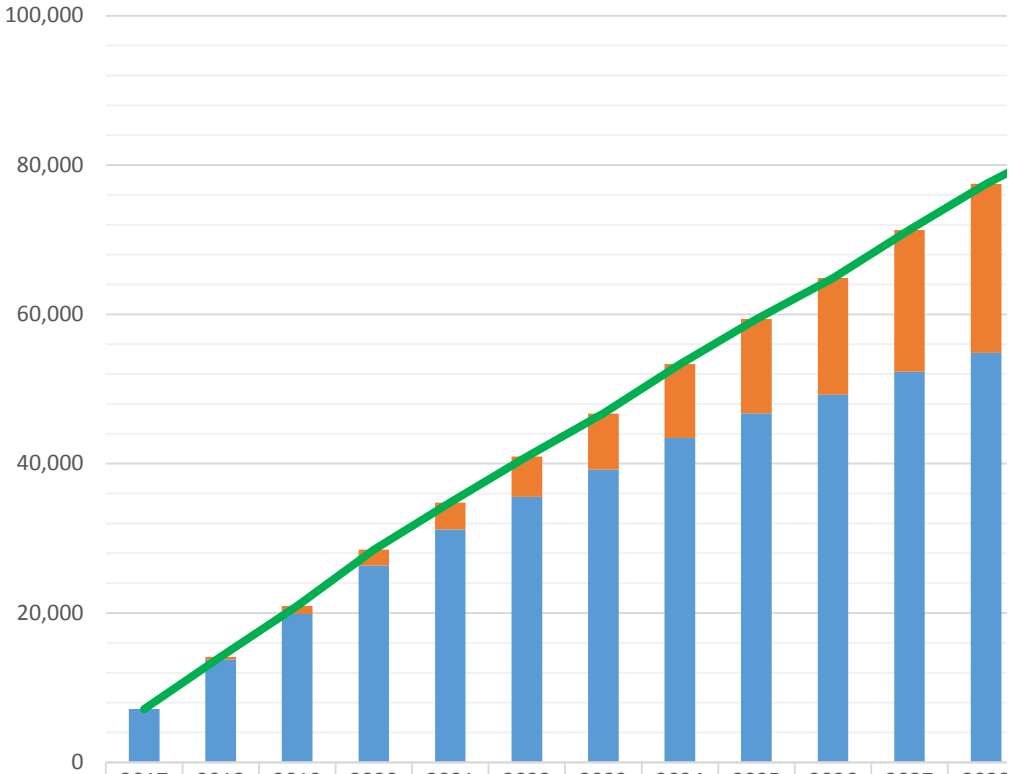


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate

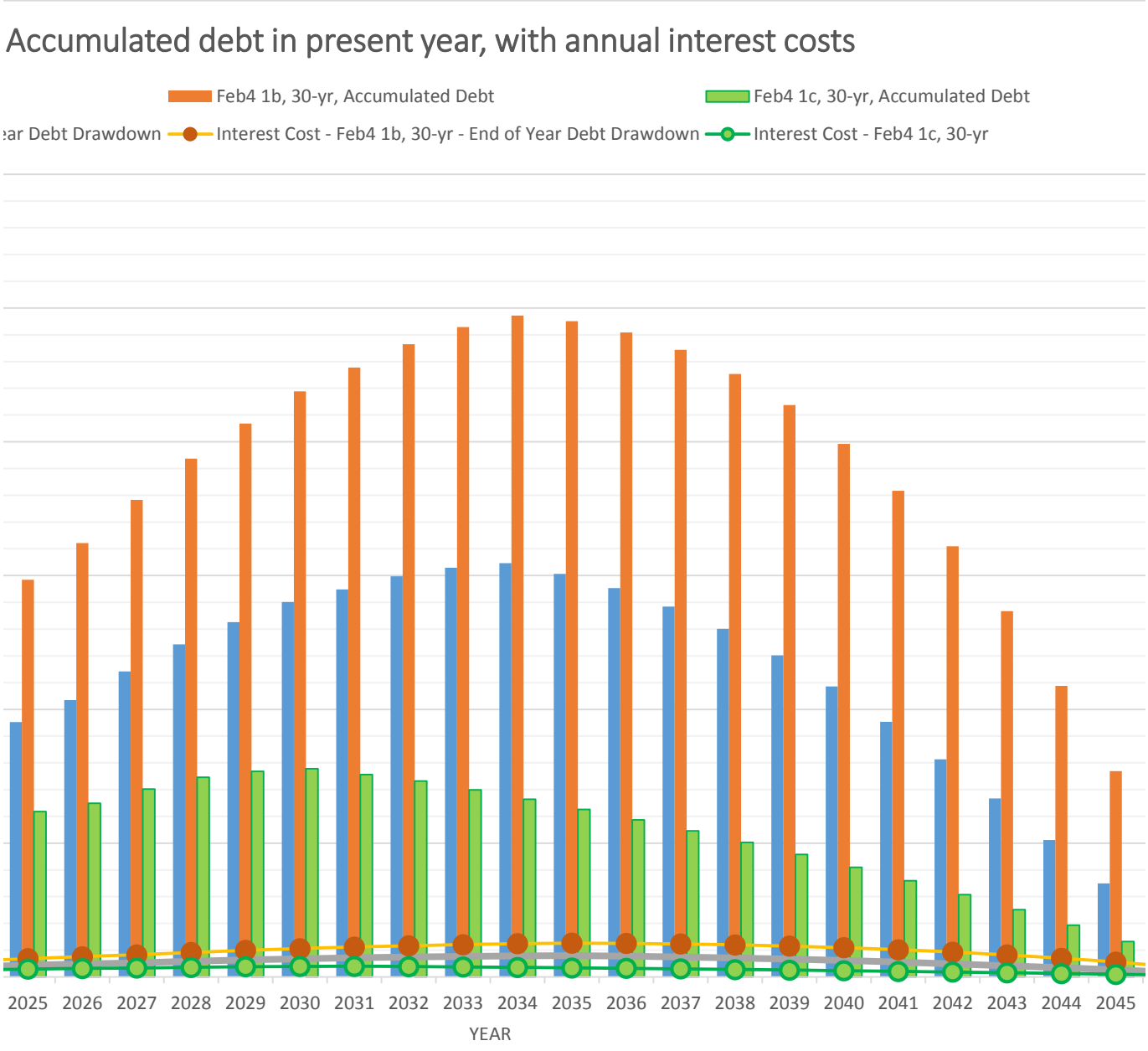


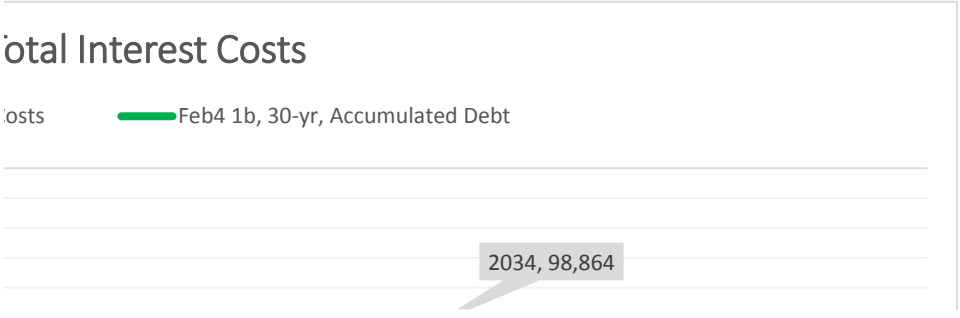

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

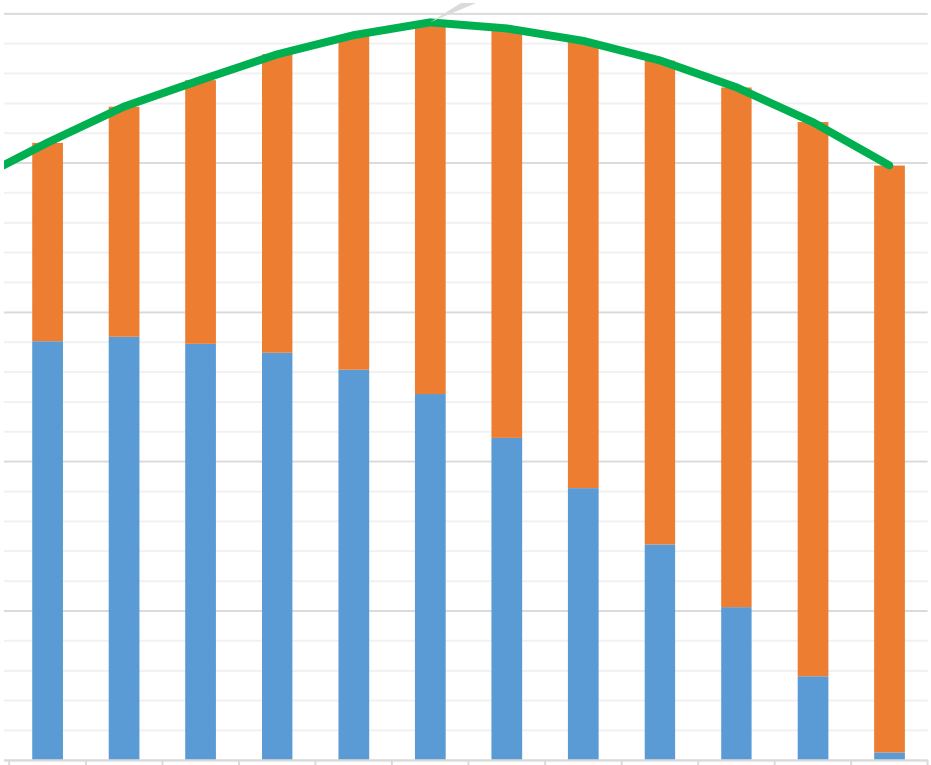


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y

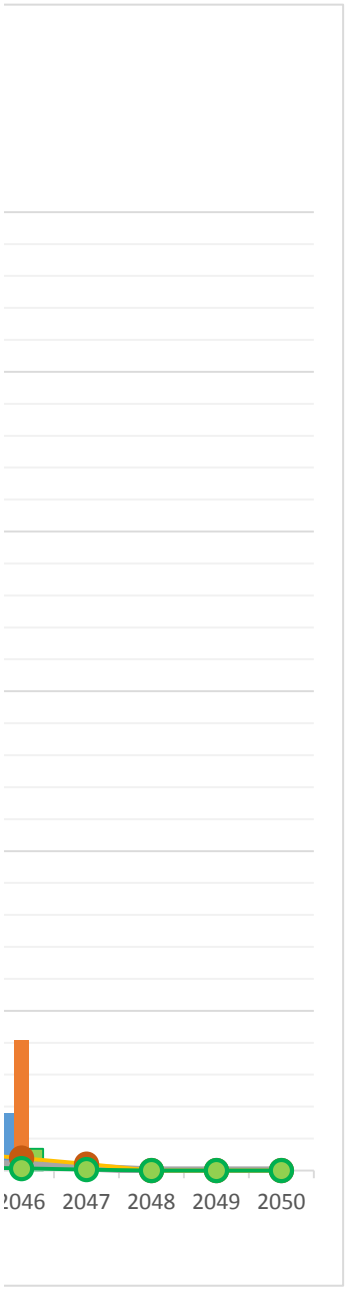

Accumulated debt in present year, with annual interest costs
Feb4 1b, 30-yr, Accumulated Debt
Feb4 1c, 30-yr, Accumulated Debt
ear Debt Drawdown
Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown
Interest Cost - Feb4 1c, 30-yr
2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045
YEAR


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

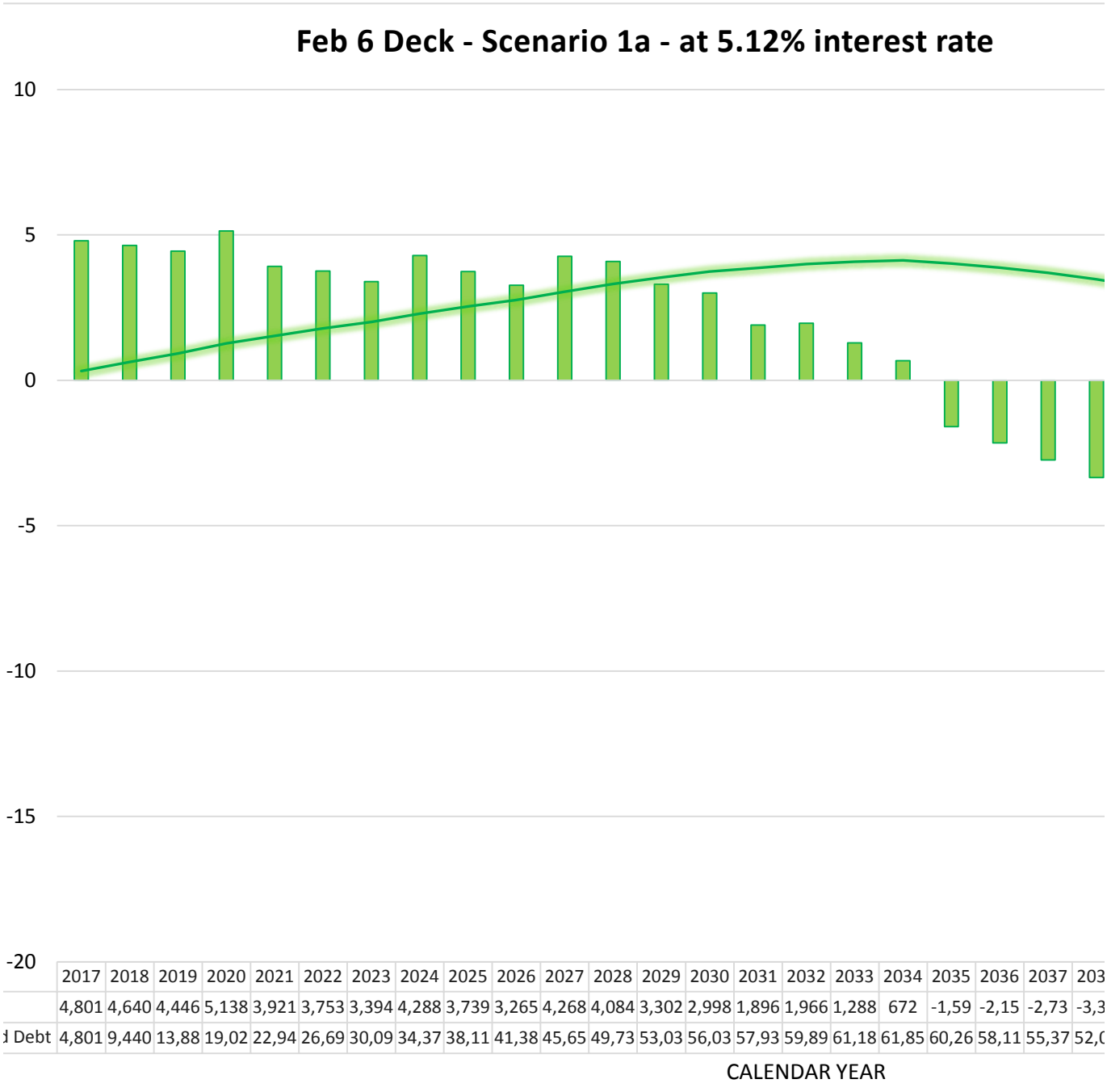
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

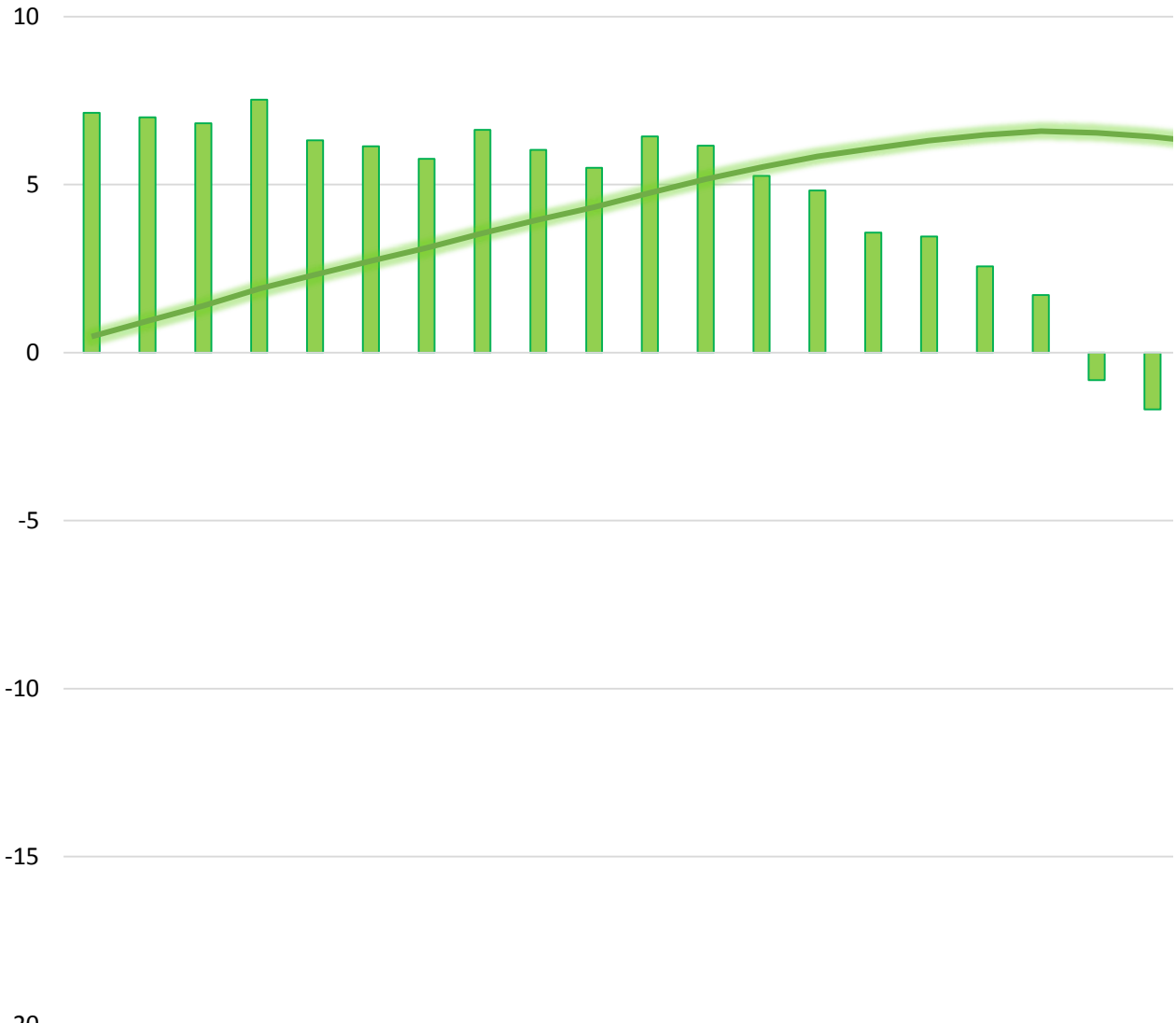
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

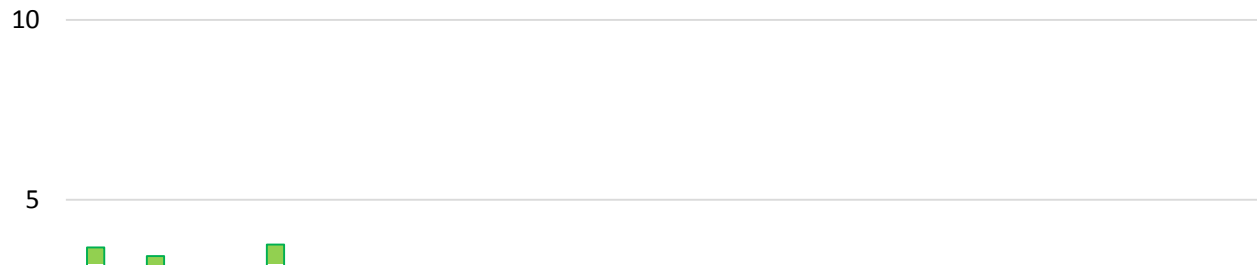
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

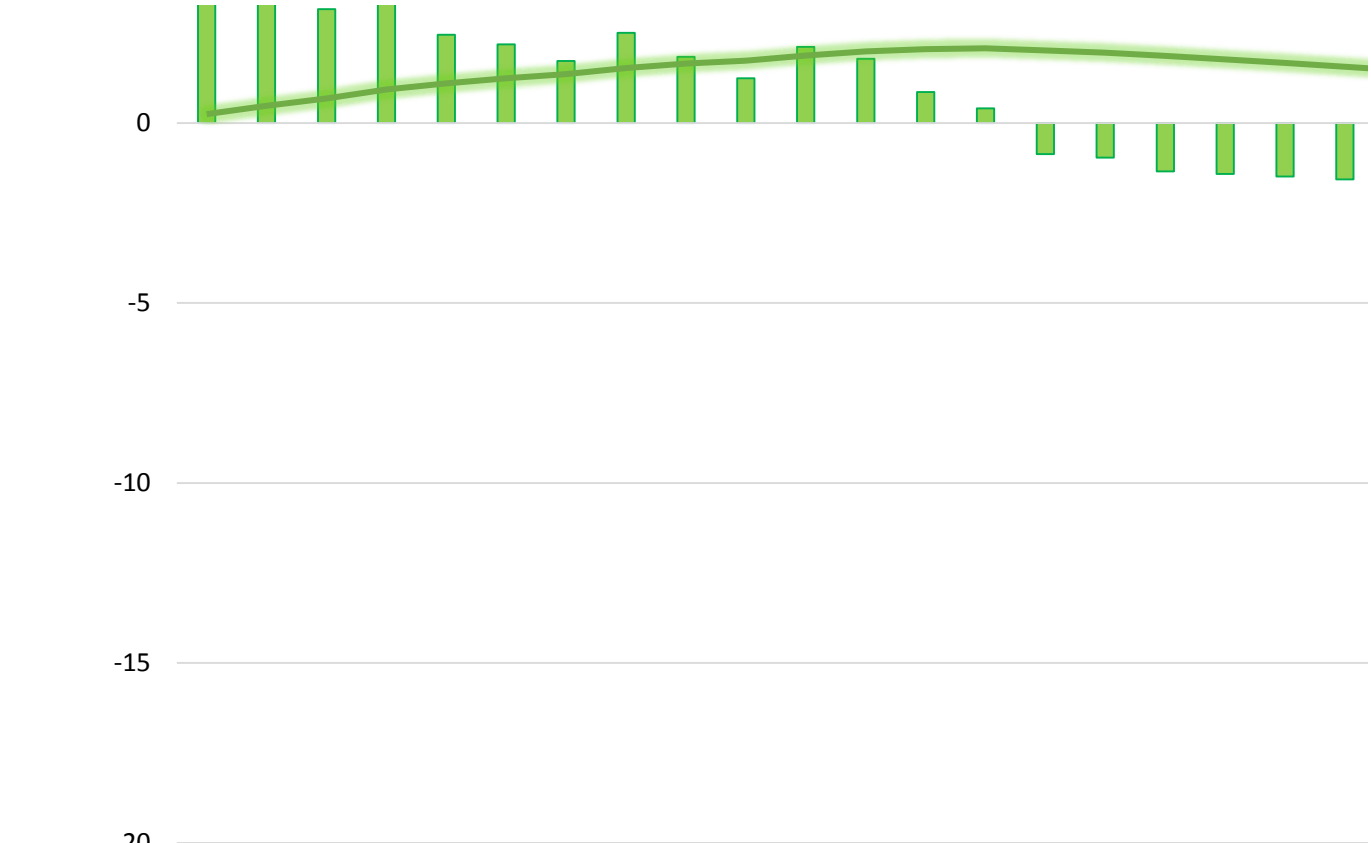


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



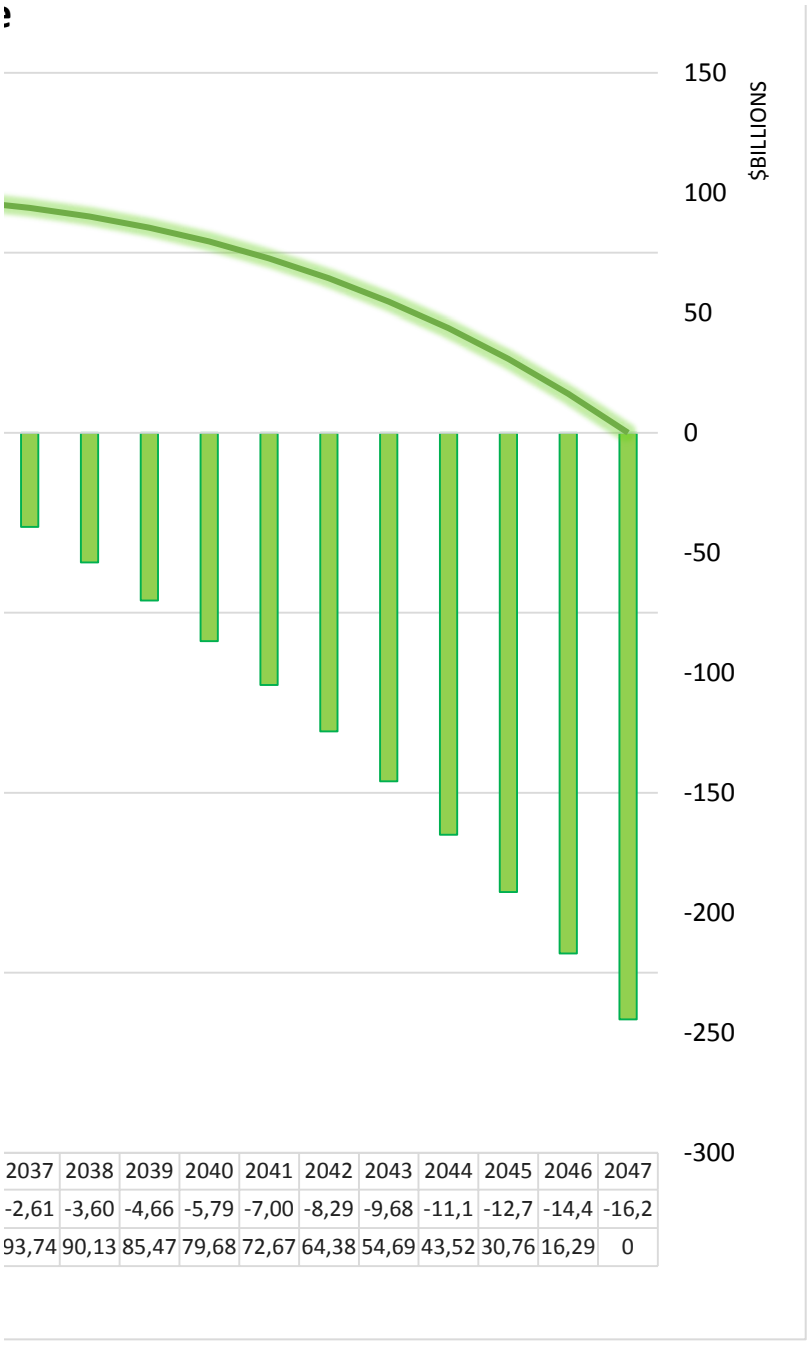


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

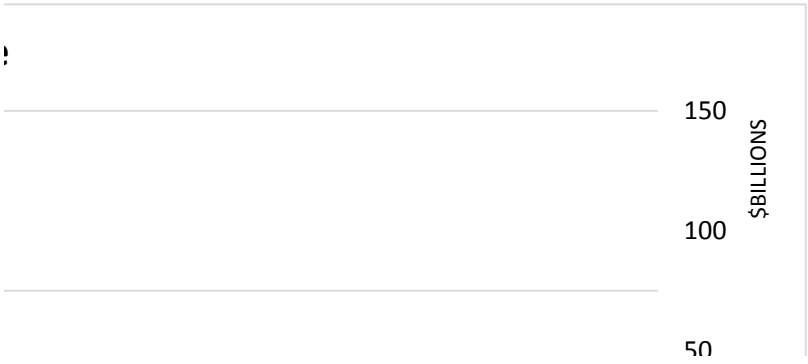
CALENDAR YEAR

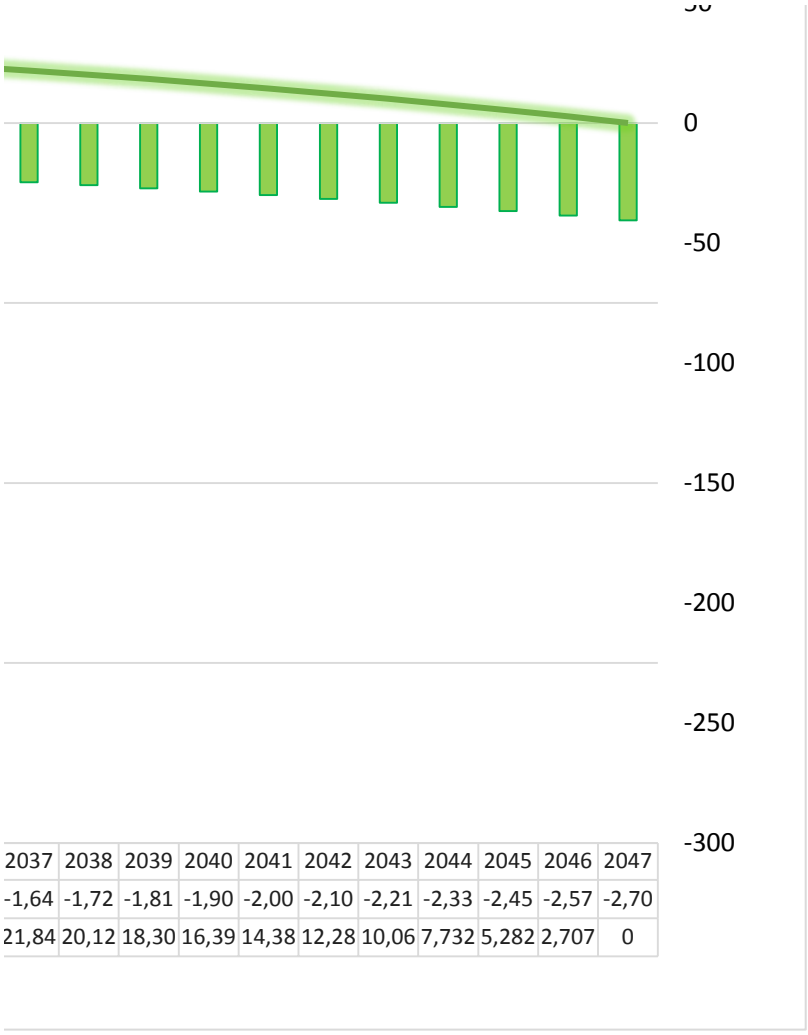


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Feb 8 Deck - Scenario 1a, 1b, 1c - at 5.12% interest
IESO GA cost forecast + extrapolation

Scenario
1a

1b

1c

1d

1e

	2017	2018	2019	2020
rate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	4674	9542	14587	21173

GA Payment from Impacted Rate Class	7421	7205	6995	6329
Accumulated debt in present year (including interest)	4674	9544	14589	21175

GA Payment from Impacted Rate Class	7421	7425	7440	7013
Accumulated debt in present year (including interest)	4674	9323	13913	19780

GA Payment from Impacted Rate Class	9915	9676	9427	9445
Accumulated debt in present year (including interest)	2180	4450	6803	9875

GA Payment from Impacted Rate Class	10596	10370	10129	10162
Accumulated debt in present year (including interest)	1500	3042	4620	6863

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
27212	33084	38588	44968	50769	56056	62291	68274

5890	6156	6434	6724	7028	7345	7677	8024
27212	33082	38585	44963	50762	56048	62281	68263

6825	7042	7266	7497	7736	7983	8237	8499
24810	29671	34167	39545	44359	48679	53976	59058

8532	8703	8877	9054	9236	9420	9609	9801
12692	15272	17420	20384	22719	24494	27181	29590

9264	9449	9638	9831	10027	10228	10432	10641
8794	10429	11568	13457	14645	15200	16588	17614

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
73391	78103	81594	85015	87596	89375	88679	87180

8386	8765	9160	9574	10006	10458	10931	11424
73378	78089	81578	84997	87577	89356	88659	87159

8770	9049	9337	9634	9941	10257	10584	10921
63318	67230	69987	72754	74773	76097	75068	73377

9997	10197	10401	10609	10821	10916	8822	8548
31116	32233	32135	31991	31045	29473	27822	26085

10854	11071	10196	10361	9779	9298	7203	6930
17670	17225	16565	15871	15142	14376	13570	12723

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
84828	81568	77341	72085	65730	58203	49425	39310

11940	12480	13043	13632	14248	14891	15564	16267
84806	81546	77320	72065	65711	58186	49409	39297

11269	11628	11998	12380	12774	13181	13600	14033
70990	67875	63995	59310	53778	47352	39985	31624

8288	8040	7805	7580	7367	7164	6970	6786
24260	22342	20325	18206	15978	13635	11173	8586

6670	6422	6186	5962	5748	5545	5352	5168
11833	10897	9914	8880	7793	6651	5450	4188

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
27767	14699	0	0	0	0

17001	17769	18572	2975	2831	2695
27758	14694	0	0	0	0

14480	14941	15417	2975	2831	2695
22213	11693	0	0	0	0

6611	6444	6286	2975	2831	2695
5865	3006	0	0	0	0

4993	4826	4667	2975	2831	2695
2861	1466	0	0	0	0

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb8_1a_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,867
Annual Exposure2 with start on July 1st	*2,337*	*4,867*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	3,554

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

1 Based on an interest rate of 5%.

2 Fiscal exposure based on equal monthly drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1b_30yr

1b. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,869
Annual Exposure2 with start on July 1st	*2,337*	*4,869*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	*3,554*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649
Annual Exposure2 with start on July 1st	*2,337*	*4,649*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,668
Start: July 1st	-	*3,499*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $76 billion peaking in

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270
Annual Exposure2 with start on July 1st	*1,090*	*2,270*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	545	2,203
Start: July 1st	-	*1,658*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $32 billion peaking in

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542
Annual Exposure2 with start on July 1st	*750*	*1,542*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	375	1,510
Start: July 1st	-	*1,135*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $18 billion peaking in

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	1,169 - 1,169	4,723 - 4,723

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1169**	**4963**
Total, B	1169	4963
Proposed Program Total:	1,169 - 1,169	4,963 - 4,963

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1a
Scenario 1b
Scenario 1c
Scenario 1d
Scenario 1e

2019	2020	2021	2022
5,045	6,586	6,039	5,872
5,045	*6,586*	*6,039*	*5,872*

2018-19	2019-20	2020-21	2021-2022
4,912	5,430	6,449	5,997
4,912	*5,430*	*6,449*	*5,997*

2034.

Actuals are subject t
- The highest debt ac
- Compared to a 5% i

[1] Based on an interes
[2] Fiscal exposure bas
[3] Fiscalized based on

depend on decision on accounting treatment.

2019	2020	2021	2022
5,045	6,586	6,037	5,870
5,045	*6,586*	*6,037*	*5,870*

2018-19	2019-20	2020-21	2021-2022
4,913	5,430	6,449	5,996
4,913	*5,430*	*6,449*	*5,996*

2034.

2019	2020	2021	2022
4,589	5,867	5,031	4,861
4,589	*5,867*	*5,031*	*4,861*

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988
4,634	*4,909*	*5,658*	*4,988*

2034.

2019	2020	2021	2022
2,353	3,072	2,817	2,580
2,353	*3,072*	*2,817*	*2,580*

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757
2,291	*2,533*	*3,008*	*2,757*

2030.

2019	2020	2021	2022
1,578	2,243	1,931	1,635
1,578	*2,243*	*1,931*	*1,635*

2018-19	2019-20	2020-21	2021-2022

1,551	1,745	2,165	1,857
1,551	*1,745*	*2,165*	*1,857*

2029.



2018-19	2019-20	2020-21	2021-2022
4,913 - 4,912	5,430 - 5,430	6,449 - 6,449	5,996 - 5,997

/1

2018-19[1]	2019-20[1]	2020-21[1]
4912	5430	6449
4913	5430	6449
225	279	323
60	60	60
18	18	18
5215	**5787**	**6850**
5216	5787	6850

5,216 - 5,215 5,787 - 5,787 6,850 - 6,850

Total Principal Debt	Total Accumulated Interest Costs	**Peak Total Debt**	
52,287	85,599	89,375	occurs in Year 2034
52,275	85,582	89,356	occurs in Year 2034
44,449	72,823	76,097	occurs in Year 2034
21,239	29,589	32,233	occurs in Year 2030
12,350	16,239	17,670	occurs in Year 2029

o actual prices and actual interest rates.
:cumulation (at 5% interest rate) is expected to be approximately $62 billion, peaking in 203 and $17-21 billion (at 3.5% interest
interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately $33-$36 million.

st rate of 5%.
sed on equal monthly drawdown of debt.
75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on mo

Feb8_1a_30yr
Feb8_1b_30yr
Feb8_1c_30yr
Feb8_1d_30yr
Feb8_1e_30yr

t rate), peaking in 2028.

nth of the year. Actuals may also depend on decision on accounting treatment.

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-275	-311	-350	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,573	85,599
Equal Monthly Debt Drawdown	6,743	4,556	

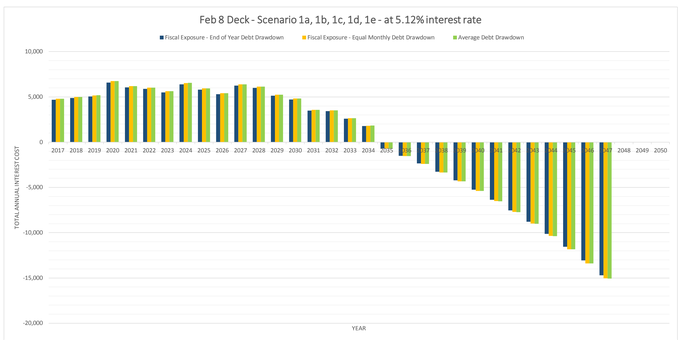
	Feb8 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,375	2034	52,287
Equal Monthly Debt Drawdown	91,501		

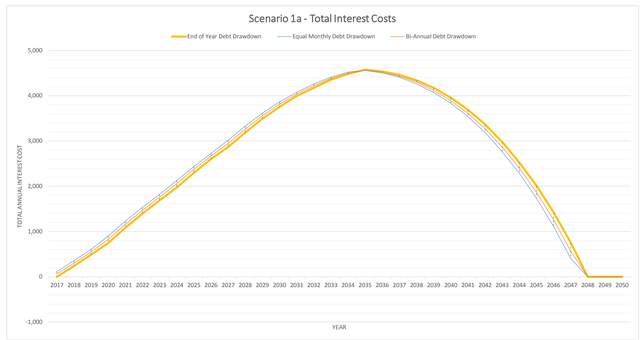
Feb8 1a, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	
c = a*5%	*Interest Cost - Feb8 1a, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,301*	*2,597*	*2,868*	*3,187*	*3,493*	*3,755*	*3,996*	*4,175*	*4,350*	*4,482*	*4,573*	*4,537*	*4,460*	*4,340*	*4,173*	*3,957*	*3,688*	*3,363*	*2,978*	*2,529*	*2,011*	*1,421*	*752*	*0*	*0*	*0*	85,599
b	Additional GA Debt Drawdown, End of Year	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,307	32,728	35,309	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	39,310	27,767	14,699	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	52,287	52,287	52,287	51,591	50,091	47,739	44,479	40,253	34,997	28,642	21,115	12,336	0	0	0	0	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,813	33,987	38,337	42,818	47,391	51,928	56,388	60,728	64,901	68,858	72,546	75,909	78,887	81,416	83,427	84,847	85,599				
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	51,781	51,028	49,259	46,557	41,288	35,252	28,440	20,840	12,440	3,227	-6,816	-17,706	-29,462	-42,106	-55,660	-70,149	-85,599				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	

Feb8 1a, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	
4,556	*Interest Cost - Feb8 1a, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,824*	*2,126*	*2,439*	*2,723*	*3,016*	*3,329*	*3,615*	*3,867*	*4,079*	*4,256*	*4,411*	*4,524*	*4,556*	*4,501*	*4,404*	*4,262*	*4,073*	*3,832*	*3,537*	*3,184*	*2,769*	*2,288*	*1,737*	*1,110*	*402*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
	Monthly Drawdown	390	386	380	487	413	373	318	367	292	224	281	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(980)	(1,054)	(1,129)	(1,207)	(1,288)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,738	4,665	5,979	5,074	4,586	3,902	4,510	3,584	2,753	3,447	2,863	1,662	980	(517)	(772)	(1,810)	(2,766)	(5,394)	(6,180)	(6,975)	(7,781)	(8,599)	(9,432)	(10,282)	(11,149)	(12,036)	(12,944)	(13,876)	(14,834)	(15,818)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	67	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(368)	-	-	-	
	Annual Interest Cost on Opening Balance	-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,263	3,576	3,844	4,091	4,274	4,453	4,588	4,681	4,645	4,566	4,443	4,272	4,051	3,776	3,443	3,049	2,589	2,059	1,454	770	(0)	(0)	(0)	
	Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,824	2,126	2,439	2,723	3,016	3,329	3,615	3,867	4,079	4,256	4,411	4,524	4,556	4,501	4,404	4,262	4,073	3,832	3,537	3,184	2,769	2,288	1,737	1,110	402	(0)	(0)	(0)	

Feb8 1a, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*60*	*301*	*553*	*831*	*1,160*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,948*	*3,263*	*3,558*	*3,815*	*4,041*	*4,218*	*4,383*	*4,504*	*4,564*	*4,518*	*4,430*	*4,298*	*4,119*	*3,890*	*3,607*	*3,267*	*2,866*	*2,399*	*1,864*	*1,253*	*564*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,930	5,110	6,670	6,116	5,947	5,575	6,461	5,875	5,354	6,315	6,060	5,182	4,773	3,535	3,464	2,614	1,802	-705	-1,518	-2,382	-3,302	-4,280	-5,324	-6,436	-7,623	-8,891	-10,244	-11,690	-13,236	-14,887	0	0	0	
	Bi-Annual Drawdown	2,337	2,314	2,279	2,920	2,478	2,240	1,906	2,203	1,750	1,345	1,684	1,398	812	479	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,800)	(4,200)	(4,607)	(5,021)	(5,445)	(5,878)	(6,322)	(6,777)	(7,245)	(7,725)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,687	4,615	5,914	5,019	4,537	3,860	4,462	3,545	2,724	3,410	2,832	1,644	970	(512)	(763)	(1,791)	(2,737)	(5,336)	(6,113)	(6,900)	(7,697)	(8,507)	(9,331)	(10,171)	(11,029)	(11,907)	(12,805)	(13,727)	(14,674)	(15,648)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	494	756	1,097	1,410	1,714	1,999	2,330	2,631	2,905	3,228	3,538	3,803	4,047	4,228	4,405	4,539	4,631	4,595	4,517	4,395	4,227	4,008	3,735	3,406	3,016	2,561	2,037	1,439	762	(0)	(0)	(0)	
	Total Annual Interest Cost	60	301	553	831	1,160	1,467	1,763	2,056	2,375	2,665	2,948	3,263	3,558	3,815	4,041	4,218	4,383	4,504	4,564	4,518	4,430	4,298	4,119	3,890	3,607	3,267	2,866	2,399	1,864	1,253	564	(0)	(0)	(0)	

Feb8 1a, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,723*	*3,027*	*3,340*	*3,624*	*3,875*	*4,085*	*4,262*	*4,416*	*4,527*	*4,555*	*4,499*	*4,400*	*4,257*	*4,065*	*3,822*	*3,525*	*3,170*	*2,753*	*2,270*	*1,716*	*1,086*	*376*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,992	5,174	6,754	6,193	6,022	5,645	6,543	5,950	5,422	6,395	6,137	5,248	4,833	3,580	3,508	2,647	1,825	-714	-1,537	-2,412	-3,343	-4,334	-5,391	-6,517	-7,720	-9,003	-10,374	-11,838	-13,403	-15,075	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-274	-311	-349	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,572	85,582
Equal Monthly Debt Drawdown	6,743	4,555	

	Feb8 1b, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,356	2034	52,275
Equal Monthly Debt Drawdown	91,481		

Feb8 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
a — Debt, Beginning of Year	0	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	
c = a*5% — *Interest Cost - Feb8 1b, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,300*	*2,597*	*2,867*	*3,186*	*3,492*	*3,754*	*3,995*	*4,174*	*4,349*	*4,481*	*4,572*	*4,536*	*4,459*	*4,339*	*4,172*	*3,956*	*3,687*	*3,362*	*2,977*	*2,528*	*2,011*	*1,420*	*752*	*0*	*0*	*0*	85,582
b — Additional GA Debt Drawdown, End of Year	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,309	32,722	35,302	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	39,297	27,758	14,694	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	52,275	52,275	52,275	52,275	51,578	50,078	47,725	44,465	40,239	34,984	28,630	21,105	12,328	0	0	0	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,809	33,983	38,331	42,812	47,384	51,920	56,379	60,718	64,890	68,846	72,533	75,895	78,871	81,399	83,410	84,830	85,582				
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	51,769	51,014	49,246	46,544	41,275	35,239	28,428	20,829	12,431	3,219	-6,822	-17,709	-29,462	-42,102	-55,652	-70,136	-85,582				
Fiscal Exposure - End of Year Debt Drawdown	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	

Feb8 1b, 30-yr — Equal Monthly Debt Drawdown

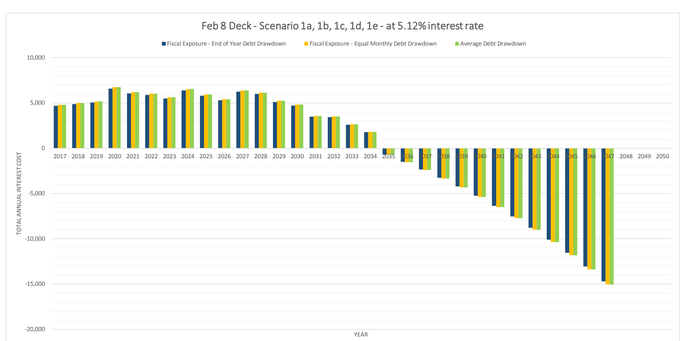
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,823*	*2,126*	*2,438*	*2,723*	*3,016*	*3,329*	*3,614*	*3,866*	*4,078*	*4,255*	*4,410*	*4,523*	*4,555*	*4,500*	*4,403*	*4,261*	*4,072*	*3,831*	*3,536*	*3,183*	*2,768*	*2,287*	*1,736*	*1,109*	*402*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
Monthly Drawdown	390	386	380	487	413	373	317	367	292	224	280	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(979)	(1,053)	(1,129)	(1,207)	(1,287)	(0)	-	-	
FV of Monthly Drawdown at 5%	4,786	4,740	4,665	5,979	5,072	4,585	3,900	4,509	3,582	2,752	3,446	2,862	1,661	979	(518)	(772)	(1,811)	(2,766)	(5,394)	(6,179)	(6,974)	(7,780)	(8,598)	(9,431)	(10,279)	(11,146)	(12,033)	(12,941)	(13,872)	(14,829)	(15,813)	(0)	-	-	
Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	66	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(367)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,262	3,576	3,843	4,090	4,273	4,452	4,587	4,680	4,644	4,565	4,442	4,271	4,050	3,775	3,442	3,048	2,588	2,058	1,454	770	0	0	0	
Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,823	2,126	2,438	2,723	3,016	3,329	3,614	3,866	4,078	4,255	4,410	4,523	4,555	4,500	4,403	4,261	4,072	3,831	3,536	3,183	2,768	2,287	1,736	1,109	402	0	0	0	

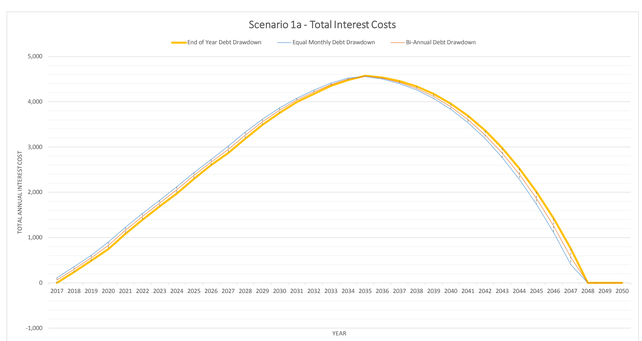
Feb8 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*60*	*301*	*553*	*831*	*1,161*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,947*	*3,263*	*3,558*	*3,814*	*4,040*	*4,217*	*4,382*	*4,503*	*4,563*	*4,517*	*4,429*	*4,297*	*4,118*	*3,889*	*3,606*	*3,266*	*2,865*	*2,399*	*1,863*	*1,253*	*564*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	4,734	4,931	5,110	6,670	6,115	5,945	5,573	6,460	5,874	5,353	6,313	6,058	5,181	4,771	3,534	3,463	2,613	1,801	-706	-1,519	-2,383	-3,302	-4,280	-5,323	-6,435	-7,622	-8,889	-10,242	-11,687	-13,231	-14,882	0	0	0	
Bi-Annual Drawdown	2,337	2,315	2,279	2,920	2,477	2,239	1,905	2,202	1,750	1,344	1,683	1,398	811	478	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,799)	(4,199)	(4,606)	(5,020)	(5,444)	(5,877)	(6,320)	(6,775)	(7,242)	(7,723)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	4,734	4,689	4,615	5,914	5,017	4,535	3,859	4,460	3,544	2,722	3,409	2,831	1,643	969	(513)	(764)	(1,791)	(2,737)	(5,336)	(6,113)	(6,899)	(7,696)	(8,506)	(9,329)	(10,169)	(11,027)	(11,904)	(12,802)	(13,723)	(14,670)	(15,643)	(0)	-	-	
Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	242	495	756	1,097	1,410	1,714	1,999	2,330	2,630	2,904	3,227	3,537	3,802	4,046	4,227	4,404	4,538	4,630	4,594	4,516	4,394	4,225	4,006	3,734	3,405	3,015	2,560	2,036	1,438	761	0	(0)	(0)	
Total Annual Interest Cost	60	301	553	831	1,161	1,467	1,763	2,056	2,375	2,665	2,947	3,263	3,558	3,814	4,040	4,217	4,382	4,503	4,563	4,517	4,429	4,297	4,118	3,889	3,606	3,266	2,865	2,399	1,863	1,253	564	0	(0)	(0)	

Feb8 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,732*	*3,027*	*3,339*	*3,623*	*3,875*	*4,084*	*4,261*	*4,415*	*4,526*	*4,554*	*4,498*	*4,399*	*4,255*	*4,064*	*3,821*	*3,524*	*3,169*	*2,752*	*2,269*	*1,715*	*1,086*	*376*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	4,794	4,994	5,174	6,754	6,192	6,020	5,643	6,541	5,948	5,420	6,393	6,135	5,246	4,831	3,578	3,507	2,646	1,824	-715	-1,538	-2,413	-3,343	-4,334	-5,390	-6,516	-7,718	-9,001	-10,371	-11,835	-13,398	-15,070	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1c_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	
			111	111	109	140	120	116	107	128	115	103	126	121	101	93	66	66	48	32	-24	-40	-57	-74	-92	-111	-132	-153	-175	-199	-224	-250	-278	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	5,867	3,893	72,823
Equal Monthly Debt Drawdown	6,006	3,869	

		Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	76,097	2034	44,449
Equal Monthly Debt Drawdown	77,907		

Feb8 1c, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
a — Debt, Beginning of Year	0	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	
c = a*5% — *Interest Cost - Feb8 1c, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*477*	*712*	*1,012*	*1,269*	*1,518*	*1,748*	*2,023*	*2,270*	*2,491*	*2,762*	*3,022*	*3,239*	*3,440*	*3,581*	*3,722*	*3,826*	*3,893*	*3,841*	*3,754*	*3,632*	*3,473*	*3,274*	*3,034*	*2,751*	*2,423*	*2,046*	*1,618*	*1,136*	*598*	*0*	*0*	*0*	72,823
b — Additional GA Debt Drawdown, End of Year	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	
Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	25,538	28,304	30,324	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,624	22,213	11,693	0	0	0	0	
Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	44,449	44,449	44,449	44,449	43,420	41,729	39,342	36,228	32,347	27,662	22,130	15,704	8,337	0	0	0	0	0	0	0	
Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	26,221	29,801	33,524	37,349	41,242	45,083	48,837	52,469	55,942	59,216	62,250	65,002	67,424	69,470	71,088	72,224	72,823				
Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	43,767	42,952	41,249	38,748	33,826	28,294	22,153	15,406	8,054	94	-8,473	-17,649	-27,439	-37,846	-48,875	-60,532	-72,823				
Fiscal Exposure - End of Year Debt Drawdown	4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	

Feb8 1c, 30-yr — Equal Monthly Debt Drawdown

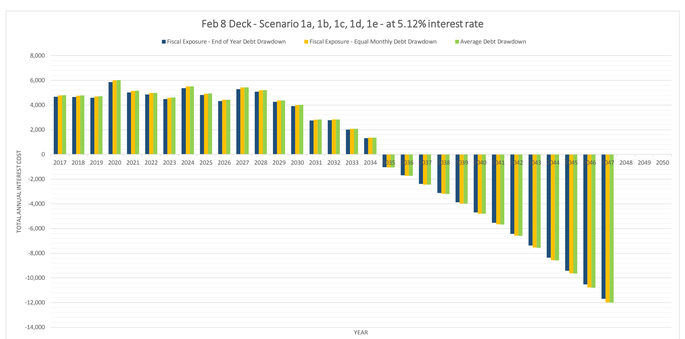
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
Debt, Beginning of Year	0	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	
3,869 — *Interest Cost - Feb8 1c, 30-yr*	*111*	*350*	*586*	*851*	*1,132*	*1,385*	*1,625*	*1,876*	*2,138*	*2,372*	*2,617*	*2,882*	*3,123*	*3,333*	*3,505*	*3,646*	*3,770*	*3,857*	*3,869*	*3,800*	*3,697*	*3,558*	*3,380*	*3,163*	*2,903*	*2,599*	*2,247*	*1,847*	*1,394*	*886*	*320*	*0*	*0*	*0*	72,823
Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	
Monthly Drawdown	390	367	343	430	335	299	248	303	233	171	234	193	103	56	(57)	(68)	(142)	(208)	(410)	(461)	(512)	(562)	(613)	(663)	(714)	(765)	(816)	(867)	(919)	(971)	(1,024)	-	-	-	
FV of Monthly Drawdown at 5%	4,786	4,515	4,210	5,278	4,114	3,677	3,048	3,717	2,857	2,099	2,873	2,375	1,268	689	(699)	(834)	(1,744)	(2,561)	(5,039)	(5,664)	(6,286)	(6,907)	(7,528)	(8,148)	(8,771)	(9,395)	(10,023)	(10,654)	(11,291)	(11,934)	(12,583)	-	-	-	
Annual Interest Cost on New Drawdowns	111	105	98	123	96	85	71	86	66	49	67	55	29	16	(16)	(19)	(41)	(59)	(117)	(132)	(146)	(160)	(175)	(189)	(204)	(218)	(233)	(248)	(262)	(277)	(292)	-	-	-	
Annual Interest Cost on Opening Balance	-	245	488	729	1,036	1,300	1,554	1,790	2,071	2,323	2,550	2,827	3,093	3,317	3,521	3,666	3,811	3,917	3,986	3,932	3,843	3,718	3,555	3,352	3,107	2,817	2,480	2,094	1,656	1,163	612	(0)	(0)	(0)	
Total Annual Interest Cost	111	350	586	851	1,132	1,385	1,625	1,876	2,138	2,372	2,617	2,882	3,123	3,333	3,505	3,646	3,770	3,857	3,869	3,800	3,697	3,558	3,380	3,163	2,903	2,599	2,247	1,847	1,394	886	320	(0)	(0)	(0)	

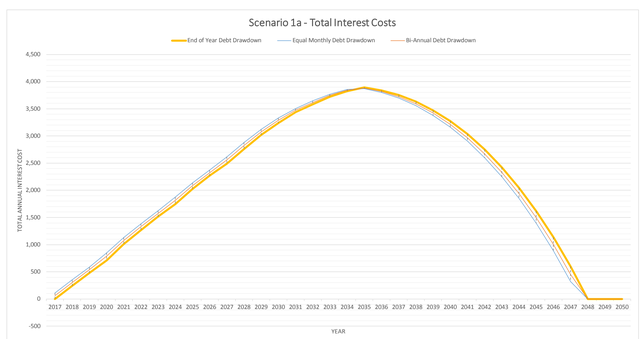
Feb8 1c, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
Debt, Beginning of Year	0	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	
Interest Cost - Feb8 1c, 30-yr	*60*	*299*	*536*	*787*	*1,076*	*1,332*	*1,576*	*1,817*	*2,085*	*2,325*	*2,558*	*2,827*	*3,076*	*3,290*	*3,475*	*3,616*	*3,748*	*3,842*	*3,880*	*3,819*	*3,724*	*3,592*	*3,423*	*3,214*	*2,964*	*2,669*	*2,328*	*1,939*	*1,498*	*1,002*	*449*	*0*	*0*	*0*	72,823
Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	4,734	4,708	4,648	5,942	5,095	4,923	4,553	5,447	4,876	4,375	5,364	5,147	4,315	3,962	2,792	2,802	2,045	1,341	-1,042	-1,713	-2,417	-3,155	-3,930	-4,745	-5,603	-6,508	-7,461	-8,468	-9,531	-10,655	-11,842	0	0	0	
Bi-Annual Drawdown	2,337	2,205	2,056	2,578	2,009	1,796	1,489	1,815	1,395	1,025	1,403	1,160	620	336	(341)	(407)	(852)	(1,251)	(2,461)	(2,766)	(3,070)	(3,373)	(3,676)	(3,980)	(4,283)	(4,588)	(4,895)	(5,203)	(5,514)	(5,828)	(6,146)	-	-	-	
FV of Bi-Annual Drawdown at 5%	4,734	4,466	4,165	5,221	4,070	3,638	3,015	3,677	2,826	2,077	2,842	2,350	1,255	681	(691)	(825)	(1,725)	(2,533)	(4,985)	(5,603)	(6,219)	(6,833)	(7,447)	(8,061)	(8,676)	(9,294)	(9,915)	(10,540)	(11,170)	(11,806)	(12,448)	-	-	-	
Annual Interest Cost on New Drawdowns	60	56	53	66	51	46	38	46	36	26	36	30	16	9	(9)	(10)	(22)	(32)	(63)	(71)	(79)	(86)	(94)	(102)	(110)	(117)	(125)	(133)	(141)	(149)	(157)	-	-	-	
Annual Interest Cost on Opening Balance	-	242	483	721	1,025	1,286	1,537	1,770	2,049	2,299	2,522	2,797	3,060	3,281	3,484	3,626	3,770	3,874	3,943	3,890	3,802	3,678	3,517	3,316	3,073	2,787	2,454	2,072	1,639	1,151	606	(0)	(0)	(0)	
Total Annual Interest Cost	60	299	536	787	1,076	1,332	1,576	1,817	2,085	2,325	2,558	2,827	3,076	3,290	3,475	3,616	3,748	3,842	3,880	3,819	3,724	3,592	3,423	3,214	2,964	2,669	2,328	1,939	1,498	1,002	449	(0)	(0)	(0)	

Feb8 1c, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
Debt, Beginning of Year	0	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	
Interest Cost - Feb8 1c, 30-yr	*120*	*358*	*594*	*862*	*1,141*	*1,394*	*1,633*	*1,886*	*2,146*	*2,380*	*2,626*	*2,892*	*3,130*	*3,340*	*3,510*	*3,651*	*3,774*	*3,859*	*3,867*	*3,797*	*3,693*	*3,552*	*3,373*	*3,154*	*2,893*	*2,587*	*2,234*	*1,832*	*1,377*	*867*	*299*	*0*	*0*	*0*	72,823
Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	4,794	4,768	4,707	6,017	5,160	4,985	4,610	5,516	4,937	4,431	5,432	5,212	4,370	4,012	2,828	2,837	2,071	1,358	-1,055	-1,735	-2,447	-3,195	-3,979	-4,805	-5,674	-6,590	-7,556	-8,575	-9,652	-10,789	-11,992	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1d_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
			52	54	56	73	67	61	51	71	56	42	64	57	36	27	-2	-3	-23	-37	-39	-41	-43	-46	-48	-50	-53	-56	-59	-62	-65	-68	-71	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,072	1,649	29,589
Equal Monthly Debt Drawdown	3,145	1,647	

	Feb8 1d, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,233	2030	21,239
Equal Monthly Debt Drawdown	32,999		

Feb8 1d, 30-yr — End of Year Debt Drawdown

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
a	Debt, Beginning of Year	0	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	
c = a*5%	*Interest Cost - Feb8 1d, 30-yr - End of Year Debt Drawdown*	*0*	*112*	*228*	*348*	*505*	*649*	*781*	*891*	*1,043*	*1,162*	*1,253*	*1,391*	*1,514*	*1,592*	*1,649*	*1,644*	*1,637*	*1,588*	*1,508*	*1,423*	*1,335*	*1,241*	*1,143*	*1,040*	*931*	*817*	*698*	*572*	*439*	*300*	*154*	*0*	*0*	*0*	29,589
b	Additional GA Debt Drawdown, End of Year	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	11,372	11,227	10,281	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,586	5,865	3,006	0	0	0	0	
	Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	20,763	20,763	20,763	20,763	19,112	17,375	15,550	13,632	11,616	9,496	7,268	4,926	2,464	0	0	0	0	0	0	0	
	Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	13,118	14,763	16,399	17,988	19,495	20,919	22,253	23,495	24,638	25,678	26,609	27,426	28,124	28,696	29,135	29,435	29,589				
	Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	19,017	17,228	14,645	11,486	8,326	5,167	2,007	-1,153	-4,312	-7,472	-10,631	-13,791	-16,951	-20,110	-23,270	-26,429	-29,589				
Fiscal Exposure - End of Year Debt Drawdown		2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	

Feb8 1d, 30-yr — Equal Monthly Debt Drawdown

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Debt, Beginning of Year	0	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	
1,647	*Interest Cost - Feb8 1d, 30-yr*	*52*	*166*	*284*	*421*	*572*	*711*	*832*	*962*	*1,098*	*1,205*	*1,317*	*1,448*	*1,550*	*1,619*	*1,647*	*1,641*	*1,614*	*1,551*	*1,469*	*1,382*	*1,291*	*1,196*	*1,095*	*989*	*878*	*762*	*639*	*510*	*375*	*232*	*82*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
	Monthly Drawdown	182	180	177	227	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	-	-	-	
	FV of Monthly Drawdown at 5%	2,232	2,210	2,176	2,788	2,366	1,977	1,399	2,123	1,322	628	1,468	1,042	12	(487)	(1,788)	(1,831)	(2,644)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	-	-	-	
	Annual Interest Cost on New Drawdowns	52	51	51	65	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	-	-	-	
	Annual Interest Cost on Opening Balance	-	114	233	356	517	665	800	912	1,068	1,190	1,283	1,424	1,550	1,630	1,688	1,683	1,676	1,626	1,544	1,457	1,366	1,271	1,170	1,065	954	837	714	585	450	307	157	0	0	0	
	Total Annual Interest Cost	52	166	284	421	572	711	832	962	1,098	1,205	1,317	1,448	1,550	1,619	1,647	1,641	1,614	1,551	1,469	1,382	1,291	1,196	1,095	989	878	762	639	510	375	232	82	0	0	0	

Feb8 1d, 30-yr — Bi-Annual Debt Drawdown

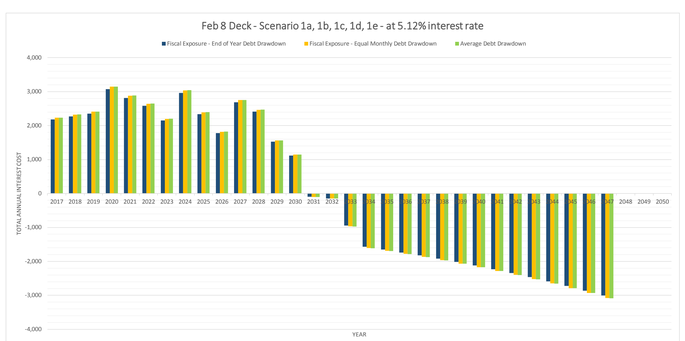
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

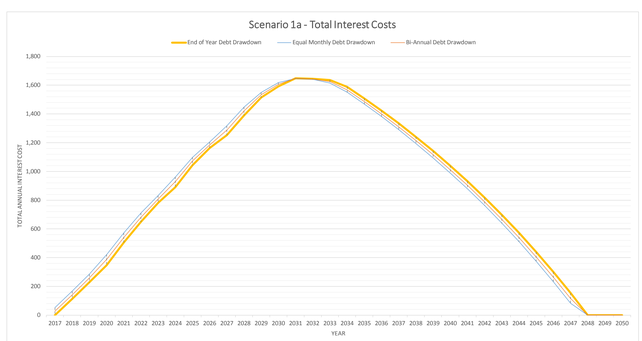
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Debt, Beginning of Year	0	2,208	4,507	6,890	10,001	12,854	15,467	17,642	20,645	23,009	24,807	27,529	29,969	31,514	32,645	32,546	32,400	31,442	29,850	28,177	26,419	24,571	22,628	20,585	18,439	16,182	13,810	11,316	8,695	5,940	3,044	0	0	0	
	Interest Cost - Feb8 1d, 30-yr	*28*	*141*	*258*	*387*	*541*	*682*	*809*	*929*	*1,073*	*1,185*	*1,288*	*1,421*	*1,533*	*1,606*	*1,648*	*1,642*	*1,625*	*1,568*	*1,487*	*1,401*	*1,311*	*1,217*	*1,117*	*1,013*	*903*	*787*	*666*	*539*	*404*	*264*	*115*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,208	4,507	6,890	10,001	12,854	15,467	17,642	20,645	23,009	24,807	27,529	29,969	31,514	32,645	32,546	32,400	31,442	29,850	28,177	26,419	24,571	22,628	20,585	18,439	16,182	13,810	11,316	8,695	5,940	3,044	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,208	2,299	2,383	3,111	2,853	2,613	2,175	3,003	2,364	1,798	2,722	2,440	1,545	1,131	-98	-147	-958	-1,591	-1,673	-1,758	-1,848	-1,943	-2,042	-2,147	-2,257	-2,372	-2,493	-2,621	-2,755	-2,896	-3,044	0	0	0	
	Bi-Annual Drawdown	1,090	1,079	1,063	1,362	1,156	965	683	1,037	646	307	717	509	6	(238)	(873)	(894)	(1,291)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,208	2,186	2,153	2,758	2,341	1,955	1,384	2,100	1,308	621	1,453	1,031	12	(481)	(1,769)	(1,812)	(2,616)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	-	-	-	
	Annual Interest Cost on New Drawdowns	28	28	27	35	30	25	17	27	17	8	18	13	0	(6)	(22)	(23)	(33)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	-	-	-	
	Annual Interest Cost on Opening Balance	-	113	231	353	512	658	791	903	1,056	1,177	1,269	1,408	1,533	1,612	1,670	1,665	1,658	1,609	1,527	1,442	1,352	1,257	1,158	1,053	943	828	707	579	445	304	156	0	0	0	
	Total Annual Interest Cost	28	141	258	387	541	682	809	929	1,073	1,185	1,288	1,421	1,533	1,606	1,648	1,642	1,625	1,568	1,487	1,401	1,311	1,217	1,117	1,013	903	787	666	539	404	264	115	0	0	0	

Feb8 1d, 30-yr — Average Debt Drawdown

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Debt, Beginning of Year	0	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	
	Interest Cost - Feb8 1d, 30-yr	*56*	*170*	*288*	*427*	*577*	*715*	*836*	*967*	*1,103*	*1,208*	*1,322*	*1,452*	*1,553*	*1,621*	*1,647*	*1,640*	*1,613*	*1,548*	*1,466*	*1,379*	*1,288*	*1,192*	*1,091*	*986*	*874*	*758*	*635*	*505*	*370*	*227*	*77*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		2,236	2,328	2,413	3,150	2,889	2,646	2,203	3,041	2,394	1,821	2,756	2,471	1,565	1,145	-100	-148	-970	-1,612	-1,694	-1,781	-1,872	-1,967	-2,068	-2,174	-2,285	-2,402	-2,525	-2,654	-2,790	-2,933	-3,083	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1e_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	
			36	37	38	53	46	39	27	45	28	13	33	24	1	-11	-16	-16	-17	-18	-19	-20	-21	-22	-23	-25	-26	-27	-29	-30	-32	-33	-35	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,243	904	16,239
Equal Monthly Debt Drawdown	2,297	903	

		Feb8 1e, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown		17,670	2029	12,350
Equal Monthly Debt Drawdown		18,091		

Feb8 1e, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
a Debt, Beginning of Year	0	1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	
c = a*5% *Interest Cost - Feb8 1e, 30-yr - End of Year Debt Drawdown*	*0*	*77*	*156*	*236*	*351*	*450*	*534*	*592*	*688*	*749*	*778*	*849*	*901*	*904*	*881*	*847*	*812*	*775*	*735*	*694*	*651*	*605*	*558*	*507*	*454*	*399*	*340*	*279*	*214*	*146*	*75*	*0*	*0*	*0*	16,239
b Additional GA Debt Drawdown, End of Year	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
d = a+b+c Accumulated debt in present year (including 5.12% annual interest)	1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
Feb8 1e, 30-yr - Accumulated Interest Costs	0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	6,605	5,911	5,182	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,188	2,861	1,466	0	0	0	0	
Feb8 1e, 30-yr - Accumulated Debt Principal	1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	9,960	9,960	9,960	9,960	9,155	8,308	7,418	6,482	5,498	4,465	3,378	2,235	1,035	0	0	0	0	0	0	0	
Feb8 1e, 30-yr - Accumulated Interest Costs	0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	8,146	8,993	9,805	10,580	11,315	12,010	12,661	13,266	13,824	14,331	14,785	15,184	15,524	15,803	16,017	16,164	16,239				
Feb8 1e, 30-yr - Accumulated Debt Principal	1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	8,419	6,878	5,337	3,796	2,255	714	-827	-2,369	-3,910	-5,451	-6,992	-8,533	-10,074	-11,615	-13,156	-14,697	-16,239				
Fiscal Exposure - End of Year Debt Drawdown	1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	

Feb8 1e, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	
903 *Interest Cost - Feb8 1e, 30-yr*	*36*	*113*	*193*	*290*	*397*	*489*	*561*	*637*	*717*	*762*	*811*	*873*	*903*	*893*	*866*	*831*	*795*	*756*	*716*	*674*	*630*	*583*	*534*	*483*	*428*	*372*	*312*	*249*	*183*	*113*	*40*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	
Monthly Drawdown	125	122	119	167	132	99	50	108	42	(16)	51	15	(70)	(112)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	-	-	-	
FV of Monthly Drawdown at 5%	1,536	1,500	1,457	2,055	1,617	1,213	620	1,328	512	(199)	625	182	(865)	(1,382)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	-	-	-	
Annual Interest Cost on New Drawdowns	36	35	34	48	38	28	14	31	12	(5)	15	4	(20)	(32)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	-	-	-	
Annual Interest Cost on Opening Balance	-	79	159	242	359	461	546	606	705	767	796	869	923	926	902	868	831	793	753	711	666	620	571	519	465	408	348	285	219	150	77	0	0	0	
Total Annual Interest Cost	36	113	193	290	397	489	561	637	717	762	811	873	903	893	866	831	795	756	716	674	630	583	534	483	428	372	312	249	183	113	40	0	0	0	

Feb8 1e, 30-yr — Bi-Annual Debt Drawdown

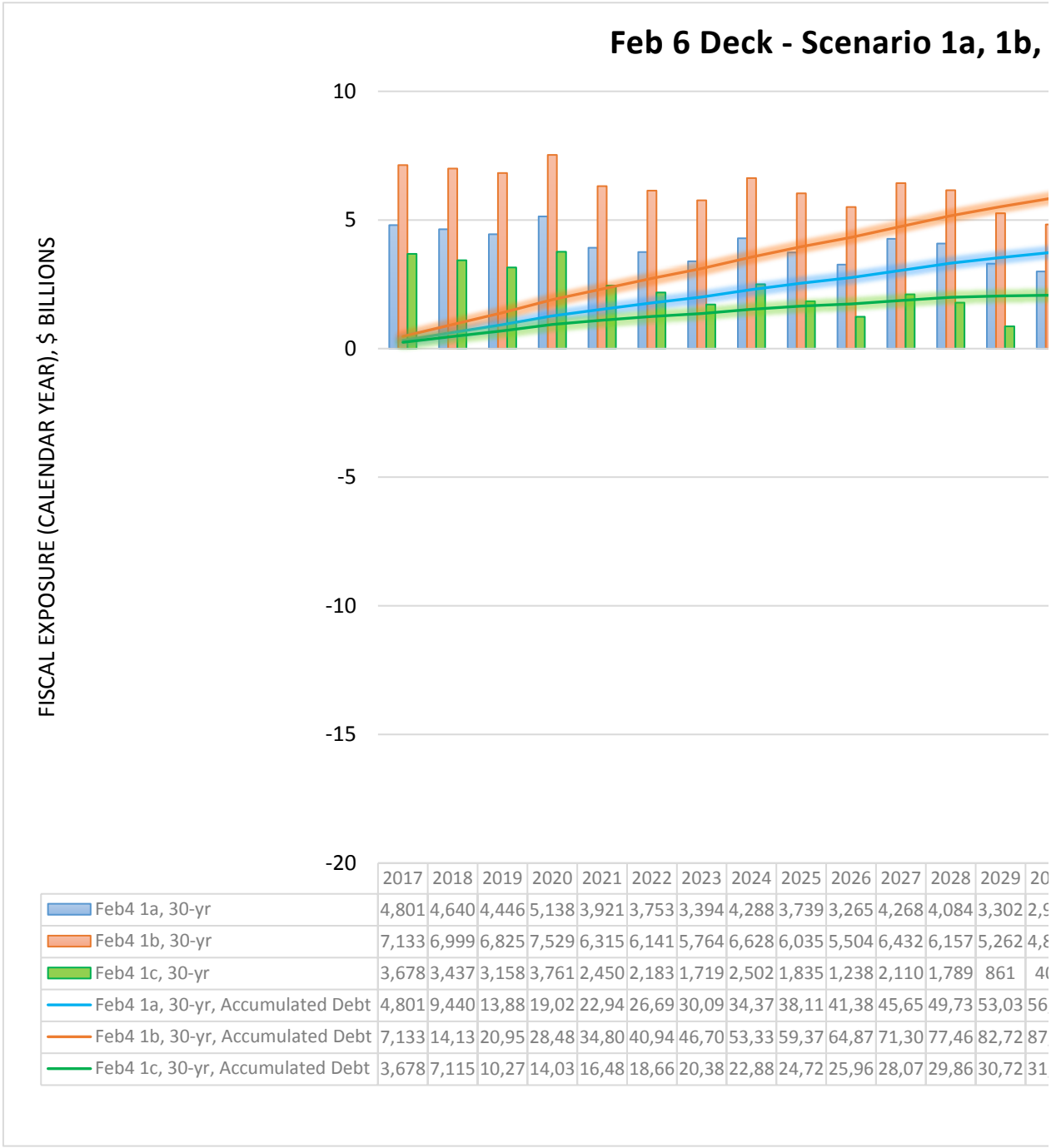
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	
Interest Cost - Feb8 1e, 30-yr	*19*	*96*	*176*	*265*	*376*	*471*	*548*	*616*	*704*	*756*	*795*	*862*	*902*	*898*	*873*	*839*	*803*	*765*	*725*	*683*	*640*	*593*	*545*	*494*	*440*	*384*	*325*	*263*	*197*	*129*	*56*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	1,519	1,561	1,598	2,272	1,956	1,655	1,154	1,913	1,203	562	1,406	1,040	57	-451	-668	-703	-738	-776	-816	-858	-902	-948	-996	-1,047	-1,101	-1,157	-1,216	-1,278	-1,344	-1,413	-1,485	0	0	0	
Bi-Annual Drawdown	750	733	711	1,003	790	592	303	649	250	(97)	305	89	(423)	(675)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	-	-	-	
FV of Bi-Annual Drawdown at 5%	1,519	1,484	1,441	2,033	1,600	1,200	613	1,314	506	(197)	618	180	(856)	(1,367)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	-	-	-	
Annual Interest Cost on New Drawdowns	19	19	18	26	20	15	8	17	6	(2)	8	2	(11)	(17)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	-	-	-	
Annual Interest Cost on Opening Balance	-	78	158	239	356	456	540	599	697	759	788	860	913	916	893	858	822	785	745	703	659	613	565	514	460	404	345	282	217	148	76	0	0	0	
Total Annual Interest Cost	19	96	176	265	376	471	548	616	704	756	795	862	902	898	873	839	803	765	725	683	640	593	545	494	440	384	325	263	197	129	56	0	0	0	

Feb8 1e, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	
Interest Cost - Feb8 1e, 30-yr	*38*	*116*	*196*	*294*	*401*	*492*	*563*	*640*	*719*	*763*	*813*	*875*	*903*	*893*	*864*	*830*	*793*	*755*	*715*	*673*	*628*	*581*	*532*	*481*	*427*	*369*	*310*	*247*	*180*	*111*	*38*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	1,538	1,581	1,619	2,301	1,980	1,676	1,168	1,938	1,219	569	1,424	1,053	57	-457	-677	-711	-748	-786	-826	-869	-913	-960	-1,009	-1,060	-1,115	-1,172	-1,232	-1,295	-1,361	-1,430	-1,504	0	0	0	

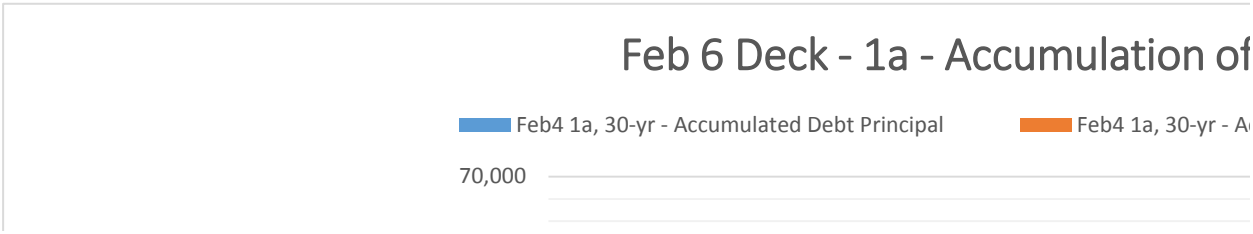
Feb 6 Deck

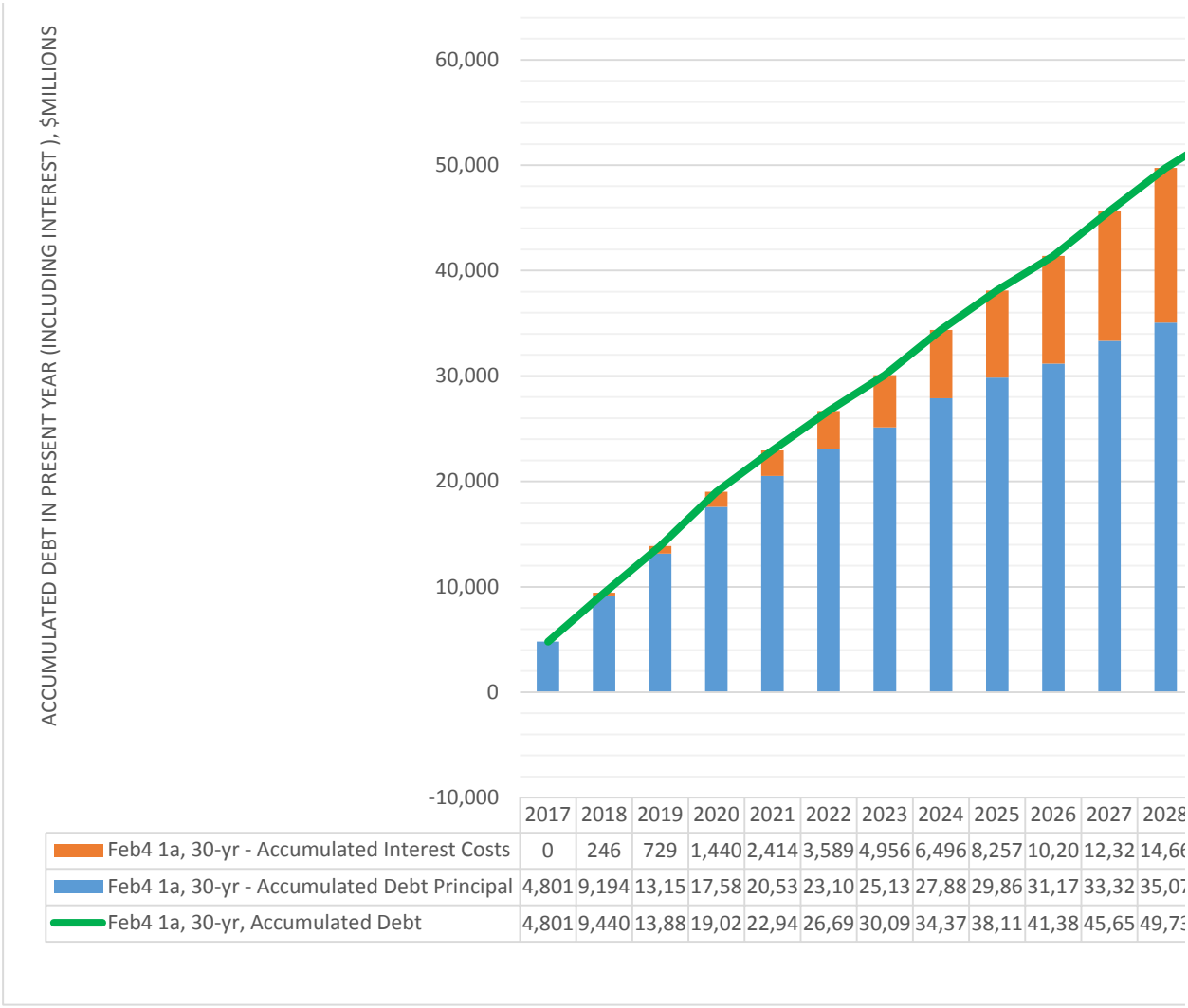
Feb 6 Deck - Scenario 1a, 1b, 1c - at 5.12% interest rate



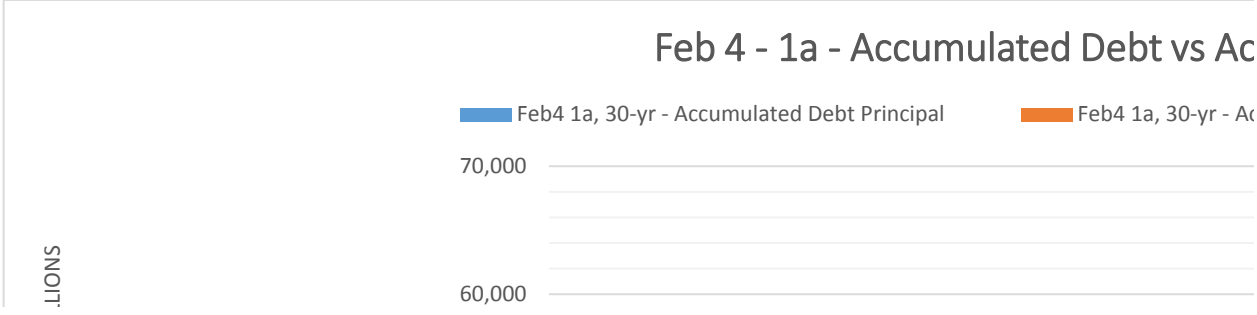
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	20
Feb4 1a, 30-yr	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,9
Feb4 1b, 30-yr	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,8
Feb4 1c, 30-yr	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	4(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73	53,03	56
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31

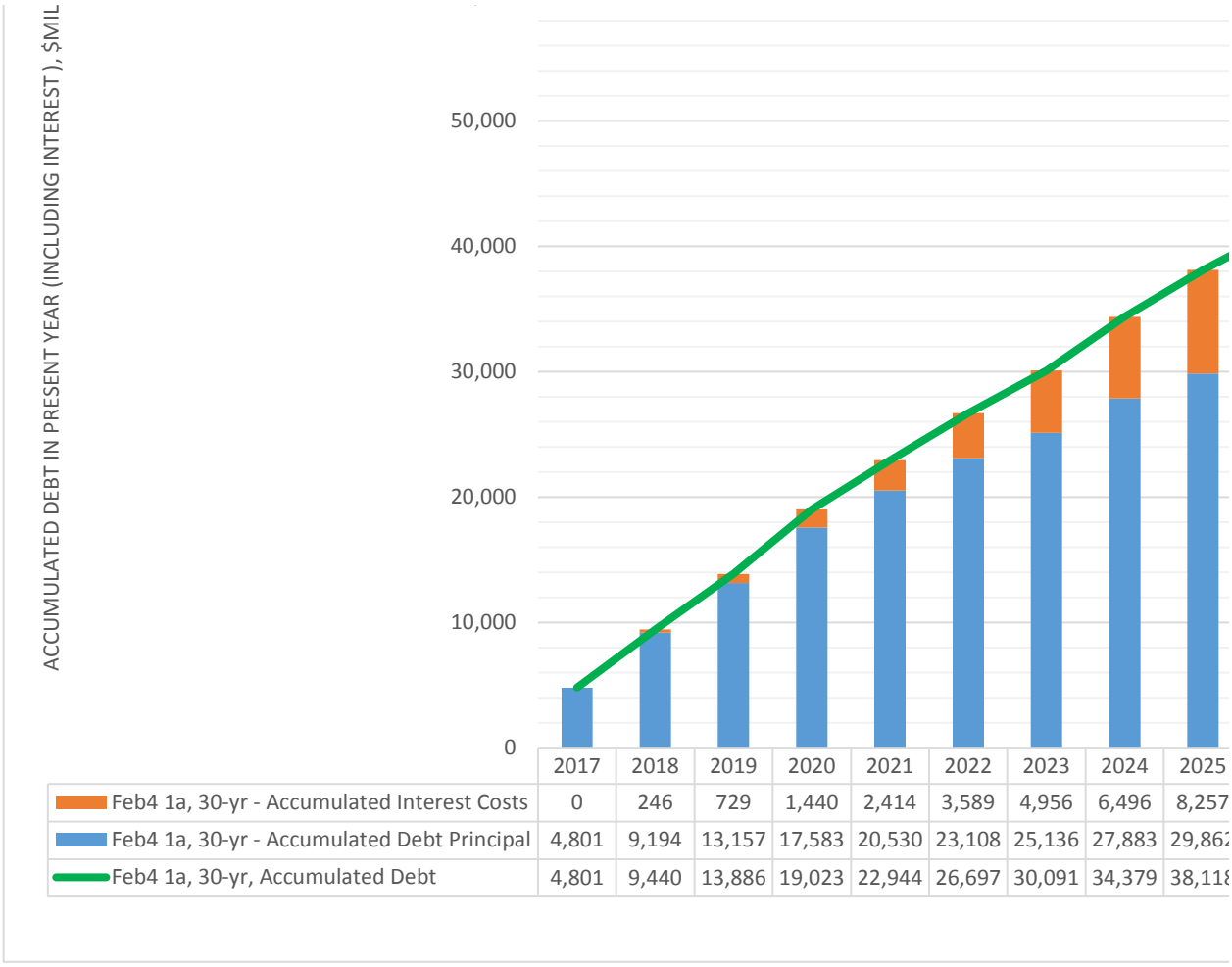
Feb 6 Deck - 1a - Accumulation of Debt (Principal and Interest)



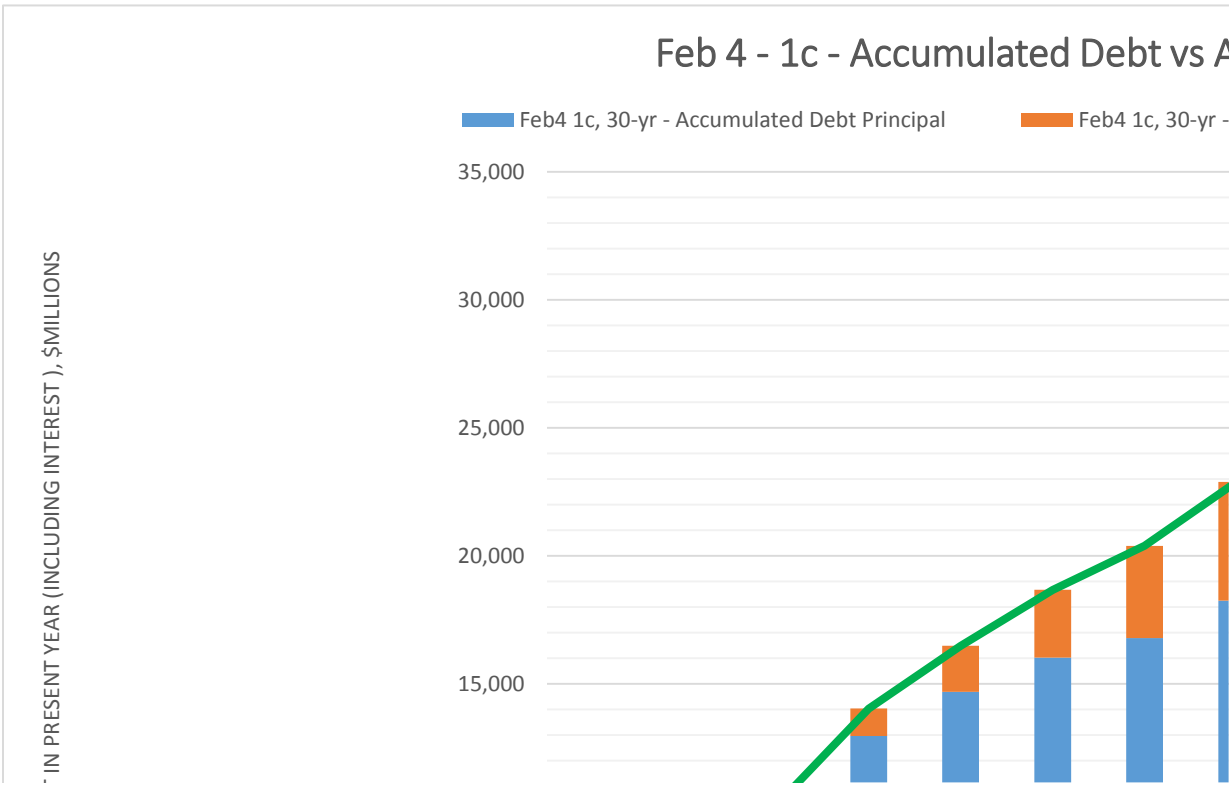


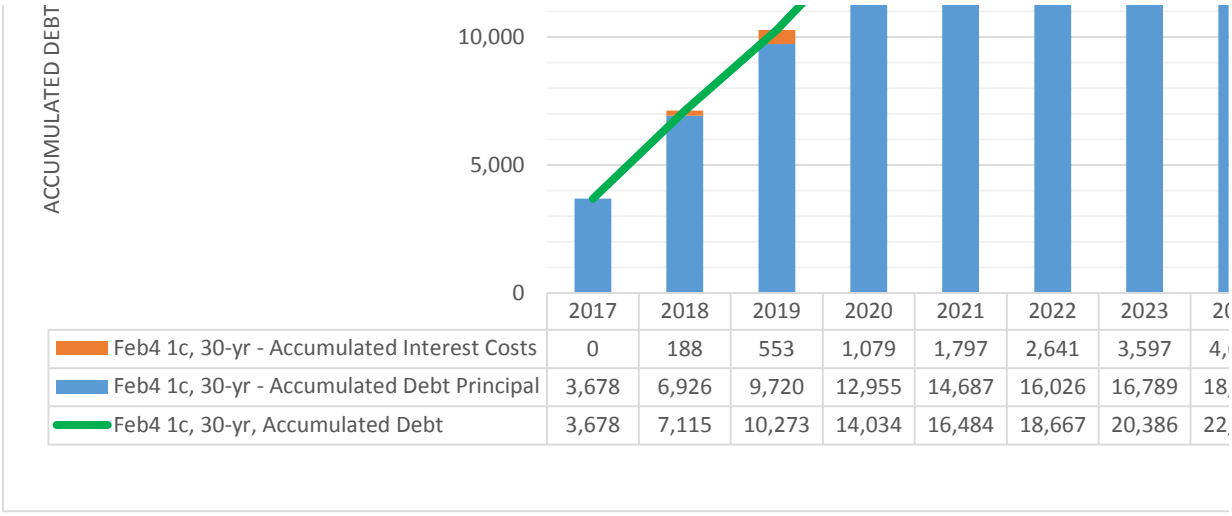
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,66
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,07
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73



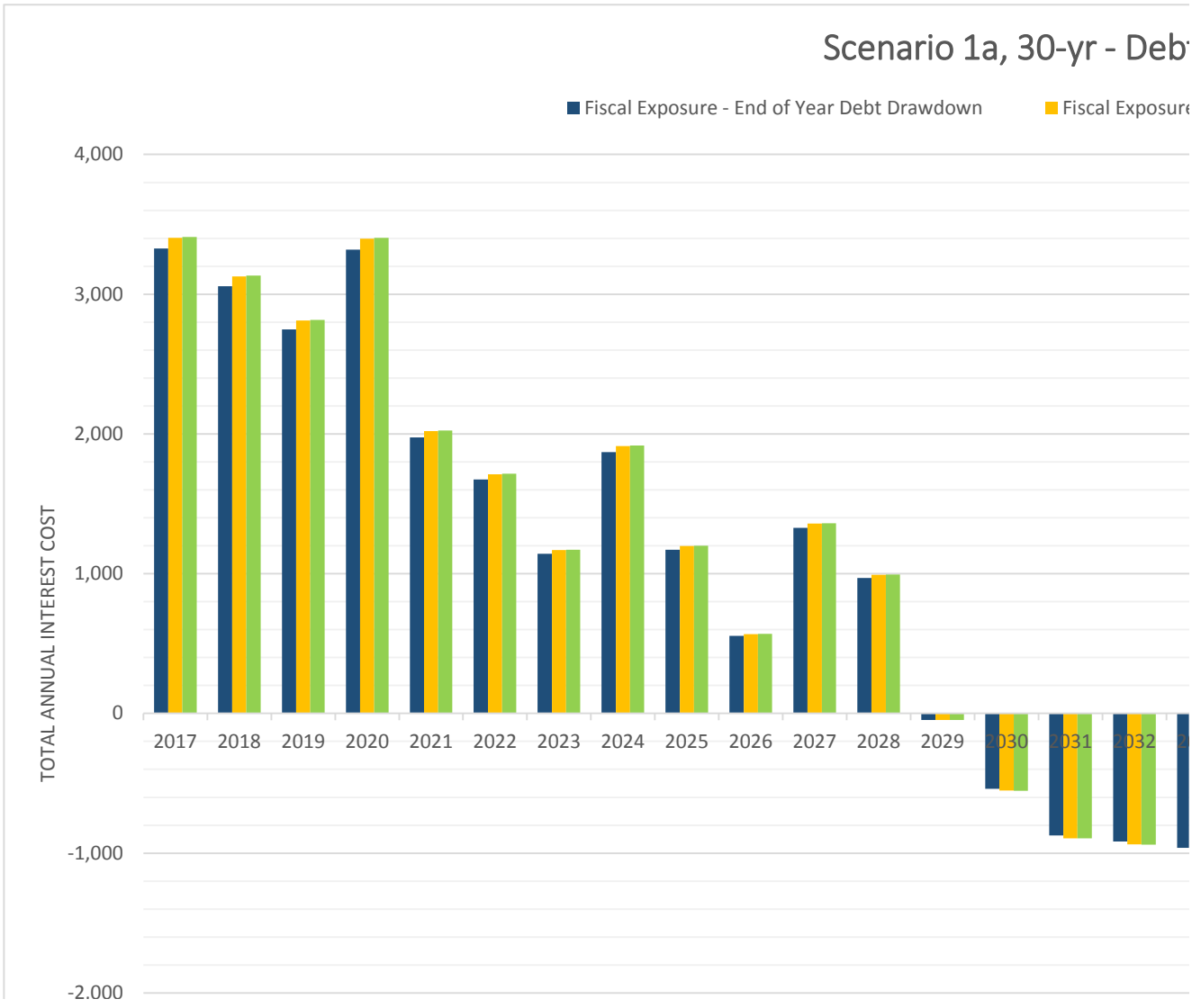


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



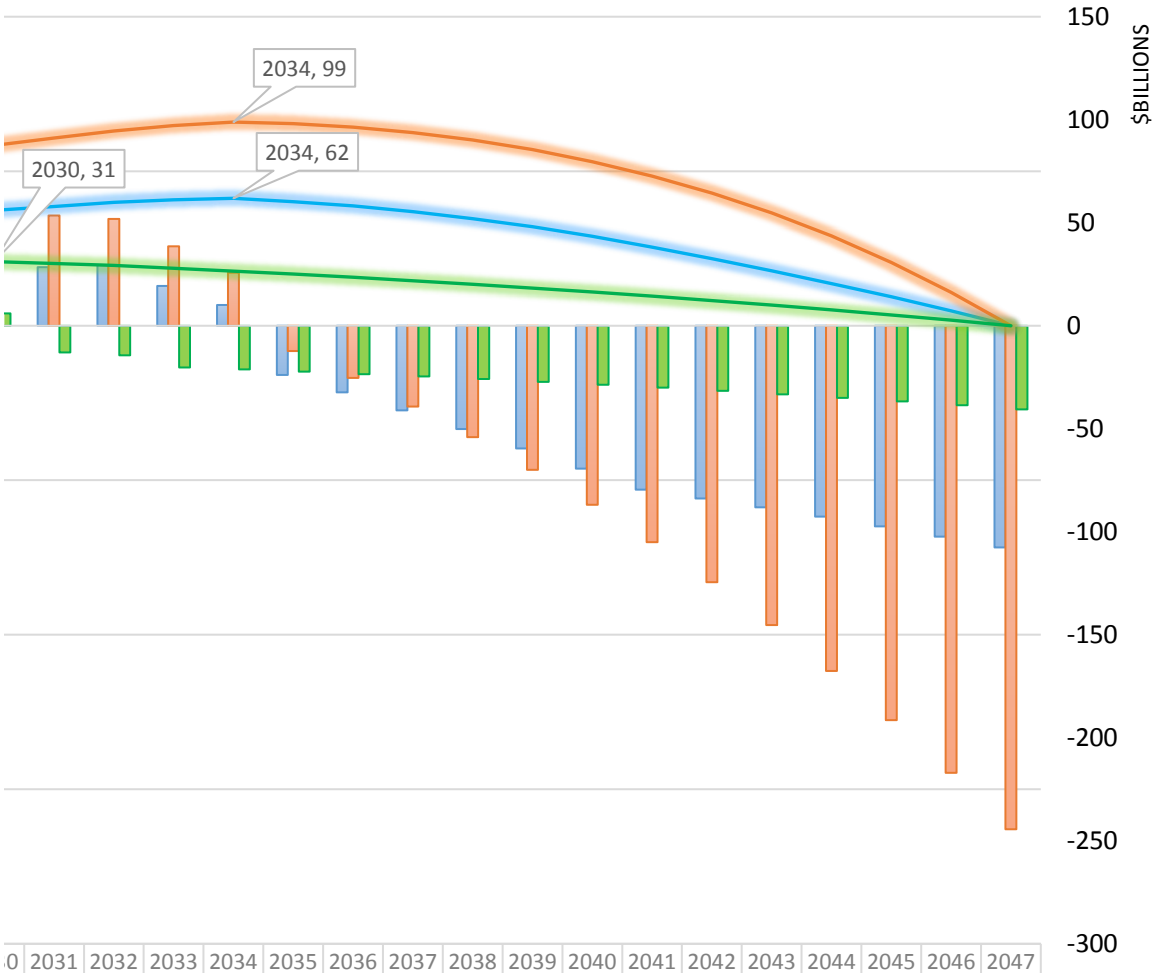


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22



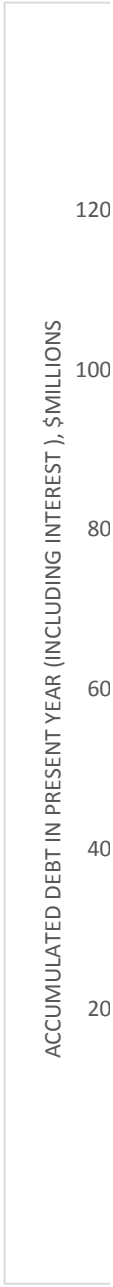

-3,000

lc - at 5.12% interest rate



0	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
98	1,896	1,966	1,288	672	-1,59	-2,15	-2,73	-3,34	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
26	3,568	3,457	2,571	1,716	-819	-1,68	-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
4	-860	-961	-1,34	-1,41	-1,48	-1,56	-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0
55	91,12	94,57	97,14	98,86	98,04	96,35	93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0
12	30,26	29,30	27,95	26,54	25,05	23,49	21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

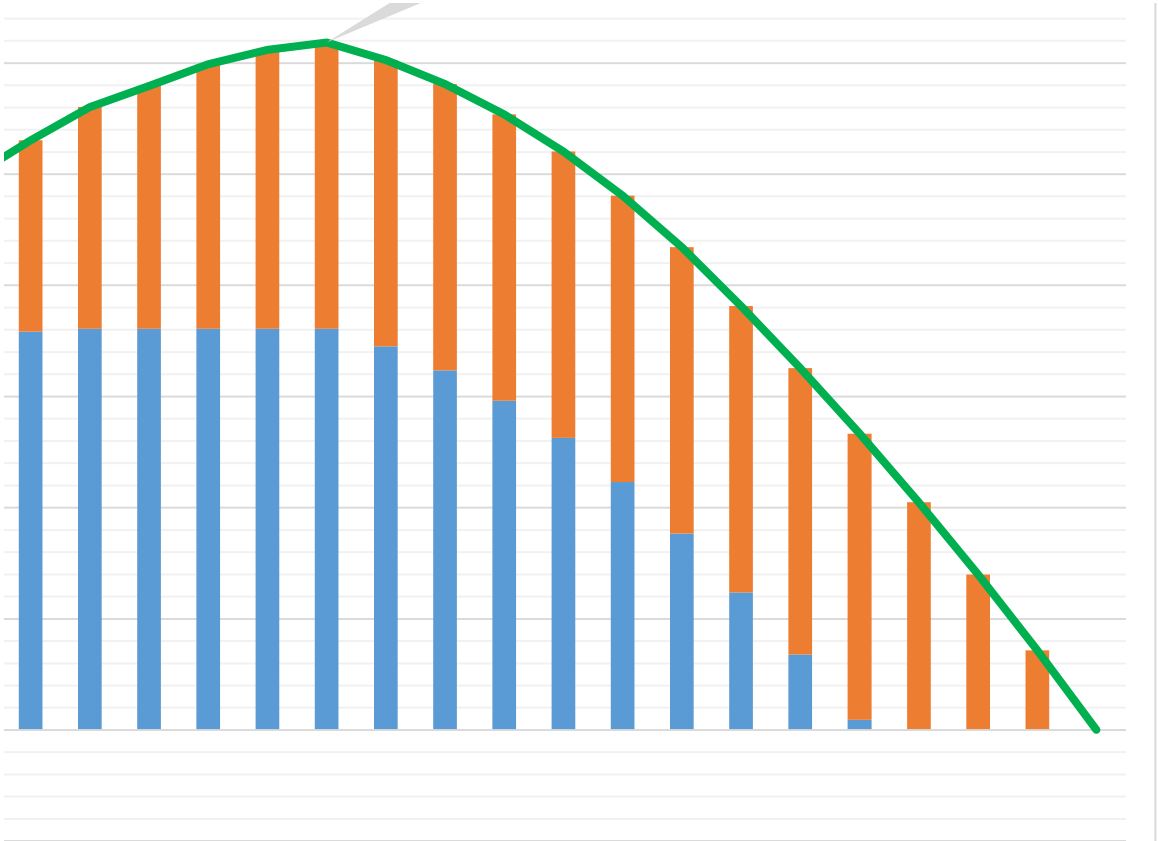
CALENDAR YEAR



Debt (Principal and Interest)

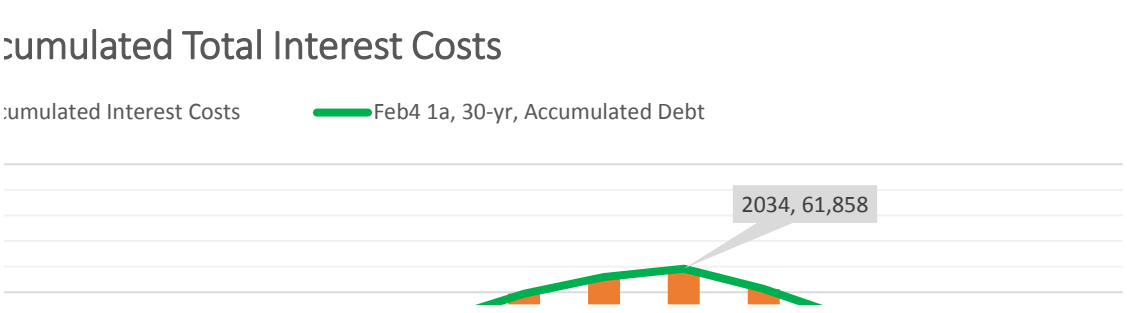
cumulated Interest Costs — Feb4 1a, 30-yr, Accumulated Debt

2034, 61,858

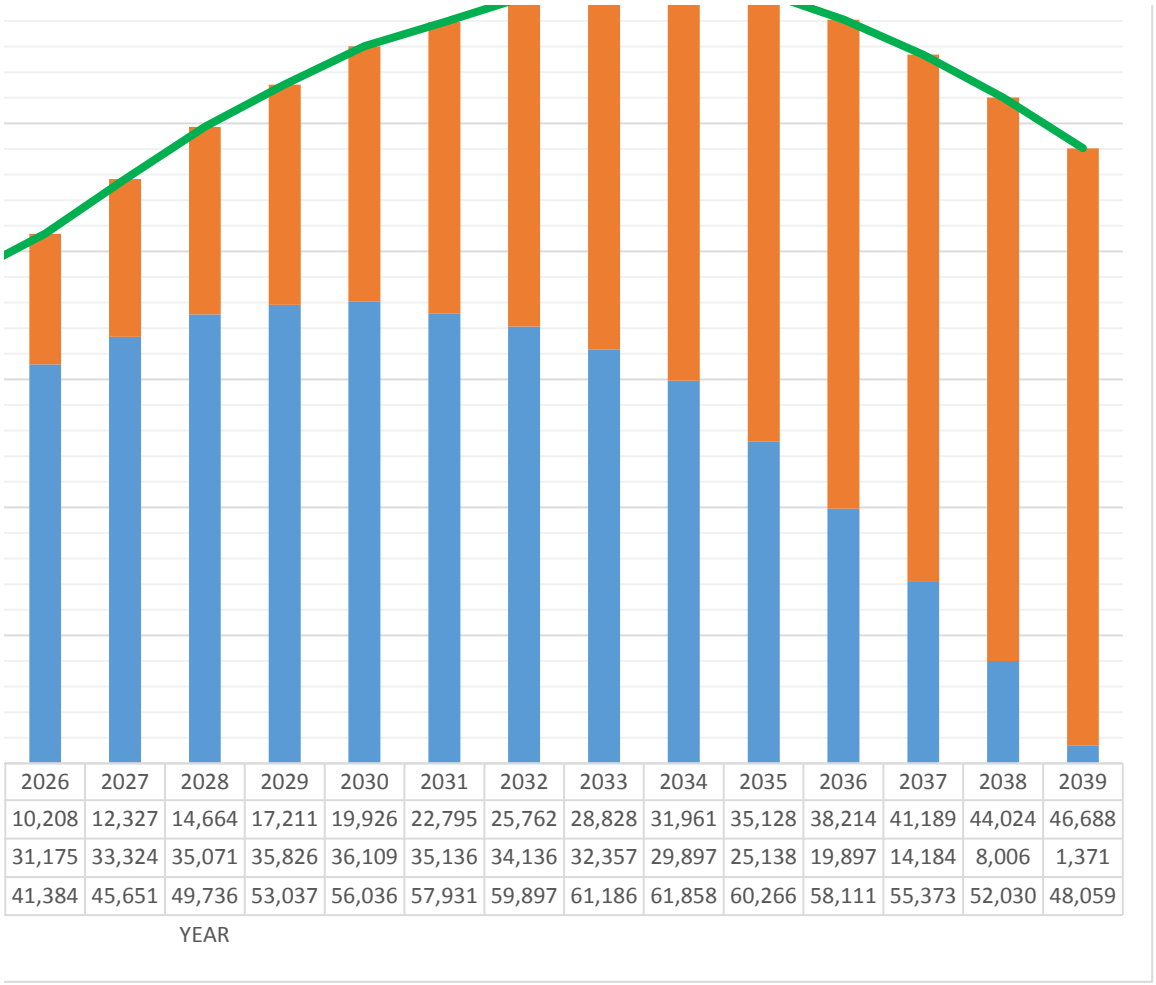


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



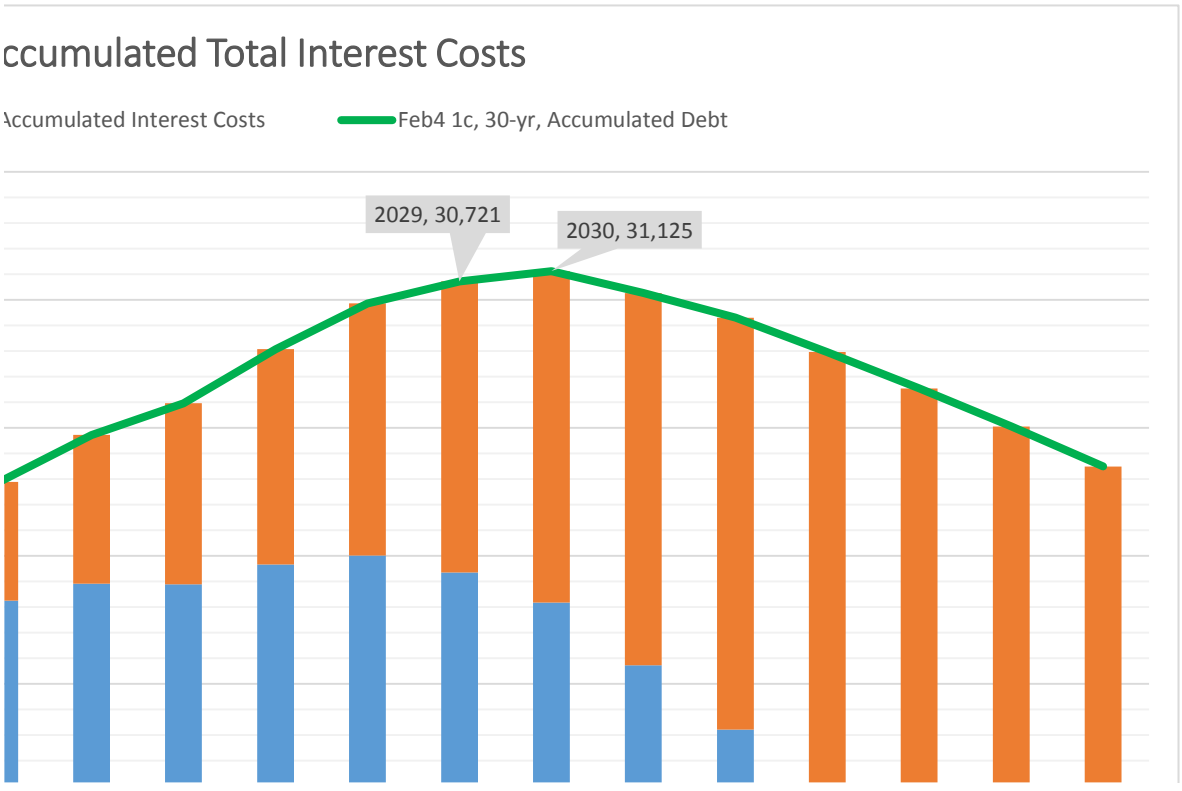
LIONS

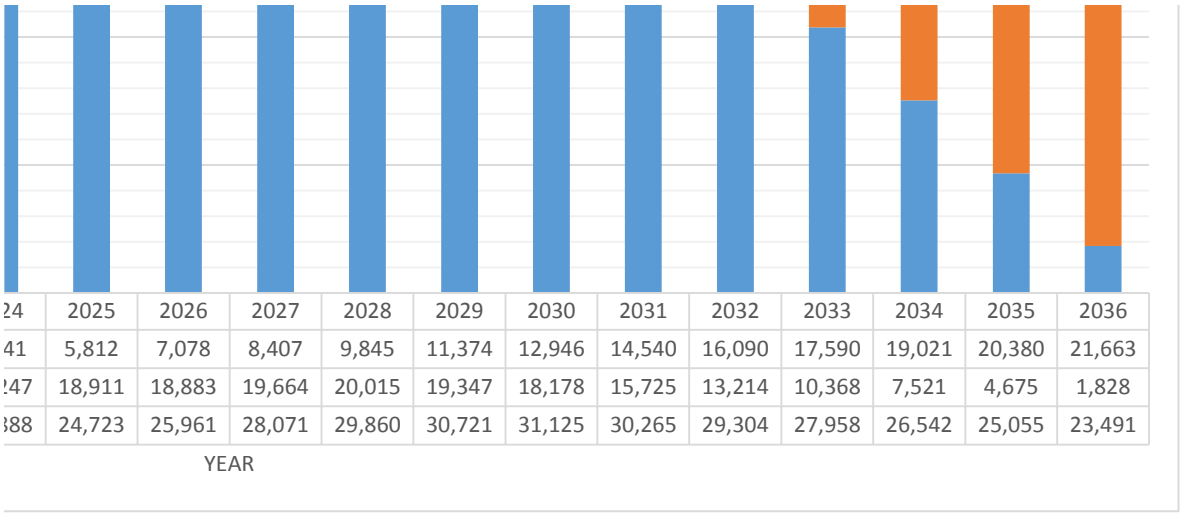


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

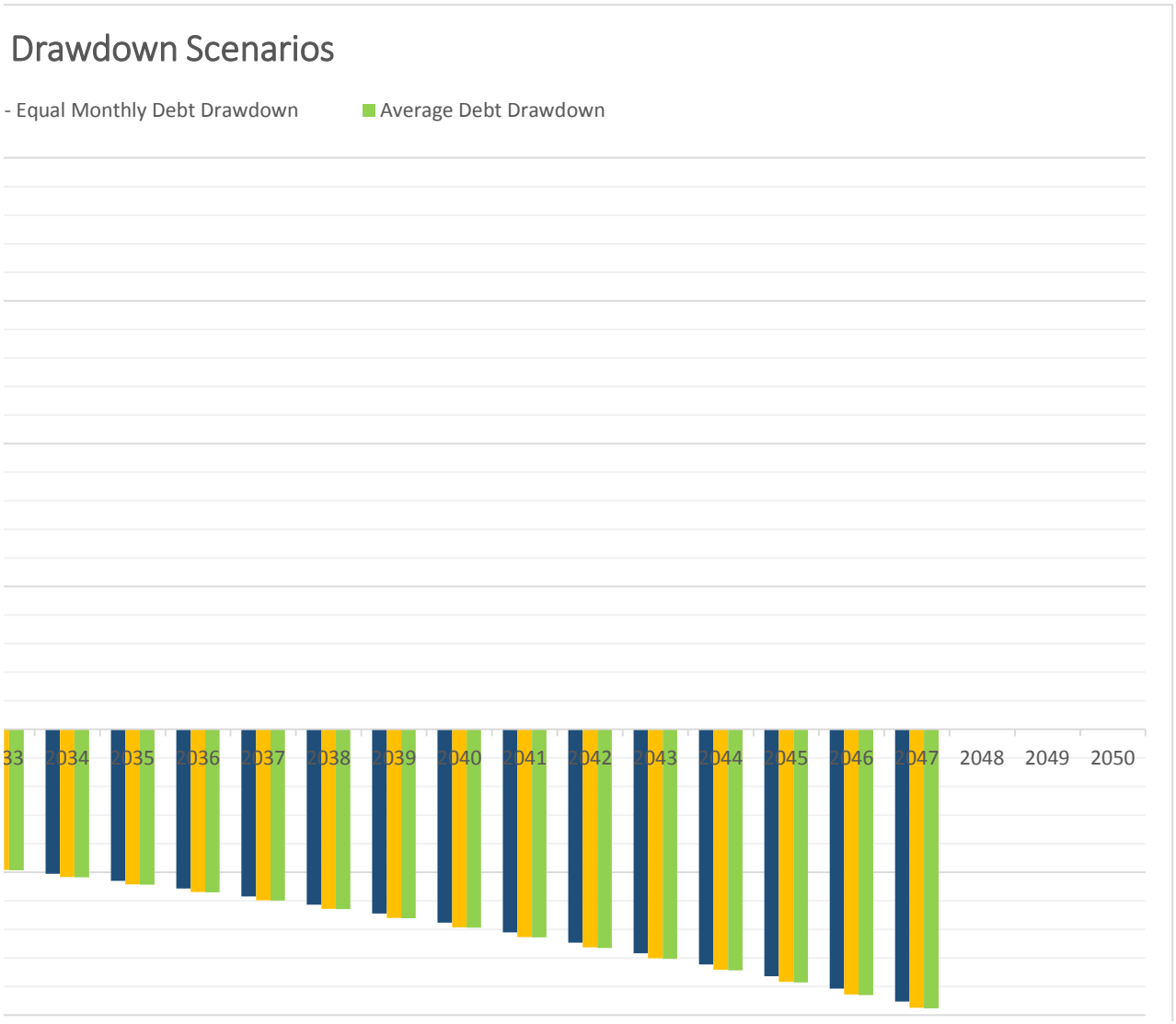
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





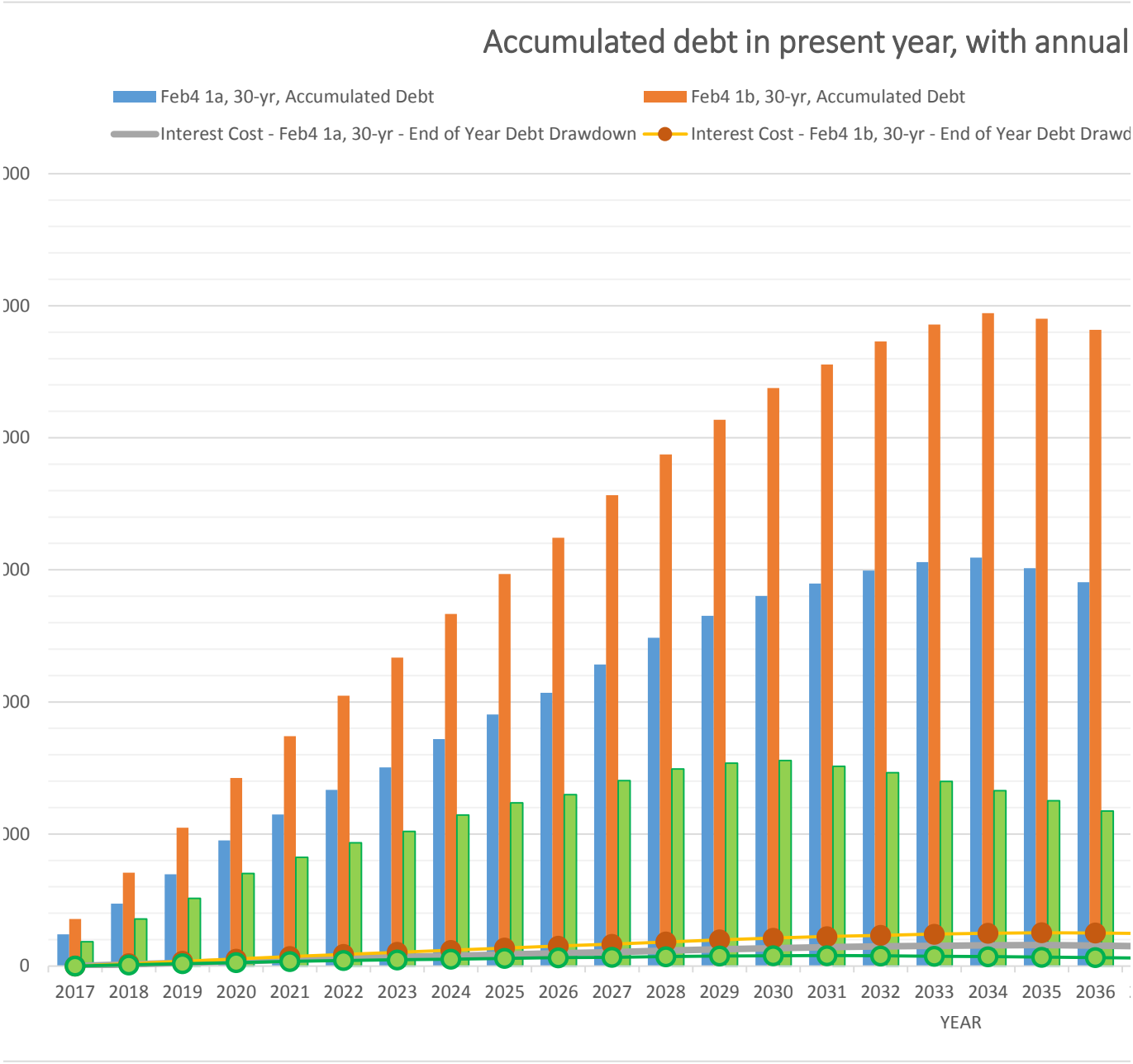
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

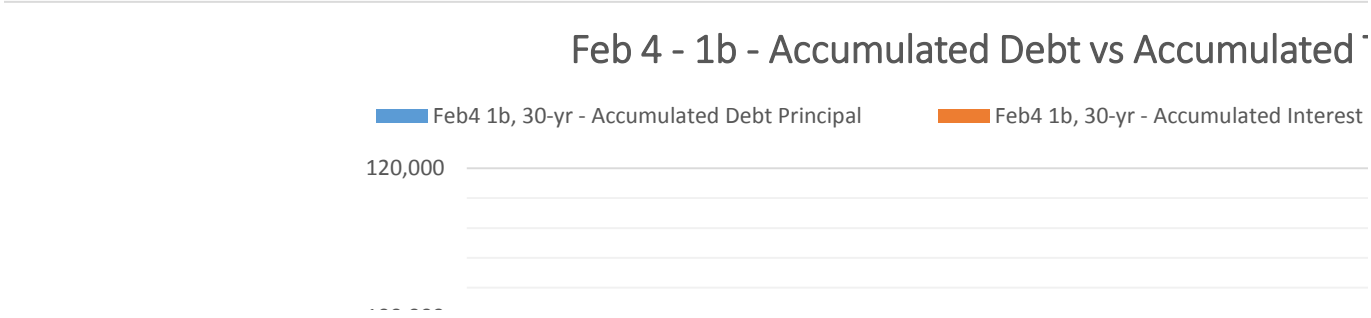
YEAR

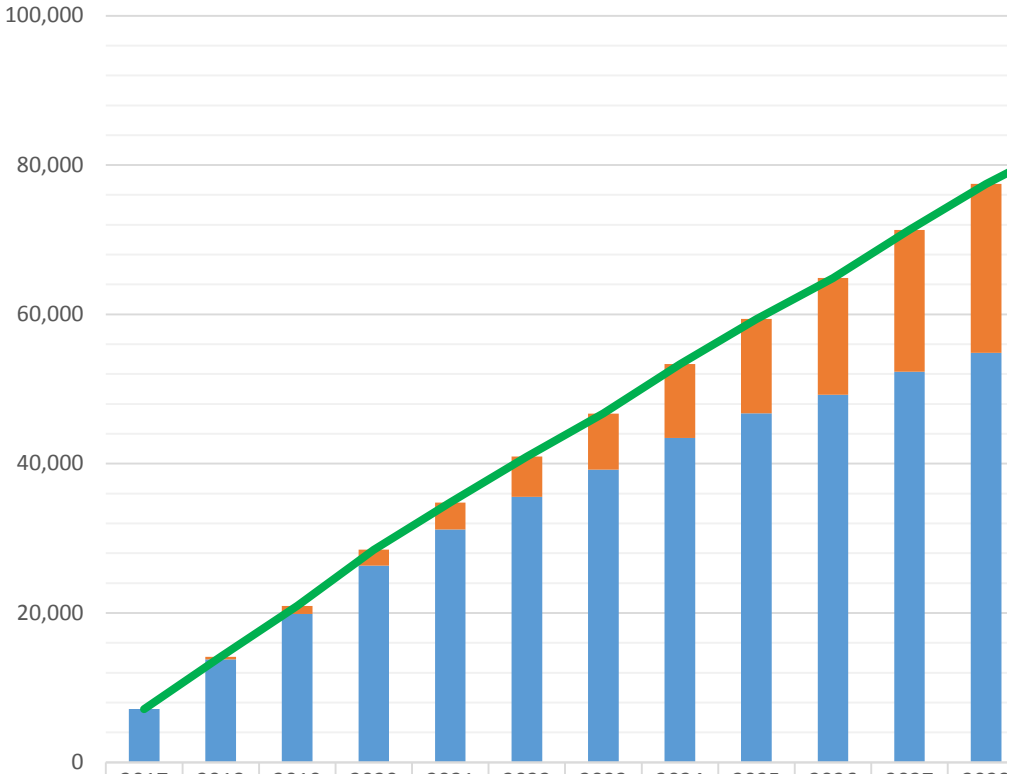


YEAR

ɜ - 25 year and 30 year Financing Terms, at 5% interest rate

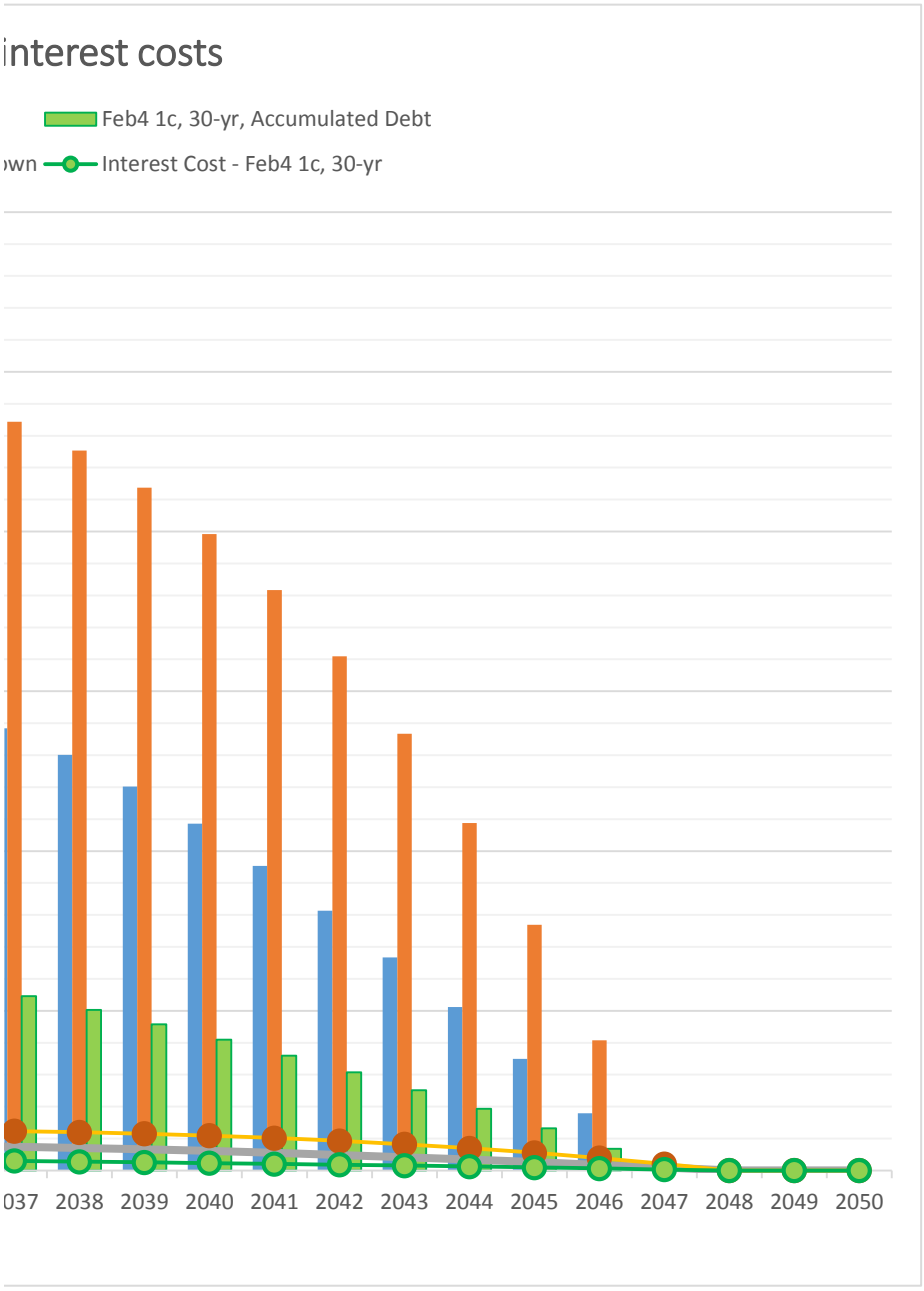


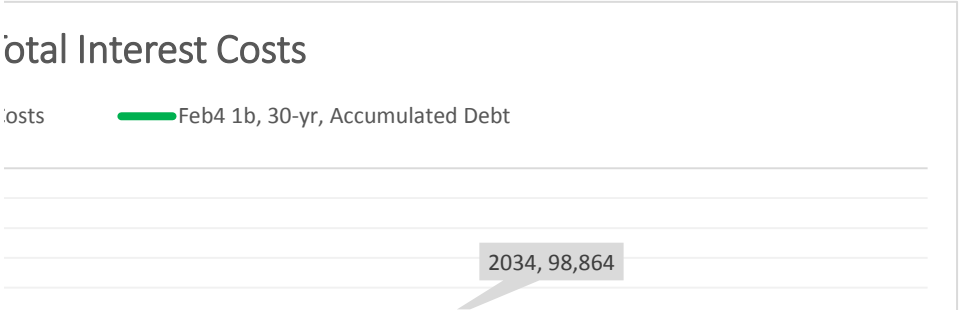

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

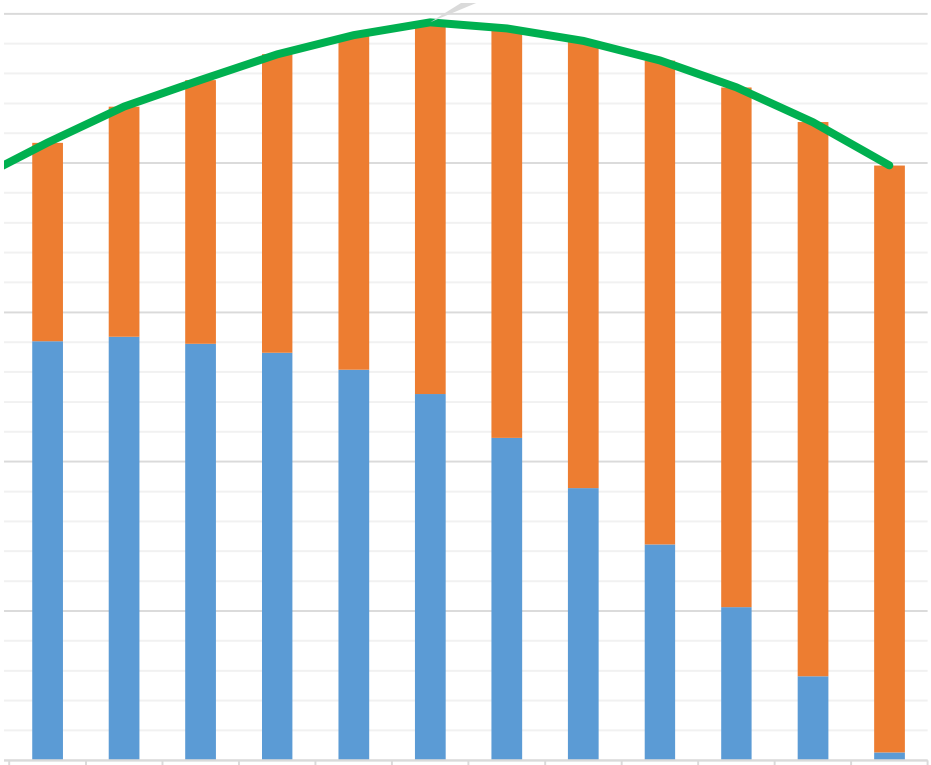


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y


interest costs
Feb4 1c, 30-yr, Accumulated Debt
wn
Interest Cost - Feb4 1c, 30-yr
037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR

Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

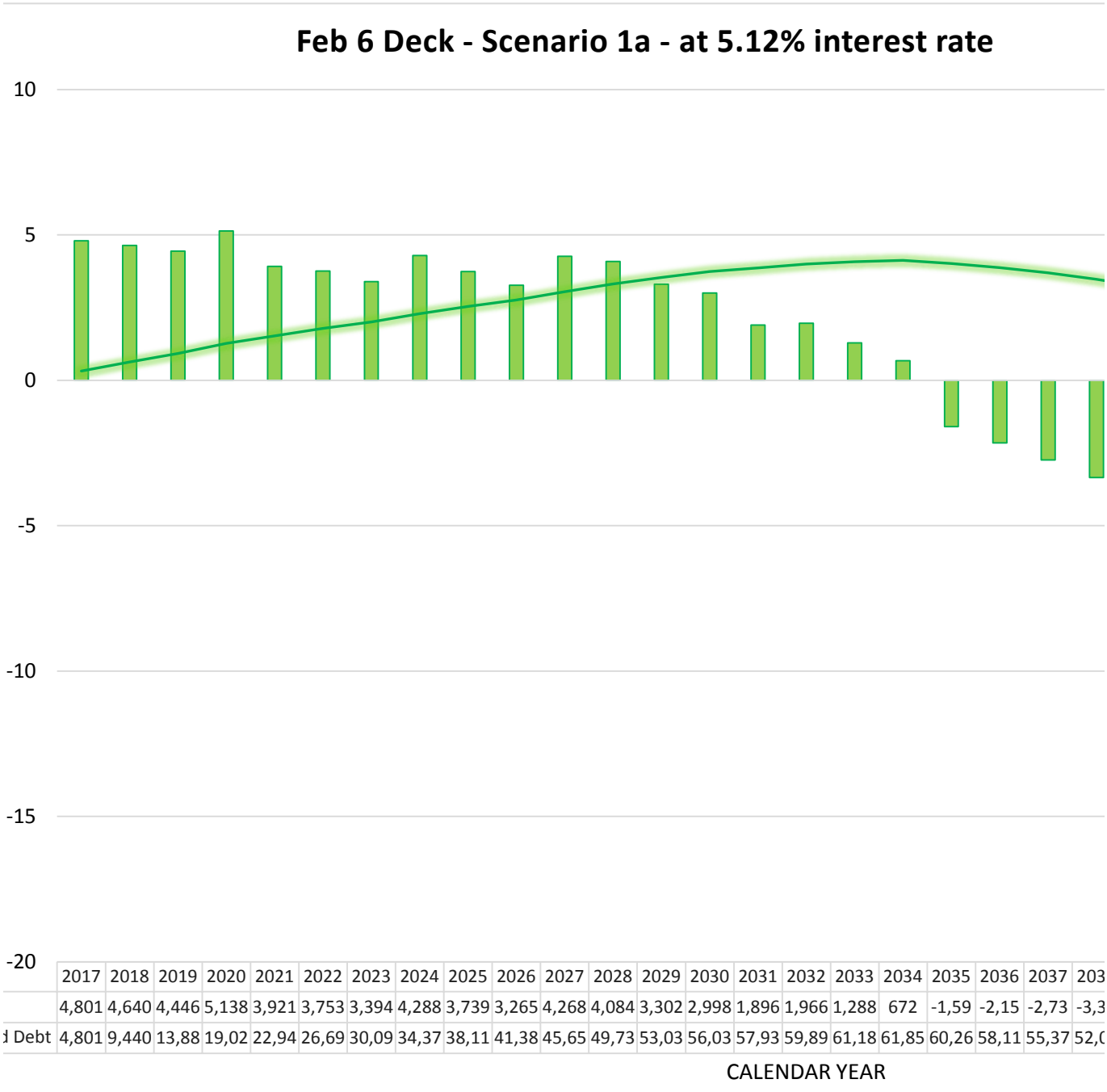
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

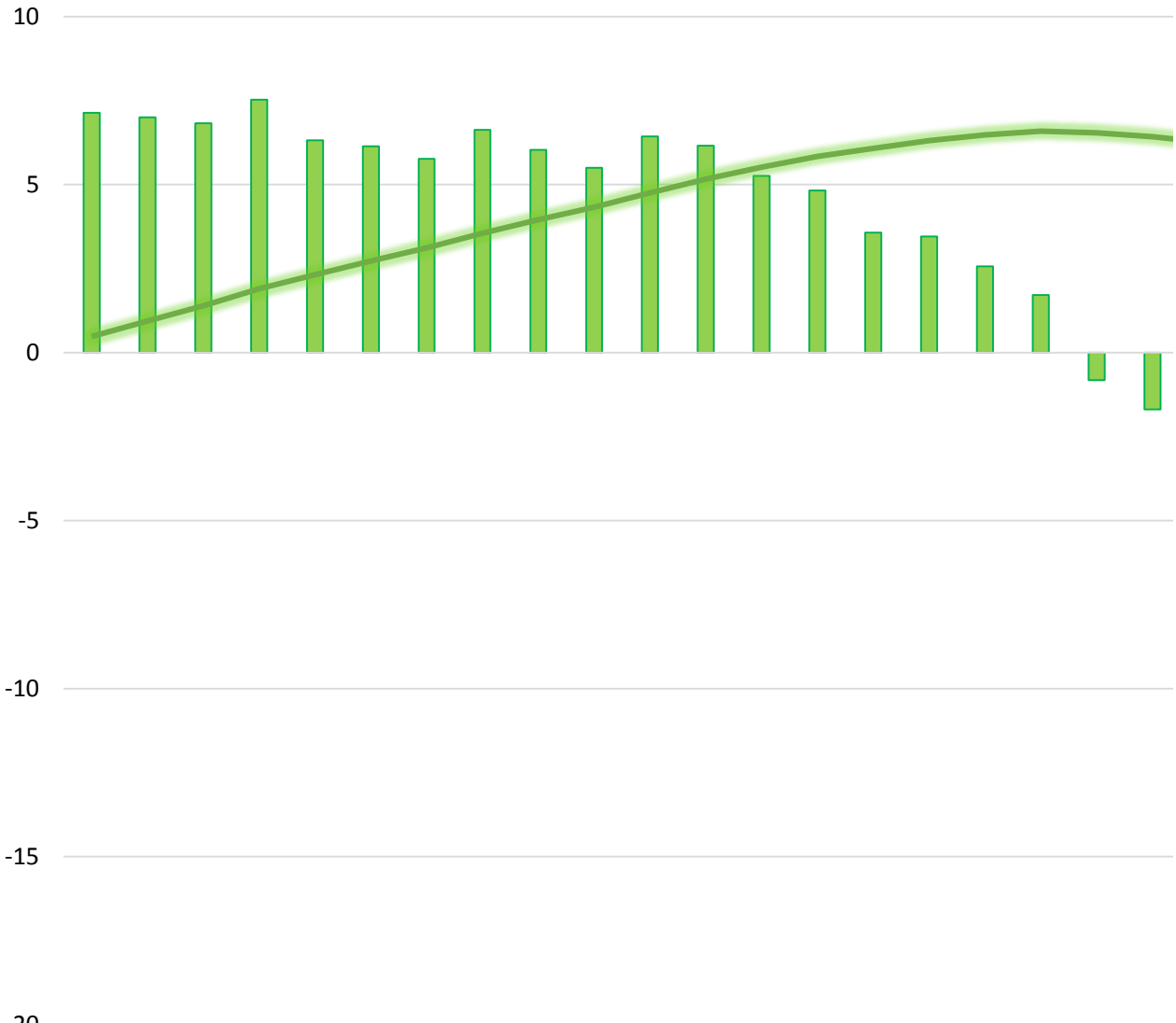
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

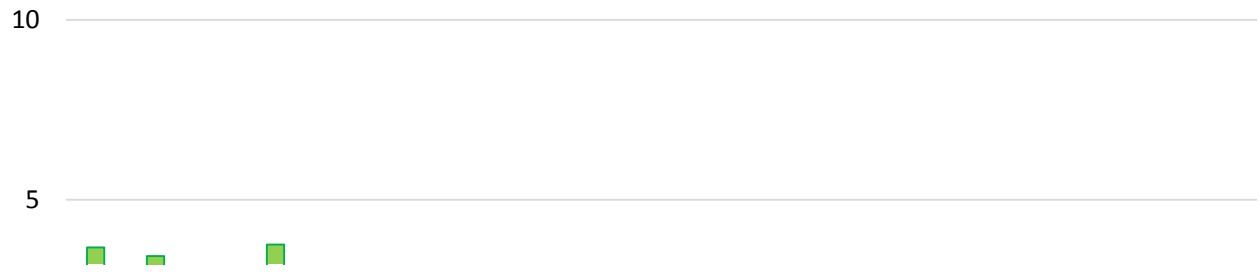
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

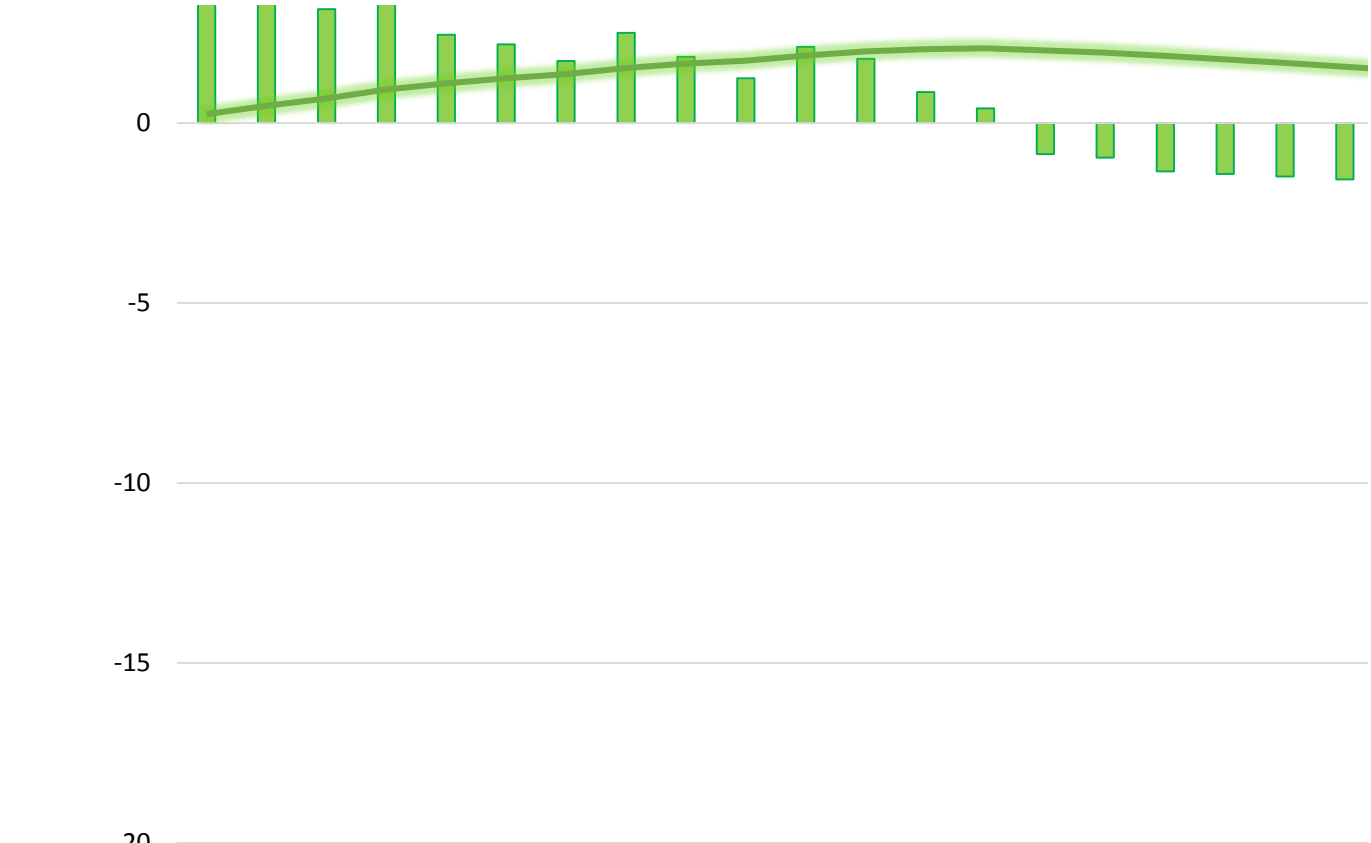


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



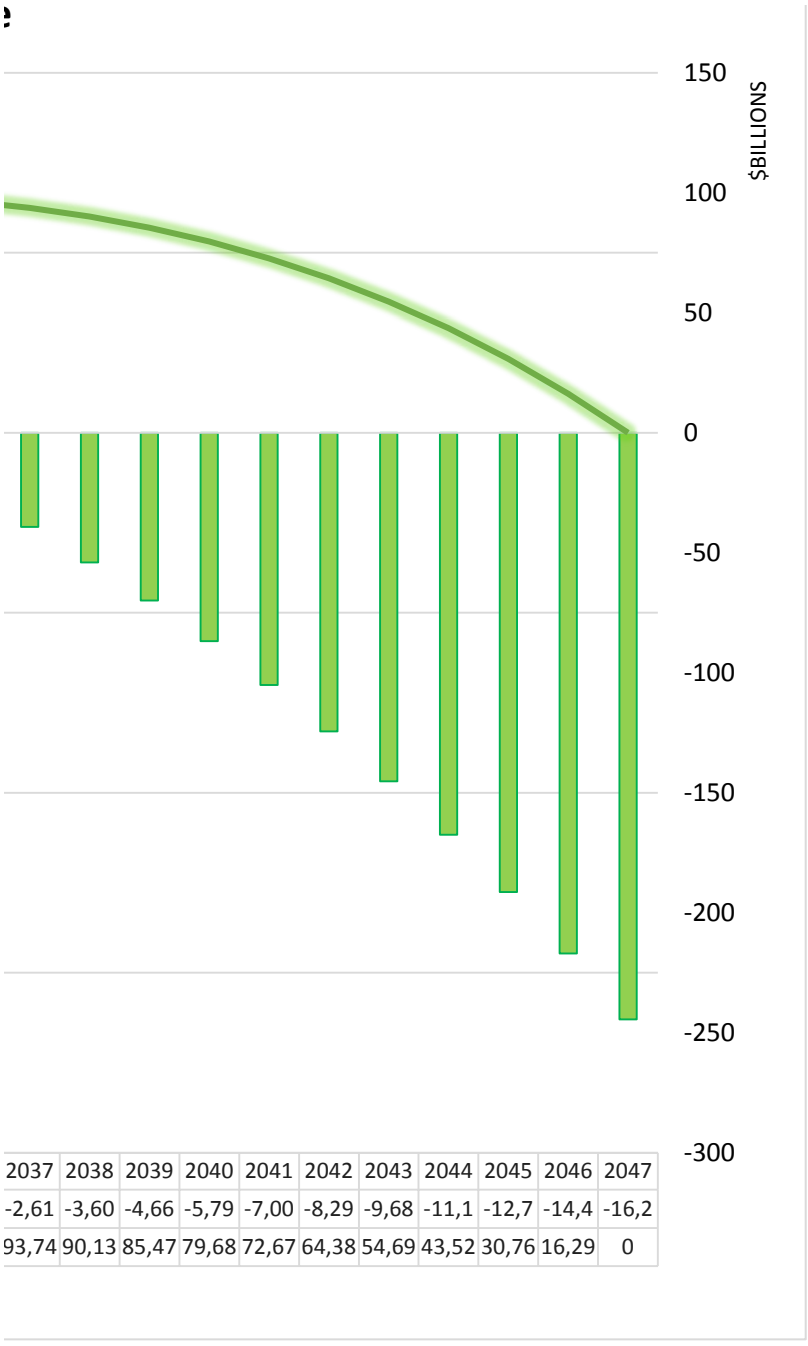


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

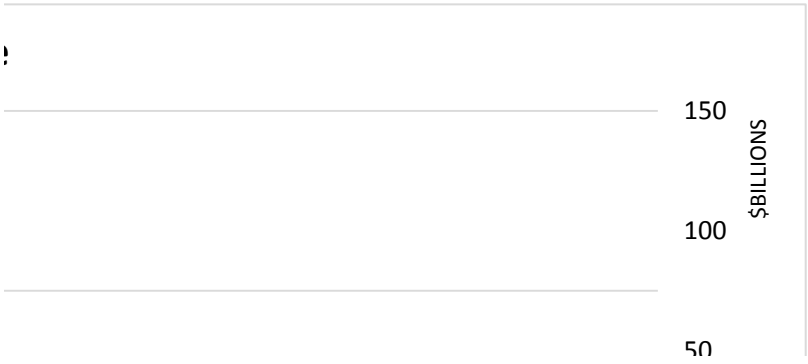
CALENDAR YEAR

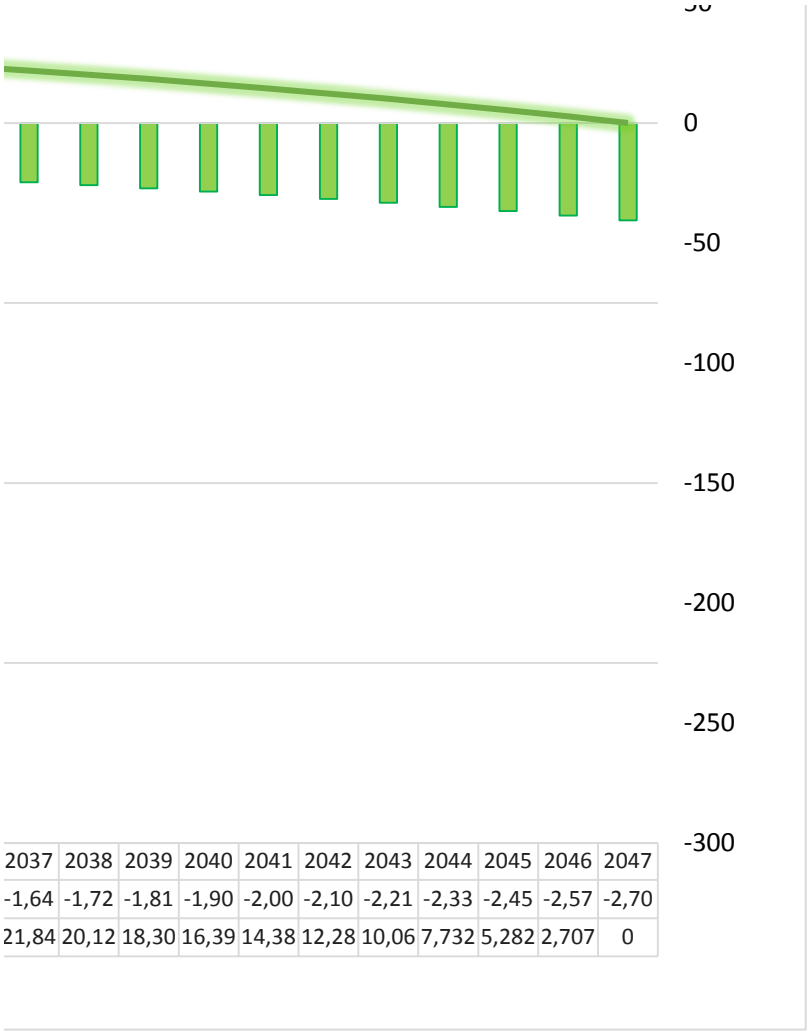


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Equal Monthly Debt Drawdown

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb4_1a_30yr

1a. GA Smoothing (Borrow ~$5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,801	4,640

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,200	4,760

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $62 billion, peakin
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary on accounting treatment.

7,133 7,133

Feb4_1b_30yr 7,133

1b. GA Smoothing (Borrow ~$7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	7,133	6,999

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,783	7,100

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $99 billion, peaking
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b on accounting treatment.

Feb4_1c_30yr

1c. GA Smoothing (Borrow ~$4 billion in 2017)

$ millions

Scenario 1C - 30-yr amortization	2017	2018
Annual Exposure[2]	3,678	3,437

	Fiscalized[3]	2016-17	2017-18
	Start: January 1st	919	3,617

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	1,783 - 1,200	7,100 - 4,760

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1200	4760
Debt-Finance Global Adjustment Costs, Option 1a	1783	7100
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18

Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1200**	**5000**
Total, B	1783	7340
Proposed Program Total:	1,783 - 1,200	7,340 - 5,000

ining

1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
4,446	5,138	3,921	3,753

2018-19	2019-20	2020-21	2021-2022
4,591	4,619	4,833	3,879

ng in 203 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
by approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
6,825	7,529	6,315	6,141

2018-19	2019-20	2020-21	2021-2022
6,956	7,001	7,226	6,272

g in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
3,158	3,761	2,450	2,183

2018-19	2019-20	2020-21	2021-2022
3,367	3,309	3,433	2,383

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
6,956 - 4,591	7,001 - 4,619	7,226 - 4,833	6,272 - 3,879

/1

2018-19[1]	2019-20[1]	2020-21[1]
4591	4619	4833
6956	7001	7226
225	279	323
60	60	60
18	18	18

4894	**4976**	**5234**
7259	7358	7627

7,259 - 4,894 7,358 - 4,976 7,627 - 5,234

1a. GA Smoothing (Borrow $5 billion in 2017)

	2017
IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	7,095
Additional GA Debt Drawdown, End of Year	5,000

Ratepayer GA Payment

Total Accumulated Debt *($ billion)*	5,000
Total Change in Accumulated Debt *($ billion)*	5000

1b. GA Smoothing (Borrow $7 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	5,095
Additional GA Debt Drawdown, End of Year	7,000

Total Accumulated Debt *($ billion)*	7000
Total Change in Accumulated Debt *($ billion)*	7000

1c. GA Smoothing (Borrow $4 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	8,095
Additional GA Debt Drawdown, End of Year	4,000

Total Accumulated Debt *($ billion)*	4000
Total Change in Accumulated Debt *($ billion)*	4000

2018	2019	2020	2021	2022	2023	2024	2025
11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
6,835	7,552	7,168	6,844	6,634	7,243	7,128	6,527
5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000

9,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000
5000	4000	5000	4000	4000	3000	4000	4000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
4,835	4,552	4,168	4,844	4,634	4,243	4,128	4,527
7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000

14000	21000	28000	35000	41000	47000	53000	59000
7000	7000	8000	6000	6000	6000	7000	6000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
8,835	8,552	8,168	8,844	8,634	8,243	8,128	8,527
3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000

7000	10000	14000	16000	19000	20000	23000	25000
3000	3000	4000	2000	2000	2000	3000	2000

2026	2027	2028	2029	2030	2031	2032	2033
10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
7,033	7,043	6,819	7,009	6,721	6,654	6,820	7,238
3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000

41,000	46,000	50,000	53,000	56,000	58,000	60,000	61,000
3000	4000	4000	3000	3000	2000	2000	1000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
4,033	5,043	4,819	5,009	4,721	4,654	5,820	5,238
6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000

65000	71000	77000	83000	88000	91000	95000	97000
6000	6000	6000	5000	5000	4000	3000	3000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
9,033	9,043	8,819	9,009	9,721	9,654	9,820	9,238
1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000

26000	28000	30000	31000	31000	30000	29000	28000
1000	2000	2000	1000	0	-1000	-1000	-1000

2034	2035	2036	2037	2038	2039	2040	2041
7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
6,756	7,662	7,389	8,129	7,881	8,645	9,421	9,207
1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000

62,000	60,000	58,000	55,000	52,000	48,000	43,000	38,000
1000	-2000	-2000	-3000	-3000	-4000	-5000	-5000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
5,756	6,662	7,389	8,129	8,881	9,645	10,421	11,207
2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000

99000	98000	96000	94000	90000	85000	80000	73000
2000	-1000	-2000	-3000	-4000	-5000	-6000	-7000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
8,756	6,662	7,389	7,129	6,881	6,645	6,421	6,207
-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000

27000	25000	23000	22000	20000	18000	16000	14000
-1000	-1000	-2000	-2000	-2000	-2000	-2000	-2000

2042	2043	2044	2045	2046	2047	2048		
4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
10,004	9,811	9,627	9,451	10,285	10,126	2,975		
-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0		

33,000	27,000	20,000	14,000	7,000	-	-	
-6000	-6000	-6000	-6000	-7000	-7000	0	

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
12,004	13,811	14,627	16,451	17,285	19,126	2,975		
-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0		

64000	55000	44000	31000	16000	0	0
-8000	-10000	-11000	-13000	-14000	-16000	0

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
6,004	5,811	5,627	5,451	6,285	6,126	2,975		
-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0		

12000	10000	8000	5000	3000	0	0
-2000	-2000	-2000	-2000	-3000	-3000	0

Feb4 1a, 30-yr - Debt Drawdown Scenarios

-92,247 -94598.515 58,489 36109.18 0

Feb4_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0
			114	110	106	122	93	89	81	102	89	78	102	97	79	71	45	47	31	16	-38	-51	-65	-80	-95	-110	-126	-133	-140	-147	-155	-162	-171	0	0	0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	5,138	3,167	58,489
Equal Monthly Debt Drawdown	5,260	3,149	

Maximum Accumulated Debt — Feb4 1a, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

End of Year Debt Drawdown	61,858	36,109
Equal Monthly Debt Drawdown	63,330	

			40%	37%	34%	36%	27%	24%																												
Feb4 1a, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
a	Debt, Beginning of Year		0	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	
c = a*5%	*Interest Cost - Feb4 1a, 30-yr - End of Year Debt Drawdown*		*0*	*246*	*483*	*711*	*974*	*1,175*	*1,367*	*1,541*	*1,760*	*1,952*	*2,119*	*2,337*	*2,546*	*2,716*	*2,869*	*2,966*	*3,067*	*3,133*	*3,167*	*3,086*	*2,975*	*2,835*	*2,664*	*2,461*	*2,224*	*1,952*	*1,666*	*1,365*	*1,049*	*717*	*367*	*0*	*0*	*0*	58,489
b	Additional GA Debt Drawdown, End of Year		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	21,822	23,788	25,076	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	20,490	13,998	7,173	0	0	0	
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	36,109	36,109	36,109	36,109	34,517	32,362	29,624	26,281	22,311	17,687	12,383	6,793	918	0	0	0	0	0	0	0	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688	49,149	51,372	53,325	54,991	56,356	57,405	58,122	58,489				
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371	-5,713	-13,241	-20,783	-28,325	-35,866	-43,408	-50,949	-58,489				
Fiscal Exposure - End of Year Debt Drawdown			4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0	

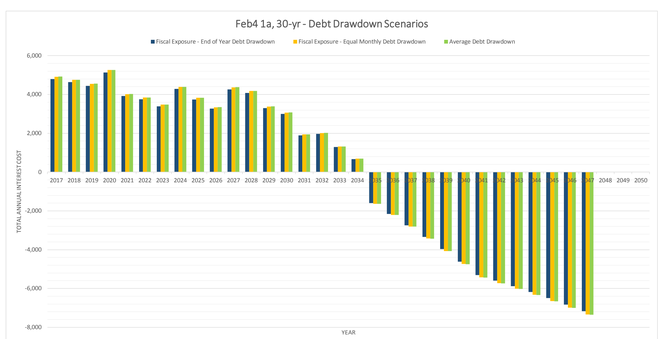
Feb4 1a, 30-yr	Equal Monthly Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			12																																		
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
3,149	*Interest Cost - Feb4 1a, 30-yr*		*114*	*356*	*589*	*833*	*1,067*	*1,264*	*1,448*	*1,643*	*1,849*	*2,029*	*2,220*	*2,435*	*2,625*	*2,787*	*2,914*	*3,013*	*3,097*	*3,149*	*3,129*	*3,034*	*2,910*	*2,756*	*2,569*	*2,351*	*2,098*	*1,819*	*1,526*	*1,218*	*895*	*554*	*197*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0	

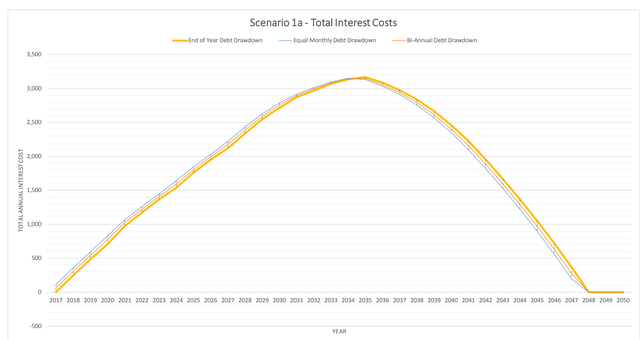
	Monthly Drawdown		400	366	330	369	246	215	169	229	165	109	179	146	63	24	(81)	(83)	(148)	(205)	(397)	(437)	(476)	(515)	(553)	(590)	(627)	(629)	(628)	(628)	(628)	(628)	(628)	-	-	-
	FV of Monthly Drawdown at 5%		4,915	4,498	4,057	4,532	3,017	2,640	2,075	2,813	2,026	1,345	2,200	1,789	773	289	(996)	(1,024)	(1,821)	(2,519)	(4,872)	(5,365)	(5,849)	(6,325)	(6,793)	(7,253)	(7,707)	(7,722)	(7,721)	(7,721)	(7,721)	(7,721)	(7,720)	-	-	-
	Annual Interest Cost on New Drawdowns		114	105	94	105	70	61	48	65	47	31	51	42	18	7	(23)	(24)	(42)	(59)	(113)	(125)	(136)	(147)	(158)	(169)	(179)	(180)	(180)	(180)	(180)	(180)	(179)	-	-	-
	Annual Interest Cost on Opening Balance		-	252	495	728	997	1,203	1,399	1,577	1,802	1,998	2,169	2,393	2,607	2,780	2,937	3,037	3,140	3,207	3,243	3,159	3,046	2,903	2,727	2,519	2,277	1,999	1,706	1,398	1,074	734	376	(0)	(0)	(0)
	Total Annual Interest Cost		114	356	589	833	1,067	1,264	1,448	1,643	1,849	2,029	2,220	2,435	2,625	2,787	2,914	3,013	3,097	3,149	3,129	3,034	2,910	2,756	2,569	2,351	2,098	1,819	1,526	1,218	895	554	197	(0)	(0)	(0)

Feb4 1a, 30-yr	Bi-Annual Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*61*	*305*	*540*	*777*	*1,024*	*1,223*	*1,410*	*1,596*	*1,808*	*1,993*	*2,173*	*2,390*	*2,589*	*2,754*	*2,893*	*2,991*	*3,083*	*3,141*	*3,147*	*3,058*	*2,940*	*2,792*	*2,613*	*2,401*	*2,156*	*1,881*	*1,591*	*1,286*	*966*	*629*	*275*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown			4,862	4,699	4,502	5,203	3,971	3,801	3,438	4,343	3,787	3,307	4,322	4,137	3,344	3,037	1,920	1,991	1,305	681	-1,612	-2,183	-2,773	-3,386	-4,021	-4,683	-5,372	-5,661	-5,951	-6,255	-6,575	-6,912	-7,265	0	0	0	

	Bi-Annual Drawdown		2,400	2,197	1,981	2,213	1,473	1,289	1,014	1,374	989	657	1,074	874	378	141	(487)	(500)	(889)	(1,230)	(2,379)	(2,620)	(2,857)	(3,089)	(3,317)	(3,542)	(3,764)	(3,771)	(3,771)	(3,771)	(3,771)	(3,771)	(3,770)	-	-	-
	FV of Bi-Annual Drawdown at 5%		4,862	4,450	4,013	4,483	2,984	2,612	2,053	2,783	2,004	1,331	2,176	1,769	765	286	(986)	(1,013)	(1,801)	(2,492)	(4,820)	(5,308)	(5,787)	(6,257)	(6,719)	(7,175)	(7,624)	(7,639)	(7,638)	(7,638)	(7,638)	(7,638)	(7,637)	-	-	-
	Annual Interest Cost on New Drawdowns		61	56	51	57	38	33	26	35	25	17	28	22	10	4	(12)	(13)	(23)	(31)	(61)	(67)	(73)	(79)	(85)	(91)	(96)	(97)	(97)	(97)	(97)	(97)	(97)	-	-	-
	Annual Interest Cost on Opening Balance		-	249	490	720	986	1,190	1,384	1,560	1,783	1,977	2,146	2,367	2,579	2,750	2,906	3,004	3,106	3,173	3,208	3,125	3,013	2,871	2,698	2,492	2,252	1,977	1,687	1,383	1,063	726	372	(0)	(0)	(0)
	Total Annual Interest Cost		61	305	540	777	1,024	1,223	1,410	1,596	1,808	1,993	2,173	2,390	2,589	2,754	2,893	2,991	3,083	3,141	3,147	3,058	2,940	2,792	2,613	2,401	2,156	1,881	1,591	1,286	966	629	275	(0)	(0)	(0)

Feb4 1a, 30-yr	Average Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*123*	*365*	*597*	*842*	*1,074*	*1,271*	*1,454*	*1,650*	*1,856*	*2,035*	*2,228*	*2,442*	*2,631*	*2,792*	*2,918*	*3,016*	*3,100*	*3,150*	*3,126*	*3,030*	*2,905*	*2,749*	*2,562*	*2,342*	*2,088*	*1,809*	*1,516*	*1,207*	*883*	*542*	*184*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
Fiscal Exposure - Average Debt Drawdown			4,923	4,758	4,559	5,269	4,021	3,849	3,481	4,398	3,835	3,349	4,377	4,189	3,386	3,075	1,944	2,016	1,321	689	-1,633	-2,210	-2,808	-3,428	-4,072	-4,742	-5,440	-5,733	-6,026	-6,334	-6,658	-6,999	-7,357	0	0	0	





Feb4 1b, 30-yr - Debt Drawdown Scenarios

-149,507 -153857.97 97,141 56717.33 0

Feb4_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0
			170	167	162	179	150	146	137	158	144	131	153	147	125	115	85	82	61	41	-19	-40	-62	-86	-111	-138	-167	-198	-231	-266	-304	-344	-388	0	0	0

0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown 7,529	5,062	97,141
Equal Monthly Debt Drawdown 7,708	5,042	

Maximum Accumulated Debt	Feb4 1b, 30-yr, Accumulated Debt	Total Principal Debt Borrowed
End of Year Debt Drawdown	98,864	56,717
Equal Monthly Debt Drawdown	101,217	

Feb4 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
a Debt, Beginning of Year	0	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	
c = a*5% *Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown*	*0*	*365*	*724*	*1,073*	*1,459*	*1,782*	*2,096*	*2,391*	*2,731*	*3,040*	*3,322*	*3,651*	*3,966*	*4,236*	*4,483*	*4,665*	*4,842*	*4,974*	*5,062*	*5,020*	*4,933*	*4,800*	*4,615*	*4,376*	*4,080*	*3,721*	*3,296*	*2,800*	*2,228*	*1,575*	*834*	*0*	*0*	*0*	97,141
b Additional GA Debt Drawdown, End of Year	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
d = a+b+c Accumulated debt in present year (including 5% annual interest)	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	0	
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,633	26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606	82,685	86,406	89,703	92,503	94,731	96,306	97,141				
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,831	56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076	-10,007	-22,027	-35,008	-48,980	-63,971	-80,013	-97,141				
Fiscal Exposure - End of Year Debt Drawdown	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0	

Feb4 1b, 30-yr — Equal Monthly Debt Drawdown

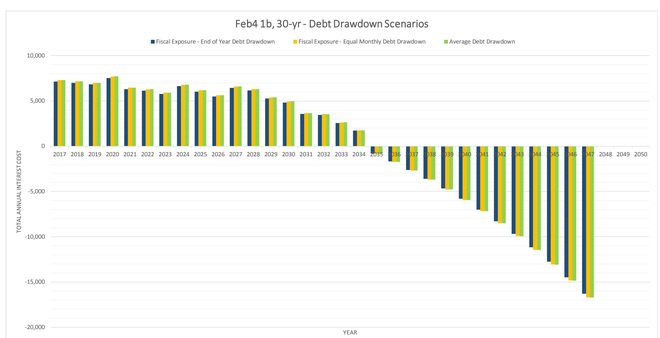
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	
5,042 *Interest Cost - Feb4 1b, 30-yr*	*170*	*532*	*886*	*1,252*	*1,609*	*1,928*	*2,234*	*2,549*	*2,874*	*3,171*	*3,475*	*3,797*	4,091	*4,350*	*4,568*	*4,748*	*4,904*	*5,015*	*5,042*	*4,980*	*4,871*	*4,714*	*4,504*	*4,238*	*3,913*	*3,524*	*3,066*	*2,534*	*1,925*	*1,231*	*446*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0	
Monthly Drawdown	594	553	508	538	405	363	306	353	275	205	259	209	108	49	(76)	(101)	(189)	(271)	(490)	(559)	(629)	(700)	(773)	(847)	(924)	(1,002)	(1,082)	(1,164)	(1,249)	(1,337)	(1,427)	(0)	-	-	
FV of Monthly Drawdown at 5%	7,303	6,792	6,247	6,610	4,972	4,463	3,755	4,338	3,383	2,523	3,184	2,565	1,327	605	(937)	(1,237)	(2,326)	(3,335)	(6,020)	(6,867)	(7,728)	(8,604)	(9,498)	(10,412)	(11,347)	(12,306)	(13,291)	(14,304)	(15,348)	(16,424)	(17,536)	(0)	-	-	
Annual Interest Cost on New Drawdowns	170	158	145	154	116	104	87	101	79	59	74	60	31	14	(22)	(29)	(54)	(78)	(140)	(160)	(180)	(200)	(221)	(242)	(264)	(286)	(309)	(333)	(357)	(382)	(408)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	374	741	1,099	1,493	1,824	2,146	2,448	2,796	3,112	3,401	3,738	4,061	4,336	4,589	4,776	4,958	5,092	5,182	5,139	5,051	4,914	4,725	4,481	4,177	3,810	3,375	2,867	2,281	1,612	854	0	(0)	(0)	
Total Annual Interest Cost	170	532	886	1,252	1,609	1,928	2,234	2,549	2,874	3,171	3,475	3,797	4,091	4,350	4,568	4,748	4,904	5,015	5,042	4,980	4,871	4,714	4,504	4,238	3,913	3,524	3,066	2,534	1,925	1,231	446	0	(0)	(0)	

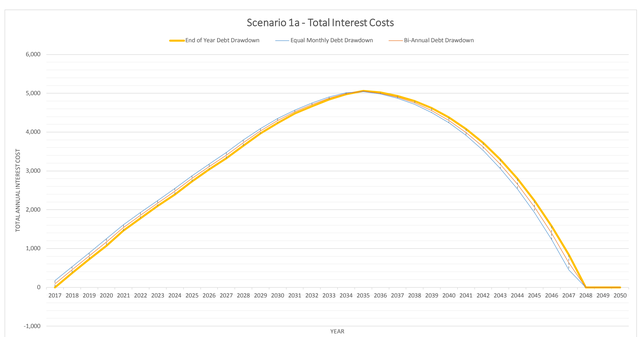
Feb4 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*91*	*455*	*811*	*1,169*	*1,539*	*1,861*	*2,170*	*2,476*	*2,808*	*3,110*	*3,404*	*3,730*	*4,034*	*4,297*	*4,528*	*4,710*	*4,875*	*4,996*	*5,051*	*4,998*	*4,900*	*4,753*	*4,555*	*4,302*	*3,990*	*3,615*	*3,172*	*2,657*	*2,065*	*1,390*	*626*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	7,225	7,089	6,913	7,626	6,396	6,220	5,838	6,713	6,113	5,574	6,514	6,235	5,330	4,888	3,614	3,501	2,603	1,738	-829	-1,709	-2,648	-3,651	-4,722	-5,867	-7,093	-8,405	-9,810	-11,314	-12,926	-14,652	-16,502	0	0	0	
Bi-Annual Drawdown	3,567	3,317	3,051	3,228	2,428	2,180	1,834	2,118	1,652	1,232	1,555	1,253	648	295	(457)	(604)	(1,136)	(1,629)	(2,940)	(3,354)	(3,774)	(4,202)	(4,639)	(5,085)	(5,542)	(6,010)	(6,491)	(6,986)	(7,495)	(8,021)	(8,564)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	7,225	6,719	6,180	6,539	4,919	4,415	3,715	4,291	3,347	2,496	3,150	2,538	1,313	598	(926)	(1,224)	(2,301)	(3,299)	(5,956)	(6,794)	(7,645)	(8,512)	(9,396)	(10,300)	(11,225)	(12,174)	(13,148)	(14,150)	(15,183)	(16,247)	(17,347)	(0)	-	-	
Annual Interest Cost on New Drawdowns	91	85	78	83	62	56	47	54	42	32	40	32	17	8	(12)	(15)	(29)	(42)	(75)	(86)	(97)	(108)	(119)	(130)	(142)	(154)	(166)	(179)	(192)	(205)	(219)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	370	733	1,087	1,477	1,805	2,123	2,422	2,766	3,079	3,364	3,698	4,017	4,290	4,540	4,725	4,904	5,038	5,127	5,084	4,997	4,861	4,674	4,432	4,132	3,769	3,338	2,836	2,257	1,595	845	0	0	0	
Total Annual Interest Cost	91	455	811	1,169	1,539	1,861	2,170	2,476	2,808	3,110	3,404	3,730	4,034	4,297	4,528	4,710	4,875	4,996	5,051	4,998	4,900	4,753	4,555	4,302	3,990	3,615	3,172	2,657	2,065	1,390	626	0	0	0	

Feb4 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*183*	*544*	*898*	*1,266*	*1,620*	*1,939*	*2,244*	*2,561*	*2,885*	*3,181*	*3,486*	*3,809*	*4,101*	*4,359*	*4,574*	*4,754*	*4,908*	*5,018*	*5,041*	*4,977*	*4,867*	*4,707*	*4,496*	*4,228*	*3,900*	*3,509*	*3,048*	*2,514*	*1,902*	*1,205*	*417*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	7,316	7,179	7,000	7,722	6,477	6,298	5,912	6,798	6,190	5,645	6,597	6,314	5,397	4,950	3,659	3,545	2,636	1,760	-840	-1,731	-2,682	-3,697	-4,782	-5,942	-7,183	-8,511	-9,934	-11,457	-13,089	-14,838	-16,711	0	0	0	





Feb4 1c, 30-yr - Debt Drawdown Scenarios

Feb4_1c_30yr

Annual Interest Rate = 5.1%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0
			88	82	75	90	58	52	41	60	44	29	50	43	20	10	-20	-23	-32	-34	-35	-37	-39	-41	-43	-45	-48	-50	-53	-55	-58	-61	-64	0	0	0

0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	3,761	1,594	29,477
Equal Monthly Debt Drawdown	3,851	1,583	

Maximum Accumulated Debt — Feb4 1c, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

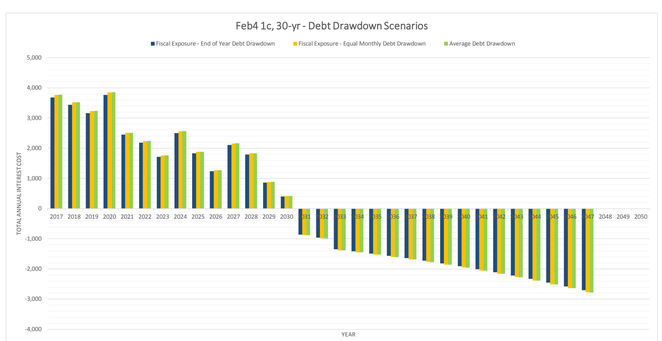
End of Year Debt Drawdown	31,125	20,043
Equal Monthly Debt Drawdown	31,866	

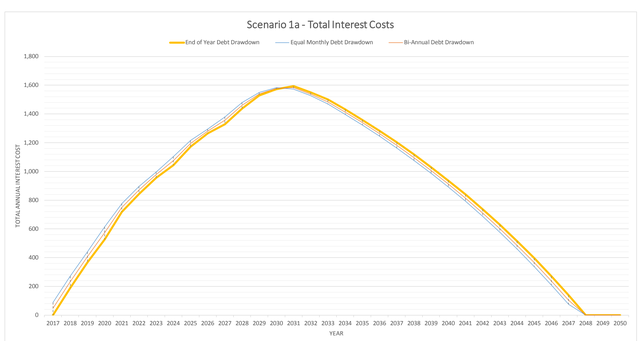
		30%	27%	24%	27%	16%	13%																														
Feb4 1c, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
a	Debt, Beginning of Year	0	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	
c = a*5%	*Interest Cost - Feb4 1c, 30-yr - End of Year Debt Drawdown*	*0*	*188*	*364*	*526*	*719*	*844*	*956*	*1,044*	*1,172*	*1,266*	*1,329*	*1,437*	*1,529*	*1,573*	*1,594*	*1,550*	*1,500*	*1,431*	*1,359*	*1,283*	*1,203*	*1,119*	*1,030*	*937*	*839*	*737*	*629*	*515*	*396*	*270*	*139*	*0*	*0*	*0*	*0*	29,477
b	Additional GA Debt Drawdown, End of Year	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	0	
	Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,641	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663	22,866	23,984	25,015	25,952	26,791	27,528	28,157	28,672	29,068	29,338	29,477				
	Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18,247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828	-1,018	-3,864	-6,710	-9,556	-12,402	-15,248	-18,094	-20,940	-23,786	-26,631	-29,477				
Fiscal Exposure - End of Year Debt Drawdown		3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0	

Feb4 1c, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	
1,583	*Interest Cost - Feb4 1c, 30-yr*	*88*	*270*	*439*	*615*	*777*	*896*	*997*	*1,103*	*1,216*	*1,295*	*1,379*	*1,480*	1,549	*1,583*	*1,573*	*1,527*	*1,468*	*1,398*	*1,324*	*1,246*	*1,164*	*1,077*	*987*	*892*	*792*	*686*	*576*	*460*	*338*	*209*	*74*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0	
	Monthly Drawdown	306	271	233	270	144	112	64	122	55	(2)	65	29	(56)	(97)	(204)	(209)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(0)	-	-	
	FV of Monthly Drawdown at 5%	3,765	3,326	2,861	3,312	1,773	1,371	781	1,493	679	(28)	799	360	(684)	(1,197)	(2,512)	(2,570)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,913)	(2,913)	(2,913)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	88	77	67	77	41	32	18	35	16	(1)	19	8	(16)	(28)	(58)	(60)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	193	373	538	736	864	979	1,069	1,200	1,296	1,361	1,471	1,565	1,610	1,632	1,586	1,536	1,465	1,391	1,313	1,231	1,145	1,055	959	859	754	644	527	405	277	142	0	0	0	
	Total Annual Interest Cost	88	270	439	615	777	896	997	1,103	1,216	1,295	1,379	1,480	1,549	1,583	1,573	1,527	1,468	1,398	1,324	1,246	1,164	1,077	987	892	792	686	576	460	338	209	74	0	0	0	

Feb4 1c, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*47*	*232*	*405*	*574*	*750*	*872*	*978*	*1,076*	*1,195*	*1,282*	*1,356*	*1,460*	*1,540*	*1,578*	*1,583*	*1,537*	*1,483*	*1,413*	*1,340*	*1,263*	*1,182*	*1,097*	*1,007*	*913*	*814*	*710*	*600*	*485*	*365*	*237*	*104*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,725	3,481	3,199	3,809	2,481	2,211	1,741	2,534	1,859	1,254	2,137	1,812	872	409	-871	-973	-1,363	-1,433	-1,506	-1,584	-1,665	-1,750	-1,839	-1,933	-2,032	-2,136	-2,246	-2,360	-2,481	-2,608	-2,742	0	0	0	
	Bi-Annual Drawdown	1,839	1,624	1,397	1,618	866	670	382	729	332	(14)	390	176	(334)	(584)	(1,227)	(1,255)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(0)	-	-	
	FV of Bi-Annual Drawdown at 5%	3,725	3,290	2,830	3,277	1,754	1,356	773	1,477	672	(28)	791	356	(677)	(1,184)	(2,485)	(2,542)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	47	42	36	41	22	17	10	19	8	(0)	10	5	(9)	(15)	(31)	(32)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	191	369	533	728	855	968	1,057	1,187	1,282	1,346	1,456	1,548	1,593	1,614	1,569	1,520	1,450	1,376	1,299	1,218	1,133	1,043	949	850	746	637	522	401	274	140	0	0	0	
	Total Annual Interest Cost	47	232	405	574	750	872	978	1,076	1,195	1,282	1,356	1,460	1,540	1,578	1,583	1,537	1,483	1,413	1,340	1,263	1,182	1,097	1,007	913	814	710	600	485	365	237	104	0	0	0	

Feb4 1c, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*94*	*276*	*445*	*622*	*781*	*900*	*1,000*	*1,108*	*1,219*	*1,298*	*1,383*	*1,483*	*1,551*	*1,583*	*1,572*	*1,525*	*1,466*	*1,395*	*1,321*	*1,243*	*1,161*	*1,074*	*984*	*888*	*788*	*683*	*572*	*456*	*333*	*205*	*69*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,772	3,525	3,239	3,857	2,513	2,239	1,763	2,566	1,882	1,270	2,164	1,835	883	414	-882	-985	-1,381	-1,451	-1,526	-1,604	-1,686	-1,772	-1,863	-1,958	-2,058	-2,163	-2,274	-2,390	-2,513	-2,641	-2,776	0	0	0	





30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

TO BE

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,556	3,123	1,728	1,400	836	1,560	821	167

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

E UPDATED

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

JK: Fixed the formula in the yellow highlighted cells. Pls. check. (SK: looks good to me)

	Tab
v16 GA Financing - Scenario 1a 1b v18 (with fiscal) - Feb 4_v2.xlsx	Powerpoint_Export Scenario tabs

Change Description

Added in trigger for later start in the year
Updated IESO forecast from Energy (IESO GA Cost Forecast 170207 (Feb 6 update).xlsx)

Equal Monthly Debt Drawdown

		Month	Months Remai
Scenario Start Date	**July**	7	6

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	3,180	2,888
Annual Exposure2 with start on July 1st	*1,590*	*2,888*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	795	3,107
Start: July 1st	-	*2,312*

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	851	3,335
Start: July 1st	-	*2,484*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	1,168	1,765
Annual Exposure2 with start on July 1st	*584*	*1,765*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	292	1,609
Start: July 1st	-	*1,025*

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,449	2,040
Annual Exposure2 with start on July 1st	*725*	*2,040*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,597
Start: July 1st	-	*1,959*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335
Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3575**
Total, B	362	1837
Proposed Program Total:	362 - 851	1,837 - 3,575

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,556	3,123	1,728	1,400
2,556	*3,123*	*1,728*	*1,400*

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646
2,805	*2,697*	*2,774*	*1,646*

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

ıking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
2,311	3,750	2,311	1,933
2,311	*3,750*	*2,311*	*1,933*

2018-19	2019-20	2020-21	2021-2022

1,901	2,671	3,391	2,217
1,901	*2,671*	*3,391*	*2,217*

2019	2020	2021	2022
2,581	4,016	2,598	2,241
2,581	*4,016*	*2,598*	*2,241*

2018-19	2019-20	2020-21	2021-2022
2,175	2,940	3,662	2,508
2,175	*2,940*	*3,662*	*2,508*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

/1

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052
2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

Equal Monthly Debt Drawdown

		Month	Months Remaining
Scenario Start Date	July	7	6

AS LONG AS >

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	3,180	2,888	2,556

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	795	3,107	2,805
Fiscal Exposure, 25%	199	777	701

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Annual Exposure[2]	3,404	3,128	2,812

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	851	3,335	3,049
Fiscal Exposure, 25%	213	834	762

Indicates year in which, similar to OPCD's exa
closest to 30%. As Fiscal 2016/17 is a partial y
month the GA deferral begins.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu
decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions	9%	14%	18%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	1,168	1,765	2,311

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	292	1,609	1,901
Fiscal Exposure, 25%	73	402	475

Scenario 1b - 30-yr amortization	2017	2018	2019
Annual Exposure[2]	1,449	2,040	2,581

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	362	1,597	2,175
Fiscal Exposure, 25%	91	399	544

Indicates year in which, similar to OPCD's exar closest to 30%.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 ar
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu on accounting treatment.

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]
Debt-Finance Global Adjustment Costs, Option 1a	213	834	762
Debt-Finance Global Adjustment Costs, Option 1b	91	399	544
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**213**	**1074**	**1065**
Total, B	91	639	847

Proposed Program Total:	91 - 213	639 - 1,074	847 - 1,065

($M)	2016-171	2017-181	2018-191
Debt-Finance Global Adjustment Costs, Option 1a	851	3335	3049
Debt-Finance Global Adjustment Costs, Option 1b	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**851**	**3575**	**3352**
Total, B	362	1837	2478

Proposed Program Total:	362 - 851	1,837 - 3,575	2,478 - 3,352

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6

7	July	7	
8	August	8	
9	September	9	
10	October	10	
11	November	11	
12	December	12	

30-year term	**2016-17**	**2017-18**	**2018-19**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335	2,175 - 3,049

ROWS HIDDEN

1	1 = Comparision Enabled

APRIL 1, 2017 25%

2020	2021	2022
3,123	1,728	1,400

2019-20	2020-21	2021-2022
2,697	2,774	1,646
674	693	412

2020	2021	2022
3,396	2,020	1,712

2019-20	2020-21	2021-2022
2,958	3,052	1,943
740	763	486

mple, the true cost of GA being deferred is
ear, exposure may be less subject to which

l $17-21 billion (at 3.5% interest rate), peaking in 2028.
$33-$36 million.

ıals per month based on month of the year. Actuals may also depend on

28%	17%	13%
2020	2021	2022
3,750	2,311	1,933

2019-20	2020-21	2021-2022
2,671	3,391	2,217
668	848	554

2020	2021	2022
4,016	2,598	2,241

2019-20	2020-21	2021-2022
2,940	3,662	2,508
735	915	627

mple, the true cost of GA being deferred is

ıd $17-21 billion (at 3.5% interest rate), peaking in 2028.
$118-$134 million.

ıals per month based on month of the year. Actuals may also depend on decision

2019-20[1]	2020-21[1]
740	763
735	915
279	323
60	60
18	18
1097	**1164**
1092	1316

1,092 - 1,097 1,316 - 1,164

2019-201	2020-211
2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453





2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964
Equal Monthly Debt Drawdown	3,180	952

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

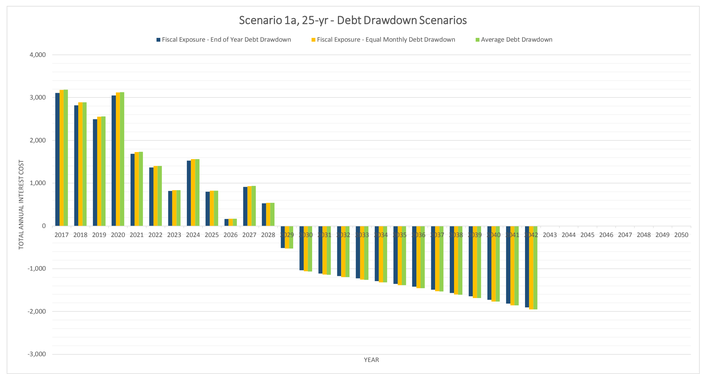
		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

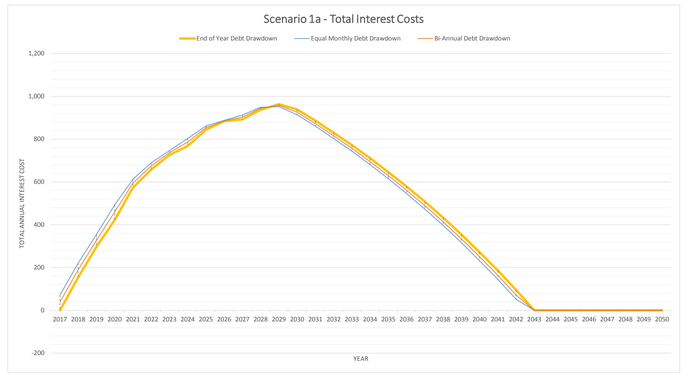
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	3,665	968	
Equal Monthly Debt Drawdown	3,750	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

		9%	14%	18%	28%	17%	13%																													
Scenario 1b, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

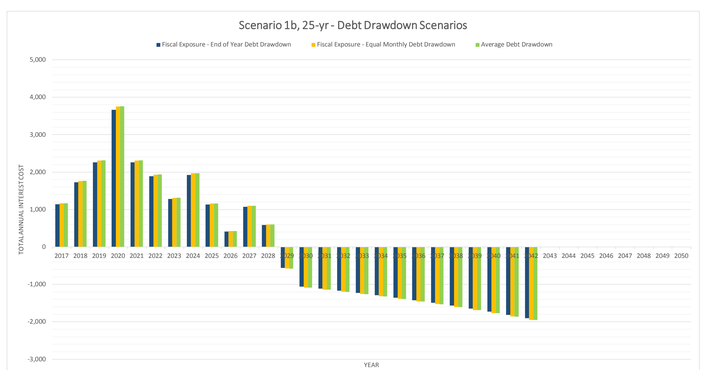
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	*954*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

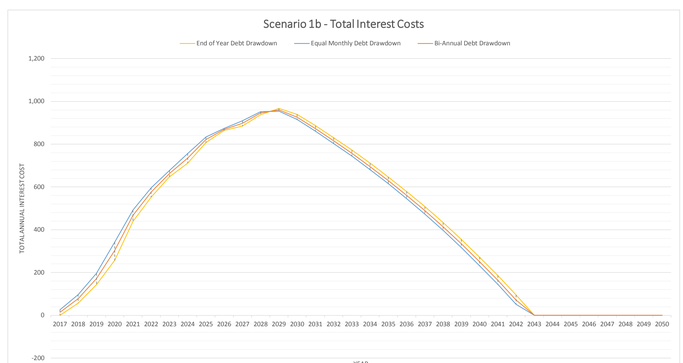
	Monthly Drawdown	95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

		28%	24%	21%	24%	12%	9%																													
Scenario 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1a, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	*1,156*	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

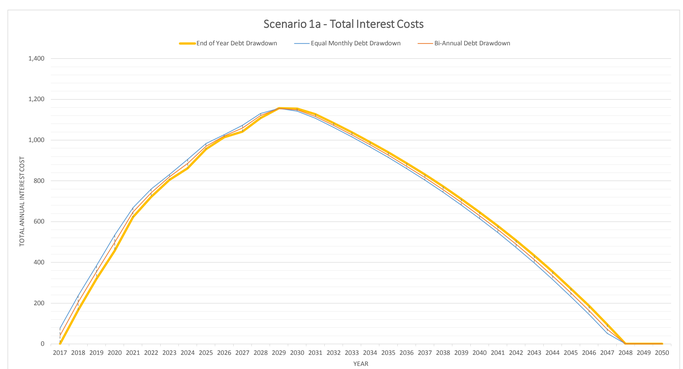
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

		12%	16%	20%	30%	19%	15%																													
Scenario 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

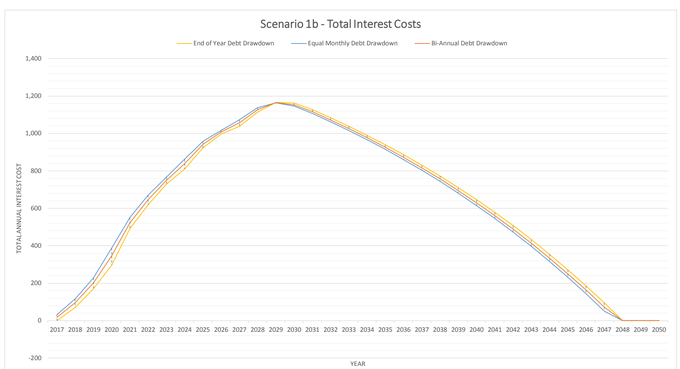
	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

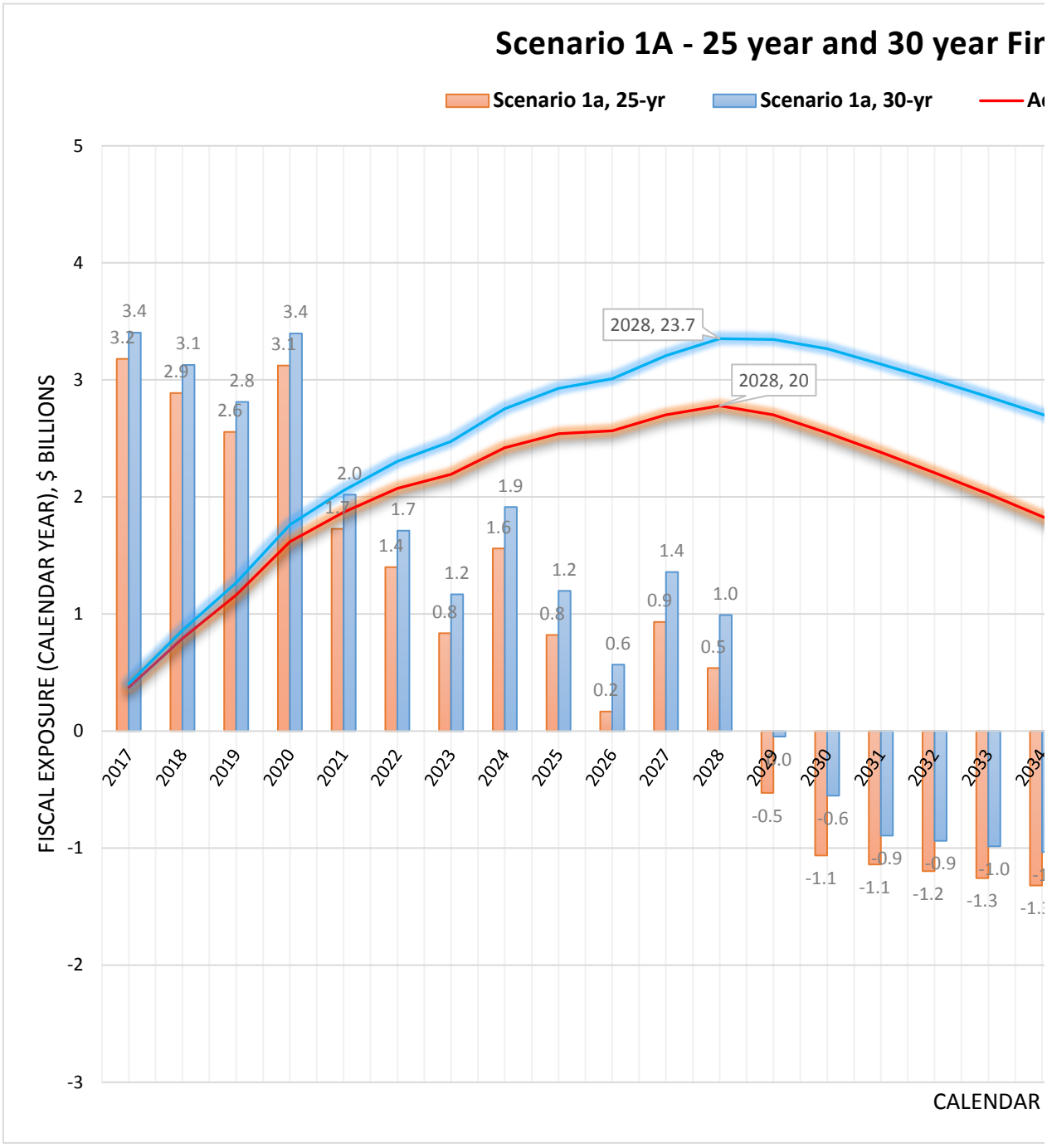
	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

Scenario 1b, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

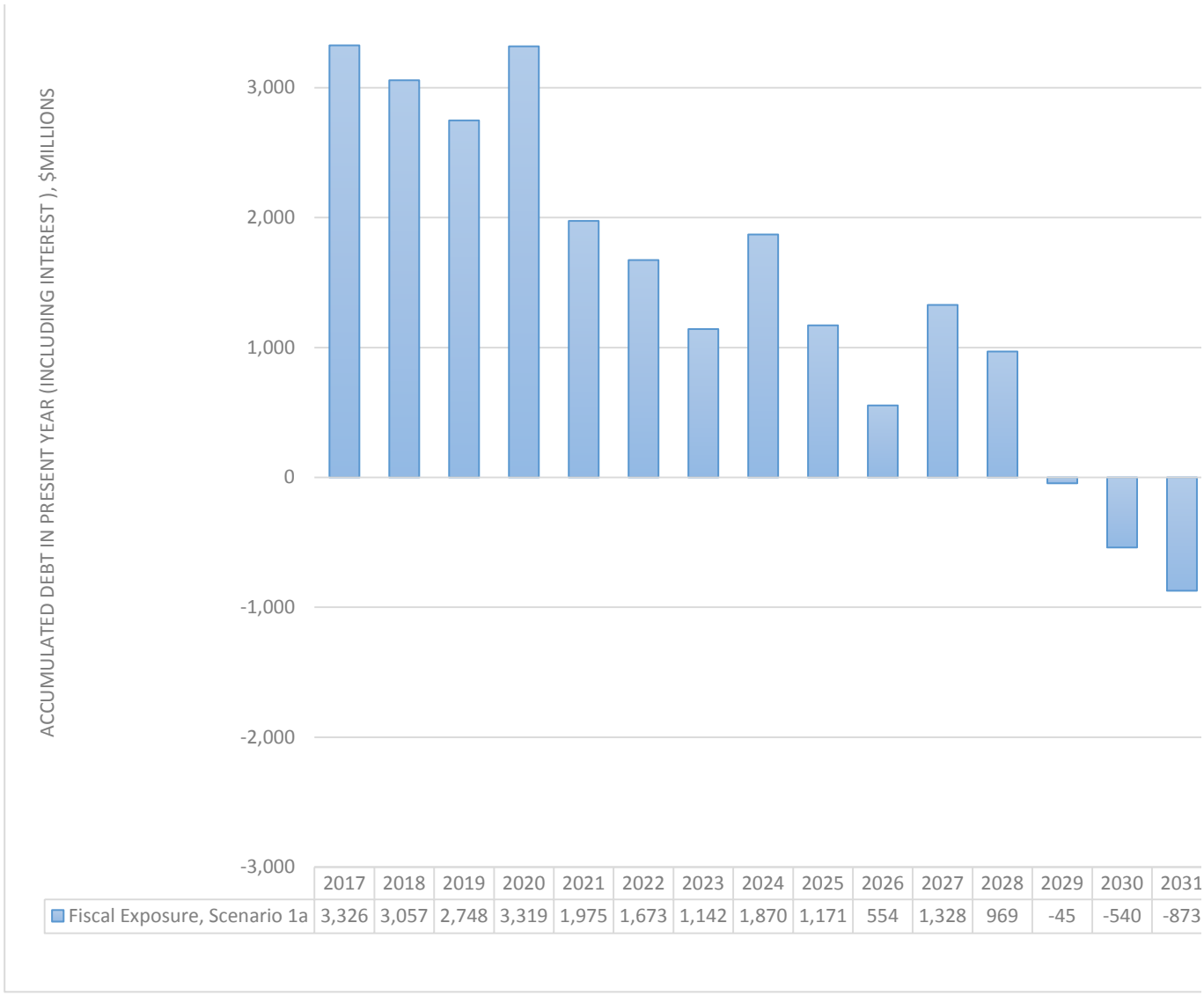




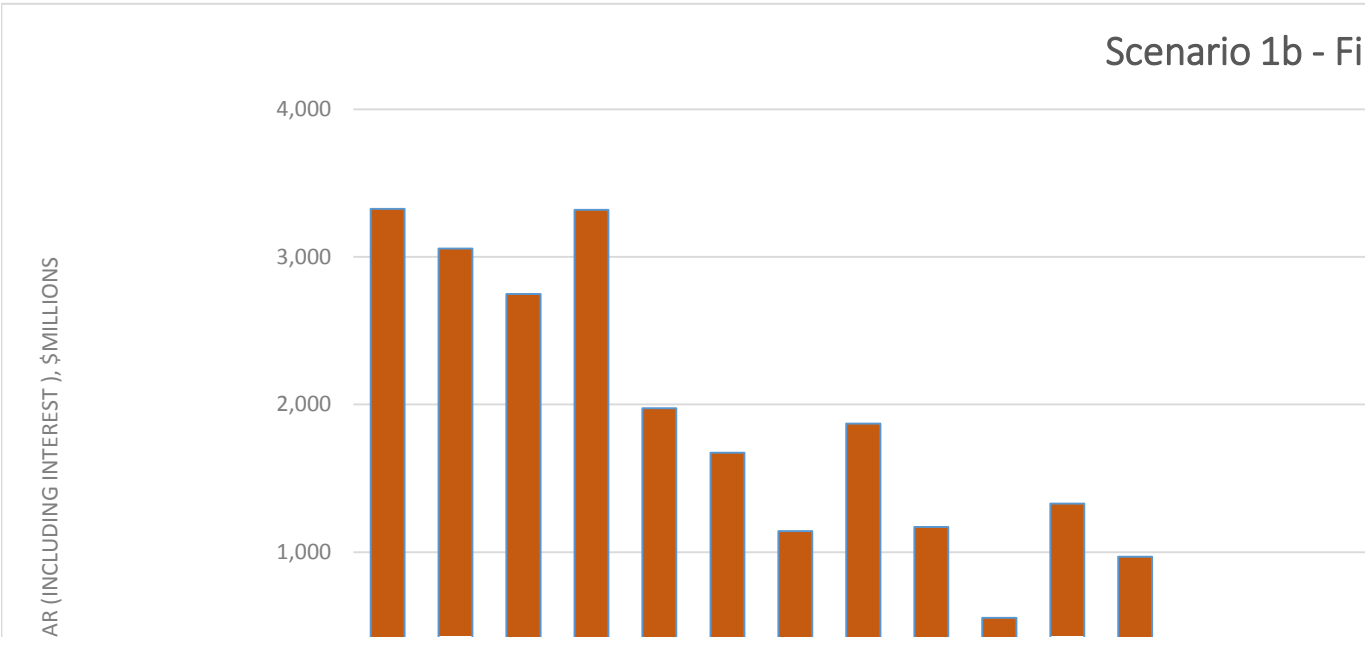
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

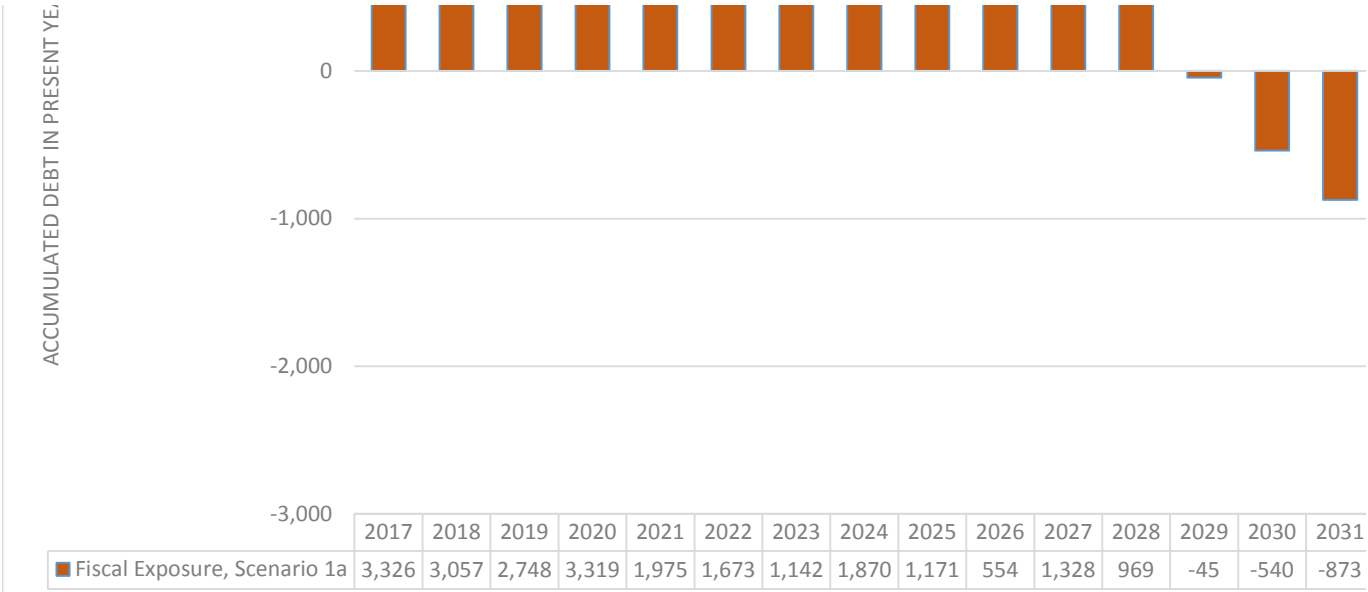




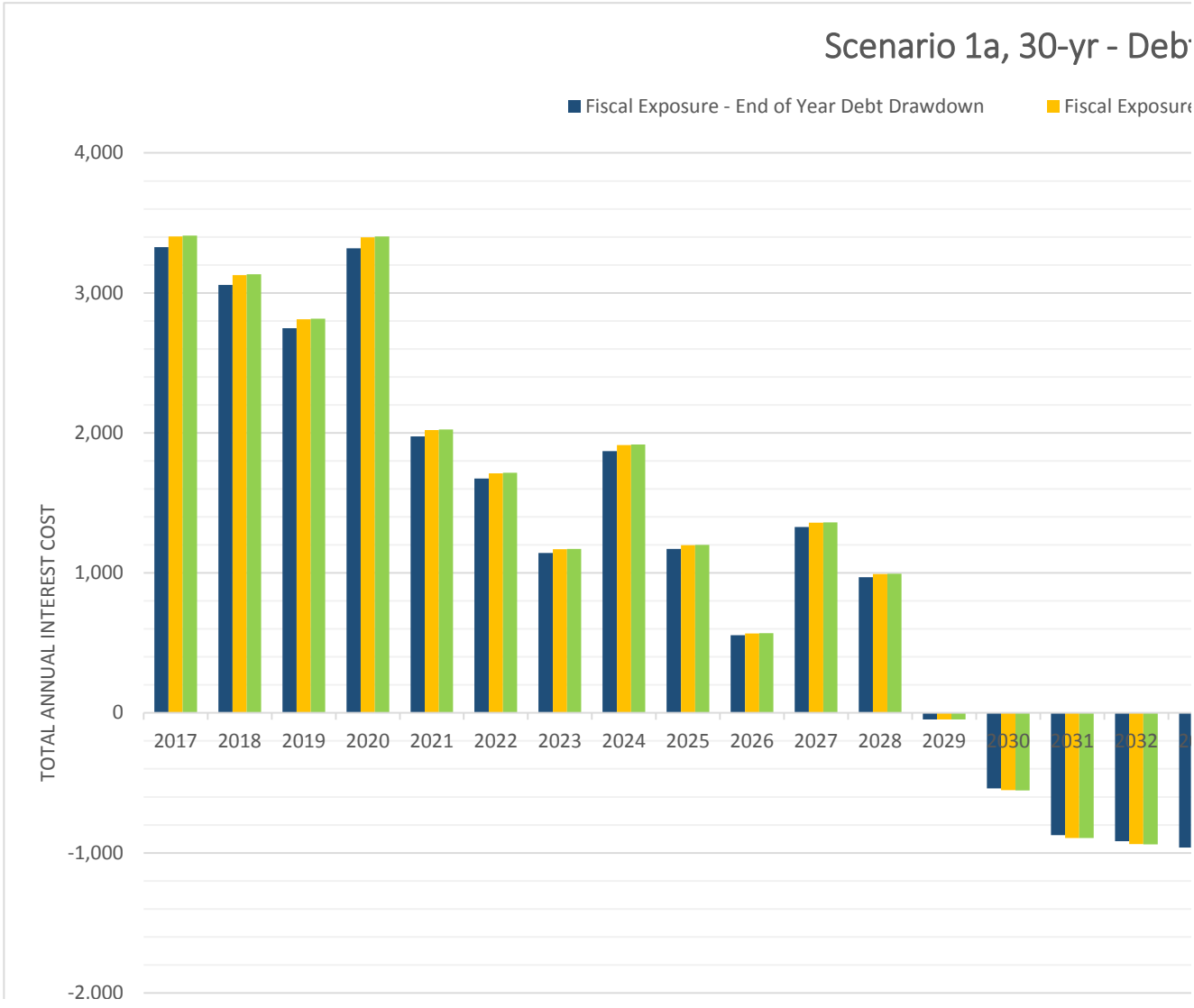


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



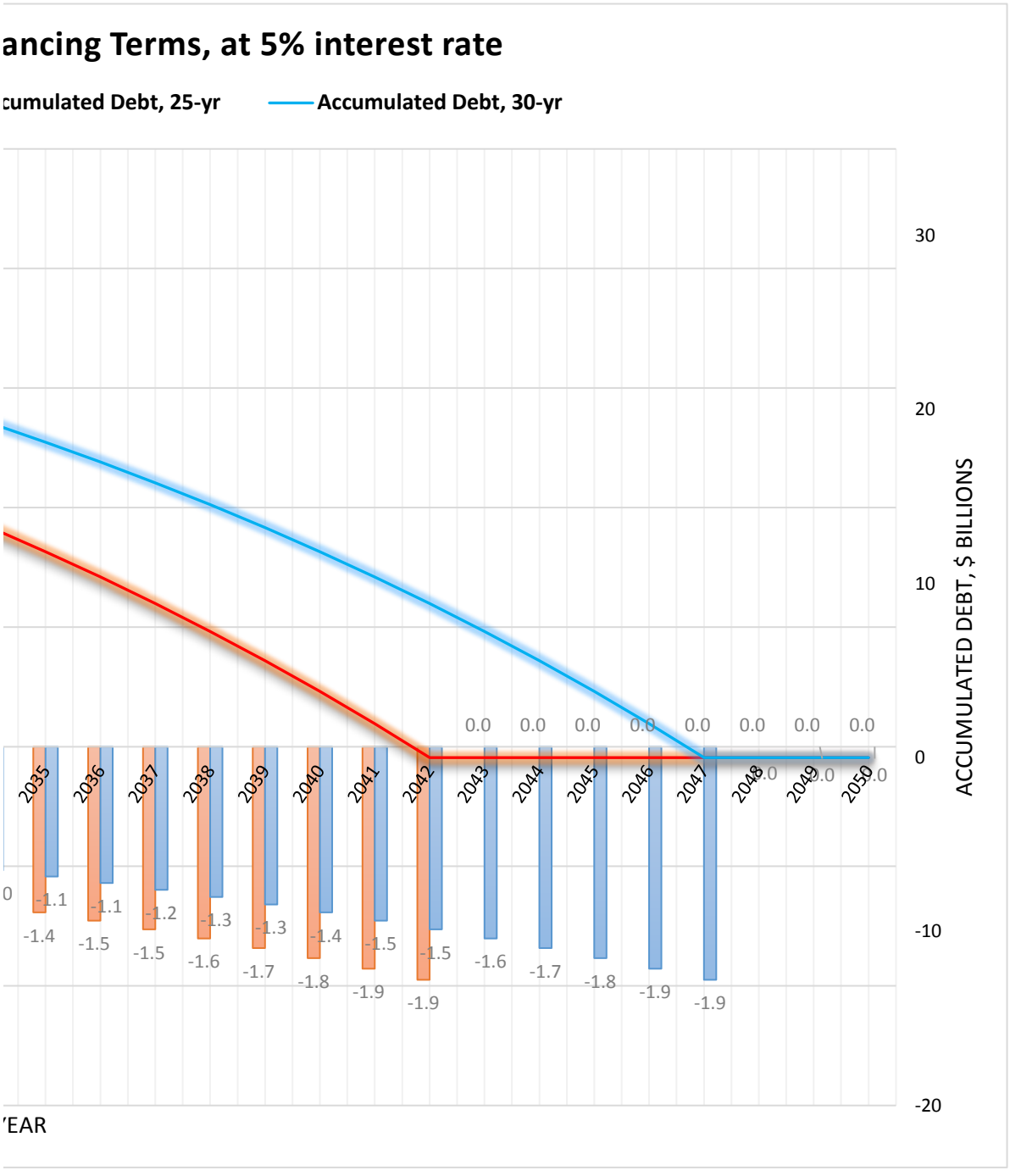


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



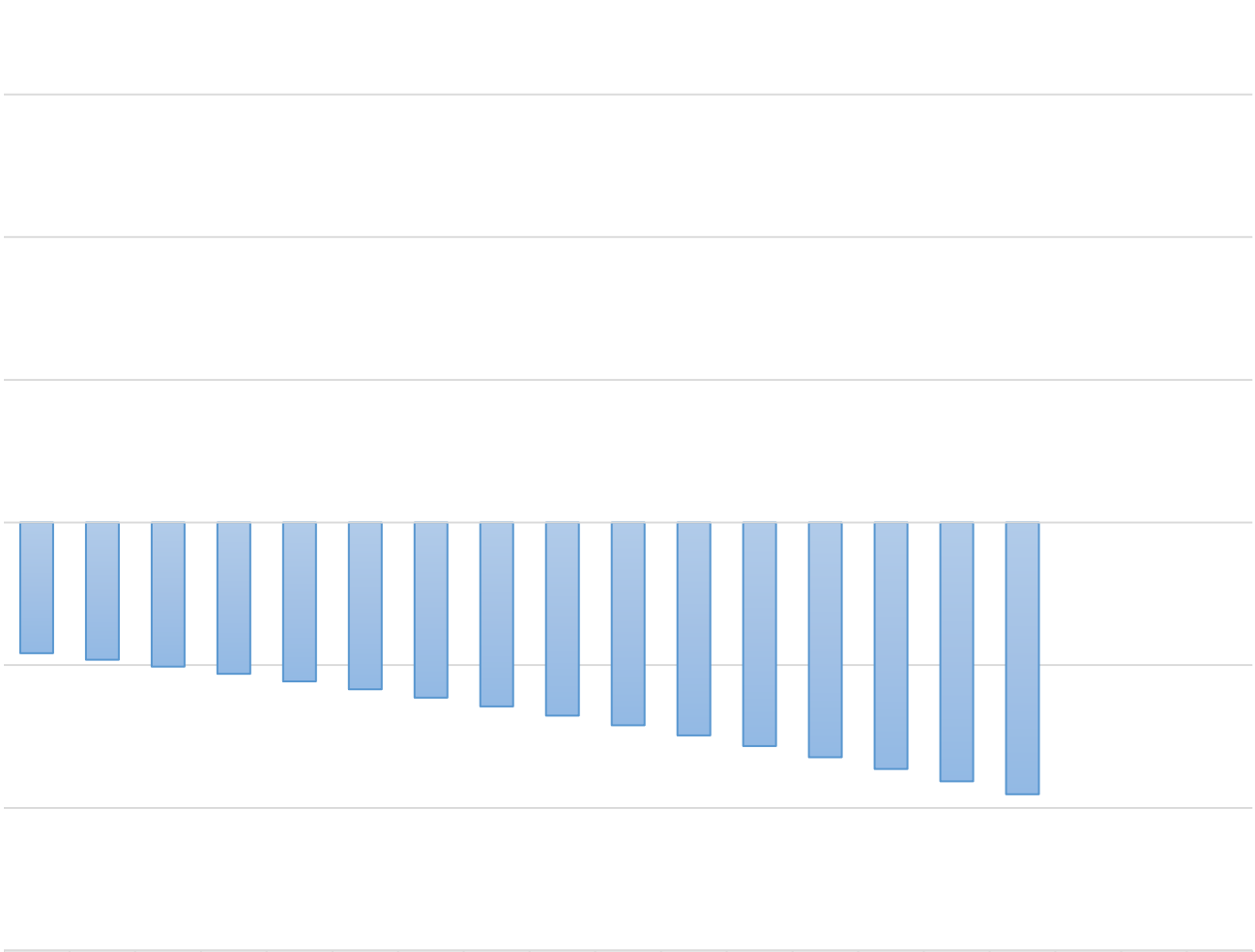

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

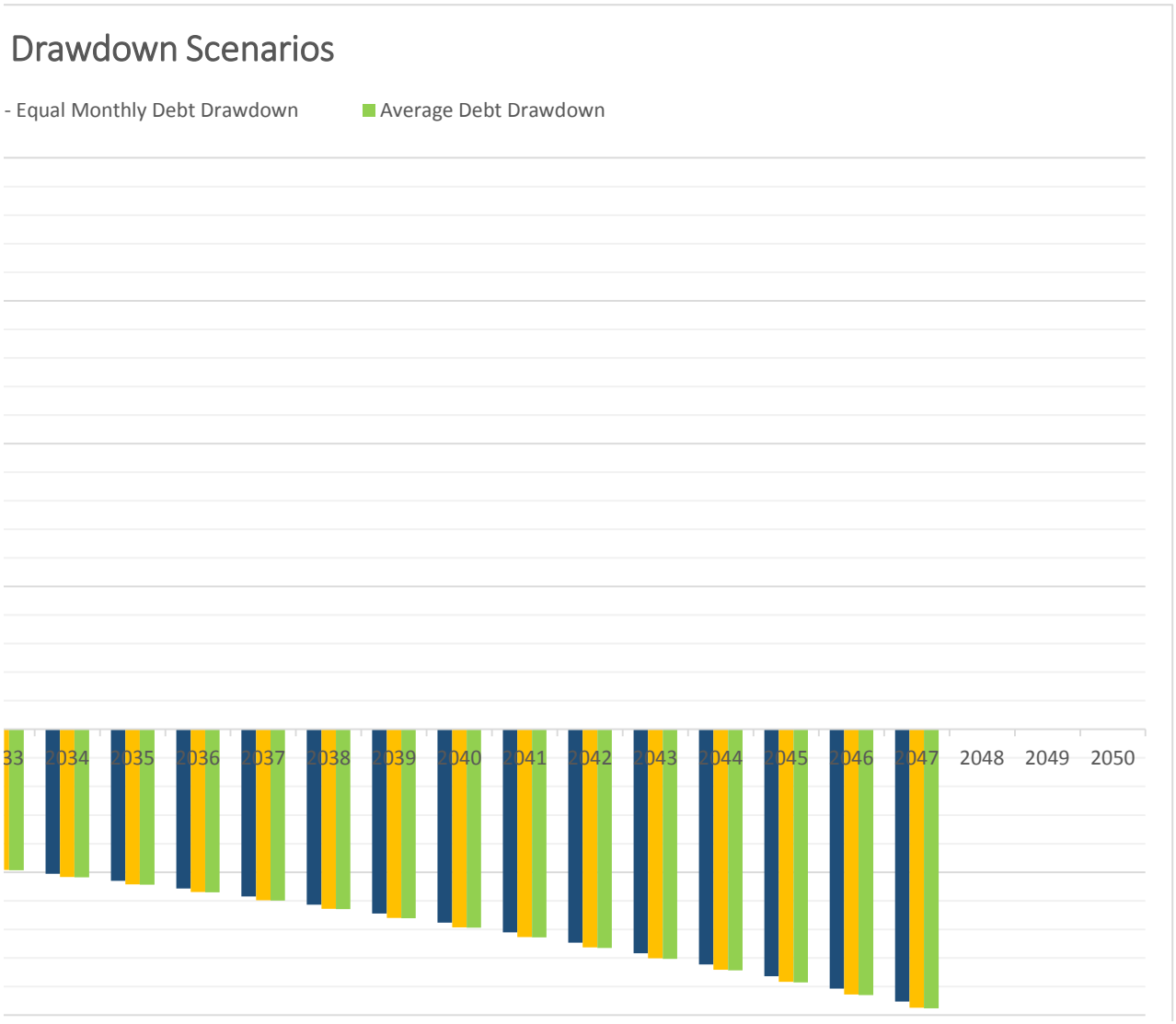
YEAR

cal Exposure



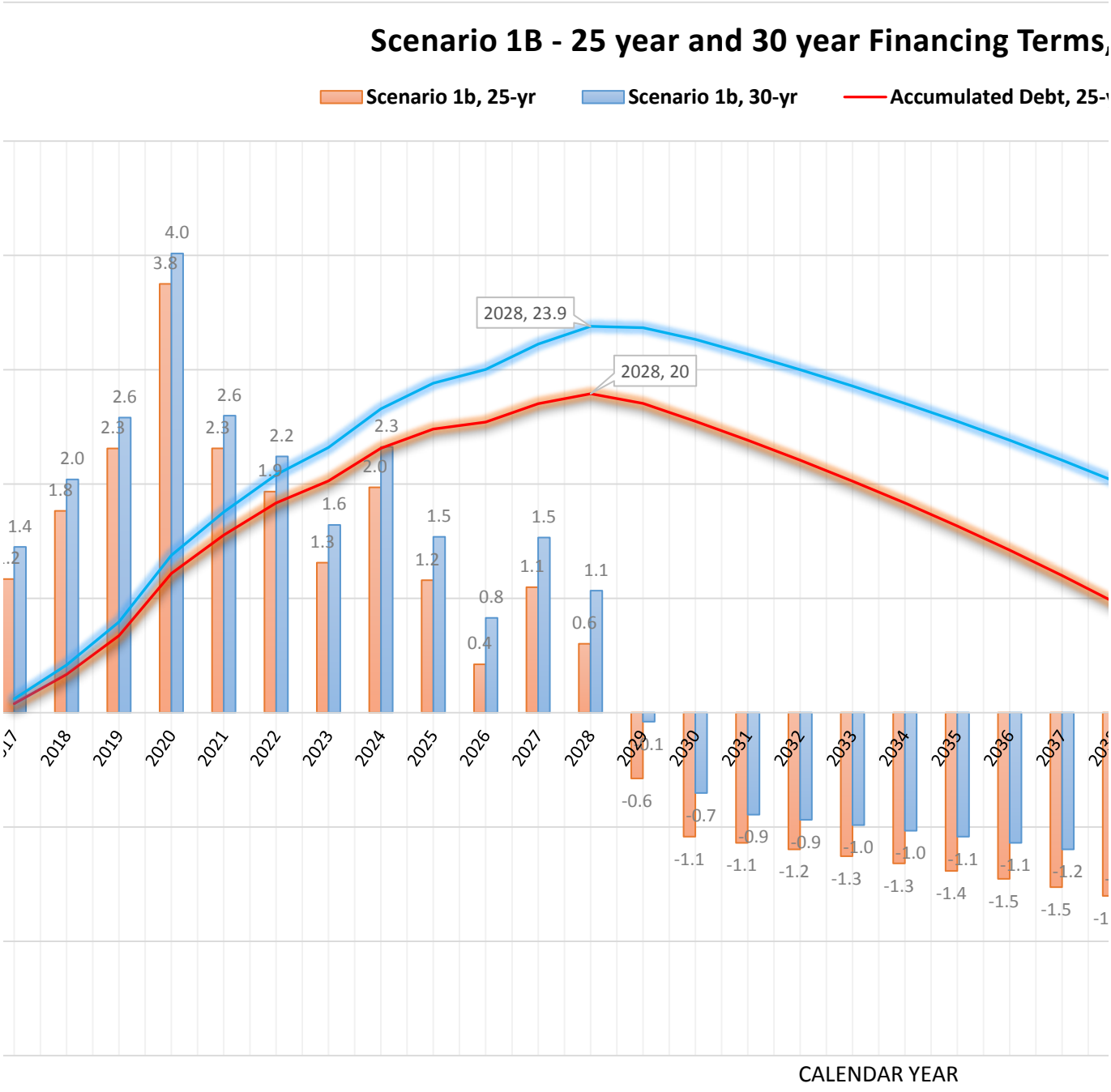
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

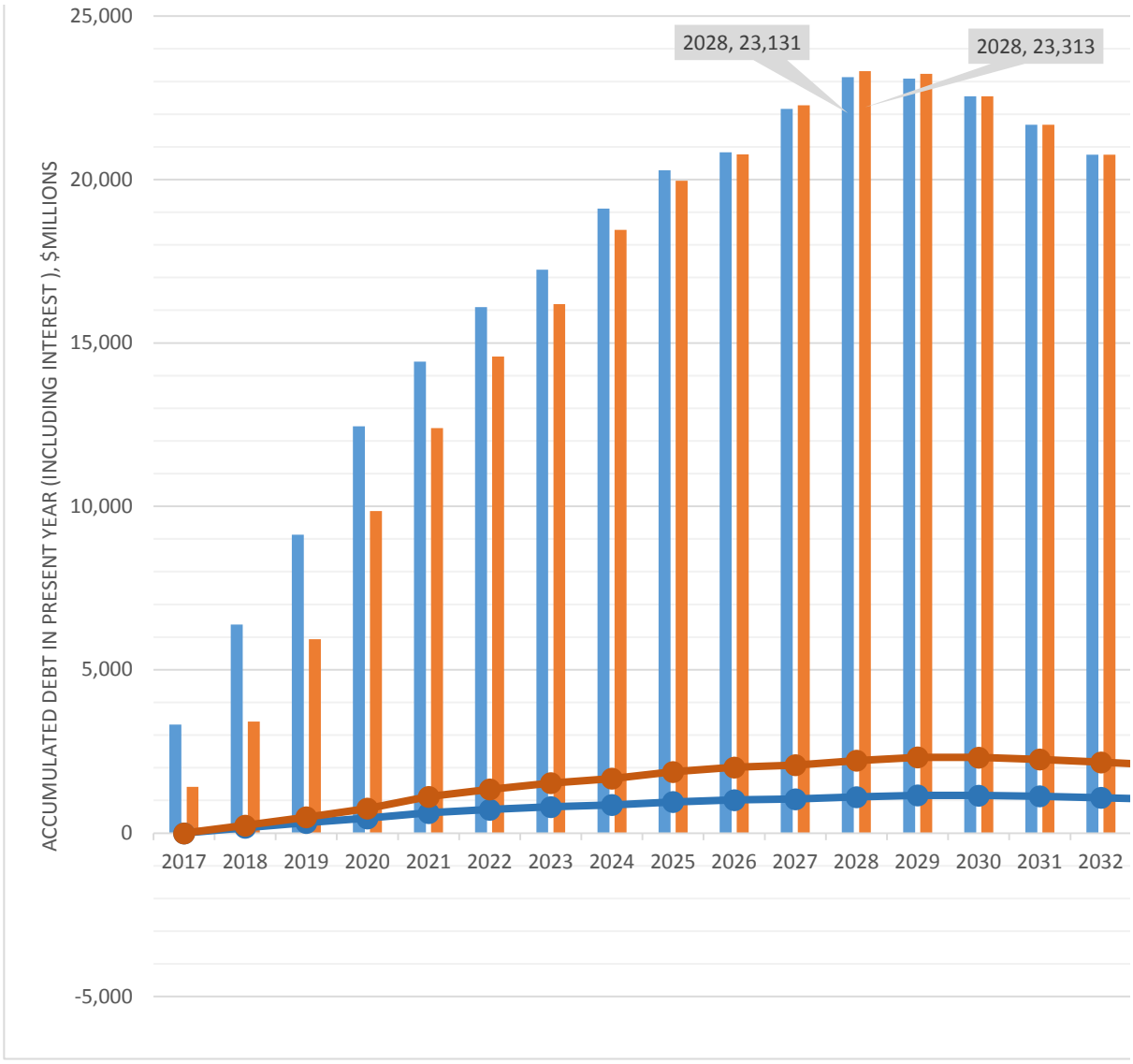


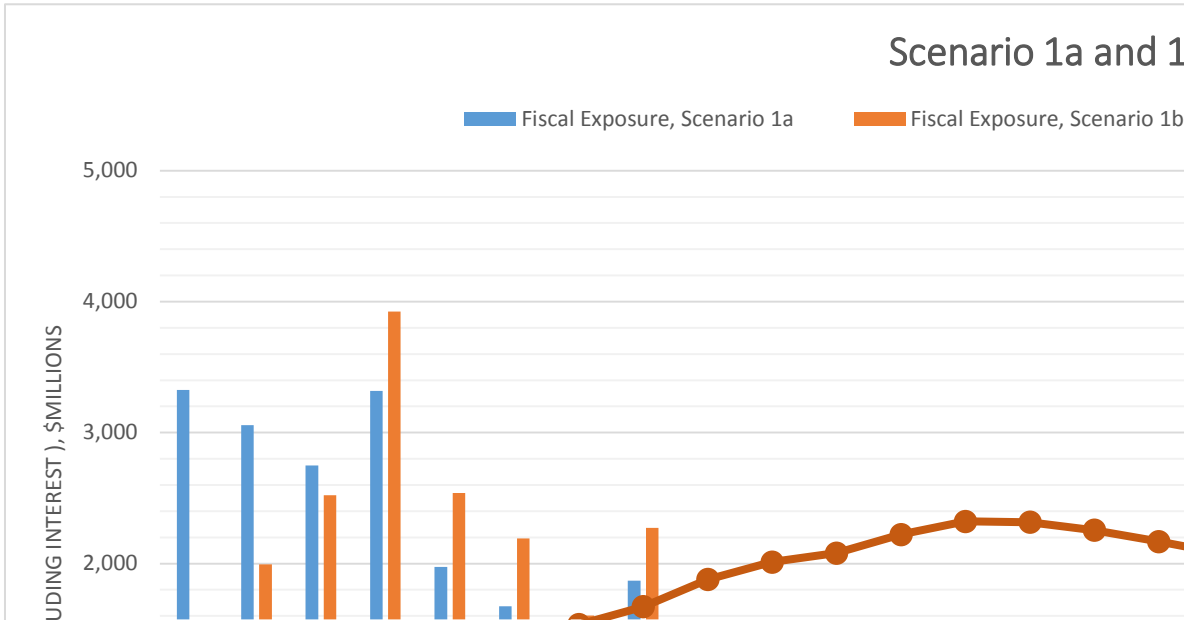
YEAR

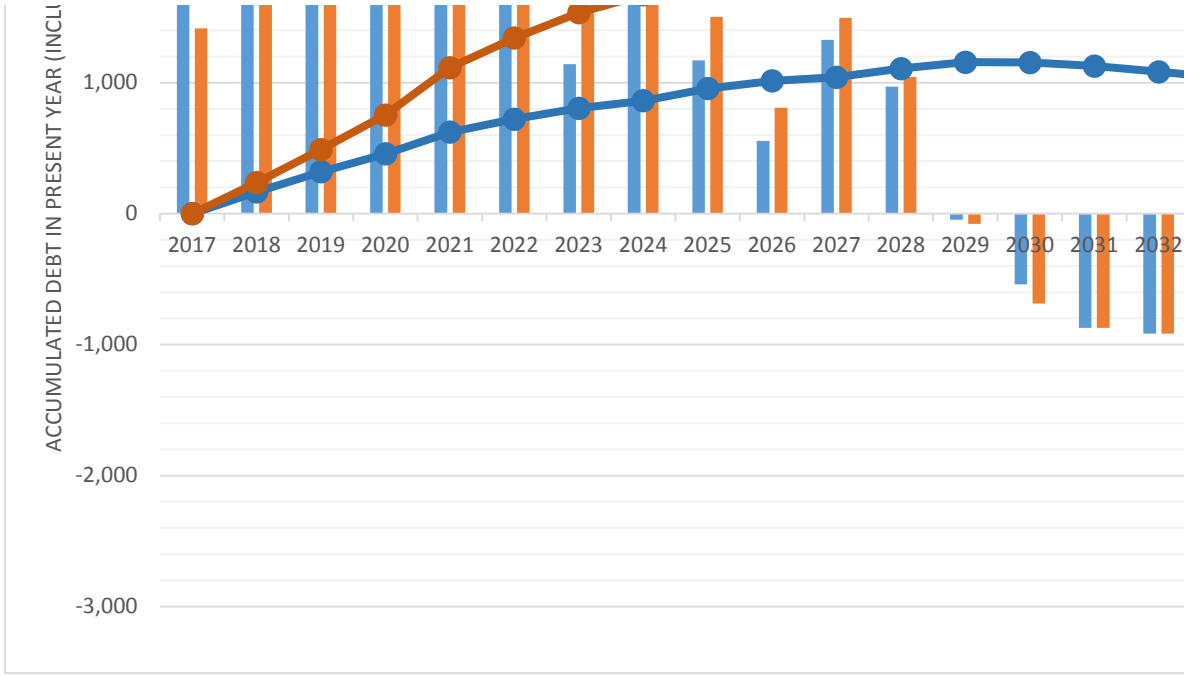
3 - 25 year and 30 year Financing Terms, at 5% interest rate

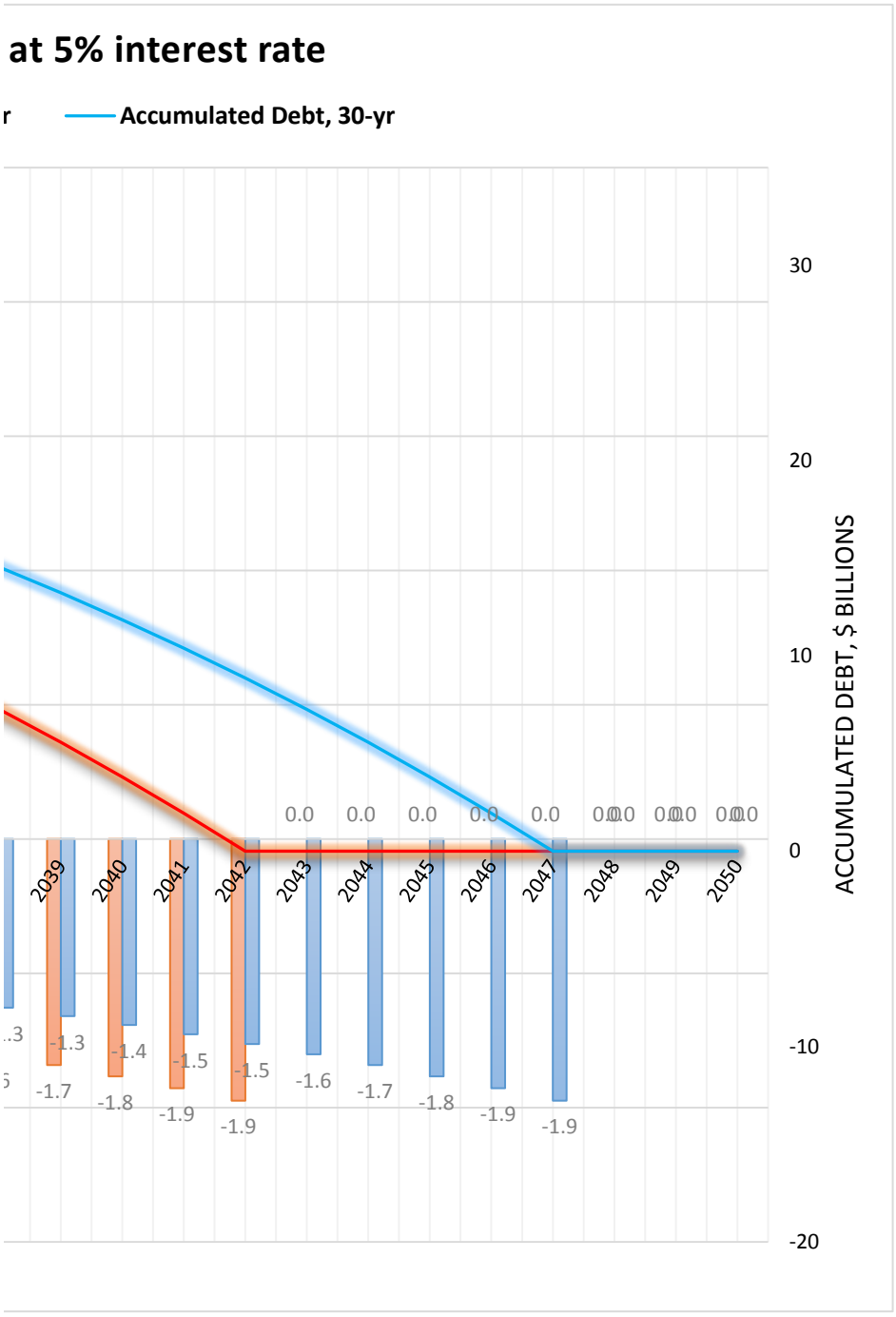





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

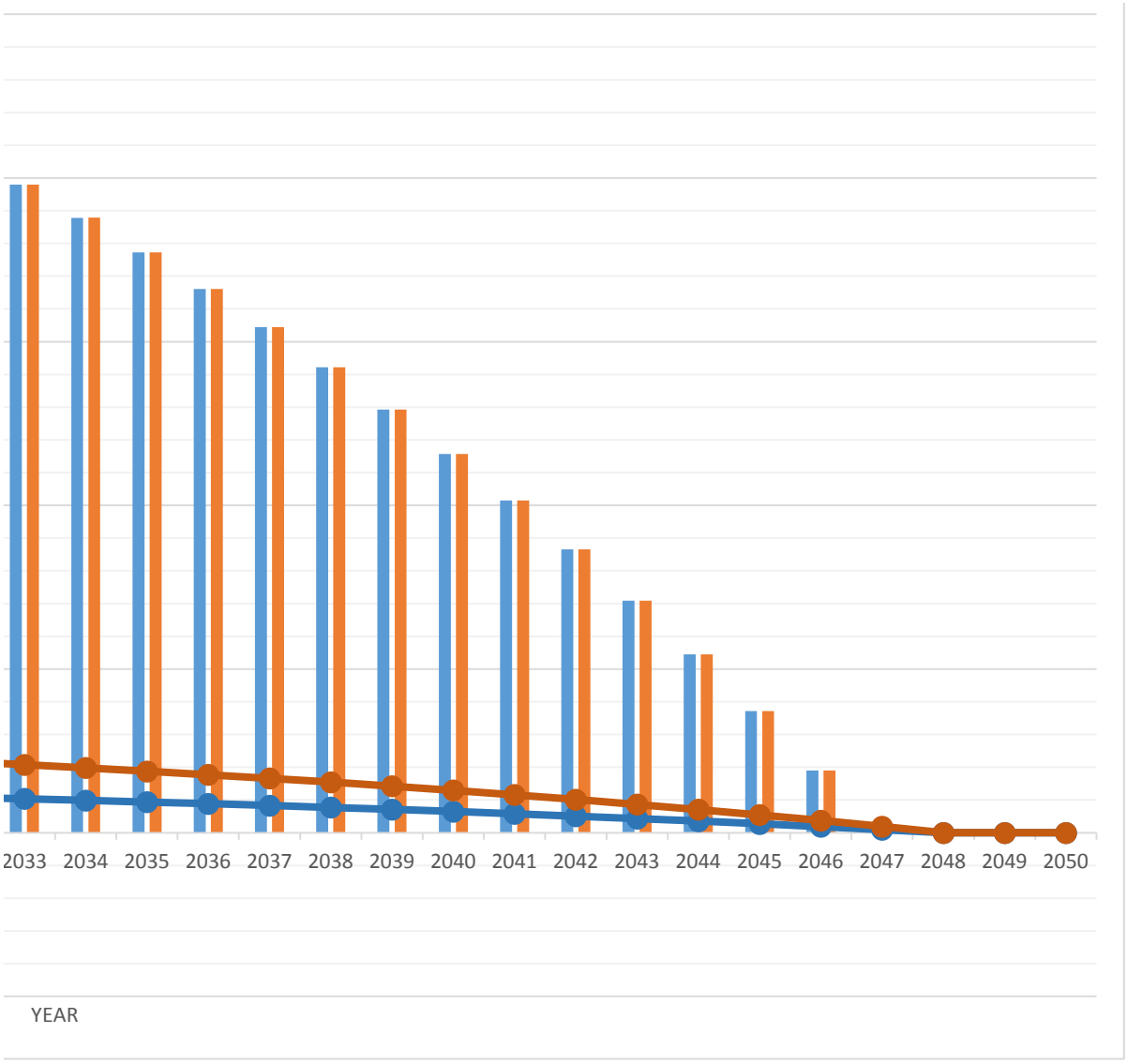

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

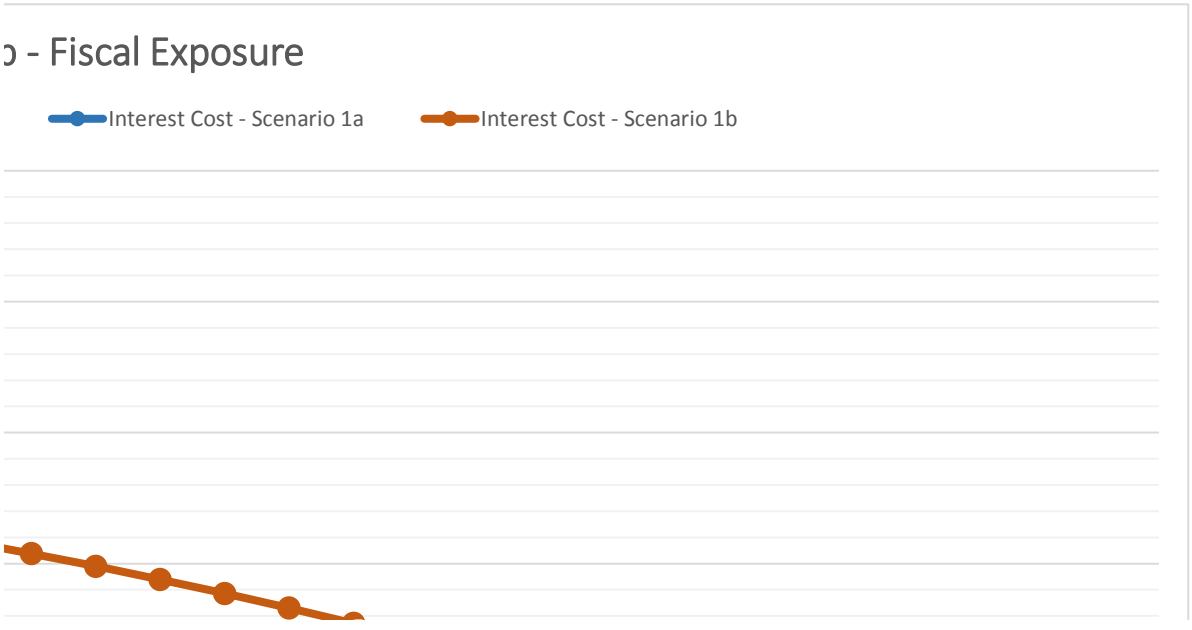

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

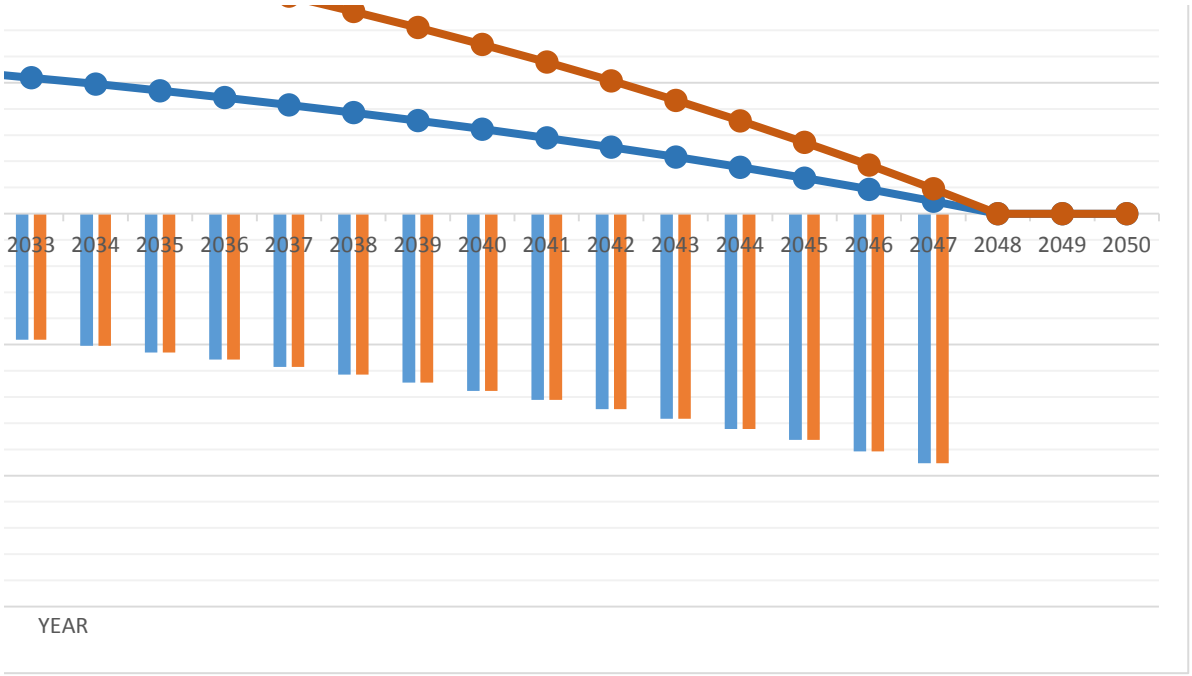


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

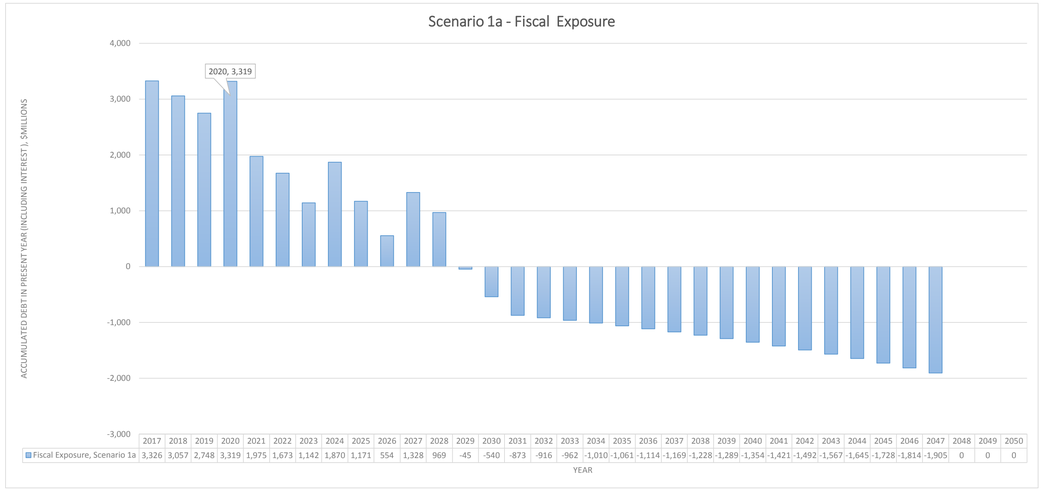
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

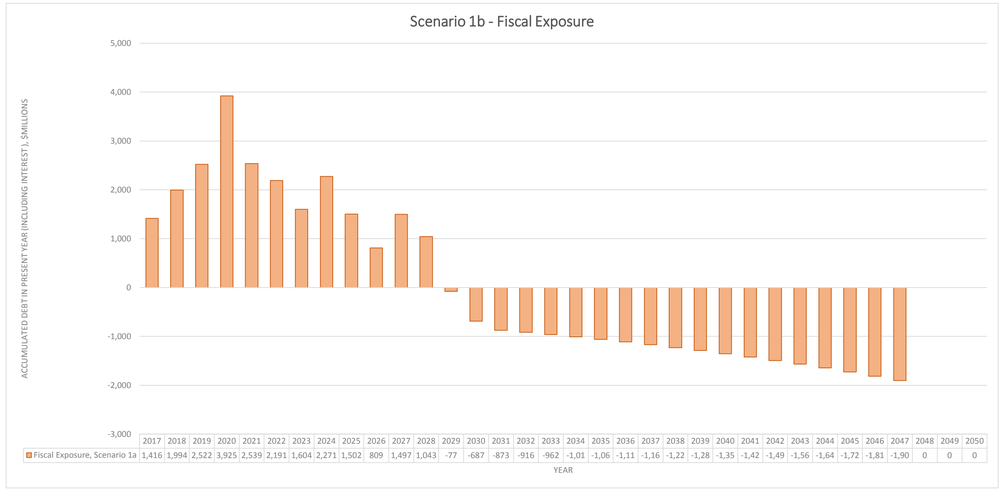
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

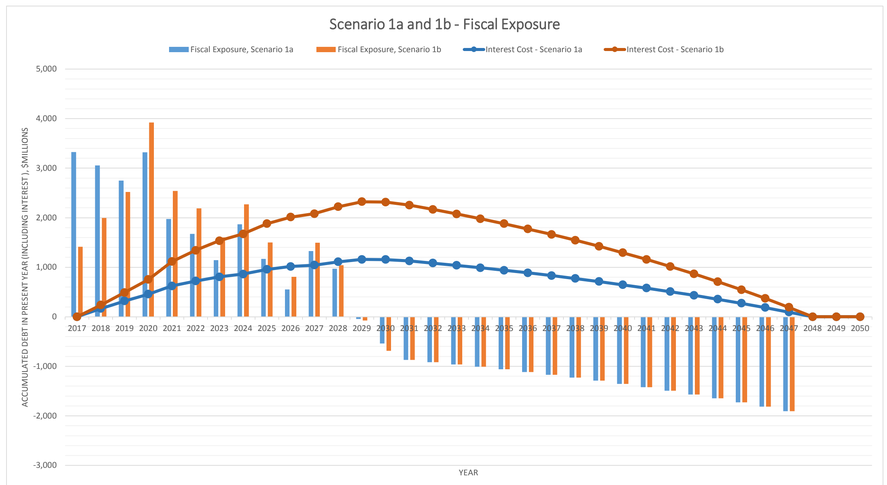
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

Notes:	Accounting treatment is to be determined.


Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0


Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0


Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest

IESO GA cost forecast + extrapolation

Scenario
Option 1
Bills Lowered 25%, RPP-Eligible Only
Option 2
Bills Lowered 20%, RPP-Eligible Only
Option 3
Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only

rate	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
Ratepayer GA Payment	9,595	9,327	9,051	9,094
Total Accumulated Debt ($ billion)	2,501	5,136	7,900	11,379
		-2.8%	-3.0%	0.5%
Ratepayer GA Payment	10,346	10,093	9,827	9,886
Accumulated debt in present year (including 5% interest,	1,749	3,580	5,488	8,052
Ratepayer GA Payment	10,648	10,303	10,186	10,873
Accumulated debt in present year (including 5% interest,	1,447	3,053	4,575	6,105

2021	2022	2023	2024	2025	2026	2027
10,844	10,634	10,243	11,128	10,527	10,033	11,043

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
10844	10634	10243	11128	10527	10033	11043
8,184	8,374	8,569	8,768	8,972	9,180	9,394
14,621	17,629	20,205	23,599	26,362	28,564	31,674
-10.0%	2.3%	2.3247180421718900000%	2.3%	2.3%	2.3%	2.3%
	TRUE	FALSE	FALSE	FALSE	FALSE	
8,991	9,200	9,414	9,633	9,857	10,086	10,321
10,316	12,278	13,735	15,933	17,418	18,256	19,913
9,733	9,573	9,240	10,128	9,620	9,238	10,318
7,527	8,973	10,436	11,970	13,490	14,976	16,467

2028	2029	2030	2031	2032	2033	2034	2035
10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662

2028	2029	2030	2031	2032	2033	2034	2035
10819	10009	9721	8654	8820	8238	7756	5662
9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585
34,502	36,440	37,962	38,260	38,500	37,925	36,589	34,538
2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	-13.1%
10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563
21,190	21,477	21,240	20,426	19,571	18,672	17,727	16,733
10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879
17,876	18,843	19,521	20,007	20,312	20,325	19,755	18,549

2036	2037	2038	2039	2040	2041	2042	2043
5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811

2036	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**
5389	5129	4881	4645	4421	4207	4004	3811
9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733
32,383	30,117	27,736	25,232	22,601	19,835	16,927	13,871
-2.9%	-2.8%	-2.7%	-2.7%	-2.6%	-2.6%	-2.5%	-2.4%
7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711
15,689	14,591	13,438	12,225	10,950	9,610	8,201	6,720
7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348
17,050	15,464	13,694	12,062	10,556	9,143	7,810	6,672

2044	2045	2046	2047	2048

3,627 3,451 3,285 3,126 2,975 2,831 2,695

2044	2045	2046	2047	2048	2049	2050
3627	3451	3285	3126	2975	2831	2695

7,549	7,374	7,207	7,048	2,975	2,831	2,695
10,658	7,281	3,731	0	0	0	0
-2.4%	-2.3%	-2.3%				
5,527	5,352	5,185	5,026	2,975	2,831	2,695
5,164	3,528	1,808	-	-	-	-
4,712	4,007	3,619	3,425	3,156	3,011	2,878
5,928	5,676	5,633	5,623	5,730	5,843	5,959

5%	End of Year Debt Drawdown	2017	2018
	IESO GA cost forecast + extrapolation	12,095	11,835
	Ratepayer GA Payment	9,595	9,327
	GA Debt Requirement	2,501	2,508
	Debt, Beginning of Year	0	2,501
	Interest Cost - Feb22 Option 1, 30-yr - End of Year Debt Drawdown	*0*	*128*
	Additional GA Debt Drawdown, End of Year	2,501	2,508
	Accumulated debt in present year (including 5.12% annual interest)	2,501	5,136

5.000050%	End of Year Debt Drawdown	2017	2018
			-2.16%
			-2.79%
	IESO GA cost forecast + extrapolation	12,095	11,835
	Ratepayer GA Payment	9,595	9,327
	GA Debt Requirement	2,501	2,508
	Debt, Beginning of Year	0	2,501
	Interest Cost - Feb22 Option 1, 30-yr - End of Year Debt Drawdown	*0*	*128*
	Additional GA Debt Drawdown, End of Year	2,501	2,508
	Accumulated debt in present year (including 5.12% annual interest)	2,501	5,136
		0.00	0.00
		0.90	for 0.00005
		4518.213	for 0.25%

5.250000%	End of Year Debt Drawdown	2017	2018
	IESO GA cost forecast + extrapolation	12,095	11,835
	Ratepayer GA Payment	9,595	9,327
	GA Debt Requirement	2,501	2,508
	Debt, Beginning of Year	0	2,501
	Interest Cost - Feb22 Option 1, 30-yr - End of Year Debt Drawdown	*0*	*134*
	Additional GA Debt Drawdown, End of Year	2,501	2,508
	Accumulated debt in present year (including 5.12% annual interest)	2,501	5,143

5.25% and 5.0%	0	7
	0	6.544088
	-4746.31	

2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
	22.9%								
	0.5%	-10.0%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%
11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819
9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
5,136	7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675
263	*404*	*582*	*748*	*902*	*1,034*	*1,207*	*1,349*	*1,461*	*1,621*
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675	34,502

2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
-2.39%	5.34%	-10.89%	-1.94%	-3.67%	8.64%	-5.40%	-4.69%	10.06%	-2.03%
-2.95%	0.47%	-10.01%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%
11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819
9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
5,136	7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675
263	*404*	*582*	*748*	*902*	*1,034*	*1,207*	*1,349*	*1,461*	*1,621*
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675	34,502
0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02

5%

5000

2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819
9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
5,143	7,921	11,421	14,695	17,745	20,374	23,830	26,667	28,955	32,161
277	*426*	*614*	*790*	*954*	*1,096*	*1,282*	*1,434*	*1,557*	*1,730*
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
7,921	11,421	14,695	17,745	20,374	23,830	26,667	28,955	32,161	35,098

14	22	32	42	52	62	74	85	96	109
13.77695	21.71447	31.92933	42.04725	52.06963	61.4769	73.50439	84.49516	94.58025	107.5596

2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
2.3%	2.3%	2.3%	2.3%						
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881
9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
34,502	36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,384	30,119
1,765	*1,864*	*1,942*	*1,957*	*1,970*	*1,940*	*1,872*	*1,767*	*1,657*	*1,541*
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,384	30,119	27,737

2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
-7.49%	-2.87%	-10.98%	1.91%	-6.60%	-5.85%	-27.00%	-4.83%	-4.83%	-4.83%
2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	-13.13%	-2.85%	-2.80%	-2.74%
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881
9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
34,502	36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,385	30,119
1,765	*1,864*	*1,942*	*1,958*	*1,970*	*1,940*	*1,872*	*1,767*	*1,657*	*1,541*
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,385	30,119	27,738
0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04

2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881
9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
35,098	37,159	38,815	39,258	39,652	39,240	38,074	36,200	34,224	32,142
1,888	*1,998*	*2,088*	*2,111*	*2,133*	*2,110*	*2,048*	*1,947*	*1,841*	*1,729*
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
37,159	38,815	39,258	39,652	39,240	38,074	36,200	34,224	32,142	29,949

122	134	145	154	163	170	176	180	184	188
120.4625	131.6985	142.4188	150.4868	158.814	165.4355	170.4025	173.755	177.0044	180.1316

2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975
8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
27,737	25,234	22,603	19,837	16,929	13,873	10,661	7,284	3,734	3
1,419	*1,291*	*1,156*	*1,015*	*866*	*710*	*545*	*373*	*191*	*0*
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
25,234	22,603	19,837	16,929	13,873	10,661	7,284	3,734	3	3

2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%
-2.68%	-2.62%	-2.56%	-2.50%	-2.44%	-2.38%	-2.32%	-2.26%	-2.20%	-57.79%
4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975
8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
27,738	25,235	22,603	19,837	16,930	13,874	10,661	7,285	3,735	4
1,419	*1,291*	*1,156*	*1,015*	*866*	*710*	*545*	*373*	*191*	*0*
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
25,235	22,603	19,837	16,930	13,874	10,661	7,285	3,735	4	4
0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04

2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975
8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
29,949	27,637	25,201	22,634	19,929	17,079	14,075	10,909	7,574	4,059
1,611	*1,486*	*1,355*	*1,217*	*1,072*	*919*	*757*	*587*	*407*	*218*
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
27,637	25,201	22,634	19,929	17,079	14,075	10,909	7,574	4,059	4,277

192	195	199	202	206	209	212	214	216	218
183.1154	185.9331	188.5597	190.9684	193.13	195.013	196.583	197.8033	198.6338	199.0316

2049	2050
2,831	2,695
2,831	2,695
0	0
3	3
0	*0*
0	0
3	3

2049	2050
-4.83%	-4.83%
-4.83%	-4.83%
2,831	2,695
2,831	2,695
0	0
4	4
0	*0*
0	0
4	4
0.04	0.04

2049	2050
2,831	2,695
2,831	2,695
0	0
4,277	4,507
230	*242*
0	0
4,507	4,750

230	242
209.2149	219.9193

Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Mar_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,501	2,636	2,764	3,479	3,242	3,202	2,950	2,448	2,399	1,108	935	-826	-869	-913	-960	-1,009	-1,060	-1,115	-1,172	-1,232	-1,295	-1,361	-1,431	-1,504	-1,581	-1,662	-1,747	-1,836	-1,930	-2,029	-2,132	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,560	2,699	2,829	3,561	3,319	3,278	3,020	2,507	2,456	1,134	957	-846	-889	-935	-983	-1,033	-1,086	-1,141	-1,200	-1,261	-1,325	-1,393	-1,465	-1,539	-1,618	-1,701	-1,788	-1,880	-1,976	-2,077	-2,183	0	0	0
			59	63	66	83	77	76	70	58	57	26	22	-20	-21	-22	-23	-24	-25	-27	-28	-29	-31	-32	-34	-36	-38	-40	-42	-44	-46	-48	-51	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,479	1,415	25,137.2
Equal Monthly Debt Drawdown	3,561	1,396	

	Feb22 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	27,662.3	2027	20,332
Equal Monthly Debt Drawdown	28,320.3		

Feb22 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																				26
($ millions)			-2.79%	-2.95%	0.47%	-10.01%	-0.05%	0.32%	18.73%	-4.38%	9.88%	12.11%	13.81%	-6.20%	-2.34%	-8.92%	1.52%	-5.26%	-4.60%	-20.95%	-3.46%	-3.41%	-3.36%	-3.31%	-3.26%	-3.20%	-3.15%	-3.10%	-3.04%	-2.98%	-2.93%	-2.87%	-44.57%	-4.83%	-4.83%	
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,180	8,206	9,743	9,316	10,236	11,476	13,061	12,250	11,963	10,896	11,061	10,480	9,998	7,904	7,630	7,370	7,122	6,887	6,662	6,449	6,246	6,052	5,868	5,693	5,526	5,368	2,975	2,831	2,695	
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	0	
a	Debt, Beginning of Year	0	2,501	5,136	7,900	11,379	14,621	17,823	20,773	23,221	25,620	26,728	27,662	26,836	25,967	25,054	24,095	23,086	22,025	20,911	19,739	18,507	17,213	15,852	14,421	12,918	11,337	9,675	7,929	6,093	4,163	2,134	2	2	2	
c = a*5%	*Interest Cost - Feb22 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*128*	*263*	*404*	*582*	*748*	*912*	*1,063*	*1,188*	*1,311*	*1,367*	*1,415*	*1,373*	*1,329*	*1,282*	*1,233*	*1,181*	*1,127*	*1,070*	*1,010*	*947*	*881*	*811*	*738*	*661*	*580*	*495*	*406*	*312*	*213*	*109*	*0*	*0*	*0*	25,137
b	Additional GA Debt Drawdown, End of Year	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,501	5,136	7,900	11,379	14,621	17,823	20,773	23,221	25,620	26,728	27,662	26,836	25,967	25,054	24,095	23,086	22,025	20,911	19,739	18,507	17,213	15,852	14,421	12,918	11,337	9,675	7,929	6,093	4,163	2,134	2	2	2	2	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb22 Option 1, 30-yr - Accumulated Interest Costs	0	128	391	795	1,377	2,125	3,037	4,100	5,288	6,599	7,966	9,381	10,754	9,841	8,882	8,882	8,882	8,882	8,882	8,882	8,882	8,882	8,882	8,882	8,882	8,882	8,882	6,093	4,163	2,134	2	2	2	2	
	Feb22 Option 1, 30-yr - Accumulated Debt Principal	2,501	5,009	7,509	10,584	13,244	15,698	17,736	19,121	20,332	20,129	19,696	17,455	15,213	15,213	15,213	14,204	13,144	12,029	10,858	9,626	8,331	6,970	5,540	4,036	2,455	794	-953	0	0	0	0	0	0	0	
	Feb22 Option 1, 30-yr - Accumulated Interest Costs	0	128	391	795	1,377	2,125	3,037	4,100	5,288	6,599	7,966	9,381	10,754	12,083	13,365	14,597	15,778	16,905	17,975	18,985	19,932	20,813	21,624	22,361	23,022	23,602	24,097	24,503	24,815	25,028	25,137				
	Feb22 Option 1, 30-yr - Accumulated Debt Principal	2,501	5,009	7,509	10,584	13,244	15,698	17,736	19,121	20,332	20,129	19,696	17,455	15,213	12,972	10,730	8,489	6,247	4,005	1,764	-478	-2,719	-4,961	-7,202	-9,444	-11,685	-13,927	-16,169	-18,410	-20,652	-22,893	-25,135				
Fiscal Exposure - End of Year Debt Drawdown		2,501	2,636	2,764	3,479	3,242	3,202	2,950	2,448	2,399	1,108	935	-826	-869	-913	-960	-1,009	-1,060	-1,115	-1,172	-1,232	-1,295	-1,361	-1,431	-1,504	-1,581	-1,662	-1,747	-1,836	-1,930	-2,029	-2,132	0	0	0	

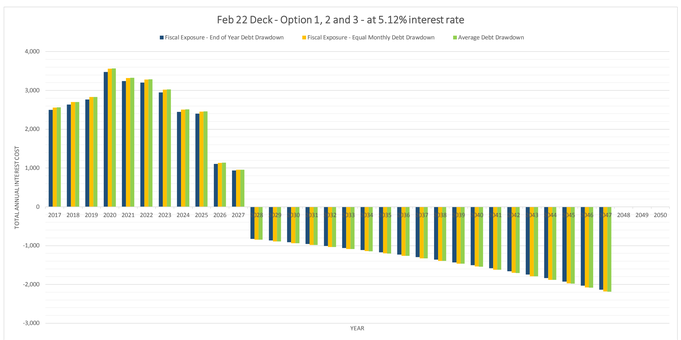
Feb22 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,180	8,206	9,743	9,316	10,236	11,476	13,061	12,250	11,963	10,896	11,061	10,480	9,998	7,904	7,630	7,370	7,122	6,887	6,662	6,449	6,246	6,052	5,868	5,693	5,526	5,368	2,975	2,831	2,695	
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	0
	Debt, Beginning of Year	0	2,560	5,259	8,088	11,650	14,969	18,247	21,267	23,773	26,229	27,363	28,320	27,474	26,585	25,650	24,668	23,635	22,549	21,408	20,209	18,948	17,622	16,229	14,764	13,225	11,607	9,905	8,117	6,238	4,262	2,185	2	2	2	
1,396	*Interest Cost - Feb22 Option 1, 30-yr*	*59*	*191*	*329*	*487*	*659*	*824*	*982*	*1,121*	*1,245*	*1,337*	*1,390*	*1,396*	*1,352*	*1,307*	*1,259*	*1,209*	*1,156*	*1,100*	*1,042*	*981*	*916*	*848*	*777*	*702*	*623*	*540*	*453*	*362*	*266*	*165*	*58*	*0*	*0*	*0*	25,137
	Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	0
	Accumulated debt in present year (including 5% annual interest)	2,560	5,259	8,088	11,650	14,969	18,247	21,267	23,773	26,229	27,363	28,320	27,474	26,585	25,650	24,668	23,635	22,549	21,408	20,209	18,948	17,622	16,229	14,764	13,225	11,607	9,905	8,117	6,238	4,262	2,185	2	2	2	3	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,560	2,699	2,829	3,561	3,319	3,278	3,020	2,507	2,456	1,134	957	-846	-889	-935	-983	-1,033	-1,086	-1,141	-1,200	-1,261	-1,325	-1,393	-1,465	-1,539	-1,618	-1,701	-1,788	-1,880	-1,976	-2,077	-2,183	0	0	0	

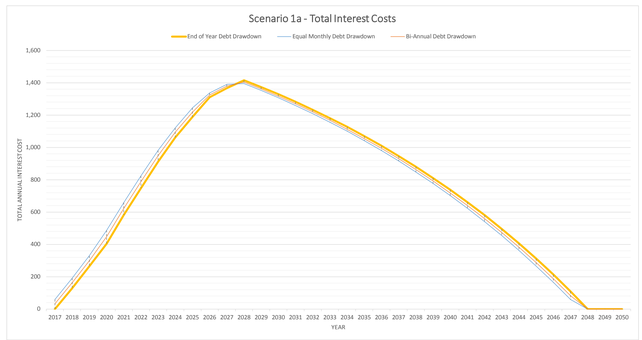
	Monthly Drawdown	208	209	208	256	222	205	170	115	101	(17)	(36)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	-	-	-	
	FV of Monthly Drawdown at 5%	2,560	2,568	2,560	3,148	2,723	2,512	2,086	1,419	1,240	(208)	(443)	(2,295)	(2,295)	(2,295)	(2,295)	(2,295)	(2,295)	(2,295)	(2,295)	(2,295)	(2,295)	(2,295)	(2,295)	(2,295)	(2,295)	(2,295)	(2,295)	(2,295)	(2,295)	(2,295)	(2,295)	-	-	-	
	Annual Interest Cost on New Drawdowns	59	60	59	73	63	58	48	33	29	(5)	(10)	(53)	(53)	(53)	(53)	(53)	(53)	(53)	(53)	(53)	(53)	(53)	(53)	(53)	(53)	(53)	(53)	(53)	(53)	(53)	(53)	-	-	-	
	Annual Interest Cost on Opening Balance	-	131	269	414	596	766	934	1,088	1,216	1,342	1,400	1,449	1,406	1,360	1,312	1,262	1,209	1,154	1,095	1,034	969	902	830	755	677	594	507	415	319	218	112	0	0	0	
	Total Annual Interest Cost	59	191	329	487	659	824	982	1,121	1,245	1,337	1,390	1,396	1,352	1,307	1,259	1,209	1,156	1,100	1,042	981	916	848	777	702	623	540	453	362	266	165	58	0	0	0	

Feb22 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,180	8,206	9,743	9,316	10,236	11,476	13,061	12,250	11,963	10,896	11,061	10,480	9,998	7,904	7,630	7,370	7,122	6,887	6,662	6,449	6,246	6,052	5,868	5,693	5,526	5,368	2,975	2,831	2,695	
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	0
	Debt, Beginning of Year	0	2,533	5,202	8,001	11,524	14,808	18,051	21,038	23,518	25,948	27,070	28,016	27,179	26,300	25,375	24,403	23,381	22,307	21,178	19,992	18,744	17,433	16,055	14,606	13,083	11,482	9,799	8,030	6,171	4,216	2,162	2	2	2	
	Interest Cost - Feb22 Option 1, 30-yr	*32*	*162*	*298*	*449*	*624*	*789*	*950*	*1,094*	*1,219*	*1,325*	*1,379*	*1,405*	*1,362*	*1,317*	*1,270*	*1,220*	*1,168*	*1,113*	*1,055*	*994*	*930*	*863*	*793*	*719*	*641*	*559*	*473*	*382*	*287*	*187*	*82*	*0*	*0*	*0*	25,137
	Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	0
	Accumulated debt in present year (including 5% annual interest)	2,533	5,202	8,001	11,524	14,808	18,051	21,038	23,518	25,948	27,070	28,016	27,179	26,300	25,375	24,403	23,381	22,307	21,178	19,992	18,744	17,433	16,055	14,606	13,083	11,482	9,799	8,030	6,171	4,216	2,162	2	2	2	3	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,533	2,670	2,799	3,523	3,283	3,243	2,987	2,480	2,430	1,122	947	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,247	-1,311	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,955	-2,055	-2,160	0	0	0	

	Bi-Annual Drawdown	1,250	1,254	1,250	1,537	1,330	1,227	1,019	693	606	(102)	(216)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,533	2,540	2,533	3,114	2,694	2,485	2,064	1,403	1,227	(206)	(438)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	-	-	-	
	Annual Interest Cost on New Drawdowns	32	32	32	39	34	31	26	18	15	(3)	(6)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	-	-	-	
	Annual Interest Cost on Opening Balance	-	130	266	409	590	758	924	1,076	1,203	1,328	1,385	1,433	1,391	1,346	1,298	1,248	1,196	1,141	1,084	1,023	959	892	821	747	669	587	501	411	316	216	111	0	0	0	
	Total Annual Interest Cost	32	162	298	449	624	789	950	1,094	1,219	1,325	1,379	1,405	1,362	1,317	1,270	1,220	1,168	1,113	1,055	994	930	863	793	719	641	559	473	382	287	187	82	0	0	0	

Feb22 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,180	8,206	9,743	9,316	10,236	11,476	13,061	12,250	11,963	10,896	11,061	10,480	9,998	7,904	7,630	7,370	7,122	6,887	6,662	6,449	6,246	6,052	5,868	5,693	5,526	5,368	2,975	2,831	2,695	
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	0
	Debt, Beginning of Year	0	2,565	5,268	8,102	11,670	14,995	18,279	21,304	23,815	26,275	27,411	28,370	27,522	26,632	25,695	24,711	23,676	22,589	21,446	20,244	18,981	17,653	16,257	14,790	13,248	11,627	9,923	8,132	6,249	4,270	2,189	2	2	2	
	Interest Cost - Feb22 Option 1, 30-yr	*64*	*195*	*333*	*493*	*665*	*830*	*987*	*1,125*	*1,249*	*1,339*	*1,391*	*1,394*	*1,351*	*1,305*	*1,257*	*1,207*	*1,154*	*1,098*	*1,040*	*978*	*914*	*846*	*774*	*699*	*620*	*538*	*450*	*359*	*262*	*161*	*55*	*0*	*0*	*0*	25,137
	Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	0
	Accumulated debt in present year (including 5% annual interest)	2,565	5,268	8,102	11,670	14,995	18,279	21,304	23,815	26,275	27,411	28,370	27,522	26,632	25,695	24,711	23,676	22,589	21,446	20,244	18,981	17,653	16,257	14,790	13,248	11,627	9,923	8,132	6,249	4,270	2,189	2	2	2	3	
Fiscal Exposure - Average Debt Drawdown		2,565	2,703	2,834	3,568	3,325	3,284	3,025	2,511	2,460	1,136	958	-847	-891	-936	-984	-1,035	-1,088	-1,143	-1,202	-1,263	-1,328	-1,396	-1,467	-1,542	-1,621	-1,704	-1,791	-1,883	-1,979	-2,080	-2,187	0	0	0	





Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Interest Rate, monthly comp.	**5.000000%**		
Annual Interest Rate	5.12%	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb22_1_30yr

Option 1 - Bills Lowered 25%, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,501	2,636
Interest Portion	0	128

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	625	2,534
Interest Portion	-	32

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $39 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb22_2_30yr

Option 2 - Bills Lowered 20%, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,749	1,831
Interest Portion	0	89

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	437	1,770
Interest Portion	-	22

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $21 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb22_3_30yr

Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606
Interest Portion	0	74

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,487
Interest Portion	-	19

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	437 - 625	1,770 - 2,534

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	625	2534
Debt-Finance Global Adjustment Costs, Option 1a	437	1770
RRRP		
OESP – Enhance Benefit		162

Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**625**	**2774**
Total, B	437	2010

Proposed Program Total:	437 - 625	2,010 - 2,774

ining

0	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

2019	2020	2021	2022	
				CheckInt
2,764	3,479	3,242	3,008	
263	404	582	748	

2018-19	2019-20	2020-21	2021-2022
2,668	2,942	3,420	3,183
162	298	449	624

Option 1
Option 2
Option 3
Option 1

Assumes an inte

Option 1
Option 2
Option 3

2032.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,908	2,564	2,264	1,961
183	281	412	528

2018-19	2019-20	2020-21	2021-2022
1,850	2,072	2,489	2,189
113	208	314	441

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446
156	234	312	385

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429
95	176	254	331

2033.

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022
1,850 - 2,668	2,072 - 2,942	2,489 - 3,420	2,189 - 3,183

/1

2018-19[1]	2019-20[1]	2020-21[1]
2668	2942	3420
1850	2072	2489
225	279	323

60	60	60
18	18	18
2971	**3299**	**3821**
2153	2429	2890

2,153 - 2,971	2,429 - 3,299	2,890 - 3,821

	$35,723	
	$35,542	
	0.51%	27.00%

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$24,976.5	$35,542.1	$38,501	occurs in Year 2032
$14,759.8	$19,733.1	$21,477	occurs in Year 2029
$12,862.3	$19,498.4	$20,326	occurs in Year 2033
$ 20,332.32	$ 25,137.20	27,662	occurs in Year 2027

erest rate of 5.00% (compounded monthly).

			5000
5.00000%	5.00005%	0.00005%	0.25%
35,542	35,543	0.90	4,518.21
19,733	19,734	0.52	2,619.41
19,498	19,499	0.48	2,410.01
0.249950%			

Tab Name		Total Accumulated Interest Costs
Feb22_1_30yr	$31,810	$40,288
Feb22_2_30yr	$17,586	$22,491
Feb22_3_30yr	$17,202	$22,028
Mar_1_30yr		

	Total Accumulated Interest Costs
Option 1	$31,810 to $40,288**
Option 2	$17,586 to $22,491**
Option 3	$17,202 to $22,028**

** With a higher interest rate, the amortization period extend beyond the 30-year forecast

ted period resulting in a remaining balance at the end of the 30-year period. For specifics, see details belo

w.

Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb22_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,501	2,636	2,764	3,479	3,242	3,008	2,577	3,394	2,763	2,202	3,111	2,828	1,938	1,522	299	240	-575	-1,336	-2,050	-2,155	-2,265	-2,381	-2,503	-2,631	-2,766	-2,907	-3,056	-3,213	-3,377	-3,550	-3,731	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,560	2,699	2,829	3,561	3,319	3,079	2,638	3,475	2,828	2,254	3,185	2,895	1,985	1,558	306	246	-588	-1,368	-2,099	-2,206	-2,319	-2,438	-2,563	-2,694	-2,832	-2,977	-3,129	-3,289	-3,457	-3,634	-3,820	0	0	0
			59	63	66	83	77	72	61	81	66	52	74	67	46	36	7	6	-14	-32	-49	-51	-54	-57	-60	-63	-66	-69	-73	-76	-80	-84	-89	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,479	1,970	35,542.1
Equal Monthly Debt Drawdown	3,561	1,963	

	Feb22 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	38,500.8	2032	24,977
Equal Monthly Debt Drawdown	39,416.6		

Feb22 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
																																				26
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																				
($ millions)			-2.79%	-2.95%	0.47%	-10.01%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	-13.13%	-2.85%	-2.80%	-2.74%	-2.68%	-2.62%	-2.56%	-2.50%	-2.44%	-2.38%	-2.32%	-2.26%	-2.20%	-57.79%	-4.83%	-4.83%	
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
a	Debt, Beginning of Year	0	2,501	5,136	7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675	34,502	36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,384	30,119	27,737	25,234	22,603	19,837	16,929	13,873	10,661	7,284	3,734	3	3	3	
c = a*5%	*Interest Cost - Feb22 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*128*	*263*	*404*	*582*	*748*	*902*	*1,034*	*1,207*	*1,349*	*1,461*	*1,621*	*1,765*	*1,864*	*1,942*	*1,957*	*1,970*	*1,940*	*1,872*	*1,767*	*1,657*	*1,541*	*1,419*	*1,291*	*1,156*	*1,015*	*866*	*710*	*545*	*373*	*191*	*0*	*0*	*0*	35,542
b	Additional GA Debt Drawdown, End of Year	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,501	5,136	7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675	34,502	36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,384	30,119	27,737	25,234	22,603	19,837	16,929	13,873	10,661	7,284	3,734	3	3	3	3	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE
	Feb22 Option 1, 30-yr - Accumulated Interest Costs	0	128	391	795	1,377	2,125	3,027	4,061	5,268	6,617	8,078	9,699	11,464	12,986	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	10,661	7,284	3,734	3	3	3	
	Feb22 Option 1, 30-yr - Accumulated Debt Principal	2,501	5,009	7,509	10,584	13,244	15,504	17,178	19,539	21,094	21,947	23,596	24,803	24,977	24,977	24,977	25,216	24,642	23,306	21,255	19,100	16,835	14,453	11,950	9,319	6,553	3,645	589	0	0	0	0	0	0	0	
	Feb22 Option 1, 30-yr - Accumulated Interest Costs	0	128	391	795	1,377	2,125	3,027	4,061	5,268	6,617	8,078	9,699	11,464	13,328	15,271	17,228	19,198	21,138	23,010	24,777	26,434	27,975	29,394	30,685	31,842	32,857	33,723	34,433	34,978	35,351	35,542				
	Feb22 Option 1, 30-yr - Accumulated Debt Principal	2,501	5,009	7,509	10,584	13,244	15,504	17,178	19,539	21,094	21,947	23,596	24,803	24,977	24,634	22,990	21,273	18,728	15,452	11,529	7,607	3,685	-238	-4,160	-8,082	-12,005	-15,927	-19,849	-23,772	-27,694	-31,616	-35,539				
Fiscal Exposure - End of Year Debt Drawdown		2,501	2,636	2,764	3,479	3,242	3,008	2,577	3,394	2,763	2,202	3,111	2,828	1,938	1,522	299	240	-575	-1,336	-2,050	-2,155	-2,265	-2,381	-2,503	-2,631	-2,766	-2,907	-3,056	-3,213	-3,377	-3,550	-3,731	0	0	0	

Feb22 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Debt, Beginning of Year	0	2,560	5,259	8,088	11,650	14,969	18,048	20,686	24,161	26,989	29,243	32,428	35,323	37,307	38,865	39,171	39,417	38,828	37,460	35,361	33,155	30,835	28,397	25,834	23,140	20,309	17,332	14,203	10,914	7,457	3,823	3	3	3	
1,963	*Interest Cost - Feb22 Option 1, 30-yr*	*59*	*191*	*329*	*487*	*659*	*820*	*963*	*1,114*	*1,273*	*1,401*	*1,535*	*1,688*	*1,811*	*1,901*	*1,949*	*1,963*	*1,956*	*1,909*	*1,823*	*1,716*	*1,603*	*1,484*	*1,360*	*1,228*	*1,091*	*946*	*793*	*633*	*465*	*288*	*102*	*0*	*0*	*0*	35,542
	Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,560	5,259	8,088	11,650	14,969	18,048	20,686	24,161	26,989	29,243	32,428	35,323	37,307	38,865	39,171	39,417	38,828	37,460	35,361	33,155	30,835	28,397	25,834	23,140	20,309	17,332	14,203	10,914	7,457	3,823	3	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,560	2,699	2,829	3,561	3,319	3,079	2,638	3,475	2,828	2,254	3,185	2,895	1,985	1,558	306	246	-588	-1,368	-2,099	-2,206	-2,319	-2,438	-2,563	-2,694	-2,832	-2,977	-3,129	-3,289	-3,457	-3,634	-3,820	0	0	0	

	Monthly Drawdown	208	209	208	256	222	188	140	197	130	71	137	101	14	(29)	(137)	(143)	(212)	(273)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	-	-	-
	FV of Monthly Drawdown at 5%	2,560	2,568	2,560	3,148	2,723	2,313	1,715	2,416	1,592	873	1,688	1,236	177	(351)	(1,683)	(1,758)	(2,605)	(3,355)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	-	-	-
	Annual Interest Cost on New Drawdowns	59	60	59	73	63	54	40	56	37	20	39	29	4	(8)	(39)	(41)	(61)	(78)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	-	-	-
	Annual Interest Cost on Opening Balance	-	131	269	414	596	766	923	1,058	1,236	1,381	1,496	1,659	1,807	1,909	1,988	2,004	2,017	1,987	1,917	1,809	1,696	1,578	1,453	1,322	1,184	1,039	887	727	558	382	196	0	0	0
	Total Annual Interest Cost	59	191	329	487	659	820	963	1,114	1,273	1,401	1,535	1,688	1,811	1,901	1,949	1,963	1,956	1,909	1,823	1,716	1,603	1,484	1,360	1,228	1,091	946	793	633	465	288	102	0	0	0

Feb22 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Debt, Beginning of Year	0	2,533	5,202	8,001	11,524	14,808	17,854	20,464	23,901	26,699	28,929	32,080	34,943	36,907	38,448	38,750	38,993	38,411	37,058	34,981	32,799	30,504	28,092	25,557	22,892	20,091	17,146	14,051	10,797	7,377	3,782	3	3	3	
	Interest Cost - Feb22 Option 1, 30-yr	*32*	*162*	*298*	*449*	*624*	*787*	*935*	*1,077*	*1,243*	*1,377*	*1,501*	*1,657*	*1,790*	*1,884*	*1,946*	*1,946*	*1,962*	*1,923*	*1,846*	*1,740*	*1,628*	*1,510*	*1,387*	*1,257*	*1,121*	*978*	*827*	*669*	*502*	*327*	*143*	*0*	*0*	*0*	35,542
	Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,533	5,202	8,001	11,524	14,808	17,854	20,464	23,901	26,699	28,929	32,080	34,943	36,907	38,448	38,750	38,993	38,411	37,058	34,981	32,799	30,504	28,092	25,557	22,892	20,091	17,146	14,051	10,797	7,377	3,782	3	3	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,533	2,670	2,799	3,523	3,283	3,046	2,610	3,437	2,798	2,230	3,150	2,864	1,963	1,541	302	243	-582	-1,353	-2,077	-2,183	-2,294	-2,412	-2,535	-2,665	-2,801	-2,945	-3,095	-3,254	-3,420	-3,595	-3,779	0	0	0	

	Bi-Annual Drawdown	1,250	1,254	1,250	1,537	1,330	1,130	837	1,180	778	427	825	604	87	(171)	(822)	(859)	(1,272)	(1,638)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	-	-	-
	FV of Bi-Annual Drawdown at 5%	2,533	2,540	2,533	3,114	2,694	2,289	1,696	2,390	1,575	864	1,670	1,223	175	(347)	(1,665)	(1,740)	(2,577)	(3,319)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	-	-	-
	Annual Interest Cost on New Drawdowns	32	32	32	39	34	29	21	30	20	11	21	15	2	(4)	(21)	(22)	(33)	(42)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	-	-	-
	Annual Interest Cost on Opening Balance	-	130	266	409	590	758	913	1,047	1,223	1,366	1,480	1,641	1,788	1,888	1,967	1,983	1,995	1,965	1,896	1,790	1,678	1,561	1,437	1,308	1,171	1,028	877	719	552	377	193	0	0	0
	Total Annual Interest Cost	32	162	298	449	624	787	935	1,077	1,243	1,377	1,501	1,657	1,790	1,884	1,946	1,961	1,962	1,923	1,846	1,740	1,628	1,510	1,387	1,257	1,121	978	827	669	502	327	143	0	0	0

Feb22 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Debt, Beginning of Year	0	2,565	5,268	8,102	11,670	14,995	18,080	20,722	24,203	27,036	29,295	32,485	35,385	37,373	38,933	39,240	39,486	38,896	37,526	35,423	33,213	30,889	28,447	25,880	23,181	20,344	17,363	14,228	10,933	7,470	3,830	3	3	3	
	Interest Cost - Feb22 Option 1, 30-yr	*64*	*195*	*333*	*493*	*665*	*825*	*968*	*1,121*	*1,278*	*1,405*	*1,541*	*1,693*	*1,815*	*1,903*	*1,950*	*1,964*	*1,955*	*1,906*	*1,820*	*1,712*	*1,599*	*1,480*	*1,355*	*1,224*	*1,086*	*941*	*788*	*628*	*459*	*282*	*96*	*0*	*0*	*0*	35,542
	Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,565	5,268	8,102	11,670	14,995	18,080	20,722	24,203	27,036	29,295	32,485	35,385	37,373	38,933	39,240	39,486	38,896	37,526	35,423	33,213	30,889	28,447	25,880	23,181	20,344	17,363	14,228	10,933	7,470	3,830	3	3	3	3	
Fiscal Exposure - Average Debt Drawdown		2,565	2,703	2,834	3,568	3,325	3,085	2,643	3,481	2,833	2,258	3,190	2,900	1,988	1,561	306	246	-589	-1,370	-2,103	-2,210	-2,323	-2,442	-2,567	-2,699	-2,837	-2,982	-3,134	-3,295	-3,463	-3,640	-3,827	0	0	0	

Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb22_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,749	1,831	1,908	2,564	2,264	1,961	1,457	2,198	1,485	838	1,656	1,277	287	-237	-814	-855	-899	-945	-993	-1,044	-1,098	-1,154	-1,213	-1,275	-1,340	-1,409	-1,481	-1,556	-1,636	-1,720	-1,808	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,791	1,875	1,953	2,625	2,318	2,008	1,492	2,250	1,521	858	1,696	1,308	294	-243	-833	-876	-920	-967	-1,017	-1,069	-1,124	-1,181	-1,242	-1,305	-1,372	-1,442	-1,516	-1,593	-1,675	-1,761	-1,851	0	0	0	
			42	44	45	61	54	47	35	52	35	20	39	30	7	-6	-19	-20	-21	-22	-24	-25	-26	-27	-29	-30	-32	-34	-35	-37	-39	-41	-43	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,564	1,099	19,733
Equal Monthly Debt Drawdown	2,625	1,093	

	Feb22 Option 2, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	21,477.1	2029	14,760
Equal Monthly Debt Drawdown	21,988		

Feb22 Option 2, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				26
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
a	Debt, Beginning of Year	0	1,749	3,580	5,488	8,052	10,316	12,278	13,735	15,933	17,418	18,256	19,913	21,190	21,477	21,240	20,427	19,571	18,672	17,727	16,734	15,690	14,592	13,438	12,226	10,951	9,611	8,202	6,722	5,165	3,529	1,809	2	2	2	
c = a*5%	*Interest Cost - Feb22 Option 2, 30-yr - End of Year Debt Drawdown*	*0*	*89*	*183*	*281*	*412*	*528*	*628*	*703*	*815*	*891*	*934*	*1,019*	*1,084*	*1,099*	*1,087*	*1,045*	*1,001*	*955*	*907*	*856*	*803*	*747*	*688*	*625*	*560*	*492*	*420*	*344*	*264*	*181*	*93*	*0*	*0*	*0*	*0*	19,733
b	Additional GA Debt Drawdown, End of Year	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,749	3,580	5,488	8,052	10,316	12,278	13,735	15,933	17,418	18,256	19,913	21,190	21,477	21,240	20,427	19,571	18,672	17,727	16,734	15,690	14,592	13,438	12,226	10,951	9,611	8,202	6,722	5,165	3,529	1,809	2	2	2	2	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	
	Feb22 Option 2, 30-yr - Accumulated Interest Costs	0	89	273	553	965	1,493	2,121	2,824	3,639	4,530	5,464	6,483	7,567	7,330	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	5,165	3,529	1,809	2	2	2	
	Feb22 Option 2, 30-yr - Accumulated Debt Principal	1,749	3,491	5,216	7,499	9,351	10,784	11,614	13,109	13,779	13,726	14,448	14,707	13,910	13,910	13,910	13,055	12,156	11,211	10,217	9,173	8,075	6,922	5,709	4,434	3,094	1,685	205	0	0	0	0	0	0	0	
	Feb22 Option 2, 30-yr - Accumulated Interest Costs	0	89	273	553	965	1,493	2,121	2,824	3,639	4,530	5,464	6,483	7,567	8,666	9,753	10,798	11,799	12,755	13,661	14,518	15,320	16,067	16,754	17,380	17,940	18,432	18,852	19,195	19,460	19,640	19,733				
	Feb22 Option 2, 30-yr - Accumulated Debt Principal	1,749	3,491	5,216	7,499	9,351	10,784	11,614	13,109	13,779	13,726	14,448	14,707	13,910	12,574	10,674	8,773	6,873	4,973	3,072	1,172	-728	-2,628	-4,529	-6,429	-8,329	-10,230	-12,130	-14,030	-15,931	-17,831	-19,731				
Fiscal Exposure - End of Year Debt Drawdown		1,749	1,831	1,908	2,564	2,264	1,961	1,457	2,198	1,485	838	1,656	1,277	287	-237	-814	-855	-899	-945	-993	-1,044	-1,098	-1,154	-1,213	-1,275	-1,340	-1,409	-1,481	-1,556	-1,636	-1,720	-1,808	0	0	0	

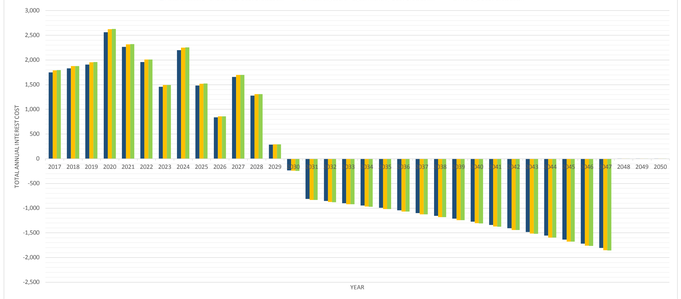
Feb22 Option 2, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Debt, Beginning of Year	0	1,791	3,666	5,619	8,244	10,562	12,570	14,062	16,312	17,832	18,691	20,386	21,694	21,988	21,745	20,912	20,037	19,116	18,149	17,132	16,063	14,939	13,758	12,517	11,211	9,839	8,397	6,881	5,288	3,613	1,852	2	2	2	
1,093	*Interest Cost - Feb22 Option 2, 30-yr*	*42*	*133*	*229*	*342*	*466*	*574*	*663*	*755*	*850*	*911*	*973*	*1,049*	*1,091*	*1,093*	*1,067*	*1,025*	*980*	*933*	*883*	*831*	*777*	*719*	*659*	*595*	*528*	*458*	*384*	*307*	*225*	*140*	*50*	*0*	*0*	*0*	19,733
	Additional GA Debt Drawdown	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,791	3,666	5,619	8,244	10,562	12,570	14,062	16,312	17,832	18,691	20,386	21,694	21,988	21,745	20,912	20,037	19,116	18,149	17,132	16,063	14,939	13,758	12,517	11,211	9,839	8,397	6,881	5,288	3,613	1,852	2	2	2	2	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,791	1,875	1,953	2,625	2,318	2,008	1,492	2,250	1,521	858	1,696	1,308	294	-243	-833	-876	-920	-967	-1,017	-1,069	-1,124	-1,181	-1,242	-1,305	-1,372	-1,442	-1,516	-1,593	-1,675	-1,761	-1,851	0	0	0	

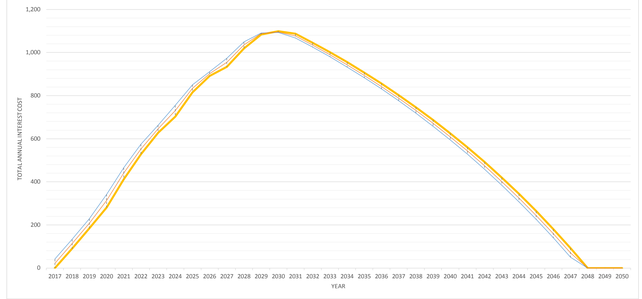
	Monthly Drawdown	146	145	144	190	154	119	69	125	56	(4)	60	22	(66)	(111)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	-	-	-	
	FV of Monthly Drawdown at 5%	1,791	1,783	1,766	2,337	1,896	1,467	849	1,531	686	(54)	739	265	(816)	(1,368)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	41	41	54	44	34	20	36	16	(1)	17	6	(19)	(32)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	-	-	-	
	Annual Interest Cost on Opening Balance	-	92	188	287	422	540	643	719	835	912	956	1,043	1,110	1,125	1,113	1,070	1,025	978	929	877	822	764	704	640	574	503	430	352	271	185	95	0	0	0	
	Total Annual Interest Cost	42	133	229	342	466	574	663	755	850	911	973	1,049	1,091	1,093	1,067	1,025	980	933	883	831	777	719	659	595	528	458	384	307	225	140	50	0	0	0	

Feb22 Option 2, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Debt, Beginning of Year	0	1,772	3,626	5,559	8,155	10,448	12,435	13,911	16,137	17,641	18,490	20,168	21,461	21,752	21,512	20,688	19,822	18,911	17,954	16,948	15,890	14,779	13,610	12,382	11,091	9,734	8,307	6,808	5,231	3,574	1,833	2	2	2	
	Interest Cost - Feb22 Option 2, 30-yr	*22*	*113*	*208*	*314*	*441*	*553*	*647*	*731*	*834*	*902*	*955*	*1,035*	*1,088*	*1,096*	*1,076*	*1,034*	*990*	*943*	*894*	*843*	*789*	*732*	*672*	*609*	*543*	*474*	*401*	*324*	*243*	*159*	*69*	*0*	*0*	*0*	19,733
	Additional GA Debt Drawdown	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,772	3,626	5,559	8,155	10,448	12,435	13,911	16,137	17,641	18,490	20,168	21,461	21,752	21,512	20,688	19,822	18,911	17,954	16,948	15,890	14,779	13,610	12,382	11,091	9,734	8,307	6,808	5,231	3,574	1,833	2	2	2	2	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,772	1,855	1,932	2,596	2,293	1,986	1,476	2,226	1,504	849	1,678	1,294	291	-240	-824	-866	-911	-957	-1,006	-1,058	-1,112	-1,168	-1,228	-1,291	-1,357	-1,427	-1,500	-1,576	-1,657	-1,742	-1,831	0	0	0	

	Bi-Annual Drawdown	875	871	862	1,141	926	717	415	748	335	(26)	361	129	(399)	(668)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,772	1,764	1,747	2,312	1,876	1,452	840	1,514	679	(53)	732	262	(807)	(1,353)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	-	-	-	
	Annual Interest Cost on New Drawdowns	22	22	22	29	24	18	11	19	9	(1)	9	3	(10)	(17)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	-	-	-	
	Annual Interest Cost on Opening Balance	-	91	186	284	417	535	636	712	826	903	946	1,032	1,098	1,113	1,101	1,058	1,014	968	919	867	813	756	696	633	567	498	425	348	268	183	94	0	0	0	
	Total Annual Interest Cost	22	113	208	314	441	553	647	731	834	902	955	1,035	1,088	1,096	1,076	1,034	990	943	894	843	789	732	672	609	543	474	401	324	243	159	69	0	0	0	

Feb22 Option 2, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Debt, Beginning of Year	0	1,794	3,672	5,629	8,258	10,580	12,592	14,086	16,340	17,864	18,724	20,422	21,732	22,027	21,784	20,949	20,072	19,150	18,181	17,162	16,091	14,965	13,782	12,538	11,231	9,857	8,412	6,894	5,297	3,619	1,856	2	2	2	
	Interest Cost - Feb22 Option 2, 30-yr	*45*	*136*	*232*	*346*	*470*	*578*	*665*	*759*	*853*	*913*	*976*	*1,051*	*1,091*	*1,093*	*1,066*	*1,023*	*978*	*931*	*882*	*829*	*775*	*717*	*657*	*593*	*526*	*456*	*382*	*304*	*222*	*137*	*46*	*0*	*0*	*0*	19,733
	Additional GA Debt Drawdown	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,794	3,672	5,629	8,258	10,580	12,592	14,086	16,340	17,864	18,724	20,422	21,732	22,027	21,784	20,949	20,072	19,150	18,181	17,162	16,091	14,965	13,782	12,538	11,231	9,857	8,412	6,894	5,297	3,619	1,856	2	2	2	2	
Fiscal Exposure - Average Debt Drawdown		1,794	1,878	1,957	2,629	2,322	2,011	1,495	2,254	1,523	860	1,699	1,310	294	-243	-834	-877	-922	-969	-1,019	-1,071	-1,126	-1,183	-1,244	-1,307	-1,374	-1,445	-1,519	-1,596	-1,678	-1,764	-1,854	0	0	0	





Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb22_3_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	
			34	38	36	36	34	34	35	36	36	35	35	34	23	16	12	7	0	-14	-29	-36	-38	-42	-39	-36	-34	-32	-27	-18	-6	-1	0	3	3	3	142

		Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	1,606		1,040	19,498
Equal Monthly Debt Drawdown	1,644		1,040	

		Feb22 Option 3, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	20,325.7		2033	12,862
Equal Monthly Debt Drawdown	20,809			

Feb22 Option 3, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				26
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
a	Debt, Beginning of Year	0	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	
c = a*5%	*Interest Cost - Feb22 Option 3, 30-yr - End of Year Debt Drawdown*	*0*	*74*	*156*	*234*	*312*	*385*	*459*	*534*	*612*	*690*	*766*	*842*	*915*	*964*	*999*	*1,024*	*1,039*	*1,040*	*1,011*	*949*	*872*	*791*	*701*	*617*	*540*	*468*	*400*	*341*	*303*	*290*	*288*	*288*	*293*	*299*	19,498
b	Additional GA Debt Drawdown, End of Year	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	
	Feb22 Option 3, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,659	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
	Feb22 Option 3, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,862	12,862	13,167	13,181	12,611	11,405	9,906	8,320	6,550	4,918	3,412	2,000	667	-472	0	0	0	0	0	0	0	
	Feb22 Option 3, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,943	8,967	10,006	11,046	12,057	13,006	13,878	14,669	15,370	15,987	16,527	16,995	17,395	17,736	18,040	18,330	18,618				
	Feb22 Option 3, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,064	11,345	10,319	8,710	6,493	4,045	1,586	-974	-3,307	-5,431	-7,383	-9,184	-10,721	-11,807	-12,362	-12,696	-12,994				
Fiscal Exposure - End of Year Debt Drawdown		1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	

Feb22 Option 3, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	
1,040	*Interest Cost - Feb22 Option 3, 30-yr*	*34*	*112*	*192*	*270*	*346*	*420*	*494*	*570*	*649*	*726*	*802*	*876*	*938*	*980*	*1,010*	*1,031*	*1,040*	*1,026*	*982*	*913*	*835*	*749*	*662*	*581*	*507*	*436*	*373*	*324*	*297*	*289*	*288*	*290*	*296*	*302*	19,640
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	6,102	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	

	Monthly Drawdown	121	128	114	108	93	88	84	83	76	66	60	47	4	(24)	(43)	(60)	(85)	(134)	(185)	(204)	(205)	(213)	(194)	(177)	(163)	(150)	(128)	(90)	(46)	(28)	(25)	(15)	(15)	(15)	
	FV of Monthly Drawdown at 5%	1,482	1,568	1,398	1,326	1,137	1,086	1,028	1,024	929	815	742	580	54	(292)	(525)	(736)	(1,050)	(1,648)	(2,269)	(2,506)	(2,517)	(2,621)	(2,389)	(2,174)	(1,999)	(1,844)	(1,574)	(1,111)	(568)	(342)	(306)	(185)	(184)	(188)	
	Annual Interest Cost on New Drawdowns	34	36	32	31	26	25	24	24	22	19	17	13	1	(7)	(12)	(17)	(24)	(38)	(53)	(58)	(58)	(61)	(55)	(51)	(46)	(43)	(37)	(26)	(13)	(8)	(7)	(4)	(4)	(4)	
	Annual Interest Cost on Opening Balance	-	76	160	240	320	394	470	547	627	707	784	863	936	987	1,023	1,048	1,064	1,065	1,035	972	893	810	717	632	553	479	409	350	311	297	295	295	300	306	
	Total Annual Interest Cost	34	112	192	270	346	420	494	570	649	726	802	876	938	980	1,010	1,031	1,040	1,026	982	913	835	749	662	581	507	436	373	324	297	289	288	290	296	302	

Feb22 Option 3, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	
	Interest Cost - Feb22 Option 3, 30-yr	*19*	*95*	*176*	*254*	*331*	*404*	*478*	*554*	*632*	*709*	*785*	*861*	*927*	*973*	*1,005*	*1,028*	*1,039*	*1,033*	*995*	*930*	*852*	*769*	*680*	*598*	*522*	*451*	*385*	*332*	*300*	*290*	*288*	*289*	*295*	*301*	19,575
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	6,037	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,466	1,626	1,541	1,549	1,441	1,465	1,482	1,554	1,539	1,505	1,510	1,427	979	687	492	309	13	-577	-1,221	-1,518	-1,607	-1,792	-1,653	-1,525	-1,430	-1,350	-1,153	-753	-255	-44	-10	109	115	117	

	Bi-Annual Drawdown	724	766	683	648	555	530	502	500	454	398	363	283	26	(143)	(256)	(359)	(513)	(805)	(1,108)	(1,224)	(1,229)	(1,280)	(1,167)	(1,062)	(976)	(900)	(769)	(543)	(278)	(167)	(149)	(90)	(90)	(92)	
	FV of Bi-Annual Drawdown at 5%	1,466	1,551	1,383	1,312	1,125	1,075	1,017	1,013	919	806	735	573	53	(289)	(519)	(728)	(1,039)	(1,630)	(2,245)	(2,479)	(2,490)	(2,593)	(2,363)	(2,150)	(1,977)	(1,824)	(1,557)	(1,099)	(562)	(338)	(302)	(183)	(182)	(186)	
	Annual Interest Cost on New Drawdowns	19	20	17	17	14	14	13	13	12	10	9	7	1	(4)	(7)	(9)	(13)	(21)	(28)	(31)	(31)	(33)	(30)	(27)	(25)	(23)	(20)	(14)	(7)	(4)	(4)	(2)	(2)	(2)	
	Annual Interest Cost on Opening Balance	-	75	158	237	316	390	465	541	620	699	776	853	926	976	1,012	1,037	1,053	1,053	1,024	961	884	801	710	625	547	474	405	346	307	294	292	291	297	303	
	Total Annual Interest Cost	19	95	176	254	331	404	478	554	632	709	785	861	927	973	1,005	1,028	1,039	1,033	995	930	852	769	680	598	522	451	385	332	300	290	288	289	295	301	

Feb22 Option 3, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	
	Interest Cost - Feb22 Option 3, 30-yr	*37*	*115*	*195*	*273*	*349*	*422*	*497*	*573*	*651*	*728*	*804*	*879*	*939*	*981*	*1,011*	*1,031*	*1,040*	*1,025*	*980*	*911*	*832*	*746*	*659*	*579*	*504*	*434*	*371*	*322*	*297*	*289*	*288*	*290*	*296*	*302*	19,651
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	6,113	
Fiscal Exposure - Average Debt Drawdown		1,484	1,647	1,561	1,569	1,459	1,483	1,500	1,573	1,559	1,524	1,530	1,445	992	696	498	313	14	-585	-1,237	-1,537	-1,627	-1,814	-1,674	-1,545	-1,448	-1,367	-1,167	-763	-258	-44	-10	110	116	119	

	2017	2018	2019	2020
GA	12,095	11,835	11,552	12,168
March 1 V	9,595	9,327	9,051	9,094
22-Feb	9,595	9,327	9,051	9,094
	0	0	0	0
March 1 V	79.33%	78.81%	78.35%	74.73%
22-Feb	79.33%	78.81%	78.35%	74.73%

3.00%	$	35,542.08

Option 1		
3.00%	$	35,542.08
3.00%	$	35,542.08
3.01%	$	35,542.08
3.02%	$	35,542.08

3.03%	$	35,542.08
3.04%	$	35,542.08
3.05%	$	35,542.08
3.06%	$	35,542.08
3.07%	$	35,542.08
3.08%	$	35,542.08
3.09%	$	35,542.08
3.10%	$	35,542.08
3.11%	$	35,542.08
3.12%	$	35,542.08
3.13%	$	35,542.08
3.14%	$	35,542.08
3.15%	$	35,542.08
3.16%	$	35,542.08
3.17%	$	35,542.08
3.18%	$	35,542.08
3.19%	$	35,542.08
3.20%	$	35,542.08
3.21%	$	35,542.08
3.22%	$	35,542.08
3.23%	$	35,542.08
3.24%	$	35,542.08
3.25%	$	35,542.08
3.26%	$	35,542.08
3.27%	$	35,542.08
3.28%	$	35,542.08
3.29%	$	35,542.08
3.30%	$	35,542.08
3.31%	$	35,542.08
3.32%	$	35,542.08
3.33%	$	35,542.08
3.34%	$	35,542.08
3.35%	$	35,542.08
3.36%	$	35,542.08
3.37%	$	35,542.08
3.38%	$	35,542.08
3.39%	$	35,542.08
3.40%	$	35,542.08
3.41%	$	35,542.08
3.42%	$	35,542.08
3.43%	$	35,542.08
3.44%	$	35,542.08
3.45%	$	35,542.08
3.46%	$	35,542.08
3.47%	$	35,542.08
3.48%	$	35,542.08
3.49%	$	35,542.08

3.50%	$	35,542.08
3.51%	$	35,542.08
3.52%	$	35,542.08
3.53%	$	35,542.08
3.54%	$	35,542.08
3.55%	$	35,542.08
3.56%	$	35,542.08
3.57%	$	35,542.08
3.58%	$	35,542.08
3.59%	$	35,542.08
3.60%	$	35,542.08
3.61%	$	35,542.08
3.62%	$	35,542.08
3.63%	$	35,542.08
3.64%	$	35,542.08
3.65%	$	35,542.08
3.66%	$	35,542.08
3.67%	$	35,542.08
3.68%	$	35,542.08
3.69%	$	35,542.08
3.70%	$	35,542.08
3.71%	$	35,542.08
3.72%	$	35,542.08
3.73%	$	35,542.08
3.74%	$	35,542.08
3.75%	$	35,542.08
3.76%	$	35,542.08
3.77%	$	35,542.08
3.78%	$	35,542.08
3.79%	$	35,542.08
3.80%	$	35,542.08
3.81%	$	35,542.08
3.82%	$	35,542.08
3.83%	$	35,542.08
3.84%	$	35,542.08
3.85%	$	35,542.08
3.86%	$	35,542.08
3.87%	$	35,542.08
3.88%	$	35,542.08
3.89%	$	35,542.08
3.90%	$	35,542.08
3.91%	$	35,542.08
3.92%	$	35,542.08
3.93%	$	35,542.08
3.94%	$	35,542.08
3.95%	$	35,542.08
3.96%	$	35,542.08

3.97%	$	35,542.08
3.98%	$	35,542.08
3.99%	$	35,542.08
4.00%	$	35,542.08
4.01%	$	35,542.08
4.02%	$	35,542.08
4.03%	$	35,542.08
4.04%	$	35,542.08
4.05%	$	35,542.08
4.06%	$	35,542.08
4.07%	$	35,542.08
4.08%	$	35,542.08
4.09%	$	35,542.08
4.10%	$	35,542.08
4.11%	$	35,542.08
4.12%	$	35,542.08
4.13%	$	35,542.08
4.14%	$	35,542.08
4.15%	$	35,542.08
4.16%	$	35,542.08
4.17%	$	35,542.08
4.18%	$	35,542.08
4.19%	$	35,542.08
4.20%	$	35,542.08
4.21%	$	35,542.08
4.22%	$	35,542.08
4.23%	$	35,542.08
4.24%	$	35,542.08
4.25%	$	35,542.08
4.26%	$	35,542.08
4.27%	$	35,542.08
4.28%	$	35,542.08
4.29%	$	35,542.08
4.30%	$	35,542.08
4.31%	$	35,542.08
4.32%	$	35,542.08
4.33%	$	35,542.08
4.34%	$	35,542.08
4.35%	$	35,542.08
4.36%	$	35,542.08
4.37%	$	35,542.08
4.38%	$	35,542.08
4.39%	$	35,542.08
4.40%	$	35,542.08
4.41%	$	35,542.08
4.42%	$	35,542.08
4.43%	$	35,542.08

4.44%	$	35,542.08
4.45%	$	35,542.08
4.46%	$	35,542.08
4.47%	$	35,542.08
4.48%	$	35,542.08
4.49%	$	35,542.08
4.50%	$	35,542.08
4.51%	$	35,542.08
4.52%	$	35,542.08
4.53%	$	35,542.08
4.54%	$	35,542.08
4.55%	$	35,542.08
4.56%	$	35,542.08
4.57%	$	35,542.08
4.58%	$	35,542.08
4.59%	$	35,542.08
4.60%	$	35,542.08
4.61%	$	35,542.08
4.62%	$	35,542.08
4.63%	$	35,542.08
4.64%	$	35,542.08
4.65%	$	35,542.08
4.66%	$	35,542.08
4.67%	$	35,542.08
4.68%	$	35,542.08
4.69%	$	35,542.08
4.70%	$	35,542.08
4.71%	$	35,542.08
4.72%	$	35,542.08
4.73%	$	35,542.08
4.74%	$	35,542.08
4.75%	$	35,542.08
4.76%	$	35,542.08
4.77%	$	35,542.08
4.78%	$	35,542.08
4.79%	$	35,542.08
4.80%	$	35,542.08
4.81%	$	35,542.08
4.82%	$	35,542.08
4.83%	$	35,542.08
4.84%	$	35,542.08
4.85%	$	35,542.08
4.86%	$	35,542.08
4.87%	$	35,542.08
4.88%	$	35,542.08
4.89%	$	35,542.08
4.90%	$	35,542.08

4.91%	$	35,542.08
4.92%	$	35,542.08
4.93%	$	35,542.08
4.94%	$	35,542.08
4.95%	$	35,542.08
4.96%	$	35,542.08
4.97%	$	35,542.08
4.98%	$	35,542.08
4.99%	$	35,542.08
5.00%	$	35,542.08
5.01%	$	35,542.08
5.02%	$	35,542.08
5.03%	$	35,542.08
5.04%	$	35,542.08
5.05%	$	35,542.08
5.06%	$	35,542.08
5.07%	$	35,542.08
5.08%	$	35,542.08
5.09%	$	35,542.08
5.10%	$	35,542.08
5.11%	$	35,542.08
5.12%	$	35,542.08
5.13%	$	35,542.08
5.14%	$	35,542.08
5.15%	$	35,542.08
5.16%	$	35,542.08
5.17%	$	35,542.08
5.18%	$	35,542.08
5.19%	$	35,542.08
5.20%	$	35,542.08
5.21%	$	35,542.08
5.22%	$	35,542.08
5.23%	$	35,542.08
5.24%	$	35,542.08
5.25%	$	35,542.08
5.26%	$	35,542.08
5.27%	$	35,542.08
5.28%	$	35,542.08
5.29%	$	35,542.08
5.30%	$	35,542.08
5.31%	$	35,542.08
5.32%	$	35,542.08
5.33%	$	35,542.08
5.34%	$	35,542.08
5.35%	$	35,542.08
5.36%	$	35,542.08
5.37%	$	35,542.08

5.38%	$	35,542.08
5.39%	$	35,542.08
5.40%	$	35,542.08
5.41%	$	35,542.08
5.42%	$	35,542.08
5.43%	$	35,542.08
5.44%	$	35,542.08
5.45%	$	35,542.08
5.46%	$	35,542.08
5.47%	$	35,542.08
5.48%	$	35,542.08
5.49%	$	35,542.08
5.50%	$	35,542.08

	2021	2022	2023	2024	2025	2026
	10,844	10,634	10,243	11,128	10,527	10,033
	8,184	8,180	8,206	9,743	9,316	10,236
	8,184	8,374	8,569	8,768	8,972	9,180
	0	-194	-363	975	344	1,056
	75.47%	76.92%	80.11%	87.55%	88.50%	102.02%
	75.47%	78.75%	83.65%	78.79%	85.23%	91.50%

$	19,733.10	$	19,498.37				
Option 2		Option 3					
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.00%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.00%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.01%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.02%

$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.03%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.04%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.05%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.06%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.07%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.08%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.09%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.10%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.11%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.12%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.13%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.14%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.15%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.16%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.17%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.18%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.19%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.20%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.21%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.22%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.23%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.24%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.25%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.26%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.27%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.28%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.29%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.30%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.31%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.32%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.33%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.34%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.35%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.36%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.37%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.38%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.39%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.40%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.41%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.42%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.43%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.44%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.45%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.46%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.47%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.48%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.49%

$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.50%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.51%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.52%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.53%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.54%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.55%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.56%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.57%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.58%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.59%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.60%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.61%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.62%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.63%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.64%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.65%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.66%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.67%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.68%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.69%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.70%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.71%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.72%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.73%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.74%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.75%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.76%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.77%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.78%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.79%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.80%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.81%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.82%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.83%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.84%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.85%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.86%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.87%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.88%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.89%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.90%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.91%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.92%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.93%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.94%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.95%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.96%

$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.97%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.98%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	3.99%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.00%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.01%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.02%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.03%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.04%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.05%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.06%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.07%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.08%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.09%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.10%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.11%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.12%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.13%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.14%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.15%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.16%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.17%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.18%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.19%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.20%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.21%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.22%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.23%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.24%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.25%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.26%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.27%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.28%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.29%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.30%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.31%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.32%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.33%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.34%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.35%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.36%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.37%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.38%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.39%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.40%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.41%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.42%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.43%

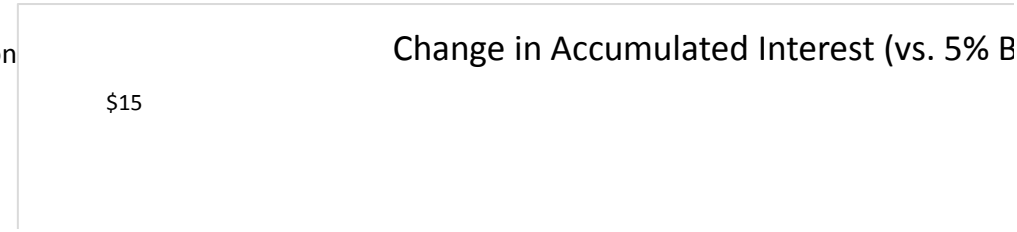
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.44%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.45%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.46%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.47%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.48%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.49%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.50%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.51%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.52%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.53%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.54%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.55%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.56%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.57%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.58%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.59%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.60%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.61%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.62%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.63%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.64%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.65%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.66%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.67%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.68%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.69%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.70%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.71%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.72%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.73%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.74%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.75%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.76%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.77%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.78%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.79%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.80%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.81%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.82%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.83%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.84%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.85%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.86%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.87%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.88%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.89%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.90%

$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.91%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.92%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.93%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.94%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.95%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.96%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.97%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.98%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	4.99%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.00%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.01%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.02%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.03%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.04%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.05%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.06%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.07%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.08%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.09%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.10%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.11%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.12%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.13%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.14%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.15%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.16%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.17%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.18%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.19%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.20%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.21%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.22%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.23%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.24%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.25%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.26%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.27%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.28%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.29%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.30%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.31%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.32%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.33%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.34%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.35%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.36%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.37%

$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.38%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.39%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.40%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.41%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.42%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.43%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.44%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.45%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.46%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.47%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.48%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.49%
$	19,733.10	$	19,498.37	$ 35,542.08	$ 19,733.10	$ 19,498.37	5.50%

2027	2028	2029	2030	2031	2032	2033	2034
11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756
11,476	13,061	12,250	11,963	10,896	11,061	10,480	9,998
9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033
2,082	3,449	2,415	1,899	598	524	-303	-1,035
103.92%	120.72%	122.40%	123.06%	125.90%	125.41%	127.21%	128.90%
85.07%	88.84%	98.27%	103.52%	118.99%	119.47%	130.89%	142.24%

Option 1		Option
$	-	$
$	-	$
$	-	$
$	-	$



$	-	$
$	-	$
$	-	$

$	-	$			
$	-	$			
$	-	$			
$	-	$			
$	-	$			
$	-	$			
$	-	$			
$	-	$	-	$	-
$	-	$	-	$	-
$	-	$	-	$	-

$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -

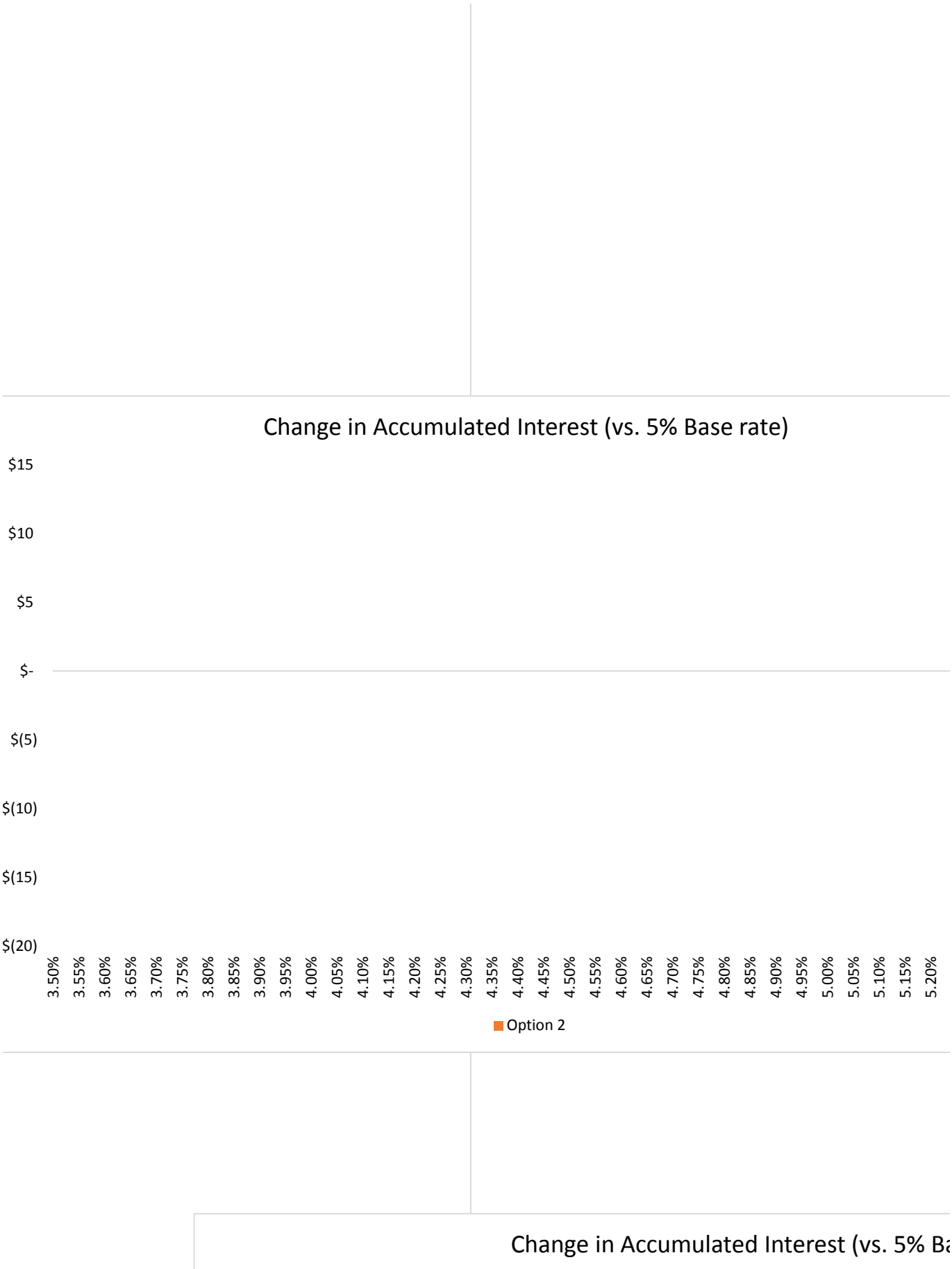
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -

$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -

$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -
$ -	$ -	$ -

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627
7,904	7,630	7,370	7,122	6,887	6,662	6,449	6,246	6,052	5,868
9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549
-1,681	-1,681	-1,681	-1,681	-1,681	-1,681	-1,681	-1,681	-1,681	-1,681
139.59%	141.60%	143.71%	145.93%	148.26%	150.70%	153.28%	155.98%	158.82%	161.81%
169.27%	172.79%	176.48%	180.36%	184.44%	188.72%	193.23%	197.96%	202.93%	208.15%

ase rate) - Option 1


Change in Accumulated Interest (vs. 5% Base rate)
$15
$10
$5
$-
$(5)
$(10)
$(15)
$(20)
3.50%
3.55%
3.60%
3.65%
3.70%
3.75%
3.80%
3.85%
3.90%
3.95%
4.00%
4.05%
4.10%
4.15%
4.20%
4.25%
4.30%
4.35%
4.40%
4.45%
4.50%
4.55%
4.60%
4.65%
4.70%
4.75%
4.80%
4.85%
4.90%
4.95%
5.00%
5.05%
5.10%
5.15%
5.20%
Option 2
Change in Accumulated Interest (vs. 5% Ba

4.65%
4.70%
4.75%
4.80%
4.85%
4.90%
4.95%
Option 3

Accumulated Interest (Billions)
$15
$10
$5
$-
$(5)
$(10)
$(15)
$(20)
3.50%
3.55%
3.60%
3.65%
3.70%
3.75%
3.80%
3.85%
3.90%
3.95%
4.00%
4.05%
4.10%
4.15%
4.20%
4.25%
4.30%
4.35%
4.40%
4.45%
4.50%
4.55%
4.60%
4.65%
4.70%
4.75%
Option 3

2045	2046	2047	2048	2049	2050	
3,451	3,285	3,126	2,975	2,831	2,695	
5,693	5,526	5,368	2,975	2,831	2,695	275,394
7,374	7,207	7,048	2,975	2,831	2,695	285,798
-1,681	-1,681	-1,681	0	0	0	
164.94%	168.24%	171.70%	100.00%	100.00%	100.00%	
213.64%	219.41%	225.47%	100.00%	100.00%	100.00%	

5.30%
5.35%
5.40%
5.45%
5.50%

se rate)

4.80%
4.85%
4.90%
4.95%
5.00%
5.05%
5.10%
5.15%
5.20%
5.25%
5.30%
5.35%
5.40%
5.45%
5.50%

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

IESO GA cost forecast + extrapolation

Scenario
Option 1a
Borrow $3.3B, Bills Lowered 20%, No Cap

Option 1b
Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B

	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168

Ratepayer GA Payment	8,753	8,535	8,311	7,650
Total Accumulated Debt ($ billion)	3,342	6,812	10,402	15,452

Ratepayer GA Payment	9,781	9,661	9,367	8,733
Accumulated debt in present year (including 5% interest,	2,314	4,606	7,027	10,822

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528
19,868	24,126	28,033	32,843	37,110	40,911	45,720	50,350
8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717
13,761	16,470	18,755	21,866	24,355	26,295	29,156	31,750

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**
10009	9721	8654	8820	8238	7756	5662	5389

8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319
54,201	57,751	60,200	62,719	64,559	65,780	64,732	63,114
9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913
33,472	34,796	34,919	35,008	34,309	32,878	31,035	29,098

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627

10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485
60,904	58,078	54,611	50,476	45,641	40,076	33,745	26,613
8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151
27,063	24,923	22,673	20,309	17,823	15,210	12,464	9,577

2045	2046	2047	2048

3,451	3,285	3,126	2,975	2,831	2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695

12,786	13,095	13410.34	2975.154	2831.461	2694.708
18,640	9,784	4.85E-06	0	0	0

6,976	6,809	6650.631	2975.154	2831.461	2694.708
6,543	3,353	5E-12	0	0	0

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

		5.00%	
Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb15_1a_30yr

Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,342	3,470
Interest Portion	0	171

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	835	3,374
Interest Portion	-	43

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $66 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb15_1b_30yr

Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,314	2,292
Interest Portion	0	118

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	579	2,309
Interest Portion	-	30

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $35 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

#REF!		
$ millions		
30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	362	1,487

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
	1	
	2	
	3	
	4 April	4
	5 May	5
	6 June	6
	7 July	7
	8 August	8
	9 September	9
	10 October	10
	11 November	11
	12 December	12
30-year term	**2016-17**	**2017-18**

Fiscal Exposure - Equal Monthly Debt Drawdown 579 - 835 2,309 - 3,374

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	835	3374
Debt-Finance Global Adjustment Costs, Option 1a	579	2309
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60

First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**835**	**3614**
Total, B	579	2549
Proposed Program Total:	579 - 835	2,549 - 3,614

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Option 1a
Option 2b

Assumes an inte

2019	2020	2021	2022
3,589	5,050	4,416	4,258
349	532	791	1,016

2018-19	2019-20	2020-21	2021-2022
3,500	3,955	4,892	4,377
215	394	597	847

2034.

depend on decision on accounting treatment.

2019	2020	2021	2022
2,421	3,795	2,938	2,709
236	360	554	704

2018-19	2019-20	2020-21	2021-2022
2,324	2,765	3,581	2,881
148	267	408	591

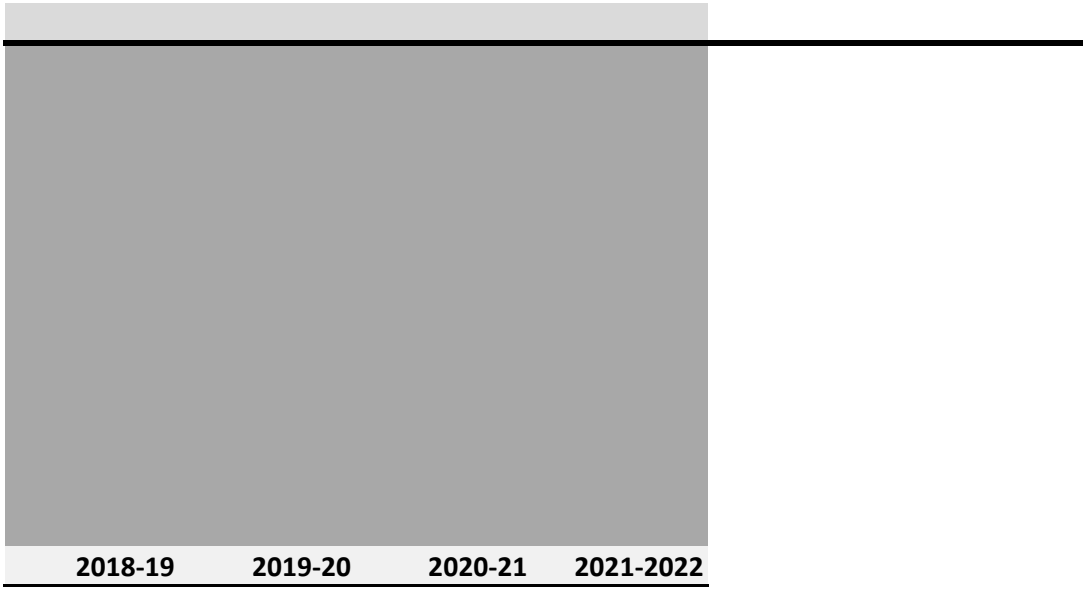
2032.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022

2,324 - 3,500 2,765 - 3,955 3,581 - 4,892 2,881 - 4,377

/1

2018-19[1]	2019-20[1]	2020-21[1]
3500	3955	4892
2324	2765	3581
225	279	323
60	60	60

18	18	18
3803	**4312**	**5293**
2627	3122	3982

2,627 - 3,803	3,122 - 4,312	3,982 - 5,293

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$38,864	$61,735	$65,781	occurs in Year 2034
$22,873	$32,368	$35,009	occurs in Year 2032

erest rate of 5.00% (compounded monthly).

Tab Name		Total Accumulated Interest Costs
Feb15_1a_30yr	$26,517	$34,278
Feb15_1b_30yr	$15,631	$20,378
	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$26,517 to $34,278
Option 2	$15,631 to $20,378
Option 3	$17,202 to $22,028

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

Feb15_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,342	3,470	3,589	5,050	4,416	4,258	3,907	4,810	4,268	3,801	4,809	4,630	3,851	3,550	2,449	2,519	1,840	1,221	-1,048	-1,618	-2,210	-2,825	-3,467	-4,135	-4,834	-5,565	-6,330	-7,132	-7,973	-8,856	-9,783	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,421	3,553	3,675	5,171	4,521	4,359	4,000	4,924	4,369	3,891	4,923	4,740	3,943	3,635	2,508	2,579	1,884	1,250	-1,073	-1,656	-2,262	-2,893	-3,549	-4,234	-4,949	-5,697	-6,481	-7,302	-8,163	-9,067	-10,016	0	0	0
			79	83	85	120	105	101	93	114	102	90	114	110	92	84	58	60	44	29	-25	-38	-53	-67	-82	-98	-115	-132	-151	-170	-190	-211	-233	0	0	0

0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	5,050	3,365	61,735
Equal Monthly Debt Drawdown	5,171	3,341	

	Feb15 Option 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	65,781	2034	38,864
Equal Monthly Debt Drawdown	67,346		

Feb15 Option 1a, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
a	Debt, Beginning of Year	0	3,342	6,812	10,402	15,452	19,868	24,126	28,034	32,843	37,111	40,911	45,720	50,350	54,201	57,752	60,201	62,720	64,560	65,781	64,733	63,115	60,906	58,080	54,614	50,478	45,644	40,079	33,749	26,617	18,644	9,788	5	5	5	
c = a*5%	*Interest Cost - Feb15 Option 1a, 30-yr - End of Year Debt Drawdown*	*0*	*171*	*349*	*532*	*791*	*1,016*	*1,234*	*1,434*	*1,680*	*1,899*	*2,093*	*2,339*	*2,576*	*2,773*	*2,955*	*3,080*	*3,209*	*3,303*	*3,365*	*3,312*	*3,229*	*3,116*	*2,972*	*2,794*	*2,583*	*2,335*	*2,051*	*1,727*	*1,362*	*954*	*501*	*0*	*0*	*0*	61,735
b	Additional GA Debt Drawdown, End of Year	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	3,342	6,812	10,402	15,452	19,868	24,126	28,034	32,843	37,111	40,911	45,720	50,350	54,201	57,752	60,201	62,720	64,560	65,781	64,733	63,115	60,906	58,080	54,614	50,478	45,644	40,079	33,749	26,617	18,644	9,788	5	5	5	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	171	520	1,052	1,842	2,859	4,093	5,527	7,208	9,106	11,199	13,539	16,115	19,665	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	26,617	18,644	9,788	5	5	5	
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal	3,342	6,641	9,882	14,400	18,026	21,267	23,941	27,316	29,903	31,805	34,521	36,812	38,087	38,087	38,087	40,606	42,446	43,667	42,619	41,001	38,792	35,966	32,500	28,364	23,530	17,965	11,635	0	0	0	0	0	0	0	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	171	520	1,052	1,842	2,859	4,093	5,527	7,208	9,106	11,199	13,539	16,115	18,888	21,842	24,922	28,131	31,434	34,800	38,112	41,341	44,457	47,428	50,222	52,805	55,140	57,191	58,917	60,279	61,233	61,734				
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal	3,342	6,641	9,882	14,400	18,026	21,267	23,941	27,316	29,903	31,805	34,521	36,812	38,087	38,864	38,359	37,798	36,429	34,347	29,934	25,004	19,565	13,624	7,186	256	-7,161	-15,061	-23,442	-32,300	-41,635	-51,445	-61,729				
Fiscal Exposure - End of Year Debt Drawdown		3,342	3,470	3,589	5,050	4,416	4,258	3,907	4,810	4,268	3,801	4,809	4,630	3,851	3,550	2,449	2,519	1,840	1,221	-1,048	-1,618	-2,210	-2,825	-3,467	-4,135	-4,834	-5,565	-6,330	-7,132	-7,973	-8,856	-9,783	0	0	0	

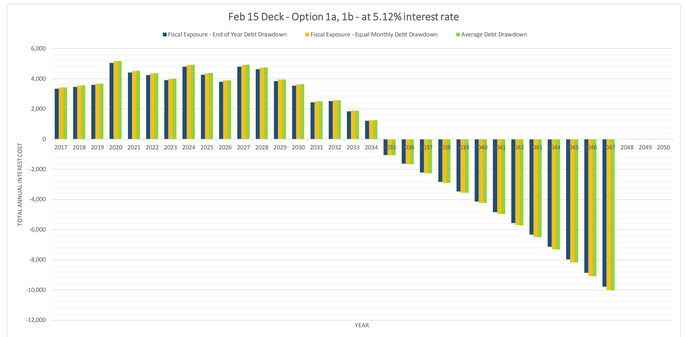
Feb15 Option 1a, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,421	6,974	10,649	15,820	20,341	24,700	28,700	33,624	37,993	41,885	46,808	51,548	55,491	59,125	61,633	64,212	66,096	67,346	66,273	64,617	62,354	59,462	55,913	51,679	46,730	41,033	34,552	27,250	19,087	10,021	5	5	5	
3,341	*Interest Cost - Feb15 Option 1a, 30-yr*	*79*	*254*	*434*	*652*	*896*	*1,118*	*1,327*	*1,549*	*1,782*	*1,989*	*2,207*	*2,449*	*2,668*	*2,857*	*3,013*	*3,140*	*3,253*	*3,332*	*3,341*	*3,273*	*3,177*	*3,049*	*2,889*	*2,696*	*2,468*	*2,203*	*1,900*	*1,557*	*1,172*	*743*	*268*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,421	6,974	10,649	15,820	20,341	24,700	28,700	33,624	37,993	41,885	46,808	51,548	55,491	59,125	61,633	64,212	66,096	67,346	66,273	64,617	62,354	59,462	55,913	51,679	46,730	41,033	34,552	27,250	19,087	10,021	5	5	5	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,421	3,553	3,675	5,171	4,521	4,359	4,000	4,924	4,369	3,891	4,923	4,740	3,943	3,635	2,508	2,579	1,884	1,250	-1,073	-1,656	-2,262	-2,893	-3,549	-4,234	-4,949	-5,697	-6,481	-7,302	-8,163	-9,067	-10,016	0	0	0	

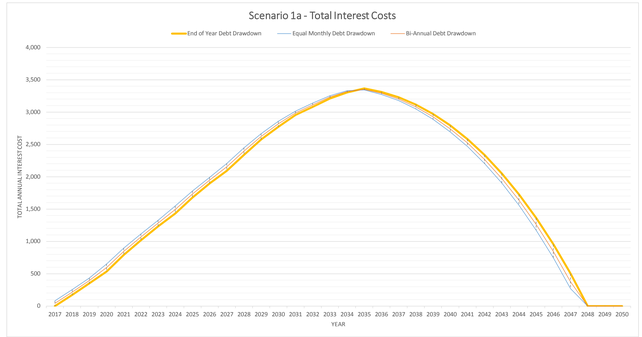
	Monthly Drawdown	278	275	270	377	302	270	223	281	216	159	226	191	106	65	(42)	(47)	(114)	(174)	(368)	(411)	(453)	(495)	(537)	(577)	(618)	(658)	(698)	(738)	(778)	(817)	(857)	-	-	-
	FV of Monthly Drawdown at 5%	3,421	3,378	3,318	4,626	3,712	3,319	2,737	3,456	2,649	1,947	2,780	2,346	1,305	796	(517)	(574)	(1,401)	(2,132)	(4,518)	(5,047)	(5,568)	(6,083)	(6,591)	(7,094)	(7,593)	(8,088)	(8,580)	(9,069)	(9,557)	(10,043)	(10,529)	-	-	-
	Annual Interest Cost on New Drawdowns	79	78	77	107	86	77	64	80	62	45	65	54	30	18	(12)	(13)	(33)	(50)	(105)	(117)	(129)	(141)	(153)	(165)	(176)	(188)	(199)	(211)	(222)	(233)	(245)	-	-	-
	Annual Interest Cost on Opening Balance	-	175	357	545	809	1,041	1,264	1,468	1,720	1,944	2,143	2,395	2,637	2,839	3,025	3,153	3,285	3,382	3,446	3,391	3,306	3,190	3,042	2,861	2,644	2,391	2,099	1,768	1,394	977	513	0	0	0
	Total Annual Interest Cost	79	254	434	652	896	1,118	1,327	1,549	1,782	1,989	2,207	2,449	2,668	2,857	3,013	3,140	3,253	3,332	3,341	3,273	3,177	3,049	2,889	2,696	2,468	2,203	1,900	1,557	1,172	743	268	0	0	0

Feb15 Option 1a, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,385	6,899	10,535	15,650	20,122	24,435	28,392	33,263	37,585	41,435	46,305	50,994	54,895	58,490	60,971	63,523	65,386	66,623	65,561	63,923	61,685	58,823	55,312	51,124	46,228	40,592	34,181	26,958	18,882	9,913	5	5	5	
	Interest Cost - Feb15 Option 1a, 30-yr	*43*	*215*	*394*	*597*	*847*	*1,071*	*1,284*	*1,496*	*1,735*	*1,947*	*2,155*	*2,398*	*2,625*	*2,818*	*2,986*	*3,112*	*3,232*	*3,319*	*3,352*	*3,291*	*3,201*	*3,080*	*2,927*	*2,741*	*2,521*	*2,264*	*1,970*	*1,635*	*1,260*	*841*	*376*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,385	6,899	10,535	15,650	20,122	24,435	28,392	33,263	37,585	41,435	46,305	50,994	54,895	58,490	60,971	63,523	65,386	66,623	65,561	63,923	61,685	58,823	55,312	51,124	46,228	40,592	34,181	26,958	18,882	9,913	5	5	5	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,385	3,515	3,635	5,115	4,473	4,313	3,957	4,871	4,322	3,849	4,870	4,689	3,900	3,596	2,481	2,551	1,864	1,237	-1,061	-1,639	-2,238	-2,861	-3,511	-4,188	-4,896	-5,636	-6,411	-7,223	-8,075	-8,969	-9,909	0	0	0	

	Bi-Annual Drawdown	1,671	1,650	1,620	2,259	1,813	1,621	1,337	1,688	1,294	951	1,358	1,146	638	389	(253)	(280)	(684)	(1,041)	(2,207)	(2,465)	(2,719)	(2,971)	(3,219)	(3,465)	(3,708)	(3,950)	(4,190)	(4,429)	(4,667)	(4,905)	(5,142)	-	-	-
	FV of Bi-Annual Drawdown at 5%	3,385	3,341	3,282	4,576	3,672	3,283	2,707	3,418	2,620	1,926	2,750	2,320	1,291	787	(512)	(568)	(1,386)	(2,109)	(4,470)	(4,993)	(5,508)	(6,017)	(6,520)	(7,018)	(7,512)	(8,001)	(8,488)	(8,972)	(9,454)	(9,935)	(10,416)	-	-	-
	Annual Interest Cost on New Drawdowns	43	42	41	58	46	41	34	43	33	24	35	29	16	10	(6)	(7)	(18)	(27)	(56)	(63)	(70)	(76)	(82)	(89)	(95)	(101)	(107)	(113)	(119)	(125)	(132)	-	-	-
	Annual Interest Cost on Opening Balance	-	173	353	539	801	1,029	1,250	1,453	1,702	1,923	2,120	2,369	2,609	2,809	2,992	3,119	3,250	3,345	3,409	3,354	3,270	3,156	3,010	2,830	2,616	2,365	2,077	1,749	1,379	966	507	0	0	0
	Total Annual Interest Cost	43	215	394	597	847	1,071	1,284	1,496	1,735	1,947	2,155	2,398	2,625	2,818	2,986	3,112	3,232	3,319	3,352	3,291	3,201	3,080	2,927	2,741	2,521	2,264	1,970	1,635	1,260	841	376	0	0	0

Feb15 Option 1a, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,427	6,986	10,668	15,847	20,376	24,743	28,751	33,683	38,060	41,958	46,890	51,638	55,588	59,229	61,741	64,325	66,212	67,464	66,389	64,730	62,464	59,566	56,011	51,770	46,812	41,104	34,612	27,298	19,121	10,038	5	5	5	
	Interest Cost - Feb15 Option 1a, 30-yr	*85*	*260*	*440*	*661*	*904*	*1,125*	*1,334*	*1,557*	*1,789*	*1,996*	*2,216*	*2,458*	*2,675*	*2,864*	*3,017*	*3,144*	*3,256*	*3,334*	*3,339*	*3,270*	*3,173*	*3,044*	*2,883*	*2,688*	*2,459*	*2,193*	*1,889*	*1,544*	*1,158*	*727*	*251*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,427	6,986	10,668	15,847	20,376	24,743	28,751	33,683	38,060	41,958	46,890	51,638	55,588	59,229	61,741	64,325	66,212	67,464	66,389	64,730	62,464	59,566	56,011	51,770	46,812	41,104	34,612	27,298	19,121	10,038	5	5	5	6
Fiscal Exposure - Average Debt Drawdown		3,427	3,559	3,681	5,180	4,529	4,367	4,007	4,933	4,377	3,898	4,932	4,749	3,950	3,641	2,512	2,584	1,887	1,252	-1,075	-1,659	-2,266	-2,898	-3,555	-4,241	-4,958	-5,707	-6,492	-7,314	-8,177	-9,083	-10,034	0	0	0	





Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

Feb15_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,314	2,292	2,421	3,795	2,938	2,709	2,285	3,111	2,489	1,940	2,862	2,594	1,722	1,324	123	89	-699	-1,431	-1,842	-1,937	-2,036	-2,140	-2,249	-2,364	-2,485	-2,613	-2,746	-2,887	-3,034	-3,190	-3,353	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,369	2,346	2,479	3,886	3,008	2,774	2,340	3,185	2,548	1,986	2,930	2,656	1,763	1,356	126	91	-716	-1,465	-1,886	-1,983	-2,084	-2,191	-2,303	-2,421	-2,544	-2,675	-2,812	-2,955	-3,107	-3,266	-3,433	0	0	0
			55	55	58	90	70	64	54	74	59	46	68	62	41	32	3	2	-17	-34	-44	-46	-48	-51	-54	-56	-59	-62	-65	-69	-72	-76	-80	0	0	0

0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,795	1,791	32,368
Equal Monthly Debt Drawdown	3,886	1,789	

	Feb15 Option 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	35,009	2032	22,873
Equal Monthly Debt Drawdown	35,841		

Feb15 Option 1a, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
a	Debt, Beginning of Year		0	2,314	4,606	7,027	10,822	13,761	16,470	18,755	21,866	24,355	26,295	29,157	31,751	33,472	34,797	34,920	35,009	34,310	32,879	31,036	29,100	27,064	24,924	22,675	20,310	17,825	15,212	12,466	9,579	6,545	3,355	3	3	3	
c = a*5%	*Interest Cost - Feb15 Option 1a, 30-yr - End of Year Debt Drawdown*		*0*	*118*	*236*	*360*	*554*	*704*	*843*	*960*	*1,119*	*1,246*	*1,345*	*1,492*	*1,624*	*1,713*	*1,780*	*1,787*	*1,791*	*1,755*	*1,682*	*1,588*	*1,489*	*1,385*	*1,275*	*1,160*	*1,039*	*912*	*778*	*638*	*490*	*335*	*172*	*0*	*0*	*0*	32,368
b	Additional GA Debt Drawdown, End of Year		2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)		2,314	4,606	7,027	10,822	13,761	16,470	18,755	21,866	24,355	26,295	29,157	31,751	33,472	34,797	34,920	35,009	34,310	32,879	31,036	29,100	27,064	24,924	22,675	20,310	17,825	15,212	12,466	9,579	6,545	3,355	3	3	3	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs		0	118	354	714	1,267	1,971	2,814	3,773	4,892	6,138	7,484	8,975	10,600	11,924	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	9,579	6,545	3,355	3	3	3	3	
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal		2,314	4,488	6,673	10,109	12,493	14,499	15,941	18,092	19,463	20,157	21,673	22,775	22,873	22,873	22,873	22,961	22,262	20,831	18,989	17,052	15,017	12,877	10,627	8,263	5,778	3,165	419	0	0	0	0	0	0	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs		0	118	354	714	1,267	1,971	2,814	3,773	4,892	6,138	7,484	8,975	10,600	12,312	14,092	15,879	17,670	19,425	21,108	22,695	24,184	25,569	26,844	28,004	29,043	29,955	30,733	31,371	31,861	32,196	32,368			
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal		2,314	4,488	6,673	10,109	12,493	14,499	15,941	18,092	19,463	20,157	21,673	22,775	22,873	22,485	20,828	19,130	16,639	13,453	9,929	6,404	2,880	-645	-4,169	-7,694	-11,218	-14,743	-18,267	-21,792	-25,316	-28,841	-32,365			
Fiscal Exposure - End of Year Debt Drawdown			2,314	2,292	2,421	3,795	2,938	2,709	2,285	3,111	2,489	1,940	2,862	2,594	1,722	1,324	123	89	-699	-1,431	-1,842	-1,937	-2,036	-2,140	-2,249	-2,364	-2,485	-2,613	-2,746	-2,887	-3,034	-3,190	-3,353	0	0	0	

Feb15 Option 1a, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Debt, Beginning of Year		0	2,369	4,716	7,194	11,080	14,088	16,862	19,201	22,386	24,934	26,920	29,850	32,506	34,269	35,625	35,751	35,841	35,126	33,661	31,774	29,792	27,708	25,517	23,214	20,793	18,249	15,574	12,763	9,807	6,701	3,435	3	3	3	
1,789	*Interest Cost - Feb15 Option 1a, 30-yr*		*55*	*173*	*293*	*450*	*624*	*768*	*897*	*1,034*	*1,178*	*1,292*	*1,413*	*1,553*	*1,665*	*1,744*	*1,783*	*1,789*	*1,774*	*1,721*	*1,638*	*1,542*	*1,440*	*1,334*	*1,222*	*1,104*	*980*	*850*	*713*	*569*	*418*	*259*	*92*	*0*	*0*	*0*	32,368
	Additional GA Debt Drawdown		2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		2,369	4,716	7,194	11,080	14,088	16,862	19,201	22,386	24,934	26,920	29,850	32,506	34,269	35,625	35,751	35,841	35,126	33,661	31,774	29,792	27,708	25,517	23,214	20,793	18,249	15,574	12,763	9,807	6,701	3,435	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown			2,369	2,346	2,479	3,886	3,008	2,774	2,340	3,185	2,548	1,986	2,930	2,656	1,763	1,356	126	91	-716	-1,465	-1,886	-1,983	-2,084	-2,191	-2,303	-2,421	-2,544	-2,675	-2,812	-2,955	-3,107	-3,266	-3,433	0	0	0	
	Monthly Drawdown		193	181	182	286	199	167	120	179	114	58	126	92	8	(32)	(138)	(141)	(208)	(266)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	-	-	-	
	FV of Monthly Drawdown at 5%		2,369	2,225	2,237	3,518	2,441	2,053	1,477	2,202	1,403	710	1,553	1,128	100	(397)	(1,697)	(1,738)	(2,549)	(3,262)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	-	-	-	
	Annual Interest Cost on New Drawdowns		55	52	52	82	57	48	34	51	33	17	36	26	2	(9)	(39)	(40)	(59)	(76)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	-	-	-	
	Annual Interest Cost on Opening Balance		-	121	241	368	567	721	863	982	1,145	1,276	1,377	1,527	1,663	1,753	1,823	1,829	1,834	1,797	1,722	1,626	1,524	1,418	1,305	1,188	1,064	934	797	653	502	343	176	0	0	0	
	Total Annual Interest Cost		55	173	293	450	624	768	897	1,034	1,178	1,292	1,413	1,553	1,665	1,744	1,783	1,789	1,774	1,721	1,638	1,542	1,440	1,334	1,222	1,104	980	850	713	569	418	259	92	0	0	0	

Feb15 Option 1a, 30-yr — Bi-Annual Debt Drawdown

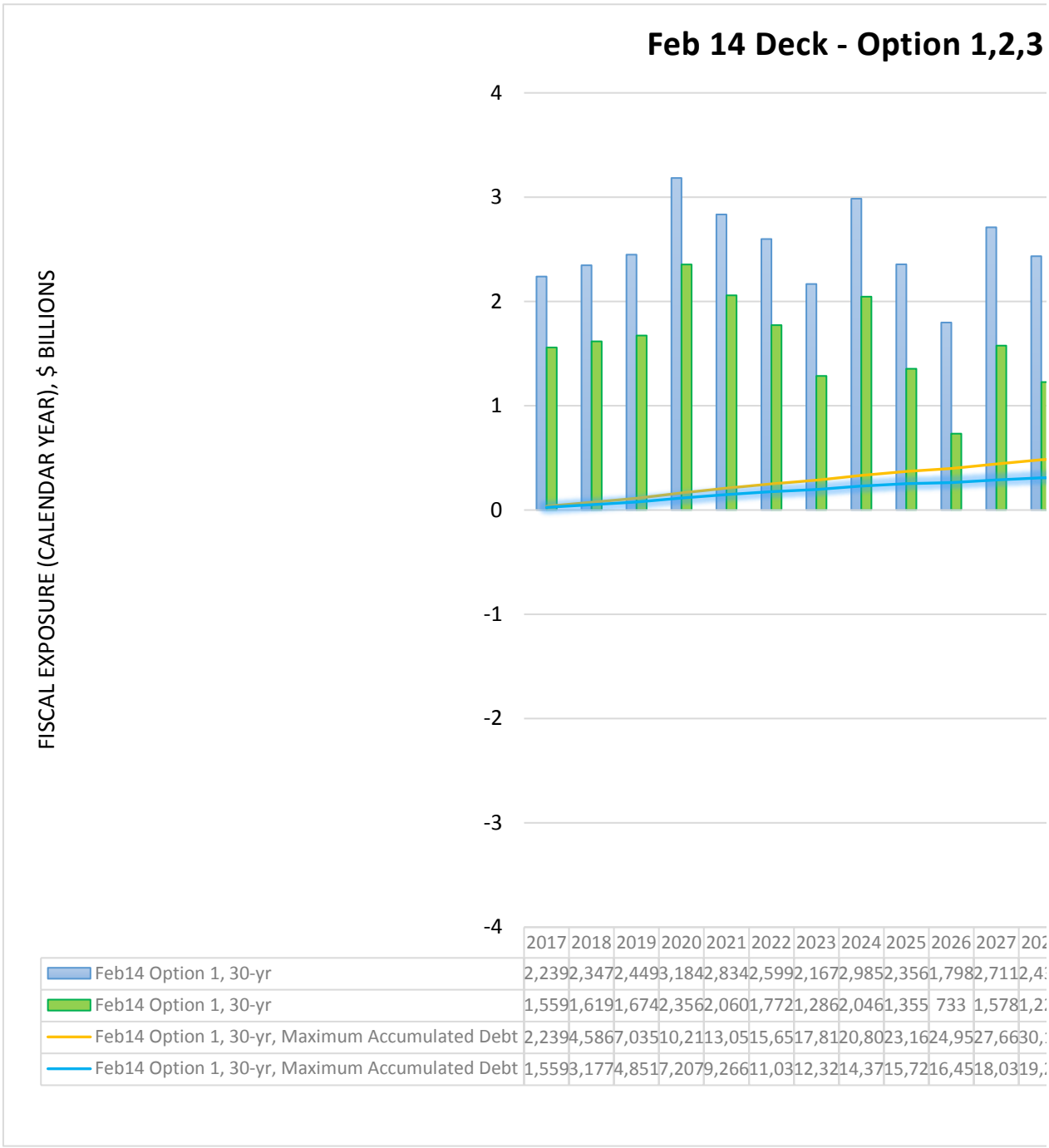
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Debt, Beginning of Year		0	2,344	4,665	7,117	10,961	13,937	16,681	18,995	22,146	24,667	26,631	29,530	32,157	33,901	35,242	35,367	35,456	34,748	33,299	31,433	29,472	27,410	25,243	22,965	20,570	18,053	15,407	12,626	9,702	6,629	3,398	3	3	3	
	Interest Cost - Feb15 Option 1a, 30-yr		*30*	*148*	*267*	*408*	*591*	*739*	*872*	*999*	*1,151*	*1,271*	*1,382*	*1,525*	*1,646*	*1,729*	*1,782*	*1,788*	*1,782*	*1,737*	*1,659*	*1,563*	*1,463*	*1,357*	*1,246*	*1,130*	*1,007*	*879*	*743*	*601*	*451*	*294*	*129*	*0*	*0*	*0*	32,368
	Additional GA Debt Drawdown		2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		2,344	4,665	7,117	10,961	13,937	16,681	18,995	22,146	24,667	26,631	29,530	32,157	33,901	35,242	35,367	35,456	34,748	33,299	31,433	29,472	27,410	25,243	22,965	20,570	18,053	15,407	12,626	9,702	6,629	3,398	3	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown			2,344	2,321	2,452	3,844	2,976	2,744	2,314	3,151	2,521	1,965	2,898	2,627	1,744	1,341	125	90	-708	-1,449	-1,866	-1,961	-2,062	-2,167	-2,278	-2,395	-2,517	-2,646	-2,781	-2,924	-3,073	-3,230	-3,396	0	0	0	
	Bi-Annual Drawdown		1,157	1,087	1,093	1,718	1,192	1,003	721	1,076	685	347	758	551	49	(194)	(829)	(849)	(1,245)	(1,593)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	-	-	-	
	FV of Bi-Annual Drawdown at 5%		2,344	2,201	2,213	3,480	2,415	2,031	1,461	2,179	1,388	703	1,536	1,116	99	(393)	(1,678)	(1,720)	(2,522)	(3,227)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	-	-	-	
	Annual Interest Cost on New Drawdowns		30	28	28	44	30	26	18	28	18	9	19	14	1	(5)	(21)	(22)	(32)	(41)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	-	-	-	
	Annual Interest Cost on Opening Balance		-	120	239	364	561	713	853	972	1,133	1,262	1,363	1,511	1,645	1,734	1,803	1,809	1,814	1,778	1,704	1,608	1,508	1,402	1,291	1,175	1,052	924	788	646	496	339	174	0	0	0	
	Total Annual Interest Cost		30	148	267	408	591	739	872	999	1,151	1,271	1,382	1,525	1,646	1,729	1,782	1,788	1,782	1,737	1,659	1,563	1,463	1,357	1,246	1,130	1,007	879	743	601	451	294	129	0	0	0	

Feb15 Option 1a, 30-yr — Average Debt Drawdown

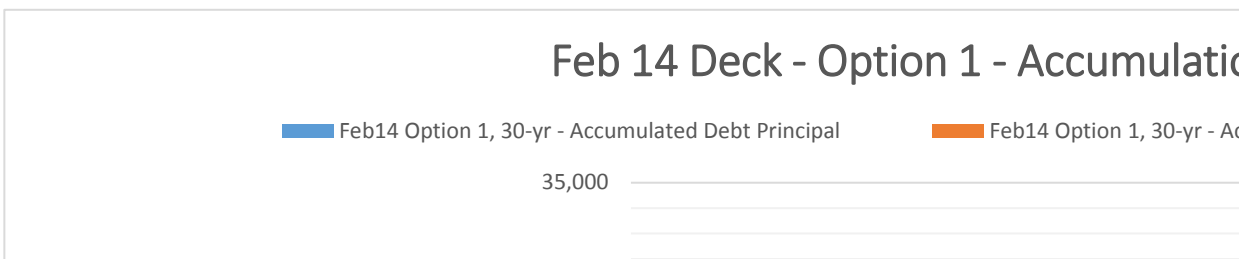
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Debt, Beginning of Year		0	2,373	4,724	7,207	11,099	14,113	16,891	19,235	22,425	24,978	26,968	29,902	32,563	34,329	35,687	35,813	35,904	35,187	33,720	31,830	29,844	27,756	25,562	23,255	20,830	18,281	15,601	12,785	9,824	6,712	3,441	3	3	3	
	Interest Cost - Feb15 Option 1a, 30-yr		*59*	*177*	*298*	*457*	*629*	*773*	*901*	*1,039*	*1,182*	*1,296*	*1,419*	*1,558*	*1,668*	*1,746*	*1,783*	*1,789*	*1,773*	*1,719*	*1,635*	*1,538*	*1,437*	*1,330*	*1,218*	*1,100*	*976*	*845*	*708*	*564*	*412*	*253*	*86*	*0*	*0*	*0*	32,368
	Additional GA Debt Drawdown		2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		2,373	4,724	7,207	11,099	14,113	16,891	19,235	22,425	24,978	26,968	29,902	32,563	34,329	35,687	35,813	35,904	35,187	33,720	31,830	29,844	27,756	25,562	23,255	20,830	18,281	15,601	12,785	9,824	6,712	3,441	3	3	3	
Fiscal Exposure - Average Debt Drawdown			2,373	2,351	2,483	3,892	3,013	2,779	2,344	3,190	2,553	1,989	2,935	2,660	1,766	1,358	126	91	-717	-1,468	-1,889	-1,986	-2,088	-2,195	-2,307	-2,425	-2,549	-2,679	-2,816	-2,961	-3,112	-3,271	-3,439	0	0	0	

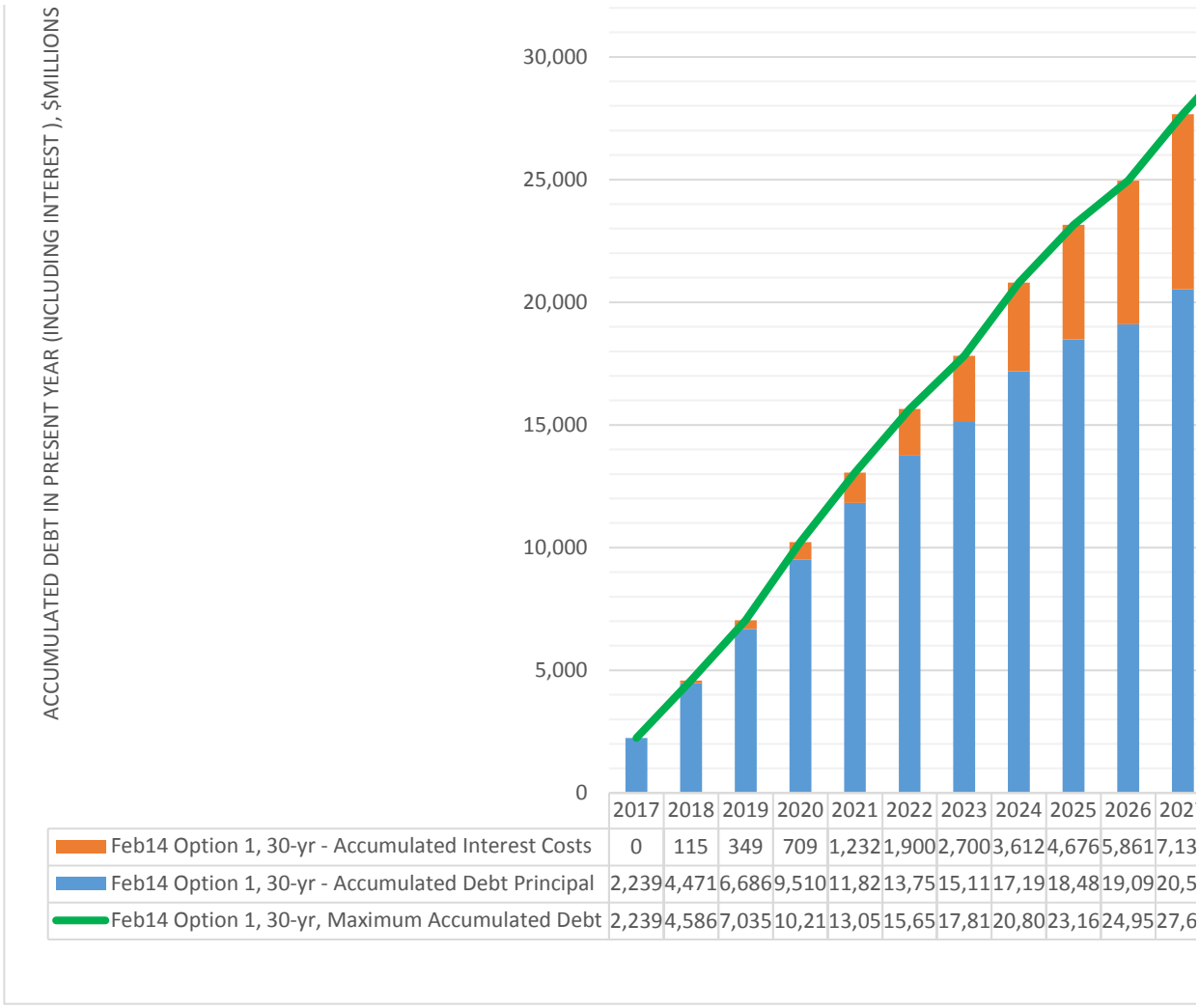
Feb 14 Deck

Feb 14 Deck - Option 1,2,3 - at 5.12% interest rate

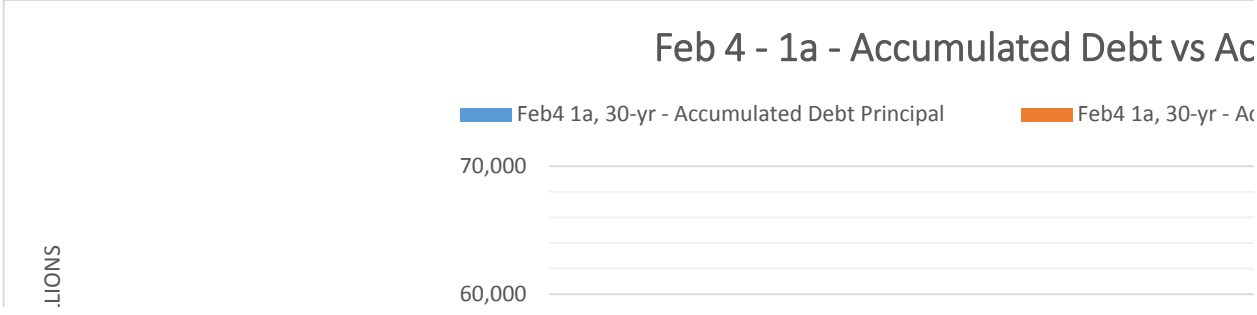


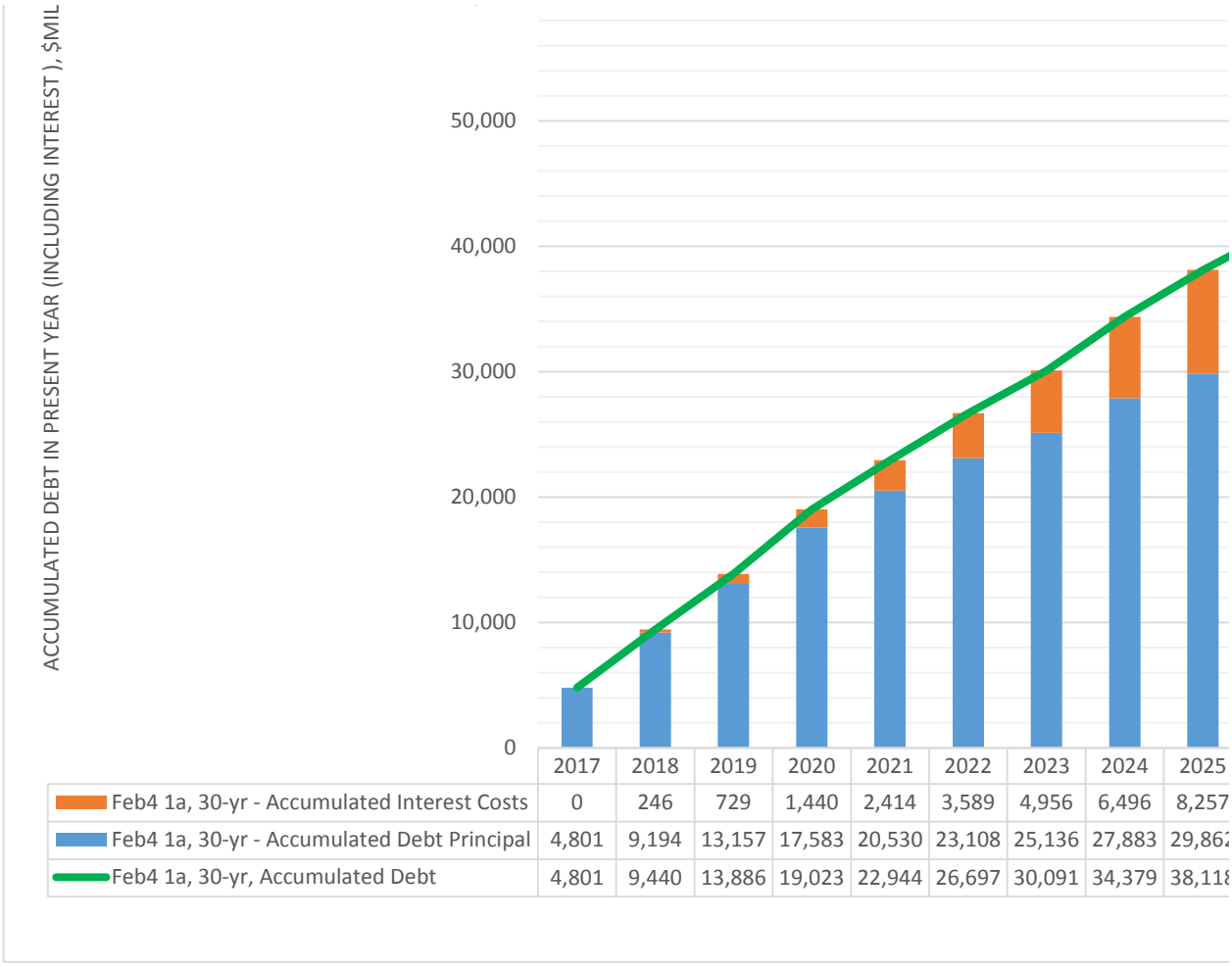
Feb 14 Deck - Option 1 - Accumulation of Debt (Principal and Interest)



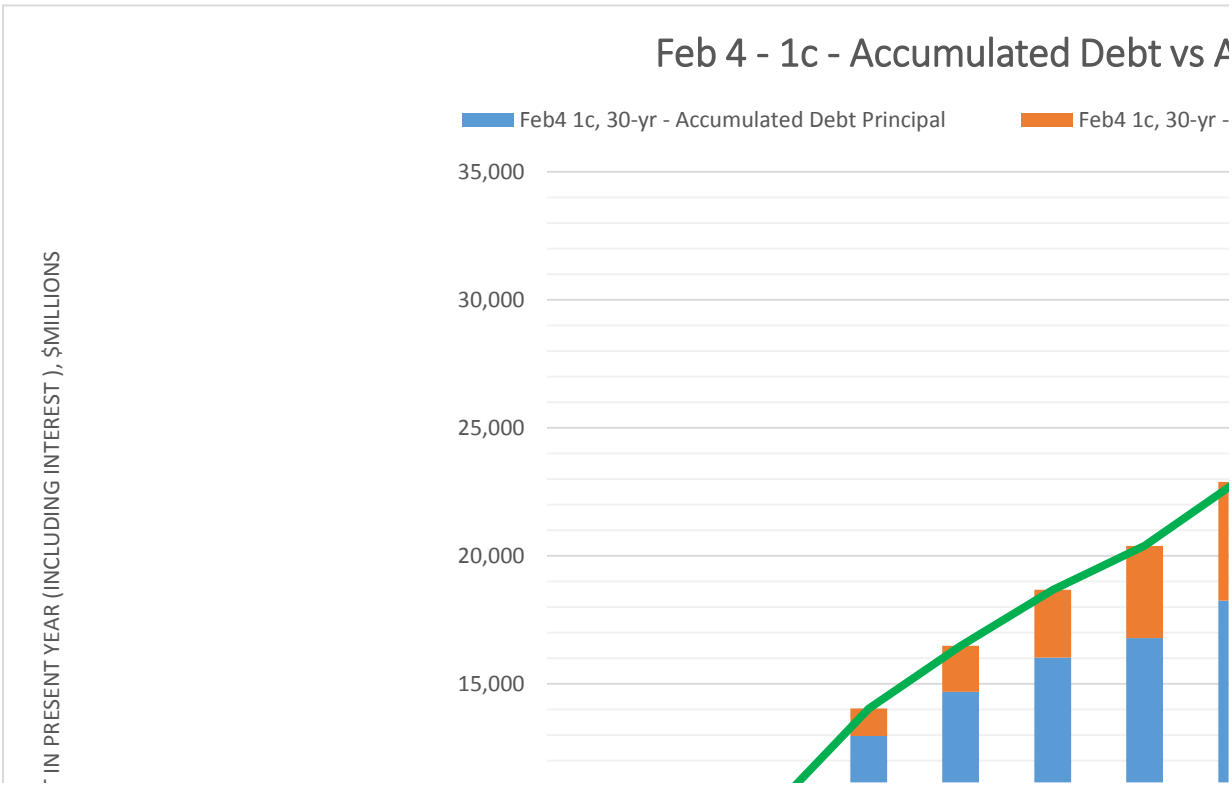


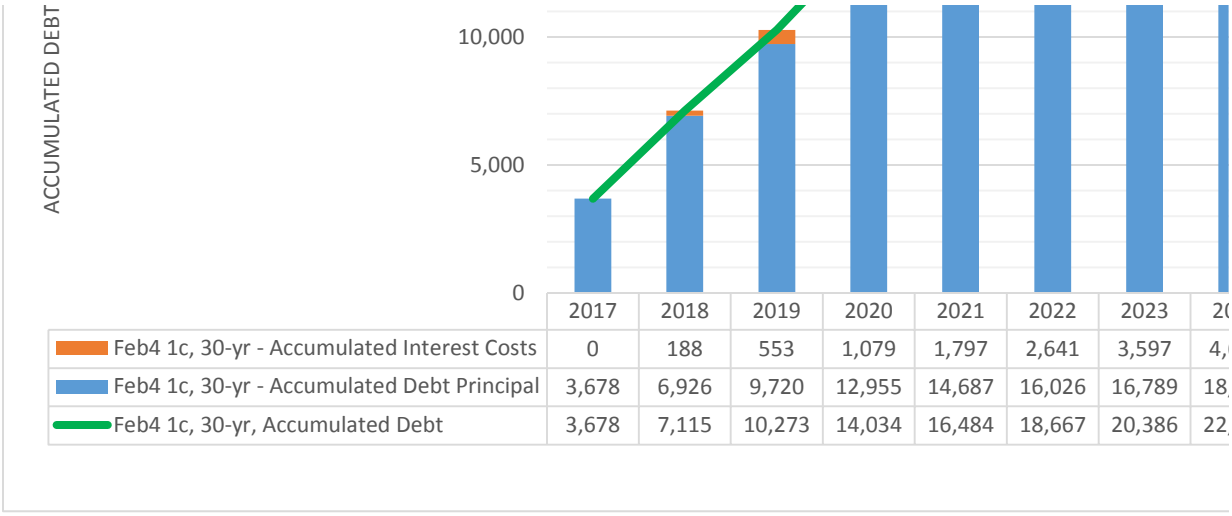
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	202
Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,13
Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,82	13,75	15,11	17,19	18,48	19,09	20,5
Feb14 Option 1, 30-yr, Maximum Accumulated Debt	2,239	4,586	7,035	10,21	13,05	15,65	17,81	20,80	23,16	24,95	27,6



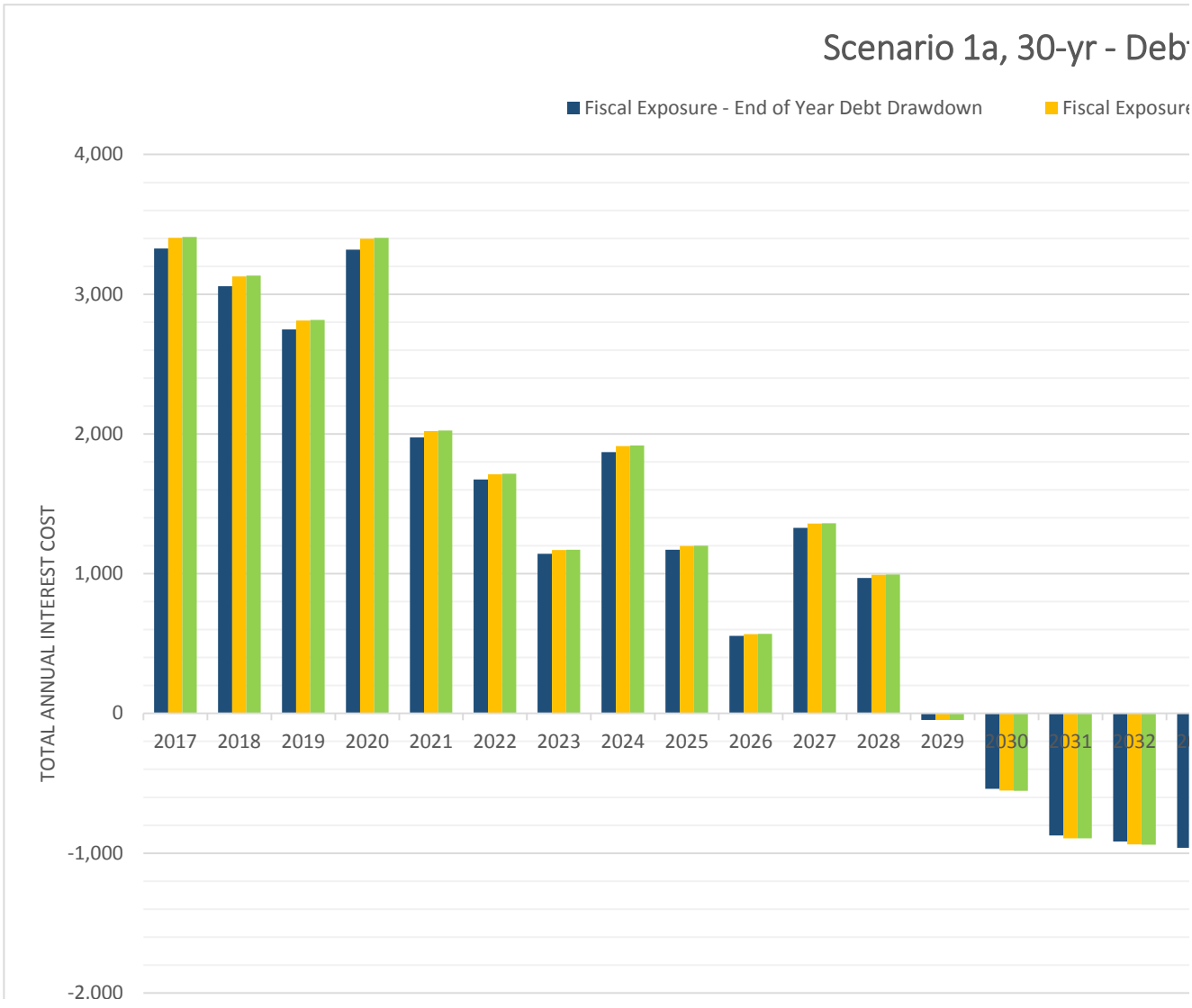


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



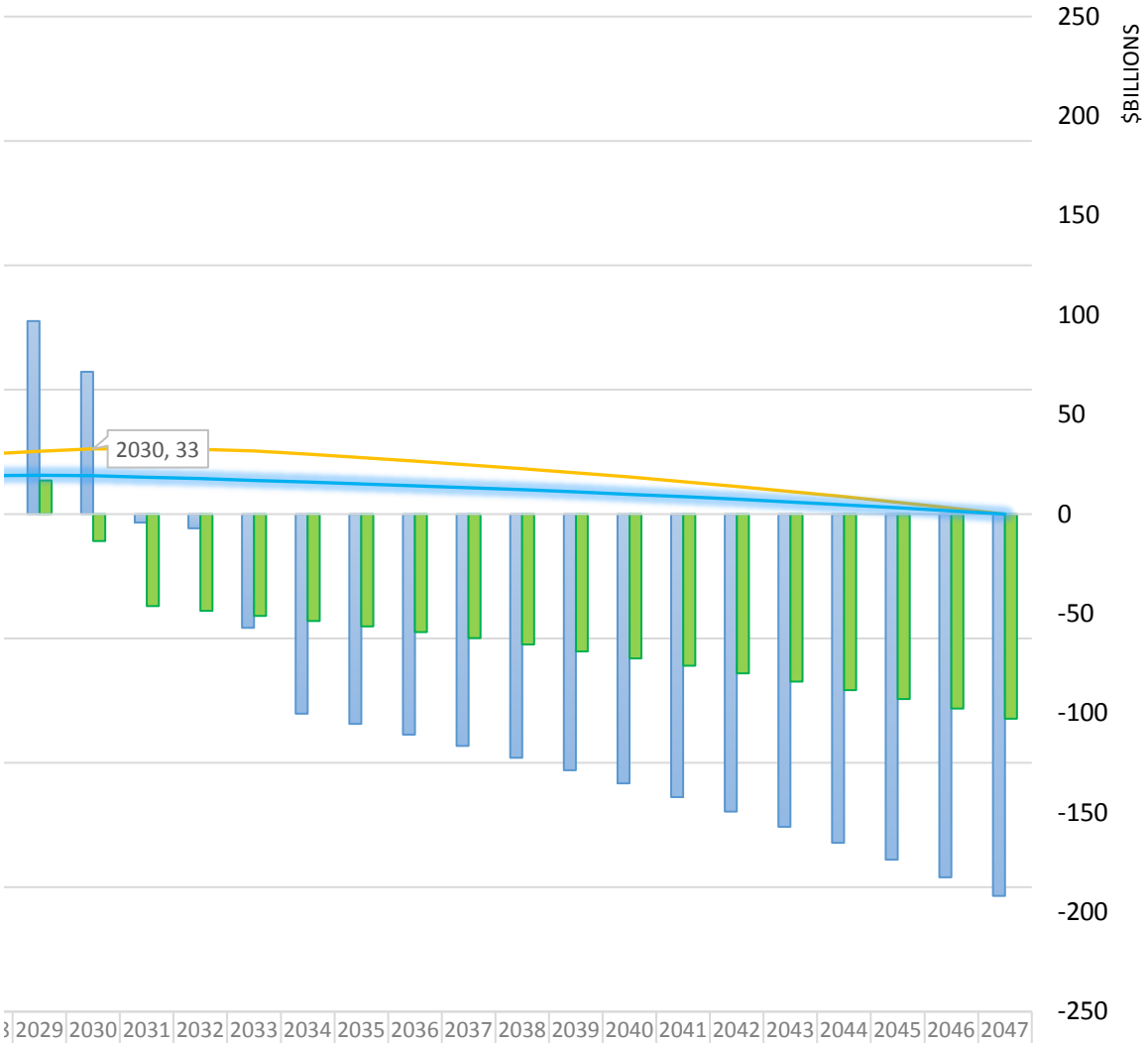


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

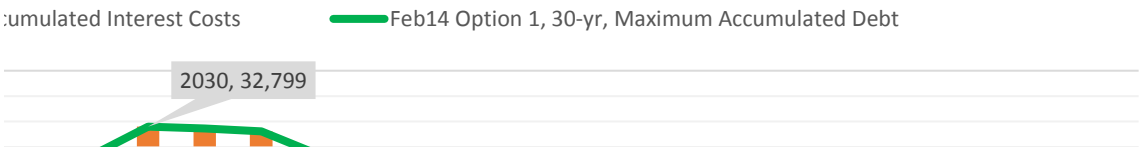
- at 5.12% interest rate

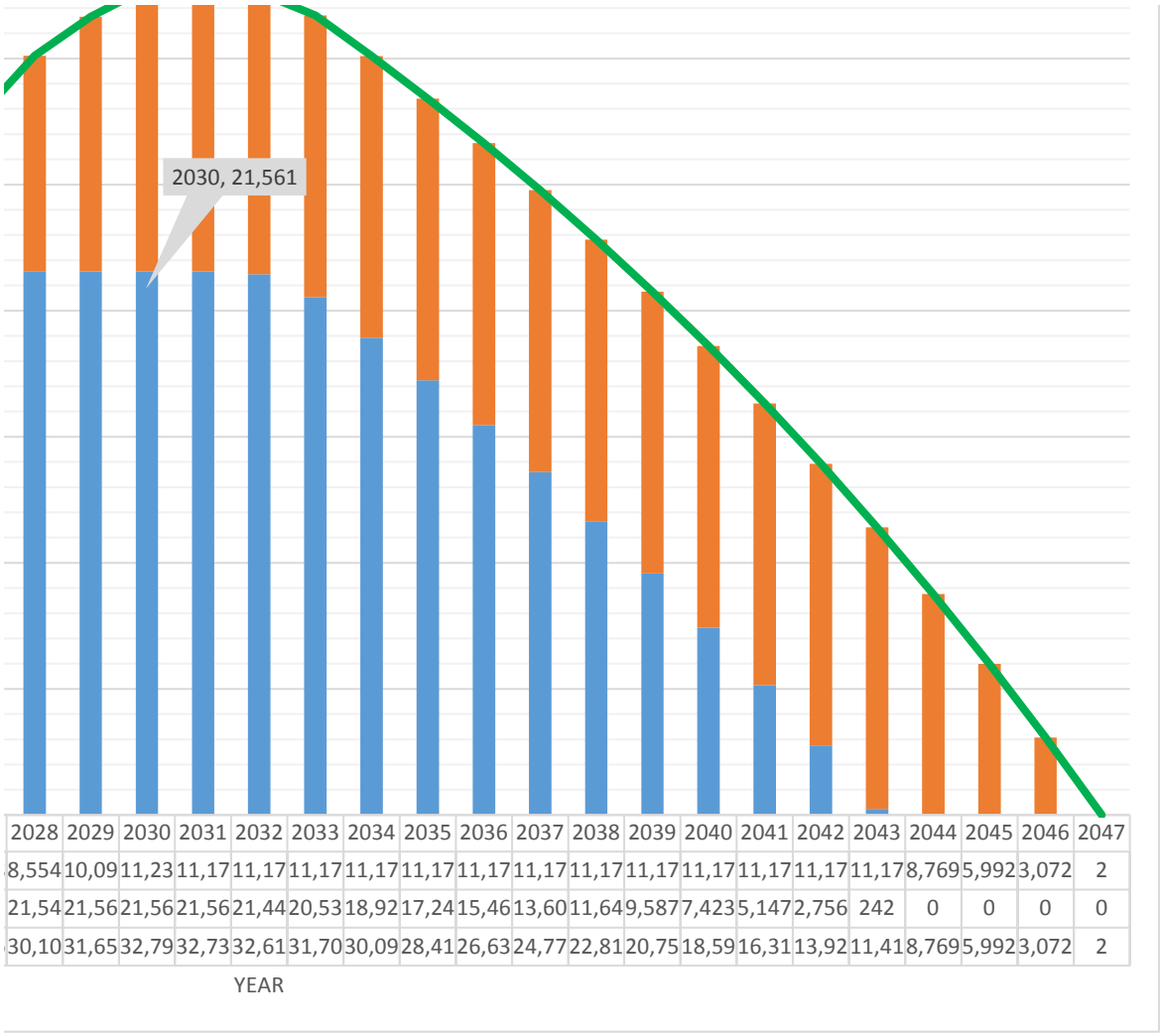


	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
	41,552	1,144	-68	-114	-914	-1,60	-1,68	-1,77	-1,86	-1,95	-2,05	-2,16	-2,27	-2,39	-2,51	-2,64	-2,77	-2,92	-3,06
	3 271	-217	-740	-778	-818	-859	-903	-950	-998	-1,04	-1,10	-1,15	-1,21	-1,28	-1,34	-1,41	-1,48	-1,56	-1,64
	031,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,769	5,992	3,072	2
	519,53	19,31	18,57	17,79	16,98	16,12	15,21	14,26	13,27	12,22	11,11	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1

CALENDAR YEAR

n of Debt (Principal and Interest)

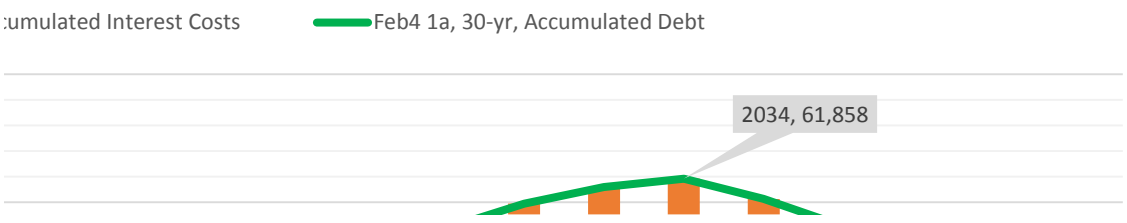




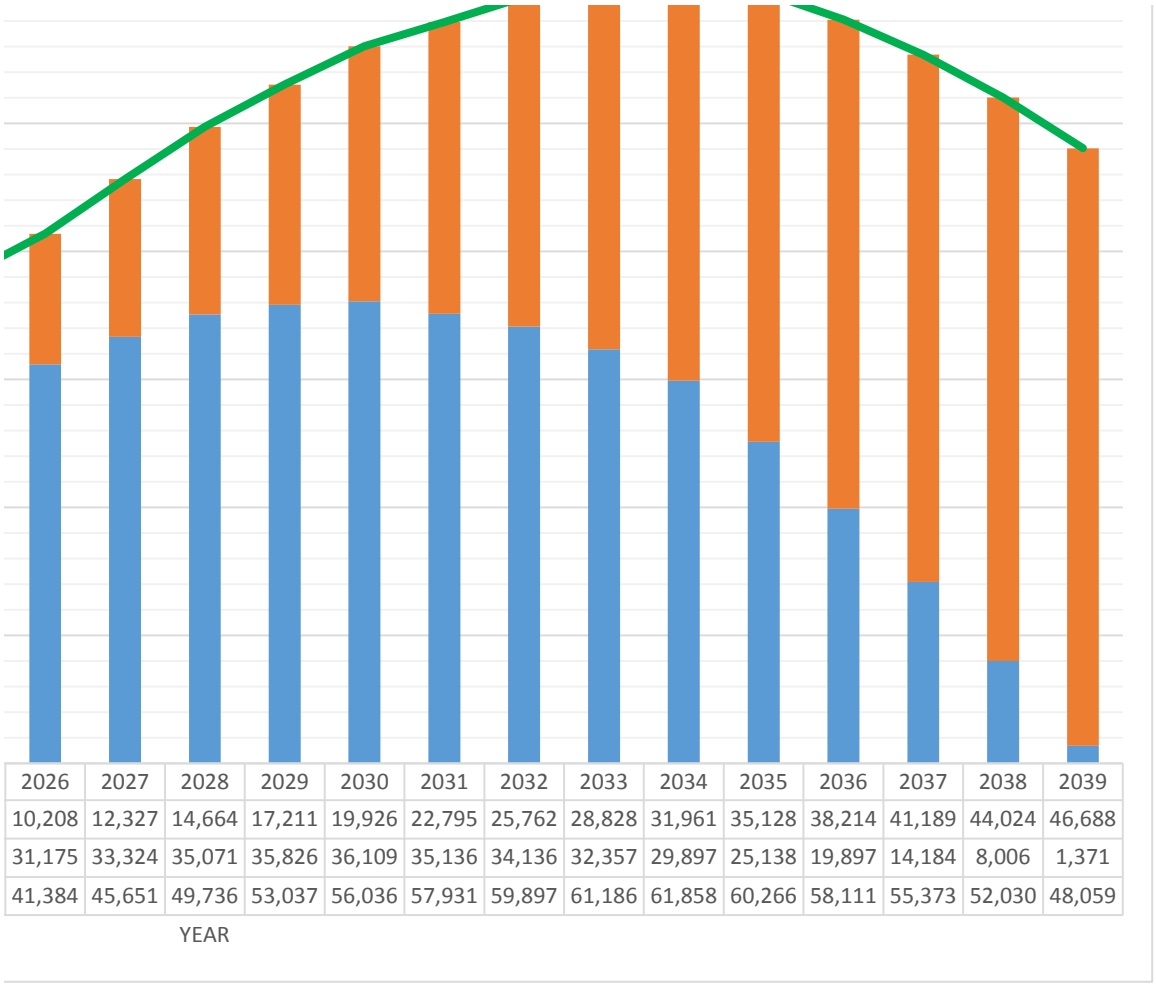
2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
8,554	10,09	11,23	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	8,769	5,992	3,072	2
21,54	21,56	21,56	21,56	21,44	20,53	18,92	17,24	15,46	13,60	11,64	9,587	7,423	5,147	2,756	242	0	0	0	0
30,10	31,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,769	5,992	3,072	2

YEAR

cumulated Total Interest Costs



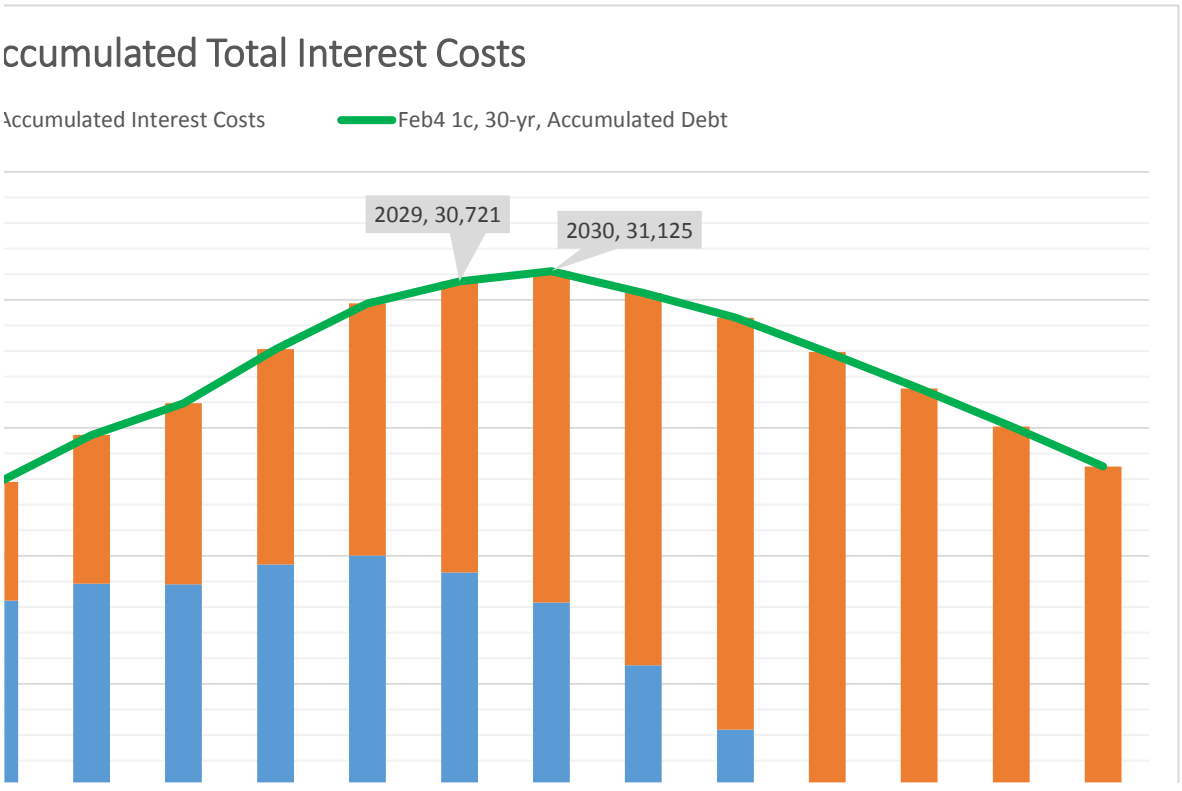
LIONS

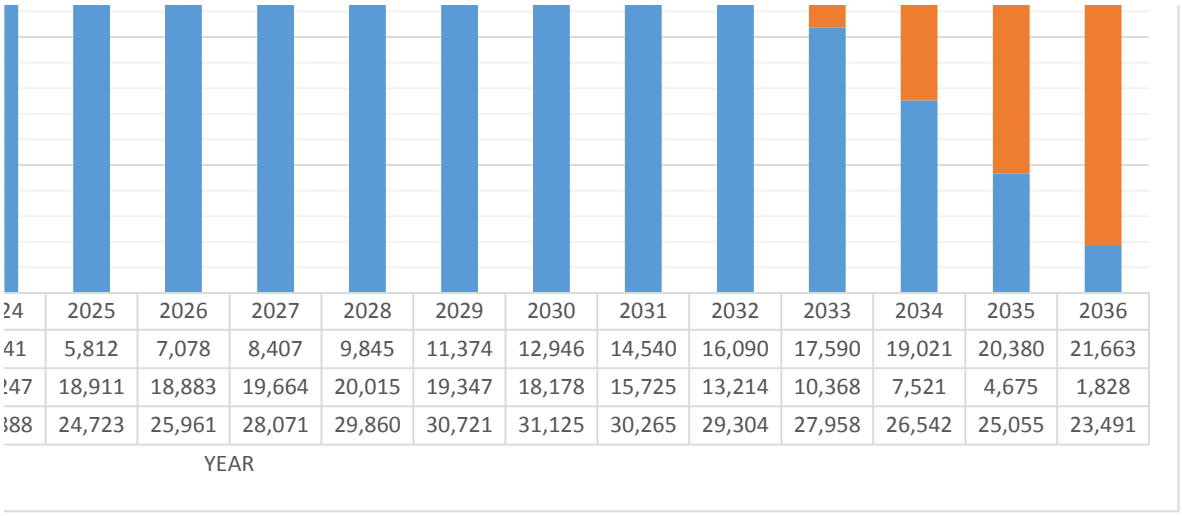


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

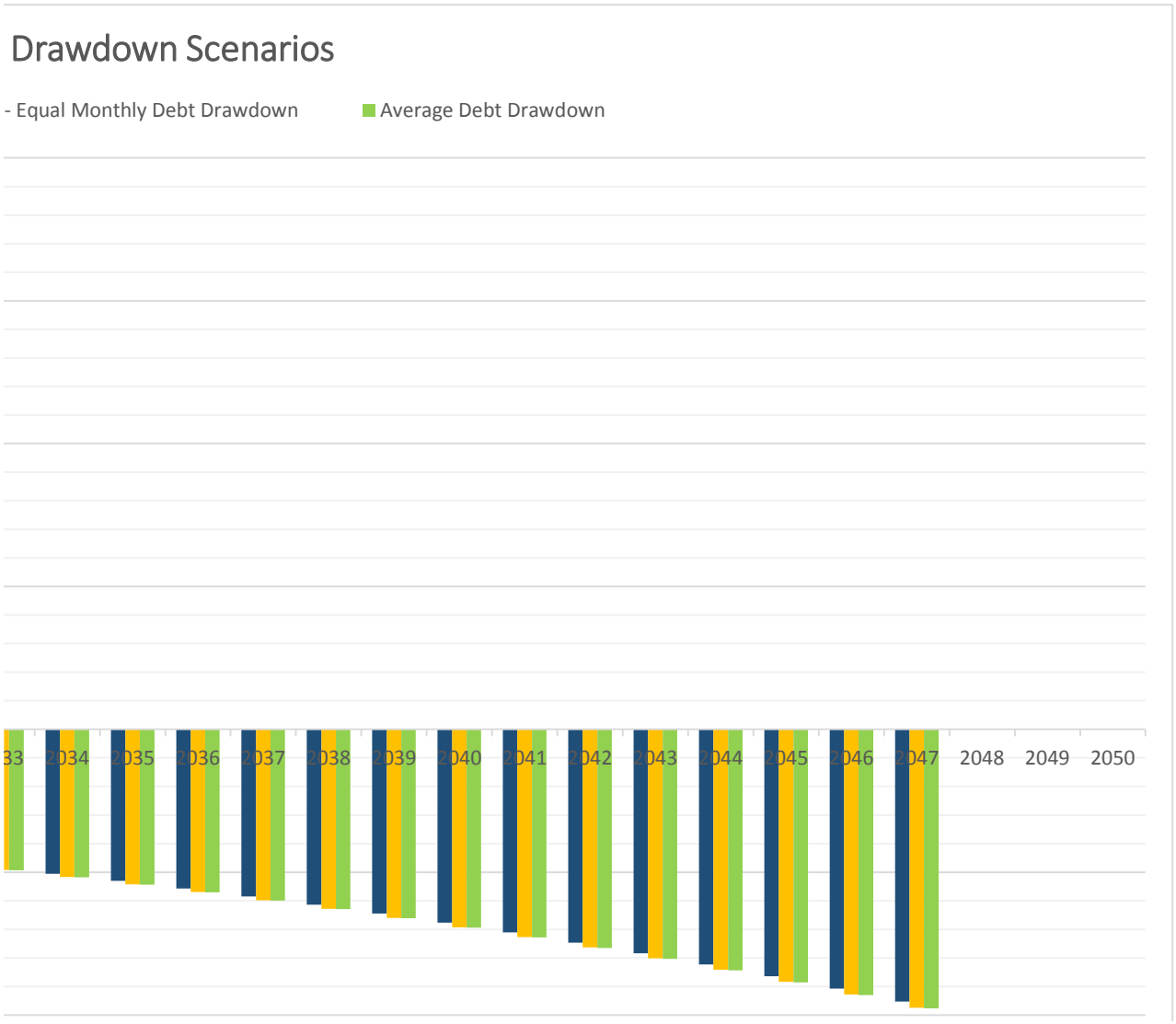
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





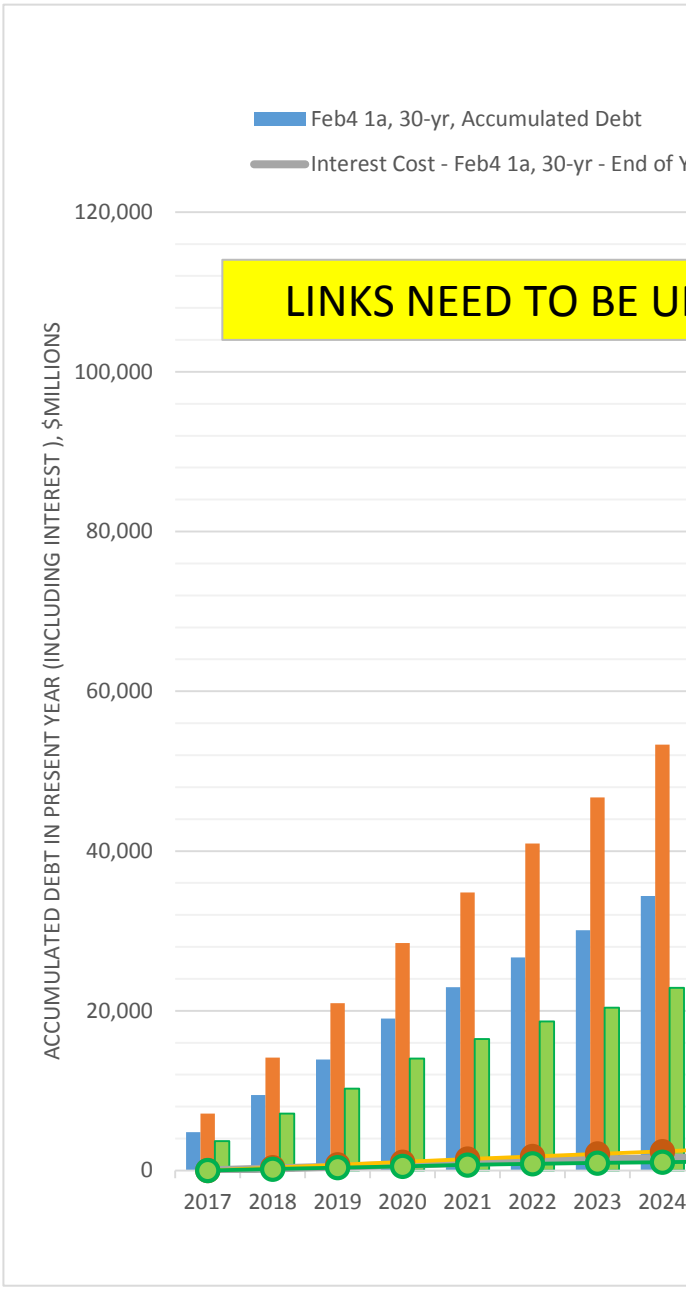
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

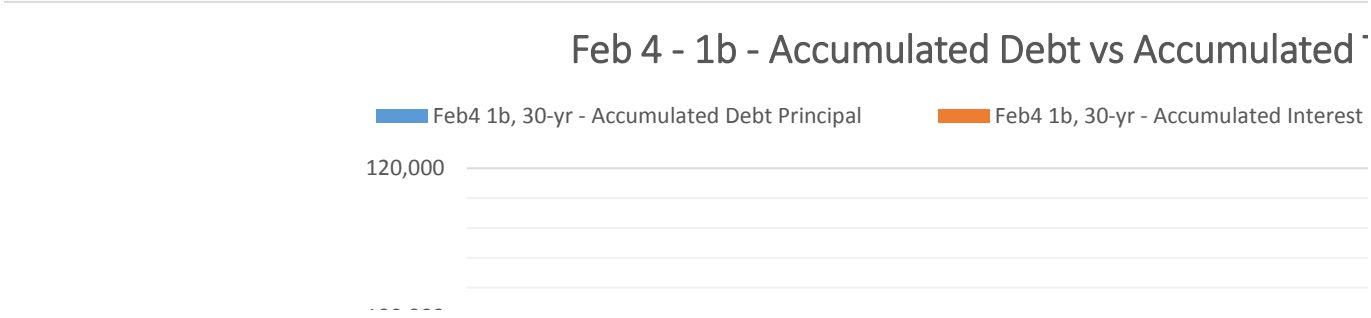
YEAR

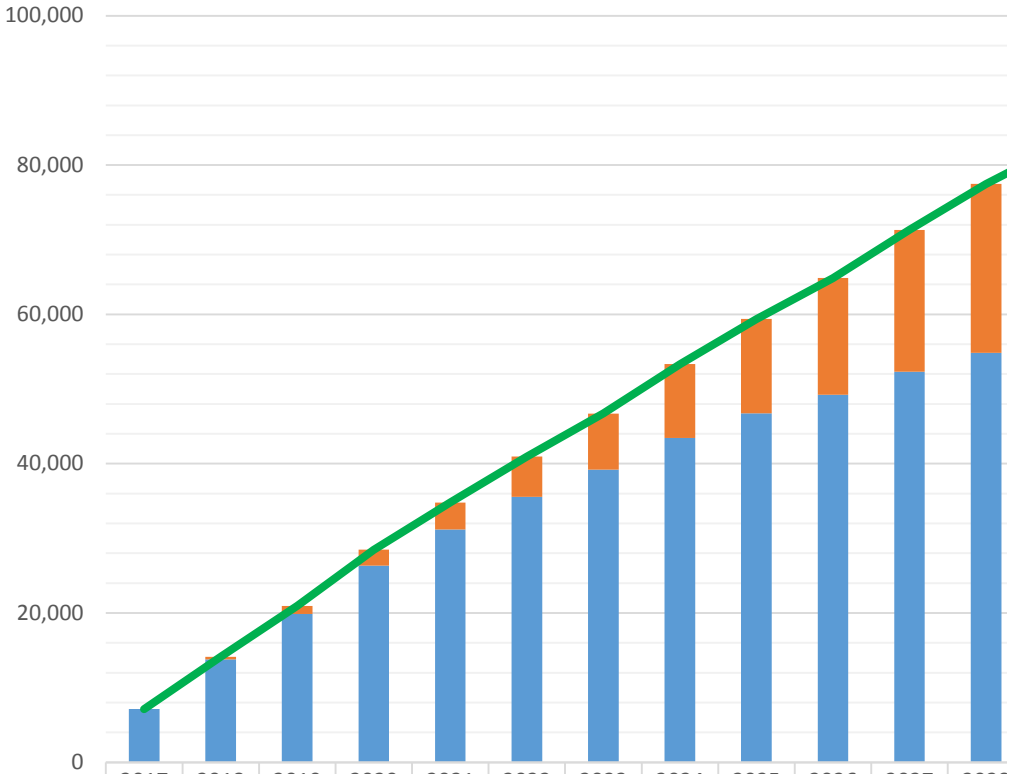


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate



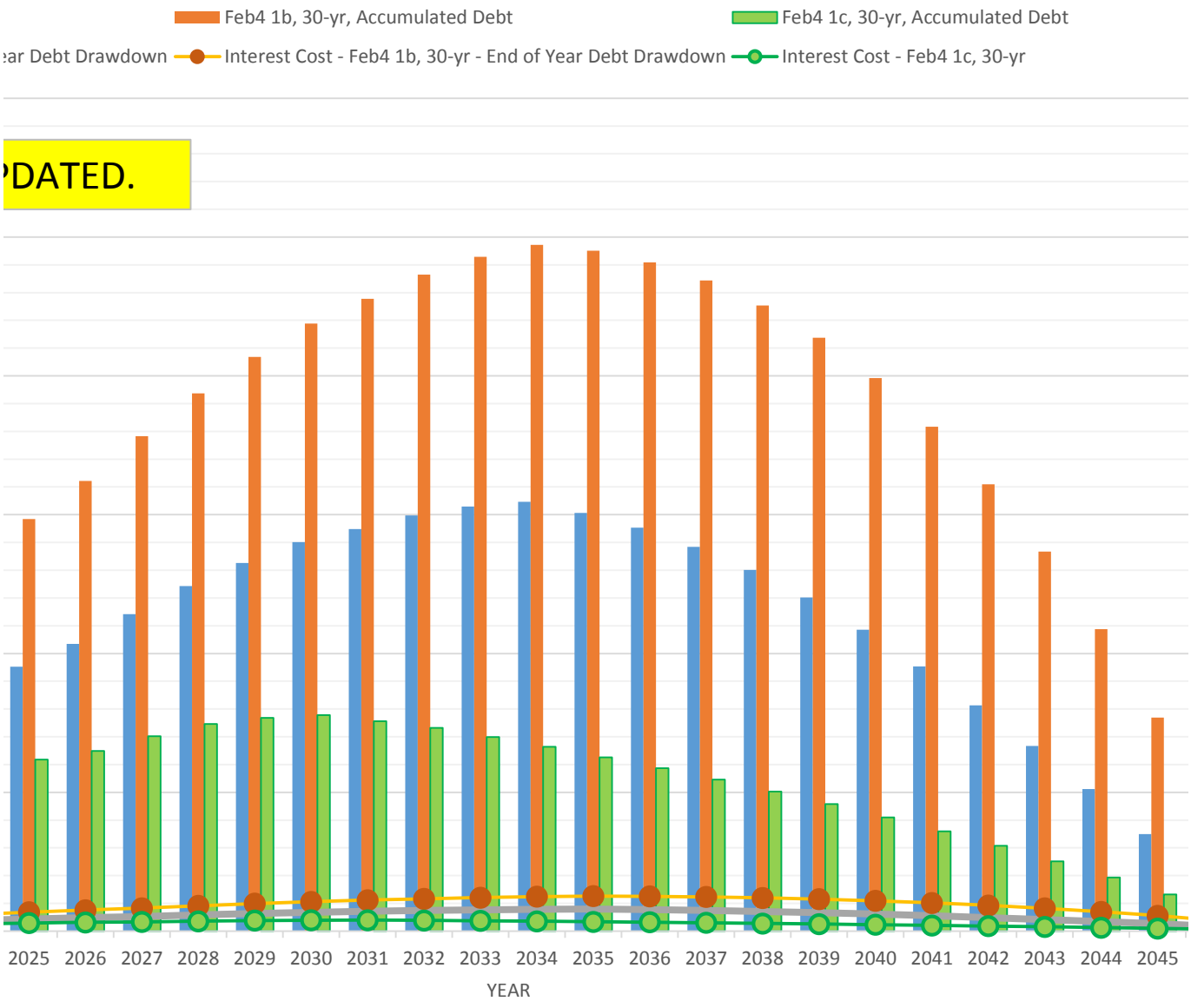

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000



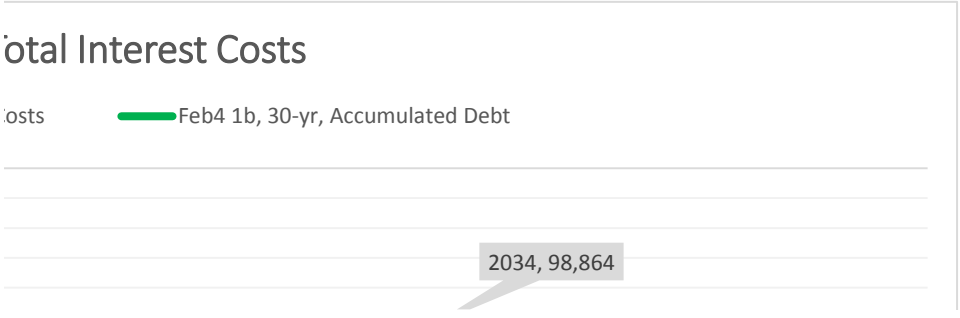
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

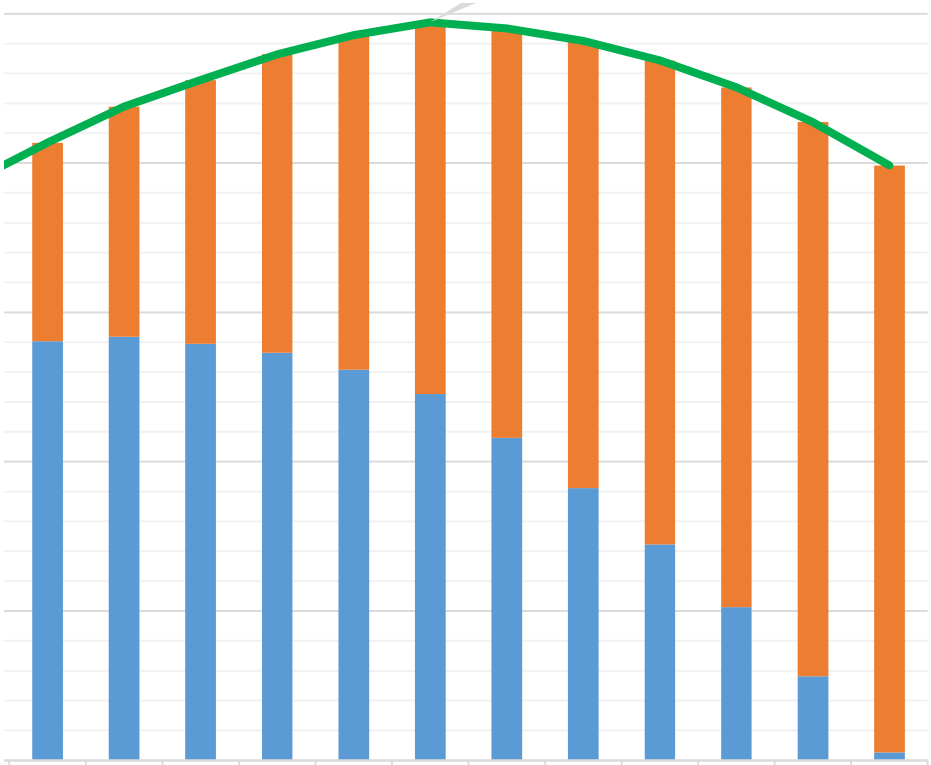
Y

Accumulated debt in present year, with annual interest costs



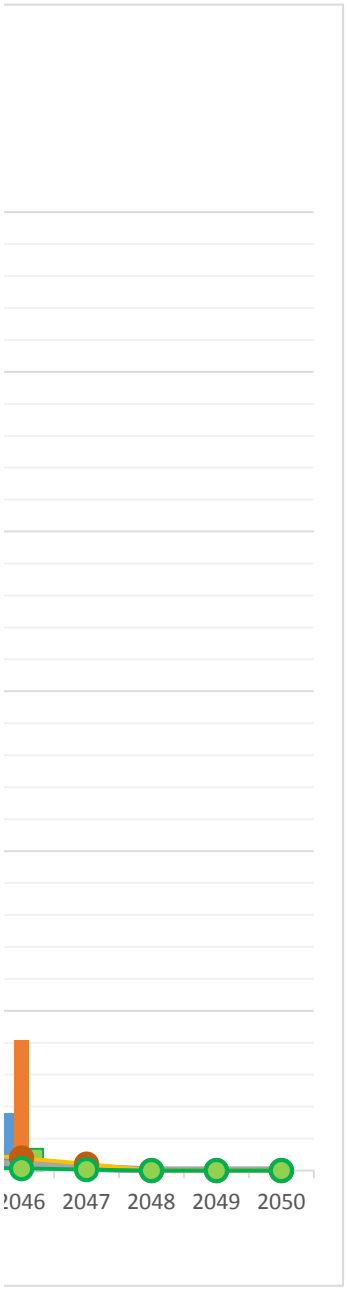
PDATED.


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864

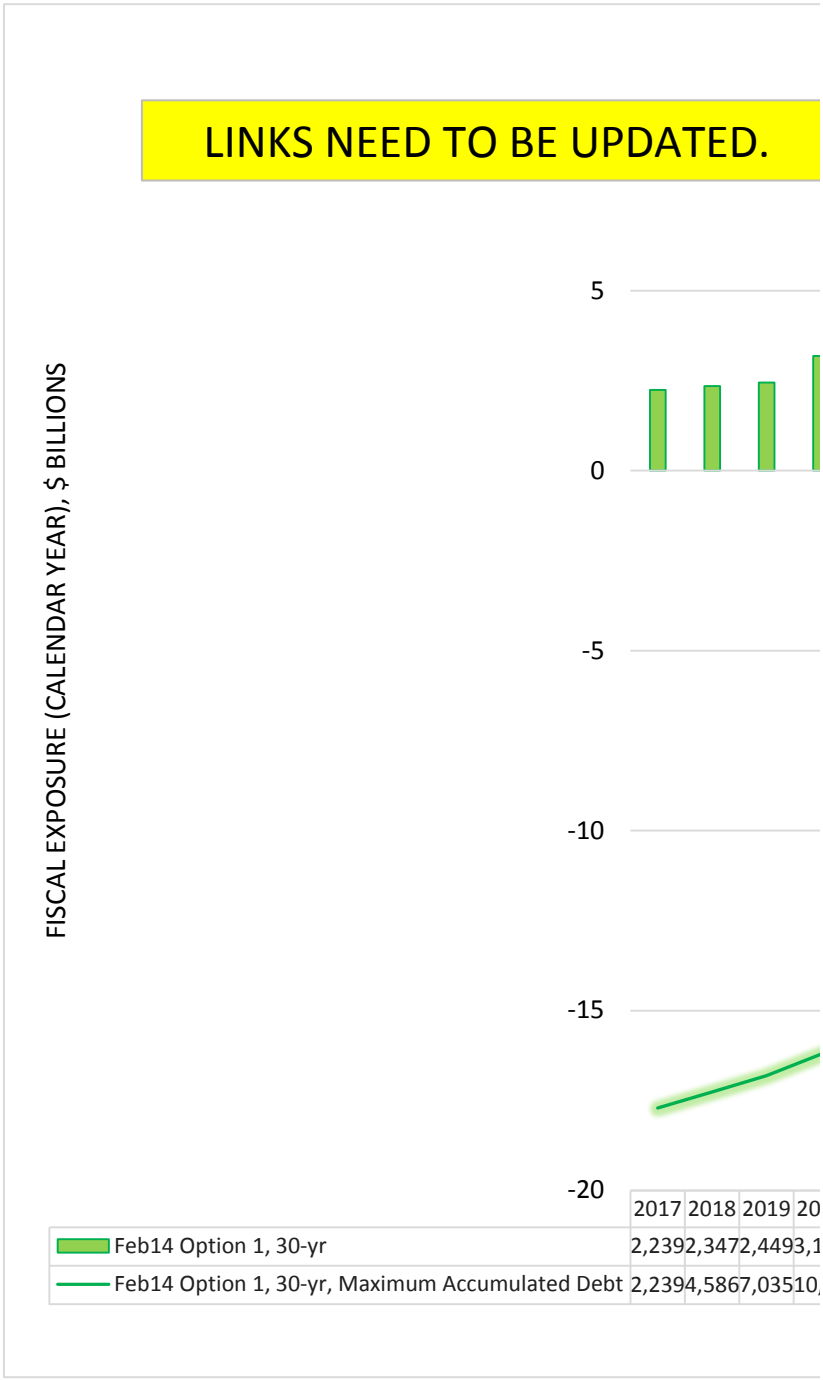


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



LINKS NEED TO BE UPDATED.



FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1b, 30-yr

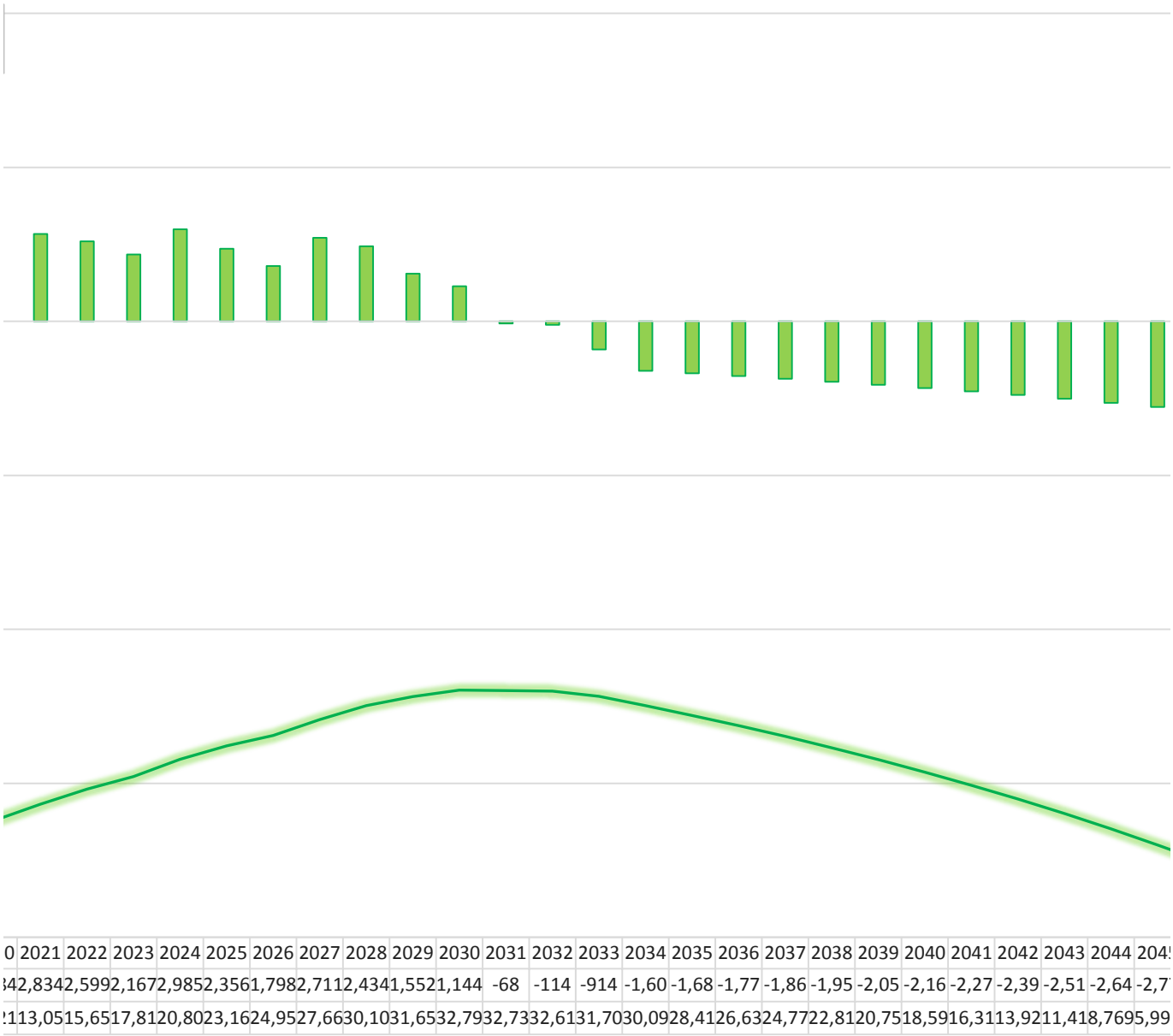
Feb4 1b, 30-yr,

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,

Feb 14 Deck - Option 1

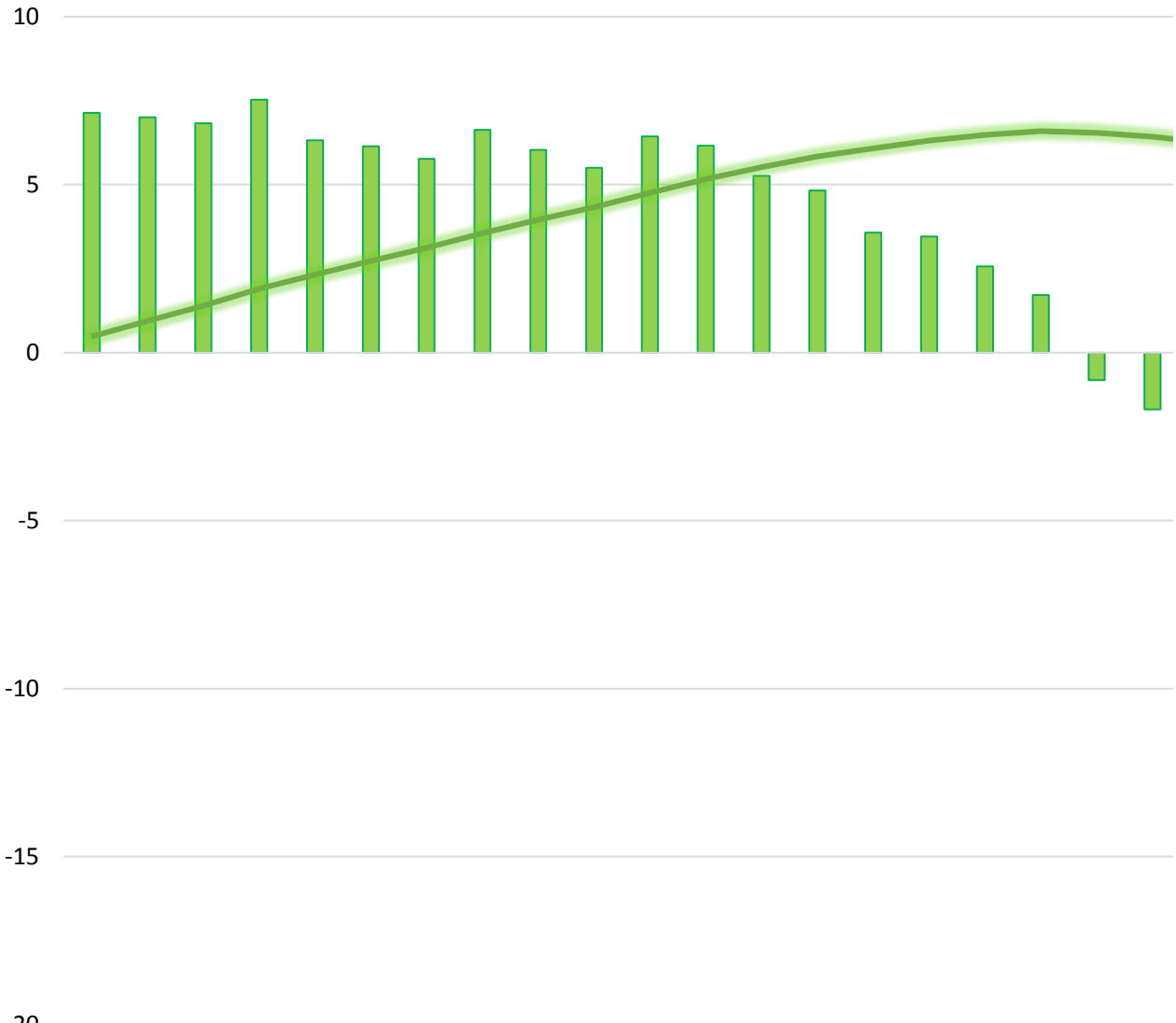


0	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	204
42	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,60	-1,68	-1,77	-1,86	-1,95	-2,05	-2,16	-2,27	-2,39	-2,51	-2,64	-2,7
113	05	15,65	17,81	20,80	23,16	24,95	27,66	30,10	31,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,76	95,99

CALENDAR YEAR

Feb 6 Deck - Scenario 1b - at 5.13% interest rat

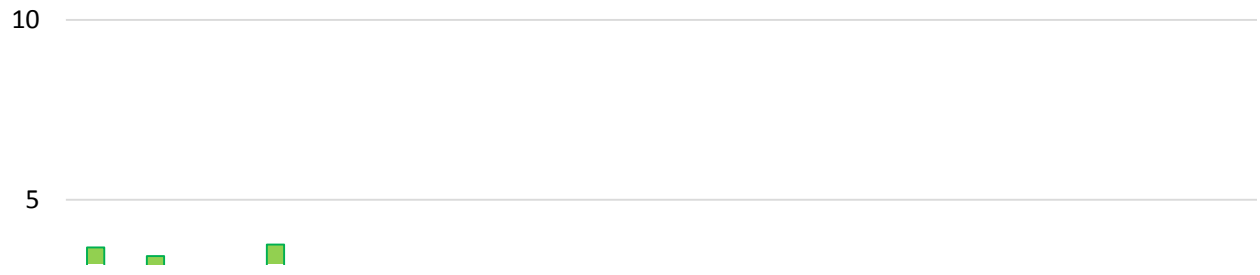
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

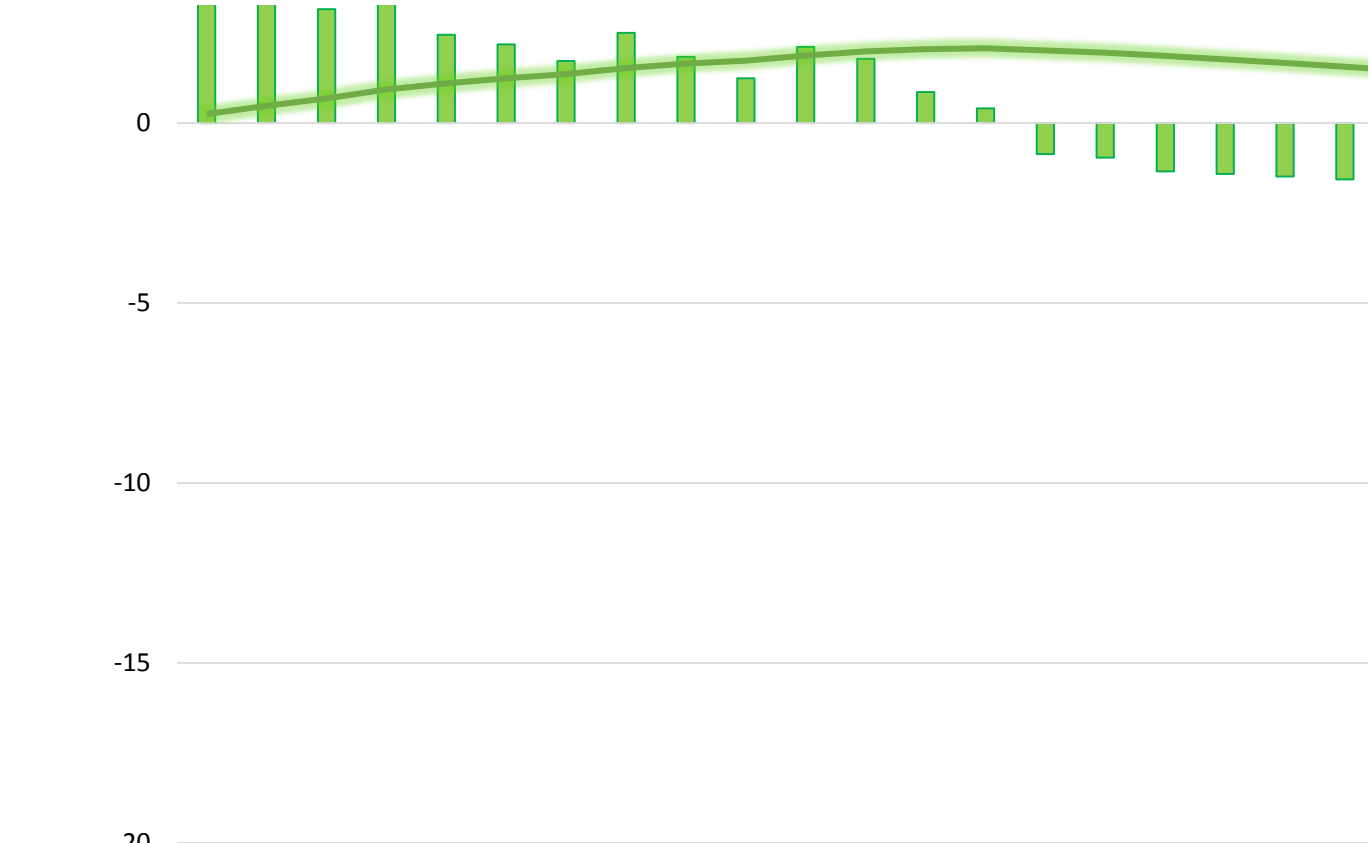


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

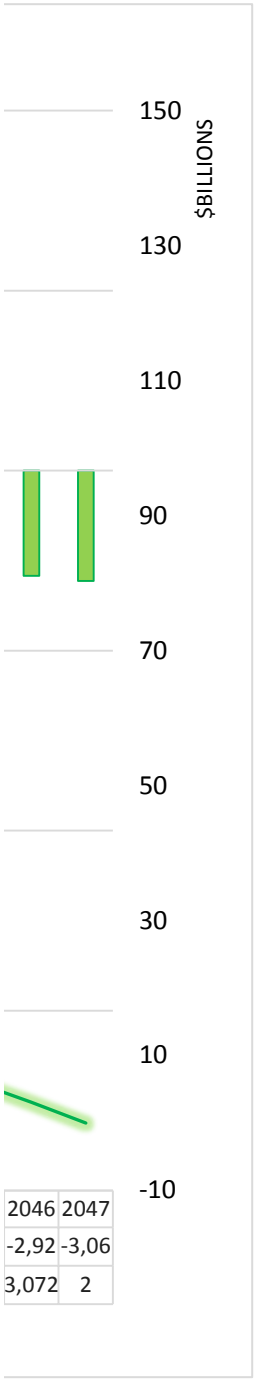
Feb 6 Deck - Scenario 1c - at 5.12% interest rat

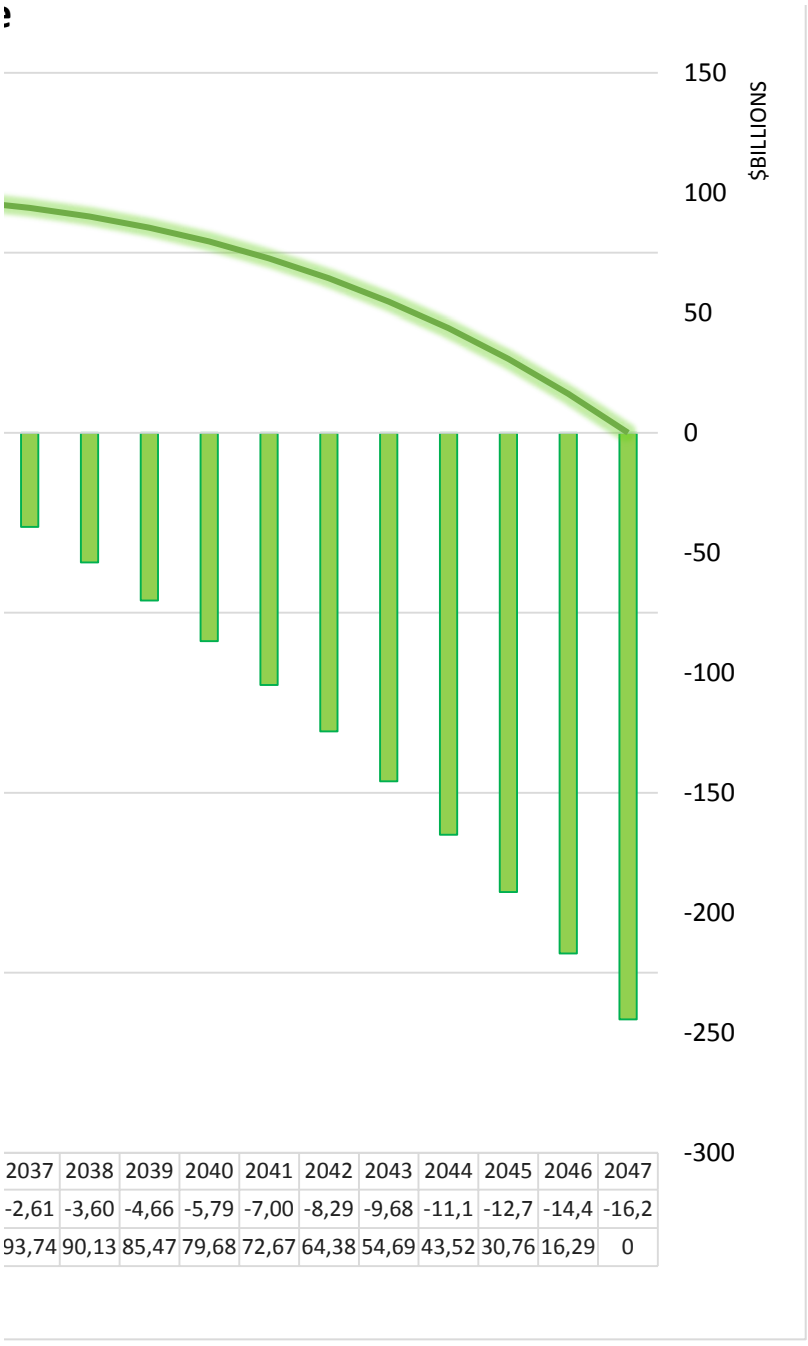




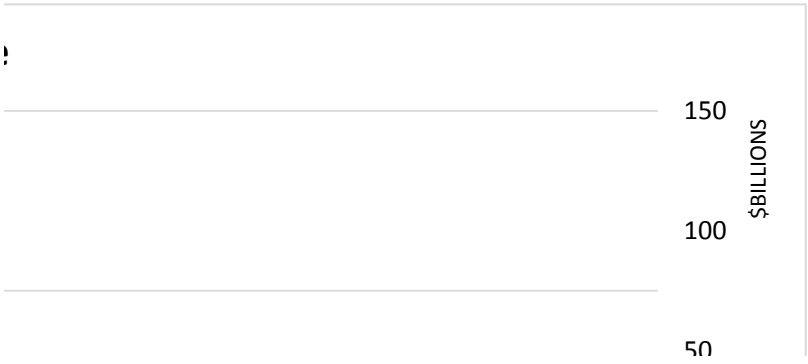
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

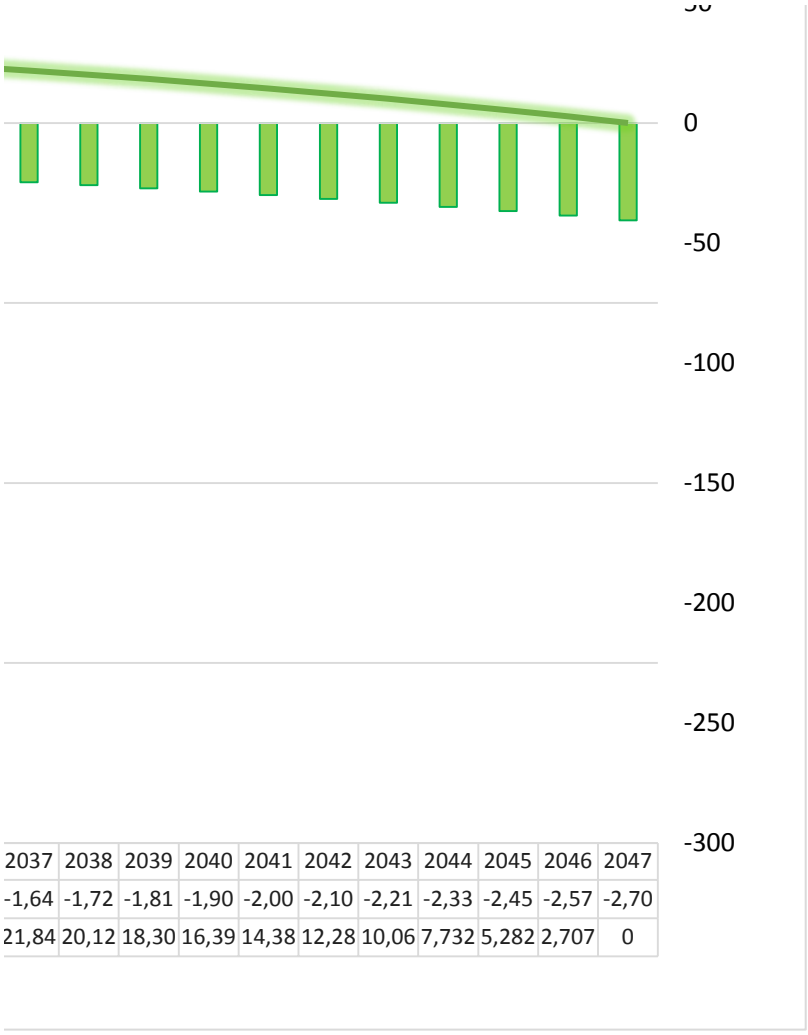
CALENDAR YEAR


150
130
110
90
70
50
30
10
-10
$BILLIONS
2046 2047
-2,92 -3,06
3,072 2



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest

IESO GA cost forecast + extrapolation

Scenario
Option 1
Bills Lowered 25%, RPP Only
Option 2
Bills Lowered 20%, RPP Only
Option 3
Bills Lowered 18%, contract/conservation refinancing, RPP Only

rate	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
Ratepayer GA Payment	9,856	9,602	9,338	9,344
Total Accumulated Debt ($ billion)	2,239	4,586	7,035	10,219
Ratepayer GA Payment	10,537	10,296	10,041	10,061
Accumulated debt in present year (including 5% interest,	1,559	3,177	4,851	7,207
Ratepayer GA Payment	10,648	10,303	10,186	10,873
Accumulated debt in present year (including 5% interest,	1,447	3,053	4,575	6,105
	12095.37	11834.681	11552.105	12168.428

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801
13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103
9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513
9,266	11,038	12,324	14,370	15,725	16,458	18,035	19,263
9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253
7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876
10843.555	10633.626	10243.432	11128.119	10527.018	10033.287	11042.844	10819.098

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389

9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615
31,654	32,799	32,730	32,616	31,702	30,097	28,411	26,638
10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117
19,534	19,317	18,577	17,799	16,981	16,122	15,218	14,268
9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837
18,843	19,521	20,007	20,312	20,325	19,755	18,549	17,050
10008.692	9721.4381	8654.4847	8819.9388	8238.0383	7756.4351	5662.3212	5388.8445

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627

8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853
24,774	22,815	20,756	18,591	16,316	13,924	11,410	8,767
6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355
13,270	12,221	11,118	9,958	8,740	7,458	6,112	4,696
7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712
15,464	13,694	12,062	10,556	9,143	7,810	6,672	5,928
5128.5761	4880.878	4645.1432	4420.7938	4207.28	4004.0783	3810.6908	3626.6435

2045	2046	2047	2048

3,451	3,285	3,126	2,975	2,831	2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
6,678	6,511	6,353	2,975	2,831	2,695
5,989	3,069	0	0	0	0
5,180	5,013	4,854	2,975	2,831	2,695
3,208	1,644	0	-	-	-
4,007	3,619	3,425	3,156	3,011	2,878
5,676	5,633	5,623	5,730	5,843	5,959
3451.485	3284.787	3126.139	2975.154	2831.461	2694.708

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

		5.00%	
Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb14_1_30yr

Option 1 - Bills Lowered 25%, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,239	2,347
Interest Portion	0	115

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	560	2,266
Interest Portion	-	29

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $33 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb14_2_30yr

Option 2 - Bills Lowered 20%, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,559	1,619
Interest Portion	0	80

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	390	1,574
Interest Portion	-	20

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb14_3_30yr

Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606
Interest Portion	0	74

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,487
Interest Portion	-	19

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	390 - 560	1,574 - 2,266

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	560	2266
Debt-Finance Global Adjustment Costs, Option 1a	390	1574
RRRP		
OESP – Enhance Benefit		162

Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**560**	**2506**
Total, B	390	1814

Proposed Program Total:	390 - 560	1,814 - 2,506

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Option 1
Option 2
Option 3

Assumes an inte

2019	2020	2021	2022
2,449	3,184	2,834	2,599
235	360	523	668

2018-19	2019-20	2020-21	2021-2022
2,372	2,633	3,096	2,775
145	266	401	559

2030.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,674	2,356	2,060	1,772
163	248	369	474

2018-19	2019-20	2020-21	2021-2022
1,632	1,844	2,282	1,988
100	184	278	395

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446
156	234	312	385

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429
95	176	254	331

2033.

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022
1,632 - 2,372	1,844 - 2,633	2,282 - 3,096	1,988 - 2,775

/1

2018-19[1]	2019-20[1]	2020-21[1]
2372	2633	3096
1632	1844	2282
225	279	323

60	60	60
18	18	18
2675	**2990**	**3497**
1935	2201	2683

1,935 - 2,675	2,201 - 2,990	2,683 - 3,497

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$21,561	$30,205	$32,799	occurs in Year 2030
$13,503	$17,883	$19,534	occurs in Year 2029
$12,862	$19,498	$20,326	occurs in Year 2033

erest rate of 5.00% (compounded monthly).

Tab Name		Total Accumulated Interest Costs
Feb14_1_30yr	$27,005	$34,278
Feb14_2_30yr	$15,940	$20,378
Feb14_3_30yr	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$27,005 to $34,278**
Option 2	$15,940 to $20,378**
Option 3	$17,202 to $22,028**

** With a higher interest rate, the amortization period extend beyond the 30-year forecast

ted period resulting in a remaining balance at the end of the 30-year period. For specifics, see details belo

w.

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,239	2,347	2,449	3,184	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,604	-1,687	-1,773	-1,864	-1,959	-2,059	-2,164	-2,275	-2,392	-2,514	-2,643	-2,778	-2,920	-3,069	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,292	2,403	2,507	3,260	2,902	2,660	2,219	3,056	2,412	1,841	2,776	2,492	1,589	1,171	-70	-117	-936	-1,643	-1,727	-1,815	-1,908	-2,005	-2,108	-2,216	-2,329	-2,448	-2,574	-2,705	-2,844	-2,989	-3,142	0	0	0
			53	56	58	76	67	62	52	71	56	43	64	58	37	27	-2	-3	-22	-38	-40	-42	-44	-47	-49	-51	-54	-57	-60	-63	-66	-69	-73	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,184	1,678	30,205
Equal Monthly Debt Drawdown	3,260	1,676	

		Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,799	2030	21,561
Equal Monthly Debt Drawdown	33,579		

Feb14 Option 1, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				26
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
a	Debt, Beginning of Year	0	2,239	4,586	7,035	10,219	13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103	31,655	32,799	32,731	32,617	31,703	30,098	28,412	26,639	24,775	22,816	20,757	18,593	16,318	13,926	11,412	8,769	5,992	3,072	2	3	3	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*115*	*235*	*360*	*523*	*668*	*801*	*912*	*1,064*	*1,185*	*1,277*	*1,416*	*1,540*	*1,620*	*1,678*	*1,675*	*1,669*	*1,622*	*1,540*	*1,454*	*1,363*	*1,268*	*1,167*	*1,062*	*951*	*835*	*712*	*584*	*449*	*307*	*157*	*0*	*0*	*0*	30,205
b	Additional GA Debt Drawdown, End of Year	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,239	4,586	7,035	10,219	13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103	31,655	32,799	32,731	32,617	31,703	30,098	28,412	26,639	24,775	22,816	20,757	18,593	16,318	13,926	11,412	8,769	5,992	3,072	2	3	3	3	
			FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,138	8,554	10,094	11,238	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	8,769	5,992	3,072	2	3	3	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,821	13,752	15,118	17,192	18,483	19,097	20,531	21,549	21,561	21,561	21,561	21,447	20,533	18,928	17,242	15,469	13,605	11,646	9,587	7,423	5,147	2,756	242	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,138	8,554	10,094	11,714	13,392	15,066	16,735	18,357	19,897	21,350	22,713	23,981	25,148	26,210	27,161	27,996	28,709	29,293	29,741	30,048	30,205				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,821	13,752	15,118	17,192	18,483	19,097	20,531	21,549	21,561	21,086	19,339	17,551	14,968	11,741	8,515	5,288	2,062	-1,164	-4,391	-7,617	-10,844	-14,070	-17,297	-20,523	-23,750	-26,976	-30,202				
Fiscal Exposure - End of Year Debt Drawdown		2,239	2,347	2,449	3,184	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,604	-1,687	-1,773	-1,864	-1,959	-2,059	-2,164	-2,275	-2,392	-2,514	-2,643	-2,778	-2,920	-3,069	0	0	0	

Feb14 Option 1, 30-yr — Equal Monthly Debt Drawdown

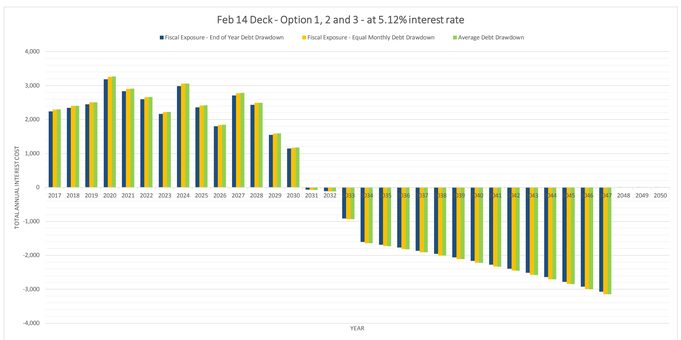
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,292	4,695	7,202	10,462	13,363	16,024	18,243	21,299	23,711	25,552	28,327	30,819	32,408	33,579	33,510	33,393	32,457	30,814	29,087	27,272	25,365	23,359	21,251	19,035	16,706	14,257	11,683	8,978	6,134	3,145	2	3	3	
1,676	*Interest Cost - Feb14 Option 1, 30-yr*	*53*	*170*	*293*	*436*	*590*	*730*	*852*	*983*	*1,120*	*1,228*	*1,341*	*1,473*	*1,577*	*1,647*	*1,676*	*1,672*	*1,647*	*1,584*	*1,500*	*1,411*	*1,319*	*1,221*	*1,118*	*1,010*	*897*	*778*	*653*	*521*	*383*	*237*	*84*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,292	4,695	7,202	10,462	13,363	16,024	18,243	21,299	23,711	25,552	28,327	30,819	32,408	33,579	33,510	33,393	32,457	30,814	29,087	27,272	25,365	23,359	21,251	19,035	16,706	14,257	11,683	8,978	6,134	3,145	2	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,292	2,403	2,507	3,260	2,902	2,660	2,219	3,056	2,412	1,841	2,776	2,492	1,589	1,171	-70	-117	-936	-1,643	-1,727	-1,815	-1,908	-2,005	-2,108	-2,216	-2,329	-2,448	-2,574	-2,705	-2,844	-2,989	-3,142	0	0	0	
	Monthly Drawdown	187	186	185	235	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	-	-	-	
	FV of Monthly Drawdown at 5%	2,292	2,285	2,267	2,891	2,366	1,977	1,399	2,123	1,322	628	1,468	1,043	12	(487)	(1,788)	(1,831)	(2,644)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	-	-	-	
	Annual Interest Cost on New Drawdowns	53	53	53	67	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	-	-	-	
	Annual Interest Cost on Opening Balance	-	117	240	368	535	684	820	933	1,090	1,213	1,307	1,449	1,577	1,658	1,718	1,714	1,708	1,661	1,577	1,488	1,395	1,298	1,195	1,087	974	855	729	598	459	314	161	0	0	0	
	Total Annual Interest Cost	53	170	293	436	590	730	852	983	1,120	1,228	1,341	1,473	1,577	1,647	1,676	1,672	1,647	1,584	1,500	1,411	1,319	1,221	1,118	1,010	897	778	653	521	383	237	84	0	0	0	

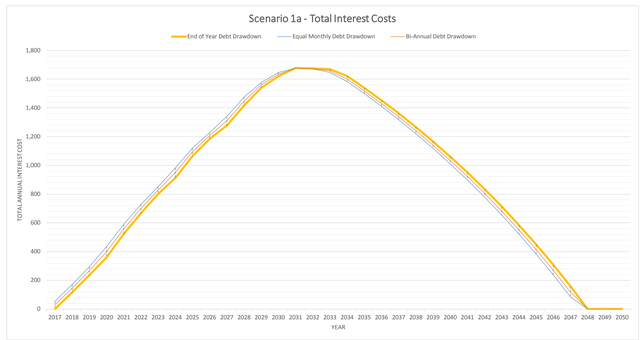
Feb14 Option 1, 30-yr — Bi-Annual Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,268	4,645	7,125	10,349	13,220	15,852	18,047	21,070	23,456	25,277	28,023	30,488	32,060	33,219	33,150	33,034	32,108	30,483	28,775	26,980	25,092	23,108	21,023	18,831	16,526	14,104	11,558	8,882	6,068	3,111	2	3	3	
	Interest Cost - Feb14 Option 1, 30-yr	*29*	*145*	*266*	*401*	*559*	*701*	*828*	*950*	*1,095*	*1,208*	*1,312*	*1,447*	*1,560*	*1,634*	*1,677*	*1,673*	*1,657*	*1,601*	*1,518*	*1,431*	*1,339*	*1,242*	*1,141*	*1,034*	*922*	*804*	*680*	*550*	*413*	*269*	*118*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,268	4,645	7,125	10,349	13,220	15,852	18,047	21,070	23,456	25,277	28,023	30,488	32,060	33,219	33,150	33,034	32,108	30,483	28,775	26,980	25,092	23,108	21,023	18,831	16,526	14,104	11,558	8,882	6,068	3,111	2	3	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,268	2,377	2,480	3,225	2,870	2,632	2,195	3,024	2,386	1,821	2,746	2,465	1,572	1,159	-69	-116	-926	-1,625	-1,708	-1,796	-1,887	-1,984	-2,085	-2,192	-2,304	-2,422	-2,546	-2,676	-2,813	-2,957	-3,109	0	0	0	
	Bi-Annual Drawdown	1,119	1,116	1,107	1,412	1,156	965	683	1,037	646	307	717	509	6	(238)	(873)	(894)	(1,291)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,268	2,261	2,243	2,860	2,341	1,955	1,384	2,100	1,308	621	1,453	1,031	12	(481)	(1,769)	(1,812)	(2,616)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	-	-	-	
	Annual Interest Cost on New Drawdowns	29	29	28	36	30	25	17	27	17	8	18	13	0	(6)	(22)	(23)	(33)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	-	-	-	
	Annual Interest Cost on Opening Balance	-	116	238	365	529	676	811	923	1,078	1,200	1,293	1,434	1,560	1,640	1,700	1,696	1,690	1,643	1,560	1,472	1,380	1,284	1,182	1,076	963	846	722	591	454	310	159	0	0	0	
	Total Annual Interest Cost	29	145	266	401	559	701	828	950	1,095	1,208	1,312	1,447	1,560	1,634	1,677	1,673	1,657	1,601	1,518	1,431	1,339	1,242	1,141	1,034	922	804	680	550	413	269	118	0	0	0	

Feb14 Option 1, 30-yr — Average Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,296	4,703	7,215	10,480	13,387	16,052	18,275	21,336	23,752	25,596	28,377	30,873	32,465	33,638	33,568	33,451	32,514	30,868	29,138	27,320	25,409	23,400	21,288	19,068	16,735	14,282	11,704	8,994	6,145	3,150	2	3	3	
	Interest Cost - Feb14 Option 1, 30-yr	*57*	*175*	*297*	*441*	*595*	*734*	*856*	*988*	*1,125*	*1,231*	*1,346*	*1,478*	*1,580*	*1,649*	*1,676*	*1,672*	*1,645*	*1,581*	*1,497*	*1,408*	*1,315*	*1,217*	*1,115*	*1,007*	*893*	*774*	*648*	*516*	*378*	*232*	*79*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,296	4,703	7,215	10,480	13,387	16,052	18,275	21,336	23,752	25,596	28,377	30,873	32,465	33,638	33,568	33,451	32,514	30,868	29,138	27,320	25,409	23,400	21,288	19,068	16,735	14,282	11,704	8,994	6,145	3,150	2	3	3	3	
Fiscal Exposure - Average Debt Drawdown		2,296	2,407	2,512	3,265	2,907	2,665	2,223	3,062	2,416	1,844	2,780	2,496	1,592	1,173	-70	-117	-937	-1,646	-1,730	-1,818	-1,911	-2,009	-2,112	-2,220	-2,333	-2,453	-2,578	-2,710	-2,849	-2,995	-3,148	0	0	0	





Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,559	1,619	1,674	2,356	2,060	1,772	1,286	2,046	1,355	733	1,578	1,228	271	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,415	-1,488	-1,564	-1,644	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0	
			37	38	40	56	49	42	31	49	32	17	38	29	6	-5	-18	-19	-19	-20	-21	-23	-24	-25	-26	-28	-29	-30	-32	-34	-35	-37	-39	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,356	999	17,883
Equal Monthly Debt Drawdown	2,412	994	

	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,534	2029	13,503
Equal Monthly Debt Drawdown	19,999		

Feb14 Option 1, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP Only																																			26
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
a — Debt, Beginning of Year	0	1,559	3,177	4,851	7,207	9,266	11,039	12,324	14,370	15,725	16,458	18,035	19,264	19,534	19,317	18,577	17,799	16,982	16,122	15,219	14,269	13,271	12,222	11,119	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1	2	2	
c = a*5% — *Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*80*	*163*	*248*	*369*	*474*	*565*	*631*	*735*	*805*	*842*	*923*	*986*	*999*	*988*	*950*	*911*	*869*	*825*	*779*	*730*	*679*	*625*	*569*	*510*	*447*	*382*	*313*	*240*	*164*	*84*	*0*	*0*	*0*	17,883
b — Additional GA Debt Drawdown, End of Year	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	1,559	3,177	4,851	7,207	9,266	11,039	12,324	14,370	15,725	16,458	18,035	19,264	19,534	19,317	18,577	17,799	16,982	16,122	15,219	14,269	13,271	12,222	11,119	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1	2	2	2	
		TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	
Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	7,818	7,078	6,300	5,483	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,697	3,210	1,646	1	2	2	2	
Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,842	12,461	12,390	13,125	13,431	12,716	11,499	11,499	11,499	11,499	11,499	10,595	9,646	8,648	7,598	6,495	5,336	4,117	2,836	1,490	0	0	0	0	0	0	0	
Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	7,818	8,806	9,757	10,667	11,536	12,361	13,140	13,870	14,549	15,174	15,743	16,252	16,700	17,081	17,394	17,634	17,798	17,883				
Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,842	12,461	12,390	13,125	13,431	12,716	11,499	9,771	8,042	6,314	4,586	2,858	1,129	-599	-2,327	-4,055	-5,784	-7,512	-9,240	-10,968	-12,696	-14,425	-16,153	-17,881				
Fiscal Exposure - End of Year Debt Drawdown	1,559	1,619	1,674	2,356	2,060	1,772	1,286	2,046	1,355	733	1,578	1,228	271	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,415	-1,488	-1,564	-1,644	0	0	0	

Feb14 Option 1, 30-yr — Equal Monthly Debt Drawdown

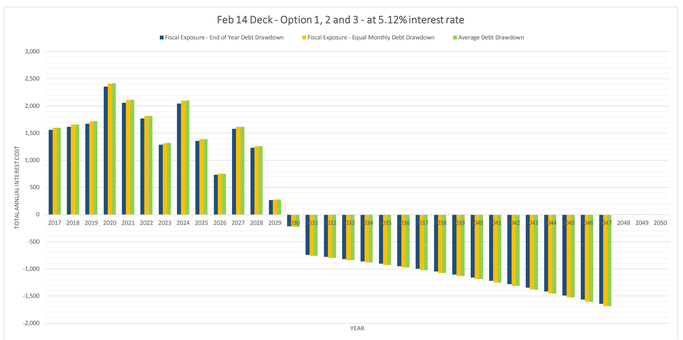
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
Option 2 - Bills Lowered 20%, RPP Only																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
Debt, Beginning of Year	0	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,019	18,223	17,385	16,506	15,581	14,609	13,587	12,512	11,383	10,196	8,948	7,637	6,258	4,809	3,286	1,685	2	2	2	
994 — *Interest Cost - Feb14 Option 1, 30-yr*	*37*	*118*	*202*	*304*	*418*	*516*	*595*	*679*	*767*	*822*	*880*	*952*	*992*	*994*	*971*	*932*	*891*	*848*	*803*	*756*	*706*	*654*	*599*	*541*	*481*	*417*	*350*	*279*	*205*	*127*	*45*	*0*	*0*	*0*	17,883
Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,019	18,223	17,385	16,506	15,581	14,609	13,587	12,512	11,383	10,196	8,948	7,637	6,258	4,809	3,286	1,685	2	2	2	2	
Fiscal Exposure - Equal Monthly Debt Drawdown	1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0	
Monthly Drawdown	130	128	126	176	141	108	60	118	52	(6)	61	25	(60)	(101)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	-	-	-	
FV of Monthly Drawdown at 5%	1,596	1,575	1,548	2,157	1,731	1,329	738	1,449	635	(74)	753	313	(732)	(1,246)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	-	-	-	
Annual Interest Cost on New Drawdowns	37	37	36	50	40	31	17	34	15	(2)	17	7	(17)	(29)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	-	-	-	
Annual Interest Cost on Opening Balance	-	82	166	254	377	485	578	646	753	824	862	945	1,009	1,023	1,012	973	932	889	844	797	747	695	640	582	522	458	391	320	246	168	86	0	0	0	
Total Annual Interest Cost	37	118	202	304	418	516	595	679	767	822	880	952	992	994	971	932	891	848	803	756	706	654	599	541	481	417	350	279	205	127	45	0	0	0	

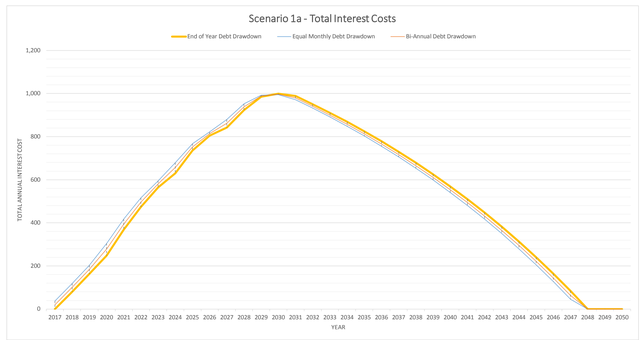
Feb14 Option 1, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
Option 2 - Bills Lowered 20%, RPP Only																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
Debt, Beginning of Year	0	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,815	18,027	17,199	16,328	15,413	14,452	13,441	12,378	11,261	10,087	8,852	7,555	6,191	4,758	3,251	1,667	1	2	2	
Interest Cost - Feb14 Option 1, 30-yr	*20*	*100*	*184*	*278*	*395*	*497*	*581*	*657*	*753*	*814*	*862*	*938*	*989*	*997*	*979*	*940*	*900*	*858*	*813*	*766*	*717*	*666*	*611*	*554*	*494*	*431*	*364*	*295*	*221*	*144*	*63*	*0*	*0*	*0*	17,883
Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,815	18,027	17,199	16,328	15,413	14,452	13,441	12,378	11,261	10,087	8,852	7,555	6,191	4,758	3,251	1,667	1	2	2	2	
Fiscal Exposure - Bi-Annual Debt Drawdown	1,579	1,639	1,696	2,386	2,086	1,795	1,302	2,072	1,372	742	1,598	1,244	274	-220	-749	-788	-828	-870	-915	-962	-1,011	-1,063	-1,117	-1,174	-1,234	-1,297	-1,364	-1,434	-1,507	-1,584	-1,665	0	0	0	
Bi-Annual Drawdown	779	769	756	1,054	845	649	361	708	310	(36)	368	153	(358)	(608)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	-	-	-	
FV of Bi-Annual Drawdown at 5%	1,579	1,558	1,531	2,134	1,713	1,315	730	1,433	628	(73)	745	310	(724)	(1,232)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	-	-	-	
Annual Interest Cost on New Drawdowns	20	20	19	27	22	17	9	18	8	(1)	9	4	(9)	(16)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	-	-	-	
Annual Interest Cost on Opening Balance	-	81	165	251	373	480	572	639	745	815	853	935	998	1,012	1,001	963	922	880	835	789	739	688	633	576	516	453	387	317	243	166	85	0	0	0	
Total Annual Interest Cost	20	100	184	278	395	497	581	657	753	814	862	938	989	997	979	940	900	858	813	766	717	666	611	554	494	431	364	295	221	144	63	0	0	0	

Feb14 Option 1, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP Only																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
Debt, Beginning of Year	0	1,599	3,258	4,975	7,391	9,504	11,321	12,640	14,738	16,128	16,879	18,497	19,757	20,034	19,811	19,052	18,254	17,416	16,535	15,608	14,634	13,610	12,534	11,403	10,214	8,964	7,650	6,269	4,818	3,292	1,688	2	2	2	
Interest Cost - Feb14 Option 1, 30-yr	*40*	*121*	*205*	*308*	*421*	*519*	*598*	*683*	*770*	*823*	*882*	*954*	*992*	*994*	*969*	*931*	*890*	*847*	*802*	*754*	*704*	*652*	*597*	*539*	*478*	*414*	*347*	*277*	*202*	*124*	*42*	*0*	*0*	*0*	17,883
Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,599	3,258	4,975	7,391	9,504	11,321	12,640	14,738	16,128	16,879	18,497	19,757	20,034	19,811	19,052	18,254	17,416	16,535	15,608	14,634	13,610	12,534	11,403	10,214	8,964	7,650	6,269	4,818	3,292	1,688	2	2	2	2	
Fiscal Exposure - Average Debt Drawdown	1,599	1,660	1,717	2,416	2,112	1,817	1,319	2,098	1,390	751	1,618	1,260	277	-223	-759	-798	-839	-881	-927	-974	-1,024	-1,076	-1,131	-1,189	-1,250	-1,314	-1,381	-1,452	-1,526	-1,604	-1,686	0	0	0	





Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_3_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	
			34	38	36	36	34	34	35	36	36	35	35	34	23	16	12	7	0	-14	-29	-36	-38	-42	-39	-36	-34	-32	-27	-18	-6	-1	0	3	3	3	142

		Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	1,606		1,040	19,498
Equal Monthly Debt Drawdown	1,644		1,040	

	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	20,326	2033	12,862
Equal Monthly Debt Drawdown	20,809		

Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
a	Debt, Beginning of Year	0	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*74*	*156*	*234*	*312*	*385*	*459*	*534*	*612*	*690*	*766*	*842*	*915*	*964*	*999*	*1,024*	*1,039*	*1,040*	*1,011*	*949*	*872*	*791*	*701*	*617*	*540*	*468*	*400*	*341*	*303*	*290*	*288*	*288*	*293*	*299*	19,498
b	Additional GA Debt Drawdown, End of Year	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,430	7,736	7,749	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,577	12,577	12,577	12,577	11,371	9,872	8,285	6,516	4,884	3,378	1,966	633	-506	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,943	8,967	10,006	11,046	12,057	13,006	13,878	14,669	15,370	15,987	16,527	16,995	17,395	17,736	18,040	18,330	18,618				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,064	11,345	10,319	8,710	6,493	4,045	1,586	-974	-3,307	-5,431	-7,383	-9,184	-10,721	-11,807	-12,362	-12,696	-12,994				
Fiscal Exposure - End of Year Debt Drawdown		1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	

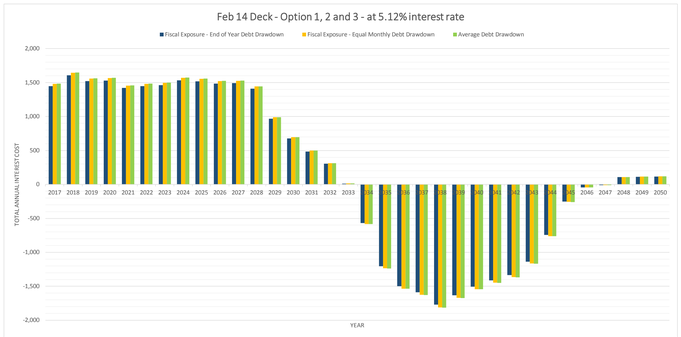
Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	
1,040	*Interest Cost - Feb14 Option 1, 30-yr*	*34*	*112*	*192*	*270*	*346*	*420*	*494*	*570*	*649*	*726*	*802*	*876*	*938*	*980*	*1,010*	*1,031*	*1,040*	*1,026*	*982*	*913*	*835*	*749*	*662*	*581*	*507*	*436*	*373*	*324*	*297*	*289*	*288*	*290*	*296*	*302*	19,640
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	6,102	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	

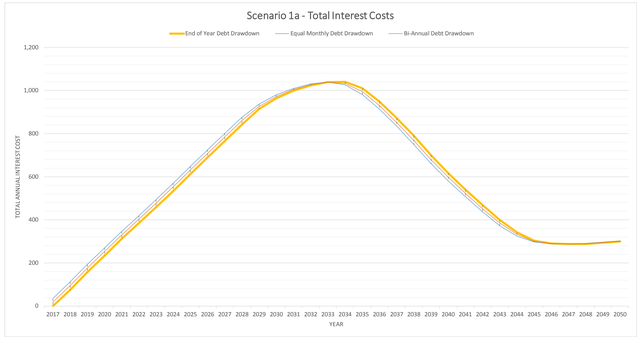
	Monthly Drawdown	121	128	114	108	93	88	84	83	76	66	60	47	4	(24)	(43)	(60)	(85)	(134)	(185)	(204)	(205)	(213)	(194)	(177)	(163)	(150)	(128)	(90)	(46)	(28)	(25)	(15)	(15)	(15)	
	FV of Monthly Drawdown at 5%	1,482	1,568	1,398	1,326	1,137	1,086	1,028	1,024	929	815	742	580	54	(292)	(525)	(736)	(1,050)	(1,648)	(2,269)	(2,506)	(2,517)	(2,621)	(2,389)	(2,174)	(1,999)	(1,844)	(1,574)	(1,111)	(568)	(342)	(306)	(185)	(184)	(188)	
	Annual Interest Cost on New Drawdowns	34	36	32	31	26	25	24	24	22	19	17	13	1	(7)	(12)	(17)	(24)	(38)	(53)	(58)	(58)	(61)	(55)	(51)	(46)	(43)	(37)	(26)	(13)	(8)	(7)	(4)	(4)	(4)	
	Annual Interest Cost on Opening Balance	-	76	160	240	320	394	470	547	627	707	784	863	936	987	1,023	1,048	1,064	1,065	1,035	972	893	810	717	632	553	479	409	350	311	297	295	295	300	306	
	Total Annual Interest Cost	34	112	192	270	346	420	494	570	649	726	802	876	938	980	1,010	1,031	1,040	1,026	982	913	835	749	662	581	507	436	373	324	297	289	288	290	296	302	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	
	Interest Cost - Feb14 Option 1, 30-yr	*19*	*95*	*176*	*254*	*331*	*404*	*478*	*554*	*632*	*709*	*785*	*861*	*927*	*973*	*1,005*	*1,028*	*1,039*	*1,033*	*995*	*930*	*852*	*769*	*680*	*598*	*522*	*451*	*385*	*332*	*300*	*290*	*288*	*289*	*295*	*301*	19,575
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	6,037	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,466	1,626	1,541	1,549	1,441	1,465	1,482	1,554	1,539	1,505	1,510	1,427	979	687	492	309	13	-577	-1,221	-1,518	-1,607	-1,792	-1,653	-1,525	-1,430	-1,350	-1,153	-753	-255	-44	-10	109	115	117	

	Bi-Annual Drawdown	724	766	683	648	555	530	502	500	454	398	363	283	26	(143)	(256)	(359)	(513)	(805)	(1,108)	(1,224)	(1,229)	(1,280)	(1,167)	(1,062)	(976)	(900)	(769)	(543)	(278)	(167)	(149)	(90)	(90)	(92)	
	FV of Bi-Annual Drawdown at 5%	1,466	1,551	1,383	1,312	1,125	1,075	1,017	1,013	919	806	735	573	53	(289)	(519)	(728)	(1,039)	(1,630)	(2,245)	(2,479)	(2,490)	(2,593)	(2,363)	(2,150)	(1,977)	(1,824)	(1,557)	(1,099)	(562)	(338)	(302)	(183)	(182)	(186)	
	Annual Interest Cost on New Drawdowns	19	20	17	17	14	14	13	13	12	10	9	7	1	(4)	(7)	(9)	(13)	(21)	(28)	(31)	(31)	(33)	(30)	(27)	(25)	(23)	(20)	(14)	(7)	(4)	(4)	(2)	(2)	(2)	
	Annual Interest Cost on Opening Balance	-	75	158	237	316	390	465	541	620	699	776	853	926	976	1,012	1,037	1,053	1,053	1,024	961	884	801	710	625	547	474	405	346	307	294	292	291	297	303	
	Total Annual Interest Cost	19	95	176	254	331	404	478	554	632	709	785	861	927	973	1,005	1,028	1,039	1,033	995	930	852	769	680	598	522	451	385	332	300	290	288	289	295	301	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	
	Interest Cost - Feb14 Option 1, 30-yr	*37*	*115*	*195*	*273*	*349*	*422*	*497*	*573*	*651*	*728*	*804*	*879*	*939*	*981*	*1,011*	*1,031*	*1,040*	*1,025*	*980*	*911*	*832*	*746*	*659*	*579*	*504*	*434*	*371*	*322*	*297*	*289*	*288*	*290*	*296*	*302*	19,651
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	6,113	
Fiscal Exposure - Average Debt Drawdown		1,484	1,647	1,561	1,569	1,459	1,483	1,500	1,573	1,559	1,524	1,530	1,445	992	696	498	313	14	-585	-1,237	-1,537	-1,627	-1,814	-1,674	-1,545	-1,448	-1,367	-1,167	-763	-258	-44	-10	110	116	119	





Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest ra

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest ra

IESO GA cost forecast + extrapolation

Scenario
Option 1

Option 2

ate	2017	2018	2019	2020
ate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	2200	4600	7000	10200

Total Accumulated Debt ($ billion)	2.2	4.6	7	10.2
	2,200	4,600	7,000	10,200

Total Accumulated Debt ($ billion)	1.6	3.2	4.9	7.2
	1,600	3,200	4,900	7,200

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
13100	15700	17800	20800	23200	25000	27700	30100

13.1 15.7 17.8 20.8 23.2 25 27.7 30.1
13,100 15,700 17,800 20,800 23,200 25,000 27,700 30,100

9.3 11 12.3 14.4 15.7 16.5 18 19.3
9,300 11,000 12,300 14,400 15,700 16,500 18,000 19,300

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
31700	32800	32700	32600	31700	30100	28400	26600

31.7	32.8	32.7	32.6	31.7	30.1	28.4	26.6
31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600

19.5	19.3	18.6	17.8	17	16.1	15.2	14.3
19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
24800	22800	20800	18600	16300	13900	11400	8800

24.8	22.8	20.8	18.6	16.3	13.9	11.4	8.8
24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800

13.3	12.2	11.1	10	8.7	7.5	6.1	4.7
13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	2046	2047	2048	2049	2050
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
6000	3100	0	0	0	0

6 3.1 0 0
6,000 3,100 - -

3.2 1.6 0 0
3,200 1,600 - -

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb9_1_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,200	2,400

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	550	2,250

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $33 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb9_2_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,600	1,600

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	400	1,600

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,169	4,668

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	545	2,203

Actuals are subject to actual prices and actual interest rates.

#N/A

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542

Fiscalized[3]	2016-17	2017-18
Start: January 1st	375	1,510

Actuals are subject to actual prices and actual interest rates.

#N/A

Rough		
	1	
	2	
	3	
	4 April	4
	5 May	5
	6 June	6
	7 July	7
	8 August	8
	9 September	9
	10 October	10
	11 November	11
	12 December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	400 - 550	1,600 - 2,250

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	550	2250
Debt-Finance Global Adjustment Costs, Option 1a	400	1600
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**550**	**2490**
Total, B	400	1840
Proposed Program Total:	400 - 550	1,840 - 2,490

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1
Scenario 2

2019	2020	2021	2022
2,400	3,200	2,900	2,600

2018-19	2019-20	2020-21	2021-2022
2,400	2,600	3,125	2,825

2030.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,700	2,300	2,100	1,700

2018-19	2019-20	2020-21	2021-2022
1,625	1,850	2,250	2,000

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
4,589	5,867	5,031	4,861

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988

› depend on decision on accounting treatment.

2019	2020	2021	2022
2,353	3,072	2,817	2,580

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757

2019	2020	2021	2022
1,578	2,243	1,931	1,635

2018-19	2019-20	2020-21	2021-2022
1,551	1,745	2,165	1,857



2018-19	2019-20	2020-21	2021-2022
1,625 - 2,400	1,850 - 2,600	2,250 - 3,125	2,000 - 2,825

/1

2018-19[1]	2019-20[1]	2020-21[1]
2400	2600	3125
1625	1850	2250
225	279	323
60	60	60
18	18	18
2703	**2957**	**3526**
1928	2207	2651

1,928 - 2,703 2,207 - 2,957 2,651 - 3,526

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
21,601	30,211	32,800	occurs in Year 2030
13,466	17,886	19,500	occurs in Year 2029
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!

2,200

Tab Name
Feb9_1_30yr
Feb9_2_30yr

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Feb9_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0	
			52	57	57	76	69	62	50	71	57	43	64	57	38	26	-2	-2	-21	-38	-40	-43	-43	-48	-48	-52	-55	-57	-59	-62	-67	-69	-74	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,200	1,678	30,211
Equal Monthly Debt Drawdown	3,276	1,676	

		Feb9 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,800	2030	21,601	
Equal Monthly Debt Drawdown	33,580			

Feb9 1, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
a	Debt, Beginning of Year	0	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	
c = a*5%	*Interest Cost - Feb9 1, 30-yr - End of Year Debt Drowdown*	*0*	*113*	*235*	*358*	*522*	*670*	*803*	*911*	*1,064*	*1,187*	*1,279*	*1,417*	*1,540*	*1,622*	*1,678*	*1,673*	*1,668*	*1,622*	*1,540*	*1,453*	*1,361*	*1,269*	*1,166*	*1,064*	*952*	*834*	*711*	*583*	*450*	*307*	*159*	*0*	*0*	*0*	30,211
b	Additional GA Debt Drawdown, End of Year	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	0
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	11,621	11,521	10,621	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	8,800	6,000	3,100	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	21,079	21,079	21,079	21,079	19,379	17,579	15,779	13,779	11,779	9,579	7,279	4,879	2,379	0	0	0	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	13,399	15,072	16,740	18,362	19,902	21,355	22,716	23,985	25,151	26,215	27,167	28,001	28,712	29,295	29,746	30,052	30,211				
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	19,301	17,528	14,960	11,738	8,498	5,245	2,084	-1,185	-4,351	-7,615	-10,867	-14,101	-17,312	-20,495	-23,746	-26,952	-30,211				
Fiscal Exposure - End of Year Debt Drawdown		2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0	

Feb9 1, 30-yr — Equal Monthly Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	
1,676	*Interest Cost - Feb9 1, 30-yr*	*52*	*170*	*292*	*434*	*591*	*732*	*853*	*982*	*1,121*	*1,230*	*1,343*	*1,474*	*1,578*	*1,648*	*1,676*	*1,671*	*1,646*	*1,584*	*1,500*	*1,410*	*1,318*	*1,221*	*1,119*	*1,012*	*897*	*777*	*652*	*521*	*384*	*238*	*85*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0	
	Monthly Drawdown	183	191	180	237	198	161	108	174	111	51	118	82	5	(43)	(148)	(148)	(214)	(268)	(270)	(271)	(263)	(272)	(264)	(272)	(271)	(269)	(268)	(265)	(271)	(267)	(272)	-	-	-	
	FV of Monthly Drawdown at 5%	2,252	2,342	2,216	2,909	2,435	1,976	1,328	2,139	1,368	628	1,455	1,006	61	(534)	(1,820)	(1,815)	(2,629)	(3,298)	(3,317)	(3,330)	(3,236)	(3,347)	(3,242)	(3,342)	(3,329)	(3,311)	(3,288)	(3,259)	(3,328)	(3,283)	(3,336)	-	-	-	
	Annual Interest Cost on New Drawdowns	52	54	51	68	57	46	31	50	32	15	34	23	1	(12)	(42)	(42)	(61)	(77)	(77)	(77)	(75)	(78)	(75)	(78)	(77)	(76)	(76)	(76)	(77)	(76)	(78)	-	-	-	
	Annual Interest Cost on Opening Balance	-	115	241	367	534	686	822	932	1,089	1,215	1,309	1,451	1,577	1,660	1,718	1,713	1,708	1,660	1,577	1,488	1,393	1,299	1,194	1,089	974	854	728	597	461	314	162	(0)	(0)	(0)	
	Total Annual Interest Cost	52	170	292	434	591	732	853	982	1,121	1,230	1,343	1,474	1,578	1,648	1,676	1,671	1,646	1,584	1,500	1,410	1,318	1,221	1,119	1,012	897	777	652	521	384	238	85	(0)	(0)	(0)	

Feb9 1, 30-yr — Bi-Annual Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*28*	*143*	*266*	*399*	*559*	*703*	*830*	*949*	*1,095*	*1,210*	*1,314*	*1,448*	*1,560*	*1,636*	*1,677*	*1,672*	*1,656*	*1,601*	*1,518*	*1,430*	*1,338*	*1,243*	*1,141*	*1,036*	*922*	*803*	*679*	*550*	*414*	*270*	*119*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,228	2,431	2,431	3,241	2,937	2,633	2,127	3,038	2,431	1,823	2,735	2,431	1,620	1,114	-101	-101	-912	-1,620	-1,722	-1,823	-1,823	-2,026	-2,026	-2,228	-2,329	-2,431	-2,532	-2,633	-2,836	-2,937	-3,140	0	0	0	
	Bi-Annual Drawdown	1,100	1,144	1,082	1,421	1,189	965	648	1,045	668	307	710	491	30	(261)	(889)	(886)	(1,284)	(1,611)	(1,620)	(1,626)	(1,580)	(1,634)	(1,583)	(1,632)	(1,626)	(1,617)	(1,606)	(1,592)	(1,625)	(1,603)	(1,629)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,228	2,317	2,192	2,878	2,409	1,954	1,313	2,116	1,353	621	1,439	995	61	(529)	(1,801)	(1,796)	(2,601)	(3,263)	(3,281)	(3,295)	(3,201)	(3,311)	(3,207)	(3,306)	(3,293)	(3,275)	(3,252)	(3,224)	(3,292)	(3,248)	(3,300)	-	-	-	
	Annual Interest Cost on New Drawdowns	28	29	28	36	30	25	17	27	17	8	18	13	1	(7)	(23)	(23)	(33)	(41)	(41)	(42)	(40)	(42)	(41)	(42)	(42)	(41)	(41)	(41)	(42)	(41)	(42)	-	-	-	
	Annual Interest Cost on Opening Balance	-	114	238	363	529	679	814	922	1,078	1,202	1,295	1,435	1,560	1,643	1,700	1,694	1,689	1,643	1,560	1,472	1,378	1,285	1,181	1,078	964	845	720	591	456	311	161	0	0	0	
	Total Annual Interest Cost	28	143	266	399	559	703	830	949	1,095	1,210	1,314	1,448	1,560	1,636	1,677	1,672	1,656	1,601	1,518	1,430	1,338	1,243	1,141	1,036	922	803	679	550	414	270	119	0	0	0	

Feb9 1, 30-yr — Average Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*56*	*174*	*297*	*440*	*596*	*737*	*857*	*987*	*1,126*	*1,233*	*1,348*	*1,479*	*1,581*	*1,650*	*1,676*	*1,670*	*1,645*	*1,581*	*1,496*	*1,407*	*1,315*	*1,218*	*1,115*	*1,008*	*893*	*773*	*647*	*517*	*379*	*233*	*79*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		2,256	2,461	2,461	3,282	2,974	2,667	2,154	3,077	2,461	1,846	2,769	2,461	1,641	1,128	-103	-103	-923	-1,641	-1,743	-1,846	-1,846	-2,051	-2,051	-2,256	-2,359	-2,461	-2,564	-2,667	-2,872	-2,974	-3,179	0	0	0	

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Feb9_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0
			38	38	40	55	50	40	31	50	31	19	36	31	5	-5	-17	-19	-19	-21	-21	-21	-24	-26	-26	-26	-31	-29	-33	-33	-36	-38	-38	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,300	998	17,886
Equal Monthly Debt Drawdown	2,355	993	

	Feb9 2, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,500	2029	13,466
Equal Monthly Debt Drawdown	19,964		

Feb9 2, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
a	Debt, Beginning of Year	0	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	
c = a*5%	*Interest Cost - Feb9 2, 30-yr - End of Year Debt Drowdown*	*0*	*82*	*164*	*251*	*368*	*476*	*563*	*629*	*737*	*803*	*844*	*921*	*987*	*998*	*987*	*952*	*911*	*870*	*824*	*778*	*732*	*680*	*624*	*568*	*512*	*445*	*384*	*312*	*240*	*164*	*82*	*0*	*0*	*0*	17,886
b	Additional GA Debt Drawdown, End of Year	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	7,123	6,323	5,523	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,700	3,200	1,600	0	0	0	
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	11,477	11,477	11,477	11,477	10,577	9,677	8,677	7,577	6,477	5,377	4,077	2,877	1,477	0	0	0	0	0	0	0	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	8,810	9,762	10,672	11,542	12,366	13,143	13,875	14,556	15,180	15,748	16,259	16,704	17,088	17,400	17,641	17,804	17,886				
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	9,790	8,038	6,328	4,558	2,834	1,157	-575	-2,356	-4,080	-5,748	-7,559	-9,204	-10,988	-12,700	-14,441	-16,204	-17,886				
Fiscal Exposure - End of Year Debt Drawdown		1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0	

Feb9 2, 30-yr — Equal Monthly Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	
993	*Interest Cost - Feb9 2, 30-yr*	*38*	*120*	*204*	*305*	*418*	*516*	*594*	*679*	*768*	*822*	*880*	*952*	*992*	*993*	*971*	*933*	*892*	*848*	*802*	*756*	*708*	*654*	*598*	*542*	*481*	*417*	*350*	*279*	*205*	*126*	*44*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0	
	Monthly Drawdown	133	127	128	171	144	102	61	123	47	(0)	55	32	(66)	(100)	(141)	(146)	(143)	(147)	(144)	(140)	(144)	(148)	(144)	(139)	(151)	(137)	(149)	(143)	(145)	(147)	(140)	-	-	-	
	FV of Monthly Drawdown at 5%	1,638	1,554	1,573	2,098	1,773	1,253	755	1,506	577	(3)	671	388	(806)	(1,226)	(1,728)	(1,793)	(1,751)	(1,812)	(1,765)	(1,718)	(1,773)	(1,823)	(1,765)	(1,708)	(1,855)	(1,684)	(1,826)	(1,753)	(1,782)	(1,806)	(1,722)	-	-	-	
	Annual Interest Cost on New Drawdowns	38	36	37	49	41	29	18	35	13	(0)	16	9	(19)	(28)	(40)	(42)	(41)	(42)	(41)	(40)	(41)	(42)	(41)	(40)	(43)	(39)	(42)	(41)	(41)	(42)	(40)	-	-	-	
	Annual Interest Cost on Opening Balance	-	84	168	257	377	487	576	644	754	822	864	943	1,011	1,021	1,011	974	932	890	843	796	749	697	639	581	524	456	393	320	246	168	84	0	0	0	
	Total Annual Interest Cost	38	120	204	305	418	516	594	679	768	822	880	952	992	993	971	933	892	848	802	756	708	654	598	542	481	417	350	279	205	126	44	0	0	0	

Feb9 2, 30-yr — Bi-Annual Debt Drawdown

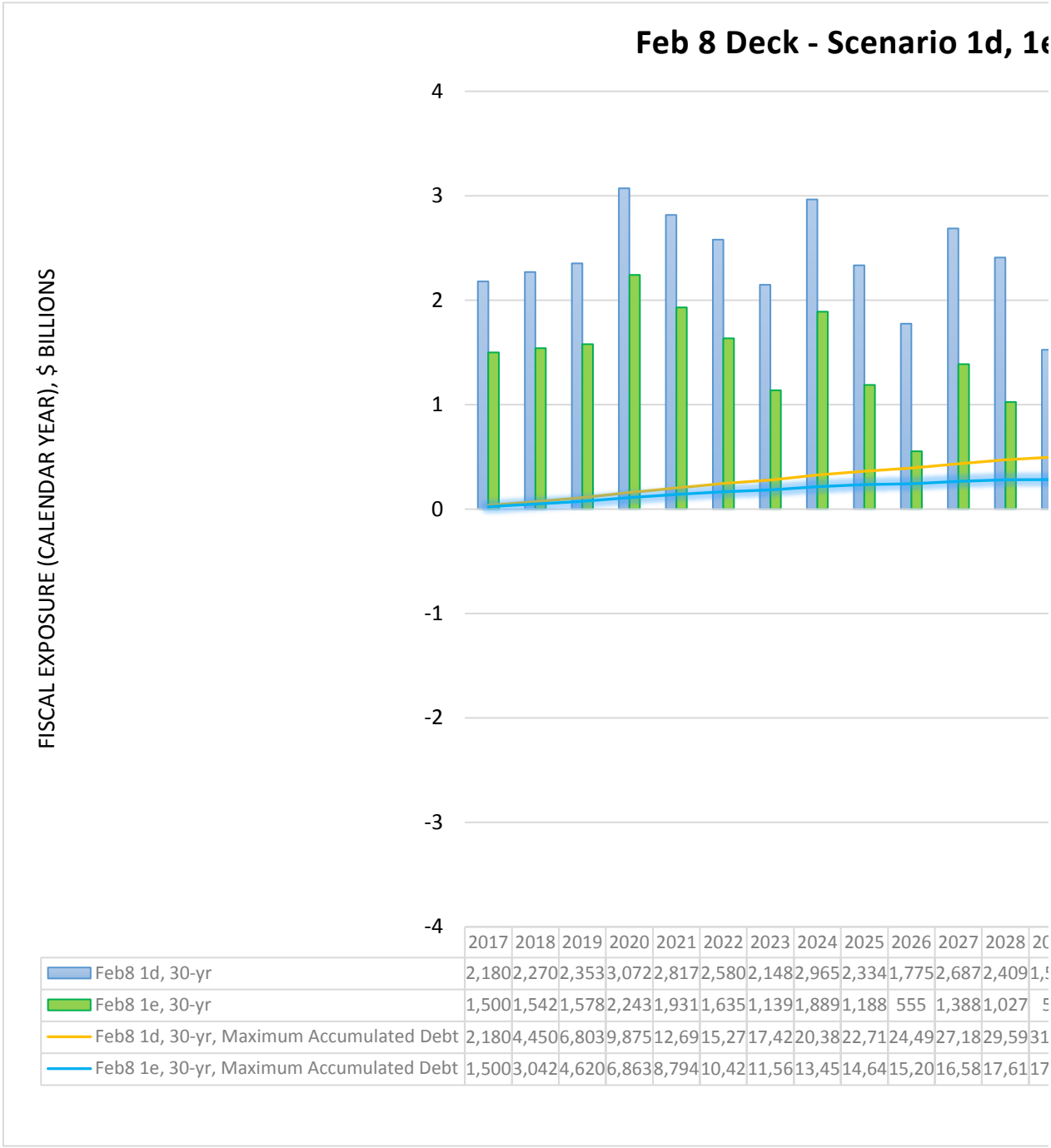
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*20*	*102*	*185*	*280*	*395*	*498*	*579*	*656*	*753*	*813*	*863*	*938*	*990*	*995*	*978*	*941*	*900*	*858*	*812*	*766*	*719*	*666*	*610*	*554*	*495*	*430*	*366*	*294*	*221*	*143*	*61*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,620	1,620	1,722	2,329	2,127	1,722	1,317	2,127	1,317	810	1,519	1,317	203	-203	-709	-810	-810	-912	-912	-912	-1,013	-1,114	-1,114	-1,114	-1,317	-1,215	-1,418	-1,418	-1,519	-1,620	-1,620	0	0	0	
	Bi-Annual Drawdown	800	759	768	1,025	866	612	369	735	282	(2)	328	190	(394)	(599)	(844)	(876)	(855)	(885)	(862)	(839)	(866)	(890)	(862)	(834)	(906)	(823)	(892)	(856)	(870)	(882)	(841)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,620	1,538	1,556	2,076	1,754	1,240	747	1,490	570	(3)	664	384	(797)	(1,213)	(1,709)	(1,774)	(1,733)	(1,792)	(1,746)	(1,699)	(1,754)	(1,803)	(1,746)	(1,689)	(1,835)	(1,666)	(1,807)	(1,734)	(1,763)	(1,786)	(1,703)	-	-	-	
	Annual Interest Cost on New Drawdowns	20	19	20	26	22	16	9	19	7	(0)	8	5	(10)	(15)	(22)	(22)	(22)	(23)	(22)	(21)	(22)	(23)	(22)	(21)	(23)	(21)	(23)	(22)	(22)	(23)	(22)	-	-	-	
	Annual Interest Cost on Opening Balance	-	83	166	254	373	482	570	637	746	814	855	933	1,000	1,010	1,000	964	922	881	834	788	741	689	632	575	518	451	389	316	244	166	83	0	0	0	
	Total Annual Interest Cost	20	102	185	280	395	498	579	656	753	813	863	938	990	995	978	941	900	858	812	766	719	666	610	554	495	430	366	294	221	143	61	0	0	0	

Feb9 2, 30-yr — Average Debt Drawdown

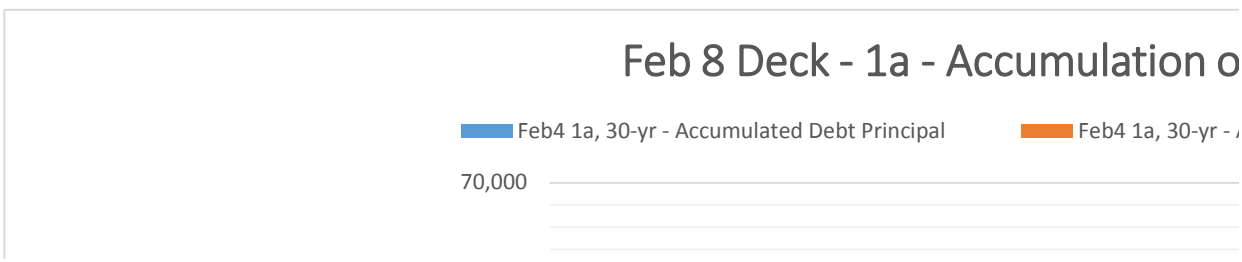
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*41*	*123*	*207*	*310*	*422*	*519*	*596*	*683*	*770*	*824*	*883*	*954*	*993*	*993*	*970*	*931*	*890*	*847*	*801*	*755*	*706*	*652*	*596*	*540*	*478*	*414*	*348*	*276*	*202*	*123*	*41*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,641	1,641	1,743	2,359	2,154	1,743	1,333	2,154	1,333	820	1,538	1,333	205	-205	-718	-820	-820	-923	-923	-923	-1,026	-1,128	-1,128	-1,128	-1,333	-1,231	-1,436	-1,436	-1,538	-1,641	-1,641	0	0	0	

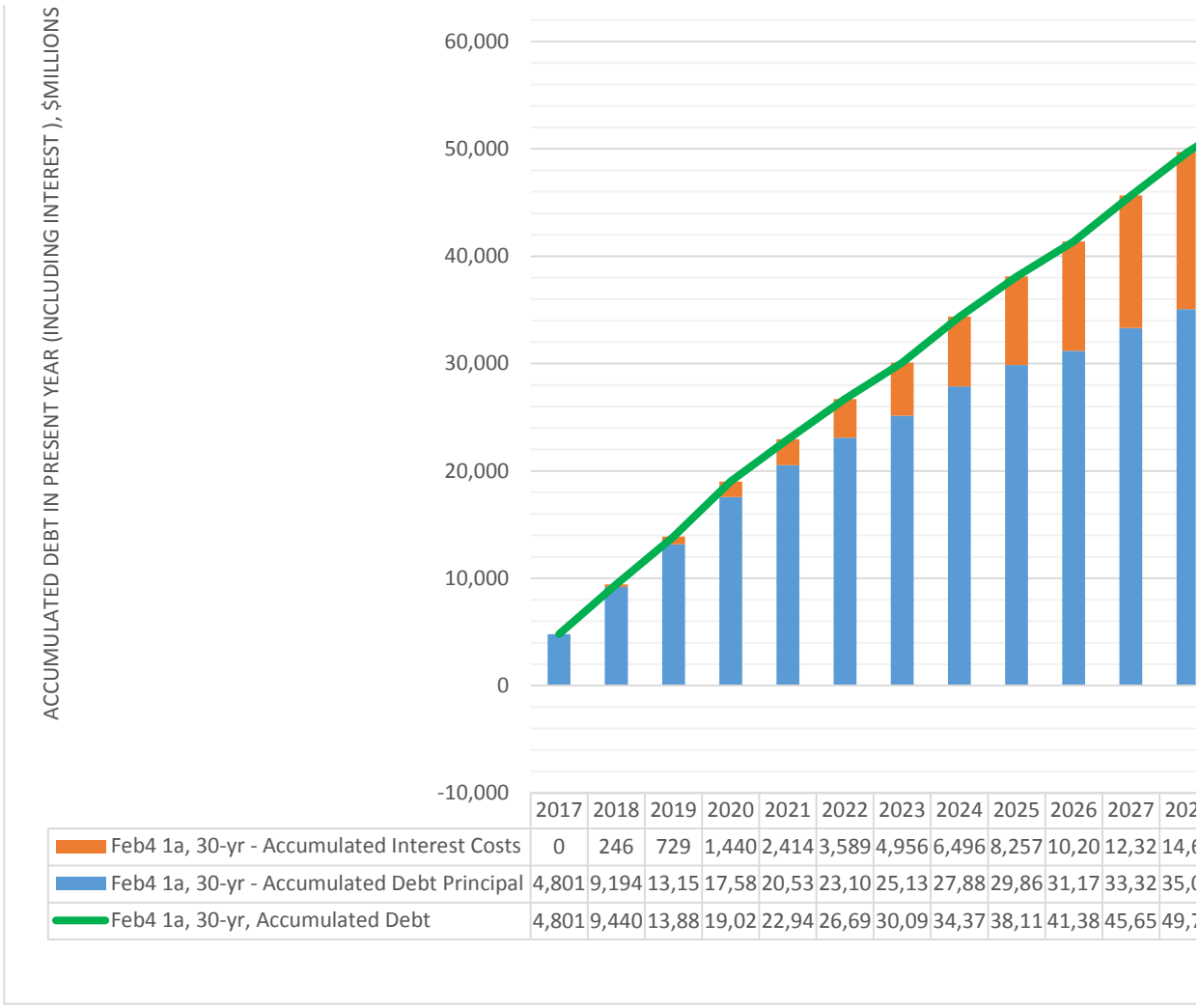
Feb 8 Deck

Feb 8 Deck - Scenario 1d, 1e - at 5.12% interest rate

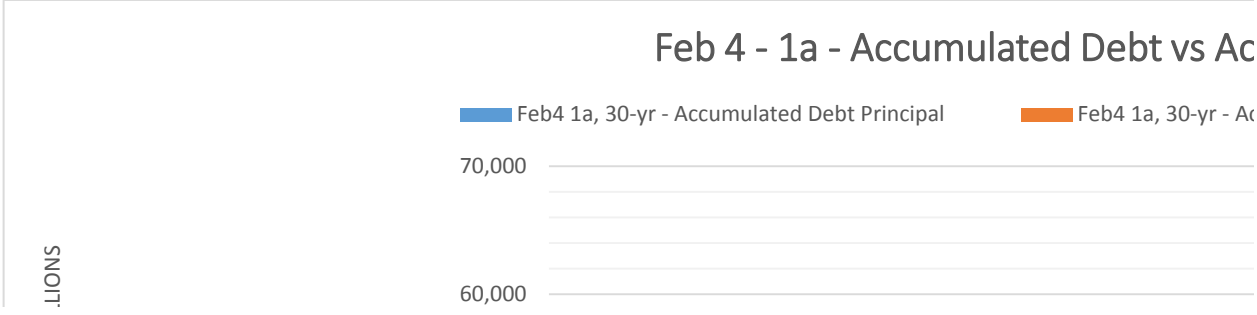


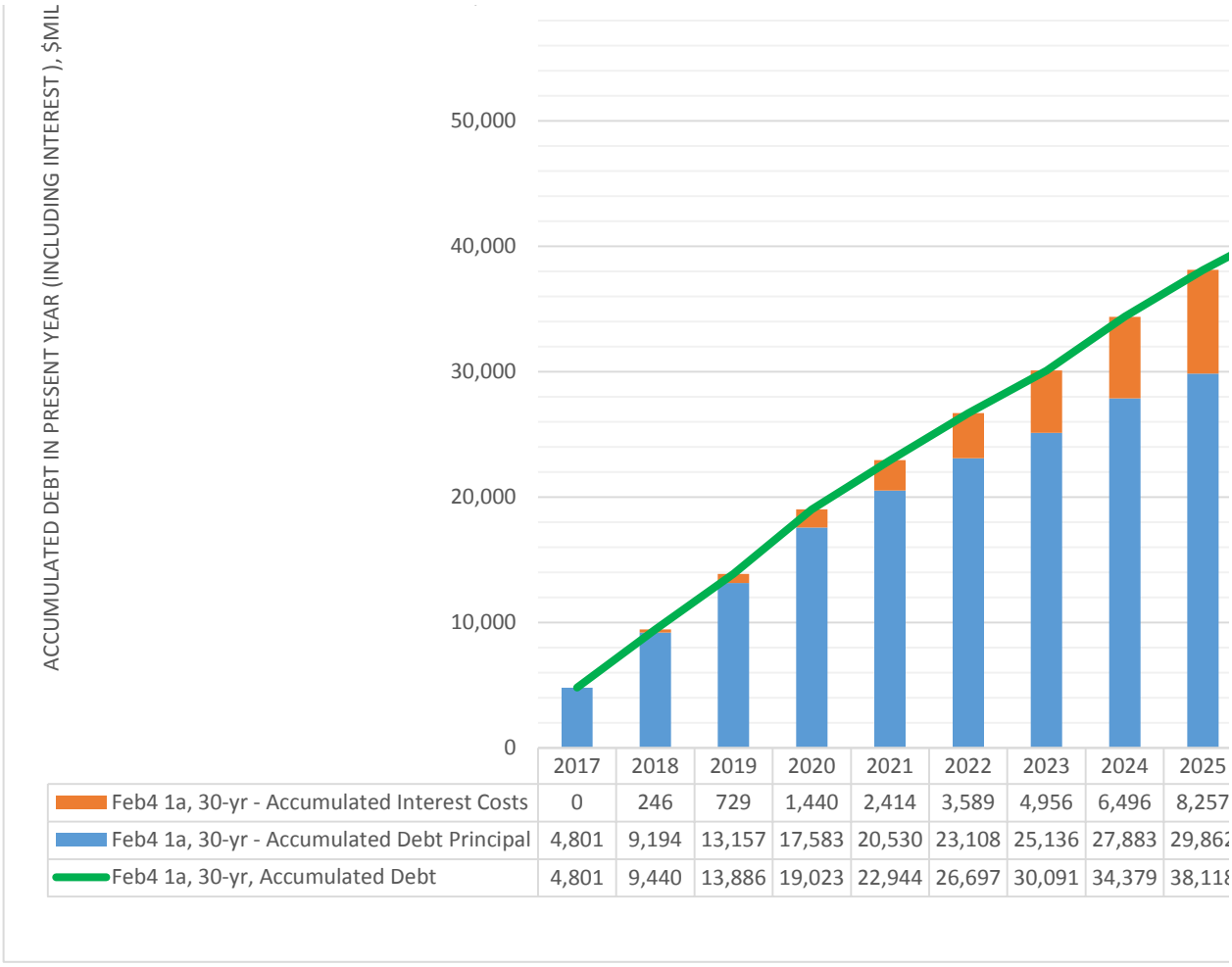
Feb 8 Deck - 1a - Accumulation of Debt (Principal and Interest)



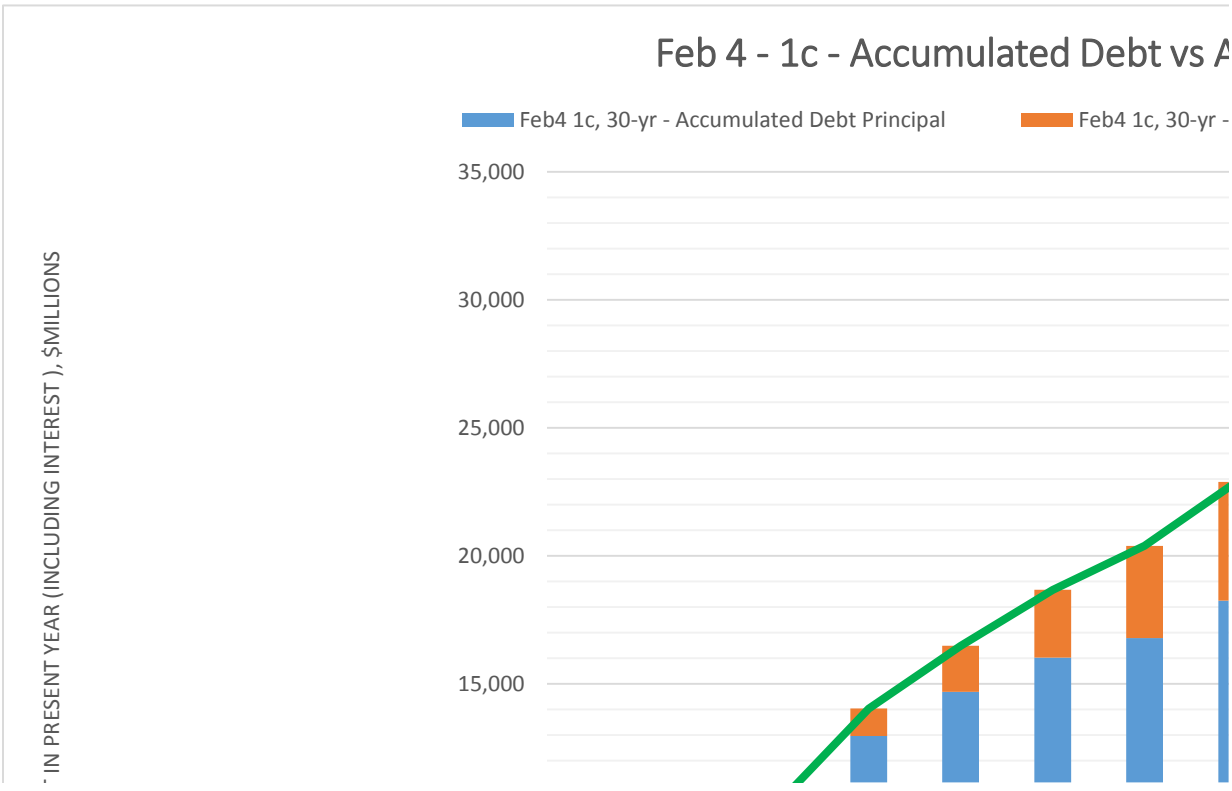


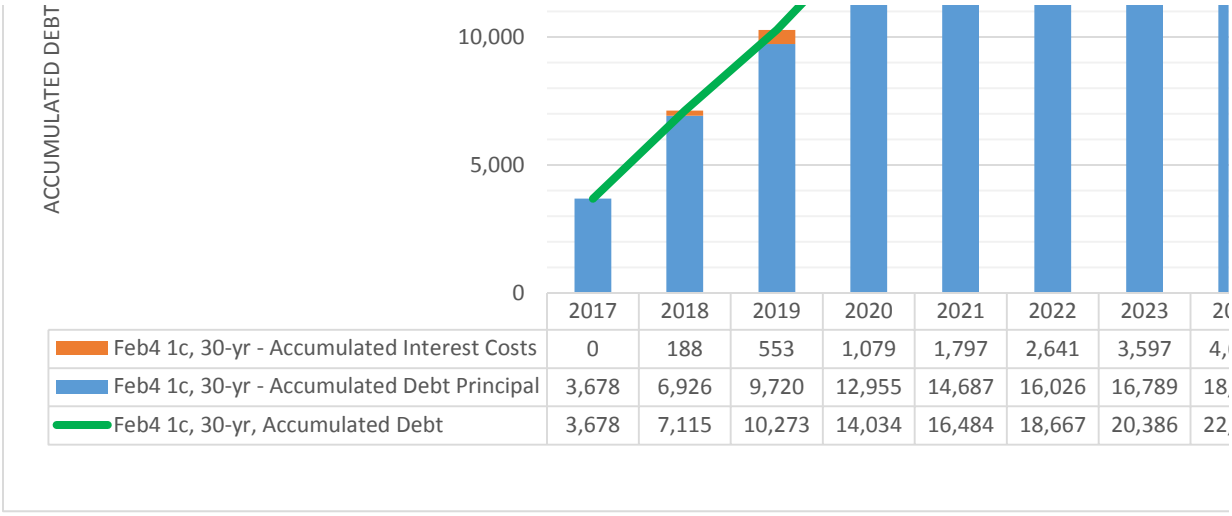
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	202
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,(
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,7



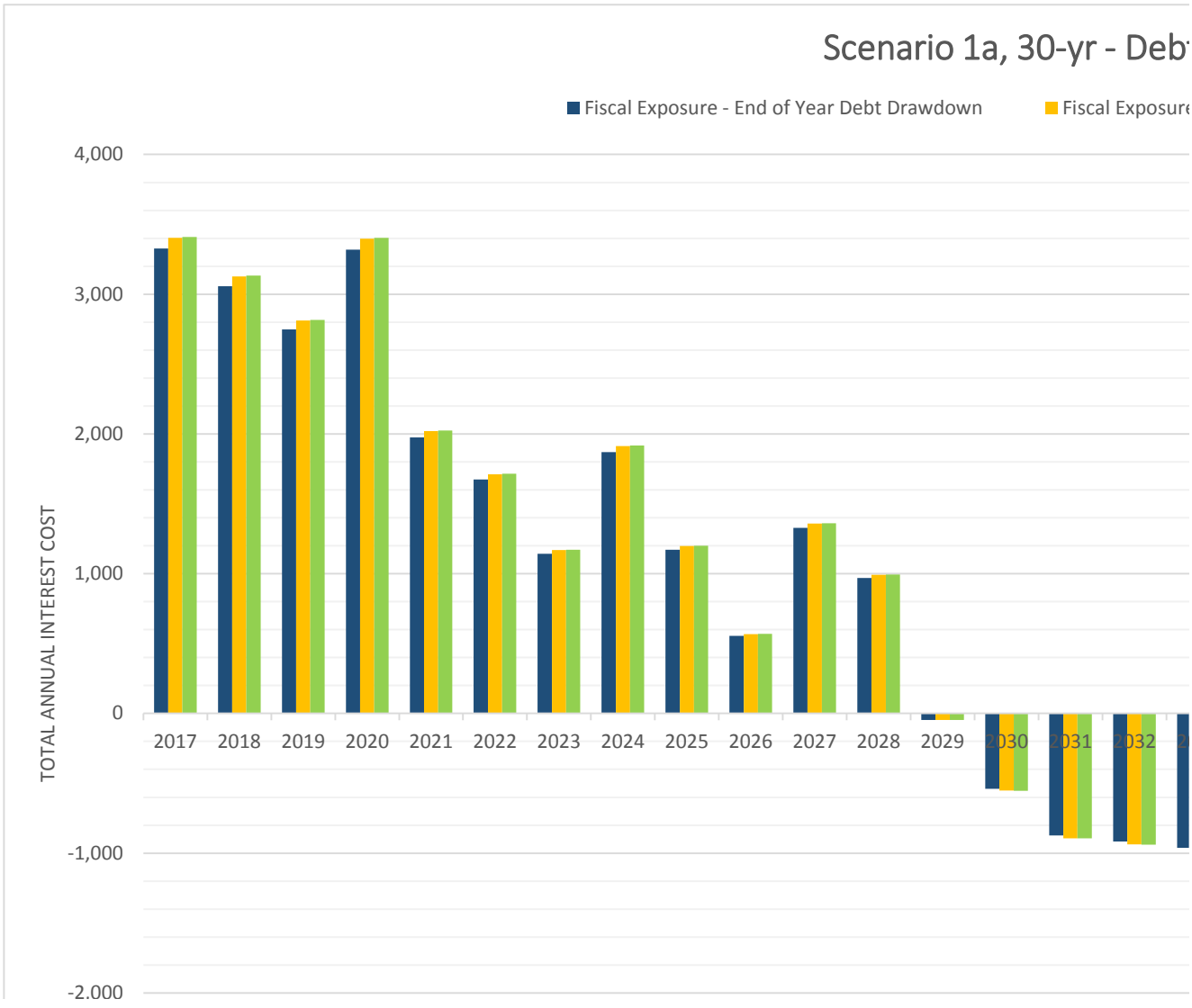


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



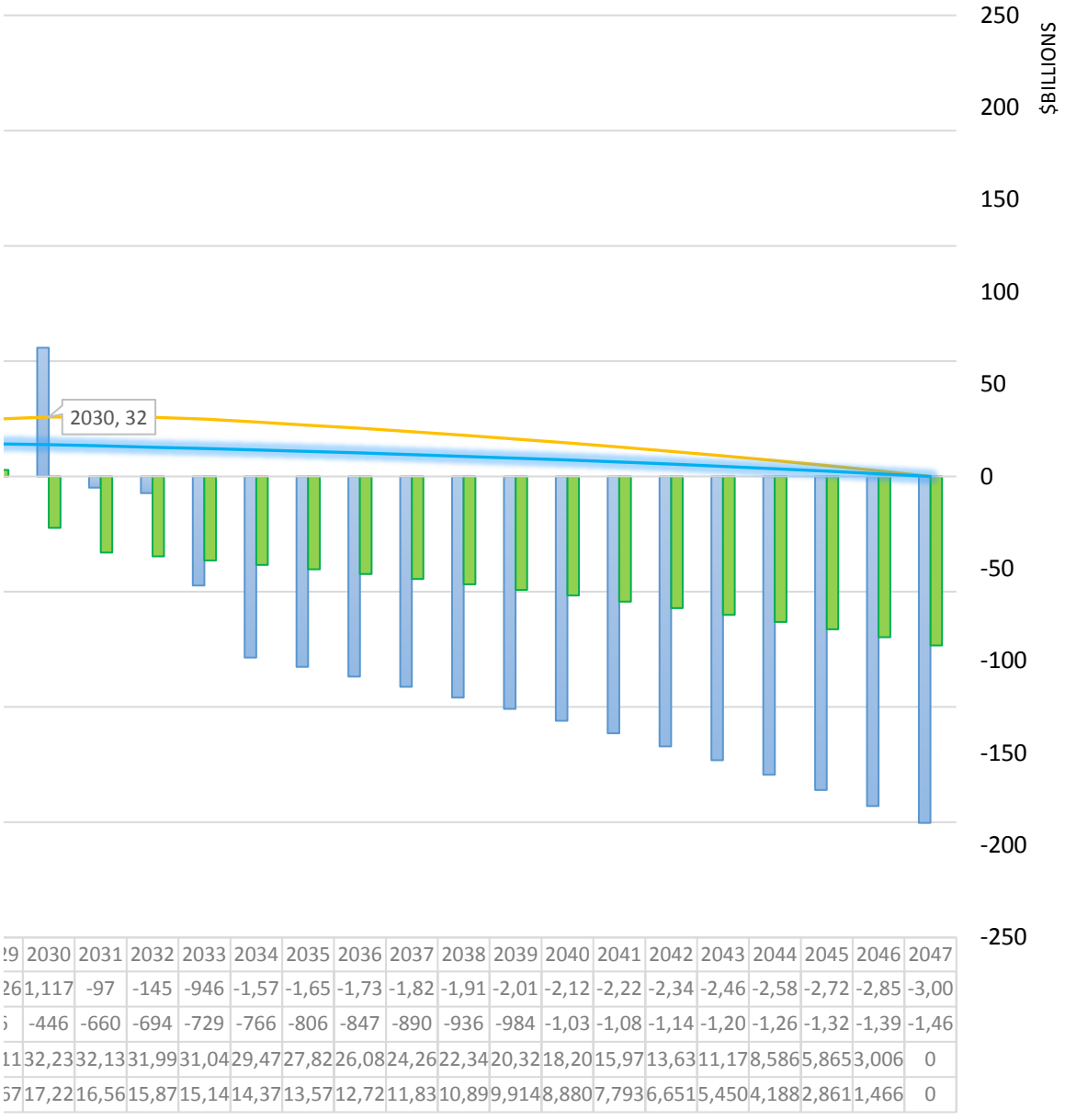


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

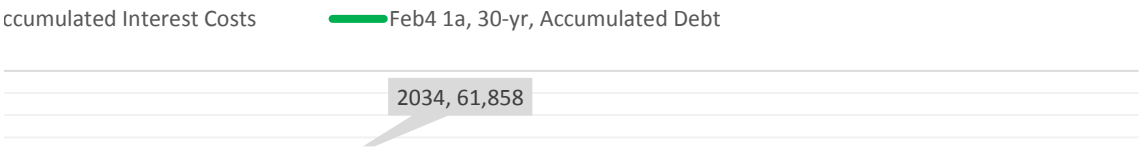
- at 5.12% interest rate

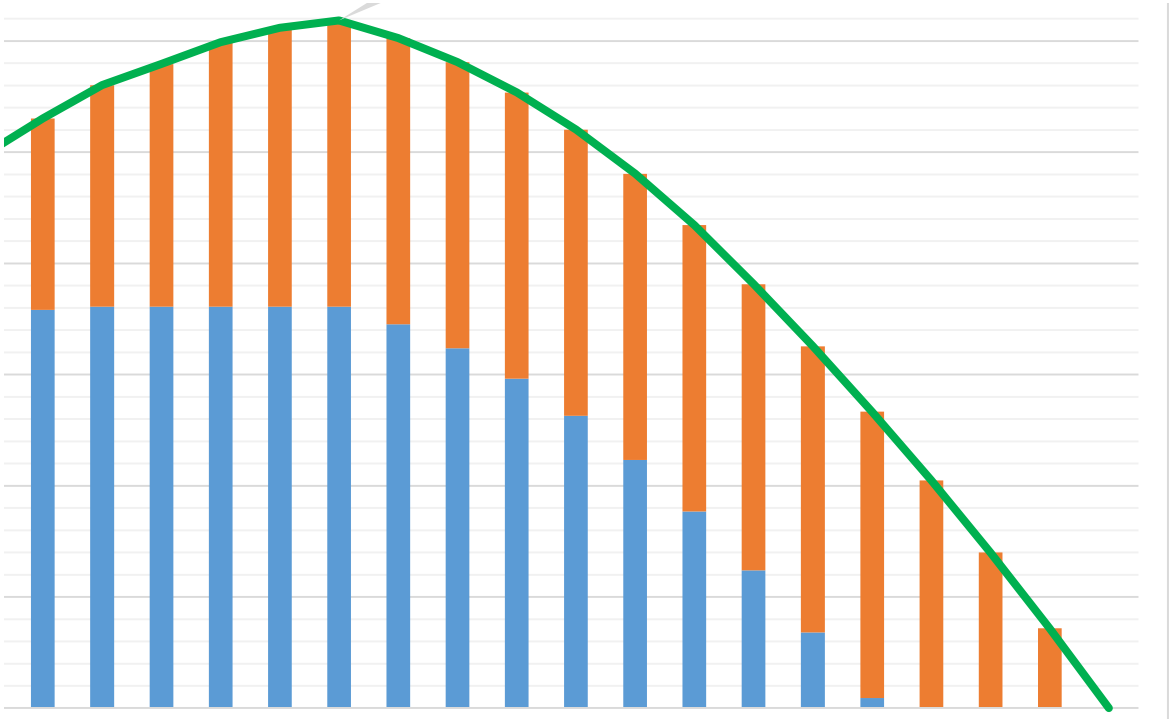


29	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
26	1,117	-97	-145	-946	-1,57	-1,65	-1,73	-1,82	-1,91	-2,01	-2,12	-2,22	-2,34	-2,46	-2,58	-2,72	-2,85	-3,00
5	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,03	-1,08	-1,14	-1,20	-1,26	-1,32	-1,39	-1,46
11	32,23	32,13	31,99	31,04	29,47	27,82	26,08	24,26	22,34	20,32	18,20	15,97	13,63	11,17	8,586	5,865	3,006	0
57	17,22	16,56	15,87	15,14	14,37	13,57	12,72	11,83	10,89	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0

CALENDAR YEAR

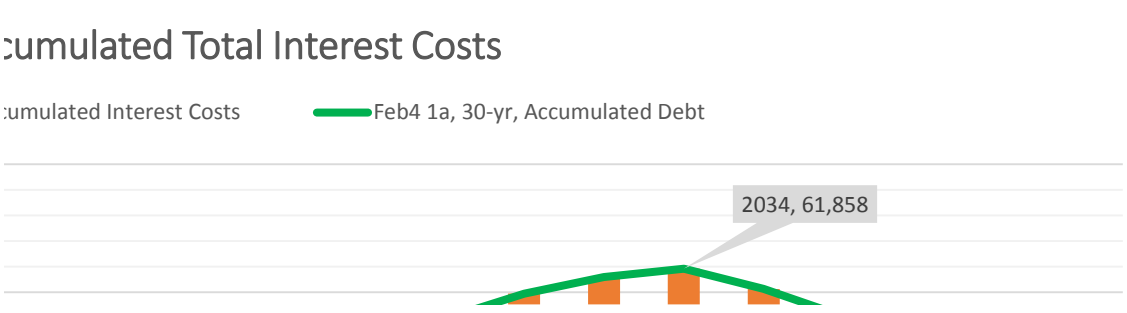
Debt (Principal and Interest)



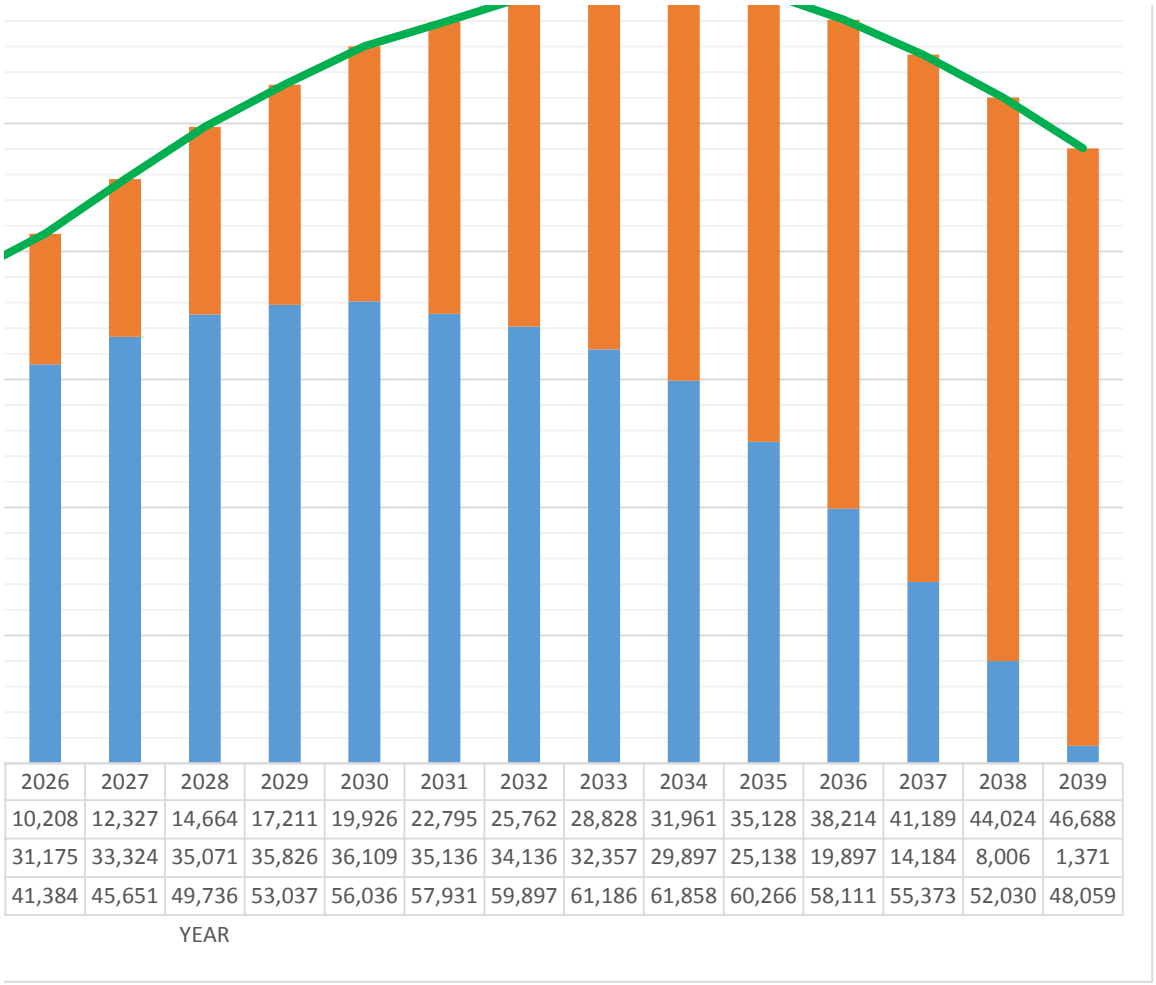


	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
5	17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
7	35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
3	53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



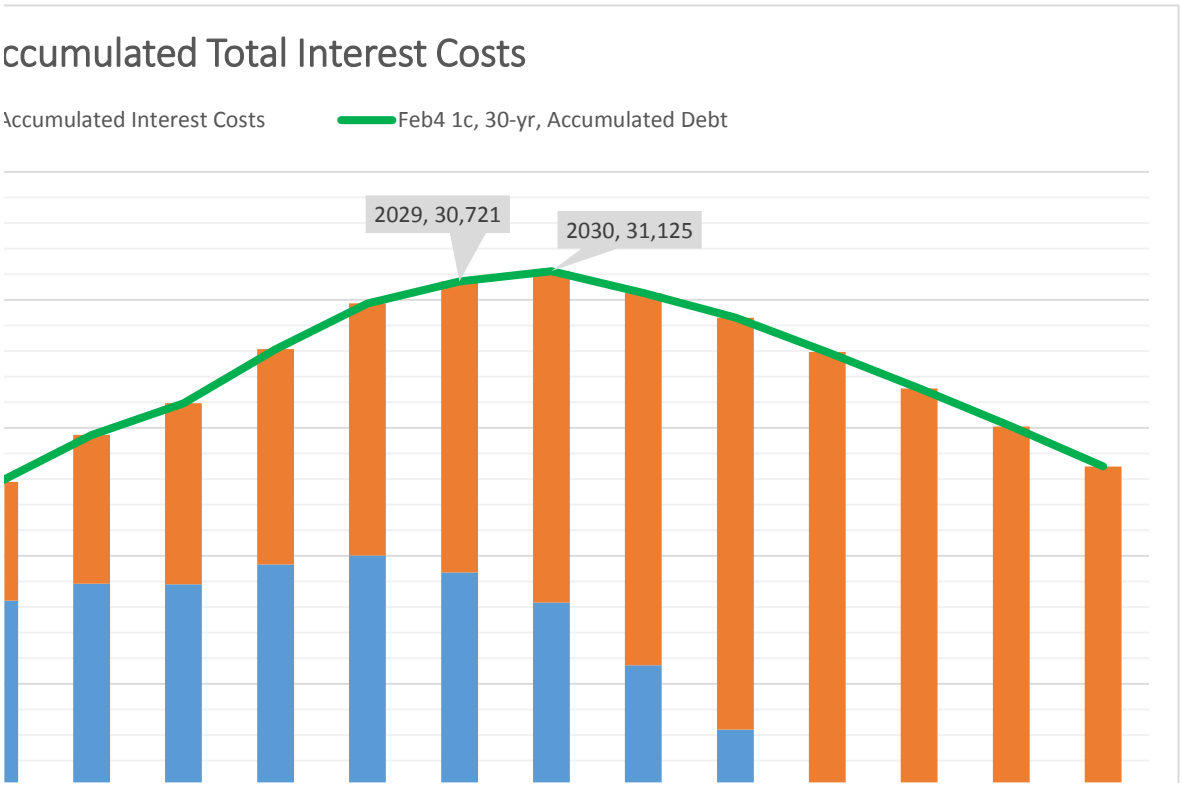
LIONS

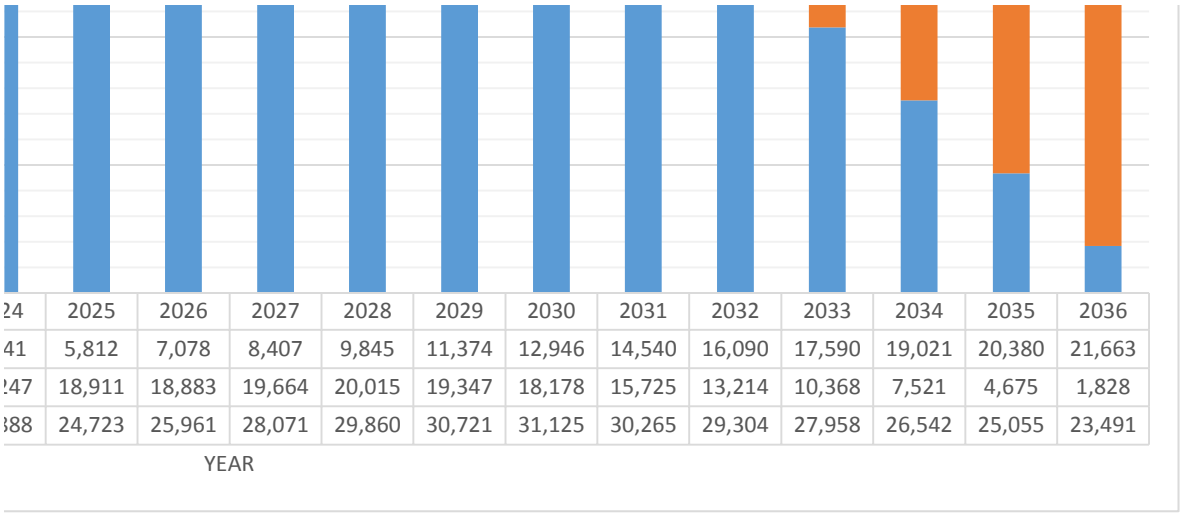


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

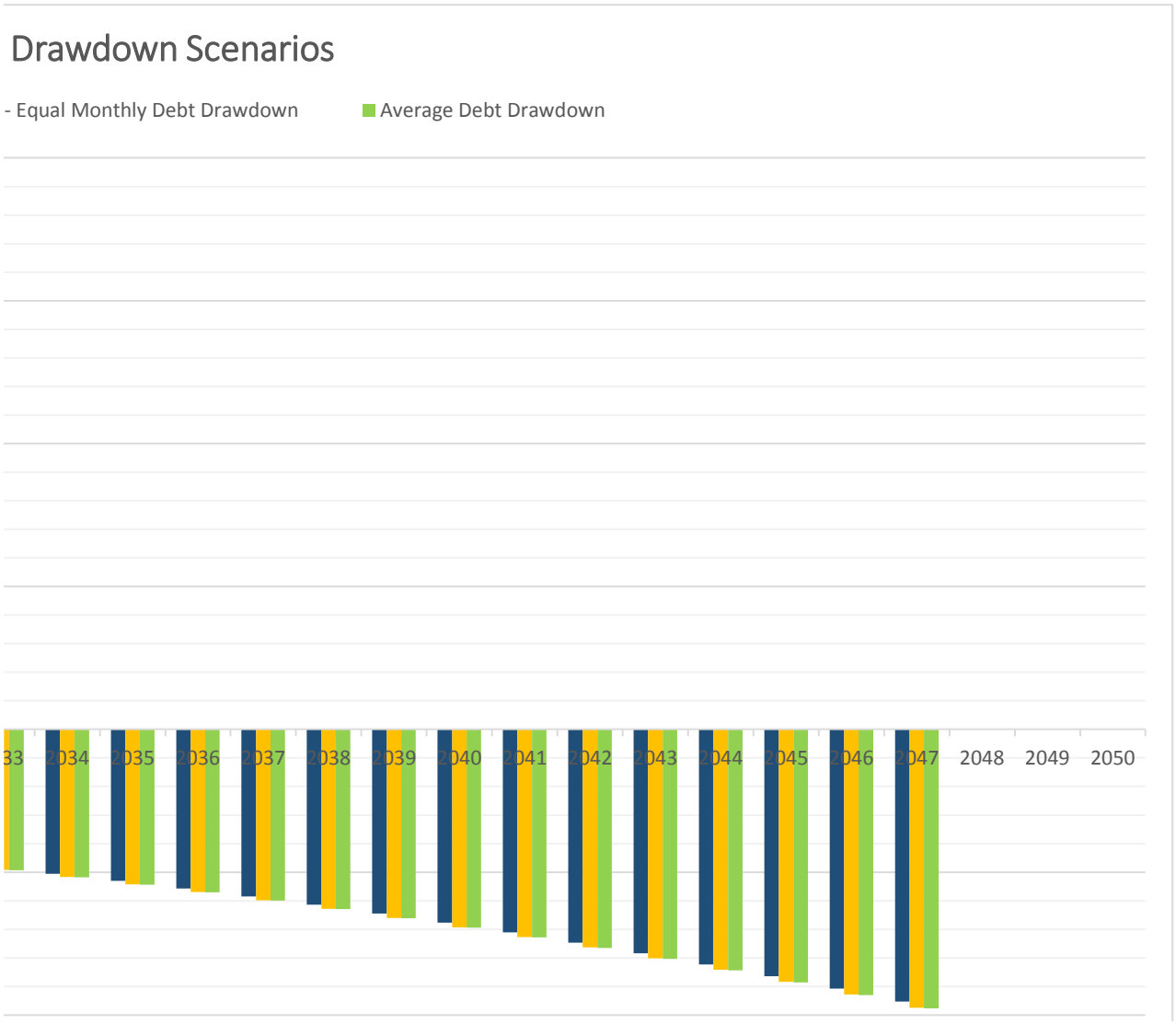
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





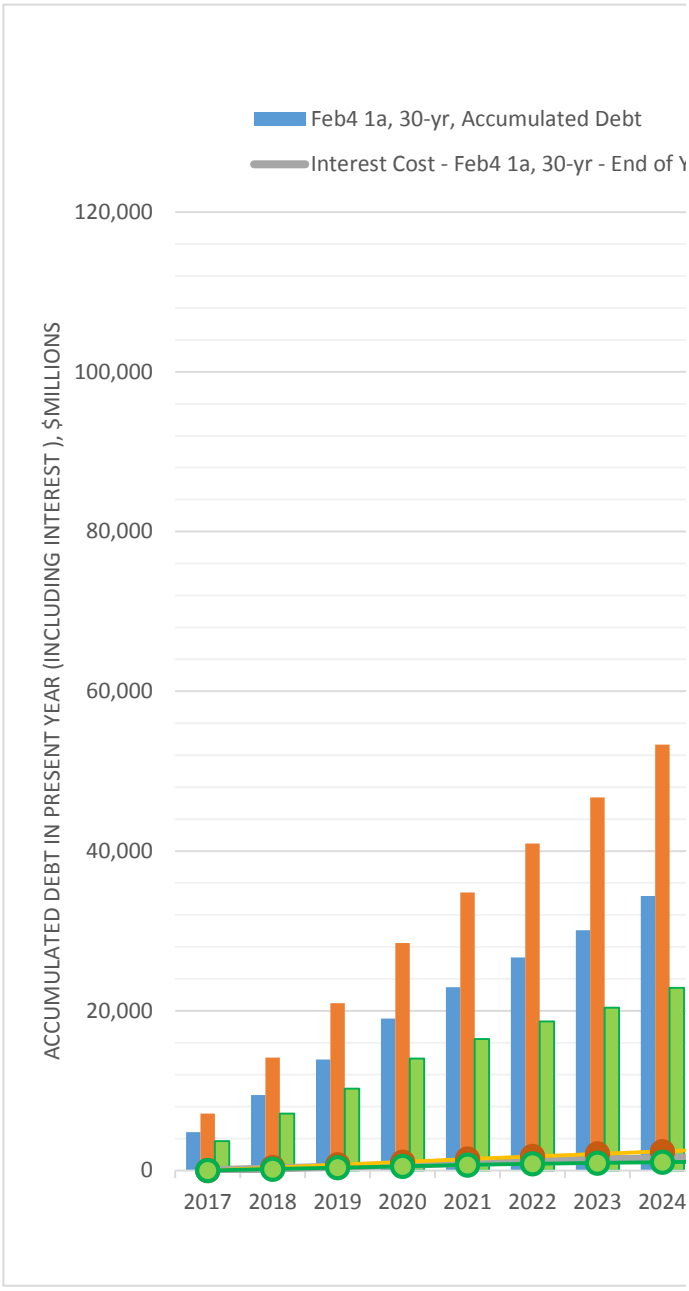
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

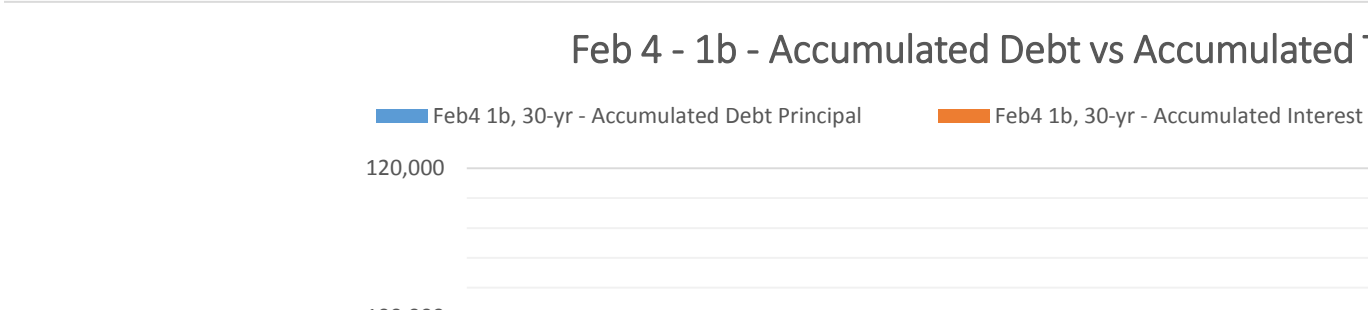
YEAR

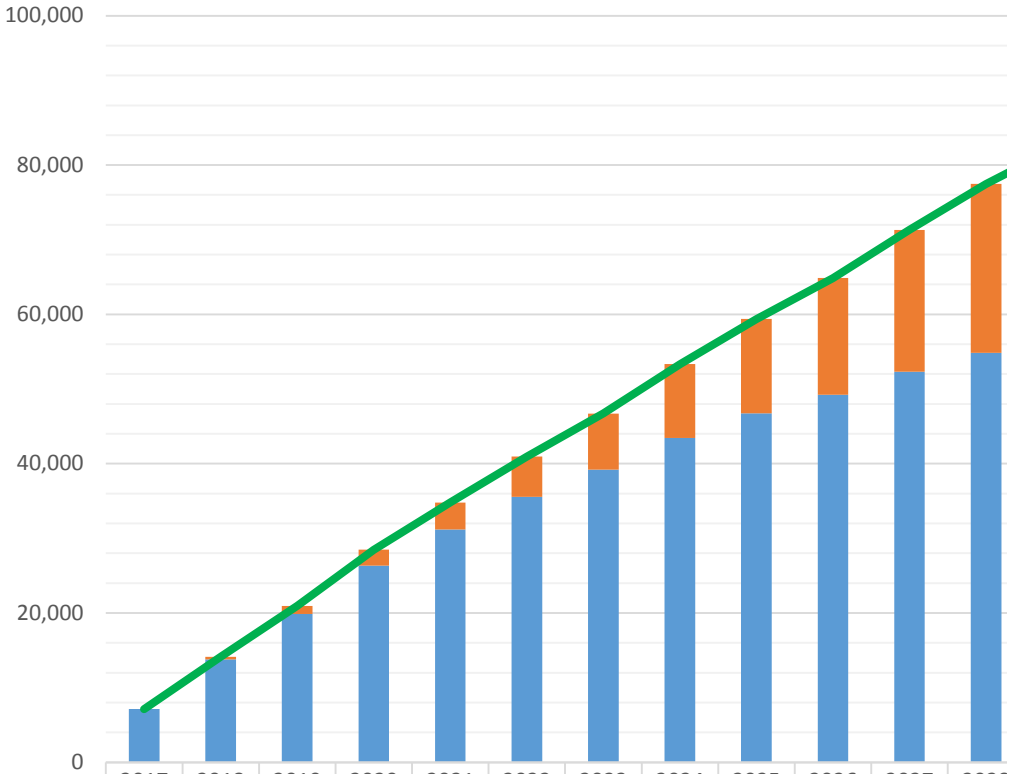


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate

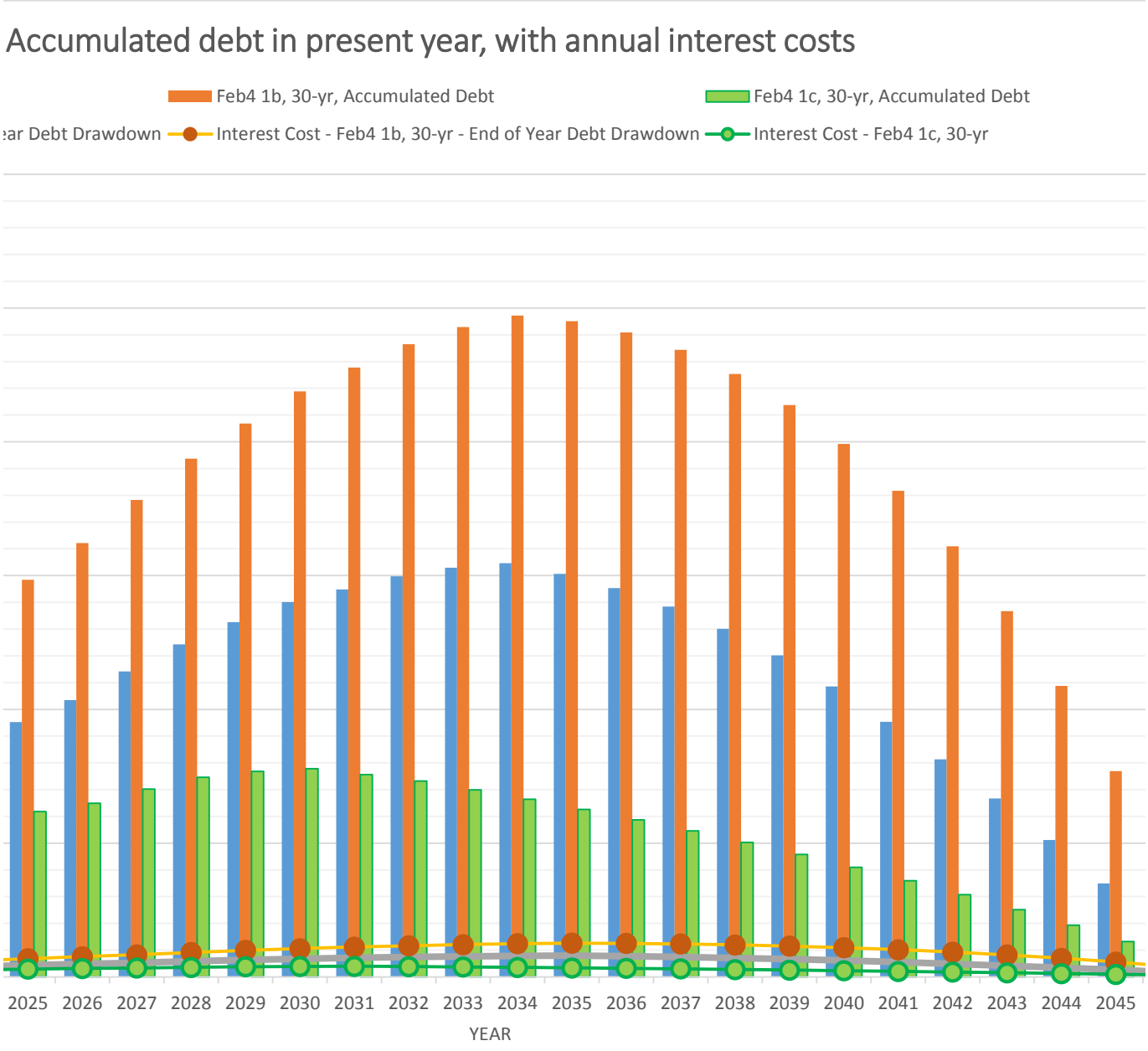


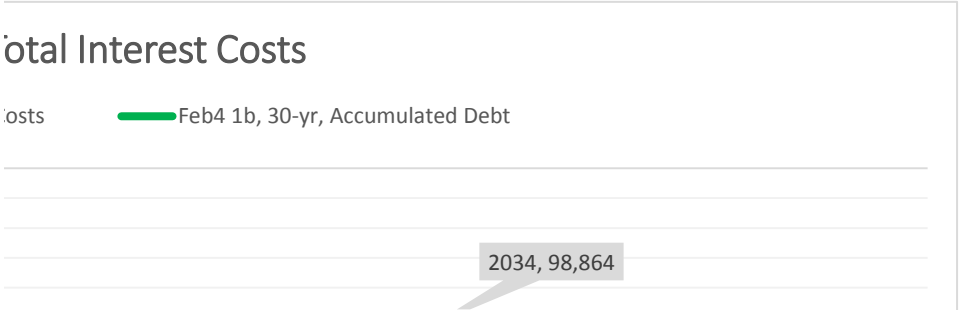

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

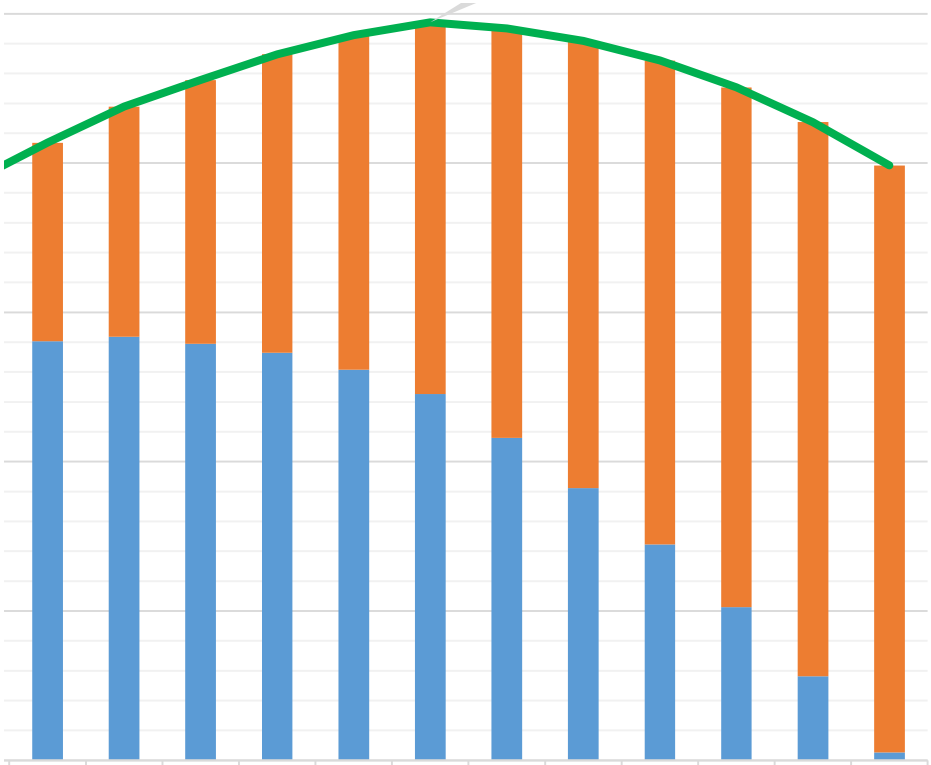


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y

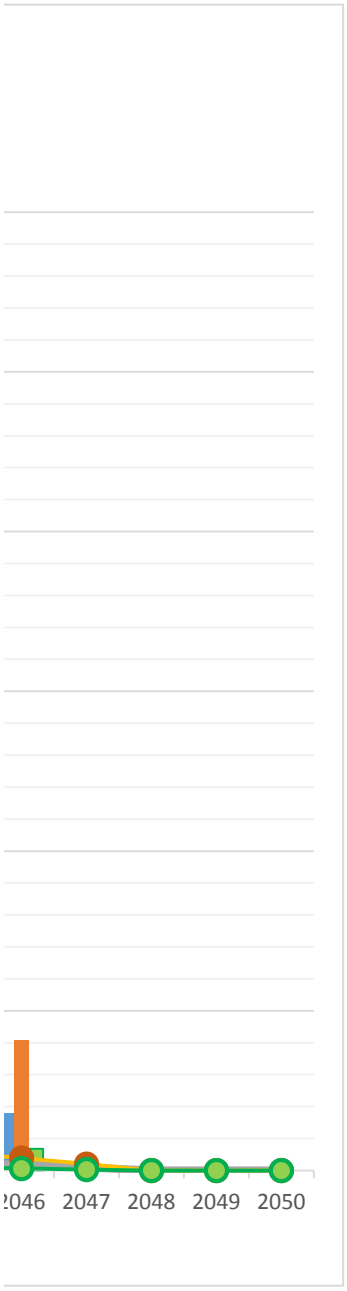

Accumulated debt in present year, with annual interest costs
Feb4 1b, 30-yr, Accumulated Debt
Feb4 1c, 30-yr, Accumulated Debt
ear Debt Drawdown
Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown
Interest Cost - Feb4 1c, 30-yr
2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045
YEAR


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

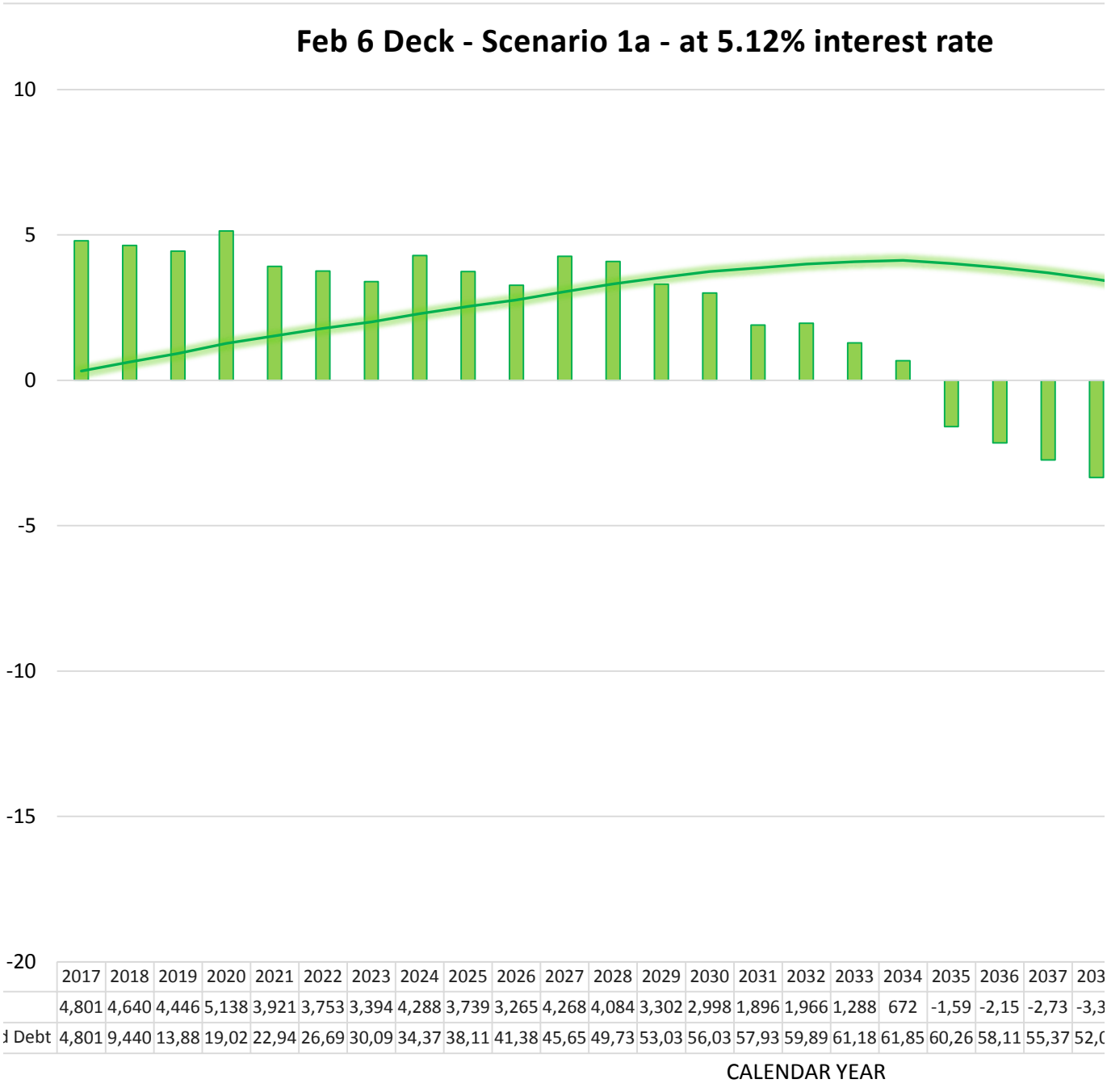
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

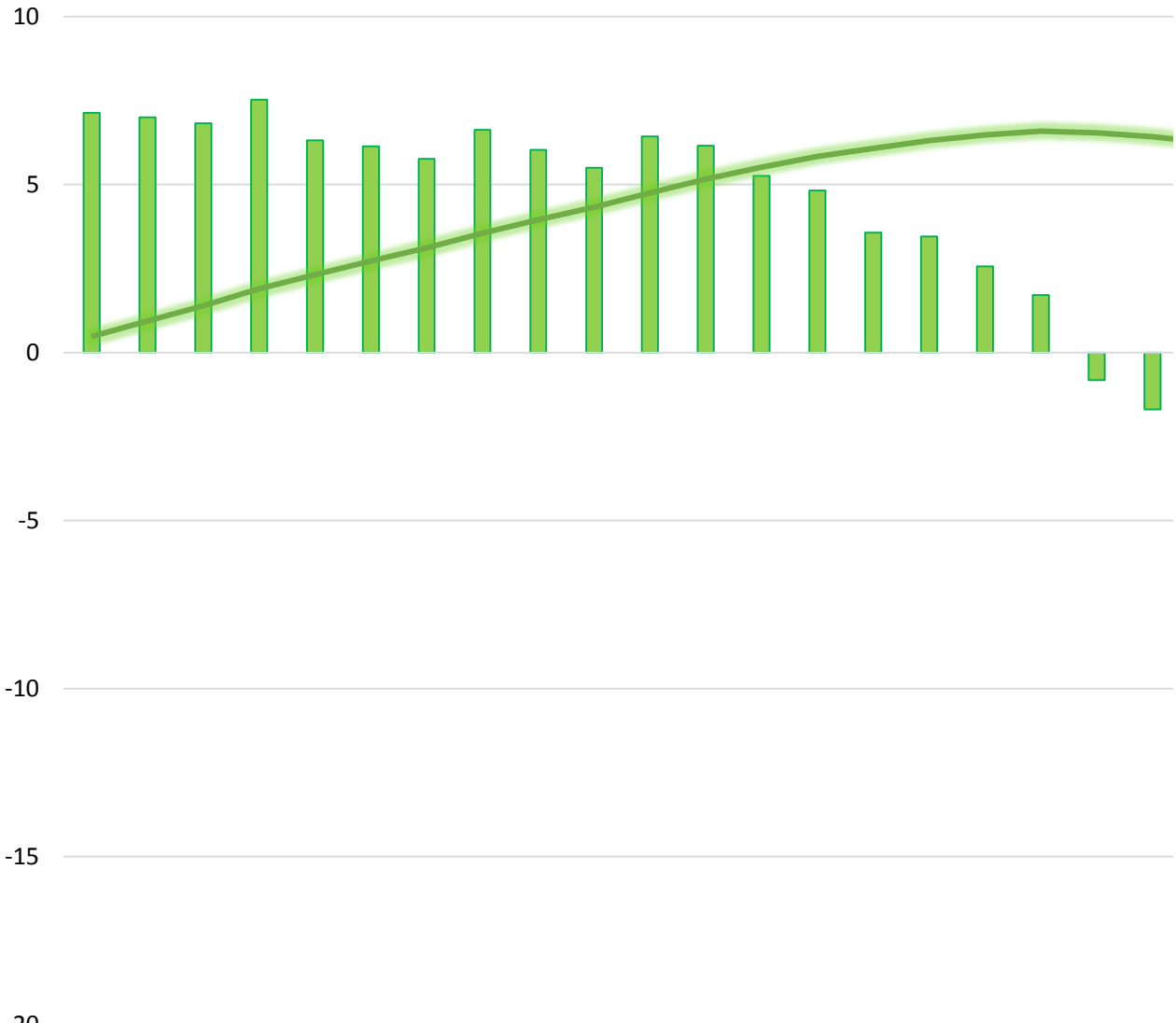
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

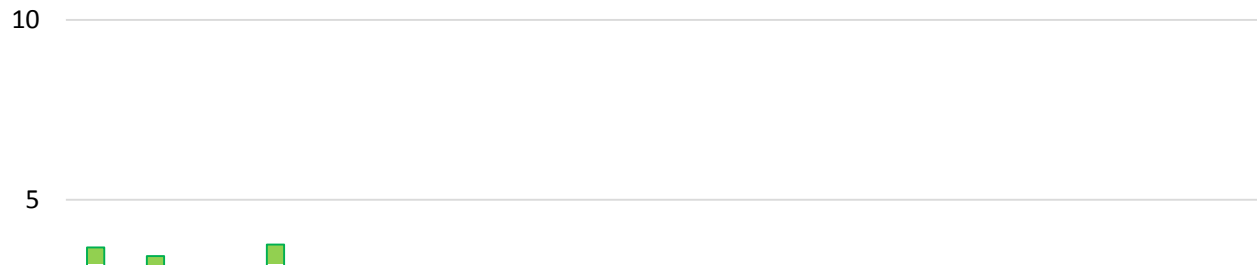
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

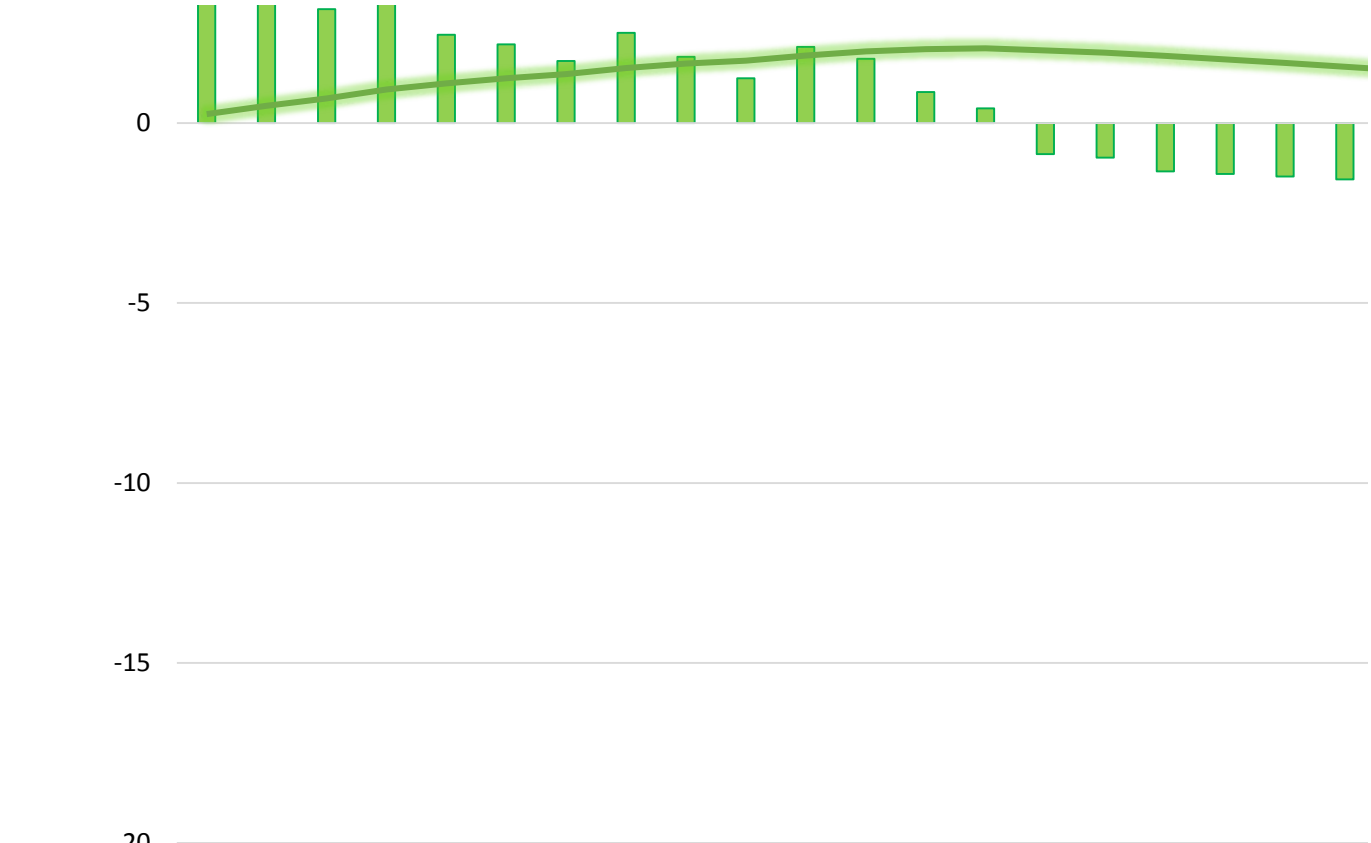


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



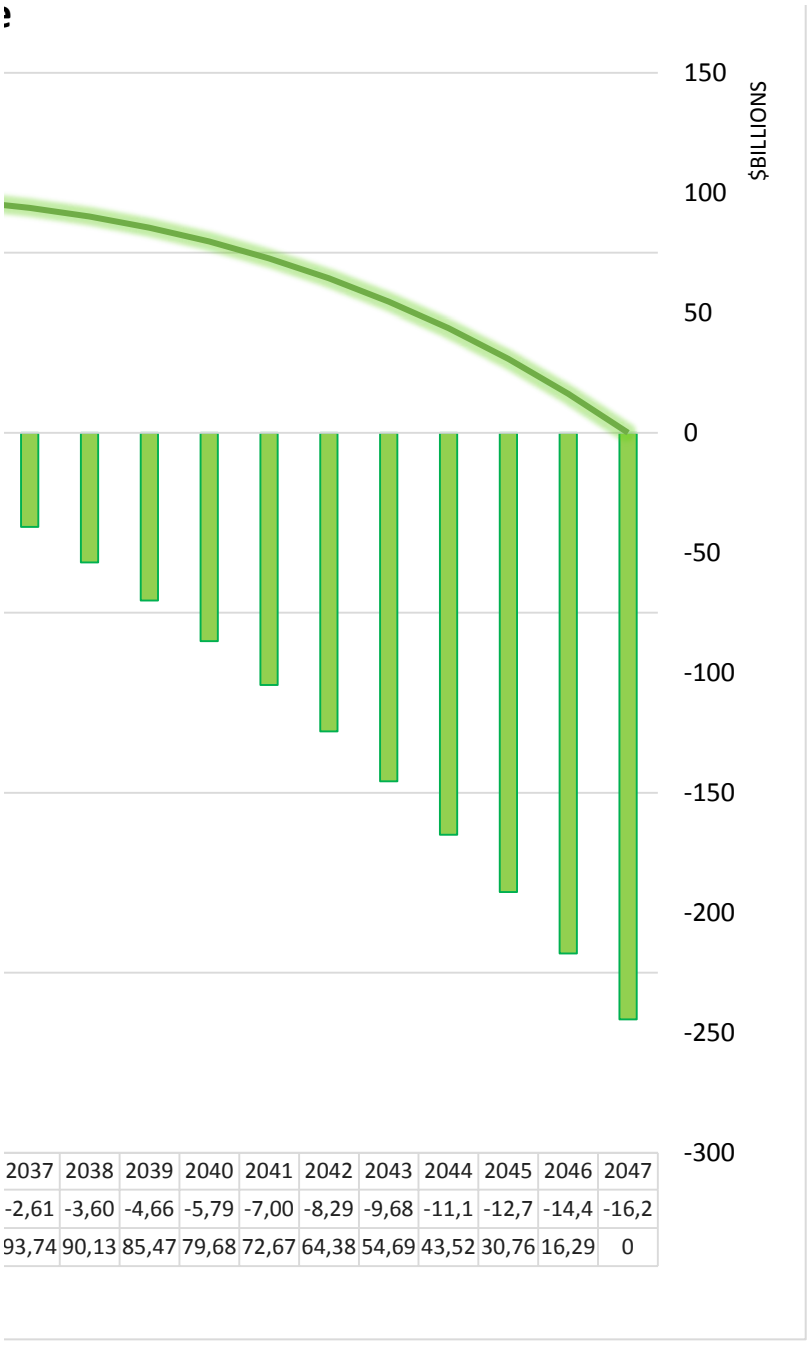


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

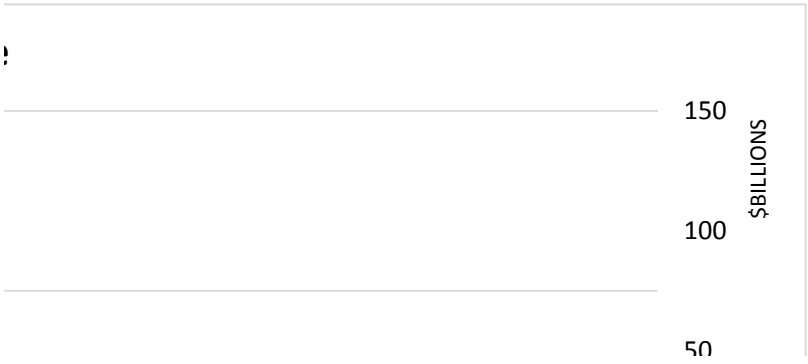
CALENDAR YEAR

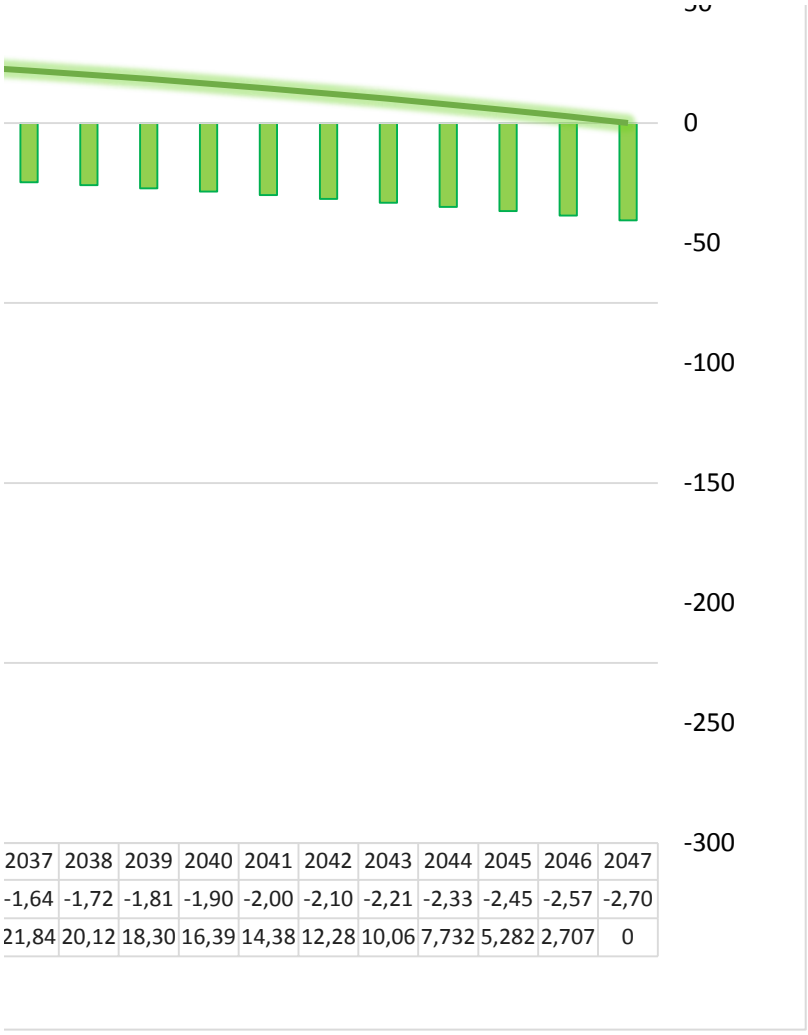


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Feb 8 Deck - Scenario 1a, 1b, 1c - at 5.12% interest
IESO GA cost forecast + extrapolation

Scenario
1a

1b

1c

1d

1e

	2017	2018	2019	2020
rate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	4674	9542	14587	21173

GA Payment from Impacted Rate Class	7421	7205	6995	6329
Accumulated debt in present year (including interest)	4674	9544	14589	21175

GA Payment from Impacted Rate Class	7421	7425	7440	7013
Accumulated debt in present year (including interest)	4674	9323	13913	19780

GA Payment from Impacted Rate Class	9915	9676	9427	9445
Accumulated debt in present year (including interest)	2180	4450	6803	9875

GA Payment from Impacted Rate Class	10596	10370	10129	10162
Accumulated debt in present year (including interest)	1500	3042	4620	6863

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
27212	33084	38588	44968	50769	56056	62291	68274

5890	6156	6434	6724	7028	7345	7677	8024
27212	33082	38585	44963	50762	56048	62281	68263

6825	7042	7266	7497	7736	7983	8237	8499
24810	29671	34167	39545	44359	48679	53976	59058

8532	8703	8877	9054	9236	9420	9609	9801
12692	15272	17420	20384	22719	24494	27181	29590

9264	9449	9638	9831	10027	10228	10432	10641
8794	10429	11568	13457	14645	15200	16588	17614

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
73391	78103	81594	85015	87596	89375	88679	87180

8386	8765	9160	9574	10006	10458	10931	11424
73378	78089	81578	84997	87577	89356	88659	87159

8770	9049	9337	9634	9941	10257	10584	10921
63318	67230	69987	72754	74773	76097	75068	73377

9997	10197	10401	10609	10821	10916	8822	8548
31116	32233	32135	31991	31045	29473	27822	26085

10854	11071	10196	10361	9779	9298	7203	6930
17670	17225	16565	15871	15142	14376	13570	12723

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
84828	81568	77341	72085	65730	58203	49425	39310

11940	12480	13043	13632	14248	14891	15564	16267
84806	81546	77320	72065	65711	58186	49409	39297

11269	11628	11998	12380	12774	13181	13600	14033
70990	67875	63995	59310	53778	47352	39985	31624

8288	8040	7805	7580	7367	7164	6970	6786
24260	22342	20325	18206	15978	13635	11173	8586

6670	6422	6186	5962	5748	5545	5352	5168
11833	10897	9914	8880	7793	6651	5450	4188

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
27767	14699	0	0	0	0

17001	17769	18572	2975	2831	2695
27758	14694	0	0	0	0

14480	14941	15417	2975	2831	2695
22213	11693	0	0	0	0

6611	6444	6286	2975	2831	2695
5865	3006	0	0	0	0

4993	4826	4667	2975	2831	2695
2861	1466	0	0	0	0

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb8_1a_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,867
Annual Exposure2 with start on July 1st	*2,337*	*4,867*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	3,554

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

1 Based on an interest rate of 5%.

2 Fiscal exposure based on equal monthly drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1b_30yr

1b. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,869
Annual Exposure2 with start on July 1st	*2,337*	*4,869*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	*3,554*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649
Annual Exposure2 with start on July 1st	*2,337*	*4,649*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,668
Start: July 1st	-	*3,499*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $76 billion peaking in

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270
Annual Exposure2 with start on July 1st	*1,090*	*2,270*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	545	2,203
Start: July 1st	-	*1,658*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $32 billion peaking in

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542
Annual Exposure2 with start on July 1st	*750*	*1,542*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	375	1,510
Start: July 1st	-	*1,135*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $18 billion peaking in

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	1,169 - 1,169	4,723 - 4,723

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1169**	**4963**
Total, B	1169	4963
Proposed Program Total:	1,169 - 1,169	4,963 - 4,963

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1a
Scenario 1b
Scenario 1c
Scenario 1d
Scenario 1e

2019	2020	2021	2022
5,045	6,586	6,039	5,872
5,045	*6,586*	*6,039*	*5,872*

2018-19	2019-20	2020-21	2021-2022
4,912	5,430	6,449	5,997
4,912	*5,430*	*6,449*	*5,997*

2034.

Actuals are subject t
- The highest debt ac
- Compared to a 5% i

[1] Based on an interes
[2] Fiscal exposure bas
[3] Fiscalized based on

depend on decision on accounting treatment.

2019	2020	2021	2022
5,045	6,586	6,037	5,870
5,045	*6,586*	*6,037*	*5,870*

2018-19	2019-20	2020-21	2021-2022
4,913	5,430	6,449	5,996
4,913	*5,430*	*6,449*	*5,996*

2034.

2019	2020	2021	2022
4,589	5,867	5,031	4,861
4,589	*5,867*	*5,031*	*4,861*

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988
4,634	*4,909*	*5,658*	*4,988*

2034.

2019	2020	2021	2022
2,353	3,072	2,817	2,580
2,353	*3,072*	*2,817*	*2,580*

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757
2,291	*2,533*	*3,008*	*2,757*

2030.

2019	2020	2021	2022
1,578	2,243	1,931	1,635
1,578	*2,243*	*1,931*	*1,635*

2018-19	2019-20	2020-21	2021-2022

1,551	1,745	2,165	1,857
1,551	*1,745*	*2,165*	*1,857*

2029.



2018-19	2019-20	2020-21	2021-2022
4,913 - 4,912	5,430 - 5,430	6,449 - 6,449	5,996 - 5,997

/1

2018-19[1]	2019-20[1]	2020-21[1]
4912	5430	6449
4913	5430	6449
225	279	323
60	60	60
18	18	18
5215	**5787**	**6850**
5216	5787	6850

5,216 - 5,215 5,787 - 5,787 6,850 - 6,850

Total Principal Debt	Total Accumulated Interest Costs	**Peak Total Debt**	
52,287	85,599	89,375	occurs in Year 2034
52,275	85,582	89,356	occurs in Year 2034
44,449	72,823	76,097	occurs in Year 2034
21,239	29,589	32,233	occurs in Year 2030
12,350	16,239	17,670	occurs in Year 2029

o actual prices and actual interest rates.
:cumulation (at 5% interest rate) is expected to be approximately $62 billion, peaking in 203 and $17-21 billion (at 3.5% interest
interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately $33-$36 million.

st rate of 5%.
sed on equal monthly drawdown of debt.
75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on mo

Feb8_1a_30yr
Feb8_1b_30yr
Feb8_1c_30yr
Feb8_1d_30yr
Feb8_1e_30yr

t rate), peaking in 2028.

nth of the year. Actuals may also depend on decision on accounting treatment.

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-275	-311	-350	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,573	85,599
Equal Monthly Debt Drawdown	6,743	4,556	

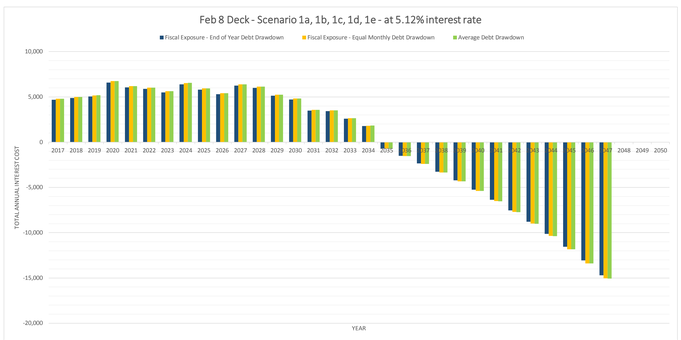
	Feb8 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,375	2034	52,287
Equal Monthly Debt Drawdown	91,501		

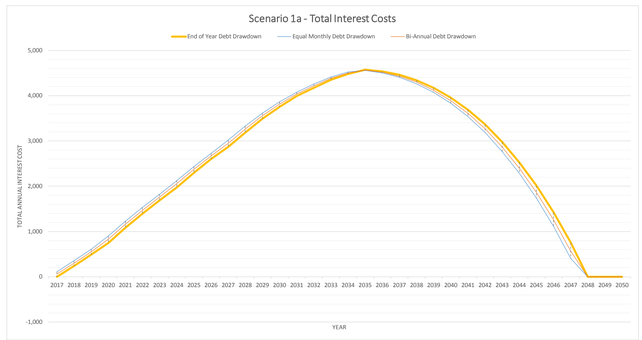
Feb8 1a, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	
c = a*5%	*Interest Cost - Feb8 1a, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,301*	*2,597*	*2,868*	*3,187*	*3,493*	*3,755*	*3,996*	*4,175*	*4,350*	*4,482*	*4,573*	*4,537*	*4,460*	*4,340*	*4,173*	*3,957*	*3,688*	*3,363*	*2,978*	*2,529*	*2,011*	*1,421*	*752*	*0*	*0*	*0*	85,599
b	Additional GA Debt Drawdown, End of Year	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,307	32,728	35,309	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	39,310	27,767	14,699	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	52,287	52,287	52,287	51,591	50,091	47,739	44,479	40,253	34,997	28,642	21,115	12,336	0	0	0	0	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,813	33,987	38,337	42,818	47,391	51,928	56,388	60,728	64,901	68,858	72,546	75,909	78,887	81,416	83,427	84,847	85,599				
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	51,781	51,028	49,259	46,557	41,288	35,252	28,440	20,840	12,440	3,227	-6,816	-17,706	-29,462	-42,106	-55,660	-70,149	-85,599				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	

Feb8 1a, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	
4,556	*Interest Cost - Feb8 1a, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,824*	*2,126*	*2,439*	*2,723*	*3,016*	*3,329*	*3,615*	*3,867*	*4,079*	*4,256*	*4,411*	*4,524*	*4,556*	*4,501*	*4,404*	*4,262*	*4,073*	*3,832*	*3,537*	*3,184*	*2,769*	*2,288*	*1,737*	*1,110*	*402*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
	Monthly Drawdown	390	386	380	487	413	373	318	367	292	224	281	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(980)	(1,054)	(1,129)	(1,207)	(1,288)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,738	4,665	5,979	5,074	4,586	3,902	4,510	3,584	2,753	3,447	2,863	1,662	980	(517)	(772)	(1,810)	(2,766)	(5,394)	(6,180)	(6,975)	(7,781)	(8,599)	(9,432)	(10,282)	(11,149)	(12,036)	(12,944)	(13,876)	(14,834)	(15,818)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	67	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(368)	-	-	-	
	Annual Interest Cost on Opening Balance	-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,263	3,576	3,844	4,091	4,274	4,453	4,588	4,681	4,645	4,566	4,443	4,272	4,051	3,776	3,443	3,049	2,589	2,059	1,454	770	(0)	(0)	(0)	
	Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,824	2,126	2,439	2,723	3,016	3,329	3,615	3,867	4,079	4,256	4,411	4,524	4,556	4,501	4,404	4,262	4,073	3,832	3,537	3,184	2,769	2,288	1,737	1,110	402	(0)	(0)	(0)	

Feb8 1a, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*60*	*301*	*553*	*831*	*1,160*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,948*	*3,263*	*3,558*	*3,815*	*4,041*	*4,218*	*4,383*	*4,504*	*4,564*	*4,518*	*4,430*	*4,298*	*4,119*	*3,890*	*3,607*	*3,267*	*2,866*	*2,399*	*1,864*	*1,253*	*564*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,930	5,110	6,670	6,116	5,947	5,575	6,461	5,875	5,354	6,315	6,060	5,182	4,773	3,535	3,464	2,614	1,802	-705	-1,518	-2,382	-3,302	-4,280	-5,324	-6,436	-7,623	-8,891	-10,244	-11,690	-13,236	-14,887	0	0	0	
	Bi-Annual Drawdown	2,337	2,314	2,279	2,920	2,478	2,240	1,906	2,203	1,750	1,345	1,684	1,398	812	479	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,800)	(4,200)	(4,607)	(5,021)	(5,445)	(5,878)	(6,322)	(6,777)	(7,245)	(7,725)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,687	4,615	5,914	5,019	4,537	3,860	4,462	3,545	2,724	3,410	2,832	1,644	970	(512)	(763)	(1,791)	(2,737)	(5,336)	(6,113)	(6,900)	(7,697)	(8,507)	(9,331)	(10,171)	(11,029)	(11,907)	(12,805)	(13,727)	(14,674)	(15,648)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	494	756	1,097	1,410	1,714	1,999	2,330	2,631	2,905	3,228	3,538	3,803	4,047	4,228	4,405	4,539	4,631	4,595	4,517	4,395	4,227	4,008	3,735	3,406	3,016	2,561	2,037	1,439	762	(0)	(0)	(0)	
	Total Annual Interest Cost	60	301	553	831	1,160	1,467	1,763	2,056	2,375	2,665	2,948	3,263	3,558	3,815	4,041	4,218	4,383	4,504	4,564	4,518	4,430	4,298	4,119	3,890	3,607	3,267	2,866	2,399	1,864	1,253	564	(0)	(0)	(0)	

Feb8 1a, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,723*	*3,027*	*3,340*	*3,624*	*3,875*	*4,085*	*4,262*	*4,416*	*4,527*	*4,555*	*4,499*	*4,400*	*4,257*	*4,065*	*3,822*	*3,525*	*3,170*	*2,753*	*2,270*	*1,716*	*1,086*	*376*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,992	5,174	6,754	6,193	6,022	5,645	6,543	5,950	5,422	6,395	6,137	5,248	4,833	3,580	3,508	2,647	1,825	-714	-1,537	-2,412	-3,343	-4,334	-5,391	-6,517	-7,720	-9,003	-10,374	-11,838	-13,403	-15,075	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-274	-311	-349	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,572	85,582
Equal Monthly Debt Drawdown	6,743	4,555	

	Feb8 1b, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,356	2034	52,275
Equal Monthly Debt Drawdown	91,481		

Feb8 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
a — Debt, Beginning of Year	0	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	
c = a*5% — *Interest Cost - Feb8 1b, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,300*	*2,597*	*2,867*	*3,186*	*3,492*	*3,754*	*3,995*	*4,174*	*4,349*	*4,481*	*4,572*	*4,536*	*4,459*	*4,339*	*4,172*	*3,956*	*3,687*	*3,362*	*2,977*	*2,528*	*2,011*	*1,420*	*752*	*0*	*0*	*0*	85,582
b — Additional GA Debt Drawdown, End of Year	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,303	32,722	35,302	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	39,297	27,758	14,694	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	52,275	52,275	52,275	52,275	51,578	50,078	47,725	44,465	40,239	34,984	28,630	21,105	12,328	0	0	0	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,809	33,983	38,331	42,812	47,384	51,920	56,379	60,718	64,890	68,846	72,533	75,895	78,871	81,399	83,410	84,830	85,582				
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	51,769	51,014	49,246	46,544	41,275	35,239	28,428	20,829	12,431	3,219	-6,822	-17,709	-29,462	-42,102	-55,652	-70,136	-85,582				
Fiscal Exposure - End of Year Debt Drawdown	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	

Feb8 1b, 30-yr — Equal Monthly Debt Drawdown

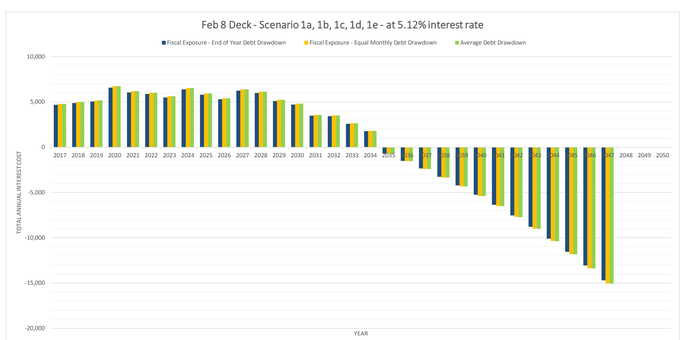
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	
4,555 — *Interest Cost - Feb8 1b, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,823*	*2,126*	*2,438*	*2,723*	*3,016*	*3,329*	*3,614*	*3,866*	*4,078*	*4,255*	*4,410*	*4,523*	*4,555*	*4,500*	*4,403*	*4,261*	*4,072*	*3,831*	*3,536*	*3,183*	*2,768*	*2,287*	*1,736*	*1,109*	*402*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
Monthly Drawdown	390	386	380	487	413	373	317	367	292	224	280	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(979)	(1,053)	(1,129)	(1,207)	(1,287)	(0)	-	-	
FV of Monthly Drawdown at 5%	4,786	4,740	4,665	5,979	5,072	4,585	3,900	4,509	3,582	2,752	3,446	2,862	1,661	979	(518)	(772)	(1,811)	(2,766)	(5,394)	(6,179)	(6,974)	(7,780)	(8,598)	(9,431)	(10,279)	(11,146)	(12,033)	(12,941)	(13,872)	(14,829)	(15,813)	(0)	-	-	
Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	66	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(367)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,262	3,576	3,843	4,090	4,273	4,452	4,587	4,680	4,644	4,565	4,442	4,271	4,050	3,775	3,442	3,048	2,588	2,058	1,454	770	0	0	0	
Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,823	2,126	2,438	2,723	3,016	3,329	3,614	3,866	4,078	4,255	4,410	4,523	4,555	4,500	4,403	4,261	4,072	3,831	3,536	3,183	2,768	2,287	1,736	1,109	402	0	0	0	

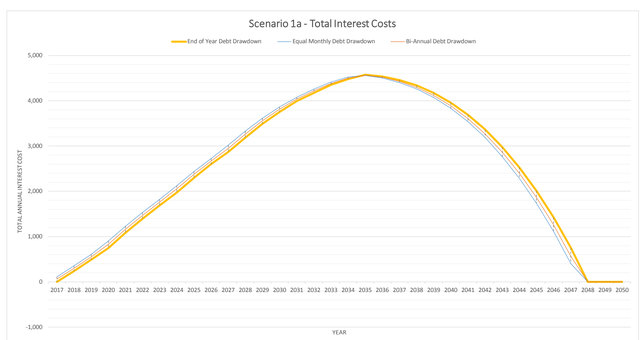
Feb8 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*60*	*301*	*553*	*831*	*1,161*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,947*	*3,263*	*3,558*	*3,814*	*4,040*	*4,217*	*4,382*	*4,503*	*4,563*	*4,517*	*4,429*	*4,297*	*4,118*	*3,889*	*3,606*	*3,266*	*2,865*	*2,399*	*1,863*	*1,253*	*564*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	4,734	4,931	5,110	6,670	6,115	5,945	5,573	6,460	5,874	5,353	6,313	6,058	5,181	4,771	3,534	3,463	2,613	1,801	-706	-1,519	-2,383	-3,302	-4,280	-5,323	-6,435	-7,622	-8,889	-10,242	-11,687	-13,231	-14,882	0	0	0	
Bi-Annual Drawdown	2,337	2,315	2,279	2,920	2,477	2,239	1,905	2,202	1,750	1,344	1,683	1,398	811	478	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,799)	(4,199)	(4,606)	(5,020)	(5,444)	(5,877)	(6,320)	(6,775)	(7,242)	(7,723)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	4,734	4,689	4,615	5,914	5,017	4,535	3,859	4,460	3,544	2,722	3,409	2,831	1,643	969	(513)	(764)	(1,791)	(2,737)	(5,336)	(6,113)	(6,899)	(7,696)	(8,506)	(9,329)	(10,169)	(11,027)	(11,904)	(12,802)	(13,723)	(14,670)	(15,643)	(0)	-	-	
Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	242	495	756	1,097	1,410	1,714	1,999	2,330	2,630	2,904	3,227	3,537	3,802	4,046	4,227	4,404	4,538	4,630	4,594	4,516	4,394	4,225	4,006	3,734	3,405	3,015	2,560	2,036	1,438	761	0	(0)	(0)	
Total Annual Interest Cost	60	301	553	831	1,161	1,467	1,763	2,056	2,375	2,665	2,947	3,263	3,558	3,814	4,040	4,217	4,382	4,503	4,563	4,517	4,429	4,297	4,118	3,889	3,606	3,266	2,865	2,399	1,863	1,253	564	0	(0)	(0)	

Feb8 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,732*	*3,027*	*3,339*	*3,623*	*3,875*	*4,084*	*4,261*	*4,415*	*4,526*	*4,554*	*4,498*	*4,399*	*4,255*	*4,064*	*3,821*	*3,524*	*3,169*	*2,752*	*2,269*	*1,715*	*1,086*	*376*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	4,794	4,994	5,174	6,754	6,192	6,020	5,643	6,541	5,948	5,420	6,393	6,135	5,246	4,831	3,578	3,507	2,646	1,824	-715	-1,538	-2,413	-3,343	-4,334	-5,390	-6,516	-7,718	-9,001	-10,371	-11,835	-13,398	-15,070	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1c_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	
			111	111	109	140	120	116	107	128	115	103	126	121	101	93	66	66	48	32	-24	-40	-57	-74	-92	-111	-132	-153	-175	-199	-224	-250	-278	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	5,867	3,893	72,823
Equal Monthly Debt Drawdown	6,006	3,869	

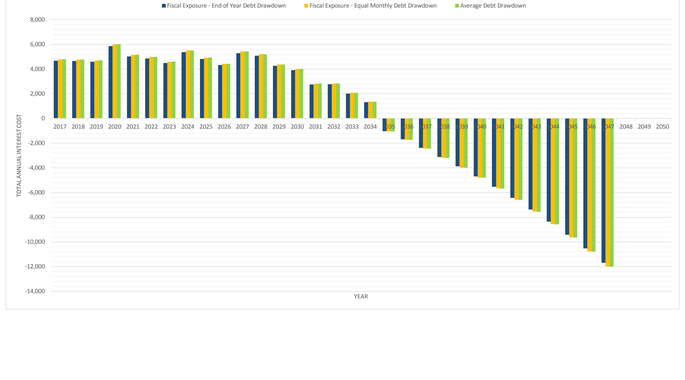
	Feb8 1c, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	76,097	2034	44,449
Equal Monthly Debt Drawdown	77,907		

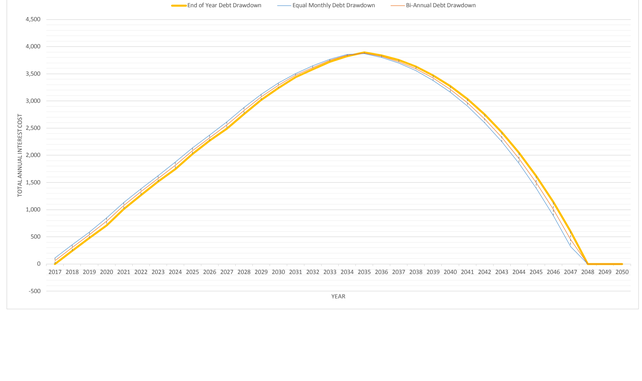
Feb8 1c, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	
c = a*5%	*Interest Cost - Feb8 1c, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*477*	*712*	*1,012*	*1,269*	*1,518*	*1,748*	*2,023*	*2,270*	*2,491*	*2,762*	*3,022*	*3,239*	*3,440*	*3,581*	*3,722*	*3,826*	*3,893*	*3,841*	*3,754*	*3,632*	*3,473*	*3,274*	*3,034*	*2,751*	*2,423*	*2,046*	*1,618*	*1,136*	*598*	*0*	*0*	*0*	72,823
b	Additional GA Debt Drawdown, End of Year	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	
	Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	25,538	28,304	30,324	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,624	22,213	11,693	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	44,449	44,449	44,449	44,449	43,420	41,729	39,342	36,228	32,347	27,662	22,130	15,704	8,337	0	0	0	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	26,221	29,801	33,524	37,349	41,242	45,083	48,837	52,469	55,942	59,216	62,250	65,002	67,424	69,470	71,088	72,224	72,823				
	Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	43,767	42,952	41,249	38,748	33,826	28,294	22,153	15,406	8,054	94	-8,473	-17,649	-27,439	-37,846	-48,875	-60,532	-72,823				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	

Feb8 1c, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
3,869	Debt, Beginning of Year	0	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*111*	*350*	*586*	*851*	*1,132*	*1,385*	*1,625*	*1,876*	*2,138*	*2,372*	*2,617*	*2,882*	*3,123*	*3,333*	*3,505*	*3,646*	*3,770*	*3,857*	*3,869*	*3,800*	*3,697*	*3,558*	*3,380*	*3,163*	*2,903*	*2,599*	*2,247*	*1,847*	*1,394*	*886*	*320*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	
	Monthly Drawdown	390	367	343	430	335	299	248	303	233	171	234	193	103	56	(57)	(68)	(142)	(208)	(410)	(461)	(512)	(562)	(613)	(663)	(714)	(765)	(816)	(867)	(919)	(971)	(1,024)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,515	4,210	5,278	4,114	3,677	3,048	3,717	2,857	2,099	2,873	2,375	1,268	689	(699)	(834)	(1,744)	(2,561)	(5,039)	(5,664)	(6,286)	(6,907)	(7,528)	(8,148)	(8,771)	(9,395)	(10,023)	(10,654)	(11,291)	(11,934)	(12,583)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	105	98	123	96	85	71	86	66	49	67	55	29	16	(16)	(19)	(41)	(59)	(117)	(132)	(146)	(160)	(175)	(189)	(204)	(218)	(233)	(248)	(262)	(277)	(292)	-	-	-	
	Annual Interest Cost on Opening Balance	-	245	488	729	1,036	1,300	1,554	1,790	2,071	2,323	2,550	2,827	3,093	3,317	3,521	3,666	3,811	3,917	3,986	3,932	3,843	3,718	3,555	3,352	3,107	2,817	2,480	2,094	1,656	1,163	612	(0)	(0)	(0)	
	Total Annual Interest Cost	111	350	586	851	1,132	1,385	1,625	1,876	2,138	2,372	2,617	2,882	3,123	3,333	3,505	3,646	3,770	3,857	3,869	3,800	3,697	3,558	3,380	3,163	2,903	2,599	2,247	1,847	1,394	886	320	(0)	(0)	(0)	

Feb8 1c, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*60*	*299*	*536*	*787*	*1,076*	*1,332*	*1,576*	*1,817*	*2,085*	*2,325*	*2,558*	*2,827*	*3,076*	*3,290*	*3,475*	*3,616*	*3,748*	*3,842*	*3,880*	*3,819*	*3,724*	*3,592*	*3,423*	*3,214*	*2,964*	*2,669*	*2,328*	*1,939*	*1,498*	*1,002*	*449*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,708	4,648	5,942	5,095	4,923	4,553	5,447	4,876	4,375	5,364	5,147	4,315	3,962	2,792	2,802	2,045	1,341	-1,042	-1,713	-2,417	-3,155	-3,930	-4,745	-5,603	-6,508	-7,461	-8,468	-9,531	-10,655	-11,842	0	0	0	
	Bi-Annual Drawdown	2,337	2,205	2,056	2,578	2,009	1,796	1,489	1,815	1,395	1,025	1,403	1,160	620	336	(341)	(407)	(852)	(1,251)	(2,461)	(2,766)	(3,070)	(3,373)	(3,676)	(3,980)	(4,283)	(4,588)	(4,895)	(5,203)	(5,514)	(5,828)	(6,146)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,466	4,165	5,221	4,070	3,638	3,015	3,677	2,826	2,077	2,842	2,350	1,255	681	(691)	(825)	(1,725)	(2,533)	(4,985)	(5,603)	(6,219)	(6,833)	(7,447)	(8,061)	(8,676)	(9,294)	(9,915)	(10,540)	(11,170)	(11,806)	(12,448)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	56	53	66	51	46	38	46	36	26	36	30	16	9	(9)	(10)	(22)	(32)	(63)	(71)	(79)	(86)	(94)	(102)	(110)	(117)	(125)	(133)	(141)	(149)	(157)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	483	721	1,025	1,286	1,537	1,770	2,049	2,299	2,522	2,797	3,060	3,281	3,484	3,626	3,770	3,874	3,943	3,890	3,802	3,678	3,517	3,316	3,073	2,787	2,454	2,072	1,639	1,151	606	(0)	(0)	(0)	
	Total Annual Interest Cost	60	299	536	787	1,076	1,332	1,576	1,817	2,085	2,325	2,558	2,827	3,076	3,290	3,475	3,616	3,748	3,842	3,880	3,819	3,724	3,592	3,423	3,214	2,964	2,669	2,328	1,939	1,498	1,002	449	(0)	(0)	(0)	

Feb8 1c, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*120*	*358*	*594*	*862*	*1,141*	*1,394*	*1,633*	*1,886*	*2,146*	*2,380*	*2,626*	*2,892*	*3,130*	*3,340*	*3,510*	*3,651*	*3,774*	*3,859*	*3,867*	*3,797*	*3,693*	*3,552*	*3,373*	*3,154*	*2,893*	*2,587*	*2,234*	*1,832*	*1,377*	*867*	*299*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,768	4,707	6,017	5,160	4,985	4,610	5,516	4,937	4,431	5,432	5,212	4,370	4,012	2,828	2,837	2,071	1,358	-1,055	-1,735	-2,447	-3,195	-3,979	-4,805	-5,674	-6,590	-7,556	-8,575	-9,652	-10,789	-11,992	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1d_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
			52	54	56	73	67	61	51	71	56	42	64	57	36	27	-2	-3	-23	-37	-39	-41	-43	-46	-48	-50	-53	-56	-59	-62	-65	-68	-71	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,072	1,649	29,589
Equal Monthly Debt Drawdown	3,145	1,647	

	Feb8 1d, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,233	2030	21,239
Equal Monthly Debt Drawdown	32,999		

Feb8 1d, 30-yr — End of Year Debt Drawdown

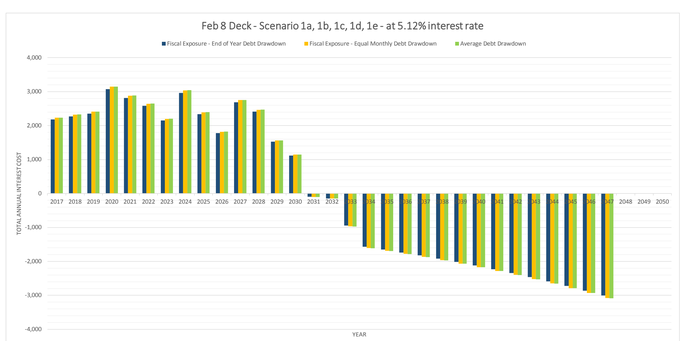
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
a Debt, Beginning of Year	0	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	
c = a*5% *Interest Cost - Feb8 1d, 30-yr - End of Year Debt Drawdown*	*0*	*112*	*228*	*348*	*505*	*649*	*781*	*891*	*1,043*	*1,162*	*1,253*	*1,391*	*1,514*	*1,592*	*1,649*	*1,644*	*1,637*	*1,588*	*1,508*	*1,423*	*1,335*	*1,241*	*1,143*	*1,040*	*931*	*817*	*698*	*572*	*439*	*300*	*154*	*0*	*0*	*0*	29,589
b Additional GA Debt Drawdown, End of Year	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
d = a+b+c Accumulated debt in present year (including 5.12% annual interest)	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	11,372	11,227	10,281	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,586	5,865	3,006	0	0	0	0	
Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	20,763	20,763	20,763	20,763	19,112	17,375	15,550	13,632	11,616	9,496	7,268	4,926	2,464	0	0	0	0	0	0	0	
Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	13,118	14,763	16,399	17,988	19,495	20,919	22,253	23,495	24,638	25,678	26,609	27,426	28,124	28,696	29,135	29,435	29,589				
Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	19,017	17,228	14,645	11,486	8,326	5,167	2,007	-1,153	-4,312	-7,472	-10,631	-13,791	-16,951	-20,110	-23,270	-26,429	-29,589				
Fiscal Exposure - End of Year Debt Drawdown	2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	

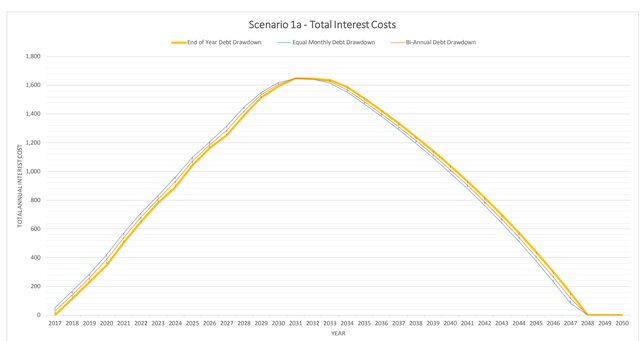
Feb8 1d, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Debt, Beginning of Year	0	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	
1,647 *Interest Cost - Feb8 1d, 30-yr*	*52*	*166*	*284*	*421*	*572*	*711*	*832*	*962*	*1,098*	*1,205*	*1,317*	*1,448*	*1,550*	*1,619*	*1,647*	*1,641*	*1,614*	*1,551*	*1,469*	*1,382*	*1,291*	*1,196*	*1,095*	*989*	*878*	*762*	*639*	*510*	*375*	*232*	*82*	*0*	*0*	*0*	29,589
Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
Monthly Drawdown	182	180	177	227	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	-	-	-	
FV of Monthly Drawdown at 5%	2,232	2,210	2,176	2,788	2,366	1,977	1,399	2,123	1,322	628	1,468	1,042	12	(487)	(1,788)	(1,831)	(2,644)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	-	-	-	
Annual Interest Cost on New Drawdowns	52	51	51	65	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	-	-	-	
Annual Interest Cost on Opening Balance	-	114	233	356	517	665	800	912	1,068	1,190	1,283	1,424	1,550	1,630	1,688	1,683	1,676	1,626	1,544	1,457	1,366	1,271	1,170	1,065	954	837	714	585	450	307	157	0	0	0	
Total Annual Interest Cost	52	166	284	421	572	711	832	962	1,098	1,205	1,317	1,448	1,550	1,619	1,647	1,641	1,614	1,551	1,469	1,382	1,291	1,196	1,095	989	878	762	639	510	375	232	82	0	0	0	

Feb8 1d, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Debt, Beginning of Year	0	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	
1,647 *Interest Cost - Feb8 1d, 30-yr*	*56*	*170*	*288*	*427*	*577*	*715*	*836*	*967*	*1,103*	*1,208*	*1,322*	*1,452*	*1,553*	*1,621*	*1,647*	*1,640*	*1,613*	*1,548*	*1,466*	*1,379*	*1,288*	*1,192*	*1,091*	*986*	*874*	*758*	*635*	*505*	*370*	*227*	*77*	*0*	*0*	*0*	29,589
Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	2,236	2,328	2,413	3,150	2,889	2,646	2,203	3,041	2,394	1,821	2,756	2,471	1,565	1,145	-100	-148	-970	-1,612	-1,694	-1,781	-1,872	-1,967	-2,068	-2,174	-2,285	-2,402	-2,525	-2,654	-2,790	-2,933	-3,083	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1e_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	
			36	37	38	53	46	39	27	45	28	13	33	24	1	-11	-16	-16	-17	-18	-19	-20	-21	-22	-23	-25	-26	-27	-29	-30	-32	-33	-35	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,243	904	16,239
Equal Monthly Debt Drawdown	2,297	903	

		Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	17,670	2029	12,350
Equal Monthly Debt Drawdown	18,091		

Feb8 1e, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	
c = a*5%	*Interest Cost - Feb8 1e, 30-yr - End of Year Debt Drawdown*		*0*	*77*	*156*	*236*	*351*	*450*	*534*	*592*	*688*	*749*	*778*	*849*	*901*	*904*	*881*	*847*	*812*	*775*	*735*	*694*	*651*	*605*	*558*	*507*	*454*	*399*	*340*	*279*	*214*	*146*	*75*	*0*	*0*	*0*	16,239
b	Additional GA Debt Drawdown, End of Year		1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)		1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
Feb8 1e, 30-yr - Accumulated Interest Costs			0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	6,605	5,911	5,182	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,188	2,861	1,466	0	0	0	0	
Feb8 1e, 30-yr - Accumulated Debt Principal			1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	9,960	9,960	9,960	9,960	9,155	8,308	7,418	6,482	5,498	4,465	3,378	2,235	1,035	0	0	0	0	0	0	0	
Feb8 1e, 30-yr - Accumulated Interest Costs			0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	8,146	8,993	9,805	10,580	11,315	12,010	12,661	13,266	13,824	14,331	14,785	15,184	15,524	15,803	16,017	16,164	16,239				
Feb8 1e, 30-yr - Accumulated Debt Principal			1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	8,419	6,878	5,337	3,796	2,255	714	-827	-2,369	-3,910	-5,451	-6,992	-8,533	-10,074	-11,615	-13,156	-14,697	-16,239				
Fiscal Exposure - End of Year Debt Drawdown			1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	

Feb8 1e, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	
Interest Cost - Feb8 1e, 30-yr			*36*	*113*	*193*	*290*	*397*	*489*	*561*	*637*	*717*	*762*	*811*	*873*	*903*	*893*	*866*	*831*	*795*	*756*	*716*	*674*	*630*	*583*	*534*	*483*	*428*	*372*	*312*	*249*	*183*	*113*	*40*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown			1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)			1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	0
Fiscal Exposure - Equal Monthly Debt Drawdown			1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	
Monthly Drawdown			125	122	119	167	132	99	50	108	42	(16)	51	15	(70)	(112)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	-	-	-	
FV of Monthly Drawdown at 5%			1,536	1,500	1,457	2,055	1,617	1,213	620	1,328	512	(199)	625	182	(865)	(1,382)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	-	-	-	
Annual Interest Cost on New Drawdowns			36	35	34	48	38	28	14	31	12	(5)	15	4	(20)	(32)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	-	-	-	
Annual Interest Cost on Opening Balance			-	79	159	242	359	461	546	606	705	767	796	869	923	926	902	868	831	793	753	711	666	620	571	519	465	408	348	285	219	150	77	0	0	0	
Total Annual Interest Cost			36	113	193	290	397	489	561	637	717	762	811	873	903	893	866	831	795	756	716	674	630	583	534	483	428	372	312	249	183	113	40	0	0	0	

Feb8 1e, 30-yr — Bi-Annual Debt Drawdown

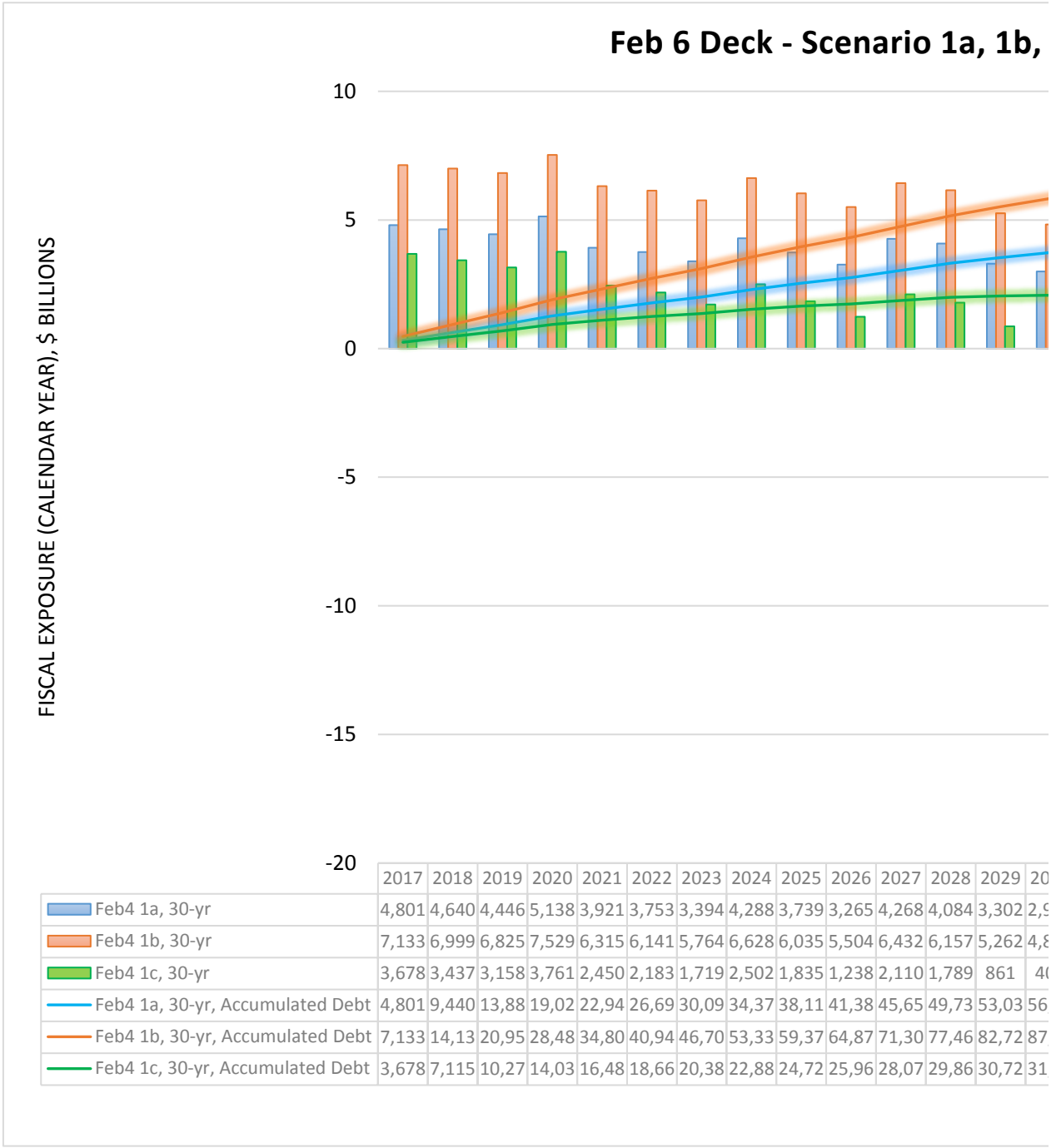
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	
Interest Cost - Feb8 1e, 30-yr			*19*	*96*	*176*	*265*	*376*	*471*	*548*	*616*	*704*	*756*	*795*	*862*	*902*	*898*	*873*	*839*	*803*	*765*	*725*	*683*	*640*	*593*	*545*	*494*	*440*	*384*	*325*	*263*	*197*	*129*	*56*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown			1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)			1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	0
Fiscal Exposure - Bi-Annual Debt Drawdown			1,519	1,561	1,598	2,272	1,956	1,655	1,154	1,913	1,203	562	1,406	1,040	57	-451	-668	-703	-738	-776	-816	-858	-902	-948	-996	-1,047	-1,101	-1,157	-1,216	-1,278	-1,344	-1,413	-1,485	0	0	0	
Bi-Annual Drawdown			750	733	711	1,003	790	592	303	649	250	(97)	305	89	(423)	(675)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	-	-	-	
FV of Bi-Annual Drawdown at 5%			1,519	1,484	1,441	2,033	1,600	1,200	613	1,314	506	(197)	618	180	(856)	(1,367)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	-	-	-	
Annual Interest Cost on New Drawdowns			19	19	18	26	20	15	8	17	6	(2)	8	2	(11)	(17)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	-	-	-	
Annual Interest Cost on Opening Balance			-	78	158	239	356	456	540	599	697	759	788	860	913	916	893	858	822	785	745	703	659	613	565	514	460	404	345	282	217	148	76	0	0	0	
Total Annual Interest Cost			19	96	176	265	376	471	548	616	704	756	795	862	902	898	873	839	803	765	725	683	640	593	545	494	440	384	325	263	197	129	56	0	0	0	

Feb8 1e, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	
Interest Cost - Feb8 1e, 30-yr			*38*	*116*	*196*	*294*	*401*	*492*	*563*	*640*	*719*	*763*	*813*	*875*	*903*	*893*	*864*	*830*	*793*	*755*	*715*	*673*	*628*	*581*	*532*	*481*	*427*	*369*	*310*	*247*	*180*	*111*	*38*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown			1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)			1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	0
Fiscal Exposure - Average Debt Drawdown			1,538	1,581	1,619	2,301	1,980	1,676	1,168	1,938	1,219	569	1,424	1,053	57	-457	-677	-711	-748	-786	-826	-869	-913	-960	-1,009	-1,060	-1,115	-1,172	-1,232	-1,295	-1,361	-1,430	-1,504	0	0	0	

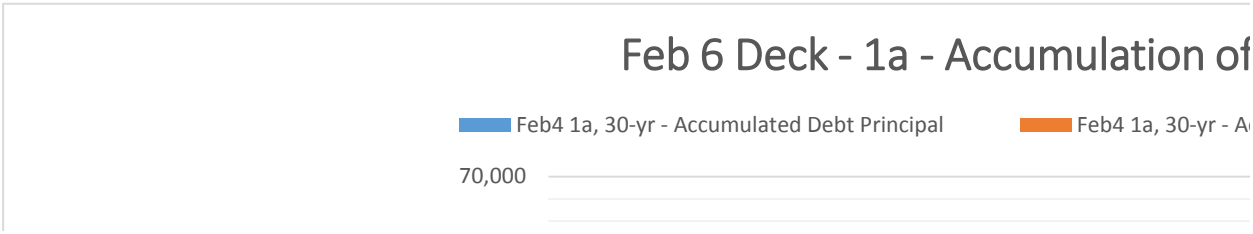
Feb 6 Deck

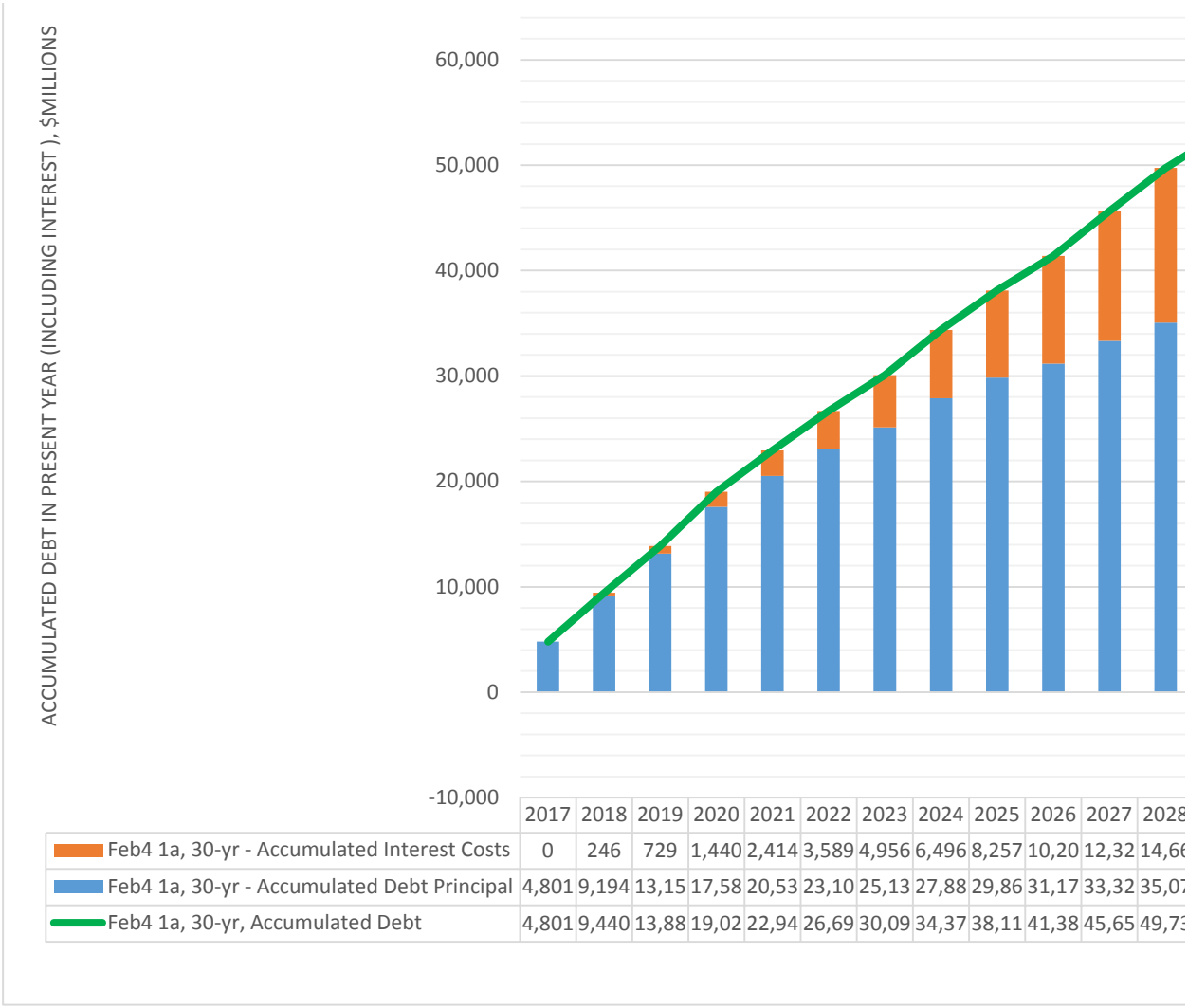
Feb 6 Deck - Scenario 1a, 1b, 1c - at 5.12% interest rate



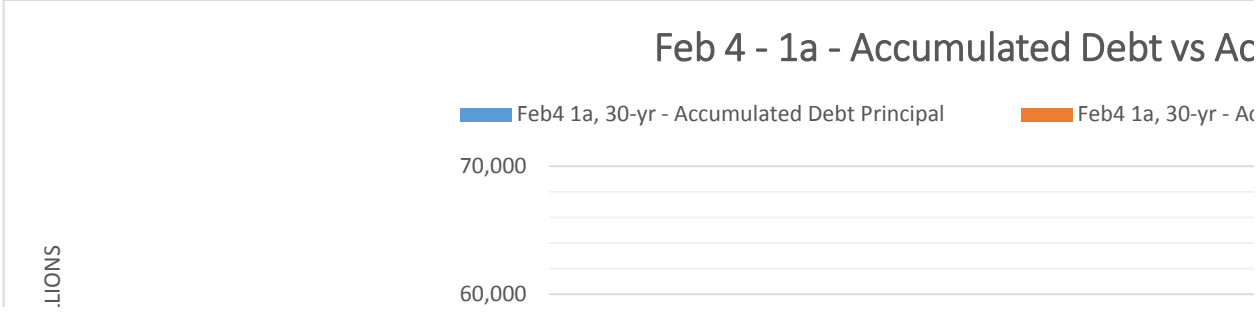
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	20
Feb4 1a, 30-yr	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,9
Feb4 1b, 30-yr	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,8
Feb4 1c, 30-yr	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	4(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73	53,03	56
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31

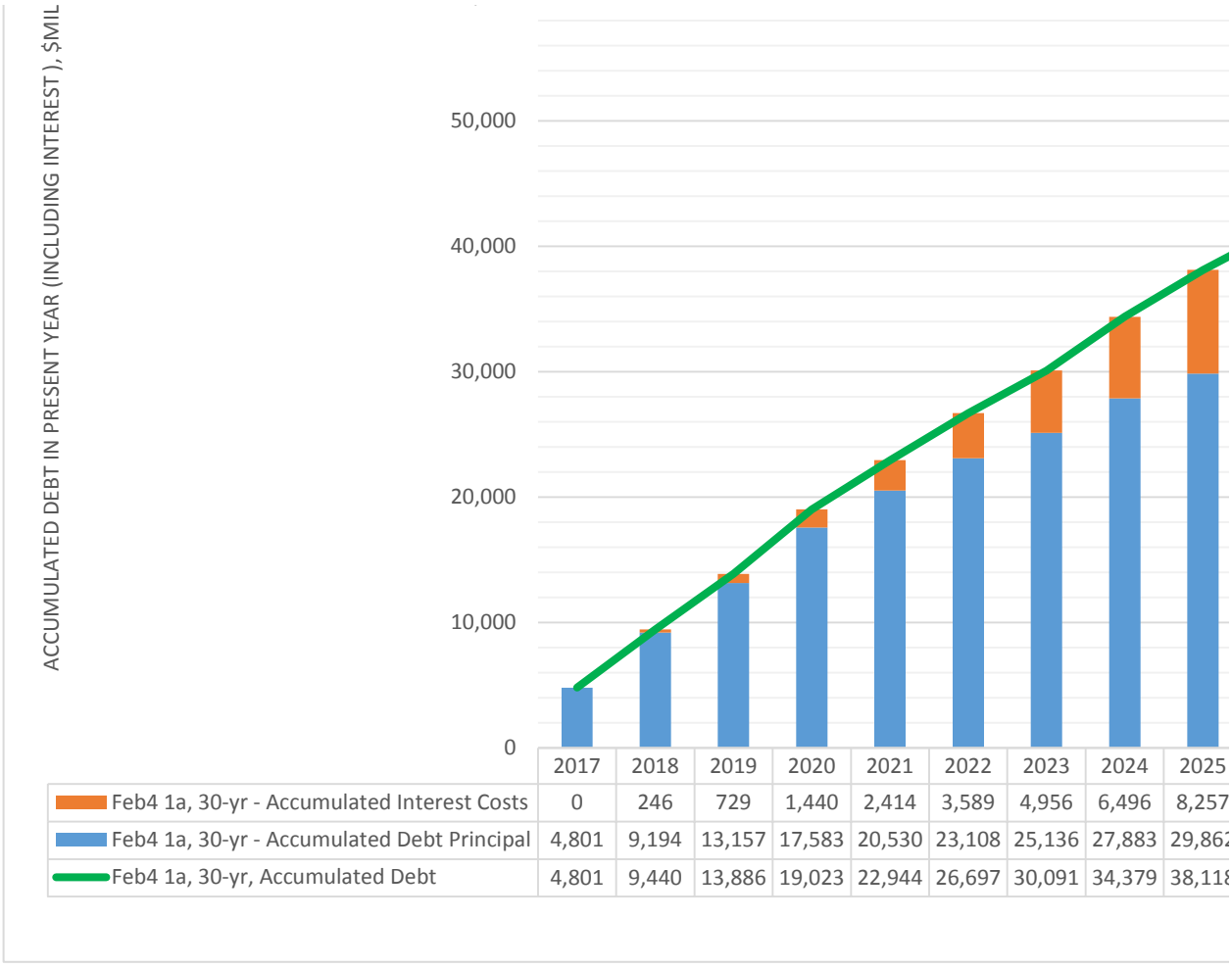
Feb 6 Deck - 1a - Accumulation of Debt (Principal and Interest)



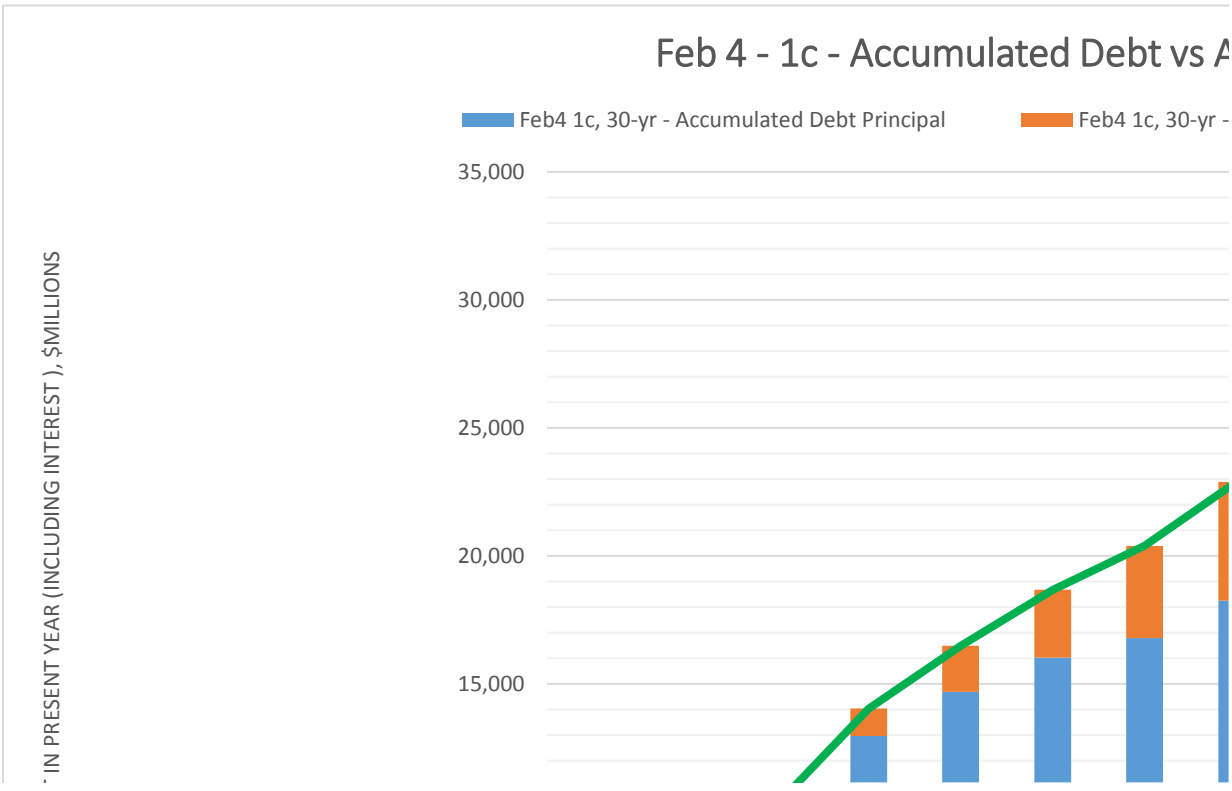


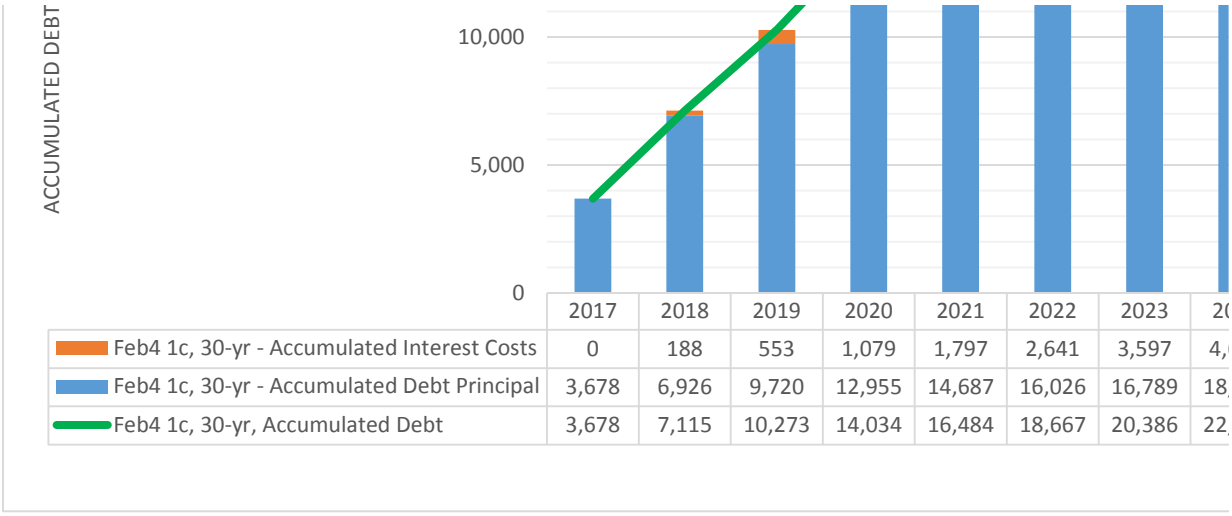
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,66
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,07
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73



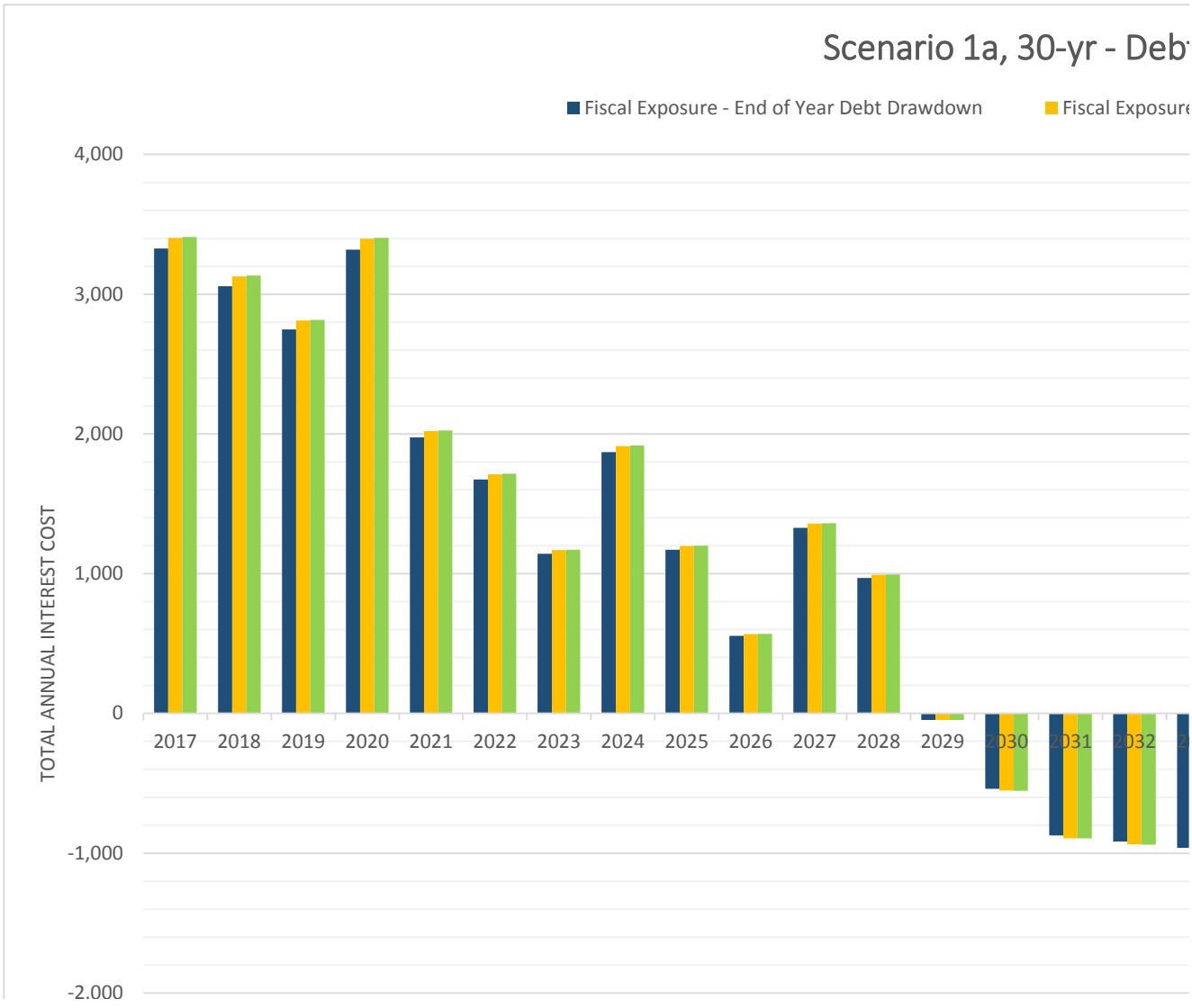


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



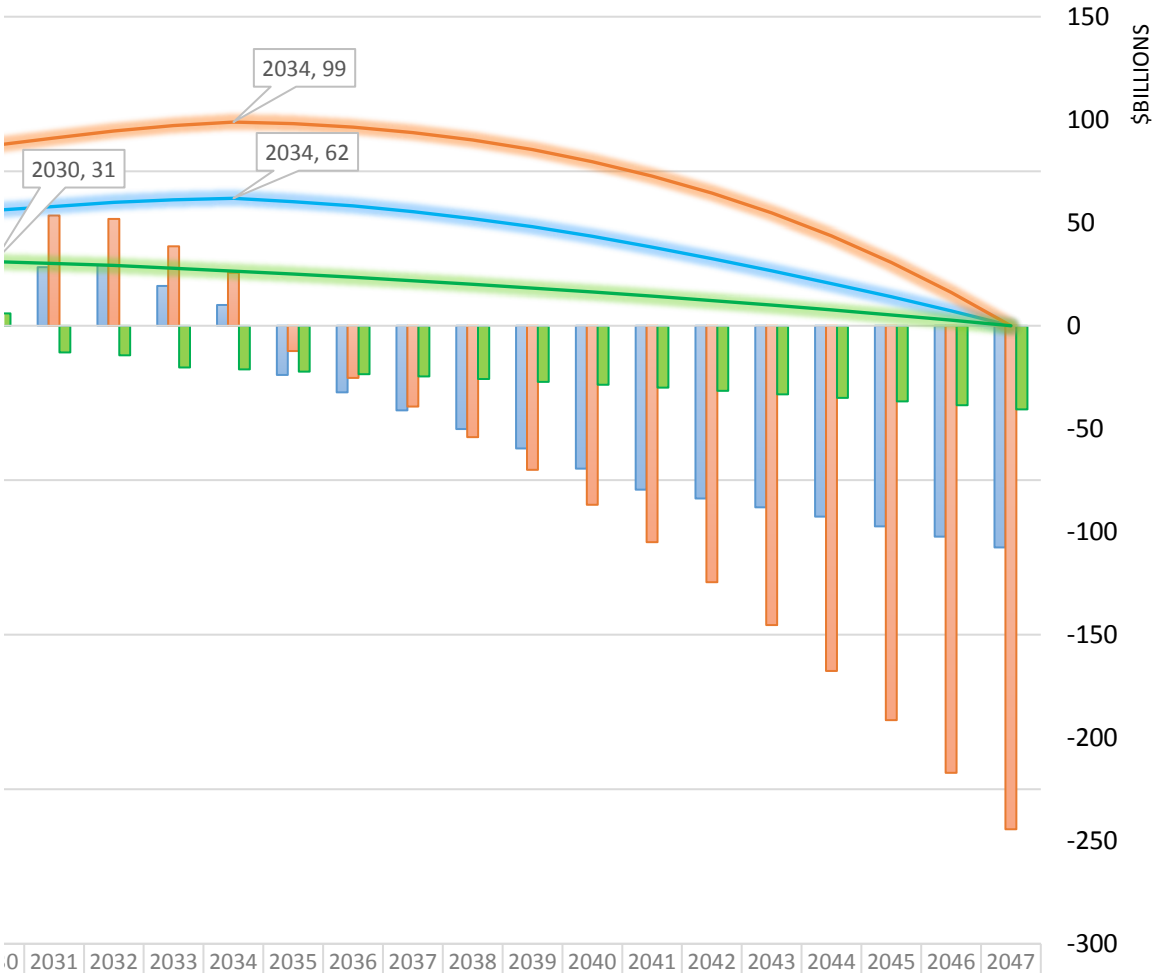


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22



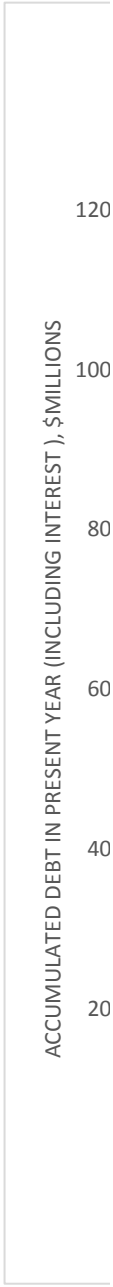

-3,000

lc - at 5.12% interest rate



0	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
98	1,896	1,966	1,288	672	-1,59	-2,15	-2,73	-3,34	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
26	3,568	3,457	2,571	1,716	-819	-1,68	-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
4	-860	-961	-1,34	-1,41	-1,48	-1,56	-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0
55	91,12	94,57	97,14	98,86	98,04	96,35	93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0
12	30,26	29,30	27,95	26,54	25,05	23,49	21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

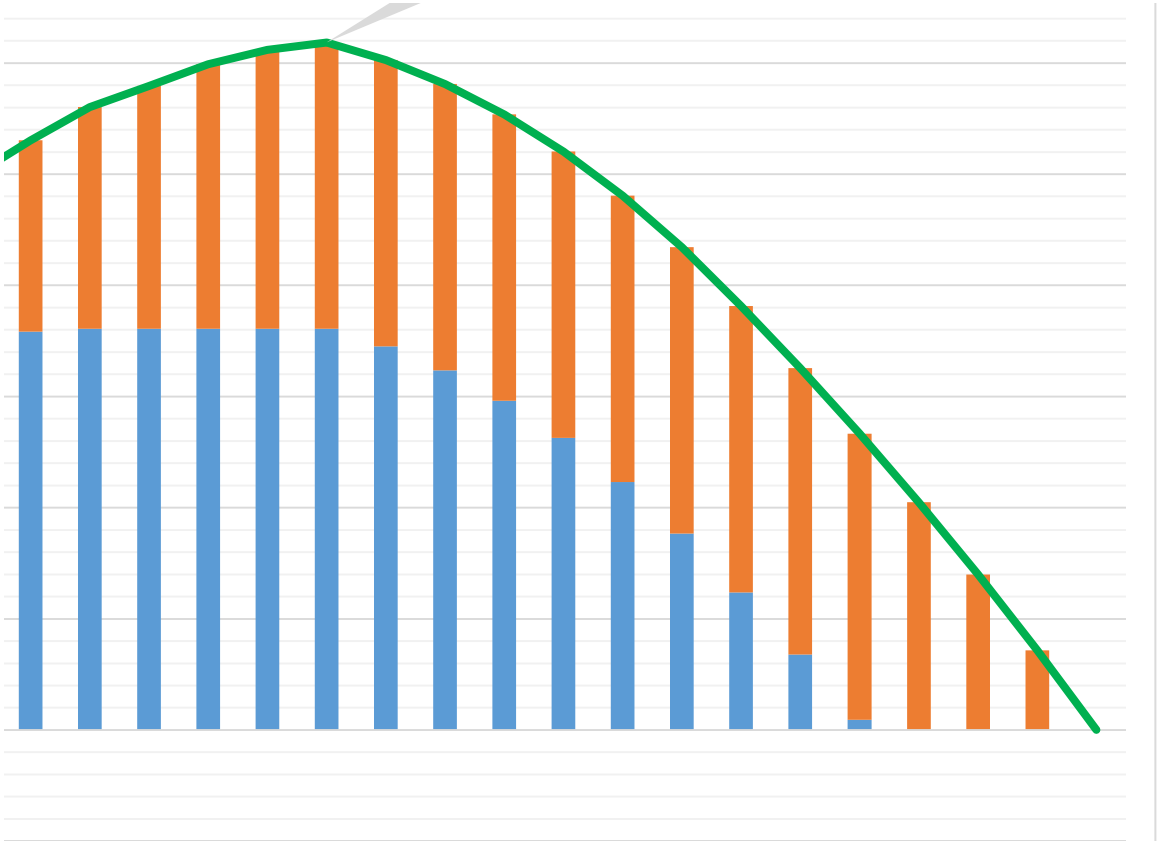
CALENDAR YEAR



Debt (Principal and Interest)

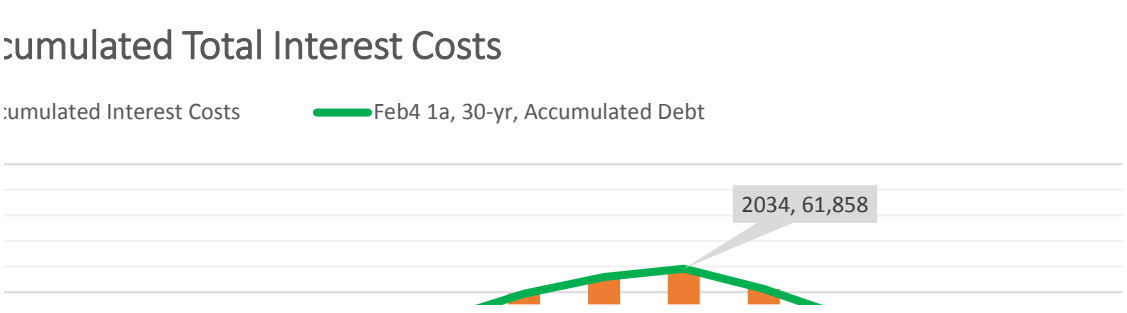
cumulated Interest Costs — Feb4 1a, 30-yr, Accumulated Debt

2034, 61,858

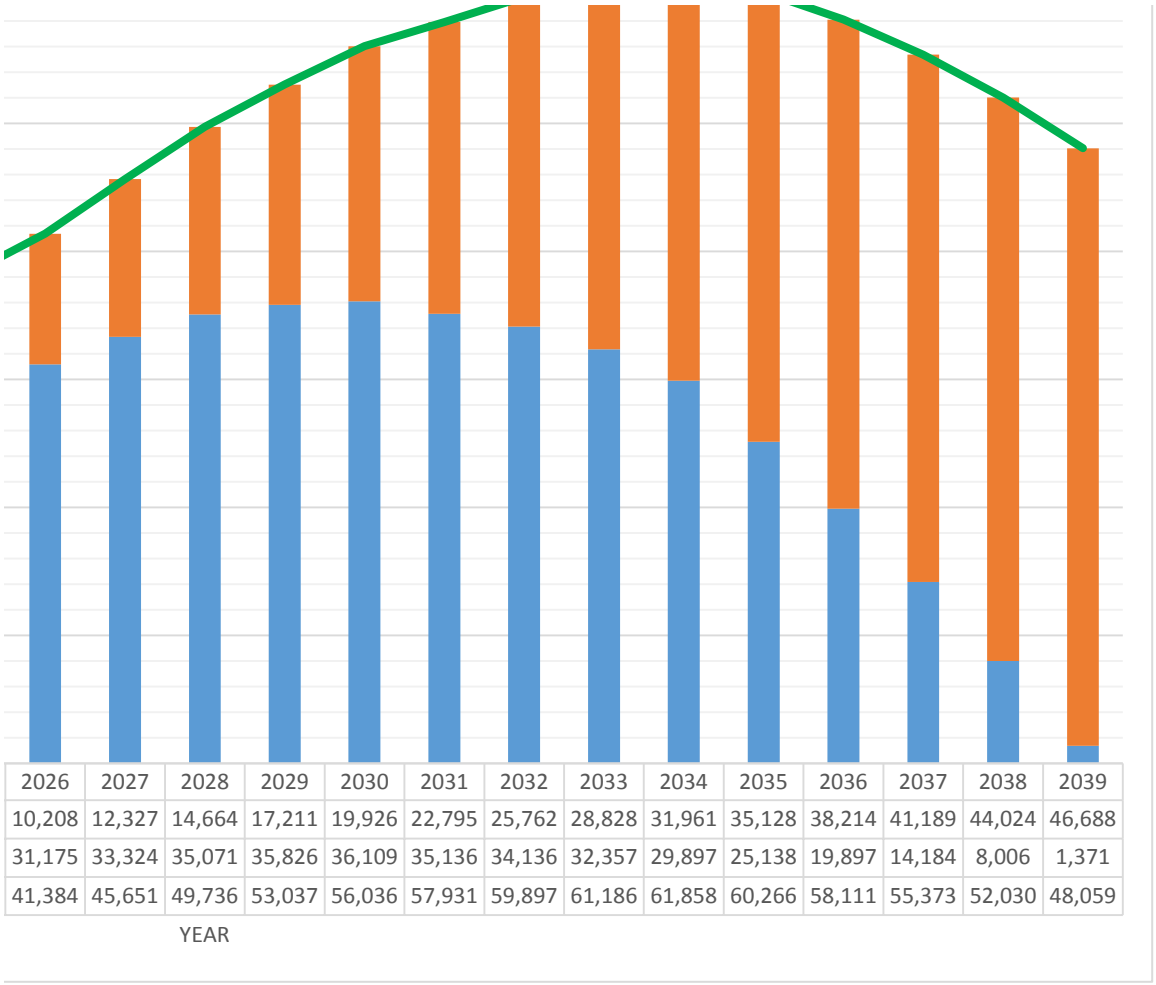


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



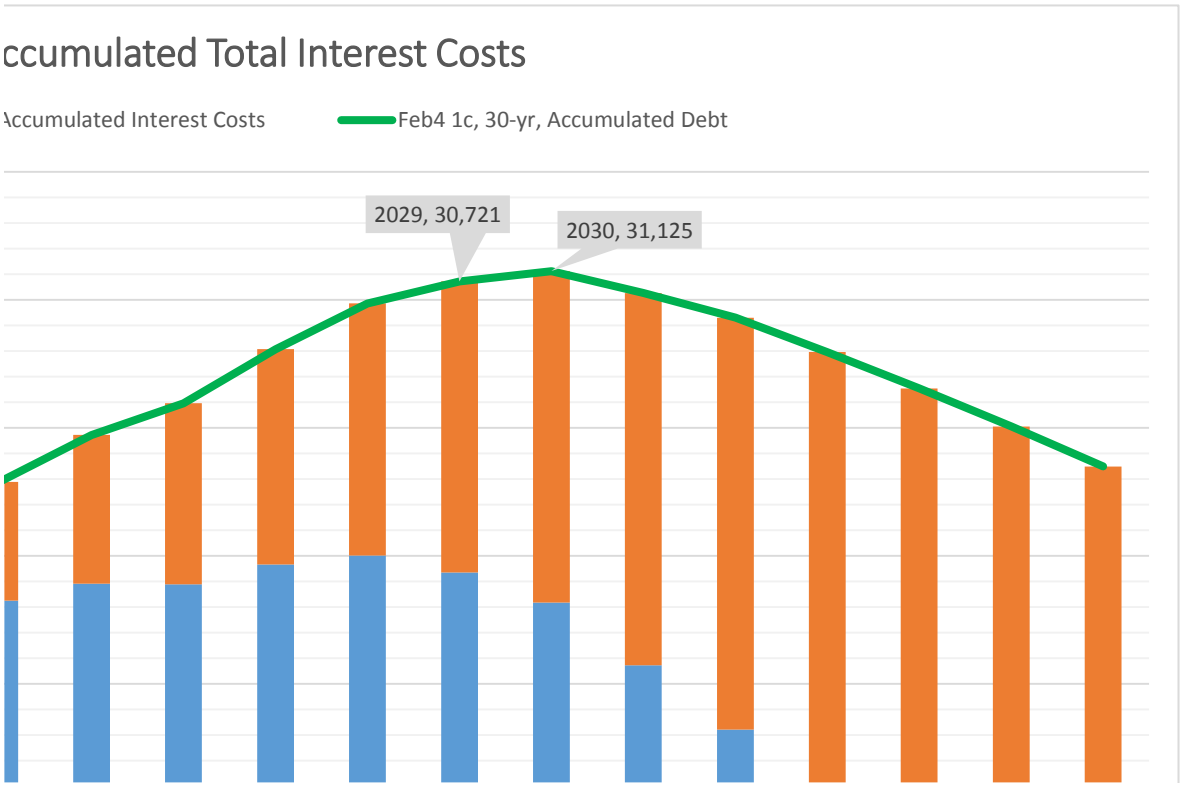
LIONS

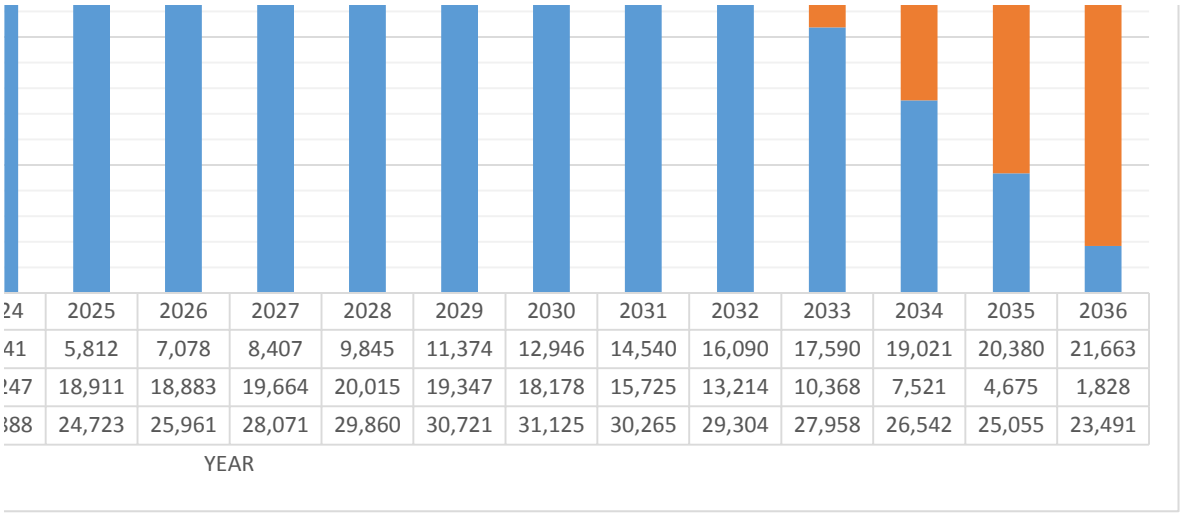


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

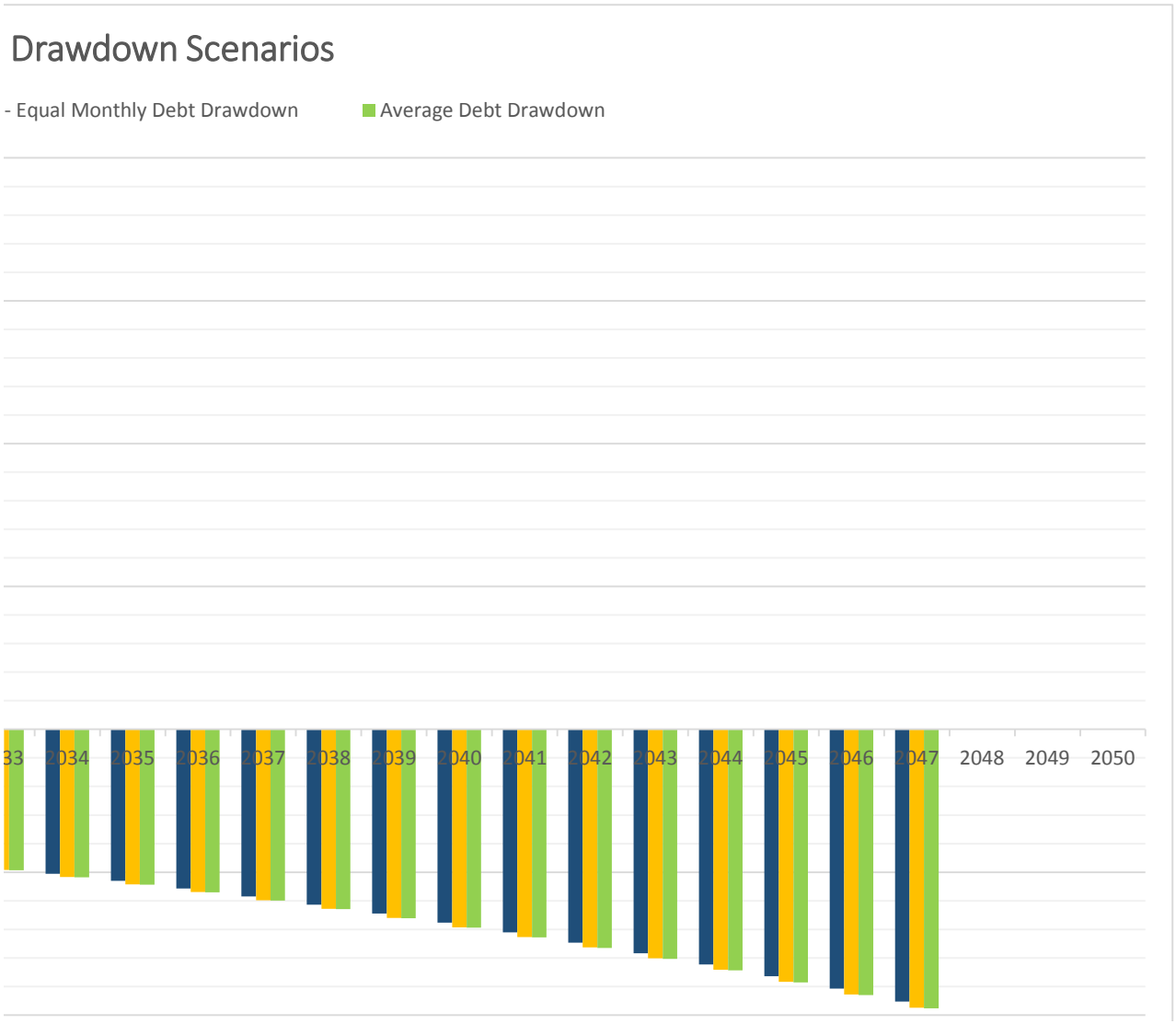
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





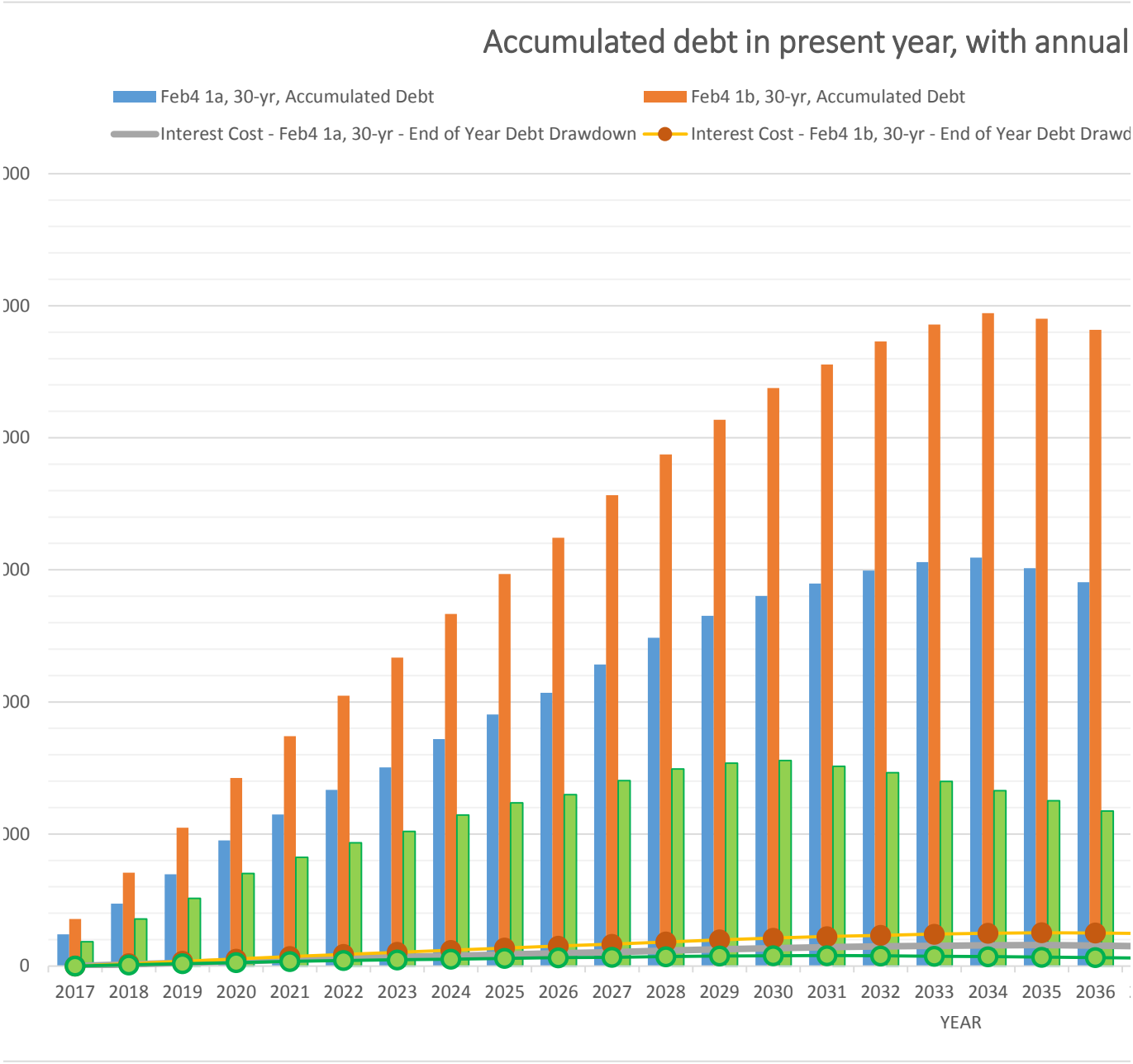
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

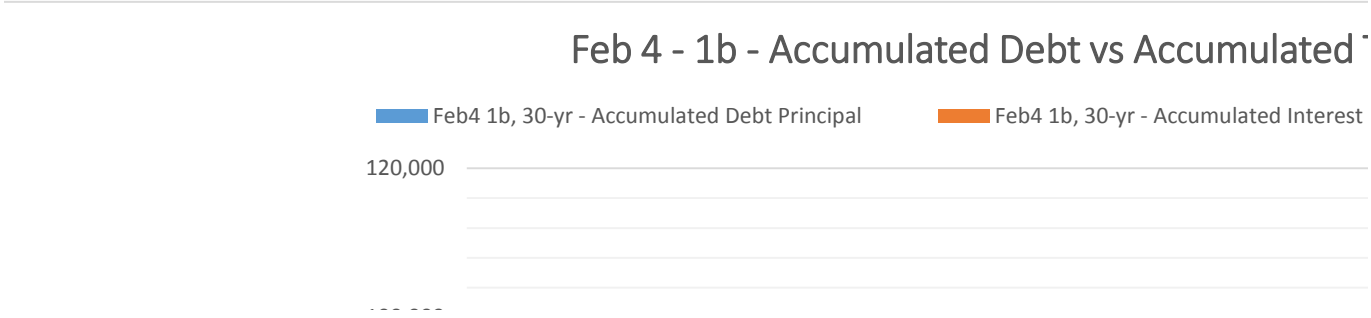
YEAR

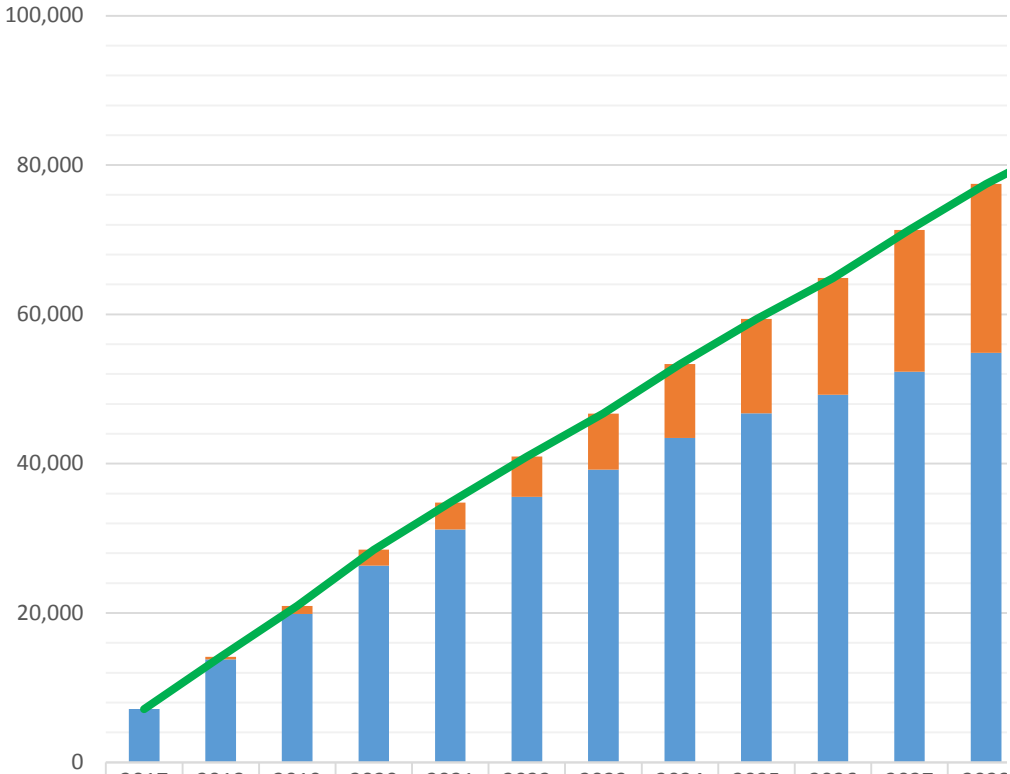


YEAR

ɜ - 25 year and 30 year Financing Terms, at 5% interest rate

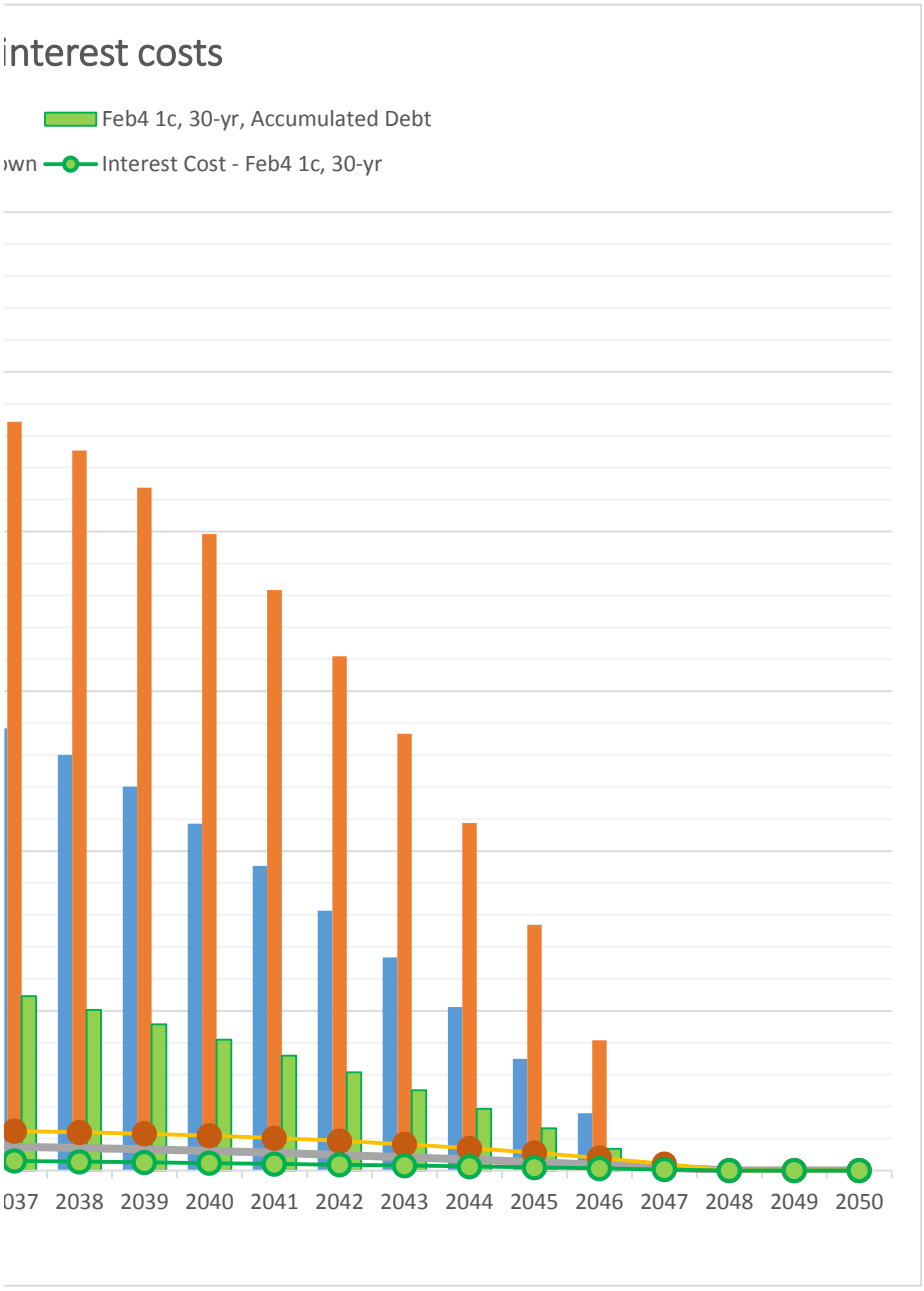


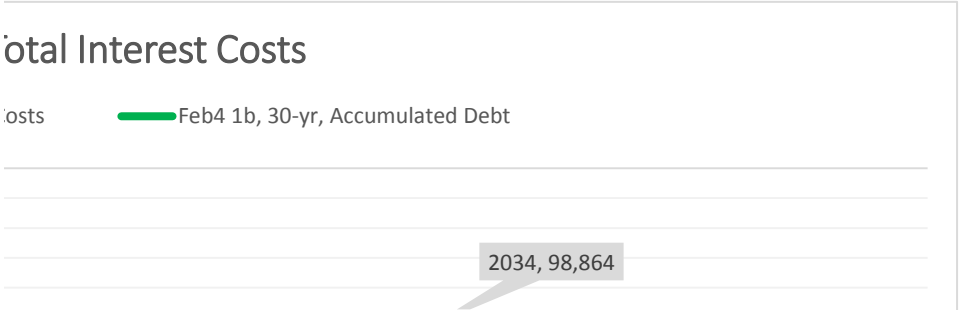

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

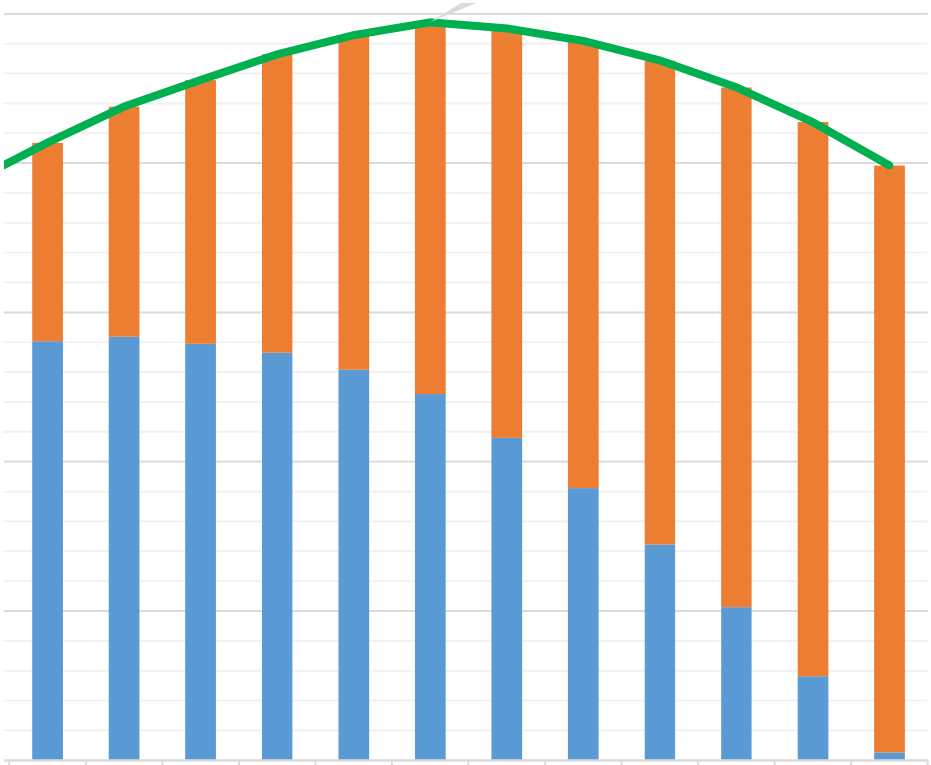


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y


interest costs
Feb4 1c, 30-yr, Accumulated Debt
wn
Interest Cost - Feb4 1c, 30-yr
037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR

Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

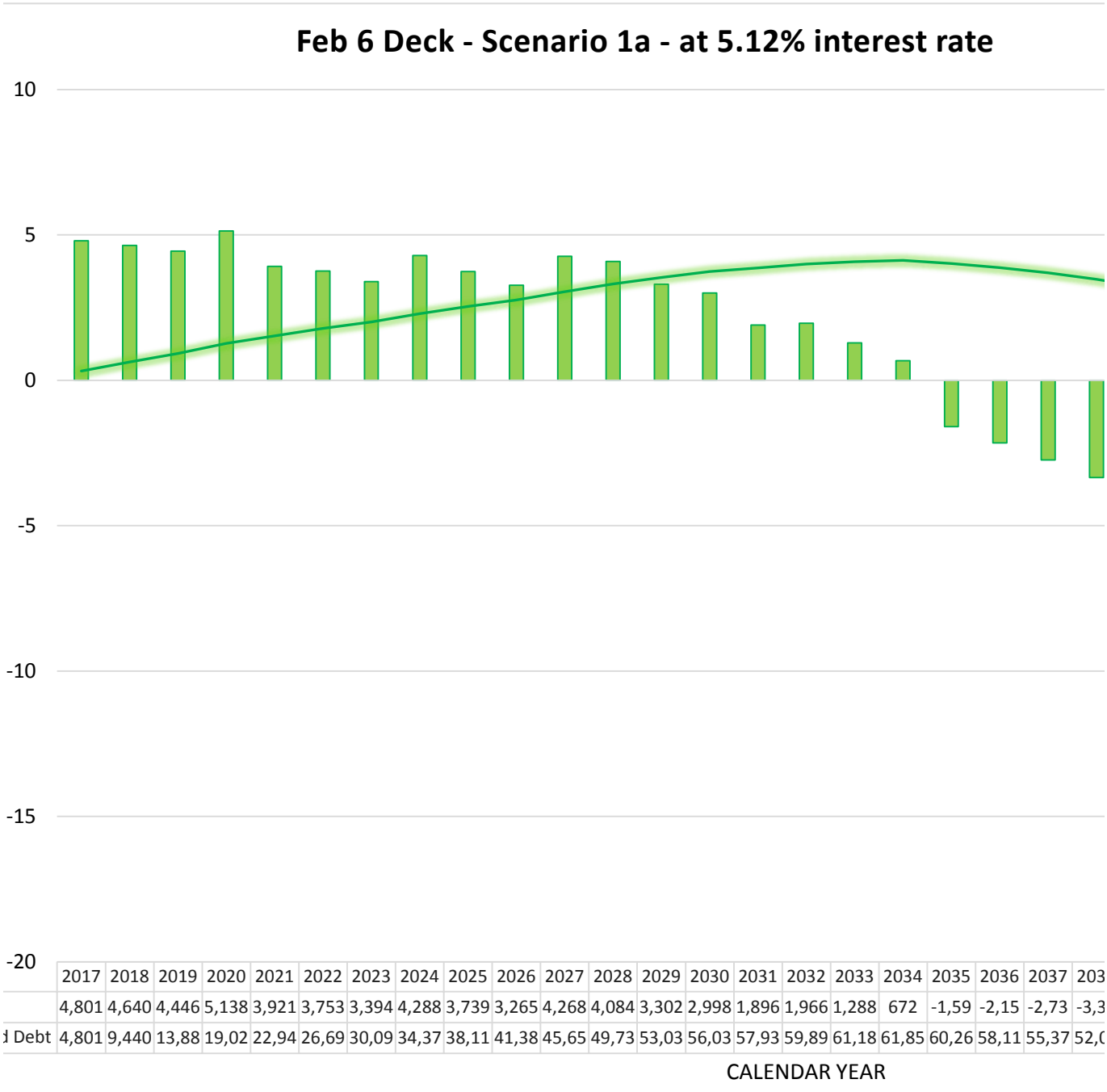
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

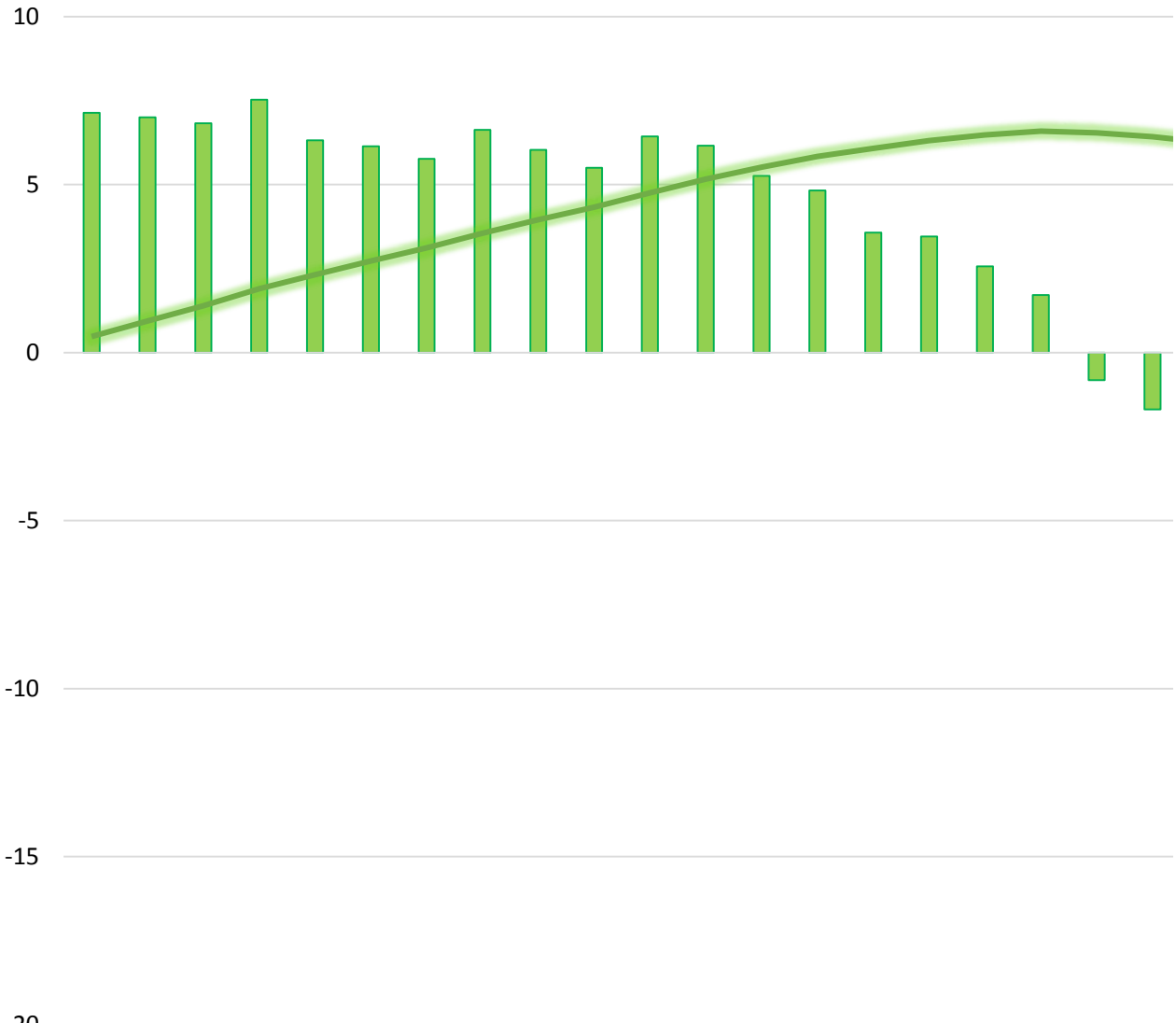
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

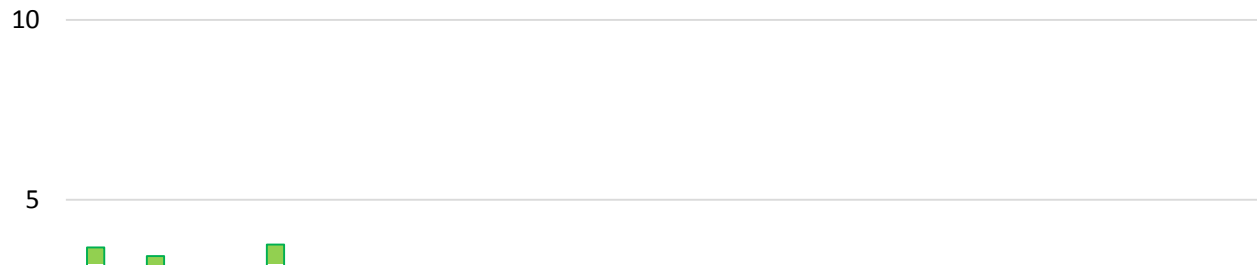
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

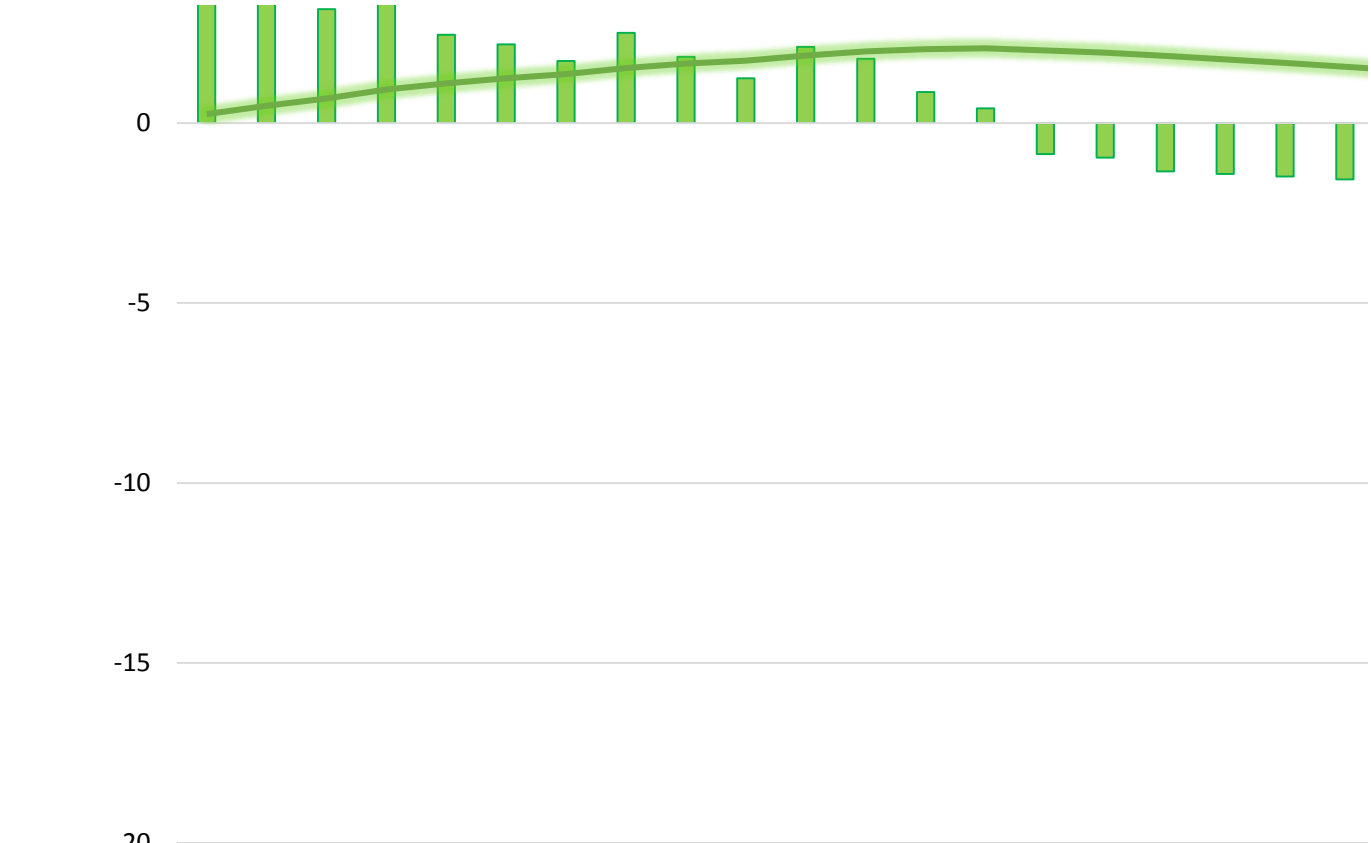


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



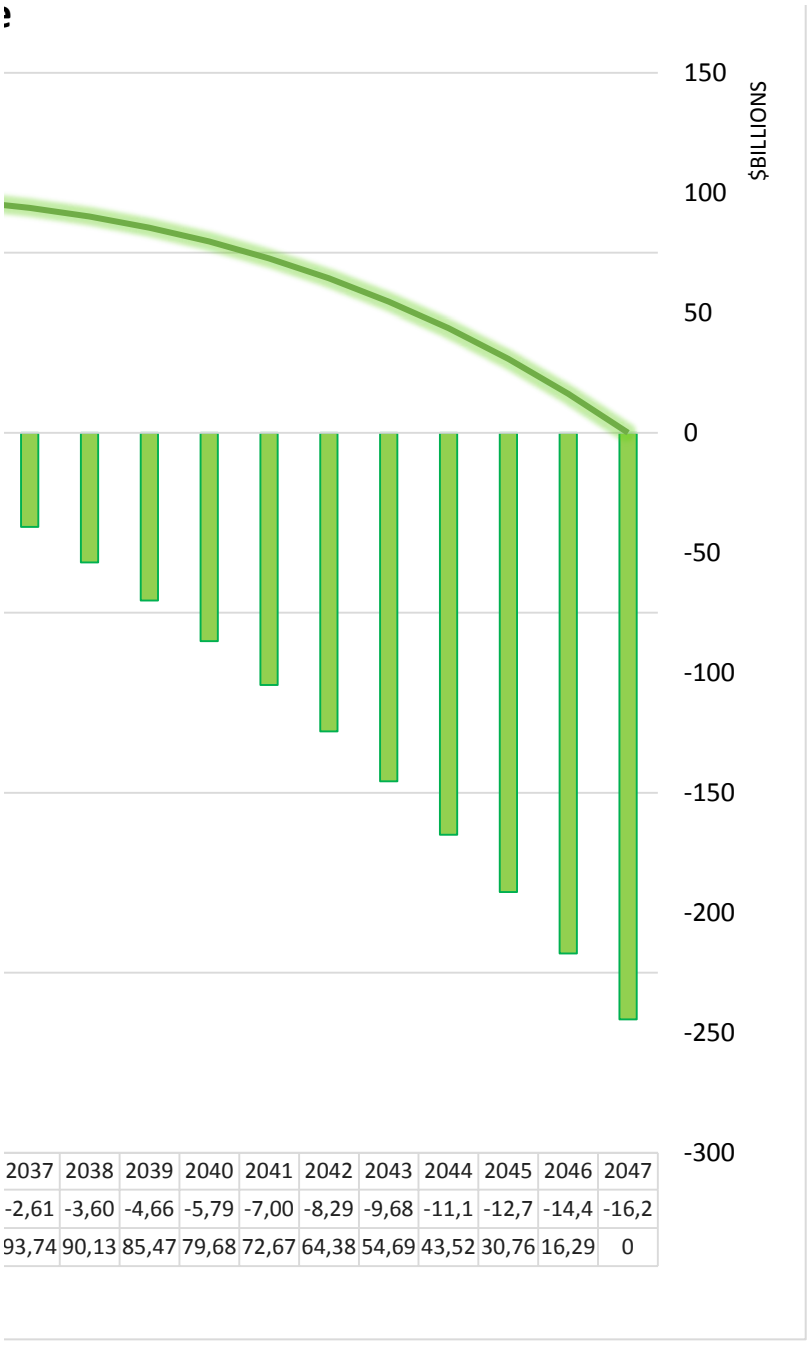


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

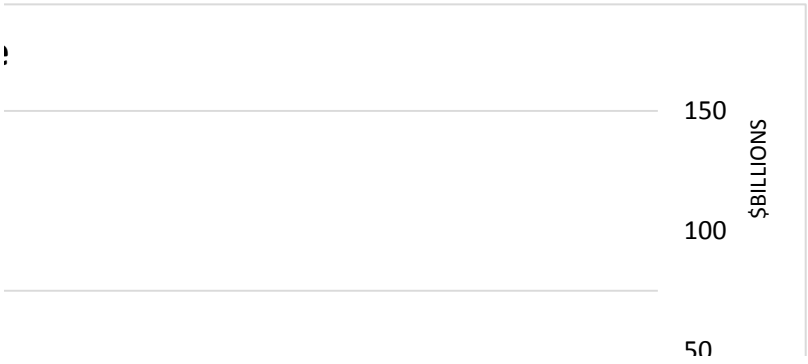
CALENDAR YEAR

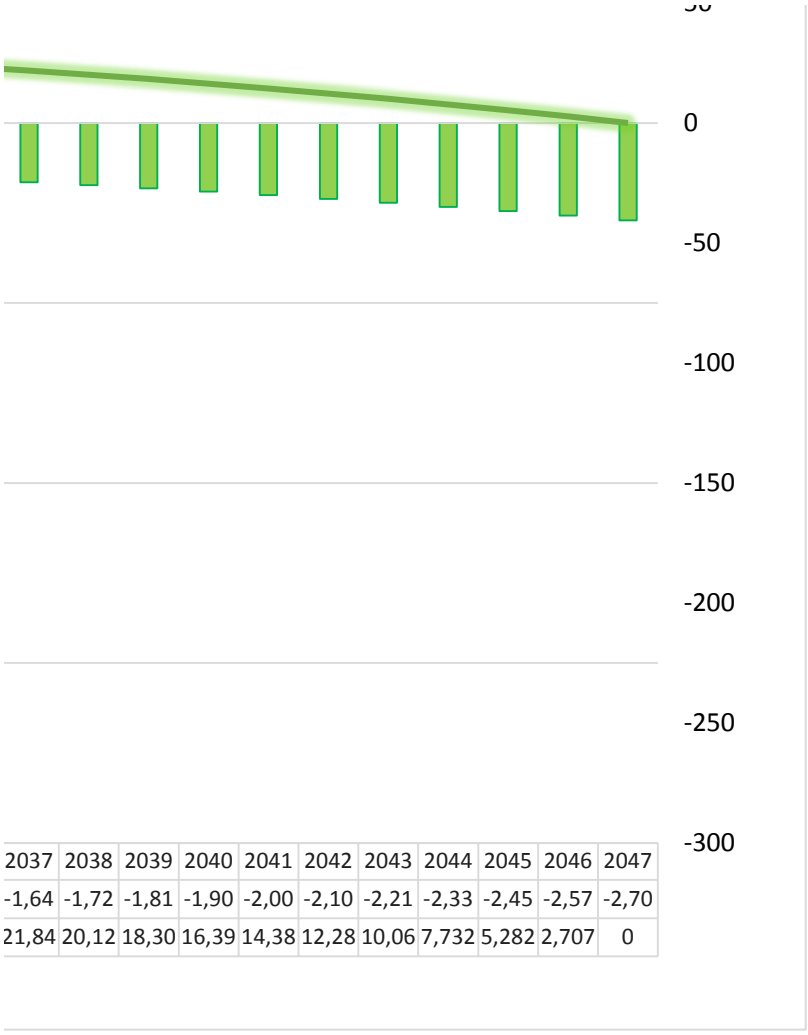


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Equal Monthly Debt Drawdown

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb4_1a_30yr

1a. GA Smoothing (Borrow ~$5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,801	4,640

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,200	4,760

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $62 billion, peakin
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary on accounting treatment.

7,133 7,133

Feb4_1b_30yr 7,133

1b. GA Smoothing (Borrow ~$7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	7,133	6,999

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,783	7,100

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $99 billion, peaking
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b on accounting treatment.

Feb4_1c_30yr

1c. GA Smoothing (Borrow ~$4 billion in 2017)

$ millions

Scenario 1C - 30-yr amortization	2017	2018
Annual Exposure[2]	3,678	3,437

	Fiscalized[3]	2016-17	2017-18
	Start: January 1st	919	3,617

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	1,783 - 1,200	7,100 - 4,760

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1200	4760
Debt-Finance Global Adjustment Costs, Option 1a	1783	7100
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18

Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1200**	**5000**
Total, B	1783	7340
Proposed Program Total:	1,783 - 1,200	7,340 - 5,000

ining

1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
4,446	5,138	3,921	3,753

2018-19	2019-20	2020-21	2021-2022
4,591	4,619	4,833	3,879

ng in 203 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
by approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
6,825	7,529	6,315	6,141

2018-19	2019-20	2020-21	2021-2022
6,956	7,001	7,226	6,272

g in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
3,158	3,761	2,450	2,183

2018-19	2019-20	2020-21	2021-2022
3,367	3,309	3,433	2,383

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
6,956 - 4,591	7,001 - 4,619	7,226 - 4,833	6,272 - 3,879

/1

2018-19[1]	2019-20[1]	2020-21[1]
4591	4619	4833
6956	7001	7226
225	279	323
60	60	60
18	18	18

4894	**4976**	**5234**
7259	7358	7627

7,259 - 4,894 7,358 - 4,976 7,627 - 5,234

1a. GA Smoothing (Borrow $5 billion in 2017)

	2017
IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	7,095
Additional GA Debt Drawdown, End of Year	5,000

Ratepayer GA Payment

Total Accumulated Debt *($ billion)*	5,000
Total Change in Accumulated Debt *($ billion)*	5000

1b. GA Smoothing (Borrow $7 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	5,095
Additional GA Debt Drawdown, End of Year	7,000

Total Accumulated Debt *($ billion)*	7000
Total Change in Accumulated Debt *($ billion)*	7000

1c. GA Smoothing (Borrow $4 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	8,095
Additional GA Debt Drawdown, End of Year	4,000

Total Accumulated Debt *($ billion)*	4000
Total Change in Accumulated Debt *($ billion)*	4000

2018	2019	2020	2021	2022	2023	2024	2025
11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
6,835	7,552	7,168	6,844	6,634	7,243	7,128	6,527
5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000

9,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000
5000	4000	5000	4000	4000	3000	4000	4000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
4,835	4,552	4,168	4,844	4,634	4,243	4,128	4,527
7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000

14000	21000	28000	35000	41000	47000	53000	59000
7000	7000	8000	6000	6000	6000	7000	6000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
8,835	8,552	8,168	8,844	8,634	8,243	8,128	8,527
3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000

7000	10000	14000	16000	19000	20000	23000	25000
3000	3000	4000	2000	2000	2000	3000	2000

2026	2027	2028	2029	2030	2031	2032	2033
10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
7,033	7,043	6,819	7,009	6,721	6,654	6,820	7,238
3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000

41,000	46,000	50,000	53,000	56,000	58,000	60,000	61,000
3000	4000	4000	3000	3000	2000	2000	1000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
4,033	5,043	4,819	5,009	4,721	4,654	5,820	5,238
6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000

65000	71000	77000	83000	88000	91000	95000	97000
6000	6000	6000	5000	5000	4000	3000	3000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
9,033	9,043	8,819	9,009	9,721	9,654	9,820	9,238
1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000

26000	28000	30000	31000	31000	30000	29000	28000
1000	2000	2000	1000	0	-1000	-1000	-1000

2034	2035	2036	2037	2038	2039	2040	2041
7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
6,756	7,662	7,389	8,129	7,881	8,645	9,421	9,207
1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000

62,000	60,000	58,000	55,000	52,000	48,000	43,000	38,000
1000	-2000	-2000	-3000	-3000	-4000	-5000	-5000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
5,756	6,662	7,389	8,129	8,881	9,645	10,421	11,207
2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000

99000	98000	96000	94000	90000	85000	80000	73000
2000	-1000	-2000	-3000	-4000	-5000	-6000	-7000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
8,756	6,662	7,389	7,129	6,881	6,645	6,421	6,207
-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000

27000	25000	23000	22000	20000	18000	16000	14000
-1000	-1000	-2000	-2000	-2000	-2000	-2000	-2000

2042	2043	2044	2045	2046	2047	2048		
4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
10,004	9,811	9,627	9,451	10,285	10,126	2,975		
-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0		

33,000	27,000	20,000	14,000	7,000	-	-	
-6000	-6000	-6000	-6000	-7000	-7000	0	

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
12,004	13,811	14,627	16,451	17,285	19,126	2,975		
-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0		

64000	55000	44000	31000	16000	0	0
-8000	-10000	-11000	-13000	-14000	-16000	0

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
6,004	5,811	5,627	5,451	6,285	6,126	2,975		
-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0		

12000	10000	8000	5000	3000	0	0
-2000	-2000	-2000	-2000	-3000	-3000	0

Feb4 1a, 30-yr - Debt Drawdown Scenarios

-92,247 -94598.515 58,489 36109.18 0

Feb4_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0
			114	110	106	122	93	89	81	102	89	78	102	97	79	71	45	47	31	16	-38	-51	-65	-80	-95	-110	-126	-133	-140	-147	-155	-162	-171	0	0	0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	5,138	3,167	58,489
Equal Monthly Debt Drawdown	5,260	3,149	

Maximum Accumulated Debt — Feb4 1a, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

End of Year Debt Drawdown	61,858	36,109
Equal Monthly Debt Drawdown	63,330	

			40%	37%	34%	36%	27%	24%																												
Feb4 1a, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
a	Debt, Beginning of Year		0	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	
c = a*5%	*Interest Cost - Feb4 1a, 30-yr - End of Year Debt Drawdown*		*0*	*246*	*483*	*711*	*974*	*1,175*	*1,367*	*1,541*	*1,760*	*1,952*	*2,119*	*2,337*	*2,546*	*2,716*	*2,869*	*2,966*	*3,067*	*3,133*	*3,167*	*3,086*	*2,975*	*2,835*	*2,664*	*2,461*	*2,224*	*1,952*	*1,666*	*1,365*	*1,049*	*717*	*367*	*0*	*0*	*0*	58,489
b	Additional GA Debt Drawdown, End of Year		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	21,822	23,788	25,076	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	20,490	13,998	7,173	0	0	0	
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	36,109	36,109	36,109	36,109	34,517	32,362	29,624	26,281	22,311	17,687	12,383	6,793	918	0	0	0	0	0	0	0	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688	49,149	51,372	53,325	54,991	56,356	57,405	58,122	58,489				
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371	-5,713	-13,241	-20,783	-28,325	-35,866	-43,408	-50,949	-58,489				
Fiscal Exposure - End of Year Debt Drawdown			4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0	

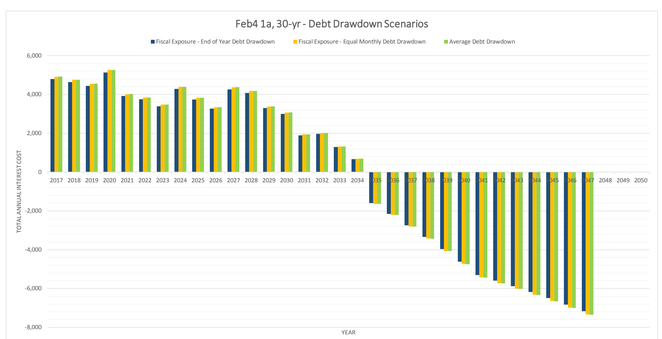
Feb4 1a, 30-yr	Equal Monthly Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			12																																		
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
3,149	*Interest Cost - Feb4 1a, 30-yr*		*114*	*356*	*589*	*833*	*1,067*	*1,264*	*1,448*	*1,643*	*1,849*	*2,029*	*2,220*	*2,435*	*2,625*	*2,787*	*2,914*	*3,013*	*3,097*	*3,149*	*3,129*	*3,034*	*2,910*	*2,756*	*2,569*	*2,351*	*2,098*	*1,819*	*1,526*	*1,218*	*895*	*554*	*197*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0	

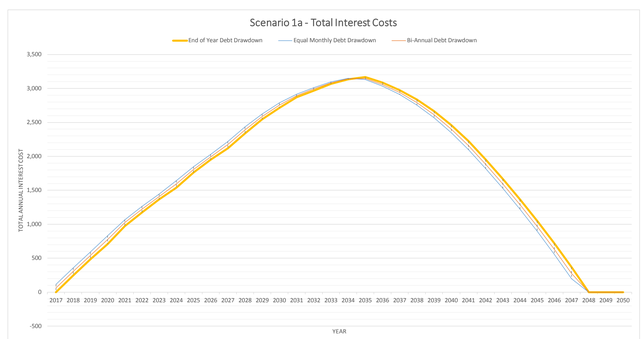
	Monthly Drawdown		400	366	330	369	246	215	169	229	165	109	179	146	63	24	(81)	(83)	(148)	(205)	(397)	(437)	(476)	(515)	(553)	(590)	(627)	(629)	(628)	(628)	(628)	(628)	(628)	-	-	-
	FV of Monthly Drawdown at 5%		4,915	4,498	4,057	4,532	3,017	2,640	2,075	2,813	2,026	1,345	2,200	1,789	773	289	(996)	(1,024)	(1,821)	(2,519)	(4,872)	(5,365)	(5,849)	(6,325)	(6,793)	(7,253)	(7,707)	(7,722)	(7,721)	(7,721)	(7,721)	(7,721)	(7,720)	-	-	-
	Annual Interest Cost on New Drawdowns		114	105	94	105	70	61	48	65	47	31	51	42	18	7	(23)	(24)	(42)	(59)	(113)	(125)	(136)	(147)	(158)	(169)	(179)	(180)	(180)	(180)	(180)	(180)	(179)	-	-	-
	Annual Interest Cost on Opening Balance		-	252	495	728	997	1,203	1,399	1,577	1,802	1,998	2,169	2,393	2,607	2,780	2,937	3,037	3,140	3,207	3,243	3,159	3,046	2,903	2,727	2,519	2,277	1,999	1,706	1,398	1,074	734	376	(0)	(0)	(0)
	Total Annual Interest Cost		114	356	589	833	1,067	1,264	1,448	1,643	1,849	2,029	2,220	2,435	2,625	2,787	2,914	3,013	3,097	3,149	3,129	3,034	2,910	2,756	2,569	2,351	2,098	1,819	1,526	1,218	895	554	197	(0)	(0)	(0)

Feb4 1a, 30-yr	Bi-Annual Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*61*	*305*	*540*	*777*	*1,024*	*1,223*	*1,410*	*1,596*	*1,808*	*1,993*	*2,173*	*2,390*	*2,589*	*2,754*	*2,893*	*2,991*	*3,083*	*3,141*	*3,147*	*3,058*	*2,940*	*2,792*	*2,613*	*2,401*	*2,156*	*1,881*	*1,591*	*1,286*	*966*	*629*	*275*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown			4,862	4,699	4,502	5,203	3,971	3,801	3,438	4,343	3,787	3,307	4,322	4,137	3,344	3,037	1,920	1,991	1,305	681	-1,612	-2,183	-2,773	-3,386	-4,021	-4,683	-5,372	-5,661	-5,951	-6,255	-6,575	-6,912	-7,265	0	0	0	

	Bi-Annual Drawdown		2,400	2,197	1,981	2,213	1,473	1,289	1,014	1,374	989	657	1,074	874	378	141	(487)	(500)	(889)	(1,230)	(2,379)	(2,620)	(2,857)	(3,089)	(3,317)	(3,542)	(3,764)	(3,771)	(3,771)	(3,771)	(3,771)	(3,771)	(3,770)	-	-	-
	FV of Bi-Annual Drawdown at 5%		4,862	4,450	4,013	4,483	2,984	2,612	2,053	2,783	2,004	1,331	2,176	1,769	765	286	(986)	(1,013)	(1,801)	(2,492)	(4,820)	(5,308)	(5,787)	(6,257)	(6,719)	(7,175)	(7,624)	(7,639)	(7,638)	(7,638)	(7,638)	(7,638)	(7,637)	-	-	-
	Annual Interest Cost on New Drawdowns		61	56	51	57	38	33	26	35	25	17	28	22	10	4	(12)	(13)	(23)	(31)	(61)	(67)	(73)	(79)	(85)	(91)	(96)	(97)	(97)	(97)	(97)	(97)	(97)	-	-	-
	Annual Interest Cost on Opening Balance		-	249	490	720	986	1,190	1,384	1,560	1,783	1,977	2,146	2,367	2,579	2,750	2,906	3,004	3,106	3,173	3,208	3,125	3,013	2,871	2,698	2,492	2,252	1,977	1,687	1,383	1,063	726	372	(0)	(0)	(0)
	Total Annual Interest Cost		61	305	540	777	1,024	1,223	1,410	1,596	1,808	1,993	2,173	2,390	2,589	2,754	2,893	2,991	3,083	3,141	3,147	3,058	2,940	2,792	2,613	2,401	2,156	1,881	1,591	1,286	966	629	275	(0)	(0)	(0)

Feb4 1a, 30-yr	Average Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*123*	*365*	*597*	*842*	*1,074*	*1,271*	*1,454*	*1,650*	*1,856*	*2,035*	*2,228*	*2,442*	*2,631*	*2,792*	*2,918*	*3,016*	*3,100*	*3,150*	*3,126*	*3,030*	*2,905*	*2,749*	*2,562*	*2,342*	*2,088*	*1,809*	*1,516*	*1,207*	*883*	*542*	*184*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
Fiscal Exposure - Average Debt Drawdown			4,923	4,758	4,559	5,269	4,021	3,849	3,481	4,398	3,835	3,349	4,377	4,189	3,386	3,075	1,944	2,016	1,321	689	-1,633	-2,210	-2,808	-3,428	-4,072	-4,742	-5,440	-5,733	-6,026	-6,334	-6,658	-6,999	-7,357	0	0	0	





Feb4 1b, 30-yr - Debt Drawdown Scenarios

-149,507 -153857.97 97,141 56717.33 0

Feb4_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0
			170	167	162	179	150	146	137	158	144	131	153	147	125	115	85	82	61	41	-19	-40	-62	-86	-111	-138	-167	-198	-231	-266	-304	-344	-388	0	0	0

0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown 7,529	5,062	97,141
Equal Monthly Debt Drawdown 7,708	5,042	

Maximum Accumulated Debt	Feb4 1b, 30-yr, Accumulated Debt	Total Principal Debt Borrowed
End of Year Debt Drawdown	98,864	56,717
Equal Monthly Debt Drawdown	101,217	

Feb4 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
a Debt, Beginning of Year	0	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	
c = a*5% *Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown*	*0*	*365*	*724*	*1,073*	*1,459*	*1,782*	*2,096*	*2,391*	*2,731*	*3,040*	*3,322*	*3,651*	*3,966*	*4,236*	*4,483*	*4,665*	*4,842*	*4,974*	*5,062*	*5,020*	*4,933*	*4,800*	*4,615*	*4,376*	*4,080*	*3,721*	*3,296*	*2,800*	*2,228*	*1,575*	*834*	*0*	*0*	*0*	97,141
b Additional GA Debt Drawdown, End of Year	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
d = a+b+c Accumulated debt in present year (including 5% annual interest)	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	0	
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,633	26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606	82,685	86,406	89,703	92,503	94,731	96,306	97,141				
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,831	56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076	-10,007	-22,027	-35,008	-48,980	-63,971	-80,013	-97,141				
Fiscal Exposure - End of Year Debt Drawdown	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0	

Feb4 1b, 30-yr — Equal Monthly Debt Drawdown

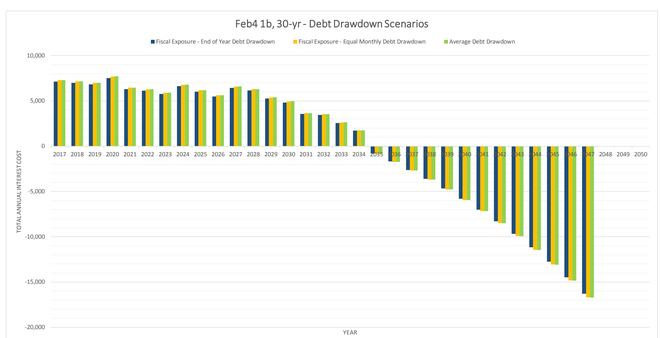
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	
5,042 *Interest Cost - Feb4 1b, 30-yr*	*170*	*532*	*886*	*1,252*	*1,609*	*1,928*	*2,234*	*2,549*	*2,874*	*3,171*	*3,475*	*3,797*	4,091	*4,350*	*4,568*	*4,748*	*4,904*	*5,015*	*5,042*	*4,980*	*4,871*	*4,714*	*4,504*	*4,238*	*3,913*	*3,524*	*3,066*	*2,534*	*1,925*	*1,231*	*446*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0	
Monthly Drawdown	594	553	508	538	405	363	306	353	275	205	259	209	108	49	(76)	(101)	(189)	(271)	(490)	(559)	(629)	(700)	(773)	(847)	(924)	(1,002)	(1,082)	(1,164)	(1,249)	(1,337)	(1,427)	(0)	-	-	
FV of Monthly Drawdown at 5%	7,303	6,792	6,247	6,610	4,972	4,463	3,755	4,338	3,383	2,523	3,184	2,565	1,327	605	(937)	(1,237)	(2,326)	(3,335)	(6,020)	(6,867)	(7,728)	(8,604)	(9,498)	(10,412)	(11,347)	(12,306)	(13,291)	(14,304)	(15,348)	(16,424)	(17,536)	(0)	-	-	
Annual Interest Cost on New Drawdowns	170	158	145	154	116	104	87	101	79	59	74	60	31	14	(22)	(29)	(54)	(78)	(140)	(160)	(180)	(200)	(221)	(242)	(264)	(286)	(309)	(333)	(357)	(382)	(408)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	374	741	1,099	1,493	1,824	2,146	2,448	2,796	3,112	3,401	3,738	4,061	4,336	4,589	4,776	4,958	5,092	5,182	5,139	5,051	4,914	4,725	4,481	4,177	3,810	3,375	2,867	2,281	1,612	854	0	(0)	(0)	
Total Annual Interest Cost	170	532	886	1,252	1,609	1,928	2,234	2,549	2,874	3,171	3,475	3,797	4,091	4,350	4,568	4,748	4,904	5,015	5,042	4,980	4,871	4,714	4,504	4,238	3,913	3,524	3,066	2,534	1,925	1,231	446	0	(0)	(0)	

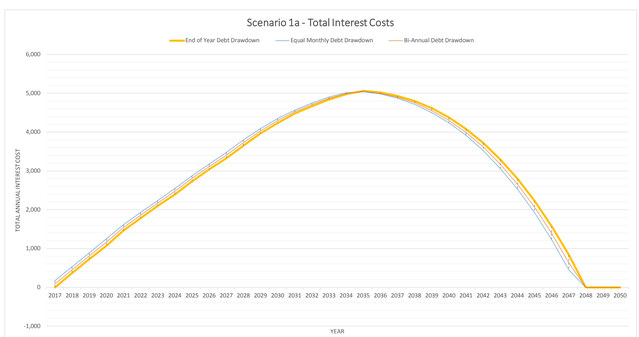
Feb4 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*91*	*455*	*811*	*1,169*	*1,539*	*1,861*	*2,170*	*2,476*	*2,808*	*3,110*	*3,404*	*3,730*	*4,034*	*4,297*	*4,528*	*4,710*	*4,875*	*4,996*	*5,051*	*4,998*	*4,900*	*4,753*	*4,555*	*4,302*	*3,990*	*3,615*	*3,172*	*2,657*	*2,065*	*1,390*	*626*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	7,225	7,089	6,913	7,626	6,396	6,220	5,838	6,713	6,113	5,574	6,514	6,235	5,330	4,888	3,614	3,501	2,603	1,738	-829	-1,709	-2,648	-3,651	-4,722	-5,867	-7,093	-8,405	-9,810	-11,314	-12,926	-14,652	-16,502	0	0	0	
Bi-Annual Drawdown	3,567	3,317	3,051	3,228	2,428	2,180	1,834	2,118	1,652	1,232	1,555	1,253	648	295	(457)	(604)	(1,136)	(1,629)	(2,940)	(3,354)	(3,774)	(4,202)	(4,639)	(5,085)	(5,542)	(6,010)	(6,491)	(6,986)	(7,495)	(8,021)	(8,564)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	7,225	6,719	6,180	6,539	4,919	4,415	3,715	4,291	3,347	2,496	3,150	2,538	1,313	598	(926)	(1,224)	(2,301)	(3,299)	(5,956)	(6,794)	(7,645)	(8,512)	(9,396)	(10,300)	(11,225)	(12,174)	(13,148)	(14,150)	(15,183)	(16,247)	(17,347)	(0)	-	-	
Annual Interest Cost on New Drawdowns	91	85	78	83	62	56	47	54	42	32	40	32	17	8	(12)	(15)	(29)	(42)	(75)	(86)	(97)	(108)	(119)	(130)	(142)	(154)	(166)	(179)	(192)	(205)	(219)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	370	733	1,087	1,477	1,805	2,123	2,422	2,766	3,079	3,364	3,698	4,017	4,290	4,540	4,725	4,904	5,038	5,127	5,084	4,997	4,861	4,674	4,432	4,132	3,769	3,338	2,836	2,257	1,595	845	0	0	0	
Total Annual Interest Cost	91	455	811	1,169	1,539	1,861	2,170	2,476	2,808	3,110	3,404	3,730	4,034	4,297	4,528	4,710	4,875	4,996	5,051	4,998	4,900	4,753	4,555	4,302	3,990	3,615	3,172	2,657	2,065	1,390	626	0	0	0	

Feb4 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*183*	*544*	*898*	*1,266*	*1,620*	*1,939*	*2,244*	*2,561*	*2,885*	*3,181*	*3,486*	*3,809*	*4,101*	*4,359*	*4,574*	*4,754*	*4,908*	*5,018*	*5,041*	*4,977*	*4,867*	*4,707*	*4,496*	*4,228*	*3,900*	*3,509*	*3,048*	*2,514*	*1,902*	*1,205*	*417*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	7,316	7,179	7,000	7,722	6,477	6,298	5,912	6,798	6,190	5,645	6,597	6,314	5,397	4,950	3,659	3,545	2,636	1,760	-840	-1,731	-2,682	-3,697	-4,782	-5,942	-7,183	-8,511	-9,934	-11,457	-13,089	-14,838	-16,711	0	0	0	





Feb4 1c, 30-yr - Debt Drawdown Scenarios

Feb4_1c_30yr

Annual Interest Rate = 5.1%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0
			88	82	75	90	58	52	41	60	44	29	50	43	20	10	-20	-23	-32	-34	-35	-37	-39	-41	-43	-45	-48	-50	-53	-55	-58	-61	-64	0	0	0

0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	3,761	1,594	29,477
Equal Monthly Debt Drawdown	3,851	1,583	

Maximum Accumulated Debt — Feb4 1c, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

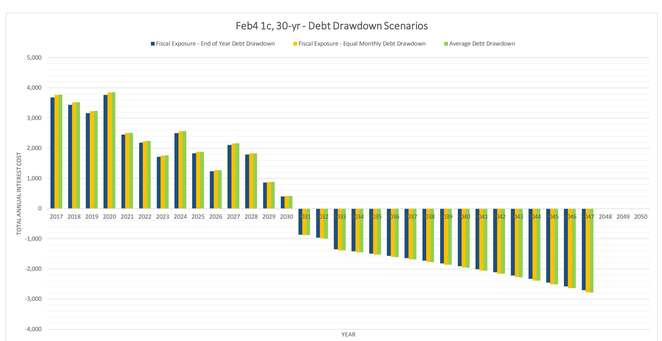
End of Year Debt Drawdown	31,125	20,043
Equal Monthly Debt Drawdown	31,866	

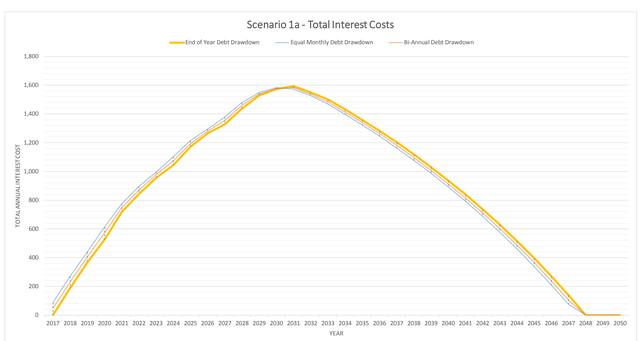
		30%	27%	24%	27%	16%	13%																														
Feb4 1c, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
a	Debt, Beginning of Year	0	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	
c = a*5%	*Interest Cost - Feb4 1c, 30-yr - End of Year Debt Drawdown*	*0*	*188*	*364*	*526*	*719*	*844*	*956*	*1,044*	*1,172*	*1,266*	*1,329*	*1,437*	*1,529*	*1,573*	*1,594*	*1,550*	*1,500*	*1,431*	*1,359*	*1,283*	*1,203*	*1,119*	*1,030*	*937*	*839*	*737*	*629*	*515*	*396*	*270*	*139*	*0*	*0*	*0*	*0*	29,477
b	Additional GA Debt Drawdown, End of Year	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	0	
	Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,641	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663	22,866	23,984	25,015	25,952	26,791	27,528	28,157	28,672	29,068	29,338	29,477				
	Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18,247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828	-1,018	-3,864	-6,710	-9,556	-12,402	-15,248	-18,094	-20,940	-23,786	-26,631	-29,477				
Fiscal Exposure - End of Year Debt Drawdown		3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0	

Feb4 1c, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	
1,583	*Interest Cost - Feb4 1c, 30-yr*	*88*	*270*	*439*	*615*	*777*	*896*	*997*	*1,103*	*1,216*	*1,295*	*1,379*	*1,480*	1,549	*1,583*	*1,573*	*1,527*	*1,468*	*1,398*	*1,324*	*1,246*	*1,164*	*1,077*	*987*	*892*	*792*	*686*	*576*	*460*	*338*	*209*	*74*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0	
	Monthly Drawdown	306	271	233	270	144	112	64	122	55	(2)	65	29	(56)	(97)	(204)	(209)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(0)	-	-	
	FV of Monthly Drawdown at 5%	3,765	3,326	2,861	3,312	1,773	1,371	781	1,493	679	(28)	799	360	(684)	(1,197)	(2,512)	(2,570)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,913)	(2,913)	(2,913)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	88	77	67	77	41	32	18	35	16	(1)	19	8	(16)	(28)	(58)	(60)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	193	373	538	736	864	979	1,069	1,200	1,296	1,361	1,471	1,565	1,610	1,632	1,586	1,536	1,465	1,391	1,313	1,231	1,145	1,055	959	859	754	644	527	405	277	142	0	0	0	
	Total Annual Interest Cost	88	270	439	615	777	896	997	1,103	1,216	1,295	1,379	1,480	1,549	1,583	1,573	1,527	1,468	1,398	1,324	1,246	1,164	1,077	987	892	792	686	576	460	338	209	74	0	0	0	

Feb4 1c, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*47*	*232*	*405*	*574*	*750*	*872*	*978*	*1,076*	*1,195*	*1,282*	*1,356*	*1,460*	*1,540*	*1,578*	*1,583*	*1,537*	*1,483*	*1,413*	*1,340*	*1,263*	*1,182*	*1,097*	*1,007*	*913*	*814*	*710*	*600*	*485*	*365*	*237*	*104*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,725	3,481	3,199	3,809	2,481	2,211	1,741	2,534	1,859	1,254	2,137	1,812	872	409	-871	-973	-1,363	-1,433	-1,506	-1,584	-1,665	-1,750	-1,839	-1,933	-2,032	-2,136	-2,246	-2,360	-2,481	-2,608	-2,742	0	0	0	
	Bi-Annual Drawdown	1,839	1,624	1,397	1,618	866	670	382	729	332	(14)	390	176	(334)	(584)	(1,227)	(1,255)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(0)	-	-	
	FV of Bi-Annual Drawdown at 5%	3,725	3,290	2,830	3,277	1,754	1,356	773	1,477	672	(28)	791	356	(677)	(1,184)	(2,485)	(2,542)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	47	42	36	41	22	17	10	19	8	(0)	10	5	(9)	(15)	(31)	(32)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	191	369	533	728	855	968	1,057	1,187	1,282	1,346	1,456	1,548	1,593	1,614	1,569	1,520	1,450	1,376	1,299	1,218	1,133	1,043	949	850	746	637	522	401	274	140	0	0	0	
	Total Annual Interest Cost	47	232	405	574	750	872	978	1,076	1,195	1,282	1,356	1,460	1,540	1,578	1,583	1,537	1,483	1,413	1,340	1,263	1,182	1,097	1,007	913	814	710	600	485	365	237	104	0	0	0	

Feb4 1c, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*94*	*276*	*445*	*622*	*781*	*900*	*1,000*	*1,108*	*1,219*	*1,298*	*1,383*	*1,483*	*1,551*	*1,583*	*1,572*	*1,525*	*1,466*	*1,395*	*1,321*	*1,243*	*1,161*	*1,074*	*984*	*888*	*788*	*683*	*572*	*456*	*333*	*205*	*69*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,772	3,525	3,239	3,857	2,513	2,239	1,763	2,566	1,882	1,270	2,164	1,835	883	414	-882	-985	-1,381	-1,451	-1,526	-1,604	-1,686	-1,772	-1,863	-1,958	-2,058	-2,163	-2,274	-2,390	-2,513	-2,641	-2,776	0	0	0	





30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

TO BE

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,556	3,123	1,728	1,400	836	1,560	821	167

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

E UPDATED

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

JK: Fixed the formula in the yellow highlighted cells. Pls. check. (SK: looks good to me)

	Tab
v16 GA Financing - Scenario 1a 1b v18 (with fiscal) - Feb 4_v2.xlsx	Powerpoint_Export Scenario tabs

Change Description

Added in trigger for later start in the year
Updated IESO forecast from Energy (IESO GA Cost Forecast 170207 (Feb 6 update).xlsx)

Equal Monthly Debt Drawdown

		Month	Months Remai
Scenario Start Date	**July**	7	6

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	3,180	2,888
Annual Exposure2 with start on July 1st	*1,590*	*2,888*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	795	3,107
Start: July 1st	-	*2,312*

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	851	3,335
Start: July 1st	-	*2,484*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	1,168	1,765
Annual Exposure2 with start on July 1st	*584*	*1,765*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	292	1,609
Start: July 1st	-	*1,025*

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,449	2,040
Annual Exposure2 with start on July 1st	*725*	*2,040*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,597
Start: July 1st	-	*1,959*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335
Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3575**
Total, B	362	1837
Proposed Program Total:	362 - 851	1,837 - 3,575

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,556	3,123	1,728	1,400
2,556	*3,123*	*1,728*	*1,400*

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646
2,805	*2,697*	*2,774*	*1,646*

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

ıking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
2,311	3,750	2,311	1,933
2,311	*3,750*	*2,311*	*1,933*

2018-19	2019-20	2020-21	2021-2022

1,901	2,671	3,391	2,217
1,901	*2,671*	*3,391*	*2,217*

2019	2020	2021	2022
2,581	4,016	2,598	2,241
2,581	*4,016*	*2,598*	*2,241*

2018-19	2019-20	2020-21	2021-2022
2,175	2,940	3,662	2,508
2,175	*2,940*	*3,662*	*2,508*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

/1

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052
2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

Equal Monthly Debt Drawdown

		Month	Months Remaining
Scenario Start Date	July	7	6

AS LONG AS >

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	3,180	2,888	2,556

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	795	3,107	2,805
Fiscal Exposure, 25%	199	777	701

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Annual Exposure[2]	3,404	3,128	2,812

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	851	3,335	3,049
Fiscal Exposure, 25%	213	834	762

Indicates year in which, similar to OPCD's exa
closest to 30%. As Fiscal 2016/17 is a partial y
month the GA deferral begins.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu
decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions	9%	14%	18%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	1,168	1,765	2,311

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	292	1,609	1,901
Fiscal Exposure, 25%	73	402	475

Scenario 1b - 30-yr amortization	2017	2018	2019
Annual Exposure[2]	1,449	2,040	2,581

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	362	1,597	2,175
Fiscal Exposure, 25%	91	399	544

Indicates year in which, similar to OPCD's exar closest to 30%.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 ar
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu on accounting treatment.

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]
Debt-Finance Global Adjustment Costs, Option 1a	213	834	762
Debt-Finance Global Adjustment Costs, Option 1b	91	399	544
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**213**	**1074**	**1065**
Total, B	91	639	847

Proposed Program Total:	91 - 213	639 - 1,074	847 - 1,065

($M)	2016-171	2017-181	2018-191
Debt-Finance Global Adjustment Costs, Option 1a	851	3335	3049
Debt-Finance Global Adjustment Costs, Option 1b	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**851**	**3575**	**3352**
Total, B	362	1837	2478

Proposed Program Total:	362 - 851	1,837 - 3,575	2,478 - 3,352

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6

7	July	7	
8	August	8	
9	September	9	
10	October	10	
11	November	11	
12	December	12	

30-year term	**2016-17**	**2017-18**	**2018-19**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335	2,175 - 3,049

ROWS HIDDEN

1	1 = Comparision Enabled

APRIL 1, 2017 25%

2020	2021	2022
3,123	1,728	1,400

2019-20	2020-21	2021-2022
2,697	2,774	1,646
674	693	412

2020	2021	2022
3,396	2,020	1,712

2019-20	2020-21	2021-2022
2,958	3,052	1,943
740	763	486

mple, the true cost of GA being deferred is
ear, exposure may be less subject to which

l $17-21 billion (at 3.5% interest rate), peaking in 2028.
$33-$36 million.

ıals per month based on month of the year. Actuals may also depend on

28%	17%	13%
2020	2021	2022
3,750	2,311	1,933

2019-20	2020-21	2021-2022
2,671	3,391	2,217
668	848	554

2020	2021	2022
4,016	2,598	2,241

2019-20	2020-21	2021-2022
2,940	3,662	2,508
735	915	627

mple, the true cost of GA being deferred is

ıd $17-21 billion (at 3.5% interest rate), peaking in 2028.
$118-$134 million.

ıals per month based on month of the year. Actuals may also depend on decision

2019-20[1]	2020-21[1]
740	763
735	915
279	323
60	60
18	18
1097	**1164**
1092	1316

1,092 - 1,097 1,316 - 1,164

2019-201	2020-211
2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453





2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964
Equal Monthly Debt Drawdown	3,180	952

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

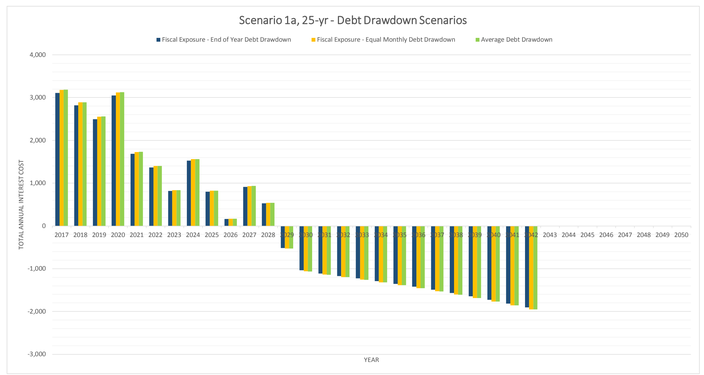
		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

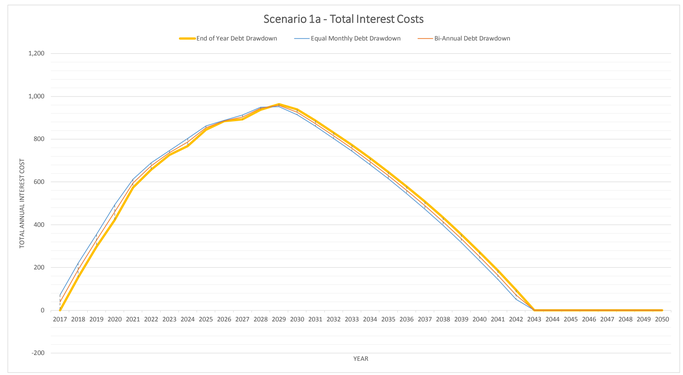
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	3,665	968	
Equal Monthly Debt Drawdown	3,750	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

		9%	14%	18%	28%	17%	13%																													
Scenario 1b, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

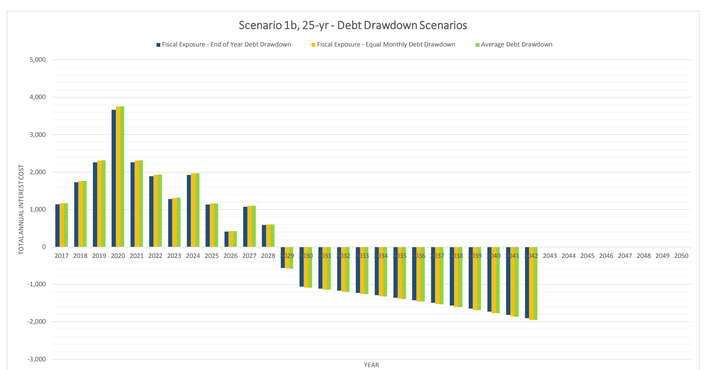
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	*954*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

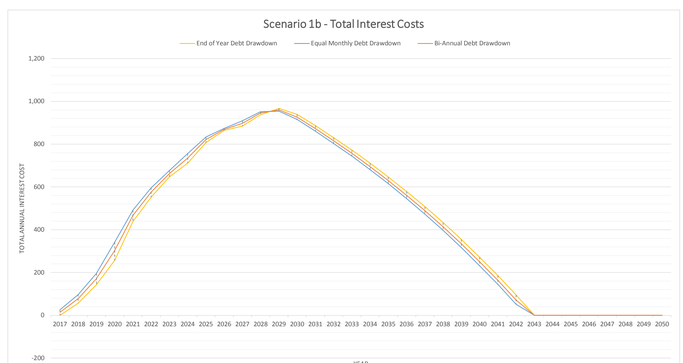
	Monthly Drawdown	95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

		28%	24%	21%	24%	12%	9%																													
Scenario 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1a, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	*1,156*	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

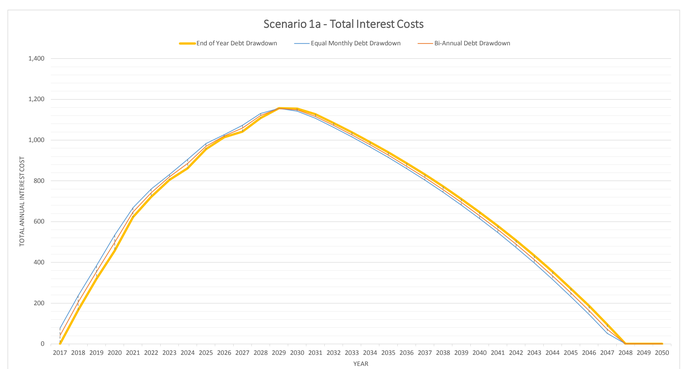
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

		12%	16%	20%	30%	19%	15%																													
Scenario 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

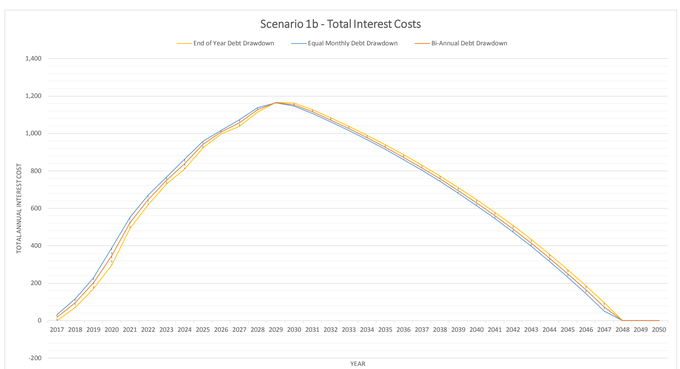
	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

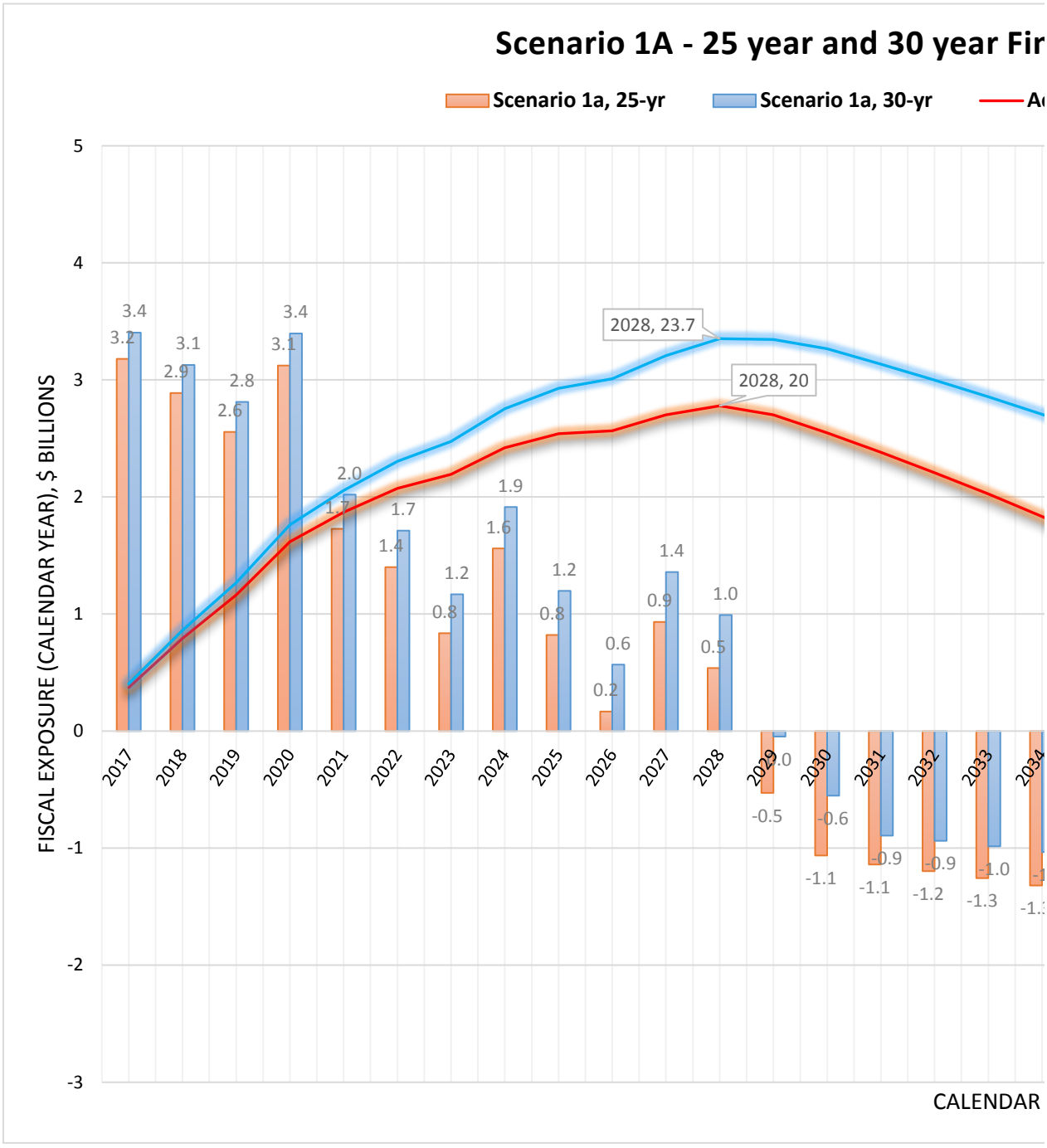
	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

Scenario 1b, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

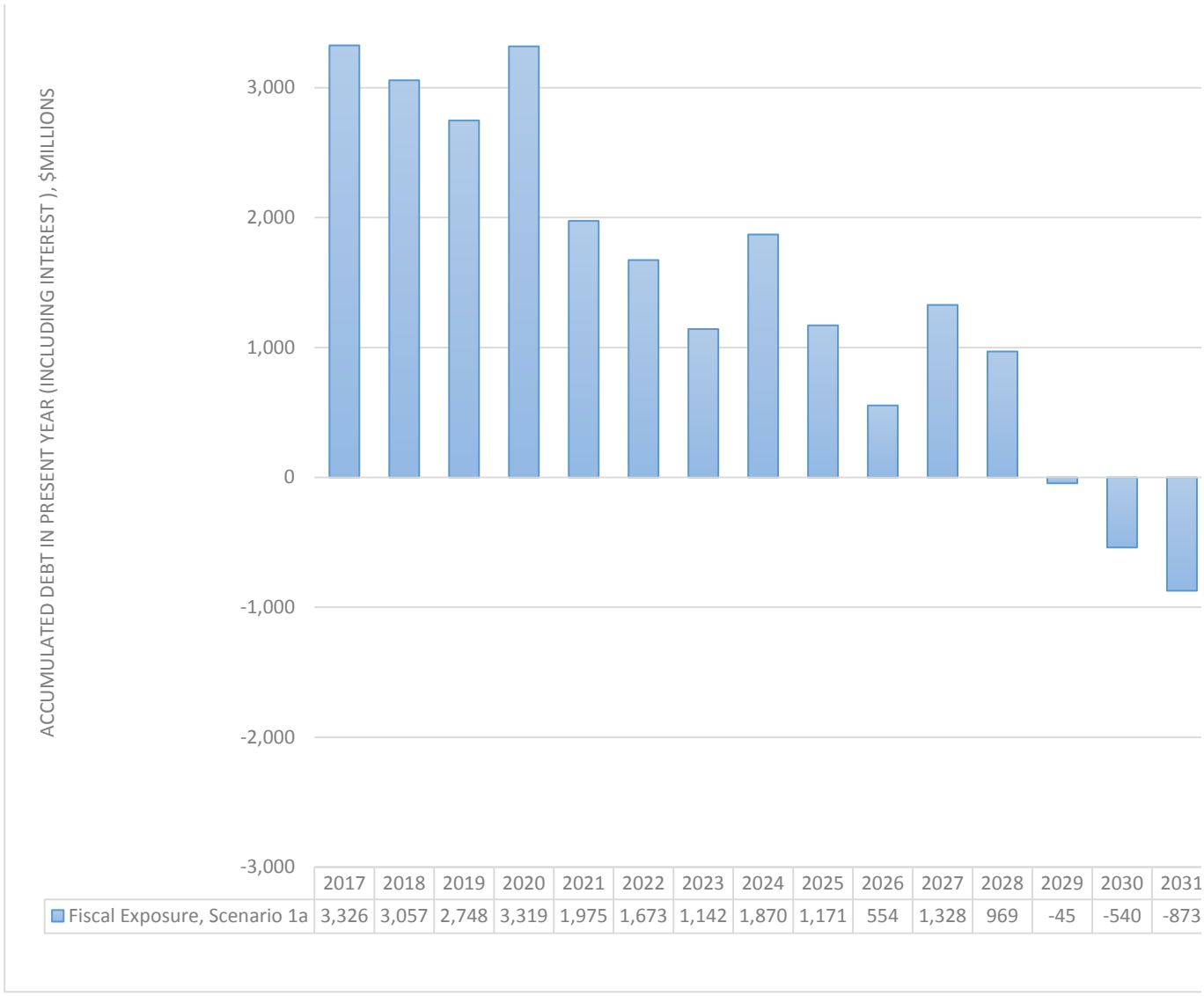




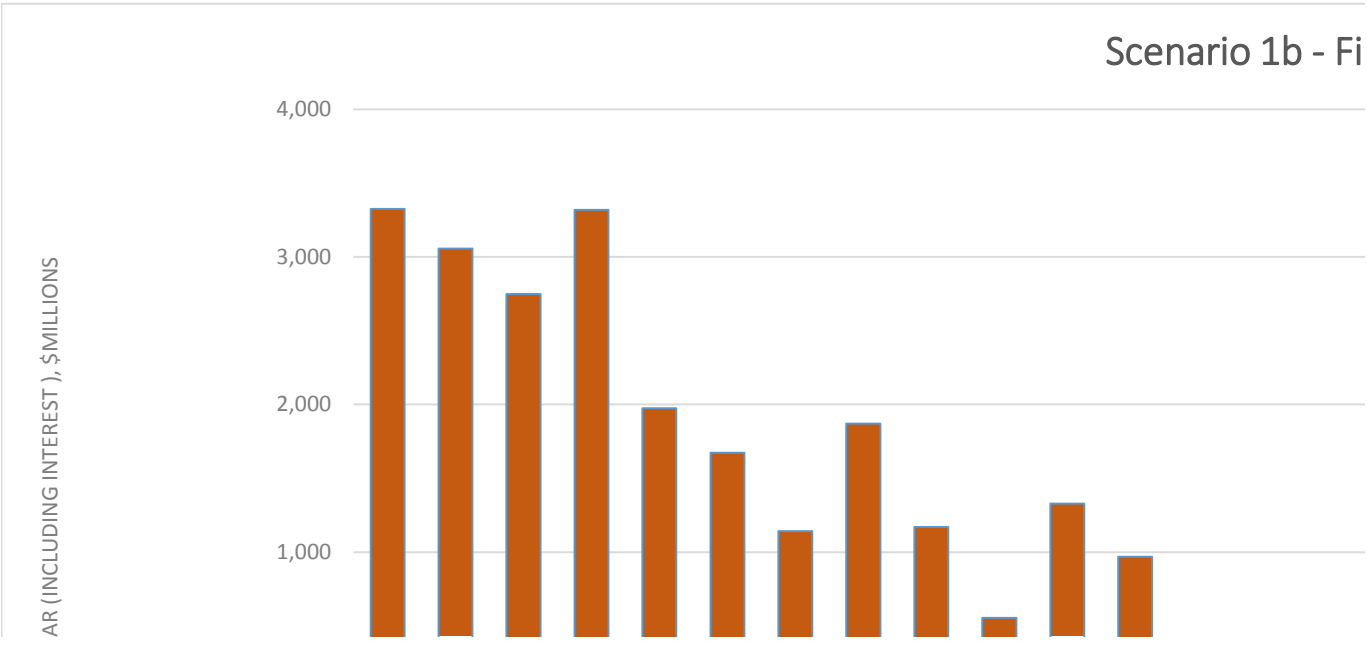
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

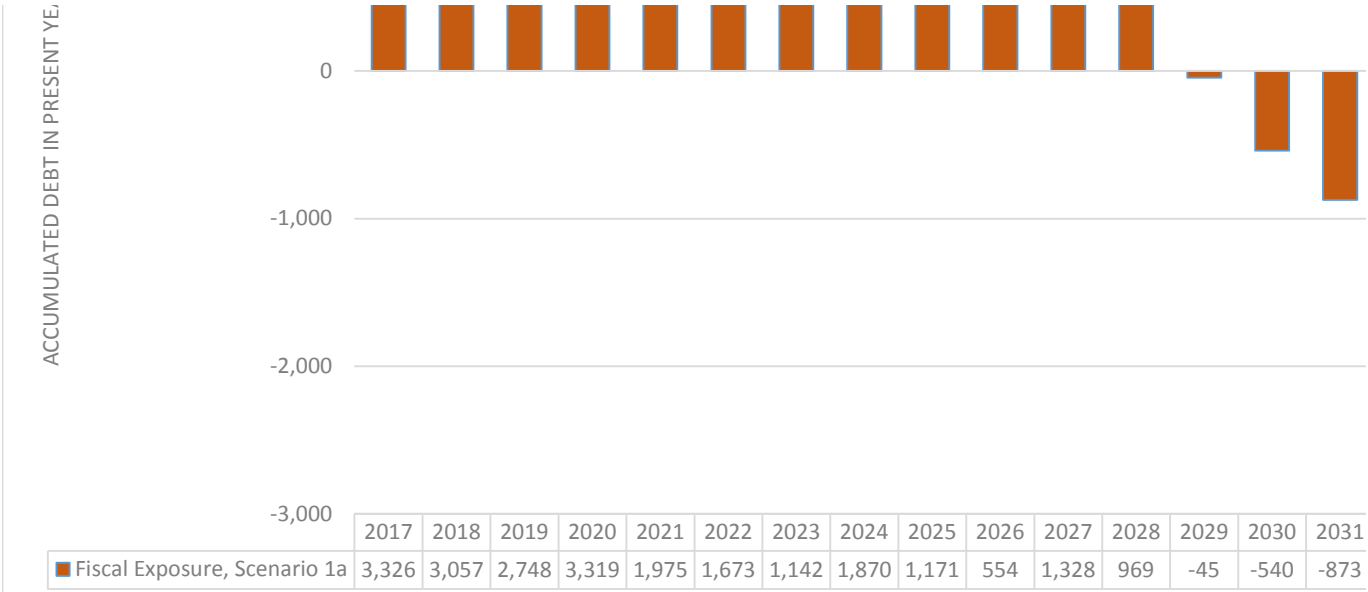




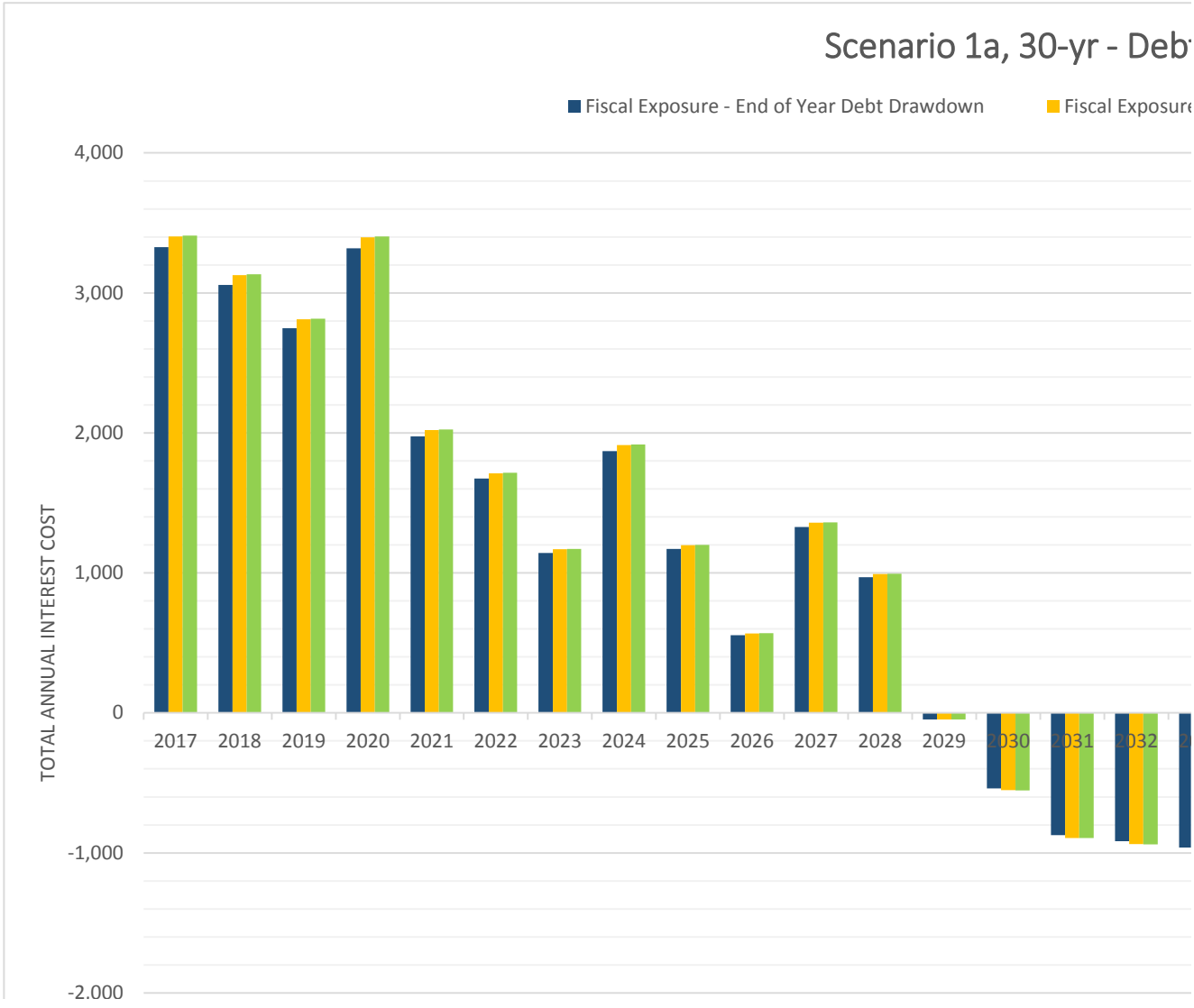


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



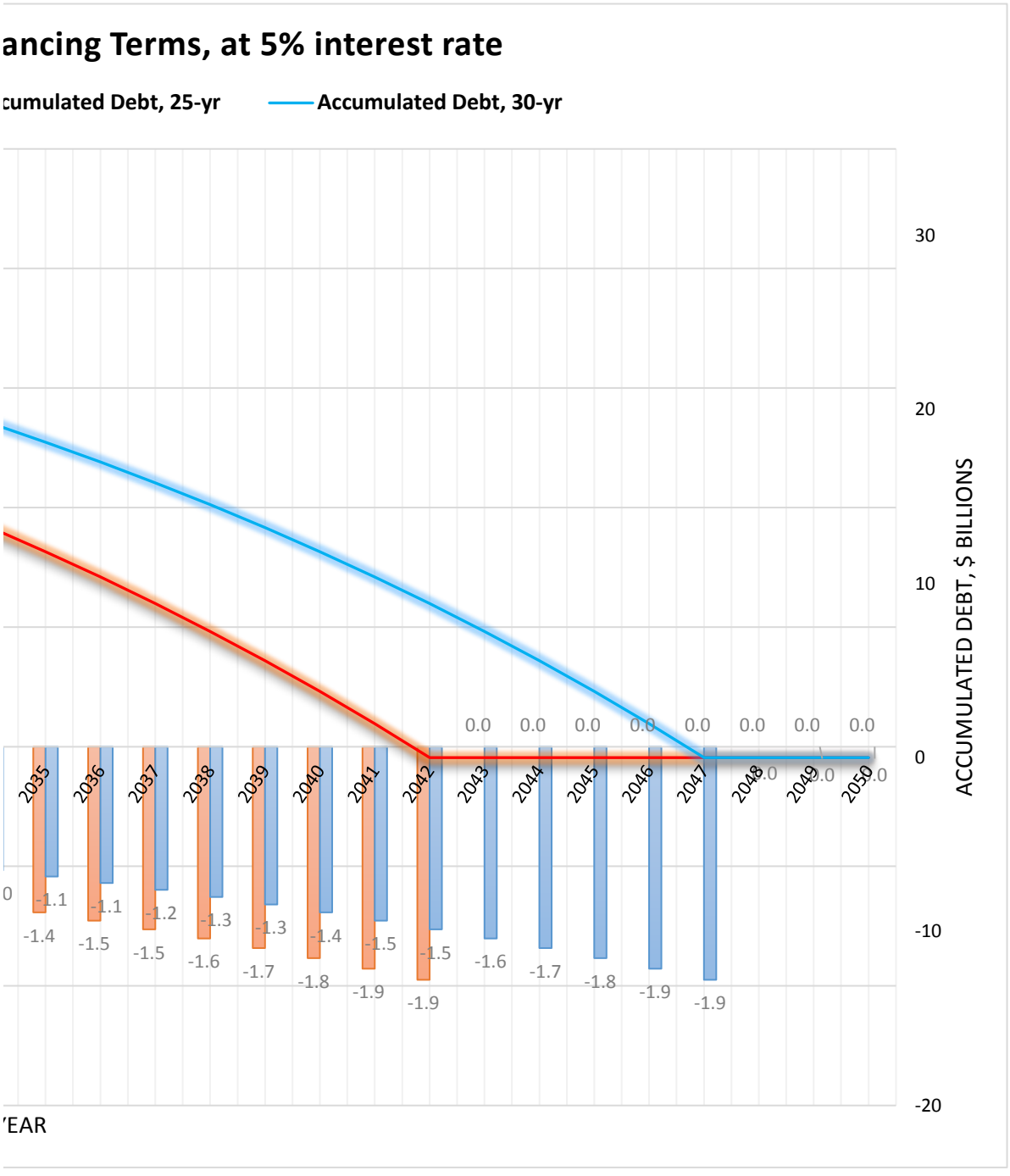


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



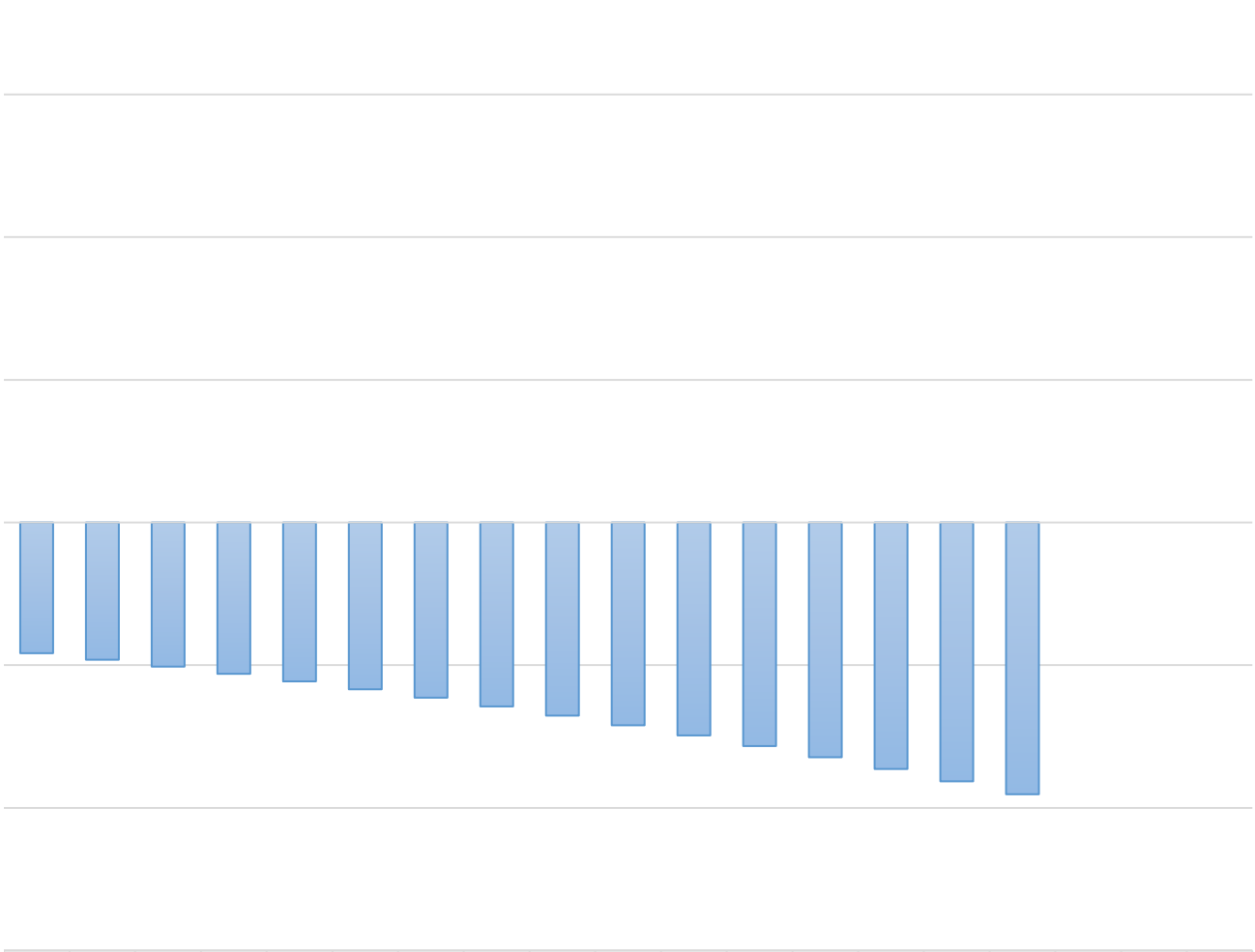

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

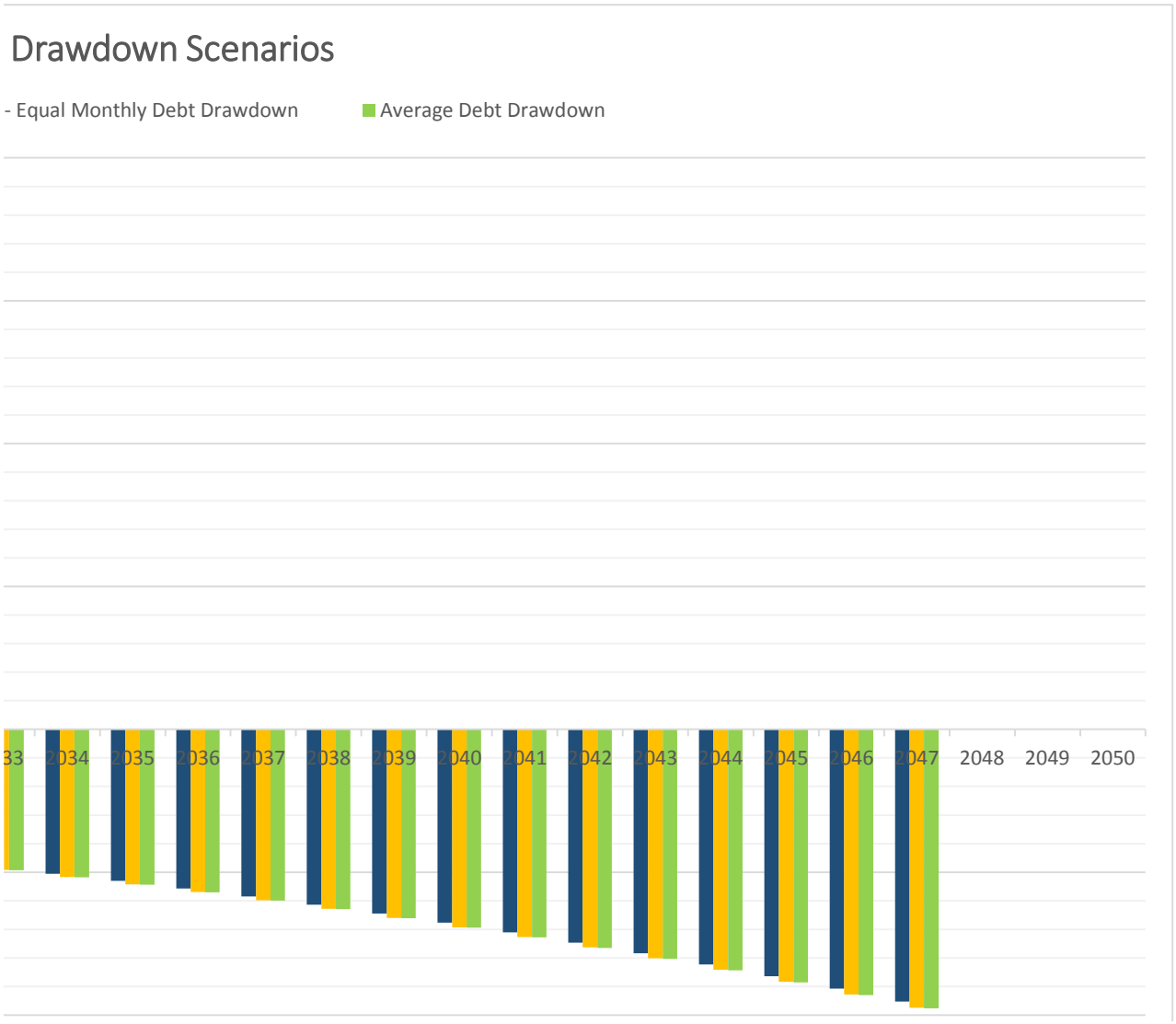
YEAR

cal Exposure



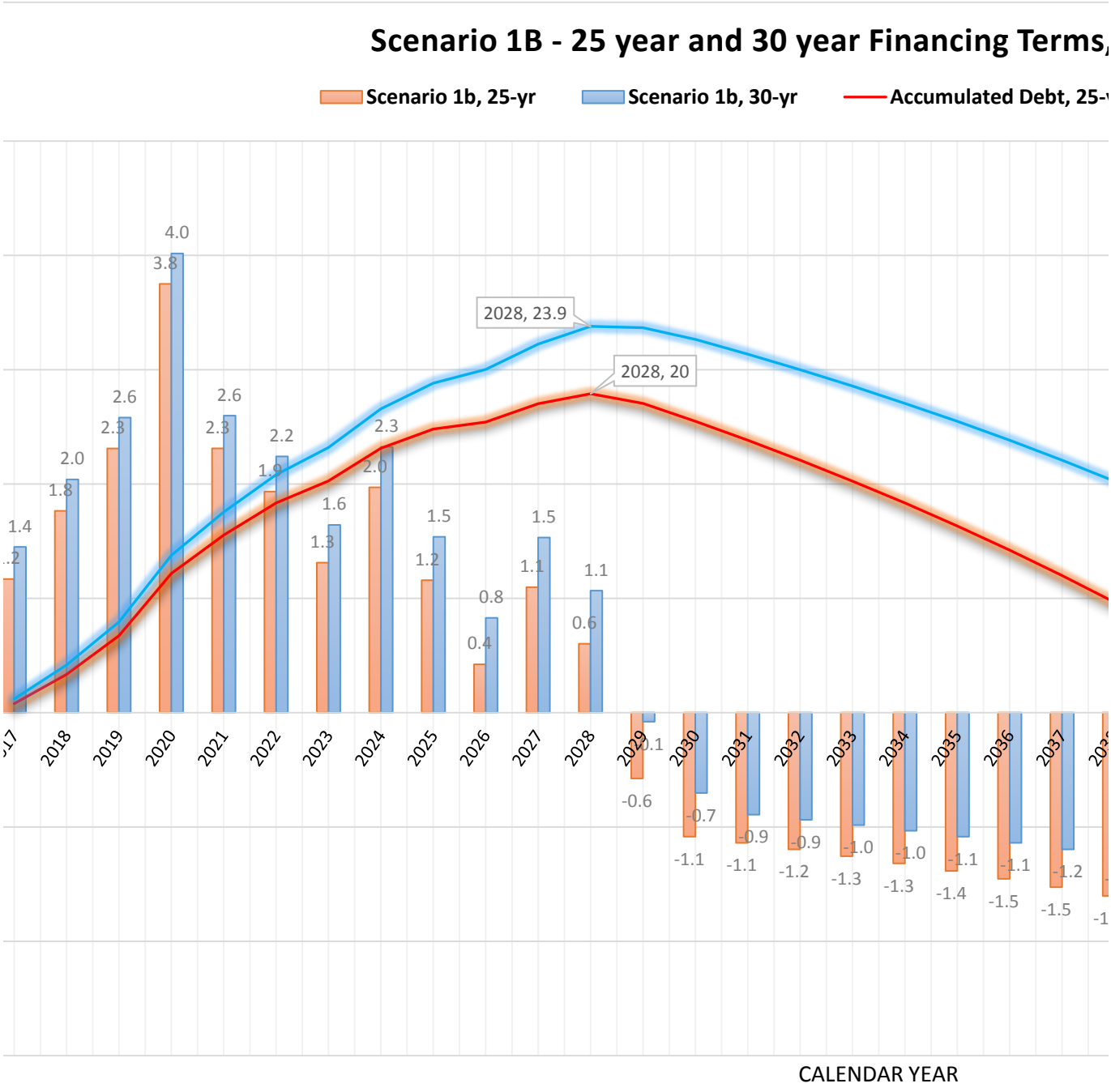
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

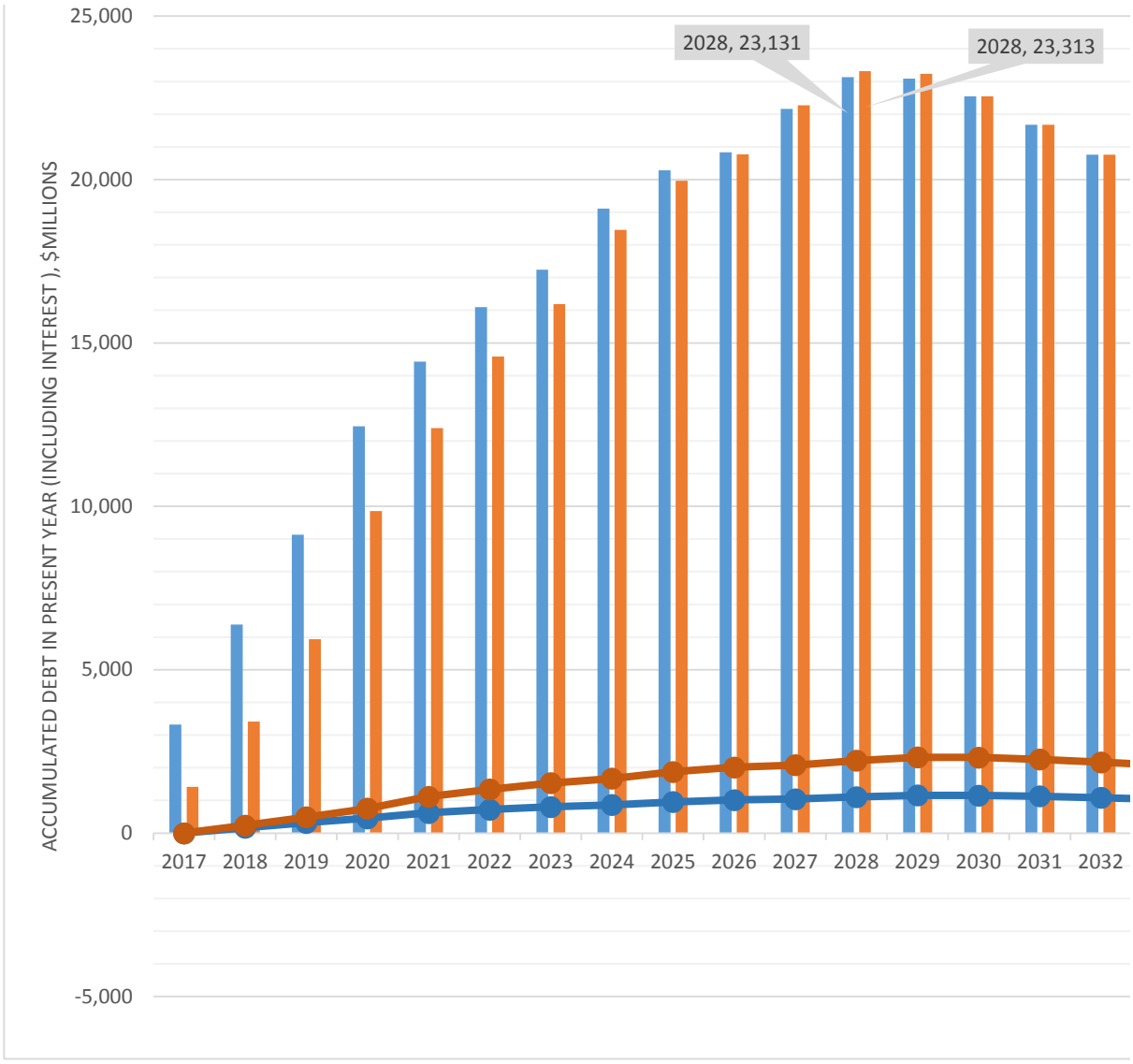


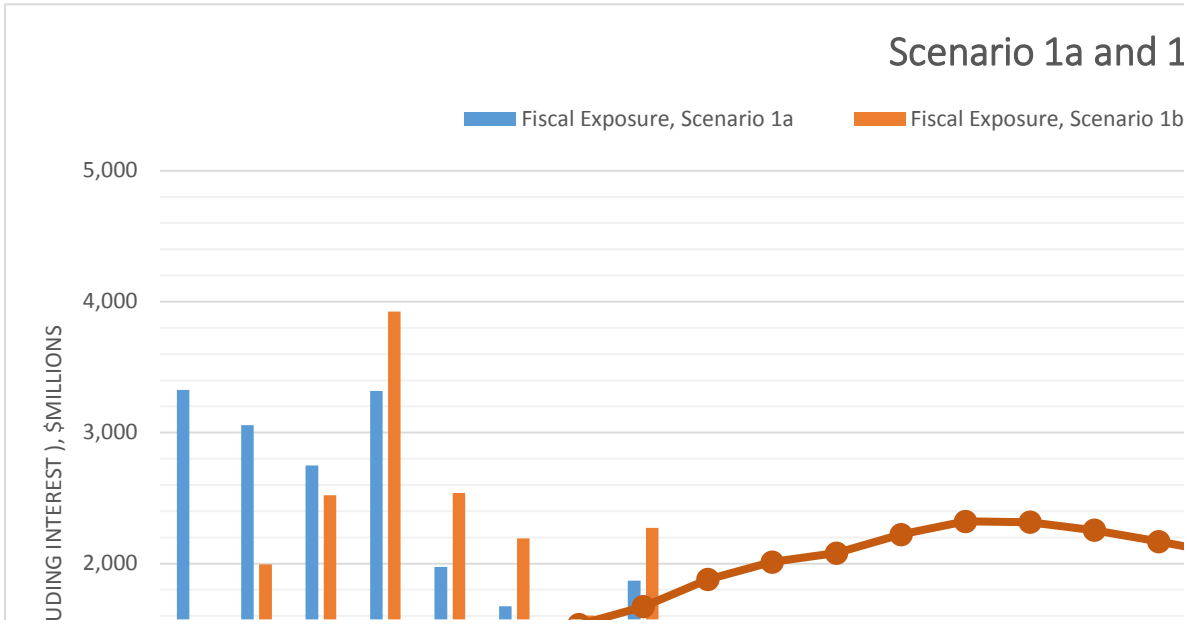
YEAR

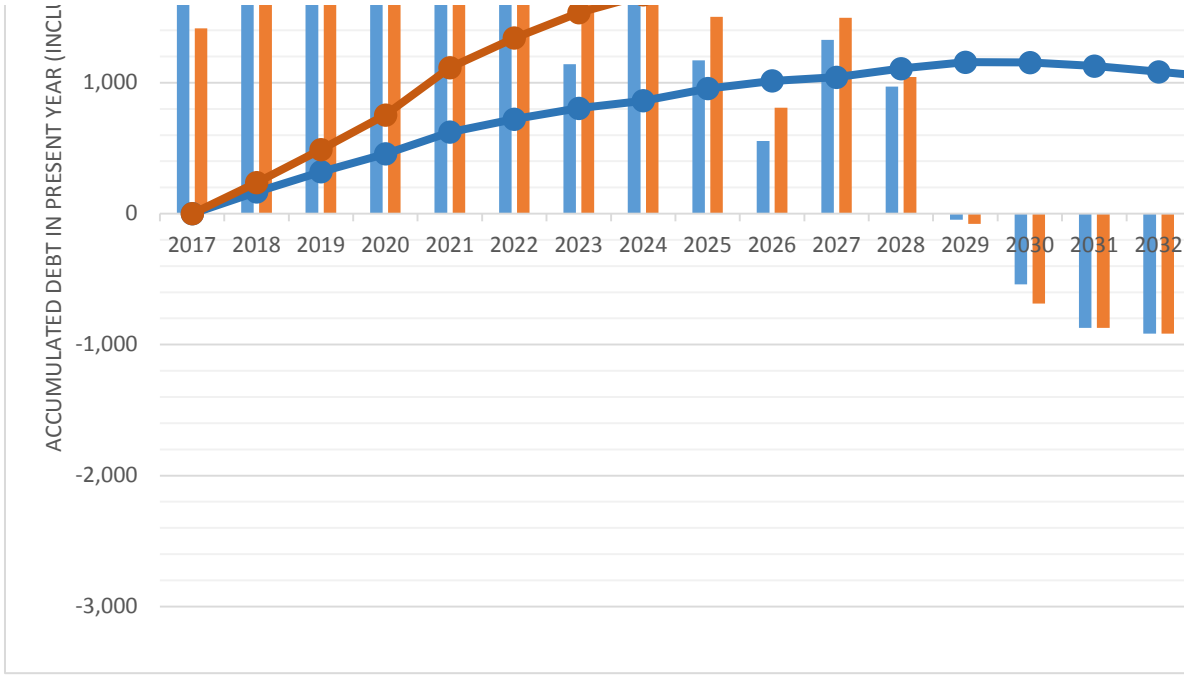
3 - 25 year and 30 year Financing Terms, at 5% interest rate

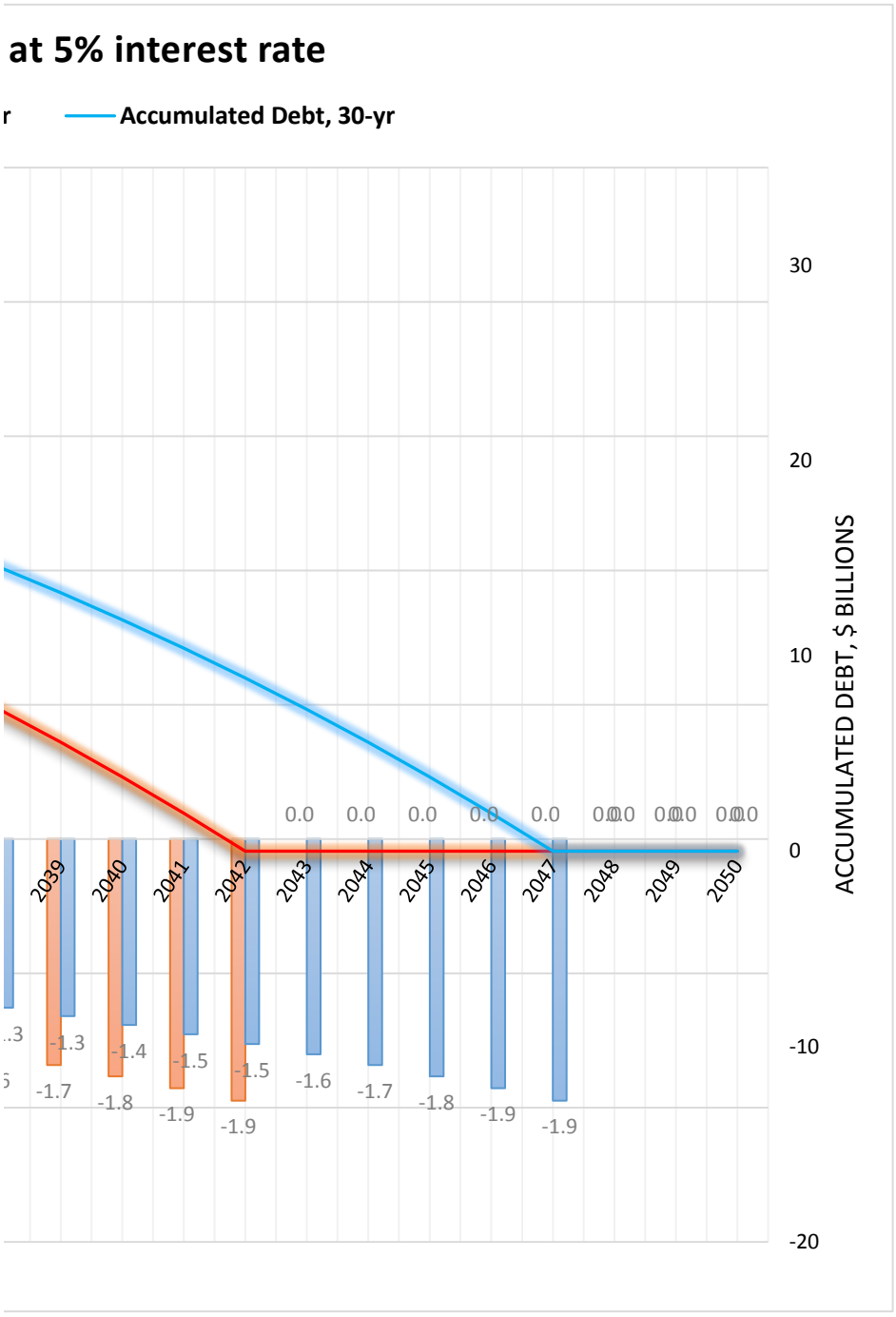





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

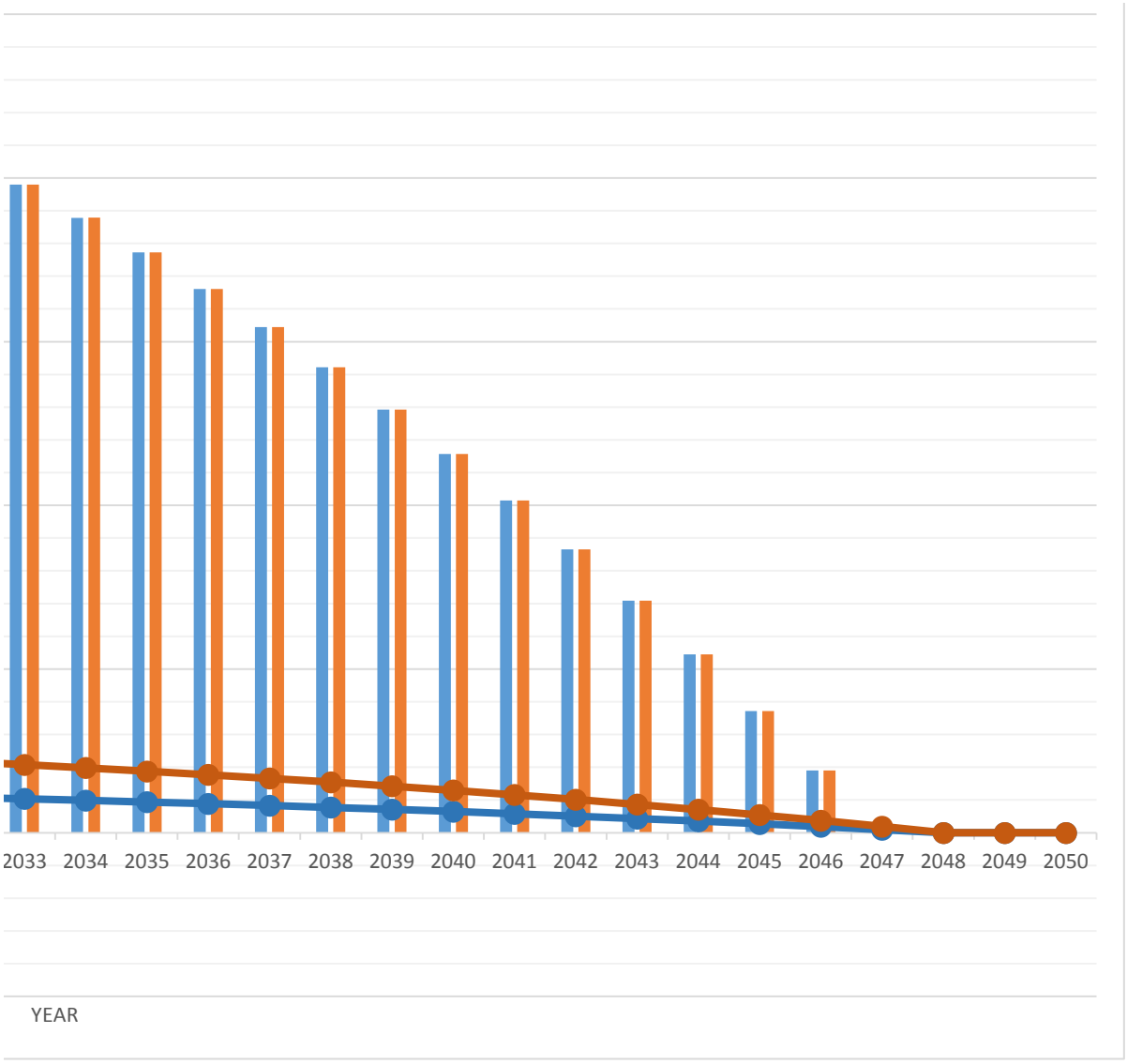

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

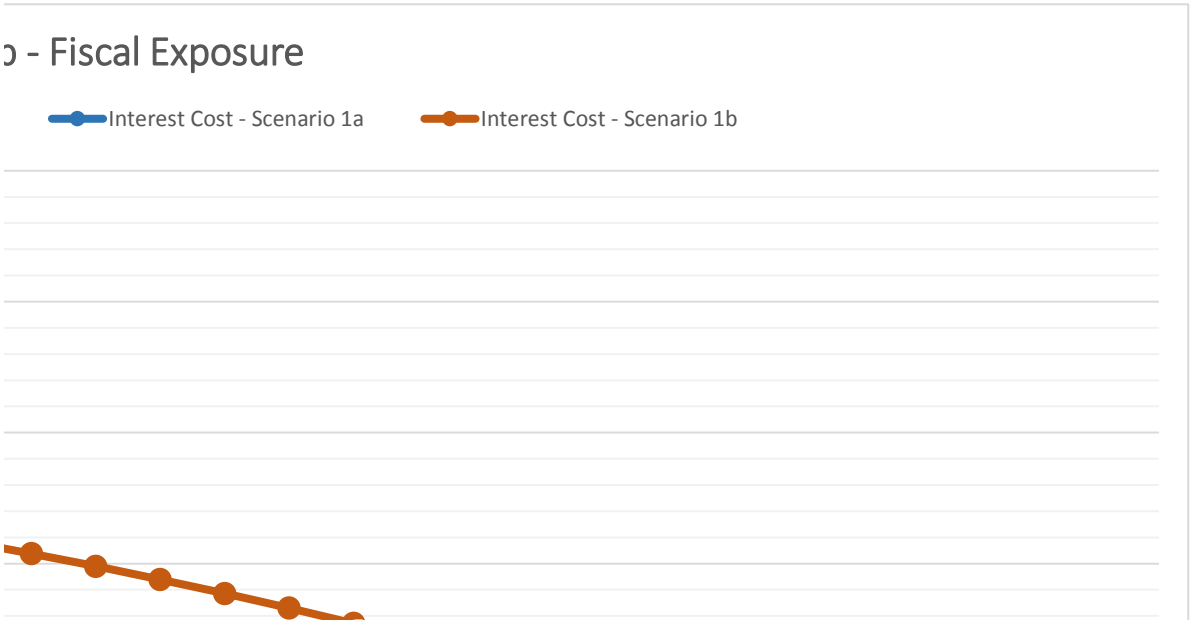

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

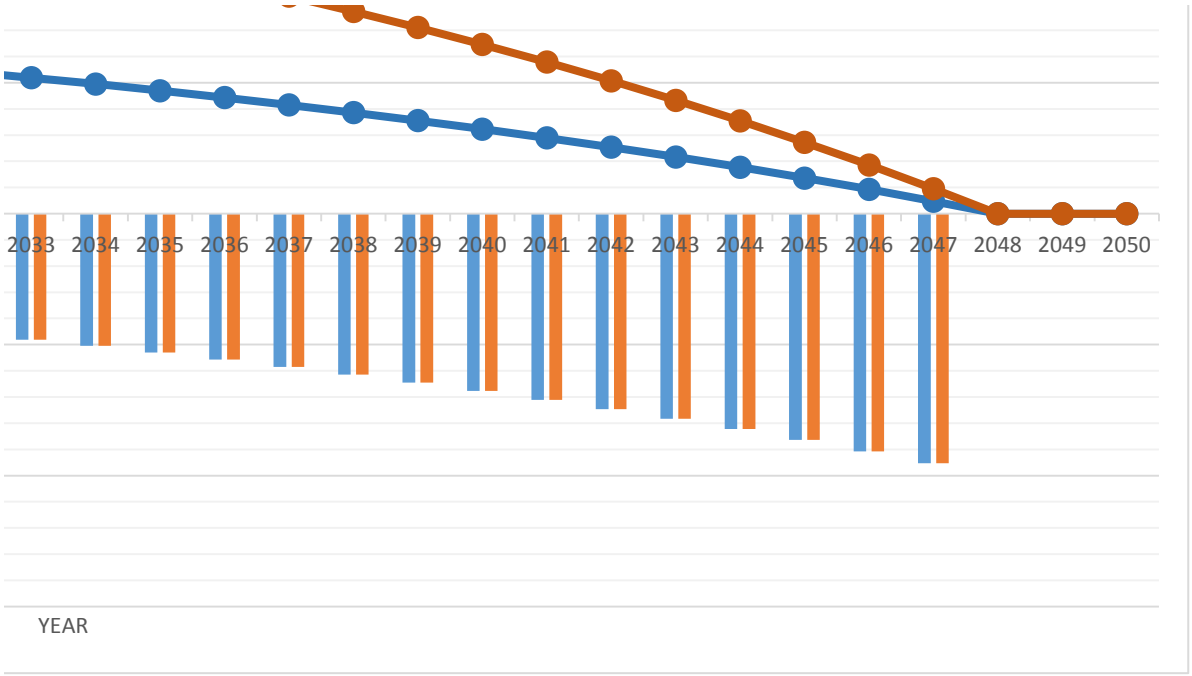


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

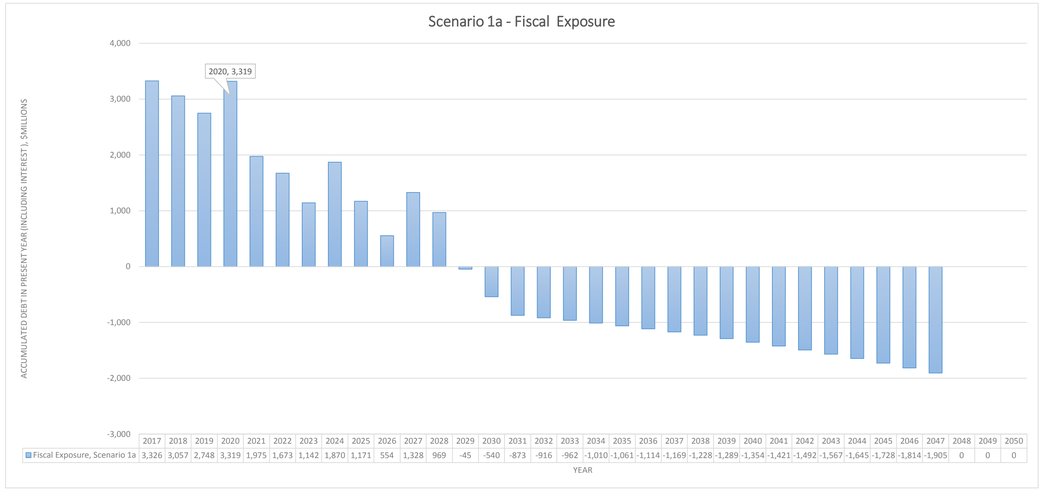
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

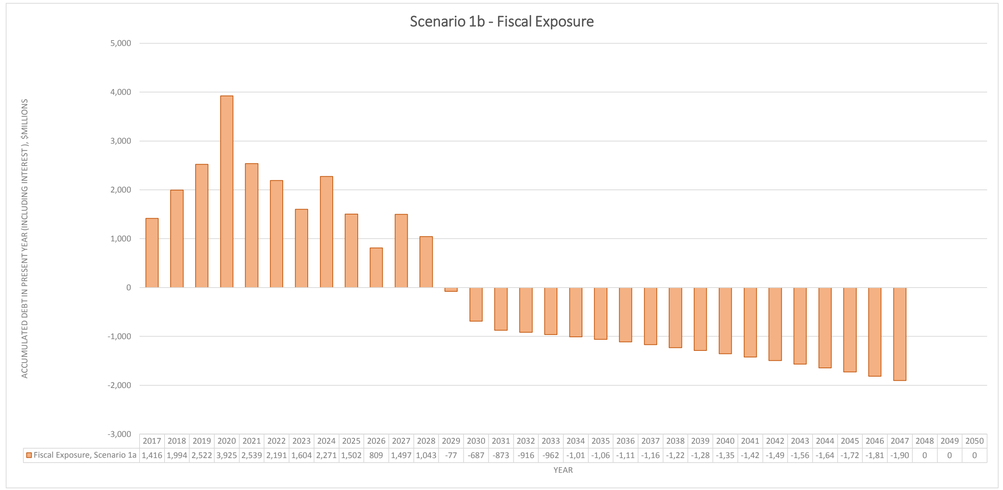
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

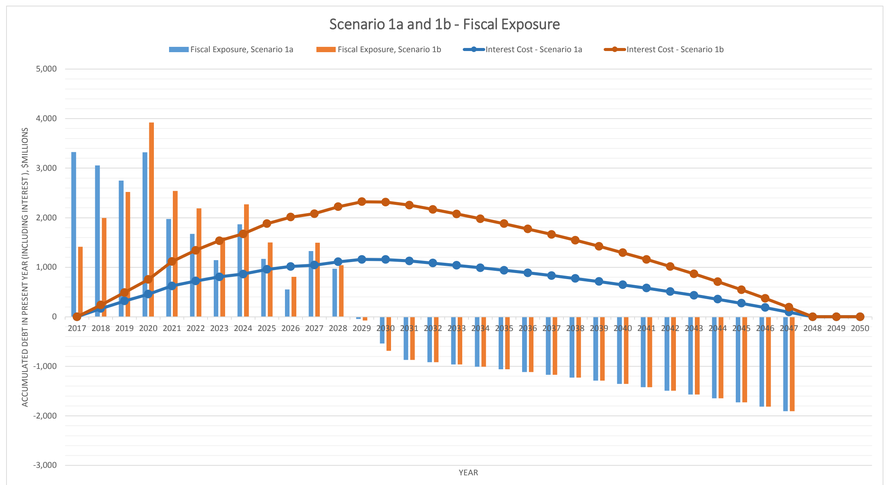
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

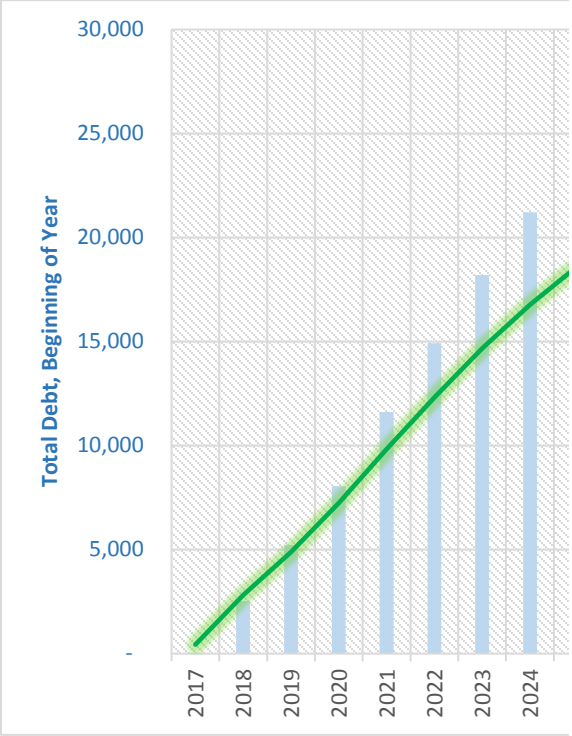
Notes:	Accounting treatment is to be determined.


Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0


Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0


Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

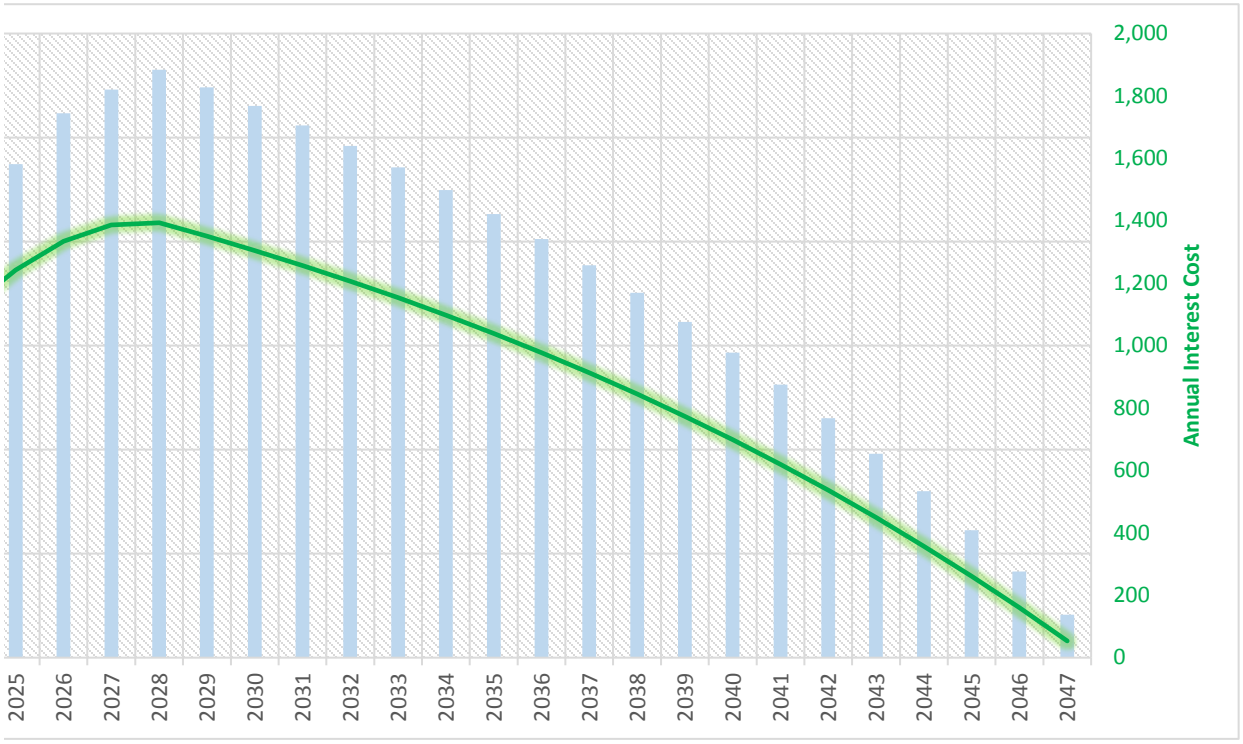
		2017	2018	2019	2020
	Debt, Beginning of Year	-	2,530	5,225	8,052
5.0%	*Interest Cost*	*29*	*188*	*325*	*483*
	Additional GA Debt Drawdown, End of Year	2,501	2,508	2,501	3,075
	Accumulated debt in present year (including 5.	2,530	5,225	8,052	11,610



	2017	2018	2019	2020
Total Debt, Beginning of Year	-	2,530	5,225	8,052
Annual Interest Cost	29	188	325	483
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075
Accumulated debt in present year	2,530	5,225	8,052	11,610

	2033	2034	2035	2036
Total Debt, Beginning of Year	23,561	22,473	21,329	20,126
Annual Interest Cost	1,153	1,098	1,039	978
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	22,473	21,329	20,126	18,862

2021	2022	2023	2024	2025	2026	2027	2028
11,610	14,925	18,200	21,216	23,719	26,172	27,303	28,257
656	*821*	*978*	*1,118*	*1,242*	*1,334*	*1,387*	*1,394*
2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242
14,925	18,200	21,216	23,719	26,172	27,303	28,257	27,409
							1,394



2021	2022	2023	2024	2025	2026	2027	2028
11,610	14,925	18,200	21,216	23,719	26,172	27,303	28,257
656	821	978	1,118	1,242	1,334	1,387	1,394
2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242
14,925	18,200	21,216	23,719	26,172	27,303	28,257	27,409

2037	2038	2039	2040	2041	2042	2043	2044
18,862	17,534	16,137	14,669	13,126	11,504	9,799	8,007
913	845	774	698	619	536	449	358
-2,242	-2,242	-2,242	-2,242	-13,746	-2,242	-2,242	-2,242
17,534	16,137	14,669	13,126	0	9,799	8,007	6,123

2029	2030	2031	2032	2033	2034	2035	2036
27,409	26,518	25,581	24,596	23,561	22,473	21,329	20,126
1,350	*1,305*	*1,257*	*1,206*	*1,153*	*1,098*	*1,039*	*978*
-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242
26,518	25,581	24,596	23,561	22,473	21,329	20,126	18,862

2029	2030	2031	2032
27,409	26,518	25,581	24,596
1,350	1,305	1,257	1,206
-2,242	-2,242	-2,242	-2,242
26,518	25,581	24,596	23,561

2045	2046	2047	**Total**
6,123	4,142	2,061	
261	160	53	**25,007**
-2,242	-2,242	-2,242	
4,142	2,061	-128	

2037	2038	2039	2040	2041	2042	2043	2044
18,862	17,534	16,137	14,669	13,126	11,504	9,799	8,007
913	*845*	*774*	*698*	*619*	*536*	*449*	*358*
-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242
17,534	16,137	14,669	13,126	11,504	9,799	8,007	6,123

2045	2046	2047	2048	2049	2050	2051	2052	2053
6,123	4,142	2,061	(128)	-	-	-	-	-
261	*160*	*53*	*-7*	*0*	*0*	*0*	*0*	*0*
-2,242	-2,242	-2,242	0	0	0	0	0	0
4,142	2,061	-128	0	0	0	0	0	0

2054	2055	2056	2057	2058	2059	2060	2061
-	-	-	-	-	-	-	-
0	*0*	*0*	*0*	*0*	*0*	*0*	*0*
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0

Mar 1 Deck - at 5.12% interest rate

Interest Rate, monthly comp.	**5.000000%**		
Annual Interest Rate	5.12%	Month	Months Remai
Scenario Start Date	**July**	7	6

Mar1_1_30yr

Option 1 - Bills Lowered 25%, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,501	2,636
Interest Portion	0	128

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	625	2,534
Interest Portion	-	32

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $28 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Mar1_1_30yr

Option 1 - Bills Lowered 25%, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,749	1,831
Interest Portion	0	89

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	437	1,770
Interest Portion	-	22

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $28 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb22_3_30yr

Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606
Interest Portion	0	74

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,487
Interest Portion	-	19

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	437 - 625	1,770 - 2,534

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Option 1
Option 2
Option 3
Option 1

Assumes an inte

2019	2020	2021	2022
2,764	3,479	3,242	3,202
263	404	582	748

#REF!
#REF!

2018-19	2019-20	2020-21	2021-2022
2,668	2,942	3,420	3,232
162	298	449	624

Option 1
Option 2
Option 3

2027.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,908	2,564	2,264	1,961
183	281	412	528

2018-19	2019-20	2020-21	2021-2022
1,850	2,072	2,489	2,189
113	208	314	441

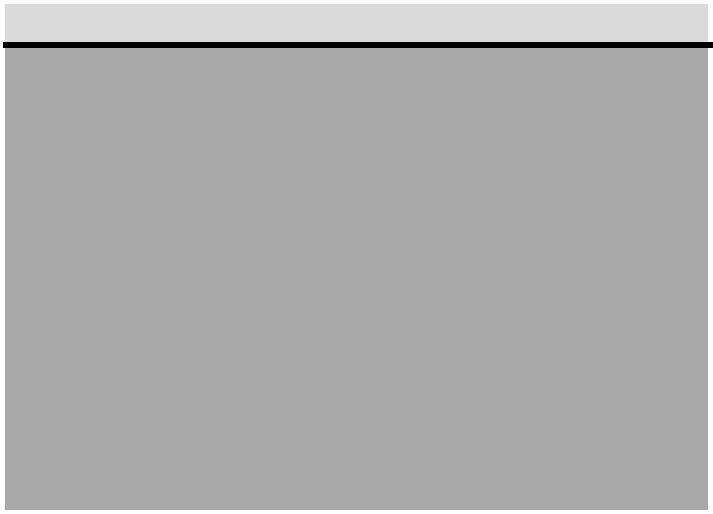
2027.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446
156	234	312	385

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429
95	176	254	331

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022
1,850 - 2,668	2,072 - 2,942	2,489 - 3,420	2,189 - 3,232

	$35,723	
	$35,542	
	0.51%	27.00%

Total Principal Debt	Total Accumulated Interest Costs	**Peak Total Debt**	
$20,332.3	$25,137.0	$27,662	occurs in Year 2027

erest rate of 5.00% (compounded monthly).

			5000
5.00000%	5.00005%	0.00005%	0.25%
35,542	35,543	0.90	4,518.21
19,733	19,734	0.52	2,619.41
19,498	19,499	0.48	2,410.01
0.249950%			

Tab Name		Total Accumulated Interest Costs
Mar1_1_30yr	$31,810	$40,288
	$17,586	$22,491
	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$31,810 to $40,288**
Option 2	$17,586 to $22,491**
Option 3	$17,202 to $22,028**

** With a higher interest rate, the amortization period extend beyond the 30-year forecast

ted period resulting in a remaining balance at the end of the 30-year period. For specifics, see details belo

w.

Mar 1 Deck - at 5.12% interest rate

Mar1_1_30yr
Annual Interest Rate = 5.12%
Annual Interest Rate = 5.00%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,501	2,636	2,764	3,479	3,242	3,202	2,950	2,448	2,399	1,108	935	-826	-869	-913	-960	-1,009	-1,060	-1,115	-1,172	-1,232	-1,295	-1,361	-1,431	-1,504	-1,581	-1,662	-1,747	-1,836	-1,930	-2,029	-2,132	-2,241	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,530	2,696	2,826	3,558	3,316	3,275	3,016	2,503	2,453	1,131	954	-848	-891	-937	-985	-1,035	-1,088	-1,144	-1,202	-1,264	-1,329	-1,397	-1,468	-1,543	-1,622	-1,705	-1,792	-1,884	-1,980	-2,082	-2,188	-7	0	0	
			29	60	63	79	74	73	67	55	54	24	19	-22	-23	-24	-25	-26	-28	-29	-31	-32	-34	-36	-37	-39	-41	-44	-46	-48	-51	-53	-56	2,235	0	0	2,105

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,479	1,415	25,137.0
Equal Monthly Debt Drawdown	3,558	1,394	

	Mar1 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	27,662.3	2027	20,332
Equal Monthly Debt Drawdown	28,257.3		

Mar1 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	Total
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																															26
($ millions)			-2.79%	-2.95%	0.47%	-10.01%	-0.05%	0.32%	18.73%	-4.38%	9.88%	12.11%	13.81%	-6.20%	-2.34%	-8.92%	1.52%	-5.26%	-4.60%	-20.95%	-3.46%	-3.41%	-3.36%	-3.31%	-3.26%	-3.20%	-3.15%	-3.10%	-3.04%	-2.98%	-2.93%	-2.87%	-44.57%	-4.83%	-4.83%													
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695													
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,180	8,206	9,743	9,316	10,236	11,476	13,061	12,250	11,963	10,896	11,061	10,480	9,998	7,904	7,630	7,370	7,122	6,887	6,662	6,449	6,246	6,052	5,868	5,693	5,526	5,368	2,975	2,831	2,695													
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	0													
a	Debt, Beginning of Year	0	2,501	5,136	7,900	11,379	14,621	17,823	20,773	23,221	25,620	26,728	27,662	26,836	25,967	25,054	24,095	23,086	22,025	20,911	19,739	18,507	17,213	15,852	14,421	12,918	11,337	9,675	7,929	6,093	4,163	2,134	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost*	*0*	*128*	*263*	*404*	*582*	*748*	*912*	*1,063*	*1,188*	*1,311*	*1,367*	*1,415*	*1,373*	*1,329*	*1,282*	*1,233*	*1,181*	*1,127*	*1,070*	*1,010*	*947*	*881*	*811*	*738*	*661*	*580*	*495*	*406*	*312*	*213*	*109*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	25,137
b	Additional GA Debt Drawdown, End of Year	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,501	5,136	7,900	11,379	14,621	17,823	20,773	23,221	25,620	26,728	27,662	26,836	25,967	25,054	24,095	23,086	22,025	20,911	19,739	18,507	17,213	15,852	14,421	12,918	11,337	9,675	7,929	6,093	4,163	2,134	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE													
	Mar1 Option 1, 30-yr - Accumulated Interest Costs	0	128	391	795	1,377	2,125	3,037	4,100	5,288	6,599	7,966	9,381	10,754	9,841	8,882	8,882	8,882	8,882	8,882	8,882	8,882	8,882	8,882	8,882	8,882	8,882	8,882	6,093	4,163	2,134	2	0	0															
	Mar1 Option 1, 30-yr - Accumulated Debt Principal	2,501	5,009	7,509	10,584	13,244	15,698	17,736	19,121	20,332	20,129	19,696	17,455	15,213	15,213	15,213	14,204	13,144	12,029	10,858	9,626	8,331	6,970	5,540	4,036	2,455	794	-953	0	0	0	0	0	0															
	Mar1 Option 1, 30-yr - Accumulated Interest Costs	0	128	391	795	1,377	2,125	3,037	4,100	5,288	6,599	7,966	9,381	10,754	12,083	13,365	14,597	15,778	16,905	17,975	18,985	19,932	20,813	21,624	22,361	23,022	23,602	24,097	24,503	24,815	25,028	25,137																	
	Mar1 Option 1, 30-yr - Accumulated Debt Principal	2,501	5,009	7,509	10,584	13,244	15,698	17,736	19,121	20,332	20,129	19,696	17,455	15,213	12,972	10,730	8,489	6,247	4,005	1,764	-478	-2,719	-4,961	-7,202	-9,444	-11,685	-13,927	-16,169	-18,410	-20,652	-22,893	-25,135																	
Fiscal Exposure - End of Year Debt Drawdown		2,501	2,636	2,764	3,479	3,242	3,202	2,950	2,448	2,399	1,108	935	-826	-869	-913	-960	-1,009	-1,060	-1,115	-1,172	-1,232	-1,295	-1,361	-1,431	-1,504	-1,581	-1,662	-1,747	-1,836	-1,930	-2,029	-2,132	-2,241	0	0														

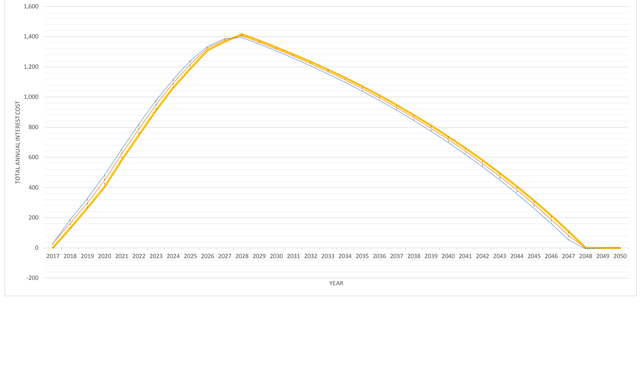
Mar1 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050															Total
		12																																															
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																															
($ millions)																																																
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695													
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,180	8,206	9,743	9,316	10,236	11,476	13,061	12,250	11,963	10,896	11,061	10,480	9,998	7,904	7,630	7,370	7,122	6,887	6,662	6,449	6,246	6,052	5,868	5,693	5,526	5,368	2,975	2,831	2,695													
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	0													
	Debt, Beginning of Year	0	2,530	5,225	8,052	11,610	14,925	18,200	21,216	23,719	26,172	27,303	28,257	27,409	26,518	25,581	24,596	23,561	22,473	21,329	20,126	18,862	17,534	16,137	14,669	13,126	11,504	9,799	8,007	6,123	4,142	2,061	-128	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1,394	*Interest Cost - Mar1 Option 1, 30-yr*	*29*	*188*	*325*	*483*	*656*	*821*	*978*	*1,118*	*1,242*	*1,334*	*1,387*	*1,394*	*1,350*	*1,305*	*1,257*	*1,206*	*1,153*	*1,098*	*1,039*	*978*	*913*	*845*	*774*	*698*	*619*	*536*	*449*	*358*	*261*	*160*	*53*	*-7*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	25,001
	Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,530	5,225	8,052	11,610	14,925	18,200	21,216	23,719	26,172	27,303	28,257	27,409	26,518	25,581	24,596	23,561	22,473	21,329	20,126	18,862	17,534	16,137	14,669	13,126	11,504	9,799	8,007	6,123	4,142	2,061	-128	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,530	2,696	2,826	3,558	3,316	3,275	3,016	2,503	2,453	1,131	954	-848	-891	-937	-985	-1,035	-1,088	-1,144	-1,202	-1,264	-1,329	-1,397	-1,468	-1,543	-1,622	-1,705	-1,792	-1,884	-1,980	-2,082	-2,188	-7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

	Monthly Drawdown	208	209	208	256	222	205	170	115	101	(17)	(36)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	2,559	2,566	2,559	3,146	2,722	2,511	2,085	1,418	1,239	(208)	(443)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	58	58	58	71	62	57	47	32	28	(5)	(10)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	129	267	412	594	764	931	1,085	1,214	1,339	1,397	1,446	1,402	1,357	1,309	1,258	1,205	1,150	1,091	1,030	965	897	826	751	672	589	501	410	313	212	105	(7)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Total Annual Interest Cost	58	188	325	483	656	821	978	1,118	1,242	1,334	1,387	1,394	1,350	1,305	1,257	1,206	1,153	1,098	1,039	978	913	845	774	698	619	536	449	358	261	160	53	(7)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Mar1 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050															Total
		2																																														
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																														
($ millions)																																															
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695													
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,180	8,206	9,743	9,316	10,236	11,476	13,061	12,250	11,963	10,896	11,061	10,480	9,998	7,904	7,630	7,370	7,122	6,887	6,662	6,449	6,246	6,052	5,868	5,693	5,526	5,368	2,975	2,831	2,695													
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	0													
	Debt, Beginning of Year	0	2,533	5,202	8,001	11,524	14,808	18,051	21,038	23,518	25,948	27,070	28,016	27,179	26,300	25,375	24,403	23,381	22,307	21,178	19,992	18,744	17,433	16,055	14,606	13,083	11,482	9,799	8,030	6,171	4,216	2,162	2	2	2													
	Interest Cost - Mar1 Option 1, 30-yr	*32*	*162*	*298*	*449*	*624*	*789*	*950*	*1,094*	*1,219*	*1,325*	*1,379*	*1,405*	*1,362*	*1,317*	*1,270*	*1,220*	*1,168*	*1,113*	*1,055*	*994*	*930*	*863*	*793*	*719*	*641*	*559*	*473*	*382*	*287*	*187*	*82*	*0*	*0*	*0*													
	Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0													
	Accumulated debt in present year (including 5% annual interest)	2,533	5,202	8,001	11,524	14,808	18,051	21,038	23,518	25,948	27,070	28,016	27,179	26,300	25,375	24,403	23,381	22,307	21,178	19,992	18,744	17,433	16,055	14,606	13,083	11,482	9,799	8,030	6,171	4,216	2,162	2	2	2													
Fiscal Exposure - Bi-Annual Debt Drawdown		2,533	2,670	2,799	3,523	3,283	3,243	2,987	2,480	2,430	1,122	947	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,247	-1,311	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,955	-2,055	-2,160	0	0	0													

	Bi-Annual Drawdown	1,250	1,254	1,250	1,537	1,330	1,227	1,019	693	606	(102)	(216)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,533	2,540	2,533	3,114	2,694	2,485	2,064	1,403	1,227	(206)	(438)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	32	32	32	39	34	31	26	18	15	(3)	(6)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	130	266	409	590	758	924	1,076	1,203	1,328	1,385	1,433	1,391	1,346	1,298	1,248	1,196	1,141	1,084	1,023	959	892	821	747	669	587	501	411	316	216	111	0	0	0													
	Total Annual Interest Cost	32	162	298	449	624	789	950	1,094	1,219	1,325	1,379	1,405	1,362	1,317	1,270	1,220	1,168	1,113	1,055	994	930	863	793	719	641	559	473	382	287	187	82	0	0	0													

Mar1 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050															Total
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																															
($ millions)																																																
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695													
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,180	8,206	9,743	9,316	10,236	11,476	13,061	12,250	11,963	10,896	11,061	10,480	9,998	7,904	7,630	7,370	7,122	6,887	6,662	6,449	6,246	6,052	5,868	5,693	5,526	5,368	2,975	2,831	2,695													
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	0													
	Debt, Beginning of Year	0	2,565	5,268	8,102	11,670	14,995	18,279	21,304	23,815	26,275	27,411	28,370	27,522	26,632	25,695	24,711	23,676	22,589	21,446	20,244	18,981	17,653	16,257	14,790	13,248	11,627	9,923	8,132	6,249	4,270	2,189	2	2	2													
	Interest Cost - Mar1 Option 1, 30-yr	*64*	*195*	*333*	*493*	*665*	*830*	*987*	*1,125*	*1,249*	*1,339*	*1,391*	*1,394*	*1,351*	*1,305*	*1,257*	*1,207*	*1,154*	*1,098*	*1,040*	*978*	*914*	*846*	*774*	*699*	*620*	*538*	*450*	*359*	*262*	*161*	*55*	*0*	*0*	*0*													
	Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0													
	Accumulated debt in present year (including 5% annual interest)	2,565	5,268	8,102	11,670	14,995	18,279	21,304	23,815	26,275	27,411	28,370	27,522	26,632	25,695	24,711	23,676	22,589	21,446	20,244	18,981	17,653	16,257	14,790	13,248	11,627	9,923	8,132	6,249	4,270	2,189	2	2	2													
Fiscal Exposure - Average Debt Drawdown		2,565	2,703	2,834	3,568	3,325	3,284	3,025	2,511	2,460	1,136	958	-847	-891	-936	-984	-1,035	-1,088	-1,143	-1,202	-1,263	-1,328	-1,396	-1,467	-1,542	-1,621	-1,704	-1,791	-1,883	-1,979	-2,080	-2,187	0	0	0													



Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest

IESO GA cost forecast + extrapolation

Scenario
Option 1
Bills Lowered 25%, RPP-Eligible Only
Option 2
Bills Lowered 20%, RPP-Eligible Only
Option 3
Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only

rate	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
Ratepayer GA Payment	9,595	9,327	9,051	9,094
Total Accumulated Debt ($ billion)	2,501	5,136	7,900	11,379
		-2.8%	-3.0%	0.5%
Ratepayer GA Payment	10,346	10,093	9,827	9,886
Accumulated debt in present year (including 5% interest,	1,749	3,580	5,488	8,052
Ratepayer GA Payment	10,648	10,303	10,186	10,873
Accumulated debt in present year (including 5% interest,	1,447	3,053	4,575	6,105

2021	2022	2023	2024	2025	2026	2027
10,844	10,634	10,243	11,128	10,527	10,033	11,043

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
10844	10634	10243	11128	10527	10033	11043
8,184	8,374	8,569	8,768	8,972	9,180	9,394
14,621	17,629	20,205	23,599	26,362	28,564	31,674
-10.0%	2.3%	2.3247180421718900000%	2.3%	2.3%	2.3%	2.3%
	TRUE	FALSE	FALSE	FALSE	FALSE	
8,991	9,200	9,414	9,633	9,857	10,086	10,321
10,316	12,278	13,735	15,933	17,418	18,256	19,913
9,733	9,573	9,240	10,128	9,620	9,238	10,318
7,527	8,973	10,436	11,970	13,490	14,976	16,467

2028	2029	2030	2031	2032	2033	2034	2035
10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662

2028	2029	2030	2031	2032	2033	2034	2035
10819	10009	9721	8654	8820	8238	7756	5662
9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585
34,502	36,440	37,962	38,260	38,500	37,925	36,589	34,538
2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	-13.1%
10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563
21,190	21,477	21,240	20,426	19,571	18,672	17,727	16,733
10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879
17,876	18,843	19,521	20,007	20,312	20,325	19,755	18,549

2036	2037	2038	2039	2040	2041	2042	2043
5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811

2036	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**
5389	5129	4881	4645	4421	4207	4004	3811
9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733
32,383	30,117	27,736	25,232	22,601	19,835	16,927	13,871
-2.9%	-2.8%	-2.7%	-2.7%	-2.6%	-2.6%	-2.5%	-2.4%
7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711
15,689	14,591	13,438	12,225	10,950	9,610	8,201	6,720
7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348
17,050	15,464	13,694	12,062	10,556	9,143	7,810	6,672

2044	2045	2046	2047	2048

3,627 3,451 3,285 3,126 2,975 2,831 2,695

2044	2045	2046	2047	2048	2049	2050
3627	3451	3285	3126	2975	2831	2695

7,549	7,374	7,207	7,048	2,975	2,831	2,695
10,658	7,281	3,731	0	0	0	0
-2.4%	-2.3%	-2.3%				
5,527	5,352	5,185	5,026	2,975	2,831	2,695
5,164	3,528	1,808	-	-	-	-
4,712	4,007	3,619	3,425	3,156	3,011	2,878
5,928	5,676	5,633	5,623	5,730	5,843	5,959

5%	End of Year Debt Drawdown	2017	2018
	IESO GA cost forecast + extrapolation	12,095	11,835
	Ratepayer GA Payment	9,595	9,327
	GA Debt Requirement	2,501	2,508
	Debt, Beginning of Year	0	2,501
	Interest Cost - Feb22 Option 1, 30-yr - End of Year Debt Drawdown	*0*	*128*
	Additional GA Debt Drawdown, End of Year	2,501	2,508
	Accumulated debt in present year (including 5.12% annual interest)	2,501	5,136

5.000050%	End of Year Debt Drawdown	2017	2018
			-2.16%
			-2.79%
	IESO GA cost forecast + extrapolation	12,095	11,835
	Ratepayer GA Payment	9,595	9,327
	GA Debt Requirement	2,501	2,508
	Debt, Beginning of Year	0	2,501
	Interest Cost - Feb22 Option 1, 30-yr - End of Year Debt Drawdown	*0*	*128*
	Additional GA Debt Drawdown, End of Year	2,501	2,508
	Accumulated debt in present year (including 5.12% annual interest)	2,501	5,136
		0.00	0.00
		0.90	for 0.00005
		4518.213	for 0.25%

5.250000%	End of Year Debt Drawdown	2017	2018
	IESO GA cost forecast + extrapolation	12,095	11,835
	Ratepayer GA Payment	9,595	9,327
	GA Debt Requirement	2,501	2,508
	Debt, Beginning of Year	0	2,501
	Interest Cost - Feb22 Option 1, 30-yr - End of Year Debt Drawdown	*0*	*134*
	Additional GA Debt Drawdown, End of Year	2,501	2,508
	Accumulated debt in present year (including 5.12% annual interest)	2,501	5,143

5.25% and 5.0%	0	7
	0	6.544088
	-4746.31	

2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
	22.9%								
	0.5%	-10.0%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%
11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819
9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
5,136	7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675
263	*404*	*582*	*748*	*902*	*1,034*	*1,207*	*1,349*	*1,461*	*1,621*
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675	34,502

2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
-2.39%	5.34%	-10.89%	-1.94%	-3.67%	8.64%	-5.40%	-4.69%	10.06%	-2.03%
-2.95%	0.47%	-10.01%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%
11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819
9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
5,136	7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675
263	*404*	*582*	*748*	*902*	*1,034*	*1,207*	*1,349*	*1,461*	*1,621*
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675	34,502
0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02

5%

5000

2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819
9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
5,143	7,921	11,421	14,695	17,745	20,374	23,830	26,667	28,955	32,161
277	*426*	*614*	*790*	*954*	*1,096*	*1,282*	*1,434*	*1,557*	*1,730*
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
7,921	11,421	14,695	17,745	20,374	23,830	26,667	28,955	32,161	35,098

14	22	32	42	52	62	74	85	96	109
13.77695	21.71447	31.92933	42.04725	52.06963	61.4769	73.50439	84.49516	94.58025	107.5596

2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
2.3%	2.3%	2.3%	2.3%						
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881
9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
34,502	36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,384	30,119
1,765	*1,864*	*1,942*	*1,957*	*1,970*	*1,940*	*1,872*	*1,767*	*1,657*	*1,541*
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,384	30,119	27,737

2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
-7.49%	-2.87%	-10.98%	1.91%	-6.60%	-5.85%	-27.00%	-4.83%	-4.83%	-4.83%
2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	-13.13%	-2.85%	-2.80%	-2.74%
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881
9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
34,502	36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,385	30,119
1,765	*1,864*	*1,942*	*1,958*	*1,970*	*1,940*	*1,872*	*1,767*	*1,657*	*1,541*
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,385	30,119	27,738
0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04

2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881
9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
35,098	37,159	38,815	39,258	39,652	39,240	38,074	36,200	34,224	32,142
1,888	*1,998*	*2,088*	*2,111*	*2,133*	*2,110*	*2,048*	*1,947*	*1,841*	*1,729*
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
37,159	38,815	39,258	39,652	39,240	38,074	36,200	34,224	32,142	29,949

122	134	145	154	163	170	176	180	184	188
120.4625	131.6985	142.4188	150.4868	158.814	165.4355	170.4025	173.755	177.0044	180.1316

2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975
8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
27,737	25,234	22,603	19,837	16,929	13,873	10,661	7,284	3,734	3
1,419	*1,291*	*1,156*	*1,015*	*866*	*710*	*545*	*373*	*191*	*0*
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
25,234	22,603	19,837	16,929	13,873	10,661	7,284	3,734	3	3

2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%
-2.68%	-2.62%	-2.56%	-2.50%	-2.44%	-2.38%	-2.32%	-2.26%	-2.20%	-57.79%
4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975
8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
27,738	25,235	22,603	19,837	16,930	13,874	10,661	7,285	3,735	4
1,419	*1,291*	*1,156*	*1,015*	*866*	*710*	*545*	*373*	*191*	*0*
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
25,235	22,603	19,837	16,930	13,874	10,661	7,285	3,735	4	4
0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04

2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975
8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
29,949	27,637	25,201	22,634	19,929	17,079	14,075	10,909	7,574	4,059
1,611	*1,486*	*1,355*	*1,217*	*1,072*	*919*	*757*	*587*	*407*	*218*
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
27,637	25,201	22,634	19,929	17,079	14,075	10,909	7,574	4,059	4,277

192	195	199	202	206	209	212	214	216	218
183.1154	185.9331	188.5597	190.9684	193.13	195.013	196.583	197.8033	198.6338	199.0316

2049	2050
2,831	2,695
2,831	2,695
0	0
3	3
0	*0*
0	0
3	3

2049	2050
-4.83%	-4.83%
-4.83%	-4.83%
2,831	2,695
2,831	2,695
0	0
4	4
0	*0*
0	0
4	4
0.04	0.04

2049	2050
2,831	2,695
2,831	2,695
0	0
4,277	4,507
230	*242*
0	0
4,507	4,750

230	242
209.2149	219.9193

Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Interest Rate, monthly comp.	**5.000000%**		
Annual Interest Rate	5.12%	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb22_1_30yr

Option 1 - Bills Lowered 25%, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,501	2,636
Interest Portion	0	128

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	625	2,534
Interest Portion	-	32

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $39 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb22_2_30yr

Option 2 - Bills Lowered 20%, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,749	1,831
Interest Portion	0	89

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	437	1,770
Interest Portion	-	22

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $21 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb22_3_30yr

Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606
Interest Portion	0	74

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,487
Interest Portion	-	19

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	437 - 625	1,770 - 2,534

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	625	2534
Debt-Finance Global Adjustment Costs, Option 1a	437	1770
RRRP		
OESP – Enhance Benefit		162

Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**625**	**2774**
Total, B	437	2010

Proposed Program Total:	437 - 625	2,010 - 2,774

ining

0	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

2019	2020	2021	2022	
				CheckInt
2,764	3,479	3,242	3,008	
263	404	582	748	

2018-19	2019-20	2020-21	2021-2022
2,668	2,942	3,420	3,183
162	298	449	624

Option 1
Option 2
Option 3
Option 1

Assumes an inte

Option 1
Option 2
Option 3

2032.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,908	2,564	2,264	1,961
183	281	412	528

2018-19	2019-20	2020-21	2021-2022
1,850	2,072	2,489	2,189
113	208	314	441

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446
156	234	312	385

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429
95	176	254	331

2033.

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022
1,850 - 2,668	2,072 - 2,942	2,489 - 3,420	2,189 - 3,183

/1

2018-19[1]	2019-20[1]	2020-21[1]
2668	2942	3420
1850	2072	2489
225	279	323

60	60	60
18	18	18
2971	**3299**	**3821**
2153	2429	2890

2,153 - 2,971	2,429 - 3,299	2,890 - 3,821

	$35,723	
	$35,542	
	0.51%	27.00%

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$24,976.5	$35,542.1	$38,501	occurs in Year 2032
$14,759.8	$19,733.1	$21,477	occurs in Year 2029
$12,862.3	$19,498.4	$20,326	occurs in Year 2033
#REF!	#REF!	#REF!	#REF!

erest rate of 5.00% (compounded monthly).

			5000
5.00000%	5.00005%	0.00005%	0.25%
35,542	35,543	0.90	4,518.21
19,733	19,734	0.52	2,619.41
19,498	19,499	0.48	2,410.01
0.249950%			

Tab Name		Total Accumulated Interest Costs
Feb22_1_30yr	$31,810	$40,288
Feb22_2_30yr	$17,586	$22,491
Feb22_3_30yr	$17,202	$22,028
Mar_1_30yr		

	Total Accumulated Interest Costs
Option 1	$31,810 to $40,288**
Option 2	$17,586 to $22,491**
Option 3	$17,202 to $22,028**

** With a higher interest rate, the amortization period extend beyond the 30-year forecast

ted period resulting in a remaining balance at the end of the 30-year period. For specifics, see details belo

w.

Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb22_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,501	2,636	2,764	3,479	3,242	3,008	2,577	3,394	2,763	2,202	3,111	2,828	1,938	1,522	299	240	-575	-1,336	-2,050	-2,155	-2,265	-2,381	-2,503	-2,631	-2,766	-2,907	-3,056	-3,213	-3,377	-3,550	-3,731	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,560	2,699	2,829	3,561	3,319	3,079	2,638	3,475	2,828	2,254	3,185	2,895	1,985	1,558	306	246	-588	-1,368	-2,099	-2,206	-2,319	-2,438	-2,563	-2,694	-2,832	-2,977	-3,129	-3,289	-3,457	-3,634	-3,820	0	0	0
			59	63	66	83	77	72	61	81	66	52	74	67	46	36	7	6	-14	-32	-49	-51	-54	-57	-60	-63	-66	-69	-73	-76	-80	-84	-89	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,479	1,970	35,542.1
Equal Monthly Debt Drawdown	3,561	1,963	

	Feb22 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	38,500.8	2032	24,977
Equal Monthly Debt Drawdown	39,416.6		

Feb22 Option 1, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																			26
($ millions)		-2.79%	-2.95%	0.47%	-10.01%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	-13.13%	-2.85%	-2.80%	-2.74%	-2.68%	-2.62%	-2.56%	-2.50%	-2.44%	-2.38%	-2.32%	-2.26%	-2.20%	-57.79%	-4.83%	-4.83%	
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
a — Debt, Beginning of Year	0	2,501	5,136	7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675	34,502	36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,384	30,119	27,737	25,234	22,603	19,837	16,929	13,873	10,661	7,284	3,734	3	3	3	
c = a*5% — *Interest Cost - Feb22 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*128*	*263*	*404*	*582*	*748*	*902*	*1,034*	*1,207*	*1,349*	*1,461*	*1,621*	*1,765*	*1,864*	*1,942*	*1,957*	*1,970*	*1,940*	*1,872*	*1,767*	*1,657*	*1,541*	*1,419*	*1,291*	*1,156*	*1,015*	*866*	*710*	*545*	*373*	*191*	*0*	*0*	*0*	35,542
b — Additional GA Debt Drawdown, End of Year	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	2,501	5,136	7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675	34,502	36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,384	30,119	27,737	25,234	22,603	19,837	16,929	13,873	10,661	7,284	3,734	3	3	3	3	
	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	
Feb22 Option 1, 30-yr - Accumulated Interest Costs	0	128	391	795	1,377	2,125	3,027	4,061	5,268	6,617	8,078	9,699	11,464	12,986	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	10,661	7,284	3,734	3	3	3	3	
Feb22 Option 1, 30-yr - Accumulated Debt Principal	2,501	5,009	7,509	10,584	13,244	15,504	17,178	19,539	21,094	21,947	23,596	24,803	24,977	24,977	24,977	25,216	24,642	23,306	21,255	19,100	16,835	14,453	11,950	9,319	6,553	3,645	589	0	0	0	0	0	0	0	
Feb22 Option 1, 30-yr - Accumulated Interest Costs	0	128	391	795	1,377	2,125	3,027	4,061	5,268	6,617	8,078	9,699	11,464	13,328	15,271	17,228	19,198	21,138	23,010	24,777	26,434	27,975	29,394	30,685	31,842	32,857	33,723	34,433	34,978	35,351	35,542				
Feb22 Option 1, 30-yr - Accumulated Debt Principal	2,501	5,009	7,509	10,584	13,244	15,504	17,178	19,539	21,094	21,947	23,596	24,803	24,977	24,634	22,990	21,273	18,728	15,452	11,529	7,607	3,685	-238	-4,160	-8,082	-12,005	-15,927	-19,849	-23,772	-27,694	-31,616	-35,539				
Fiscal Exposure - End of Year Debt Drawdown	2,501	2,636	2,764	3,479	3,242	3,008	2,577	3,394	2,763	2,202	3,111	2,828	1,938	1,522	299	240	-575	-1,336	-2,050	-2,155	-2,265	-2,381	-2,503	-2,631	-2,766	-2,907	-3,056	-3,213	-3,377	-3,550	-3,731	0	0	0	

Feb22 Option 1, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
Debt, Beginning of Year	0	2,560	5,259	8,088	11,650	14,969	18,048	20,686	24,161	26,989	29,243	32,428	35,323	37,307	38,865	39,171	39,417	38,828	37,460	35,361	33,155	30,835	28,397	25,834	23,140	20,309	17,332	14,203	10,914	7,457	3,823	3	3	3	
Interest Cost - Feb22 Option 1, 30-yr	*59*	*191*	*329*	*487*	*659*	*820*	*963*	*1,114*	*1,273*	*1,401*	*1,535*	*1,688*	*1,811*	*1,901*	*1,949*	*1,963*	*1,956*	*1,909*	*1,823*	*1,716*	*1,603*	*1,484*	*1,360*	*1,228*	*1,091*	*946*	*793*	*633*	*465*	*288*	*102*	*0*	*0*	*0*	35,542
Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,560	5,259	8,088	11,650	14,969	18,048	20,686	24,161	26,989	29,243	32,428	35,323	37,307	38,865	39,171	39,417	38,828	37,460	35,361	33,155	30,835	28,397	25,834	23,140	20,309	17,332	14,203	10,914	7,457	3,823	3	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown	2,560	2,699	2,829	3,561	3,319	3,079	2,638	3,475	2,828	2,254	3,185	2,895	1,985	1,558	306	246	-588	-1,368	-2,099	-2,206	-2,319	-2,438	-2,563	-2,694	-2,832	-2,977	-3,129	-3,289	-3,457	-3,634	-3,820	0	0	0	
Monthly Drawdown	208	209	208	256	222	188	140	197	130	71	137	101	14	(29)	(137)	(143)	(212)	(273)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	-	-	-	
FV of Monthly Drawdown at 5%	2,560	2,568	2,560	3,148	2,723	2,313	1,715	2,416	1,592	873	1,688	1,236	177	(351)	(1,683)	(1,758)	(2,605)	(3,355)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	-	-	-	
Annual Interest Cost on New Drawdowns	59	60	59	73	63	54	40	56	37	20	39	29	4	(8)	(39)	(41)	(61)	(78)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	-	-	-	
Annual Interest Cost on Opening Balance	-	131	269	414	596	766	923	1,058	1,236	1,381	1,496	1,659	1,807	1,909	1,988	2,004	2,017	1,987	1,917	1,809	1,696	1,578	1,453	1,322	1,184	1,039	887	727	558	382	196	0	0	0	
Total Annual Interest Cost	59	191	329	487	659	820	963	1,114	1,273	1,401	1,535	1,688	1,811	1,901	1,949	1,963	1,956	1,909	1,823	1,716	1,603	1,484	1,360	1,228	1,091	946	793	633	465	288	102	0	0	0	

Feb22 Option 1, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
Debt, Beginning of Year	0	2,533	5,202	8,001	11,524	14,808	17,854	20,464	23,901	26,699	28,929	32,080	34,943	36,907	38,448	38,750	38,993	38,411	37,058	34,981	32,799	30,504	28,092	25,557	22,892	20,091	17,146	14,051	10,797	7,377	3,782	3	3	3	
Interest Cost - Feb22 Option 1, 30-yr	*32*	*162*	*298*	*449*	*624*	*787*	*935*	*1,077*	*1,243*	*1,377*	*1,501*	*1,657*	*1,790*	*1,884*	*1,946*	*1,961*	*1,962*	*1,923*	*1,846*	*1,740*	*1,628*	*1,510*	*1,387*	*1,257*	*1,121*	*978*	*827*	*669*	*502*	*327*	*143*	*0*	*0*	*0*	35,542
Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,533	5,202	8,001	11,524	14,808	17,854	20,464	23,901	26,699	28,929	32,080	34,943	36,907	38,448	38,750	38,993	38,411	37,058	34,981	32,799	30,504	28,092	25,557	22,892	20,091	17,146	14,051	10,797	7,377	3,782	3	3	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown	2,533	2,670	2,799	3,523	3,283	3,046	2,610	3,437	2,798	2,230	3,150	2,864	1,963	1,541	302	243	-582	-1,353	-2,077	-2,183	-2,294	-2,412	-2,535	-2,665	-2,801	-2,945	-3,095	-3,254	-3,420	-3,595	-3,779	0	0	0	
Bi-Annual Drawdown	1,250	1,254	1,250	1,537	1,330	1,130	837	1,180	778	427	825	604	87	(171)	(822)	(859)	(1,272)	(1,638)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	-	-	-	
FV of Bi-Annual Drawdown at 5%	2,533	2,540	2,533	3,114	2,694	2,289	1,696	2,390	1,575	864	1,670	1,223	175	(347)	(1,665)	(1,740)	(2,577)	(3,319)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	-	-	-	
Annual Interest Cost on New Drawdowns	32	32	32	39	34	29	21	30	20	11	21	15	2	(4)	(21)	(22)	(33)	(42)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	-	-	-	
Annual Interest Cost on Opening Balance	-	130	266	409	590	758	913	1,047	1,223	1,366	1,480	1,641	1,788	1,888	1,967	1,983	1,995	1,965	1,896	1,790	1,678	1,561	1,437	1,308	1,171	1,028	877	719	552	377	193	0	0	0	
Total Annual Interest Cost	32	162	298	449	624	787	935	1,077	1,243	1,377	1,501	1,657	1,790	1,884	1,946	1,961	1,962	1,923	1,846	1,740	1,628	1,510	1,387	1,257	1,121	978	827	669	502	327	143	0	0	0	

Feb22 Option 1, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
Debt, Beginning of Year	0	2,565	5,268	8,102	11,670	14,995	18,080	20,722	24,203	27,036	29,295	32,485	35,385	37,373	38,933	39,240	39,486	38,896	37,526	35,423	33,213	30,889	28,447	25,880	23,181	20,344	17,363	14,228	10,933	7,470	3,830	3	3	3	
Interest Cost - Feb22 Option 1, 30-yr	*64*	*195*	*333*	*493*	*665*	*825*	*968*	*1,121*	*1,278*	*1,405*	*1,541*	*1,693*	*1,815*	*1,903*	*1,950*	*1,964*	*1,955*	*1,906*	*1,820*	*1,712*	*1,599*	*1,480*	*1,355*	*1,224*	*1,086*	*941*	*788*	*628*	*459*	*282*	*96*	*0*	*0*	*0*	35,542
Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,565	5,268	8,102	11,670	14,995	18,080	20,722	24,203	27,036	29,295	32,485	35,385	37,373	38,933	39,240	39,486	38,896	37,526	35,423	33,213	30,889	28,447	25,880	23,181	20,344	17,363	14,228	10,933	7,470	3,830	3	3	3	3	
Fiscal Exposure - Average Debt Drawdown	2,565	2,703	2,834	3,568	3,325	3,085	2,643	3,481	2,833	2,258	3,190	2,900	1,988	1,561	306	246	-589	-1,370	-2,103	-2,210	-2,323	-2,442	-2,567	-2,699	-2,837	-2,982	-3,134	-3,295	-3,463	-3,640	-3,827	0	0	0	

Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb22_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,749	1,831	1,908	2,564	2,264	1,961	1,457	2,198	1,485	838	1,656	1,277	287	-237	-814	-855	-899	-945	-993	-1,044	-1,098	-1,154	-1,213	-1,275	-1,340	-1,409	-1,481	-1,556	-1,636	-1,720	-1,808	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,791	1,875	1,953	2,625	2,318	2,008	1,492	2,250	1,521	858	1,696	1,308	294	-243	-833	-876	-920	-967	-1,017	-1,069	-1,124	-1,181	-1,242	-1,305	-1,372	-1,442	-1,516	-1,593	-1,675	-1,761	-1,851	0	0	0	
			42	44	45	61	54	47	35	52	35	20	39	30	7	-6	-19	-20	-21	-22	-24	-25	-26	-27	-29	-30	-32	-34	-35	-37	-39	-41	-43	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,564	1,099	19,733
Equal Monthly Debt Drawdown	2,625	1,093	

	Feb22 Option 2, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	21,477.1	2029	14,760
Equal Monthly Debt Drawdown	21,988		

Feb22 Option 2, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				26
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
a	Debt, Beginning of Year	0	1,749	3,580	5,488	8,052	10,316	12,278	13,735	15,933	17,418	18,256	19,913	21,190	21,477	21,240	20,427	19,571	18,672	17,727	16,734	15,690	14,592	13,438	12,226	10,951	9,611	8,202	6,722	5,165	3,529	1,809	2	2	2	
c = a*5%	*Interest Cost - Feb22 Option 2, 30-yr - End of Year Debt Drawdown*	*0*	*89*	*183*	*281*	*412*	*528*	*628*	*703*	*815*	*891*	*934*	*1,019*	*1,084*	*1,099*	*1,087*	*1,045*	*1,001*	*955*	*907*	*856*	*803*	*747*	*688*	*625*	*560*	*492*	*420*	*344*	*264*	*181*	*93*	*0*	*0*	*0*	*0*	19,733
b	Additional GA Debt Drawdown, End of Year	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,749	3,580	5,488	8,052	10,316	12,278	13,735	15,933	17,418	18,256	19,913	21,190	21,477	21,240	20,427	19,571	18,672	17,727	16,734	15,690	14,592	13,438	12,226	10,951	9,611	8,202	6,722	5,165	3,529	1,809	2	2	2	2	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	
	Feb22 Option 2, 30-yr - Accumulated Interest Costs	0	89	273	553	965	1,493	2,121	2,824	3,639	4,530	5,464	6,483	7,567	7,330	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	5,165	3,529	1,809	2	2	2	
	Feb22 Option 2, 30-yr - Accumulated Debt Principal	1,749	3,491	5,216	7,499	9,351	10,784	11,614	13,109	13,779	13,726	14,448	14,707	13,910	13,910	13,910	13,055	12,156	11,211	10,217	9,173	8,075	6,922	5,709	4,434	3,094	1,685	205	0	0	0	0	0	0	0	
	Feb22 Option 2, 30-yr - Accumulated Interest Costs	0	89	273	553	965	1,493	2,121	2,824	3,639	4,530	5,464	6,483	7,567	8,666	9,753	10,798	11,799	12,755	13,661	14,518	15,320	16,067	16,754	17,380	17,940	18,432	18,852	19,195	19,460	19,640	19,733				
	Feb22 Option 2, 30-yr - Accumulated Debt Principal	1,749	3,491	5,216	7,499	9,351	10,784	11,614	13,109	13,779	13,726	14,448	14,707	13,910	12,574	10,674	8,773	6,873	4,973	3,072	1,172	-728	-2,628	-4,529	-6,429	-8,329	-10,230	-12,130	-14,030	-15,931	-17,831	-19,731				
Fiscal Exposure - End of Year Debt Drawdown		1,749	1,831	1,908	2,564	2,264	1,961	1,457	2,198	1,485	838	1,656	1,277	287	-237	-814	-855	-899	-945	-993	-1,044	-1,098	-1,154	-1,213	-1,275	-1,340	-1,409	-1,481	-1,556	-1,636	-1,720	-1,808	0	0	0	

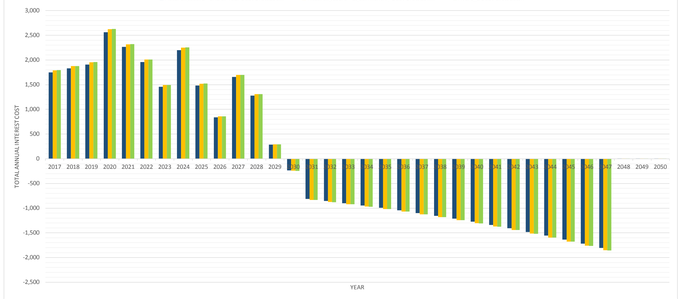
Feb22 Option 2, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Debt, Beginning of Year	0	1,791	3,666	5,619	8,244	10,562	12,570	14,062	16,312	17,832	18,691	20,386	21,694	21,988	21,745	20,912	20,037	19,116	18,149	17,132	16,063	14,939	13,758	12,517	11,211	9,839	8,397	6,881	5,288	3,613	1,852	2	2	2	
1,093	*Interest Cost - Feb22 Option 2, 30-yr*	*42*	*133*	*229*	*342*	*466*	*574*	*663*	*755*	*850*	*911*	*973*	*1,049*	*1,091*	*1,093*	*1,067*	*1,025*	*980*	*933*	*883*	*831*	*777*	*719*	*659*	*595*	*528*	*458*	*384*	*307*	*225*	*140*	*50*	*0*	*0*	*0*	19,733
	Additional GA Debt Drawdown	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,791	3,666	5,619	8,244	10,562	12,570	14,062	16,312	17,832	18,691	20,386	21,694	21,988	21,745	20,912	20,037	19,116	18,149	17,132	16,063	14,939	13,758	12,517	11,211	9,839	8,397	6,881	5,288	3,613	1,852	2	2	2	2	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,791	1,875	1,953	2,625	2,318	2,008	1,492	2,250	1,521	858	1,696	1,308	294	-243	-833	-876	-920	-967	-1,017	-1,069	-1,124	-1,181	-1,242	-1,305	-1,372	-1,442	-1,516	-1,593	-1,675	-1,761	-1,851	0	0	0	

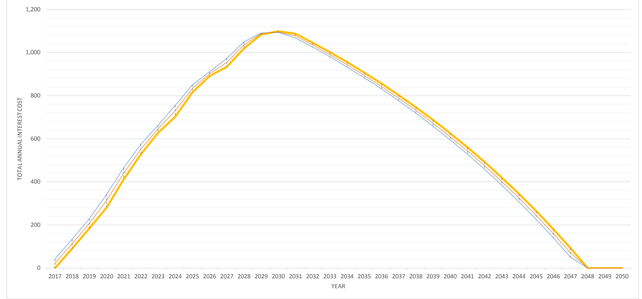
	Monthly Drawdown	146	145	144	190	154	119	69	125	56	(4)	60	22	(66)	(111)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	-	-	-	
	FV of Monthly Drawdown at 5%	1,791	1,783	1,766	2,337	1,896	1,467	849	1,531	686	(54)	739	265	(816)	(1,368)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	41	41	54	44	34	20	36	16	(1)	17	6	(19)	(32)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	-	-	-	
	Annual Interest Cost on Opening Balance	-	92	188	287	422	540	643	719	835	912	956	1,043	1,110	1,125	1,113	1,070	1,025	978	929	877	822	764	704	640	574	503	430	352	271	185	95	0	0	0	
	Total Annual Interest Cost	42	133	229	342	466	574	663	755	850	911	973	1,049	1,091	1,093	1,067	1,025	980	933	883	831	777	719	659	595	528	458	384	307	225	140	50	0	0	0	

Feb22 Option 2, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Debt, Beginning of Year	0	1,772	3,626	5,559	8,155	10,448	12,435	13,911	16,137	17,641	18,490	20,168	21,461	21,752	21,512	20,688	19,822	18,911	17,954	16,948	15,890	14,779	13,610	12,382	11,091	9,734	8,307	6,808	5,231	3,574	1,833	2	2	2	
	Interest Cost - Feb22 Option 2, 30-yr	*22*	*113*	*208*	*314*	*441*	*553*	*647*	*731*	*834*	*902*	*955*	*1,035*	*1,088*	*1,096*	*1,076*	*1,034*	*990*	*943*	*894*	*843*	*789*	*732*	*672*	*609*	*543*	*474*	*401*	*324*	*243*	*159*	*69*	*0*	*0*	*0*	19,733
	Additional GA Debt Drawdown	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,772	3,626	5,559	8,155	10,448	12,435	13,911	16,137	17,641	18,490	20,168	21,461	21,752	21,512	20,688	19,822	18,911	17,954	16,948	15,890	14,779	13,610	12,382	11,091	9,734	8,307	6,808	5,231	3,574	1,833	2	2	2	2	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,772	1,855	1,932	2,596	2,293	1,986	1,476	2,226	1,504	849	1,678	1,294	291	-240	-824	-866	-911	-957	-1,006	-1,058	-1,112	-1,168	-1,228	-1,291	-1,357	-1,427	-1,500	-1,576	-1,657	-1,742	-1,831	0	0	0	

	Bi-Annual Drawdown	875	871	862	1,141	926	717	415	748	335	(26)	361	129	(399)	(668)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,772	1,764	1,747	2,312	1,876	1,452	840	1,514	679	(53)	732	262	(807)	(1,353)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	-	-	-	
	Annual Interest Cost on New Drawdowns	22	22	22	29	24	18	11	19	9	(1)	9	3	(10)	(17)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	-	-	-	
	Annual Interest Cost on Opening Balance	-	91	186	284	417	535	636	712	826	903	946	1,032	1,098	1,113	1,101	1,058	1,014	968	919	867	813	756	696	633	567	498	425	348	268	183	94	0	0	0	
	Total Annual Interest Cost	22	113	208	314	441	553	647	731	834	902	955	1,035	1,088	1,096	1,076	1,034	990	943	894	843	789	732	672	609	543	474	401	324	243	159	69	0	0	0	

Feb22 Option 2, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Debt, Beginning of Year	0	1,794	3,672	5,629	8,258	10,580	12,592	14,086	16,340	17,864	18,724	20,422	21,732	22,027	21,784	20,949	20,072	19,150	18,181	17,162	16,091	14,965	13,782	12,538	11,231	9,857	8,412	6,894	5,297	3,619	1,856	2	2	2	
	Interest Cost - Feb22 Option 2, 30-yr	*45*	*136*	*232*	*346*	*470*	*578*	*665*	*759*	*853*	*913*	*976*	*1,051*	*1,091*	*1,093*	*1,066*	*1,023*	*978*	*931*	*882*	*829*	*775*	*717*	*657*	*593*	*526*	*456*	*382*	*304*	*222*	*137*	*46*	*0*	*0*	*0*	19,733
	Additional GA Debt Drawdown	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,794	3,672	5,629	8,258	10,580	12,592	14,086	16,340	17,864	18,724	20,422	21,732	22,027	21,784	20,949	20,072	19,150	18,181	17,162	16,091	14,965	13,782	12,538	11,231	9,857	8,412	6,894	5,297	3,619	1,856	2	2	2	2	
Fiscal Exposure - Average Debt Drawdown		1,794	1,878	1,957	2,629	2,322	2,011	1,495	2,254	1,523	860	1,699	1,310	294	-243	-834	-877	-922	-969	-1,019	-1,071	-1,126	-1,183	-1,244	-1,307	-1,374	-1,445	-1,519	-1,596	-1,678	-1,764	-1,854	0	0	0	





Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb22_3_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	
			34	38	36	36	34	34	35	36	36	35	35	34	23	16	12	7	0	-14	-29	-36	-38	-42	-39	-36	-34	-32	-27	-18	-6	-1	0	3	3	3	142

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	1,606	1,040	19,498
Equal Monthly Debt Drawdown	1,644	1,040	

	Feb22 Option 3, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	20,325.7	2033	12,862
Equal Monthly Debt Drawdown	20,809		

Feb22 Option 3, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				26
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
a	Debt, Beginning of Year	0	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	
c = a*5%	*Interest Cost - Feb22 Option 3, 30-yr - End of Year Debt Drawdown*	*0*	*74*	*156*	*234*	*312*	*385*	*459*	*534*	*612*	*690*	*766*	*842*	*915*	*964*	*999*	*1,024*	*1,039*	*1,040*	*1,011*	*949*	*872*	*791*	*701*	*617*	*540*	*468*	*400*	*341*	*303*	*290*	*288*	*288*	*293*	*299*	19,498
b	Additional GA Debt Drawdown, End of Year	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
	Feb22 Option 3, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,659	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
	Feb22 Option 3, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,862	12,862	13,167	13,181	12,611	11,405	9,906	8,320	6,550	4,918	3,412	2,000	667	-472	0	0	0	0	0	0	0	
	Feb22 Option 3, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,943	8,967	10,006	11,046	12,057	13,006	13,878	14,669	15,370	15,987	16,527	16,995	17,395	17,736	18,040	18,330	18,618				
	Feb22 Option 3, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,064	11,345	10,319	8,710	6,493	4,045	1,586	-974	-3,307	-5,431	-7,383	-9,184	-10,721	-11,807	-12,362	-12,696	-12,994				
Fiscal Exposure - End of Year Debt Drawdown		1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	

Feb22 Option 3, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	
1,040	*Interest Cost - Feb22 Option 3, 30-yr*	*34*	*112*	*192*	*270*	*346*	*420*	*494*	*570*	*649*	*726*	*802*	*876*	*938*	*980*	*1,010*	*1,031*	*1,040*	*1,026*	*982*	*913*	*835*	*749*	*662*	*581*	*507*	*436*	*373*	*324*	*297*	*289*	*288*	*290*	*296*	*302*	19,640
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	6,102	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	

	Monthly Drawdown	121	128	114	108	93	88	84	83	76	66	60	47	4	(24)	(43)	(60)	(85)	(134)	(185)	(204)	(205)	(213)	(194)	(177)	(163)	(150)	(128)	(90)	(46)	(28)	(25)	(15)	(15)	(15)	
	FV of Monthly Drawdown at 5%	1,482	1,568	1,398	1,326	1,137	1,086	1,028	1,024	929	815	742	580	54	(292)	(525)	(736)	(1,050)	(1,648)	(2,269)	(2,506)	(2,517)	(2,621)	(2,389)	(2,174)	(1,999)	(1,844)	(1,574)	(1,111)	(568)	(342)	(306)	(185)	(184)	(188)	
	Annual Interest Cost on New Drawdowns	34	36	32	31	26	25	24	24	22	19	17	13	1	(7)	(12)	(17)	(24)	(38)	(53)	(58)	(58)	(61)	(55)	(51)	(46)	(43)	(37)	(26)	(13)	(8)	(7)	(4)	(4)	(4)	
	Annual Interest Cost on Opening Balance	-	76	160	240	320	394	470	547	627	707	784	863	936	987	1,023	1,048	1,064	1,065	1,035	972	893	810	717	632	553	479	409	350	311	297	295	295	300	306	
	Total Annual Interest Cost	34	112	192	270	346	420	494	570	649	726	802	876	938	980	1,010	1,031	1,040	1,026	982	913	835	749	662	581	507	436	373	324	297	289	288	290	296	302	

Feb22 Option 3, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	
	Interest Cost - Feb22 Option 3, 30-yr	*19*	*95*	*176*	*254*	*331*	*404*	*478*	*554*	*632*	*709*	*785*	*861*	*927*	*973*	*1,005*	*1,028*	*1,039*	*1,033*	*995*	*930*	*852*	*769*	*680*	*598*	*522*	*451*	*385*	*332*	*300*	*290*	*288*	*289*	*295*	*301*	19,575
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	6,037	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,466	1,626	1,541	1,549	1,441	1,465	1,482	1,554	1,539	1,505	1,510	1,427	979	687	492	309	13	-577	-1,221	-1,518	-1,607	-1,792	-1,653	-1,525	-1,430	-1,350	-1,153	-753	-255	-44	-10	109	115	117	

	Bi-Annual Drawdown	724	766	683	648	555	530	502	500	454	398	363	283	26	(143)	(256)	(359)	(513)	(805)	(1,108)	(1,224)	(1,229)	(1,280)	(1,167)	(1,062)	(976)	(900)	(769)	(543)	(278)	(167)	(149)	(90)	(90)	(92)	
	FV of Bi-Annual Drawdown at 5%	1,466	1,551	1,383	1,312	1,125	1,075	1,017	1,013	919	806	735	573	53	(289)	(519)	(728)	(1,039)	(1,630)	(2,245)	(2,479)	(2,490)	(2,593)	(2,363)	(2,150)	(1,977)	(1,824)	(1,557)	(1,099)	(562)	(338)	(302)	(183)	(182)	(186)	
	Annual Interest Cost on New Drawdowns	19	20	17	17	14	14	13	13	12	10	9	7	1	(4)	(7)	(9)	(13)	(21)	(28)	(31)	(31)	(33)	(30)	(27)	(25)	(23)	(20)	(14)	(7)	(4)	(4)	(2)	(2)	(2)	
	Annual Interest Cost on Opening Balance	-	75	158	237	316	390	465	541	620	699	776	853	926	976	1,012	1,037	1,053	1,053	1,024	961	884	801	710	625	547	474	405	346	307	294	292	291	297	303	
	Total Annual Interest Cost	19	95	176	254	331	404	478	554	632	709	785	861	927	973	1,005	1,028	1,039	1,033	995	930	852	769	680	598	522	451	385	332	300	290	288	289	295	301	

Feb22 Option 3, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	
	Interest Cost - Feb22 Option 3, 30-yr	*37*	*115*	*195*	*273*	*349*	*422*	*497*	*573*	*651*	*728*	*804*	*879*	*939*	*981*	*1,011*	*1,031*	*1,040*	*1,025*	*980*	*911*	*832*	*746*	*659*	*579*	*504*	*434*	*371*	*322*	*297*	*289*	*288*	*290*	*296*	*302*	19,651
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	6,113	
Fiscal Exposure - Average Debt Drawdown		1,484	1,647	1,561	1,569	1,459	1,483	1,500	1,573	1,559	1,524	1,530	1,445	992	696	498	313	14	-585	-1,237	-1,537	-1,627	-1,814	-1,674	-1,545	-1,448	-1,367	-1,167	-763	-258	-44	-10	110	116	119	

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

IESO GA cost forecast + extrapolation

Scenario
Option 1a
Borrow $3.3B, Bills Lowered 20%, No Cap

Option 1b
Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B

	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168

Ratepayer GA Payment	8,753	8,535	8,311	7,650
Total Accumulated Debt ($ billion)	3,342	6,812	10,402	15,452

Ratepayer GA Payment	9,781	9,661	9,367	8,733
Accumulated debt in present year (including 5% interest,	2,314	4,606	7,027	10,822

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528
19,868	24,126	28,033	32,843	37,110	40,911	45,720	50,350
8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717
13,761	16,470	18,755	21,866	24,355	26,295	29,156	31,750

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**
10009	9721	8654	8820	8238	7756	5662	5389

8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319
54,201	57,751	60,200	62,719	64,559	65,780	64,732	63,114
9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913
33,472	34,796	34,919	35,008	34,309	32,878	31,035	29,098

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627

10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485
60,904	58,078	54,611	50,476	45,641	40,076	33,745	26,613
8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151
27,063	24,923	22,673	20,309	17,823	15,210	12,464	9,577

2045	2046	2047	2048

3,451	3,285	3,126	2,975	2,831	2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695

12,786	13,095	13410.34	2975.154	2831.461	2694.708
18,640	9,784	4.85E-06	0	0	0

6,976	6,809	6650.631	2975.154	2831.461	2694.708
6,543	3,353	5E-12	0	0	0

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

		5.00%	
Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb15_1a_30yr

Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,342	3,470
Interest Portion	0	171

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	835	3,374
Interest Portion	-	43

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $66 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb15_1b_30yr

Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,314	2,292
Interest Portion	0	118

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	579	2,309
Interest Portion	-	30

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $35 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

#REF!		
$ millions		
30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	362	1,487

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
	1	
	2	
	3	
	4 April	4
	5 May	5
	6 June	6
	7 July	7
	8 August	8
	9 September	9
	10 October	10
	11 November	11
	12 December	12
30-year term	**2016-17**	**2017-18**

Fiscal Exposure - Equal Monthly Debt Drawdown 579 - 835 2,309 - 3,374

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	835	3374
Debt-Finance Global Adjustment Costs, Option 1a	579	2309
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60

First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**835**	**3614**
Total, B	579	2549
Proposed Program Total:	579 - 835	2,549 - 3,614

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Option 1a
Option 2b

Assumes an inte

2019	2020	2021	2022
3,589	5,050	4,416	4,258
349	532	791	1,016

2018-19	2019-20	2020-21	2021-2022
3,500	3,955	4,892	4,377
215	394	597	847

2034.

depend on decision on accounting treatment.

2019	2020	2021	2022
2,421	3,795	2,938	2,709
236	360	554	704

2018-19	2019-20	2020-21	2021-2022
2,324	2,765	3,581	2,881
148	267	408	591

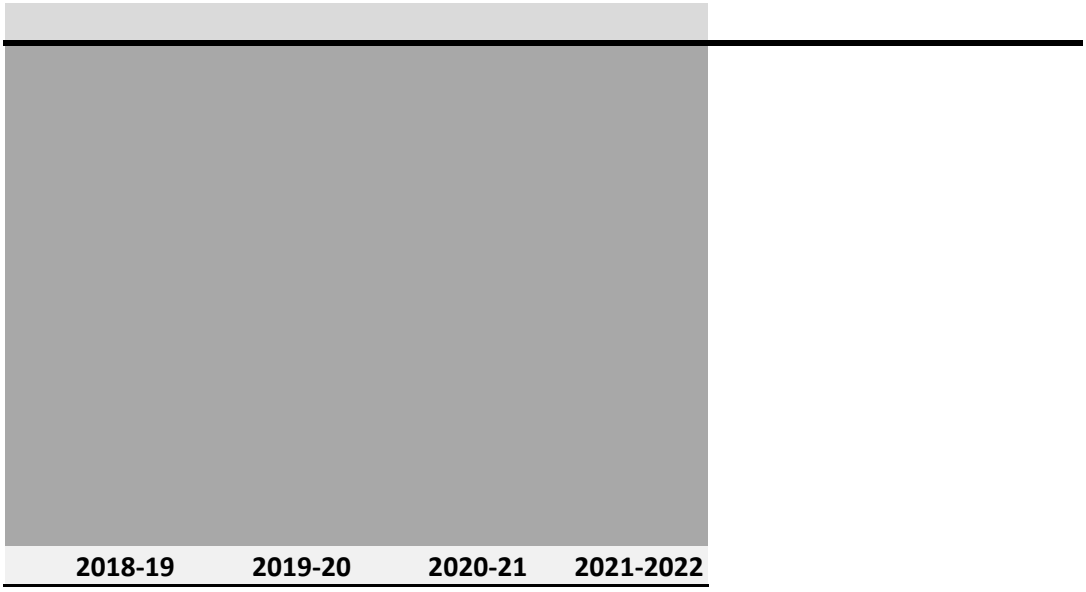
2032.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022

2,324 - 3,500 2,765 - 3,955 3,581 - 4,892 2,881 - 4,377

/1

2018-19[1]	2019-20[1]	2020-21[1]
3500	3955	4892
2324	2765	3581
225	279	323
60	60	60

18	18	18
3803	**4312**	**5293**
2627	3122	3982

2,627 - 3,803	3,122 - 4,312	3,982 - 5,293

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$38,864	$61,735	$65,781	occurs in Year 2034
$22,873	$32,368	$35,009	occurs in Year 2032

erest rate of 5.00% (compounded monthly).

Tab Name		Total Accumulated Interest Costs
Feb15_1a_30yr	$26,517	$34,278
Feb15_1b_30yr	$15,631	$20,378
	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$26,517 to $34,278
Option 2	$15,631 to $20,378
Option 3	$17,202 to $22,028

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

Feb15_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,342	3,470	3,589	5,050	4,416	4,258	3,907	4,810	4,268	3,801	4,809	4,630	3,851	3,550	2,449	2,519	1,840	1,221	-1,048	-1,618	-2,210	-2,825	-3,467	-4,135	-4,834	-5,565	-6,330	-7,132	-7,973	-8,856	-9,783	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,421	3,553	3,675	5,171	4,521	4,359	4,000	4,924	4,369	3,891	4,923	4,740	3,943	3,635	2,508	2,579	1,884	1,250	-1,073	-1,656	-2,262	-2,893	-3,549	-4,234	-4,949	-5,697	-6,481	-7,302	-8,163	-9,067	-10,016	0	0	0	
			79	83	85	120	105	101	93	114	102	90	114	110	92	84	58	60	44	29	-25	-38	-53	-67	-82	-98	-115	-132	-151	-170	-190	-211	-233	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	5,050	3,365	61,735
Equal Monthly Debt Drawdown	5,171	3,341	

	Feb15 Option 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	65,781	2034	38,864
Equal Monthly Debt Drawdown	67,346		

Feb15 Option 1a, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
a	Debt, Beginning of Year	0	3,342	6,812	10,402	15,452	19,868	24,126	28,034	32,843	37,111	40,911	45,720	50,350	54,201	57,752	60,201	62,720	64,560	65,781	64,733	63,115	60,906	58,080	54,614	50,478	45,644	40,079	33,749	26,617	18,644	9,788	5	5	5	
c = a*5%	*Interest Cost - Feb15 Option 1a, 30-yr - End of Year Debt Drawdown*	0	171	349	532	791	1,016	1,234	1,434	1,680	1,899	2,093	2,339	2,576	2,773	2,955	3,080	3,209	3,303	3,365	3,312	3,229	3,116	2,972	2,794	2,583	2,335	2,051	1,727	1,362	954	501	0	0	0	61,735
b	Additional GA Debt Drawdown, End of Year	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	3,342	6,812	10,402	15,452	19,868	24,126	28,034	32,843	37,111	40,911	45,720	50,350	54,201	57,752	60,201	62,720	64,560	65,781	64,733	63,115	60,906	58,080	54,614	50,478	45,644	40,079	33,749	26,617	18,644	9,788	5	5	5	5	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	171	520	1,052	1,842	2,859	4,093	5,527	7,208	9,106	11,199	13,539	16,115	19,665	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	26,617	18,644	9,788	5	5	5	5	
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal	3,342	6,641	9,882	14,400	18,026	21,267	23,941	27,316	29,903	31,805	34,521	36,812	38,087	38,087	38,087	40,606	42,446	43,667	42,619	41,001	38,792	35,966	32,500	28,364	23,530	17,965	11,635	0	0	0	0	0	0	0	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	171	520	1,052	1,842	2,859	4,093	5,527	7,208	9,106	11,199	13,539	16,115	18,888	21,842	24,922	28,131	31,434	34,800	38,112	41,341	44,457	47,428	50,222	52,805	55,140	57,191	58,917	60,279	61,233	61,734				
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal	3,342	6,641	9,882	14,400	18,026	21,267	23,941	27,316	29,903	31,805	34,521	36,812	38,087	38,864	38,359	37,798	36,429	34,347	29,934	25,004	19,565	13,624	7,186	256	-7,161	-15,061	-23,442	-32,300	-41,635	-51,445	-61,729				
Fiscal Exposure - End of Year Debt Drawdown		3,342	3,470	3,589	5,050	4,416	4,258	3,907	4,810	4,268	3,801	4,809	4,630	3,851	3,550	2,449	2,519	1,840	1,221	-1,048	-1,618	-2,210	-2,825	-3,467	-4,135	-4,834	-5,565	-6,330	-7,132	-7,973	-8,856	-9,783	0	0	0	

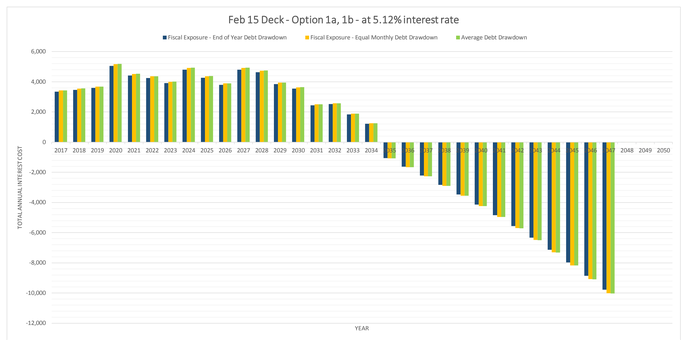
Feb15 Option 1a, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,421	6,974	10,649	15,820	20,341	24,700	28,700	33,624	37,993	41,885	46,808	51,548	55,491	59,125	61,633	64,212	66,096	67,346	66,273	64,617	62,354	59,462	55,913	51,679	46,730	41,033	34,552	27,250	19,087	10,021	5	5	5	
3,341	*Interest Cost - Feb15 Option 1a, 30-yr*	*79*	*254*	*434*	*652*	*896*	*1,118*	*1,327*	*1,549*	*1,782*	*1,989*	*2,207*	*2,449*	*2,668*	*2,857*	*3,013*	*3,140*	*3,253*	*3,332*	*3,341*	*3,273*	*3,177*	*3,049*	*2,889*	*2,696*	*2,468*	*2,203*	*1,900*	*1,557*	*1,172*	*743*	*268*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,421	6,974	10,649	15,820	20,341	24,700	28,700	33,624	37,993	41,885	46,808	51,548	55,491	59,125	61,633	64,212	66,096	67,346	66,273	64,617	62,354	59,462	55,913	51,679	46,730	41,033	34,552	27,250	19,087	10,021	5	5	5	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,421	3,553	3,675	5,171	4,521	4,359	4,000	4,924	4,369	3,891	4,923	4,740	3,943	3,635	2,508	2,579	1,884	1,250	-1,073	-1,656	-2,262	-2,893	-3,549	-4,234	-4,949	-5,697	-6,481	-7,302	-8,163	-9,067	-10,016	0	0	0	

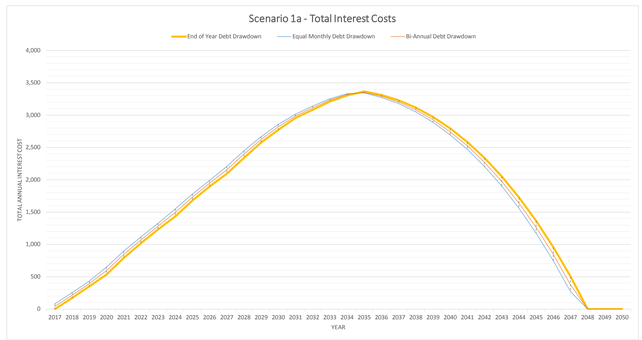
	Monthly Drawdown	278	275	270	377	302	270	223	281	216	159	226	191	106	65	(42)	(47)	(114)	(174)	(368)	(411)	(453)	(495)	(537)	(577)	(618)	(658)	(698)	(738)	(778)	(817)	(857)	-	-	-	
	FV of Monthly Drawdown at 5%	3,421	3,378	3,318	4,626	3,712	3,319	2,737	3,456	2,649	1,947	2,780	2,346	1,305	796	(517)	(574)	(1,401)	(2,132)	(4,518)	(5,047)	(5,568)	(6,083)	(6,591)	(7,094)	(7,593)	(8,088)	(8,580)	(9,069)	(9,557)	(10,043)	(10,529)	-	-	-	
	Annual Interest Cost on New Drawdowns	79	78	77	107	86	77	64	80	62	45	65	54	30	18	(12)	(13)	(33)	(50)	(105)	(117)	(129)	(141)	(153)	(165)	(176)	(188)	(199)	(211)	(222)	(233)	(245)	-	-	-	
	Annual Interest Cost on Opening Balance	-	175	357	545	809	1,041	1,264	1,468	1,720	1,944	2,143	2,395	2,637	2,839	3,025	3,153	3,285	3,382	3,446	3,391	3,306	3,190	3,042	2,861	2,644	2,391	2,099	1,768	1,394	977	513	0	0	0	
	Total Annual Interest Cost	79	254	434	652	896	1,118	1,327	1,549	1,782	1,989	2,207	2,449	2,668	2,857	3,013	3,140	3,253	3,332	3,341	3,273	3,177	3,049	2,889	2,696	2,468	2,203	1,900	1,557	1,172	743	268	0	0	0	

Feb15 Option 1a, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,385	6,899	10,535	15,650	20,122	24,435	28,392	33,263	37,585	41,435	46,305	50,994	54,895	58,490	60,971	63,523	65,386	66,623	65,561	63,923	61,685	58,823	55,312	51,124	46,228	40,592	34,181	26,958	18,882	9,913	5	5	5	
	Interest Cost - Feb15 Option 1a, 30-yr	*43*	*215*	*394*	*597*	*847*	*1,071*	*1,284*	*1,496*	*1,735*	*1,947*	*2,155*	*2,398*	*2,625*	*2,818*	*2,986*	*3,112*	*3,232*	*3,319*	*3,352*	*3,291*	*3,201*	*3,080*	*2,927*	*2,741*	*2,521*	*2,264*	*1,970*	*1,635*	*1,260*	*841*	*376*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,385	6,899	10,535	15,650	20,122	24,435	28,392	33,263	37,585	41,435	46,305	50,994	54,895	58,490	60,971	63,523	65,386	66,623	65,561	63,923	61,685	58,823	55,312	51,124	46,228	40,592	34,181	26,958	18,882	9,913	5	5	5	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,385	3,515	3,635	5,115	4,473	4,313	3,957	4,871	4,322	3,849	4,870	4,689	3,900	3,596	2,481	2,551	1,864	1,237	-1,061	-1,639	-2,238	-2,861	-3,511	-4,188	-4,896	-5,636	-6,411	-7,223	-8,075	-8,969	-9,909	0	0	0	

	Bi-Annual Drawdown	1,671	1,650	1,620	2,259	1,813	1,621	1,337	1,688	1,294	951	1,358	1,146	638	389	(253)	(280)	(684)	(1,041)	(2,207)	(2,465)	(2,719)	(2,971)	(3,219)	(3,465)	(3,708)	(3,950)	(4,190)	(4,429)	(4,667)	(4,905)	(5,142)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,385	3,341	3,282	4,576	3,672	3,283	2,707	3,418	2,620	1,926	2,750	2,320	1,291	787	(512)	(568)	(1,386)	(2,109)	(4,470)	(4,993)	(5,508)	(6,017)	(6,520)	(7,018)	(7,512)	(8,001)	(8,488)	(8,972)	(9,454)	(9,935)	(10,416)	-	-	-	
	Annual Interest Cost on New Drawdowns	43	42	41	58	46	41	34	43	33	24	35	29	16	10	(6)	(7)	(18)	(27)	(56)	(63)	(70)	(76)	(82)	(89)	(95)	(101)	(107)	(113)	(119)	(125)	(132)	-	-	-	
	Annual Interest Cost on Opening Balance	-	173	353	539	801	1,029	1,250	1,453	1,702	1,923	2,120	2,369	2,609	2,809	2,992	3,119	3,250	3,345	3,409	3,354	3,270	3,156	3,010	2,830	2,616	2,365	2,077	1,749	1,379	966	507	0	0	0	
	Total Annual Interest Cost	43	215	394	597	847	1,071	1,284	1,496	1,735	1,947	2,155	2,398	2,625	2,818	2,986	3,112	3,232	3,319	3,352	3,291	3,201	3,080	2,927	2,741	2,521	2,264	1,970	1,635	1,260	841	376	0	0	0	

Feb15 Option 1a, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,427	6,986	10,668	15,847	20,376	24,743	28,751	33,683	38,060	41,958	46,890	51,638	55,588	59,229	61,741	64,325	66,212	67,464	66,389	64,730	62,464	59,566	56,011	51,770	46,812	41,104	34,612	27,298	19,121	10,038	5	5	5	
	Interest Cost - Feb15 Option 1a, 30-yr	*85*	*260*	*440*	*661*	*904*	*1,125*	*1,334*	*1,557*	*1,789*	*1,996*	*2,216*	*2,458*	*2,675*	*2,864*	*3,017*	*3,144*	*3,256*	*3,334*	*3,339*	*3,270*	*3,173*	*3,044*	*2,883*	*2,688*	*2,459*	*2,193*	*1,889*	*1,544*	*1,158*	*727*	*251*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,427	6,986	10,668	15,847	20,376	24,743	28,751	33,683	38,060	41,958	46,890	51,638	55,588	59,229	61,741	64,325	66,212	67,464	66,389	64,730	62,464	59,566	56,011	51,770	46,812	41,104	34,612	27,298	19,121	10,038	5	5	5	6	
Fiscal Exposure - Average Debt Drawdown		3,427	3,559	3,681	5,180	4,529	4,367	4,007	4,933	4,377	3,898	4,932	4,749	3,950	3,641	2,512	2,584	1,887	1,252	-1,075	-1,659	-2,266	-2,898	-3,555	-4,241	-4,958	-5,707	-6,492	-7,314	-8,177	-9,083	-10,034	0	0	0	





Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

Feb15_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,314	2,292	2,421	3,795	2,938	2,709	2,285	3,111	2,489	1,940	2,862	2,594	1,722	1,324	123	89	-699	-1,431	-1,842	-1,937	-2,036	-2,140	-2,249	-2,364	-2,485	-2,613	-2,746	-2,887	-3,034	-3,190	-3,353	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,369	2,346	2,479	3,886	3,008	2,774	2,340	3,185	2,548	1,986	2,930	2,656	1,763	1,356	126	91	-716	-1,465	-1,886	-1,983	-2,084	-2,191	-2,303	-2,421	-2,544	-2,675	-2,812	-2,955	-3,107	-3,266	-3,433	0	0	0
			55	55	58	90	70	64	54	74	59	46	68	62	41	32	3	2	-17	-34	-44	-46	-48	-51	-54	-56	-59	-62	-65	-69	-72	-76	-80	0	0	0

0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,795	1,791	32,368
Equal Monthly Debt Drawdown	3,886	1,789	

	Feb15 Option 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	35,009	2032	22,873
Equal Monthly Debt Drawdown	35,841		

Feb15 Option 1a, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
a	Debt, Beginning of Year		0	2,314	4,606	7,027	10,822	13,761	16,470	18,755	21,866	24,355	26,295	29,157	31,751	33,472	34,797	34,920	35,009	34,310	32,879	31,036	29,100	27,064	24,924	22,675	20,310	17,825	15,212	12,466	9,579	6,545	3,355	3	3	3	
c = a*5%	*Interest Cost - Feb15 Option 1a, 30-yr - End of Year Debt Drawdown*		*0*	*118*	*236*	*360*	*554*	*704*	*843*	*960*	*1,119*	*1,246*	*1,345*	*1,492*	*1,624*	*1,713*	*1,780*	*1,787*	*1,791*	*1,755*	*1,682*	*1,588*	*1,489*	*1,385*	*1,275*	*1,160*	*1,039*	*912*	*778*	*638*	*490*	*335*	*172*	*0*	*0*	*0*	32,368
b	Additional GA Debt Drawdown, End of Year		2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)		2,314	4,606	7,027	10,822	13,761	16,470	18,755	21,866	24,355	26,295	29,157	31,751	33,472	34,797	34,920	35,009	34,310	32,879	31,036	29,100	27,064	24,924	22,675	20,310	17,825	15,212	12,466	9,579	6,545	3,355	3	3	3	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs		0	118	354	714	1,267	1,971	2,814	3,773	4,892	6,138	7,484	8,975	10,600	11,924	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	9,579	6,545	3,355	3	3	3	3	
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal		2,314	4,488	6,673	10,109	12,493	14,499	15,941	18,092	19,463	20,157	21,673	22,775	22,873	22,873	22,873	22,961	22,262	20,831	18,989	17,052	15,017	12,877	10,627	8,263	5,778	3,165	419	0	0	0	0	0	0	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs		0	118	354	714	1,267	1,971	2,814	3,773	4,892	6,138	7,484	8,975	10,600	12,312	14,092	15,879	17,670	19,425	21,108	22,695	24,184	25,569	26,844	28,004	29,043	29,955	30,733	31,371	31,861	32,196	32,368			
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal		2,314	4,488	6,673	10,109	12,493	14,499	15,941	18,092	19,463	20,157	21,673	22,775	22,873	22,485	20,828	19,130	16,639	13,453	9,929	6,404	2,880	-645	-4,169	-7,694	-11,218	-14,743	-18,267	-21,792	-25,316	-28,841	-32,365			
Fiscal Exposure - End of Year Debt Drawdown			2,314	2,292	2,421	3,795	2,938	2,709	2,285	3,111	2,489	1,940	2,862	2,594	1,722	1,324	123	89	-699	-1,431	-1,842	-1,937	-2,036	-2,140	-2,249	-2,364	-2,485	-2,613	-2,746	-2,887	-3,034	-3,190	-3,353	0	0	0	

Feb15 Option 1a, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Debt, Beginning of Year		0	2,369	4,716	7,194	11,080	14,088	16,862	19,201	22,386	24,934	26,920	29,850	32,506	34,269	35,625	35,751	35,841	35,126	33,661	31,774	29,792	27,708	25,517	23,214	20,793	18,249	15,574	12,763	9,807	6,701	3,435	3	3	3	
1,789	*Interest Cost - Feb15 Option 1a, 30-yr*		*55*	*173*	*293*	*450*	*624*	*768*	*897*	*1,034*	*1,178*	*1,292*	*1,413*	*1,553*	*1,665*	*1,744*	*1,783*	*1,789*	*1,774*	*1,721*	*1,638*	*1,542*	*1,440*	*1,334*	*1,222*	*1,104*	*980*	*850*	*713*	*569*	*418*	*259*	*92*	*0*	*0*	*0*	32,368
	Additional GA Debt Drawdown		2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		2,369	4,716	7,194	11,080	14,088	16,862	19,201	22,386	24,934	26,920	29,850	32,506	34,269	35,625	35,751	35,841	35,126	33,661	31,774	29,792	27,708	25,517	23,214	20,793	18,249	15,574	12,763	9,807	6,701	3,435	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown			2,369	2,346	2,479	3,886	3,008	2,774	2,340	3,185	2,548	1,986	2,930	2,656	1,763	1,356	126	91	-716	-1,465	-1,886	-1,983	-2,084	-2,191	-2,303	-2,421	-2,544	-2,675	-2,812	-2,955	-3,107	-3,266	-3,433	0	0	0	
	Monthly Drawdown		193	181	182	286	199	167	120	179	114	58	126	92	8	(32)	(138)	(141)	(208)	(266)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	-	-	-	
	FV of Monthly Drawdown at 5%		2,369	2,225	2,237	3,518	2,441	2,053	1,477	2,202	1,403	710	1,553	1,128	100	(397)	(1,697)	(1,738)	(2,549)	(3,262)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	-	-	-	
	Annual Interest Cost on New Drawdowns		55	52	52	82	57	48	34	51	33	17	36	26	2	(9)	(39)	(40)	(59)	(76)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	-	-	-	
	Annual Interest Cost on Opening Balance		-	121	241	368	567	721	863	982	1,145	1,276	1,377	1,527	1,663	1,753	1,823	1,829	1,834	1,797	1,722	1,626	1,524	1,418	1,305	1,188	1,064	934	797	653	502	343	176	0	0	0	
	Total Annual Interest Cost		55	173	293	450	624	768	897	1,034	1,178	1,292	1,413	1,553	1,665	1,744	1,783	1,789	1,774	1,721	1,638	1,542	1,440	1,334	1,222	1,104	980	850	713	569	418	259	92	0	0	0	

Feb15 Option 1a, 30-yr — Bi-Annual Debt Drawdown

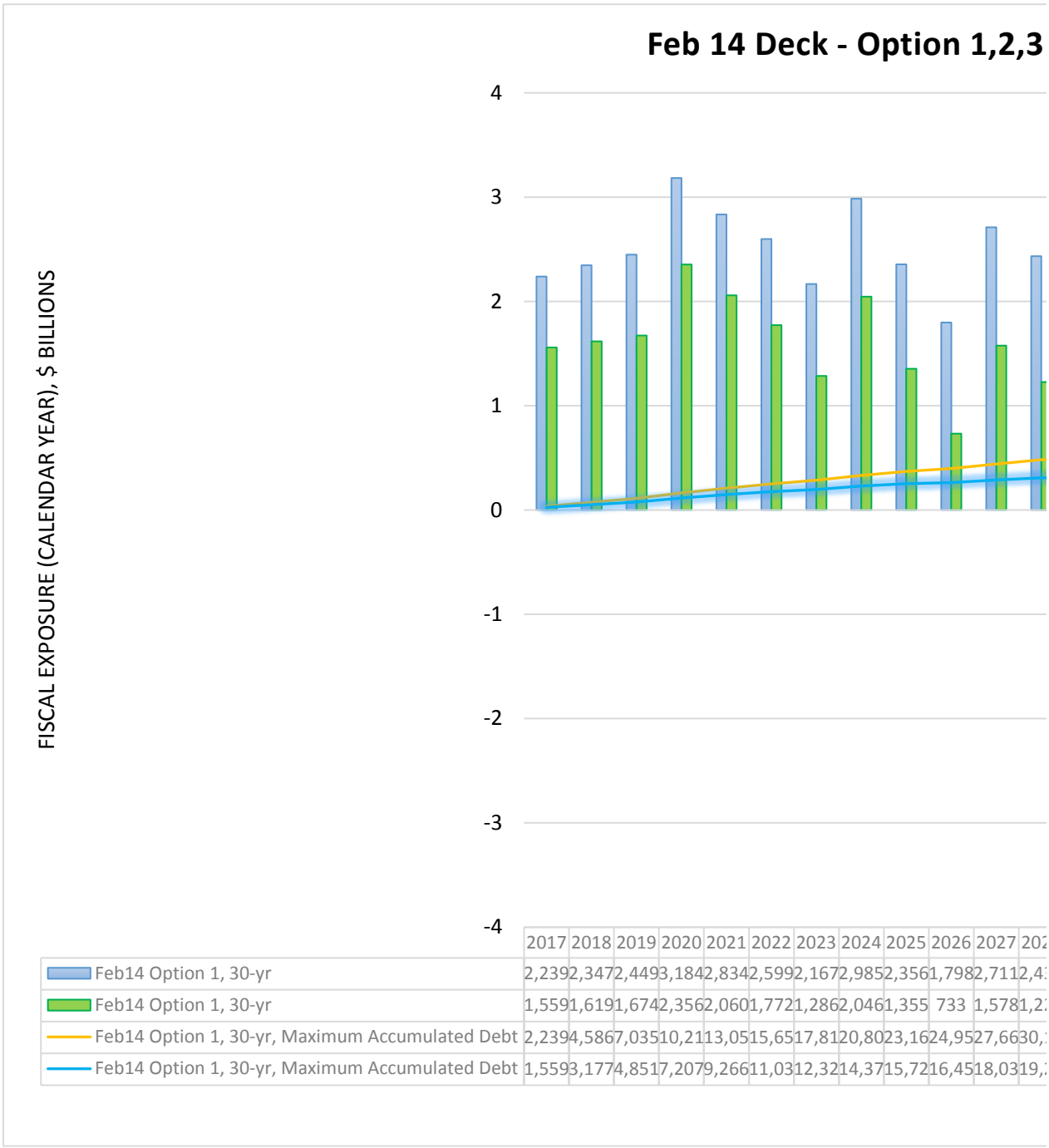
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Debt, Beginning of Year		0	2,344	4,665	7,117	10,961	13,937	16,681	18,995	22,146	24,667	26,631	29,530	32,157	33,901	35,242	35,367	35,456	34,748	33,299	31,433	29,472	27,410	25,243	22,965	20,570	18,053	15,407	12,626	9,702	6,629	3,398	3	3	3	
	Interest Cost - Feb15 Option 1a, 30-yr		*30*	*148*	*267*	*408*	*591*	*739*	*872*	*999*	*1,151*	*1,271*	*1,382*	*1,525*	*1,646*	*1,729*	*1,782*	*1,788*	*1,782*	*1,737*	*1,659*	*1,563*	*1,463*	*1,357*	*1,246*	*1,130*	*1,007*	*879*	*743*	*601*	*451*	*294*	*129*	*0*	*0*	*0*	32,368
	Additional GA Debt Drawdown		2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		2,344	4,665	7,117	10,961	13,937	16,681	18,995	22,146	24,667	26,631	29,530	32,157	33,901	35,242	35,367	35,456	34,748	33,299	31,433	29,472	27,410	25,243	22,965	20,570	18,053	15,407	12,626	9,702	6,629	3,398	3	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown			2,344	2,321	2,452	3,844	2,976	2,744	2,314	3,151	2,521	1,965	2,898	2,627	1,744	1,341	125	90	-708	-1,449	-1,866	-1,961	-2,062	-2,167	-2,278	-2,395	-2,517	-2,646	-2,781	-2,924	-3,073	-3,230	-3,396	0	0	0	
	Bi-Annual Drawdown		1,157	1,087	1,093	1,718	1,192	1,003	721	1,076	685	347	758	551	49	(194)	(829)	(849)	(1,245)	(1,593)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	-	-	-	
	FV of Bi-Annual Drawdown at 5%		2,344	2,201	2,213	3,480	2,415	2,031	1,461	2,179	1,388	703	1,536	1,116	99	(393)	(1,678)	(1,720)	(2,522)	(3,227)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	-	-	-	
	Annual Interest Cost on New Drawdowns		30	28	28	44	30	26	18	28	18	9	19	14	1	(5)	(21)	(22)	(32)	(41)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	-	-	-	
	Annual Interest Cost on Opening Balance		-	120	239	364	561	713	853	972	1,133	1,262	1,363	1,511	1,645	1,734	1,803	1,809	1,814	1,778	1,704	1,608	1,508	1,402	1,291	1,175	1,052	924	788	646	496	339	174	0	0	0	
	Total Annual Interest Cost		30	148	267	408	591	739	872	999	1,151	1,271	1,382	1,525	1,646	1,729	1,782	1,788	1,782	1,737	1,659	1,563	1,463	1,357	1,246	1,130	1,007	879	743	601	451	294	129	0	0	0	

Feb15 Option 1a, 30-yr — Average Debt Drawdown

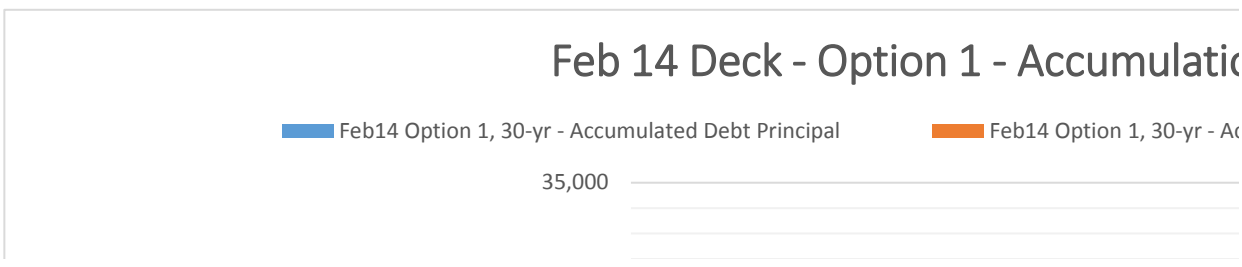
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Debt, Beginning of Year		0	2,373	4,724	7,207	11,099	14,113	16,891	19,235	22,425	24,978	26,968	29,902	32,563	34,329	35,687	35,813	35,904	35,187	33,720	31,830	29,844	27,756	25,562	23,255	20,830	18,281	15,601	12,785	9,824	6,712	3,441	3	3	3	
	Interest Cost - Feb15 Option 1a, 30-yr		*59*	*177*	*298*	*457*	*629*	*773*	*901*	*1,039*	*1,182*	*1,296*	*1,419*	*1,558*	*1,668*	*1,746*	*1,783*	*1,789*	*1,773*	*1,719*	*1,635*	*1,538*	*1,437*	*1,330*	*1,218*	*1,100*	*976*	*845*	*708*	*564*	*412*	*253*	*86*	*0*	*0*	*0*	32,368
	Additional GA Debt Drawdown		2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		2,373	4,724	7,207	11,099	14,113	16,891	19,235	22,425	24,978	26,968	29,902	32,563	34,329	35,687	35,813	35,904	35,187	33,720	31,830	29,844	27,756	25,562	23,255	20,830	18,281	15,601	12,785	9,824	6,712	3,441	3	3	3	
Fiscal Exposure - Average Debt Drawdown			2,373	2,351	2,483	3,892	3,013	2,779	2,344	3,190	2,553	1,989	2,935	2,660	1,766	1,358	126	91	-717	-1,468	-1,889	-1,986	-2,088	-2,195	-2,307	-2,425	-2,549	-2,679	-2,816	-2,961	-3,112	-3,271	-3,439	0	0	0	

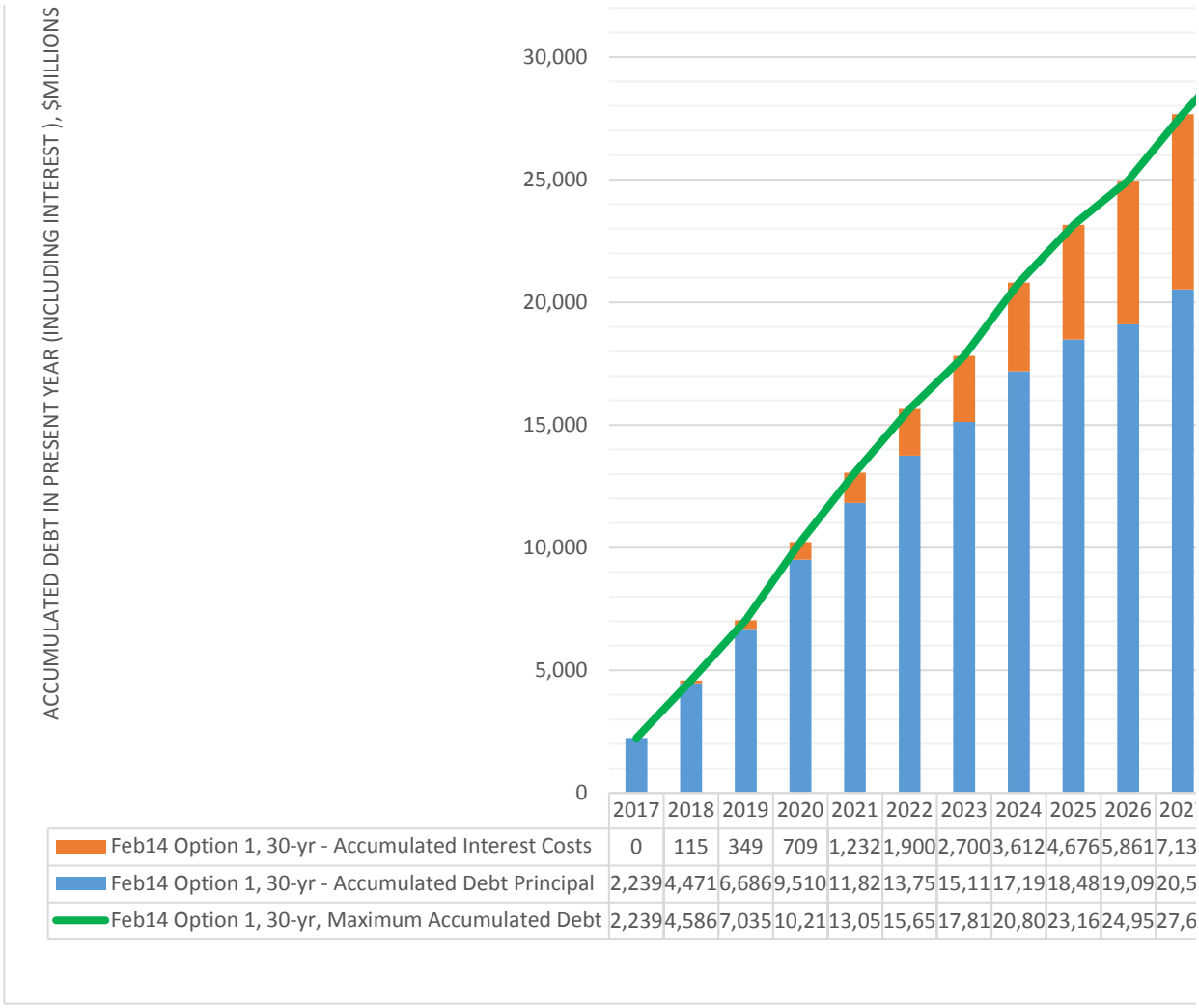
Feb 14 Deck

Feb 14 Deck - Option 1,2,3 - at 5.12% interest rate

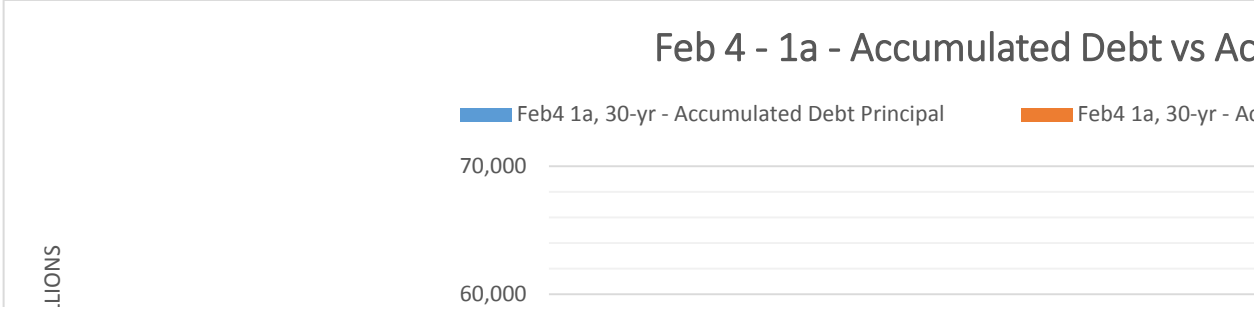


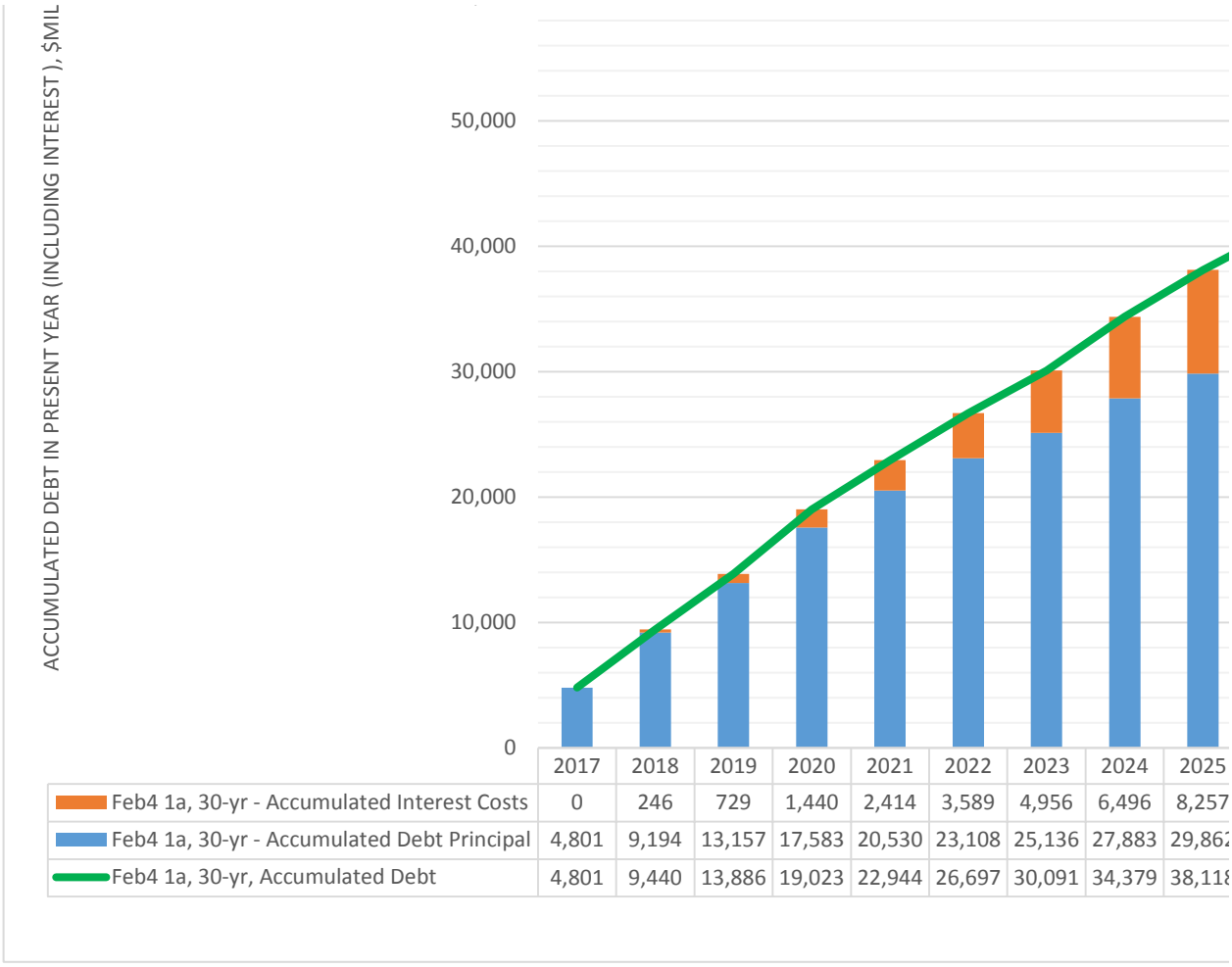
Feb 14 Deck - Option 1 - Accumulation of Debt (Principal and Interest)



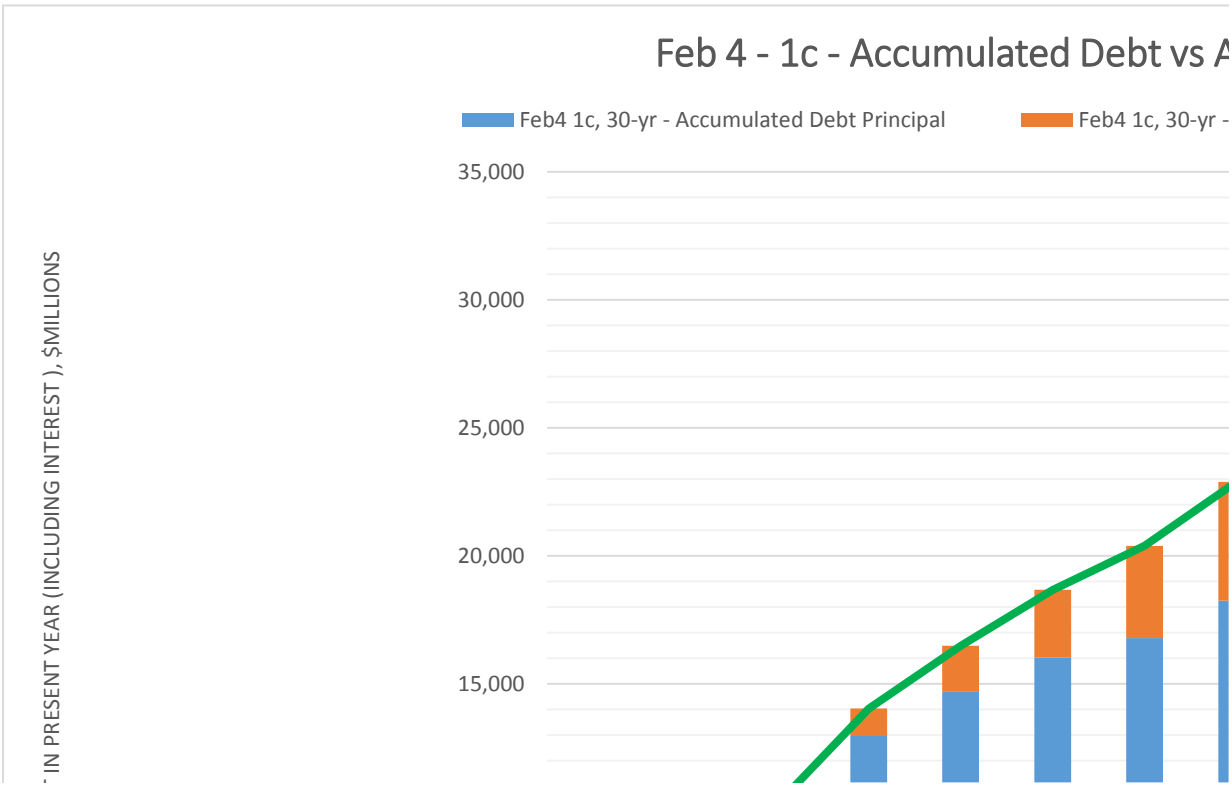


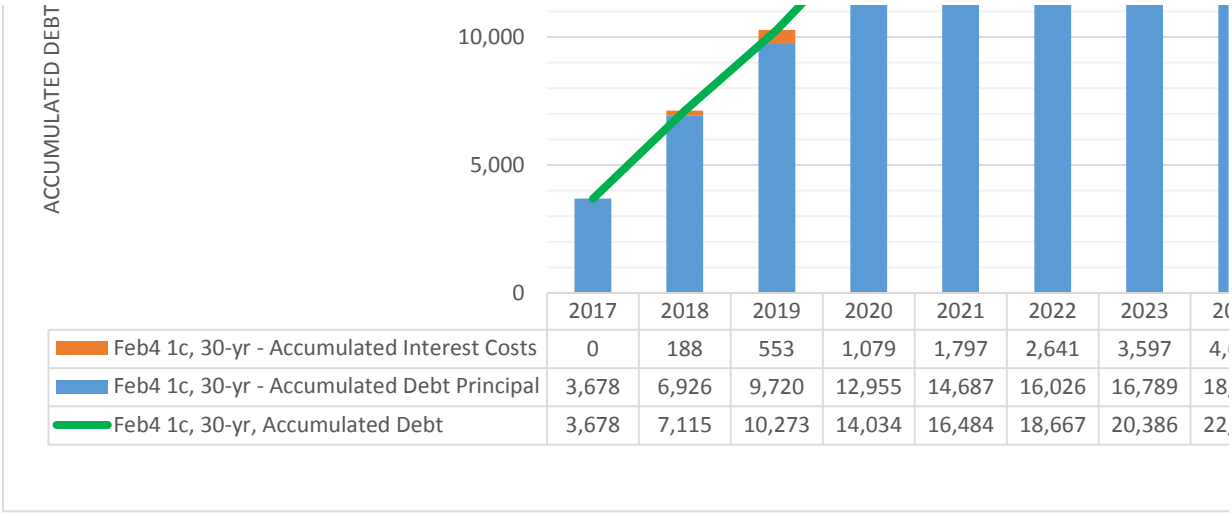
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	202
Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,13
Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,82	13,75	15,11	17,19	18,48	19,09	20,5
Feb14 Option 1, 30-yr, Maximum Accumulated Debt	2,239	4,586	7,035	10,21	13,05	15,65	17,81	20,80	23,16	24,95	27,6



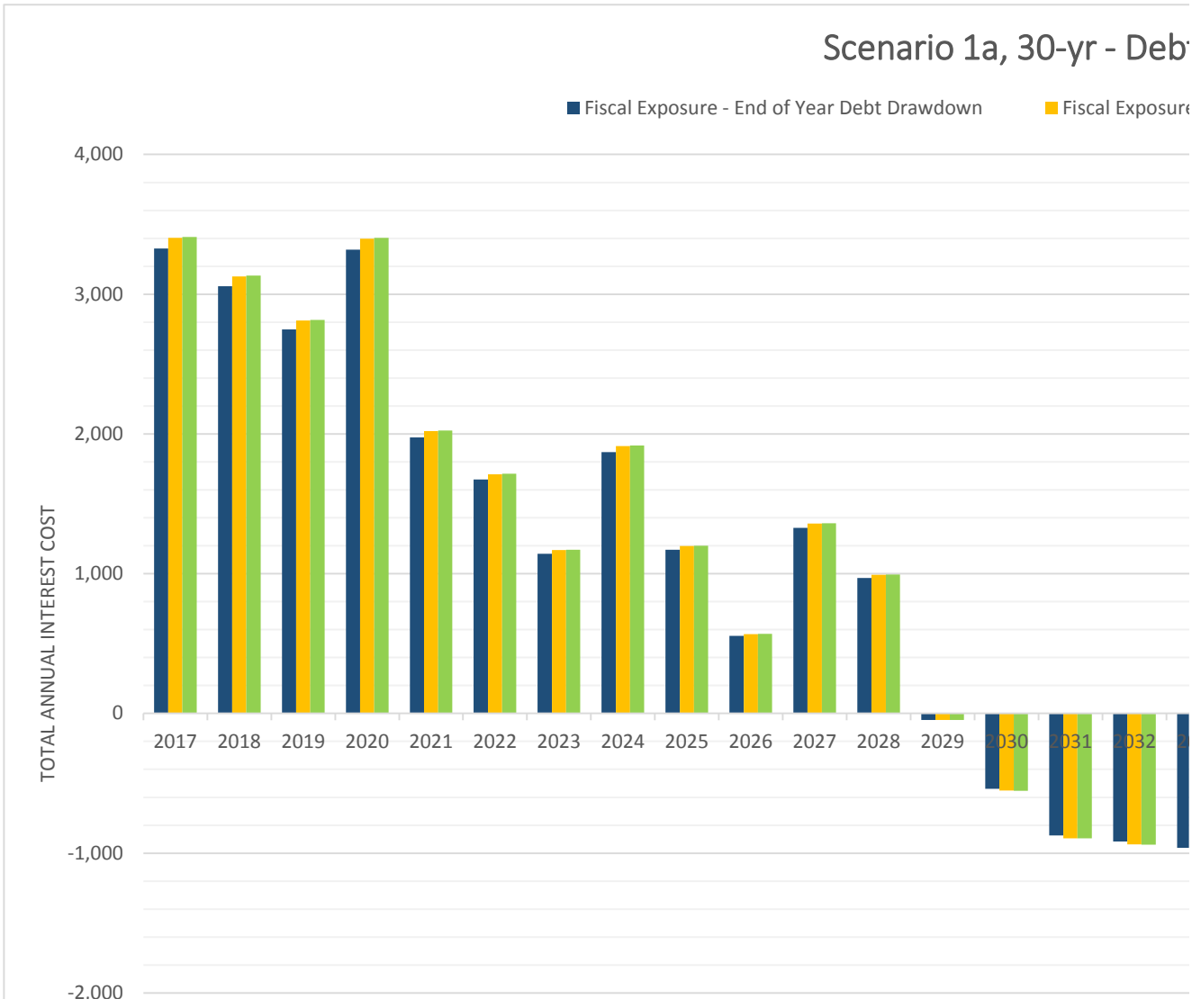


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



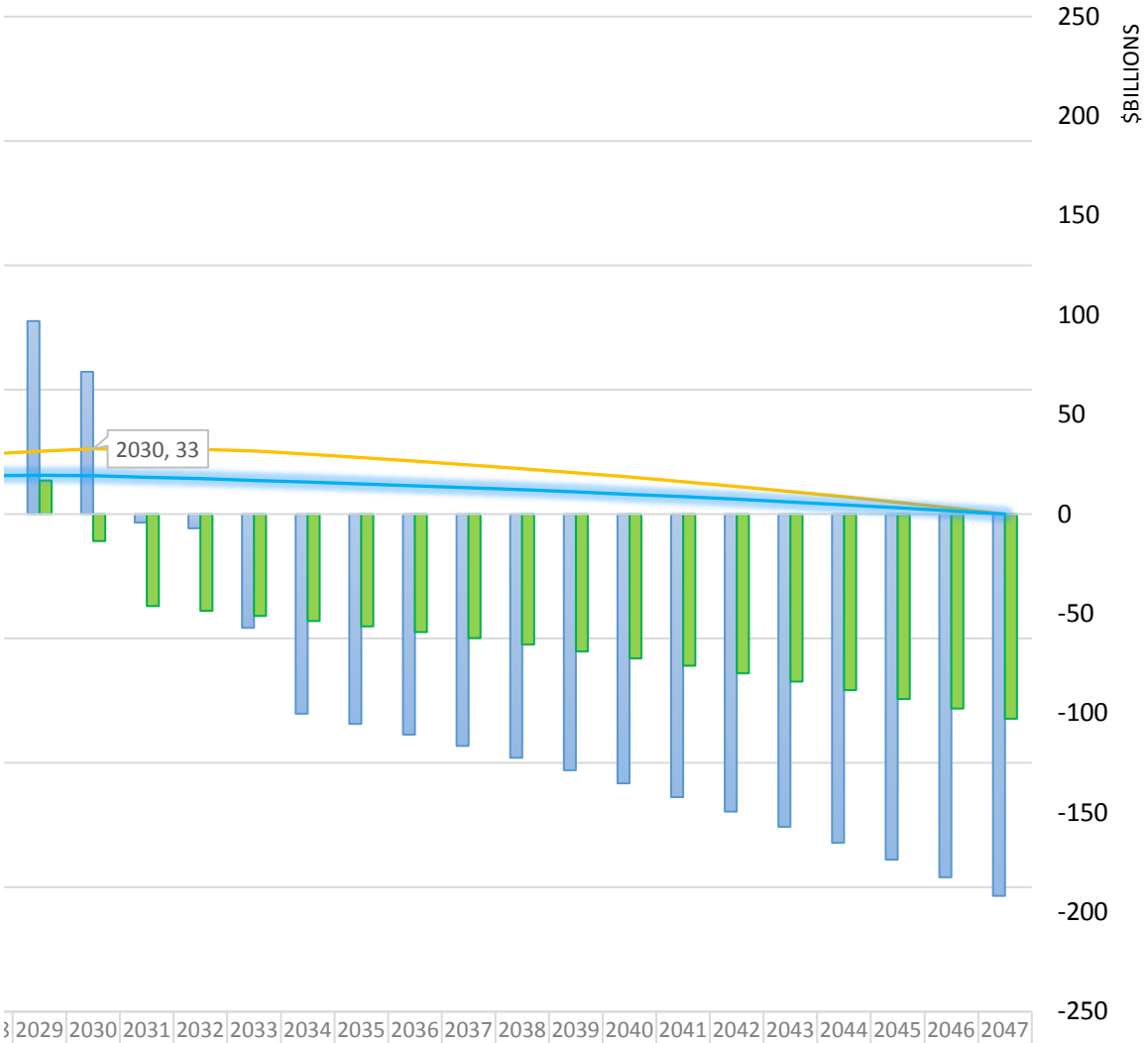


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

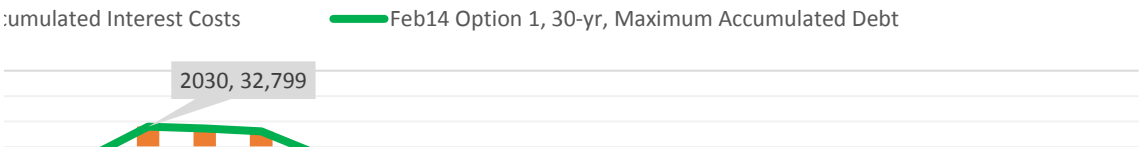
- at 5.12% interest rate

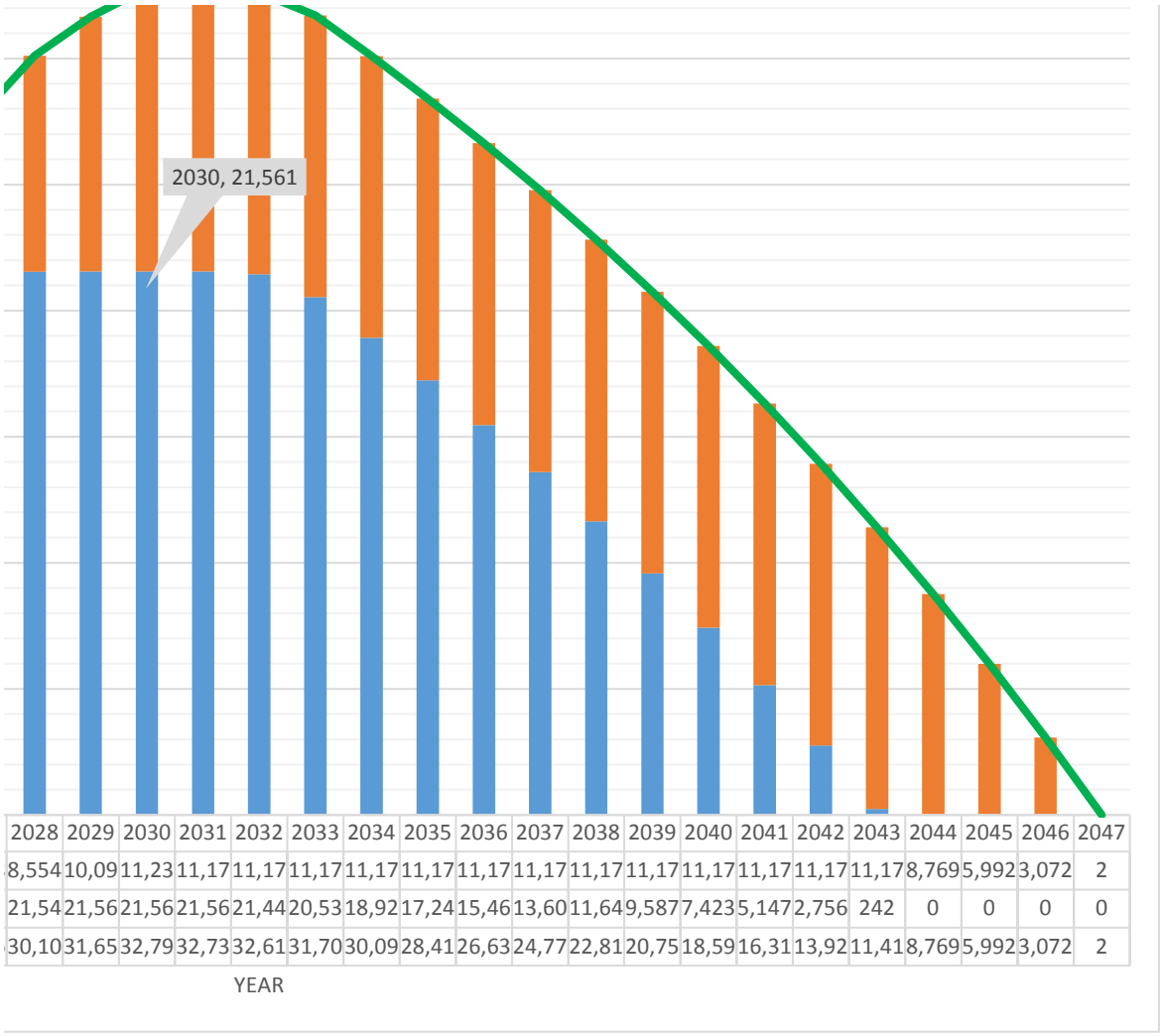


	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
	41,552	1,144	-68	-114	-914	-1,60	-1,68	-1,77	-1,86	-1,95	-2,05	-2,16	-2,27	-2,39	-2,51	-2,64	-2,77	-2,92	-3,06
	3 271	-217	-740	-778	-818	-859	-903	-950	-998	-1,04	-1,10	-1,15	-1,21	-1,28	-1,34	-1,41	-1,48	-1,56	-1,64
	031,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,769	5,992	3,072	2
	519,53	19,31	18,57	17,79	16,98	16,12	15,21	14,26	13,27	12,22	11,11	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1

CALENDAR YEAR

n of Debt (Principal and Interest)

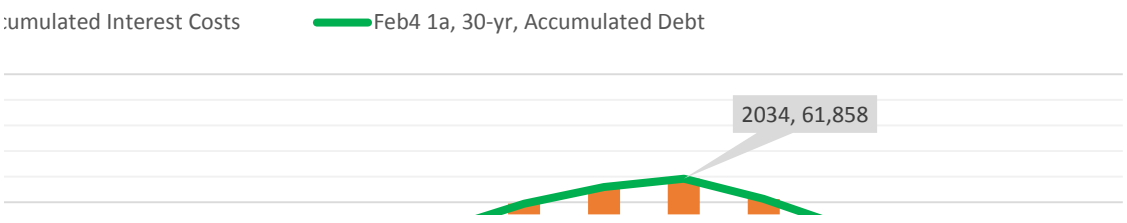




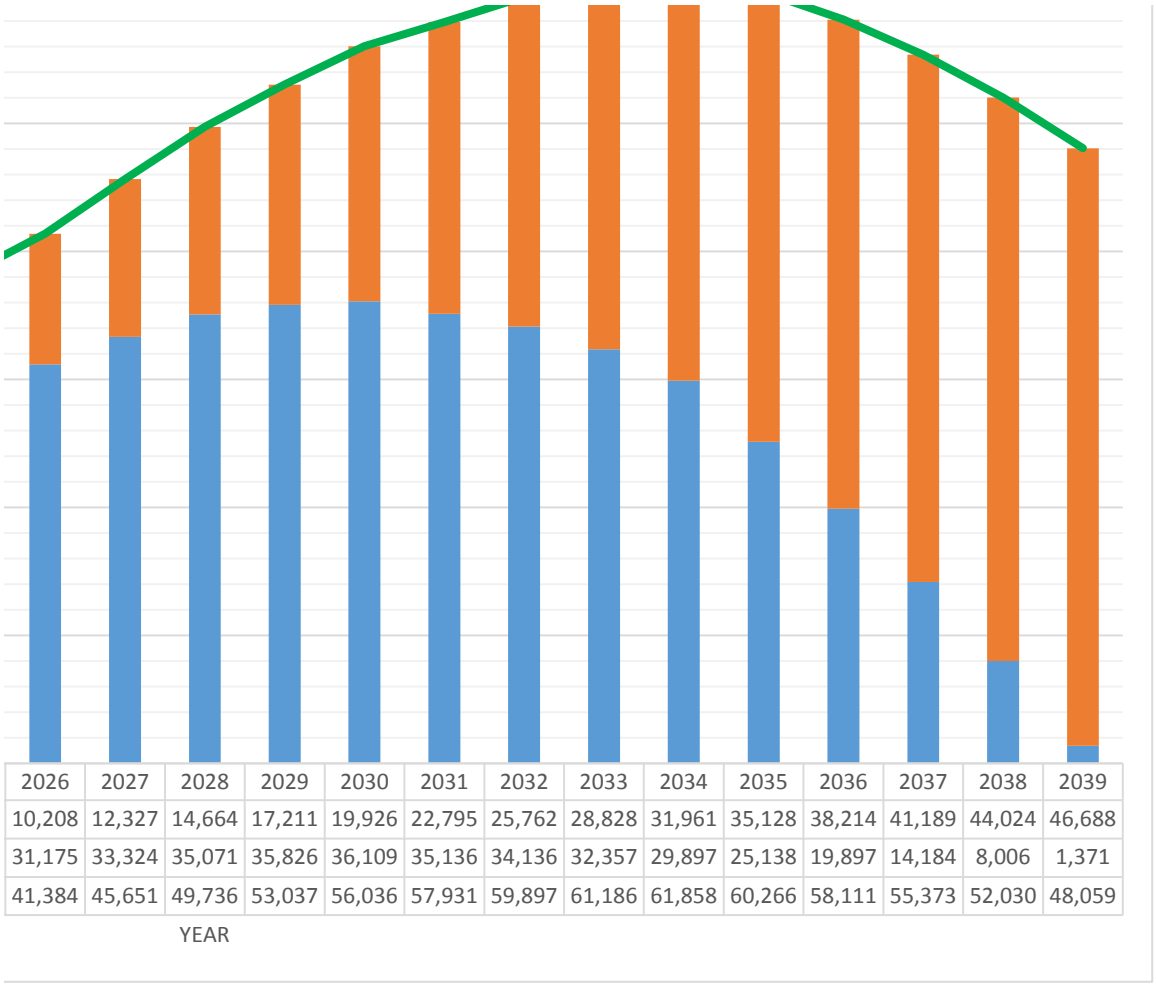
2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
8,554	10,09	11,23	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	8,769	5,992	3,072	2
21,54	21,56	21,56	21,56	21,44	20,53	18,92	17,24	15,46	13,60	11,64	9,587	7,423	5,147	2,756	242	0	0	0	0
30,10	31,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,769	5,992	3,072	2

YEAR

cumulated Total Interest Costs



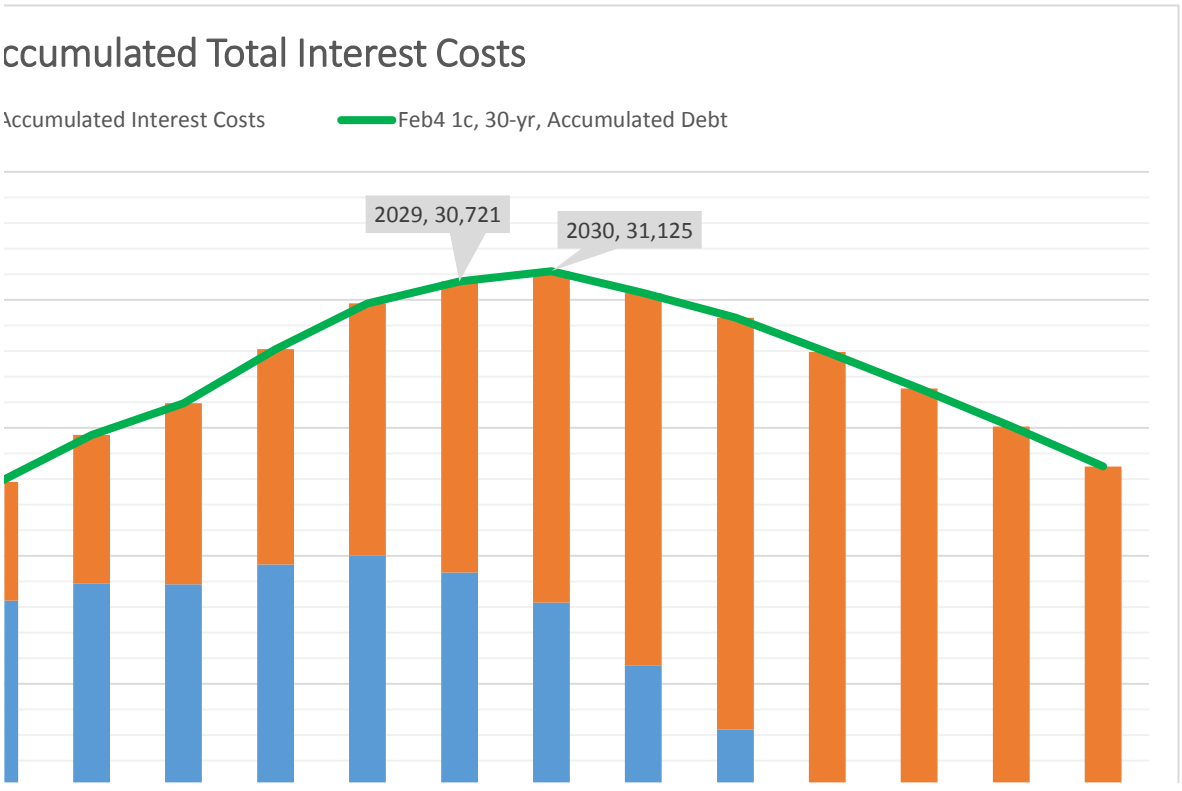
LIONS

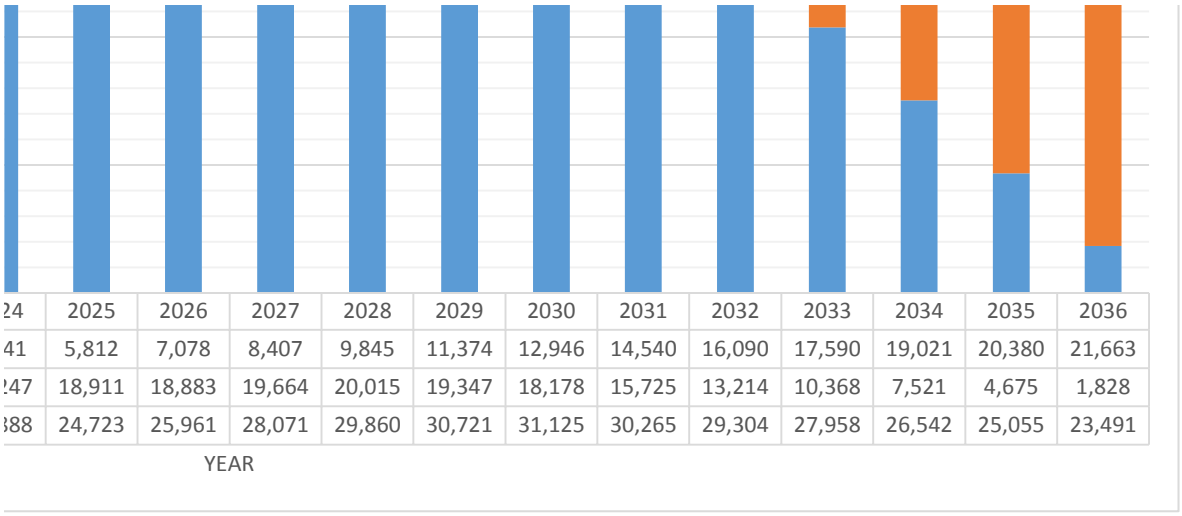


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

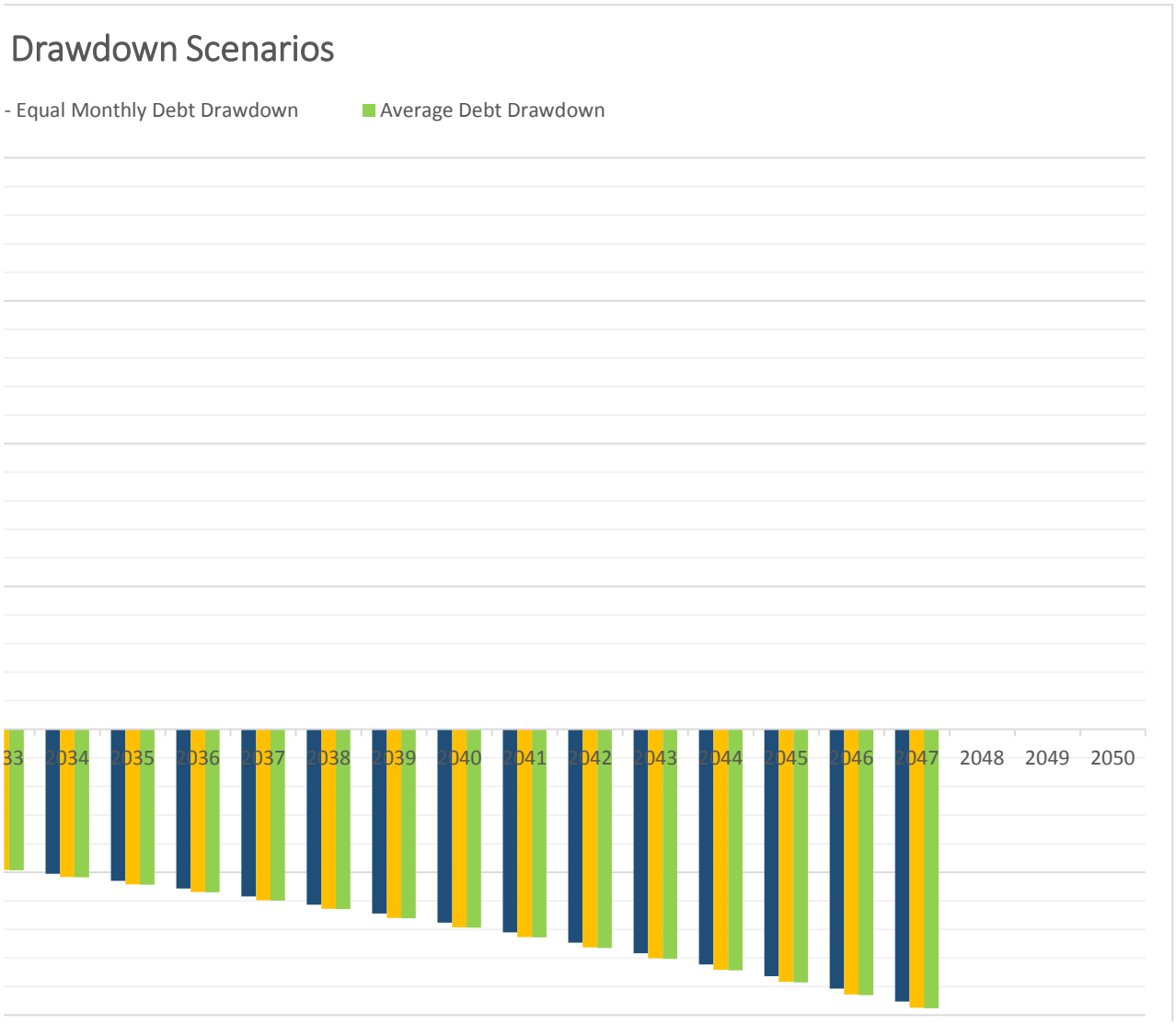
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





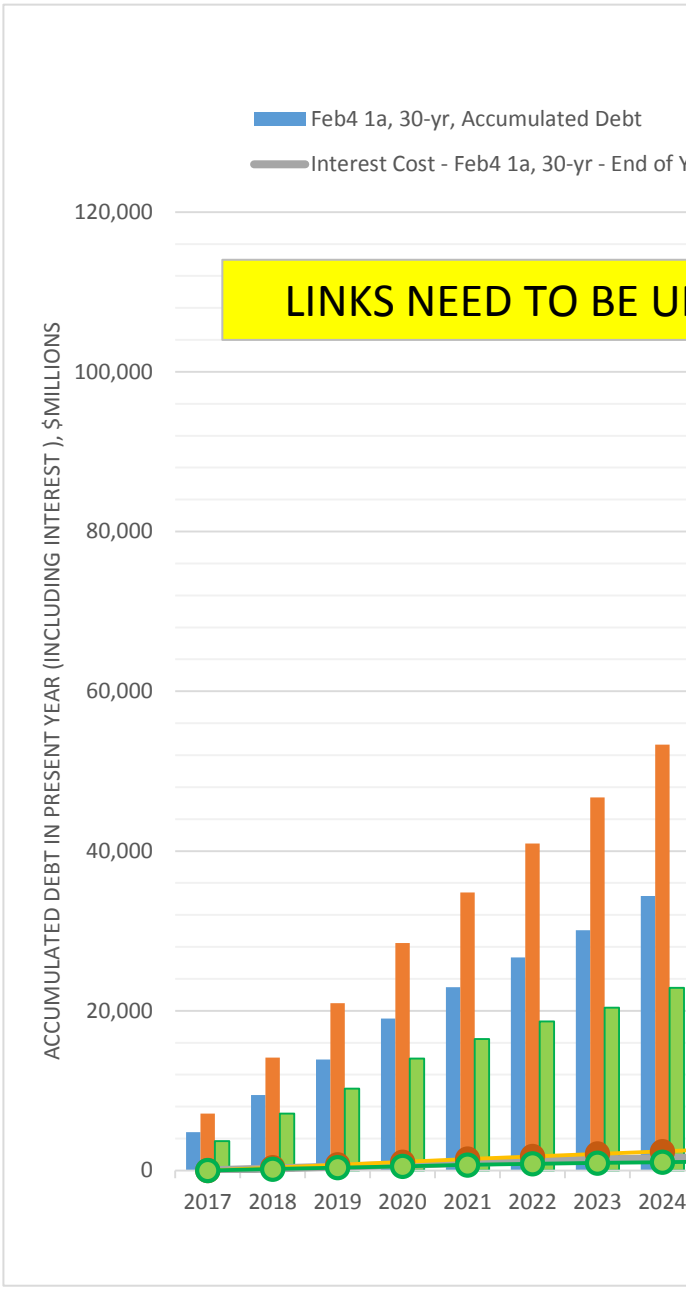
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

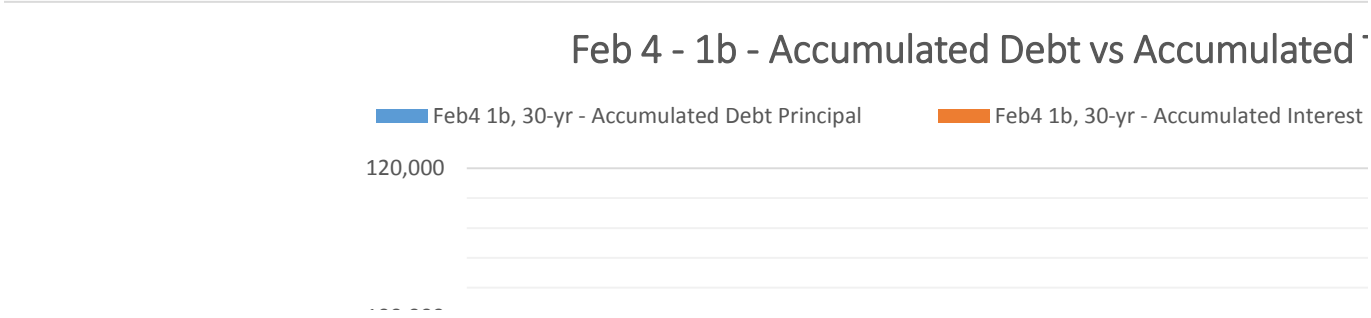
YEAR

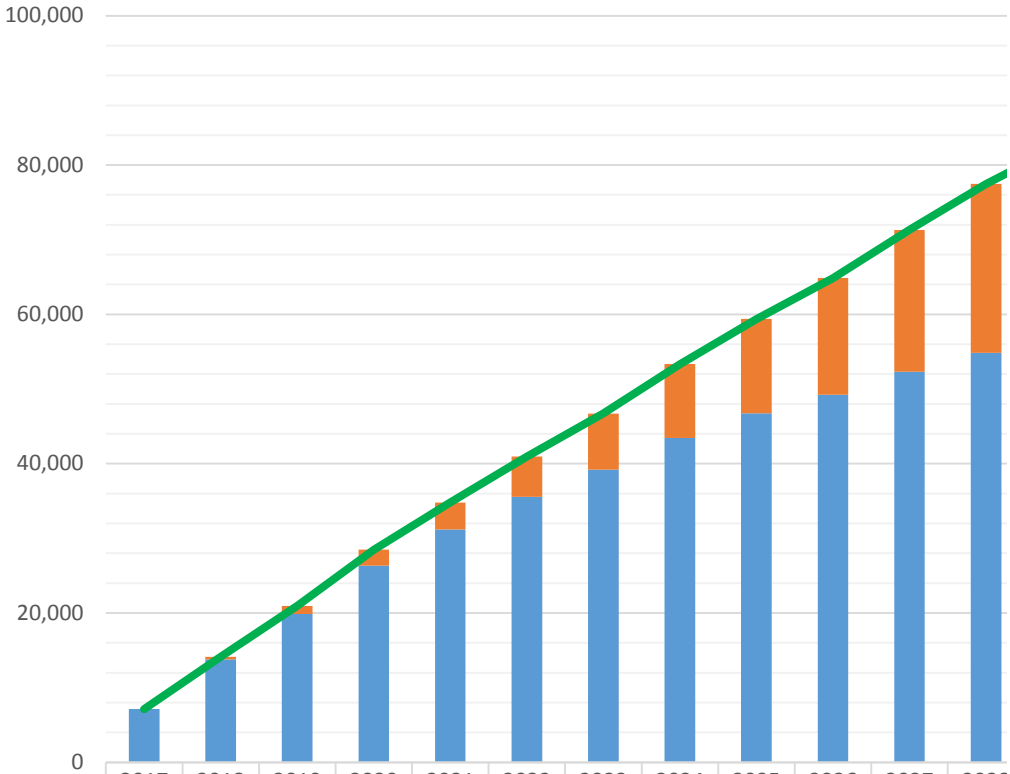


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate



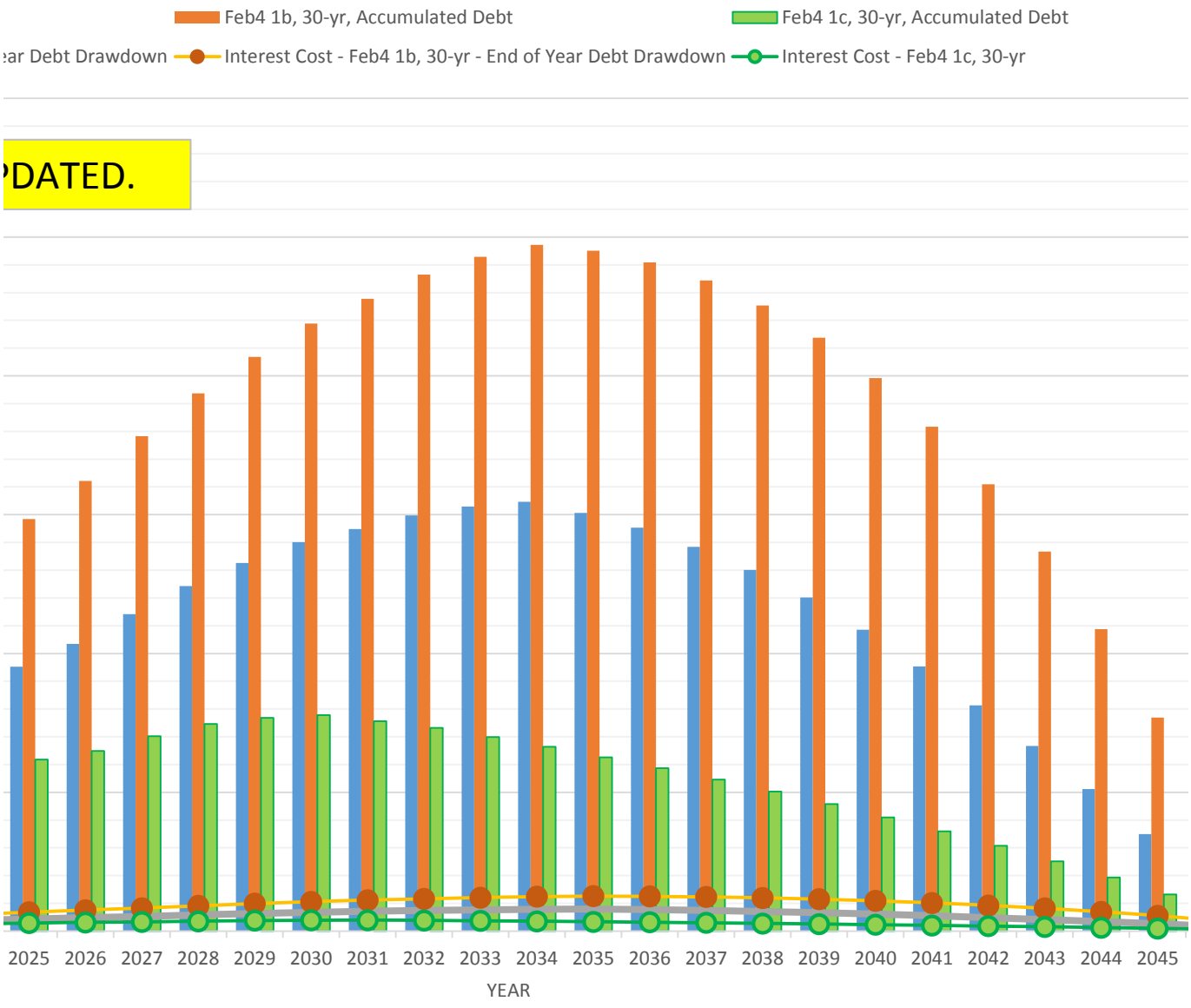

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000



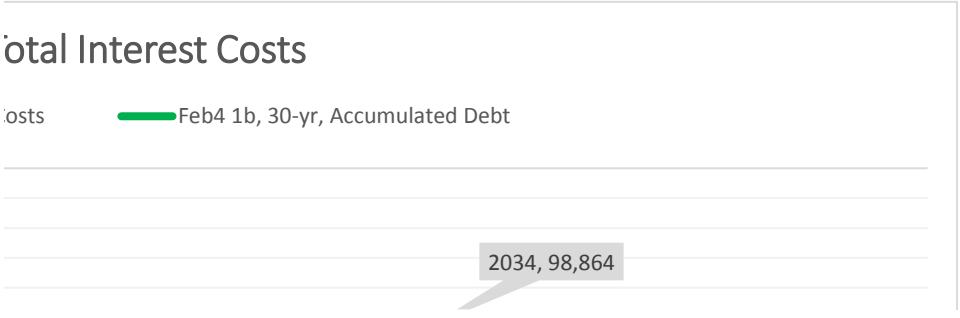
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

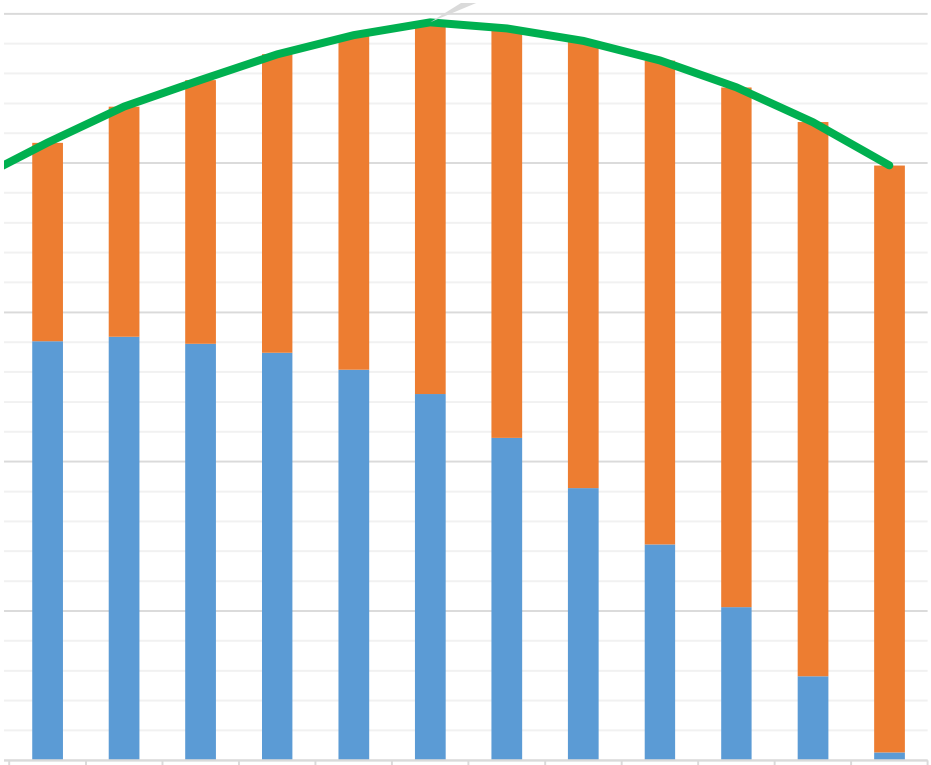
Y

Accumulated debt in present year, with annual interest costs



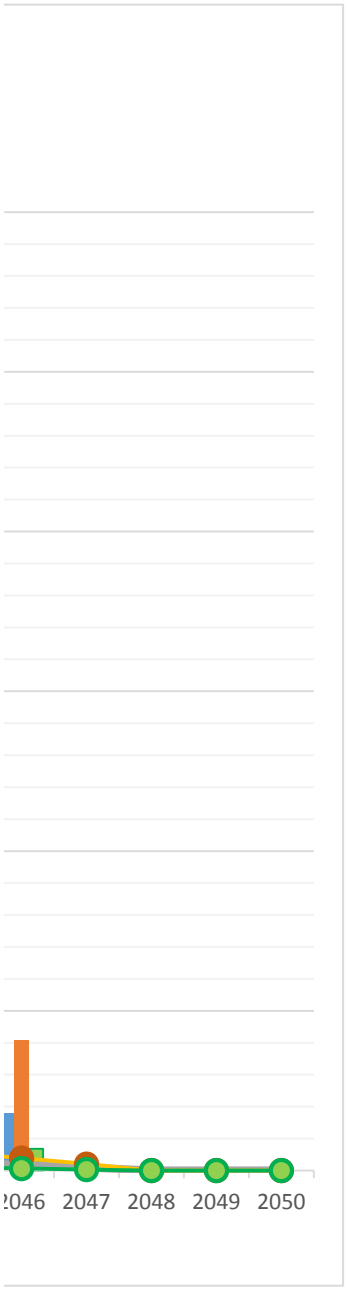
PDATED.


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864

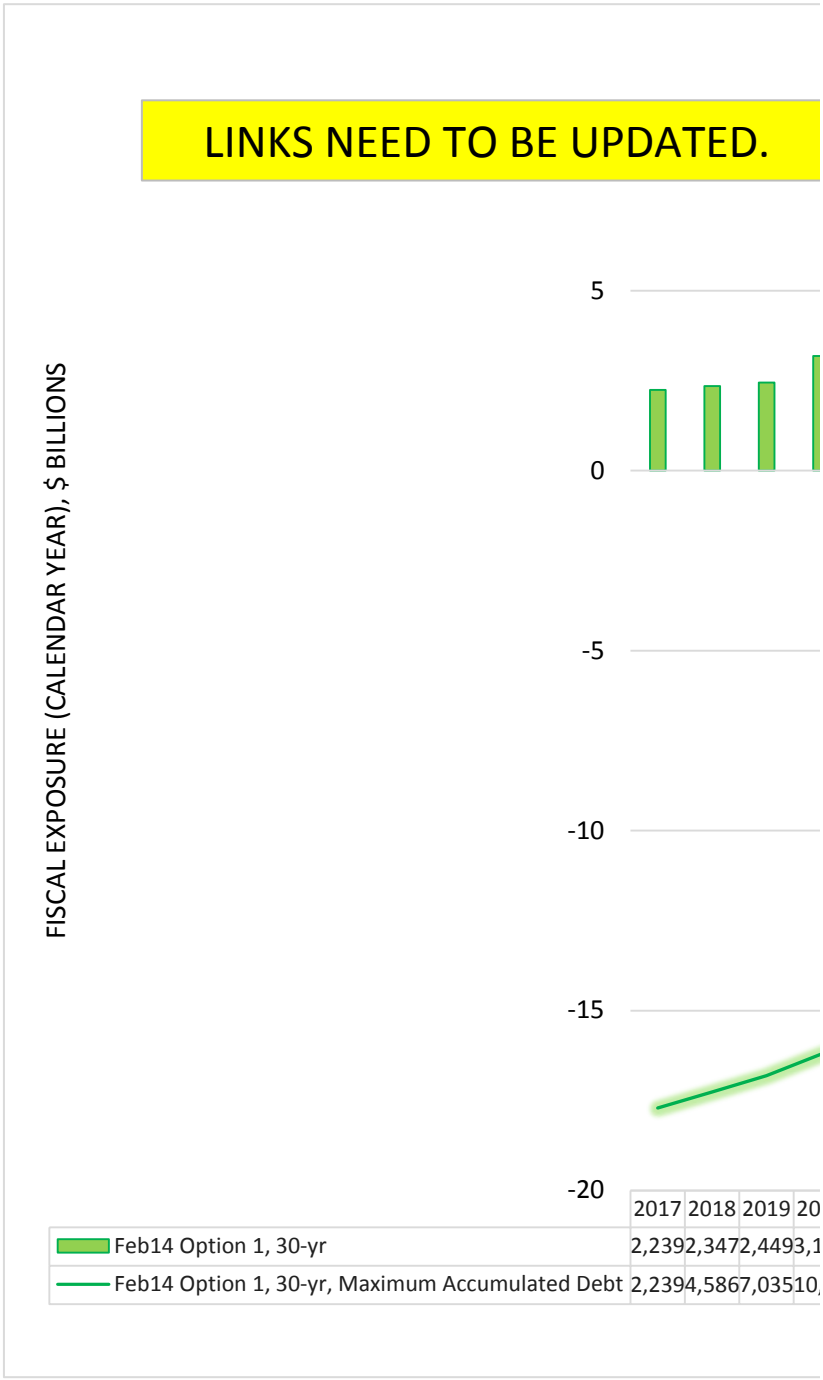


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



LINKS NEED TO BE UPDATED.



FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1b, 30-yr

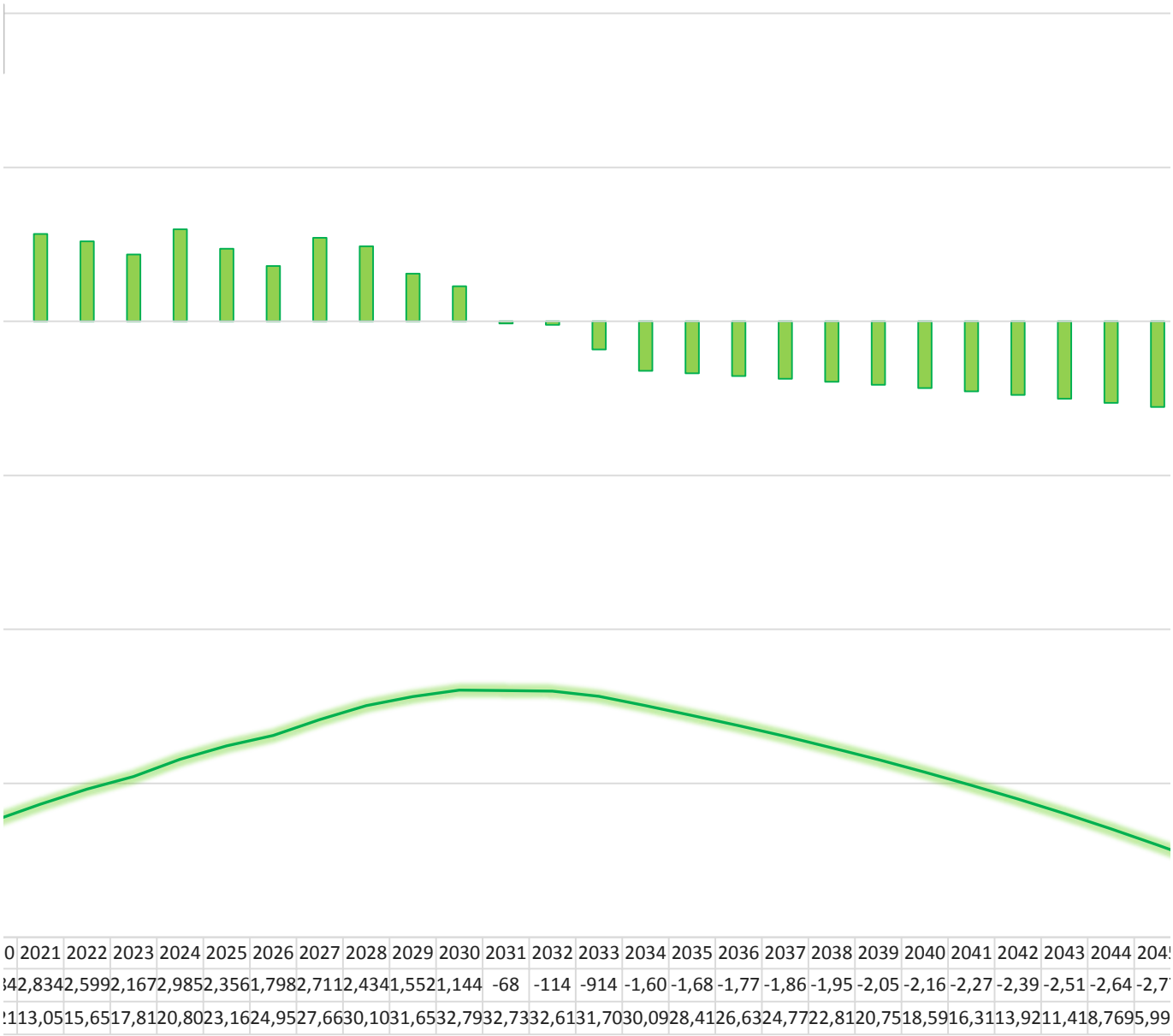
Feb4 1b, 30-yr,

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,

Feb 14 Deck - Option 1

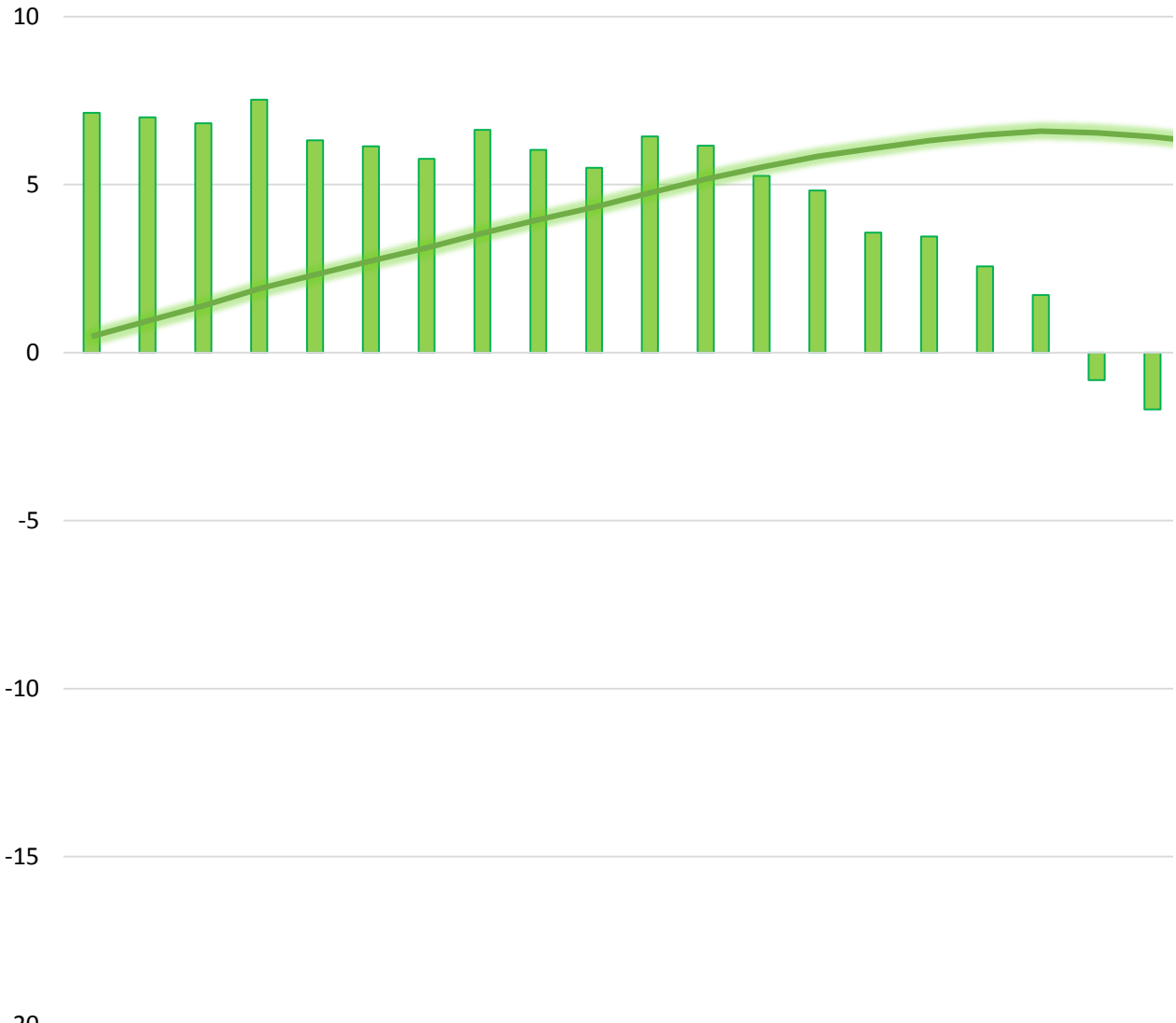


0	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	204
42	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,60	-1,68	-1,77	-1,86	-1,95	-2,05	-2,16	-2,27	-2,39	-2,51	-2,64	-2,7
113	05	15,65	17,81	20,80	23,16	24,95	27,66	30,10	31,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,76	95,99

CALENDAR YEAR

Feb 6 Deck - Scenario 1b - at 5.13% interest rat

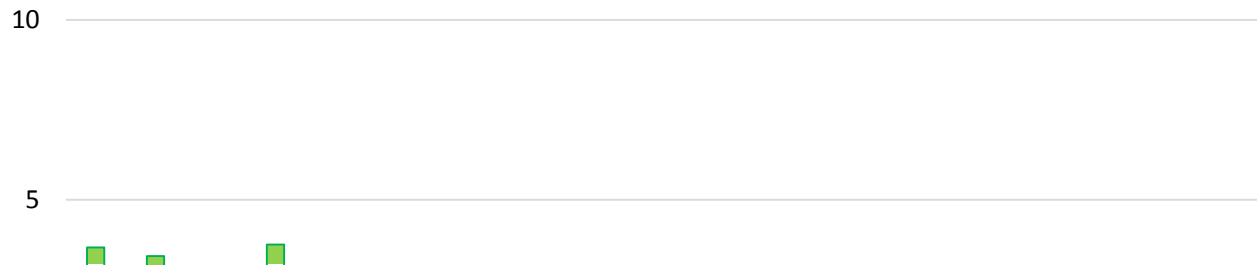
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

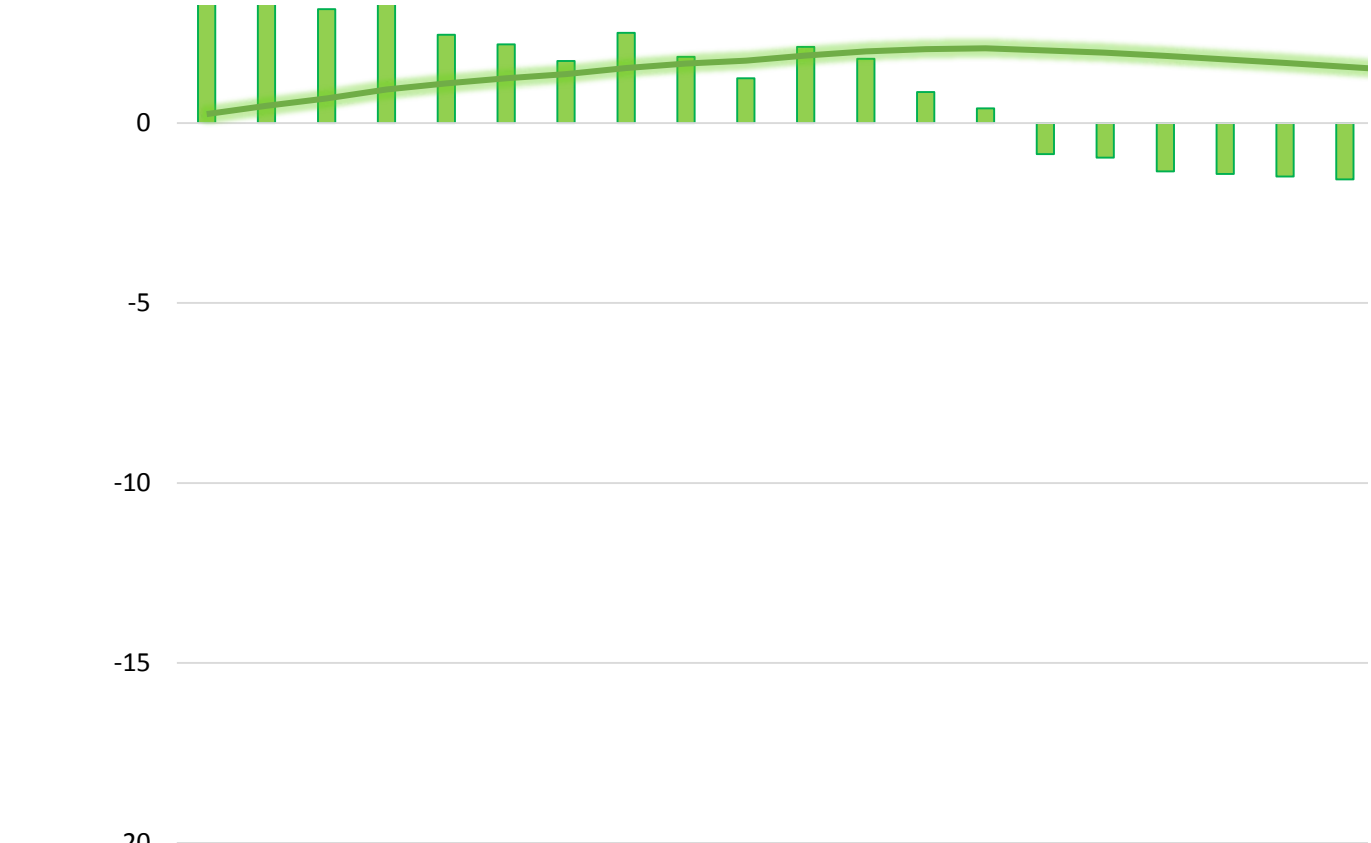


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

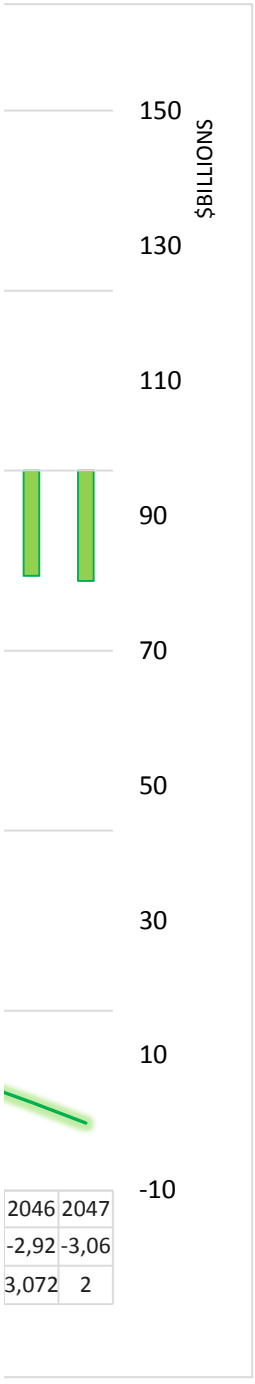
Feb 6 Deck - Scenario 1c - at 5.12% interest rat

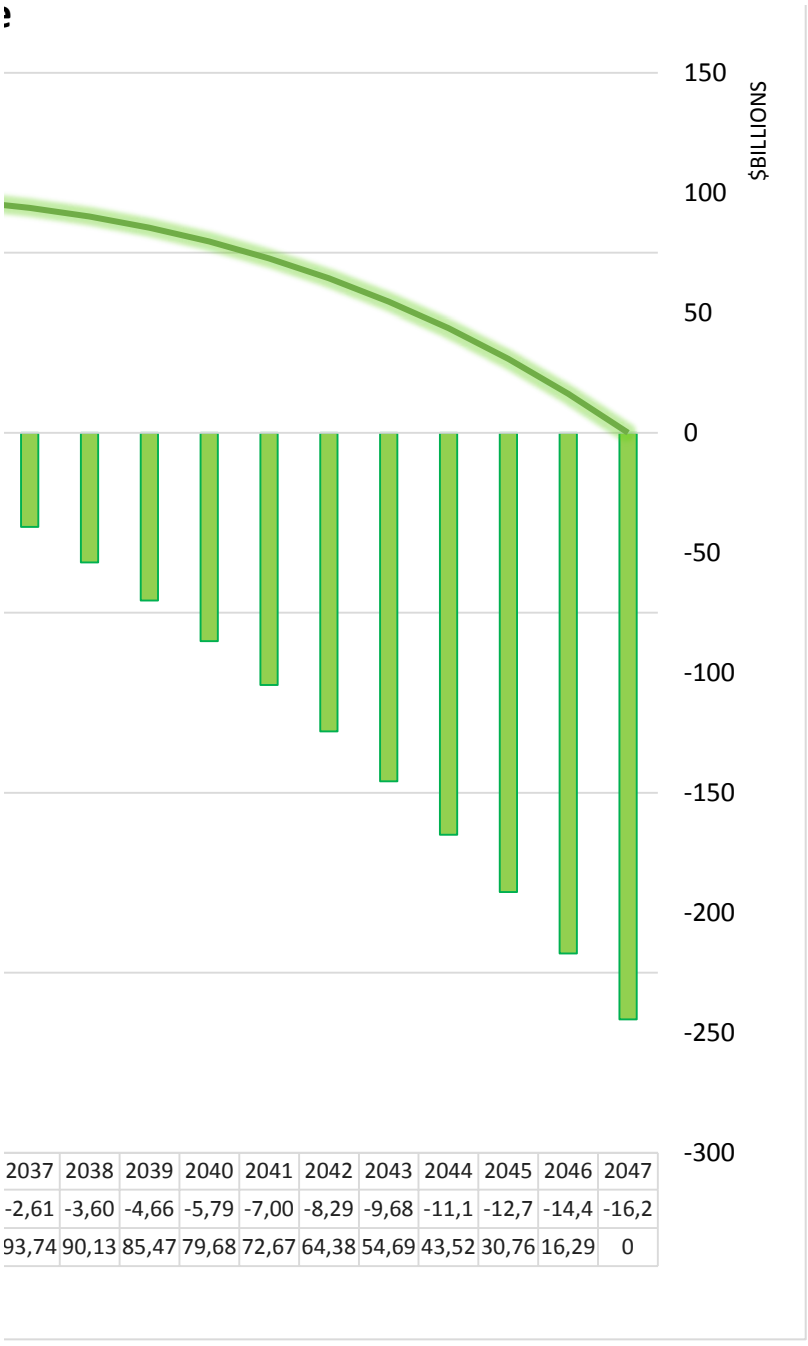




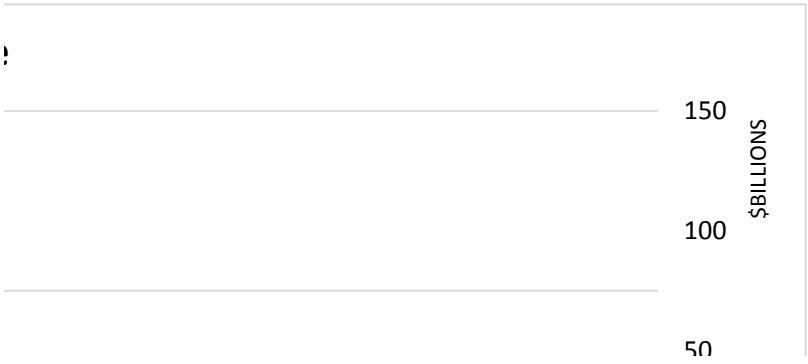
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

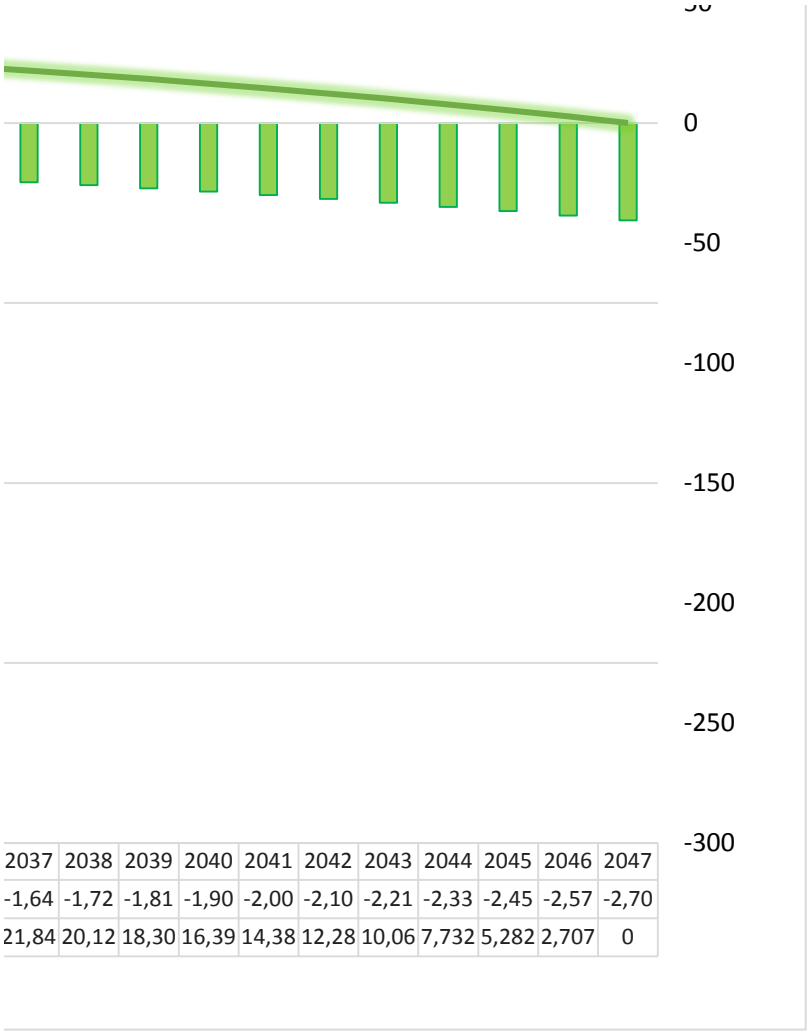
CALENDAR YEAR


150
130
110
90
70
50
30
10
-10
$BILLIONS
2046 2047
-2,92 -3,06
3,072 2



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest

IESO GA cost forecast + extrapolation

Scenario
Option 1
Bills Lowered 25%, RPP Only
Option 2
Bills Lowered 20%, RPP Only
Option 3
Bills Lowered 18%, contract/conservation refinancing, RPP Only

rate	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
Ratepayer GA Payment	9,856	9,602	9,338	9,344
Total Accumulated Debt ($ billion)	2,239	4,586	7,035	10,219
Ratepayer GA Payment	10,537	10,296	10,041	10,061
Accumulated debt in present year (including 5% interest,	1,559	3,177	4,851	7,207
Ratepayer GA Payment	10,648	10,303	10,186	10,873
Accumulated debt in present year (including 5% interest,	1,447	3,053	4,575	6,105
	12095.37	11834.681	11552.105	12168.428

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801
13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103
9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513
9,266	11,038	12,324	14,370	15,725	16,458	18,035	19,263
9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253
7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876
10843.555	10633.626	10243.432	11128.119	10527.018	10033.287	11042.844	10819.098

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389

9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615
31,654	32,799	32,730	32,616	31,702	30,097	28,411	26,638
10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117
19,534	19,317	18,577	17,799	16,981	16,122	15,218	14,268
9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837
18,843	19,521	20,007	20,312	20,325	19,755	18,549	17,050
10008.692	9721.4381	8654.4847	8819.9388	8238.0383	7756.4351	5662.3212	5388.8445

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627

8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853
24,774	22,815	20,756	18,591	16,316	13,924	11,410	8,767
6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355
13,270	12,221	11,118	9,958	8,740	7,458	6,112	4,696
7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712
15,464	13,694	12,062	10,556	9,143	7,810	6,672	5,928
5128.5761	4880.878	4645.1432	4420.7938	4207.28	4004.0783	3810.6908	3626.6435

2045	2046	2047	2048

3,451	3,285	3,126	2,975	2,831	2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
6,678	6,511	6,353	2,975	2,831	2,695
5,989	3,069	0	0	0	0
5,180	5,013	4,854	2,975	2,831	2,695
3,208	1,644	0	-	-	-
4,007	3,619	3,425	3,156	3,011	2,878
5,676	5,633	5,623	5,730	5,843	5,959
3451.485	3284.787	3126.139	2975.154	2831.461	2694.708

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

		5.00%	
Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb14_1_30yr

Option 1 - Bills Lowered 25%, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,239	2,347
Interest Portion	0	115

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	560	2,266
Interest Portion	-	29

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $33 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb14_2_30yr

Option 2 - Bills Lowered 20%, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,559	1,619
Interest Portion	0	80

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	390	1,574
Interest Portion	-	20

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb14_3_30yr

Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606
Interest Portion	0	74

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,487
Interest Portion	-	19

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	390 - 560	1,574 - 2,266

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	560	2266
Debt-Finance Global Adjustment Costs, Option 1a	390	1574
RRRP		
OESP – Enhance Benefit		162

Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**560**	**2506**
Total, B	390	1814

Proposed Program Total:	390 - 560	1,814 - 2,506

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Option 1
Option 2
Option 3

Assumes an inte

2019	2020	2021	2022
2,449	3,184	2,834	2,599
235	360	523	668

2018-19	2019-20	2020-21	2021-2022
2,372	2,633	3,096	2,775
145	266	401	559

2030.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,674	2,356	2,060	1,772
163	248	369	474

2018-19	2019-20	2020-21	2021-2022
1,632	1,844	2,282	1,988
100	184	278	395

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446
156	234	312	385

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429
95	176	254	331

2033.

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022
1,632 - 2,372	1,844 - 2,633	2,282 - 3,096	1,988 - 2,775

/1

2018-19[1]	2019-20[1]	2020-21[1]
2372	2633	3096
1632	1844	2282
225	279	323

60	60	60
18	18	18
2675	**2990**	**3497**
1935	2201	2683

1,935 - 2,675	2,201 - 2,990	2,683 - 3,497

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$21,561	$30,205	$32,799	occurs in Year 2030
$13,503	$17,883	$19,534	occurs in Year 2029
$12,862	$19,498	$20,326	occurs in Year 2033

erest rate of 5.00% (compounded monthly).

Tab Name		Total Accumulated Interest Costs
Feb14_1_30yr	$27,005	$34,278
Feb14_2_30yr	$15,940	$20,378
Feb14_3_30yr	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$27,005 to $34,278**
Option 2	$15,940 to $20,378**
Option 3	$17,202 to $22,028**

** With a higher interest rate, the amortization period extend beyond the 30-year forecast

ted period resulting in a remaining balance at the end of the 30-year period. For specifics, see details belo

w.

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,239	2,347	2,449	3,184	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,604	-1,687	-1,773	-1,864	-1,959	-2,059	-2,164	-2,275	-2,392	-2,514	-2,643	-2,778	-2,920	-3,069	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,292	2,403	2,507	3,260	2,902	2,660	2,219	3,056	2,412	1,841	2,776	2,492	1,589	1,171	-70	-117	-936	-1,643	-1,727	-1,815	-1,908	-2,005	-2,108	-2,216	-2,329	-2,448	-2,574	-2,705	-2,844	-2,989	-3,142	0	0	0
			53	56	58	76	67	62	52	71	56	43	64	58	37	27	-2	-3	-22	-38	-40	-42	-44	-47	-49	-51	-54	-57	-60	-63	-66	-69	-73	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,184	1,678	30,205
Equal Monthly Debt Drawdown	3,260	1,676	

		Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,799	2030	21,561
Equal Monthly Debt Drawdown	33,579		

Feb14 Option 1, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				26
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
a	Debt, Beginning of Year	0	2,239	4,586	7,035	10,219	13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103	31,655	32,799	32,731	32,617	31,703	30,098	28,412	26,639	24,775	22,816	20,757	18,593	16,318	13,926	11,412	8,769	5,992	3,072	2	3	3	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*115*	*235*	*360*	*523*	*668*	*801*	*912*	*1,064*	*1,185*	*1,277*	*1,416*	*1,540*	*1,620*	*1,678*	*1,675*	*1,669*	*1,622*	*1,540*	*1,454*	*1,363*	*1,268*	*1,167*	*1,062*	*951*	*835*	*712*	*584*	*449*	*307*	*157*	*0*	*0*	*0*	30,205
b	Additional GA Debt Drawdown, End of Year	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,239	4,586	7,035	10,219	13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103	31,655	32,799	32,731	32,617	31,703	30,098	28,412	26,639	24,775	22,816	20,757	18,593	16,318	13,926	11,412	8,769	5,992	3,072	2	3	3	3	
			FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,138	8,554	10,094	11,238	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	8,769	5,992	3,072	2	3	3	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,821	13,752	15,118	17,192	18,483	19,097	20,531	21,549	21,561	21,561	21,561	21,447	20,533	18,928	17,242	15,469	13,605	11,646	9,587	7,423	5,147	2,756	242	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,138	8,554	10,094	11,714	13,392	15,066	16,735	18,357	19,897	21,350	22,713	23,981	25,148	26,210	27,161	27,996	28,709	29,293	29,741	30,048	30,205				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,821	13,752	15,118	17,192	18,483	19,097	20,531	21,549	21,561	21,086	19,339	17,551	14,968	11,741	8,515	5,288	2,062	-1,164	-4,391	-7,617	-10,844	-14,070	-17,297	-20,523	-23,750	-26,976	-30,202				
Fiscal Exposure - End of Year Debt Drawdown		2,239	2,347	2,449	3,184	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,604	-1,687	-1,773	-1,864	-1,959	-2,059	-2,164	-2,275	-2,392	-2,514	-2,643	-2,778	-2,920	-3,069	0	0	0	

Feb14 Option 1, 30-yr — Equal Monthly Debt Drawdown

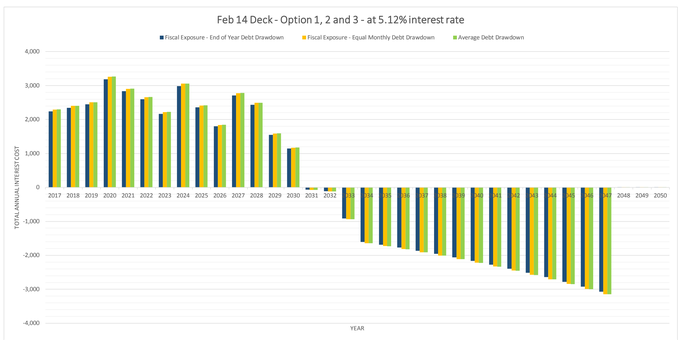
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,292	4,695	7,202	10,462	13,363	16,024	18,243	21,299	23,711	25,552	28,327	30,819	32,408	33,579	33,510	33,393	32,457	30,814	29,087	27,272	25,365	23,359	21,251	19,035	16,706	14,257	11,683	8,978	6,134	3,145	2	3	3	
1,676	*Interest Cost - Feb14 Option 1, 30-yr*	*53*	*170*	*293*	*436*	*590*	*730*	*852*	*983*	*1,120*	*1,228*	*1,341*	*1,473*	*1,577*	*1,647*	*1,676*	*1,672*	*1,647*	*1,584*	*1,500*	*1,411*	*1,319*	*1,221*	*1,118*	*1,010*	*897*	*778*	*653*	*521*	*383*	*237*	*84*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,292	4,695	7,202	10,462	13,363	16,024	18,243	21,299	23,711	25,552	28,327	30,819	32,408	33,579	33,510	33,393	32,457	30,814	29,087	27,272	25,365	23,359	21,251	19,035	16,706	14,257	11,683	8,978	6,134	3,145	2	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,292	2,403	2,507	3,260	2,902	2,660	2,219	3,056	2,412	1,841	2,776	2,492	1,589	1,171	-70	-117	-936	-1,643	-1,727	-1,815	-1,908	-2,005	-2,108	-2,216	-2,329	-2,448	-2,574	-2,705	-2,844	-2,989	-3,142	0	0	0	
	Monthly Drawdown	187	186	185	235	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	-	-	-	
	FV of Monthly Drawdown at 5%	2,292	2,285	2,267	2,891	2,366	1,977	1,399	2,123	1,322	628	1,468	1,043	12	(487)	(1,788)	(1,831)	(2,644)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	-	-	-	
	Annual Interest Cost on New Drawdowns	53	53	53	67	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	-	-	-	
	Annual Interest Cost on Opening Balance	-	117	240	368	535	684	820	933	1,090	1,213	1,307	1,449	1,577	1,658	1,718	1,714	1,708	1,661	1,577	1,488	1,395	1,298	1,195	1,087	974	855	729	598	459	314	161	0	0	0	
	Total Annual Interest Cost	53	170	293	436	590	730	852	983	1,120	1,228	1,341	1,473	1,577	1,647	1,676	1,672	1,647	1,584	1,500	1,411	1,319	1,221	1,118	1,010	897	778	653	521	383	237	84	0	0	0	

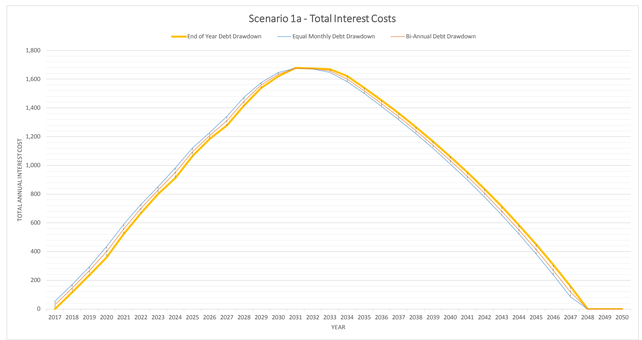
Feb14 Option 1, 30-yr — Bi-Annual Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,268	4,645	7,125	10,349	13,220	15,852	18,047	21,070	23,456	25,277	28,023	30,488	32,060	33,219	33,150	33,034	32,108	30,483	28,775	26,980	25,092	23,108	21,023	18,831	16,526	14,104	11,558	8,882	6,068	3,111	2	3	3	
	Interest Cost - Feb14 Option 1, 30-yr	*29*	*145*	*266*	*401*	*559*	*701*	*828*	*950*	*1,095*	*1,208*	*1,312*	*1,447*	*1,560*	*1,634*	*1,677*	*1,673*	*1,657*	*1,601*	*1,518*	*1,431*	*1,339*	*1,242*	*1,141*	*1,034*	*922*	*804*	*680*	*550*	*413*	*269*	*118*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,268	4,645	7,125	10,349	13,220	15,852	18,047	21,070	23,456	25,277	28,023	30,488	32,060	33,219	33,150	33,034	32,108	30,483	28,775	26,980	25,092	23,108	21,023	18,831	16,526	14,104	11,558	8,882	6,068	3,111	2	3	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,268	2,377	2,480	3,225	2,870	2,632	2,195	3,024	2,386	1,821	2,746	2,465	1,572	1,159	-69	-116	-926	-1,625	-1,708	-1,796	-1,887	-1,984	-2,085	-2,192	-2,304	-2,422	-2,546	-2,676	-2,813	-2,957	-3,109	0	0	0	
	Bi-Annual Drawdown	1,119	1,116	1,107	1,412	1,156	965	683	1,037	646	307	717	509	6	(238)	(873)	(894)	(1,291)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,268	2,261	2,243	2,860	2,341	1,955	1,384	2,100	1,308	621	1,453	1,031	12	(481)	(1,769)	(1,812)	(2,616)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	-	-	-	
	Annual Interest Cost on New Drawdowns	29	29	28	36	30	25	17	27	17	8	18	13	0	(6)	(22)	(23)	(33)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	-	-	-	
	Annual Interest Cost on Opening Balance	-	116	238	365	529	676	811	923	1,078	1,200	1,293	1,434	1,560	1,640	1,700	1,696	1,690	1,643	1,560	1,472	1,380	1,284	1,182	1,076	963	846	722	591	454	310	159	0	0	0	
	Total Annual Interest Cost	29	145	266	401	559	701	828	950	1,095	1,208	1,312	1,447	1,560	1,634	1,677	1,673	1,657	1,601	1,518	1,431	1,339	1,242	1,141	1,034	922	804	680	550	413	269	118	0	0	0	

Feb14 Option 1, 30-yr — Average Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,296	4,703	7,215	10,480	13,387	16,052	18,275	21,336	23,752	25,596	28,377	30,873	32,465	33,638	33,568	33,451	32,514	30,868	29,138	27,320	25,409	23,400	21,288	19,068	16,735	14,282	11,704	8,994	6,145	3,150	2	3	3	
	Interest Cost - Feb14 Option 1, 30-yr	*57*	*175*	*297*	*441*	*595*	*734*	*856*	*988*	*1,125*	*1,231*	*1,346*	*1,478*	*1,580*	*1,649*	*1,676*	*1,672*	*1,645*	*1,581*	*1,497*	*1,408*	*1,315*	*1,217*	*1,115*	*1,007*	*893*	*774*	*648*	*516*	*378*	*232*	*79*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,296	4,703	7,215	10,480	13,387	16,052	18,275	21,336	23,752	25,596	28,377	30,873	32,465	33,638	33,568	33,451	32,514	30,868	29,138	27,320	25,409	23,400	21,288	19,068	16,735	14,282	11,704	8,994	6,145	3,150	2	3	3	3	
Fiscal Exposure - Average Debt Drawdown		2,296	2,407	2,512	3,265	2,907	2,665	2,223	3,062	2,416	1,844	2,780	2,496	1,592	1,173	-70	-117	-937	-1,646	-1,730	-1,818	-1,911	-2,009	-2,112	-2,220	-2,333	-2,453	-2,578	-2,710	-2,849	-2,995	-3,148	0	0	0	





Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,559	1,619	1,674	2,356	2,060	1,772	1,286	2,046	1,355	733	1,578	1,228	271	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,415	-1,488	-1,564	-1,644	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0	
			37	38	40	56	49	42	31	49	32	17	38	29	6	-5	-18	-19	-19	-20	-21	-23	-24	-25	-26	-28	-29	-30	-32	-34	-35	-37	-39	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,356	999	17,883
Equal Monthly Debt Drawdown	2,412	994	

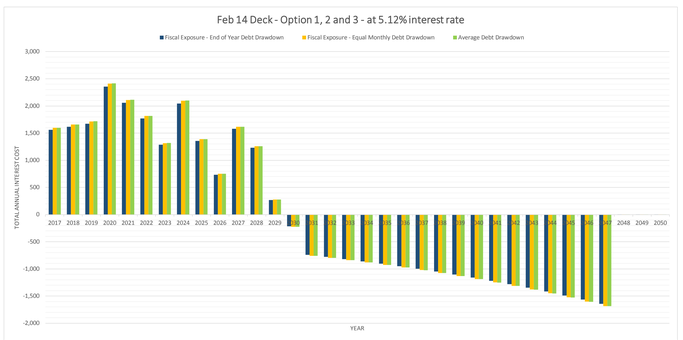
	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,534	2029	13,503
Equal Monthly Debt Drawdown	19,999		

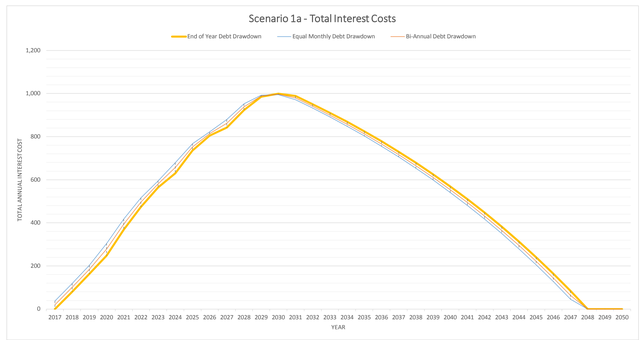
Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP Only																																				26
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
a	Debt, Beginning of Year	0	1,559	3,177	4,851	7,207	9,266	11,039	12,324	14,370	15,725	16,458	18,035	19,264	19,534	19,317	18,577	17,799	16,982	16,122	15,219	14,269	13,271	12,222	11,119	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1	2	2	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*80*	*163*	*248*	*369*	*474*	*565*	*631*	*735*	*805*	*842*	*923*	*986*	*999*	*988*	*950*	*911*	*869*	*825*	*779*	*730*	*679*	*625*	*569*	*510*	*447*	*382*	*313*	*240*	*164*	*84*	*0*	*0*	*0*	17,883
b	Additional GA Debt Drawdown, End of Year	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,559	3,177	4,851	7,207	9,266	11,039	12,324	14,370	15,725	16,458	18,035	19,264	19,534	19,317	18,577	17,799	16,982	16,122	15,219	14,269	13,271	12,222	11,119	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1	2	2	2	
			TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE		
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	7,818	7,078	6,300	5,483	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,697	3,210	1,646	1	2	2	2	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,842	12,461	12,390	13,125	13,431	12,716	11,499	11,499	11,499	11,499	11,499	10,595	9,646	8,648	7,598	6,495	5,336	4,117	2,836	1,490	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	7,818	8,805	9,757	10,667	11,536	12,361	13,140	13,870	14,549	15,174	15,743	16,252	16,700	17,081	17,394	17,634	17,798	17,883				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,842	12,461	12,390	13,125	13,431	12,716	11,499	9,771	8,042	6,314	4,586	2,858	1,129	-599	-2,327	-4,055	-5,784	-7,512	-9,240	-10,968	-12,696	-14,425	-16,153	-17,881				
Fiscal Exposure - End of Year Debt Drawdown		1,559	1,619	1,674	2,356	2,060	1,772	1,286	2,046	1,355	733	1,578	1,228	271	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,415	-1,488	-1,564	-1,644	0	0	0	

Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,019	18,223	17,385	16,506	15,581	14,609	13,587	12,512	11,383	10,196	8,948	7,637	6,258	4,809	3,286	1,685	2	2	2	
994	*Interest Cost - Feb14 Option 1, 30-yr*	*37*	*118*	*202*	*304*	*418*	*516*	*595*	*679*	*767*	*822*	*880*	*952*	*992*	*994*	*971*	*932*	*891*	*848*	*803*	*756*	*706*	*654*	*599*	*541*	*481*	*417*	*350*	*279*	*205*	*127*	*45*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,019	18,223	17,385	16,506	15,581	14,609	13,587	12,512	11,383	10,196	8,948	7,637	6,258	4,809	3,286	1,685	2	2	2	2	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0	
	Monthly Drawdown	130	128	126	176	141	108	60	118	52	(6)	61	25	(60)	(101)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	-	-	-	
	FV of Monthly Drawdown at 5%	1,596	1,575	1,548	2,157	1,731	1,329	738	1,449	635	(74)	753	313	(732)	(1,246)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	-	-	-	
	Annual Interest Cost on New Drawdowns	37	37	36	50	40	31	17	34	15	(2)	17	7	(17)	(29)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	-	-	-	
	Annual Interest Cost on Opening Balance	-	82	166	254	377	485	578	646	753	824	862	945	1,009	1,023	1,012	973	932	889	844	797	747	695	640	582	522	458	391	320	246	168	86	0	0	0	
	Total Annual Interest Cost	37	118	202	304	418	516	595	679	767	822	880	952	992	994	971	932	891	848	803	756	706	654	599	541	481	417	350	279	205	127	45	0	0	0	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,815	18,027	17,199	16,328	15,413	14,452	13,441	12,378	11,261	10,087	8,852	7,555	6,191	4,758	3,251	1,667	1	2	2	
	Interest Cost - Feb14 Option 1, 30-yr	*20*	*100*	*184*	*278*	*395*	*497*	*581*	*657*	*753*	*814*	*862*	*938*	*989*	*997*	*979*	*940*	*900*	*858*	*813*	*766*	*717*	*666*	*611*	*554*	*494*	*431*	*364*	*295*	*221*	*144*	*63*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,815	18,027	17,199	16,328	15,413	14,452	13,441	12,378	11,261	10,087	8,852	7,555	6,191	4,758	3,251	1,667	1	2	2	2	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,579	1,639	1,696	2,386	2,086	1,795	1,302	2,072	1,372	742	1,598	1,244	274	-220	-749	-788	-828	-870	-915	-962	-1,011	-1,063	-1,117	-1,174	-1,234	-1,297	-1,364	-1,434	-1,507	-1,584	-1,665	0	0	0	
	Bi-Annual Drawdown	779	769	756	1,054	845	649	361	708	310	(36)	368	153	(358)	(608)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,579	1,558	1,531	2,134	1,713	1,315	730	1,433	628	(73)	745	310	(724)	(1,232)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	-	-	-	
	Annual Interest Cost on New Drawdowns	20	20	19	27	22	17	9	18	8	(1)	9	4	(9)	(16)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	-	-	-	
	Annual Interest Cost on Opening Balance	-	81	165	251	373	480	572	639	745	815	853	935	998	1,012	1,001	963	922	880	835	789	739	688	633	576	516	453	387	317	243	166	85	0	0	0	
	Total Annual Interest Cost	20	100	184	278	395	497	581	657	753	814	862	938	989	997	979	940	900	858	813	766	717	666	611	554	494	431	364	295	221	144	63	0	0	0	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,599	3,258	4,975	7,391	9,504	11,321	12,640	14,738	16,128	16,879	18,497	19,757	20,034	19,811	19,052	18,254	17,416	16,535	15,608	14,634	13,610	12,534	11,403	10,214	8,964	7,650	6,269	4,818	3,292	1,688	2	2	2	
	Interest Cost - Feb14 Option 1, 30-yr	*40*	*121*	*205*	*308*	*421*	*519*	*598*	*683*	*770*	*823*	*882*	*954*	*992*	*994*	*969*	*931*	*890*	*847*	*802*	*754*	*704*	*652*	*597*	*539*	*478*	*414*	*347*	*277*	*202*	*124*	*42*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,599	3,258	4,975	7,391	9,504	11,321	12,640	14,738	16,128	16,879	18,497	19,757	20,034	19,811	19,052	18,254	17,416	16,535	15,608	14,634	13,610	12,534	11,403	10,214	8,964	7,650	6,269	4,818	3,292	1,688	2	2	2	2	
Fiscal Exposure - Average Debt Drawdown		1,599	1,660	1,717	2,416	2,112	1,817	1,319	2,098	1,390	751	1,618	1,260	277	-223	-759	-798	-839	-881	-927	-974	-1,024	-1,076	-1,131	-1,189	-1,250	-1,314	-1,381	-1,452	-1,526	-1,604	-1,686	0	0	0	





Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_3_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	
			34	38	36	36	34	34	35	36	36	35	35	34	23	16	12	7	0	-14	-29	-36	-38	-42	-39	-36	-34	-32	-27	-18	-6	-1	0	3	3	3	142

		Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	1,606		1,040	19,498
Equal Monthly Debt Drawdown	1,644		1,040	

	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	20,326	2033	12,862
Equal Monthly Debt Drawdown	20,809		

Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
a	Debt, Beginning of Year	0	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*74*	*156*	*234*	*312*	*385*	*459*	*534*	*612*	*690*	*766*	*842*	*915*	*964*	*999*	*1,024*	*1,039*	*1,040*	*1,011*	*949*	*872*	*791*	*701*	*617*	*540*	*468*	*400*	*341*	*303*	*290*	*288*	*288*	*293*	*299*	19,498
b	Additional GA Debt Drawdown, End of Year	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,430	7,736	7,749	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,577	12,577	12,577	12,577	11,371	9,872	8,285	6,516	4,884	3,378	1,966	633	-506	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,943	8,967	10,006	11,046	12,057	13,006	13,878	14,669	15,370	15,987	16,527	16,995	17,395	17,736	18,040	18,330	18,618				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,064	11,345	10,319	8,710	6,493	4,045	1,586	-974	-3,307	-5,431	-7,383	-9,184	-10,721	-11,807	-12,362	-12,696	-12,994				
Fiscal Exposure - End of Year Debt Drawdown		1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	

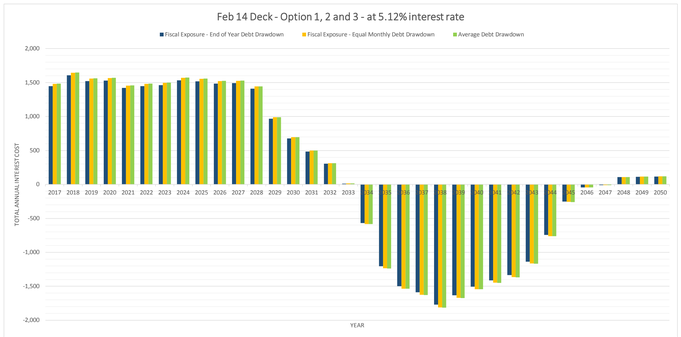
Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	
1,040	*Interest Cost - Feb14 Option 1, 30-yr*	*34*	*112*	*192*	*270*	*346*	*420*	*494*	*570*	*649*	*726*	*802*	*876*	*938*	*980*	*1,010*	*1,031*	*1,040*	*1,026*	*982*	*913*	*835*	*749*	*662*	*581*	*507*	*436*	*373*	*324*	*297*	*289*	*288*	*290*	*296*	*302*	19,640
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	6,102	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	

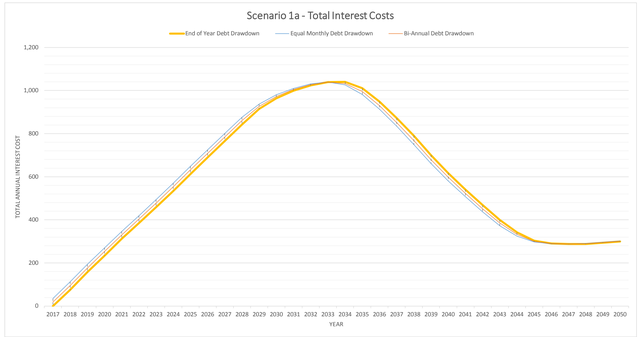
	Monthly Drawdown	121	128	114	108	93	88	84	83	76	66	60	47	4	(24)	(43)	(60)	(85)	(134)	(185)	(204)	(205)	(213)	(194)	(177)	(163)	(150)	(128)	(90)	(46)	(28)	(25)	(15)	(15)	(15)	
	FV of Monthly Drawdown at 5%	1,482	1,568	1,398	1,326	1,137	1,086	1,028	1,024	929	815	742	580	54	(292)	(525)	(736)	(1,050)	(1,648)	(2,269)	(2,506)	(2,517)	(2,621)	(2,389)	(2,174)	(1,999)	(1,844)	(1,574)	(1,111)	(568)	(342)	(306)	(185)	(184)	(188)	
	Annual Interest Cost on New Drawdowns	34	36	32	31	26	25	24	24	22	19	17	13	1	(7)	(12)	(17)	(24)	(38)	(53)	(58)	(58)	(61)	(55)	(51)	(46)	(43)	(37)	(26)	(13)	(8)	(7)	(4)	(4)	(4)	
	Annual Interest Cost on Opening Balance	-	76	160	240	320	394	470	547	627	707	784	863	936	987	1,023	1,048	1,064	1,065	1,035	972	893	810	717	632	553	479	409	350	311	297	295	295	300	306	
	Total Annual Interest Cost	34	112	192	270	346	420	494	570	649	726	802	876	938	980	1,010	1,031	1,040	1,026	982	913	835	749	662	581	507	436	373	324	297	289	288	290	296	302	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	
	Interest Cost - Feb14 Option 1, 30-yr	*19*	*95*	*176*	*254*	*331*	*404*	*478*	*554*	*632*	*709*	*785*	*861*	*927*	*973*	*1,005*	*1,028*	*1,039*	*1,033*	*995*	*930*	*852*	*769*	*680*	*598*	*522*	*451*	*385*	*332*	*300*	*290*	*288*	*289*	*295*	*301*	19,575
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	6,037	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,466	1,626	1,541	1,549	1,441	1,465	1,482	1,554	1,539	1,505	1,510	1,427	979	687	492	309	13	-577	-1,221	-1,518	-1,607	-1,792	-1,653	-1,525	-1,430	-1,350	-1,153	-753	-255	-44	-10	109	115	117	

	Bi-Annual Drawdown	724	766	683	648	555	530	502	500	454	398	363	283	26	(143)	(256)	(359)	(513)	(805)	(1,108)	(1,224)	(1,229)	(1,280)	(1,167)	(1,062)	(976)	(900)	(769)	(543)	(278)	(167)	(149)	(90)	(90)	(92)	
	FV of Bi-Annual Drawdown at 5%	1,466	1,551	1,383	1,312	1,125	1,075	1,017	1,013	919	806	735	573	53	(289)	(519)	(728)	(1,039)	(1,630)	(2,245)	(2,479)	(2,490)	(2,593)	(2,363)	(2,150)	(1,977)	(1,824)	(1,557)	(1,099)	(562)	(338)	(302)	(183)	(182)	(186)	
	Annual Interest Cost on New Drawdowns	19	20	17	17	14	14	13	13	12	10	9	7	1	(4)	(7)	(9)	(13)	(21)	(28)	(31)	(31)	(33)	(30)	(27)	(25)	(23)	(20)	(14)	(7)	(4)	(4)	(2)	(2)	(2)	
	Annual Interest Cost on Opening Balance	-	75	158	237	316	390	465	541	620	699	776	853	926	976	1,012	1,037	1,053	1,053	1,024	961	884	801	710	625	547	474	405	346	307	294	292	291	297	303	
	Total Annual Interest Cost	19	95	176	254	331	404	478	554	632	709	785	861	927	973	1,005	1,028	1,039	1,033	995	930	852	769	680	598	522	451	385	332	300	290	288	289	295	301	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	
	Interest Cost - Feb14 Option 1, 30-yr	*37*	*115*	*195*	*273*	*349*	*422*	*497*	*573*	*651*	*728*	*804*	*879*	*939*	*981*	*1,011*	*1,031*	*1,040*	*1,025*	*980*	*911*	*832*	*746*	*659*	*579*	*504*	*434*	*371*	*322*	*297*	*289*	*288*	*290*	*296*	*302*	19,651
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	6,113	
Fiscal Exposure - Average Debt Drawdown		1,484	1,647	1,561	1,569	1,459	1,483	1,500	1,573	1,559	1,524	1,530	1,445	992	696	498	313	14	-585	-1,237	-1,537	-1,627	-1,814	-1,674	-1,545	-1,448	-1,367	-1,167	-763	-258	-44	-10	110	116	119	





Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest ra

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest ra

IESO GA cost forecast + extrapolation

Scenario
Option 1

Option 2

ate	2017	2018	2019	2020
ate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	2200	4600	7000	10200

Total Accumulated Debt ($ billion)	2.2	4.6	7	10.2
	2,200	4,600	7,000	10,200

Total Accumulated Debt ($ billion)	1.6	3.2	4.9	7.2
	1,600	3,200	4,900	7,200

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
13100	15700	17800	20800	23200	25000	27700	30100

13.1 15.7 17.8 20.8 23.2 25 27.7 30.1
13,100 15,700 17,800 20,800 23,200 25,000 27,700 30,100

9.3 11 12.3 14.4 15.7 16.5 18 19.3
9,300 11,000 12,300 14,400 15,700 16,500 18,000 19,300

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
31700	32800	32700	32600	31700	30100	28400	26600

31.7	32.8	32.7	32.6	31.7	30.1	28.4	26.6
31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600

19.5	19.3	18.6	17.8	17	16.1	15.2	14.3
19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
24800	22800	20800	18600	16300	13900	11400	8800

24.8	22.8	20.8	18.6	16.3	13.9	11.4	8.8
24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800

13.3	12.2	11.1	10	8.7	7.5	6.1	4.7
13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	2046	2047	2048	2049	2050
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
6000	3100	0	0	0	0

6 3.1 0 0
6,000 3,100 - -

3.2 1.6 0 0
3,200 1,600 - -

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb9_1_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,200	2,400

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	550	2,250

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $33 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb9_2_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,600	1,600

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	400	1,600

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,169	4,668

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	545	2,203

Actuals are subject to actual prices and actual interest rates.

#N/A

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542

Fiscalized[3]	2016-17	2017-18
Start: January 1st	375	1,510

Actuals are subject to actual prices and actual interest rates.

#N/A

Rough		
	1	
	2	
	3	
	4 April	4
	5 May	5
	6 June	6
	7 July	7
	8 August	8
	9 September	9
	10 October	10
	11 November	11
	12 December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	400 - 550	1,600 - 2,250

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	550	2250
Debt-Finance Global Adjustment Costs, Option 1a	400	1600
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**550**	**2490**
Total, B	400	1840

Proposed Program Total:	400 - 550	1,840 - 2,490

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1
Scenario 2

2019	2020	2021	2022
2,400	3,200	2,900	2,600

2018-19	2019-20	2020-21	2021-2022
2,400	2,600	3,125	2,825

2030.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,700	2,300	2,100	1,700

2018-19	2019-20	2020-21	2021-2022
1,625	1,850	2,250	2,000

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
4,589	5,867	5,031	4,861

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988

› depend on decision on accounting treatment.

2019	2020	2021	2022
2,353	3,072	2,817	2,580

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757

2019	2020	2021	2022
1,578	2,243	1,931	1,635

2018-19	2019-20	2020-21	2021-2022
1,551	1,745	2,165	1,857



2018-19	2019-20	2020-21	2021-2022
1,625 - 2,400	1,850 - 2,600	2,250 - 3,125	2,000 - 2,825

/1

2018-19[1]	2019-20[1]	2020-21[1]
2400	2600	3125
1625	1850	2250
225	279	323
60	60	60
18	18	18
2703	**2957**	**3526**
1928	2207	2651

1,928 - 2,703 2,207 - 2,957 2,651 - 3,526

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
21,601	30,211	32,800	occurs in Year 2030
13,466	17,886	19,500	occurs in Year 2029
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!

2,200

Tab Name
Feb9_1_30yr
Feb9_2_30yr

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Feb9_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0	
			52	57	57	76	69	62	50	71	57	43	64	57	38	26	-2	-2	-21	-38	-40	-43	-43	-48	-48	-52	-55	-57	-59	-62	-67	-69	-74	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,200	1,678	30,211
Equal Monthly Debt Drawdown	3,276	1,676	

		Feb9 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,800	2030	21,601	
Equal Monthly Debt Drawdown	33,580			

Feb9 1, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
a	Debt, Beginning of Year	0	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	
c = a*5%	*Interest Cost - Feb9 1, 30-yr - End of Year Debt Drowdown*	*0*	*113*	*235*	*358*	*522*	*670*	*803*	*911*	*1,064*	*1,187*	*1,279*	*1,417*	*1,540*	*1,622*	*1,678*	*1,673*	*1,668*	*1,622*	*1,540*	*1,453*	*1,361*	*1,269*	*1,166*	*1,064*	*952*	*834*	*711*	*583*	*450*	*307*	*159*	*0*	*0*	*0*	30,211
b	Additional GA Debt Drawdown, End of Year	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	0
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	11,621	11,521	10,621	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	8,800	6,000	3,100	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	21,079	21,079	21,079	21,079	19,379	17,579	15,779	13,779	11,779	9,579	7,279	4,879	2,379	0	0	0	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	13,399	15,072	16,740	18,362	19,902	21,355	22,716	23,985	25,151	26,215	27,167	28,001	28,712	29,295	29,746	30,052	30,211				
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	19,301	17,528	14,960	11,738	8,498	5,245	2,084	-1,185	-4,351	-7,615	-10,867	-14,101	-17,312	-20,495	-23,746	-26,952	-30,211				
Fiscal Exposure - End of Year Debt Drawdown		2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0	

Feb9 1, 30-yr — Equal Monthly Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	
1,676	*Interest Cost - Feb9 1, 30-yr*	*52*	*170*	*292*	*434*	*591*	*732*	*853*	*982*	*1,121*	*1,230*	*1,343*	*1,474*	*1,578*	*1,648*	*1,676*	*1,671*	*1,646*	*1,584*	*1,500*	*1,410*	*1,318*	*1,221*	*1,119*	*1,012*	*897*	*777*	*652*	*521*	*384*	*238*	*85*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0	
	Monthly Drawdown	183	191	180	237	198	161	108	174	111	51	118	82	5	(43)	(148)	(148)	(214)	(268)	(270)	(271)	(263)	(272)	(264)	(272)	(271)	(269)	(268)	(265)	(271)	(267)	(272)	-	-	-	
	FV of Monthly Drawdown at 5%	2,252	2,342	2,216	2,909	2,435	1,976	1,328	2,139	1,368	628	1,455	1,006	61	(534)	(1,820)	(1,815)	(2,629)	(3,298)	(3,317)	(3,330)	(3,236)	(3,347)	(3,242)	(3,342)	(3,329)	(3,311)	(3,288)	(3,259)	(3,328)	(3,283)	(3,336)	-	-	-	
	Annual Interest Cost on New Drawdowns	52	54	51	68	57	46	31	50	32	15	34	23	1	(12)	(42)	(42)	(61)	(77)	(77)	(77)	(75)	(78)	(75)	(78)	(77)	(76)	(76)	(76)	(77)	(76)	(78)	-	-	-	
	Annual Interest Cost on Opening Balance	-	115	241	367	534	686	822	932	1,089	1,215	1,309	1,451	1,577	1,660	1,718	1,713	1,708	1,660	1,577	1,488	1,393	1,299	1,194	1,089	974	854	728	597	461	314	162	(0)	(0)	(0)	
	Total Annual Interest Cost	52	170	292	434	591	732	853	982	1,121	1,230	1,343	1,474	1,578	1,648	1,676	1,671	1,646	1,584	1,500	1,410	1,318	1,221	1,119	1,012	897	777	652	521	384	238	85	(0)	(0)	(0)	

Feb9 1, 30-yr — Bi-Annual Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*28*	*143*	*266*	*399*	*559*	*703*	*830*	*949*	*1,095*	*1,210*	*1,314*	*1,448*	*1,560*	*1,636*	*1,677*	*1,672*	*1,656*	*1,601*	*1,518*	*1,430*	*1,338*	*1,243*	*1,141*	*1,036*	*922*	*803*	*679*	*550*	*414*	*270*	*119*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,228	2,431	2,431	3,241	2,937	2,633	2,127	3,038	2,431	1,823	2,735	2,431	1,620	1,114	-101	-101	-912	-1,620	-1,722	-1,823	-1,823	-2,026	-2,026	-2,228	-2,329	-2,431	-2,532	-2,633	-2,836	-2,937	-3,140	0	0	0	
	Bi-Annual Drawdown	1,100	1,144	1,082	1,421	1,189	965	648	1,045	668	307	710	491	30	(261)	(889)	(886)	(1,284)	(1,611)	(1,620)	(1,626)	(1,580)	(1,634)	(1,583)	(1,632)	(1,626)	(1,617)	(1,606)	(1,592)	(1,625)	(1,603)	(1,629)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,228	2,317	2,192	2,878	2,409	1,954	1,313	2,116	1,353	621	1,439	995	61	(529)	(1,801)	(1,796)	(2,601)	(3,263)	(3,281)	(3,295)	(3,201)	(3,311)	(3,207)	(3,306)	(3,293)	(3,275)	(3,252)	(3,224)	(3,292)	(3,248)	(3,300)	-	-	-	
	Annual Interest Cost on New Drawdowns	28	29	28	36	30	25	17	27	17	8	18	13	1	(7)	(23)	(23)	(33)	(41)	(41)	(42)	(40)	(42)	(41)	(42)	(42)	(41)	(41)	(41)	(42)	(41)	(42)	-	-	-	
	Annual Interest Cost on Opening Balance	-	114	238	363	529	679	814	922	1,078	1,202	1,295	1,435	1,560	1,643	1,700	1,694	1,689	1,643	1,560	1,472	1,378	1,285	1,181	1,078	964	845	720	591	456	311	161	0	0	0	
	Total Annual Interest Cost	28	143	266	399	559	703	830	949	1,095	1,210	1,314	1,448	1,560	1,636	1,677	1,672	1,656	1,601	1,518	1,430	1,338	1,243	1,141	1,036	922	803	679	550	414	270	119	0	0	0	

Feb9 1, 30-yr — Average Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*56*	*174*	*297*	*440*	*596*	*737*	*857*	*987*	*1,126*	*1,233*	*1,348*	*1,479*	*1,581*	*1,650*	*1,676*	*1,670*	*1,645*	*1,581*	*1,496*	*1,407*	*1,315*	*1,218*	*1,115*	*1,008*	*893*	*773*	*647*	*517*	*379*	*233*	*79*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		2,256	2,461	2,461	3,282	2,974	2,667	2,154	3,077	2,461	1,846	2,769	2,461	1,641	1,128	-103	-103	-923	-1,641	-1,743	-1,846	-1,846	-2,051	-2,051	-2,256	-2,359	-2,461	-2,564	-2,667	-2,872	-2,974	-3,179	0	0	0	

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Feb9_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0
			38	38	40	55	50	40	31	50	31	19	36	31	5	-5	-17	-19	-19	-21	-21	-21	-24	-26	-26	-26	-31	-29	-33	-33	-36	-38	-38	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,300	998	17,886
Equal Monthly Debt Drawdown	2,355	993	

	Feb9 2, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,500	2029	13,466
Equal Monthly Debt Drawdown	19,964		

Feb9 2, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
a	Debt, Beginning of Year	0	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	
c = a*5%	*Interest Cost - Feb9 2, 30-yr - End of Year Debt Drowdown*	*0*	*82*	*164*	*251*	*368*	*476*	*563*	*629*	*737*	*803*	*844*	*921*	*987*	*998*	*987*	*952*	*911*	*870*	*824*	*778*	*732*	*680*	*624*	*568*	*512*	*445*	*384*	*312*	*240*	*164*	*82*	*0*	*0*	*0*	17,886
b	Additional GA Debt Drawdown, End of Year	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	7,123	6,323	5,523	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,700	3,200	1,600	0	0	0	
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	11,477	11,477	11,477	11,477	10,577	9,677	8,677	7,577	6,477	5,377	4,077	2,877	1,477	0	0	0	0	0	0	0	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	8,810	9,762	10,672	11,542	12,366	13,143	13,875	14,556	15,180	15,748	16,259	16,704	17,088	17,400	17,641	17,804	17,886				
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	9,790	8,038	6,328	4,558	2,834	1,157	-575	-2,356	-4,080	-5,748	-7,559	-9,204	-10,988	-12,700	-14,441	-16,204	-17,886				
Fiscal Exposure - End of Year Debt Drawdown		1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0	

Feb9 2, 30-yr — Equal Monthly Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	
993	*Interest Cost - Feb9 2, 30-yr*	*38*	*120*	*204*	*305*	*418*	*516*	*594*	*679*	*768*	*822*	*880*	*952*	*992*	*993*	*971*	*933*	*892*	*848*	*802*	*756*	*708*	*654*	*598*	*542*	*481*	*417*	*350*	*279*	*205*	*126*	*44*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0	
	Monthly Drawdown	133	127	128	171	144	102	61	123	47	(0)	55	32	(66)	(100)	(141)	(146)	(143)	(147)	(144)	(140)	(144)	(148)	(144)	(139)	(151)	(137)	(149)	(143)	(145)	(147)	(140)	-	-	-	
	FV of Monthly Drawdown at 5%	1,638	1,554	1,573	2,098	1,773	1,253	755	1,506	577	(3)	671	388	(806)	(1,226)	(1,728)	(1,793)	(1,751)	(1,812)	(1,765)	(1,718)	(1,773)	(1,823)	(1,765)	(1,708)	(1,855)	(1,684)	(1,826)	(1,753)	(1,782)	(1,806)	(1,722)	-	-	-	
	Annual Interest Cost on New Drawdowns	38	36	37	49	41	29	18	35	13	(0)	16	9	(19)	(28)	(40)	(42)	(41)	(42)	(41)	(40)	(41)	(42)	(41)	(40)	(43)	(39)	(42)	(41)	(41)	(42)	(40)	-	-	-	
	Annual Interest Cost on Opening Balance	-	84	168	257	377	487	576	644	754	822	864	943	1,011	1,021	1,011	974	932	890	843	796	749	697	639	581	524	456	393	320	246	168	84	0	0	0	
	Total Annual Interest Cost	38	120	204	305	418	516	594	679	768	822	880	952	992	993	971	933	892	848	802	756	708	654	598	542	481	417	350	279	205	126	44	0	0	0	

Feb9 2, 30-yr — Bi-Annual Debt Drawdown

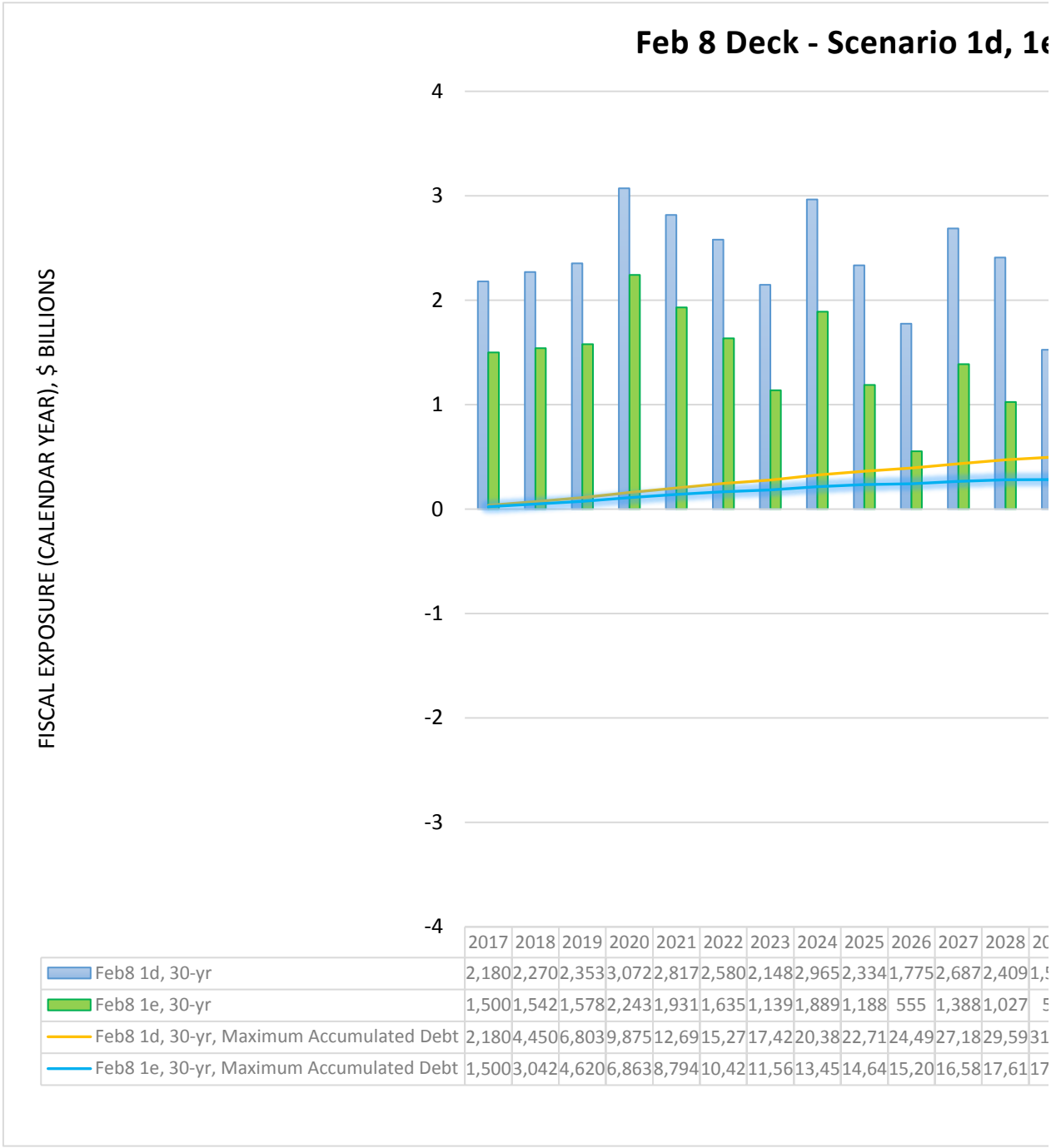
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*20*	*102*	*185*	*280*	*395*	*498*	*579*	*656*	*753*	*813*	*863*	*938*	*990*	*995*	*978*	*941*	*900*	*858*	*812*	*766*	*719*	*666*	*610*	*554*	*495*	*430*	*366*	*294*	*221*	*143*	*61*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,620	1,620	1,722	2,329	2,127	1,722	1,317	2,127	1,317	810	1,519	1,317	203	-203	-709	-810	-810	-912	-912	-912	-1,013	-1,114	-1,114	-1,114	-1,317	-1,215	-1,418	-1,418	-1,519	-1,620	-1,620	0	0	0	
	Bi-Annual Drawdown	800	759	768	1,025	866	612	369	735	282	(2)	328	190	(394)	(599)	(844)	(876)	(855)	(885)	(862)	(839)	(866)	(890)	(862)	(834)	(906)	(823)	(892)	(856)	(870)	(882)	(841)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,620	1,538	1,556	2,076	1,754	1,240	747	1,490	570	(3)	664	384	(797)	(1,213)	(1,709)	(1,774)	(1,733)	(1,792)	(1,746)	(1,699)	(1,754)	(1,803)	(1,746)	(1,689)	(1,835)	(1,666)	(1,807)	(1,734)	(1,763)	(1,786)	(1,703)	-	-	-	
	Annual Interest Cost on New Drawdowns	20	19	20	26	22	16	9	19	7	(0)	8	5	(10)	(15)	(22)	(22)	(22)	(23)	(22)	(21)	(22)	(23)	(22)	(21)	(23)	(21)	(23)	(22)	(22)	(23)	(22)	-	-	-	
	Annual Interest Cost on Opening Balance	-	83	166	254	373	482	570	637	746	814	855	933	1,000	1,010	1,000	964	922	881	834	788	741	689	632	575	518	451	389	316	244	166	83	0	0	0	
	Total Annual Interest Cost	20	102	185	280	395	498	579	656	753	813	863	938	990	995	978	941	900	858	812	766	719	666	610	554	495	430	366	294	221	143	61	0	0	0	

Feb9 2, 30-yr — Average Debt Drawdown

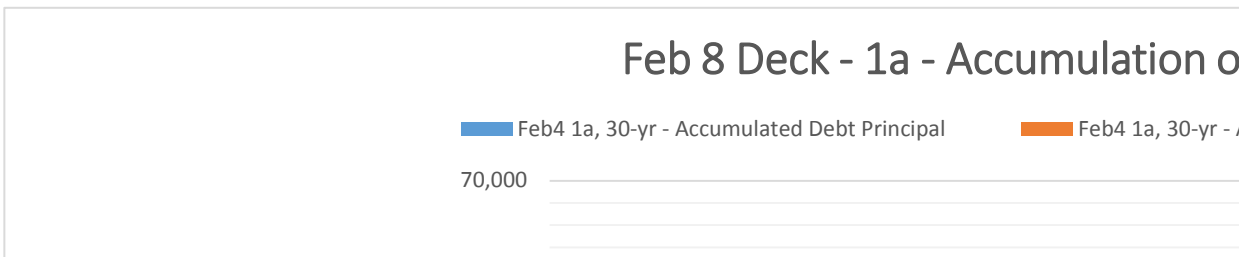
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*41*	*123*	*207*	*310*	*422*	*519*	*596*	*683*	*770*	*824*	*883*	*954*	*993*	*993*	*970*	*931*	*890*	*847*	*801*	*755*	*706*	*652*	*596*	*540*	*478*	*414*	*348*	*276*	*202*	*123*	*41*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,641	1,641	1,743	2,359	2,154	1,743	1,333	2,154	1,333	820	1,538	1,333	205	-205	-718	-820	-820	-923	-923	-923	-1,026	-1,128	-1,128	-1,128	-1,333	-1,231	-1,436	-1,436	-1,538	-1,641	-1,641	0	0	0	

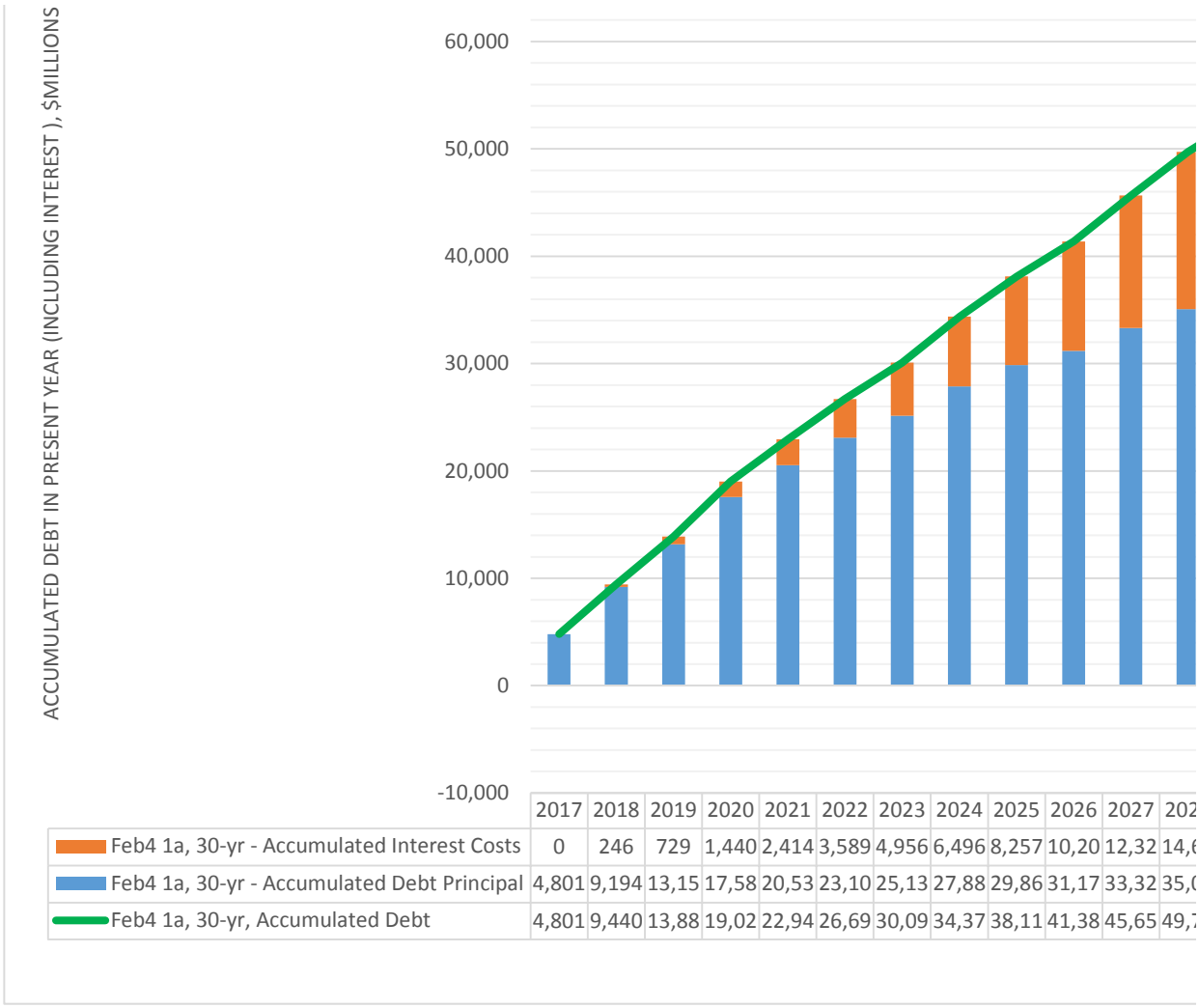
Feb 8 Deck

Feb 8 Deck - Scenario 1d, 1e - at 5.12% interest rate

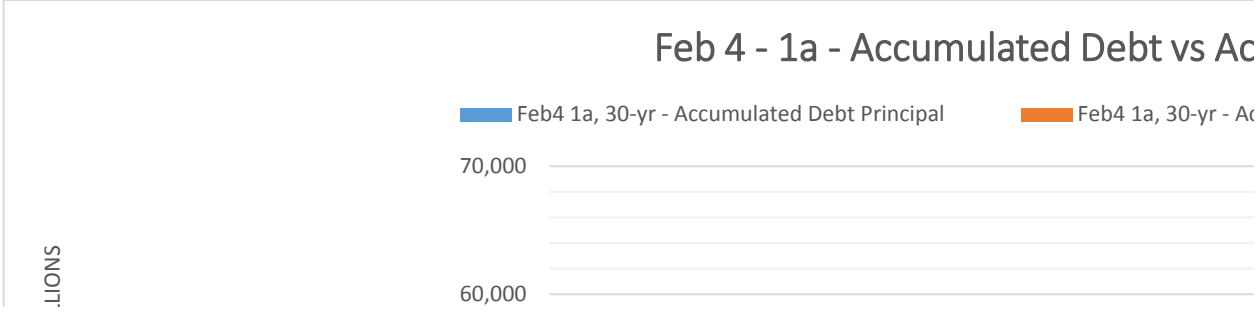


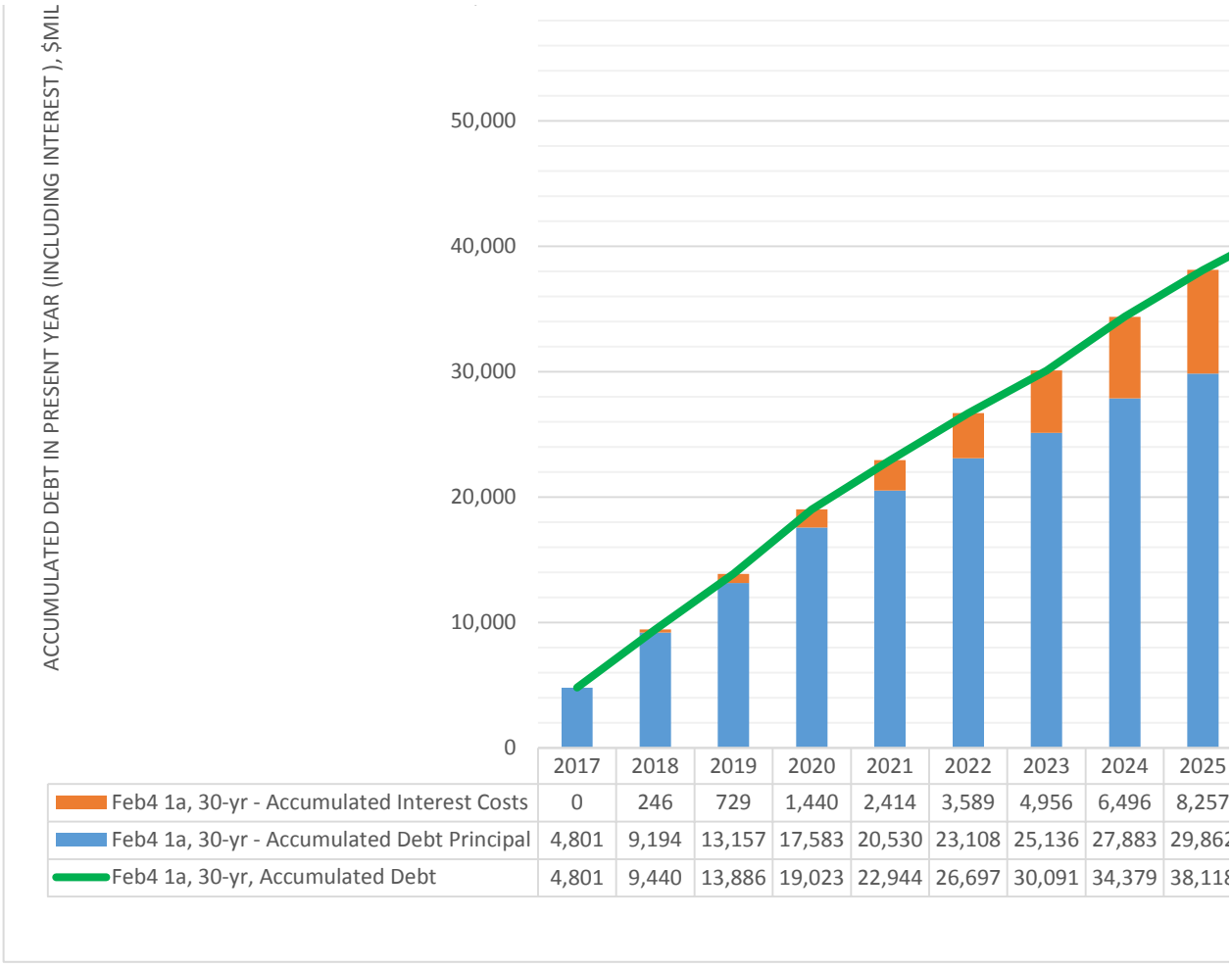
Feb 8 Deck - 1a - Accumulation of Debt (Principal and Interest)



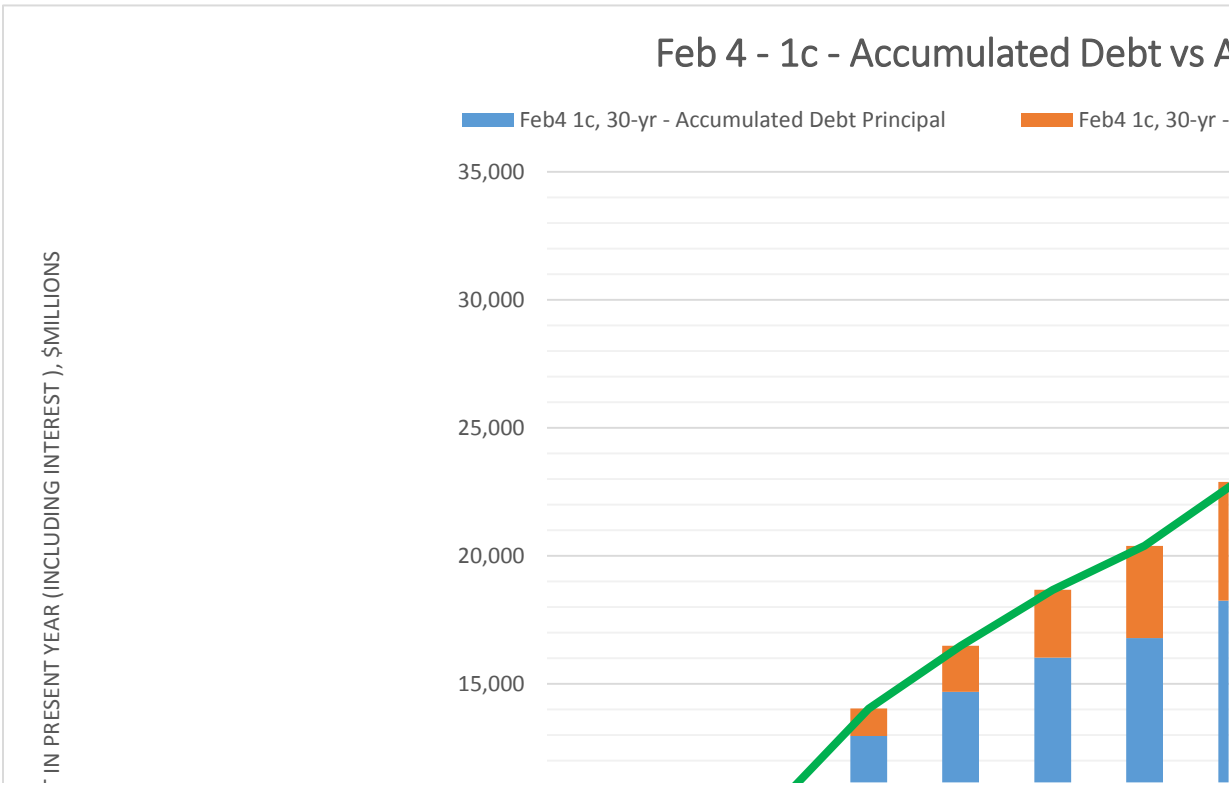


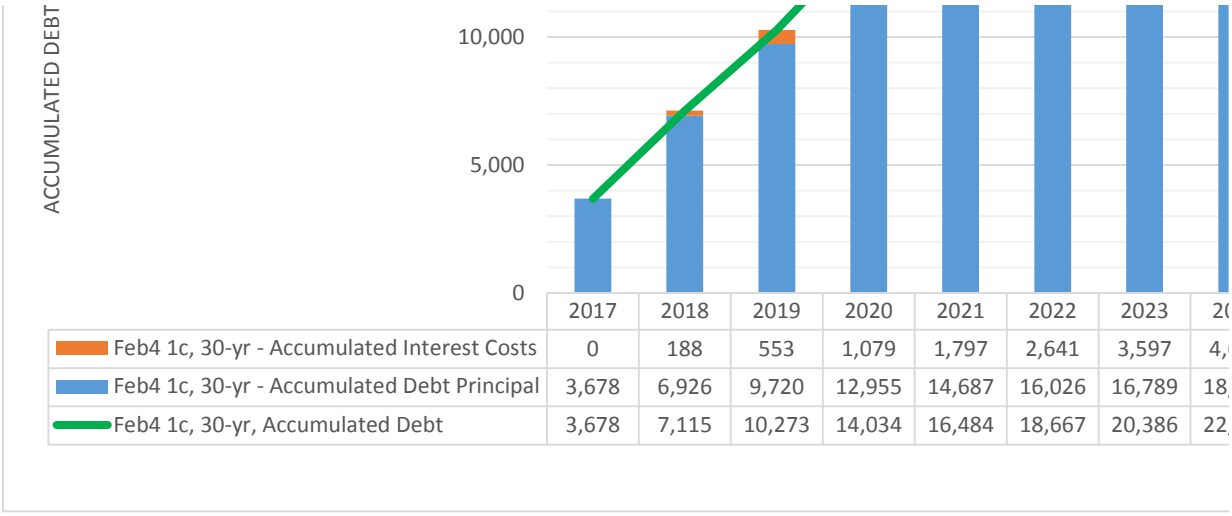
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	202
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,(
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,7



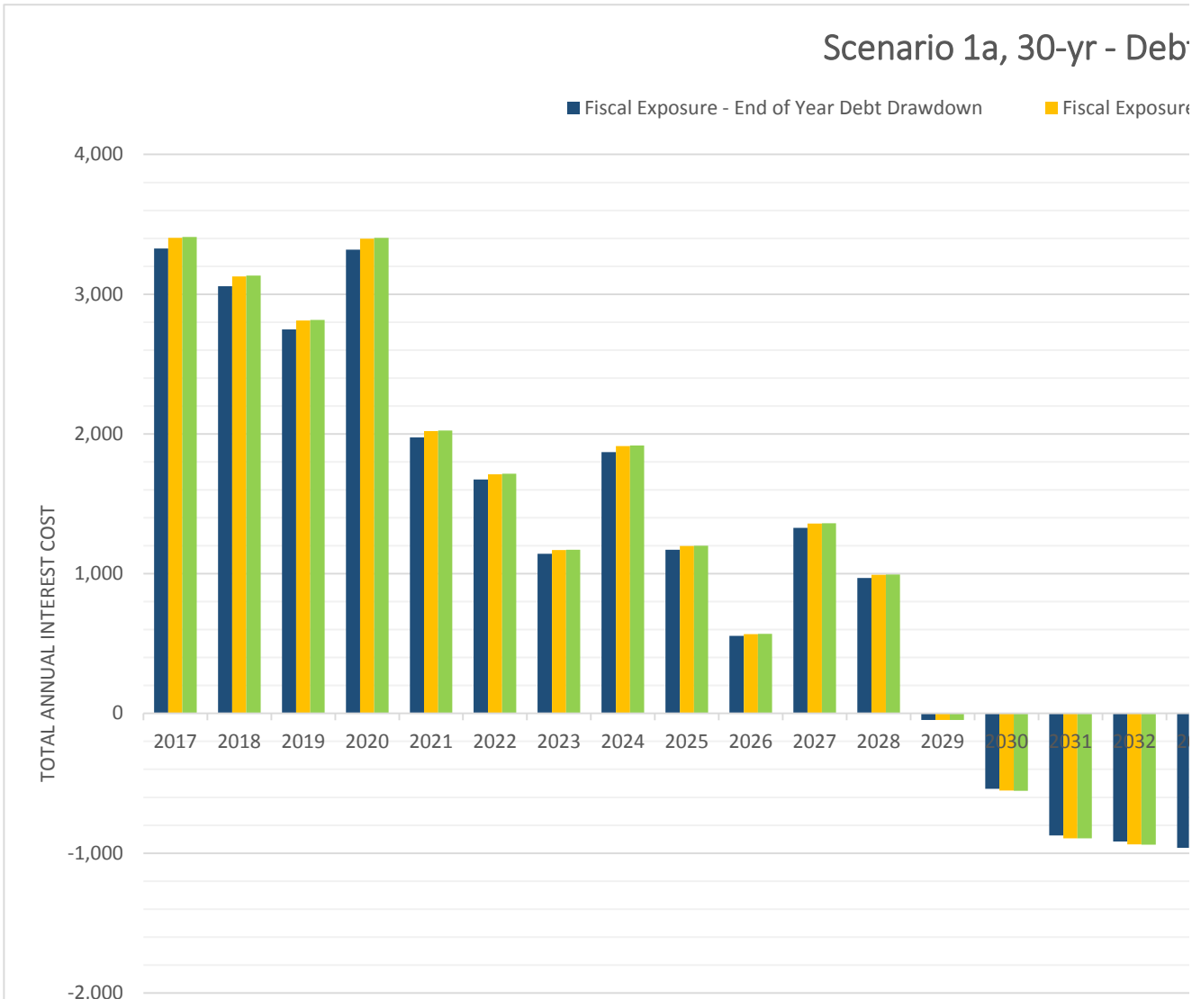


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



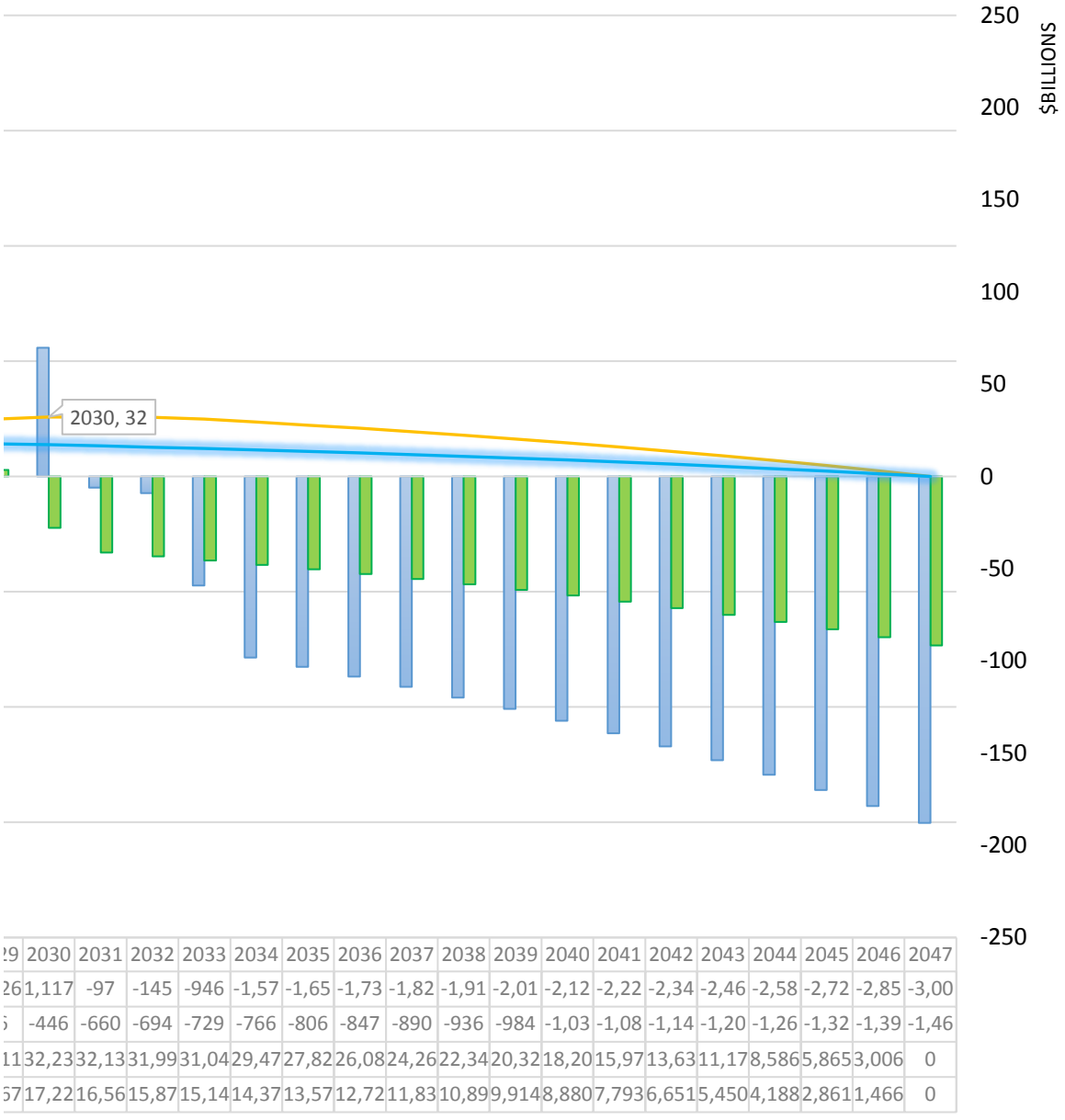


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

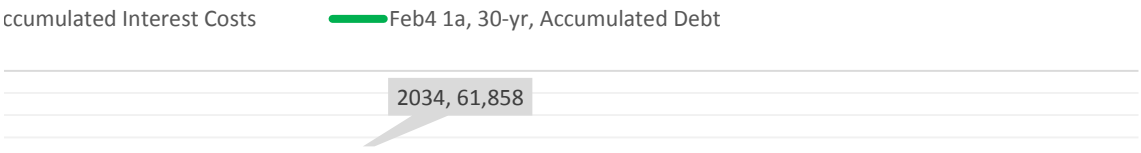
- at 5.12% interest rate

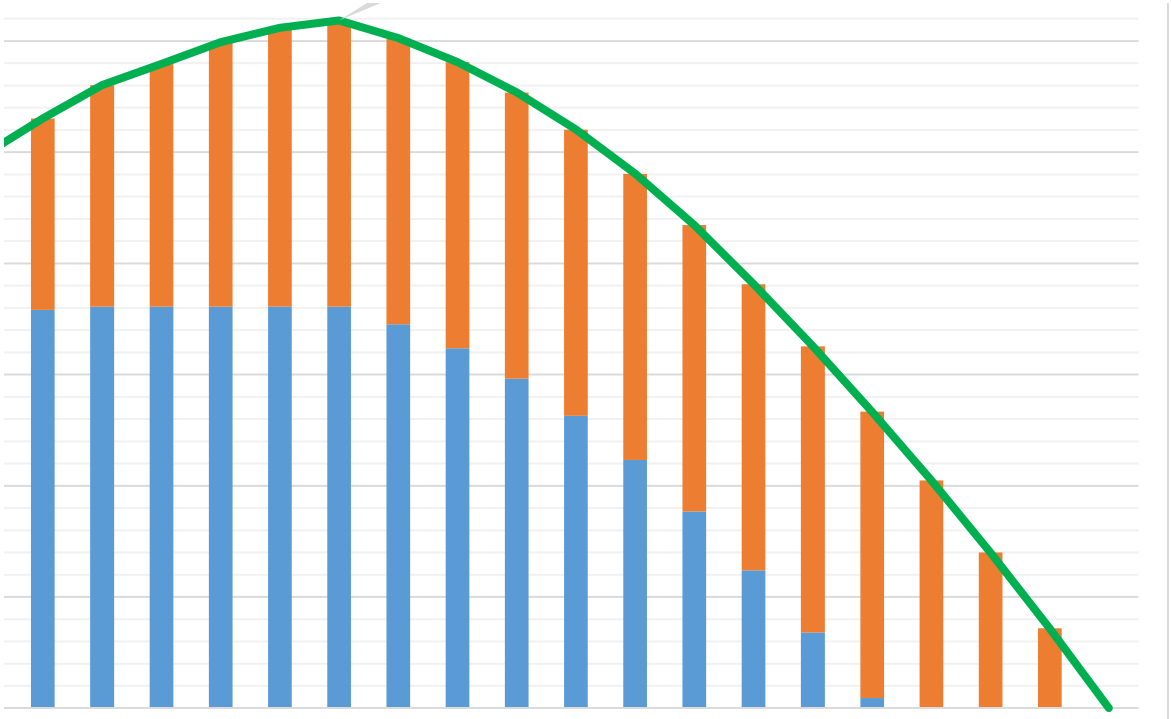


29	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
26	1,117	-97	-145	-946	-1,57	-1,65	-1,73	-1,82	-1,91	-2,01	-2,12	-2,22	-2,34	-2,46	-2,58	-2,72	-2,85	-3,00
5	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,03	-1,08	-1,14	-1,20	-1,26	-1,32	-1,39	-1,46
11	32,23	32,13	31,99	31,04	29,47	27,82	26,08	24,26	22,34	20,32	18,20	15,97	13,63	11,17	8,586	5,865	3,006	0
57	17,22	16,56	15,87	15,14	14,37	13,57	12,72	11,83	10,89	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0

CALENDAR YEAR

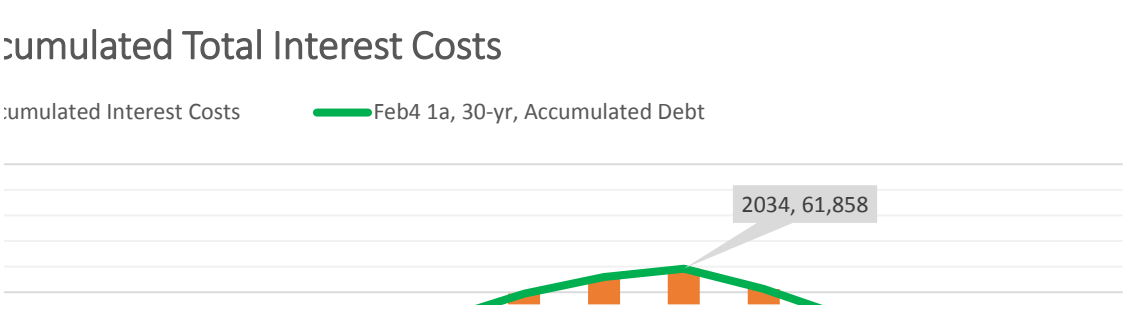
Debt (Principal and Interest)



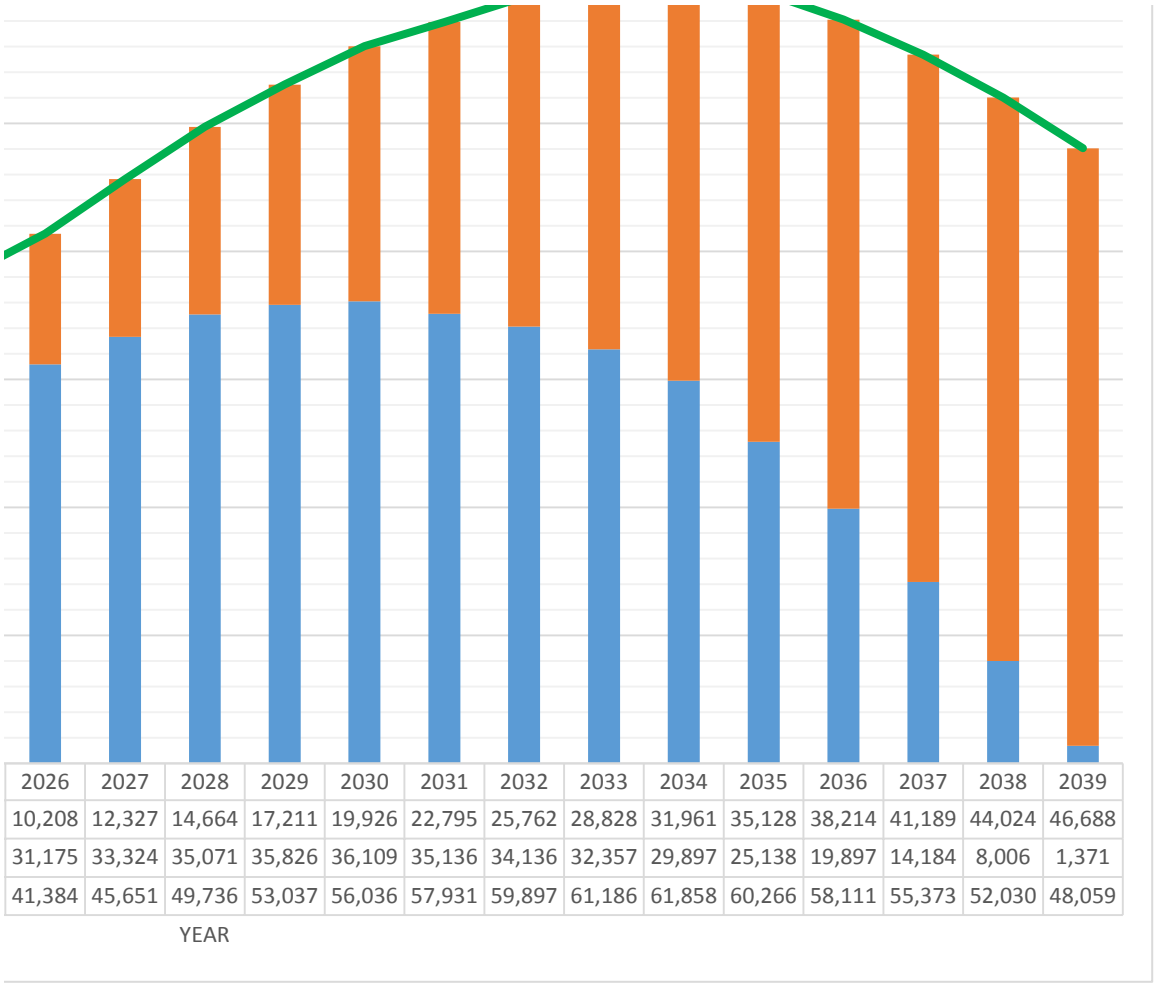


	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
5	17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
7	35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
3	53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



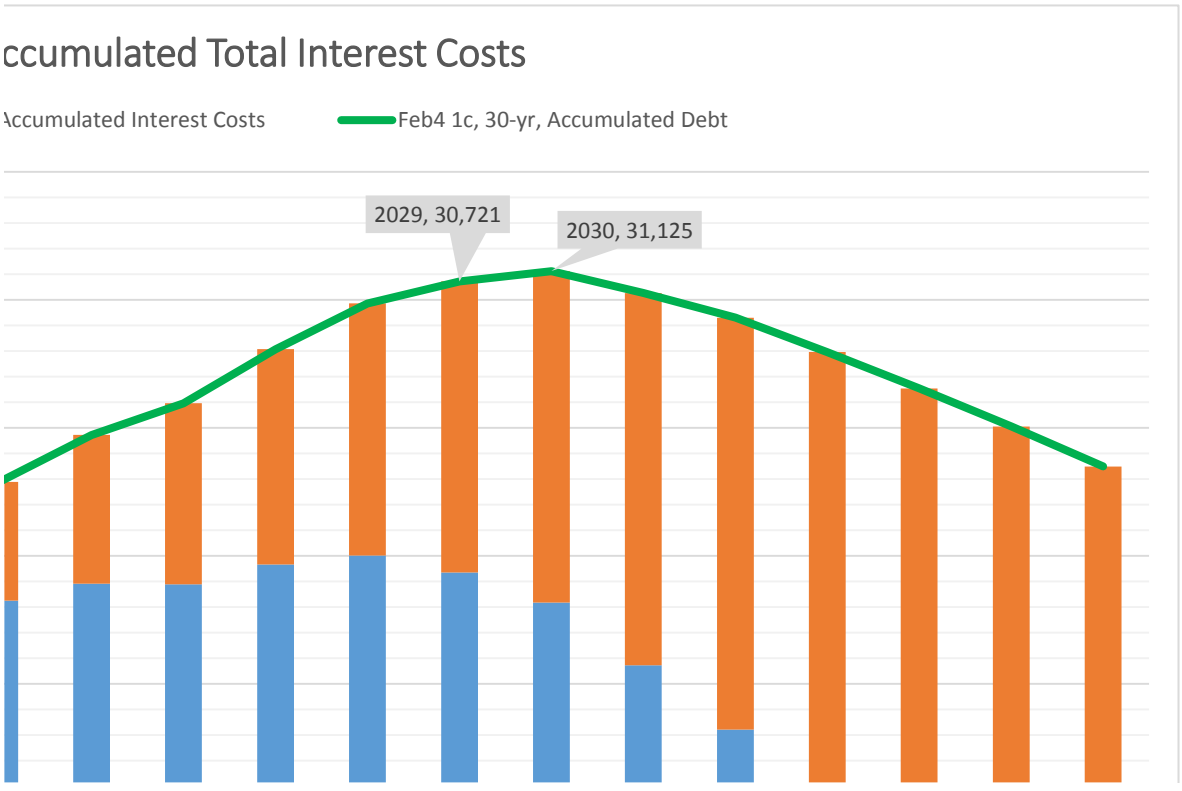
LIONS

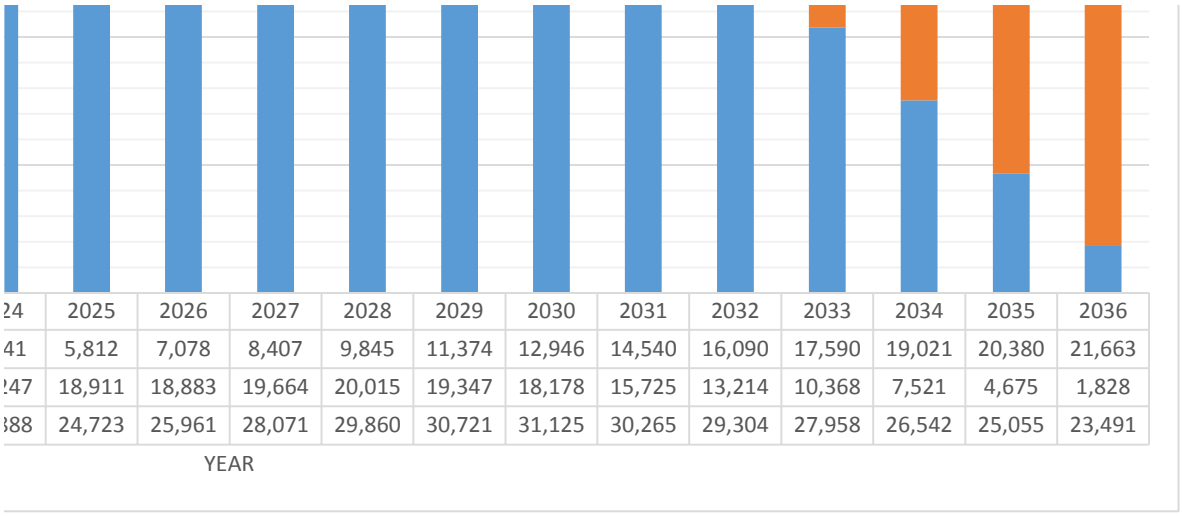


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

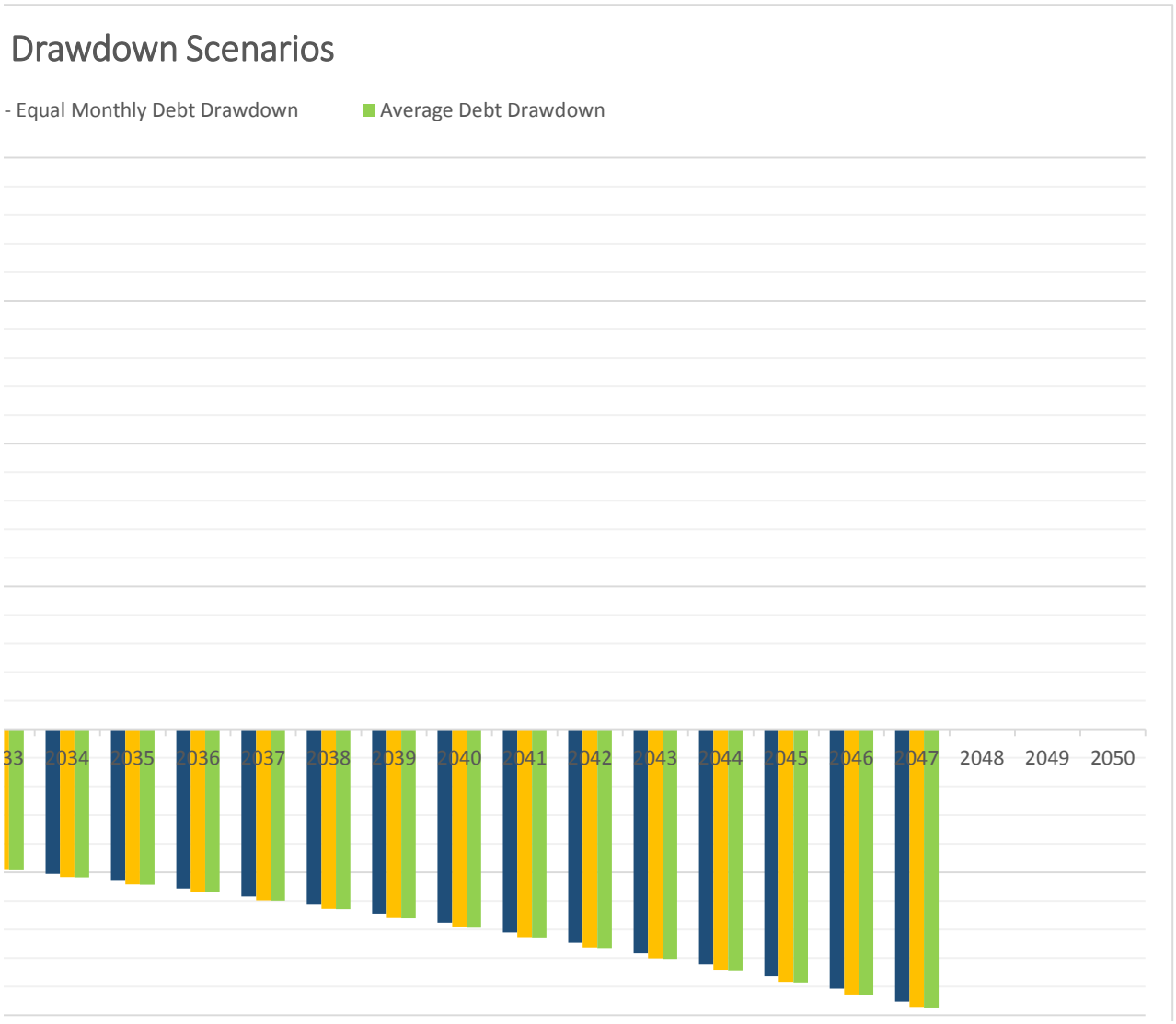
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





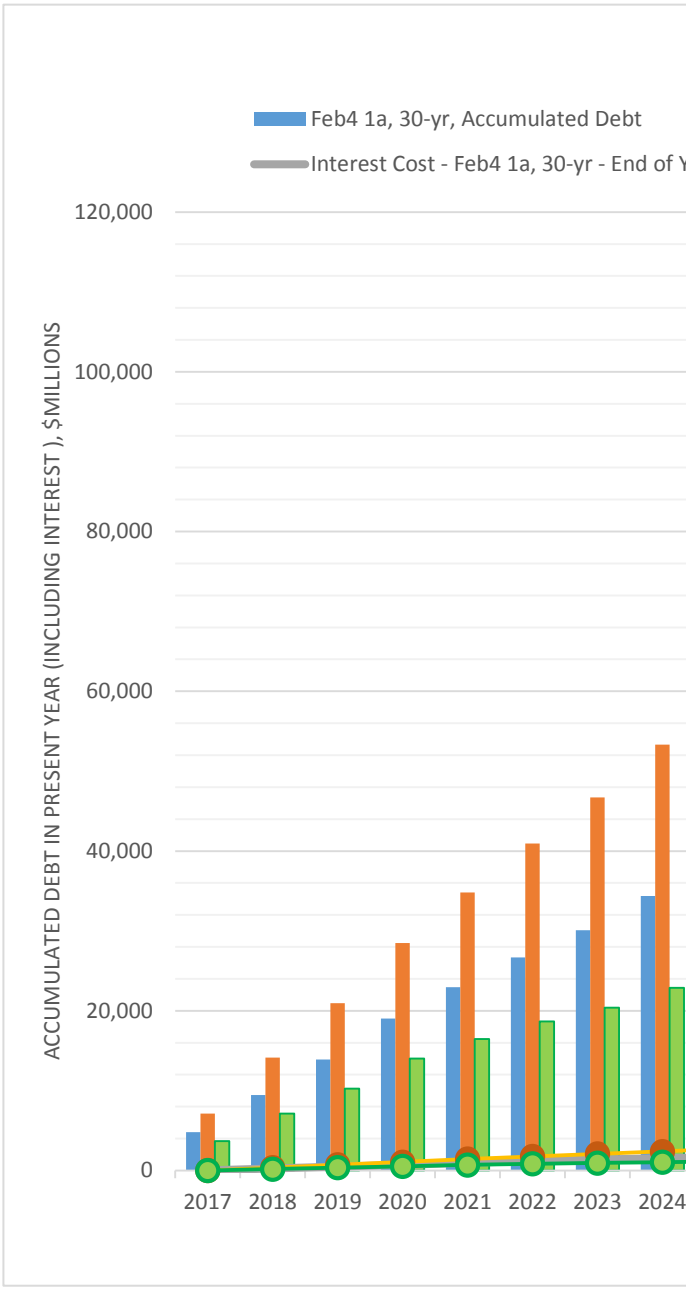
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

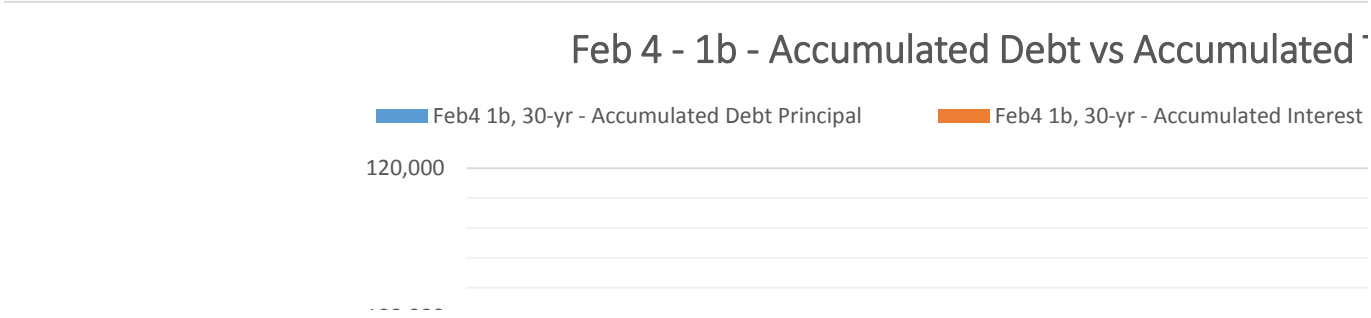
YEAR

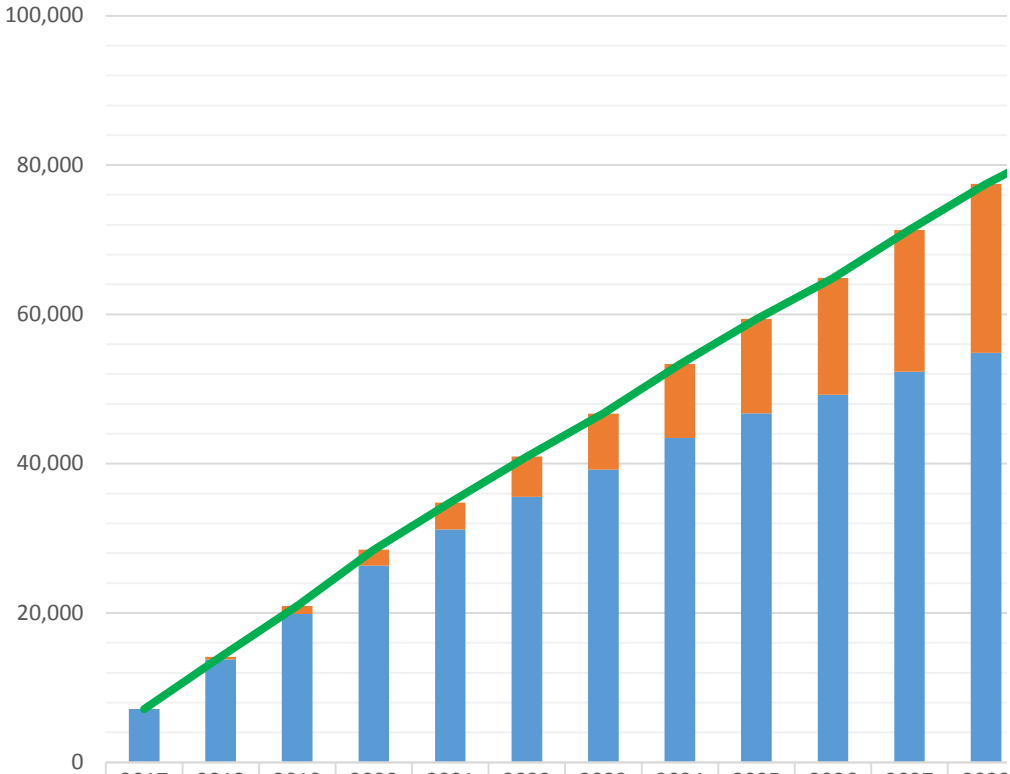


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate

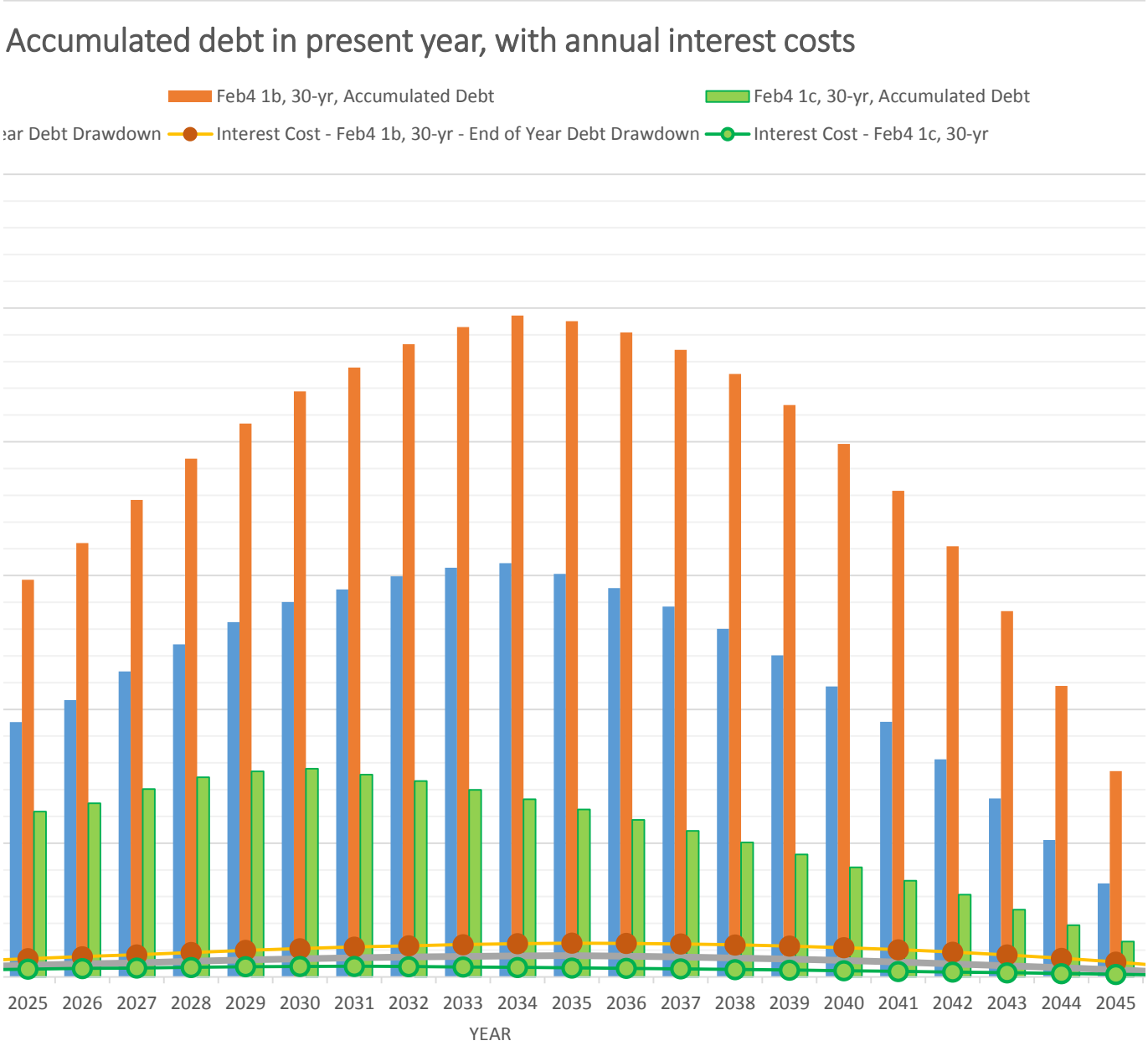


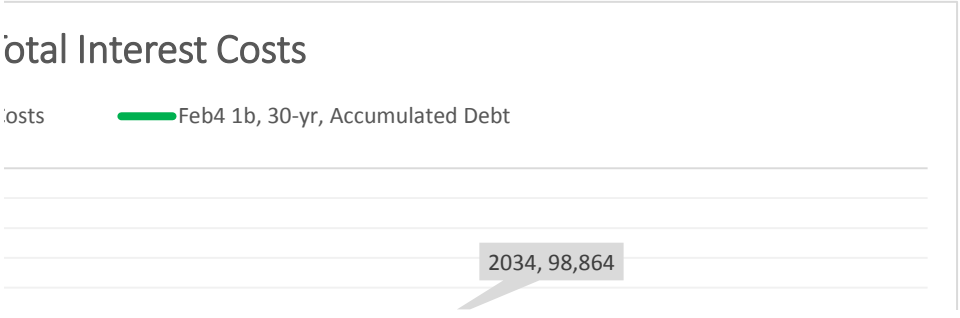

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

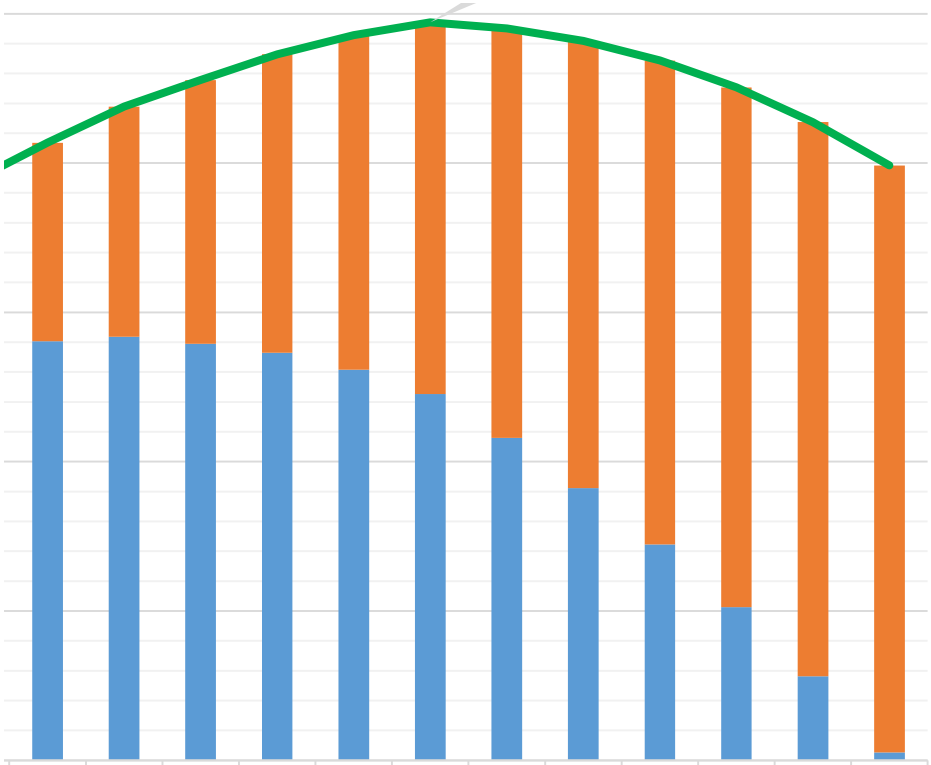


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y

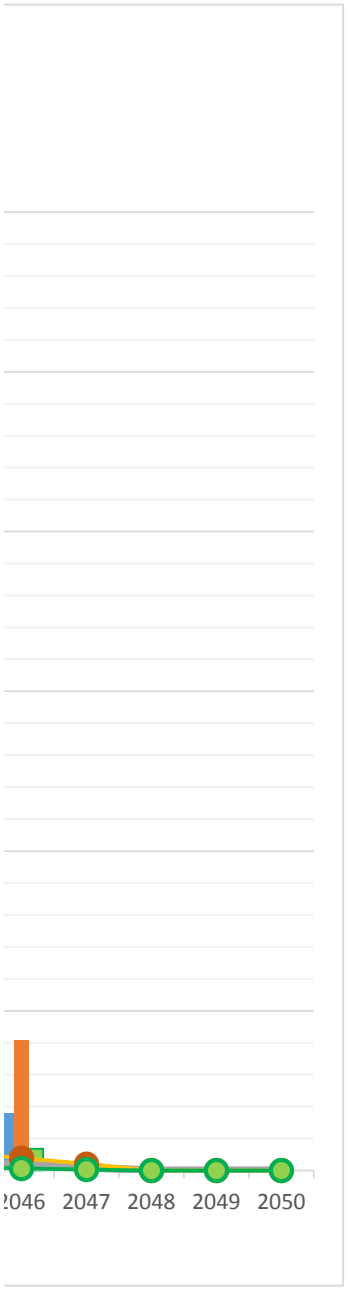

Accumulated debt in present year, with annual interest costs
Feb4 1b, 30-yr, Accumulated Debt
Feb4 1c, 30-yr, Accumulated Debt
ear Debt Drawdown
Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown
Interest Cost - Feb4 1c, 30-yr
2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045
YEAR


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

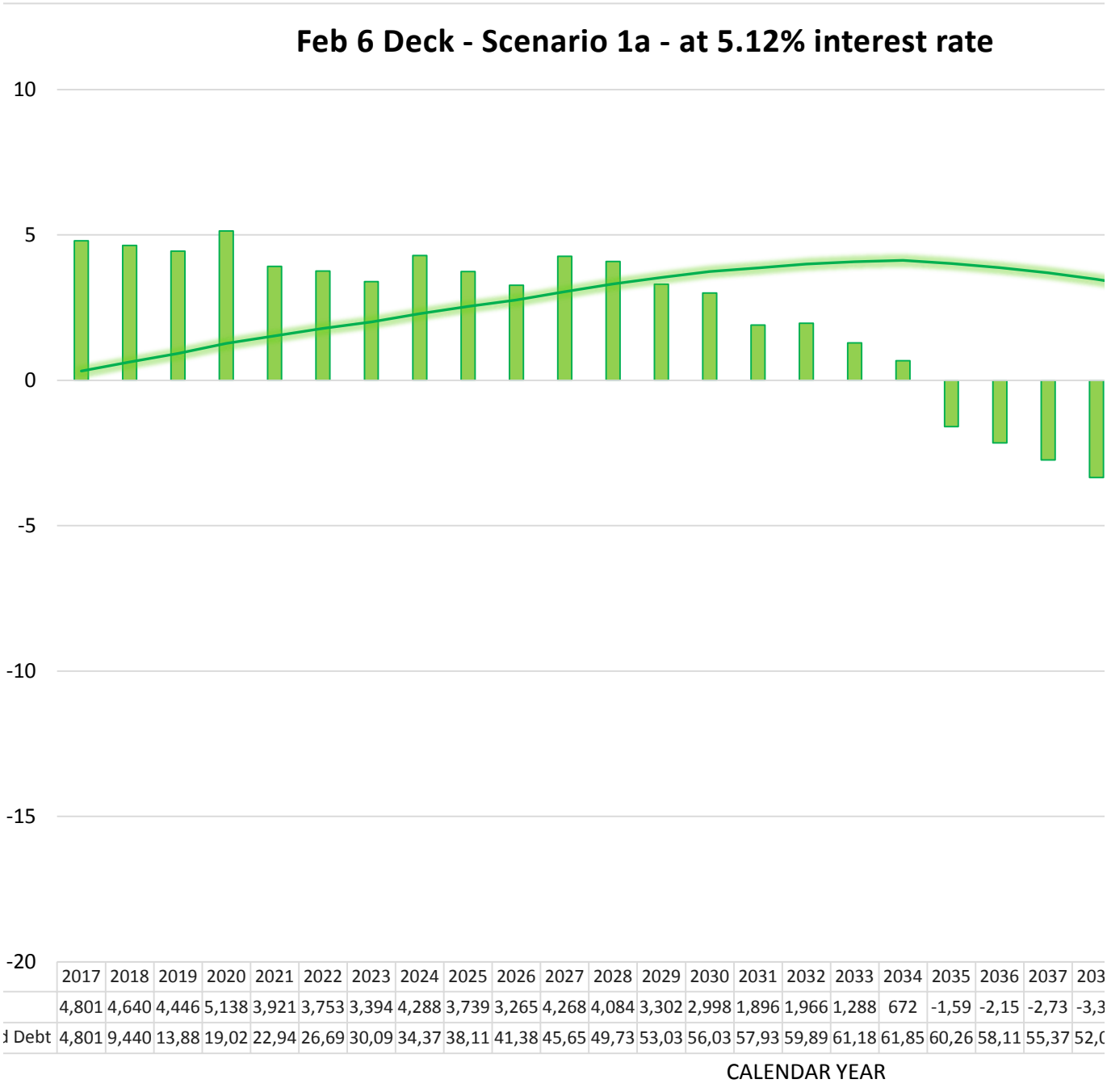
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

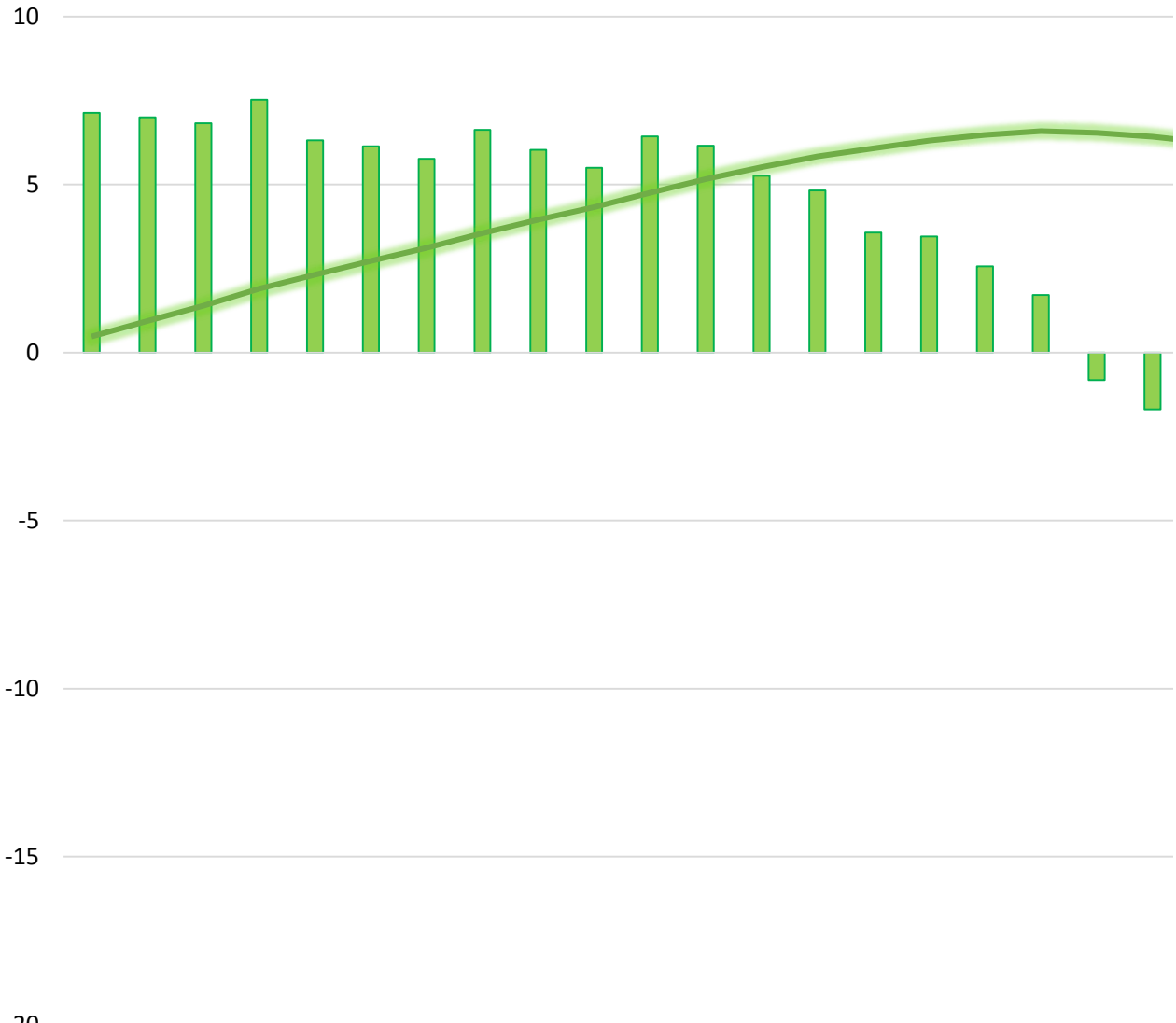
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

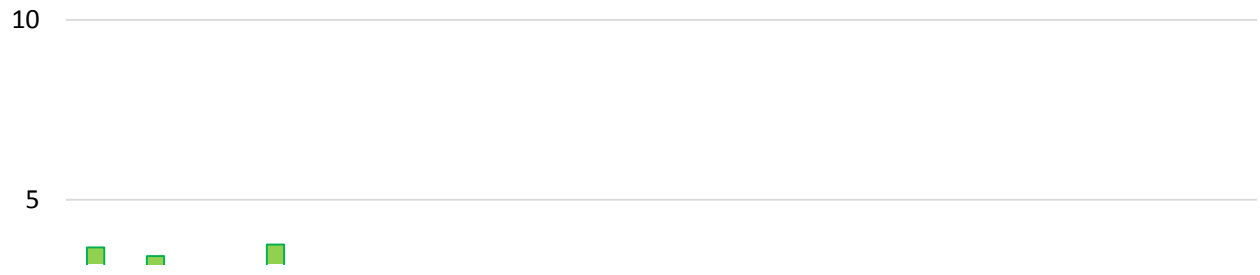
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

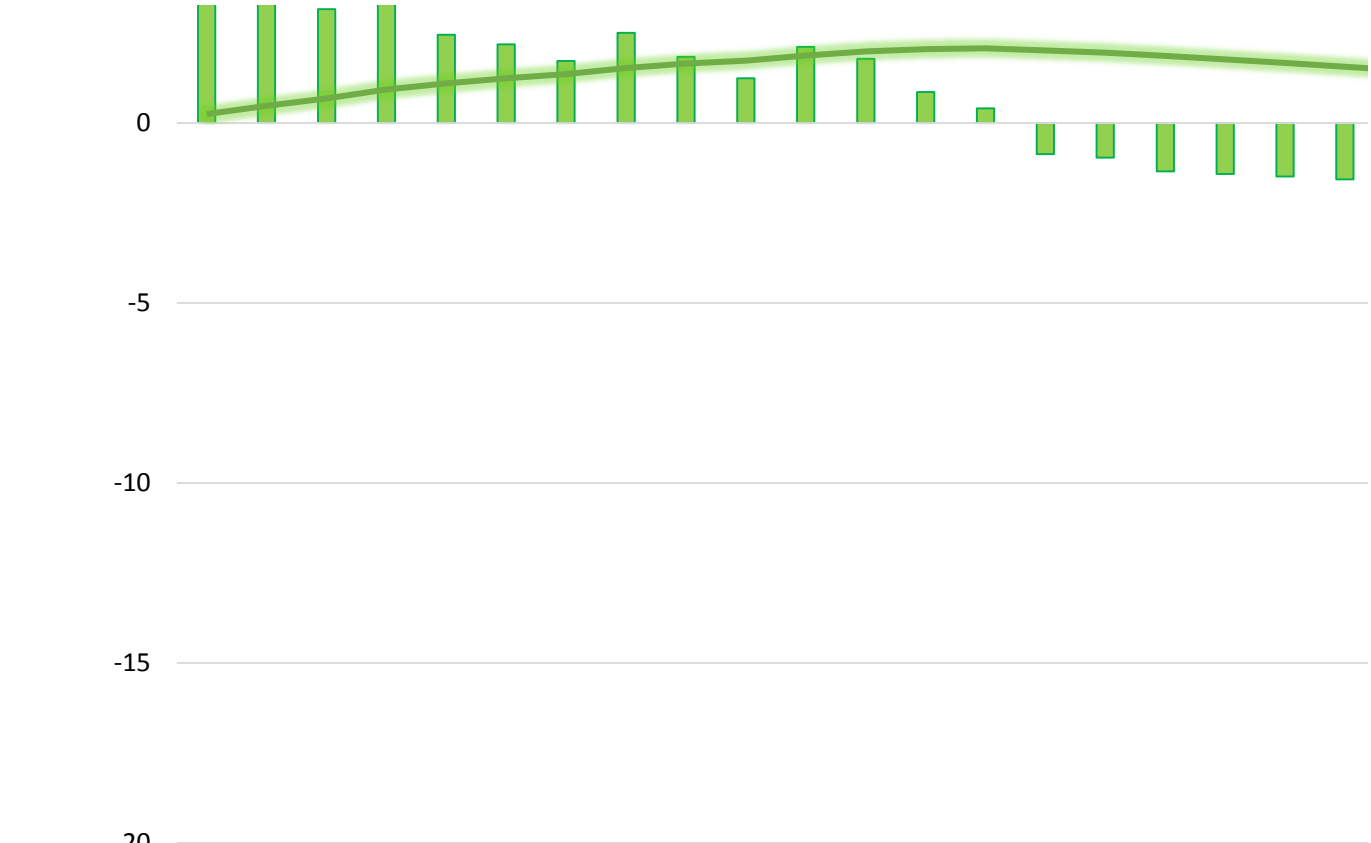


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



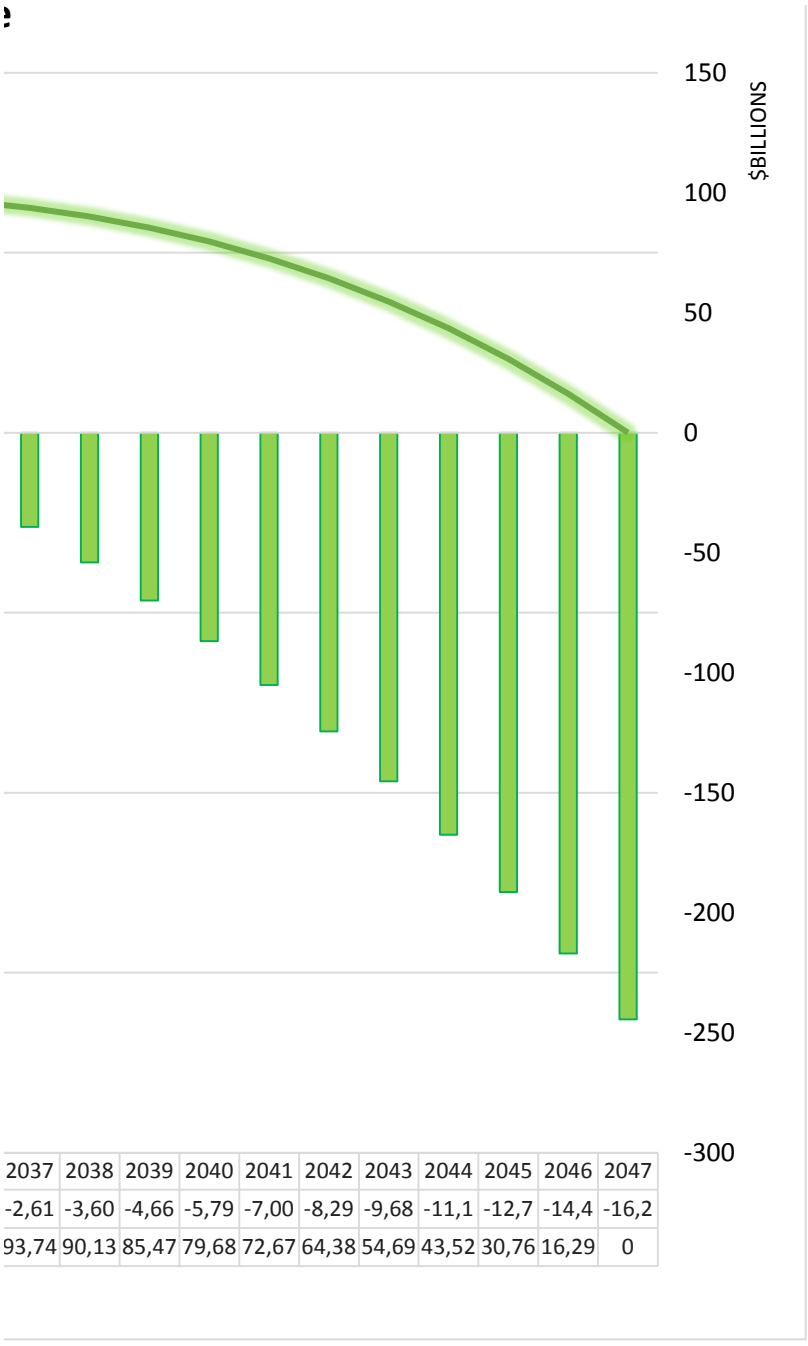


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

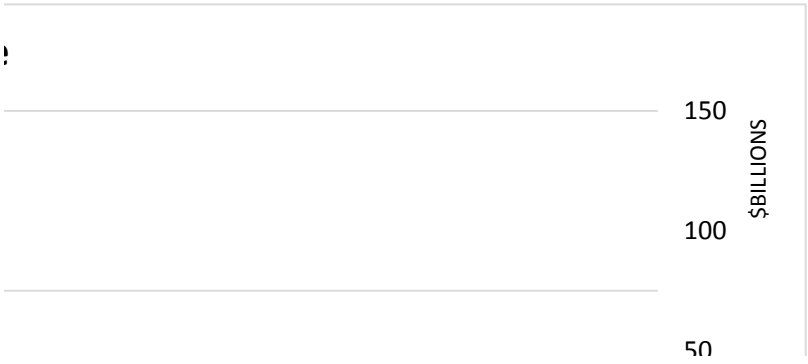
CALENDAR YEAR

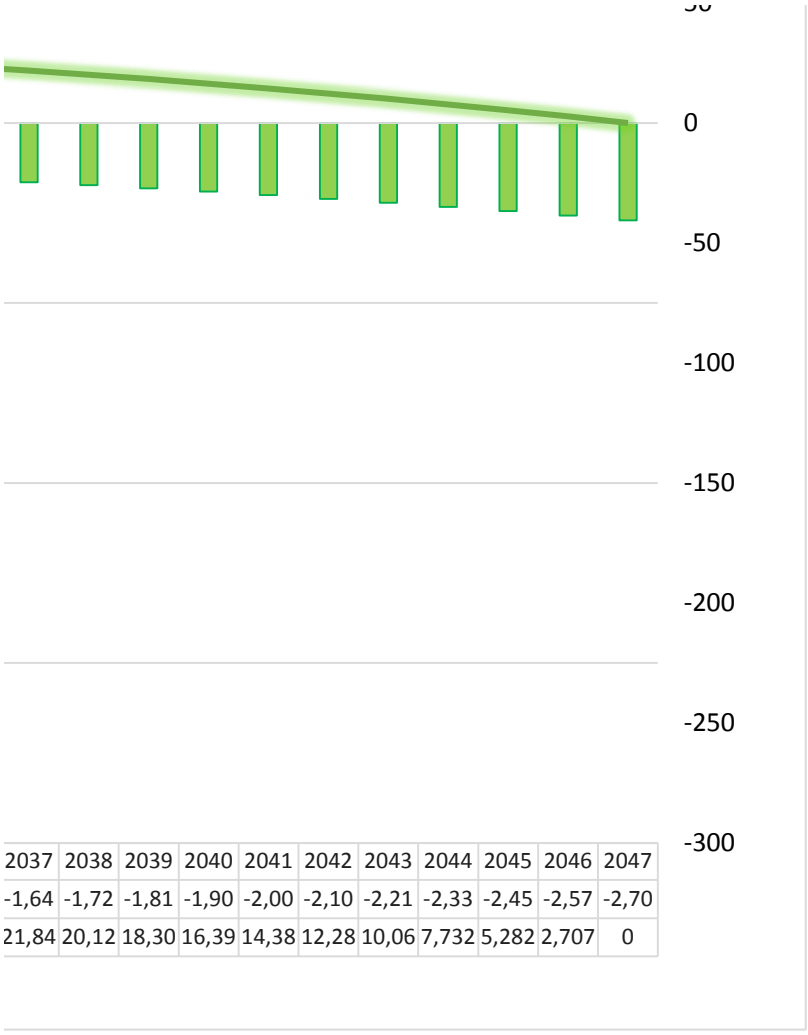


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Feb 8 Deck - Scenario 1a, 1b, 1c - at 5.12% interest
IESO GA cost forecast + extrapolation

Scenario
1a

1b

1c

1d

1e

	2017	2018	2019	2020
rate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	4674	9542	14587	21173

GA Payment from Impacted Rate Class	7421	7205	6995	6329
Accumulated debt in present year (including interest)	4674	9544	14589	21175

GA Payment from Impacted Rate Class	7421	7425	7440	7013
Accumulated debt in present year (including interest)	4674	9323	13913	19780

GA Payment from Impacted Rate Class	9915	9676	9427	9445
Accumulated debt in present year (including interest)	2180	4450	6803	9875

GA Payment from Impacted Rate Class	10596	10370	10129	10162
Accumulated debt in present year (including interest)	1500	3042	4620	6863

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
27212	33084	38588	44968	50769	56056	62291	68274

5890	6156	6434	6724	7028	7345	7677	8024
27212	33082	38585	44963	50762	56048	62281	68263

6825	7042	7266	7497	7736	7983	8237	8499
24810	29671	34167	39545	44359	48679	53976	59058

8532	8703	8877	9054	9236	9420	9609	9801
12692	15272	17420	20384	22719	24494	27181	29590

9264	9449	9638	9831	10027	10228	10432	10641
8794	10429	11568	13457	14645	15200	16588	17614

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
73391	78103	81594	85015	87596	89375	88679	87180

8386	8765	9160	9574	10006	10458	10931	11424
73378	78089	81578	84997	87577	89356	88659	87159

8770	9049	9337	9634	9941	10257	10584	10921
63318	67230	69987	72754	74773	76097	75068	73377

9997	10197	10401	10609	10821	10916	8822	8548
31116	32233	32135	31991	31045	29473	27822	26085

10854	11071	10196	10361	9779	9298	7203	6930
17670	17225	16565	15871	15142	14376	13570	12723

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
84828	81568	77341	72085	65730	58203	49425	39310

11940	12480	13043	13632	14248	14891	15564	16267
84806	81546	77320	72065	65711	58186	49409	39297

11269	11628	11998	12380	12774	13181	13600	14033
70990	67875	63995	59310	53778	47352	39985	31624

8288	8040	7805	7580	7367	7164	6970	6786
24260	22342	20325	18206	15978	13635	11173	8586

6670	6422	6186	5962	5748	5545	5352	5168
11833	10897	9914	8880	7793	6651	5450	4188

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
27767	14699	0	0	0	0

17001	17769	18572	2975	2831	2695
27758	14694	0	0	0	0

14480	14941	15417	2975	2831	2695
22213	11693	0	0	0	0

6611	6444	6286	2975	2831	2695
5865	3006	0	0	0	0

4993	4826	4667	2975	2831	2695
2861	1466	0	0	0	0

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb8_1a_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,867
Annual Exposure2 with start on July 1st	*2,337*	*4,867*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	3,554

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

1 Based on an interest rate of 5%.

2 Fiscal exposure based on equal monthly drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1b_30yr

1b. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,869
Annual Exposure2 with start on July 1st	*2,337*	*4,869*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	*3,554*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649
Annual Exposure2 with start on July 1st	*2,337*	*4,649*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,668
Start: July 1st	-	*3,499*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $76 billion peaking in

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270
Annual Exposure2 with start on July 1st	*1,090*	*2,270*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	545	2,203
Start: July 1st	-	*1,658*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $32 billion peaking in

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542
Annual Exposure2 with start on July 1st	*750*	*1,542*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	375	1,510
Start: July 1st	-	*1,135*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $18 billion peaking in

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	1,169 - 1,169	4,723 - 4,723

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1169**	**4963**
Total, B	1169	4963
Proposed Program Total:	1,169 - 1,169	4,963 - 4,963

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1a
Scenario 1b
Scenario 1c
Scenario 1d
Scenario 1e

2019	2020	2021	2022
5,045	6,586	6,039	5,872
5,045	*6,586*	*6,039*	*5,872*

2018-19	2019-20	2020-21	2021-2022
4,912	5,430	6,449	5,997
4,912	*5,430*	*6,449*	*5,997*

2034.

Actuals are subject t
- The highest debt ac
- Compared to a 5% i

[1] Based on an interes
[2] Fiscal exposure bas
[3] Fiscalized based on

depend on decision on accounting treatment.

2019	2020	2021	2022
5,045	6,586	6,037	5,870
5,045	*6,586*	*6,037*	*5,870*

2018-19	2019-20	2020-21	2021-2022
4,913	5,430	6,449	5,996
4,913	*5,430*	*6,449*	*5,996*

2034.

2019	2020	2021	2022
4,589	5,867	5,031	4,861
4,589	*5,867*	*5,031*	*4,861*

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988
4,634	*4,909*	*5,658*	*4,988*

2034.

2019	2020	2021	2022
2,353	3,072	2,817	2,580
2,353	*3,072*	*2,817*	*2,580*

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757
2,291	*2,533*	*3,008*	*2,757*

2030.

2019	2020	2021	2022
1,578	2,243	1,931	1,635
1,578	*2,243*	*1,931*	*1,635*

2018-19	2019-20	2020-21	2021-2022

1,551	1,745	2,165	1,857
1,551	*1,745*	*2,165*	*1,857*

2029.



2018-19	2019-20	2020-21	2021-2022
4,913 - 4,912	5,430 - 5,430	6,449 - 6,449	5,996 - 5,997

/1

2018-19[1]	2019-20[1]	2020-21[1]
4912	5430	6449
4913	5430	6449
225	279	323
60	60	60
18	18	18
5215	**5787**	**6850**
5216	5787	6850

5,216 - 5,215 5,787 - 5,787 6,850 - 6,850

Total Principal Debt	Total Accumulated Interest Costs	**Peak Total Debt**	
52,287	85,599	89,375	occurs in Year 2034
52,275	85,582	89,356	occurs in Year 2034
44,449	72,823	76,097	occurs in Year 2034
21,239	29,589	32,233	occurs in Year 2030
12,350	16,239	17,670	occurs in Year 2029

o actual prices and actual interest rates.
:cumulation (at 5% interest rate) is expected to be approximately $62 billion, peaking in 203 and $17-21 billion (at 3.5% interest
interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately $33-$36 million.

st rate of 5%.
sed on equal monthly drawdown of debt.
75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on mo

Feb8_1a_30yr
Feb8_1b_30yr
Feb8_1c_30yr
Feb8_1d_30yr
Feb8_1e_30yr

t rate), peaking in 2028.

nth of the year. Actuals may also depend on decision on accounting treatment.

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-275	-311	-350	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,573	85,599
Equal Monthly Debt Drawdown	6,743	4,556	

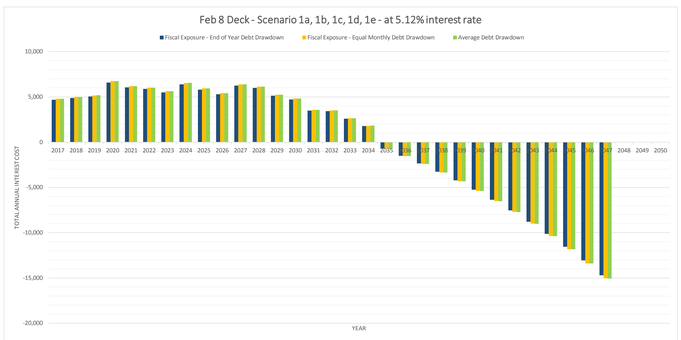
	Feb8 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,375	2034	52,287
Equal Monthly Debt Drawdown	91,501		

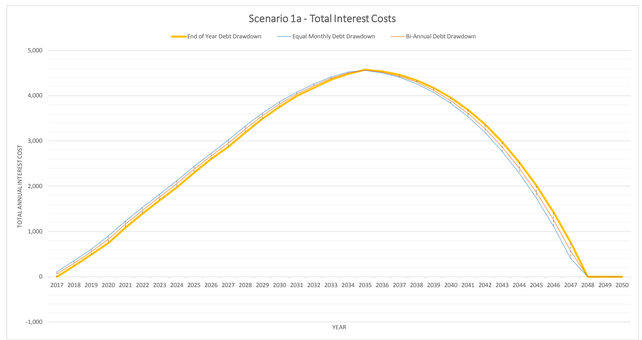
Feb8 1a, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	
c = a*5%	*Interest Cost - Feb8 1a, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,301*	*2,597*	*2,868*	*3,187*	*3,493*	*3,755*	*3,996*	*4,175*	*4,350*	*4,482*	*4,573*	*4,537*	*4,460*	*4,340*	*4,173*	*3,957*	*3,688*	*3,363*	*2,978*	*2,529*	*2,011*	*1,421*	*752*	*0*	*0*	*0*	85,599
b	Additional GA Debt Drawdown, End of Year	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,307	32,728	35,309	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	39,310	27,767	14,699	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	52,287	52,287	52,287	51,591	50,091	47,739	44,479	40,253	34,997	28,642	21,115	12,336	0	0	0	0	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,813	33,987	38,337	42,818	47,391	51,928	56,388	60,728	64,901	68,858	72,546	75,909	78,887	81,416	83,427	84,847	85,599				
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	51,781	51,028	49,259	46,557	41,288	35,252	28,440	20,840	12,440	3,227	-6,816	-17,706	-29,462	-42,106	-55,660	-70,149	-85,599				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	

Feb8 1a, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	
4,556	*Interest Cost - Feb8 1a, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,824*	*2,126*	*2,439*	*2,723*	*3,016*	*3,329*	*3,615*	*3,867*	*4,079*	*4,256*	*4,411*	*4,524*	*4,556*	*4,501*	*4,404*	*4,262*	*4,073*	*3,832*	*3,537*	*3,184*	*2,769*	*2,288*	*1,737*	*1,110*	*402*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
	Monthly Drawdown	390	386	380	487	413	373	318	367	292	224	281	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(980)	(1,054)	(1,129)	(1,207)	(1,288)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,738	4,665	5,979	5,074	4,586	3,902	4,510	3,584	2,753	3,447	2,863	1,662	980	(517)	(772)	(1,810)	(2,766)	(5,394)	(6,180)	(6,975)	(7,781)	(8,599)	(9,432)	(10,282)	(11,149)	(12,036)	(12,944)	(13,876)	(14,834)	(15,818)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	67	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(368)	-	-	-	
	Annual Interest Cost on Opening Balance	-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,263	3,576	3,844	4,091	4,274	4,453	4,588	4,681	4,645	4,566	4,443	4,272	4,051	3,776	3,443	3,049	2,589	2,059	1,454	770	(0)	(0)	(0)	
	Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,824	2,126	2,439	2,723	3,016	3,329	3,615	3,867	4,079	4,256	4,411	4,524	4,556	4,501	4,404	4,262	4,073	3,832	3,537	3,184	2,769	2,288	1,737	1,110	402	(0)	(0)	(0)	

Feb8 1a, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*60*	*301*	*553*	*831*	*1,160*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,948*	*3,263*	*3,558*	*3,815*	*4,041*	*4,218*	*4,383*	*4,504*	*4,564*	*4,518*	*4,430*	*4,298*	*4,119*	*3,890*	*3,607*	*3,267*	*2,866*	*2,399*	*1,864*	*1,253*	*564*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,930	5,110	6,670	6,116	5,947	5,575	6,461	5,875	5,354	6,315	6,060	5,182	4,773	3,535	3,464	2,614	1,802	-705	-1,518	-2,382	-3,302	-4,280	-5,324	-6,436	-7,623	-8,891	-10,244	-11,690	-13,236	-14,887	0	0	0	
	Bi-Annual Drawdown	2,337	2,314	2,279	2,920	2,478	2,240	1,906	2,203	1,750	1,345	1,684	1,398	812	479	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,800)	(4,200)	(4,607)	(5,021)	(5,445)	(5,878)	(6,322)	(6,777)	(7,245)	(7,725)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,687	4,615	5,914	5,019	4,537	3,860	4,462	3,545	2,724	3,410	2,832	1,644	970	(512)	(763)	(1,791)	(2,737)	(5,336)	(6,113)	(6,900)	(7,697)	(8,507)	(9,331)	(10,171)	(11,029)	(11,907)	(12,805)	(13,727)	(14,674)	(15,648)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	494	756	1,097	1,410	1,714	1,999	2,330	2,631	2,905	3,228	3,538	3,803	4,047	4,228	4,405	4,539	4,631	4,595	4,517	4,395	4,227	4,008	3,735	3,406	3,016	2,561	2,037	1,439	762	(0)	(0)	(0)	
	Total Annual Interest Cost	60	301	553	831	1,160	1,467	1,763	2,056	2,375	2,665	2,948	3,263	3,558	3,815	4,041	4,218	4,383	4,504	4,564	4,518	4,430	4,298	4,119	3,890	3,607	3,267	2,866	2,399	1,864	1,253	564	(0)	(0)	(0)	

Feb8 1a, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,723*	*3,027*	*3,340*	*3,624*	*3,875*	*4,085*	*4,262*	*4,416*	*4,527*	*4,555*	*4,499*	*4,400*	*4,257*	*4,065*	*3,822*	*3,525*	*3,170*	*2,753*	*2,270*	*1,716*	*1,086*	*376*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,992	5,174	6,754	6,193	6,022	5,645	6,543	5,950	5,422	6,395	6,137	5,248	4,833	3,580	3,508	2,647	1,825	-714	-1,537	-2,412	-3,343	-4,334	-5,391	-6,517	-7,720	-9,003	-10,374	-11,838	-13,403	-15,075	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-274	-311	-349	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,572	85,582
Equal Monthly Debt Drawdown	6,743	4,555	

	Feb8 1b, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,356	2034	52,275
Equal Monthly Debt Drawdown	91,481		

Feb8 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
a — Debt, Beginning of Year	0	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	
c = a*5% — *Interest Cost - Feb8 1b, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,300*	*2,597*	*2,867*	*3,186*	*3,492*	*3,754*	*3,995*	*4,174*	*4,349*	*4,481*	*4,572*	*4,536*	*4,459*	*4,339*	*4,172*	*3,956*	*3,687*	*3,362*	*2,977*	*2,528*	*2,011*	*1,420*	*752*	*0*	*0*	*0*	85,582
b — Additional GA Debt Drawdown, End of Year	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,309	32,722	35,302	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	39,297	27,758	14,694	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	52,275	52,275	52,275	52,275	51,578	50,078	47,725	44,465	40,239	34,984	28,630	21,105	12,328	0	0	0	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,809	33,983	38,331	42,812	47,384	51,920	56,379	60,718	64,890	68,846	72,533	75,895	78,871	81,399	83,410	84,830	85,582				
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	51,769	51,014	49,246	46,544	41,275	35,239	28,428	20,829	12,431	3,219	-6,822	-17,709	-29,462	-42,102	-55,652	-70,136	-85,582				
Fiscal Exposure - End of Year Debt Drawdown	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	

Feb8 1b, 30-yr — Equal Monthly Debt Drawdown

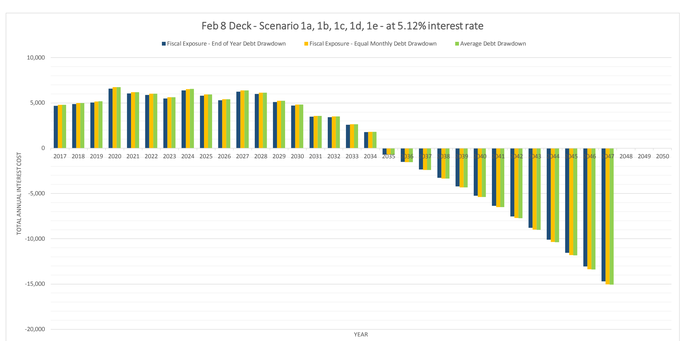
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,823*	*2,126*	*2,438*	*2,723*	*3,016*	*3,329*	*3,614*	*3,866*	*4,078*	*4,255*	*4,410*	*4,523*	*4,555*	*4,500*	*4,403*	*4,261*	*4,072*	*3,831*	*3,536*	*3,183*	*2,768*	*2,287*	*1,736*	*1,109*	*402*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
Monthly Drawdown	390	386	380	487	413	373	317	367	292	224	280	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(979)	(1,053)	(1,129)	(1,207)	(1,287)	(0)	-	-	
FV of Monthly Drawdown at 5%	4,786	4,740	4,665	5,979	5,072	4,585	3,900	4,509	3,582	2,752	3,446	2,862	1,661	979	(518)	(772)	(1,811)	(2,766)	(5,394)	(6,179)	(6,974)	(7,780)	(8,598)	(9,431)	(10,279)	(11,146)	(12,033)	(12,941)	(13,872)	(14,829)	(15,813)	(0)	-	-	
Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	66	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(367)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,262	3,576	3,843	4,090	4,273	4,452	4,587	4,680	4,644	4,565	4,442	4,271	4,050	3,775	3,442	3,048	2,588	2,058	1,454	770	0	0	0	
Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,823	2,126	2,438	2,723	3,016	3,329	3,614	3,866	4,078	4,255	4,410	4,523	4,555	4,500	4,403	4,261	4,072	3,831	3,536	3,183	2,768	2,287	1,736	1,109	402	0	0	0	

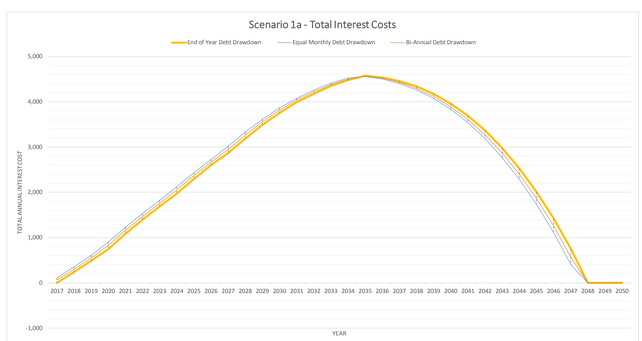
Feb8 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*60*	*301*	*553*	*831*	*1,161*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,947*	*3,263*	*3,558*	*3,814*	*4,040*	*4,217*	*4,382*	*4,503*	*4,563*	*4,517*	*4,429*	*4,297*	*4,118*	*3,889*	*3,606*	*3,266*	*2,865*	*2,399*	*1,863*	*1,253*	*564*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	4,734	4,931	5,110	6,670	6,115	5,945	5,573	6,460	5,874	5,353	6,313	6,058	5,181	4,771	3,534	3,463	2,613	1,801	-706	-1,519	-2,383	-3,302	-4,280	-5,323	-6,435	-7,622	-8,889	-10,242	-11,687	-13,231	-14,882	0	0	0	
Bi-Annual Drawdown	2,337	2,315	2,279	2,920	2,477	2,239	1,905	2,202	1,750	1,344	1,683	1,398	811	478	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,799)	(4,199)	(4,606)	(5,020)	(5,444)	(5,877)	(6,320)	(6,775)	(7,242)	(7,723)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	4,734	4,689	4,615	5,914	5,017	4,535	3,859	4,460	3,544	2,722	3,409	2,831	1,643	969	(513)	(764)	(1,791)	(2,737)	(5,336)	(6,113)	(6,899)	(7,696)	(8,506)	(9,329)	(10,169)	(11,027)	(11,904)	(12,802)	(13,723)	(14,670)	(15,643)	(0)	-	-	
Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	242	495	756	1,097	1,410	1,714	1,999	2,330	2,630	2,904	3,227	3,537	3,802	4,046	4,227	4,404	4,538	4,630	4,594	4,516	4,394	4,225	4,006	3,734	3,405	3,015	2,560	2,036	1,438	761	0	(0)	(0)	
Total Annual Interest Cost	60	301	553	831	1,161	1,467	1,763	2,056	2,375	2,665	2,947	3,263	3,558	3,814	4,040	4,217	4,382	4,503	4,563	4,517	4,429	4,297	4,118	3,889	3,606	3,266	2,865	2,399	1,863	1,253	564	0	(0)	(0)	

Feb8 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,732*	*3,027*	*3,339*	*3,623*	*3,875*	*4,084*	*4,261*	*4,415*	*4,526*	*4,554*	*4,498*	*4,399*	*4,255*	*4,064*	*3,821*	*3,524*	*3,169*	*2,752*	*2,269*	*1,715*	*1,086*	*376*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	4,794	4,994	5,174	6,754	6,192	6,020	5,643	6,541	5,948	5,420	6,393	6,135	5,246	4,831	3,578	3,507	2,646	1,824	-715	-1,538	-2,413	-3,343	-4,334	-5,390	-6,516	-7,718	-9,001	-10,371	-11,835	-13,398	-15,070	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1c_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	
			111	111	109	140	120	116	107	128	115	103	126	121	101	93	66	66	48	32	-24	-40	-57	-74	-92	-111	-132	-153	-175	-199	-224	-250	-278	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	5,867	3,893	72,823
Equal Monthly Debt Drawdown	6,006	3,869	

		Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	76,097	2034	44,449
Equal Monthly Debt Drawdown	77,907		

Feb8 1c, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
a — Debt, Beginning of Year	0	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	
c = a*5% — *Interest Cost - Feb8 1c, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*477*	*712*	*1,012*	*1,269*	*1,518*	*1,748*	*2,023*	*2,270*	*2,491*	*2,762*	*3,022*	*3,239*	*3,440*	*3,581*	*3,722*	*3,826*	*3,893*	*3,841*	*3,754*	*3,632*	*3,473*	*3,274*	*3,034*	*2,751*	*2,423*	*2,046*	*1,618*	*1,136*	*598*	*0*	*0*	*0*	72,823
b — Additional GA Debt Drawdown, End of Year	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	
Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	25,538	28,304	30,324	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,624	22,213	11,693	0	0	0	0	
Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	44,449	44,449	44,449	44,449	43,420	41,729	39,342	36,228	32,347	27,662	22,130	15,704	8,337	0	0	0	0	0	0	0	
Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	26,221	29,801	33,524	37,349	41,242	45,083	48,837	52,469	55,942	59,216	62,250	65,002	67,424	69,470	71,088	72,224	72,823				
Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	43,767	42,952	41,249	38,748	33,826	28,294	22,153	15,406	8,054	94	-8,473	-17,649	-27,439	-37,846	-48,875	-60,532	-72,823				
Fiscal Exposure - End of Year Debt Drawdown	4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	

Feb8 1c, 30-yr — Equal Monthly Debt Drawdown

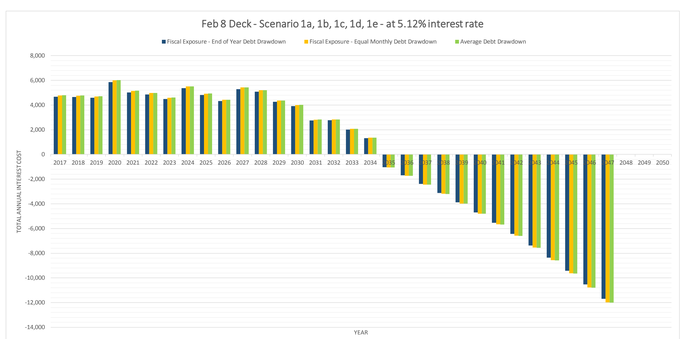
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
Debt, Beginning of Year	0	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	
3,869 — *Interest Cost - Feb8 1c, 30-yr*	*111*	*350*	*586*	*851*	*1,132*	*1,385*	*1,625*	*1,876*	*2,138*	*2,372*	*2,617*	*2,882*	*3,123*	*3,333*	*3,505*	*3,646*	*3,770*	*3,857*	*3,869*	*3,800*	*3,697*	*3,558*	*3,380*	*3,163*	*2,903*	*2,599*	*2,247*	*1,847*	*1,394*	*886*	*320*	*0*	*0*	*0*	72,823
Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	
Monthly Drawdown	390	367	343	430	335	299	248	303	233	171	234	193	103	56	(57)	(68)	(142)	(208)	(410)	(461)	(512)	(562)	(613)	(663)	(714)	(765)	(816)	(867)	(919)	(971)	(1,024)	-	-	-	
FV of Monthly Drawdown at 5%	4,786	4,515	4,210	5,278	4,114	3,677	3,048	3,717	2,857	2,099	2,873	2,375	1,268	689	(699)	(834)	(1,744)	(2,561)	(5,039)	(5,664)	(6,286)	(6,907)	(7,528)	(8,148)	(8,771)	(9,395)	(10,023)	(10,654)	(11,291)	(11,934)	(12,583)	-	-	-	
Annual Interest Cost on New Drawdowns	111	105	98	123	96	85	71	86	66	49	67	55	29	16	(16)	(19)	(41)	(59)	(117)	(132)	(146)	(160)	(175)	(189)	(204)	(218)	(233)	(248)	(262)	(277)	(292)	-	-	-	
Annual Interest Cost on Opening Balance	-	245	488	729	1,036	1,300	1,554	1,790	2,071	2,323	2,550	2,827	3,093	3,317	3,521	3,666	3,811	3,917	3,986	3,932	3,843	3,718	3,555	3,352	3,107	2,817	2,480	2,094	1,656	1,163	612	(0)	(0)	(0)	
Total Annual Interest Cost	111	350	586	851	1,132	1,385	1,625	1,876	2,138	2,372	2,617	2,882	3,123	3,333	3,505	3,646	3,770	3,857	3,869	3,800	3,697	3,558	3,380	3,163	2,903	2,599	2,247	1,847	1,394	886	320	(0)	(0)	(0)	

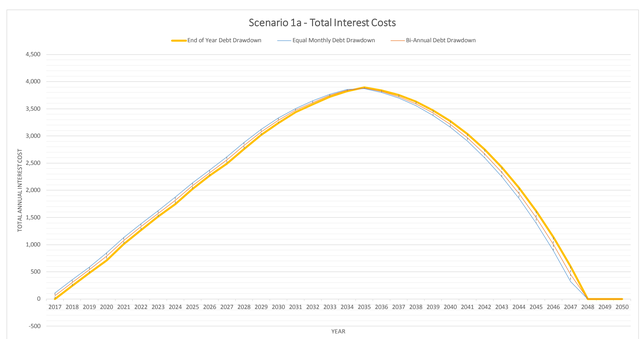
Feb8 1c, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
Debt, Beginning of Year	0	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	
Interest Cost - Feb8 1c, 30-yr	*60*	*299*	*536*	*787*	*1,076*	*1,332*	*1,576*	*1,817*	*2,085*	*2,325*	*2,558*	*2,827*	*3,076*	*3,290*	*3,475*	*3,616*	*3,748*	*3,842*	*3,880*	*3,819*	*3,724*	*3,592*	*3,423*	*3,214*	*2,964*	*2,669*	*2,328*	*1,939*	*1,498*	*1,002*	*449*	*0*	*0*	*0*	72,823
Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	4,734	4,708	4,648	5,942	5,095	4,923	4,553	5,447	4,876	4,375	5,364	5,147	4,315	3,962	2,792	2,802	2,045	1,341	-1,042	-1,713	-2,417	-3,155	-3,930	-4,745	-5,603	-6,508	-7,461	-8,468	-9,531	-10,655	-11,842	0	0	0	
Bi-Annual Drawdown	2,337	2,205	2,056	2,578	2,009	1,796	1,489	1,815	1,395	1,025	1,403	1,160	620	336	(341)	(407)	(852)	(1,251)	(2,461)	(2,766)	(3,070)	(3,373)	(3,676)	(3,980)	(4,283)	(4,588)	(4,895)	(5,203)	(5,514)	(5,828)	(6,146)	-	-	-	
FV of Bi-Annual Drawdown at 5%	4,734	4,466	4,165	5,221	4,070	3,638	3,015	3,677	2,826	2,077	2,842	2,350	1,255	681	(691)	(825)	(1,725)	(2,533)	(4,985)	(5,603)	(6,219)	(6,833)	(7,447)	(8,061)	(8,676)	(9,294)	(9,915)	(10,540)	(11,170)	(11,806)	(12,448)	-	-	-	
Annual Interest Cost on New Drawdowns	60	56	53	66	51	46	38	46	36	26	36	30	16	9	(9)	(10)	(22)	(32)	(63)	(71)	(79)	(86)	(94)	(102)	(110)	(117)	(125)	(133)	(141)	(149)	(157)	-	-	-	
Annual Interest Cost on Opening Balance	-	242	483	721	1,025	1,286	1,537	1,770	2,049	2,299	2,522	2,797	3,060	3,281	3,484	3,626	3,770	3,874	3,943	3,890	3,802	3,678	3,517	3,316	3,073	2,787	2,454	2,072	1,639	1,151	606	(0)	(0)	(0)	
Total Annual Interest Cost	60	299	536	787	1,076	1,332	1,576	1,817	2,085	2,325	2,558	2,827	3,076	3,290	3,475	3,616	3,748	3,842	3,880	3,819	3,724	3,592	3,423	3,214	2,964	2,669	2,328	1,939	1,498	1,002	449	(0)	(0)	(0)	

Feb8 1c, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
Debt, Beginning of Year	0	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	
Interest Cost - Feb8 1c, 30-yr	*120*	*358*	*594*	*862*	*1,141*	*1,394*	*1,633*	*1,886*	*2,146*	*2,380*	*2,626*	*2,892*	*3,130*	*3,340*	*3,510*	*3,651*	*3,774*	*3,859*	*3,867*	*3,797*	*3,693*	*3,552*	*3,373*	*3,154*	*2,893*	*2,587*	*2,234*	*1,832*	*1,377*	*867*	*299*	*0*	*0*	*0*	72,823
Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	4,794	4,768	4,707	6,017	5,160	4,985	4,610	5,516	4,937	4,431	5,432	5,212	4,370	4,012	2,828	2,837	2,071	1,358	-1,055	-1,735	-2,447	-3,195	-3,979	-4,805	-5,674	-6,590	-7,556	-8,575	-9,652	-10,789	-11,992	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1d_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
			52	54	56	73	67	61	51	71	56	42	64	57	36	27	-2	-3	-23	-37	-39	-41	-43	-46	-48	-50	-53	-56	-59	-62	-65	-68	-71	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,072	1,649	29,589
Equal Monthly Debt Drawdown	3,145	1,647	

	Feb8 1d, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,233	2030	21,239
Equal Monthly Debt Drawdown	32,999		

Feb8 1d, 30-yr — End of Year Debt Drawdown

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
a	Debt, Beginning of Year	0	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	
c = a*5%	*Interest Cost - Feb8 1d, 30-yr - End of Year Debt Drawdown*	*0*	*112*	*228*	*348*	*505*	*649*	*781*	*891*	*1,043*	*1,162*	*1,253*	*1,391*	*1,514*	*1,592*	*1,649*	*1,644*	*1,637*	*1,588*	*1,508*	*1,423*	*1,335*	*1,241*	*1,143*	*1,040*	*931*	*817*	*698*	*572*	*439*	*300*	*154*	*0*	*0*	*0*	29,589
b	Additional GA Debt Drawdown, End of Year	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	11,372	11,227	10,281	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,586	5,865	3,006	0	0	0	0	
	Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	20,763	20,763	20,763	20,763	19,112	17,375	15,550	13,632	11,616	9,496	7,268	4,926	2,464	0	0	0	0	0	0	0	
	Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	13,118	14,763	16,399	17,988	19,495	20,919	22,253	23,495	24,638	25,678	26,609	27,426	28,124	28,696	29,135	29,435	29,589				
	Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	19,017	17,228	14,645	11,486	8,326	5,167	2,007	-1,153	-4,312	-7,472	-10,631	-13,791	-16,951	-20,110	-23,270	-26,429	-29,589				
Fiscal Exposure - End of Year Debt Drawdown		2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	

Feb8 1d, 30-yr — Equal Monthly Debt Drawdown

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Debt, Beginning of Year	0	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	
1,647	*Interest Cost - Feb8 1d, 30-yr*	*52*	*166*	*284*	*421*	*572*	*711*	*832*	*962*	*1,098*	*1,205*	*1,317*	*1,448*	*1,550*	*1,619*	*1,647*	*1,641*	*1,614*	*1,551*	*1,469*	*1,382*	*1,291*	*1,196*	*1,095*	*989*	*878*	*762*	*639*	*510*	*375*	*232*	*82*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
	Monthly Drawdown	182	180	177	227	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	-	-	-	
	FV of Monthly Drawdown at 5%	2,232	2,210	2,176	2,788	2,366	1,977	1,399	2,123	1,322	628	1,468	1,042	12	(487)	(1,788)	(1,831)	(2,644)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	-	-	-	
	Annual Interest Cost on New Drawdowns	52	51	51	65	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	-	-	-	
	Annual Interest Cost on Opening Balance	-	114	233	356	517	665	800	912	1,068	1,190	1,283	1,424	1,550	1,630	1,688	1,683	1,676	1,626	1,544	1,457	1,366	1,271	1,170	1,065	954	837	714	585	450	307	157	0	0	0	
	Total Annual Interest Cost	52	166	284	421	572	711	832	962	1,098	1,205	1,317	1,448	1,550	1,619	1,647	1,641	1,614	1,551	1,469	1,382	1,291	1,196	1,095	989	878	762	639	510	375	232	82	0	0	0	

Feb8 1d, 30-yr — Bi-Annual Debt Drawdown

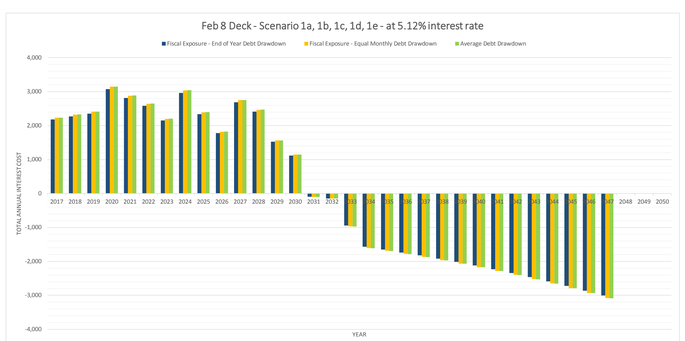
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

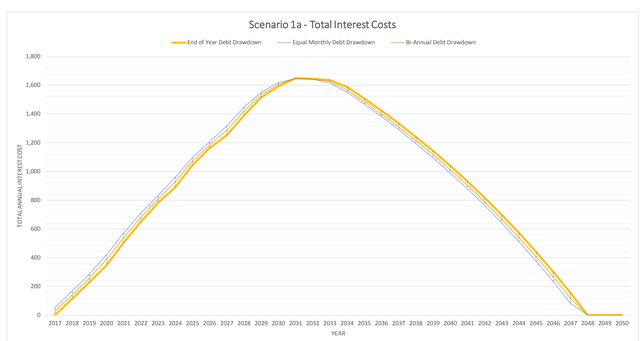
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Debt, Beginning of Year	0	2,208	4,507	6,890	10,001	12,854	15,467	17,642	20,645	23,009	24,807	27,529	29,969	31,514	32,645	32,546	32,400	31,442	29,850	28,177	26,419	24,571	22,628	20,585	18,439	16,182	13,810	11,316	8,695	5,940	3,044	0	0	0	
	Interest Cost - Feb8 1d, 30-yr	*28*	*141*	*258*	*387*	*541*	*682*	*809*	*929*	*1,073*	*1,185*	*1,288*	*1,421*	*1,533*	*1,606*	*1,648*	*1,642*	*1,625*	*1,568*	*1,487*	*1,401*	*1,311*	*1,217*	*1,117*	*1,013*	*903*	*787*	*666*	*539*	*404*	*264*	*115*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,208	4,507	6,890	10,001	12,854	15,467	17,642	20,645	23,009	24,807	27,529	29,969	31,514	32,645	32,546	32,400	31,442	29,850	28,177	26,419	24,571	22,628	20,585	18,439	16,182	13,810	11,316	8,695	5,940	3,044	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,208	2,299	2,383	3,111	2,853	2,613	2,175	3,003	2,364	1,798	2,722	2,440	1,545	1,131	-98	-147	-958	-1,591	-1,673	-1,758	-1,848	-1,943	-2,042	-2,147	-2,257	-2,372	-2,493	-2,621	-2,755	-2,896	-3,044	0	0	0	
	Bi-Annual Drawdown	1,090	1,079	1,063	1,362	1,156	965	683	1,037	646	307	717	509	6	(238)	(873)	(894)	(1,291)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,208	2,186	2,153	2,758	2,341	1,955	1,384	2,100	1,308	621	1,453	1,031	12	(481)	(1,769)	(1,812)	(2,616)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	-	-	-	
	Annual Interest Cost on New Drawdowns	28	28	27	35	30	25	17	27	17	8	18	13	0	(6)	(22)	(23)	(33)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	-	-	-	
	Annual Interest Cost on Opening Balance	-	113	231	353	512	658	791	903	1,056	1,177	1,269	1,408	1,533	1,612	1,670	1,665	1,658	1,609	1,527	1,442	1,352	1,257	1,158	1,053	943	828	707	579	445	304	156	0	0	0	
	Total Annual Interest Cost	28	141	258	387	541	682	809	929	1,073	1,185	1,288	1,421	1,533	1,606	1,648	1,642	1,625	1,568	1,487	1,401	1,311	1,217	1,117	1,013	903	787	666	539	404	264	115	0	0	0	

Feb8 1d, 30-yr — Average Debt Drawdown

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Debt, Beginning of Year	0	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	
	Interest Cost - Feb8 1d, 30-yr	*56*	*170*	*288*	*427*	*577*	*715*	*836*	*967*	*1,103*	*1,208*	*1,322*	*1,452*	*1,553*	*1,621*	*1,647*	*1,640*	*1,613*	*1,548*	*1,466*	*1,379*	*1,288*	*1,192*	*1,091*	*986*	*874*	*758*	*635*	*505*	*370*	*227*	*77*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		2,236	2,328	2,413	3,150	2,889	2,646	2,203	3,041	2,394	1,821	2,756	2,471	1,565	1,145	-100	-148	-970	-1,612	-1,694	-1,781	-1,872	-1,967	-2,068	-2,174	-2,285	-2,402	-2,525	-2,654	-2,790	-2,933	-3,083	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1e_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	
			36	37	38	53	46	39	27	45	28	13	33	24	1	-11	-16	-16	-17	-18	-19	-20	-21	-22	-23	-25	-26	-27	-29	-30	-32	-33	-35	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,243	904	16,239
Equal Monthly Debt Drawdown	2,297	903	

		Feb8 1e, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown		17,670	2029	12,350
Equal Monthly Debt Drawdown		18,091		

Feb8 1e, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
a Debt, Beginning of Year	0	1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	
c = a*5% *Interest Cost - Feb8 1e, 30-yr - End of Year Debt Drawdown*	*0*	*77*	*156*	*236*	*351*	*450*	*534*	*592*	*688*	*749*	*778*	*849*	*901*	*904*	*881*	*847*	*812*	*775*	*735*	*694*	*651*	*605*	*558*	*507*	*454*	*399*	*340*	*279*	*214*	*146*	*75*	*0*	*0*	*0*	16,239
b Additional GA Debt Drawdown, End of Year	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
d = a+b+c Accumulated debt in present year (including 5.12% annual interest)	1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
Feb8 1e, 30-yr - Accumulated Interest Costs	0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	6,605	5,911	5,182	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,188	2,861	1,466	0	0	0	0	
Feb8 1e, 30-yr - Accumulated Debt Principal	1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	9,960	9,960	9,960	9,960	9,155	8,308	7,418	6,482	5,498	4,465	3,378	2,235	1,035	0	0	0	0	0	0	0	
Feb8 1e, 30-yr - Accumulated Interest Costs	0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	8,146	8,993	9,805	10,580	11,315	12,010	12,661	13,266	13,824	14,331	14,785	15,184	15,524	15,803	16,017	16,164	16,239				
Feb8 1e, 30-yr - Accumulated Debt Principal	1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	8,419	6,878	5,337	3,796	2,255	714	-827	-2,369	-3,910	-5,451	-6,992	-8,533	-10,074	-11,615	-13,156	-14,697	-16,239				
Fiscal Exposure - End of Year Debt Drawdown	1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	

Feb8 1e, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	
903 *Interest Cost - Feb8 1e, 30-yr*	*36*	*113*	*193*	*290*	*397*	*489*	*561*	*637*	*717*	*762*	*811*	*873*	*903*	*893*	*866*	*831*	*795*	*756*	*716*	*674*	*630*	*583*	*534*	*483*	*428*	*372*	*312*	*249*	*183*	*113*	*40*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	
Monthly Drawdown	125	122	119	167	132	99	50	108	42	(16)	51	15	(70)	(112)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	-	-	-	
FV of Monthly Drawdown at 5%	1,536	1,500	1,457	2,055	1,617	1,213	620	1,328	512	(199)	625	182	(865)	(1,382)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	-	-	-	
Annual Interest Cost on New Drawdowns	36	35	34	48	38	28	14	31	12	(5)	15	4	(20)	(32)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	-	-	-	
Annual Interest Cost on Opening Balance	-	79	159	242	359	461	546	606	705	767	796	869	923	926	902	868	831	793	753	711	666	620	571	519	465	408	348	285	219	150	77	0	0	0	
Total Annual Interest Cost	36	113	193	290	397	489	561	637	717	762	811	873	903	893	866	831	795	756	716	674	630	583	534	483	428	372	312	249	183	113	40	0	0	0	

Feb8 1e, 30-yr — Bi-Annual Debt Drawdown

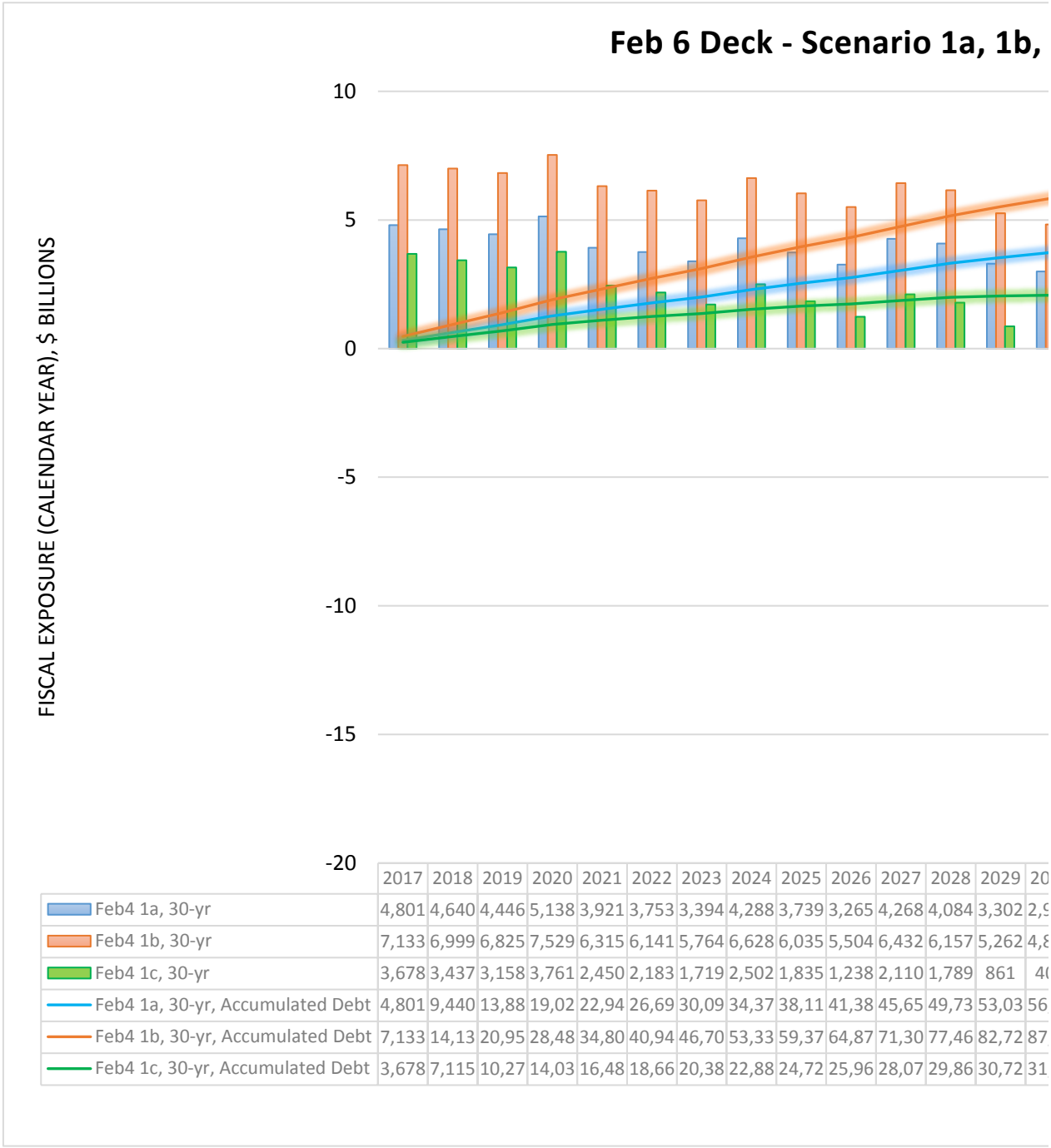
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	
Interest Cost - Feb8 1e, 30-yr	*19*	*96*	*176*	*265*	*376*	*471*	*548*	*616*	*704*	*756*	*795*	*862*	*902*	*898*	*873*	*839*	*803*	*765*	*725*	*683*	*640*	*593*	*545*	*494*	*440*	*384*	*325*	*263*	*197*	*129*	*56*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	1,519	1,561	1,598	2,272	1,956	1,655	1,154	1,913	1,203	562	1,406	1,040	57	-451	-668	-703	-738	-776	-816	-858	-902	-948	-996	-1,047	-1,101	-1,157	-1,216	-1,278	-1,344	-1,413	-1,485	0	0	0	
Bi-Annual Drawdown	750	733	711	1,003	790	592	303	649	250	(97)	305	89	(423)	(675)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	-	-	-	
FV of Bi-Annual Drawdown at 5%	1,519	1,484	1,441	2,033	1,600	1,200	613	1,314	506	(197)	618	180	(856)	(1,367)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	-	-	-	
Annual Interest Cost on New Drawdowns	19	19	18	26	20	15	8	17	6	(2)	8	2	(11)	(17)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	-	-	-	
Annual Interest Cost on Opening Balance	-	78	158	239	356	456	540	599	697	759	788	860	913	916	893	858	822	785	745	703	659	613	565	514	460	404	345	282	217	148	76	0	0	0	
Total Annual Interest Cost	19	96	176	265	376	471	548	616	704	756	795	862	902	898	873	839	803	765	725	683	640	593	545	494	440	384	325	263	197	129	56	0	0	0	

Feb8 1e, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	
Interest Cost - Feb8 1e, 30-yr	*38*	*116*	*196*	*294*	*401*	*492*	*563*	*640*	*719*	*763*	*813*	*875*	*903*	*893*	*864*	*830*	*793*	*755*	*715*	*673*	*628*	*581*	*532*	*481*	*427*	*369*	*310*	*247*	*180*	*111*	*38*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	1,538	1,581	1,619	2,301	1,980	1,676	1,168	1,938	1,219	569	1,424	1,053	57	-457	-677	-711	-748	-786	-826	-869	-913	-960	-1,009	-1,060	-1,115	-1,172	-1,232	-1,295	-1,361	-1,430	-1,504	0	0	0	

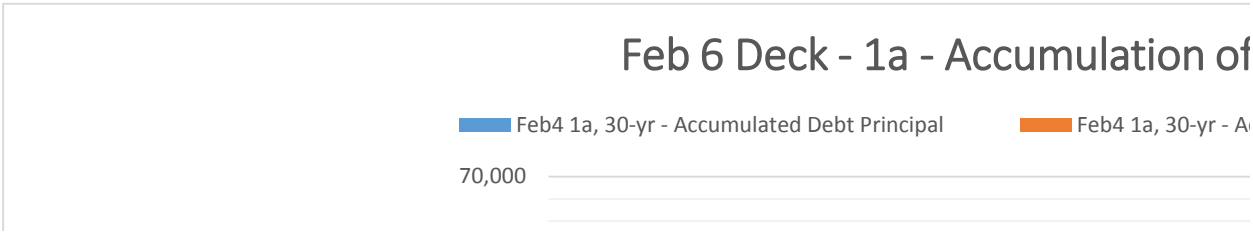
Feb 6 Deck

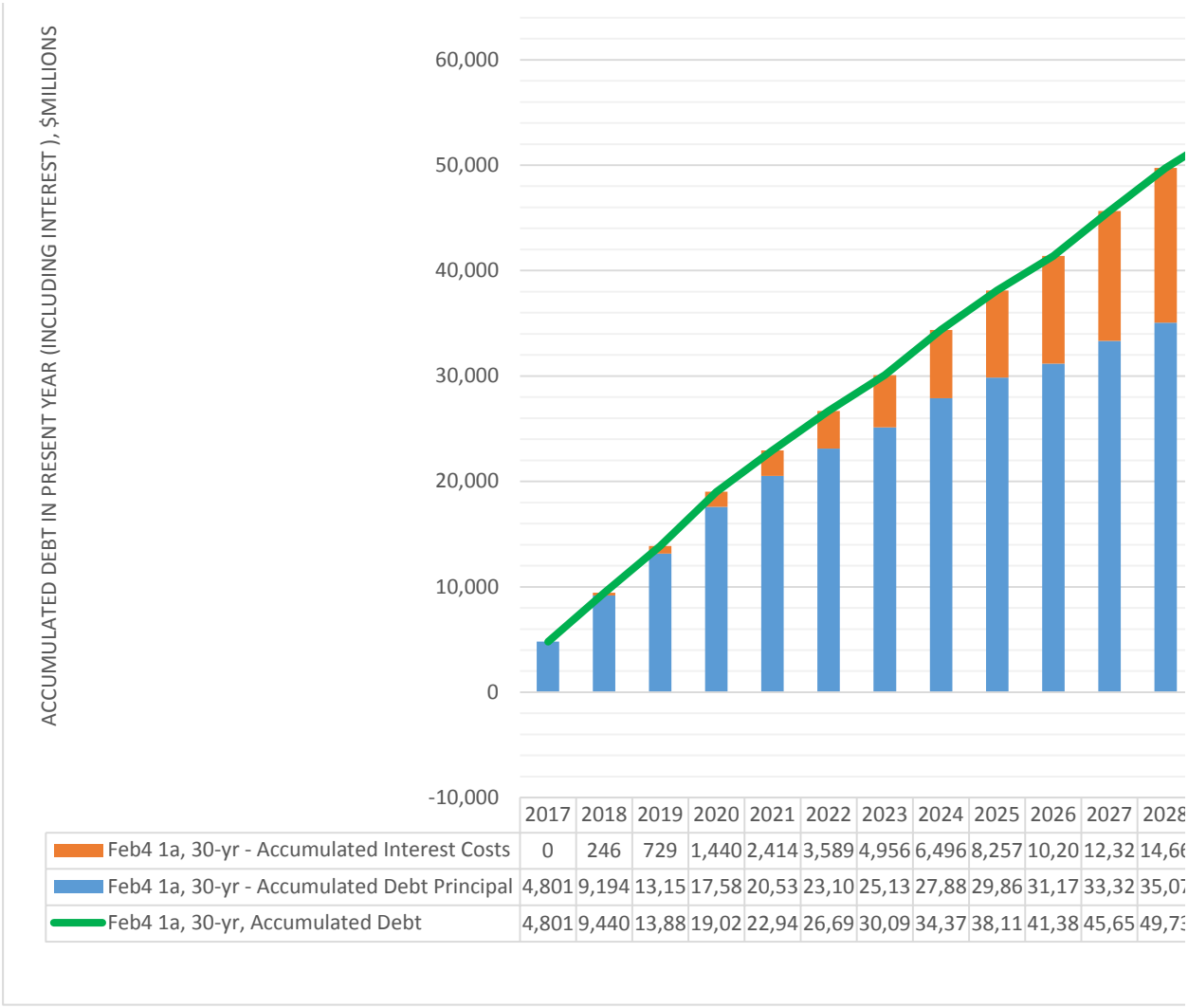
Feb 6 Deck - Scenario 1a, 1b, 1c - at 5.12% interest rate



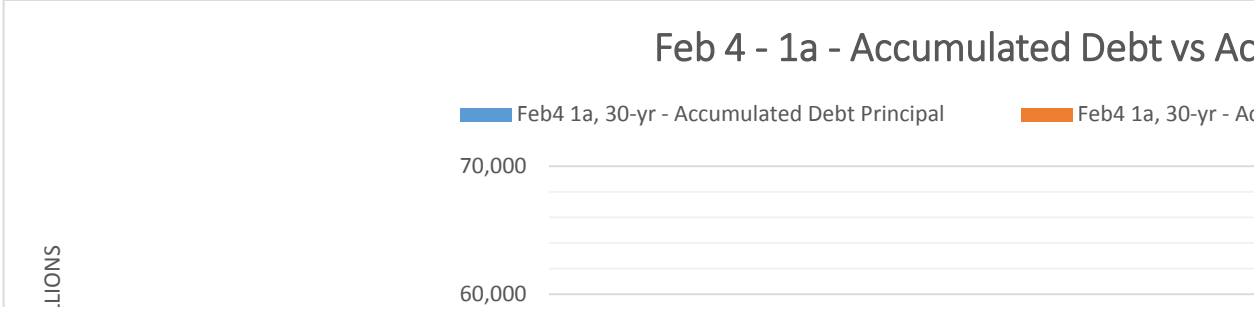
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	20
Feb4 1a, 30-yr	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,9
Feb4 1b, 30-yr	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,8
Feb4 1c, 30-yr	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	4(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73	53,03	56
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31

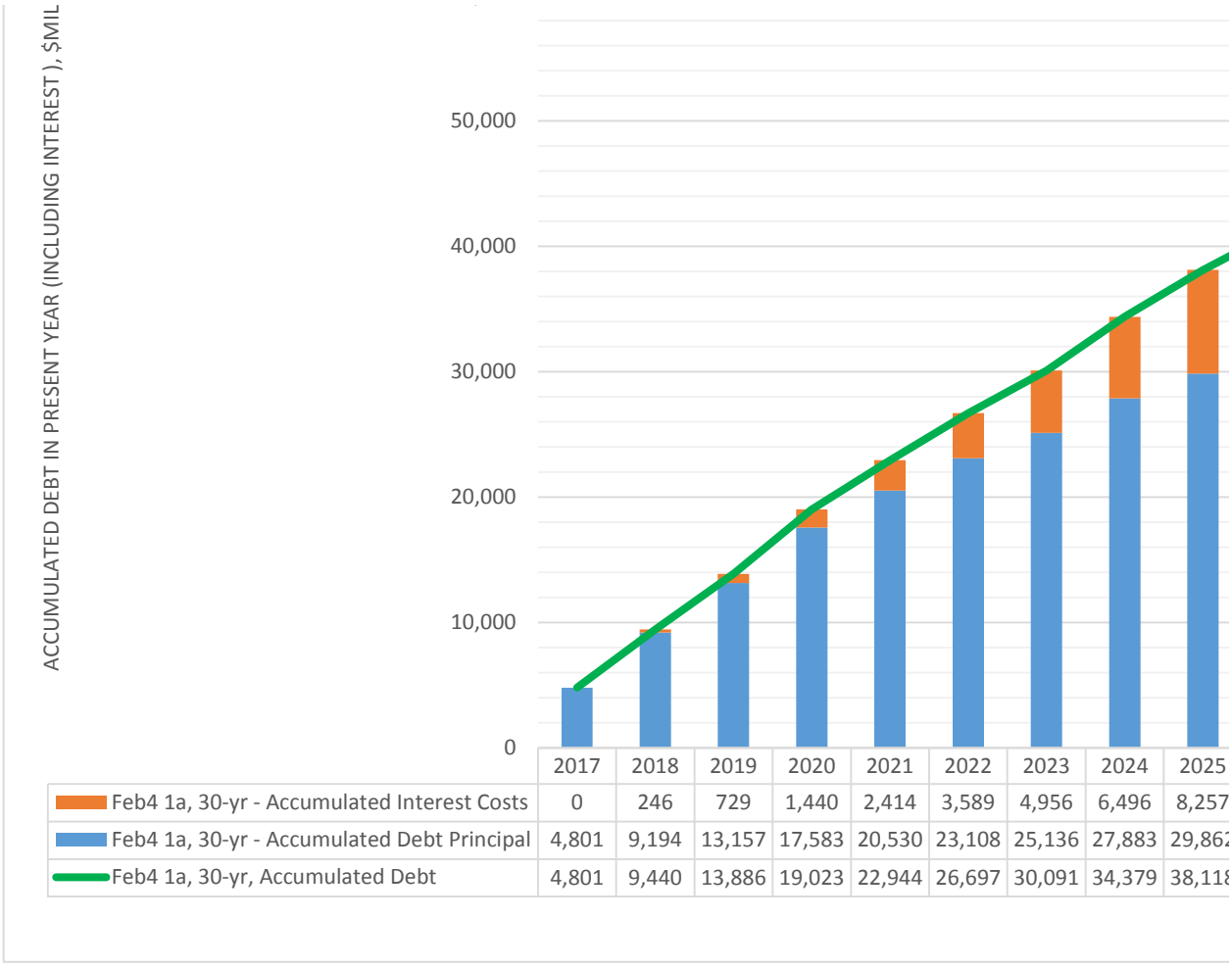
Feb 6 Deck - 1a - Accumulation of Debt (Principal and Interest)



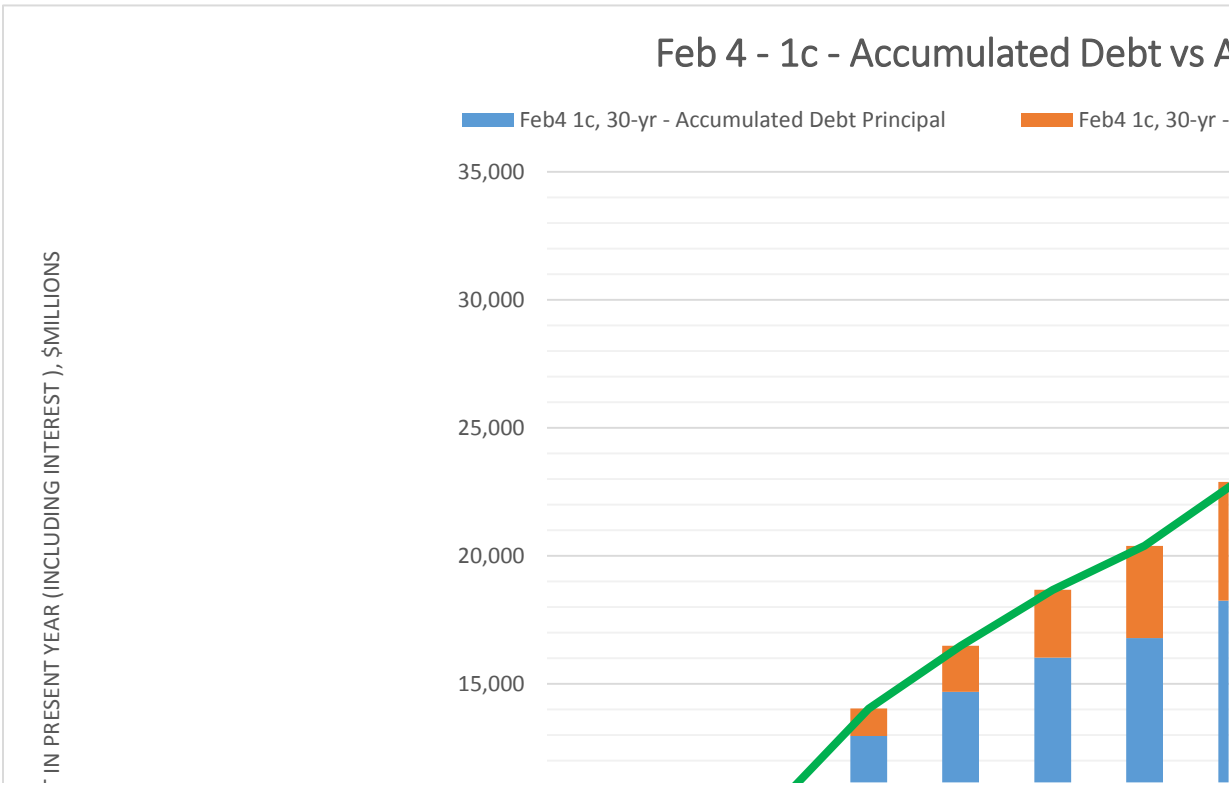


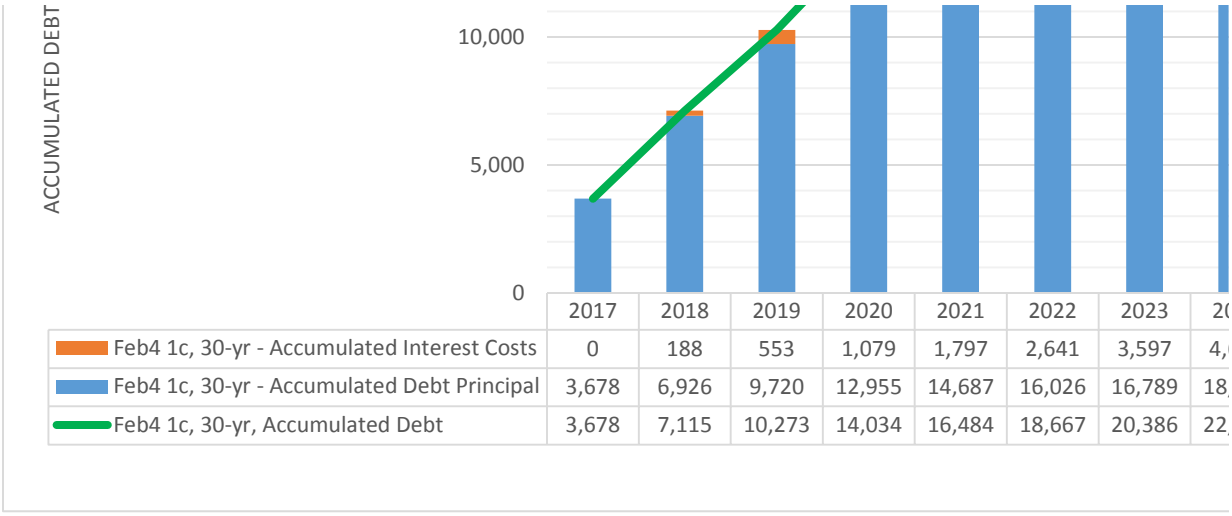
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,66
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,07
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73



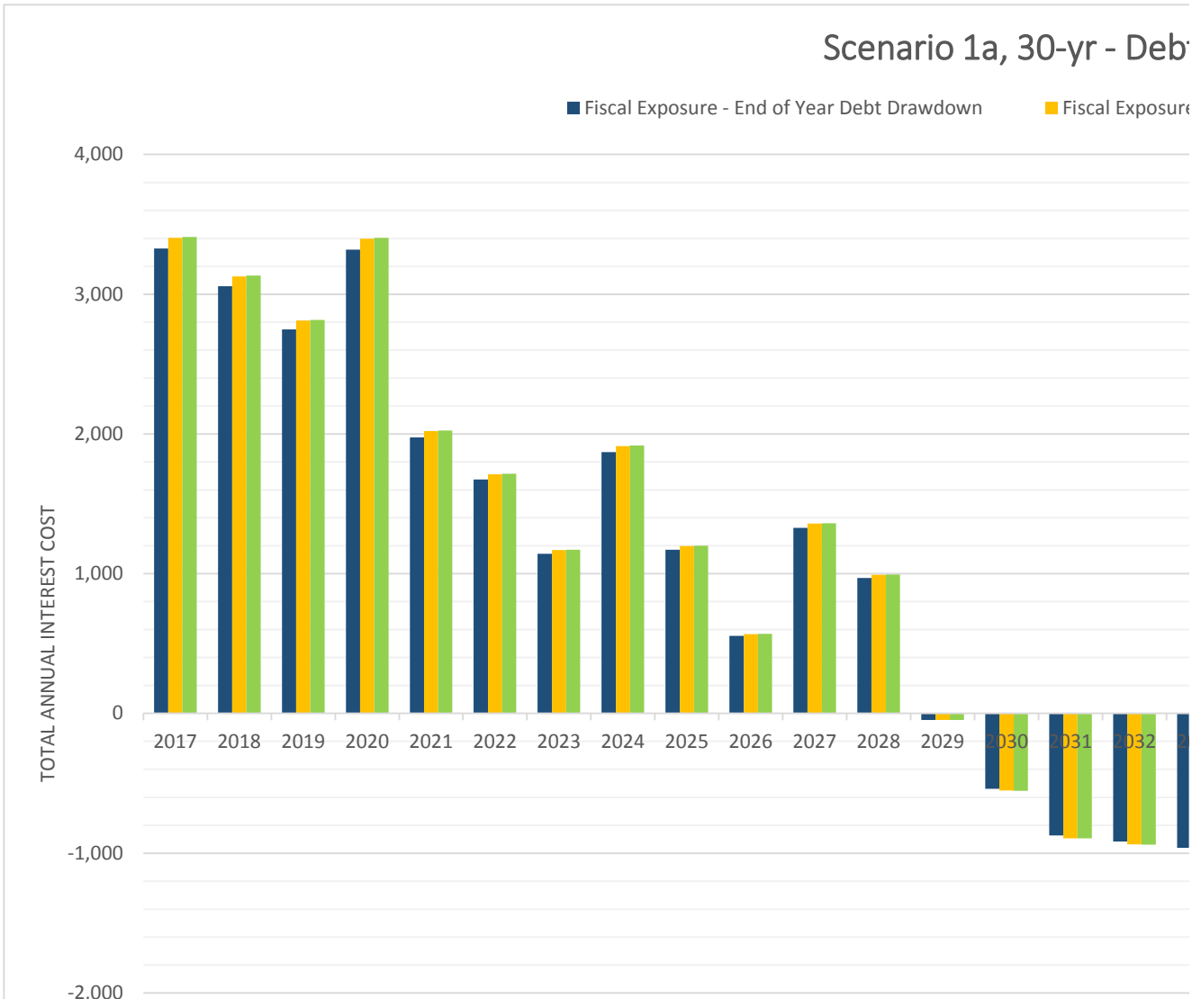


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



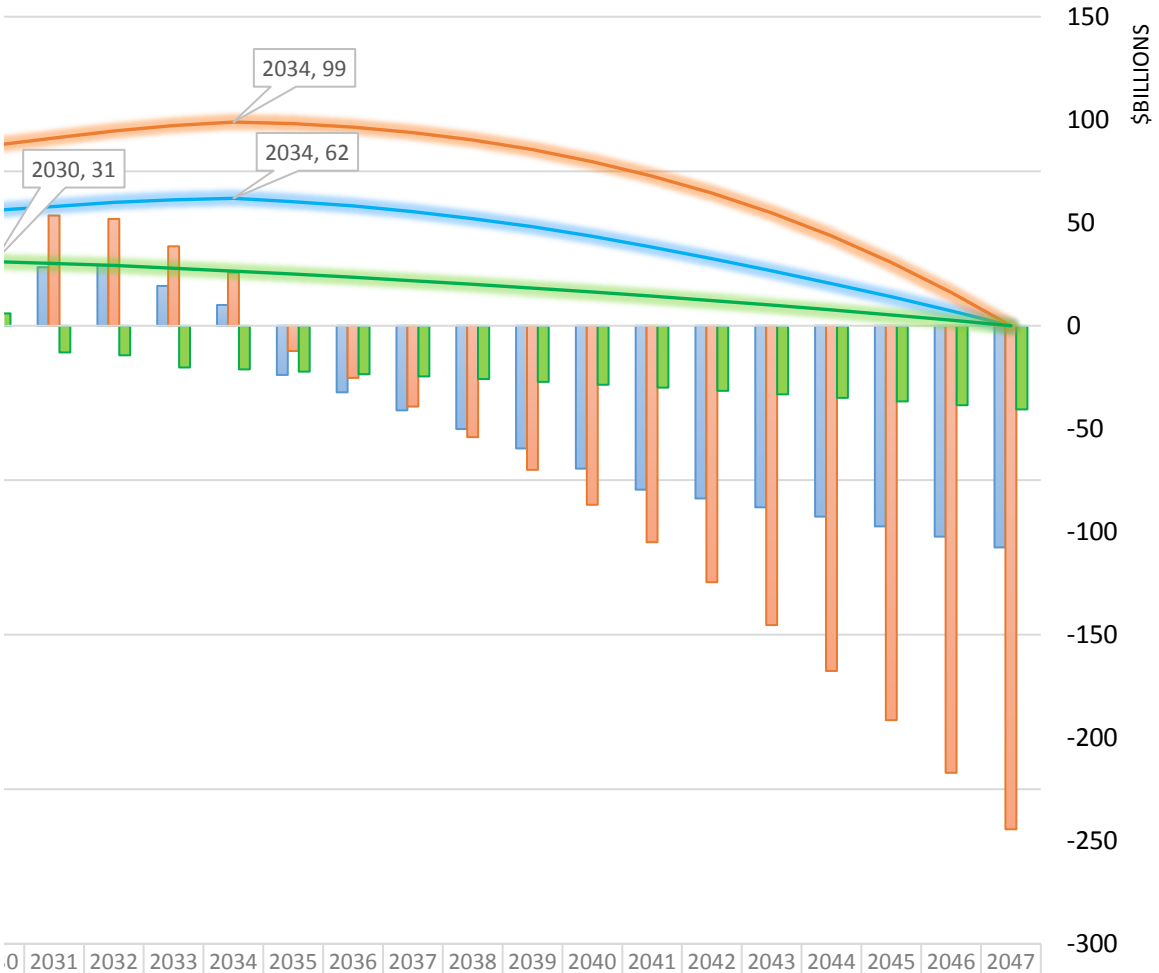


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22



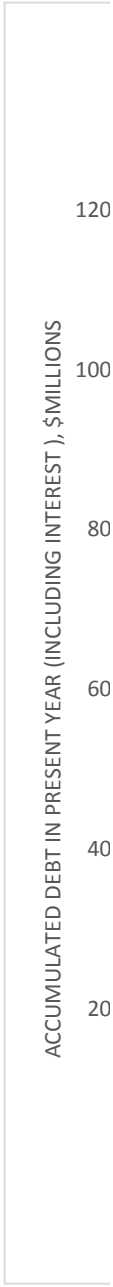

-3,000

lc - at 5.12% interest rate



0	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
98	1,896	1,966	1,288	672	-1,59	-2,15	-2,73	-3,34	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
26	3,568	3,457	2,571	1,716	-819	-1,68	-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
4	-860	-961	-1,34	-1,41	-1,48	-1,56	-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0
55	91,12	94,57	97,14	98,86	98,04	96,35	93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0
12	30,26	29,30	27,95	26,54	25,05	23,49	21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

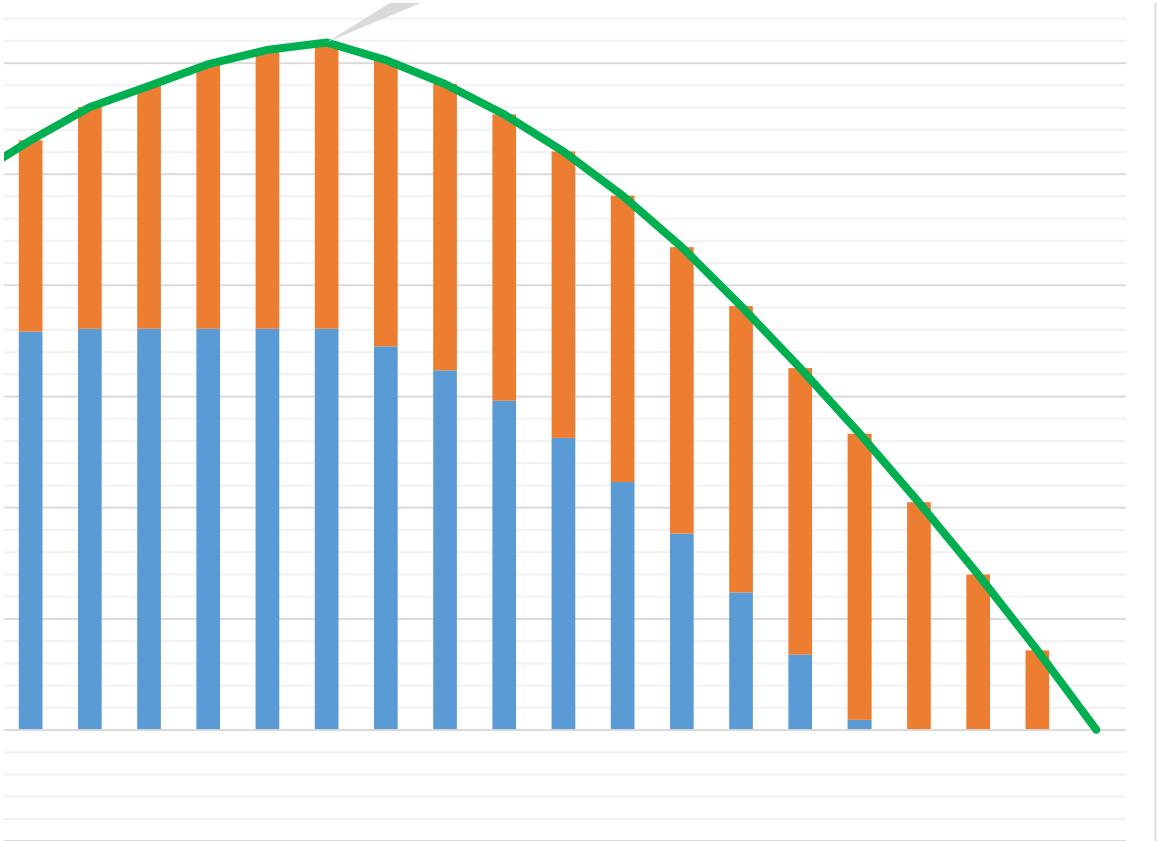
CALENDAR YEAR



Debt (Principal and Interest)

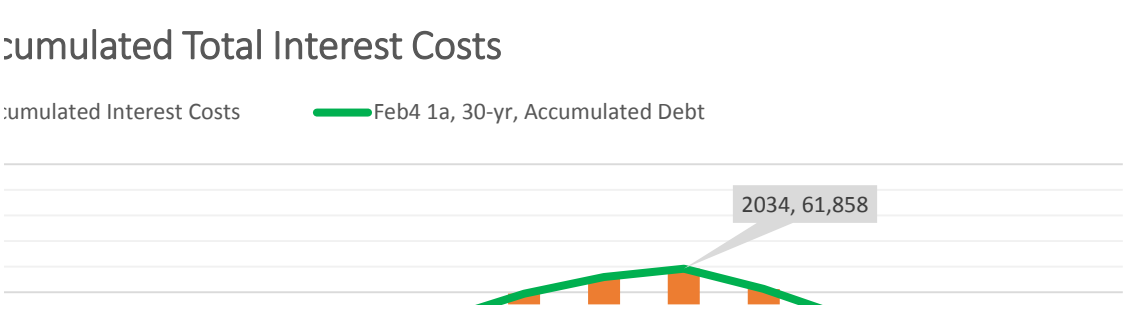
cumulated Interest Costs — Feb4 1a, 30-yr, Accumulated Debt

2034, 61,858

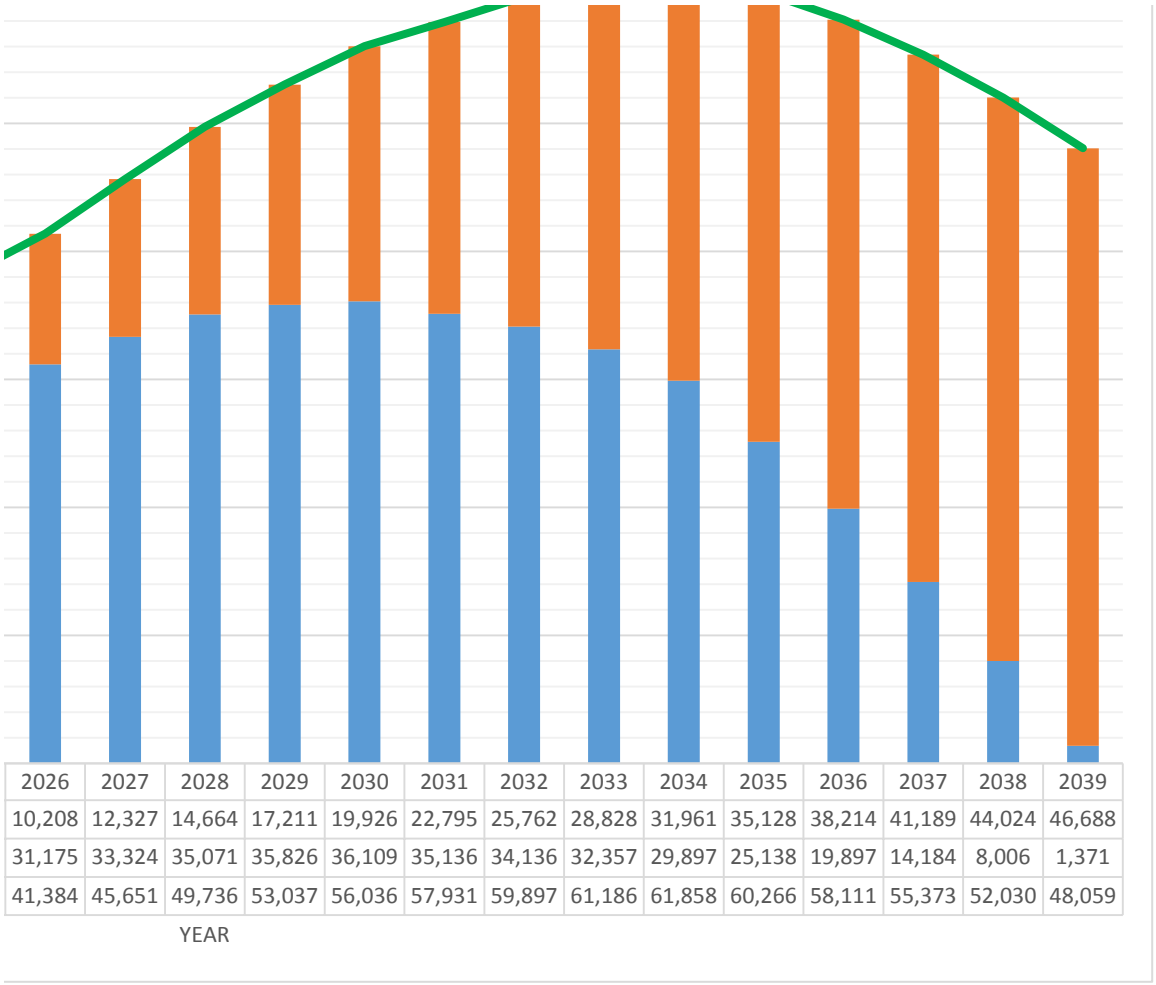


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



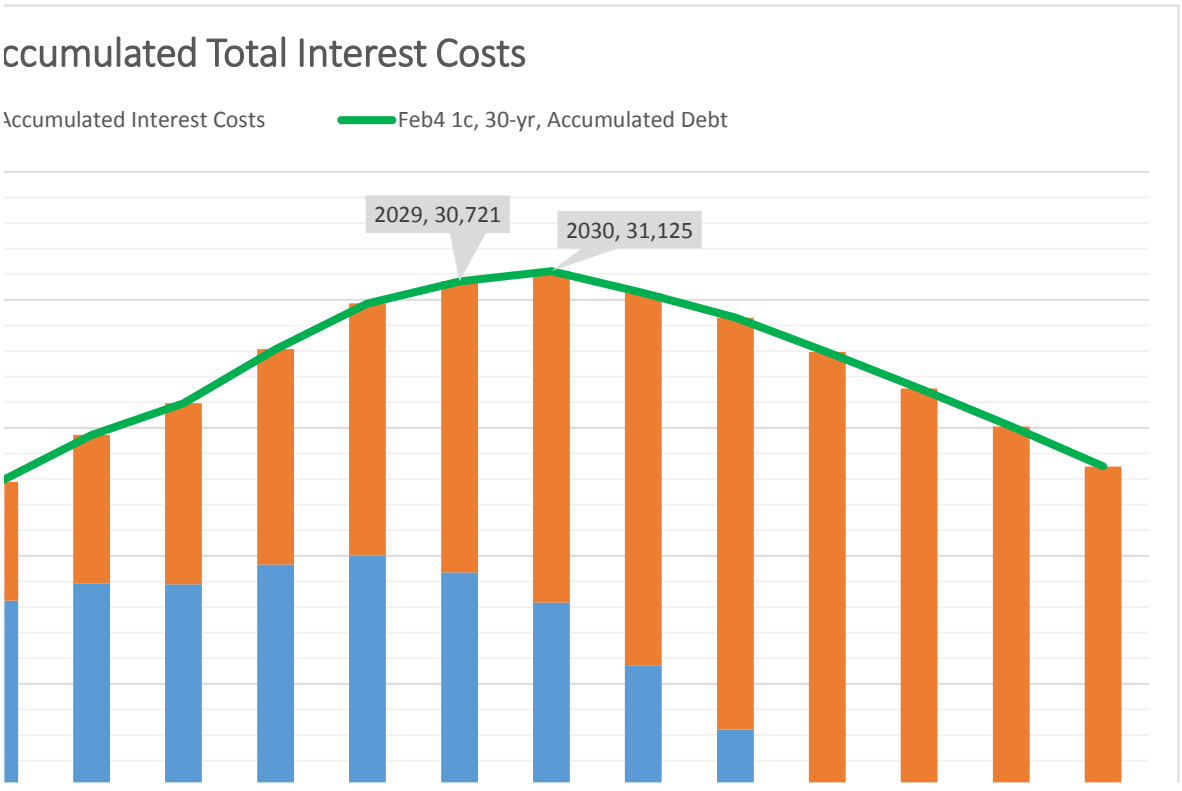
LIONS

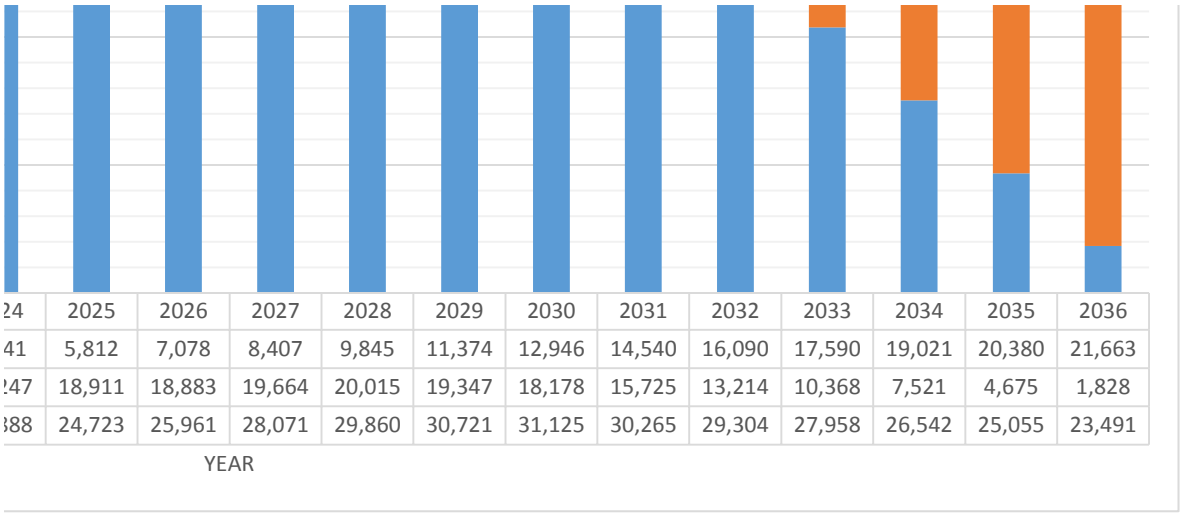


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

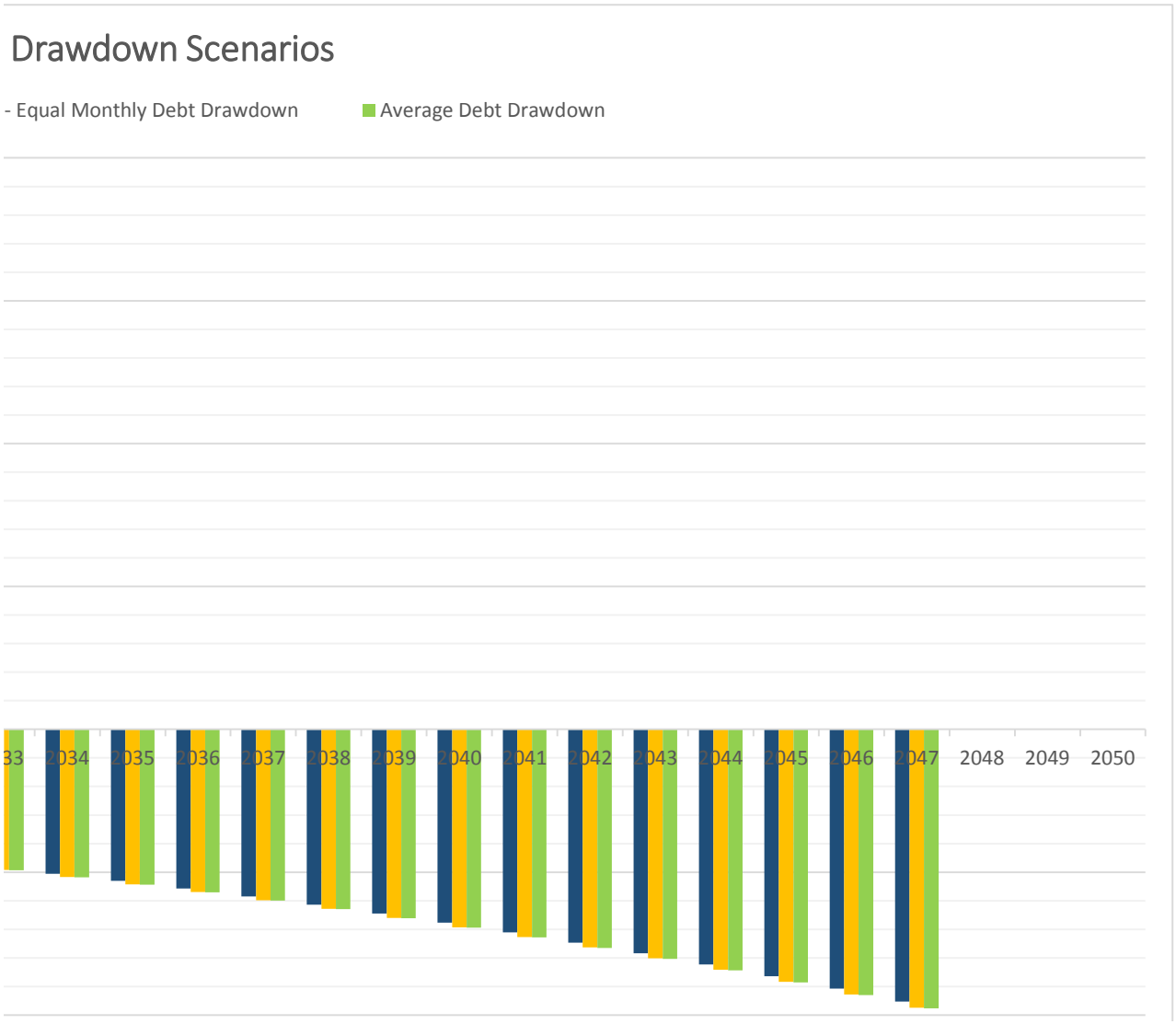
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





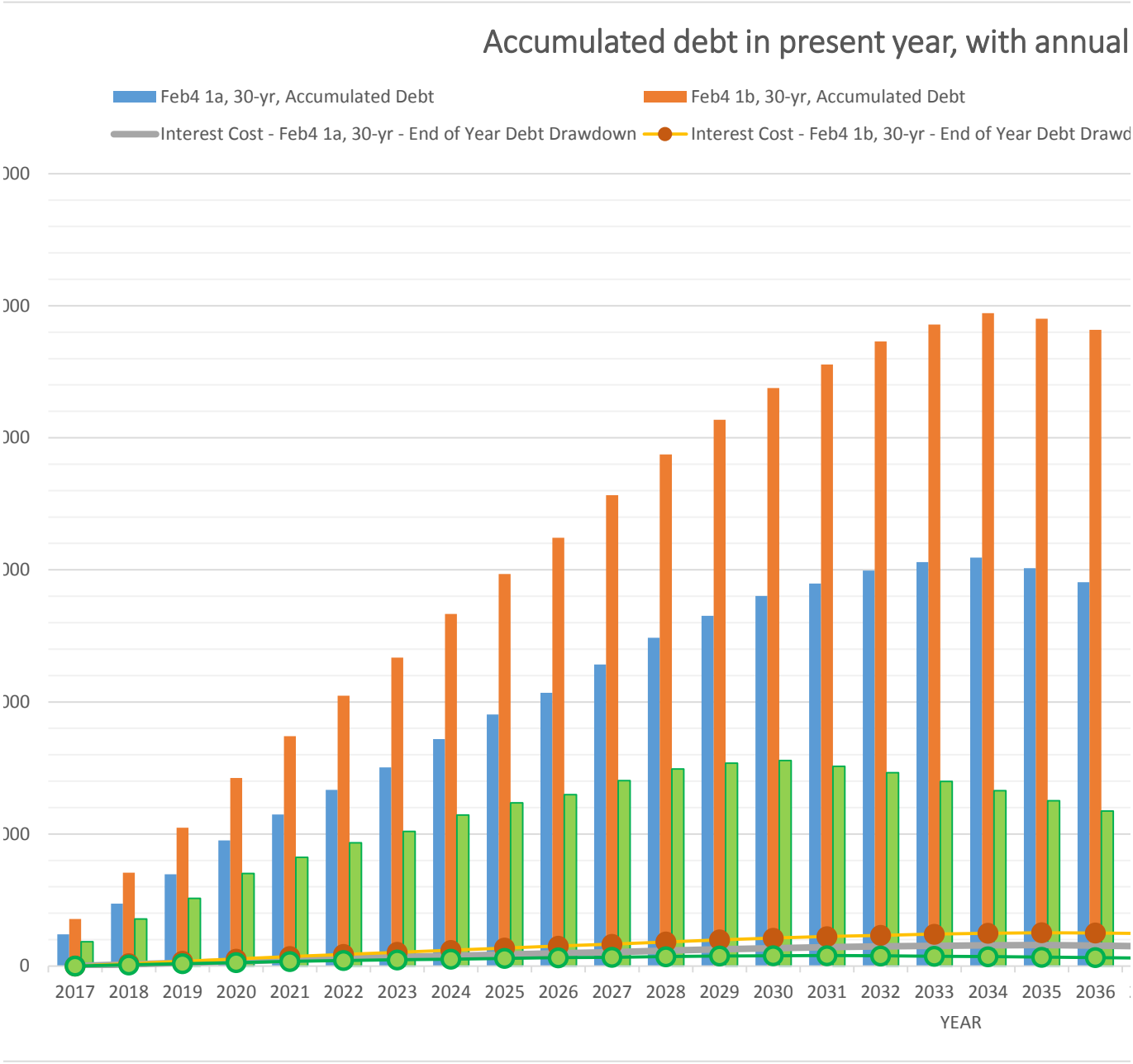
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

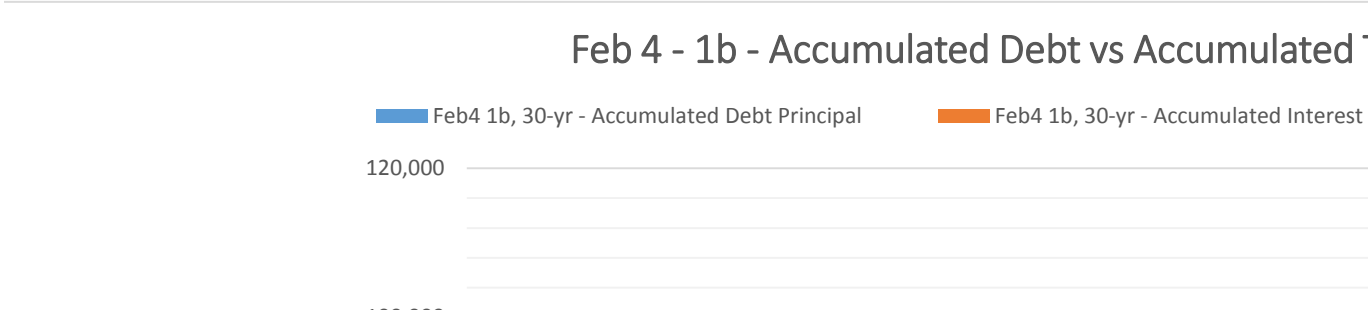
YEAR

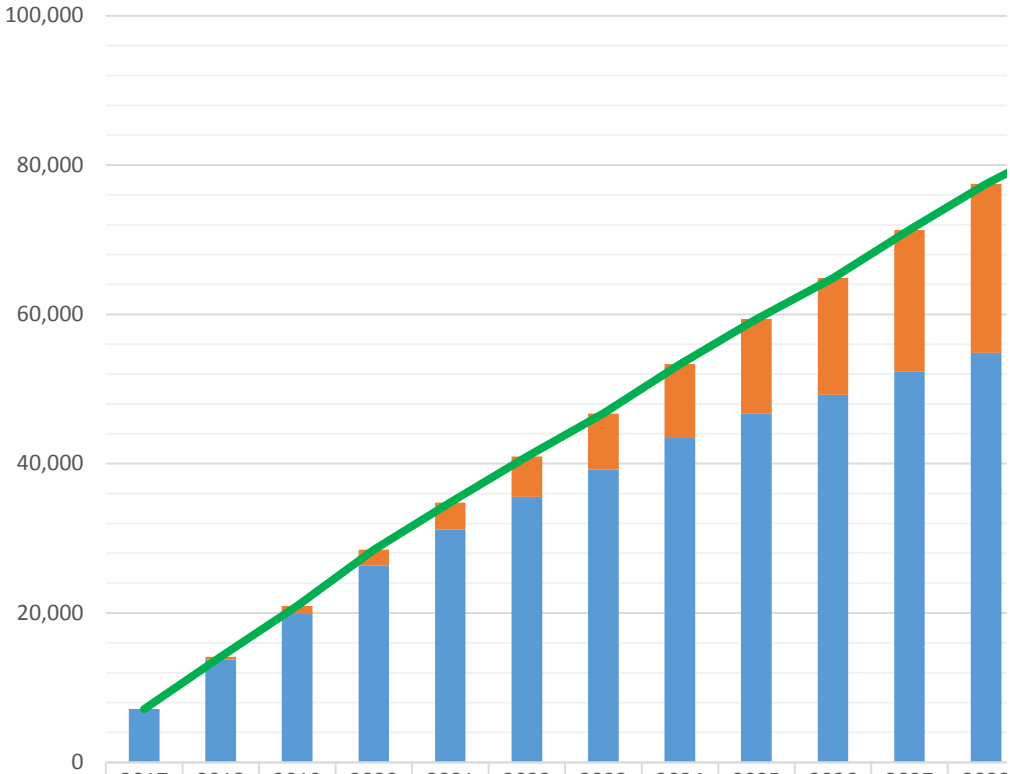


YEAR

ɜ - 25 year and 30 year Financing Terms, at 5% interest rate

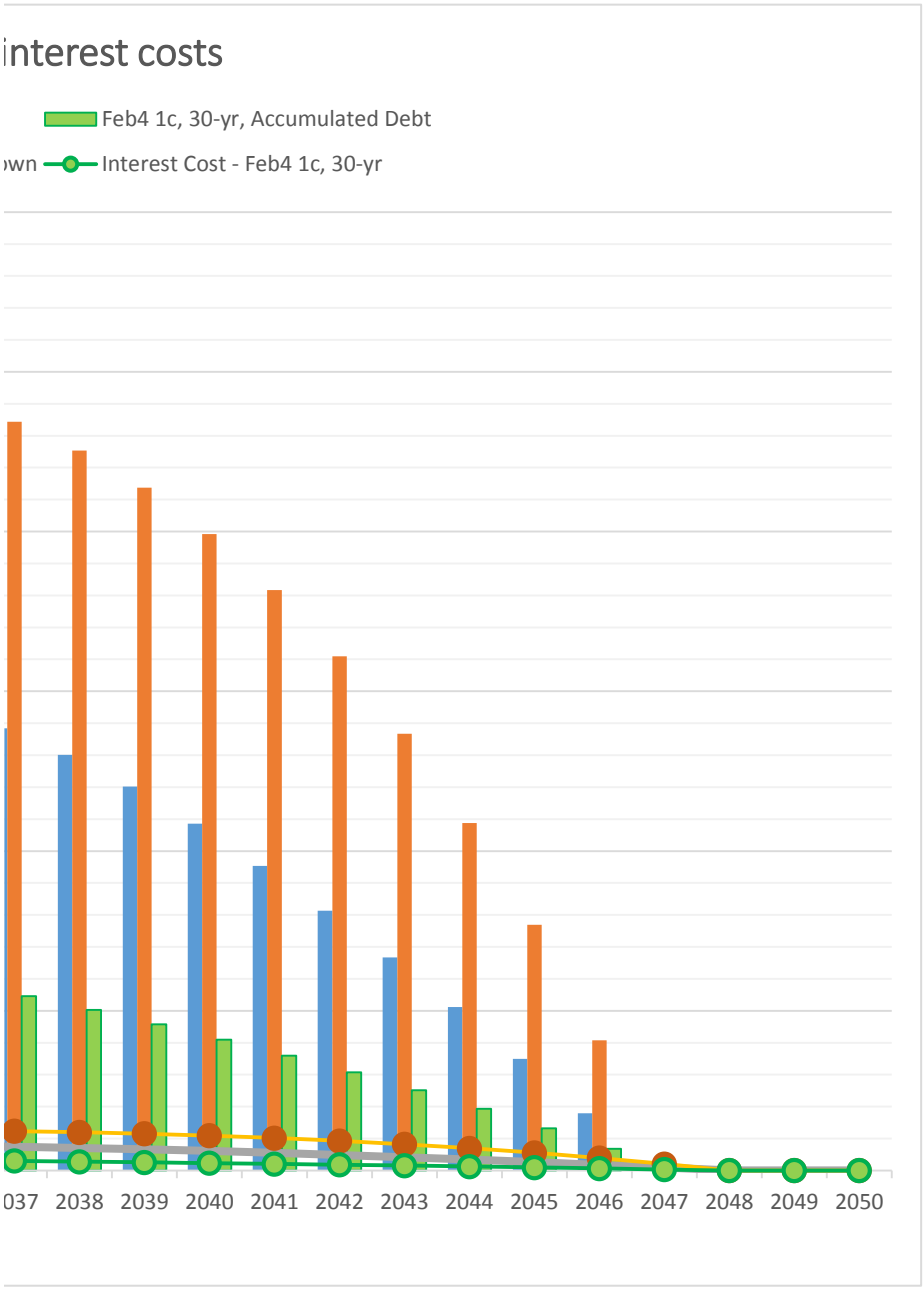


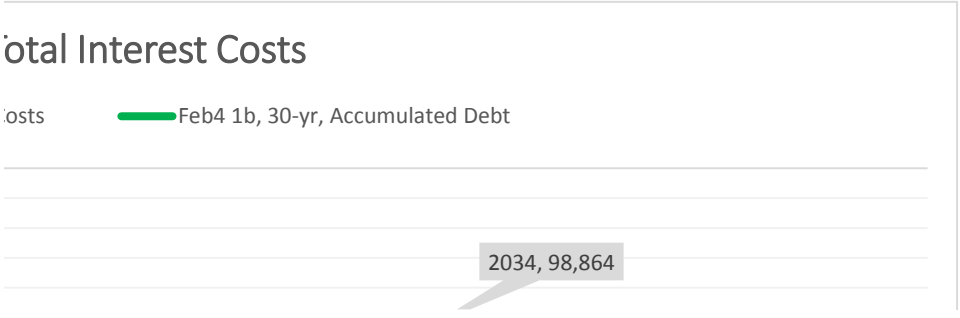

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

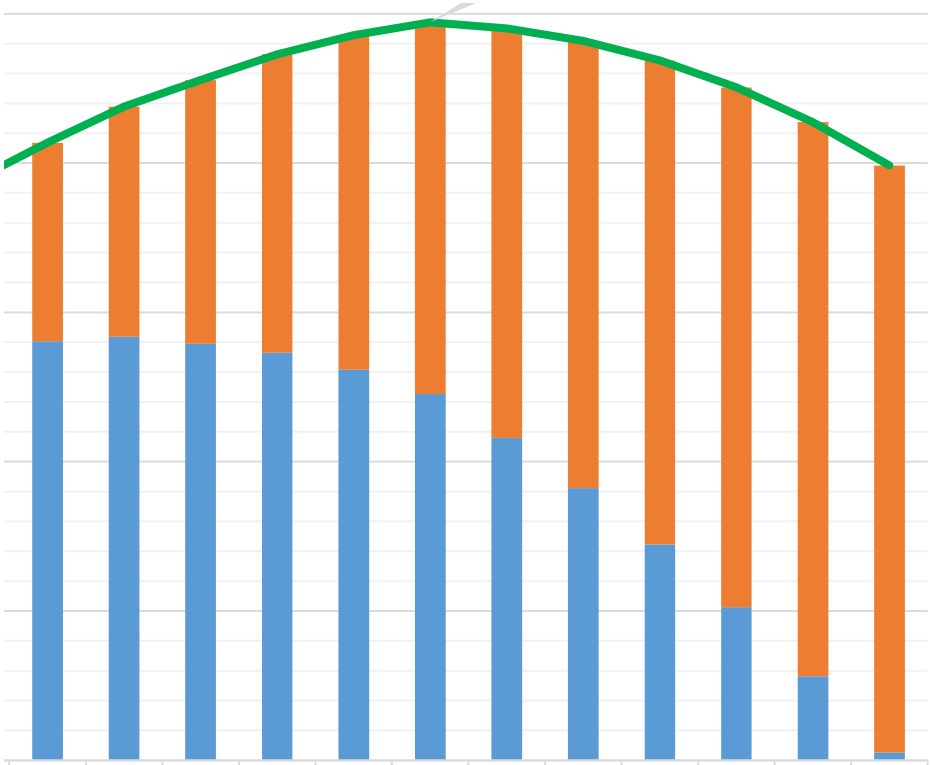


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y


interest costs
Feb4 1c, 30-yr, Accumulated Debt
wn
Interest Cost - Feb4 1c, 30-yr
037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR

Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

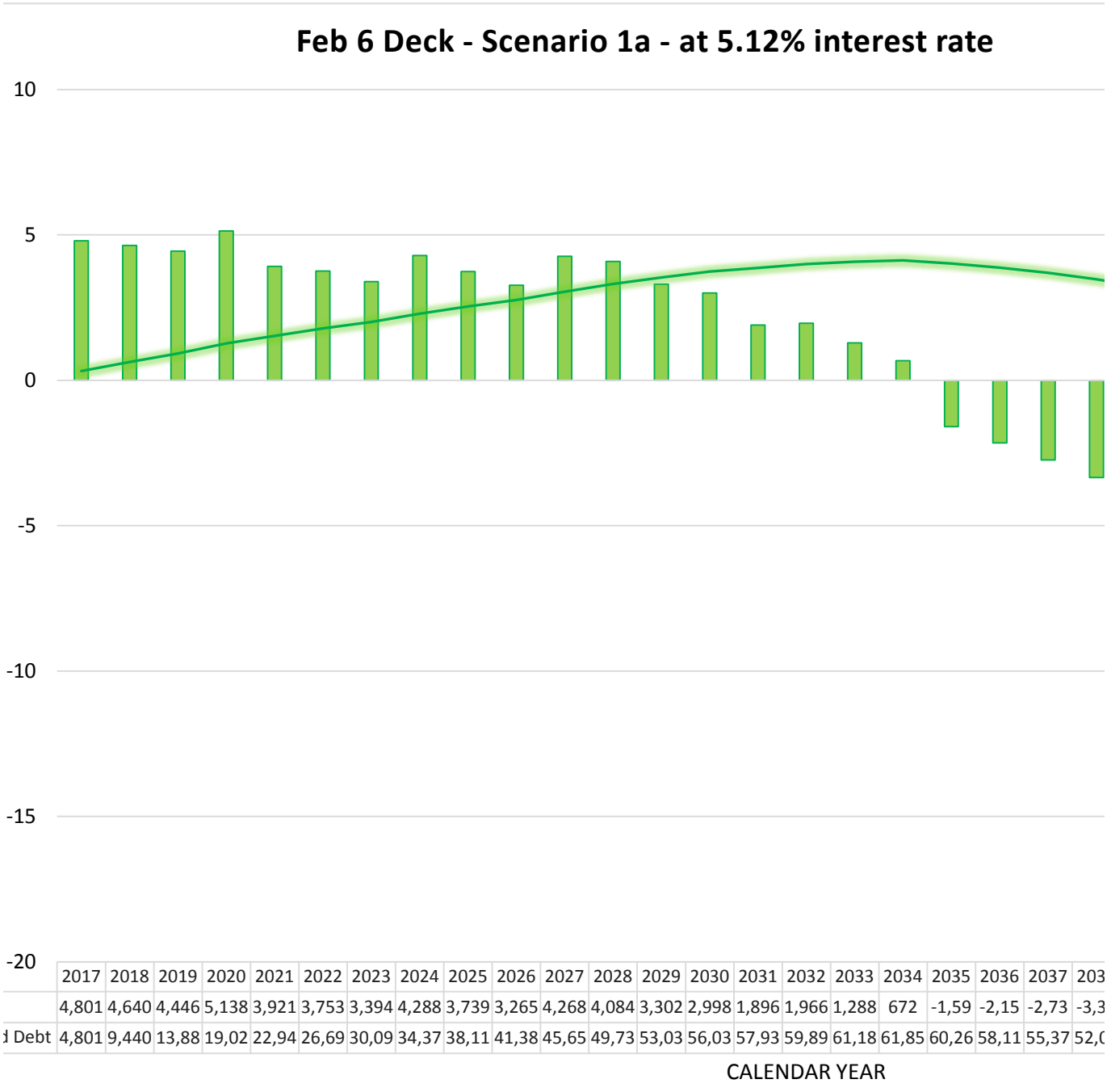
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

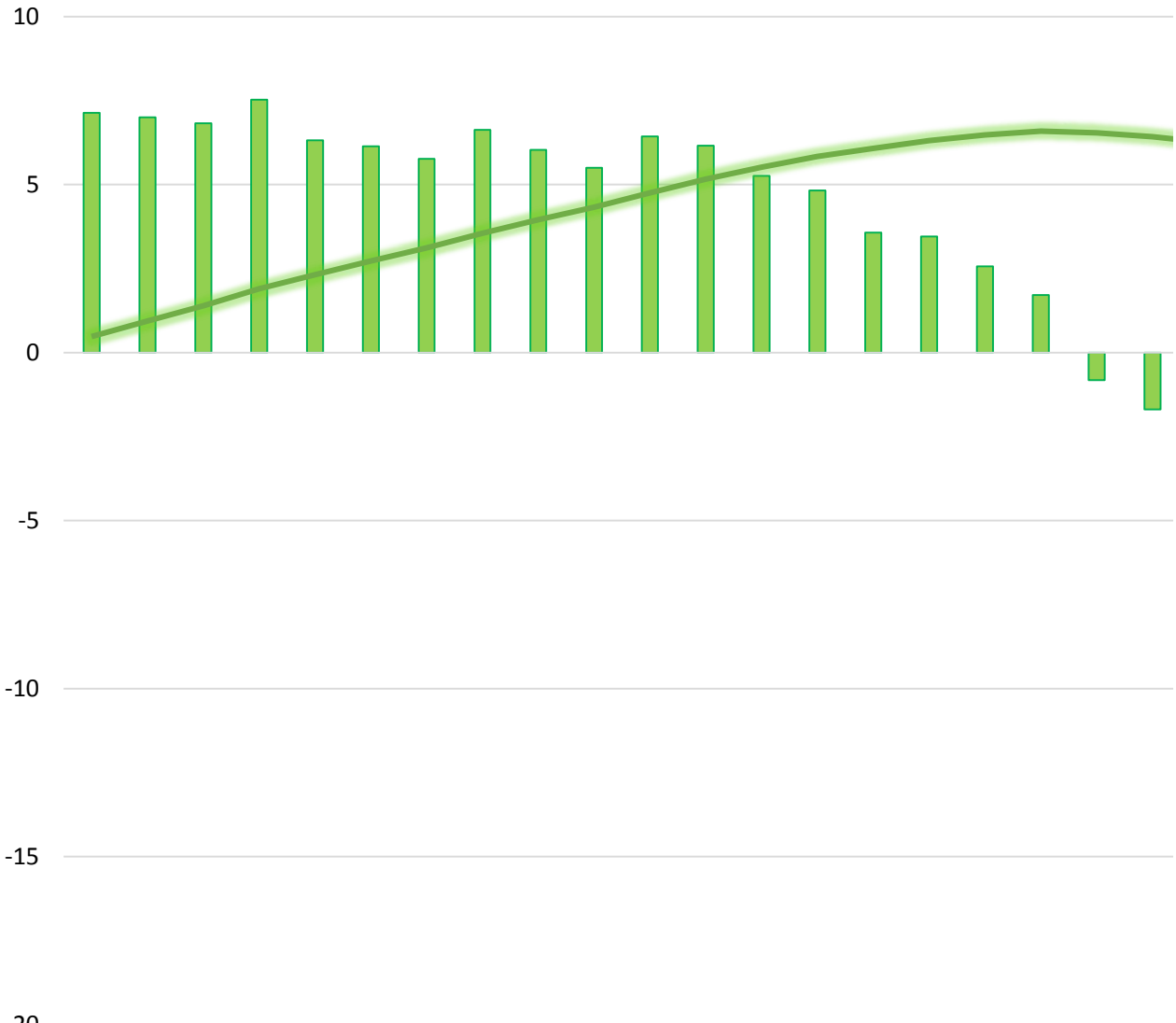
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

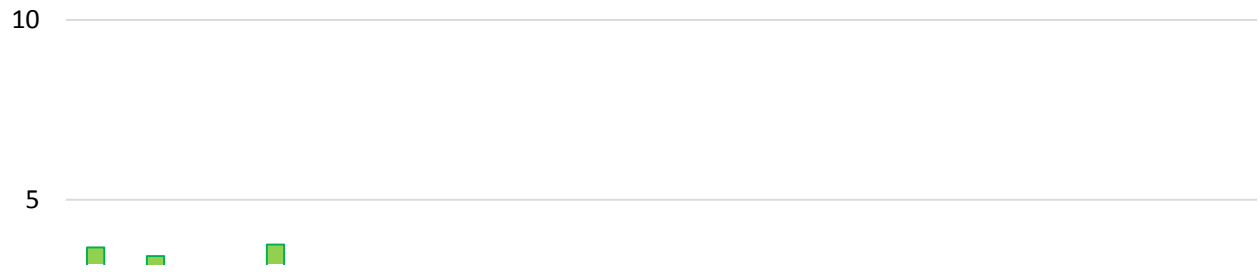
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

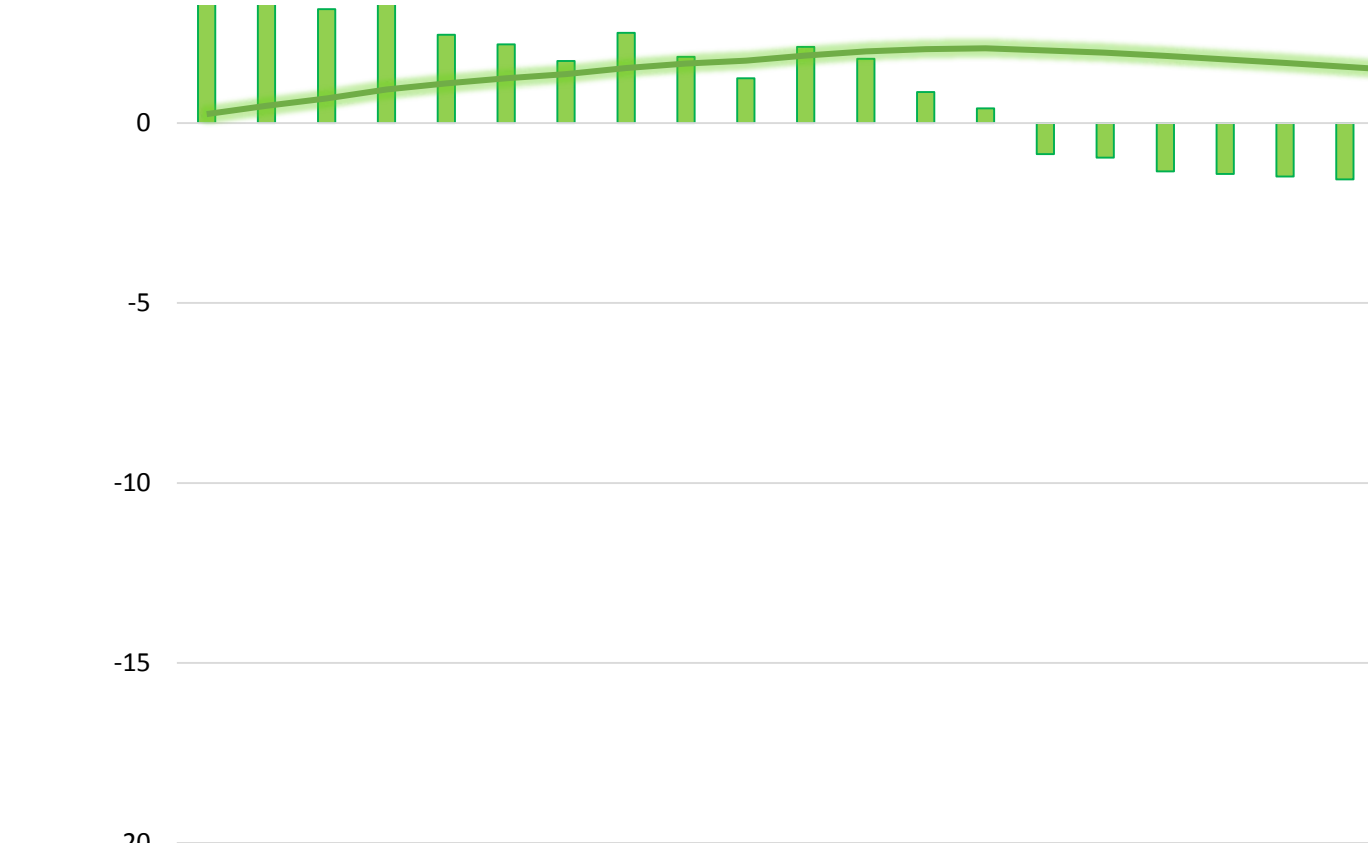


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



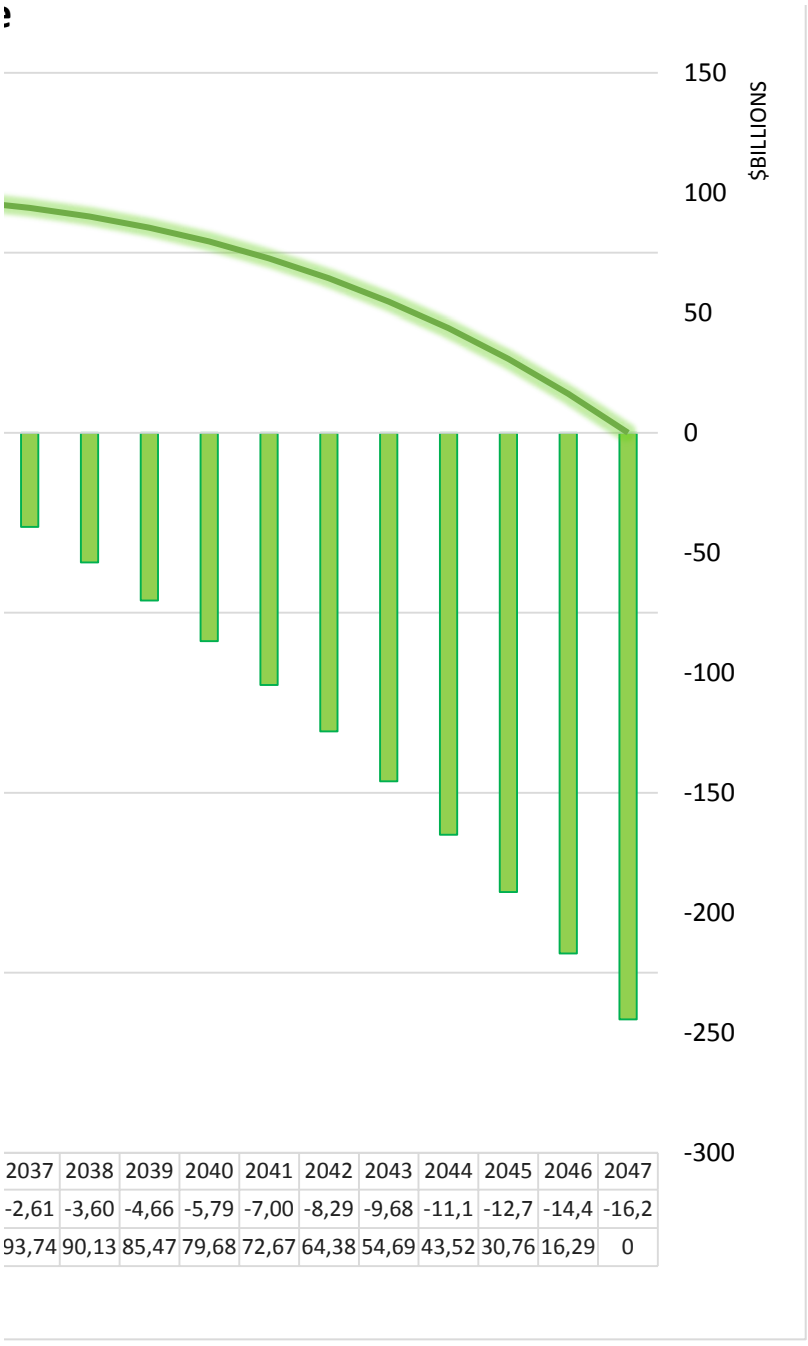


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

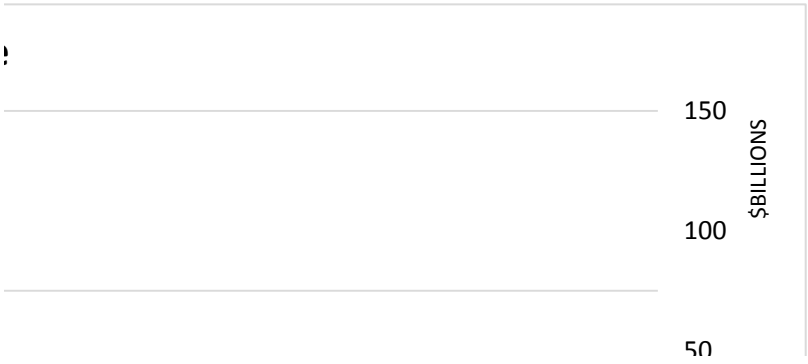
CALENDAR YEAR

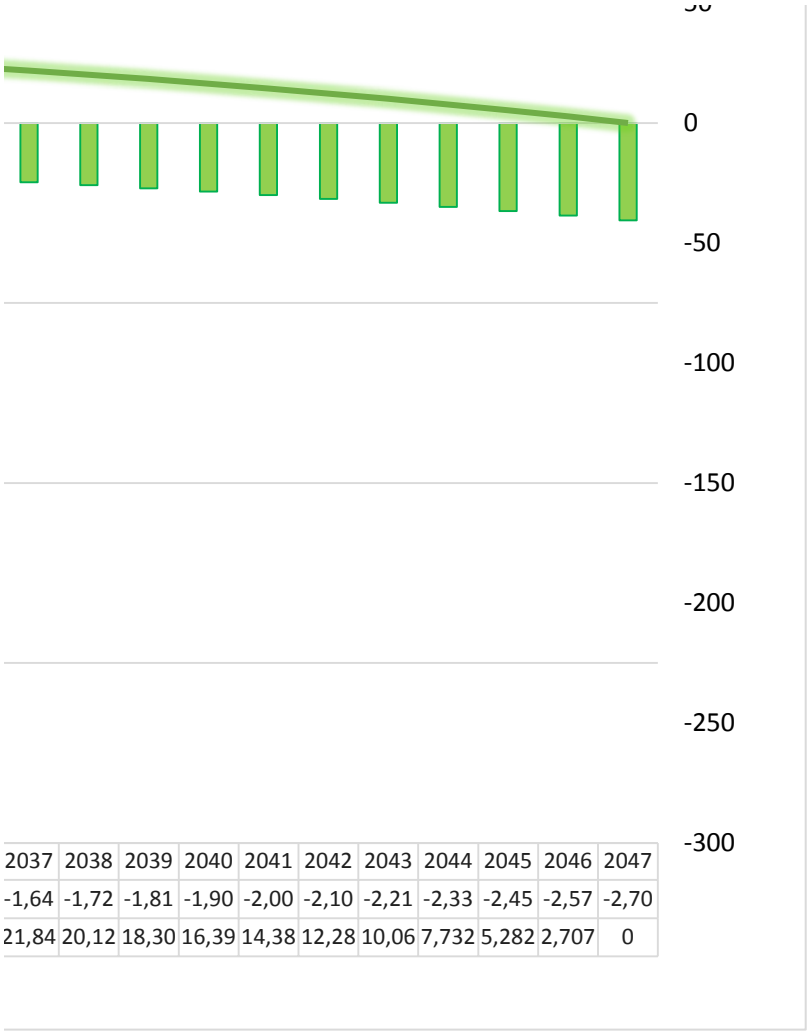


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Equal Monthly Debt Drawdown

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb4_1a_30yr

1a. GA Smoothing (Borrow ~$5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,801	4,640

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,200	4,760

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $62 billion, peakin
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary on accounting treatment.

7,133 7,133

Feb4_1b_30yr 7,133

1b. GA Smoothing (Borrow ~$7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	7,133	6,999

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,783	7,100

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $99 billion, peaking
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b on accounting treatment.

Feb4_1c_30yr

1c. GA Smoothing (Borrow ~$4 billion in 2017)

$ millions

Scenario 1C - 30-yr amortization	2017	2018
Annual Exposure[2]	3,678	3,437

	Fiscalized[3]	2016-17	2017-18
	Start: January 1st	919	3,617

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	1,783 - 1,200	7,100 - 4,760

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1200	4760
Debt-Finance Global Adjustment Costs, Option 1a	1783	7100
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18

Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1200**	**5000**
Total, B	1783	7340
Proposed Program Total:	1,783 - 1,200	7,340 - 5,000

ining

1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
4,446	5,138	3,921	3,753

2018-19	2019-20	2020-21	2021-2022
4,591	4,619	4,833	3,879

ng in 203 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
by approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
6,825	7,529	6,315	6,141

2018-19	2019-20	2020-21	2021-2022
6,956	7,001	7,226	6,272

g in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
3,158	3,761	2,450	2,183

2018-19	2019-20	2020-21	2021-2022
3,367	3,309	3,433	2,383

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
6,956 - 4,591	7,001 - 4,619	7,226 - 4,833	6,272 - 3,879

/1

2018-19[1]	2019-20[1]	2020-21[1]
4591	4619	4833
6956	7001	7226
225	279	323
60	60	60
18	18	18

4894	**4976**	**5234**
7259	7358	7627

7,259 - 4,894 7,358 - 4,976 7,627 - 5,234

1a. GA Smoothing (Borrow $5 billion in 2017)

	2017
IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	7,095
Additional GA Debt Drawdown, End of Year	5,000

Ratepayer GA Payment

Total Accumulated Debt *($ billion)*	5,000
Total Change in Accumulated Debt *($ billion)*	5000

1b. GA Smoothing (Borrow $7 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	5,095
Additional GA Debt Drawdown, End of Year	7,000

Total Accumulated Debt *($ billion)*	7000
Total Change in Accumulated Debt *($ billion)*	7000

1c. GA Smoothing (Borrow $4 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	8,095
Additional GA Debt Drawdown, End of Year	4,000

Total Accumulated Debt *($ billion)*	4000
Total Change in Accumulated Debt *($ billion)*	4000

2018	2019	2020	2021	2022	2023	2024	2025
11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
6,835	7,552	7,168	6,844	6,634	7,243	7,128	6,527
5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000

9,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000
5000	4000	5000	4000	4000	3000	4000	4000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
4,835	4,552	4,168	4,844	4,634	4,243	4,128	4,527
7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000

14000	21000	28000	35000	41000	47000	53000	59000
7000	7000	8000	6000	6000	6000	7000	6000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
8,835	8,552	8,168	8,844	8,634	8,243	8,128	8,527
3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000

7000	10000	14000	16000	19000	20000	23000	25000
3000	3000	4000	2000	2000	2000	3000	2000

2026	2027	2028	2029	2030	2031	2032	2033
10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
7,033	7,043	6,819	7,009	6,721	6,654	6,820	7,238
3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000

41,000	46,000	50,000	53,000	56,000	58,000	60,000	61,000
3000	4000	4000	3000	3000	2000	2000	1000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
4,033	5,043	4,819	5,009	4,721	4,654	5,820	5,238
6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000

65000	71000	77000	83000	88000	91000	95000	97000
6000	6000	6000	5000	5000	4000	3000	3000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
9,033	9,043	8,819	9,009	9,721	9,654	9,820	9,238
1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000

26000	28000	30000	31000	31000	30000	29000	28000
1000	2000	2000	1000	0	-1000	-1000	-1000

2034	2035	2036	2037	2038	2039	2040	2041
7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
6,756	7,662	7,389	8,129	7,881	8,645	9,421	9,207
1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000

62,000	60,000	58,000	55,000	52,000	48,000	43,000	38,000
1000	-2000	-2000	-3000	-3000	-4000	-5000	-5000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
5,756	6,662	7,389	8,129	8,881	9,645	10,421	11,207
2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000

99000	98000	96000	94000	90000	85000	80000	73000
2000	-1000	-2000	-3000	-4000	-5000	-6000	-7000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
8,756	6,662	7,389	7,129	6,881	6,645	6,421	6,207
-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000

27000	25000	23000	22000	20000	18000	16000	14000
-1000	-1000	-2000	-2000	-2000	-2000	-2000	-2000

2042	2043	2044	2045	2046	2047	2048		
4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
10,004	9,811	9,627	9,451	10,285	10,126	2,975		
-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0		

33,000	27,000	20,000	14,000	7,000	-	-	
-6000	-6000	-6000	-6000	-7000	-7000	0	

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
12,004	13,811	14,627	16,451	17,285	19,126	2,975		
-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0		

64000	55000	44000	31000	16000	0	0
-8000	-10000	-11000	-13000	-14000	-16000	0

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
6,004	5,811	5,627	5,451	6,285	6,126	2,975		
-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0		

12000	10000	8000	5000	3000	0	0
-2000	-2000	-2000	-2000	-3000	-3000	0

Feb4 1a, 30-yr - Debt Drawdown Scenarios

-92,247 -94598.515 58,489 36109.18 0

Feb4_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0
			114	110	106	122	93	89	81	102	89	78	102	97	79	71	45	47	31	16	-38	-51	-65	-80	-95	-110	-126	-133	-140	-147	-155	-162	-171	0	0	0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	5,138	3,167	58,489
Equal Monthly Debt Drawdown	5,260	3,149	

Maximum Accumulated Debt — Feb4 1a, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

End of Year Debt Drawdown	61,858	36,109
Equal Monthly Debt Drawdown	63,330	

			40%	37%	34%	36%	27%	24%																												
Feb4 1a, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
a	Debt, Beginning of Year		0	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	
c = a*5%	*Interest Cost - Feb4 1a, 30-yr - End of Year Debt Drawdown*		*0*	*246*	*483*	*711*	*974*	*1,175*	*1,367*	*1,541*	*1,760*	*1,952*	*2,119*	*2,337*	*2,546*	*2,716*	*2,869*	*2,966*	*3,067*	*3,133*	*3,167*	*3,086*	*2,975*	*2,835*	*2,664*	*2,461*	*2,224*	*1,952*	*1,666*	*1,365*	*1,049*	*717*	*367*	*0*	*0*	*0*	58,489
b	Additional GA Debt Drawdown, End of Year		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	21,822	23,788	25,076	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	20,490	13,998	7,173	0	0	0	
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	36,109	36,109	36,109	36,109	34,517	32,362	29,624	26,281	22,311	17,687	12,383	6,793	918	0	0	0	0	0	0	0	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688	49,149	51,372	53,325	54,991	56,356	57,405	58,122	58,489				
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371	-5,713	-13,241	-20,783	-28,325	-35,866	-43,408	-50,949	-58,489				
Fiscal Exposure - End of Year Debt Drawdown			4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0	

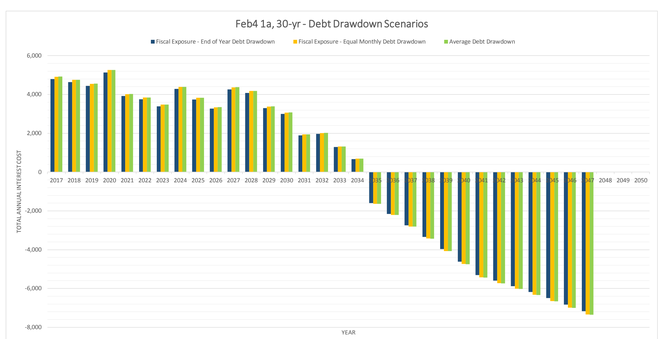
Feb4 1a, 30-yr	Equal Monthly Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			12																																		
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
3,149	*Interest Cost - Feb4 1a, 30-yr*		*114*	*356*	*589*	*833*	*1,067*	*1,264*	*1,448*	*1,643*	*1,849*	*2,029*	*2,220*	*2,435*	*2,625*	*2,787*	*2,914*	*3,013*	*3,097*	*3,149*	*3,129*	*3,034*	*2,910*	*2,756*	*2,569*	*2,351*	*2,098*	*1,819*	*1,526*	*1,218*	*895*	*554*	*197*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0	

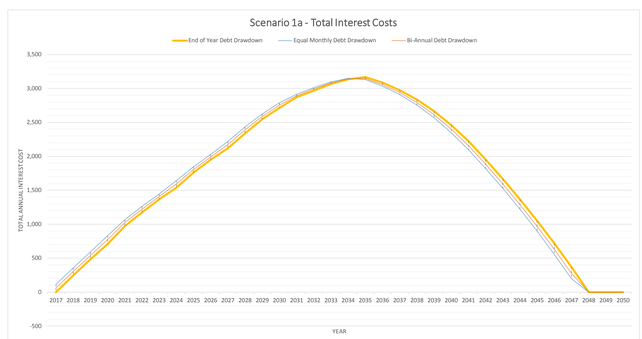
	Monthly Drawdown		400	366	330	369	246	215	169	229	165	109	179	146	63	24	(81)	(83)	(148)	(205)	(397)	(437)	(476)	(515)	(553)	(590)	(627)	(629)	(628)	(628)	(628)	(628)	(628)	-	-	-
	FV of Monthly Drawdown at 5%		4,915	4,498	4,057	4,532	3,017	2,640	2,075	2,813	2,026	1,345	2,200	1,789	773	289	(996)	(1,024)	(1,821)	(2,519)	(4,872)	(5,365)	(5,849)	(6,325)	(6,793)	(7,253)	(7,707)	(7,722)	(7,721)	(7,721)	(7,721)	(7,721)	(7,720)	-	-	-
	Annual Interest Cost on New Drawdowns		114	105	94	105	70	61	48	65	47	31	51	42	18	7	(23)	(24)	(42)	(59)	(113)	(125)	(136)	(147)	(158)	(169)	(179)	(180)	(180)	(180)	(180)	(180)	(179)	-	-	-
	Annual Interest Cost on Opening Balance		-	252	495	728	997	1,203	1,399	1,577	1,802	1,998	2,169	2,393	2,607	2,780	2,937	3,037	3,140	3,207	3,243	3,159	3,046	2,903	2,727	2,519	2,277	1,999	1,706	1,398	1,074	734	376	(0)	(0)	(0)
	Total Annual Interest Cost		114	356	589	833	1,067	1,264	1,448	1,643	1,849	2,029	2,220	2,435	2,625	2,787	2,914	3,013	3,097	3,149	3,129	3,034	2,910	2,756	2,569	2,351	2,098	1,819	1,526	1,218	895	554	197	(0)	(0)	(0)

Feb4 1a, 30-yr	Bi-Annual Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*61*	*305*	*540*	*777*	*1,024*	*1,223*	*1,410*	*1,596*	*1,808*	*1,993*	*2,173*	*2,390*	*2,589*	*2,754*	*2,893*	*2,991*	*3,083*	*3,141*	*3,147*	*3,058*	*2,940*	*2,792*	*2,613*	*2,401*	*2,156*	*1,881*	*1,591*	*1,286*	*966*	*629*	*275*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown			4,862	4,699	4,502	5,203	3,971	3,801	3,438	4,343	3,787	3,307	4,322	4,137	3,344	3,037	1,920	1,991	1,305	681	-1,612	-2,183	-2,773	-3,386	-4,021	-4,683	-5,372	-5,661	-5,951	-6,255	-6,575	-6,912	-7,265	0	0	0	

	Bi-Annual Drawdown		2,400	2,197	1,981	2,213	1,473	1,289	1,014	1,374	989	657	1,074	874	378	141	(487)	(500)	(889)	(1,230)	(2,379)	(2,620)	(2,857)	(3,089)	(3,317)	(3,542)	(3,764)	(3,771)	(3,771)	(3,771)	(3,771)	(3,771)	(3,770)	-	-	-
	FV of Bi-Annual Drawdown at 5%		4,862	4,450	4,013	4,483	2,984	2,612	2,053	2,783	2,004	1,331	2,176	1,769	765	286	(986)	(1,013)	(1,801)	(2,492)	(4,820)	(5,308)	(5,787)	(6,257)	(6,719)	(7,175)	(7,624)	(7,639)	(7,638)	(7,638)	(7,638)	(7,638)	(7,637)	-	-	-
	Annual Interest Cost on New Drawdowns		61	56	51	57	38	33	26	35	25	17	28	22	10	4	(12)	(13)	(23)	(31)	(61)	(67)	(73)	(79)	(85)	(91)	(96)	(97)	(97)	(97)	(97)	(97)	(97)	-	-	-
	Annual Interest Cost on Opening Balance		-	249	490	720	986	1,190	1,384	1,560	1,783	1,977	2,146	2,367	2,579	2,750	2,906	3,004	3,106	3,173	3,208	3,125	3,013	2,871	2,698	2,492	2,252	1,977	1,687	1,383	1,063	726	372	(0)	(0)	(0)
	Total Annual Interest Cost		61	305	540	777	1,024	1,223	1,410	1,596	1,808	1,993	2,173	2,390	2,589	2,754	2,893	2,991	3,083	3,141	3,147	3,058	2,940	2,792	2,613	2,401	2,156	1,881	1,591	1,286	966	629	275	(0)	(0)	(0)

Feb4 1a, 30-yr	Average Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*123*	*365*	*597*	*842*	*1,074*	*1,271*	*1,454*	*1,650*	*1,856*	*2,035*	*2,228*	*2,442*	*2,631*	*2,792*	*2,918*	*3,016*	*3,100*	*3,150*	*3,126*	*3,030*	*2,905*	*2,749*	*2,562*	*2,342*	*2,088*	*1,809*	*1,516*	*1,207*	*883*	*542*	*184*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
Fiscal Exposure - Average Debt Drawdown			4,923	4,758	4,559	5,269	4,021	3,849	3,481	4,398	3,835	3,349	4,377	4,189	3,386	3,075	1,944	2,016	1,321	689	-1,633	-2,210	-2,808	-3,428	-4,072	-4,742	-5,440	-5,733	-6,026	-6,334	-6,658	-6,999	-7,357	0	0	0	





Feb4 1b, 30-yr - Debt Drawdown Scenarios

-149,507 -153857.97 97,141 56717.33 0

Feb4_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0
			170	167	162	179	150	146	137	158	144	131	153	147	125	115	85	82	61	41	-19	-40	-62	-86	-111	-138	-167	-198	-231	-266	-304	-344	-388	0	0	0

0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown 7,529	5,062	97,141
Equal Monthly Debt Drawdown 7,708	5,042	

Maximum Accumulated Debt	Feb4 1b, 30-yr, Accumulated Debt	Total Principal Debt Borrowed
End of Year Debt Drawdown	98,864	56,717
Equal Monthly Debt Drawdown	101,217	

Feb4 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
a Debt, Beginning of Year	0	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	
c = a*5% *Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown*	*0*	*365*	*724*	*1,073*	*1,459*	*1,782*	*2,096*	*2,391*	*2,731*	*3,040*	*3,322*	*3,651*	*3,966*	*4,236*	*4,483*	*4,665*	*4,842*	*4,974*	*5,062*	*5,020*	*4,933*	*4,800*	*4,615*	*4,376*	*4,080*	*3,721*	*3,296*	*2,800*	*2,228*	*1,575*	*834*	*0*	*0*	*0*	97,141
b Additional GA Debt Drawdown, End of Year	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
d = a+b+c Accumulated debt in present year (including 5% annual interest)	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	0	
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,633	26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606	82,685	86,406	89,703	92,503	94,731	96,306	97,141				
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,831	56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076	-10,007	-22,027	-35,008	-48,980	-63,971	-80,013	-97,141				
Fiscal Exposure - End of Year Debt Drawdown	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0	

Feb4 1b, 30-yr — Equal Monthly Debt Drawdown

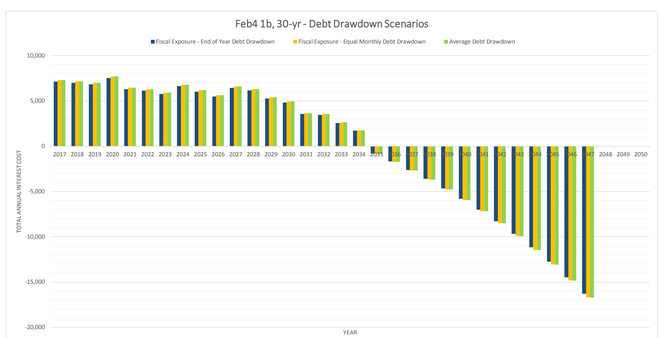
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	
5,042 *Interest Cost - Feb4 1b, 30-yr*	*170*	*532*	*886*	*1,252*	*1,609*	*1,928*	*2,234*	*2,549*	*2,874*	*3,171*	*3,475*	*3,797*	4,091	*4,350*	*4,568*	*4,748*	*4,904*	*5,015*	*5,042*	*4,980*	*4,871*	*4,714*	*4,504*	*4,238*	*3,913*	*3,524*	*3,066*	*2,534*	*1,925*	*1,231*	*446*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0	
Monthly Drawdown	594	553	508	538	405	363	306	353	275	205	259	209	108	49	(76)	(101)	(189)	(271)	(490)	(559)	(629)	(700)	(773)	(847)	(924)	(1,002)	(1,082)	(1,164)	(1,249)	(1,337)	(1,427)	(0)	-	-	
FV of Monthly Drawdown at 5%	7,303	6,792	6,247	6,610	4,972	4,463	3,755	4,338	3,383	2,523	3,184	2,565	1,327	605	(937)	(1,237)	(2,326)	(3,335)	(6,020)	(6,867)	(7,728)	(8,604)	(9,498)	(10,412)	(11,347)	(12,306)	(13,291)	(14,304)	(15,348)	(16,424)	(17,536)	(0)	-	-	
Annual Interest Cost on New Drawdowns	170	158	145	154	116	104	87	101	79	59	74	60	31	14	(22)	(29)	(54)	(78)	(140)	(160)	(180)	(200)	(221)	(242)	(264)	(286)	(309)	(333)	(357)	(382)	(408)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	374	741	1,099	1,493	1,824	2,146	2,448	2,796	3,112	3,401	3,738	4,061	4,336	4,589	4,776	4,958	5,092	5,182	5,139	5,051	4,914	4,725	4,481	4,177	3,810	3,375	2,867	2,281	1,612	854	0	(0)	(0)	
Total Annual Interest Cost	170	532	886	1,252	1,609	1,928	2,234	2,549	2,874	3,171	3,475	3,797	4,091	4,350	4,568	4,748	4,904	5,015	5,042	4,980	4,871	4,714	4,504	4,238	3,913	3,524	3,066	2,534	1,925	1,231	446	0	(0)	(0)	

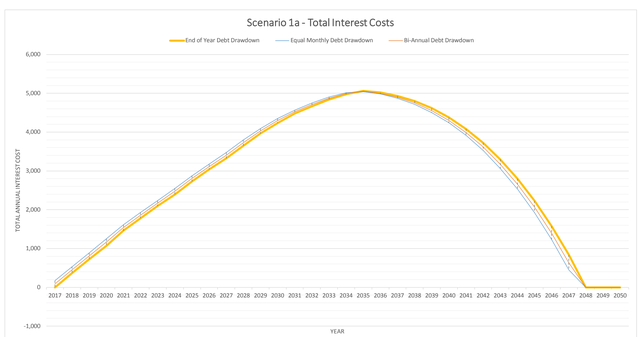
Feb4 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*91*	*455*	*811*	*1,169*	*1,539*	*1,861*	*2,170*	*2,476*	*2,808*	*3,110*	*3,404*	*3,730*	*4,034*	*4,297*	*4,528*	*4,710*	*4,875*	*4,996*	*5,051*	*4,998*	*4,900*	*4,753*	*4,555*	*4,302*	*3,990*	*3,615*	*3,172*	*2,657*	*2,065*	*1,390*	*626*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	7,225	7,089	6,913	7,626	6,396	6,220	5,838	6,713	6,113	5,574	6,514	6,235	5,330	4,888	3,614	3,501	2,603	1,738	-829	-1,709	-2,648	-3,651	-4,722	-5,867	-7,093	-8,405	-9,810	-11,314	-12,926	-14,652	-16,502	0	0	0	
Bi-Annual Drawdown	3,567	3,317	3,051	3,228	2,428	2,180	1,834	2,118	1,652	1,232	1,555	1,253	648	295	(457)	(604)	(1,136)	(1,629)	(2,940)	(3,354)	(3,774)	(4,202)	(4,639)	(5,085)	(5,542)	(6,010)	(6,491)	(6,986)	(7,495)	(8,021)	(8,564)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	7,225	6,719	6,180	6,539	4,919	4,415	3,715	4,291	3,347	2,496	3,150	2,538	1,313	598	(926)	(1,224)	(2,301)	(3,299)	(5,956)	(6,794)	(7,645)	(8,512)	(9,396)	(10,300)	(11,225)	(12,174)	(13,148)	(14,150)	(15,183)	(16,247)	(17,347)	(0)	-	-	
Annual Interest Cost on New Drawdowns	91	85	78	83	62	56	47	54	42	32	40	32	17	8	(12)	(15)	(29)	(42)	(75)	(86)	(97)	(108)	(119)	(130)	(142)	(154)	(166)	(179)	(192)	(205)	(219)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	370	733	1,087	1,477	1,805	2,123	2,422	2,766	3,079	3,364	3,698	4,017	4,290	4,540	4,725	4,904	5,038	5,127	5,084	4,997	4,861	4,674	4,432	4,132	3,769	3,338	2,836	2,257	1,595	845	0	0	0	
Total Annual Interest Cost	91	455	811	1,169	1,539	1,861	2,170	2,476	2,808	3,110	3,404	3,730	4,034	4,297	4,528	4,710	4,875	4,996	5,051	4,998	4,900	4,753	4,555	4,302	3,990	3,615	3,172	2,657	2,065	1,390	626	0	0	0	

Feb4 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*183*	*544*	*898*	*1,266*	*1,620*	*1,939*	*2,244*	*2,561*	*2,885*	*3,181*	*3,486*	*3,809*	*4,101*	*4,359*	*4,574*	*4,754*	*4,908*	*5,018*	*5,041*	*4,977*	*4,867*	*4,707*	*4,496*	*4,228*	*3,900*	*3,509*	*3,048*	*2,514*	*1,902*	*1,205*	*417*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	7,316	7,179	7,000	7,722	6,477	6,298	5,912	6,798	6,190	5,645	6,597	6,314	5,397	4,950	3,659	3,545	2,636	1,760	-840	-1,731	-2,682	-3,697	-4,782	-5,942	-7,183	-8,511	-9,934	-11,457	-13,089	-14,838	-16,711	0	0	0	





Feb4 1c, 30-yr - Debt Drawdown Scenarios

Feb4_1c_30yr

Annual Interest Rate = 5.1%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0
			88	82	75	90	58	52	41	60	44	29	50	43	20	10	-20	-23	-32	-34	-35	-37	-39	-41	-43	-45	-48	-50	-53	-55	-58	-61	-64	0	0	0

0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	3,761	1,594	29,477
Equal Monthly Debt Drawdown	3,851	1,583	

Maximum Accumulated Debt — Feb4 1c, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

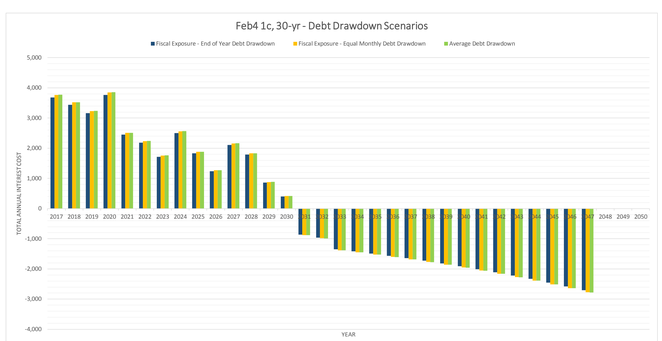
End of Year Debt Drawdown	31,125	20,043
Equal Monthly Debt Drawdown	31,866	

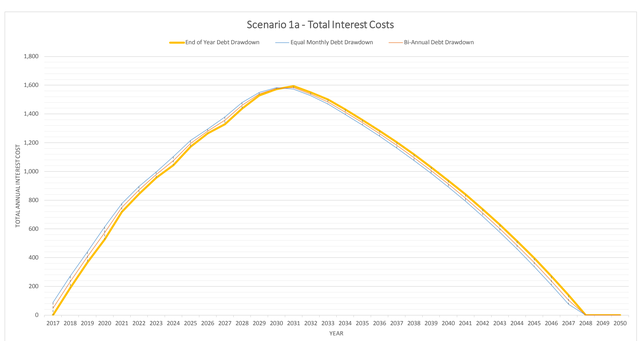
		30%	27%	24%	27%	16%	13%																														
Feb4 1c, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
a	Debt, Beginning of Year	0	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	
c = a*5%	*Interest Cost - Feb4 1c, 30-yr - End of Year Debt Drawdown*	*0*	*188*	*364*	*526*	*719*	*844*	*956*	*1,044*	*1,172*	*1,266*	*1,329*	*1,437*	*1,529*	*1,573*	*1,594*	*1,550*	*1,500*	*1,431*	*1,359*	*1,283*	*1,203*	*1,119*	*1,030*	*937*	*839*	*737*	*629*	*515*	*396*	*270*	*139*	*0*	*0*	*0*	*0*	29,477
b	Additional GA Debt Drawdown, End of Year	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	0	
	Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,641	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663	22,866	23,984	25,015	25,952	26,791	27,528	28,157	28,672	29,068	29,338	29,477				
	Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18,247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828	-1,018	-3,864	-6,710	-9,556	-12,402	-15,248	-18,094	-20,940	-23,786	-26,631	-29,477				
Fiscal Exposure - End of Year Debt Drawdown		3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0	

Feb4 1c, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	
1,583	*Interest Cost - Feb4 1c, 30-yr*	*88*	*270*	*439*	*615*	*777*	*896*	*997*	*1,103*	*1,216*	*1,295*	*1,379*	*1,480*	1,549	*1,583*	*1,573*	*1,527*	*1,468*	*1,398*	*1,324*	*1,246*	*1,164*	*1,077*	*987*	*892*	*792*	*686*	*576*	*460*	*338*	*209*	*74*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0	
	Monthly Drawdown	306	271	233	270	144	112	64	122	55	(2)	65	29	(56)	(97)	(204)	(209)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(0)	-	-	
	FV of Monthly Drawdown at 5%	3,765	3,326	2,861	3,312	1,773	1,371	781	1,493	679	(28)	799	360	(684)	(1,197)	(2,512)	(2,570)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,913)	(2,913)	(2,913)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	88	77	67	77	41	32	18	35	16	(1)	19	8	(16)	(28)	(58)	(60)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	193	373	538	736	864	979	1,069	1,200	1,296	1,361	1,471	1,565	1,610	1,632	1,586	1,536	1,465	1,391	1,313	1,231	1,145	1,055	959	859	754	644	527	405	277	142	0	0	0	
	Total Annual Interest Cost	88	270	439	615	777	896	997	1,103	1,216	1,295	1,379	1,480	1,549	1,583	1,573	1,527	1,468	1,398	1,324	1,246	1,164	1,077	987	892	792	686	576	460	338	209	74	0	0	0	

Feb4 1c, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*47*	*232*	*405*	*574*	*750*	*872*	*978*	*1,076*	*1,195*	*1,282*	*1,356*	*1,460*	*1,540*	*1,578*	*1,583*	*1,537*	*1,483*	*1,413*	*1,340*	*1,263*	*1,182*	*1,097*	*1,007*	*913*	*814*	*710*	*600*	*485*	*365*	*237*	*104*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,725	3,481	3,199	3,809	2,481	2,211	1,741	2,534	1,859	1,254	2,137	1,812	872	409	-871	-973	-1,363	-1,433	-1,506	-1,584	-1,665	-1,750	-1,839	-1,933	-2,032	-2,136	-2,246	-2,360	-2,481	-2,608	-2,742	0	0	0	
	Bi-Annual Drawdown	1,839	1,624	1,397	1,618	866	670	382	729	332	(14)	390	176	(334)	(584)	(1,227)	(1,255)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(0)	-	-	
	FV of Bi-Annual Drawdown at 5%	3,725	3,290	2,830	3,277	1,754	1,356	773	1,477	672	(28)	791	356	(677)	(1,184)	(2,485)	(2,542)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	47	42	36	41	22	17	10	19	8	(0)	10	5	(9)	(15)	(31)	(32)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	191	369	533	728	855	968	1,057	1,187	1,282	1,346	1,456	1,548	1,593	1,614	1,569	1,520	1,450	1,376	1,299	1,218	1,133	1,043	949	850	746	637	522	401	274	140	0	0	0	
	Total Annual Interest Cost	47	232	405	574	750	872	978	1,076	1,195	1,282	1,356	1,460	1,540	1,578	1,583	1,537	1,483	1,413	1,340	1,263	1,182	1,097	1,007	913	814	710	600	485	365	237	104	0	0	0	

Feb4 1c, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*94*	*276*	*445*	*622*	*781*	*900*	*1,000*	*1,108*	*1,219*	*1,298*	*1,383*	*1,483*	*1,551*	*1,583*	*1,572*	*1,525*	*1,466*	*1,395*	*1,321*	*1,243*	*1,161*	*1,074*	*984*	*888*	*788*	*683*	*572*	*456*	*333*	*205*	*69*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,772	3,525	3,239	3,857	2,513	2,239	1,763	2,566	1,882	1,270	2,164	1,835	883	414	-882	-985	-1,381	-1,451	-1,526	-1,604	-1,686	-1,772	-1,863	-1,958	-2,058	-2,163	-2,274	-2,390	-2,513	-2,641	-2,776	0	0	0	





30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

TO BE

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,556	3,123	1,728	1,400	836	1,560	821	167

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

E UPDATED

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

JK: Fixed the formula in the yellow highlighted cells. Pls. check. (SK: looks good to me)

	Tab
v16 GA Financing - Scenario 1a 1b v18 (with fiscal) - Feb 4_v2.xlsx	Powerpoint_Export Scenario tabs

Change Description

Added in trigger for later start in the year
Updated IESO forecast from Energy (IESO GA Cost Forecast 170207 (Feb 6 update).xlsx)

Equal Monthly Debt Drawdown

		Month	Months Remai
Scenario Start Date	**July**	7	6

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	3,180	2,888
Annual Exposure2 with start on July 1st	*1,590*	*2,888*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	795	3,107
Start: July 1st	-	*2,312*

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	851	3,335
Start: July 1st	-	*2,484*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	1,168	1,765
Annual Exposure2 with start on July 1st	*584*	*1,765*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	292	1,609
Start: July 1st	-	*1,025*

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,449	2,040
Annual Exposure2 with start on July 1st	*725*	*2,040*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,597
Start: July 1st	-	*1,959*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335
Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3575**
Total, B	362	1837
Proposed Program Total:	362 - 851	1,837 - 3,575

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,556	3,123	1,728	1,400
2,556	*3,123*	*1,728*	*1,400*

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646
2,805	*2,697*	*2,774*	*1,646*

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

ıking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
2,311	3,750	2,311	1,933
2,311	*3,750*	*2,311*	*1,933*

2018-19	2019-20	2020-21	2021-2022

1,901	2,671	3,391	2,217
1,901	*2,671*	*3,391*	*2,217*

2019	2020	2021	2022
2,581	4,016	2,598	2,241
2,581	*4,016*	*2,598*	*2,241*

2018-19	2019-20	2020-21	2021-2022
2,175	2,940	3,662	2,508
2,175	*2,940*	*3,662*	*2,508*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

/1

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052
2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

Equal Monthly Debt Drawdown

		Month	Months Remaining
Scenario Start Date	July	7	6

AS LONG AS >

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	3,180	2,888	2,556

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	795	3,107	2,805
Fiscal Exposure, 25%	199	777	701

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Annual Exposure[2]	3,404	3,128	2,812

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	851	3,335	3,049
Fiscal Exposure, 25%	213	834	762

Indicates year in which, similar to OPCD's exa
closest to 30%. As Fiscal 2016/17 is a partial y
month the GA deferral begins.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu
decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions	9%	14%	18%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	1,168	1,765	2,311

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	292	1,609	1,901
Fiscal Exposure, 25%	73	402	475

Scenario 1b - 30-yr amortization	2017	2018	2019
Annual Exposure[2]	1,449	2,040	2,581

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	362	1,597	2,175
Fiscal Exposure, 25%	91	399	544

Indicates year in which, similar to OPCD's exar closest to 30%.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 ar
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu on accounting treatment.

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]
Debt-Finance Global Adjustment Costs, Option 1a	213	834	762
Debt-Finance Global Adjustment Costs, Option 1b	91	399	544
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**213**	**1074**	**1065**
Total, B	91	639	847

Proposed Program Total:	91 - 213	639 - 1,074	847 - 1,065

($M)	2016-171	2017-181	2018-191
Debt-Finance Global Adjustment Costs, Option 1a	851	3335	3049
Debt-Finance Global Adjustment Costs, Option 1b	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**851**	**3575**	**3352**
Total, B	362	1837	2478

Proposed Program Total:	362 - 851	1,837 - 3,575	2,478 - 3,352

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6

7	July	7	
8	August	8	
9	September	9	
10	October	10	
11	November	11	
12	December	12	

30-year term	**2016-17**	**2017-18**	**2018-19**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335	2,175 - 3,049

ROWS HIDDEN

1	1 = Comparision Enabled

APRIL 1, 2017 25%

2020	2021	2022
3,123	1,728	1,400

2019-20	2020-21	2021-2022
2,697	2,774	1,646
674	693	412

2020	2021	2022
3,396	2,020	1,712

2019-20	2020-21	2021-2022
2,958	3,052	1,943
740	763	486

mple, the true cost of GA being deferred is
ear, exposure may be less subject to which

l $17-21 billion (at 3.5% interest rate), peaking in 2028.
$33-$36 million.

ıals per month based on month of the year. Actuals may also depend on

28%	17%	13%
2020	2021	2022
3,750	2,311	1,933

2019-20	2020-21	2021-2022
2,671	3,391	2,217
668	848	554

2020	2021	2022
4,016	2,598	2,241

2019-20	2020-21	2021-2022
2,940	3,662	2,508
735	915	627

mple, the true cost of GA being deferred is

ıd $17-21 billion (at 3.5% interest rate), peaking in 2028.
$118-$134 million.

ıals per month based on month of the year. Actuals may also depend on decision

2019-20[1]	2020-21[1]
740	763
735	915
279	323
60	60
18	18
1097	**1164**
1092	1316

1,092 - 1,097 1,316 - 1,164

2019-201	2020-211
2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453





2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964
Equal Monthly Debt Drawdown	3,180	952

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

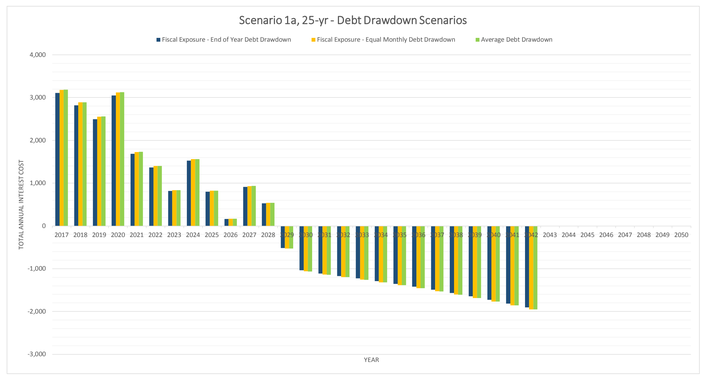
		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

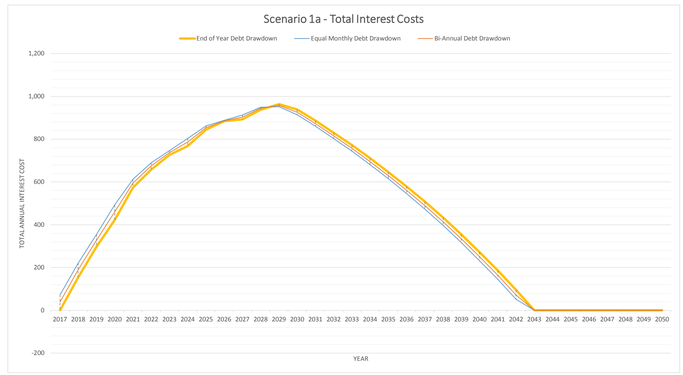
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	3,665	968	
Equal Monthly Debt Drawdown	3,750	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

		9%	14%	18%	28%	17%	13%																													
Scenario 1b, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

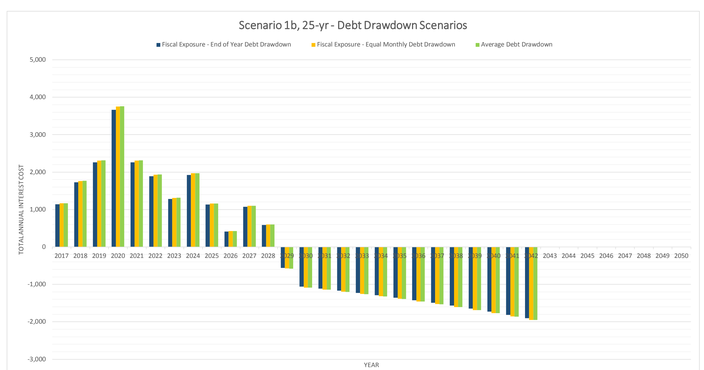
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	*954*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

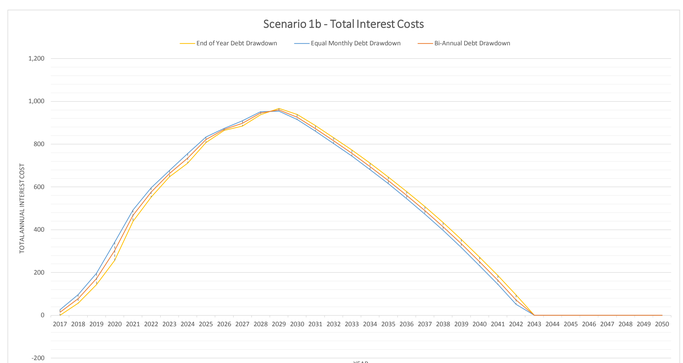
	Monthly Drawdown	95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

		28%	24%	21%	24%	12%	9%																													
Scenario 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1a, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	*1,156*	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

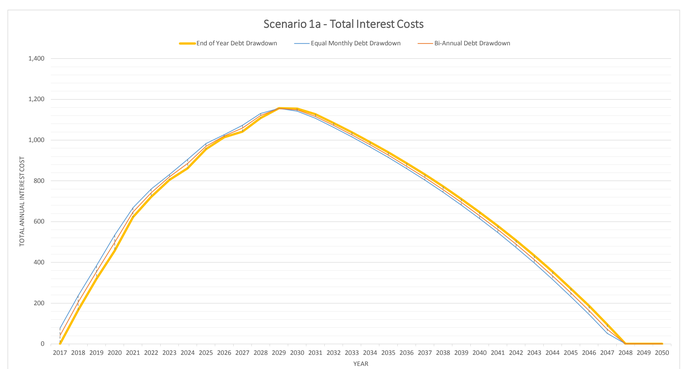
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

		12%	16%	20%	30%	19%	15%																													
Scenario 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

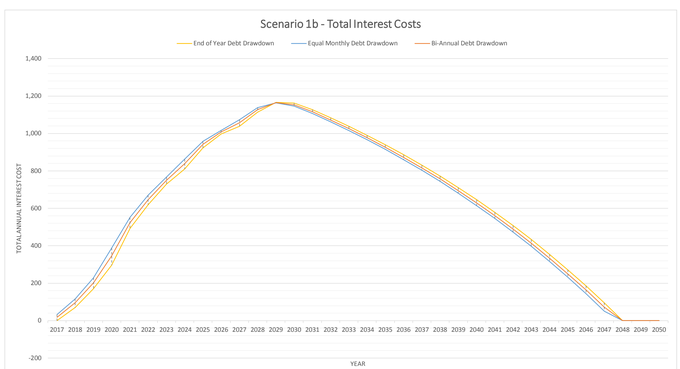
	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

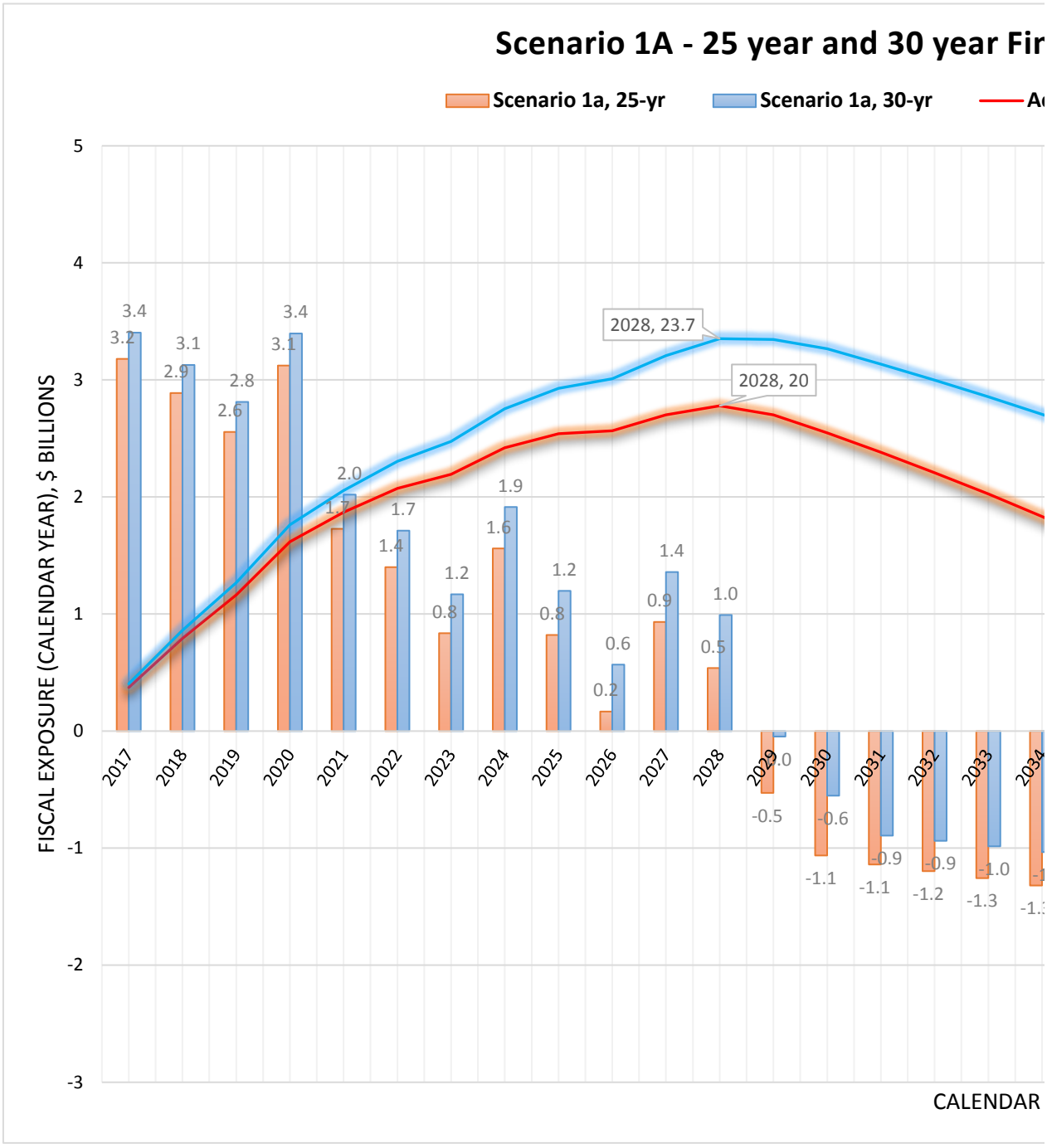
	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

Scenario 1b, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

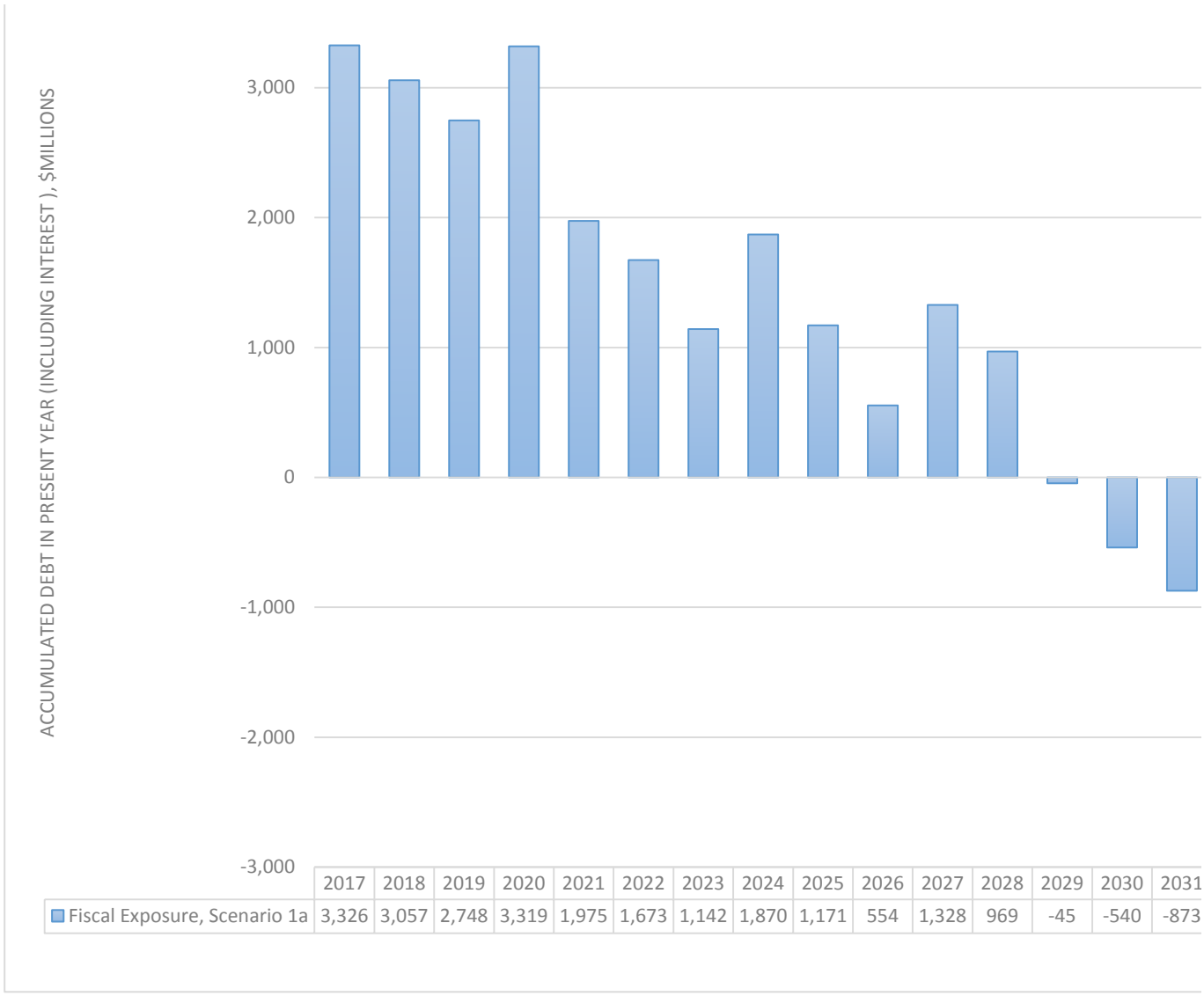




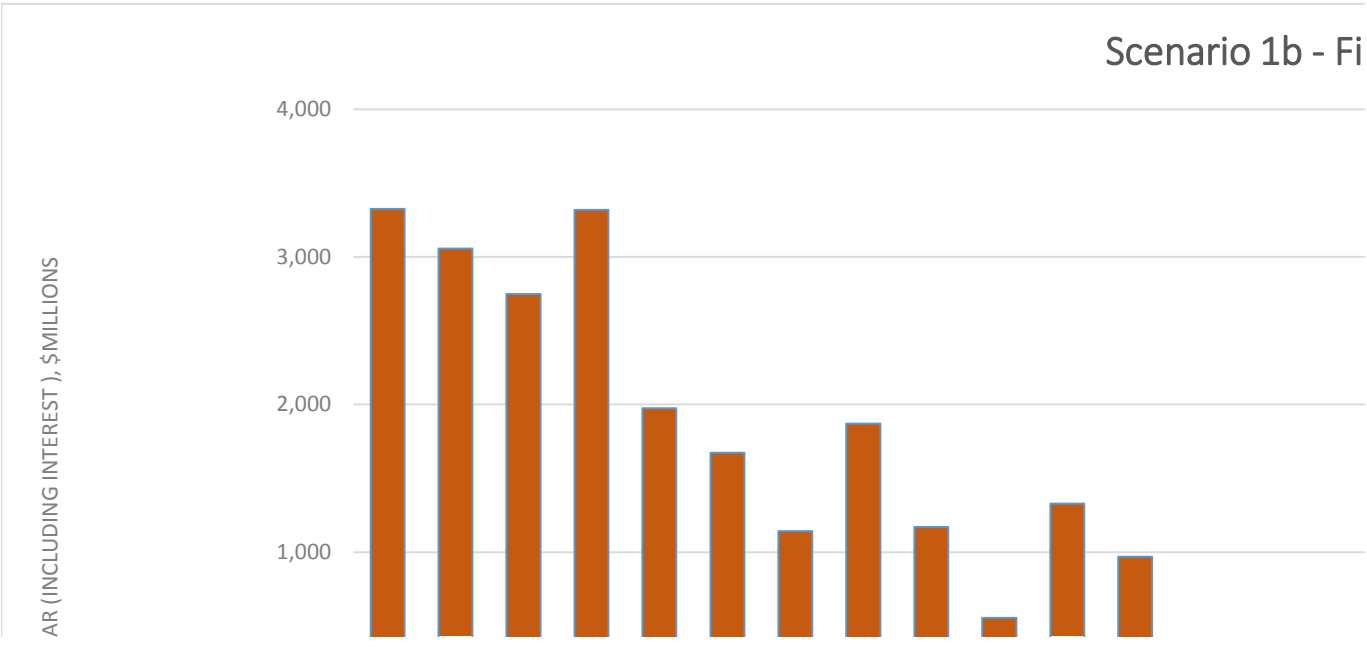
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

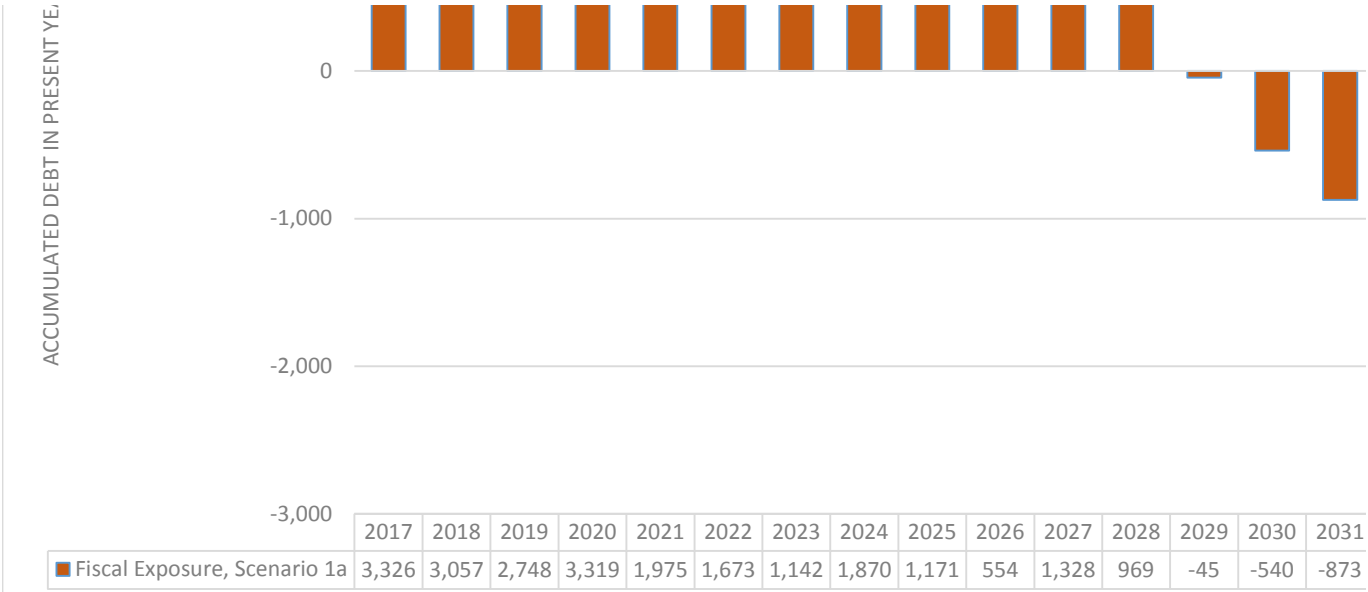




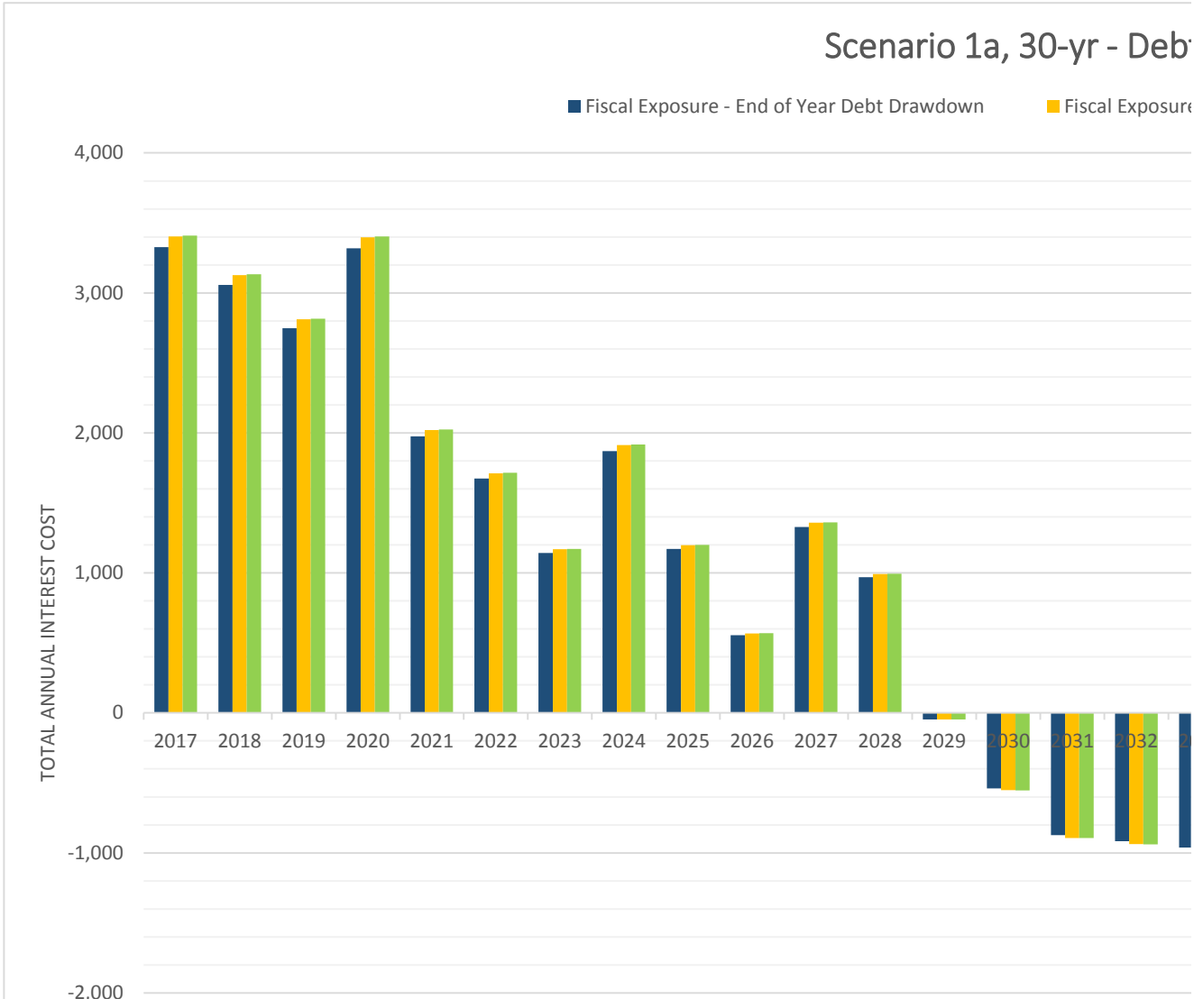


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



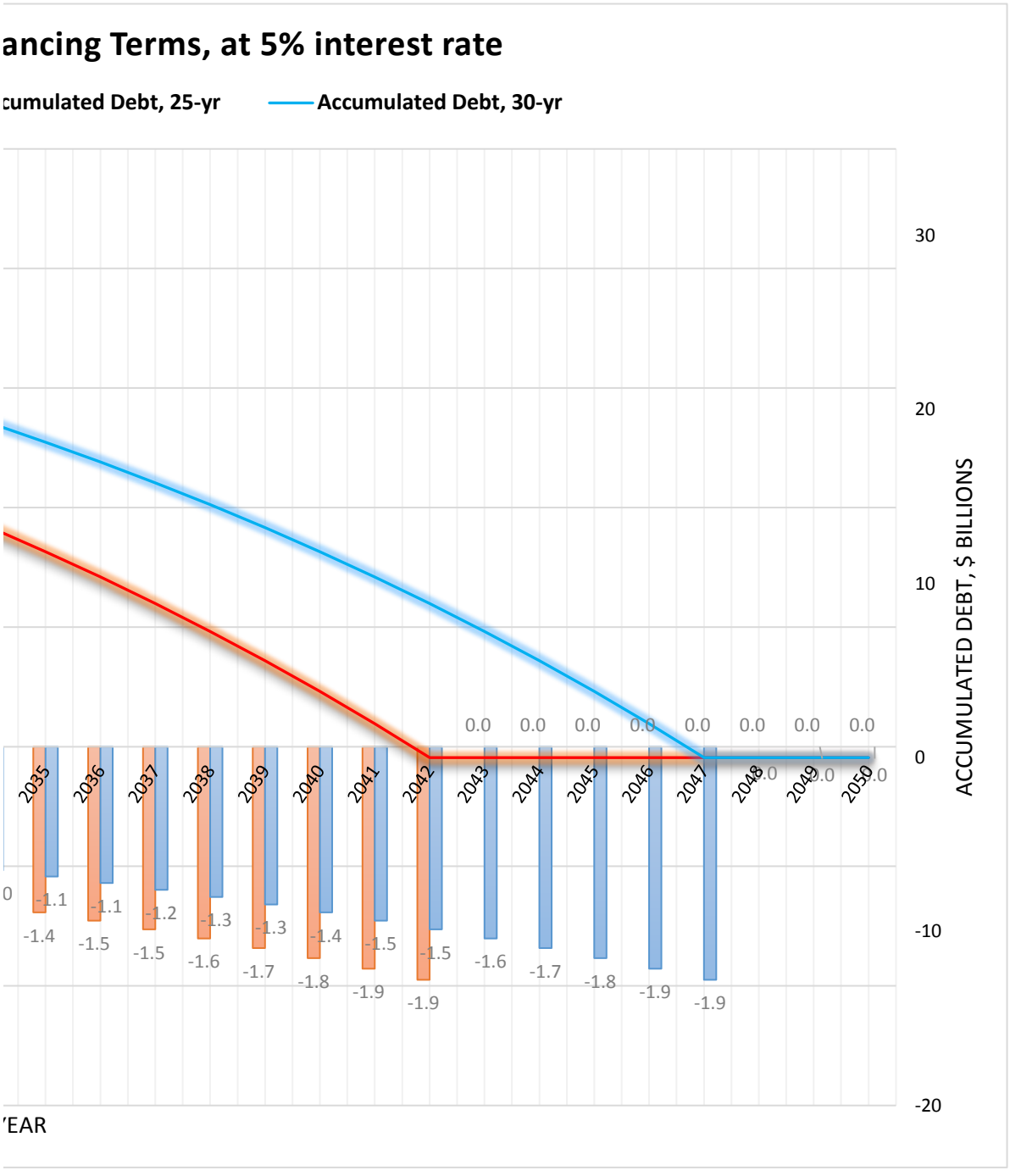


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



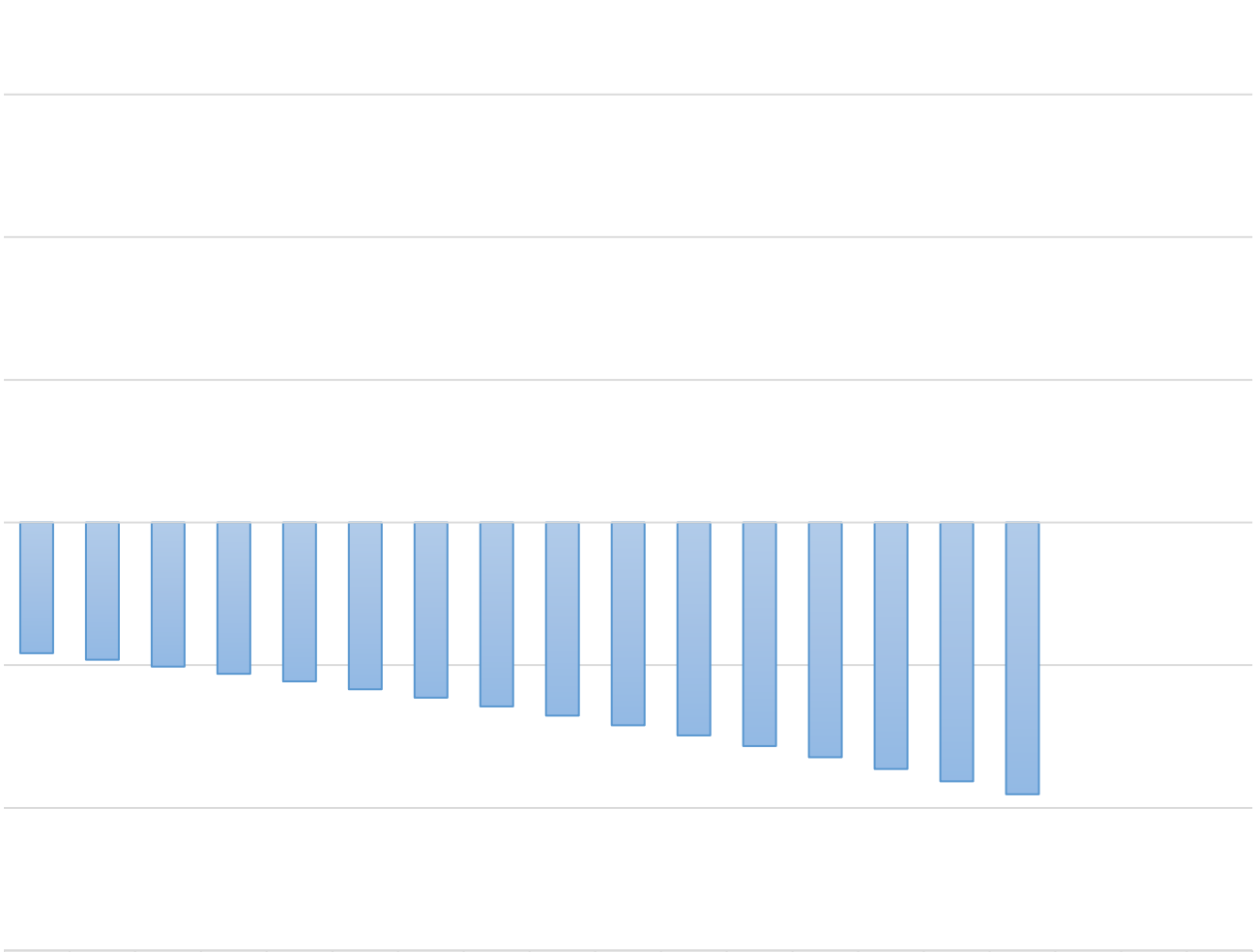

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

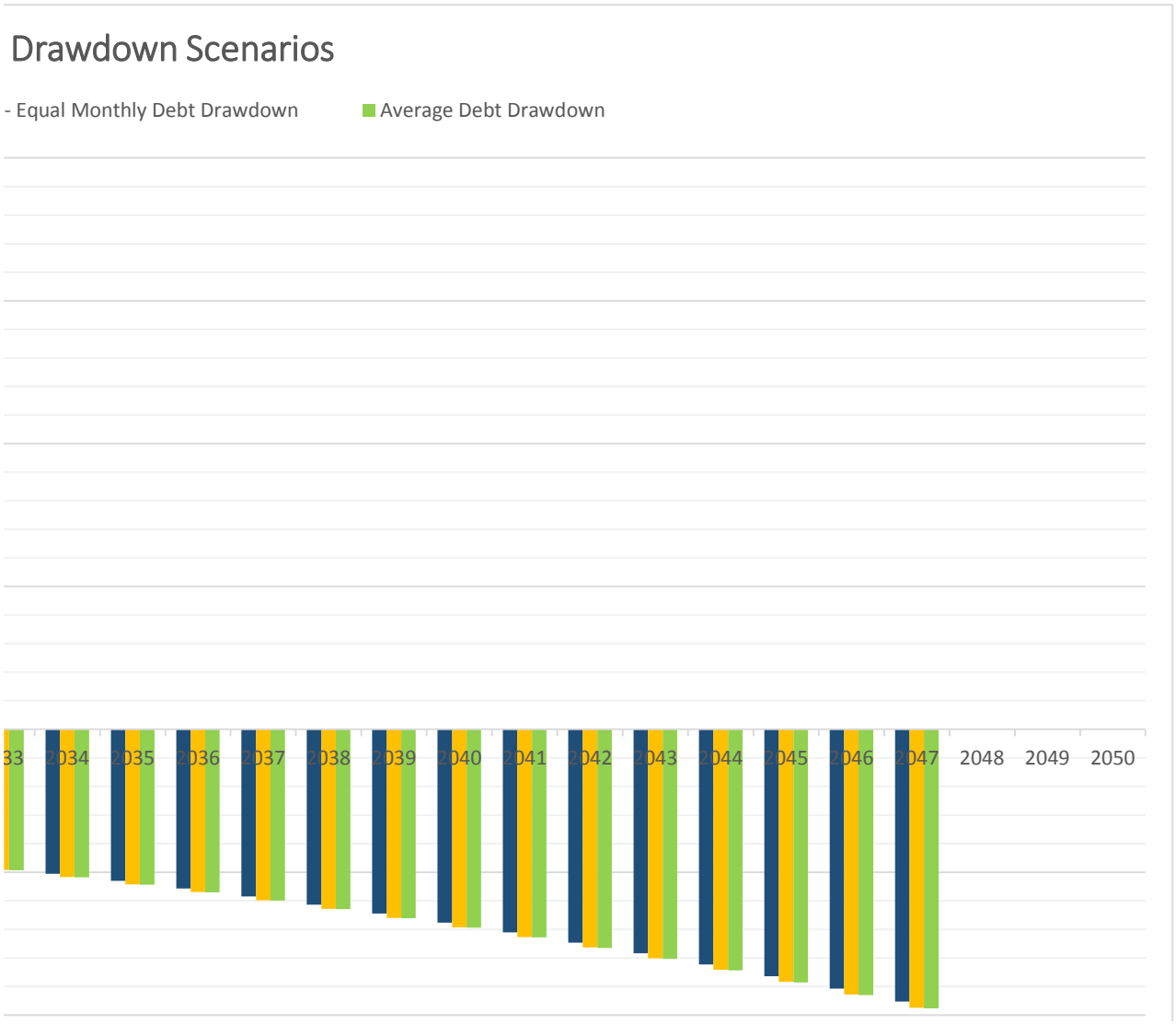
YEAR

cal Exposure



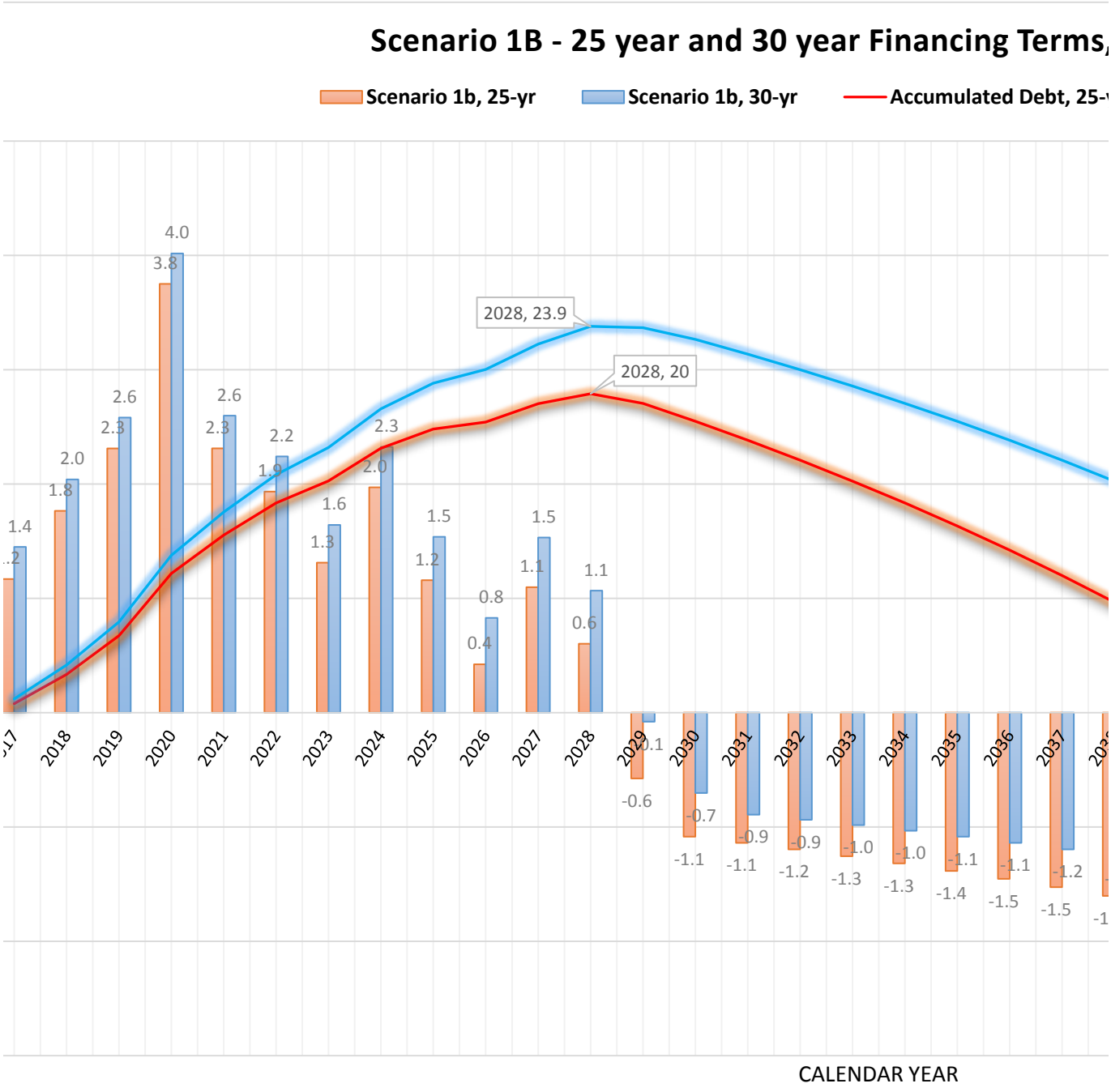
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

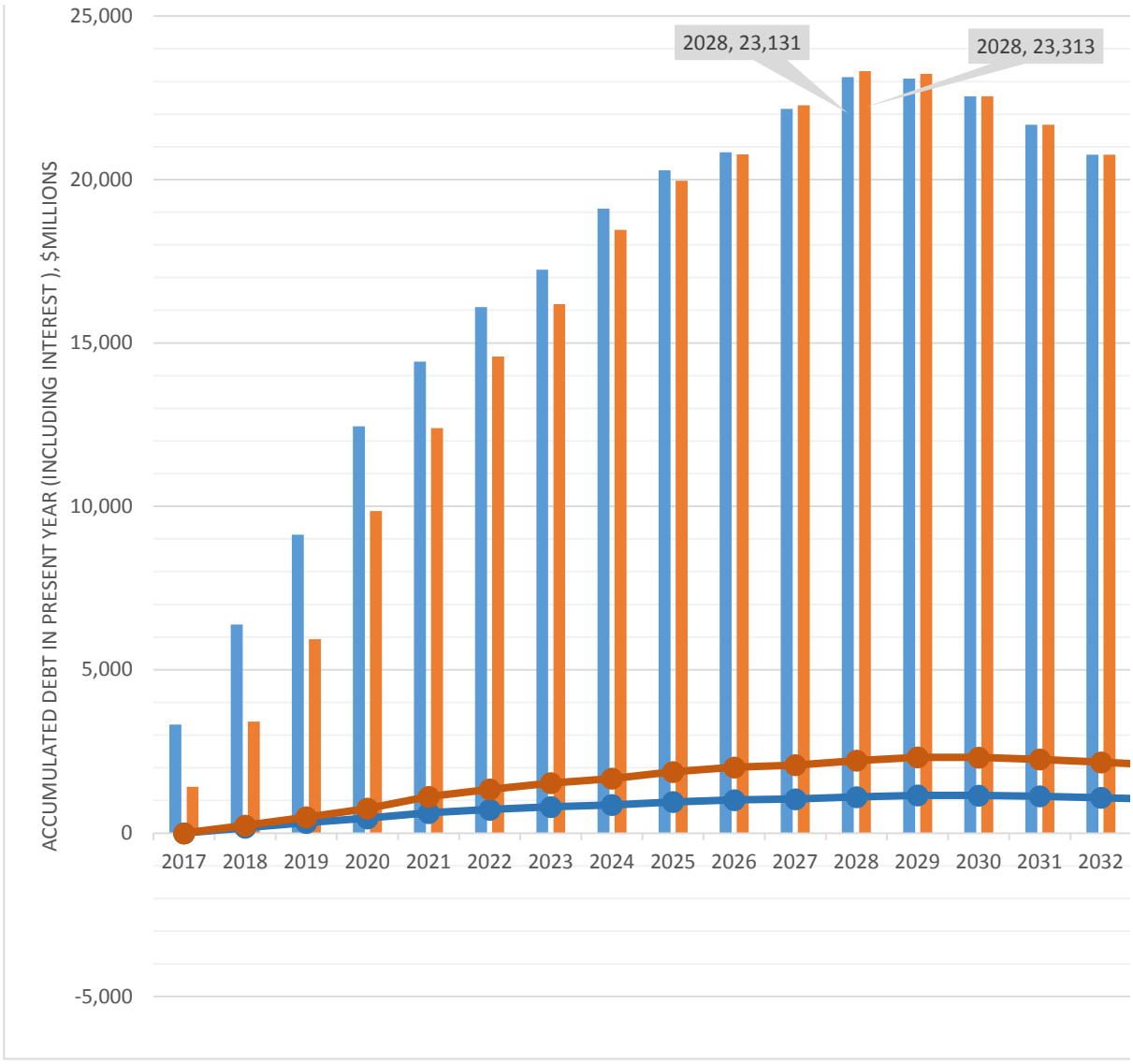


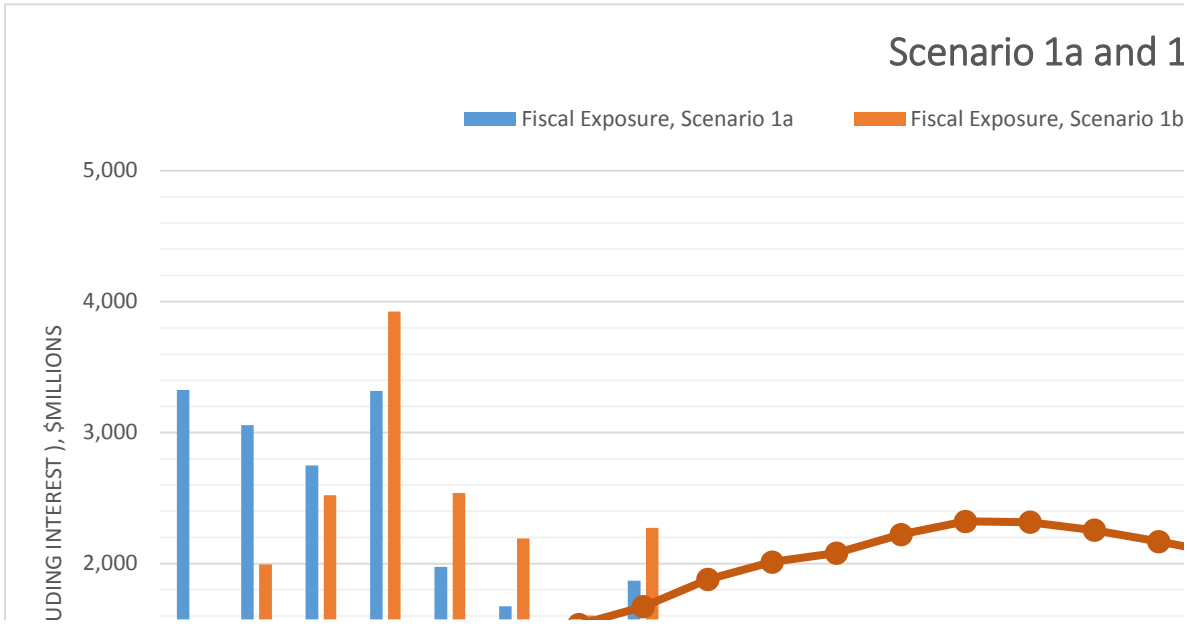
YEAR

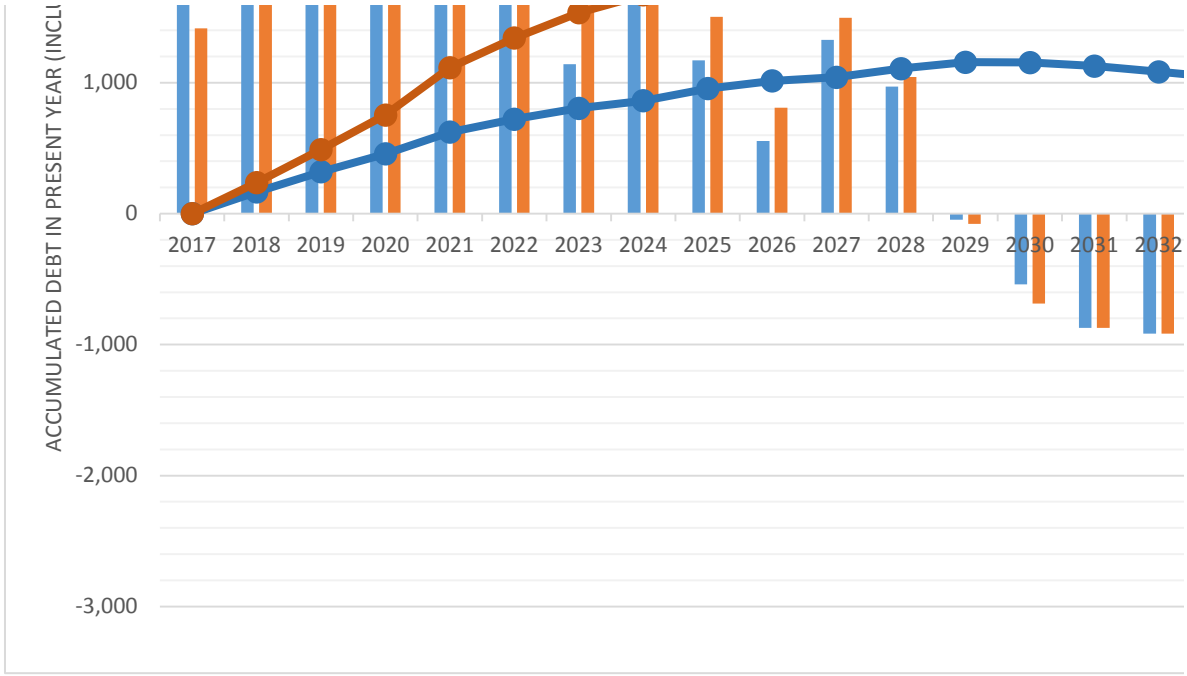
3 - 25 year and 30 year Financing Terms, at 5% interest rate

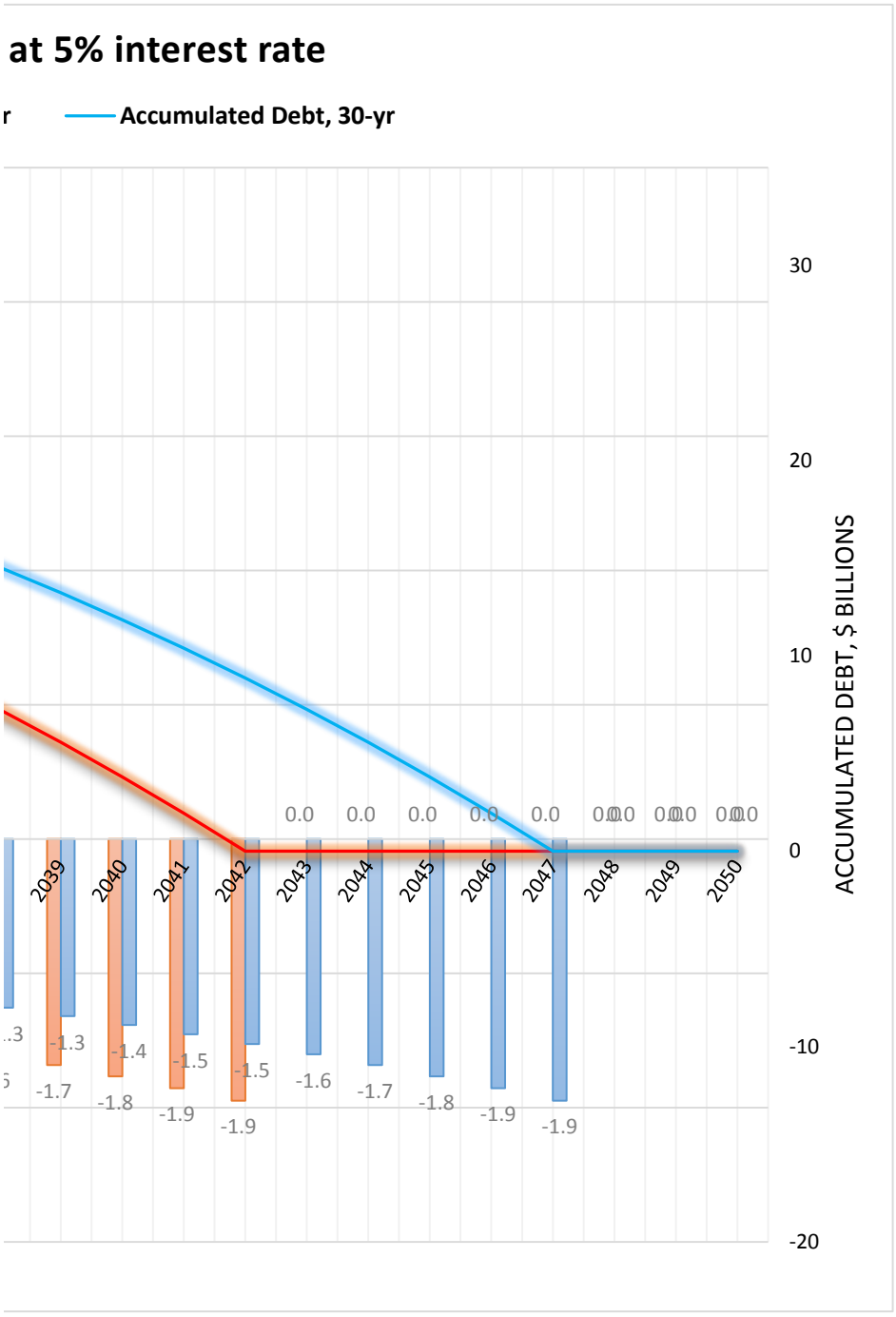





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

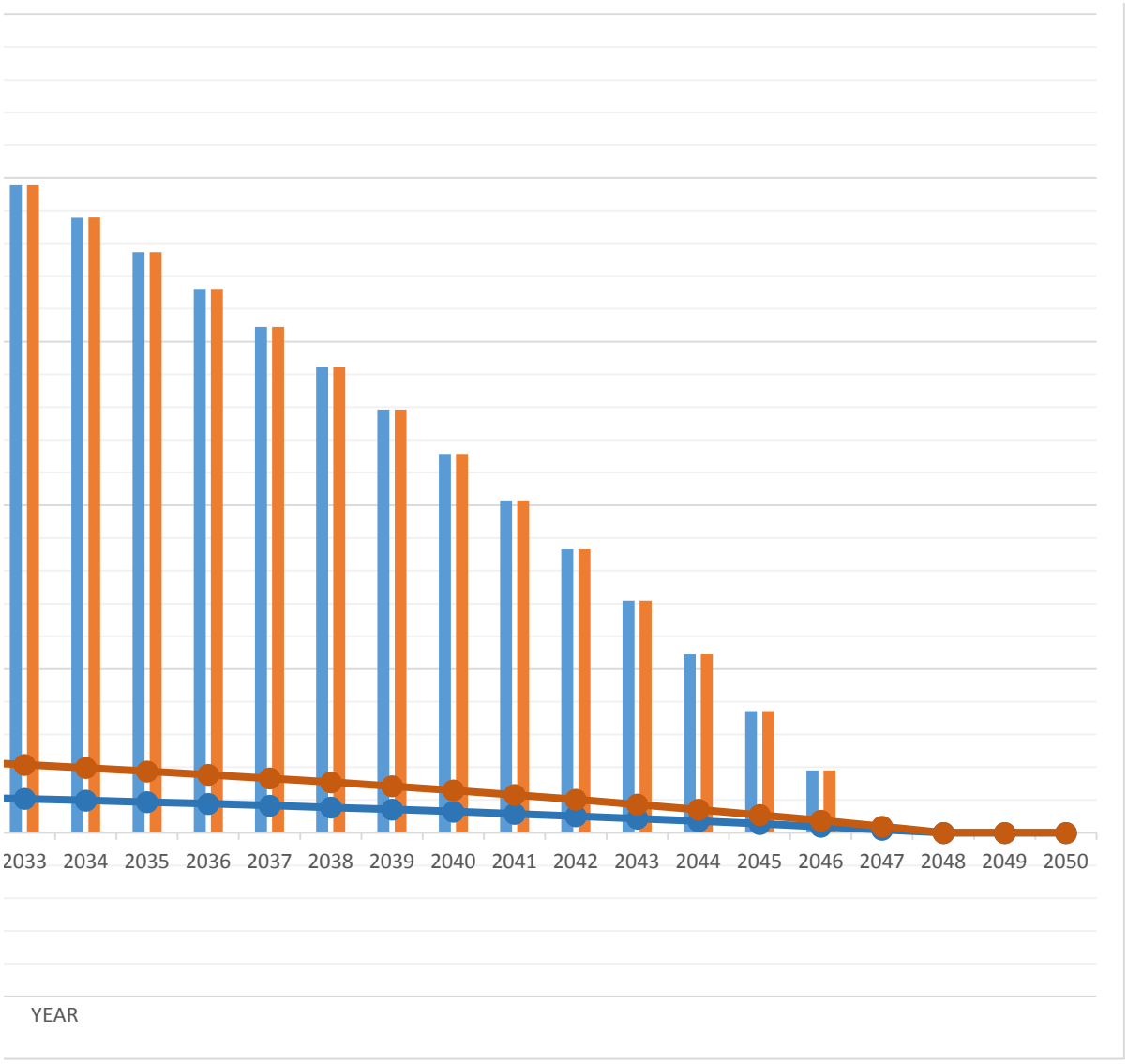

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

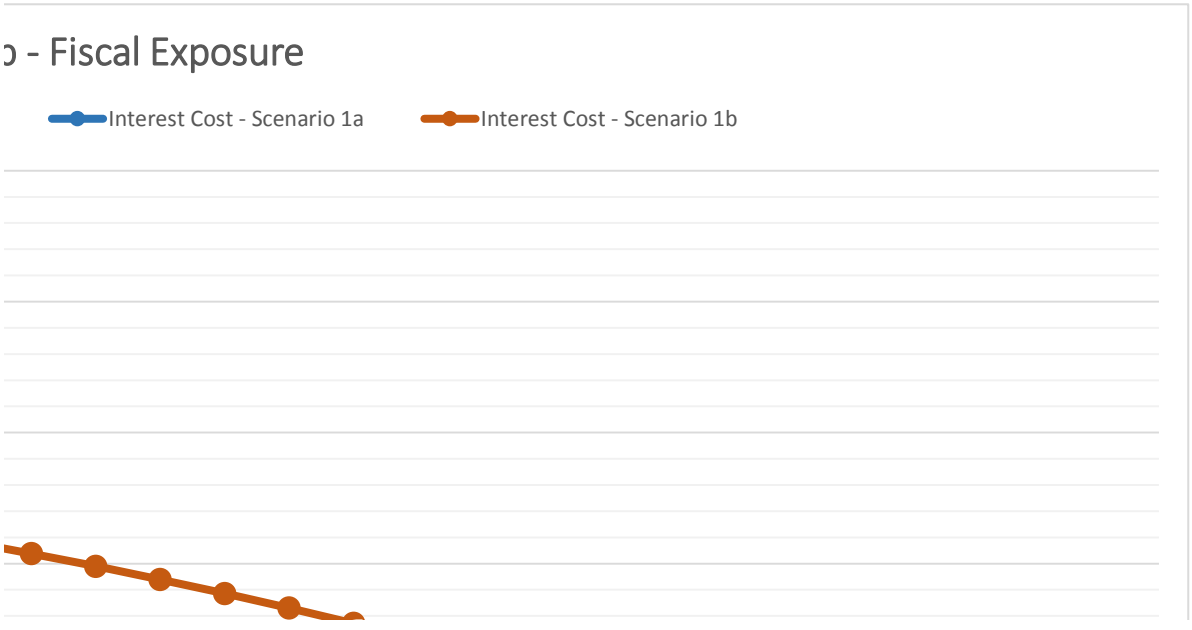

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

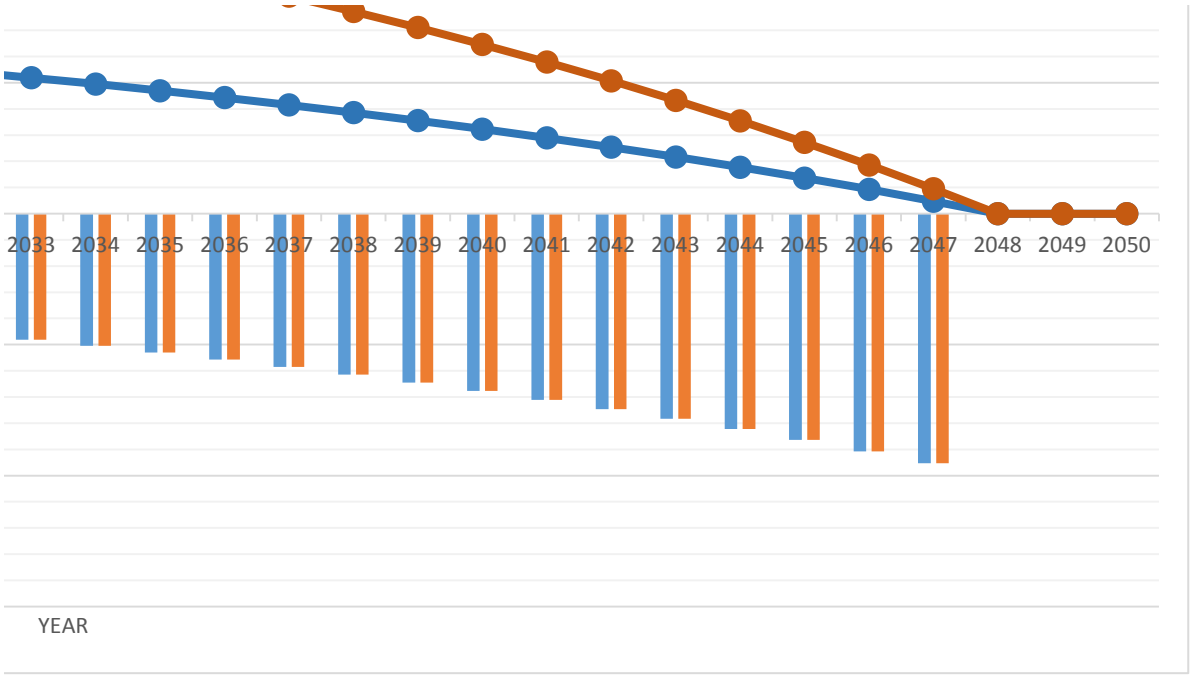


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

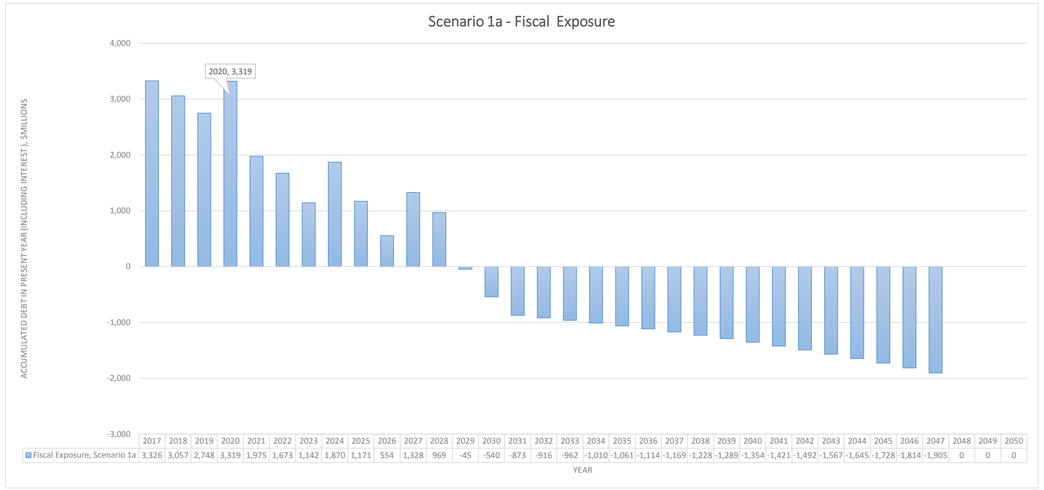
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

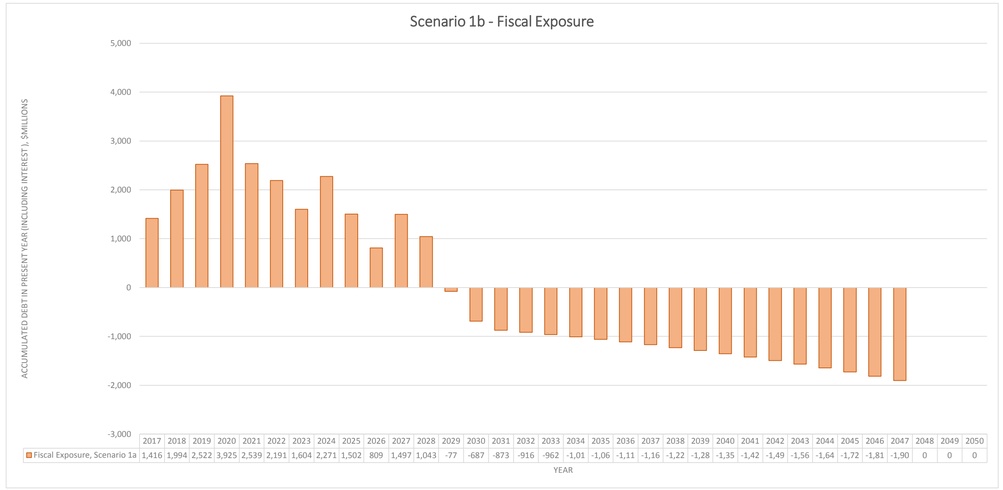
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

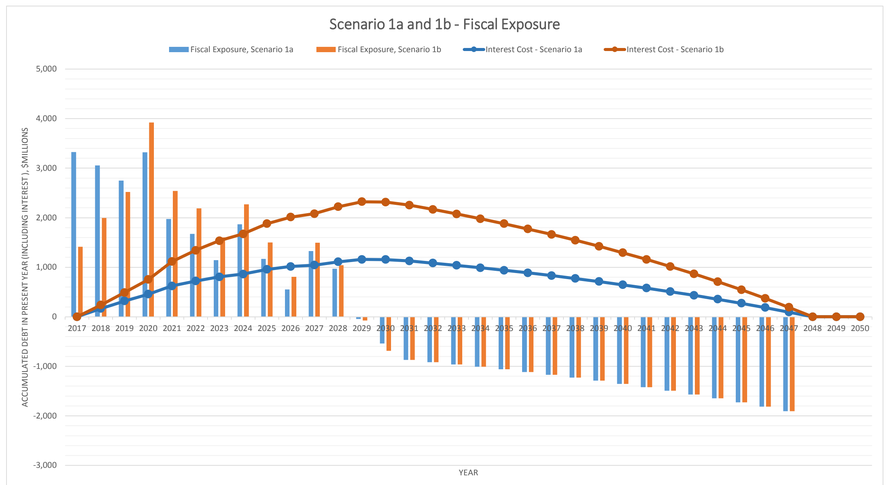
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

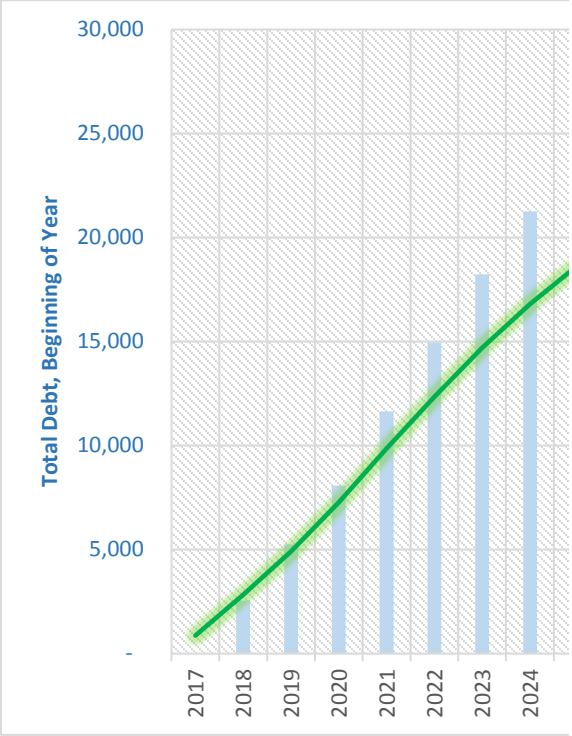
Notes:	Accounting treatment is to be determined.


Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0


Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0


Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

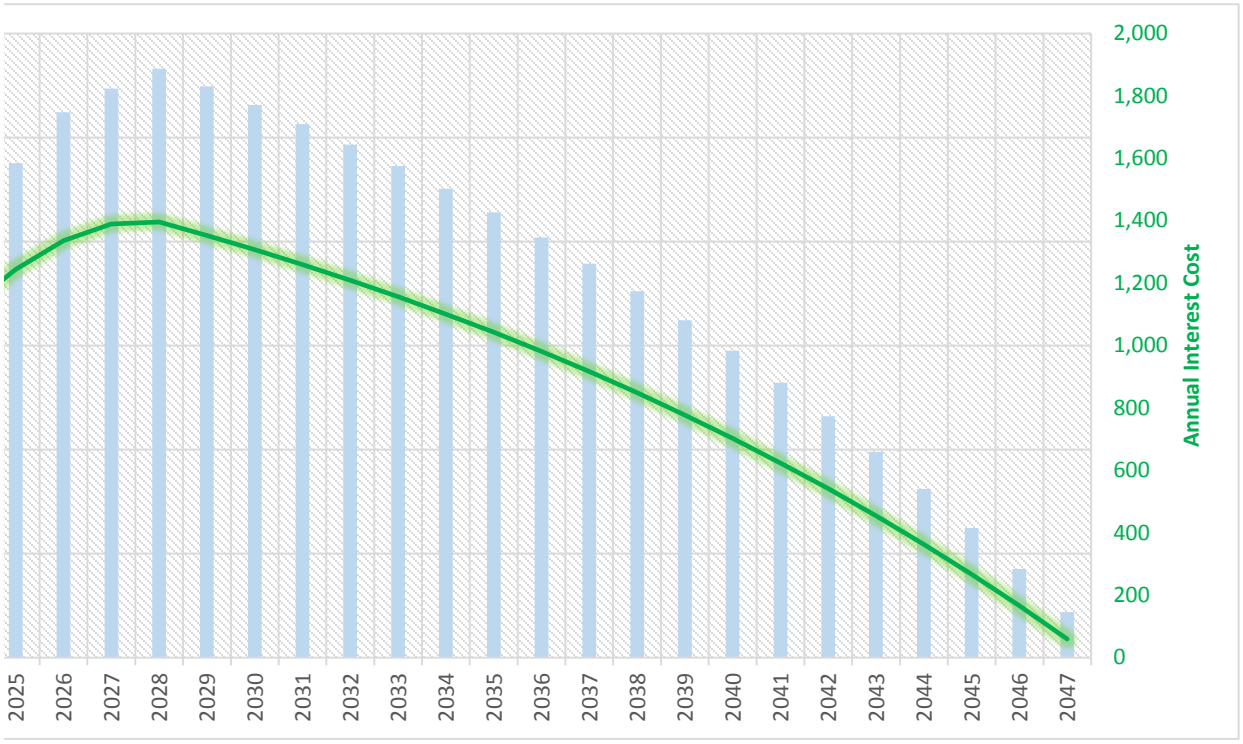
		2017	2018	2019	2020
	Debt, Beginning of Year	-	2,559	5,256	8,084
5.0%	*Interest Cost*	*58*	*189*	*327*	*485*
	Additional GA Debt Drawdown, End of Year	2,501	2,508	2,501	3,075
	Accumulated debt in present year (including 5.	2,559	5,256	8,084	11,643



	2017	2018	2019	2020
Total Debt, Beginning of Year	-	2,559	5,256	8,084
Annual Interest Cost	58	189	327	485
Additional GA Debt Drawdown Required	2,501	2,508	2,501	3,075
Accumulated debt in present year	2,559	5,256	8,084	11,643

	2033	2034	2035	2036
Total Debt, Beginning of Year	23,622	22,537	21,397	20,198
Annual Interest Cost	1,156	1,101	1,043	981
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	22,537	21,397	20,198	18,937

2021	2022	2023	2024	2025	2026	2027	2028
11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305
658	*822*	*980*	*1,120*	*1,244*	*1,337*	*1,389*	*1,396*
2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242
14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460
							1,396



2021	2022	2023	2024	2025	2026	2027	2028
11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305
658	822	980	1,120	1,244	1,337	1,389	1,396
2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242
14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460

2037	2038	2039	2040	2041	2042	2043	2044
18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113
917	849	778	703	624	541	454	363
-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242
17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234

2029	2030	2031	2032	2033	2034	2035	2036
27,460	26,571	25,637	24,655	23,622	22,537	21,397	20,198
1,353	*1,307*	*1,260*	*1,209*	*1,156*	*1,101*	*1,043*	*981*
-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242
26,571	25,637	24,655	23,622	22,537	21,397	20,198	18,937

2029	2030	2031	2032
27,460	26,571	25,637	24,655
1,353	1,307	1,260	1,209
-2,242	-2,242	-2,242	-2,242
26,571	25,637	24,655	23,622

2045	2046	2047	**Total**
6,234	4,260	2,184	
267	166	60	**25,137**
-2,242	-2,242	-2,242	
4,260	2,184	2	

2037	2038	2039	2040	2041	2042	2043	2044
18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113
917	*849*	*778*	*703*	*624*	*541*	*454*	*363*
-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242
17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234

2045	2046	2047	2048	2049	2050	2051	2052	2053
6,234	4,260	2,184	2	-	-	-	-	-
267	*166*	*60*	*0*	*0*	*0*	*0*	*0*	*0*
-2,242	-2,242	-2,242	-2,242	0	0	0	0	0
4,260	2,184	2	0	0	0	0	0	0

2054	2055	2056	2057	2058	2059	2060	2061
-	-	-	-	-	-	-	-
0	*0*	*0*	*0*	*0*	*0*	*0*	*0*
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0

Mar 1 Deck - at 5.12% interest rate

Mar1_1_30yr
Annual Interest Rate = 5.12%
Annual Interest Rate = 5.00%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,501	2,636	2,764	3,479	3,242	3,202	2,950	2,448	2,399	1,108	935	-826	-869	-913	-960	-1,009	-1,060	-1,115	-1,172	-1,232	-1,295	-1,361	-1,431	-1,504	-1,581	-1,662	-1,747	-1,836	-1,930	-2,029	-2,132	-2,241	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,559	2,697	2,828	3,560	3,317	3,277	3,018	2,505	2,455	1,133	956	-845	-889	-934	-982	-1,032	-1,085	-1,141	-1,199	-1,260	-1,325	-1,393	-1,464	-1,539	-1,617	-1,700	-1,787	-1,879	-1,975	-2,076	-2,182	-2,241	0	0	
			58	61	64	81	75	74	69	57	56	26	22	-19	-20	-21	-22	-23	-25	-26	-27	-29	-30	-32	-33	-35	-37	-39	-41	-43	-45	-47	-50	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,479	1,415	25,137.0
Equal Monthly Debt Drawdown	3,560	1,396	

		Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	27,662.3	2027	20,332
Equal Monthly Debt Drawdown	28,305.1		

Mar1 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	Total
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																															26
($ millions)			-2.79%	-2.95%	0.47%	-10.01%	-0.05%	0.32%	18.73%	-4.38%	9.88%	12.11%	13.81%	-6.20%	-2.34%	-8.92%	1.52%	-5.26%	-4.60%	-20.95%	-3.46%	-3.41%	-3.36%	-3.31%	-3.26%	-3.20%	-3.15%	-3.10%	-3.04%	-2.98%	-2.93%	-2.87%	-44.57%	-4.83%	-4.83%													
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695													
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,180	8,206	9,743	9,316	10,236	11,476	13,061	12,250	11,963	10,896	11,061	10,480	9,998	7,904	7,630	7,370	7,122	6,887	6,662	6,449	6,246	6,052	5,868	5,693	5,526	5,368	2,975	2,831	2,695													
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	0													
a	Debt, Beginning of Year	0	2,501	5,136	7,900	11,379	14,621	17,823	20,773	23,221	25,620	26,728	27,662	26,836	25,967	25,054	24,095	23,086	22,025	20,911	19,739	18,507	17,213	15,852	14,421	12,918	11,337	9,675	7,929	6,093	4,163	2,134	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost*	*0*	*128*	*263*	*404*	*582*	*748*	*912*	*1,063*	*1,188*	*1,311*	*1,367*	*1,415*	*1,373*	*1,329*	*1,282*	*1,233*	*1,181*	*1,127*	*1,070*	*1,010*	*947*	*881*	*811*	*738*	*661*	*580*	*495*	*406*	*312*	*213*	*109*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	25,137
b	Additional GA Debt Drawdown, End of Year	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,501	5,136	7,900	11,379	14,621	17,823	20,773	23,221	25,620	26,728	27,662	26,836	25,967	25,054	24,095	23,086	22,025	20,911	19,739	18,507	17,213	15,852	14,421	12,918	11,337	9,675	7,929	6,093	4,163	2,134	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE													
	Mar1 Option 1, 30-yr - Accumulated Interest Costs	0	128	391	795	1,377	2,125	3,037	4,100	5,288	6,599	7,966	9,381	10,754	9,841	8,882	8,882	8,882	8,882	8,882	8,882	8,882	8,882	8,882	8,882	8,882	8,882	8,882	6,093	4,163	2,134	2	0	0															
	Mar1 Option 1, 30-yr - Accumulated Debt Principal	2,501	5,009	7,509	10,584	13,244	15,698	17,736	19,121	20,332	20,129	19,696	17,455	15,213	15,213	15,213	14,204	13,144	12,029	10,858	9,626	8,331	6,970	5,540	4,036	2,455	794	-953	0	0	0	0	0	0															
	Mar1 Option 1, 30-yr - Accumulated Interest Costs	0	128	391	795	1,377	2,125	3,037	4,100	5,288	6,599	7,966	9,381	10,754	12,083	13,365	14,597	15,778	16,905	17,975	18,985	19,932	20,813	21,624	22,361	23,022	23,602	24,097	24,503	24,815	25,028	25,137																	
	Mar1 Option 1, 30-yr - Accumulated Debt Principal	2,501	5,009	7,509	10,584	13,244	15,698	17,736	19,121	20,332	20,129	19,696	17,455	15,213	12,972	10,730	8,489	6,247	4,005	1,764	-478	-2,719	-4,961	-7,202	-9,444	-11,685	-13,927	-16,169	-18,410	-20,652	-22,893	-25,135																	
Fiscal Exposure - End of Year Debt Drawdown		2,501	2,636	2,764	3,479	3,242	3,202	2,950	2,448	2,399	1,108	935	-826	-869	-913	-960	-1,009	-1,060	-1,115	-1,172	-1,232	-1,295	-1,361	-1,431	-1,504	-1,581	-1,662	-1,747	-1,836	-1,930	-2,029	-2,132	-2,241	0	0													

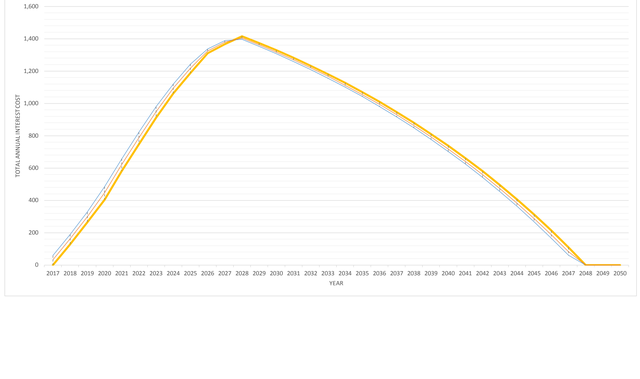
Mar1 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,180	8,206	9,743	9,316	10,236	11,476	13,061	12,250	11,963	10,896	11,061	10,480	9,998	7,904	7,630	7,370	7,122	6,887	6,662	6,449	6,246	6,052	5,868	5,693	5,526	5,368	2,975	2,831	2,695	
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	
	Debt, Beginning of Year	0	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655	23,622	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	2	0	0	
1,396	*Interest Cost - Mar1 Option 1, 30-yr*	*58*	*189*	*327*	*485*	*658*	*822*	*980*	*1,120*	*1,244*	*1,337*	*1,389*	*1,396*	*1,353*	*1,307*	*1,260*	*1,209*	*1,156*	*1,101*	*1,043*	*981*	*917*	*849*	*778*	*703*	*624*	*541*	*454*	*363*	*267*	*166*	*60*	*0*	*0*	*0*	*0*	*0*	25,137
	Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,559	5,256	8,084	11,643	14,961	18,237	21,255	23,761	26,215	27,349	28,305	27,460	26,571	25,637	24,655	23,622	22,537	21,397	20,198	18,937	17,613	16,220	14,756	13,218	11,600	9,900	8,113	6,234	4,260	2,184	2	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,559	2,697	2,828	3,560	3,317	3,277	3,018	2,505	2,455	1,133	956	-845	-889	-934	-982	-1,032	-1,085	-1,141	-1,199	-1,260	-1,325	-1,393	-1,464	-1,539	-1,617	-1,700	-1,787	-1,879	-1,975	-2,076	-2,182	-2,241	0	0	

	Monthly Drawdown	208	209	208	256	222	205	170	115	101	(17)	(36)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	FV of Monthly Drawdown at 5%	2,559	2,566	2,559	3,146	2,722	2,511	2,085	1,418	1,239	(208)	(443)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	58	58	58	71	62	57	47	32	28	(5)	(10)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	131	269	414	596	765	933	1,087	1,216	1,341	1,399	1,448	1,405	1,359	1,312	1,261	1,209	1,153	1,095	1,033	969	901	830	755	676	593	507	415	319	218	112	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total Annual Interest Cost	58	189	327	485	658	822	980	1,120	1,244	1,337	1,389	1,396	1,353	1,307	1,260	1,209	1,156	1,101	1,043	981	917	849	778	703	624	541	454	363	267	166	60	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Mar1 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,180	8,206	9,743	9,316	10,236	11,476	13,061	12,250	11,963	10,896	11,061	10,480	9,998	7,904	7,630	7,370	7,122	6,887	6,662	6,449	6,246	6,052	5,868	5,693	5,526	5,368	2,975	2,831	2,695	
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	
	Debt, Beginning of Year	0	2,533	5,202	8,001	11,524	14,808	18,051	21,038	23,518	25,948	27,070	28,016	27,179	26,300	25,375	24,403	23,381	22,307	21,178	19,992	18,744	17,433	16,055	14,606	13,083	11,482	9,799	8,030	6,171	4,216	2,162	2	2	2	
	Interest Cost - Mar1 Option 1, 30-yr	*32*	*162*	*298*	*449*	*624*	*789*	*950*	*1,094*	*1,219*	*1,325*	*1,379*	*1,405*	*1,362*	*1,317*	*1,270*	*1,220*	*1,168*	*1,113*	*1,055*	*994*	*930*	*863*	*793*	*719*	*641*	*559*	*473*	*382*	*287*	*187*	*82*	*0*	*0*	*0*		25,137
	Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,533	5,202	8,001	11,524	14,808	18,051	21,038	23,518	25,948	27,070	28,016	27,179	26,300	25,375	24,403	23,381	22,307	21,178	19,992	18,744	17,433	16,055	14,606	13,083	11,482	9,799	8,030	6,171	4,216	2,162	2	2	2	3	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,533	2,670	2,799	3,523	3,283	3,243	2,987	2,480	2,430	1,122	947	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,247	-1,311	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,955	-2,055	-2,160	0	0	0	

	Bi-Annual Drawdown	1,250	1,254	1,250	1,537	1,330	1,227	1,019	693	606	(102)	(216)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,533	2,540	2,533	3,114	2,694	2,485	2,064	1,403	1,227	(206)	(438)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	-	-	-	
	Annual Interest Cost on New Drawdowns	32	32	32	39	34	31	26	18	15	(3)	(6)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	-	-	-	
	Annual Interest Cost on Opening Balance	-	130	266	409	590	758	924	1,076	1,203	1,328	1,385	1,433	1,391	1,346	1,298	1,248	1,196	1,141	1,084	1,023	959	892	821	747	669	587	501	411	316	216	111	0	0	0	0	
	Total Annual Interest Cost	32	162	298	449	624	789	950	1,094	1,219	1,325	1,379	1,405	1,362	1,317	1,270	1,220	1,168	1,113	1,055	994	930	863	793	719	641	559	473	382	287	187	82	0	0	0	

Mar1 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,180	8,206	9,743	9,316	10,236	11,476	13,061	12,250	11,963	10,896	11,061	10,480	9,998	7,904	7,630	7,370	7,122	6,887	6,662	6,449	6,246	6,052	5,868	5,693	5,526	5,368	2,975	2,831	2,695	
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	
	Debt, Beginning of Year	0	2,565	5,268	8,102	11,670	14,995	18,279	21,304	23,815	26,275	27,411	28,370	27,522	26,632	25,695	24,711	23,676	22,589	21,446	20,244	18,981	17,653	16,257	14,790	13,248	11,627	9,923	8,132	6,249	4,270	2,189	2	2	2	
	Interest Cost - Mar1 Option 1, 30-yr	*64*	*195*	*333*	*493*	*665*	*830*	*987*	*1,125*	*1,249*	*1,339*	*1,391*	*1,394*	*1,351*	*1,305*	*1,257*	*1,207*	*1,154*	*1,098*	*1,040*	*978*	*914*	*846*	*774*	*699*	*620*	*538*	*450*	*359*	*262*	*161*	*55*	*0*	*0*	*0*		25,137
	Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,565	5,268	8,102	11,670	14,995	18,279	21,304	23,815	26,275	27,411	28,370	27,522	26,632	25,695	24,711	23,676	22,589	21,446	20,244	18,981	17,653	16,257	14,790	13,248	11,627	9,923	8,132	6,249	4,270	2,189	2	2	2	3	
Fiscal Exposure - Average Debt Drawdown		2,565	2,703	2,834	3,568	3,325	3,284	3,025	2,511	2,460	1,136	958	-847	-891	-936	-984	-1,035	-1,088	-1,143	-1,202	-1,263	-1,328	-1,396	-1,467	-1,542	-1,621	-1,704	-1,791	-1,883	-1,979	-2,080	-2,187	0	0	0	



Mar 1 Deck - at 5.12% interest rate

Interest Rate, monthly comp.	**5.000000%**		
Annual Interest Rate	5.12%	Month	Months Remai
Scenario Start Date	**July**	7	6

Mar1_1_30yr

Option 1 - Bills Lowered 25%, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,501	2,636
Interest Portion	0	128

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	625	2,534
Interest Portion	-	32

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $28 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Mar1_1_30yr

Option 1 - Bills Lowered 25%, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,749	1,831
Interest Portion	0	89

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	437	1,770
Interest Portion	-	22

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $28 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb22_3_30yr

Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606
Interest Portion	0	74

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,487
Interest Portion	-	19

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	437 - 625	1,770 - 2,534

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Option 1
Option 2
Option 3
Option 1

Assumes an inte

2019	2020	2021	2022
2,764	3,479	3,242	3,202
263	404	582	748

#REF!
#REF!

2018-19	2019-20	2020-21	2021-2022
2,668	2,942	3,420	3,232
162	298	449	624

Option 1
Option 2
Option 3

2027.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,908	2,564	2,264	1,961
183	281	412	528

2018-19	2019-20	2020-21	2021-2022
1,850	2,072	2,489	2,189
113	208	314	441

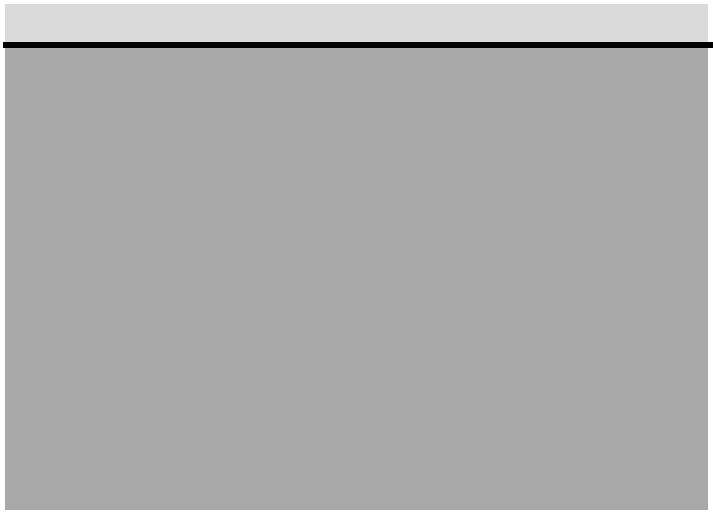
2027.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446
156	234	312	385

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429
95	176	254	331

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022
1,850 - 2,668	2,072 - 2,942	2,489 - 3,420	2,189 - 3,232

	$35,723	
	$35,542	
	0.51%	27.00%

Total Principal Debt	Total Accumulated Interest Costs	**Peak Total Debt**	
$20,332.3	$25,137.0	$27,662	occurs in Year 2027

erest rate of 5.00% (compounded monthly).

			5000
5.00000%	5.00005%	0.00005%	0.25%
35,542	35,543	0.90	4,518.21
19,733	19,734	0.52	2,619.41
19,498	19,499	0.48	2,410.01
0.249950%			

Tab Name		Total Accumulated Interest Costs
Mar1_1_30yr	$31,810	$40,288
	$17,586	$22,491
	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$31,810 to $40,288**
Option 2	$17,586 to $22,491**
Option 3	$17,202 to $22,028**

** With a higher interest rate, the amortization period extend beyond the 30-year forecast

ted period resulting in a remaining balance at the end of the 30-year period. For specifics, see details belo

w.

Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest

IESO GA cost forecast + extrapolation

Scenario
Option 1
Bills Lowered 25%, RPP-Eligible Only
Option 2
Bills Lowered 20%, RPP-Eligible Only
Option 3
Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only

rate	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
Ratepayer GA Payment	9,595	9,327	9,051	9,094
Total Accumulated Debt ($ billion)	2,501	5,136	7,900	11,379
		-2.8%	-3.0%	0.5%
Ratepayer GA Payment	10,346	10,093	9,827	9,886
Accumulated debt in present year (including 5% interest,	1,749	3,580	5,488	8,052
Ratepayer GA Payment	10,648	10,303	10,186	10,873
Accumulated debt in present year (including 5% interest,	1,447	3,053	4,575	6,105

2021	2022	2023	2024	2025	2026	2027
10,844	10,634	10,243	11,128	10,527	10,033	11,043

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
10844	10634	10243	11128	10527	10033	11043
8,184	8,374	8,569	8,768	8,972	9,180	9,394
14,621	17,629	20,205	23,599	26,362	28,564	31,674
-10.0%	2.3%	2.3247180421718900000%	2.3%	2.3%	2.3%	2.3%
	TRUE	FALSE	FALSE	FALSE	FALSE	
8,991	9,200	9,414	9,633	9,857	10,086	10,321
10,316	12,278	13,735	15,933	17,418	18,256	19,913
9,733	9,573	9,240	10,128	9,620	9,238	10,318
7,527	8,973	10,436	11,970	13,490	14,976	16,467

2028	2029	2030	2031	2032	2033	2034	2035
10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662

2028	2029	2030	2031	2032	2033	2034	2035
10819	10009	9721	8654	8820	8238	7756	5662
9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585
34,502	36,440	37,962	38,260	38,500	37,925	36,589	34,538
2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	-13.1%
10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563
21,190	21,477	21,240	20,426	19,571	18,672	17,727	16,733
10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879
17,876	18,843	19,521	20,007	20,312	20,325	19,755	18,549

2036	2037	2038	2039	2040	2041	2042	2043
5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811

2036	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**
5389	5129	4881	4645	4421	4207	4004	3811
9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733
32,383	30,117	27,736	25,232	22,601	19,835	16,927	13,871
-2.9%	-2.8%	-2.7%	-2.7%	-2.6%	-2.6%	-2.5%	-2.4%
7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711
15,689	14,591	13,438	12,225	10,950	9,610	8,201	6,720
7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348
17,050	15,464	13,694	12,062	10,556	9,143	7,810	6,672

2044	2045	2046	2047	2048

3,627 3,451 3,285 3,126 2,975 2,831 2,695

2044	2045	2046	2047	2048	2049	2050
3627	3451	3285	3126	2975	2831	2695

7,549	7,374	7,207	7,048	2,975	2,831	2,695
10,658	7,281	3,731	0	0	0	0
-2.4%	-2.3%	-2.3%				
5,527	5,352	5,185	5,026	2,975	2,831	2,695
5,164	3,528	1,808	-	-	-	-
4,712	4,007	3,619	3,425	3,156	3,011	2,878
5,928	5,676	5,633	5,623	5,730	5,843	5,959

5%	End of Year Debt Drawdown	2017	2018
	IESO GA cost forecast + extrapolation	12,095	11,835
	Ratepayer GA Payment	9,595	9,327
	GA Debt Requirement	2,501	2,508
	Debt, Beginning of Year	0	2,501
	Interest Cost - Feb22 Option 1, 30-yr - End of Year Debt Drawdown	*0*	*128*
	Additional GA Debt Drawdown, End of Year	2,501	2,508
	Accumulated debt in present year (including 5.12% annual interest)	2,501	5,136

5.000050%	End of Year Debt Drawdown	2017	2018
			-2.16%
			-2.79%
	IESO GA cost forecast + extrapolation	12,095	11,835
	Ratepayer GA Payment	9,595	9,327
	GA Debt Requirement	2,501	2,508
	Debt, Beginning of Year	0	2,501
	Interest Cost - Feb22 Option 1, 30-yr - End of Year Debt Drawdown	*0*	*128*
	Additional GA Debt Drawdown, End of Year	2,501	2,508
	Accumulated debt in present year (including 5.12% annual interest)	2,501	5,136
		0.00	0.00
		0.90	for 0.00005
		4518.213	for 0.25%

5.250000%	End of Year Debt Drawdown	2017	2018
	IESO GA cost forecast + extrapolation	12,095	11,835
	Ratepayer GA Payment	9,595	9,327
	GA Debt Requirement	2,501	2,508
	Debt, Beginning of Year	0	2,501
	Interest Cost - Feb22 Option 1, 30-yr - End of Year Debt Drawdown	*0*	*134*
	Additional GA Debt Drawdown, End of Year	2,501	2,508
	Accumulated debt in present year (including 5.12% annual interest)	2,501	5,143

5.25% and 5.0%	0	7
	0	6.544088
	-4746.31	

2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
	22.9%								
	0.5%	-10.0%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%
11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819
9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
5,136	7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675
263	*404*	*582*	*748*	*902*	*1,034*	*1,207*	*1,349*	*1,461*	*1,621*
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675	34,502

2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
-2.39%	5.34%	-10.89%	-1.94%	-3.67%	8.64%	-5.40%	-4.69%	10.06%	-2.03%
-2.95%	0.47%	-10.01%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%
11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819
9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
5,136	7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675
263	*404*	*582*	*748*	*902*	*1,034*	*1,207*	*1,349*	*1,461*	*1,621*
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675	34,502
0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02

5%

5000

2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819
9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
5,143	7,921	11,421	14,695	17,745	20,374	23,830	26,667	28,955	32,161
277	*426*	*614*	*790*	*954*	*1,096*	*1,282*	*1,434*	*1,557*	*1,730*
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
7,921	11,421	14,695	17,745	20,374	23,830	26,667	28,955	32,161	35,098

14	22	32	42	52	62	74	85	96	109
13.77695	21.71447	31.92933	42.04725	52.06963	61.4769	73.50439	84.49516	94.58025	107.5596

2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
2.3%	2.3%	2.3%	2.3%						
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881
9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
34,502	36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,384	30,119
1,765	*1,864*	*1,942*	*1,957*	*1,970*	*1,940*	*1,872*	*1,767*	*1,657*	*1,541*
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,384	30,119	27,737

2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
-7.49%	-2.87%	-10.98%	1.91%	-6.60%	-5.85%	-27.00%	-4.83%	-4.83%	-4.83%
2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	-13.13%	-2.85%	-2.80%	-2.74%
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881
9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
34,502	36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,385	30,119
1,765	*1,864*	*1,942*	*1,958*	*1,970*	*1,940*	*1,872*	*1,767*	*1,657*	*1,541*
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,385	30,119	27,738
0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04

2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881
9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
35,098	37,159	38,815	39,258	39,652	39,240	38,074	36,200	34,224	32,142
1,888	*1,998*	*2,088*	*2,111*	*2,133*	*2,110*	*2,048*	*1,947*	*1,841*	*1,729*
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
37,159	38,815	39,258	39,652	39,240	38,074	36,200	34,224	32,142	29,949

122	134	145	154	163	170	176	180	184	188
120.4625	131.6985	142.4188	150.4868	158.814	165.4355	170.4025	173.755	177.0044	180.1316

2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975
8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
27,737	25,234	22,603	19,837	16,929	13,873	10,661	7,284	3,734	3
1,419	*1,291*	*1,156*	*1,015*	*866*	*710*	*545*	*373*	*191*	*0*
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
25,234	22,603	19,837	16,929	13,873	10,661	7,284	3,734	3	3

2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%
-2.68%	-2.62%	-2.56%	-2.50%	-2.44%	-2.38%	-2.32%	-2.26%	-2.20%	-57.79%
4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975
8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
27,738	25,235	22,603	19,837	16,930	13,874	10,661	7,285	3,735	4
1,419	*1,291*	*1,156*	*1,015*	*866*	*710*	*545*	*373*	*191*	*0*
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
25,235	22,603	19,837	16,930	13,874	10,661	7,285	3,735	4	4
0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04

2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975
8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
29,949	27,637	25,201	22,634	19,929	17,079	14,075	10,909	7,574	4,059
1,611	*1,486*	*1,355*	*1,217*	*1,072*	*919*	*757*	*587*	*407*	*218*
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
27,637	25,201	22,634	19,929	17,079	14,075	10,909	7,574	4,059	4,277

192	195	199	202	206	209	212	214	216	218
183.1154	185.9331	188.5597	190.9684	193.13	195.013	196.583	197.8033	198.6338	199.0316

2049	2050
2,831	2,695
2,831	2,695
0	0
3	3
0	*0*
0	0
3	3

2049	2050
-4.83%	-4.83%
-4.83%	-4.83%
2,831	2,695
2,831	2,695
0	0
4	4
0	*0*
0	0
4	4
0.04	0.04

2049	2050
2,831	2,695
2,831	2,695
0	0
4,277	4,507
230	*242*
0	0
4,507	4,750

230	242
209.2149	219.9193

Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Interest Rate, monthly comp.	**5.000000%**		
Annual Interest Rate	5.12%	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb22_1_30yr

Option 1 - Bills Lowered 25%, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,501	2,636
Interest Portion	0	128

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	625	2,534
Interest Portion	-	32

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $39 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb22_2_30yr

Option 2 - Bills Lowered 20%, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,749	1,831
Interest Portion	0	89

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	437	1,770
Interest Portion	-	22

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $21 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb22_3_30yr

Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606
Interest Portion	0	74

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,487
Interest Portion	-	19

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	437 - 625	1,770 - 2,534

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	625	2534
Debt-Finance Global Adjustment Costs, Option 1a	437	1770
RRRP		
OESP – Enhance Benefit		162

Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**625**	**2774**
Total, B	437	2010

Proposed Program Total:	437 - 625	2,010 - 2,774

ining

0	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

2019	2020	2021	2022	
				CheckInt
2,764	3,479	3,242	3,008	
263	404	582	748	

2018-19	2019-20	2020-21	2021-2022
2,668	2,942	3,420	3,183
162	298	449	624

Option 1
Option 2
Option 3
Option 1

Assumes an inte

Option 1
Option 2
Option 3

2032.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,908	2,564	2,264	1,961
183	281	412	528

2018-19	2019-20	2020-21	2021-2022
1,850	2,072	2,489	2,189
113	208	314	441

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446
156	234	312	385

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429
95	176	254	331

2033.

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022
1,850 - 2,668	2,072 - 2,942	2,489 - 3,420	2,189 - 3,183

/1

2018-19[1]	2019-20[1]	2020-21[1]
2668	2942	3420
1850	2072	2489
225	279	323

60	60	60
18	18	18
2971	**3299**	**3821**
2153	2429	2890

2,153 - 2,971	2,429 - 3,299	2,890 - 3,821

	$35,723	
	$35,542	
	0.51%	27.00%

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$24,976.5	$35,542.1	$38,501	occurs in Year 2032
$14,759.8	$19,733.1	$21,477	occurs in Year 2029
$12,862.3	$19,498.4	$20,326	occurs in Year 2033
#REF!	#REF!	#REF!	#REF!

erest rate of 5.00% (compounded monthly).

			5000
5.00000%	5.00005%	0.00005%	0.25%
35,542	35,543	0.90	4,518.21
19,733	19,734	0.52	2,619.41
19,498	19,499	0.48	2,410.01
0.249950%			

Tab Name		Total Accumulated Interest Costs
Feb22_1_30yr	$31,810	$40,288
Feb22_2_30yr	$17,586	$22,491
Feb22_3_30yr	$17,202	$22,028
Mar_1_30yr		

	Total Accumulated Interest Costs
Option 1	$31,810 to $40,288**
Option 2	$17,586 to $22,491**
Option 3	$17,202 to $22,028**

** With a higher interest rate, the amortization period extend beyond the 30-year forecast

ted period resulting in a remaining balance at the end of the 30-year period. For specifics, see details belo

w.

Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb22_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,501	2,636	2,764	3,479	3,242	3,008	2,577	3,394	2,763	2,202	3,111	2,828	1,938	1,522	299	240	-575	-1,336	-2,050	-2,155	-2,265	-2,381	-2,503	-2,631	-2,766	-2,907	-3,056	-3,213	-3,377	-3,550	-3,731	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,560	2,699	2,829	3,561	3,319	3,079	2,638	3,475	2,828	2,254	3,185	2,895	1,985	1,558	306	246	-588	-1,368	-2,099	-2,206	-2,319	-2,438	-2,563	-2,694	-2,832	-2,977	-3,129	-3,289	-3,457	-3,634	-3,820	0	0	0
			59	63	66	83	77	72	61	81	66	52	74	67	46	36	7	6	-14	-32	-49	-51	-54	-57	-60	-63	-66	-69	-73	-76	-80	-84	-89	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,479	1,970	35,542.1
Equal Monthly Debt Drawdown	3,561	1,963	

	Feb22 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	38,500.8	2032	24,977
Equal Monthly Debt Drawdown	39,416.6		

Feb22 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
																																				26
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																				
($ millions)			-2.79%	-2.95%	0.47%	-10.01%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	-13.13%	-2.85%	-2.80%	-2.74%	-2.68%	-2.62%	-2.56%	-2.50%	-2.44%	-2.38%	-2.32%	-2.26%	-2.20%	-57.79%	-4.83%	-4.83%	
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
a	Debt, Beginning of Year	0	2,501	5,136	7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675	34,502	36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,384	30,119	27,737	25,234	22,603	19,837	16,929	13,873	10,661	7,284	3,734	3	3	3	
c = a*5%	*Interest Cost - Feb22 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*128*	*263*	*404*	*582*	*748*	*902*	*1,034*	*1,207*	*1,349*	*1,461*	*1,621*	*1,765*	*1,864*	*1,942*	*1,957*	*1,970*	*1,940*	*1,872*	*1,767*	*1,657*	*1,541*	*1,419*	*1,291*	*1,156*	*1,015*	*866*	*710*	*545*	*373*	*191*	*0*	*0*	*0*	35,542
b	Additional GA Debt Drawdown, End of Year	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,501	5,136	7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675	34,502	36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,384	30,119	27,737	25,234	22,603	19,837	16,929	13,873	10,661	7,284	3,734	3	3	3	3	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE
	Feb22 Option 1, 30-yr - Accumulated Interest Costs	0	128	391	795	1,377	2,125	3,027	4,061	5,268	6,617	8,078	9,699	11,464	12,986	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	10,661	7,284	3,734	3	3	3	
	Feb22 Option 1, 30-yr - Accumulated Debt Principal	2,501	5,009	7,509	10,584	13,244	15,504	17,178	19,539	21,094	21,947	23,596	24,803	24,977	24,977	24,977	25,216	24,642	23,306	21,255	19,100	16,835	14,453	11,950	9,319	6,553	3,645	589	0	0	0	0	0	0	0	
	Feb22 Option 1, 30-yr - Accumulated Interest Costs	0	128	391	795	1,377	2,125	3,027	4,061	5,268	6,617	8,078	9,699	11,464	13,328	15,271	17,228	19,198	21,138	23,010	24,777	26,434	27,975	29,394	30,685	31,842	32,857	33,723	34,433	34,978	35,351	35,542				
	Feb22 Option 1, 30-yr - Accumulated Debt Principal	2,501	5,009	7,509	10,584	13,244	15,504	17,178	19,539	21,094	21,947	23,596	24,803	24,977	24,634	22,990	21,273	18,728	15,452	11,529	7,607	3,685	-238	-4,160	-8,082	-12,005	-15,927	-19,849	-23,772	-27,694	-31,616	-35,539				
Fiscal Exposure - End of Year Debt Drawdown		2,501	2,636	2,764	3,479	3,242	3,008	2,577	3,394	2,763	2,202	3,111	2,828	1,938	1,522	299	240	-575	-1,336	-2,050	-2,155	-2,265	-2,381	-2,503	-2,631	-2,766	-2,907	-3,056	-3,213	-3,377	-3,550	-3,731	0	0	0	

Feb22 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Debt, Beginning of Year	0	2,560	5,259	8,088	11,650	14,969	18,048	20,686	24,161	26,989	29,243	32,428	35,323	37,307	38,865	39,171	39,417	38,828	37,460	35,361	33,155	30,835	28,397	25,834	23,140	20,309	17,332	14,203	10,914	7,457	3,823	3	3	3	
1,963	*Interest Cost - Feb22 Option 1, 30-yr*	*59*	*191*	*329*	*487*	*659*	*820*	*963*	*1,114*	*1,273*	*1,401*	*1,535*	*1,688*	*1,811*	*1,901*	*1,949*	*1,963*	*1,956*	*1,909*	*1,823*	*1,716*	*1,603*	*1,484*	*1,360*	*1,228*	*1,091*	*946*	*793*	*633*	*465*	*288*	*102*	*0*	*0*	*0*	35,542
	Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,560	5,259	8,088	11,650	14,969	18,048	20,686	24,161	26,989	29,243	32,428	35,323	37,307	38,865	39,171	39,417	38,828	37,460	35,361	33,155	30,835	28,397	25,834	23,140	20,309	17,332	14,203	10,914	7,457	3,823	3	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,560	2,699	2,829	3,561	3,319	3,079	2,638	3,475	2,828	2,254	3,185	2,895	1,985	1,558	306	246	-588	-1,368	-2,099	-2,206	-2,319	-2,438	-2,563	-2,694	-2,832	-2,977	-3,129	-3,289	-3,457	-3,634	-3,820	0	0	0	

	Monthly Drawdown	208	209	208	256	222	188	140	197	130	71	137	101	14	(29)	(137)	(143)	(212)	(273)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	-	-	-
	FV of Monthly Drawdown at 5%	2,560	2,568	2,560	3,148	2,723	2,313	1,715	2,416	1,592	873	1,688	1,236	177	(351)	(1,683)	(1,758)	(2,605)	(3,355)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	-	-	-
	Annual Interest Cost on New Drawdowns	59	60	59	73	63	54	40	56	37	20	39	29	4	(8)	(39)	(41)	(61)	(78)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	-	-	-
	Annual Interest Cost on Opening Balance	-	131	269	414	596	766	923	1,058	1,236	1,381	1,496	1,659	1,807	1,909	1,988	2,004	2,017	1,987	1,917	1,809	1,696	1,578	1,453	1,322	1,184	1,039	887	727	558	382	196	0	0	0
	Total Annual Interest Cost	59	191	329	487	659	820	963	1,114	1,273	1,401	1,535	1,688	1,811	1,901	1,949	1,963	1,956	1,909	1,823	1,716	1,603	1,484	1,360	1,228	1,091	946	793	633	465	288	102	0	0	0

Feb22 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Debt, Beginning of Year	0	2,533	5,202	8,001	11,524	14,808	17,854	20,464	23,901	26,699	28,929	32,080	34,943	36,907	38,448	38,750	38,993	38,411	37,058	34,981	32,799	30,504	28,092	25,557	22,892	20,091	17,146	14,051	10,797	7,377	3,782	3	3	3	
	Interest Cost - Feb22 Option 1, 30-yr	*32*	*162*	*298*	*449*	*624*	*787*	*935*	*1,077*	*1,243*	*1,377*	*1,501*	*1,657*	*1,790*	*1,884*	*1,946*	*1,946*	*1,962*	*1,923*	*1,846*	*1,740*	*1,628*	*1,510*	*1,387*	*1,257*	*1,121*	*978*	*827*	*669*	*502*	*327*	*143*	*0*	*0*	*0*	35,542
	Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,533	5,202	8,001	11,524	14,808	17,854	20,464	23,901	26,699	28,929	32,080	34,943	36,907	38,448	38,750	38,993	38,411	37,058	34,981	32,799	30,504	28,092	25,557	22,892	20,091	17,146	14,051	10,797	7,377	3,782	3	3	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,533	2,670	2,799	3,523	3,283	3,046	2,610	3,437	2,798	2,230	3,150	2,864	1,963	1,541	302	243	-582	-1,353	-2,077	-2,183	-2,294	-2,412	-2,535	-2,665	-2,801	-2,945	-3,095	-3,254	-3,420	-3,595	-3,779	0	0	0	

	Bi-Annual Drawdown	1,250	1,254	1,250	1,537	1,330	1,130	837	1,180	778	427	825	604	87	(171)	(822)	(859)	(1,272)	(1,638)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	-	-	-
	FV of Bi-Annual Drawdown at 5%	2,533	2,540	2,533	3,114	2,694	2,289	1,696	2,390	1,575	864	1,670	1,223	175	(347)	(1,665)	(1,740)	(2,577)	(3,319)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	-	-	-
	Annual Interest Cost on New Drawdowns	32	32	32	39	34	29	21	30	20	11	21	15	2	(4)	(21)	(22)	(33)	(42)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	-	-	-
	Annual Interest Cost on Opening Balance	-	130	266	409	590	758	913	1,047	1,223	1,366	1,480	1,641	1,788	1,888	1,967	1,983	1,995	1,965	1,896	1,790	1,678	1,561	1,437	1,308	1,171	1,028	877	719	552	377	193	0	0	0
	Total Annual Interest Cost	32	162	298	449	624	787	935	1,077	1,243	1,377	1,501	1,657	1,790	1,884	1,946	1,961	1,962	1,923	1,846	1,740	1,628	1,510	1,387	1,257	1,121	978	827	669	502	327	143	0	0	0

Feb22 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Debt, Beginning of Year	0	2,565	5,268	8,102	11,670	14,995	18,080	20,722	24,203	27,036	29,295	32,485	35,385	37,373	38,933	39,240	39,486	38,896	37,526	35,423	33,213	30,889	28,447	25,880	23,181	20,344	17,363	14,228	10,933	7,470	3,830	3	3	3	
	Interest Cost - Feb22 Option 1, 30-yr	*64*	*195*	*333*	*493*	*665*	*825*	*968*	*1,121*	*1,278*	*1,405*	*1,541*	*1,693*	*1,815*	*1,903*	*1,950*	*1,964*	*1,955*	*1,906*	*1,820*	*1,712*	*1,599*	*1,480*	*1,355*	*1,224*	*1,086*	*941*	*788*	*628*	*459*	*282*	*96*	*0*	*0*	*0*	35,542
	Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,565	5,268	8,102	11,670	14,995	18,080	20,722	24,203	27,036	29,295	32,485	35,385	37,373	38,933	39,240	39,486	38,896	37,526	35,423	33,213	30,889	28,447	25,880	23,181	20,344	17,363	14,228	10,933	7,470	3,830	3	3	3	3	
Fiscal Exposure - Average Debt Drawdown		2,565	2,703	2,834	3,568	3,325	3,085	2,643	3,481	2,833	2,258	3,190	2,900	1,988	1,561	306	246	-589	-1,370	-2,103	-2,210	-2,323	-2,442	-2,567	-2,699	-2,837	-2,982	-3,134	-3,295	-3,463	-3,640	-3,827	0	0	0	

Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb22_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,749	1,831	1,908	2,564	2,264	1,961	1,457	2,198	1,485	838	1,656	1,277	287	-237	-814	-855	-899	-945	-993	-1,044	-1,098	-1,154	-1,213	-1,275	-1,340	-1,409	-1,481	-1,556	-1,636	-1,720	-1,808	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,791	1,875	1,953	2,625	2,318	2,008	1,492	2,250	1,521	858	1,696	1,308	294	-243	-833	-876	-920	-967	-1,017	-1,069	-1,124	-1,181	-1,242	-1,305	-1,372	-1,442	-1,516	-1,593	-1,675	-1,761	-1,851	0	0	0	
			42	44	45	61	54	47	35	52	35	20	39	30	7	-6	-19	-20	-21	-22	-24	-25	-26	-27	-29	-30	-32	-34	-35	-37	-39	-41	-43	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,564	1,099	19,733
Equal Monthly Debt Drawdown	2,625	1,093	

	Feb22 Option 2, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	21,477.1	2029	14,760
Equal Monthly Debt Drawdown	21,988		

Feb22 Option 2, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				26
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
a	Debt, Beginning of Year	0	1,749	3,580	5,488	8,052	10,316	12,278	13,735	15,933	17,418	18,256	19,913	21,190	21,477	21,240	20,427	19,571	18,672	17,727	16,734	15,690	14,592	13,438	12,226	10,951	9,611	8,202	6,722	5,165	3,529	1,809	2	2	2	
c = a*5%	*Interest Cost - Feb22 Option 2, 30-yr - End of Year Debt Drawdown*	*0*	*89*	*183*	*281*	*412*	*528*	*628*	*703*	*815*	*891*	*934*	*1,019*	*1,084*	*1,099*	*1,087*	*1,045*	*1,001*	*955*	*907*	*856*	*803*	*747*	*688*	*625*	*560*	*492*	*420*	*344*	*264*	*181*	*93*	*0*	*0*	*0*	*0*	19,733
b	Additional GA Debt Drawdown, End of Year	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,749	3,580	5,488	8,052	10,316	12,278	13,735	15,933	17,418	18,256	19,913	21,190	21,477	21,240	20,427	19,571	18,672	17,727	16,734	15,690	14,592	13,438	12,226	10,951	9,611	8,202	6,722	5,165	3,529	1,809	2	2	2	2	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	
	Feb22 Option 2, 30-yr - Accumulated Interest Costs	0	89	273	553	965	1,493	2,121	2,824	3,639	4,530	5,464	6,483	7,567	7,330	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	5,165	3,529	1,809	2	2	2	
	Feb22 Option 2, 30-yr - Accumulated Debt Principal	1,749	3,491	5,216	7,499	9,351	10,784	11,614	13,109	13,779	13,726	14,448	14,707	13,910	13,910	13,910	13,055	12,156	11,211	10,217	9,173	8,075	6,922	5,709	4,434	3,094	1,685	205	0	0	0	0	0	0	0	
	Feb22 Option 2, 30-yr - Accumulated Interest Costs	0	89	273	553	965	1,493	2,121	2,824	3,639	4,530	5,464	6,483	7,567	8,666	9,753	10,798	11,799	12,755	13,661	14,518	15,320	16,067	16,754	17,380	17,940	18,432	18,852	19,195	19,460	19,640	19,733				
	Feb22 Option 2, 30-yr - Accumulated Debt Principal	1,749	3,491	5,216	7,499	9,351	10,784	11,614	13,109	13,779	13,726	14,448	14,707	13,910	12,574	10,674	8,773	6,873	4,973	3,072	1,172	-728	-2,628	-4,529	-6,429	-8,329	-10,230	-12,130	-14,030	-15,931	-17,831	-19,731				
Fiscal Exposure - End of Year Debt Drawdown		1,749	1,831	1,908	2,564	2,264	1,961	1,457	2,198	1,485	838	1,656	1,277	287	-237	-814	-855	-899	-945	-993	-1,044	-1,098	-1,154	-1,213	-1,275	-1,340	-1,409	-1,481	-1,556	-1,636	-1,720	-1,808	0	0	0	

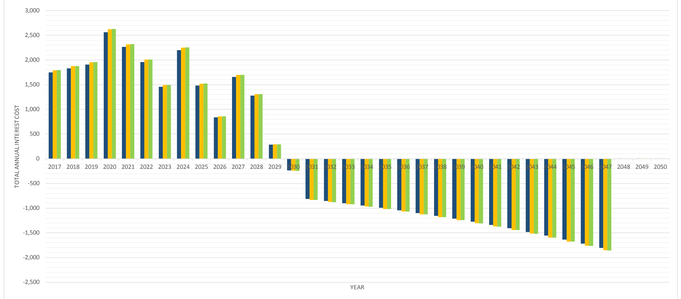
Feb22 Option 2, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Debt, Beginning of Year	0	1,791	3,666	5,619	8,244	10,562	12,570	14,062	16,312	17,832	18,691	20,386	21,694	21,988	21,745	20,912	20,037	19,116	18,149	17,132	16,063	14,939	13,758	12,517	11,211	9,839	8,397	6,881	5,288	3,613	1,852	2	2	2	
1,093	*Interest Cost - Feb22 Option 2, 30-yr*	*42*	*133*	*229*	*342*	*466*	*574*	*663*	*755*	*850*	*911*	*973*	*1,049*	*1,091*	*1,093*	*1,067*	*1,025*	*980*	*933*	*883*	*831*	*777*	*719*	*659*	*595*	*528*	*458*	*384*	*307*	*225*	*140*	*50*	*0*	*0*	*0*	19,733
	Additional GA Debt Drawdown	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,791	3,666	5,619	8,244	10,562	12,570	14,062	16,312	17,832	18,691	20,386	21,694	21,988	21,745	20,912	20,037	19,116	18,149	17,132	16,063	14,939	13,758	12,517	11,211	9,839	8,397	6,881	5,288	3,613	1,852	2	2	2	2	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,791	1,875	1,953	2,625	2,318	2,008	1,492	2,250	1,521	858	1,696	1,308	294	-243	-833	-876	-920	-967	-1,017	-1,069	-1,124	-1,181	-1,242	-1,305	-1,372	-1,442	-1,516	-1,593	-1,675	-1,761	-1,851	0	0	0	

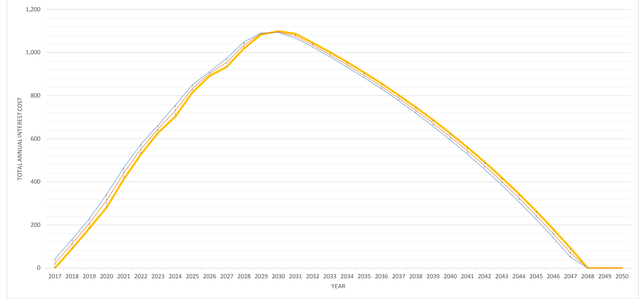
	Monthly Drawdown	146	145	144	190	154	119	69	125	56	(4)	60	22	(66)	(111)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	-	-	-	
	FV of Monthly Drawdown at 5%	1,791	1,783	1,766	2,337	1,896	1,467	849	1,531	686	(54)	739	265	(816)	(1,368)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	41	41	54	44	34	20	36	16	(1)	17	6	(19)	(32)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	-	-	-	
	Annual Interest Cost on Opening Balance	-	92	188	287	422	540	643	719	835	912	956	1,043	1,110	1,125	1,113	1,070	1,025	978	929	877	822	764	704	640	574	503	430	352	271	185	95	0	0	0	
	Total Annual Interest Cost	42	133	229	342	466	574	663	755	850	911	973	1,049	1,091	1,093	1,067	1,025	980	933	883	831	777	719	659	595	528	458	384	307	225	140	50	0	0	0	

Feb22 Option 2, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Debt, Beginning of Year	0	1,772	3,626	5,559	8,155	10,448	12,435	13,911	16,137	17,641	18,490	20,168	21,461	21,752	21,512	20,688	19,822	18,911	17,954	16,948	15,890	14,779	13,610	12,382	11,091	9,734	8,307	6,808	5,231	3,574	1,833	2	2	2	
	Interest Cost - Feb22 Option 2, 30-yr	*22*	*113*	*208*	*314*	*441*	*553*	*647*	*731*	*834*	*902*	*955*	*1,035*	*1,088*	*1,096*	*1,076*	*1,034*	*990*	*943*	*894*	*843*	*789*	*732*	*672*	*609*	*543*	*474*	*401*	*324*	*243*	*159*	*69*	*0*	*0*	*0*	19,733
	Additional GA Debt Drawdown	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,772	3,626	5,559	8,155	10,448	12,435	13,911	16,137	17,641	18,490	20,168	21,461	21,752	21,512	20,688	19,822	18,911	17,954	16,948	15,890	14,779	13,610	12,382	11,091	9,734	8,307	6,808	5,231	3,574	1,833	2	2	2	2	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,772	1,855	1,932	2,596	2,293	1,986	1,476	2,226	1,504	849	1,678	1,294	291	-240	-824	-866	-911	-957	-1,006	-1,058	-1,112	-1,168	-1,228	-1,291	-1,357	-1,427	-1,500	-1,576	-1,657	-1,742	-1,831	0	0	0	

	Bi-Annual Drawdown	875	871	862	1,141	926	717	415	748	335	(26)	361	129	(399)	(668)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,772	1,764	1,747	2,312	1,876	1,452	840	1,514	679	(53)	732	262	(807)	(1,353)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	-	-	-	
	Annual Interest Cost on New Drawdowns	22	22	22	29	24	18	11	19	9	(1)	9	3	(10)	(17)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	-	-	-	
	Annual Interest Cost on Opening Balance	-	91	186	284	417	535	636	712	826	903	946	1,032	1,098	1,113	1,101	1,058	1,014	968	919	867	813	756	696	633	567	498	425	348	268	183	94	0	0	0	
	Total Annual Interest Cost	22	113	208	314	441	553	647	731	834	902	955	1,035	1,088	1,096	1,076	1,034	990	943	894	843	789	732	672	609	543	474	401	324	243	159	69	0	0	0	

Feb22 Option 2, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Debt, Beginning of Year	0	1,794	3,672	5,629	8,258	10,580	12,592	14,086	16,340	17,864	18,724	20,422	21,732	22,027	21,784	20,949	20,072	19,150	18,181	17,162	16,091	14,965	13,782	12,538	11,231	9,857	8,412	6,894	5,297	3,619	1,856	2	2	2	
	Interest Cost - Feb22 Option 2, 30-yr	*45*	*136*	*232*	*346*	*470*	*578*	*665*	*759*	*853*	*913*	*976*	*1,051*	*1,091*	*1,093*	*1,066*	*1,023*	*978*	*931*	*882*	*829*	*775*	*717*	*657*	*593*	*526*	*456*	*382*	*304*	*222*	*137*	*46*	*0*	*0*	*0*	19,733
	Additional GA Debt Drawdown	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,794	3,672	5,629	8,258	10,580	12,592	14,086	16,340	17,864	18,724	20,422	21,732	22,027	21,784	20,949	20,072	19,150	18,181	17,162	16,091	14,965	13,782	12,538	11,231	9,857	8,412	6,894	5,297	3,619	1,856	2	2	2	2	
Fiscal Exposure - Average Debt Drawdown		1,794	1,878	1,957	2,629	2,322	2,011	1,495	2,254	1,523	860	1,699	1,310	294	-243	-834	-877	-922	-969	-1,019	-1,071	-1,126	-1,183	-1,244	-1,307	-1,374	-1,445	-1,519	-1,596	-1,678	-1,764	-1,854	0	0	0	





Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb22_3_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	
			34	38	36	36	34	34	35	36	36	35	35	34	23	16	12	7	0	-14	-29	-36	-38	-42	-39	-36	-34	-32	-27	-18	-6	-1	0	3	3	3	142

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	1,606	1,040	19,498
Equal Monthly Debt Drawdown	1,644	1,040	

	Feb22 Option 3, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	20,325.7	2033	12,862
Equal Monthly Debt Drawdown	20,809		

Feb22 Option 3, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
																																					26
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
a	Debt, Beginning of Year	0	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	
c = a*5%	*Interest Cost - Feb22 Option 3, 30-yr - End of Year Debt Drawdown*	*0*	*74*	*156*	*234*	*312*	*385*	*459*	*534*	*612*	*690*	*766*	*842*	*915*	*964*	*999*	*1,024*	*1,039*	*1,040*	*1,011*	*949*	*872*	*791*	*701*	*617*	*540*	*468*	*400*	*341*	*303*	*290*	*288*	*288*	*293*	*299*	19,498
b	Additional GA Debt Drawdown, End of Year	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	
	Feb22 Option 3, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,659	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
	Feb22 Option 3, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,862	12,862	13,167	13,181	12,611	11,405	9,906	8,320	6,550	4,918	3,412	2,000	667	-472	0	0	0	0	0	0	0	
	Feb22 Option 3, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,943	8,967	10,006	11,046	12,057	13,006	13,878	14,669	15,370	15,987	16,527	16,995	17,395	17,736	18,040	18,330	18,618				
	Feb22 Option 3, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,064	11,345	10,319	8,710	6,493	4,045	1,586	-974	-3,307	-5,431	-7,383	-9,184	-10,721	-11,807	-12,362	-12,696	-12,994				
Fiscal Exposure - End of Year Debt Drawdown		1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	

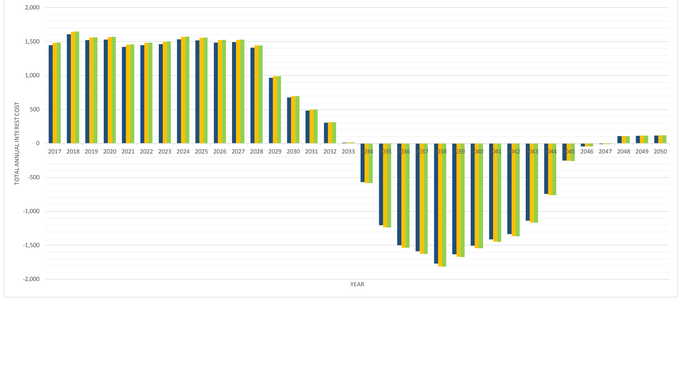
Feb22 Option 3, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	
1,040	*Interest Cost - Feb22 Option 3, 30-yr*	*34*	*112*	*192*	*270*	*346*	*420*	*494*	*570*	*649*	*726*	*802*	*876*	*938*	*980*	*1,010*	*1,031*	*1,040*	*1,026*	*982*	*913*	*835*	*749*	*662*	*581*	*507*	*436*	*373*	*324*	*297*	*289*	*288*	*290*	*296*	*302*	19,640
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	6,102	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	

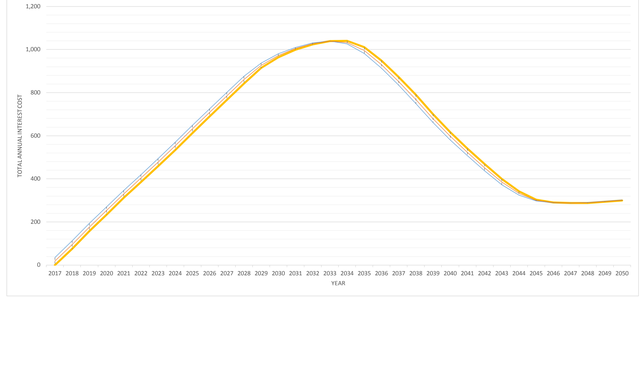
	Monthly Drawdown	121	128	114	108	93	88	84	83	76	66	60	47	4	(24)	(43)	(60)	(85)	(134)	(185)	(204)	(205)	(213)	(194)	(177)	(163)	(150)	(128)	(90)	(46)	(28)	(25)	(15)	(15)	(15)	
	FV of Monthly Drawdown at 5%	1,482	1,568	1,398	1,326	1,137	1,086	1,028	1,024	929	815	742	580	54	(292)	(525)	(736)	(1,050)	(1,648)	(2,269)	(2,506)	(2,517)	(2,621)	(2,389)	(2,174)	(1,999)	(1,844)	(1,574)	(1,111)	(568)	(342)	(306)	(185)	(184)	(188)	
	Annual Interest Cost on New Drawdowns	34	36	32	31	26	25	24	24	22	19	17	13	1	(7)	(12)	(17)	(24)	(38)	(53)	(58)	(58)	(61)	(55)	(51)	(46)	(43)	(37)	(26)	(13)	(8)	(7)	(4)	(4)	(4)	
	Annual Interest Cost on Opening Balance	-	76	160	240	320	394	470	547	627	707	784	863	936	987	1,023	1,048	1,064	1,065	1,035	972	893	810	717	632	553	479	409	350	311	297	295	295	300	306	
	Total Annual Interest Cost	34	112	192	270	346	420	494	570	649	726	802	876	938	980	1,010	1,031	1,040	1,026	982	913	835	749	662	581	507	436	373	324	297	289	288	290	296	302	

Feb22 Option 3, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	
	Interest Cost - Feb22 Option 3, 30-yr	*19*	*95*	*176*	*254*	*331*	*404*	*478*	*554*	*632*	*709*	*785*	*861*	*927*	*973*	*1,005*	*1,028*	*1,039*	*1,033*	*995*	*930*	*852*	*769*	*680*	*598*	*522*	*451*	*385*	*332*	*300*	*290*	*288*	*289*	*295*	*301*	19,575
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	6,037	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,466	1,626	1,541	1,549	1,441	1,465	1,482	1,554	1,539	1,505	1,510	1,427	979	687	492	309	13	-577	-1,221	-1,518	-1,607	-1,792	-1,653	-1,525	-1,430	-1,350	-1,153	-753	-255	-44	-10	109	115	117	

	Bi-Annual Drawdown	724	766	683	648	555	530	502	500	454	398	363	283	26	(143)	(256)	(359)	(513)	(805)	(1,108)	(1,224)	(1,229)	(1,280)	(1,167)	(1,062)	(976)	(900)	(769)	(543)	(278)	(167)	(149)	(90)	(90)	(92)	
	FV of Bi-Annual Drawdown at 5%	1,466	1,551	1,383	1,312	1,125	1,075	1,017	1,013	919	806	735	573	53	(289)	(519)	(728)	(1,039)	(1,630)	(2,245)	(2,479)	(2,490)	(2,593)	(2,363)	(2,150)	(1,977)	(1,824)	(1,557)	(1,099)	(562)	(338)	(302)	(183)	(182)	(186)	
	Annual Interest Cost on New Drawdowns	19	20	17	17	14	14	13	13	12	10	9	7	1	(4)	(7)	(9)	(13)	(21)	(28)	(31)	(31)	(33)	(30)	(27)	(25)	(23)	(20)	(14)	(7)	(4)	(4)	(2)	(2)	(2)	
	Annual Interest Cost on Opening Balance	-	75	158	237	316	390	465	541	620	699	776	853	926	976	1,012	1,037	1,053	1,053	1,024	961	884	801	710	625	547	474	405	346	307	294	292	291	297	303	
	Total Annual Interest Cost	19	95	176	254	331	404	478	554	632	709	785	861	927	973	1,005	1,028	1,039	1,033	995	930	852	769	680	598	522	451	385	332	300	290	288	289	295	301	

Feb22 Option 3, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	
	Interest Cost - Feb22 Option 3, 30-yr	*37*	*115*	*195*	*273*	*349*	*422*	*497*	*573*	*651*	*728*	*804*	*879*	*939*	*981*	*1,011*	*1,031*	*1,040*	*1,025*	*980*	*911*	*832*	*746*	*659*	*579*	*504*	*434*	*371*	*322*	*297*	*289*	*288*	*290*	*296*	*302*	19,651
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	6,113	
Fiscal Exposure - Average Debt Drawdown		1,484	1,647	1,561	1,569	1,459	1,483	1,500	1,573	1,559	1,524	1,530	1,445	992	696	498	313	14	-585	-1,237	-1,537	-1,627	-1,814	-1,674	-1,545	-1,448	-1,367	-1,167	-763	-258	-44	-10	110	116	119	





Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

IESO GA cost forecast + extrapolation

Scenario
Option 1a
Borrow $3.3B, Bills Lowered 20%, No Cap

Option 1b
Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B

	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168

Ratepayer GA Payment	8,753	8,535	8,311	7,650
Total Accumulated Debt ($ billion)	3,342	6,812	10,402	15,452

Ratepayer GA Payment	9,781	9,661	9,367	8,733
Accumulated debt in present year (including 5% interest,	2,314	4,606	7,027	10,822

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528
19,868	24,126	28,033	32,843	37,110	40,911	45,720	50,350
8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717
13,761	16,470	18,755	21,866	24,355	26,295	29,156	31,750

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**
10009	9721	8654	8820	8238	7756	5662	5389

8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319
54,201	57,751	60,200	62,719	64,559	65,780	64,732	63,114
9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913
33,472	34,796	34,919	35,008	34,309	32,878	31,035	29,098

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627

10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485
60,904	58,078	54,611	50,476	45,641	40,076	33,745	26,613
8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151
27,063	24,923	22,673	20,309	17,823	15,210	12,464	9,577

2045	2046	2047	2048

3,451	3,285	3,126	2,975	2,831	2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695

12,786	13,095	13410.34	2975.154	2831.461	2694.708
18,640	9,784	4.85E-06	0	0	0

6,976	6,809	6650.631	2975.154	2831.461	2694.708
6,543	3,353	5E-12	0	0	0

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

		5.00%	
Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb15_1a_30yr

Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,342	3,470
Interest Portion	0	171

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	835	3,374
Interest Portion	-	43

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $66 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb15_1b_30yr

Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,314	2,292
Interest Portion	0	118

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	579	2,309
Interest Portion	-	30

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $35 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

#REF!		
$ millions		
30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	362	1,487

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
	1	
	2	
	3	
	4 April	4
	5 May	5
	6 June	6
	7 July	7
	8 August	8
	9 September	9
	10 October	10
	11 November	11
	12 December	12
30-year term	**2016-17**	**2017-18**

Fiscal Exposure - Equal Monthly Debt Drawdown 579 - 835 2,309 - 3,374

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	835	3374
Debt-Finance Global Adjustment Costs, Option 1a	579	2309
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60

First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**835**	**3614**
Total, B	579	2549
Proposed Program Total:	579 - 835	2,549 - 3,614

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Option 1a
Option 2b

Assumes an inte

2019	2020	2021	2022
3,589	5,050	4,416	4,258
349	532	791	1,016

2018-19	2019-20	2020-21	2021-2022
3,500	3,955	4,892	4,377
215	394	597	847

2034.

depend on decision on accounting treatment.

2019	2020	2021	2022
2,421	3,795	2,938	2,709
236	360	554	704

2018-19	2019-20	2020-21	2021-2022
2,324	2,765	3,581	2,881
148	267	408	591

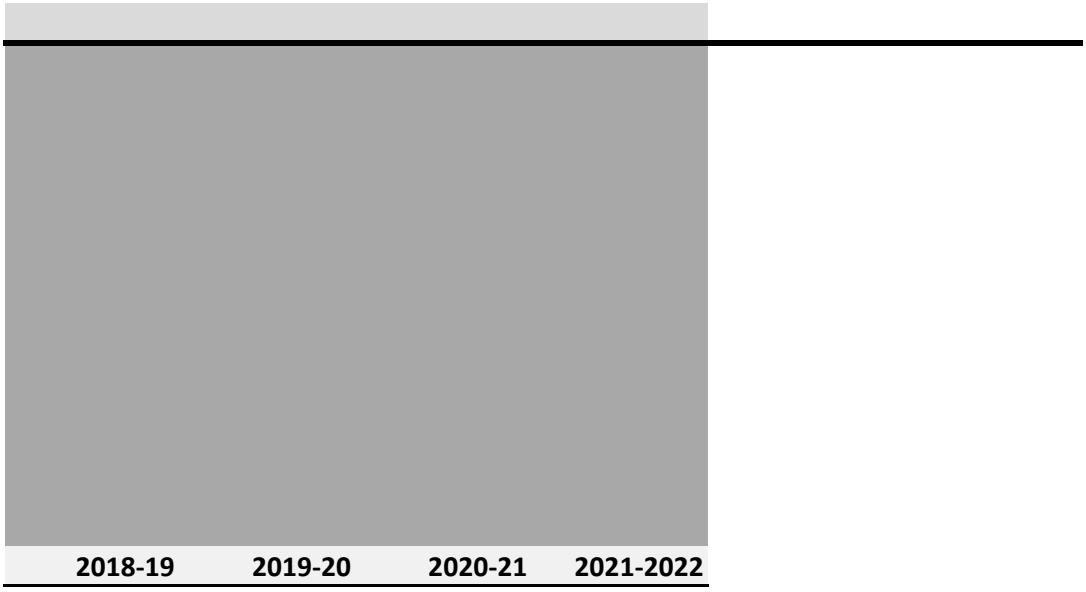
2032.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022

2,324 - 3,500 2,765 - 3,955 3,581 - 4,892 2,881 - 4,377

/1

2018-19[1]	2019-20[1]	2020-21[1]
3500	3955	4892
2324	2765	3581
225	279	323
60	60	60

18	18	18
3803	**4312**	**5293**
2627	3122	3982

2,627 - 3,803	3,122 - 4,312	3,982 - 5,293

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$38,864	$61,735	$65,781	occurs in Year 2034
$22,873	$32,368	$35,009	occurs in Year 2032

erest rate of 5.00% (compounded monthly).

Tab Name		Total Accumulated Interest Costs
Feb15_1a_30yr	$26,517	$34,278
Feb15_1b_30yr	$15,631	$20,378
	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$26,517 to $34,278
Option 2	$15,631 to $20,378
Option 3	$17,202 to $22,028

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

Feb15_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,342	3,470	3,589	5,050	4,416	4,258	3,907	4,810	4,268	3,801	4,809	4,630	3,851	3,550	2,449	2,519	1,840	1,221	-1,048	-1,618	-2,210	-2,825	-3,467	-4,135	-4,834	-5,565	-6,330	-7,132	-7,973	-8,856	-9,783	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,421	3,553	3,675	5,171	4,521	4,359	4,000	4,924	4,369	3,891	4,923	4,740	3,943	3,635	2,508	2,579	1,884	1,250	-1,073	-1,656	-2,262	-2,893	-3,549	-4,234	-4,949	-5,697	-6,481	-7,302	-8,163	-9,067	-10,016	0	0	0
			79	83	85	120	105	101	93	114	102	90	114	110	92	84	58	60	44	29	-25	-38	-53	-67	-82	-98	-115	-132	-151	-170	-190	-211	-233	0	0	0

0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	5,050	3,365	61,735
Equal Monthly Debt Drawdown	5,171	3,341	

	Feb15 Option 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	65,781	2034	38,864
Equal Monthly Debt Drawdown	67,346		

Feb15 Option 1a, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
a	Debt, Beginning of Year	0	3,342	6,812	10,402	15,452	19,868	24,126	28,034	32,843	37,111	40,911	45,720	50,350	54,201	57,752	60,201	62,720	64,560	65,781	64,733	63,115	60,906	58,080	54,614	50,478	45,644	40,079	33,749	26,617	18,644	9,788	5	5	5	
c = a*5%	*Interest Cost - Feb15 Option 1a, 30-yr - End of Year Debt Drawdown*	*0*	*171*	*349*	*532*	*791*	*1,016*	*1,234*	*1,434*	*1,680*	*1,899*	*2,093*	*2,339*	*2,576*	*2,773*	*2,955*	*3,080*	*3,209*	*3,303*	*3,365*	*3,312*	*3,229*	*3,116*	*2,972*	*2,794*	*2,583*	*2,335*	*2,051*	*1,727*	*1,362*	*954*	*501*	*0*	*0*	*0*	61,735
b	Additional GA Debt Drawdown, End of Year	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	3,342	6,812	10,402	15,452	19,868	24,126	28,034	32,843	37,111	40,911	45,720	50,350	54,201	57,752	60,201	62,720	64,560	65,781	64,733	63,115	60,906	58,080	54,614	50,478	45,644	40,079	33,749	26,617	18,644	9,788	5	5	5	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	171	520	1,052	1,842	2,859	4,093	5,527	7,208	9,106	11,199	13,539	16,115	19,665	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	26,617	18,644	9,788	5	5	5	
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal	3,342	6,641	9,882	14,400	18,026	21,267	23,941	27,316	29,903	31,805	34,521	36,812	38,087	38,087	38,087	40,606	42,446	43,667	42,619	41,001	38,792	35,966	32,500	28,364	23,530	17,965	11,635	0	0	0	0	0	0	0	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	171	520	1,052	1,842	2,859	4,093	5,527	7,208	9,106	11,199	13,539	16,115	18,888	21,842	24,922	28,131	31,434	34,800	38,112	41,341	44,457	47,428	50,222	52,805	55,140	57,191	58,917	60,279	61,233	61,734				
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal	3,342	6,641	9,882	14,400	18,026	21,267	23,941	27,316	29,903	31,805	34,521	36,812	38,087	38,864	38,359	37,798	36,429	34,347	29,934	25,004	19,565	13,624	7,186	256	-7,161	-15,061	-23,442	-32,300	-41,635	-51,445	-61,729				
Fiscal Exposure - End of Year Debt Drawdown		3,342	3,470	3,589	5,050	4,416	4,258	3,907	4,810	4,268	3,801	4,809	4,630	3,851	3,550	2,449	2,519	1,840	1,221	-1,048	-1,618	-2,210	-2,825	-3,467	-4,135	-4,834	-5,565	-6,330	-7,132	-7,973	-8,856	-9,783	0	0	0	

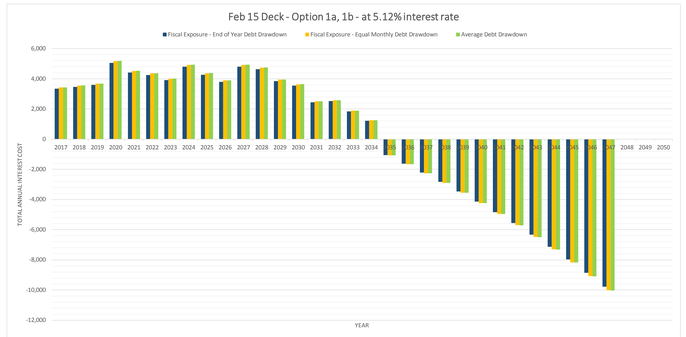
Feb15 Option 1a, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,421	6,974	10,649	15,820	20,341	24,700	28,700	33,624	37,993	41,885	46,808	51,548	55,491	59,125	61,633	64,212	66,096	67,346	66,273	64,617	62,354	59,462	55,913	51,679	46,730	41,033	34,552	27,250	19,087	10,021	5	5	5	
3,341	*Interest Cost - Feb15 Option 1a, 30-yr*	*79*	*254*	*434*	*652*	*896*	*1,118*	*1,327*	*1,549*	*1,782*	*1,989*	*2,207*	*2,449*	*2,668*	*2,857*	*3,013*	*3,140*	*3,253*	*3,332*	*3,341*	*3,273*	*3,177*	*3,049*	*2,889*	*2,696*	*2,468*	*2,203*	*1,900*	*1,557*	*1,172*	*743*	*268*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,421	6,974	10,649	15,820	20,341	24,700	28,700	33,624	37,993	41,885	46,808	51,548	55,491	59,125	61,633	64,212	66,096	67,346	66,273	64,617	62,354	59,462	55,913	51,679	46,730	41,033	34,552	27,250	19,087	10,021	5	5	5	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,421	3,553	3,675	5,171	4,521	4,359	4,000	4,924	4,369	3,891	4,923	4,740	3,943	3,635	2,508	2,579	1,884	1,250	-1,073	-1,656	-2,262	-2,893	-3,549	-4,234	-4,949	-5,697	-6,481	-7,302	-8,163	-9,067	-10,016	0	0	0	

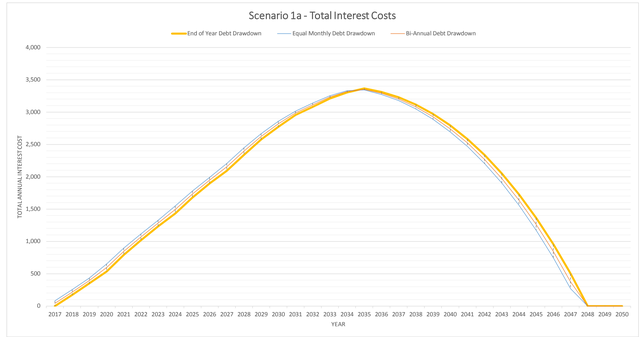
	Monthly Drawdown	278	275	270	377	302	270	223	281	216	159	226	191	106	65	(42)	(47)	(114)	(174)	(368)	(411)	(453)	(495)	(537)	(577)	(618)	(658)	(698)	(738)	(778)	(817)	(857)	-	-	-
	FV of Monthly Drawdown at 5%	3,421	3,378	3,318	4,626	3,712	3,319	2,737	3,456	2,649	1,947	2,780	2,346	1,305	796	(517)	(574)	(1,401)	(2,132)	(4,518)	(5,047)	(5,568)	(6,083)	(6,591)	(7,094)	(7,593)	(8,088)	(8,580)	(9,069)	(9,557)	(10,043)	(10,529)	-	-	-
	Annual Interest Cost on New Drawdowns	79	78	77	107	86	77	64	80	62	45	65	54	30	18	(12)	(13)	(33)	(50)	(105)	(117)	(129)	(141)	(153)	(165)	(176)	(188)	(199)	(211)	(222)	(233)	(245)	-	-	-
	Annual Interest Cost on Opening Balance	-	175	357	545	809	1,041	1,264	1,468	1,720	1,944	2,143	2,395	2,637	2,839	3,025	3,153	3,285	3,382	3,446	3,391	3,306	3,190	3,042	2,861	2,644	2,391	2,099	1,768	1,394	977	513	0	0	0
	Total Annual Interest Cost	79	254	434	652	896	1,118	1,327	1,549	1,782	1,989	2,207	2,449	2,668	2,857	3,013	3,140	3,253	3,332	3,341	3,273	3,177	3,049	2,889	2,696	2,468	2,203	1,900	1,557	1,172	743	268	0	0	0

Feb15 Option 1a, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,385	6,899	10,535	15,650	20,122	24,435	28,392	33,263	37,585	41,435	46,305	50,994	54,895	58,490	60,971	63,523	65,386	66,623	65,561	63,923	61,685	58,823	55,312	51,124	46,228	40,592	34,181	26,958	18,882	9,913	5	5	5	
	Interest Cost - Feb15 Option 1a, 30-yr	*43*	*215*	*394*	*597*	*847*	*1,071*	*1,284*	*1,496*	*1,735*	*1,947*	*2,155*	*2,398*	*2,625*	*2,818*	*2,986*	*3,112*	*3,232*	*3,319*	*3,352*	*3,291*	*3,201*	*3,080*	*2,927*	*2,741*	*2,521*	*2,264*	*1,970*	*1,635*	*1,260*	*841*	*376*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,385	6,899	10,535	15,650	20,122	24,435	28,392	33,263	37,585	41,435	46,305	50,994	54,895	58,490	60,971	63,523	65,386	66,623	65,561	63,923	61,685	58,823	55,312	51,124	46,228	40,592	34,181	26,958	18,882	9,913	5	5	5	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,385	3,515	3,635	5,115	4,473	4,313	3,957	4,871	4,322	3,849	4,870	4,689	3,900	3,596	2,481	2,551	1,864	1,237	-1,061	-1,639	-2,238	-2,861	-3,511	-4,188	-4,896	-5,636	-6,411	-7,223	-8,075	-8,969	-9,909	0	0	0	

	Bi-Annual Drawdown	1,671	1,650	1,620	2,259	1,813	1,621	1,337	1,688	1,294	951	1,358	1,146	638	389	(253)	(280)	(684)	(1,041)	(2,207)	(2,465)	(2,719)	(2,971)	(3,219)	(3,465)	(3,708)	(3,950)	(4,190)	(4,429)	(4,667)	(4,905)	(5,142)	-	-	-
	FV of Bi-Annual Drawdown at 5%	3,385	3,341	3,282	4,576	3,672	3,283	2,707	3,418	2,620	1,926	2,750	2,320	1,291	787	(512)	(568)	(1,386)	(2,109)	(4,470)	(4,993)	(5,508)	(6,017)	(6,520)	(7,018)	(7,512)	(8,001)	(8,488)	(8,972)	(9,454)	(9,935)	(10,416)	-	-	-
	Annual Interest Cost on New Drawdowns	43	42	41	58	46	41	34	43	33	24	35	29	16	10	(6)	(7)	(18)	(27)	(56)	(63)	(70)	(76)	(82)	(89)	(95)	(101)	(107)	(113)	(119)	(125)	(132)	-	-	-
	Annual Interest Cost on Opening Balance	-	173	353	539	801	1,029	1,250	1,453	1,702	1,923	2,120	2,369	2,609	2,809	2,992	3,119	3,250	3,345	3,409	3,354	3,270	3,156	3,010	2,830	2,616	2,365	2,077	1,749	1,379	966	507	0	0	0
	Total Annual Interest Cost	43	215	394	597	847	1,071	1,284	1,496	1,735	1,947	2,155	2,398	2,625	2,818	2,986	3,112	3,232	3,319	3,352	3,291	3,201	3,080	2,927	2,741	2,521	2,264	1,970	1,635	1,260	841	376	0	0	0

Feb15 Option 1a, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,427	6,986	10,668	15,847	20,376	24,743	28,751	33,683	38,060	41,958	46,890	51,638	55,588	59,229	61,741	64,325	66,212	67,464	66,389	64,730	62,464	59,566	56,011	51,770	46,812	41,104	34,612	27,298	19,121	10,038	5	5	5	
	Interest Cost - Feb15 Option 1a, 30-yr	*85*	*260*	*440*	*661*	*904*	*1,125*	*1,334*	*1,557*	*1,789*	*1,996*	*2,216*	*2,458*	*2,675*	*2,864*	*3,017*	*3,144*	*3,256*	*3,334*	*3,339*	*3,270*	*3,173*	*3,044*	*2,883*	*2,688*	*2,459*	*2,193*	*1,889*	*1,544*	*1,158*	*727*	*251*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,427	6,986	10,668	15,847	20,376	24,743	28,751	33,683	38,060	41,958	46,890	51,638	55,588	59,229	61,741	64,325	66,212	67,464	66,389	64,730	62,464	59,566	56,011	51,770	46,812	41,104	34,612	27,298	19,121	10,038	5	5	5	6
Fiscal Exposure - Average Debt Drawdown		3,427	3,559	3,681	5,180	4,529	4,367	4,007	4,933	4,377	3,898	4,932	4,749	3,950	3,641	2,512	2,584	1,887	1,252	-1,075	-1,659	-2,266	-2,898	-3,555	-4,241	-4,958	-5,707	-6,492	-7,314	-8,177	-9,083	-10,034	0	0	0	





Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

Feb15_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,314	2,292	2,421	3,795	2,938	2,709	2,285	3,111	2,489	1,940	2,862	2,594	1,722	1,324	123	89	-699	-1,431	-1,842	-1,937	-2,036	-2,140	-2,249	-2,364	-2,485	-2,613	-2,746	-2,887	-3,034	-3,190	-3,353	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,369	2,346	2,479	3,886	3,008	2,774	2,340	3,185	2,548	1,986	2,930	2,656	1,763	1,356	126	91	-716	-1,465	-1,886	-1,983	-2,084	-2,191	-2,303	-2,421	-2,544	-2,675	-2,812	-2,955	-3,107	-3,266	-3,433	0	0	0
			55	55	58	90	70	64	54	74	59	46	68	62	41	32	3	2	-17	-34	-44	-46	-48	-51	-54	-56	-59	-62	-65	-69	-72	-76	-80	0	0	0

0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,795	1,791	32,368
Equal Monthly Debt Drawdown	3,886	1,789	

	Feb15 Option 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	35,009	2032	22,873
Equal Monthly Debt Drawdown	35,841		

Feb15 Option 1a, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
a	Debt, Beginning of Year		0	2,314	4,606	7,027	10,822	13,761	16,470	18,755	21,866	24,355	26,295	29,157	31,751	33,472	34,797	34,920	35,009	34,310	32,879	31,036	29,100	27,064	24,924	22,675	20,310	17,825	15,212	12,466	9,579	6,545	3,355	3	3	3	
c = a*5%	*Interest Cost - Feb15 Option 1a, 30-yr - End of Year Debt Drawdown*		*0*	*118*	*236*	*360*	*554*	*704*	*843*	*960*	*1,119*	*1,246*	*1,345*	*1,492*	*1,624*	*1,713*	*1,780*	*1,787*	*1,791*	*1,755*	*1,682*	*1,588*	*1,489*	*1,385*	*1,275*	*1,160*	*1,039*	*912*	*778*	*638*	*490*	*335*	*172*	*0*	*0*	*0*	32,368
b	Additional GA Debt Drawdown, End of Year		2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)		2,314	4,606	7,027	10,822	13,761	16,470	18,755	21,866	24,355	26,295	29,157	31,751	33,472	34,797	34,920	35,009	34,310	32,879	31,036	29,100	27,064	24,924	22,675	20,310	17,825	15,212	12,466	9,579	6,545	3,355	3	3	3	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs		0	118	354	714	1,267	1,971	2,814	3,773	4,892	6,138	7,484	8,975	10,600	11,924	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	9,579	6,545	3,355	3	3	3	3	
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal		2,314	4,488	6,673	10,109	12,493	14,499	15,941	18,092	19,463	20,157	21,673	22,775	22,873	22,873	22,873	22,961	22,262	20,831	18,989	17,052	15,017	12,877	10,627	8,263	5,778	3,165	419	0	0	0	0	0	0	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs		0	118	354	714	1,267	1,971	2,814	3,773	4,892	6,138	7,484	8,975	10,600	12,312	14,092	15,879	17,670	19,425	21,108	22,695	24,184	25,569	26,844	28,004	29,043	29,955	30,733	31,371	31,861	32,196	32,368			
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal		2,314	4,488	6,673	10,109	12,493	14,499	15,941	18,092	19,463	20,157	21,673	22,775	22,873	22,485	20,828	19,130	16,639	13,453	9,929	6,404	2,880	-645	-4,169	-7,694	-11,218	-14,743	-18,267	-21,792	-25,316	-28,841	-32,365			
Fiscal Exposure - End of Year Debt Drawdown			2,314	2,292	2,421	3,795	2,938	2,709	2,285	3,111	2,489	1,940	2,862	2,594	1,722	1,324	123	89	-699	-1,431	-1,842	-1,937	-2,036	-2,140	-2,249	-2,364	-2,485	-2,613	-2,746	-2,887	-3,034	-3,190	-3,353	0	0	0	

Feb15 Option 1a, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Debt, Beginning of Year		0	2,369	4,716	7,194	11,080	14,088	16,862	19,201	22,386	24,934	26,920	29,850	32,506	34,269	35,625	35,751	35,841	35,126	33,661	31,774	29,792	27,708	25,517	23,214	20,793	18,249	15,574	12,763	9,807	6,701	3,435	3	3	3	
1,789	*Interest Cost - Feb15 Option 1a, 30-yr*		*55*	*173*	*293*	*450*	*624*	*768*	*897*	*1,034*	*1,178*	*1,292*	*1,413*	*1,553*	*1,665*	*1,744*	*1,783*	*1,789*	*1,774*	*1,721*	*1,638*	*1,542*	*1,440*	*1,334*	*1,222*	*1,104*	*980*	*850*	*713*	*569*	*418*	*259*	*92*	*0*	*0*	*0*	32,368
	Additional GA Debt Drawdown		2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		2,369	4,716	7,194	11,080	14,088	16,862	19,201	22,386	24,934	26,920	29,850	32,506	34,269	35,625	35,751	35,841	35,126	33,661	31,774	29,792	27,708	25,517	23,214	20,793	18,249	15,574	12,763	9,807	6,701	3,435	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown			2,369	2,346	2,479	3,886	3,008	2,774	2,340	3,185	2,548	1,986	2,930	2,656	1,763	1,356	126	91	-716	-1,465	-1,886	-1,983	-2,084	-2,191	-2,303	-2,421	-2,544	-2,675	-2,812	-2,955	-3,107	-3,266	-3,433	0	0	0	
	Monthly Drawdown		193	181	182	286	199	167	120	179	114	58	126	92	8	(32)	(138)	(141)	(208)	(266)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	-	-	-	
	FV of Monthly Drawdown at 5%		2,369	2,225	2,237	3,518	2,441	2,053	1,477	2,202	1,403	710	1,553	1,128	100	(397)	(1,697)	(1,738)	(2,549)	(3,262)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	-	-	-	
	Annual Interest Cost on New Drawdowns		55	52	52	82	57	48	34	51	33	17	36	26	2	(9)	(39)	(40)	(59)	(76)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	-	-	-	
	Annual Interest Cost on Opening Balance		-	121	241	368	567	721	863	982	1,145	1,276	1,377	1,527	1,663	1,753	1,823	1,829	1,834	1,797	1,722	1,626	1,524	1,418	1,305	1,188	1,064	934	797	653	502	343	176	0	0	0	
	Total Annual Interest Cost		55	173	293	450	624	768	897	1,034	1,178	1,292	1,413	1,553	1,665	1,744	1,783	1,789	1,774	1,721	1,638	1,542	1,440	1,334	1,222	1,104	980	850	713	569	418	259	92	0	0	0	

Feb15 Option 1a, 30-yr — Bi-Annual Debt Drawdown

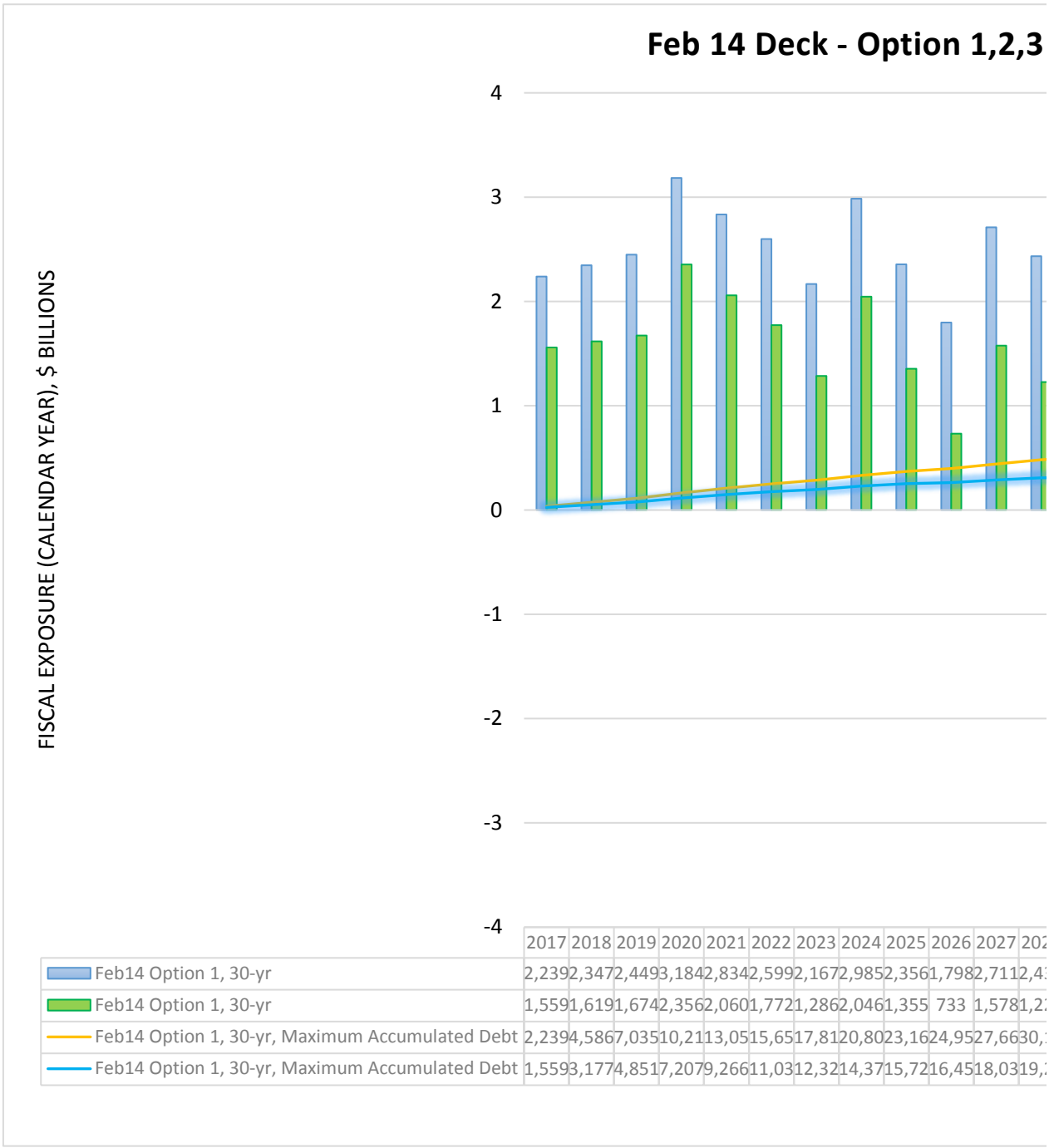
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Debt, Beginning of Year		0	2,344	4,665	7,117	10,961	13,937	16,681	18,995	22,146	24,667	26,631	29,530	32,157	33,901	35,242	35,367	35,456	34,748	33,299	31,433	29,472	27,410	25,243	22,965	20,570	18,053	15,407	12,626	9,702	6,629	3,398	3	3	3	
	Interest Cost - Feb15 Option 1a, 30-yr		*30*	*148*	*267*	*408*	*591*	*739*	*872*	*999*	*1,151*	*1,271*	*1,382*	*1,525*	*1,646*	*1,729*	*1,782*	*1,788*	*1,782*	*1,737*	*1,659*	*1,563*	*1,463*	*1,357*	*1,246*	*1,130*	*1,007*	*879*	*743*	*601*	*451*	*294*	*129*	*0*	*0*	*0*	32,368
	Additional GA Debt Drawdown		2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		2,344	4,665	7,117	10,961	13,937	16,681	18,995	22,146	24,667	26,631	29,530	32,157	33,901	35,242	35,367	35,456	34,748	33,299	31,433	29,472	27,410	25,243	22,965	20,570	18,053	15,407	12,626	9,702	6,629	3,398	3	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown			2,344	2,321	2,452	3,844	2,976	2,744	2,314	3,151	2,521	1,965	2,898	2,627	1,744	1,341	125	90	-708	-1,449	-1,866	-1,961	-2,062	-2,167	-2,278	-2,395	-2,517	-2,646	-2,781	-2,924	-3,073	-3,230	-3,396	0	0	0	
	Bi-Annual Drawdown		1,157	1,087	1,093	1,718	1,192	1,003	721	1,076	685	347	758	551	49	(194)	(829)	(849)	(1,245)	(1,593)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	-	-	-	
	FV of Bi-Annual Drawdown at 5%		2,344	2,201	2,213	3,480	2,415	2,031	1,461	2,179	1,388	703	1,536	1,116	99	(393)	(1,678)	(1,720)	(2,522)	(3,227)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	-	-	-	
	Annual Interest Cost on New Drawdowns		30	28	28	44	30	26	18	28	18	9	19	14	1	(5)	(21)	(22)	(32)	(41)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	-	-	-	
	Annual Interest Cost on Opening Balance		-	120	239	364	561	713	853	972	1,133	1,262	1,363	1,511	1,645	1,734	1,803	1,809	1,814	1,778	1,704	1,608	1,508	1,402	1,291	1,175	1,052	924	788	646	496	339	174	0	0	0	
	Total Annual Interest Cost		30	148	267	408	591	739	872	999	1,151	1,271	1,382	1,525	1,646	1,729	1,782	1,788	1,782	1,737	1,659	1,563	1,463	1,357	1,246	1,130	1,007	879	743	601	451	294	129	0	0	0	

Feb15 Option 1a, 30-yr — Average Debt Drawdown

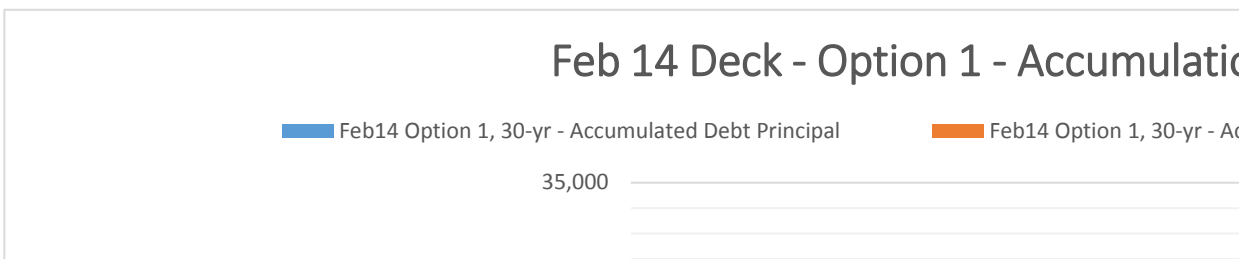
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Debt, Beginning of Year		0	2,373	4,724	7,207	11,099	14,113	16,891	19,235	22,425	24,978	26,968	29,902	32,563	34,329	35,687	35,813	35,904	35,187	33,720	31,830	29,844	27,756	25,562	23,255	20,830	18,281	15,601	12,785	9,824	6,712	3,441	3	3	3	
	Interest Cost - Feb15 Option 1a, 30-yr		*59*	*177*	*298*	*457*	*629*	*773*	*901*	*1,039*	*1,182*	*1,296*	*1,419*	*1,558*	*1,668*	*1,746*	*1,783*	*1,789*	*1,773*	*1,719*	*1,635*	*1,538*	*1,437*	*1,330*	*1,218*	*1,100*	*976*	*845*	*708*	*564*	*412*	*253*	*86*	*0*	*0*	*0*	32,368
	Additional GA Debt Drawdown		2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		2,373	4,724	7,207	11,099	14,113	16,891	19,235	22,425	24,978	26,968	29,902	32,563	34,329	35,687	35,813	35,904	35,187	33,720	31,830	29,844	27,756	25,562	23,255	20,830	18,281	15,601	12,785	9,824	6,712	3,441	3	3	3	
Fiscal Exposure - Average Debt Drawdown			2,373	2,351	2,483	3,892	3,013	2,779	2,344	3,190	2,553	1,989	2,935	2,660	1,766	1,358	126	91	-717	-1,468	-1,889	-1,986	-2,088	-2,195	-2,307	-2,425	-2,549	-2,679	-2,816	-2,961	-3,112	-3,271	-3,439	0	0	0	

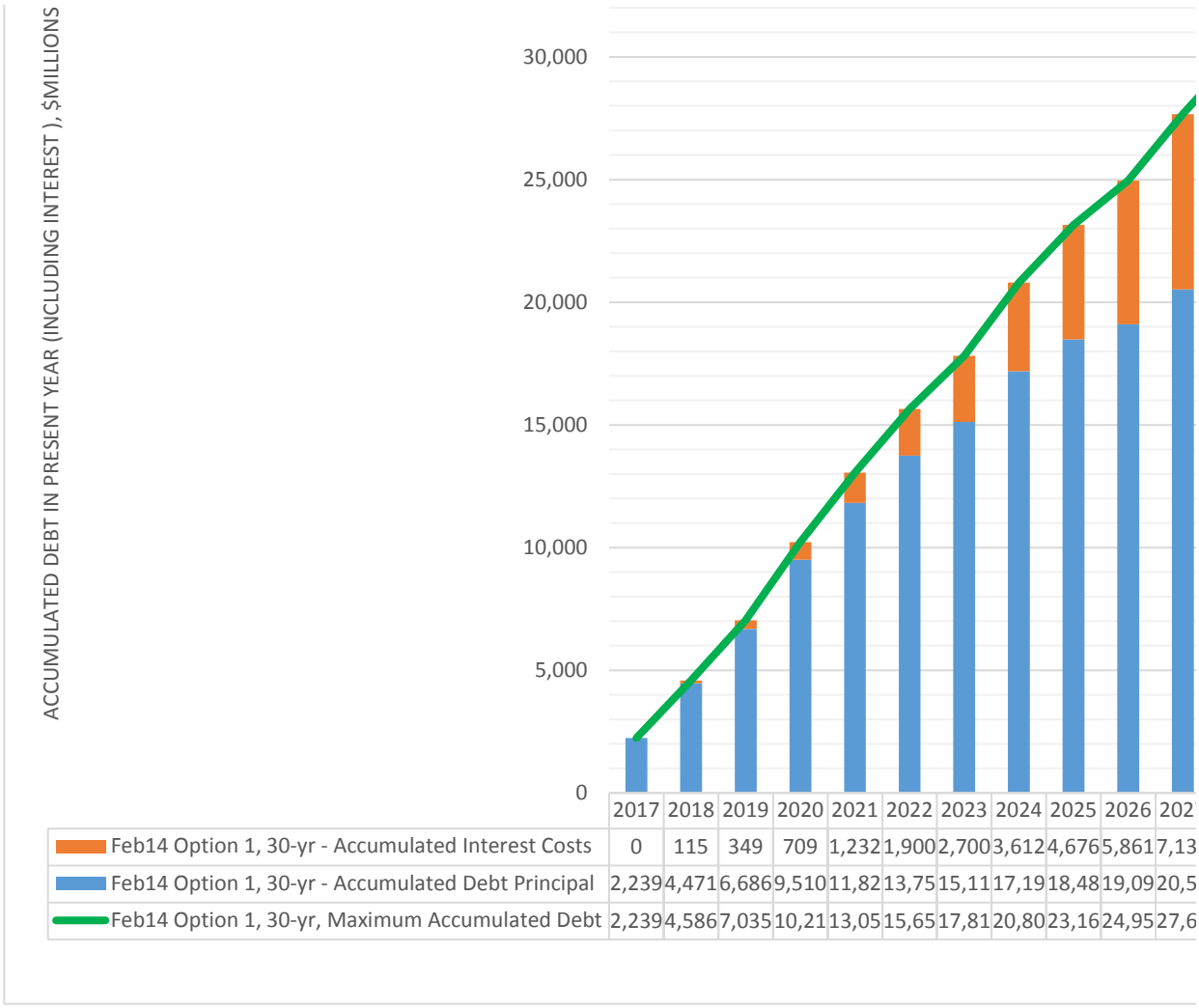
Feb 14 Deck

Feb 14 Deck - Option 1,2,3 - at 5.12% interest rate

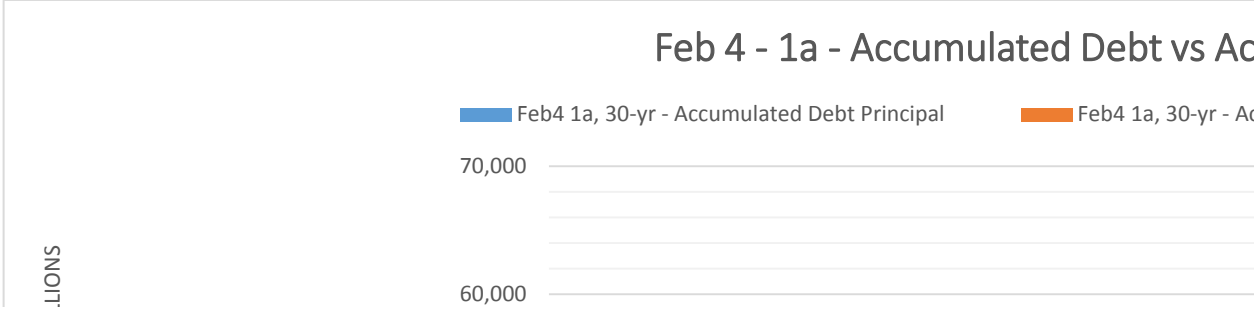


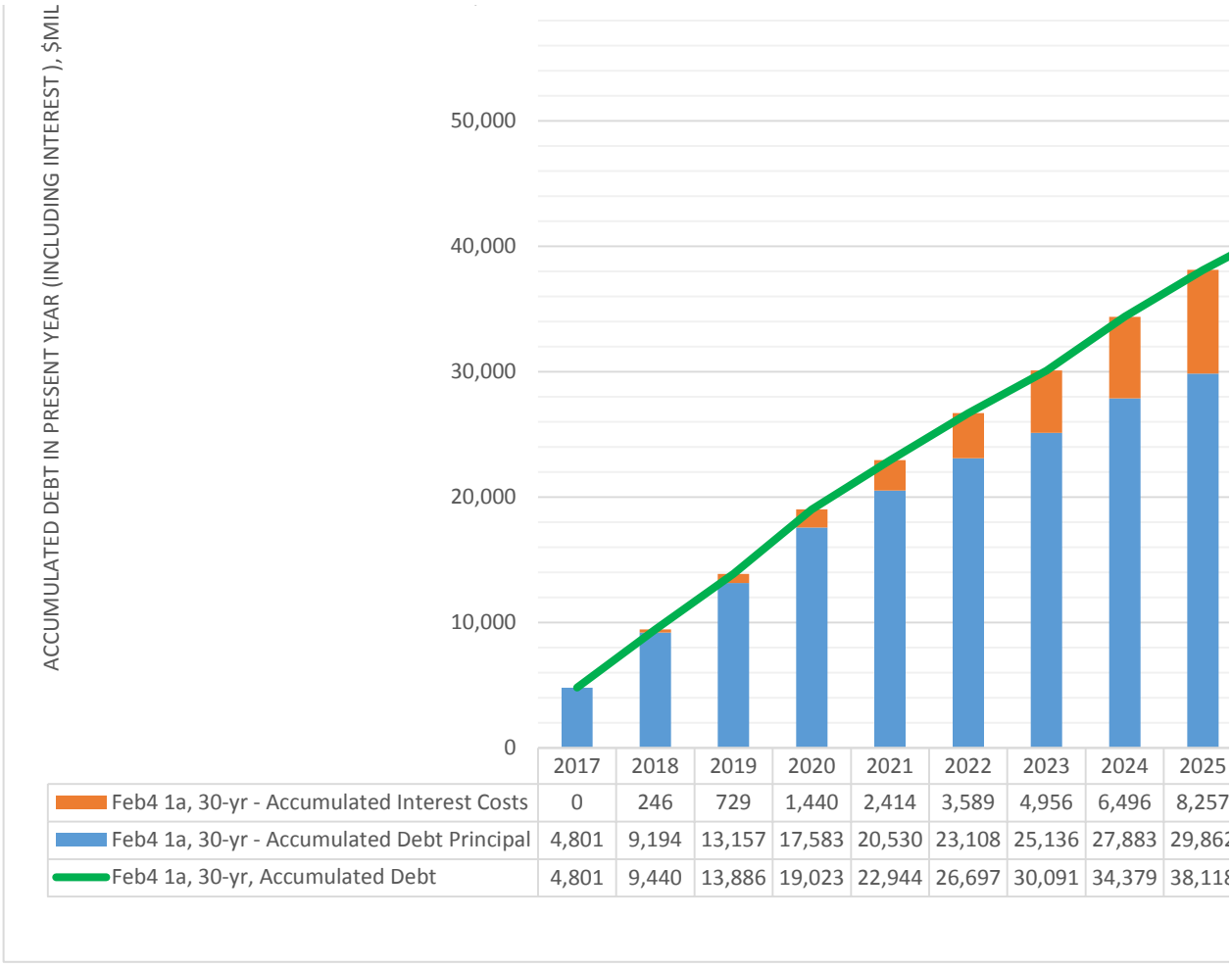
Feb 14 Deck - Option 1 - Accumulation of Debt (Principal and Interest)



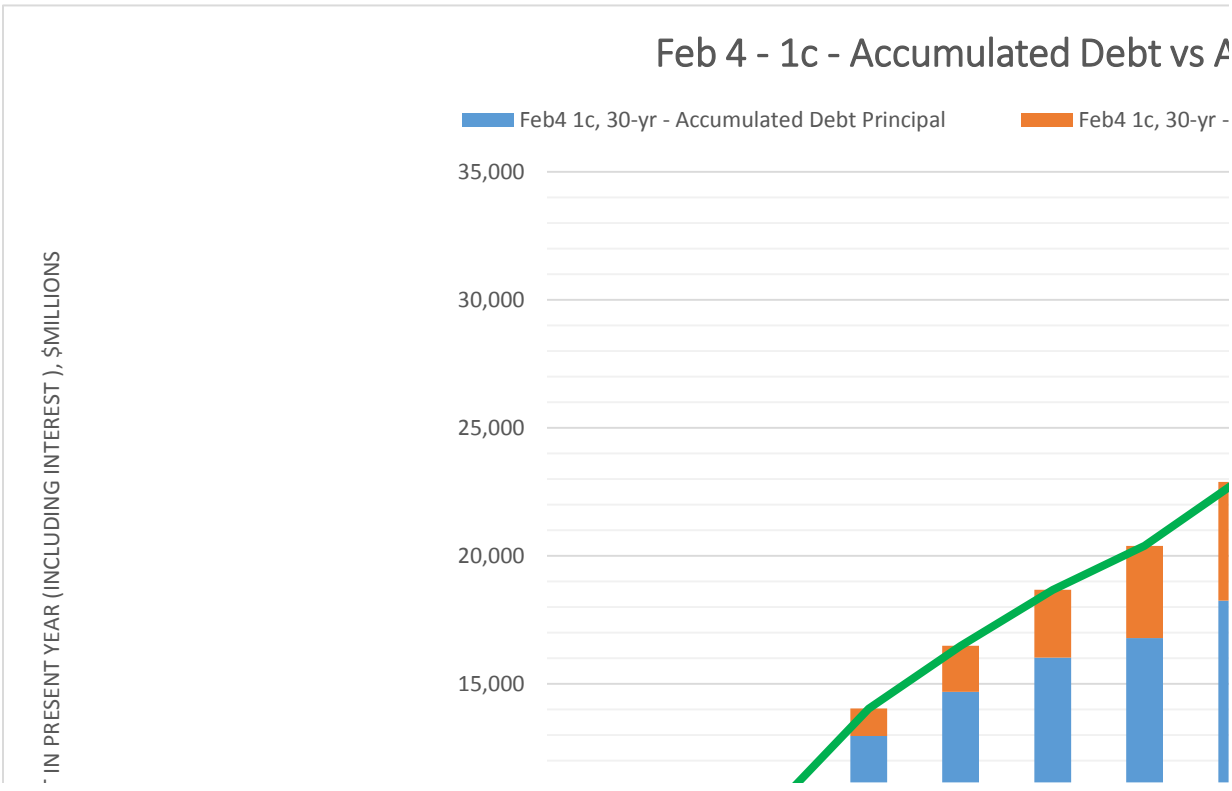


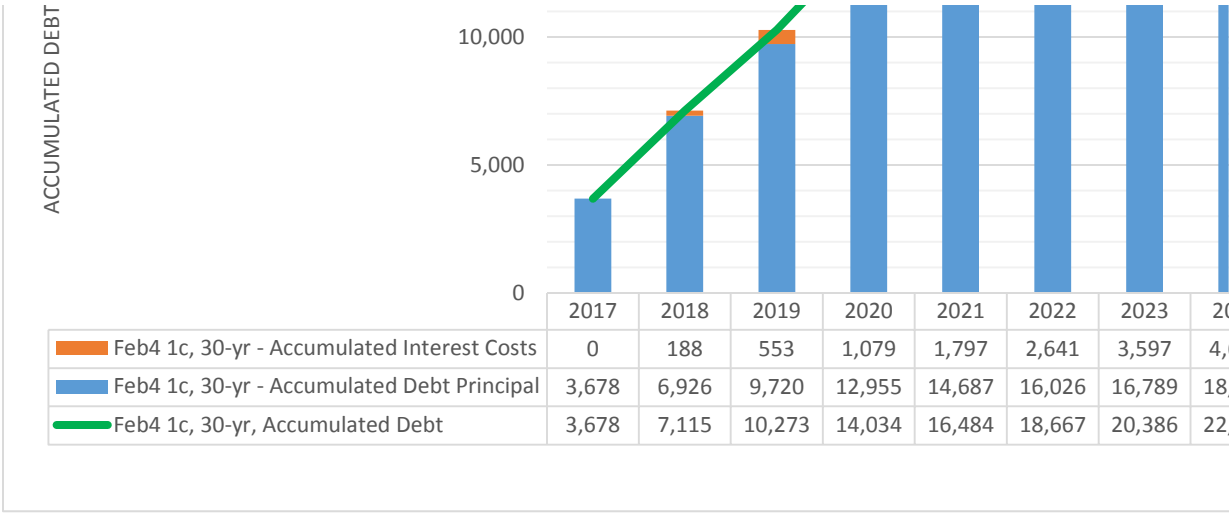
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	202
Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,13
Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,82	13,75	15,11	17,19	18,48	19,09	20,5
Feb14 Option 1, 30-yr, Maximum Accumulated Debt	2,239	4,586	7,035	10,21	13,05	15,65	17,81	20,80	23,16	24,95	27,6



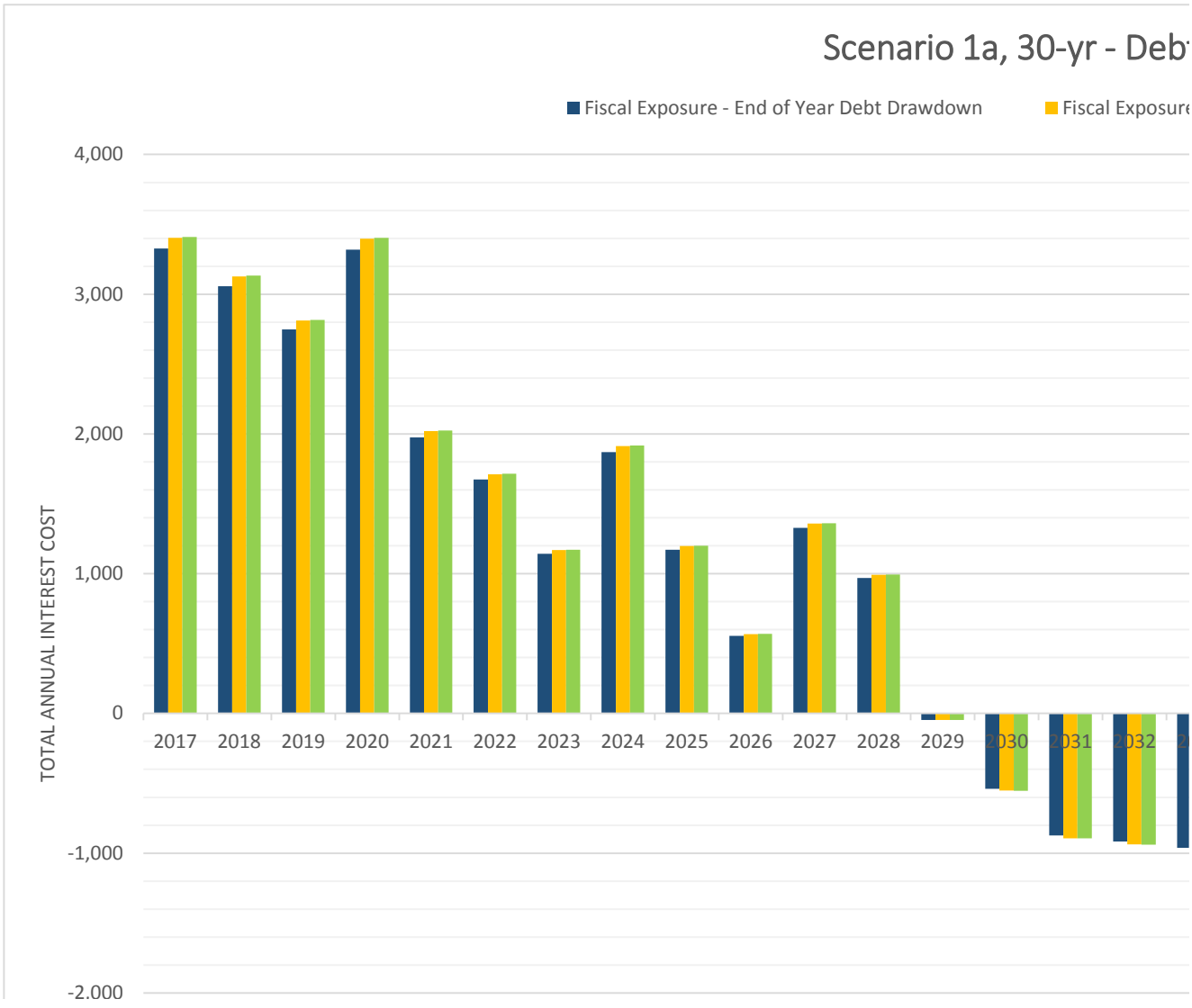


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



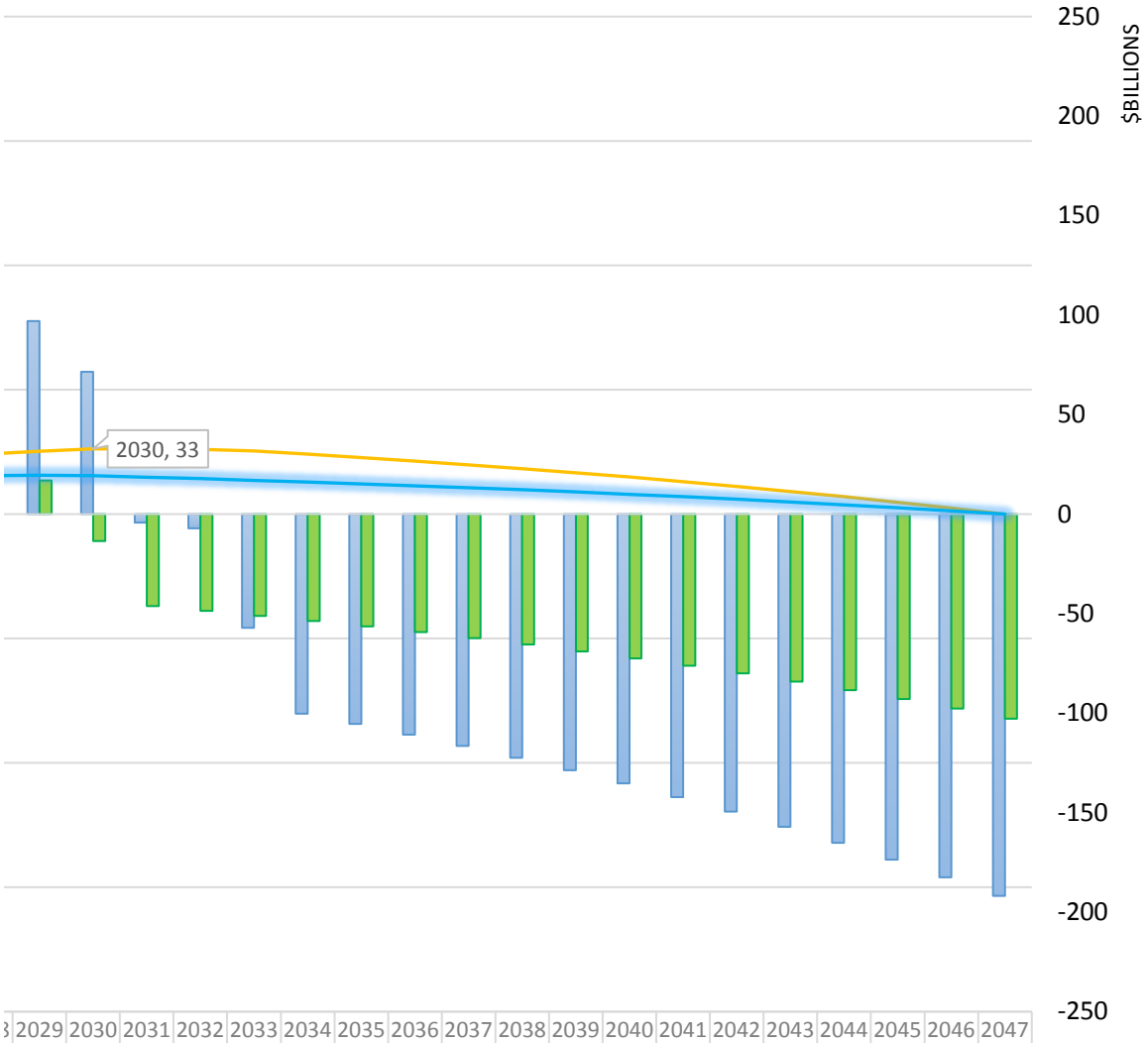


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

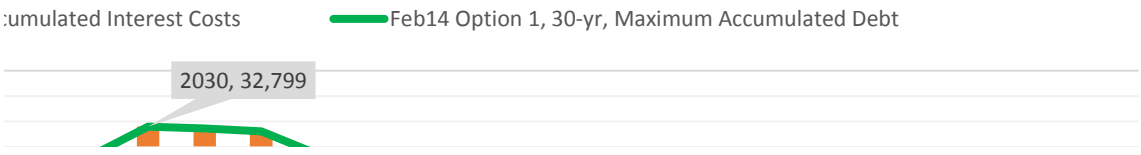
- at 5.12% interest rate

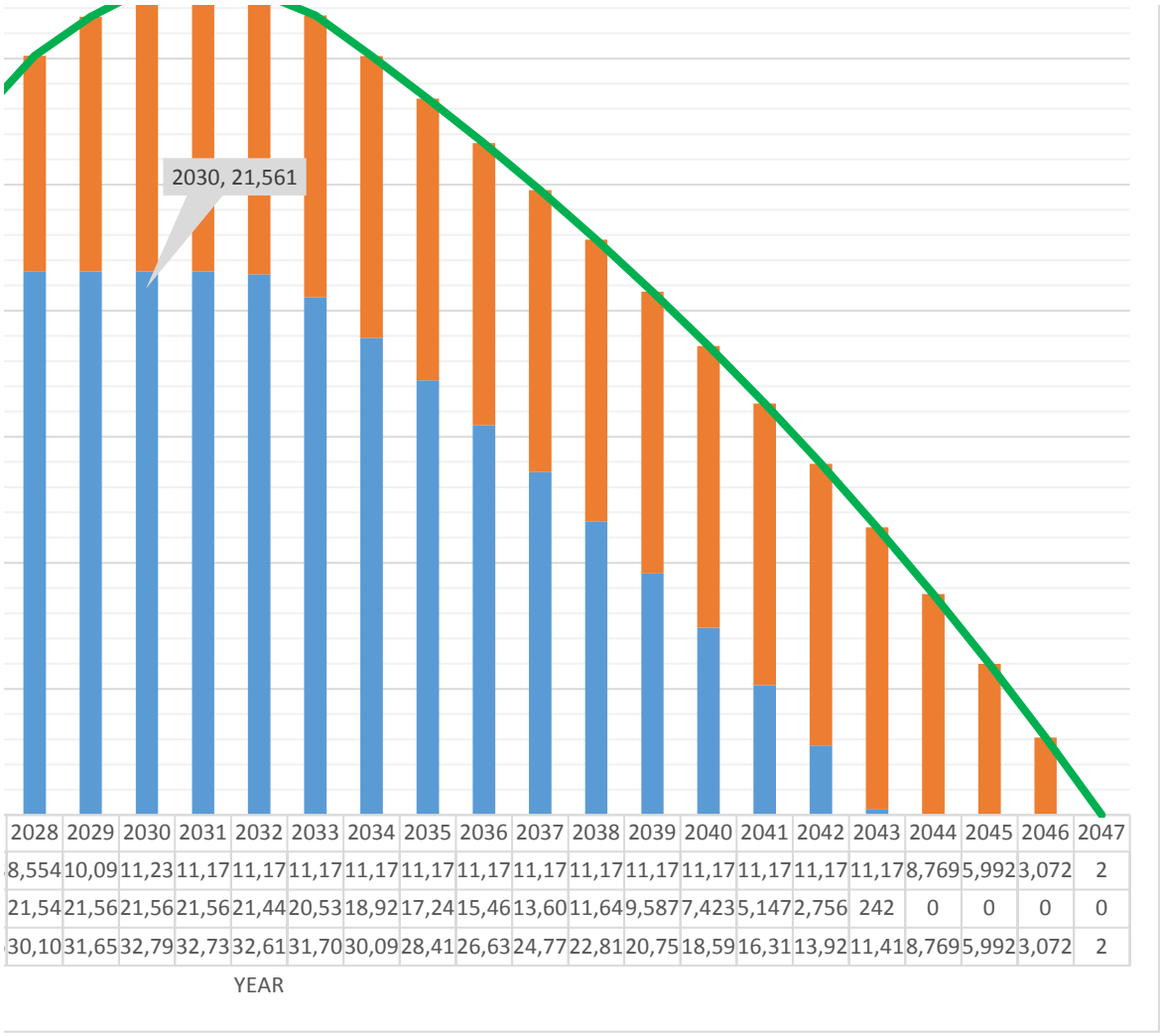


	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
	41,552	1,144	-68	-114	-914	-1,60	-1,68	-1,77	-1,86	-1,95	-2,05	-2,16	-2,27	-2,39	-2,51	-2,64	-2,77	-2,92	-3,06
	3 271	-217	-740	-778	-818	-859	-903	-950	-998	-1,04	-1,10	-1,15	-1,21	-1,28	-1,34	-1,41	-1,48	-1,56	-1,64
	031,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,769	5,992	3,072	2
	519,53	19,31	18,57	17,79	16,98	16,12	15,21	14,26	13,27	12,22	11,11	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1

CALENDAR YEAR

n of Debt (Principal and Interest)

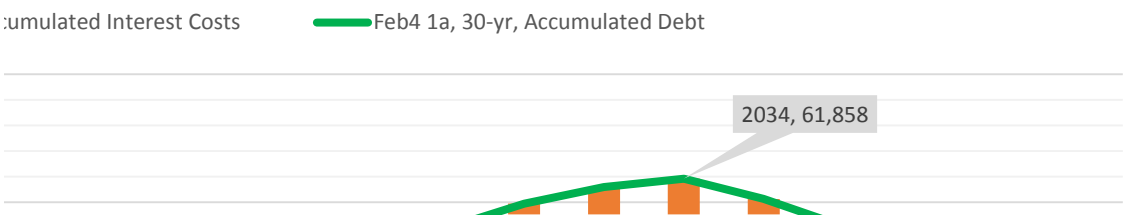




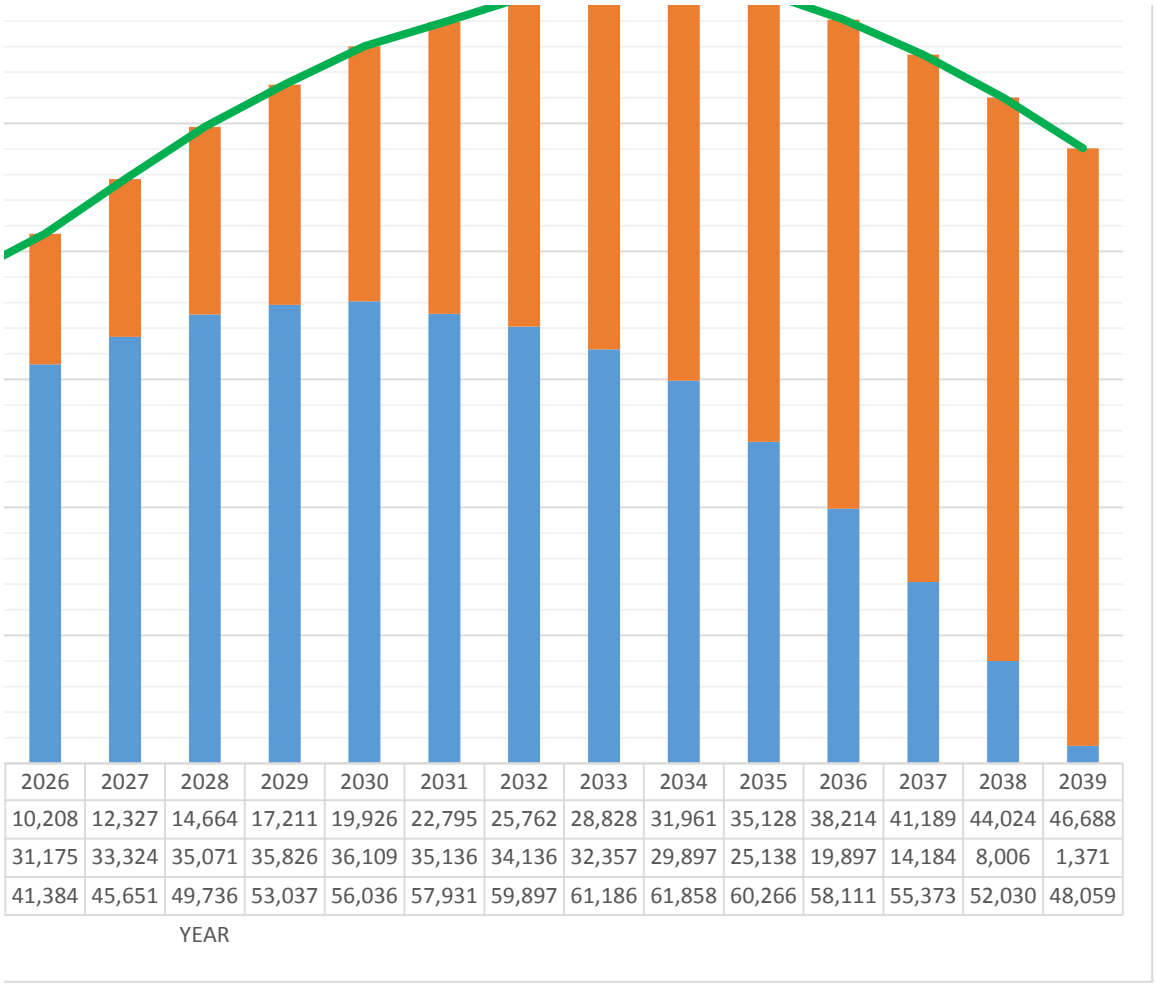
2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
8,554	10,09	11,23	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	8,769	5,992	3,072	2
21,54	21,56	21,56	21,56	21,44	20,53	18,92	17,24	15,46	13,60	11,64	9,587	7,423	5,147	2,756	242	0	0	0	0
30,10	31,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,769	5,992	3,072	2

YEAR

cumulated Total Interest Costs



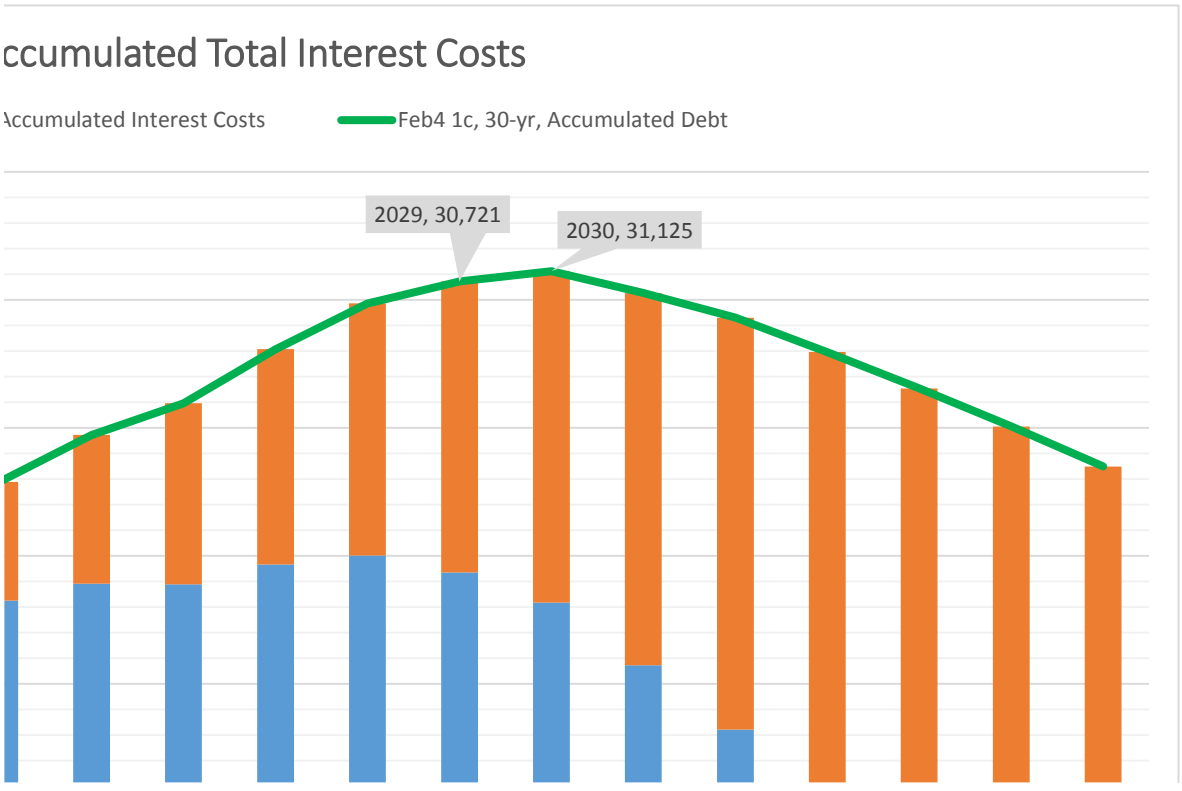
LIONS

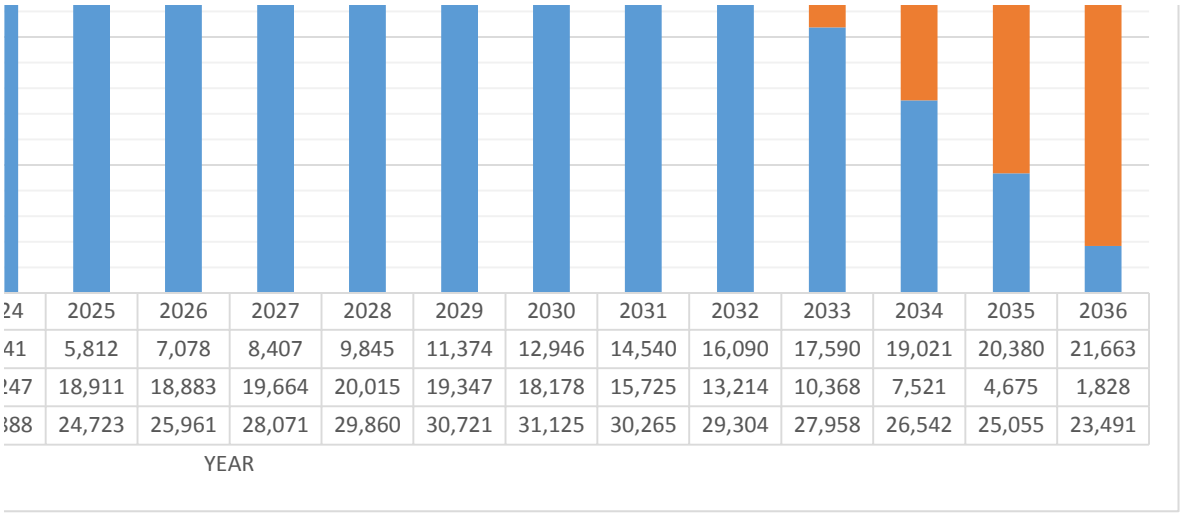


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

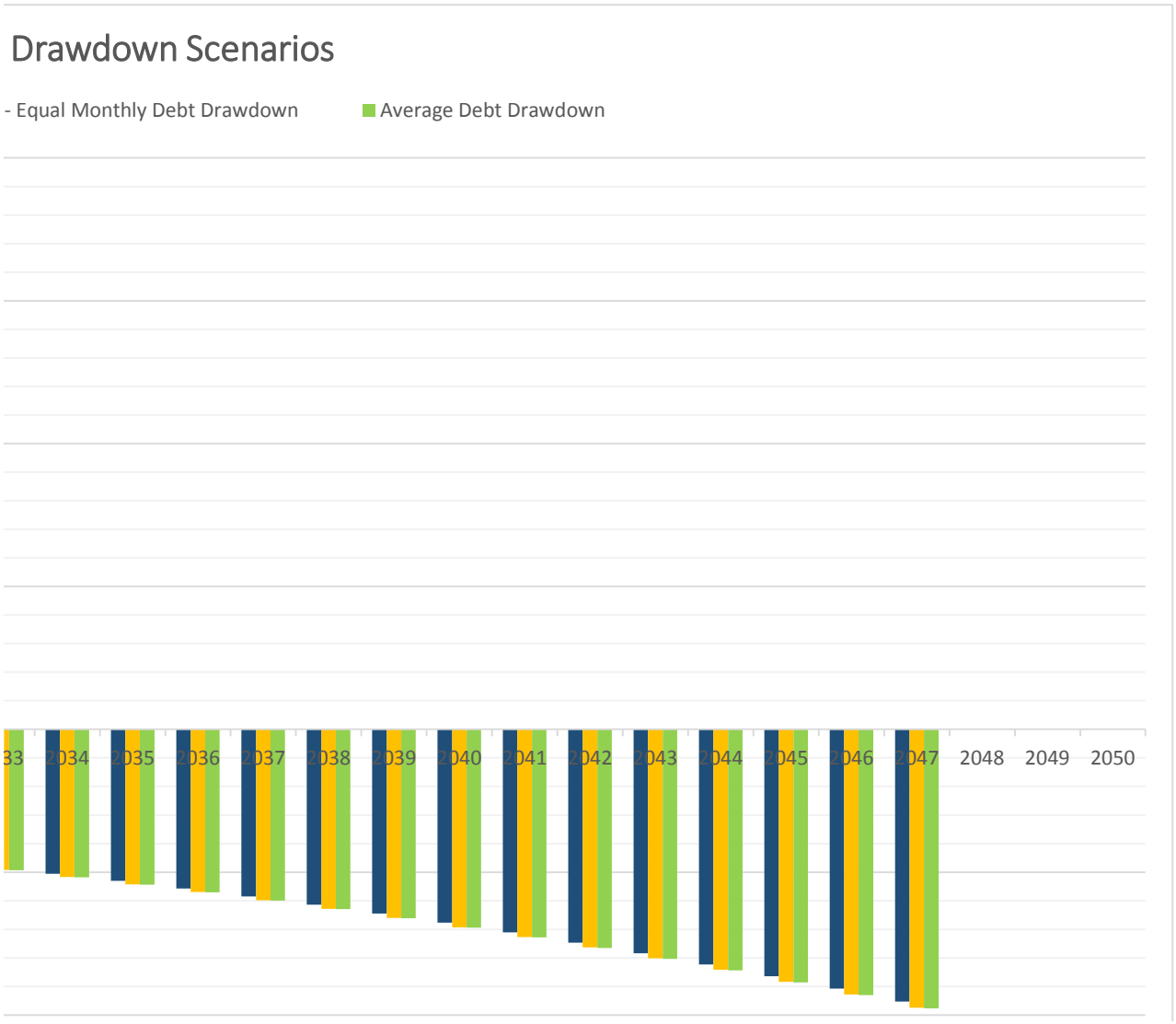
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





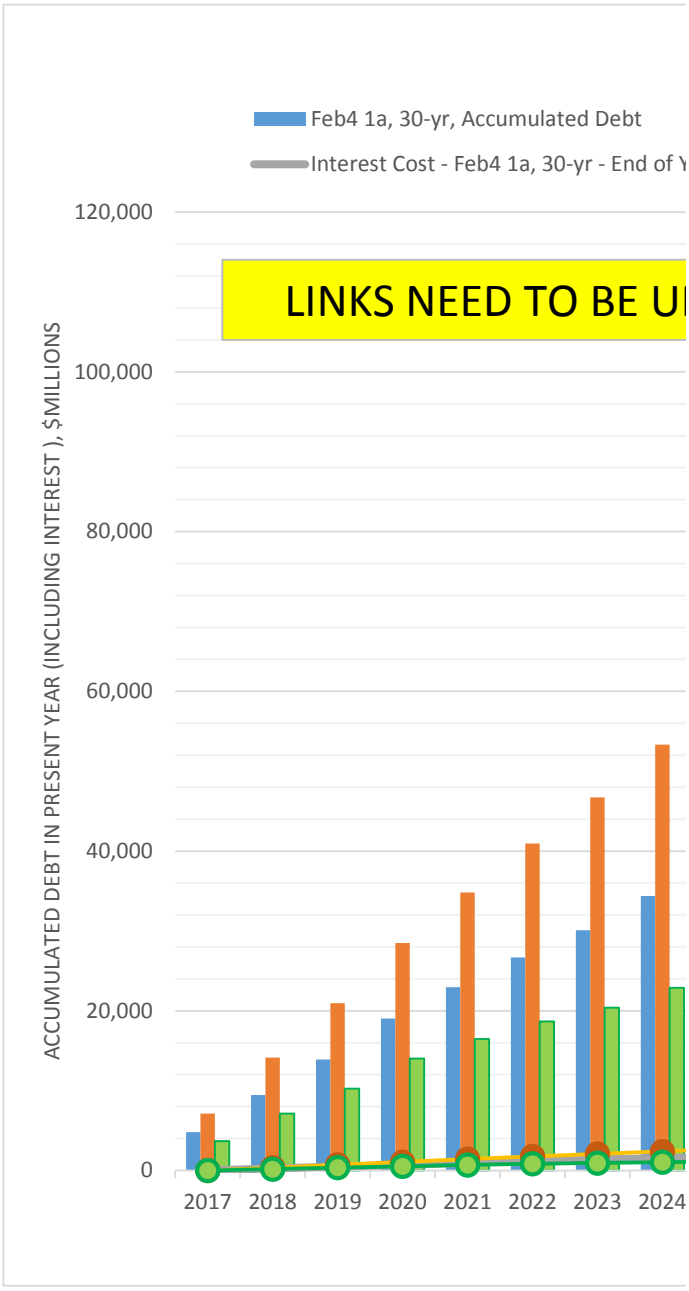
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

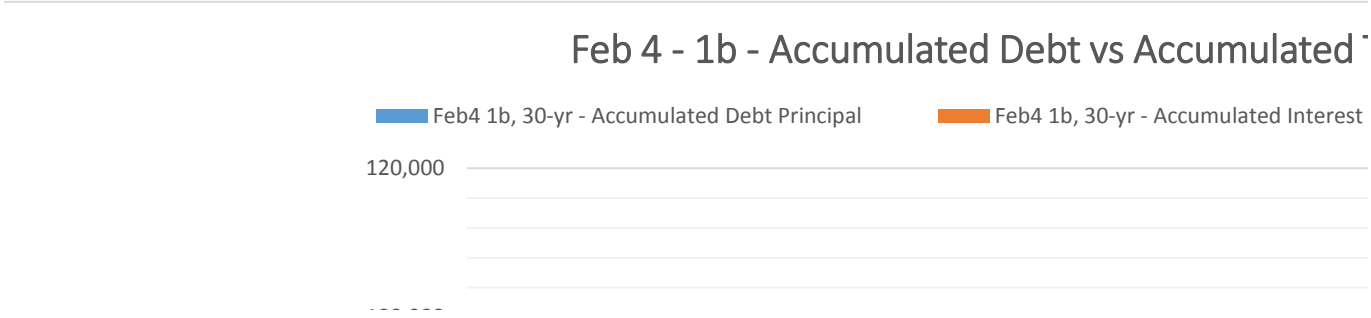
YEAR

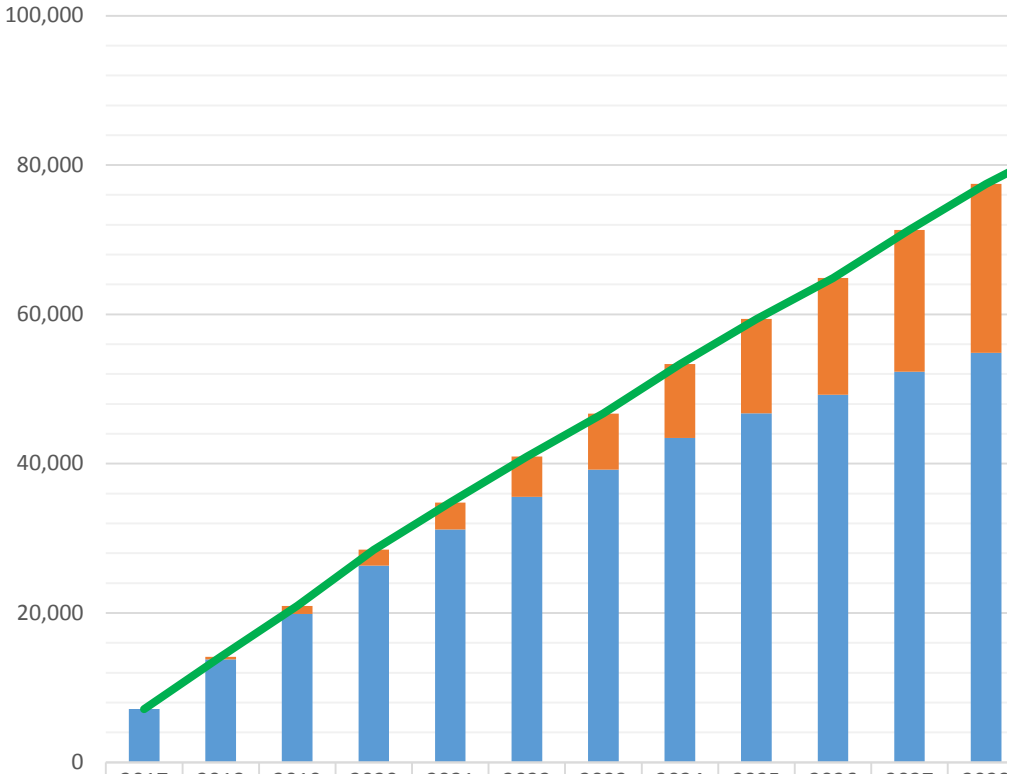


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate



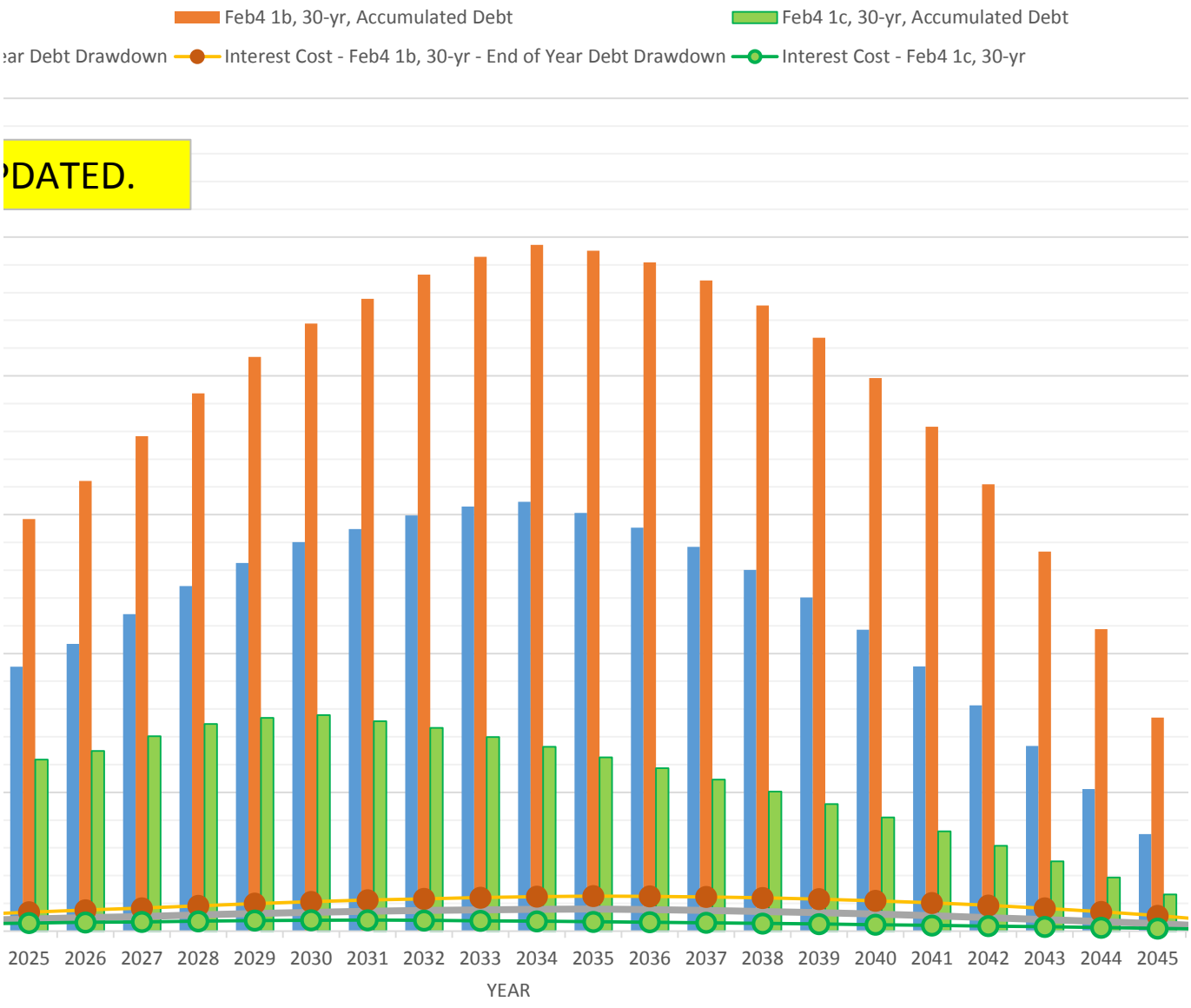

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000



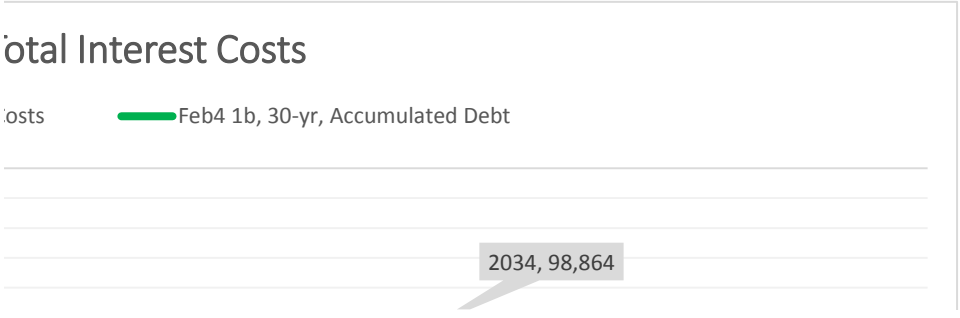
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

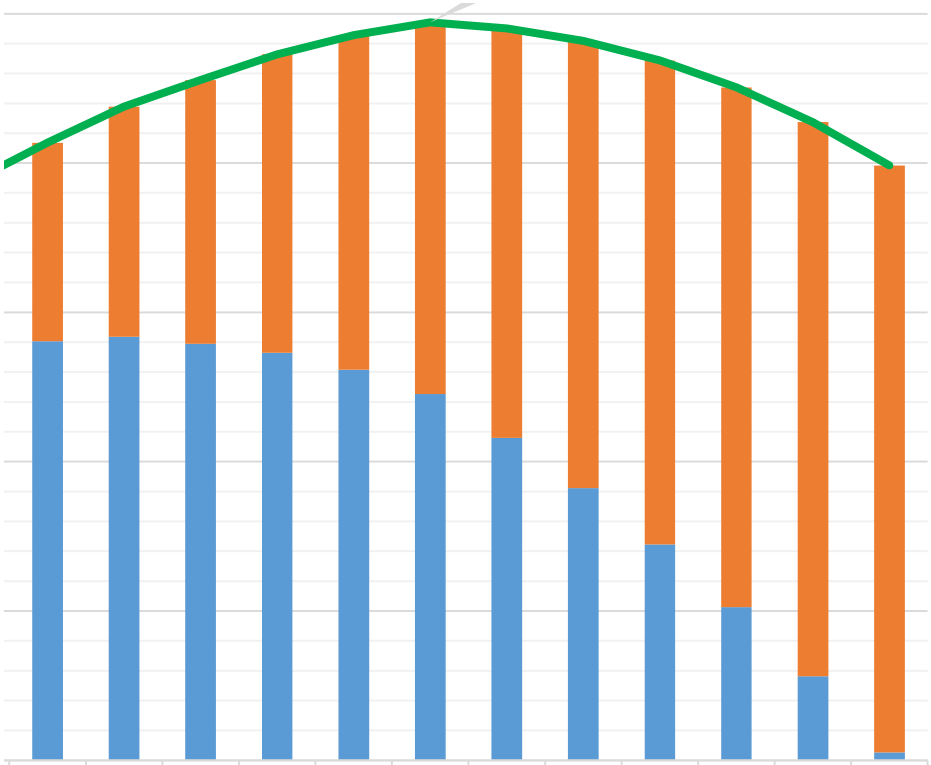
Y

Accumulated debt in present year, with annual interest costs



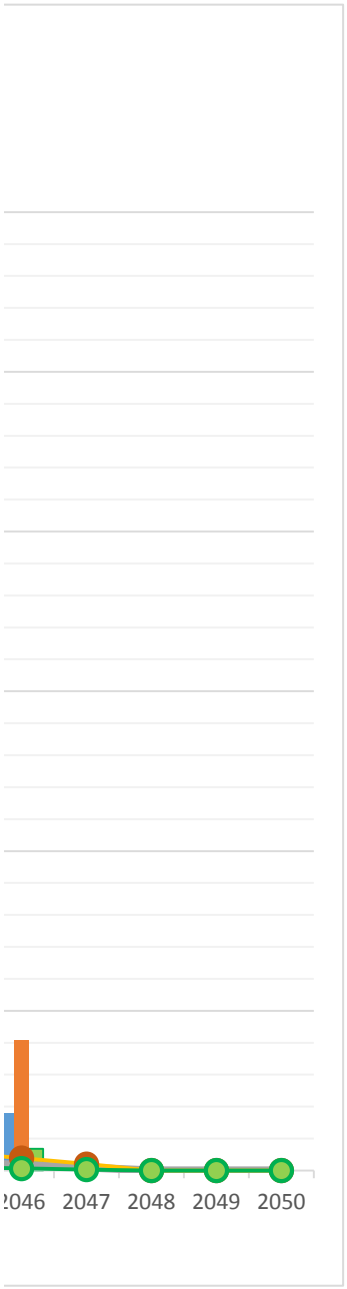
PDATED.


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864

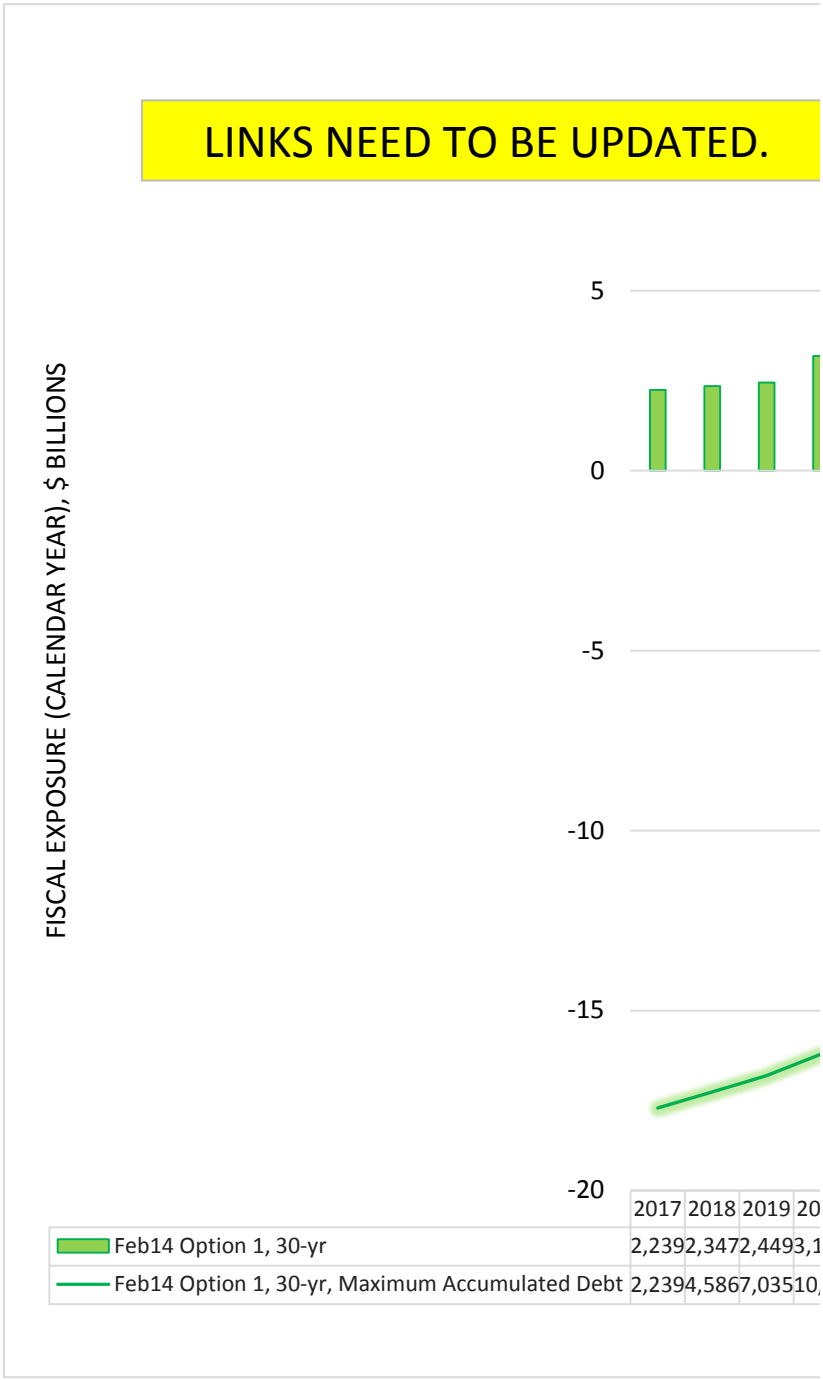


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



LINKS NEED TO BE UPDATED.



FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1b, 30-yr

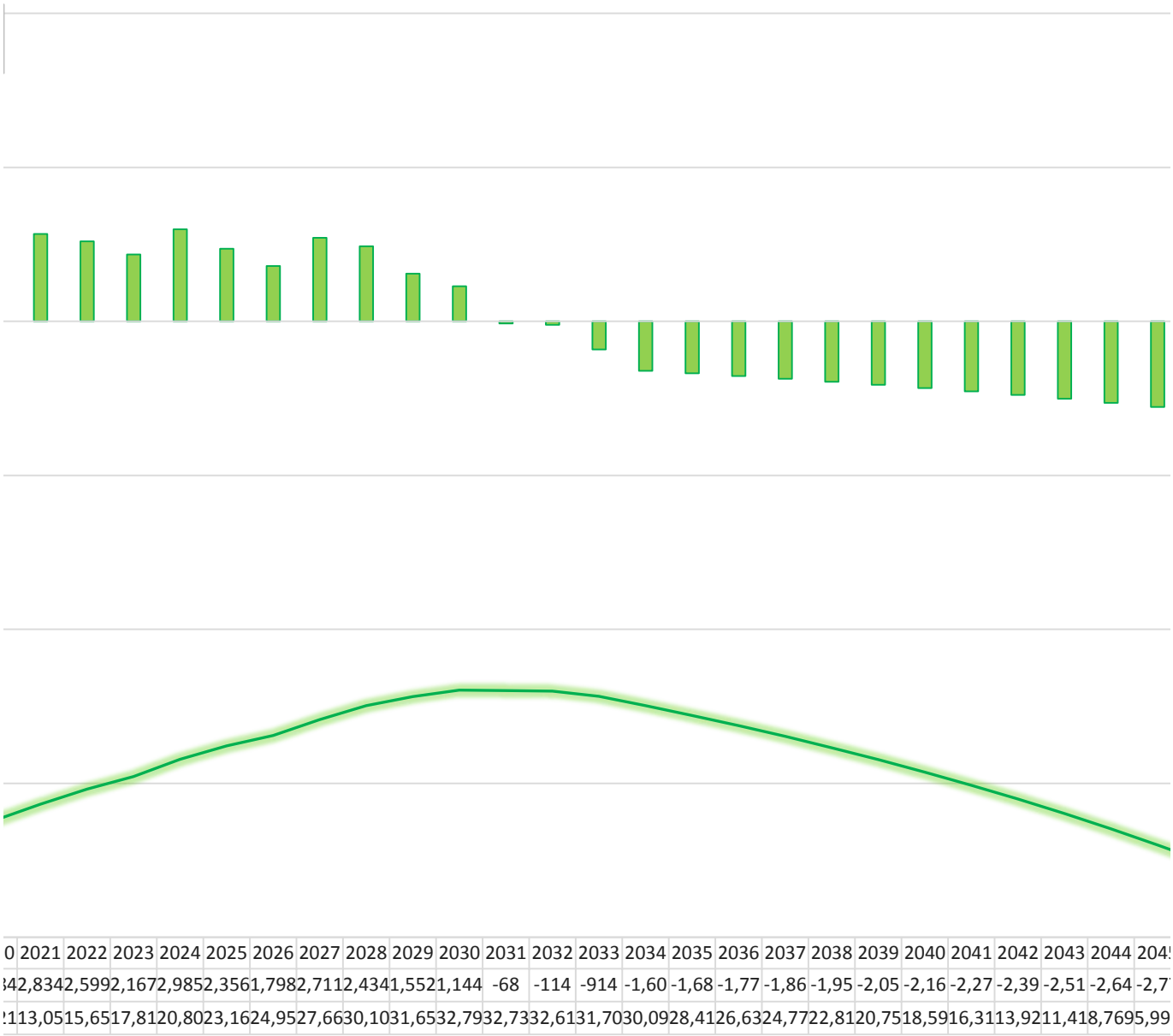
Feb4 1b, 30-yr,

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,

Feb 14 Deck - Option 1

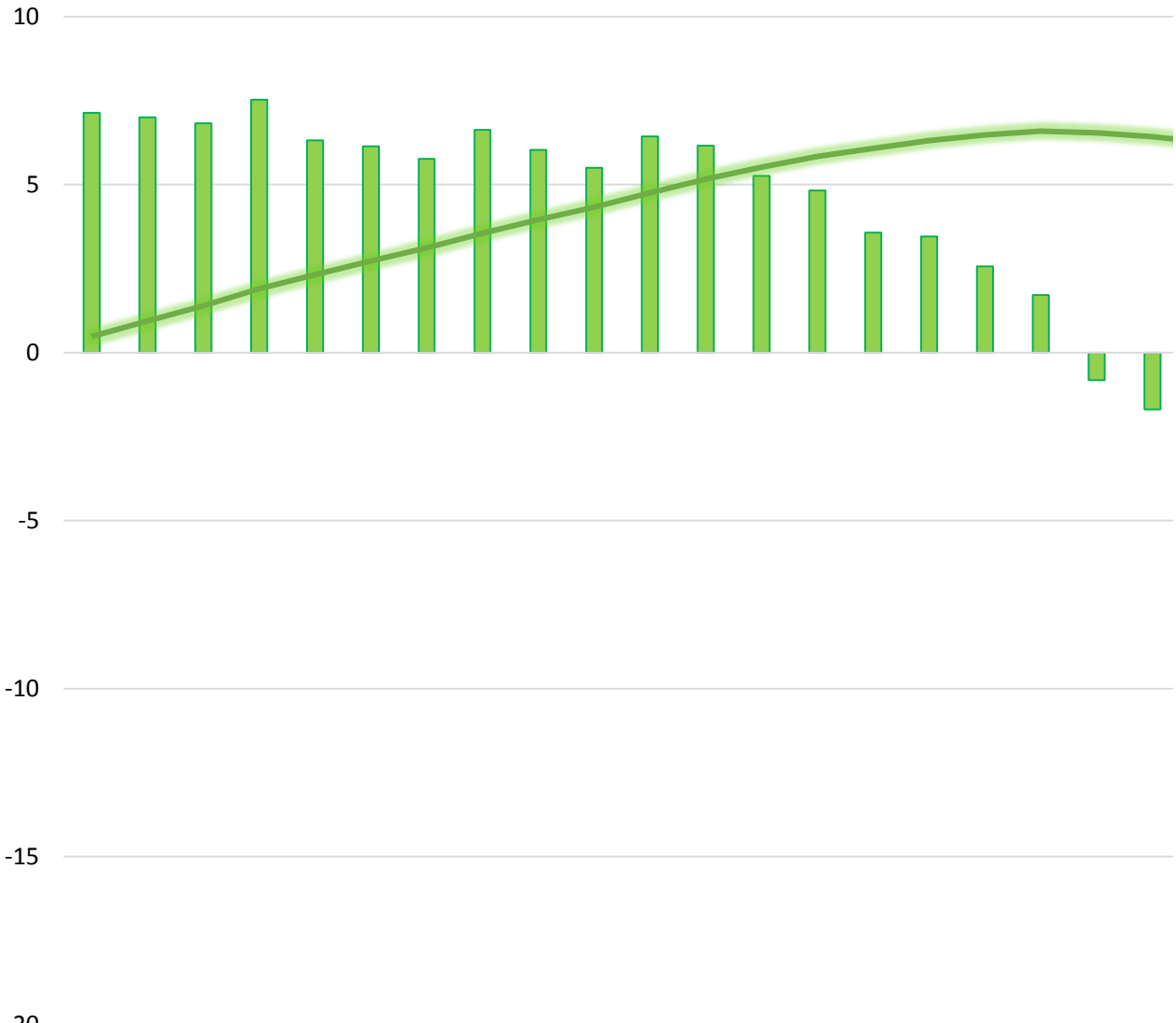


0	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	204
42	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,60	-1,68	-1,77	-1,86	-1,95	-2,05	-2,16	-2,27	-2,39	-2,51	-2,64	-2,7
113	05	15,65	17,81	20,80	23,16	24,95	27,66	30,10	31,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,76	95,99

CALENDAR YEAR

Feb 6 Deck - Scenario 1b - at 5.13% interest rat

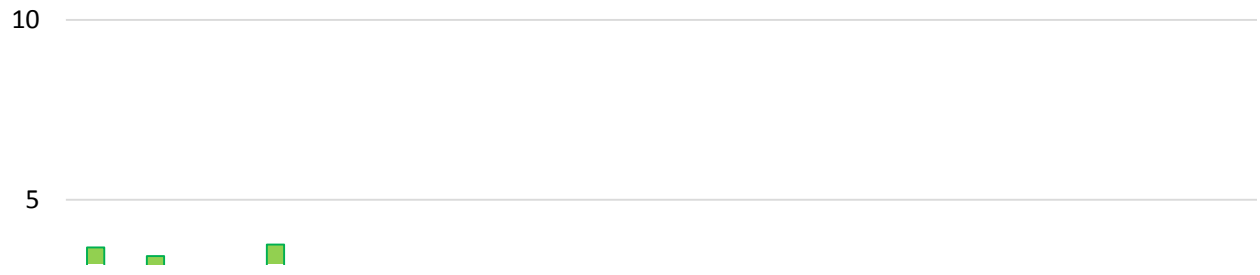
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

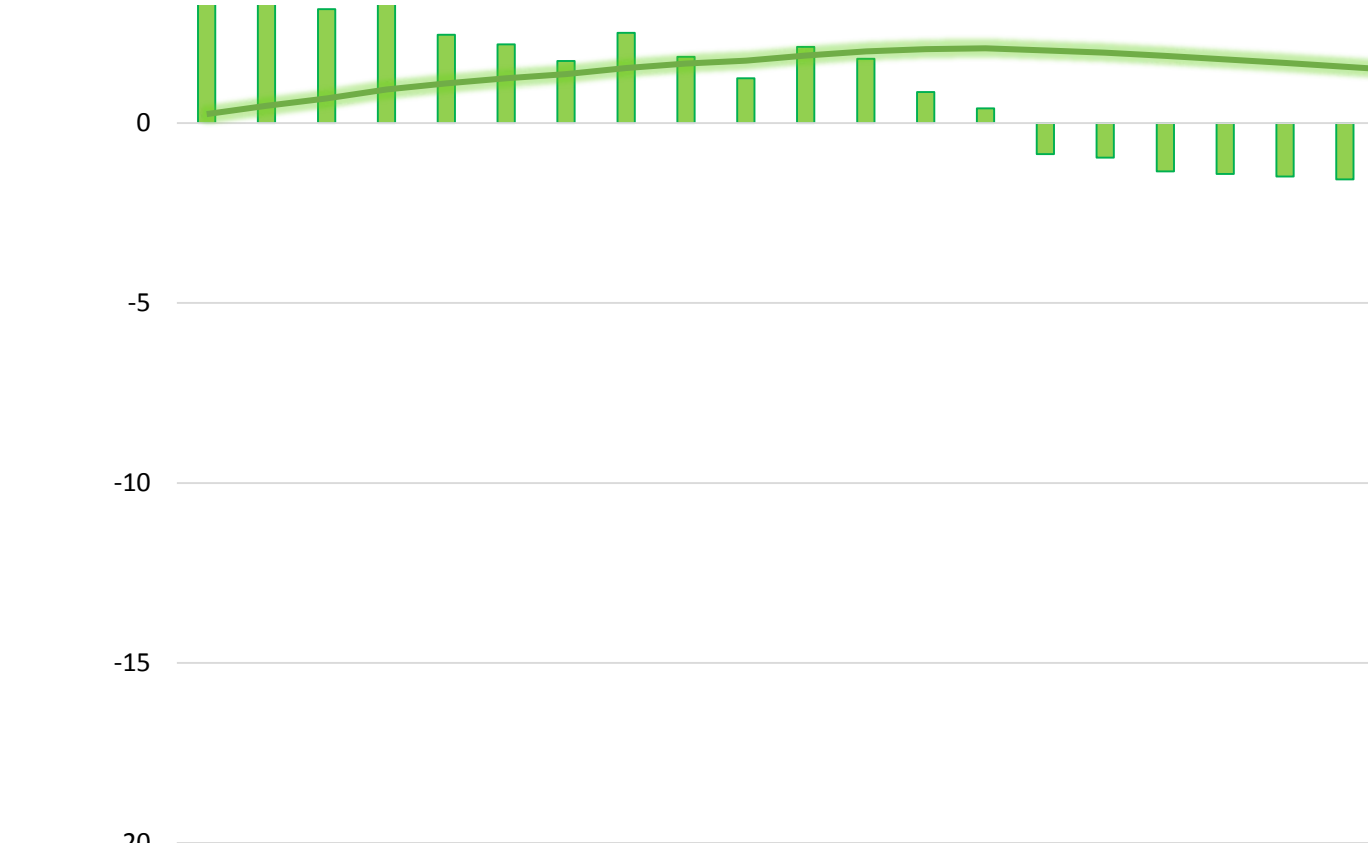


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

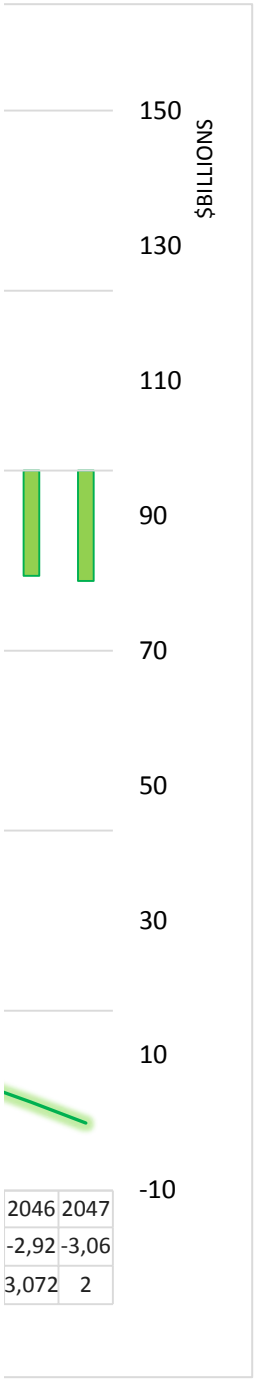
Feb 6 Deck - Scenario 1c - at 5.12% interest rat

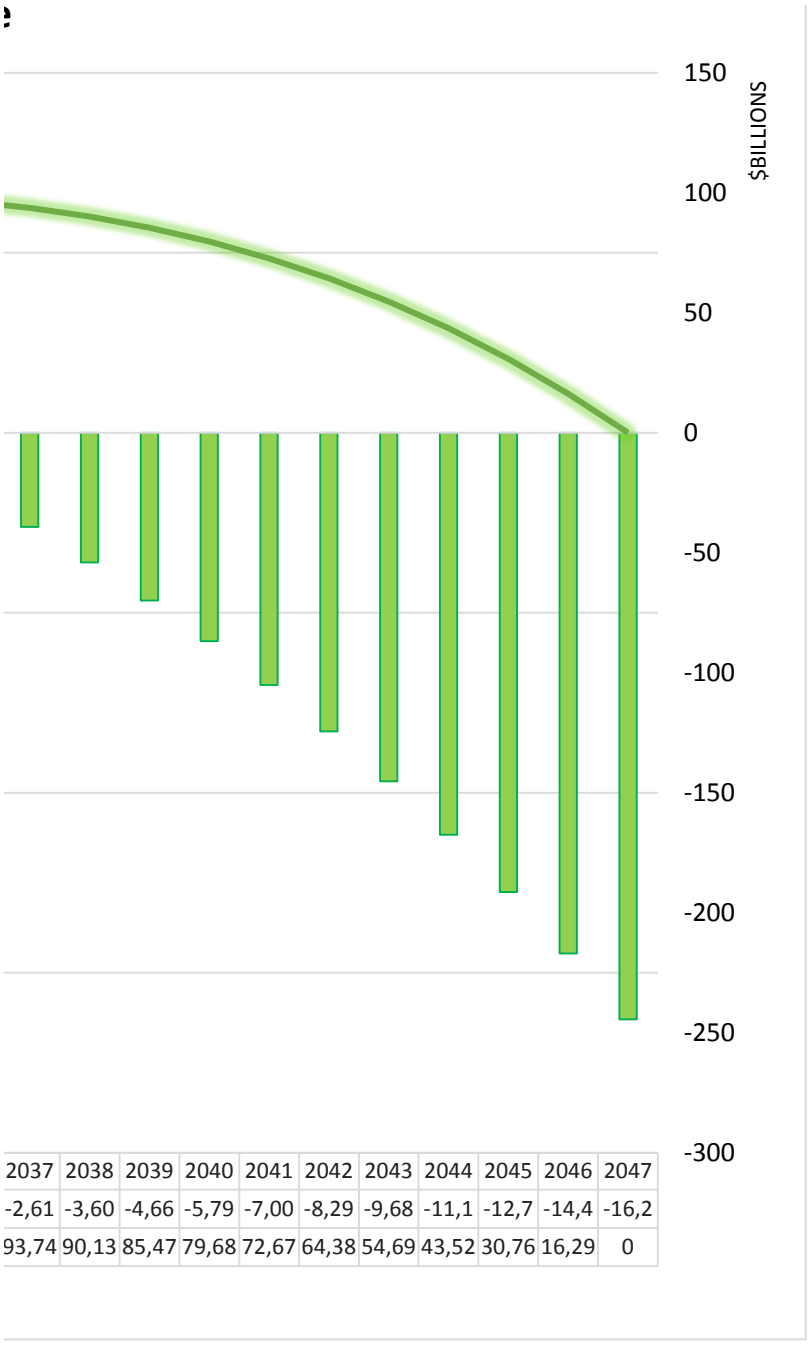




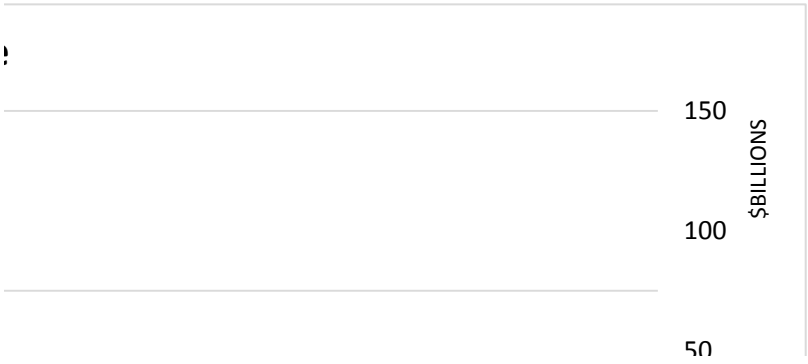
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

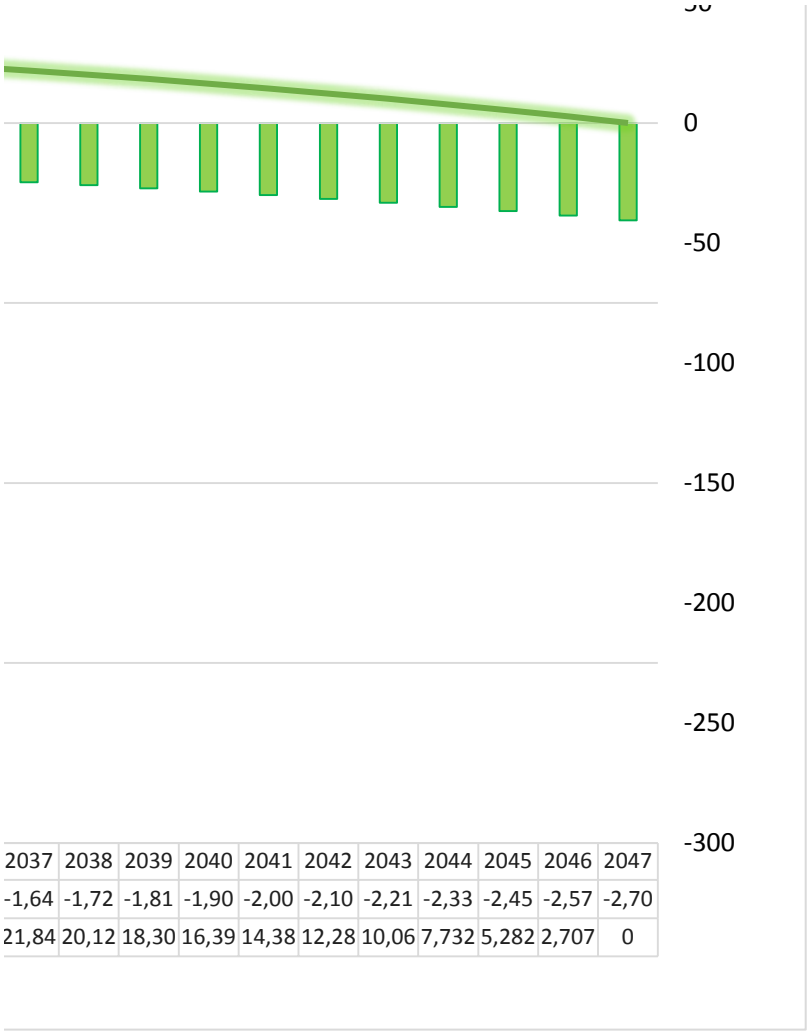
CALENDAR YEAR


150
130
110
90
70
50
30
10
-10
$BILLIONS
2046 2047
-2,92 -3,06
3,072 2



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest

IESO GA cost forecast + extrapolation

Scenario
Option 1
Bills Lowered 25%, RPP Only
Option 2
Bills Lowered 20%, RPP Only
Option 3
Bills Lowered 18%, contract/conservation refinancing, RPP Only

rate	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
Ratepayer GA Payment	9,856	9,602	9,338	9,344
Total Accumulated Debt ($ billion)	2,239	4,586	7,035	10,219
Ratepayer GA Payment	10,537	10,296	10,041	10,061
Accumulated debt in present year (including 5% interest,	1,559	3,177	4,851	7,207
Ratepayer GA Payment	10,648	10,303	10,186	10,873
Accumulated debt in present year (including 5% interest,	1,447	3,053	4,575	6,105
	12095.37	11834.681	11552.105	12168.428

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801
13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103
9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513
9,266	11,038	12,324	14,370	15,725	16,458	18,035	19,263
9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253
7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876
10843.555	10633.626	10243.432	11128.119	10527.018	10033.287	11042.844	10819.098

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389

9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615
31,654	32,799	32,730	32,616	31,702	30,097	28,411	26,638
10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117
19,534	19,317	18,577	17,799	16,981	16,122	15,218	14,268
9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837
18,843	19,521	20,007	20,312	20,325	19,755	18,549	17,050
10008.692	9721.4381	8654.4847	8819.9388	8238.0383	7756.4351	5662.3212	5388.8445

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627

8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853
24,774	22,815	20,756	18,591	16,316	13,924	11,410	8,767
6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355
13,270	12,221	11,118	9,958	8,740	7,458	6,112	4,696
7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712
15,464	13,694	12,062	10,556	9,143	7,810	6,672	5,928
5128.5761	4880.878	4645.1432	4420.7938	4207.28	4004.0783	3810.6908	3626.6435

2045	2046	2047	2048

3,451	3,285	3,126	2,975	2,831	2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
6,678	6,511	6,353	2,975	2,831	2,695
5,989	3,069	0	0	0	0
5,180	5,013	4,854	2,975	2,831	2,695
3,208	1,644	0	-	-	-
4,007	3,619	3,425	3,156	3,011	2,878
5,676	5,633	5,623	5,730	5,843	5,959
3451.485	3284.787	3126.139	2975.154	2831.461	2694.708

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

		5.00%	
Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb14_1_30yr

Option 1 - Bills Lowered 25%, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,239	2,347
Interest Portion	0	115

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	560	2,266
Interest Portion	-	29

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $33 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb14_2_30yr

Option 2 - Bills Lowered 20%, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,559	1,619
Interest Portion	0	80

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	390	1,574
Interest Portion	-	20

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb14_3_30yr

Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606
Interest Portion	0	74

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,487
Interest Portion	-	19

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	390 - 560	1,574 - 2,266

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	560	2266
Debt-Finance Global Adjustment Costs, Option 1a	390	1574
RRRP		
OESP – Enhance Benefit		162

Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**560**	**2506**
Total, B	390	1814

Proposed Program Total:	390 - 560	1,814 - 2,506

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Option 1
Option 2
Option 3

Assumes an inte

2019	2020	2021	2022
2,449	3,184	2,834	2,599
235	360	523	668

2018-19	2019-20	2020-21	2021-2022
2,372	2,633	3,096	2,775
145	266	401	559

2030.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,674	2,356	2,060	1,772
163	248	369	474

2018-19	2019-20	2020-21	2021-2022
1,632	1,844	2,282	1,988
100	184	278	395

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446
156	234	312	385

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429
95	176	254	331

2033.

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022
1,632 - 2,372	1,844 - 2,633	2,282 - 3,096	1,988 - 2,775

/1

2018-19[1]	2019-20[1]	2020-21[1]
2372	2633	3096
1632	1844	2282
225	279	323

60	60	60
18	18	18
2675	**2990**	**3497**
1935	2201	2683

1,935 - 2,675	2,201 - 2,990	2,683 - 3,497

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$21,561	$30,205	$32,799	occurs in Year 2030
$13,503	$17,883	$19,534	occurs in Year 2029
$12,862	$19,498	$20,326	occurs in Year 2033

erest rate of 5.00% (compounded monthly).

Tab Name		Total Accumulated Interest Costs
Feb14_1_30yr	$27,005	$34,278
Feb14_2_30yr	$15,940	$20,378
Feb14_3_30yr	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$27,005 to $34,278**
Option 2	$15,940 to $20,378**
Option 3	$17,202 to $22,028**

** With a higher interest rate, the amortization period extend beyond the 30-year forecast

ted period resulting in a remaining balance at the end of the 30-year period. For specifics, see details belo

w.

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,239	2,347	2,449	3,184	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,604	-1,687	-1,773	-1,864	-1,959	-2,059	-2,164	-2,275	-2,392	-2,514	-2,643	-2,778	-2,920	-3,069	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,292	2,403	2,507	3,260	2,902	2,660	2,219	3,056	2,412	1,841	2,776	2,492	1,589	1,171	-70	-117	-936	-1,643	-1,727	-1,815	-1,908	-2,005	-2,108	-2,216	-2,329	-2,448	-2,574	-2,705	-2,844	-2,989	-3,142	0	0	0
			53	56	58	76	67	62	52	71	56	43	64	58	37	27	-2	-3	-22	-38	-40	-42	-44	-47	-49	-51	-54	-57	-60	-63	-66	-69	-73	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,184	1,678	30,205
Equal Monthly Debt Drawdown	3,260	1,676	

		Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,799	2030	21,561
Equal Monthly Debt Drawdown	33,579		

Feb14 Option 1, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				26
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
a	Debt, Beginning of Year	0	2,239	4,586	7,035	10,219	13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103	31,655	32,799	32,731	32,617	31,703	30,098	28,412	26,639	24,775	22,816	20,757	18,593	16,318	13,926	11,412	8,769	5,992	3,072	2	3	3	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*115*	*235*	*360*	*523*	*668*	*801*	*912*	*1,064*	*1,185*	*1,277*	*1,416*	*1,540*	*1,620*	*1,678*	*1,675*	*1,669*	*1,622*	*1,540*	*1,454*	*1,363*	*1,268*	*1,167*	*1,062*	*951*	*835*	*712*	*584*	*449*	*307*	*157*	*0*	*0*	*0*	30,205
b	Additional GA Debt Drawdown, End of Year	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,239	4,586	7,035	10,219	13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103	31,655	32,799	32,731	32,617	31,703	30,098	28,412	26,639	24,775	22,816	20,757	18,593	16,318	13,926	11,412	8,769	5,992	3,072	2	3	3	3	
			FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,138	8,554	10,094	11,238	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	8,769	5,992	3,072	2	3	3	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,821	13,752	15,118	17,192	18,483	19,097	20,531	21,549	21,561	21,561	21,561	21,447	20,533	18,928	17,242	15,469	13,605	11,646	9,587	7,423	5,147	2,756	242	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,138	8,554	10,094	11,714	13,392	15,066	16,735	18,357	19,897	21,350	22,713	23,981	25,148	26,210	27,161	27,996	28,709	29,293	29,741	30,048	30,205				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,821	13,752	15,118	17,192	18,483	19,097	20,531	21,549	21,561	21,086	19,339	17,551	14,968	11,741	8,515	5,288	2,062	-1,164	-4,391	-7,617	-10,844	-14,070	-17,297	-20,523	-23,750	-26,976	-30,202				
Fiscal Exposure - End of Year Debt Drawdown		2,239	2,347	2,449	3,184	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,604	-1,687	-1,773	-1,864	-1,959	-2,059	-2,164	-2,275	-2,392	-2,514	-2,643	-2,778	-2,920	-3,069	0	0	0	

Feb14 Option 1, 30-yr — Equal Monthly Debt Drawdown

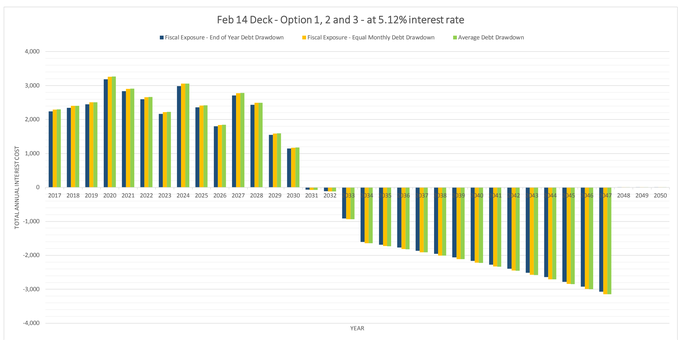
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,292	4,695	7,202	10,462	13,363	16,024	18,243	21,299	23,711	25,552	28,327	30,819	32,408	33,579	33,510	33,393	32,457	30,814	29,087	27,272	25,365	23,359	21,251	19,035	16,706	14,257	11,683	8,978	6,134	3,145	2	3	3	
1,676	*Interest Cost - Feb14 Option 1, 30-yr*	*53*	*170*	*293*	*436*	*590*	*730*	*852*	*983*	*1,120*	*1,228*	*1,341*	*1,473*	*1,577*	*1,647*	*1,676*	*1,672*	*1,647*	*1,584*	*1,500*	*1,411*	*1,319*	*1,221*	*1,118*	*1,010*	*897*	*778*	*653*	*521*	*383*	*237*	*84*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,292	4,695	7,202	10,462	13,363	16,024	18,243	21,299	23,711	25,552	28,327	30,819	32,408	33,579	33,510	33,393	32,457	30,814	29,087	27,272	25,365	23,359	21,251	19,035	16,706	14,257	11,683	8,978	6,134	3,145	2	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,292	2,403	2,507	3,260	2,902	2,660	2,219	3,056	2,412	1,841	2,776	2,492	1,589	1,171	-70	-117	-936	-1,643	-1,727	-1,815	-1,908	-2,005	-2,108	-2,216	-2,329	-2,448	-2,574	-2,705	-2,844	-2,989	-3,142	0	0	0	
	Monthly Drawdown	187	186	185	235	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	-	-	-	
	FV of Monthly Drawdown at 5%	2,292	2,285	2,267	2,891	2,366	1,977	1,399	2,123	1,322	628	1,468	1,043	12	(487)	(1,788)	(1,831)	(2,644)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	-	-	-	
	Annual Interest Cost on New Drawdowns	53	53	53	67	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	-	-	-	
	Annual Interest Cost on Opening Balance	-	117	240	368	535	684	820	933	1,090	1,213	1,307	1,449	1,577	1,658	1,718	1,714	1,708	1,661	1,577	1,488	1,395	1,298	1,195	1,087	974	855	729	598	459	314	161	0	0	0	
	Total Annual Interest Cost	53	170	293	436	590	730	852	983	1,120	1,228	1,341	1,473	1,577	1,647	1,676	1,672	1,647	1,584	1,500	1,411	1,319	1,221	1,118	1,010	897	778	653	521	383	237	84	0	0	0	

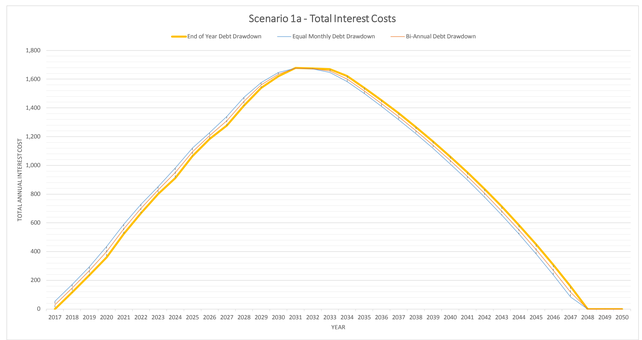
Feb14 Option 1, 30-yr — Bi-Annual Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,268	4,645	7,125	10,349	13,220	15,852	18,047	21,070	23,456	25,277	28,023	30,488	32,060	33,219	33,150	33,034	32,108	30,483	28,775	26,980	25,092	23,108	21,023	18,831	16,526	14,104	11,558	8,882	6,068	3,111	2	3	3	
	Interest Cost - Feb14 Option 1, 30-yr	*29*	*145*	*266*	*401*	*559*	*701*	*828*	*950*	*1,095*	*1,208*	*1,312*	*1,447*	*1,560*	*1,634*	*1,677*	*1,673*	*1,657*	*1,601*	*1,518*	*1,431*	*1,339*	*1,242*	*1,141*	*1,034*	*922*	*804*	*680*	*550*	*413*	*269*	*118*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,268	4,645	7,125	10,349	13,220	15,852	18,047	21,070	23,456	25,277	28,023	30,488	32,060	33,219	33,150	33,034	32,108	30,483	28,775	26,980	25,092	23,108	21,023	18,831	16,526	14,104	11,558	8,882	6,068	3,111	2	3	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,268	2,377	2,480	3,225	2,870	2,632	2,195	3,024	2,386	1,821	2,746	2,465	1,572	1,159	-69	-116	-926	-1,625	-1,708	-1,796	-1,887	-1,984	-2,085	-2,192	-2,304	-2,422	-2,546	-2,676	-2,813	-2,957	-3,109	0	0	0	
	Bi-Annual Drawdown	1,119	1,116	1,107	1,412	1,156	965	683	1,037	646	307	717	509	6	(238)	(873)	(894)	(1,291)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,268	2,261	2,243	2,860	2,341	1,955	1,384	2,100	1,308	621	1,453	1,031	12	(481)	(1,769)	(1,812)	(2,616)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	-	-	-	
	Annual Interest Cost on New Drawdowns	29	29	28	36	30	25	17	27	17	8	18	13	0	(6)	(22)	(23)	(33)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	-	-	-	
	Annual Interest Cost on Opening Balance	-	116	238	365	529	676	811	923	1,078	1,200	1,293	1,434	1,560	1,640	1,700	1,696	1,690	1,643	1,560	1,472	1,380	1,284	1,182	1,076	963	846	722	591	454	310	159	0	0	0	
	Total Annual Interest Cost	29	145	266	401	559	701	828	950	1,095	1,208	1,312	1,447	1,560	1,634	1,677	1,673	1,657	1,601	1,518	1,431	1,339	1,242	1,141	1,034	922	804	680	550	413	269	118	0	0	0	

Feb14 Option 1, 30-yr — Average Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,296	4,703	7,215	10,480	13,387	16,052	18,275	21,336	23,752	25,596	28,377	30,873	32,465	33,638	33,568	33,451	32,514	30,868	29,138	27,320	25,409	23,400	21,288	19,068	16,735	14,282	11,704	8,994	6,145	3,150	2	3	3	
	Interest Cost - Feb14 Option 1, 30-yr	*57*	*175*	*297*	*441*	*595*	*734*	*856*	*988*	*1,125*	*1,231*	*1,346*	*1,478*	*1,580*	*1,649*	*1,676*	*1,672*	*1,645*	*1,581*	*1,497*	*1,408*	*1,315*	*1,217*	*1,115*	*1,007*	*893*	*774*	*648*	*516*	*378*	*232*	*79*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,296	4,703	7,215	10,480	13,387	16,052	18,275	21,336	23,752	25,596	28,377	30,873	32,465	33,638	33,568	33,451	32,514	30,868	29,138	27,320	25,409	23,400	21,288	19,068	16,735	14,282	11,704	8,994	6,145	3,150	2	3	3	3	
Fiscal Exposure - Average Debt Drawdown		2,296	2,407	2,512	3,265	2,907	2,665	2,223	3,062	2,416	1,844	2,780	2,496	1,592	1,173	-70	-117	-937	-1,646	-1,730	-1,818	-1,911	-2,009	-2,112	-2,220	-2,333	-2,453	-2,578	-2,710	-2,849	-2,995	-3,148	0	0	0	





Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,559	1,619	1,674	2,356	2,060	1,772	1,286	2,046	1,355	733	1,578	1,228	271	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,415	-1,488	-1,564	-1,644	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0	
			37	38	40	56	49	42	31	49	32	17	38	29	6	-5	-18	-19	-19	-20	-21	-23	-24	-25	-26	-28	-29	-30	-32	-34	-35	-37	-39	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,356	999	17,883
Equal Monthly Debt Drawdown	2,412	994	

	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,534	2029	13,503
Equal Monthly Debt Drawdown	19,999		

Feb14 Option 1, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP Only																																			26
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
a — Debt, Beginning of Year	0	1,559	3,177	4,851	7,207	9,266	11,039	12,324	14,370	15,725	16,458	18,035	19,264	19,534	19,317	18,577	17,799	16,982	16,122	15,219	14,269	13,271	12,222	11,119	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1	2	2	
c = a*5% — *Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*80*	*163*	*248*	*369*	*474*	*565*	*631*	*735*	*805*	*842*	*923*	*986*	*999*	*988*	*950*	*911*	*869*	*825*	*779*	*730*	*679*	*625*	*569*	*510*	*447*	*382*	*313*	*240*	*164*	*84*	*0*	*0*	*0*	17,883
b — Additional GA Debt Drawdown, End of Year	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	1,559	3,177	4,851	7,207	9,266	11,039	12,324	14,370	15,725	16,458	18,035	19,264	19,534	19,317	18,577	17,799	16,982	16,122	15,219	14,269	13,271	12,222	11,119	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1	2	2	2	
		TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	
Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	7,818	7,078	6,300	5,483	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,697	3,210	1,646	1	2	2	2	
Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,842	12,461	12,390	13,125	13,431	12,716	11,499	11,499	11,499	11,499	11,499	10,595	9,646	8,648	7,598	6,495	5,336	4,117	2,836	1,490	0	0	0	0	0	0	0	
Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	7,818	8,806	9,757	10,667	11,536	12,361	13,140	13,870	14,549	15,174	15,743	16,252	16,700	17,081	17,394	17,634	17,798	17,883				
Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,842	12,461	12,390	13,125	13,431	12,716	11,499	9,771	8,042	6,314	4,586	2,858	1,129	-599	-2,327	-4,055	-5,784	-7,512	-9,240	-10,968	-12,696	-14,425	-16,153	-17,881				
Fiscal Exposure - End of Year Debt Drawdown	1,559	1,619	1,674	2,356	2,060	1,772	1,286	2,046	1,355	733	1,578	1,228	271	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,415	-1,488	-1,564	-1,644	0	0	0	

Feb14 Option 1, 30-yr — Equal Monthly Debt Drawdown

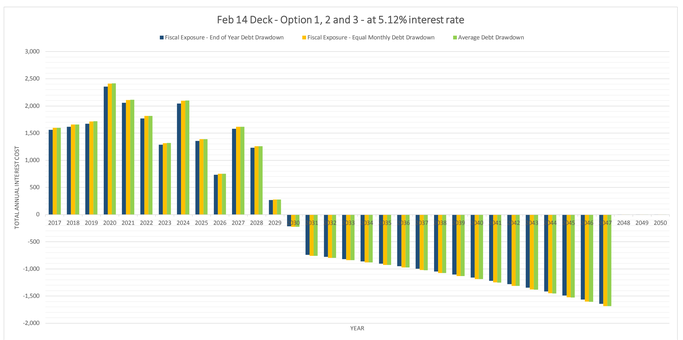
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
Option 2 - Bills Lowered 20%, RPP Only																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
Debt, Beginning of Year	0	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,019	18,223	17,385	16,506	15,581	14,609	13,587	12,512	11,383	10,196	8,948	7,637	6,258	4,809	3,286	1,685	2	2	2	
994 — *Interest Cost - Feb14 Option 1, 30-yr*	*37*	*118*	*202*	*304*	*418*	*516*	*595*	*679*	*767*	*822*	*880*	*952*	*992*	*994*	*971*	*932*	*891*	*848*	*803*	*756*	*706*	*654*	*599*	*541*	*481*	*417*	*350*	*279*	*205*	*127*	*45*	*0*	*0*	*0*	17,883
Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,019	18,223	17,385	16,506	15,581	14,609	13,587	12,512	11,383	10,196	8,948	7,637	6,258	4,809	3,286	1,685	2	2	2	2	
Fiscal Exposure - Equal Monthly Debt Drawdown	1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0	
Monthly Drawdown	130	128	126	176	141	108	60	118	52	(6)	61	25	(60)	(101)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	-	-	-	
FV of Monthly Drawdown at 5%	1,596	1,575	1,548	2,157	1,731	1,329	738	1,449	635	(74)	753	313	(732)	(1,246)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	-	-	-	
Annual Interest Cost on New Drawdowns	37	37	36	50	40	31	17	34	15	(2)	17	7	(17)	(29)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	-	-	-	
Annual Interest Cost on Opening Balance	-	82	166	254	377	485	578	646	753	824	862	945	1,009	1,023	1,012	973	932	889	844	797	747	695	640	582	522	458	391	320	246	168	86	0	0	0	
Total Annual Interest Cost	37	118	202	304	418	516	595	679	767	822	880	952	992	994	971	932	891	848	803	756	706	654	599	541	481	417	350	279	205	127	45	0	0	0	

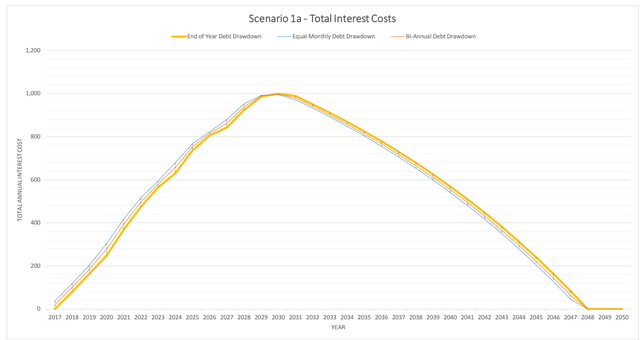
Feb14 Option 1, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
Option 2 - Bills Lowered 20%, RPP Only																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
Debt, Beginning of Year	0	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,815	18,027	17,199	16,328	15,413	14,452	13,441	12,378	11,261	10,087	8,852	7,555	6,191	4,758	3,251	1,667	1	2	2	
Interest Cost - Feb14 Option 1, 30-yr	*20*	*100*	*184*	*278*	*395*	*497*	*581*	*657*	*753*	*814*	*862*	*938*	*989*	*997*	*979*	*940*	*900*	*858*	*813*	*766*	*717*	*666*	*611*	*554*	*494*	*431*	*364*	*295*	*221*	*144*	*63*	*0*	*0*	*0*	17,883
Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,815	18,027	17,199	16,328	15,413	14,452	13,441	12,378	11,261	10,087	8,852	7,555	6,191	4,758	3,251	1,667	1	2	2	2	
Fiscal Exposure - Bi-Annual Debt Drawdown	1,579	1,639	1,696	2,386	2,086	1,795	1,302	2,072	1,372	742	1,598	1,244	274	-220	-749	-788	-828	-870	-915	-962	-1,011	-1,063	-1,117	-1,174	-1,234	-1,297	-1,364	-1,434	-1,507	-1,584	-1,665	0	0	0	
Bi-Annual Drawdown	779	769	756	1,054	845	649	361	708	310	(36)	368	153	(358)	(608)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	-	-	-	
FV of Bi-Annual Drawdown at 5%	1,579	1,558	1,531	2,134	1,713	1,315	730	1,433	628	(73)	745	310	(724)	(1,232)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	-	-	-	
Annual Interest Cost on New Drawdowns	20	20	19	27	22	17	9	18	8	(1)	9	4	(9)	(16)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	-	-	-	
Annual Interest Cost on Opening Balance	-	81	165	251	373	480	572	639	745	815	853	935	998	1,012	1,001	963	922	880	835	789	739	688	633	576	516	453	387	317	243	166	85	0	0	0	
Total Annual Interest Cost	20	100	184	278	395	497	581	657	753	814	862	938	989	997	979	940	900	858	813	766	717	666	611	554	494	431	364	295	221	144	63	0	0	0	

Feb14 Option 1, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP Only																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
Debt, Beginning of Year	0	1,599	3,258	4,975	7,391	9,504	11,321	12,640	14,738	16,128	16,879	18,497	19,757	20,034	19,811	19,052	18,254	17,416	16,535	15,608	14,634	13,610	12,534	11,403	10,214	8,964	7,650	6,269	4,818	3,292	1,688	2	2	2	
Interest Cost - Feb14 Option 1, 30-yr	*40*	*121*	*205*	*308*	*421*	*519*	*598*	*683*	*770*	*823*	*882*	*954*	*992*	*994*	*969*	*931*	*890*	*847*	*802*	*754*	*704*	*652*	*597*	*539*	*478*	*414*	*347*	*277*	*202*	*124*	*42*	*0*	*0*	*0*	17,883
Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,599	3,258	4,975	7,391	9,504	11,321	12,640	14,738	16,128	16,879	18,497	19,757	20,034	19,811	19,052	18,254	17,416	16,535	15,608	14,634	13,610	12,534	11,403	10,214	8,964	7,650	6,269	4,818	3,292	1,688	2	2	2	2	
Fiscal Exposure - Average Debt Drawdown	1,599	1,660	1,717	2,416	2,112	1,817	1,319	2,098	1,390	751	1,618	1,260	277	-223	-759	-798	-839	-881	-927	-974	-1,024	-1,076	-1,131	-1,189	-1,250	-1,314	-1,381	-1,452	-1,526	-1,604	-1,686	0	0	0	





Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_3_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	
			34	38	36	36	34	34	35	36	36	35	35	34	23	16	12	7	0	-14	-29	-36	-38	-42	-39	-36	-34	-32	-27	-18	-6	-1	0	3	3	3	142

		Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	1,606		1,040	19,498
Equal Monthly Debt Drawdown	1,644		1,040	

	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	20,326	2033	12,862
Equal Monthly Debt Drawdown	20,809		

Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
a	Debt, Beginning of Year	0	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*74*	*156*	*234*	*312*	*385*	*459*	*534*	*612*	*690*	*766*	*842*	*915*	*964*	*999*	*1,024*	*1,039*	*1,040*	*1,011*	*949*	*872*	*791*	*701*	*617*	*540*	*468*	*400*	*341*	*303*	*290*	*288*	*288*	*293*	*299*	19,498
b	Additional GA Debt Drawdown, End of Year	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,430	7,736	7,749	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,577	12,577	12,577	12,577	11,371	9,872	8,285	6,516	4,884	3,378	1,966	633	-506	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,943	8,967	10,006	11,046	12,057	13,006	13,878	14,669	15,370	15,987	16,527	16,995	17,395	17,736	18,040	18,330	18,618				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,064	11,345	10,319	8,710	6,493	4,045	1,586	-974	-3,307	-5,431	-7,383	-9,184	-10,721	-11,807	-12,362	-12,696	-12,994				
Fiscal Exposure - End of Year Debt Drawdown		1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	

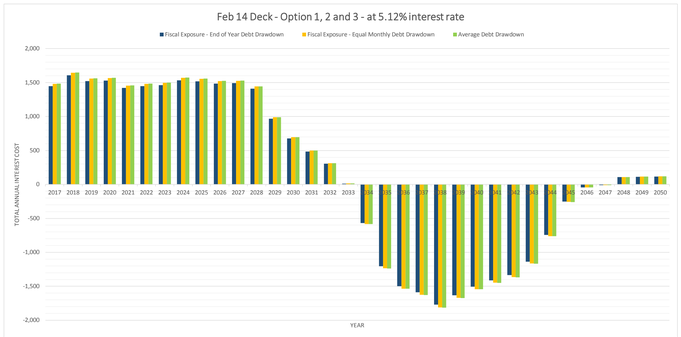
Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	
1,040	*Interest Cost - Feb14 Option 1, 30-yr*	*34*	*112*	*192*	*270*	*346*	*420*	*494*	*570*	*649*	*726*	*802*	*876*	*938*	*980*	*1,010*	*1,031*	*1,040*	*1,026*	*982*	*913*	*835*	*749*	*662*	*581*	*507*	*436*	*373*	*324*	*297*	*289*	*288*	*290*	*296*	*302*	19,640
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	6,102	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	

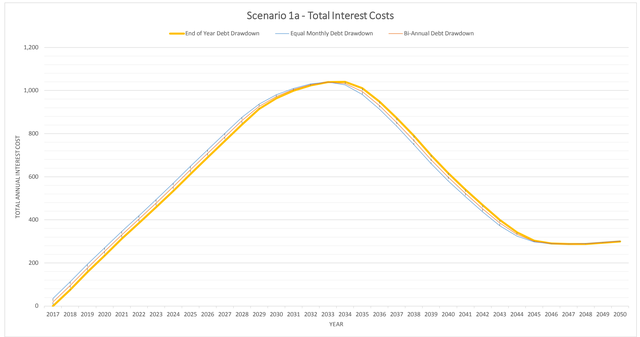
	Monthly Drawdown	121	128	114	108	93	88	84	83	76	66	60	47	4	(24)	(43)	(60)	(85)	(134)	(185)	(204)	(205)	(213)	(194)	(177)	(163)	(150)	(128)	(90)	(46)	(28)	(25)	(15)	(15)	(15)	
	FV of Monthly Drawdown at 5%	1,482	1,568	1,398	1,326	1,137	1,086	1,028	1,024	929	815	742	580	54	(292)	(525)	(736)	(1,050)	(1,648)	(2,269)	(2,506)	(2,517)	(2,621)	(2,389)	(2,174)	(1,999)	(1,844)	(1,574)	(1,111)	(568)	(342)	(306)	(185)	(184)	(188)	
	Annual Interest Cost on New Drawdowns	34	36	32	31	26	25	24	24	22	19	17	13	1	(7)	(12)	(17)	(24)	(38)	(53)	(58)	(58)	(61)	(55)	(51)	(46)	(43)	(37)	(26)	(13)	(8)	(7)	(4)	(4)	(4)	
	Annual Interest Cost on Opening Balance	-	76	160	240	320	394	470	547	627	707	784	863	936	987	1,023	1,048	1,064	1,065	1,035	972	893	810	717	632	553	479	409	350	311	297	295	295	300	306	
	Total Annual Interest Cost	34	112	192	270	346	420	494	570	649	726	802	876	938	980	1,010	1,031	1,040	1,026	982	913	835	749	662	581	507	436	373	324	297	289	288	290	296	302	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	
	Interest Cost - Feb14 Option 1, 30-yr	*19*	*95*	*176*	*254*	*331*	*404*	*478*	*554*	*632*	*709*	*785*	*861*	*927*	*973*	*1,005*	*1,028*	*1,039*	*1,033*	*995*	*930*	*852*	*769*	*680*	*598*	*522*	*451*	*385*	*332*	*300*	*290*	*288*	*289*	*295*	*301*	19,575
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	6,037	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,466	1,626	1,541	1,549	1,441	1,465	1,482	1,554	1,539	1,505	1,510	1,427	979	687	492	309	13	-577	-1,221	-1,518	-1,607	-1,792	-1,653	-1,525	-1,430	-1,350	-1,153	-753	-255	-44	-10	109	115	117	

	Bi-Annual Drawdown	724	766	683	648	555	530	502	500	454	398	363	283	26	(143)	(256)	(359)	(513)	(805)	(1,108)	(1,224)	(1,229)	(1,280)	(1,167)	(1,062)	(976)	(900)	(769)	(543)	(278)	(167)	(149)	(90)	(90)	(92)	
	FV of Bi-Annual Drawdown at 5%	1,466	1,551	1,383	1,312	1,125	1,075	1,017	1,013	919	806	735	573	53	(289)	(519)	(728)	(1,039)	(1,630)	(2,245)	(2,479)	(2,490)	(2,593)	(2,363)	(2,150)	(1,977)	(1,824)	(1,557)	(1,099)	(562)	(338)	(302)	(183)	(182)	(186)	
	Annual Interest Cost on New Drawdowns	19	20	17	17	14	14	13	13	12	10	9	7	1	(4)	(7)	(9)	(13)	(21)	(28)	(31)	(31)	(33)	(30)	(27)	(25)	(23)	(20)	(14)	(7)	(4)	(4)	(2)	(2)	(2)	
	Annual Interest Cost on Opening Balance	-	75	158	237	316	390	465	541	620	699	776	853	926	976	1,012	1,037	1,053	1,053	1,024	961	884	801	710	625	547	474	405	346	307	294	292	291	297	303	
	Total Annual Interest Cost	19	95	176	254	331	404	478	554	632	709	785	861	927	973	1,005	1,028	1,039	1,033	995	930	852	769	680	598	522	451	385	332	300	290	288	289	295	301	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	
	Interest Cost - Feb14 Option 1, 30-yr	*37*	*115*	*195*	*273*	*349*	*422*	*497*	*573*	*651*	*728*	*804*	*879*	*939*	*981*	*1,011*	*1,031*	*1,040*	*1,025*	*980*	*911*	*832*	*746*	*659*	*579*	*504*	*434*	*371*	*322*	*297*	*289*	*288*	*290*	*296*	*302*	19,651
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	6,113	
Fiscal Exposure - Average Debt Drawdown		1,484	1,647	1,561	1,569	1,459	1,483	1,500	1,573	1,559	1,524	1,530	1,445	992	696	498	313	14	-585	-1,237	-1,537	-1,627	-1,814	-1,674	-1,545	-1,448	-1,367	-1,167	-763	-258	-44	-10	110	116	119	





Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest ra

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest ra

IESO GA cost forecast + extrapolation

Scenario
Option 1

Option 2

ate	2017	2018	2019	2020
ate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	2200	4600	7000	10200

Total Accumulated Debt ($ billion)	2.2	4.6	7	10.2
	2,200	4,600	7,000	10,200

Total Accumulated Debt ($ billion)	1.6	3.2	4.9	7.2
	1,600	3,200	4,900	7,200

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
13100	15700	17800	20800	23200	25000	27700	30100

13.1 15.7 17.8 20.8 23.2 25 27.7 30.1
13,100 15,700 17,800 20,800 23,200 25,000 27,700 30,100

9.3 11 12.3 14.4 15.7 16.5 18 19.3
9,300 11,000 12,300 14,400 15,700 16,500 18,000 19,300

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
31700	32800	32700	32600	31700	30100	28400	26600

31.7	32.8	32.7	32.6	31.7	30.1	28.4	26.6
31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600

19.5	19.3	18.6	17.8	17	16.1	15.2	14.3
19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
24800	22800	20800	18600	16300	13900	11400	8800

24.8	22.8	20.8	18.6	16.3	13.9	11.4	8.8
24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800

13.3	12.2	11.1	10	8.7	7.5	6.1	4.7
13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	2046	2047	2048	2049	2050
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
6000	3100	0	0	0	0

6 3.1 0 0
6,000 3,100 - -

3.2 1.6 0 0
3,200 1,600 - -

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb9_1_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,200	2,400

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	550	2,250

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $33 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb9_2_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,600	1,600

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	400	1,600

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,169	4,668

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	545	2,203

Actuals are subject to actual prices and actual interest rates.

#N/A

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542

Fiscalized[3]	2016-17	2017-18
Start: January 1st	375	1,510

Actuals are subject to actual prices and actual interest rates.

#N/A

Rough		
	1	
	2	
	3	
	4 April	4
	5 May	5
	6 June	6
	7 July	7
	8 August	8
	9 September	9
	10 October	10
	11 November	11
	12 December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	400 - 550	1,600 - 2,250

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	550	2250
Debt-Finance Global Adjustment Costs, Option 1a	400	1600
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**550**	**2490**
Total, B	400	1840
Proposed Program Total:	400 - 550	1,840 - 2,490

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1
Scenario 2

2019	2020	2021	2022
2,400	3,200	2,900	2,600

2018-19	2019-20	2020-21	2021-2022
2,400	2,600	3,125	2,825

2030.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,700	2,300	2,100	1,700

2018-19	2019-20	2020-21	2021-2022
1,625	1,850	2,250	2,000

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
4,589	5,867	5,031	4,861

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988

› depend on decision on accounting treatment.

2019	2020	2021	2022
2,353	3,072	2,817	2,580

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757

2019	2020	2021	2022
1,578	2,243	1,931	1,635

2018-19	2019-20	2020-21	2021-2022
1,551	1,745	2,165	1,857



2018-19	2019-20	2020-21	2021-2022
1,625 - 2,400	1,850 - 2,600	2,250 - 3,125	2,000 - 2,825

/1

2018-19[1]	2019-20[1]	2020-21[1]
2400	2600	3125
1625	1850	2250
225	279	323
60	60	60
18	18	18
2703	**2957**	**3526**
1928	2207	2651

1,928 - 2,703 2,207 - 2,957 2,651 - 3,526

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
21,601	30,211	32,800	occurs in Year 2030
13,466	17,886	19,500	occurs in Year 2029
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!

2,200

Tab Name
Feb9_1_30yr
Feb9_2_30yr

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Feb9_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0	
			52	57	57	76	69	62	50	71	57	43	64	57	38	26	-2	-2	-21	-38	-40	-43	-43	-48	-48	-52	-55	-57	-59	-62	-67	-69	-74	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,200	1,678	30,211
Equal Monthly Debt Drawdown	3,276	1,676	

		Feb9 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,800	2030	21,601	
Equal Monthly Debt Drawdown	33,580			

Feb9 1, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
a	Debt, Beginning of Year	0	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	
c = a*5%	*Interest Cost - Feb9 1, 30-yr - End of Year Debt Drowdown*	*0*	*113*	*235*	*358*	*522*	*670*	*803*	*911*	*1,064*	*1,187*	*1,279*	*1,417*	*1,540*	*1,622*	*1,678*	*1,673*	*1,668*	*1,622*	*1,540*	*1,453*	*1,361*	*1,269*	*1,166*	*1,064*	*952*	*834*	*711*	*583*	*450*	*307*	*159*	*0*	*0*	*0*	30,211
b	Additional GA Debt Drawdown, End of Year	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	0
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	11,621	11,521	10,621	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	8,800	6,000	3,100	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	21,079	21,079	21,079	21,079	19,379	17,579	15,779	13,779	11,779	9,579	7,279	4,879	2,379	0	0	0	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	13,399	15,072	16,740	18,362	19,902	21,355	22,716	23,985	25,151	26,215	27,167	28,001	28,712	29,295	29,746	30,052	30,211				
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	19,301	17,528	14,960	11,738	8,498	5,245	2,084	-1,185	-4,351	-7,615	-10,867	-14,101	-17,312	-20,495	-23,746	-26,952	-30,211				
Fiscal Exposure - End of Year Debt Drawdown		2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0	

Feb9 1, 30-yr — Equal Monthly Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	
1,676	*Interest Cost - Feb9 1, 30-yr*	*52*	*170*	*292*	*434*	*591*	*732*	*853*	*982*	*1,121*	*1,230*	*1,343*	*1,474*	*1,578*	*1,648*	*1,676*	*1,671*	*1,646*	*1,584*	*1,500*	*1,410*	*1,318*	*1,221*	*1,119*	*1,012*	*897*	*777*	*652*	*521*	*384*	*238*	*85*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0	
	Monthly Drawdown	183	191	180	237	198	161	108	174	111	51	118	82	5	(43)	(148)	(148)	(214)	(268)	(270)	(271)	(263)	(272)	(264)	(272)	(271)	(269)	(268)	(265)	(271)	(267)	(272)	-	-	-	
	FV of Monthly Drawdown at 5%	2,252	2,342	2,216	2,909	2,435	1,976	1,328	2,139	1,368	628	1,455	1,006	61	(534)	(1,820)	(1,815)	(2,629)	(3,298)	(3,317)	(3,330)	(3,236)	(3,347)	(3,242)	(3,342)	(3,329)	(3,311)	(3,288)	(3,259)	(3,328)	(3,283)	(3,336)	-	-	-	
	Annual Interest Cost on New Drawdowns	52	54	51	68	57	46	31	50	32	15	34	23	1	(12)	(42)	(42)	(61)	(77)	(77)	(77)	(75)	(78)	(75)	(78)	(77)	(76)	(76)	(76)	(77)	(76)	(78)	-	-	-	
	Annual Interest Cost on Opening Balance	-	115	241	367	534	686	822	932	1,089	1,215	1,309	1,451	1,577	1,660	1,718	1,713	1,708	1,660	1,577	1,488	1,393	1,299	1,194	1,089	974	854	728	597	461	314	162	(0)	(0)	(0)	
	Total Annual Interest Cost	52	170	292	434	591	732	853	982	1,121	1,230	1,343	1,474	1,578	1,648	1,676	1,671	1,646	1,584	1,500	1,410	1,318	1,221	1,119	1,012	897	777	652	521	384	238	85	(0)	(0)	(0)	

Feb9 1, 30-yr — Bi-Annual Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*28*	*143*	*266*	*399*	*559*	*703*	*830*	*949*	*1,095*	*1,210*	*1,314*	*1,448*	*1,560*	*1,636*	*1,677*	*1,672*	*1,656*	*1,601*	*1,518*	*1,430*	*1,338*	*1,243*	*1,141*	*1,036*	*922*	*803*	*679*	*550*	*414*	*270*	*119*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,228	2,431	2,431	3,241	2,937	2,633	2,127	3,038	2,431	1,823	2,735	2,431	1,620	1,114	-101	-101	-912	-1,620	-1,722	-1,823	-1,823	-2,026	-2,026	-2,228	-2,329	-2,431	-2,532	-2,633	-2,836	-2,937	-3,140	0	0	0	
	Bi-Annual Drawdown	1,100	1,144	1,082	1,421	1,189	965	648	1,045	668	307	710	491	30	(261)	(889)	(886)	(1,284)	(1,611)	(1,620)	(1,626)	(1,580)	(1,634)	(1,583)	(1,632)	(1,626)	(1,617)	(1,606)	(1,592)	(1,625)	(1,603)	(1,629)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,228	2,317	2,192	2,878	2,409	1,954	1,313	2,116	1,353	621	1,439	995	61	(529)	(1,801)	(1,796)	(2,601)	(3,263)	(3,281)	(3,295)	(3,201)	(3,311)	(3,207)	(3,306)	(3,293)	(3,275)	(3,252)	(3,224)	(3,292)	(3,248)	(3,300)	-	-	-	
	Annual Interest Cost on New Drawdowns	28	29	28	36	30	25	17	27	17	8	18	13	1	(7)	(23)	(23)	(33)	(41)	(41)	(42)	(40)	(42)	(41)	(42)	(42)	(41)	(41)	(41)	(42)	(41)	(42)	-	-	-	
	Annual Interest Cost on Opening Balance	-	114	238	363	529	679	814	922	1,078	1,202	1,295	1,435	1,560	1,643	1,700	1,694	1,689	1,643	1,560	1,472	1,378	1,285	1,181	1,078	964	845	720	591	456	311	161	0	0	0	
	Total Annual Interest Cost	28	143	266	399	559	703	830	949	1,095	1,210	1,314	1,448	1,560	1,636	1,677	1,672	1,656	1,601	1,518	1,430	1,338	1,243	1,141	1,036	922	803	679	550	414	270	119	0	0	0	

Feb9 1, 30-yr — Average Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*56*	*174*	*297*	*440*	*596*	*737*	*857*	*987*	*1,126*	*1,233*	*1,348*	*1,479*	*1,581*	*1,650*	*1,676*	*1,670*	*1,645*	*1,581*	*1,496*	*1,407*	*1,315*	*1,218*	*1,115*	*1,008*	*893*	*773*	*647*	*517*	*379*	*233*	*79*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		2,256	2,461	2,461	3,282	2,974	2,667	2,154	3,077	2,461	1,846	2,769	2,461	1,641	1,128	-103	-103	-923	-1,641	-1,743	-1,846	-1,846	-2,051	-2,051	-2,256	-2,359	-2,461	-2,564	-2,667	-2,872	-2,974	-3,179	0	0	0	

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Feb9_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0
			38	38	40	55	50	40	31	50	31	19	36	31	5	-5	-17	-19	-19	-21	-21	-21	-24	-26	-26	-26	-31	-29	-33	-33	-36	-38	-38	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,300	998	17,886
Equal Monthly Debt Drawdown	2,355	993	

	Feb9 2, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,500	2029	13,466
Equal Monthly Debt Drawdown	19,964		

Feb9 2, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
a	Debt, Beginning of Year	0	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	
c = a*5%	*Interest Cost - Feb9 2, 30-yr - End of Year Debt Drowdown*	*0*	*82*	*164*	*251*	*368*	*476*	*563*	*629*	*737*	*803*	*844*	*921*	*987*	*998*	*987*	*952*	*911*	*870*	*824*	*778*	*732*	*680*	*624*	*568*	*512*	*445*	*384*	*312*	*240*	*164*	*82*	*0*	*0*	*0*	17,886
b	Additional GA Debt Drawdown, End of Year	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	7,123	6,323	5,523	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,700	3,200	1,600	0	0	0	
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	11,477	11,477	11,477	11,477	10,577	9,677	8,677	7,577	6,477	5,377	4,077	2,877	1,477	0	0	0	0	0	0	0	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	8,810	9,762	10,672	11,542	12,366	13,143	13,875	14,556	15,180	15,748	16,259	16,704	17,088	17,400	17,641	17,804	17,886				
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	9,790	8,038	6,328	4,558	2,834	1,157	-575	-2,356	-4,080	-5,748	-7,559	-9,204	-10,988	-12,700	-14,441	-16,204	-17,886				
Fiscal Exposure - End of Year Debt Drawdown		1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0	

Feb9 2, 30-yr — Equal Monthly Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	
993	*Interest Cost - Feb9 2, 30-yr*	*38*	*120*	*204*	*305*	*418*	*516*	*594*	*679*	*768*	*822*	*880*	*952*	*992*	*993*	*971*	*933*	*892*	*848*	*802*	*756*	*708*	*654*	*598*	*542*	*481*	*417*	*350*	*279*	*205*	*126*	*44*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0	
	Monthly Drawdown	133	127	128	171	144	102	61	123	47	(0)	55	32	(66)	(100)	(141)	(146)	(143)	(147)	(144)	(140)	(144)	(148)	(144)	(139)	(151)	(137)	(149)	(143)	(145)	(147)	(140)	-	-	-	
	FV of Monthly Drawdown at 5%	1,638	1,554	1,573	2,098	1,773	1,253	755	1,506	577	(3)	671	388	(806)	(1,226)	(1,728)	(1,793)	(1,751)	(1,812)	(1,765)	(1,718)	(1,773)	(1,823)	(1,765)	(1,708)	(1,855)	(1,684)	(1,826)	(1,753)	(1,782)	(1,806)	(1,722)	-	-	-	
	Annual Interest Cost on New Drawdowns	38	36	37	49	41	29	18	35	13	(0)	16	9	(19)	(28)	(40)	(42)	(41)	(42)	(41)	(40)	(41)	(42)	(41)	(40)	(43)	(39)	(42)	(41)	(41)	(42)	(40)	-	-	-	
	Annual Interest Cost on Opening Balance	-	84	168	257	377	487	576	644	754	822	864	943	1,011	1,021	1,011	974	932	890	843	796	749	697	639	581	524	456	393	320	246	168	84	0	0	0	
	Total Annual Interest Cost	38	120	204	305	418	516	594	679	768	822	880	952	992	993	971	933	892	848	802	756	708	654	598	542	481	417	350	279	205	126	44	0	0	0	

Feb9 2, 30-yr — Bi-Annual Debt Drawdown

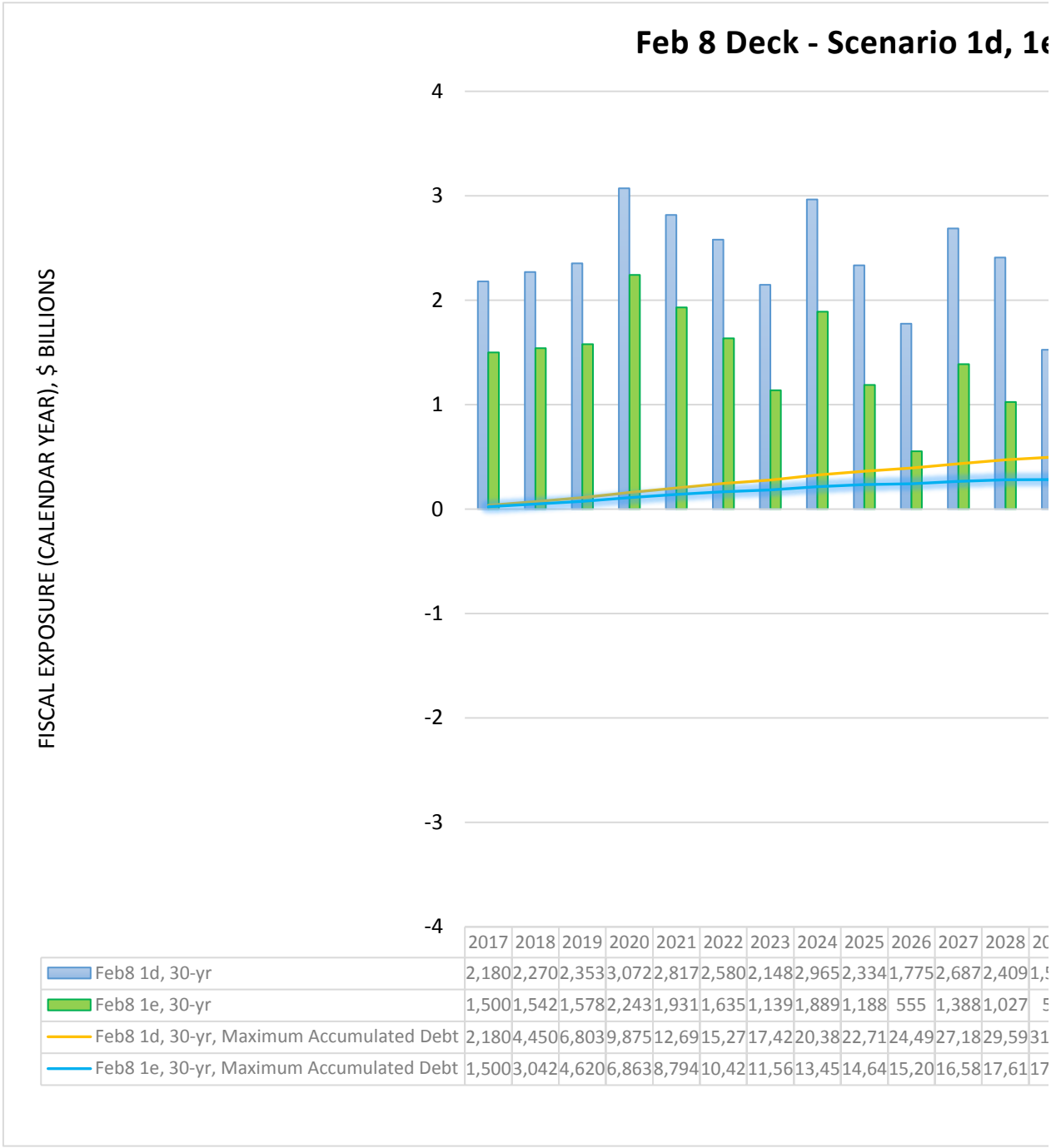
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*20*	*102*	*185*	*280*	*395*	*498*	*579*	*656*	*753*	*813*	*863*	*938*	*990*	*995*	*978*	*941*	*900*	*858*	*812*	*766*	*719*	*666*	*610*	*554*	*495*	*430*	*366*	*294*	*221*	*143*	*61*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,620	1,620	1,722	2,329	2,127	1,722	1,317	2,127	1,317	810	1,519	1,317	203	-203	-709	-810	-810	-912	-912	-912	-1,013	-1,114	-1,114	-1,114	-1,317	-1,215	-1,418	-1,418	-1,519	-1,620	-1,620	0	0	0	
	Bi-Annual Drawdown	800	759	768	1,025	866	612	369	735	282	(2)	328	190	(394)	(599)	(844)	(876)	(855)	(885)	(862)	(839)	(866)	(890)	(862)	(834)	(906)	(823)	(892)	(856)	(870)	(882)	(841)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,620	1,538	1,556	2,076	1,754	1,240	747	1,490	570	(3)	664	384	(797)	(1,213)	(1,709)	(1,774)	(1,733)	(1,792)	(1,746)	(1,699)	(1,754)	(1,803)	(1,746)	(1,689)	(1,835)	(1,666)	(1,807)	(1,734)	(1,763)	(1,786)	(1,703)	-	-	-	
	Annual Interest Cost on New Drawdowns	20	19	20	26	22	16	9	19	7	(0)	8	5	(10)	(15)	(22)	(22)	(22)	(23)	(22)	(21)	(22)	(23)	(22)	(21)	(23)	(21)	(23)	(22)	(22)	(23)	(22)	-	-	-	
	Annual Interest Cost on Opening Balance	-	83	166	254	373	482	570	637	746	814	855	933	1,000	1,010	1,000	964	922	881	834	788	741	689	632	575	518	451	389	316	244	166	83	0	0	0	
	Total Annual Interest Cost	20	102	185	280	395	498	579	656	753	813	863	938	990	995	978	941	900	858	812	766	719	666	610	554	495	430	366	294	221	143	61	0	0	0	

Feb9 2, 30-yr — Average Debt Drawdown

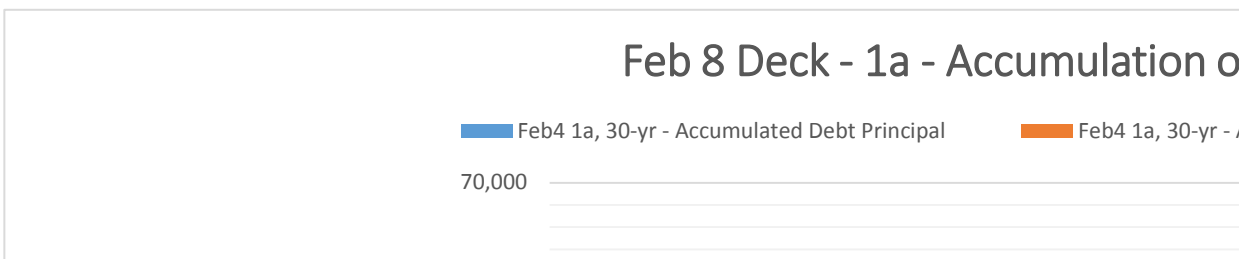
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*41*	*123*	*207*	*310*	*422*	*519*	*596*	*683*	*770*	*824*	*883*	*954*	*993*	*993*	*970*	*931*	*890*	*847*	*801*	*755*	*706*	*652*	*596*	*540*	*478*	*414*	*348*	*276*	*202*	*123*	*41*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,641	1,641	1,743	2,359	2,154	1,743	1,333	2,154	1,333	820	1,538	1,333	205	-205	-718	-820	-820	-923	-923	-923	-1,026	-1,128	-1,128	-1,128	-1,333	-1,231	-1,436	-1,436	-1,538	-1,641	-1,641	0	0	0	

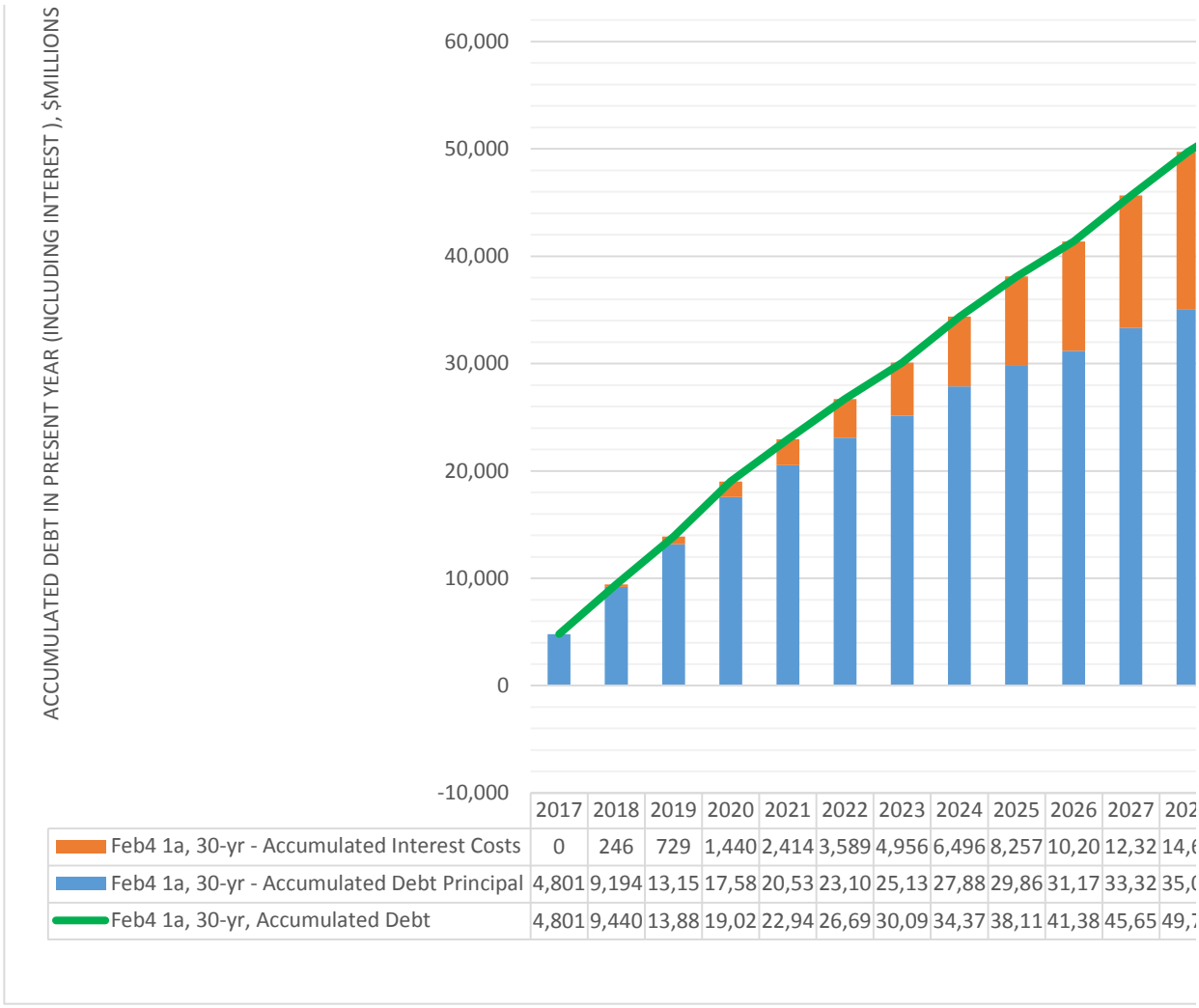
Feb 8 Deck

Feb 8 Deck - Scenario 1d, 1e - at 5.12% interest rate

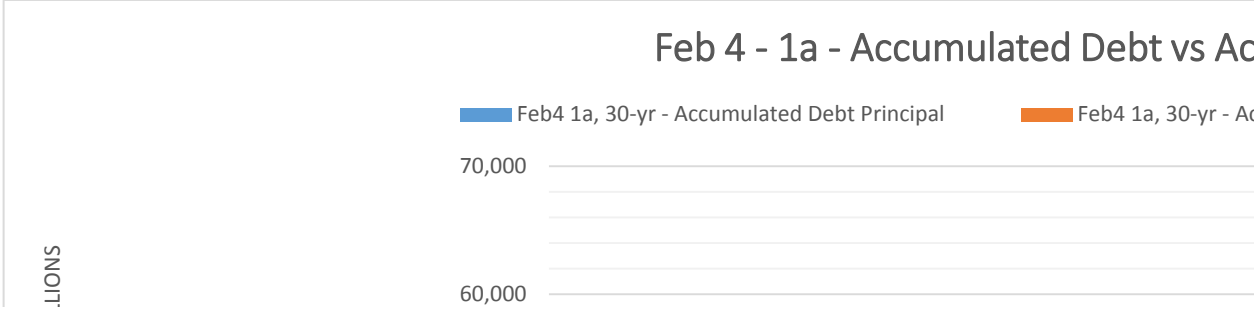


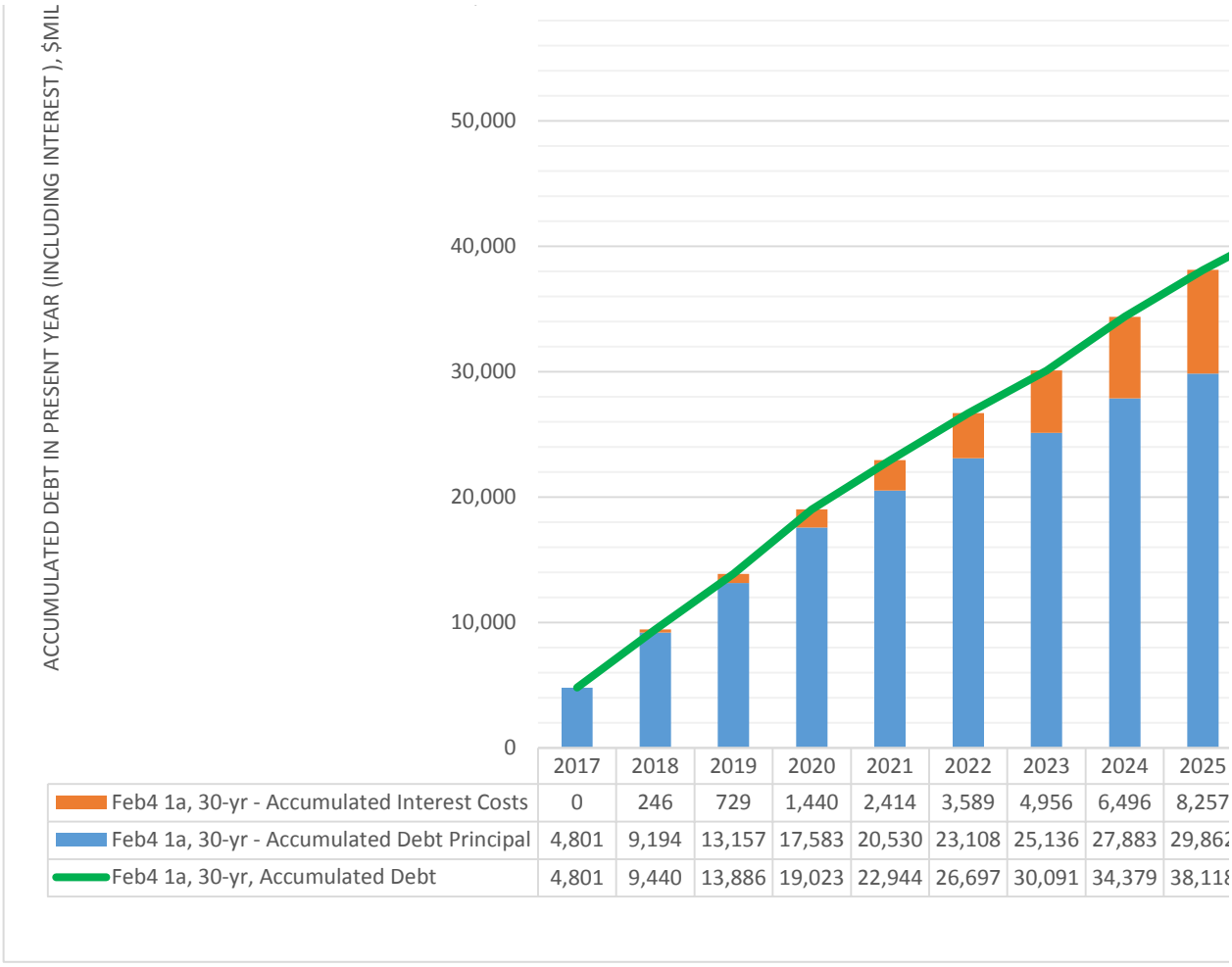
Feb 8 Deck - 1a - Accumulation of Debt (Principal and Interest)



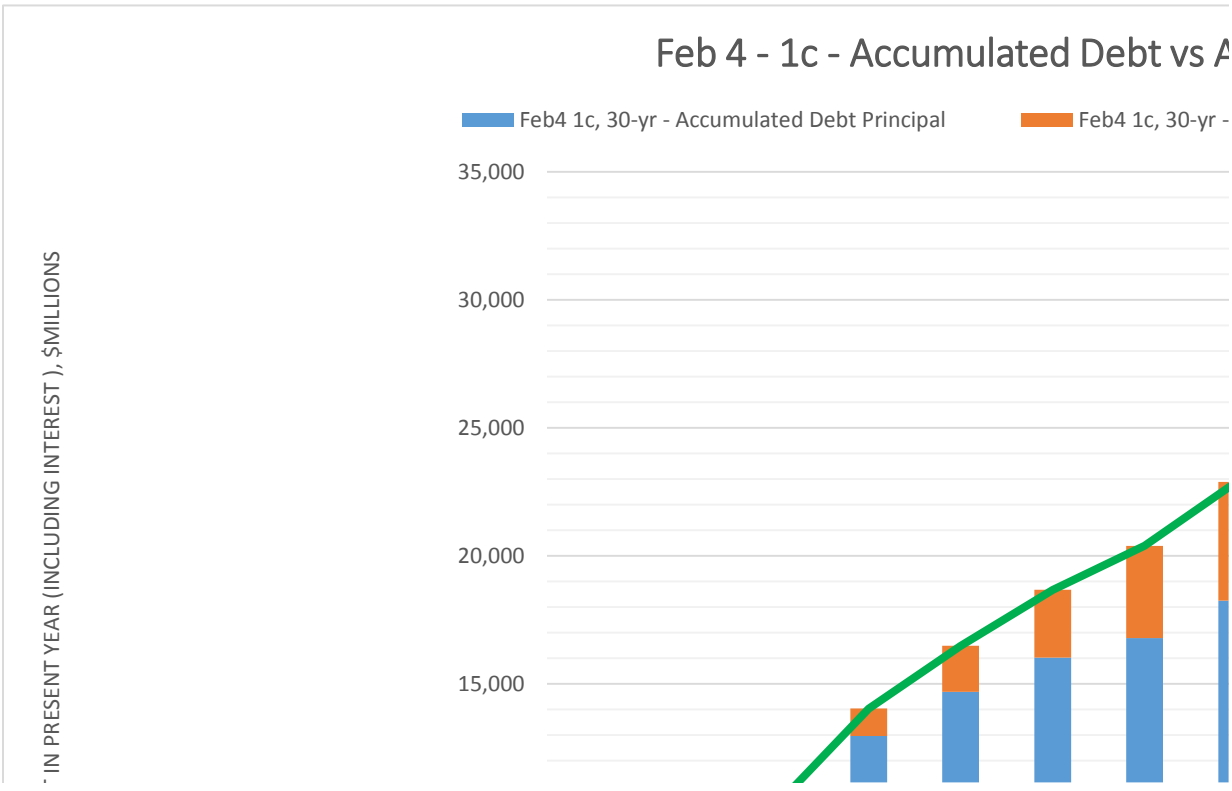


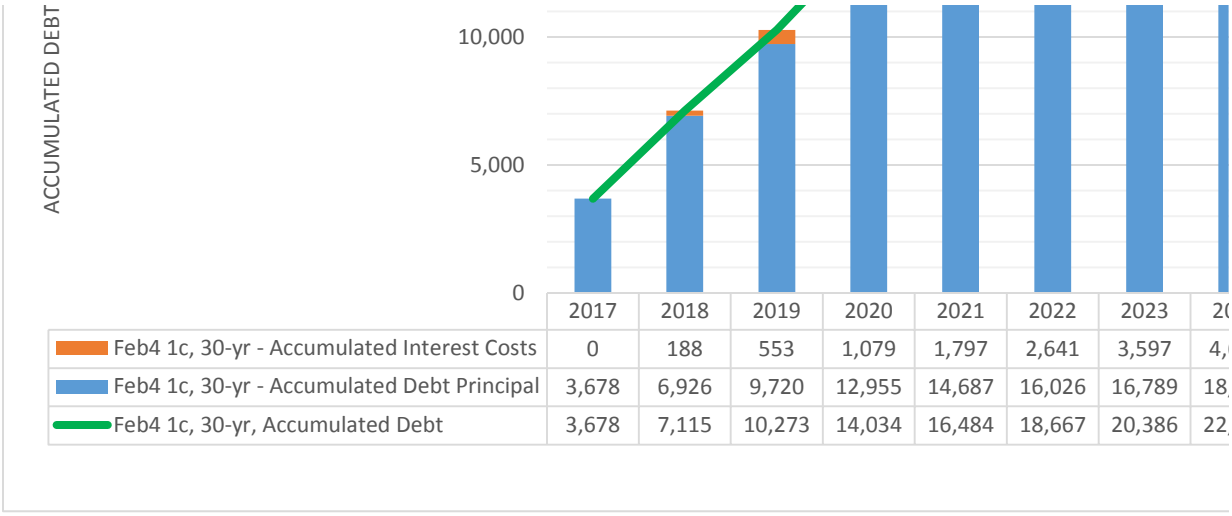
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	202
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,(
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,7



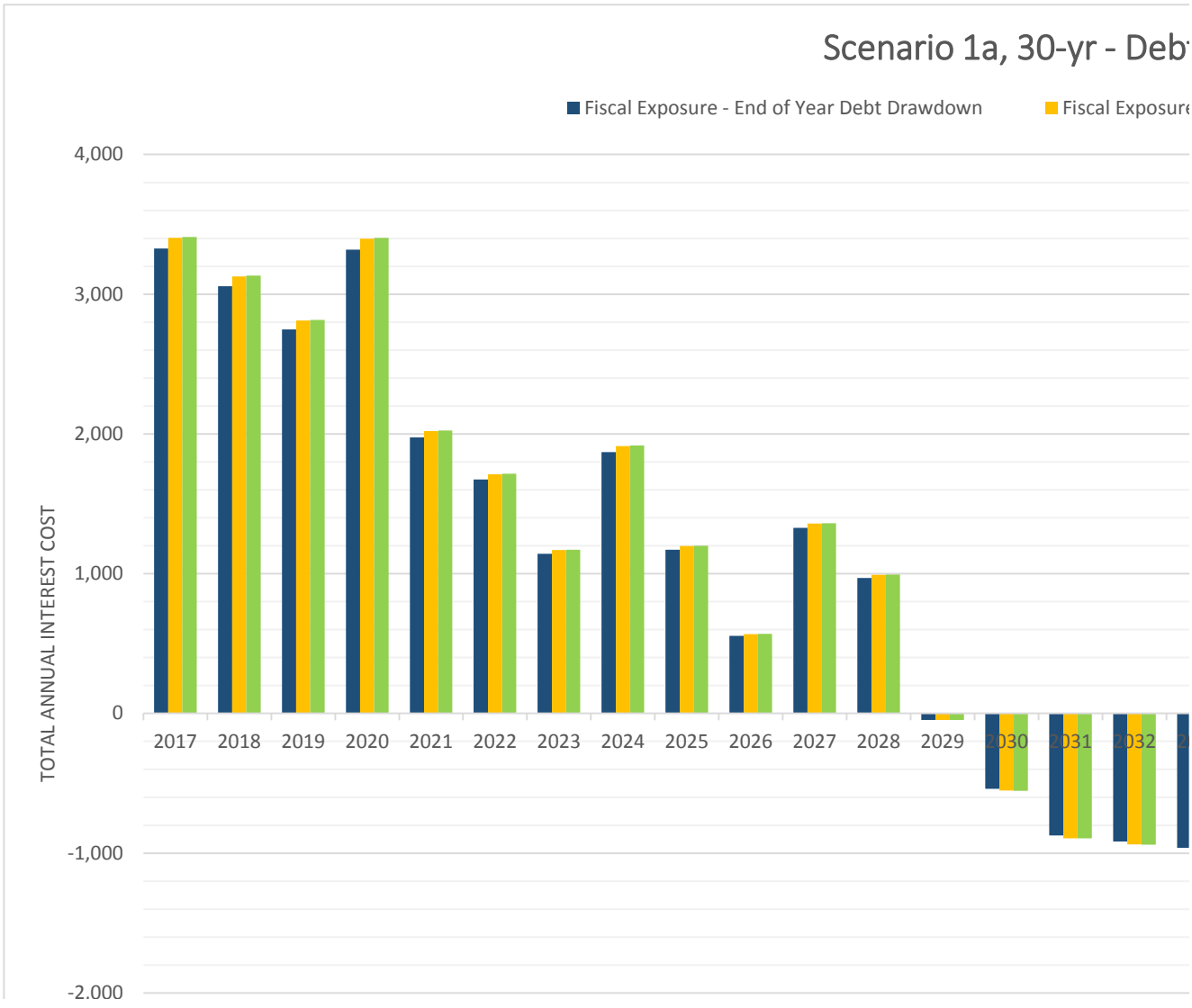


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



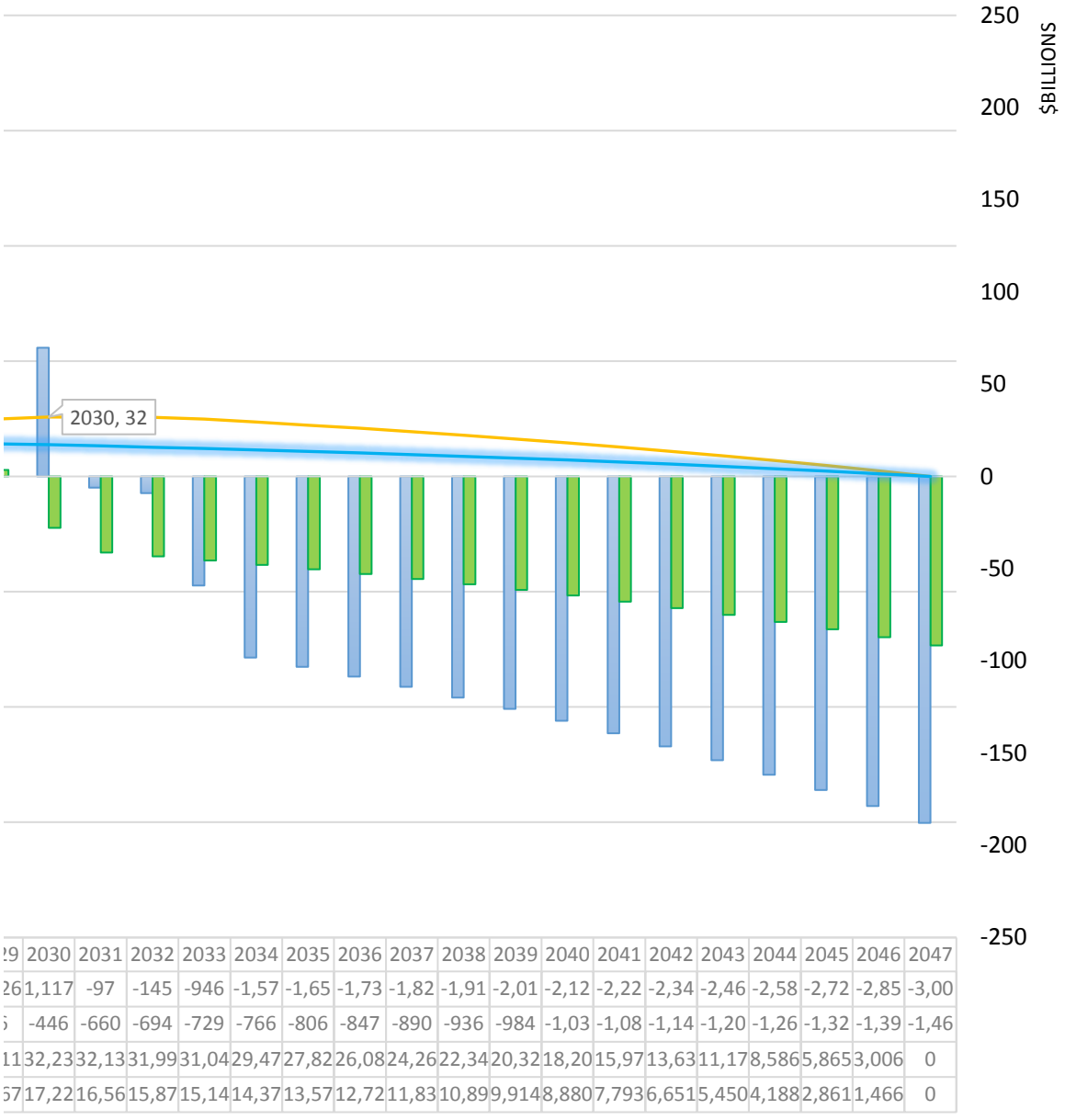


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

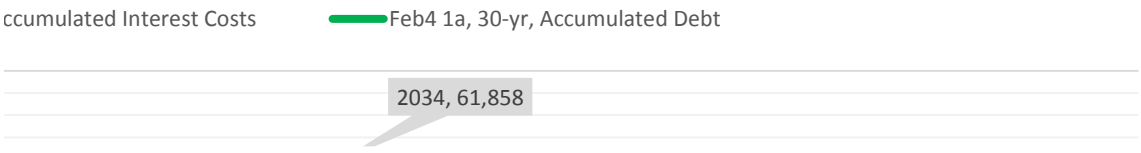
- at 5.12% interest rate

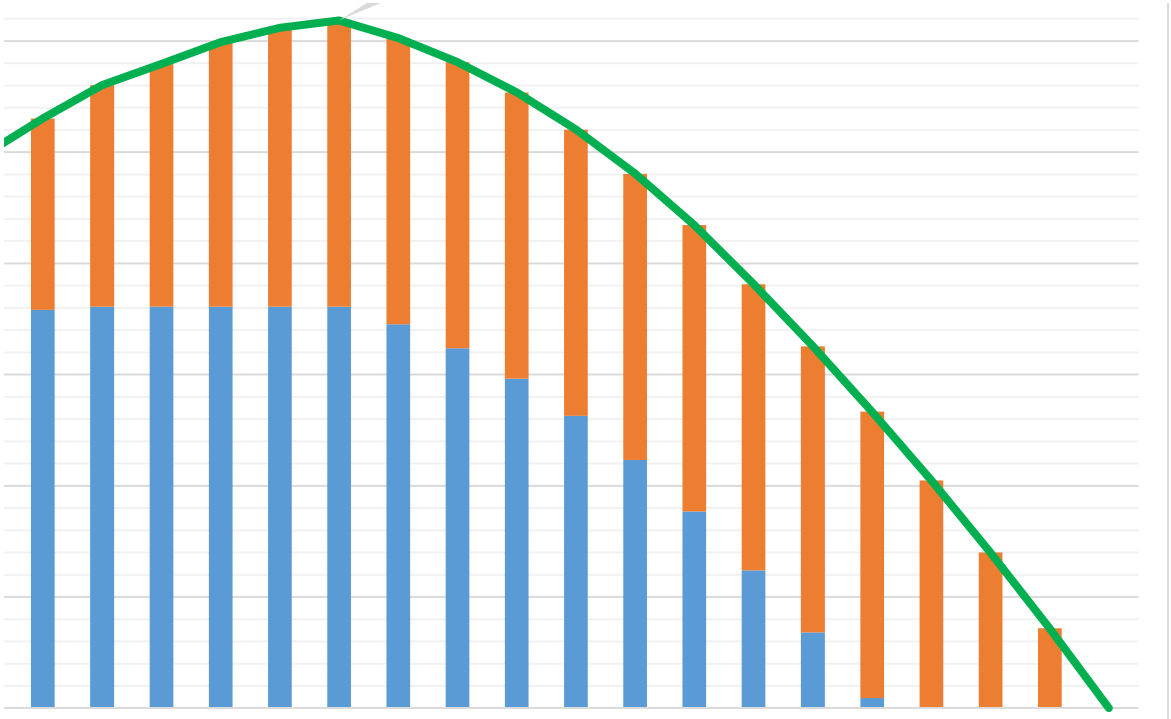


29	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
26	1,117	-97	-145	-946	-1,57	-1,65	-1,73	-1,82	-1,91	-2,01	-2,12	-2,22	-2,34	-2,46	-2,58	-2,72	-2,85	-3,00
5	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,03	-1,08	-1,14	-1,20	-1,26	-1,32	-1,39	-1,46
11	32,23	32,13	31,99	31,04	29,47	27,82	26,08	24,26	22,34	20,32	18,20	15,97	13,63	11,17	8,586	5,865	3,006	0
57	17,22	16,56	15,87	15,14	14,37	13,57	12,72	11,83	10,89	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0

CALENDAR YEAR

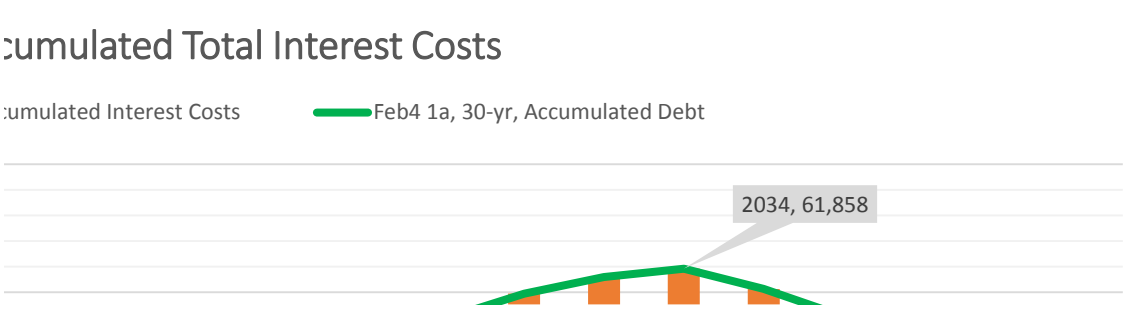
Debt (Principal and Interest)



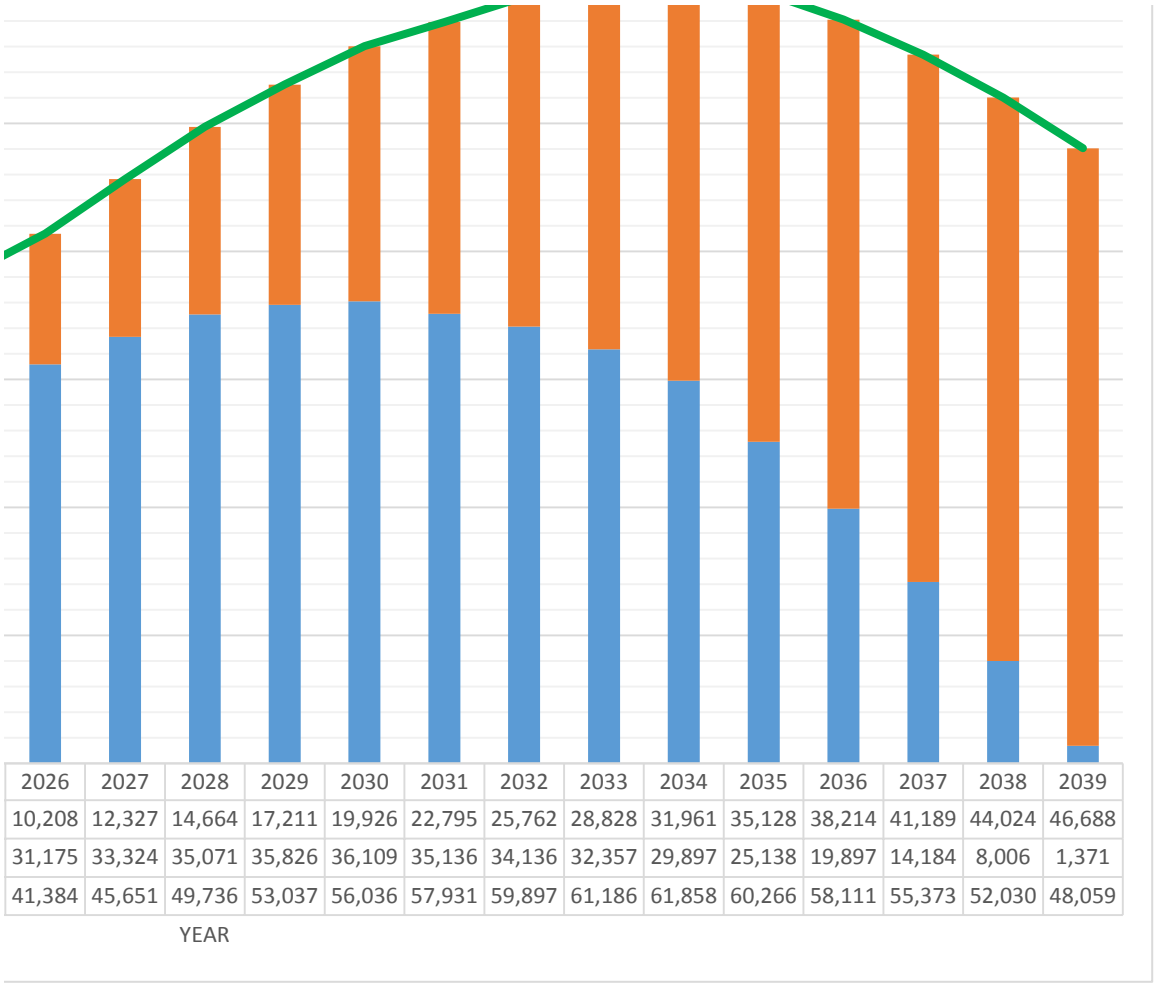


	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
5	17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
7	35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
3	53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



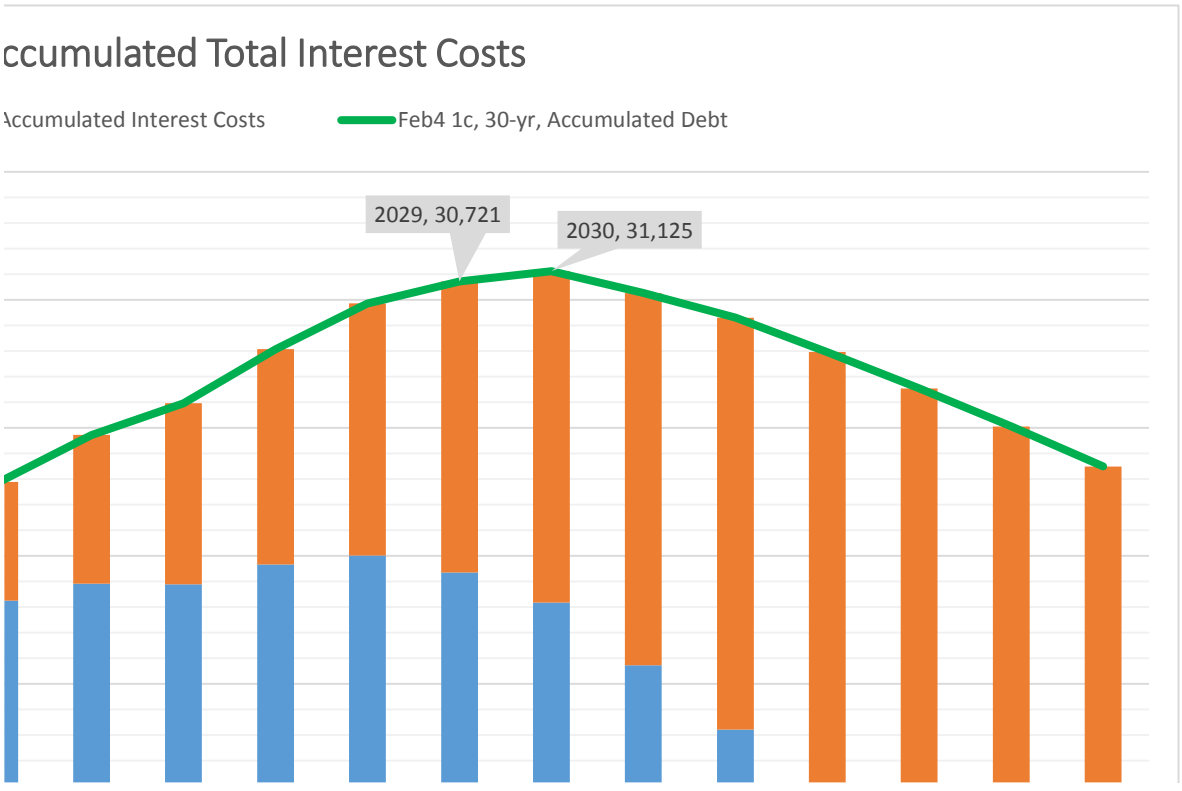
LIONS

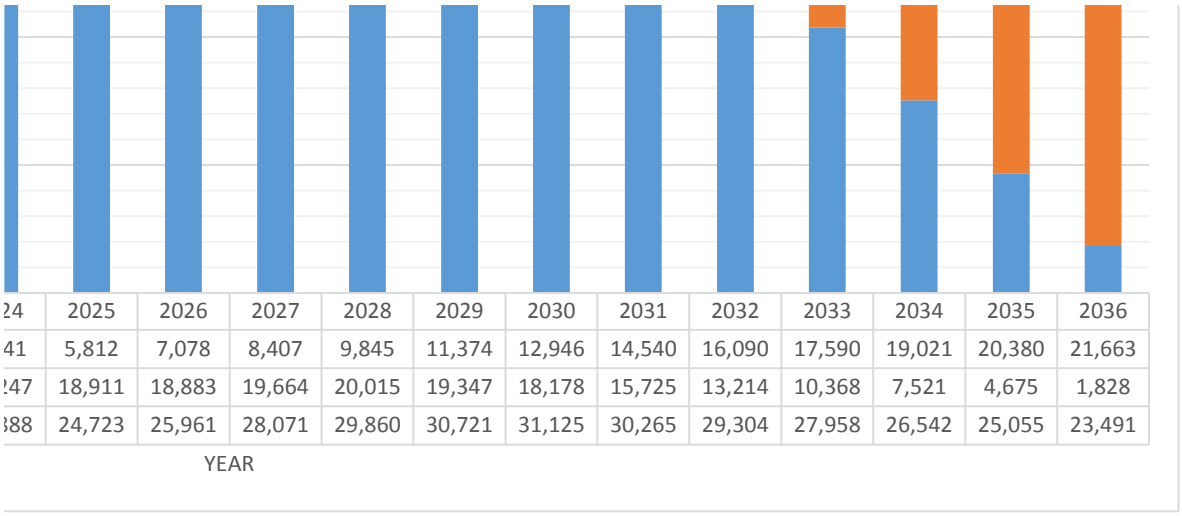


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

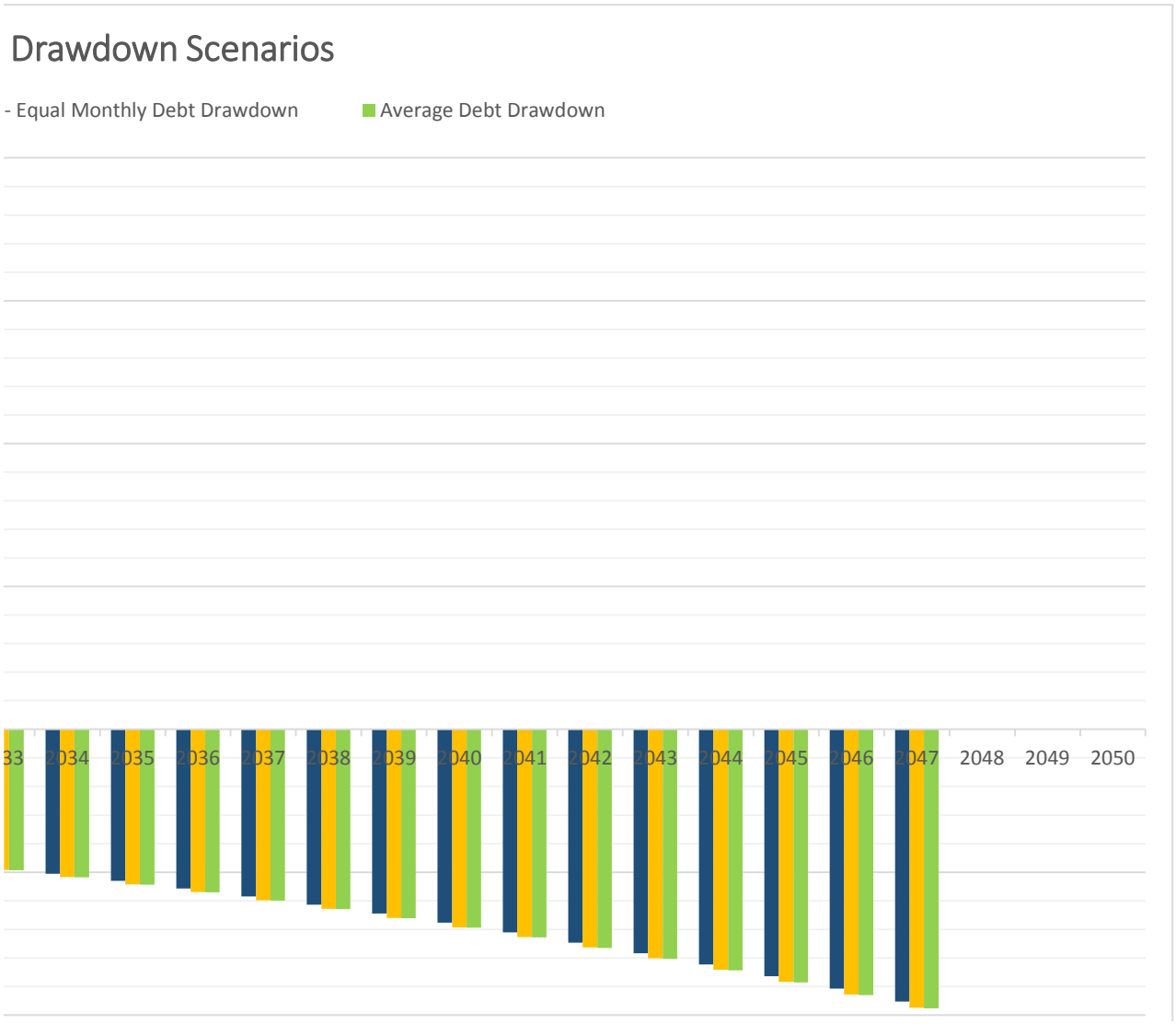
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





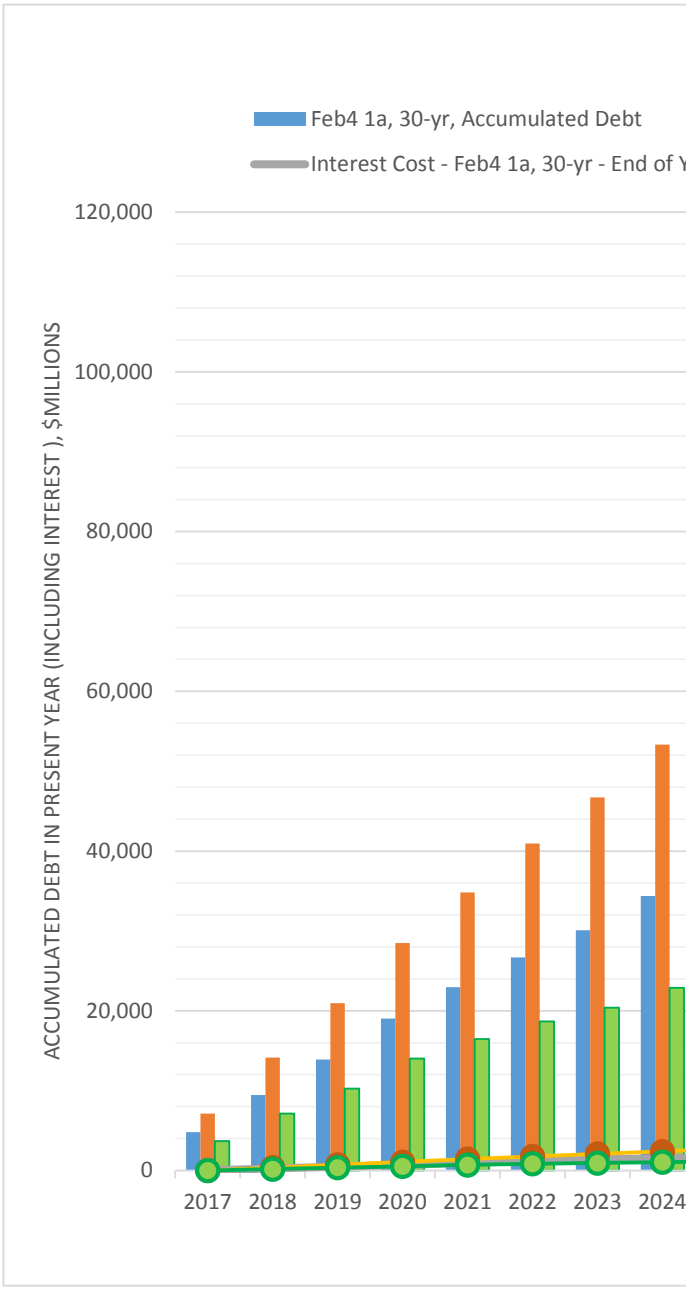
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

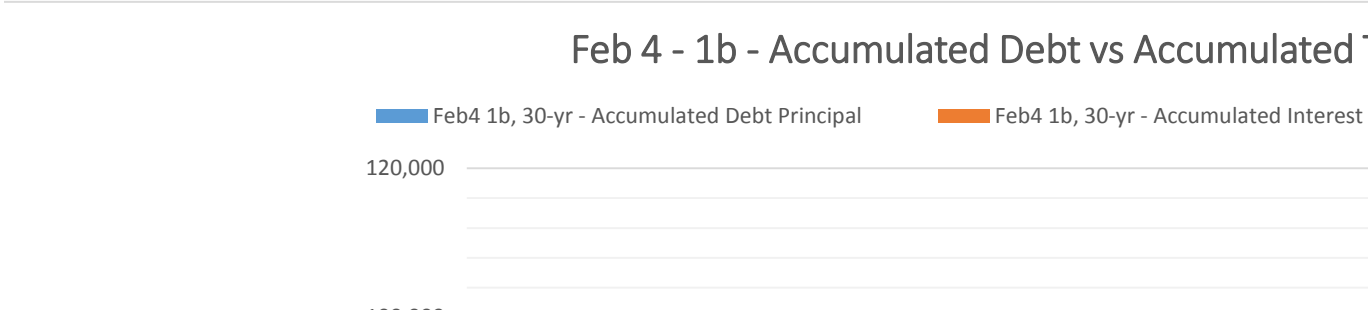
YEAR

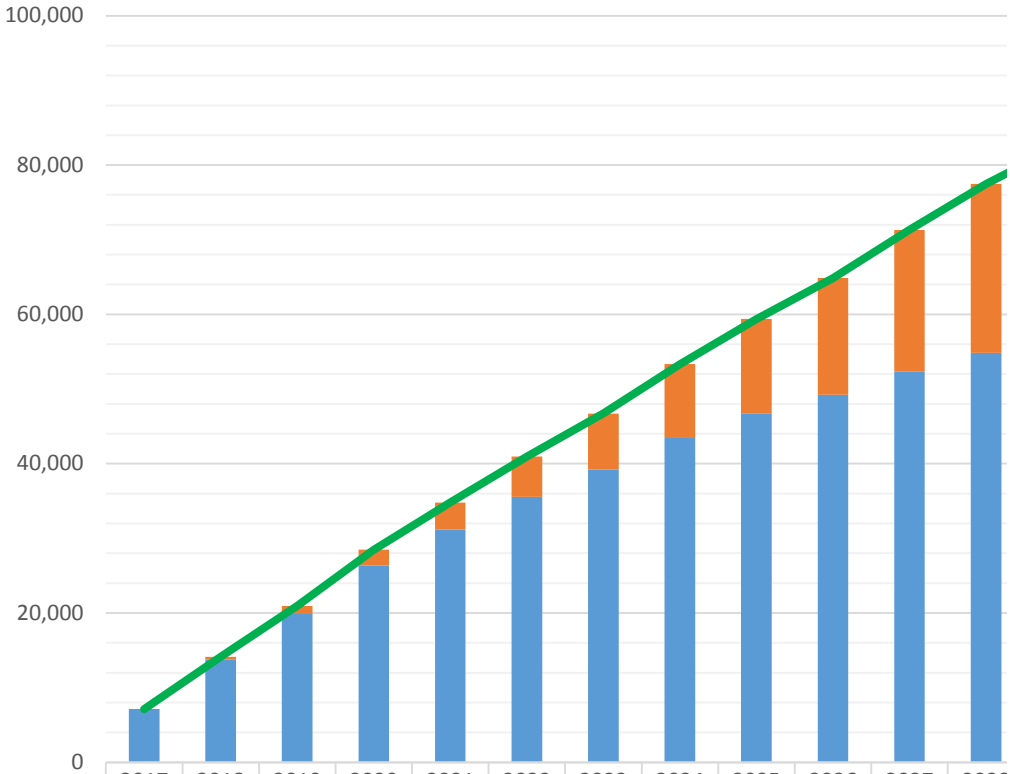


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate

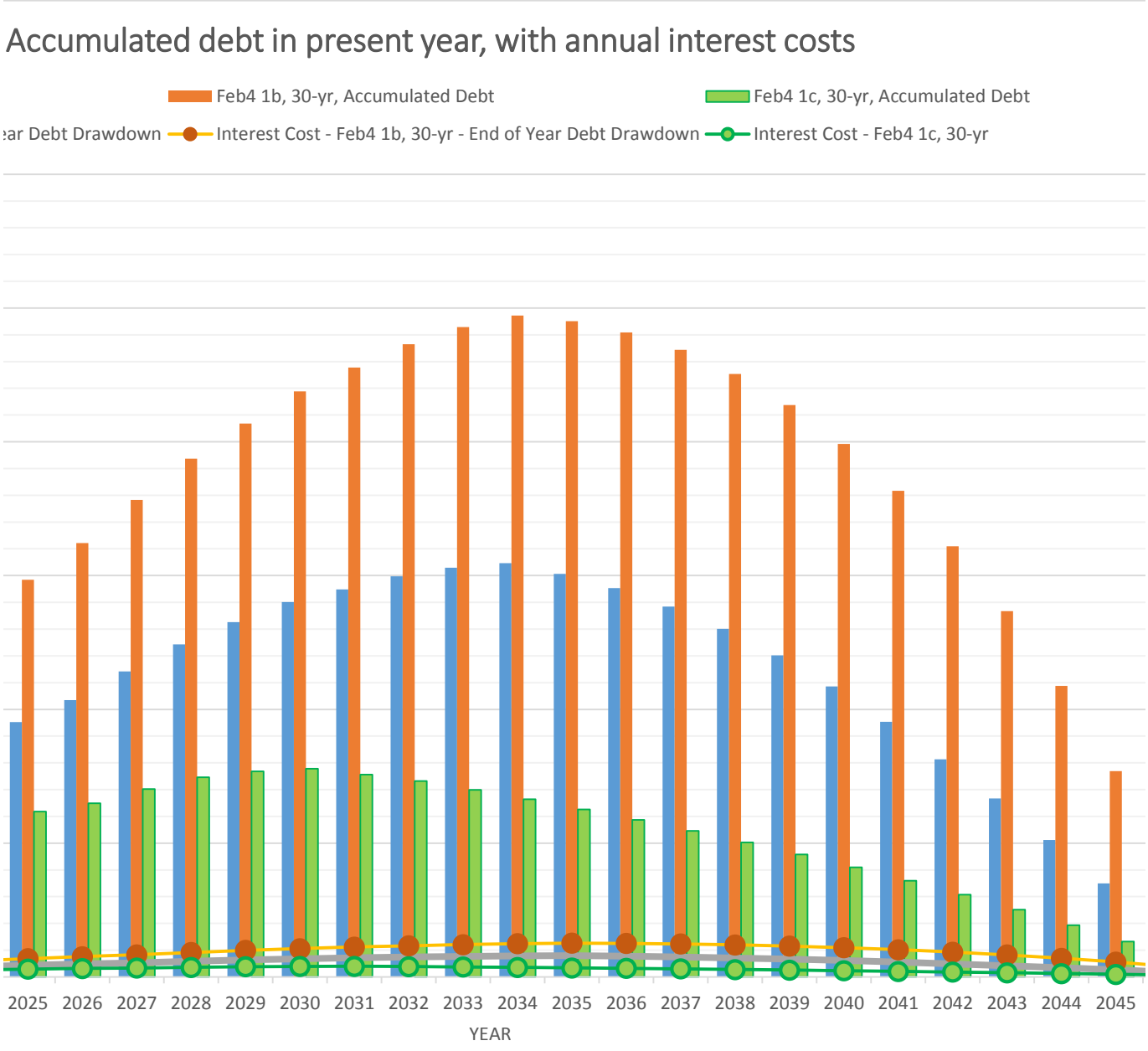


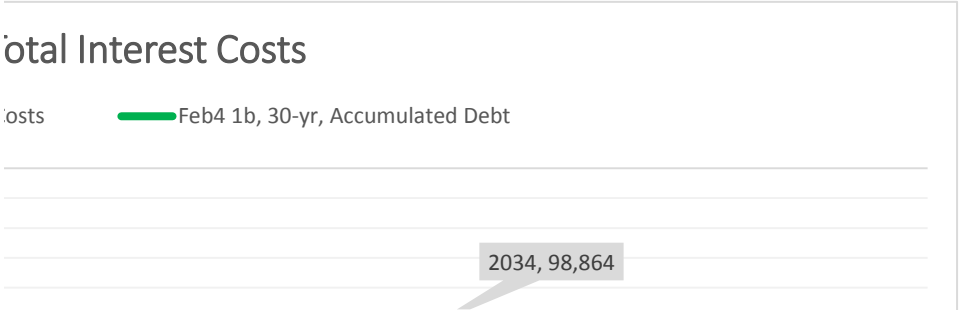

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

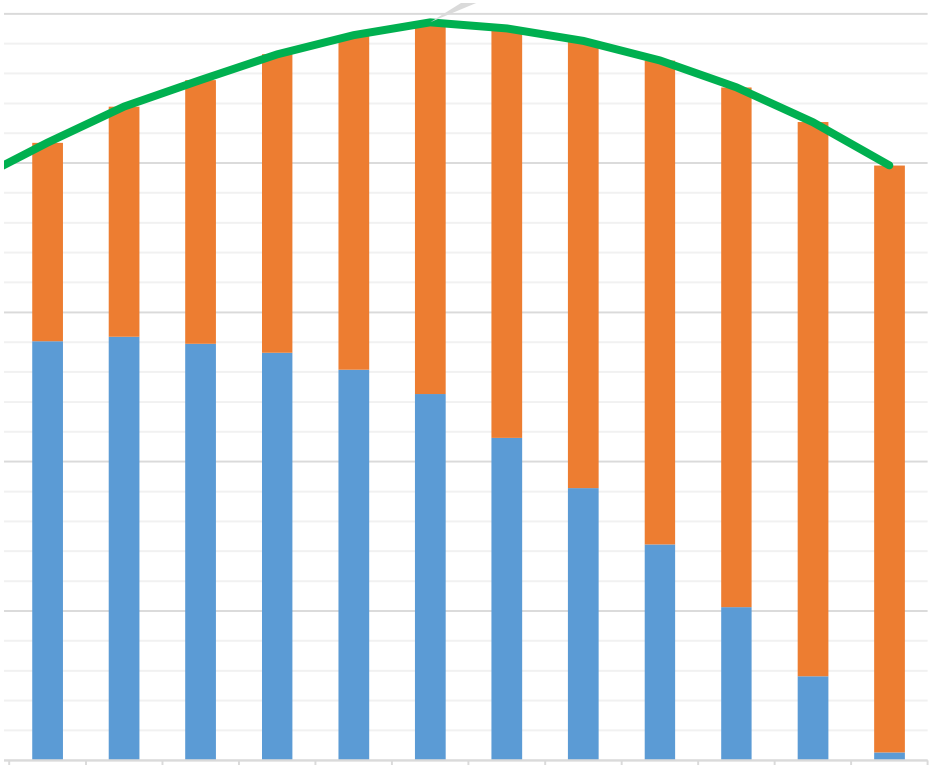


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y

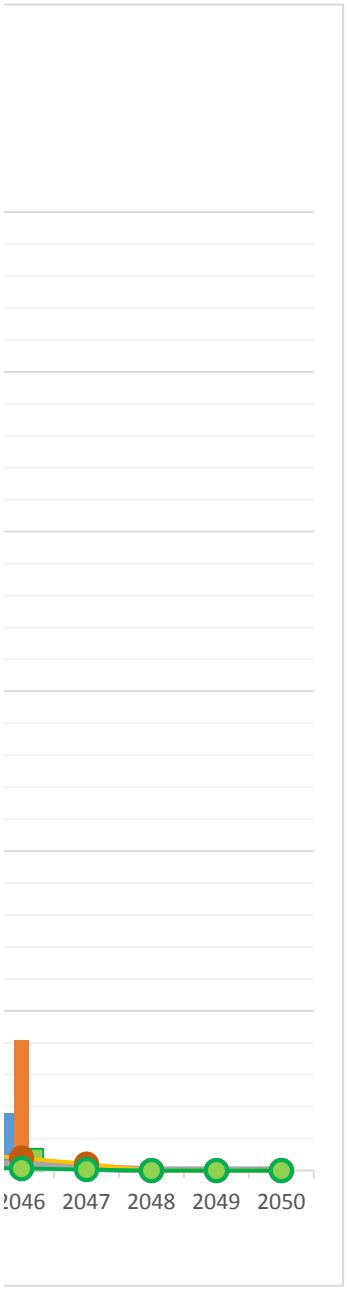

Accumulated debt in present year, with annual interest costs
Feb4 1b, 30-yr, Accumulated Debt
Feb4 1c, 30-yr, Accumulated Debt
ear Debt Drawdown
Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown
Interest Cost - Feb4 1c, 30-yr
2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045
YEAR


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

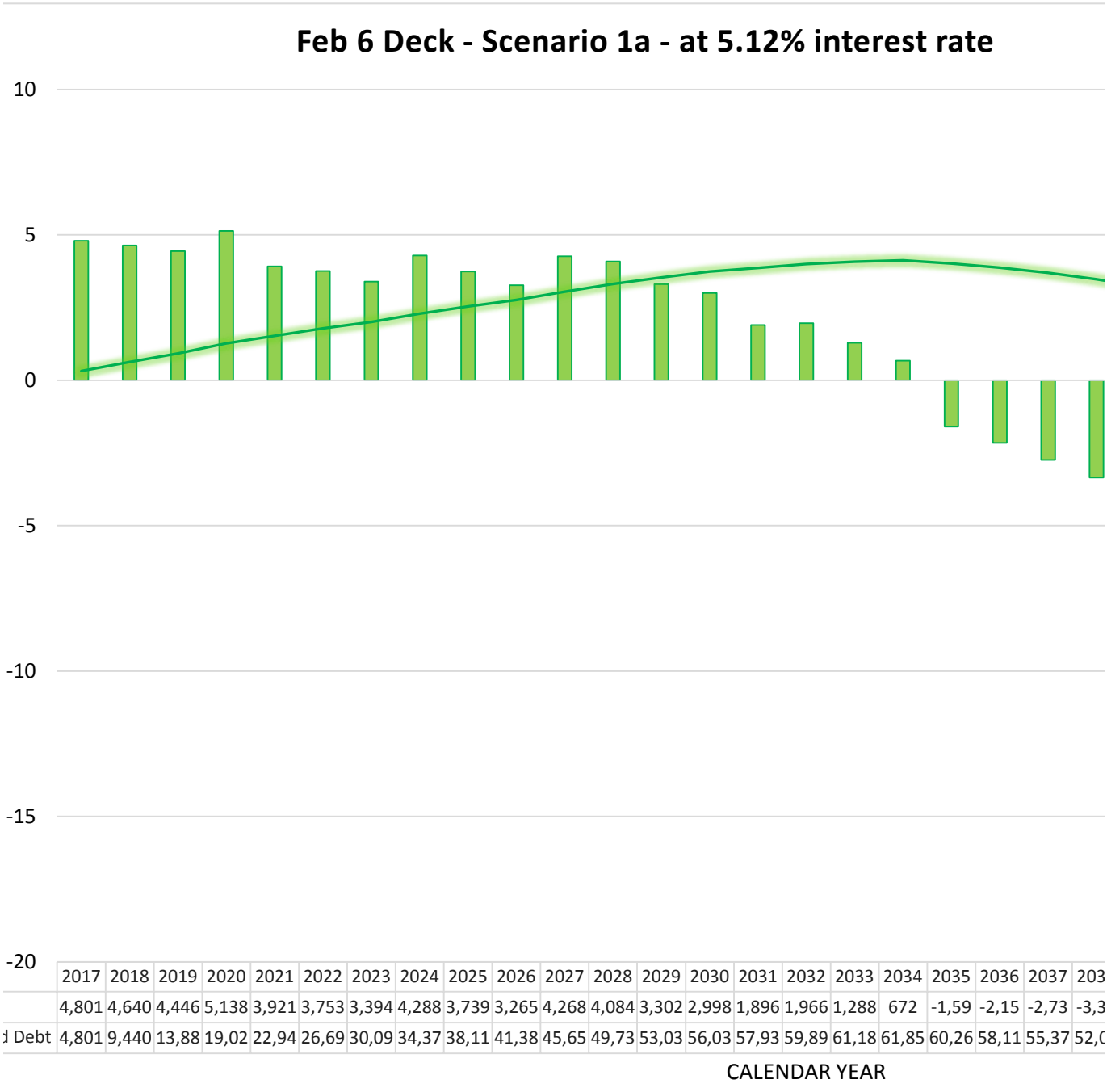
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

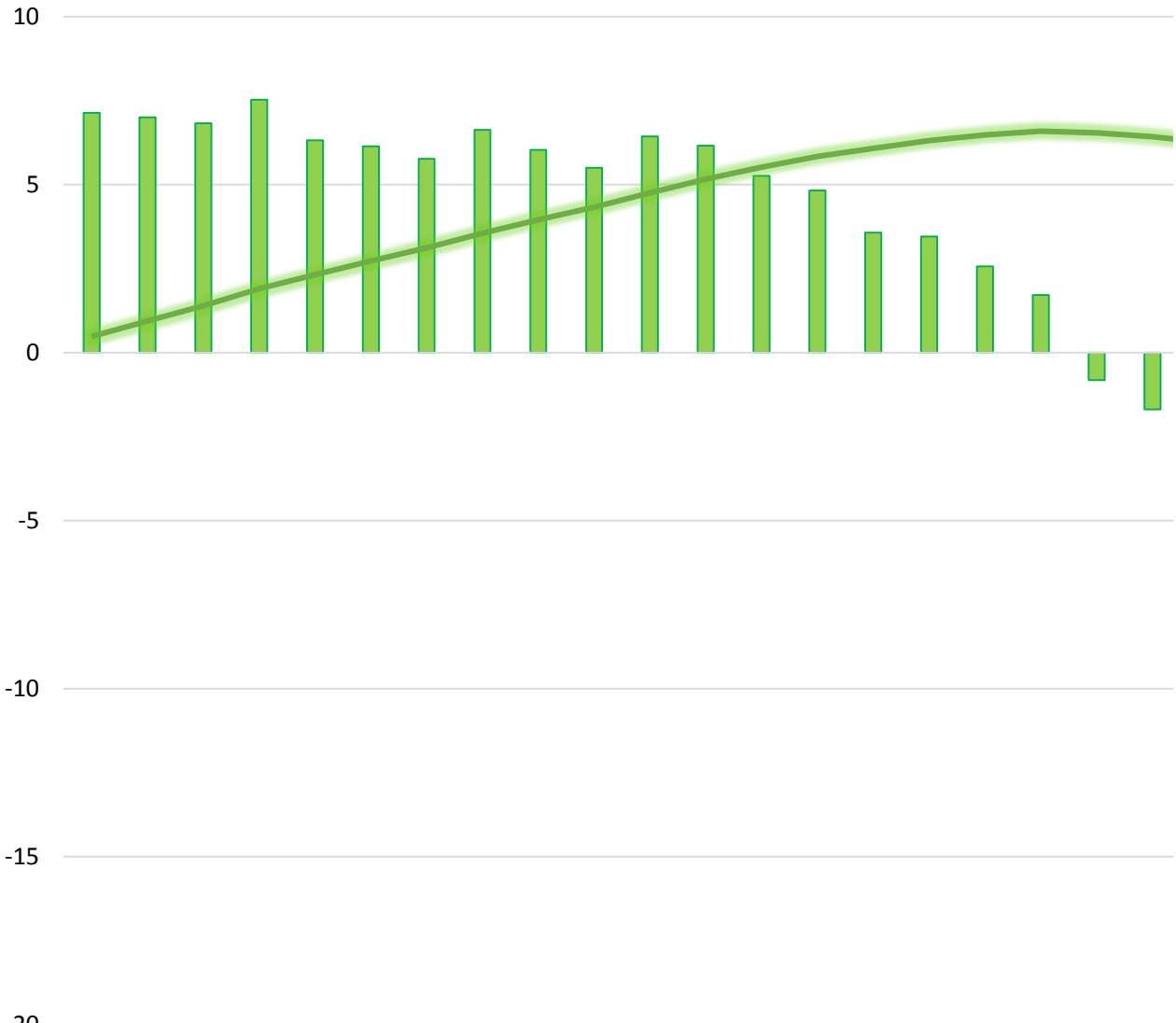
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

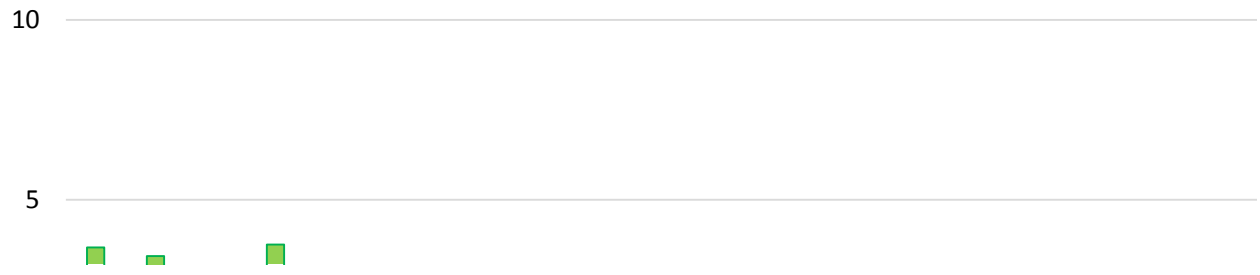
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

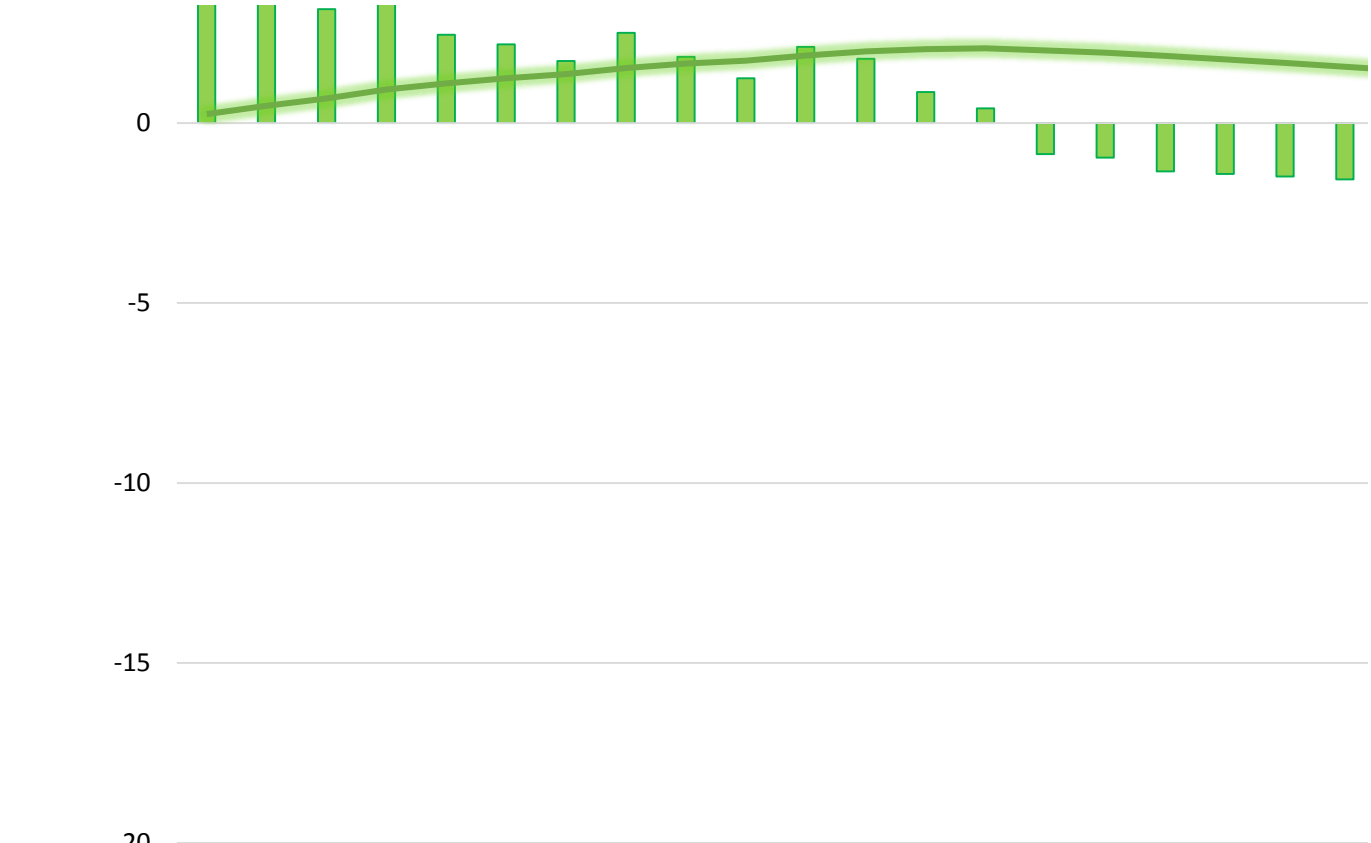


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



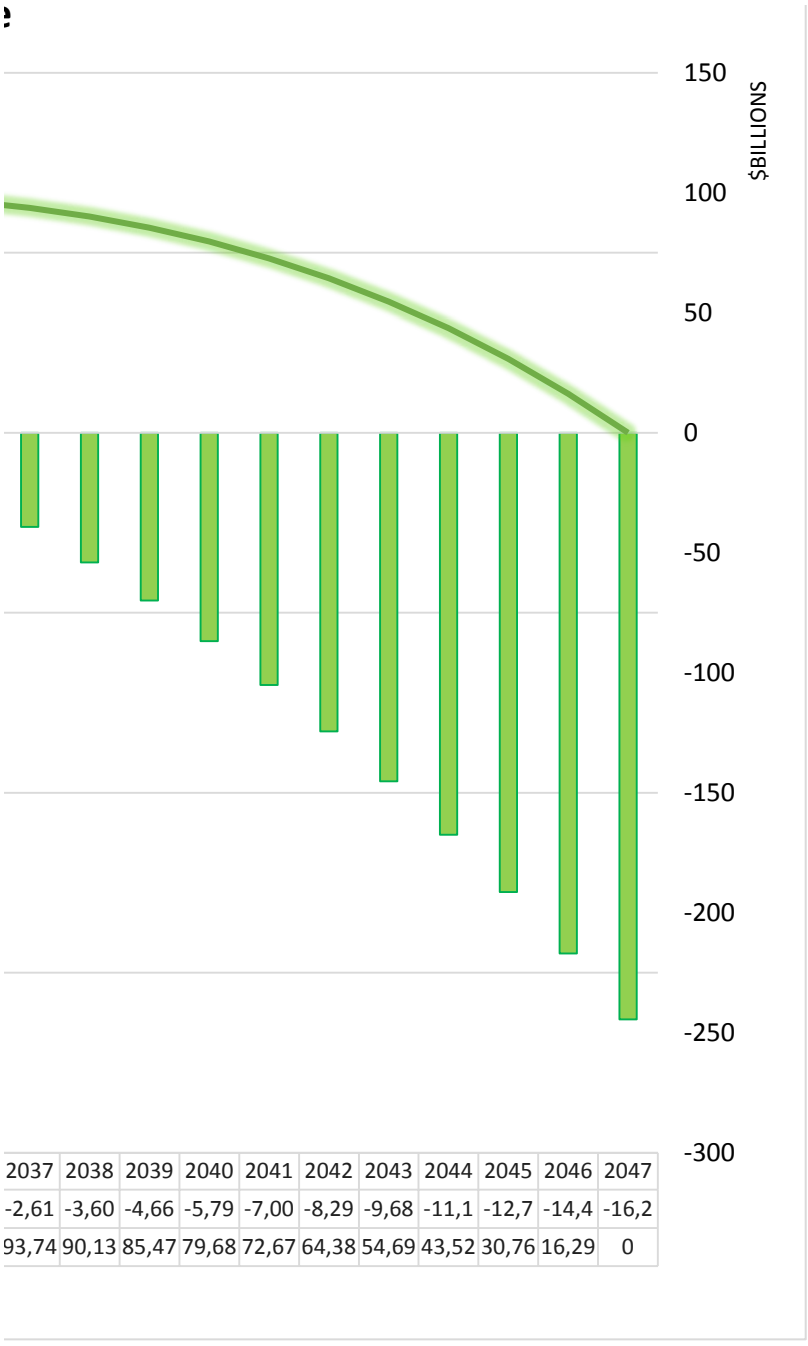


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

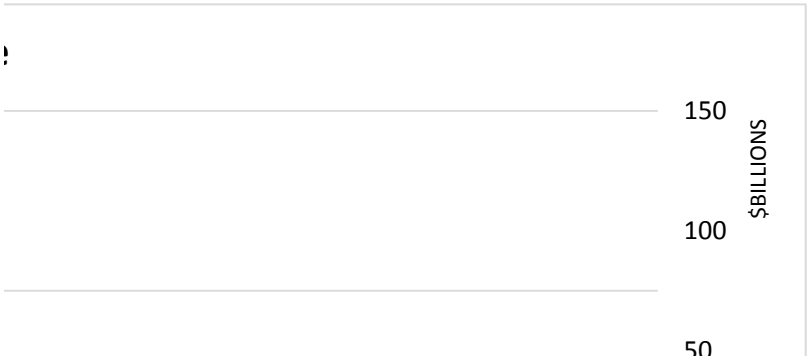
CALENDAR YEAR

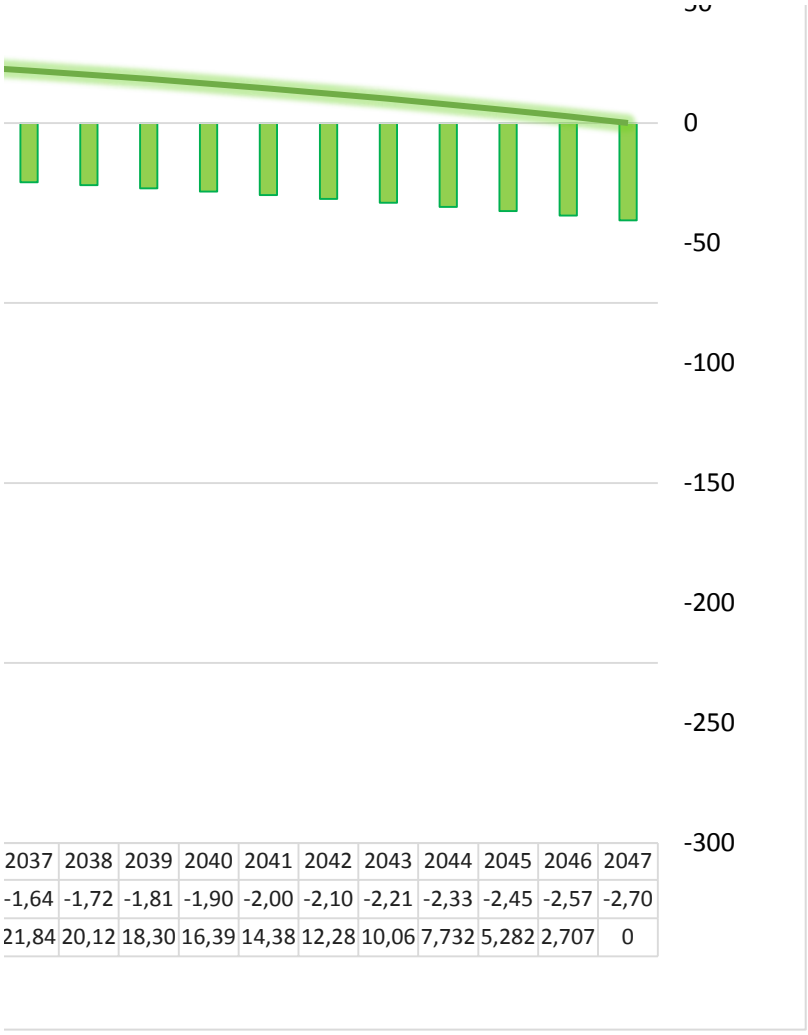


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Feb 8 Deck - Scenario 1a, 1b, 1c - at 5.12% interest
IESO GA cost forecast + extrapolation

Scenario
1a

1b

1c

1d

1e

	2017	2018	2019	2020
rate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	4674	9542	14587	21173

GA Payment from Impacted Rate Class	7421	7205	6995	6329
Accumulated debt in present year (including interest)	4674	9544	14589	21175

GA Payment from Impacted Rate Class	7421	7425	7440	7013
Accumulated debt in present year (including interest)	4674	9323	13913	19780

GA Payment from Impacted Rate Class	9915	9676	9427	9445
Accumulated debt in present year (including interest)	2180	4450	6803	9875

GA Payment from Impacted Rate Class	10596	10370	10129	10162
Accumulated debt in present year (including interest)	1500	3042	4620	6863

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
27212	33084	38588	44968	50769	56056	62291	68274

5890	6156	6434	6724	7028	7345	7677	8024
27212	33082	38585	44963	50762	56048	62281	68263

6825	7042	7266	7497	7736	7983	8237	8499
24810	29671	34167	39545	44359	48679	53976	59058

8532	8703	8877	9054	9236	9420	9609	9801
12692	15272	17420	20384	22719	24494	27181	29590

9264	9449	9638	9831	10027	10228	10432	10641
8794	10429	11568	13457	14645	15200	16588	17614

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
73391	78103	81594	85015	87596	89375	88679	87180

8386	8765	9160	9574	10006	10458	10931	11424
73378	78089	81578	84997	87577	89356	88659	87159

8770	9049	9337	9634	9941	10257	10584	10921
63318	67230	69987	72754	74773	76097	75068	73377

9997	10197	10401	10609	10821	10916	8822	8548
31116	32233	32135	31991	31045	29473	27822	26085

10854	11071	10196	10361	9779	9298	7203	6930
17670	17225	16565	15871	15142	14376	13570	12723

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
84828	81568	77341	72085	65730	58203	49425	39310

11940	12480	13043	13632	14248	14891	15564	16267
84806	81546	77320	72065	65711	58186	49409	39297

11269	11628	11998	12380	12774	13181	13600	14033
70990	67875	63995	59310	53778	47352	39985	31624

8288	8040	7805	7580	7367	7164	6970	6786
24260	22342	20325	18206	15978	13635	11173	8586

6670	6422	6186	5962	5748	5545	5352	5168
11833	10897	9914	8880	7793	6651	5450	4188

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
27767	14699	0	0	0	0

17001	17769	18572	2975	2831	2695
27758	14694	0	0	0	0

14480	14941	15417	2975	2831	2695
22213	11693	0	0	0	0

6611	6444	6286	2975	2831	2695
5865	3006	0	0	0	0

4993	4826	4667	2975	2831	2695
2861	1466	0	0	0	0

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb8_1a_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,867
Annual Exposure2 with start on July 1st	*2,337*	*4,867*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	3,554

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

1 Based on an interest rate of 5%.

2 Fiscal exposure based on equal monthly drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1b_30yr

1b. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,869
Annual Exposure2 with start on July 1st	*2,337*	*4,869*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	*3,554*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649
Annual Exposure2 with start on July 1st	*2,337*	*4,649*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,668
Start: July 1st	-	*3,499*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $76 billion peaking in

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270
Annual Exposure2 with start on July 1st	*1,090*	*2,270*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	545	2,203
Start: July 1st	-	*1,658*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $32 billion peaking in

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542
Annual Exposure2 with start on July 1st	*750*	*1,542*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	375	1,510
Start: July 1st	-	*1,135*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $18 billion peaking in

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	1,169 - 1,169	4,723 - 4,723

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1169**	**4963**
Total, B	1169	4963
Proposed Program Total:	1,169 - 1,169	4,963 - 4,963

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1a
Scenario 1b
Scenario 1c
Scenario 1d
Scenario 1e

2019	2020	2021	2022
5,045	6,586	6,039	5,872
5,045	*6,586*	*6,039*	*5,872*

2018-19	2019-20	2020-21	2021-2022
4,912	5,430	6,449	5,997
4,912	*5,430*	*6,449*	*5,997*

2034.

Actuals are subject t
- The highest debt ac
- Compared to a 5% i

[1] Based on an interes
[2] Fiscal exposure bas
[3] Fiscalized based on

depend on decision on accounting treatment.

2019	2020	2021	2022
5,045	6,586	6,037	5,870
5,045	*6,586*	*6,037*	*5,870*

2018-19	2019-20	2020-21	2021-2022
4,913	5,430	6,449	5,996
4,913	*5,430*	*6,449*	*5,996*

2034.

2019	2020	2021	2022
4,589	5,867	5,031	4,861
4,589	*5,867*	*5,031*	*4,861*

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988
4,634	*4,909*	*5,658*	*4,988*

2034.

2019	2020	2021	2022
2,353	3,072	2,817	2,580
2,353	*3,072*	*2,817*	*2,580*

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757
2,291	*2,533*	*3,008*	*2,757*

2030.

2019	2020	2021	2022
1,578	2,243	1,931	1,635
1,578	*2,243*	*1,931*	*1,635*

2018-19	2019-20	2020-21	2021-2022

1,551	1,745	2,165	1,857
1,551	*1,745*	*2,165*	*1,857*

2029.



2018-19	2019-20	2020-21	2021-2022
4,913 - 4,912	5,430 - 5,430	6,449 - 6,449	5,996 - 5,997

/1

2018-19[1]	2019-20[1]	2020-21[1]
4912	5430	6449
4913	5430	6449
225	279	323
60	60	60
18	18	18
5215	**5787**	**6850**
5216	5787	6850

5,216 - 5,215 5,787 - 5,787 6,850 - 6,850

Total Principal Debt	Total Accumulated Interest Costs	**Peak Total Debt**	
52,287	85,599	89,375	occurs in Year 2034
52,275	85,582	89,356	occurs in Year 2034
44,449	72,823	76,097	occurs in Year 2034
21,239	29,589	32,233	occurs in Year 2030
12,350	16,239	17,670	occurs in Year 2029

o actual prices and actual interest rates.
:cumulation (at 5% interest rate) is expected to be approximately $62 billion, peaking in 203 and $17-21 billion (at 3.5% interest
interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately $33-$36 million.

st rate of 5%.
sed on equal monthly drawdown of debt.
75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on mo

Feb8_1a_30yr
Feb8_1b_30yr
Feb8_1c_30yr
Feb8_1d_30yr
Feb8_1e_30yr

t rate), peaking in 2028.

nth of the year. Actuals may also depend on decision on accounting treatment.

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-275	-311	-350	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,573	85,599
Equal Monthly Debt Drawdown	6,743	4,556	

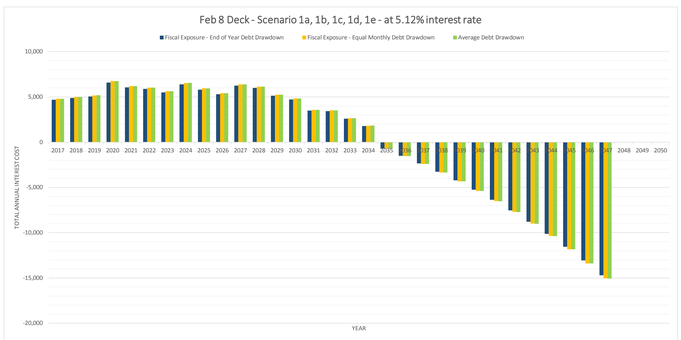
	Feb8 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,375	2034	52,287
Equal Monthly Debt Drawdown	91,501		

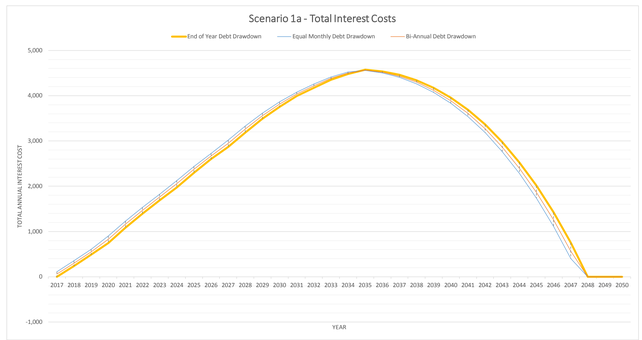
Feb8 1a, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	
c = a*5%	*Interest Cost - Feb8 1a, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,301*	*2,597*	*2,868*	*3,187*	*3,493*	*3,755*	*3,996*	*4,175*	*4,350*	*4,482*	*4,573*	*4,537*	*4,460*	*4,340*	*4,173*	*3,957*	*3,688*	*3,363*	*2,978*	*2,529*	*2,011*	*1,421*	*752*	*0*	*0*	*0*	85,599
b	Additional GA Debt Drawdown, End of Year	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,307	32,728	35,309	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	39,310	27,767	14,699	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	52,287	52,287	52,287	51,591	50,091	47,739	44,479	40,253	34,997	28,642	21,115	12,336	0	0	0	0	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,813	33,987	38,337	42,818	47,391	51,928	56,388	60,728	64,901	68,858	72,546	75,909	78,887	81,416	83,427	84,847	85,599				
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	51,781	51,028	49,259	46,557	41,288	35,252	28,440	20,840	12,440	3,227	-6,816	-17,706	-29,462	-42,106	-55,660	-70,149	-85,599				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	

Feb8 1a, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	
4,556	*Interest Cost - Feb8 1a, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,824*	*2,126*	*2,439*	*2,723*	*3,016*	*3,329*	*3,615*	*3,867*	*4,079*	*4,256*	*4,411*	*4,524*	*4,556*	*4,501*	*4,404*	*4,262*	*4,073*	*3,832*	*3,537*	*3,184*	*2,769*	*2,288*	*1,737*	*1,110*	*402*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
	Monthly Drawdown	390	386	380	487	413	373	318	367	292	224	281	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(980)	(1,054)	(1,129)	(1,207)	(1,288)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,738	4,665	5,979	5,074	4,586	3,902	4,510	3,584	2,753	3,447	2,863	1,662	980	(517)	(772)	(1,810)	(2,766)	(5,394)	(6,180)	(6,975)	(7,781)	(8,599)	(9,432)	(10,282)	(11,149)	(12,036)	(12,944)	(13,876)	(14,834)	(15,818)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	67	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(368)	-	-	-	
	Annual Interest Cost on Opening Balance	-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,263	3,576	3,844	4,091	4,274	4,453	4,588	4,681	4,645	4,566	4,443	4,272	4,051	3,776	3,443	3,049	2,589	2,059	1,454	770	(0)	(0)	(0)	
	Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,824	2,126	2,439	2,723	3,016	3,329	3,615	3,867	4,079	4,256	4,411	4,524	4,556	4,501	4,404	4,262	4,073	3,832	3,537	3,184	2,769	2,288	1,737	1,110	402	(0)	(0)	(0)	

Feb8 1a, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*60*	*301*	*553*	*831*	*1,160*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,948*	*3,263*	*3,558*	*3,815*	*4,041*	*4,218*	*4,383*	*4,504*	*4,564*	*4,518*	*4,430*	*4,298*	*4,119*	*3,890*	*3,607*	*3,267*	*2,866*	*2,399*	*1,864*	*1,253*	*564*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,930	5,110	6,670	6,116	5,947	5,575	6,461	5,875	5,354	6,315	6,060	5,182	4,773	3,535	3,464	2,614	1,802	-705	-1,518	-2,382	-3,302	-4,280	-5,324	-6,436	-7,623	-8,891	-10,244	-11,690	-13,236	-14,887	0	0	0	
	Bi-Annual Drawdown	2,337	2,314	2,279	2,920	2,478	2,240	1,906	2,203	1,750	1,345	1,684	1,398	812	479	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,800)	(4,200)	(4,607)	(5,021)	(5,445)	(5,878)	(6,322)	(6,777)	(7,245)	(7,725)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,687	4,615	5,914	5,019	4,537	3,860	4,462	3,545	2,724	3,410	2,832	1,644	970	(512)	(763)	(1,791)	(2,737)	(5,336)	(6,113)	(6,900)	(7,697)	(8,507)	(9,331)	(10,171)	(11,029)	(11,907)	(12,805)	(13,727)	(14,674)	(15,648)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	494	756	1,097	1,410	1,714	1,999	2,330	2,631	2,905	3,228	3,538	3,803	4,047	4,228	4,405	4,539	4,631	4,595	4,517	4,395	4,227	4,008	3,735	3,406	3,016	2,561	2,037	1,439	762	(0)	(0)	(0)	
	Total Annual Interest Cost	60	301	553	831	1,160	1,467	1,763	2,056	2,375	2,665	2,948	3,263	3,558	3,815	4,041	4,218	4,383	4,504	4,564	4,518	4,430	4,298	4,119	3,890	3,607	3,267	2,866	2,399	1,864	1,253	564	(0)	(0)	(0)	

Feb8 1a, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,723*	*3,027*	*3,340*	*3,624*	*3,875*	*4,085*	*4,262*	*4,416*	*4,527*	*4,555*	*4,499*	*4,400*	*4,257*	*4,065*	*3,822*	*3,525*	*3,170*	*2,753*	*2,270*	*1,716*	*1,086*	*376*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,992	5,174	6,754	6,193	6,022	5,645	6,543	5,950	5,422	6,395	6,137	5,248	4,833	3,580	3,508	2,647	1,825	-714	-1,537	-2,412	-3,343	-4,334	-5,391	-6,517	-7,720	-9,003	-10,374	-11,838	-13,403	-15,075	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-274	-311	-349	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,572	85,582
Equal Monthly Debt Drawdown	6,743	4,555	

	Feb8 1b, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,356	2034	52,275
Equal Monthly Debt Drawdown	91,481		

Feb8 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
a — Debt, Beginning of Year	0	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	
c = a*5% — *Interest Cost - Feb8 1b, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,300*	*2,597*	*2,867*	*3,186*	*3,492*	*3,754*	*3,995*	*4,174*	*4,349*	*4,481*	*4,572*	*4,536*	*4,459*	*4,339*	*4,172*	*3,956*	*3,687*	*3,362*	*2,977*	*2,528*	*2,011*	*1,420*	*752*	*0*	*0*	*0*	85,582
b — Additional GA Debt Drawdown, End of Year	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,303	32,722	35,302	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	39,297	27,758	14,694	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	52,275	52,275	52,275	52,275	51,578	50,078	47,725	44,465	40,239	34,984	28,630	21,105	12,328	0	0	0	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,809	33,983	38,331	42,812	47,384	51,920	56,379	60,718	64,890	68,846	72,533	75,895	78,871	81,399	83,410	84,830	85,582				
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	51,769	51,014	49,246	46,544	41,275	35,239	28,428	20,829	12,431	3,219	-6,822	-17,709	-29,462	-42,102	-55,652	-70,136	-85,582				
Fiscal Exposure - End of Year Debt Drawdown	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	

Feb8 1b, 30-yr — Equal Monthly Debt Drawdown

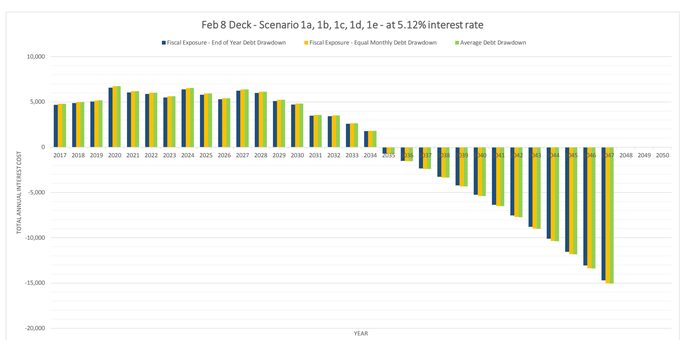
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	
4,555 — *Interest Cost - Feb8 1b, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,823*	*2,126*	*2,438*	*2,723*	*3,016*	*3,329*	*3,614*	*3,866*	*4,078*	*4,255*	*4,410*	*4,523*	*4,555*	*4,500*	*4,403*	*4,261*	*4,072*	*3,831*	*3,536*	*3,183*	*2,768*	*2,287*	*1,736*	*1,109*	*402*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
Monthly Drawdown	390	386	380	487	413	373	317	367	292	224	280	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(979)	(1,053)	(1,129)	(1,207)	(1,287)	(0)	-	-	
FV of Monthly Drawdown at 5%	4,786	4,740	4,665	5,979	5,072	4,585	3,900	4,509	3,582	2,752	3,446	2,862	1,661	979	(518)	(772)	(1,811)	(2,766)	(5,394)	(6,179)	(6,974)	(7,780)	(8,598)	(9,431)	(10,279)	(11,146)	(12,033)	(12,941)	(13,872)	(14,829)	(15,813)	(0)	-	-	
Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	66	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(367)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,262	3,576	3,843	4,090	4,273	4,452	4,587	4,680	4,644	4,565	4,442	4,271	4,050	3,775	3,442	3,048	2,588	2,058	1,454	770	0	0	0	
Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,823	2,126	2,438	2,723	3,016	3,329	3,614	3,866	4,078	4,255	4,410	4,523	4,555	4,500	4,403	4,261	4,072	3,831	3,536	3,183	2,768	2,287	1,736	1,109	402	0	0	0	

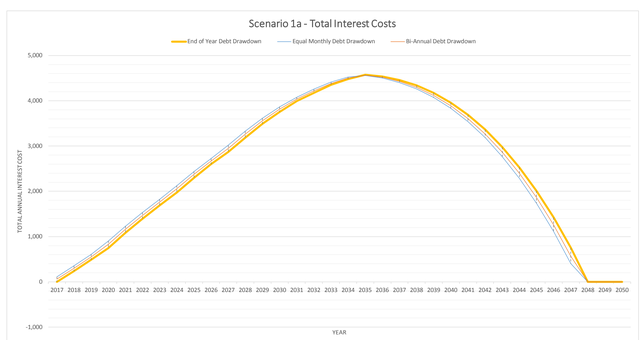
Feb8 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*60*	*301*	*553*	*831*	*1,161*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,947*	*3,263*	*3,558*	*3,814*	*4,040*	*4,217*	*4,382*	*4,503*	*4,563*	*4,517*	*4,429*	*4,297*	*4,118*	*3,889*	*3,606*	*3,266*	*2,865*	*2,399*	*1,863*	*1,253*	*564*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	4,734	4,931	5,110	6,670	6,115	5,945	5,573	6,460	5,874	5,353	6,313	6,058	5,181	4,771	3,534	3,463	2,613	1,801	-706	-1,519	-2,383	-3,302	-4,280	-5,323	-6,435	-7,622	-8,889	-10,242	-11,687	-13,231	-14,882	0	0	0	
Bi-Annual Drawdown	2,337	2,315	2,279	2,920	2,477	2,239	1,905	2,202	1,750	1,344	1,683	1,398	811	478	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,799)	(4,199)	(4,606)	(5,020)	(5,444)	(5,877)	(6,320)	(6,775)	(7,242)	(7,723)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	4,734	4,689	4,615	5,914	5,017	4,535	3,859	4,460	3,544	2,722	3,409	2,831	1,643	969	(513)	(764)	(1,791)	(2,737)	(5,336)	(6,113)	(6,899)	(7,696)	(8,506)	(9,329)	(10,169)	(11,027)	(11,904)	(12,802)	(13,723)	(14,670)	(15,643)	(0)	-	-	
Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	242	495	756	1,097	1,410	1,714	1,999	2,330	2,630	2,904	3,227	3,537	3,802	4,046	4,227	4,404	4,538	4,630	4,594	4,516	4,394	4,225	4,006	3,734	3,405	3,015	2,560	2,036	1,438	761	0	(0)	(0)	
Total Annual Interest Cost	60	301	553	831	1,161	1,467	1,763	2,056	2,375	2,665	2,947	3,263	3,558	3,814	4,040	4,217	4,382	4,503	4,563	4,517	4,429	4,297	4,118	3,889	3,606	3,266	2,865	2,399	1,863	1,253	564	0	(0)	(0)	

Feb8 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,732*	*3,027*	*3,339*	*3,623*	*3,875*	*4,084*	*4,261*	*4,415*	*4,526*	*4,554*	*4,498*	*4,399*	*4,255*	*4,064*	*3,821*	*3,524*	*3,169*	*2,752*	*2,269*	*1,715*	*1,086*	*376*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	4,794	4,994	5,174	6,754	6,192	6,020	5,643	6,541	5,948	5,420	6,393	6,135	5,246	4,831	3,578	3,507	2,646	1,824	-715	-1,538	-2,413	-3,343	-4,334	-5,390	-6,516	-7,718	-9,001	-10,371	-11,835	-13,398	-15,070	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1c_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	
			111	111	109	140	120	116	107	128	115	103	126	121	101	93	66	66	48	32	-24	-40	-57	-74	-92	-111	-132	-153	-175	-199	-224	-250	-278	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	5,867	3,893	72,823
Equal Monthly Debt Drawdown	6,006	3,869	

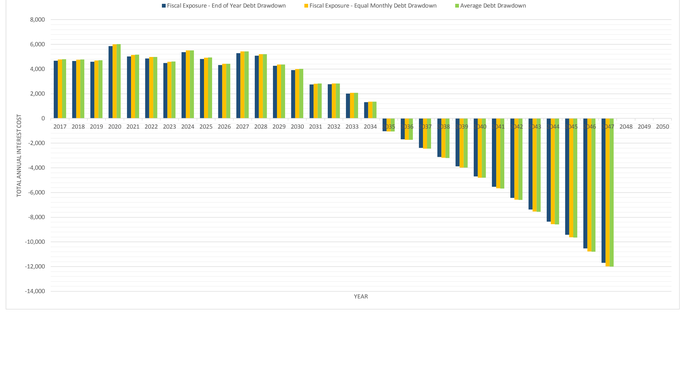
	Feb8 1c, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	76,097	2034	44,449
Equal Monthly Debt Drawdown	77,907		

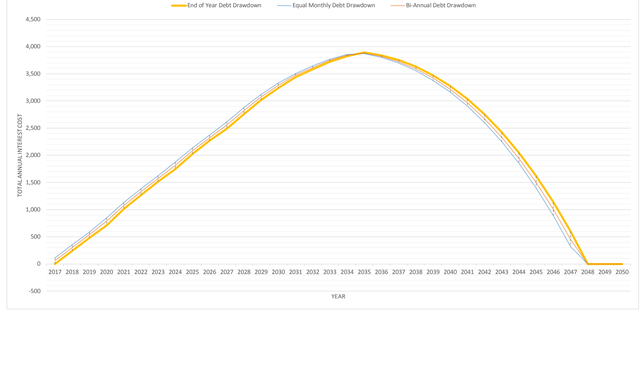
Feb8 1c, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	
c = a*5%	*Interest Cost - Feb8 1c, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*477*	*712*	*1,012*	*1,269*	*1,518*	*1,748*	*2,023*	*2,270*	*2,491*	*2,762*	*3,022*	*3,239*	*3,440*	*3,581*	*3,722*	*3,826*	*3,893*	*3,841*	*3,754*	*3,632*	*3,473*	*3,274*	*3,034*	*2,751*	*2,423*	*2,046*	*1,618*	*1,136*	*598*	*0*	*0*	*0*	72,823
b	Additional GA Debt Drawdown, End of Year	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	
	Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	25,538	28,304	30,324	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,624	22,213	11,693	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	44,449	44,449	44,449	44,449	43,420	41,729	39,342	36,228	32,347	27,662	22,130	15,704	8,337	0	0	0	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	26,221	29,801	33,524	37,349	41,242	45,083	48,837	52,469	55,942	59,216	62,250	65,002	67,424	69,470	71,088	72,224	72,823				
	Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	43,767	42,952	41,249	38,748	33,826	28,294	22,153	15,406	8,054	94	-8,473	-17,649	-27,439	-37,846	-48,875	-60,532	-72,823				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	

Feb8 1c, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
3,869	Debt, Beginning of Year	0	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*111*	*350*	*586*	*851*	*1,132*	*1,385*	*1,625*	*1,876*	*2,138*	*2,372*	*2,617*	*2,882*	*3,123*	*3,333*	*3,505*	*3,646*	*3,770*	*3,857*	*3,869*	*3,800*	*3,697*	*3,558*	*3,380*	*3,163*	*2,903*	*2,599*	*2,247*	*1,847*	*1,394*	*886*	*320*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	
	Monthly Drawdown	390	367	343	430	335	299	248	303	233	171	234	193	103	56	(57)	(68)	(142)	(208)	(410)	(461)	(512)	(562)	(613)	(663)	(714)	(765)	(816)	(867)	(919)	(971)	(1,024)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,515	4,210	5,278	4,114	3,677	3,048	3,717	2,857	2,099	2,873	2,375	1,268	689	(699)	(834)	(1,744)	(2,561)	(5,039)	(5,664)	(6,286)	(6,907)	(7,528)	(8,148)	(8,771)	(9,395)	(10,023)	(10,654)	(11,291)	(11,934)	(12,583)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	105	98	123	96	85	71	86	66	49	67	55	29	16	(16)	(19)	(41)	(59)	(117)	(132)	(146)	(160)	(175)	(189)	(204)	(218)	(233)	(248)	(262)	(277)	(292)	-	-	-	
	Annual Interest Cost on Opening Balance	-	245	488	729	1,036	1,300	1,554	1,790	2,071	2,323	2,550	2,827	3,093	3,317	3,521	3,666	3,811	3,917	3,986	3,932	3,843	3,718	3,555	3,352	3,107	2,817	2,480	2,094	1,656	1,163	612	(0)	(0)	(0)	
	Total Annual Interest Cost	111	350	586	851	1,132	1,385	1,625	1,876	2,138	2,372	2,617	2,882	3,123	3,333	3,505	3,646	3,770	3,857	3,869	3,800	3,697	3,558	3,380	3,163	2,903	2,599	2,247	1,847	1,394	886	320	(0)	(0)	(0)	

Feb8 1c, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*60*	*299*	*536*	*787*	*1,076*	*1,332*	*1,576*	*1,817*	*2,085*	*2,325*	*2,558*	*2,827*	*3,076*	*3,290*	*3,475*	*3,616*	*3,748*	*3,842*	*3,880*	*3,819*	*3,724*	*3,592*	*3,423*	*3,214*	*2,964*	*2,669*	*2,328*	*1,939*	*1,498*	*1,002*	*449*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,708	4,648	5,942	5,095	4,923	4,553	5,447	4,876	4,375	5,364	5,147	4,315	3,962	2,792	2,802	2,045	1,341	-1,042	-1,713	-2,417	-3,155	-3,930	-4,745	-5,603	-6,508	-7,461	-8,468	-9,531	-10,655	-11,842	0	0	0	
	Bi-Annual Drawdown	2,337	2,205	2,056	2,578	2,009	1,796	1,489	1,815	1,395	1,025	1,403	1,160	620	336	(341)	(407)	(852)	(1,251)	(2,461)	(2,766)	(3,070)	(3,373)	(3,676)	(3,980)	(4,283)	(4,588)	(4,895)	(5,203)	(5,514)	(5,828)	(6,146)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,466	4,165	5,221	4,070	3,638	3,015	3,677	2,826	2,077	2,842	2,350	1,255	681	(691)	(825)	(1,725)	(2,533)	(4,985)	(5,603)	(6,219)	(6,833)	(7,447)	(8,061)	(8,676)	(9,294)	(9,915)	(10,540)	(11,170)	(11,806)	(12,448)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	56	53	66	51	46	38	46	36	26	36	30	16	9	(9)	(10)	(22)	(32)	(63)	(71)	(79)	(86)	(94)	(102)	(110)	(117)	(125)	(133)	(141)	(149)	(157)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	483	721	1,025	1,286	1,537	1,770	2,049	2,299	2,522	2,797	3,060	3,281	3,484	3,626	3,770	3,874	3,943	3,890	3,802	3,678	3,517	3,316	3,073	2,787	2,454	2,072	1,639	1,151	606	(0)	(0)	(0)	
	Total Annual Interest Cost	60	299	536	787	1,076	1,332	1,576	1,817	2,085	2,325	2,558	2,827	3,076	3,290	3,475	3,616	3,748	3,842	3,880	3,819	3,724	3,592	3,423	3,214	2,964	2,669	2,328	1,939	1,498	1,002	449	(0)	(0)	(0)	

Feb8 1c, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*120*	*358*	*594*	*862*	*1,141*	*1,394*	*1,633*	*1,886*	*2,146*	*2,380*	*2,626*	*2,892*	*3,130*	*3,340*	*3,510*	*3,651*	*3,774*	*3,859*	*3,867*	*3,797*	*3,693*	*3,552*	*3,373*	*3,154*	*2,893*	*2,587*	*2,234*	*1,832*	*1,377*	*867*	*299*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,768	4,707	6,017	5,160	4,985	4,610	5,516	4,937	4,431	5,432	5,212	4,370	4,012	2,828	2,837	2,071	1,358	-1,055	-1,735	-2,447	-3,195	-3,979	-4,805	-5,674	-6,590	-7,556	-8,575	-9,652	-10,789	-11,992	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1d_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
			52	54	56	73	67	61	51	71	56	42	64	57	36	27	-2	-3	-23	-37	-39	-41	-43	-46	-48	-50	-53	-56	-59	-62	-65	-68	-71	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,072	1,649	29,589
Equal Monthly Debt Drawdown	3,145	1,647	

	Feb8 1d, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,233	2030	21,239
Equal Monthly Debt Drawdown	32,999		

Feb8 1d, 30-yr — End of Year Debt Drawdown

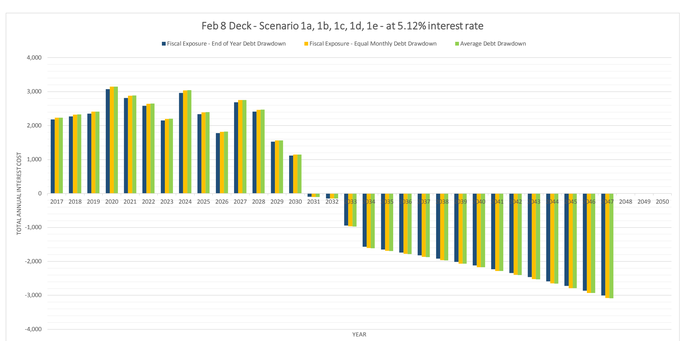
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
a Debt, Beginning of Year	0	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	
c = a*5% *Interest Cost - Feb8 1d, 30-yr - End of Year Debt Drawdown*	*0*	*112*	*228*	*348*	*505*	*649*	*781*	*891*	*1,043*	*1,162*	*1,253*	*1,391*	*1,514*	*1,592*	*1,649*	*1,644*	*1,637*	*1,588*	*1,508*	*1,423*	*1,335*	*1,241*	*1,143*	*1,040*	*931*	*817*	*698*	*572*	*439*	*300*	*154*	*0*	*0*	*0*	29,589
b Additional GA Debt Drawdown, End of Year	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
d = a+b+c Accumulated debt in present year (including 5.12% annual interest)	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	11,372	11,227	10,281	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,586	5,865	3,006	0	0	0	0	
Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	20,763	20,763	20,763	20,763	19,112	17,375	15,550	13,632	11,616	9,496	7,268	4,926	2,464	0	0	0	0	0	0	0	
Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	13,118	14,763	16,399	17,988	19,495	20,919	22,253	23,495	24,638	25,678	26,609	27,426	28,124	28,696	29,135	29,435	29,589				
Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	19,017	17,228	14,645	11,486	8,326	5,167	2,007	-1,153	-4,312	-7,472	-10,631	-13,791	-16,951	-20,110	-23,270	-26,429	-29,589				
Fiscal Exposure - End of Year Debt Drawdown	2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	

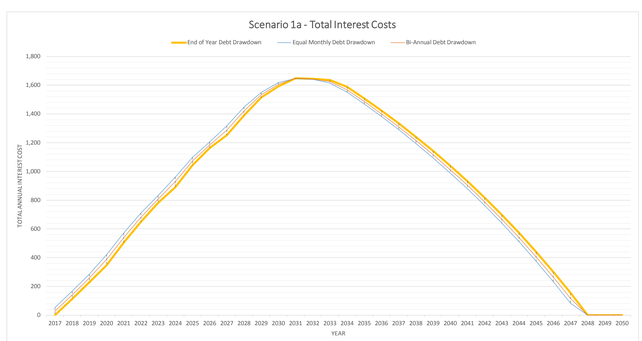
Feb8 1d, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Debt, Beginning of Year	0	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	
1,647 *Interest Cost - Feb8 1d, 30-yr*	*52*	*166*	*284*	*421*	*572*	*711*	*832*	*962*	*1,098*	*1,205*	*1,317*	*1,448*	*1,550*	*1,619*	*1,647*	*1,641*	*1,614*	*1,551*	*1,469*	*1,382*	*1,291*	*1,196*	*1,095*	*989*	*878*	*762*	*639*	*510*	*375*	*232*	*82*	*0*	*0*	*0*	29,589
Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
Monthly Drawdown	182	180	177	227	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	-	-	-	
FV of Monthly Drawdown at 5%	2,232	2,210	2,176	2,788	2,366	1,977	1,399	2,123	1,322	628	1,468	1,042	12	(487)	(1,788)	(1,831)	(2,644)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	-	-	-	
Annual Interest Cost on New Drawdowns	52	51	51	65	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	-	-	-	
Annual Interest Cost on Opening Balance	-	114	233	356	517	665	800	912	1,068	1,190	1,283	1,424	1,550	1,630	1,688	1,683	1,676	1,626	1,544	1,457	1,366	1,271	1,170	1,065	954	837	714	585	450	307	157	0	0	0	
Total Annual Interest Cost	52	166	284	421	572	711	832	962	1,098	1,205	1,317	1,448	1,550	1,619	1,647	1,641	1,614	1,551	1,469	1,382	1,291	1,196	1,095	989	878	762	639	510	375	232	82	0	0	0	

Feb8 1d, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Debt, Beginning of Year	0	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	
1,647 *Interest Cost - Feb8 1d, 30-yr*	*56*	*170*	*288*	*427*	*577*	*715*	*836*	*967*	*1,103*	*1,208*	*1,322*	*1,452*	*1,553*	*1,621*	*1,647*	*1,640*	*1,613*	*1,548*	*1,466*	*1,379*	*1,288*	*1,192*	*1,091*	*986*	*874*	*758*	*635*	*505*	*370*	*227*	*77*	*0*	*0*	*0*	29,589
Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	2,236	2,328	2,413	3,150	2,889	2,646	2,203	3,041	2,394	1,821	2,756	2,471	1,565	1,145	-100	-148	-970	-1,612	-1,694	-1,781	-1,872	-1,967	-2,068	-2,174	-2,285	-2,402	-2,525	-2,654	-2,790	-2,933	-3,083	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1e_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	
			36	37	38	53	46	39	27	45	28	13	33	24	1	-11	-16	-16	-17	-18	-19	-20	-21	-22	-23	-25	-26	-27	-29	-30	-32	-33	-35	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,243	904	16,239
Equal Monthly Debt Drawdown	2,297	903	

		Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	17,670	2029	12,350
Equal Monthly Debt Drawdown	18,091		

Feb8 1e, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	
c = a*5%	*Interest Cost - Feb8 1e, 30-yr - End of Year Debt Drawdown*		*0*	*77*	*156*	*236*	*351*	*450*	*534*	*592*	*688*	*749*	*778*	*849*	*901*	*904*	*881*	*847*	*812*	*775*	*735*	*694*	*651*	*605*	*558*	*507*	*454*	*399*	*340*	*279*	*214*	*146*	*75*	*0*	*0*	*0*	16,239
b	Additional GA Debt Drawdown, End of Year		1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)		1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
Feb8 1e, 30-yr - Accumulated Interest Costs			0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	6,605	5,911	5,182	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,188	2,861	1,466	0	0	0	0	
Feb8 1e, 30-yr - Accumulated Debt Principal			1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	9,960	9,960	9,960	9,960	9,155	8,308	7,418	6,482	5,498	4,465	3,378	2,235	1,035	0	0	0	0	0	0	0	
Feb8 1e, 30-yr - Accumulated Interest Costs			0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	8,146	8,993	9,805	10,580	11,315	12,010	12,661	13,266	13,824	14,331	14,785	15,184	15,524	15,803	16,017	16,164	16,239				
Feb8 1e, 30-yr - Accumulated Debt Principal			1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	8,419	6,878	5,337	3,796	2,255	714	-827	-2,369	-3,910	-5,451	-6,992	-8,533	-10,074	-11,615	-13,156	-14,697	-16,239				
Fiscal Exposure - End of Year Debt Drawdown			1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	

Feb8 1e, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	
Interest Cost - Feb8 1e, 30-yr			*36*	*113*	*193*	*290*	*397*	*489*	*561*	*637*	*717*	*762*	*811*	*873*	*903*	*893*	*866*	*831*	*795*	*756*	*716*	*674*	*630*	*583*	*534*	*483*	*428*	*372*	*312*	*249*	*183*	*113*	*40*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown			1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)			1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	0
Fiscal Exposure - Equal Monthly Debt Drawdown			1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	
Monthly Drawdown			125	122	119	167	132	99	50	108	42	(16)	51	15	(70)	(112)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	-	-	-	
FV of Monthly Drawdown at 5%			1,536	1,500	1,457	2,055	1,617	1,213	620	1,328	512	(199)	625	182	(865)	(1,382)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	-	-	-	
Annual Interest Cost on New Drawdowns			36	35	34	48	38	28	14	31	12	(5)	15	4	(20)	(32)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	-	-	-	
Annual Interest Cost on Opening Balance			-	79	159	242	359	461	546	606	705	767	796	869	923	926	902	868	831	793	753	711	666	620	571	519	465	408	348	285	219	150	77	0	0	0	
Total Annual Interest Cost			36	113	193	290	397	489	561	637	717	762	811	873	903	893	866	831	795	756	716	674	630	583	534	483	428	372	312	249	183	113	40	0	0	0	

Feb8 1e, 30-yr — Bi-Annual Debt Drawdown

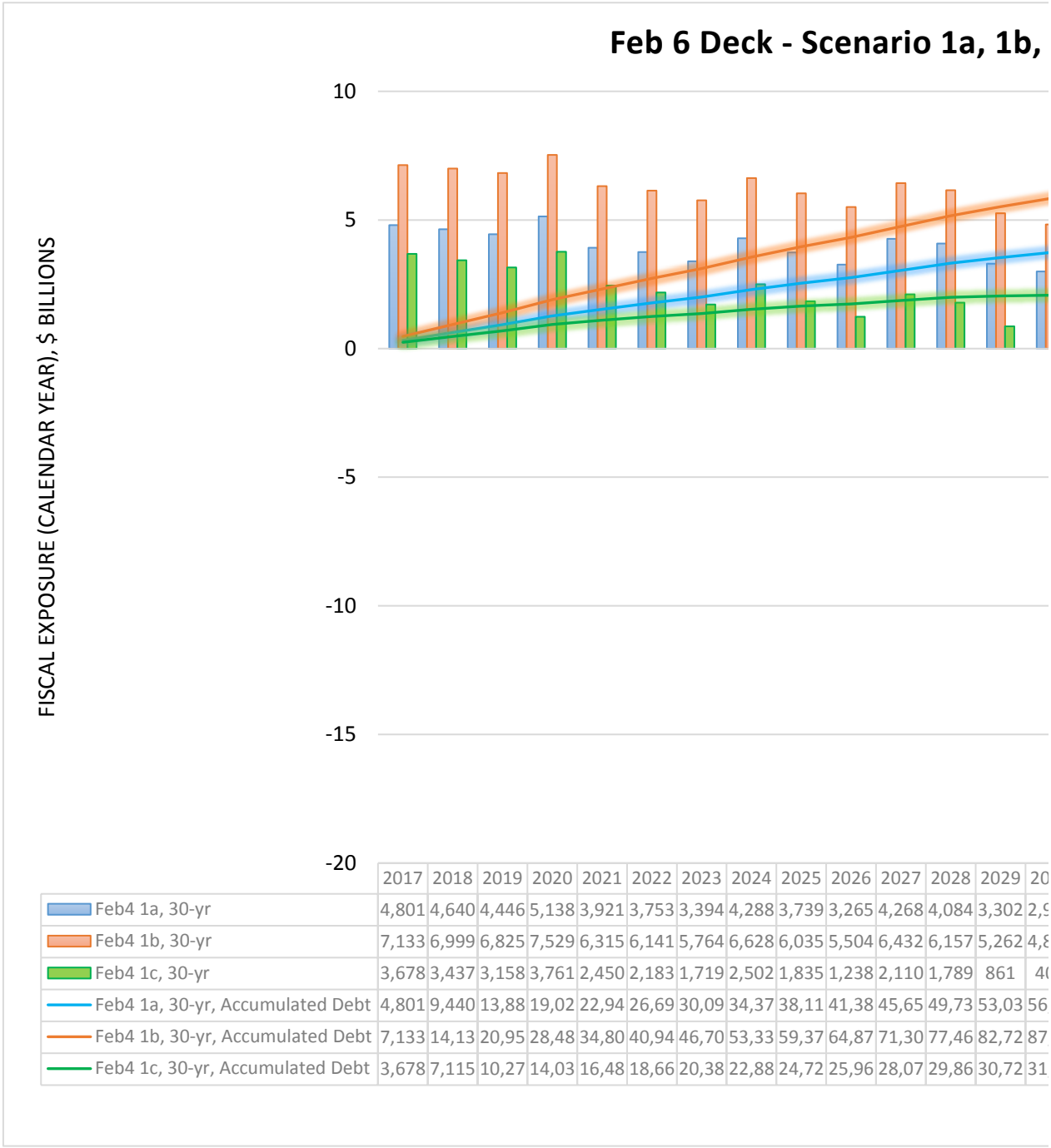
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	
Interest Cost - Feb8 1e, 30-yr			*19*	*96*	*176*	*265*	*376*	*471*	*548*	*616*	*704*	*756*	*795*	*862*	*902*	*898*	*873*	*839*	*803*	*765*	*725*	*683*	*640*	*593*	*545*	*494*	*440*	*384*	*325*	*263*	*197*	*129*	*56*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown			1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)			1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	0
Fiscal Exposure - Bi-Annual Debt Drawdown			1,519	1,561	1,598	2,272	1,956	1,655	1,154	1,913	1,203	562	1,406	1,040	57	-451	-668	-703	-738	-776	-816	-858	-902	-948	-996	-1,047	-1,101	-1,157	-1,216	-1,278	-1,344	-1,413	-1,485	0	0	0	
Bi-Annual Drawdown			750	733	711	1,003	790	592	303	649	250	(97)	305	89	(423)	(675)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	-	-	-	
FV of Bi-Annual Drawdown at 5%			1,519	1,484	1,441	2,033	1,600	1,200	613	1,314	506	(197)	618	180	(856)	(1,367)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	-	-	-	
Annual Interest Cost on New Drawdowns			19	19	18	26	20	15	8	17	6	(2)	8	2	(11)	(17)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	-	-	-	
Annual Interest Cost on Opening Balance			-	78	158	239	356	456	540	599	697	759	788	860	913	916	893	858	822	785	745	703	659	613	565	514	460	404	345	282	217	148	76	0	0	0	
Total Annual Interest Cost			19	96	176	265	376	471	548	616	704	756	795	862	902	898	873	839	803	765	725	683	640	593	545	494	440	384	325	263	197	129	56	0	0	0	

Feb8 1e, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	
Interest Cost - Feb8 1e, 30-yr			*38*	*116*	*196*	*294*	*401*	*492*	*563*	*640*	*719*	*763*	*813*	*875*	*903*	*893*	*864*	*830*	*793*	*755*	*715*	*673*	*628*	*581*	*532*	*481*	*427*	*369*	*310*	*247*	*180*	*111*	*38*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown			1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)			1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	0
Fiscal Exposure - Average Debt Drawdown			1,538	1,581	1,619	2,301	1,980	1,676	1,168	1,938	1,219	569	1,424	1,053	57	-457	-677	-711	-748	-786	-826	-869	-913	-960	-1,009	-1,060	-1,115	-1,172	-1,232	-1,295	-1,361	-1,430	-1,504	0	0	0	

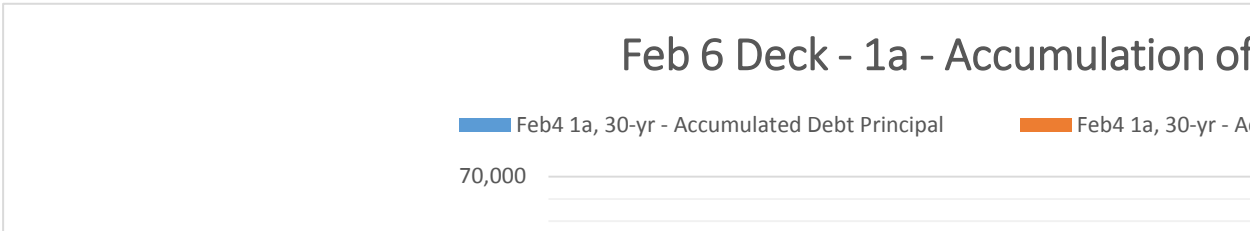
Feb 6 Deck

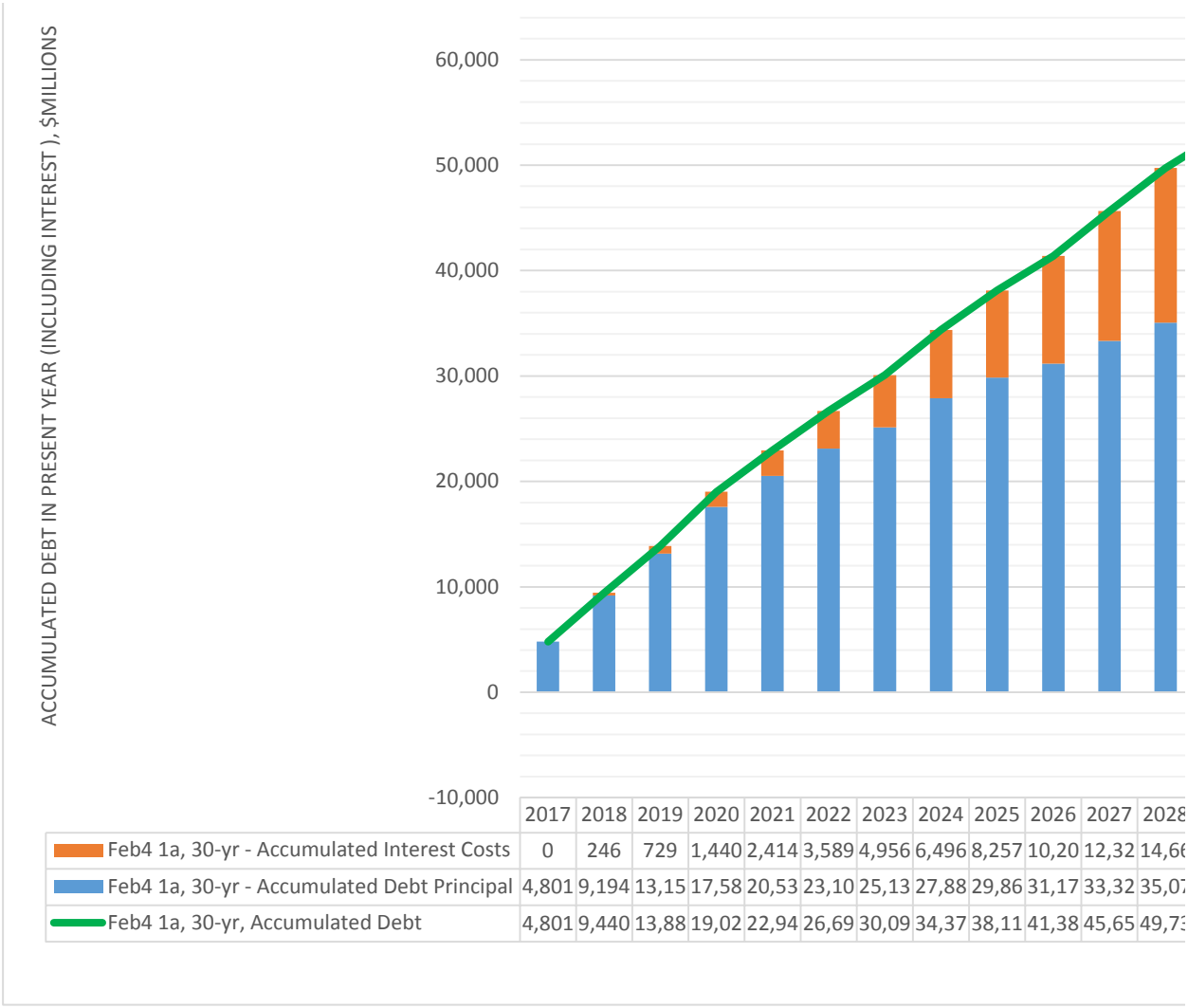
Feb 6 Deck - Scenario 1a, 1b, 1c - at 5.12% interest rate



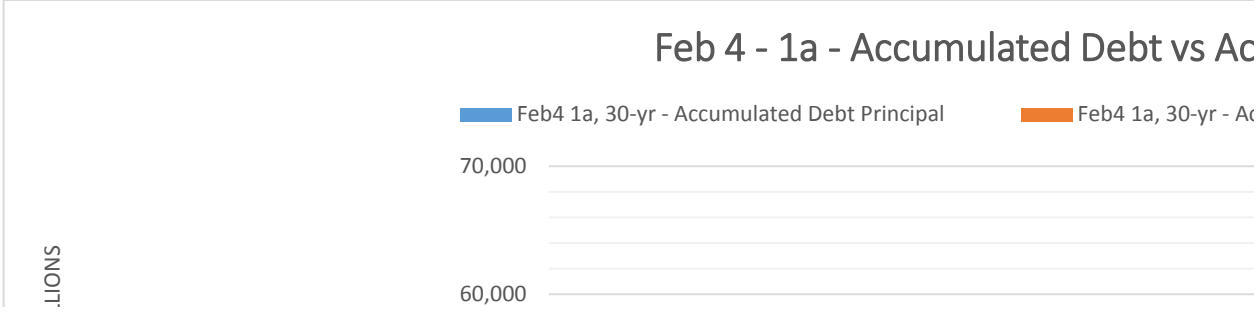
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	20
Feb4 1a, 30-yr	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,9
Feb4 1b, 30-yr	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,8
Feb4 1c, 30-yr	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	4(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73	53,03	56
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31

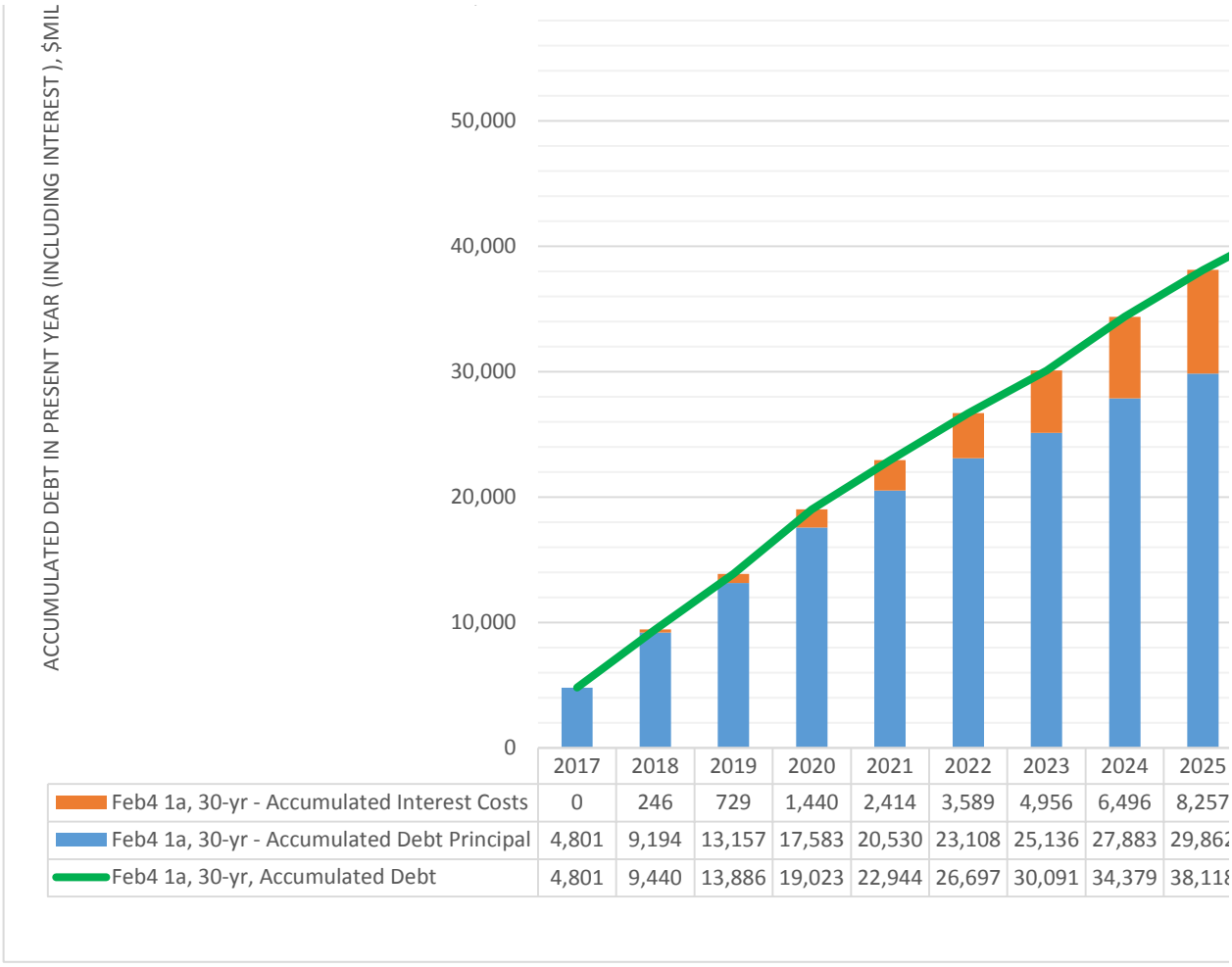
Feb 6 Deck - 1a - Accumulation of Debt (Principal and Interest)



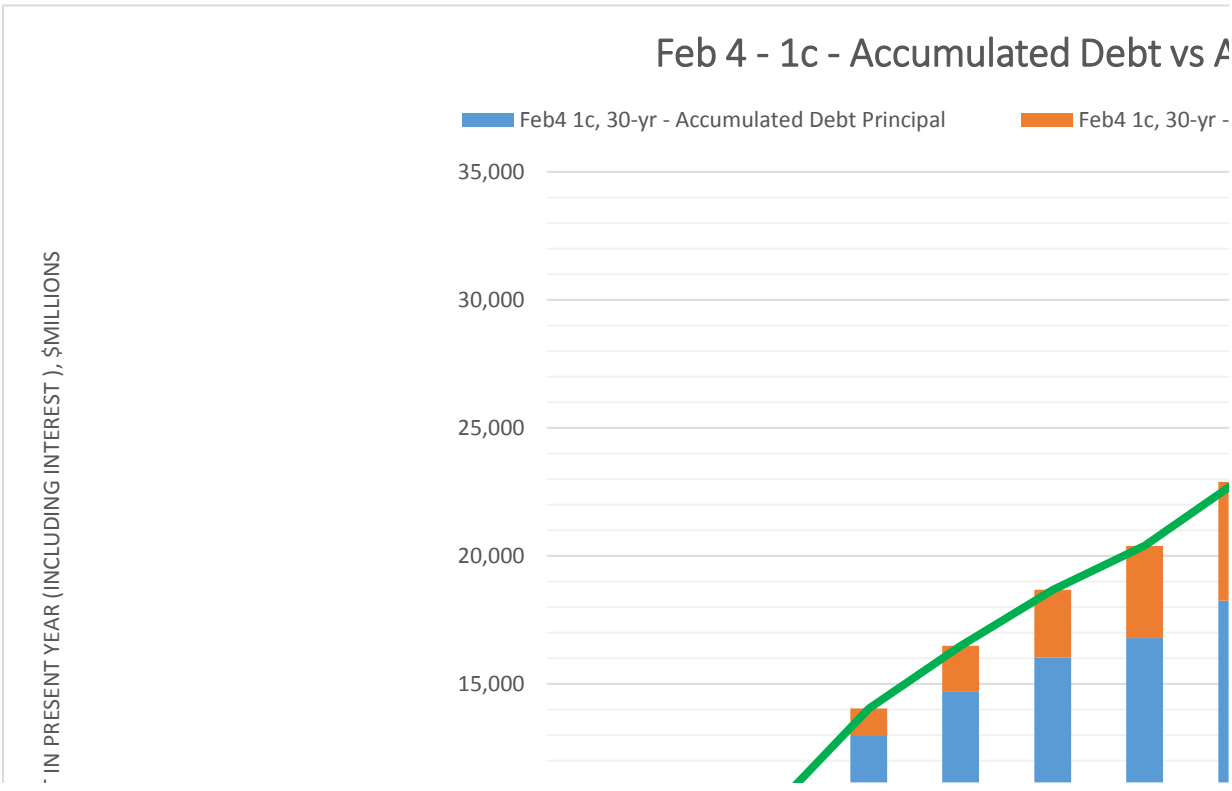


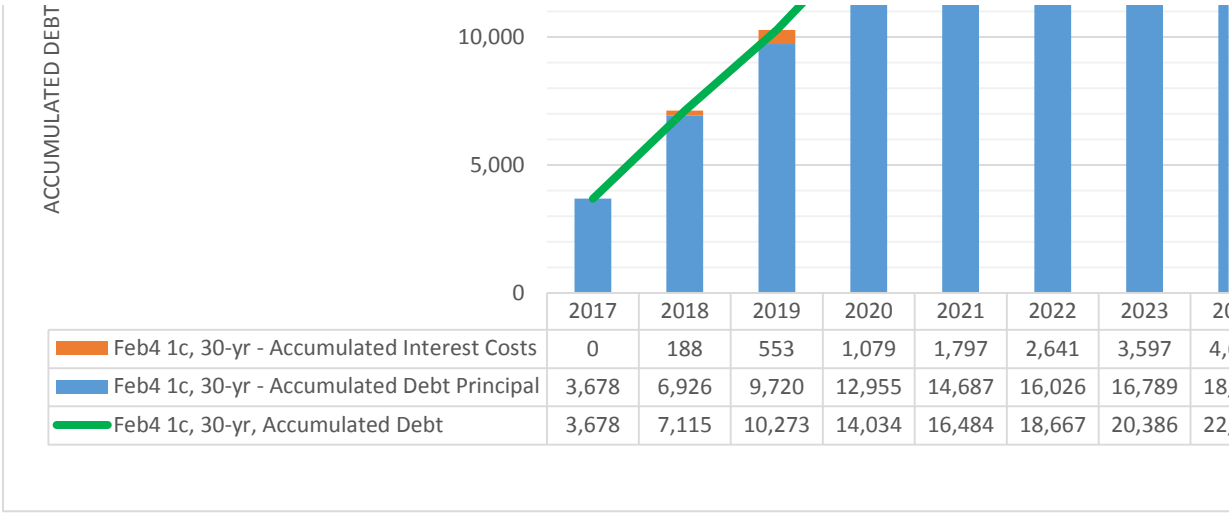
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,66
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,07
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73



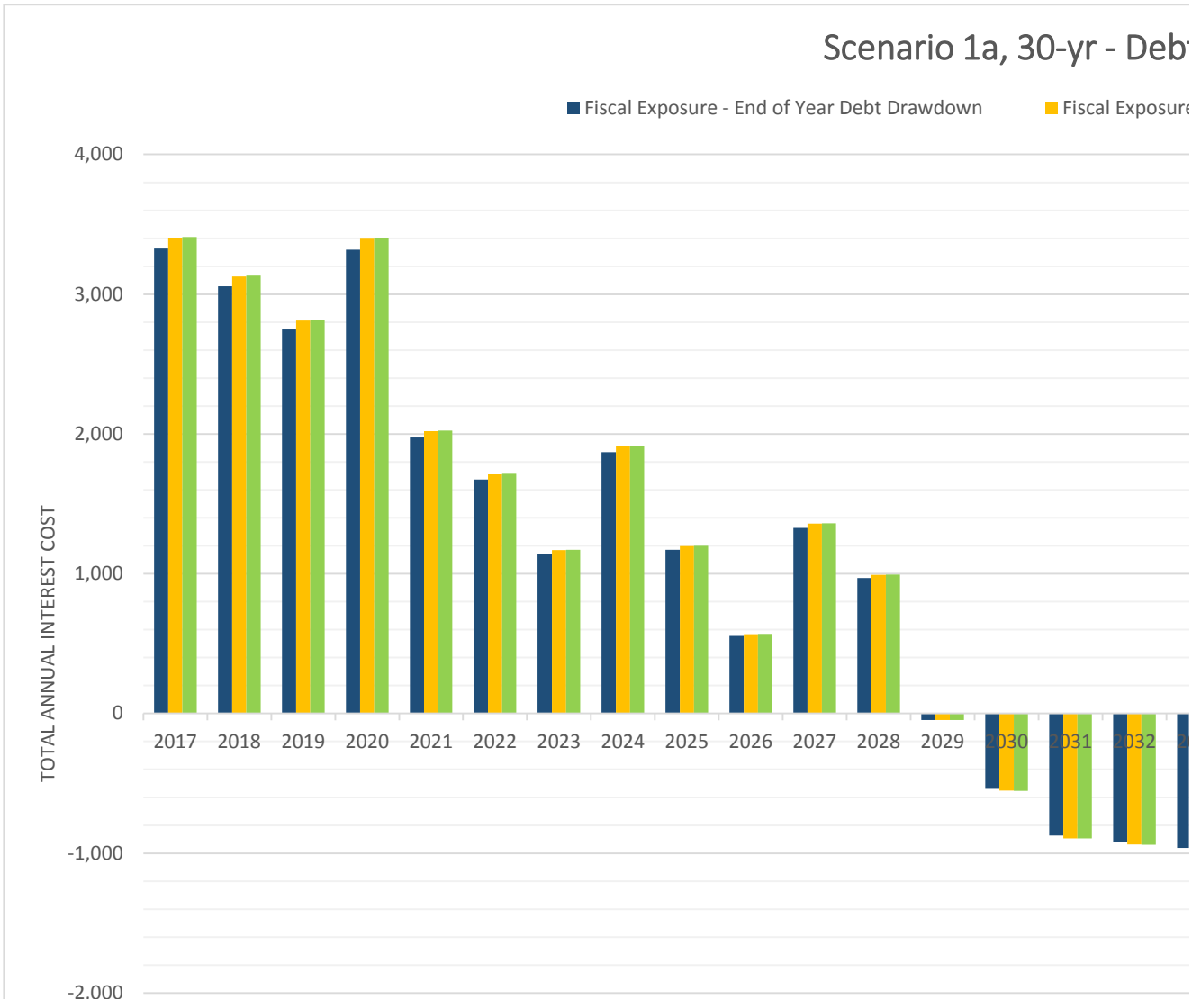


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



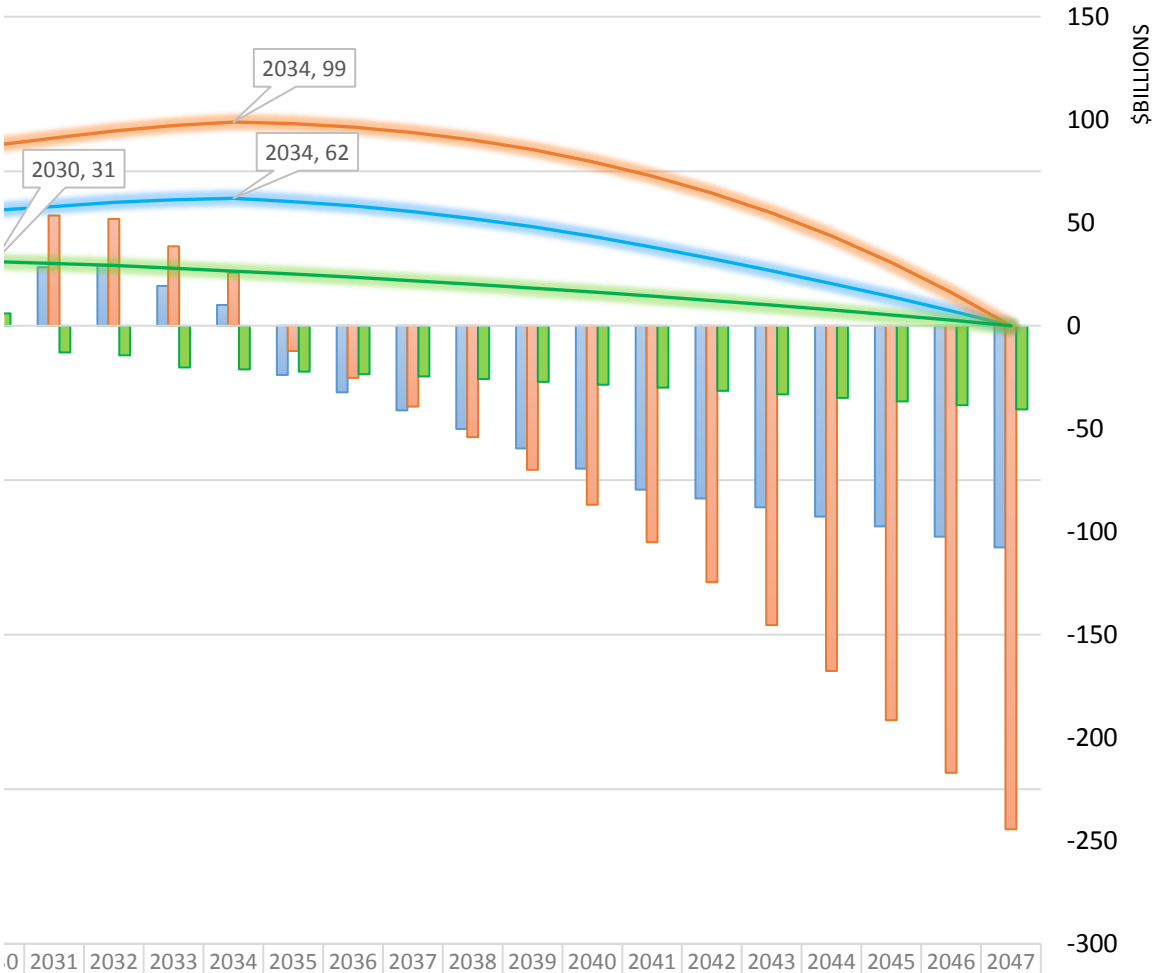


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22



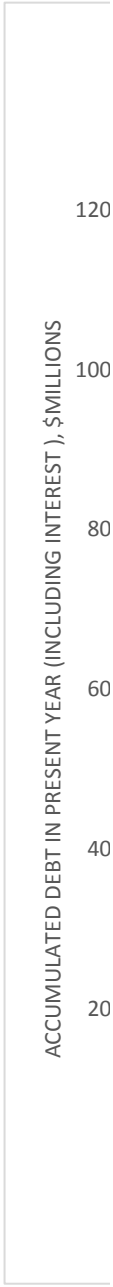

-3,000

lc - at 5.12% interest rate



0	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
98	1,896	1,966	1,288	672	-1,59	-2,15	-2,73	-3,34	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
26	3,568	3,457	2,571	1,716	-819	-1,68	-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
4	-860	-961	-1,34	-1,41	-1,48	-1,56	-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0
55	91,12	94,57	97,14	98,86	98,04	96,35	93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0
12	30,26	29,30	27,95	26,54	25,05	23,49	21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

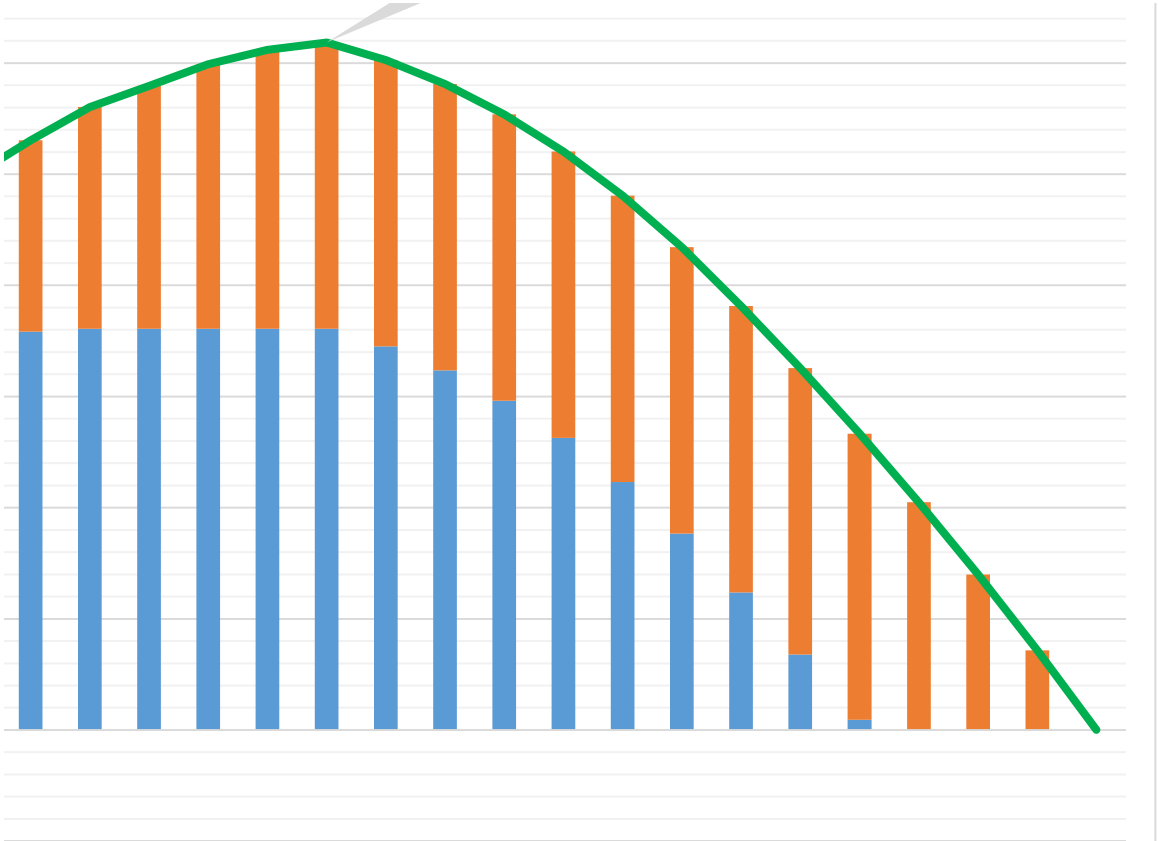
CALENDAR YEAR



Debt (Principal and Interest)

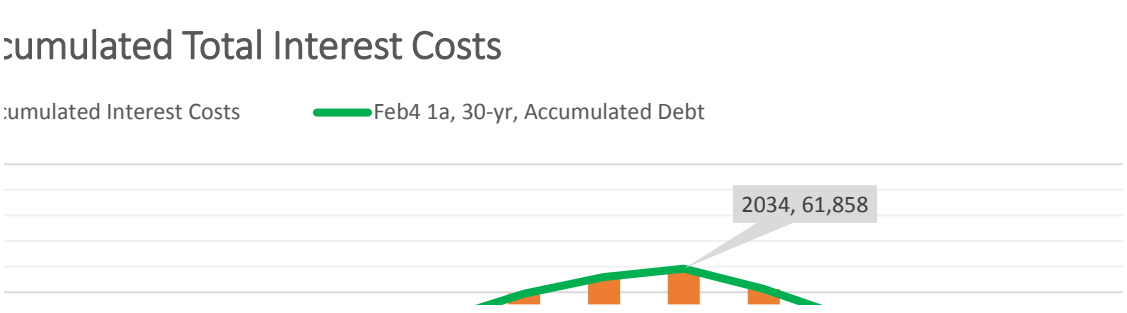
cumulated Interest Costs — Feb4 1a, 30-yr, Accumulated Debt

2034, 61,858

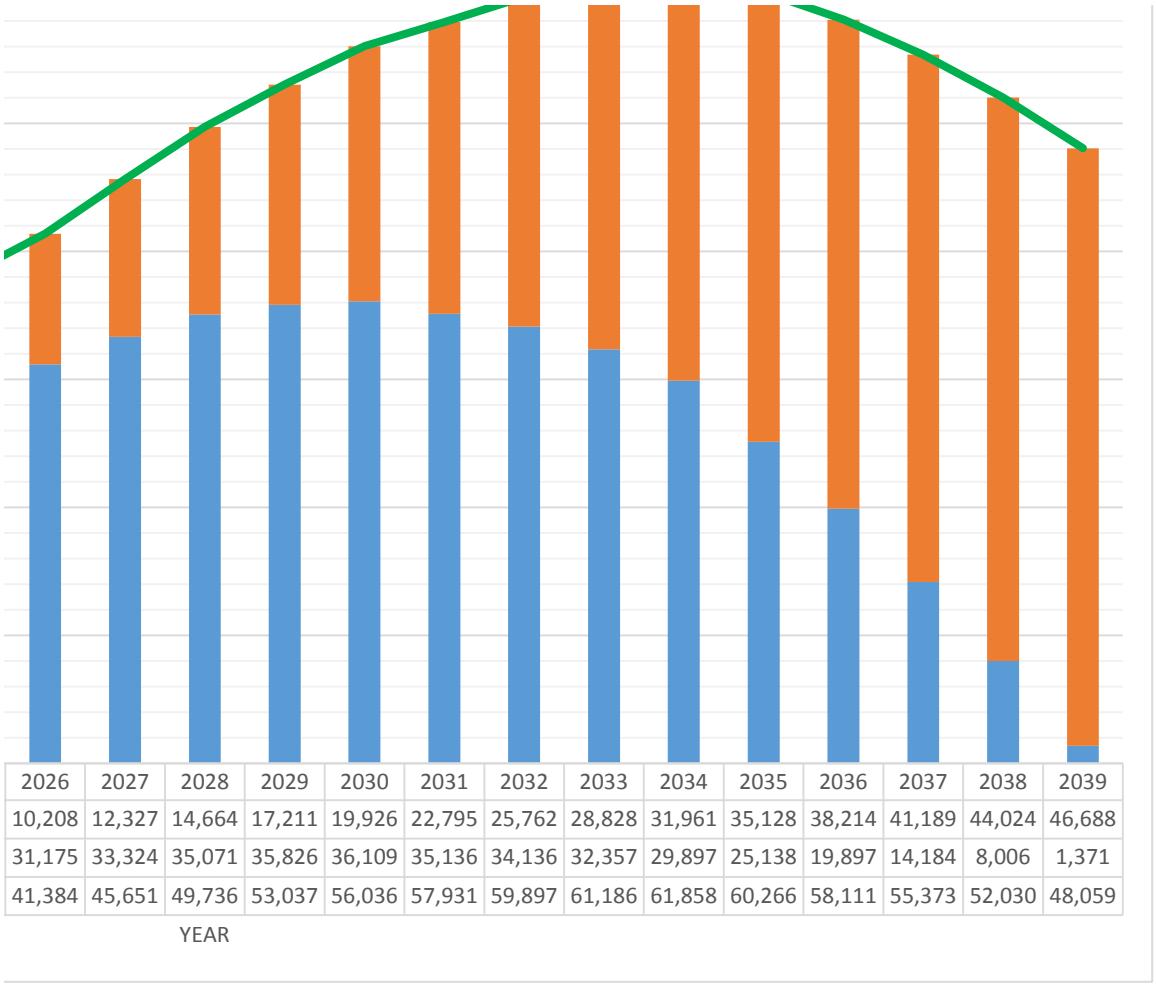


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



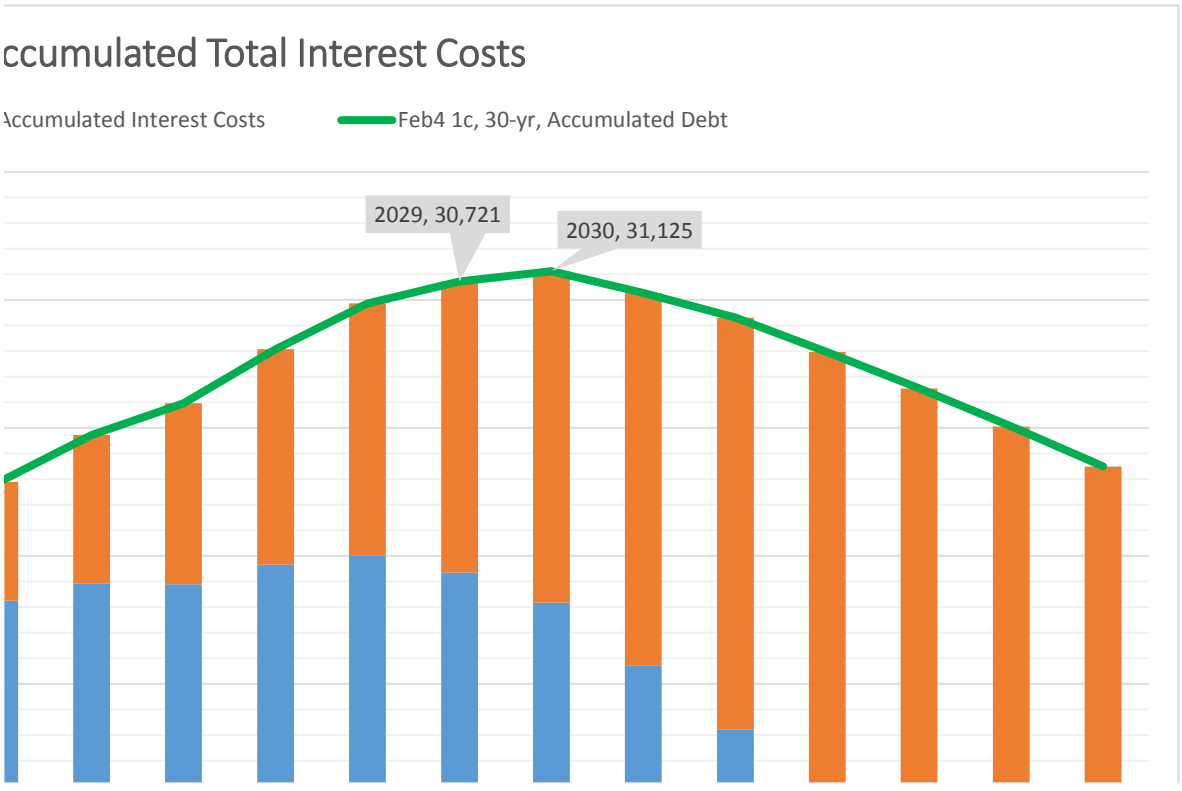
LIONS

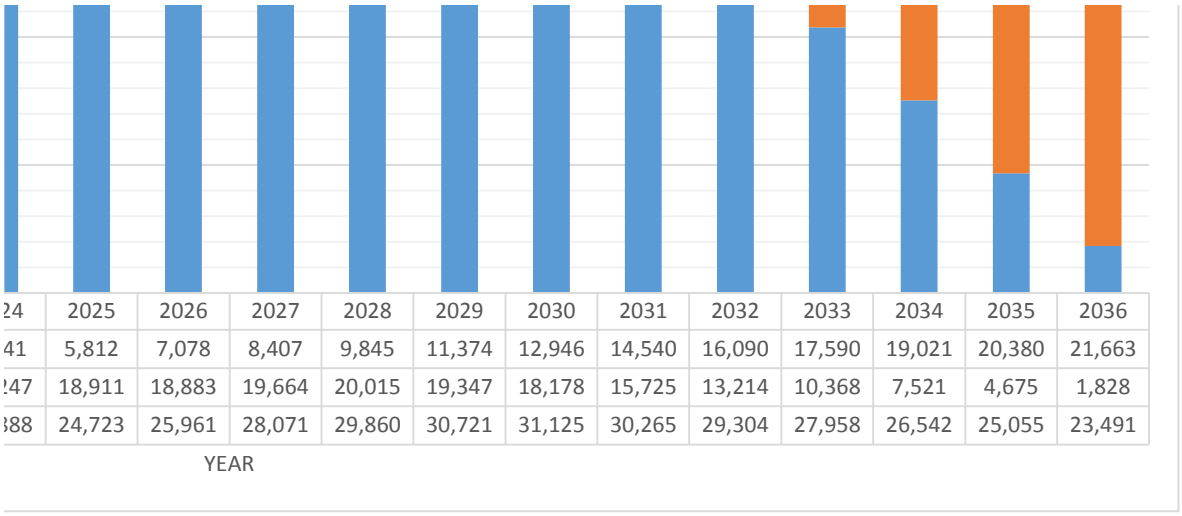


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

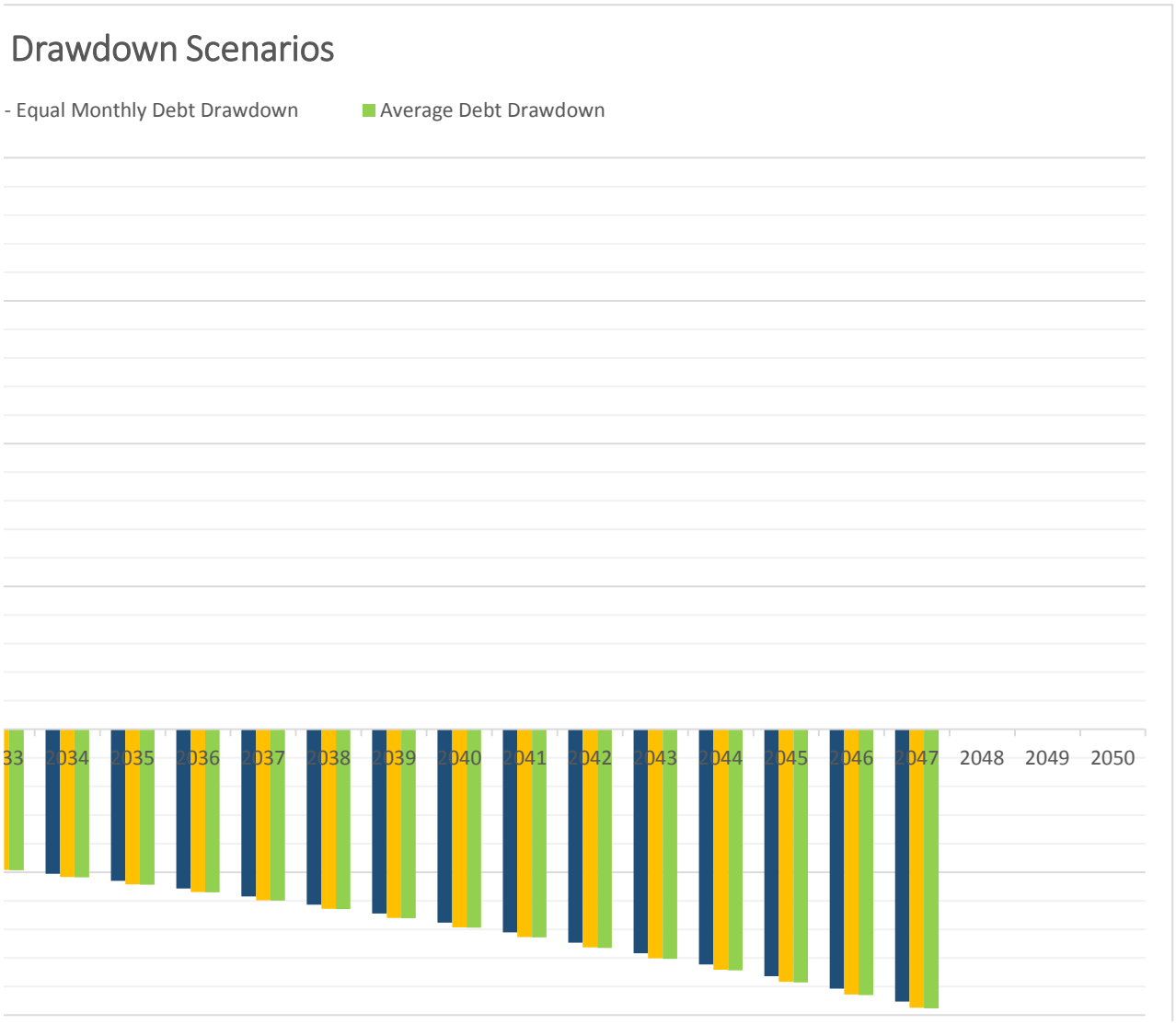
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





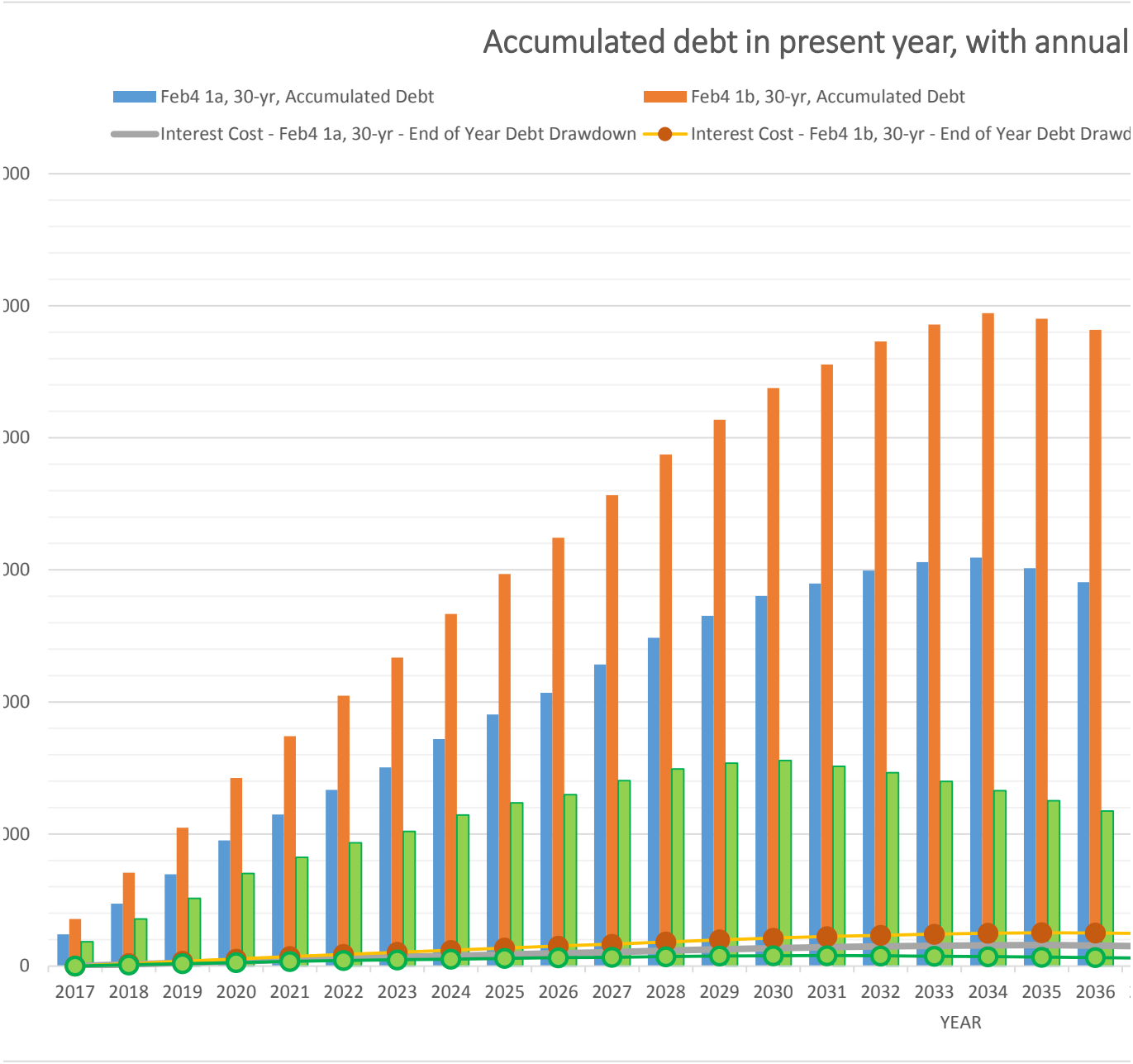
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

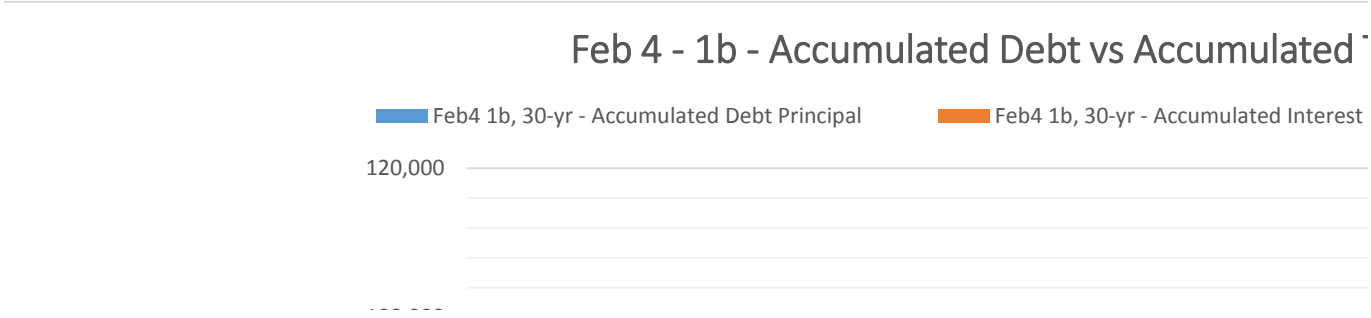
YEAR

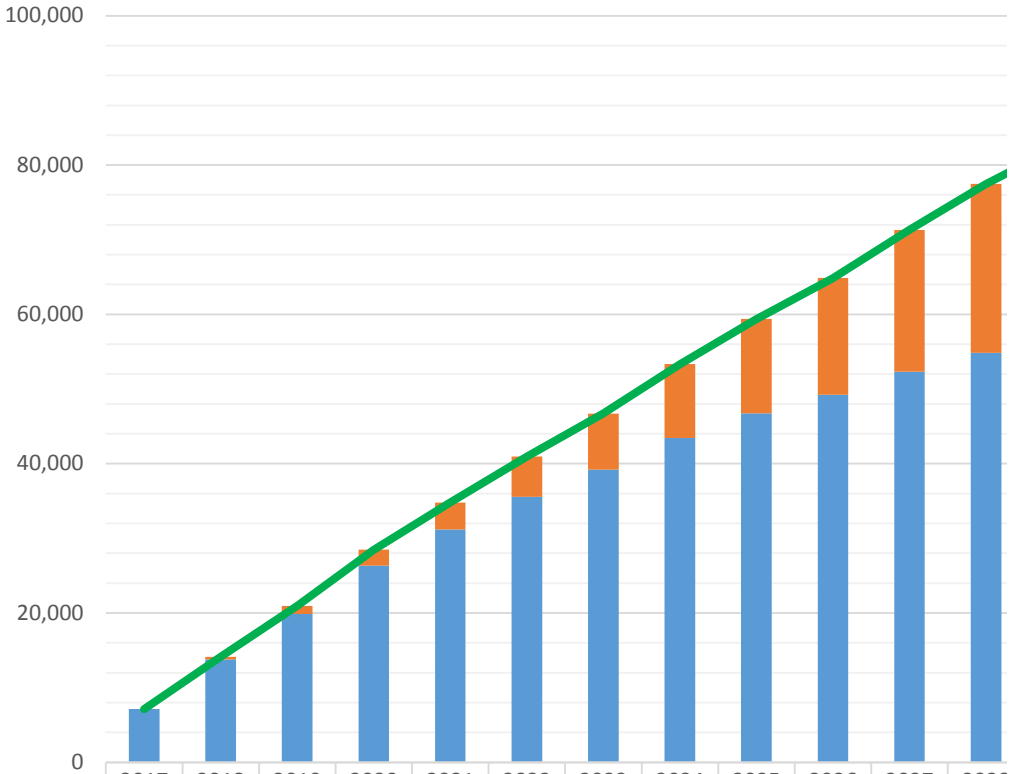


YEAR

ɜ - 25 year and 30 year Financing Terms, at 5% interest rate

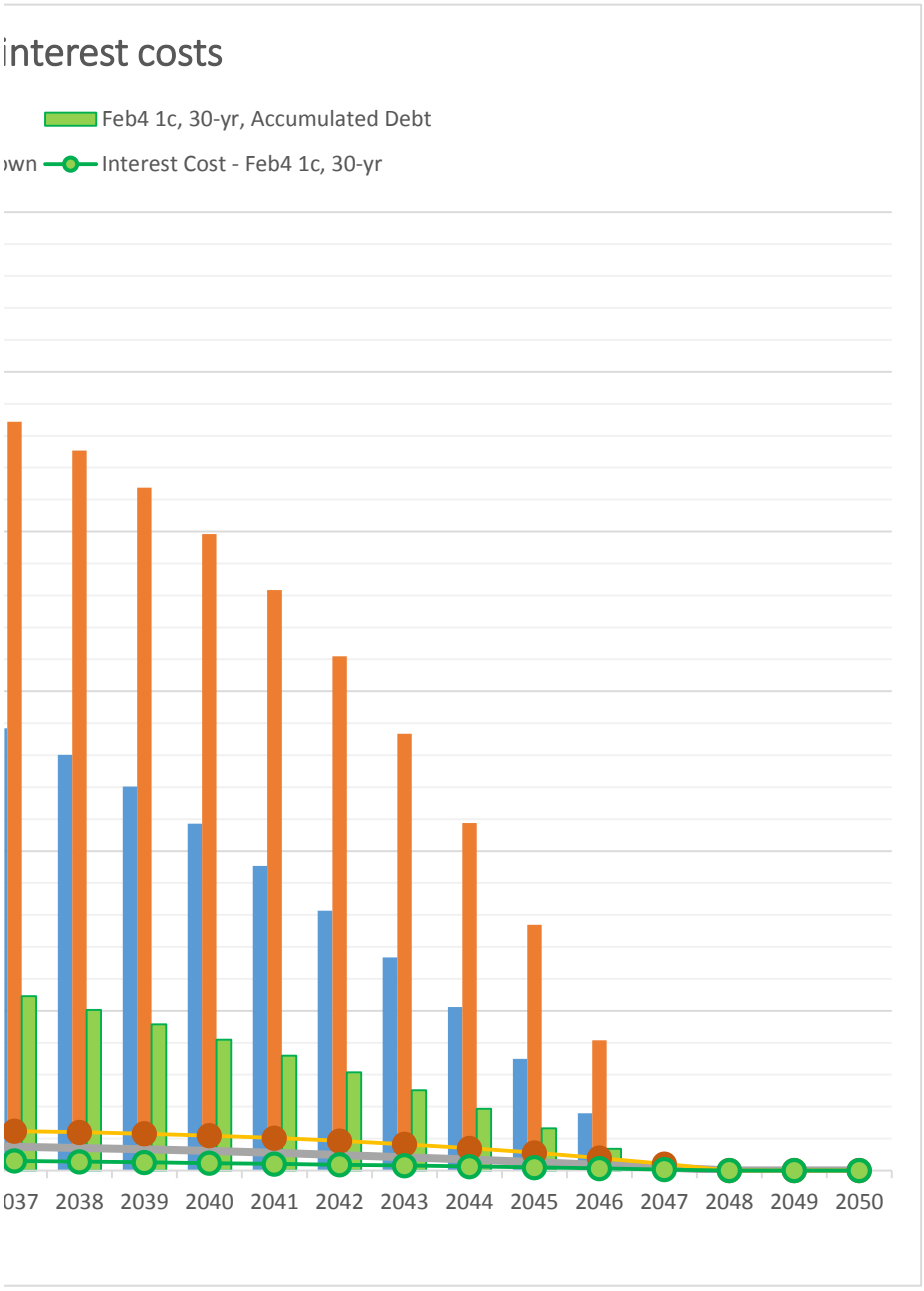


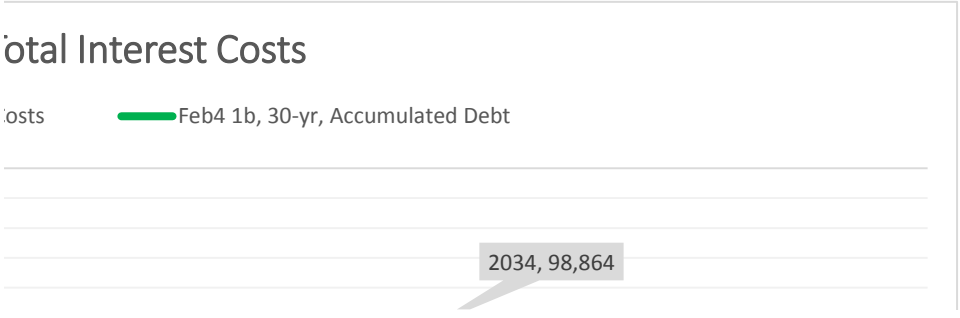

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

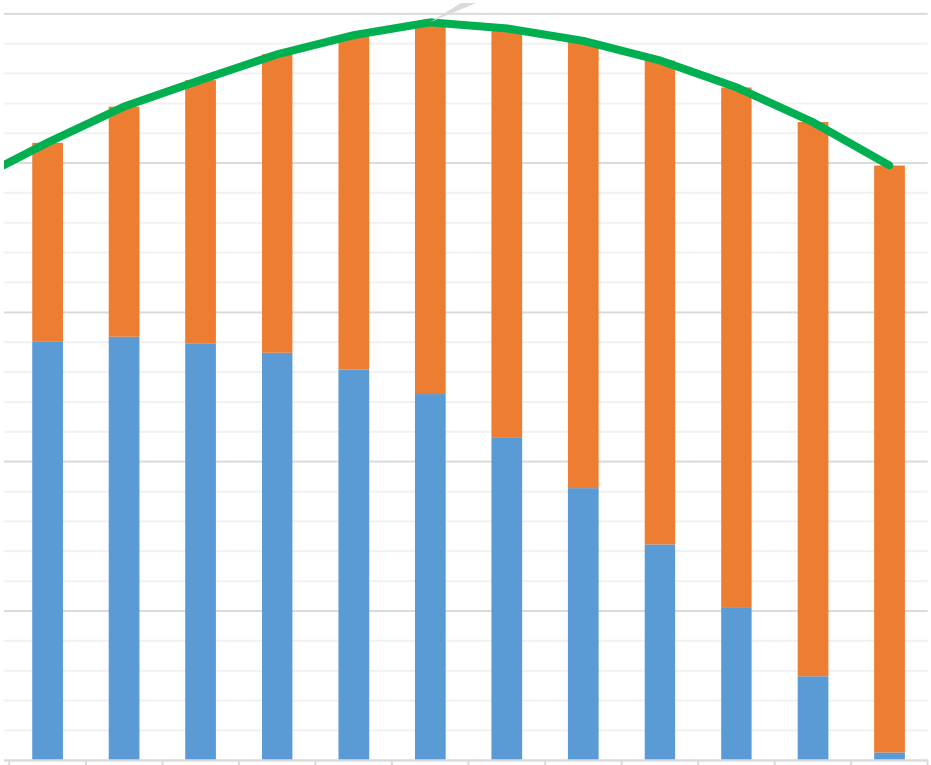


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y


interest costs
Feb4 1c, 30-yr, Accumulated Debt
wn
Interest Cost - Feb4 1c, 30-yr
037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR

Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

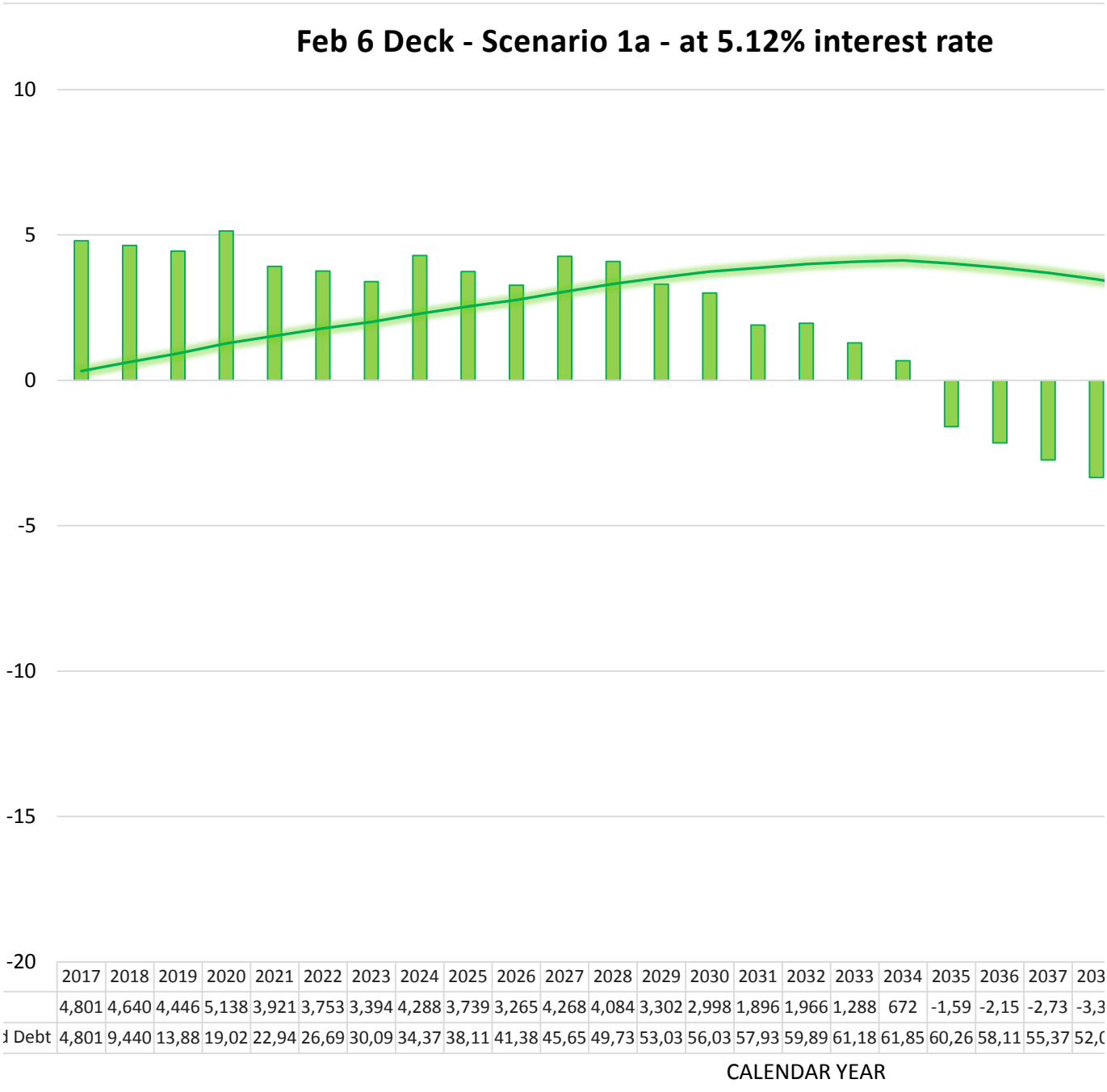
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

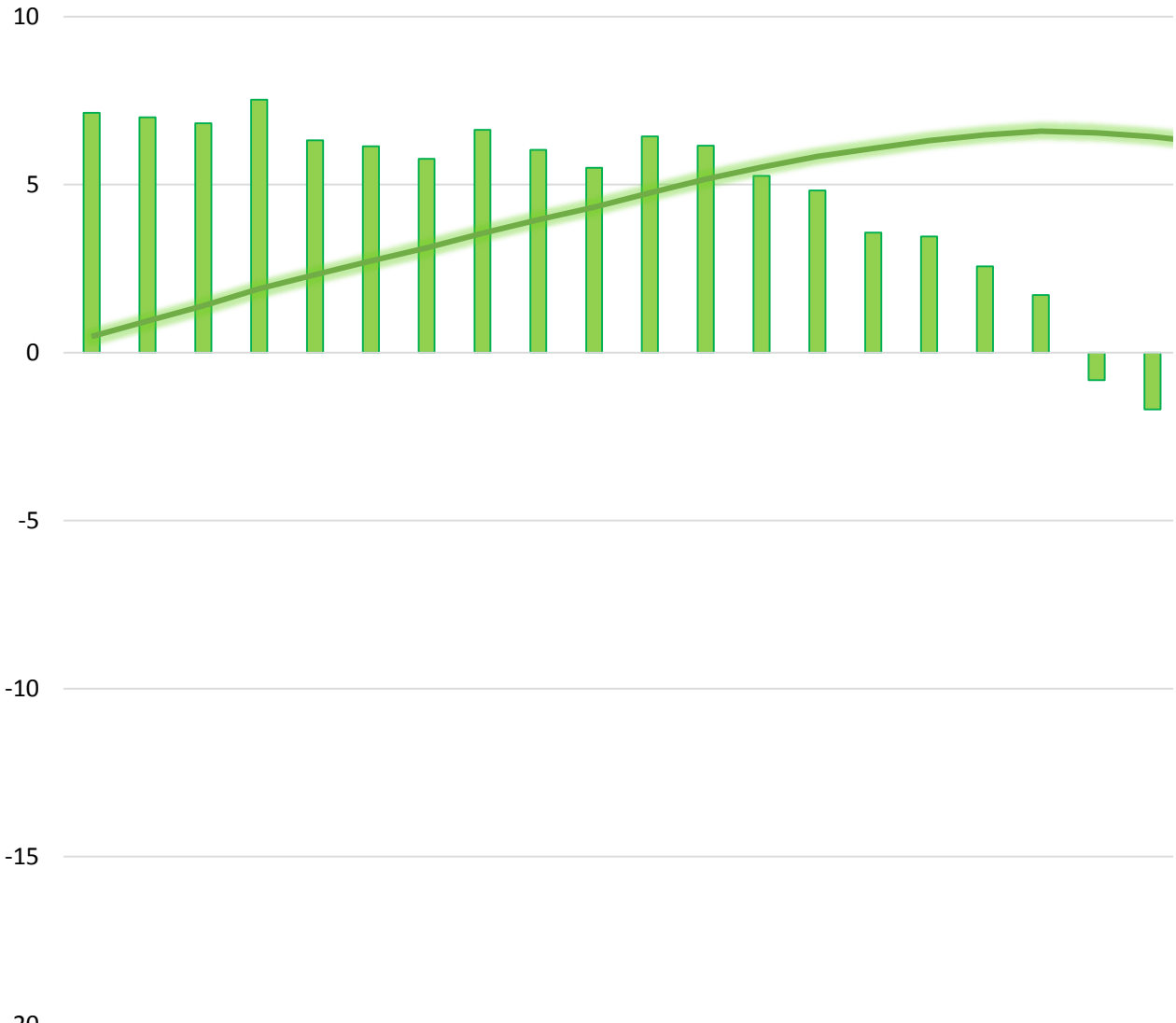
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

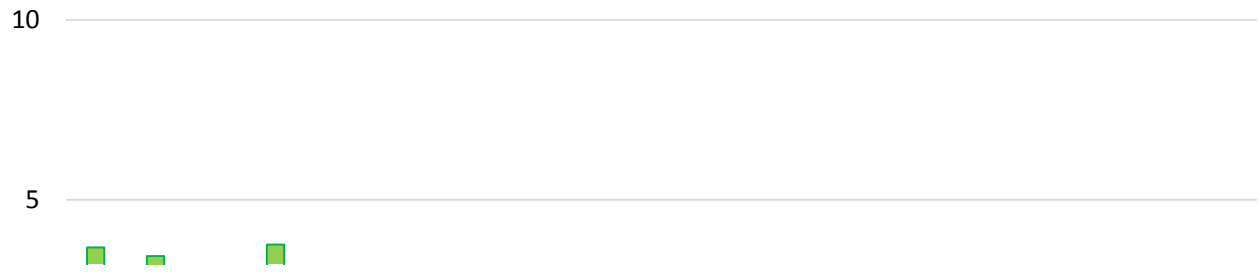
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

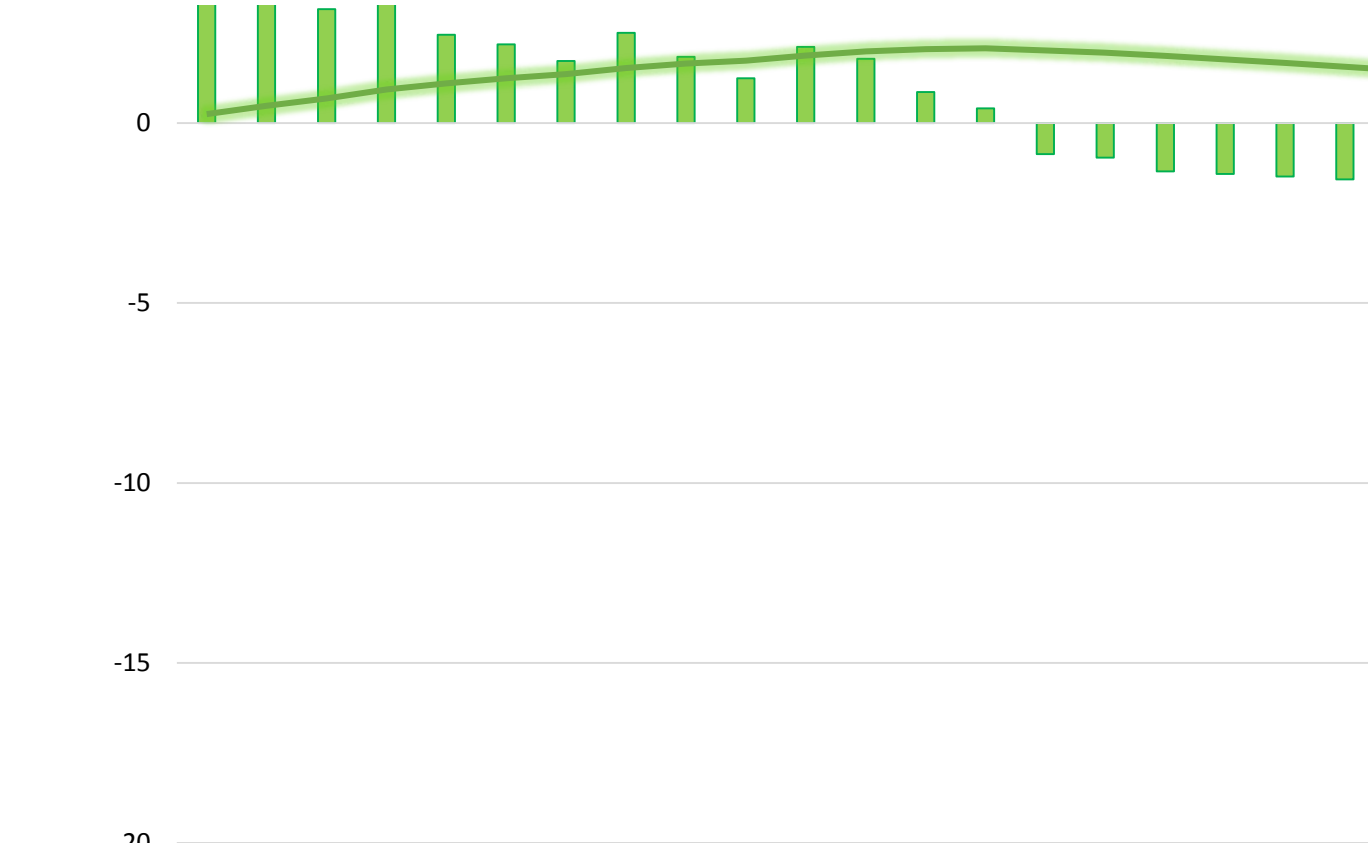


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



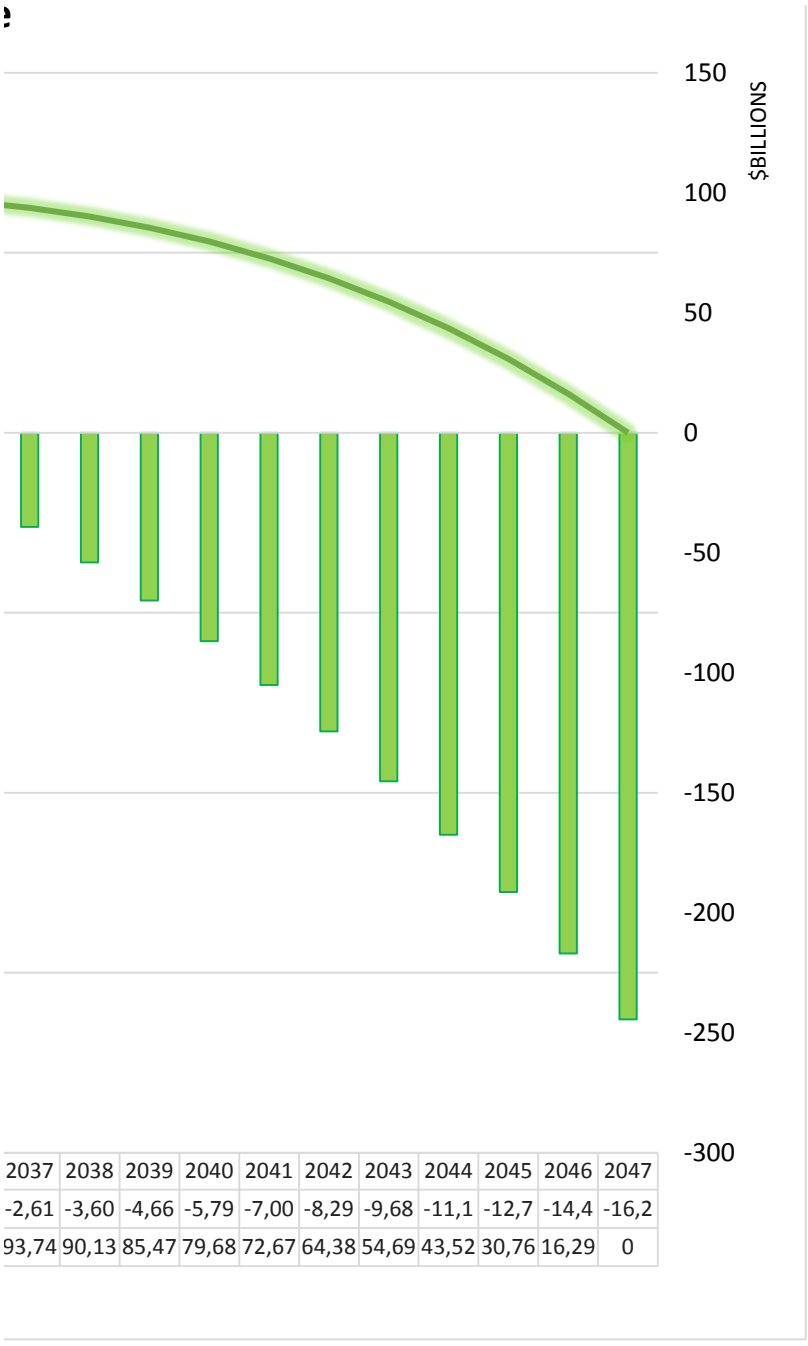


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

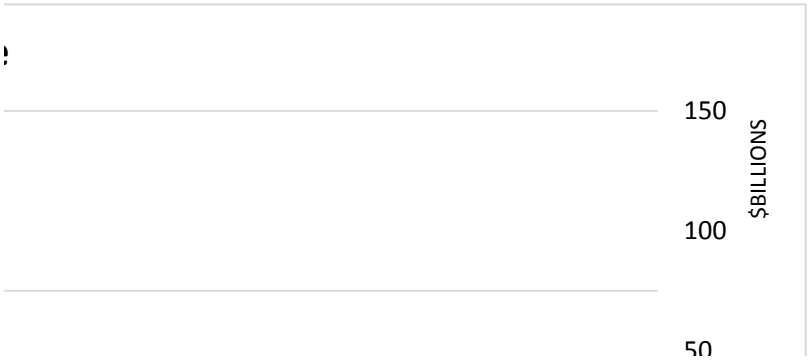
CALENDAR YEAR

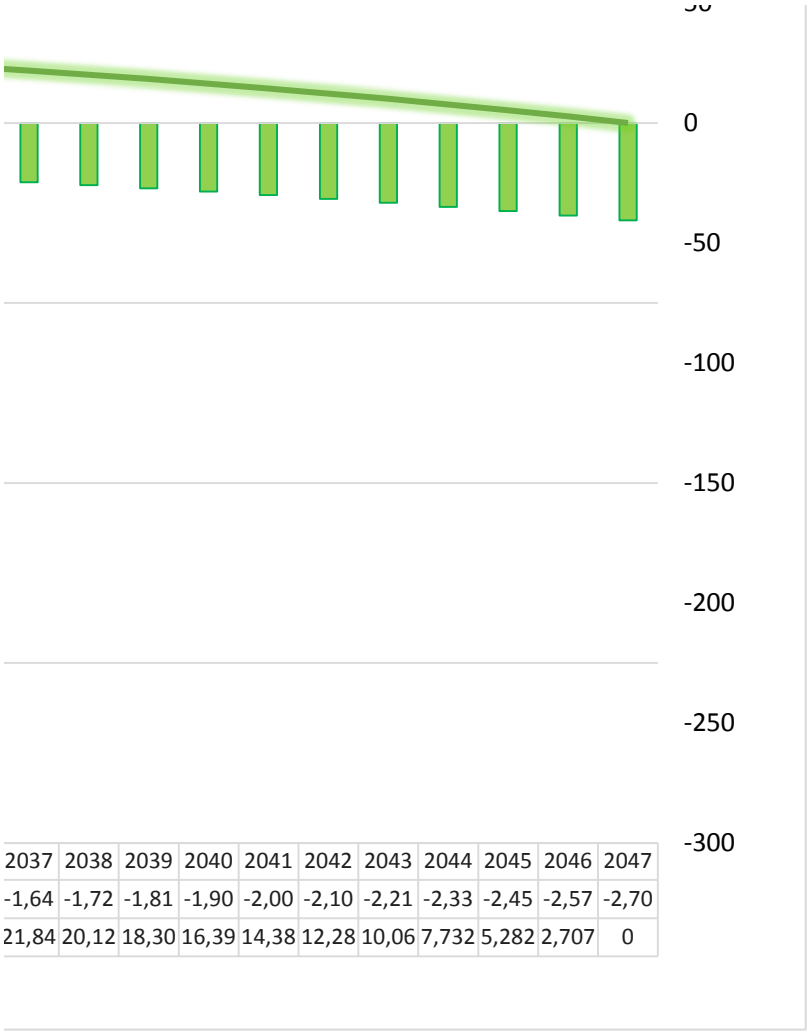


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Equal Monthly Debt Drawdown

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb4_1a_30yr

1a. GA Smoothing (Borrow ~$5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,801	4,640

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,200	4,760

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $62 billion, peakin
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary on accounting treatment.

7,133 7,133

Feb4_1b_30yr 7,133

1b. GA Smoothing (Borrow ~$7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	7,133	6,999

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,783	7,100

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $99 billion, peaking
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b on accounting treatment.

Feb4_1c_30yr

1c. GA Smoothing (Borrow ~$4 billion in 2017)

$ millions

Scenario 1C - 30-yr amortization	2017	2018
Annual Exposure[2]	3,678	3,437

	Fiscalized[3]	2016-17	2017-18
	Start: January 1st	919	3,617

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	1,783 - 1,200	7,100 - 4,760

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1200	4760
Debt-Finance Global Adjustment Costs, Option 1a	1783	7100
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18

Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1200**	**5000**
Total, B	1783	7340
Proposed Program Total:	1,783 - 1,200	7,340 - 5,000

ining

1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
4,446	5,138	3,921	3,753

2018-19	2019-20	2020-21	2021-2022
4,591	4,619	4,833	3,879

ng in 203 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
by approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
6,825	7,529	6,315	6,141

2018-19	2019-20	2020-21	2021-2022
6,956	7,001	7,226	6,272

g in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
3,158	3,761	2,450	2,183

2018-19	2019-20	2020-21	2021-2022
3,367	3,309	3,433	2,383

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
6,956 - 4,591	7,001 - 4,619	7,226 - 4,833	6,272 - 3,879

/1

2018-19[1]	2019-20[1]	2020-21[1]
4591	4619	4833
6956	7001	7226
225	279	323
60	60	60
18	18	18

4894	**4976**	**5234**
7259	7358	7627

7,259 - 4,894 7,358 - 4,976 7,627 - 5,234

1a. GA Smoothing (Borrow $5 billion in 2017)

	2017
IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	7,095
Additional GA Debt Drawdown, End of Year	5,000

Ratepayer GA Payment

Total Accumulated Debt *($ billion)*	5,000
Total Change in Accumulated Debt *($ billion)*	5000

1b. GA Smoothing (Borrow $7 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	5,095
Additional GA Debt Drawdown, End of Year	7,000

Total Accumulated Debt *($ billion)*	7000
Total Change in Accumulated Debt *($ billion)*	7000

1c. GA Smoothing (Borrow $4 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	8,095
Additional GA Debt Drawdown, End of Year	4,000

Total Accumulated Debt *($ billion)*	4000
Total Change in Accumulated Debt *($ billion)*	4000

2018	2019	2020	2021	2022	2023	2024	2025
11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
6,835	7,552	7,168	6,844	6,634	7,243	7,128	6,527
5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000

9,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000
5000	4000	5000	4000	4000	3000	4000	4000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
4,835	4,552	4,168	4,844	4,634	4,243	4,128	4,527
7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000

14000	21000	28000	35000	41000	47000	53000	59000
7000	7000	8000	6000	6000	6000	7000	6000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
8,835	8,552	8,168	8,844	8,634	8,243	8,128	8,527
3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000

7000	10000	14000	16000	19000	20000	23000	25000
3000	3000	4000	2000	2000	2000	3000	2000

2026	2027	2028	2029	2030	2031	2032	2033
10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
7,033	7,043	6,819	7,009	6,721	6,654	6,820	7,238
3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000

41,000	46,000	50,000	53,000	56,000	58,000	60,000	61,000
3000	4000	4000	3000	3000	2000	2000	1000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
4,033	5,043	4,819	5,009	4,721	4,654	5,820	5,238
6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000

65000	71000	77000	83000	88000	91000	95000	97000
6000	6000	6000	5000	5000	4000	3000	3000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
9,033	9,043	8,819	9,009	9,721	9,654	9,820	9,238
1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000

26000	28000	30000	31000	31000	30000	29000	28000
1000	2000	2000	1000	0	-1000	-1000	-1000

2034	2035	2036	2037	2038	2039	2040	2041
7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
6,756	7,662	7,389	8,129	7,881	8,645	9,421	9,207
1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000

62,000	60,000	58,000	55,000	52,000	48,000	43,000	38,000
1000	-2000	-2000	-3000	-3000	-4000	-5000	-5000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
5,756	6,662	7,389	8,129	8,881	9,645	10,421	11,207
2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000

99000	98000	96000	94000	90000	85000	80000	73000
2000	-1000	-2000	-3000	-4000	-5000	-6000	-7000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
8,756	6,662	7,389	7,129	6,881	6,645	6,421	6,207
-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000

27000	25000	23000	22000	20000	18000	16000	14000
-1000	-1000	-2000	-2000	-2000	-2000	-2000	-2000

2042	2043	2044	2045	2046	2047	2048		
4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
10,004	9,811	9,627	9,451	10,285	10,126	2,975		
-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0		

33,000	27,000	20,000	14,000	7,000	-	-	
-6000	-6000	-6000	-6000	-7000	-7000	0	

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
12,004	13,811	14,627	16,451	17,285	19,126	2,975		
-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0		

64000	55000	44000	31000	16000	0	0
-8000	-10000	-11000	-13000	-14000	-16000	0

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
6,004	5,811	5,627	5,451	6,285	6,126	2,975		
-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0		

12000	10000	8000	5000	3000	0	0
-2000	-2000	-2000	-2000	-3000	-3000	0

Feb4 1a, 30-yr - Debt Drawdown Scenarios

-92,247 -94598.515 58,489 36109.18 0

Feb4_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0
			114	110	106	122	93	89	81	102	89	78	102	97	79	71	45	47	31	16	-38	-51	-65	-80	-95	-110	-126	-133	-140	-147	-155	-162	-171	0	0	0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	5,138	3,167	58,489
Equal Monthly Debt Drawdown	5,260	3,149	

Maximum Accumulated Debt — Feb4 1a, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

End of Year Debt Drawdown	61,858	36,109
Equal Monthly Debt Drawdown	63,330	

			40%	37%	34%	36%	27%	24%																												
Feb4 1a, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
a	Debt, Beginning of Year		0	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	
c = a*5%	*Interest Cost - Feb4 1a, 30-yr - End of Year Debt Drawdown*		*0*	*246*	*483*	*711*	*974*	*1,175*	*1,367*	*1,541*	*1,760*	*1,952*	*2,119*	*2,337*	*2,546*	*2,716*	*2,869*	*2,966*	*3,067*	*3,133*	*3,167*	*3,086*	*2,975*	*2,835*	*2,664*	*2,461*	*2,224*	*1,952*	*1,666*	*1,365*	*1,049*	*717*	*367*	*0*	*0*	*0*	58,489
b	Additional GA Debt Drawdown, End of Year		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	21,822	23,788	25,076	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	20,490	13,998	7,173	0	0	0	
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	36,109	36,109	36,109	36,109	34,517	32,362	29,624	26,281	22,311	17,687	12,383	6,793	918	0	0	0	0	0	0	0	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688	49,149	51,372	53,325	54,991	56,356	57,405	58,122	58,489				
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371	-5,713	-13,241	-20,783	-28,325	-35,866	-43,408	-50,949	-58,489				
Fiscal Exposure - End of Year Debt Drawdown			4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0	

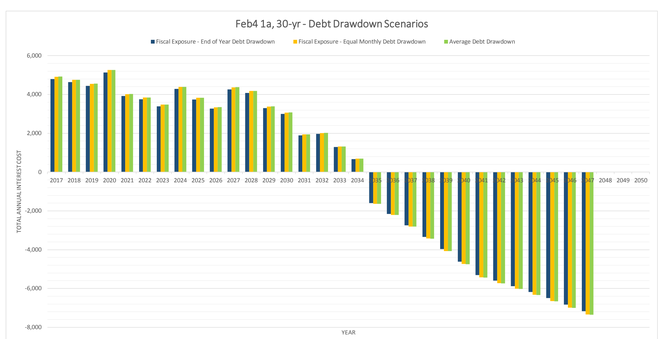
Feb4 1a, 30-yr	Equal Monthly Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			12																																		
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
3,149	*Interest Cost - Feb4 1a, 30-yr*		*114*	*356*	*589*	*833*	*1,067*	*1,264*	*1,448*	*1,643*	*1,849*	*2,029*	*2,220*	*2,435*	*2,625*	*2,787*	*2,914*	*3,013*	*3,097*	*3,149*	*3,129*	*3,034*	*2,910*	*2,756*	*2,569*	*2,351*	*2,098*	*1,819*	*1,526*	*1,218*	*895*	*554*	*197*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0	

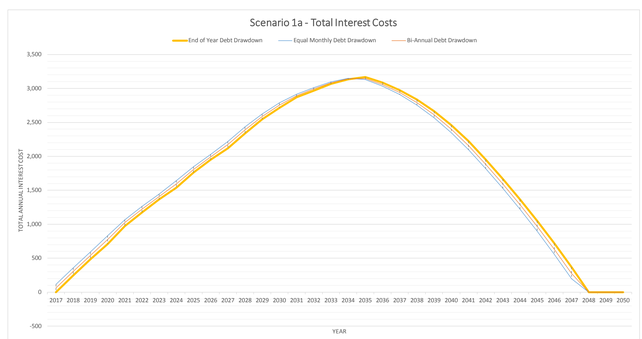
	Monthly Drawdown		400	366	330	369	246	215	169	229	165	109	179	146	63	24	(81)	(83)	(148)	(205)	(397)	(437)	(476)	(515)	(553)	(590)	(627)	(629)	(628)	(628)	(628)	(628)	(628)	-	-	-
	FV of Monthly Drawdown at 5%		4,915	4,498	4,057	4,532	3,017	2,640	2,075	2,813	2,026	1,345	2,200	1,789	773	289	(996)	(1,024)	(1,821)	(2,519)	(4,872)	(5,365)	(5,849)	(6,325)	(6,793)	(7,253)	(7,707)	(7,722)	(7,721)	(7,721)	(7,721)	(7,721)	(7,720)	-	-	-
	Annual Interest Cost on New Drawdowns		114	105	94	105	70	61	48	65	47	31	51	42	18	7	(23)	(24)	(42)	(59)	(113)	(125)	(136)	(147)	(158)	(169)	(179)	(180)	(180)	(180)	(180)	(180)	(179)	-	-	-
	Annual Interest Cost on Opening Balance		-	252	495	728	997	1,203	1,399	1,577	1,802	1,998	2,169	2,393	2,607	2,780	2,937	3,037	3,140	3,207	3,243	3,159	3,046	2,903	2,727	2,519	2,277	1,999	1,706	1,398	1,074	734	376	(0)	(0)	(0)
	Total Annual Interest Cost		114	356	589	833	1,067	1,264	1,448	1,643	1,849	2,029	2,220	2,435	2,625	2,787	2,914	3,013	3,097	3,149	3,129	3,034	2,910	2,756	2,569	2,351	2,098	1,819	1,526	1,218	895	554	197	(0)	(0)	(0)

Feb4 1a, 30-yr	Bi-Annual Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*61*	*305*	*540*	*777*	*1,024*	*1,223*	*1,410*	*1,596*	*1,808*	*1,993*	*2,173*	*2,390*	*2,589*	*2,754*	*2,893*	*2,991*	*3,083*	*3,141*	*3,147*	*3,058*	*2,940*	*2,792*	*2,613*	*2,401*	*2,156*	*1,881*	*1,591*	*1,286*	*966*	*629*	*275*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown			4,862	4,699	4,502	5,203	3,971	3,801	3,438	4,343	3,787	3,307	4,322	4,137	3,344	3,037	1,920	1,991	1,305	681	-1,612	-2,183	-2,773	-3,386	-4,021	-4,683	-5,372	-5,661	-5,951	-6,255	-6,575	-6,912	-7,265	0	0	0	

	Bi-Annual Drawdown		2,400	2,197	1,981	2,213	1,473	1,289	1,014	1,374	989	657	1,074	874	378	141	(487)	(500)	(889)	(1,230)	(2,379)	(2,620)	(2,857)	(3,089)	(3,317)	(3,542)	(3,764)	(3,771)	(3,771)	(3,771)	(3,771)	(3,771)	(3,770)	-	-	-
	FV of Bi-Annual Drawdown at 5%		4,862	4,450	4,013	4,483	2,984	2,612	2,053	2,783	2,004	1,331	2,176	1,769	765	286	(986)	(1,013)	(1,801)	(2,492)	(4,820)	(5,308)	(5,787)	(6,257)	(6,719)	(7,175)	(7,624)	(7,639)	(7,638)	(7,638)	(7,638)	(7,638)	(7,637)	-	-	-
	Annual Interest Cost on New Drawdowns		61	56	51	57	38	33	26	35	25	17	28	22	10	4	(12)	(13)	(23)	(31)	(61)	(67)	(73)	(79)	(85)	(91)	(96)	(97)	(97)	(97)	(97)	(97)	(97)	-	-	-
	Annual Interest Cost on Opening Balance		-	249	490	720	986	1,190	1,384	1,560	1,783	1,977	2,146	2,367	2,579	2,750	2,906	3,004	3,106	3,173	3,208	3,125	3,013	2,871	2,698	2,492	2,252	1,977	1,687	1,383	1,063	726	372	(0)	(0)	(0)
	Total Annual Interest Cost		61	305	540	777	1,024	1,223	1,410	1,596	1,808	1,993	2,173	2,390	2,589	2,754	2,893	2,991	3,083	3,141	3,147	3,058	2,940	2,792	2,613	2,401	2,156	1,881	1,591	1,286	966	629	275	(0)	(0)	(0)

Feb4 1a, 30-yr	Average Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*123*	*365*	*597*	*842*	*1,074*	*1,271*	*1,454*	*1,650*	*1,856*	*2,035*	*2,228*	*2,442*	*2,631*	*2,792*	*2,918*	*3,016*	*3,100*	*3,150*	*3,126*	*3,030*	*2,905*	*2,749*	*2,562*	*2,342*	*2,088*	*1,809*	*1,516*	*1,207*	*883*	*542*	*184*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
Fiscal Exposure - Average Debt Drawdown			4,923	4,758	4,559	5,269	4,021	3,849	3,481	4,398	3,835	3,349	4,377	4,189	3,386	3,075	1,944	2,016	1,321	689	-1,633	-2,210	-2,808	-3,428	-4,072	-4,742	-5,440	-5,733	-6,026	-6,334	-6,658	-6,999	-7,357	0	0	0	





Feb4 1b, 30-yr - Debt Drawdown Scenarios

-149,507 -153857.97 97,141 56717.33 0

Feb4_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0
			170	167	162	179	150	146	137	158	144	131	153	147	125	115	85	82	61	41	-19	-40	-62	-86	-111	-138	-167	-198	-231	-266	-304	-344	-388	0	0	0

0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown 7,529	5,062	97,141
Equal Monthly Debt Drawdown 7,708	5,042	

Maximum Accumulated Debt	Feb4 1b, 30-yr, Accumulated Debt	Total Principal Debt Borrowed
End of Year Debt Drawdown	98,864	56,717
Equal Monthly Debt Drawdown	101,217	

Feb4 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
a Debt, Beginning of Year	0	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	
c = a*5% *Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown*	*0*	*365*	*724*	*1,073*	*1,459*	*1,782*	*2,096*	*2,391*	*2,731*	*3,040*	*3,322*	*3,651*	*3,966*	*4,236*	*4,483*	*4,665*	*4,842*	*4,974*	*5,062*	*5,020*	*4,933*	*4,800*	*4,615*	*4,376*	*4,080*	*3,721*	*3,296*	*2,800*	*2,228*	*1,575*	*834*	*0*	*0*	*0*	97,141
b Additional GA Debt Drawdown, End of Year	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
d = a+b+c Accumulated debt in present year (including 5% annual interest)	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	0	
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,633	26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606	82,685	86,406	89,703	92,503	94,731	96,306	97,141				
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,831	56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076	-10,007	-22,027	-35,008	-48,980	-63,971	-80,013	-97,141				
Fiscal Exposure - End of Year Debt Drawdown	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0	

Feb4 1b, 30-yr — Equal Monthly Debt Drawdown

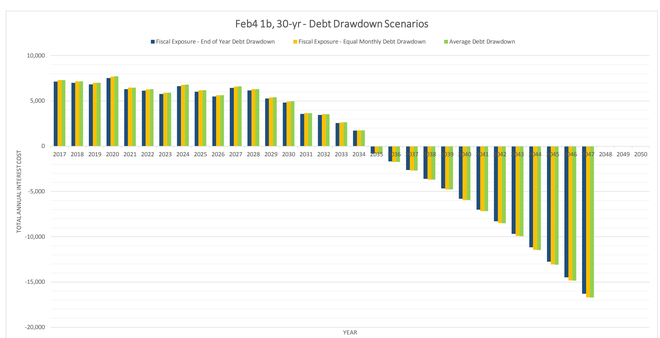
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	
5,042 *Interest Cost - Feb4 1b, 30-yr*	*170*	*532*	*886*	*1,252*	*1,609*	*1,928*	*2,234*	*2,549*	*2,874*	*3,171*	*3,475*	*3,797*	4,091	*4,350*	*4,568*	*4,748*	*4,904*	*5,015*	*5,042*	*4,980*	*4,871*	*4,714*	*4,504*	*4,238*	*3,913*	*3,524*	*3,066*	*2,534*	*1,925*	*1,231*	*446*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0	
Monthly Drawdown	594	553	508	538	405	363	306	353	275	205	259	209	108	49	(76)	(101)	(189)	(271)	(490)	(559)	(629)	(700)	(773)	(847)	(924)	(1,002)	(1,082)	(1,164)	(1,249)	(1,337)	(1,427)	(0)	-	-	
FV of Monthly Drawdown at 5%	7,303	6,792	6,247	6,610	4,972	4,463	3,755	4,338	3,383	2,523	3,184	2,565	1,327	605	(937)	(1,237)	(2,326)	(3,335)	(6,020)	(6,867)	(7,728)	(8,604)	(9,498)	(10,412)	(11,347)	(12,306)	(13,291)	(14,304)	(15,348)	(16,424)	(17,536)	(0)	-	-	
Annual Interest Cost on New Drawdowns	170	158	145	154	116	104	87	101	79	59	74	60	31	14	(22)	(29)	(54)	(78)	(140)	(160)	(180)	(200)	(221)	(242)	(264)	(286)	(309)	(333)	(357)	(382)	(408)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	374	741	1,099	1,493	1,824	2,146	2,448	2,796	3,112	3,401	3,738	4,061	4,336	4,589	4,776	4,958	5,092	5,182	5,139	5,051	4,914	4,725	4,481	4,177	3,810	3,375	2,867	2,281	1,612	854	0	(0)	(0)	
Total Annual Interest Cost	170	532	886	1,252	1,609	1,928	2,234	2,549	2,874	3,171	3,475	3,797	4,091	4,350	4,568	4,748	4,904	5,015	5,042	4,980	4,871	4,714	4,504	4,238	3,913	3,524	3,066	2,534	1,925	1,231	446	0	(0)	(0)	

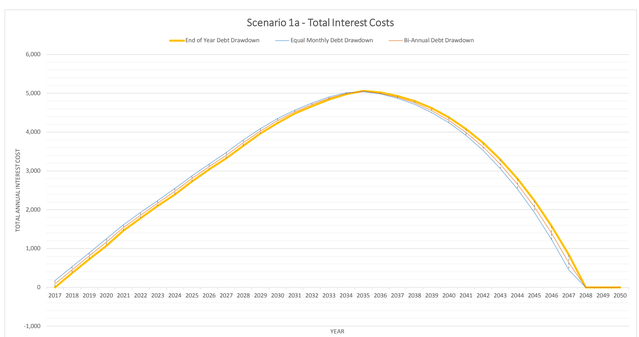
Feb4 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*91*	*455*	*811*	*1,169*	*1,539*	*1,861*	*2,170*	*2,476*	*2,808*	*3,110*	*3,404*	*3,730*	*4,034*	*4,297*	*4,528*	*4,710*	*4,875*	*4,996*	*5,051*	*4,998*	*4,900*	*4,753*	*4,555*	*4,302*	*3,990*	*3,615*	*3,172*	*2,657*	*2,065*	*1,390*	*626*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	7,225	7,089	6,913	7,626	6,396	6,220	5,838	6,713	6,113	5,574	6,514	6,235	5,330	4,888	3,614	3,501	2,603	1,738	-829	-1,709	-2,648	-3,651	-4,722	-5,867	-7,093	-8,405	-9,810	-11,314	-12,926	-14,652	-16,502	0	0	0	
Bi-Annual Drawdown	3,567	3,317	3,051	3,228	2,428	2,180	1,834	2,118	1,652	1,232	1,555	1,253	648	295	(457)	(604)	(1,136)	(1,629)	(2,940)	(3,354)	(3,774)	(4,202)	(4,639)	(5,085)	(5,542)	(6,010)	(6,491)	(6,986)	(7,495)	(8,021)	(8,564)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	7,225	6,719	6,180	6,539	4,919	4,415	3,715	4,291	3,347	2,496	3,150	2,538	1,313	598	(926)	(1,224)	(2,301)	(3,299)	(5,956)	(6,794)	(7,645)	(8,512)	(9,396)	(10,300)	(11,225)	(12,174)	(13,148)	(14,150)	(15,183)	(16,247)	(17,347)	(0)	-	-	
Annual Interest Cost on New Drawdowns	91	85	78	83	62	56	47	54	42	32	40	32	17	8	(12)	(15)	(29)	(42)	(75)	(86)	(97)	(108)	(119)	(130)	(142)	(154)	(166)	(179)	(192)	(205)	(219)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	370	733	1,087	1,477	1,805	2,123	2,422	2,766	3,079	3,364	3,698	4,017	4,290	4,540	4,725	4,904	5,038	5,127	5,084	4,997	4,861	4,674	4,432	4,132	3,769	3,338	2,836	2,257	1,595	845	0	0	0	
Total Annual Interest Cost	91	455	811	1,169	1,539	1,861	2,170	2,476	2,808	3,110	3,404	3,730	4,034	4,297	4,528	4,710	4,875	4,996	5,051	4,998	4,900	4,753	4,555	4,302	3,990	3,615	3,172	2,657	2,065	1,390	626	0	0	0	

Feb4 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*183*	*544*	*898*	*1,266*	*1,620*	*1,939*	*2,244*	*2,561*	*2,885*	*3,181*	*3,486*	*3,809*	*4,101*	*4,359*	*4,574*	*4,754*	*4,908*	*5,018*	*5,041*	*4,977*	*4,867*	*4,707*	*4,496*	*4,228*	*3,900*	*3,509*	*3,048*	*2,514*	*1,902*	*1,205*	*417*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	7,316	7,179	7,000	7,722	6,477	6,298	5,912	6,798	6,190	5,645	6,597	6,314	5,397	4,950	3,659	3,545	2,636	1,760	-840	-1,731	-2,682	-3,697	-4,782	-5,942	-7,183	-8,511	-9,934	-11,457	-13,089	-14,838	-16,711	0	0	0	





Feb4 1c, 30-yr - Debt Drawdown Scenarios

Feb4_1c_30yr

Annual Interest Rate = 5.1%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0
			88	82	75	90	58	52	41	60	44	29	50	43	20	10	-20	-23	-32	-34	-35	-37	-39	-41	-43	-45	-48	-50	-53	-55	-58	-61	-64	0	0	0

0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	3,761	1,594	29,477
Equal Monthly Debt Drawdown	3,851	1,583	

Maximum Accumulated Debt — Feb4 1c, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

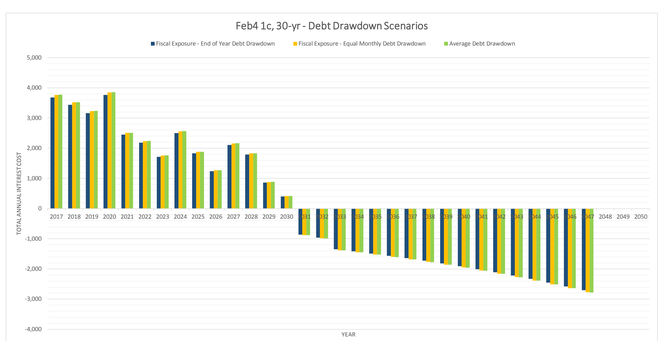
End of Year Debt Drawdown	31,125	20,043
Equal Monthly Debt Drawdown	31,866	

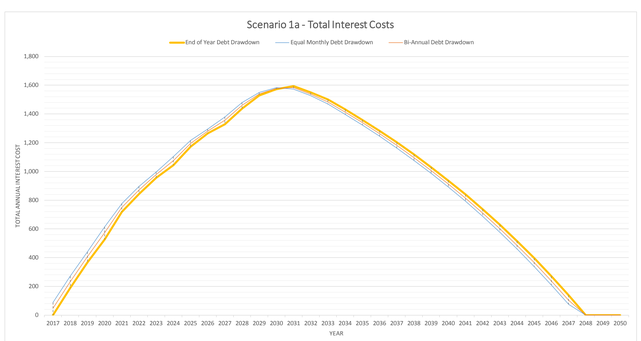
		30%	27%	24%	27%	16%	13%																														
Feb4 1c, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
a	Debt, Beginning of Year	0	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	
c = a*5%	*Interest Cost - Feb4 1c, 30-yr - End of Year Debt Drawdown*	*0*	*188*	*364*	*526*	*719*	*844*	*956*	*1,044*	*1,172*	*1,266*	*1,329*	*1,437*	*1,529*	*1,573*	*1,594*	*1,550*	*1,500*	*1,431*	*1,359*	*1,283*	*1,203*	*1,119*	*1,030*	*937*	*839*	*737*	*629*	*515*	*396*	*270*	*139*	*0*	*0*	*0*	*0*	29,477
b	Additional GA Debt Drawdown, End of Year	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	0	
	Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,641	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663	22,866	23,984	25,015	25,952	26,791	27,528	28,157	28,672	29,068	29,338	29,477				
	Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18,247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828	-1,018	-3,864	-6,710	-9,556	-12,402	-15,248	-18,094	-20,940	-23,786	-26,631	-29,477				
Fiscal Exposure - End of Year Debt Drawdown		3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0	

Feb4 1c, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	
1,583	*Interest Cost - Feb4 1c, 30-yr*	*88*	*270*	*439*	*615*	*777*	*896*	*997*	*1,103*	*1,216*	*1,295*	*1,379*	*1,480*	1,549	*1,583*	*1,573*	*1,527*	*1,468*	*1,398*	*1,324*	*1,246*	*1,164*	*1,077*	*987*	*892*	*792*	*686*	*576*	*460*	*338*	*209*	*74*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0	
	Monthly Drawdown	306	271	233	270	144	112	64	122	55	(2)	65	29	(56)	(97)	(204)	(209)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(0)	-	-	
	FV of Monthly Drawdown at 5%	3,765	3,326	2,861	3,312	1,773	1,371	781	1,493	679	(28)	799	360	(684)	(1,197)	(2,512)	(2,570)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,913)	(2,913)	(2,913)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	88	77	67	77	41	32	18	35	16	(1)	19	8	(16)	(28)	(58)	(60)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	193	373	538	736	864	979	1,069	1,200	1,296	1,361	1,471	1,565	1,610	1,632	1,586	1,536	1,465	1,391	1,313	1,231	1,145	1,055	959	859	754	644	527	405	277	142	0	0	0	
	Total Annual Interest Cost	88	270	439	615	777	896	997	1,103	1,216	1,295	1,379	1,480	1,549	1,583	1,573	1,527	1,468	1,398	1,324	1,246	1,164	1,077	987	892	792	686	576	460	338	209	74	0	0	0	

Feb4 1c, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*47*	*232*	*405*	*574*	*750*	*872*	*978*	*1,076*	*1,195*	*1,282*	*1,356*	*1,460*	*1,540*	*1,578*	*1,583*	*1,537*	*1,483*	*1,413*	*1,340*	*1,263*	*1,182*	*1,097*	*1,007*	*913*	*814*	*710*	*600*	*485*	*365*	*237*	*104*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,725	3,481	3,199	3,809	2,481	2,211	1,741	2,534	1,859	1,254	2,137	1,812	872	409	-871	-973	-1,363	-1,433	-1,506	-1,584	-1,665	-1,750	-1,839	-1,933	-2,032	-2,136	-2,246	-2,360	-2,481	-2,608	-2,742	0	0	0	
	Bi-Annual Drawdown	1,839	1,624	1,397	1,618	866	670	382	729	332	(14)	390	176	(334)	(584)	(1,227)	(1,255)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(0)	-	-	
	FV of Bi-Annual Drawdown at 5%	3,725	3,290	2,830	3,277	1,754	1,356	773	1,477	672	(28)	791	356	(677)	(1,184)	(2,485)	(2,542)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	47	42	36	41	22	17	10	19	8	(0)	10	5	(9)	(15)	(31)	(32)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	191	369	533	728	855	968	1,057	1,187	1,282	1,346	1,456	1,548	1,593	1,614	1,569	1,520	1,450	1,376	1,299	1,218	1,133	1,043	949	850	746	637	522	401	274	140	0	0	0	
	Total Annual Interest Cost	47	232	405	574	750	872	978	1,076	1,195	1,282	1,356	1,460	1,540	1,578	1,583	1,537	1,483	1,413	1,340	1,263	1,182	1,097	1,007	913	814	710	600	485	365	237	104	0	0	0	

Feb4 1c, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*94*	*276*	*445*	*622*	*781*	*900*	*1,000*	*1,108*	*1,219*	*1,298*	*1,383*	*1,483*	*1,551*	*1,583*	*1,572*	*1,525*	*1,466*	*1,395*	*1,321*	*1,243*	*1,161*	*1,074*	*984*	*888*	*788*	*683*	*572*	*456*	*333*	*205*	*69*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,772	3,525	3,239	3,857	2,513	2,239	1,763	2,566	1,882	1,270	2,164	1,835	883	414	-882	-985	-1,381	-1,451	-1,526	-1,604	-1,686	-1,772	-1,863	-1,958	-2,058	-2,163	-2,274	-2,390	-2,513	-2,641	-2,776	0	0	0	





30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

TO BE

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,556	3,123	1,728	1,400	836	1,560	821	167

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

E UPDATED

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

JK: Fixed the formula in the yellow highlighted cells. Pls. check. (SK: looks good to me)

	Tab
v16 GA Financing - Scenario 1a 1b v18 (with fiscal) - Feb 4_v2.xlsx	Powerpoint_Export Scenario tabs

Change Description

Added in trigger for later start in the year
Updated IESO forecast from Energy (IESO GA Cost Forecast 170207 (Feb 6 update).xlsx)

Equal Monthly Debt Drawdown

		Month	Months Remai
Scenario Start Date	**July**	7	6

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	3,180	2,888
Annual Exposure2 with start on July 1st	*1,590*	*2,888*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	795	3,107
Start: July 1st	-	*2,312*

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	851	3,335
Start: July 1st	-	*2,484*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	1,168	1,765
Annual Exposure2 with start on July 1st	*584*	*1,765*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	292	1,609
Start: July 1st	-	*1,025*

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,449	2,040
Annual Exposure2 with start on July 1st	*725*	*2,040*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,597
Start: July 1st	-	*1,959*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335
Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3575**
Total, B	362	1837
Proposed Program Total:	362 - 851	1,837 - 3,575

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,556	3,123	1,728	1,400
2,556	*3,123*	*1,728*	*1,400*

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646
2,805	*2,697*	*2,774*	*1,646*

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

ıking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
2,311	3,750	2,311	1,933
2,311	*3,750*	*2,311*	*1,933*

2018-19	2019-20	2020-21	2021-2022

1,901	2,671	3,391	2,217
1,901	*2,671*	*3,391*	*2,217*

2019	2020	2021	2022
2,581	4,016	2,598	2,241
2,581	*4,016*	*2,598*	*2,241*

2018-19	2019-20	2020-21	2021-2022
2,175	2,940	3,662	2,508
2,175	*2,940*	*3,662*	*2,508*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

/1

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052
2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

Equal Monthly Debt Drawdown

		Month	Months Remaining
Scenario Start Date	July	7	6

AS LONG AS >

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	3,180	2,888	2,556

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	795	3,107	2,805
Fiscal Exposure, 25%	199	777	701

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Annual Exposure[2]	3,404	3,128	2,812

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	851	3,335	3,049
Fiscal Exposure, 25%	213	834	762

Indicates year in which, similar to OPCD's exa
closest to 30%. As Fiscal 2016/17 is a partial y
month the GA deferral begins.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu
decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions	9%	14%	18%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	1,168	1,765	2,311

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	292	1,609	1,901
Fiscal Exposure, 25%	73	402	475

Scenario 1b - 30-yr amortization	2017	2018	2019
Annual Exposure[2]	1,449	2,040	2,581

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	362	1,597	2,175
Fiscal Exposure, 25%	91	399	544

Indicates year in which, similar to OPCD's exar closest to 30%.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 ar
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu on accounting treatment.

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]
Debt-Finance Global Adjustment Costs, Option 1a	213	834	762
Debt-Finance Global Adjustment Costs, Option 1b	91	399	544
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**213**	**1074**	**1065**
Total, B	91	639	847

Proposed Program Total:	91 - 213	639 - 1,074	847 - 1,065

($M)	2016-171	2017-181	2018-191
Debt-Finance Global Adjustment Costs, Option 1a	851	3335	3049
Debt-Finance Global Adjustment Costs, Option 1b	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**851**	**3575**	**3352**
Total, B	362	1837	2478

Proposed Program Total:	362 - 851	1,837 - 3,575	2,478 - 3,352

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6

7	July	7	
8	August	8	
9	September	9	
10	October	10	
11	November	11	
12	December	12	

30-year term	**2016-17**	**2017-18**	**2018-19**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335	2,175 - 3,049

ROWS HIDDEN

1	1 = Comparision Enabled

APRIL 1, 2017 25%

2020	2021	2022
3,123	1,728	1,400

2019-20	2020-21	2021-2022
2,697	2,774	1,646
674	693	412

2020	2021	2022
3,396	2,020	1,712

2019-20	2020-21	2021-2022
2,958	3,052	1,943
740	763	486

mple, the true cost of GA being deferred is
ear, exposure may be less subject to which

l $17-21 billion (at 3.5% interest rate), peaking in 2028.
$33-$36 million.

ıals per month based on month of the year. Actuals may also depend on

28%	17%	13%
2020	2021	2022
3,750	2,311	1,933

2019-20	2020-21	2021-2022
2,671	3,391	2,217
668	848	554

2020	2021	2022
4,016	2,598	2,241

2019-20	2020-21	2021-2022
2,940	3,662	2,508
735	915	627

mple, the true cost of GA being deferred is

ıd $17-21 billion (at 3.5% interest rate), peaking in 2028.
$118-$134 million.

ıals per month based on month of the year. Actuals may also depend on decision

2019-20[1]	2020-21[1]
740	763
735	915
279	323
60	60
18	18
1097	**1164**
1092	1316

1,092 - 1,097 1,316 - 1,164

2019-201	2020-211
2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453





2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964
Equal Monthly Debt Drawdown	3,180	952

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

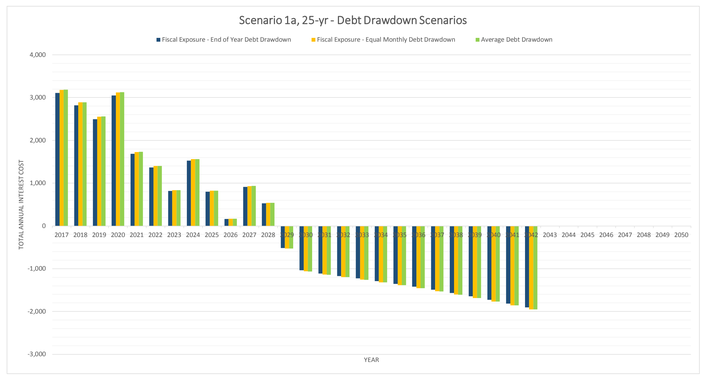
		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

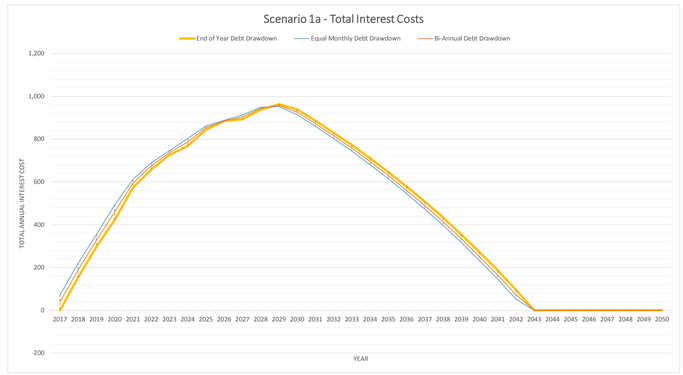
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	3,665	968	
Equal Monthly Debt Drawdown	3,750	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

		9%	14%	18%	28%	17%	13%																													
Scenario 1b, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

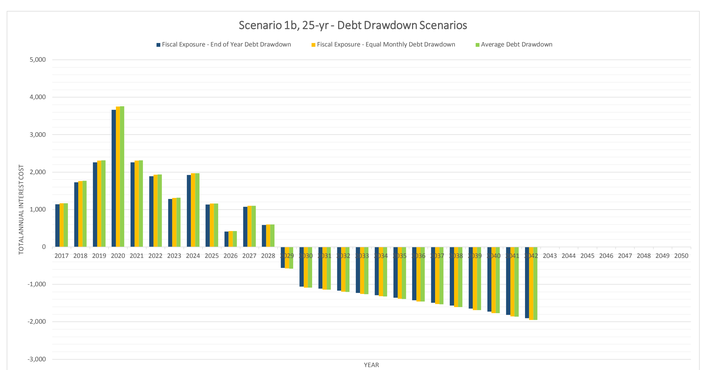
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	*954*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

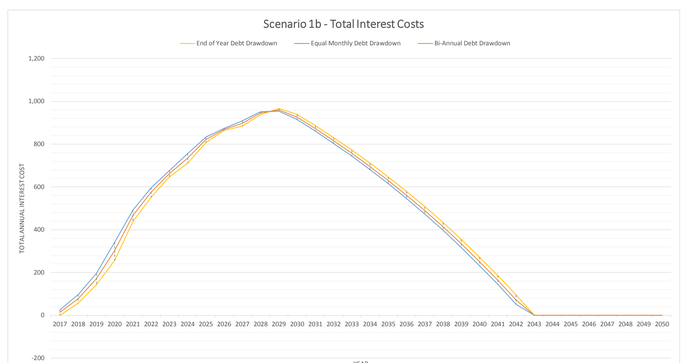
	Monthly Drawdown	95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

		28%	24%	21%	24%	12%	9%																													
Scenario 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1a, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	*1,156*	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

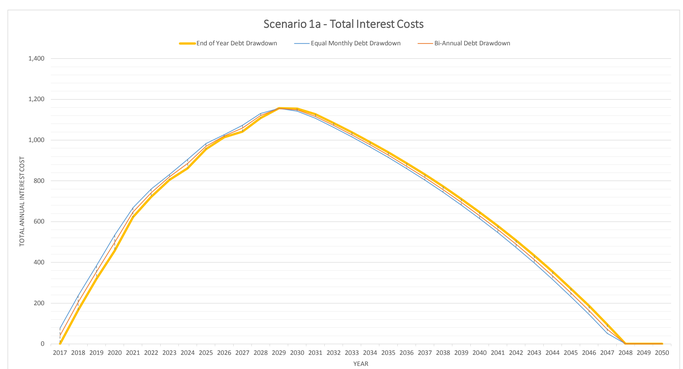
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

		12%	16%	20%	30%	19%	15%																													
Scenario 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

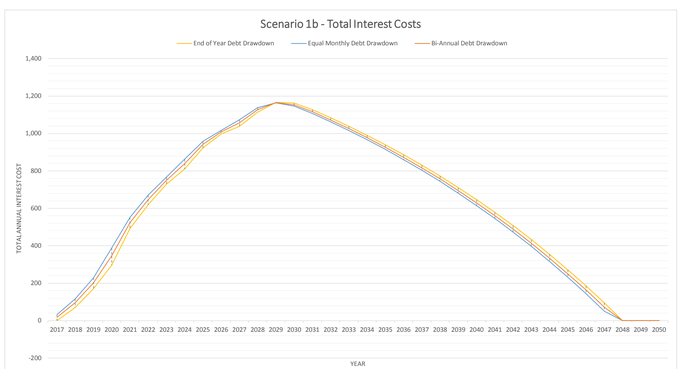
	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

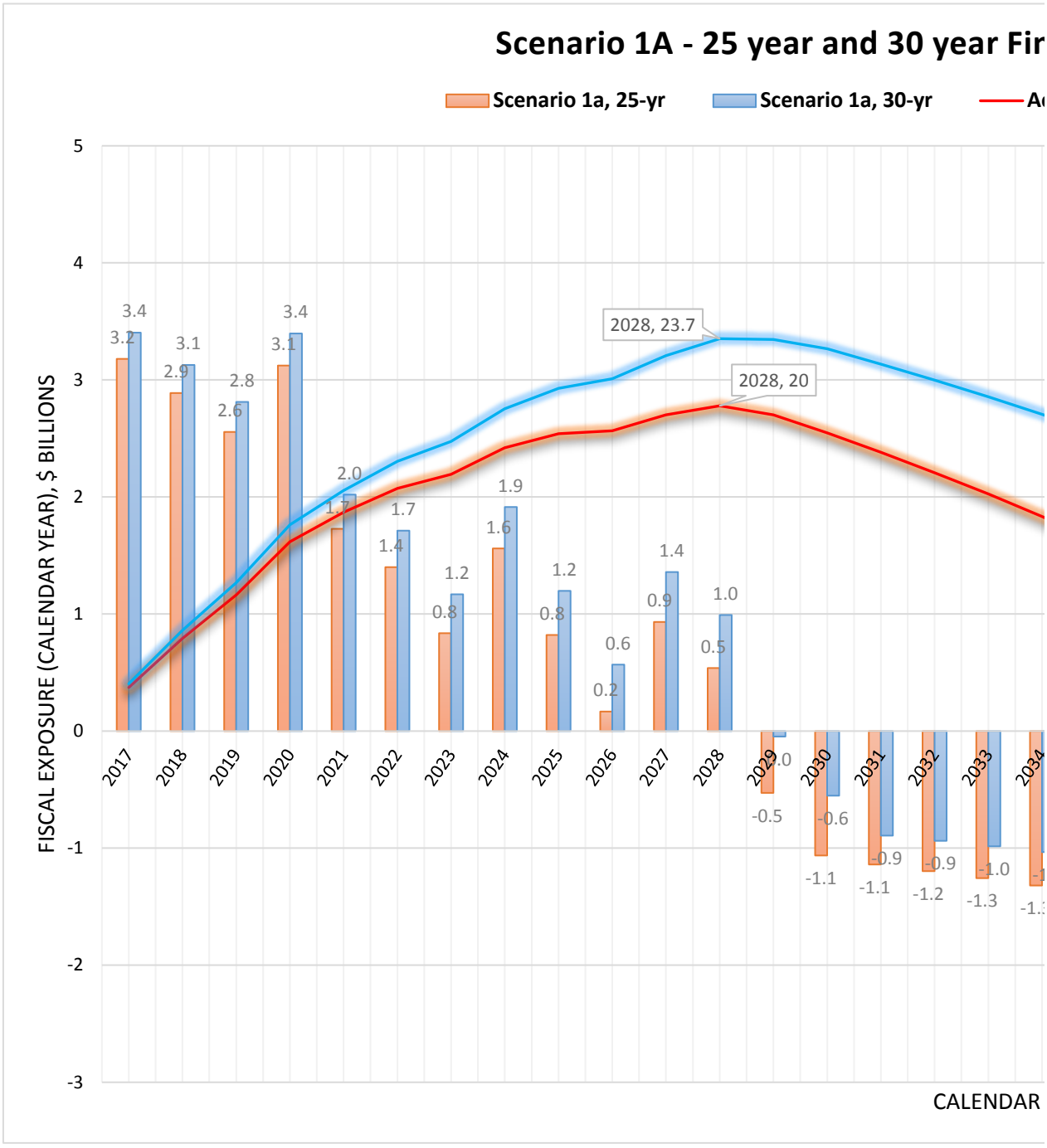
	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

Scenario 1b, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

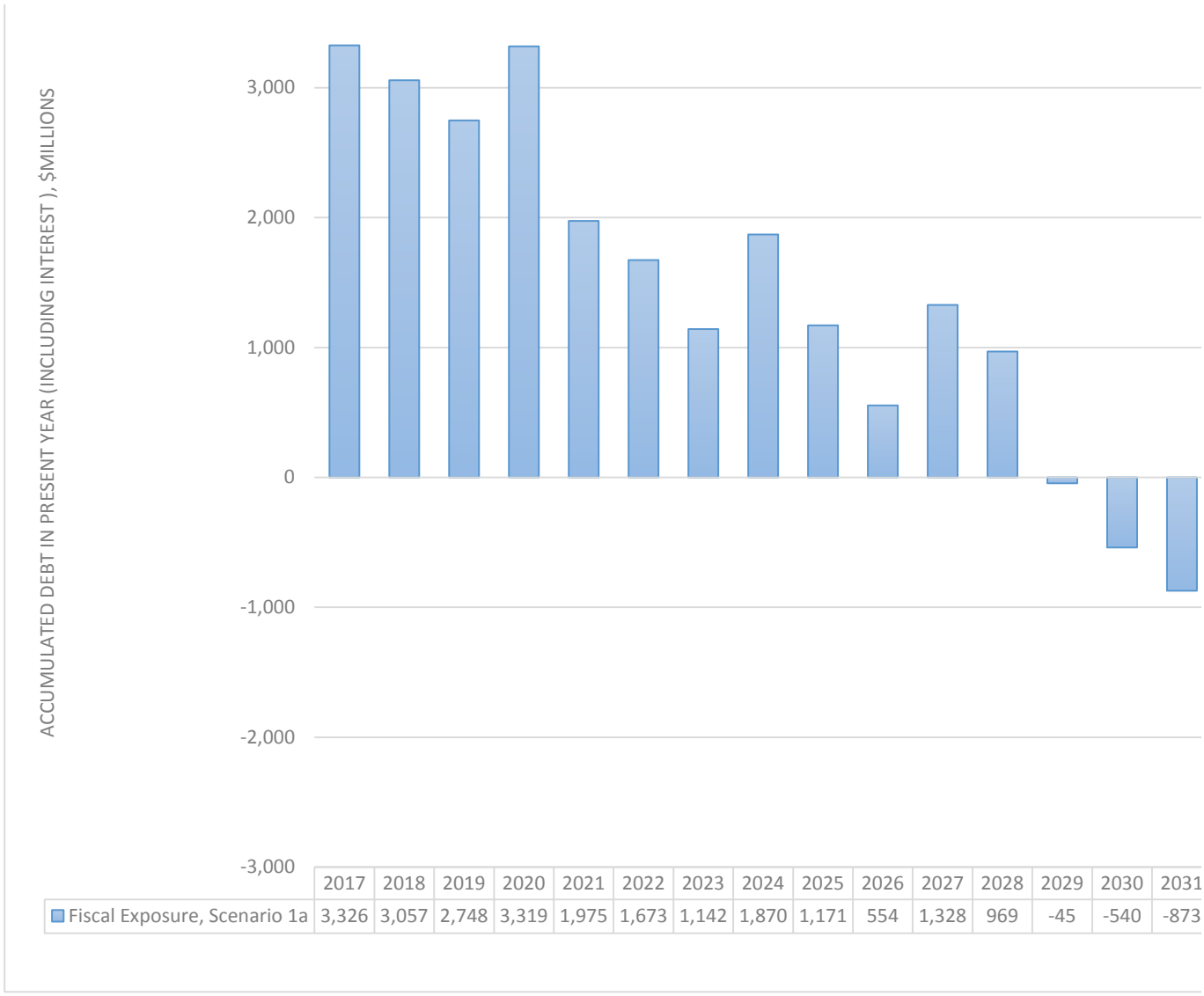




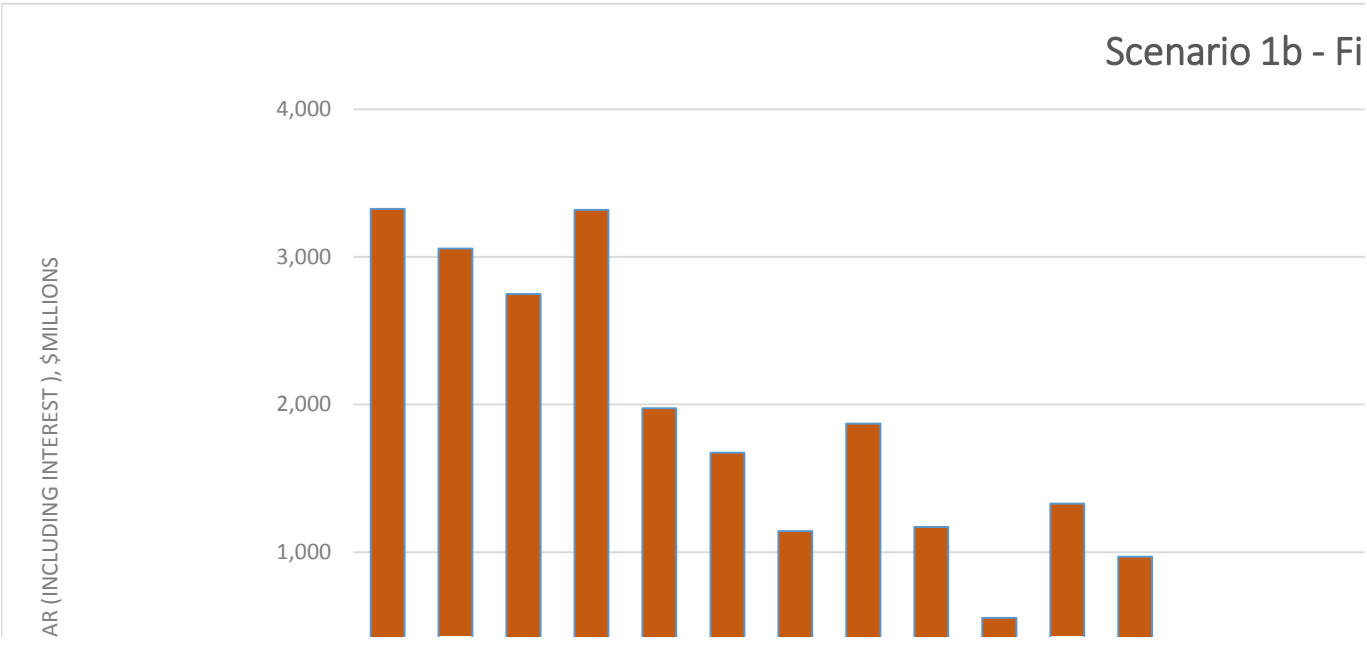
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

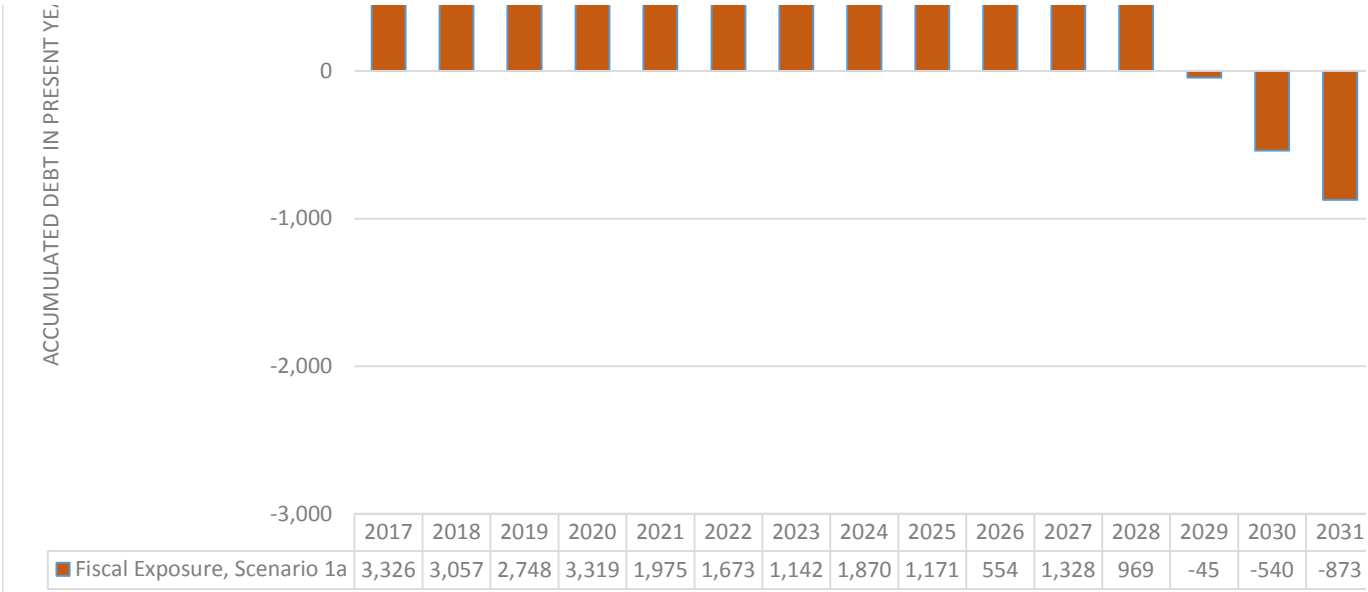




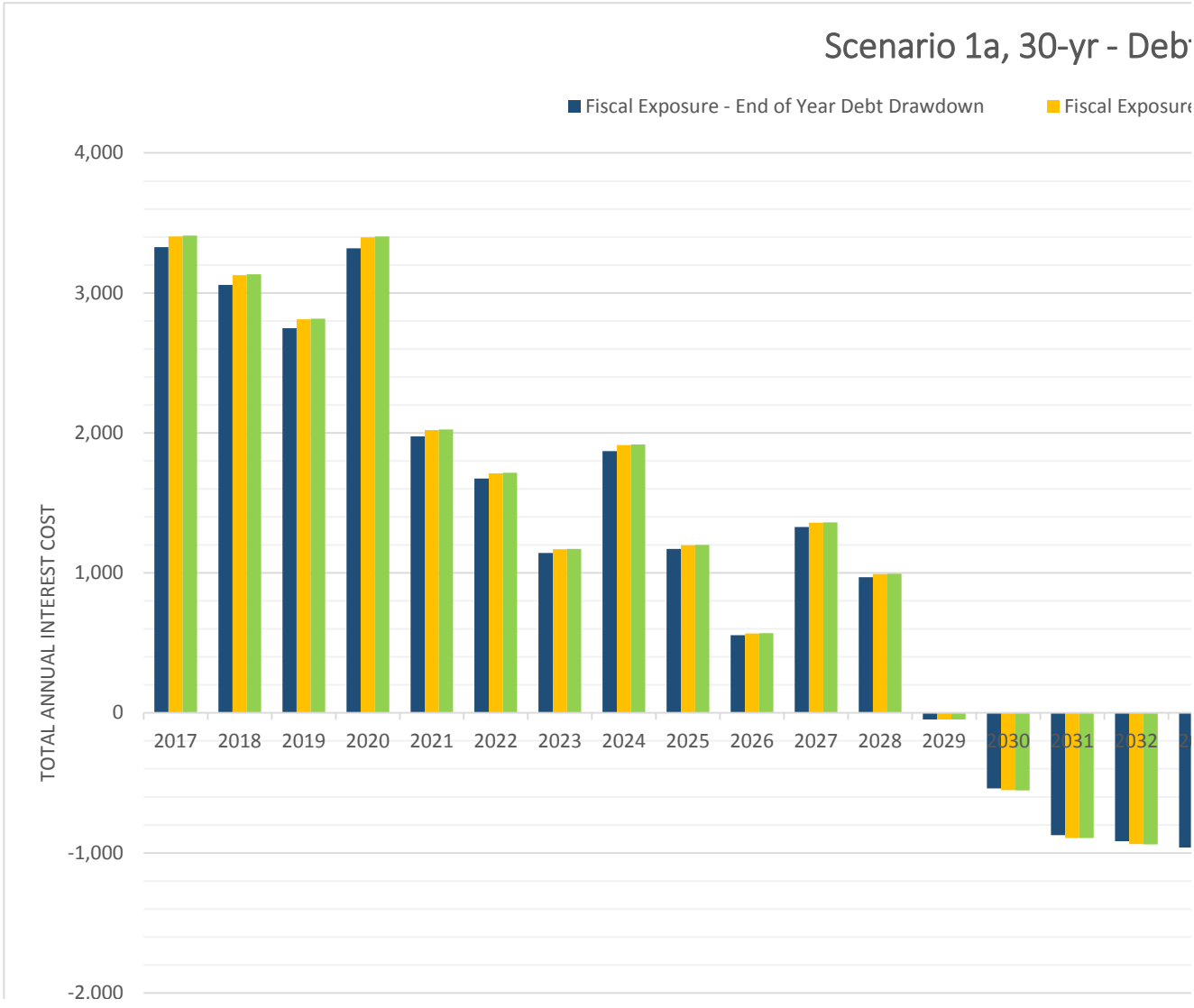


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



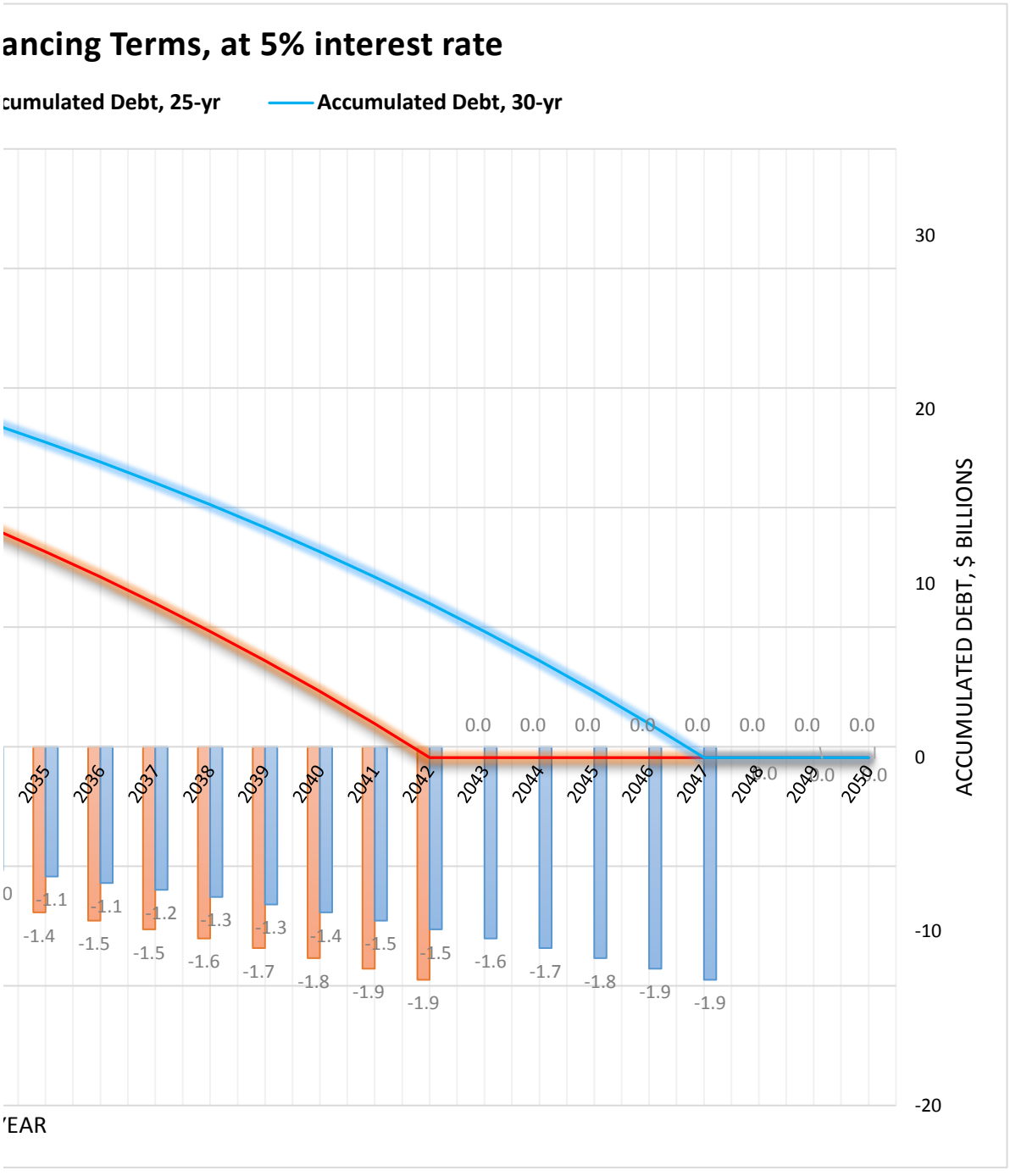


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



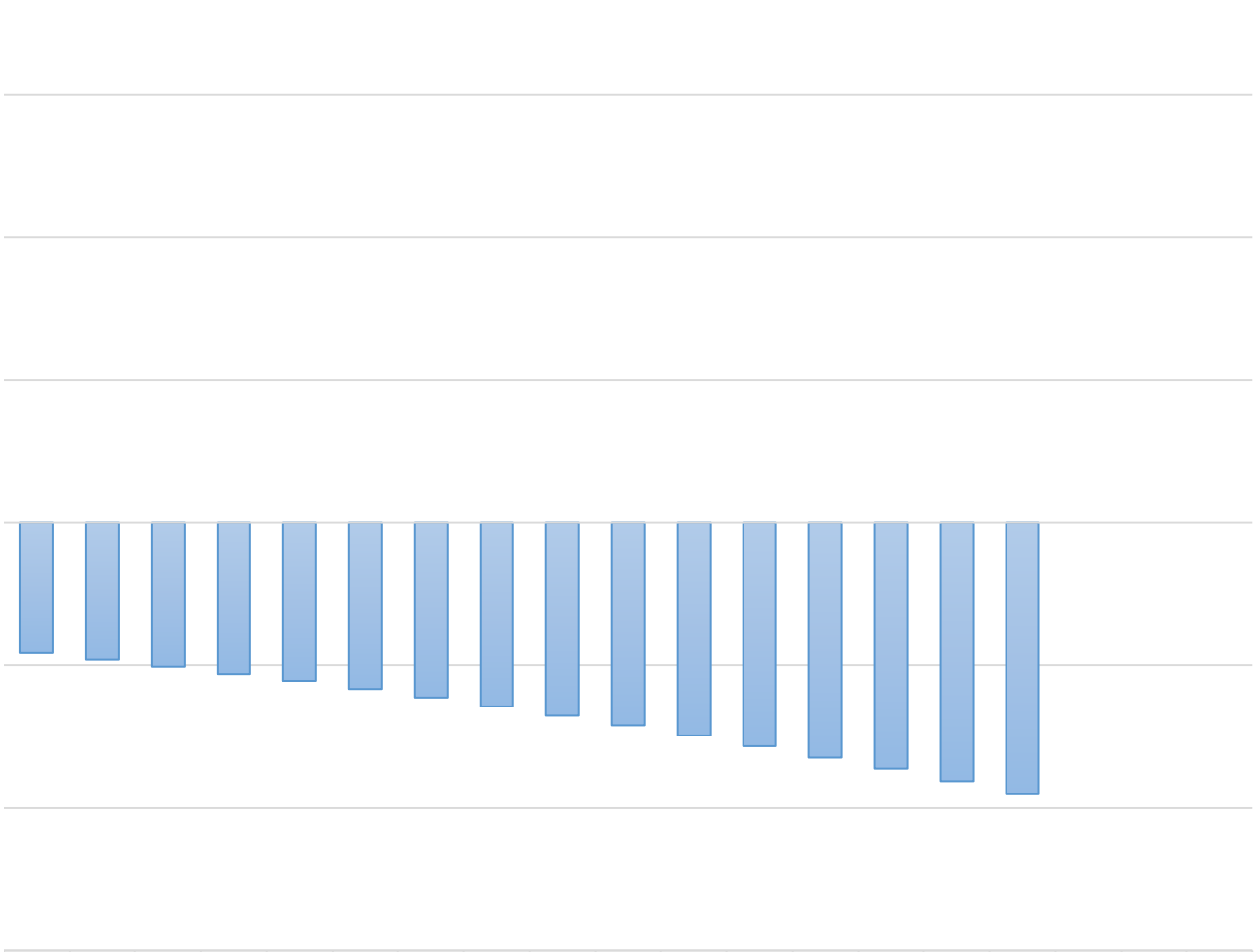

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

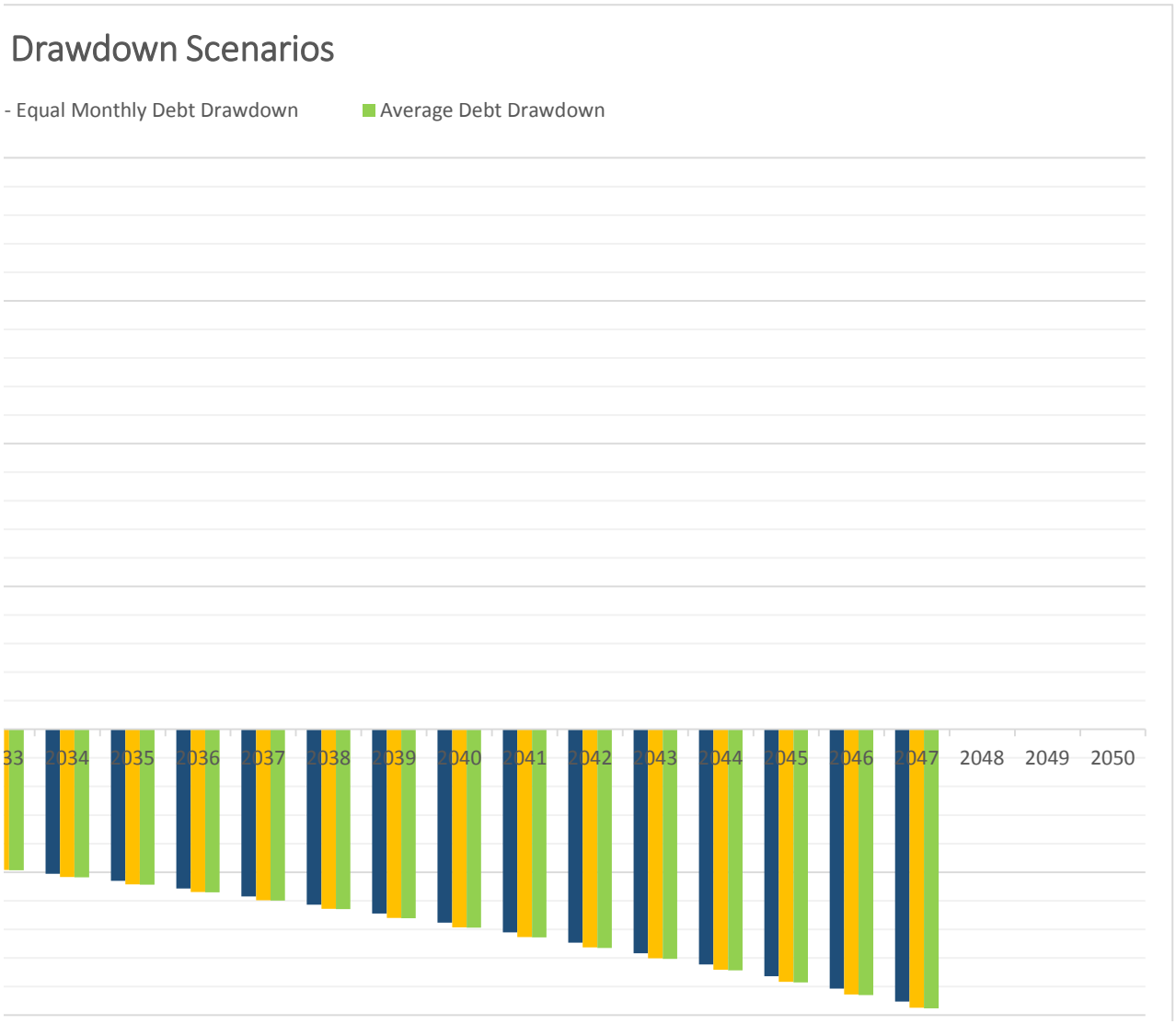
YEAR

cal Exposure



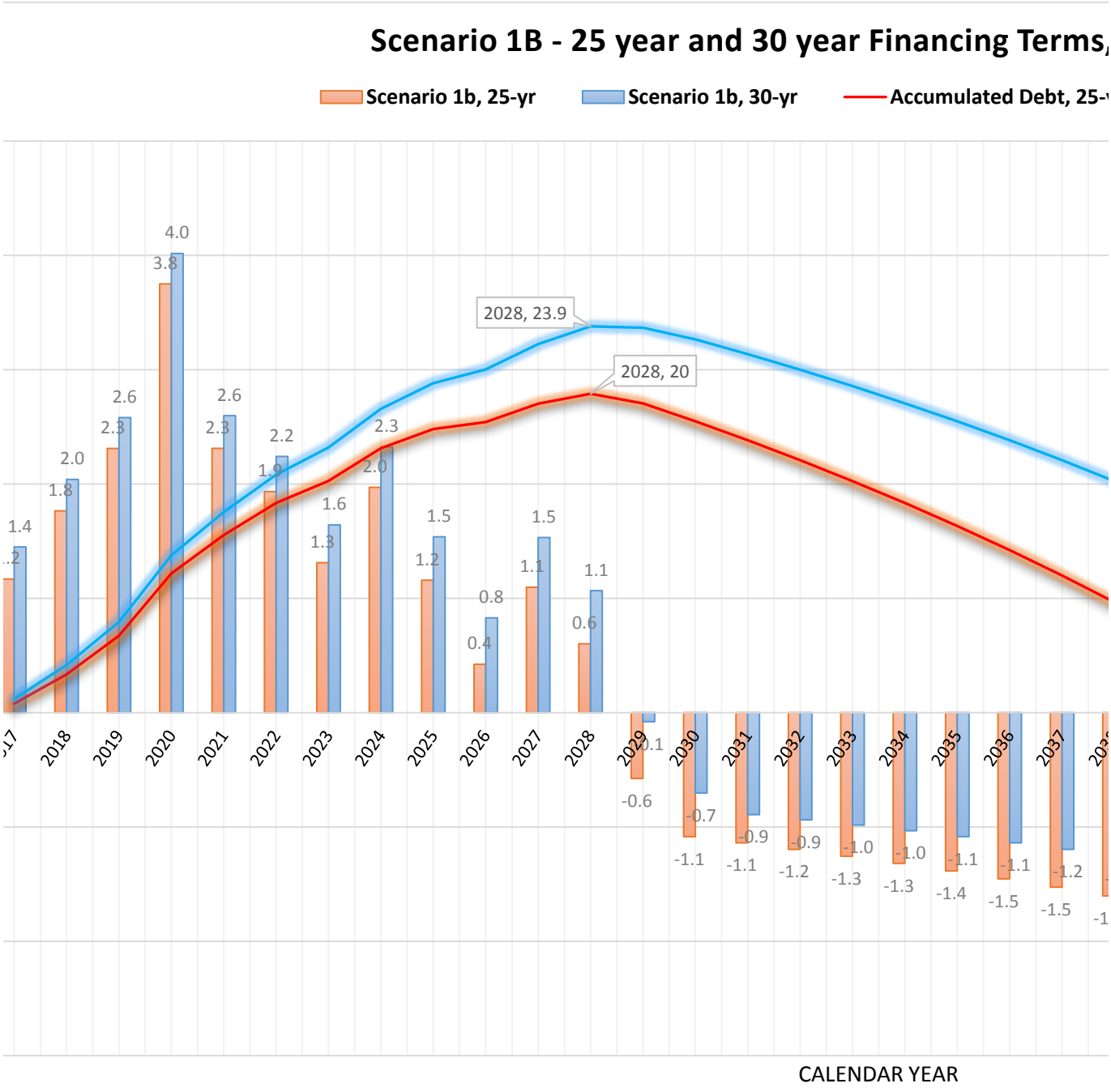
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

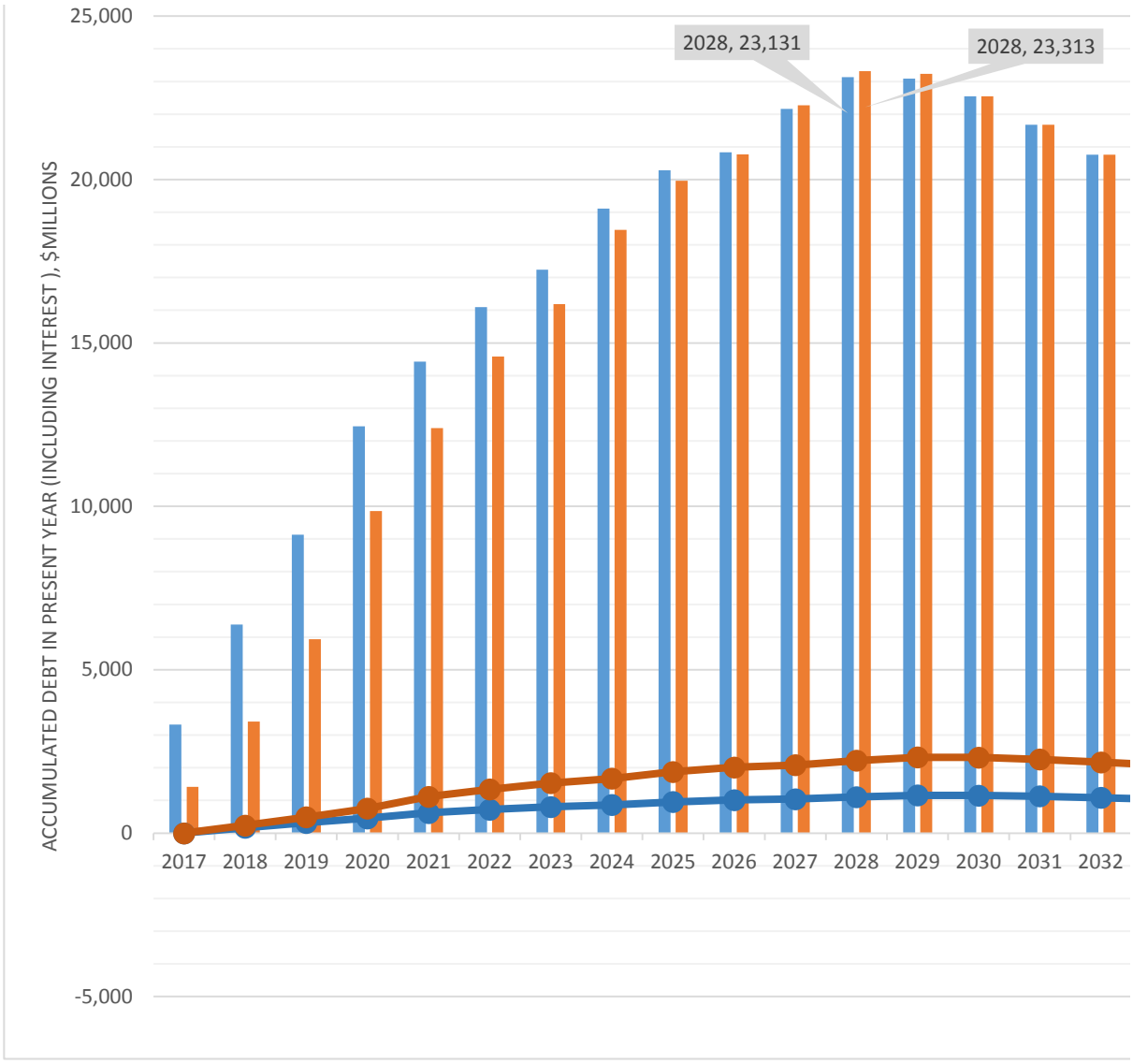


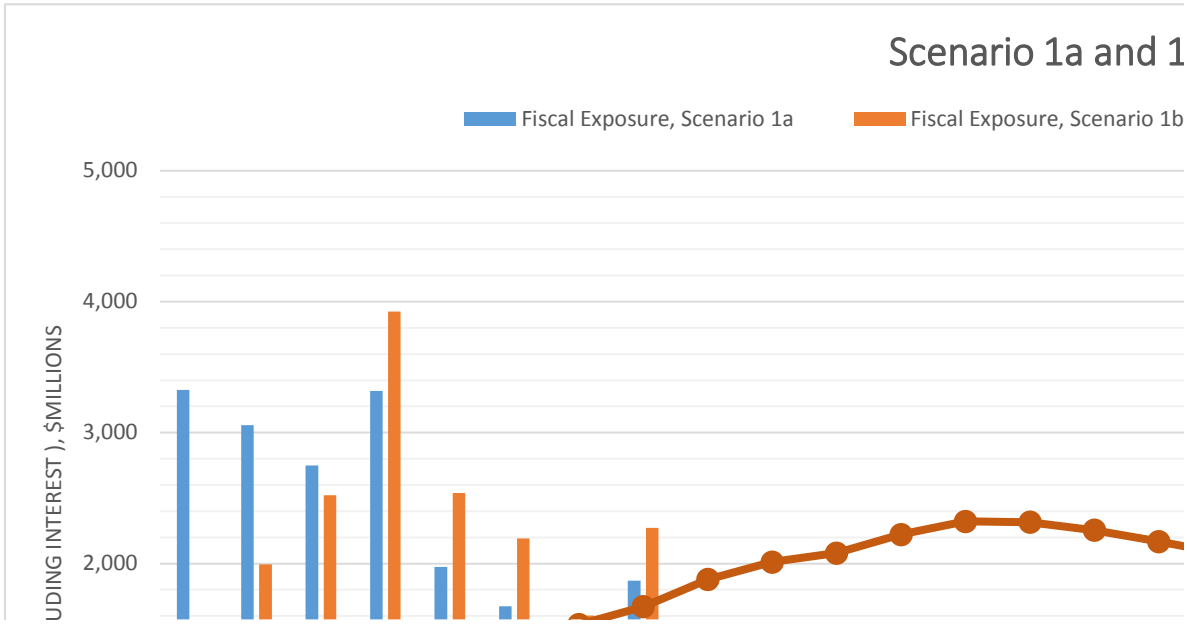
YEAR

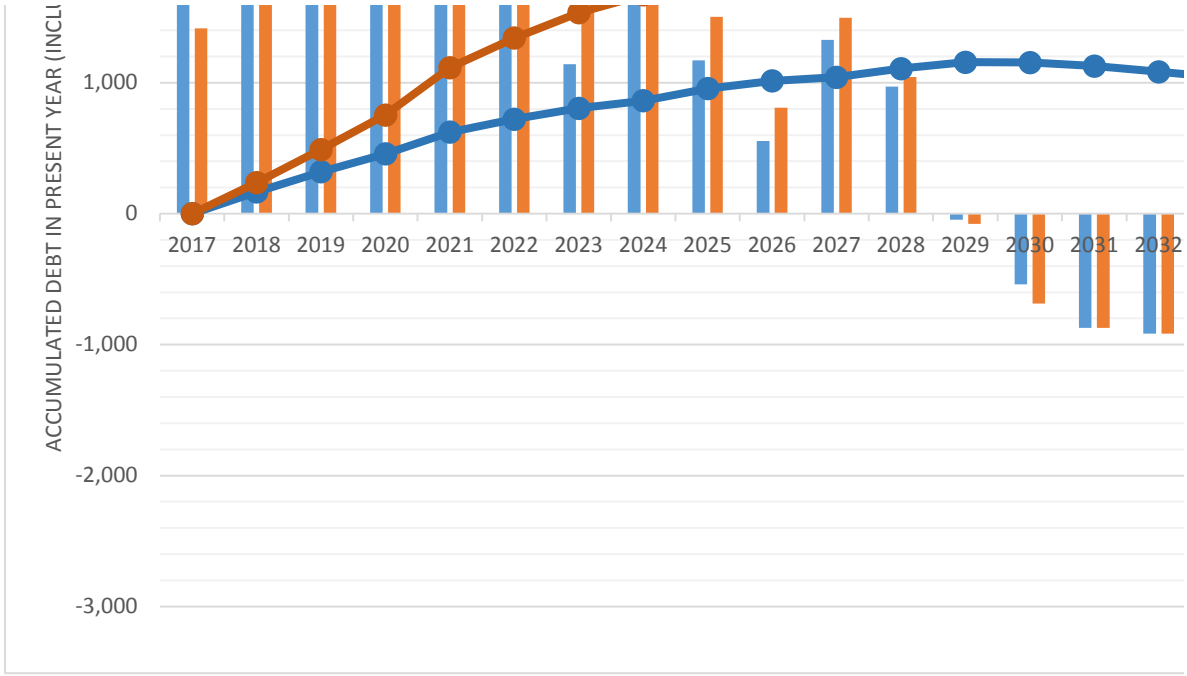
3 - 25 year and 30 year Financing Terms, at 5% interest rate

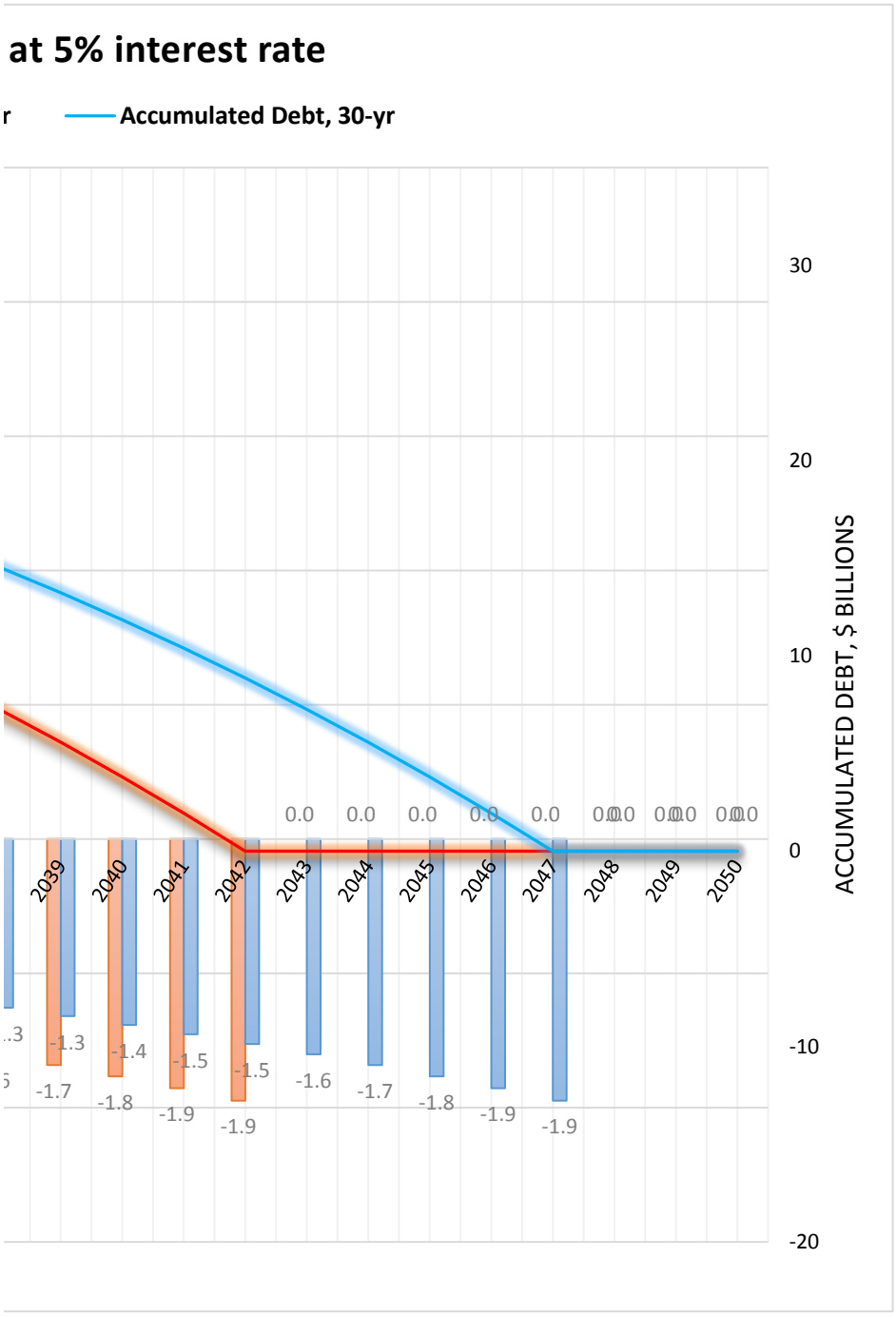





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

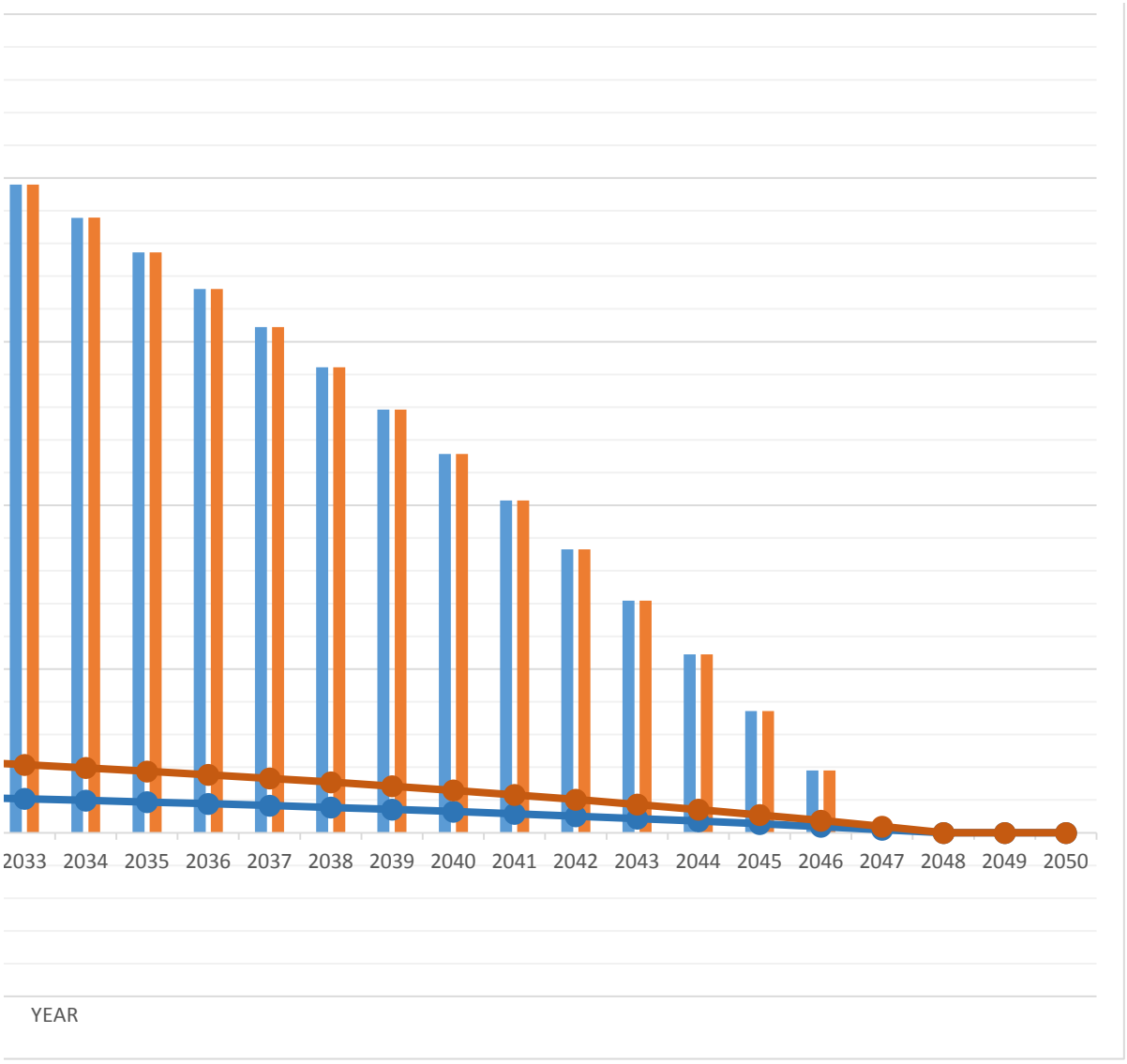

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

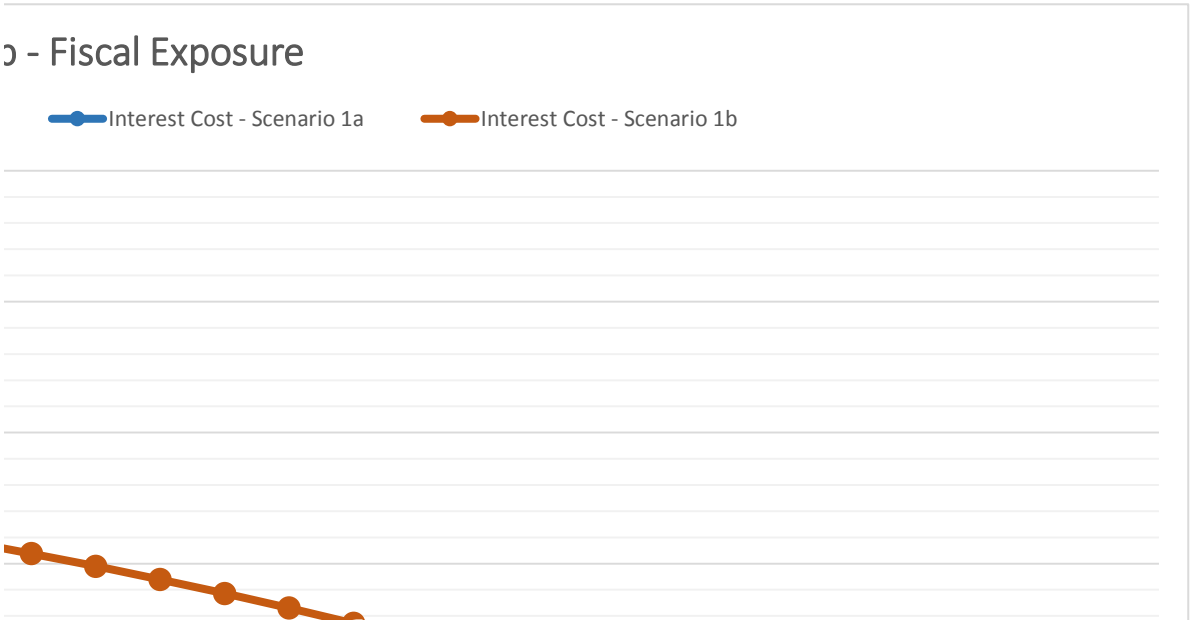

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

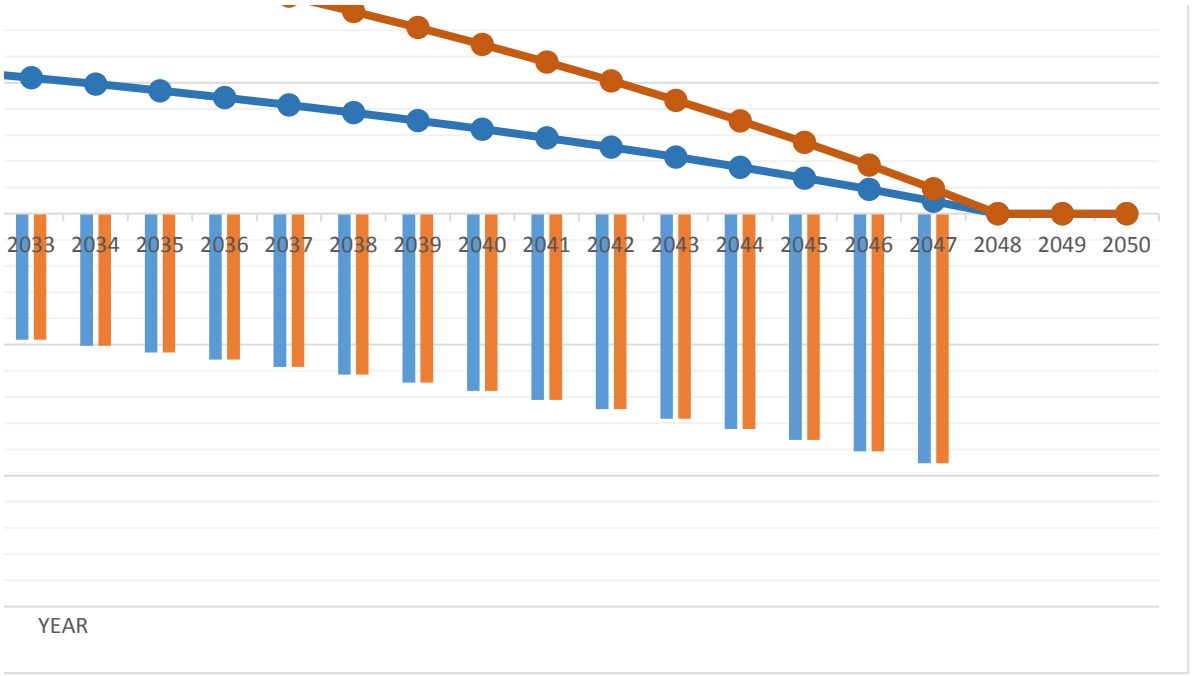


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

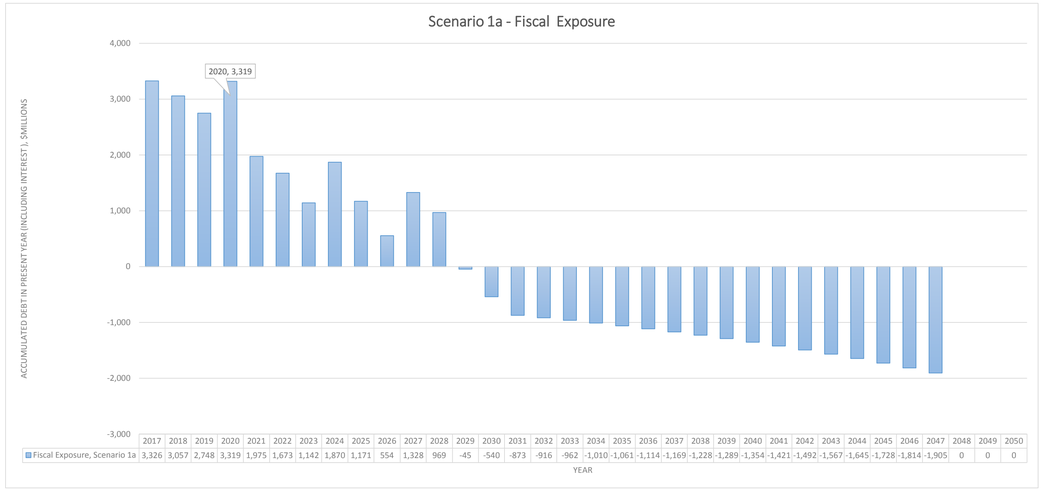
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

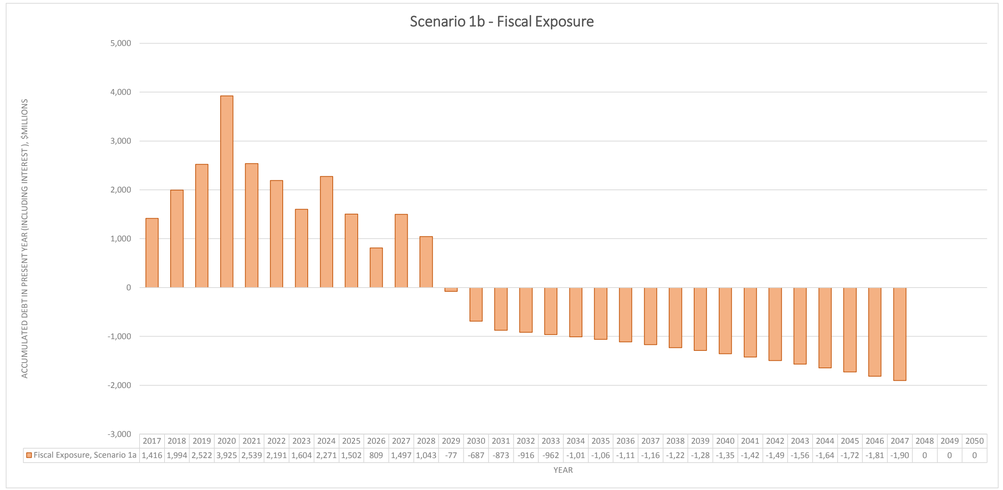
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

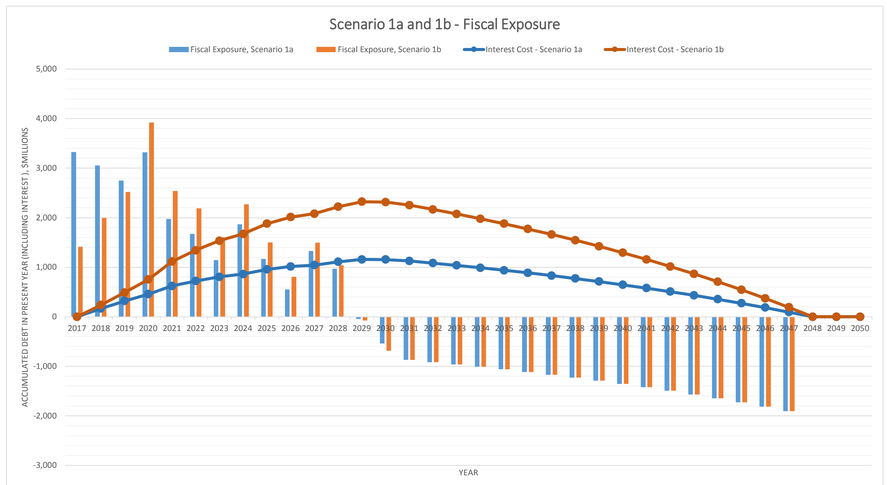
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

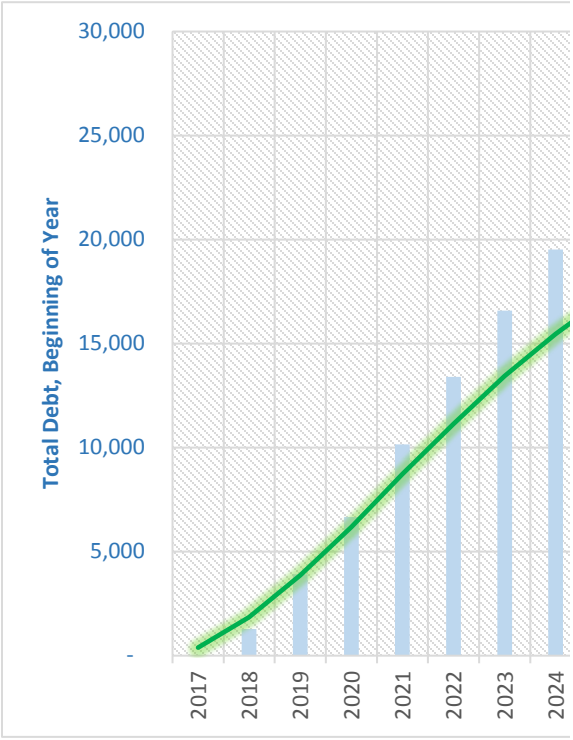
Notes:	Accounting treatment is to be determined.


Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0


Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0


Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

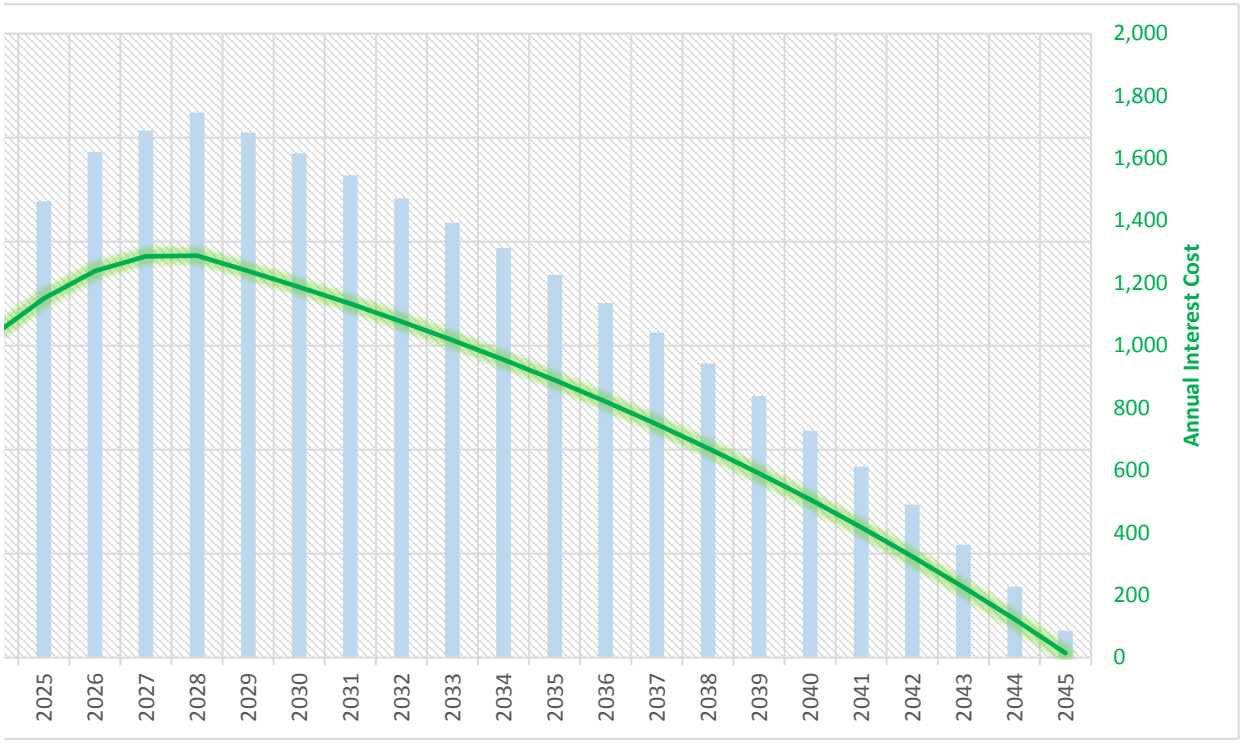
		2017	2018	2019	2020
	Debt, Beginning of Year	-	1,277	3,908	6,667
5.0%	*Interest Cost*	*26*	*124*	*258*	*413*
	Additional GA Debt Drawdown, End of Year	1,250	2,508	2,501	3,075
	Accumulated debt in present year (including 5.	1,277	3,908	6,667	10,154



	2017	2018	2019	2020
Total Debt, Beginning of Year	-	1,277	3,908	6,667
Annual Interest Cost	26	124	258	413
Additional GA Debt Drawdown Required	1,250	2,508	2,501	3,075
Accumulated debt in present year	1,277	3,908	6,667	10,154

	2033	2034	2035	2036
Total Debt, Beginning of Year	20,912	19,689	18,402	17,050
Annual Interest Cost	1,018	955	889	820
Additional GA Debt Drawdown Required	-2,242	-2,242	-2,242	-2,242
Accumulated debt in present year	19,689	18,402	17,050	15,629

2021	2022	2023	2024	2025	2026	2027	2028
10,154	13,395	16,592	19,526	21,943	24,304	25,340	26,194
581	*742*	*896*	*1,031*	*1,151*	*1,239*	*1,286*	*1,288*
2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242
13,395	16,592	19,526	21,943	24,304	25,340	26,194	25,240
							1,288



2021	2022	2023	2024	2025	2026	2027	2028
10,154	13,395	16,592	19,526	21,943	24,304	25,340	26,194
581	742	896	1,031	1,151	1,239	1,286	1,288
2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242
13,395	16,592	19,526	21,943	24,304	25,340	26,194	25,240

2037	2038	2039	2040	2041	2042	2043	2044
15,629	14,135	12,564	10,914	9,178	7,354	5,437	3,421
748	671	591	506	417	324	226	123
-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242
14,135	12,564	10,914	9,178	7,354	5,437	3,421	1,303

2029	2030	2031	2032	2033	2034	2035	2036
25,240	24,238	23,184	22,077	20,912	19,689	18,402	17,050
1,239	*1,188*	*1,134*	*1,077*	*1,018*	*955*	*889*	*820*
-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242
24,238	23,184	22,077	20,912	19,689	18,402	17,050	15,629

2029	2030	2031	2032
25,240	24,238	23,184	22,077
1,239	1,188	1,134	1,077
-2,242	-2,242	-2,242	-2,242
24,238	23,184	22,077	20,912

2045	2046	2047	**Total**
1,303	0	0	
15	0	0	**20,978**
-1,317	0	0	
0	0	0	

2037	2038	2039	2040	2041	2042	2043	2044
15,629	14,135	12,564	10,914	9,178	7,354	5,437	3,421
748	*671*	*591*	*506*	*417*	*324*	*226*	*123*
-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242
14,135	12,564	10,914	9,178	7,354	5,437	3,421	1,303

2045	2046	2047	2048	2049	2050	2051	2052	2053
1,303				-	-	-	-	-
15				*0*	*0*	*0*	*0*	*0*
-1,317				0	0	0	0	0
0				0	0	0	0	0

2054	2055	2056	2057	2058	2059	2060	2061
-	-	-	-	-	-	-	-
0	*0*	*0*	*0*	*0*	*0*	*0*	*0*
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0

Mar 1 Deck - at 5.12% interest rate

Mar1_1_30yr
Annual Interest Rate = 5.12%
Annual Interest Rate = 5.00%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,501	2,636	2,764	3,479	3,242	3,202	2,950	2,448	2,399	1,108	935	-826	-869	-913	-960	-1,009	-1,060	-1,115	-1,172	-1,232	-1,295	-1,361	-1,431	-1,504	-1,581	-1,662	-1,747	-1,836	-1,930	-2,029	-2,132	-2,241	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,277	2,632	2,759	3,487	3,241	3,196	2,934	2,417	2,362	1,036	854	-954	-1,002	-1,054	-1,107	-1,164	-1,224	-1,286	-1,352	-1,421	-1,494	-1,570	-1,651	-1,735	-1,824	-1,917	-2,015	-2,119	-2,227	-2,341	-2,461	-293	0	0	
			-1,224	-4	-5	8	-1	-6	-16	-32	-37	-72	-81	-127	-134	-141	-148	-155	-163	-172	-180	-190	-199	-210	-220	-232	-243	-256	-269	-283	-297	-312	-328	1,948	0	0	-3,779

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,479	1,415	25,137.0
Equal Monthly Debt Drawdown	3,487	1,288	

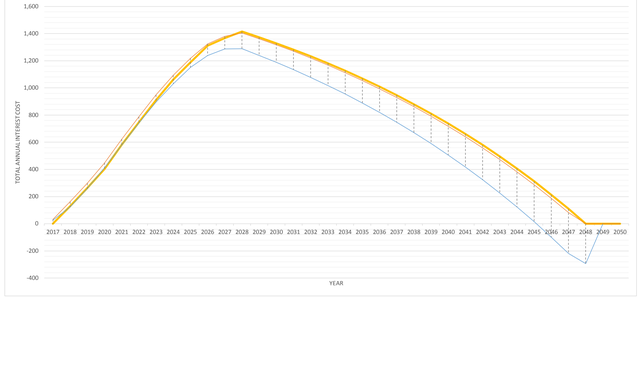
	Mar1 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	27,662.3	2027	20,332
Equal Monthly Debt Drawdown	26,193.5		

Mar1 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	Total
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																															26
($ millions)			-2.79%	-2.95%	0.47%	-10.01%	-0.05%	0.32%	18.73%	-4.38%	9.88%	12.11%	13.81%	-6.20%	-2.34%	-8.92%	1.52%	-5.26%	-4.60%	-20.95%	-3.46%	-3.41%	-3.36%	-3.31%	-3.26%	-3.20%	-3.15%	-3.10%	-3.04%	-2.98%	-2.93%	-2.87%	-44.57%	-4.83%	-4.83%													
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695													
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,180	8,206	9,743	9,316	10,236	11,476	13,061	12,250	11,963	10,896	11,061	10,480	9,998	7,904	7,630	7,370	7,122	6,887	6,662	6,449	6,246	6,052	5,868	5,693	5,526	5,368	2,975	2,831	2,695													
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	0													
a	Debt, Beginning of Year	0	2,501	5,136	7,900	11,379	14,621	17,823	20,773	23,221	25,620	26,728	27,662	26,836	25,967	25,054	24,095	23,086	22,025	20,911	19,739	18,507	17,213	15,852	14,421	12,918	11,337	9,675	7,929	6,093	4,163	2,134	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost*	*0*	*128*	*263*	*404*	*582*	*748*	*912*	*1,063*	*1,188*	*1,311*	*1,367*	*1,415*	*1,373*	*1,329*	*1,282*	*1,233*	*1,181*	*1,127*	*1,070*	*1,010*	*947*	*881*	*811*	*738*	*661*	*580*	*495*	*406*	*312*	*213*	*109*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	25,137
b	Additional GA Debt Drawdown, End of Year	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,501	5,136	7,900	11,379	14,621	17,823	20,773	23,221	25,620	26,728	27,662	26,836	25,967	25,054	24,095	23,086	22,025	20,911	19,739	18,507	17,213	15,852	14,421	12,918	11,337	9,675	7,929	6,093	4,163	2,134	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE													
	Mar1 Option 1, 30-yr - Accumulated Interest Costs	0	128	391	795	1,377	2,125	3,037	4,100	5,288	6,599	7,966	9,381	10,754	9,841	8,882	8,882	8,882	8,882	8,882	8,882	8,882	8,882	8,882	8,882	8,882	8,882	8,882	6,093	4,163	2,134	2	0	0														
	Mar1 Option 1, 30-yr - Accumulated Debt Principal	2,501	5,009	7,509	10,584	13,244	15,698	17,736	19,121	20,332	20,129	19,696	17,455	15,213	15,213	15,213	14,204	13,144	12,029	10,858	9,626	8,331	6,970	5,540	4,036	2,455	794	-953	0	0	0	0	0	0														
	Mar1 Option 1, 30-yr - Accumulated Interest Costs	0	128	391	795	1,377	2,125	3,037	4,100	5,288	6,599	7,966	9,381	10,754	12,083	13,365	14,597	15,778	16,905	17,975	18,985	19,932	20,813	21,624	22,361	23,022	23,602	24,097	24,503	24,815	25,028	25,137																
	Mar1 Option 1, 30-yr - Accumulated Debt Principal	2,501	5,009	7,509	10,584	13,244	15,698	17,736	19,121	20,332	20,129	19,696	17,455	15,213	12,972	10,730	8,489	6,247	4,005	1,764	-478	-2,719	-4,961	-7,202	-9,444	-11,685	-13,927	-16,169	-18,410	-20,652	-22,893	-25,135																
Fiscal Exposure - End of Year Debt Drawdown		2,501	2,636	2,764	3,479	3,242	3,202	2,950	2,448	2,399	1,108	935	-826	-869	-913	-960	-1,009	-1,060	-1,115	-1,172	-1,232	-1,295	-1,361	-1,431	-1,504	-1,581	-1,662	-1,747	-1,836	-1,930	-2,029	-2,132	-2,241	0	0													

Mar1 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1 - Bills Lowered 25%, RPP-Eligible Only		**6**																																		
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,180	8,206	9,743	9,316	10,236	11,476	13,061	12,250	11,963	10,896	11,061	10,480	9,998	7,904	7,630	7,370	7,122	6,887	6,662	6,449	6,246	6,052	5,868	5,693	5,526	5,368	2,975	2,831	2,695	
	GA Debt Requirement	1,250	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	
	Debt, Beginning of Year	0	1,277	3,908	6,667	10,154	13,395	16,592	19,526	21,943	24,304	25,340	26,194	25,240	24,238	23,184	22,077	20,912	19,689	18,402	17,050	15,629	14,135	12,564	10,914	9,178	7,354	5,437	3,421	1,303	-924	-3,265	-5,726	0	0	
1,288	*Interest Cost - Mar1 Option 1, 30-yr*	*26*	*124*	*258*	*413*	*581*	*742*	*896*	*1,031*	*1,151*	*1,239*	*1,286*	*1,288*	*1,239*	*1,188*	*1,134*	*1,077*	*1,018*	*955*	*889*	*820*	*748*	*671*	*591*	*506*	*417*	*324*	*226*	*123*	*15*	*-99*	*-219*	*-293*	*0*	*0*	*0*	*0*	20,366
	Additional GA Debt Drawdown	1,250	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,277	3,908	6,667	10,154	13,395	16,592	19,526	21,943	24,304	25,340	26,194	25,240	24,238	23,184	22,077	20,912	19,689	18,402	17,050	15,629	14,135	12,564	10,914	9,178	7,354	5,437	3,421	1,303	-924	-3,265	-5,726	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,277	2,632	2,759	3,487	3,241	3,196	2,934	2,417	2,362	1,036	854	-954	-1,002	-1,054	-1,107	-1,164	-1,224	-1,286	-1,352	-1,421	-1,494	-1,570	-1,651	-1,735	-1,824	-1,917	-2,015	-2,119	-2,227	-2,341	-2,461	-293	0	0	
	Monthly Drawdown	208	209	208	256	222	205	170	115	101	(17)	(36)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	1,277	2,566	2,559	3,146	2,722	2,511	2,085	1,418	1,239	(208)	(443)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	(2,294)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	26	58	58	71	62	57	47	32	28	(5)	(10)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	(52)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	65	200	341	520	685	849	999	1,123	1,243	1,296	1,340	1,291	1,240	1,186	1,129	1,070	1,007	942	872	800	723	643	558	470	376	278	175	67	(47)	(167)	(293)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Total Annual Interest Cost	26	124	258	413	581	742	896	1,031	1,151	1,239	1,286	1,288	1,239	1,188	1,134	1,077	1,018	955	889	820	748	671	591	506	417	324	226	123	15	(99)	(219)	(293)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Mar1 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,180	8,206	9,743	9,316	10,236	11,476	13,061	12,250	11,963	10,896	11,061	10,480	9,998	7,904	7,630	7,370	7,122	6,887	6,662	6,449	6,246	6,052	5,868	5,693	5,526	5,368	2,975	2,831	2,695	
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	
	Debt, Beginning of Year	0	2,533	5,202	8,001	11,524	14,808	18,051	21,038	23,518	25,948	27,070	28,016	27,179	26,300	25,375	24,403	23,381	22,307	21,178	19,992	18,744	17,433	16,055	14,606	13,083	11,482	9,799	8,030	6,171	4,216	2,162	2	2	2	
	Interest Cost - Mar1 Option 1, 30-yr	*32*	*162*	*298*	*449*	*624*	*789*	*950*	*1,094*	*1,219*	*1,325*	*1,379*	*1,405*	*1,362*	*1,317*	*1,270*	*1,220*	*1,168*	*1,113*	*1,055*	*994*	*930*	*863*	*793*	*719*	*641*	*559*	*473*	*382*	*287*	*187*	*82*	*0*	*0*	*0*	25,137
	Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,533	5,202	8,001	11,524	14,808	18,051	21,038	23,518	25,948	27,070	28,016	27,179	26,300	25,375	24,403	23,381	22,307	21,178	19,992	18,744	17,433	16,055	14,606	13,083	11,482	9,799	8,030	6,171	4,216	2,162	2	2	2	3	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,533	2,670	2,799	3,523	3,283	3,243	2,987	2,480	2,430	1,122	947	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,247	-1,311	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,955	-2,055	-2,160	0	0	0	
	Bi-Annual Drawdown	1,250	1,254	1,250	1,537	1,330	1,227	1,019	693	606	(102)	(216)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	(1,121)	-	-	-													
	FV of Bi-Annual Drawdown at 5%	2,533	2,540	2,533	3,114	2,694	2,485	2,064	1,403	1,227	(206)	(438)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	(2,270)	-	-	-													
	Annual Interest Cost on New Drawdowns	32	32	32	39	34	31	26	18	15	(3)	(6)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	-	-	-													
	Annual Interest Cost on Opening Balance	-	130	266	409	590	758	924	1,076	1,203	1,328	1,385	1,433	1,391	1,346	1,298	1,248	1,196	1,141	1,084	1,023	959	892	821	747	669	587	501	411	316	216	111	0	0	0													
	Total Annual Interest Cost	32	162	298	449	624	789	950	1,094	1,219	1,325	1,379	1,405	1,362	1,317	1,270	1,220	1,168	1,113	1,055	994	930	863	793	719	641	559	473	382	287	187	82	0	0	0													

Mar1 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,180	8,206	9,743	9,316	10,236	11,476	13,061	12,250	11,963	10,896	11,061	10,480	9,998	7,904	7,630	7,370	7,122	6,887	6,662	6,449	6,246	6,052	5,868	5,693	5,526	5,368	2,975	2,831	2,695	
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	
	Debt, Beginning of Year	0	2,565	5,268	8,102	11,670	14,995	18,279	21,304	23,815	26,275	27,411	28,370	27,522	26,632	25,695	24,711	23,676	22,589	21,446	20,244	18,981	17,653	16,257	14,790	13,248	11,627	9,923	8,132	6,249	4,270	2,189	2	2	2	
	Interest Cost - Mar1 Option 1, 30-yr	*64*	*195*	*333*	*493*	*665*	*830*	*987*	*1,125*	*1,249*	*1,339*	*1,391*	*1,394*	*1,351*	*1,305*	*1,257*	*1,207*	*1,154*	*1,098*	*1,040*	*978*	*914*	*846*	*774*	*699*	*620*	*538*	*450*	*359*	*262*	*161*	*55*	*0*	*0*	*0*	25,137
	Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,454	2,038	1,386	1,211	-203	-433	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,565	5,268	8,102	11,670	14,995	18,279	21,304	23,815	26,275	27,411	28,370	27,522	26,632	25,695	24,711	23,676	22,589	21,446	20,244	18,981	17,653	16,257	14,790	13,248	11,627	9,923	8,132	6,249	4,270	2,189	2	2	2	3	
Fiscal Exposure - Average Debt Drawdown		2,565	2,703	2,834	3,568	3,325	3,284	3,025	2,511	2,460	1,136	958	-847	-891	-936	-984	-1,035	-1,088	-1,143	-1,202	-1,263	-1,328	-1,396	-1,467	-1,542	-1,621	-1,704	-1,791	-1,883	-1,979	-2,080	-2,187	0	0	0	



Mar 1 Deck - at 5.12% interest rate

Interest Rate, monthly comp.	**5.000000%**		
Annual Interest Rate	5.12%	Month	Months Remai
Scenario Start Date	**July**	7	6

Mar1_1_30yr

Option 1 - Bills Lowered 25%, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,501	2,636
Interest Portion	0	128

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	625	2,534
Interest Portion	-	32

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $28 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Mar1_1_30yr

Option 1 - Bills Lowered 25%, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,749	1,831
Interest Portion	0	89

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	437	1,770
Interest Portion	-	22

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $28 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb22_3_30yr

Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606
Interest Portion	0	74

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,487
Interest Portion	-	19

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	437 - 625	1,770 - 2,534

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Option 1
Option 2
Option 3
Option 1

Assumes an inte

2019	2020	2021	2022
2,764	3,479	3,242	3,202
263	404	582	748

#REF!
#REF!

2018-19	2019-20	2020-21	2021-2022
2,668	2,942	3,420	3,232
162	298	449	624

Option 1
Option 2
Option 3

2027.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,908	2,564	2,264	1,961
183	281	412	528

2018-19	2019-20	2020-21	2021-2022
1,850	2,072	2,489	2,189
113	208	314	441

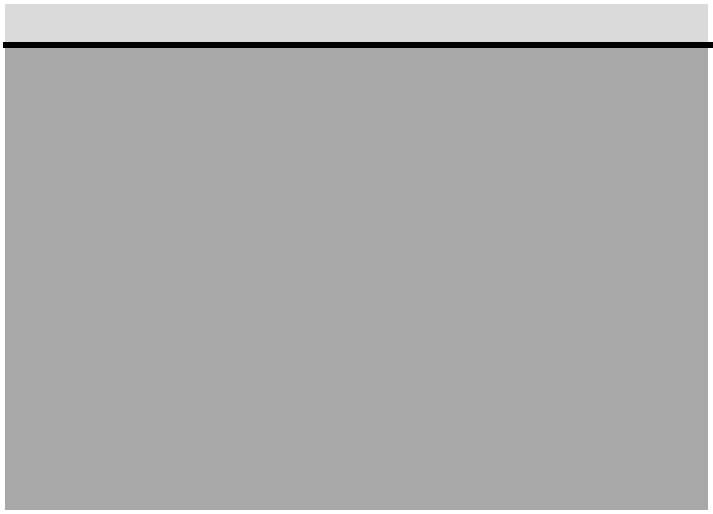
2027.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446
156	234	312	385

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429
95	176	254	331

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022
1,850 - 2,668	2,072 - 2,942	2,489 - 3,420	2,189 - 3,232

	$35,723	
	$35,542	
	0.51%	27.00%

Total Principal Debt	Total Accumulated Interest Costs	**Peak Total Debt**	
$20,332.3	$25,137.0	$27,662	occurs in Year 2027

erest rate of 5.00% (compounded monthly).

			5000
5.00000%	5.00005%	0.00005%	0.25%
35,542	35,543	0.90	4,518.21
19,733	19,734	0.52	2,619.41
19,498	19,499	0.48	2,410.01
0.249950%			

Tab Name		Total Accumulated Interest Costs
Mar1_1_30yr	$31,810	$40,288
	$17,586	$22,491
	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$31,810 to $40,288**
Option 2	$17,586 to $22,491**
Option 3	$17,202 to $22,028**

** With a higher interest rate, the amortization period extend beyond the 30-year forecast

ted period resulting in a remaining balance at the end of the 30-year period. For specifics, see details belo

w.

Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest

IESO GA cost forecast + extrapolation

Scenario
Option 1
Bills Lowered 25%, RPP-Eligible Only
Option 2
Bills Lowered 20%, RPP-Eligible Only
Option 3
Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only

rate	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
Ratepayer GA Payment	9,595	9,327	9,051	9,094
Total Accumulated Debt ($ billion)	2,501	5,136	7,900	11,379
		-2.8%	-3.0%	0.5%
Ratepayer GA Payment	10,346	10,093	9,827	9,886
Accumulated debt in present year (including 5% interest,	1,749	3,580	5,488	8,052
Ratepayer GA Payment	10,648	10,303	10,186	10,873
Accumulated debt in present year (including 5% interest,	1,447	3,053	4,575	6,105

2021	2022	2023	2024	2025	2026	2027
10,844	10,634	10,243	11,128	10,527	10,033	11,043

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
10844	10634	10243	11128	10527	10033	11043
8,184	8,374	8,569	8,768	8,972	9,180	9,394
14,621	17,629	20,205	23,599	26,362	28,564	31,674
-10.0%	2.3%	2.3247180421718900000%	2.3%	2.3%	2.3%	2.3%
	TRUE	FALSE	FALSE	FALSE	FALSE	
8,991	9,200	9,414	9,633	9,857	10,086	10,321
10,316	12,278	13,735	15,933	17,418	18,256	19,913
9,733	9,573	9,240	10,128	9,620	9,238	10,318
7,527	8,973	10,436	11,970	13,490	14,976	16,467

2028	2029	2030	2031	2032	2033	2034	2035
10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662

2028	2029	2030	2031	2032	2033	2034	2035
10819	10009	9721	8654	8820	8238	7756	5662
9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585
34,502	36,440	37,962	38,260	38,500	37,925	36,589	34,538
2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	-13.1%
10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563
21,190	21,477	21,240	20,426	19,571	18,672	17,727	16,733
10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879
17,876	18,843	19,521	20,007	20,312	20,325	19,755	18,549

2036	2037	2038	2039	2040	2041	2042	2043
5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811

2036	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**
5389	5129	4881	4645	4421	4207	4004	3811
9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733
32,383	30,117	27,736	25,232	22,601	19,835	16,927	13,871
-2.9%	-2.8%	-2.7%	-2.7%	-2.6%	-2.6%	-2.5%	-2.4%
7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711
15,689	14,591	13,438	12,225	10,950	9,610	8,201	6,720
7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348
17,050	15,464	13,694	12,062	10,556	9,143	7,810	6,672

2044	2045	2046	2047	2048

3,627 3,451 3,285 3,126 2,975 2,831 2,695

2044	2045	2046	2047	2048	2049	2050
3627	3451	3285	3126	2975	2831	2695

7,549	7,374	7,207	7,048	2,975	2,831	2,695
10,658	7,281	3,731	0	0	0	0
-2.4%	-2.3%	-2.3%				
5,527	5,352	5,185	5,026	2,975	2,831	2,695
5,164	3,528	1,808	-	-	-	-
4,712	4,007	3,619	3,425	3,156	3,011	2,878
5,928	5,676	5,633	5,623	5,730	5,843	5,959

5%	End of Year Debt Drawdown	2017	2018
	IESO GA cost forecast + extrapolation	12,095	11,835
	Ratepayer GA Payment	9,595	9,327
	GA Debt Requirement	2,501	2,508
	Debt, Beginning of Year	0	2,501
	Interest Cost - Feb22 Option 1, 30-yr - End of Year Debt Drawdown	*0*	*128*
	Additional GA Debt Drawdown, End of Year	2,501	2,508
	Accumulated debt in present year (including 5.12% annual interest)	2,501	5,136

5.000050%	End of Year Debt Drawdown	2017	2018
			-2.16%
			-2.79%
	IESO GA cost forecast + extrapolation	12,095	11,835
	Ratepayer GA Payment	9,595	9,327
	GA Debt Requirement	2,501	2,508
	Debt, Beginning of Year	0	2,501
	Interest Cost - Feb22 Option 1, 30-yr - End of Year Debt Drawdown	*0*	*128*
	Additional GA Debt Drawdown, End of Year	2,501	2,508
	Accumulated debt in present year (including 5.12% annual interest)	2,501	5,136
		0.00	0.00
		0.90	for 0.00005
		4518.213	for 0.25%

5.250000%	End of Year Debt Drawdown	2017	2018
	IESO GA cost forecast + extrapolation	12,095	11,835
	Ratepayer GA Payment	9,595	9,327
	GA Debt Requirement	2,501	2,508
	Debt, Beginning of Year	0	2,501
	Interest Cost - Feb22 Option 1, 30-yr - End of Year Debt Drawdown	*0*	*134*
	Additional GA Debt Drawdown, End of Year	2,501	2,508
	Accumulated debt in present year (including 5.12% annual interest)	2,501	5,143

5.25% and 5.0%	0	7
	0	6.544088
	-4746.31	

2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
	22.9%								
	0.5%	-10.0%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%
11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819
9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
5,136	7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675
263	*404*	*582*	*748*	*902*	*1,034*	*1,207*	*1,349*	*1,461*	*1,621*
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675	34,502

2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
-2.39%	5.34%	-10.89%	-1.94%	-3.67%	8.64%	-5.40%	-4.69%	10.06%	-2.03%
-2.95%	0.47%	-10.01%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%
11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819
9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
5,136	7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675
263	*404*	*582*	*748*	*902*	*1,034*	*1,207*	*1,349*	*1,461*	*1,621*
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675	34,502
0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02

5%

5000

2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819
9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
5,143	7,921	11,421	14,695	17,745	20,374	23,830	26,667	28,955	32,161
277	*426*	*614*	*790*	*954*	*1,096*	*1,282*	*1,434*	*1,557*	*1,730*
2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207
7,921	11,421	14,695	17,745	20,374	23,830	26,667	28,955	32,161	35,098

14	22	32	42	52	62	74	85	96	109
13.77695	21.71447	31.92933	42.04725	52.06963	61.4769	73.50439	84.49516	94.58025	107.5596

2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
2.3%	2.3%	2.3%	2.3%						
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881
9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
34,502	36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,384	30,119
1,765	*1,864*	*1,942*	*1,957*	*1,970*	*1,940*	*1,872*	*1,767*	*1,657*	*1,541*
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,384	30,119	27,737

2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
-7.49%	-2.87%	-10.98%	1.91%	-6.60%	-5.85%	-27.00%	-4.83%	-4.83%	-4.83%
2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	-13.13%	-2.85%	-2.80%	-2.74%
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881
9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
34,502	36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,385	30,119
1,765	*1,864*	*1,942*	*1,958*	*1,970*	*1,940*	*1,872*	*1,767*	*1,657*	*1,541*
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,385	30,119	27,738
0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04

2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881
9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
35,098	37,159	38,815	39,258	39,652	39,240	38,074	36,200	34,224	32,142
1,888	*1,998*	*2,088*	*2,111*	*2,133*	*2,110*	*2,048*	*1,947*	*1,841*	*1,729*
173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922
37,159	38,815	39,258	39,652	39,240	38,074	36,200	34,224	32,142	29,949

122	134	145	154	163	170	176	180	184	188
120.4625	131.6985	142.4188	150.4868	158.814	165.4355	170.4025	173.755	177.0044	180.1316

2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975
8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
27,737	25,234	22,603	19,837	16,929	13,873	10,661	7,284	3,734	3
1,419	*1,291*	*1,156*	*1,015*	*866*	*710*	*545*	*373*	*191*	*0*
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
25,234	22,603	19,837	16,929	13,873	10,661	7,284	3,734	3	3

2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%	-4.83%
-2.68%	-2.62%	-2.56%	-2.50%	-2.44%	-2.38%	-2.32%	-2.26%	-2.20%	-57.79%
4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975
8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
27,738	25,235	22,603	19,837	16,930	13,874	10,661	7,285	3,735	4
1,419	*1,291*	*1,156*	*1,015*	*866*	*710*	*545*	*373*	*191*	*0*
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
25,235	22,603	19,837	16,930	13,874	10,661	7,285	3,735	4	4
0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04

2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975
8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
29,949	27,637	25,201	22,634	19,929	17,079	14,075	10,909	7,574	4,059
1,611	*1,486*	*1,355*	*1,217*	*1,072*	*919*	*757*	*587*	*407*	*218*
-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0
27,637	25,201	22,634	19,929	17,079	14,075	10,909	7,574	4,059	4,277

192	195	199	202	206	209	212	214	216	218
183.1154	185.9331	188.5597	190.9684	193.13	195.013	196.583	197.8033	198.6338	199.0316

2049	2050
2,831	2,695
2,831	2,695
0	0
3	3
0	*0*
0	0
3	3

2049	2050
-4.83%	-4.83%
-4.83%	-4.83%
2,831	2,695
2,831	2,695
0	0
4	4
0	*0*
0	0
4	4
0.04	0.04

2049	2050
2,831	2,695
2,831	2,695
0	0
4,277	4,507
230	*242*
0	0
4,507	4,750

230	242
209.2149	219.9193

Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Interest Rate, monthly comp.	**5.000000%**		
Annual Interest Rate	5.12%	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb22_1_30yr

Option 1 - Bills Lowered 25%, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,501	2,636
Interest Portion	0	128

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	625	2,534
Interest Portion	-	32

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $39 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb22_2_30yr

Option 2 - Bills Lowered 20%, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,749	1,831
Interest Portion	0	89

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	437	1,770
Interest Portion	-	22

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $21 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb22_3_30yr

Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606
Interest Portion	0	74

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,487
Interest Portion	-	19

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	437 - 625	1,770 - 2,534

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	625	2534
Debt-Finance Global Adjustment Costs, Option 1a	437	1770
RRRP		
OESP – Enhance Benefit		162

Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**625**	**2774**
Total, B	437	2010

Proposed Program Total:	437 - 625	2,010 - 2,774

ining

0	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

2019	2020	2021	2022	
				CheckInt
2,764	3,479	3,242	3,008	
263	404	582	748	

2018-19	2019-20	2020-21	2021-2022
2,668	2,942	3,420	3,183
162	298	449	624

Option 1
Option 2
Option 3
Option 1

Assumes an inte

Option 1
Option 2
Option 3

2032.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,908	2,564	2,264	1,961
183	281	412	528

2018-19	2019-20	2020-21	2021-2022
1,850	2,072	2,489	2,189
113	208	314	441

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446
156	234	312	385

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429
95	176	254	331

2033.

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022
1,850 - 2,668	2,072 - 2,942	2,489 - 3,420	2,189 - 3,183

/1

2018-19[1]	2019-20[1]	2020-21[1]
2668	2942	3420
1850	2072	2489
225	279	323

60	60	60
18	18	18
2971	**3299**	**3821**
2153	2429	2890

2,153 - 2,971	2,429 - 3,299	2,890 - 3,821

	$35,723	
	$35,542	
	0.51%	27.00%

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$24,976.5	$35,542.1	$38,501	occurs in Year 2032
$14,759.8	$19,733.1	$21,477	occurs in Year 2029
$12,862.3	$19,498.4	$20,326	occurs in Year 2033
#REF!	#REF!	#REF!	#REF!

erest rate of 5.00% (compounded monthly).

			5000
5.00000%	5.00005%	0.00005%	0.25%
35,542	35,543	0.90	4,518.21
19,733	19,734	0.52	2,619.41
19,498	19,499	0.48	2,410.01
0.249950%			

Tab Name		Total Accumulated Interest Costs
Feb22_1_30yr	$31,810	$40,288
Feb22_2_30yr	$17,586	$22,491
Feb22_3_30yr	$17,202	$22,028
Mar_1_30yr		

	Total Accumulated Interest Costs
Option 1	$31,810 to $40,288**
Option 2	$17,586 to $22,491**
Option 3	$17,202 to $22,028**

** With a higher interest rate, the amortization period extend beyond the 30-year forecast

ted period resulting in a remaining balance at the end of the 30-year period. For specifics, see details belo

w.

Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb22_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,501	2,636	2,764	3,479	3,242	3,008	2,577	3,394	2,763	2,202	3,111	2,828	1,938	1,522	299	240	-575	-1,336	-2,050	-2,155	-2,265	-2,381	-2,503	-2,631	-2,766	-2,907	-3,056	-3,213	-3,377	-3,550	-3,731	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,560	2,699	2,829	3,561	3,319	3,079	2,638	3,475	2,828	2,254	3,185	2,895	1,985	1,558	306	246	-588	-1,368	-2,099	-2,206	-2,319	-2,438	-2,563	-2,694	-2,832	-2,977	-3,129	-3,289	-3,457	-3,634	-3,820	0	0	0
			59	63	66	83	77	72	61	81	66	52	74	67	46	36	7	6	-14	-32	-49	-51	-54	-57	-60	-63	-66	-69	-73	-76	-80	-84	-89	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,479	1,970	35,542.1
Equal Monthly Debt Drawdown	3,561	1,963	

	Feb22 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	38,500.8	2032	24,977
Equal Monthly Debt Drawdown	39,416.6		

Feb22 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
																																				26
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																				
($ millions)			-2.79%	-2.95%	0.47%	-10.01%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	-13.13%	-2.85%	-2.80%	-2.74%	-2.68%	-2.62%	-2.56%	-2.50%	-2.44%	-2.38%	-2.32%	-2.26%	-2.20%	-57.79%	-4.83%	-4.83%	
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
a	Debt, Beginning of Year	0	2,501	5,136	7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675	34,502	36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,384	30,119	27,737	25,234	22,603	19,837	16,929	13,873	10,661	7,284	3,734	3	3	3	
c = a*5%	*Interest Cost - Feb22 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*128*	*263*	*404*	*582*	*748*	*902*	*1,034*	*1,207*	*1,349*	*1,461*	*1,621*	*1,765*	*1,864*	*1,942*	*1,957*	*1,970*	*1,940*	*1,872*	*1,767*	*1,657*	*1,541*	*1,419*	*1,291*	*1,156*	*1,015*	*866*	*710*	*545*	*373*	*191*	*0*	*0*	*0*	35,542
b	Additional GA Debt Drawdown, End of Year	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,501	5,136	7,900	11,379	14,621	17,629	20,205	23,599	26,362	28,564	31,675	34,502	36,441	37,962	38,261	38,501	37,926	36,590	34,540	32,384	30,119	27,737	25,234	22,603	19,837	16,929	13,873	10,661	7,284	3,734	3	3	3	3	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE
	Feb22 Option 1, 30-yr - Accumulated Interest Costs	0	128	391	795	1,377	2,125	3,027	4,061	5,268	6,617	8,078	9,699	11,464	12,986	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	13,284	10,661	7,284	3,734	3	3	3	
	Feb22 Option 1, 30-yr - Accumulated Debt Principal	2,501	5,009	7,509	10,584	13,244	15,504	17,178	19,539	21,094	21,947	23,596	24,803	24,977	24,977	24,977	25,216	24,642	23,306	21,255	19,100	16,835	14,453	11,950	9,319	6,553	3,645	589	0	0	0	0	0	0	0	
	Feb22 Option 1, 30-yr - Accumulated Interest Costs	0	128	391	795	1,377	2,125	3,027	4,061	5,268	6,617	8,078	9,699	11,464	13,328	15,271	17,228	19,198	21,138	23,010	24,777	26,434	27,975	29,394	30,685	31,842	32,857	33,723	34,433	34,978	35,351	35,542				
	Feb22 Option 1, 30-yr - Accumulated Debt Principal	2,501	5,009	7,509	10,584	13,244	15,504	17,178	19,539	21,094	21,947	23,596	24,803	24,977	24,634	22,990	21,273	18,728	15,452	11,529	7,607	3,685	-238	-4,160	-8,082	-12,005	-15,927	-19,849	-23,772	-27,694	-31,616	-35,539				
Fiscal Exposure - End of Year Debt Drawdown		2,501	2,636	2,764	3,479	3,242	3,008	2,577	3,394	2,763	2,202	3,111	2,828	1,938	1,522	299	240	-575	-1,336	-2,050	-2,155	-2,265	-2,381	-2,503	-2,631	-2,766	-2,907	-3,056	-3,213	-3,377	-3,550	-3,731	0	0	0	

Feb22 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Debt, Beginning of Year	0	2,560	5,259	8,088	11,650	14,969	18,048	20,686	24,161	26,989	29,243	32,428	35,323	37,307	38,865	39,171	39,417	38,828	37,460	35,361	33,155	30,835	28,397	25,834	23,140	20,309	17,332	14,203	10,914	7,457	3,823	3	3	3	
1,963	*Interest Cost - Feb22 Option 1, 30-yr*	*59*	*191*	*329*	*487*	*659*	*820*	*963*	*1,114*	*1,273*	*1,401*	*1,535*	*1,688*	*1,811*	*1,901*	*1,949*	*1,963*	*1,956*	*1,909*	*1,823*	*1,716*	*1,603*	*1,484*	*1,360*	*1,228*	*1,091*	*946*	*793*	*633*	*465*	*288*	*102*	*0*	*0*	*0*	35,542
	Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,560	5,259	8,088	11,650	14,969	18,048	20,686	24,161	26,989	29,243	32,428	35,323	37,307	38,865	39,171	39,417	38,828	37,460	35,361	33,155	30,835	28,397	25,834	23,140	20,309	17,332	14,203	10,914	7,457	3,823	3	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,560	2,699	2,829	3,561	3,319	3,079	2,638	3,475	2,828	2,254	3,185	2,895	1,985	1,558	306	246	-588	-1,368	-2,099	-2,206	-2,319	-2,438	-2,563	-2,694	-2,832	-2,977	-3,129	-3,289	-3,457	-3,634	-3,820	0	0	0	

	Monthly Drawdown	208	209	208	256	222	188	140	197	130	71	137	101	14	(29)	(137)	(143)	(212)	(273)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	(327)	-	-	-
	FV of Monthly Drawdown at 5%	2,560	2,568	2,560	3,148	2,723	2,313	1,715	2,416	1,592	873	1,688	1,236	177	(351)	(1,683)	(1,758)	(2,605)	(3,355)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	(4,016)	-	-	-
	Annual Interest Cost on New Drawdowns	59	60	59	73	63	54	40	56	37	20	39	29	4	(8)	(39)	(41)	(61)	(78)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	(93)	-	-	-
	Annual Interest Cost on Opening Balance	-	131	269	414	596	766	923	1,058	1,236	1,381	1,496	1,659	1,807	1,909	1,988	2,004	2,017	1,987	1,917	1,809	1,696	1,578	1,453	1,322	1,184	1,039	887	727	558	382	196	0	0	0
	Total Annual Interest Cost	59	191	329	487	659	820	963	1,114	1,273	1,401	1,535	1,688	1,811	1,901	1,949	1,963	1,956	1,909	1,823	1,716	1,603	1,484	1,360	1,228	1,091	946	793	633	465	288	102	0	0	0

Feb22 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Debt, Beginning of Year	0	2,533	5,202	8,001	11,524	14,808	17,854	20,464	23,901	26,699	28,929	32,080	34,943	36,907	38,448	38,750	38,993	38,411	37,058	34,981	32,799	30,504	28,092	25,557	22,892	20,091	17,146	14,051	10,797	7,377	3,782	3	3	3	
	Interest Cost - Feb22 Option 1, 30-yr	*32*	*162*	*298*	*449*	*624*	*787*	*935*	*1,077*	*1,243*	*1,377*	*1,501*	*1,657*	*1,790*	*1,884*	*1,946*	*1,946*	*1,962*	*1,923*	*1,846*	*1,740*	*1,628*	*1,510*	*1,387*	*1,257*	*1,121*	*978*	*827*	*669*	*502*	*327*	*143*	*0*	*0*	*0*	35,542
	Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,533	5,202	8,001	11,524	14,808	17,854	20,464	23,901	26,699	28,929	32,080	34,943	36,907	38,448	38,750	38,993	38,411	37,058	34,981	32,799	30,504	28,092	25,557	22,892	20,091	17,146	14,051	10,797	7,377	3,782	3	3	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,533	2,670	2,799	3,523	3,283	3,046	2,610	3,437	2,798	2,230	3,150	2,864	1,963	1,541	302	243	-582	-1,353	-2,077	-2,183	-2,294	-2,412	-2,535	-2,665	-2,801	-2,945	-3,095	-3,254	-3,420	-3,595	-3,779	0	0	0	

	Bi-Annual Drawdown	1,250	1,254	1,250	1,537	1,330	1,130	837	1,180	778	427	825	604	87	(171)	(822)	(859)	(1,272)	(1,638)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	(1,961)	-	-	-
	FV of Bi-Annual Drawdown at 5%	2,533	2,540	2,533	3,114	2,694	2,289	1,696	2,390	1,575	864	1,670	1,223	175	(347)	(1,665)	(1,740)	(2,577)	(3,319)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	(3,973)	-	-	-
	Annual Interest Cost on New Drawdowns	32	32	32	39	34	29	21	30	20	11	21	15	2	(4)	(21)	(22)	(33)	(42)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	-	-	-
	Annual Interest Cost on Opening Balance	-	130	266	409	590	758	913	1,047	1,223	1,366	1,480	1,641	1,788	1,888	1,967	1,983	1,995	1,965	1,896	1,790	1,678	1,561	1,437	1,308	1,171	1,028	877	719	552	377	193	0	0	0
	Total Annual Interest Cost	32	162	298	449	624	787	935	1,077	1,243	1,377	1,501	1,657	1,790	1,884	1,946	1,961	1,962	1,923	1,846	1,740	1,628	1,510	1,387	1,257	1,121	978	827	669	502	327	143	0	0	0

Feb22 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,595	9,327	9,051	9,094	8,184	8,374	8,569	8,768	8,972	9,180	9,394	9,612	9,835	10,064	10,298	10,537	10,782	11,033	9,585	9,311	9,051	8,803	8,567	8,343	8,130	7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831	2,695	
	GA Debt Requirement	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Debt, Beginning of Year	0	2,565	5,268	8,102	11,670	14,995	18,080	20,722	24,203	27,036	29,295	32,485	35,385	37,373	38,933	39,240	39,486	38,896	37,526	35,423	33,213	30,889	28,447	25,880	23,181	20,344	17,363	14,228	10,933	7,470	3,830	3	3	3	
	Interest Cost - Feb22 Option 1, 30-yr	*64*	*195*	*333*	*493*	*665*	*825*	*968*	*1,121*	*1,278*	*1,405*	*1,541*	*1,693*	*1,815*	*1,903*	*1,950*	*1,964*	*1,955*	*1,906*	*1,820*	*1,712*	*1,599*	*1,480*	*1,355*	*1,224*	*1,086*	*941*	*788*	*628*	*459*	*282*	*96*	*0*	*0*	*0*	35,542
	Additional GA Debt Drawdown	2,501	2,508	2,501	3,075	2,660	2,260	1,675	2,360	1,555	853	1,649	1,207	173	-343	-1,644	-1,718	-2,544	-3,277	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	-3,922	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,565	5,268	8,102	11,670	14,995	18,080	20,722	24,203	27,036	29,295	32,485	35,385	37,373	38,933	39,240	39,486	38,896	37,526	35,423	33,213	30,889	28,447	25,880	23,181	20,344	17,363	14,228	10,933	7,470	3,830	3	3	3	3	
Fiscal Exposure - Average Debt Drawdown		2,565	2,703	2,834	3,568	3,325	3,085	2,643	3,481	2,833	2,258	3,190	2,900	1,988	1,561	306	246	-589	-1,370	-2,103	-2,210	-2,323	-2,442	-2,567	-2,699	-2,837	-2,982	-3,134	-3,295	-3,463	-3,640	-3,827	0	0	0	

Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb22_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,749	1,831	1,908	2,564	2,264	1,961	1,457	2,198	1,485	838	1,656	1,277	287	-237	-814	-855	-899	-945	-993	-1,044	-1,098	-1,154	-1,213	-1,275	-1,340	-1,409	-1,481	-1,556	-1,636	-1,720	-1,808	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,791	1,875	1,953	2,625	2,318	2,008	1,492	2,250	1,521	858	1,696	1,308	294	-243	-833	-876	-920	-967	-1,017	-1,069	-1,124	-1,181	-1,242	-1,305	-1,372	-1,442	-1,516	-1,593	-1,675	-1,761	-1,851	0	0	0	
			42	44	45	61	54	47	35	52	35	20	39	30	7	-6	-19	-20	-21	-22	-24	-25	-26	-27	-29	-30	-32	-34	-35	-37	-39	-41	-43	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,564	1,099	19,733
Equal Monthly Debt Drawdown	2,625	1,093	

	Feb22 Option 2, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	21,477.1	2029	14,760
Equal Monthly Debt Drawdown	21,988		

Feb22 Option 2, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				26
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
a	Debt, Beginning of Year	0	1,749	3,580	5,488	8,052	10,316	12,278	13,735	15,933	17,418	18,256	19,913	21,190	21,477	21,240	20,427	19,571	18,672	17,727	16,734	15,690	14,592	13,438	12,226	10,951	9,611	8,202	6,722	5,165	3,529	1,809	2	2	2	
c = a*5%	*Interest Cost - Feb22 Option 2, 30-yr - End of Year Debt Drawdown*	*0*	*89*	*183*	*281*	*412*	*528*	*628*	*703*	*815*	*891*	*934*	*1,019*	*1,084*	*1,099*	*1,087*	*1,045*	*1,001*	*955*	*907*	*856*	*803*	*747*	*688*	*625*	*560*	*492*	*420*	*344*	*264*	*181*	*93*	*0*	*0*	*0*	*0*	19,733
b	Additional GA Debt Drawdown, End of Year	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,749	3,580	5,488	8,052	10,316	12,278	13,735	15,933	17,418	18,256	19,913	21,190	21,477	21,240	20,427	19,571	18,672	17,727	16,734	15,690	14,592	13,438	12,226	10,951	9,611	8,202	6,722	5,165	3,529	1,809	2	2	2	2	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	
	Feb22 Option 2, 30-yr - Accumulated Interest Costs	0	89	273	553	965	1,493	2,121	2,824	3,639	4,530	5,464	6,483	7,567	7,330	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	6,517	5,165	3,529	1,809	2	2	2	
	Feb22 Option 2, 30-yr - Accumulated Debt Principal	1,749	3,491	5,216	7,499	9,351	10,784	11,614	13,109	13,779	13,726	14,448	14,707	13,910	13,910	13,910	13,055	12,156	11,211	10,217	9,173	8,075	6,922	5,709	4,434	3,094	1,685	205	0	0	0	0	0	0	0	
	Feb22 Option 2, 30-yr - Accumulated Interest Costs	0	89	273	553	965	1,493	2,121	2,824	3,639	4,530	5,464	6,483	7,567	8,666	9,753	10,798	11,799	12,755	13,661	14,518	15,320	16,067	16,754	17,380	17,940	18,432	18,852	19,195	19,460	19,640	19,733				
	Feb22 Option 2, 30-yr - Accumulated Debt Principal	1,749	3,491	5,216	7,499	9,351	10,784	11,614	13,109	13,779	13,726	14,448	14,707	13,910	12,574	10,674	8,773	6,873	4,973	3,072	1,172	-728	-2,628	-4,529	-6,429	-8,329	-10,230	-12,130	-14,030	-15,931	-17,831	-19,731				
Fiscal Exposure - End of Year Debt Drawdown		1,749	1,831	1,908	2,564	2,264	1,961	1,457	2,198	1,485	838	1,656	1,277	287	-237	-814	-855	-899	-945	-993	-1,044	-1,098	-1,154	-1,213	-1,275	-1,340	-1,409	-1,481	-1,556	-1,636	-1,720	-1,808	0	0	0	

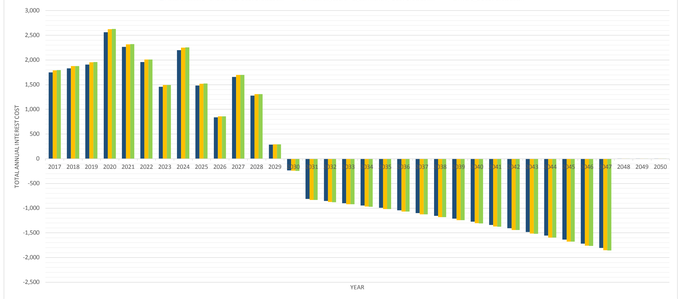
Feb22 Option 2, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Debt, Beginning of Year	0	1,791	3,666	5,619	8,244	10,562	12,570	14,062	16,312	17,832	18,691	20,386	21,694	21,988	21,745	20,912	20,037	19,116	18,149	17,132	16,063	14,939	13,758	12,517	11,211	9,839	8,397	6,881	5,288	3,613	1,852	2	2	2	
1,093	*Interest Cost - Feb22 Option 2, 30-yr*	*42*	*133*	*229*	*342*	*466*	*574*	*663*	*755*	*850*	*911*	*973*	*1,049*	*1,091*	*1,093*	*1,067*	*1,025*	*980*	*933*	*883*	*831*	*777*	*719*	*659*	*595*	*528*	*458*	*384*	*307*	*225*	*140*	*50*	*0*	*0*	*0*	19,733
	Additional GA Debt Drawdown	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,791	3,666	5,619	8,244	10,562	12,570	14,062	16,312	17,832	18,691	20,386	21,694	21,988	21,745	20,912	20,037	19,116	18,149	17,132	16,063	14,939	13,758	12,517	11,211	9,839	8,397	6,881	5,288	3,613	1,852	2	2	2	2	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,791	1,875	1,953	2,625	2,318	2,008	1,492	2,250	1,521	858	1,696	1,308	294	-243	-833	-876	-920	-967	-1,017	-1,069	-1,124	-1,181	-1,242	-1,305	-1,372	-1,442	-1,516	-1,593	-1,675	-1,761	-1,851	0	0	0	

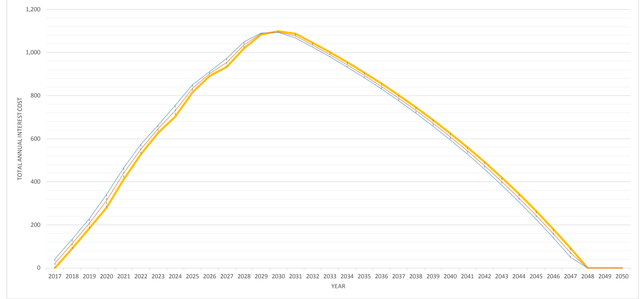
	Monthly Drawdown	146	145	144	190	154	119	69	125	56	(4)	60	22	(66)	(111)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	(158)	-	-	-	
	FV of Monthly Drawdown at 5%	1,791	1,783	1,766	2,337	1,896	1,467	849	1,531	686	(54)	739	265	(816)	(1,368)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	(1,946)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	41	41	54	44	34	20	36	16	(1)	17	6	(19)	(32)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	-	-	-	
	Annual Interest Cost on Opening Balance	-	92	188	287	422	540	643	719	835	912	956	1,043	1,110	1,125	1,113	1,070	1,025	978	929	877	822	764	704	640	574	503	430	352	271	185	95	0	0	0	
	Total Annual Interest Cost	42	133	229	342	466	574	663	755	850	911	973	1,049	1,091	1,093	1,067	1,025	980	933	883	831	777	719	659	595	528	458	384	307	225	140	50	0	0	0	

Feb22 Option 2, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Debt, Beginning of Year	0	1,772	3,626	5,559	8,155	10,448	12,435	13,911	16,137	17,641	18,490	20,168	21,461	21,752	21,512	20,688	19,822	18,911	17,954	16,948	15,890	14,779	13,610	12,382	11,091	9,734	8,307	6,808	5,231	3,574	1,833	2	2	2	
	Interest Cost - Feb22 Option 2, 30-yr	*22*	*113*	*208*	*314*	*441*	*553*	*647*	*731*	*834*	*902*	*955*	*1,035*	*1,088*	*1,096*	*1,076*	*1,034*	*990*	*943*	*894*	*843*	*789*	*732*	*672*	*609*	*543*	*474*	*401*	*324*	*243*	*159*	*69*	*0*	*0*	*0*	19,733
	Additional GA Debt Drawdown	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,772	3,626	5,559	8,155	10,448	12,435	13,911	16,137	17,641	18,490	20,168	21,461	21,752	21,512	20,688	19,822	18,911	17,954	16,948	15,890	14,779	13,610	12,382	11,091	9,734	8,307	6,808	5,231	3,574	1,833	2	2	2	2	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,772	1,855	1,932	2,596	2,293	1,986	1,476	2,226	1,504	849	1,678	1,294	291	-240	-824	-866	-911	-957	-1,006	-1,058	-1,112	-1,168	-1,228	-1,291	-1,357	-1,427	-1,500	-1,576	-1,657	-1,742	-1,831	0	0	0	

	Bi-Annual Drawdown	875	871	862	1,141	926	717	415	748	335	(26)	361	129	(399)	(668)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	(950)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,772	1,764	1,747	2,312	1,876	1,452	840	1,514	679	(53)	732	262	(807)	(1,353)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	(1,925)	-	-	-	
	Annual Interest Cost on New Drawdowns	22	22	22	29	24	18	11	19	9	(1)	9	3	(10)	(17)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	-	-	-	
	Annual Interest Cost on Opening Balance	-	91	186	284	417	535	636	712	826	903	946	1,032	1,098	1,113	1,101	1,058	1,014	968	919	867	813	756	696	633	567	498	425	348	268	183	94	0	0	0	
	Total Annual Interest Cost	22	113	208	314	441	553	647	731	834	902	955	1,035	1,088	1,096	1,076	1,034	990	943	894	843	789	732	672	609	543	474	401	324	243	159	69	0	0	0	

Feb22 Option 2, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,346	10,093	9,827	9,886	8,991	9,200	9,414	9,633	9,857	10,086	10,321	10,560	10,806	11,057	10,555	10,720	10,138	9,657	7,563	7,289	7,029	6,781	6,545	6,321	6,108	5,904	5,711	5,527	5,352	5,185	5,026	2,975	2,831	2,695	
	GA Debt Requirement	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Debt, Beginning of Year	0	1,794	3,672	5,629	8,258	10,580	12,592	14,086	16,340	17,864	18,724	20,422	21,732	22,027	21,784	20,949	20,072	19,150	18,181	17,162	16,091	14,965	13,782	12,538	11,231	9,857	8,412	6,894	5,297	3,619	1,856	2	2	2	
	Interest Cost - Feb22 Option 2, 30-yr	*45*	*136*	*232*	*346*	*470*	*578*	*665*	*759*	*853*	*913*	*976*	*1,051*	*1,091*	*1,093*	*1,066*	*1,023*	*978*	*931*	*882*	*829*	*775*	*717*	*657*	*593*	*526*	*456*	*382*	*304*	*222*	*137*	*46*	*0*	*0*	*0*	19,733
	Additional GA Debt Drawdown	1,749	1,742	1,725	2,283	1,852	1,433	829	1,495	670	-53	722	259	-797	-1,336	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	-1,900	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,794	3,672	5,629	8,258	10,580	12,592	14,086	16,340	17,864	18,724	20,422	21,732	22,027	21,784	20,949	20,072	19,150	18,181	17,162	16,091	14,965	13,782	12,538	11,231	9,857	8,412	6,894	5,297	3,619	1,856	2	2	2	2	
Fiscal Exposure - Average Debt Drawdown		1,794	1,878	1,957	2,629	2,322	2,011	1,495	2,254	1,523	860	1,699	1,310	294	-243	-834	-877	-922	-969	-1,019	-1,071	-1,126	-1,183	-1,244	-1,307	-1,374	-1,445	-1,519	-1,596	-1,678	-1,764	-1,854	0	0	0	





Feb 22 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb22_3_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	
			34	38	36	36	34	34	35	36	36	35	35	34	23	16	12	7	0	-14	-29	-36	-38	-42	-39	-36	-34	-32	-27	-18	-6	-1	0	3	3	3	142

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	1,606	1,040	19,498
Equal Monthly Debt Drawdown	1,644	1,040	

	Feb22 Option 3, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	20,325.7	2033	12,862
Equal Monthly Debt Drawdown	20,809		

Feb22 Option 3, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
																																					26
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
a	Debt, Beginning of Year	0	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	
c = a*5%	*Interest Cost - Feb22 Option 3, 30-yr - End of Year Debt Drawdown*	*0*	*74*	*156*	*234*	*312*	*385*	*459*	*534*	*612*	*690*	*766*	*842*	*915*	*964*	*999*	*1,024*	*1,039*	*1,040*	*1,011*	*949*	*872*	*791*	*701*	*617*	*540*	*468*	*400*	*341*	*303*	*290*	*288*	*288*	*293*	*299*	19,498
b	Additional GA Debt Drawdown, End of Year	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	
	Feb22 Option 3, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,659	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	7,145	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
	Feb22 Option 3, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,862	12,862	13,167	13,181	12,611	11,405	9,906	8,320	6,550	4,918	3,412	2,000	667	-472	0	0	0	0	0	0	0	
	Feb22 Option 3, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,943	8,967	10,006	11,046	12,057	13,006	13,878	14,669	15,370	15,987	16,527	16,995	17,395	17,736	18,040	18,330	18,618				
	Feb22 Option 3, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,064	11,345	10,319	8,710	6,493	4,045	1,586	-974	-3,307	-5,431	-7,383	-9,184	-10,721	-11,807	-12,362	-12,696	-12,994				
Fiscal Exposure - End of Year Debt Drawdown		1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	

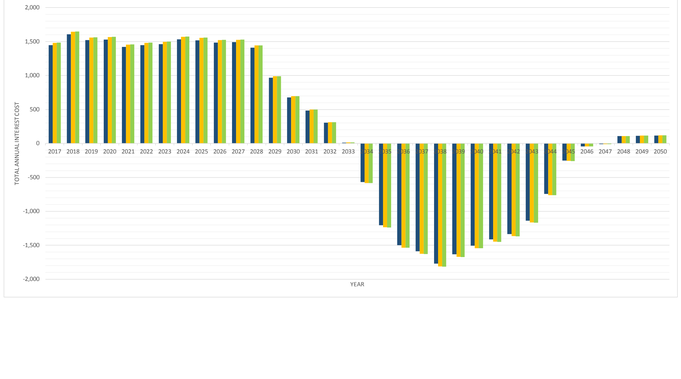
Feb22 Option 3, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	
1,040	*Interest Cost - Feb22 Option 3, 30-yr*	*34*	*112*	*192*	*270*	*346*	*420*	*494*	*570*	*649*	*726*	*802*	*876*	*938*	*980*	*1,010*	*1,031*	*1,040*	*1,026*	*982*	*913*	*835*	*749*	*662*	*581*	*507*	*436*	*373*	*324*	*297*	*289*	*288*	*290*	*296*	*302*	19,640
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	6,102	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	

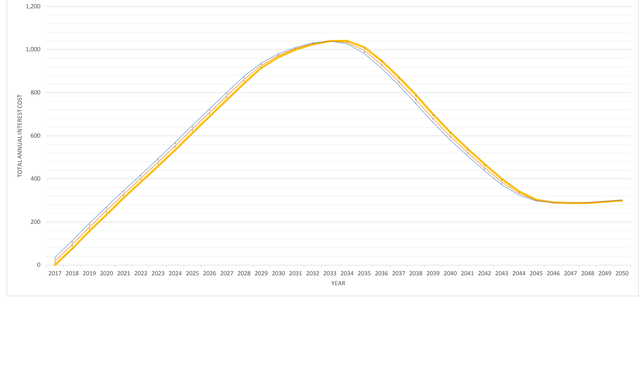
	Monthly Drawdown	121	128	114	108	93	88	84	83	76	66	60	47	4	(24)	(43)	(60)	(85)	(134)	(185)	(204)	(205)	(213)	(194)	(177)	(163)	(150)	(128)	(90)	(46)	(28)	(25)	(15)	(15)	(15)	
	FV of Monthly Drawdown at 5%	1,482	1,568	1,398	1,326	1,137	1,086	1,028	1,024	929	815	742	580	54	(292)	(525)	(736)	(1,050)	(1,648)	(2,269)	(2,506)	(2,517)	(2,621)	(2,389)	(2,174)	(1,999)	(1,844)	(1,574)	(1,111)	(568)	(342)	(306)	(185)	(184)	(188)	
	Annual Interest Cost on New Drawdowns	34	36	32	31	26	25	24	24	22	19	17	13	1	(7)	(12)	(17)	(24)	(38)	(53)	(58)	(58)	(61)	(55)	(51)	(46)	(43)	(37)	(26)	(13)	(8)	(7)	(4)	(4)	(4)	
	Annual Interest Cost on Opening Balance	-	76	160	240	320	394	470	547	627	707	784	863	936	987	1,023	1,048	1,064	1,065	1,035	972	893	810	717	632	553	479	409	350	311	297	295	295	300	306	
	Total Annual Interest Cost	34	112	192	270	346	420	494	570	649	726	802	876	938	980	1,010	1,031	1,040	1,026	982	913	835	749	662	581	507	436	373	324	297	289	288	290	296	302	

Feb22 Option 3, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	
	Interest Cost - Feb22 Option 3, 30-yr	*19*	*95*	*176*	*254*	*331*	*404*	*478*	*554*	*632*	*709*	*785*	*861*	*927*	*973*	*1,005*	*1,028*	*1,039*	*1,033*	*995*	*930*	*852*	*769*	*680*	*598*	*522*	*451*	*385*	*332*	*300*	*290*	*288*	*289*	*295*	*301*	19,575
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	6,037	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,466	1,626	1,541	1,549	1,441	1,465	1,482	1,554	1,539	1,505	1,510	1,427	979	687	492	309	13	-577	-1,221	-1,518	-1,607	-1,792	-1,653	-1,525	-1,430	-1,350	-1,153	-753	-255	-44	-10	109	115	117	

	Bi-Annual Drawdown	724	766	683	648	555	530	502	500	454	398	363	283	26	(143)	(256)	(359)	(513)	(805)	(1,108)	(1,224)	(1,229)	(1,280)	(1,167)	(1,062)	(976)	(900)	(769)	(543)	(278)	(167)	(149)	(90)	(90)	(92)	
	FV of Bi-Annual Drawdown at 5%	1,466	1,551	1,383	1,312	1,125	1,075	1,017	1,013	919	806	735	573	53	(289)	(519)	(728)	(1,039)	(1,630)	(2,245)	(2,479)	(2,490)	(2,593)	(2,363)	(2,150)	(1,977)	(1,824)	(1,557)	(1,099)	(562)	(338)	(302)	(183)	(182)	(186)	
	Annual Interest Cost on New Drawdowns	19	20	17	17	14	14	13	13	12	10	9	7	1	(4)	(7)	(9)	(13)	(21)	(28)	(31)	(31)	(33)	(30)	(27)	(25)	(23)	(20)	(14)	(7)	(4)	(4)	(2)	(2)	(2)	
	Annual Interest Cost on Opening Balance	-	75	158	237	316	390	465	541	620	699	776	853	926	976	1,012	1,037	1,053	1,053	1,024	961	884	801	710	625	547	474	405	346	307	294	292	291	297	303	
	Total Annual Interest Cost	19	95	176	254	331	404	478	554	632	709	785	861	927	973	1,005	1,028	1,039	1,033	995	930	852	769	680	598	522	451	385	332	300	290	288	289	295	301	

Feb22 Option 3, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP-Eligible Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	
	Interest Cost - Feb22 Option 3, 30-yr	*37*	*115*	*195*	*273*	*349*	*422*	*497*	*573*	*651*	*728*	*804*	*879*	*939*	*981*	*1,011*	*1,031*	*1,040*	*1,025*	*980*	*911*	*832*	*746*	*659*	*579*	*504*	*434*	*371*	*322*	*297*	*289*	*288*	*290*	*296*	*302*	19,651
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	6,113	
Fiscal Exposure - Average Debt Drawdown		1,484	1,647	1,561	1,569	1,459	1,483	1,500	1,573	1,559	1,524	1,530	1,445	992	696	498	313	14	-585	-1,237	-1,537	-1,627	-1,814	-1,674	-1,545	-1,448	-1,367	-1,167	-763	-258	-44	-10	110	116	119	





Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

IESO GA cost forecast + extrapolation

Scenario
Option 1a
Borrow $3.3B, Bills Lowered 20%, No Cap

Option 1b
Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B

	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168

Ratepayer GA Payment	8,753	8,535	8,311	7,650
Total Accumulated Debt ($ billion)	3,342	6,812	10,402	15,452

Ratepayer GA Payment	9,781	9,661	9,367	8,733
Accumulated debt in present year (including 5% interest,	2,314	4,606	7,027	10,822

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528
19,868	24,126	28,033	32,843	37,110	40,911	45,720	50,350
8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717
13,761	16,470	18,755	21,866	24,355	26,295	29,156	31,750

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**
10009	9721	8654	8820	8238	7756	5662	5389

8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319
54,201	57,751	60,200	62,719	64,559	65,780	64,732	63,114
9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913
33,472	34,796	34,919	35,008	34,309	32,878	31,035	29,098

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627

10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485
60,904	58,078	54,611	50,476	45,641	40,076	33,745	26,613
8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151
27,063	24,923	22,673	20,309	17,823	15,210	12,464	9,577

2045	2046	2047	2048

3,451	3,285	3,126	2,975	2,831	2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695

12,786	13,095	13410.34	2975.154	2831.461	2694.708
18,640	9,784	4.85E-06	0	0	0

6,976	6,809	6650.631	2975.154	2831.461	2694.708
6,543	3,353	5E-12	0	0	0

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

		5.00%	
Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb15_1a_30yr

Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,342	3,470
Interest Portion	0	171

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	835	3,374
Interest Portion	-	43

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $66 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb15_1b_30yr

Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,314	2,292
Interest Portion	0	118

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	579	2,309
Interest Portion	-	30

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $35 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

#REF!		
$ millions		
30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	362	1,487

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
	1	
	2	
	3	
	4 April	4
	5 May	5
	6 June	6
	7 July	7
	8 August	8
	9 September	9
	10 October	10
	11 November	11
	12 December	12
30-year term	**2016-17**	**2017-18**

Fiscal Exposure - Equal Monthly Debt Drawdown 579 - 835 2,309 - 3,374

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	835	3374
Debt-Finance Global Adjustment Costs, Option 1a	579	2309
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60

First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**835**	**3614**
Total, B	579	2549
Proposed Program Total:	579 - 835	2,549 - 3,614

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Option 1a
Option 2b

Assumes an inte

2019	2020	2021	2022
3,589	5,050	4,416	4,258
349	532	791	1,016

2018-19	2019-20	2020-21	2021-2022
3,500	3,955	4,892	4,377
215	394	597	847

2034.

depend on decision on accounting treatment.

2019	2020	2021	2022
2,421	3,795	2,938	2,709
236	360	554	704

2018-19	2019-20	2020-21	2021-2022
2,324	2,765	3,581	2,881
148	267	408	591

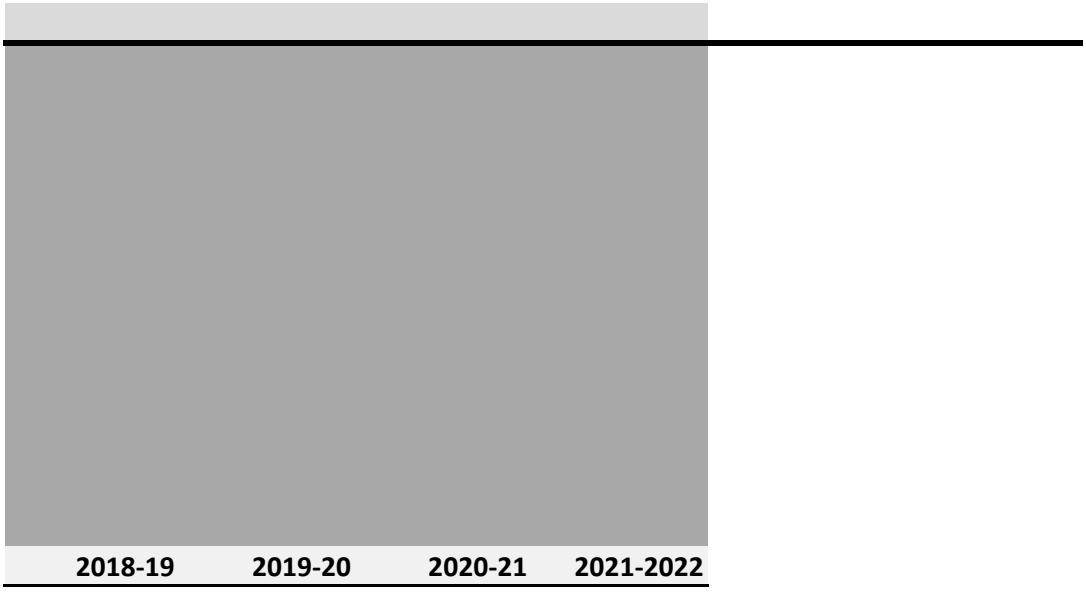
2032.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022

2,324 - 3,500 2,765 - 3,955 3,581 - 4,892 2,881 - 4,377

/1

2018-19[1]	2019-20[1]	2020-21[1]
3500	3955	4892
2324	2765	3581
225	279	323
60	60	60

18	18	18
3803	**4312**	**5293**
2627	3122	3982

2,627 - 3,803	3,122 - 4,312	3,982 - 5,293

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$38,864	$61,735	$65,781	occurs in Year 2034
$22,873	$32,368	$35,009	occurs in Year 2032

erest rate of 5.00% (compounded monthly).

Tab Name		Total Accumulated Interest Costs
Feb15_1a_30yr	$26,517	$34,278
Feb15_1b_30yr	$15,631	$20,378
	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$26,517 to $34,278
Option 2	$15,631 to $20,378
Option 3	$17,202 to $22,028

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

Feb15_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,342	3,470	3,589	5,050	4,416	4,258	3,907	4,810	4,268	3,801	4,809	4,630	3,851	3,550	2,449	2,519	1,840	1,221	-1,048	-1,618	-2,210	-2,825	-3,467	-4,135	-4,834	-5,565	-6,330	-7,132	-7,973	-8,856	-9,783	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,421	3,553	3,675	5,171	4,521	4,359	4,000	4,924	4,369	3,891	4,923	4,740	3,943	3,635	2,508	2,579	1,884	1,250	-1,073	-1,656	-2,262	-2,893	-3,549	-4,234	-4,949	-5,697	-6,481	-7,302	-8,163	-9,067	-10,016	0	0	0
			79	83	85	120	105	101	93	114	102	90	114	110	92	84	58	60	44	29	-25	-38	-53	-67	-82	-98	-115	-132	-151	-170	-190	-211	-233	0	0	0

0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	5,050	3,365	61,735
Equal Monthly Debt Drawdown	5,171	3,341	

	Feb15 Option 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	65,781	2034	38,864
Equal Monthly Debt Drawdown	67,346		

Feb15 Option 1a, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
a	Debt, Beginning of Year	0	3,342	6,812	10,402	15,452	19,868	24,126	28,034	32,843	37,111	40,911	45,720	50,350	54,201	57,752	60,201	62,720	64,560	65,781	64,733	63,115	60,906	58,080	54,614	50,478	45,644	40,079	33,749	26,617	18,644	9,788	5	5	5	
c = a*5%	*Interest Cost - Feb15 Option 1a, 30-yr - End of Year Debt Drawdown*	*0*	*171*	*349*	*532*	*791*	*1,016*	*1,234*	*1,434*	*1,680*	*1,899*	*2,093*	*2,339*	*2,576*	*2,773*	*2,955*	*3,080*	*3,209*	*3,303*	*3,365*	*3,312*	*3,229*	*3,116*	*2,972*	*2,794*	*2,583*	*2,335*	*2,051*	*1,727*	*1,362*	*954*	*501*	*0*	*0*	*0*	61,735
b	Additional GA Debt Drawdown, End of Year	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	3,342	6,812	10,402	15,452	19,868	24,126	28,034	32,843	37,111	40,911	45,720	50,350	54,201	57,752	60,201	62,720	64,560	65,781	64,733	63,115	60,906	58,080	54,614	50,478	45,644	40,079	33,749	26,617	18,644	9,788	5	5	5	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	171	520	1,052	1,842	2,859	4,093	5,527	7,208	9,106	11,199	13,539	16,115	19,665	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	26,617	18,644	9,788	5	5	5	
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal	3,342	6,641	9,882	14,400	18,026	21,267	23,941	27,316	29,903	31,805	34,521	36,812	38,087	38,087	38,087	40,606	42,446	43,667	42,619	41,001	38,792	35,966	32,500	28,364	23,530	17,965	11,635	0	0	0	0	0	0	0	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	171	520	1,052	1,842	2,859	4,093	5,527	7,208	9,106	11,199	13,539	16,115	18,888	21,842	24,922	28,131	31,434	34,800	38,112	41,341	44,457	47,428	50,222	52,805	55,140	57,191	58,917	60,279	61,233	61,734				
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal	3,342	6,641	9,882	14,400	18,026	21,267	23,941	27,316	29,903	31,805	34,521	36,812	38,087	38,864	38,359	37,798	36,429	34,347	29,934	25,004	19,565	13,624	7,186	256	-7,161	-15,061	-23,442	-32,300	-41,635	-51,445	-61,729				
Fiscal Exposure - End of Year Debt Drawdown		3,342	3,470	3,589	5,050	4,416	4,258	3,907	4,810	4,268	3,801	4,809	4,630	3,851	3,550	2,449	2,519	1,840	1,221	-1,048	-1,618	-2,210	-2,825	-3,467	-4,135	-4,834	-5,565	-6,330	-7,132	-7,973	-8,856	-9,783	0	0	0	

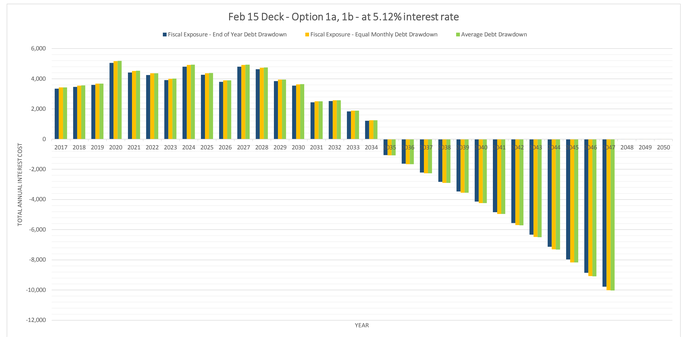
Feb15 Option 1a, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,421	6,974	10,649	15,820	20,341	24,700	28,700	33,624	37,993	41,885	46,808	51,548	55,491	59,125	61,633	64,212	66,096	67,346	66,273	64,617	62,354	59,462	55,913	51,679	46,730	41,033	34,552	27,250	19,087	10,021	5	5	5	
3,341	*Interest Cost - Feb15 Option 1a, 30-yr*	*79*	*254*	*434*	*652*	*896*	*1,118*	*1,327*	*1,549*	*1,782*	*1,989*	*2,207*	*2,449*	*2,668*	*2,857*	*3,013*	*3,140*	*3,253*	*3,332*	*3,341*	*3,273*	*3,177*	*3,049*	*2,889*	*2,696*	*2,468*	*2,203*	*1,900*	*1,557*	*1,172*	*743*	*268*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,421	6,974	10,649	15,820	20,341	24,700	28,700	33,624	37,993	41,885	46,808	51,548	55,491	59,125	61,633	64,212	66,096	67,346	66,273	64,617	62,354	59,462	55,913	51,679	46,730	41,033	34,552	27,250	19,087	10,021	5	5	5	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,421	3,553	3,675	5,171	4,521	4,359	4,000	4,924	4,369	3,891	4,923	4,740	3,943	3,635	2,508	2,579	1,884	1,250	-1,073	-1,656	-2,262	-2,893	-3,549	-4,234	-4,949	-5,697	-6,481	-7,302	-8,163	-9,067	-10,016	0	0	0	

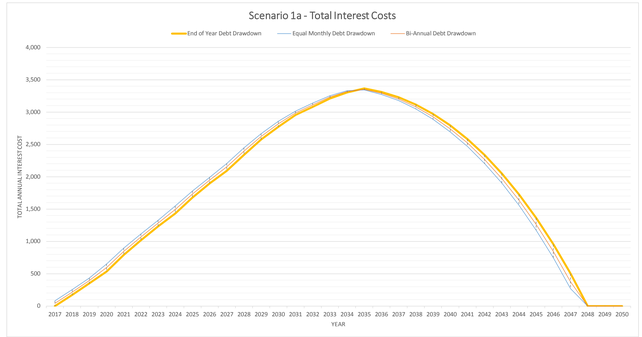
	Monthly Drawdown	278	275	270	377	302	270	223	281	216	159	226	191	106	65	(42)	(47)	(114)	(174)	(368)	(411)	(453)	(495)	(537)	(577)	(618)	(658)	(698)	(738)	(778)	(817)	(857)	-	-	-
	FV of Monthly Drawdown at 5%	3,421	3,378	3,318	4,626	3,712	3,319	2,737	3,456	2,649	1,947	2,780	2,346	1,305	796	(517)	(574)	(1,401)	(2,132)	(4,518)	(5,047)	(5,568)	(6,083)	(6,591)	(7,094)	(7,593)	(8,088)	(8,580)	(9,069)	(9,557)	(10,043)	(10,529)	-	-	-
	Annual Interest Cost on New Drawdowns	79	78	77	107	86	77	64	80	62	45	65	54	30	18	(12)	(13)	(33)	(50)	(105)	(117)	(129)	(141)	(153)	(165)	(176)	(188)	(199)	(211)	(222)	(233)	(245)	-	-	-
	Annual Interest Cost on Opening Balance	-	175	357	545	809	1,041	1,264	1,468	1,720	1,944	2,143	2,395	2,637	2,839	3,025	3,153	3,285	3,382	3,446	3,391	3,306	3,190	3,042	2,861	2,644	2,391	2,099	1,768	1,394	977	513	0	0	0
	Total Annual Interest Cost	79	254	434	652	896	1,118	1,327	1,549	1,782	1,989	2,207	2,449	2,668	2,857	3,013	3,140	3,253	3,332	3,341	3,273	3,177	3,049	2,889	2,696	2,468	2,203	1,900	1,557	1,172	743	268	0	0	0

Feb15 Option 1a, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,385	6,899	10,535	15,650	20,122	24,435	28,392	33,263	37,585	41,435	46,305	50,994	54,895	58,490	60,971	63,523	65,386	66,623	65,561	63,923	61,685	58,823	55,312	51,124	46,228	40,592	34,181	26,958	18,882	9,913	5	5	5	
	Interest Cost - Feb15 Option 1a, 30-yr	*43*	*215*	*394*	*597*	*847*	*1,071*	*1,284*	*1,496*	*1,735*	*1,947*	*2,155*	*2,398*	*2,625*	*2,818*	*2,986*	*3,112*	*3,232*	*3,319*	*3,352*	*3,291*	*3,201*	*3,080*	*2,927*	*2,741*	*2,521*	*2,264*	*1,970*	*1,635*	*1,260*	*841*	*376*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,385	6,899	10,535	15,650	20,122	24,435	28,392	33,263	37,585	41,435	46,305	50,994	54,895	58,490	60,971	63,523	65,386	66,623	65,561	63,923	61,685	58,823	55,312	51,124	46,228	40,592	34,181	26,958	18,882	9,913	5	5	5	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,385	3,515	3,635	5,115	4,473	4,313	3,957	4,871	4,322	3,849	4,870	4,689	3,900	3,596	2,481	2,551	1,864	1,237	-1,061	-1,639	-2,238	-2,861	-3,511	-4,188	-4,896	-5,636	-6,411	-7,223	-8,075	-8,969	-9,909	0	0	0	

	Bi-Annual Drawdown	1,671	1,650	1,620	2,259	1,813	1,621	1,337	1,688	1,294	951	1,358	1,146	638	389	(253)	(280)	(684)	(1,041)	(2,207)	(2,465)	(2,719)	(2,971)	(3,219)	(3,465)	(3,708)	(3,950)	(4,190)	(4,429)	(4,667)	(4,905)	(5,142)	-	-	-
	FV of Bi-Annual Drawdown at 5%	3,385	3,341	3,282	4,576	3,672	3,283	2,707	3,418	2,620	1,926	2,750	2,320	1,291	787	(512)	(568)	(1,386)	(2,109)	(4,470)	(4,993)	(5,508)	(6,017)	(6,520)	(7,018)	(7,512)	(8,001)	(8,488)	(8,972)	(9,454)	(9,935)	(10,416)	-	-	-
	Annual Interest Cost on New Drawdowns	43	42	41	58	46	41	34	43	33	24	35	29	16	10	(6)	(7)	(18)	(27)	(56)	(63)	(70)	(76)	(82)	(89)	(95)	(101)	(107)	(113)	(119)	(125)	(132)	-	-	-
	Annual Interest Cost on Opening Balance	-	173	353	539	801	1,029	1,250	1,453	1,702	1,923	2,120	2,369	2,609	2,809	2,992	3,119	3,250	3,345	3,409	3,354	3,270	3,156	3,010	2,830	2,616	2,365	2,077	1,749	1,379	966	507	0	0	0
	Total Annual Interest Cost	43	215	394	597	847	1,071	1,284	1,496	1,735	1,947	2,155	2,398	2,625	2,818	2,986	3,112	3,232	3,319	3,352	3,291	3,201	3,080	2,927	2,741	2,521	2,264	1,970	1,635	1,260	841	376	0	0	0

Feb15 Option 1a, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,427	6,986	10,668	15,847	20,376	24,743	28,751	33,683	38,060	41,958	46,890	51,638	55,588	59,229	61,741	64,325	66,212	67,464	66,389	64,730	62,464	59,566	56,011	51,770	46,812	41,104	34,612	27,298	19,121	10,038	5	5	5	
	Interest Cost - Feb15 Option 1a, 30-yr	*85*	*260*	*440*	*661*	*904*	*1,125*	*1,334*	*1,557*	*1,789*	*1,996*	*2,216*	*2,458*	*2,675*	*2,864*	*3,017*	*3,144*	*3,256*	*3,334*	*3,339*	*3,270*	*3,173*	*3,044*	*2,883*	*2,688*	*2,459*	*2,193*	*1,889*	*1,544*	*1,158*	*727*	*251*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,427	6,986	10,668	15,847	20,376	24,743	28,751	33,683	38,060	41,958	46,890	51,638	55,588	59,229	61,741	64,325	66,212	67,464	66,389	64,730	62,464	59,566	56,011	51,770	46,812	41,104	34,612	27,298	19,121	10,038	5	5	5	6
Fiscal Exposure - Average Debt Drawdown		3,427	3,559	3,681	5,180	4,529	4,367	4,007	4,933	4,377	3,898	4,932	4,749	3,950	3,641	2,512	2,584	1,887	1,252	-1,075	-1,659	-2,266	-2,898	-3,555	-4,241	-4,958	-5,707	-6,492	-7,314	-8,177	-9,083	-10,034	0	0	0	





Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

Feb15_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,314	2,292	2,421	3,795	2,938	2,709	2,285	3,111	2,489	1,940	2,862	2,594	1,722	1,324	123	89	-699	-1,431	-1,842	-1,937	-2,036	-2,140	-2,249	-2,364	-2,485	-2,613	-2,746	-2,887	-3,034	-3,190	-3,353	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,369	2,346	2,479	3,886	3,008	2,774	2,340	3,185	2,548	1,986	2,930	2,656	1,763	1,356	126	91	-716	-1,465	-1,886	-1,983	-2,084	-2,191	-2,303	-2,421	-2,544	-2,675	-2,812	-2,955	-3,107	-3,266	-3,433	0	0	0
			55	55	58	90	70	64	54	74	59	46	68	62	41	32	3	2	-17	-34	-44	-46	-48	-51	-54	-56	-59	-62	-65	-69	-72	-76	-80	0	0	0

0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,795	1,791	32,368
Equal Monthly Debt Drawdown	3,886	1,789	

	Feb15 Option 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	35,009	2032	22,873
Equal Monthly Debt Drawdown	35,841		

Feb15 Option 1a, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
a	Debt, Beginning of Year		0	2,314	4,606	7,027	10,822	13,761	16,470	18,755	21,866	24,355	26,295	29,157	31,751	33,472	34,797	34,920	35,009	34,310	32,879	31,036	29,100	27,064	24,924	22,675	20,310	17,825	15,212	12,466	9,579	6,545	3,355	3	3	3	
c = a*5%	*Interest Cost - Feb15 Option 1a, 30-yr - End of Year Debt Drawdown*		*0*	*118*	*236*	*360*	*554*	*704*	*843*	*960*	*1,119*	*1,246*	*1,345*	*1,492*	*1,624*	*1,713*	*1,780*	*1,787*	*1,791*	*1,755*	*1,682*	*1,588*	*1,489*	*1,385*	*1,275*	*1,160*	*1,039*	*912*	*778*	*638*	*490*	*335*	*172*	*0*	*0*	*0*	32,368
b	Additional GA Debt Drawdown, End of Year		2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)		2,314	4,606	7,027	10,822	13,761	16,470	18,755	21,866	24,355	26,295	29,157	31,751	33,472	34,797	34,920	35,009	34,310	32,879	31,036	29,100	27,064	24,924	22,675	20,310	17,825	15,212	12,466	9,579	6,545	3,355	3	3	3	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs		0	118	354	714	1,267	1,971	2,814	3,773	4,892	6,138	7,484	8,975	10,600	11,924	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	9,579	6,545	3,355	3	3	3	3	
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal		2,314	4,488	6,673	10,109	12,493	14,499	15,941	18,092	19,463	20,157	21,673	22,775	22,873	22,873	22,873	22,961	22,262	20,831	18,989	17,052	15,017	12,877	10,627	8,263	5,778	3,165	419	0	0	0	0	0	0	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs		0	118	354	714	1,267	1,971	2,814	3,773	4,892	6,138	7,484	8,975	10,600	12,312	14,092	15,879	17,670	19,425	21,108	22,695	24,184	25,569	26,844	28,004	29,043	29,955	30,733	31,371	31,861	32,196	32,368			
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal		2,314	4,488	6,673	10,109	12,493	14,499	15,941	18,092	19,463	20,157	21,673	22,775	22,873	22,485	20,828	19,130	16,639	13,453	9,929	6,404	2,880	-645	-4,169	-7,694	-11,218	-14,743	-18,267	-21,792	-25,316	-28,841	-32,365			
Fiscal Exposure - End of Year Debt Drawdown			2,314	2,292	2,421	3,795	2,938	2,709	2,285	3,111	2,489	1,940	2,862	2,594	1,722	1,324	123	89	-699	-1,431	-1,842	-1,937	-2,036	-2,140	-2,249	-2,364	-2,485	-2,613	-2,746	-2,887	-3,034	-3,190	-3,353	0	0	0	

Feb15 Option 1a, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Debt, Beginning of Year		0	2,369	4,716	7,194	11,080	14,088	16,862	19,201	22,386	24,934	26,920	29,850	32,506	34,269	35,625	35,751	35,841	35,126	33,661	31,774	29,792	27,708	25,517	23,214	20,793	18,249	15,574	12,763	9,807	6,701	3,435	3	3	3	
1,789	*Interest Cost - Feb15 Option 1a, 30-yr*		*55*	*173*	*293*	*450*	*624*	*768*	*897*	*1,034*	*1,178*	*1,292*	*1,413*	*1,553*	*1,665*	*1,744*	*1,783*	*1,789*	*1,774*	*1,721*	*1,638*	*1,542*	*1,440*	*1,334*	*1,222*	*1,104*	*980*	*850*	*713*	*569*	*418*	*259*	*92*	*0*	*0*	*0*	32,368
	Additional GA Debt Drawdown		2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		2,369	4,716	7,194	11,080	14,088	16,862	19,201	22,386	24,934	26,920	29,850	32,506	34,269	35,625	35,751	35,841	35,126	33,661	31,774	29,792	27,708	25,517	23,214	20,793	18,249	15,574	12,763	9,807	6,701	3,435	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown			2,369	2,346	2,479	3,886	3,008	2,774	2,340	3,185	2,548	1,986	2,930	2,656	1,763	1,356	126	91	-716	-1,465	-1,886	-1,983	-2,084	-2,191	-2,303	-2,421	-2,544	-2,675	-2,812	-2,955	-3,107	-3,266	-3,433	0	0	0	
	Monthly Drawdown		193	181	182	286	199	167	120	179	114	58	126	92	8	(32)	(138)	(141)	(208)	(266)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	-	-	-	
	FV of Monthly Drawdown at 5%		2,369	2,225	2,237	3,518	2,441	2,053	1,477	2,202	1,403	710	1,553	1,128	100	(397)	(1,697)	(1,738)	(2,549)	(3,262)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	-	-	-	
	Annual Interest Cost on New Drawdowns		55	52	52	82	57	48	34	51	33	17	36	26	2	(9)	(39)	(40)	(59)	(76)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	-	-	-	
	Annual Interest Cost on Opening Balance		-	121	241	368	567	721	863	982	1,145	1,276	1,377	1,527	1,663	1,753	1,823	1,829	1,834	1,797	1,722	1,626	1,524	1,418	1,305	1,188	1,064	934	797	653	502	343	176	0	0	0	
	Total Annual Interest Cost		55	173	293	450	624	768	897	1,034	1,178	1,292	1,413	1,553	1,665	1,744	1,783	1,789	1,774	1,721	1,638	1,542	1,440	1,334	1,222	1,104	980	850	713	569	418	259	92	0	0	0	

Feb15 Option 1a, 30-yr — Bi-Annual Debt Drawdown

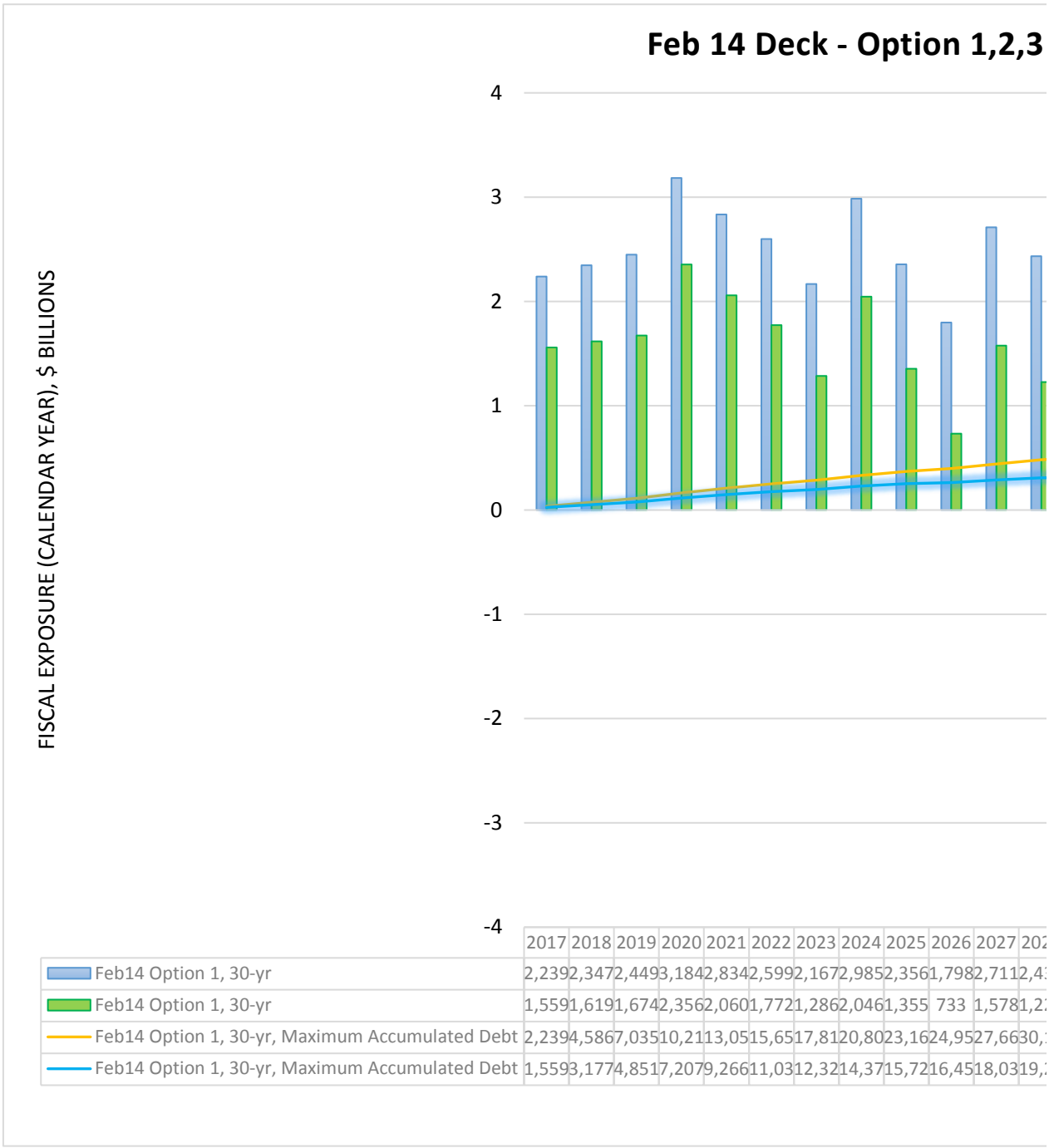
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Debt, Beginning of Year		0	2,344	4,665	7,117	10,961	13,937	16,681	18,995	22,146	24,667	26,631	29,530	32,157	33,901	35,242	35,367	35,456	34,748	33,299	31,433	29,472	27,410	25,243	22,965	20,570	18,053	15,407	12,626	9,702	6,629	3,398	3	3	3	
	Interest Cost - Feb15 Option 1a, 30-yr		*30*	*148*	*267*	*408*	*591*	*739*	*872*	*999*	*1,151*	*1,271*	*1,382*	*1,525*	*1,646*	*1,729*	*1,782*	*1,788*	*1,782*	*1,737*	*1,659*	*1,563*	*1,463*	*1,357*	*1,246*	*1,130*	*1,007*	*879*	*743*	*601*	*451*	*294*	*129*	*0*	*0*	*0*	32,368
	Additional GA Debt Drawdown		2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		2,344	4,665	7,117	10,961	13,937	16,681	18,995	22,146	24,667	26,631	29,530	32,157	33,901	35,242	35,367	35,456	34,748	33,299	31,433	29,472	27,410	25,243	22,965	20,570	18,053	15,407	12,626	9,702	6,629	3,398	3	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown			2,344	2,321	2,452	3,844	2,976	2,744	2,314	3,151	2,521	1,965	2,898	2,627	1,744	1,341	125	90	-708	-1,449	-1,866	-1,961	-2,062	-2,167	-2,278	-2,395	-2,517	-2,646	-2,781	-2,924	-3,073	-3,230	-3,396	0	0	0	
	Bi-Annual Drawdown		1,157	1,087	1,093	1,718	1,192	1,003	721	1,076	685	347	758	551	49	(194)	(829)	(849)	(1,245)	(1,593)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	-	-	-	
	FV of Bi-Annual Drawdown at 5%		2,344	2,201	2,213	3,480	2,415	2,031	1,461	2,179	1,388	703	1,536	1,116	99	(393)	(1,678)	(1,720)	(2,522)	(3,227)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	-	-	-	
	Annual Interest Cost on New Drawdowns		30	28	28	44	30	26	18	28	18	9	19	14	1	(5)	(21)	(22)	(32)	(41)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	-	-	-	
	Annual Interest Cost on Opening Balance		-	120	239	364	561	713	853	972	1,133	1,262	1,363	1,511	1,645	1,734	1,803	1,809	1,814	1,778	1,704	1,608	1,508	1,402	1,291	1,175	1,052	924	788	646	496	339	174	0	0	0	
	Total Annual Interest Cost		30	148	267	408	591	739	872	999	1,151	1,271	1,382	1,525	1,646	1,729	1,782	1,788	1,782	1,737	1,659	1,563	1,463	1,357	1,246	1,130	1,007	879	743	601	451	294	129	0	0	0	

Feb15 Option 1a, 30-yr — Average Debt Drawdown

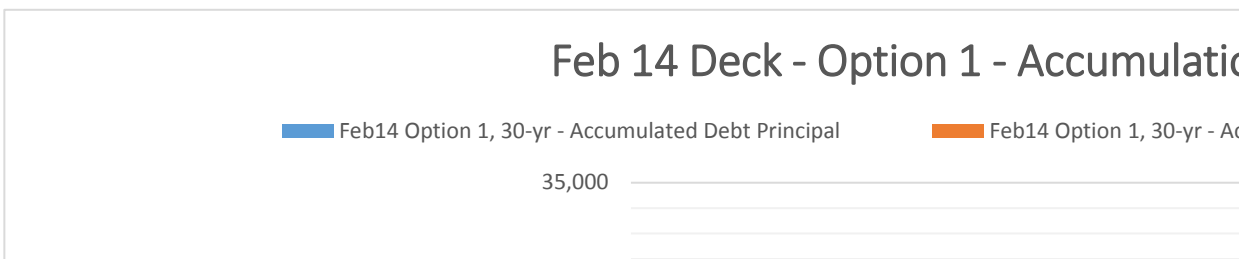
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Debt, Beginning of Year		0	2,373	4,724	7,207	11,099	14,113	16,891	19,235	22,425	24,978	26,968	29,902	32,563	34,329	35,687	35,813	35,904	35,187	33,720	31,830	29,844	27,756	25,562	23,255	20,830	18,281	15,601	12,785	9,824	6,712	3,441	3	3	3	
	Interest Cost - Feb15 Option 1a, 30-yr		*59*	*177*	*298*	*457*	*629*	*773*	*901*	*1,039*	*1,182*	*1,296*	*1,419*	*1,558*	*1,668*	*1,746*	*1,783*	*1,789*	*1,773*	*1,719*	*1,635*	*1,538*	*1,437*	*1,330*	*1,218*	*1,100*	*976*	*845*	*708*	*564*	*412*	*253*	*86*	*0*	*0*	*0*	32,368
	Additional GA Debt Drawdown		2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		2,373	4,724	7,207	11,099	14,113	16,891	19,235	22,425	24,978	26,968	29,902	32,563	34,329	35,687	35,813	35,904	35,187	33,720	31,830	29,844	27,756	25,562	23,255	20,830	18,281	15,601	12,785	9,824	6,712	3,441	3	3	3	
Fiscal Exposure - Average Debt Drawdown			2,373	2,351	2,483	3,892	3,013	2,779	2,344	3,190	2,553	1,989	2,935	2,660	1,766	1,358	126	91	-717	-1,468	-1,889	-1,986	-2,088	-2,195	-2,307	-2,425	-2,549	-2,679	-2,816	-2,961	-3,112	-3,271	-3,439	0	0	0	

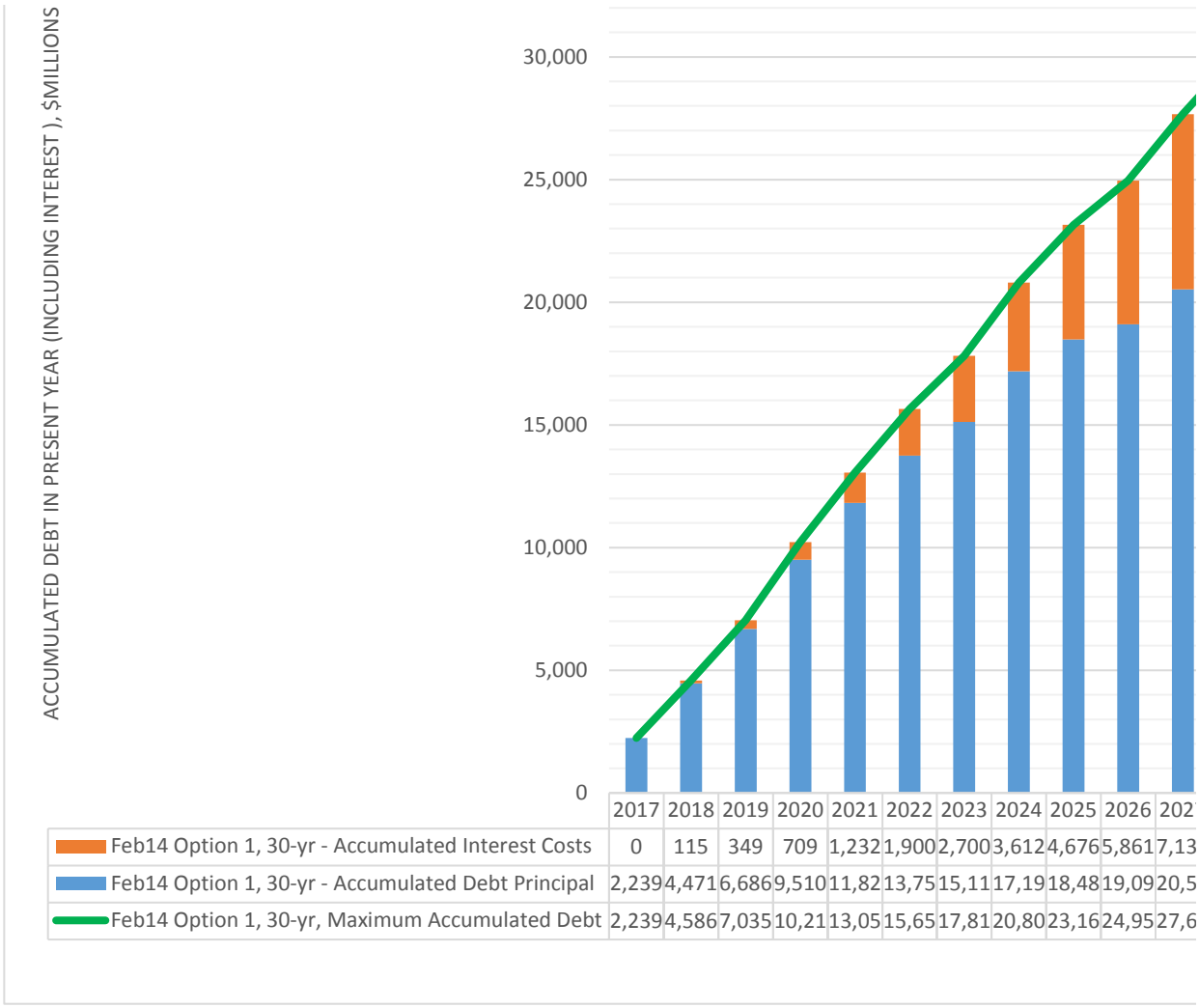
Feb 14 Deck

Feb 14 Deck - Option 1,2,3 - at 5.12% interest rate

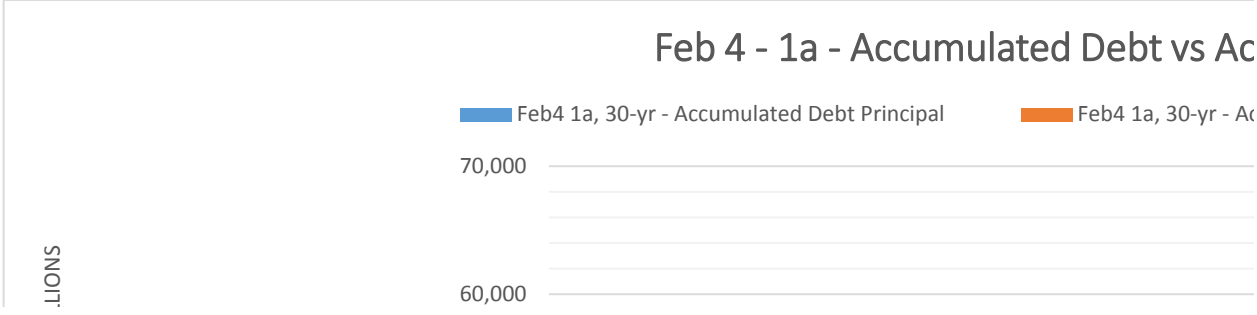


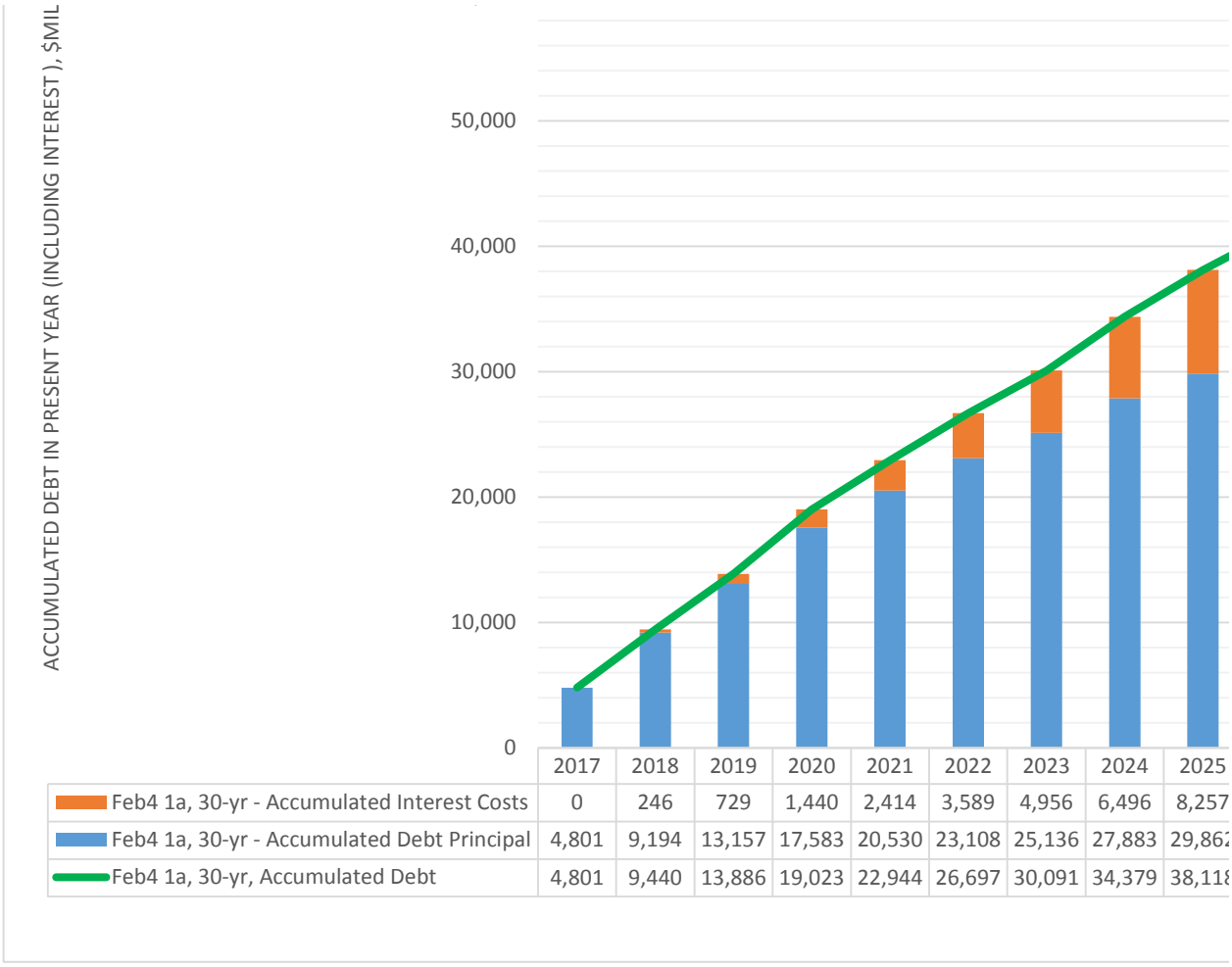
Feb 14 Deck - Option 1 - Accumulation of Debt (Principal and Interest)



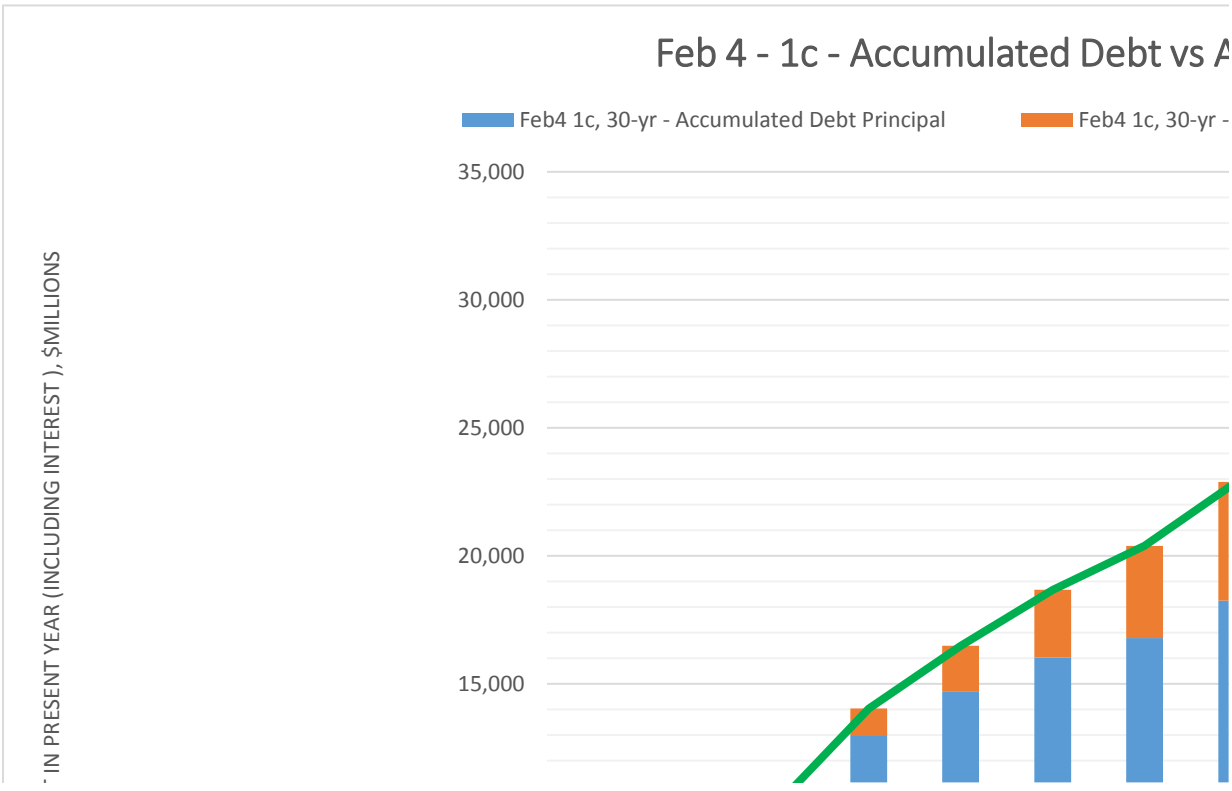


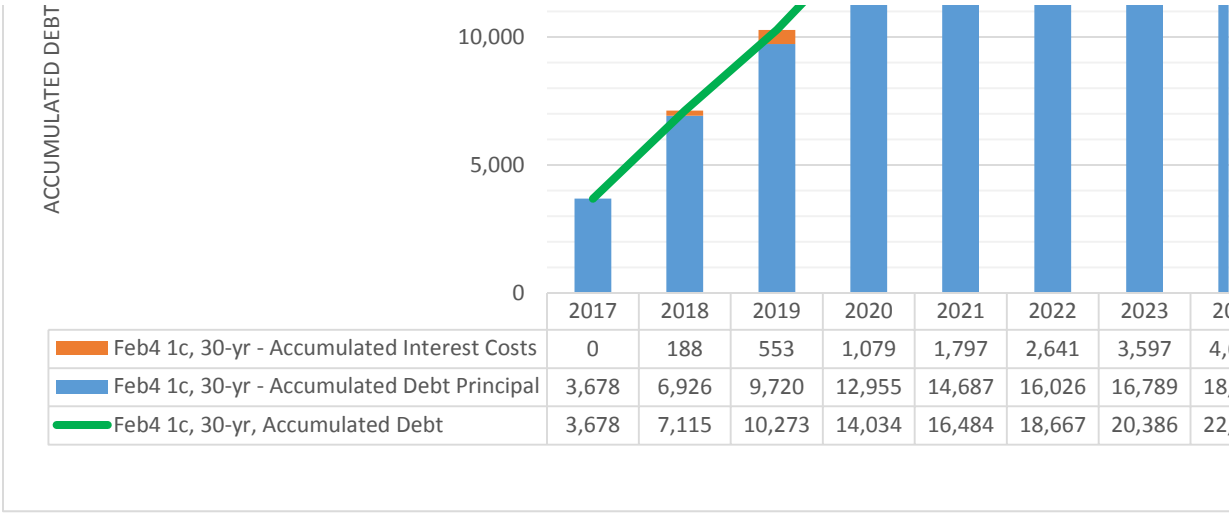
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	202
Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,13
Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,82	13,75	15,11	17,19	18,48	19,09	20,5
Feb14 Option 1, 30-yr, Maximum Accumulated Debt	2,239	4,586	7,035	10,21	13,05	15,65	17,81	20,80	23,16	24,95	27,6



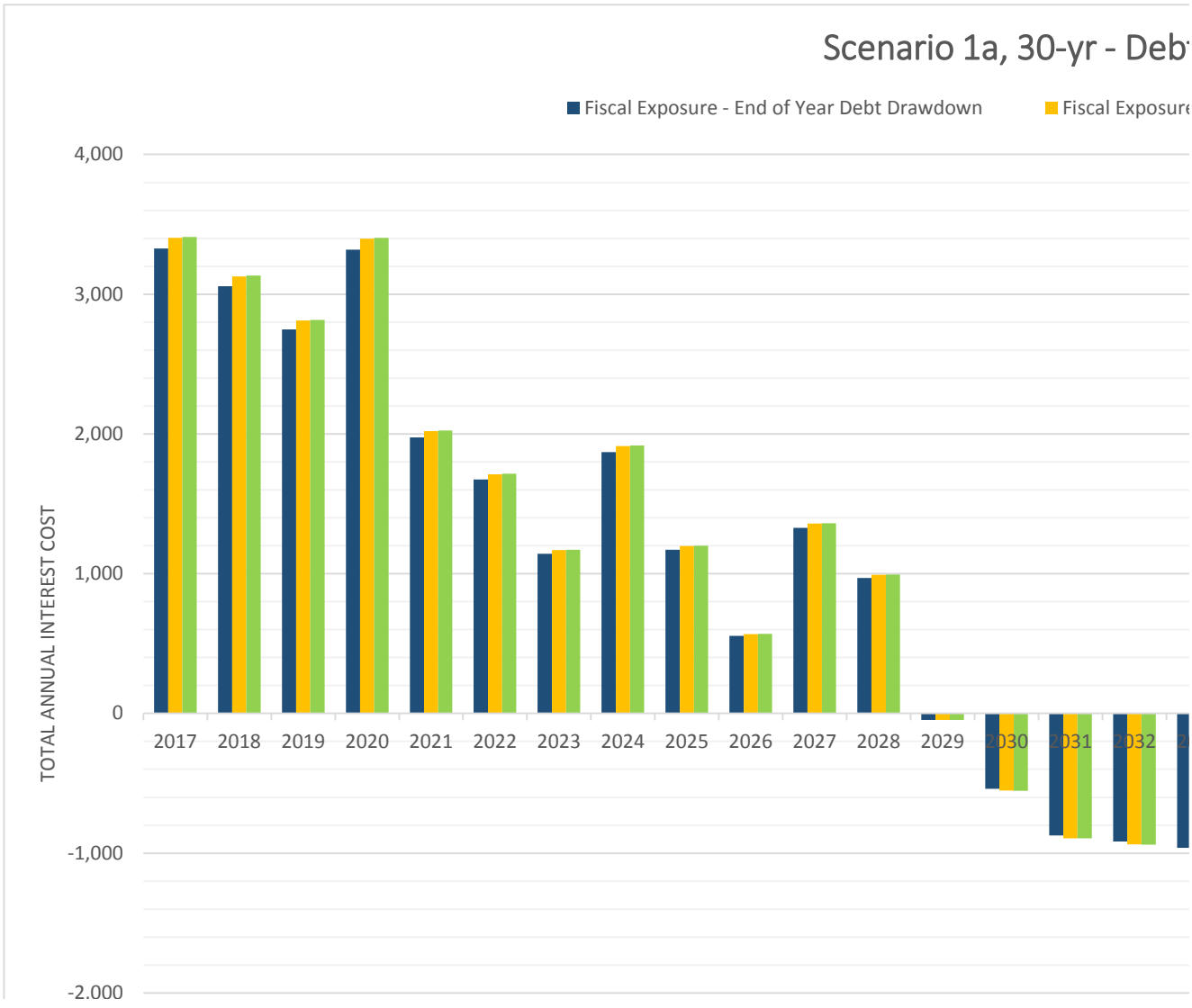


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



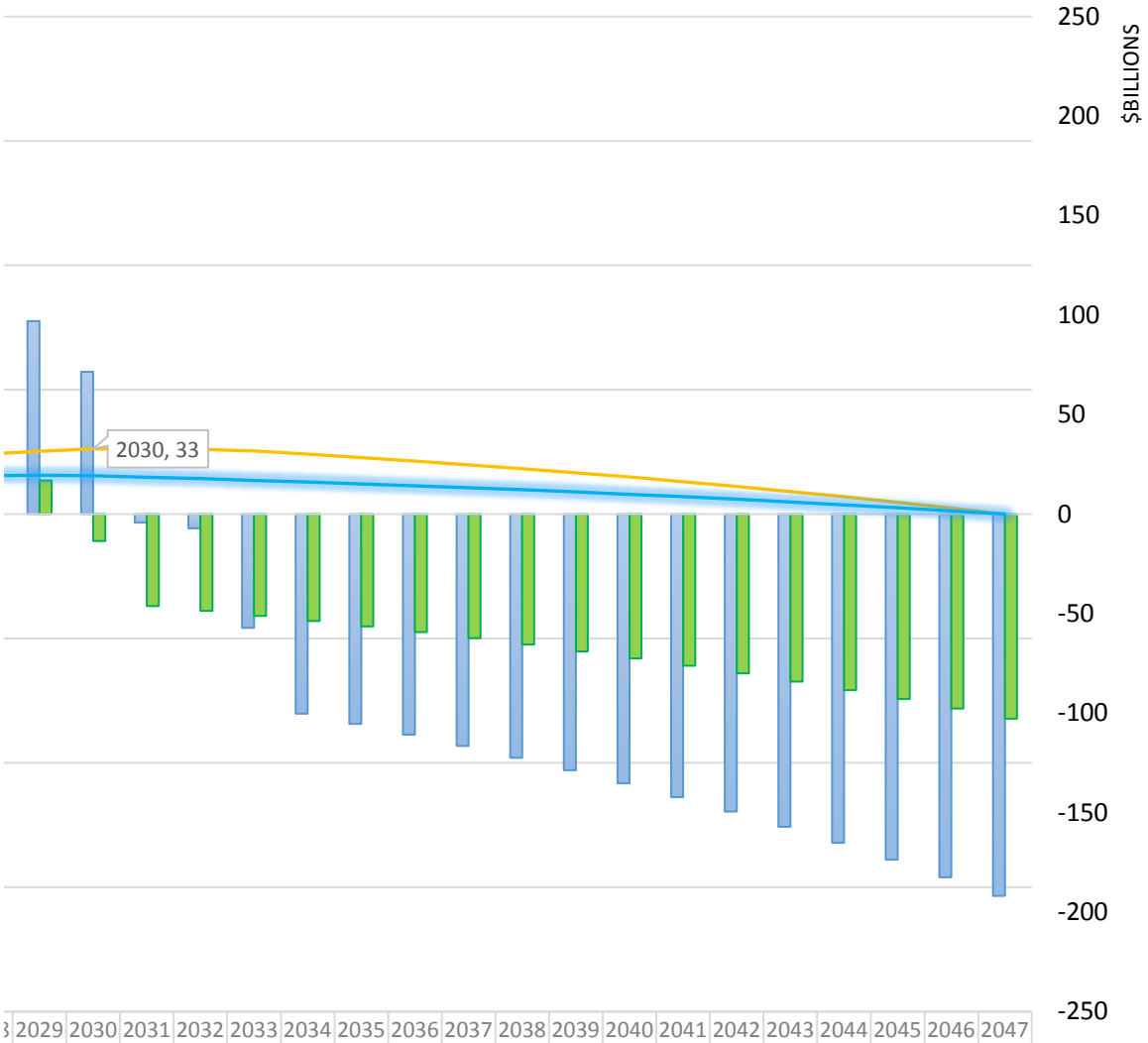


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

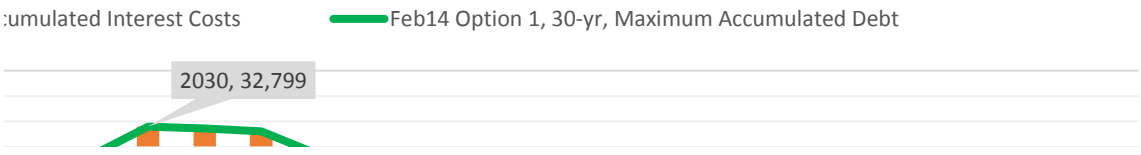
- at 5.12% interest rate

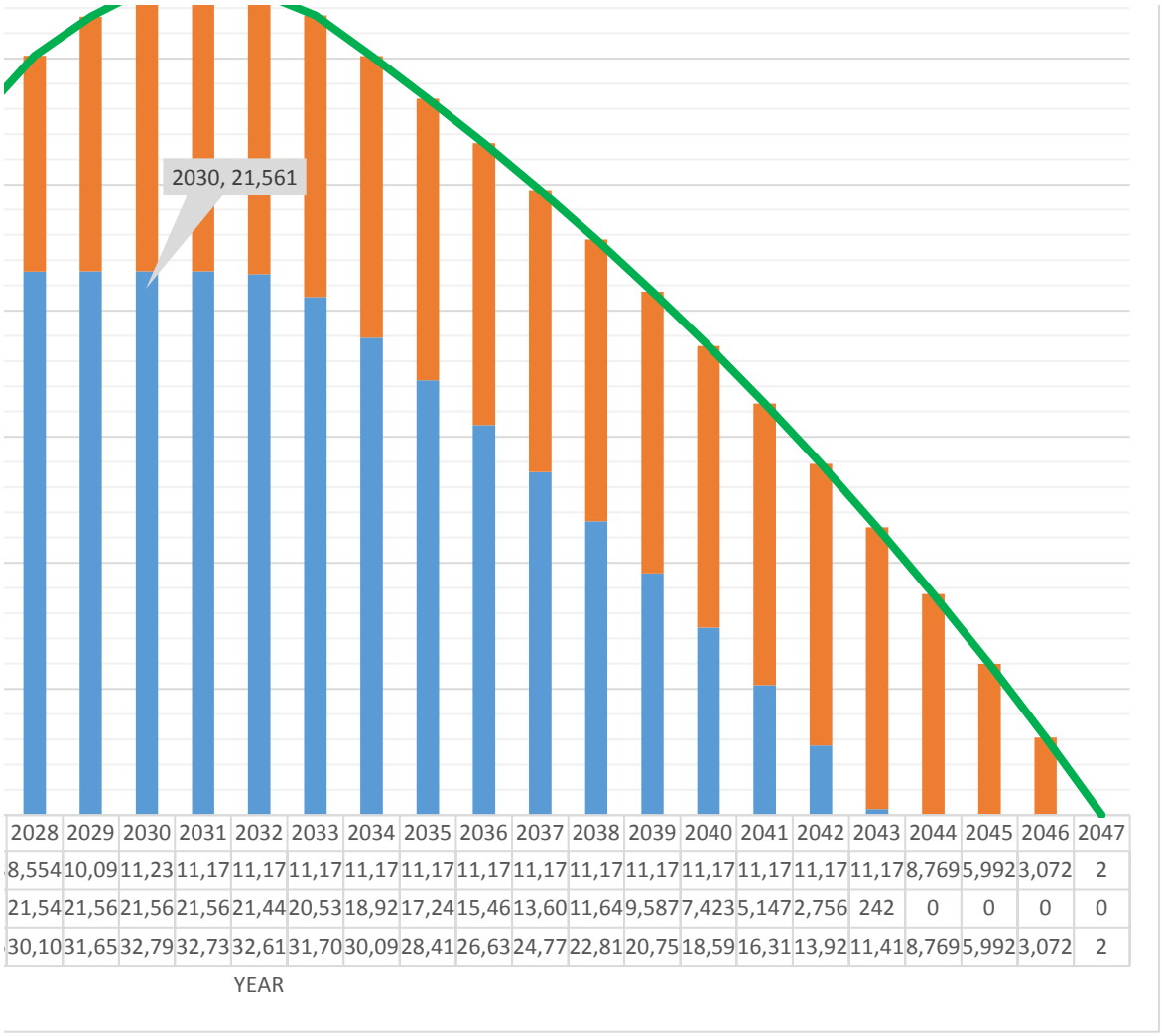


	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
	41,552	1,144	-68	-114	-914	-1,60	-1,68	-1,77	-1,86	-1,95	-2,05	-2,16	-2,27	-2,39	-2,51	-2,64	-2,77	-2,92	-3,06
	3 271	-217	-740	-778	-818	-859	-903	-950	-998	-1,04	-1,10	-1,15	-1,21	-1,28	-1,34	-1,41	-1,48	-1,56	-1,64
	031,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,769	5,992	3,072	2
	519,53	19,31	18,57	17,79	16,98	16,12	15,21	14,26	13,27	12,22	11,11	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1

CALENDAR YEAR

n of Debt (Principal and Interest)

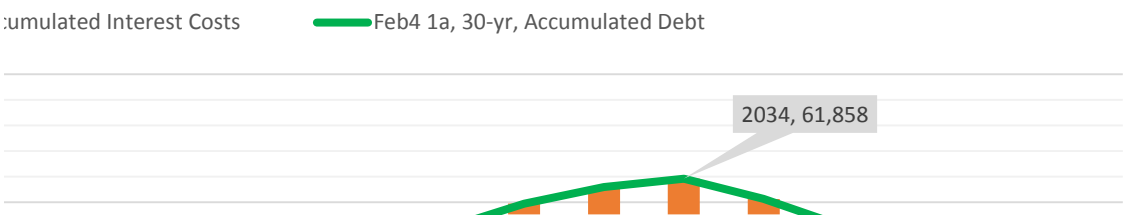




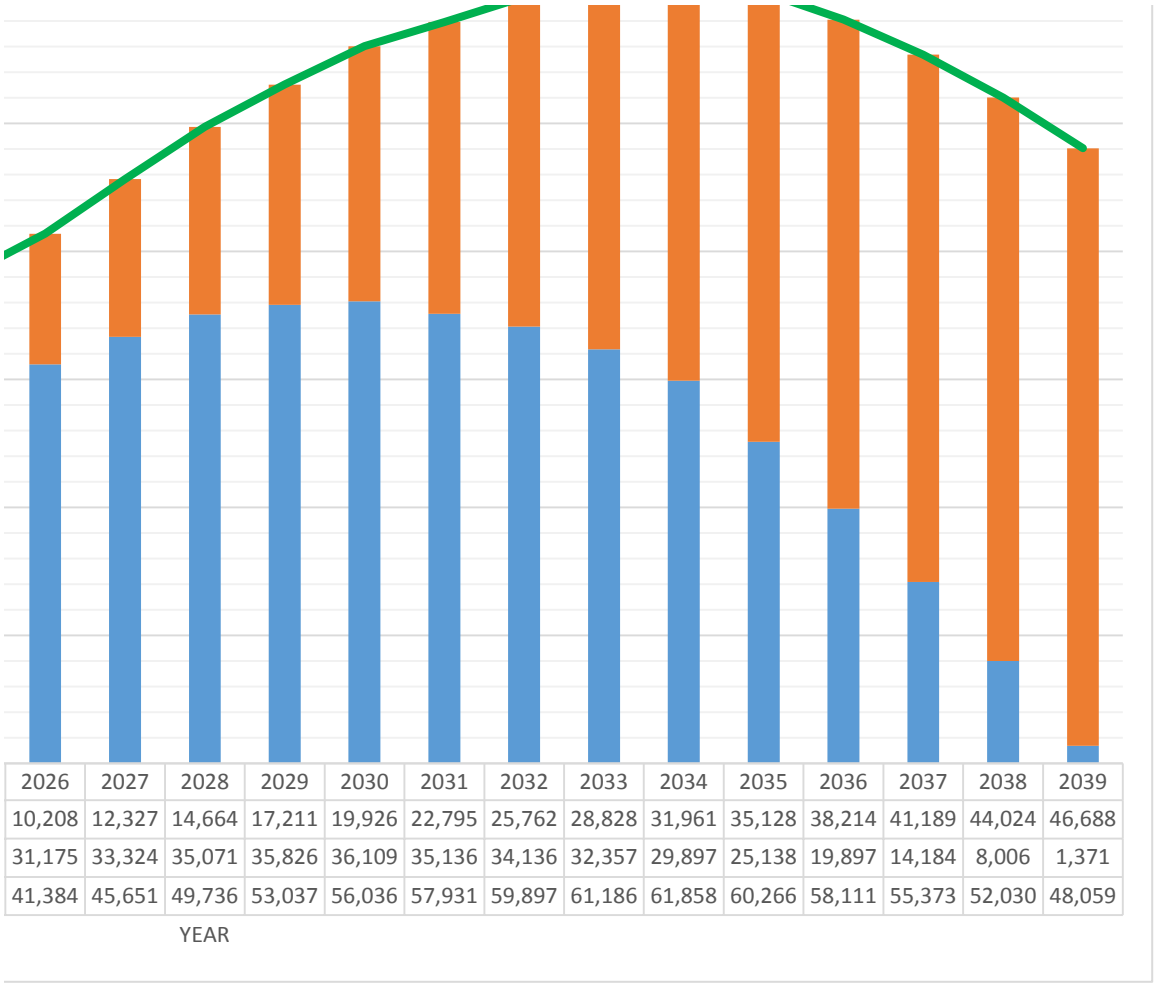
2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
8,554	10,09	11,23	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	8,769	5,992	3,072	2
21,54	21,56	21,56	21,56	21,44	20,53	18,92	17,24	15,46	13,60	11,64	9,587	7,423	5,147	2,756	242	0	0	0	0
30,10	31,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,769	5,992	3,072	2

YEAR

cumulated Total Interest Costs



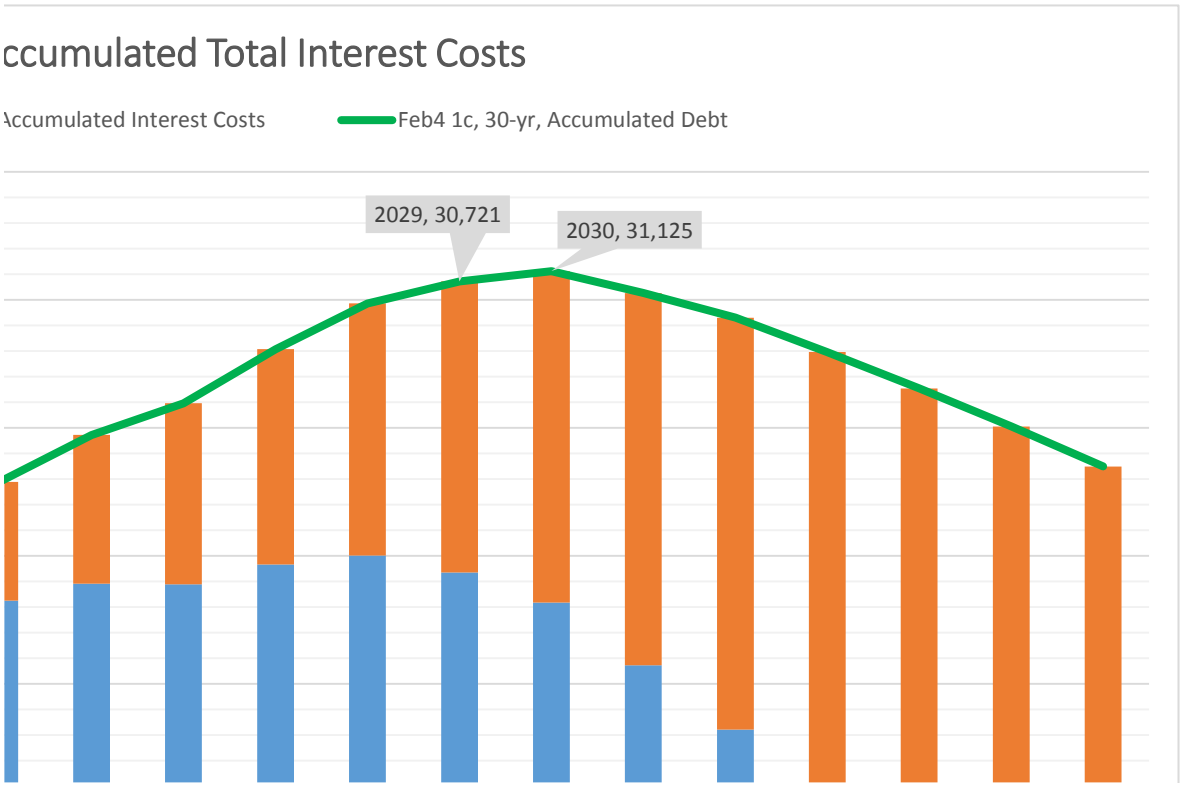
LIONS

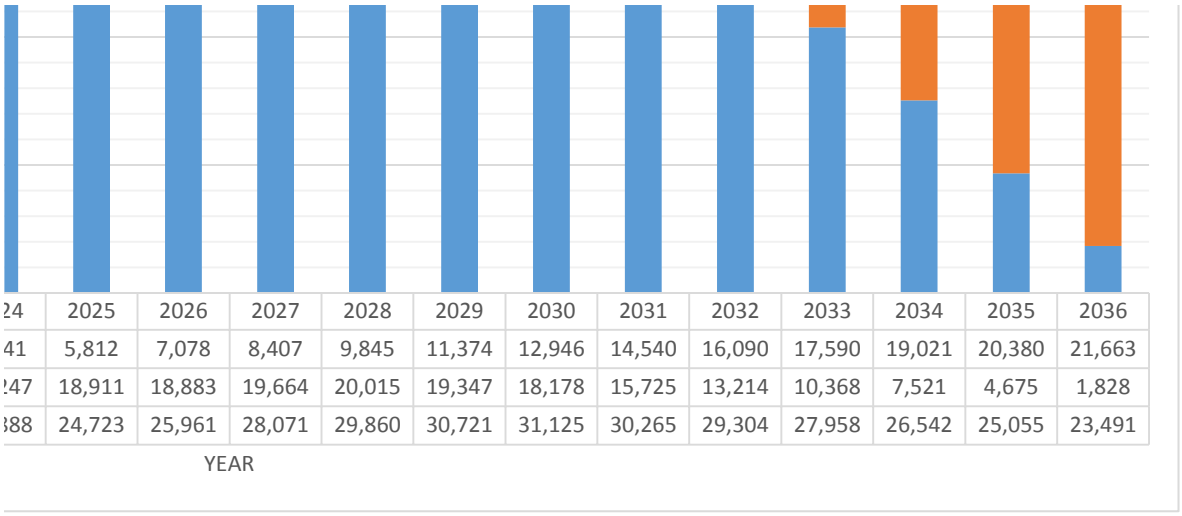


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

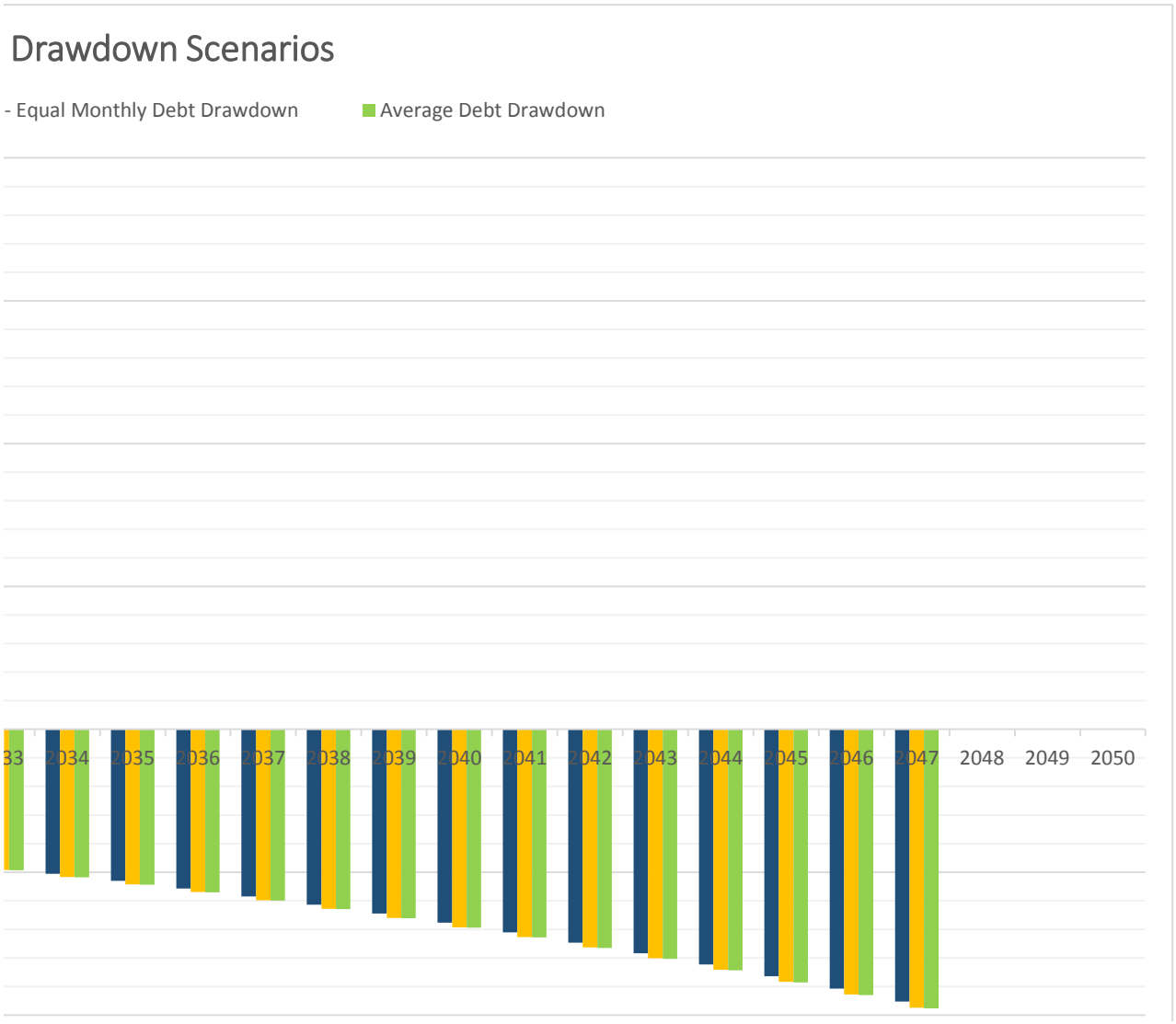
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





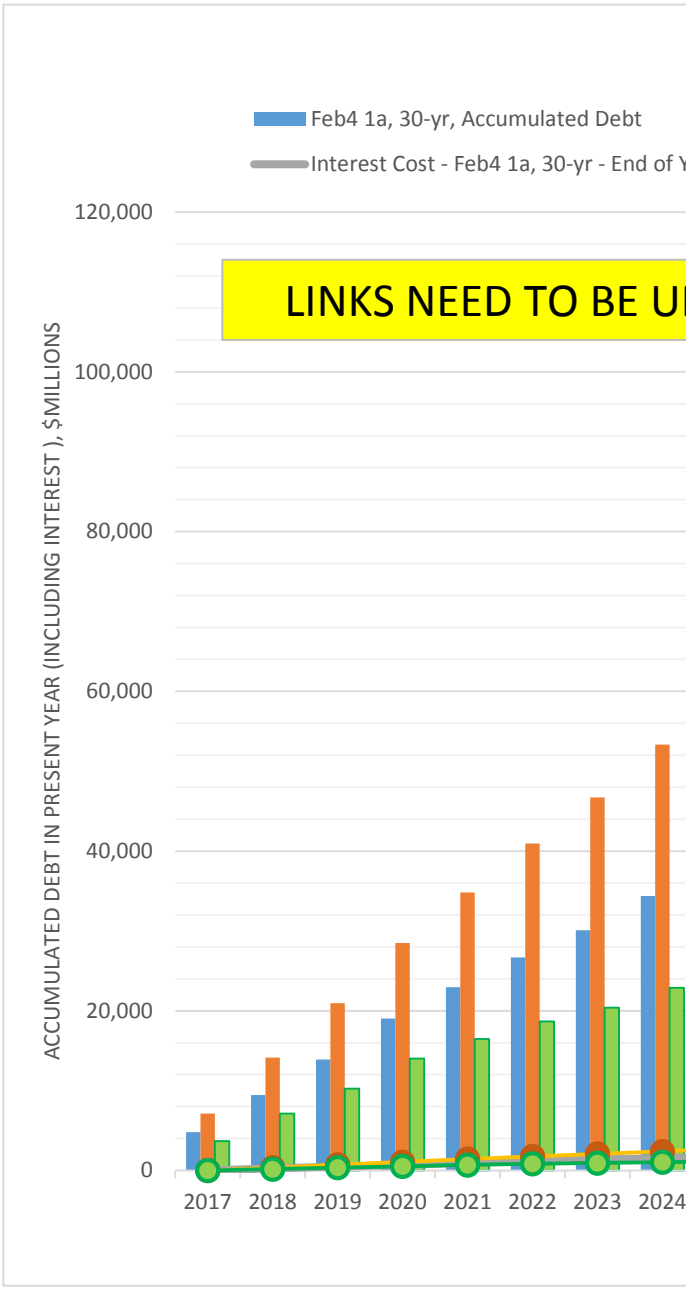
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

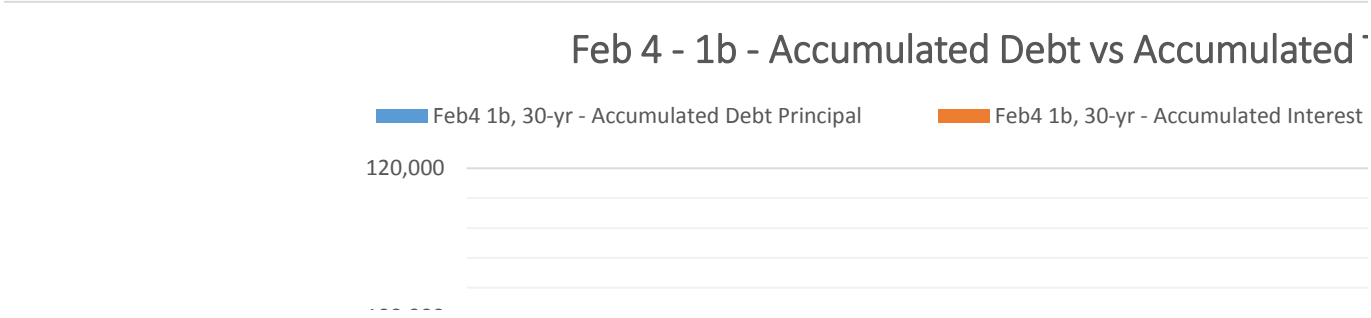
YEAR

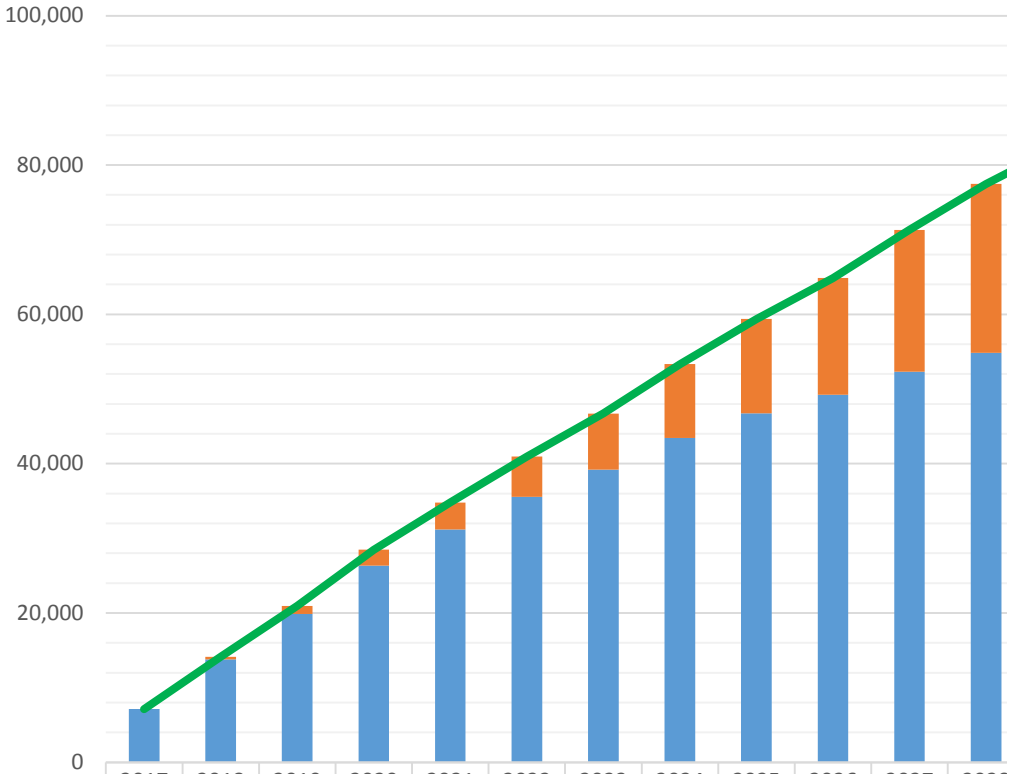


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate



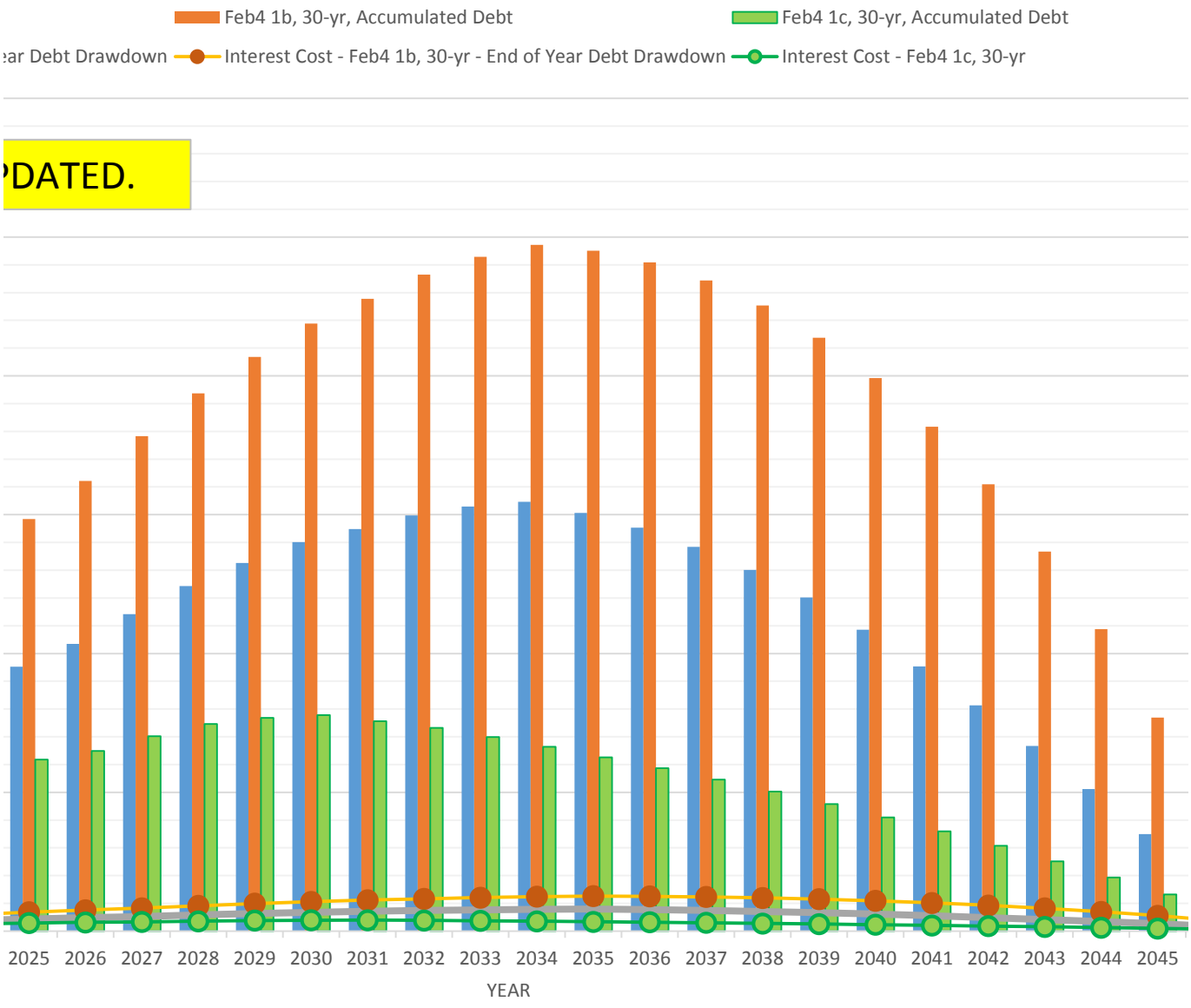

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000



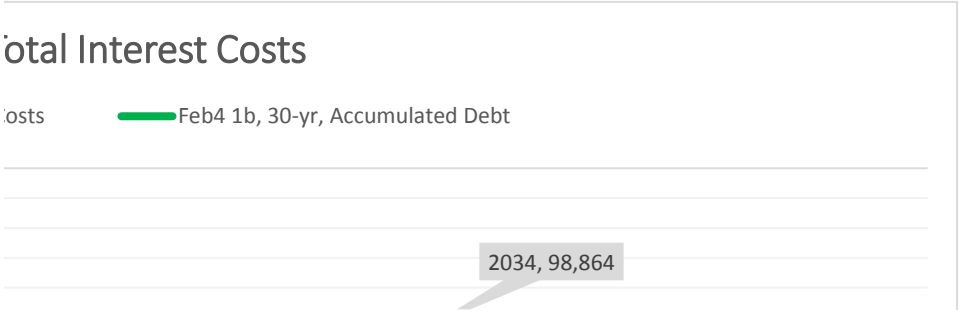
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

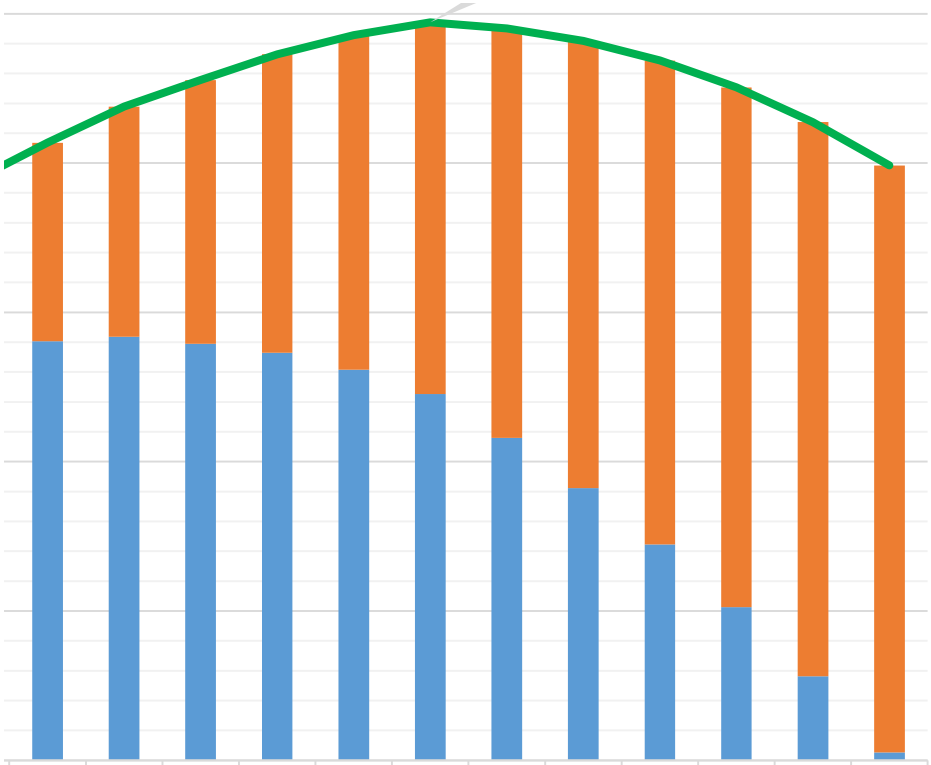
Y

Accumulated debt in present year, with annual interest costs



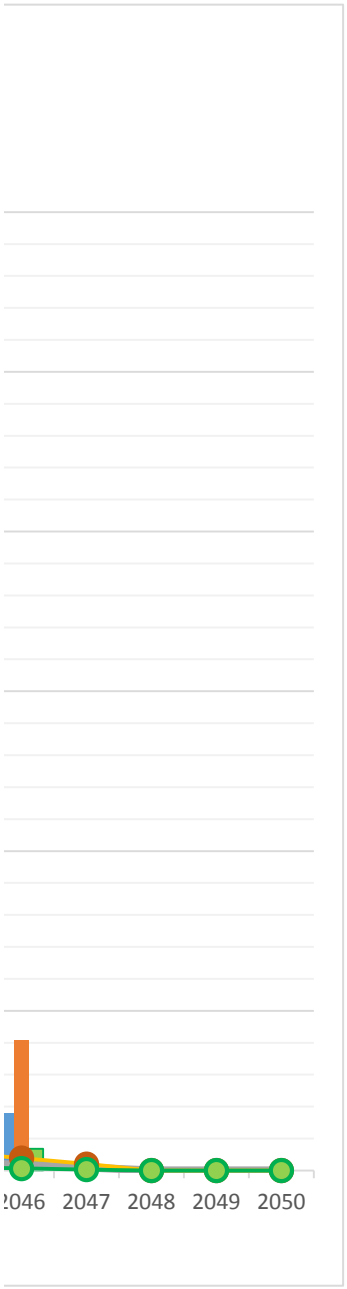
PDATED.


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864

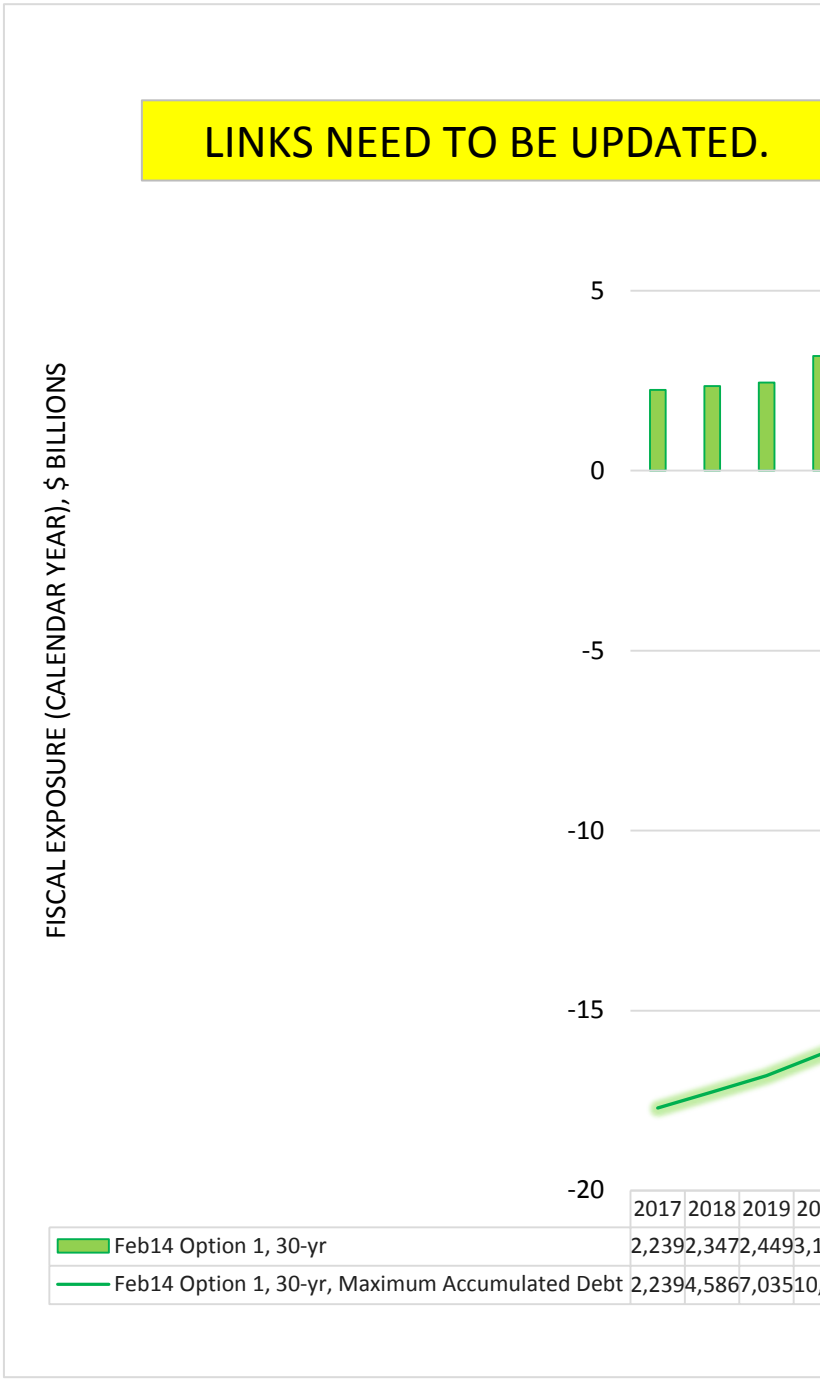


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



LINKS NEED TO BE UPDATED.



FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1b, 30-yr

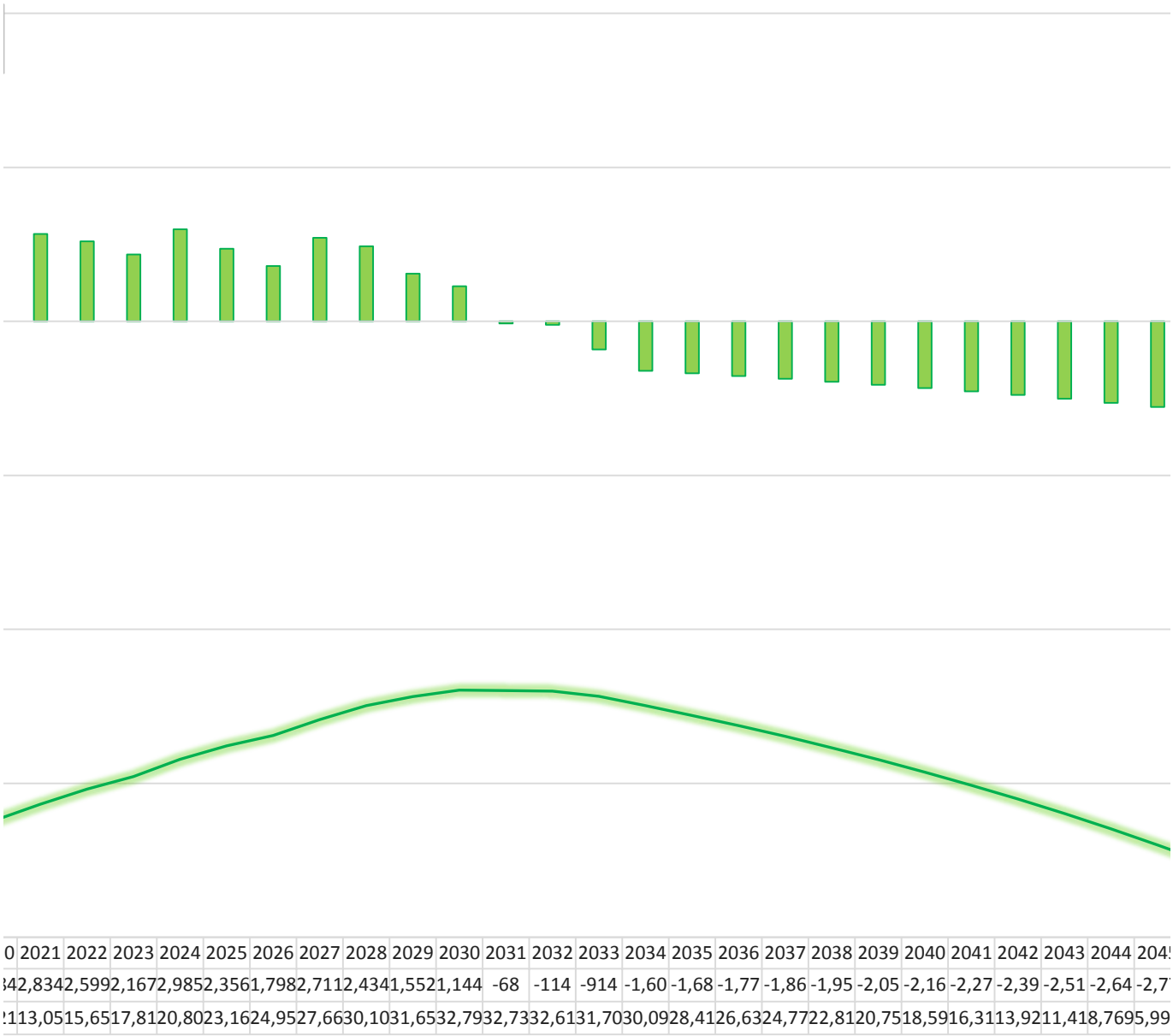
Feb4 1b, 30-yr,

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,

Feb 14 Deck - Option 1

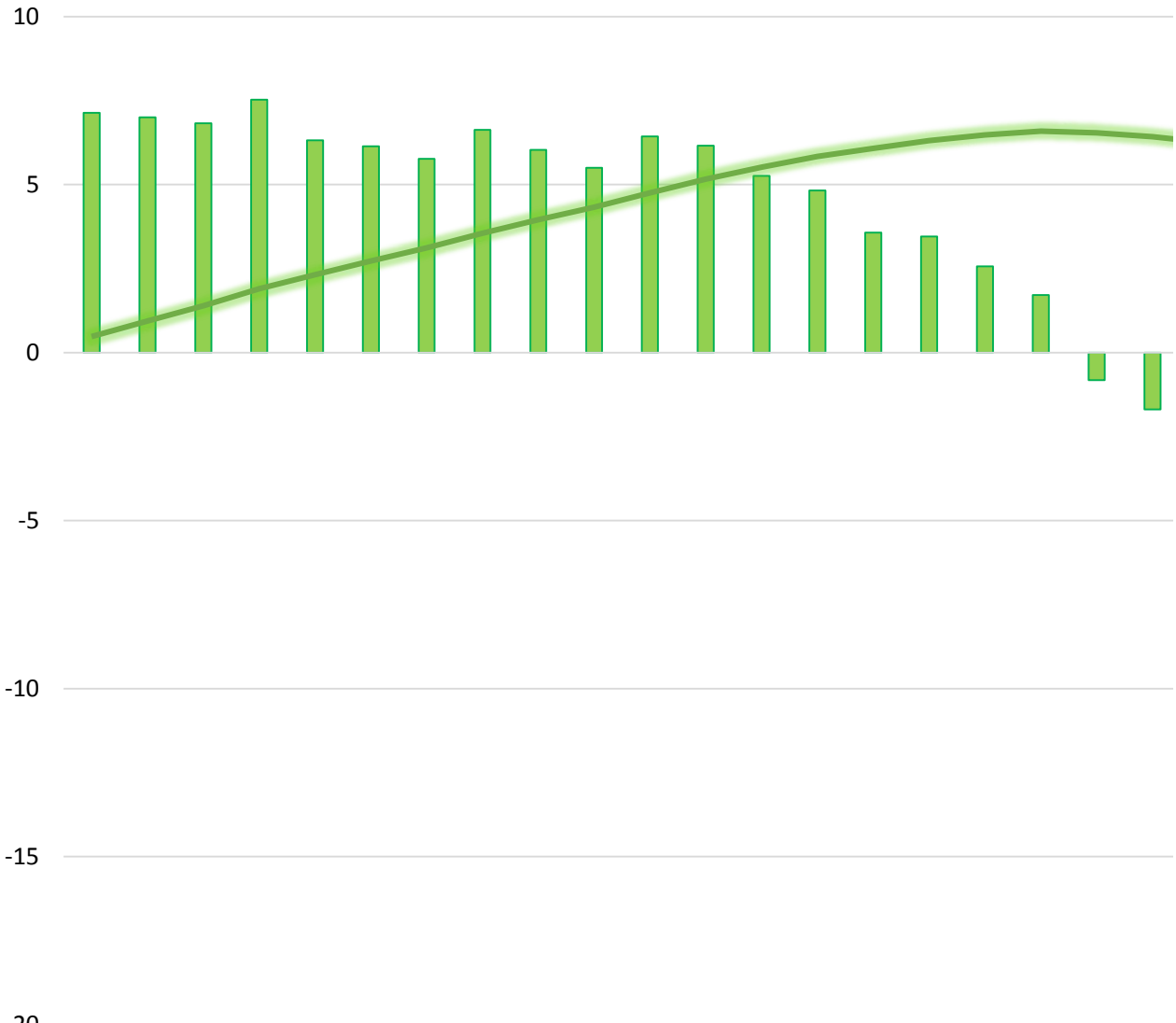


0	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	204
42	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,60	-1,68	-1,77	-1,86	-1,95	-2,05	-2,16	-2,27	-2,39	-2,51	-2,64	-2,7
113	05	15,65	17,81	20,80	23,16	24,95	27,66	30,10	31,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,76	95,99

CALENDAR YEAR

Feb 6 Deck - Scenario 1b - at 5.13% interest rat

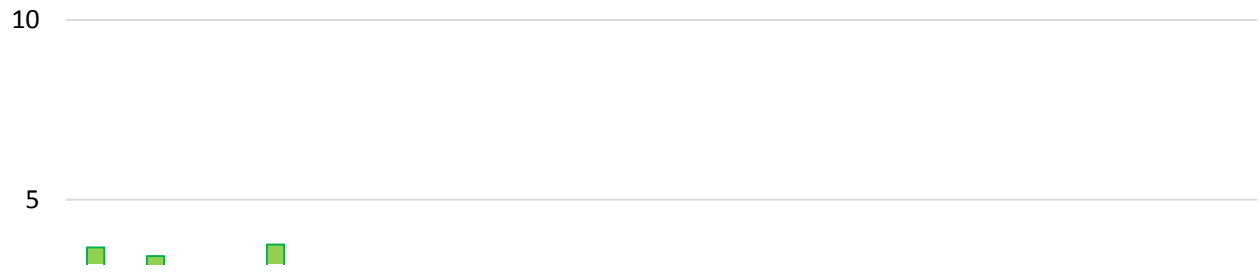
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

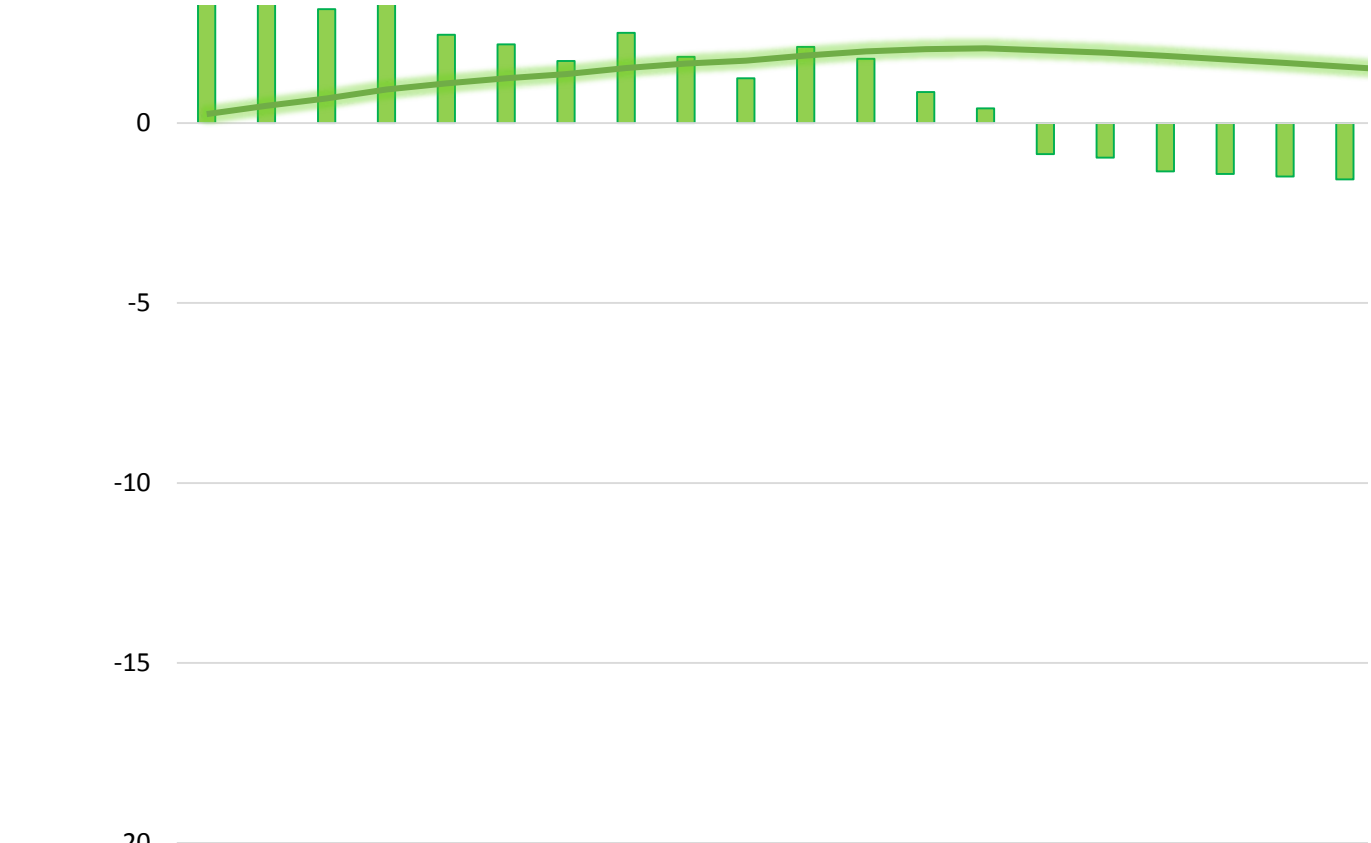


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

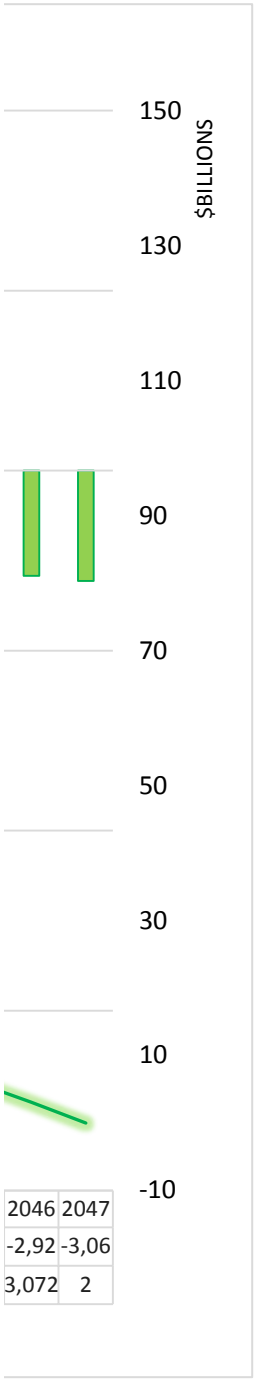
Feb 6 Deck - Scenario 1c - at 5.12% interest rat

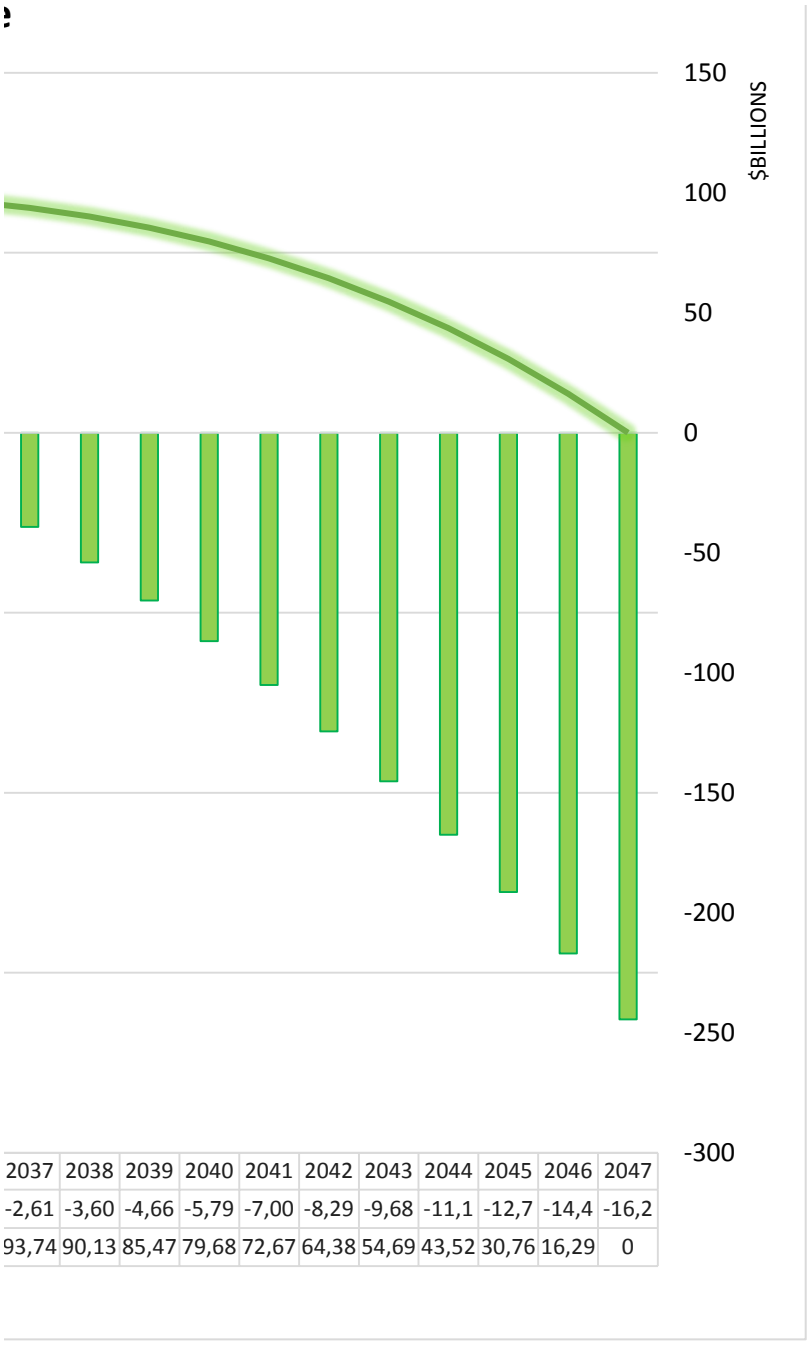




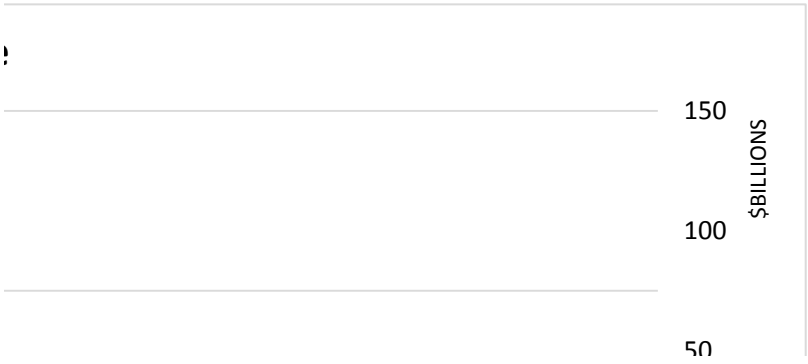
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

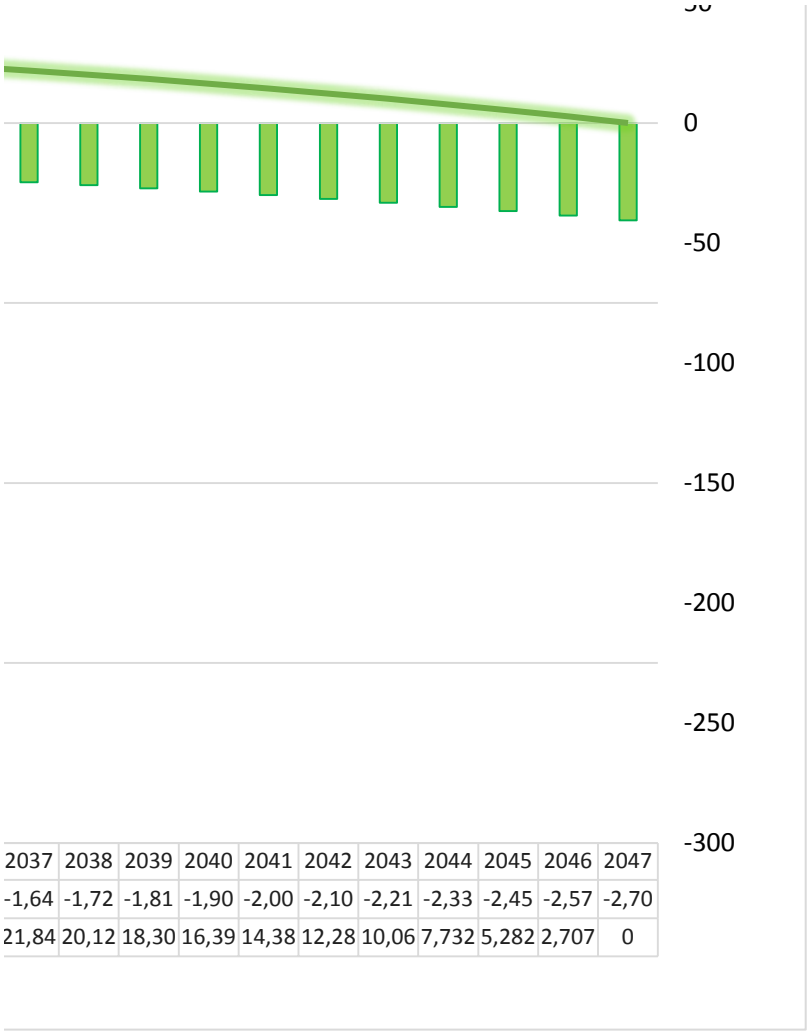
CALENDAR YEAR


150
130
110
90
70
50
30
10
-10
$BILLIONS
2046 2047
-2,92 -3,06
3,072 2



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest

IESO GA cost forecast + extrapolation

Scenario
Option 1
Bills Lowered 25%, RPP Only
Option 2
Bills Lowered 20%, RPP Only
Option 3
Bills Lowered 18%, contract/conservation refinancing, RPP Only

rate	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
Ratepayer GA Payment	9,856	9,602	9,338	9,344
Total Accumulated Debt ($ billion)	2,239	4,586	7,035	10,219
Ratepayer GA Payment	10,537	10,296	10,041	10,061
Accumulated debt in present year (including 5% interest,	1,559	3,177	4,851	7,207
Ratepayer GA Payment	10,648	10,303	10,186	10,873
Accumulated debt in present year (including 5% interest,	1,447	3,053	4,575	6,105
	12095.37	11834.681	11552.105	12168.428

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801
13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103
9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513
9,266	11,038	12,324	14,370	15,725	16,458	18,035	19,263
9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253
7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876
10843.555	10633.626	10243.432	11128.119	10527.018	10033.287	11042.844	10819.098

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389

9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615
31,654	32,799	32,730	32,616	31,702	30,097	28,411	26,638
10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117
19,534	19,317	18,577	17,799	16,981	16,122	15,218	14,268
9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837
18,843	19,521	20,007	20,312	20,325	19,755	18,549	17,050
10008.692	9721.4381	8654.4847	8819.9388	8238.0383	7756.4351	5662.3212	5388.8445

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627

8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853
24,774	22,815	20,756	18,591	16,316	13,924	11,410	8,767
6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355
13,270	12,221	11,118	9,958	8,740	7,458	6,112	4,696
7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712
15,464	13,694	12,062	10,556	9,143	7,810	6,672	5,928
5128.5761	4880.878	4645.1432	4420.7938	4207.28	4004.0783	3810.6908	3626.6435

2045	2046	2047	2048

3,451	3,285	3,126	2,975	2,831	2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
6,678	6,511	6,353	2,975	2,831	2,695
5,989	3,069	0	0	0	0
5,180	5,013	4,854	2,975	2,831	2,695
3,208	1,644	0	-	-	-
4,007	3,619	3,425	3,156	3,011	2,878
5,676	5,633	5,623	5,730	5,843	5,959
3451.485	3284.787	3126.139	2975.154	2831.461	2694.708

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

		5.00%	
Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb14_1_30yr

Option 1 - Bills Lowered 25%, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,239	2,347
Interest Portion	0	115

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	560	2,266
Interest Portion	-	29

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $33 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb14_2_30yr

Option 2 - Bills Lowered 20%, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,559	1,619
Interest Portion	0	80

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	390	1,574
Interest Portion	-	20

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb14_3_30yr

Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606
Interest Portion	0	74

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,487
Interest Portion	-	19

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	390 - 560	1,574 - 2,266

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	560	2266
Debt-Finance Global Adjustment Costs, Option 1a	390	1574
RRRP		
OESP – Enhance Benefit		162

Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**560**	**2506**
Total, B	390	1814

Proposed Program Total:	390 - 560	1,814 - 2,506

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Option 1
Option 2
Option 3

Assumes an inte

2019	2020	2021	2022
2,449	3,184	2,834	2,599
235	360	523	668

2018-19	2019-20	2020-21	2021-2022
2,372	2,633	3,096	2,775
145	266	401	559

2030.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,674	2,356	2,060	1,772
163	248	369	474

2018-19	2019-20	2020-21	2021-2022
1,632	1,844	2,282	1,988
100	184	278	395

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446
156	234	312	385

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429
95	176	254	331

2033.

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022
1,632 - 2,372	1,844 - 2,633	2,282 - 3,096	1,988 - 2,775

/1

2018-19[1]	2019-20[1]	2020-21[1]
2372	2633	3096
1632	1844	2282
225	279	323

60	60	60
18	18	18
2675	**2990**	**3497**
1935	2201	2683

1,935 - 2,675	2,201 - 2,990	2,683 - 3,497

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$21,561	$30,205	$32,799	occurs in Year 2030
$13,503	$17,883	$19,534	occurs in Year 2029
$12,862	$19,498	$20,326	occurs in Year 2033

erest rate of 5.00% (compounded monthly).

Tab Name		Total Accumulated Interest Costs
Feb14_1_30yr	$27,005	$34,278
Feb14_2_30yr	$15,940	$20,378
Feb14_3_30yr	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$27,005 to $34,278**
Option 2	$15,940 to $20,378**
Option 3	$17,202 to $22,028**

** With a higher interest rate, the amortization period extend beyond the 30-year forecast

ted period resulting in a remaining balance at the end of the 30-year period. For specifics, see details belo

w.

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,239	2,347	2,449	3,184	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,604	-1,687	-1,773	-1,864	-1,959	-2,059	-2,164	-2,275	-2,392	-2,514	-2,643	-2,778	-2,920	-3,069	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,292	2,403	2,507	3,260	2,902	2,660	2,219	3,056	2,412	1,841	2,776	2,492	1,589	1,171	-70	-117	-936	-1,643	-1,727	-1,815	-1,908	-2,005	-2,108	-2,216	-2,329	-2,448	-2,574	-2,705	-2,844	-2,989	-3,142	0	0	0
			53	56	58	76	67	62	52	71	56	43	64	58	37	27	-2	-3	-22	-38	-40	-42	-44	-47	-49	-51	-54	-57	-60	-63	-66	-69	-73	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,184	1,678	30,205
Equal Monthly Debt Drawdown	3,260	1,676	

		Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,799	2030	21,561
Equal Monthly Debt Drawdown	33,579		

Feb14 Option 1, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				26
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
a	Debt, Beginning of Year	0	2,239	4,586	7,035	10,219	13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103	31,655	32,799	32,731	32,617	31,703	30,098	28,412	26,639	24,775	22,816	20,757	18,593	16,318	13,926	11,412	8,769	5,992	3,072	2	3	3	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*115*	*235*	*360*	*523*	*668*	*801*	*912*	*1,064*	*1,185*	*1,277*	*1,416*	*1,540*	*1,620*	*1,678*	*1,675*	*1,669*	*1,622*	*1,540*	*1,454*	*1,363*	*1,268*	*1,167*	*1,062*	*951*	*835*	*712*	*584*	*449*	*307*	*157*	*0*	*0*	*0*	30,205
b	Additional GA Debt Drawdown, End of Year	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,239	4,586	7,035	10,219	13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103	31,655	32,799	32,731	32,617	31,703	30,098	28,412	26,639	24,775	22,816	20,757	18,593	16,318	13,926	11,412	8,769	5,992	3,072	2	3	3	3	
			FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,138	8,554	10,094	11,238	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	8,769	5,992	3,072	2	3	3	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,821	13,752	15,118	17,192	18,483	19,097	20,531	21,549	21,561	21,561	21,561	21,447	20,533	18,928	17,242	15,469	13,605	11,646	9,587	7,423	5,147	2,756	242	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,138	8,554	10,094	11,714	13,392	15,066	16,735	18,357	19,897	21,350	22,713	23,981	25,148	26,210	27,161	27,996	28,709	29,293	29,741	30,048	30,205				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,821	13,752	15,118	17,192	18,483	19,097	20,531	21,549	21,561	21,086	19,339	17,551	14,968	11,741	8,515	5,288	2,062	-1,164	-4,391	-7,617	-10,844	-14,070	-17,297	-20,523	-23,750	-26,976	-30,202				
Fiscal Exposure - End of Year Debt Drawdown		2,239	2,347	2,449	3,184	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,604	-1,687	-1,773	-1,864	-1,959	-2,059	-2,164	-2,275	-2,392	-2,514	-2,643	-2,778	-2,920	-3,069	0	0	0	

Feb14 Option 1, 30-yr — Equal Monthly Debt Drawdown

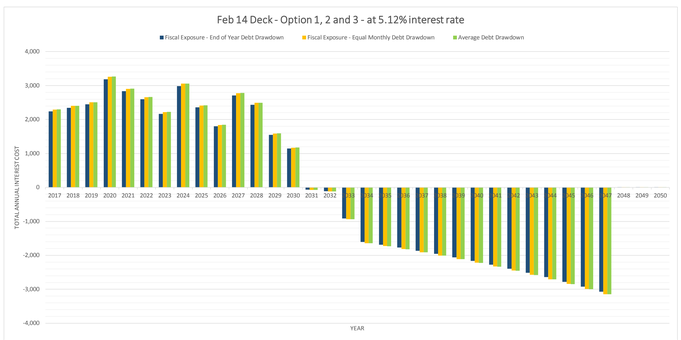
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,292	4,695	7,202	10,462	13,363	16,024	18,243	21,299	23,711	25,552	28,327	30,819	32,408	33,579	33,510	33,393	32,457	30,814	29,087	27,272	25,365	23,359	21,251	19,035	16,706	14,257	11,683	8,978	6,134	3,145	2	3	3	
1,676	*Interest Cost - Feb14 Option 1, 30-yr*	*53*	*170*	*293*	*436*	*590*	*730*	*852*	*983*	*1,120*	*1,228*	*1,341*	*1,473*	*1,577*	*1,647*	*1,676*	*1,672*	*1,647*	*1,584*	*1,500*	*1,411*	*1,319*	*1,221*	*1,118*	*1,010*	*897*	*778*	*653*	*521*	*383*	*237*	*84*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,292	4,695	7,202	10,462	13,363	16,024	18,243	21,299	23,711	25,552	28,327	30,819	32,408	33,579	33,510	33,393	32,457	30,814	29,087	27,272	25,365	23,359	21,251	19,035	16,706	14,257	11,683	8,978	6,134	3,145	2	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,292	2,403	2,507	3,260	2,902	2,660	2,219	3,056	2,412	1,841	2,776	2,492	1,589	1,171	-70	-117	-936	-1,643	-1,727	-1,815	-1,908	-2,005	-2,108	-2,216	-2,329	-2,448	-2,574	-2,705	-2,844	-2,989	-3,142	0	0	0	
	Monthly Drawdown	187	186	185	235	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	-	-	-	
	FV of Monthly Drawdown at 5%	2,292	2,285	2,267	2,891	2,366	1,977	1,399	2,123	1,322	628	1,468	1,043	12	(487)	(1,788)	(1,831)	(2,644)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	-	-	-	
	Annual Interest Cost on New Drawdowns	53	53	53	67	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	-	-	-	
	Annual Interest Cost on Opening Balance	-	117	240	368	535	684	820	933	1,090	1,213	1,307	1,449	1,577	1,658	1,718	1,714	1,708	1,661	1,577	1,488	1,395	1,298	1,195	1,087	974	855	729	598	459	314	161	0	0	0	
	Total Annual Interest Cost	53	170	293	436	590	730	852	983	1,120	1,228	1,341	1,473	1,577	1,647	1,676	1,672	1,647	1,584	1,500	1,411	1,319	1,221	1,118	1,010	897	778	653	521	383	237	84	0	0	0	

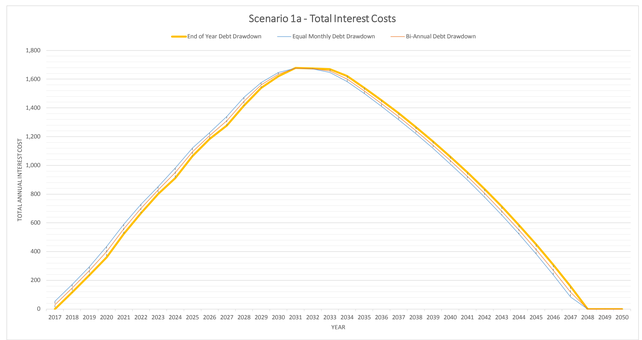
Feb14 Option 1, 30-yr — Bi-Annual Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,268	4,645	7,125	10,349	13,220	15,852	18,047	21,070	23,456	25,277	28,023	30,488	32,060	33,219	33,150	33,034	32,108	30,483	28,775	26,980	25,092	23,108	21,023	18,831	16,526	14,104	11,558	8,882	6,068	3,111	2	3	3	
	Interest Cost - Feb14 Option 1, 30-yr	*29*	*145*	*266*	*401*	*559*	*701*	*828*	*950*	*1,095*	*1,208*	*1,312*	*1,447*	*1,560*	*1,634*	*1,677*	*1,673*	*1,657*	*1,601*	*1,518*	*1,431*	*1,339*	*1,242*	*1,141*	*1,034*	*922*	*804*	*680*	*550*	*413*	*269*	*118*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,268	4,645	7,125	10,349	13,220	15,852	18,047	21,070	23,456	25,277	28,023	30,488	32,060	33,219	33,150	33,034	32,108	30,483	28,775	26,980	25,092	23,108	21,023	18,831	16,526	14,104	11,558	8,882	6,068	3,111	2	3	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,268	2,377	2,480	3,225	2,870	2,632	2,195	3,024	2,386	1,821	2,746	2,465	1,572	1,159	-69	-116	-926	-1,625	-1,708	-1,796	-1,887	-1,984	-2,085	-2,192	-2,304	-2,422	-2,546	-2,676	-2,813	-2,957	-3,109	0	0	0	
	Bi-Annual Drawdown	1,119	1,116	1,107	1,412	1,156	965	683	1,037	646	307	717	509	6	(238)	(873)	(894)	(1,291)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,268	2,261	2,243	2,860	2,341	1,955	1,384	2,100	1,308	621	1,453	1,031	12	(481)	(1,769)	(1,812)	(2,616)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	-	-	-	
	Annual Interest Cost on New Drawdowns	29	29	28	36	30	25	17	27	17	8	18	13	0	(6)	(22)	(23)	(33)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	-	-	-	
	Annual Interest Cost on Opening Balance	-	116	238	365	529	676	811	923	1,078	1,200	1,293	1,434	1,560	1,640	1,700	1,696	1,690	1,643	1,560	1,472	1,380	1,284	1,182	1,076	963	846	722	591	454	310	159	0	0	0	
	Total Annual Interest Cost	29	145	266	401	559	701	828	950	1,095	1,208	1,312	1,447	1,560	1,634	1,677	1,673	1,657	1,601	1,518	1,431	1,339	1,242	1,141	1,034	922	804	680	550	413	269	118	0	0	0	

Feb14 Option 1, 30-yr — Average Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,296	4,703	7,215	10,480	13,387	16,052	18,275	21,336	23,752	25,596	28,377	30,873	32,465	33,638	33,568	33,451	32,514	30,868	29,138	27,320	25,409	23,400	21,288	19,068	16,735	14,282	11,704	8,994	6,145	3,150	2	3	3	
	Interest Cost - Feb14 Option 1, 30-yr	*57*	*175*	*297*	*441*	*595*	*734*	*856*	*988*	*1,125*	*1,231*	*1,346*	*1,478*	*1,580*	*1,649*	*1,676*	*1,672*	*1,645*	*1,581*	*1,497*	*1,408*	*1,315*	*1,217*	*1,115*	*1,007*	*893*	*774*	*648*	*516*	*378*	*232*	*79*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,296	4,703	7,215	10,480	13,387	16,052	18,275	21,336	23,752	25,596	28,377	30,873	32,465	33,638	33,568	33,451	32,514	30,868	29,138	27,320	25,409	23,400	21,288	19,068	16,735	14,282	11,704	8,994	6,145	3,150	2	3	3	3	
Fiscal Exposure - Average Debt Drawdown		2,296	2,407	2,512	3,265	2,907	2,665	2,223	3,062	2,416	1,844	2,780	2,496	1,592	1,173	-70	-117	-937	-1,646	-1,730	-1,818	-1,911	-2,009	-2,112	-2,220	-2,333	-2,453	-2,578	-2,710	-2,849	-2,995	-3,148	0	0	0	





Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,559	1,619	1,674	2,356	2,060	1,772	1,286	2,046	1,355	733	1,578	1,228	271	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,415	-1,488	-1,564	-1,644	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0	
			37	38	40	56	49	42	31	49	32	17	38	29	6	-5	-18	-19	-19	-20	-21	-23	-24	-25	-26	-28	-29	-30	-32	-34	-35	-37	-39	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,356	999	17,883
Equal Monthly Debt Drawdown	2,412	994	

	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,534	2029	13,503
Equal Monthly Debt Drawdown	19,999		

Feb14 Option 1, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP Only																																			26
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
a — Debt, Beginning of Year	0	1,559	3,177	4,851	7,207	9,266	11,039	12,324	14,370	15,725	16,458	18,035	19,264	19,534	19,317	18,577	17,799	16,982	16,122	15,219	14,269	13,271	12,222	11,119	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1	2	2	
c = a*5% — *Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*80*	*163*	*248*	*369*	*474*	*565*	*631*	*735*	*805*	*842*	*923*	*986*	*999*	*988*	*950*	*911*	*869*	*825*	*779*	*730*	*679*	*625*	*569*	*510*	*447*	*382*	*313*	*240*	*164*	*84*	*0*	*0*	*0*	17,883
b — Additional GA Debt Drawdown, End of Year	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	1,559	3,177	4,851	7,207	9,266	11,039	12,324	14,370	15,725	16,458	18,035	19,264	19,534	19,317	18,577	17,799	16,982	16,122	15,219	14,269	13,271	12,222	11,119	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1	2	2	2	
		TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	
Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	7,818	7,078	6,300	5,483	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,697	3,210	1,646	1	2	2	2	
Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,842	12,461	12,390	13,125	13,431	12,716	11,499	11,499	11,499	11,499	11,499	10,595	9,646	8,648	7,598	6,495	5,336	4,117	2,836	1,490	0	0	0	0	0	0	0	
Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	7,818	8,806	9,757	10,667	11,536	12,361	13,140	13,870	14,549	15,174	15,743	16,252	16,700	17,081	17,394	17,634	17,798	17,883				
Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,842	12,461	12,390	13,125	13,431	12,716	11,499	9,771	8,042	6,314	4,586	2,858	1,129	-599	-2,327	-4,055	-5,784	-7,512	-9,240	-10,968	-12,696	-14,425	-16,153	-17,881				
Fiscal Exposure - End of Year Debt Drawdown	1,559	1,619	1,674	2,356	2,060	1,772	1,286	2,046	1,355	733	1,578	1,228	271	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,415	-1,488	-1,564	-1,644	0	0	0	

Feb14 Option 1, 30-yr — Equal Monthly Debt Drawdown

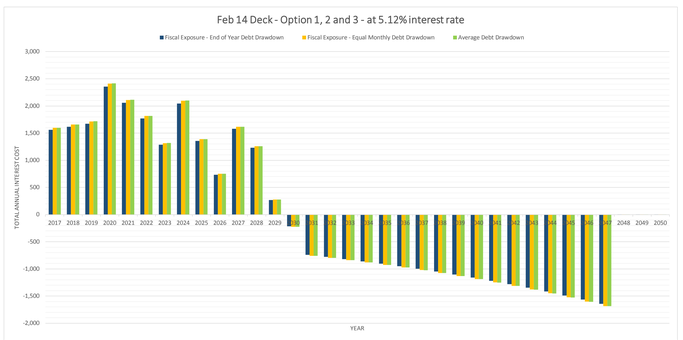
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
Option 2 - Bills Lowered 20%, RPP Only																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
Debt, Beginning of Year	0	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,019	18,223	17,385	16,506	15,581	14,609	13,587	12,512	11,383	10,196	8,948	7,637	6,258	4,809	3,286	1,685	2	2	2	
994 — *Interest Cost - Feb14 Option 1, 30-yr*	*37*	*118*	*202*	*304*	*418*	*516*	*595*	*679*	*767*	*822*	*880*	*952*	*992*	*994*	*971*	*932*	*891*	*848*	*803*	*756*	*706*	*654*	*599*	*541*	*481*	*417*	*350*	*279*	*205*	*127*	*45*	*0*	*0*	*0*	17,883
Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,019	18,223	17,385	16,506	15,581	14,609	13,587	12,512	11,383	10,196	8,948	7,637	6,258	4,809	3,286	1,685	2	2	2	2	
Fiscal Exposure - Equal Monthly Debt Drawdown	1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0	
Monthly Drawdown	130	128	126	176	141	108	60	118	52	(6)	61	25	(60)	(101)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	-	-	-	
FV of Monthly Drawdown at 5%	1,596	1,575	1,548	2,157	1,731	1,329	738	1,449	635	(74)	753	313	(732)	(1,246)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	-	-	-	
Annual Interest Cost on New Drawdowns	37	37	36	50	40	31	17	34	15	(2)	17	7	(17)	(29)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	-	-	-	
Annual Interest Cost on Opening Balance	-	82	166	254	377	485	578	646	753	824	862	945	1,009	1,023	1,012	973	932	889	844	797	747	695	640	582	522	458	391	320	246	168	86	0	0	0	
Total Annual Interest Cost	37	118	202	304	418	516	595	679	767	822	880	952	992	994	971	932	891	848	803	756	706	654	599	541	481	417	350	279	205	127	45	0	0	0	

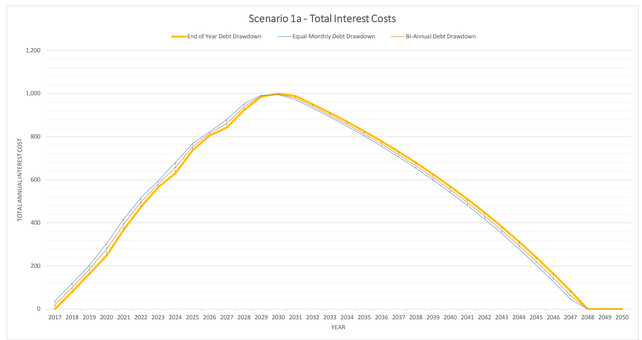
Feb14 Option 1, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
Option 2 - Bills Lowered 20%, RPP Only																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
Debt, Beginning of Year	0	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,815	18,027	17,199	16,328	15,413	14,452	13,441	12,378	11,261	10,087	8,852	7,555	6,191	4,758	3,251	1,667	1	2	2	
Interest Cost - Feb14 Option 1, 30-yr	*20*	*100*	*184*	*278*	*395*	*497*	*581*	*657*	*753*	*814*	*862*	*938*	*989*	*997*	*979*	*940*	*900*	*858*	*813*	*766*	*717*	*666*	*611*	*554*	*494*	*431*	*364*	*295*	*221*	*144*	*63*	*0*	*0*	*0*	17,883
Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,815	18,027	17,199	16,328	15,413	14,452	13,441	12,378	11,261	10,087	8,852	7,555	6,191	4,758	3,251	1,667	1	2	2	2	
Fiscal Exposure - Bi-Annual Debt Drawdown	1,579	1,639	1,696	2,386	2,086	1,795	1,302	2,072	1,372	742	1,598	1,244	274	-220	-749	-788	-828	-870	-915	-962	-1,011	-1,063	-1,117	-1,174	-1,234	-1,297	-1,364	-1,434	-1,507	-1,584	-1,665	0	0	0	
Bi-Annual Drawdown	779	769	756	1,054	845	649	361	708	310	(36)	368	153	(358)	(608)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	-	-	-	
FV of Bi-Annual Drawdown at 5%	1,579	1,558	1,531	2,134	1,713	1,315	730	1,433	628	(73)	745	310	(724)	(1,232)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	-	-	-	
Annual Interest Cost on New Drawdowns	20	20	19	27	22	17	9	18	8	(1)	9	4	(9)	(16)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	-	-	-	
Annual Interest Cost on Opening Balance	-	81	165	251	373	480	572	639	745	815	853	935	998	1,012	1,001	963	922	880	835	789	739	688	633	576	516	453	387	317	243	166	85	0	0	0	
Total Annual Interest Cost	20	100	184	278	395	497	581	657	753	814	862	938	989	997	979	940	900	858	813	766	717	666	611	554	494	431	364	295	221	144	63	0	0	0	

Feb14 Option 1, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP Only																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
Debt, Beginning of Year	0	1,599	3,258	4,975	7,391	9,504	11,321	12,640	14,738	16,128	16,879	18,497	19,757	20,034	19,811	19,052	18,254	17,416	16,535	15,608	14,634	13,610	12,534	11,403	10,214	8,964	7,650	6,269	4,818	3,292	1,688	2	2	2	
Interest Cost - Feb14 Option 1, 30-yr	*40*	*121*	*205*	*308*	*421*	*519*	*598*	*683*	*770*	*823*	*882*	*954*	*992*	*994*	*969*	*931*	*890*	*847*	*802*	*754*	*704*	*652*	*597*	*539*	*478*	*414*	*347*	*277*	*202*	*124*	*42*	*0*	*0*	*0*	17,883
Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,599	3,258	4,975	7,391	9,504	11,321	12,640	14,738	16,128	16,879	18,497	19,757	20,034	19,811	19,052	18,254	17,416	16,535	15,608	14,634	13,610	12,534	11,403	10,214	8,964	7,650	6,269	4,818	3,292	1,688	2	2	2	2	
Fiscal Exposure - Average Debt Drawdown	1,599	1,660	1,717	2,416	2,112	1,817	1,319	2,098	1,390	751	1,618	1,260	277	-223	-759	-798	-839	-881	-927	-974	-1,024	-1,076	-1,131	-1,189	-1,250	-1,314	-1,381	-1,452	-1,526	-1,604	-1,686	0	0	0	





Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_3_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	
			34	38	36	36	34	34	35	36	36	35	35	34	23	16	12	7	0	-14	-29	-36	-38	-42	-39	-36	-34	-32	-27	-18	-6	-1	0	3	3	3	142

		Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	1,606		1,040	19,498
Equal Monthly Debt Drawdown	1,644		1,040	

	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	20,326	2033	12,862
Equal Monthly Debt Drawdown	20,809		

Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
a	Debt, Beginning of Year	0	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*74*	*156*	*234*	*312*	*385*	*459*	*534*	*612*	*690*	*766*	*842*	*915*	*964*	*999*	*1,024*	*1,039*	*1,040*	*1,011*	*949*	*872*	*791*	*701*	*617*	*540*	*468*	*400*	*341*	*303*	*290*	*288*	*288*	*293*	*299*	19,498
b	Additional GA Debt Drawdown, End of Year	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,430	7,736	7,749	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,577	12,577	12,577	12,577	11,371	9,872	8,285	6,516	4,884	3,378	1,966	633	-506	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,943	8,967	10,006	11,046	12,057	13,006	13,878	14,669	15,370	15,987	16,527	16,995	17,395	17,736	18,040	18,330	18,618				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,064	11,345	10,319	8,710	6,493	4,045	1,586	-974	-3,307	-5,431	-7,383	-9,184	-10,721	-11,807	-12,362	-12,696	-12,994				
Fiscal Exposure - End of Year Debt Drawdown		1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	

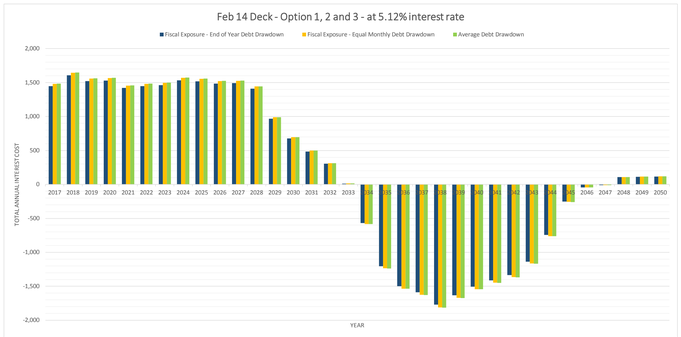
Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	
1,040	*Interest Cost - Feb14 Option 1, 30-yr*	*34*	*112*	*192*	*270*	*346*	*420*	*494*	*570*	*649*	*726*	*802*	*876*	*938*	*980*	*1,010*	*1,031*	*1,040*	*1,026*	*982*	*913*	*835*	*749*	*662*	*581*	*507*	*436*	*373*	*324*	*297*	*289*	*288*	*290*	*296*	*302*	19,640
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	6,102	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	

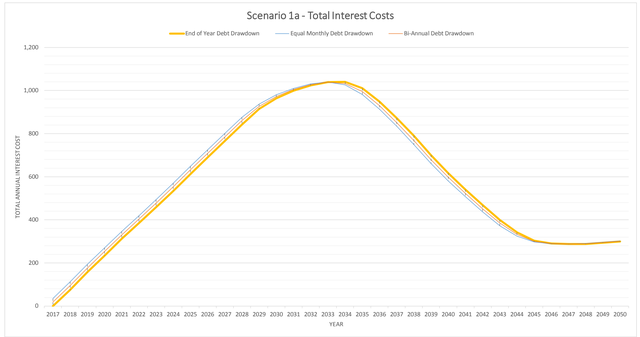
	Monthly Drawdown	121	128	114	108	93	88	84	83	76	66	60	47	4	(24)	(43)	(60)	(85)	(134)	(185)	(204)	(205)	(213)	(194)	(177)	(163)	(150)	(128)	(90)	(46)	(28)	(25)	(15)	(15)	(15)	
	FV of Monthly Drawdown at 5%	1,482	1,568	1,398	1,326	1,137	1,086	1,028	1,024	929	815	742	580	54	(292)	(525)	(736)	(1,050)	(1,648)	(2,269)	(2,506)	(2,517)	(2,621)	(2,389)	(2,174)	(1,999)	(1,844)	(1,574)	(1,111)	(568)	(342)	(306)	(185)	(184)	(188)	
	Annual Interest Cost on New Drawdowns	34	36	32	31	26	25	24	24	22	19	17	13	1	(7)	(12)	(17)	(24)	(38)	(53)	(58)	(58)	(61)	(55)	(51)	(46)	(43)	(37)	(26)	(13)	(8)	(7)	(4)	(4)	(4)	
	Annual Interest Cost on Opening Balance	-	76	160	240	320	394	470	547	627	707	784	863	936	987	1,023	1,048	1,064	1,065	1,035	972	893	810	717	632	553	479	409	350	311	297	295	295	300	306	
	Total Annual Interest Cost	34	112	192	270	346	420	494	570	649	726	802	876	938	980	1,010	1,031	1,040	1,026	982	913	835	749	662	581	507	436	373	324	297	289	288	290	296	302	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	
	Interest Cost - Feb14 Option 1, 30-yr	*19*	*95*	*176*	*254*	*331*	*404*	*478*	*554*	*632*	*709*	*785*	*861*	*927*	*973*	*1,005*	*1,028*	*1,039*	*1,033*	*995*	*930*	*852*	*769*	*680*	*598*	*522*	*451*	*385*	*332*	*300*	*290*	*288*	*289*	*295*	*301*	19,575
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	6,037	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,466	1,626	1,541	1,549	1,441	1,465	1,482	1,554	1,539	1,505	1,510	1,427	979	687	492	309	13	-577	-1,221	-1,518	-1,607	-1,792	-1,653	-1,525	-1,430	-1,350	-1,153	-753	-255	-44	-10	109	115	117	

	Bi-Annual Drawdown	724	766	683	648	555	530	502	500	454	398	363	283	26	(143)	(256)	(359)	(513)	(805)	(1,108)	(1,224)	(1,229)	(1,280)	(1,167)	(1,062)	(976)	(900)	(769)	(543)	(278)	(167)	(149)	(90)	(90)	(92)	
	FV of Bi-Annual Drawdown at 5%	1,466	1,551	1,383	1,312	1,125	1,075	1,017	1,013	919	806	735	573	53	(289)	(519)	(728)	(1,039)	(1,630)	(2,245)	(2,479)	(2,490)	(2,593)	(2,363)	(2,150)	(1,977)	(1,824)	(1,557)	(1,099)	(562)	(338)	(302)	(183)	(182)	(186)	
	Annual Interest Cost on New Drawdowns	19	20	17	17	14	14	13	13	12	10	9	7	1	(4)	(7)	(9)	(13)	(21)	(28)	(31)	(31)	(33)	(30)	(27)	(25)	(23)	(20)	(14)	(7)	(4)	(4)	(2)	(2)	(2)	
	Annual Interest Cost on Opening Balance	-	75	158	237	316	390	465	541	620	699	776	853	926	976	1,012	1,037	1,053	1,053	1,024	961	884	801	710	625	547	474	405	346	307	294	292	291	297	303	
	Total Annual Interest Cost	19	95	176	254	331	404	478	554	632	709	785	861	927	973	1,005	1,028	1,039	1,033	995	930	852	769	680	598	522	451	385	332	300	290	288	289	295	301	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	
	Interest Cost - Feb14 Option 1, 30-yr	*37*	*115*	*195*	*273*	*349*	*422*	*497*	*573*	*651*	*728*	*804*	*879*	*939*	*981*	*1,011*	*1,031*	*1,040*	*1,025*	*980*	*911*	*832*	*746*	*659*	*579*	*504*	*434*	*371*	*322*	*297*	*289*	*288*	*290*	*296*	*302*	19,651
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	6,113	
Fiscal Exposure - Average Debt Drawdown		1,484	1,647	1,561	1,569	1,459	1,483	1,500	1,573	1,559	1,524	1,530	1,445	992	696	498	313	14	-585	-1,237	-1,537	-1,627	-1,814	-1,674	-1,545	-1,448	-1,367	-1,167	-763	-258	-44	-10	110	116	119	





Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest ra

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest ra

IESO GA cost forecast + extrapolation

Scenario
Option 1

Option 2

ate	2017	2018	2019	2020
ate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	2200	4600	7000	10200

Total Accumulated Debt ($ billion)	2.2	4.6	7	10.2
	2,200	4,600	7,000	10,200

Total Accumulated Debt ($ billion)	1.6	3.2	4.9	7.2
	1,600	3,200	4,900	7,200

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
13100	15700	17800	20800	23200	25000	27700	30100

13.1 15.7 17.8 20.8 23.2 25 27.7 30.1
13,100 15,700 17,800 20,800 23,200 25,000 27,700 30,100

9.3 11 12.3 14.4 15.7 16.5 18 19.3
9,300 11,000 12,300 14,400 15,700 16,500 18,000 19,300

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
31700	32800	32700	32600	31700	30100	28400	26600

31.7	32.8	32.7	32.6	31.7	30.1	28.4	26.6
31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600

19.5	19.3	18.6	17.8	17	16.1	15.2	14.3
19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
24800	22800	20800	18600	16300	13900	11400	8800

24.8	22.8	20.8	18.6	16.3	13.9	11.4	8.8
24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800

13.3	12.2	11.1	10	8.7	7.5	6.1	4.7
13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	2046	2047	2048	2049	2050
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
6000	3100	0	0	0	0

6 3.1 0 0
6,000 3,100 - -

3.2 1.6 0 0
3,200 1,600 - -

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb9_1_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,200	2,400

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	550	2,250

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $33 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb9_2_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,600	1,600

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	400	1,600

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,169	4,668

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	545	2,203

Actuals are subject to actual prices and actual interest rates.

#N/A

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542

Fiscalized[3]	2016-17	2017-18
Start: January 1st	375	1,510

Actuals are subject to actual prices and actual interest rates.

#N/A

Rough		
	1	
	2	
	3	
	4 April	4
	5 May	5
	6 June	6
	7 July	7
	8 August	8
	9 September	9
	10 October	10
	11 November	11
	12 December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	400 - 550	1,600 - 2,250

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	550	2250
Debt-Finance Global Adjustment Costs, Option 1a	400	1600
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**550**	**2490**
Total, B	400	1840
Proposed Program Total:	400 - 550	1,840 - 2,490

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1
Scenario 2

2019	2020	2021	2022
2,400	3,200	2,900	2,600

2018-19	2019-20	2020-21	2021-2022
2,400	2,600	3,125	2,825

2030.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,700	2,300	2,100	1,700

2018-19	2019-20	2020-21	2021-2022
1,625	1,850	2,250	2,000

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
4,589	5,867	5,031	4,861

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988

› depend on decision on accounting treatment.

2019	2020	2021	2022
2,353	3,072	2,817	2,580

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757

2019	2020	2021	2022
1,578	2,243	1,931	1,635

2018-19	2019-20	2020-21	2021-2022
1,551	1,745	2,165	1,857



2018-19	2019-20	2020-21	2021-2022
1,625 - 2,400	1,850 - 2,600	2,250 - 3,125	2,000 - 2,825

/1

2018-19[1]	2019-20[1]	2020-21[1]
2400	2600	3125
1625	1850	2250
225	279	323
60	60	60
18	18	18
2703	**2957**	**3526**
1928	2207	2651

1,928 - 2,703 2,207 - 2,957 2,651 - 3,526

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
21,601	30,211	32,800	occurs in Year 2030
13,466	17,886	19,500	occurs in Year 2029
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!

2,200

Tab Name
Feb9_1_30yr
Feb9_2_30yr

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Feb9_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0	
			52	57	57	76	69	62	50	71	57	43	64	57	38	26	-2	-2	-21	-38	-40	-43	-43	-48	-48	-52	-55	-57	-59	-62	-67	-69	-74	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,200	1,678	30,211
Equal Monthly Debt Drawdown	3,276	1,676	

		Feb9 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,800	2030	21,601	
Equal Monthly Debt Drawdown	33,580			

Feb9 1, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
a	Debt, Beginning of Year	0	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	
c = a*5%	*Interest Cost - Feb9 1, 30-yr - End of Year Debt Drowdown*	*0*	*113*	*235*	*358*	*522*	*670*	*803*	*911*	*1,064*	*1,187*	*1,279*	*1,417*	*1,540*	*1,622*	*1,678*	*1,673*	*1,668*	*1,622*	*1,540*	*1,453*	*1,361*	*1,269*	*1,166*	*1,064*	*952*	*834*	*711*	*583*	*450*	*307*	*159*	*0*	*0*	*0*	30,211
b	Additional GA Debt Drawdown, End of Year	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	0
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	11,621	11,521	10,621	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	8,800	6,000	3,100	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	21,079	21,079	21,079	21,079	19,379	17,579	15,779	13,779	11,779	9,579	7,279	4,879	2,379	0	0	0	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	13,399	15,072	16,740	18,362	19,902	21,355	22,716	23,985	25,151	26,215	27,167	28,001	28,712	29,295	29,746	30,052	30,211				
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	19,301	17,528	14,960	11,738	8,498	5,245	2,084	-1,185	-4,351	-7,615	-10,867	-14,101	-17,312	-20,495	-23,746	-26,952	-30,211				
Fiscal Exposure - End of Year Debt Drawdown		2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0	

Feb9 1, 30-yr — Equal Monthly Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	
1,676	*Interest Cost - Feb9 1, 30-yr*	*52*	*170*	*292*	*434*	*591*	*732*	*853*	*982*	*1,121*	*1,230*	*1,343*	*1,474*	*1,578*	*1,648*	*1,676*	*1,671*	*1,646*	*1,584*	*1,500*	*1,410*	*1,318*	*1,221*	*1,119*	*1,012*	*897*	*777*	*652*	*521*	*384*	*238*	*85*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0	
	Monthly Drawdown	183	191	180	237	198	161	108	174	111	51	118	82	5	(43)	(148)	(148)	(214)	(268)	(270)	(271)	(263)	(272)	(264)	(272)	(271)	(269)	(268)	(265)	(271)	(267)	(272)	-	-	-	
	FV of Monthly Drawdown at 5%	2,252	2,342	2,216	2,909	2,435	1,976	1,328	2,139	1,368	628	1,455	1,006	61	(534)	(1,820)	(1,815)	(2,629)	(3,298)	(3,317)	(3,330)	(3,236)	(3,347)	(3,242)	(3,342)	(3,329)	(3,311)	(3,288)	(3,259)	(3,328)	(3,283)	(3,336)	-	-	-	
	Annual Interest Cost on New Drawdowns	52	54	51	68	57	46	31	50	32	15	34	23	1	(12)	(42)	(42)	(61)	(77)	(77)	(77)	(75)	(78)	(75)	(78)	(77)	(76)	(76)	(76)	(77)	(76)	(78)	-	-	-	
	Annual Interest Cost on Opening Balance	-	115	241	367	534	686	822	932	1,089	1,215	1,309	1,451	1,577	1,660	1,718	1,713	1,708	1,660	1,577	1,488	1,393	1,299	1,194	1,089	974	854	728	597	461	314	162	(0)	(0)	(0)	
	Total Annual Interest Cost	52	170	292	434	591	732	853	982	1,121	1,230	1,343	1,474	1,578	1,648	1,676	1,671	1,646	1,584	1,500	1,410	1,318	1,221	1,119	1,012	897	777	652	521	384	238	85	(0)	(0)	(0)	

Feb9 1, 30-yr — Bi-Annual Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*28*	*143*	*266*	*399*	*559*	*703*	*830*	*949*	*1,095*	*1,210*	*1,314*	*1,448*	*1,560*	*1,636*	*1,677*	*1,672*	*1,656*	*1,601*	*1,518*	*1,430*	*1,338*	*1,243*	*1,141*	*1,036*	*922*	*803*	*679*	*550*	*414*	*270*	*119*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,228	2,431	2,431	3,241	2,937	2,633	2,127	3,038	2,431	1,823	2,735	2,431	1,620	1,114	-101	-101	-912	-1,620	-1,722	-1,823	-1,823	-2,026	-2,026	-2,228	-2,329	-2,431	-2,532	-2,633	-2,836	-2,937	-3,140	0	0	0	
	Bi-Annual Drawdown	1,100	1,144	1,082	1,421	1,189	965	648	1,045	668	307	710	491	30	(261)	(889)	(886)	(1,284)	(1,611)	(1,620)	(1,626)	(1,580)	(1,634)	(1,583)	(1,632)	(1,626)	(1,617)	(1,606)	(1,592)	(1,625)	(1,603)	(1,629)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,228	2,317	2,192	2,878	2,409	1,954	1,313	2,116	1,353	621	1,439	995	61	(529)	(1,801)	(1,796)	(2,601)	(3,263)	(3,281)	(3,295)	(3,201)	(3,311)	(3,207)	(3,306)	(3,293)	(3,275)	(3,252)	(3,224)	(3,292)	(3,248)	(3,300)	-	-	-	
	Annual Interest Cost on New Drawdowns	28	29	28	36	30	25	17	27	17	8	18	13	1	(7)	(23)	(23)	(33)	(41)	(41)	(42)	(40)	(42)	(41)	(42)	(42)	(41)	(41)	(41)	(42)	(41)	(42)	-	-	-	
	Annual Interest Cost on Opening Balance	-	114	238	363	529	679	814	922	1,078	1,202	1,295	1,435	1,560	1,643	1,700	1,694	1,689	1,643	1,560	1,472	1,378	1,285	1,181	1,078	964	845	720	591	456	311	161	0	0	0	
	Total Annual Interest Cost	28	143	266	399	559	703	830	949	1,095	1,210	1,314	1,448	1,560	1,636	1,677	1,672	1,656	1,601	1,518	1,430	1,338	1,243	1,141	1,036	922	803	679	550	414	270	119	0	0	0	

Feb9 1, 30-yr — Average Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*56*	*174*	*297*	*440*	*596*	*737*	*857*	*987*	*1,126*	*1,233*	*1,348*	*1,479*	*1,581*	*1,650*	*1,676*	*1,670*	*1,645*	*1,581*	*1,496*	*1,407*	*1,315*	*1,218*	*1,115*	*1,008*	*893*	*773*	*647*	*517*	*379*	*233*	*79*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		2,256	2,461	2,461	3,282	2,974	2,667	2,154	3,077	2,461	1,846	2,769	2,461	1,641	1,128	-103	-103	-923	-1,641	-1,743	-1,846	-1,846	-2,051	-2,051	-2,256	-2,359	-2,461	-2,564	-2,667	-2,872	-2,974	-3,179	0	0	0	

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Feb9_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0
			38	38	40	55	50	40	31	50	31	19	36	31	5	-5	-17	-19	-19	-21	-21	-21	-24	-26	-26	-26	-31	-29	-33	-33	-36	-38	-38	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,300	998	17,886
Equal Monthly Debt Drawdown	2,355	993	

	Feb9 2, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,500	2029	13,466
Equal Monthly Debt Drawdown	19,964		

Feb9 2, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
a	Debt, Beginning of Year	0	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	
c = a*5%	*Interest Cost - Feb9 2, 30-yr - End of Year Debt Drowdown*	*0*	*82*	*164*	*251*	*368*	*476*	*563*	*629*	*737*	*803*	*844*	*921*	*987*	*998*	*987*	*952*	*911*	*870*	*824*	*778*	*732*	*680*	*624*	*568*	*512*	*445*	*384*	*312*	*240*	*164*	*82*	*0*	*0*	*0*	17,886
b	Additional GA Debt Drawdown, End of Year	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	7,123	6,323	5,523	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,700	3,200	1,600	0	0	0	
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	11,477	11,477	11,477	11,477	10,577	9,677	8,677	7,577	6,477	5,377	4,077	2,877	1,477	0	0	0	0	0	0	0	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	8,810	9,762	10,672	11,542	12,366	13,143	13,875	14,556	15,180	15,748	16,259	16,704	17,088	17,400	17,641	17,804	17,886				
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	9,790	8,038	6,328	4,558	2,834	1,157	-575	-2,356	-4,080	-5,748	-7,559	-9,204	-10,988	-12,700	-14,441	-16,204	-17,886				
Fiscal Exposure - End of Year Debt Drawdown		1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0	

Feb9 2, 30-yr — Equal Monthly Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	
993	*Interest Cost - Feb9 2, 30-yr*	*38*	*120*	*204*	*305*	*418*	*516*	*594*	*679*	*768*	*822*	*880*	*952*	*992*	*993*	*971*	*933*	*892*	*848*	*802*	*756*	*708*	*654*	*598*	*542*	*481*	*417*	*350*	*279*	*205*	*126*	*44*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0	
	Monthly Drawdown	133	127	128	171	144	102	61	123	47	(0)	55	32	(66)	(100)	(141)	(146)	(143)	(147)	(144)	(140)	(144)	(148)	(144)	(139)	(151)	(137)	(149)	(143)	(145)	(147)	(140)	-	-	-	
	FV of Monthly Drawdown at 5%	1,638	1,554	1,573	2,098	1,773	1,253	755	1,506	577	(3)	671	388	(806)	(1,226)	(1,728)	(1,793)	(1,751)	(1,812)	(1,765)	(1,718)	(1,773)	(1,823)	(1,765)	(1,708)	(1,855)	(1,684)	(1,826)	(1,753)	(1,782)	(1,806)	(1,722)	-	-	-	
	Annual Interest Cost on New Drawdowns	38	36	37	49	41	29	18	35	13	(0)	16	9	(19)	(28)	(40)	(42)	(41)	(42)	(41)	(40)	(41)	(42)	(41)	(40)	(43)	(39)	(42)	(41)	(41)	(42)	(40)	-	-	-	
	Annual Interest Cost on Opening Balance	-	84	168	257	377	487	576	644	754	822	864	943	1,011	1,021	1,011	974	932	890	843	796	749	697	639	581	524	456	393	320	246	168	84	0	0	0	
	Total Annual Interest Cost	38	120	204	305	418	516	594	679	768	822	880	952	992	993	971	933	892	848	802	756	708	654	598	542	481	417	350	279	205	126	44	0	0	0	

Feb9 2, 30-yr — Bi-Annual Debt Drawdown

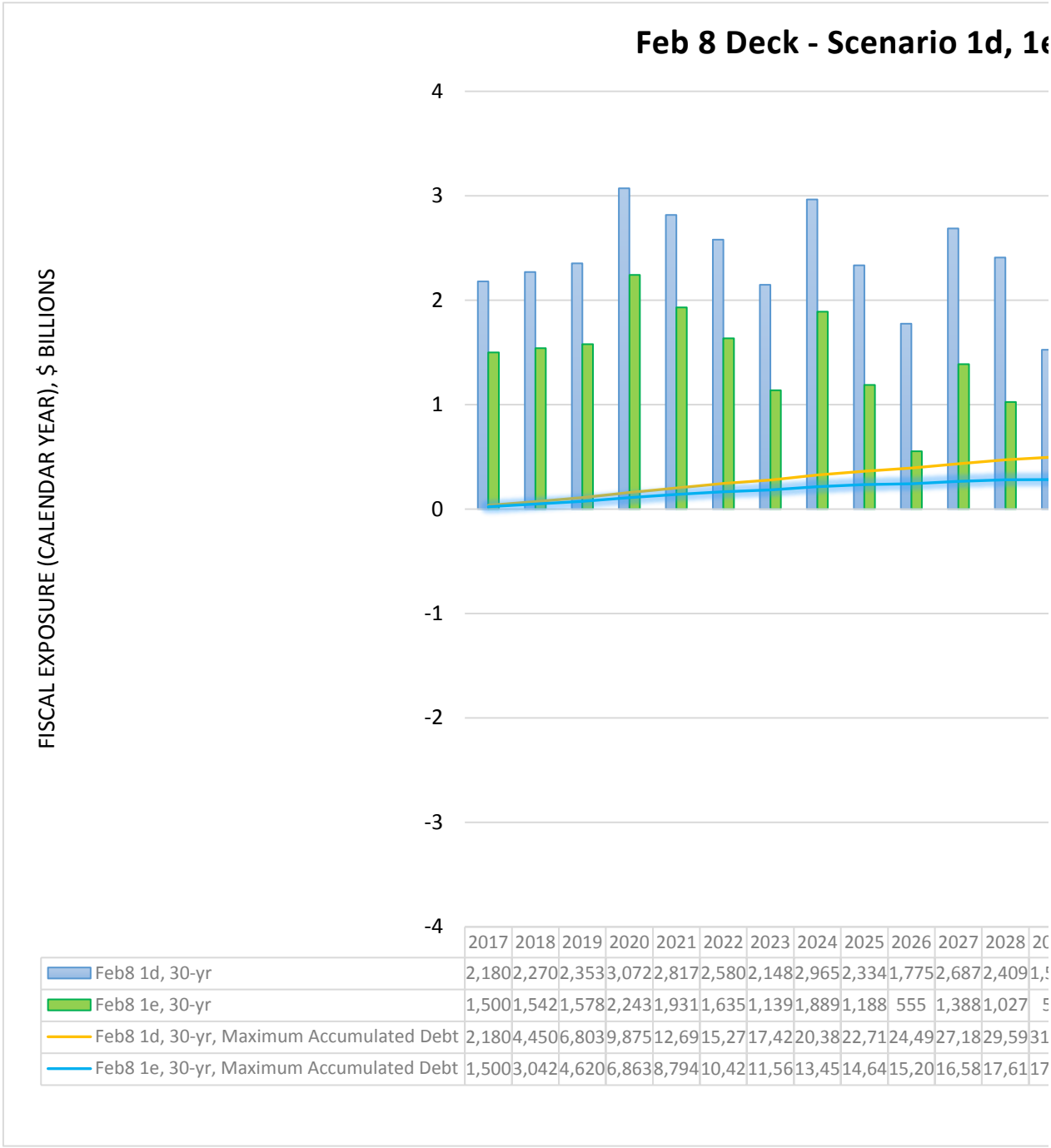
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*20*	*102*	*185*	*280*	*395*	*498*	*579*	*656*	*753*	*813*	*863*	*938*	*990*	*995*	*978*	*941*	*900*	*858*	*812*	*766*	*719*	*666*	*610*	*554*	*495*	*430*	*366*	*294*	*221*	*143*	*61*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,620	1,620	1,722	2,329	2,127	1,722	1,317	2,127	1,317	810	1,519	1,317	203	-203	-709	-810	-810	-912	-912	-912	-1,013	-1,114	-1,114	-1,114	-1,317	-1,215	-1,418	-1,418	-1,519	-1,620	-1,620	0	0	0	
	Bi-Annual Drawdown	800	759	768	1,025	866	612	369	735	282	(2)	328	190	(394)	(599)	(844)	(876)	(855)	(885)	(862)	(839)	(866)	(890)	(862)	(834)	(906)	(823)	(892)	(856)	(870)	(882)	(841)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,620	1,538	1,556	2,076	1,754	1,240	747	1,490	570	(3)	664	384	(797)	(1,213)	(1,709)	(1,774)	(1,733)	(1,792)	(1,746)	(1,699)	(1,754)	(1,803)	(1,746)	(1,689)	(1,835)	(1,666)	(1,807)	(1,734)	(1,763)	(1,786)	(1,703)	-	-	-	
	Annual Interest Cost on New Drawdowns	20	19	20	26	22	16	9	19	7	(0)	8	5	(10)	(15)	(22)	(22)	(22)	(23)	(22)	(21)	(22)	(23)	(22)	(21)	(23)	(21)	(23)	(22)	(22)	(23)	(22)	-	-	-	
	Annual Interest Cost on Opening Balance	-	83	166	254	373	482	570	637	746	814	855	933	1,000	1,010	1,000	964	922	881	834	788	741	689	632	575	518	451	389	316	244	166	83	0	0	0	
	Total Annual Interest Cost	20	102	185	280	395	498	579	656	753	813	863	938	990	995	978	941	900	858	812	766	719	666	610	554	495	430	366	294	221	143	61	0	0	0	

Feb9 2, 30-yr — Average Debt Drawdown

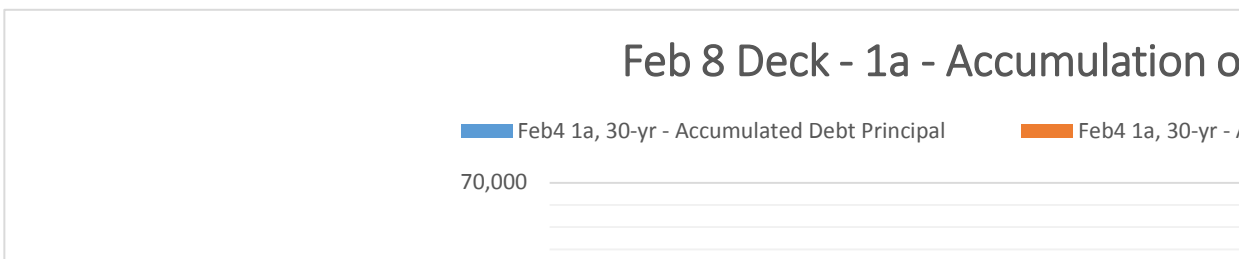
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*41*	*123*	*207*	*310*	*422*	*519*	*596*	*683*	*770*	*824*	*883*	*954*	*993*	*993*	*970*	*931*	*890*	*847*	*801*	*755*	*706*	*652*	*596*	*540*	*478*	*414*	*348*	*276*	*202*	*123*	*41*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,641	1,641	1,743	2,359	2,154	1,743	1,333	2,154	1,333	820	1,538	1,333	205	-205	-718	-820	-820	-923	-923	-923	-1,026	-1,128	-1,128	-1,128	-1,333	-1,231	-1,436	-1,436	-1,538	-1,641	-1,641	0	0	0	

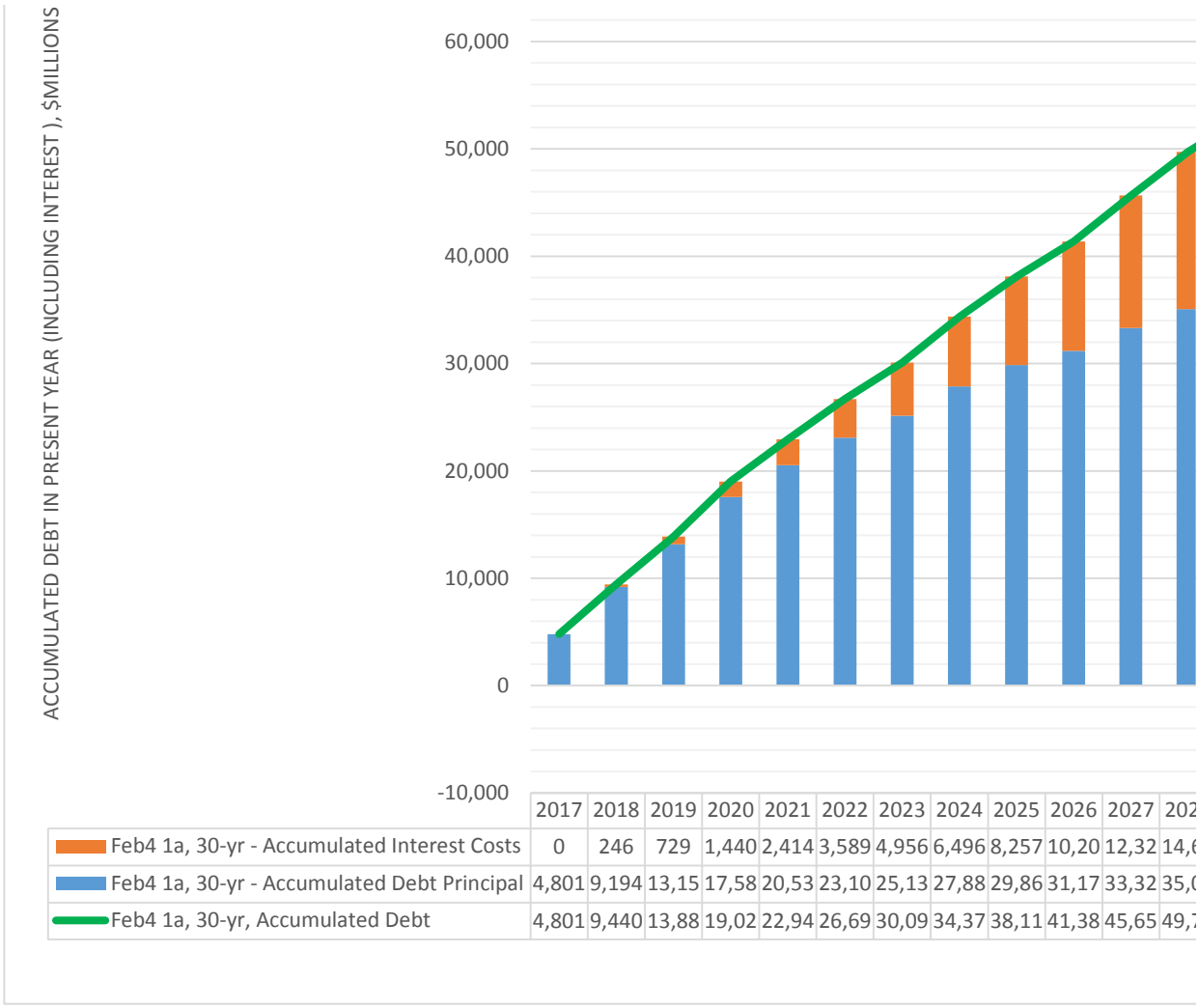
Feb 8 Deck

Feb 8 Deck - Scenario 1d, 1e - at 5.12% interest rate

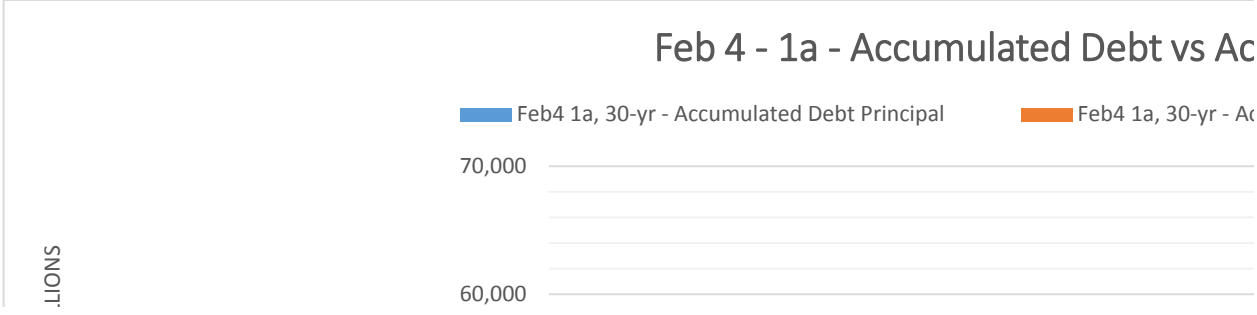


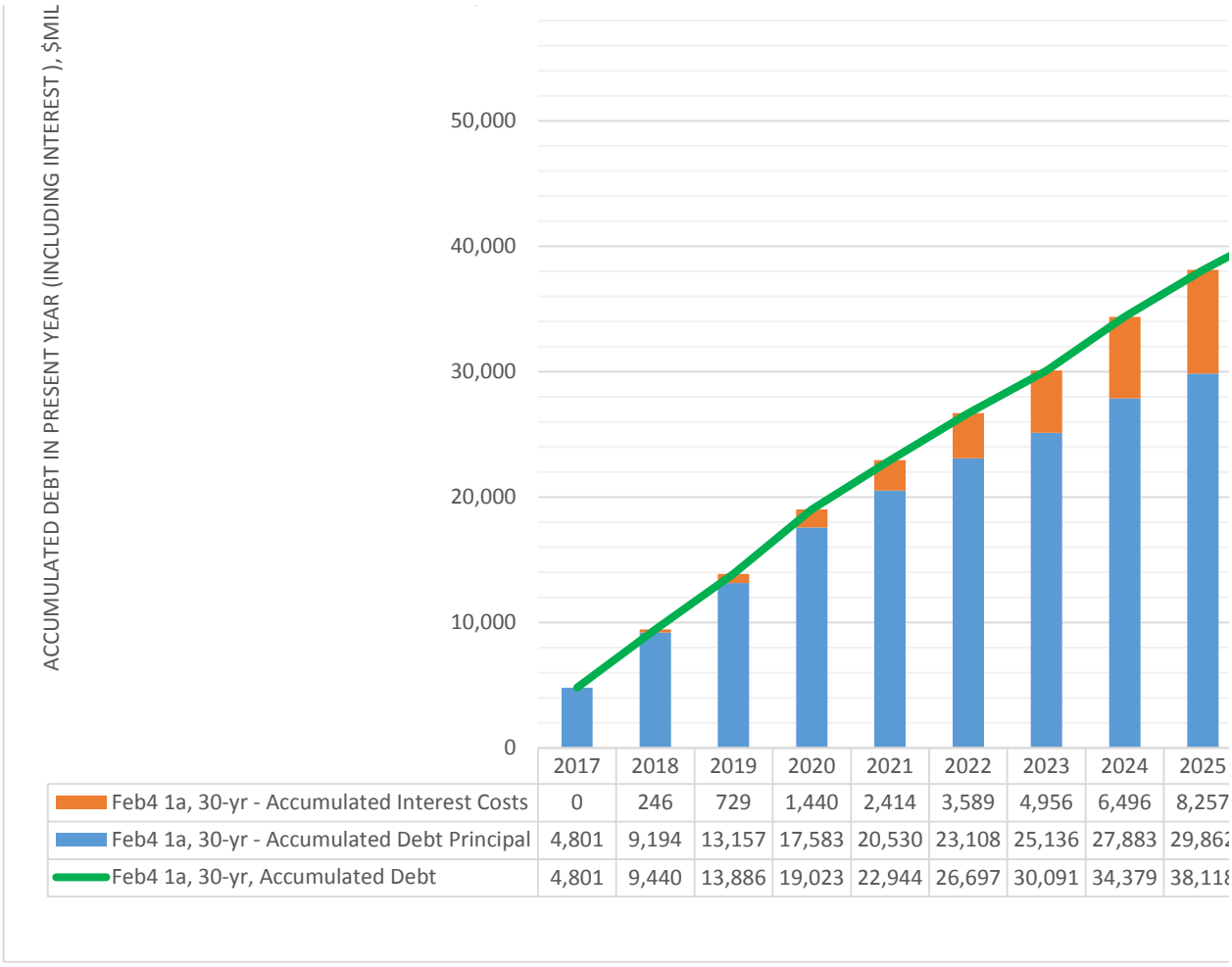
Feb 8 Deck - 1a - Accumulation of Debt (Principal and Interest)



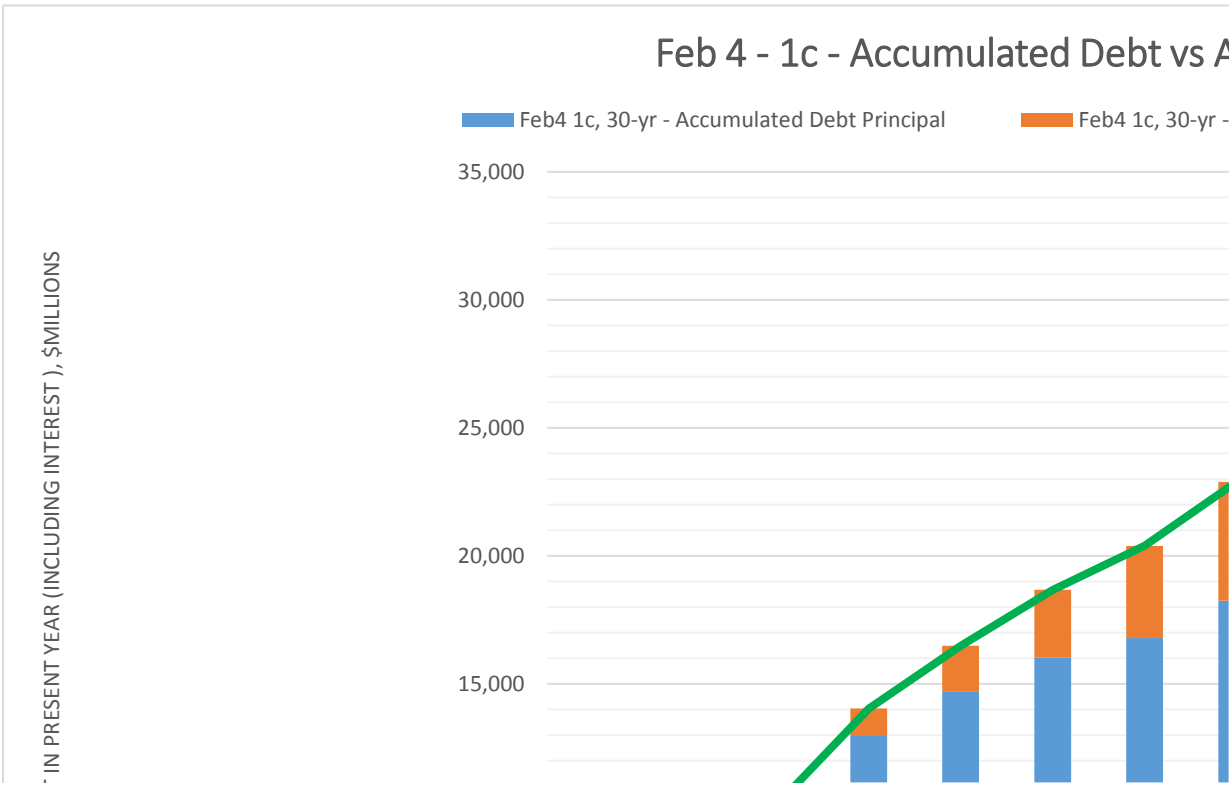


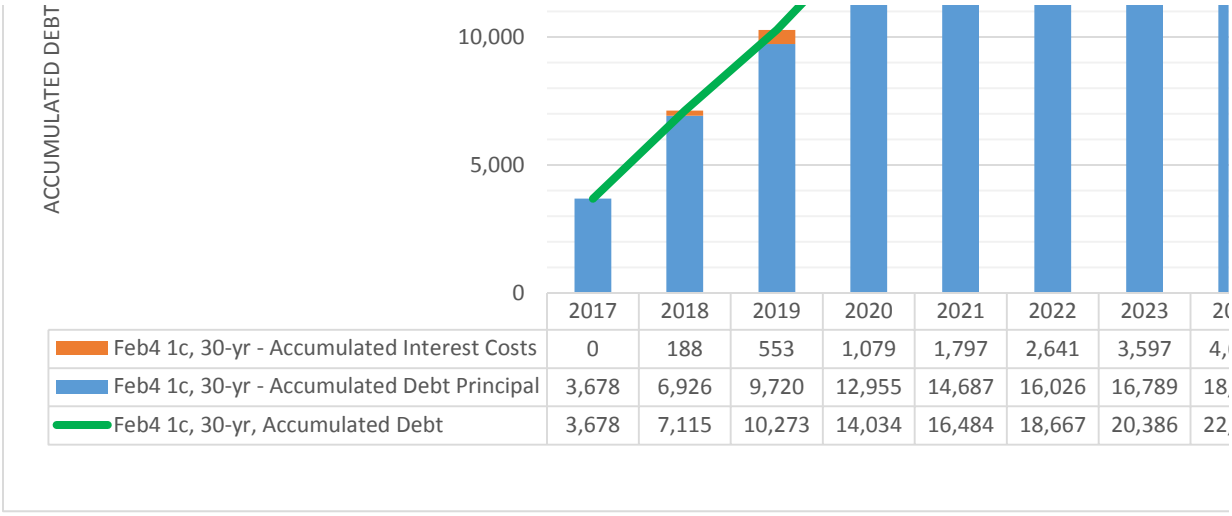
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	202
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,(
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,7



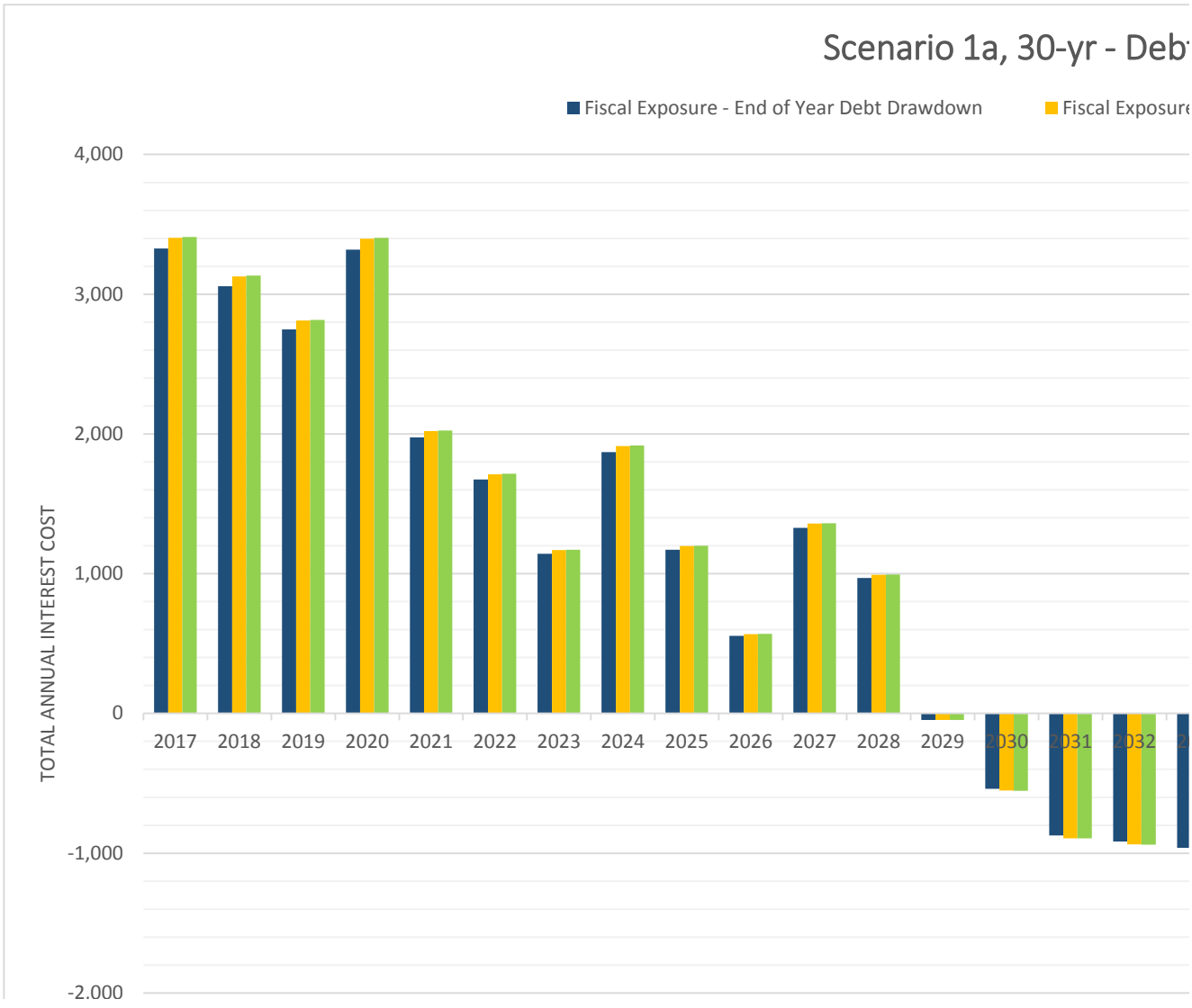


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



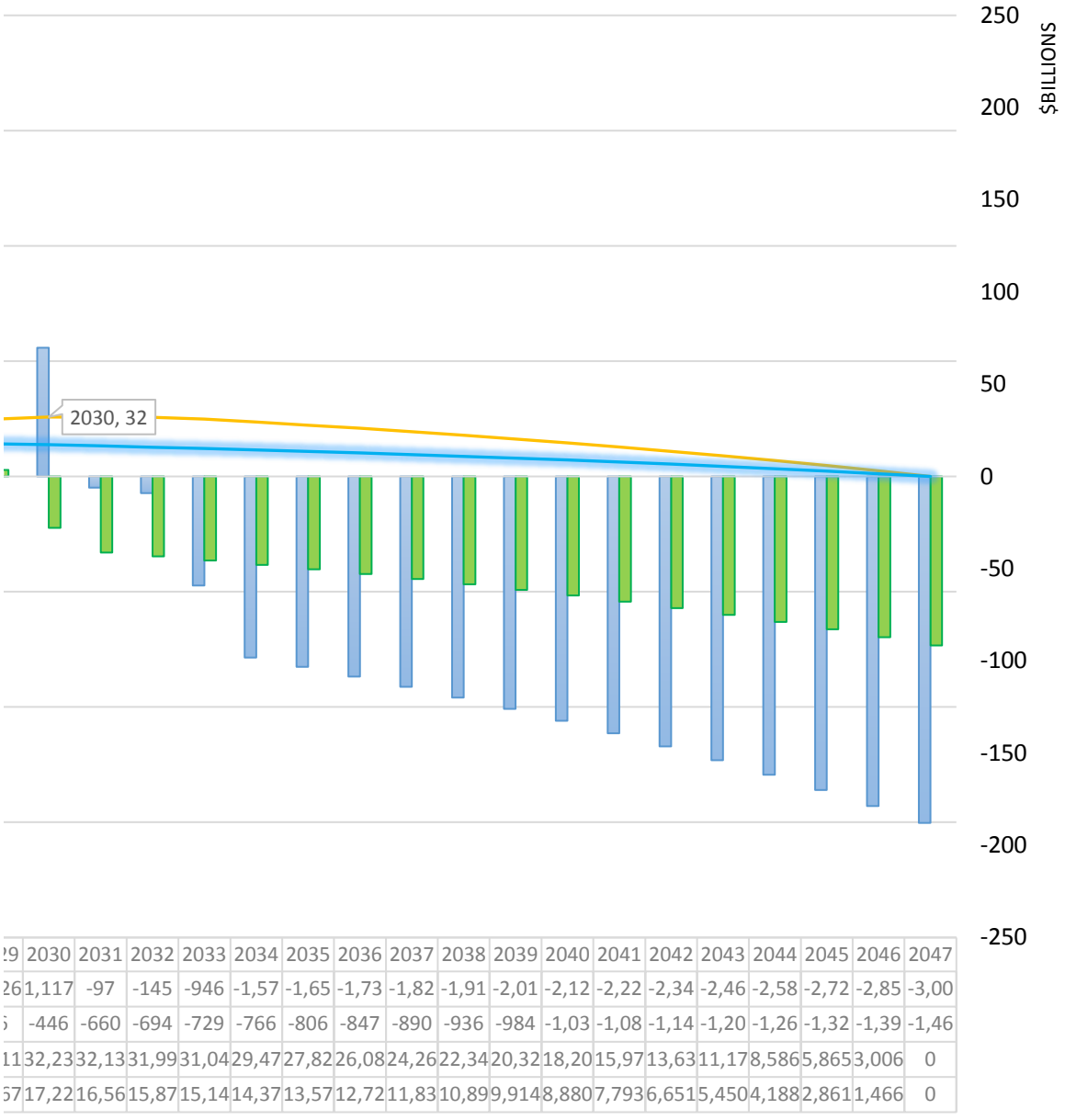


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

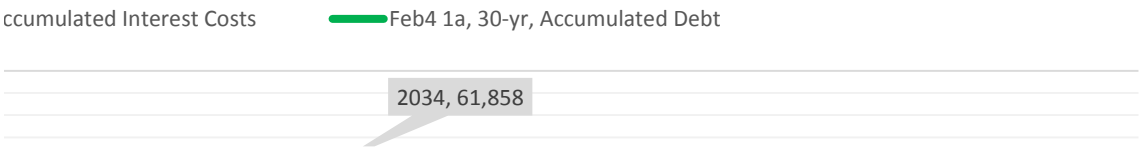
- at 5.12% interest rate

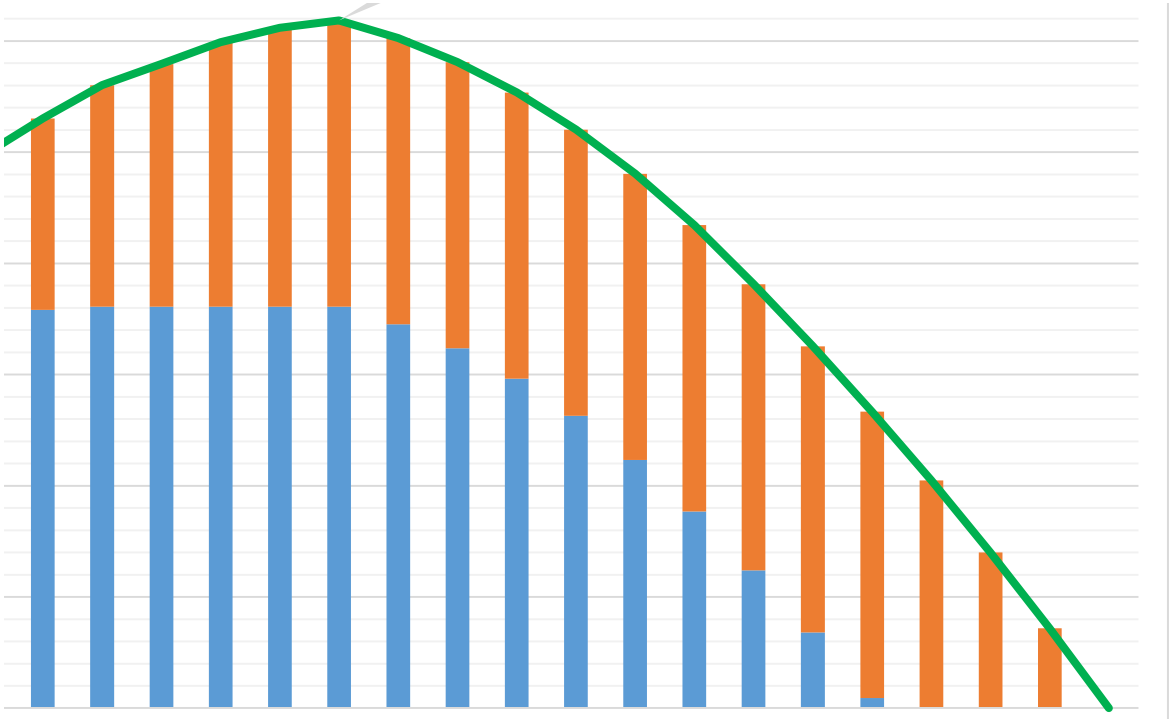


29	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
26	1,117	-97	-145	-946	-1,57	-1,65	-1,73	-1,82	-1,91	-2,01	-2,12	-2,22	-2,34	-2,46	-2,58	-2,72	-2,85	-3,00
5	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,03	-1,08	-1,14	-1,20	-1,26	-1,32	-1,39	-1,46
11	32,23	32,13	31,99	31,04	29,47	27,82	26,08	24,26	22,34	20,32	18,20	15,97	13,63	11,17	8,586	5,865	3,006	0
57	17,22	16,56	15,87	15,14	14,37	13,57	12,72	11,83	10,89	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0

CALENDAR YEAR

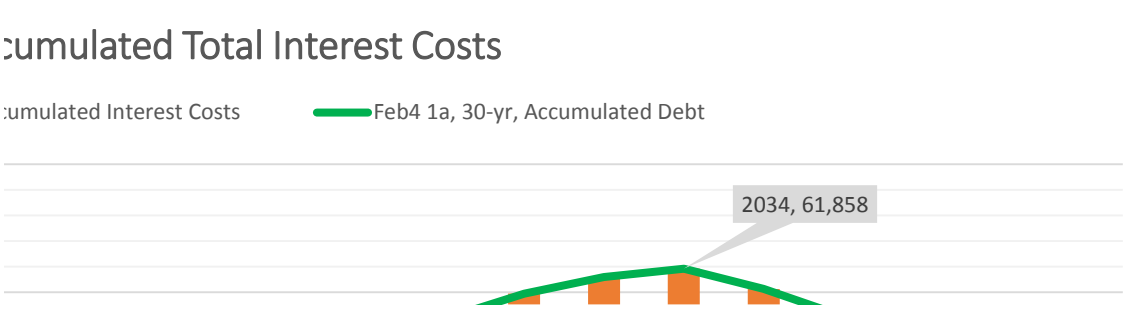
Debt (Principal and Interest)



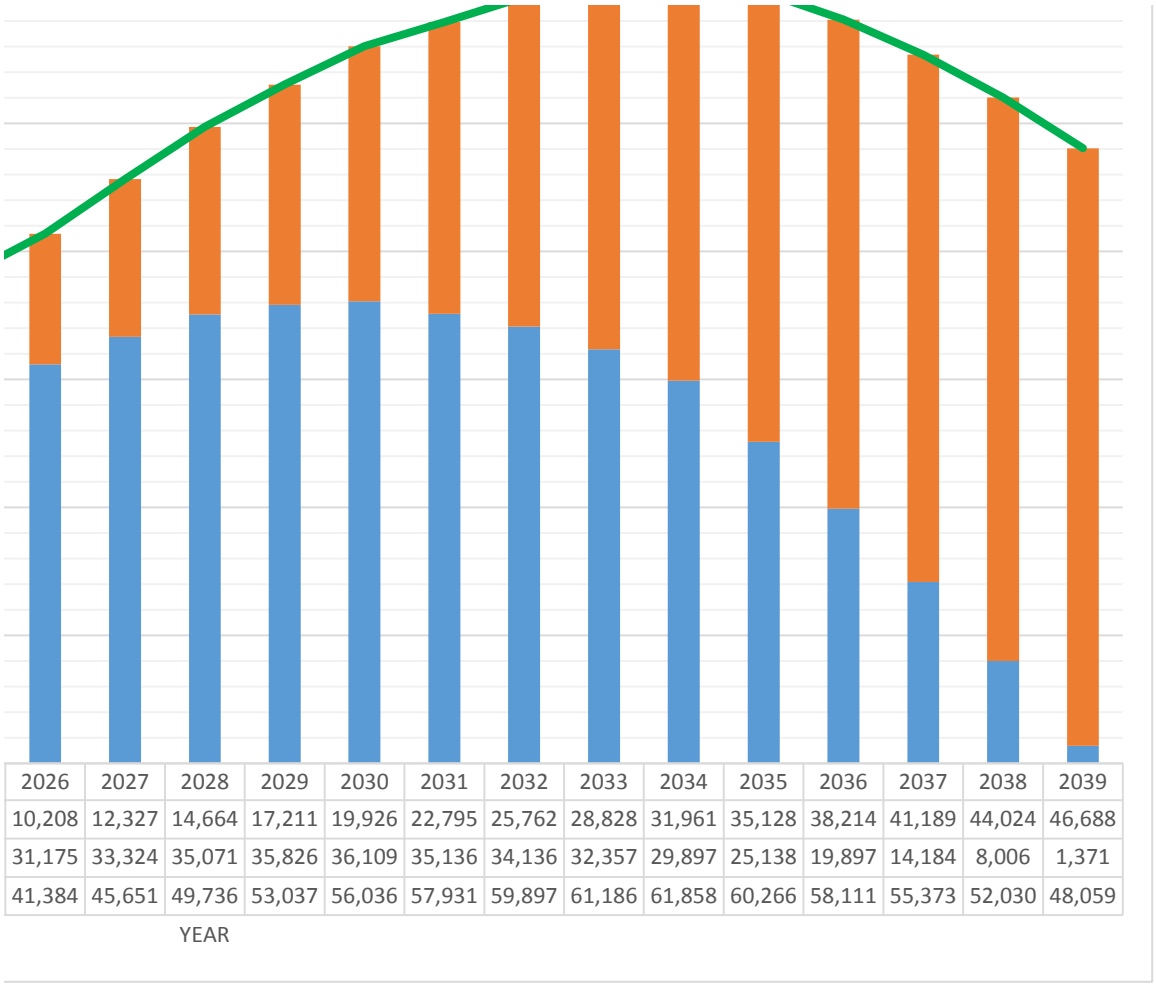


	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
5	17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
7	35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
3	53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



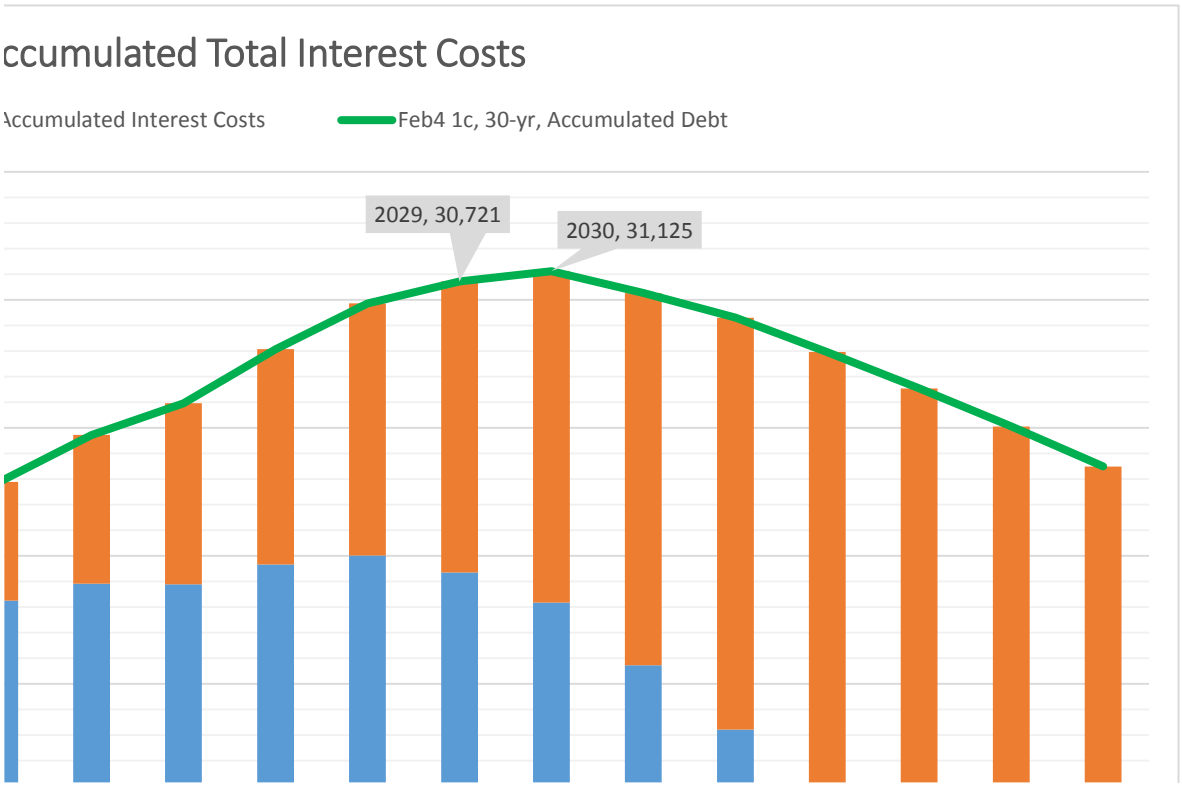
LIONS

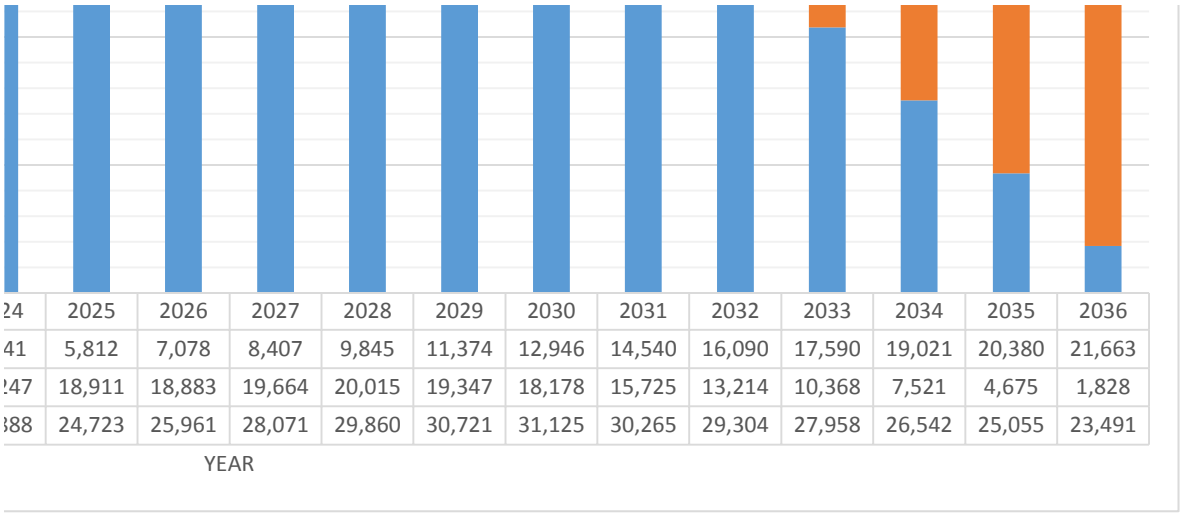


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

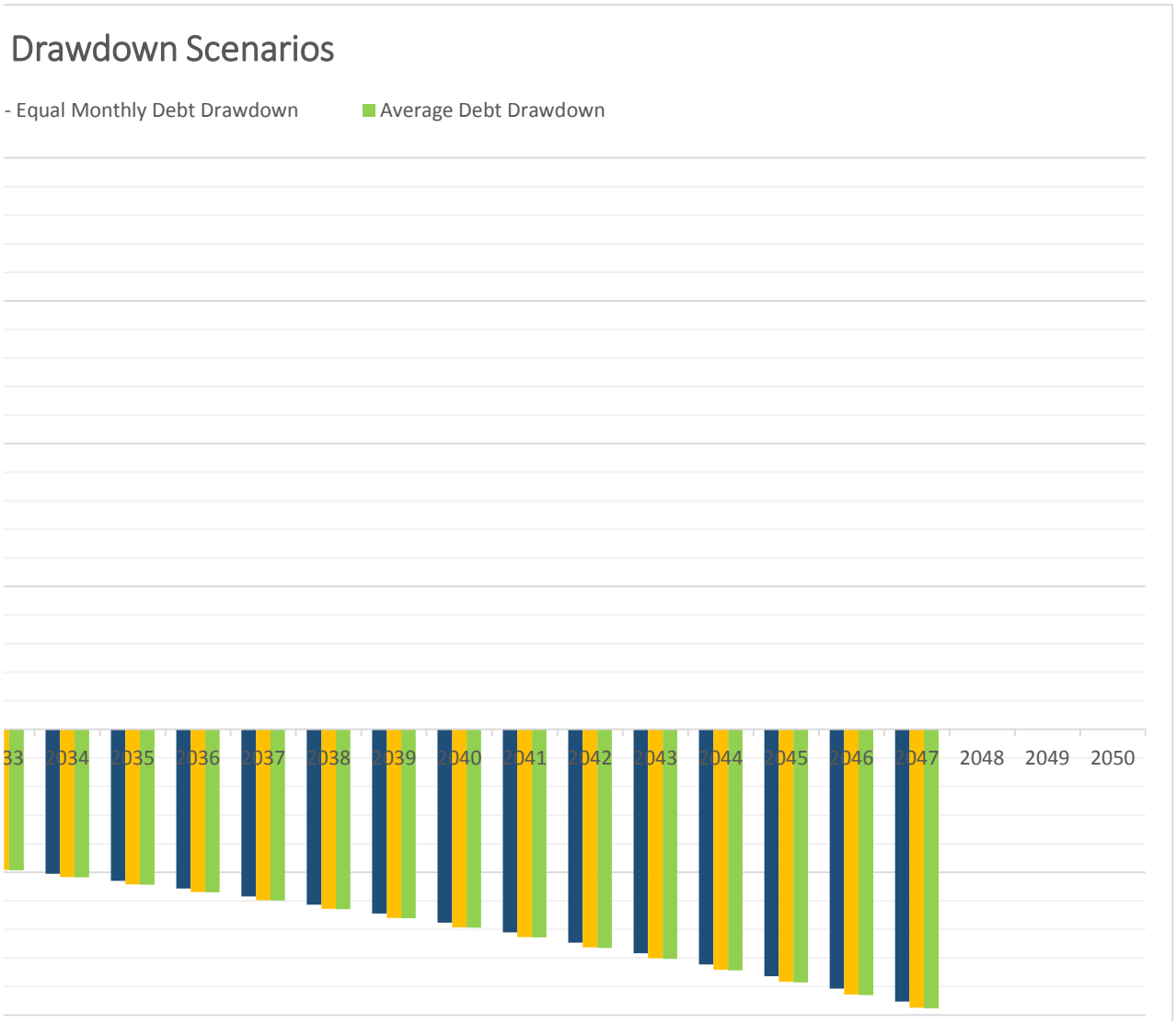
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





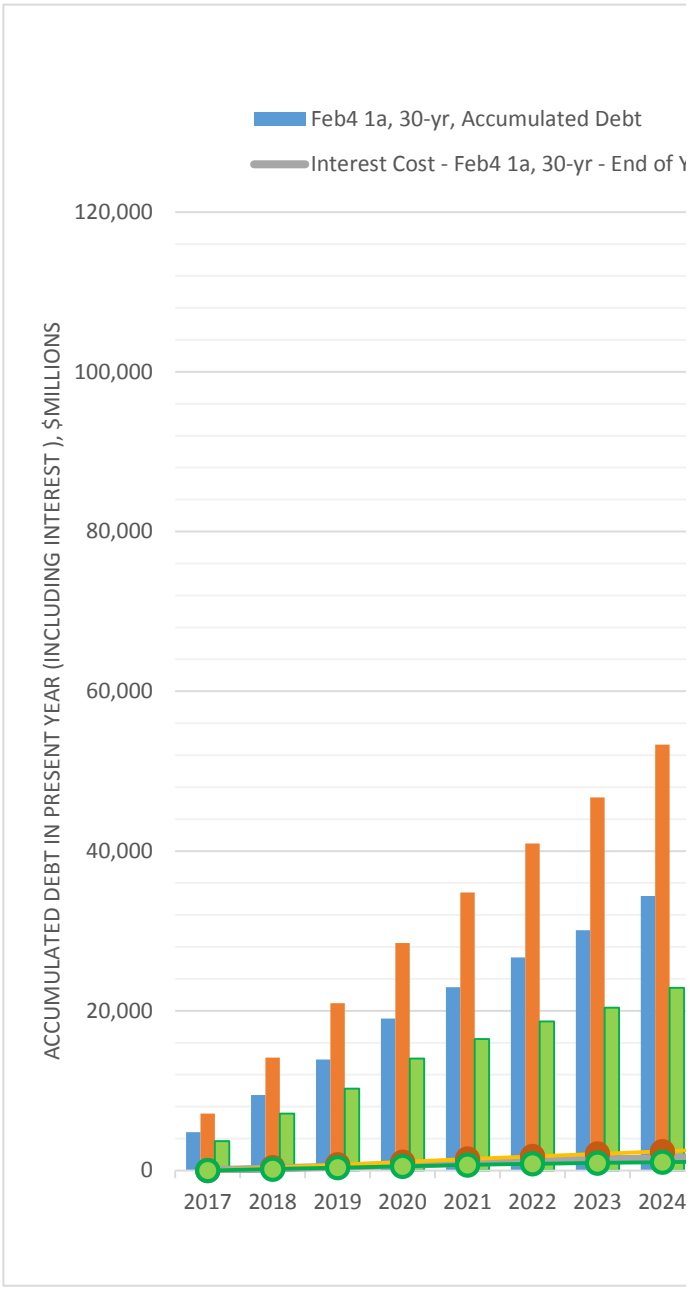
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

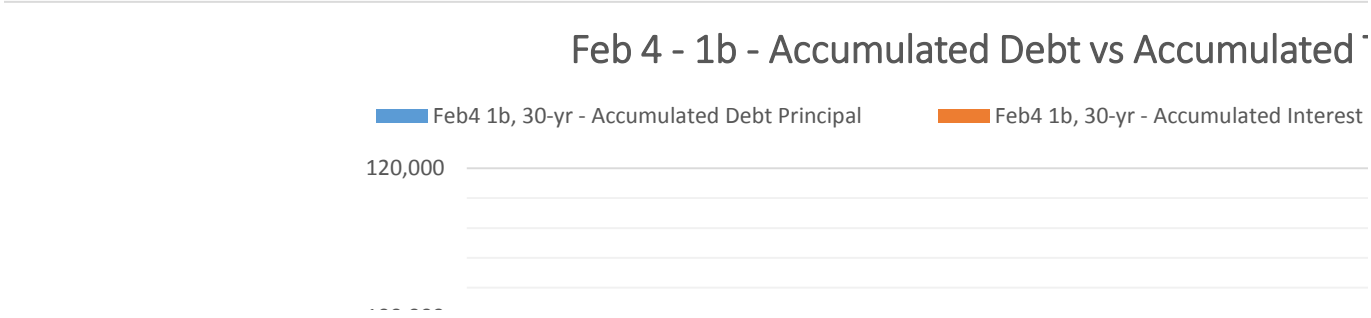
YEAR

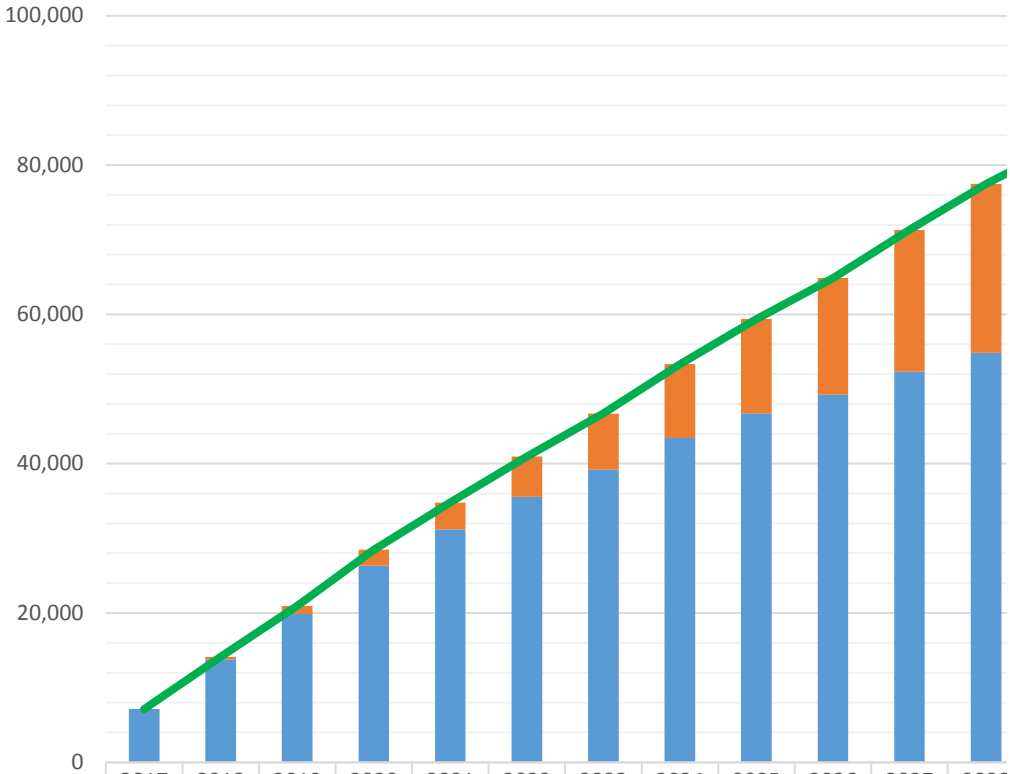


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate

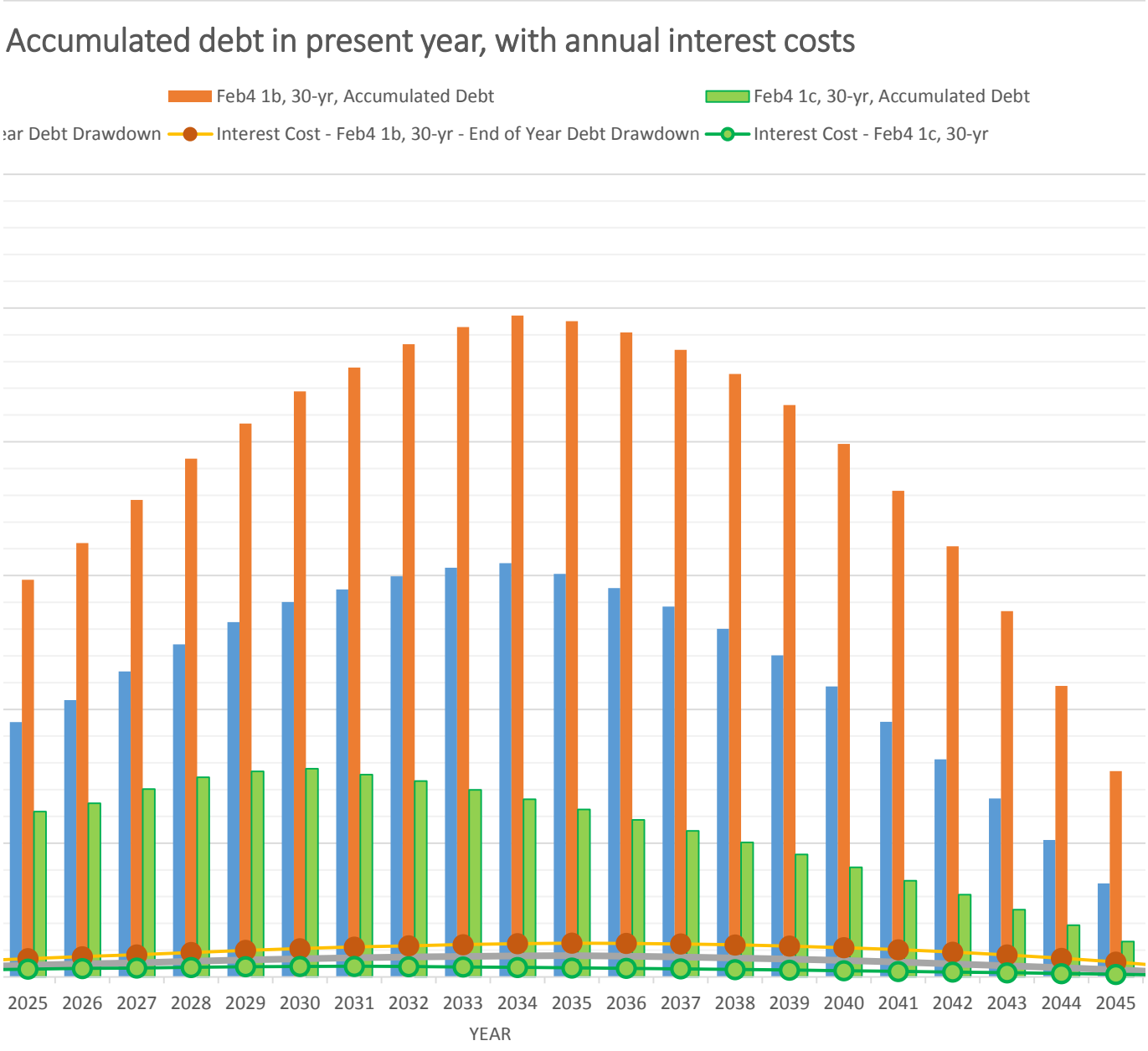


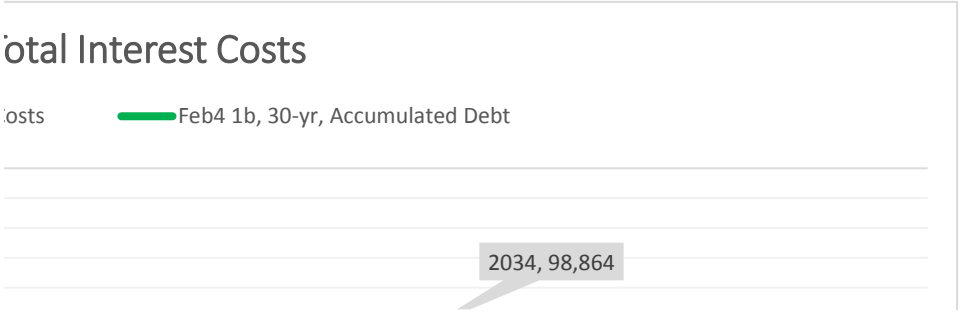

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

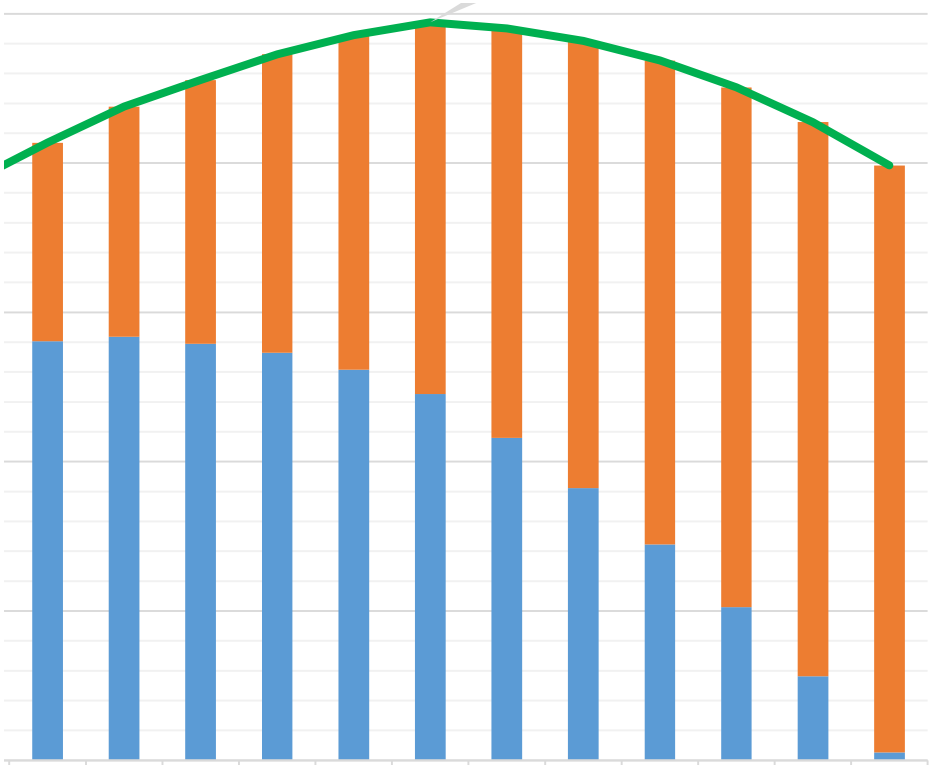


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y

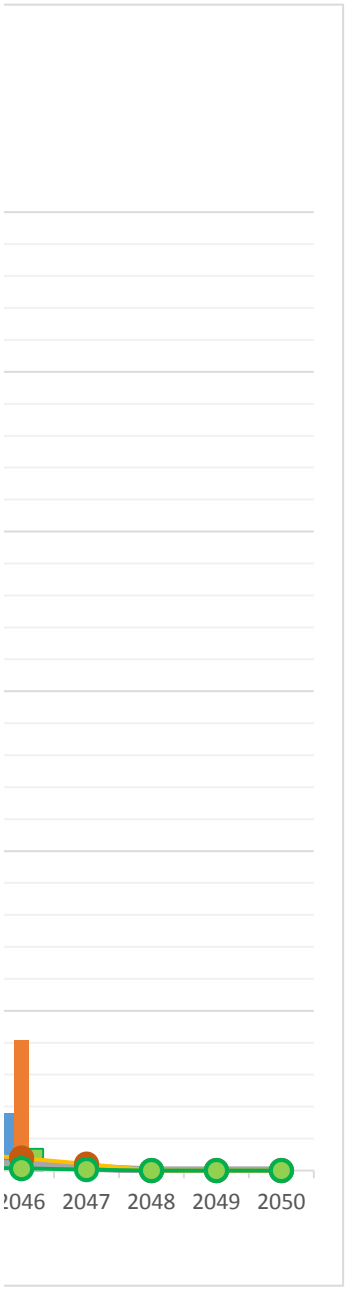

Accumulated debt in present year, with annual interest costs
Feb4 1b, 30-yr, Accumulated Debt
Feb4 1c, 30-yr, Accumulated Debt
ear Debt Drawdown
Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown
Interest Cost - Feb4 1c, 30-yr
2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045
YEAR


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

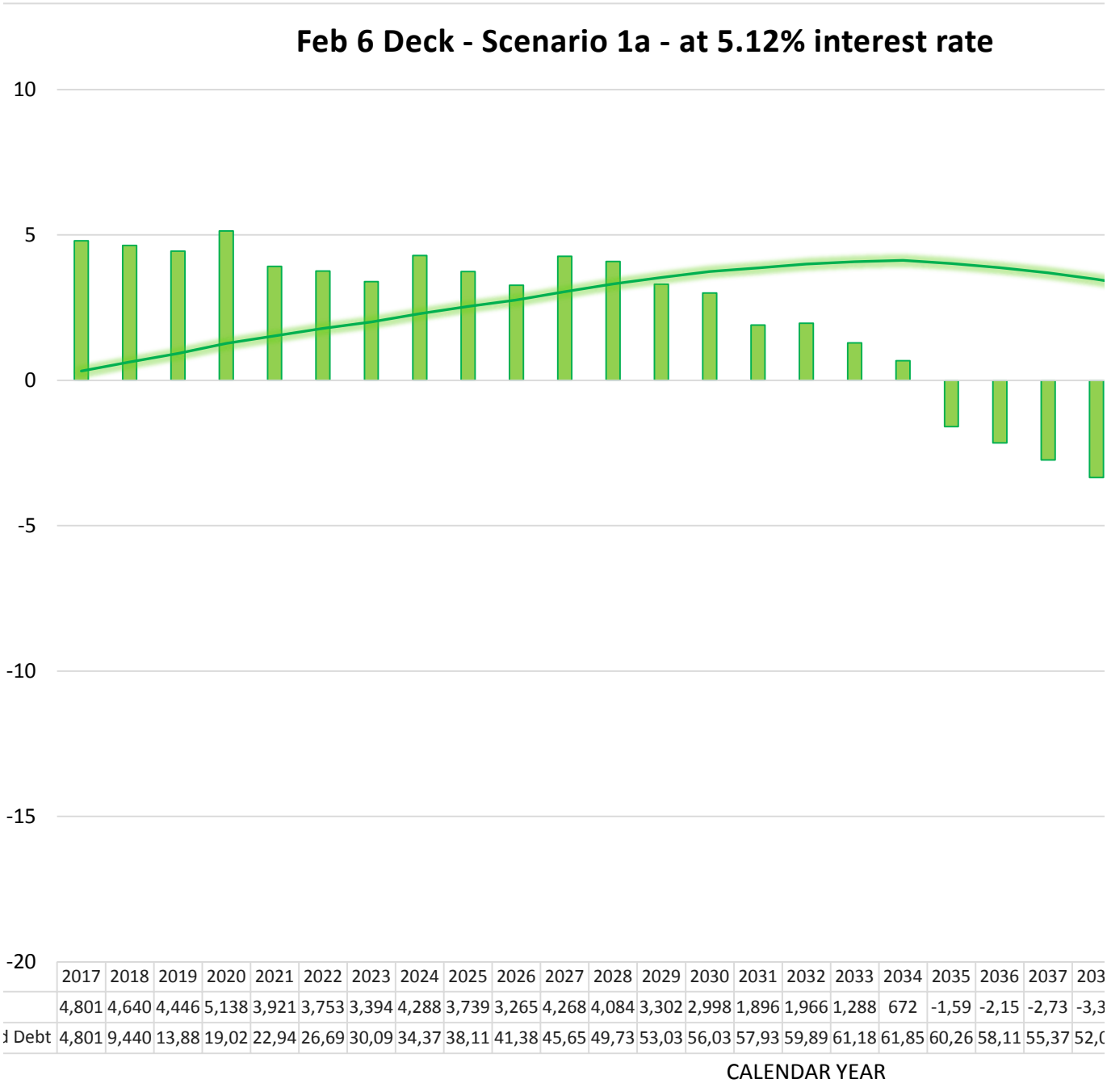
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

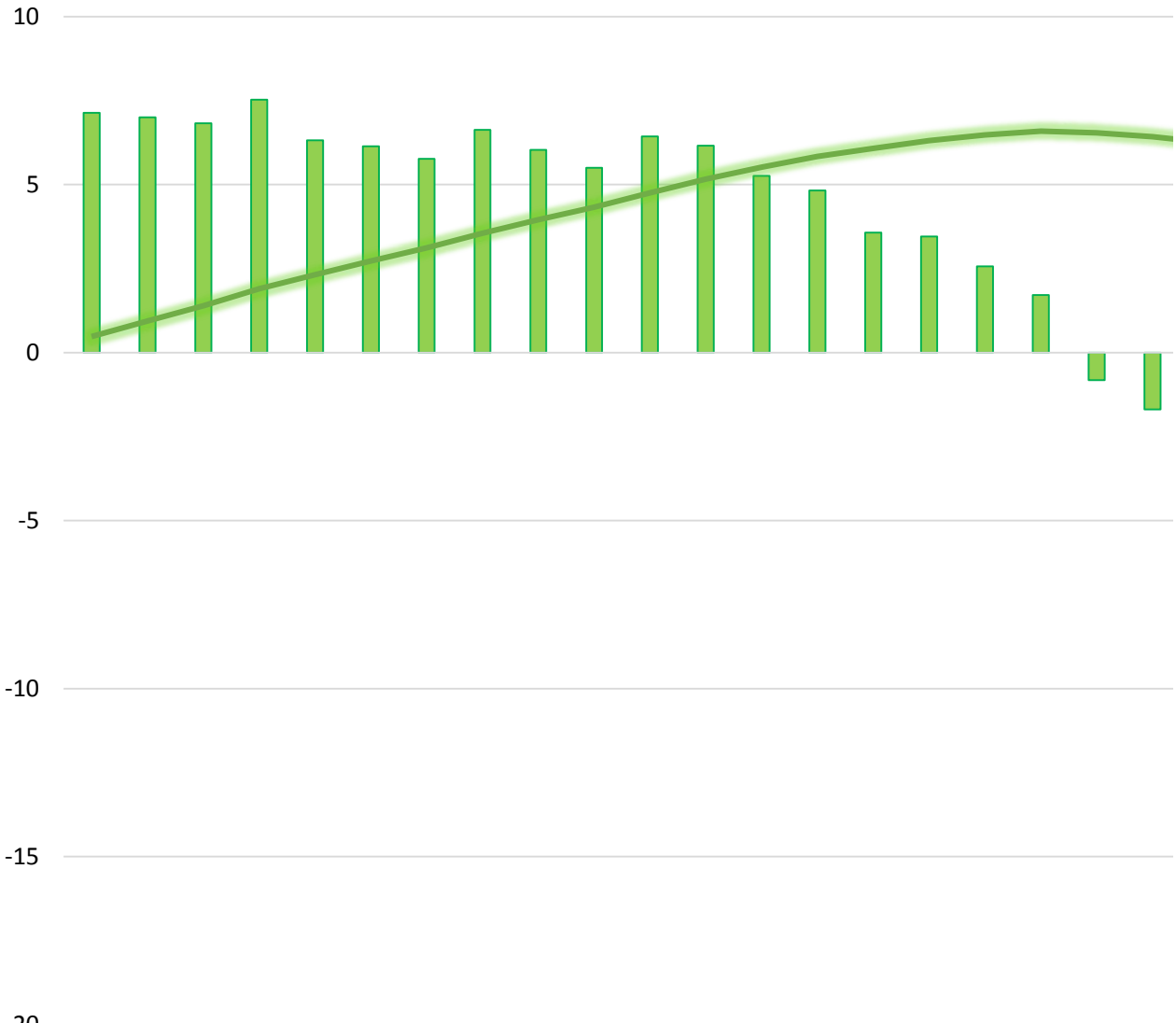
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

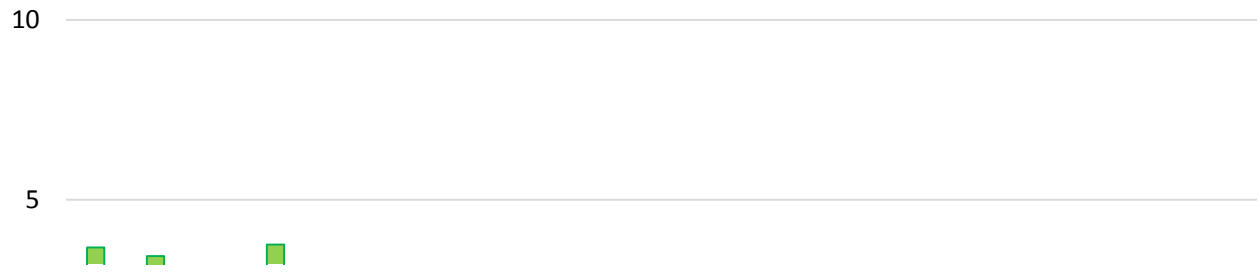
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

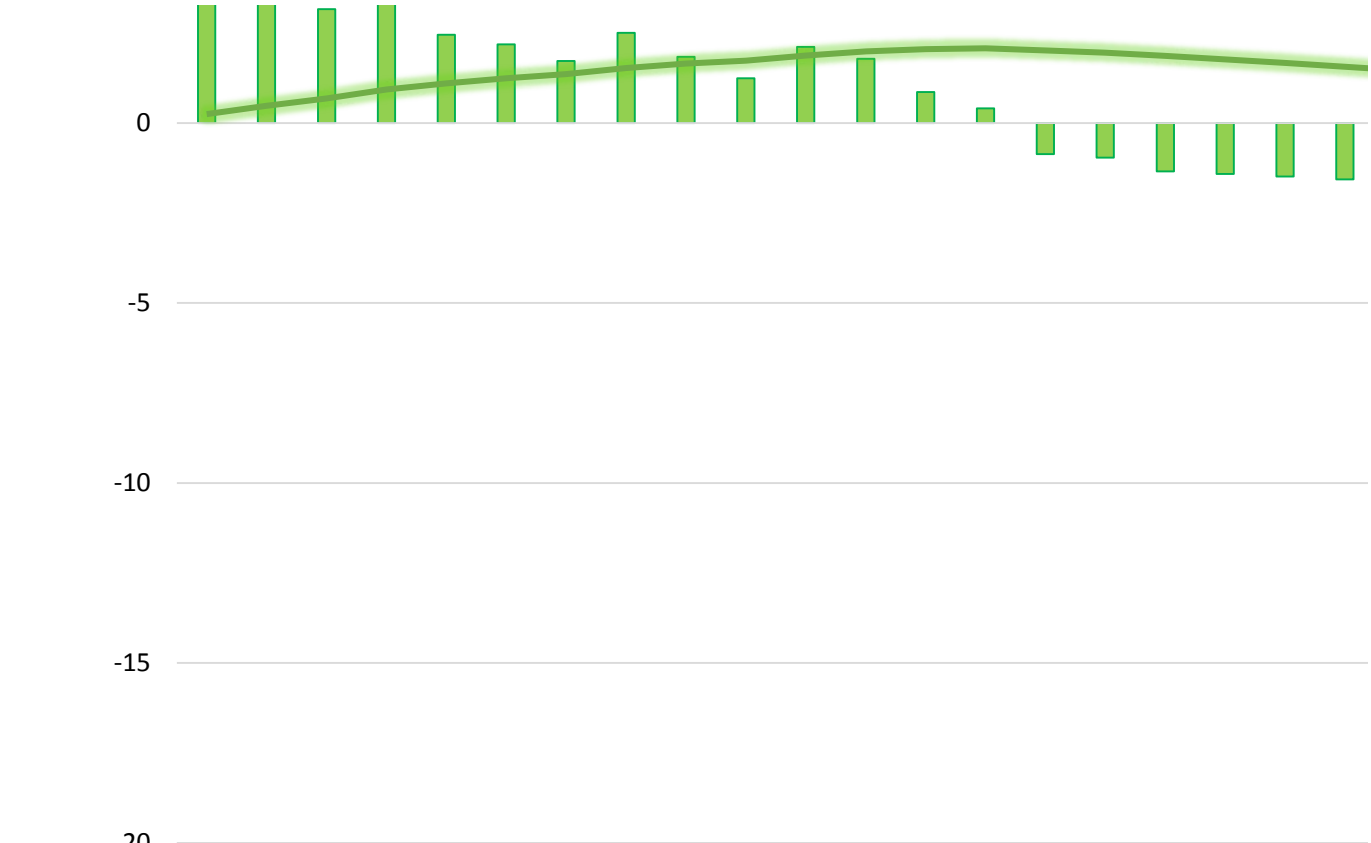


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



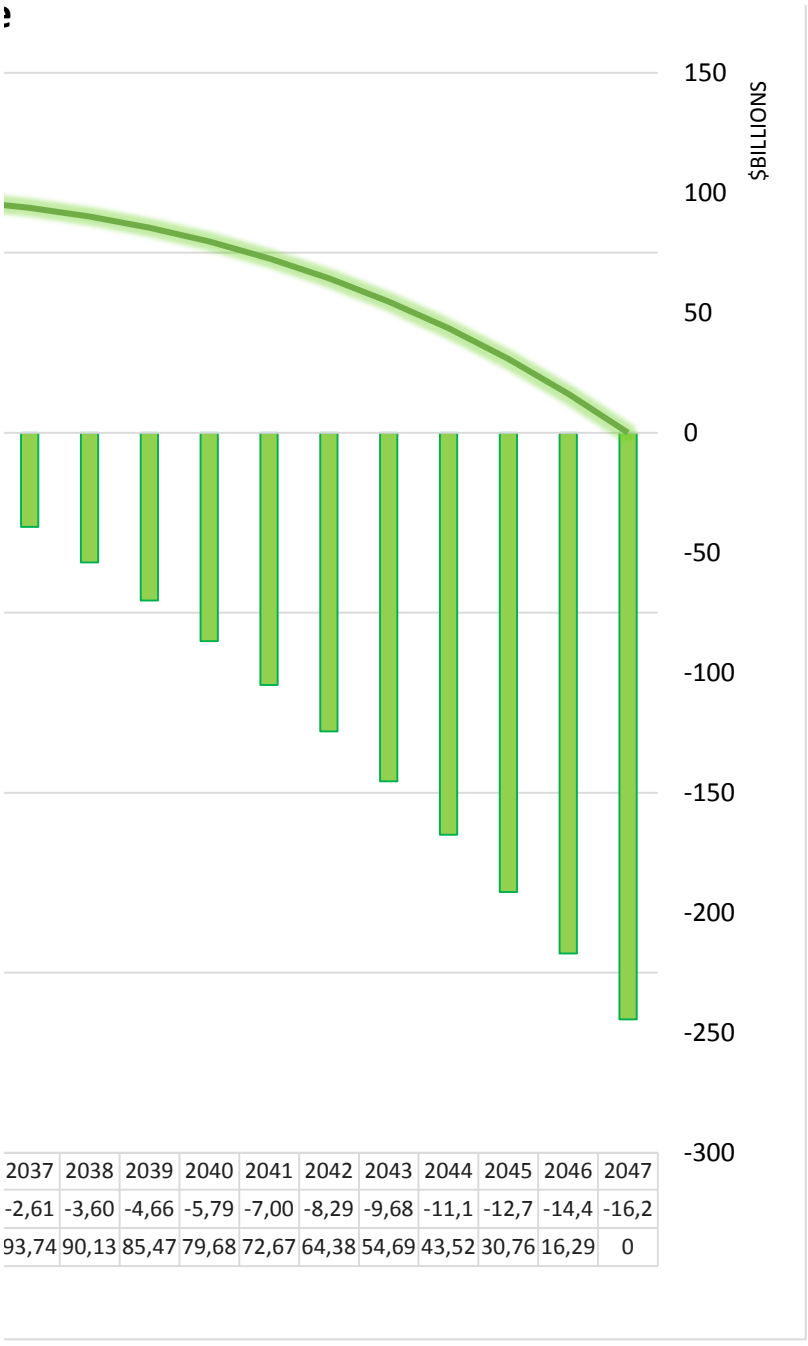


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

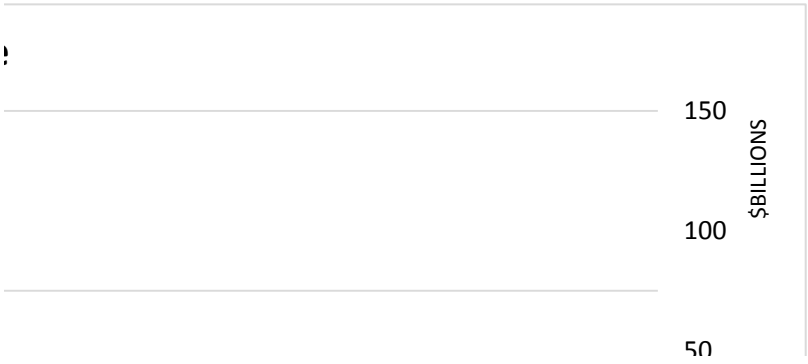
CALENDAR YEAR

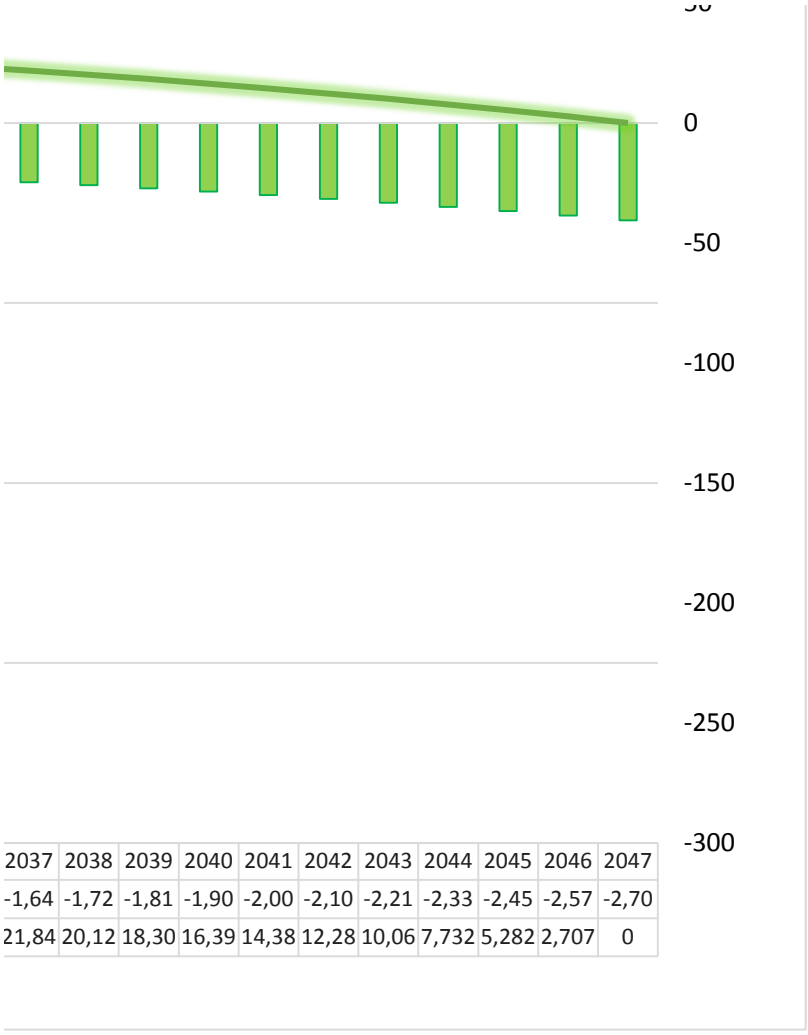


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Feb 8 Deck - Scenario 1a, 1b, 1c - at 5.12% interest
IESO GA cost forecast + extrapolation

Scenario
1a

1b

1c

1d

1e

	2017	2018	2019	2020
rate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	4674	9542	14587	21173

GA Payment from Impacted Rate Class	7421	7205	6995	6329
Accumulated debt in present year (including interest)	4674	9544	14589	21175

GA Payment from Impacted Rate Class	7421	7425	7440	7013
Accumulated debt in present year (including interest)	4674	9323	13913	19780

GA Payment from Impacted Rate Class	9915	9676	9427	9445
Accumulated debt in present year (including interest)	2180	4450	6803	9875

GA Payment from Impacted Rate Class	10596	10370	10129	10162
Accumulated debt in present year (including interest)	1500	3042	4620	6863

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
27212	33084	38588	44968	50769	56056	62291	68274

5890	6156	6434	6724	7028	7345	7677	8024
27212	33082	38585	44963	50762	56048	62281	68263

6825	7042	7266	7497	7736	7983	8237	8499
24810	29671	34167	39545	44359	48679	53976	59058

8532	8703	8877	9054	9236	9420	9609	9801
12692	15272	17420	20384	22719	24494	27181	29590

9264	9449	9638	9831	10027	10228	10432	10641
8794	10429	11568	13457	14645	15200	16588	17614

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
73391	78103	81594	85015	87596	89375	88679	87180

8386	8765	9160	9574	10006	10458	10931	11424
73378	78089	81578	84997	87577	89356	88659	87159

8770	9049	9337	9634	9941	10257	10584	10921
63318	67230	69987	72754	74773	76097	75068	73377

9997	10197	10401	10609	10821	10916	8822	8548
31116	32233	32135	31991	31045	29473	27822	26085

10854	11071	10196	10361	9779	9298	7203	6930
17670	17225	16565	15871	15142	14376	13570	12723

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
84828	81568	77341	72085	65730	58203	49425	39310

11940	12480	13043	13632	14248	14891	15564	16267
84806	81546	77320	72065	65711	58186	49409	39297

11269	11628	11998	12380	12774	13181	13600	14033
70990	67875	63995	59310	53778	47352	39985	31624

8288	8040	7805	7580	7367	7164	6970	6786
24260	22342	20325	18206	15978	13635	11173	8586

6670	6422	6186	5962	5748	5545	5352	5168
11833	10897	9914	8880	7793	6651	5450	4188

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
27767	14699	0	0	0	0

17001	17769	18572	2975	2831	2695
27758	14694	0	0	0	0

14480	14941	15417	2975	2831	2695
22213	11693	0	0	0	0

6611	6444	6286	2975	2831	2695
5865	3006	0	0	0	0

4993	4826	4667	2975	2831	2695
2861	1466	0	0	0	0

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb8_1a_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,867
Annual Exposure2 with start on July 1st	*2,337*	*4,867*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	3,554

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

1 Based on an interest rate of 5%.

2 Fiscal exposure based on equal monthly drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1b_30yr

1b. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,869
Annual Exposure2 with start on July 1st	*2,337*	*4,869*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	*3,554*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649
Annual Exposure2 with start on July 1st	*2,337*	*4,649*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,668
Start: July 1st	-	*3,499*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $76 billion peaking in

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270
Annual Exposure2 with start on July 1st	*1,090*	*2,270*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	545	2,203
Start: July 1st	-	*1,658*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $32 billion peaking in

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542
Annual Exposure2 with start on July 1st	*750*	*1,542*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	375	1,510
Start: July 1st	-	*1,135*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $18 billion peaking in

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	1,169 - 1,169	4,723 - 4,723

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1169**	**4963**
Total, B	1169	4963
Proposed Program Total:	1,169 - 1,169	4,963 - 4,963

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1a
Scenario 1b
Scenario 1c
Scenario 1d
Scenario 1e

2019	2020	2021	2022
5,045	6,586	6,039	5,872
5,045	*6,586*	*6,039*	*5,872*

2018-19	2019-20	2020-21	2021-2022
4,912	5,430	6,449	5,997
4,912	*5,430*	*6,449*	*5,997*

2034.

Actuals are subject t
- The highest debt ac
- Compared to a 5% i

[1] Based on an interes
[2] Fiscal exposure bas
[3] Fiscalized based on

depend on decision on accounting treatment.

2019	2020	2021	2022
5,045	6,586	6,037	5,870
5,045	*6,586*	*6,037*	*5,870*

2018-19	2019-20	2020-21	2021-2022
4,913	5,430	6,449	5,996
4,913	*5,430*	*6,449*	*5,996*

2034.

2019	2020	2021	2022
4,589	5,867	5,031	4,861
4,589	*5,867*	*5,031*	*4,861*

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988
4,634	*4,909*	*5,658*	*4,988*

2034.

2019	2020	2021	2022
2,353	3,072	2,817	2,580
2,353	*3,072*	*2,817*	*2,580*

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757
2,291	*2,533*	*3,008*	*2,757*

2030.

2019	2020	2021	2022
1,578	2,243	1,931	1,635
1,578	*2,243*	*1,931*	*1,635*

2018-19	2019-20	2020-21	2021-2022

1,551	1,745	2,165	1,857
1,551	*1,745*	*2,165*	*1,857*

2029.



2018-19	2019-20	2020-21	2021-2022
4,913 - 4,912	5,430 - 5,430	6,449 - 6,449	5,996 - 5,997

/1

2018-19[1]	2019-20[1]	2020-21[1]
4912	5430	6449
4913	5430	6449
225	279	323
60	60	60
18	18	18
5215	**5787**	**6850**
5216	5787	6850

5,216 - 5,215 5,787 - 5,787 6,850 - 6,850

Total Principal Debt	Total Accumulated Interest Costs	**Peak Total Debt**	
52,287	85,599	89,375	occurs in Year 2034
52,275	85,582	89,356	occurs in Year 2034
44,449	72,823	76,097	occurs in Year 2034
21,239	29,589	32,233	occurs in Year 2030
12,350	16,239	17,670	occurs in Year 2029

o actual prices and actual interest rates.
:cumulation (at 5% interest rate) is expected to be approximately $62 billion, peaking in 203 and $17-21 billion (at 3.5% interest
interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately $33-$36 million.

st rate of 5%.
sed on equal monthly drawdown of debt.
75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on mo

Feb8_1a_30yr
Feb8_1b_30yr
Feb8_1c_30yr
Feb8_1d_30yr
Feb8_1e_30yr

t rate), peaking in 2028.

nth of the year. Actuals may also depend on decision on accounting treatment.

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-275	-311	-350	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,573	85,599
Equal Monthly Debt Drawdown	6,743	4,556	

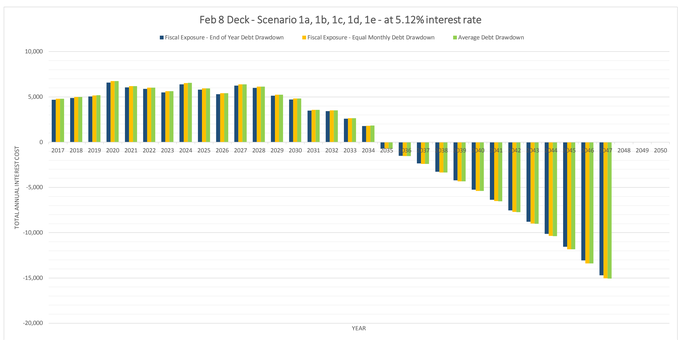
	Feb8 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,375	2034	52,287
Equal Monthly Debt Drawdown	91,501		

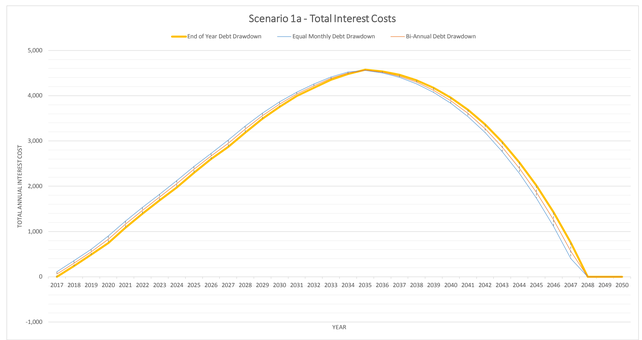
Feb8 1a, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	
c = a*5%	*Interest Cost - Feb8 1a, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,301*	*2,597*	*2,868*	*3,187*	*3,493*	*3,755*	*3,996*	*4,175*	*4,350*	*4,482*	*4,573*	*4,537*	*4,460*	*4,340*	*4,173*	*3,957*	*3,688*	*3,363*	*2,978*	*2,529*	*2,011*	*1,421*	*752*	*0*	*0*	*0*	85,599
b	Additional GA Debt Drawdown, End of Year	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,307	32,728	35,309	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	39,310	27,767	14,699	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	52,287	52,287	52,287	51,591	50,091	47,739	44,479	40,253	34,997	28,642	21,115	12,336	0	0	0	0	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,813	33,987	38,337	42,818	47,391	51,928	56,388	60,728	64,901	68,858	72,546	75,909	78,887	81,416	83,427	84,847	85,599				
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	51,781	51,028	49,259	46,557	41,288	35,252	28,440	20,840	12,440	3,227	-6,816	-17,706	-29,462	-42,106	-55,660	-70,149	-85,599				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	

Feb8 1a, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	
4,556	*Interest Cost - Feb8 1a, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,824*	*2,126*	*2,439*	*2,723*	*3,016*	*3,329*	*3,615*	*3,867*	*4,079*	*4,256*	*4,411*	*4,524*	*4,556*	*4,501*	*4,404*	*4,262*	*4,073*	*3,832*	*3,537*	*3,184*	*2,769*	*2,288*	*1,737*	*1,110*	*402*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
	Monthly Drawdown	390	386	380	487	413	373	318	367	292	224	281	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(980)	(1,054)	(1,129)	(1,207)	(1,288)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,738	4,665	5,979	5,074	4,586	3,902	4,510	3,584	2,753	3,447	2,863	1,662	980	(517)	(772)	(1,810)	(2,766)	(5,394)	(6,180)	(6,975)	(7,781)	(8,599)	(9,432)	(10,282)	(11,149)	(12,036)	(12,944)	(13,876)	(14,834)	(15,818)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	67	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(368)	-	-	-	
	Annual Interest Cost on Opening Balance	-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,263	3,576	3,844	4,091	4,274	4,453	4,588	4,681	4,645	4,566	4,443	4,272	4,051	3,776	3,443	3,049	2,589	2,059	1,454	770	(0)	(0)	(0)	
	Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,824	2,126	2,439	2,723	3,016	3,329	3,615	3,867	4,079	4,256	4,411	4,524	4,556	4,501	4,404	4,262	4,073	3,832	3,537	3,184	2,769	2,288	1,737	1,110	402	(0)	(0)	(0)	

Feb8 1a, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*60*	*301*	*553*	*831*	*1,160*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,948*	*3,263*	*3,558*	*3,815*	*4,041*	*4,218*	*4,383*	*4,504*	*4,564*	*4,518*	*4,430*	*4,298*	*4,119*	*3,890*	*3,607*	*3,267*	*2,866*	*2,399*	*1,864*	*1,253*	*564*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,930	5,110	6,670	6,116	5,947	5,575	6,461	5,875	5,354	6,315	6,060	5,182	4,773	3,535	3,464	2,614	1,802	-705	-1,518	-2,382	-3,302	-4,280	-5,324	-6,436	-7,623	-8,891	-10,244	-11,690	-13,236	-14,887	0	0	0	
	Bi-Annual Drawdown	2,337	2,314	2,279	2,920	2,478	2,240	1,906	2,203	1,750	1,345	1,684	1,398	812	479	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,800)	(4,200)	(4,607)	(5,021)	(5,445)	(5,878)	(6,322)	(6,777)	(7,245)	(7,725)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,687	4,615	5,914	5,019	4,537	3,860	4,462	3,545	2,724	3,410	2,832	1,644	970	(512)	(763)	(1,791)	(2,737)	(5,336)	(6,113)	(6,900)	(7,697)	(8,507)	(9,331)	(10,171)	(11,029)	(11,907)	(12,805)	(13,727)	(14,674)	(15,648)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	494	756	1,097	1,410	1,714	1,999	2,330	2,631	2,905	3,228	3,538	3,803	4,047	4,228	4,405	4,539	4,631	4,595	4,517	4,395	4,227	4,008	3,735	3,406	3,016	2,561	2,037	1,439	762	(0)	(0)	(0)	
	Total Annual Interest Cost	60	301	553	831	1,160	1,467	1,763	2,056	2,375	2,665	2,948	3,263	3,558	3,815	4,041	4,218	4,383	4,504	4,564	4,518	4,430	4,298	4,119	3,890	3,607	3,267	2,866	2,399	1,864	1,253	564	(0)	(0)	(0)	

Feb8 1a, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,723*	*3,027*	*3,340*	*3,624*	*3,875*	*4,085*	*4,262*	*4,416*	*4,527*	*4,555*	*4,499*	*4,400*	*4,257*	*4,065*	*3,822*	*3,525*	*3,170*	*2,753*	*2,270*	*1,716*	*1,086*	*376*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,992	5,174	6,754	6,193	6,022	5,645	6,543	5,950	5,422	6,395	6,137	5,248	4,833	3,580	3,508	2,647	1,825	-714	-1,537	-2,412	-3,343	-4,334	-5,391	-6,517	-7,720	-9,003	-10,374	-11,838	-13,403	-15,075	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-274	-311	-349	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,572	85,582
Equal Monthly Debt Drawdown	6,743	4,555	

	Feb8 1b, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,356	2034	52,275
Equal Monthly Debt Drawdown	91,481		

Feb8 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
a — Debt, Beginning of Year	0	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	
c = a*5% — *Interest Cost - Feb8 1b, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,300*	*2,597*	*2,867*	*3,186*	*3,492*	*3,754*	*3,995*	*4,174*	*4,349*	*4,481*	*4,572*	*4,536*	*4,459*	*4,339*	*4,172*	*3,956*	*3,687*	*3,362*	*2,977*	*2,528*	*2,011*	*1,420*	*752*	*0*	*0*	*0*	85,582
b — Additional GA Debt Drawdown, End of Year	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,303	32,722	35,302	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	39,297	27,758	14,694	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	52,275	52,275	52,275	52,275	51,578	50,078	47,725	44,465	40,239	34,984	28,630	21,105	12,328	0	0	0	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,809	33,983	38,331	42,812	47,384	51,920	56,379	60,718	64,890	68,846	72,533	75,895	78,871	81,399	83,410	84,830	85,582				
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	51,769	51,014	49,246	46,544	41,275	35,239	28,428	20,829	12,431	3,219	-6,822	-17,709	-29,462	-42,102	-55,652	-70,136	-85,582				
Fiscal Exposure - End of Year Debt Drawdown	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	

Feb8 1b, 30-yr — Equal Monthly Debt Drawdown

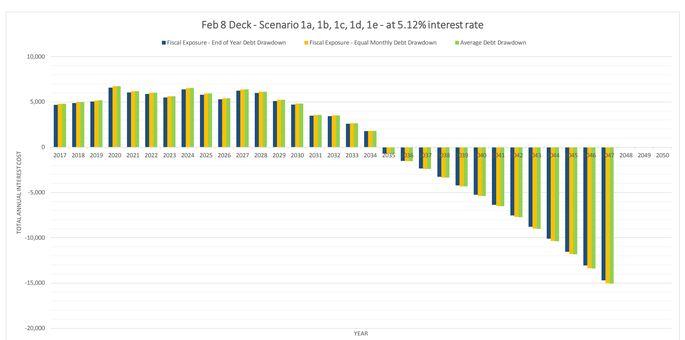
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	
4,555 — *Interest Cost - Feb8 1b, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,823*	*2,126*	*2,438*	*2,723*	*3,016*	*3,329*	*3,614*	*3,866*	*4,078*	*4,255*	*4,410*	*4,523*	*4,555*	*4,500*	*4,403*	*4,261*	*4,072*	*3,831*	*3,536*	*3,183*	*2,768*	*2,287*	*1,736*	*1,109*	*402*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
Monthly Drawdown	390	386	380	487	413	373	317	367	292	224	280	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(979)	(1,053)	(1,129)	(1,207)	(1,287)	(0)	-	-	
FV of Monthly Drawdown at 5%	4,786	4,740	4,665	5,979	5,072	4,585	3,900	4,509	3,582	2,752	3,446	2,862	1,661	979	(518)	(772)	(1,811)	(2,766)	(5,394)	(6,179)	(6,974)	(7,780)	(8,598)	(9,431)	(10,279)	(11,146)	(12,033)	(12,941)	(13,872)	(14,829)	(15,813)	(0)	-	-	
Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	66	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(367)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,262	3,576	3,843	4,090	4,273	4,452	4,587	4,680	4,644	4,565	4,442	4,271	4,050	3,775	3,442	3,048	2,588	2,058	1,454	770	0	0	0	
Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,823	2,126	2,438	2,723	3,016	3,329	3,614	3,866	4,078	4,255	4,410	4,523	4,555	4,500	4,403	4,261	4,072	3,831	3,536	3,183	2,768	2,287	1,736	1,109	402	0	0	0	

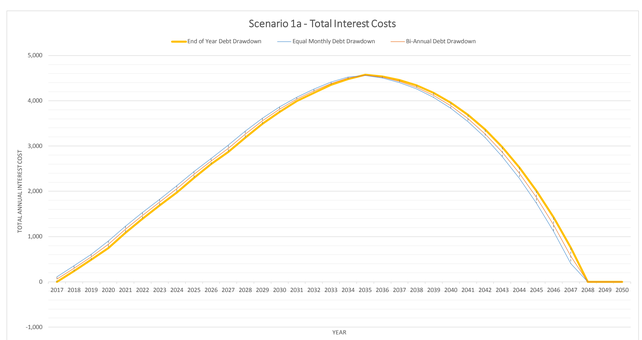
Feb8 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*60*	*301*	*553*	*831*	*1,161*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,947*	*3,263*	*3,558*	*3,814*	*4,040*	*4,217*	*4,382*	*4,503*	*4,563*	*4,517*	*4,429*	*4,297*	*4,118*	*3,889*	*3,606*	*3,266*	*2,865*	*2,399*	*1,863*	*1,253*	*564*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	4,734	4,931	5,110	6,670	6,115	5,945	5,573	6,460	5,874	5,353	6,313	6,058	5,181	4,771	3,534	3,463	2,613	1,801	-706	-1,519	-2,383	-3,302	-4,280	-5,323	-6,435	-7,622	-8,889	-10,242	-11,687	-13,231	-14,882	0	0	0	
Bi-Annual Drawdown	2,337	2,315	2,279	2,920	2,477	2,239	1,905	2,202	1,750	1,344	1,683	1,398	811	478	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,799)	(4,199)	(4,606)	(5,020)	(5,444)	(5,877)	(6,320)	(6,775)	(7,242)	(7,723)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	4,734	4,689	4,615	5,914	5,017	4,535	3,859	4,460	3,544	2,722	3,409	2,831	1,643	969	(513)	(764)	(1,791)	(2,737)	(5,336)	(6,113)	(6,899)	(7,696)	(8,506)	(9,329)	(10,169)	(11,027)	(11,904)	(12,802)	(13,723)	(14,670)	(15,643)	(0)	-	-	
Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	242	495	756	1,097	1,410	1,714	1,999	2,330	2,630	2,904	3,227	3,537	3,802	4,046	4,227	4,404	4,538	4,630	4,594	4,516	4,394	4,225	4,006	3,734	3,405	3,015	2,560	2,036	1,438	761	0	(0)	(0)	
Total Annual Interest Cost	60	301	553	831	1,161	1,467	1,763	2,056	2,375	2,665	2,947	3,263	3,558	3,814	4,040	4,217	4,382	4,503	4,563	4,517	4,429	4,297	4,118	3,889	3,606	3,266	2,865	2,399	1,863	1,253	564	0	(0)	(0)	

Feb8 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,732*	*3,027*	*3,339*	*3,623*	*3,875*	*4,084*	*4,261*	*4,415*	*4,526*	*4,554*	*4,498*	*4,399*	*4,255*	*4,064*	*3,821*	*3,524*	*3,169*	*2,752*	*2,269*	*1,715*	*1,086*	*376*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	4,794	4,994	5,174	6,754	6,192	6,020	5,643	6,541	5,948	5,420	6,393	6,135	5,246	4,831	3,578	3,507	2,646	1,824	-715	-1,538	-2,413	-3,343	-4,334	-5,390	-6,516	-7,718	-9,001	-10,371	-11,835	-13,398	-15,070	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1c_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	
			111	111	109	140	120	116	107	128	115	103	126	121	101	93	66	66	48	32	-24	-40	-57	-74	-92	-111	-132	-153	-175	-199	-224	-250	-278	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	5,867	3,893	72,823
Equal Monthly Debt Drawdown	6,006	3,869	

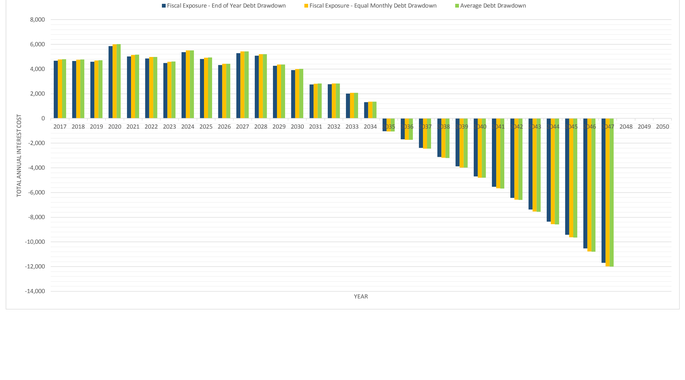
	Feb8 1c, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	76,097	2034	44,449
Equal Monthly Debt Drawdown	77,907		

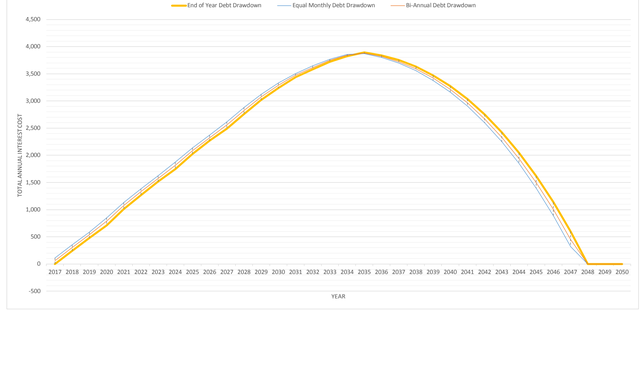
Feb8 1c, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	
c = a*5%	*Interest Cost - Feb8 1c, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*477*	*712*	*1,012*	*1,269*	*1,518*	*1,748*	*2,023*	*2,270*	*2,491*	*2,762*	*3,022*	*3,239*	*3,440*	*3,581*	*3,722*	*3,826*	*3,893*	*3,841*	*3,754*	*3,632*	*3,473*	*3,274*	*3,034*	*2,751*	*2,423*	*2,046*	*1,618*	*1,136*	*598*	*0*	*0*	*0*	72,823
b	Additional GA Debt Drawdown, End of Year	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	
	Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	25,538	28,304	30,324	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,624	22,213	11,693	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	44,449	44,449	44,449	44,449	43,420	41,729	39,342	36,228	32,347	27,662	22,130	15,704	8,337	0	0	0	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	26,221	29,801	33,524	37,349	41,242	45,083	48,837	52,469	55,942	59,216	62,250	65,002	67,424	69,470	71,088	72,224	72,823				
	Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	43,767	42,952	41,249	38,748	33,826	28,294	22,153	15,406	8,054	94	-8,473	-17,649	-27,439	-37,846	-48,875	-60,532	-72,823				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	

Feb8 1c, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
3,869	Debt, Beginning of Year	0	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*111*	*350*	*586*	*851*	*1,132*	*1,385*	*1,625*	*1,876*	*2,138*	*2,372*	*2,617*	*2,882*	*3,123*	*3,333*	*3,505*	*3,646*	*3,770*	*3,857*	*3,869*	*3,800*	*3,697*	*3,558*	*3,380*	*3,163*	*2,903*	*2,599*	*2,247*	*1,847*	*1,394*	*886*	*320*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	
	Monthly Drawdown	390	367	343	430	335	299	248	303	233	171	234	193	103	56	(57)	(68)	(142)	(208)	(410)	(461)	(512)	(562)	(613)	(663)	(714)	(765)	(816)	(867)	(919)	(971)	(1,024)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,515	4,210	5,278	4,114	3,677	3,048	3,717	2,857	2,099	2,873	2,375	1,268	689	(699)	(834)	(1,744)	(2,561)	(5,039)	(5,664)	(6,286)	(6,907)	(7,528)	(8,148)	(8,771)	(9,395)	(10,023)	(10,654)	(11,291)	(11,934)	(12,583)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	105	98	123	96	85	71	86	66	49	67	55	29	16	(16)	(19)	(41)	(59)	(117)	(132)	(146)	(160)	(175)	(189)	(204)	(218)	(233)	(248)	(262)	(277)	(292)	-	-	-	
	Annual Interest Cost on Opening Balance	-	245	488	729	1,036	1,300	1,554	1,790	2,071	2,323	2,550	2,827	3,093	3,317	3,521	3,666	3,811	3,917	3,986	3,932	3,843	3,718	3,555	3,352	3,107	2,817	2,480	2,094	1,656	1,163	612	(0)	(0)	(0)	
	Total Annual Interest Cost	111	350	586	851	1,132	1,385	1,625	1,876	2,138	2,372	2,617	2,882	3,123	3,333	3,505	3,646	3,770	3,857	3,869	3,800	3,697	3,558	3,380	3,163	2,903	2,599	2,247	1,847	1,394	886	320	(0)	(0)	(0)	

Feb8 1c, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*60*	*299*	*536*	*787*	*1,076*	*1,332*	*1,576*	*1,817*	*2,085*	*2,325*	*2,558*	*2,827*	*3,076*	*3,290*	*3,475*	*3,616*	*3,748*	*3,842*	*3,880*	*3,819*	*3,724*	*3,592*	*3,423*	*3,214*	*2,964*	*2,669*	*2,328*	*1,939*	*1,498*	*1,002*	*449*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,708	4,648	5,942	5,095	4,923	4,553	5,447	4,876	4,375	5,364	5,147	4,315	3,962	2,792	2,802	2,045	1,341	-1,042	-1,713	-2,417	-3,155	-3,930	-4,745	-5,603	-6,508	-7,461	-8,468	-9,531	-10,655	-11,842	0	0	0	
	Bi-Annual Drawdown	2,337	2,205	2,056	2,578	2,009	1,796	1,489	1,815	1,395	1,025	1,403	1,160	620	336	(341)	(407)	(852)	(1,251)	(2,461)	(2,766)	(3,070)	(3,373)	(3,676)	(3,980)	(4,283)	(4,588)	(4,895)	(5,203)	(5,514)	(5,828)	(6,146)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,466	4,165	5,221	4,070	3,638	3,015	3,677	2,826	2,077	2,842	2,350	1,255	681	(691)	(825)	(1,725)	(2,533)	(4,985)	(5,603)	(6,219)	(6,833)	(7,447)	(8,061)	(8,676)	(9,294)	(9,915)	(10,540)	(11,170)	(11,806)	(12,448)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	56	53	66	51	46	38	46	36	26	36	30	16	9	(9)	(10)	(22)	(32)	(63)	(71)	(79)	(86)	(94)	(102)	(110)	(117)	(125)	(133)	(141)	(149)	(157)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	483	721	1,025	1,286	1,537	1,770	2,049	2,299	2,522	2,797	3,060	3,281	3,484	3,626	3,770	3,874	3,943	3,890	3,802	3,678	3,517	3,316	3,073	2,787	2,454	2,072	1,639	1,151	606	(0)	(0)	(0)	
	Total Annual Interest Cost	60	299	536	787	1,076	1,332	1,576	1,817	2,085	2,325	2,558	2,827	3,076	3,290	3,475	3,616	3,748	3,842	3,880	3,819	3,724	3,592	3,423	3,214	2,964	2,669	2,328	1,939	1,498	1,002	449	(0)	(0)	(0)	

Feb8 1c, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*120*	*358*	*594*	*862*	*1,141*	*1,394*	*1,633*	*1,886*	*2,146*	*2,380*	*2,626*	*2,892*	*3,130*	*3,340*	*3,510*	*3,651*	*3,774*	*3,859*	*3,867*	*3,797*	*3,693*	*3,552*	*3,373*	*3,154*	*2,893*	*2,587*	*2,234*	*1,832*	*1,377*	*867*	*299*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,768	4,707	6,017	5,160	4,985	4,610	5,516	4,937	4,431	5,432	5,212	4,370	4,012	2,828	2,837	2,071	1,358	-1,055	-1,735	-2,447	-3,195	-3,979	-4,805	-5,674	-6,590	-7,556	-8,575	-9,652	-10,789	-11,992	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1d_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
			52	54	56	73	67	61	51	71	56	42	64	57	36	27	-2	-3	-23	-37	-39	-41	-43	-46	-48	-50	-53	-56	-59	-62	-65	-68	-71	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,072	1,649	29,589
Equal Monthly Debt Drawdown	3,145	1,647	

	Feb8 1d, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,233	2030	21,239
Equal Monthly Debt Drawdown	32,999		

Feb8 1d, 30-yr — End of Year Debt Drawdown

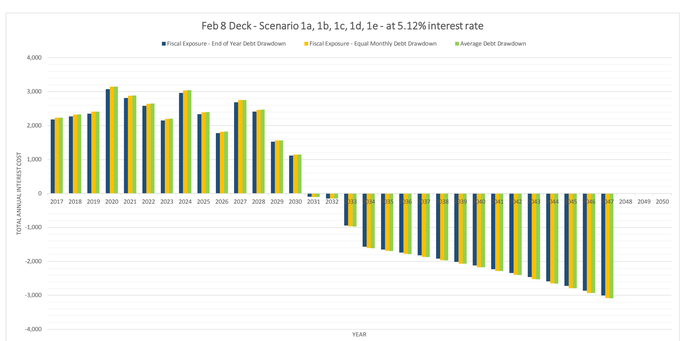
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
a Debt, Beginning of Year	0	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	
c = a*5% *Interest Cost - Feb8 1d, 30-yr - End of Year Debt Drawdown*	*0*	*112*	*228*	*348*	*505*	*649*	*781*	*891*	*1,043*	*1,162*	*1,253*	*1,391*	*1,514*	*1,592*	*1,649*	*1,644*	*1,637*	*1,588*	*1,508*	*1,423*	*1,335*	*1,241*	*1,143*	*1,040*	*931*	*817*	*698*	*572*	*439*	*300*	*154*	*0*	*0*	*0*	29,589
b Additional GA Debt Drawdown, End of Year	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
d = a+b+c Accumulated debt in present year (including 5.12% annual interest)	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	11,372	11,227	10,281	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,586	5,865	3,006	0	0	0	0	
Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	20,763	20,763	20,763	20,763	19,112	17,375	15,550	13,632	11,616	9,496	7,268	4,926	2,464	0	0	0	0	0	0	0	
Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	13,118	14,763	16,399	17,988	19,495	20,919	22,253	23,495	24,638	25,678	26,609	27,426	28,124	28,696	29,135	29,435	29,589				
Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	19,017	17,228	14,645	11,486	8,326	5,167	2,007	-1,153	-4,312	-7,472	-10,631	-13,791	-16,951	-20,110	-23,270	-26,429	-29,589				
Fiscal Exposure - End of Year Debt Drawdown	2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	

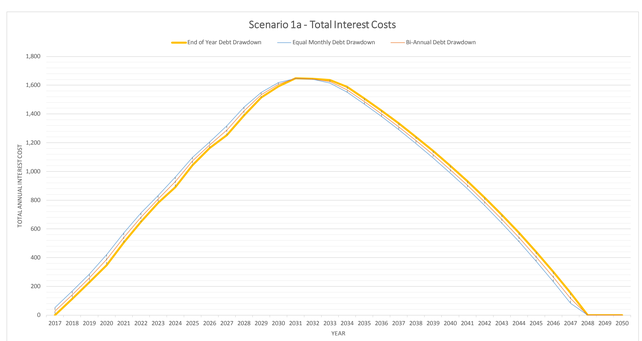
Feb8 1d, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Debt, Beginning of Year	0	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	
1,647 *Interest Cost - Feb8 1d, 30-yr*	*52*	*166*	*284*	*421*	*572*	*711*	*832*	*962*	*1,098*	*1,205*	*1,317*	*1,448*	*1,550*	*1,619*	*1,647*	*1,641*	*1,614*	*1,551*	*1,469*	*1,382*	*1,291*	*1,196*	*1,095*	*989*	*878*	*762*	*639*	*510*	*375*	*232*	*82*	*0*	*0*	*0*	29,589
Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
Monthly Drawdown	182	180	177	227	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	-	-	-	
FV of Monthly Drawdown at 5%	2,232	2,210	2,176	2,788	2,366	1,977	1,399	2,123	1,322	628	1,468	1,042	12	(487)	(1,788)	(1,831)	(2,644)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	-	-	-	
Annual Interest Cost on New Drawdowns	52	51	51	65	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	-	-	-	
Annual Interest Cost on Opening Balance	-	114	233	356	517	665	800	912	1,068	1,190	1,283	1,424	1,550	1,630	1,688	1,683	1,676	1,626	1,544	1,457	1,366	1,271	1,170	1,065	954	837	714	585	450	307	157	0	0	0	
Total Annual Interest Cost	52	166	284	421	572	711	832	962	1,098	1,205	1,317	1,448	1,550	1,619	1,647	1,641	1,614	1,551	1,469	1,382	1,291	1,196	1,095	989	878	762	639	510	375	232	82	0	0	0	

Feb8 1d, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Debt, Beginning of Year	0	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	
1,647 *Interest Cost - Feb8 1d, 30-yr*	*56*	*170*	*288*	*427*	*577*	*715*	*836*	*967*	*1,103*	*1,208*	*1,322*	*1,452*	*1,553*	*1,621*	*1,647*	*1,640*	*1,613*	*1,548*	*1,466*	*1,379*	*1,288*	*1,192*	*1,091*	*986*	*874*	*758*	*635*	*505*	*370*	*227*	*77*	*0*	*0*	*0*	29,589
Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	2,236	2,328	2,413	3,150	2,889	2,646	2,203	3,041	2,394	1,821	2,756	2,471	1,565	1,145	-100	-148	-970	-1,612	-1,694	-1,781	-1,872	-1,967	-2,068	-2,174	-2,285	-2,402	-2,525	-2,654	-2,790	-2,933	-3,083	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1e_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	
			36	37	38	53	46	39	27	45	28	13	33	24	1	-11	-16	-16	-17	-18	-19	-20	-21	-22	-23	-25	-26	-27	-29	-30	-32	-33	-35	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,243	904	16,239
Equal Monthly Debt Drawdown	2,297	903	

		Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	17,670	2029	12,350
Equal Monthly Debt Drawdown	18,091		

Feb8 1e, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	
c = a*5%	*Interest Cost - Feb8 1e, 30-yr - End of Year Debt Drawdown*		*0*	*77*	*156*	*236*	*351*	*450*	*534*	*592*	*688*	*749*	*778*	*849*	*901*	*904*	*881*	*847*	*812*	*775*	*735*	*694*	*651*	*605*	*558*	*507*	*454*	*399*	*340*	*279*	*214*	*146*	*75*	*0*	*0*	*0*	16,239
b	Additional GA Debt Drawdown, End of Year		1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)		1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
Feb8 1e, 30-yr - Accumulated Interest Costs			0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	6,605	5,911	5,182	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,188	2,861	1,466	0	0	0	0	
Feb8 1e, 30-yr - Accumulated Debt Principal			1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	9,960	9,960	9,960	9,960	9,155	8,308	7,418	6,482	5,498	4,465	3,378	2,235	1,035	0	0	0	0	0	0	0	
Feb8 1e, 30-yr - Accumulated Interest Costs			0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	8,146	8,993	9,805	10,580	11,315	12,010	12,661	13,266	13,824	14,331	14,785	15,184	15,524	15,803	16,017	16,164	16,239				
Feb8 1e, 30-yr - Accumulated Debt Principal			1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	8,419	6,878	5,337	3,796	2,255	714	-827	-2,369	-3,910	-5,451	-6,992	-8,533	-10,074	-11,615	-13,156	-14,697	-16,239				
Fiscal Exposure - End of Year Debt Drawdown			1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	

Feb8 1e, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	
Interest Cost - Feb8 1e, 30-yr			*36*	*113*	*193*	*290*	*397*	*489*	*561*	*637*	*717*	*762*	*811*	*873*	*903*	*893*	*866*	*831*	*795*	*756*	*716*	*674*	*630*	*583*	*534*	*483*	*428*	*372*	*312*	*249*	*183*	*113*	*40*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown			1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)			1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	0
Fiscal Exposure - Equal Monthly Debt Drawdown			1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	
Monthly Drawdown			125	122	119	167	132	99	50	108	42	(16)	51	15	(70)	(112)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	-	-	-	
FV of Monthly Drawdown at 5%			1,536	1,500	1,457	2,055	1,617	1,213	620	1,328	512	(199)	625	182	(865)	(1,382)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	-	-	-	
Annual Interest Cost on New Drawdowns			36	35	34	48	38	28	14	31	12	(5)	15	4	(20)	(32)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	-	-	-	
Annual Interest Cost on Opening Balance			-	79	159	242	359	461	546	606	705	767	796	869	923	926	902	868	831	793	753	711	666	620	571	519	465	408	348	285	219	150	77	0	0	0	
Total Annual Interest Cost			36	113	193	290	397	489	561	637	717	762	811	873	903	893	866	831	795	756	716	674	630	583	534	483	428	372	312	249	183	113	40	0	0	0	

Feb8 1e, 30-yr — Bi-Annual Debt Drawdown

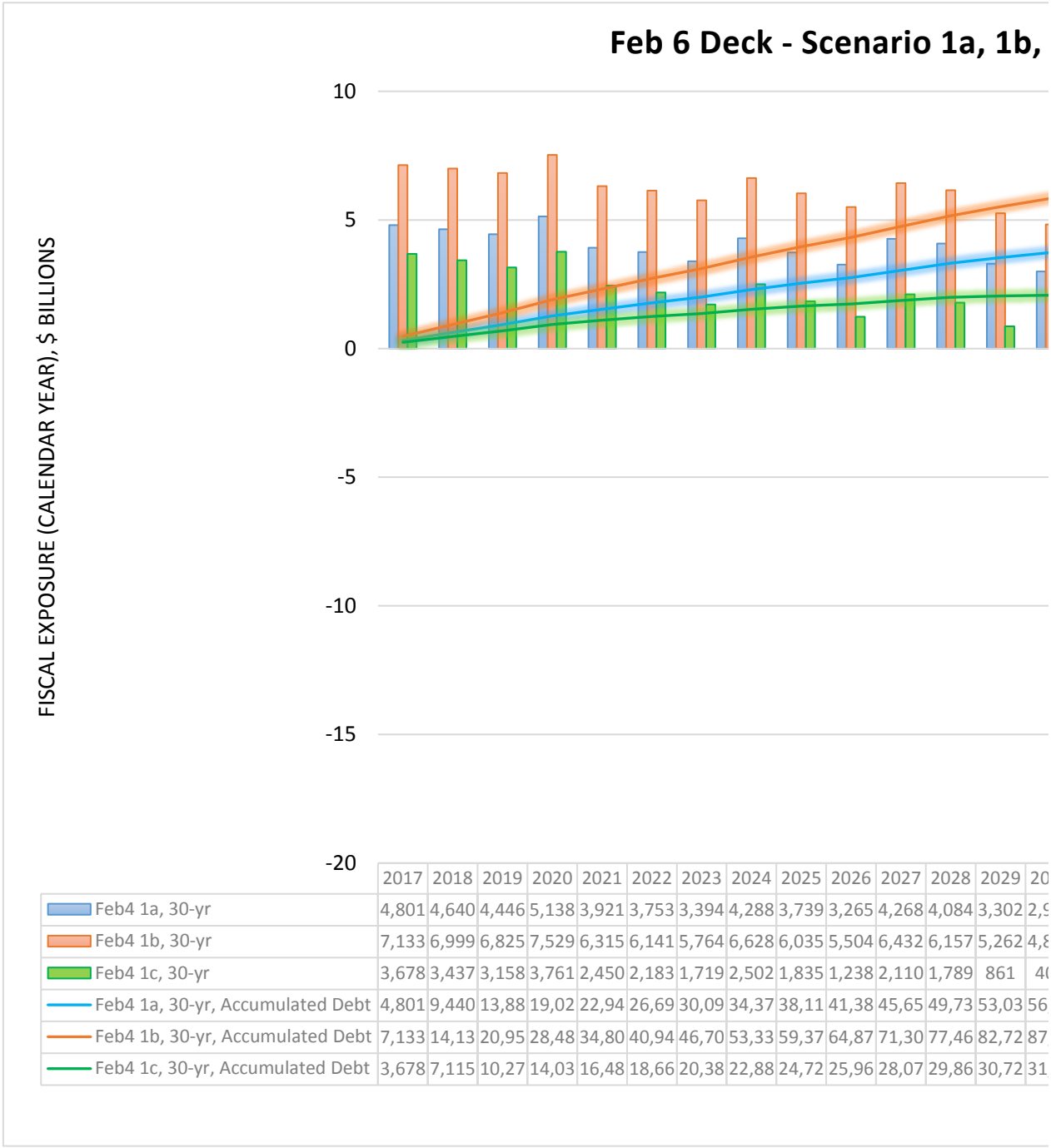
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	
Interest Cost - Feb8 1e, 30-yr			*19*	*96*	*176*	*265*	*376*	*471*	*548*	*616*	*704*	*756*	*795*	*862*	*902*	*898*	*873*	*839*	*803*	*765*	*725*	*683*	*640*	*593*	*545*	*494*	*440*	*384*	*325*	*263*	*197*	*129*	*56*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown			1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)			1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	0
Fiscal Exposure - Bi-Annual Debt Drawdown			1,519	1,561	1,598	2,272	1,956	1,655	1,154	1,913	1,203	562	1,406	1,040	57	-451	-668	-703	-738	-776	-816	-858	-902	-948	-996	-1,047	-1,101	-1,157	-1,216	-1,278	-1,344	-1,413	-1,485	0	0	0	
Bi-Annual Drawdown			750	733	711	1,003	790	592	303	649	250	(97)	305	89	(423)	(675)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	-	-	-	
FV of Bi-Annual Drawdown at 5%			1,519	1,484	1,441	2,033	1,600	1,200	613	1,314	506	(197)	618	180	(856)	(1,367)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	-	-	-	
Annual Interest Cost on New Drawdowns			19	19	18	26	20	15	8	17	6	(2)	8	2	(11)	(17)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	-	-	-	
Annual Interest Cost on Opening Balance			-	78	158	239	356	456	540	599	697	759	788	860	913	916	893	858	822	785	745	703	659	613	565	514	460	404	345	282	217	148	76	0	0	0	
Total Annual Interest Cost			19	96	176	265	376	471	548	616	704	756	795	862	902	898	873	839	803	765	725	683	640	593	545	494	440	384	325	263	197	129	56	0	0	0	

Feb8 1e, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	
Interest Cost - Feb8 1e, 30-yr			*38*	*116*	*196*	*294*	*401*	*492*	*563*	*640*	*719*	*763*	*813*	*875*	*903*	*893*	*864*	*830*	*793*	*755*	*715*	*673*	*628*	*581*	*532*	*481*	*427*	*369*	*310*	*247*	*180*	*111*	*38*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown			1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)			1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	0
Fiscal Exposure - Average Debt Drawdown			1,538	1,581	1,619	2,301	1,980	1,676	1,168	1,938	1,219	569	1,424	1,053	57	-457	-677	-711	-748	-786	-826	-869	-913	-960	-1,009	-1,060	-1,115	-1,172	-1,232	-1,295	-1,361	-1,430	-1,504	0	0	0	

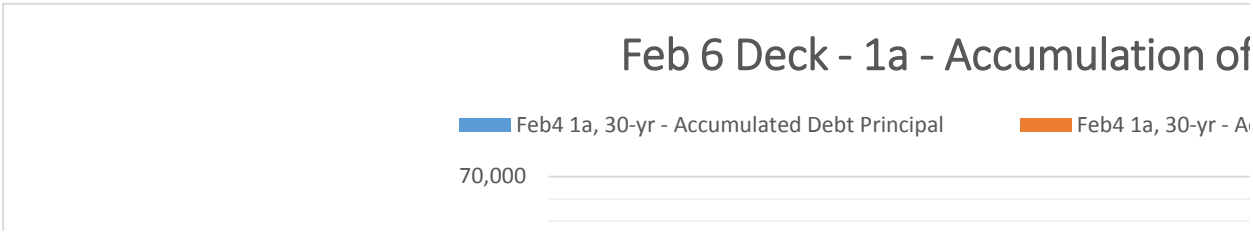
Feb 6 Deck

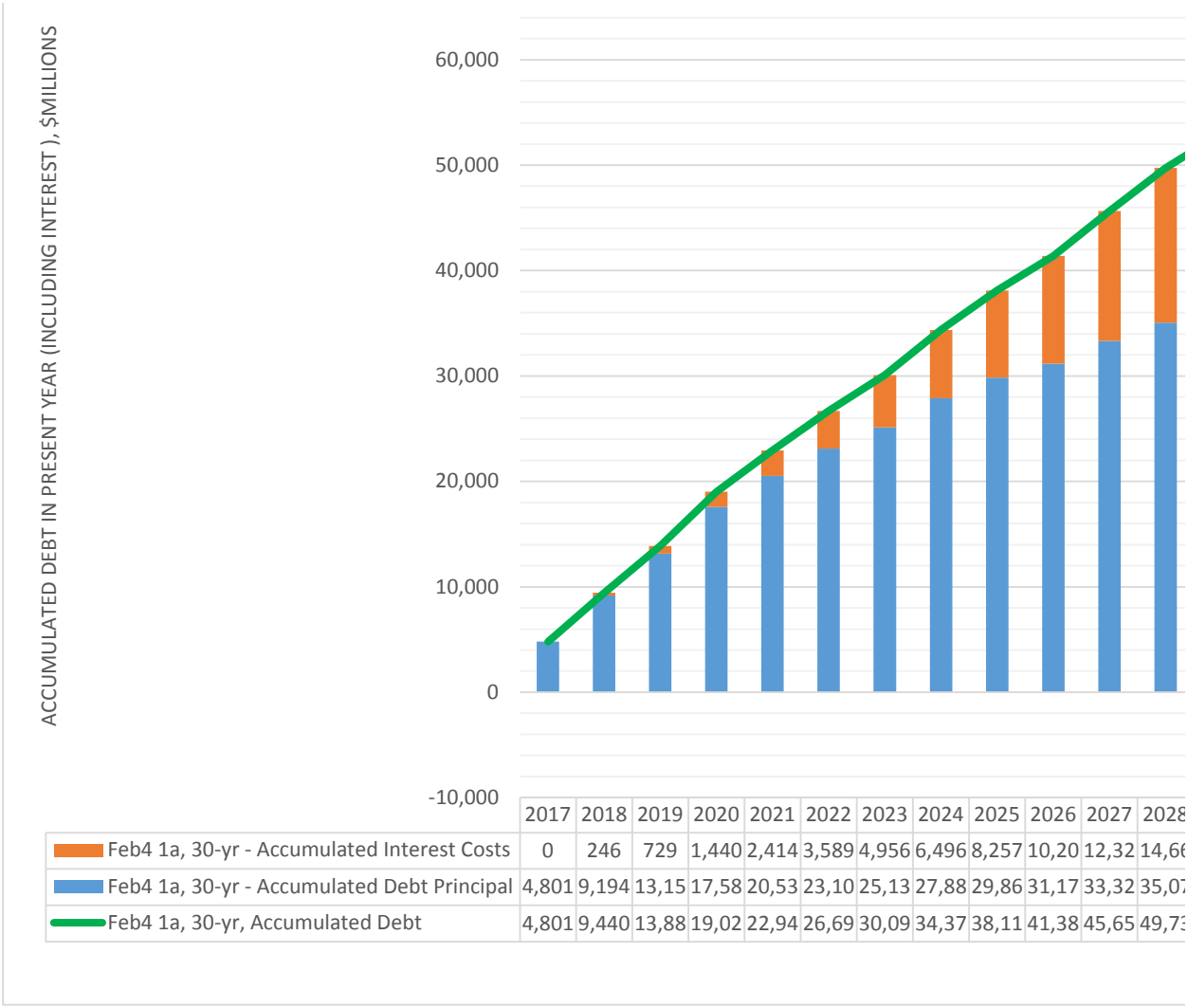
Feb 6 Deck - Scenario 1a, 1b, 1c - at 5.12% interest rate



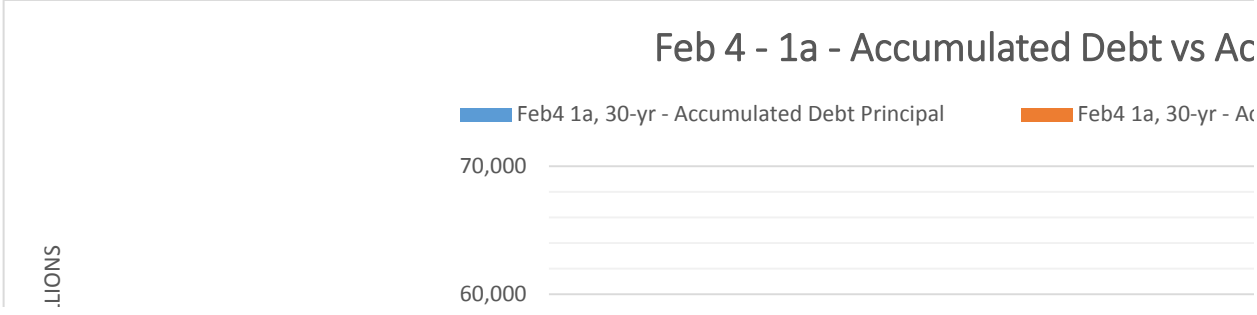
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	20
Feb4 1a, 30-yr	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,9
Feb4 1b, 30-yr	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,8
Feb4 1c, 30-yr	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	4(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73	53,03	56
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31

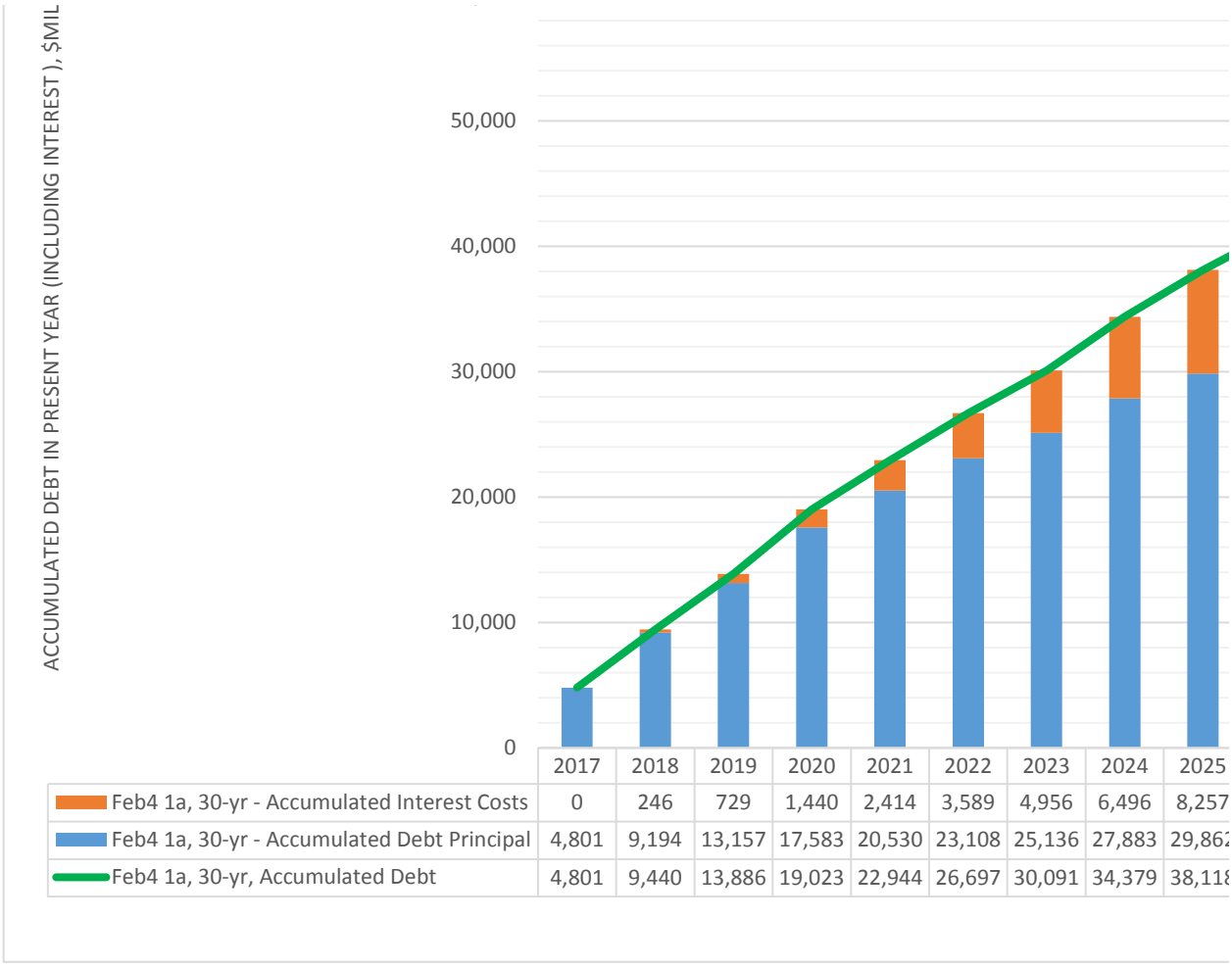
Feb 6 Deck - 1a - Accumulation of Debt (Principal and Interest)



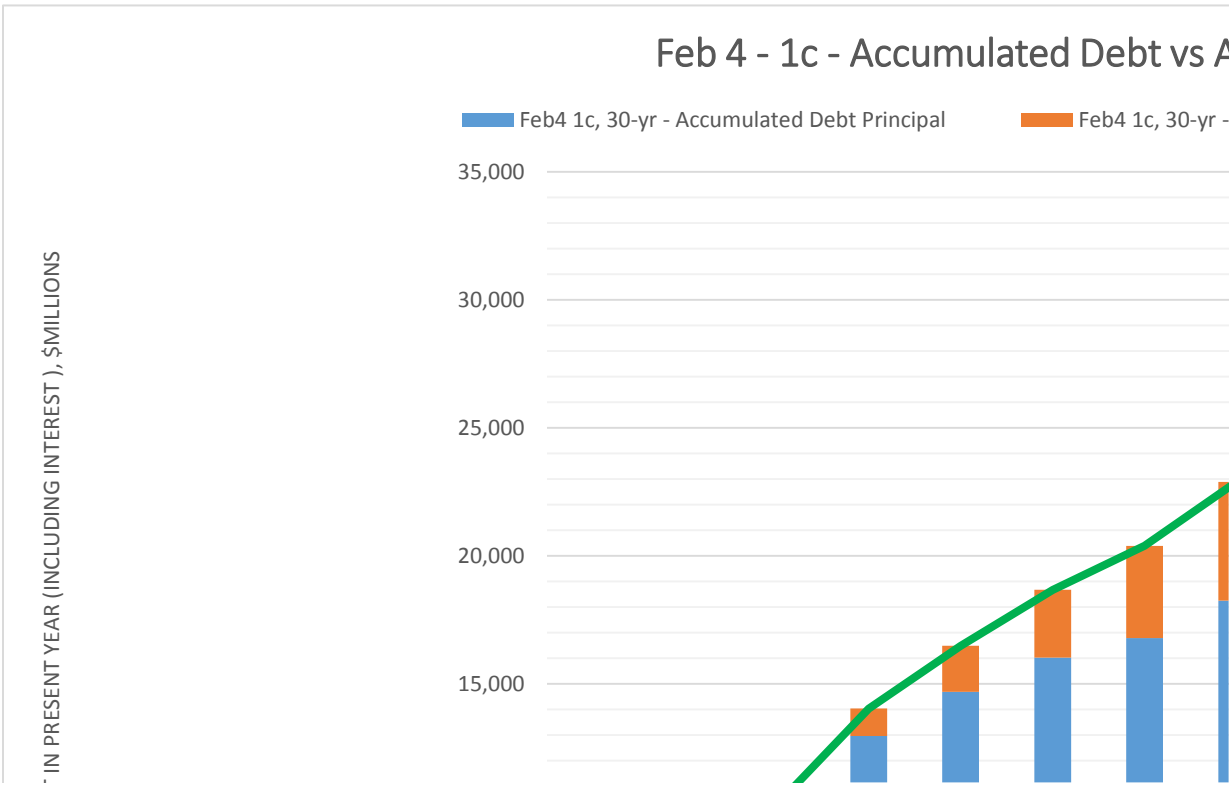


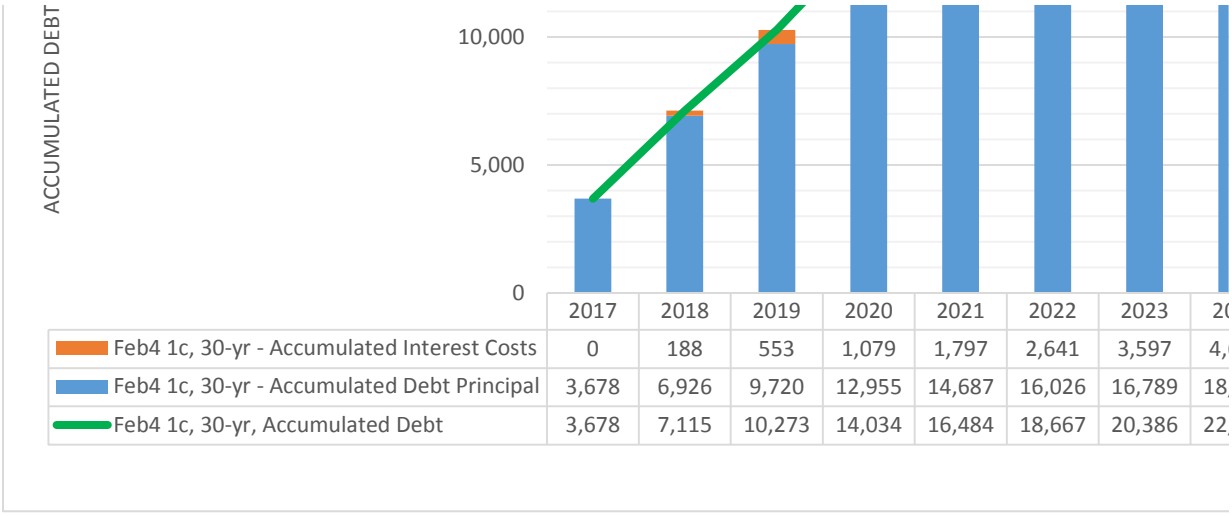
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,66
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,07
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73



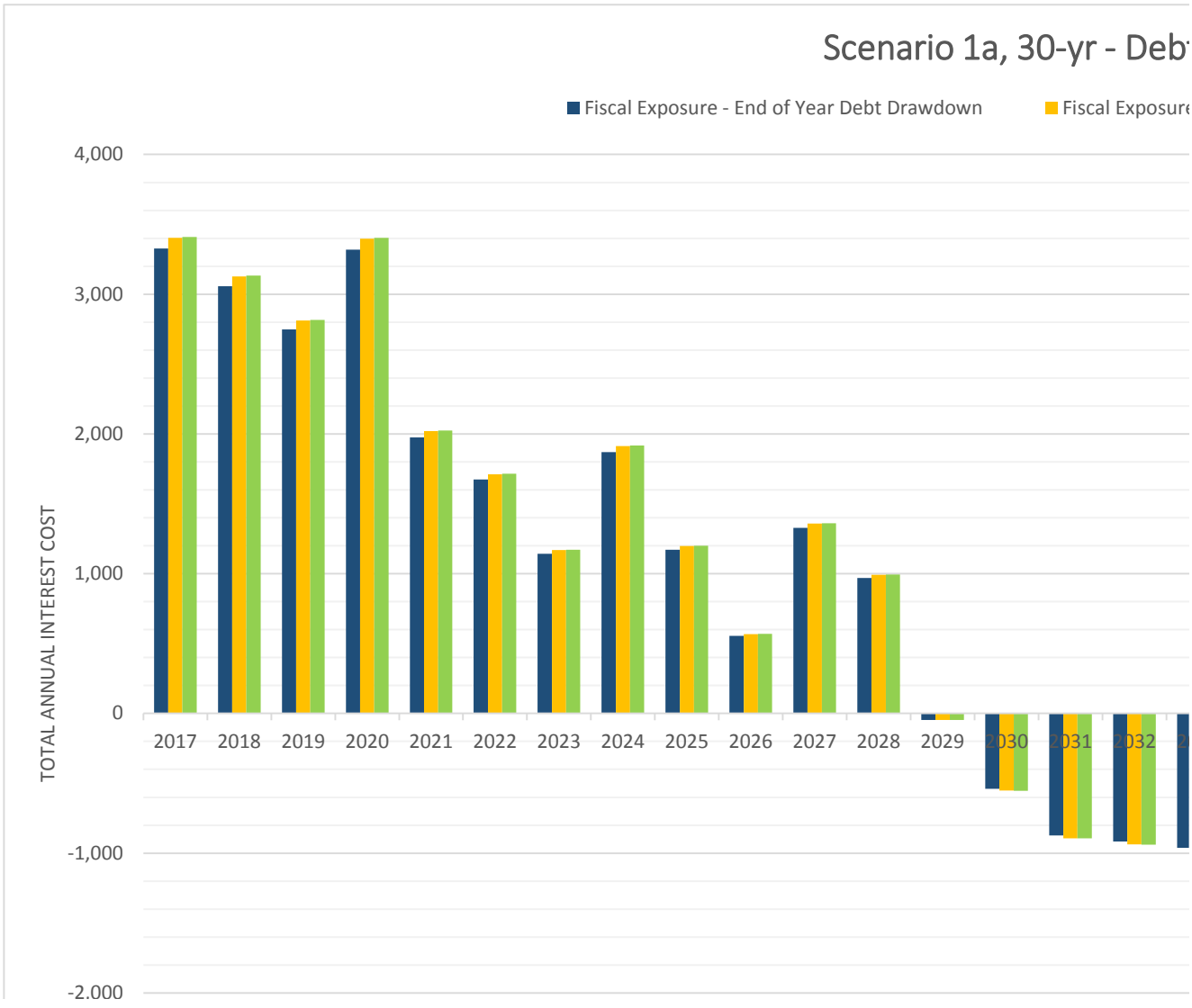


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



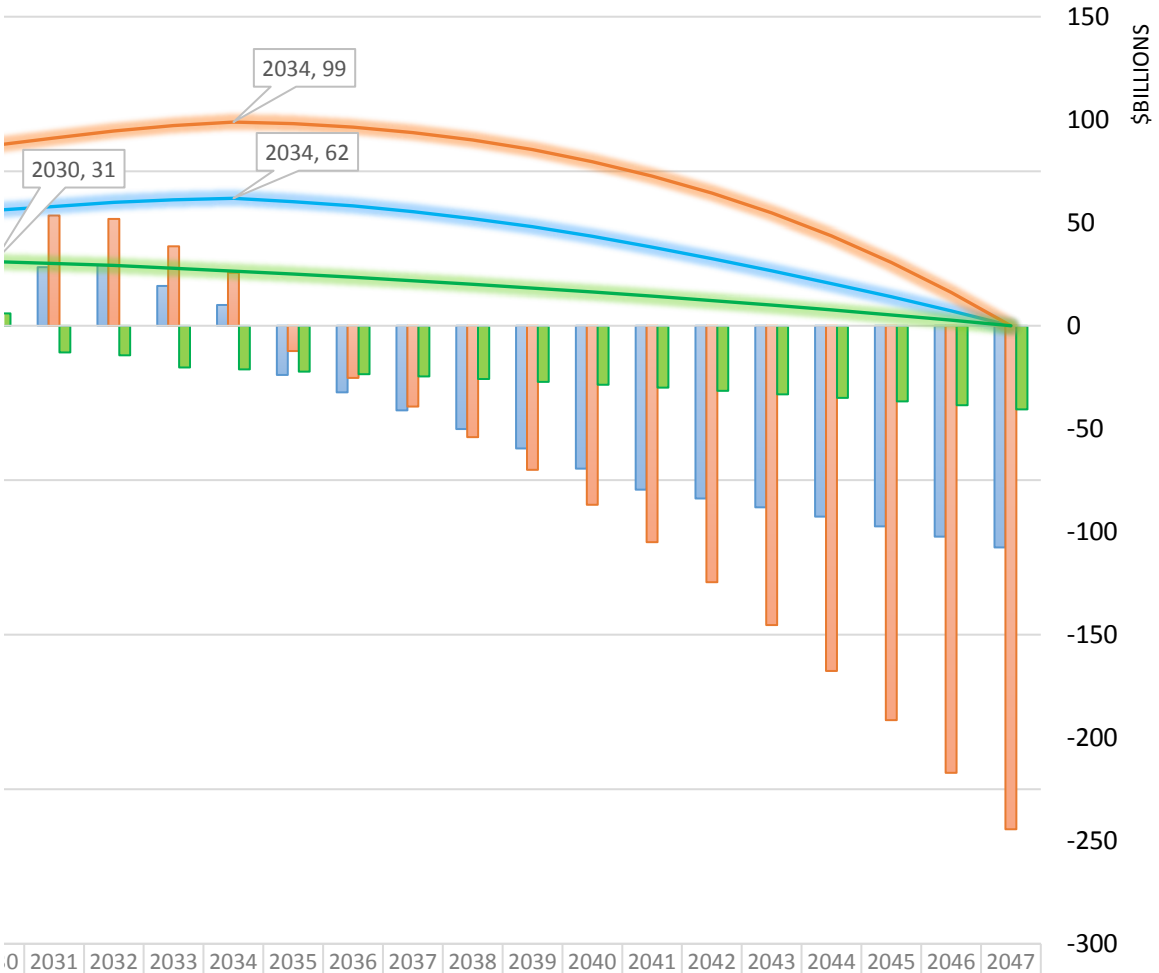


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22



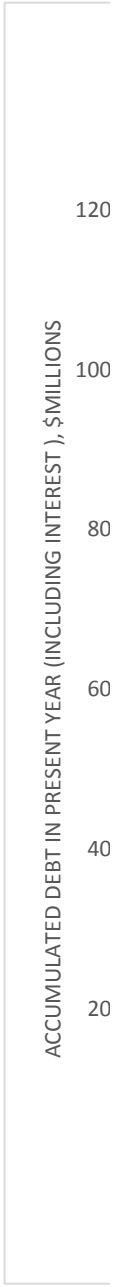

-3,000

lc - at 5.12% interest rate



0	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
98	1,896	1,966	1,288	672	-1,59	-2,15	-2,73	-3,34	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
26	3,568	3,457	2,571	1,716	-819	-1,68	-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
4	-860	-961	-1,34	-1,41	-1,48	-1,56	-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0
55	91,12	94,57	97,14	98,86	98,04	96,35	93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0
12	30,26	29,30	27,95	26,54	25,05	23,49	21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

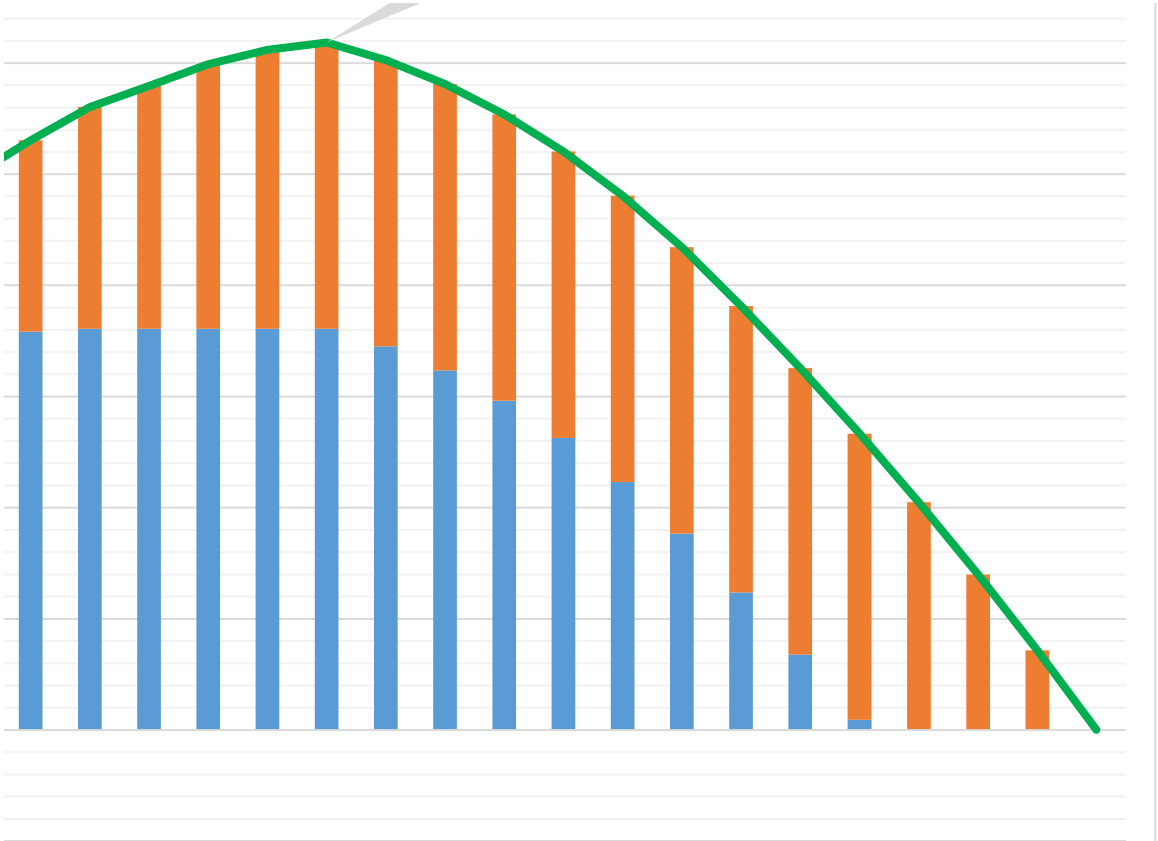
CALENDAR YEAR



Debt (Principal and Interest)

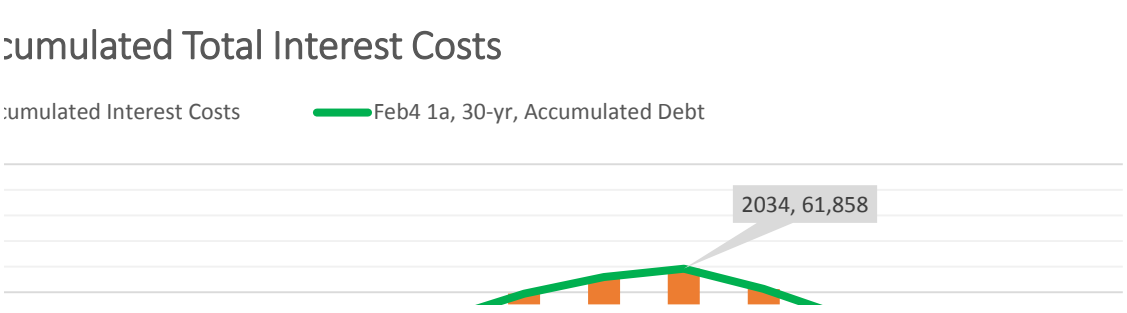
cumulated Interest Costs — Feb4 1a, 30-yr, Accumulated Debt

2034, 61,858

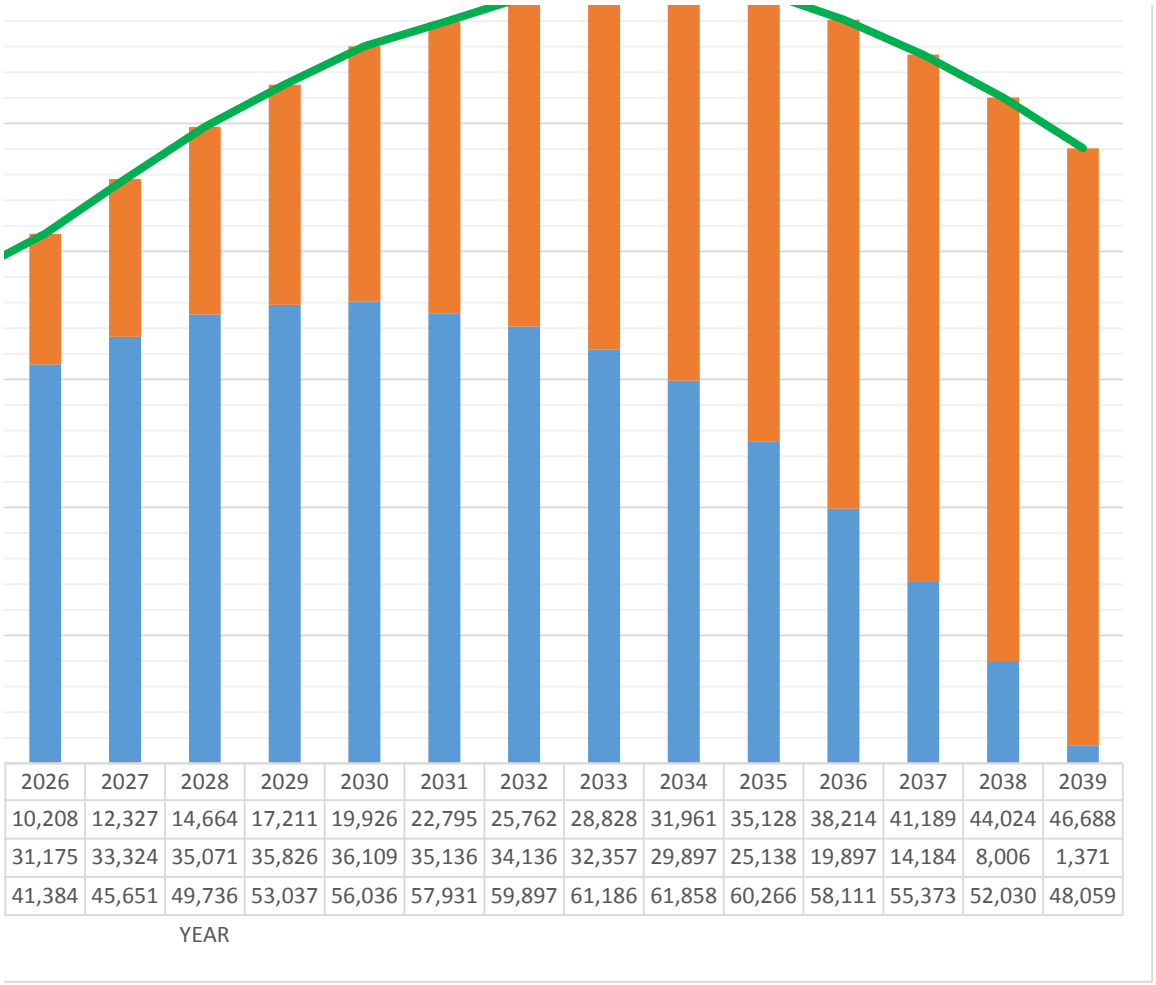


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



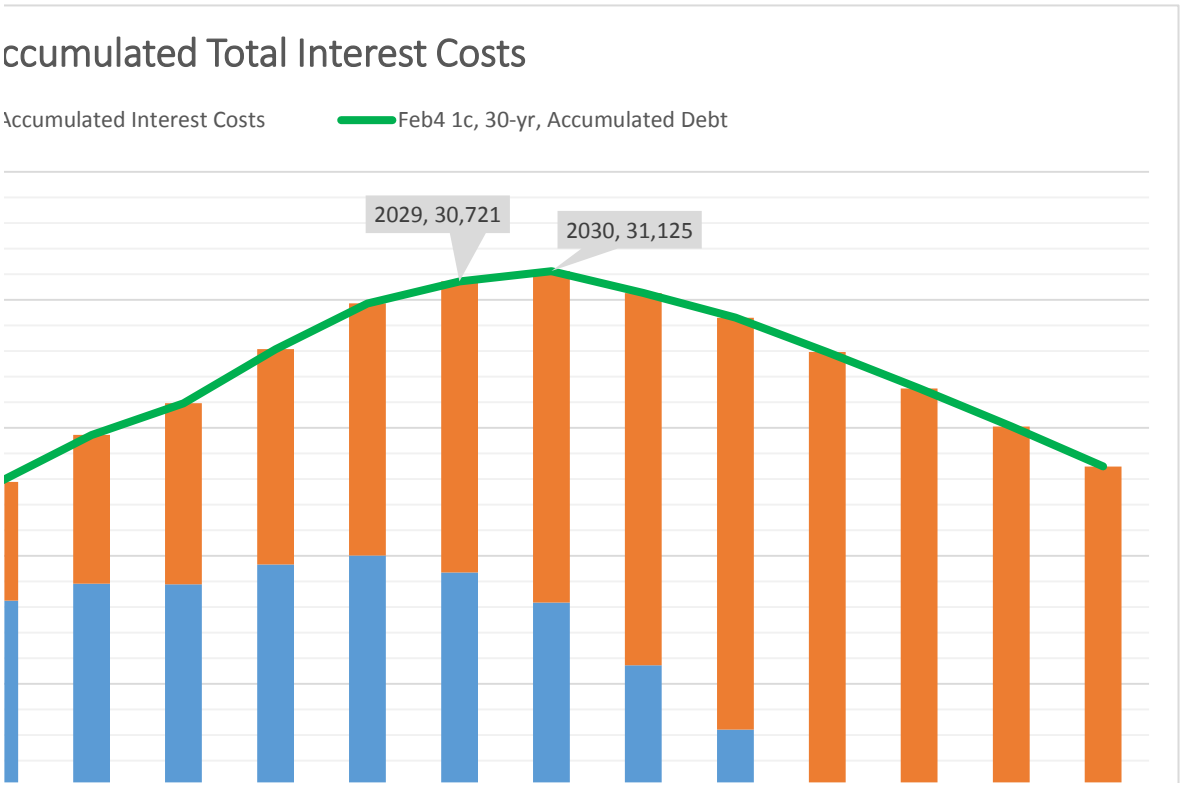
LIONS

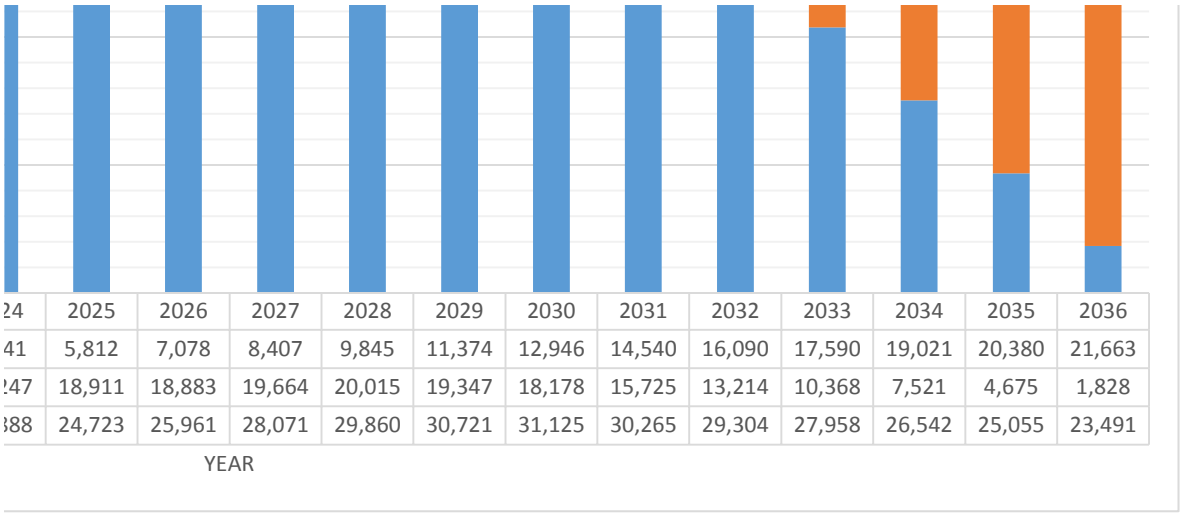


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

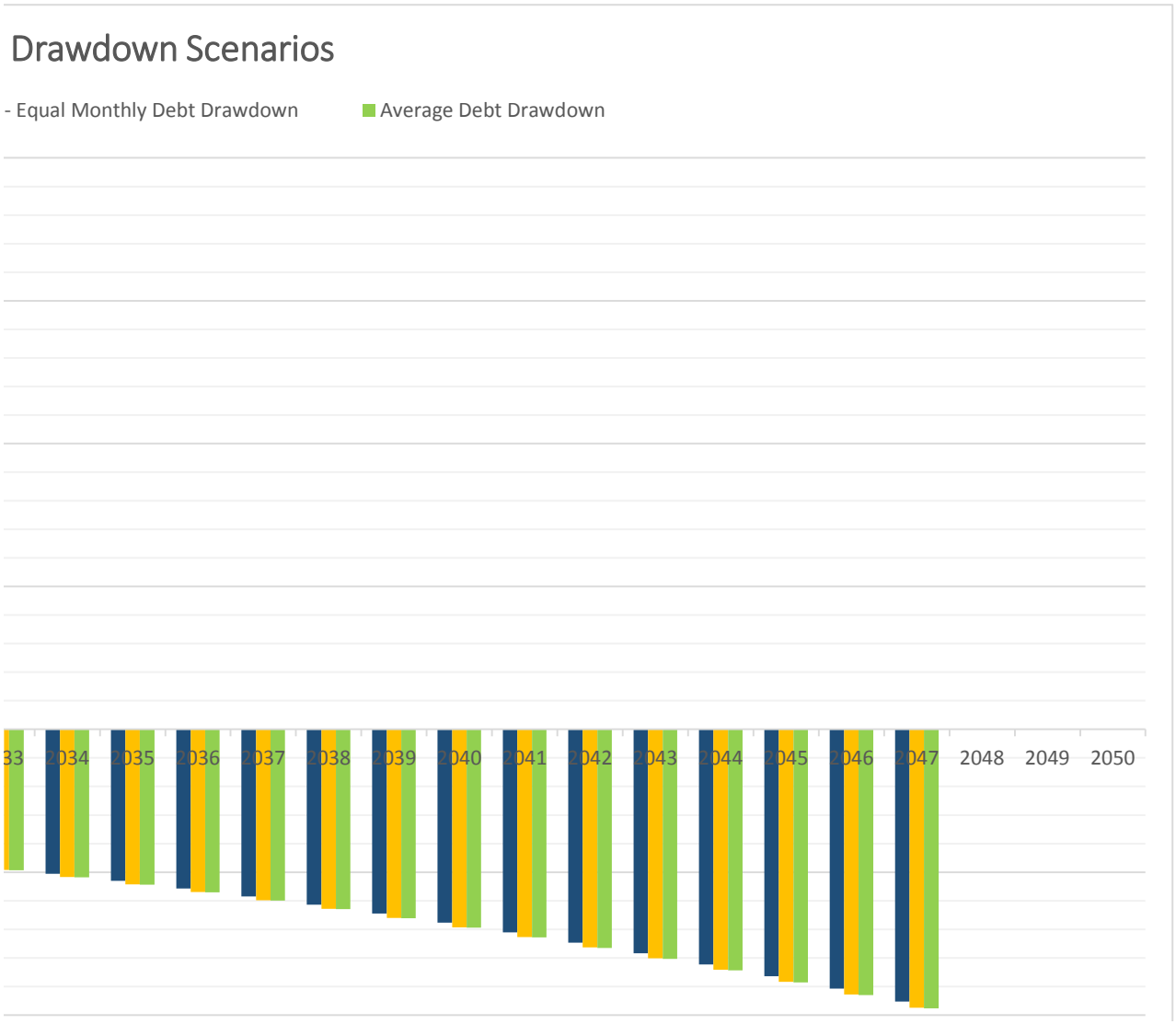
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





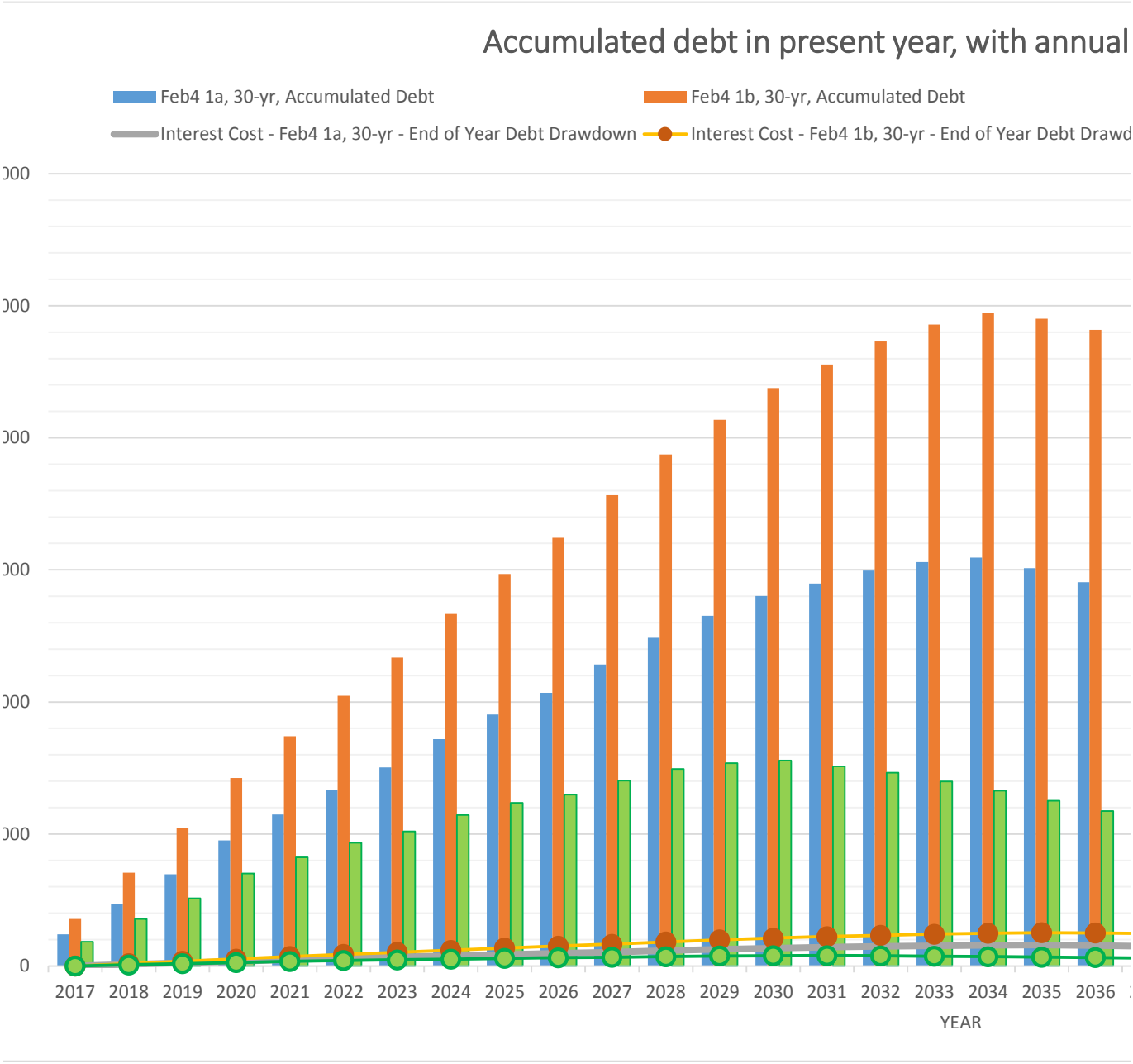
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

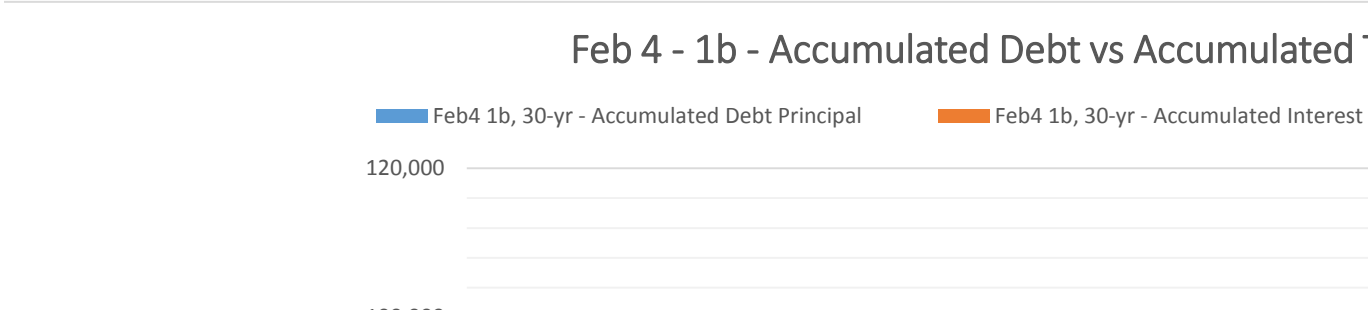
YEAR

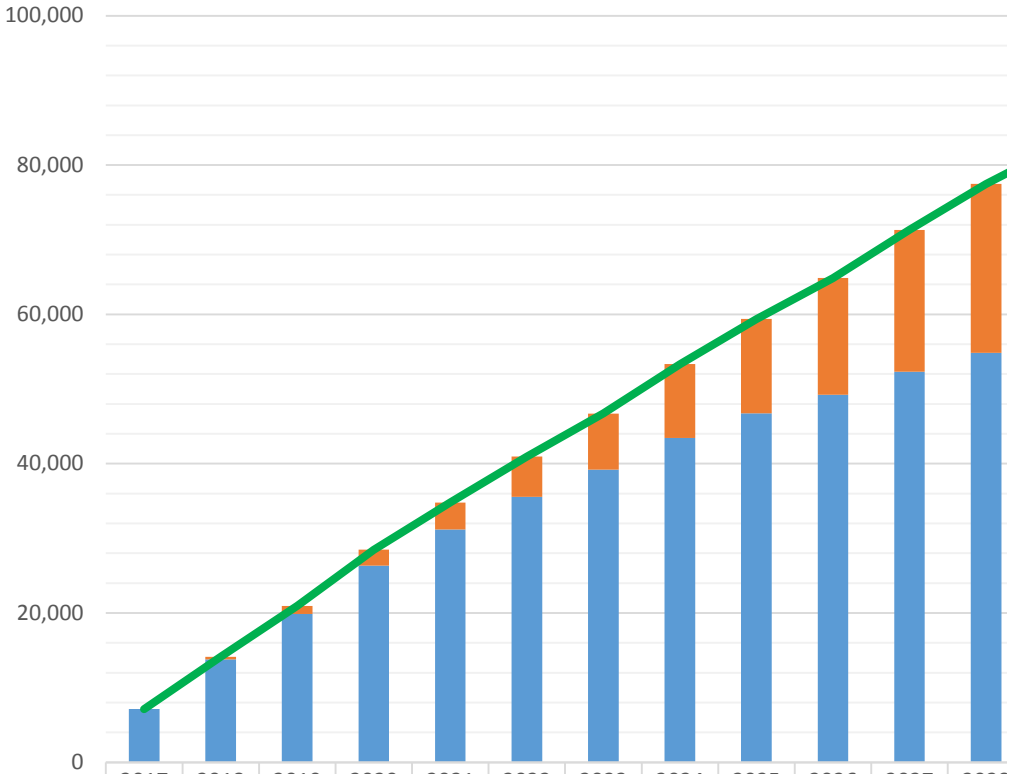


YEAR

ɜ - 25 year and 30 year Financing Terms, at 5% interest rate

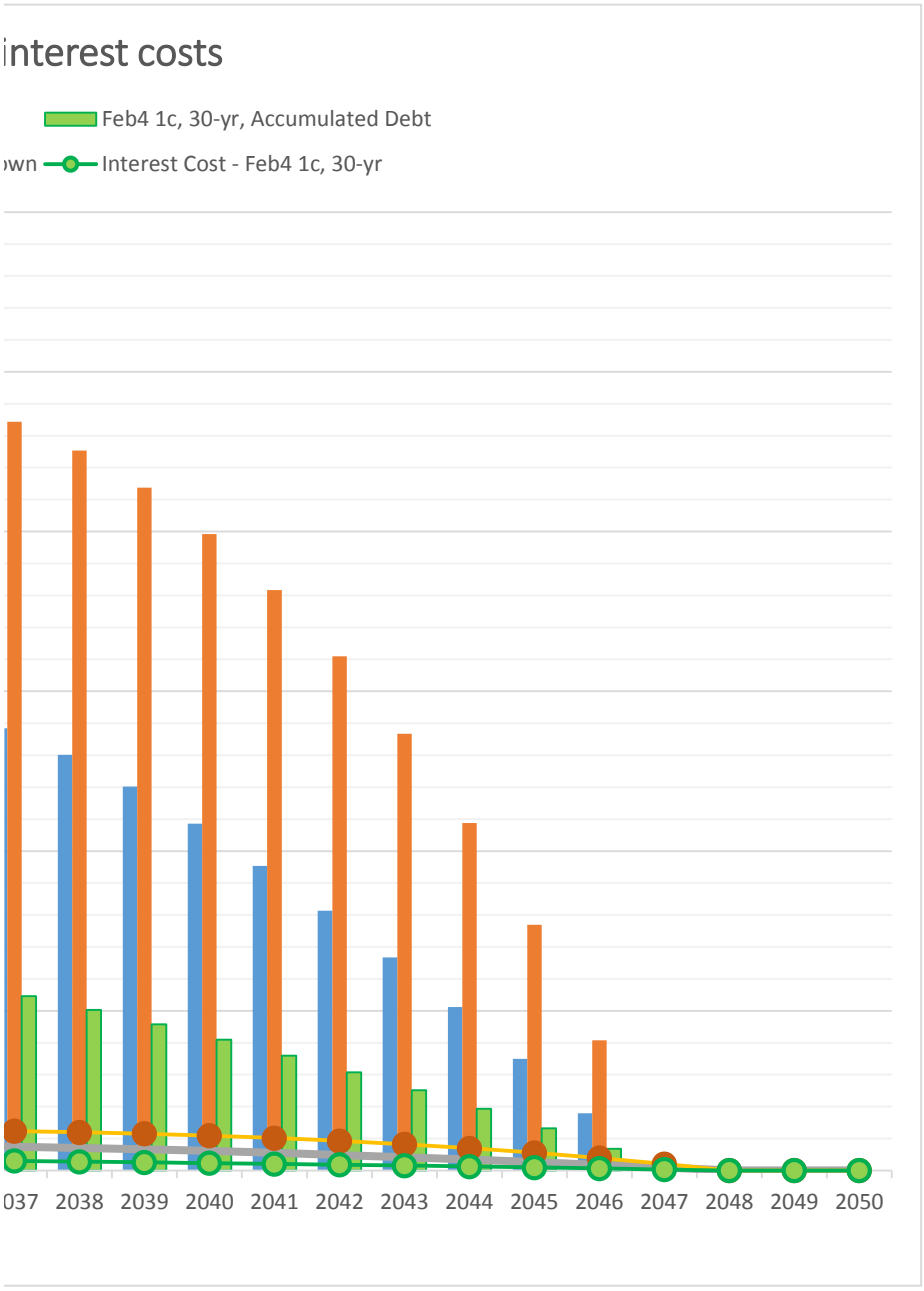


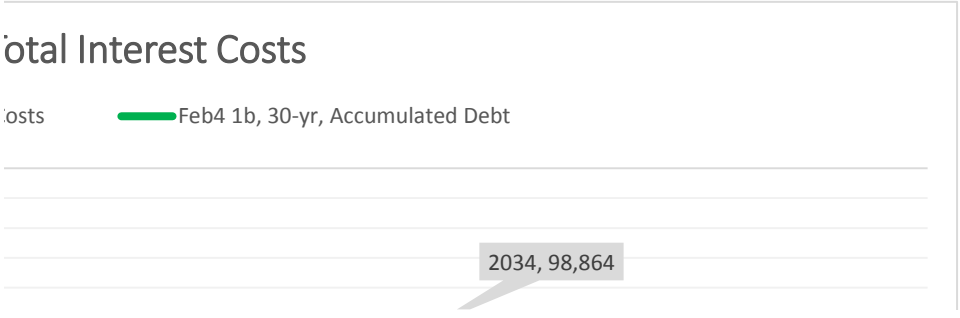

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

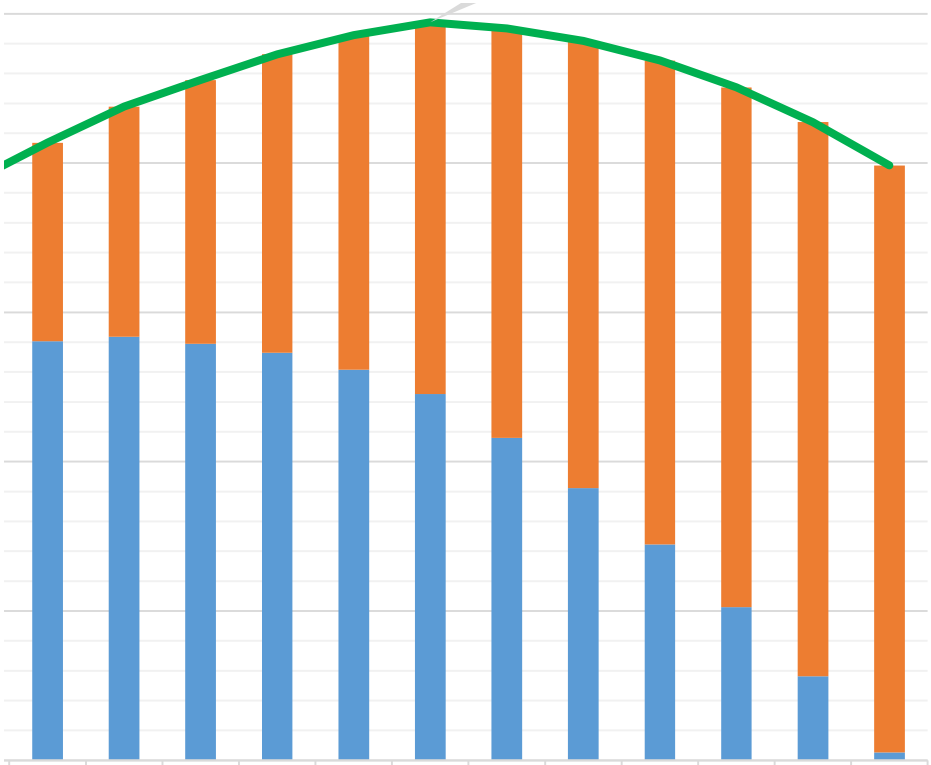


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y


interest costs
Feb4 1c, 30-yr, Accumulated Debt
wn
Interest Cost - Feb4 1c, 30-yr
037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR

Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

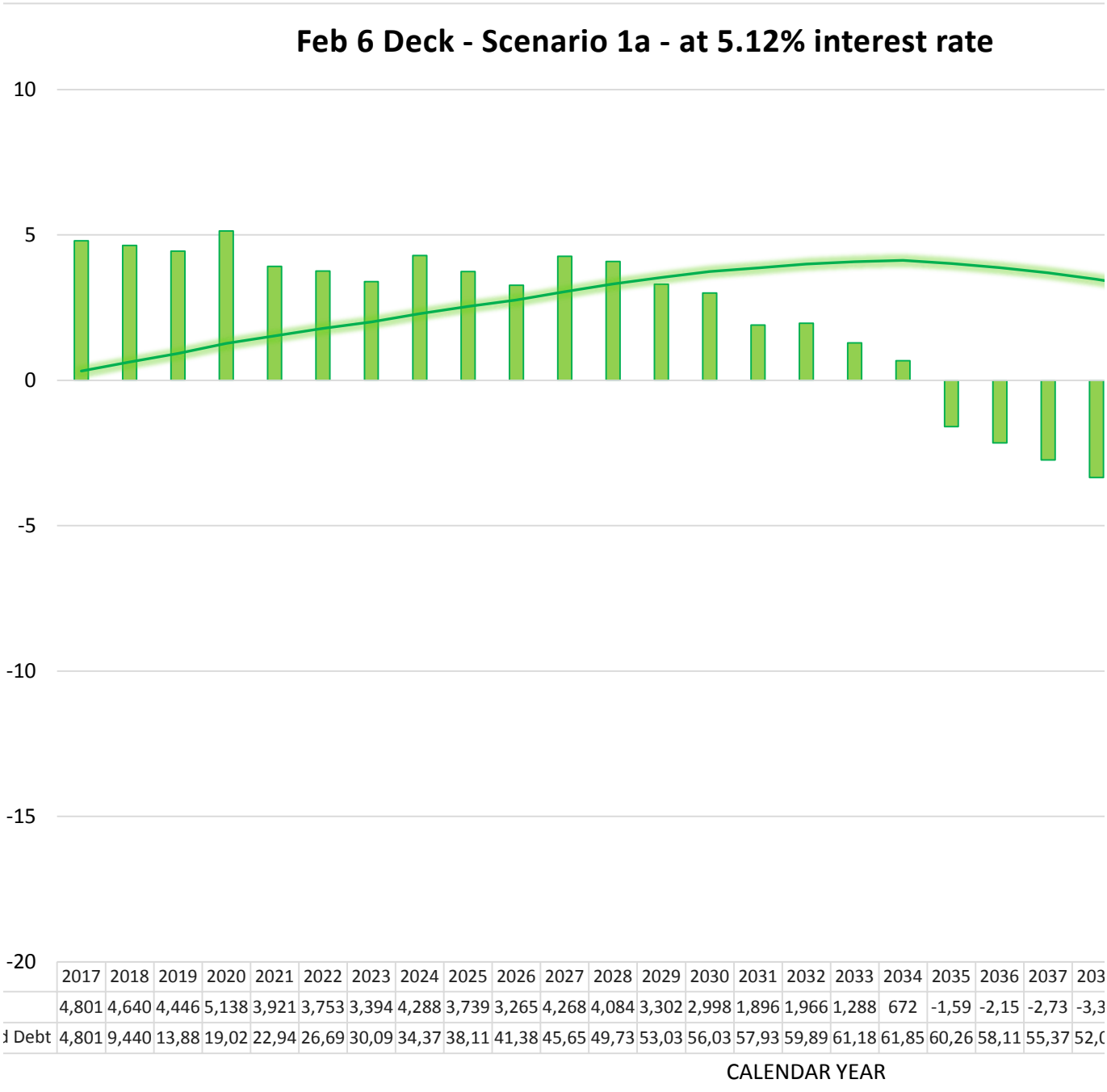
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

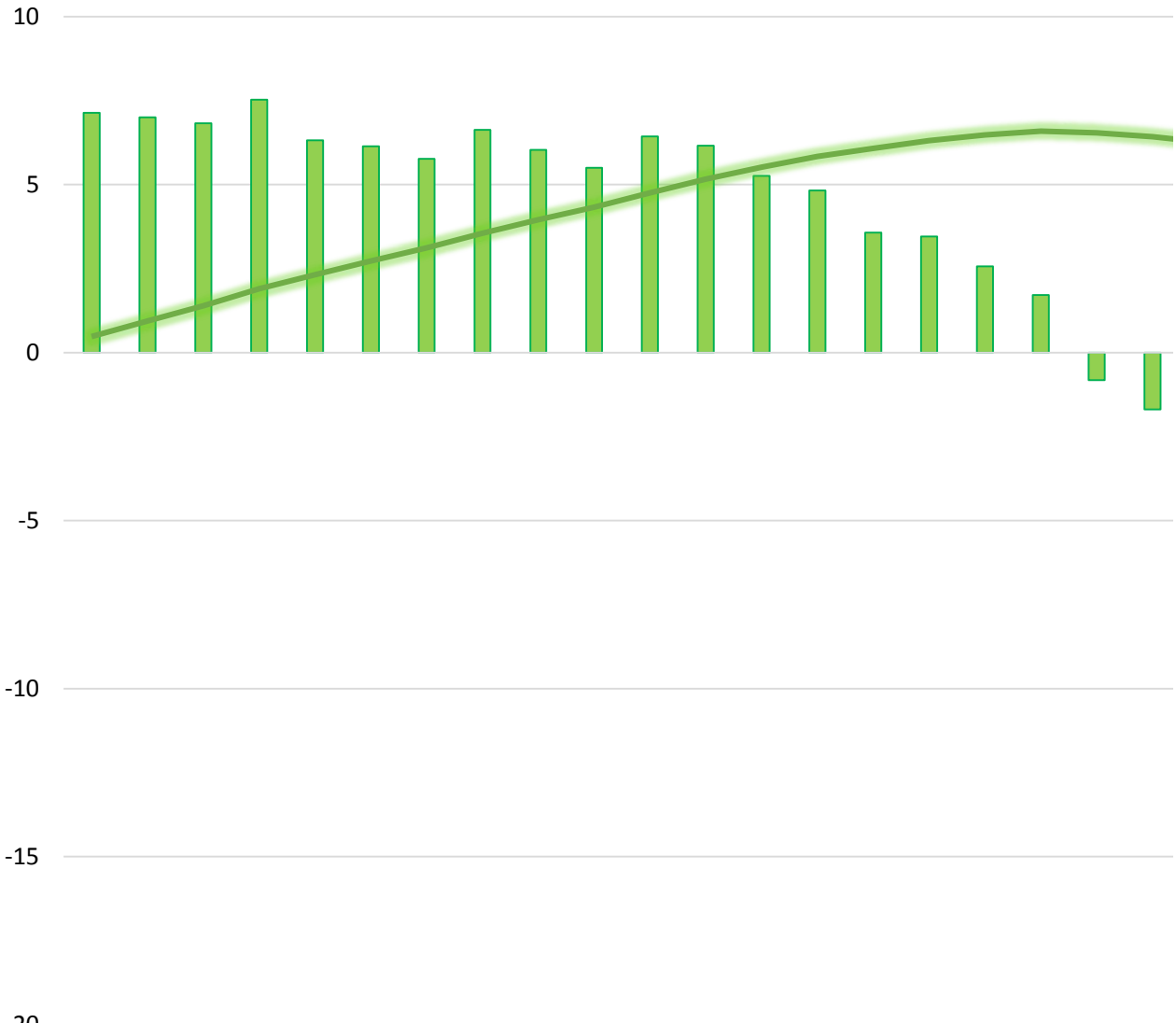
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

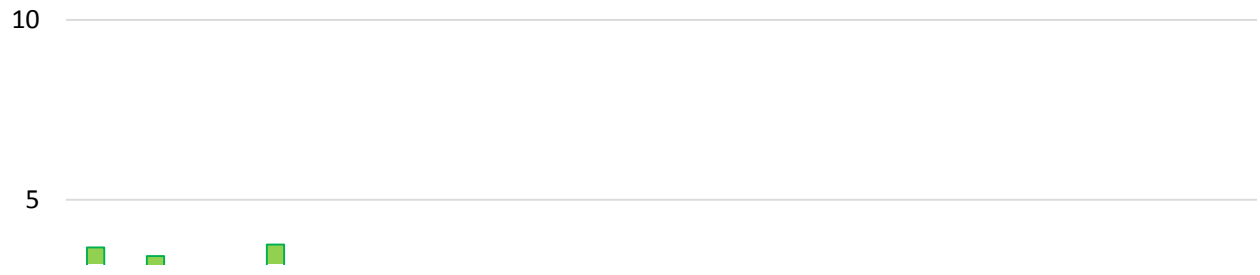
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

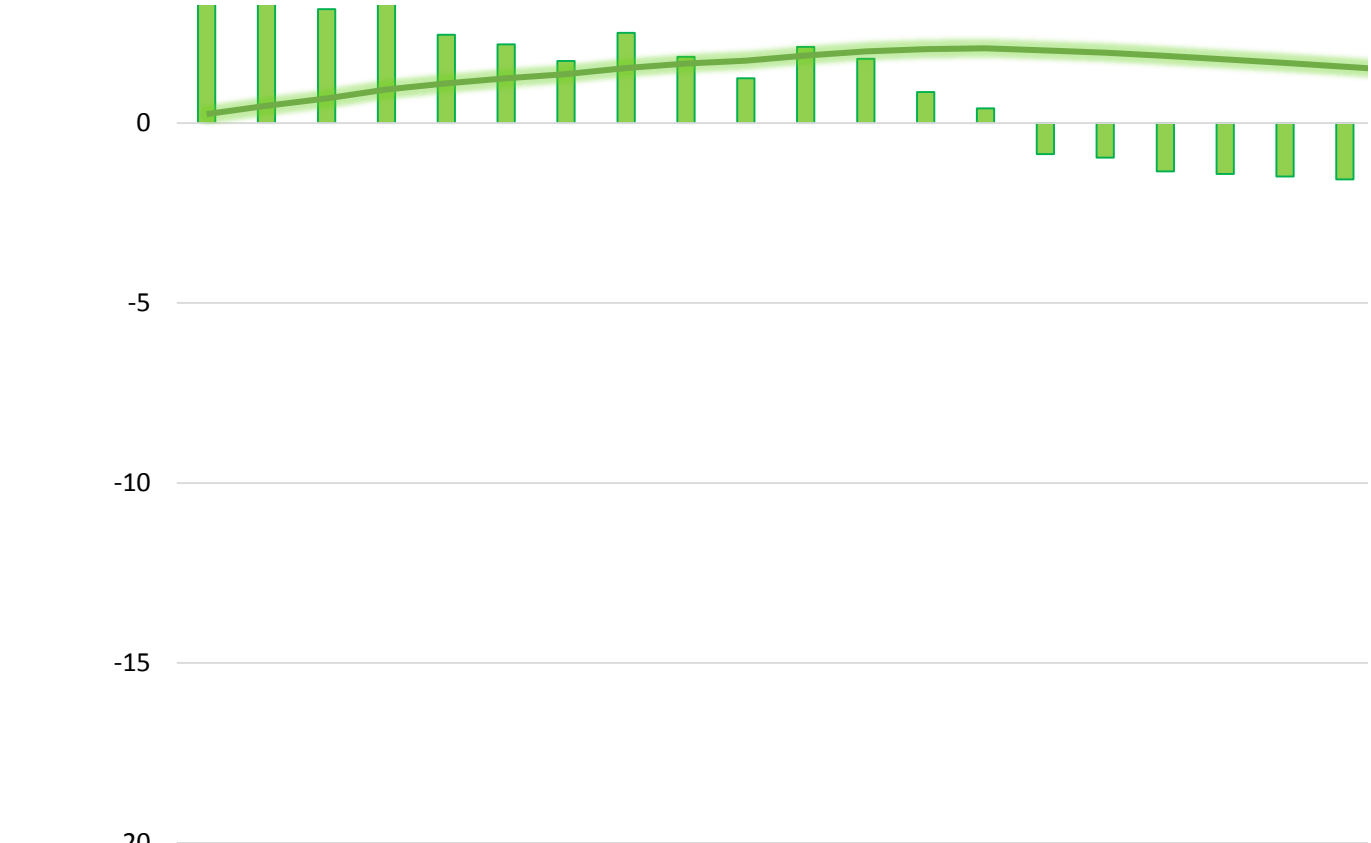


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



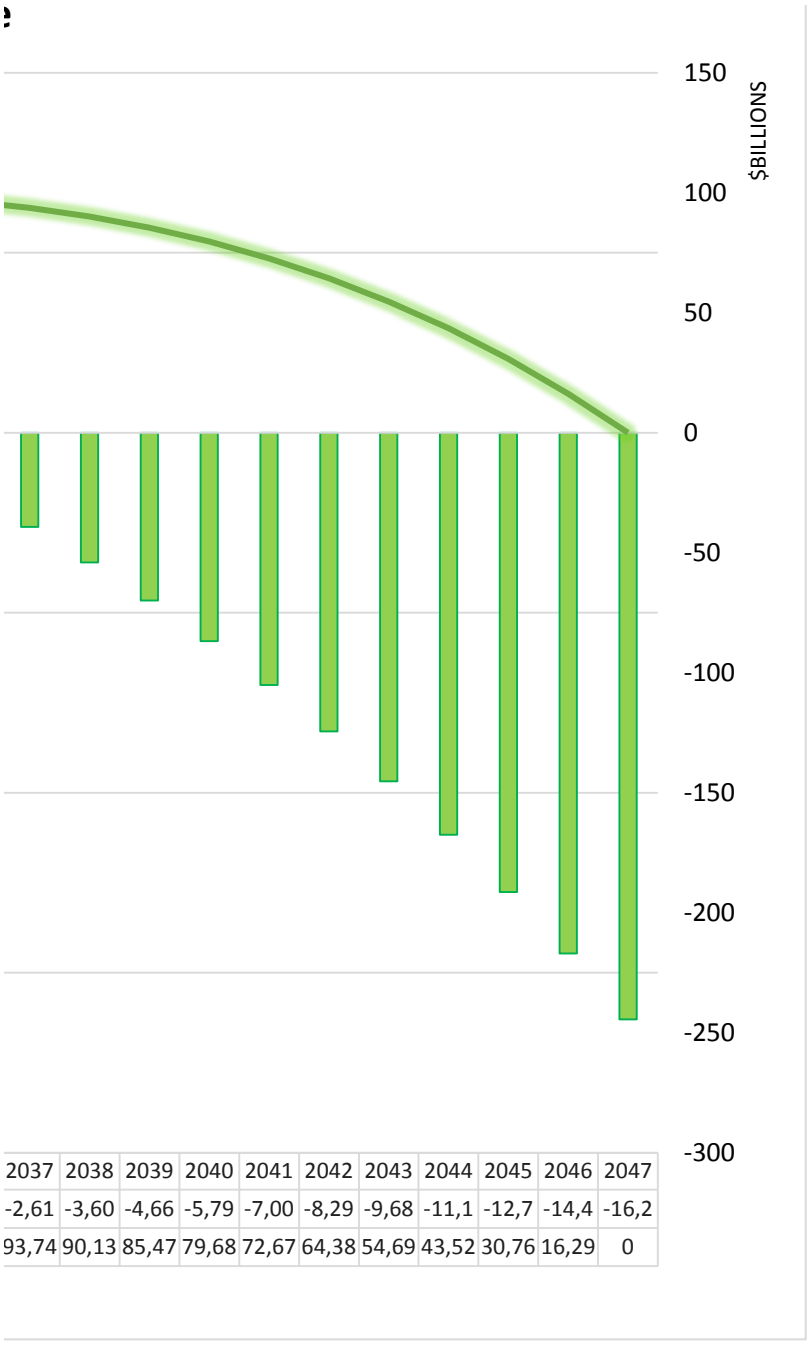


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

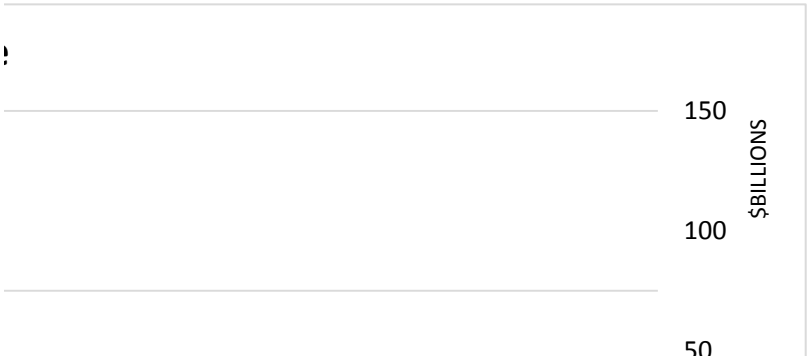
CALENDAR YEAR

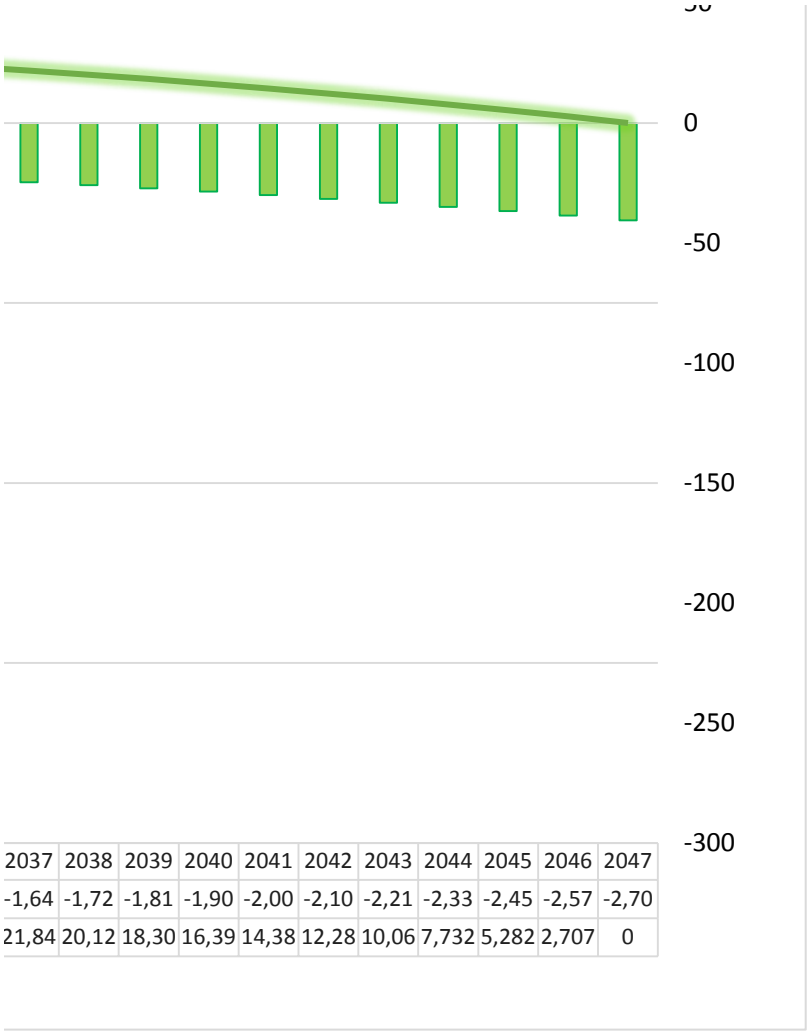


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Equal Monthly Debt Drawdown

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb4_1a_30yr

1a. GA Smoothing (Borrow ~$5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,801	4,640

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,200	4,760

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $62 billion, peakin
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary on accounting treatment.

7,133 7,133

Feb4_1b_30yr 7,133

1b. GA Smoothing (Borrow ~$7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	7,133	6,999

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,783	7,100

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $99 billion, peaking
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b on accounting treatment.

Feb4_1c_30yr

1c. GA Smoothing (Borrow ~$4 billion in 2017)

$ millions

Scenario 1C - 30-yr amortization	2017	2018
Annual Exposure[2]	3,678	3,437

	Fiscalized[3]	2016-17	2017-18
	Start: January 1st	919	3,617

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	1,783 - 1,200	7,100 - 4,760

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1200	4760
Debt-Finance Global Adjustment Costs, Option 1a	1783	7100
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18

Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1200**	**5000**
Total, B	1783	7340
Proposed Program Total:	1,783 - 1,200	7,340 - 5,000

ining

1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
4,446	5,138	3,921	3,753

2018-19	2019-20	2020-21	2021-2022
4,591	4,619	4,833	3,879

ng in 203 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
by approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
6,825	7,529	6,315	6,141

2018-19	2019-20	2020-21	2021-2022
6,956	7,001	7,226	6,272

g in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
3,158	3,761	2,450	2,183

2018-19	2019-20	2020-21	2021-2022
3,367	3,309	3,433	2,383

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
6,956 - 4,591	7,001 - 4,619	7,226 - 4,833	6,272 - 3,879

/1

2018-19[1]	2019-20[1]	2020-21[1]
4591	4619	4833
6956	7001	7226
225	279	323
60	60	60
18	18	18

4894	**4976**	**5234**
7259	7358	7627

7,259 - 4,894 7,358 - 4,976 7,627 - 5,234

1a. GA Smoothing (Borrow $5 billion in 2017)

	2017
IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	7,095
Additional GA Debt Drawdown, End of Year	5,000

Ratepayer GA Payment

Total Accumulated Debt *($ billion)*	5,000
Total Change in Accumulated Debt *($ billion)*	5000

1b. GA Smoothing (Borrow $7 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	5,095
Additional GA Debt Drawdown, End of Year	7,000

Total Accumulated Debt *($ billion)*	7000
Total Change in Accumulated Debt *($ billion)*	7000

1c. GA Smoothing (Borrow $4 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	8,095
Additional GA Debt Drawdown, End of Year	4,000

Total Accumulated Debt *($ billion)*	4000
Total Change in Accumulated Debt *($ billion)*	4000

2018	2019	2020	2021	2022	2023	2024	2025
11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
6,835	7,552	7,168	6,844	6,634	7,243	7,128	6,527
5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000

9,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000
5000	4000	5000	4000	4000	3000	4000	4000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
4,835	4,552	4,168	4,844	4,634	4,243	4,128	4,527
7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000

14000	21000	28000	35000	41000	47000	53000	59000
7000	7000	8000	6000	6000	6000	7000	6000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
8,835	8,552	8,168	8,844	8,634	8,243	8,128	8,527
3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000

7000	10000	14000	16000	19000	20000	23000	25000
3000	3000	4000	2000	2000	2000	3000	2000

2026	2027	2028	2029	2030	2031	2032	2033
10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
7,033	7,043	6,819	7,009	6,721	6,654	6,820	7,238
3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000

41,000	46,000	50,000	53,000	56,000	58,000	60,000	61,000
3000	4000	4000	3000	3000	2000	2000	1000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
4,033	5,043	4,819	5,009	4,721	4,654	5,820	5,238
6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000

65000	71000	77000	83000	88000	91000	95000	97000
6000	6000	6000	5000	5000	4000	3000	3000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
9,033	9,043	8,819	9,009	9,721	9,654	9,820	9,238
1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000

26000	28000	30000	31000	31000	30000	29000	28000
1000	2000	2000	1000	0	-1000	-1000	-1000

2034	2035	2036	2037	2038	2039	2040	2041
7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
6,756	7,662	7,389	8,129	7,881	8,645	9,421	9,207
1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000

62,000	60,000	58,000	55,000	52,000	48,000	43,000	38,000
1000	-2000	-2000	-3000	-3000	-4000	-5000	-5000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
5,756	6,662	7,389	8,129	8,881	9,645	10,421	11,207
2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000

99000	98000	96000	94000	90000	85000	80000	73000
2000	-1000	-2000	-3000	-4000	-5000	-6000	-7000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
8,756	6,662	7,389	7,129	6,881	6,645	6,421	6,207
-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000

27000	25000	23000	22000	20000	18000	16000	14000
-1000	-1000	-2000	-2000	-2000	-2000	-2000	-2000

2042	2043	2044	2045	2046	2047	2048		
4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
10,004	9,811	9,627	9,451	10,285	10,126	2,975		
-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0		

33,000	27,000	20,000	14,000	7,000	-	-	
-6000	-6000	-6000	-6000	-7000	-7000	0	

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
12,004	13,811	14,627	16,451	17,285	19,126	2,975		
-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0		

64000	55000	44000	31000	16000	0	0
-8000	-10000	-11000	-13000	-14000	-16000	0

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
6,004	5,811	5,627	5,451	6,285	6,126	2,975		
-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0		

12000	10000	8000	5000	3000	0	0
-2000	-2000	-2000	-2000	-3000	-3000	0

Feb4 1a, 30-yr - Debt Drawdown Scenarios

-92,247 -94598.515 58,489 36109.18 0

Feb4_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0
			114	110	106	122	93	89	81	102	89	78	102	97	79	71	45	47	31	16	-38	-51	-65	-80	-95	-110	-126	-133	-140	-147	-155	-162	-171	0	0	0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	5,138	3,167	58,489
Equal Monthly Debt Drawdown	5,260	3,149	

Maximum Accumulated Debt — Feb4 1a, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

End of Year Debt Drawdown	61,858	36,109
Equal Monthly Debt Drawdown	63,330	

			40%	37%	34%	36%	27%	24%																												
Feb4 1a, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
a	Debt, Beginning of Year		0	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	
c = a*5%	*Interest Cost - Feb4 1a, 30-yr - End of Year Debt Drawdown*		*0*	*246*	*483*	*711*	*974*	*1,175*	*1,367*	*1,541*	*1,760*	*1,952*	*2,119*	*2,337*	*2,546*	*2,716*	*2,869*	*2,966*	*3,067*	*3,133*	*3,167*	*3,086*	*2,975*	*2,835*	*2,664*	*2,461*	*2,224*	*1,952*	*1,666*	*1,365*	*1,049*	*717*	*367*	*0*	*0*	*0*	58,489
b	Additional GA Debt Drawdown, End of Year		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	21,822	23,788	25,076	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	20,490	13,998	7,173	0	0	0	
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	36,109	36,109	36,109	36,109	34,517	32,362	29,624	26,281	22,311	17,687	12,383	6,793	918	0	0	0	0	0	0	0	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688	49,149	51,372	53,325	54,991	56,356	57,405	58,122	58,489				
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371	-5,713	-13,241	-20,783	-28,325	-35,866	-43,408	-50,949	-58,489				
Fiscal Exposure - End of Year Debt Drawdown			4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0	

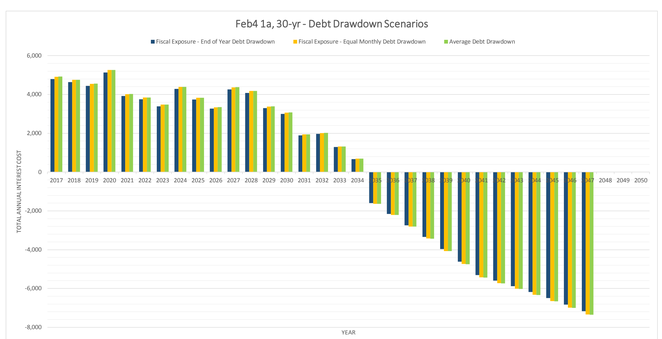
Feb4 1a, 30-yr	Equal Monthly Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			12																																		
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
3,149	*Interest Cost - Feb4 1a, 30-yr*		*114*	*356*	*589*	*833*	*1,067*	*1,264*	*1,448*	*1,643*	*1,849*	*2,029*	*2,220*	*2,435*	*2,625*	*2,787*	*2,914*	*3,013*	*3,097*	*3,149*	*3,129*	*3,034*	*2,910*	*2,756*	*2,569*	*2,351*	*2,098*	*1,819*	*1,526*	*1,218*	*895*	*554*	*197*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0	

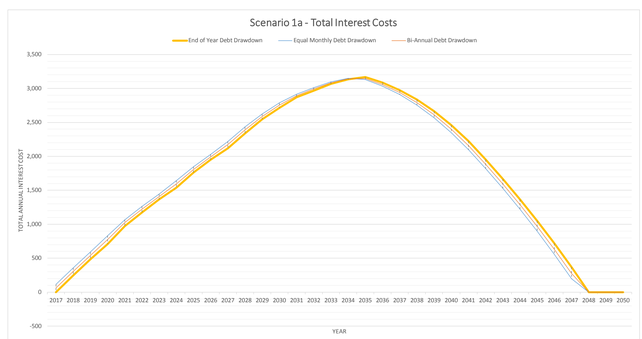
	Monthly Drawdown		400	366	330	369	246	215	169	229	165	109	179	146	63	24	(81)	(83)	(148)	(205)	(397)	(437)	(476)	(515)	(553)	(590)	(627)	(629)	(628)	(628)	(628)	(628)	(628)	-	-	-
	FV of Monthly Drawdown at 5%		4,915	4,498	4,057	4,532	3,017	2,640	2,075	2,813	2,026	1,345	2,200	1,789	773	289	(996)	(1,024)	(1,821)	(2,519)	(4,872)	(5,365)	(5,849)	(6,325)	(6,793)	(7,253)	(7,707)	(7,722)	(7,721)	(7,721)	(7,721)	(7,721)	(7,720)	-	-	-
	Annual Interest Cost on New Drawdowns		114	105	94	105	70	61	48	65	47	31	51	42	18	7	(23)	(24)	(42)	(59)	(113)	(125)	(136)	(147)	(158)	(169)	(179)	(180)	(180)	(180)	(180)	(180)	(179)	-	-	-
	Annual Interest Cost on Opening Balance		-	252	495	728	997	1,203	1,399	1,577	1,802	1,998	2,169	2,393	2,607	2,780	2,937	3,037	3,140	3,207	3,243	3,159	3,046	2,903	2,727	2,519	2,277	1,999	1,706	1,398	1,074	734	376	(0)	(0)	(0)
	Total Annual Interest Cost		114	356	589	833	1,067	1,264	1,448	1,643	1,849	2,029	2,220	2,435	2,625	2,787	2,914	3,013	3,097	3,149	3,129	3,034	2,910	2,756	2,569	2,351	2,098	1,819	1,526	1,218	895	554	197	(0)	(0)	(0)

Feb4 1a, 30-yr	Bi-Annual Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*61*	*305*	*540*	*777*	*1,024*	*1,223*	*1,410*	*1,596*	*1,808*	*1,993*	*2,173*	*2,390*	*2,589*	*2,754*	*2,893*	*2,991*	*3,083*	*3,141*	*3,147*	*3,058*	*2,940*	*2,792*	*2,613*	*2,401*	*2,156*	*1,881*	*1,591*	*1,286*	*966*	*629*	*275*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown			4,862	4,699	4,502	5,203	3,971	3,801	3,438	4,343	3,787	3,307	4,322	4,137	3,344	3,037	1,920	1,991	1,305	681	-1,612	-2,183	-2,773	-3,386	-4,021	-4,683	-5,372	-5,661	-5,951	-6,255	-6,575	-6,912	-7,265	0	0	0	

	Bi-Annual Drawdown		2,400	2,197	1,981	2,213	1,473	1,289	1,014	1,374	989	657	1,074	874	378	141	(487)	(500)	(889)	(1,230)	(2,379)	(2,620)	(2,857)	(3,089)	(3,317)	(3,542)	(3,764)	(3,771)	(3,771)	(3,771)	(3,771)	(3,771)	(3,770)	-	-	-
	FV of Bi-Annual Drawdown at 5%		4,862	4,450	4,013	4,483	2,984	2,612	2,053	2,783	2,004	1,331	2,176	1,769	765	286	(986)	(1,013)	(1,801)	(2,492)	(4,820)	(5,308)	(5,787)	(6,257)	(6,719)	(7,175)	(7,624)	(7,639)	(7,638)	(7,638)	(7,638)	(7,638)	(7,637)	-	-	-
	Annual Interest Cost on New Drawdowns		61	56	51	57	38	33	26	35	25	17	28	22	10	4	(12)	(13)	(23)	(31)	(61)	(67)	(73)	(79)	(85)	(91)	(96)	(97)	(97)	(97)	(97)	(97)	(97)	-	-	-
	Annual Interest Cost on Opening Balance		-	249	490	720	986	1,190	1,384	1,560	1,783	1,977	2,146	2,367	2,579	2,750	2,906	3,004	3,106	3,173	3,208	3,125	3,013	2,871	2,698	2,492	2,252	1,977	1,687	1,383	1,063	726	372	(0)	(0)	(0)
	Total Annual Interest Cost		61	305	540	777	1,024	1,223	1,410	1,596	1,808	1,993	2,173	2,390	2,589	2,754	2,893	2,991	3,083	3,141	3,147	3,058	2,940	2,792	2,613	2,401	2,156	1,881	1,591	1,286	966	629	275	(0)	(0)	(0)

Feb4 1a, 30-yr	Average Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*123*	*365*	*597*	*842*	*1,074*	*1,271*	*1,454*	*1,650*	*1,856*	*2,035*	*2,228*	*2,442*	*2,631*	*2,792*	*2,918*	*3,016*	*3,100*	*3,150*	*3,126*	*3,030*	*2,905*	*2,749*	*2,562*	*2,342*	*2,088*	*1,809*	*1,516*	*1,207*	*883*	*542*	*184*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
Fiscal Exposure - Average Debt Drawdown			4,923	4,758	4,559	5,269	4,021	3,849	3,481	4,398	3,835	3,349	4,377	4,189	3,386	3,075	1,944	2,016	1,321	689	-1,633	-2,210	-2,808	-3,428	-4,072	-4,742	-5,440	-5,733	-6,026	-6,334	-6,658	-6,999	-7,357	0	0	0	





Feb4 1b, 30-yr - Debt Drawdown Scenarios

-149,507 -153857.97 97,141 56717.33 0

Feb4_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0
			170	167	162	179	150	146	137	158	144	131	153	147	125	115	85	82	61	41	-19	-40	-62	-86	-111	-138	-167	-198	-231	-266	-304	-344	-388	0	0	0

0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown 7,529	5,062	97,141
Equal Monthly Debt Drawdown 7,708	5,042	

Maximum Accumulated Debt	Feb4 1b, 30-yr, Accumulated Debt	Total Principal Debt Borrowed
End of Year Debt Drawdown	98,864	56,717
Equal Monthly Debt Drawdown	101,217	

Feb4 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
a Debt, Beginning of Year	0	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	
c = a*5% *Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown*	*0*	*365*	*724*	*1,073*	*1,459*	*1,782*	*2,096*	*2,391*	*2,731*	*3,040*	*3,322*	*3,651*	*3,966*	*4,236*	*4,483*	*4,665*	*4,842*	*4,974*	*5,062*	*5,020*	*4,933*	*4,800*	*4,615*	*4,376*	*4,080*	*3,721*	*3,296*	*2,800*	*2,228*	*1,575*	*834*	*0*	*0*	*0*	97,141
b Additional GA Debt Drawdown, End of Year	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
d = a+b+c Accumulated debt in present year (including 5% annual interest)	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	0	
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,633	26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606	82,685	86,406	89,703	92,503	94,731	96,306	97,141				
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,831	56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076	-10,007	-22,027	-35,008	-48,980	-63,971	-80,013	-97,141				
Fiscal Exposure - End of Year Debt Drawdown	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0	

Feb4 1b, 30-yr — Equal Monthly Debt Drawdown

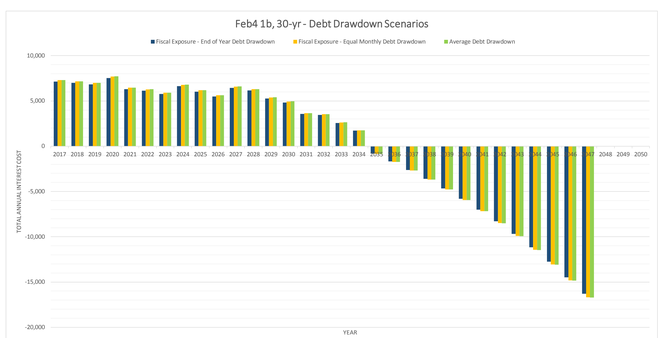
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	
5,042 *Interest Cost - Feb4 1b, 30-yr*	*170*	*532*	*886*	*1,252*	*1,609*	*1,928*	*2,234*	*2,549*	*2,874*	*3,171*	*3,475*	*3,797*	4,091	*4,350*	*4,568*	*4,748*	*4,904*	*5,015*	*5,042*	*4,980*	*4,871*	*4,714*	*4,504*	*4,238*	*3,913*	*3,524*	*3,066*	*2,534*	*1,925*	*1,231*	*446*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0	
Monthly Drawdown	594	553	508	538	405	363	306	353	275	205	259	209	108	49	(76)	(101)	(189)	(271)	(490)	(559)	(629)	(700)	(773)	(847)	(924)	(1,002)	(1,082)	(1,164)	(1,249)	(1,337)	(1,427)	(0)	-	-	
FV of Monthly Drawdown at 5%	7,303	6,792	6,247	6,610	4,972	4,463	3,755	4,338	3,383	2,523	3,184	2,565	1,327	605	(937)	(1,237)	(2,326)	(3,335)	(6,020)	(6,867)	(7,728)	(8,604)	(9,498)	(10,412)	(11,347)	(12,306)	(13,291)	(14,304)	(15,348)	(16,424)	(17,536)	(0)	-	-	
Annual Interest Cost on New Drawdowns	170	158	145	154	116	104	87	101	79	59	74	60	31	14	(22)	(29)	(54)	(78)	(140)	(160)	(180)	(200)	(221)	(242)	(264)	(286)	(309)	(333)	(357)	(382)	(408)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	374	741	1,099	1,493	1,824	2,146	2,448	2,796	3,112	3,401	3,738	4,061	4,336	4,589	4,776	4,958	5,092	5,182	5,139	5,051	4,914	4,725	4,481	4,177	3,810	3,375	2,867	2,281	1,612	854	0	(0)	(0)	
Total Annual Interest Cost	170	532	886	1,252	1,609	1,928	2,234	2,549	2,874	3,171	3,475	3,797	4,091	4,350	4,568	4,748	4,904	5,015	5,042	4,980	4,871	4,714	4,504	4,238	3,913	3,524	3,066	2,534	1,925	1,231	446	0	(0)	(0)	

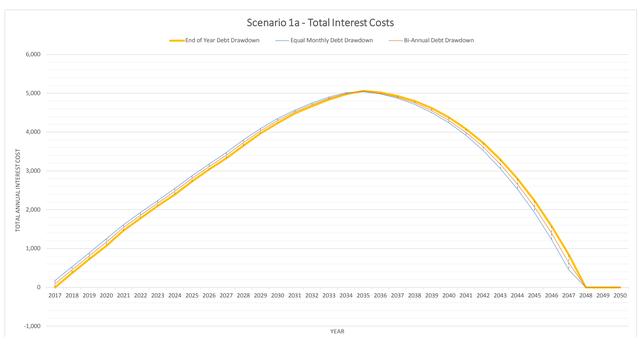
Feb4 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*91*	*455*	*811*	*1,169*	*1,539*	*1,861*	*2,170*	*2,476*	*2,808*	*3,110*	*3,404*	*3,730*	*4,034*	*4,297*	*4,528*	*4,710*	*4,875*	*4,996*	*5,051*	*4,998*	*4,900*	*4,753*	*4,555*	*4,302*	*3,990*	*3,615*	*3,172*	*2,657*	*2,065*	*1,390*	*626*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	7,225	7,089	6,913	7,626	6,396	6,220	5,838	6,713	6,113	5,574	6,514	6,235	5,330	4,888	3,614	3,501	2,603	1,738	-829	-1,709	-2,648	-3,651	-4,722	-5,867	-7,093	-8,405	-9,810	-11,314	-12,926	-14,652	-16,502	0	0	0	
Bi-Annual Drawdown	3,567	3,317	3,051	3,228	2,428	2,180	1,834	2,118	1,652	1,232	1,555	1,253	648	295	(457)	(604)	(1,136)	(1,629)	(2,940)	(3,354)	(3,774)	(4,202)	(4,639)	(5,085)	(5,542)	(6,010)	(6,491)	(6,986)	(7,495)	(8,021)	(8,564)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	7,225	6,719	6,180	6,539	4,919	4,415	3,715	4,291	3,347	2,496	3,150	2,538	1,313	598	(926)	(1,224)	(2,301)	(3,299)	(5,956)	(6,794)	(7,645)	(8,512)	(9,396)	(10,300)	(11,225)	(12,174)	(13,148)	(14,150)	(15,183)	(16,247)	(17,347)	(0)	-	-	
Annual Interest Cost on New Drawdowns	91	85	78	83	62	56	47	54	42	32	40	32	17	8	(12)	(15)	(29)	(42)	(75)	(86)	(97)	(108)	(119)	(130)	(142)	(154)	(166)	(179)	(192)	(205)	(219)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	370	733	1,087	1,477	1,805	2,123	2,422	2,766	3,079	3,364	3,698	4,017	4,290	4,540	4,725	4,904	5,038	5,127	5,084	4,997	4,861	4,674	4,432	4,132	3,769	3,338	2,836	2,257	1,595	845	0	0	0	
Total Annual Interest Cost	91	455	811	1,169	1,539	1,861	2,170	2,476	2,808	3,110	3,404	3,730	4,034	4,297	4,528	4,710	4,875	4,996	5,051	4,998	4,900	4,753	4,555	4,302	3,990	3,615	3,172	2,657	2,065	1,390	626	0	0	0	

Feb4 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*183*	*544*	*898*	*1,266*	*1,620*	*1,939*	*2,244*	*2,561*	*2,885*	*3,181*	*3,486*	*3,809*	*4,101*	*4,359*	*4,574*	*4,754*	*4,908*	*5,018*	*5,041*	*4,977*	*4,867*	*4,707*	*4,496*	*4,228*	*3,900*	*3,509*	*3,048*	*2,514*	*1,902*	*1,205*	*417*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	7,316	7,179	7,000	7,722	6,477	6,298	5,912	6,798	6,190	5,645	6,597	6,314	5,397	4,950	3,659	3,545	2,636	1,760	-840	-1,731	-2,682	-3,697	-4,782	-5,942	-7,183	-8,511	-9,934	-11,457	-13,089	-14,838	-16,711	0	0	0	





Feb4 1c, 30-yr - Debt Drawdown Scenarios

Feb4_1c_30yr

Annual Interest Rate = 5.1%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0
			88	82	75	90	58	52	41	60	44	29	50	43	20	10	-20	-23	-32	-34	-35	-37	-39	-41	-43	-45	-48	-50	-53	-55	-58	-61	-64	0	0	0

0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	3,761	1,594	29,477
Equal Monthly Debt Drawdown	3,851	1,583	

Maximum Accumulated Debt — Feb4 1c, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

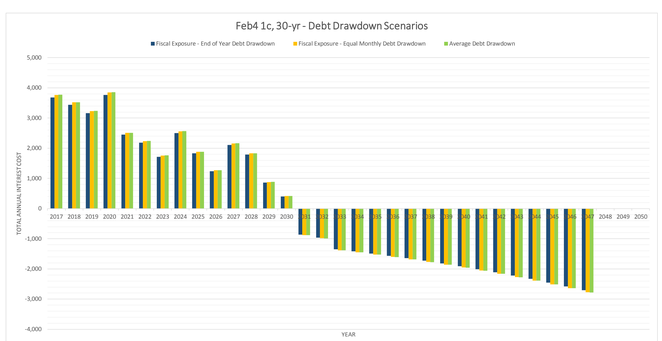
End of Year Debt Drawdown	31,125	20,043
Equal Monthly Debt Drawdown	31,866	

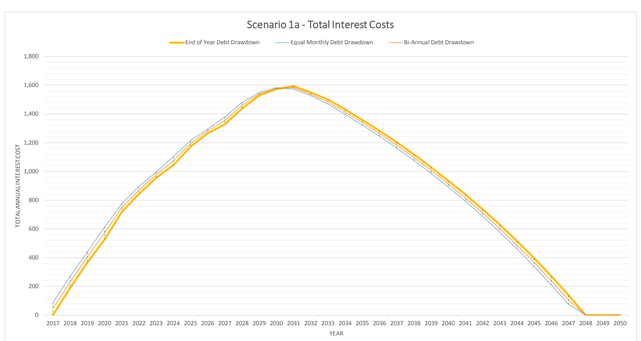
		30%	27%	24%	27%	16%	13%																														
Feb4 1c, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
a	Debt, Beginning of Year	0	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	
c = a*5%	*Interest Cost - Feb4 1c, 30-yr - End of Year Debt Drawdown*	*0*	*188*	*364*	*526*	*719*	*844*	*956*	*1,044*	*1,172*	*1,266*	*1,329*	*1,437*	*1,529*	*1,573*	*1,594*	*1,550*	*1,500*	*1,431*	*1,359*	*1,283*	*1,203*	*1,119*	*1,030*	*937*	*839*	*737*	*629*	*515*	*396*	*270*	*139*	*0*	*0*	*0*	*0*	29,477
b	Additional GA Debt Drawdown, End of Year	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	0	
	Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,641	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663	22,866	23,984	25,015	25,952	26,791	27,528	28,157	28,672	29,068	29,338	29,477				
	Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18,247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828	-1,018	-3,864	-6,710	-9,556	-12,402	-15,248	-18,094	-20,940	-23,786	-26,631	-29,477				
Fiscal Exposure - End of Year Debt Drawdown		3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0	

Feb4 1c, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	
1,583	*Interest Cost - Feb4 1c, 30-yr*	*88*	*270*	*439*	*615*	*777*	*896*	*997*	*1,103*	*1,216*	*1,295*	*1,379*	*1,480*	1,549	*1,583*	*1,573*	*1,527*	*1,468*	*1,398*	*1,324*	*1,246*	*1,164*	*1,077*	*987*	*892*	*792*	*686*	*576*	*460*	*338*	*209*	*74*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0	
	Monthly Drawdown	306	271	233	270	144	112	64	122	55	(2)	65	29	(56)	(97)	(204)	(209)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(0)	-	-	
	FV of Monthly Drawdown at 5%	3,765	3,326	2,861	3,312	1,773	1,371	781	1,493	679	(28)	799	360	(684)	(1,197)	(2,512)	(2,570)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,913)	(2,913)	(2,913)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	88	77	67	77	41	32	18	35	16	(1)	19	8	(16)	(28)	(58)	(60)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	193	373	538	736	864	979	1,069	1,200	1,296	1,361	1,471	1,565	1,610	1,632	1,586	1,536	1,465	1,391	1,313	1,231	1,145	1,055	959	859	754	644	527	405	277	142	0	0	0	
	Total Annual Interest Cost	88	270	439	615	777	896	997	1,103	1,216	1,295	1,379	1,480	1,549	1,583	1,573	1,527	1,468	1,398	1,324	1,246	1,164	1,077	987	892	792	686	576	460	338	209	74	0	0	0	

Feb4 1c, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*47*	*232*	*405*	*574*	*750*	*872*	*978*	*1,076*	*1,195*	*1,282*	*1,356*	*1,460*	*1,540*	*1,578*	*1,583*	*1,537*	*1,483*	*1,413*	*1,340*	*1,263*	*1,182*	*1,097*	*1,007*	*913*	*814*	*710*	*600*	*485*	*365*	*237*	*104*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,725	3,481	3,199	3,809	2,481	2,211	1,741	2,534	1,859	1,254	2,137	1,812	872	409	-871	-973	-1,363	-1,433	-1,506	-1,584	-1,665	-1,750	-1,839	-1,933	-2,032	-2,136	-2,246	-2,360	-2,481	-2,608	-2,742	0	0	0	
	Bi-Annual Drawdown	1,839	1,624	1,397	1,618	866	670	382	729	332	(14)	390	176	(334)	(584)	(1,227)	(1,255)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(0)	-	-	
	FV of Bi-Annual Drawdown at 5%	3,725	3,290	2,830	3,277	1,754	1,356	773	1,477	672	(28)	791	356	(677)	(1,184)	(2,485)	(2,542)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	47	42	36	41	22	17	10	19	8	(0)	10	5	(9)	(15)	(31)	(32)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	191	369	533	728	855	968	1,057	1,187	1,282	1,346	1,456	1,548	1,593	1,614	1,569	1,520	1,450	1,376	1,299	1,218	1,133	1,043	949	850	746	637	522	401	274	140	0	0	0	
	Total Annual Interest Cost	47	232	405	574	750	872	978	1,076	1,195	1,282	1,356	1,460	1,540	1,578	1,583	1,537	1,483	1,413	1,340	1,263	1,182	1,097	1,007	913	814	710	600	485	365	237	104	0	0	0	

Feb4 1c, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*94*	*276*	*445*	*622*	*781*	*900*	*1,000*	*1,108*	*1,219*	*1,298*	*1,383*	*1,483*	*1,551*	*1,583*	*1,572*	*1,525*	*1,466*	*1,395*	*1,321*	*1,243*	*1,161*	*1,074*	*984*	*888*	*788*	*683*	*572*	*456*	*333*	*205*	*69*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,772	3,525	3,239	3,857	2,513	2,239	1,763	2,566	1,882	1,270	2,164	1,835	883	414	-882	-985	-1,381	-1,451	-1,526	-1,604	-1,686	-1,772	-1,863	-1,958	-2,058	-2,163	-2,274	-2,390	-2,513	-2,641	-2,776	0	0	0	





30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

TO BE

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,556	3,123	1,728	1,400	836	1,560	821	167

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

E UPDATED

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

JK: Fixed the formula in the yellow highlighted cells. Pls. check. (SK: looks good to me)

	Tab
v16 GA Financing - Scenario 1a 1b v18 (with fiscal) - Feb 4_v2.xlsx	Powerpoint_Export Scenario tabs

Change Description

Added in trigger for later start in the year
Updated IESO forecast from Energy (IESO GA Cost Forecast 170207 (Feb 6 update).xlsx)

Equal Monthly Debt Drawdown

		Month	Months Remai
Scenario Start Date	**July**	7	6

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	3,180	2,888
Annual Exposure2 with start on July 1st	*1,590*	*2,888*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	795	3,107
Start: July 1st	-	*2,312*

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	851	3,335
Start: July 1st	-	*2,484*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	1,168	1,765
Annual Exposure2 with start on July 1st	*584*	*1,765*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	292	1,609
Start: July 1st	-	*1,025*

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,449	2,040
Annual Exposure2 with start on July 1st	*725*	*2,040*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,597
Start: July 1st	-	*1,959*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335
Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3575**
Total, B	362	1837
Proposed Program Total:	362 - 851	1,837 - 3,575

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,556	3,123	1,728	1,400
2,556	*3,123*	*1,728*	*1,400*

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646
2,805	*2,697*	*2,774*	*1,646*

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

ıking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
2,311	3,750	2,311	1,933
2,311	*3,750*	*2,311*	*1,933*

2018-19	2019-20	2020-21	2021-2022

1,901	2,671	3,391	2,217
1,901	*2,671*	*3,391*	*2,217*

2019	2020	2021	2022
2,581	4,016	2,598	2,241
2,581	*4,016*	*2,598*	*2,241*

2018-19	2019-20	2020-21	2021-2022
2,175	2,940	3,662	2,508
2,175	*2,940*	*3,662*	*2,508*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

/1

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052
2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

Equal Monthly Debt Drawdown

		Month	Months Remaining
Scenario Start Date	July	7	6

AS LONG AS >

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	3,180	2,888	2,556

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	795	3,107	2,805
Fiscal Exposure, 25%	199	777	701

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Annual Exposure[2]	3,404	3,128	2,812

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	851	3,335	3,049
Fiscal Exposure, 25%	213	834	762

Indicates year in which, similar to OPCD's exa
closest to 30%. As Fiscal 2016/17 is a partial y
month the GA deferral begins.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu
decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions	9%	14%	18%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	1,168	1,765	2,311

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	292	1,609	1,901
Fiscal Exposure, 25%	73	402	475

Scenario 1b - 30-yr amortization	2017	2018	2019
Annual Exposure[2]	1,449	2,040	2,581

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	362	1,597	2,175
Fiscal Exposure, 25%	91	399	544

Indicates year in which, similar to OPCD's exar closest to 30%.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 ar
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu on accounting treatment.

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]
Debt-Finance Global Adjustment Costs, Option 1a	213	834	762
Debt-Finance Global Adjustment Costs, Option 1b	91	399	544
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**213**	**1074**	**1065**
Total, B	91	639	847

Proposed Program Total:	91 - 213	639 - 1,074	847 - 1,065

($M)	2016-171	2017-181	2018-191
Debt-Finance Global Adjustment Costs, Option 1a	851	3335	3049
Debt-Finance Global Adjustment Costs, Option 1b	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**851**	**3575**	**3352**
Total, B	362	1837	2478

Proposed Program Total:	362 - 851	1,837 - 3,575	2,478 - 3,352

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6

7	July	7	
8	August	8	
9	September	9	
10	October	10	
11	November	11	
12	December	12	

30-year term	**2016-17**	**2017-18**	**2018-19**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335	2,175 - 3,049

ROWS HIDDEN

1	1 = Comparision Enabled

APRIL 1, 2017 25%

2020	2021	2022
3,123	1,728	1,400

2019-20	2020-21	2021-2022
2,697	2,774	1,646
674	693	412

2020	2021	2022
3,396	2,020	1,712

2019-20	2020-21	2021-2022
2,958	3,052	1,943
740	763	486

mple, the true cost of GA being deferred is
ear, exposure may be less subject to which

l $17-21 billion (at 3.5% interest rate), peaking in 2028.
$33-$36 million.

ıals per month based on month of the year. Actuals may also depend on

28%	17%	13%
2020	2021	2022
3,750	2,311	1,933

2019-20	2020-21	2021-2022
2,671	3,391	2,217
668	848	554

2020	2021	2022
4,016	2,598	2,241

2019-20	2020-21	2021-2022
2,940	3,662	2,508
735	915	627

mple, the true cost of GA being deferred is

ıd $17-21 billion (at 3.5% interest rate), peaking in 2028.
$118-$134 million.

ıals per month based on month of the year. Actuals may also depend on decision

2019-20[1]	2020-21[1]
740	763
735	915
279	323
60	60
18	18
1097	**1164**
1092	1316

1,092 - 1,097 1,316 - 1,164

2019-201	2020-211
2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453





2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964
Equal Monthly Debt Drawdown	3,180	952

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

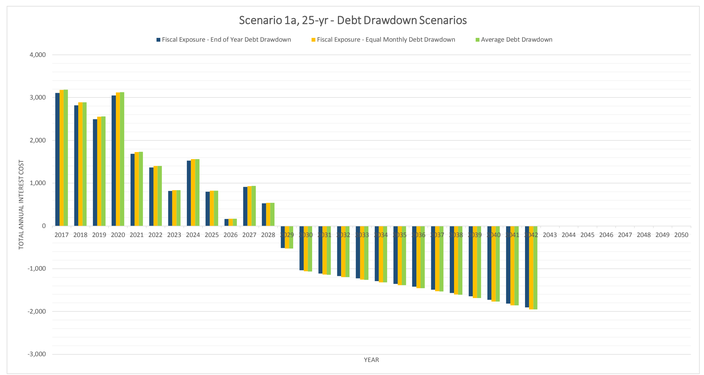
		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

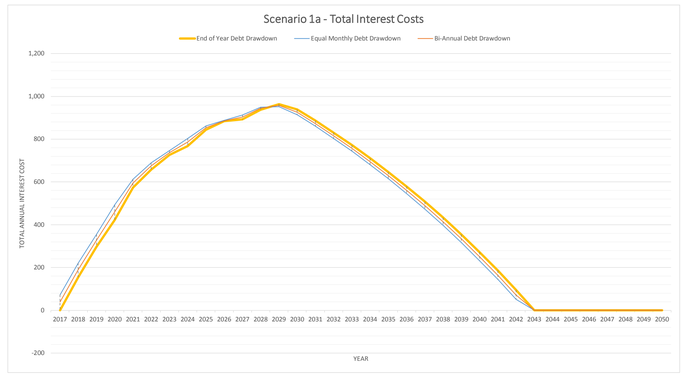
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	3,665	968	
Equal Monthly Debt Drawdown	3,750	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

		9%	14%	18%	28%	17%	13%																													
Scenario 1b, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

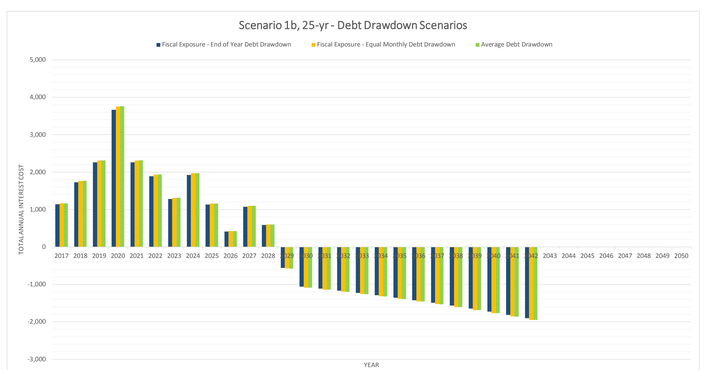
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	*954*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

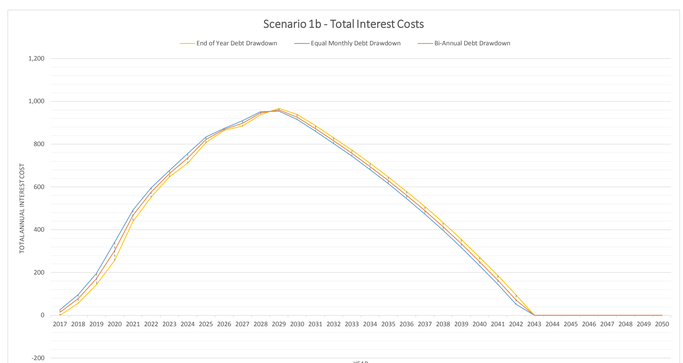
	Monthly Drawdown	95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

		28%	24%	21%	24%	12%	9%																													
Scenario 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1a, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	*1,156*	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

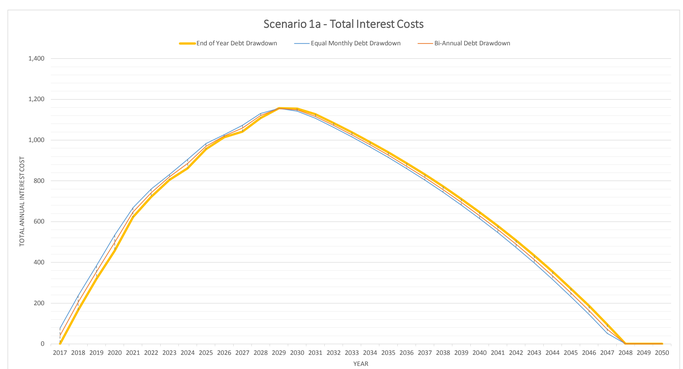
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

		12%	16%	20%	30%	19%	15%																													
Scenario 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

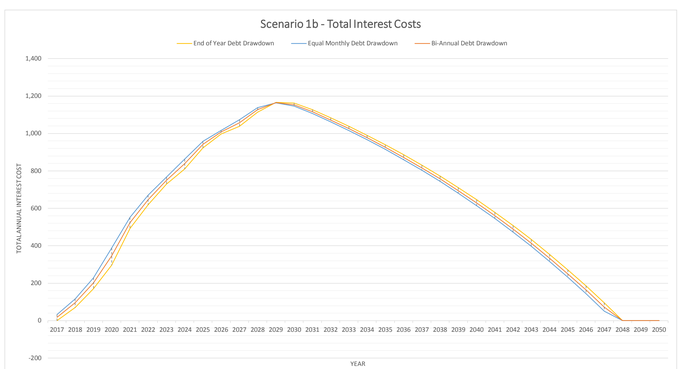
	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

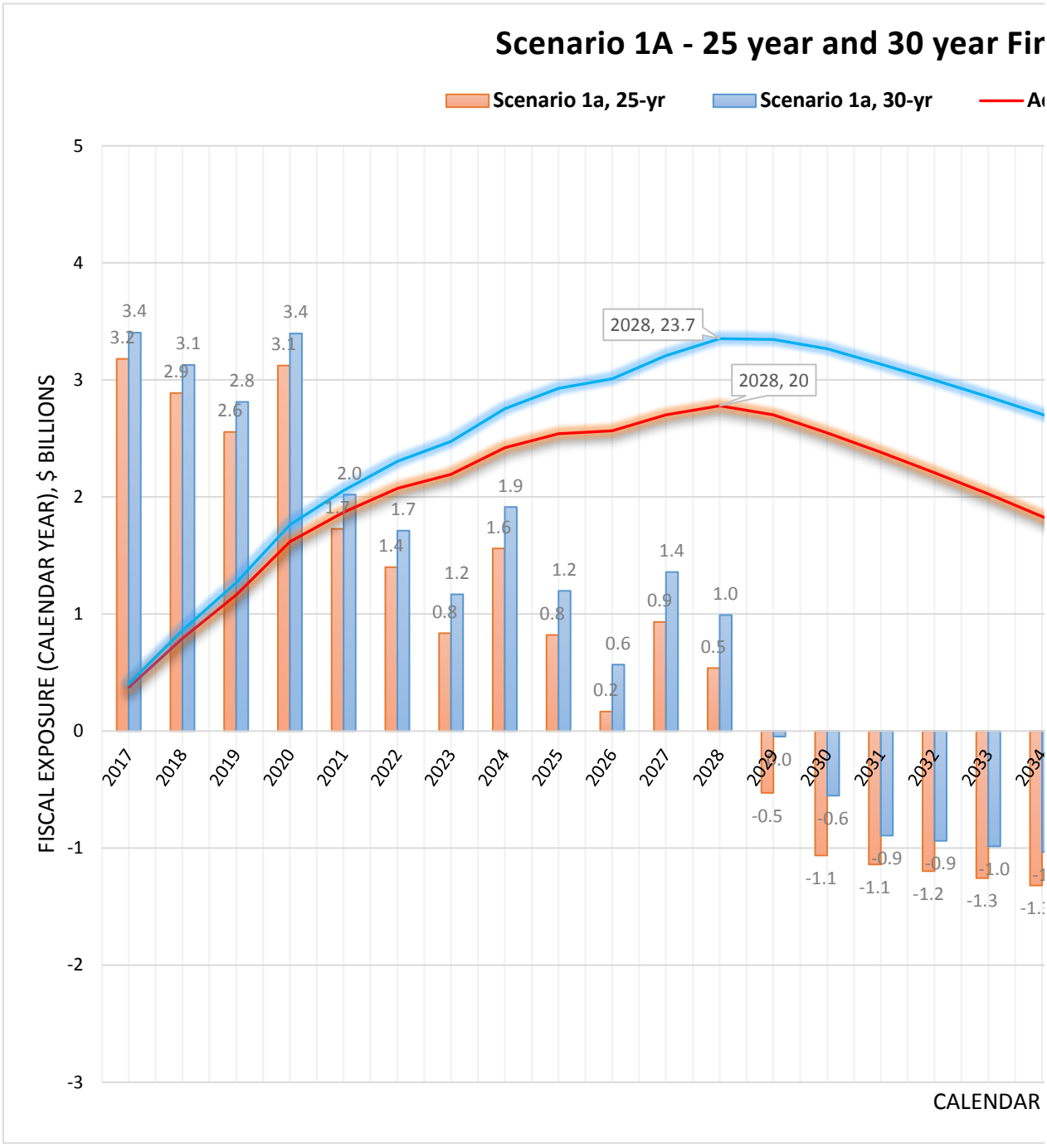
	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

Scenario 1b, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

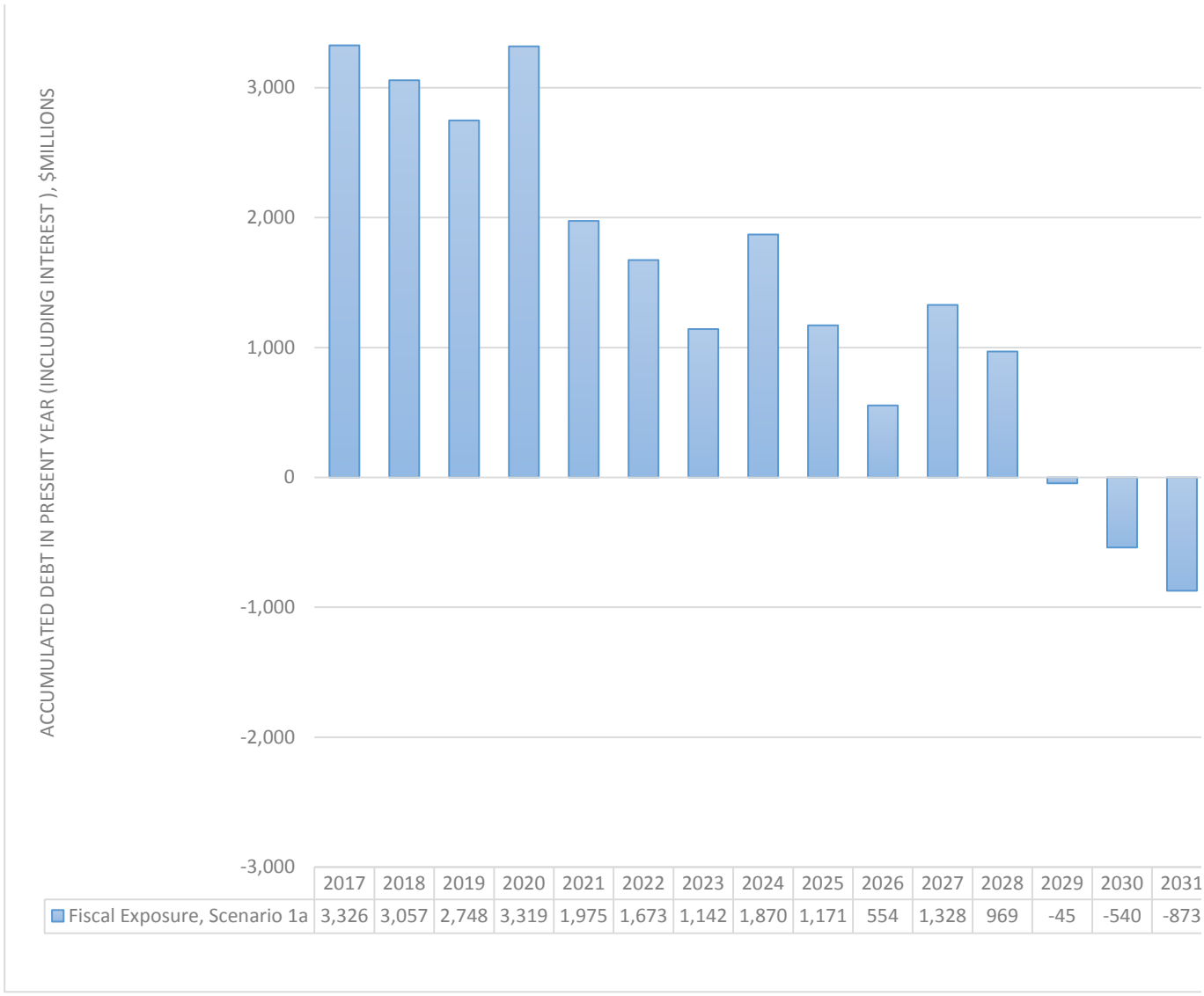




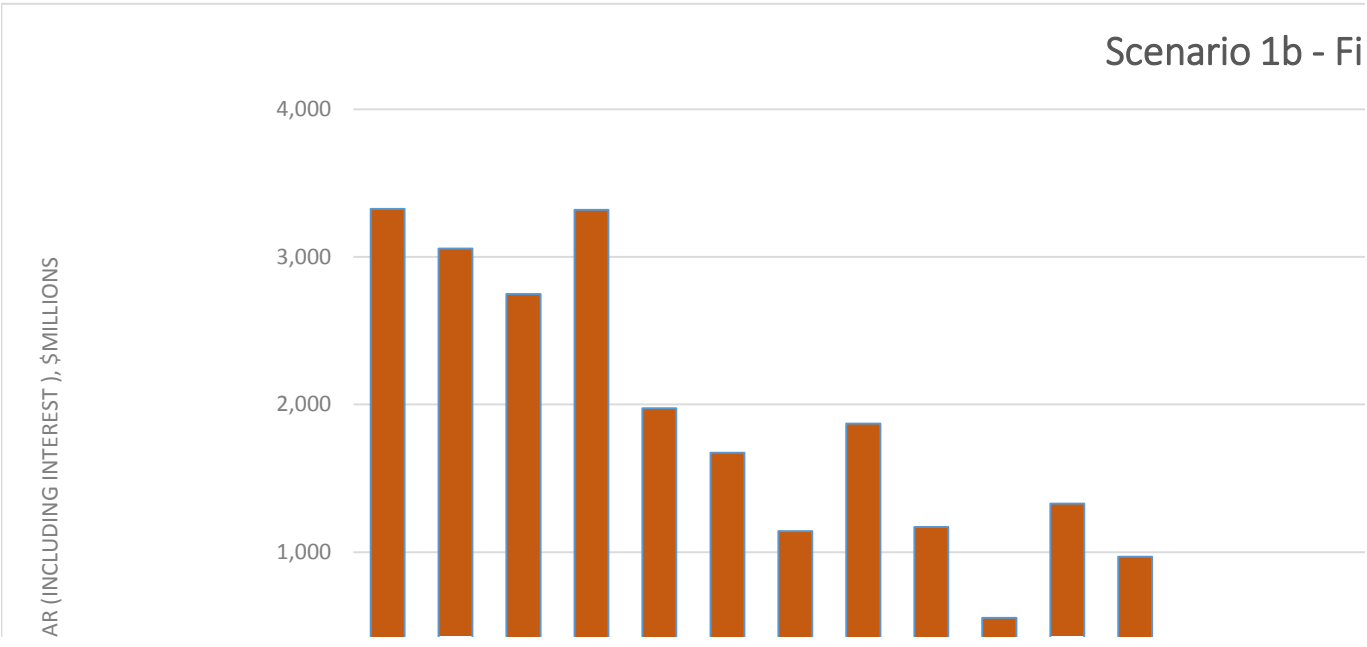
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

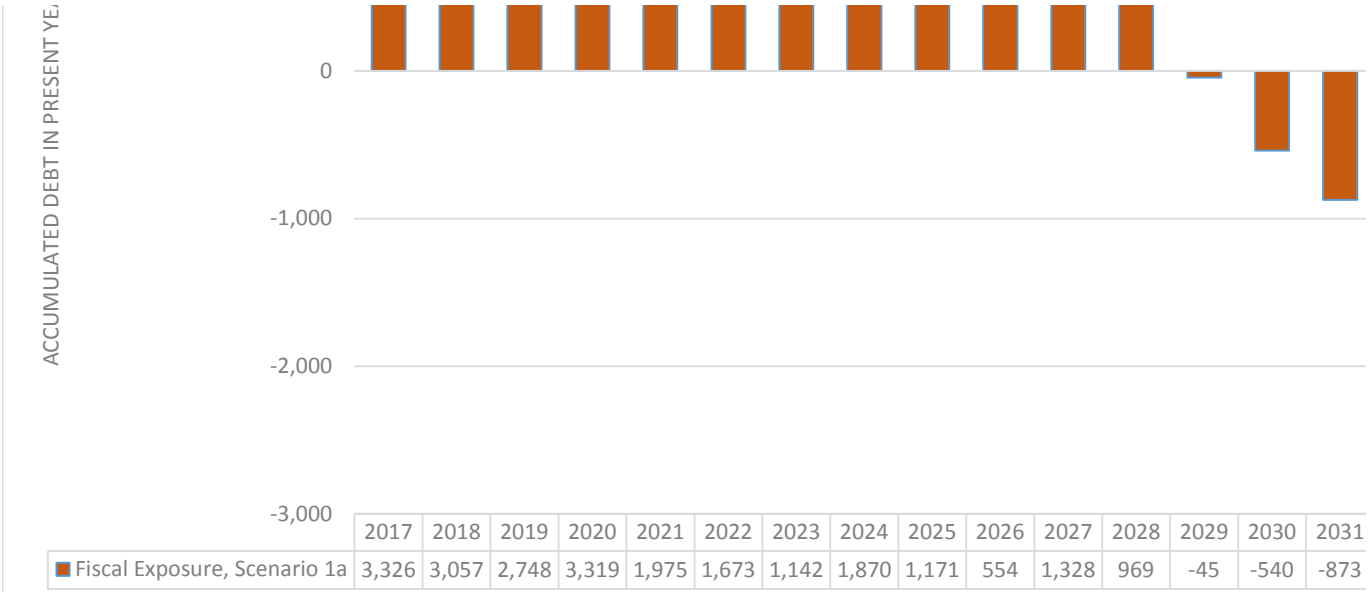




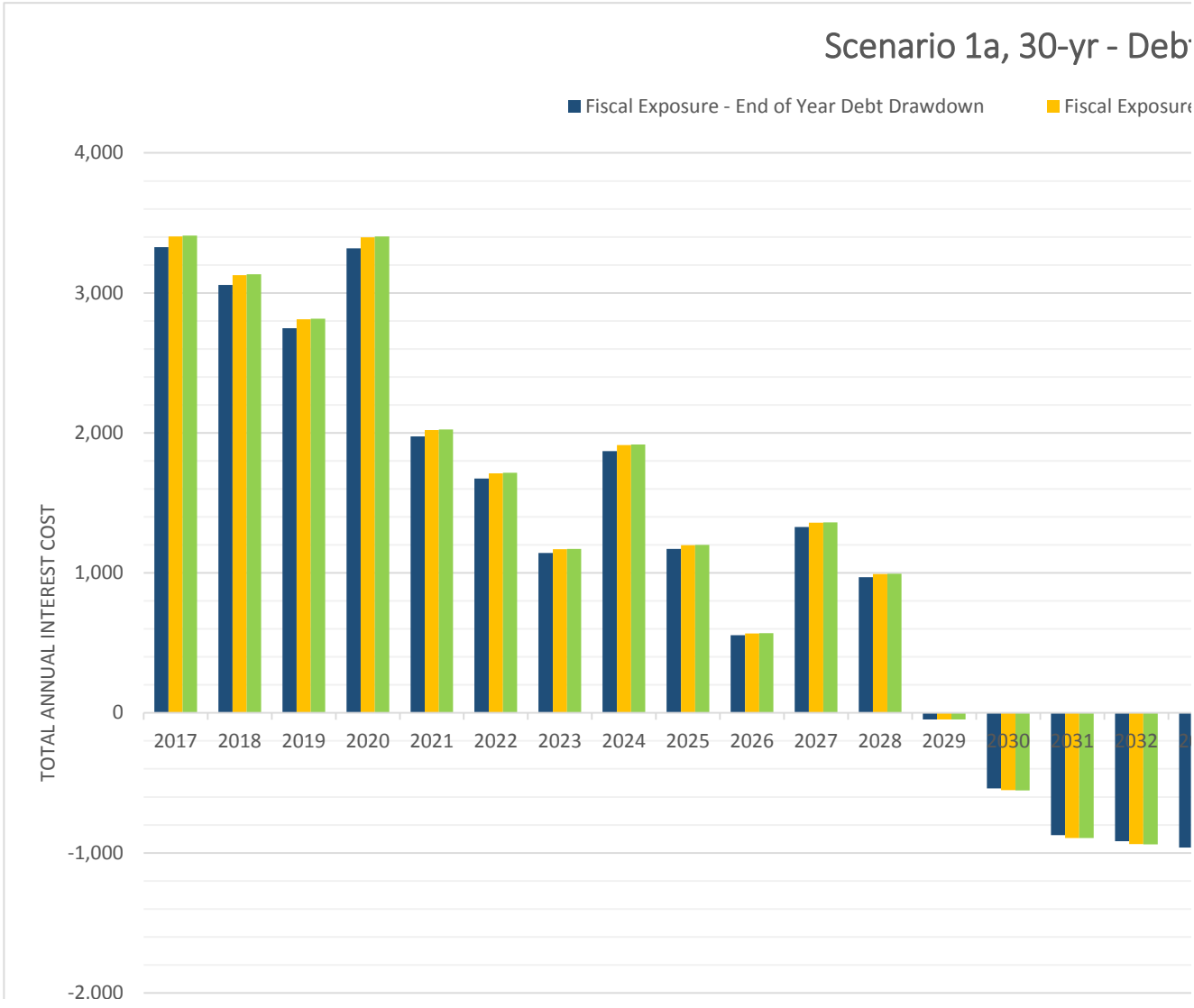


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



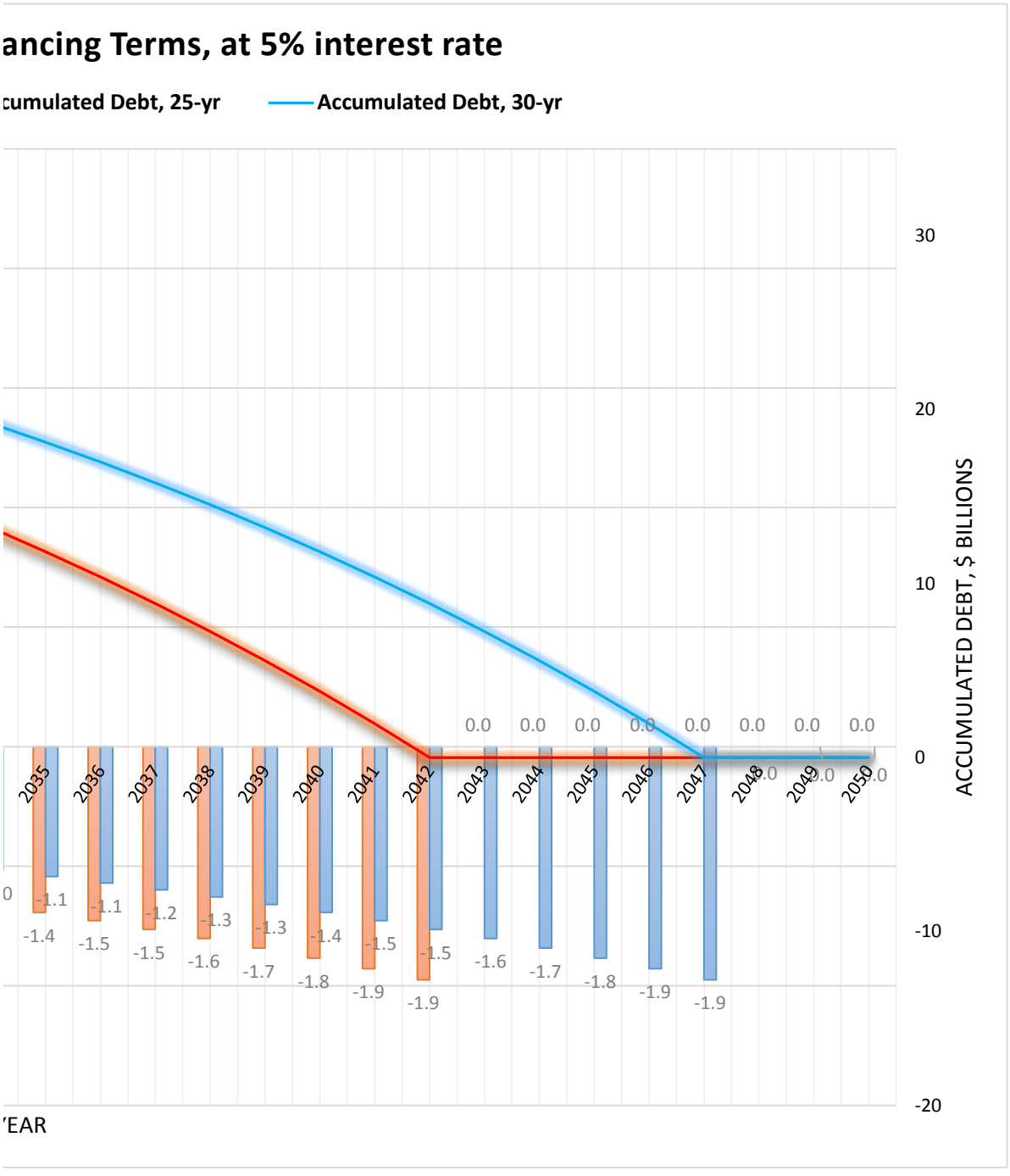


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



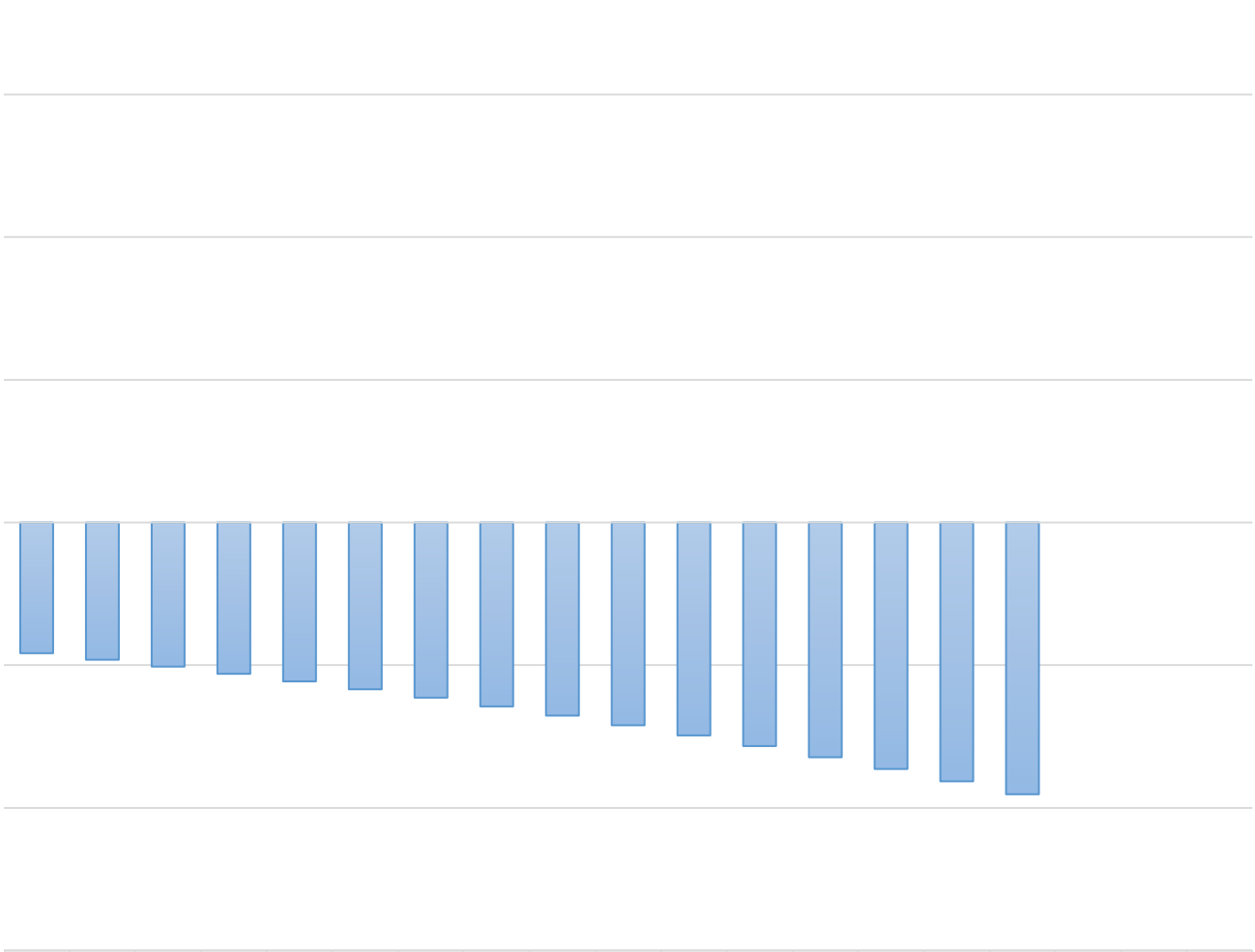

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

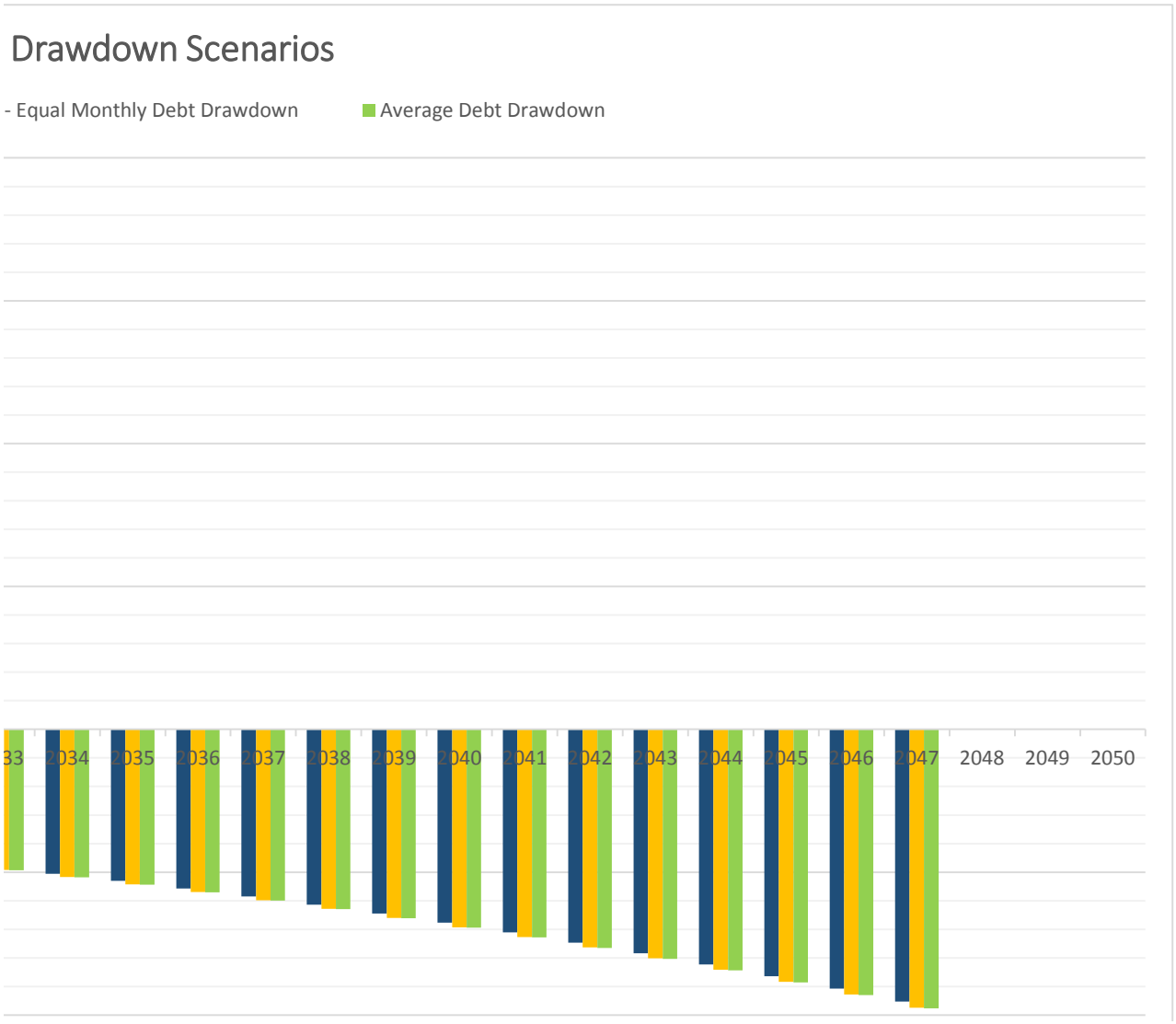
YEAR

cal Exposure



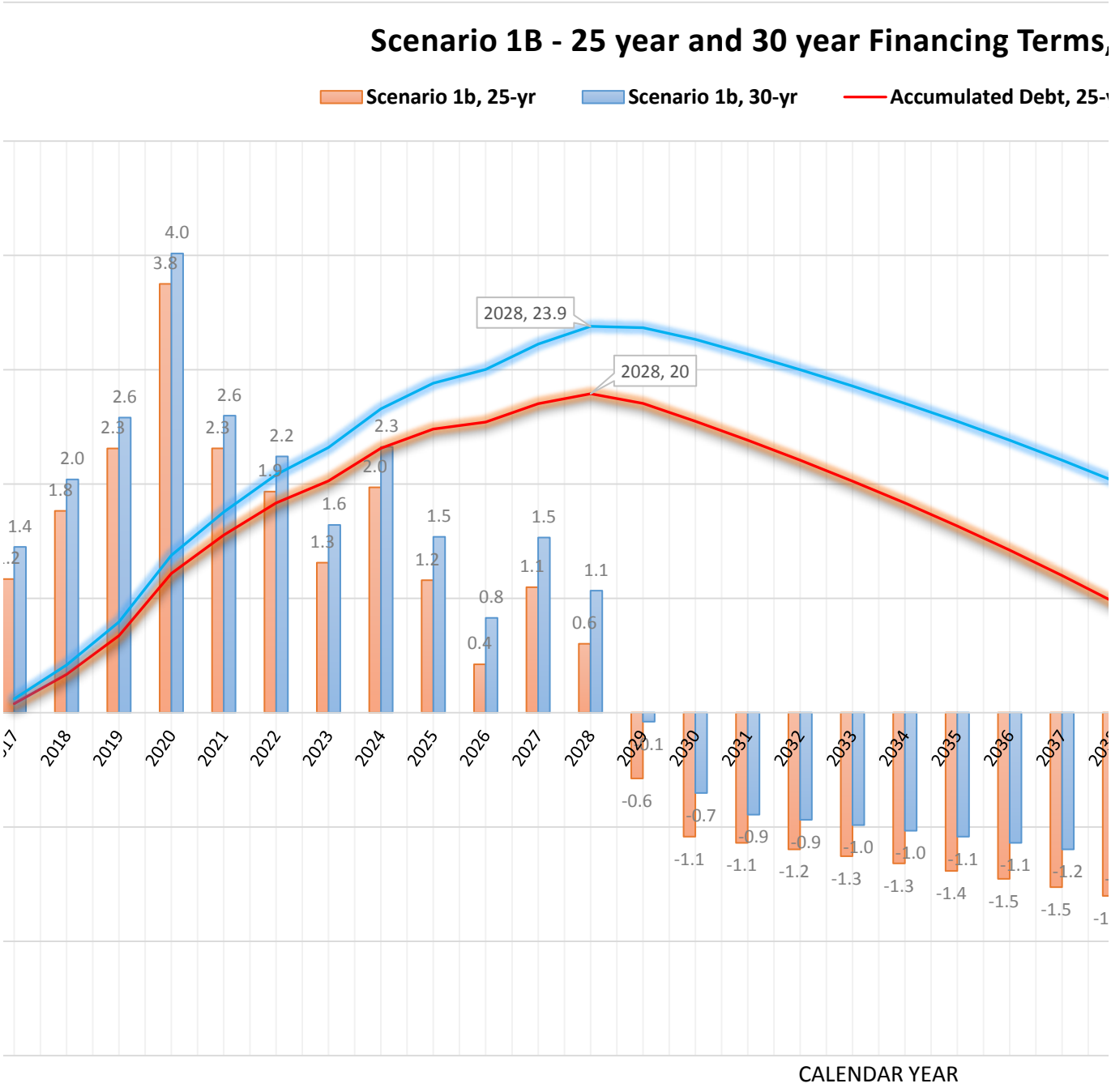
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

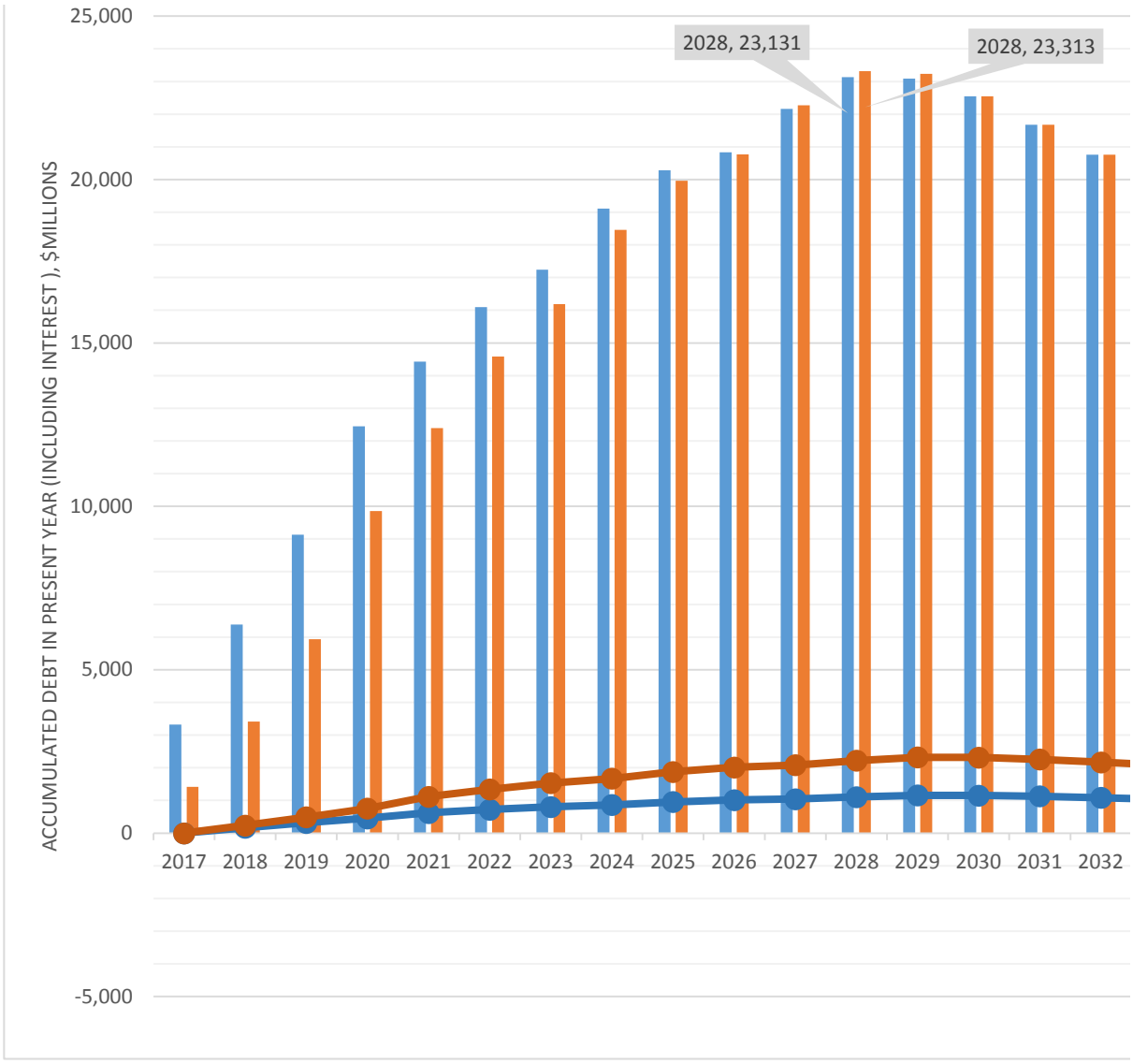


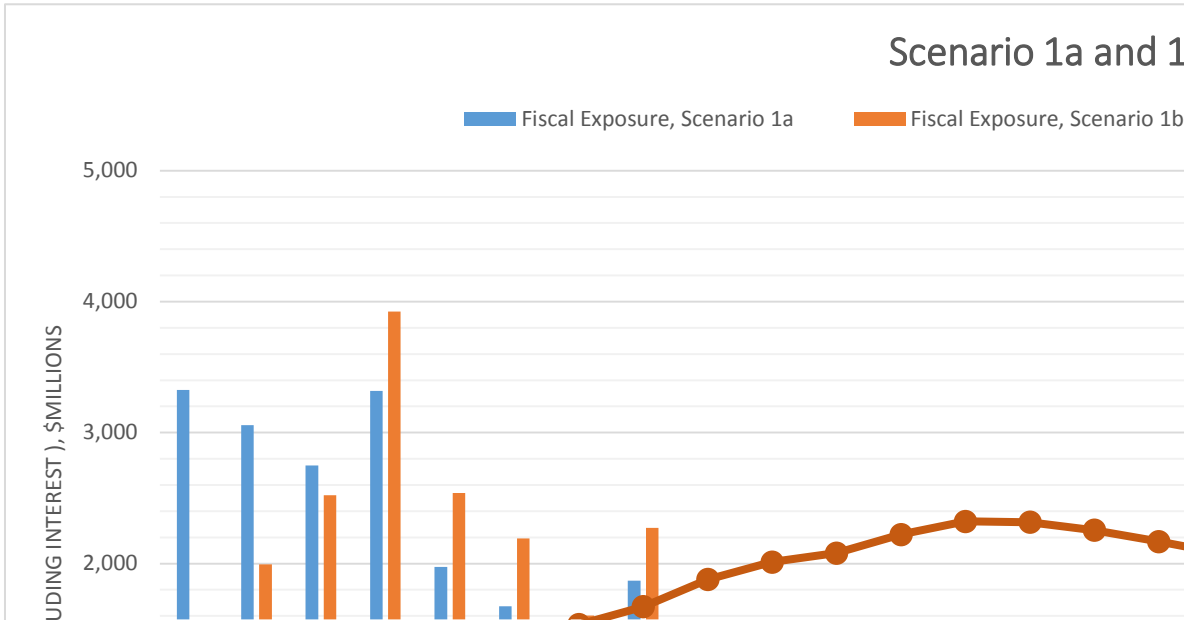
YEAR

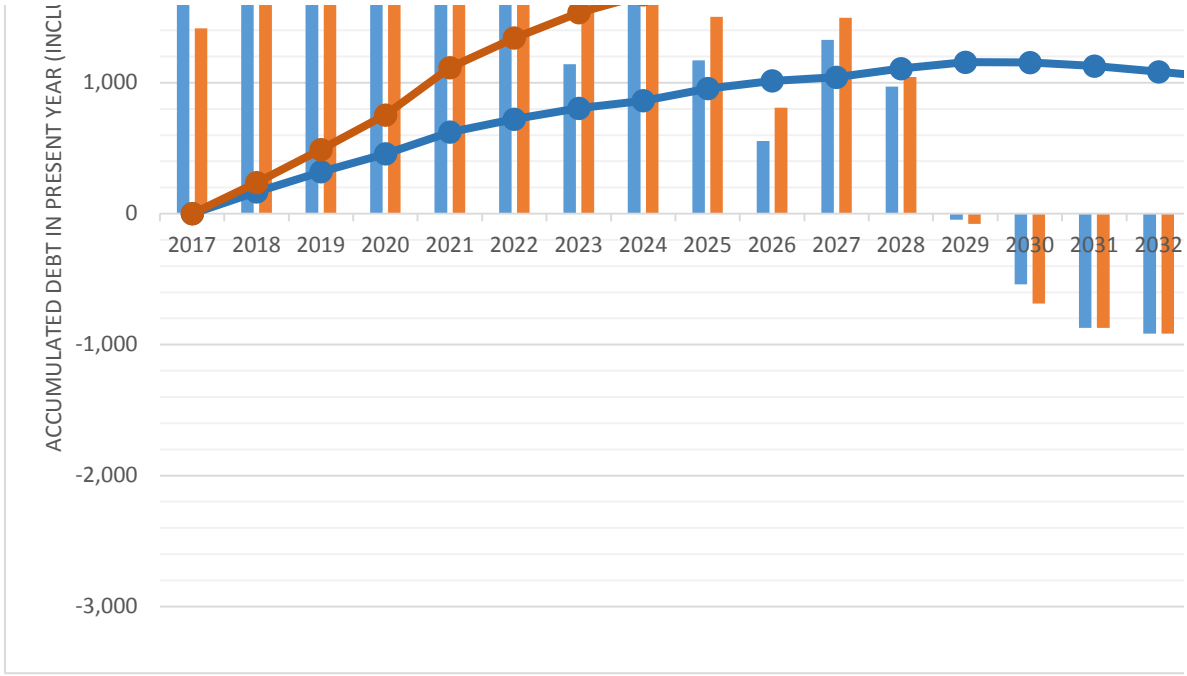
3 - 25 year and 30 year Financing Terms, at 5% interest rate

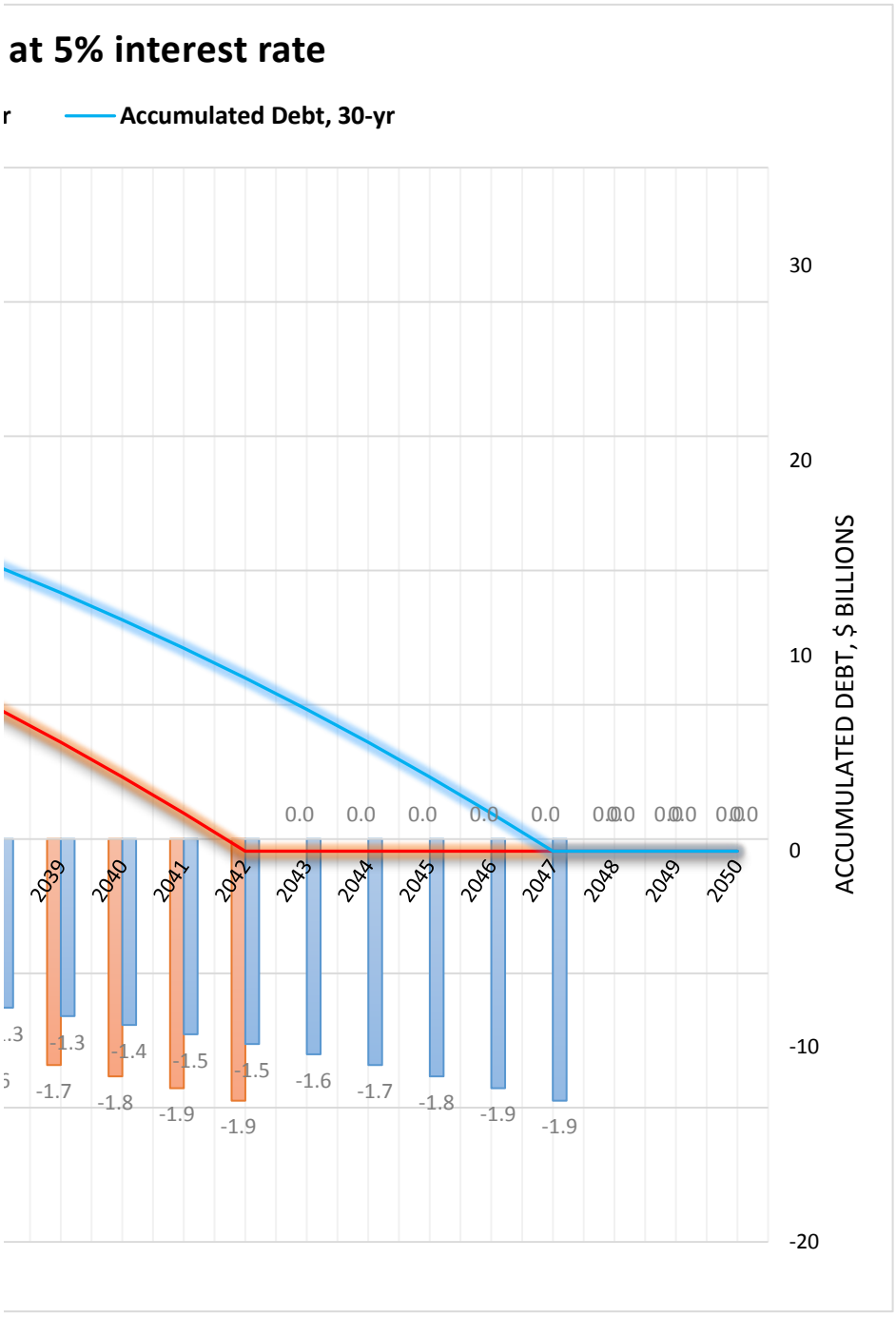





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

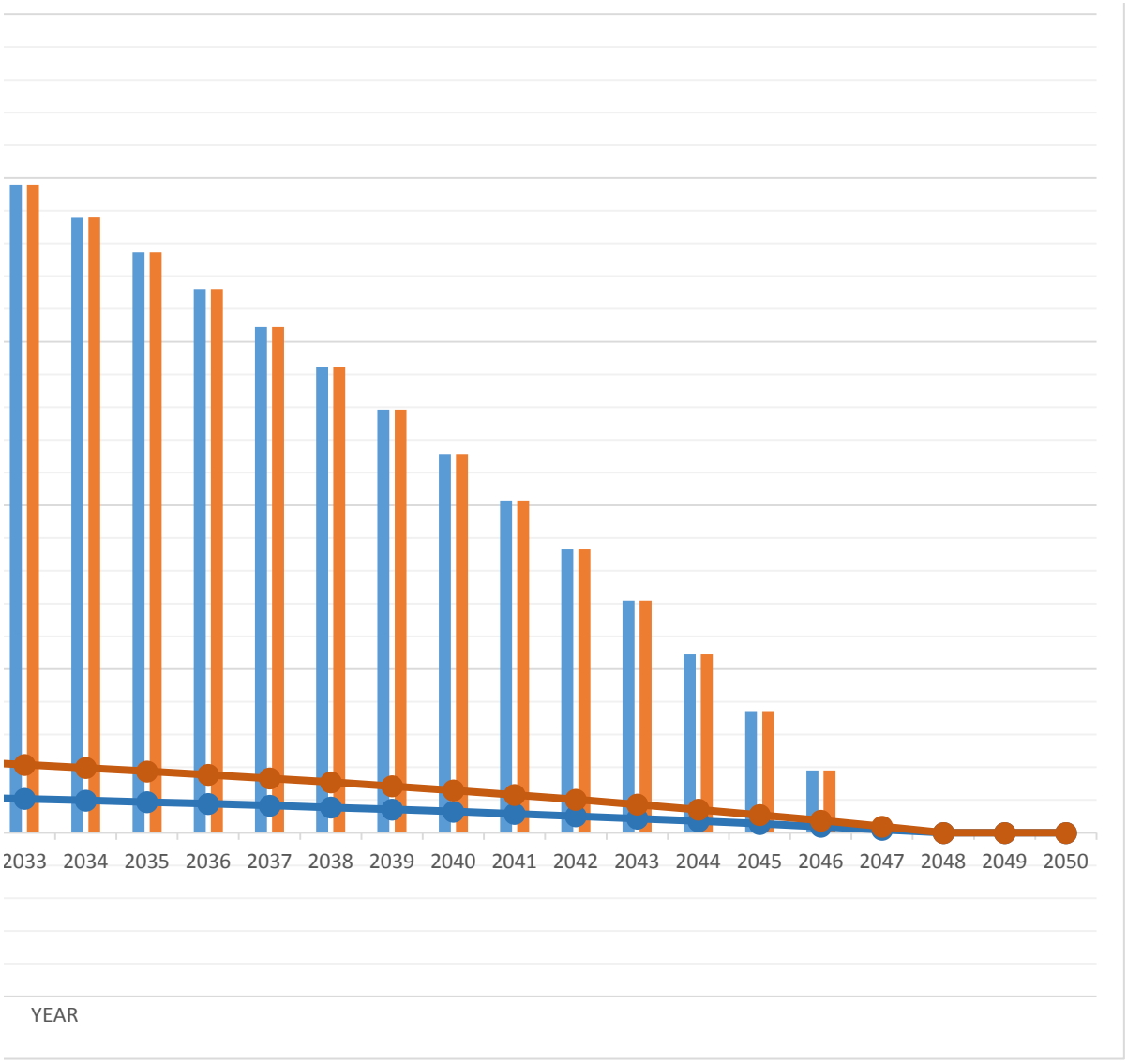

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

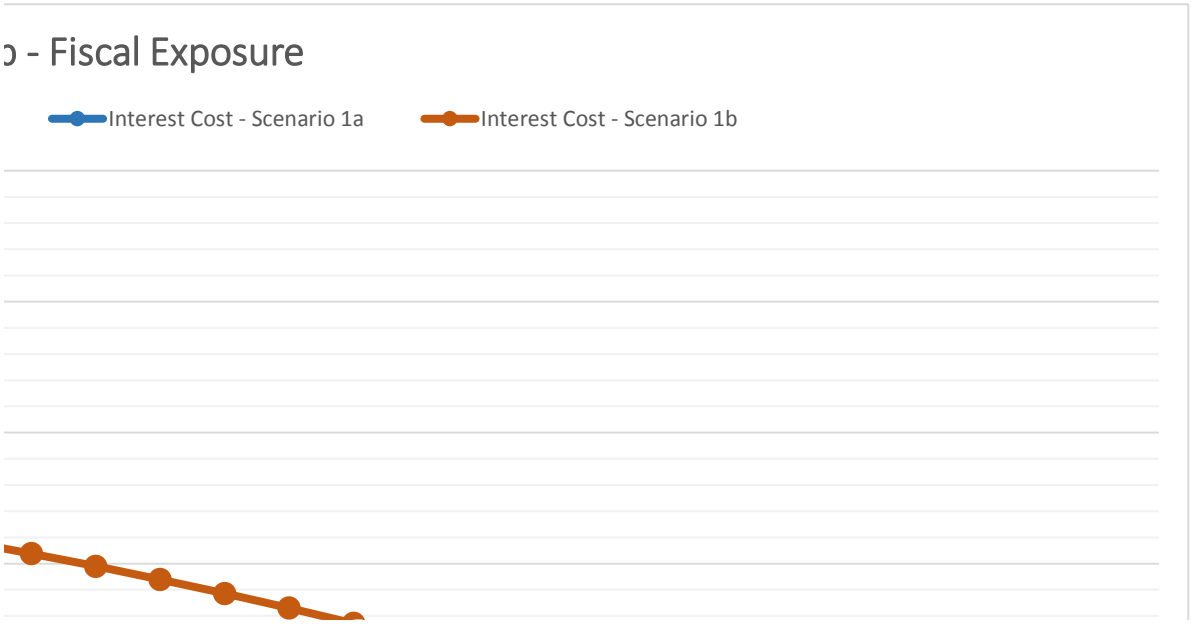

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

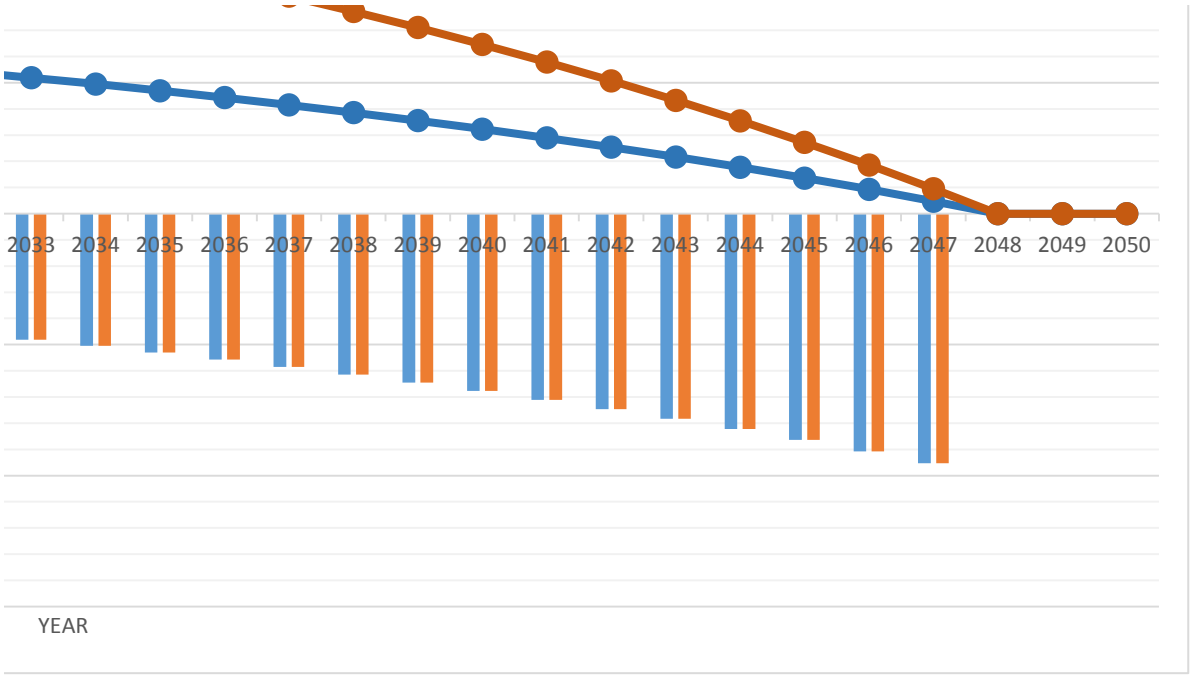


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

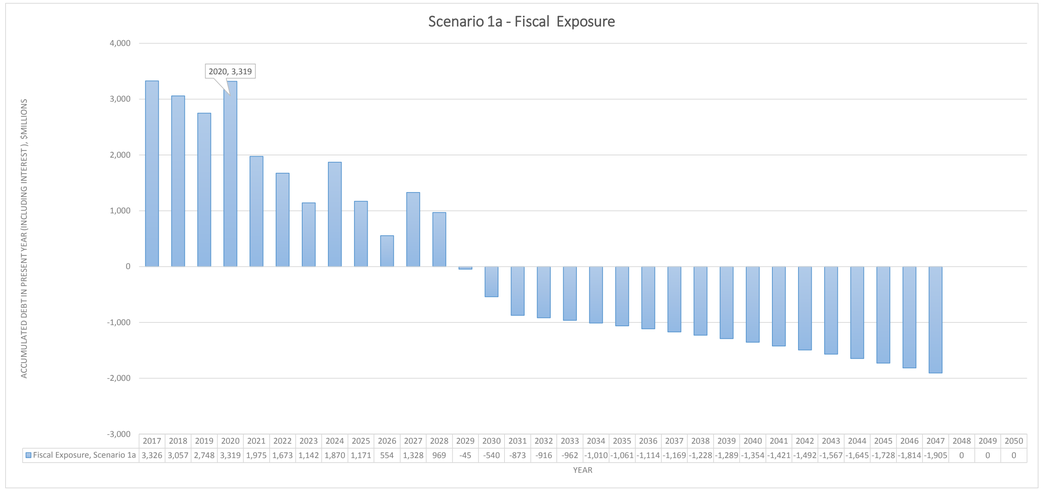
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

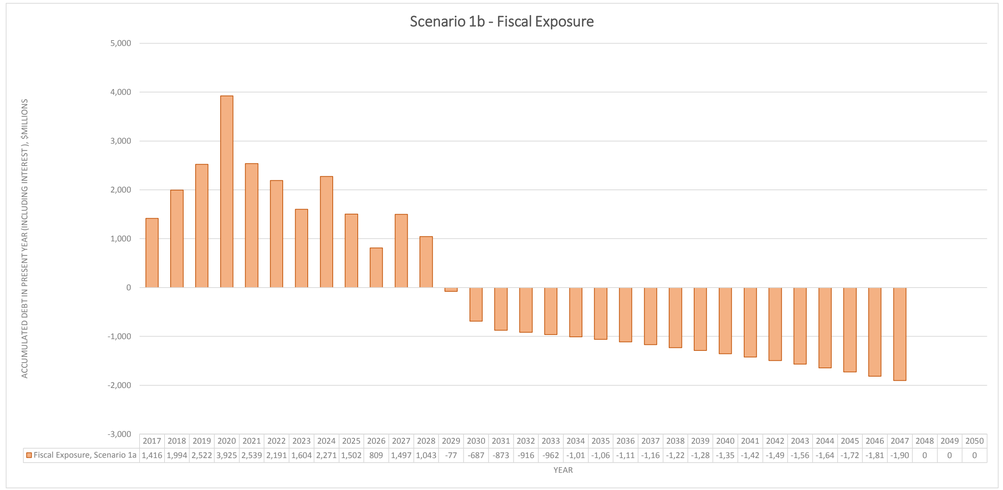
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

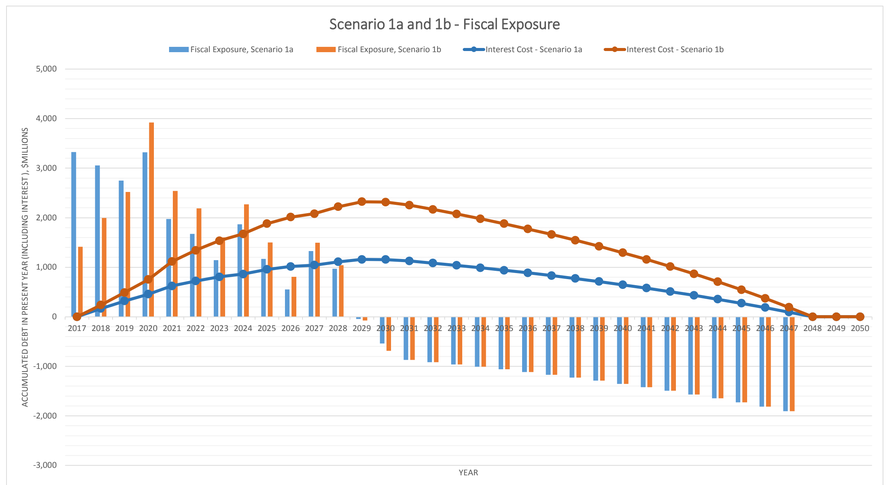
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

Notes:	Accounting treatment is to be determined.


Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0


Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0


Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

Feb 9 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% i
IESO GA cost forecast + extrapolation

Scenario
Option 1

Option 2

	2017	2018	2019	2020
interest rate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	2200	4600	7000	10200

Total Accumulated Debt ($ billion)	2.2	4.6	7	10.2
	2,200	4,600	7,000	10,200

Total Accumulated Debt ($ billion)	1.6	3.2	4.9	7.2
	1,600	3,200	4,900	7,200

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
13100	15700	17800	20800	23200	25000	27700	30100

13.1 15.7 17.8 20.8 23.2 25 27.7 30.1
13,100 15,700 17,800 20,800 23,200 25,000 27,700 30,100

9.3 11 12.3 14.4 15.7 16.5 18 19.3
9,300 11,000 12,300 14,400 15,700 16,500 18,000 19,300

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
31700	32800	32700	32600	31700	30100	28400	26600

31.7	32.8	32.7	32.6	31.7	30.1	28.4	26.6
31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600

19.5	19.3	18.6	17.8	17	16.1	15.2	14.3
19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
24800	22800	20800	18600	16300	13900	11400	8800

24.8	22.8	20.8	18.6	16.3	13.9	11.4	8.8
24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800

13.3	12.2	11.1	10	8.7	7.5	6.1	4.7
13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	2046	2047	2048	2049	2050
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
6000	3100	0	0	0	0

6 3.1 0 0
6,000 3,100 - -

3.2 1.6 0 0
3,200 1,600 - -

Feb 9 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb9_1_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,200	2,400

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	550	2,250

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $33 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb9_2_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,600	1,600

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	400	1,600

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,169	4,668

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	545	2,203

Actuals are subject to actual prices and actual interest rates.

#N/A

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542

Fiscalized[3]	2016-17	2017-18
Start: January 1st	375	1,510

Actuals are subject to actual prices and actual interest rates.

#N/A

Rough		
	1	
	2	
	3	
	4 April	4
	5 May	5
	6 June	6
	7 July	7
	8 August	8
	9 September	9
	10 October	10
	11 November	11
	12 December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	400 - 550	1,600 - 2,250

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	550	2250
Debt-Finance Global Adjustment Costs, Option 1a	400	1600
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**550**	**2490**
Total, B	400	1840
Proposed Program Total:	400 - 550	1,840 - 2,490

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1
Scenario 2

2019	2020	2021	2022
2,400	3,200	2,900	2,600

2018-19	2019-20	2020-21	2021-2022
2,400	2,600	3,125	2,825

2030.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,700	2,300	2,100	1,700

2018-19	2019-20	2020-21	2021-2022
1,625	1,850	2,250	2,000

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
4,589	5,867	5,031	4,861

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988

› depend on decision on accounting treatment.

2019	2020	2021	2022
2,353	3,072	2,817	2,580

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757

2019	2020	2021	2022
1,578	2,243	1,931	1,635

2018-19	2019-20	2020-21	2021-2022
1,551	1,745	2,165	1,857



2018-19	2019-20	2020-21	2021-2022
1,625 - 2,400	1,850 - 2,600	2,250 - 3,125	2,000 - 2,825

/1

2018-19[1]	2019-20[1]	2020-21[1]
2400	2600	3125
1625	1850	2250
225	279	323
60	60	60
18	18	18
2703	**2957**	**3526**
1928	2207	2651

1,928 - 2,703 2,207 - 2,957 2,651 - 3,526

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
21,601	30,211	32,800	occurs in Year 2030
13,466	17,886	19,500	occurs in Year 2029
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!

2,200

Tab Name
Feb9_1_30yr
Feb9_2_30yr

Feb 9 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb9_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0
			52	57	57	76	69	62	50	71	57	43	64	57	38	26	-2	-2	-21	-38	-40	-43	-43	-48	-48	-52	-55	-57	-59	-62	-67	-69	-74	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,200	1,678	30,211
Equal Monthly Debt Drawdown	3,276	1,676	

		Feb9 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,800		2030	21,601
Equal Monthly Debt Drawdown	33,580			

Feb9 1, 30-yr — End of Year Debt Drawdown

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
a	Debt, Beginning of Year	0	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	
c = a*5%	*Interest Cost - Feb9 1, 30-yr - End of Year Debt Drawdown*	*0*	*113*	*235*	*358*	*522*	*670*	*803*	*911*	*1,064*	*1,187*	*1,279*	*1,417*	*1,540*	*1,622*	*1,678*	*1,673*	*1,668*	*1,622*	*1,540*	*1,453*	*1,361*	*1,269*	*1,166*	*1,064*	*952*	*834*	*711*	*583*	*450*	*307*	*159*	*0*	*0*	*0*	30,211
b	Additional GA Debt Drawdown, End of Year	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	30,211
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	11,621	11,521	10,621	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	8,800	6,000	3,100	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	21,079	21,079	21,079	21,079	19,379	17,579	15,779	13,779	11,779	9,579	7,279	4,879	2,379	0	0	0	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	13,399	15,072	16,740	18,362	19,902	21,355	22,716	23,985	25,151	26,215	27,167	28,001	28,712	29,295	29,746	30,052	30,211				
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	19,301	17,528	14,960	11,738	8,498	5,245	2,084	-1,185	-4,351	-7,615	-10,867	-14,101	-17,312	-20,495	-23,746	-26,952	-30,211				
Fiscal Exposure - End of Year Debt Drawdown		2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0	

Feb9 1, 30-yr — Equal Monthly Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	
1,676	*Interest Cost - Feb9 1, 30-yr*	*52*	*170*	*292*	*434*	*591*	*732*	*853*	*982*	*1,121*	*1,230*	*1,343*	*1,474*	*1,578*	*1,648*	*1,676*	*1,671*	*1,646*	*1,584*	*1,500*	*1,410*	*1,318*	*1,221*	*1,119*	*1,012*	*897*	*777*	*652*	*521*	*384*	*238*	*85*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0	

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
	Monthly Drawdown	183	191	180	237	198	161	108	174	111	51	118	82	5	(43)	(148)	(148)	(214)	(268)	(270)	(271)	(263)	(272)	(264)	(272)	(271)	(269)	(268)	(265)	(271)	(267)	(272)	-	-	-
	FV of Monthly Drawdown at 5%	2,252	2,342	2,216	2,909	2,435	1,976	1,328	2,139	1,368	628	1,455	1,006	61	(534)	(1,820)	(1,815)	(2,629)	(3,298)	(3,317)	(3,330)	(3,236)	(3,347)	(3,242)	(3,342)	(3,329)	(3,311)	(3,288)	(3,259)	(3,328)	(3,283)	(3,336)	-	-	-
	Annual Interest Cost on New Drawdowns	52	54	51	68	57	46	31	50	32	15	34	23	1	(12)	(42)	(42)	(61)	(77)	(77)	(77)	(75)	(78)	(75)	(78)	(77)	(76)	(76)	(76)	(77)	(76)	(78)	-	-	-
	Annual Interest Cost on Opening Balance	-	115	241	367	534	686	822	932	1,089	1,215	1,309	1,451	1,577	1,660	1,718	1,713	1,708	1,660	1,577	1,488	1,393	1,299	1,194	1,089	974	854	728	597	461	314	162	(0)	(0)	(0)
	Total Annual Interest Cost	52	170	292	434	591	732	853	982	1,121	1,230	1,343	1,474	1,578	1,648	1,676	1,671	1,646	1,584	1,500	1,410	1,318	1,221	1,119	1,012	897	777	652	521	384	238	85	(0)	(0)	(0)

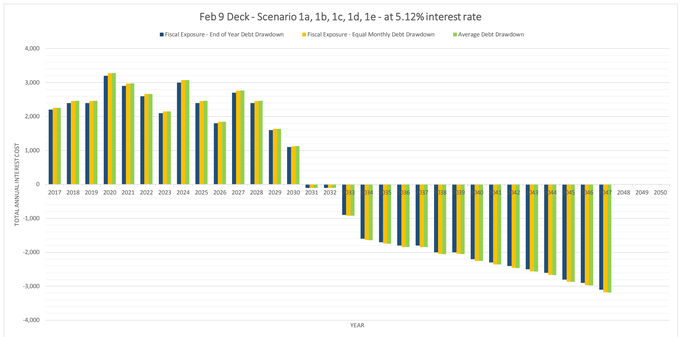
Feb9 1, 30-yr — Bi-Annual Debt Drawdown

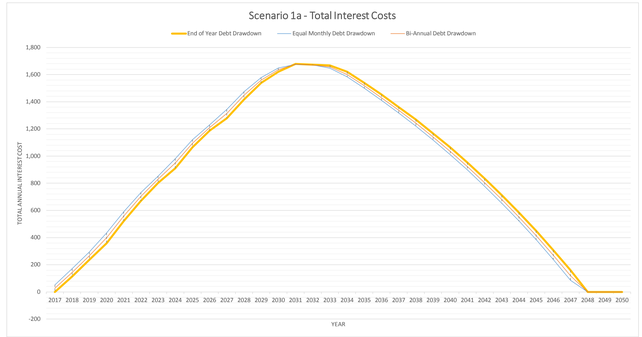
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*28*	*143*	*266*	*399*	*559*	*703*	*830*	*949*	*1,095*	*1,210*	*1,314*	*1,448*	*1,560*	*1,636*	*1,677*	*1,672*	*1,656*	*1,601*	*1,518*	*1,430*	*1,338*	*1,243*	*1,141*	*1,036*	*922*	*803*	*679*	*550*	*414*	*270*	*119*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,228	2,431	2,431	3,241	2,937	2,633	2,127	3,038	2,431	1,823	2,735	2,431	1,620	1,114	-101	-101	-912	-1,620	-1,722	-1,823	-1,823	-2,026	-2,026	-2,228	-2,329	-2,431	-2,532	-2,633	-2,836	-2,937	-3,140	0	0	0	

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
	Bi-Annual Drawdown	1,100	1,144	1,082	1,421	1,189	965	648	1,045	668	307	710	491	30	(261)	(889)	(886)	(1,284)	(1,611)	(1,620)	(1,626)	(1,580)	(1,634)	(1,583)	(1,632)	(1,626)	(1,617)	(1,606)	(1,592)	(1,625)	(1,603)	(1,629)	-	-	-
	FV of Bi-Annual Drawdown at 5%	2,228	2,317	2,192	2,878	2,409	1,954	1,313	2,116	1,353	621	1,439	995	61	(529)	(1,801)	(1,796)	(2,601)	(3,263)	(3,281)	(3,295)	(3,201)	(3,311)	(3,207)	(3,306)	(3,293)	(3,275)	(3,252)	(3,224)	(3,292)	(3,248)	(3,300)	-	-	-
	Annual Interest Cost on New Drawdowns	28	29	28	36	30	25	17	27	17	8	18	13	1	(7)	(23)	(23)	(33)	(41)	(41)	(42)	(40)	(42)	(41)	(42)	(42)	(41)	(41)	(41)	(42)	(41)	(42)	-	-	-
	Annual Interest Cost on Opening Balance	-	114	238	363	529	679	814	922	1,078	1,202	1,295	1,435	1,560	1,643	1,700	1,694	1,689	1,643	1,560	1,472	1,378	1,285	1,181	1,078	964	845	720	591	456	311	161	0	0	0
	Total Annual Interest Cost	28	143	266	399	559	703	830	949	1,095	1,210	1,314	1,448	1,560	1,636	1,677	1,672	1,656	1,601	1,518	1,430	1,338	1,243	1,141	1,036	922	803	679	550	414	270	119	0	0	0

Feb9 1, 30-yr — Average Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*56*	*174*	*297*	*440*	*596*	*737*	*857*	*987*	*1,126*	*1,233*	*1,348*	*1,479*	*1,581*	*1,650*	*1,676*	*1,670*	*1,645*	*1,581*	*1,496*	*1,407*	*1,315*	*1,218*	*1,115*	*1,008*	*893*	*773*	*647*	*517*	*379*	*233*	*79*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		2,256	2,461	2,461	3,282	2,974	2,667	2,154	3,077	2,461	1,846	2,769	2,461	1,641	1,128	-103	-103	-923	-1,641	-1,743	-1,846	-1,846	-2,051	-2,051	-2,256	-2,359	-2,461	-2,564	-2,667	-2,872	-2,974	-3,179	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb9_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0
			38	38	40	55	50	40	31	50	31	19	36	31	5	-5	-17	-19	-19	-21	-21	-21	-24	-26	-26	-26	-31	-29	-33	-33	-36	-38	-38	0	0	0

0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,300	998	17,886
Equal Monthly Debt Drawdown	2,355	993	

	Feb9 2, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,500	2029	13,466
Equal Monthly Debt Drawdown	19,964		

Feb9 2, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
a	Debt, Beginning of Year	0	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	
c = a*5%	*Interest Cost - Feb9 2, 30-yr - End of Year Debt Drawdown*	*0*	*82*	*164*	*251*	*368*	*476*	*563*	*629*	*737*	*803*	*844*	*921*	*987*	*998*	*987*	*952*	*911*	*870*	*824*	*778*	*732*	*680*	*624*	*568*	*512*	*445*	*384*	*312*	*240*	*164*	*82*	*0*	*0*	*0*	17,886
b	Additional GA Debt Drawdown, End of Year	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	7,123	6,323	5,523	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,700	3,200	1,600	0	0	0	0	
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	11,477	11,477	11,477	11,477	10,577	9,677	8,677	7,577	6,477	5,377	4,077	2,877	1,477	0	0	0	0	0	0	0	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	8,810	9,762	10,672	11,542	12,366	13,143	13,875	14,556	15,180	15,748	16,259	16,704	17,088	17,400	17,641	17,804	17,886				
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	9,790	8,038	6,328	4,558	2,834	1,157	-575	-2,356	-4,080	-5,748	-7,559	-9,204	-10,988	-12,700	-14,441	-16,204	-17,886				
Fiscal Exposure - End of Year Debt Drawdown		1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0	

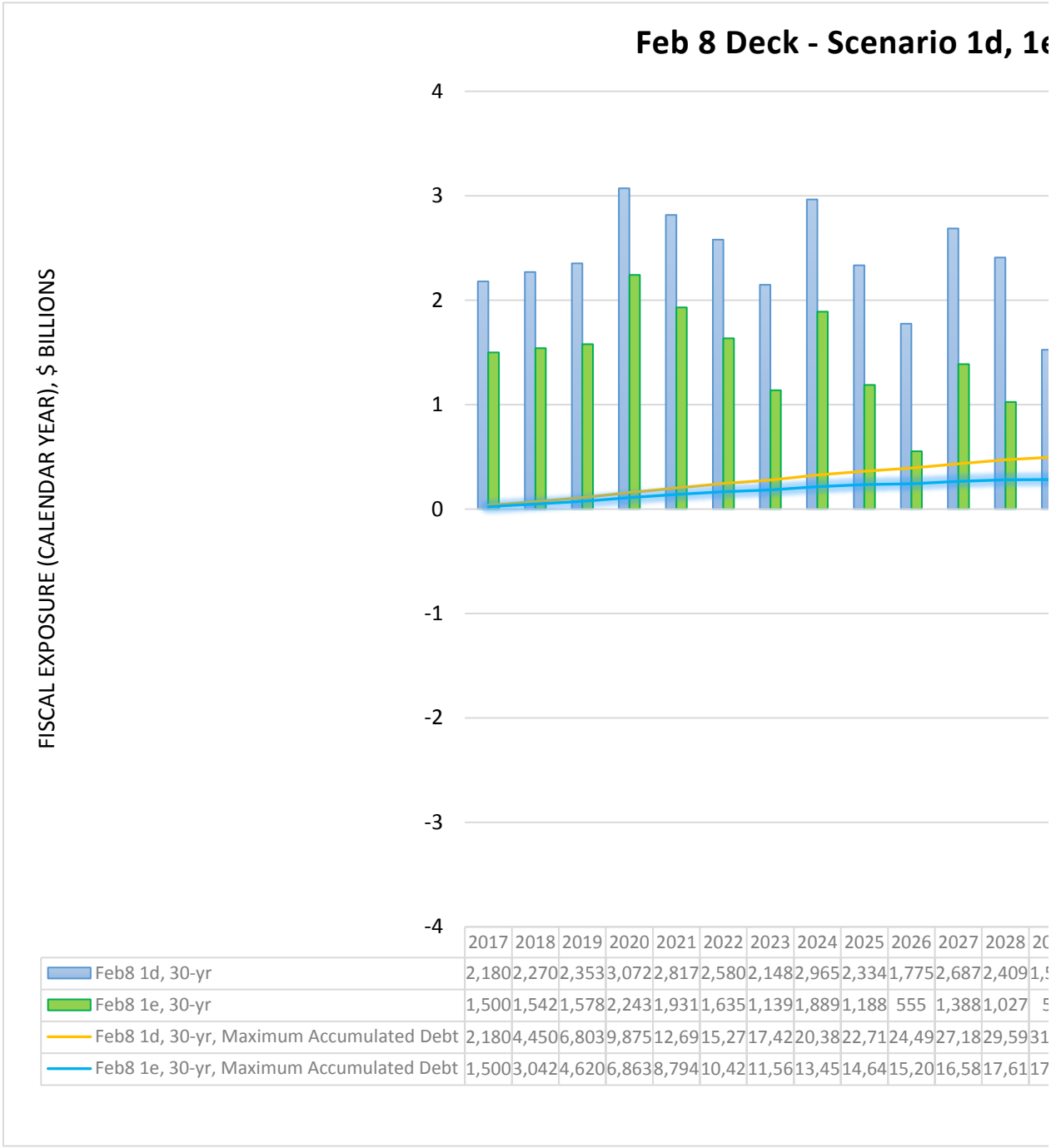
Feb9 2, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	
993	*Interest Cost - Feb9 2, 30-yr*	*38*	*120*	*204*	*305*	*418*	*516*	*594*	*679*	*768*	*822*	*880*	*952*	*992*	*993*	*971*	*933*	*892*	*848*	*802*	*756*	*708*	*654*	*598*	*542*	*481*	*417*	*350*	*279*	*205*	*126*	*44*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0	
	Monthly Drawdown	133	127	128	171	144	102	61	123	47	(0)	55	32	(66)	(100)	(141)	(146)	(143)	(147)	(144)	(140)	(144)	(148)	(144)	(139)	(151)	(137)	(149)	(143)	(145)	(147)	(140)	-	-	-	
	FV of Monthly Drawdown at 5%	1,638	1,554	1,573	2,098	1,773	1,253	755	1,506	577	(3)	671	388	(806)	(1,226)	(1,728)	(1,793)	(1,751)	(1,812)	(1,765)	(1,718)	(1,773)	(1,823)	(1,765)	(1,708)	(1,855)	(1,684)	(1,826)	(1,753)	(1,782)	(1,806)	(1,722)	-	-	-	
	Annual Interest Cost on New Drawdowns	38	36	37	49	41	29	18	35	13	(0)	16	9	(19)	(28)	(40)	(42)	(41)	(42)	(41)	(40)	(41)	(42)	(41)	(40)	(43)	(39)	(42)	(41)	(41)	(42)	(40)	-	-	-	
	Annual Interest Cost on Opening Balance	-	84	168	257	377	487	576	644	754	822	864	943	1,011	1,021	1,011	974	932	890	843	796	749	697	639	581	524	456	393	320	246	168	84	0	0	0	
	Total Annual Interest Cost	38	120	204	305	418	516	594	679	768	822	880	952	992	993	971	933	892	848	802	756	708	654	598	542	481	417	350	279	205	126	44	0	0	0	

Feb9 2, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*20*	*102*	*185*	*280*	*395*	*498*	*579*	*656*	*753*	*813*	*863*	*938*	*990*	*995*	*978*	*941*	*900*	*858*	*812*	*766*	*719*	*666*	*610*	*554*	*495*	*430*	*366*	*294*	*221*	*143*	*61*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,620	1,620	1,722	2,329	2,127	1,722	1,317	2,127	1,317	810	1,519	1,317	203	-203	-709	-810	-810	-912	-912	-912	-1,013	-1,114	-1,114	-1,114	-1,317	-1,215	-1,418	-1,418	-1,519	-1,620	-1,620	0	0	0	
	Bi-Annual Drawdown	800	759	768	1,025	866	612	369	735	282	(2)	328	190	(394)	(599)	(844)	(876)	(855)	(885)	(862)	(839)	(866)	(890)	(862)	(834)	(906)	(823)	(892)	(856)	(870)	(882)	(841)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,620	1,538	1,556	2,076	1,754	1,240	747	1,490	570	(3)	664	384	(797)	(1,213)	(1,709)	(1,774)	(1,733)	(1,792)	(1,746)	(1,699)	(1,754)	(1,803)	(1,746)	(1,689)	(1,835)	(1,666)	(1,807)	(1,734)	(1,763)	(1,786)	(1,703)	-	-	-	
	Annual Interest Cost on New Drawdowns	20	19	20	26	22	16	9	19	7	(0)	8	5	(10)	(15)	(22)	(22)	(22)	(23)	(22)	(21)	(22)	(23)	(22)	(21)	(23)	(21)	(23)	(22)	(22)	(23)	(22)	-	-	-	
	Annual Interest Cost on Opening Balance	-	83	166	254	373	482	570	637	746	814	855	933	1,000	1,010	1,000	964	922	881	834	788	741	689	632	575	518	451	389	316	244	166	83	0	0	0	
	Total Annual Interest Cost	20	102	185	280	395	498	579	656	753	813	863	938	990	995	978	941	900	858	812	766	719	666	610	554	495	430	366	294	221	143	61	0	0	0	

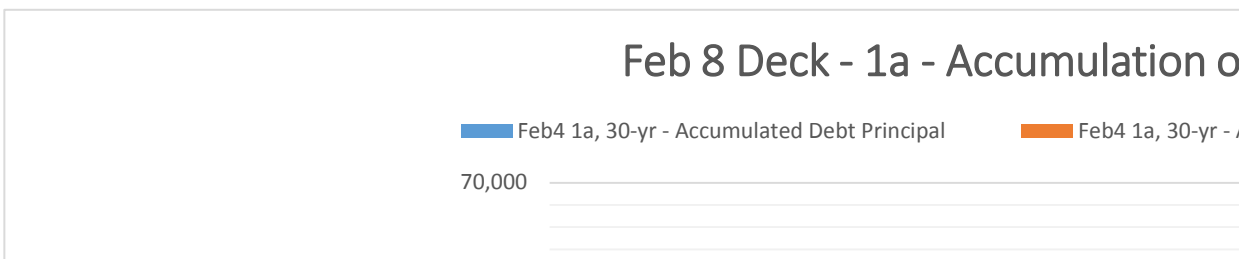
Feb9 2, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*41*	*123*	*207*	*310*	*422*	*519*	*596*	*683*	*770*	*824*	*883*	*954*	*993*	*993*	*970*	*931*	*890*	*847*	*801*	*755*	*706*	*652*	*596*	*540*	*478*	*414*	*348*	*276*	*202*	*123*	*41*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,641	1,641	1,743	2,359	2,154	1,743	1,333	2,154	1,333	820	1,538	1,333	205	-205	-718	-820	-820	-923	-923	-923	-1,026	-1,128	-1,128	-1,128	-1,333	-1,231	-1,436	-1,436	-1,538	-1,641	-1,641	0	0	0	

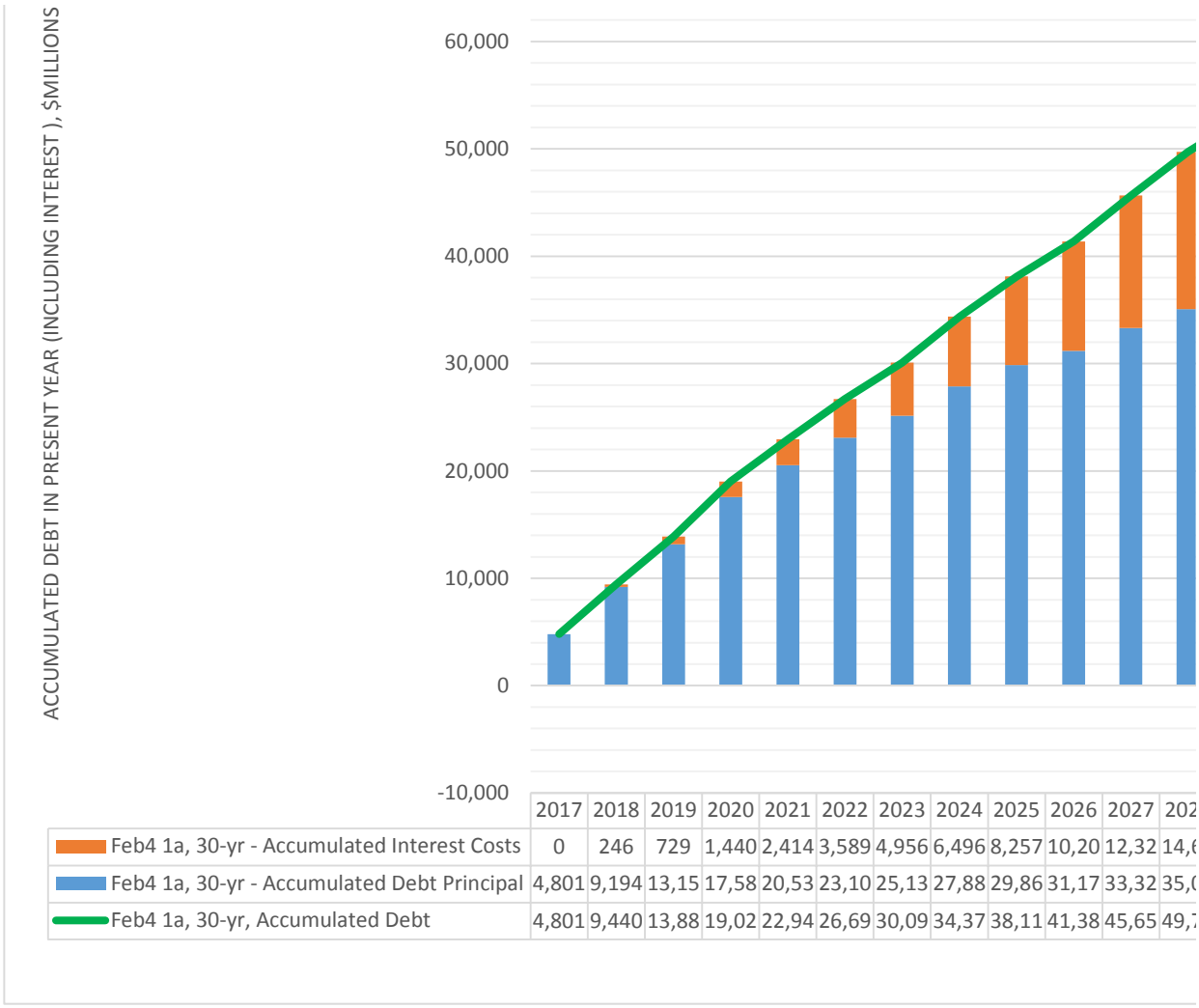
Feb 8 Deck

Feb 8 Deck - Scenario 1d, 1e - at 5.12% interest rate

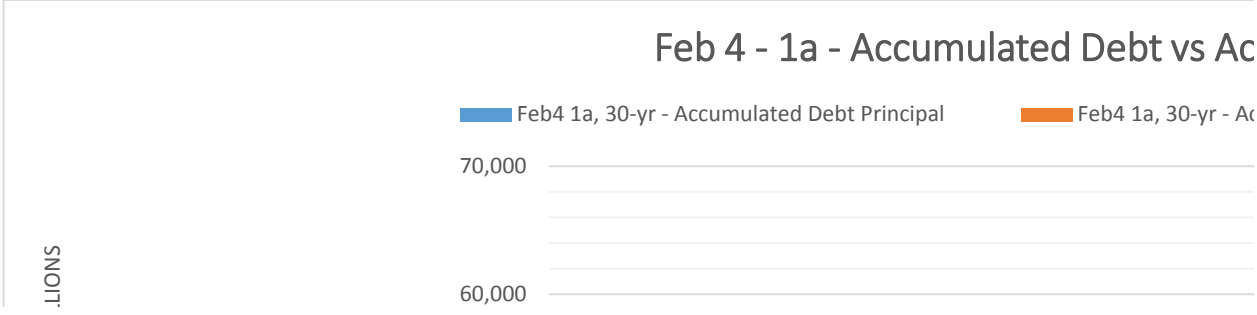


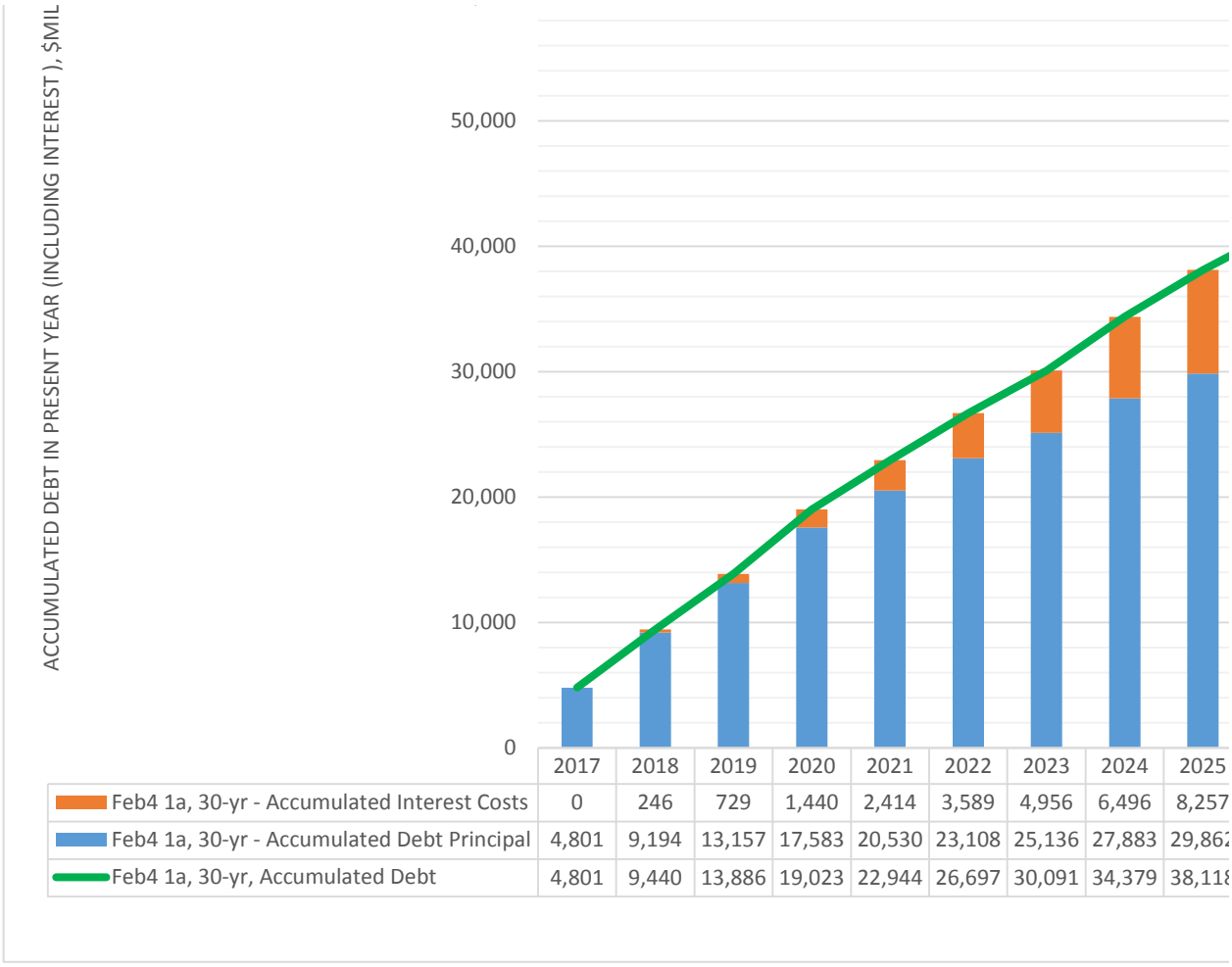
Feb 8 Deck - 1a - Accumulation of Debt (Principal and Interest)



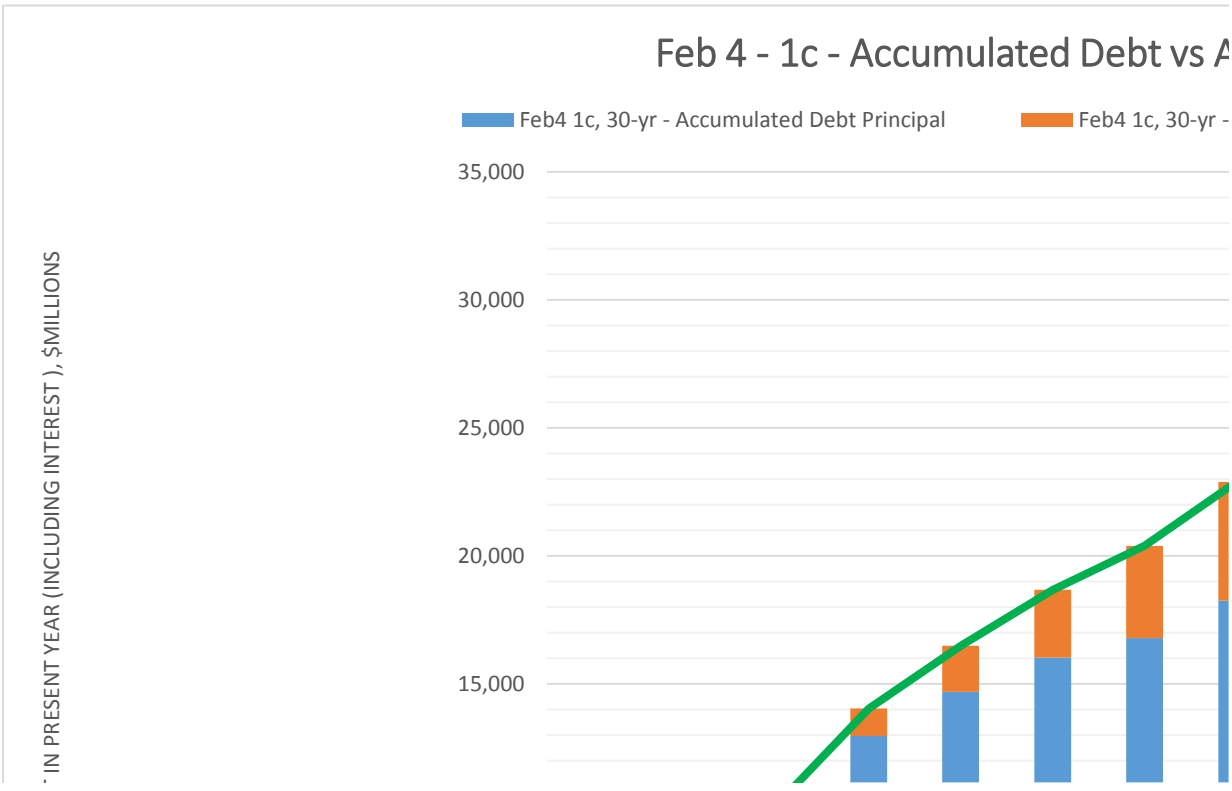


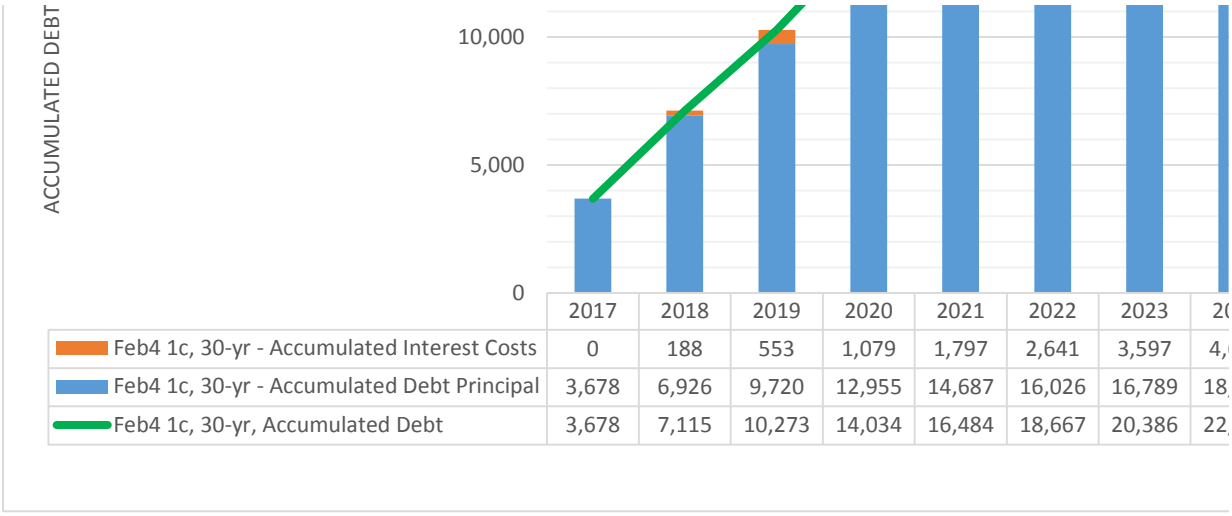
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	202
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,(
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,7



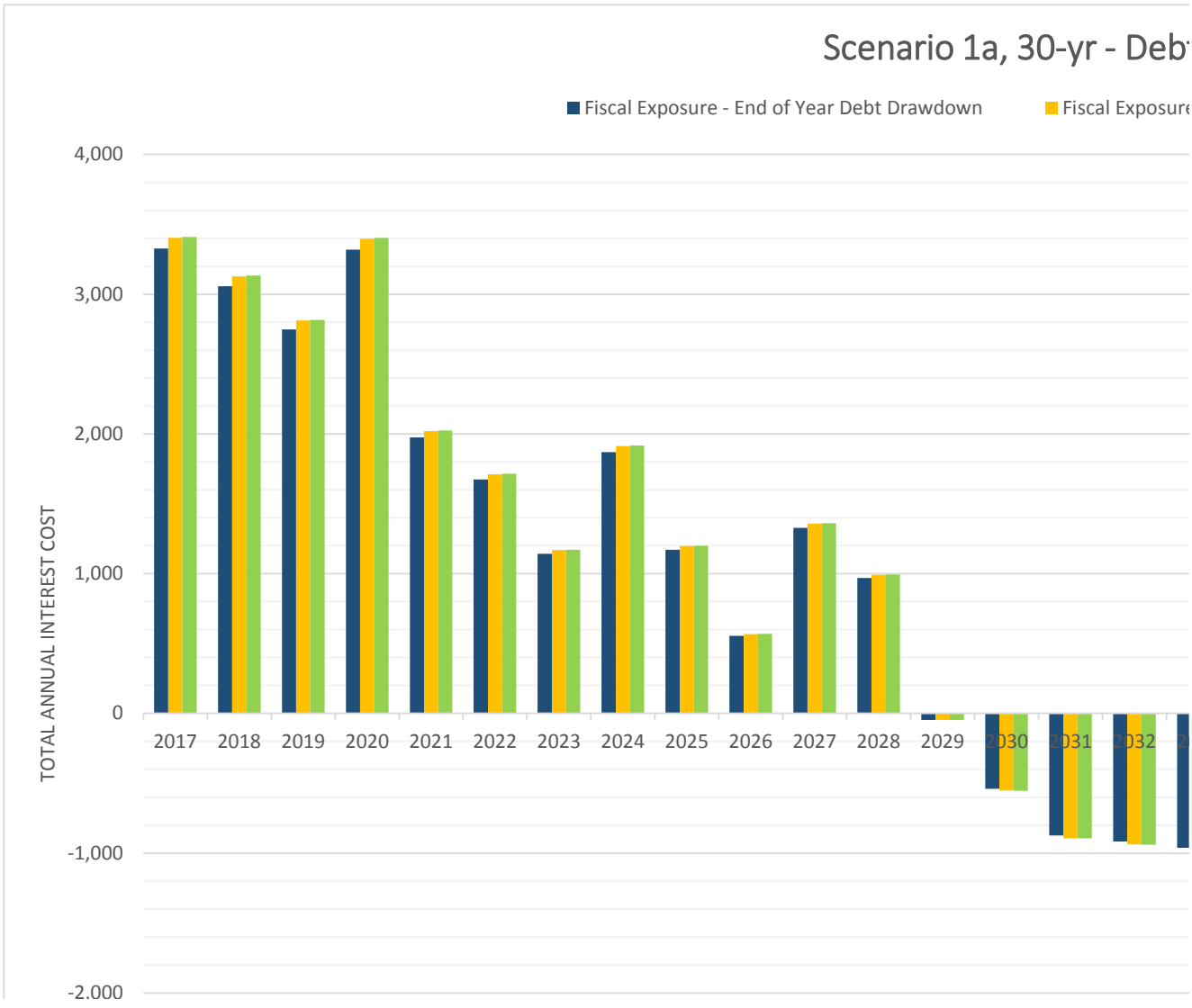


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



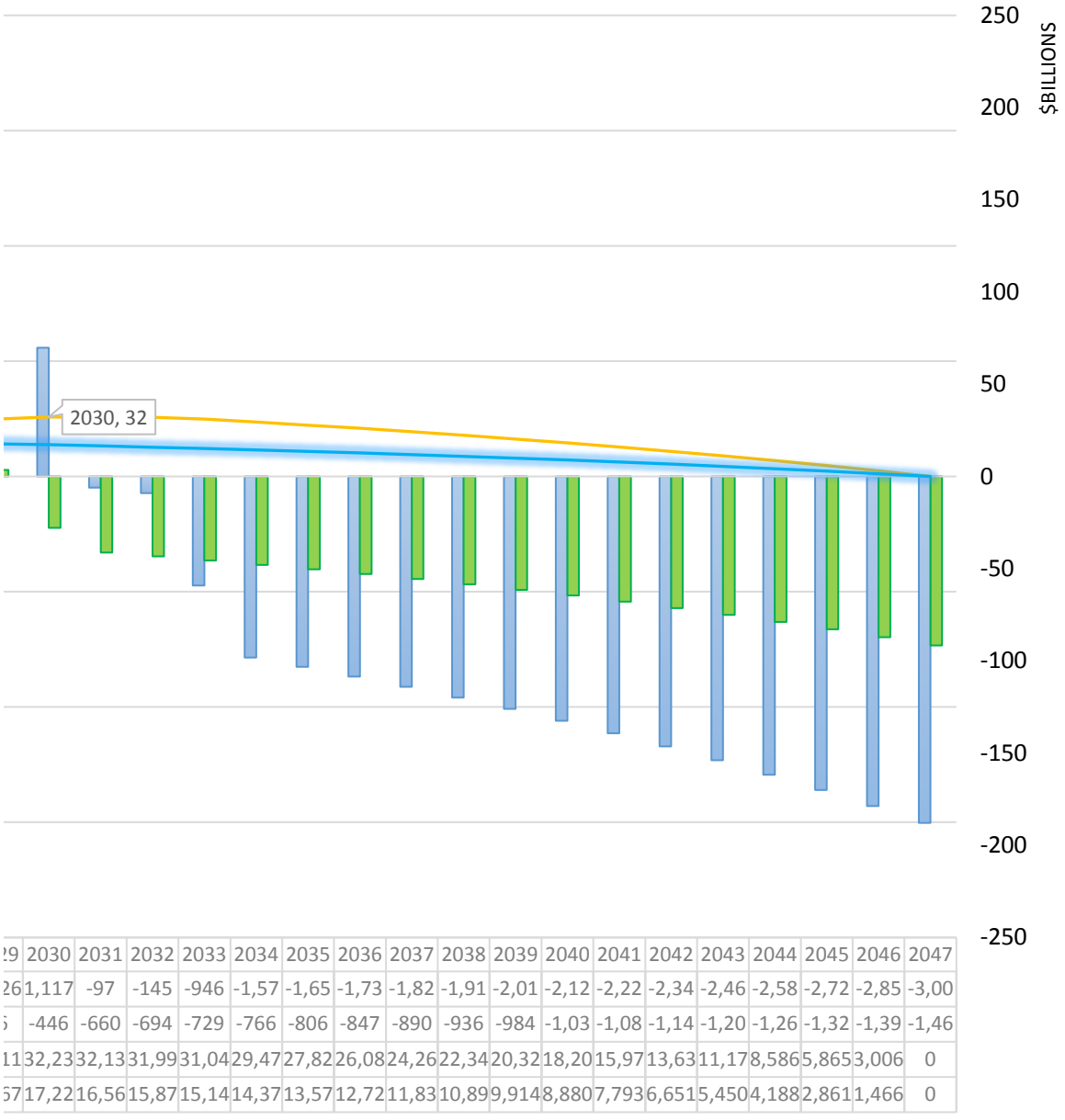


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

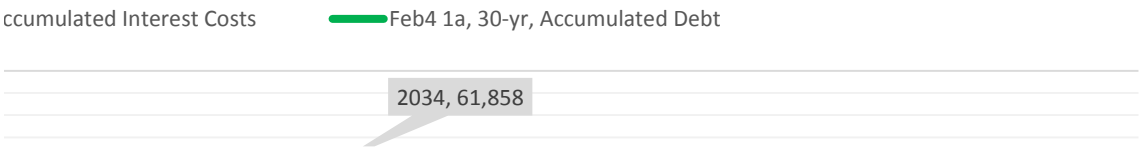
- at 5.12% interest rate

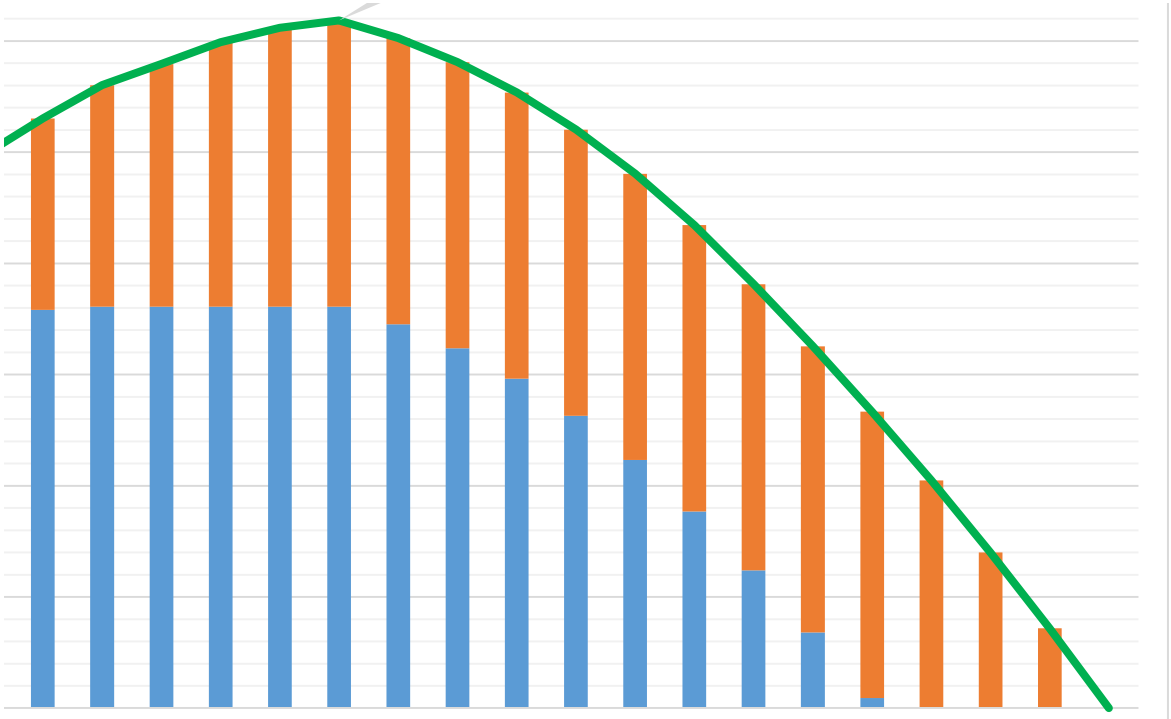


29	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
26	1,117	-97	-145	-946	-1,57	-1,65	-1,73	-1,82	-1,91	-2,01	-2,12	-2,22	-2,34	-2,46	-2,58	-2,72	-2,85	-3,00
5	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,03	-1,08	-1,14	-1,20	-1,26	-1,32	-1,39	-1,46
11	32,23	32,13	31,99	31,04	29,47	27,82	26,08	24,26	22,34	20,32	18,20	15,97	13,63	11,17	8,586	5,865	3,006	0
57	17,22	16,56	15,87	15,14	14,37	13,57	12,72	11,83	10,89	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0

CALENDAR YEAR

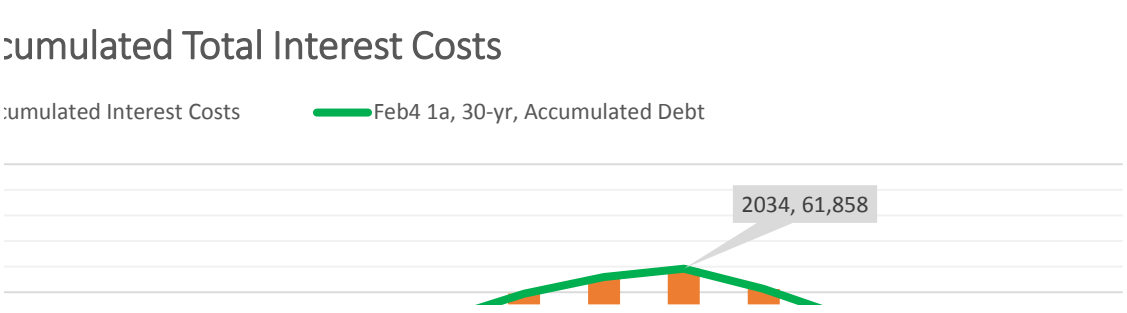
Debt (Principal and Interest)



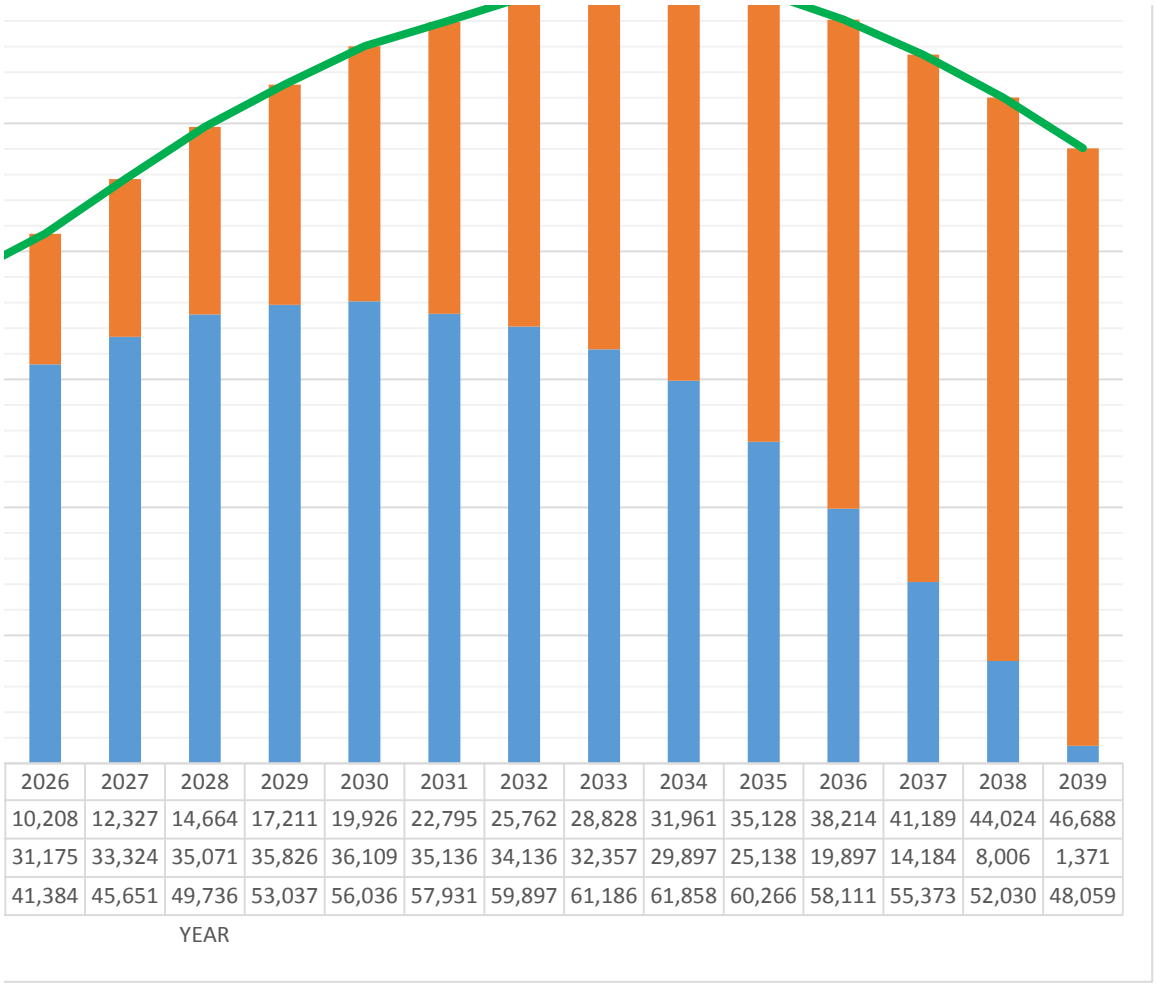


	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
5	17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
7	35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
3	53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



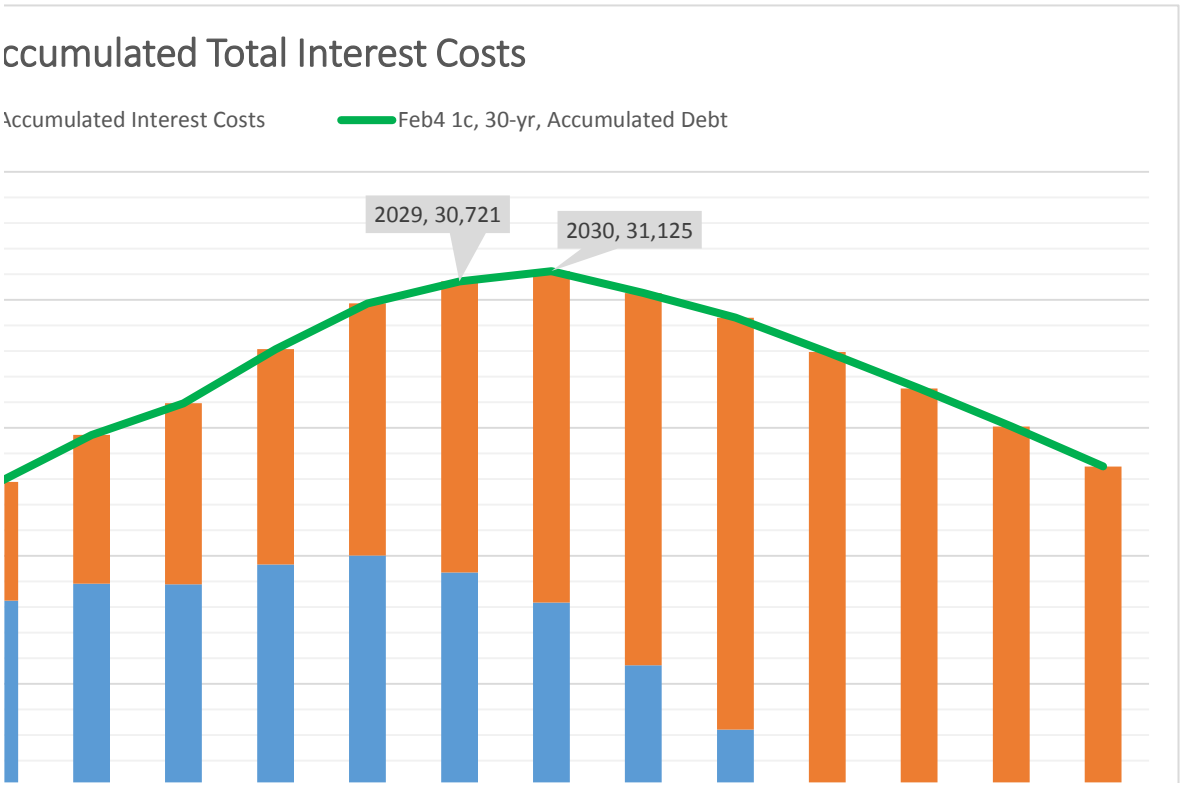
LIONS

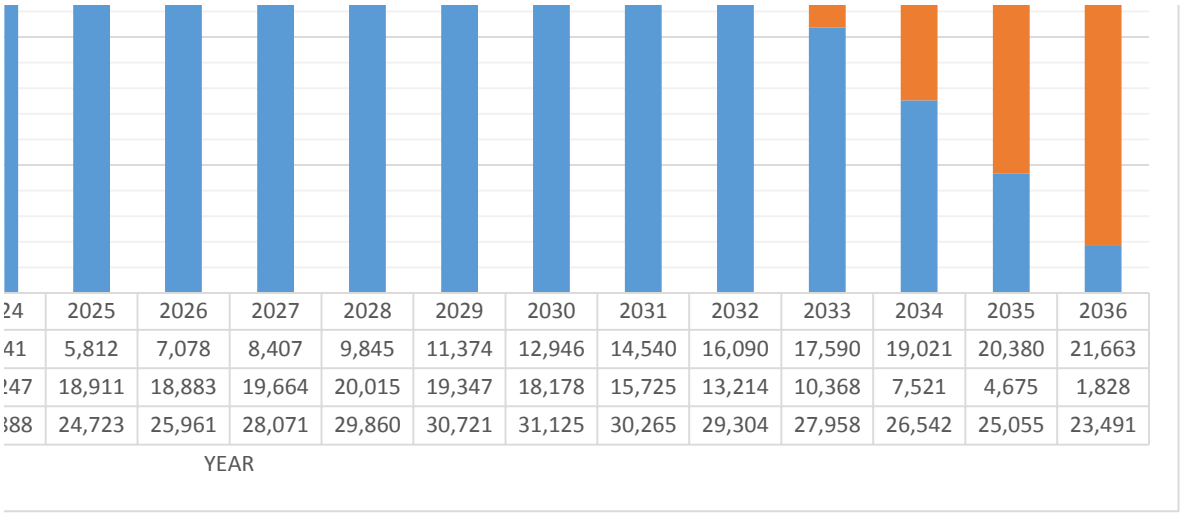


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

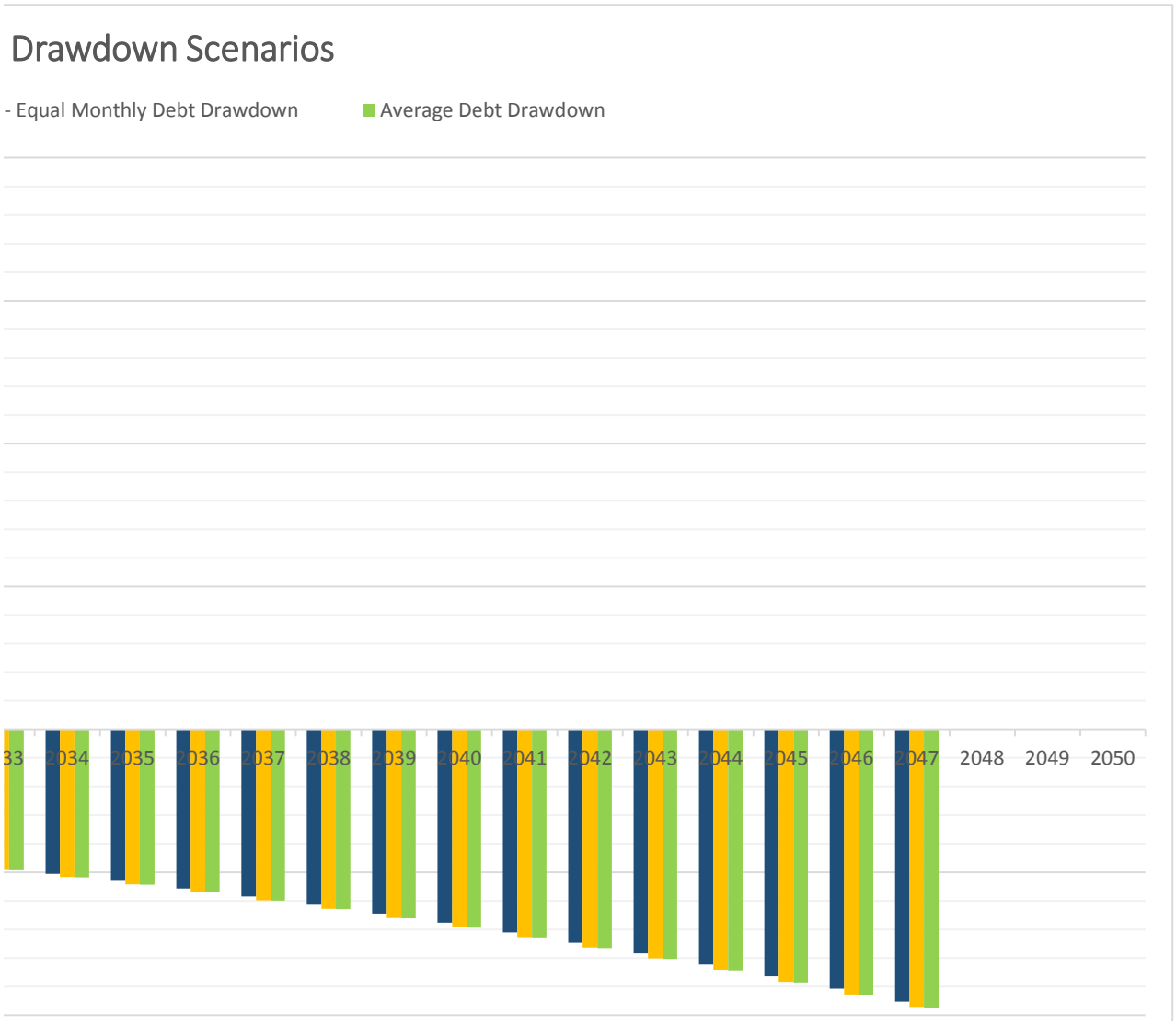
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





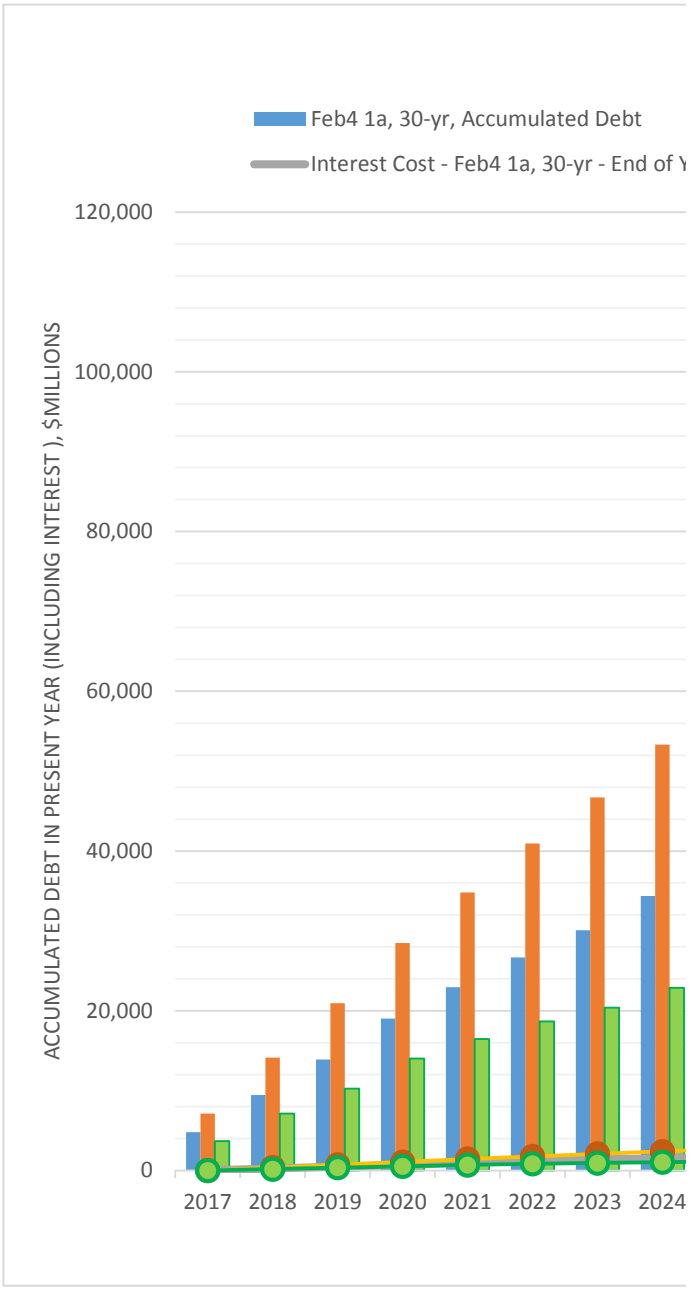
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

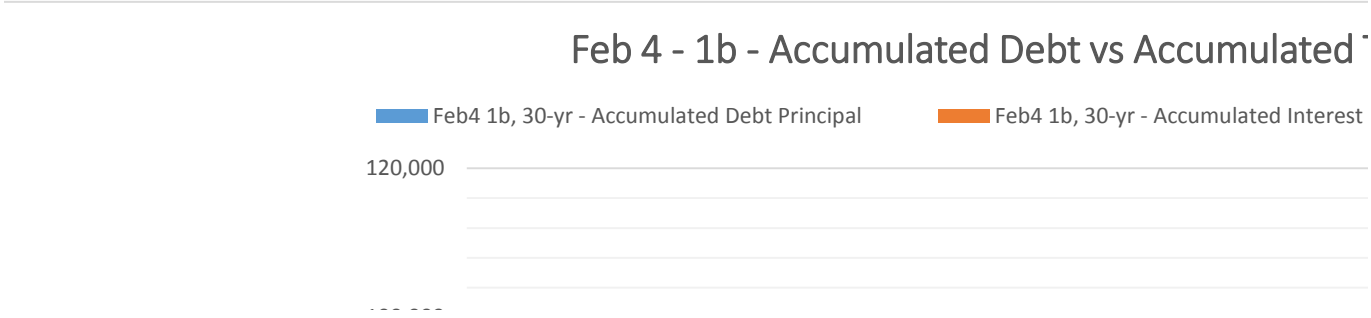
YEAR

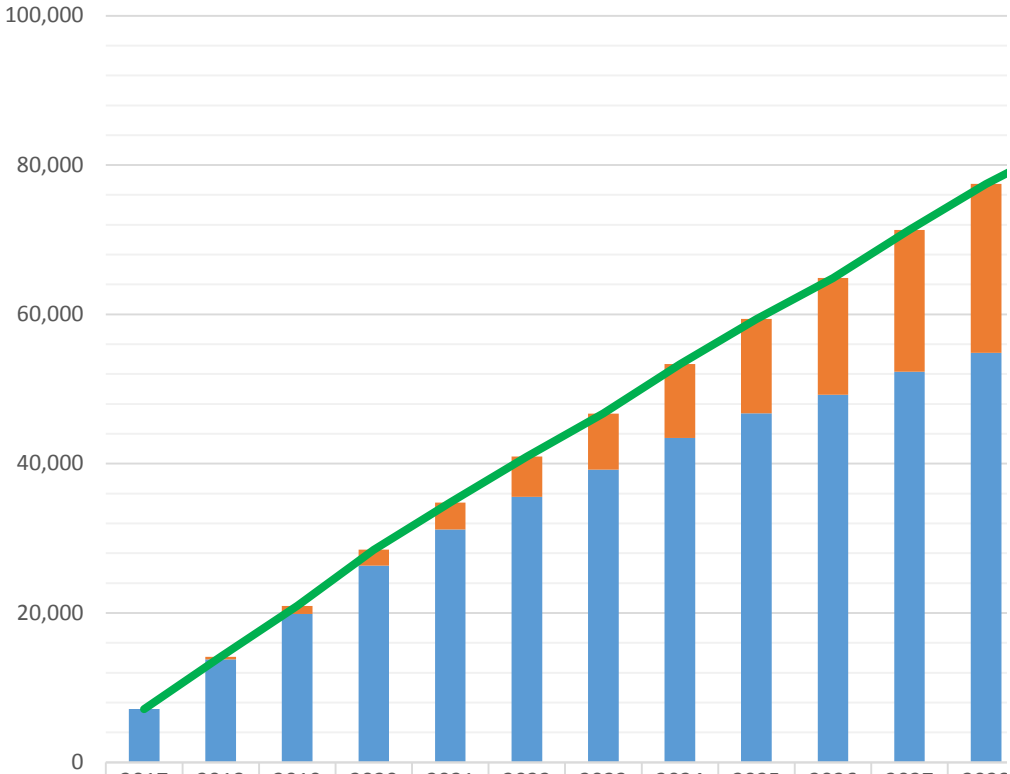


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate

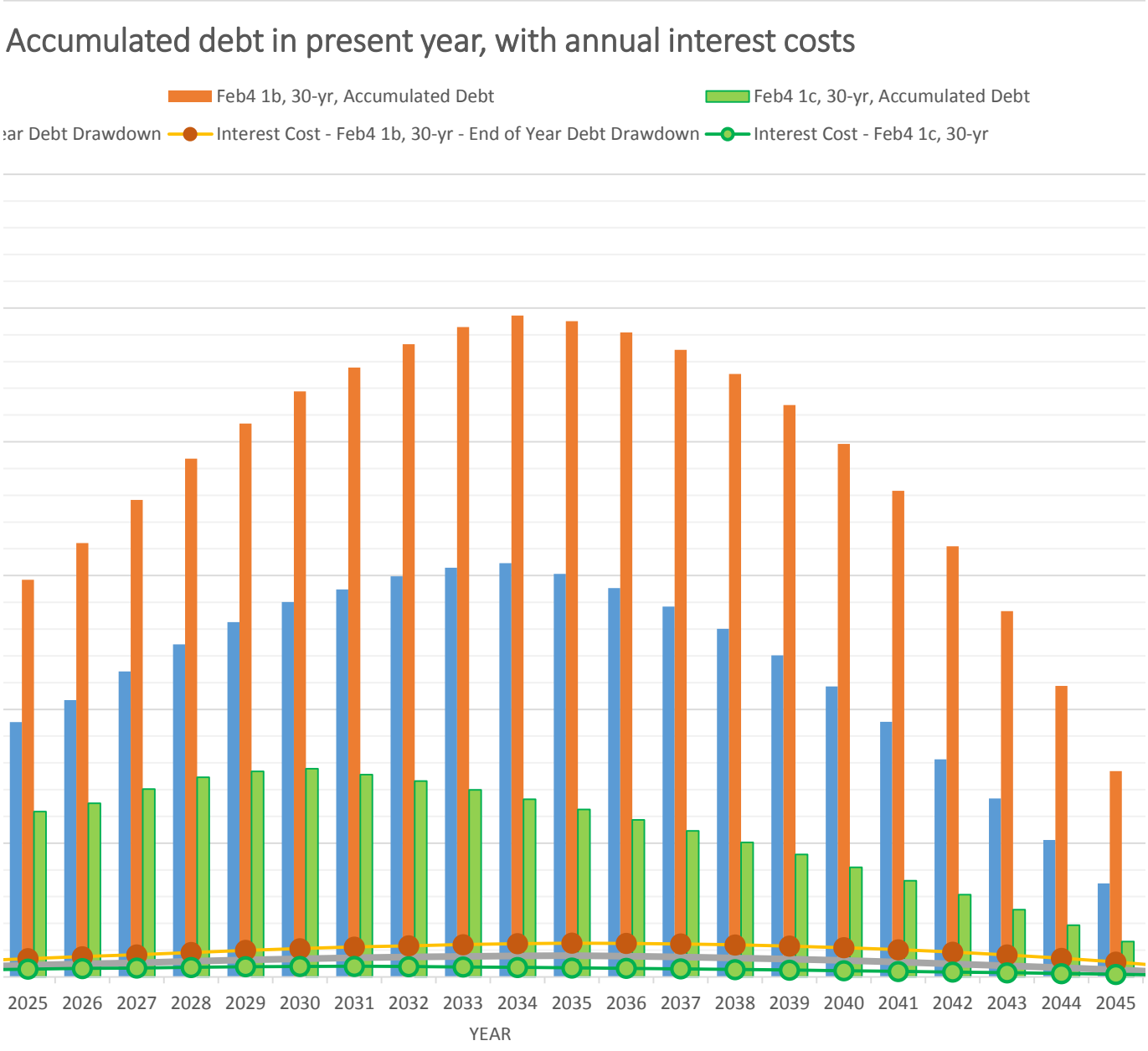


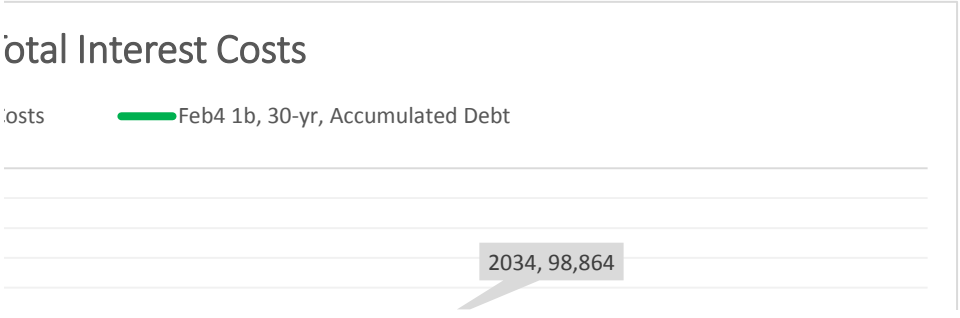

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

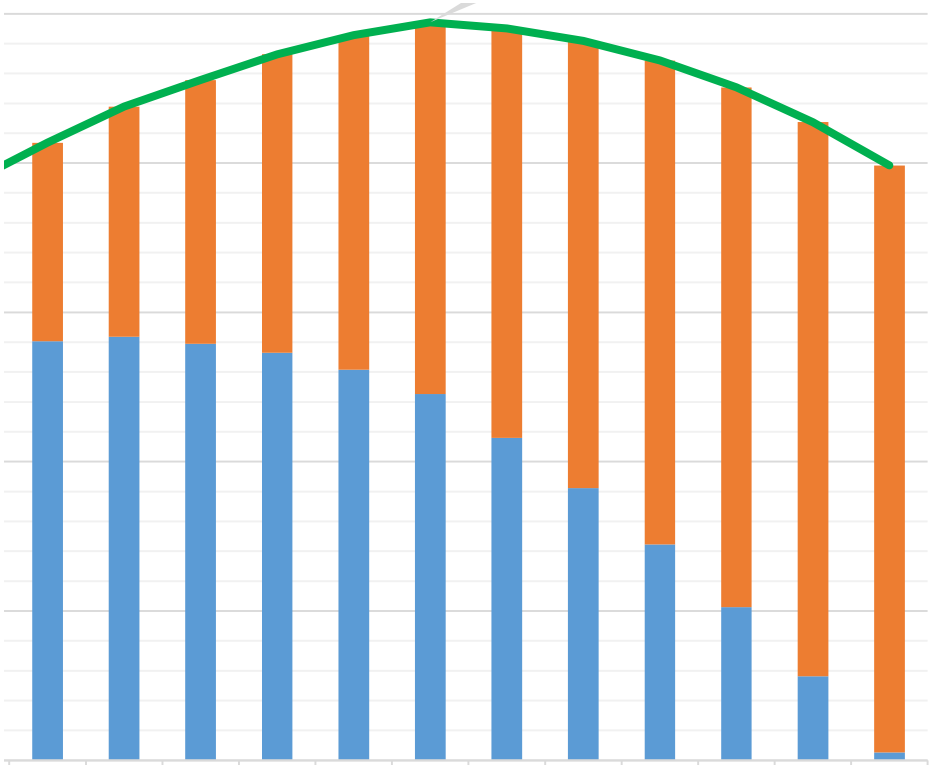


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y

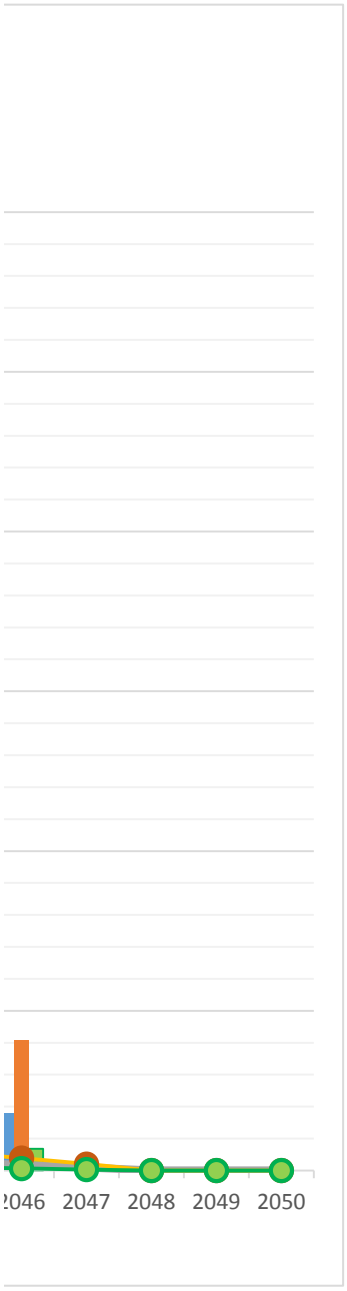

Accumulated debt in present year, with annual interest costs
Feb4 1b, 30-yr, Accumulated Debt
Feb4 1c, 30-yr, Accumulated Debt
ear Debt Drawdown
Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown
Interest Cost - Feb4 1c, 30-yr
2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045
YEAR


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

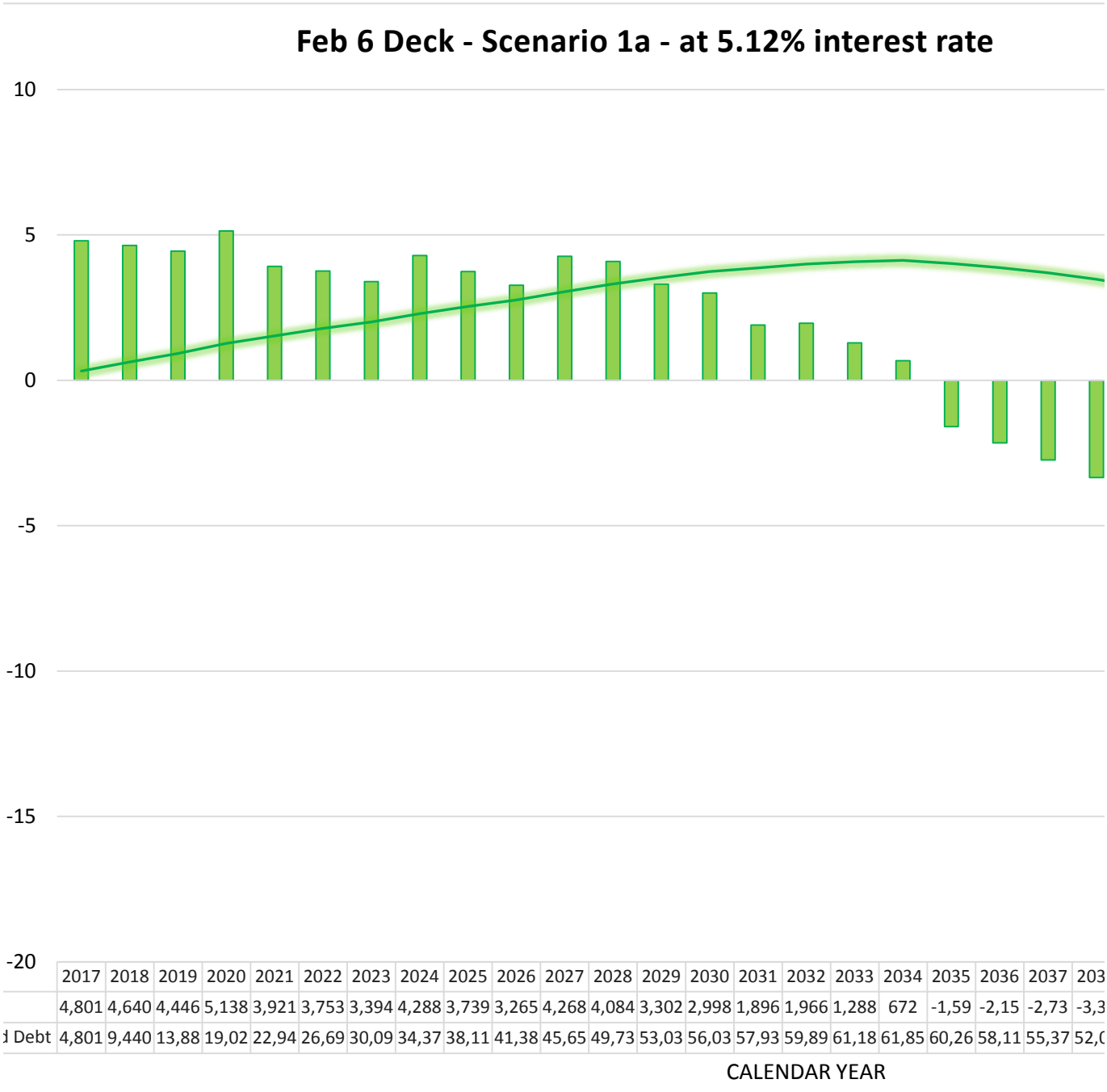
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

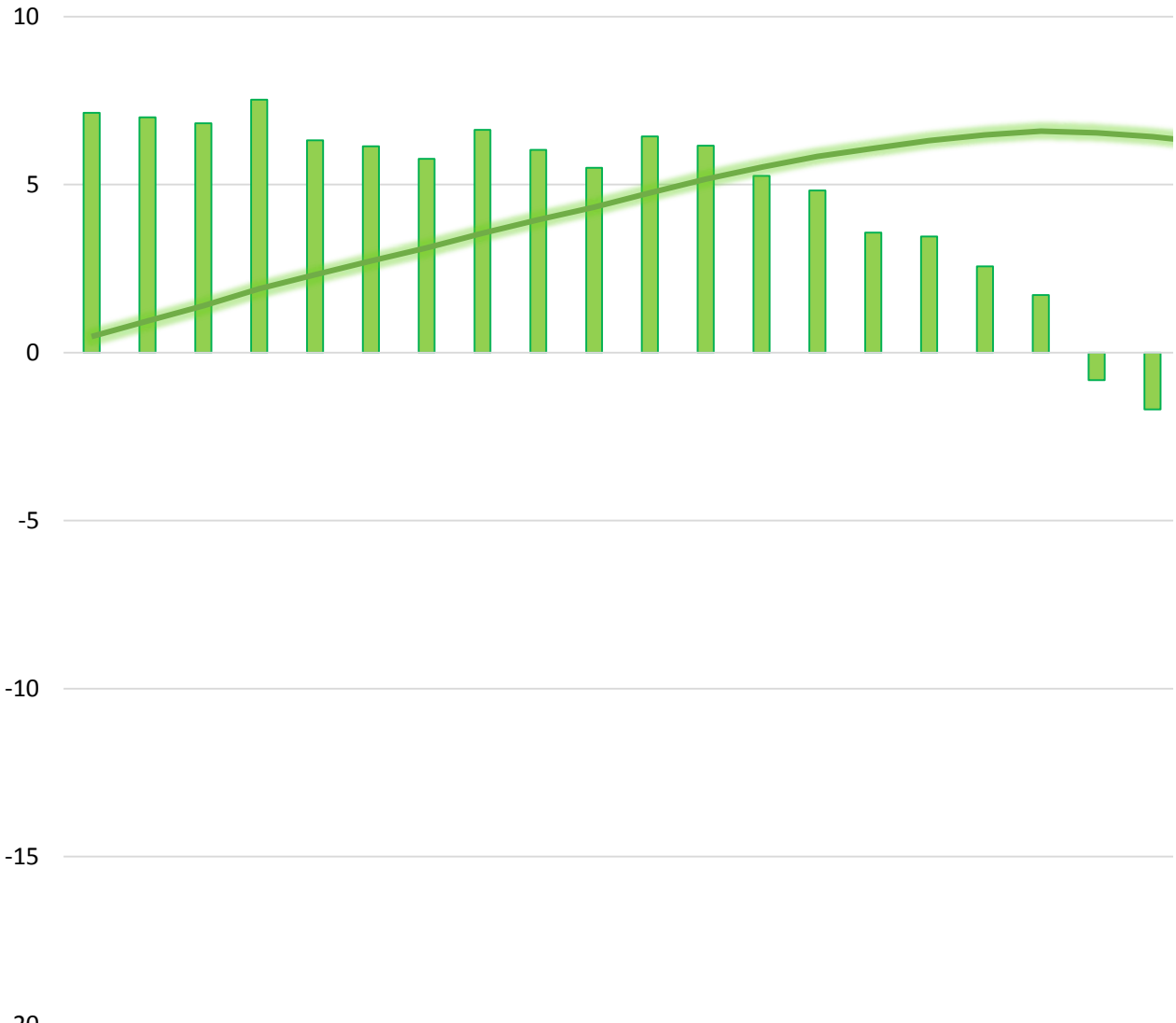
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

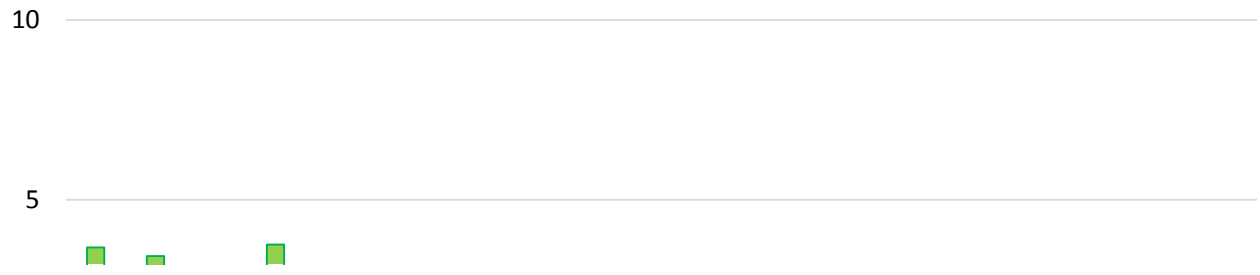
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

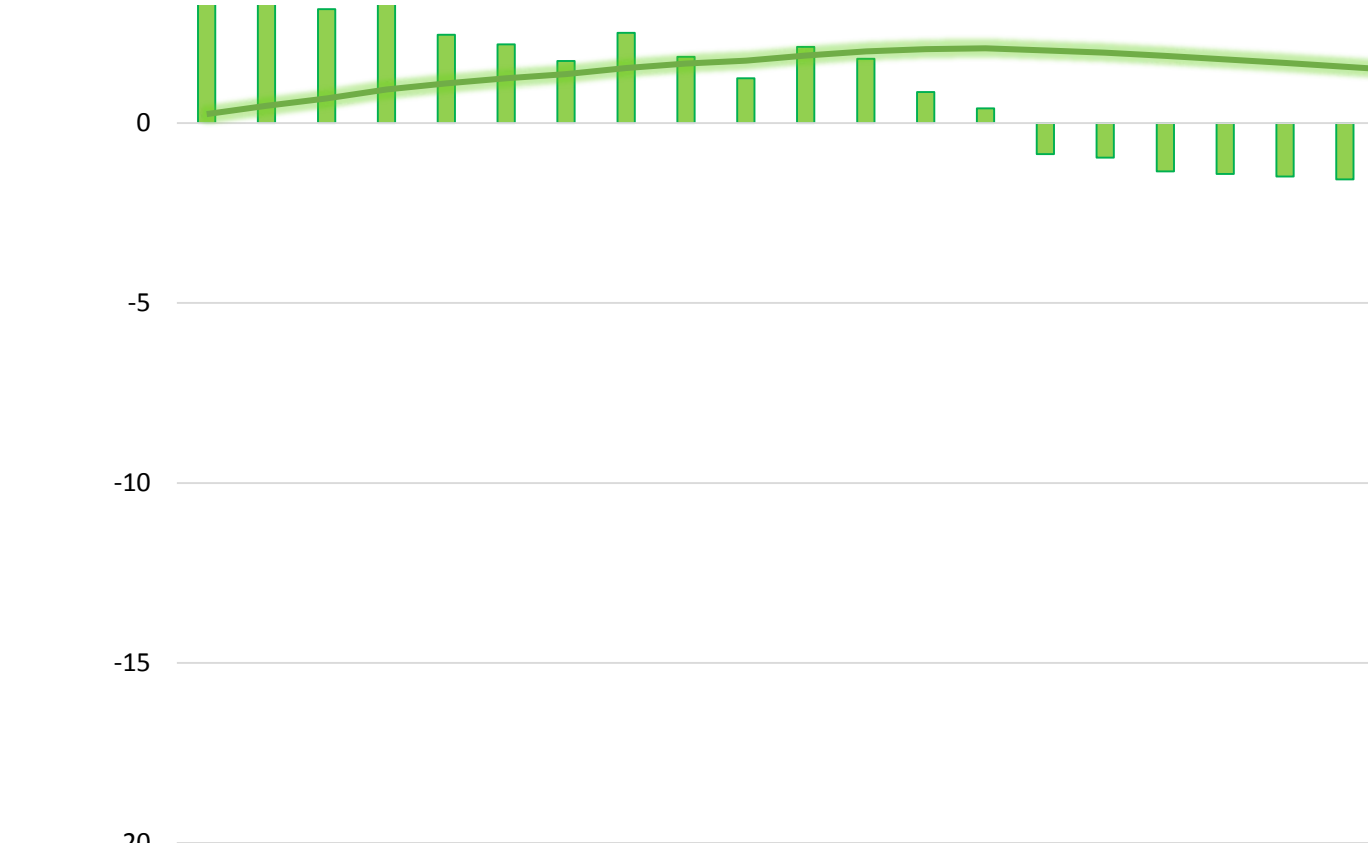


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



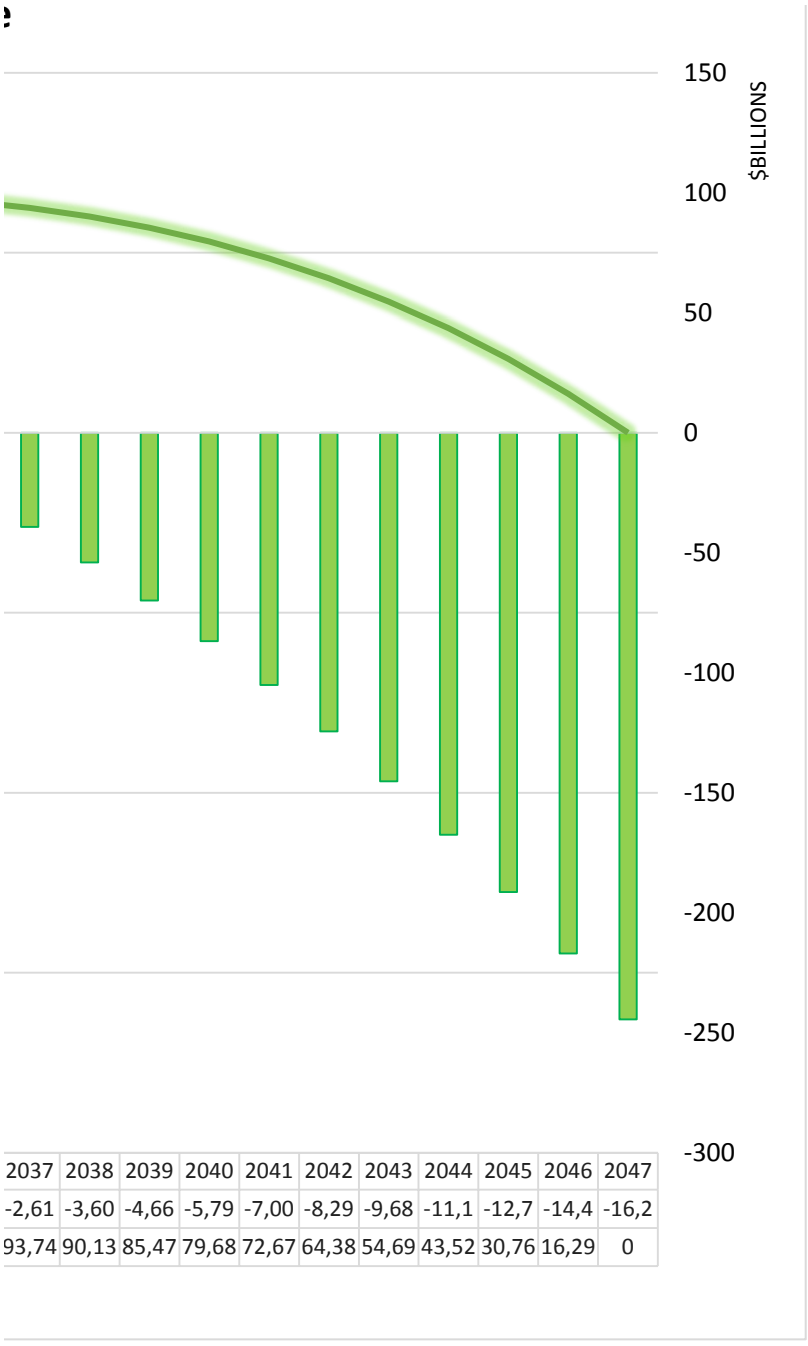


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

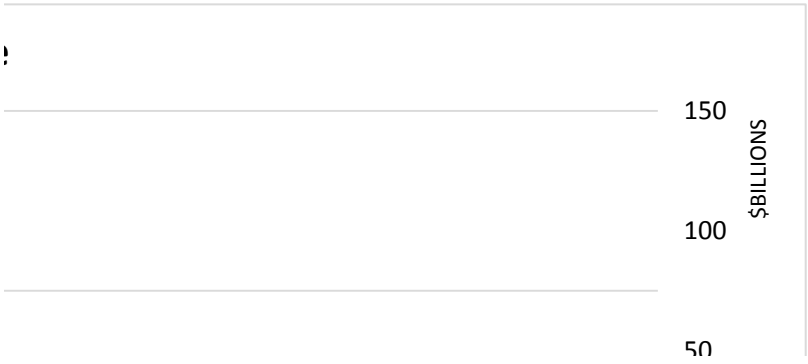
CALENDAR YEAR

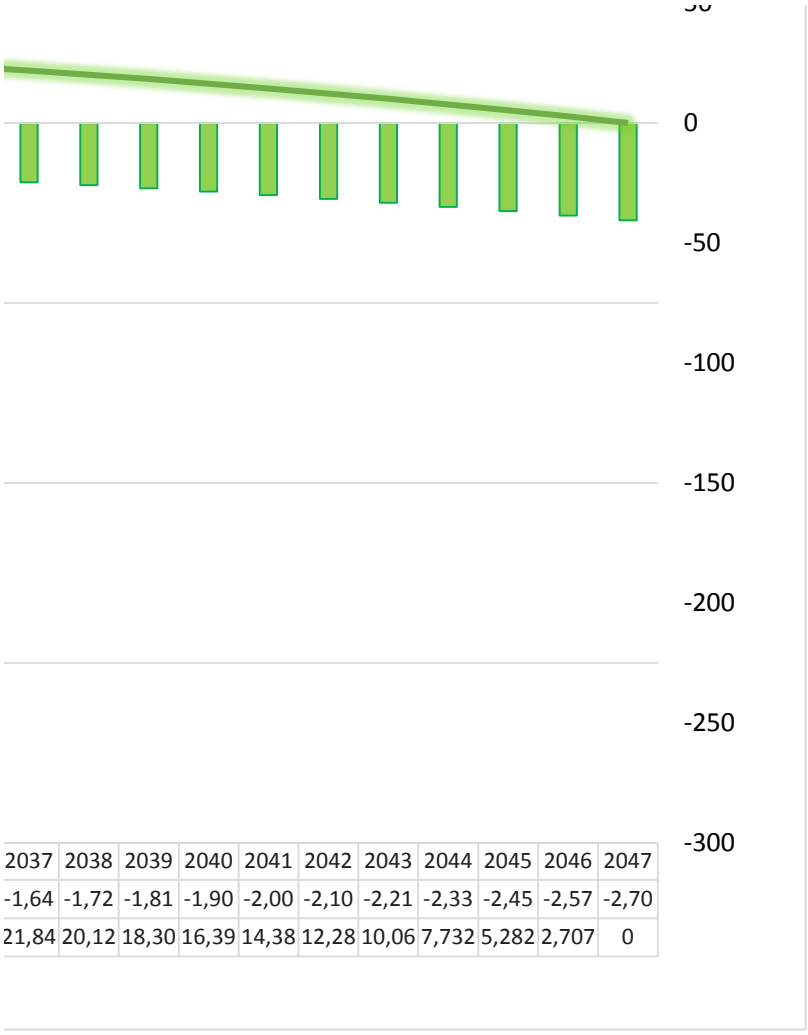


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Feb 8 Deck - Scenario 1a, 1b, 1c - at 5.12% interest
IESO GA cost forecast + extrapolation

Scenario
1a

1b

1c

1d

1e

	2017	2018	2019	2020
rate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	4674	9542	14587	21173

GA Payment from Impacted Rate Class	7421	7205	6995	6329
Accumulated debt in present year (including interest)	4674	9544	14589	21175

GA Payment from Impacted Rate Class	7421	7425	7440	7013
Accumulated debt in present year (including interest)	4674	9323	13913	19780

GA Payment from Impacted Rate Class	9915	9676	9427	9445
Accumulated debt in present year (including interest)	2180	4450	6803	9875

GA Payment from Impacted Rate Class	10596	10370	10129	10162
Accumulated debt in present year (including interest)	1500	3042	4620	6863

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
27212	33084	38588	44968	50769	56056	62291	68274

5890	6156	6434	6724	7028	7345	7677	8024
27212	33082	38585	44963	50762	56048	62281	68263

6825	7042	7266	7497	7736	7983	8237	8499
24810	29671	34167	39545	44359	48679	53976	59058

8532	8703	8877	9054	9236	9420	9609	9801
12692	15272	17420	20384	22719	24494	27181	29590

9264	9449	9638	9831	10027	10228	10432	10641
8794	10429	11568	13457	14645	15200	16588	17614

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
73391	78103	81594	85015	87596	89375	88679	87180

8386	8765	9160	9574	10006	10458	10931	11424
73378	78089	81578	84997	87577	89356	88659	87159

8770	9049	9337	9634	9941	10257	10584	10921
63318	67230	69987	72754	74773	76097	75068	73377

9997	10197	10401	10609	10821	10916	8822	8548
31116	32233	32135	31991	31045	29473	27822	26085

10854	11071	10196	10361	9779	9298	7203	6930
17670	17225	16565	15871	15142	14376	13570	12723

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
84828	81568	77341	72085	65730	58203	49425	39310

11940	12480	13043	13632	14248	14891	15564	16267
84806	81546	77320	72065	65711	58186	49409	39297

11269	11628	11998	12380	12774	13181	13600	14033
70990	67875	63995	59310	53778	47352	39985	31624

8288	8040	7805	7580	7367	7164	6970	6786
24260	22342	20325	18206	15978	13635	11173	8586

6670	6422	6186	5962	5748	5545	5352	5168
11833	10897	9914	8880	7793	6651	5450	4188

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
27767	14699	0	0	0	0

17001	17769	18572	2975	2831	2695
27758	14694	0	0	0	0

14480	14941	15417	2975	2831	2695
22213	11693	0	0	0	0

6611	6444	6286	2975	2831	2695
5865	3006	0	0	0	0

4993	4826	4667	2975	2831	2695
2861	1466	0	0	0	0

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb8_1a_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,867
Annual Exposure2 with start on July 1st	*2,337*	*4,867*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	3,554

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

1 Based on an interest rate of 5%.

2 Fiscal exposure based on equal monthly drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1b_30yr

1b. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,869
Annual Exposure2 with start on July 1st	*2,337*	*4,869*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	*3,554*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649
Annual Exposure2 with start on July 1st	*2,337*	*4,649*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,668
Start: July 1st	-	*3,499*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $76 billion peaking in

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270
Annual Exposure2 with start on July 1st	*1,090*	*2,270*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	545	2,203
Start: July 1st	-	*1,658*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $32 billion peaking in

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542
Annual Exposure2 with start on July 1st	*750*	*1,542*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	375	1,510
Start: July 1st	-	*1,135*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $18 billion peaking in

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	1,169 - 1,169	4,723 - 4,723

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1169**	**4963**
Total, B	1169	4963
Proposed Program Total:	1,169 - 1,169	4,963 - 4,963

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1a
Scenario 1b
Scenario 1c
Scenario 1d
Scenario 1e

2019	2020	2021	2022
5,045	6,586	6,039	5,872
5,045	*6,586*	*6,039*	*5,872*

2018-19	2019-20	2020-21	2021-2022
4,912	5,430	6,449	5,997
4,912	*5,430*	*6,449*	*5,997*

2034.

Actuals are subject t
- The highest debt ac
- Compared to a 5% i

[1] Based on an interes
[2] Fiscal exposure bas
[3] Fiscalized based on

depend on decision on accounting treatment.

2019	2020	2021	2022
5,045	6,586	6,037	5,870
5,045	*6,586*	*6,037*	*5,870*

2018-19	2019-20	2020-21	2021-2022
4,913	5,430	6,449	5,996
4,913	*5,430*	*6,449*	*5,996*

2034.

2019	2020	2021	2022
4,589	5,867	5,031	4,861
4,589	*5,867*	*5,031*	*4,861*

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988
4,634	*4,909*	*5,658*	*4,988*

2034.

2019	2020	2021	2022
2,353	3,072	2,817	2,580
2,353	*3,072*	*2,817*	*2,580*

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757
2,291	*2,533*	*3,008*	*2,757*

2030.

2019	2020	2021	2022
1,578	2,243	1,931	1,635
1,578	*2,243*	*1,931*	*1,635*

2018-19	2019-20	2020-21	2021-2022

1,551	1,745	2,165	1,857
1,551	*1,745*	*2,165*	*1,857*

2029.



2018-19	2019-20	2020-21	2021-2022
4,913 - 4,912	5,430 - 5,430	6,449 - 6,449	5,996 - 5,997

/1

2018-19[1]	2019-20[1]	2020-21[1]
4912	5430	6449
4913	5430	6449
225	279	323
60	60	60
18	18	18
5215	**5787**	**6850**
5216	5787	6850

5,216 - 5,215 5,787 - 5,787 6,850 - 6,850

Total Principal Debt	Total Accumulated Interest Costs	**Peak Total Debt**	
52,287	85,599	89,375	occurs in Year 2034
52,275	85,582	89,356	occurs in Year 2034
44,449	72,823	76,097	occurs in Year 2034
21,239	29,589	32,233	occurs in Year 2030
12,350	16,239	17,670	occurs in Year 2029

o actual prices and actual interest rates.
:cumulation (at 5% interest rate) is expected to be approximately $62 billion, peaking in 203 and $17-21 billion (at 3.5% interest
interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately $33-$36 million.

st rate of 5%.
sed on equal monthly drawdown of debt.
75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on mo

Feb8_1a_30yr
Feb8_1b_30yr
Feb8_1c_30yr
Feb8_1d_30yr
Feb8_1e_30yr

t rate), peaking in 2028.

nth of the year. Actuals may also depend on decision on accounting treatment.

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-275	-311	-350	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,573	85,599
Equal Monthly Debt Drawdown	6,743	4,556	

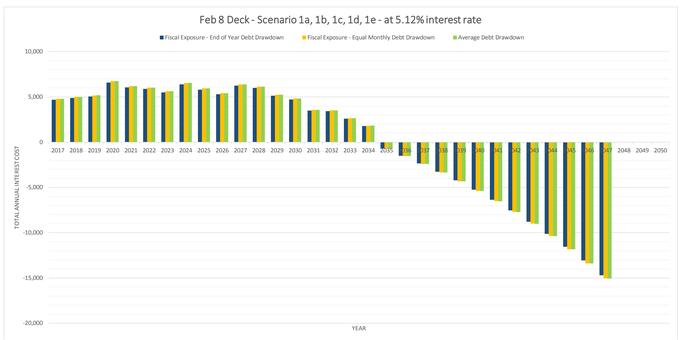
	Feb8 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,375	2034	52,287
Equal Monthly Debt Drawdown	91,501		

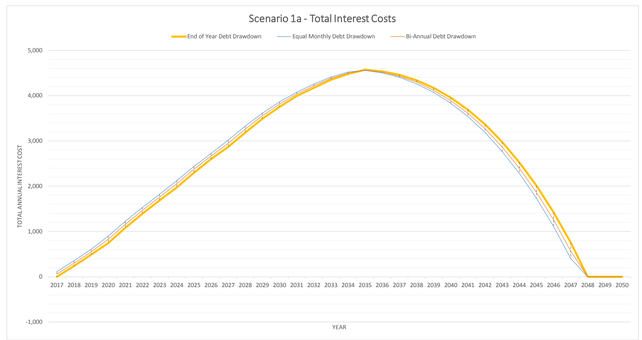
Feb8 1a, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	
c = a*5%	*Interest Cost - Feb8 1a, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,301*	*2,597*	*2,868*	*3,187*	*3,493*	*3,755*	*3,996*	*4,175*	*4,350*	*4,482*	*4,573*	*4,537*	*4,460*	*4,340*	*4,173*	*3,957*	*3,688*	*3,363*	*2,978*	*2,529*	*2,011*	*1,421*	*752*	*0*	*0*	*0*	85,599
b	Additional GA Debt Drawdown, End of Year	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,307	32,728	35,309	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	39,310	27,767	14,699	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	52,287	52,287	52,287	51,591	50,091	47,739	44,479	40,253	34,997	28,642	21,115	12,336	0	0	0	0	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,813	33,987	38,337	42,818	47,391	51,928	56,388	60,728	64,901	68,858	72,546	75,909	78,887	81,416	83,427	84,847	85,599				
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	51,781	51,028	49,259	46,557	41,288	35,252	28,440	20,840	12,440	3,227	-6,816	-17,706	-29,462	-42,106	-55,660	-70,149	-85,599				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	

Feb8 1a, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	
4,556	*Interest Cost - Feb8 1a, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,824*	*2,126*	*2,439*	*2,723*	*3,016*	*3,329*	*3,615*	*3,867*	*4,079*	*4,256*	*4,411*	*4,524*	*4,556*	*4,501*	*4,404*	*4,262*	*4,073*	*3,832*	*3,537*	*3,184*	*2,769*	*2,288*	*1,737*	*1,110*	*402*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
	Monthly Drawdown	390	386	380	487	413	373	318	367	292	224	281	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(980)	(1,054)	(1,129)	(1,207)	(1,288)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,738	4,665	5,979	5,074	4,586	3,902	4,510	3,584	2,753	3,447	2,863	1,662	980	(517)	(772)	(1,810)	(2,766)	(5,394)	(6,180)	(6,975)	(7,781)	(8,599)	(9,432)	(10,282)	(11,149)	(12,036)	(12,944)	(13,876)	(14,834)	(15,818)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	67	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(368)	-	-	-	
	Annual Interest Cost on Opening Balance	-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,263	3,576	3,844	4,091	4,274	4,453	4,588	4,681	4,645	4,566	4,443	4,272	4,051	3,776	3,443	3,049	2,589	2,059	1,454	770	(0)	(0)	(0)	
	Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,824	2,126	2,439	2,723	3,016	3,329	3,615	3,867	4,079	4,256	4,411	4,524	4,556	4,501	4,404	4,262	4,073	3,832	3,537	3,184	2,769	2,288	1,737	1,110	402	(0)	(0)	(0)	

Feb8 1a, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*60*	*301*	*553*	*831*	*1,160*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,948*	*3,263*	*3,558*	*3,815*	*4,041*	*4,218*	*4,383*	*4,504*	*4,564*	*4,518*	*4,430*	*4,298*	*4,119*	*3,890*	*3,607*	*3,267*	*2,866*	*2,399*	*1,864*	*1,253*	*564*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,930	5,110	6,670	6,116	5,947	5,575	6,461	5,875	5,354	6,315	6,060	5,182	4,773	3,535	3,464	2,614	1,802	-705	-1,518	-2,382	-3,302	-4,280	-5,324	-6,436	-7,623	-8,891	-10,244	-11,690	-13,236	-14,887	0	0	0	
	Bi-Annual Drawdown	2,337	2,314	2,279	2,920	2,478	2,240	1,906	2,203	1,750	1,345	1,684	1,398	812	479	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,800)	(4,200)	(4,607)	(5,021)	(5,445)	(5,878)	(6,322)	(6,777)	(7,245)	(7,725)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,687	4,615	5,914	5,019	4,537	3,860	4,462	3,545	2,724	3,410	2,832	1,644	970	(512)	(763)	(1,791)	(2,737)	(5,336)	(6,113)	(6,900)	(7,697)	(8,507)	(9,331)	(10,171)	(11,029)	(11,907)	(12,805)	(13,727)	(14,674)	(15,648)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	494	756	1,097	1,410	1,714	1,999	2,330	2,631	2,905	3,228	3,538	3,803	4,047	4,228	4,405	4,539	4,631	4,595	4,517	4,395	4,227	4,008	3,735	3,406	3,016	2,561	2,037	1,439	762	(0)	(0)	(0)	
	Total Annual Interest Cost	60	301	553	831	1,160	1,467	1,763	2,056	2,375	2,665	2,948	3,263	3,558	3,815	4,041	4,218	4,383	4,504	4,564	4,518	4,430	4,298	4,119	3,890	3,607	3,267	2,866	2,399	1,864	1,253	564	(0)	(0)	(0)	

Feb8 1a, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,723*	*3,027*	*3,340*	*3,624*	*3,875*	*4,085*	*4,262*	*4,416*	*4,527*	*4,555*	*4,499*	*4,400*	*4,257*	*4,065*	*3,822*	*3,525*	*3,170*	*2,753*	*2,270*	*1,716*	*1,086*	*376*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,992	5,174	6,754	6,193	6,022	5,645	6,543	5,950	5,422	6,395	6,137	5,248	4,833	3,580	3,508	2,647	1,825	-714	-1,537	-2,412	-3,343	-4,334	-5,391	-6,517	-7,720	-9,003	-10,374	-11,838	-13,403	-15,075	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-274	-311	-349	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,572	85,582
Equal Monthly Debt Drawdown	6,743	4,555	

	Feb8 1b, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,356	2034	52,275
Equal Monthly Debt Drawdown	91,481		

Feb8 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
a — Debt, Beginning of Year	0	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	
c = a*5% — *Interest Cost - Feb8 1b, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,300*	*2,597*	*2,867*	*3,186*	*3,492*	*3,754*	*3,995*	*4,174*	*4,349*	*4,481*	*4,572*	*4,536*	*4,459*	*4,339*	*4,172*	*3,956*	*3,687*	*3,362*	*2,977*	*2,528*	*2,011*	*1,420*	*752*	*0*	*0*	*0*	85,582
b — Additional GA Debt Drawdown, End of Year	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,303	32,722	35,302	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	39,297	27,758	14,694	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	52,275	52,275	52,275	52,275	51,578	50,078	47,725	44,465	40,239	34,984	28,630	21,105	12,328	0	0	0	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,809	33,983	38,331	42,812	47,384	51,920	56,379	60,718	64,890	68,846	72,533	75,895	78,871	81,399	83,410	84,830	85,582				
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	51,769	51,014	49,246	46,544	41,275	35,239	28,428	20,829	12,431	3,219	-6,822	-17,709	-29,462	-42,102	-55,652	-70,136	-85,582				
Fiscal Exposure - End of Year Debt Drawdown	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	

Feb8 1b, 30-yr — Equal Monthly Debt Drawdown

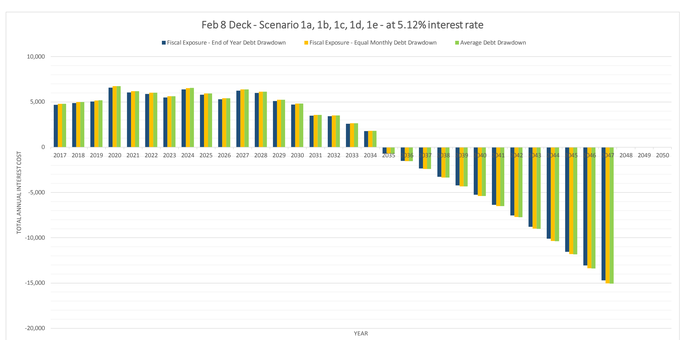
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	
4,555 — *Interest Cost - Feb8 1b, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,823*	*2,126*	*2,438*	*2,723*	*3,016*	*3,329*	*3,614*	*3,866*	*4,078*	*4,255*	*4,410*	*4,523*	*4,555*	*4,500*	*4,403*	*4,261*	*4,072*	*3,831*	*3,536*	*3,183*	*2,768*	*2,287*	*1,736*	*1,109*	*402*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
Monthly Drawdown	390	386	380	487	413	373	317	367	292	224	280	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(979)	(1,053)	(1,129)	(1,207)	(1,287)	(0)	-	-	
FV of Monthly Drawdown at 5%	4,786	4,740	4,665	5,979	5,072	4,585	3,900	4,509	3,582	2,752	3,446	2,862	1,661	979	(518)	(772)	(1,811)	(2,766)	(5,394)	(6,179)	(6,974)	(7,780)	(8,598)	(9,431)	(10,279)	(11,146)	(12,033)	(12,941)	(13,872)	(14,829)	(15,813)	(0)	-	-	
Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	66	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(367)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,262	3,576	3,843	4,090	4,273	4,452	4,587	4,680	4,644	4,565	4,442	4,271	4,050	3,775	3,442	3,048	2,588	2,058	1,454	770	0	0	0	
Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,823	2,126	2,438	2,723	3,016	3,329	3,614	3,866	4,078	4,255	4,410	4,523	4,555	4,500	4,403	4,261	4,072	3,831	3,536	3,183	2,768	2,287	1,736	1,109	402	0	0	0	

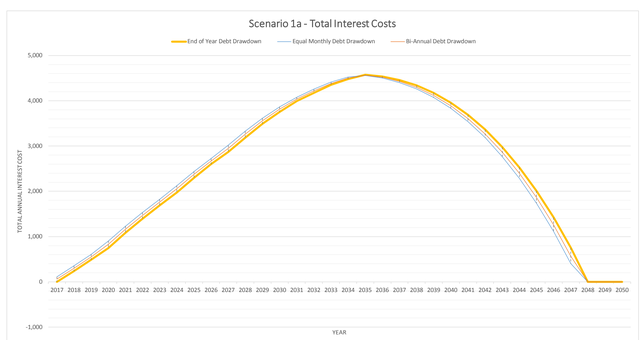
Feb8 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*60*	*301*	*553*	*831*	*1,161*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,947*	*3,263*	*3,558*	*3,814*	*4,040*	*4,217*	*4,382*	*4,503*	*4,563*	*4,517*	*4,429*	*4,297*	*4,118*	*3,889*	*3,606*	*3,266*	*2,865*	*2,399*	*1,863*	*1,253*	*564*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	4,734	4,931	5,110	6,670	6,115	5,945	5,573	6,460	5,874	5,353	6,313	6,058	5,181	4,771	3,534	3,463	2,613	1,801	-706	-1,519	-2,383	-3,302	-4,280	-5,323	-6,435	-7,622	-8,889	-10,242	-11,687	-13,231	-14,882	0	0	0	
Bi-Annual Drawdown	2,337	2,315	2,279	2,920	2,477	2,239	1,905	2,202	1,750	1,344	1,683	1,398	811	478	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,799)	(4,199)	(4,606)	(5,020)	(5,444)	(5,877)	(6,320)	(6,775)	(7,242)	(7,723)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	4,734	4,689	4,615	5,914	5,017	4,535	3,859	4,460	3,544	2,722	3,409	2,831	1,643	969	(513)	(764)	(1,791)	(2,737)	(5,336)	(6,113)	(6,899)	(7,696)	(8,506)	(9,329)	(10,169)	(11,027)	(11,904)	(12,802)	(13,723)	(14,670)	(15,643)	(0)	-	-	
Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	242	495	756	1,097	1,410	1,714	1,999	2,330	2,630	2,904	3,227	3,537	3,802	4,046	4,227	4,404	4,538	4,630	4,594	4,516	4,394	4,225	4,006	3,734	3,405	3,015	2,560	2,036	1,438	761	0	(0)	(0)	
Total Annual Interest Cost	60	301	553	831	1,161	1,467	1,763	2,056	2,375	2,665	2,947	3,263	3,558	3,814	4,040	4,217	4,382	4,503	4,563	4,517	4,429	4,297	4,118	3,889	3,606	3,266	2,865	2,399	1,863	1,253	564	0	(0)	(0)	

Feb8 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,732*	*3,027*	*3,339*	*3,623*	*3,875*	*4,084*	*4,261*	*4,415*	*4,526*	*4,554*	*4,498*	*4,399*	*4,255*	*4,064*	*3,821*	*3,524*	*3,169*	*2,752*	*2,269*	*1,715*	*1,086*	*376*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	4,794	4,994	5,174	6,754	6,192	6,020	5,643	6,541	5,948	5,420	6,393	6,135	5,246	4,831	3,578	3,507	2,646	1,824	-715	-1,538	-2,413	-3,343	-4,334	-5,390	-6,516	-7,718	-9,001	-10,371	-11,835	-13,398	-15,070	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1c_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	
			111	111	109	140	120	116	107	128	115	103	126	121	101	93	66	66	48	32	-24	-40	-57	-74	-92	-111	-132	-153	-175	-199	-224	-250	-278	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	5,867	3,893	72,823
Equal Monthly Debt Drawdown	6,006	3,869	

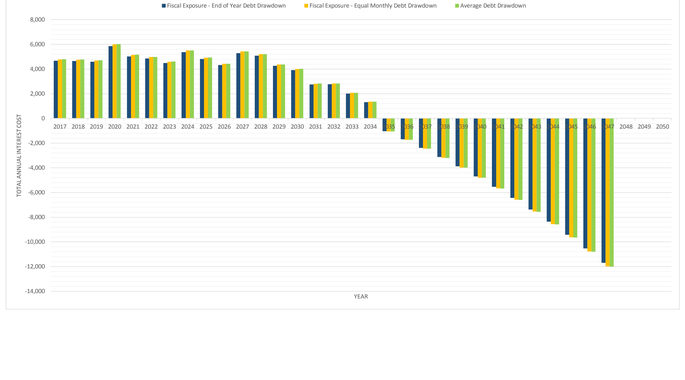
	Feb8 1c, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	76,097	2034	44,449
Equal Monthly Debt Drawdown	77,907		

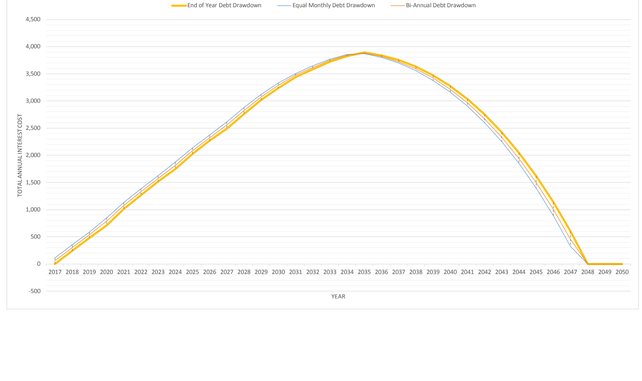
Feb8 1c, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	
c = a*5%	*Interest Cost - Feb8 1c, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*477*	*712*	*1,012*	*1,269*	*1,518*	*1,748*	*2,023*	*2,270*	*2,491*	*2,762*	*3,022*	*3,239*	*3,440*	*3,581*	*3,722*	*3,826*	*3,893*	*3,841*	*3,754*	*3,632*	*3,473*	*3,274*	*3,034*	*2,751*	*2,423*	*2,046*	*1,618*	*1,136*	*598*	*0*	*0*	*0*	72,823
b	Additional GA Debt Drawdown, End of Year	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	
	Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	25,538	28,304	30,324	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,624	22,213	11,693	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	44,449	44,449	44,449	44,449	43,420	41,729	39,342	36,228	32,347	27,662	22,130	15,704	8,337	0	0	0	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	26,221	29,801	33,524	37,349	41,242	45,083	48,837	52,469	55,942	59,216	62,250	65,002	67,424	69,470	71,088	72,224	72,823				
	Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	43,767	42,952	41,249	38,748	33,826	28,294	22,153	15,406	8,054	94	-8,473	-17,649	-27,439	-37,846	-48,875	-60,532	-72,823				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	

Feb8 1c, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
3,869	Debt, Beginning of Year	0	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*111*	*350*	*586*	*851*	*1,132*	*1,385*	*1,625*	*1,876*	*2,138*	*2,372*	*2,617*	*2,882*	*3,123*	*3,333*	*3,505*	*3,646*	*3,770*	*3,857*	*3,869*	*3,800*	*3,697*	*3,558*	*3,380*	*3,163*	*2,903*	*2,599*	*2,247*	*1,847*	*1,394*	*886*	*320*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	
	Monthly Drawdown	390	367	343	430	335	299	248	303	233	171	234	193	103	56	(57)	(68)	(142)	(208)	(410)	(461)	(512)	(562)	(613)	(663)	(714)	(765)	(816)	(867)	(919)	(971)	(1,024)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,515	4,210	5,278	4,114	3,677	3,048	3,717	2,857	2,099	2,873	2,375	1,268	689	(699)	(834)	(1,744)	(2,561)	(5,039)	(5,664)	(6,286)	(6,907)	(7,528)	(8,148)	(8,771)	(9,395)	(10,023)	(10,654)	(11,291)	(11,934)	(12,583)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	105	98	123	96	85	71	86	66	49	67	55	29	16	(16)	(19)	(41)	(59)	(117)	(132)	(146)	(160)	(175)	(189)	(204)	(218)	(233)	(248)	(262)	(277)	(292)	-	-	-	
	Annual Interest Cost on Opening Balance	-	245	488	729	1,036	1,300	1,554	1,790	2,071	2,323	2,550	2,827	3,093	3,317	3,521	3,666	3,811	3,917	3,986	3,932	3,843	3,718	3,555	3,352	3,107	2,817	2,480	2,094	1,656	1,163	612	(0)	(0)	(0)	
	Total Annual Interest Cost	111	350	586	851	1,132	1,385	1,625	1,876	2,138	2,372	2,617	2,882	3,123	3,333	3,505	3,646	3,770	3,857	3,869	3,800	3,697	3,558	3,380	3,163	2,903	2,599	2,247	1,847	1,394	886	320	(0)	(0)	(0)	

Feb8 1c, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*60*	*299*	*536*	*787*	*1,076*	*1,332*	*1,576*	*1,817*	*2,085*	*2,325*	*2,558*	*2,827*	*3,076*	*3,290*	*3,475*	*3,616*	*3,748*	*3,842*	*3,880*	*3,819*	*3,724*	*3,592*	*3,423*	*3,214*	*2,964*	*2,669*	*2,328*	*1,939*	*1,498*	*1,002*	*449*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,708	4,648	5,942	5,095	4,923	4,553	5,447	4,876	4,375	5,364	5,147	4,315	3,962	2,792	2,802	2,045	1,341	-1,042	-1,713	-2,417	-3,155	-3,930	-4,745	-5,603	-6,508	-7,461	-8,468	-9,531	-10,655	-11,842	0	0	0	
	Bi-Annual Drawdown	2,337	2,205	2,056	2,578	2,009	1,796	1,489	1,815	1,395	1,025	1,403	1,160	620	336	(341)	(407)	(852)	(1,251)	(2,461)	(2,766)	(3,070)	(3,373)	(3,676)	(3,980)	(4,283)	(4,588)	(4,895)	(5,203)	(5,514)	(5,828)	(6,146)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,466	4,165	5,221	4,070	3,638	3,015	3,677	2,826	2,077	2,842	2,350	1,255	681	(691)	(825)	(1,725)	(2,533)	(4,985)	(5,603)	(6,219)	(6,833)	(7,447)	(8,061)	(8,676)	(9,294)	(9,915)	(10,540)	(11,170)	(11,806)	(12,448)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	56	53	66	51	46	38	46	36	26	36	30	16	9	(9)	(10)	(22)	(32)	(63)	(71)	(79)	(86)	(94)	(102)	(110)	(117)	(125)	(133)	(141)	(149)	(157)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	483	721	1,025	1,286	1,537	1,770	2,049	2,299	2,522	2,797	3,060	3,281	3,484	3,626	3,770	3,874	3,943	3,890	3,802	3,678	3,517	3,316	3,073	2,787	2,454	2,072	1,639	1,151	606	(0)	(0)	(0)	
	Total Annual Interest Cost	60	299	536	787	1,076	1,332	1,576	1,817	2,085	2,325	2,558	2,827	3,076	3,290	3,475	3,616	3,748	3,842	3,880	3,819	3,724	3,592	3,423	3,214	2,964	2,669	2,328	1,939	1,498	1,002	449	(0)	(0)	(0)	

Feb8 1c, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*120*	*358*	*594*	*862*	*1,141*	*1,394*	*1,633*	*1,886*	*2,146*	*2,380*	*2,626*	*2,892*	*3,130*	*3,340*	*3,510*	*3,651*	*3,774*	*3,859*	*3,867*	*3,797*	*3,693*	*3,552*	*3,373*	*3,154*	*2,893*	*2,587*	*2,234*	*1,832*	*1,377*	*867*	*299*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,768	4,707	6,017	5,160	4,985	4,610	5,516	4,937	4,431	5,432	5,212	4,370	4,012	2,828	2,837	2,071	1,358	-1,055	-1,735	-2,447	-3,195	-3,979	-4,805	-5,674	-6,590	-7,556	-8,575	-9,652	-10,789	-11,992	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1d_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
			52	54	56	73	67	61	51	71	56	42	64	57	36	27	-2	-3	-23	-37	-39	-41	-43	-46	-48	-50	-53	-56	-59	-62	-65	-68	-71	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,072	1,649	29,589
Equal Monthly Debt Drawdown	3,145	1,647	

	Feb8 1d, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,233	2030	21,239
Equal Monthly Debt Drawdown	32,999		

Feb8 1d, 30-yr — End of Year Debt Drawdown

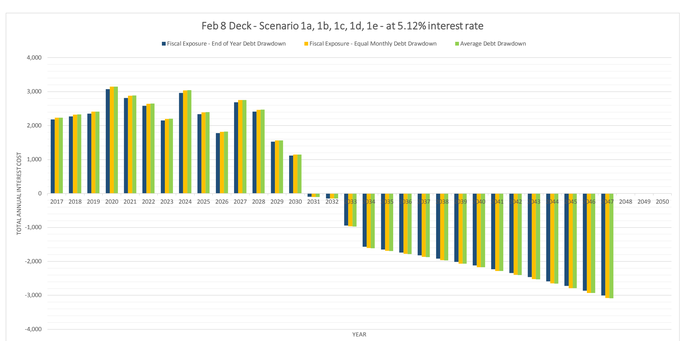
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
a Debt, Beginning of Year	0	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	
c = a*5% *Interest Cost - Feb8 1d, 30-yr - End of Year Debt Drawdown*	*0*	*112*	*228*	*348*	*505*	*649*	*781*	*891*	*1,043*	*1,162*	*1,253*	*1,391*	*1,514*	*1,592*	*1,649*	*1,644*	*1,637*	*1,588*	*1,508*	*1,423*	*1,335*	*1,241*	*1,143*	*1,040*	*931*	*817*	*698*	*572*	*439*	*300*	*154*	*0*	*0*	*0*	29,589
b Additional GA Debt Drawdown, End of Year	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
d = a+b+c Accumulated debt in present year (including 5.12% annual interest)	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	11,372	11,227	10,281	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,586	5,865	3,006	0	0	0	0	
Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	20,763	20,763	20,763	20,763	19,112	17,375	15,550	13,632	11,616	9,496	7,268	4,926	2,464	0	0	0	0	0	0	0	
Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	13,118	14,763	16,399	17,988	19,495	20,919	22,253	23,495	24,638	25,678	26,609	27,426	28,124	28,696	29,135	29,435	29,589				
Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	19,017	17,228	14,645	11,486	8,326	5,167	2,007	-1,153	-4,312	-7,472	-10,631	-13,791	-16,951	-20,110	-23,270	-26,429	-29,589				
Fiscal Exposure - End of Year Debt Drawdown	2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	

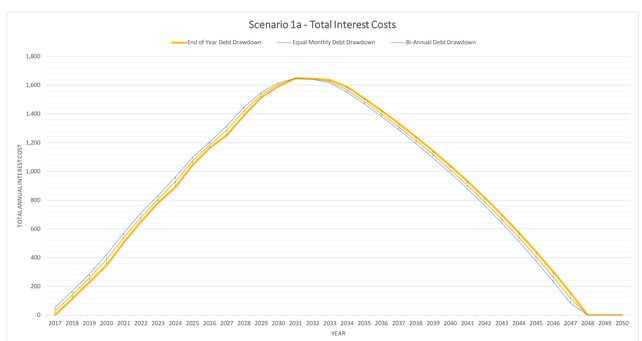
Feb8 1d, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Debt, Beginning of Year	0	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	
1,647 *Interest Cost - Feb8 1d, 30-yr*	*52*	*166*	*284*	*421*	*572*	*711*	*832*	*962*	*1,098*	*1,205*	*1,317*	*1,448*	*1,550*	*1,619*	*1,647*	*1,641*	*1,614*	*1,551*	*1,469*	*1,382*	*1,291*	*1,196*	*1,095*	*989*	*878*	*762*	*639*	*510*	*375*	*232*	*82*	*0*	*0*	*0*	29,589
Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
Monthly Drawdown	182	180	177	227	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	-	-	-	
FV of Monthly Drawdown at 5%	2,232	2,210	2,176	2,788	2,366	1,977	1,399	2,123	1,322	628	1,468	1,042	12	(487)	(1,788)	(1,831)	(2,644)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	-	-	-	
Annual Interest Cost on New Drawdowns	52	51	51	65	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	-	-	-	
Annual Interest Cost on Opening Balance	-	114	233	356	517	665	800	912	1,068	1,190	1,283	1,424	1,550	1,630	1,688	1,683	1,676	1,626	1,544	1,457	1,366	1,271	1,170	1,065	954	837	714	585	450	307	157	0	0	0	
Total Annual Interest Cost	52	166	284	421	572	711	832	962	1,098	1,205	1,317	1,448	1,550	1,619	1,647	1,641	1,614	1,551	1,469	1,382	1,291	1,196	1,095	989	878	762	639	510	375	232	82	0	0	0	

Feb8 1d, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Debt, Beginning of Year	0	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	
1,647 *Interest Cost - Feb8 1d, 30-yr*	*56*	*170*	*288*	*427*	*577*	*715*	*836*	*967*	*1,103*	*1,208*	*1,322*	*1,452*	*1,553*	*1,621*	*1,647*	*1,640*	*1,613*	*1,548*	*1,466*	*1,379*	*1,288*	*1,192*	*1,091*	*986*	*874*	*758*	*635*	*505*	*370*	*227*	*77*	*0*	*0*	*0*	29,589
Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	2,236	2,328	2,413	3,150	2,889	2,646	2,203	3,041	2,394	1,821	2,756	2,471	1,565	1,145	-100	-148	-970	-1,612	-1,694	-1,781	-1,872	-1,967	-2,068	-2,174	-2,285	-2,402	-2,525	-2,654	-2,790	-2,933	-3,083	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1e_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	
			36	37	38	53	46	39	27	45	28	13	33	24	1	-11	-16	-16	-17	-18	-19	-20	-21	-22	-23	-25	-26	-27	-29	-30	-32	-33	-35	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,243	904	16,239
Equal Monthly Debt Drawdown	2,297	903	

		Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	17,670	2029	12,350
Equal Monthly Debt Drawdown	18,091		

Feb8 1e, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	
c = a*5%	*Interest Cost - Feb8 1e, 30-yr - End of Year Debt Drawdown*		*0*	*77*	*156*	*236*	*351*	*450*	*534*	*592*	*688*	*749*	*778*	*849*	*901*	*904*	*881*	*847*	*812*	*775*	*735*	*694*	*651*	*605*	*558*	*507*	*454*	*399*	*340*	*279*	*214*	*146*	*75*	*0*	*0*	*0*	16,239
b	Additional GA Debt Drawdown, End of Year		1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)		1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
Feb8 1e, 30-yr - Accumulated Interest Costs			0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	6,605	5,911	5,182	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,188	2,861	1,466	0	0	0	0	
Feb8 1e, 30-yr - Accumulated Debt Principal			1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	9,960	9,960	9,960	9,960	9,155	8,308	7,418	6,482	5,498	4,465	3,378	2,235	1,035	0	0	0	0	0	0	0	
Feb8 1e, 30-yr - Accumulated Interest Costs			0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	8,146	8,993	9,805	10,580	11,315	12,010	12,661	13,266	13,824	14,331	14,785	15,184	15,524	15,803	16,017	16,164	16,239				
Feb8 1e, 30-yr - Accumulated Debt Principal			1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	8,419	6,878	5,337	3,796	2,255	714	-827	-2,369	-3,910	-5,451	-6,992	-8,533	-10,074	-11,615	-13,156	-14,697	-16,239				
Fiscal Exposure - End of Year Debt Drawdown			1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	

Feb8 1e, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	
Interest Cost - Feb8 1e, 30-yr			*36*	*113*	*193*	*290*	*397*	*489*	*561*	*637*	*717*	*762*	*811*	*873*	*903*	*893*	*866*	*831*	*795*	*756*	*716*	*674*	*630*	*583*	*534*	*483*	*428*	*372*	*312*	*249*	*183*	*113*	*40*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown			1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)			1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	0
Fiscal Exposure - Equal Monthly Debt Drawdown			1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	
Monthly Drawdown			125	122	119	167	132	99	50	108	42	(16)	51	15	(70)	(112)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	-	-	-	
FV of Monthly Drawdown at 5%			1,536	1,500	1,457	2,055	1,617	1,213	620	1,328	512	(199)	625	182	(865)	(1,382)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	-	-	-	
Annual Interest Cost on New Drawdowns			36	35	34	48	38	28	14	31	12	(5)	15	4	(20)	(32)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	-	-	-	
Annual Interest Cost on Opening Balance			-	79	159	242	359	461	546	606	705	767	796	869	923	926	902	868	831	793	753	711	666	620	571	519	465	408	348	285	219	150	77	0	0	0	
Total Annual Interest Cost			36	113	193	290	397	489	561	637	717	762	811	873	903	893	866	831	795	756	716	674	630	583	534	483	428	372	312	249	183	113	40	0	0	0	

Feb8 1e, 30-yr — Bi-Annual Debt Drawdown

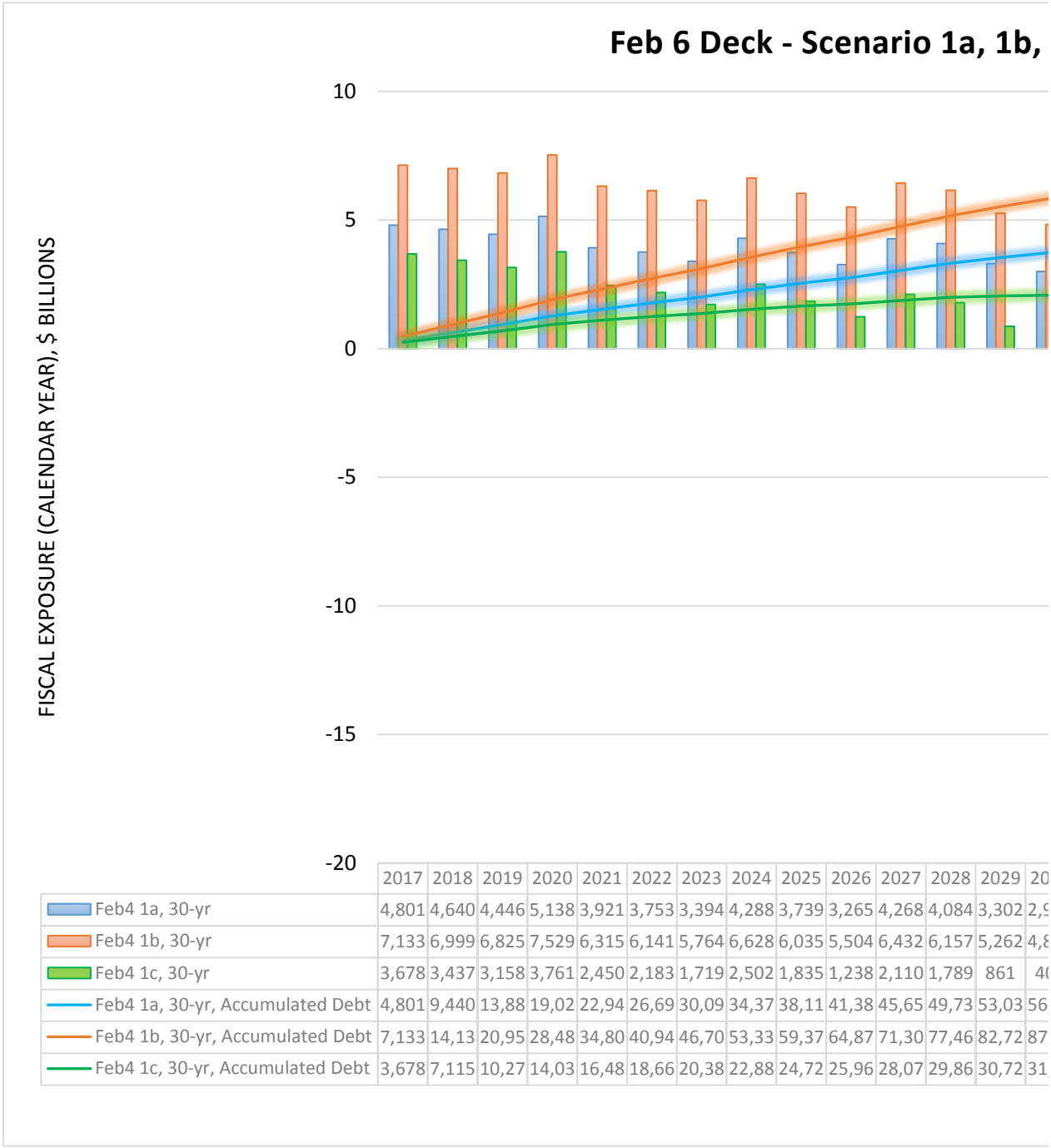
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	
Interest Cost - Feb8 1e, 30-yr			*19*	*96*	*176*	*265*	*376*	*471*	*548*	*616*	*704*	*756*	*795*	*862*	*902*	*898*	*873*	*839*	*803*	*765*	*725*	*683*	*640*	*593*	*545*	*494*	*440*	*384*	*325*	*263*	*197*	*129*	*56*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown			1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)			1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	0
Fiscal Exposure - Bi-Annual Debt Drawdown			1,519	1,561	1,598	2,272	1,956	1,655	1,154	1,913	1,203	562	1,406	1,040	57	-451	-668	-703	-738	-776	-816	-858	-902	-948	-996	-1,047	-1,101	-1,157	-1,216	-1,278	-1,344	-1,413	-1,485	0	0	0	
Bi-Annual Drawdown			750	733	711	1,003	790	592	303	649	250	(97)	305	89	(423)	(675)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	-	-	-	
FV of Bi-Annual Drawdown at 5%			1,519	1,484	1,441	2,033	1,600	1,200	613	1,314	506	(197)	618	180	(856)	(1,367)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	-	-	-	
Annual Interest Cost on New Drawdowns			19	19	18	26	20	15	8	17	6	(2)	8	2	(11)	(17)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	-	-	-	
Annual Interest Cost on Opening Balance			-	78	158	239	356	456	540	599	697	759	788	860	913	916	893	858	822	785	745	703	659	613	565	514	460	404	345	282	217	148	76	0	0	0	
Total Annual Interest Cost			19	96	176	265	376	471	548	616	704	756	795	862	902	898	873	839	803	765	725	683	640	593	545	494	440	384	325	263	197	129	56	0	0	0	

Feb8 1e, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	
Interest Cost - Feb8 1e, 30-yr			*38*	*116*	*196*	*294*	*401*	*492*	*563*	*640*	*719*	*763*	*813*	*875*	*903*	*893*	*864*	*830*	*793*	*755*	*715*	*673*	*628*	*581*	*532*	*481*	*427*	*369*	*310*	*247*	*180*	*111*	*38*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown			1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)			1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	0
Fiscal Exposure - Average Debt Drawdown			1,538	1,581	1,619	2,301	1,980	1,676	1,168	1,938	1,219	569	1,424	1,053	57	-457	-677	-711	-748	-786	-826	-869	-913	-960	-1,009	-1,060	-1,115	-1,172	-1,232	-1,295	-1,361	-1,430	-1,504	0	0	0	

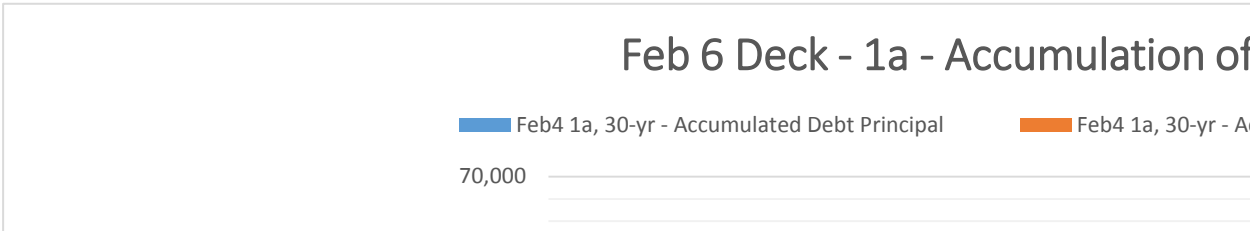
Feb 6 Deck

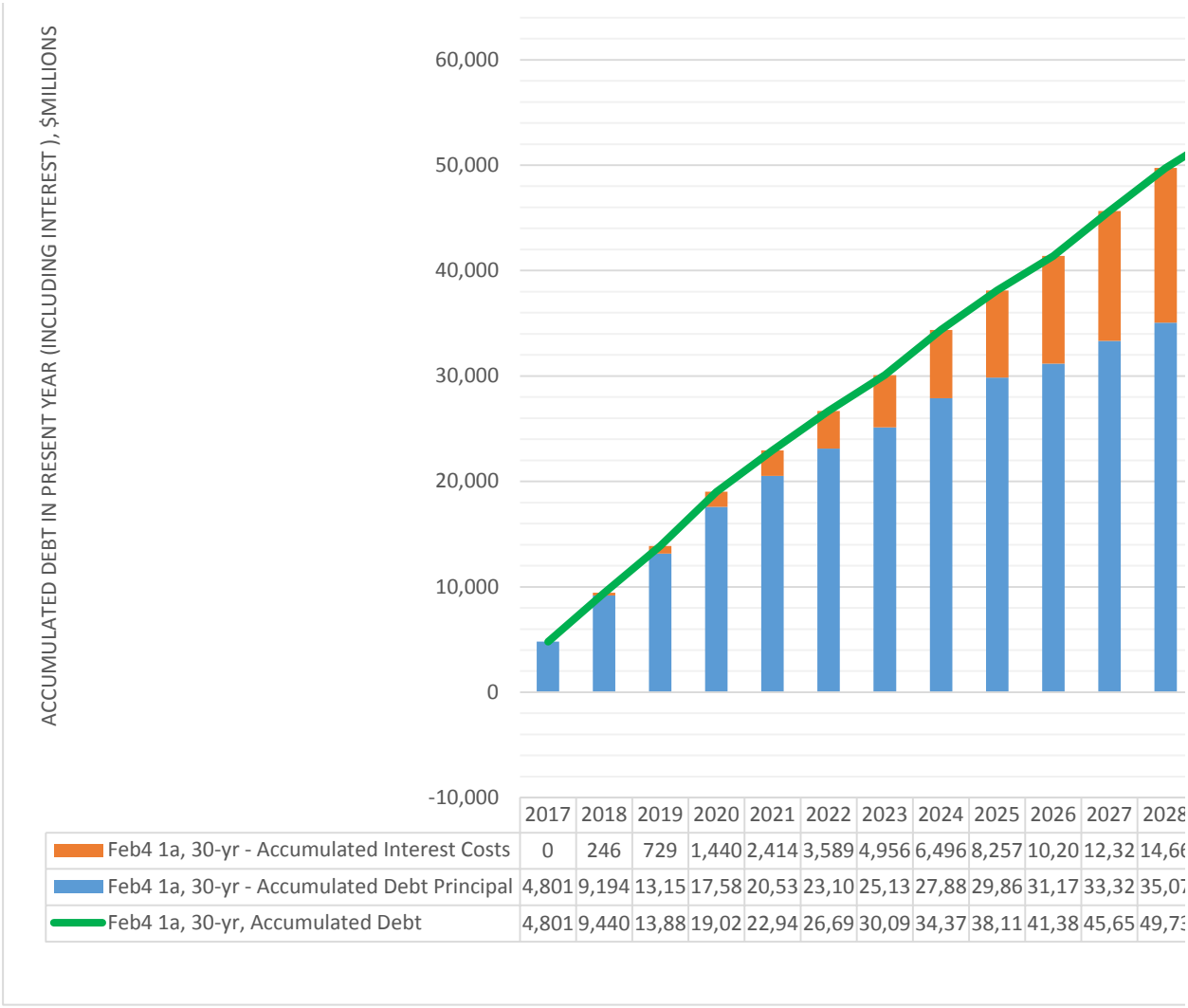
Feb 6 Deck - Scenario 1a, 1b, 1c - at 5.12% interest rate



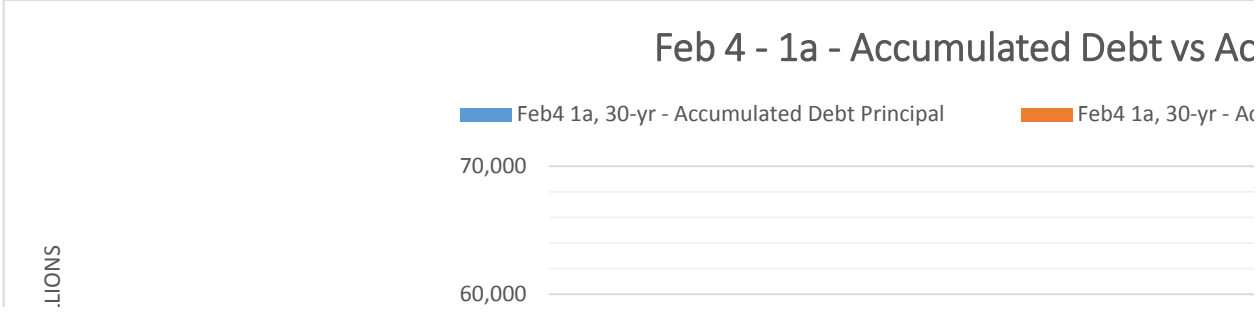
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	20
Feb4 1a, 30-yr	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,9
Feb4 1b, 30-yr	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,8
Feb4 1c, 30-yr	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	4(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73	53,03	56
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31

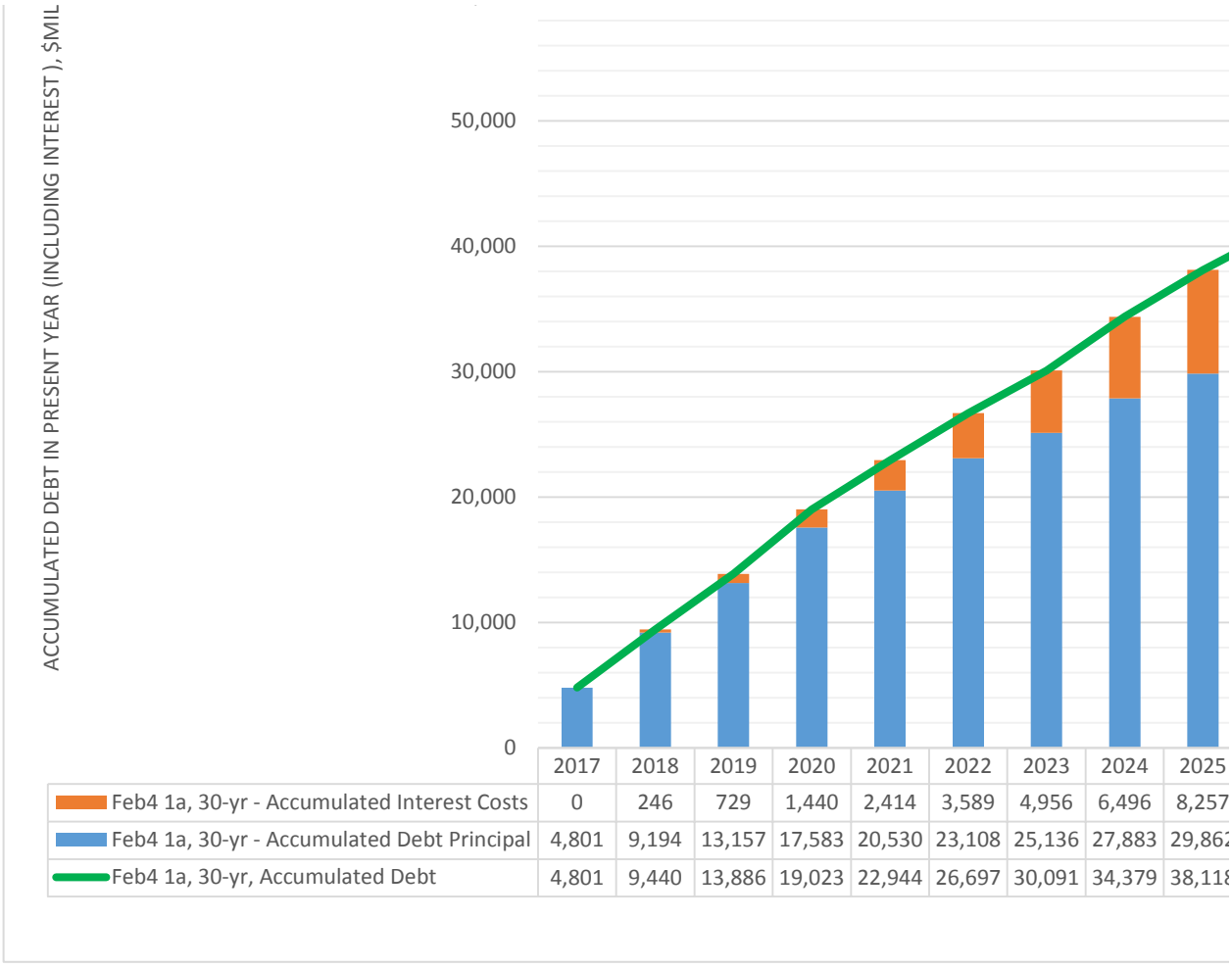
Feb 6 Deck - 1a - Accumulation of Debt (Principal and Interest)



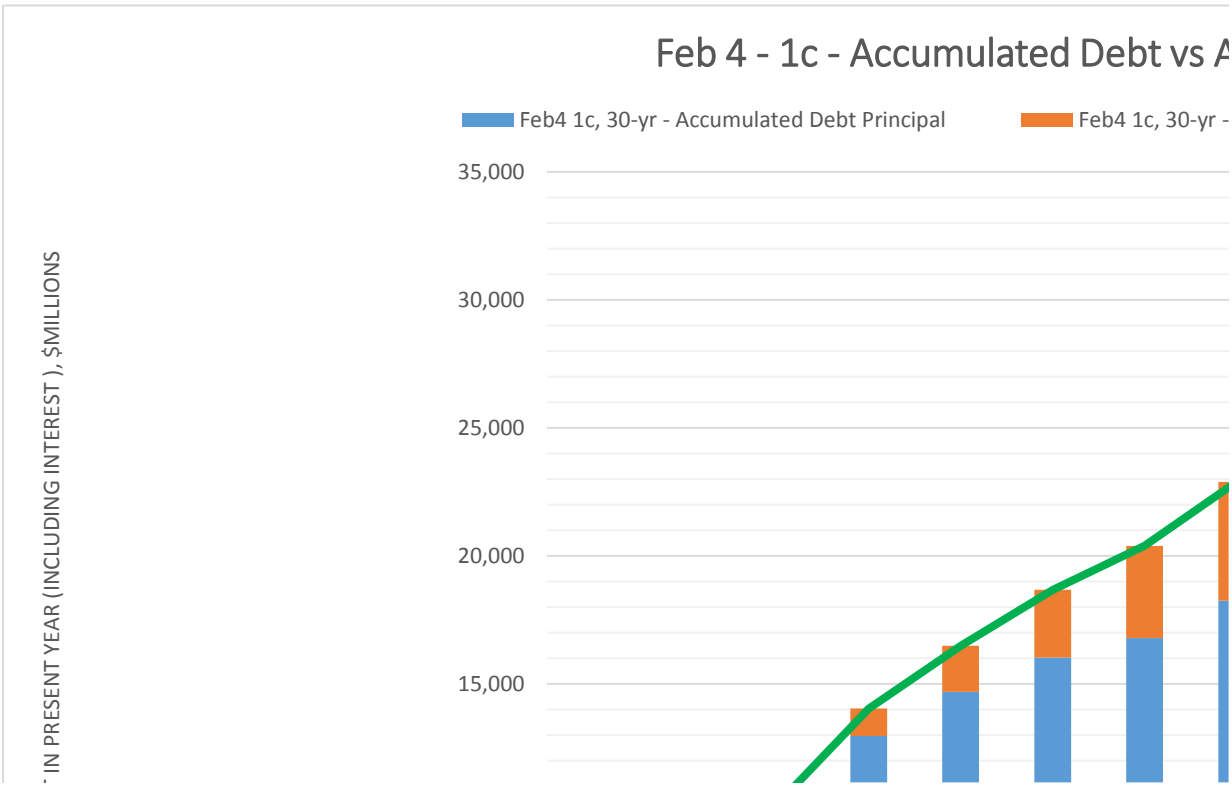


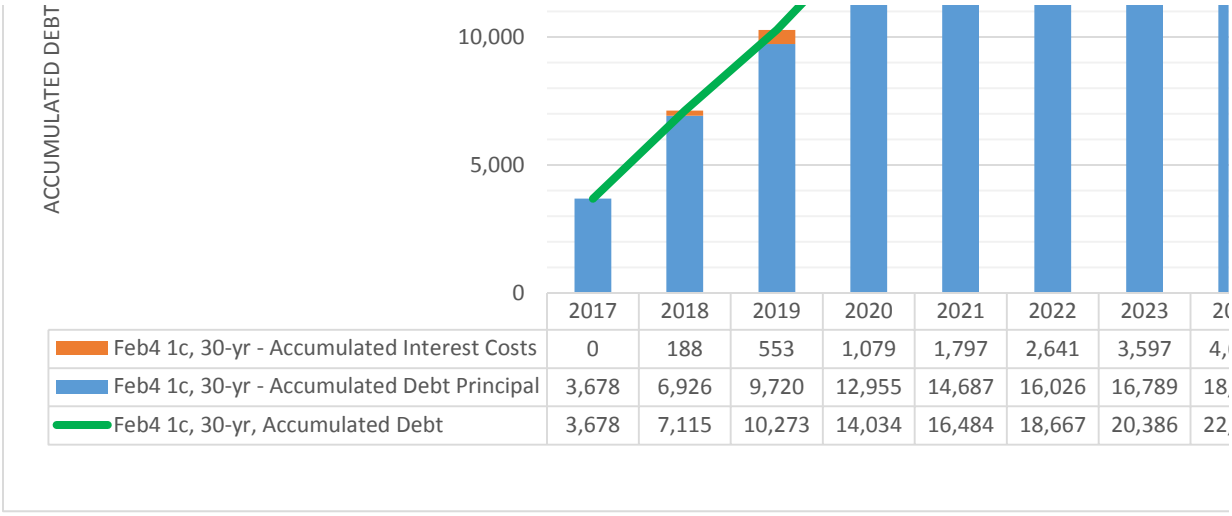
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,66
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,07
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73



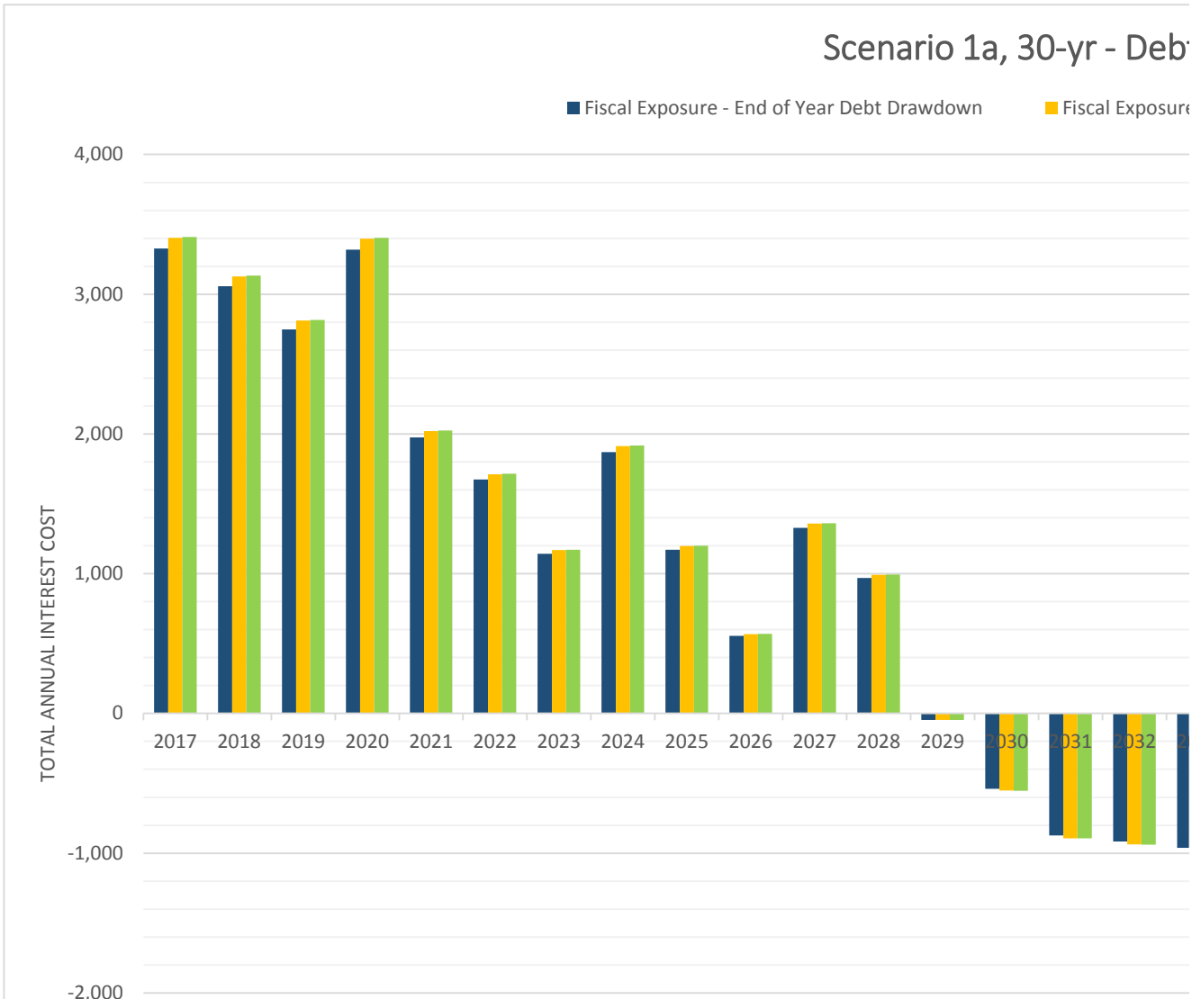


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



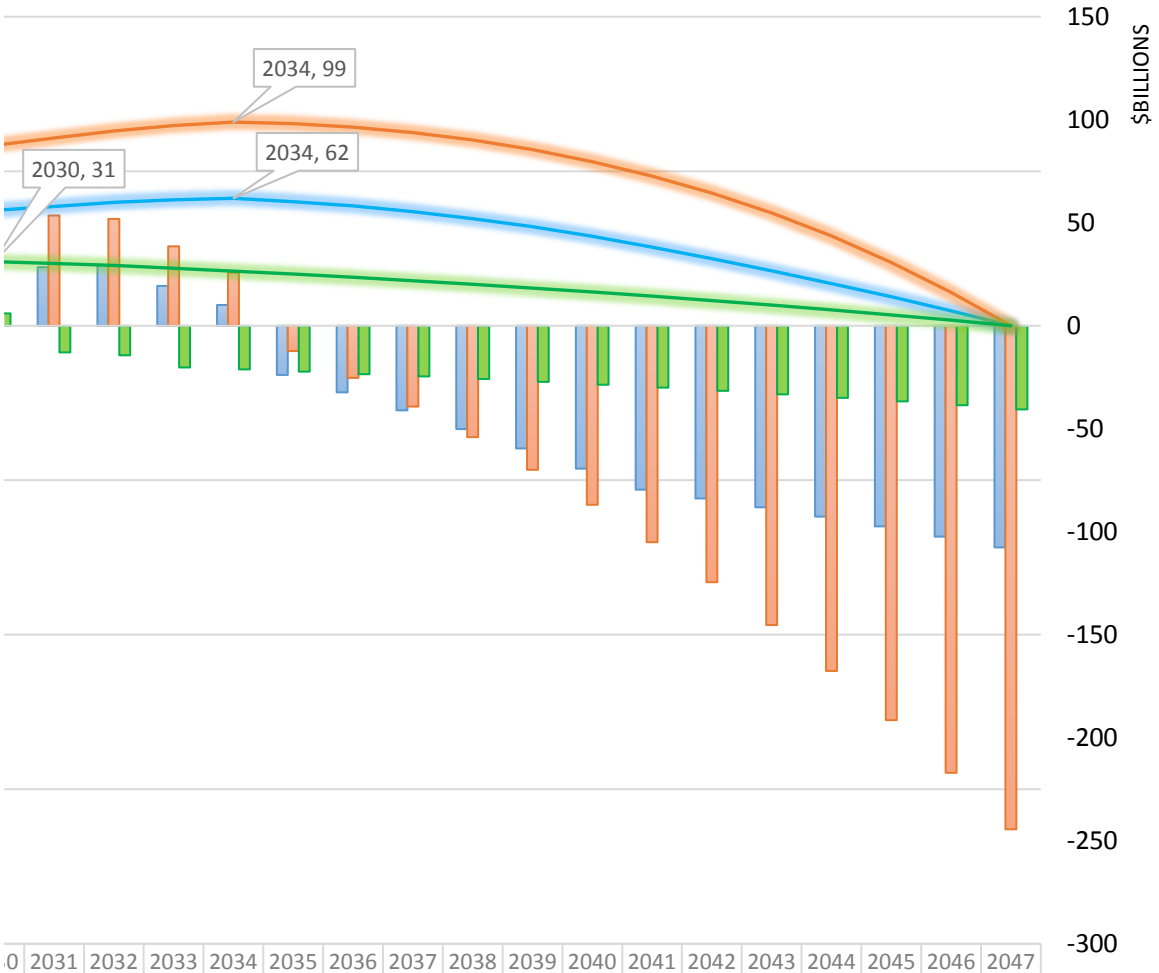


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22



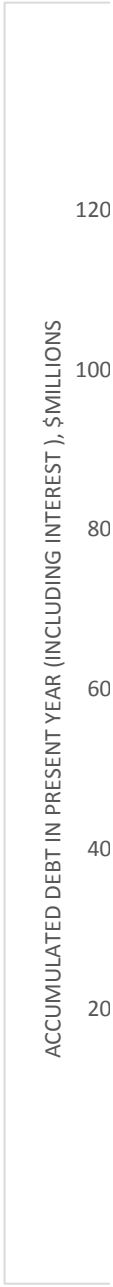

-3,000

lc - at 5.12% interest rate



0	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
98	1,896	1,966	1,288	672	-1,59	-2,15	-2,73	-3,34	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
26	3,568	3,457	2,571	1,716	-819	-1,68	-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
4	-860	-961	-1,34	-1,41	-1,48	-1,56	-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0
55	91,12	94,57	97,14	98,86	98,04	96,35	93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0
12	30,26	29,30	27,95	26,54	25,05	23,49	21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

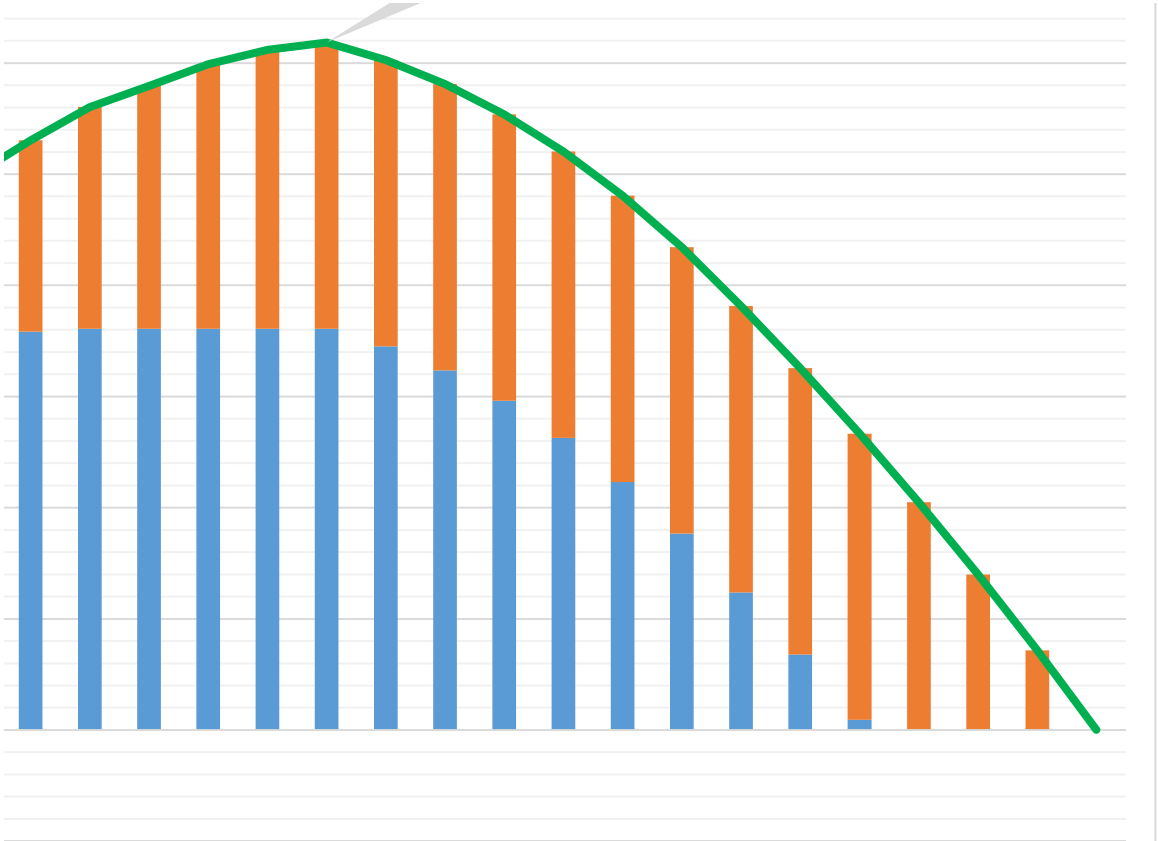
CALENDAR YEAR



Debt (Principal and Interest)

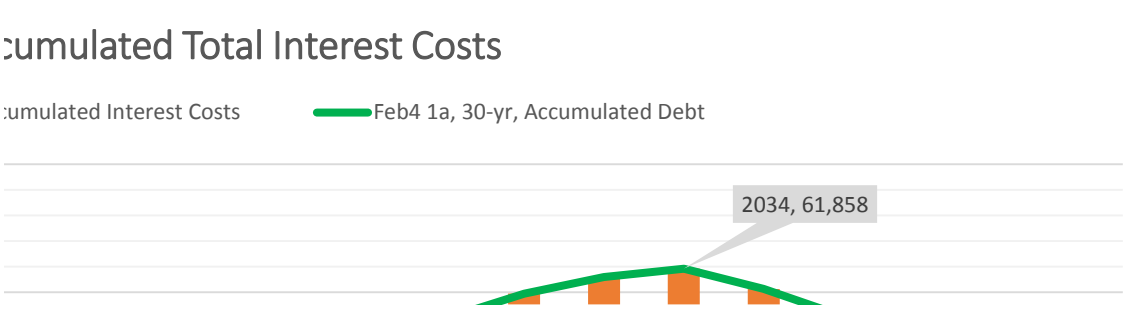
cumulated Interest Costs — Feb4 1a, 30-yr, Accumulated Debt

2034, 61,858

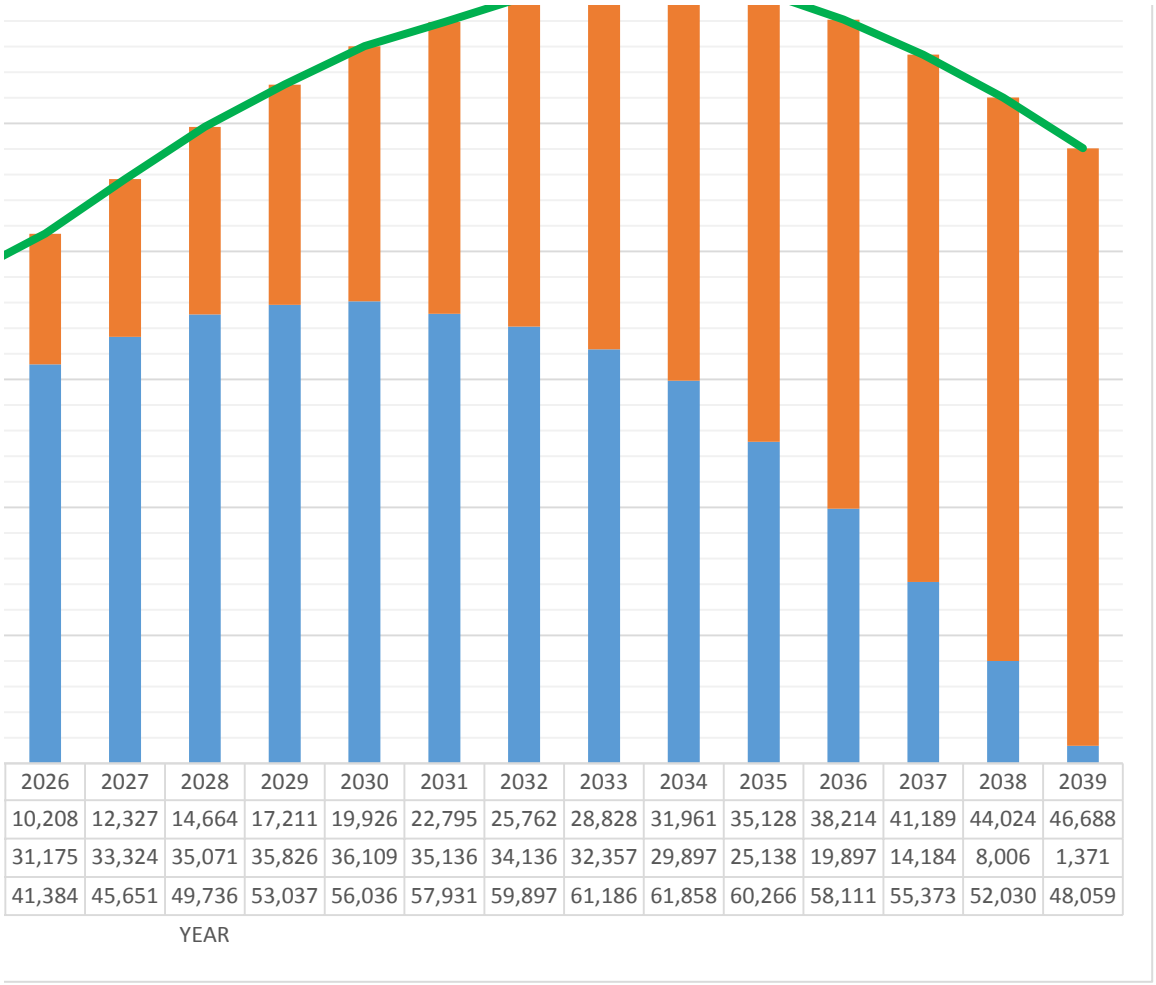


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



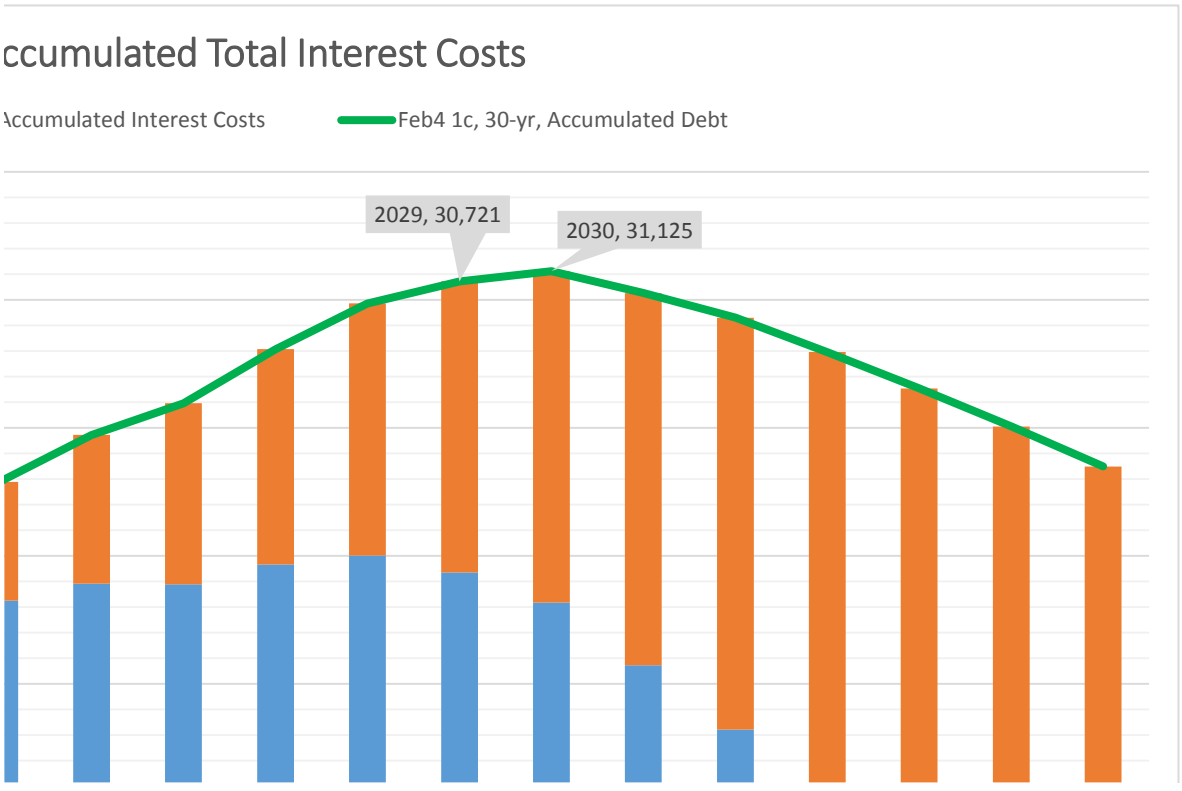
LIONS

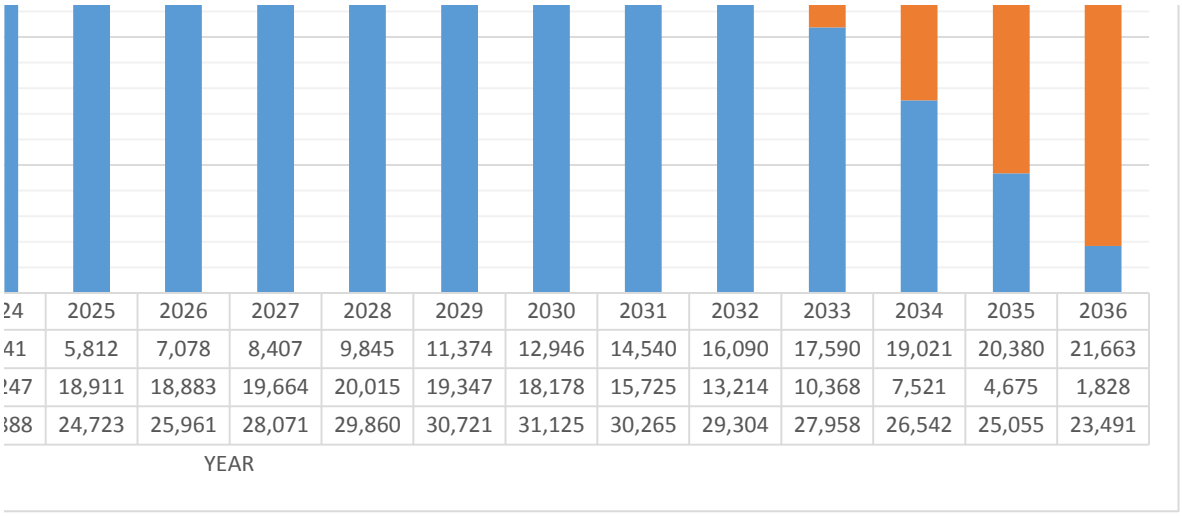


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

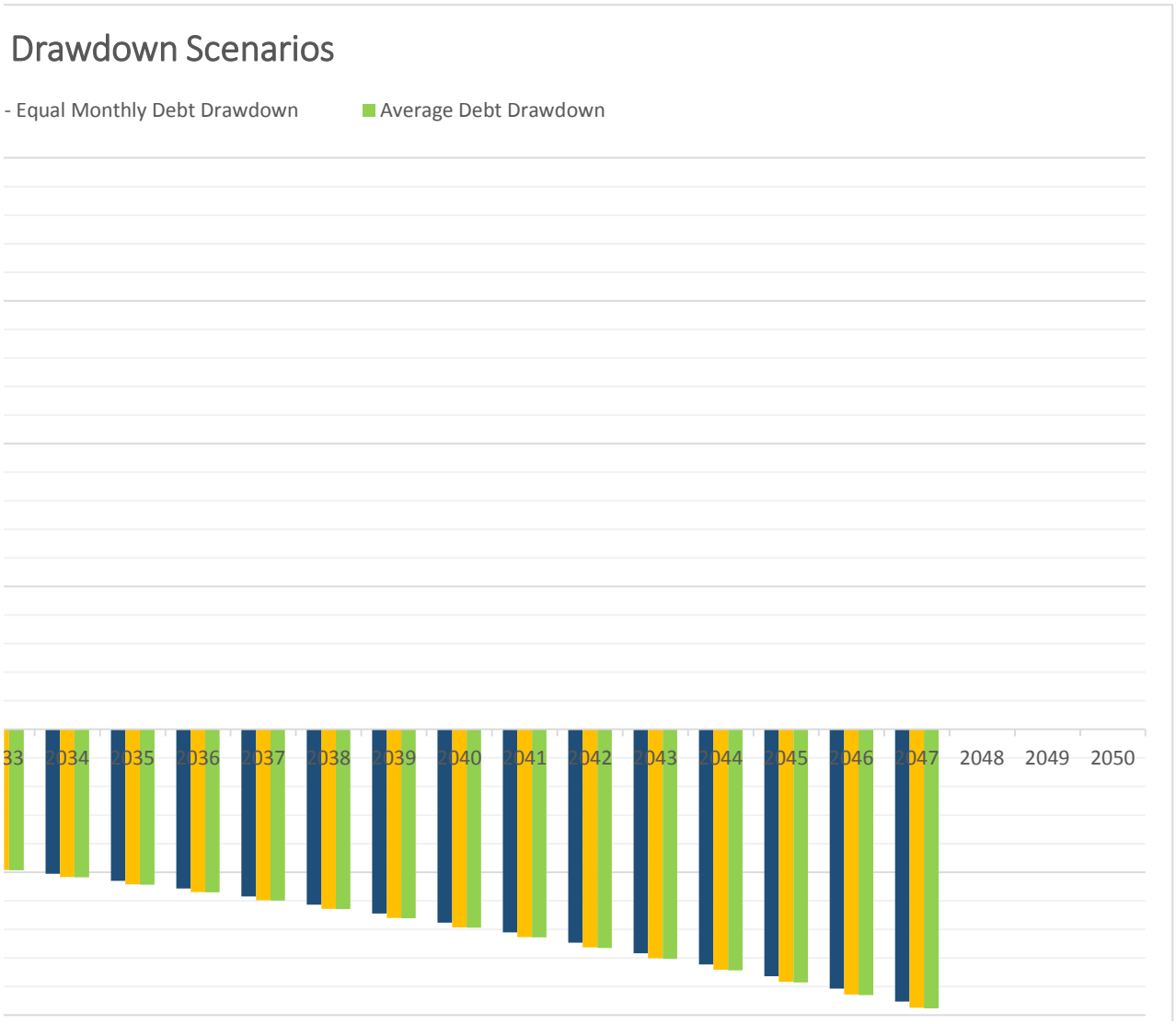
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





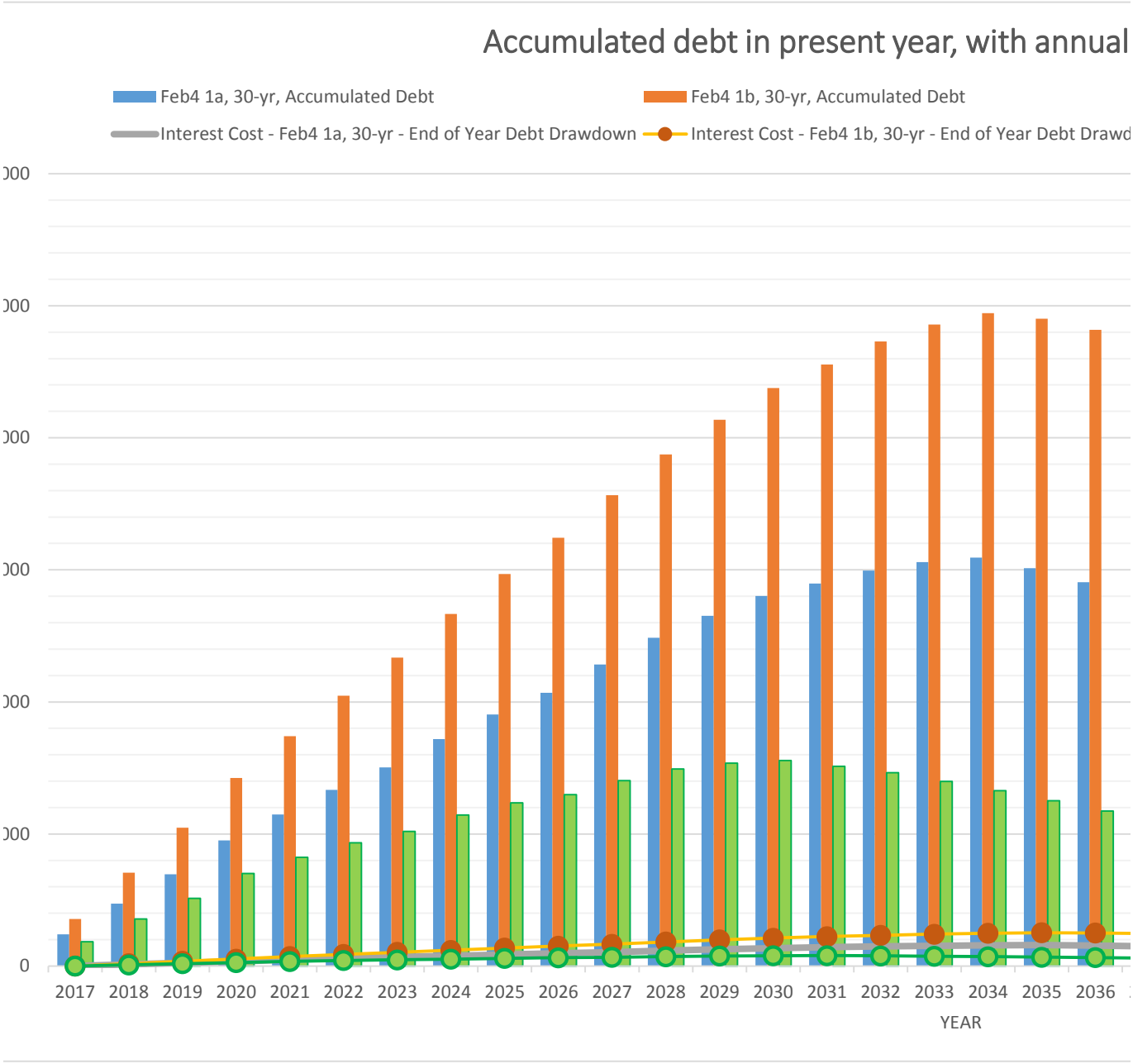
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

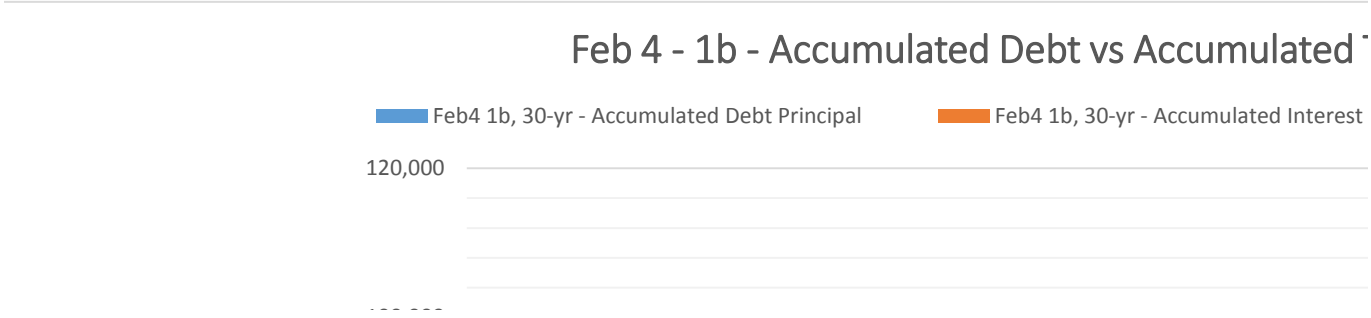
YEAR

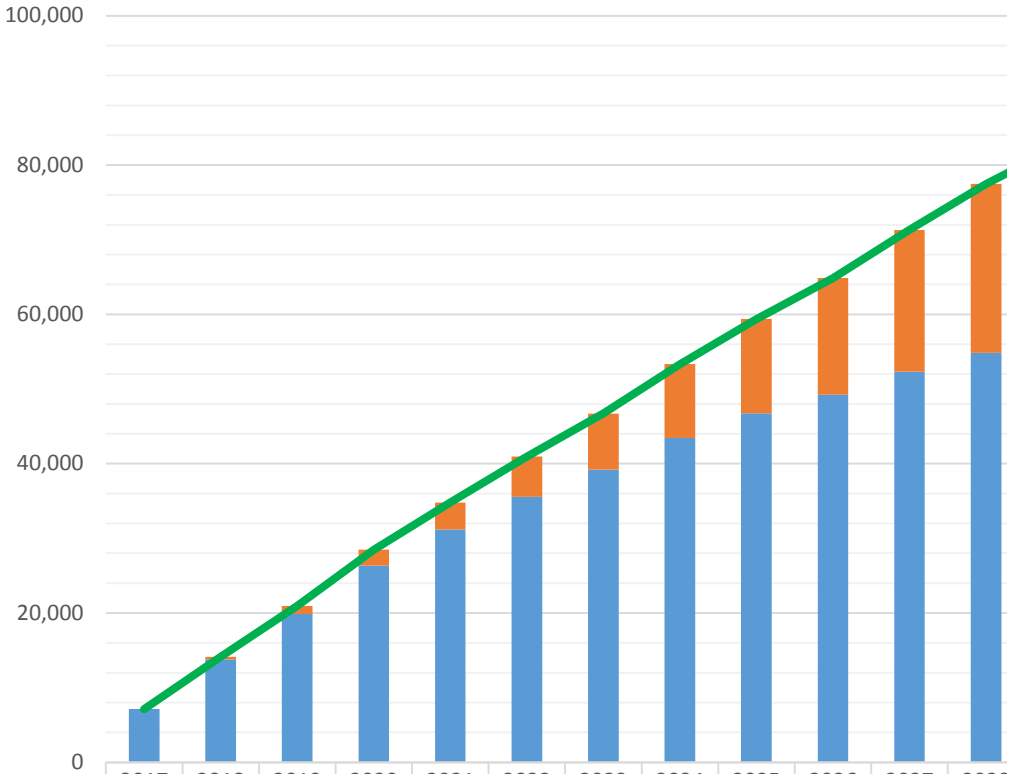


YEAR

ɜ - 25 year and 30 year Financing Terms, at 5% interest rate

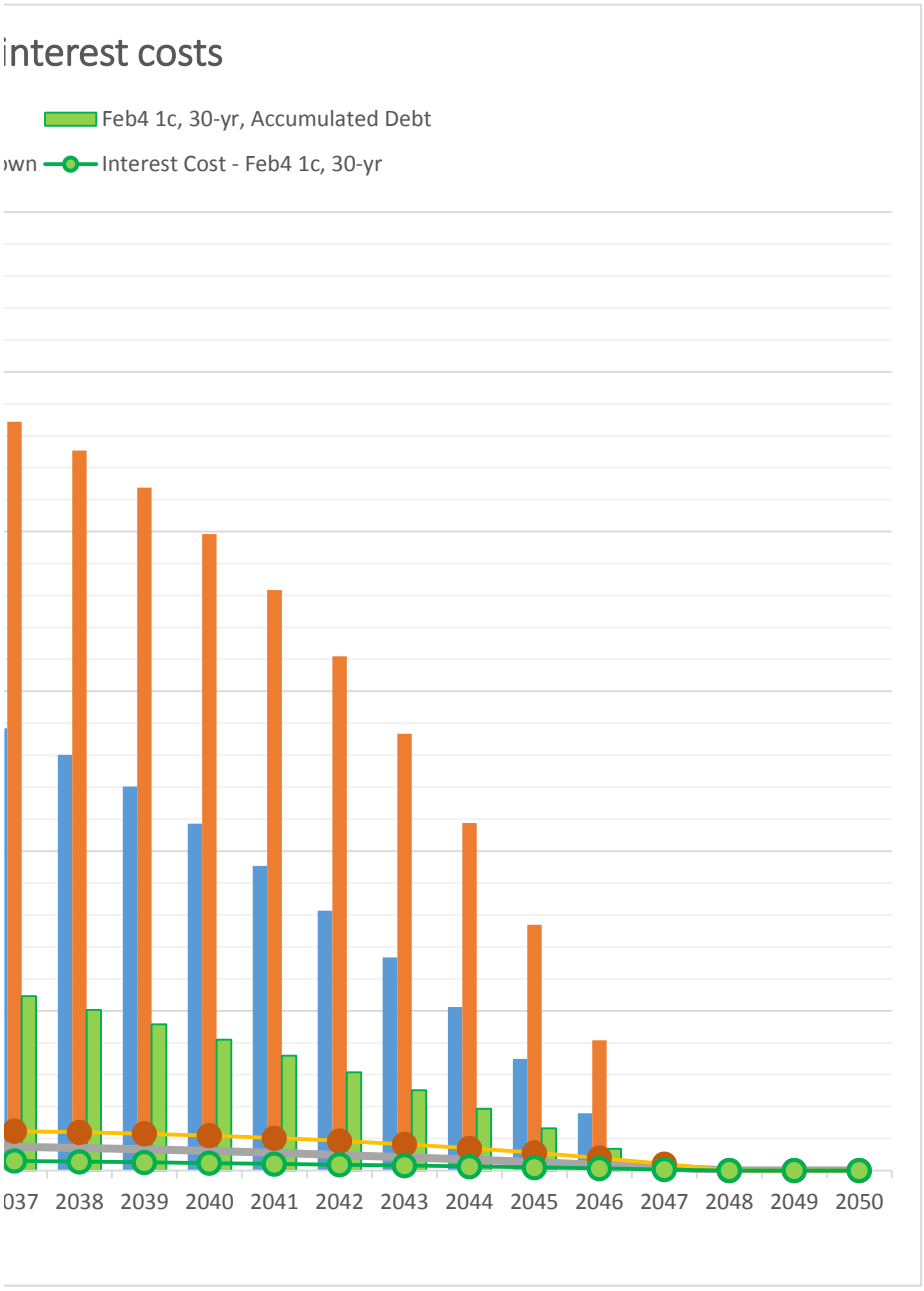


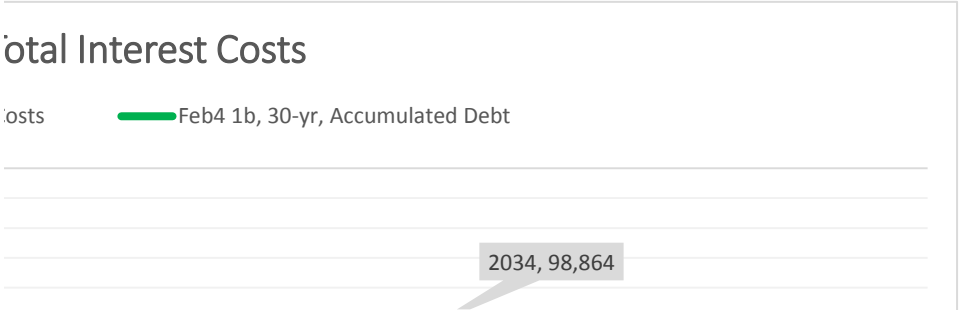

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

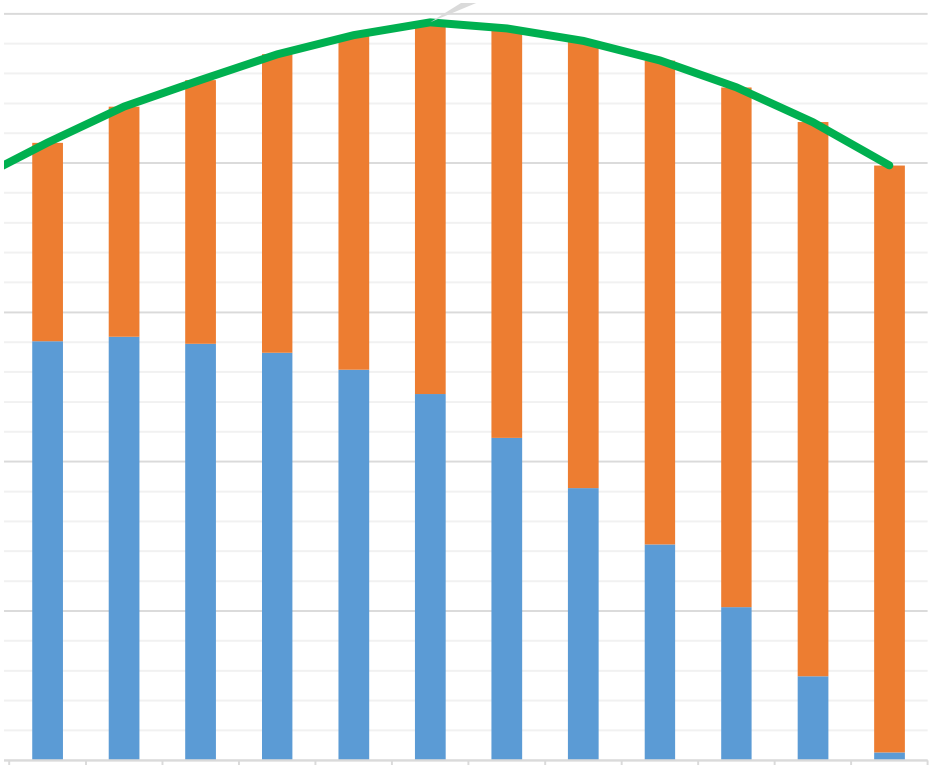


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y


interest costs
Feb4 1c, 30-yr, Accumulated Debt
wn
Interest Cost - Feb4 1c, 30-yr
037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR

Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

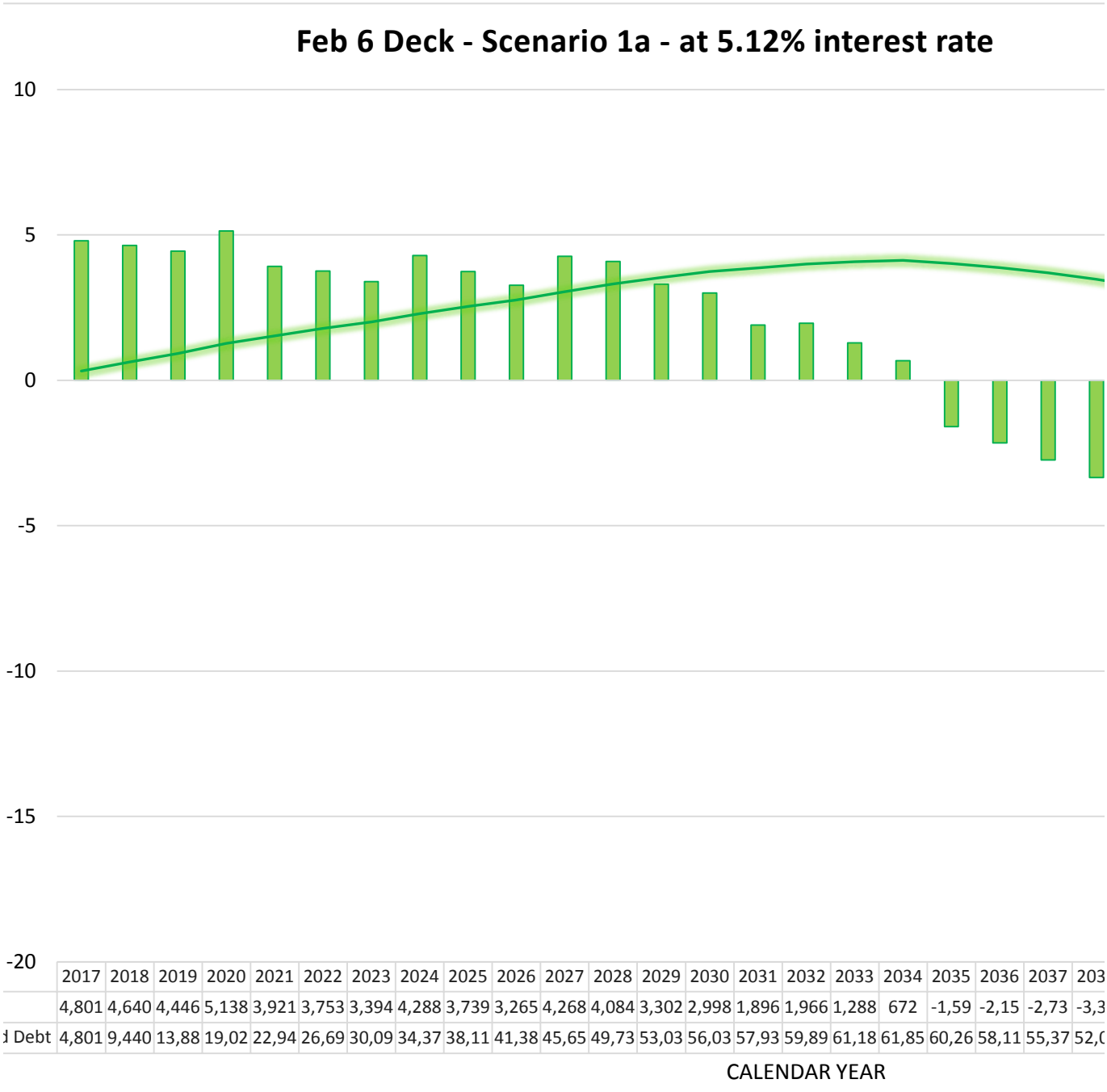
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

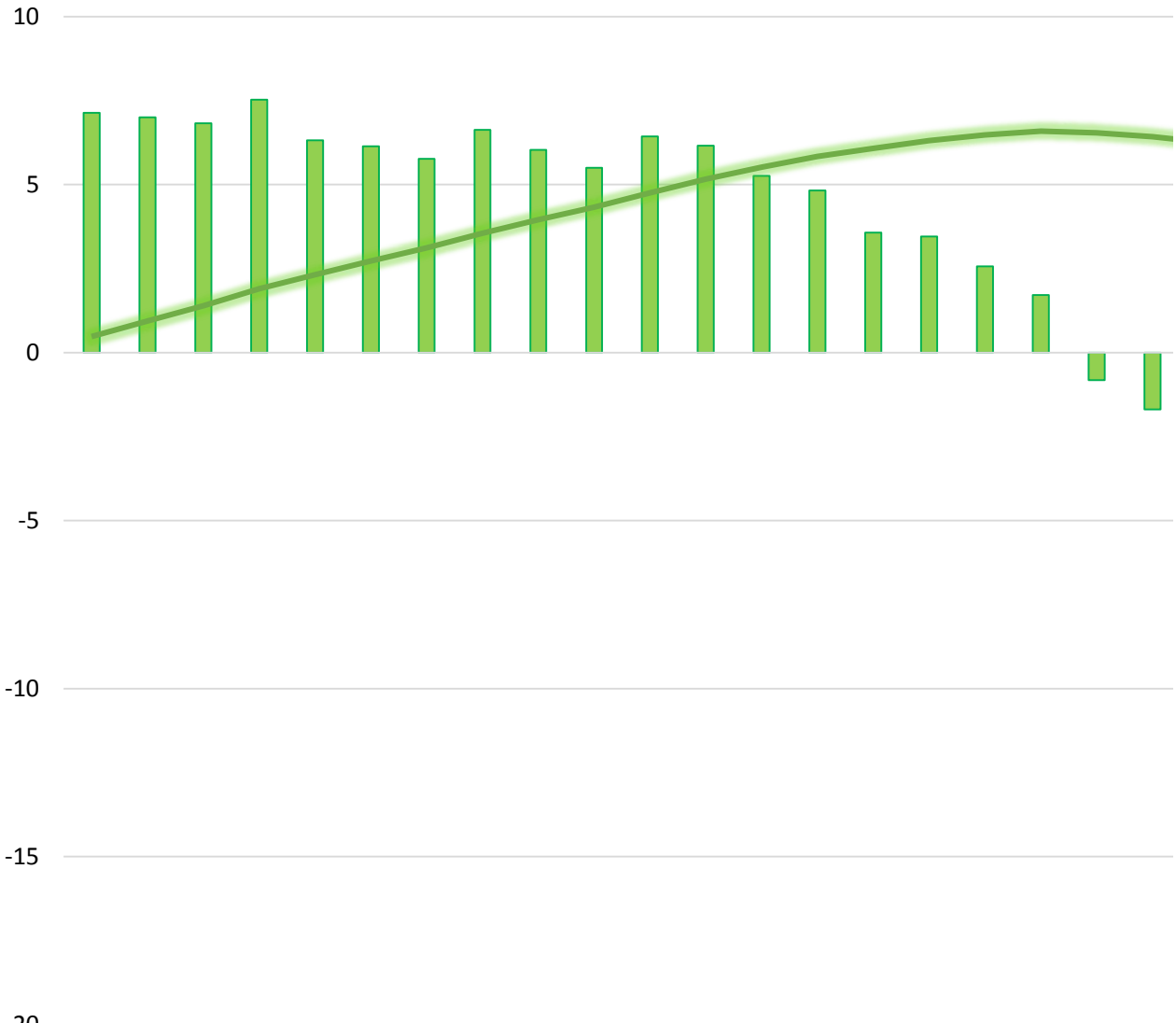
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

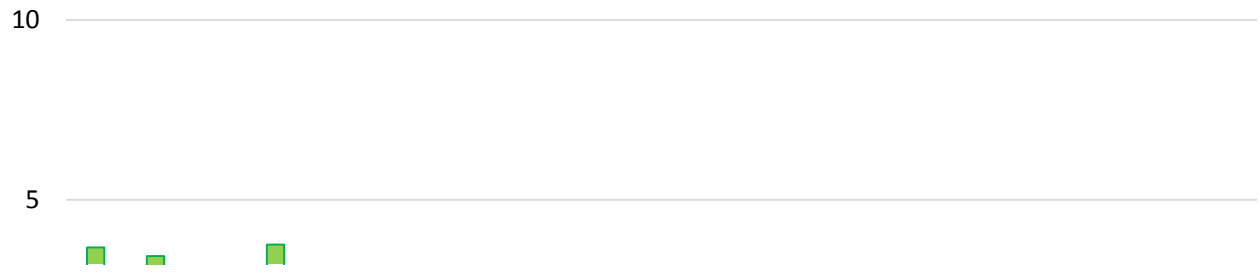
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

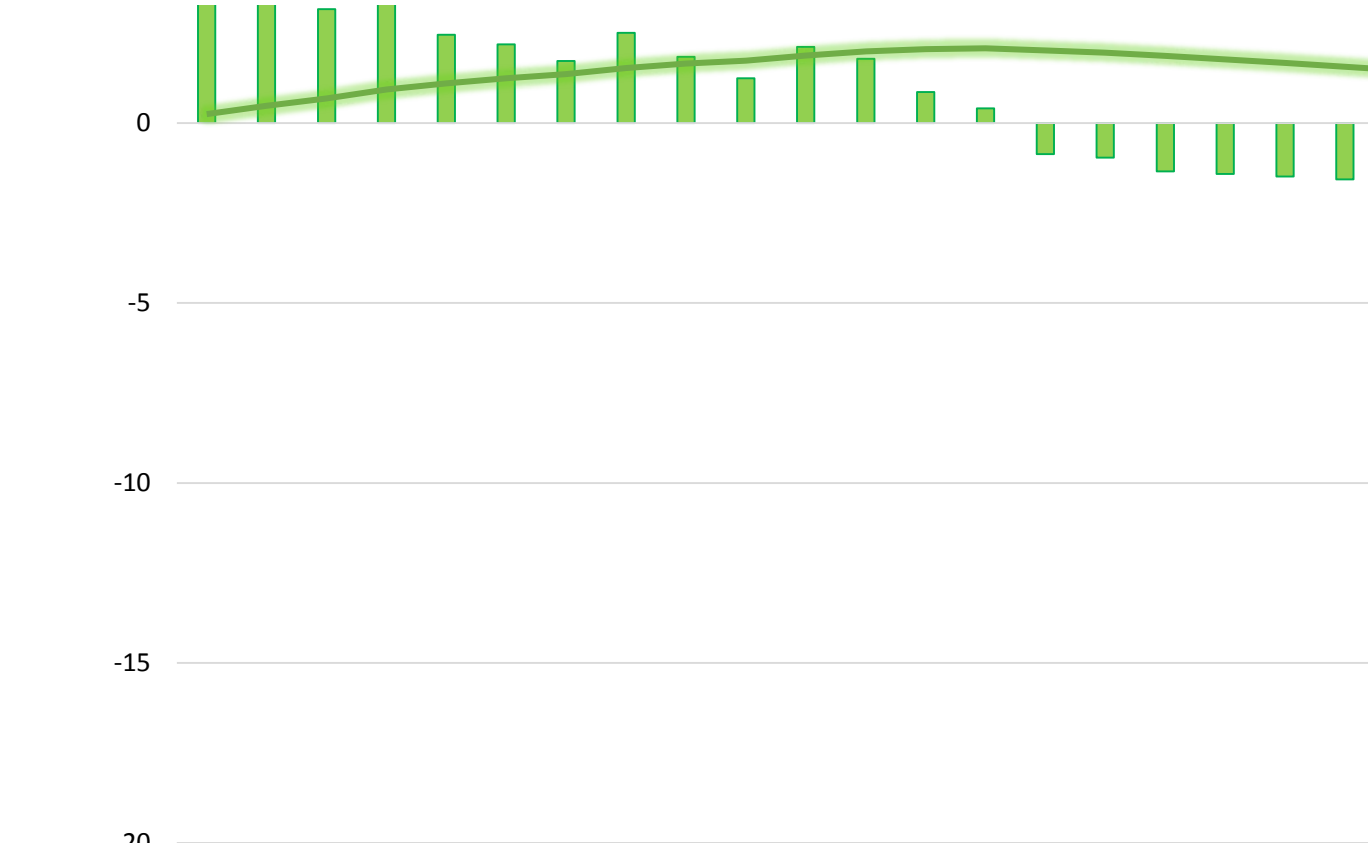


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



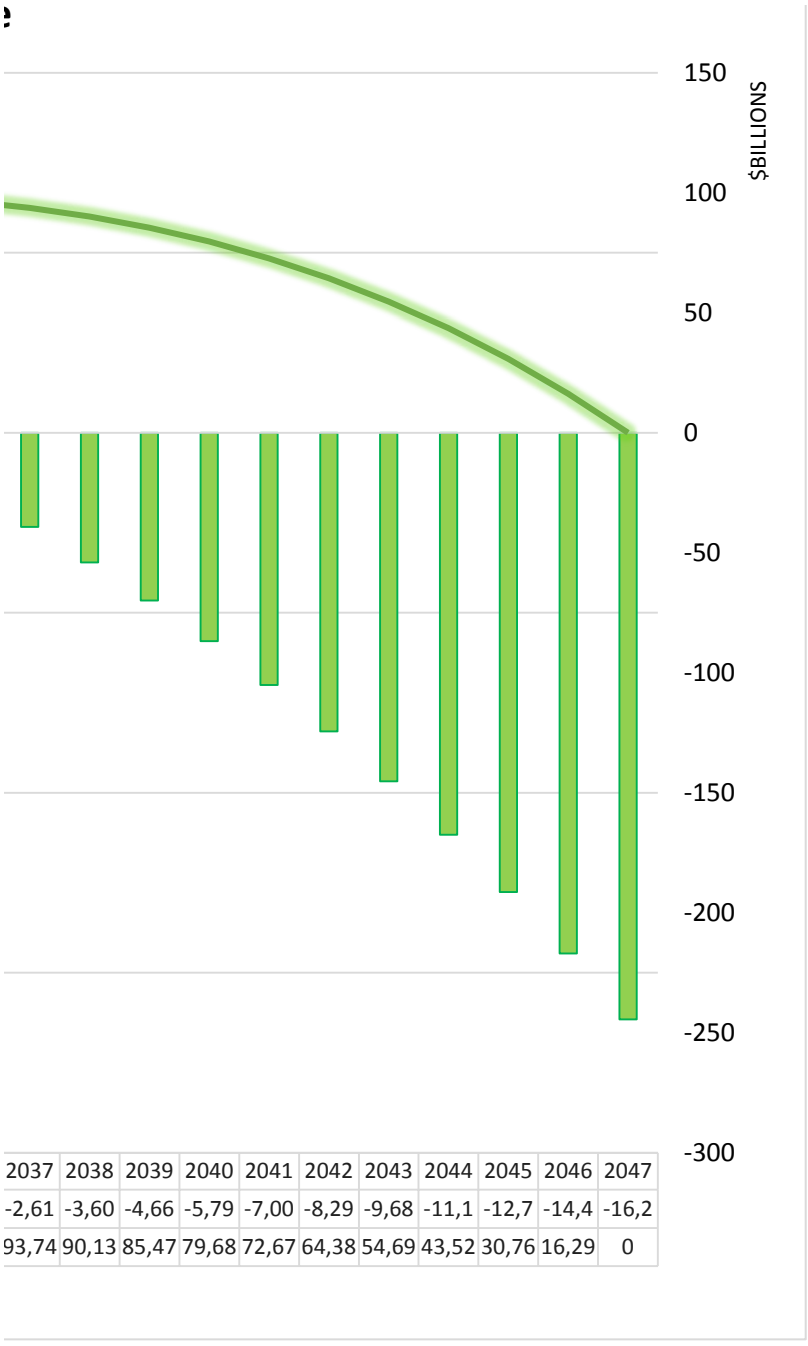


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

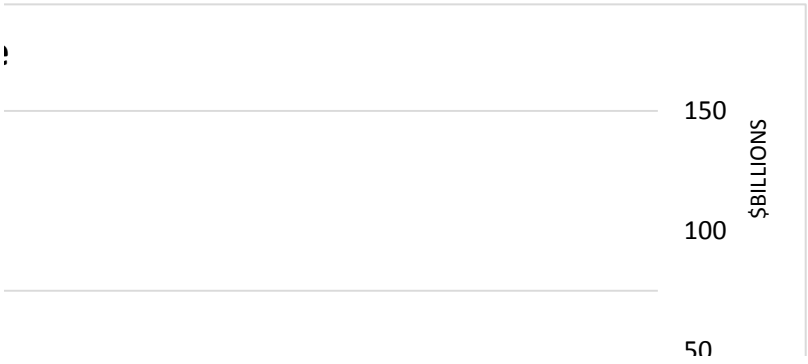
CALENDAR YEAR

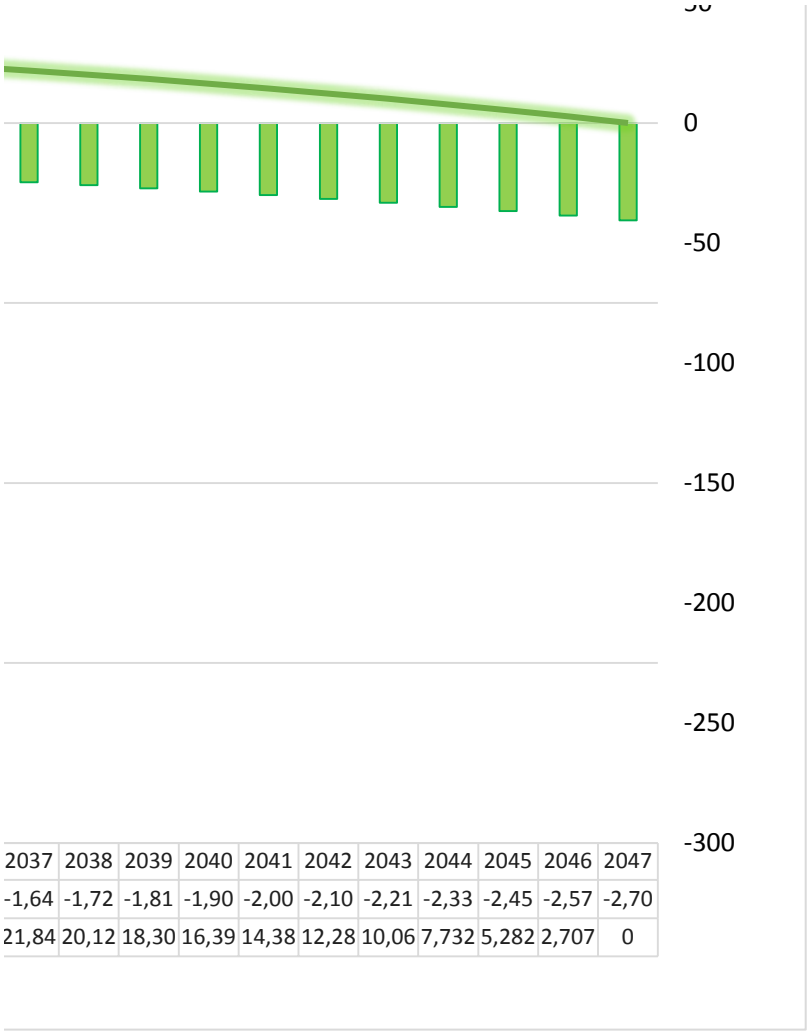


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Equal Monthly Debt Drawdown

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb4_1a_30yr

1a. GA Smoothing (Borrow ~$5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,801	4,640

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,200	4,760

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $62 billion, peakin
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary on accounting treatment.

7,133 7,133

Feb4_1b_30yr 7,133

1b. GA Smoothing (Borrow ~$7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	7,133	6,999

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,783	7,100

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $99 billion, peaking
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b on accounting treatment.

Feb4_1c_30yr

1c. GA Smoothing (Borrow ~$4 billion in 2017)

$ millions

Scenario 1C - 30-yr amortization	2017	2018
Annual Exposure[2]	3,678	3,437

	Fiscalized[3]	2016-17	2017-18
	Start: January 1st	919	3,617

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	1,783 - 1,200	7,100 - 4,760

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1200	4760
Debt-Finance Global Adjustment Costs, Option 1a	1783	7100
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18

Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1200**	**5000**
Total, B	1783	7340
Proposed Program Total:	1,783 - 1,200	7,340 - 5,000

ining

1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
4,446	5,138	3,921	3,753

2018-19	2019-20	2020-21	2021-2022
4,591	4,619	4,833	3,879

ng in 203 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
by approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
6,825	7,529	6,315	6,141

2018-19	2019-20	2020-21	2021-2022
6,956	7,001	7,226	6,272

g in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
3,158	3,761	2,450	2,183

2018-19	2019-20	2020-21	2021-2022
3,367	3,309	3,433	2,383

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
6,956 - 4,591	7,001 - 4,619	7,226 - 4,833	6,272 - 3,879

/1

2018-19[1]	2019-20[1]	2020-21[1]
4591	4619	4833
6956	7001	7226
225	279	323
60	60	60
18	18	18

4894	**4976**	**5234**
7259	7358	7627

7,259 - 4,894 7,358 - 4,976 7,627 - 5,234

1a. GA Smoothing (Borrow $5 billion in 2017)

	2017
IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	7,095
Additional GA Debt Drawdown, End of Year	5,000

Ratepayer GA Payment

Total Accumulated Debt *($ billion)*	5,000
Total Change in Accumulated Debt *($ billion)*	5000

1b. GA Smoothing (Borrow $7 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	5,095
Additional GA Debt Drawdown, End of Year	7,000

Total Accumulated Debt *($ billion)*	7000
Total Change in Accumulated Debt *($ billion)*	7000

1c. GA Smoothing (Borrow $4 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	8,095
Additional GA Debt Drawdown, End of Year	4,000

Total Accumulated Debt *($ billion)*	4000
Total Change in Accumulated Debt *($ billion)*	4000

2018	2019	2020	2021	2022	2023	2024	2025
11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
6,835	7,552	7,168	6,844	6,634	7,243	7,128	6,527
5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000

9,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000
5000	4000	5000	4000	4000	3000	4000	4000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
4,835	4,552	4,168	4,844	4,634	4,243	4,128	4,527
7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000

14000	21000	28000	35000	41000	47000	53000	59000
7000	7000	8000	6000	6000	6000	7000	6000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
8,835	8,552	8,168	8,844	8,634	8,243	8,128	8,527
3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000

7000	10000	14000	16000	19000	20000	23000	25000
3000	3000	4000	2000	2000	2000	3000	2000

2026	2027	2028	2029	2030	2031	2032	2033
10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
7,033	7,043	6,819	7,009	6,721	6,654	6,820	7,238
3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000

41,000	46,000	50,000	53,000	56,000	58,000	60,000	61,000
3000	4000	4000	3000	3000	2000	2000	1000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
4,033	5,043	4,819	5,009	4,721	4,654	5,820	5,238
6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000

65000	71000	77000	83000	88000	91000	95000	97000
6000	6000	6000	5000	5000	4000	3000	3000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
9,033	9,043	8,819	9,009	9,721	9,654	9,820	9,238
1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000

26000	28000	30000	31000	31000	30000	29000	28000
1000	2000	2000	1000	0	-1000	-1000	-1000

2034	2035	2036	2037	2038	2039	2040	2041
7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
6,756	7,662	7,389	8,129	7,881	8,645	9,421	9,207
1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000

62,000	60,000	58,000	55,000	52,000	48,000	43,000	38,000
1000	-2000	-2000	-3000	-3000	-4000	-5000	-5000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
5,756	6,662	7,389	8,129	8,881	9,645	10,421	11,207
2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000

99000	98000	96000	94000	90000	85000	80000	73000
2000	-1000	-2000	-3000	-4000	-5000	-6000	-7000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
8,756	6,662	7,389	7,129	6,881	6,645	6,421	6,207
-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000

27000	25000	23000	22000	20000	18000	16000	14000
-1000	-1000	-2000	-2000	-2000	-2000	-2000	-2000

2042	2043	2044	2045	2046	2047	2048		
4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
10,004	9,811	9,627	9,451	10,285	10,126	2,975		
-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0		

33,000	27,000	20,000	14,000	7,000	-	-	
-6000	-6000	-6000	-6000	-7000	-7000	0	

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
12,004	13,811	14,627	16,451	17,285	19,126	2,975		
-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0		

64000	55000	44000	31000	16000	0	0
-8000	-10000	-11000	-13000	-14000	-16000	0

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
6,004	5,811	5,627	5,451	6,285	6,126	2,975		
-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0		

12000	10000	8000	5000	3000	0	0
-2000	-2000	-2000	-2000	-3000	-3000	0

Feb4 1a, 30-yr - Debt Drawdown Scenarios

-92,247 -94598.515 58,489 36109.18 0

Feb4_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0
			114	110	106	122	93	89	81	102	89	78	102	97	79	71	45	47	31	16	-38	-51	-65	-80	-95	-110	-126	-133	-140	-147	-155	-162	-171	0	0	0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	5,138	3,167	58,489
Equal Monthly Debt Drawdown	5,260	3,149	

Maximum Accumulated Debt — Feb4 1a, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

End of Year Debt Drawdown	61,858	36,109
Equal Monthly Debt Drawdown	63,330	

			40%	37%	34%	36%	27%	24%																												
Feb4 1a, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
a	Debt, Beginning of Year		0	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	
c = a*5%	*Interest Cost - Feb4 1a, 30-yr - End of Year Debt Drawdown*		*0*	*246*	*483*	*711*	*974*	*1,175*	*1,367*	*1,541*	*1,760*	*1,952*	*2,119*	*2,337*	*2,546*	*2,716*	*2,869*	*2,966*	*3,067*	*3,133*	*3,167*	*3,086*	*2,975*	*2,835*	*2,664*	*2,461*	*2,224*	*1,952*	*1,666*	*1,365*	*1,049*	*717*	*367*	*0*	*0*	*0*	58,489
b	Additional GA Debt Drawdown, End of Year		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	21,822	23,788	25,076	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	20,490	13,998	7,173	0	0	0	
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	36,109	36,109	36,109	36,109	34,517	32,362	29,624	26,281	22,311	17,687	12,383	6,793	918	0	0	0	0	0	0	0	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688	49,149	51,372	53,325	54,991	56,356	57,405	58,122	58,489				
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371	-5,713	-13,241	-20,783	-28,325	-35,866	-43,408	-50,949	-58,489				
Fiscal Exposure - End of Year Debt Drawdown			4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0	

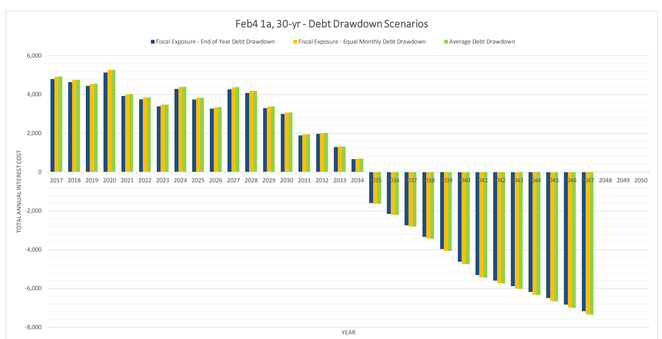
Feb4 1a, 30-yr	Equal Monthly Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			12																																		
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
3,149	*Interest Cost - Feb4 1a, 30-yr*		*114*	*356*	*589*	*833*	*1,067*	*1,264*	*1,448*	*1,643*	*1,849*	*2,029*	*2,220*	*2,435*	*2,625*	*2,787*	*2,914*	*3,013*	*3,097*	*3,149*	*3,129*	*3,034*	*2,910*	*2,756*	*2,569*	*2,351*	*2,098*	*1,819*	*1,526*	*1,218*	*895*	*554*	*197*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0	

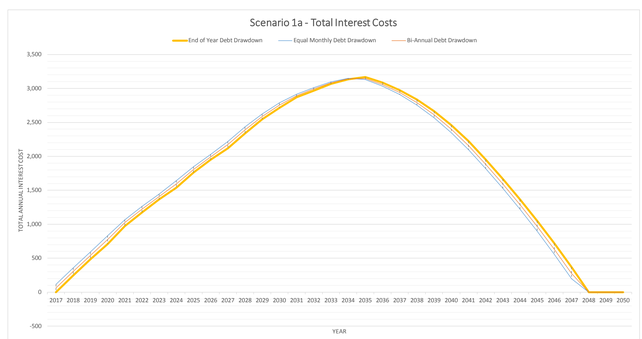
	Monthly Drawdown		400	366	330	369	246	215	169	229	165	109	179	146	63	24	(81)	(83)	(148)	(205)	(397)	(437)	(476)	(515)	(553)	(590)	(627)	(629)	(628)	(628)	(628)	(628)	(628)	-	-	-
	FV of Monthly Drawdown at 5%		4,915	4,498	4,057	4,532	3,017	2,640	2,075	2,813	2,026	1,345	2,200	1,789	773	289	(996)	(1,024)	(1,821)	(2,519)	(4,872)	(5,365)	(5,849)	(6,325)	(6,793)	(7,253)	(7,707)	(7,722)	(7,721)	(7,721)	(7,721)	(7,721)	(7,720)	-	-	-
	Annual Interest Cost on New Drawdowns		114	105	94	105	70	61	48	65	47	31	51	42	18	7	(23)	(24)	(42)	(59)	(113)	(125)	(136)	(147)	(158)	(169)	(179)	(180)	(180)	(180)	(180)	(180)	(179)	-	-	-
	Annual Interest Cost on Opening Balance		-	252	495	728	997	1,203	1,399	1,577	1,802	1,998	2,169	2,393	2,607	2,780	2,937	3,037	3,140	3,207	3,243	3,159	3,046	2,903	2,727	2,519	2,277	1,999	1,706	1,398	1,074	734	376	(0)	(0)	(0)
	Total Annual Interest Cost		114	356	589	833	1,067	1,264	1,448	1,643	1,849	2,029	2,220	2,435	2,625	2,787	2,914	3,013	3,097	3,149	3,129	3,034	2,910	2,756	2,569	2,351	2,098	1,819	1,526	1,218	895	554	197	(0)	(0)	(0)

Feb4 1a, 30-yr	Bi-Annual Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*61*	*305*	*540*	*777*	*1,024*	*1,223*	*1,410*	*1,596*	*1,808*	*1,993*	*2,173*	*2,390*	*2,589*	*2,754*	*2,893*	*2,991*	*3,083*	*3,141*	*3,147*	*3,058*	*2,940*	*2,792*	*2,613*	*2,401*	*2,156*	*1,881*	*1,591*	*1,286*	*966*	*629*	*275*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown			4,862	4,699	4,502	5,203	3,971	3,801	3,438	4,343	3,787	3,307	4,322	4,137	3,344	3,037	1,920	1,991	1,305	681	-1,612	-2,183	-2,773	-3,386	-4,021	-4,683	-5,372	-5,661	-5,951	-6,255	-6,575	-6,912	-7,265	0	0	0	

	Bi-Annual Drawdown		2,400	2,197	1,981	2,213	1,473	1,289	1,014	1,374	989	657	1,074	874	378	141	(487)	(500)	(889)	(1,230)	(2,379)	(2,620)	(2,857)	(3,089)	(3,317)	(3,542)	(3,764)	(3,771)	(3,771)	(3,771)	(3,771)	(3,771)	(3,770)	-	-	-
	FV of Bi-Annual Drawdown at 5%		4,862	4,450	4,013	4,483	2,984	2,612	2,053	2,783	2,004	1,331	2,176	1,769	765	286	(986)	(1,013)	(1,801)	(2,492)	(4,820)	(5,308)	(5,787)	(6,257)	(6,719)	(7,175)	(7,624)	(7,639)	(7,638)	(7,638)	(7,638)	(7,638)	(7,637)	-	-	-
	Annual Interest Cost on New Drawdowns		61	56	51	57	38	33	26	35	25	17	28	22	10	4	(12)	(13)	(23)	(31)	(61)	(67)	(73)	(79)	(85)	(91)	(96)	(97)	(97)	(97)	(97)	(97)	(97)	-	-	-
	Annual Interest Cost on Opening Balance		-	249	490	720	986	1,190	1,384	1,560	1,783	1,977	2,146	2,367	2,579	2,750	2,906	3,004	3,106	3,173	3,208	3,125	3,013	2,871	2,698	2,492	2,252	1,977	1,687	1,383	1,063	726	372	(0)	(0)	(0)
	Total Annual Interest Cost		61	305	540	777	1,024	1,223	1,410	1,596	1,808	1,993	2,173	2,390	2,589	2,754	2,893	2,991	3,083	3,141	3,147	3,058	2,940	2,792	2,613	2,401	2,156	1,881	1,591	1,286	966	629	275	(0)	(0)	(0)

Feb4 1a, 30-yr	Average Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*123*	*365*	*597*	*842*	*1,074*	*1,271*	*1,454*	*1,650*	*1,856*	*2,035*	*2,228*	*2,442*	*2,631*	*2,792*	*2,918*	*3,016*	*3,100*	*3,150*	*3,126*	*3,030*	*2,905*	*2,749*	*2,562*	*2,342*	*2,088*	*1,809*	*1,516*	*1,207*	*883*	*542*	*184*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
Fiscal Exposure - Average Debt Drawdown			4,923	4,758	4,559	5,269	4,021	3,849	3,481	4,398	3,835	3,349	4,377	4,189	3,386	3,075	1,944	2,016	1,321	689	-1,633	-2,210	-2,808	-3,428	-4,072	-4,742	-5,440	-5,733	-6,026	-6,334	-6,658	-6,999	-7,357	0	0	0	





Feb4 1b, 30-yr - Debt Drawdown Scenarios

-149,507 -153857.97 97,141 56717.33 0

Feb4_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0
			170	167	162	179	150	146	137	158	144	131	153	147	125	115	85	82	61	41	-19	-40	-62	-86	-111	-138	-167	-198	-231	-266	-304	-344	-388	0	0	0

0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown 7,529	5,062	97,141
Equal Monthly Debt Drawdown 7,708	5,042	

Maximum Accumulated Debt	Feb4 1b, 30-yr, Accumulated Debt	Total Principal Debt Borrowed
End of Year Debt Drawdown	98,864	56,717
Equal Monthly Debt Drawdown	101,217	

Feb4 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
a Debt, Beginning of Year	0	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	
c = a*5% *Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown*	*0*	*365*	*724*	*1,073*	*1,459*	*1,782*	*2,096*	*2,391*	*2,731*	*3,040*	*3,322*	*3,651*	*3,966*	*4,236*	*4,483*	*4,665*	*4,842*	*4,974*	*5,062*	*5,020*	*4,933*	*4,800*	*4,615*	*4,376*	*4,080*	*3,721*	*3,296*	*2,800*	*2,228*	*1,575*	*834*	*0*	*0*	*0*	97,141
b Additional GA Debt Drawdown, End of Year	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
d = a+b+c Accumulated debt in present year (including 5% annual interest)	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	0	
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,633	26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606	82,685	86,406	89,703	92,503	94,731	96,306	97,141				
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,831	56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076	-10,007	-22,027	-35,008	-48,980	-63,971	-80,013	-97,141				
Fiscal Exposure - End of Year Debt Drawdown	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0	

Feb4 1b, 30-yr — Equal Monthly Debt Drawdown

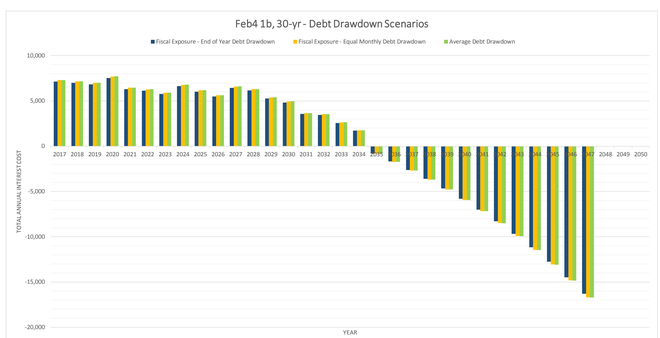
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	
5,042 *Interest Cost - Feb4 1b, 30-yr*	*170*	*532*	*886*	*1,252*	*1,609*	*1,928*	*2,234*	*2,549*	*2,874*	*3,171*	*3,475*	*3,797*	4,091	*4,350*	*4,568*	*4,748*	*4,904*	*5,015*	*5,042*	*4,980*	*4,871*	*4,714*	*4,504*	*4,238*	*3,913*	*3,524*	*3,066*	*2,534*	*1,925*	*1,231*	*446*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0	
Monthly Drawdown	594	553	508	538	405	363	306	353	275	205	259	209	108	49	(76)	(101)	(189)	(271)	(490)	(559)	(629)	(700)	(773)	(847)	(924)	(1,002)	(1,082)	(1,164)	(1,249)	(1,337)	(1,427)	(0)	-	-	
FV of Monthly Drawdown at 5%	7,303	6,792	6,247	6,610	4,972	4,463	3,755	4,338	3,383	2,523	3,184	2,565	1,327	605	(937)	(1,237)	(2,326)	(3,335)	(6,020)	(6,867)	(7,728)	(8,604)	(9,498)	(10,412)	(11,347)	(12,306)	(13,291)	(14,304)	(15,348)	(16,424)	(17,536)	(0)	-	-	
Annual Interest Cost on New Drawdowns	170	158	145	154	116	104	87	101	79	59	74	60	31	14	(22)	(29)	(54)	(78)	(140)	(160)	(180)	(200)	(221)	(242)	(264)	(286)	(309)	(333)	(357)	(382)	(408)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	374	741	1,099	1,493	1,824	2,146	2,448	2,796	3,112	3,401	3,738	4,061	4,336	4,589	4,776	4,958	5,092	5,182	5,139	5,051	4,914	4,725	4,481	4,177	3,810	3,375	2,867	2,281	1,612	854	0	(0)	(0)	
Total Annual Interest Cost	170	532	886	1,252	1,609	1,928	2,234	2,549	2,874	3,171	3,475	3,797	4,091	4,350	4,568	4,748	4,904	5,015	5,042	4,980	4,871	4,714	4,504	4,238	3,913	3,524	3,066	2,534	1,925	1,231	446	0	(0)	(0)	

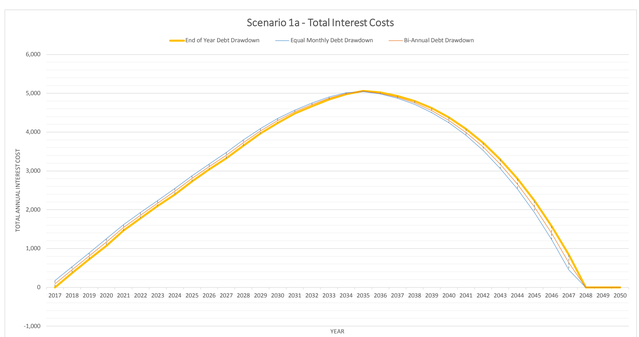
Feb4 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*91*	*455*	*811*	*1,169*	*1,539*	*1,861*	*2,170*	*2,476*	*2,808*	*3,110*	*3,404*	*3,730*	*4,034*	*4,297*	*4,528*	*4,710*	*4,875*	*4,996*	*5,051*	*4,998*	*4,900*	*4,753*	*4,555*	*4,302*	*3,990*	*3,615*	*3,172*	*2,657*	*2,065*	*1,390*	*626*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	7,225	7,089	6,913	7,626	6,396	6,220	5,838	6,713	6,113	5,574	6,514	6,235	5,330	4,888	3,614	3,501	2,603	1,738	-829	-1,709	-2,648	-3,651	-4,722	-5,867	-7,093	-8,405	-9,810	-11,314	-12,926	-14,652	-16,502	0	0	0	
Bi-Annual Drawdown	3,567	3,317	3,051	3,228	2,428	2,180	1,834	2,118	1,652	1,232	1,555	1,253	648	295	(457)	(604)	(1,136)	(1,629)	(2,940)	(3,354)	(3,774)	(4,202)	(4,639)	(5,085)	(5,542)	(6,010)	(6,491)	(6,986)	(7,495)	(8,021)	(8,564)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	7,225	6,719	6,180	6,539	4,919	4,415	3,715	4,291	3,347	2,496	3,150	2,538	1,313	598	(926)	(1,224)	(2,301)	(3,299)	(5,956)	(6,794)	(7,645)	(8,512)	(9,396)	(10,300)	(11,225)	(12,174)	(13,148)	(14,150)	(15,183)	(16,247)	(17,347)	(0)	-	-	
Annual Interest Cost on New Drawdowns	91	85	78	83	62	56	47	54	42	32	40	32	17	8	(12)	(15)	(29)	(42)	(75)	(86)	(97)	(108)	(119)	(130)	(142)	(154)	(166)	(179)	(192)	(205)	(219)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	370	733	1,087	1,477	1,805	2,123	2,422	2,766	3,079	3,364	3,698	4,017	4,290	4,540	4,725	4,904	5,038	5,127	5,084	4,997	4,861	4,674	4,432	4,132	3,769	3,338	2,836	2,257	1,595	845	0	0	0	
Total Annual Interest Cost	91	455	811	1,169	1,539	1,861	2,170	2,476	2,808	3,110	3,404	3,730	4,034	4,297	4,528	4,710	4,875	4,996	5,051	4,998	4,900	4,753	4,555	4,302	3,990	3,615	3,172	2,657	2,065	1,390	626	0	0	0	

Feb4 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*183*	*544*	*898*	*1,266*	*1,620*	*1,939*	*2,244*	*2,561*	*2,885*	*3,181*	*3,486*	*3,809*	*4,101*	*4,359*	*4,574*	*4,754*	*4,908*	*5,018*	*5,041*	*4,977*	*4,867*	*4,707*	*4,496*	*4,228*	*3,900*	*3,509*	*3,048*	*2,514*	*1,902*	*1,205*	*417*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	7,316	7,179	7,000	7,722	6,477	6,298	5,912	6,798	6,190	5,645	6,597	6,314	5,397	4,950	3,659	3,545	2,636	1,760	-840	-1,731	-2,682	-3,697	-4,782	-5,942	-7,183	-8,511	-9,934	-11,457	-13,089	-14,838	-16,711	0	0	0	





Feb4 1c, 30-yr - Debt Drawdown Scenarios

Feb4_1c_30yr

Annual Interest Rate = 5.1%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0
			88	82	75	90	58	52	41	60	44	29	50	43	20	10	-20	-23	-32	-34	-35	-37	-39	-41	-43	-45	-48	-50	-53	-55	-58	-61	-64	0	0	0

0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	3,761	1,594	29,477
Equal Monthly Debt Drawdown	3,851	1,583	

Maximum Accumulated Debt — Feb4 1c, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

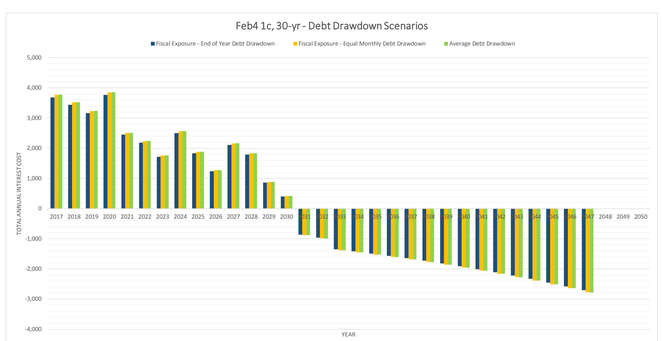
End of Year Debt Drawdown	31,125	20,043
Equal Monthly Debt Drawdown	31,866	

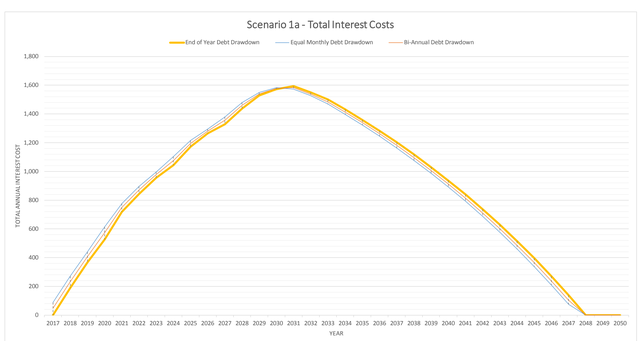
		30%	27%	24%	27%	16%	13%																														
Feb4 1c, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
a	Debt, Beginning of Year	0	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	
c = a*5%	*Interest Cost - Feb4 1c, 30-yr - End of Year Debt Drawdown*	*0*	*188*	*364*	*526*	*719*	*844*	*956*	*1,044*	*1,172*	*1,266*	*1,329*	*1,437*	*1,529*	*1,573*	*1,594*	*1,550*	*1,500*	*1,431*	*1,359*	*1,283*	*1,203*	*1,119*	*1,030*	*937*	*839*	*737*	*629*	*515*	*396*	*270*	*139*	*0*	*0*	*0*	*0*	29,477
b	Additional GA Debt Drawdown, End of Year	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	0	
	Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,641	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663	22,866	23,984	25,015	25,952	26,791	27,528	28,157	28,672	29,068	29,338	29,477				
	Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18,247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828	-1,018	-3,864	-6,710	-9,556	-12,402	-15,248	-18,094	-20,940	-23,786	-26,631	-29,477				
Fiscal Exposure - End of Year Debt Drawdown		3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0	

Feb4 1c, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	
1,583	*Interest Cost - Feb4 1c, 30-yr*	*88*	*270*	*439*	*615*	*777*	*896*	*997*	*1,103*	*1,216*	*1,295*	*1,379*	*1,480*	1,549	*1,583*	*1,573*	*1,527*	*1,468*	*1,398*	*1,324*	*1,246*	*1,164*	*1,077*	*987*	*892*	*792*	*686*	*576*	*460*	*338*	*209*	*74*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0	
	Monthly Drawdown	306	271	233	270	144	112	64	122	55	(2)	65	29	(56)	(97)	(204)	(209)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(0)	-	-	
	FV of Monthly Drawdown at 5%	3,765	3,326	2,861	3,312	1,773	1,371	781	1,493	679	(28)	799	360	(684)	(1,197)	(2,512)	(2,570)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,913)	(2,913)	(2,913)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	88	77	67	77	41	32	18	35	16	(1)	19	8	(16)	(28)	(58)	(60)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	193	373	538	736	864	979	1,069	1,200	1,296	1,361	1,471	1,565	1,610	1,632	1,586	1,536	1,465	1,391	1,313	1,231	1,145	1,055	959	859	754	644	527	405	277	142	0	0	0	
	Total Annual Interest Cost	88	270	439	615	777	896	997	1,103	1,216	1,295	1,379	1,480	1,549	1,583	1,573	1,527	1,468	1,398	1,324	1,246	1,164	1,077	987	892	792	686	576	460	338	209	74	0	0	0	

Feb4 1c, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*47*	*232*	*405*	*574*	*750*	*872*	*978*	*1,076*	*1,195*	*1,282*	*1,356*	*1,460*	*1,540*	*1,578*	*1,583*	*1,537*	*1,483*	*1,413*	*1,340*	*1,263*	*1,182*	*1,097*	*1,007*	*913*	*814*	*710*	*600*	*485*	*365*	*237*	*104*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,725	3,481	3,199	3,809	2,481	2,211	1,741	2,534	1,859	1,254	2,137	1,812	872	409	-871	-973	-1,363	-1,433	-1,506	-1,584	-1,665	-1,750	-1,839	-1,933	-2,032	-2,136	-2,246	-2,360	-2,481	-2,608	-2,742	0	0	0	
	Bi-Annual Drawdown	1,839	1,624	1,397	1,618	866	670	382	729	332	(14)	390	176	(334)	(584)	(1,227)	(1,255)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(0)	-	-	
	FV of Bi-Annual Drawdown at 5%	3,725	3,290	2,830	3,277	1,754	1,356	773	1,477	672	(28)	791	356	(677)	(1,184)	(2,485)	(2,542)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	47	42	36	41	22	17	10	19	8	(0)	10	5	(9)	(15)	(31)	(32)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	191	369	533	728	855	968	1,057	1,187	1,282	1,346	1,456	1,548	1,593	1,614	1,569	1,520	1,450	1,376	1,299	1,218	1,133	1,043	949	850	746	637	522	401	274	140	0	0	0	
	Total Annual Interest Cost	47	232	405	574	750	872	978	1,076	1,195	1,282	1,356	1,460	1,540	1,578	1,583	1,537	1,483	1,413	1,340	1,263	1,182	1,097	1,007	913	814	710	600	485	365	237	104	0	0	0	

Feb4 1c, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*94*	*276*	*445*	*622*	*781*	*900*	*1,000*	*1,108*	*1,219*	*1,298*	*1,383*	*1,483*	*1,551*	*1,583*	*1,572*	*1,525*	*1,466*	*1,395*	*1,321*	*1,243*	*1,161*	*1,074*	*984*	*888*	*788*	*683*	*572*	*456*	*333*	*205*	*69*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,772	3,525	3,239	3,857	2,513	2,239	1,763	2,566	1,882	1,270	2,164	1,835	883	414	-882	-985	-1,381	-1,451	-1,526	-1,604	-1,686	-1,772	-1,863	-1,958	-2,058	-2,163	-2,274	-2,390	-2,513	-2,641	-2,776	0	0	0	





30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

TO BE

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,556	3,123	1,728	1,400	836	1,560	821	167

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

E UPDATED

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

JK: Fixed the formula in the yellow highlighted cells. Pls. check. (SK: looks good to me)

	Tab
v16 GA Financing - Scenario 1a 1b v18 (with fiscal) - Feb 4_v2.xlsx	Powerpoint_Export Scenario tabs

Change Description

Added in trigger for later start in the year
Updated IESO forecast from Energy (IESO GA Cost Forecast 170207 (Feb 6 update).xlsx)

Equal Monthly Debt Drawdown

		Month	Months Remai
Scenario Start Date	**July**	7	6

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	3,180	2,888
Annual Exposure2 with start on July 1st	*1,590*	*2,888*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	795	3,107
Start: July 1st	-	*2,312*

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	851	3,335
Start: July 1st	-	*2,484*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	1,168	1,765
Annual Exposure2 with start on July 1st	*584*	*1,765*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	292	1,609
Start: July 1st	-	*1,025*

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,449	2,040
Annual Exposure2 with start on July 1st	*725*	*2,040*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,597
Start: July 1st	-	*1,959*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335
Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3575**
Total, B	362	1837
Proposed Program Total:	362 - 851	1,837 - 3,575

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,556	3,123	1,728	1,400
2,556	*3,123*	*1,728*	*1,400*

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646
2,805	*2,697*	*2,774*	*1,646*

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

ıking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
2,311	3,750	2,311	1,933
2,311	*3,750*	*2,311*	*1,933*

2018-19	2019-20	2020-21	2021-2022

1,901	2,671	3,391	2,217
1,901	*2,671*	*3,391*	*2,217*

2019	2020	2021	2022
2,581	4,016	2,598	2,241
2,581	*4,016*	*2,598*	*2,241*

2018-19	2019-20	2020-21	2021-2022
2,175	2,940	3,662	2,508
2,175	*2,940*	*3,662*	*2,508*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

/1

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052
2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

Equal Monthly Debt Drawdown

		Month	Months Remaining
Scenario Start Date	July	7	6

AS LONG AS >

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	3,180	2,888	2,556

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	795	3,107	2,805
Fiscal Exposure, 25%	199	777	701

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Annual Exposure[2]	3,404	3,128	2,812

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	851	3,335	3,049
Fiscal Exposure, 25%	213	834	762

Indicates year in which, similar to OPCD's exa
closest to 30%. As Fiscal 2016/17 is a partial y
month the GA deferral begins.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu
decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions	9%	14%	18%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	1,168	1,765	2,311

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	292	1,609	1,901
Fiscal Exposure, 25%	73	402	475

Scenario 1b - 30-yr amortization	2017	2018	2019
Annual Exposure[2]	1,449	2,040	2,581

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	362	1,597	2,175
Fiscal Exposure, 25%	91	399	544

Indicates year in which, similar to OPCD's exar closest to 30%.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 ar
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu on accounting treatment.

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]
Debt-Finance Global Adjustment Costs, Option 1a	213	834	762
Debt-Finance Global Adjustment Costs, Option 1b	91	399	544
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**213**	**1074**	**1065**
Total, B	91	639	847

Proposed Program Total:	91 - 213	639 - 1,074	847 - 1,065

($M)	2016-171	2017-181	2018-191
Debt-Finance Global Adjustment Costs, Option 1a	851	3335	3049
Debt-Finance Global Adjustment Costs, Option 1b	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**851**	**3575**	**3352**
Total, B	362	1837	2478

Proposed Program Total:	362 - 851	1,837 - 3,575	2,478 - 3,352

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6

7	July	7	
8	August	8	
9	September	9	
10	October	10	
11	November	11	
12	December	12	

30-year term	**2016-17**	**2017-18**	**2018-19**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335	2,175 - 3,049

ROWS HIDDEN

1	1 = Comparision Enabled

APRIL 1, 2017 25%

2020	2021	2022
3,123	1,728	1,400

2019-20	2020-21	2021-2022
2,697	2,774	1,646
674	693	412

2020	2021	2022
3,396	2,020	1,712

2019-20	2020-21	2021-2022
2,958	3,052	1,943
740	763	486

mple, the true cost of GA being deferred is
ear, exposure may be less subject to which

l $17-21 billion (at 3.5% interest rate), peaking in 2028.
$33-$36 million.

ıals per month based on month of the year. Actuals may also depend on

28%	17%	13%
2020	2021	2022
3,750	2,311	1,933

2019-20	2020-21	2021-2022
2,671	3,391	2,217
668	848	554

2020	2021	2022
4,016	2,598	2,241

2019-20	2020-21	2021-2022
2,940	3,662	2,508
735	915	627

mple, the true cost of GA being deferred is

ıd $17-21 billion (at 3.5% interest rate), peaking in 2028.
$118-$134 million.

ıals per month based on month of the year. Actuals may also depend on decision

2019-20[1]	2020-21[1]
740	763
735	915
279	323
60	60
18	18
1097	**1164**
1092	1316

1,092 - 1,097 1,316 - 1,164

2019-201	2020-211
2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453





2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964
Equal Monthly Debt Drawdown	3,180	952

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

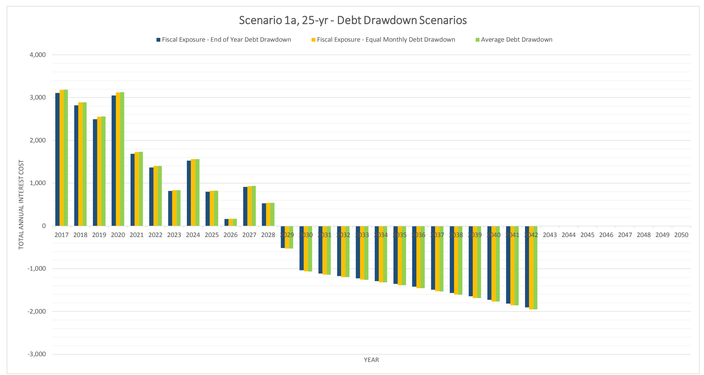
		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

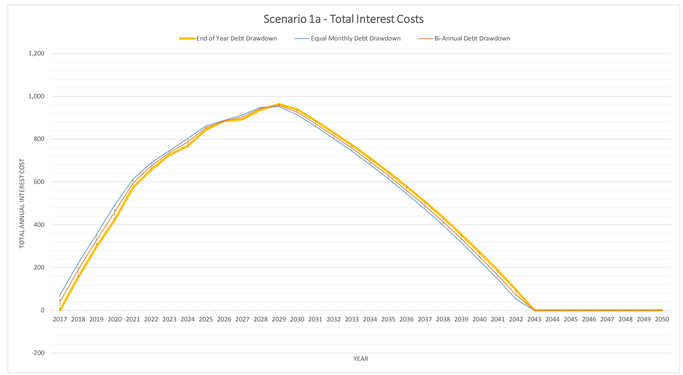
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	3,665	968	
Equal Monthly Debt Drawdown	3,750	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

		9%	14%	18%	28%	17%	13%																													
Scenario 1b, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

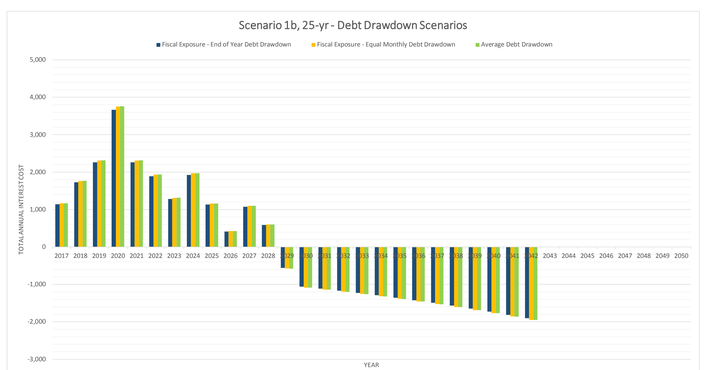
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	*954*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

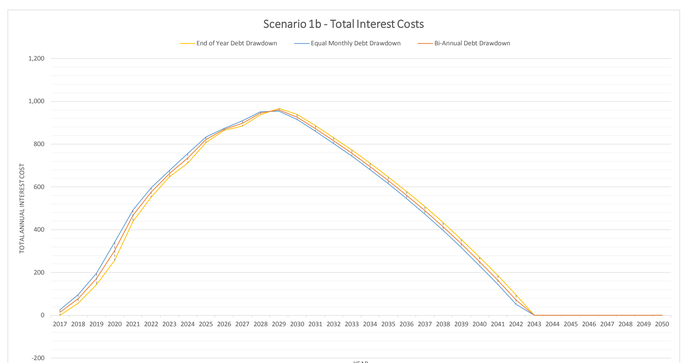
	Monthly Drawdown	95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

		28%	24%	21%	24%	12%	9%																													
Scenario 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1a, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	*1,156*	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

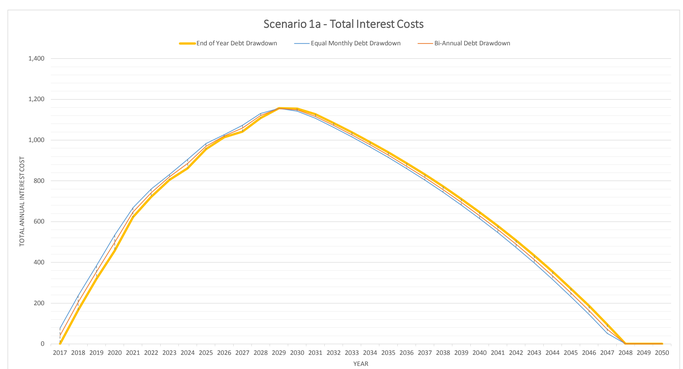
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

		12%	16%	20%	30%	19%	15%																													
Scenario 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

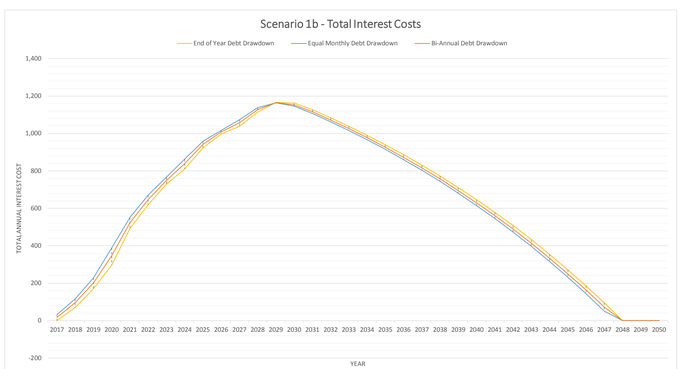
	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

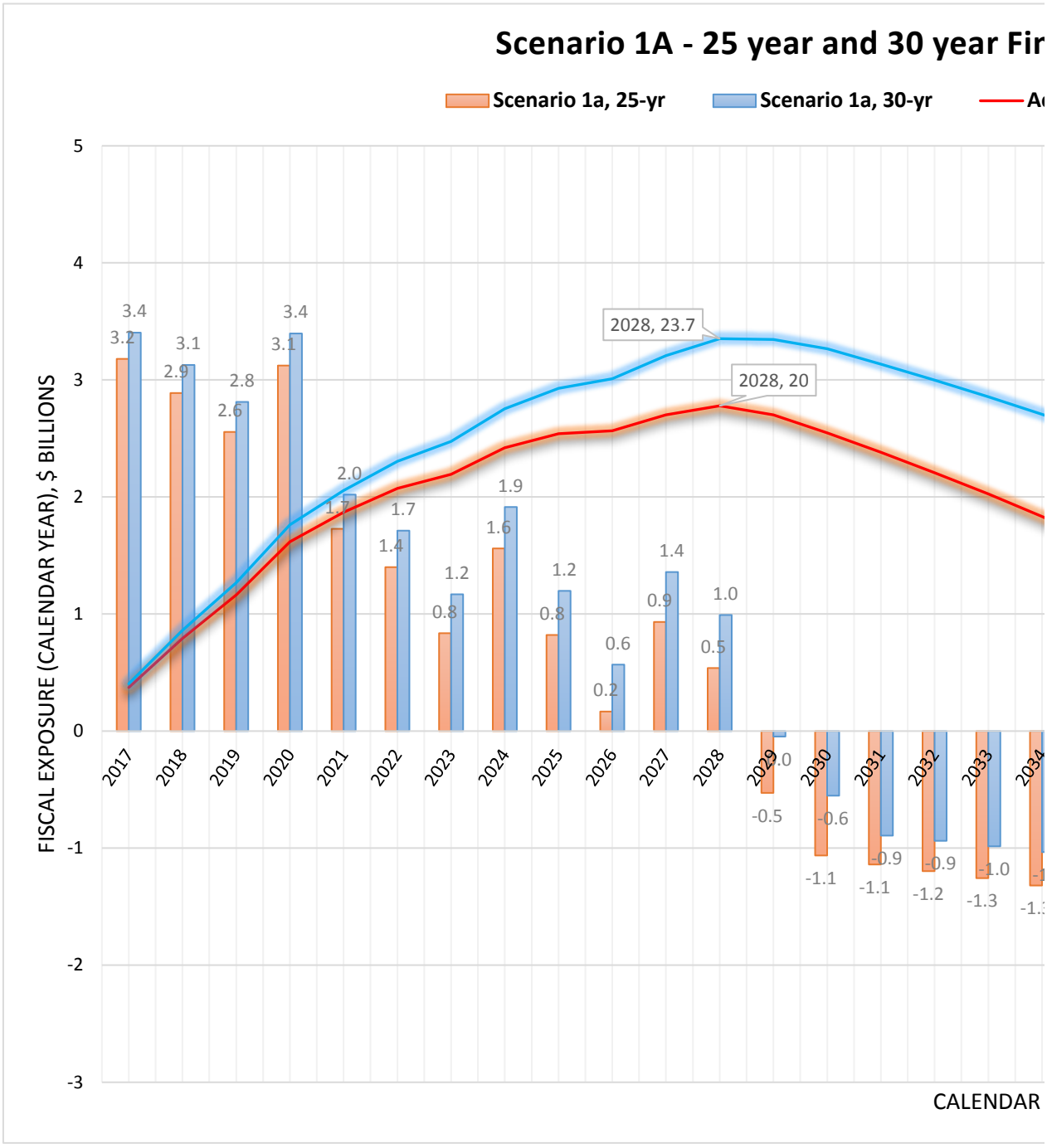
	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

Scenario 1b, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

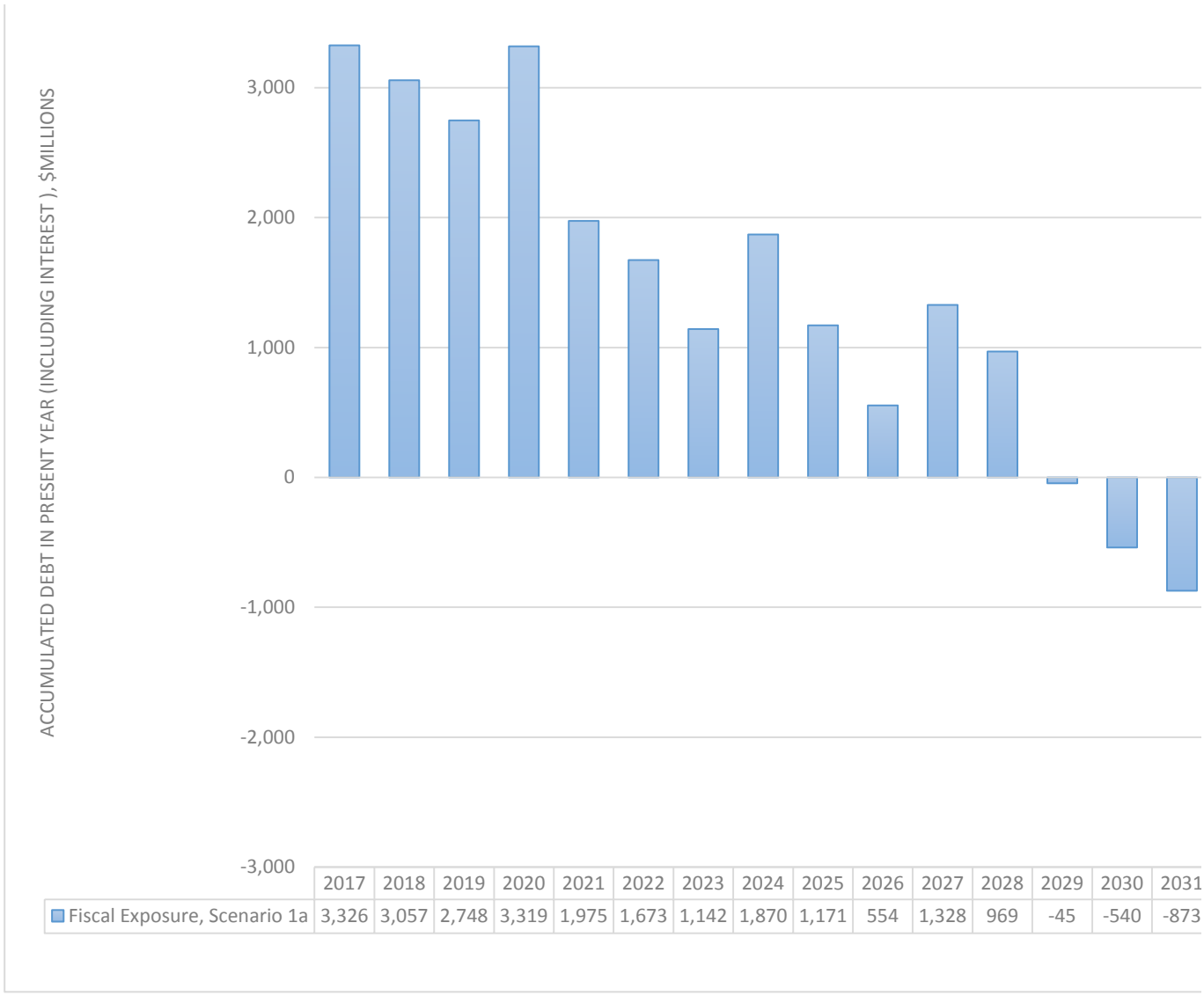




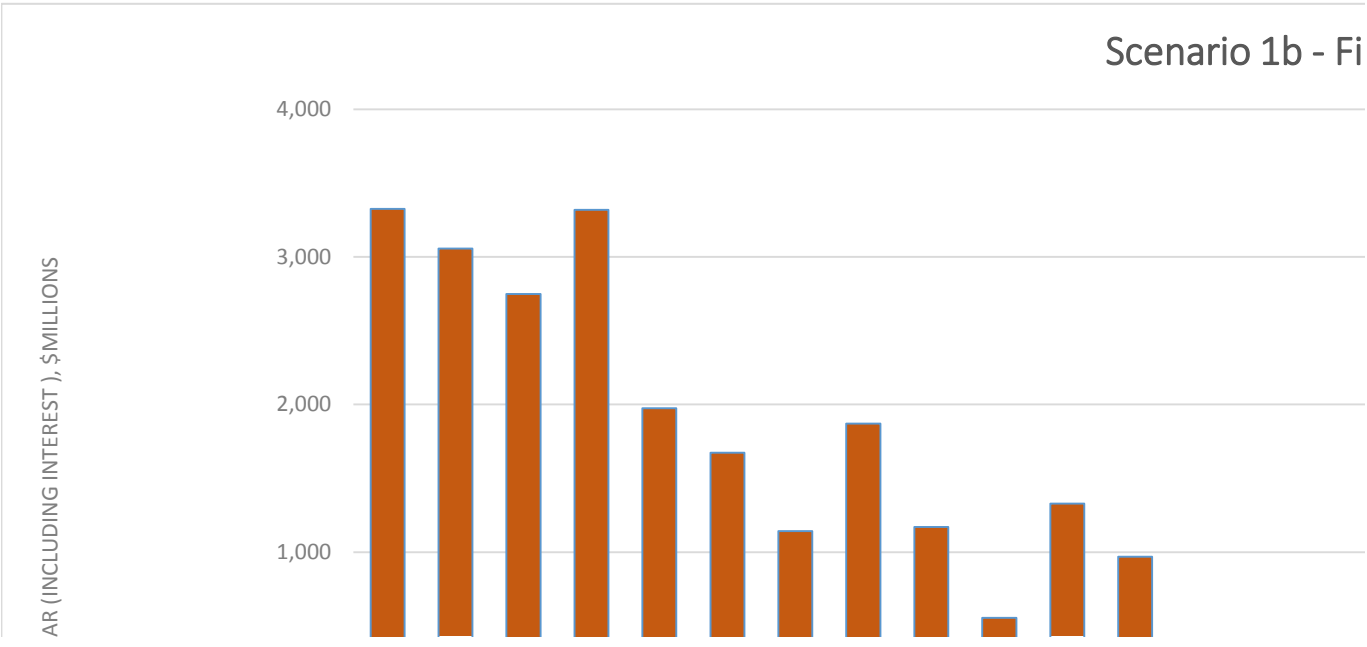
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

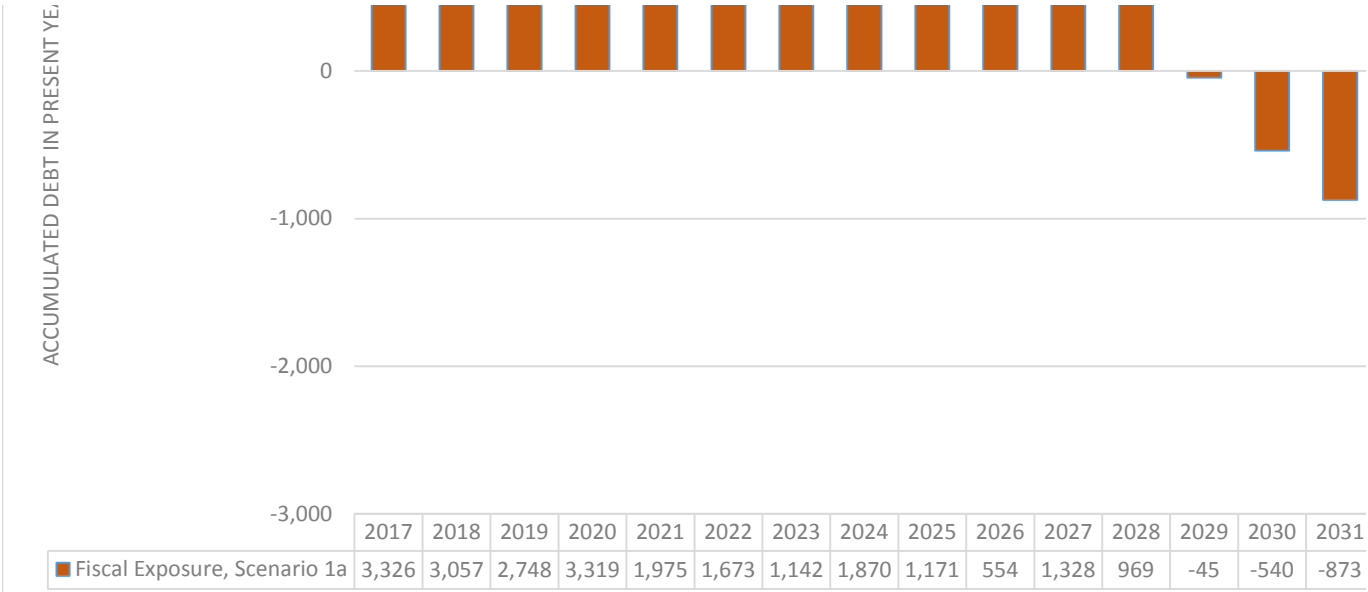




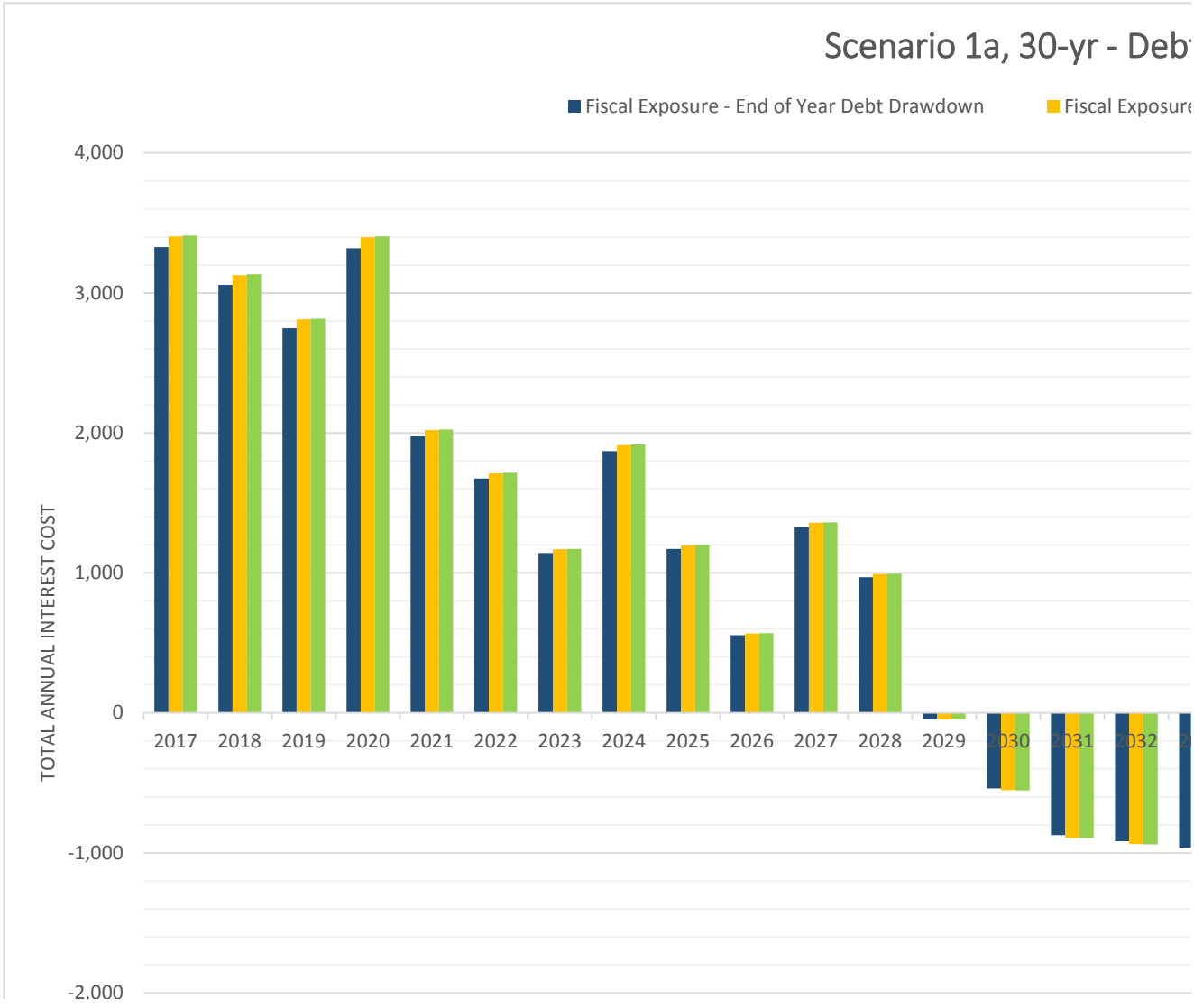


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



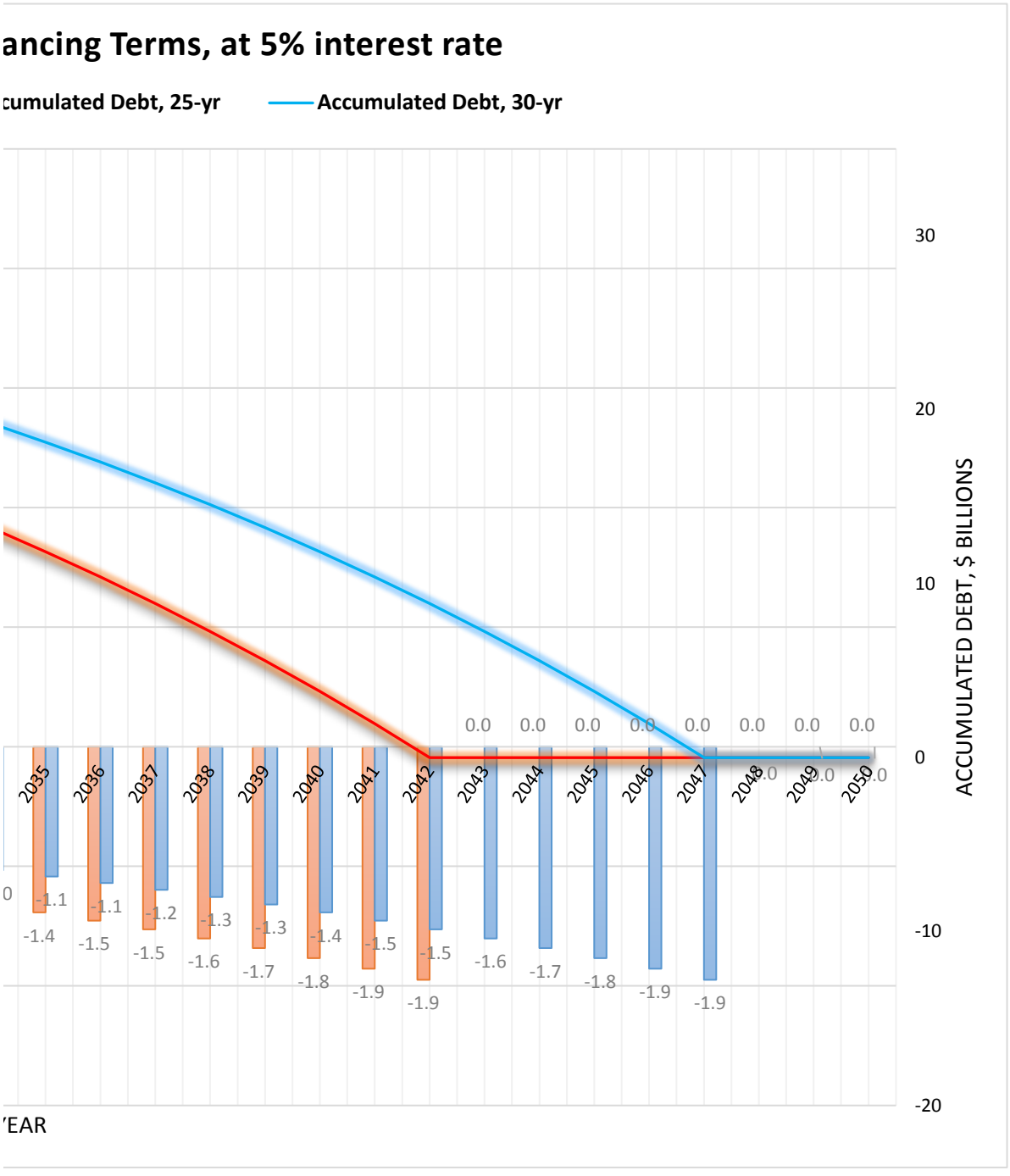


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



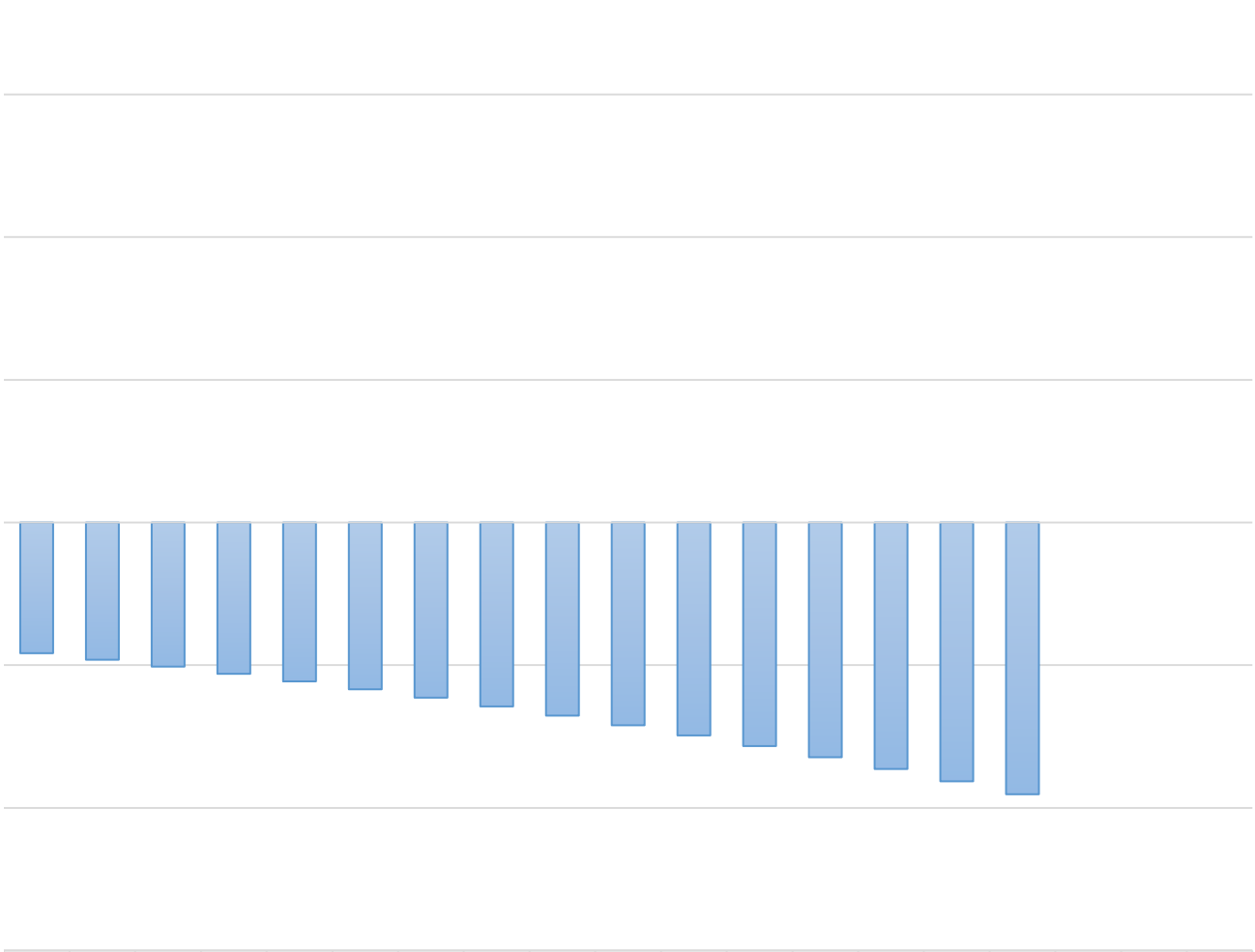

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

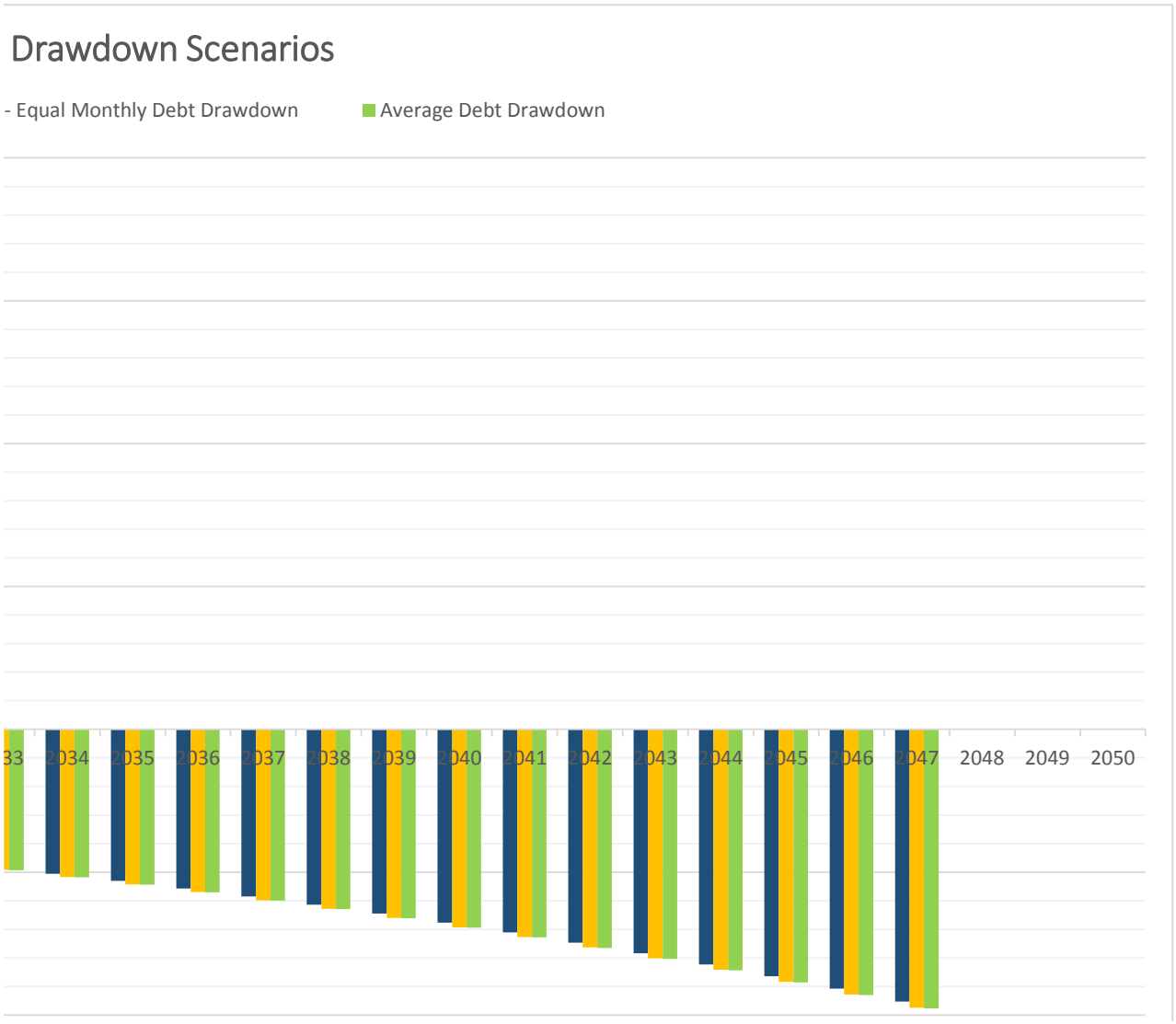
YEAR

cal Exposure



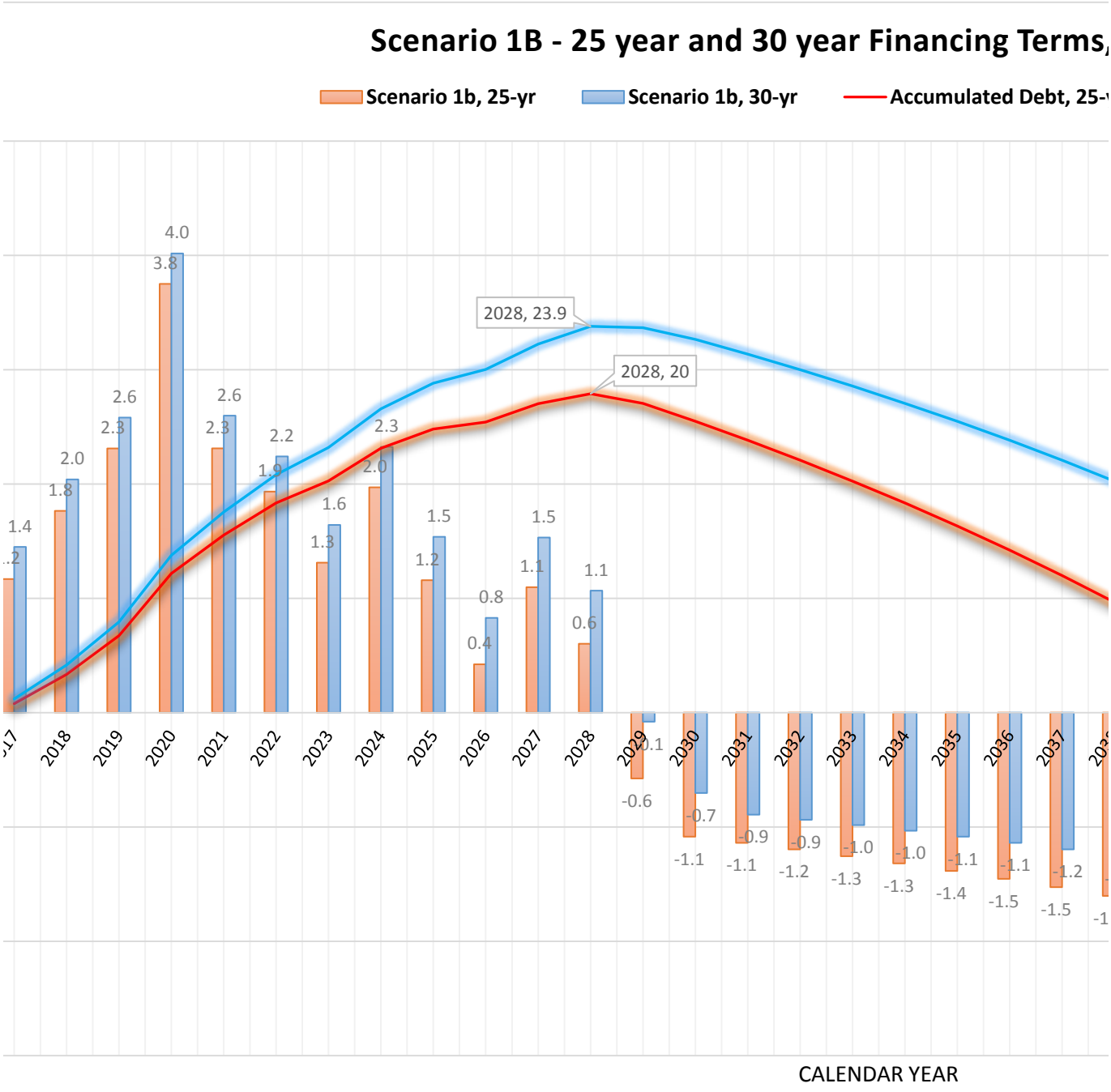
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

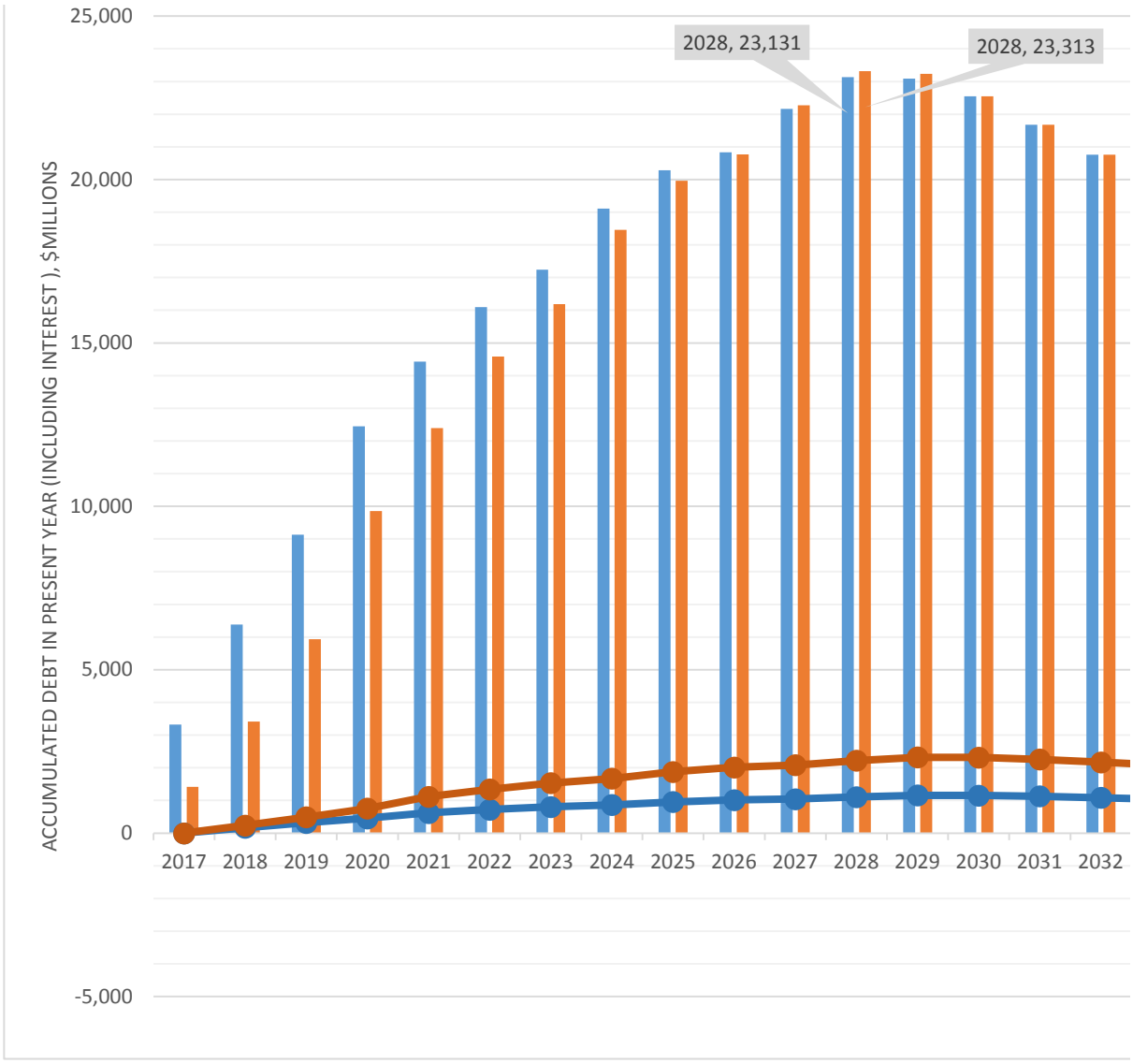


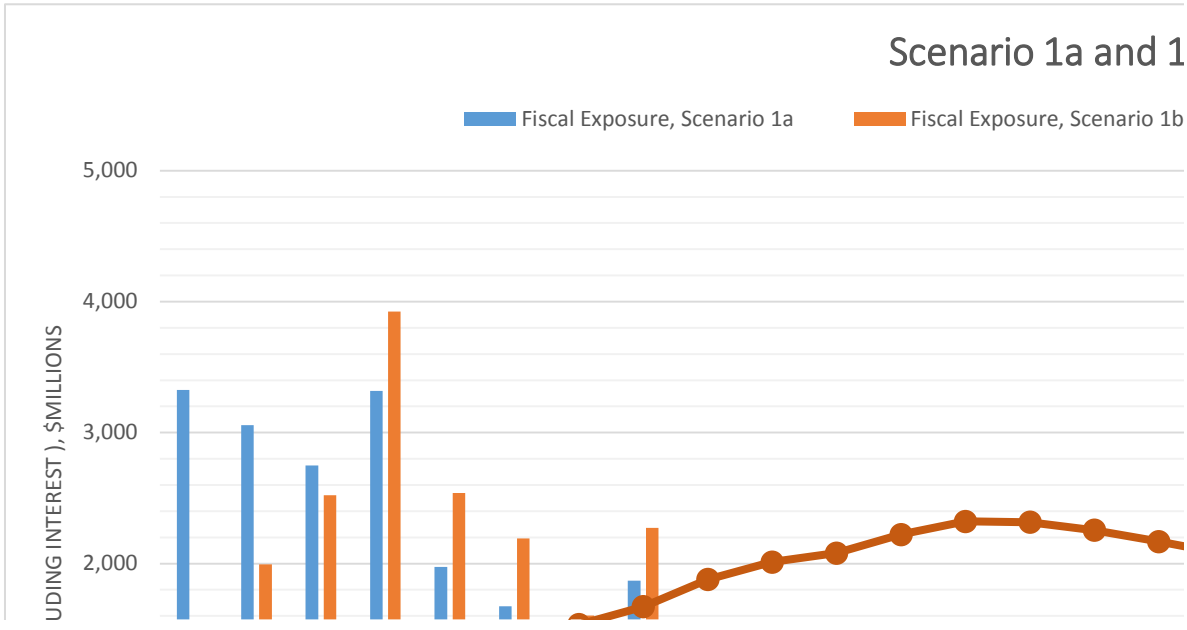
YEAR

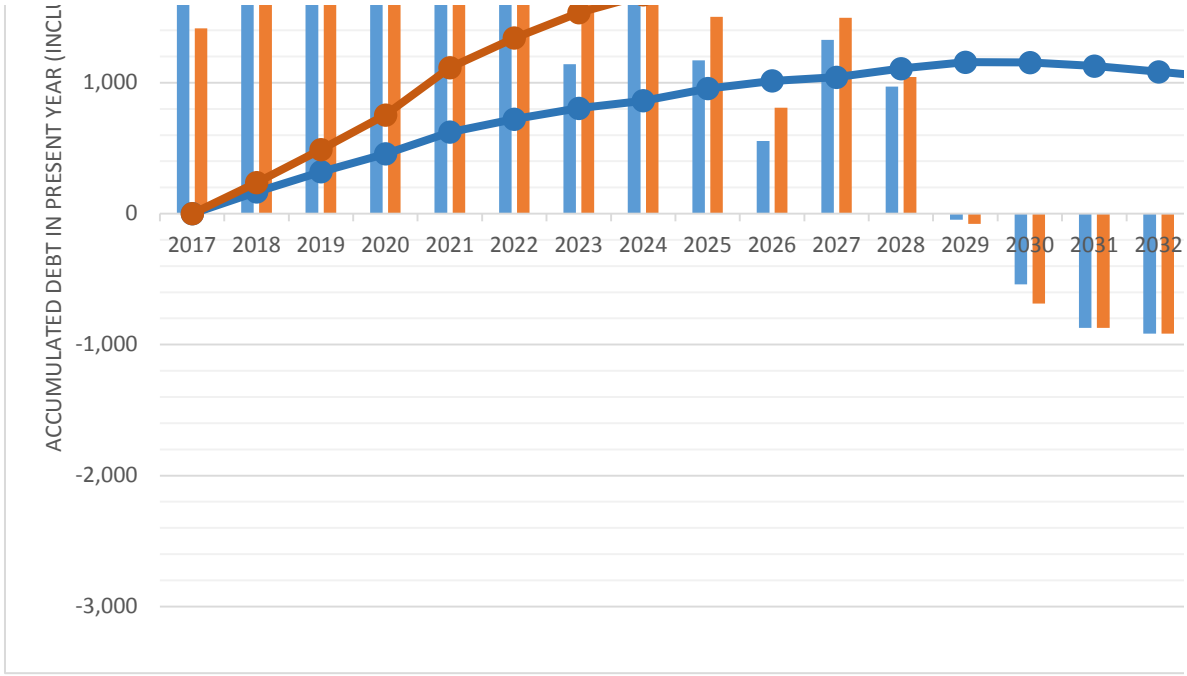
3 - 25 year and 30 year Financing Terms, at 5% interest rate

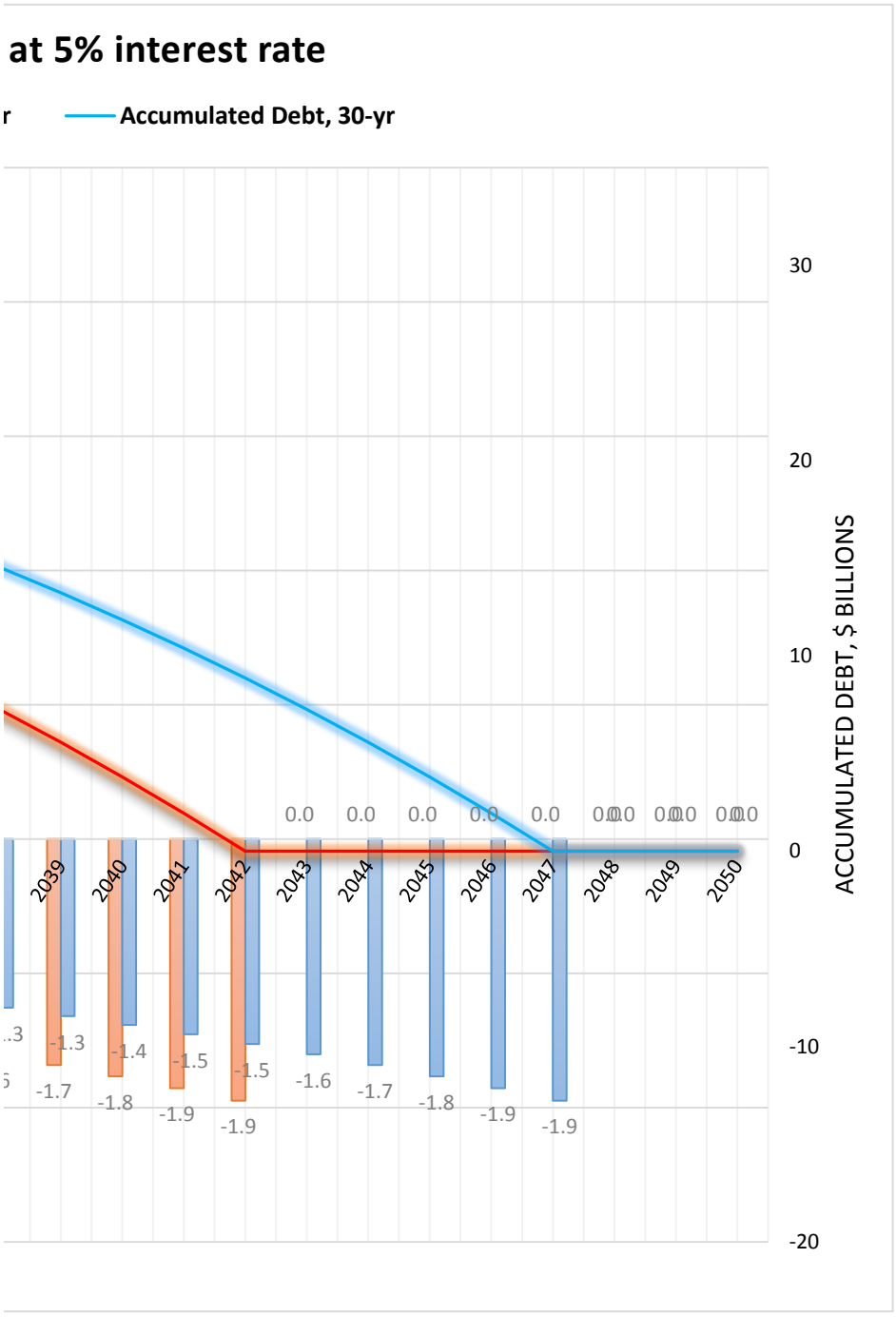





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

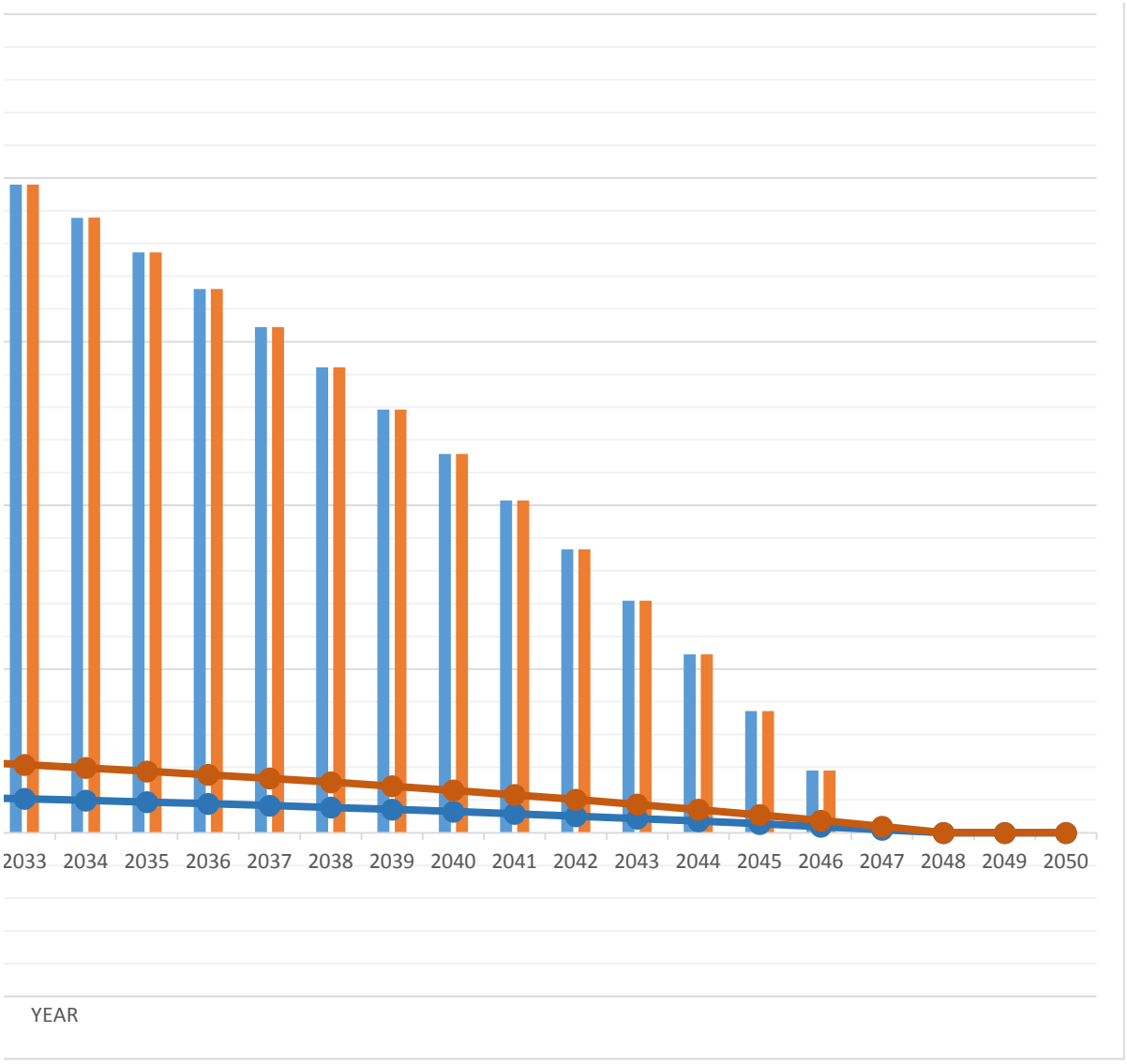

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

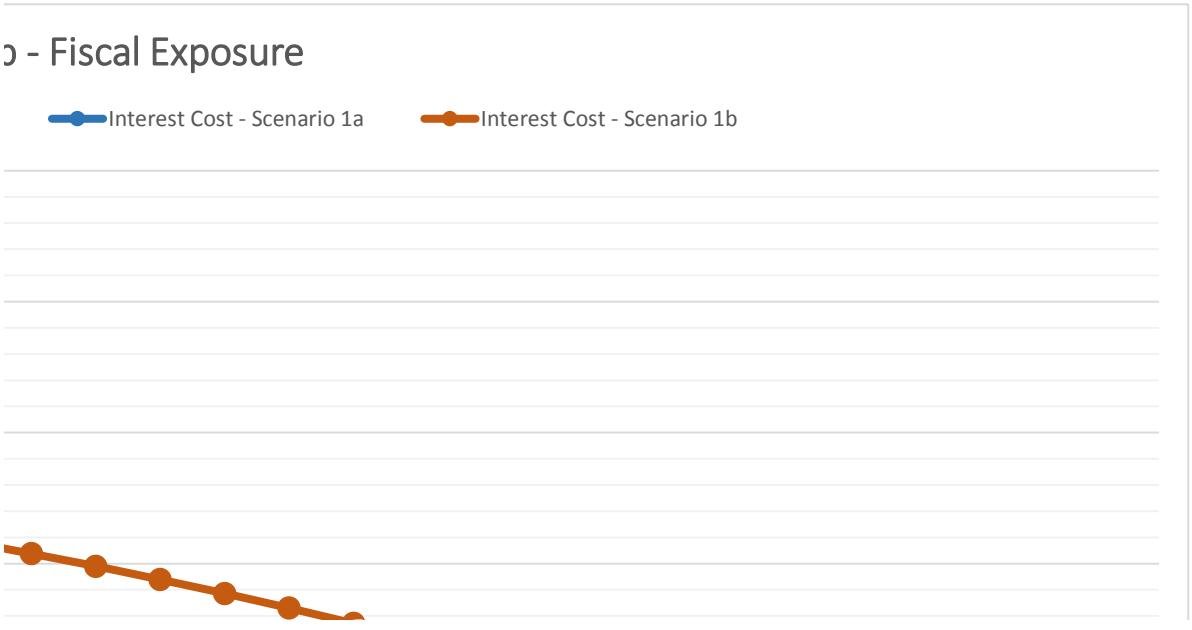

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

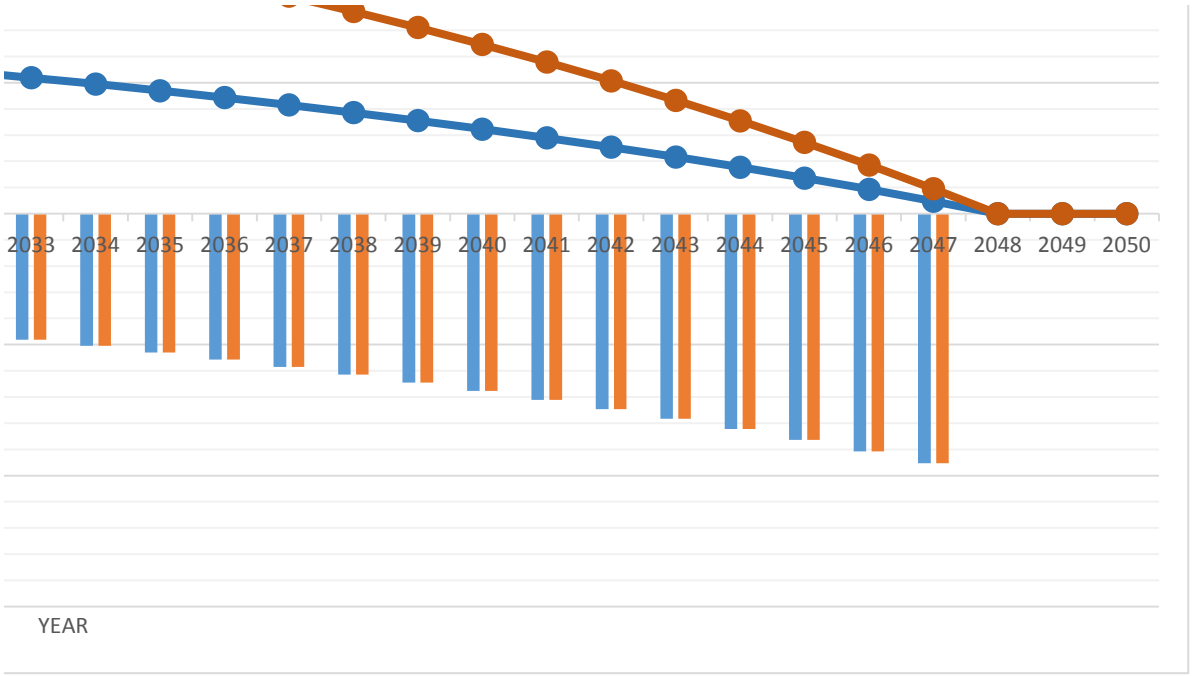


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

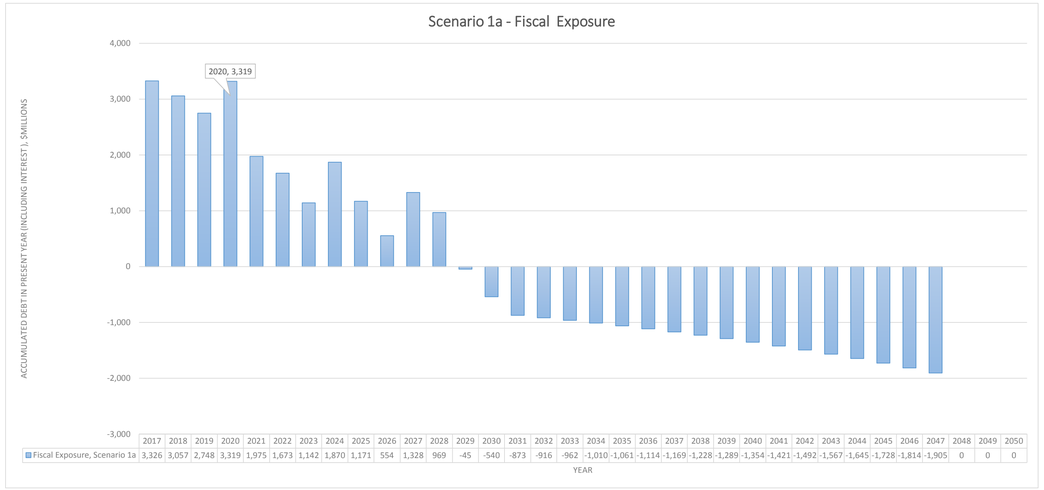
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

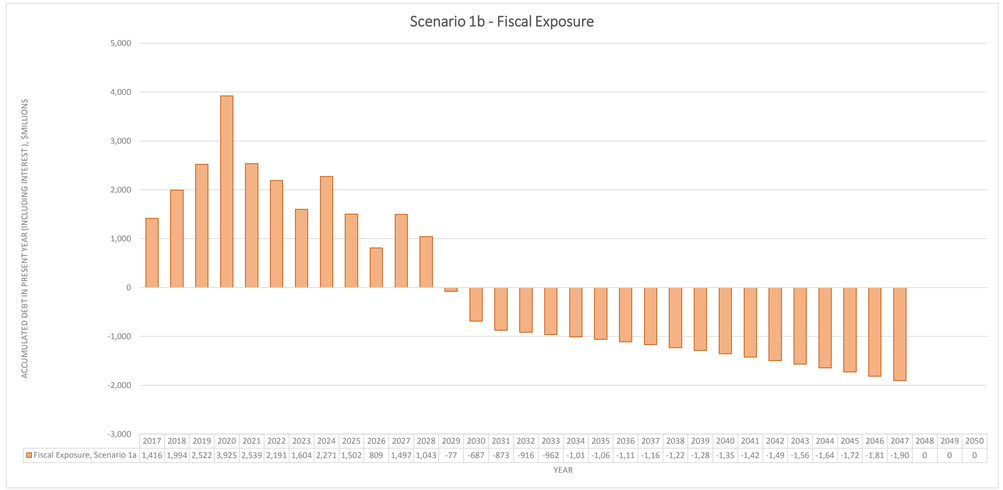
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

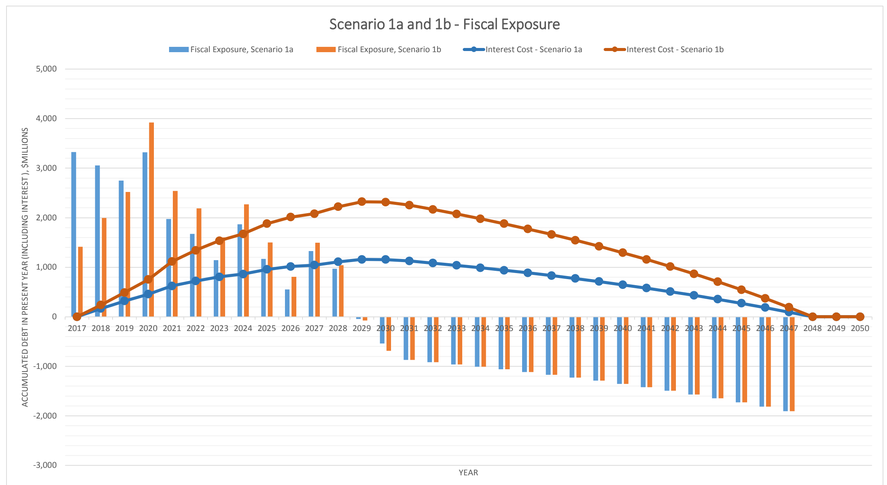
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

Notes:	Accounting treatment is to be determined.


Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0


Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0


Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

IESO GA cost forecast + extrapolation

Scenario
Option 1a
Borrow $3.3B, Bills Lowered 20%, No Cap

Option 1b
Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B

	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168

Ratepayer GA Payment	8,753	8,535	8,311	7,650
Total Accumulated Debt ($ billion)	3,342	6,812	10,402	15,452

Ratepayer GA Payment	9,781	9,661	9,367	8,733
Accumulated debt in present year (including 5% interest,	2,314	4,606	7,027	10,822

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528
19,868	24,126	28,033	32,843	37,110	40,911	45,720	50,350
8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717
13,761	16,470	18,755	21,866	24,355	26,295	29,156	31,750

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**
10009	9721	8654	8820	8238	7756	5662	5389

8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319
54,201	57,751	60,200	62,719	64,559	65,780	64,732	63,114
9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913
33,472	34,796	34,919	35,008	34,309	32,878	31,035	29,098

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627

10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485
60,904	58,078	54,611	50,476	45,641	40,076	33,745	26,613
8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151
27,063	24,923	22,673	20,309	17,823	15,210	12,464	9,577

2045	2046	2047	2048

3,451	3,285	3,126	2,975	2,831	2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695

12,786	13,095	13410.34	2975.154	2831.461	2694.708
18,640	9,784	4.85E-06	0	0	0

6,976	6,809	6650.631	2975.154	2831.461	2694.708
6,543	3,353	5E-12	0	0	0

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

	5.00%		
Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb15_1a_30yr

Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,342	3,470

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	835	3,374

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $66 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb15_1b_30yr

Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,314	2,292

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	579	2,309

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $35 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

#REF!		
$ millions		
30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	362	1,487

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	579 - 835	2,309 - 3,374

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	835	3374
Debt-Finance Global Adjustment Costs, Option 1a	579	2309
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		

Enhanced RPP Rebate		
Total, A	**835**	**3614**
Total, B	579	2549

Proposed Program Total:	579 - 835	2,549 - 3,614

ining

0	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
3,589	5,050	4,416	4,258

2018-19	2019-20	2020-21	2021-2022
3,500	3,955	4,892	4,377

$ millions

Option 1a
Option 2b

Assumes an inte

2034.

depend on decision on accounting treatment.

2019	2020	2021	2022
2,421	3,795	2,938	2,709

2018-19	2019-20	2020-21	2021-2022
2,324	2,765	3,581	2,881

2032.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022
2,324 - 3,500	2,765 - 3,955	3,581 - 4,892	2,881 - 4,377

/1

2018-19[1]	2019-20[1]	2020-21[1]
3500	3955	4892
2324	2765	3581
225	279	323
60	60	60
18	18	18

3803	**4312**	**5293**
2627	3122	3982

2,627 - 3,803 3,122 - 4,312 3,982 - 5,293

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$38,864	$61,735	$65,781	occurs in Year 2034
$22,873	$32,368	$35,009	occurs in Year 2032

erest rate of 5.00% (compounded monthly).

Tab Name		Total Accumulated Interest Costs
Feb15_1a_30yr	$26,517	$34,278
Feb15_1b_30yr	$15,631	$20,378
	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$26,517 to $34,278
Option 2	$15,631 to $20,378
Option 3	$17,202 to $22,028

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

Feb15_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,342	3,470	3,589	5,050	4,416	4,258	3,907	4,810	4,268	3,801	4,809	4,630	3,851	3,550	2,449	2,519	1,840	1,221	-1,048	-1,618	-2,210	-2,825	-3,467	-4,135	-4,834	-5,565	-6,330	-7,132	-7,973	-8,856	-9,783	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,421	3,553	3,675	5,171	4,521	4,359	4,000	4,924	4,369	3,891	4,923	4,740	3,943	3,635	2,508	2,579	1,884	1,250	-1,073	-1,656	-2,262	-2,893	-3,549	-4,234	-4,949	-5,697	-6,481	-7,302	-8,163	-9,067	-10,016	0	0	0	
			79	83	85	120	105	101	93	114	102	90	114	110	92	84	58	60	44	29	-25	-38	-53	-67	-82	-98	-115	-132	-151	-170	-190	-211	-233	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	5,050	3,365	61,735
Equal Monthly Debt Drawdown	5,171	3,341	

	Feb15 Option 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	65,781	2034	38,864
Equal Monthly Debt Drawdown	67,346		

Feb15 Option 1a, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
a	Debt, Beginning of Year	0	3,342	6,812	10,402	15,452	19,868	24,126	28,034	32,843	37,111	40,911	45,720	50,350	54,201	57,752	60,201	62,720	64,560	65,781	64,733	63,115	60,906	58,080	54,614	50,478	45,644	40,079	33,749	26,617	18,644	9,788	5	5	5	
c = a*5%	*Interest Cost - Feb15 Option 1a, 30-yr - End of Year Debt Drawdown*	*0*	*171*	*349*	*532*	*791*	*1,016*	*1,234*	*1,434*	*1,680*	*1,899*	*2,093*	*2,339*	*2,576*	*2,773*	*2,955*	*3,080*	*3,209*	*3,303*	*3,365*	*3,312*	*3,229*	*3,116*	*2,972*	*2,794*	*2,583*	*2,335*	*2,051*	*1,727*	*1,362*	*954*	*501*	*0*	*0*	*0*	61,735
b	Additional GA Debt Drawdown, End of Year	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	3,342	6,812	10,402	15,452	19,868	24,126	28,034	32,843	37,111	40,911	45,720	50,350	54,201	57,752	60,201	62,720	64,560	65,781	64,733	63,115	60,906	58,080	54,614	50,478	45,644	40,079	33,749	26,617	18,644	9,788	5	5	5	5	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	171	520	1,052	1,842	2,859	4,093	5,527	7,208	9,106	11,199	13,539	16,115	19,665	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	26,617	18,644	9,788	5	5	5	5	
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal	3,342	6,641	9,882	14,400	18,026	21,267	23,941	27,316	29,903	31,805	34,521	36,812	38,087	38,087	38,087	40,606	42,446	43,667	42,619	41,001	38,792	35,966	32,500	28,364	23,530	17,965	11,635	0	0	0	0	0	0	0	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	171	520	1,052	1,842	2,859	4,093	5,527	7,208	9,106	11,199	13,539	16,115	18,888	21,842	24,922	28,131	31,434	34,800	38,112	41,341	44,457	47,428	50,222	52,805	55,140	57,191	58,917	60,279	61,233	61,734				
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal	3,342	6,641	9,882	14,400	18,026	21,267	23,941	27,316	29,903	31,805	34,521	36,812	38,087	38,864	38,359	37,798	36,429	34,347	29,934	25,004	19,565	13,624	7,186	256	-7,161	-15,061	-23,442	-32,300	-41,635	-51,445	-61,729				
Fiscal Exposure - End of Year Debt Drawdown		3,342	3,470	3,589	5,050	4,416	4,258	3,907	4,810	4,268	3,801	4,809	4,630	3,851	3,550	2,449	2,519	1,840	1,221	-1,048	-1,618	-2,210	-2,825	-3,467	-4,135	-4,834	-5,565	-6,330	-7,132	-7,973	-8,856	-9,783	0	0	0	

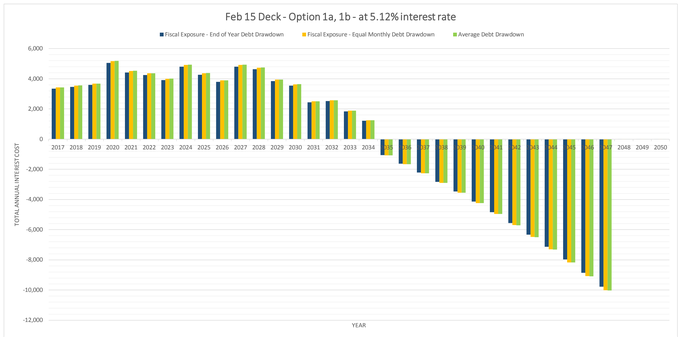
Feb15 Option 1a, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,421	6,974	10,649	15,820	20,341	24,700	28,700	33,624	37,993	41,885	46,808	51,548	55,491	59,125	61,633	64,212	66,096	67,346	66,273	64,617	62,354	59,462	55,913	51,679	46,730	41,033	34,552	27,250	19,087	10,021	5	5	5	
3,341	*Interest Cost - Feb15 Option 1a, 30-yr*	*79*	*254*	*434*	*652*	*896*	*1,118*	*1,327*	*1,549*	*1,782*	*1,989*	*2,207*	*2,449*	*2,668*	*2,857*	*3,013*	*3,140*	*3,253*	*3,332*	*3,341*	*3,273*	*3,177*	*3,049*	*2,889*	*2,696*	*2,468*	*2,203*	*1,900*	*1,557*	*1,172*	*743*	*268*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,421	6,974	10,649	15,820	20,341	24,700	28,700	33,624	37,993	41,885	46,808	51,548	55,491	59,125	61,633	64,212	66,096	67,346	66,273	64,617	62,354	59,462	55,913	51,679	46,730	41,033	34,552	27,250	19,087	10,021	5	5	5	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,421	3,553	3,675	5,171	4,521	4,359	4,000	4,924	4,369	3,891	4,923	4,740	3,943	3,635	2,508	2,579	1,884	1,250	-1,073	-1,656	-2,262	-2,893	-3,549	-4,234	-4,949	-5,697	-6,481	-7,302	-8,163	-9,067	-10,016	0	0	0	

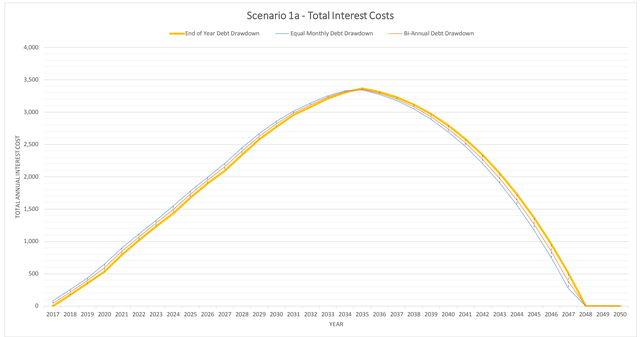
	Monthly Drawdown	278	275	270	377	302	270	223	281	216	159	226	191	106	65	(42)	(47)	(114)	(174)	(368)	(411)	(453)	(495)	(537)	(577)	(618)	(658)	(698)	(738)	(778)	(817)	(857)	-	-	-	
	FV of Monthly Drawdown at 5%	3,421	3,378	3,318	4,626	3,712	3,319	2,737	3,456	2,649	1,947	2,780	2,346	1,305	796	(517)	(574)	(1,401)	(2,132)	(4,518)	(5,047)	(5,568)	(6,083)	(6,591)	(7,094)	(7,593)	(8,088)	(8,580)	(9,069)	(9,557)	(10,043)	(10,529)	-	-	-	
	Annual Interest Cost on New Drawdowns	79	78	77	107	86	77	64	80	62	45	65	54	30	18	(12)	(13)	(33)	(50)	(105)	(117)	(129)	(141)	(153)	(165)	(176)	(188)	(199)	(211)	(222)	(233)	(245)	-	-	-	
	Annual Interest Cost on Opening Balance	-	175	357	545	809	1,041	1,264	1,468	1,720	1,944	2,143	2,395	2,637	2,839	3,025	3,153	3,285	3,382	3,446	3,391	3,306	3,190	3,042	2,861	2,644	2,391	2,099	1,768	1,394	977	513	0	0	0	
	Total Annual Interest Cost	79	254	434	652	896	1,118	1,327	1,549	1,782	1,989	2,207	2,449	2,668	2,857	3,013	3,140	3,253	3,332	3,341	3,273	3,177	3,049	2,889	2,696	2,468	2,203	1,900	1,557	1,172	743	268	0	0	0	

Feb15 Option 1a, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,385	6,899	10,535	15,650	20,122	24,435	28,392	33,263	37,585	41,435	46,305	50,994	54,895	58,490	60,971	63,523	65,386	66,623	65,561	63,923	61,685	58,823	55,312	51,124	46,228	40,592	34,181	26,958	18,882	9,913	5	5	5	
	Interest Cost - Feb15 Option 1a, 30-yr	*43*	*215*	*394*	*597*	*847*	*1,071*	*1,284*	*1,496*	*1,735*	*1,947*	*2,155*	*2,398*	*2,625*	*2,818*	*2,986*	*3,112*	*3,232*	*3,319*	*3,352*	*3,291*	*3,201*	*3,080*	*2,927*	*2,741*	*2,521*	*2,264*	*1,970*	*1,635*	*1,260*	*841*	*376*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,385	6,899	10,535	15,650	20,122	24,435	28,392	33,263	37,585	41,435	46,305	50,994	54,895	58,490	60,971	63,523	65,386	66,623	65,561	63,923	61,685	58,823	55,312	51,124	46,228	40,592	34,181	26,958	18,882	9,913	5	5	5	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,385	3,515	3,635	5,115	4,473	4,313	3,957	4,871	4,322	3,849	4,870	4,689	3,900	3,596	2,481	2,551	1,864	1,237	-1,061	-1,639	-2,238	-2,861	-3,511	-4,188	-4,896	-5,636	-6,411	-7,223	-8,075	-8,969	-9,909	0	0	0	

	Bi-Annual Drawdown	1,671	1,650	1,620	2,259	1,813	1,621	1,337	1,688	1,294	951	1,358	1,146	638	389	(253)	(280)	(684)	(1,041)	(2,207)	(2,465)	(2,719)	(2,971)	(3,219)	(3,465)	(3,708)	(3,950)	(4,190)	(4,429)	(4,667)	(4,905)	(5,142)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,385	3,341	3,282	4,576	3,672	3,283	2,707	3,418	2,620	1,926	2,750	2,320	1,291	787	(512)	(568)	(1,386)	(2,109)	(4,470)	(4,993)	(5,508)	(6,017)	(6,520)	(7,018)	(7,512)	(8,001)	(8,488)	(8,972)	(9,454)	(9,935)	(10,416)	-	-	-	
	Annual Interest Cost on New Drawdowns	43	42	41	58	46	41	34	43	33	24	35	29	16	10	(6)	(7)	(18)	(27)	(56)	(63)	(70)	(76)	(82)	(89)	(95)	(101)	(107)	(113)	(119)	(125)	(132)	-	-	-	
	Annual Interest Cost on Opening Balance	-	173	353	539	801	1,029	1,250	1,453	1,702	1,923	2,120	2,369	2,609	2,809	2,992	3,119	3,250	3,345	3,409	3,354	3,270	3,156	3,010	2,830	2,616	2,365	2,077	1,749	1,379	966	507	0	0	0	
	Total Annual Interest Cost	43	215	394	597	847	1,071	1,284	1,496	1,735	1,947	2,155	2,398	2,625	2,818	2,986	3,112	3,232	3,319	3,352	3,291	3,201	3,080	2,927	2,741	2,521	2,264	1,970	1,635	1,260	841	376	0	0	0	

Feb15 Option 1a, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,427	6,986	10,668	15,847	20,376	24,743	28,751	33,683	38,060	41,958	46,890	51,638	55,588	59,229	61,741	64,325	66,212	67,464	66,389	64,730	62,464	59,566	56,011	51,770	46,812	41,104	34,612	27,298	19,121	10,038	5	5	5	
	Interest Cost - Feb15 Option 1a, 30-yr	*85*	*260*	*440*	*661*	*904*	*1,125*	*1,334*	*1,557*	*1,789*	*1,996*	*2,216*	*2,458*	*2,675*	*2,864*	*3,017*	*3,144*	*3,256*	*3,334*	*3,339*	*3,270*	*3,173*	*3,044*	*2,883*	*2,688*	*2,459*	*2,193*	*1,889*	*1,544*	*1,158*	*727*	*251*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,427	6,986	10,668	15,847	20,376	24,743	28,751	33,683	38,060	41,958	46,890	51,638	55,588	59,229	61,741	64,325	66,212	67,464	66,389	64,730	62,464	59,566	56,011	51,770	46,812	41,104	34,612	27,298	19,121	10,038	5	5	5	6	
Fiscal Exposure - Average Debt Drawdown		3,427	3,559	3,681	5,180	4,529	4,367	4,007	4,933	4,377	3,898	4,932	4,749	3,950	3,641	2,512	2,584	1,887	1,252	-1,075	-1,659	-2,266	-2,898	-3,555	-4,241	-4,958	-5,707	-6,492	-7,314	-8,177	-9,083	-10,034	0	0	0	





Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

Feb15_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,314	2,292	2,421	3,795	2,938	2,709	2,285	3,111	2,489	1,940	2,862	2,594	1,722	1,324	123	89	-699	-1,431	-1,842	-1,937	-2,036	-2,140	-2,249	-2,364	-2,485	-2,613	-2,746	-2,887	-3,034	-3,190	-3,353	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,369	2,346	2,479	3,886	3,008	2,774	2,340	3,185	2,548	1,986	2,930	2,656	1,763	1,356	126	91	-716	-1,465	-1,886	-1,983	-2,084	-2,191	-2,303	-2,421	-2,544	-2,675	-2,812	-2,955	-3,107	-3,266	-3,433	0	0	0
			55	55	58	90	70	64	54	74	59	46	68	62	41	32	3	2	-17	-34	-44	-46	-48	-51	-54	-56	-59	-62	-65	-69	-72	-76	-80	0	0	0

0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,795	1,791	32,368
Equal Monthly Debt Drawdown	3,886	1,789	

	Feb15 Option 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	35,009	2032	22,873
Equal Monthly Debt Drawdown	35,841		

Feb15 Option 1a, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
a — Debt, Beginning of Year	0	2,314	4,606	7,027	10,822	13,761	16,470	18,755	21,866	24,355	26,295	29,157	31,751	33,472	34,797	34,920	35,009	34,310	32,879	31,036	29,100	27,064	24,924	22,675	20,310	17,825	15,212	12,466	9,579	6,545	3,355	3	3	3	
c = a*5% — *Interest Cost - Feb15 Option 1a, 30-yr - End of Year Debt Drawdown*	*0*	*118*	*236*	*360*	*554*	*704*	*843*	*960*	*1,119*	*1,246*	*1,345*	*1,492*	*1,624*	*1,713*	*1,780*	*1,787*	*1,791*	*1,755*	*1,682*	*1,588*	*1,489*	*1,385*	*1,275*	*1,160*	*1,039*	*912*	*778*	*638*	*490*	*335*	*172*	*0*	*0*	*0*	32,368
b — Additional GA Debt Drawdown, End of Year	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	2,314	4,606	7,027	10,822	13,761	16,470	18,755	21,866	24,355	26,295	29,157	31,751	33,472	34,797	34,920	35,009	34,310	32,879	31,036	29,100	27,064	24,924	22,675	20,310	17,825	15,212	12,466	9,579	6,545	3,355	3	3	3	3	
	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	
Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	118	354	714	1,267	1,971	2,814	3,773	4,892	6,138	7,484	8,975	10,600	11,924	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	9,579	6,545	3,355	3	3	3	3	
Feb15 Option 1a, 30-yr - Accumulated Debt Principal	2,314	4,488	6,673	10,109	12,493	14,499	15,941	18,092	19,463	20,157	21,673	22,775	22,873	22,873	22,873	22,961	22,262	20,831	18,989	17,052	15,017	12,877	10,627	8,263	5,778	3,165	419	0	0	0	0	0	0	0	
Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	118	354	714	1,267	1,971	2,814	3,773	4,892	6,138	7,484	8,975	10,600	12,312	14,092	15,879	17,670	19,425	21,108	22,695	24,184	25,569	26,844	28,004	29,043	29,955	30,733	31,371	31,861	32,196	32,368				
Feb15 Option 1a, 30-yr - Accumulated Debt Principal	2,314	4,488	6,673	10,109	12,493	14,499	15,941	18,092	19,463	20,157	21,673	22,775	22,873	22,485	20,828	19,130	16,639	13,453	9,929	6,404	2,880	-645	-4,169	-7,694	-11,218	-14,743	-18,267	-21,792	-25,316	-28,841	-32,365				
Fiscal Exposure - End of Year Debt Drawdown	2,314	2,292	2,421	3,795	2,938	2,709	2,285	3,111	2,489	1,940	2,862	2,594	1,722	1,324	123	89	-699	-1,431	-1,842	-1,937	-2,036	-2,140	-2,249	-2,364	-2,485	-2,613	-2,746	-2,887	-3,034	-3,190	-3,353	0	0	0	

Feb15 Option 1a, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Debt, Beginning of Year	0	2,369	4,716	7,194	11,080	14,088	16,862	19,201	22,386	24,934	26,920	29,850	32,506	34,269	35,625	35,751	35,841	35,126	33,661	31,774	29,792	27,708	25,517	23,214	20,793	18,249	15,574	12,763	9,807	6,701	3,435	3	3	3	
1,789 — *Interest Cost - Feb15 Option 1a, 30-yr*	*55*	*173*	*293*	*450*	*624*	*768*	*897*	*1,034*	*1,178*	*1,292*	*1,413*	*1,553*	*1,665*	*1,744*	*1,783*	*1,789*	*1,774*	*1,721*	*1,638*	*1,542*	*1,440*	*1,334*	*1,222*	*1,104*	*980*	*850*	*713*	*569*	*418*	*259*	*92*	*0*	*0*	*0*	32,368
Additional GA Debt Drawdown	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,369	4,716	7,194	11,080	14,088	16,862	19,201	22,386	24,934	26,920	29,850	32,506	34,269	35,625	35,751	35,841	35,126	33,661	31,774	29,792	27,708	25,517	23,214	20,793	18,249	15,574	12,763	9,807	6,701	3,435	3	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown	2,369	2,346	2,479	3,886	3,008	2,774	2,340	3,185	2,548	1,986	2,930	2,656	1,763	1,356	126	91	-716	-1,465	-1,886	-1,983	-2,084	-2,191	-2,303	-2,421	-2,544	-2,675	-2,812	-2,955	-3,107	-3,266	-3,433	0	0	0	

Monthly Drawdown	193	181	182	286	199	167	120	179	114	58	126	92	8	(32)	(138)	(141)	(208)	(266)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	-	-	-	
FV of Monthly Drawdown at 5%	2,369	2,225	2,237	3,518	2,441	2,053	1,477	2,202	1,403	710	1,553	1,128	100	(397)	(1,697)	(1,738)	(2,549)	(3,262)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	-	-	-	
Annual Interest Cost on New Drawdowns	55	52	52	82	57	48	34	51	33	17	36	26	2	(9)	(39)	(40)	(59)	(76)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	-	-	-	
Annual Interest Cost on Opening Balance	-	121	241	368	567	721	863	982	1,145	1,276	1,377	1,527	1,663	1,753	1,823	1,829	1,834	1,797	1,722	1,626	1,524	1,418	1,305	1,188	1,064	934	797	653	502	343	176	0	0	0	
Total Annual Interest Cost	55	173	293	450	624	768	897	1,034	1,178	1,292	1,413	1,553	1,665	1,744	1,783	1,789	1,774	1,721	1,638	1,542	1,440	1,334	1,222	1,104	980	850	713	569	418	259	92	0	0	0	

Feb15 Option 1a, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Debt, Beginning of Year	0	2,344	4,665	7,117	10,961	13,937	16,681	18,995	22,146	24,667	26,631	29,530	32,157	33,901	35,242	35,367	35,456	34,748	33,299	31,433	29,472	27,410	25,243	22,965	20,570	18,053	15,407	12,626	9,702	6,629	3,398	3	3	3	
Interest Cost - Feb15 Option 1a, 30-yr	*30*	*148*	*267*	*408*	*591*	*739*	*872*	*999*	*1,151*	*1,271*	*1,382*	*1,525*	*1,646*	*1,729*	*1,782*	*1,788*	*1,782*	*1,737*	*1,659*	*1,563*	*1,463*	*1,357*	*1,246*	*1,130*	*1,007*	*879*	*743*	*601*	*451*	*294*	*129*	*0*	*0*	*0*	32,368
Additional GA Debt Drawdown	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,344	4,665	7,117	10,961	13,937	16,681	18,995	22,146	24,667	26,631	29,530	32,157	33,901	35,242	35,367	35,456	34,748	33,299	31,433	29,472	27,410	25,243	22,965	20,570	18,053	15,407	12,626	9,702	6,629	3,398	3	3	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown	2,344	2,321	2,452	3,844	2,976	2,744	2,314	3,151	2,521	1,965	2,898	2,627	1,744	1,341	125	90	-708	-1,449	-1,866	-1,961	-2,062	-2,167	-2,278	-2,395	-2,517	-2,646	-2,781	-2,924	-3,073	-3,230	-3,396	0	0	0	

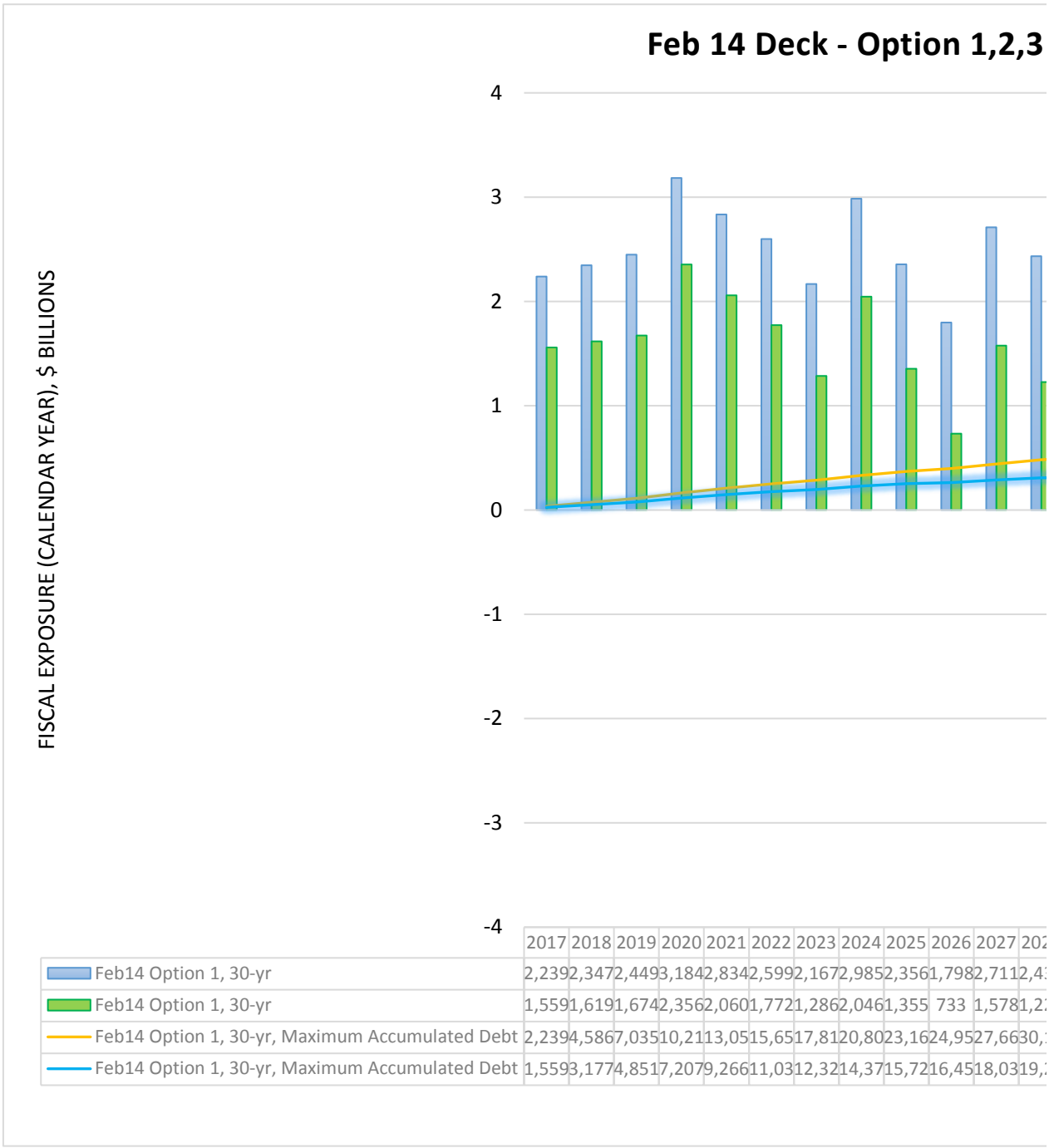
Bi-Annual Drawdown	1,157	1,087	1,093	1,718	1,192	1,003	721	1,076	685	347	758	551	49	(194)	(829)	(849)	(1,245)	(1,593)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	-	-	-	
FV of Bi-Annual Drawdown at 5%	2,344	2,201	2,213	3,480	2,415	2,031	1,461	2,179	1,388	703	1,536	1,116	99	(393)	(1,678)	(1,720)	(2,522)	(3,227)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	-	-	-	
Annual Interest Cost on New Drawdowns	30	28	28	44	30	26	18	28	18	9	19	14	1	(5)	(21)	(22)	(32)	(41)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	-	-	-	
Annual Interest Cost on Opening Balance	-	120	239	364	561	713	853	972	1,133	1,262	1,363	1,511	1,645	1,734	1,803	1,809	1,814	1,778	1,704	1,608	1,508	1,402	1,291	1,175	1,052	924	788	646	496	339	174	0	0	0	
Total Annual Interest Cost	30	148	267	408	591	739	872	999	1,151	1,271	1,382	1,525	1,646	1,729	1,782	1,788	1,782	1,737	1,659	1,563	1,463	1,357	1,246	1,130	1,007	879	743	601	451	294	129	0	0	0	

Feb15 Option 1a, 30-yr — Average Debt Drawdown

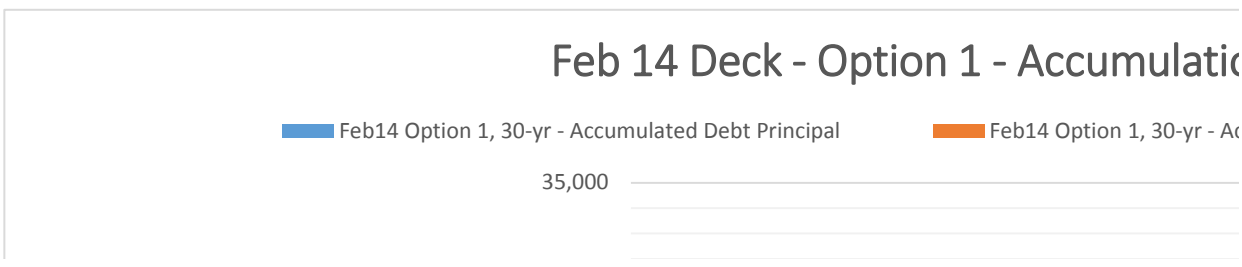
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Debt, Beginning of Year	0	2,373	4,724	7,207	11,099	14,113	16,891	19,235	22,425	24,978	26,968	29,902	32,563	34,329	35,687	35,813	35,904	35,187	33,720	31,830	29,844	27,756	25,562	23,255	20,830	18,281	15,601	12,785	9,824	6,712	3,441	3	3	3	
Interest Cost - Feb15 Option 1a, 30-yr	*59*	*177*	*298*	*457*	*629*	*773*	*901*	*1,039*	*1,182*	*1,296*	*1,419*	*1,558*	*1,668*	*1,746*	*1,783*	*1,789*	*1,773*	*1,719*	*1,635*	*1,538*	*1,437*	*1,330*	*1,218*	*1,100*	*976*	*845*	*708*	*564*	*412*	*253*	*86*	*0*	*0*	*0*	32,368
Additional GA Debt Drawdown	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,373	4,724	7,207	11,099	14,113	16,891	19,235	22,425	24,978	26,968	29,902	32,563	34,329	35,687	35,813	35,904	35,187	33,720	31,830	29,844	27,756	25,562	23,255	20,830	18,281	15,601	12,785	9,824	6,712	3,441	3	3	3	3	
Fiscal Exposure - Average Debt Drawdown	2,373	2,351	2,483	3,892	3,013	2,779	2,344	3,190	2,553	1,989	2,935	2,660	1,766	1,358	126	91	-717	-1,468	-1,889	-1,986	-2,088	-2,195	-2,307	-2,425	-2,549	-2,679	-2,816	-2,961	-3,112	-3,271	-3,439	0	0	0	

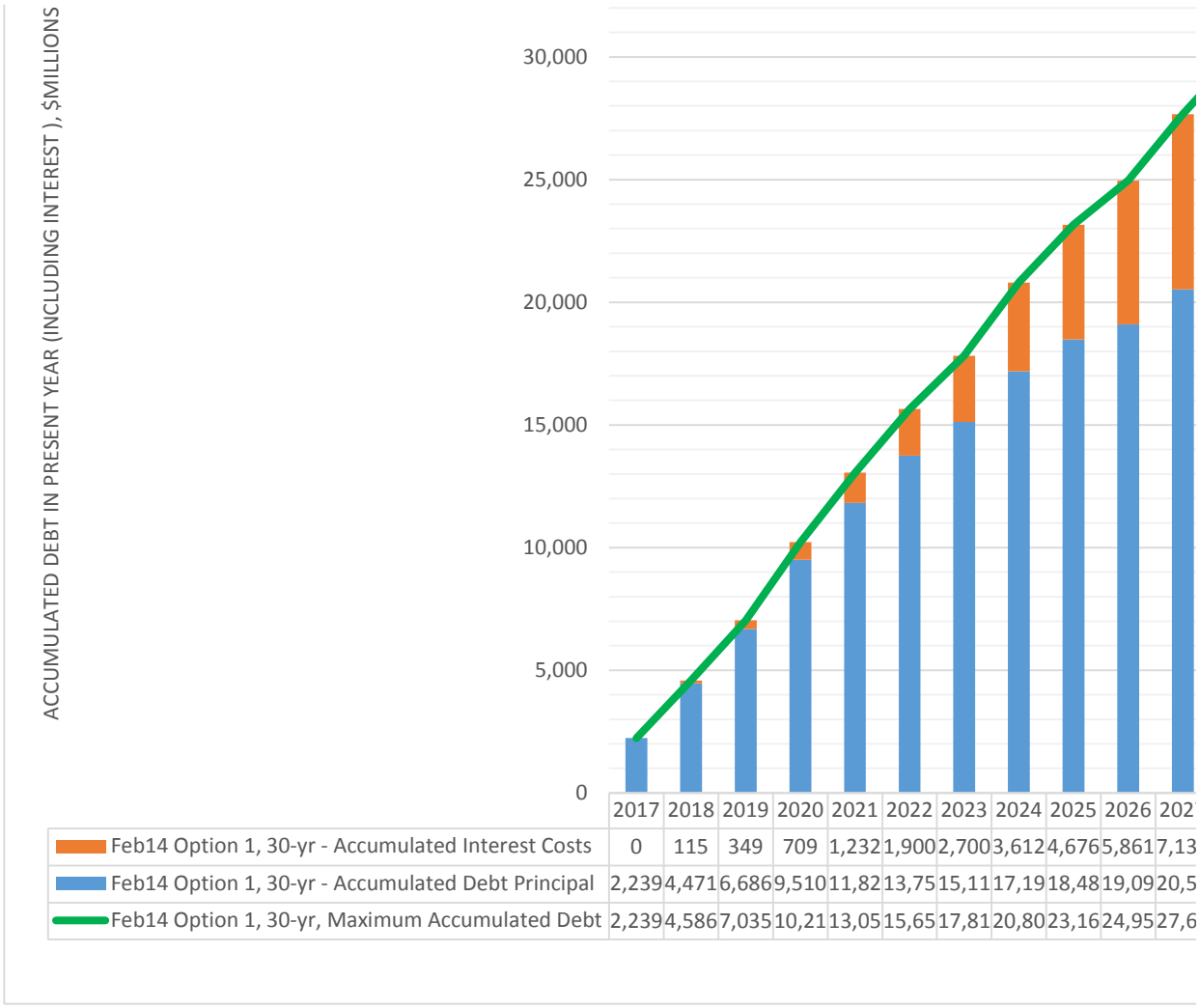
Feb 14 Deck

Feb 14 Deck - Option 1,2,3 - at 5.12% interest rate

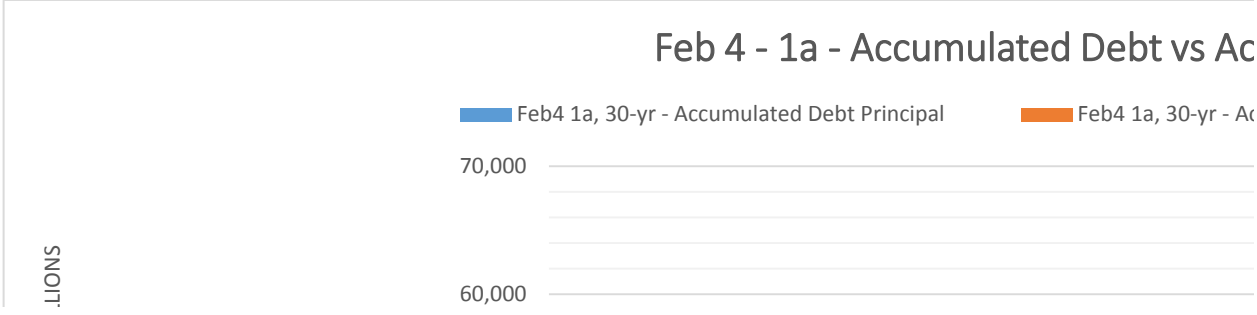


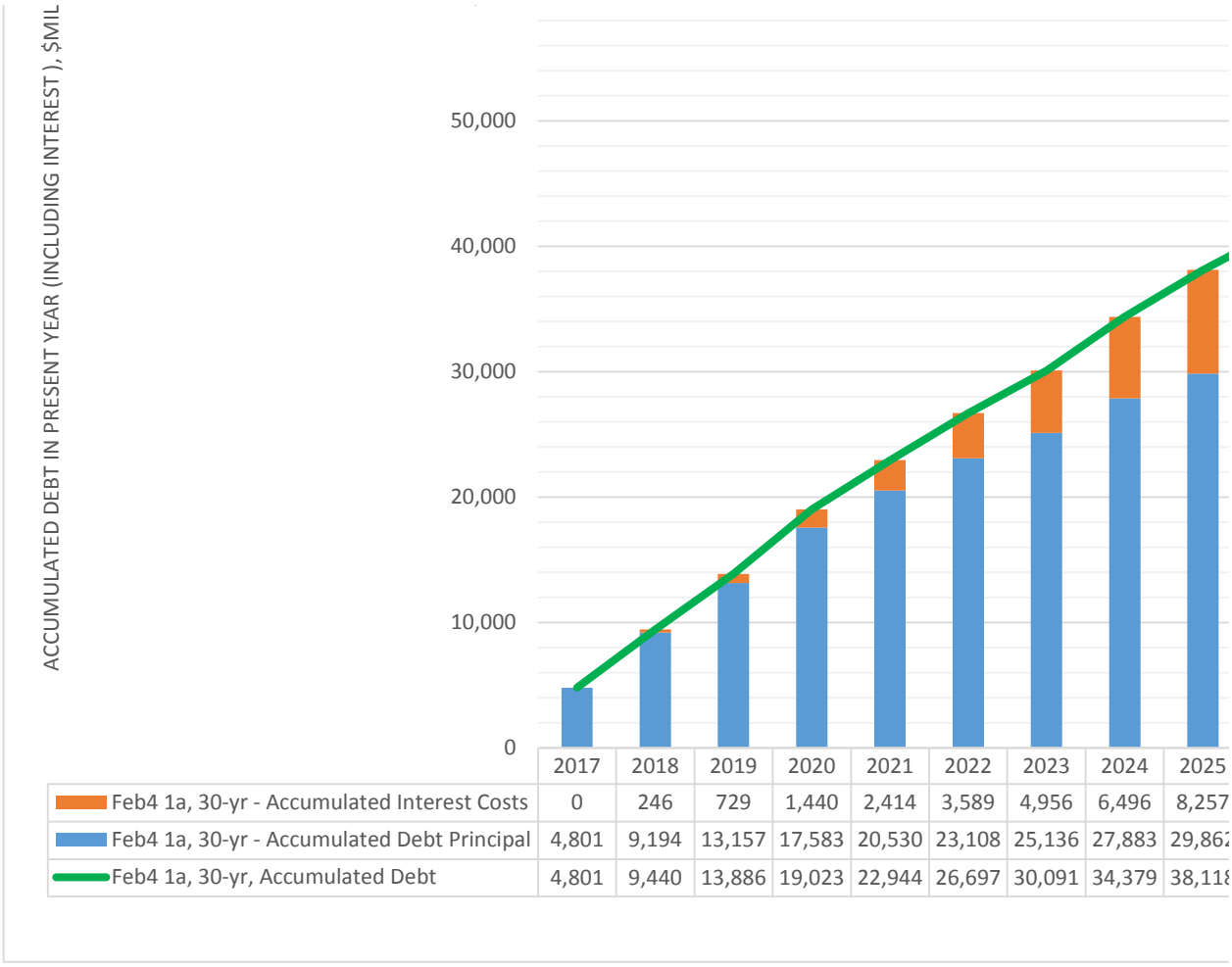
Feb 14 Deck - Option 1 - Accumulation of Debt (Principal and Interest)



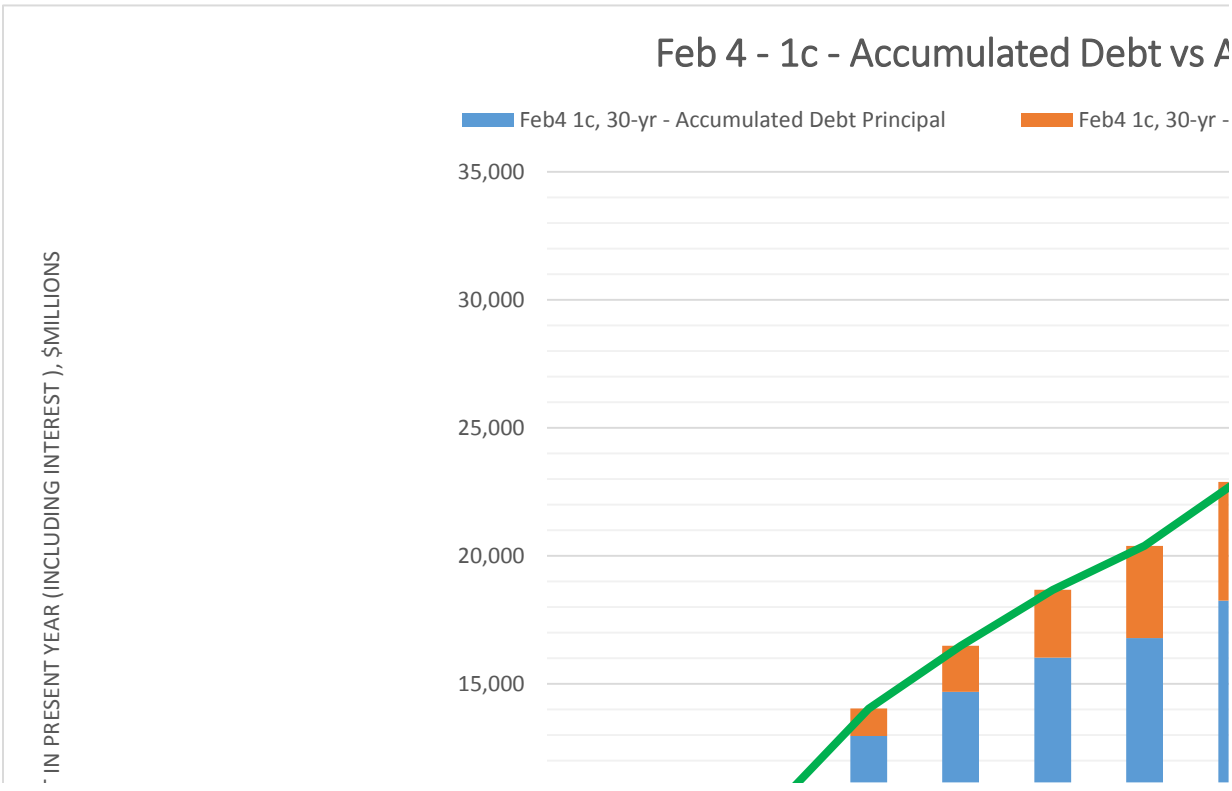


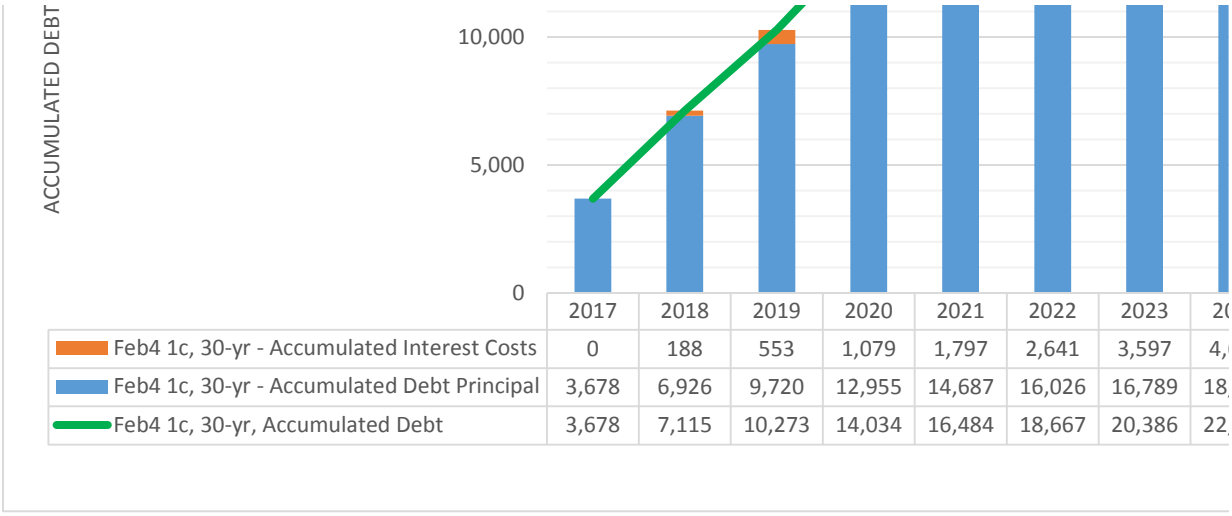
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	202
Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,13
Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,82	13,75	15,11	17,19	18,48	19,09	20,5
Feb14 Option 1, 30-yr, Maximum Accumulated Debt	2,239	4,586	7,035	10,21	13,05	15,65	17,81	20,80	23,16	24,95	27,6



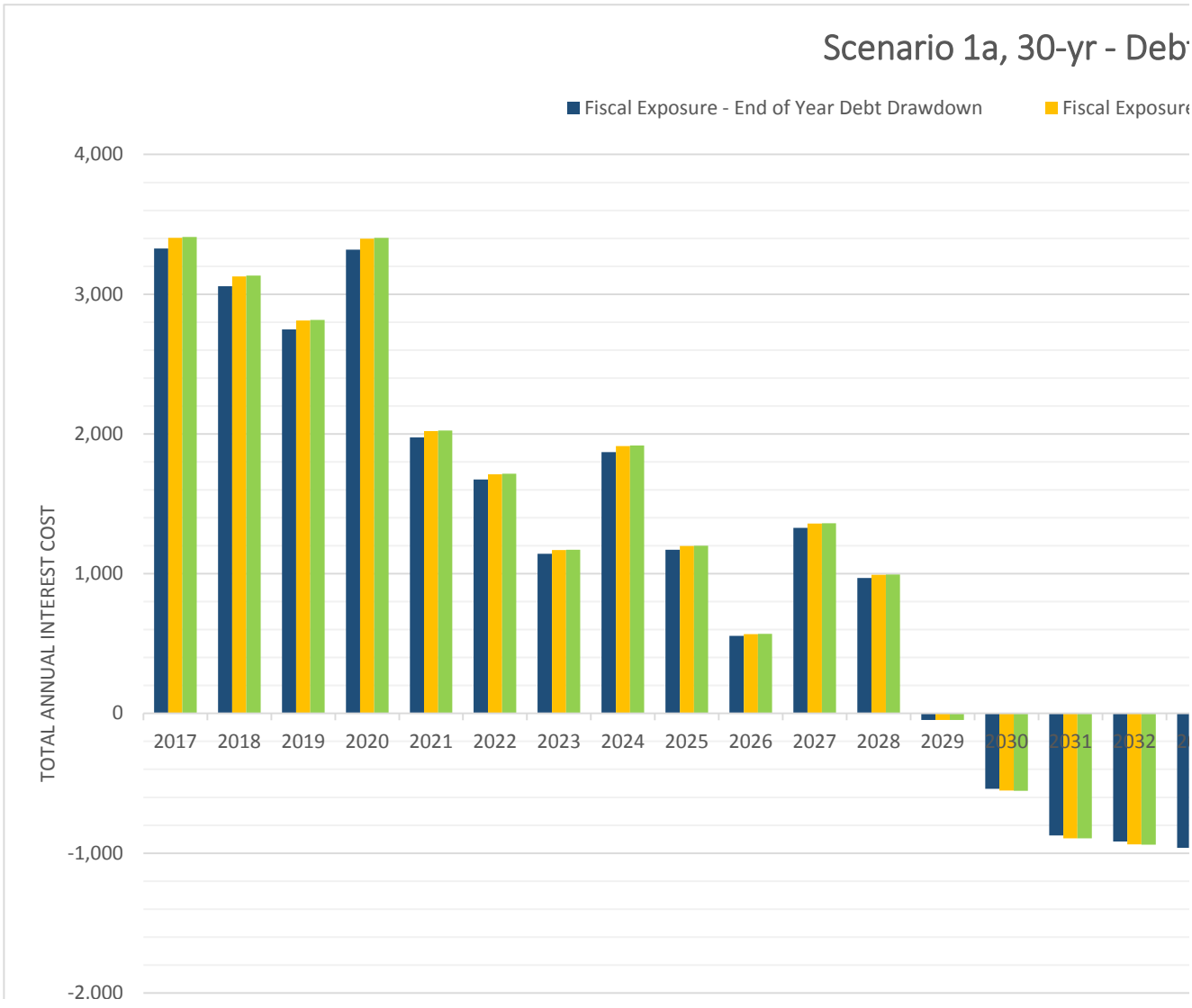


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



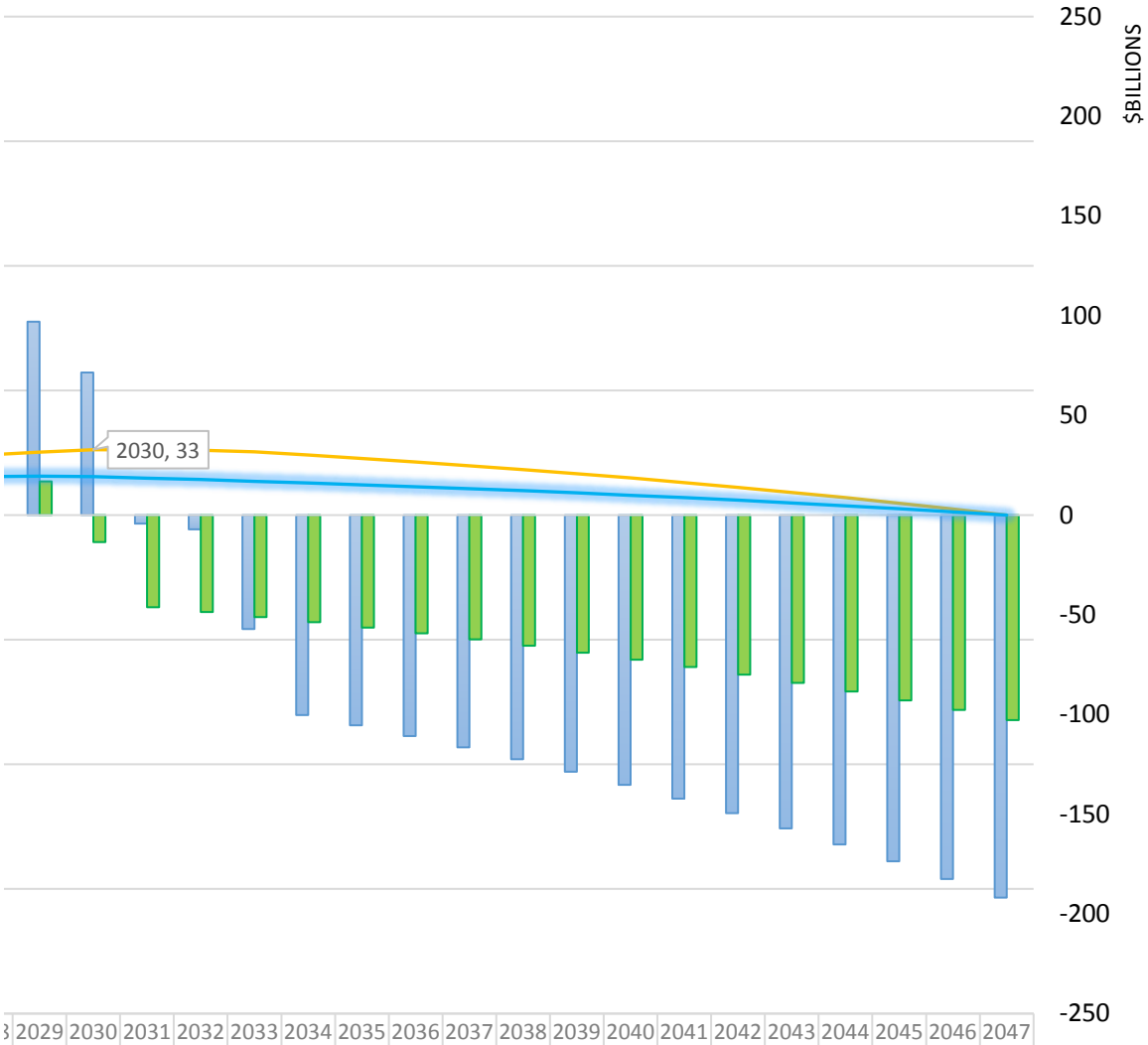


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

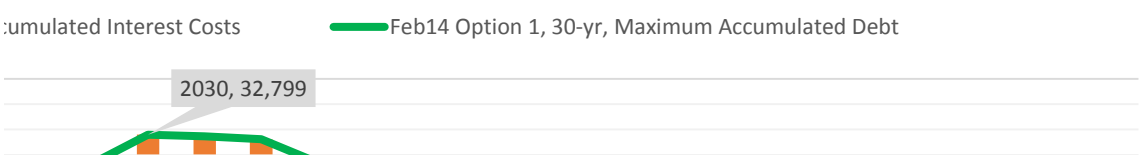
- at 5.12% interest rate

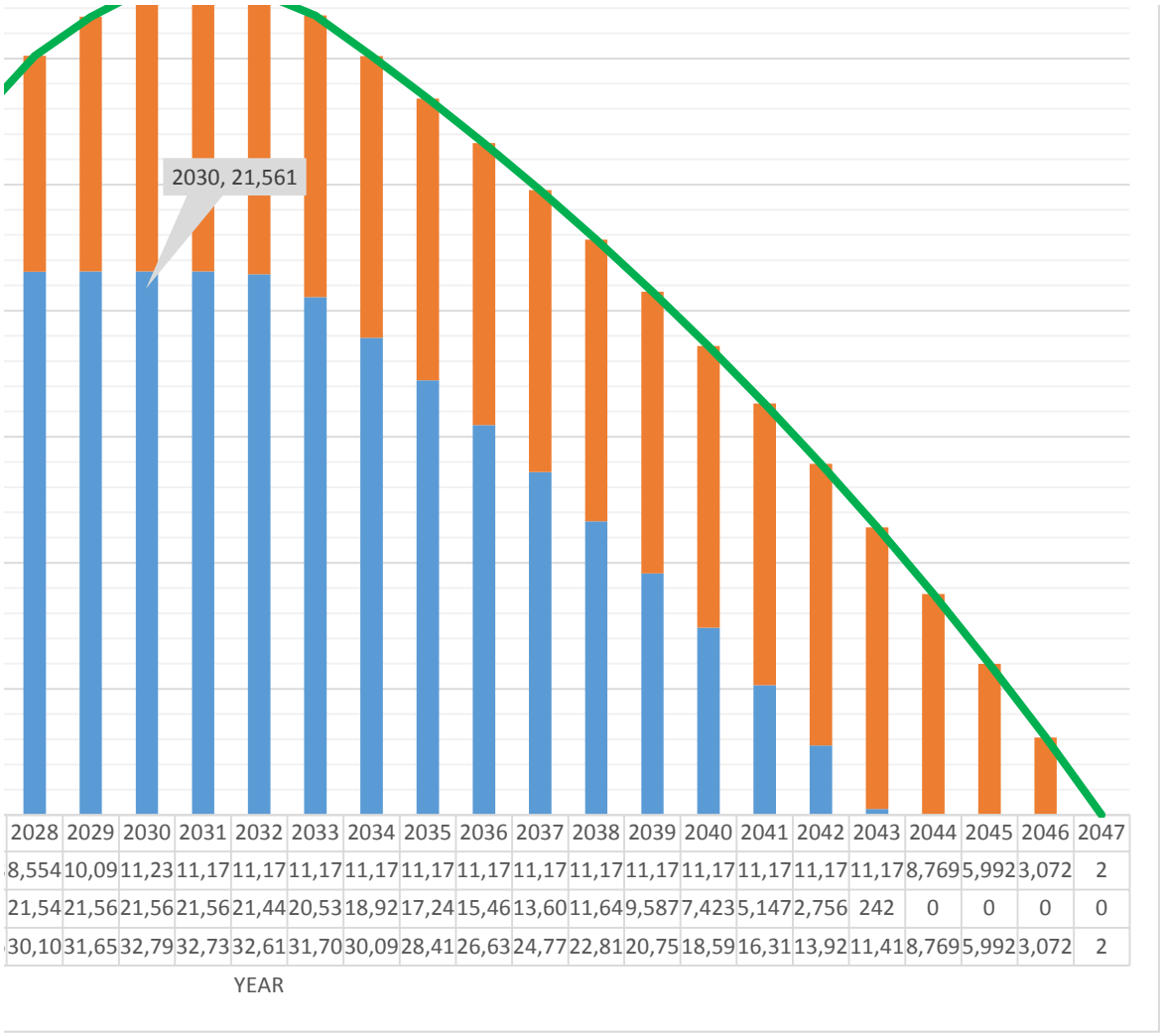


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
41,552	1,144	-68	-114	-914	-1,60	-1,68	-1,77	-1,86	-1,95	-2,05	-2,16	-2,27	-2,39	-2,51	-2,64	-2,77	-2,92	-3,06
3 271	-217	-740	-778	-818	-859	-903	-950	-998	-1,04	-1,10	-1,15	-1,21	-1,28	-1,34	-1,41	-1,48	-1,56	-1,64
031,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,769	5,992	3,072	2
519,53	19,31	18,57	17,79	16,98	16,12	15,21	14,26	13,27	12,22	11,11	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1

CALENDAR YEAR

n of Debt (Principal and Interest)

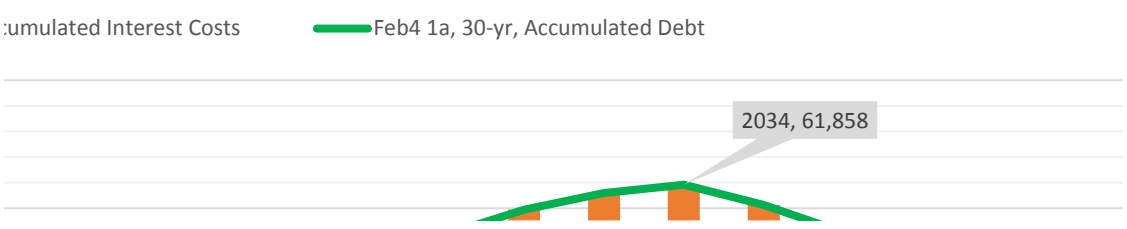




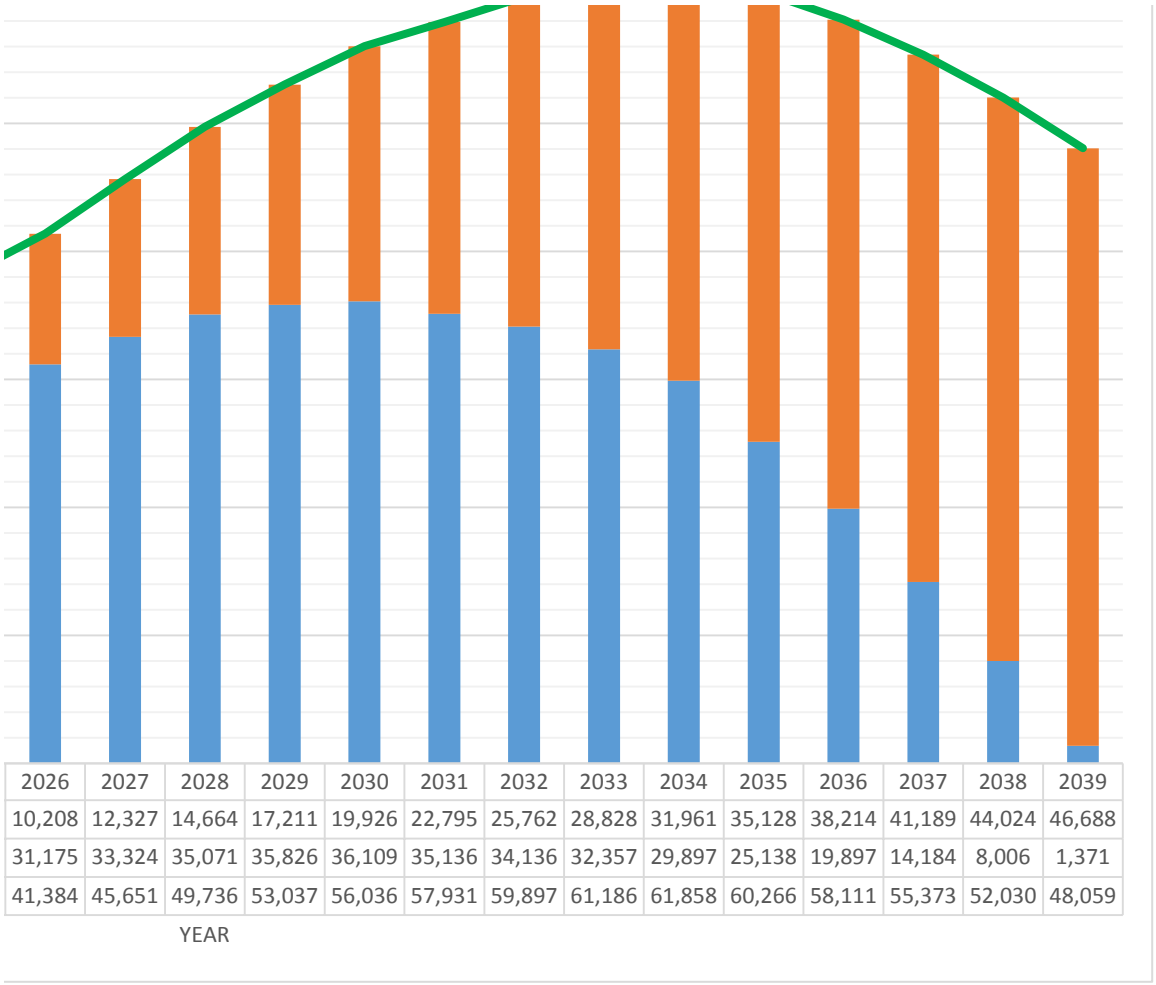
2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
8,554	10,09	11,23	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	8,769	5,992	3,072	2
21,54	21,56	21,56	21,56	21,44	20,53	18,92	17,24	15,46	13,60	11,64	9,587	7,423	5,147	2,756	242	0	0	0	0
30,10	31,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,769	5,992	3,072	2

YEAR

cumulated Total Interest Costs



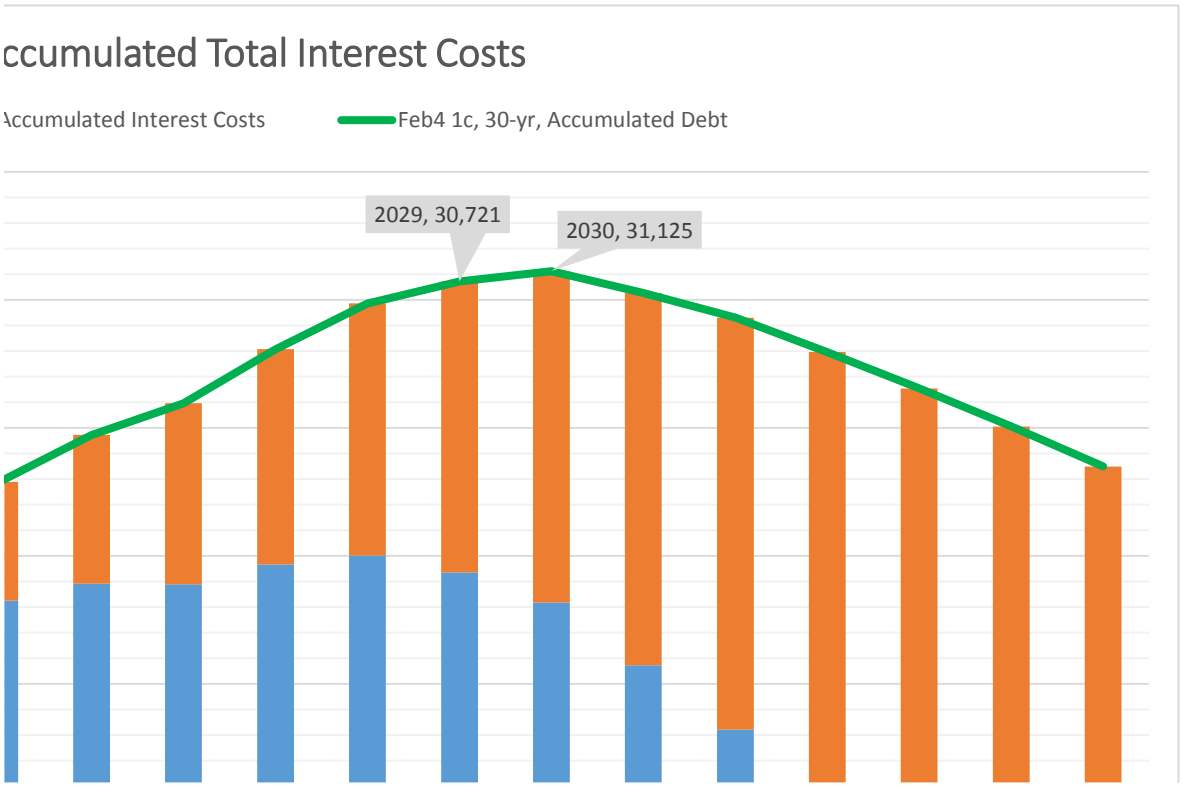
LIONS

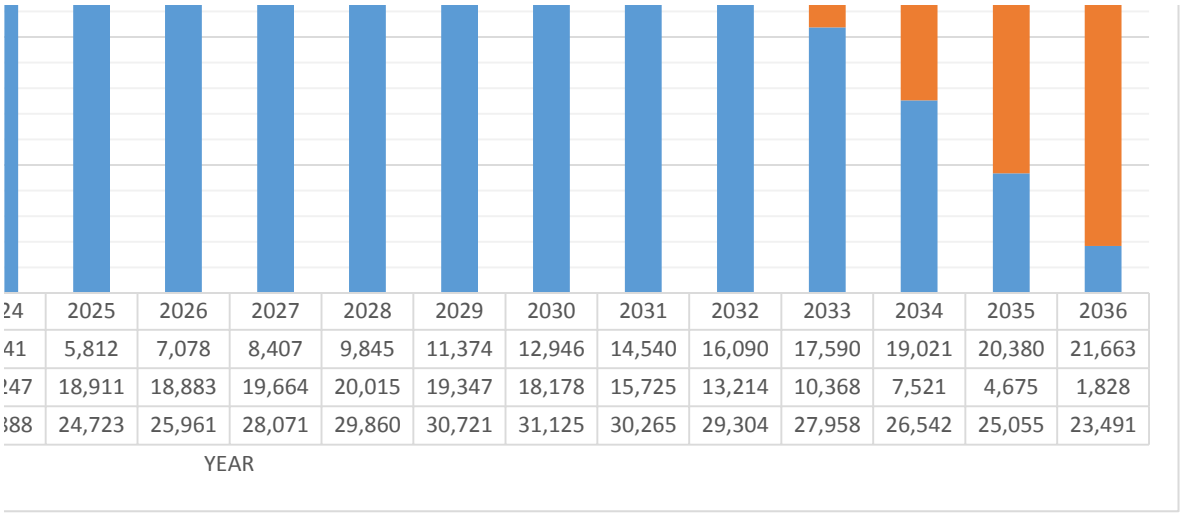


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

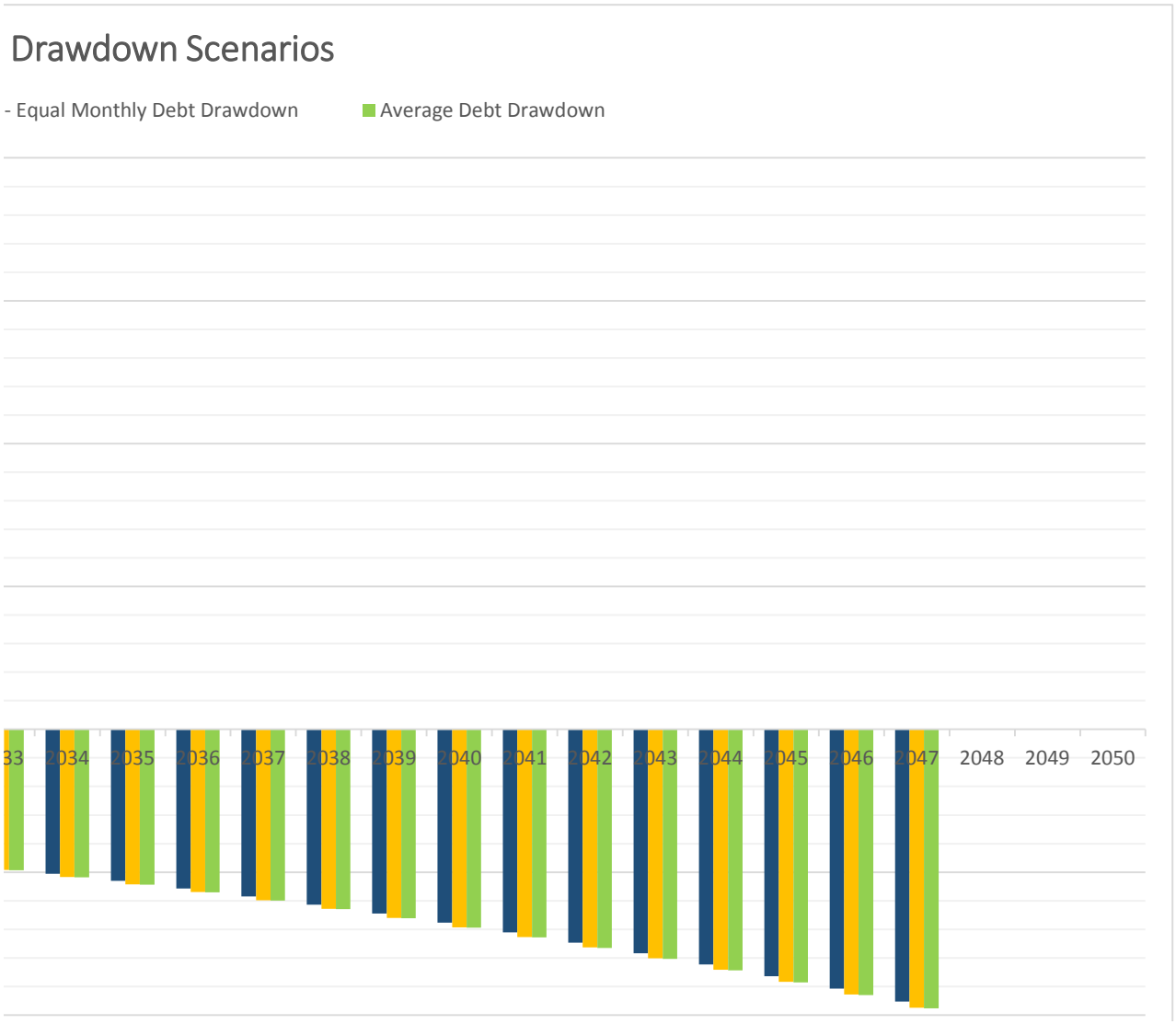
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





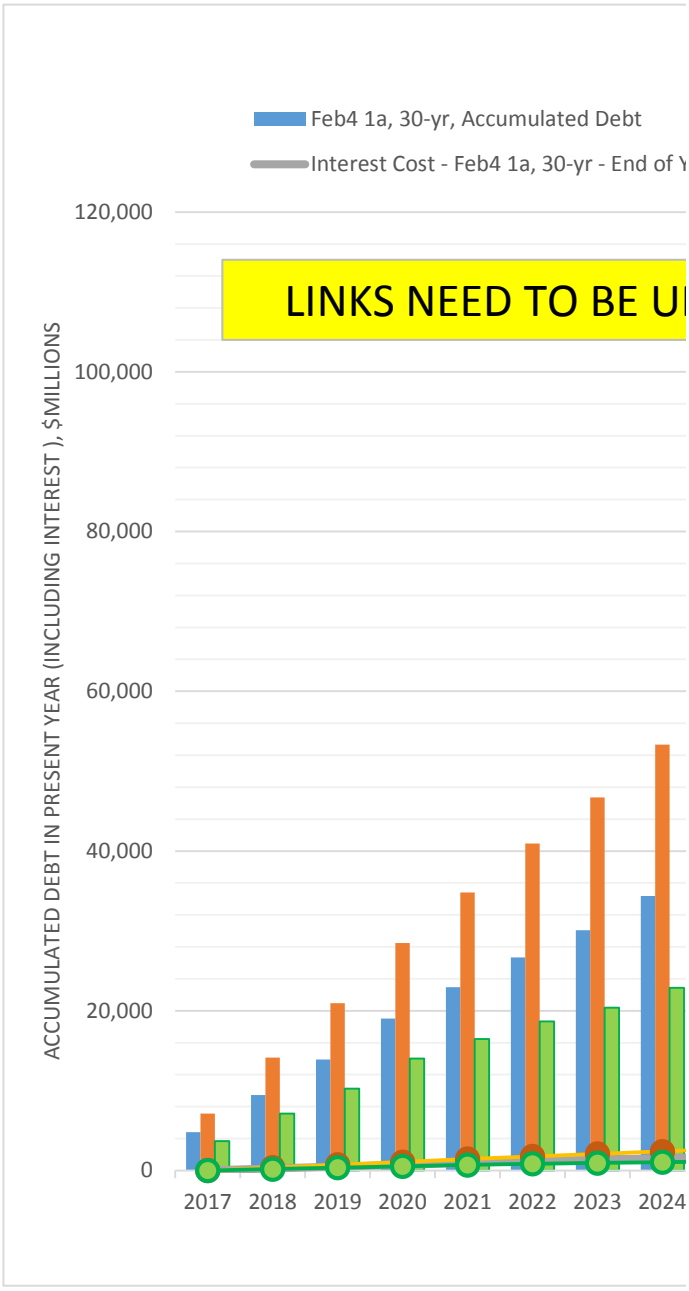
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

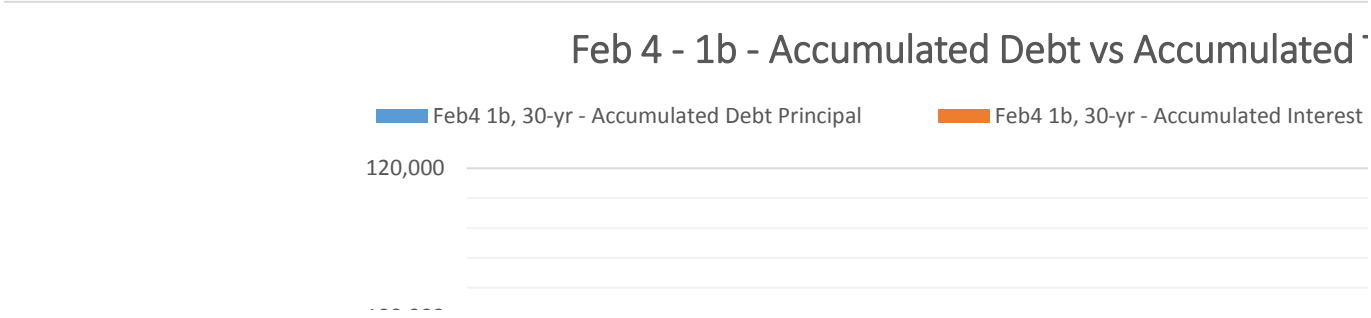
YEAR

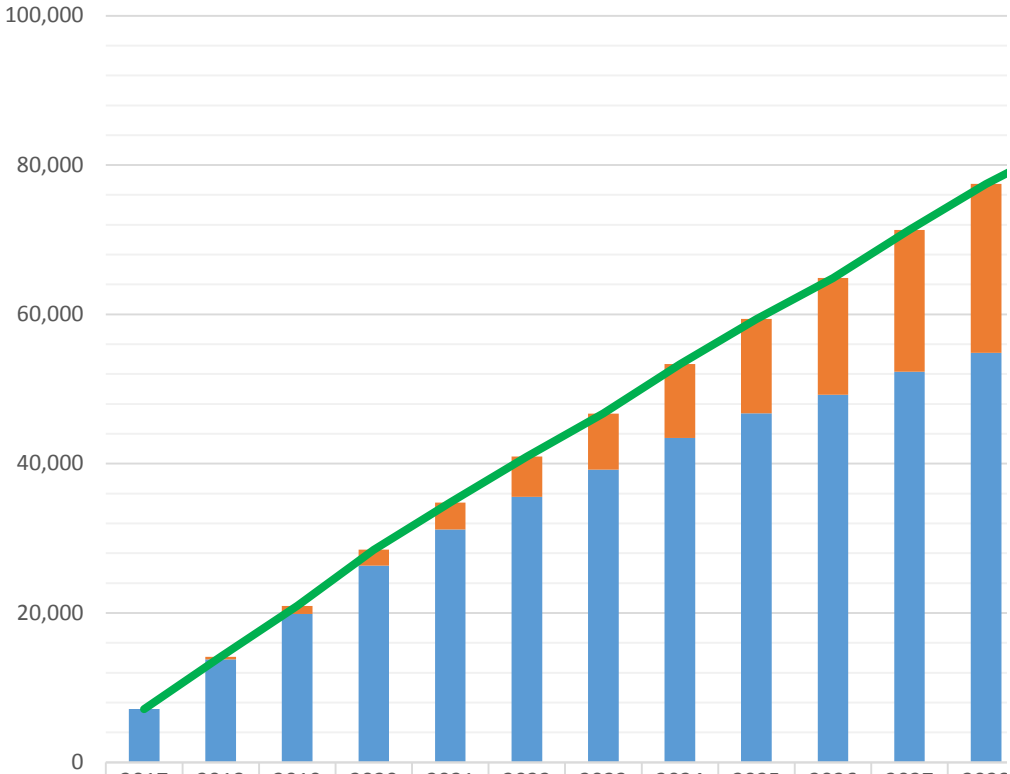


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate



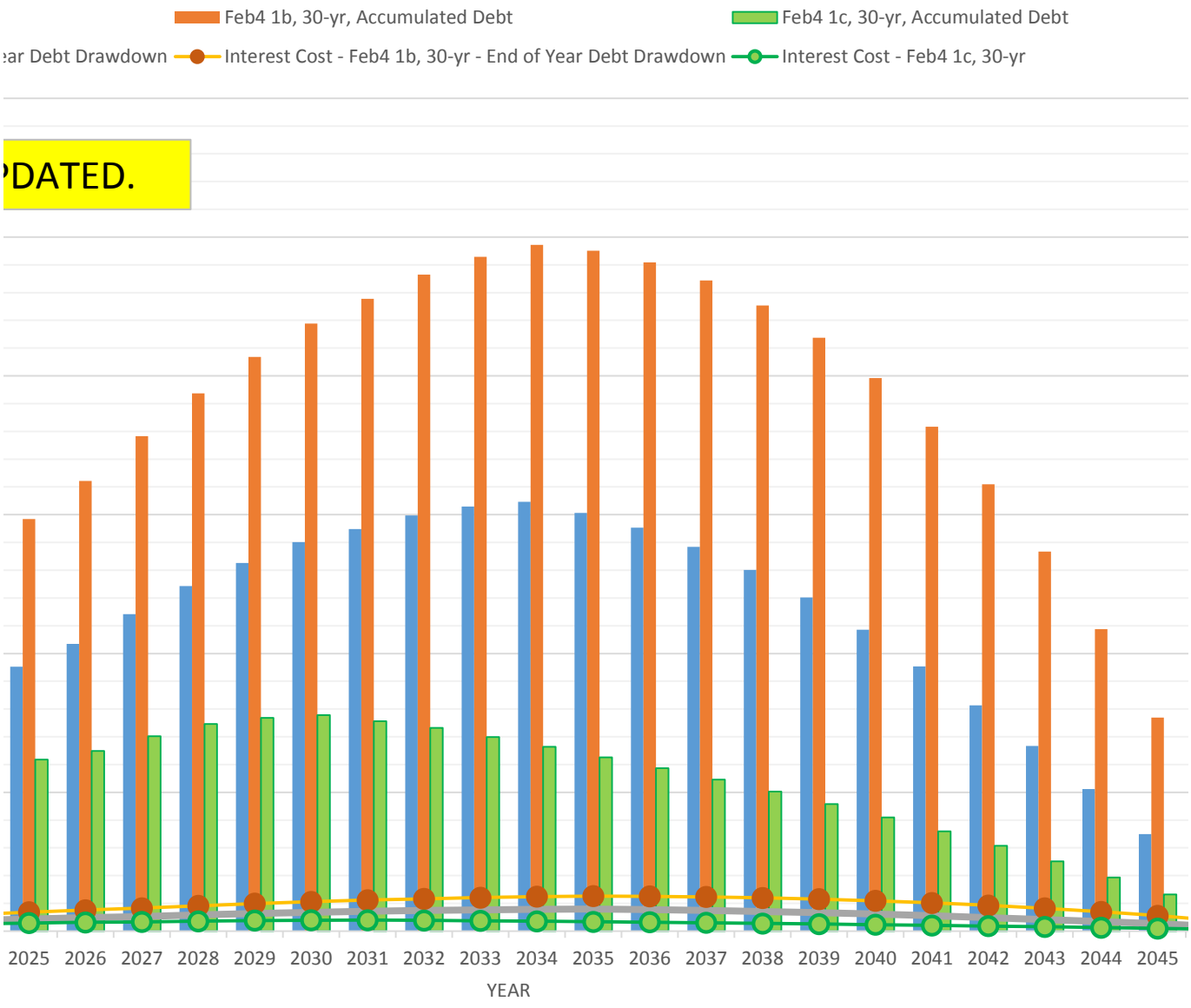

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000



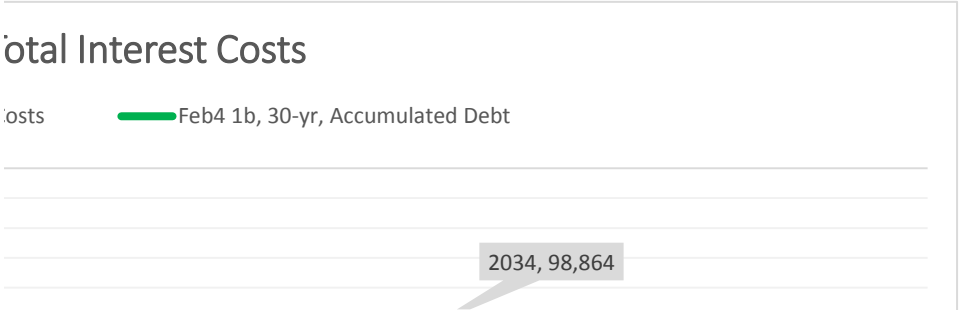
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

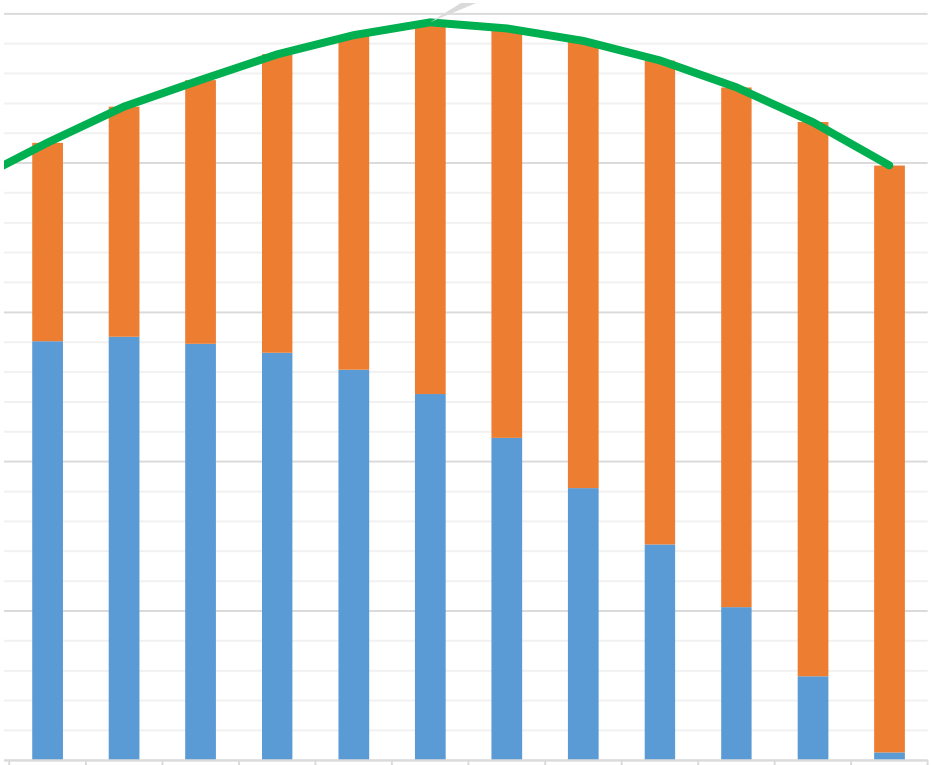
Y

Accumulated debt in present year, with annual interest costs



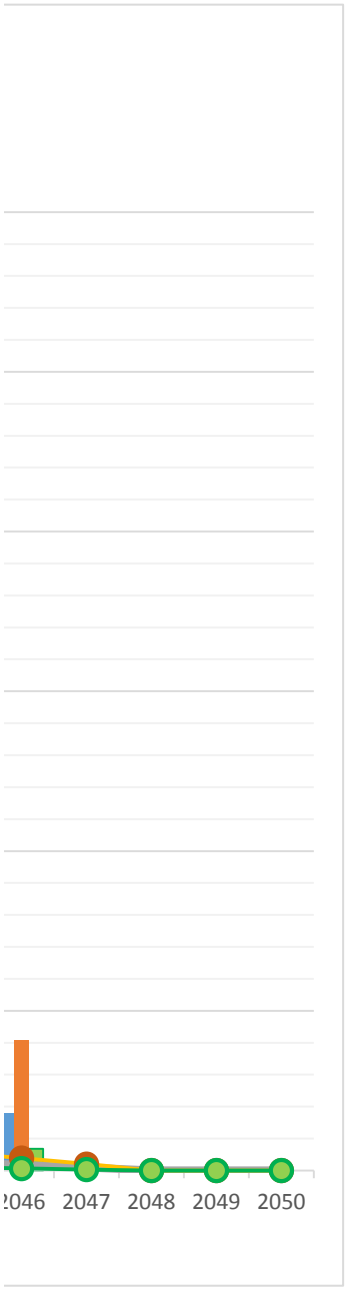
PDATED.


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864

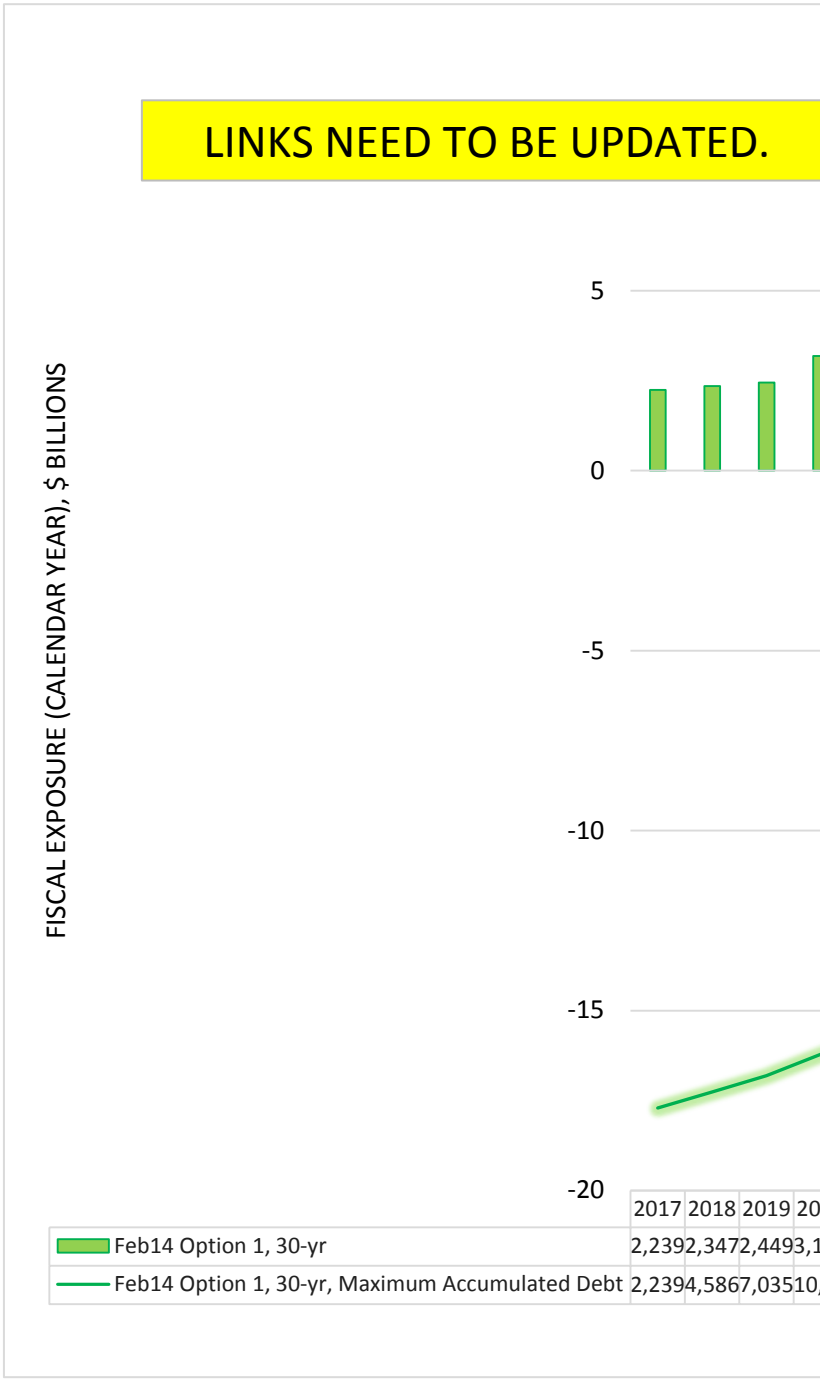


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



LINKS NEED TO BE UPDATED.



FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1b, 30-yr

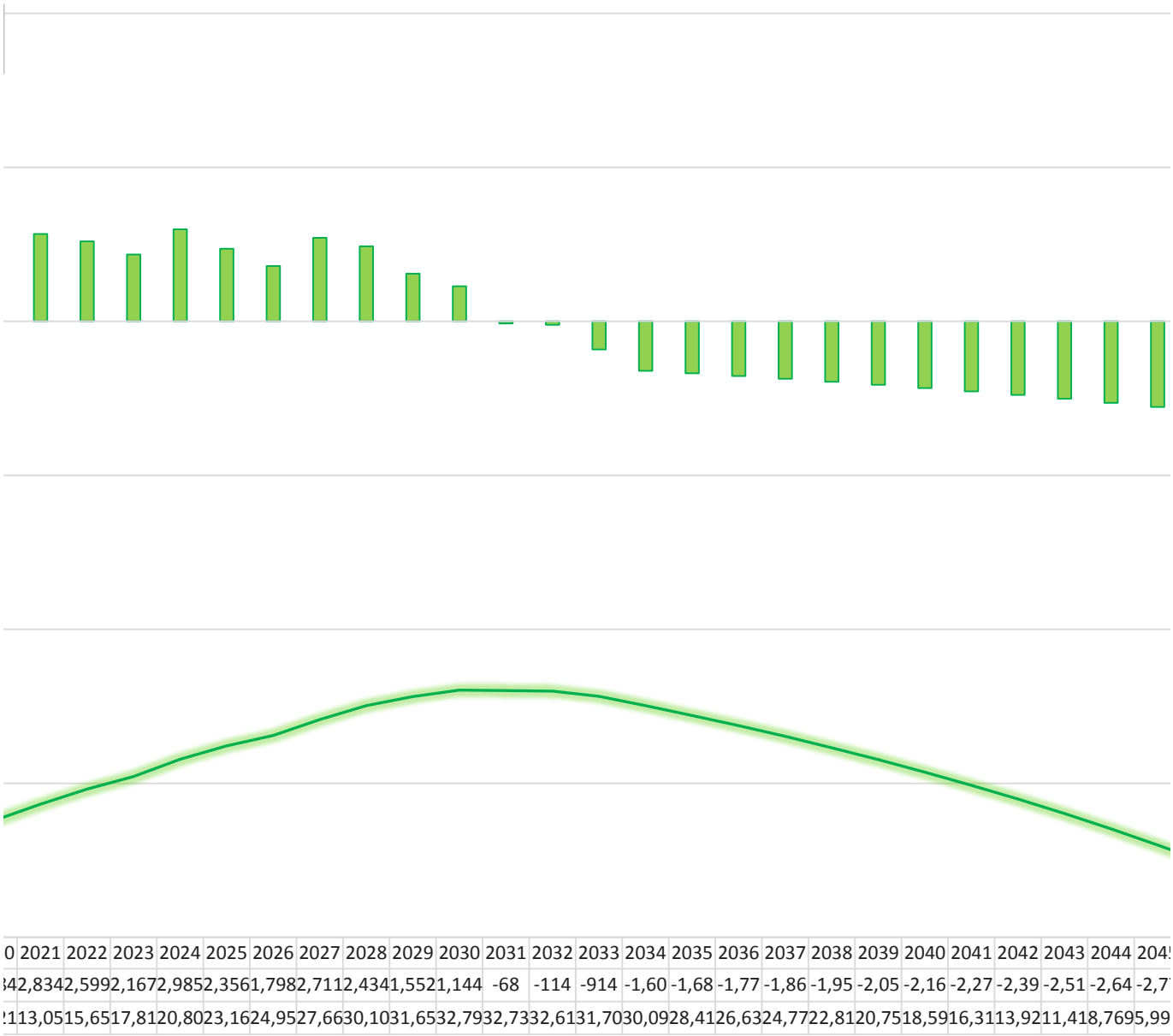
Feb4 1b, 30-yr,

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,

Feb 14 Deck - Option 1

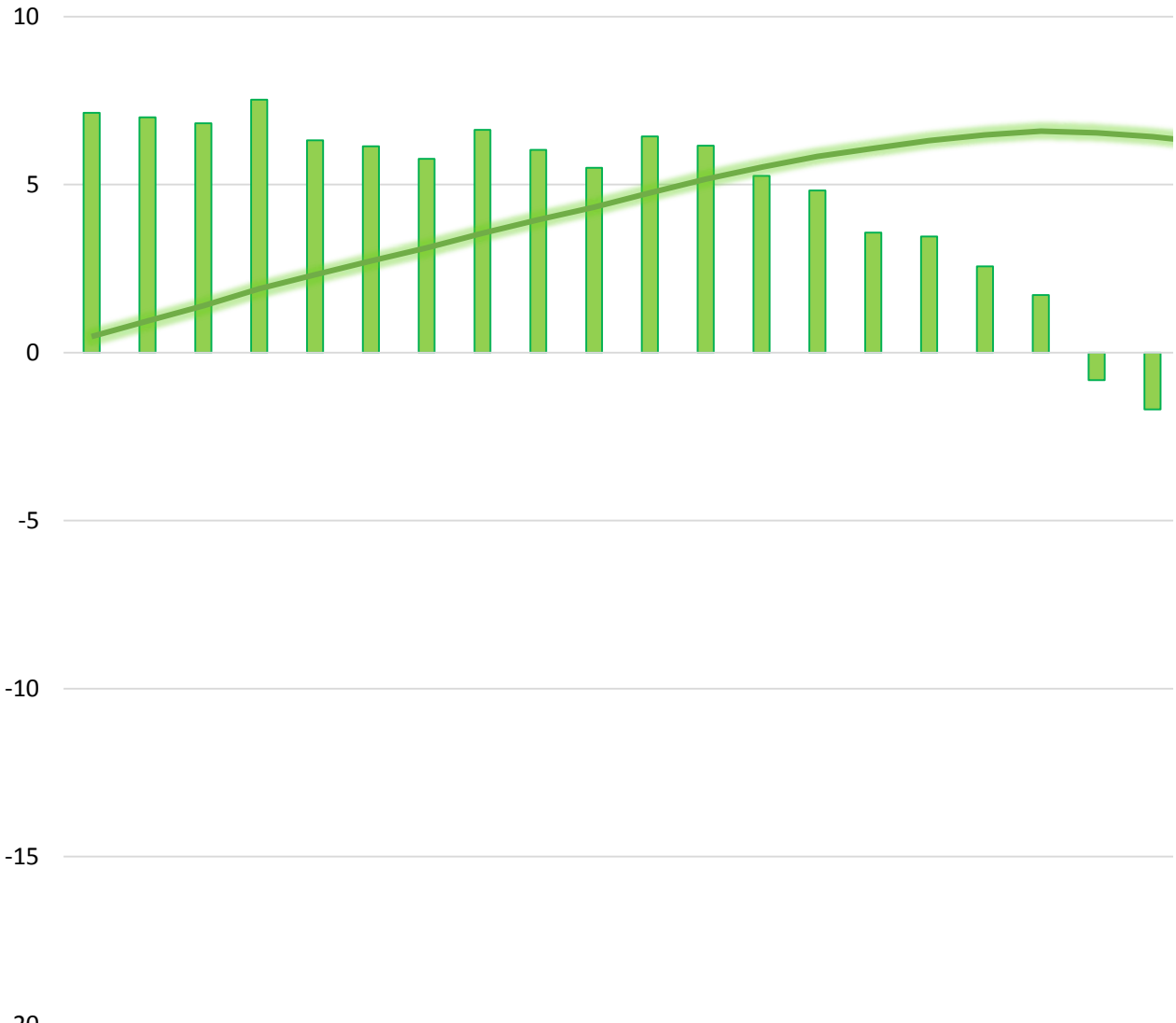


0	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	204
42	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,60	-1,68	-1,77	-1,86	-1,95	-2,05	-2,16	-2,27	-2,39	-2,51	-2,64	-2,7
113	05	15,65	17,81	20,80	23,16	24,95	27,66	30,10	31,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,76	95,99

CALENDAR YEAR

Feb 6 Deck - Scenario 1b - at 5.13% interest rat

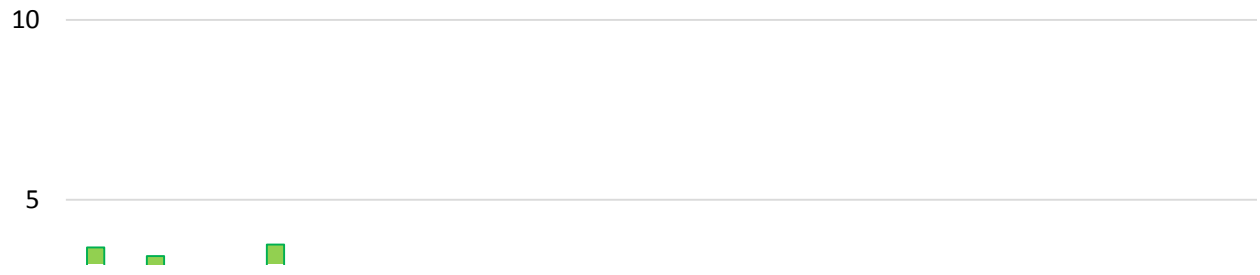
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

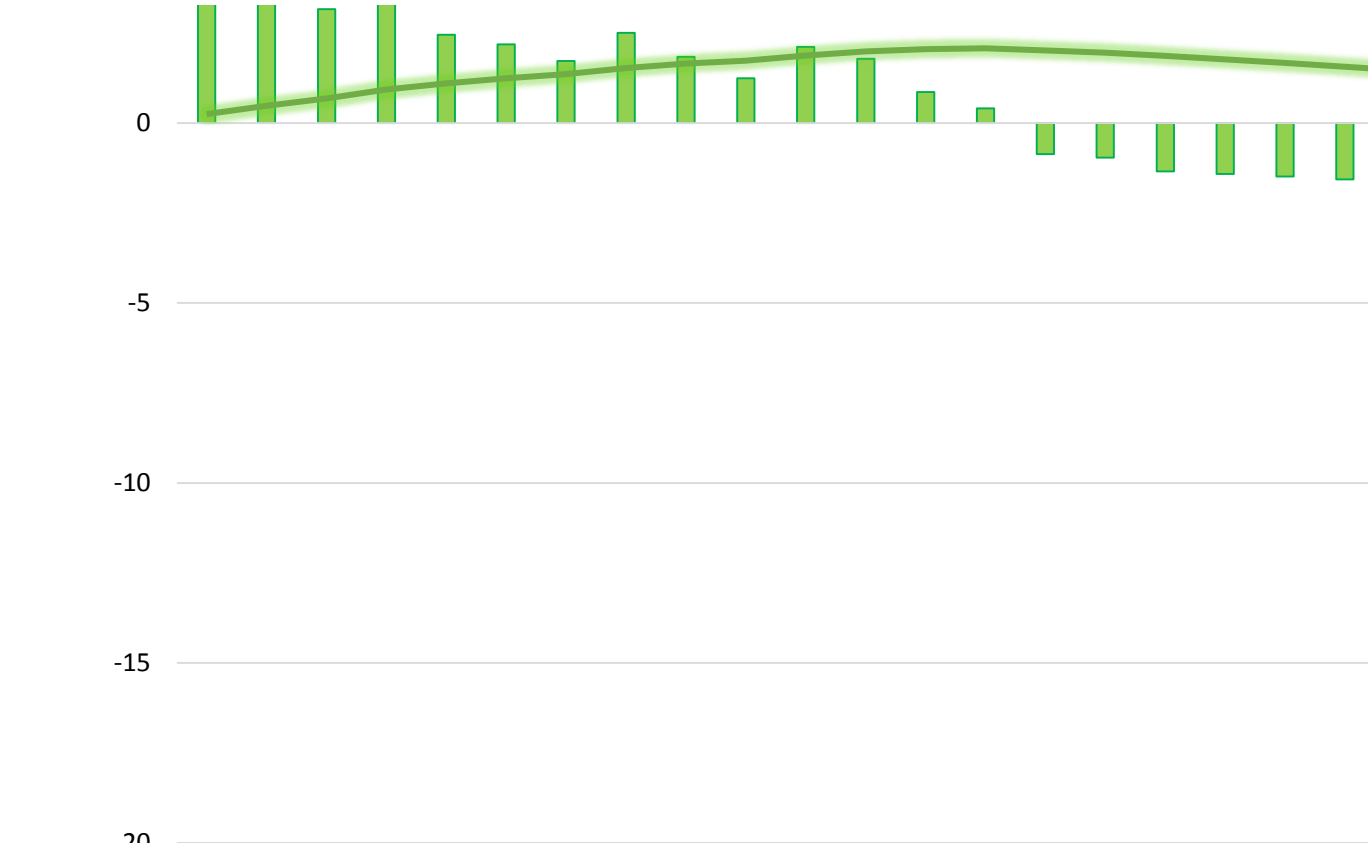


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

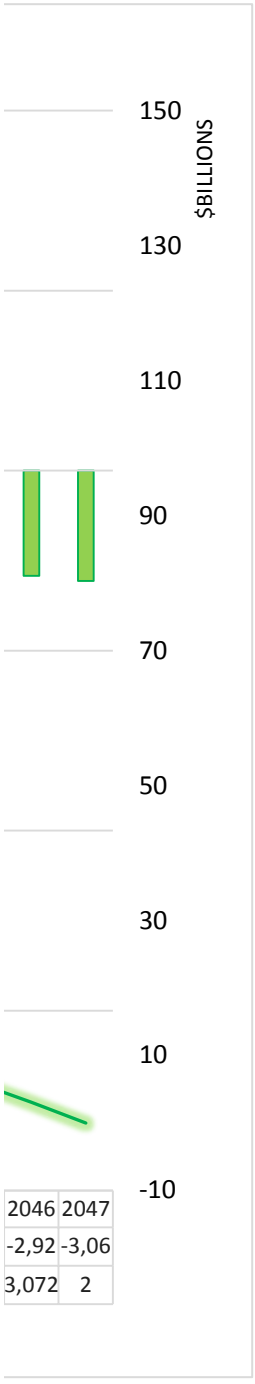
Feb 6 Deck - Scenario 1c - at 5.12% interest rat

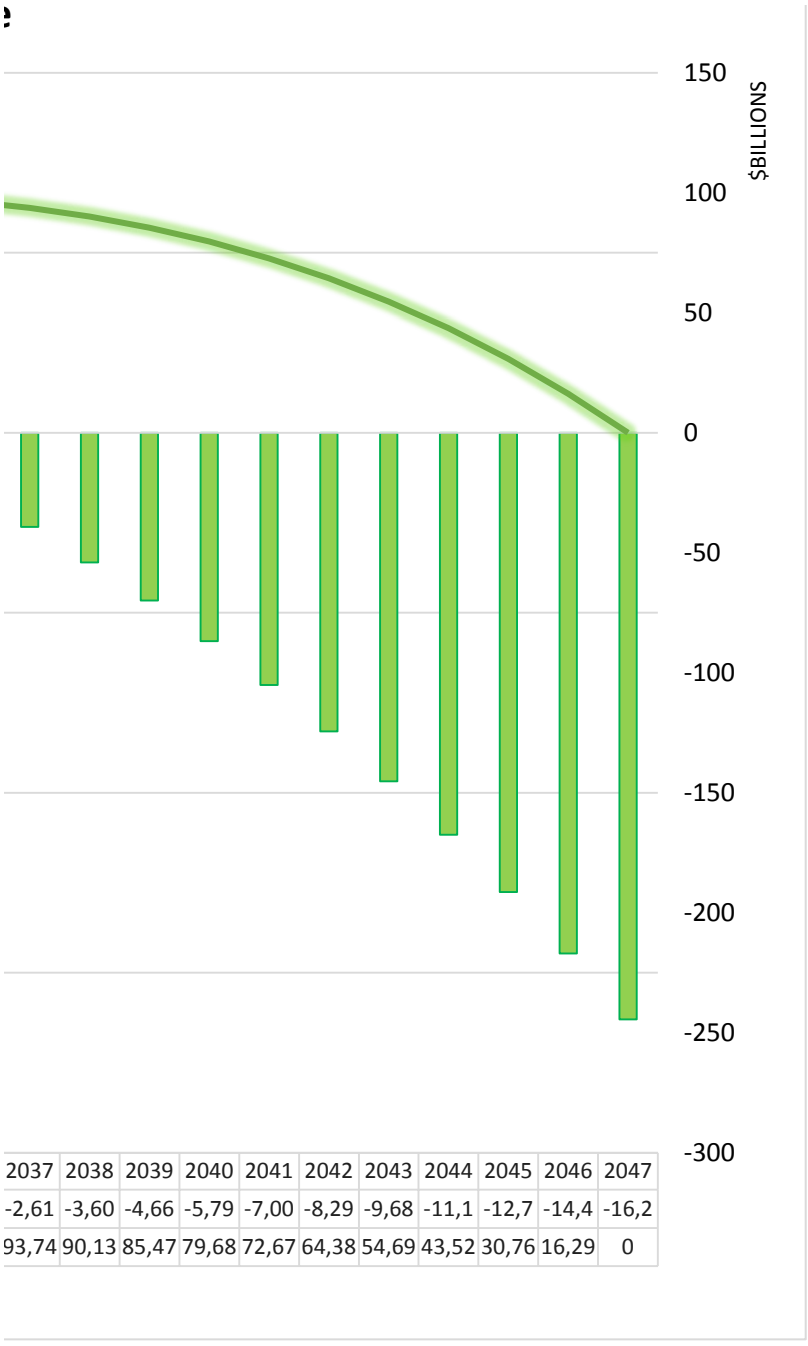




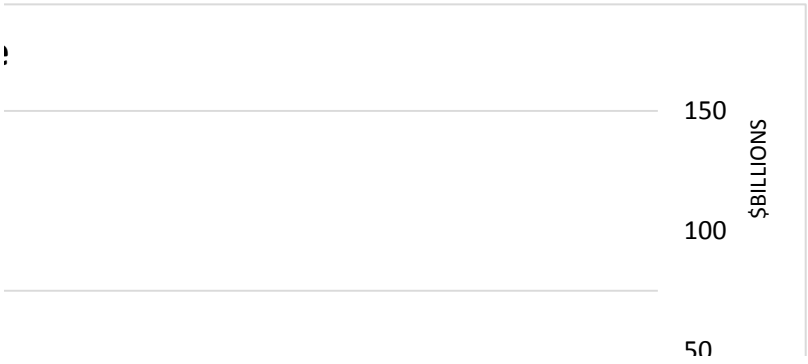
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

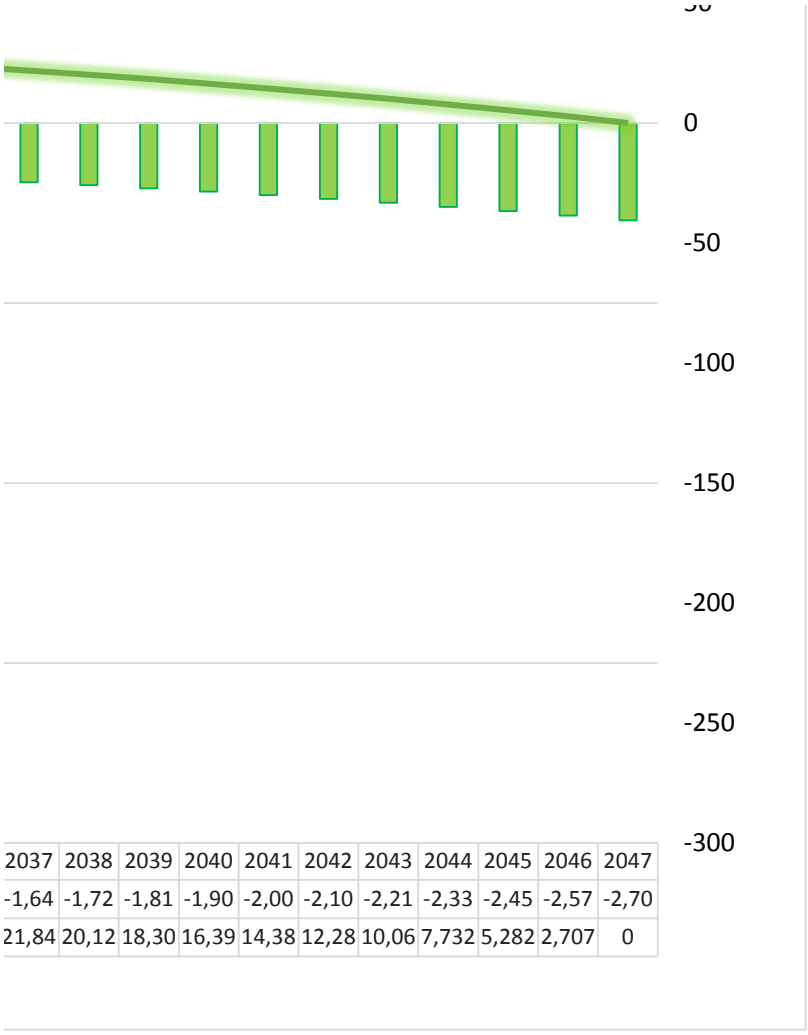
CALENDAR YEAR


150
130
110
90
70
50
30
10
-10
$BILLIONS
2046 2047
-2,92 -3,06
3,072 2



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest

IESO GA cost forecast + extrapolation

Scenario
Option 1
Bills Lowered 25%, RPP Only
Option 2
Bills Lowered 20%, RPP Only
Option 3
Bills Lowered 18%, contract/conservation refinancing, RPP Only

rate	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
Ratepayer GA Payment	9,856	9,602	9,338	9,344
Total Accumulated Debt ($ billion)	2,239	4,586	7,035	10,219
Ratepayer GA Payment	10,537	10,296	10,041	10,061
Accumulated debt in present year (including 5% interest,	1,559	3,177	4,851	7,207
Ratepayer GA Payment	10,648	10,303	10,186	10,873
Accumulated debt in present year (including 5% interest,	1,447	3,053	4,575	6,105
	12095.37	11834.681	11552.105	12168.428

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801
13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103
9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513
9,266	11,038	12,324	14,370	15,725	16,458	18,035	19,263
9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253
7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876
10843.555	10633.626	10243.432	11128.119	10527.018	10033.287	11042.844	10819.098

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389

9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615
31,654	32,799	32,730	32,616	31,702	30,097	28,411	26,638
10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117
19,534	19,317	18,577	17,799	16,981	16,122	15,218	14,268
9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837
18,843	19,521	20,007	20,312	20,325	19,755	18,549	17,050
10008.692	9721.4381	8654.4847	8819.9388	8238.0383	7756.4351	5662.3212	5388.8445

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627

8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853
24,774	22,815	20,756	18,591	16,316	13,924	11,410	8,767
6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355
13,270	12,221	11,118	9,958	8,740	7,458	6,112	4,696
7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712
15,464	13,694	12,062	10,556	9,143	7,810	6,672	5,928
5128.5761	4880.878	4645.1432	4420.7938	4207.28	4004.0783	3810.6908	3626.6435

2045	2046	2047	2048

3,451	3,285	3,126	2,975	2,831	2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
6,678	6,511	6,353	2,975	2,831	2,695
5,989	3,069	0	0	0	0
5,180	5,013	4,854	2,975	2,831	2,695
3,208	1,644	0	-	-	-
4,007	3,619	3,425	3,156	3,011	2,878
5,676	5,633	5,623	5,730	5,843	5,959
3451.485	3284.787	3126.139	2975.154	2831.461	2694.708

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

	5.00%		
Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb14_1_30yr

Option 1 - Bills Lowered 25%, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,239	2,347

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	560	2,266

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $33 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb14_2_30yr

Option 2 - Bills Lowered 20%, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,559	1,619

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	390	1,574

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb14_3_30yr

Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606

	Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st		362	1,487

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	390 - 560	1,574 - 2,266

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	560	2266
Debt-Finance Global Adjustment Costs, Option 1a	390	1574
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		

Enhanced RPP Rebate		
Total, A	**560**	**2506**
Total, B	390	1814

Proposed Program Total:	390 - 560	1,814 - 2,506

ining

0	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,449	3,184	2,834	2,599

2018-19	2019-20	2020-21	2021-2022
2,372	2,633	3,096	2,775

$ millions

Option 1
Option 2
Option 3

Assumes an inte

2030.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,674	2,356	2,060	1,772

2018-19	2019-20	2020-21	2021-2022
1,632	1,844	2,282	1,988

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429

2033.

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022
1,632 - 2,372	1,844 - 2,633	2,282 - 3,096	1,988 - 2,775

/1

2018-19[1]	2019-20[1]	2020-21[1]
2372	2633	3096
1632	1844	2282
225	279	323
60	60	60
18	18	18

2675	**2990**	**3497**
1935	2201	2683

1,935 - 2,675 2,201 - 2,990 2,683 - 3,497

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$21,561	$30,205	$32,799	occurs in Year 2030
$13,503	$17,883	$19,534	occurs in Year 2029
$12,862	$19,498	$20,326	occurs in Year 2033

erest rate of 5.00% (compounded monthly).

Tab Name		Total Accumulated Interest Costs
Feb14_1_30yr	$26,517	$34,278
Feb14_2_30yr	$15,631	$20,378
Feb14_3_30yr	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$26,517 to $34,278
Option 2	$15,631 to $20,378
Option 3	$17,202 to $22,028

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,239	2,347	2,449	3,184	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,604	-1,687	-1,773	-1,864	-1,959	-2,059	-2,164	-2,275	-2,392	-2,514	-2,643	-2,778	-2,920	-3,069	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,292	2,403	2,507	3,260	2,902	2,660	2,219	3,056	2,412	1,841	2,776	2,492	1,589	1,171	-70	-117	-936	-1,643	-1,727	-1,815	-1,908	-2,005	-2,108	-2,216	-2,329	-2,448	-2,574	-2,705	-2,844	-2,989	-3,142	0	0	0
			53	56	58	76	67	62	52	71	56	43	64	58	37	27	-2	-3	-22	-38	-40	-42	-44	-47	-49	-51	-54	-57	-60	-63	-66	-69	-73	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,184	1,678	30,205
Equal Monthly Debt Drawdown	3,260	1,676	

		Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,799	2030	21,561
Equal Monthly Debt Drawdown	33,579		

Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
a	Debt, Beginning of Year	0	2,239	4,586	7,035	10,219	13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103	31,655	32,799	32,731	32,617	31,703	30,098	28,412	26,639	24,775	22,816	20,757	18,593	16,318	13,926	11,412	8,769	5,992	3,072	2	3	3	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*115*	*235*	*360*	*523*	*668*	*801*	*912*	*1,064*	*1,185*	*1,277*	*1,416*	*1,540*	*1,620*	*1,678*	*1,675*	*1,669*	*1,622*	*1,540*	*1,454*	*1,363*	*1,268*	*1,167*	*1,062*	*951*	*835*	*712*	*584*	*449*	*307*	*157*	*0*	*0*	*0*	30,205
b	Additional GA Debt Drawdown, End of Year	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,239	4,586	7,035	10,219	13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103	31,655	32,799	32,731	32,617	31,703	30,098	28,412	26,639	24,775	22,816	20,757	18,593	16,318	13,926	11,412	8,769	5,992	3,072	2	3	3	3	
			FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,138	8,554	10,094	11,238	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	8,769	5,992	3,072	2	3	3	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,821	13,752	15,118	17,192	18,483	19,097	20,531	21,549	21,561	21,561	21,561	21,447	20,533	18,928	17,242	15,469	13,605	11,646	9,587	7,423	5,147	2,756	242	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,138	8,554	10,094	11,714	13,392	15,066	16,735	18,357	19,897	21,350	22,713	23,981	25,148	26,210	27,161	27,996	28,709	29,293	29,741	30,048	30,205				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,821	13,752	15,118	17,192	18,483	19,097	20,531	21,549	21,561	21,086	19,339	17,551	14,968	11,741	8,515	5,288	2,062	-1,164	-4,391	-7,617	-10,844	-14,070	-17,297	-20,523	-23,750	-26,976	-30,202				
Fiscal Exposure - End of Year Debt Drawdown		2,239	2,347	2,449	3,184	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,604	-1,687	-1,773	-1,864	-1,959	-2,059	-2,164	-2,275	-2,392	-2,514	-2,643	-2,778	-2,920	-3,069	0	0	0	

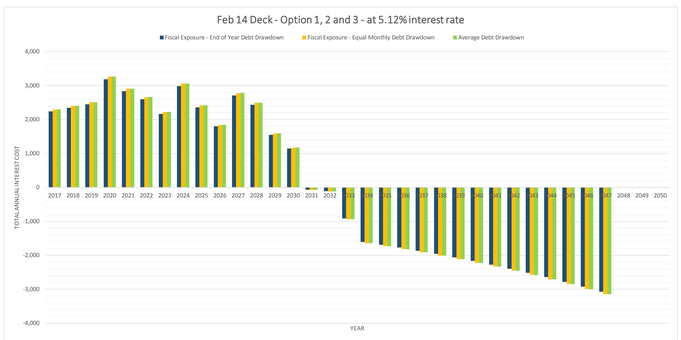
Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,292	4,695	7,202	10,462	13,363	16,024	18,243	21,299	23,711	25,552	28,327	30,819	32,408	33,579	33,510	33,393	32,457	30,814	29,087	27,272	25,365	23,359	21,251	19,035	16,706	14,257	11,683	8,978	6,134	3,145	2	3	3	
1,676	*Interest Cost - Feb14 Option 1, 30-yr*	*53*	*170*	*293*	*436*	*590*	*730*	*852*	*983*	*1,120*	*1,228*	*1,341*	*1,473*	*1,577*	*1,647*	*1,676*	*1,672*	*1,647*	*1,584*	*1,500*	*1,411*	*1,319*	*1,221*	*1,118*	*1,010*	*897*	*778*	*653*	*521*	*383*	*237*	*84*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,292	4,695	7,202	10,462	13,363	16,024	18,243	21,299	23,711	25,552	28,327	30,819	32,408	33,579	33,510	33,393	32,457	30,814	29,087	27,272	25,365	23,359	21,251	19,035	16,706	14,257	11,683	8,978	6,134	3,145	2	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,292	2,403	2,507	3,260	2,902	2,660	2,219	3,056	2,412	1,841	2,776	2,492	1,589	1,171	-70	-117	-936	-1,643	-1,727	-1,815	-1,908	-2,005	-2,108	-2,216	-2,329	-2,448	-2,574	-2,705	-2,844	-2,989	-3,142	0	0	0	

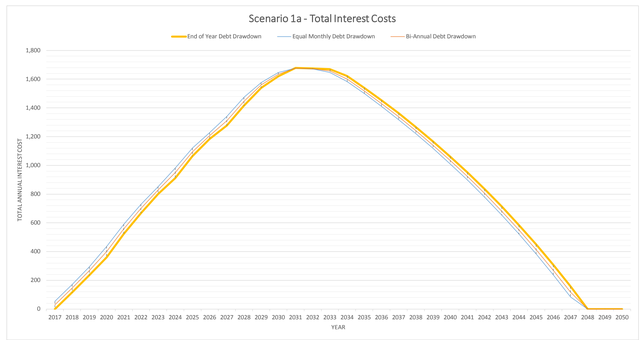
	Monthly Drawdown	187	186	185	235	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	-	-	-
	FV of Monthly Drawdown at 5%	2,292	2,285	2,267	2,891	2,366	1,977	1,399	2,123	1,322	628	1,468	1,043	12	(487)	(1,788)	(1,831)	(2,644)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	-	-	-
	Annual Interest Cost on New Drawdowns	53	53	53	67	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	-	-	-
	Annual Interest Cost on Opening Balance	-	117	240	368	535	684	820	933	1,090	1,213	1,307	1,449	1,577	1,658	1,718	1,714	1,708	1,661	1,577	1,488	1,395	1,298	1,195	1,087	974	855	729	598	459	314	161	0	0	0	
	Total Annual Interest Cost	53	170	293	436	590	730	852	983	1,120	1,228	1,341	1,473	1,577	1,647	1,676	1,672	1,647	1,584	1,500	1,411	1,319	1,221	1,118	1,010	897	778	653	521	383	237	84	0	0	0	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,268	4,645	7,125	10,349	13,220	15,852	18,047	21,070	23,456	25,277	28,023	30,488	32,060	33,219	33,150	33,034	32,108	30,483	28,775	26,980	25,092	23,108	21,023	18,831	16,526	14,104	11,558	8,882	6,068	3,111	2	3	3	
	Interest Cost - Feb14 Option 1, 30-yr	*29*	*145*	*266*	*401*	*559*	*701*	*828*	*950*	*1,095*	*1,208*	*1,312*	*1,447*	*1,560*	*1,634*	*1,677*	*1,673*	*1,657*	*1,601*	*1,518*	*1,431*	*1,339*	*1,242*	*1,141*	*1,034*	*922*	*804*	*680*	*550*	*413*	*269*	*118*	*0*	*0*	*0*	30,205
	Accumulated debt in present year (including 5% annual interest)	2,268	4,645	7,125	10,349	13,220	15,852	18,047	21,070	23,456	25,277	28,023	30,488	32,060	33,219	33,150	33,034	32,108	30,483	28,775	26,980	25,092	23,108	21,023	18,831	16,526	14,104	11,558	8,882	6,068	3,111	2	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,268	2,377	2,480	3,225	2,870	2,632	2,195	3,024	2,386	1,821	2,746	2,465	1,572	1,159	-69	-116	-926	-1,625	-1,708	-1,796	-1,887	-1,984	-2,085	-2,192	-2,304	-2,422	-2,546	-2,676	-2,813	-2,957	-3,109	0	0	0	

	Bi-Annual Drawdown	1,119	1,116	1,107	1,412	1,156	965	683	1,037	646	307	717	509	6	(238)	(873)	(894)	(1,291)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	-	-	-
	FV of Bi-Annual Drawdown at 5%	2,268	2,261	2,243	2,860	2,341	1,955	1,384	2,100	1,308	621	1,453	1,031	12	(481)	(1,769)	(1,812)	(2,616)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	-	-	-
	Annual Interest Cost on New Drawdowns	29	29	28	36	30	25	17	27	17	8	18	13	0	(6)	(22)	(23)	(33)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	-	-	-
	Annual Interest Cost on Opening Balance	-	116	238	365	529	676	811	923	1,078	1,200	1,293	1,434	1,560	1,640	1,700	1,696	1,690	1,643	1,560	1,472	1,380	1,284	1,182	1,076	963	846	722	591	454	310	159	0	0	0	
	Total Annual Interest Cost	29	145	266	401	559	701	828	950	1,095	1,208	1,312	1,447	1,560	1,634	1,677	1,673	1,657	1,601	1,518	1,431	1,339	1,242	1,141	1,034	922	804	680	550	413	269	118	0	0	0	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,296	4,703	7,215	10,480	13,387	16,052	18,275	21,336	23,752	25,596	28,377	30,873	32,465	33,638	33,568	33,451	32,514	30,868	29,138	27,320	25,409	23,400	21,288	19,068	16,735	14,282	11,704	8,994	6,145	3,150	2	3	3	
	Interest Cost - Feb14 Option 1, 30-yr	*57*	*175*	*297*	*441*	*595*	*734*	*856*	*988*	*1,125*	*1,231*	*1,346*	*1,478*	*1,580*	*1,649*	*1,676*	*1,672*	*1,645*	*1,581*	*1,497*	*1,408*	*1,315*	*1,217*	*1,115*	*1,007*	*893*	*774*	*648*	*516*	*378*	*232*	*79*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,296	4,703	7,215	10,480	13,387	16,052	18,275	21,336	23,752	25,596	28,377	30,873	32,465	33,638	33,568	33,451	32,514	30,868	29,138	27,320	25,409	23,400	21,288	19,068	16,735	14,282	11,704	8,994	6,145	3,150	2	3	3	3	
Fiscal Exposure - Average Debt Drawdown		2,296	2,407	2,512	3,265	2,907	2,665	2,223	3,062	2,416	1,844	2,780	2,496	1,592	1,173	-70	-117	-937	-1,646	-1,730	-1,818	-1,911	-2,009	-2,112	-2,220	-2,333	-2,453	-2,578	-2,710	-2,849	-2,995	-3,148	0	0	0	





Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,559	1,619	1,674	2,356	2,060	1,772	1,286	2,046	1,355	733	1,578	1,228	271	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,415	-1,488	-1,564	-1,644	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0	
			37	38	40	56	49	42	31	49	32	17	38	29	6	-5	-18	-19	-19	-20	-21	-23	-24	-25	-26	-28	-29	-30	-32	-34	-35	-37	-39	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,356	999	17,883
Equal Monthly Debt Drawdown	2,412	994	

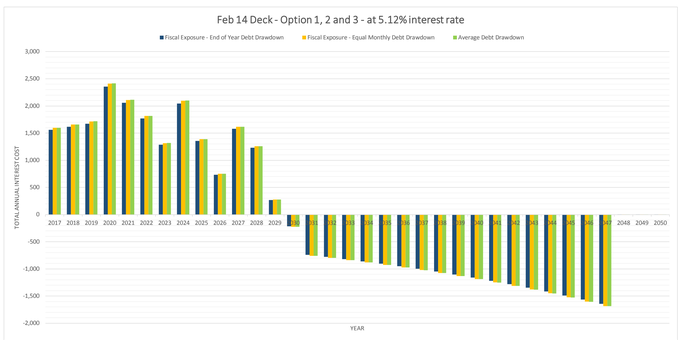
	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,534	2029	13,503
Equal Monthly Debt Drawdown	19,999		

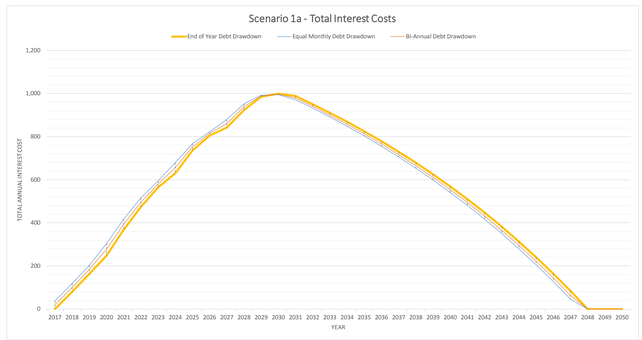
Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
a	Debt, Beginning of Year	0	1,559	3,177	4,851	7,207	9,266	11,039	12,324	14,370	15,725	16,458	18,035	19,264	19,534	19,317	18,577	17,799	16,982	16,122	15,219	14,269	13,271	12,222	11,119	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1	2	2	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*80*	*163*	*248*	*369*	*474*	*565*	*631*	*735*	*805*	*842*	*923*	*986*	*999*	*988*	*950*	*911*	*869*	*825*	*779*	*730*	*679*	*625*	*569*	*510*	*447*	*382*	*313*	*240*	*164*	*84*	*0*	*0*	*0*	17,883
b	Additional GA Debt Drawdown, End of Year	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,559	3,177	4,851	7,207	9,266	11,039	12,324	14,370	15,725	16,458	18,035	19,264	19,534	19,317	18,577	17,799	16,982	16,122	15,219	14,269	13,271	12,222	11,119	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1	2	2	2	
			TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	7,818	7,078	6,300	5,483	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,697	3,210	1,646	1	2	2	2	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,842	12,461	12,390	13,125	13,431	12,716	11,499	11,499	11,499	11,499	11,499	10,595	9,646	8,648	7,598	6,495	5,336	4,117	2,836	1,490	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	7,818	8,806	9,757	10,667	11,536	12,361	13,140	13,870	14,549	15,174	15,743	16,252	16,700	17,081	17,394	17,634	17,798	17,883				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,842	12,461	12,390	13,125	13,431	12,716	11,499	9,771	8,042	6,314	4,586	2,858	1,129	-599	-2,327	-4,055	-5,784	-7,512	-9,240	-10,968	-12,696	-14,425	-16,153	-17,881				
Fiscal Exposure - End of Year Debt Drawdown		1,559	1,619	1,674	2,356	2,060	1,772	1,286	2,046	1,355	733	1,578	1,228	271	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,415	-1,488	-1,564	-1,644	0	0	0	

Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,019	18,223	17,385	16,506	15,581	14,609	13,587	12,512	11,383	10,196	8,948	7,637	6,258	4,809	3,286	1,685	2	2	2	
994	*Interest Cost - Feb14 Option 1, 30-yr*	*37*	*118*	*202*	*304*	*418*	*516*	*595*	*679*	*767*	*822*	*880*	*952*	*992*	*994*	*971*	*932*	*891*	*848*	*803*	*756*	*706*	*654*	*599*	*541*	*481*	*417*	*350*	*279*	*205*	*127*	*45*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,019	18,223	17,385	16,506	15,581	14,609	13,587	12,512	11,383	10,196	8,948	7,637	6,258	4,809	3,286	1,685	2	2	2	2	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0	
	Monthly Drawdown	130	128	126	176	141	108	60	118	52	(6)	61	25	(60)	(101)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	-	-	-	
	FV of Monthly Drawdown at 5%	1,596	1,575	1,548	2,157	1,731	1,329	738	1,449	635	(74)	753	313	(732)	(1,246)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	-	-	-	
	Annual Interest Cost on New Drawdowns	37	37	36	50	40	31	17	34	15	(2)	17	7	(17)	(29)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	-	-	-	
	Annual Interest Cost on Opening Balance	-	82	166	254	377	485	578	646	753	824	862	945	1,009	1,023	1,012	973	932	889	844	797	747	695	640	582	522	458	391	320	246	168	86	0	0	0	
	Total Annual Interest Cost	37	118	202	304	418	516	595	679	767	822	880	952	992	994	971	932	891	848	803	756	706	654	599	541	481	417	350	279	205	127	45	0	0	0	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,815	18,027	17,199	16,328	15,413	14,452	13,441	12,378	11,261	10,087	8,852	7,555	6,191	4,758	3,251	1,667	1	2	2	
	Interest Cost - Feb14 Option 1, 30-yr	*20*	*100*	*184*	*278*	*395*	*497*	*581*	*657*	*753*	*814*	*862*	*938*	*989*	*997*	*979*	*940*	*900*	*858*	*813*	*766*	*717*	*666*	*611*	*554*	*494*	*431*	*364*	*295*	*221*	*144*	*63*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,815	18,027	17,199	16,328	15,413	14,452	13,441	12,378	11,261	10,087	8,852	7,555	6,191	4,758	3,251	1,667	1	2	2	2	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,579	1,639	1,696	2,386	2,086	1,795	1,302	2,072	1,372	742	1,598	1,244	274	-220	-749	-788	-828	-870	-915	-962	-1,011	-1,063	-1,117	-1,174	-1,234	-1,297	-1,364	-1,434	-1,507	-1,584	-1,665	0	0	0	
	Bi-Annual Drawdown	779	769	756	1,054	845	649	361	708	310	(36)	368	153	(358)	(608)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,579	1,558	1,531	2,134	1,713	1,315	730	1,433	628	(73)	745	310	(724)	(1,232)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	-	-	-	
	Annual Interest Cost on New Drawdowns	20	20	19	27	22	17	9	18	8	(1)	9	4	(9)	(16)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	-	-	-	
	Annual Interest Cost on Opening Balance	-	81	165	251	373	480	572	639	745	815	853	935	998	1,012	1,001	963	922	880	835	789	739	688	633	576	516	453	387	317	243	166	85	0	0	0	
	Total Annual Interest Cost	20	100	184	278	395	497	581	657	753	814	862	938	989	997	979	940	900	858	813	766	717	666	611	554	494	431	364	295	221	144	63	0	0	0	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,599	3,258	4,975	7,391	9,504	11,321	12,640	14,738	16,128	16,879	18,497	19,757	20,034	19,811	19,052	18,254	17,416	16,535	15,608	14,634	13,610	12,534	11,403	10,214	8,964	7,650	6,269	4,818	3,292	1,688	2	2	2	
	Interest Cost - Feb14 Option 1, 30-yr	*40*	*121*	*205*	*308*	*421*	*519*	*598*	*683*	*770*	*823*	*882*	*954*	*992*	*994*	*969*	*931*	*890*	*847*	*802*	*754*	*704*	*652*	*597*	*539*	*478*	*414*	*347*	*277*	*202*	*124*	*42*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,599	3,258	4,975	7,391	9,504	11,321	12,640	14,738	16,128	16,879	18,497	19,757	20,034	19,811	19,052	18,254	17,416	16,535	15,608	14,634	13,610	12,534	11,403	10,214	8,964	7,650	6,269	4,818	3,292	1,688	2	2	2	2	
Fiscal Exposure - Average Debt Drawdown		1,599	1,660	1,717	2,416	2,112	1,817	1,319	2,098	1,390	751	1,618	1,260	277	-223	-759	-798	-839	-881	-927	-974	-1,024	-1,076	-1,131	-1,189	-1,250	-1,314	-1,381	-1,452	-1,526	-1,604	-1,686	0	0	0	





Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_3_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	
			34	38	36	36	34	34	35	36	36	35	35	34	23	16	12	7	0	-14	-29	-36	-38	-42	-39	-36	-34	-32	-27	-18	-6	-1	0	3	3	3	142

		Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	1,606		1,040	19,498
Equal Monthly Debt Drawdown	1,644		1,040	

	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	20,326	2033	12,862
Equal Monthly Debt Drawdown	20,809		

Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
a	Debt, Beginning of Year	0	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*74*	*156*	*234*	*312*	*385*	*459*	*534*	*612*	*690*	*766*	*842*	*915*	*964*	*999*	*1,024*	*1,039*	*1,040*	*1,011*	*949*	*872*	*791*	*701*	*617*	*540*	*468*	*400*	*341*	*303*	*290*	*288*	*288*	*293*	*299*	19,498
b	Additional GA Debt Drawdown, End of Year	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,430	7,736	7,749	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,577	12,577	12,577	12,577	11,371	9,872	8,285	6,516	4,884	3,378	1,966	633	-506	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,943	8,967	10,006	11,046	12,057	13,006	13,878	14,669	15,370	15,987	16,527	16,995	17,395	17,736	18,040	18,330	18,618				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,064	11,345	10,319	8,710	6,493	4,045	1,586	-974	-3,307	-5,431	-7,383	-9,184	-10,721	-11,807	-12,362	-12,696	-12,994				
Fiscal Exposure - End of Year Debt Drawdown		1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	

Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	
1,040	*Interest Cost - Feb14 Option 1, 30-yr*	*34*	*112*	*192*	*270*	*346*	*420*	*494*	*570*	*649*	*726*	*802*	*876*	*938*	*980*	*1,010*	*1,031*	*1,040*	*1,026*	*982*	*913*	*835*	*749*	*662*	*581*	*507*	*436*	*373*	*324*	*297*	*289*	*288*	*290*	*296*	*302*	19,640
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	6,102	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	

	Monthly Drawdown	121	128	114	108	93	88	84	83	76	66	60	47	4	(24)	(43)	(60)	(85)	(134)	(185)	(204)	(205)	(213)	(194)	(177)	(163)	(150)	(128)	(90)	(46)	(28)	(25)	(15)	(15)	(15)	
	FV of Monthly Drawdown at 5%	1,482	1,568	1,398	1,326	1,137	1,086	1,028	1,024	929	815	742	580	54	(292)	(525)	(736)	(1,050)	(1,648)	(2,269)	(2,506)	(2,517)	(2,621)	(2,389)	(2,174)	(1,999)	(1,844)	(1,574)	(1,111)	(568)	(342)	(306)	(185)	(184)	(188)	
	Annual Interest Cost on New Drawdowns	34	36	32	31	26	25	24	24	22	19	17	13	1	(7)	(12)	(17)	(24)	(38)	(53)	(58)	(58)	(61)	(55)	(51)	(46)	(43)	(37)	(26)	(13)	(8)	(7)	(4)	(4)	(4)	
	Annual Interest Cost on Opening Balance	-	76	160	240	320	394	470	547	627	707	784	863	936	987	1,023	1,048	1,064	1,065	1,035	972	893	810	717	632	553	479	409	350	311	297	295	295	300	306	
	Total Annual Interest Cost	34	112	192	270	346	420	494	570	649	726	802	876	938	980	1,010	1,031	1,040	1,026	982	913	835	749	662	581	507	436	373	324	297	289	288	290	296	302	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	
	Interest Cost - Feb14 Option 1, 30-yr	*19*	*95*	*176*	*254*	*331*	*404*	*478*	*554*	*632*	*709*	*785*	*861*	*927*	*973*	*1,005*	*1,028*	*1,039*	*1,033*	*995*	*930*	*852*	*769*	*680*	*598*	*522*	*451*	*385*	*332*	*300*	*290*	*288*	*289*	*295*	*301*	19,575
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	6,037	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,466	1,626	1,541	1,549	1,441	1,465	1,482	1,554	1,539	1,505	1,510	1,427	979	687	492	309	13	-577	-1,221	-1,518	-1,607	-1,792	-1,653	-1,525	-1,430	-1,350	-1,153	-753	-255	-44	-10	109	115	117	

	Bi-Annual Drawdown	724	766	683	648	555	530	502	500	454	398	363	283	26	(143)	(256)	(359)	(513)	(805)	(1,108)	(1,224)	(1,229)	(1,280)	(1,167)	(1,062)	(976)	(900)	(769)	(543)	(278)	(167)	(149)	(90)	(90)	(92)	
	FV of Bi-Annual Drawdown at 5%	1,466	1,551	1,383	1,312	1,125	1,075	1,017	1,013	919	806	735	573	53	(289)	(519)	(728)	(1,039)	(1,630)	(2,245)	(2,479)	(2,490)	(2,593)	(2,363)	(2,150)	(1,977)	(1,824)	(1,557)	(1,099)	(562)	(338)	(302)	(183)	(182)	(186)	
	Annual Interest Cost on New Drawdowns	19	20	17	17	14	14	13	13	12	10	9	7	1	(4)	(7)	(9)	(13)	(21)	(28)	(31)	(31)	(33)	(30)	(27)	(25)	(23)	(20)	(14)	(7)	(4)	(4)	(2)	(2)	(2)	
	Annual Interest Cost on Opening Balance	-	75	158	237	316	390	465	541	620	699	776	853	926	976	1,012	1,037	1,053	1,053	1,024	961	884	801	710	625	547	474	405	346	307	294	292	291	297	303	
	Total Annual Interest Cost	19	95	176	254	331	404	478	554	632	709	785	861	927	973	1,005	1,028	1,039	1,033	995	930	852	769	680	598	522	451	385	332	300	290	288	289	295	301	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	
	Interest Cost - Feb14 Option 1, 30-yr	*37*	*115*	*195*	*273*	*349*	*422*	*497*	*573*	*651*	*728*	*804*	*879*	*939*	*981*	*1,011*	*1,031*	*1,040*	*1,025*	*980*	*911*	*832*	*746*	*659*	*579*	*504*	*434*	*371*	*322*	*297*	*289*	*288*	*290*	*296*	*302*	19,651
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	6,113	
Fiscal Exposure - Average Debt Drawdown		1,484	1,647	1,561	1,569	1,459	1,483	1,500	1,573	1,559	1,524	1,530	1,445	992	696	498	313	14	-585	-1,237	-1,537	-1,627	-1,814	-1,674	-1,545	-1,448	-1,367	-1,167	-763	-258	-44	-10	110	116	119	

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest ra

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest ra

IESO GA cost forecast + extrapolation

Scenario
Option 1

Option 2

ate	2017	2018	2019	2020
ate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	2200	4600	7000	10200

Total Accumulated Debt ($ billion)	2.2	4.6	7	10.2
	2,200	4,600	7,000	10,200

Total Accumulated Debt ($ billion)	1.6	3.2	4.9	7.2
	1,600	3,200	4,900	7,200

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
13100	15700	17800	20800	23200	25000	27700	30100

13.1 15.7 17.8 20.8 23.2 25 27.7 30.1
13,100 15,700 17,800 20,800 23,200 25,000 27,700 30,100

9.3 11 12.3 14.4 15.7 16.5 18 19.3
9,300 11,000 12,300 14,400 15,700 16,500 18,000 19,300

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
31700	32800	32700	32600	31700	30100	28400	26600

31.7	32.8	32.7	32.6	31.7	30.1	28.4	26.6
31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600

19.5	19.3	18.6	17.8	17	16.1	15.2	14.3
19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
24800	22800	20800	18600	16300	13900	11400	8800

24.8	22.8	20.8	18.6	16.3	13.9	11.4	8.8
24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800

13.3	12.2	11.1	10	8.7	7.5	6.1	4.7
13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	2046	2047	2048	2049	2050
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
6000	3100	0	0	0	0

6 3.1 0 0
6,000 3,100 - -

3.2 1.6 0 0
3,200 1,600 - -

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb9_1_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,200	2,400

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	550	2,250

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $33 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb9_2_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,600	1,600

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	400	1,600

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,169	4,668

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	545	2,203

Actuals are subject to actual prices and actual interest rates.

#N/A

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542

Fiscalized[3]	2016-17	2017-18
Start: January 1st	375	1,510

Actuals are subject to actual prices and actual interest rates.

#N/A

Rough		
	1	
	2	
	3	
	4 April	4
	5 May	5
	6 June	6
	7 July	7
	8 August	8
	9 September	9
	10 October	10
	11 November	11
	12 December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	400 - 550	1,600 - 2,250

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	550	2250
Debt-Finance Global Adjustment Costs, Option 1a	400	1600
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**550**	**2490**
Total, B	400	1840
Proposed Program Total:	400 - 550	1,840 - 2,490

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1
Scenario 2

2019	2020	2021	2022
2,400	3,200	2,900	2,600

2018-19	2019-20	2020-21	2021-2022
2,400	2,600	3,125	2,825

2030.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,700	2,300	2,100	1,700

2018-19	2019-20	2020-21	2021-2022
1,625	1,850	2,250	2,000

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
4,589	5,867	5,031	4,861

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988

› depend on decision on accounting treatment.

2019	2020	2021	2022
2,353	3,072	2,817	2,580

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757

2019	2020	2021	2022
1,578	2,243	1,931	1,635

2018-19	2019-20	2020-21	2021-2022
1,551	1,745	2,165	1,857



2018-19	2019-20	2020-21	2021-2022
1,625 - 2,400	1,850 - 2,600	2,250 - 3,125	2,000 - 2,825

/1

2018-19[1]	2019-20[1]	2020-21[1]
2400	2600	3125
1625	1850	2250
225	279	323
60	60	60
18	18	18
2703	**2957**	**3526**
1928	2207	2651

1,928 - 2,703 2,207 - 2,957 2,651 - 3,526

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
21,601	30,211	32,800	occurs in Year 2030
13,466	17,886	19,500	occurs in Year 2029
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!

2,200

Tab Name
Feb9_1_30yr
Feb9_2_30yr

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Feb9_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0	
			52	57	57	76	69	62	50	71	57	43	64	57	38	26	-2	-2	-21	-38	-40	-43	-43	-48	-48	-52	-55	-57	-59	-62	-67	-69	-74	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,200	1,678	30,211
Equal Monthly Debt Drawdown	3,276	1,676	

		Feb9 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,800	2030	21,601	
Equal Monthly Debt Drawdown	33,580			

Feb9 1, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
	($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
a	Debt, Beginning of Year	0	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	
c = a*5%	*Interest Cost - Feb9 1, 30-yr - End of Year Debt Drowdown*	*0*	*113*	*235*	*358*	*522*	*670*	*803*	*911*	*1,064*	*1,187*	*1,279*	*1,417*	*1,540*	*1,622*	*1,678*	*1,673*	*1,668*	*1,622*	*1,540*	*1,453*	*1,361*	*1,269*	*1,166*	*1,064*	*952*	*834*	*711*	*583*	*450*	*307*	*159*	*0*	*0*	*0*	30,211
b	Additional GA Debt Drawdown, End of Year	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	0
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	11,621	11,521	10,621	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	8,800	6,000	3,100	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	21,079	21,079	21,079	21,079	19,379	17,579	15,779	13,779	11,779	9,579	7,279	4,879	2,379	0	0	0	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	13,399	15,072	16,740	18,362	19,902	21,355	22,716	23,985	25,151	26,215	27,167	28,001	28,712	29,295	29,746	30,052	30,211				
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	19,301	17,528	14,960	11,738	8,498	5,245	2,084	-1,185	-4,351	-7,615	-10,867	-14,101	-17,312	-20,495	-23,746	-26,952	-30,211				
Fiscal Exposure - End of Year Debt Drawdown		2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0	

Feb9 1, 30-yr — Equal Monthly Debt Drawdown

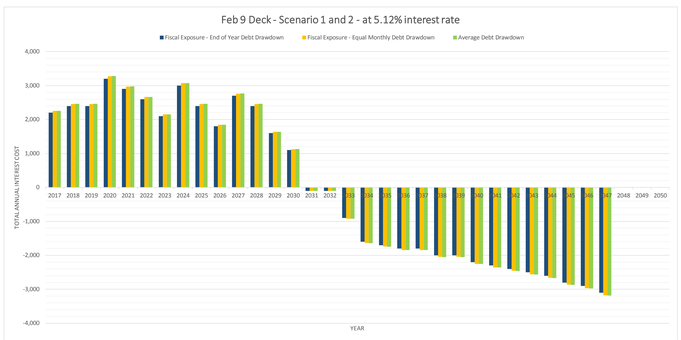
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
	1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
	($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	
1,676	*Interest Cost - Feb9 1, 30-yr*	*52*	*170*	*292*	*434*	*591*	*732*	*853*	*982*	*1,121*	*1,230*	*1,343*	*1,474*	*1,578*	*1,648*	*1,676*	*1,671*	*1,646*	*1,584*	*1,500*	*1,410*	*1,318*	*1,221*	*1,119*	*1,012*	*897*	*777*	*652*	*521*	*384*	*238*	*85*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0	
	Monthly Drawdown	183	191	180	237	198	161	108	174	111	51	118	82	5	(43)	(148)	(148)	(214)	(268)	(270)	(271)	(263)	(272)	(264)	(272)	(271)	(269)	(268)	(265)	(271)	(267)	(272)	-	-	-	
	FV of Monthly Drawdown at 5%	2,252	2,342	2,216	2,909	2,435	1,976	1,328	2,139	1,368	628	1,455	1,006	61	(534)	(1,820)	(1,815)	(2,629)	(3,298)	(3,317)	(3,330)	(3,236)	(3,347)	(3,242)	(3,342)	(3,329)	(3,311)	(3,288)	(3,259)	(3,328)	(3,283)	(3,336)	-	-	-	
	Annual Interest Cost on New Drawdowns	52	54	51	68	57	46	31	50	32	15	34	23	1	(12)	(42)	(42)	(61)	(77)	(77)	(77)	(75)	(78)	(75)	(78)	(77)	(76)	(76)	(76)	(77)	(76)	(78)	-	-	-	
	Annual Interest Cost on Opening Balance	-	115	241	367	534	686	822	932	1,089	1,215	1,309	1,451	1,577	1,660	1,718	1,713	1,708	1,660	1,577	1,488	1,393	1,299	1,194	1,089	974	854	728	597	461	314	162	(0)	(0)	(0)	
	Total Annual Interest Cost	52	170	292	434	591	732	853	982	1,121	1,230	1,343	1,474	1,578	1,648	1,676	1,671	1,646	1,584	1,500	1,410	1,318	1,221	1,119	1,012	897	777	652	521	384	238	85	(0)	(0)	(0)	

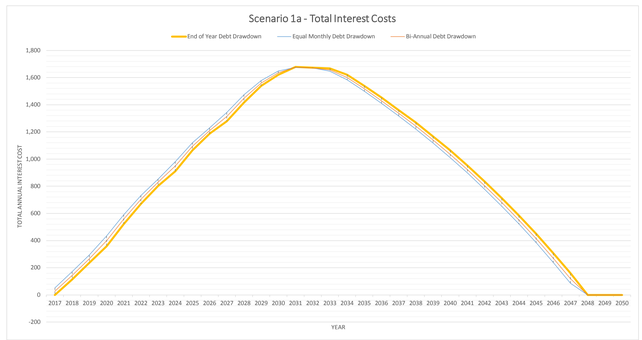
Feb9 1, 30-yr — Bi-Annual Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
	1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
	($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*28*	*143*	*266*	*399*	*559*	*703*	*830*	*949*	*1,095*	*1,210*	*1,314*	*1,448*	*1,560*	*1,636*	*1,677*	*1,672*	*1,656*	*1,601*	*1,518*	*1,430*	*1,338*	*1,243*	*1,141*	*1,036*	*922*	*803*	*679*	*550*	*414*	*270*	*119*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,228	2,431	2,431	3,241	2,937	2,633	2,127	3,038	2,431	1,823	2,735	2,431	1,620	1,114	-101	-101	-912	-1,620	-1,722	-1,823	-1,823	-2,026	-2,026	-2,228	-2,329	-2,431	-2,532	-2,633	-2,836	-2,937	-3,140	0	0	0	
	Bi-Annual Drawdown	1,100	1,144	1,082	1,421	1,189	965	648	1,045	668	307	710	491	30	(261)	(889)	(886)	(1,284)	(1,611)	(1,620)	(1,626)	(1,580)	(1,634)	(1,583)	(1,632)	(1,626)	(1,617)	(1,606)	(1,592)	(1,625)	(1,603)	(1,629)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,228	2,317	2,192	2,878	2,409	1,954	1,313	2,116	1,353	621	1,439	995	61	(529)	(1,801)	(1,796)	(2,601)	(3,263)	(3,281)	(3,295)	(3,201)	(3,311)	(3,207)	(3,306)	(3,293)	(3,275)	(3,252)	(3,224)	(3,292)	(3,248)	(3,300)	-	-	-	
	Annual Interest Cost on New Drawdowns	28	29	28	36	30	25	17	27	17	8	18	13	1	(7)	(23)	(23)	(33)	(41)	(41)	(42)	(40)	(42)	(41)	(42)	(42)	(41)	(41)	(41)	(42)	(41)	(42)	-	-	-	
	Annual Interest Cost on Opening Balance	-	114	238	363	529	679	814	922	1,078	1,202	1,295	1,435	1,560	1,643	1,700	1,694	1,689	1,643	1,560	1,472	1,378	1,285	1,181	1,078	964	845	720	591	456	311	161	0	0	0	
	Total Annual Interest Cost	28	143	266	399	559	703	830	949	1,095	1,210	1,314	1,448	1,560	1,636	1,677	1,672	1,656	1,601	1,518	1,430	1,338	1,243	1,141	1,036	922	803	679	550	414	270	119	0	0	0	

Feb9 1, 30-yr — Average Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
	($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*56*	*174*	*297*	*440*	*596*	*737*	*857*	*987*	*1,126*	*1,233*	*1,348*	*1,479*	*1,581*	*1,650*	*1,676*	*1,670*	*1,645*	*1,581*	*1,496*	*1,407*	*1,315*	*1,218*	*1,115*	*1,008*	*893*	*773*	*647*	*517*	*379*	*233*	*79*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		2,256	2,461	2,461	3,282	2,974	2,667	2,154	3,077	2,461	1,846	2,769	2,461	1,641	1,128	-103	-103	-923	-1,641	-1,743	-1,846	-1,846	-2,051	-2,051	-2,256	-2,359	-2,461	-2,564	-2,667	-2,872	-2,974	-3,179	0	0	0	





Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Feb9_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0
			38	38	40	55	50	40	31	50	31	19	36	31	5	-5	-17	-19	-19	-21	-21	-21	-24	-26	-26	-26	-31	-29	-33	-33	-36	-38	-38	0	0	0

0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,300	998	17,886
Equal Monthly Debt Drawdown	2,355	993	

	Feb9 2, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,500	2029	13,466
Equal Monthly Debt Drawdown	19,964		

Feb9 2, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
a	Debt, Beginning of Year	0	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	
c = a*5%	*Interest Cost - Feb9 2, 30-yr - End of Year Debt Drawdown*	*0*	*82*	*164*	*251*	*368*	*476*	*563*	*629*	*737*	*803*	*844*	*921*	*987*	*998*	*987*	*952*	*911*	*870*	*824*	*778*	*732*	*680*	*624*	*568*	*512*	*445*	*384*	*312*	*240*	*164*	*82*	*0*	*0*	*0*	17,886
b	Additional GA Debt Drawdown, End of Year	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	7,123	6,323	5,523	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,700	3,200	1,600	0	0	0	
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	11,477	11,477	11,477	11,477	10,577	9,677	8,677	7,577	6,477	5,377	4,077	2,877	1,477	0	0	0	0	0	0	0	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	8,810	9,762	10,672	11,542	12,366	13,143	13,875	14,556	15,180	15,748	16,259	16,704	17,088	17,400	17,641	17,804	17,886				
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	9,790	8,038	6,328	4,558	2,834	1,157	-575	-2,356	-4,080	-5,748	-7,559	-9,204	-10,988	-12,700	-14,441	-16,204	-17,886				
Fiscal Exposure - End of Year Debt Drawdown		1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0	

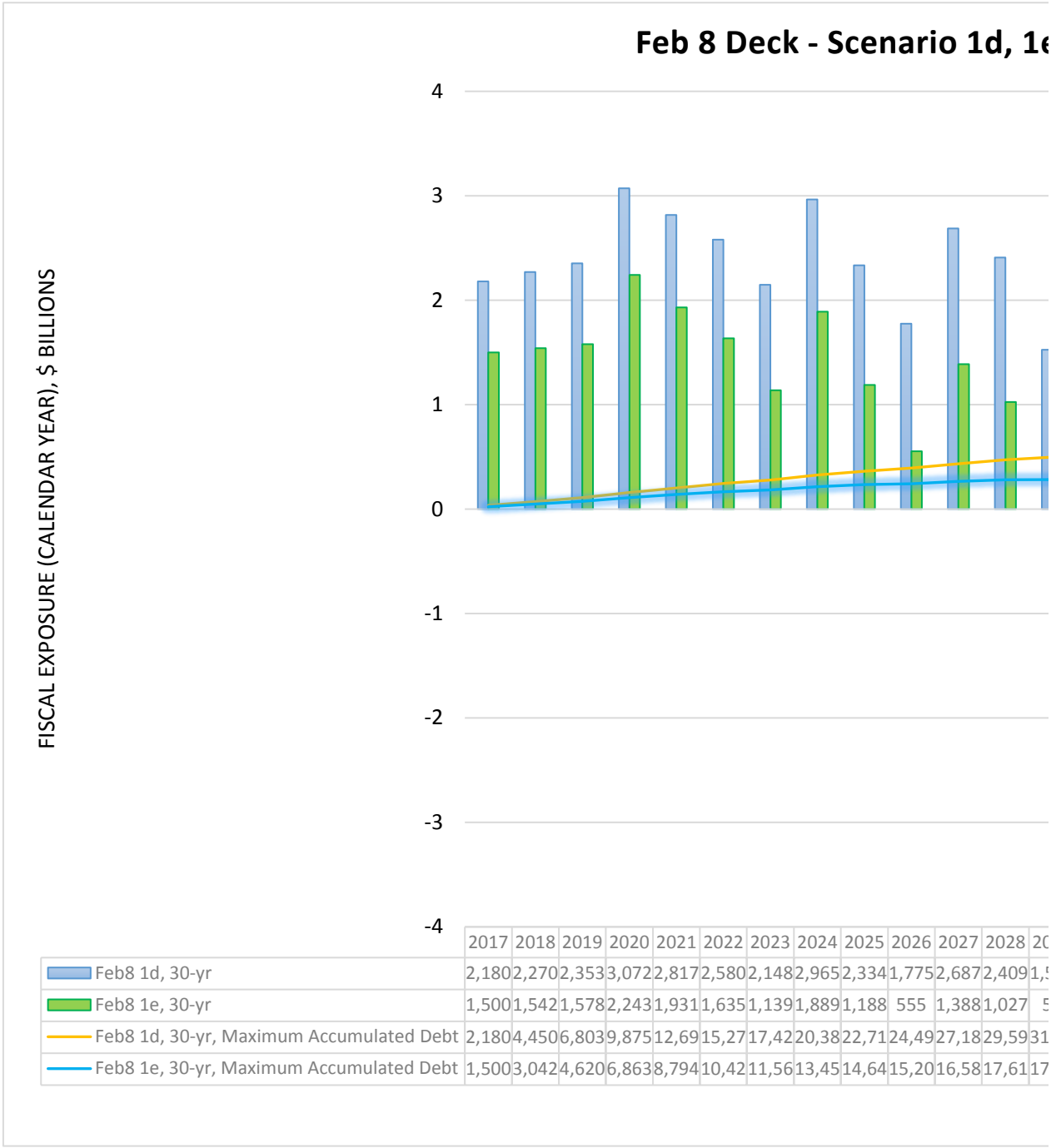
Feb9 2, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	
993	*Interest Cost - Feb9 2, 30-yr*	*38*	*120*	*204*	*305*	*418*	*516*	*594*	*679*	*768*	*822*	*880*	*952*	*992*	*993*	*971*	*933*	*892*	*848*	*802*	*756*	*708*	*654*	*598*	*542*	*481*	*417*	*350*	*279*	*205*	*126*	*44*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0	
	Monthly Drawdown	133	127	128	171	144	102	61	123	47	(0)	55	32	(66)	(100)	(141)	(146)	(143)	(147)	(144)	(140)	(144)	(148)	(144)	(139)	(151)	(137)	(149)	(143)	(145)	(147)	(140)	-	-	-	
	FV of Monthly Drawdown at 5%	1,638	1,554	1,573	2,098	1,773	1,253	755	1,506	577	(3)	671	388	(806)	(1,226)	(1,728)	(1,793)	(1,751)	(1,812)	(1,765)	(1,718)	(1,773)	(1,823)	(1,765)	(1,708)	(1,855)	(1,684)	(1,826)	(1,753)	(1,782)	(1,806)	(1,722)	-	-	-	
	Annual Interest Cost on New Drawdowns	38	36	37	49	41	29	18	35	13	(0)	16	9	(19)	(28)	(40)	(42)	(41)	(42)	(41)	(40)	(41)	(42)	(41)	(40)	(43)	(39)	(42)	(41)	(41)	(42)	(40)	-	-	-	
	Annual Interest Cost on Opening Balance	-	84	168	257	377	487	576	644	754	822	864	943	1,011	1,021	1,011	974	932	890	843	796	749	697	639	581	524	456	393	320	246	168	84	0	0	0	
	Total Annual Interest Cost	38	120	204	305	418	516	594	679	768	822	880	952	992	993	971	933	892	848	802	756	708	654	598	542	481	417	350	279	205	126	44	0	0	0	

Feb9 2, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*20*	*102*	*185*	*280*	*395*	*498*	*579*	*656*	*753*	*813*	*863*	*938*	*990*	*995*	*978*	*941*	*900*	*858*	*812*	*766*	*719*	*666*	*610*	*554*	*495*	*430*	*366*	*294*	*221*	*143*	*61*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,620	1,620	1,722	2,329	2,127	1,722	1,317	2,127	1,317	810	1,519	1,317	203	-203	-709	-810	-810	-912	-912	-912	-1,013	-1,114	-1,114	-1,114	-1,317	-1,215	-1,418	-1,418	-1,519	-1,620	-1,620	0	0	0	
	Bi-Annual Drawdown	800	759	768	1,025	866	612	369	735	282	(2)	328	190	(394)	(599)	(844)	(876)	(855)	(885)	(862)	(839)	(866)	(890)	(862)	(834)	(906)	(823)	(892)	(856)	(870)	(882)	(841)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,620	1,538	1,556	2,076	1,754	1,240	747	1,490	570	(3)	664	384	(797)	(1,213)	(1,709)	(1,774)	(1,733)	(1,792)	(1,746)	(1,699)	(1,754)	(1,803)	(1,746)	(1,689)	(1,835)	(1,666)	(1,807)	(1,734)	(1,763)	(1,786)	(1,703)	-	-	-	
	Annual Interest Cost on New Drawdowns	20	19	20	26	22	16	9	19	7	(0)	8	5	(10)	(15)	(22)	(22)	(22)	(23)	(22)	(21)	(22)	(23)	(22)	(21)	(23)	(21)	(23)	(22)	(22)	(23)	(22)	-	-	-	
	Annual Interest Cost on Opening Balance	-	83	166	254	373	482	570	637	746	814	855	933	1,000	1,010	1,000	964	922	881	834	788	741	689	632	575	518	451	389	316	244	166	83	0	0	0	
	Total Annual Interest Cost	20	102	185	280	395	498	579	656	753	813	863	938	990	995	978	941	900	858	812	766	719	666	610	554	495	430	366	294	221	143	61	0	0	0	

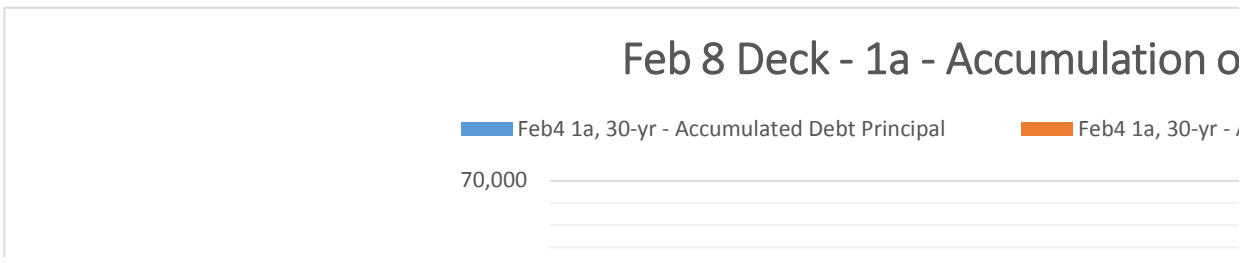
Feb9 2, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*41*	*123*	*207*	*310*	*422*	*519*	*596*	*683*	*770*	*824*	*883*	*954*	*993*	*993*	*970*	*931*	*890*	*847*	*801*	*755*	*706*	*652*	*596*	*540*	*478*	*414*	*348*	*276*	*202*	*123*	*41*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,641	1,641	1,743	2,359	2,154	1,743	1,333	2,154	1,333	820	1,538	1,333	205	-205	-718	-820	-820	-923	-923	-923	-1,026	-1,128	-1,128	-1,128	-1,333	-1,231	-1,436	-1,436	-1,538	-1,641	-1,641	0	0	0	

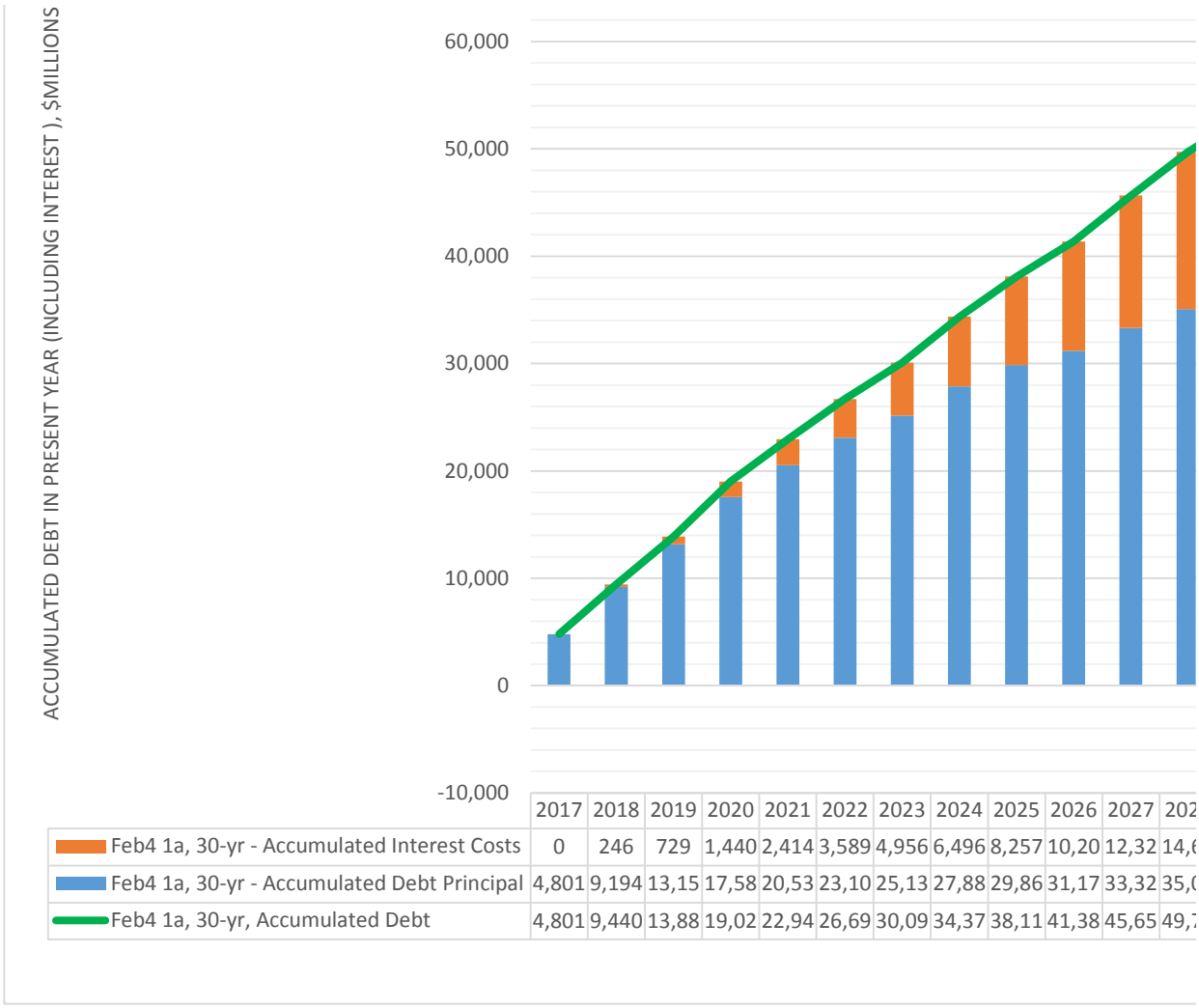
Feb 8 Deck

Feb 8 Deck - Scenario 1d, 1e - at 5.12% interest rate

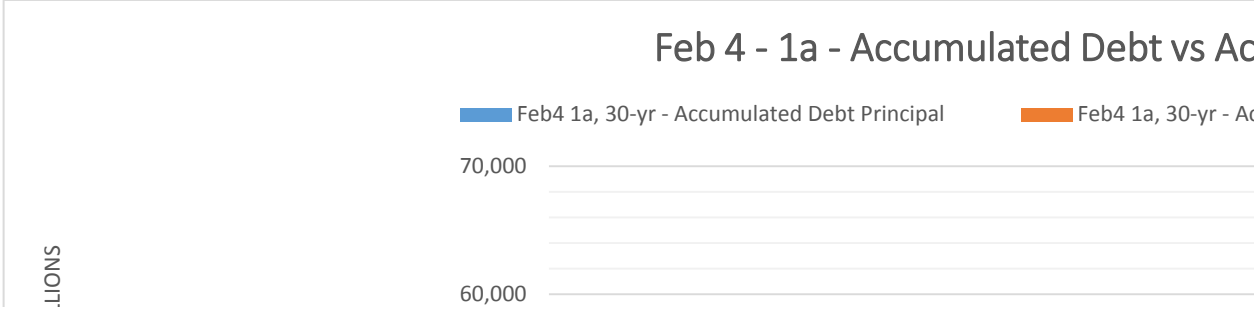


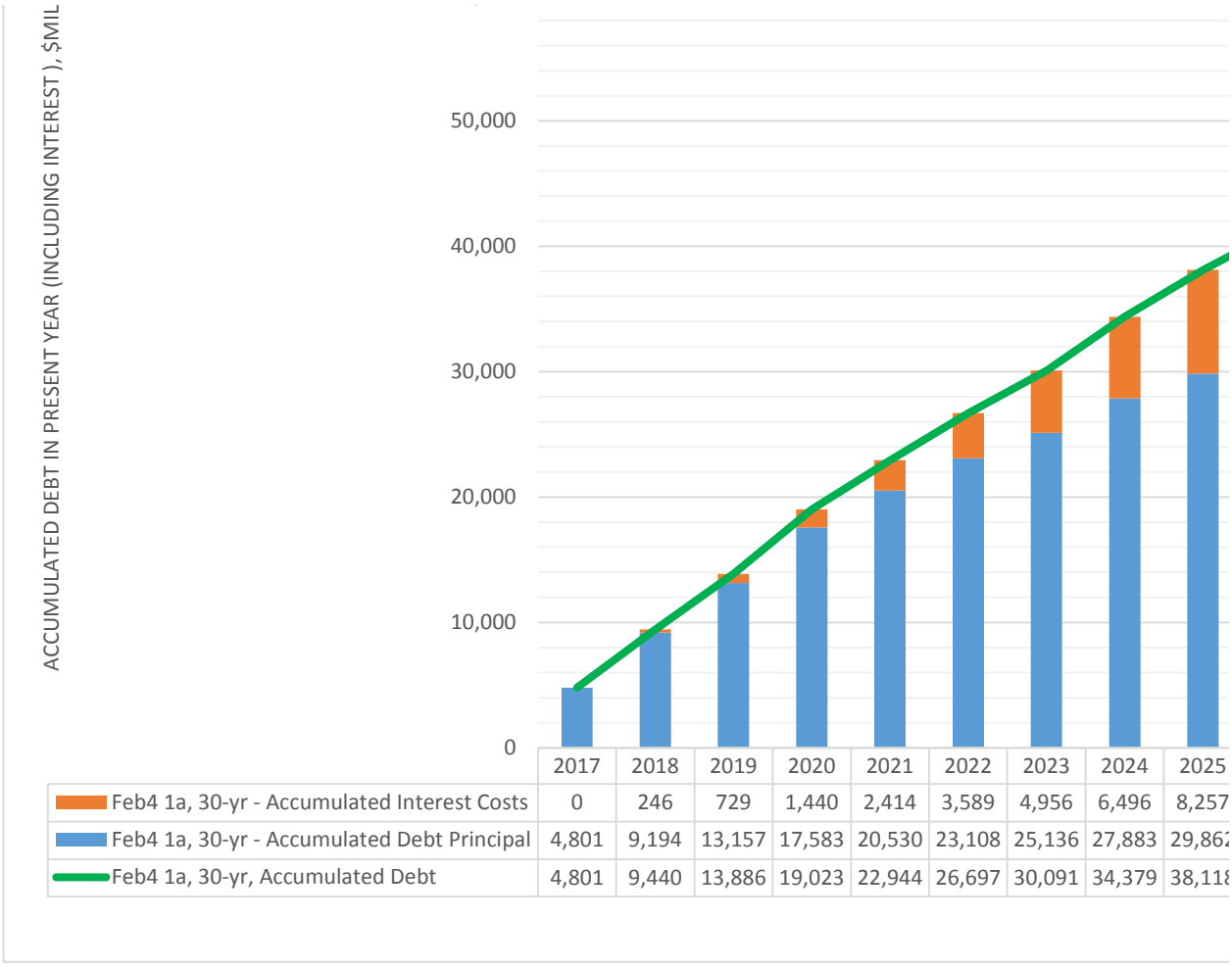
Feb 8 Deck - 1a - Accumulation of Debt (Principal and Interest)



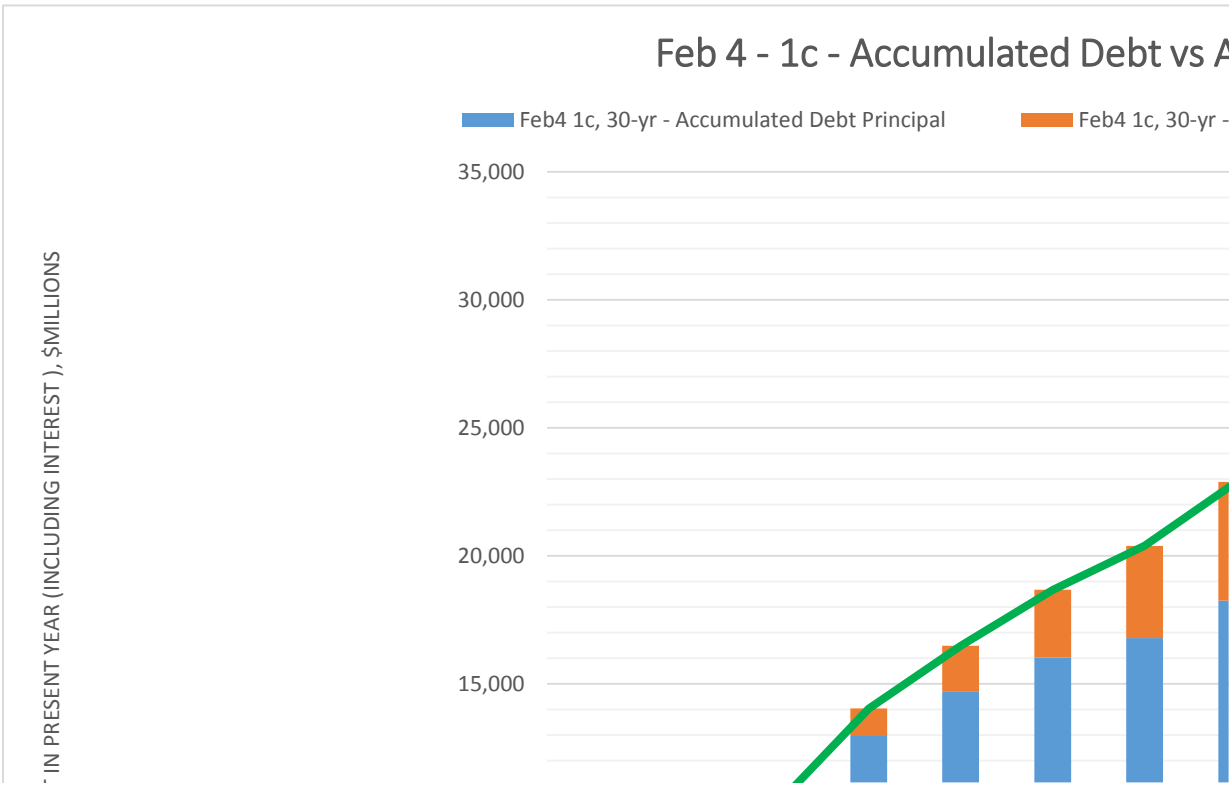


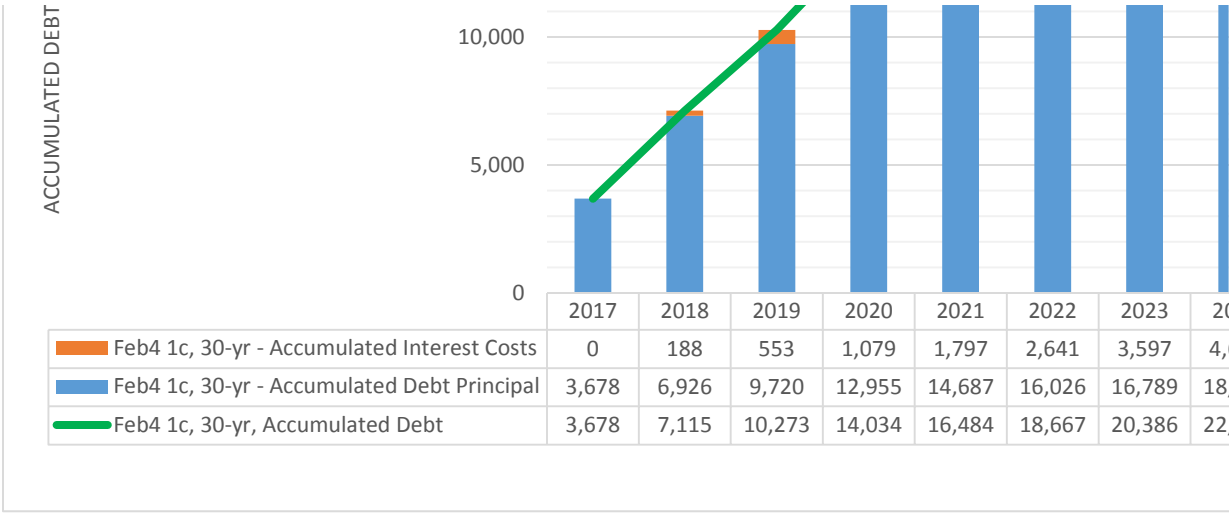
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	202
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,(
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,7



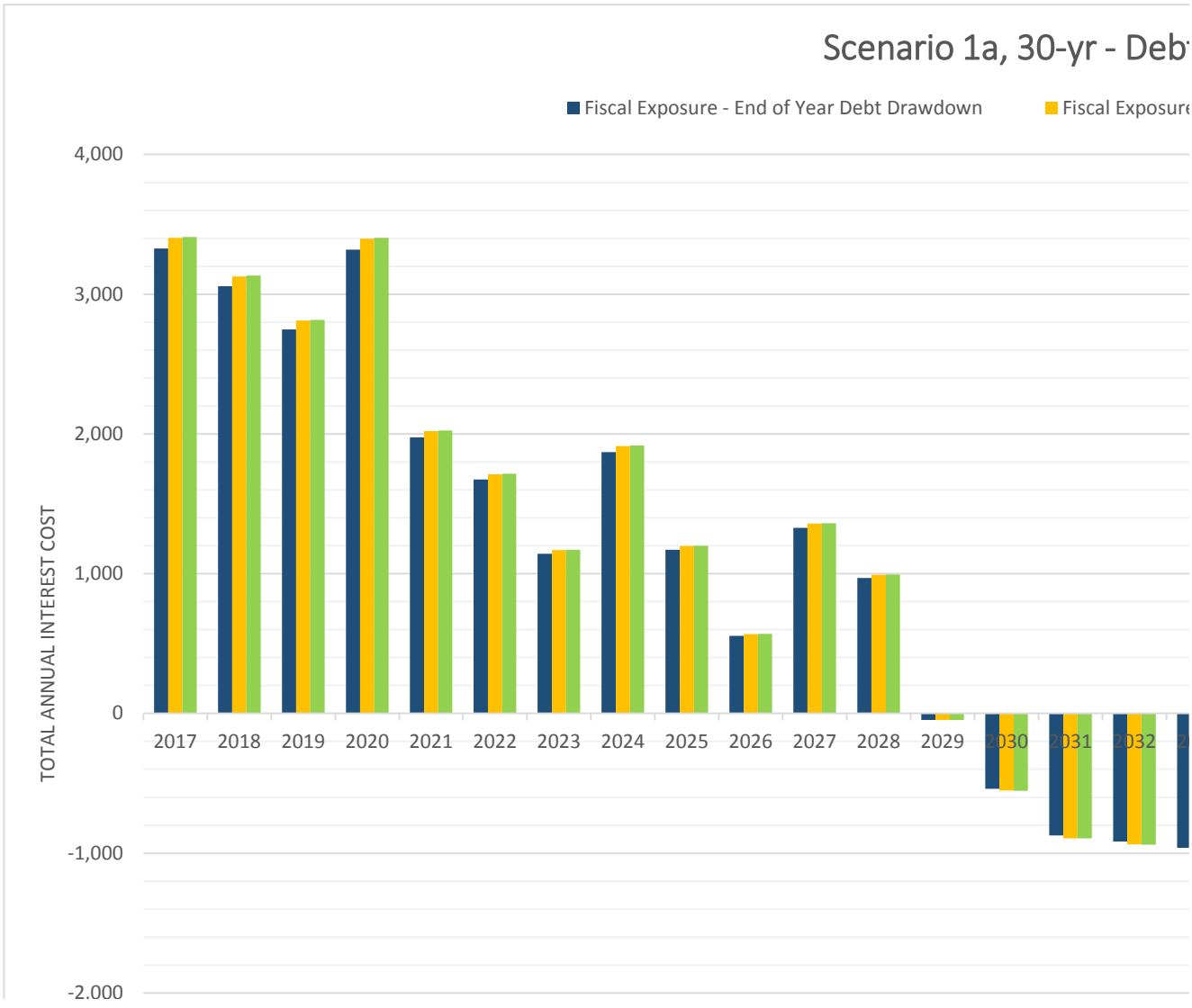


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



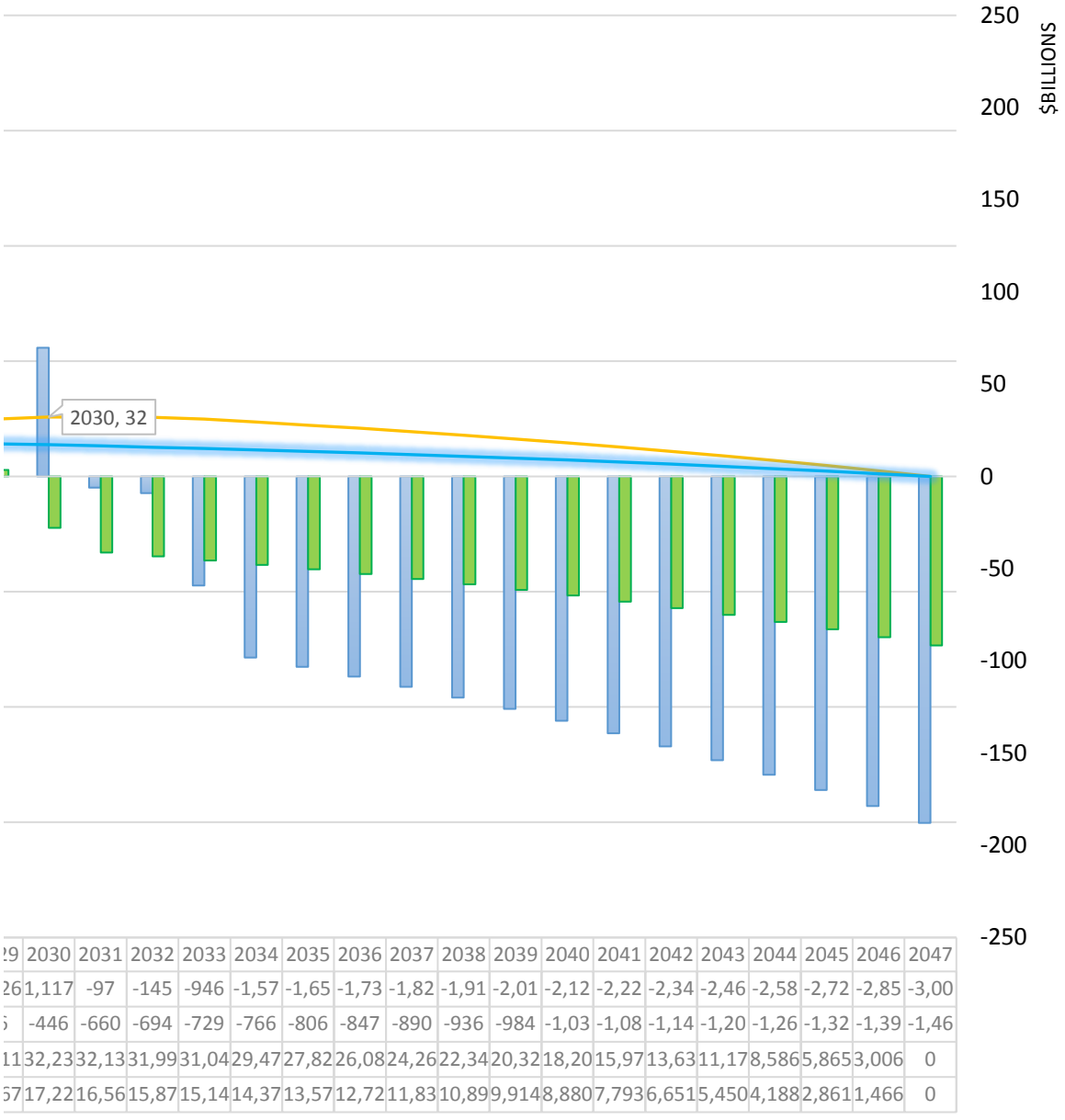


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

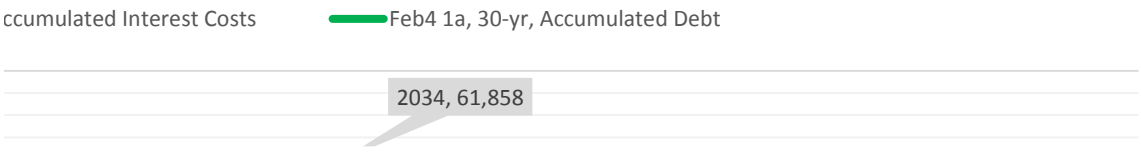
- at 5.12% interest rate

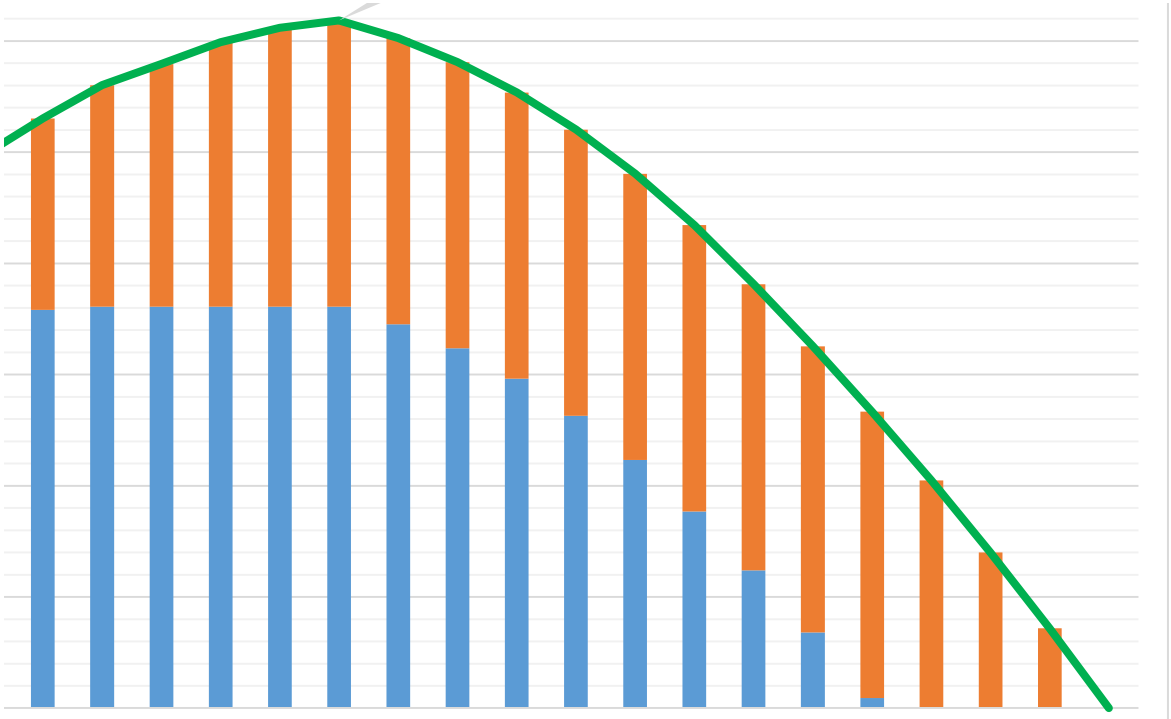


29	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
26	1,117	-97	-145	-946	-1,57	-1,65	-1,73	-1,82	-1,91	-2,01	-2,12	-2,22	-2,34	-2,46	-2,58	-2,72	-2,85	-3,00
5	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,03	-1,08	-1,14	-1,20	-1,26	-1,32	-1,39	-1,46
11	32,23	32,13	31,99	31,04	29,47	27,82	26,08	24,26	22,34	20,32	18,20	15,97	13,63	11,17	8,586	5,865	3,006	0
57	17,22	16,56	15,87	15,14	14,37	13,57	12,72	11,83	10,89	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0

CALENDAR YEAR

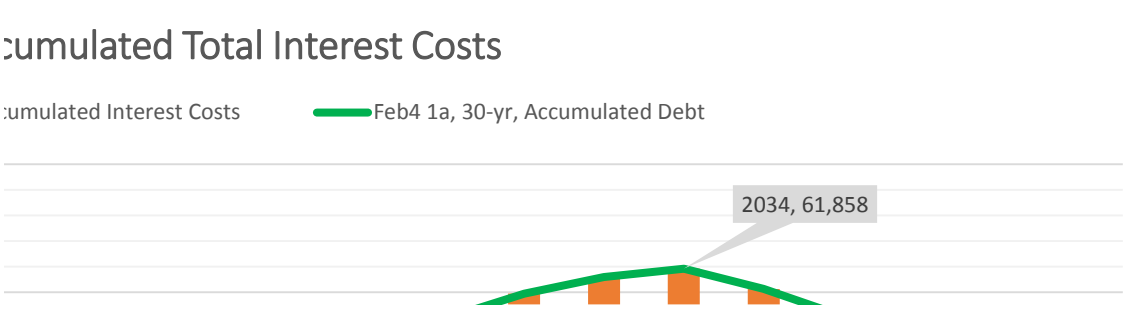
Debt (Principal and Interest)



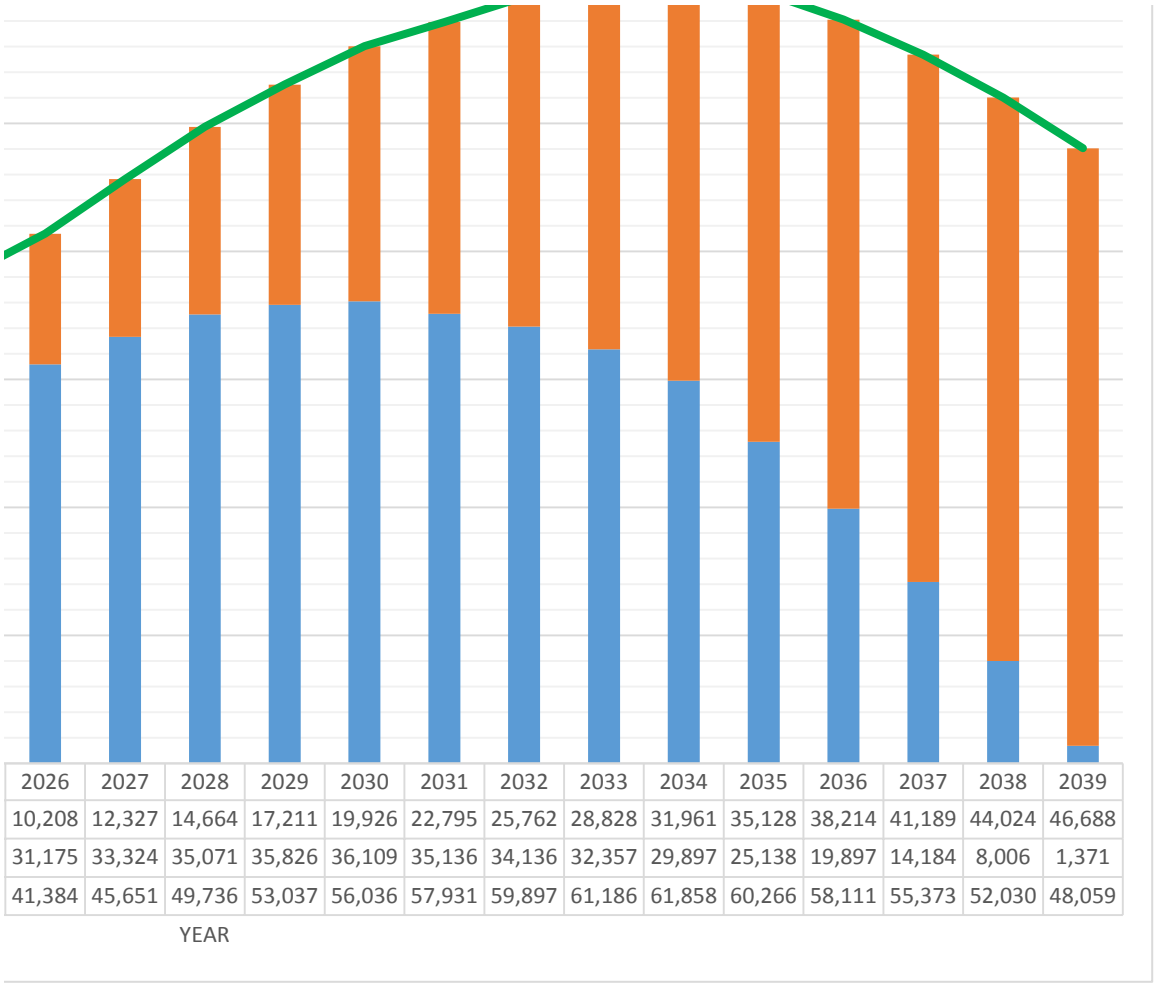


	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
5	17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
7	35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
3	53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



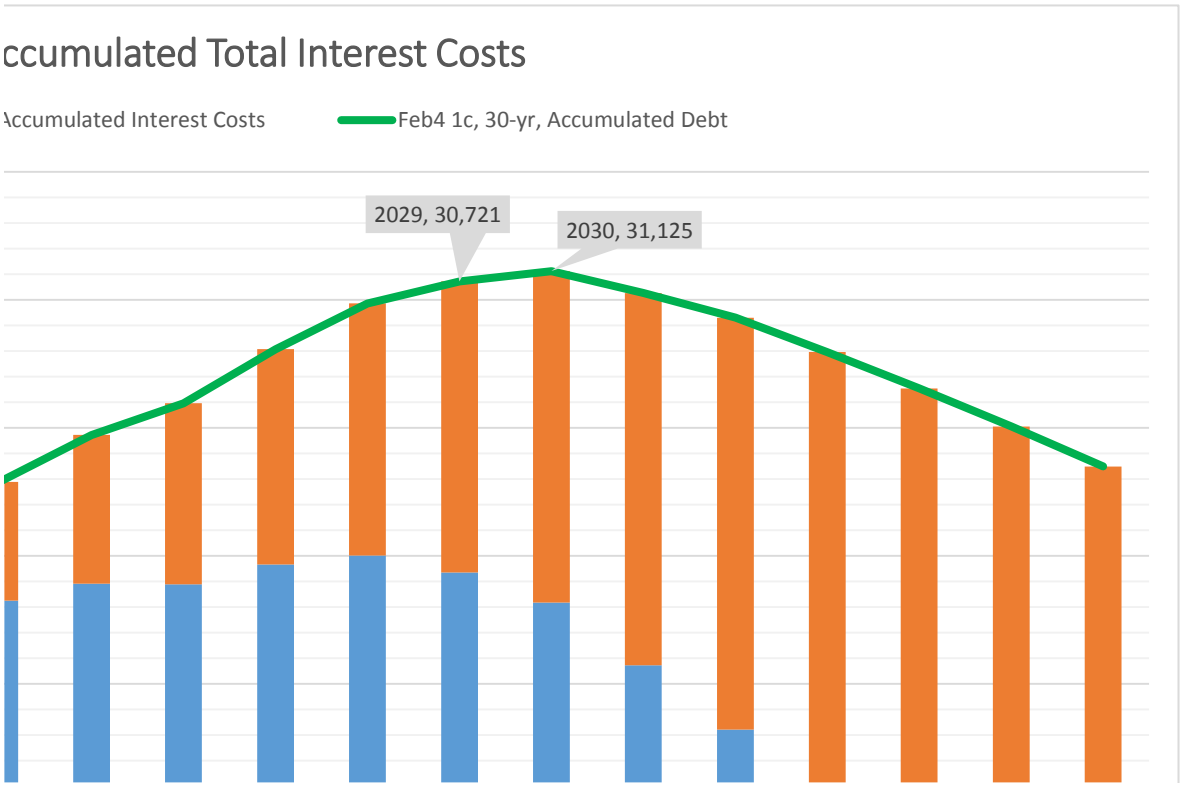
LIONS

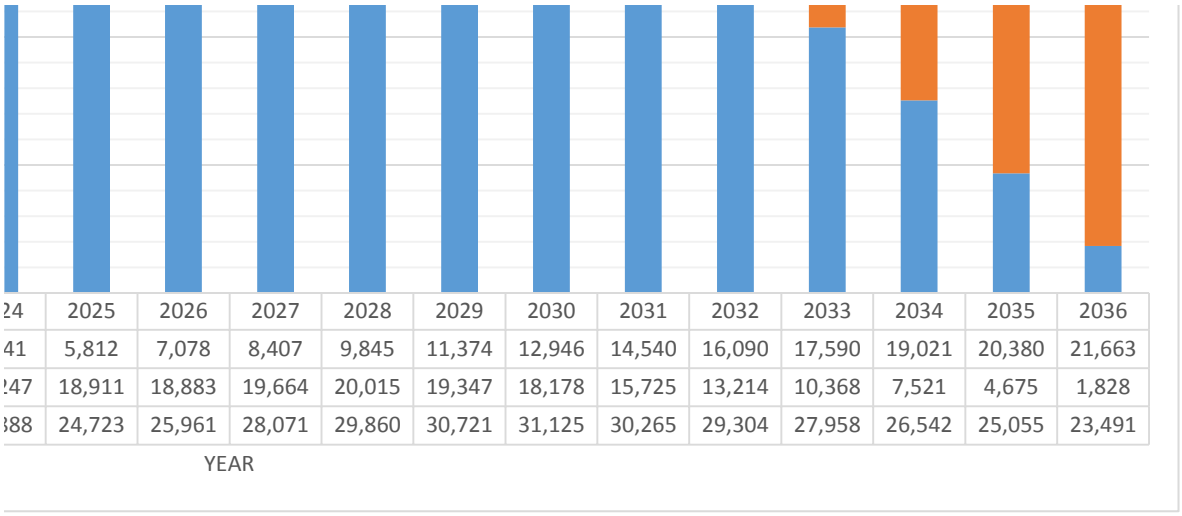


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

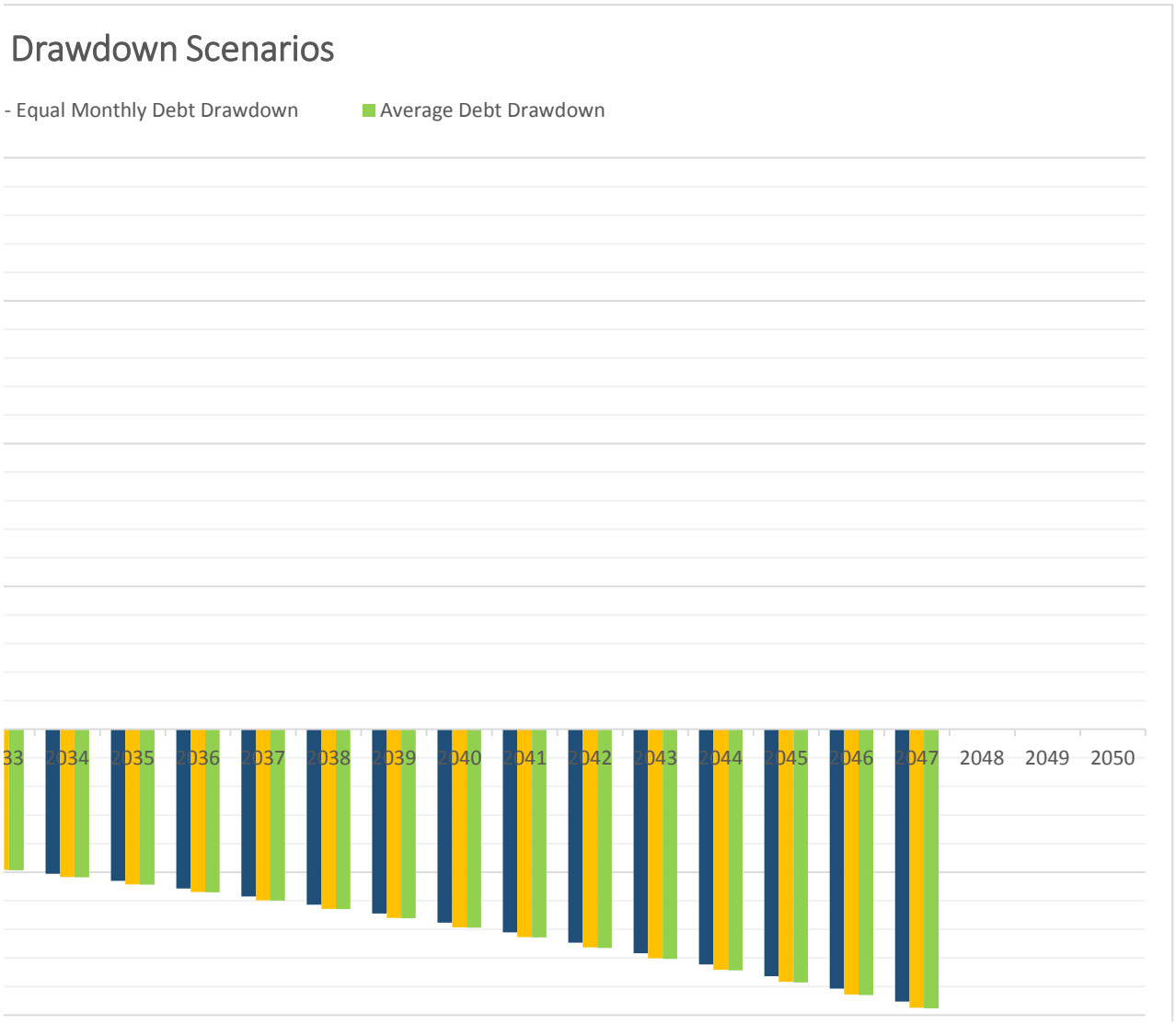
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





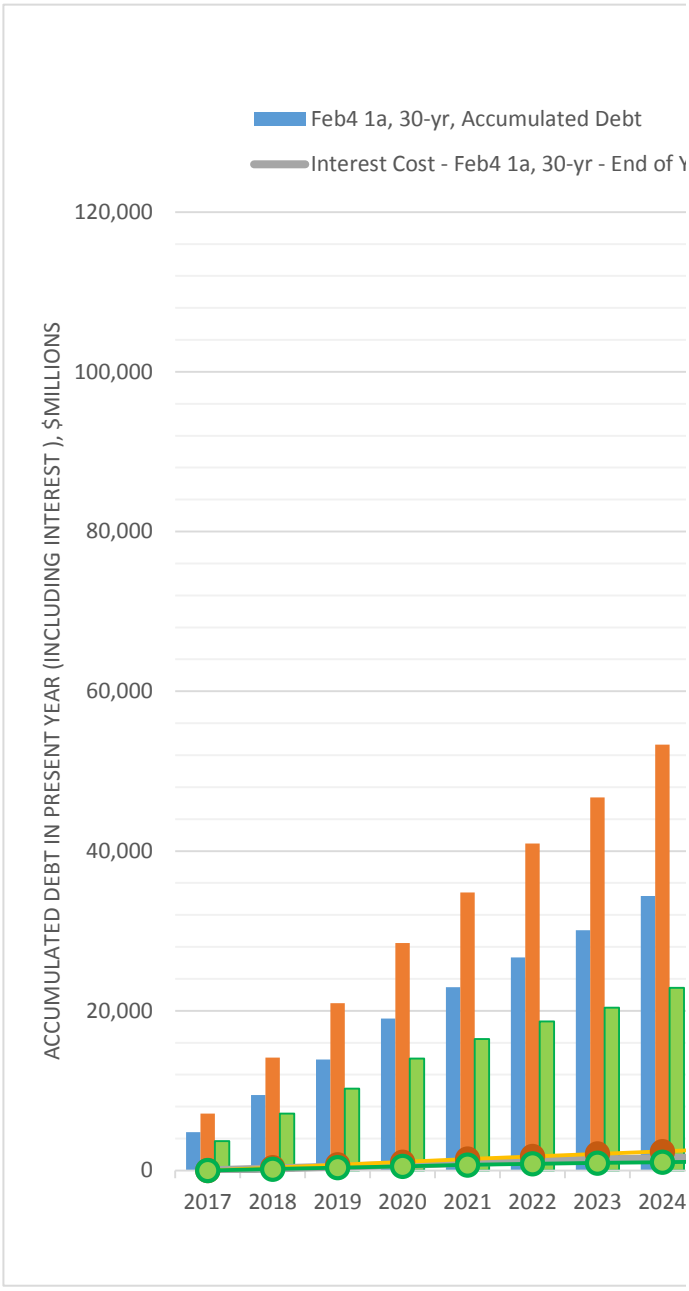
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

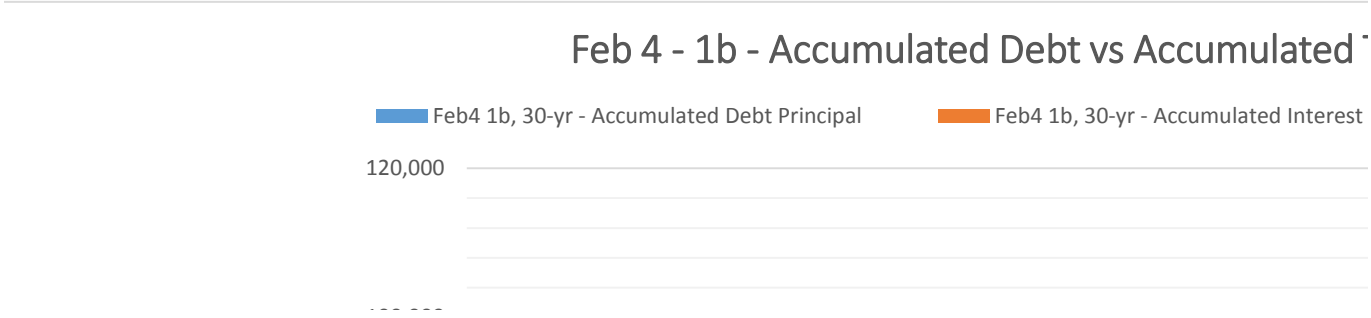
YEAR

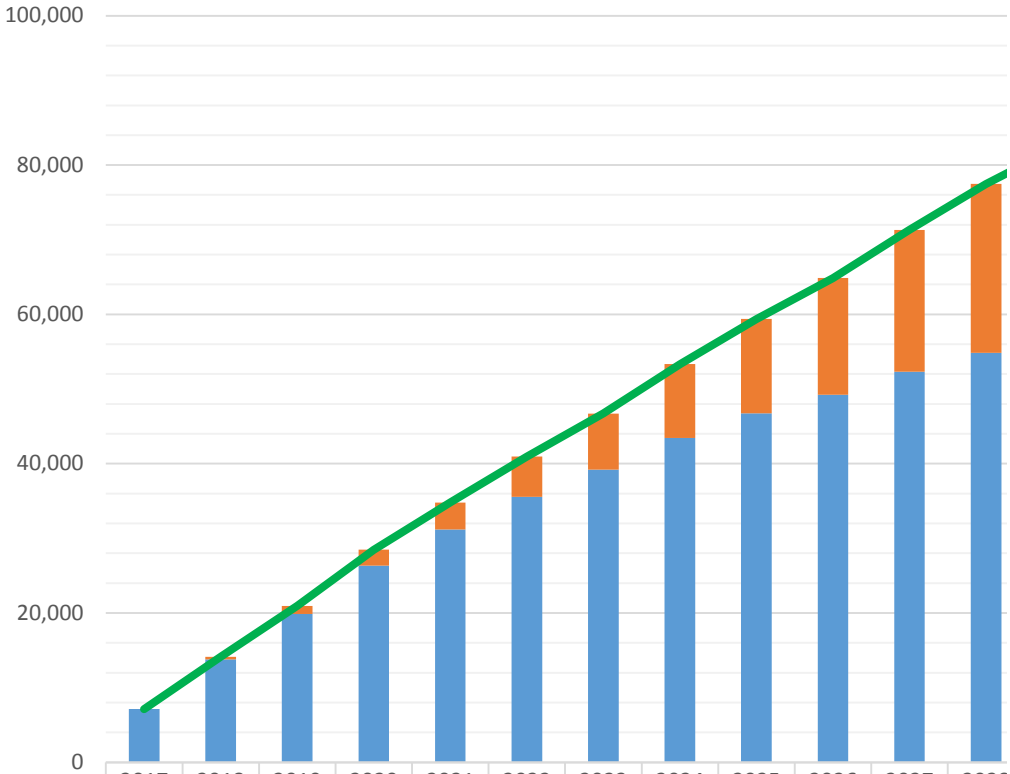


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate

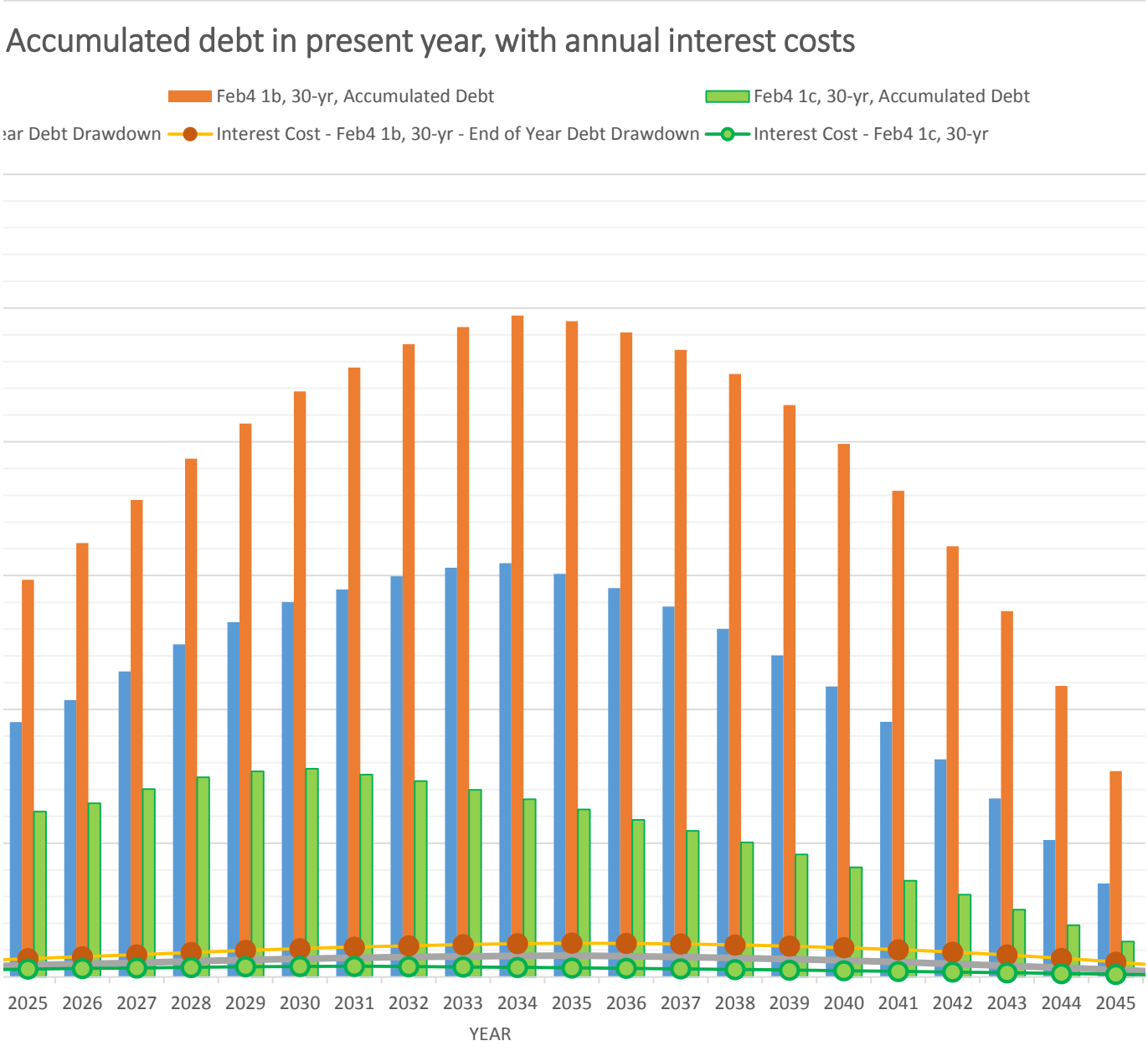


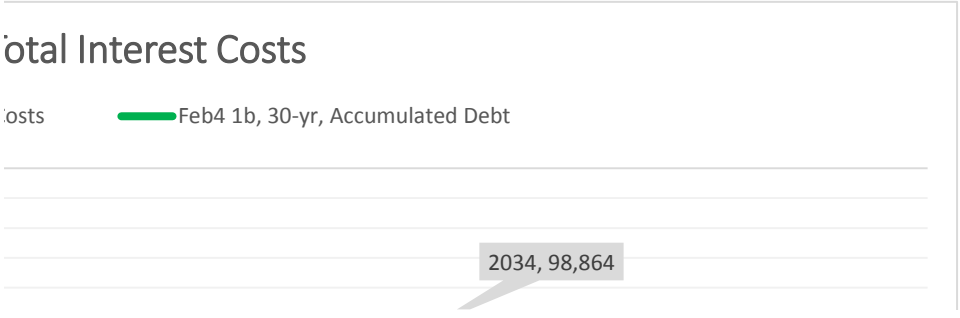

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

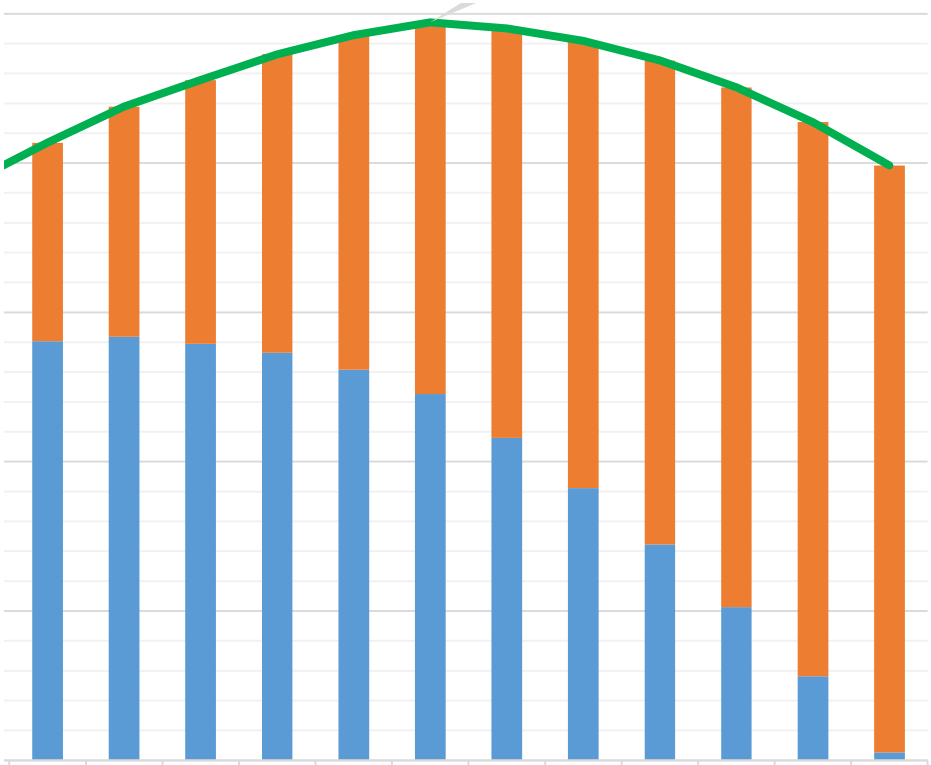


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y

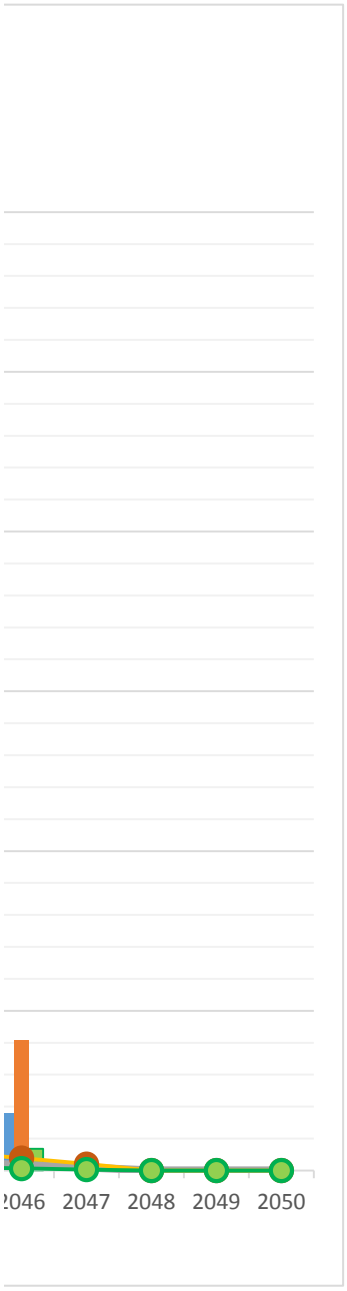

Accumulated debt in present year, with annual interest costs
Feb4 1b, 30-yr, Accumulated Debt
Feb4 1c, 30-yr, Accumulated Debt
ear Debt Drawdown
Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown
Interest Cost - Feb4 1c, 30-yr
2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045
YEAR


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

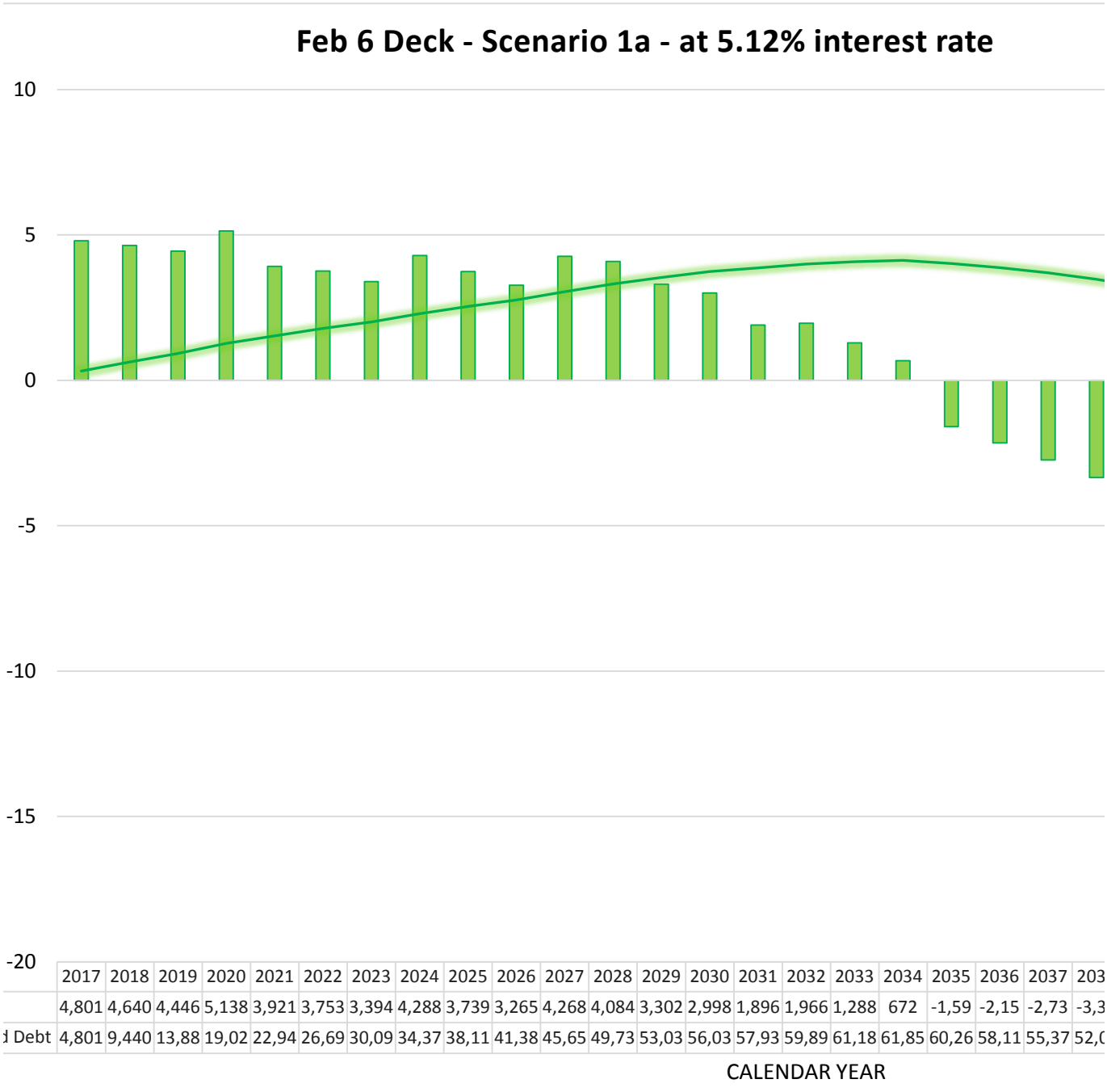
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

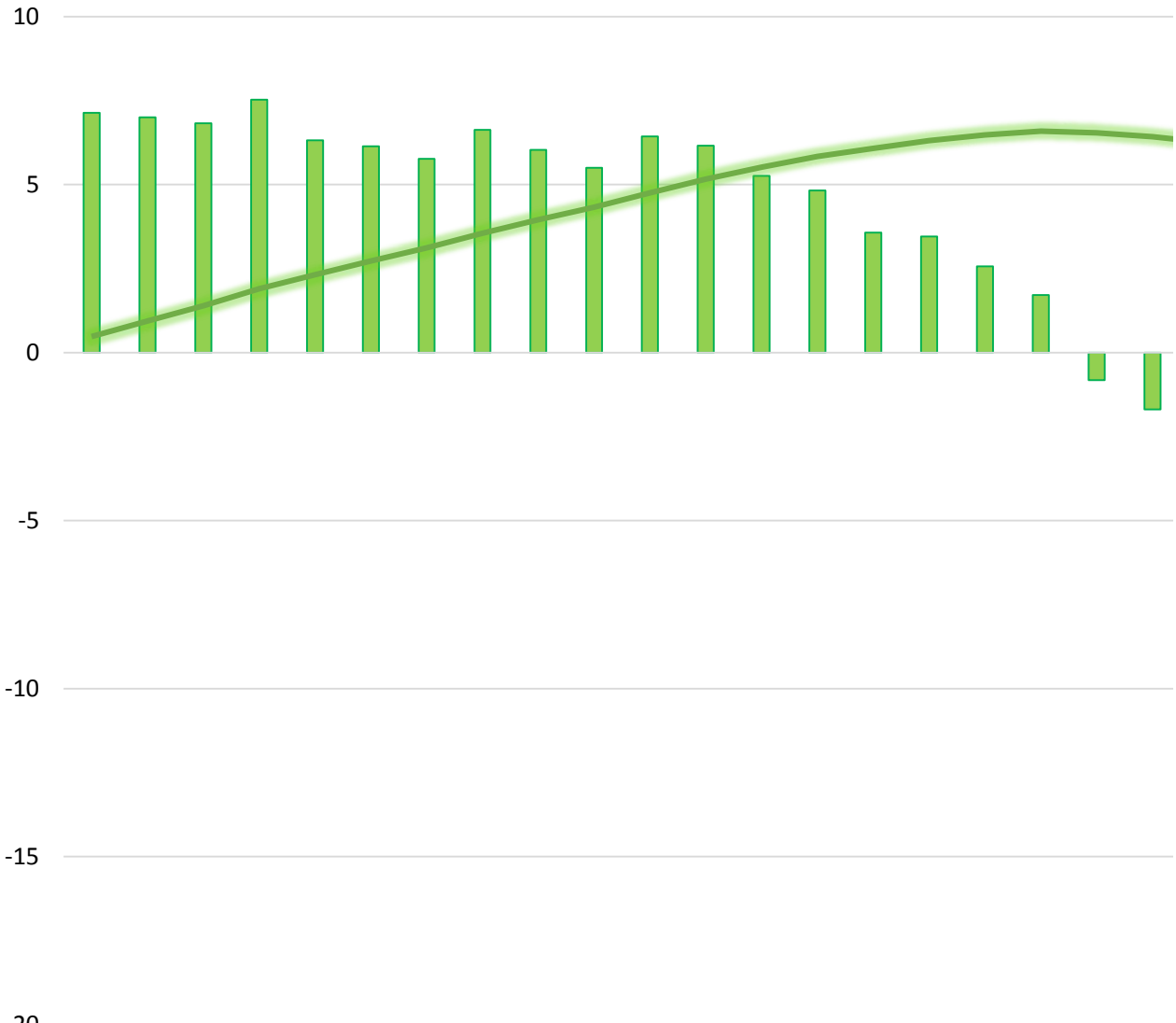
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

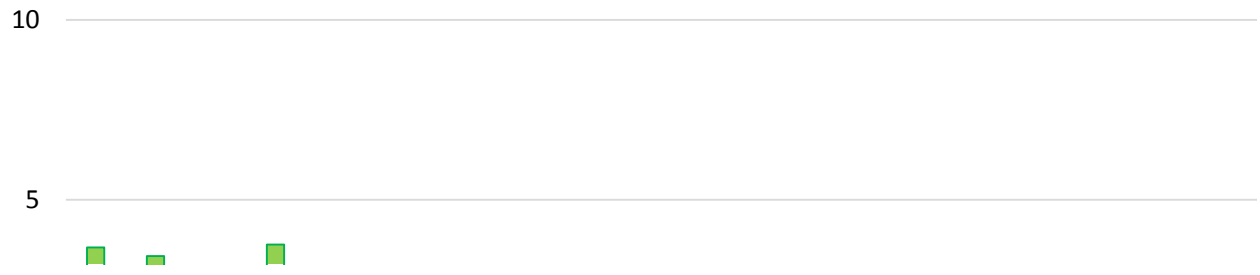
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

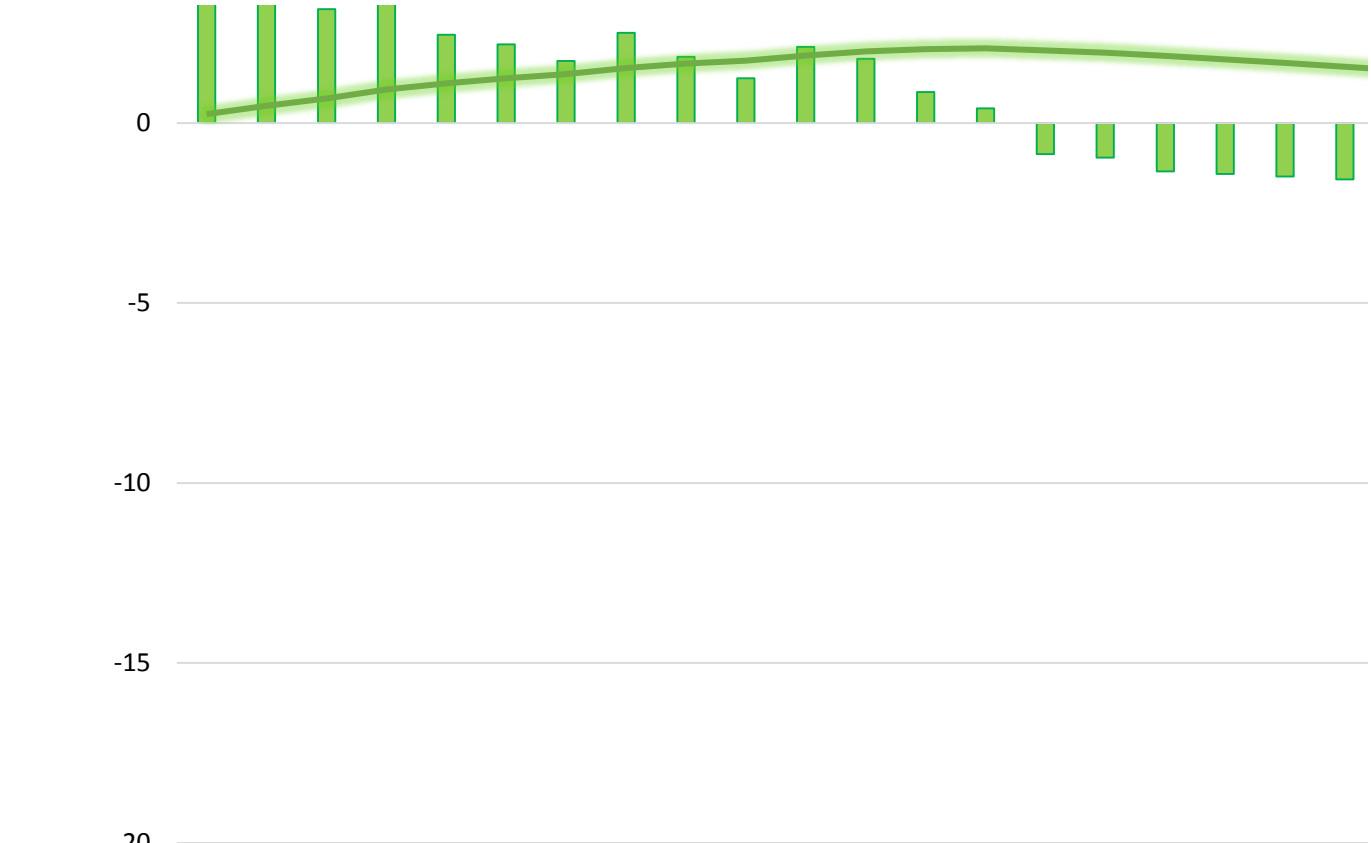


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



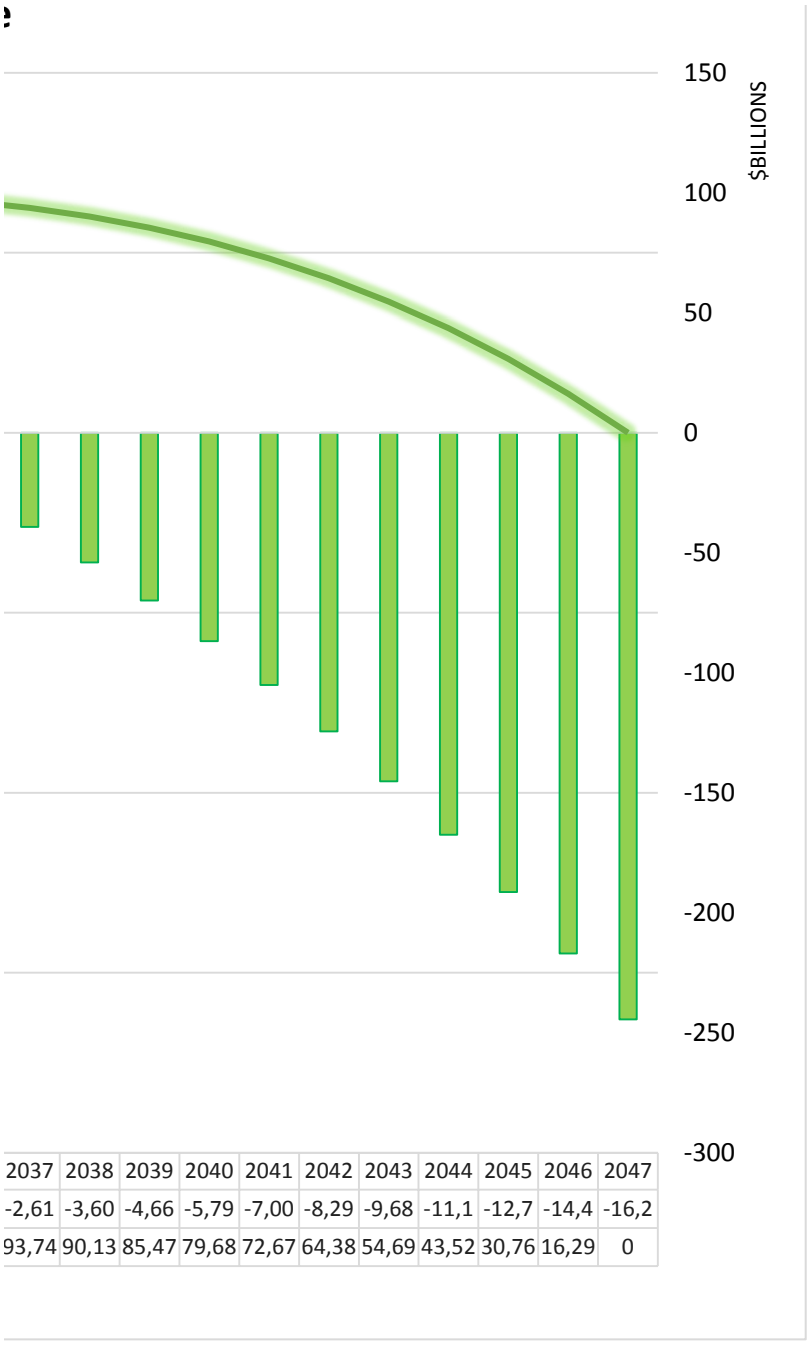


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

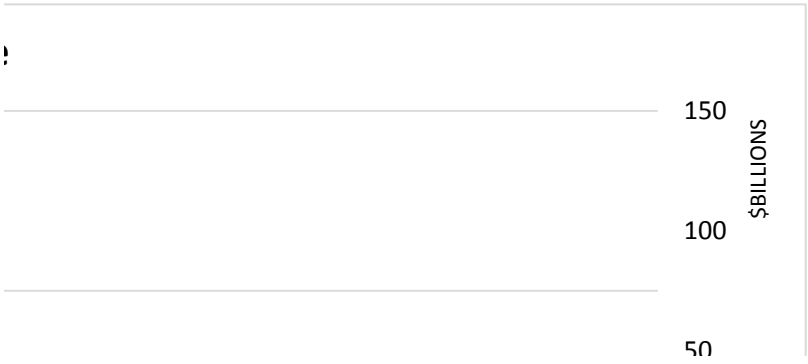
CALENDAR YEAR

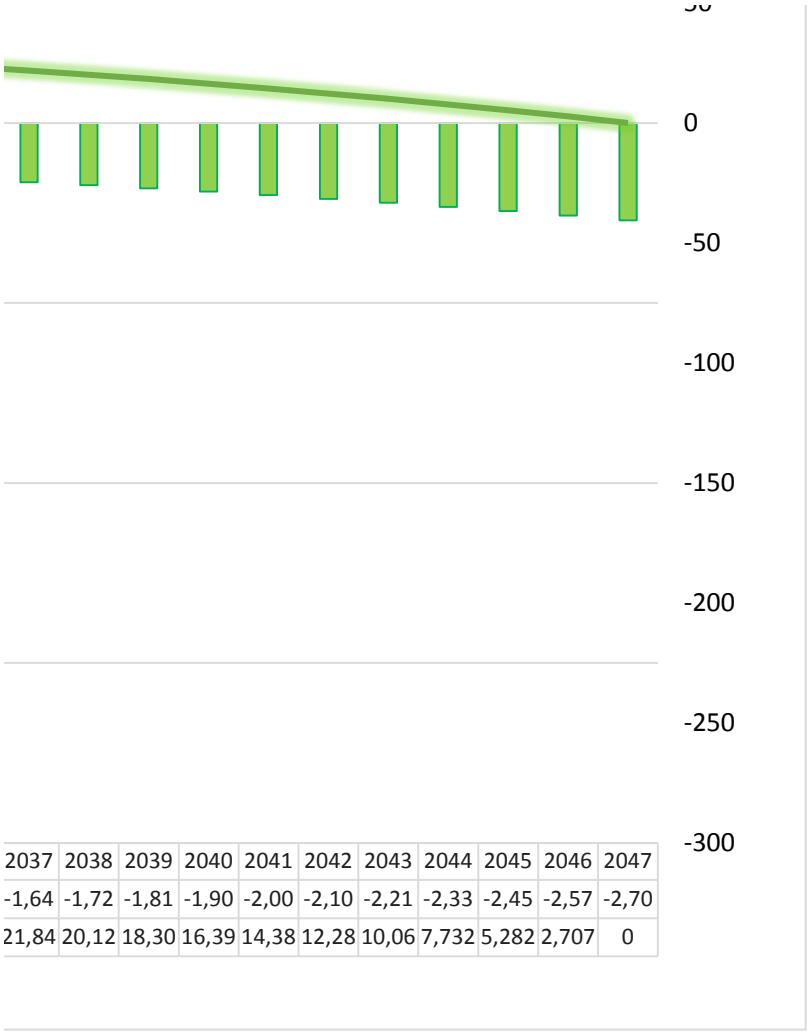


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Feb 8 Deck - Scenario 1a, 1b, 1c - at 5.12% interest
IESO GA cost forecast + extrapolation

Scenario
1a

1b

1c

1d

1e

	2017	2018	2019	2020
rate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	4674	9542	14587	21173

GA Payment from Impacted Rate Class	7421	7205	6995	6329
Accumulated debt in present year (including interest)	4674	9544	14589	21175

GA Payment from Impacted Rate Class	7421	7425	7440	7013
Accumulated debt in present year (including interest)	4674	9323	13913	19780

GA Payment from Impacted Rate Class	9915	9676	9427	9445
Accumulated debt in present year (including interest)	2180	4450	6803	9875

GA Payment from Impacted Rate Class	10596	10370	10129	10162
Accumulated debt in present year (including interest)	1500	3042	4620	6863

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
27212	33084	38588	44968	50769	56056	62291	68274

5890	6156	6434	6724	7028	7345	7677	8024
27212	33082	38585	44963	50762	56048	62281	68263

6825	7042	7266	7497	7736	7983	8237	8499
24810	29671	34167	39545	44359	48679	53976	59058

8532	8703	8877	9054	9236	9420	9609	9801
12692	15272	17420	20384	22719	24494	27181	29590

9264	9449	9638	9831	10027	10228	10432	10641
8794	10429	11568	13457	14645	15200	16588	17614

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
73391	78103	81594	85015	87596	89375	88679	87180

8386	8765	9160	9574	10006	10458	10931	11424
73378	78089	81578	84997	87577	89356	88659	87159

8770	9049	9337	9634	9941	10257	10584	10921
63318	67230	69987	72754	74773	76097	75068	73377

9997	10197	10401	10609	10821	10916	8822	8548
31116	32233	32135	31991	31045	29473	27822	26085

10854	11071	10196	10361	9779	9298	7203	6930
17670	17225	16565	15871	15142	14376	13570	12723

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
84828	81568	77341	72085	65730	58203	49425	39310

11940	12480	13043	13632	14248	14891	15564	16267
84806	81546	77320	72065	65711	58186	49409	39297

11269	11628	11998	12380	12774	13181	13600	14033
70990	67875	63995	59310	53778	47352	39985	31624

8288	8040	7805	7580	7367	7164	6970	6786
24260	22342	20325	18206	15978	13635	11173	8586

6670	6422	6186	5962	5748	5545	5352	5168
11833	10897	9914	8880	7793	6651	5450	4188

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
27767	14699	0	0	0	0

17001	17769	18572	2975	2831	2695
27758	14694	0	0	0	0

14480	14941	15417	2975	2831	2695
22213	11693	0	0	0	0

6611	6444	6286	2975	2831	2695
5865	3006	0	0	0	0

4993	4826	4667	2975	2831	2695
2861	1466	0	0	0	0

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb8_1a_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,867
Annual Exposure2 with start on July 1st	*2,337*	*4,867*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	3,554

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

1 Based on an interest rate of 5%.

2 Fiscal exposure based on equal monthly drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1b_30yr

1b. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,869
Annual Exposure2 with start on July 1st	*2,337*	*4,869*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	*3,554*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649
Annual Exposure2 with start on July 1st	*2,337*	*4,649*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,668
Start: July 1st	-	*3,499*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $76 billion peaking in

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270
Annual Exposure2 with start on July 1st	*1,090*	*2,270*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	545	2,203
Start: July 1st	-	*1,658*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $32 billion peaking in

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542
Annual Exposure2 with start on July 1st	*750*	*1,542*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	375	1,510
Start: July 1st	-	*1,135*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $18 billion peaking in

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	1,169 - 1,169	4,723 - 4,723

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1169**	**4963**
Total, B	1169	4963
Proposed Program Total:	1,169 - 1,169	4,963 - 4,963

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1a
Scenario 1b
Scenario 1c
Scenario 1d
Scenario 1e

2019	2020	2021	2022
5,045	6,586	6,039	5,872
5,045	*6,586*	*6,039*	*5,872*

2018-19	2019-20	2020-21	2021-2022
4,912	5,430	6,449	5,997
4,912	*5,430*	*6,449*	*5,997*

2034.

Actuals are subject t
- The highest debt ac
- Compared to a 5% i

[1] Based on an interes
[2] Fiscal exposure bas
[3] Fiscalized based on

depend on decision on accounting treatment.

2019	2020	2021	2022
5,045	6,586	6,037	5,870
5,045	*6,586*	*6,037*	*5,870*

2018-19	2019-20	2020-21	2021-2022
4,913	5,430	6,449	5,996
4,913	*5,430*	*6,449*	*5,996*

2034.

2019	2020	2021	2022
4,589	5,867	5,031	4,861
4,589	*5,867*	*5,031*	*4,861*

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988
4,634	*4,909*	*5,658*	*4,988*

2034.

2019	2020	2021	2022
2,353	3,072	2,817	2,580
2,353	*3,072*	*2,817*	*2,580*

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757
2,291	*2,533*	*3,008*	*2,757*

2030.

2019	2020	2021	2022
1,578	2,243	1,931	1,635
1,578	*2,243*	*1,931*	*1,635*

2018-19	2019-20	2020-21	2021-2022

1,551	1,745	2,165	1,857
1,551	*1,745*	*2,165*	*1,857*

2029.



2018-19	2019-20	2020-21	2021-2022
4,913 - 4,912	5,430 - 5,430	6,449 - 6,449	5,996 - 5,997

/1

2018-19[1]	2019-20[1]	2020-21[1]
4912	5430	6449
4913	5430	6449
225	279	323
60	60	60
18	18	18
5215	**5787**	**6850**
5216	5787	6850

5,216 - 5,215 5,787 - 5,787 6,850 - 6,850

Total Principal Debt	Total Accumulated Interest Costs	**Peak Total Debt**	
52,287	85,599	89,375	occurs in Year 2034
52,275	85,582	89,356	occurs in Year 2034
44,449	72,823	76,097	occurs in Year 2034
21,239	29,589	32,233	occurs in Year 2030
12,350	16,239	17,670	occurs in Year 2029

o actual prices and actual interest rates.
:cumulation (at 5% interest rate) is expected to be approximately $62 billion, peaking in 203 and $17-21 billion (at 3.5% interest
interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately $33-$36 million.

st rate of 5%.
sed on equal monthly drawdown of debt.
75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on mo

Feb8_1a_30yr
Feb8_1b_30yr
Feb8_1c_30yr
Feb8_1d_30yr
Feb8_1e_30yr

t rate), peaking in 2028.

nth of the year. Actuals may also depend on decision on accounting treatment.

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-275	-311	-350	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,573	85,599
Equal Monthly Debt Drawdown	6,743	4,556	

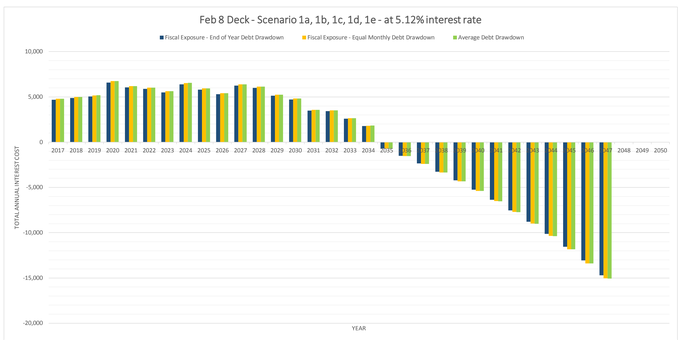
	Feb8 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,375	2034	52,287
Equal Monthly Debt Drawdown	91,501		

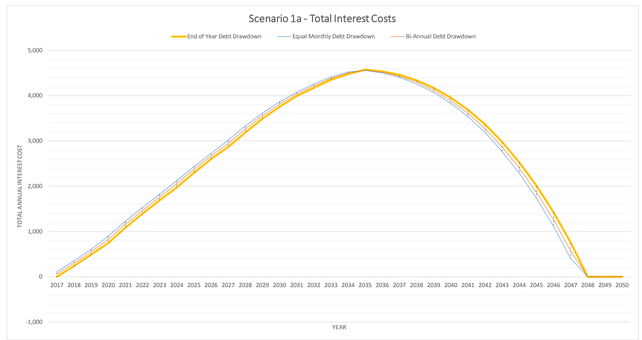
Feb8 1a, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	
c = a*5%	*Interest Cost - Feb8 1a, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,301*	*2,597*	*2,868*	*3,187*	*3,493*	*3,755*	*3,996*	*4,175*	*4,350*	*4,482*	*4,573*	*4,537*	*4,460*	*4,340*	*4,173*	*3,957*	*3,688*	*3,363*	*2,978*	*2,529*	*2,011*	*1,421*	*752*	*0*	*0*	*0*	85,599
b	Additional GA Debt Drawdown, End of Year	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,307	32,728	35,309	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	39,310	27,767	14,699	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	52,287	52,287	52,287	51,591	50,091	47,739	44,479	40,253	34,997	28,642	21,115	12,336	0	0	0	0	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,813	33,987	38,337	42,818	47,391	51,928	56,388	60,728	64,901	68,858	72,546	75,909	78,887	81,416	83,427	84,847	85,599				
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	51,781	51,028	49,259	46,557	41,288	35,252	28,440	20,840	12,440	3,227	-6,816	-17,706	-29,462	-42,106	-55,660	-70,149	-85,599				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	

Feb8 1a, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	
4,556	*Interest Cost - Feb8 1a, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,824*	*2,126*	*2,439*	*2,723*	*3,016*	*3,329*	*3,615*	*3,867*	*4,079*	*4,256*	*4,411*	*4,524*	*4,556*	*4,501*	*4,404*	*4,262*	*4,073*	*3,832*	*3,537*	*3,184*	*2,769*	*2,288*	*1,737*	*1,110*	*402*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
	Monthly Drawdown	390	386	380	487	413	373	318	367	292	224	281	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(980)	(1,054)	(1,129)	(1,207)	(1,288)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,738	4,665	5,979	5,074	4,586	3,902	4,510	3,584	2,753	3,447	2,863	1,662	980	(517)	(772)	(1,810)	(2,766)	(5,394)	(6,180)	(6,975)	(7,781)	(8,599)	(9,432)	(10,282)	(11,149)	(12,036)	(12,944)	(13,876)	(14,834)	(15,818)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	67	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(368)	-	-	-	
	Annual Interest Cost on Opening Balance		245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,263	3,576	3,844	4,091	4,274	4,453	4,588	4,681	4,645	4,566	4,443	4,272	4,051	3,776	3,443	3,049	2,589	2,059	1,454	770	(0)	(0)	(0)	
	Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,824	2,126	2,439	2,723	3,016	3,329	3,615	3,867	4,079	4,256	4,411	4,524	4,556	4,501	4,404	4,262	4,073	3,832	3,537	3,184	2,769	2,288	1,737	1,110	402	(0)	(0)	(0)	

Feb8 1a, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*60*	*301*	*553*	*831*	*1,160*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,948*	*3,263*	*3,558*	*3,815*	*4,041*	*4,218*	*4,383*	*4,504*	*4,564*	*4,518*	*4,430*	*4,298*	*4,119*	*3,890*	*3,607*	*3,267*	*2,866*	*2,399*	*1,864*	*1,253*	*564*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,930	5,110	6,670	6,116	5,947	5,575	6,461	5,875	5,354	6,315	6,060	5,182	4,773	3,535	3,464	2,614	1,802	-705	-1,518	-2,382	-3,302	-4,280	-5,324	-6,436	-7,623	-8,891	-10,244	-11,690	-13,236	-14,887	0	0	0	
	Bi-Annual Drawdown	2,337	2,314	2,279	2,920	2,478	2,240	1,906	2,203	1,750	1,345	1,684	1,398	812	479	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,800)	(4,200)	(4,607)	(5,021)	(5,445)	(5,878)	(6,322)	(6,777)	(7,245)	(7,725)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,687	4,615	5,914	5,019	4,537	3,860	4,462	3,545	2,724	3,410	2,832	1,644	970	(512)	(763)	(1,791)	(2,737)	(5,336)	(6,113)	(6,900)	(7,697)	(8,507)	(9,331)	(10,171)	(11,029)	(11,907)	(12,805)	(13,727)	(14,674)	(15,648)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	494	756	1,097	1,410	1,714	1,999	2,330	2,631	2,905	3,228	3,538	3,803	4,047	4,228	4,405	4,539	4,631	4,595	4,517	4,395	4,227	4,008	3,735	3,406	3,016	2,561	2,037	1,439	762	(0)	(0)	(0)	
	Total Annual Interest Cost	60	301	553	831	1,160	1,467	1,763	2,056	2,375	2,665	2,948	3,263	3,558	3,815	4,041	4,218	4,383	4,504	4,564	4,518	4,430	4,298	4,119	3,890	3,607	3,267	2,866	2,399	1,864	1,253	564	(0)	(0)	(0)	

Feb8 1a, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,723*	*3,027*	*3,340*	*3,624*	*3,875*	*4,085*	*4,262*	*4,416*	*4,527*	*4,555*	*4,499*	*4,400*	*4,257*	*4,065*	*3,822*	*3,525*	*3,170*	*2,753*	*2,270*	*1,716*	*1,086*	*376*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,992	5,174	6,754	6,193	6,022	5,645	6,543	5,950	5,422	6,395	6,137	5,248	4,833	3,580	3,508	2,647	1,825	-714	-1,537	-2,412	-3,343	-4,334	-5,391	-6,517	-7,720	-9,003	-10,374	-11,838	-13,403	-15,075	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-274	-311	-349	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,572	85,582
Equal Monthly Debt Drawdown	6,743	4,555	

	Feb8 1b, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,356	2034	52,275
Equal Monthly Debt Drawdown	91,481		

Feb8 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
a — Debt, Beginning of Year	0	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	
c = a*5% — *Interest Cost - Feb8 1b, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,300*	*2,597*	*2,867*	*3,186*	*3,492*	*3,754*	*3,995*	*4,174*	*4,349*	*4,481*	*4,572*	*4,536*	*4,459*	*4,339*	*4,172*	*3,956*	*3,687*	*3,362*	*2,977*	*2,528*	*2,011*	*1,420*	*752*	*0*	*0*	*0*	85,582
b — Additional GA Debt Drawdown, End of Year	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,309	32,722	35,302	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	39,297	27,758	14,694	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	52,275	52,275	52,275	52,275	51,578	50,078	47,725	44,465	40,239	34,984	28,630	21,105	12,328	0	0	0	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,809	33,983	38,331	42,812	47,384	51,920	56,379	60,718	64,890	68,846	72,533	75,895	78,871	81,399	83,410	84,830	85,582				
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	51,769	51,014	49,246	46,544	41,275	35,239	28,428	20,829	12,431	3,219	-6,822	-17,709	-29,462	-42,102	-55,652	-70,136	-85,582				
Fiscal Exposure - End of Year Debt Drawdown	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	

Feb8 1b, 30-yr — Equal Monthly Debt Drawdown

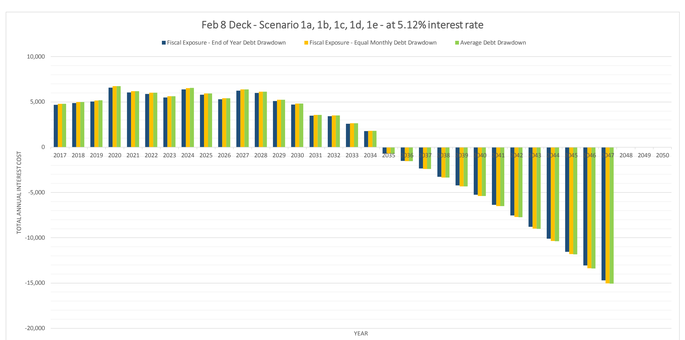
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	
4,555 — *Interest Cost - Feb8 1b, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,823*	*2,126*	*2,438*	*2,723*	*3,016*	*3,329*	*3,614*	*3,866*	*4,078*	*4,255*	*4,410*	*4,523*	*4,555*	*4,500*	*4,403*	*4,261*	*4,072*	*3,831*	*3,536*	*3,183*	*2,768*	*2,287*	*1,736*	*1,109*	*402*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
Monthly Drawdown	390	386	380	487	413	373	317	367	292	224	280	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(979)	(1,053)	(1,129)	(1,207)	(1,287)	(0)	-	-	
FV of Monthly Drawdown at 5%	4,786	4,740	4,665	5,979	5,072	4,585	3,900	4,509	3,582	2,752	3,446	2,862	1,661	979	(518)	(772)	(1,811)	(2,766)	(5,394)	(6,179)	(6,974)	(7,780)	(8,598)	(9,431)	(10,279)	(11,146)	(12,033)	(12,941)	(13,872)	(14,829)	(15,813)	(0)	-	-	
Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	66	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(367)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,262	3,576	3,843	4,090	4,273	4,452	4,587	4,680	4,644	4,565	4,442	4,271	4,050	3,775	3,442	3,048	2,588	2,058	1,454	770	0	0	0	
Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,823	2,126	2,438	2,723	3,016	3,329	3,614	3,866	4,078	4,255	4,410	4,523	4,555	4,500	4,403	4,261	4,072	3,831	3,536	3,183	2,768	2,287	1,736	1,109	402	0	0	0	

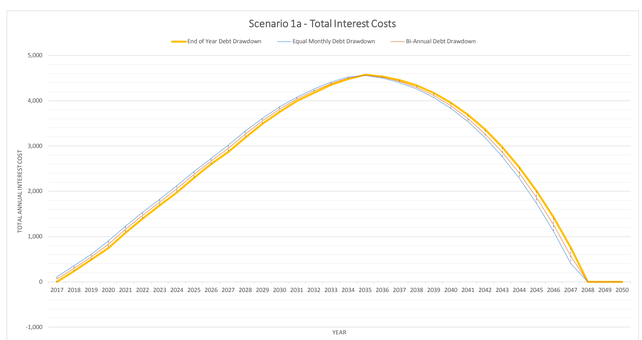
Feb8 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*60*	*301*	*553*	*831*	*1,161*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,947*	*3,263*	*3,558*	*3,814*	*4,040*	*4,217*	*4,382*	*4,503*	*4,563*	*4,517*	*4,429*	*4,297*	*4,118*	*3,889*	*3,606*	*3,266*	*2,865*	*2,399*	*1,863*	*1,253*	*564*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	4,734	4,931	5,110	6,670	6,115	5,945	5,573	6,460	5,874	5,353	6,313	6,058	5,181	4,771	3,534	3,463	2,613	1,801	-706	-1,519	-2,383	-3,302	-4,280	-5,323	-6,435	-7,622	-8,889	-10,242	-11,687	-13,231	-14,882	0	0	0	
Bi-Annual Drawdown	2,337	2,315	2,279	2,920	2,477	2,239	1,905	2,202	1,750	1,344	1,683	1,398	811	478	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,799)	(4,199)	(4,606)	(5,020)	(5,444)	(5,877)	(6,320)	(6,775)	(7,242)	(7,723)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	4,734	4,689	4,615	5,914	5,017	4,535	3,859	4,460	3,544	2,722	3,409	2,831	1,643	969	(513)	(764)	(1,791)	(2,737)	(5,336)	(6,113)	(6,899)	(7,696)	(8,506)	(9,329)	(10,169)	(11,027)	(11,904)	(12,802)	(13,723)	(14,670)	(15,643)	(0)	-	-	
Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	242	495	756	1,097	1,410	1,714	1,999	2,330	2,630	2,904	3,227	3,537	3,802	4,046	4,227	4,404	4,538	4,630	4,594	4,516	4,394	4,225	4,006	3,734	3,405	3,015	2,560	2,036	1,438	761	0	(0)	(0)	
Total Annual Interest Cost	60	301	553	831	1,161	1,467	1,763	2,056	2,375	2,665	2,947	3,263	3,558	3,814	4,040	4,217	4,382	4,503	4,563	4,517	4,429	4,297	4,118	3,889	3,606	3,266	2,865	2,399	1,863	1,253	564	0	(0)	(0)	

Feb8 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,732*	*3,027*	*3,339*	*3,623*	*3,875*	*4,084*	*4,261*	*4,415*	*4,526*	*4,554*	*4,498*	*4,399*	*4,255*	*4,064*	*3,821*	*3,524*	*3,169*	*2,752*	*2,269*	*1,715*	*1,086*	*376*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	4,794	4,994	5,174	6,754	6,192	6,020	5,643	6,541	5,948	5,420	6,393	6,135	5,246	4,831	3,578	3,507	2,646	1,824	-715	-1,538	-2,413	-3,343	-4,334	-5,390	-6,516	-7,718	-9,001	-10,371	-11,835	-13,398	-15,070	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1c_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	
			111	111	109	140	120	116	107	128	115	103	126	121	101	93	66	66	48	32	-24	-40	-57	-74	-92	-111	-132	-153	-175	-199	-224	-250	-278	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	5,867	3,893	72,823
Equal Monthly Debt Drawdown	6,006	3,869	

	Feb8 1c, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	76,097	2034	44,449
Equal Monthly Debt Drawdown	77,907		

Feb8 1c, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	
c = a*5%	*Interest Cost - Feb8 1c, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*477*	*712*	*1,012*	*1,269*	*1,518*	*1,748*	*2,023*	*2,270*	*2,491*	*2,762*	*3,022*	*3,239*	*3,440*	*3,581*	*3,722*	*3,826*	*3,893*	*3,841*	*3,754*	*3,632*	*3,473*	*3,274*	*3,034*	*2,751*	*2,423*	*2,046*	*1,618*	*1,136*	*598*	*0*	*0*	*0*	72,823
b	Additional GA Debt Drawdown, End of Year	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	
	Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	25,538	28,304	30,324	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,624	22,213	11,693	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	44,449	44,449	44,449	44,449	43,420	41,729	39,342	36,228	32,347	27,662	22,130	15,704	8,337	0	0	0	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	26,221	29,801	33,524	37,349	41,242	45,083	48,837	52,469	55,942	59,216	62,250	65,002	67,424	69,470	71,088	72,224	72,823				
	Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	43,767	42,952	41,249	38,748	33,826	28,294	22,153	15,406	8,054	94	-8,473	-17,649	-27,439	-37,846	-48,875	-60,532	-72,823				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	

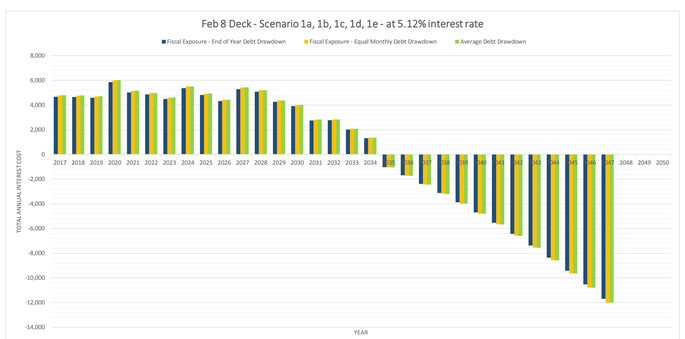
Feb8 1c, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
3,869	Debt, Beginning of Year	0	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*111*	*350*	*586*	*851*	*1,132*	*1,385*	*1,625*	*1,876*	*2,138*	*2,372*	*2,617*	*2,882*	*3,123*	*3,333*	*3,505*	*3,646*	*3,770*	*3,857*	*3,869*	*3,800*	*3,697*	*3,558*	*3,380*	*3,163*	*2,903*	*2,599*	*2,247*	*1,847*	*1,394*	*886*	*320*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	

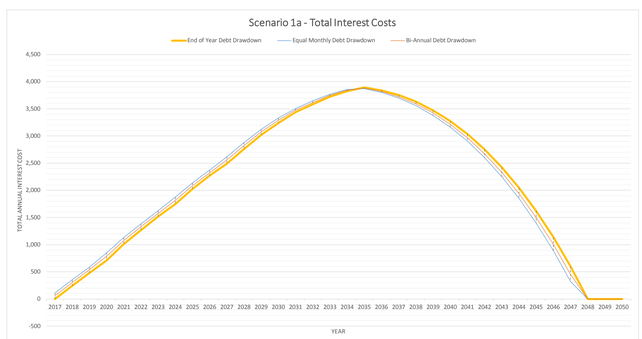
	Monthly Drawdown	390	367	343	430	335	299	248	303	233	171	234	193	103	56	(57)	(68)	(142)	(208)	(410)	(461)	(512)	(562)	(613)	(663)	(714)	(765)	(816)	(867)	(919)	(971)	(1,024)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,515	4,210	5,278	4,114	3,677	3,048	3,717	2,857	2,099	2,873	2,375	1,268	689	(699)	(834)	(1,744)	(2,561)	(5,039)	(5,664)	(6,286)	(6,907)	(7,528)	(8,148)	(8,771)	(9,395)	(10,023)	(10,654)	(11,291)	(11,934)	(12,583)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	105	98	123	96	85	71	86	66	49	67	55	29	16	(16)	(19)	(41)	(59)	(117)	(132)	(146)	(160)	(175)	(189)	(204)	(218)	(233)	(248)	(262)	(277)	(292)	-	-	-	
	Annual Interest Cost on Opening Balance	-	245	488	729	1,036	1,300	1,554	1,790	2,071	2,323	2,550	2,827	3,093	3,317	3,521	3,666	3,811	3,917	3,986	3,932	3,843	3,718	3,555	3,352	3,107	2,817	2,480	2,094	1,656	1,163	612	(0)	(0)	(0)	
	Total Annual Interest Cost	111	350	586	851	1,132	1,385	1,625	1,876	2,138	2,372	2,617	2,882	3,123	3,333	3,505	3,646	3,770	3,857	3,869	3,800	3,697	3,558	3,380	3,163	2,903	2,599	2,247	1,847	1,394	886	320	(0)	(0)	(0)	

Feb8 1c, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*60*	*299*	*536*	*787*	*1,076*	*1,332*	*1,576*	*1,817*	*2,085*	*2,325*	*2,558*	*2,827*	*3,076*	*3,290*	*3,475*	*3,616*	*3,748*	*3,842*	*3,880*	*3,819*	*3,724*	*3,592*	*3,423*	*3,214*	*2,964*	*2,669*	*2,328*	*1,939*	*1,498*	*1,002*	*449*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,708	4,648	5,942	5,095	4,923	4,553	5,447	4,876	4,375	5,364	5,147	4,315	3,962	2,792	2,802	2,045	1,341	-1,042	-1,713	-2,417	-3,155	-3,930	-4,745	-5,603	-6,508	-7,461	-8,468	-9,531	-10,655	-11,842	0	0	0	

	Bi-Annual Drawdown	2,337	2,205	2,056	2,578	2,009	1,796	1,489	1,815	1,395	1,025	1,403	1,160	620	336	(341)	(407)	(852)	(1,251)	(2,461)	(2,766)	(3,070)	(3,373)	(3,676)	(3,980)	(4,283)	(4,588)	(4,895)	(5,203)	(5,514)	(5,828)	(6,146)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,466	4,165	5,221	4,070	3,638	3,015	3,677	2,826	2,077	2,842	2,350	1,255	681	(691)	(825)	(1,725)	(2,533)	(4,985)	(5,603)	(6,219)	(6,833)	(7,447)	(8,061)	(8,676)	(9,294)	(9,915)	(10,540)	(11,170)	(11,806)	(12,448)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	56	53	66	51	46	38	46	36	26	36	30	16	9	(9)	(10)	(22)	(32)	(63)	(71)	(79)	(86)	(94)	(102)	(110)	(117)	(125)	(133)	(141)	(149)	(157)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	483	721	1,025	1,286	1,537	1,770	2,049	2,299	2,522	2,797	3,060	3,281	3,484	3,626	3,770	3,874	3,943	3,890	3,802	3,678	3,517	3,316	3,073	2,787	2,454	2,072	1,639	1,151	606	(0)	(0)	(0)	
	Total Annual Interest Cost	60	299	536	787	1,076	1,332	1,576	1,817	2,085	2,325	2,558	2,827	3,076	3,290	3,475	3,616	3,748	3,842	3,880	3,819	3,724	3,592	3,423	3,214	2,964	2,669	2,328	1,939	1,498	1,002	449	(0)	(0)	(0)	

Feb8 1c, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*120*	*358*	*594*	*862*	*1,141*	*1,394*	*1,633*	*1,886*	*2,146*	*2,380*	*2,626*	*2,892*	*3,130*	*3,340*	*3,510*	*3,651*	*3,774*	*3,859*	*3,867*	*3,797*	*3,693*	*3,552*	*3,373*	*3,154*	*2,893*	*2,587*	*2,234*	*1,832*	*1,377*	*867*	*299*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,768	4,707	6,017	5,160	4,985	4,610	5,516	4,937	4,431	5,432	5,212	4,370	4,012	2,828	2,837	2,071	1,358	-1,055	-1,735	-2,447	-3,195	-3,979	-4,805	-5,674	-6,590	-7,556	-8,575	-9,652	-10,789	-11,992	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1d_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
			52	54	56	73	67	61	51	71	56	42	64	57	36	27	-2	-3	-23	-37	-39	-41	-43	-46	-48	-50	-53	-56	-59	-62	-65	-68	-71	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,072	1,649	29,589
Equal Monthly Debt Drawdown	3,145	1,647	

	Feb8 1d, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,233	2030	21,239
Equal Monthly Debt Drawdown	32,999		

Feb8 1d, 30-yr — End of Year Debt Drawdown

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
a	Debt, Beginning of Year	0	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	
c = a*5%	*Interest Cost - Feb8 1d, 30-yr - End of Year Debt Drawdown*	*0*	*112*	*228*	*348*	*505*	*649*	*781*	*891*	*1,043*	*1,162*	*1,253*	*1,391*	*1,514*	*1,592*	*1,649*	*1,644*	*1,637*	*1,588*	*1,508*	*1,423*	*1,335*	*1,241*	*1,143*	*1,040*	*931*	*817*	*698*	*572*	*439*	*300*	*154*	*0*	*0*	*0*	29,589
b	Additional GA Debt Drawdown, End of Year	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	11,372	11,227	10,281	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,586	5,865	3,006	0	0	0	0	
	Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	20,763	20,763	20,763	20,763	19,112	17,375	15,550	13,632	11,616	9,496	7,268	4,926	2,464	0	0	0	0	0	0	0	
	Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	13,118	14,763	16,399	17,988	19,495	20,919	22,253	23,495	24,638	25,678	26,609	27,426	28,124	28,696	29,135	29,435	29,589				
	Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	19,017	17,228	14,645	11,486	8,326	5,167	2,007	-1,153	-4,312	-7,472	-10,631	-13,791	-16,951	-20,110	-23,270	-26,429	-29,589				
Fiscal Exposure - End of Year Debt Drawdown		2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	

Feb8 1d, 30-yr — Equal Monthly Debt Drawdown

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Debt, Beginning of Year	0	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	
1,647	*Interest Cost - Feb8 1d, 30-yr*	*52*	*166*	*284*	*421*	*572*	*711*	*832*	*962*	*1,098*	*1,205*	*1,317*	*1,448*	*1,550*	*1,619*	*1,647*	*1,641*	*1,614*	*1,551*	*1,469*	*1,382*	*1,291*	*1,196*	*1,095*	*989*	*878*	*762*	*639*	*510*	*375*	*232*	*82*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
	Monthly Drawdown	182	180	177	227	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	-	-	-	
	FV of Monthly Drawdown at 5%	2,232	2,210	2,176	2,788	2,366	1,977	1,399	2,123	1,322	628	1,468	1,042	12	(487)	(1,788)	(1,831)	(2,644)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	-	-	-	
	Annual Interest Cost on New Drawdowns	52	51	51	65	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	-	-	-	
	Annual Interest Cost on Opening Balance	-	114	233	356	517	665	800	912	1,068	1,190	1,283	1,424	1,550	1,630	1,688	1,683	1,676	1,626	1,544	1,457	1,366	1,271	1,170	1,065	954	837	714	585	450	307	157	0	0	0	
	Total Annual Interest Cost	52	166	284	421	572	711	832	962	1,098	1,205	1,317	1,448	1,550	1,619	1,647	1,641	1,614	1,551	1,469	1,382	1,291	1,196	1,095	989	878	762	639	510	375	232	82	0	0	0	

Feb8 1d, 30-yr — Bi-Annual Debt Drawdown

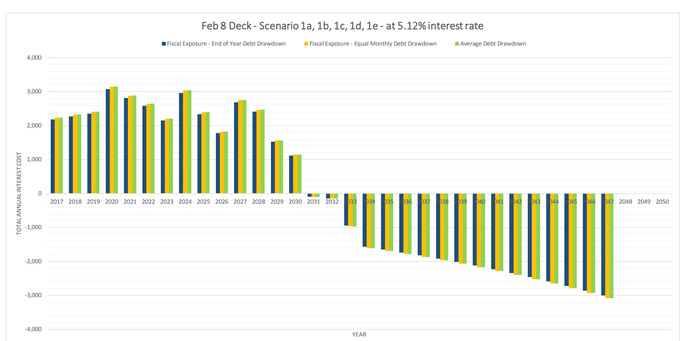
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

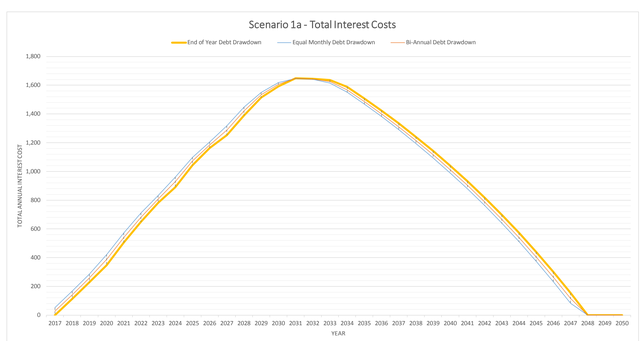
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Debt, Beginning of Year	0	2,208	4,507	6,890	10,001	12,854	15,467	17,642	20,645	23,009	24,807	27,529	29,969	31,514	32,645	32,546	32,400	31,442	29,850	28,177	26,419	24,571	22,628	20,585	18,439	16,182	13,810	11,316	8,695	5,940	3,044	0	0	0	
	Interest Cost - Feb8 1d, 30-yr	*28*	*141*	*258*	*387*	*541*	*682*	*809*	*929*	*1,073*	*1,185*	*1,288*	*1,421*	*1,533*	*1,606*	*1,648*	*1,642*	*1,625*	*1,568*	*1,487*	*1,401*	*1,311*	*1,217*	*1,117*	*1,013*	*903*	*787*	*666*	*539*	*404*	*264*	*115*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,208	4,507	6,890	10,001	12,854	15,467	17,642	20,645	23,009	24,807	27,529	29,969	31,514	32,645	32,546	32,400	31,442	29,850	28,177	26,419	24,571	22,628	20,585	18,439	16,182	13,810	11,316	8,695	5,940	3,044	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,208	2,299	2,383	3,111	2,853	2,613	2,175	3,003	2,364	1,798	2,722	2,440	1,545	1,131	-98	-147	-958	-1,591	-1,673	-1,758	-1,848	-1,943	-2,042	-2,147	-2,257	-2,372	-2,493	-2,621	-2,755	-2,896	-3,044	0	0	0	
	Bi-Annual Drawdown	1,090	1,079	1,063	1,362	1,156	965	683	1,037	646	307	717	509	6	(238)	(873)	(894)	(1,291)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,208	2,186	2,153	2,758	2,341	1,955	1,384	2,100	1,308	621	1,453	1,031	12	(481)	(1,769)	(1,812)	(2,616)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	-	-	-	
	Annual Interest Cost on New Drawdowns	28	28	27	35	30	25	17	27	17	8	18	13	0	(6)	(22)	(23)	(33)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	-	-	-	
	Annual Interest Cost on Opening Balance	-	113	231	353	512	658	791	903	1,056	1,177	1,269	1,408	1,533	1,612	1,670	1,665	1,658	1,609	1,527	1,442	1,352	1,257	1,158	1,053	943	828	707	579	445	304	156	0	0	0	
	Total Annual Interest Cost	28	141	258	387	541	682	809	929	1,073	1,185	1,288	1,421	1,533	1,606	1,648	1,642	1,625	1,568	1,487	1,401	1,311	1,217	1,117	1,013	903	787	666	539	404	264	115	0	0	0	

Feb8 1d, 30-yr — Average Debt Drawdown

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Debt, Beginning of Year	0	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	
	Interest Cost - Feb8 1d, 30-yr	*56*	*170*	*288*	*427*	*577*	*715*	*836*	*967*	*1,103*	*1,208*	*1,322*	*1,452*	*1,553*	*1,621*	*1,647*	*1,640*	*1,613*	*1,548*	*1,466*	*1,379*	*1,288*	*1,192*	*1,091*	*986*	*874*	*758*	*635*	*505*	*370*	*227*	*77*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		2,236	2,328	2,413	3,150	2,889	2,646	2,203	3,041	2,394	1,821	2,756	2,471	1,565	1,145	-100	-148	-970	-1,612	-1,694	-1,781	-1,872	-1,967	-2,068	-2,174	-2,285	-2,402	-2,525	-2,654	-2,790	-2,933	-3,083	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1e_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0
			36	37	38	53	46	39	27	45	28	13	33	24	1	-11	-16	-16	-17	-18	-19	-20	-21	-22	-23	-25	-26	-27	-29	-30	-32	-33	-35	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,243	904	16,239
Equal Monthly Debt Drawdown	2,297	903	

	Feb8 1e, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	17,670	2029	12,350
Equal Monthly Debt Drawdown	18,091		

Feb8 1e, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
a Debt, Beginning of Year	0	1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	
c = a*5% *Interest Cost - Feb8 1e, 30-yr - End of Year Debt Drawdown*	*0*	*77*	*156*	*236*	*351*	*450*	*534*	*592*	*688*	*749*	*778*	*849*	*901*	*904*	*881*	*847*	*812*	*775*	*735*	*694*	*651*	*605*	*558*	*507*	*454*	*399*	*340*	*279*	*214*	*146*	*75*	*0*	*0*	*0*	16,239
b Additional GA Debt Drawdown, End of Year	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
d = a+b+c Accumulated debt in present year (including 5.12% annual interest)	1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
Feb8 1e, 30-yr - Accumulated Interest Costs	0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	6,605	5,911	5,182	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,188	2,861	1,466	0	0	0	0
Feb8 1e, 30-yr - Accumulated Debt Principal	1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	9,960	9,960	9,960	9,960	9,155	8,308	7,418	6,482	5,498	4,465	3,378	2,235	1,035	0	0	0	0	0	0	0	
Feb8 1e, 30-yr - Accumulated Interest Costs	0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	8,146	8,993	9,805	10,580	11,315	12,010	12,661	13,266	13,824	14,331	14,785	15,184	15,524	15,803	16,017	16,164	16,239				
Feb8 1e, 30-yr - Accumulated Debt Principal	1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	8,419	6,878	5,337	3,796	2,255	714	-827	-2,369	-3,910	-5,451	-6,992	-8,533	-10,074	-11,615	-13,156	-14,697	-16,239				
Fiscal Exposure - End of Year Debt Drawdown	1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	

Feb8 1e, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	
903 *Interest Cost - Feb8 1e, 30-yr*	*36*	*113*	*193*	*290*	*397*	*489*	*561*	*637*	*717*	*762*	*811*	*873*	*903*	*893*	*866*	*831*	*795*	*756*	*716*	*674*	*630*	*583*	*534*	*483*	*428*	*372*	*312*	*249*	*183*	*113*	*40*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	
Monthly Drawdown	125	122	119	167	132	99	50	108	42	(16)	51	15	(70)	(112)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	-	-	-	
FV of Monthly Drawdown at 5%	1,536	1,500	1,457	2,055	1,617	1,213	620	1,328	512	(199)	625	182	(865)	(1,382)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	-	-	-	
Annual Interest Cost on New Drawdowns	36	35	34	48	38	28	14	31	12	(5)	15	4	(20)	(32)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	-	-	-	
Annual Interest Cost on Opening Balance	-	79	159	242	359	461	546	606	705	767	796	869	923	926	902	868	831	793	753	711	666	620	571	519	465	408	348	285	219	150	77	0	0	0	
Total Annual Interest Cost	36	113	193	290	397	489	561	637	717	762	811	873	903	893	866	831	795	756	716	674	630	583	534	483	428	372	312	249	183	113	40	0	0	0	

Feb8 1e, 30-yr — Bi-Annual Debt Drawdown

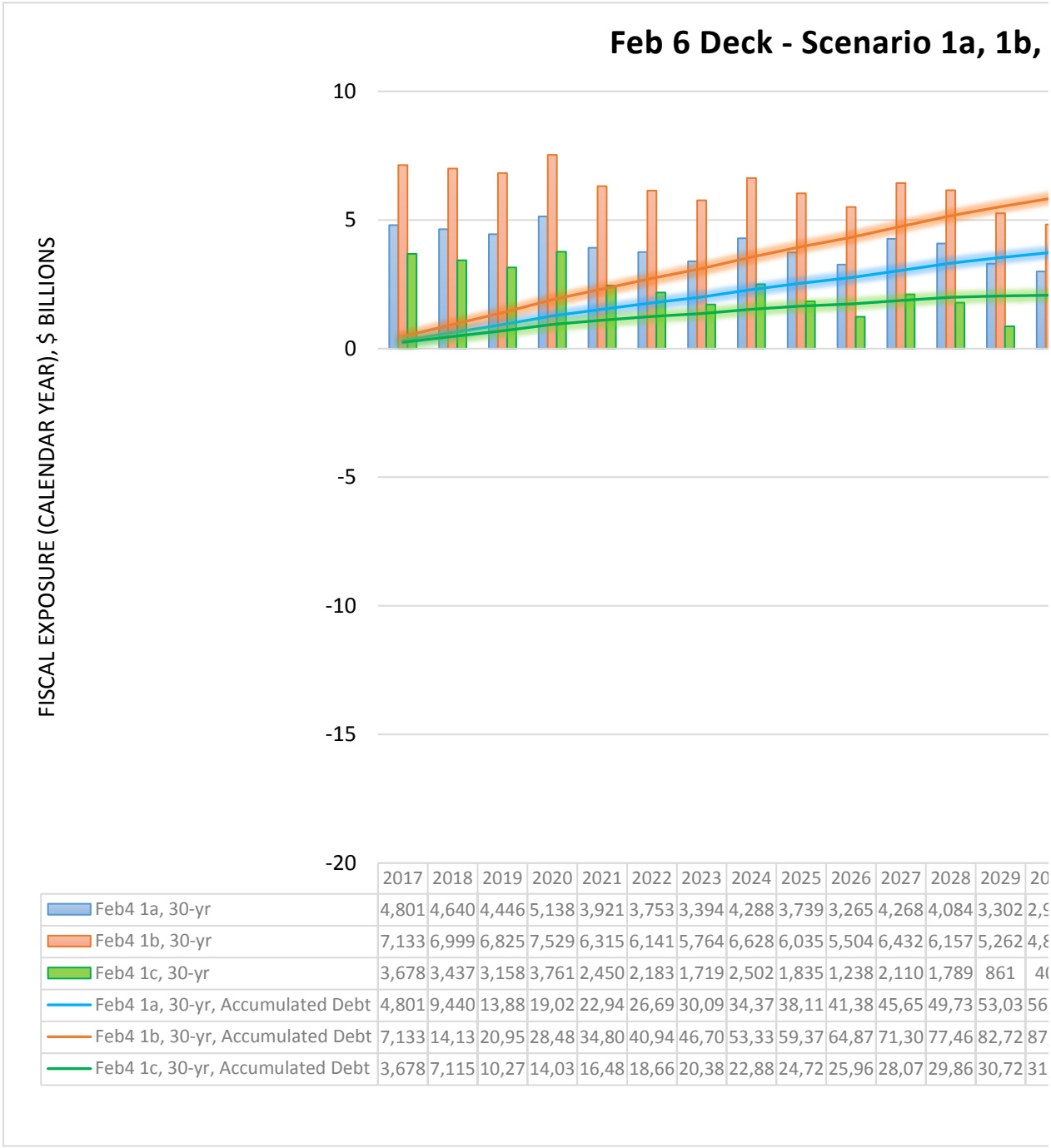
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	
Interest Cost - Feb8 1e, 30-yr	*19*	*96*	*176*	*265*	*376*	*471*	*548*	*616*	*704*	*756*	*795*	*862*	*902*	*898*	*873*	*839*	*803*	*765*	*725*	*683*	*640*	*593*	*545*	*494*	*440*	*384*	*325*	*263*	*197*	*129*	*56*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	1,519	1,561	1,598	2,272	1,956	1,655	1,154	1,913	1,203	562	1,406	1,040	57	-451	-668	-703	-738	-776	-816	-858	-902	-948	-996	-1,047	-1,101	-1,157	-1,216	-1,278	-1,344	-1,413	-1,485	0	0	0	
Bi-Annual Drawdown	750	733	711	1,003	790	592	303	649	250	(97)	305	89	(423)	(675)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	-	-	-	
FV of Bi-Annual Drawdown at 5%	1,519	1,484	1,441	2,033	1,600	1,200	613	1,314	506	(197)	618	180	(856)	(1,367)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	-	-	-	
Annual Interest Cost on New Drawdowns	19	19	18	26	20	15	8	17	6	(2)	8	2	(11)	(17)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	-	-	-	
Annual Interest Cost on Opening Balance	-	78	158	239	356	456	540	599	697	759	788	860	913	916	893	858	822	785	745	703	659	613	565	514	460	404	345	282	217	148	76	0	0	0	
Total Annual Interest Cost	19	96	176	265	376	471	548	616	704	756	795	862	902	898	873	839	803	765	725	683	640	593	545	494	440	384	325	263	197	129	56	0	0	0	

Feb8 1e, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	
Interest Cost - Feb8 1e, 30-yr	*38*	*116*	*196*	*294*	*401*	*492*	*563*	*640*	*719*	*763*	*813*	*875*	*903*	*893*	*864*	*830*	*793*	*755*	*715*	*673*	*628*	*581*	*532*	*481*	*427*	*369*	*310*	*247*	*180*	*111*	*38*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	1,538	1,581	1,619	2,301	1,980	1,676	1,168	1,938	1,219	569	1,424	1,053	57	-457	-677	-711	-748	-786	-826	-869	-913	-960	-1,009	-1,060	-1,115	-1,172	-1,232	-1,295	-1,361	-1,430	-1,504	0	0	0	

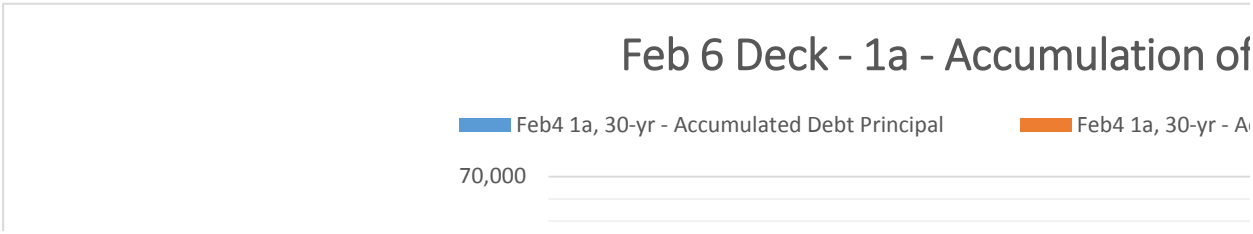
Feb 6 Deck

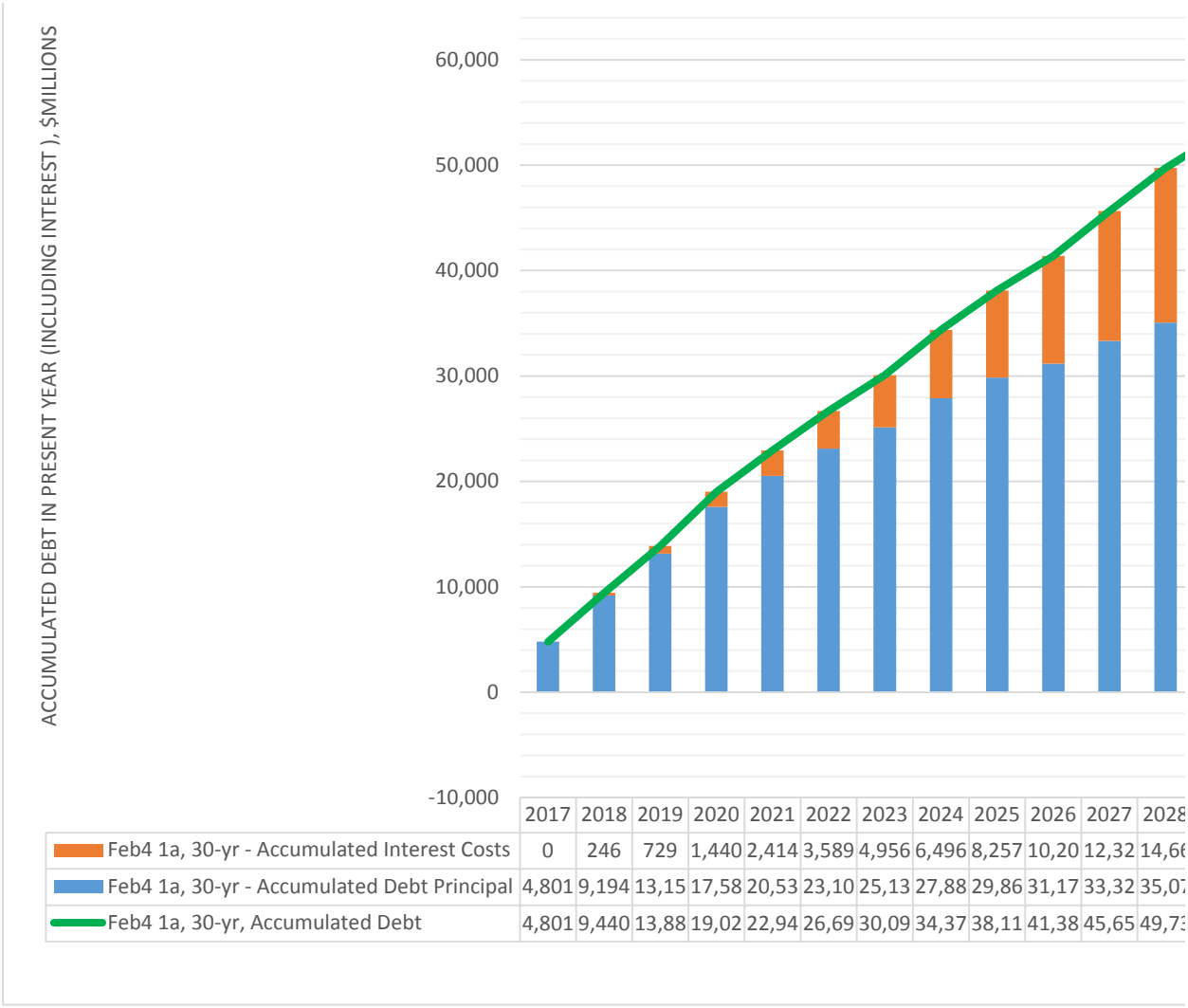
Feb 6 Deck - Scenario 1a, 1b, 1c - at 5.12% interest rate



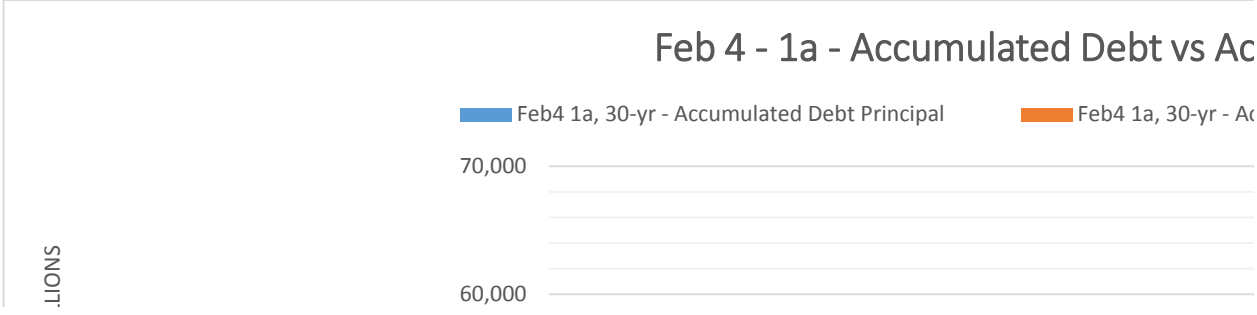
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	20
Feb4 1a, 30-yr	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,9
Feb4 1b, 30-yr	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,8
Feb4 1c, 30-yr	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	4(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73	53,03	56
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31

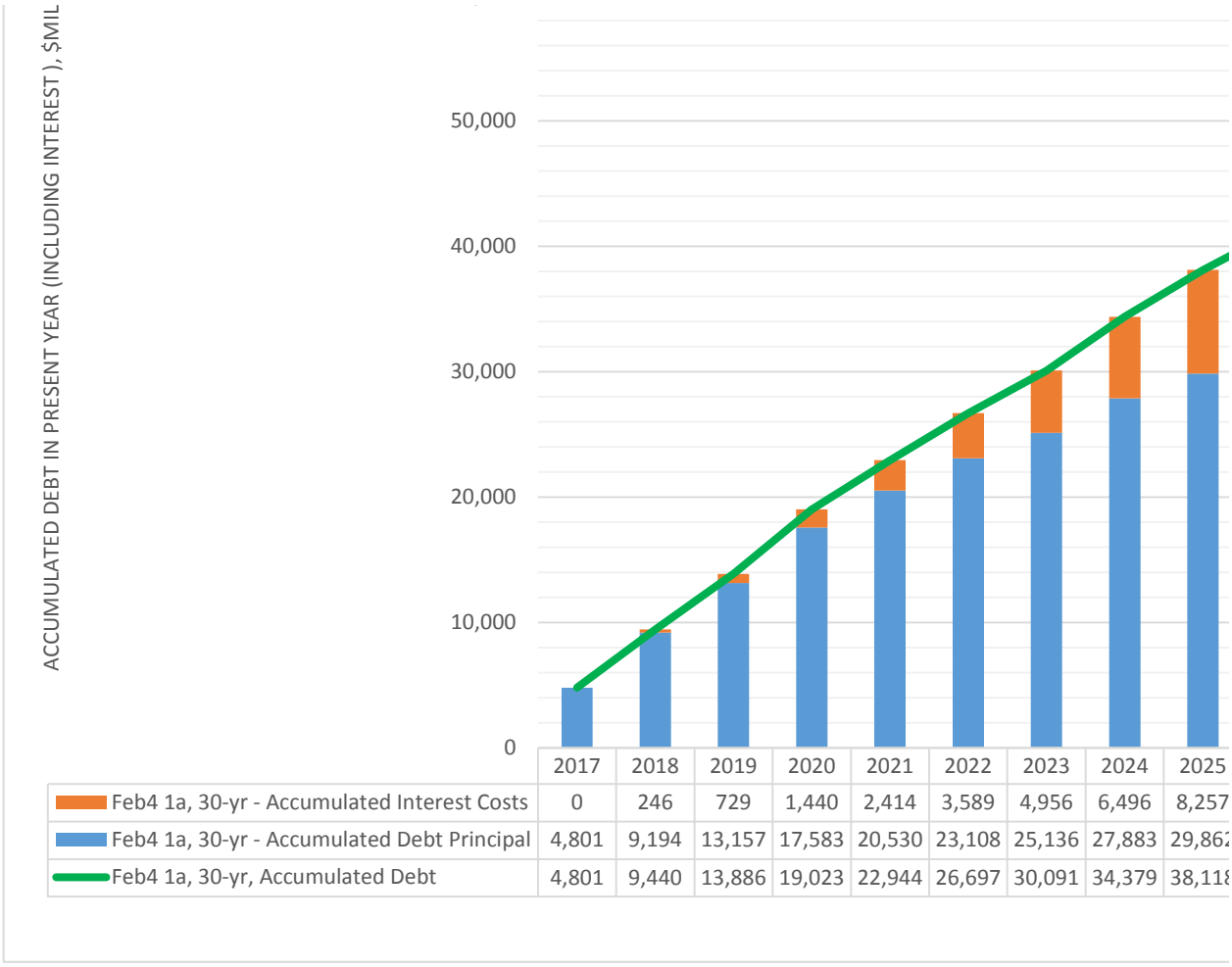
Feb 6 Deck - 1a - Accumulation of Debt (Principal and Interest)



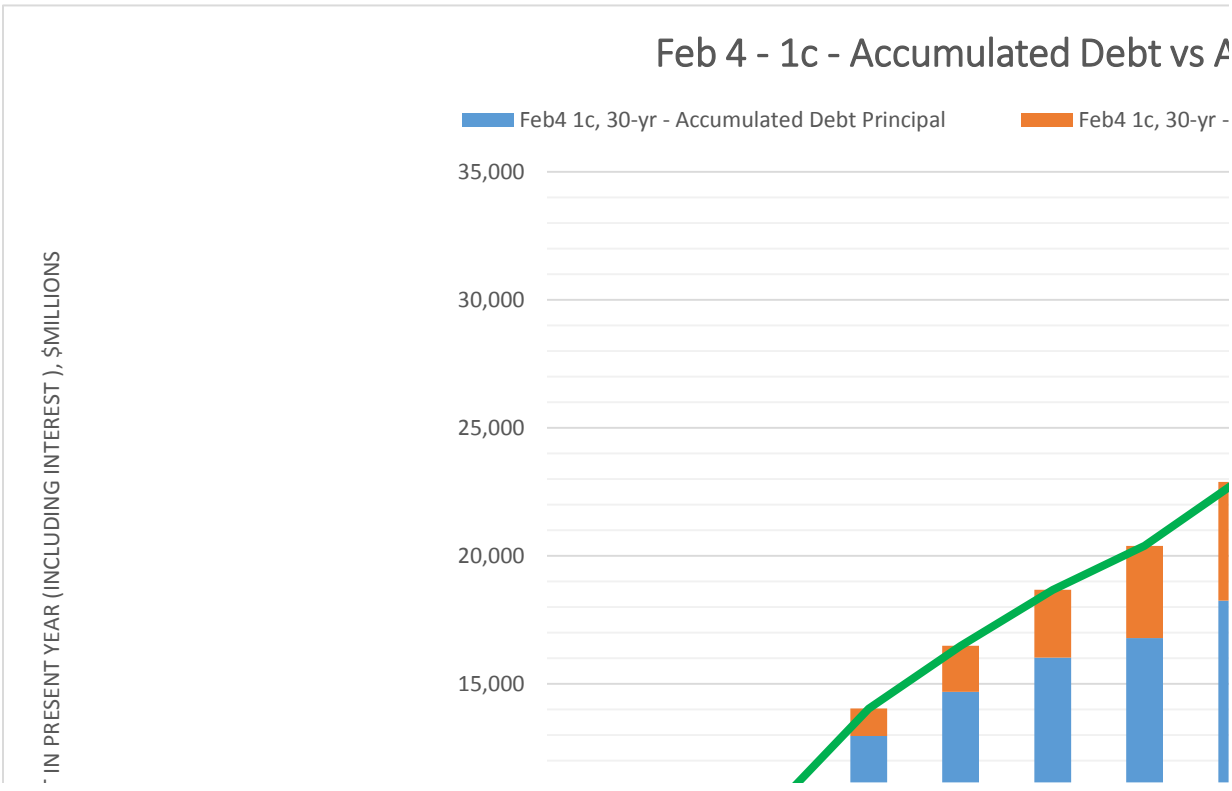


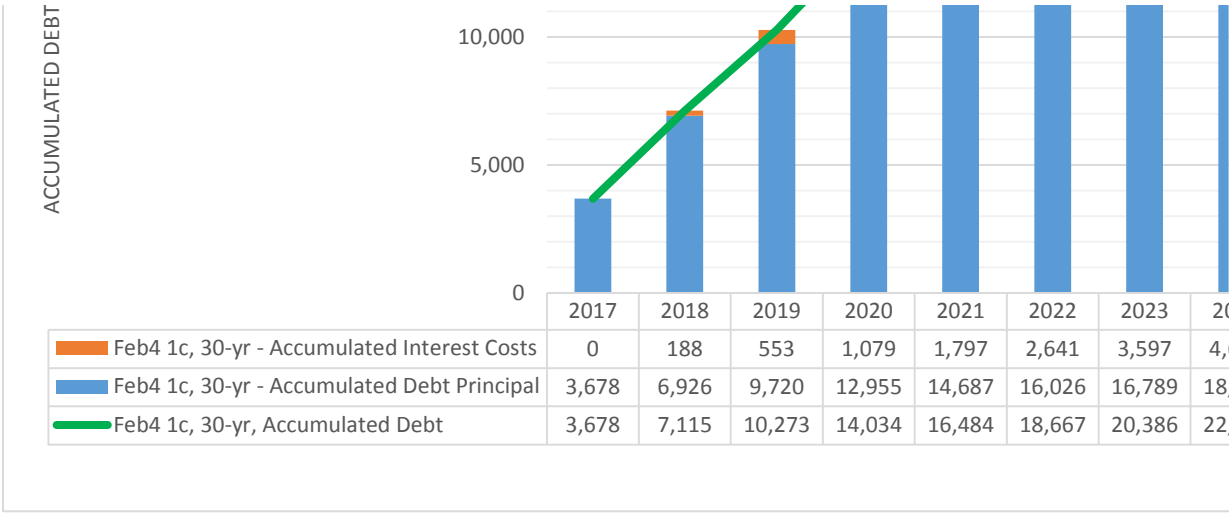
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,66
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,07
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73



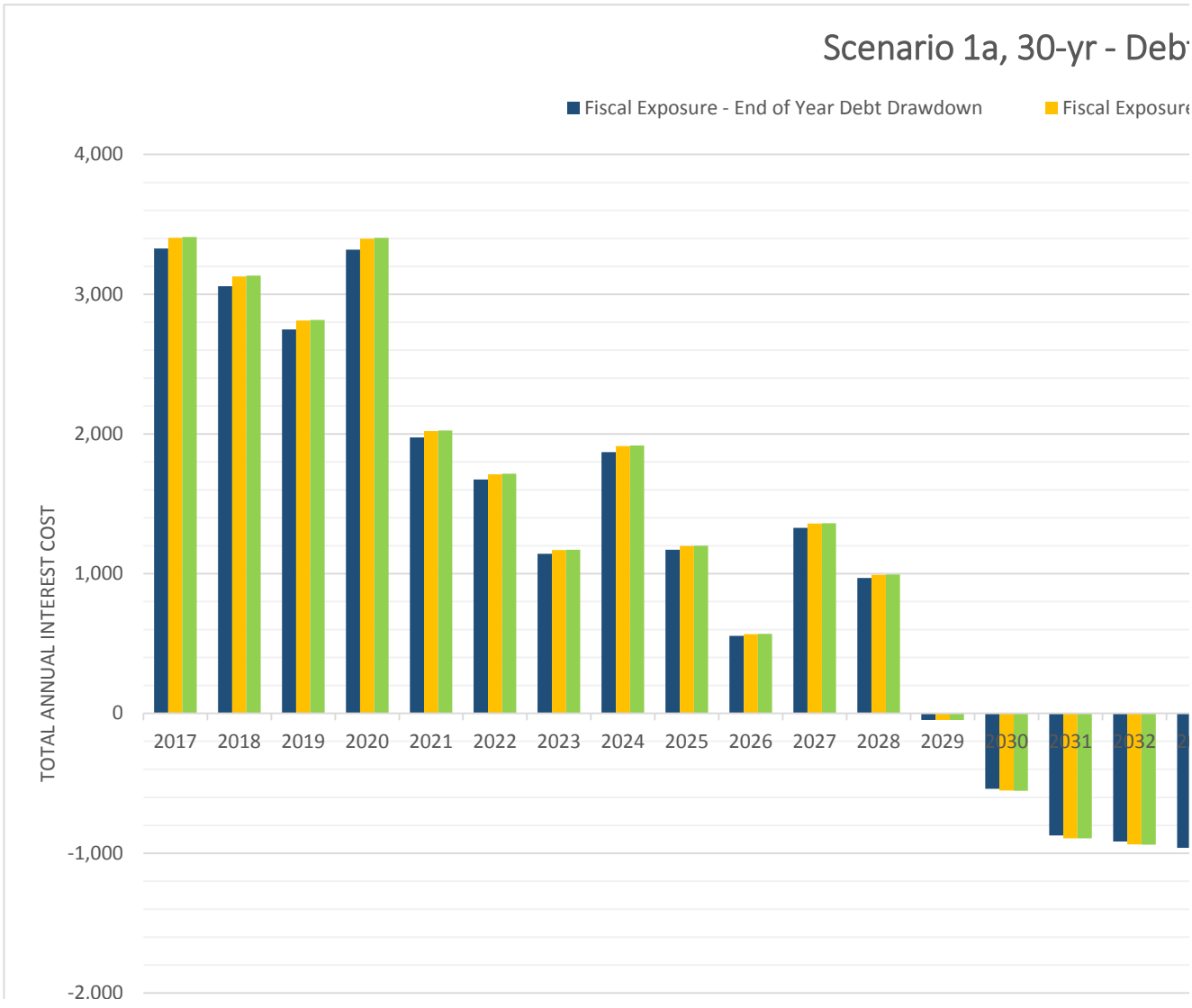


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



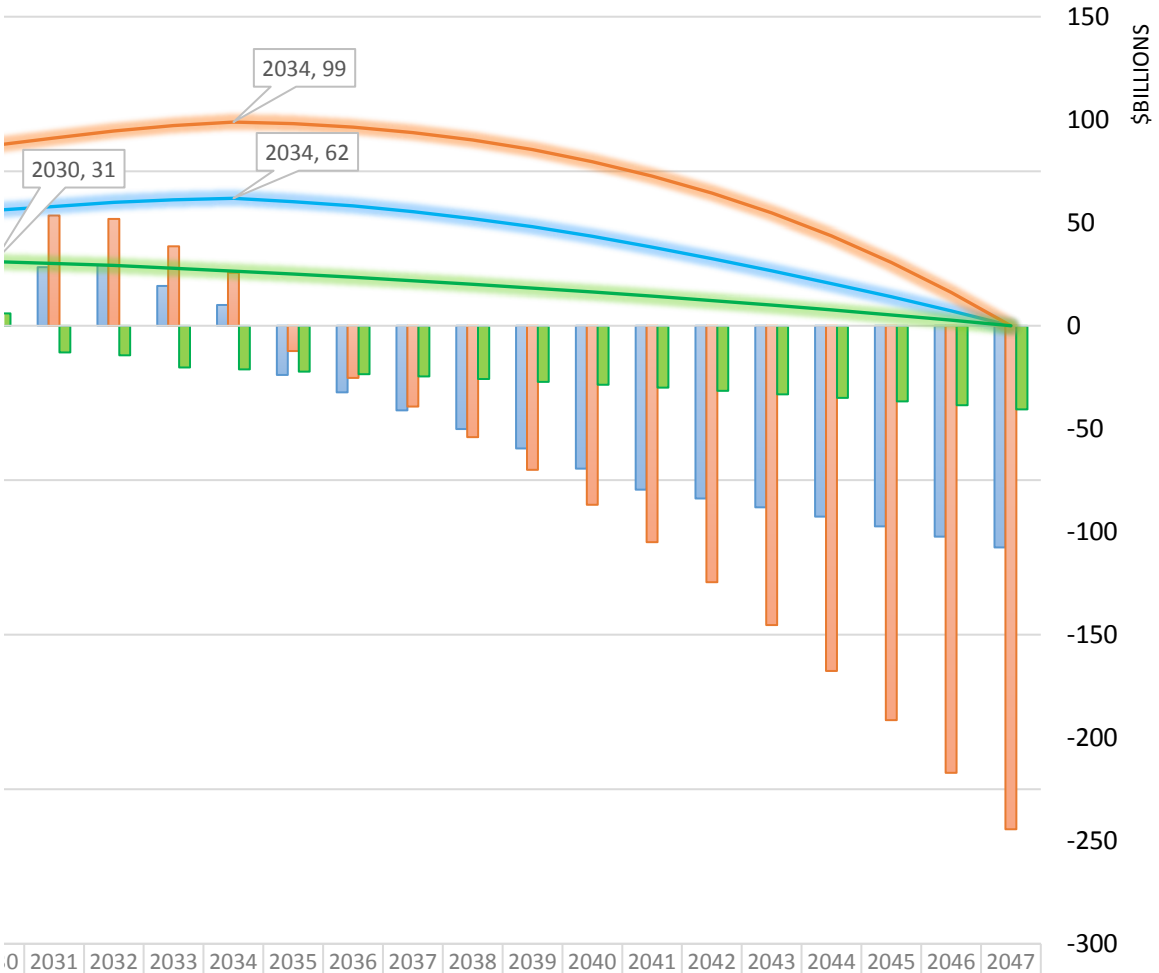


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22



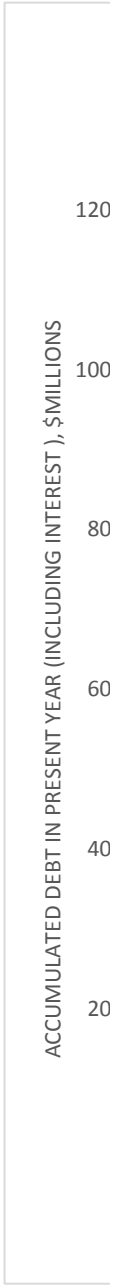

-3,000

lc - at 5.12% interest rate



0	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
98	1,896	1,966	1,288	672	-1,59	-2,15	-2,73	-3,34	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
26	3,568	3,457	2,571	1,716	-819	-1,68	-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
4	-860	-961	-1,34	-1,41	-1,48	-1,56	-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0
55	91,12	94,57	97,14	98,86	98,04	96,35	93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0
12	30,26	29,30	27,95	26,54	25,05	23,49	21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

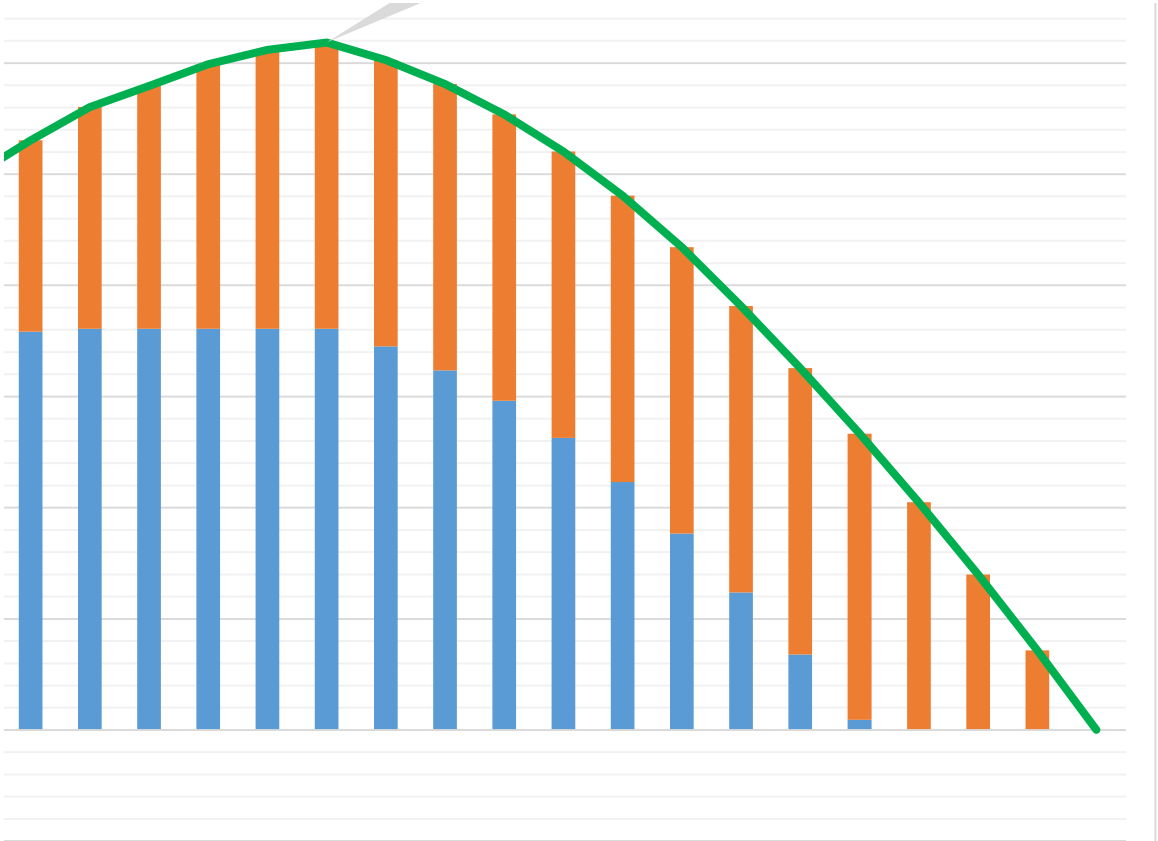
CALENDAR YEAR



Debt (Principal and Interest)

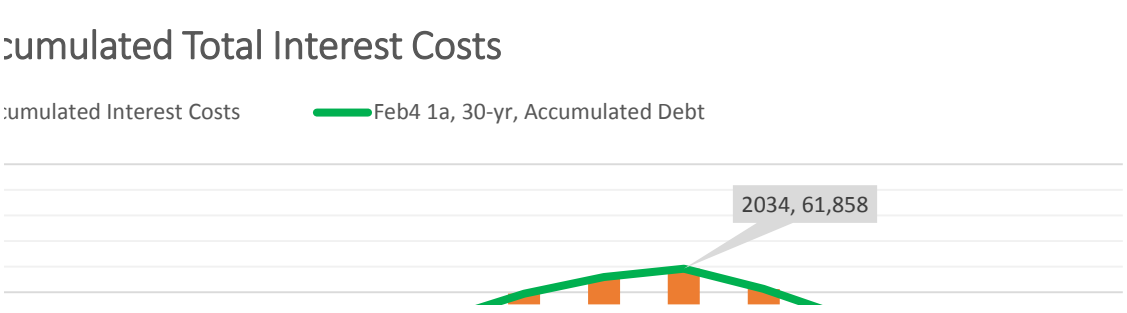
cumulated Interest Costs — Feb4 1a, 30-yr, Accumulated Debt

2034, 61,858

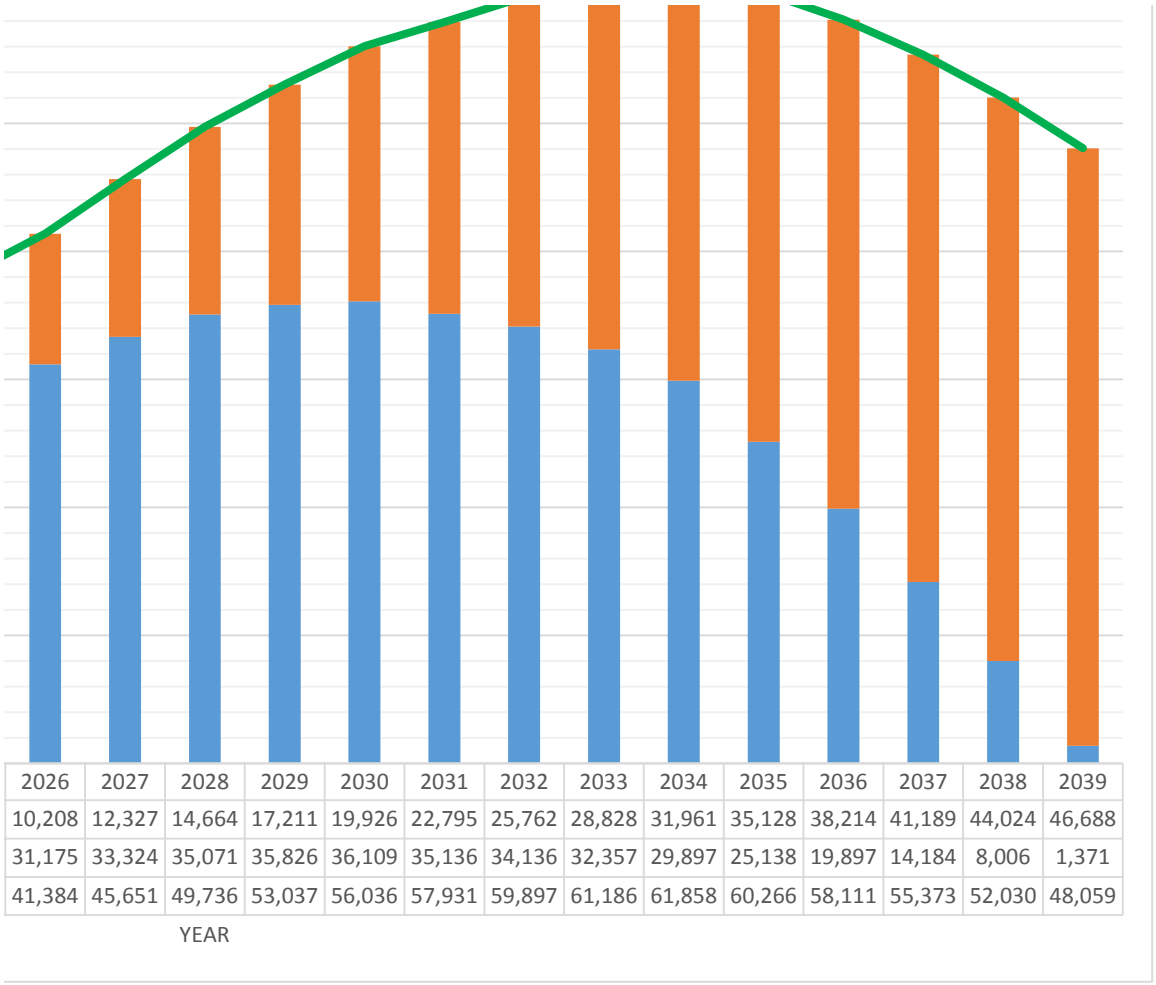


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



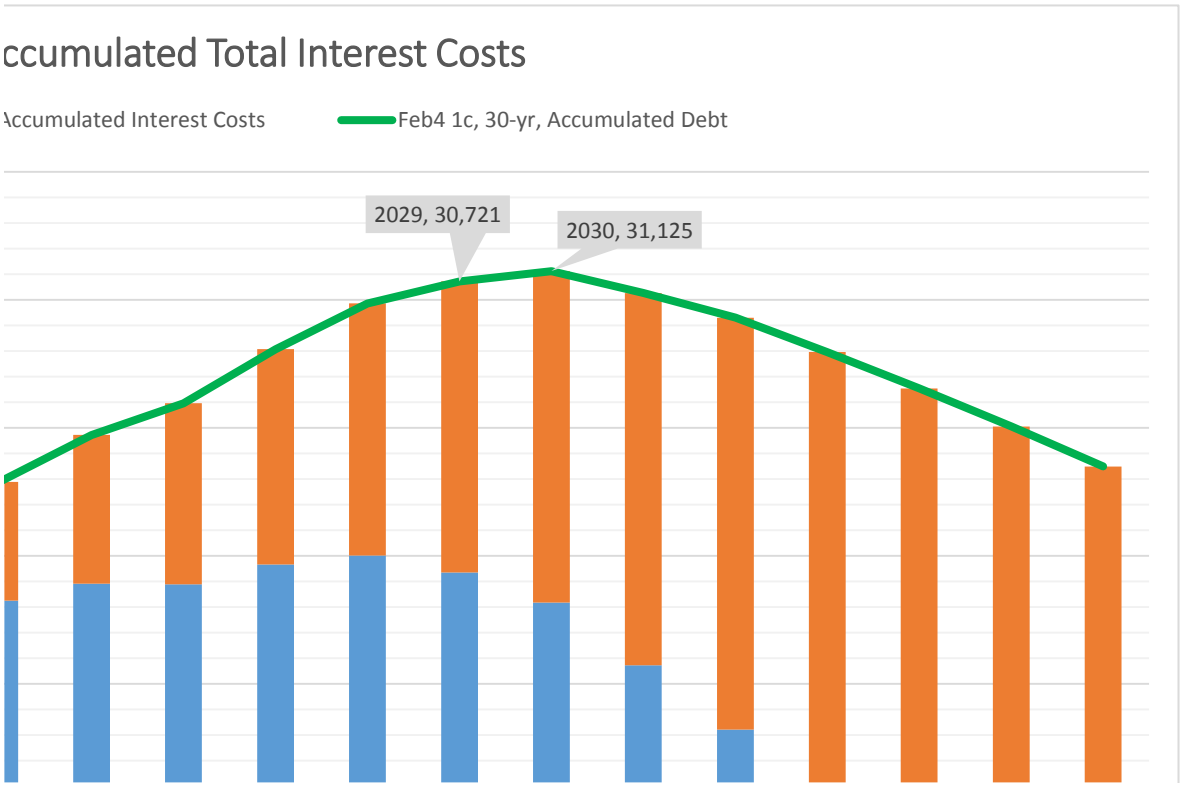
LIONS

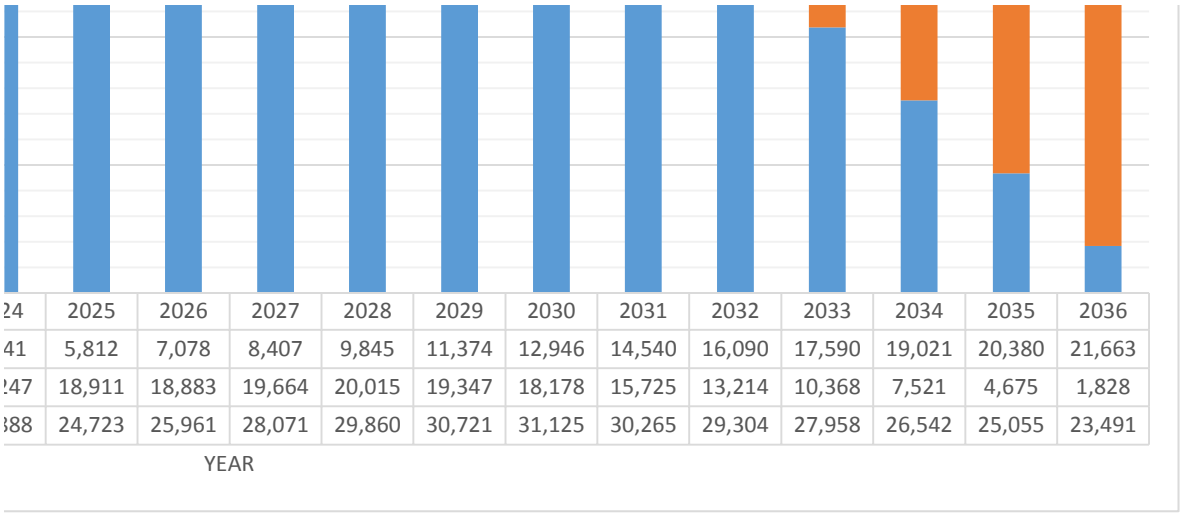


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

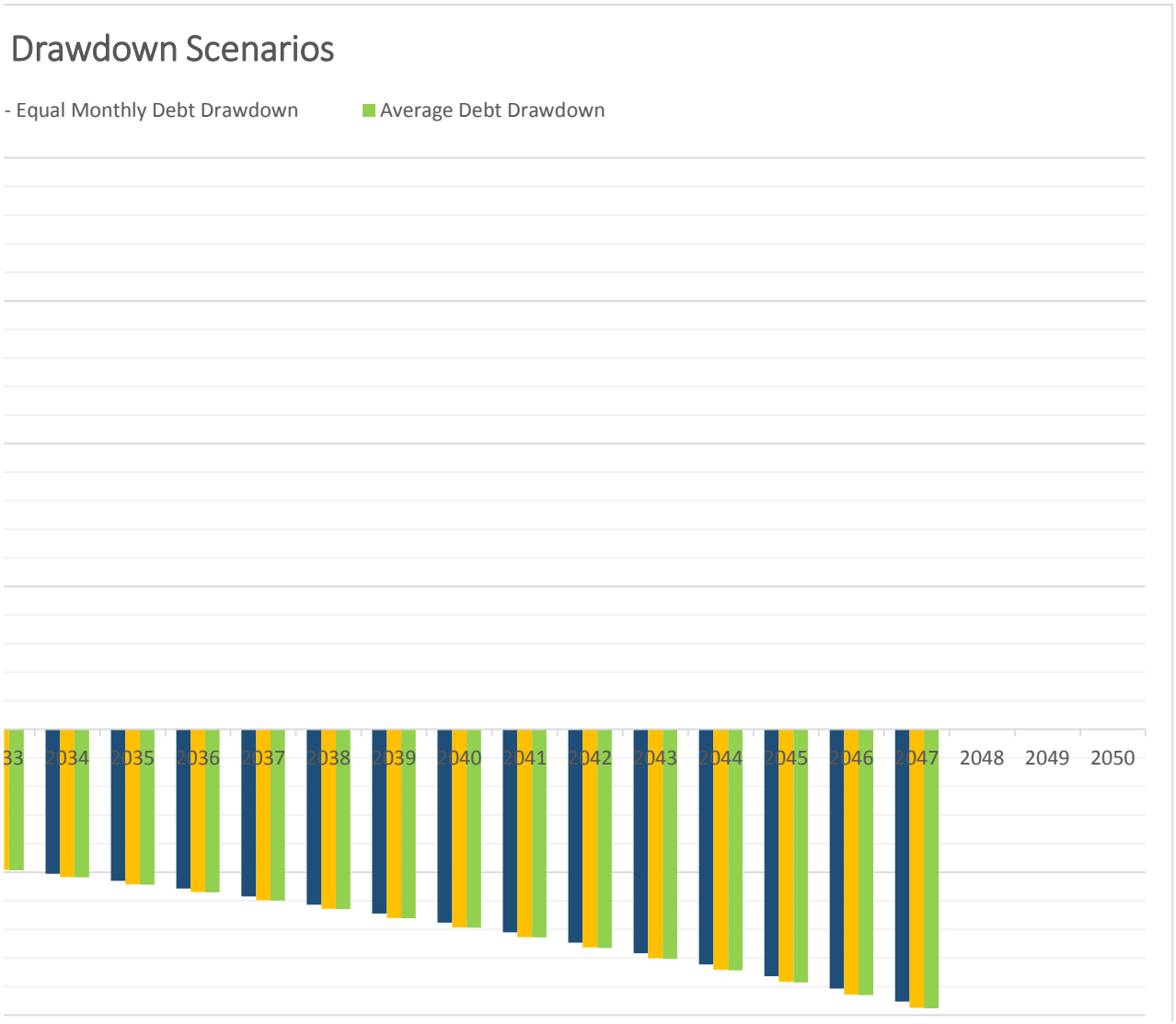
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





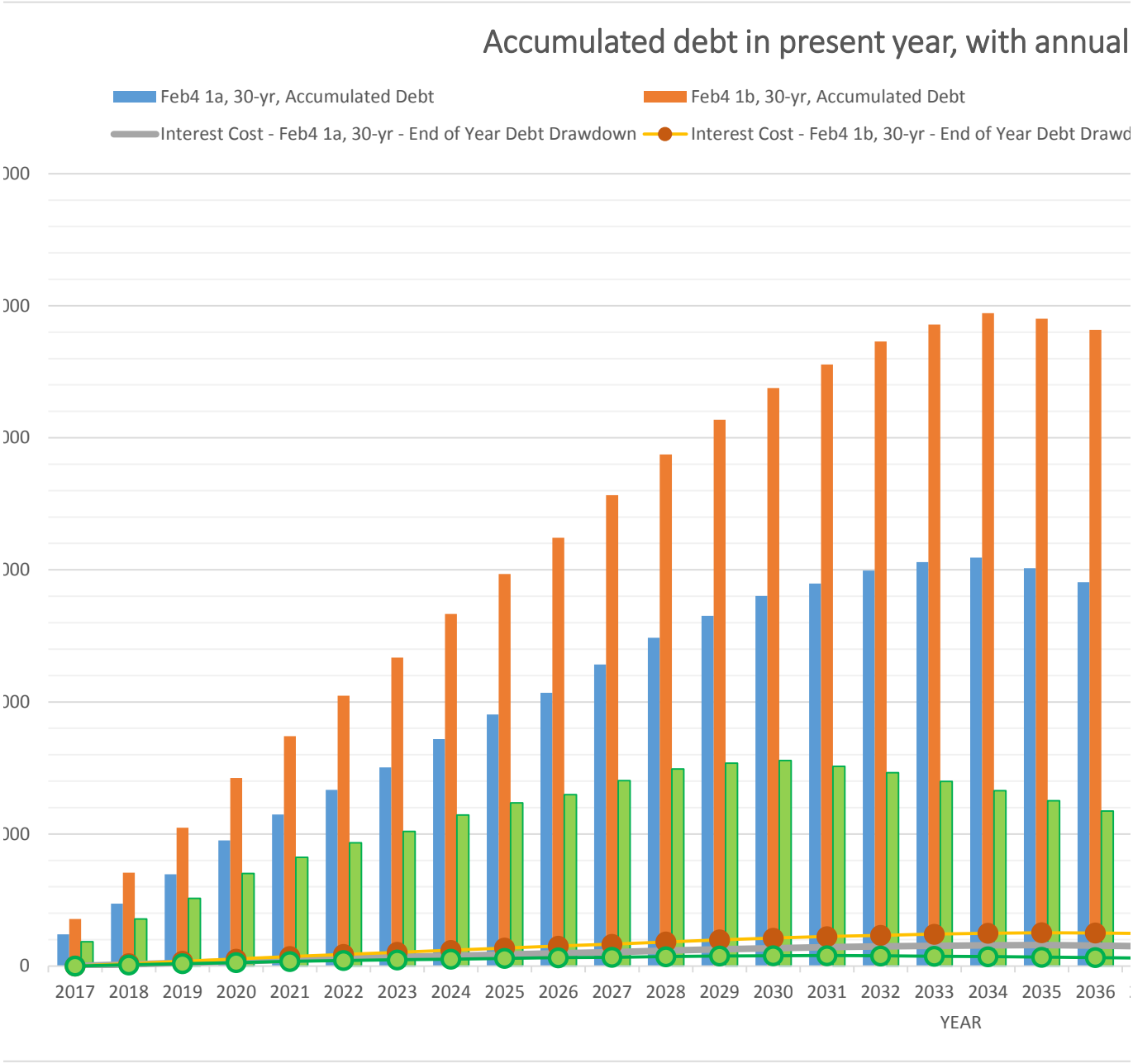
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

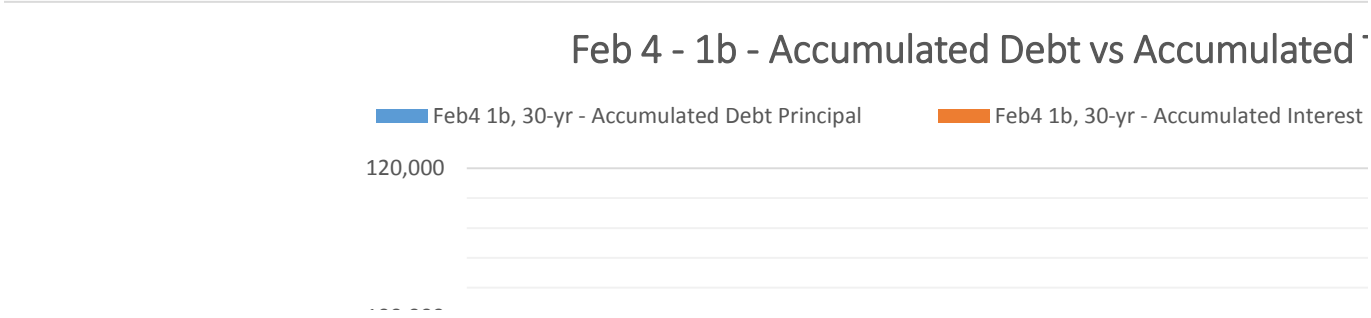
YEAR

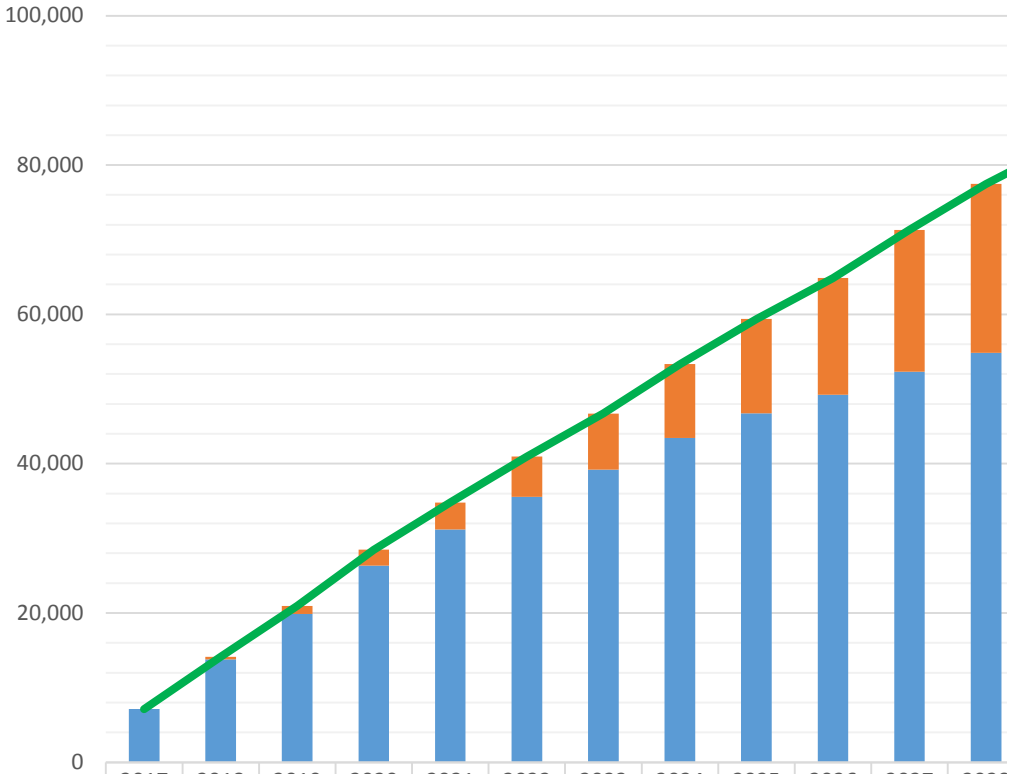


YEAR

ɜ - 25 year and 30 year Financing Terms, at 5% interest rate

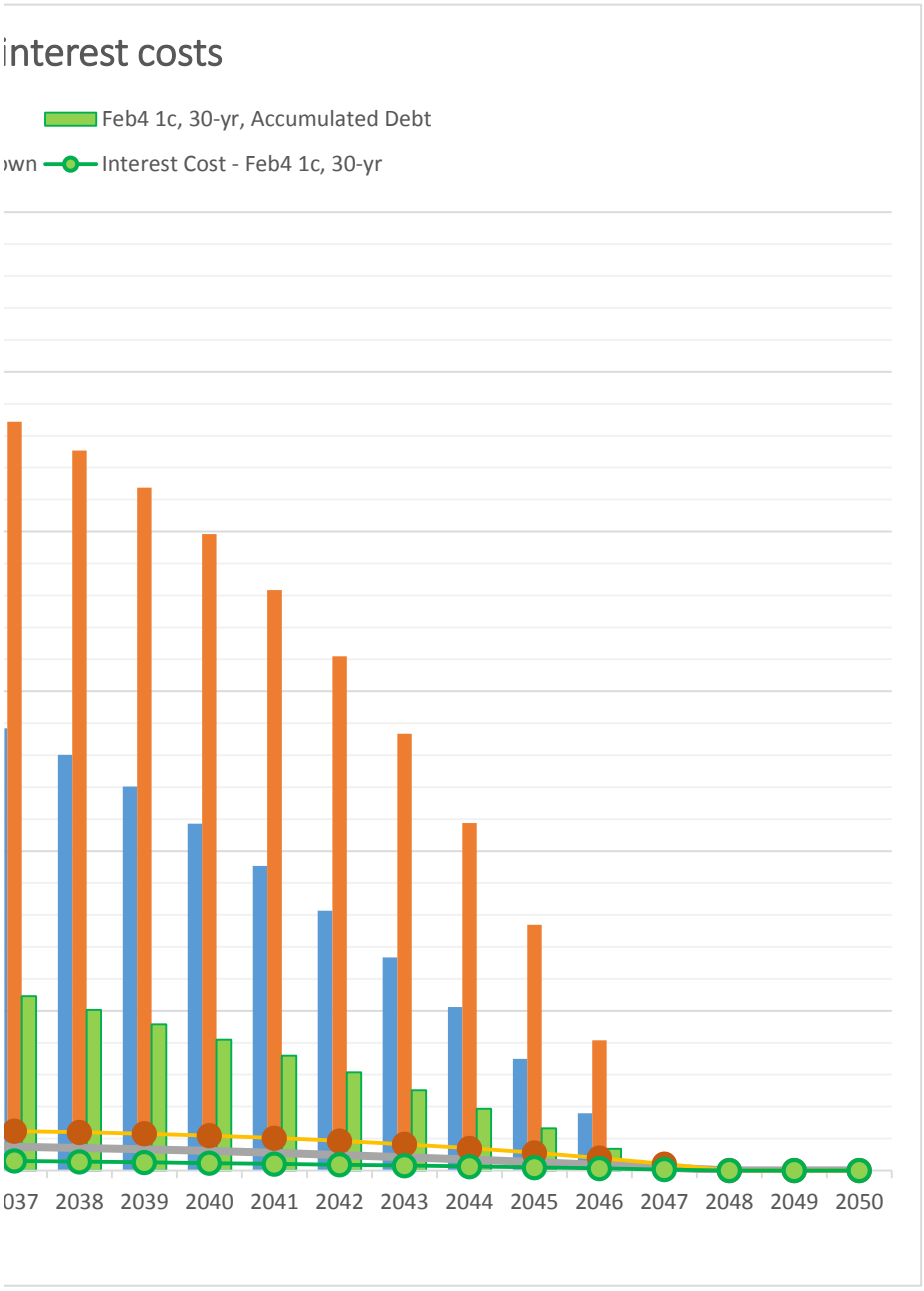


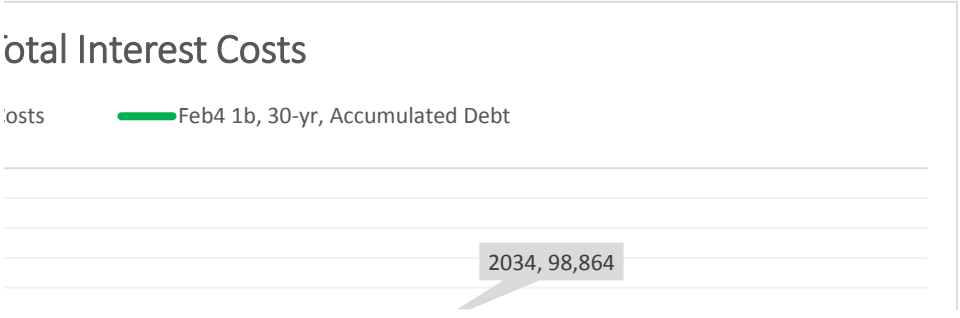

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

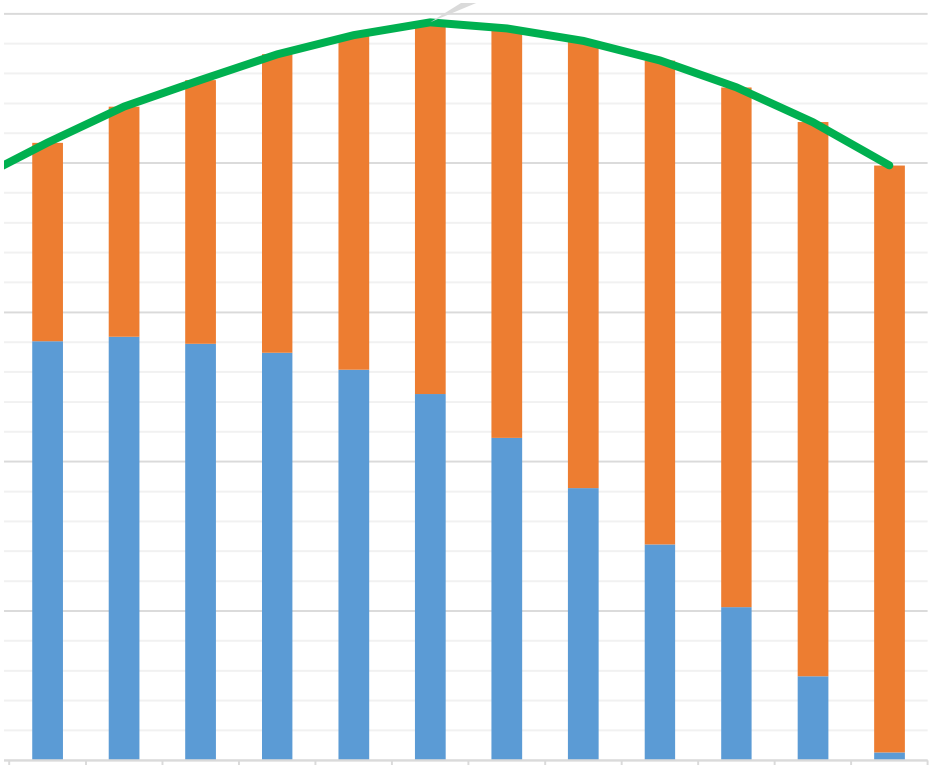


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y


interest costs
Feb4 1c, 30-yr, Accumulated Debt
wn
Interest Cost - Feb4 1c, 30-yr
037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR

Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

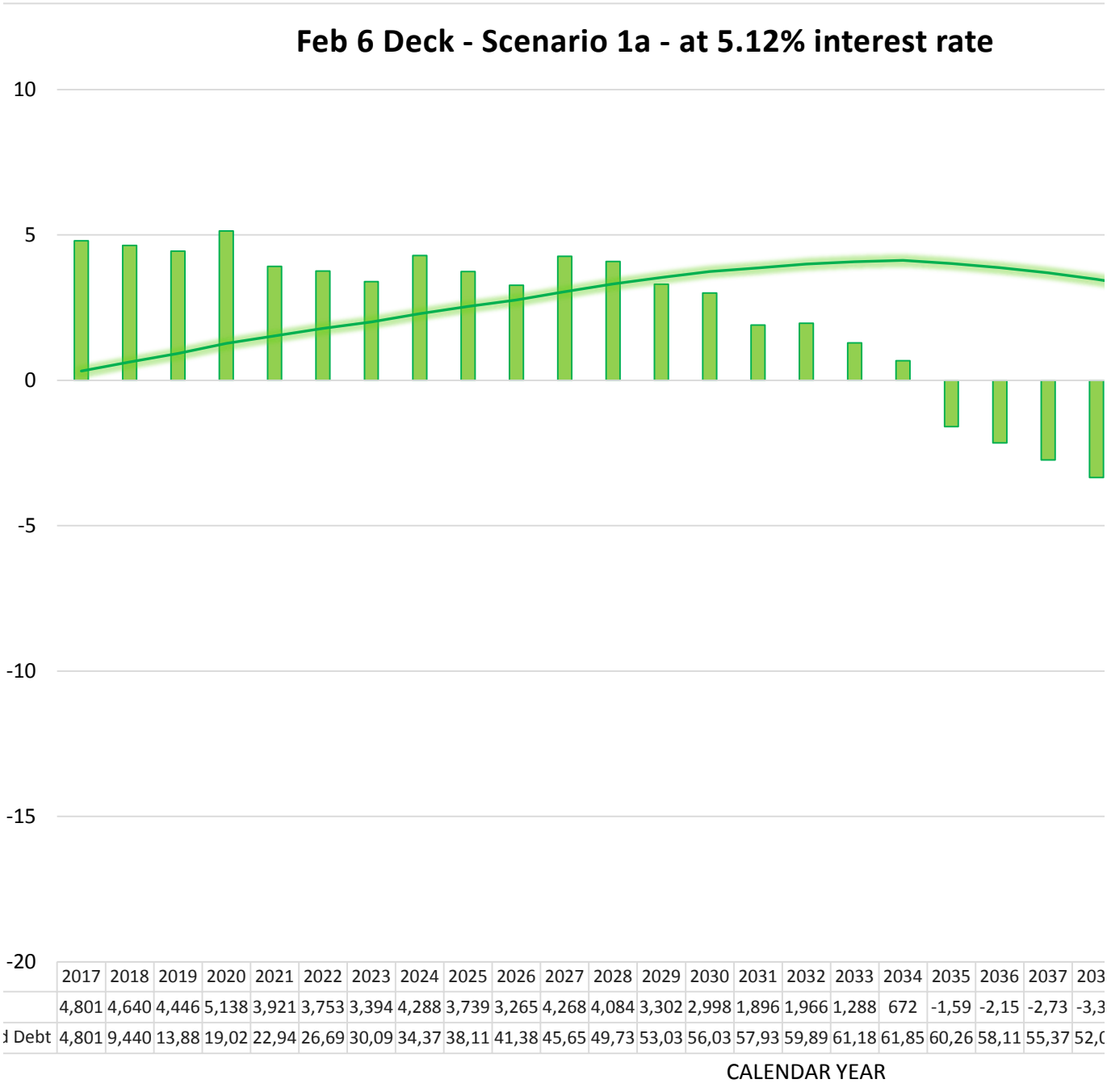
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

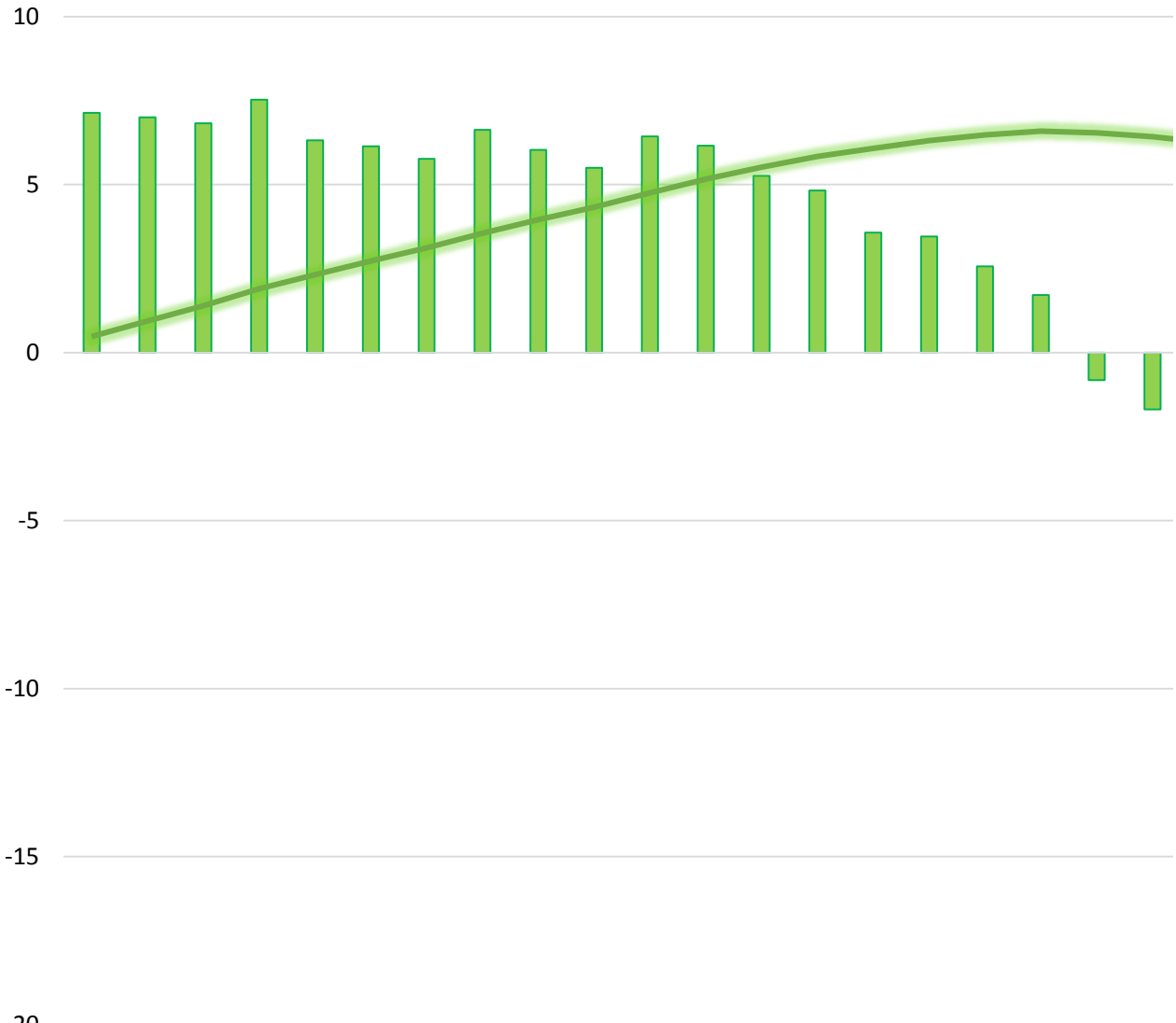
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

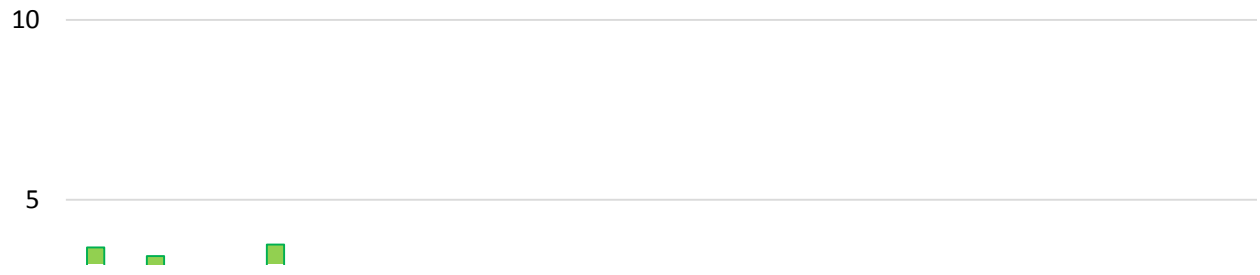
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

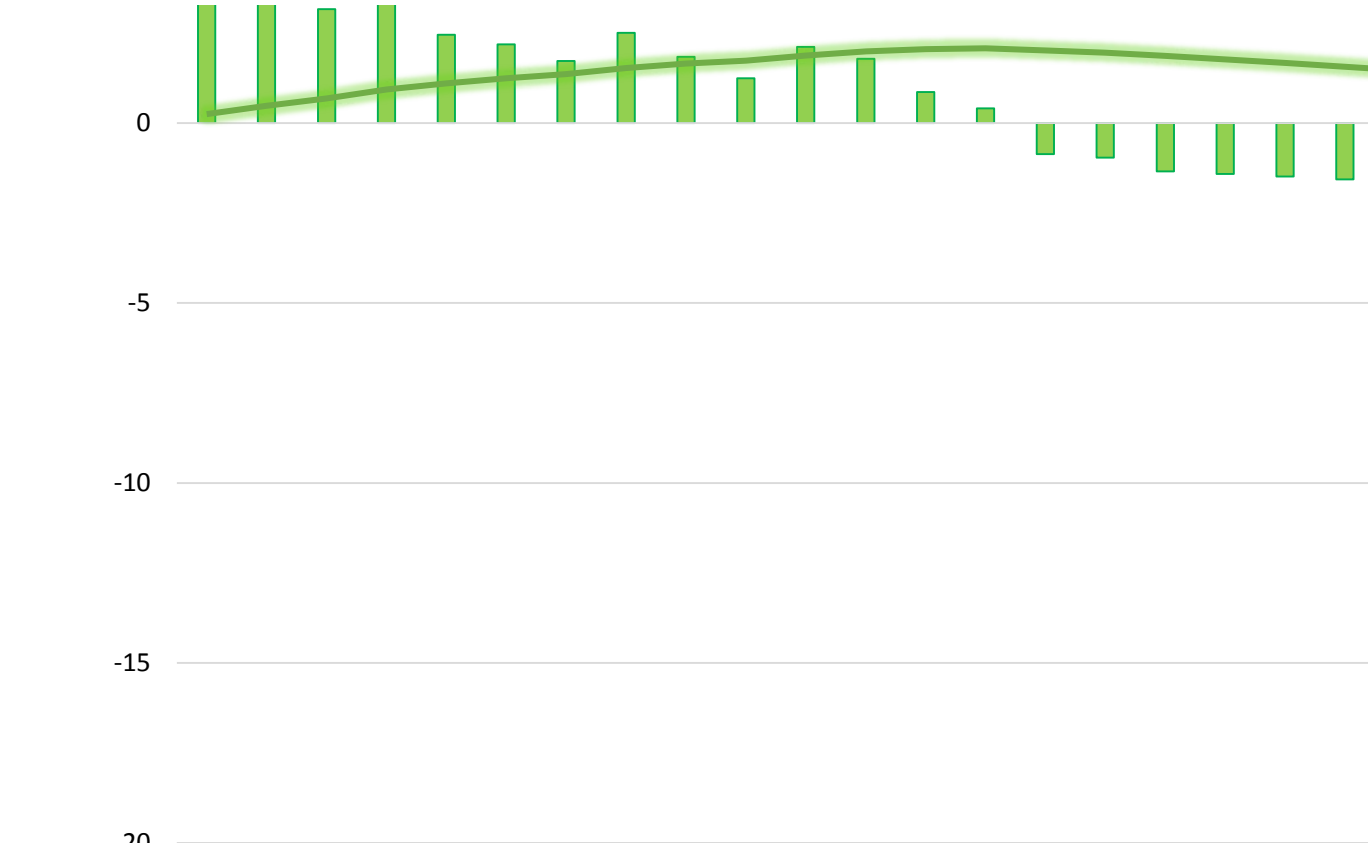


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



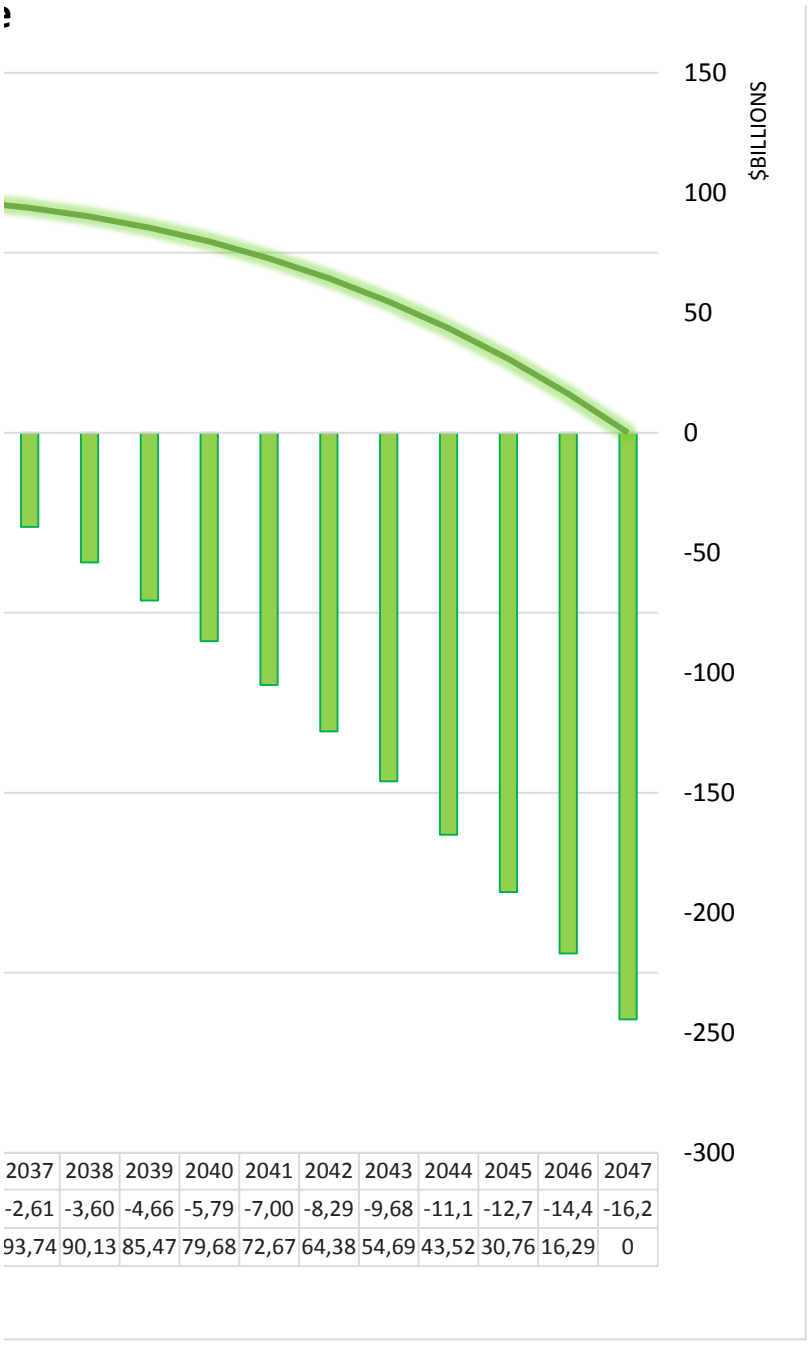


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

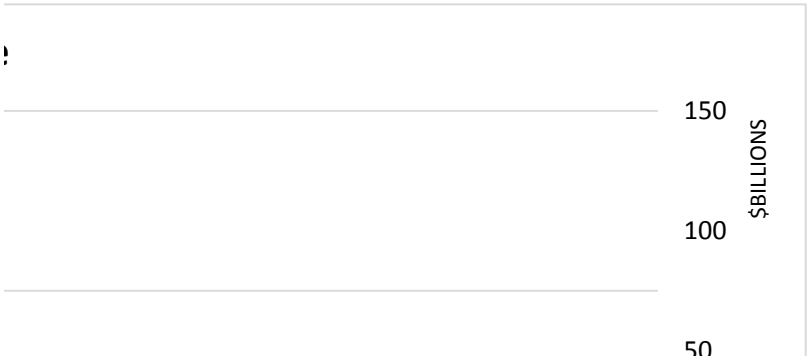
CALENDAR YEAR

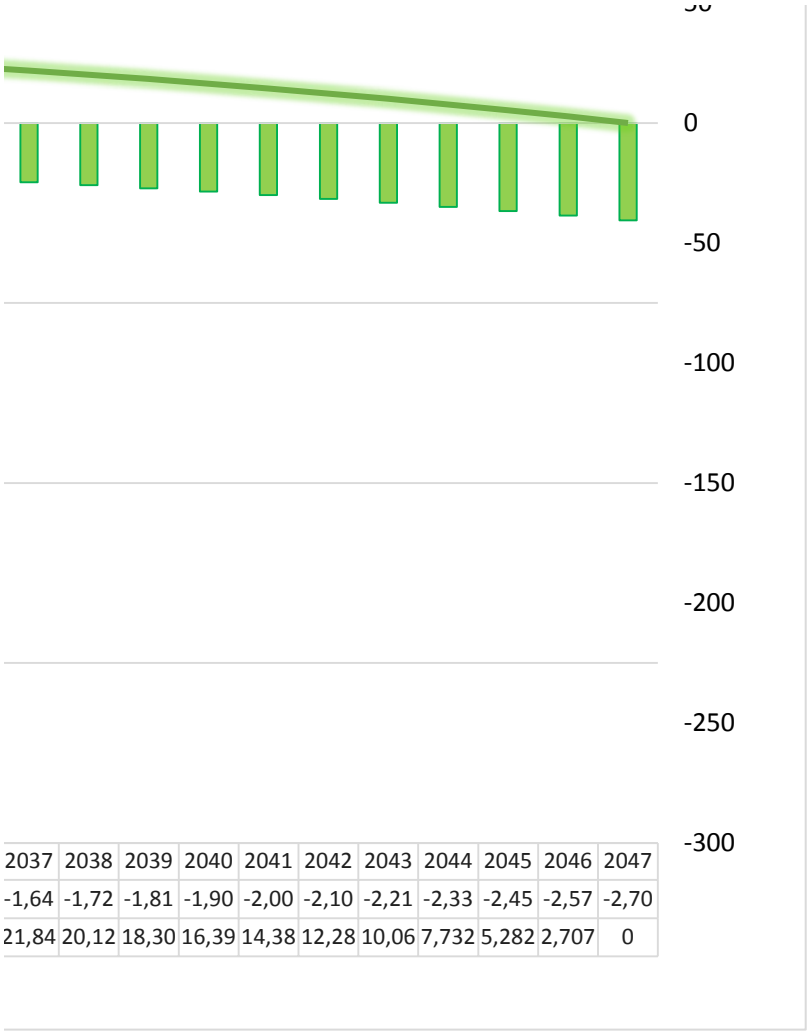


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Equal Monthly Debt Drawdown

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb4_1a_30yr

1a. GA Smoothing (Borrow ~$5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,801	4,640

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,200	4,760

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $62 billion, peakin
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary on accounting treatment.

7,133 7,133

Feb4_1b_30yr 7,133

1b. GA Smoothing (Borrow ~$7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	7,133	6,999

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,783	7,100

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $99 billion, peaking
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b on accounting treatment.

Feb4_1c_30yr

1c. GA Smoothing (Borrow ~$4 billion in 2017)

$ millions

Scenario 1C - 30-yr amortization	2017	2018
Annual Exposure[2]	3,678	3,437

	Fiscalized[3]	2016-17	2017-18
	Start: January 1st	919	3,617

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	1,783 - 1,200	7,100 - 4,760

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1200	4760
Debt-Finance Global Adjustment Costs, Option 1a	1783	7100
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18

Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1200**	**5000**
Total, B	1783	7340
Proposed Program Total:	1,783 - 1,200	7,340 - 5,000

ining

1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
4,446	5,138	3,921	3,753

2018-19	2019-20	2020-21	2021-2022
4,591	4,619	4,833	3,879

ng in 203 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
by approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
6,825	7,529	6,315	6,141

2018-19	2019-20	2020-21	2021-2022
6,956	7,001	7,226	6,272

g in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
3,158	3,761	2,450	2,183

2018-19	2019-20	2020-21	2021-2022
3,367	3,309	3,433	2,383

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
6,956 - 4,591	7,001 - 4,619	7,226 - 4,833	6,272 - 3,879

/1

2018-19[1]	2019-20[1]	2020-21[1]
4591	4619	4833
6956	7001	7226
225	279	323
60	60	60
18	18	18

4894	**4976**	**5234**
7259	7358	7627

7,259 - 4,894 7,358 - 4,976 7,627 - 5,234

1a. GA Smoothing (Borrow $5 billion in 2017)

	2017
IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	7,095
Additional GA Debt Drawdown, End of Year	5,000

Ratepayer GA Payment

Total Accumulated Debt *($ billion)*	5,000
Total Change in Accumulated Debt *($ billion)*	5000

1b. GA Smoothing (Borrow $7 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	5,095
Additional GA Debt Drawdown, End of Year	7,000

Total Accumulated Debt *($ billion)*	7000
Total Change in Accumulated Debt *($ billion)*	7000

1c. GA Smoothing (Borrow $4 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	8,095
Additional GA Debt Drawdown, End of Year	4,000

Total Accumulated Debt *($ billion)*	4000
Total Change in Accumulated Debt *($ billion)*	4000

2018	2019	2020	2021	2022	2023	2024	2025
11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
6,835	7,552	7,168	6,844	6,634	7,243	7,128	6,527
5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000

9,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000
5000	4000	5000	4000	4000	3000	4000	4000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
4,835	4,552	4,168	4,844	4,634	4,243	4,128	4,527
7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000

14000	21000	28000	35000	41000	47000	53000	59000
7000	7000	8000	6000	6000	6000	7000	6000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
8,835	8,552	8,168	8,844	8,634	8,243	8,128	8,527
3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000

7000	10000	14000	16000	19000	20000	23000	25000
3000	3000	4000	2000	2000	2000	3000	2000

2026	2027	2028	2029	2030	2031	2032	2033
10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
7,033	7,043	6,819	7,009	6,721	6,654	6,820	7,238
3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000

41,000	46,000	50,000	53,000	56,000	58,000	60,000	61,000
3000	4000	4000	3000	3000	2000	2000	1000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
4,033	5,043	4,819	5,009	4,721	4,654	5,820	5,238
6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000

65000	71000	77000	83000	88000	91000	95000	97000
6000	6000	6000	5000	5000	4000	3000	3000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
9,033	9,043	8,819	9,009	9,721	9,654	9,820	9,238
1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000

26000	28000	30000	31000	31000	30000	29000	28000
1000	2000	2000	1000	0	-1000	-1000	-1000

2034	2035	2036	2037	2038	2039	2040	2041
7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
6,756	7,662	7,389	8,129	7,881	8,645	9,421	9,207
1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000

62,000	60,000	58,000	55,000	52,000	48,000	43,000	38,000
1000	-2000	-2000	-3000	-3000	-4000	-5000	-5000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
5,756	6,662	7,389	8,129	8,881	9,645	10,421	11,207
2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000

99000	98000	96000	94000	90000	85000	80000	73000
2000	-1000	-2000	-3000	-4000	-5000	-6000	-7000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
8,756	6,662	7,389	7,129	6,881	6,645	6,421	6,207
-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000

27000	25000	23000	22000	20000	18000	16000	14000
-1000	-1000	-2000	-2000	-2000	-2000	-2000	-2000

2042	2043	2044	2045	2046	2047	2048		
4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
10,004	9,811	9,627	9,451	10,285	10,126	2,975		
-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0		

33,000	27,000	20,000	14,000	7,000	-	-	
-6000	-6000	-6000	-6000	-7000	-7000	0	

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
12,004	13,811	14,627	16,451	17,285	19,126	2,975		
-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0		

64000	55000	44000	31000	16000	0	0
-8000	-10000	-11000	-13000	-14000	-16000	0

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
6,004	5,811	5,627	5,451	6,285	6,126	2,975		
-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0		

12000	10000	8000	5000	3000	0	0
-2000	-2000	-2000	-2000	-3000	-3000	0

Feb4 1a, 30-yr - Debt Drawdown Scenarios

-92,247 -94598.515 58,489 36109.18 0

Feb4_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0
			114	110	106	122	93	89	81	102	89	78	102	97	79	71	45	47	31	16	-38	-51	-65	-80	-95	-110	-126	-133	-140	-147	-155	-162	-171	0	0	0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	5,138	3,167	58,489
Equal Monthly Debt Drawdown	5,260	3,149	

Maximum Accumulated Debt — Feb4 1a, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

End of Year Debt Drawdown	61,858	36,109
Equal Monthly Debt Drawdown	63,330	

			40%	37%	34%	36%	27%	24%																													
Feb4 1a, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
a	Debt, Beginning of Year		0	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	
c = a*5%	*Interest Cost - Feb4 1a, 30-yr - End of Year Debt Drawdown*		*0*	*246*	*483*	*711*	*974*	*1,175*	*1,367*	*1,541*	*1,760*	*1,952*	*2,119*	*2,337*	*2,546*	*2,716*	*2,869*	*2,966*	*3,067*	*3,133*	*3,167*	*3,086*	*2,975*	*2,835*	*2,664*	*2,461*	*2,224*	*1,952*	*1,666*	*1,365*	*1,049*	*717*	*367*	*0*	*0*	*0*	58,489
b	Additional GA Debt Drawdown, End of Year		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	21,822	23,788	25,076	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	20,490	13,998	7,173	0	0	0	
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	36,109	36,109	36,109	36,109	34,517	32,362	29,624	26,281	22,311	17,687	12,383	6,793	918	0	0	0	0	0	0	0	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688	49,149	51,372	53,325	54,991	56,356	57,405	58,122	58,489				
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371	-5,713	-13,241	-20,783	-28,325	-35,866	-43,408	-50,949	-58,489				
Fiscal Exposure - End of Year Debt Drawdown			4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0	

Feb4 1a, 30-yr	Equal Monthly Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			12																																		
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
3,149	*Interest Cost - Feb4 1a, 30-yr*		*114*	*356*	*589*	*833*	*1,067*	*1,264*	*1,448*	*1,643*	*1,849*	*2,029*	*2,220*	*2,435*	*2,625*	*2,787*	*2,914*	*3,013*	*3,097*	*3,149*	*3,129*	*3,034*	*2,910*	*2,756*	*2,569*	*2,351*	*2,098*	*1,819*	*1,526*	*1,218*	*895*	*554*	*197*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0	

	Monthly Drawdown		400	366	330	369	246	215	169	229	165	109	179	146	63	24	(81)	(83)	(148)	(205)	(397)	(437)	(476)	(515)	(553)	(590)	(627)	(629)	(628)	(628)	(628)	(628)	(628)	-	-	-
	FV of Monthly Drawdown at 5%		4,915	4,498	4,057	4,532	3,017	2,640	2,075	2,813	2,026	1,345	2,200	1,789	773	289	(996)	(1,024)	(1,821)	(2,519)	(4,872)	(5,365)	(5,849)	(6,325)	(6,793)	(7,253)	(7,707)	(7,722)	(7,721)	(7,721)	(7,721)	(7,721)	(7,720)	-	-	-
	Annual Interest Cost on New Drawdowns		114	105	94	105	70	61	48	65	47	31	51	42	18	7	(23)	(24)	(42)	(59)	(113)	(125)	(136)	(147)	(158)	(169)	(179)	(180)	(180)	(180)	(180)	(180)	(179)	-	-	-
	Annual Interest Cost on Opening Balance		-	252	495	728	997	1,203	1,399	1,577	1,802	1,998	2,169	2,393	2,607	2,780	2,937	3,037	3,140	3,207	3,243	3,159	3,046	2,903	2,727	2,519	2,277	1,999	1,706	1,398	1,074	734	376	(0)	(0)	(0)
	Total Annual Interest Cost		114	356	589	833	1,067	1,264	1,448	1,643	1,849	2,029	2,220	2,435	2,625	2,787	2,914	3,013	3,097	3,149	3,129	3,034	2,910	2,756	2,569	2,351	2,098	1,819	1,526	1,218	895	554	197	(0)	(0)	(0)

Feb4 1a, 30-yr	Bi-Annual Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			2																																		
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*61*	*305*	*540*	*777*	*1,024*	*1,223*	*1,410*	*1,596*	*1,808*	*1,993*	*2,173*	*2,390*	*2,589*	*2,754*	*2,893*	*2,991*	*3,083*	*3,141*	*3,147*	*3,058*	*2,940*	*2,792*	*2,613*	*2,401*	*2,156*	*1,881*	*1,591*	*1,286*	*966*	*629*	*275*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown			4,862	4,699	4,502	5,203	3,971	3,801	3,438	4,343	3,787	3,307	4,322	4,137	3,344	3,037	1,920	1,991	1,305	681	-1,612	-2,183	-2,773	-3,386	-4,021	-4,683	-5,372	-5,661	-5,951	-6,255	-6,575	-6,912	-7,265	0	0	0	

	Bi-Annual Drawdown		2,400	2,197	1,981	2,213	1,473	1,289	1,014	1,374	989	657	1,074	874	378	141	(487)	(500)	(889)	(1,230)	(2,379)	(2,620)	(2,857)	(3,089)	(3,317)	(3,542)	(3,764)	(3,771)	(3,771)	(3,771)	(3,771)	(3,771)	(3,770)	-	-	-
	FV of Bi-Annual Drawdown at 5%		4,862	4,450	4,013	4,483	2,984	2,612	2,053	2,783	2,004	1,331	2,176	1,769	765	286	(986)	(1,013)	(1,801)	(2,492)	(4,820)	(5,308)	(5,787)	(6,257)	(6,719)	(7,175)	(7,624)	(7,639)	(7,638)	(7,638)	(7,638)	(7,638)	(7,637)	-	-	-
	Annual Interest Cost on New Drawdowns		61	56	51	57	38	33	26	35	25	17	28	22	10	4	(12)	(13)	(23)	(31)	(61)	(67)	(73)	(79)	(85)	(91)	(96)	(97)	(97)	(97)	(97)	(97)	(97)	-	-	-
	Annual Interest Cost on Opening Balance		-	249	490	720	986	1,190	1,384	1,560	1,783	1,977	2,146	2,367	2,579	2,750	2,906	3,004	3,106	3,173	3,208	3,125	3,013	2,871	2,698	2,492	2,252	1,977	1,687	1,383	1,063	726	372	(0)	(0)	(0)
	Total Annual Interest Cost		61	305	540	777	1,024	1,223	1,410	1,596	1,808	1,993	2,173	2,390	2,589	2,754	2,893	2,991	3,083	3,141	3,147	3,058	2,940	2,792	2,613	2,401	2,156	1,881	1,591	1,286	966	629	275	(0)	(0)	(0)

Feb4 1a, 30-yr	Average Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*123*	*365*	*597*	*842*	*1,074*	*1,271*	*1,454*	*1,650*	*1,856*	*2,035*	*2,228*	*2,442*	*2,631*	*2,792*	*2,918*	*3,016*	*3,100*	*3,150*	*3,126*	*3,030*	*2,905*	*2,749*	*2,562*	*2,342*	*2,088*	*1,809*	*1,516*	*1,207*	*883*	*542*	*184*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
Fiscal Exposure - Average Debt Drawdown			4,923	4,758	4,559	5,269	4,021	3,849	3,481	4,398	3,835	3,349	4,377	4,189	3,386	3,075	1,944	2,016	1,321	689	-1,633	-2,210	-2,808	-3,428	-4,072	-4,742	-5,440	-5,733	-6,026	-6,334	-6,658	-6,999	-7,357	0	0	0	

Feb4 1b, 30-yr - Debt Drawdown Scenarios

-149,507 -153857.97 97,141 56717.33 0

Feb4_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0
			170	167	162	179	150	146	137	158	144	131	153	147	125	115	85	82	61	41	-19	-40	-62	-86	-111	-138	-167	-198	-231	-266	-304	-344	-388	0	0	0

0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown 7,529	5,062	97,141
Equal Monthly Debt Drawdown 7,708	5,042	

Maximum Accumulated Debt	Feb4 1b, 30-yr, Accumulated Debt	Total Principal Debt Borrowed
End of Year Debt Drawdown	98,864	56,717
Equal Monthly Debt Drawdown	101,217	

Feb4 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
a Debt, Beginning of Year	0	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	
c = a*5% *Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown*	*0*	*365*	*724*	*1,073*	*1,459*	*1,782*	*2,096*	*2,391*	*2,731*	*3,040*	*3,322*	*3,651*	*3,966*	*4,236*	*4,483*	*4,665*	*4,842*	*4,974*	*5,062*	*5,020*	*4,933*	*4,800*	*4,615*	*4,376*	*4,080*	*3,721*	*3,296*	*2,800*	*2,228*	*1,575*	*834*	*0*	*0*	*0*	97,141
b Additional GA Debt Drawdown, End of Year	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
d = a+b+c Accumulated debt in present year (including 5% annual interest)	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	0	
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,633	26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606	82,685	86,406	89,703	92,503	94,731	96,306	97,141				
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,831	56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076	-10,007	-22,027	-35,008	-48,980	-63,971	-80,013	-97,141				
Fiscal Exposure - End of Year Debt Drawdown	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0	

Feb4 1b, 30-yr — Equal Monthly Debt Drawdown

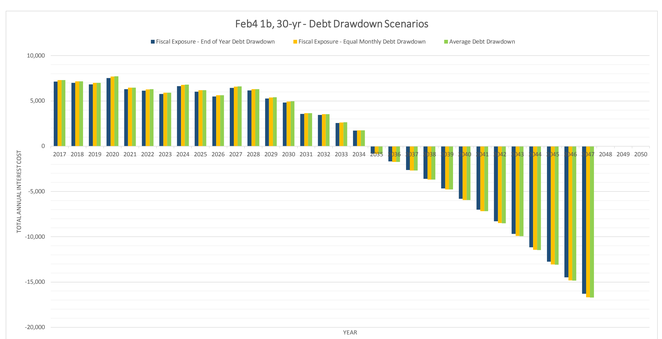
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	
5,042 *Interest Cost - Feb4 1b, 30-yr*	*170*	*532*	*886*	*1,252*	*1,609*	*1,928*	*2,234*	*2,549*	*2,874*	*3,171*	*3,475*	*3,797*	4,091	*4,350*	*4,568*	*4,748*	*4,904*	*5,015*	*5,042*	*4,980*	*4,871*	*4,714*	*4,504*	*4,238*	*3,913*	*3,524*	*3,066*	*2,534*	*1,925*	*1,231*	*446*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0	
Monthly Drawdown	594	553	508	538	405	363	306	353	275	205	259	209	108	49	(76)	(101)	(189)	(271)	(490)	(559)	(629)	(700)	(773)	(847)	(924)	(1,002)	(1,082)	(1,164)	(1,249)	(1,337)	(1,427)	(0)	-	-	
FV of Monthly Drawdown at 5%	7,303	6,792	6,247	6,610	4,972	4,463	3,755	4,338	3,383	2,523	3,184	2,565	1,327	605	(937)	(1,237)	(2,326)	(3,335)	(6,020)	(6,867)	(7,728)	(8,604)	(9,498)	(10,412)	(11,347)	(12,306)	(13,291)	(14,304)	(15,348)	(16,424)	(17,536)	(0)	-	-	
Annual Interest Cost on New Drawdowns	170	158	145	154	116	104	87	101	79	59	74	60	31	14	(22)	(29)	(54)	(78)	(140)	(160)	(180)	(200)	(221)	(242)	(264)	(286)	(309)	(333)	(357)	(382)	(408)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	374	741	1,099	1,493	1,824	2,146	2,448	2,796	3,112	3,401	3,738	4,061	4,336	4,589	4,776	4,958	5,092	5,182	5,139	5,051	4,914	4,725	4,481	4,177	3,810	3,375	2,867	2,281	1,612	854	0	(0)	(0)	
Total Annual Interest Cost	170	532	886	1,252	1,609	1,928	2,234	2,549	2,874	3,171	3,475	3,797	4,091	4,350	4,568	4,748	4,904	5,015	5,042	4,980	4,871	4,714	4,504	4,238	3,913	3,524	3,066	2,534	1,925	1,231	446	0	(0)	(0)	

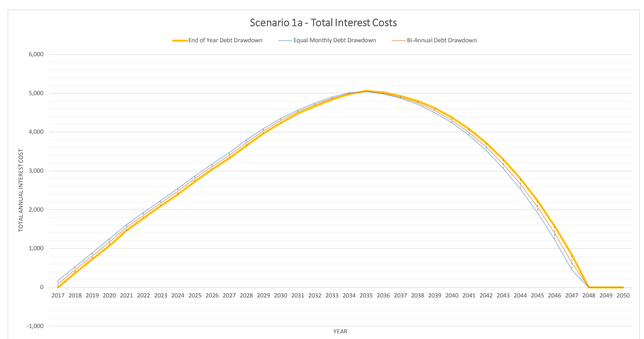
Feb4 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*91*	*455*	*811*	*1,169*	*1,539*	*1,861*	*2,170*	*2,476*	*2,808*	*3,110*	*3,404*	*3,730*	*4,034*	*4,297*	*4,528*	*4,710*	*4,875*	*4,996*	*5,051*	*4,998*	*4,900*	*4,753*	*4,555*	*4,302*	*3,990*	*3,615*	*3,172*	*2,657*	*2,065*	*1,390*	*626*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	7,225	7,089	6,913	7,626	6,396	6,220	5,838	6,713	6,113	5,574	6,514	6,235	5,330	4,888	3,614	3,501	2,603	1,738	-829	-1,709	-2,648	-3,651	-4,722	-5,867	-7,093	-8,405	-9,810	-11,314	-12,926	-14,652	-16,502	0	0	0	
Bi-Annual Drawdown	3,567	3,317	3,051	3,228	2,428	2,180	1,834	2,118	1,652	1,232	1,555	1,253	648	295	(457)	(604)	(1,136)	(1,629)	(2,940)	(3,354)	(3,774)	(4,202)	(4,639)	(5,085)	(5,542)	(6,010)	(6,491)	(6,986)	(7,495)	(8,021)	(8,564)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	7,225	6,719	6,180	6,539	4,919	4,415	3,715	4,291	3,347	2,496	3,150	2,538	1,313	598	(926)	(1,224)	(2,301)	(3,299)	(5,956)	(6,794)	(7,645)	(8,512)	(9,396)	(10,300)	(11,225)	(12,174)	(13,148)	(14,150)	(15,183)	(16,247)	(17,347)	(0)	-	-	
Annual Interest Cost on New Drawdowns	91	85	78	83	62	56	47	54	42	32	40	32	17	8	(12)	(15)	(29)	(42)	(75)	(86)	(97)	(108)	(119)	(130)	(142)	(154)	(166)	(179)	(192)	(205)	(219)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	370	733	1,087	1,477	1,805	2,123	2,422	2,766	3,079	3,364	3,698	4,017	4,290	4,540	4,725	4,904	5,038	5,127	5,084	4,997	4,861	4,674	4,432	4,132	3,769	3,338	2,836	2,257	1,595	845	0	0	0	
Total Annual Interest Cost	91	455	811	1,169	1,539	1,861	2,170	2,476	2,808	3,110	3,404	3,730	4,034	4,297	4,528	4,710	4,875	4,996	5,051	4,998	4,900	4,753	4,555	4,302	3,990	3,615	3,172	2,657	2,065	1,390	626	0	0	0	

Feb4 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*183*	*544*	*898*	*1,266*	*1,620*	*1,939*	*2,244*	*2,561*	*2,885*	*3,181*	*3,486*	*3,809*	*4,101*	*4,359*	*4,574*	*4,754*	*4,908*	*5,018*	*5,041*	*4,977*	*4,867*	*4,707*	*4,496*	*4,228*	*3,900*	*3,509*	*3,048*	*2,514*	*1,902*	*1,205*	*417*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	7,316	7,179	7,000	7,722	6,477	6,298	5,912	6,798	6,190	5,645	6,597	6,314	5,397	4,950	3,659	3,545	2,636	1,760	-840	-1,731	-2,682	-3,697	-4,782	-5,942	-7,183	-8,511	-9,934	-11,457	-13,089	-14,838	-16,711	0	0	0	





Feb4 1c, 30-yr - Debt Drawdown Scenarios

Feb4_1c_30yr

Annual Interest Rate = 5.1%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0
			88	82	75	90	58	52	41	60	44	29	50	43	20	10	-20	-23	-32	-34	-35	-37	-39	-41	-43	-45	-48	-50	-53	-55	-58	-61	-64	0	0	0

0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	3,761	1,594	29,477
Equal Monthly Debt Drawdown	3,851	1,583	

Maximum Accumulated Debt — Feb4 1c, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

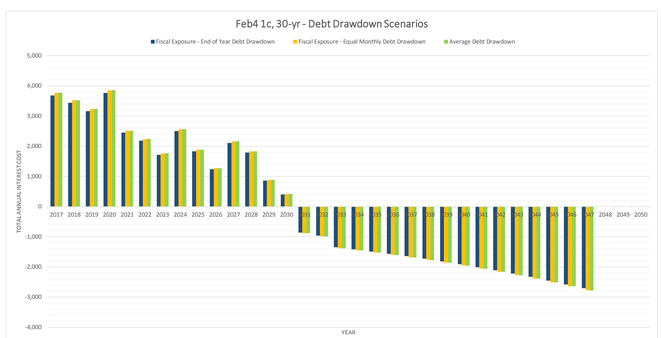
End of Year Debt Drawdown	31,125	20,043
Equal Monthly Debt Drawdown	31,866	

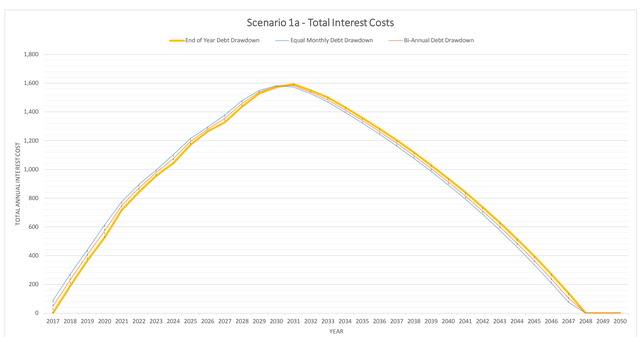
		30%	27%	24%	27%	16%	13%																														
Feb4 1c, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
a	Debt, Beginning of Year	0	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	
c = a*5%	*Interest Cost - Feb4 1c, 30-yr - End of Year Debt Drawdown*	*0*	*188*	*364*	*526*	*719*	*844*	*956*	*1,044*	*1,172*	*1,266*	*1,329*	*1,437*	*1,529*	*1,573*	*1,594*	*1,550*	*1,500*	*1,431*	*1,359*	*1,283*	*1,203*	*1,119*	*1,030*	*937*	*839*	*737*	*629*	*515*	*396*	*270*	*139*	*0*	*0*	*0*	*0*	29,477
b	Additional GA Debt Drawdown, End of Year	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	0	
	Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,641	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663	22,866	23,984	25,015	25,952	26,791	27,528	28,157	28,672	29,068	29,338	29,477				
	Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18,247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828	-1,018	-3,864	-6,710	-9,556	-12,402	-15,248	-18,094	-20,940	-23,786	-26,631	-29,477				
Fiscal Exposure - End of Year Debt Drawdown		3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0	

Feb4 1c, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	
1,583	*Interest Cost - Feb4 1c, 30-yr*	*88*	*270*	*439*	*615*	*777*	*896*	*997*	*1,103*	*1,216*	*1,295*	*1,379*	*1,480*	1,549	*1,583*	*1,573*	*1,527*	*1,468*	*1,398*	*1,324*	*1,246*	*1,164*	*1,077*	*987*	*892*	*792*	*686*	*576*	*460*	*338*	*209*	*74*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0	
	Monthly Drawdown	306	271	233	270	144	112	64	122	55	(2)	65	29	(56)	(97)	(204)	(209)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(0)	-	-	
	FV of Monthly Drawdown at 5%	3,765	3,326	2,861	3,312	1,773	1,371	781	1,493	679	(28)	799	360	(684)	(1,197)	(2,512)	(2,570)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,913)	(2,913)	(2,913)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	88	77	67	77	41	32	18	35	16	(1)	19	8	(16)	(28)	(58)	(60)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	193	373	538	736	864	979	1,069	1,200	1,296	1,361	1,471	1,565	1,610	1,632	1,586	1,536	1,465	1,391	1,313	1,231	1,145	1,055	959	859	754	644	527	405	277	142	0	0	0	
	Total Annual Interest Cost	88	270	439	615	777	896	997	1,103	1,216	1,295	1,379	1,480	1,549	1,583	1,573	1,527	1,468	1,398	1,324	1,246	1,164	1,077	987	892	792	686	576	460	338	209	74	0	0	0	

Feb4 1c, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*47*	*232*	*405*	*574*	*750*	*872*	*978*	*1,076*	*1,195*	*1,282*	*1,356*	*1,460*	*1,540*	*1,578*	*1,583*	*1,537*	*1,483*	*1,413*	*1,340*	*1,263*	*1,182*	*1,097*	*1,007*	*913*	*814*	*710*	*600*	*485*	*365*	*237*	*104*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,725	3,481	3,199	3,809	2,481	2,211	1,741	2,534	1,859	1,254	2,137	1,812	872	409	-871	-973	-1,363	-1,433	-1,506	-1,584	-1,665	-1,750	-1,839	-1,933	-2,032	-2,136	-2,246	-2,360	-2,481	-2,608	-2,742	0	0	0	
	Bi-Annual Drawdown	1,839	1,624	1,397	1,618	866	670	382	729	332	(14)	390	176	(334)	(584)	(1,227)	(1,255)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(0)	-	-	
	FV of Bi-Annual Drawdown at 5%	3,725	3,290	2,830	3,277	1,754	1,356	773	1,477	672	(28)	791	356	(677)	(1,184)	(2,485)	(2,542)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	47	42	36	41	22	17	10	19	8	(0)	10	5	(9)	(15)	(31)	(32)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	191	369	533	728	855	968	1,057	1,187	1,282	1,346	1,456	1,548	1,593	1,614	1,569	1,520	1,450	1,376	1,299	1,218	1,133	1,043	949	850	746	637	522	401	274	140	0	0	0	
	Total Annual Interest Cost	47	232	405	574	750	872	978	1,076	1,195	1,282	1,356	1,460	1,540	1,578	1,583	1,537	1,483	1,413	1,340	1,263	1,182	1,097	1,007	913	814	710	600	485	365	237	104	0	0	0	

Feb4 1c, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*94*	*276*	*445*	*622*	*781*	*900*	*1,000*	*1,108*	*1,219*	*1,298*	*1,383*	*1,483*	*1,551*	*1,583*	*1,572*	*1,525*	*1,466*	*1,395*	*1,321*	*1,243*	*1,161*	*1,074*	*984*	*888*	*788*	*683*	*572*	*456*	*333*	*205*	*69*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,772	3,525	3,239	3,857	2,513	2,239	1,763	2,566	1,882	1,270	2,164	1,835	883	414	-882	-985	-1,381	-1,451	-1,526	-1,604	-1,686	-1,772	-1,863	-1,958	-2,058	-2,163	-2,274	-2,390	-2,513	-2,641	-2,776	0	0	0	





30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

TO BE

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,556	3,123	1,728	1,400	836	1,560	821	167

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

E UPDATED

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

JK: Fixed the formula in the yellow highlighted cells. Pls. check. (SK: looks good to me)

	Tab
v16 GA Financing - Scenario 1a 1b v18 (with fiscal) - Feb 4_v2.xlsx	Powerpoint_Export Scenario tabs

Change Description

Added in trigger for later start in the year
Updated IESO forecast from Energy (IESO GA Cost Forecast 170207 (Feb 6 update).xlsx)

Equal Monthly Debt Drawdown

		Month	Months Remai
Scenario Start Date	**July**	7	6

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	3,180	2,888
Annual Exposure2 with start on July 1st	*1,590*	*2,888*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	795	3,107
Start: July 1st	-	*2,312*

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	851	3,335
Start: July 1st	-	*2,484*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	1,168	1,765
Annual Exposure2 with start on July 1st	*584*	*1,765*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	292	1,609
Start: July 1st	-	*1,025*

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,449	2,040
Annual Exposure2 with start on July 1st	*725*	*2,040*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,597
Start: July 1st	-	*1,959*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335
Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3575**
Total, B	362	1837
Proposed Program Total:	362 - 851	1,837 - 3,575

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,556	3,123	1,728	1,400
2,556	*3,123*	*1,728*	*1,400*

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646
2,805	*2,697*	*2,774*	*1,646*

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

ıking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
2,311	3,750	2,311	1,933
2,311	*3,750*	*2,311*	*1,933*

2018-19	2019-20	2020-21	2021-2022

1,901	2,671	3,391	2,217
1,901	*2,671*	*3,391*	*2,217*

2019	2020	2021	2022
2,581	4,016	2,598	2,241
2,581	*4,016*	*2,598*	*2,241*

2018-19	2019-20	2020-21	2021-2022
2,175	2,940	3,662	2,508
2,175	*2,940*	*3,662*	*2,508*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

/1

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052
2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

Equal Monthly Debt Drawdown

		Month	Months Remaining
Scenario Start Date	July	7	6

AS LONG AS >

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	3,180	2,888	2,556

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	795	3,107	2,805
Fiscal Exposure, 25%	199	777	701

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Annual Exposure[2]	3,404	3,128	2,812

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	851	3,335	3,049
Fiscal Exposure, 25%	213	834	762

Indicates year in which, similar to OPCD's exa
closest to 30%. As Fiscal 2016/17 is a partial y
month the GA deferral begins.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu
decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions	9%	14%	18%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	1,168	1,765	2,311

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	292	1,609	1,901
Fiscal Exposure, 25%	73	402	475

Scenario 1b - 30-yr amortization	2017	2018	2019
Annual Exposure[2]	1,449	2,040	2,581

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	362	1,597	2,175
Fiscal Exposure, 25%	91	399	544

Indicates year in which, similar to OPCD's exar closest to 30%.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 ar
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu on accounting treatment.

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]
Debt-Finance Global Adjustment Costs, Option 1a	213	834	762
Debt-Finance Global Adjustment Costs, Option 1b	91	399	544
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**213**	**1074**	**1065**
Total, B	91	639	847

Proposed Program Total:	91 - 213	639 - 1,074	847 - 1,065

($M)	2016-171	2017-181	2018-191
Debt-Finance Global Adjustment Costs, Option 1a	851	3335	3049
Debt-Finance Global Adjustment Costs, Option 1b	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**851**	**3575**	**3352**
Total, B	362	1837	2478

Proposed Program Total:	362 - 851	1,837 - 3,575	2,478 - 3,352

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6

7	July	7	
8	August	8	
9	September	9	
10	October	10	
11	November	11	
12	December	12	

30-year term	**2016-17**	**2017-18**	**2018-19**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335	2,175 - 3,049

ROWS HIDDEN

1	1 = Comparision Enabled

APRIL 1, 2017 25%

2020	2021	2022
3,123	1,728	1,400

2019-20	2020-21	2021-2022
2,697	2,774	1,646
674	693	412

2020	2021	2022
3,396	2,020	1,712

2019-20	2020-21	2021-2022
2,958	3,052	1,943
740	763	486

mple, the true cost of GA being deferred is
ear, exposure may be less subject to which

l $17-21 billion (at 3.5% interest rate), peaking in 2028.
$33-$36 million.

ıals per month based on month of the year. Actuals may also depend on

28%	17%	13%
2020	2021	2022
3,750	2,311	1,933

2019-20	2020-21	2021-2022
2,671	3,391	2,217
668	848	554

2020	2021	2022
4,016	2,598	2,241

2019-20	2020-21	2021-2022
2,940	3,662	2,508
735	915	627

mple, the true cost of GA being deferred is

ıd $17-21 billion (at 3.5% interest rate), peaking in 2028.
$118-$134 million.

ıals per month based on month of the year. Actuals may also depend on decision

2019-20[1]	2020-21[1]
740	763
735	915
279	323
60	60
18	18
1097	**1164**
1092	1316

1,092 - 1,097 1,316 - 1,164

2019-201	2020-211
2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453





2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964
Equal Monthly Debt Drawdown	3,180	952

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

		26%	23%	19%	22%	10%	7%																													
Scenario 1a, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

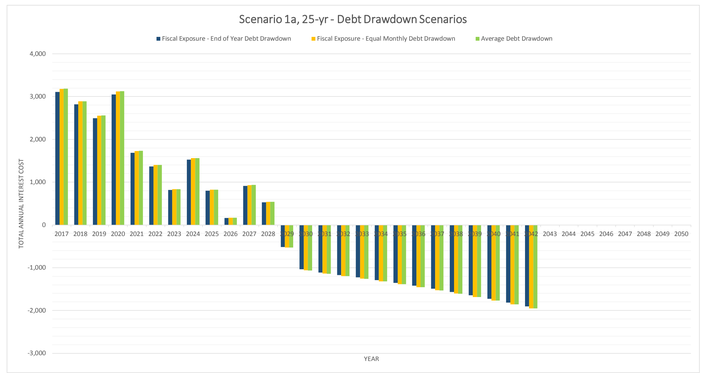
		26%	23%	19%	22%	10%	7%																													
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

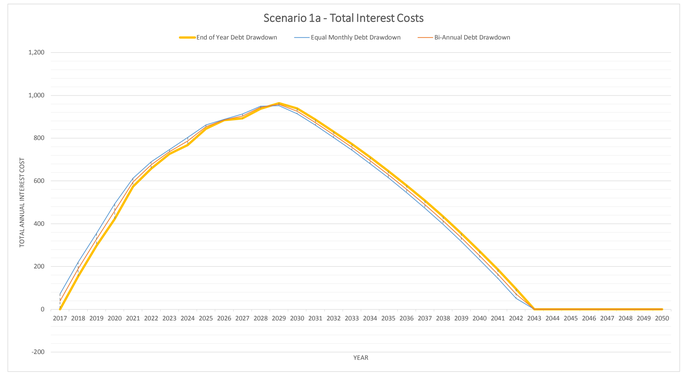
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

		26%	23%	19%	22%	10%	7%																													
Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1a, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	968	
Equal Monthly Debt Drawdown	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

			9%	14%	18%	28%	17%	13%																														
Scenario 1b, 25-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year		0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*		*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown			1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		**12**																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year		0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*		*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	[redacted]	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

	Monthly Drawdown		95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%		1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns		27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance		-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost		27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Scenario 1b, 25-yr	Bi-Annual Debt Drawdown		**2**																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year		0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr		*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown			1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown		571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%		1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns		14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance		-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost		14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Scenario 1b, 25-yr	Average Debt Drawdown																																				
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year		0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr		*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown			1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	

Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

		28%	24%	21%	24%	12%	9%																														
Scenario 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

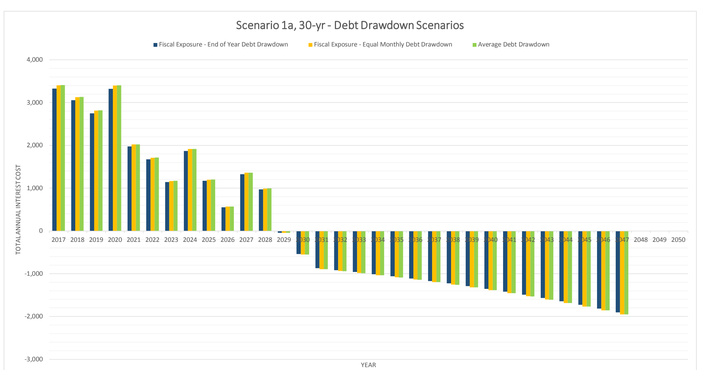
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	1,156	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

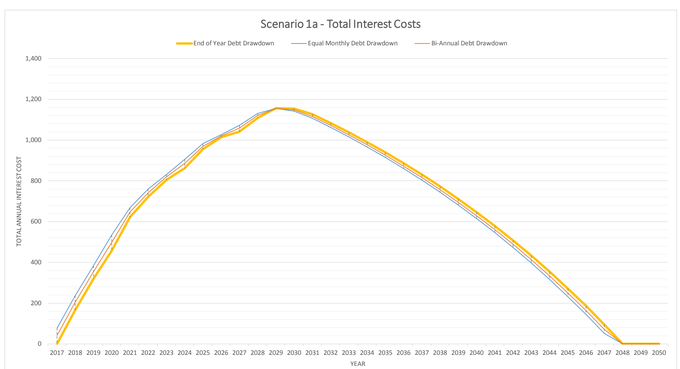
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

		12%	16%	20%	30%	19%	15%																													
Scenario 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

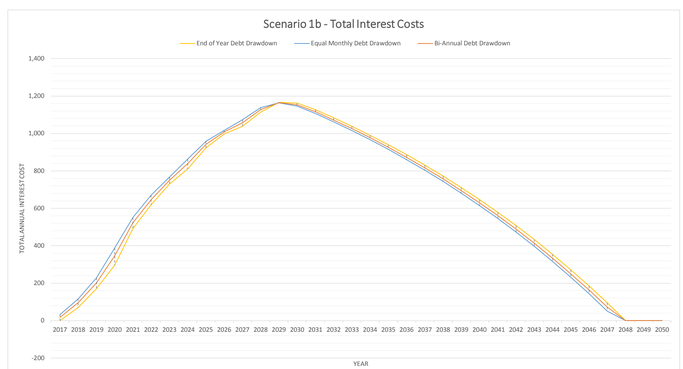
	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

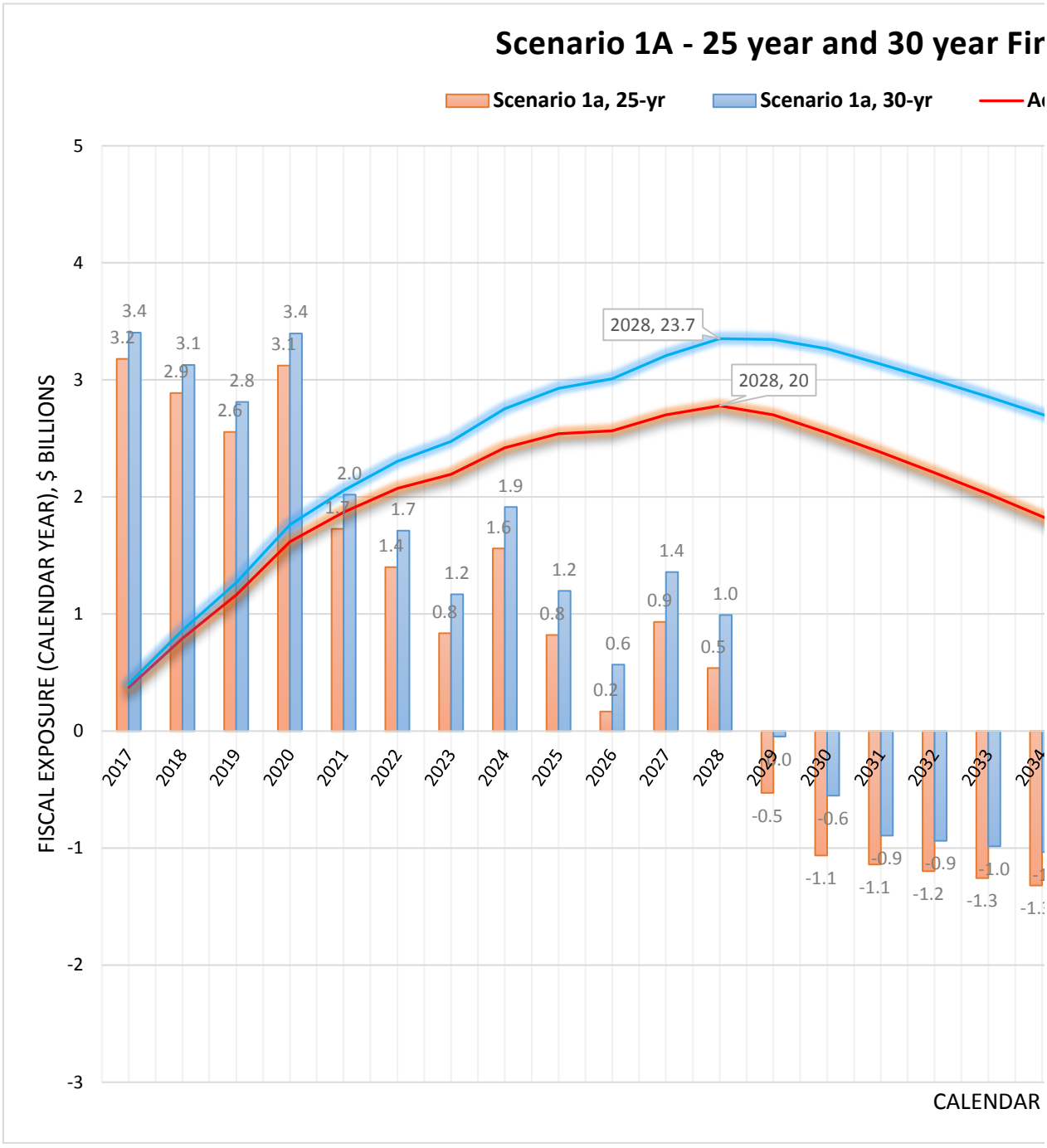
	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

Scenario 1b, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

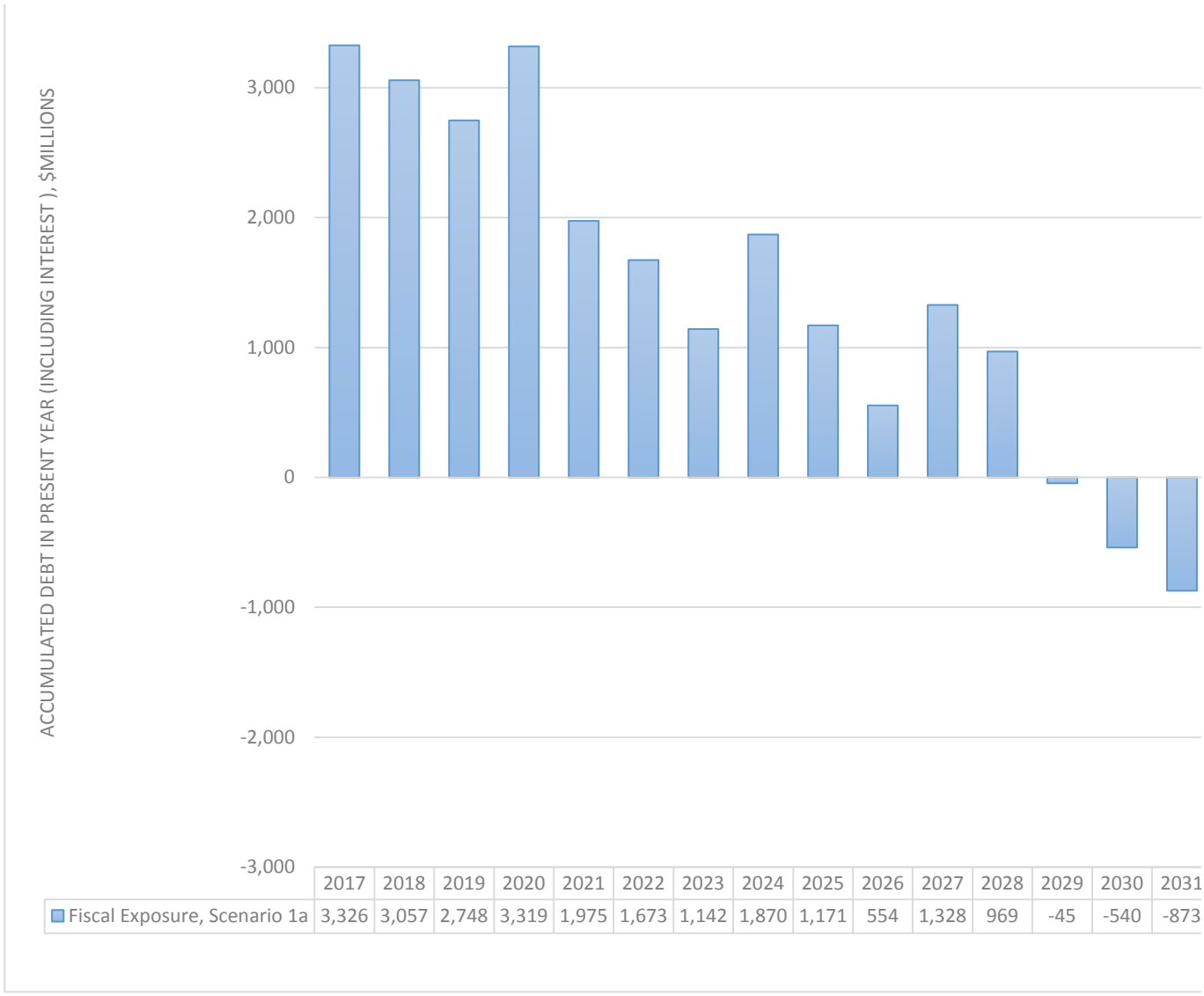




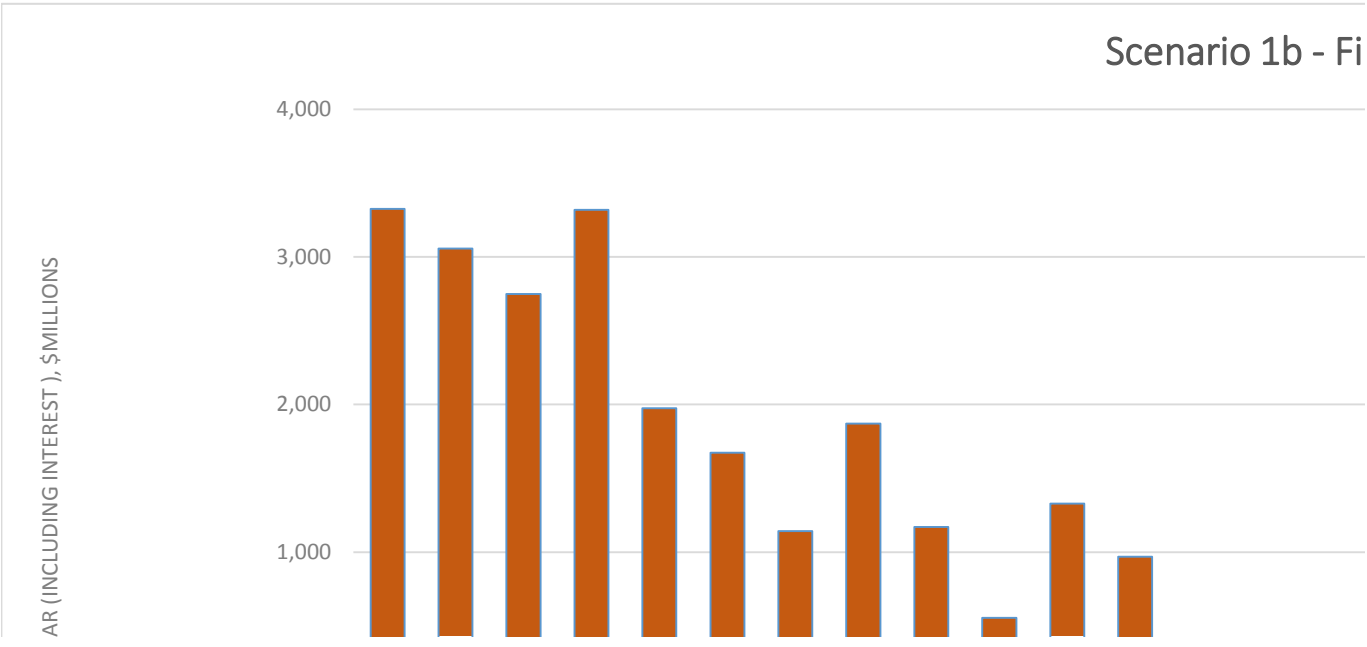
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

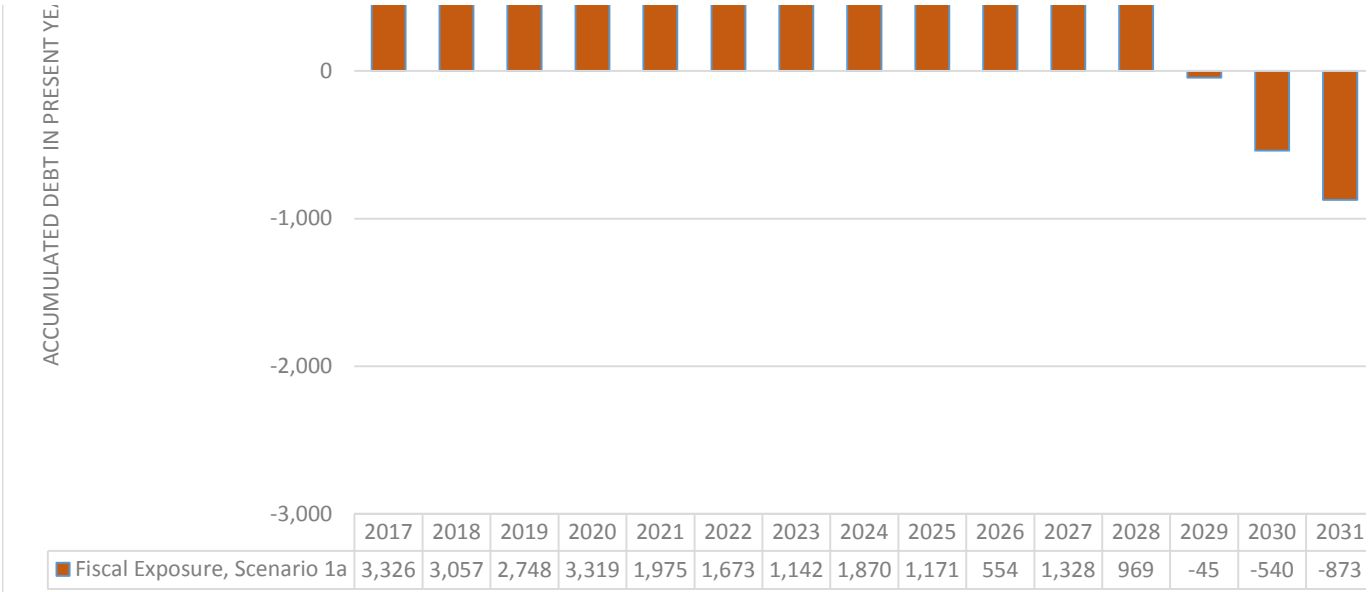




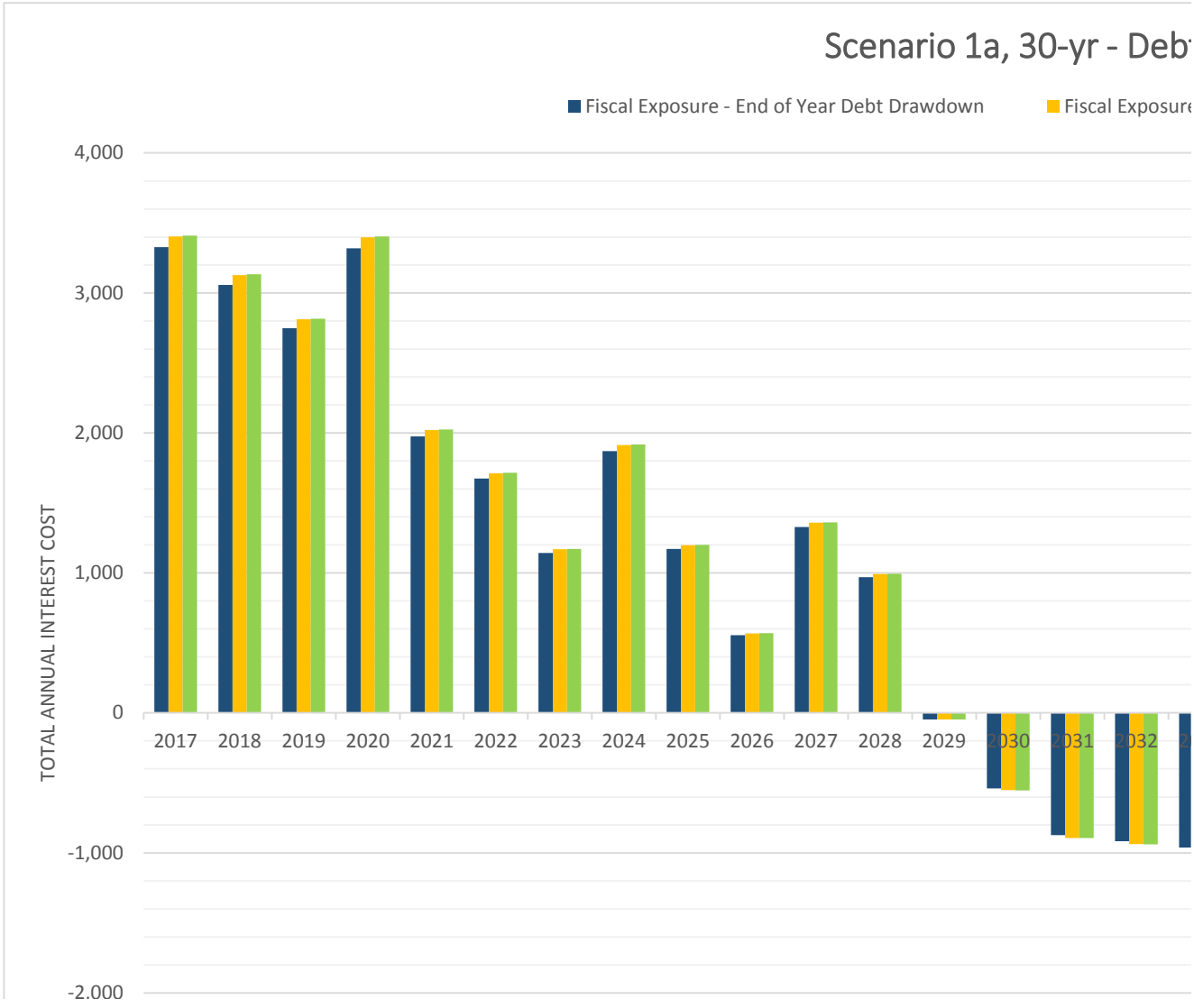


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



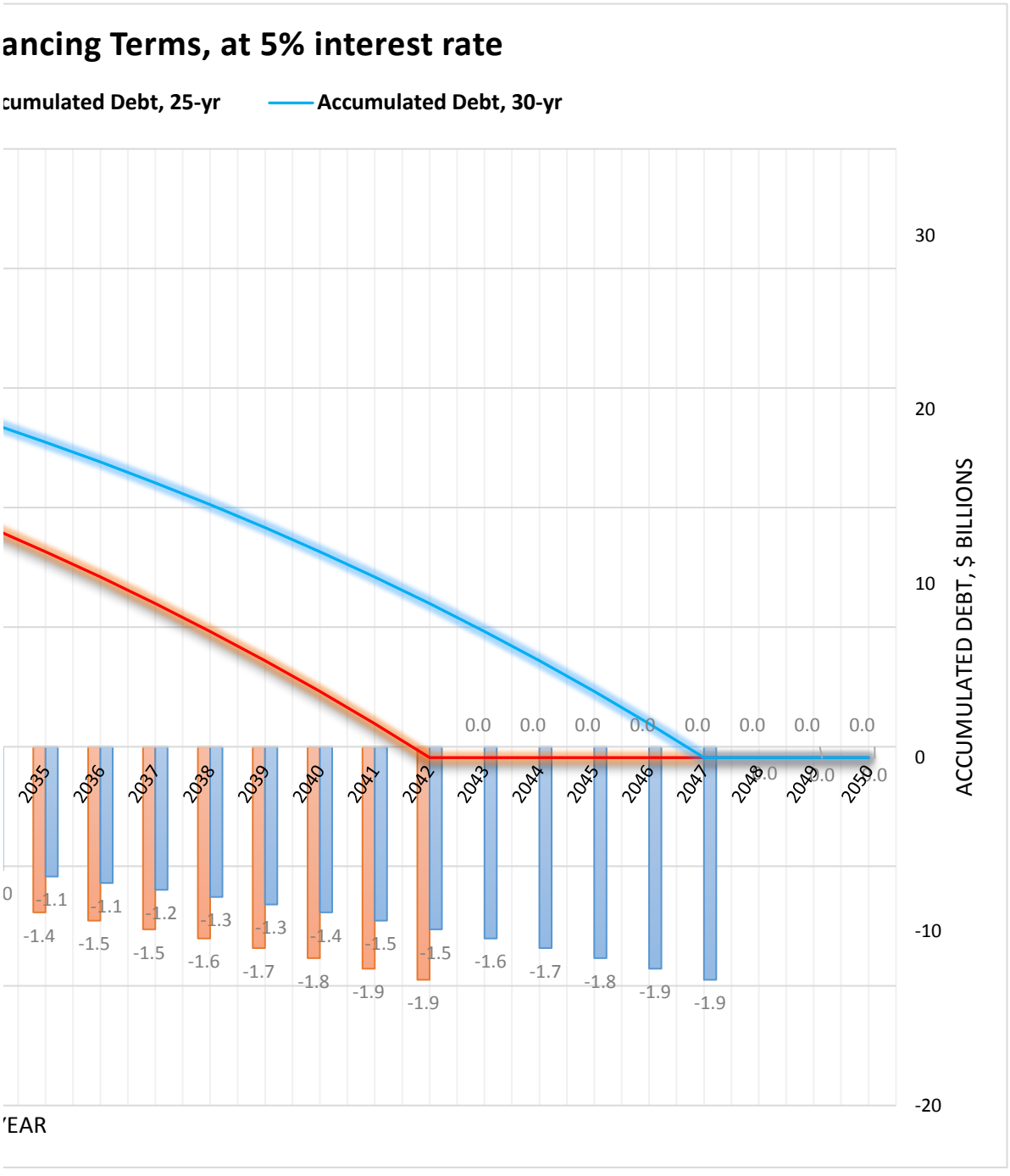


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



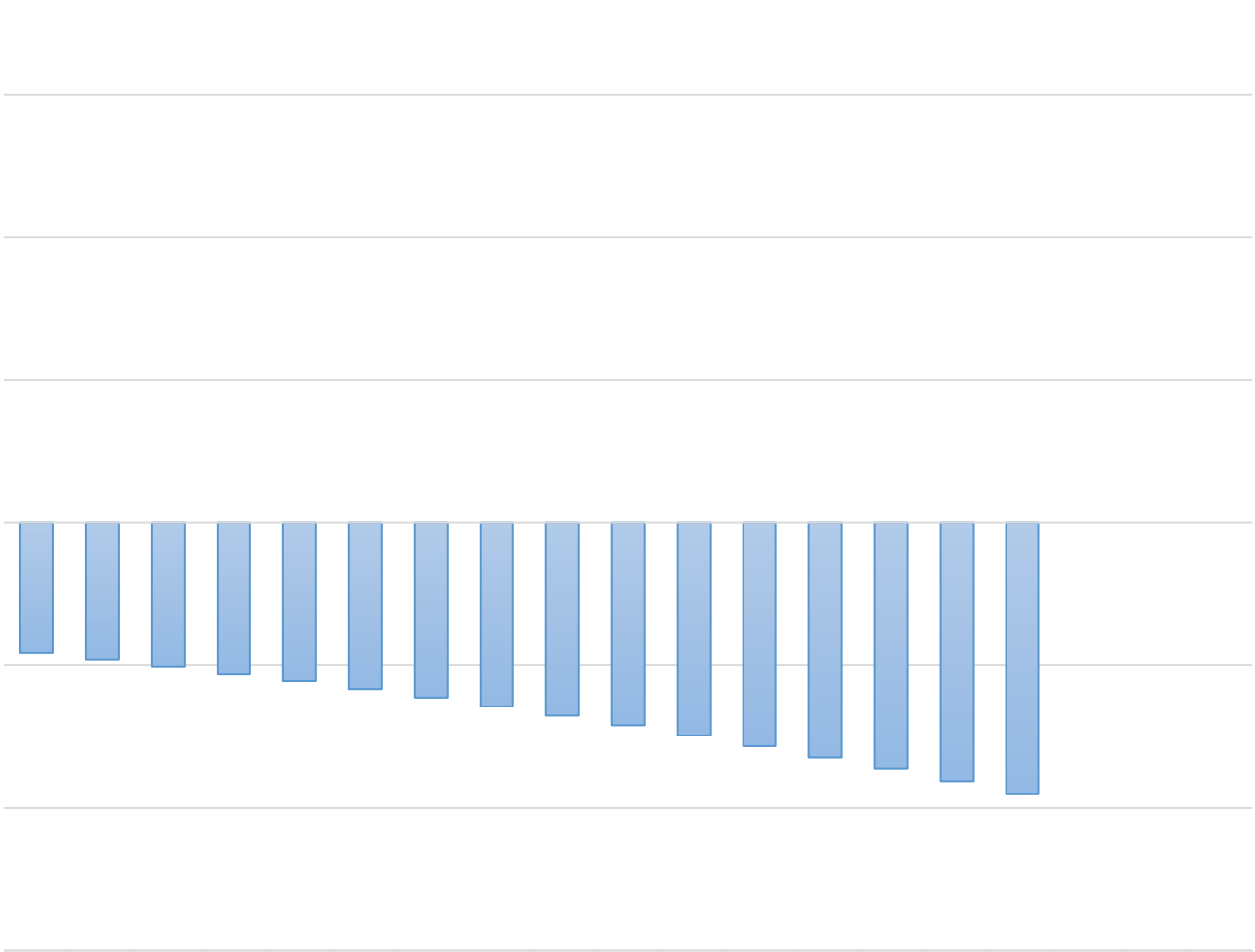

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

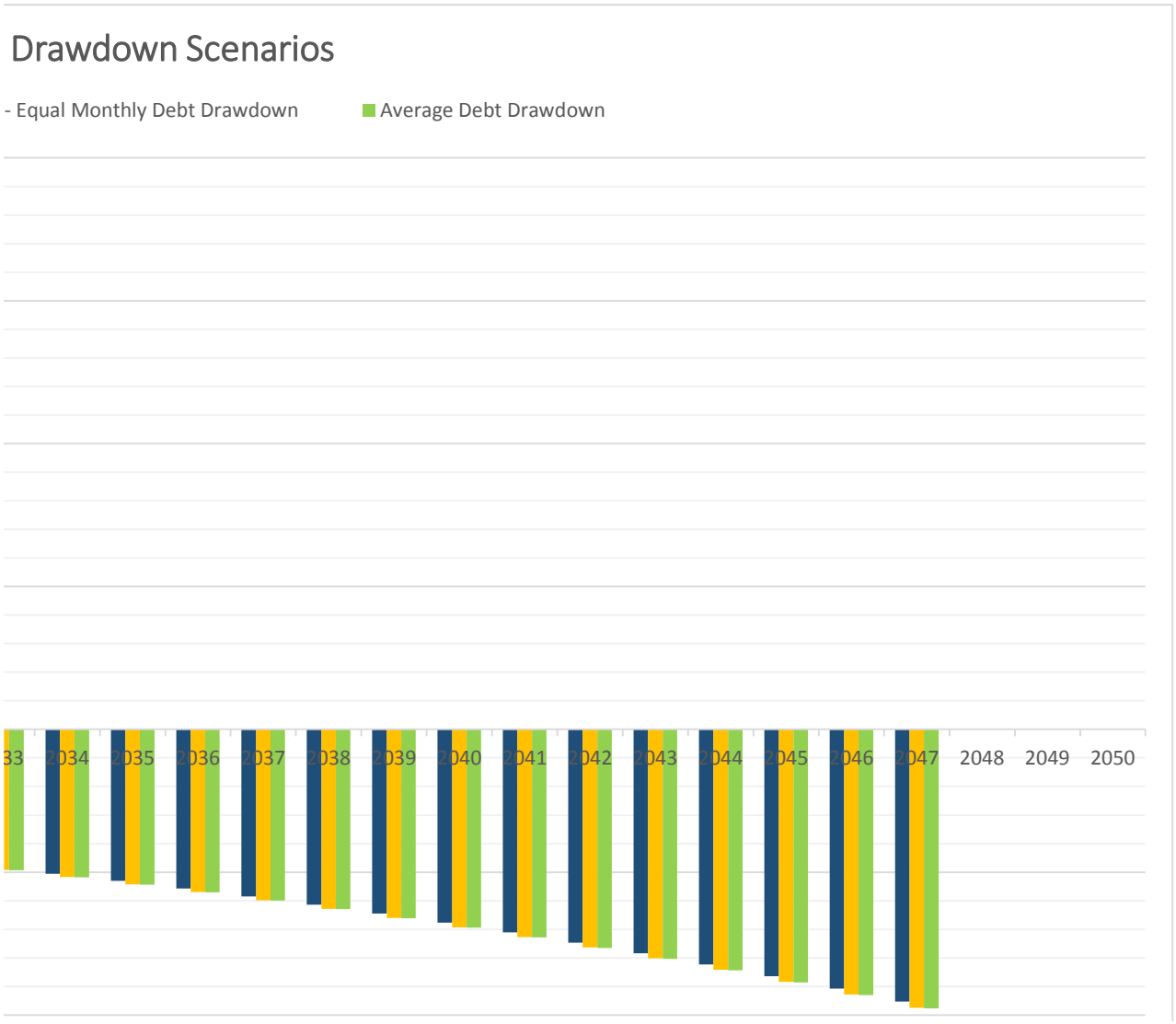
YEAR

cal Exposure



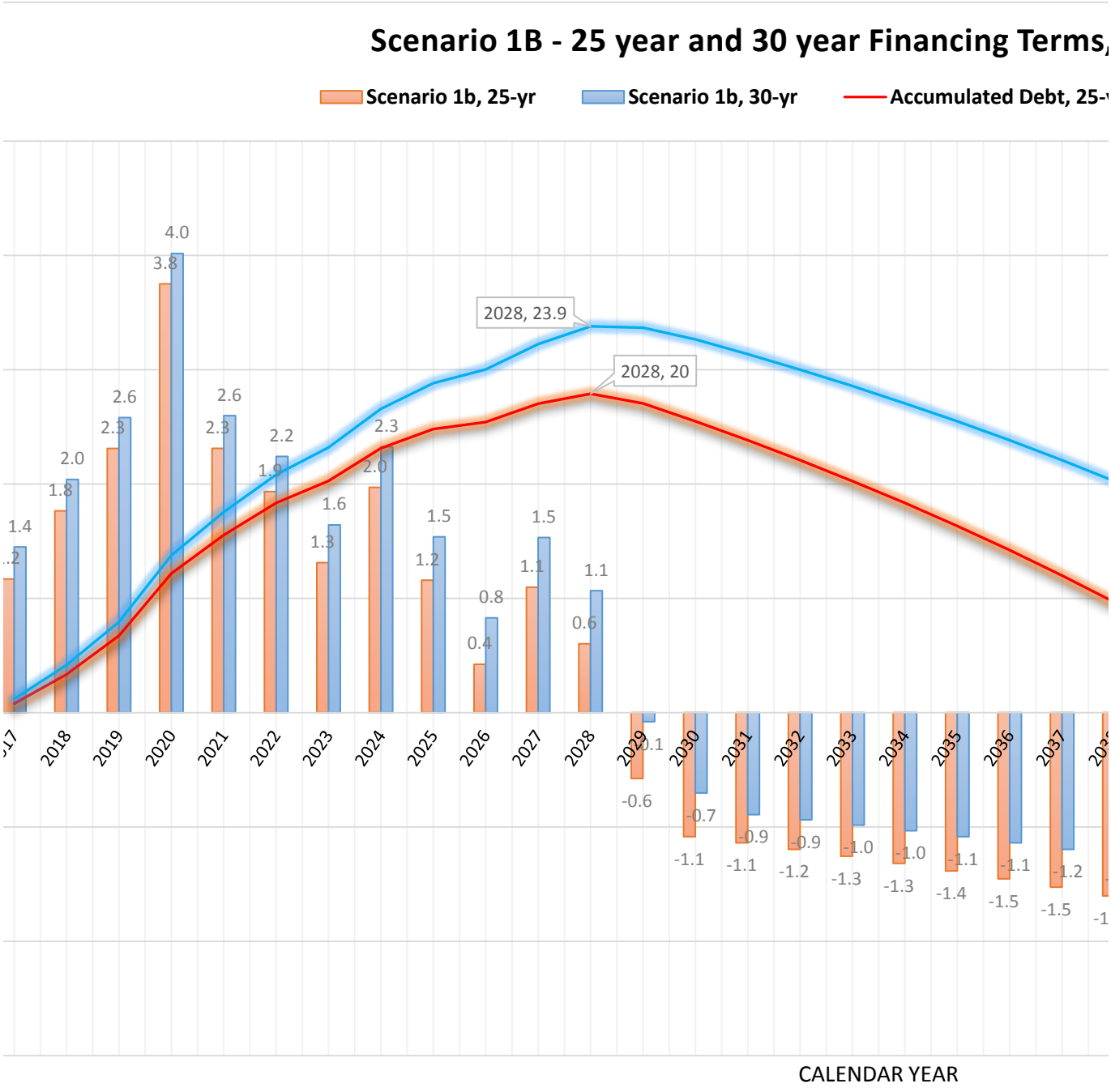
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

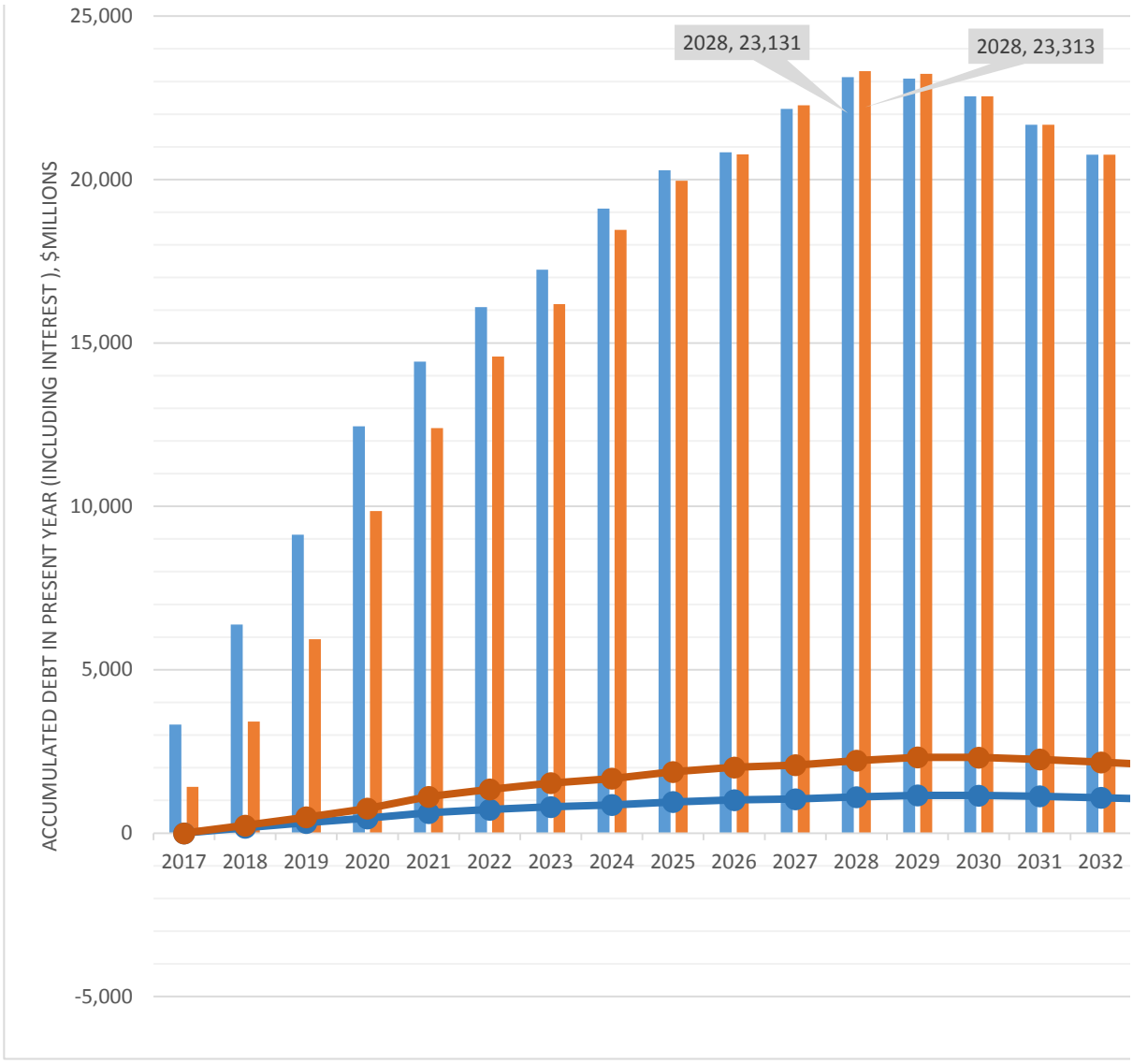


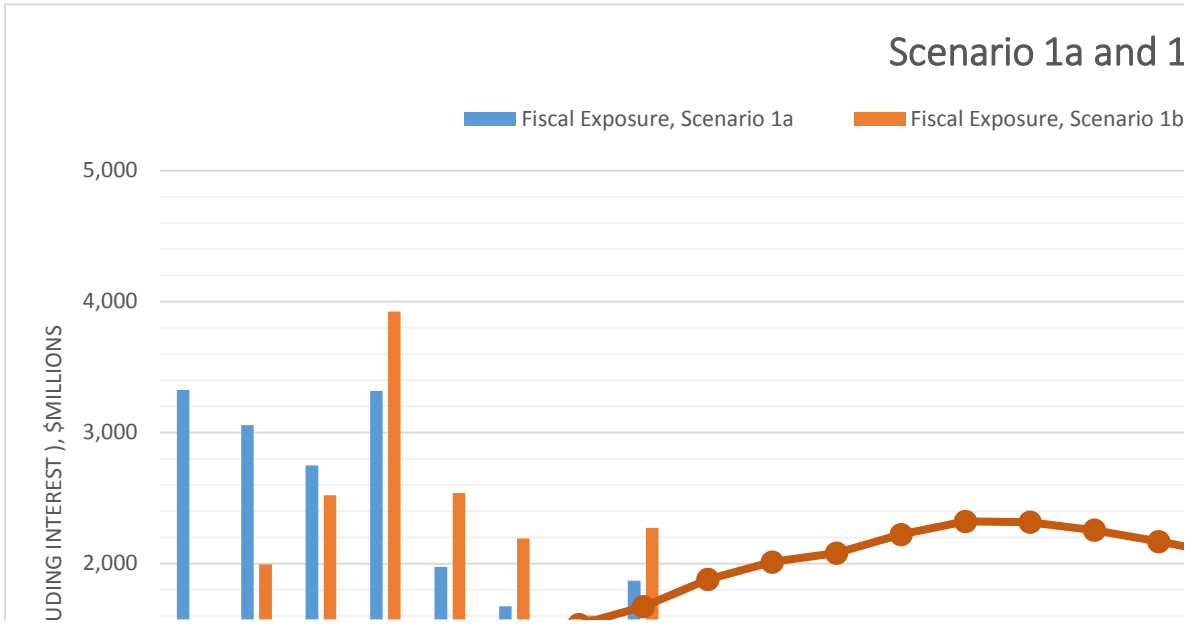
YEAR

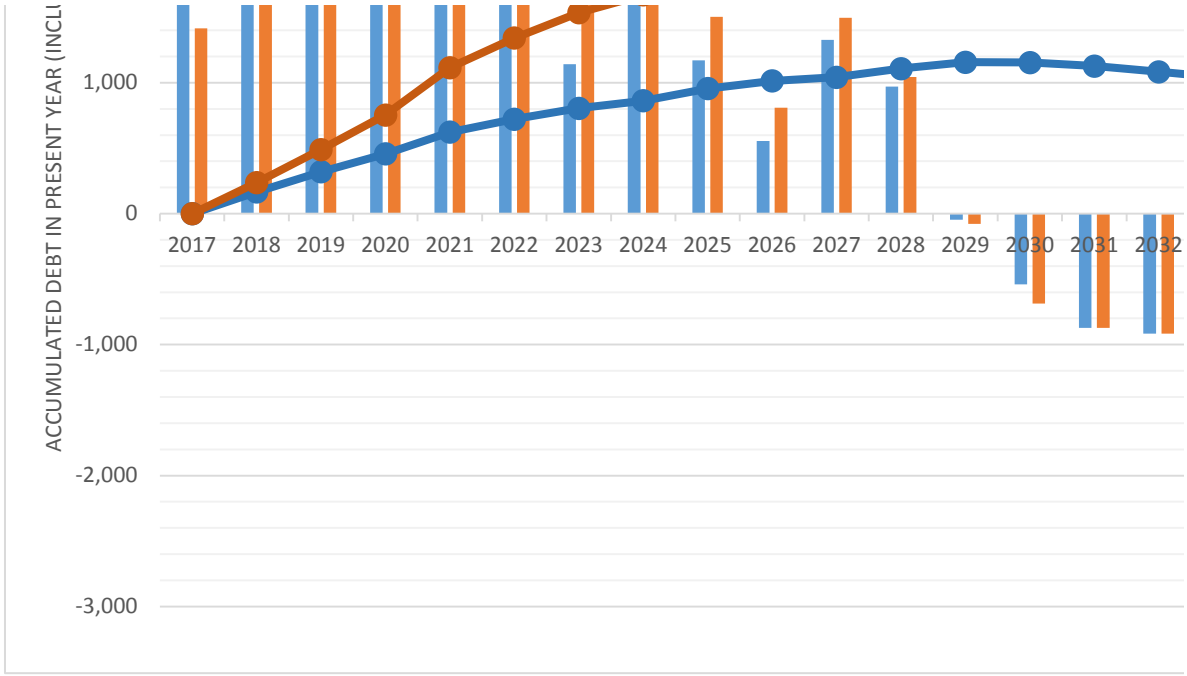
3 - 25 year and 30 year Financing Terms, at 5% interest rate

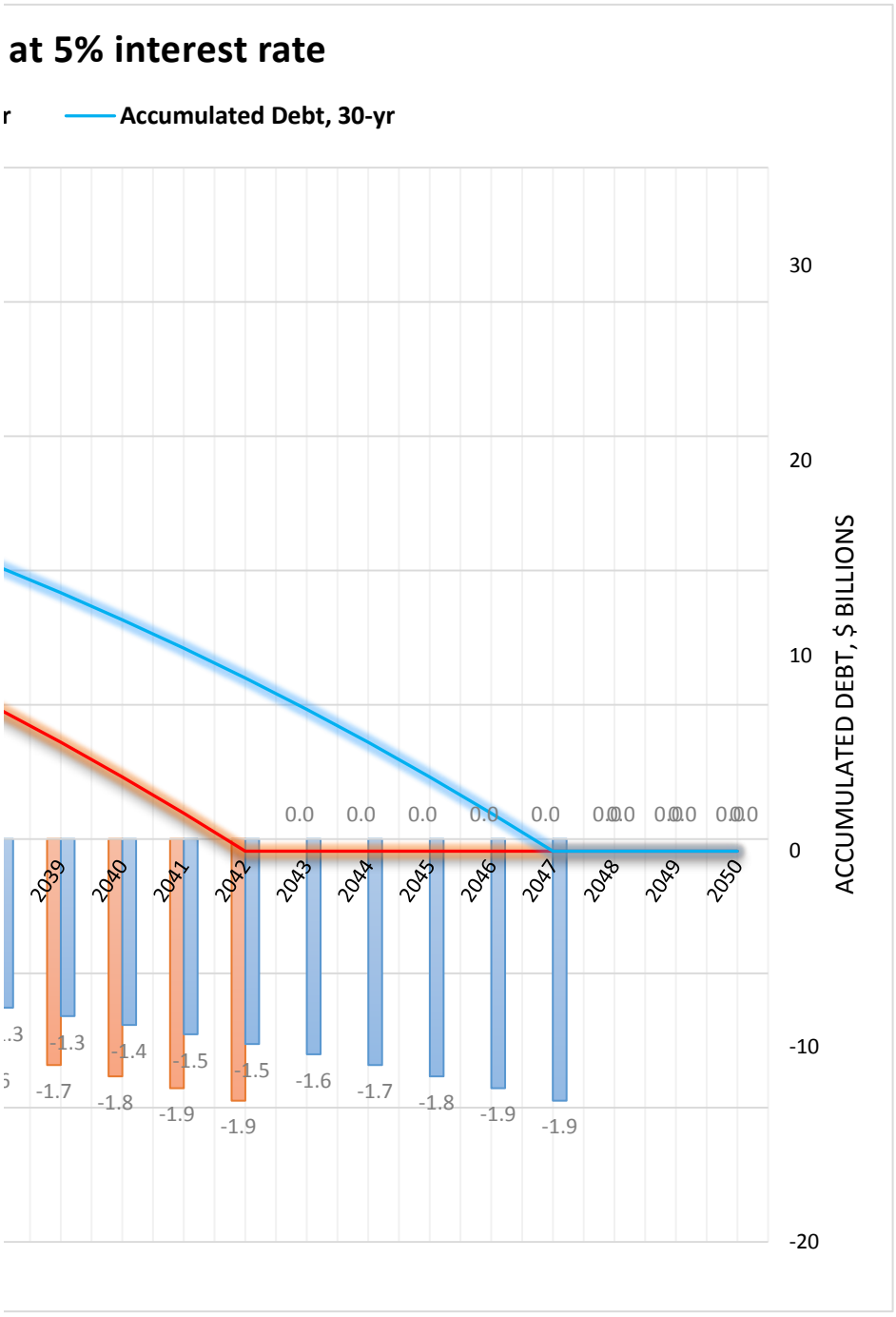





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

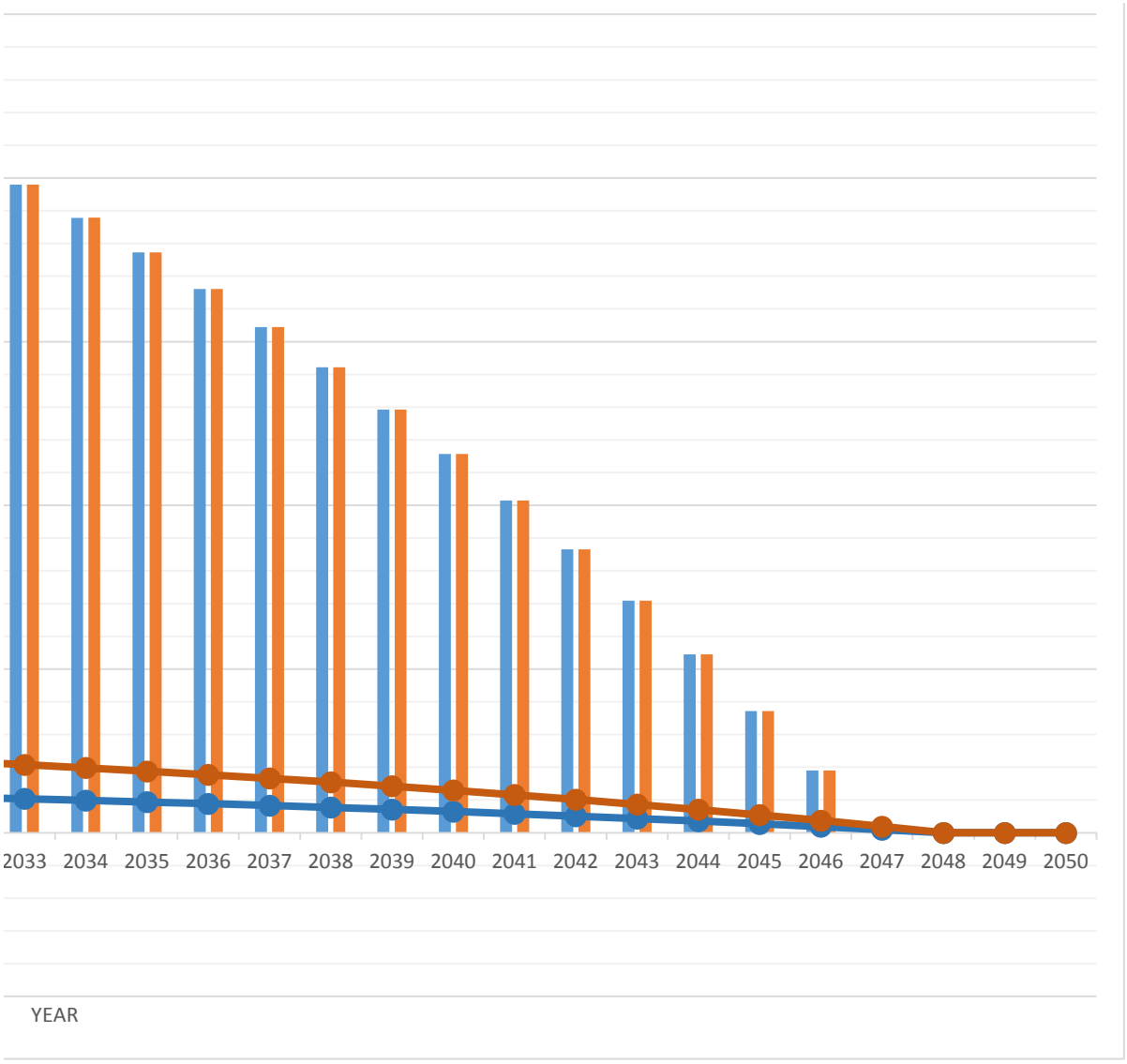

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

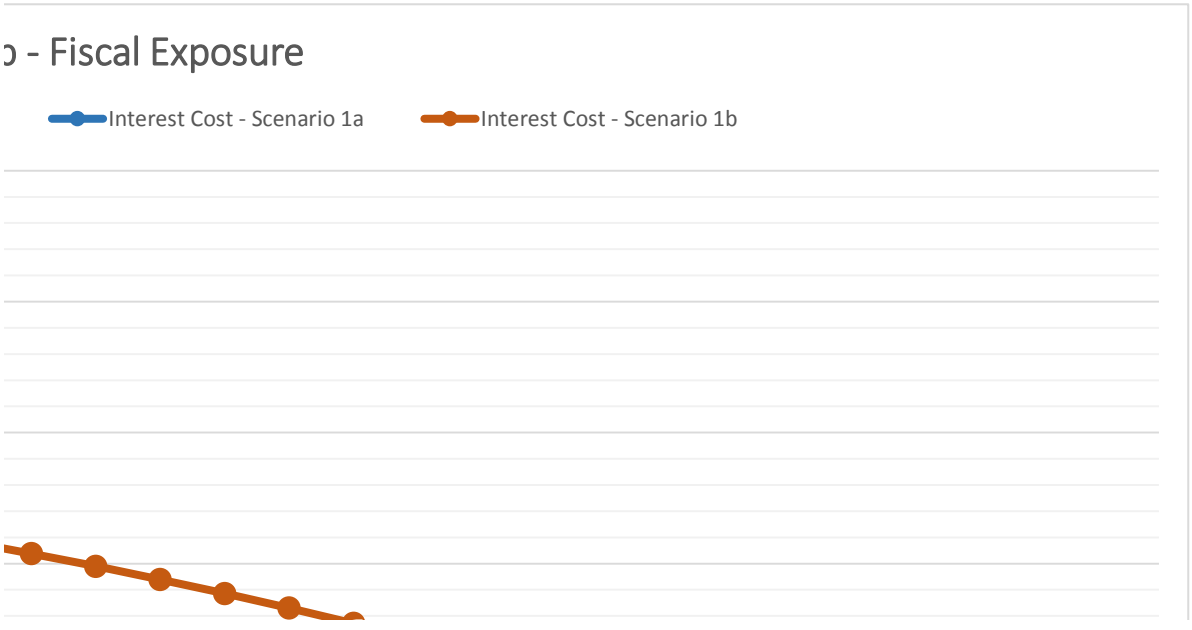

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

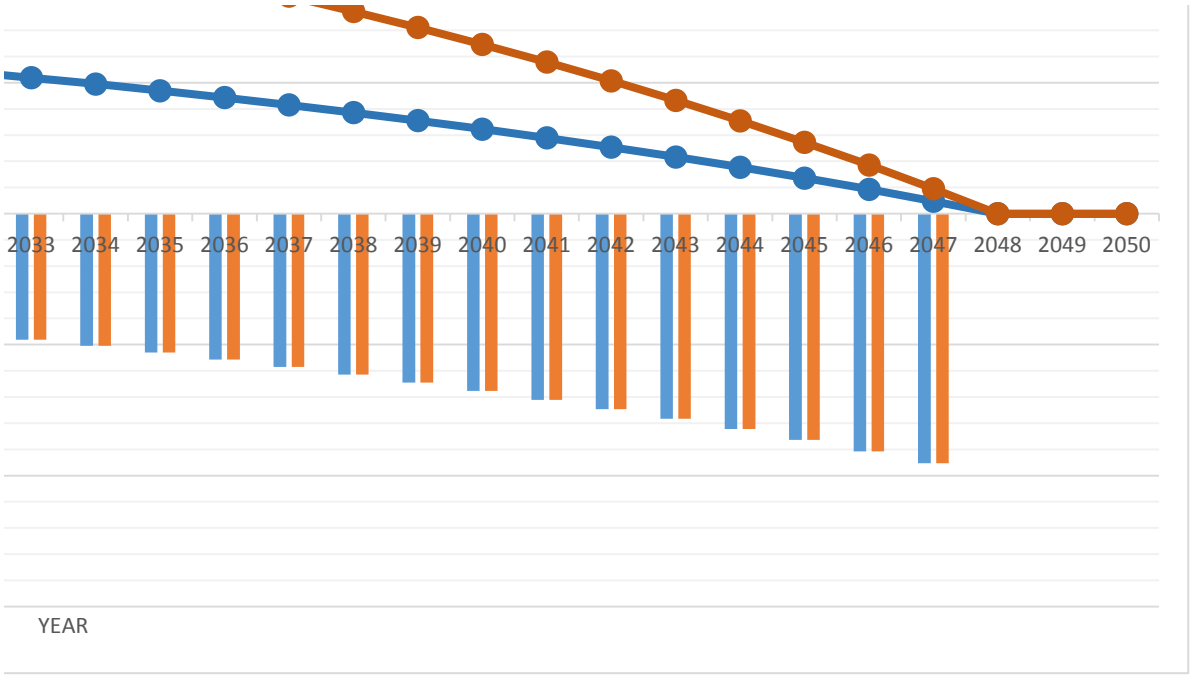


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

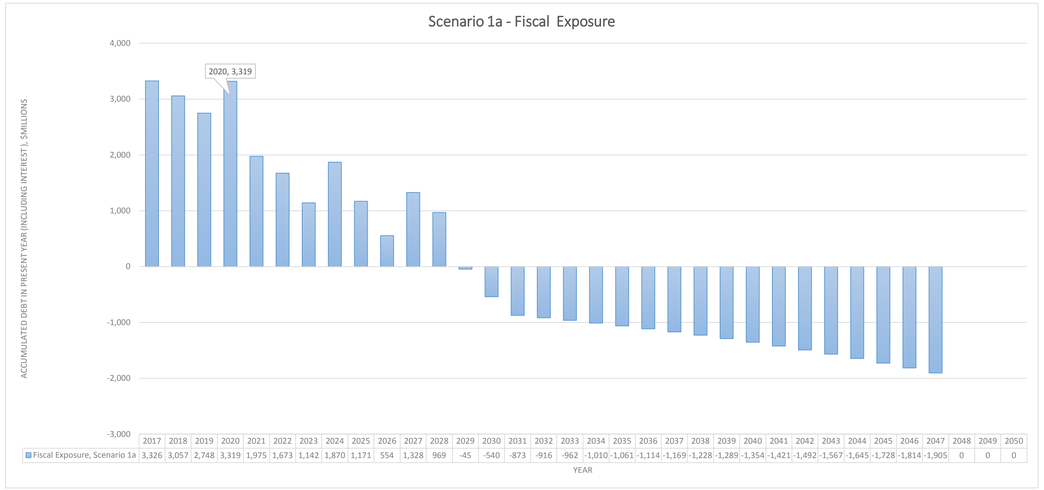
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

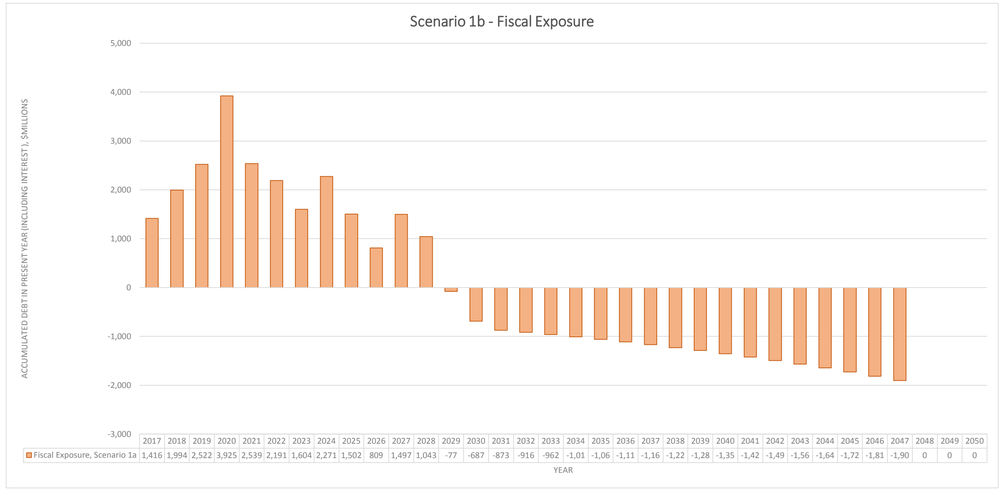
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

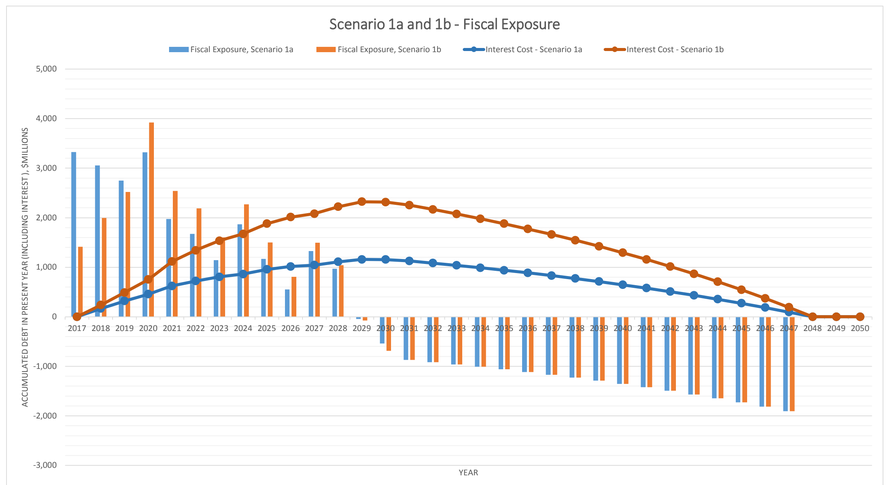
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

Notes:	Accounting treatment is to be determined.


Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0


Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0


Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

IESO GA cost forecast + extrapolation

Scenario
Option 1a
Borrow $3.3B, Bills Lowered 20%, No Cap

Option 1b
Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B

	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168

Ratepayer GA Payment	8,753	8,535	8,311	7,650
Total Accumulated Debt ($ billion)	3,342	6,812	10,402	15,452

Ratepayer GA Payment	9,781	9,661	9,367	8,733
Accumulated debt in present year (including 5% interest,	2,314	4,606	7,027	10,822

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528
19,868	24,126	28,033	32,843	37,110	40,911	45,720	50,350
8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717
13,761	16,470	18,755	21,866	24,355	26,295	29,156	31,750

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**
10009	9721	8654	8820	8238	7756	5662	5389

8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319
54,201	57,751	60,200	62,719	64,559	65,780	64,732	63,114
9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913
33,472	34,796	34,919	35,008	34,309	32,878	31,035	29,098

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627

10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485
60,904	58,078	54,611	50,476	45,641	40,076	33,745	26,613
8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151
27,063	24,923	22,673	20,309	17,823	15,210	12,464	9,577

2045	2046	2047	2048

3,451	3,285	3,126	2,975	2,831	2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695

12,786	13,095	13410.34	2975.154	2831.461	2694.708
18,640	9,784	4.85E-06	0	0	0

6,976	6,809	6650.631	2975.154	2831.461	2694.708
6,543	3,353	5E-12	0	0	0

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

		5.00%	
Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb15_1a_30yr

Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,342	3,470
Interest Portion	0	171

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	835	3,374
Interest Portion	-	43

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $66 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb15_1b_30yr

Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,314	2,292
Interest Portion	0	118

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	579	2,309
Interest Portion	-	30

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $35 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

#REF!		
$ millions		
30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	362	1,487

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
	1	
	2	
	3	
	4 April	4
	5 May	5
	6 June	6
	7 July	7
	8 August	8
	9 September	9
	10 October	10
	11 November	11
	12 December	12
30-year term	**2016-17**	**2017-18**

Fiscal Exposure - Equal Monthly Debt Drawdown 579 - 835 2,309 - 3,374

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	835	3374
Debt-Finance Global Adjustment Costs, Option 1a	579	2309
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60

First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**835**	**3614**
Total, B	579	2549
Proposed Program Total:	579 - 835	2,549 - 3,614

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Option 1a
Option 2b

Assumes an inte

2019	2020	2021	2022
3,589	5,050	4,416	4,258
349	532	791	1,016

2018-19	2019-20	2020-21	2021-2022
3,500	3,955	4,892	4,377
215	394	597	847

2034.

depend on decision on accounting treatment.

2019	2020	2021	2022
2,421	3,795	2,938	2,709
236	360	554	704

2018-19	2019-20	2020-21	2021-2022
2,324	2,765	3,581	2,881
148	267	408	591

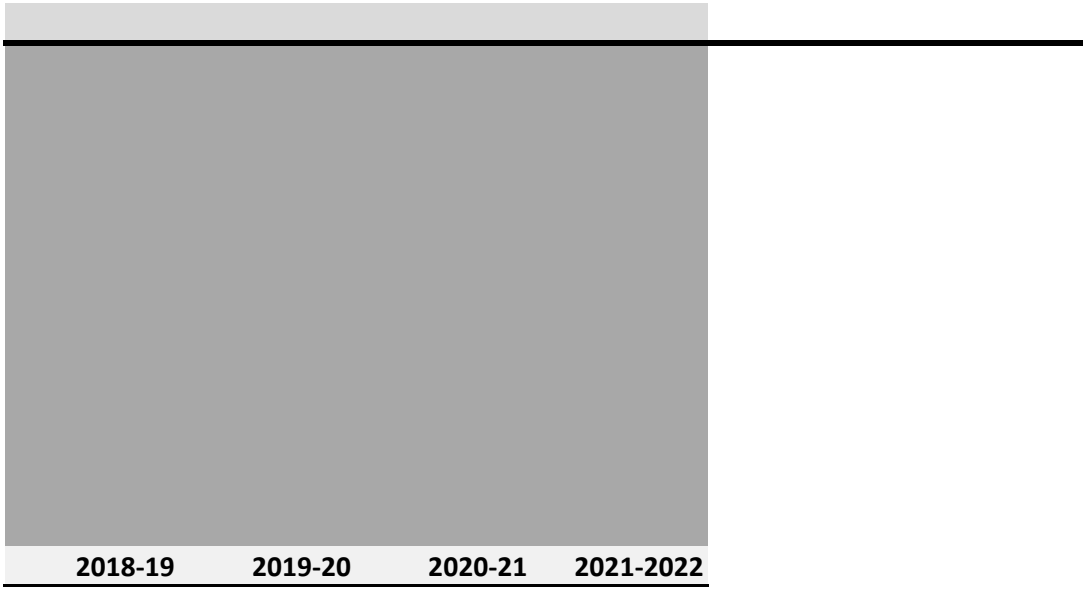
2032.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022

2,324 - 3,500 2,765 - 3,955 3,581 - 4,892 2,881 - 4,377

/1

2018-19[1]	2019-20[1]	2020-21[1]
3500	3955	4892
2324	2765	3581
225	279	323
60	60	60

18	18	18
3803	**4312**	**5293**
2627	3122	3982

2,627 - 3,803	3,122 - 4,312	3,982 - 5,293

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$38,864	$61,735	$65,781	occurs in Year 2034
$22,873	$32,368	$35,009	occurs in Year 2032

erest rate of 5.00% (compounded monthly).

Tab Name		Total Accumulated Interest Costs
Feb15_1a_30yr	$26,517	$34,278
Feb15_1b_30yr	$15,631	$20,378
	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$26,517 to $34,278
Option 2	$15,631 to $20,378
Option 3	$17,202 to $22,028

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

Feb15_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,342	3,470	3,589	5,050	4,416	4,258	3,907	4,810	4,268	3,801	4,809	4,630	3,851	3,550	2,449	2,519	1,840	1,221	-1,048	-1,618	-2,210	-2,825	-3,467	-4,135	-4,834	-5,565	-6,330	-7,132	-7,973	-8,856	-9,783	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,421	3,553	3,675	5,171	4,521	4,359	4,000	4,924	4,369	3,891	4,923	4,740	3,943	3,635	2,508	2,579	1,884	1,250	-1,073	-1,656	-2,262	-2,893	-3,549	-4,234	-4,949	-5,697	-6,481	-7,302	-8,163	-9,067	-10,016	0	0	0	
			79	83	85	120	105	101	93	114	102	90	114	110	92	84	58	60	44	29	-25	-38	-53	-67	-82	-98	-115	-132	-151	-170	-190	-211	-233	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	5,050	3,365	61,735
Equal Monthly Debt Drawdown	5,171	3,341	

	Feb15 Option 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	65,781	2034	38,864
Equal Monthly Debt Drawdown	67,346		

Feb15 Option 1a, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
a	Debt, Beginning of Year	0	3,342	6,812	10,402	15,452	19,868	24,126	28,034	32,843	37,111	40,911	45,720	50,350	54,201	57,752	60,201	62,720	64,560	65,781	64,733	63,115	60,906	58,080	54,614	50,478	45,644	40,079	33,749	26,617	18,644	9,788	5	5	5	
c = a*5%	*Interest Cost - Feb15 Option 1a, 30-yr - End of Year Debt Drawdown*	*0*	*171*	*349*	*532*	*791*	*1,016*	*1,234*	*1,434*	*1,680*	*1,899*	*2,093*	*2,339*	*2,576*	*2,773*	*2,955*	*3,080*	*3,209*	*3,303*	*3,365*	*3,312*	*3,229*	*3,116*	*2,972*	*2,794*	*2,583*	*2,335*	*2,051*	*1,727*	*1,362*	*954*	*501*	*0*	*0*	*0*	61,735
b	Additional GA Debt Drawdown, End of Year	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	3,342	6,812	10,402	15,452	19,868	24,126	28,034	32,843	37,111	40,911	45,720	50,350	54,201	57,752	60,201	62,720	64,560	65,781	64,733	63,115	60,906	58,080	54,614	50,478	45,644	40,079	33,749	26,617	18,644	9,788	5	5	5	5	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	171	520	1,052	1,842	2,859	4,093	5,527	7,208	9,106	11,199	13,539	16,115	19,665	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	26,617	18,644	9,788	5	5	5	5	
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal	3,342	6,641	9,882	14,400	18,026	21,267	23,941	27,316	29,903	31,805	34,521	36,812	38,087	38,087	38,087	40,606	42,446	43,667	42,619	41,001	38,792	35,966	32,500	28,364	23,530	17,965	11,635	0	0	0	0	0	0	0	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	171	520	1,052	1,842	2,859	4,093	5,527	7,208	9,106	11,199	13,539	16,115	18,888	21,842	24,922	28,131	31,434	34,800	38,112	41,341	44,457	47,428	50,222	52,805	55,140	57,191	58,917	60,279	61,233	61,734				
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal	3,342	6,641	9,882	14,400	18,026	21,267	23,941	27,316	29,903	31,805	34,521	36,812	38,087	38,864	38,359	37,798	36,429	34,347	29,934	25,004	19,565	13,624	7,186	256	-7,161	-15,061	-23,442	-32,300	-41,635	-51,445	-61,729				
Fiscal Exposure - End of Year Debt Drawdown		3,342	3,470	3,589	5,050	4,416	4,258	3,907	4,810	4,268	3,801	4,809	4,630	3,851	3,550	2,449	2,519	1,840	1,221	-1,048	-1,618	-2,210	-2,825	-3,467	-4,135	-4,834	-5,565	-6,330	-7,132	-7,973	-8,856	-9,783	0	0	0	

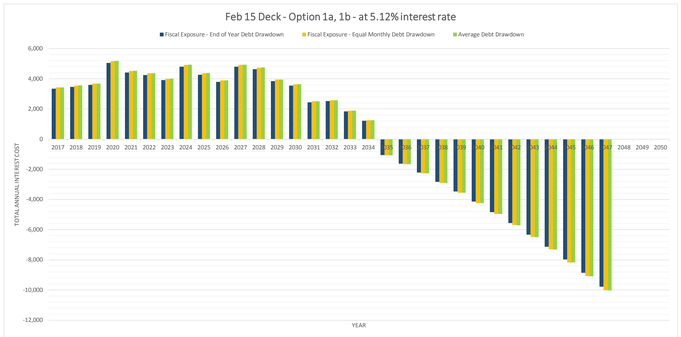
Feb15 Option 1a, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,421	6,974	10,649	15,820	20,341	24,700	28,700	33,624	37,993	41,885	46,808	51,548	55,491	59,125	61,633	64,212	66,096	67,346	66,273	64,617	62,354	59,462	55,913	51,679	46,730	41,033	34,552	27,250	19,087	10,021	5	5	5	
3,341	*Interest Cost - Feb15 Option 1a, 30-yr*	*79*	*254*	*434*	*652*	*896*	*1,118*	*1,327*	*1,549*	*1,782*	*1,989*	*2,207*	*2,449*	*2,668*	*2,857*	*3,013*	*3,140*	*3,253*	*3,332*	*3,341*	*3,273*	*3,177*	*3,049*	*2,889*	*2,696*	*2,468*	*2,203*	*1,900*	*1,557*	*1,172*	*743*	*268*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,421	6,974	10,649	15,820	20,341	24,700	28,700	33,624	37,993	41,885	46,808	51,548	55,491	59,125	61,633	64,212	66,096	67,346	66,273	64,617	62,354	59,462	55,913	51,679	46,730	41,033	34,552	27,250	19,087	10,021	5	5	5	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,421	3,553	3,675	5,171	4,521	4,359	4,000	4,924	4,369	3,891	4,923	4,740	3,943	3,635	2,508	2,579	1,884	1,250	-1,073	-1,656	-2,262	-2,893	-3,549	-4,234	-4,949	-5,697	-6,481	-7,302	-8,163	-9,067	-10,016	0	0	0	

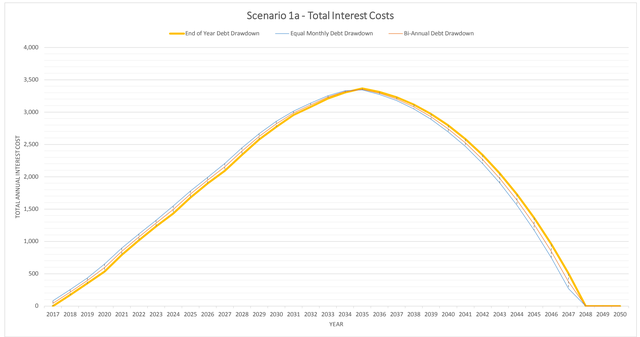
	Monthly Drawdown	278	275	270	377	302	270	223	281	216	159	226	191	106	65	(42)	(47)	(114)	(174)	(368)	(411)	(453)	(495)	(537)	(577)	(618)	(658)	(698)	(738)	(778)	(817)	(857)	-	-	-	
	FV of Monthly Drawdown at 5%	3,421	3,378	3,318	4,626	3,712	3,319	2,737	3,456	2,649	1,947	2,780	2,346	1,305	796	(517)	(574)	(1,401)	(2,132)	(4,518)	(5,047)	(5,568)	(6,083)	(6,591)	(7,094)	(7,593)	(8,088)	(8,580)	(9,069)	(9,557)	(10,043)	(10,529)	-	-	-	
	Annual Interest Cost on New Drawdowns	79	78	77	107	86	77	64	80	62	45	65	54	30	18	(12)	(13)	(33)	(50)	(105)	(117)	(129)	(141)	(153)	(165)	(176)	(188)	(199)	(211)	(222)	(233)	(245)	-	-	-	
	Annual Interest Cost on Opening Balance	-	175	357	545	809	1,041	1,264	1,468	1,720	1,944	2,143	2,395	2,637	2,839	3,025	3,153	3,285	3,382	3,446	3,391	3,306	3,190	3,042	2,861	2,644	2,391	2,099	1,768	1,394	977	513	0	0	0	
	Total Annual Interest Cost	79	254	434	652	896	1,118	1,327	1,549	1,782	1,989	2,207	2,449	2,668	2,857	3,013	3,140	3,253	3,332	3,341	3,273	3,177	3,049	2,889	2,696	2,468	2,203	1,900	1,557	1,172	743	268	0	0	0	

Feb15 Option 1a, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,385	6,899	10,535	15,650	20,122	24,435	28,392	33,263	37,585	41,435	46,305	50,994	54,895	58,490	60,971	63,523	65,386	66,623	65,561	63,923	61,685	58,823	55,312	51,124	46,228	40,592	34,181	26,958	18,882	9,913	5	5	5	
	Interest Cost - Feb15 Option 1a, 30-yr	*43*	*215*	*394*	*597*	*847*	*1,071*	*1,284*	*1,496*	*1,735*	*1,947*	*2,155*	*2,398*	*2,625*	*2,818*	*2,986*	*3,112*	*3,232*	*3,319*	*3,352*	*3,291*	*3,201*	*3,080*	*2,927*	*2,741*	*2,521*	*2,264*	*1,970*	*1,635*	*1,260*	*841*	*376*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,385	6,899	10,535	15,650	20,122	24,435	28,392	33,263	37,585	41,435	46,305	50,994	54,895	58,490	60,971	63,523	65,386	66,623	65,561	63,923	61,685	58,823	55,312	51,124	46,228	40,592	34,181	26,958	18,882	9,913	5	5	5	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,385	3,515	3,635	5,115	4,473	4,313	3,957	4,871	4,322	3,849	4,870	4,689	3,900	3,596	2,481	2,551	1,864	1,237	-1,061	-1,639	-2,238	-2,861	-3,511	-4,188	-4,896	-5,636	-6,411	-7,223	-8,075	-8,969	-9,909	0	0	0	

	Bi-Annual Drawdown	1,671	1,650	1,620	2,259	1,813	1,621	1,337	1,688	1,294	951	1,358	1,146	638	389	(253)	(280)	(684)	(1,041)	(2,207)	(2,465)	(2,719)	(2,971)	(3,219)	(3,465)	(3,708)	(3,950)	(4,190)	(4,429)	(4,667)	(4,905)	(5,142)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,385	3,341	3,282	4,576	3,672	3,283	2,707	3,418	2,620	1,926	2,750	2,320	1,291	787	(512)	(568)	(1,386)	(2,109)	(4,470)	(4,993)	(5,508)	(6,017)	(6,520)	(7,018)	(7,512)	(8,001)	(8,488)	(8,972)	(9,454)	(9,935)	(10,416)	-	-	-	
	Annual Interest Cost on New Drawdowns	43	42	41	58	46	41	34	43	33	24	35	29	16	10	(6)	(7)	(18)	(27)	(56)	(63)	(70)	(76)	(82)	(89)	(95)	(101)	(107)	(113)	(119)	(125)	(132)	-	-	-	
	Annual Interest Cost on Opening Balance	-	173	353	539	801	1,029	1,250	1,453	1,702	1,923	2,120	2,369	2,609	2,809	2,992	3,119	3,250	3,345	3,409	3,354	3,270	3,156	3,010	2,830	2,616	2,365	2,077	1,749	1,379	966	507	0	0	0	
	Total Annual Interest Cost	43	215	394	597	847	1,071	1,284	1,496	1,735	1,947	2,155	2,398	2,625	2,818	2,986	3,112	3,232	3,319	3,352	3,291	3,201	3,080	2,927	2,741	2,521	2,264	1,970	1,635	1,260	841	376	0	0	0	

Feb15 Option 1a, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,427	6,986	10,668	15,847	20,376	24,743	28,751	33,683	38,060	41,958	46,890	51,638	55,588	59,229	61,741	64,325	66,212	67,464	66,389	64,730	62,464	59,566	56,011	51,770	46,812	41,104	34,612	27,298	19,121	10,038	5	5	5	
	Interest Cost - Feb15 Option 1a, 30-yr	*85*	*260*	*440*	*661*	*904*	*1,125*	*1,334*	*1,557*	*1,789*	*1,996*	*2,216*	*2,458*	*2,675*	*2,864*	*3,017*	*3,144*	*3,256*	*3,334*	*3,339*	*3,270*	*3,173*	*3,044*	*2,883*	*2,688*	*2,459*	*2,193*	*1,889*	*1,544*	*1,158*	*727*	*251*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,427	6,986	10,668	15,847	20,376	24,743	28,751	33,683	38,060	41,958	46,890	51,638	55,588	59,229	61,741	64,325	66,212	67,464	66,389	64,730	62,464	59,566	56,011	51,770	46,812	41,104	34,612	27,298	19,121	10,038	5	5	5	6	
Fiscal Exposure - Average Debt Drawdown		3,427	3,559	3,681	5,180	4,529	4,367	4,007	4,933	4,377	3,898	4,932	4,749	3,950	3,641	2,512	2,584	1,887	1,252	-1,075	-1,659	-2,266	-2,898	-3,555	-4,241	-4,958	-5,707	-6,492	-7,314	-8,177	-9,083	-10,034	0	0	0	





Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

Feb15_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,314	2,292	2,421	3,795	2,938	2,709	2,285	3,111	2,489	1,940	2,862	2,594	1,722	1,324	123	89	-699	-1,431	-1,842	-1,937	-2,036	-2,140	-2,249	-2,364	-2,485	-2,613	-2,746	-2,887	-3,034	-3,190	-3,353	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,369	2,346	2,479	3,886	3,008	2,774	2,340	3,185	2,548	1,986	2,930	2,656	1,763	1,356	126	91	-716	-1,465	-1,886	-1,983	-2,084	-2,191	-2,303	-2,421	-2,544	-2,675	-2,812	-2,955	-3,107	-3,266	-3,433	0	0	0
			55	55	58	90	70	64	54	74	59	46	68	62	41	32	3	2	-17	-34	-44	-46	-48	-51	-54	-56	-59	-62	-65	-69	-72	-76	-80	0	0	0

0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,795	1,791	32,368
Equal Monthly Debt Drawdown	3,886	1,789	

	Feb15 Option 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	35,009	2032	22,873
Equal Monthly Debt Drawdown	35,841		

Feb15 Option 1a, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
a — Debt, Beginning of Year	0	2,314	4,606	7,027	10,822	13,761	16,470	18,755	21,866	24,355	26,295	29,157	31,751	33,472	34,797	34,920	35,009	34,310	32,879	31,036	29,100	27,064	24,924	22,675	20,310	17,825	15,212	12,466	9,579	6,545	3,355	3	3	3	
c = a*5% — *Interest Cost - Feb15 Option 1a, 30-yr - End of Year Debt Drawdown*	*0*	*118*	*236*	*360*	*554*	*704*	*843*	*960*	*1,119*	*1,246*	*1,345*	*1,492*	*1,624*	*1,713*	*1,780*	*1,787*	*1,791*	*1,755*	*1,682*	*1,588*	*1,489*	*1,385*	*1,275*	*1,160*	*1,039*	*912*	*778*	*638*	*490*	*335*	*172*	*0*	*0*	*0*	32,368
b — Additional GA Debt Drawdown, End of Year	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	2,314	4,606	7,027	10,822	13,761	16,470	18,755	21,866	24,355	26,295	29,157	31,751	33,472	34,797	34,920	35,009	34,310	32,879	31,036	29,100	27,064	24,924	22,675	20,310	17,825	15,212	12,466	9,579	6,545	3,355	3	3	3	3	
	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	
Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	118	354	714	1,267	1,971	2,814	3,773	4,892	6,138	7,484	8,975	10,600	11,924	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	9,579	6,545	3,355	3	3	3	3	
Feb15 Option 1a, 30-yr - Accumulated Debt Principal	2,314	4,488	6,673	10,109	12,493	14,499	15,941	18,092	19,463	20,157	21,673	22,775	22,873	22,873	22,873	22,961	22,262	20,831	18,989	17,052	15,017	12,877	10,627	8,263	5,778	3,165	419	0	0	0	0	0	0	0	
Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	118	354	714	1,267	1,971	2,814	3,773	4,892	6,138	7,484	8,975	10,600	12,312	14,092	15,879	17,670	19,425	21,108	22,695	24,184	25,569	26,844	28,004	29,043	29,955	30,733	31,371	31,861	32,196	32,368				
Feb15 Option 1a, 30-yr - Accumulated Debt Principal	2,314	4,488	6,673	10,109	12,493	14,499	15,941	18,092	19,463	20,157	21,673	22,775	22,873	22,485	20,828	19,130	16,639	13,453	9,929	6,404	2,880	-645	-4,169	-7,694	-11,218	-14,743	-18,267	-21,792	-25,316	-28,841	-32,365				
Fiscal Exposure - End of Year Debt Drawdown	2,314	2,292	2,421	3,795	2,938	2,709	2,285	3,111	2,489	1,940	2,862	2,594	1,722	1,324	123	89	-699	-1,431	-1,842	-1,937	-2,036	-2,140	-2,249	-2,364	-2,485	-2,613	-2,746	-2,887	-3,034	-3,190	-3,353	0	0	0	

Feb15 Option 1a, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Debt, Beginning of Year	0	2,369	4,716	7,194	11,080	14,088	16,862	19,201	22,386	24,934	26,920	29,850	32,506	34,269	35,625	35,751	35,841	35,126	33,661	31,774	29,792	27,708	25,517	23,214	20,793	18,249	15,574	12,763	9,807	6,701	3,435	3	3	3	
1,789 — *Interest Cost - Feb15 Option 1a, 30-yr*	*55*	*173*	*293*	*450*	*624*	*768*	*897*	*1,034*	*1,178*	*1,292*	*1,413*	*1,553*	*1,665*	*1,744*	*1,783*	*1,789*	*1,774*	*1,721*	*1,638*	*1,542*	*1,440*	*1,334*	*1,222*	*1,104*	*980*	*850*	*713*	*569*	*418*	*259*	*92*	*0*	*0*	*0*	32,368
Additional GA Debt Drawdown	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,369	4,716	7,194	11,080	14,088	16,862	19,201	22,386	24,934	26,920	29,850	32,506	34,269	35,625	35,751	35,841	35,126	33,661	31,774	29,792	27,708	25,517	23,214	20,793	18,249	15,574	12,763	9,807	6,701	3,435	3	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown	2,369	2,346	2,479	3,886	3,008	2,774	2,340	3,185	2,548	1,986	2,930	2,656	1,763	1,356	126	91	-716	-1,465	-1,886	-1,983	-2,084	-2,191	-2,303	-2,421	-2,544	-2,675	-2,812	-2,955	-3,107	-3,266	-3,433	0	0	0	

Monthly Drawdown	193	181	182	286	199	167	120	179	114	58	126	92	8	(32)	(138)	(141)	(208)	(266)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	-	-	-	
FV of Monthly Drawdown at 5%	2,369	2,225	2,237	3,518	2,441	2,053	1,477	2,202	1,403	710	1,553	1,128	100	(397)	(1,697)	(1,738)	(2,549)	(3,262)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	-	-	-	
Annual Interest Cost on New Drawdowns	55	52	52	82	57	48	34	51	33	17	36	26	2	(9)	(39)	(40)	(59)	(76)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	-	-	-	
Annual Interest Cost on Opening Balance	-	121	241	368	567	721	863	982	1,145	1,276	1,377	1,527	1,663	1,753	1,823	1,829	1,834	1,797	1,722	1,626	1,524	1,418	1,305	1,188	1,064	934	797	653	502	343	176	0	0	0	
Total Annual Interest Cost	55	173	293	450	624	768	897	1,034	1,178	1,292	1,413	1,553	1,665	1,744	1,783	1,789	1,774	1,721	1,638	1,542	1,440	1,334	1,222	1,104	980	850	713	569	418	259	92	0	0	0	

Feb15 Option 1a, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Debt, Beginning of Year	0	2,344	4,665	7,117	10,961	13,937	16,681	18,995	22,146	24,667	26,631	29,530	32,157	33,901	35,242	35,367	35,456	34,748	33,299	31,433	29,472	27,410	25,243	22,965	20,570	18,053	15,407	12,626	9,702	6,629	3,398	3	3	3	
Interest Cost - Feb15 Option 1a, 30-yr	*30*	*148*	*267*	*408*	*591*	*739*	*872*	*999*	*1,151*	*1,271*	*1,382*	*1,525*	*1,646*	*1,729*	*1,782*	*1,788*	*1,782*	*1,737*	*1,659*	*1,563*	*1,463*	*1,357*	*1,246*	*1,130*	*1,007*	*879*	*743*	*601*	*451*	*294*	*129*	*0*	*0*	*0*	32,368
Additional GA Debt Drawdown	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,344	4,665	7,117	10,961	13,937	16,681	18,995	22,146	24,667	26,631	29,530	32,157	33,901	35,242	35,367	35,456	34,748	33,299	31,433	29,472	27,410	25,243	22,965	20,570	18,053	15,407	12,626	9,702	6,629	3,398	3	3	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown	2,344	2,321	2,452	3,844	2,976	2,744	2,314	3,151	2,521	1,965	2,898	2,627	1,744	1,341	125	90	-708	-1,449	-1,866	-1,961	-2,062	-2,167	-2,278	-2,395	-2,517	-2,646	-2,781	-2,924	-3,073	-3,230	-3,396	0	0	0	

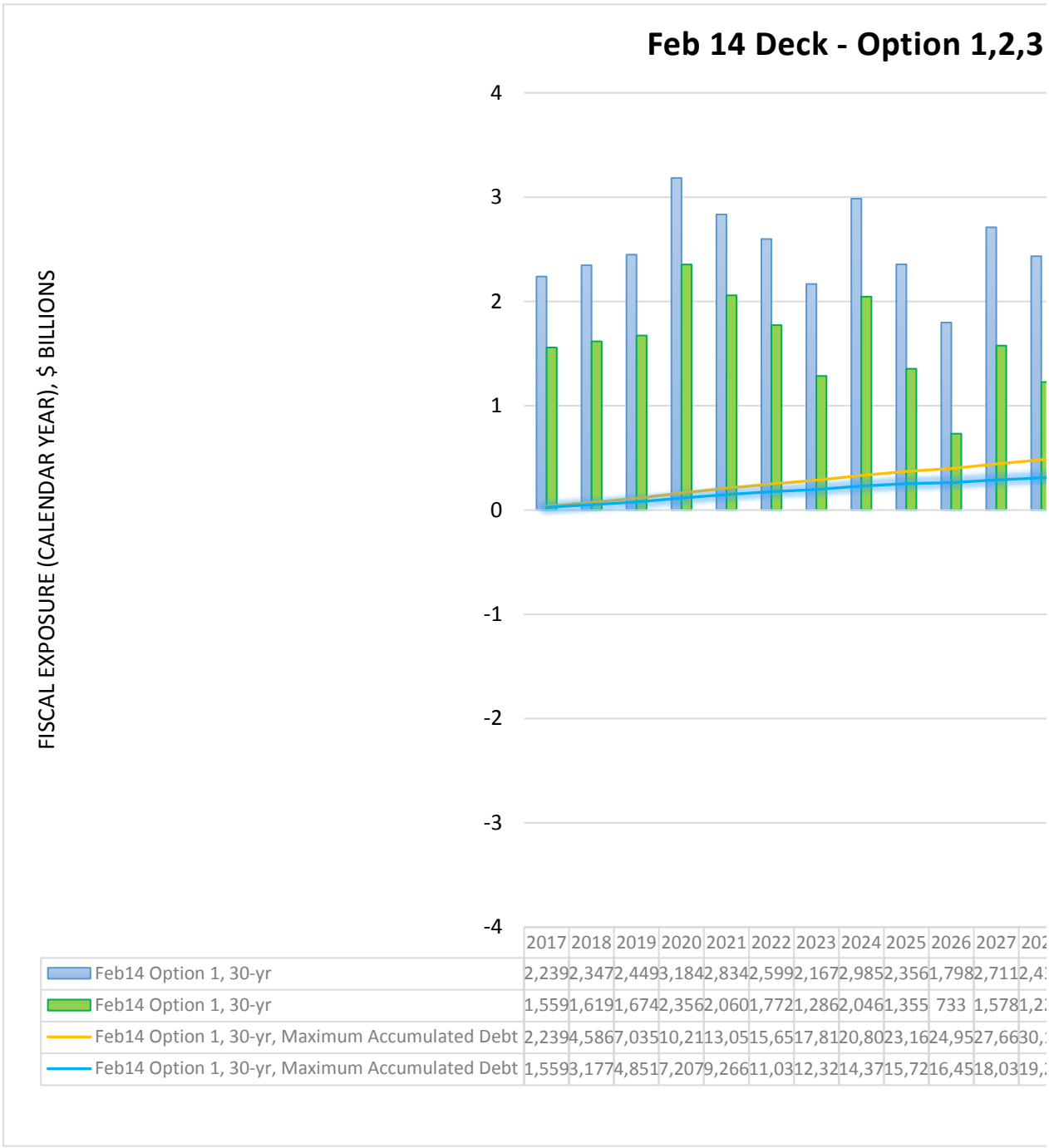
Bi-Annual Drawdown	1,157	1,087	1,093	1,718	1,192	1,003	721	1,076	685	347	758	551	49	(194)	(829)	(849)	(1,245)	(1,593)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	-	-	-	
FV of Bi-Annual Drawdown at 5%	2,344	2,201	2,213	3,480	2,415	2,031	1,461	2,179	1,388	703	1,536	1,116	99	(393)	(1,678)	(1,720)	(2,522)	(3,227)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	-	-	-	
Annual Interest Cost on New Drawdowns	30	28	28	44	30	26	18	28	18	9	19	14	1	(5)	(21)	(22)	(32)	(41)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	-	-	-	
Annual Interest Cost on Opening Balance	-	120	239	364	561	713	853	972	1,133	1,262	1,363	1,511	1,645	1,734	1,803	1,809	1,814	1,778	1,704	1,608	1,508	1,402	1,291	1,175	1,052	924	788	646	496	339	174	0	0	0	
Total Annual Interest Cost	30	148	267	408	591	739	872	999	1,151	1,271	1,382	1,525	1,646	1,729	1,782	1,788	1,782	1,737	1,659	1,563	1,463	1,357	1,246	1,130	1,007	879	743	601	451	294	129	0	0	0	

Feb15 Option 1a, 30-yr — Average Debt Drawdown

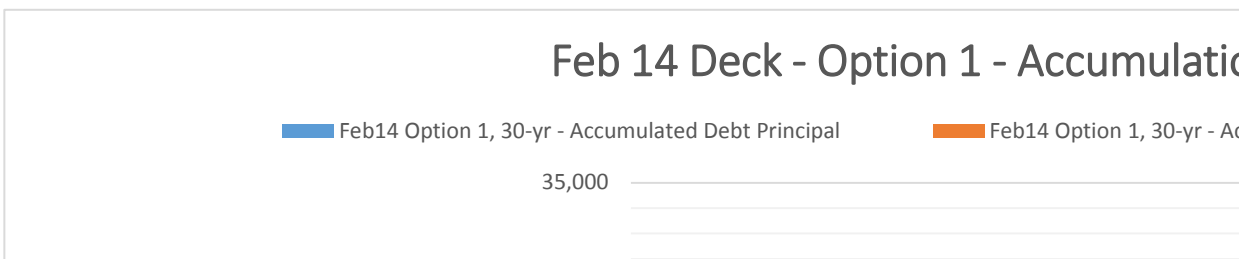
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Debt, Beginning of Year	0	2,373	4,724	7,207	11,099	14,113	16,891	19,235	22,425	24,978	26,968	29,902	32,563	34,329	35,687	35,813	35,904	35,187	33,720	31,830	29,844	27,756	25,562	23,255	20,830	18,281	15,601	12,785	9,824	6,712	3,441	3	3	3	
Interest Cost - Feb15 Option 1a, 30-yr	*59*	*177*	*298*	*457*	*629*	*773*	*901*	*1,039*	*1,182*	*1,296*	*1,419*	*1,558*	*1,668*	*1,746*	*1,783*	*1,789*	*1,773*	*1,719*	*1,635*	*1,538*	*1,437*	*1,330*	*1,218*	*1,100*	*976*	*845*	*708*	*564*	*412*	*253*	*86*	*0*	*0*	*0*	32,368
Additional GA Debt Drawdown	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,373	4,724	7,207	11,099	14,113	16,891	19,235	22,425	24,978	26,968	29,902	32,563	34,329	35,687	35,813	35,904	35,187	33,720	31,830	29,844	27,756	25,562	23,255	20,830	18,281	15,601	12,785	9,824	6,712	3,441	3	3	3	3	
Fiscal Exposure - Average Debt Drawdown	2,373	2,351	2,483	3,892	3,013	2,779	2,344	3,190	2,553	1,989	2,935	2,660	1,766	1,358	126	91	-717	-1,468	-1,889	-1,986	-2,088	-2,195	-2,307	-2,425	-2,549	-2,679	-2,816	-2,961	-3,112	-3,271	-3,439	0	0	0	

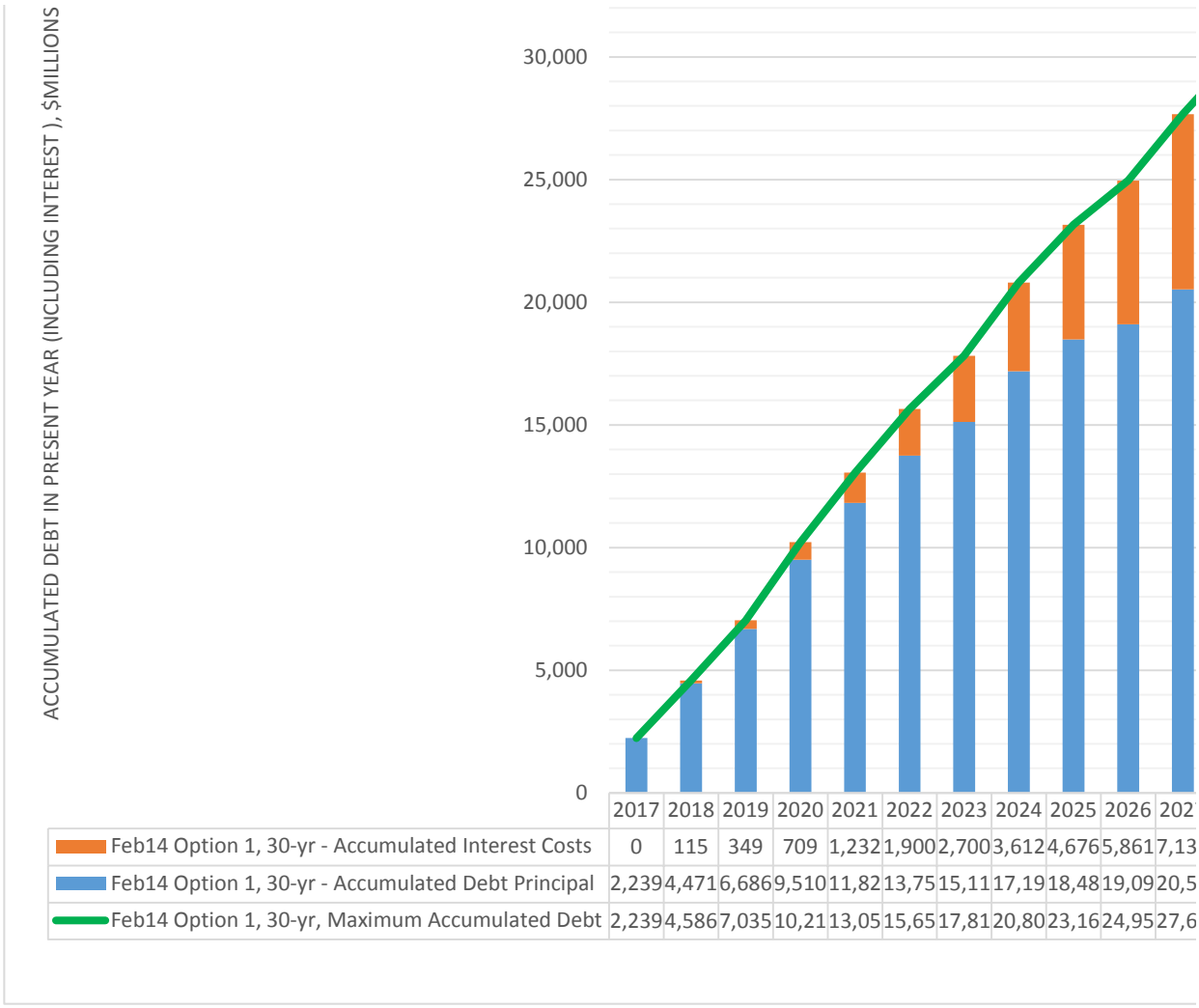
Feb 14 Deck

Feb 14 Deck - Option 1,2,3 - at 5.12% interest rate

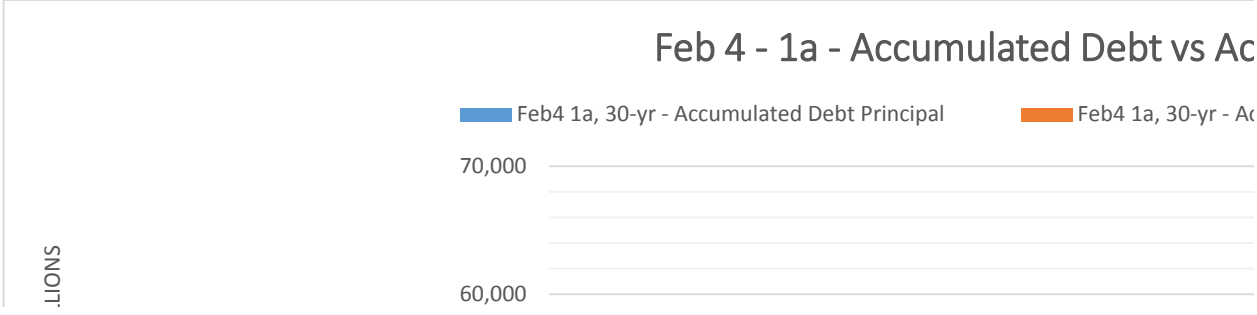


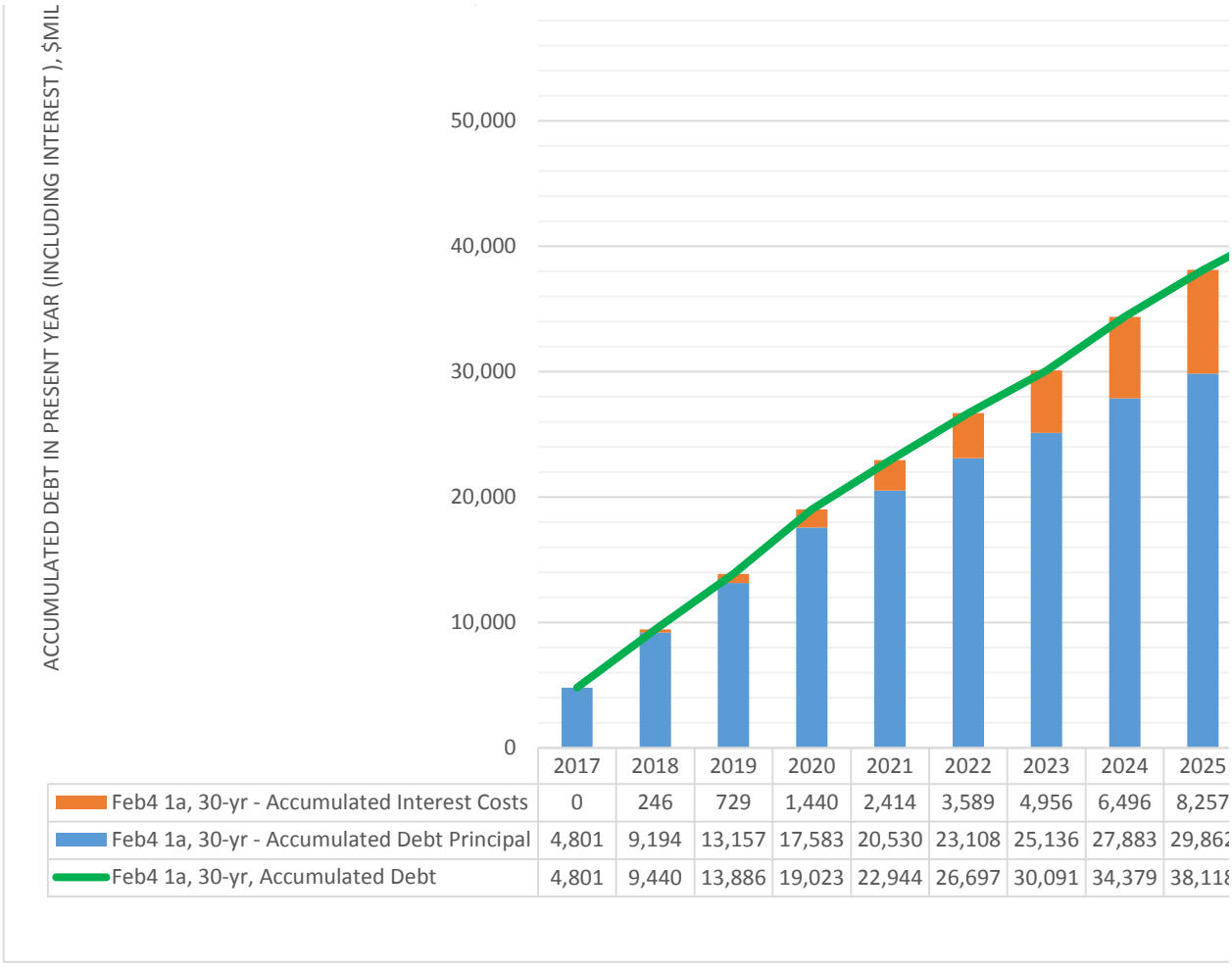
Feb 14 Deck - Option 1 - Accumulation of Debt (Principal and Interest)



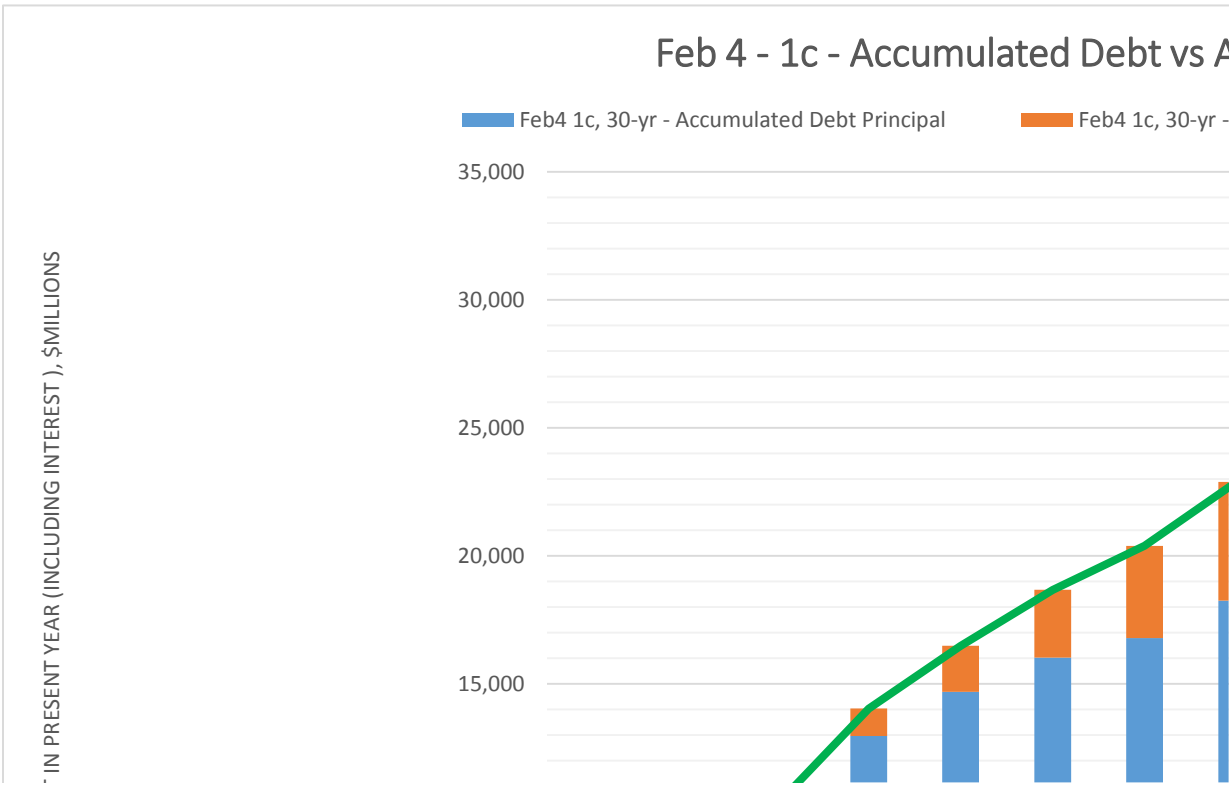


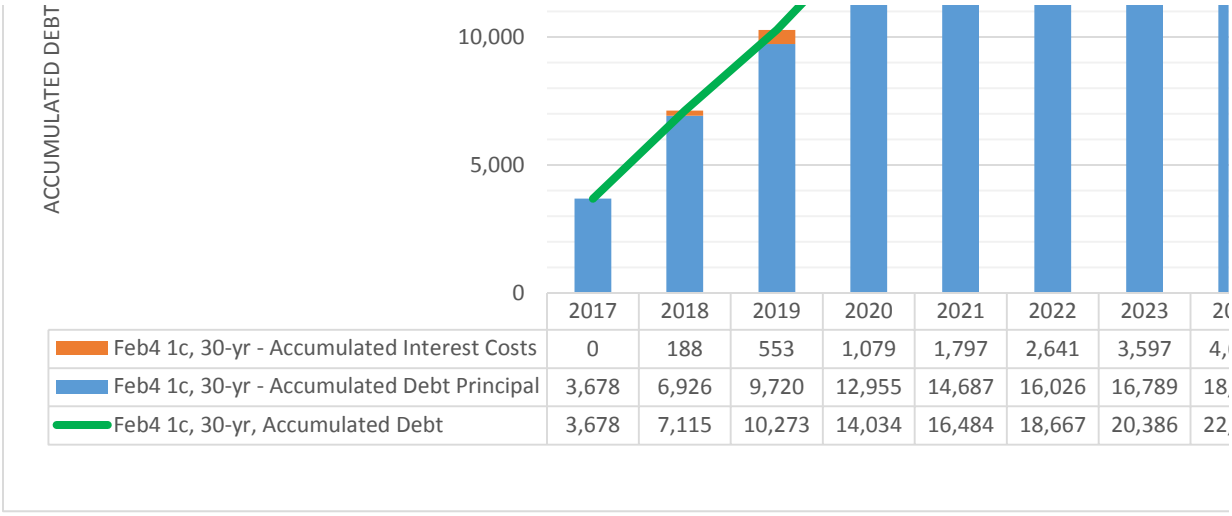
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	202
Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,13
Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,82	13,75	15,11	17,19	18,48	19,09	20,5
Feb14 Option 1, 30-yr, Maximum Accumulated Debt	2,239	4,586	7,035	10,21	13,05	15,65	17,81	20,80	23,16	24,95	27,6



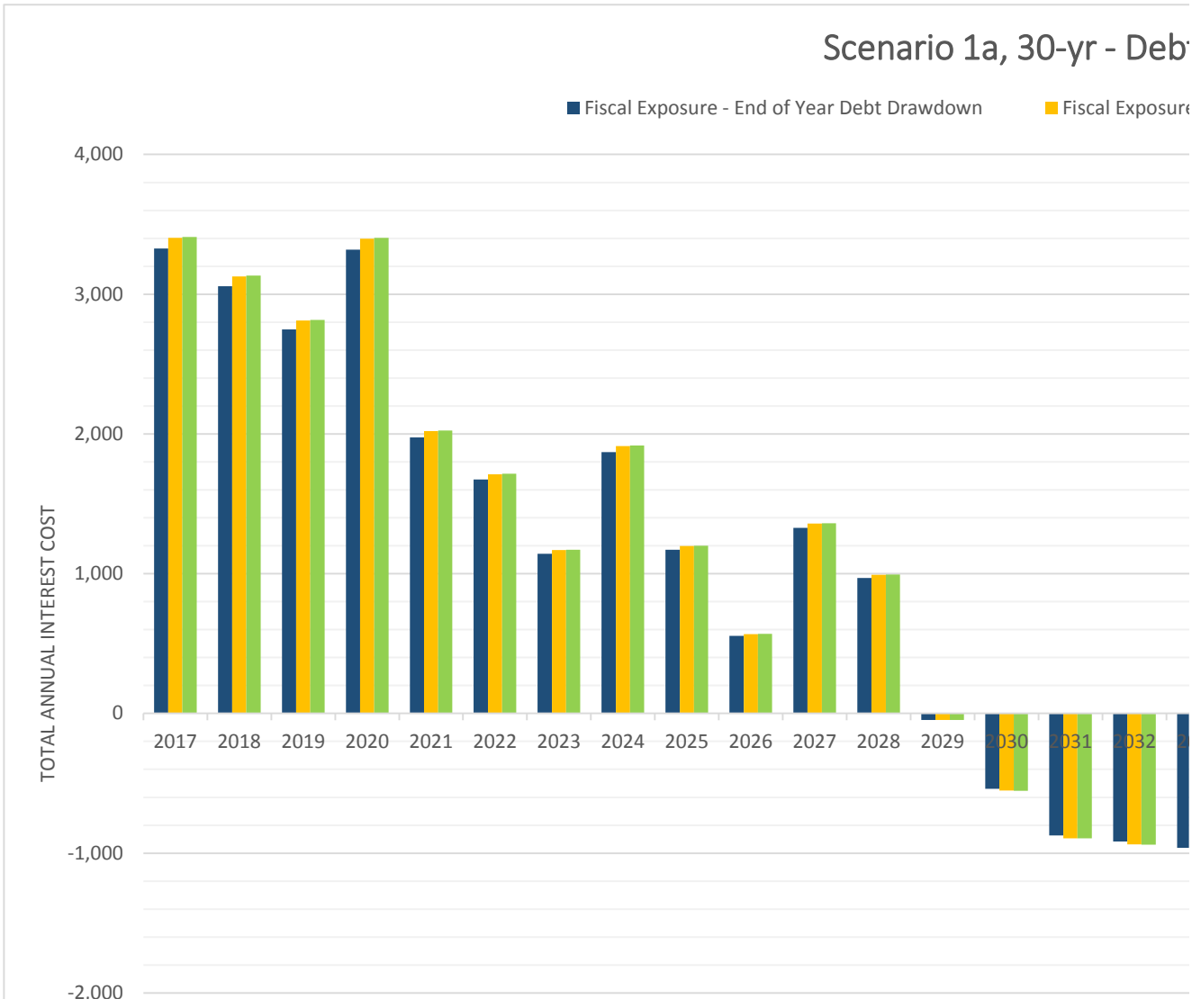


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



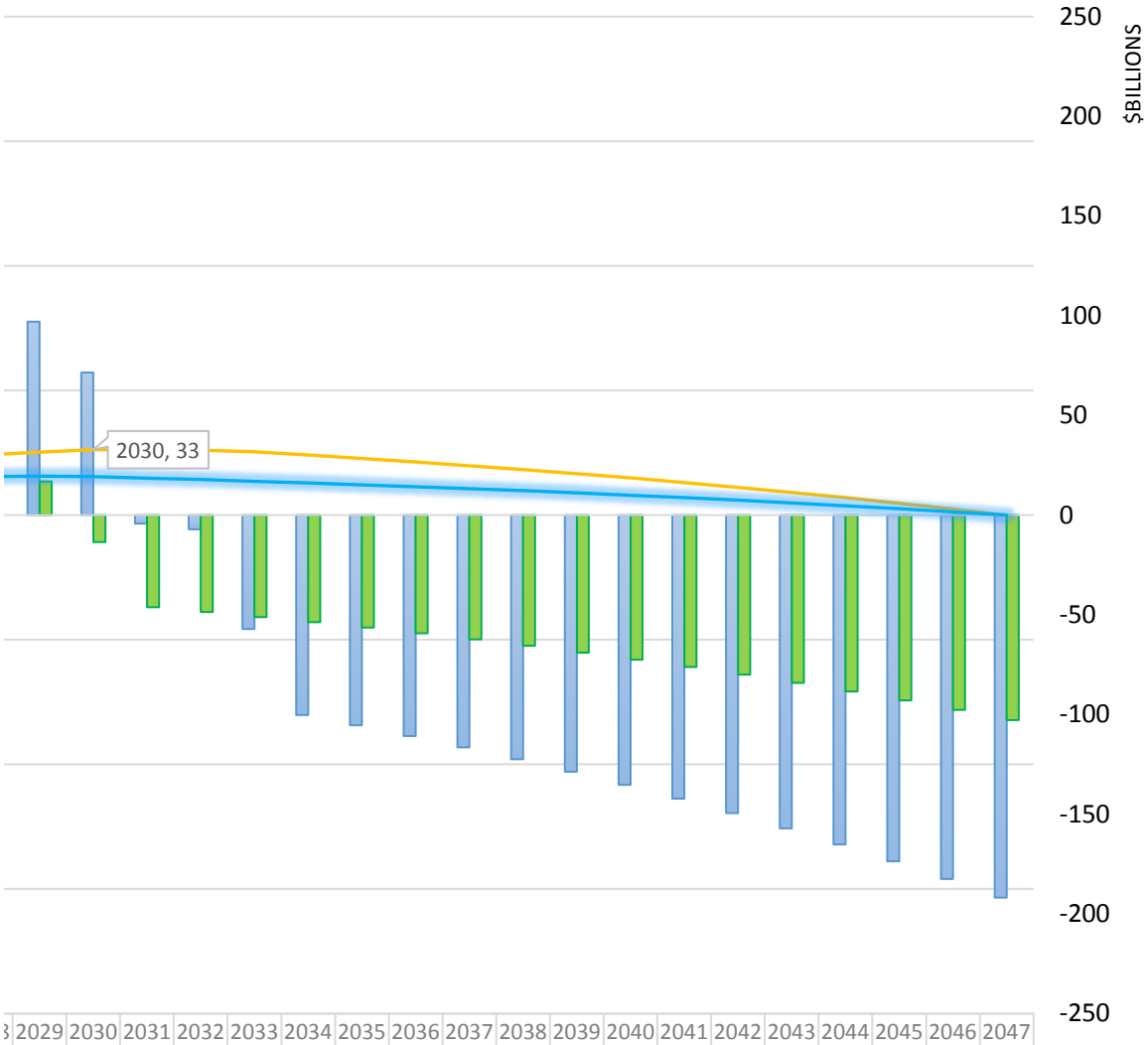


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

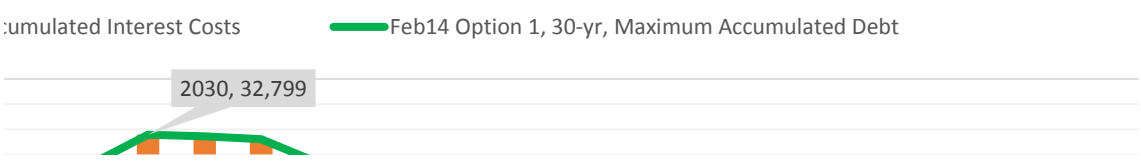
- at 5.12% interest rate

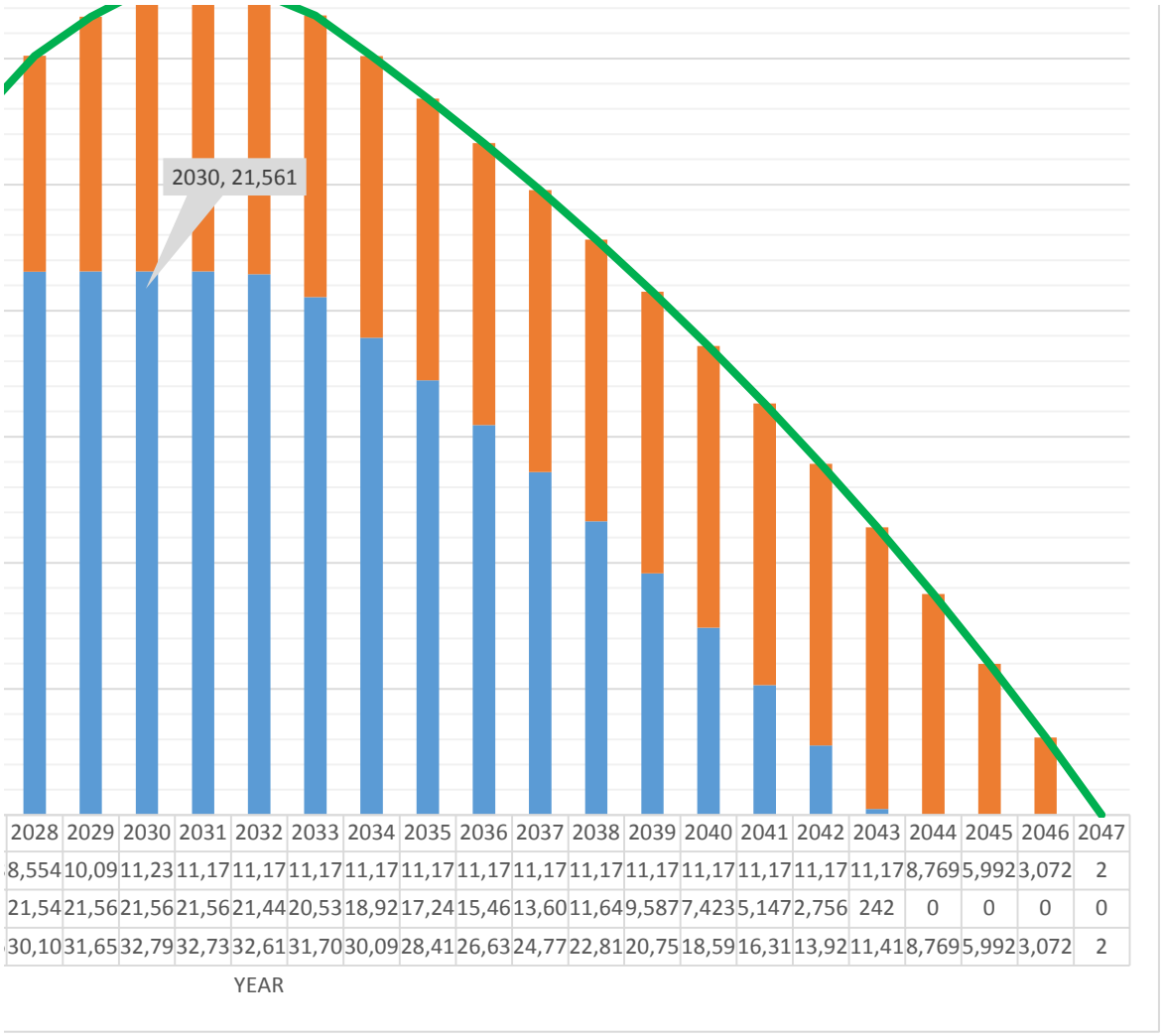


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
41,552	1,144	-68	-114	-914	-1,60	-1,68	-1,77	-1,86	-1,95	-2,05	-2,16	-2,27	-2,39	-2,51	-2,64	-2,77	-2,92	-3,06
3 271	-217	-740	-778	-818	-859	-903	-950	-998	-1,04	-1,10	-1,15	-1,21	-1,28	-1,34	-1,41	-1,48	-1,56	-1,64
031,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,769	5,992	3,072	2
519,53	19,31	18,57	17,79	16,98	16,12	15,21	14,26	13,27	12,22	11,11	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1

CALENDAR YEAR

n of Debt (Principal and Interest)

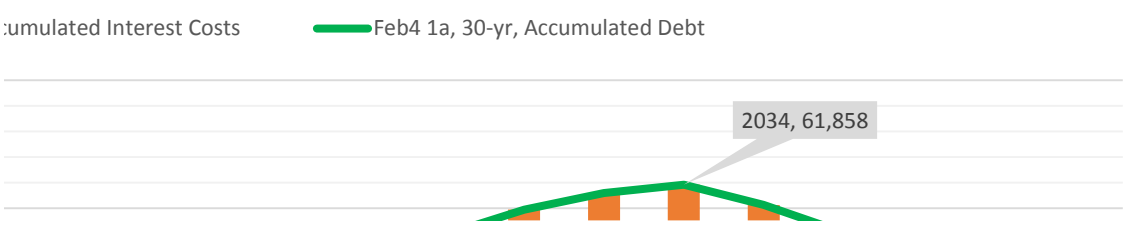




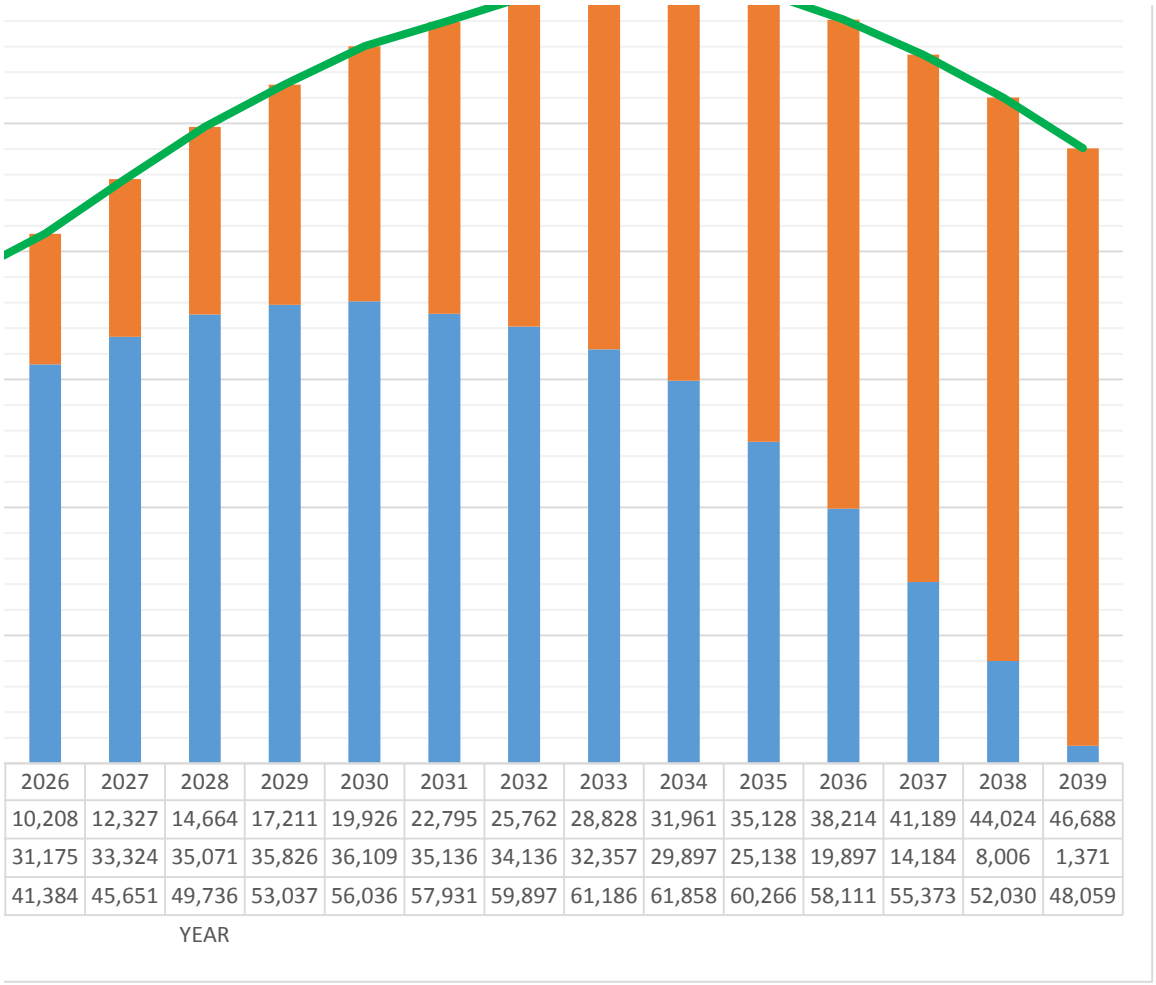
2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
8,554	10,09	11,23	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	8,769	5,992	3,072	2
21,54	21,56	21,56	21,56	21,44	20,53	18,92	17,24	15,46	13,60	11,64	9,587	7,423	5,147	2,756	242	0	0	0	0
30,10	31,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,769	5,992	3,072	2

YEAR

cumulated Total Interest Costs



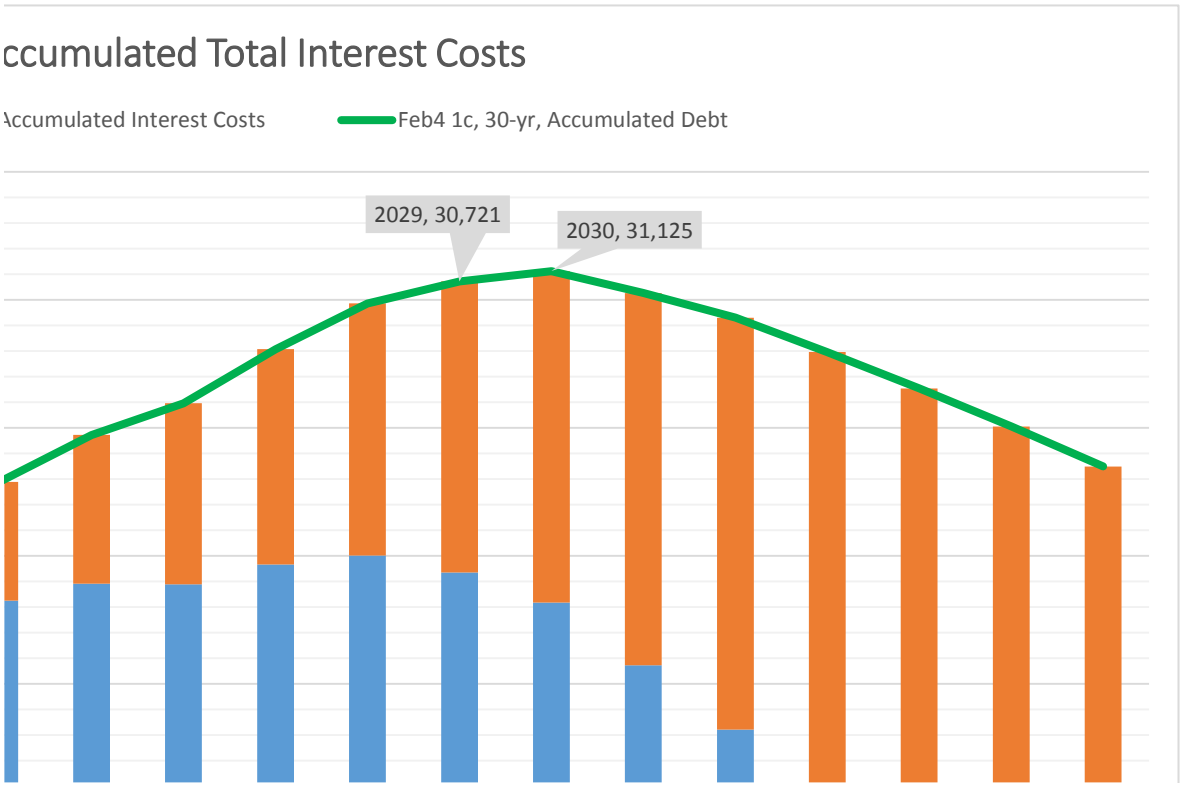
LIONS

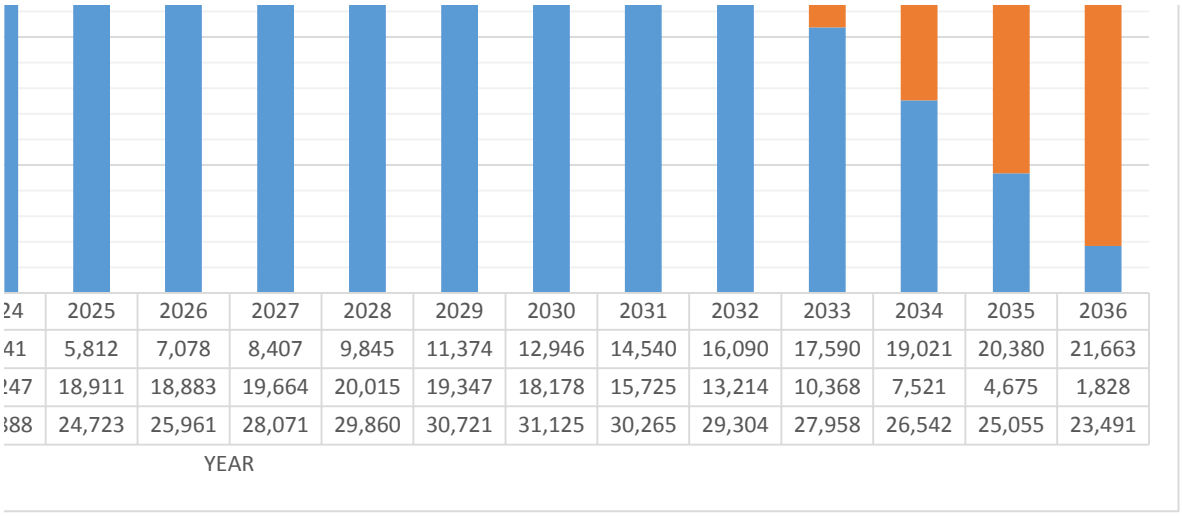


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

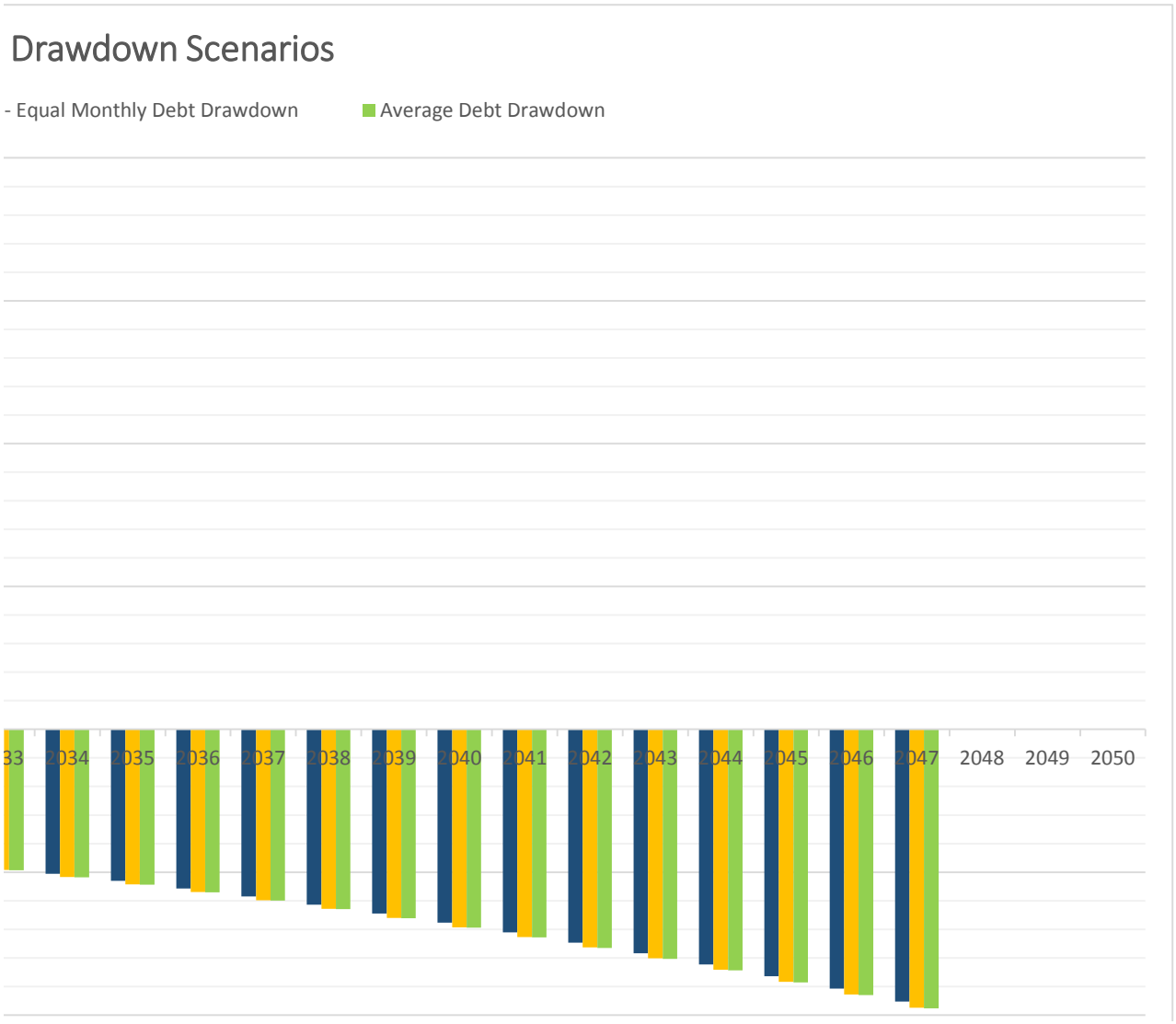
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





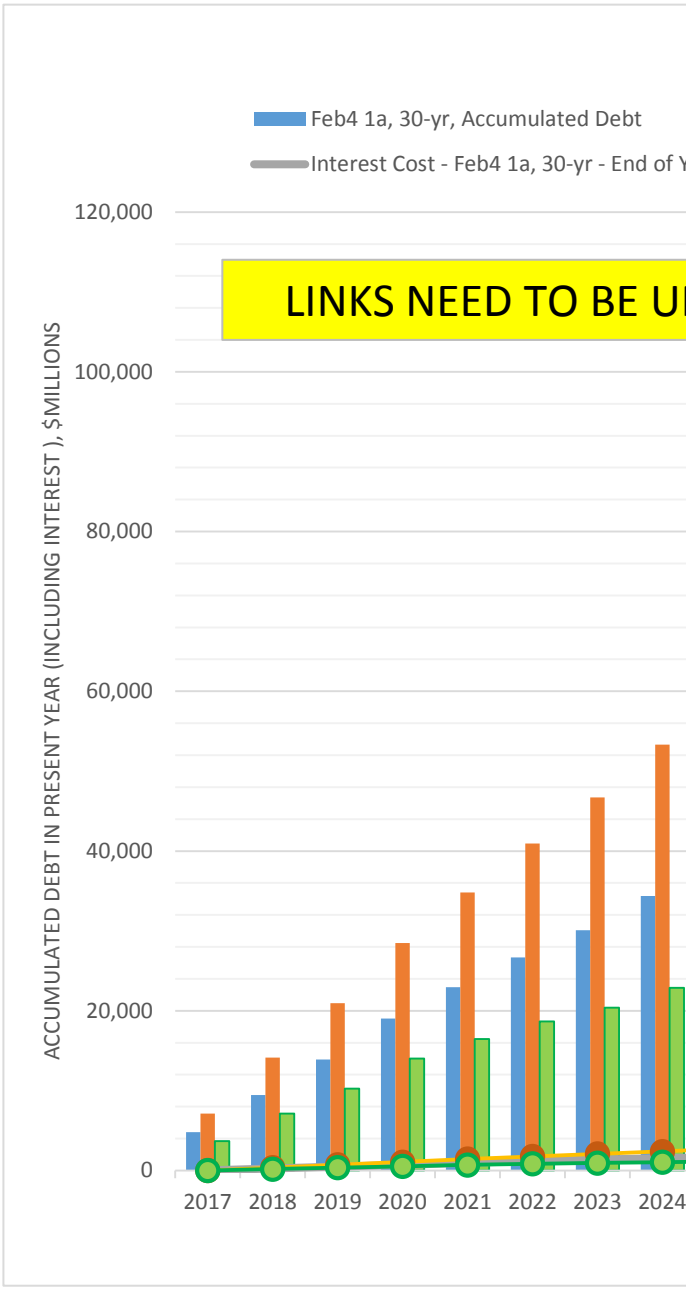
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

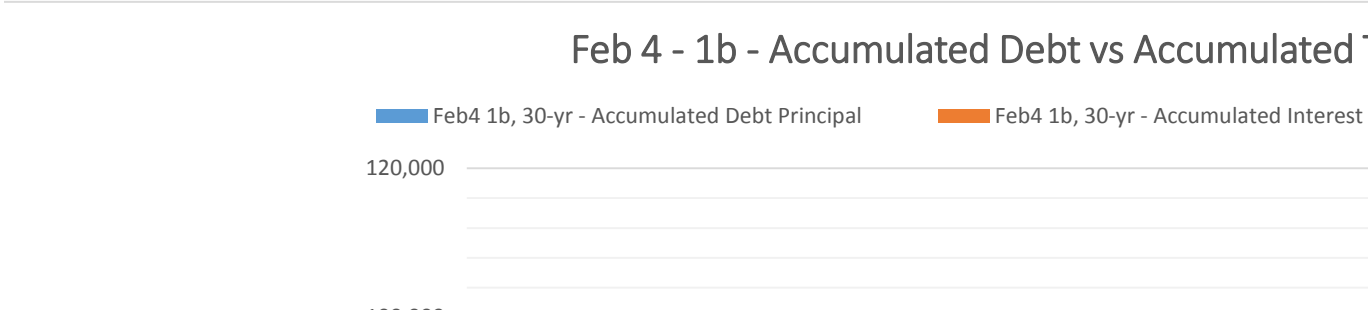
YEAR

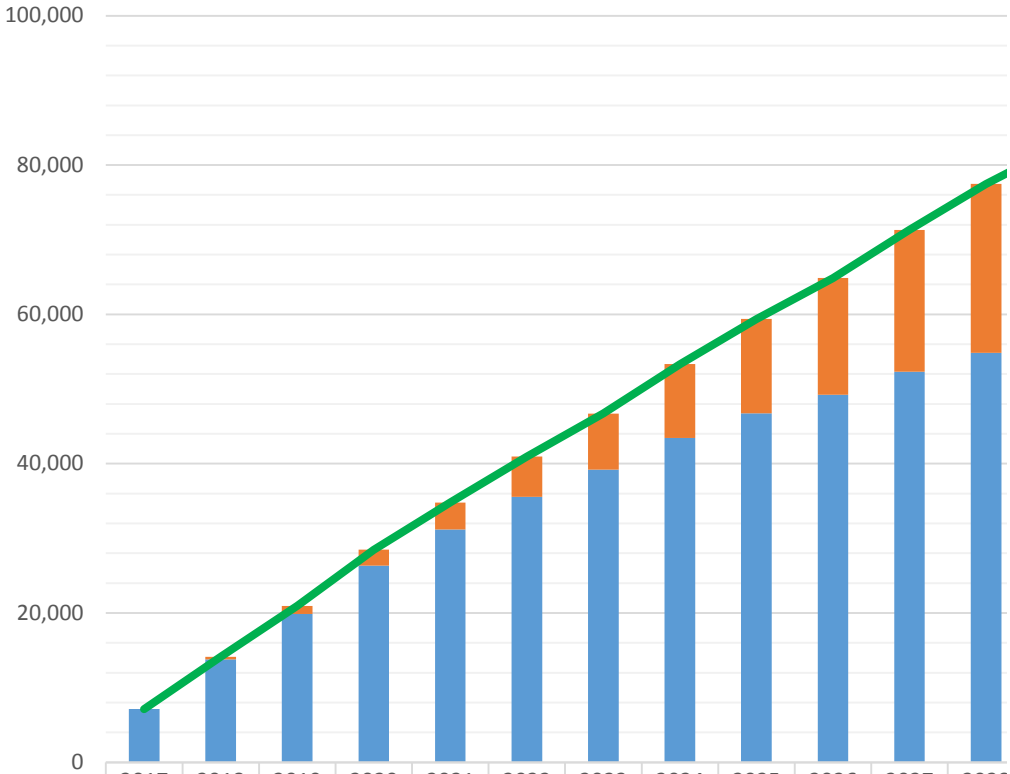


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate



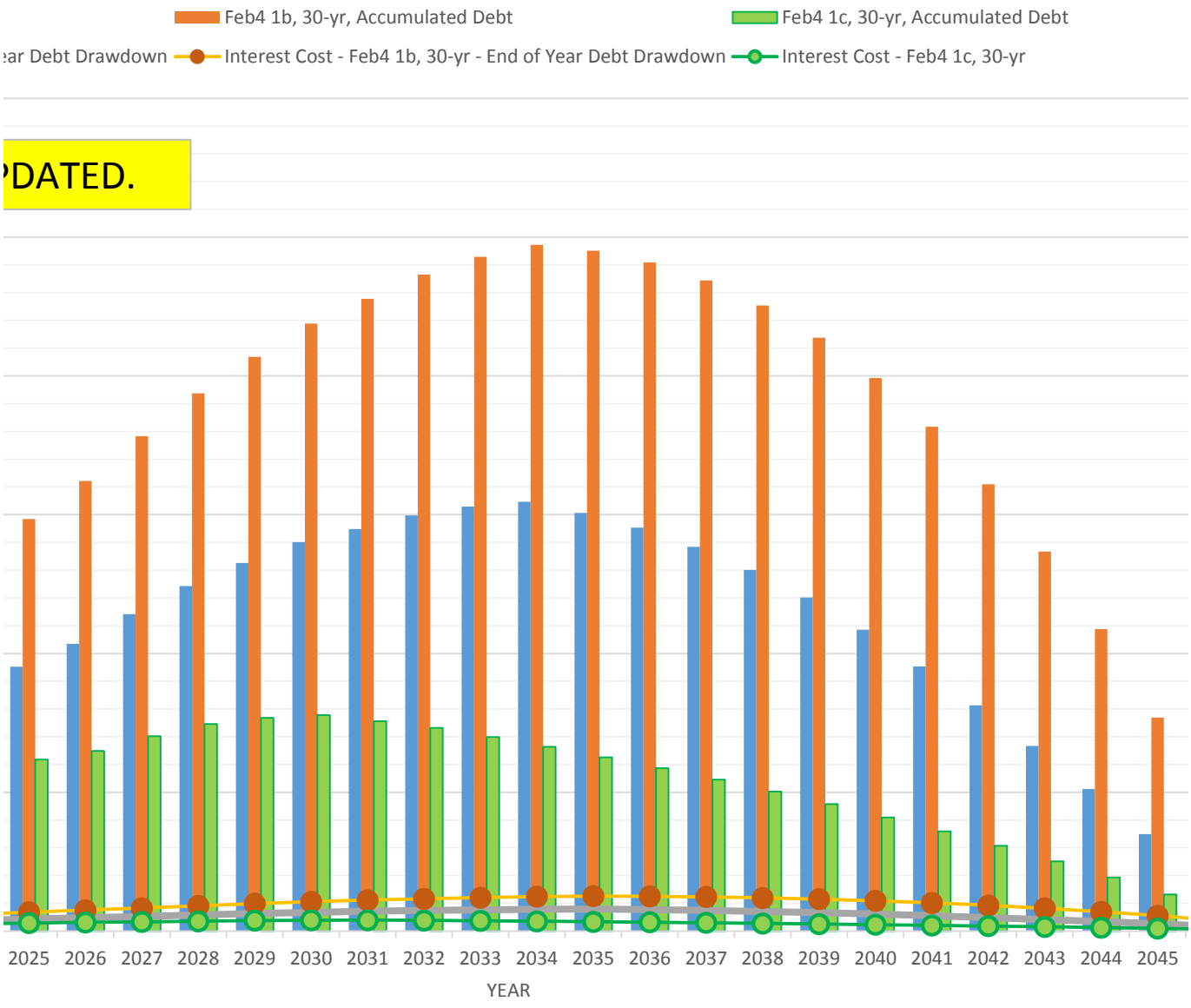

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000



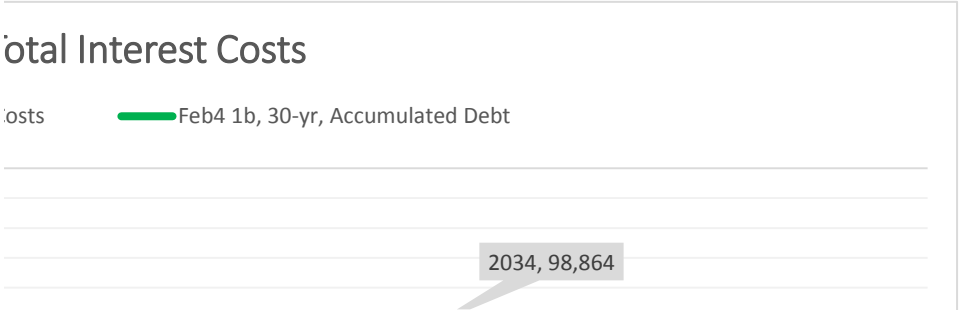
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

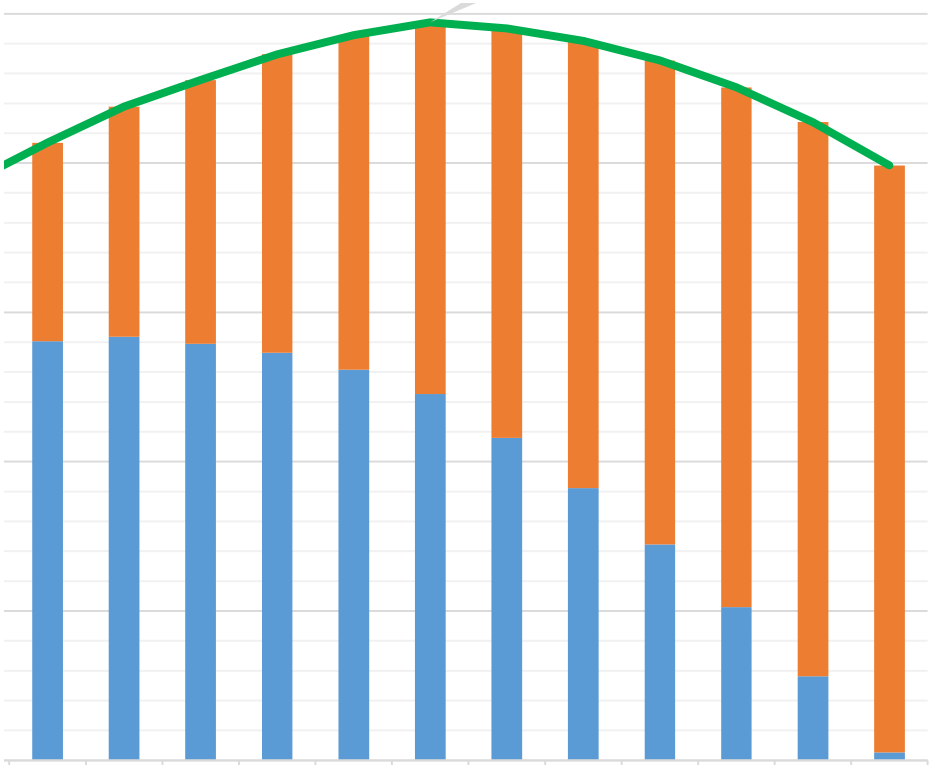
Y

Accumulated debt in present year, with annual interest costs



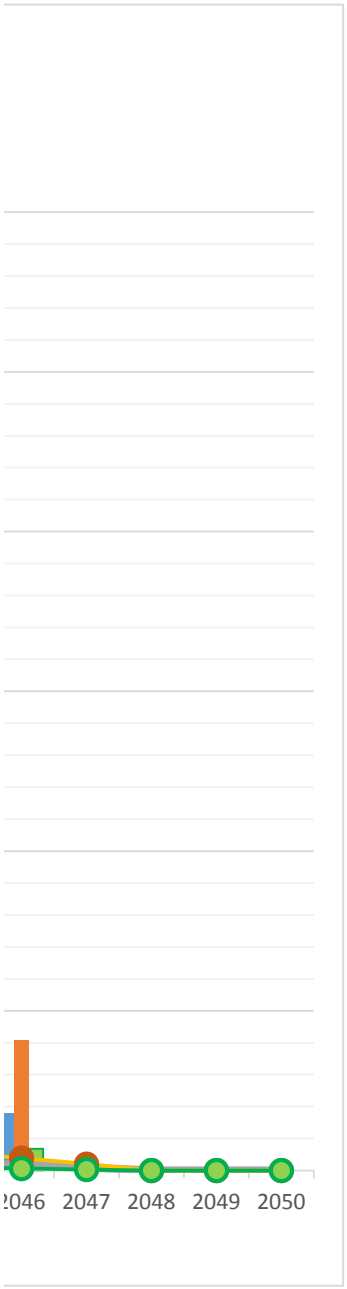
PDATED.


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864

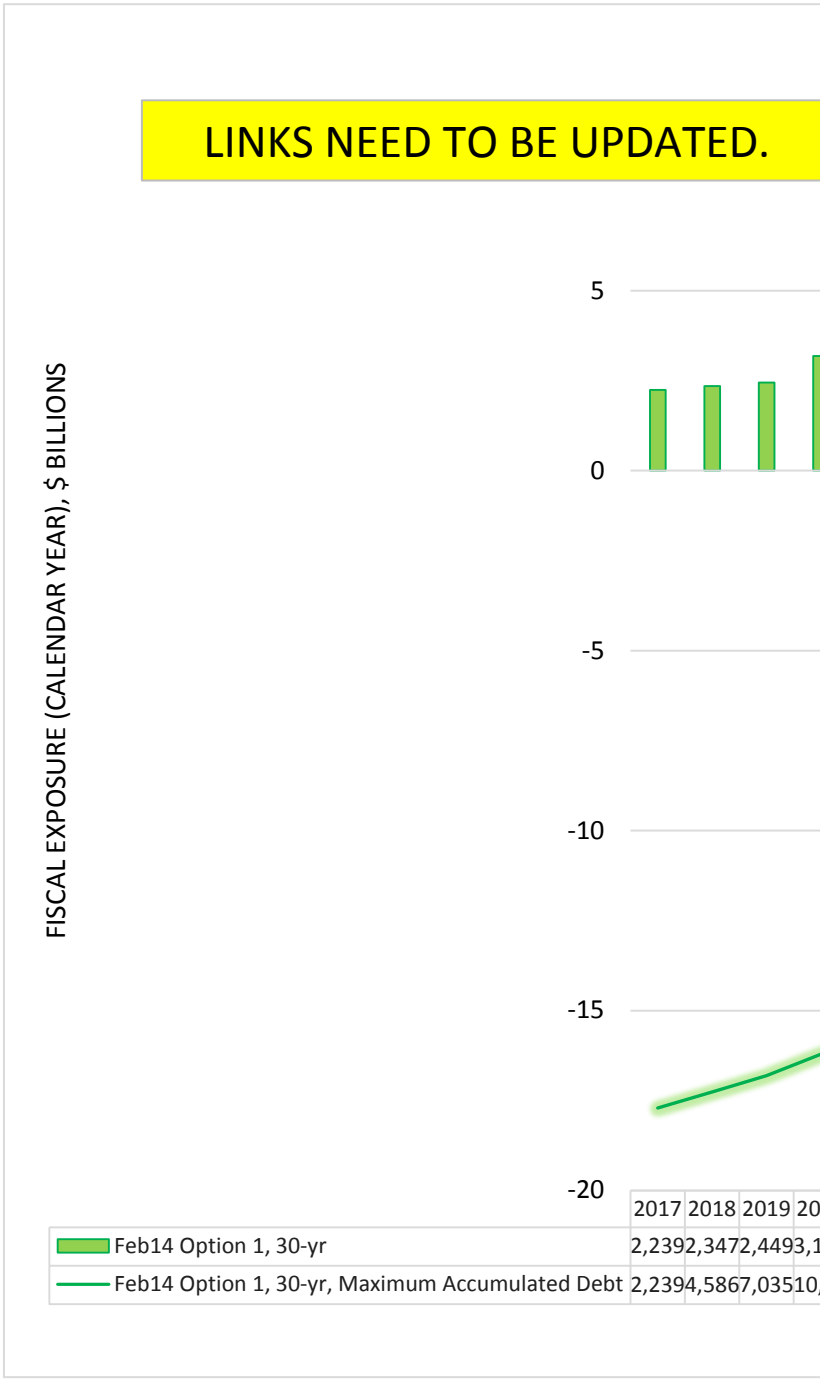


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



LINKS NEED TO BE UPDATED.



FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1b, 30-yr

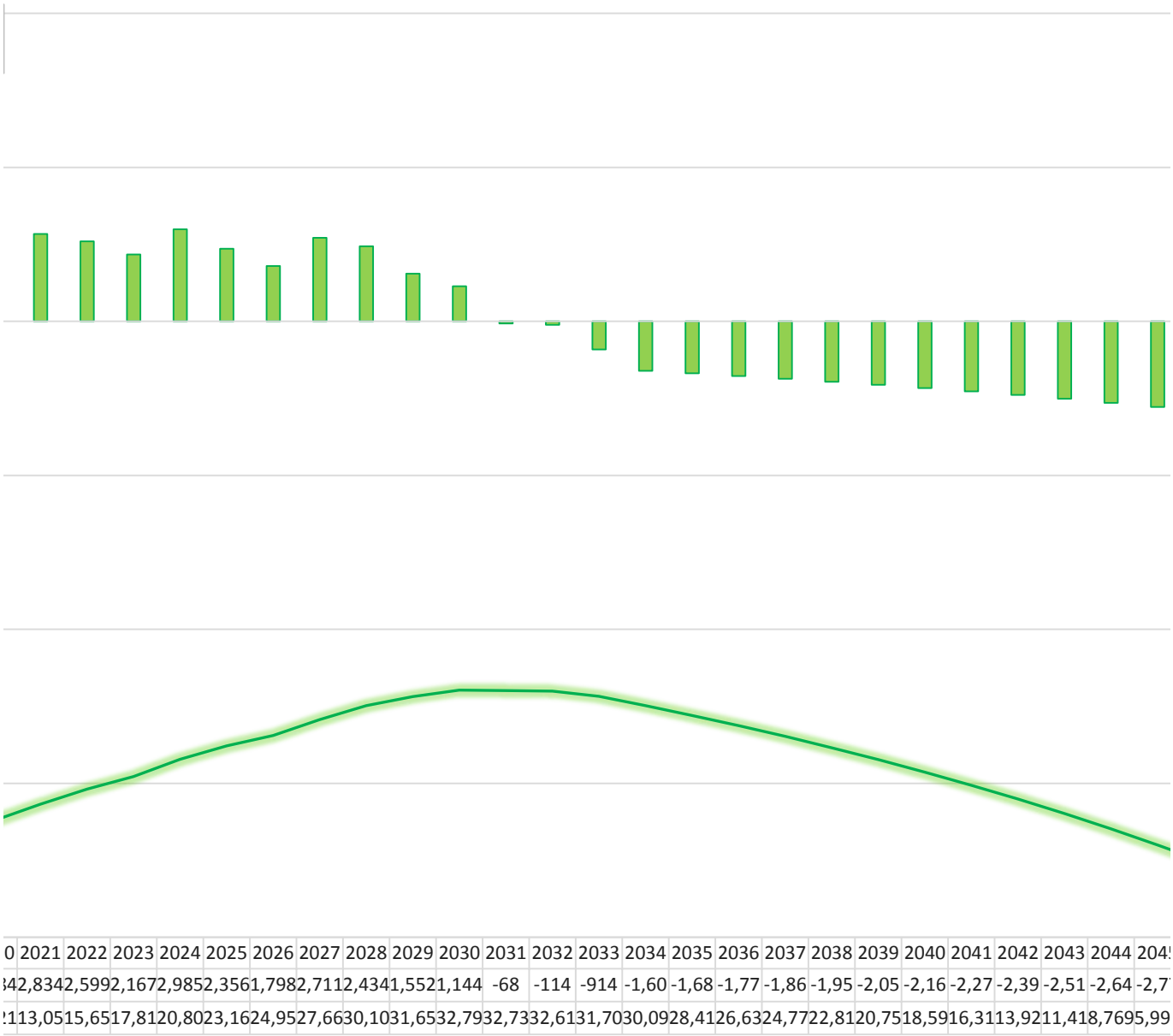
Feb4 1b, 30-yr,

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,

Feb 14 Deck - Option 1

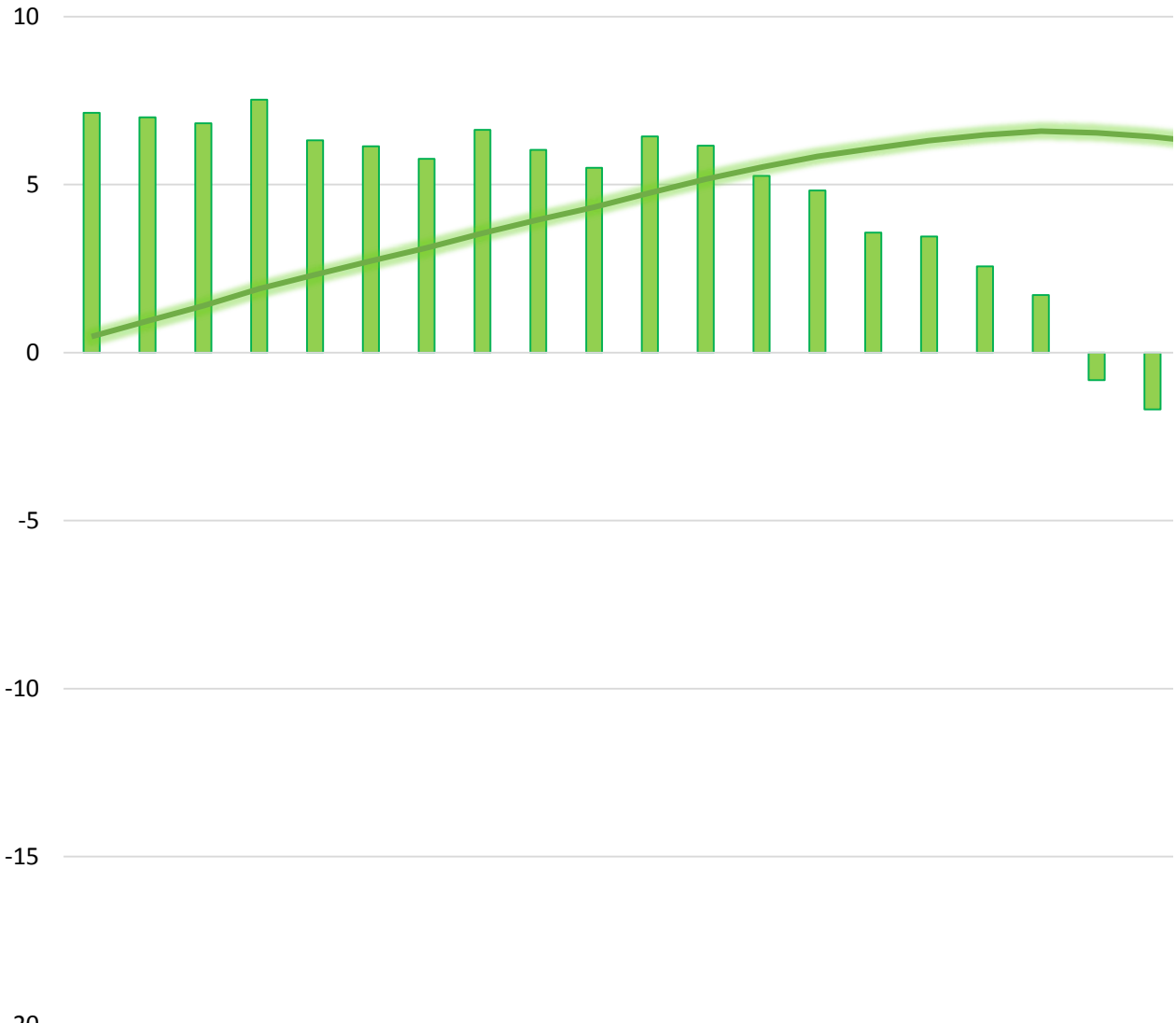


0	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	204
42	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,60	-1,68	-1,77	-1,86	-1,95	-2,05	-2,16	-2,27	-2,39	-2,51	-2,64	-2,7
113	05	15,65	17,81	20,80	23,16	24,95	27,66	30,10	31,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,76	95,99

CALENDAR YEAR

Feb 6 Deck - Scenario 1b - at 5.13% interest rat

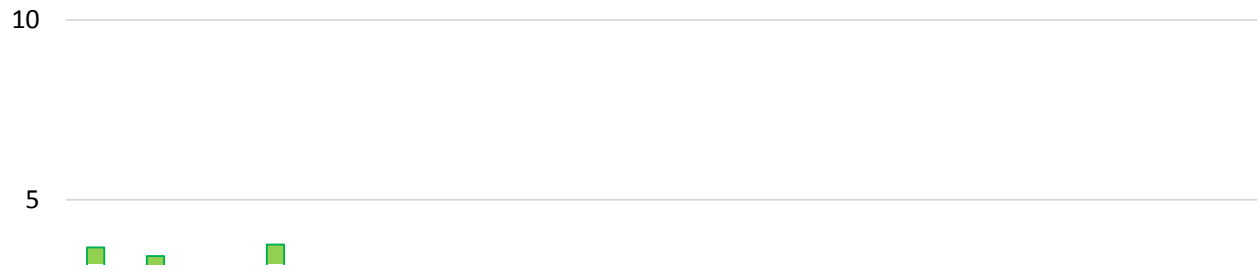
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

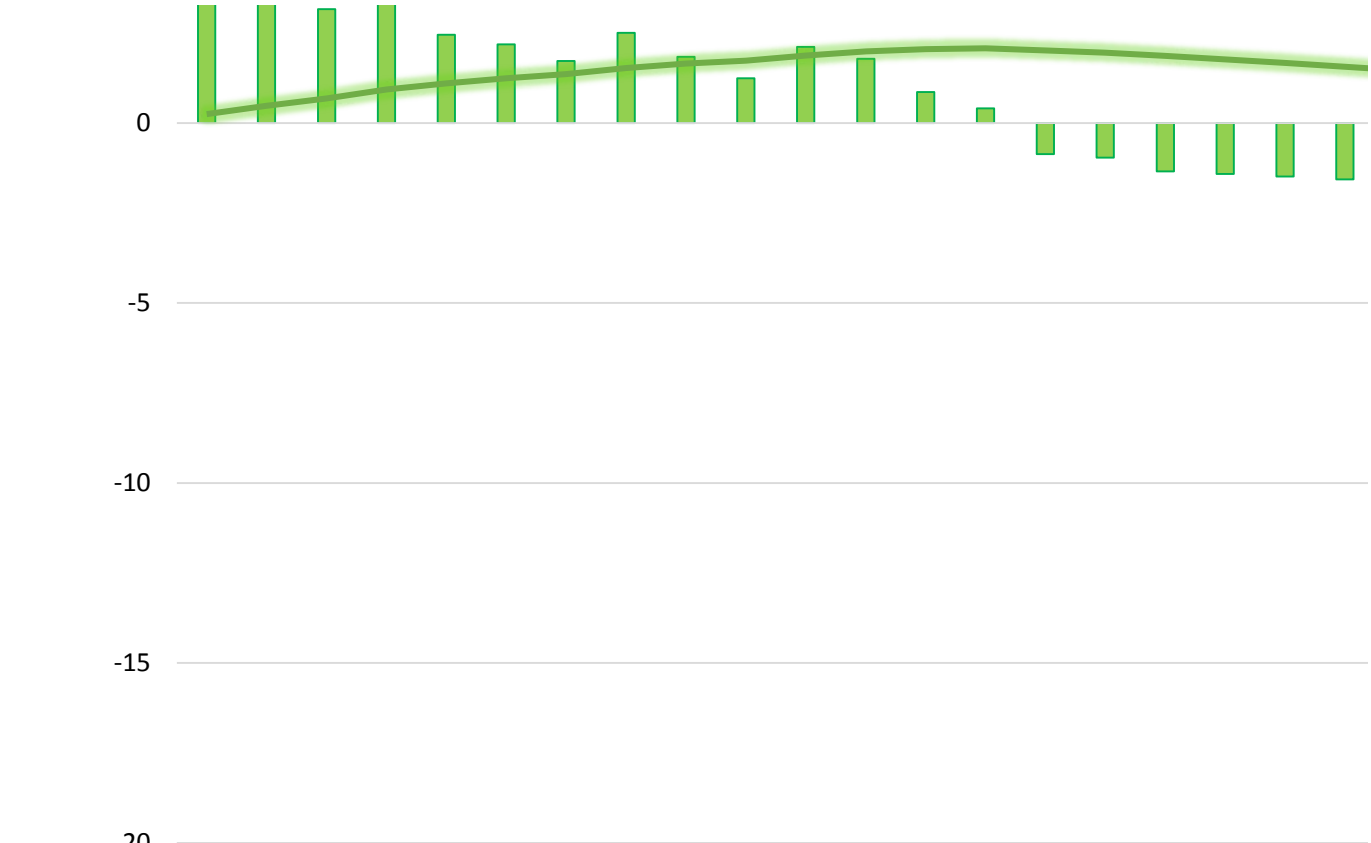


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

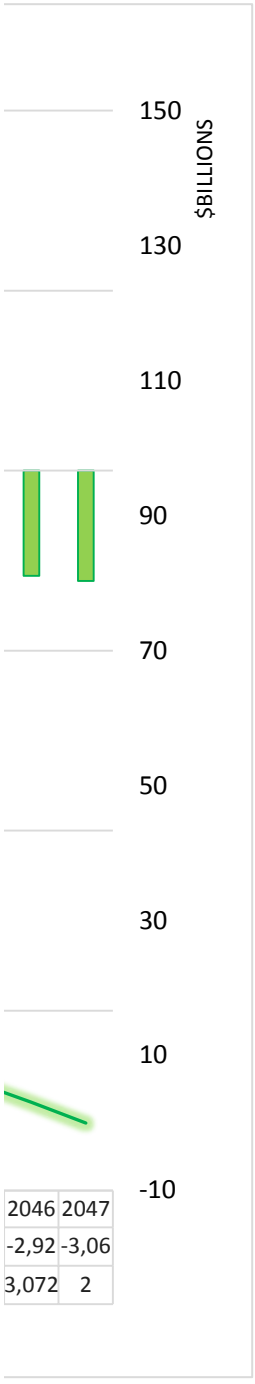
Feb 6 Deck - Scenario 1c - at 5.12% interest rat

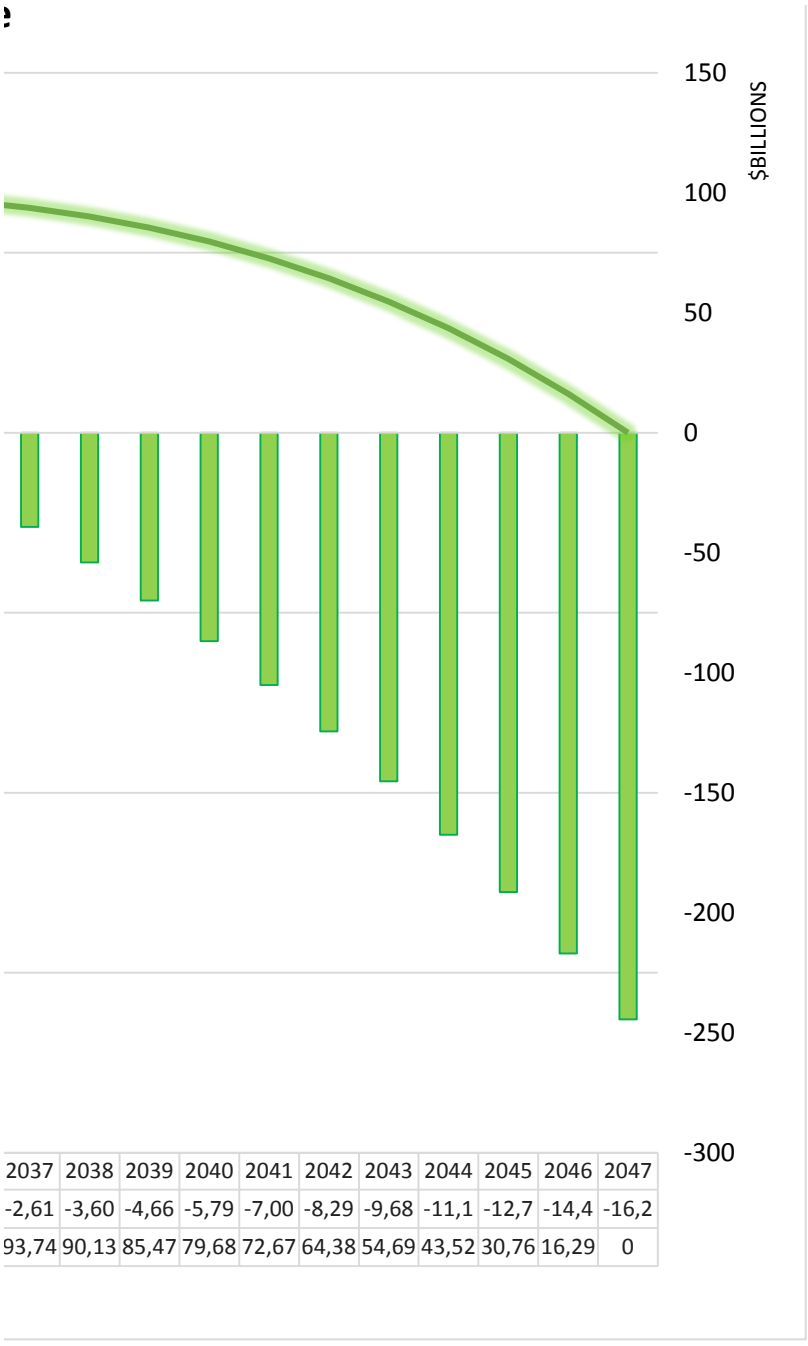




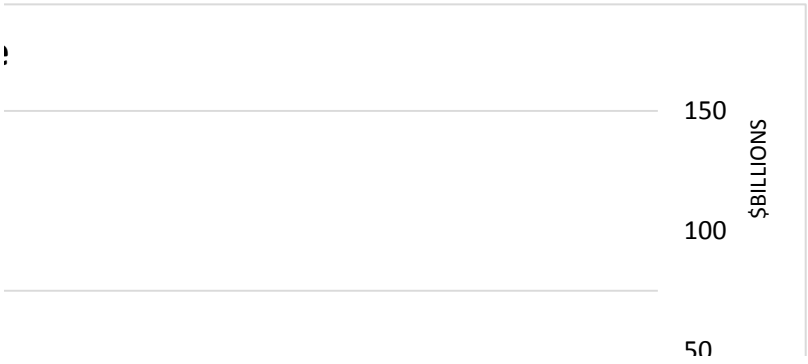
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

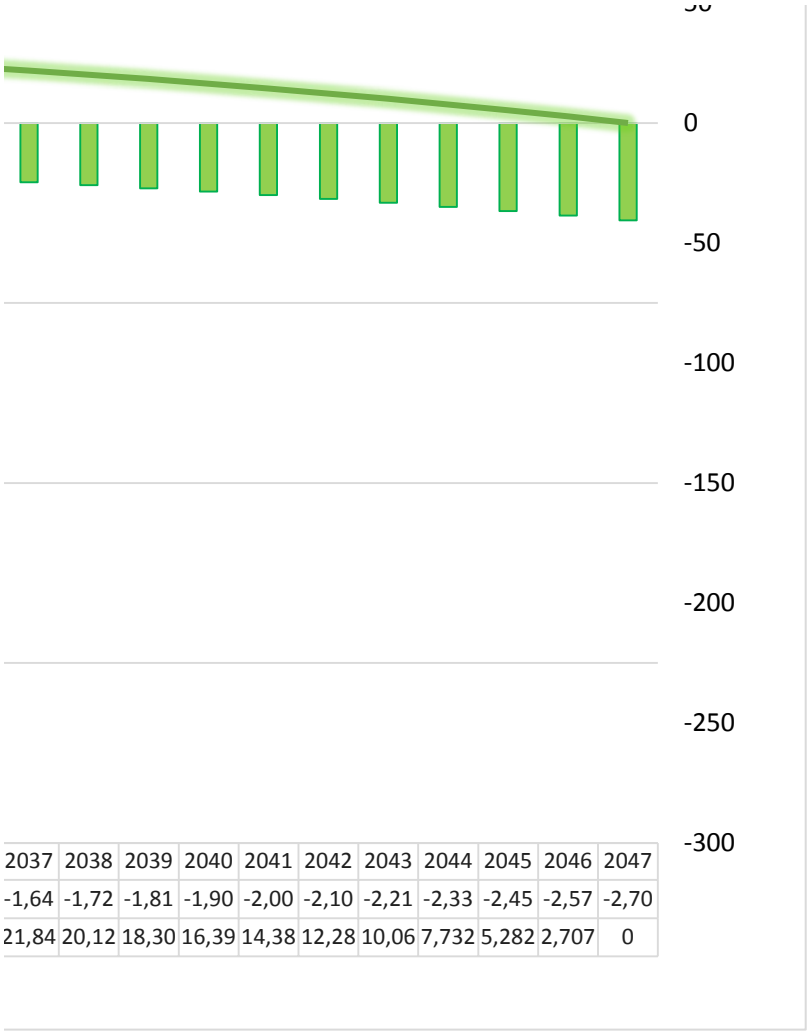
CALENDAR YEAR


150
130
110
90
70
50
30
10
-10
$BILLIONS
2046 2047
-2,92 -3,06
3,072 2



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest

IESO GA cost forecast + extrapolation

Scenario
Option 1
Bills Lowered 25%, RPP Only
Option 2
Bills Lowered 20%, RPP Only
Option 3
Bills Lowered 18%, contract/conservation refinancing, RPP Only

rate	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
Ratepayer GA Payment	9,856	9,602	9,338	9,344
Total Accumulated Debt ($ billion)	2,239	4,586	7,035	10,219
Ratepayer GA Payment	10,537	10,296	10,041	10,061
Accumulated debt in present year (including 5% interest,	1,559	3,177	4,851	7,207
Ratepayer GA Payment	10,648	10,303	10,186	10,873
Accumulated debt in present year (including 5% interest,	1,447	3,053	4,575	6,105
	12095.37	11834.681	11552.105	12168.428

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801
13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103
9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513
9,266	11,038	12,324	14,370	15,725	16,458	18,035	19,263
9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253
7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876
10843.555	10633.626	10243.432	11128.119	10527.018	10033.287	11042.844	10819.098

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389

9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615
31,654	32,799	32,730	32,616	31,702	30,097	28,411	26,638
10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117
19,534	19,317	18,577	17,799	16,981	16,122	15,218	14,268
9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837
18,843	19,521	20,007	20,312	20,325	19,755	18,549	17,050
10008.692	9721.4381	8654.4847	8819.9388	8238.0383	7756.4351	5662.3212	5388.8445

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627

8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853
24,774	22,815	20,756	18,591	16,316	13,924	11,410	8,767
6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355
13,270	12,221	11,118	9,958	8,740	7,458	6,112	4,696
7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712
15,464	13,694	12,062	10,556	9,143	7,810	6,672	5,928
5128.5761	4880.878	4645.1432	4420.7938	4207.28	4004.0783	3810.6908	3626.6435

2045	2046	2047	2048

3,451	3,285	3,126	2,975	2,831	2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
6,678	6,511	6,353	2,975	2,831	2,695
5,989	3,069	0	0	0	0
5,180	5,013	4,854	2,975	2,831	2,695
3,208	1,644	0	-	-	-
4,007	3,619	3,425	3,156	3,011	2,878
5,676	5,633	5,623	5,730	5,843	5,959
3451.485	3284.787	3126.139	2975.154	2831.461	2694.708

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

	5.00%		
Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb14_1_30yr

Option 1 - Bills Lowered 25%, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,239	2,347
Interest Portion	0	115

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	560	2,266
Interest Portion	-	29

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $33 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb14_2_30yr

Option 2 - Bills Lowered 20%, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,559	1,619
Interest Portion	0	80

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	390	1,574
Interest Portion	-	20

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb14_3_30yr

Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606
Interest Portion	0	74

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,487
Interest Portion	-	19

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	390 - 560	1,574 - 2,266

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	560	2266
Debt-Finance Global Adjustment Costs, Option 1a	390	1574
RRRP		
OESP – Enhance Benefit		162

Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**560**	**2506**
Total, B	390	1814

Proposed Program Total:	390 - 560	1,814 - 2,506

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Option 1
Option 2
Option 3

Assumes an inte

2019	2020	2021	2022
2,449	3,184	2,834	2,599
235	360	523	668

2018-19	2019-20	2020-21	2021-2022
2,372	2,633	3,096	2,775
145	266	401	559

2030.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,674	2,356	2,060	1,772
163	248	369	474

2018-19	2019-20	2020-21	2021-2022
1,632	1,844	2,282	1,988
100	184	278	395

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446
156	234	312	385

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429
95	176	254	331

2033.

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022
1,632 - 2,372	1,844 - 2,633	2,282 - 3,096	1,988 - 2,775

/1

2018-19[1]	2019-20[1]	2020-21[1]
2372	2633	3096
1632	1844	2282
225	279	323

60	60	60
18	18	18
2675	**2990**	**3497**
1935	2201	2683

1,935 - 2,675	2,201 - 2,990	2,683 - 3,497

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$21,561	$30,205	$32,799	occurs in Year 2030
$13,503	$17,883	$19,534	occurs in Year 2029
$12,862	$19,498	$20,326	occurs in Year 2033

erest rate of 5.00% (compounded monthly).

Tab Name		Total Accumulated Interest Costs
Feb14_1_30yr	$26,517	$34,278
Feb14_2_30yr	$15,631	$20,378
Feb14_3_30yr	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$26,517 to $34,278
Option 2	$15,631 to $20,378
Option 3	$17,202 to $22,028

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,239	2,347	2,449	3,184	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,604	-1,687	-1,773	-1,864	-1,959	-2,059	-2,164	-2,275	-2,392	-2,514	-2,643	-2,778	-2,920	-3,069	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,292	2,403	2,507	3,260	2,902	2,660	2,219	3,056	2,412	1,841	2,776	2,492	1,589	1,171	-70	-117	-936	-1,643	-1,727	-1,815	-1,908	-2,005	-2,108	-2,216	-2,329	-2,448	-2,574	-2,705	-2,844	-2,989	-3,142	0	0	0
			53	56	58	76	67	62	52	71	56	43	64	58	37	27	-2	-3	-22	-38	-40	-42	-44	-47	-49	-51	-54	-57	-60	-63	-66	-69	-73	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,184	1,678	30,205
Equal Monthly Debt Drawdown	3,260	1,676	

		Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,799	2030	21,561
Equal Monthly Debt Drawdown	33,579		

Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
a	Debt, Beginning of Year	0	2,239	4,586	7,035	10,219	13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103	31,655	32,799	32,731	32,617	31,703	30,098	28,412	26,639	24,775	22,816	20,757	18,593	16,318	13,926	11,412	8,769	5,992	3,072	2	3	3	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*115*	*235*	*360*	*523*	*668*	*801*	*912*	*1,064*	*1,185*	*1,277*	*1,416*	*1,540*	*1,620*	*1,678*	*1,675*	*1,669*	*1,622*	*1,540*	*1,454*	*1,363*	*1,268*	*1,167*	*1,062*	*951*	*835*	*712*	*584*	*449*	*307*	*157*	*0*	*0*	*0*	30,205
b	Additional GA Debt Drawdown, End of Year	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,239	4,586	7,035	10,219	13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103	31,655	32,799	32,731	32,617	31,703	30,098	28,412	26,639	24,775	22,816	20,757	18,593	16,318	13,926	11,412	8,769	5,992	3,072	2	3	3	3	
			FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,138	8,554	10,094	11,238	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	8,769	5,992	3,072	2	3	3	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,821	13,752	15,118	17,192	18,483	19,097	20,531	21,549	21,561	21,561	21,561	21,447	20,533	18,928	17,242	15,469	13,605	11,646	9,587	7,423	5,147	2,756	242	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,138	8,554	10,094	11,714	13,392	15,066	16,735	18,357	19,897	21,350	22,713	23,981	25,148	26,210	27,161	27,996	28,709	29,293	29,741	30,048	30,205				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,821	13,752	15,118	17,192	18,483	19,097	20,531	21,549	21,561	21,086	19,339	17,551	14,968	11,741	8,515	5,288	2,062	-1,164	-4,391	-7,617	-10,844	-14,070	-17,297	-20,523	-23,750	-26,976	-30,202				
Fiscal Exposure - End of Year Debt Drawdown		2,239	2,347	2,449	3,184	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,604	-1,687	-1,773	-1,864	-1,959	-2,059	-2,164	-2,275	-2,392	-2,514	-2,643	-2,778	-2,920	-3,069	0	0	0	

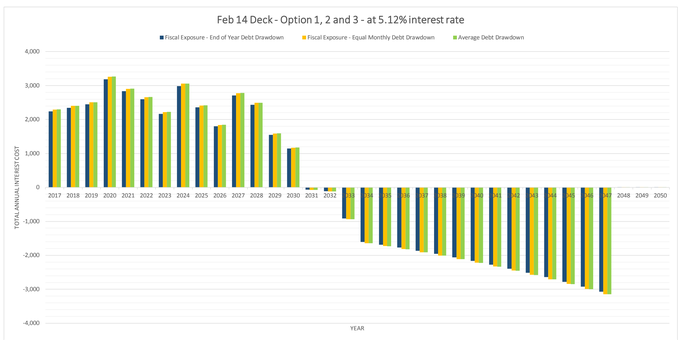
Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,292	4,695	7,202	10,462	13,363	16,024	18,243	21,299	23,711	25,552	28,327	30,819	32,408	33,579	33,510	33,393	32,457	30,814	29,087	27,272	25,365	23,359	21,251	19,035	16,706	14,257	11,683	8,978	6,134	3,145	2	3	3	
1,676	*Interest Cost - Feb14 Option 1, 30-yr*	*53*	*170*	*293*	*436*	*590*	*730*	*852*	*983*	*1,120*	*1,228*	*1,341*	*1,473*	*1,577*	*1,647*	*1,676*	*1,672*	*1,647*	*1,584*	*1,500*	*1,411*	*1,319*	*1,221*	*1,118*	*1,010*	*897*	*778*	*653*	*521*	*383*	*237*	*84*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,292	4,695	7,202	10,462	13,363	16,024	18,243	21,299	23,711	25,552	28,327	30,819	32,408	33,579	33,510	33,393	32,457	30,814	29,087	27,272	25,365	23,359	21,251	19,035	16,706	14,257	11,683	8,978	6,134	3,145	2	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,292	2,403	2,507	3,260	2,902	2,660	2,219	3,056	2,412	1,841	2,776	2,492	1,589	1,171	-70	-117	-936	-1,643	-1,727	-1,815	-1,908	-2,005	-2,108	-2,216	-2,329	-2,448	-2,574	-2,705	-2,844	-2,989	-3,142	0	0	0	

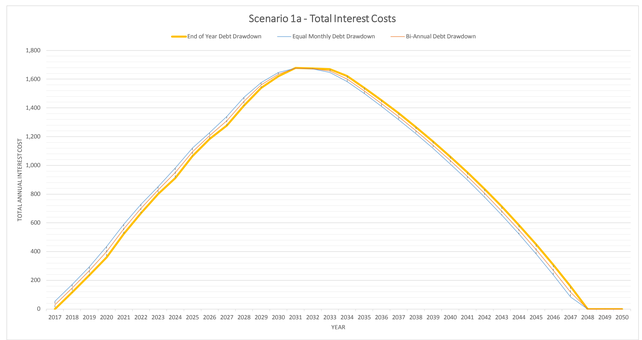
	Monthly Drawdown	187	186	185	235	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	-	-	-
	FV of Monthly Drawdown at 5%	2,292	2,285	2,267	2,891	2,366	1,977	1,399	2,123	1,322	628	1,468	1,043	12	(487)	(1,788)	(1,831)	(2,644)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	-	-	-
	Annual Interest Cost on New Drawdowns	53	53	53	67	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	-	-	-
	Annual Interest Cost on Opening Balance	-	117	240	368	535	684	820	933	1,090	1,213	1,307	1,449	1,577	1,658	1,718	1,714	1,708	1,661	1,577	1,488	1,395	1,298	1,195	1,087	974	855	729	598	459	314	161	0	0	0	
	Total Annual Interest Cost	53	170	293	436	590	730	852	983	1,120	1,228	1,341	1,473	1,577	1,647	1,676	1,672	1,647	1,584	1,500	1,411	1,319	1,221	1,118	1,010	897	778	653	521	383	237	84	0	0	0	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,268	4,645	7,125	10,349	13,220	15,852	18,047	21,070	23,456	25,277	28,023	30,488	32,060	33,219	33,150	33,034	32,108	30,483	28,775	26,980	25,092	23,108	21,023	18,831	16,526	14,104	11,558	8,882	6,068	3,111	2	3	3	
	Interest Cost - Feb14 Option 1, 30-yr	*29*	*145*	*266*	*401*	*559*	*701*	*828*	*950*	*1,095*	*1,208*	*1,312*	*1,447*	*1,560*	*1,634*	*1,677*	*1,673*	*1,657*	*1,601*	*1,518*	*1,431*	*1,339*	*1,242*	*1,141*	*1,034*	*922*	*804*	*680*	*550*	*413*	*269*	*118*	*0*	*0*	*0*	30,205
	Accumulated debt in present year (including 5% annual interest)	2,268	4,645	7,125	10,349	13,220	15,852	18,047	21,070	23,456	25,277	28,023	30,488	32,060	33,219	33,150	33,034	32,108	30,483	28,775	26,980	25,092	23,108	21,023	18,831	16,526	14,104	11,558	8,882	6,068	3,111	2	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,268	2,377	2,480	3,225	2,870	2,632	2,195	3,024	2,386	1,821	2,746	2,465	1,572	1,159	-69	-116	-926	-1,625	-1,708	-1,796	-1,887	-1,984	-2,085	-2,192	-2,304	-2,422	-2,546	-2,676	-2,813	-2,957	-3,109	0	0	0	

	Bi-Annual Drawdown	1,119	1,116	1,107	1,412	1,156	965	683	1,037	646	307	717	509	6	(238)	(873)	(894)	(1,291)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	-	-	-
	FV of Bi-Annual Drawdown at 5%	2,268	2,261	2,243	2,860	2,341	1,955	1,384	2,100	1,308	621	1,453	1,031	12	(481)	(1,769)	(1,812)	(2,616)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	-	-	-
	Annual Interest Cost on New Drawdowns	29	29	28	36	30	25	17	27	17	8	18	13	0	(6)	(22)	(23)	(33)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	-	-	-
	Annual Interest Cost on Opening Balance	-	116	238	365	529	676	811	923	1,078	1,200	1,293	1,434	1,560	1,640	1,700	1,696	1,690	1,643	1,560	1,472	1,380	1,284	1,182	1,076	963	846	722	591	454	310	159	0	0	0	
	Total Annual Interest Cost	29	145	266	401	559	701	828	950	1,095	1,208	1,312	1,447	1,560	1,634	1,677	1,673	1,657	1,601	1,518	1,431	1,339	1,242	1,141	1,034	922	804	680	550	413	269	118	0	0	0	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,296	4,703	7,215	10,480	13,387	16,052	18,275	21,336	23,752	25,596	28,377	30,873	32,465	33,638	33,568	33,451	32,514	30,868	29,138	27,320	25,409	23,400	21,288	19,068	16,735	14,282	11,704	8,994	6,145	3,150	2	3	3	
	Interest Cost - Feb14 Option 1, 30-yr	*57*	*175*	*297*	*441*	*595*	*734*	*856*	*988*	*1,125*	*1,231*	*1,346*	*1,478*	*1,580*	*1,649*	*1,676*	*1,672*	*1,645*	*1,581*	*1,497*	*1,408*	*1,315*	*1,217*	*1,115*	*1,007*	*893*	*774*	*648*	*516*	*378*	*232*	*79*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,296	4,703	7,215	10,480	13,387	16,052	18,275	21,336	23,752	25,596	28,377	30,873	32,465	33,638	33,568	33,451	32,514	30,868	29,138	27,320	25,409	23,400	21,288	19,068	16,735	14,282	11,704	8,994	6,145	3,150	2	3	3	3	
Fiscal Exposure - Average Debt Drawdown		2,296	2,407	2,512	3,265	2,907	2,665	2,223	3,062	2,416	1,844	2,780	2,496	1,592	1,173	-70	-117	-937	-1,646	-1,730	-1,818	-1,911	-2,009	-2,112	-2,220	-2,333	-2,453	-2,578	-2,710	-2,849	-2,995	-3,148	0	0	0	





Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,559	1,619	1,674	2,356	2,060	1,772	1,286	2,046	1,355	733	1,578	1,228	271	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,415	-1,488	-1,564	-1,644	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0	
			37	38	40	56	49	42	31	49	32	17	38	29	6	-5	-18	-19	-19	-20	-21	-23	-24	-25	-26	-28	-29	-30	-32	-34	-35	-37	-39	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,356	999	17,883
Equal Monthly Debt Drawdown	2,412	994	

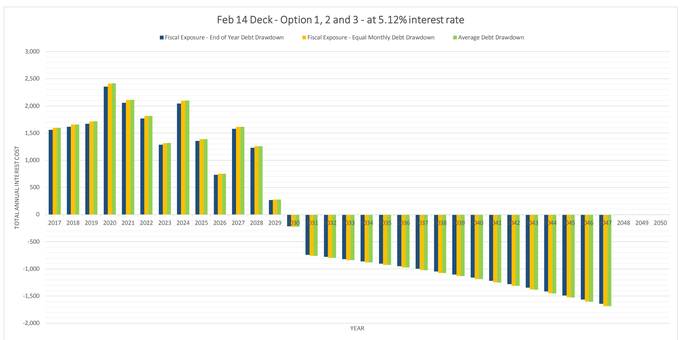
	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,534	2029	13,503
Equal Monthly Debt Drawdown	19,999		

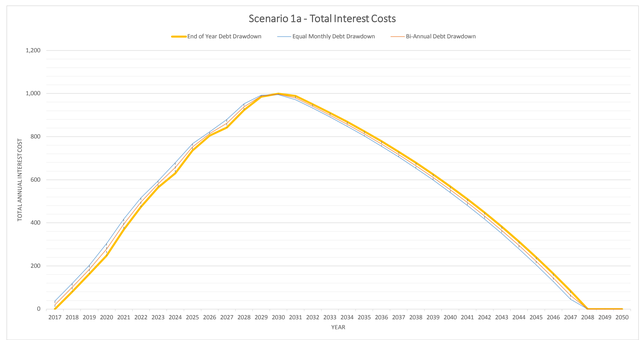
Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
a	Debt, Beginning of Year	0	1,559	3,177	4,851	7,207	9,266	11,039	12,324	14,370	15,725	16,458	18,035	19,264	19,534	19,317	18,577	17,799	16,982	16,122	15,219	14,269	13,271	12,222	11,119	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1	2	2	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*80*	*163*	*248*	*369*	*474*	*565*	*631*	*735*	*805*	*842*	*923*	*986*	*999*	*988*	*950*	*911*	*869*	*825*	*779*	*730*	*679*	*625*	*569*	*510*	*447*	*382*	*313*	*240*	*164*	*84*	*0*	*0*	*0*	17,883
b	Additional GA Debt Drawdown, End of Year	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,559	3,177	4,851	7,207	9,266	11,039	12,324	14,370	15,725	16,458	18,035	19,264	19,534	19,317	18,577	17,799	16,982	16,122	15,219	14,269	13,271	12,222	11,119	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1	2	2	2	
			TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	7,818	7,078	6,300	5,483	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,697	3,210	1,646	1	2	2	2	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,842	12,461	12,390	13,125	13,431	12,716	11,499	11,499	11,499	11,499	11,499	10,595	9,646	8,648	7,598	6,495	5,336	4,117	2,836	1,490	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	7,818	8,806	9,757	10,667	11,536	12,361	13,140	13,870	14,549	15,174	15,743	16,252	16,700	17,081	17,394	17,634	17,798	17,883				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,842	12,461	12,390	13,125	13,431	12,716	11,499	9,771	8,042	6,314	4,586	2,858	1,129	-599	-2,327	-4,055	-5,784	-7,512	-9,240	-10,968	-12,696	-14,425	-16,153	-17,881				
Fiscal Exposure - End of Year Debt Drawdown		1,559	1,619	1,674	2,356	2,060	1,772	1,286	2,046	1,355	733	1,578	1,228	271	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,415	-1,488	-1,564	-1,644	0	0	0	

Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,019	18,223	17,385	16,506	15,581	14,609	13,587	12,512	11,383	10,196	8,948	7,637	6,258	4,809	3,286	1,685	2	2	2	
994	*Interest Cost - Feb14 Option 1, 30-yr*	*37*	*118*	*202*	*304*	*418*	*516*	*595*	*679*	*767*	*822*	*880*	*952*	*992*	*994*	*971*	*932*	*891*	*848*	*803*	*756*	*706*	*654*	*599*	*541*	*481*	*417*	*350*	*279*	*205*	*127*	*45*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,019	18,223	17,385	16,506	15,581	14,609	13,587	12,512	11,383	10,196	8,948	7,637	6,258	4,809	3,286	1,685	2	2	2	2	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0	
	Monthly Drawdown	130	128	126	176	141	108	60	118	52	(6)	61	25	(60)	(101)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	-	-	-	
	FV of Monthly Drawdown at 5%	1,596	1,575	1,548	2,157	1,731	1,329	738	1,449	635	(74)	753	313	(732)	(1,246)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	-	-	-	
	Annual Interest Cost on New Drawdowns	37	37	36	50	40	31	17	34	15	(2)	17	7	(17)	(29)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	-	-	-	
	Annual Interest Cost on Opening Balance	-	82	166	254	377	485	578	646	753	824	862	945	1,009	1,023	1,012	973	932	889	844	797	747	695	640	582	522	458	391	320	246	168	86	0	0	0	
	Total Annual Interest Cost	37	118	202	304	418	516	595	679	767	822	880	952	992	994	971	932	891	848	803	756	706	654	599	541	481	417	350	279	205	127	45	0	0	0	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,815	18,027	17,199	16,328	15,413	14,452	13,441	12,378	11,261	10,087	8,852	7,555	6,191	4,758	3,251	1,667	1	2	2	
	Interest Cost - Feb14 Option 1, 30-yr	*20*	*100*	*184*	*278*	*395*	*497*	*581*	*657*	*753*	*814*	*862*	*938*	*989*	*997*	*979*	*940*	*900*	*858*	*813*	*766*	*717*	*666*	*611*	*554*	*494*	*431*	*364*	*295*	*221*	*144*	*63*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,815	18,027	17,199	16,328	15,413	14,452	13,441	12,378	11,261	10,087	8,852	7,555	6,191	4,758	3,251	1,667	1	2	2	2	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,579	1,639	1,696	2,386	2,086	1,795	1,302	2,072	1,372	742	1,598	1,244	274	-220	-749	-788	-828	-870	-915	-962	-1,011	-1,063	-1,117	-1,174	-1,234	-1,297	-1,364	-1,434	-1,507	-1,584	-1,665	0	0	0	
	Bi-Annual Drawdown	779	769	756	1,054	845	649	361	708	310	(36)	368	153	(358)	(608)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,579	1,558	1,531	2,134	1,713	1,315	730	1,433	628	(73)	745	310	(724)	(1,232)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	-	-	-	
	Annual Interest Cost on New Drawdowns	20	20	19	27	22	17	9	18	8	(1)	9	4	(9)	(16)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	-	-	-	
	Annual Interest Cost on Opening Balance	-	81	165	251	373	480	572	639	745	815	853	935	998	1,012	1,001	963	922	880	835	789	739	688	633	576	516	453	387	317	243	166	85	0	0	0	
	Total Annual Interest Cost	20	100	184	278	395	497	581	657	753	814	862	938	989	997	979	940	900	858	813	766	717	666	611	554	494	431	364	295	221	144	63	0	0	0	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,599	3,258	4,975	7,391	9,504	11,321	12,640	14,738	16,128	16,879	18,497	19,757	20,034	19,811	19,052	18,254	17,416	16,535	15,608	14,634	13,610	12,534	11,403	10,214	8,964	7,650	6,269	4,818	3,292	1,688	2	2	2	
	Interest Cost - Feb14 Option 1, 30-yr	*40*	*121*	*205*	*308*	*421*	*519*	*598*	*683*	*770*	*823*	*882*	*954*	*992*	*994*	*969*	*931*	*890*	*847*	*802*	*754*	*704*	*652*	*597*	*539*	*478*	*414*	*347*	*277*	*202*	*124*	*42*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,599	3,258	4,975	7,391	9,504	11,321	12,640	14,738	16,128	16,879	18,497	19,757	20,034	19,811	19,052	18,254	17,416	16,535	15,608	14,634	13,610	12,534	11,403	10,214	8,964	7,650	6,269	4,818	3,292	1,688	2	2	2	2	
Fiscal Exposure - Average Debt Drawdown		1,599	1,660	1,717	2,416	2,112	1,817	1,319	2,098	1,390	751	1,618	1,260	277	-223	-759	-798	-839	-881	-927	-974	-1,024	-1,076	-1,131	-1,189	-1,250	-1,314	-1,381	-1,452	-1,526	-1,604	-1,686	0	0	0	





Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_3_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	
			34	38	36	36	34	34	35	36	36	35	35	34	23	16	12	7	0	-14	-29	-36	-38	-42	-39	-36	-34	-32	-27	-18	-6	-1	0	3	3	3	142

		Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	1,606		1,040	19,498
Equal Monthly Debt Drawdown	1,644		1,040	

	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	20,326	2033	12,862
Equal Monthly Debt Drawdown	20,809		

Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
a	Debt, Beginning of Year	0	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*74*	*156*	*234*	*312*	*385*	*459*	*534*	*612*	*690*	*766*	*842*	*915*	*964*	*999*	*1,024*	*1,039*	*1,040*	*1,011*	*949*	*872*	*791*	*701*	*617*	*540*	*468*	*400*	*341*	*303*	*290*	*288*	*288*	*293*	*299*	19,498
b	Additional GA Debt Drawdown, End of Year	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,430	7,736	7,749	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,577	12,577	12,577	12,577	11,371	9,872	8,285	6,516	4,884	3,378	1,966	633	-506	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,943	8,967	10,006	11,046	12,057	13,006	13,878	14,669	15,370	15,987	16,527	16,995	17,395	17,736	18,040	18,330	18,618				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,064	11,345	10,319	8,710	6,493	4,045	1,586	-974	-3,307	-5,431	-7,383	-9,184	-10,721	-11,807	-12,362	-12,696	-12,994				
Fiscal Exposure - End of Year Debt Drawdown		1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	

Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	
1,040	*Interest Cost - Feb14 Option 1, 30-yr*	*34*	*112*	*192*	*270*	*346*	*420*	*494*	*570*	*649*	*726*	*802*	*876*	*938*	*980*	*1,010*	*1,031*	*1,040*	*1,026*	*982*	*913*	*835*	*749*	*662*	*581*	*507*	*436*	*373*	*324*	*297*	*289*	*288*	*290*	*296*	*302*	19,640
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	6,102	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	

	Monthly Drawdown	121	128	114	108	93	88	84	83	76	66	60	47	4	(24)	(43)	(60)	(85)	(134)	(185)	(204)	(205)	(213)	(194)	(177)	(163)	(150)	(128)	(90)	(46)	(28)	(25)	(15)	(15)	(15)	
	FV of Monthly Drawdown at 5%	1,482	1,568	1,398	1,326	1,137	1,086	1,028	1,024	929	815	742	580	54	(292)	(525)	(736)	(1,050)	(1,648)	(2,269)	(2,506)	(2,517)	(2,621)	(2,389)	(2,174)	(1,999)	(1,844)	(1,574)	(1,111)	(568)	(342)	(306)	(185)	(184)	(188)	
	Annual Interest Cost on New Drawdowns	34	36	32	31	26	25	24	24	22	19	17	13	1	(7)	(12)	(17)	(24)	(38)	(53)	(58)	(58)	(61)	(55)	(51)	(46)	(43)	(37)	(26)	(13)	(8)	(7)	(4)	(4)	(4)	
	Annual Interest Cost on Opening Balance	-	76	160	240	320	394	470	547	627	707	784	863	936	987	1,023	1,048	1,064	1,065	1,035	972	893	810	717	632	553	479	409	350	311	297	295	295	300	306	
	Total Annual Interest Cost	34	112	192	270	346	420	494	570	649	726	802	876	938	980	1,010	1,031	1,040	1,026	982	913	835	749	662	581	507	436	373	324	297	289	288	290	296	302	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	
	Interest Cost - Feb14 Option 1, 30-yr	*19*	*95*	*176*	*254*	*331*	*404*	*478*	*554*	*632*	*709*	*785*	*861*	*927*	*973*	*1,005*	*1,028*	*1,039*	*1,033*	*995*	*930*	*852*	*769*	*680*	*598*	*522*	*451*	*385*	*332*	*300*	*290*	*288*	*289*	*295*	*301*	19,575
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	6,037	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,466	1,626	1,541	1,549	1,441	1,465	1,482	1,554	1,539	1,505	1,510	1,427	979	687	492	309	13	-577	-1,221	-1,518	-1,607	-1,792	-1,653	-1,525	-1,430	-1,350	-1,153	-753	-255	-44	-10	109	115	117	

	Bi-Annual Drawdown	724	766	683	648	555	530	502	500	454	398	363	283	26	(143)	(256)	(359)	(513)	(805)	(1,108)	(1,224)	(1,229)	(1,280)	(1,167)	(1,062)	(976)	(900)	(769)	(543)	(278)	(167)	(149)	(90)	(90)	(92)	
	FV of Bi-Annual Drawdown at 5%	1,466	1,551	1,383	1,312	1,125	1,075	1,017	1,013	919	806	735	573	53	(289)	(519)	(728)	(1,039)	(1,630)	(2,245)	(2,479)	(2,490)	(2,593)	(2,363)	(2,150)	(1,977)	(1,824)	(1,557)	(1,099)	(562)	(338)	(302)	(183)	(182)	(186)	
	Annual Interest Cost on New Drawdowns	19	20	17	17	14	14	13	13	12	10	9	7	1	(4)	(7)	(9)	(13)	(21)	(28)	(31)	(31)	(33)	(30)	(27)	(25)	(23)	(20)	(14)	(7)	(4)	(4)	(2)	(2)	(2)	
	Annual Interest Cost on Opening Balance	-	75	158	237	316	390	465	541	620	699	776	853	926	976	1,012	1,037	1,053	1,053	1,024	961	884	801	710	625	547	474	405	346	307	294	292	291	297	303	
	Total Annual Interest Cost	19	95	176	254	331	404	478	554	632	709	785	861	927	973	1,005	1,028	1,039	1,033	995	930	852	769	680	598	522	451	385	332	300	290	288	289	295	301	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	
	Interest Cost - Feb14 Option 1, 30-yr	*37*	*115*	*195*	*273*	*349*	*422*	*497*	*573*	*651*	*728*	*804*	*879*	*939*	*981*	*1,011*	*1,031*	*1,040*	*1,025*	*980*	*911*	*832*	*746*	*659*	*579*	*504*	*434*	*371*	*322*	*297*	*289*	*288*	*290*	*296*	*302*	19,651
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	6,113	
Fiscal Exposure - Average Debt Drawdown		1,484	1,647	1,561	1,569	1,459	1,483	1,500	1,573	1,559	1,524	1,530	1,445	992	696	498	313	14	-585	-1,237	-1,537	-1,627	-1,814	-1,674	-1,545	-1,448	-1,367	-1,167	-763	-258	-44	-10	110	116	119	

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest ra

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest ra

IESO GA cost forecast + extrapolation

Scenario
Option 1

Option 2

ate	2017	2018	2019	2020
ate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	2200	4600	7000	10200

Total Accumulated Debt ($ billion)	2.2	4.6	7	10.2
	2,200	4,600	7,000	10,200

Total Accumulated Debt ($ billion)	1.6	3.2	4.9	7.2
	1,600	3,200	4,900	7,200

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
13100	15700	17800	20800	23200	25000	27700	30100

13.1 15.7 17.8 20.8 23.2 25 27.7 30.1
13,100 15,700 17,800 20,800 23,200 25,000 27,700 30,100

9.3 11 12.3 14.4 15.7 16.5 18 19.3
9,300 11,000 12,300 14,400 15,700 16,500 18,000 19,300

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
31700	32800	32700	32600	31700	30100	28400	26600

31.7	32.8	32.7	32.6	31.7	30.1	28.4	26.6
31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600

19.5	19.3	18.6	17.8	17	16.1	15.2	14.3
19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
24800	22800	20800	18600	16300	13900	11400	8800

24.8	22.8	20.8	18.6	16.3	13.9	11.4	8.8
24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800

13.3	12.2	11.1	10	8.7	7.5	6.1	4.7
13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	2046	2047	2048	2049	2050
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
6000	3100	0	0	0	0

6 3.1 0 0
6,000 3,100 - -

3.2 1.6 0 0
3,200 1,600 - -

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb9_1_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,200	2,400

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	550	2,250

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $33 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb9_2_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,600	1,600

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	400	1,600

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,169	4,668

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	545	2,203

Actuals are subject to actual prices and actual interest rates.

#N/A

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542

Fiscalized[3]	2016-17	2017-18
Start: January 1st	375	1,510

Actuals are subject to actual prices and actual interest rates.

#N/A

Rough		
	1	
	2	
	3	
	4 April	4
	5 May	5
	6 June	6
	7 July	7
	8 August	8
	9 September	9
	10 October	10
	11 November	11
	12 December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	400 - 550	1,600 - 2,250

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	550	2250
Debt-Finance Global Adjustment Costs, Option 1a	400	1600
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**550**	**2490**
Total, B	400	1840
Proposed Program Total:	400 - 550	1,840 - 2,490

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1
Scenario 2

2019	2020	2021	2022
2,400	3,200	2,900	2,600

2018-19	2019-20	2020-21	2021-2022
2,400	2,600	3,125	2,825

2030.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,700	2,300	2,100	1,700

2018-19	2019-20	2020-21	2021-2022
1,625	1,850	2,250	2,000

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
4,589	5,867	5,031	4,861

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988

› depend on decision on accounting treatment.

2019	2020	2021	2022
2,353	3,072	2,817	2,580

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757

2019	2020	2021	2022
1,578	2,243	1,931	1,635

2018-19	2019-20	2020-21	2021-2022
1,551	1,745	2,165	1,857



2018-19	2019-20	2020-21	2021-2022
1,625 - 2,400	1,850 - 2,600	2,250 - 3,125	2,000 - 2,825

/1

2018-19[1]	2019-20[1]	2020-21[1]
2400	2600	3125
1625	1850	2250
225	279	323
60	60	60
18	18	18
2703	**2957**	**3526**
1928	2207	2651

1,928 - 2,703 2,207 - 2,957 2,651 - 3,526

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
21,601	30,211	32,800	occurs in Year 2030
13,466	17,886	19,500	occurs in Year 2029
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!

2,200

Tab Name
Feb9_1_30yr
Feb9_2_30yr

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Feb9_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0	
			52	57	57	76	69	62	50	71	57	43	64	57	38	26	-2	-2	-21	-38	-40	-43	-43	-48	-48	-52	-55	-57	-59	-62	-67	-69	-74	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,200	1,678	30,211
Equal Monthly Debt Drawdown	3,276	1,676	

		Feb9 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,800	2030	21,601	
Equal Monthly Debt Drawdown	33,580			

Feb9 1, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
	($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
a	Debt, Beginning of Year	0	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	
c = a*5%	*Interest Cost - Feb9 1, 30-yr - End of Year Debt Drowdown*	*0*	*113*	*235*	*358*	*522*	*670*	*803*	*911*	*1,064*	*1,187*	*1,279*	*1,417*	*1,540*	*1,622*	*1,678*	*1,673*	*1,668*	*1,622*	*1,540*	*1,453*	*1,361*	*1,269*	*1,166*	*1,064*	*952*	*834*	*711*	*583*	*450*	*307*	*159*	*0*	*0*	*0*	30,211
b	Additional GA Debt Drawdown, End of Year	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	0
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	11,621	11,521	10,621	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	8,800	6,000	3,100	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	21,079	21,079	21,079	21,079	19,379	17,579	15,779	13,779	11,779	9,579	7,279	4,879	2,379	0	0	0	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	13,399	15,072	16,740	18,362	19,902	21,355	22,716	23,985	25,151	26,215	27,167	28,001	28,712	29,295	29,746	30,052	30,211				
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	19,301	17,528	14,960	11,738	8,498	5,245	2,084	-1,185	-4,351	-7,615	-10,867	-14,101	-17,312	-20,495	-23,746	-26,952	-30,211				
Fiscal Exposure - End of Year Debt Drawdown		2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0	

Feb9 1, 30-yr — Equal Monthly Debt Drawdown

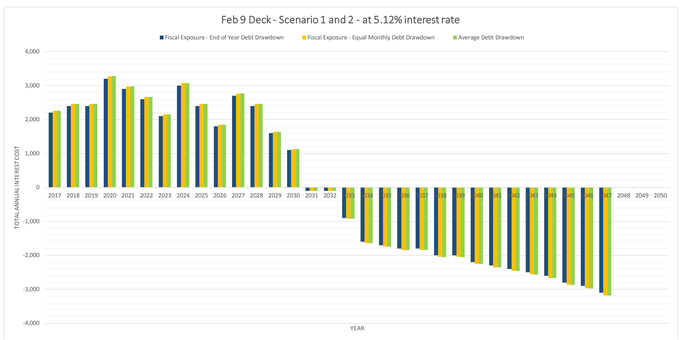
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
	1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
	($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	
1,676	*Interest Cost - Feb9 1, 30-yr*	*52*	*170*	*292*	*434*	*591*	*732*	*853*	*982*	*1,121*	*1,230*	*1,343*	*1,474*	*1,578*	*1,648*	*1,676*	*1,671*	*1,646*	*1,584*	*1,500*	*1,410*	*1,318*	*1,221*	*1,119*	*1,012*	*897*	*777*	*652*	*521*	*384*	*238*	*85*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0	
	Monthly Drawdown	183	191	180	237	198	161	108	174	111	51	118	82	5	(43)	(148)	(148)	(214)	(268)	(270)	(271)	(263)	(272)	(264)	(272)	(271)	(269)	(268)	(265)	(271)	(267)	(272)	-	-	-	
	FV of Monthly Drawdown at 5%	2,252	2,342	2,216	2,909	2,435	1,976	1,328	2,139	1,368	628	1,455	1,006	61	(534)	(1,820)	(1,815)	(2,629)	(3,298)	(3,317)	(3,330)	(3,236)	(3,347)	(3,242)	(3,342)	(3,329)	(3,311)	(3,288)	(3,259)	(3,328)	(3,283)	(3,336)	-	-	-	
	Annual Interest Cost on New Drawdowns	52	54	51	68	57	46	31	50	32	15	34	23	1	(12)	(42)	(42)	(61)	(77)	(77)	(77)	(75)	(78)	(75)	(78)	(77)	(76)	(76)	(76)	(77)	(76)	(78)	-	-	-	
	Annual Interest Cost on Opening Balance	-	115	241	367	534	686	822	932	1,089	1,215	1,309	1,451	1,577	1,660	1,718	1,713	1,708	1,660	1,577	1,488	1,393	1,299	1,194	1,089	974	854	728	597	461	314	162	(0)	(0)	(0)	
	Total Annual Interest Cost	52	170	292	434	591	732	853	982	1,121	1,230	1,343	1,474	1,578	1,648	1,676	1,671	1,646	1,584	1,500	1,410	1,318	1,221	1,119	1,012	897	777	652	521	384	238	85	(0)	(0)	(0)	

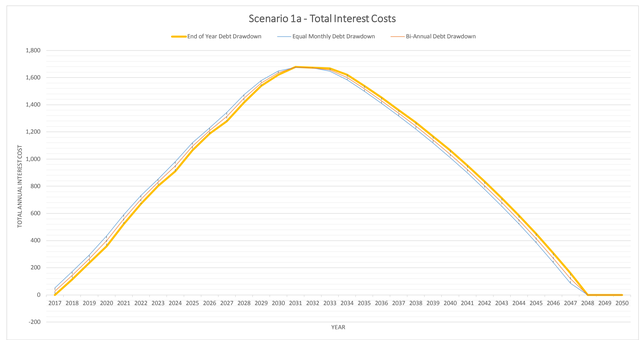
Feb9 1, 30-yr — Bi-Annual Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
	1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
	($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*28*	*143*	*266*	*399*	*559*	*703*	*830*	*949*	*1,095*	*1,210*	*1,314*	*1,448*	*1,560*	*1,636*	*1,677*	*1,672*	*1,656*	*1,601*	*1,518*	*1,430*	*1,338*	*1,243*	*1,141*	*1,036*	*922*	*803*	*679*	*550*	*414*	*270*	*119*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,228	2,431	2,431	3,241	2,937	2,633	2,127	3,038	2,431	1,823	2,735	2,431	1,620	1,114	-101	-101	-912	-1,620	-1,722	-1,823	-1,823	-2,026	-2,026	-2,228	-2,329	-2,431	-2,532	-2,633	-2,836	-2,937	-3,140	0	0	0	
	Bi-Annual Drawdown	1,100	1,144	1,082	1,421	1,189	965	648	1,045	668	307	710	491	30	(261)	(889)	(886)	(1,284)	(1,611)	(1,620)	(1,626)	(1,580)	(1,634)	(1,583)	(1,632)	(1,626)	(1,617)	(1,606)	(1,592)	(1,625)	(1,603)	(1,629)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,228	2,317	2,192	2,878	2,409	1,954	1,313	2,116	1,353	621	1,439	995	61	(529)	(1,801)	(1,796)	(2,601)	(3,263)	(3,281)	(3,295)	(3,201)	(3,311)	(3,207)	(3,306)	(3,293)	(3,275)	(3,252)	(3,224)	(3,292)	(3,248)	(3,300)	-	-	-	
	Annual Interest Cost on New Drawdowns	28	29	28	36	30	25	17	27	17	8	18	13	1	(7)	(23)	(23)	(33)	(41)	(41)	(42)	(40)	(42)	(41)	(42)	(42)	(41)	(41)	(41)	(42)	(41)	(42)	-	-	-	
	Annual Interest Cost on Opening Balance	-	114	238	363	529	679	814	922	1,078	1,202	1,295	1,435	1,560	1,643	1,700	1,694	1,689	1,643	1,560	1,472	1,378	1,285	1,181	1,078	964	845	720	591	456	311	161	0	0	0	
	Total Annual Interest Cost	28	143	266	399	559	703	830	949	1,095	1,210	1,314	1,448	1,560	1,636	1,677	1,672	1,656	1,601	1,518	1,430	1,338	1,243	1,141	1,036	922	803	679	550	414	270	119	0	0	0	

Feb9 1, 30-yr — Average Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
	($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*56*	*174*	*297*	*440*	*596*	*737*	*857*	*987*	*1,126*	*1,233*	*1,348*	*1,479*	*1,581*	*1,650*	*1,676*	*1,670*	*1,645*	*1,581*	*1,496*	*1,407*	*1,315*	*1,218*	*1,115*	*1,008*	*893*	*773*	*647*	*517*	*379*	*233*	*79*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		2,256	2,461	2,461	3,282	2,974	2,667	2,154	3,077	2,461	1,846	2,769	2,461	1,641	1,128	-103	-103	-923	-1,641	-1,743	-1,846	-1,846	-2,051	-2,051	-2,256	-2,359	-2,461	-2,564	-2,667	-2,872	-2,974	-3,179	0	0	0	





Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Feb9_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0
			38	38	40	55	50	40	31	50	31	19	36	31	5	-5	-17	-19	-19	-21	-21	-21	-24	-26	-26	-26	-31	-29	-33	-33	-36	-38	-38	0	0	0

0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,300	998	17,886
Equal Monthly Debt Drawdown	2,355	993	

	Feb9 2, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,500	2029	13,466
Equal Monthly Debt Drawdown	19,964		

Feb9 2, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
a	Debt, Beginning of Year	0	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	
c = a*5%	*Interest Cost - Feb9 2, 30-yr - End of Year Debt Drawdown*	*0*	*82*	*164*	*251*	*368*	*476*	*563*	*629*	*737*	*803*	*844*	*921*	*987*	*998*	*987*	*952*	*911*	*870*	*824*	*778*	*732*	*680*	*624*	*568*	*512*	*445*	*384*	*312*	*240*	*164*	*82*	*0*	*0*	*0*	17,886
b	Additional GA Debt Drawdown, End of Year	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	7,123	6,323	5,523	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,700	3,200	1,600	0	0	0	
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	11,477	11,477	11,477	11,477	10,577	9,677	8,677	7,577	6,477	5,377	4,077	2,877	1,477	0	0	0	0	0	0	0	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	8,810	9,762	10,672	11,542	12,366	13,143	13,875	14,556	15,180	15,748	16,259	16,704	17,088	17,400	17,641	17,804	17,886				
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	9,790	8,038	6,328	4,558	2,834	1,157	-575	-2,356	-4,080	-5,748	-7,559	-9,204	-10,988	-12,700	-14,441	-16,204	-17,886				
Fiscal Exposure - End of Year Debt Drawdown		1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0	

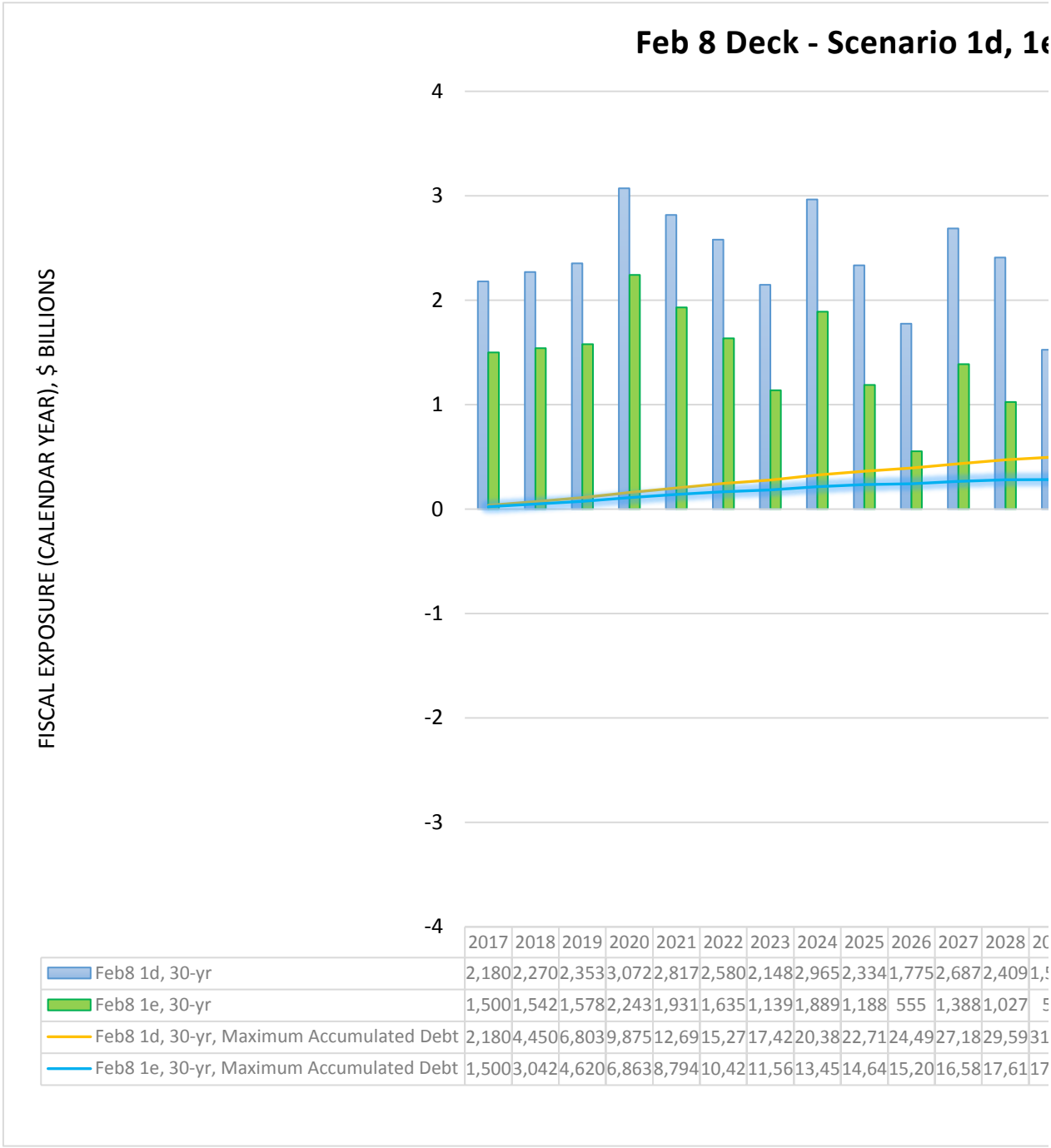
Feb9 2, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	
993	*Interest Cost - Feb9 2, 30-yr*	*38*	*120*	*204*	*305*	*418*	*516*	*594*	*679*	*768*	*822*	*880*	*952*	*992*	*993*	*971*	*933*	*892*	*848*	*802*	*756*	*708*	*654*	*598*	*542*	*481*	*417*	*350*	*279*	*205*	*126*	*44*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0	
	Monthly Drawdown	133	127	128	171	144	102	61	123	47	(0)	55	32	(66)	(100)	(141)	(146)	(143)	(147)	(144)	(140)	(144)	(148)	(144)	(139)	(151)	(137)	(149)	(143)	(145)	(147)	(140)	-	-	-	
	FV of Monthly Drawdown at 5%	1,638	1,554	1,573	2,098	1,773	1,253	755	1,506	577	(3)	671	388	(806)	(1,226)	(1,728)	(1,793)	(1,751)	(1,812)	(1,765)	(1,718)	(1,773)	(1,823)	(1,765)	(1,708)	(1,855)	(1,684)	(1,826)	(1,753)	(1,782)	(1,806)	(1,722)	-	-	-	
	Annual Interest Cost on New Drawdowns	38	36	37	49	41	29	18	35	13	(0)	16	9	(19)	(28)	(40)	(42)	(41)	(42)	(41)	(40)	(41)	(42)	(41)	(40)	(43)	(39)	(42)	(41)	(41)	(42)	(40)	-	-	-	
	Annual Interest Cost on Opening Balance	-	84	168	257	377	487	576	644	754	822	864	943	1,011	1,021	1,011	974	932	890	843	796	749	697	639	581	524	456	393	320	246	168	84	0	0	0	
	Total Annual Interest Cost	38	120	204	305	418	516	594	679	768	822	880	952	992	993	971	933	892	848	802	756	708	654	598	542	481	417	350	279	205	126	44	0	0	0	

Feb9 2, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*20*	*102*	*185*	*280*	*395*	*498*	*579*	*656*	*753*	*813*	*863*	*938*	*990*	*995*	*978*	*941*	*900*	*858*	*812*	*766*	*719*	*666*	*610*	*554*	*495*	*430*	*366*	*294*	*221*	*143*	*61*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,620	1,620	1,722	2,329	2,127	1,722	1,317	2,127	1,317	810	1,519	1,317	203	-203	-709	-810	-810	-912	-912	-912	-1,013	-1,114	-1,114	-1,114	-1,317	-1,215	-1,418	-1,418	-1,519	-1,620	-1,620	0	0	0	
	Bi-Annual Drawdown	800	759	768	1,025	866	612	369	735	282	(2)	328	190	(394)	(599)	(844)	(876)	(855)	(885)	(862)	(839)	(866)	(890)	(862)	(834)	(906)	(823)	(892)	(856)	(870)	(882)	(841)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,620	1,538	1,556	2,076	1,754	1,240	747	1,490	570	(3)	664	384	(797)	(1,213)	(1,709)	(1,774)	(1,733)	(1,792)	(1,746)	(1,699)	(1,754)	(1,803)	(1,746)	(1,689)	(1,835)	(1,666)	(1,807)	(1,734)	(1,763)	(1,786)	(1,703)	-	-	-	
	Annual Interest Cost on New Drawdowns	20	19	20	26	22	16	9	19	7	(0)	8	5	(10)	(15)	(22)	(22)	(22)	(23)	(22)	(21)	(22)	(23)	(22)	(21)	(23)	(21)	(23)	(22)	(22)	(23)	(22)	-	-	-	
	Annual Interest Cost on Opening Balance	-	83	166	254	373	482	570	637	746	814	855	933	1,000	1,010	1,000	964	922	881	834	788	741	689	632	575	518	451	389	316	244	166	83	0	0	0	
	Total Annual Interest Cost	20	102	185	280	395	498	579	656	753	813	863	938	990	995	978	941	900	858	812	766	719	666	610	554	495	430	366	294	221	143	61	0	0	0	

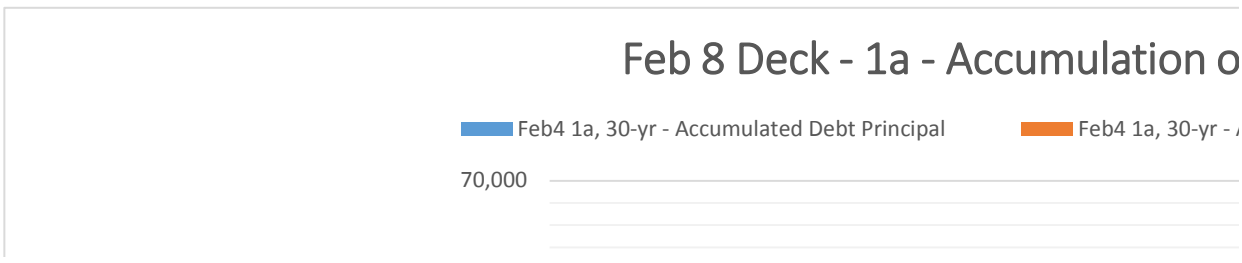
Feb9 2, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*41*	*123*	*207*	*310*	*422*	*519*	*596*	*683*	*770*	*824*	*883*	*954*	*993*	*993*	*970*	*931*	*890*	*847*	*801*	*755*	*706*	*652*	*596*	*540*	*478*	*414*	*348*	*276*	*202*	*123*	*41*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,641	1,641	1,743	2,359	2,154	1,743	1,333	2,154	1,333	820	1,538	1,333	205	-205	-718	-820	-820	-923	-923	-923	-1,026	-1,128	-1,128	-1,128	-1,333	-1,231	-1,436	-1,436	-1,538	-1,641	-1,641	0	0	0	

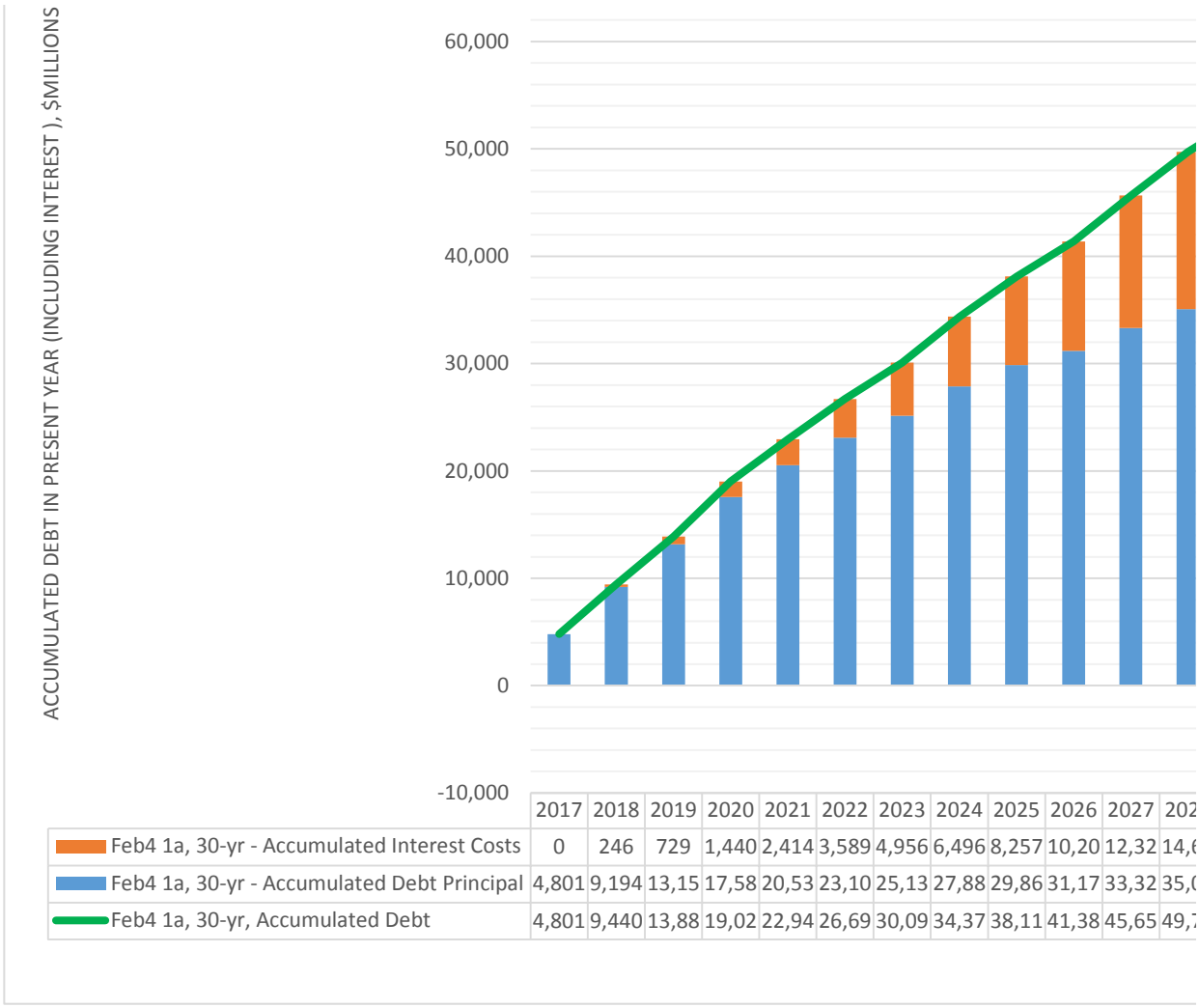
Feb 8 Deck

Feb 8 Deck - Scenario 1d, 1e - at 5.12% interest rate

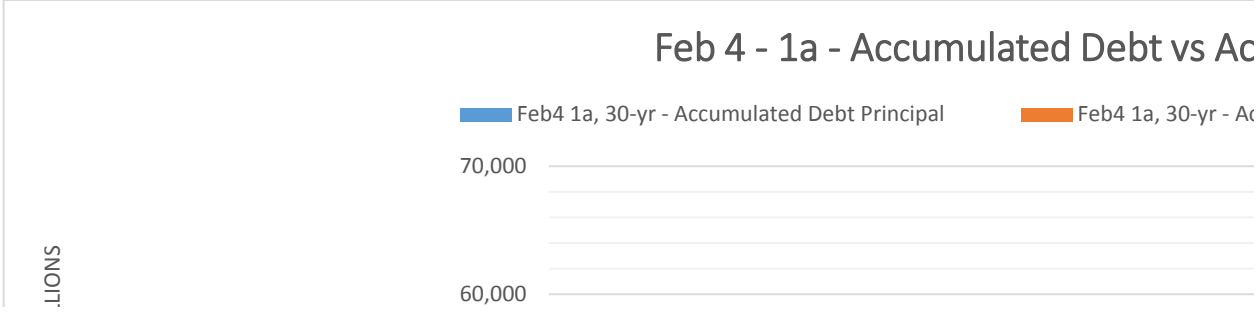


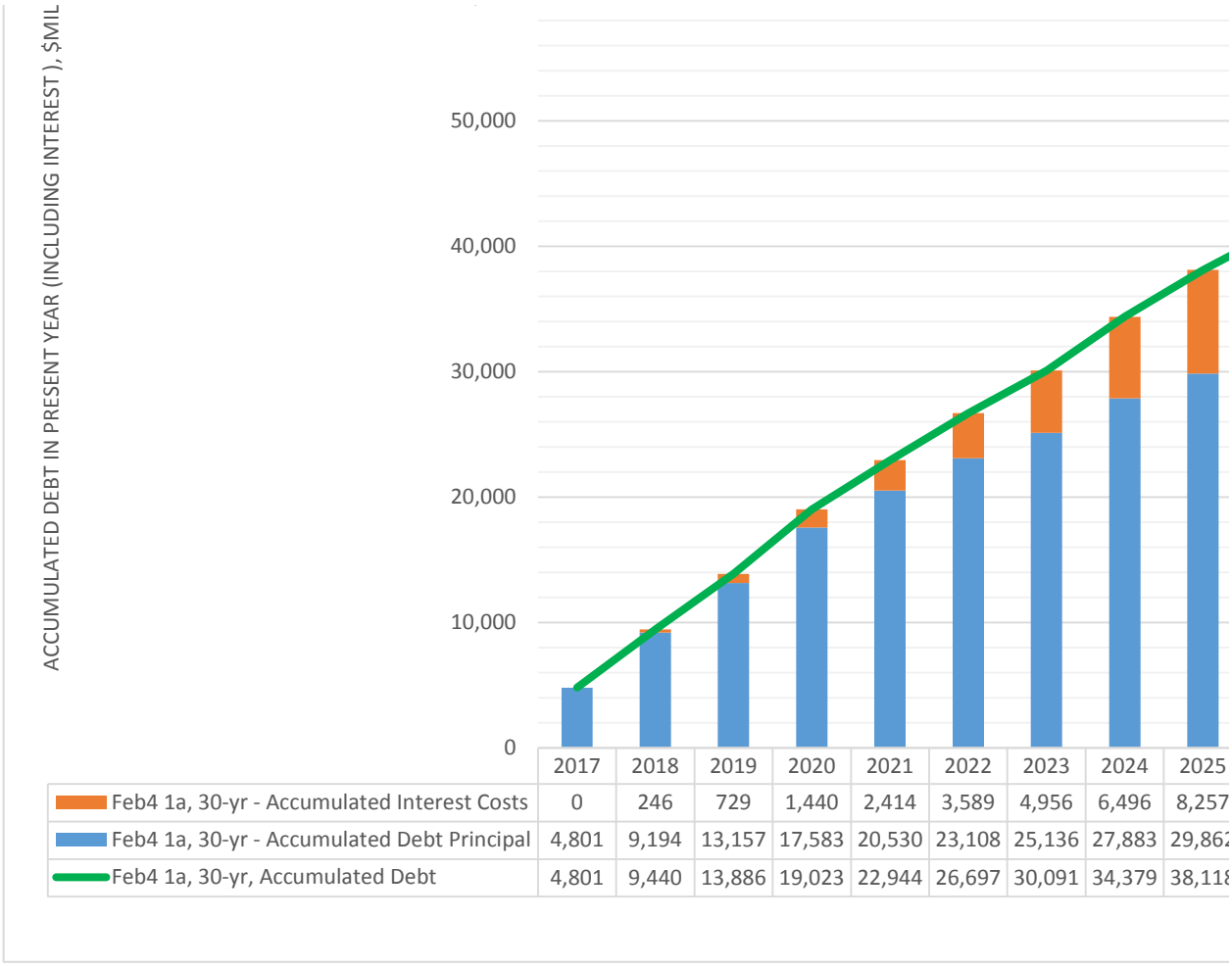
Feb 8 Deck - 1a - Accumulation of Debt (Principal and Interest)



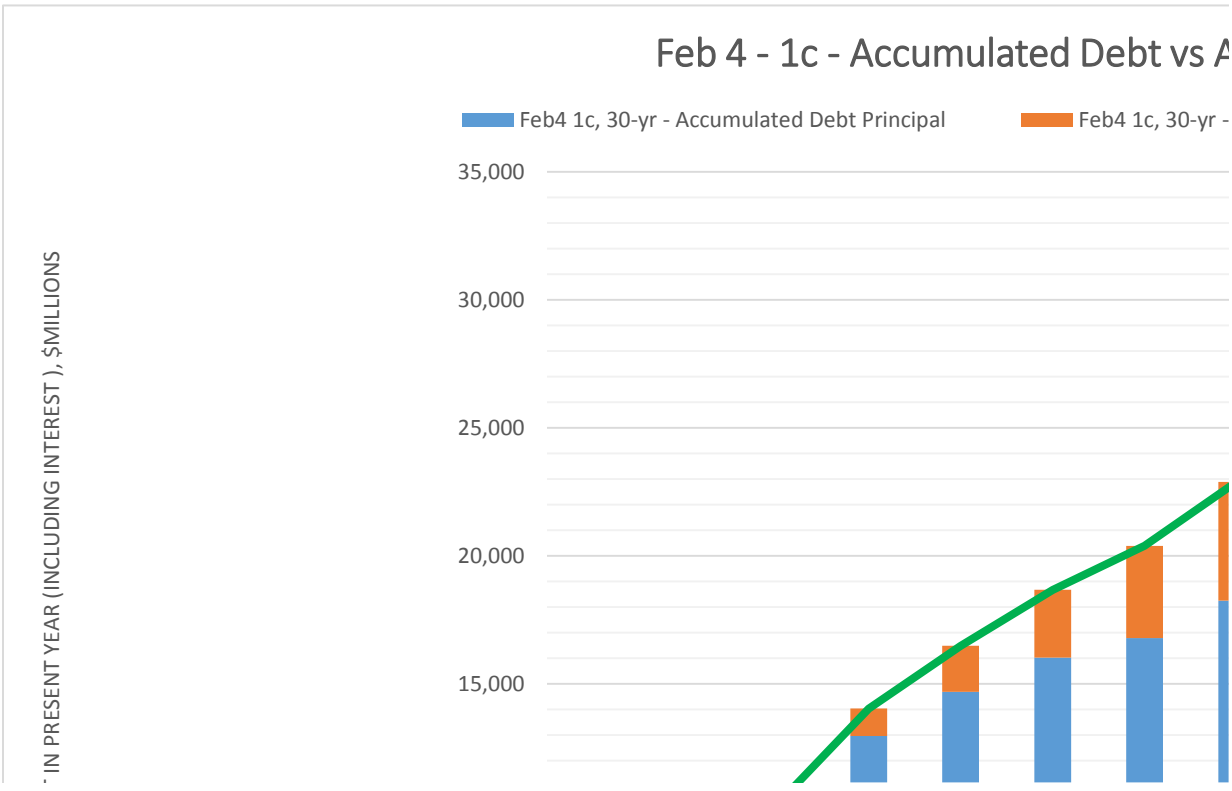


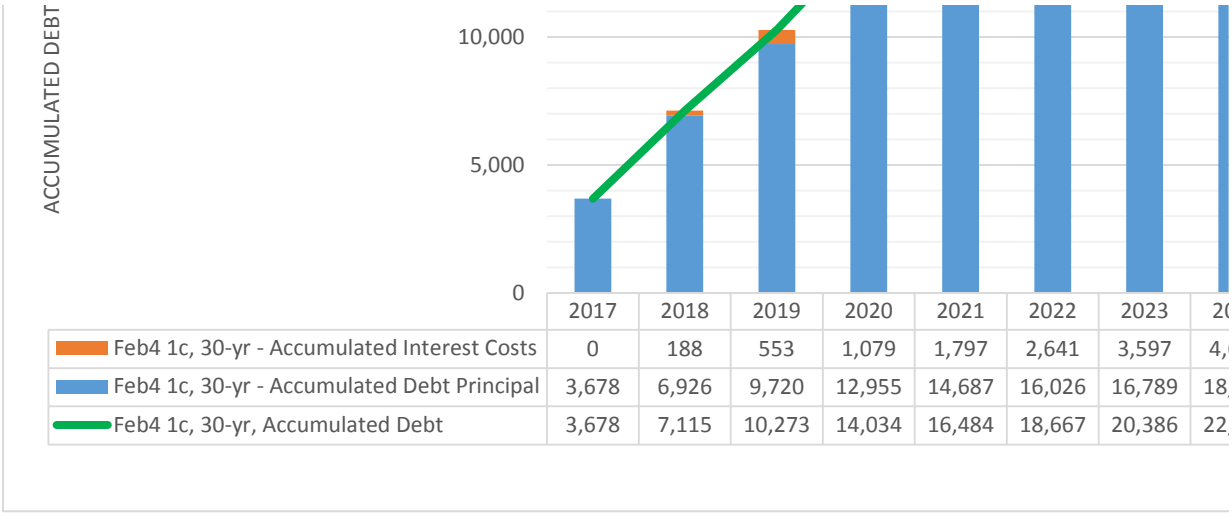
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	202
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,(
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,7



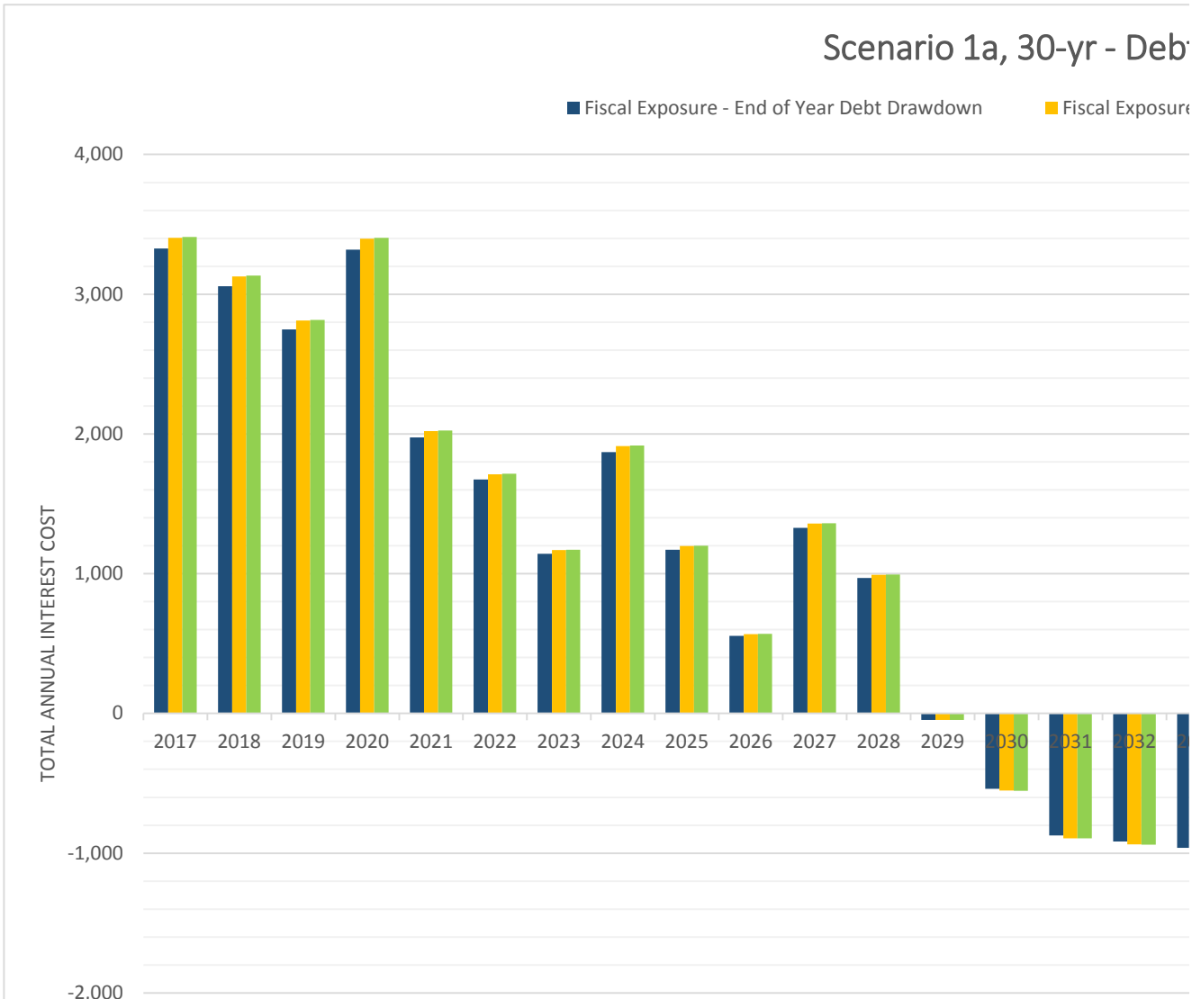


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



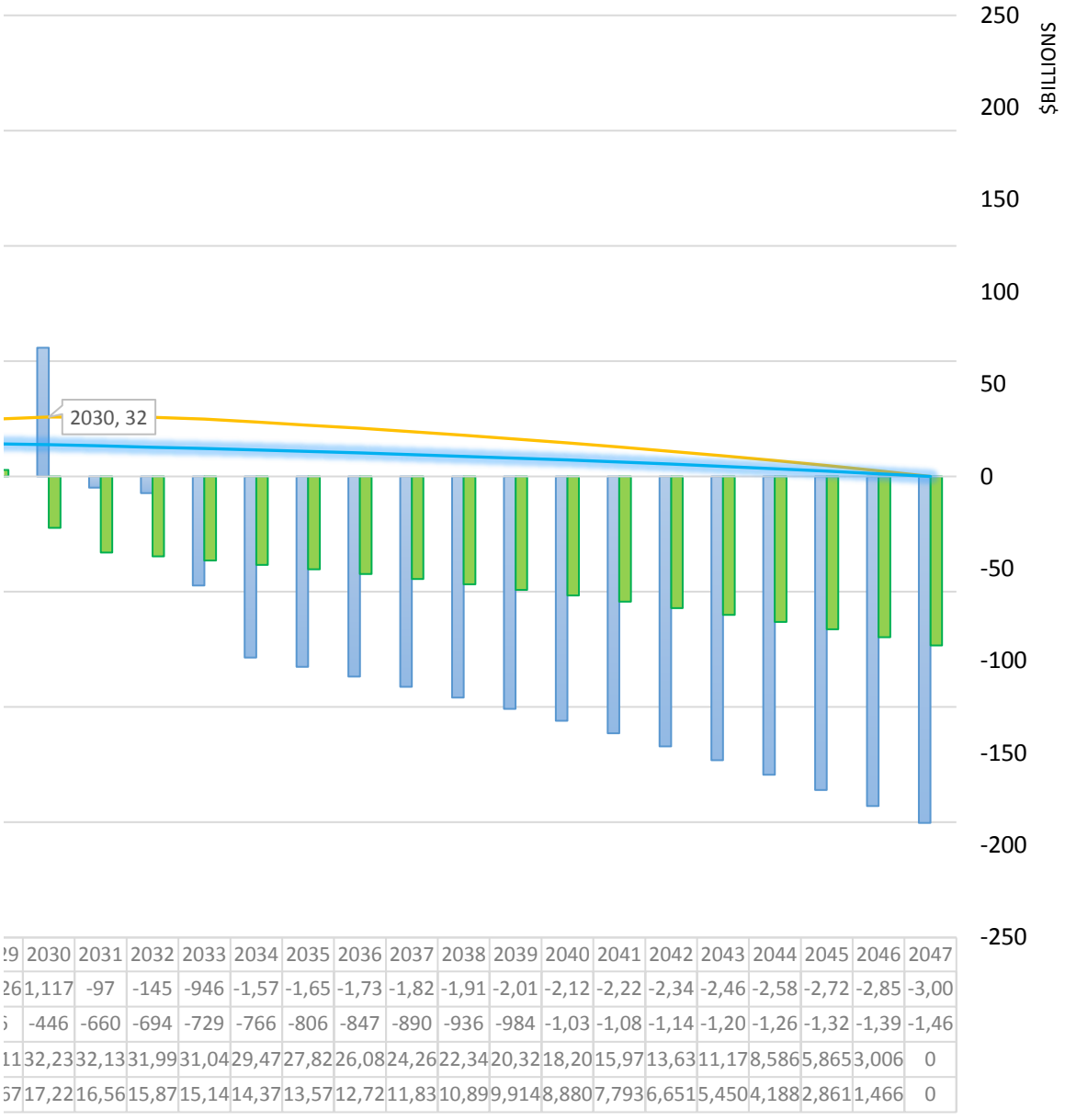


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

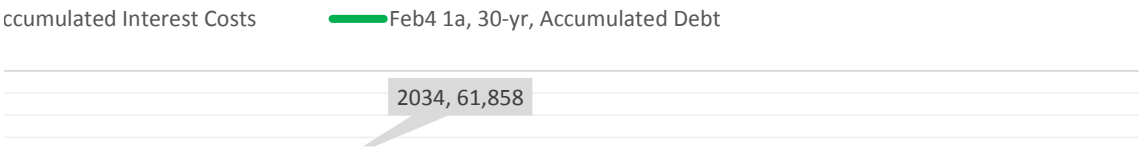
- at 5.12% interest rate

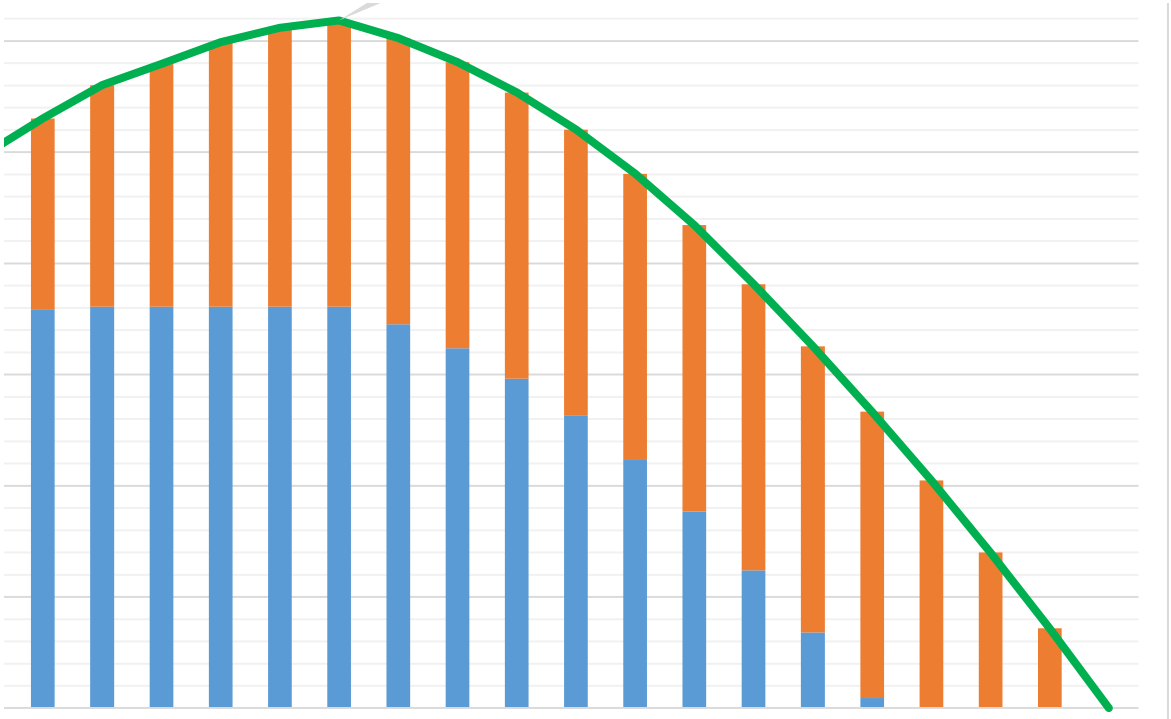


29	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
26	1,117	-97	-145	-946	-1,57	-1,65	-1,73	-1,82	-1,91	-2,01	-2,12	-2,22	-2,34	-2,46	-2,58	-2,72	-2,85	-3,00
5	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,03	-1,08	-1,14	-1,20	-1,26	-1,32	-1,39	-1,46
11	32,23	32,13	31,99	31,04	29,47	27,82	26,08	24,26	22,34	20,32	18,20	15,97	13,63	11,17	8,586	5,865	3,006	0
57	17,22	16,56	15,87	15,14	14,37	13,57	12,72	11,83	10,89	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0

CALENDAR YEAR

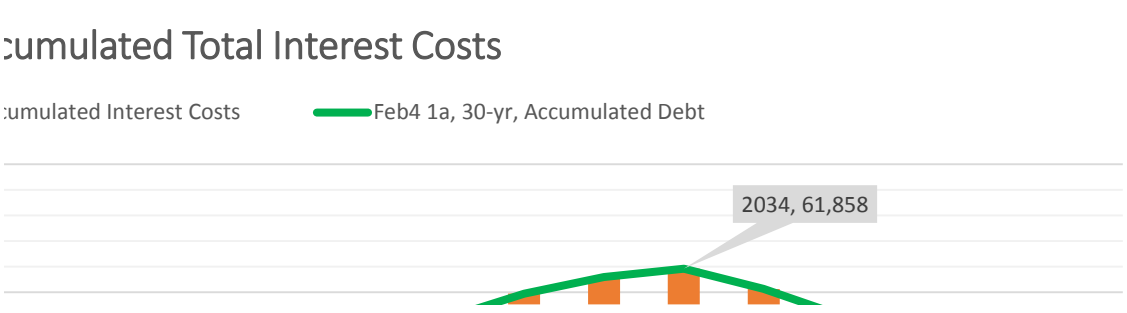
Debt (Principal and Interest)



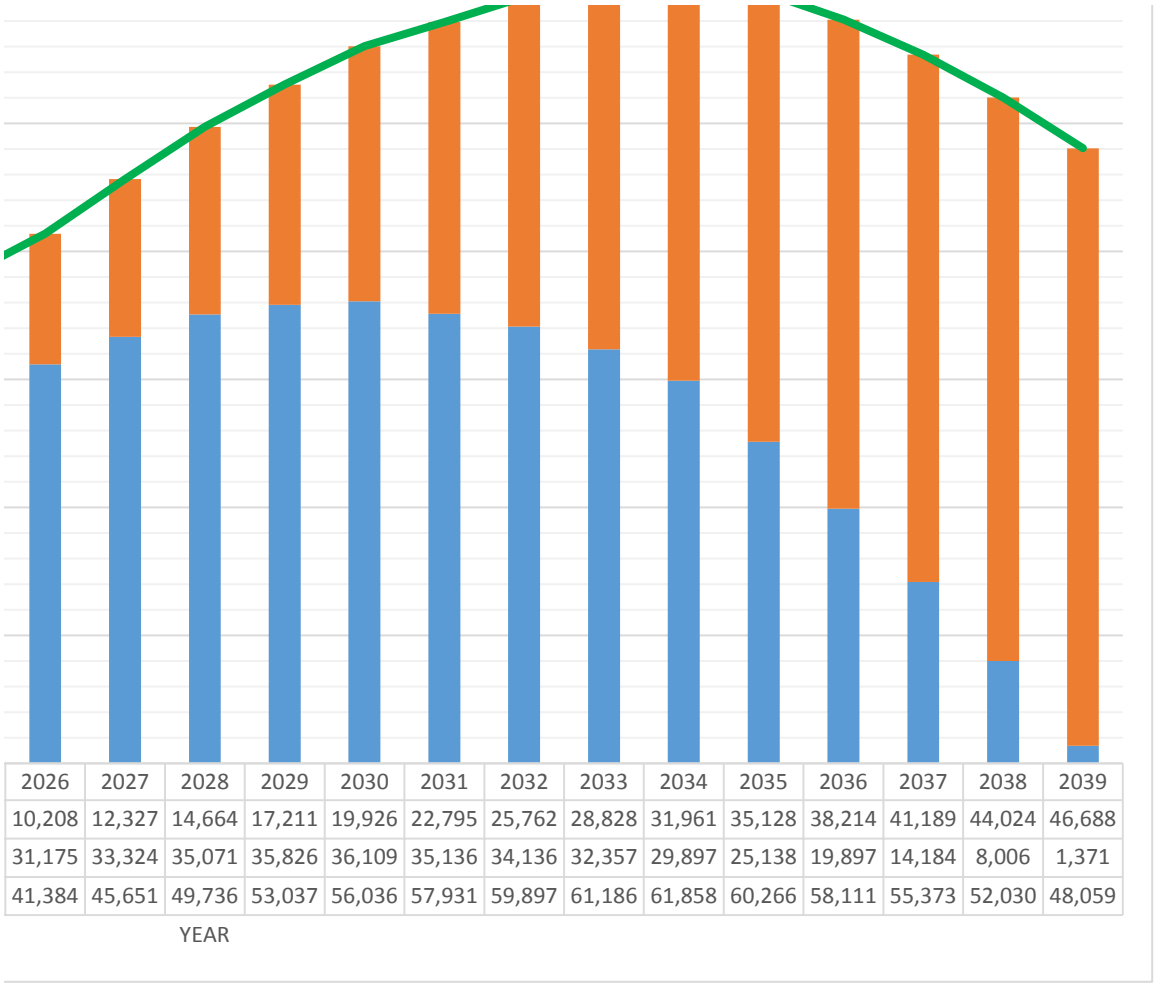


	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
5	17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
7	35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
3	53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



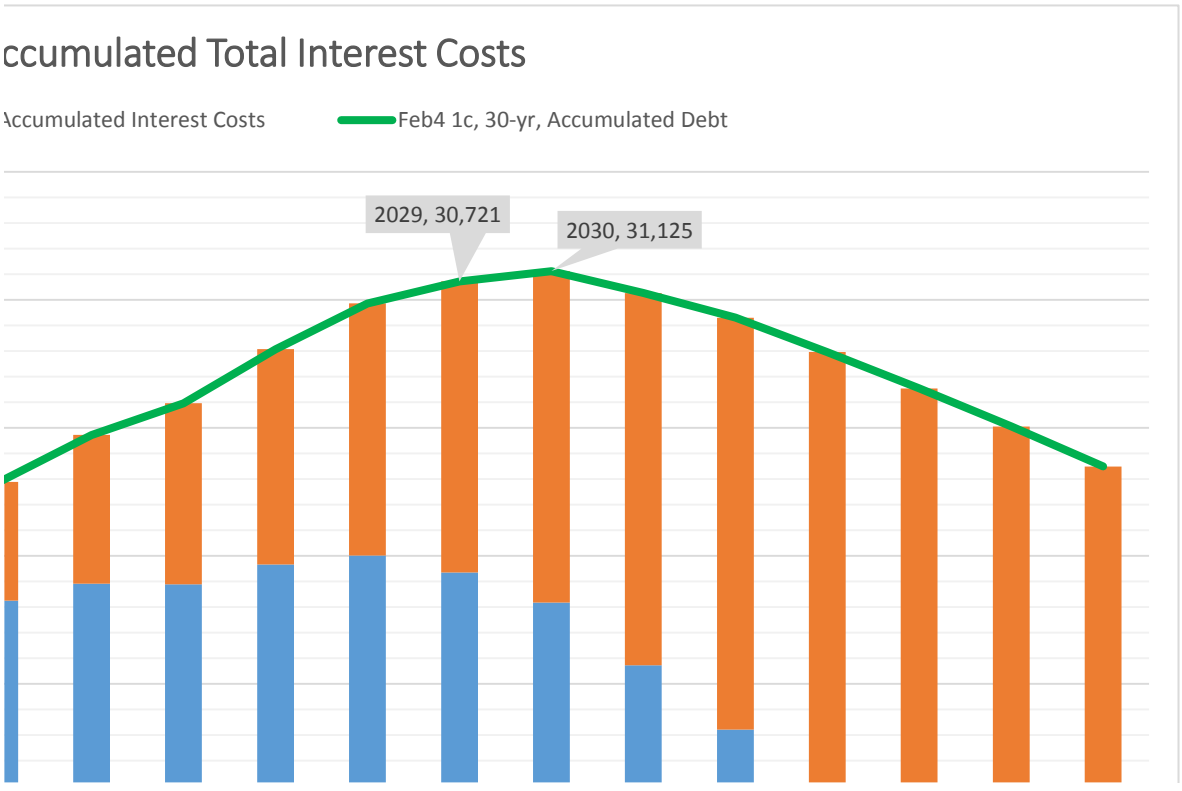
LIONS

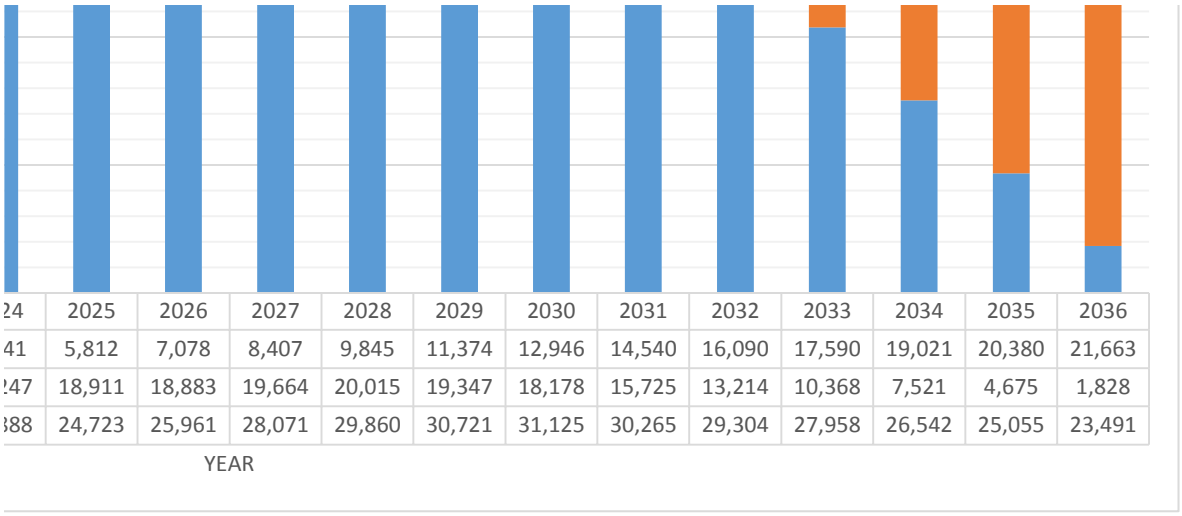


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

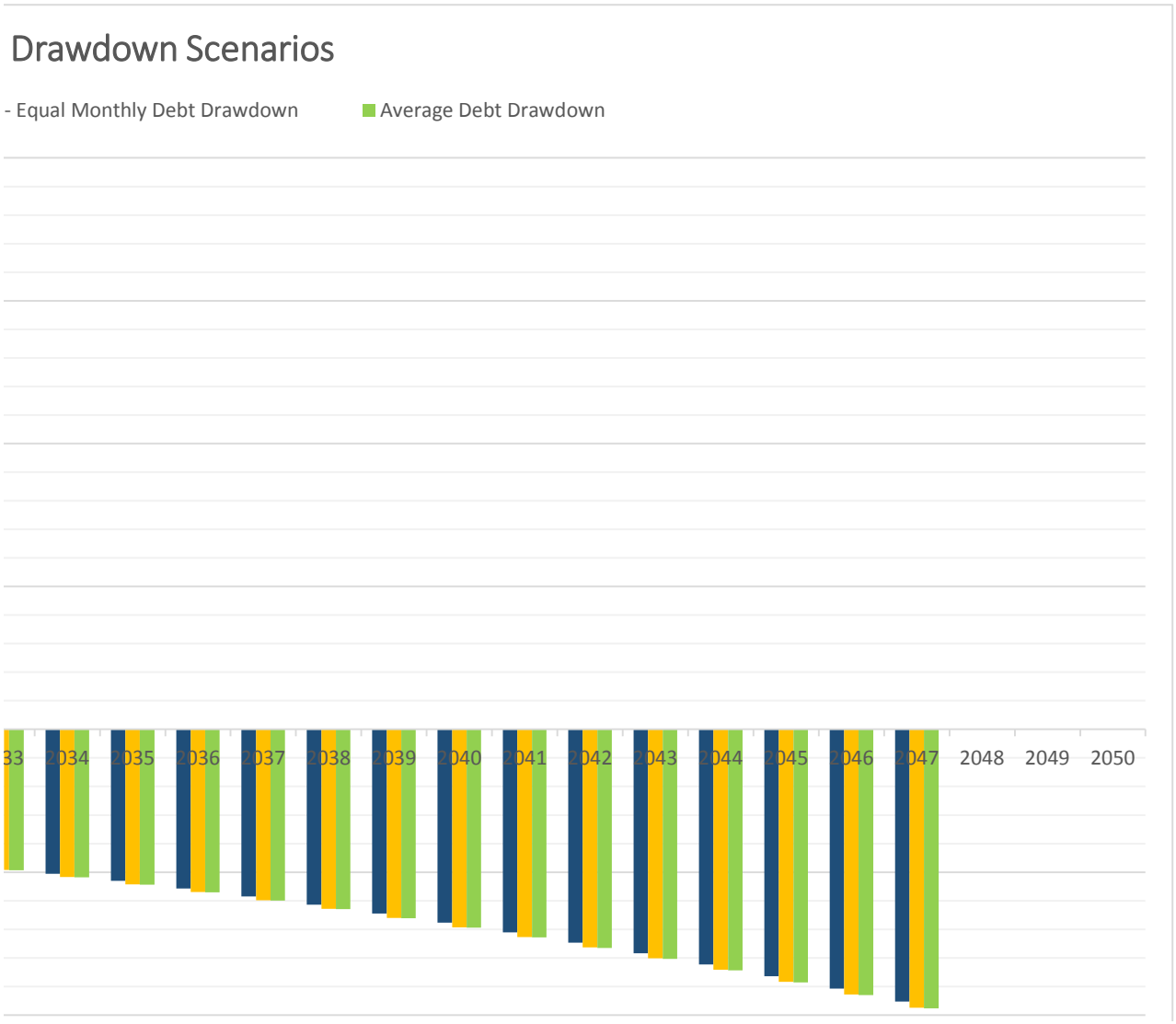
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





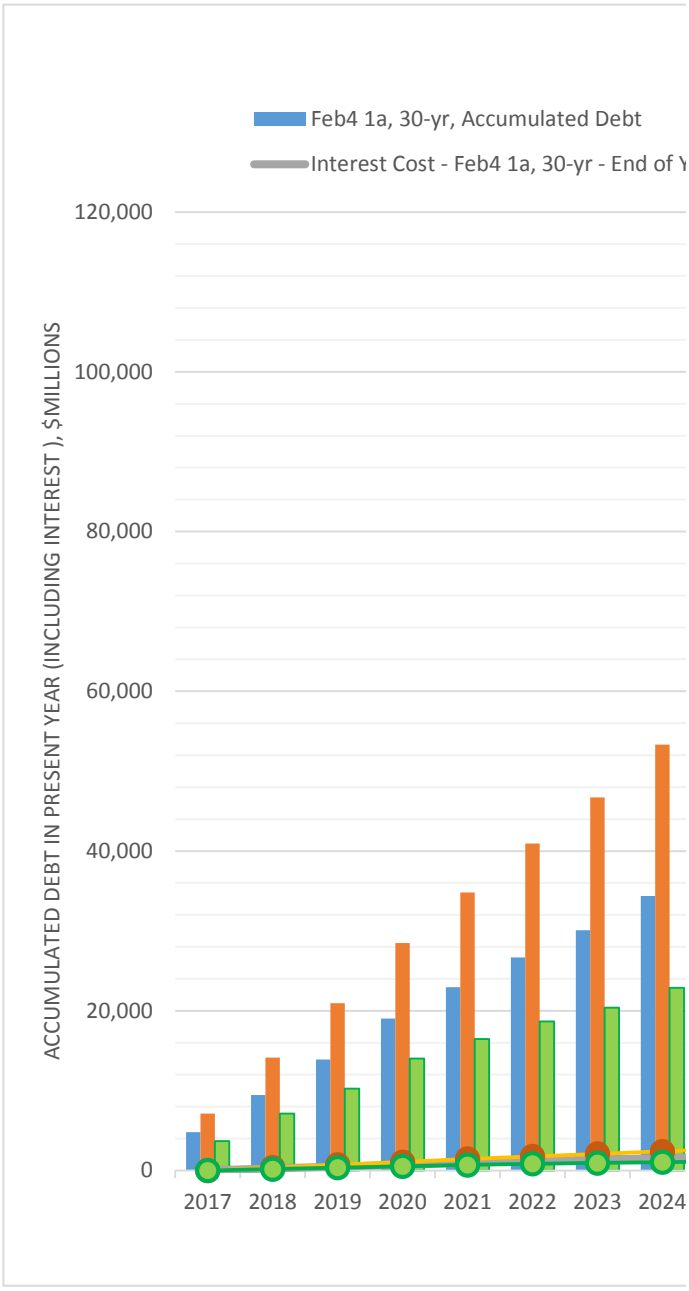
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

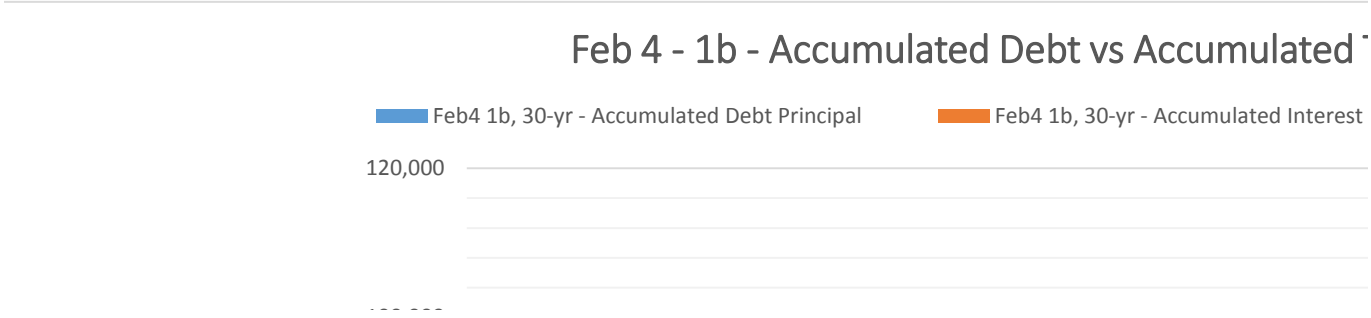
YEAR

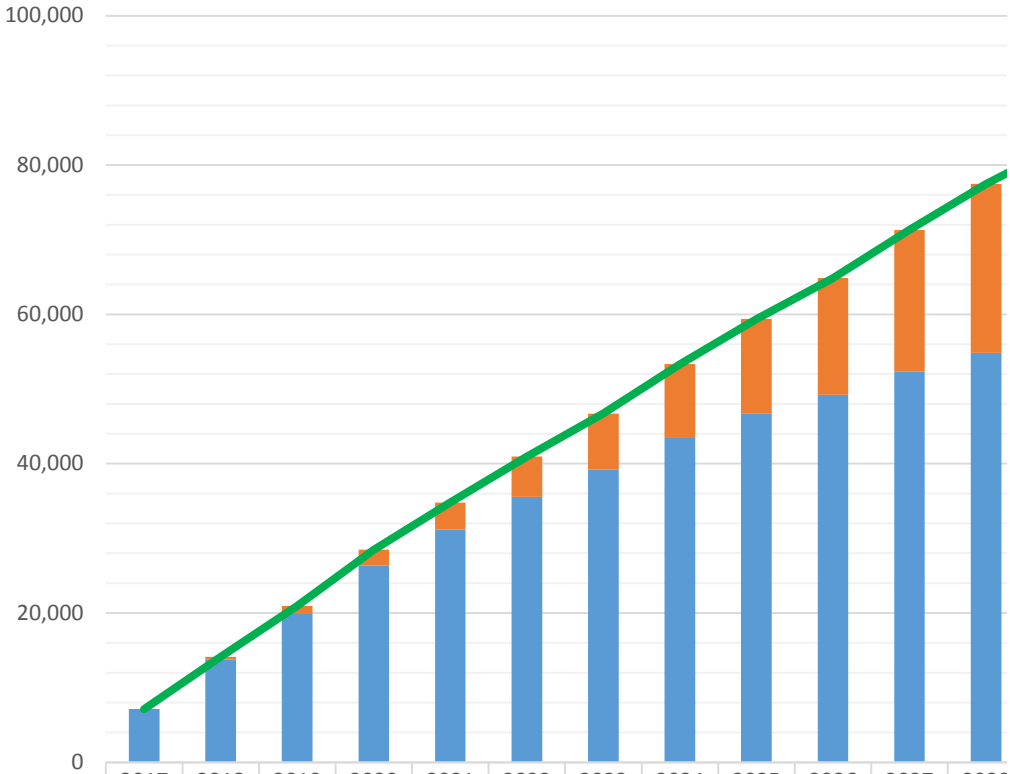


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate

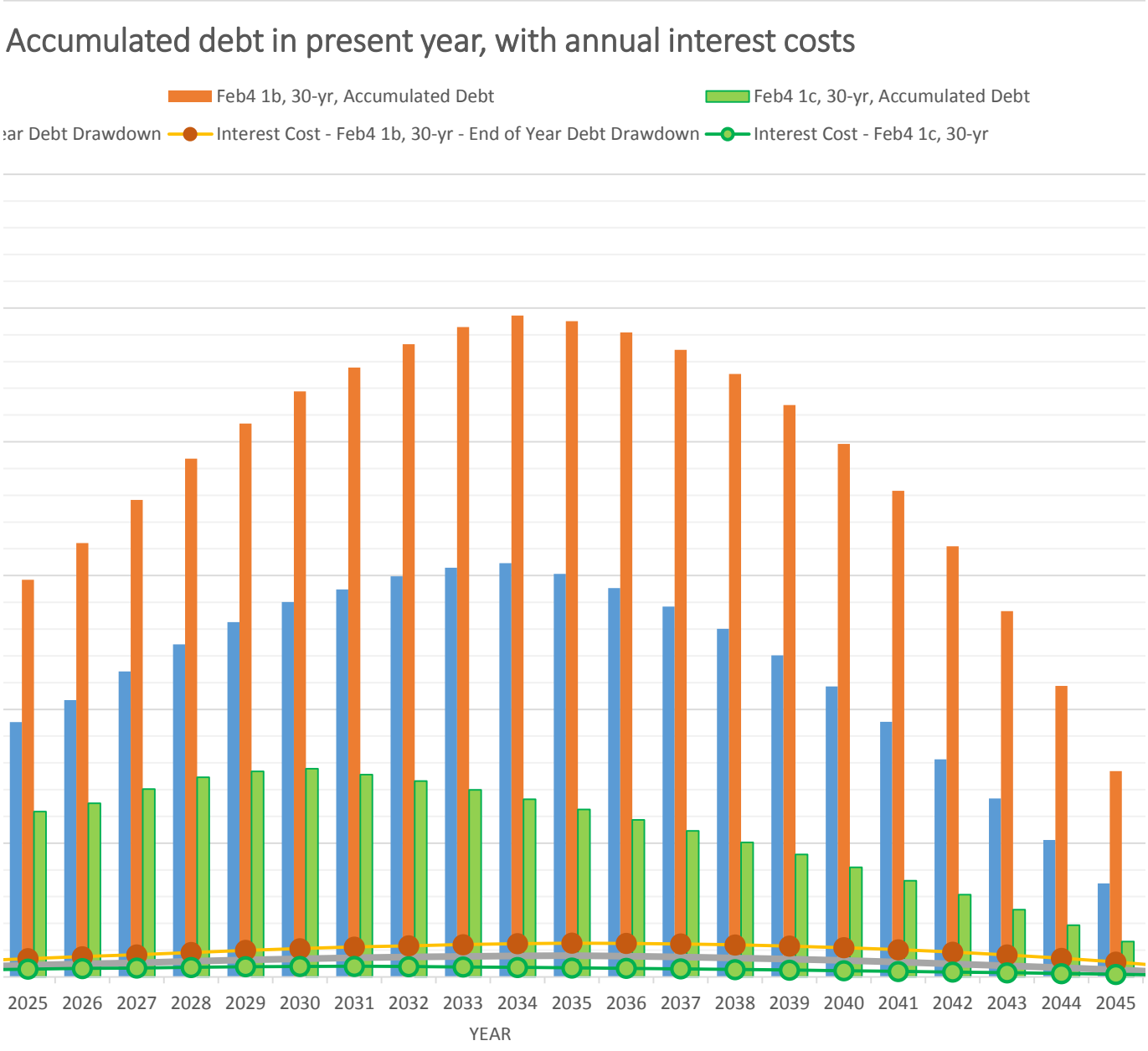


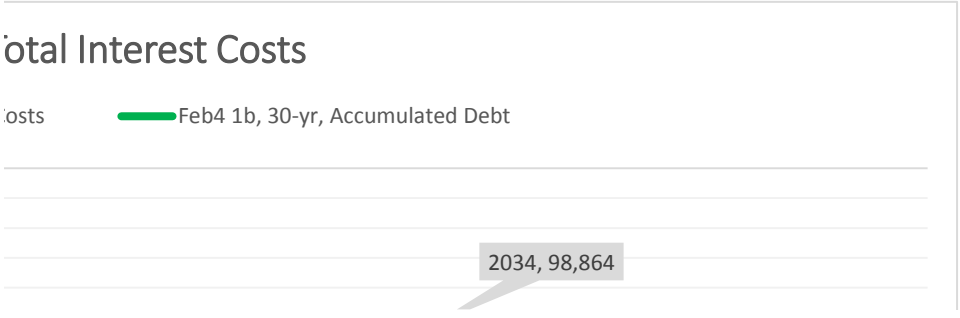

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

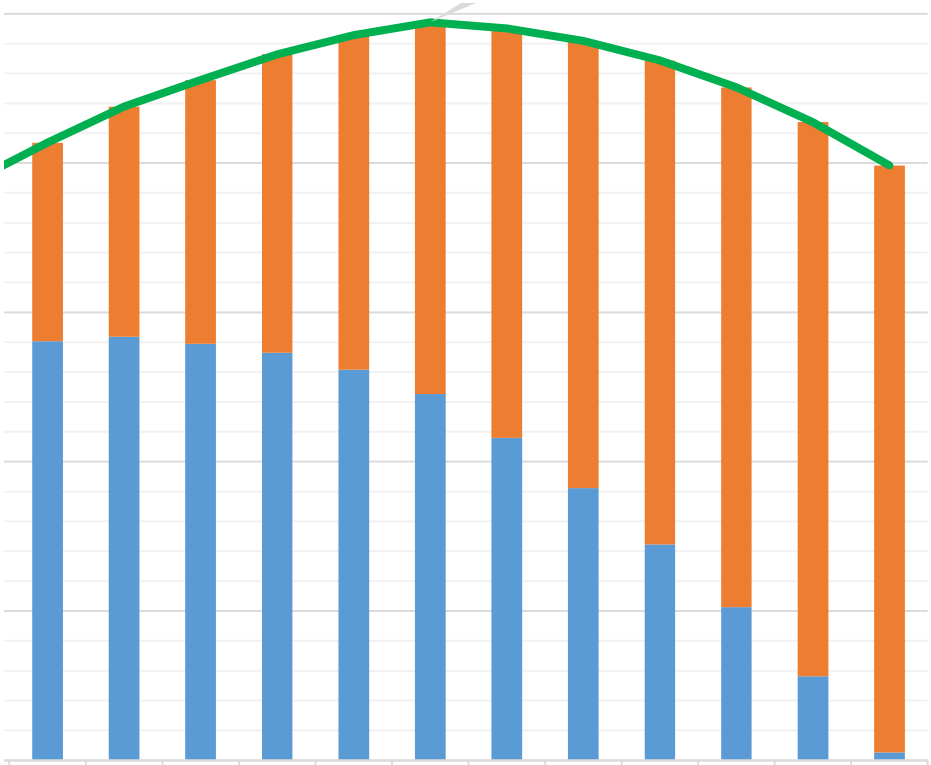


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y

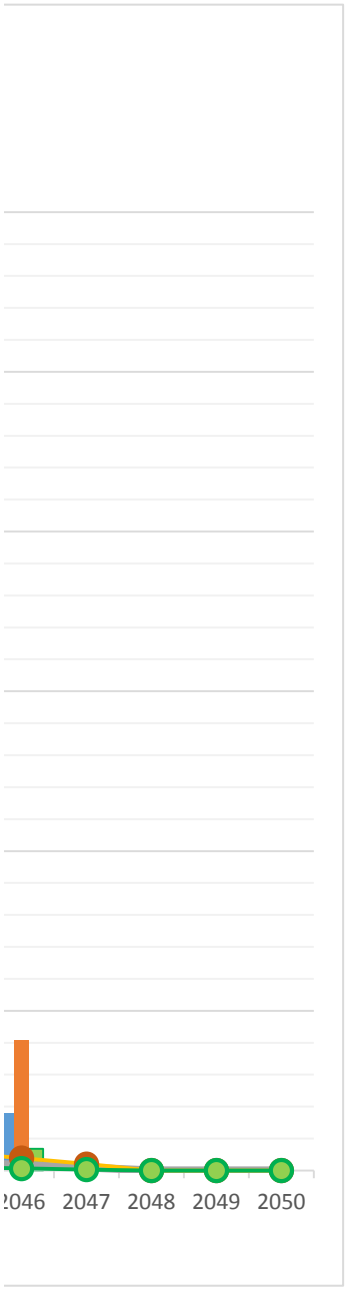

Accumulated debt in present year, with annual interest costs
Feb4 1b, 30-yr, Accumulated Debt
Feb4 1c, 30-yr, Accumulated Debt
ear Debt Drawdown
Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown
Interest Cost - Feb4 1c, 30-yr
2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045
YEAR


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

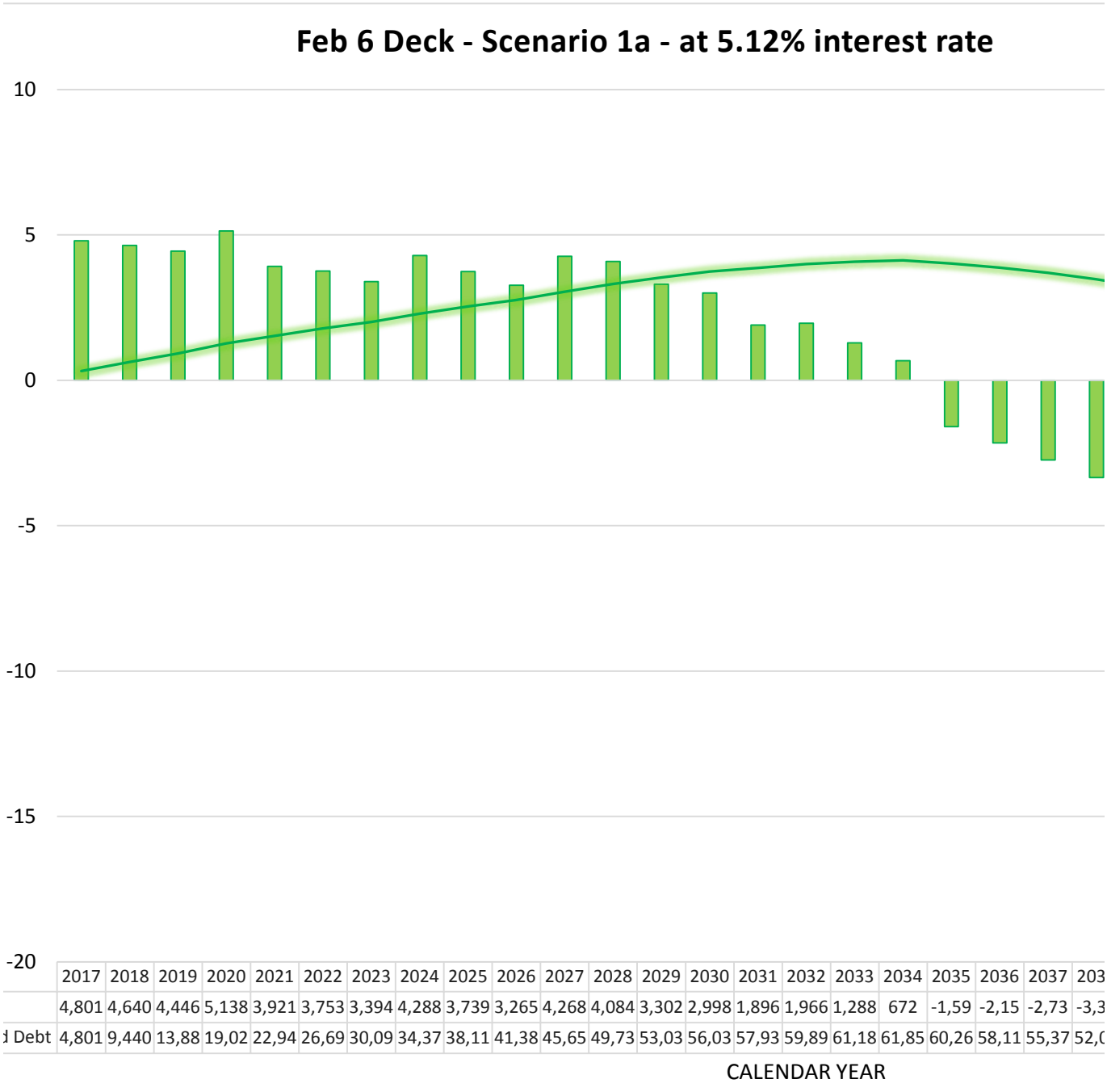
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

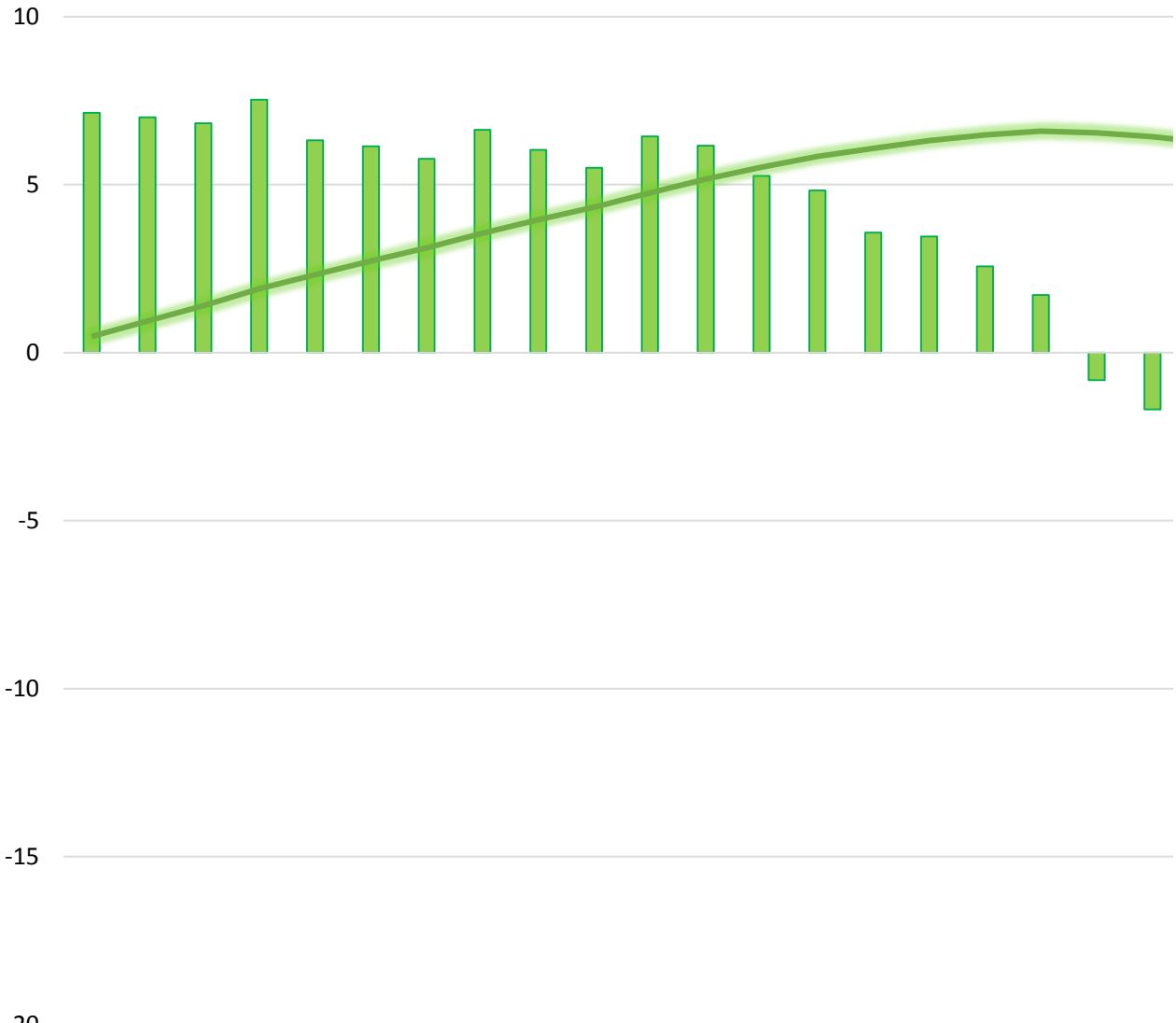
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

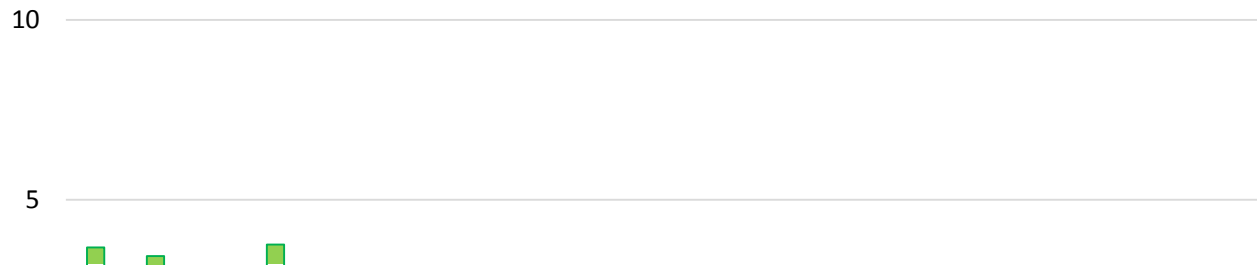
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

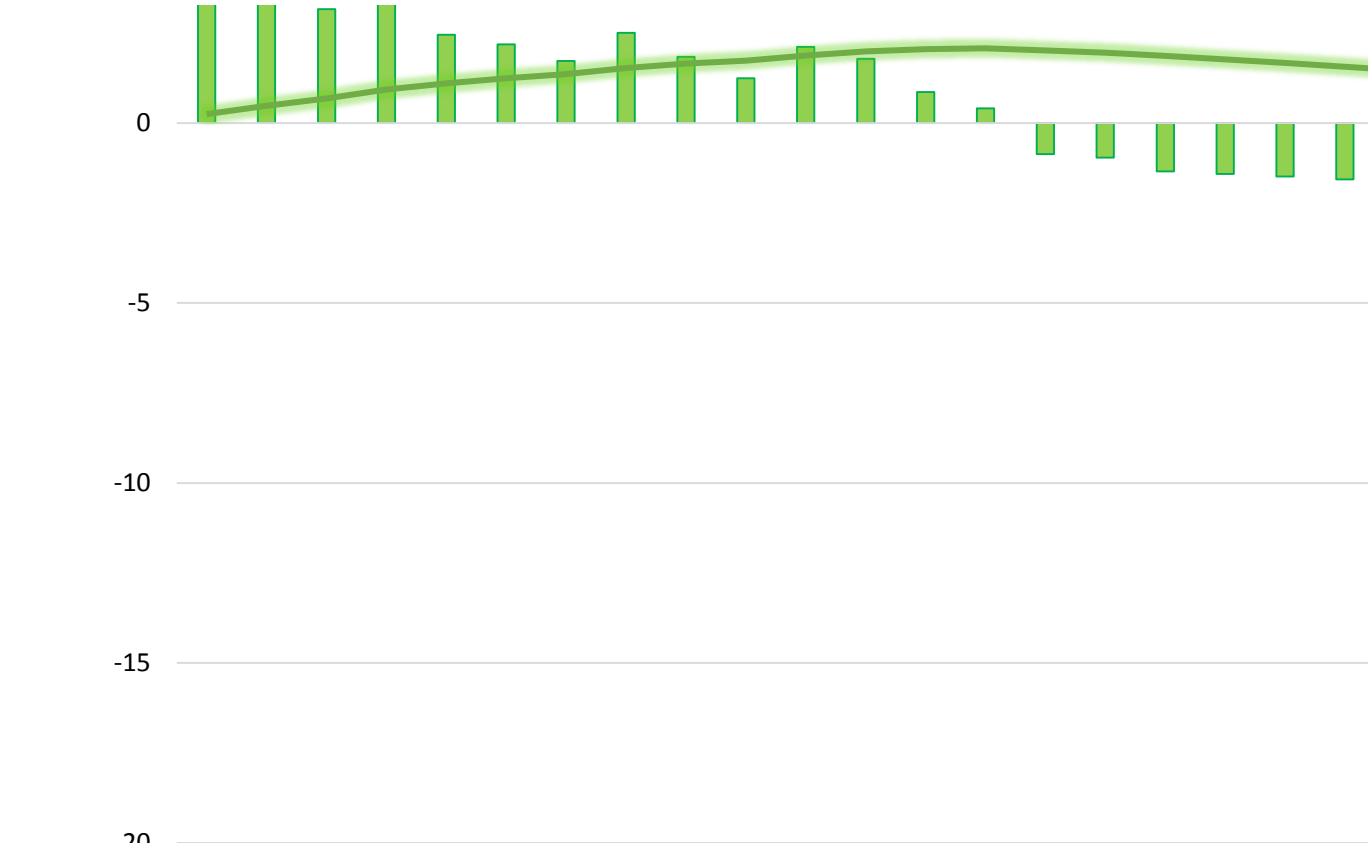


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



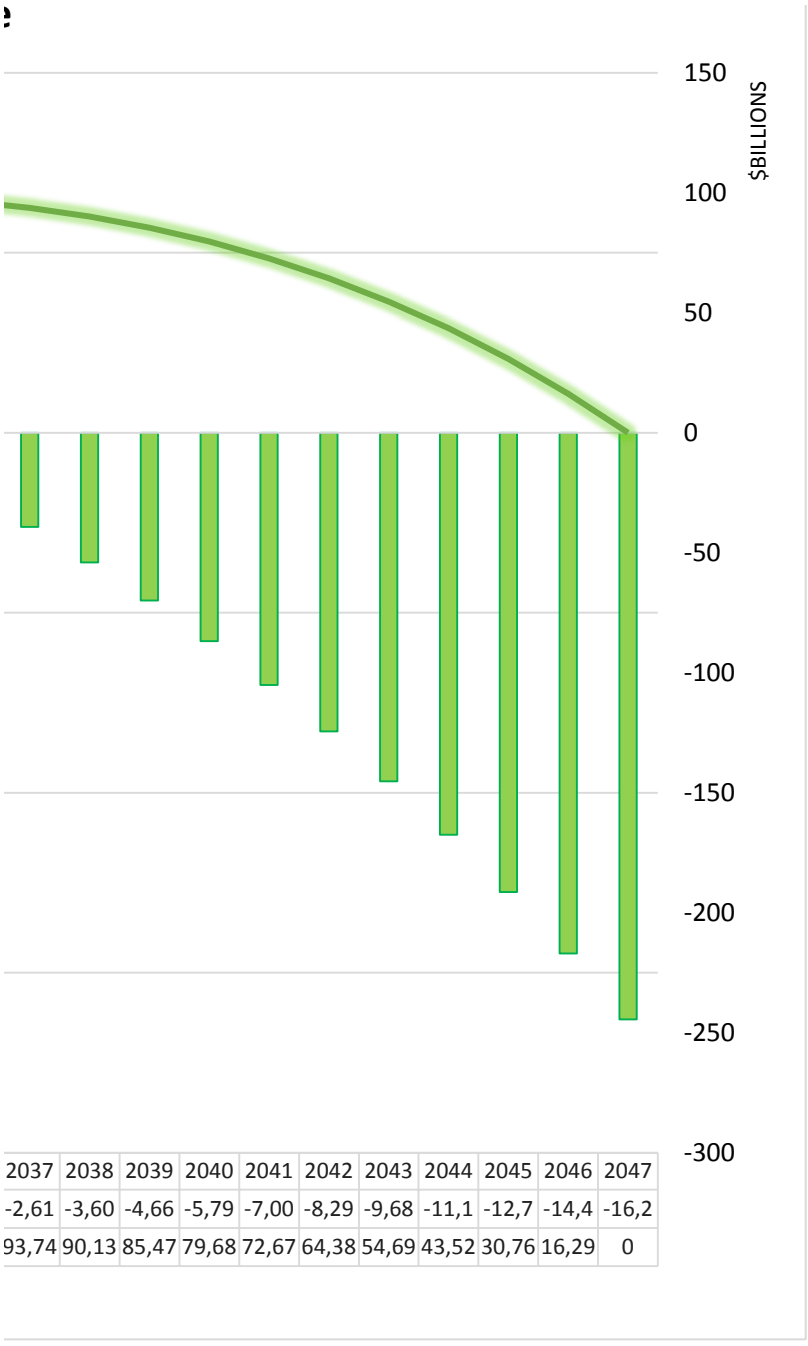


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

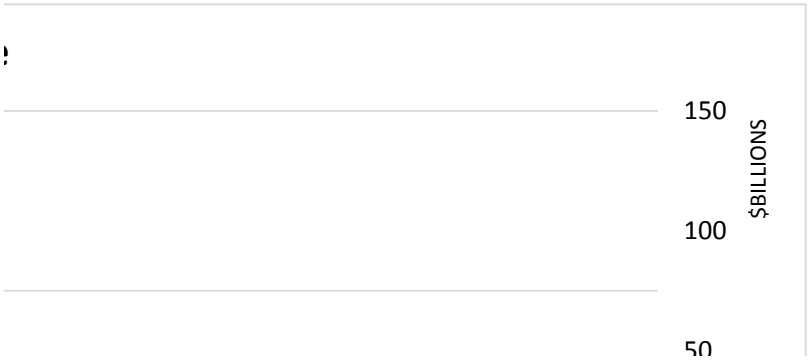
CALENDAR YEAR

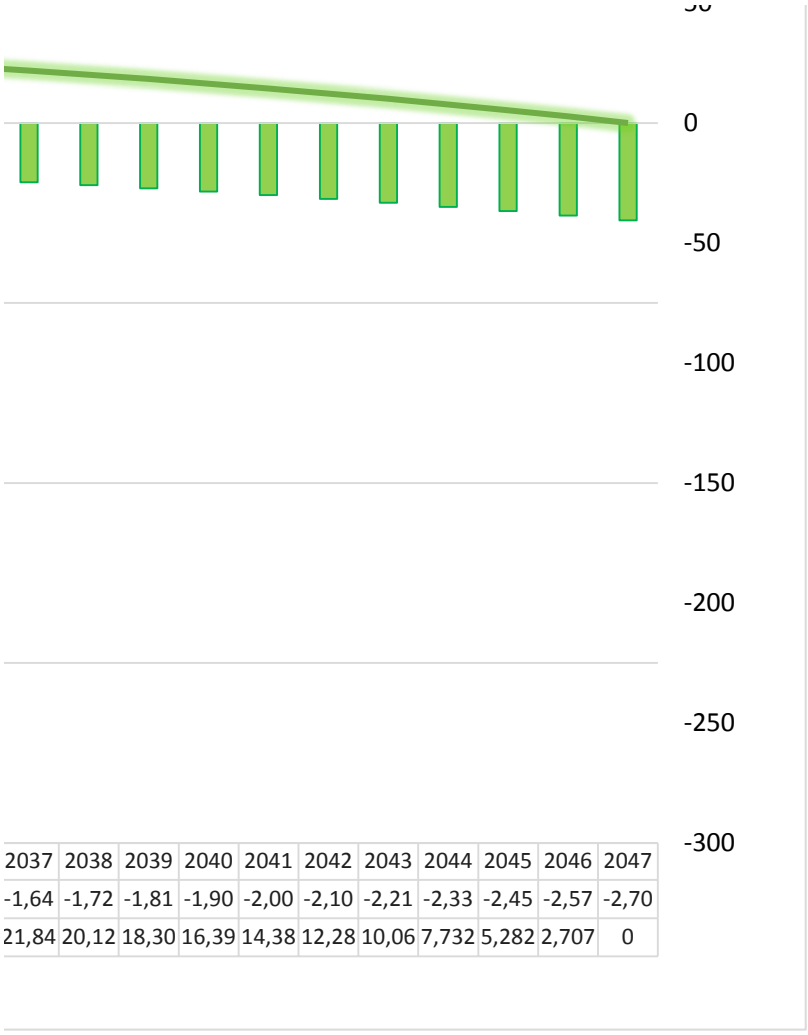


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Feb 8 Deck - Scenario 1a, 1b, 1c - at 5.12% interest
IESO GA cost forecast + extrapolation

Scenario
1a

1b

1c

1d

1e

	2017	2018	2019	2020
rate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	4674	9542	14587	21173

GA Payment from Impacted Rate Class	7421	7205	6995	6329
Accumulated debt in present year (including interest)	4674	9544	14589	21175

GA Payment from Impacted Rate Class	7421	7425	7440	7013
Accumulated debt in present year (including interest)	4674	9323	13913	19780

GA Payment from Impacted Rate Class	9915	9676	9427	9445
Accumulated debt in present year (including interest)	2180	4450	6803	9875

GA Payment from Impacted Rate Class	10596	10370	10129	10162
Accumulated debt in present year (including interest)	1500	3042	4620	6863

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
27212	33084	38588	44968	50769	56056	62291	68274

5890	6156	6434	6724	7028	7345	7677	8024
27212	33082	38585	44963	50762	56048	62281	68263

6825	7042	7266	7497	7736	7983	8237	8499
24810	29671	34167	39545	44359	48679	53976	59058

8532	8703	8877	9054	9236	9420	9609	9801
12692	15272	17420	20384	22719	24494	27181	29590

9264	9449	9638	9831	10027	10228	10432	10641
8794	10429	11568	13457	14645	15200	16588	17614

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
73391	78103	81594	85015	87596	89375	88679	87180

8386	8765	9160	9574	10006	10458	10931	11424
73378	78089	81578	84997	87577	89356	88659	87159

8770	9049	9337	9634	9941	10257	10584	10921
63318	67230	69987	72754	74773	76097	75068	73377

9997	10197	10401	10609	10821	10916	8822	8548
31116	32233	32135	31991	31045	29473	27822	26085

10854	11071	10196	10361	9779	9298	7203	6930
17670	17225	16565	15871	15142	14376	13570	12723

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
84828	81568	77341	72085	65730	58203	49425	39310

11940	12480	13043	13632	14248	14891	15564	16267
84806	81546	77320	72065	65711	58186	49409	39297

11269	11628	11998	12380	12774	13181	13600	14033
70990	67875	63995	59310	53778	47352	39985	31624

8288	8040	7805	7580	7367	7164	6970	6786
24260	22342	20325	18206	15978	13635	11173	8586

6670	6422	6186	5962	5748	5545	5352	5168
11833	10897	9914	8880	7793	6651	5450	4188

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
27767	14699	0	0	0	0

17001	17769	18572	2975	2831	2695
27758	14694	0	0	0	0

14480	14941	15417	2975	2831	2695
22213	11693	0	0	0	0

6611	6444	6286	2975	2831	2695
5865	3006	0	0	0	0

4993	4826	4667	2975	2831	2695
2861	1466	0	0	0	0

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb8_1a_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,867
Annual Exposure2 with start on July 1st	*2,337*	*4,867*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	3,554

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

1 Based on an interest rate of 5%.

2 Fiscal exposure based on equal monthly drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1b_30yr

1b. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,869
Annual Exposure2 with start on July 1st	*2,337*	*4,869*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	*3,554*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649
Annual Exposure2 with start on July 1st	*2,337*	*4,649*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,668
Start: July 1st	-	*3,499*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $76 billion peaking in

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270
Annual Exposure2 with start on July 1st	*1,090*	*2,270*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	545	2,203
Start: July 1st	-	*1,658*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $32 billion peaking in

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542
Annual Exposure2 with start on July 1st	*750*	*1,542*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	375	1,510
Start: July 1st	-	*1,135*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $18 billion peaking in

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	1,169 - 1,169	4,723 - 4,723

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1169**	**4963**
Total, B	1169	4963
Proposed Program Total:	1,169 - 1,169	4,963 - 4,963

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1a
Scenario 1b
Scenario 1c
Scenario 1d
Scenario 1e

2019	2020	2021	2022
5,045	6,586	6,039	5,872
5,045	*6,586*	*6,039*	*5,872*

2018-19	2019-20	2020-21	2021-2022
4,912	5,430	6,449	5,997
4,912	*5,430*	*6,449*	*5,997*

2034.

Actuals are subject t
- The highest debt ac
- Compared to a 5% i

[1] Based on an interes
[2] Fiscal exposure bas
[3] Fiscalized based on

depend on decision on accounting treatment.

2019	2020	2021	2022
5,045	6,586	6,037	5,870
5,045	*6,586*	*6,037*	*5,870*

2018-19	2019-20	2020-21	2021-2022
4,913	5,430	6,449	5,996
4,913	*5,430*	*6,449*	*5,996*

2034.

2019	2020	2021	2022
4,589	5,867	5,031	4,861
4,589	*5,867*	*5,031*	*4,861*

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988
4,634	*4,909*	*5,658*	*4,988*

2034.

2019	2020	2021	2022
2,353	3,072	2,817	2,580
2,353	*3,072*	*2,817*	*2,580*

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757
2,291	*2,533*	*3,008*	*2,757*

2030.

2019	2020	2021	2022
1,578	2,243	1,931	1,635
1,578	*2,243*	*1,931*	*1,635*

2018-19	2019-20	2020-21	2021-2022

1,551	1,745	2,165	1,857
1,551	*1,745*	*2,165*	*1,857*

2029.



2018-19	2019-20	2020-21	2021-2022
4,913 - 4,912	5,430 - 5,430	6,449 - 6,449	5,996 - 5,997

/1

2018-19[1]	2019-20[1]	2020-21[1]
4912	5430	6449
4913	5430	6449
225	279	323
60	60	60
18	18	18
5215	**5787**	**6850**
5216	5787	6850

5,216 - 5,215 5,787 - 5,787 6,850 - 6,850

Total Principal Debt	Total Accumulated Interest Costs	**Peak Total Debt**	
52,287	85,599	89,375	occurs in Year 2034
52,275	85,582	89,356	occurs in Year 2034
44,449	72,823	76,097	occurs in Year 2034
21,239	29,589	32,233	occurs in Year 2030
12,350	16,239	17,670	occurs in Year 2029

o actual prices and actual interest rates.
:cumulation (at 5% interest rate) is expected to be approximately $62 billion, peaking in 203 and $17-21 billion (at 3.5% interest
interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately $33-$36 million.

st rate of 5%.
sed on equal monthly drawdown of debt.
75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on mo

Feb8_1a_30yr
Feb8_1b_30yr
Feb8_1c_30yr
Feb8_1d_30yr
Feb8_1e_30yr

t rate), peaking in 2028.

nth of the year. Actuals may also depend on decision on accounting treatment.

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-275	-311	-350	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,573	85,599
Equal Monthly Debt Drawdown	6,743	4,556	

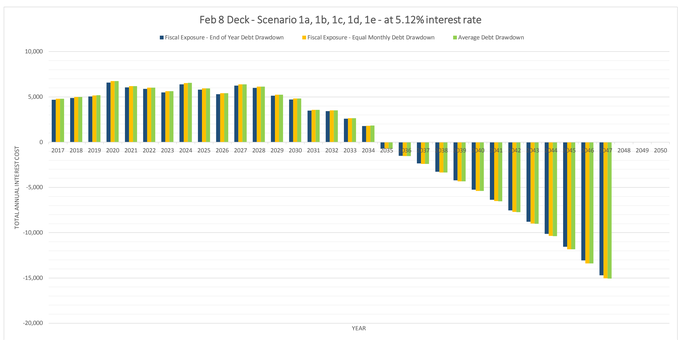
	Feb8 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,375	2034	52,287
Equal Monthly Debt Drawdown	91,501		

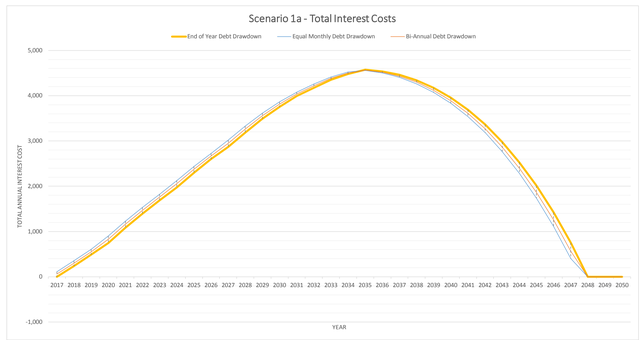
Feb8 1a, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	
c = a*5%	*Interest Cost - Feb8 1a, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,301*	*2,597*	*2,868*	*3,187*	*3,493*	*3,755*	*3,996*	*4,175*	*4,350*	*4,482*	*4,573*	*4,537*	*4,460*	*4,340*	*4,173*	*3,957*	*3,688*	*3,363*	*2,978*	*2,529*	*2,011*	*1,421*	*752*	*0*	*0*	*0*	85,599
b	Additional GA Debt Drawdown, End of Year	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,307	32,728	35,309	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	39,310	27,767	14,699	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	52,287	52,287	52,287	51,591	50,091	47,739	44,479	40,253	34,997	28,642	21,115	12,336	0	0	0	0	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,813	33,987	38,337	42,818	47,391	51,928	56,388	60,728	64,901	68,858	72,546	75,909	78,887	81,416	83,427	84,847	85,599				
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	51,781	51,028	49,259	46,557	41,288	35,252	28,440	20,840	12,440	3,227	-6,816	-17,706	-29,462	-42,106	-55,660	-70,149	-85,599				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	

Feb8 1a, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	
4,556	*Interest Cost - Feb8 1a, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,824*	*2,126*	*2,439*	*2,723*	*3,016*	*3,329*	*3,615*	*3,867*	*4,079*	*4,256*	*4,411*	*4,524*	*4,556*	*4,501*	*4,404*	*4,262*	*4,073*	*3,832*	*3,537*	*3,184*	*2,769*	*2,288*	*1,737*	*1,110*	*402*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
	Monthly Drawdown	390	386	380	487	413	373	318	367	292	224	281	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(980)	(1,054)	(1,129)	(1,207)	(1,288)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,738	4,665	5,979	5,074	4,586	3,902	4,510	3,584	2,753	3,447	2,863	1,662	980	(517)	(772)	(1,810)	(2,766)	(5,394)	(6,180)	(6,975)	(7,781)	(8,599)	(9,432)	(10,282)	(11,149)	(12,036)	(12,944)	(13,876)	(14,834)	(15,818)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	67	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(368)	-	-	-	
	Annual Interest Cost on Opening Balance		245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,263	3,576	3,844	4,091	4,274	4,453	4,588	4,681	4,645	4,566	4,443	4,272	4,051	3,776	3,443	3,049	2,589	2,059	1,454	770	(0)	(0)	(0)	
	Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,824	2,126	2,439	2,723	3,016	3,329	3,615	3,867	4,079	4,256	4,411	4,524	4,556	4,501	4,404	4,262	4,073	3,832	3,537	3,184	2,769	2,288	1,737	1,110	402	(0)	(0)	(0)	

Feb8 1a, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*60*	*301*	*553*	*831*	*1,160*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,948*	*3,263*	*3,558*	*3,815*	*4,041*	*4,218*	*4,383*	*4,504*	*4,564*	*4,518*	*4,430*	*4,298*	*4,119*	*3,890*	*3,607*	*3,267*	*2,866*	*2,399*	*1,864*	*1,253*	*564*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,930	5,110	6,670	6,116	5,947	5,575	6,461	5,875	5,354	6,315	6,060	5,182	4,773	3,535	3,464	2,614	1,802	-705	-1,518	-2,382	-3,302	-4,280	-5,324	-6,436	-7,623	-8,891	-10,244	-11,690	-13,236	-14,887	0	0	0	
	Bi-Annual Drawdown	2,337	2,314	2,279	2,920	2,478	2,240	1,906	2,203	1,750	1,345	1,684	1,398	812	479	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,800)	(4,200)	(4,607)	(5,021)	(5,445)	(5,878)	(6,322)	(6,777)	(7,245)	(7,725)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,687	4,615	5,914	5,019	4,537	3,860	4,462	3,545	2,724	3,410	2,832	1,644	970	(512)	(763)	(1,791)	(2,737)	(5,336)	(6,113)	(6,900)	(7,697)	(8,507)	(9,331)	(10,171)	(11,029)	(11,907)	(12,805)	(13,727)	(14,674)	(15,648)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	494	756	1,097	1,410	1,714	1,999	2,330	2,631	2,905	3,228	3,538	3,803	4,047	4,228	4,405	4,539	4,631	4,595	4,517	4,395	4,227	4,008	3,735	3,406	3,016	2,561	2,037	1,439	762	(0)	(0)	(0)	
	Total Annual Interest Cost	60	301	553	831	1,160	1,467	1,763	2,056	2,375	2,665	2,948	3,263	3,558	3,815	4,041	4,218	4,383	4,504	4,564	4,518	4,430	4,298	4,119	3,890	3,607	3,267	2,866	2,399	1,864	1,253	564	(0)	(0)	(0)	

Feb8 1a, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,723*	*3,027*	*3,340*	*3,624*	*3,875*	*4,085*	*4,262*	*4,416*	*4,527*	*4,555*	*4,499*	*4,400*	*4,257*	*4,065*	*3,822*	*3,525*	*3,170*	*2,753*	*2,270*	*1,716*	*1,086*	*376*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,992	5,174	6,754	6,193	6,022	5,645	6,543	5,950	5,422	6,395	6,137	5,248	4,833	3,580	3,508	2,647	1,825	-714	-1,537	-2,412	-3,343	-4,334	-5,391	-6,517	-7,720	-9,003	-10,374	-11,838	-13,403	-15,075	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-274	-311	-349	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,572	85,582
Equal Monthly Debt Drawdown	6,743	4,555	

	Feb8 1b, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,356	2034	52,275
Equal Monthly Debt Drawdown	91,481		

Feb8 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
a — Debt, Beginning of Year	0	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	
c = a*5% — *Interest Cost - Feb8 1b, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,300*	*2,597*	*2,867*	*3,186*	*3,492*	*3,754*	*3,995*	*4,174*	*4,349*	*4,481*	*4,572*	*4,536*	*4,459*	*4,339*	*4,172*	*3,956*	*3,687*	*3,362*	*2,977*	*2,528*	*2,011*	*1,420*	*752*	*0*	*0*	*0*	85,582
b — Additional GA Debt Drawdown, End of Year	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,309	32,722	35,302	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	39,297	27,758	14,694	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	52,275	52,275	52,275	52,275	51,578	50,078	47,725	44,465	40,239	34,984	28,630	21,105	12,328	0	0	0	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,809	33,983	38,331	42,812	47,384	51,920	56,379	60,718	64,890	68,846	72,533	75,895	78,871	81,399	83,410	84,830	85,582				
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	51,769	51,014	49,246	46,544	41,275	35,239	28,428	20,829	12,431	3,219	-6,822	-17,709	-29,462	-42,102	-55,652	-70,136	-85,582				
Fiscal Exposure - End of Year Debt Drawdown	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	

Feb8 1b, 30-yr — Equal Monthly Debt Drawdown

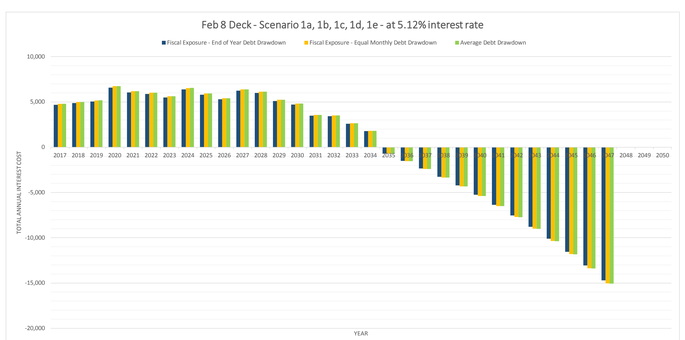
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	
4,555 — *Interest Cost - Feb8 1b, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,823*	*2,126*	*2,438*	*2,723*	*3,016*	*3,329*	*3,614*	*3,866*	*4,078*	*4,255*	*4,410*	*4,523*	*4,555*	*4,500*	*4,403*	*4,261*	*4,072*	*3,831*	*3,536*	*3,183*	*2,768*	*2,287*	*1,736*	*1,109*	*402*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
Monthly Drawdown	390	386	380	487	413	373	317	367	292	224	280	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(979)	(1,053)	(1,129)	(1,207)	(1,287)	(0)	-	-	
FV of Monthly Drawdown at 5%	4,786	4,740	4,665	5,979	5,072	4,585	3,900	4,509	3,582	2,752	3,446	2,862	1,661	979	(518)	(772)	(1,811)	(2,766)	(5,394)	(6,179)	(6,974)	(7,780)	(8,598)	(9,431)	(10,279)	(11,146)	(12,033)	(12,941)	(13,872)	(14,829)	(15,813)	(0)	-	-	
Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	66	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(367)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,262	3,576	3,843	4,090	4,273	4,452	4,587	4,680	4,644	4,565	4,442	4,271	4,050	3,775	3,442	3,048	2,588	2,058	1,454	770	0	0	0	
Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,823	2,126	2,438	2,723	3,016	3,329	3,614	3,866	4,078	4,255	4,410	4,523	4,555	4,500	4,403	4,261	4,072	3,831	3,536	3,183	2,768	2,287	1,736	1,109	402	0	0	0	

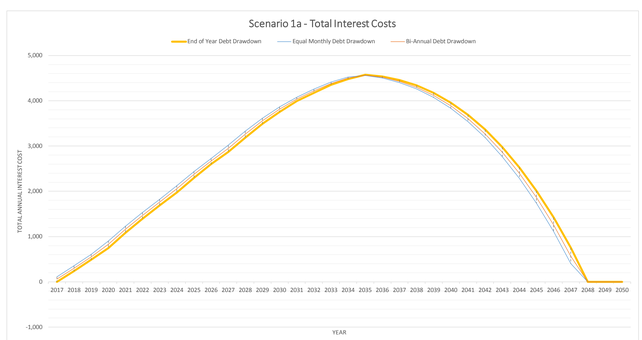
Feb8 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*60*	*301*	*553*	*831*	*1,161*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,947*	*3,263*	*3,558*	*3,814*	*4,040*	*4,217*	*4,382*	*4,503*	*4,563*	*4,517*	*4,429*	*4,297*	*4,118*	*3,889*	*3,606*	*3,266*	*2,865*	*2,399*	*1,863*	*1,253*	*564*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	4,734	4,931	5,110	6,670	6,115	5,945	5,573	6,460	5,874	5,353	6,313	6,058	5,181	4,771	3,534	3,463	2,613	1,801	-706	-1,519	-2,383	-3,302	-4,280	-5,323	-6,435	-7,622	-8,889	-10,242	-11,687	-13,231	-14,882	0	0	0	
Bi-Annual Drawdown	2,337	2,315	2,279	2,920	2,477	2,239	1,905	2,202	1,750	1,344	1,683	1,398	811	478	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,799)	(4,199)	(4,606)	(5,020)	(5,444)	(5,877)	(6,320)	(6,775)	(7,242)	(7,723)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	4,734	4,689	4,615	5,914	5,017	4,535	3,859	4,460	3,544	2,722	3,409	2,831	1,643	969	(513)	(764)	(1,791)	(2,737)	(5,336)	(6,113)	(6,899)	(7,696)	(8,506)	(9,329)	(10,169)	(11,027)	(11,904)	(12,802)	(13,723)	(14,670)	(15,643)	(0)	-	-	
Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	242	495	756	1,097	1,410	1,714	1,999	2,330	2,630	2,904	3,227	3,537	3,802	4,046	4,227	4,404	4,538	4,630	4,594	4,516	4,394	4,225	4,006	3,734	3,405	3,015	2,560	2,036	1,438	761	0	(0)	(0)	
Total Annual Interest Cost	60	301	553	831	1,161	1,467	1,763	2,056	2,375	2,665	2,947	3,263	3,558	3,814	4,040	4,217	4,382	4,503	4,563	4,517	4,429	4,297	4,118	3,889	3,606	3,266	2,865	2,399	1,863	1,253	564	0	(0)	(0)	

Feb8 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,732*	*3,027*	*3,339*	*3,623*	*3,875*	*4,084*	*4,261*	*4,415*	*4,526*	*4,554*	*4,498*	*4,399*	*4,255*	*4,064*	*3,821*	*3,524*	*3,169*	*2,752*	*2,269*	*1,715*	*1,086*	*376*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	4,794	4,994	5,174	6,754	6,192	6,020	5,643	6,541	5,948	5,420	6,393	6,135	5,246	4,831	3,578	3,507	2,646	1,824	-715	-1,538	-2,413	-3,343	-4,334	-5,390	-6,516	-7,718	-9,001	-10,371	-11,835	-13,398	-15,070	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1c_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	
			111	111	109	140	120	116	107	128	115	103	126	121	101	93	66	66	48	32	-24	-40	-57	-74	-92	-111	-132	-153	-175	-199	-224	-250	-278	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	5,867	3,893	72,823
Equal Monthly Debt Drawdown	6,006	3,869	

	Feb8 1c, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	76,097	2034	44,449
Equal Monthly Debt Drawdown	77,907		

Feb8 1c, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	
c = a*5%	*Interest Cost - Feb8 1c, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*477*	*712*	*1,012*	*1,269*	*1,518*	*1,748*	*2,023*	*2,270*	*2,491*	*2,762*	*3,022*	*3,239*	*3,440*	*3,581*	*3,722*	*3,826*	*3,893*	*3,841*	*3,754*	*3,632*	*3,473*	*3,274*	*3,034*	*2,751*	*2,423*	*2,046*	*1,618*	*1,136*	*598*	*0*	*0*	*0*	72,823
b	Additional GA Debt Drawdown, End of Year	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	
	Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	25,538	28,304	30,324	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,624	22,213	11,693	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	44,449	44,449	44,449	44,449	43,420	41,729	39,342	36,228	32,347	27,662	22,130	15,704	8,337	0	0	0	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	26,221	29,801	33,524	37,349	41,242	45,083	48,837	52,469	55,942	59,216	62,250	65,002	67,424	69,470	71,088	72,224	72,823				
	Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	43,767	42,952	41,249	38,748	33,826	28,294	22,153	15,406	8,054	94	-8,473	-17,649	-27,439	-37,846	-48,875	-60,532	-72,823				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	

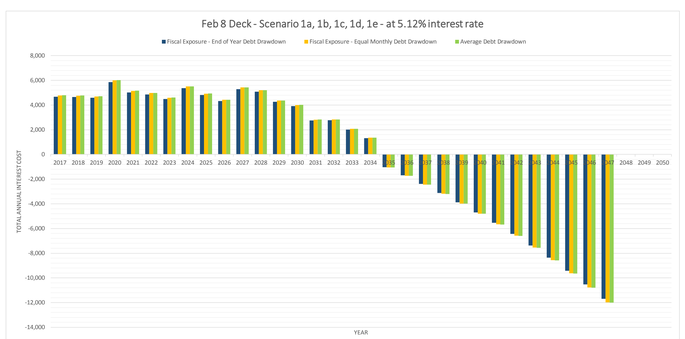
Feb8 1c, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
3,869	Debt, Beginning of Year	0	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*111*	*350*	*586*	*851*	*1,132*	*1,385*	*1,625*	*1,876*	*2,138*	*2,372*	*2,617*	*2,882*	*3,123*	*3,333*	*3,505*	*3,646*	*3,770*	*3,857*	*3,869*	*3,800*	*3,697*	*3,558*	*3,380*	*3,163*	*2,903*	*2,599*	*2,247*	*1,847*	*1,394*	*886*	*320*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	

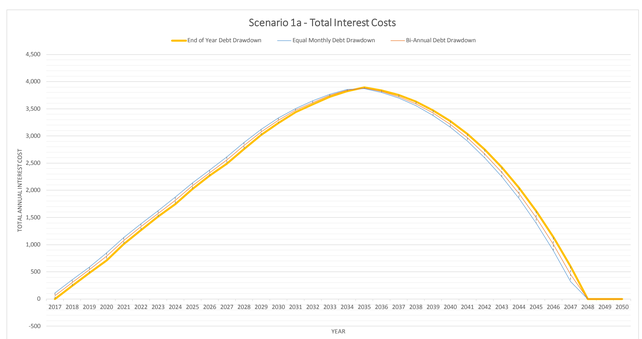
	Monthly Drawdown	390	367	343	430	335	299	248	303	233	171	234	193	103	56	(57)	(68)	(142)	(208)	(410)	(461)	(512)	(562)	(613)	(663)	(714)	(765)	(816)	(867)	(919)	(971)	(1,024)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,515	4,210	5,278	4,114	3,677	3,048	3,717	2,857	2,099	2,873	2,375	1,268	689	(699)	(834)	(1,744)	(2,561)	(5,039)	(5,664)	(6,286)	(6,907)	(7,528)	(8,148)	(8,771)	(9,395)	(10,023)	(10,654)	(11,291)	(11,934)	(12,583)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	105	98	123	96	85	71	86	66	49	67	55	29	16	(16)	(19)	(41)	(59)	(117)	(132)	(146)	(160)	(175)	(189)	(204)	(218)	(233)	(248)	(262)	(277)	(292)	-	-	-	
	Annual Interest Cost on Opening Balance	-	245	488	729	1,036	1,300	1,554	1,790	2,071	2,323	2,550	2,827	3,093	3,317	3,521	3,666	3,811	3,917	3,986	3,932	3,843	3,718	3,555	3,352	3,107	2,817	2,480	2,094	1,656	1,163	612	(0)	(0)	(0)	
	Total Annual Interest Cost	111	350	586	851	1,132	1,385	1,625	1,876	2,138	2,372	2,617	2,882	3,123	3,333	3,505	3,646	3,770	3,857	3,869	3,800	3,697	3,558	3,380	3,163	2,903	2,599	2,247	1,847	1,394	886	320	(0)	(0)	(0)	

Feb8 1c, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*60*	*299*	*536*	*787*	*1,076*	*1,332*	*1,576*	*1,817*	*2,085*	*2,325*	*2,558*	*2,827*	*3,076*	*3,290*	*3,475*	*3,616*	*3,748*	*3,842*	*3,880*	*3,819*	*3,724*	*3,592*	*3,423*	*3,214*	*2,964*	*2,669*	*2,328*	*1,939*	*1,498*	*1,002*	*449*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,708	4,648	5,942	5,095	4,923	4,553	5,447	4,876	4,375	5,364	5,147	4,315	3,962	2,792	2,802	2,045	1,341	-1,042	-1,713	-2,417	-3,155	-3,930	-4,745	-5,603	-6,508	-7,461	-8,468	-9,531	-10,655	-11,842	0	0	0	

	Bi-Annual Drawdown	2,337	2,205	2,056	2,578	2,009	1,796	1,489	1,815	1,395	1,025	1,403	1,160	620	336	(341)	(407)	(852)	(1,251)	(2,461)	(2,766)	(3,070)	(3,373)	(3,676)	(3,980)	(4,283)	(4,588)	(4,895)	(5,203)	(5,514)	(5,828)	(6,146)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,466	4,165	5,221	4,070	3,638	3,015	3,677	2,826	2,077	2,842	2,350	1,255	681	(691)	(825)	(1,725)	(2,533)	(4,985)	(5,603)	(6,219)	(6,833)	(7,447)	(8,061)	(8,676)	(9,294)	(9,915)	(10,540)	(11,170)	(11,806)	(12,448)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	56	53	66	51	46	38	46	36	26	36	30	16	9	(9)	(10)	(22)	(32)	(63)	(71)	(79)	(86)	(94)	(102)	(110)	(117)	(125)	(133)	(141)	(149)	(157)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	483	721	1,025	1,286	1,537	1,770	2,049	2,299	2,522	2,797	3,060	3,281	3,484	3,626	3,770	3,874	3,943	3,890	3,802	3,678	3,517	3,316	3,073	2,787	2,454	2,072	1,639	1,151	606	(0)	(0)	(0)	
	Total Annual Interest Cost	60	299	536	787	1,076	1,332	1,576	1,817	2,085	2,325	2,558	2,827	3,076	3,290	3,475	3,616	3,748	3,842	3,880	3,819	3,724	3,592	3,423	3,214	2,964	2,669	2,328	1,939	1,498	1,002	449	(0)	(0)	(0)	

Feb8 1c, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*120*	*358*	*594*	*862*	*1,141*	*1,394*	*1,633*	*1,886*	*2,146*	*2,380*	*2,626*	*2,892*	*3,130*	*3,340*	*3,510*	*3,651*	*3,774*	*3,859*	*3,867*	*3,797*	*3,693*	*3,552*	*3,373*	*3,154*	*2,893*	*2,587*	*2,234*	*1,832*	*1,377*	*867*	*299*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,768	4,707	6,017	5,160	4,985	4,610	5,516	4,937	4,431	5,432	5,212	4,370	4,012	2,828	2,837	2,071	1,358	-1,055	-1,735	-2,447	-3,195	-3,979	-4,805	-5,674	-6,590	-7,556	-8,575	-9,652	-10,789	-11,992	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1d_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
			52	54	56	73	67	61	51	71	56	42	64	57	36	27	-2	-3	-23	-37	-39	-41	-43	-46	-48	-50	-53	-56	-59	-62	-65	-68	-71	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,072	1,649	29,589
Equal Monthly Debt Drawdown	3,145	1,647	

	Feb8 1d, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,233	2030	21,239
Equal Monthly Debt Drawdown	32,999		

Feb8 1d, 30-yr — End of Year Debt Drawdown

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
a	Debt, Beginning of Year	0	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	
c = a*5%	*Interest Cost - Feb8 1d, 30-yr - End of Year Debt Drawdown*	*0*	*112*	*228*	*348*	*505*	*649*	*781*	*891*	*1,043*	*1,162*	*1,253*	*1,391*	*1,514*	*1,592*	*1,649*	*1,644*	*1,637*	*1,588*	*1,508*	*1,423*	*1,335*	*1,241*	*1,143*	*1,040*	*931*	*817*	*698*	*572*	*439*	*300*	*154*	*0*	*0*	*0*	29,589
b	Additional GA Debt Drawdown, End of Year	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	11,372	11,227	10,281	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,586	5,865	3,006	0	0	0	0	
	Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	20,763	20,763	20,763	20,763	19,112	17,375	15,550	13,632	11,616	9,496	7,268	4,926	2,464	0	0	0	0	0	0	0	
	Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	13,118	14,763	16,399	17,988	19,495	20,919	22,253	23,495	24,638	25,678	26,609	27,426	28,124	28,696	29,135	29,435	29,589				
	Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	19,017	17,228	14,645	11,486	8,326	5,167	2,007	-1,153	-4,312	-7,472	-10,631	-13,791	-16,951	-20,110	-23,270	-26,429	-29,589				
Fiscal Exposure - End of Year Debt Drawdown		2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	

Feb8 1d, 30-yr — Equal Monthly Debt Drawdown

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Debt, Beginning of Year	0	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	
1,647	*Interest Cost - Feb8 1d, 30-yr*	*52*	*166*	*284*	*421*	*572*	*711*	*832*	*962*	*1,098*	*1,205*	*1,317*	*1,448*	*1,550*	*1,619*	*1,647*	*1,641*	*1,614*	*1,551*	*1,469*	*1,382*	*1,291*	*1,196*	*1,095*	*989*	*878*	*762*	*639*	*510*	*375*	*232*	*82*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
	Monthly Drawdown	182	180	177	227	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	-	-	-	
	FV of Monthly Drawdown at 5%	2,232	2,210	2,176	2,788	2,366	1,977	1,399	2,123	1,322	628	1,468	1,042	12	(487)	(1,788)	(1,831)	(2,644)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	-	-	-	
	Annual Interest Cost on New Drawdowns	52	51	51	65	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	-	-	-	
	Annual Interest Cost on Opening Balance	-	114	233	356	517	665	800	912	1,068	1,190	1,283	1,424	1,550	1,630	1,688	1,683	1,676	1,626	1,544	1,457	1,366	1,271	1,170	1,065	954	837	714	585	450	307	157	0	0	0	
	Total Annual Interest Cost	52	166	284	421	572	711	832	962	1,098	1,205	1,317	1,448	1,550	1,619	1,647	1,641	1,614	1,551	1,469	1,382	1,291	1,196	1,095	989	878	762	639	510	375	232	82	0	0	0	

Feb8 1d, 30-yr — Bi-Annual Debt Drawdown

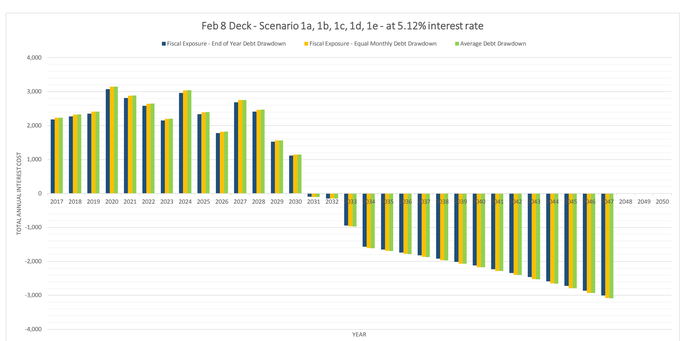
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

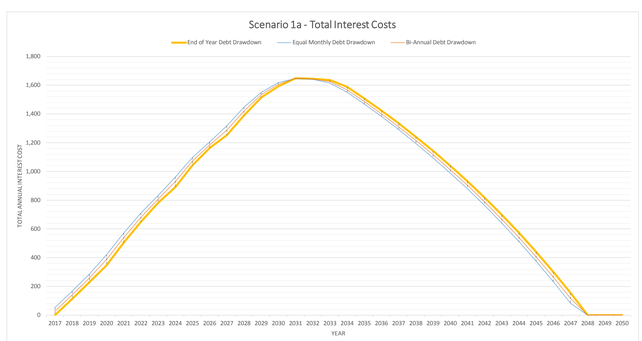
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Debt, Beginning of Year	0	2,208	4,507	6,890	10,001	12,854	15,467	17,642	20,645	23,009	24,807	27,529	29,969	31,514	32,645	32,546	32,400	31,442	29,850	28,177	26,419	24,571	22,628	20,585	18,439	16,182	13,810	11,316	8,695	5,940	3,044	0	0	0	
	Interest Cost - Feb8 1d, 30-yr	*28*	*141*	*258*	*387*	*541*	*682*	*809*	*929*	*1,073*	*1,185*	*1,288*	*1,421*	*1,533*	*1,606*	*1,648*	*1,642*	*1,625*	*1,568*	*1,487*	*1,401*	*1,311*	*1,217*	*1,117*	*1,013*	*903*	*787*	*666*	*539*	*404*	*264*	*115*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,208	4,507	6,890	10,001	12,854	15,467	17,642	20,645	23,009	24,807	27,529	29,969	31,514	32,645	32,546	32,400	31,442	29,850	28,177	26,419	24,571	22,628	20,585	18,439	16,182	13,810	11,316	8,695	5,940	3,044	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,208	2,299	2,383	3,111	2,853	2,613	2,175	3,003	2,364	1,798	2,722	2,440	1,545	1,131	-98	-147	-958	-1,591	-1,673	-1,758	-1,848	-1,943	-2,042	-2,147	-2,257	-2,372	-2,493	-2,621	-2,755	-2,896	-3,044	0	0	0	
	Bi-Annual Drawdown	1,090	1,079	1,063	1,362	1,156	965	683	1,037	646	307	717	509	6	(238)	(873)	(894)	(1,291)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,208	2,186	2,153	2,758	2,341	1,955	1,384	2,100	1,308	621	1,453	1,031	12	(481)	(1,769)	(1,812)	(2,616)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	-	-	-	
	Annual Interest Cost on New Drawdowns	28	28	27	35	30	25	17	27	17	8	18	13	0	(6)	(22)	(23)	(33)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	-	-	-	
	Annual Interest Cost on Opening Balance	-	113	231	353	512	658	791	903	1,056	1,177	1,269	1,408	1,533	1,612	1,670	1,665	1,658	1,609	1,527	1,442	1,352	1,257	1,158	1,053	943	828	707	579	445	304	156	0	0	0	
	Total Annual Interest Cost	28	141	258	387	541	682	809	929	1,073	1,185	1,288	1,421	1,533	1,606	1,648	1,642	1,625	1,568	1,487	1,401	1,311	1,217	1,117	1,013	903	787	666	539	404	264	115	0	0	0	

Feb8 1d, 30-yr — Average Debt Drawdown

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Debt, Beginning of Year	0	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	
	Interest Cost - Feb8 1d, 30-yr	*56*	*170*	*288*	*427*	*577*	*715*	*836*	*967*	*1,103*	*1,208*	*1,322*	*1,452*	*1,553*	*1,621*	*1,647*	*1,640*	*1,613*	*1,548*	*1,466*	*1,379*	*1,288*	*1,192*	*1,091*	*986*	*874*	*758*	*635*	*505*	*370*	*227*	*77*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		2,236	2,328	2,413	3,150	2,889	2,646	2,203	3,041	2,394	1,821	2,756	2,471	1,565	1,145	-100	-148	-970	-1,612	-1,694	-1,781	-1,872	-1,967	-2,068	-2,174	-2,285	-2,402	-2,525	-2,654	-2,790	-2,933	-3,083	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1e_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0
			36	37	38	53	46	39	27	45	28	13	33	24	1	-11	-16	-16	-17	-18	-19	-20	-21	-22	-23	-25	-26	-27	-29	-30	-32	-33	-35	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,243	904	16,239
Equal Monthly Debt Drawdown	2,297	903	

	Feb8 1e, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	17,670	2029	12,350
Equal Monthly Debt Drawdown	18,091		

Feb8 1e, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
a Debt, Beginning of Year	0	1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	
c = a*5% *Interest Cost - Feb8 1e, 30-yr - End of Year Debt Drawdown*	*0*	*77*	*156*	*236*	*351*	*450*	*534*	*592*	*688*	*749*	*778*	*849*	*901*	*904*	*881*	*847*	*812*	*775*	*735*	*694*	*651*	*605*	*558*	*507*	*454*	*399*	*340*	*279*	*214*	*146*	*75*	*0*	*0*	*0*	16,239
b Additional GA Debt Drawdown, End of Year	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
d = a+b+c Accumulated debt in present year (including 5.12% annual interest)	1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
Feb8 1e, 30-yr - Accumulated Interest Costs	0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	6,605	5,911	5,182	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,188	2,861	1,466	0	0	0	0
Feb8 1e, 30-yr - Accumulated Debt Principal	1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	9,960	9,960	9,960	9,960	9,155	8,308	7,418	6,482	5,498	4,465	3,378	2,235	1,035	0	0	0	0	0	0	0	
Feb8 1e, 30-yr - Accumulated Interest Costs	0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	8,146	8,993	9,805	10,580	11,315	12,010	12,661	13,266	13,824	14,331	14,785	15,184	15,524	15,803	16,017	16,164	16,239				
Feb8 1e, 30-yr - Accumulated Debt Principal	1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	8,419	6,878	5,337	3,796	2,255	714	-827	-2,369	-3,910	-5,451	-6,992	-8,533	-10,074	-11,615	-13,156	-14,697	-16,239				
Fiscal Exposure - End of Year Debt Drawdown	1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	

Feb8 1e, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	
903 *Interest Cost - Feb8 1e, 30-yr*	*36*	*113*	*193*	*290*	*397*	*489*	*561*	*637*	*717*	*762*	*811*	*873*	*903*	*893*	*866*	*831*	*795*	*756*	*716*	*674*	*630*	*583*	*534*	*483*	*428*	*372*	*312*	*249*	*183*	*113*	*40*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	
Monthly Drawdown	125	122	119	167	132	99	50	108	42	(16)	51	15	(70)	(112)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	-	-	-	
FV of Monthly Drawdown at 5%	1,536	1,500	1,457	2,055	1,617	1,213	620	1,328	512	(199)	625	182	(865)	(1,382)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	-	-	-	
Annual Interest Cost on New Drawdowns	36	35	34	48	38	28	14	31	12	(5)	15	4	(20)	(32)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	-	-	-	
Annual Interest Cost on Opening Balance	-	79	159	242	359	461	546	606	705	767	796	869	923	926	902	868	831	793	753	711	666	620	571	519	465	408	348	285	219	150	77	0	0	0	
Total Annual Interest Cost	36	113	193	290	397	489	561	637	717	762	811	873	903	893	866	831	795	756	716	674	630	583	534	483	428	372	312	249	183	113	40	0	0	0	

Feb8 1e, 30-yr — Bi-Annual Debt Drawdown

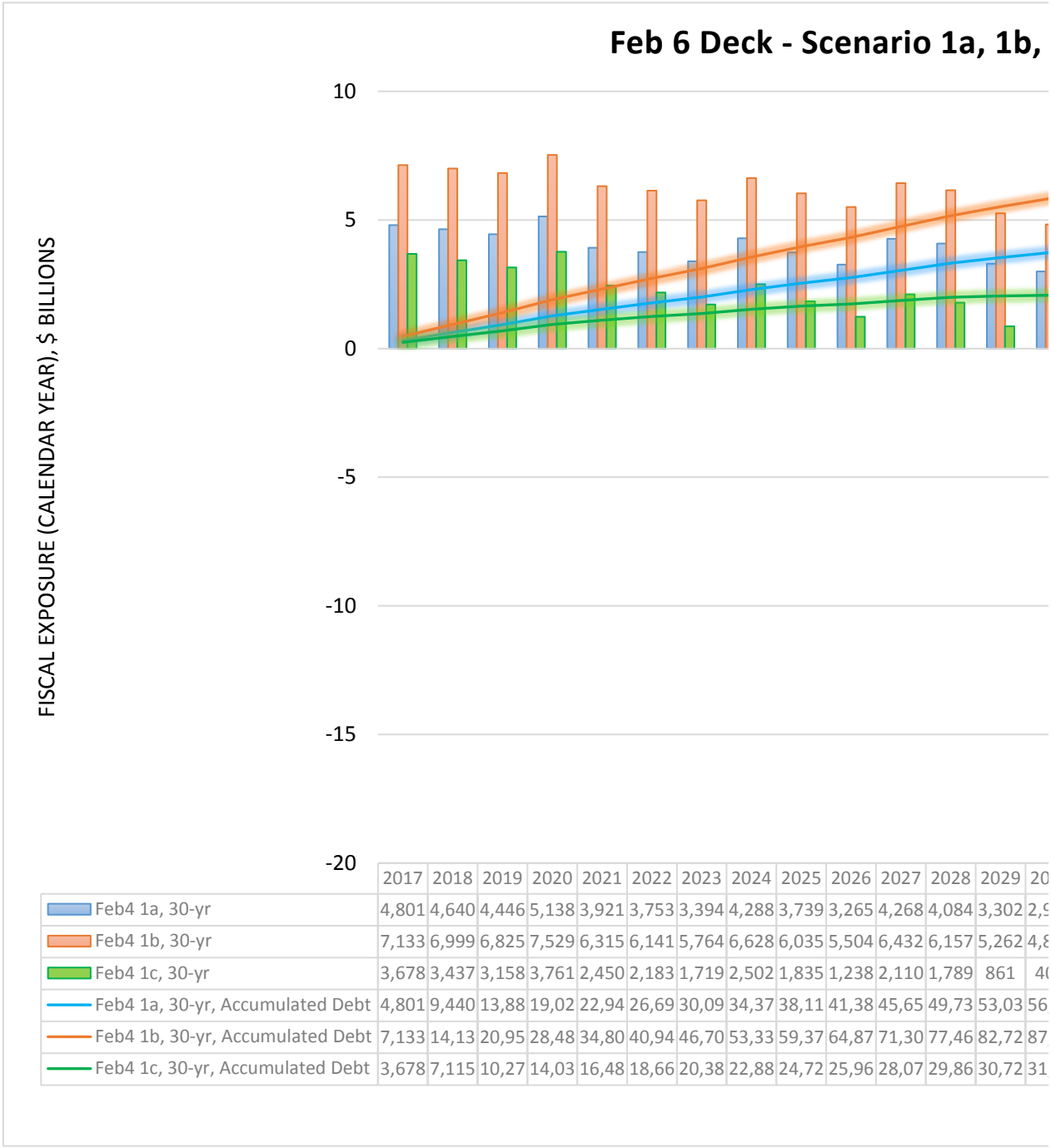
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	
Interest Cost - Feb8 1e, 30-yr	*19*	*96*	*176*	*265*	*376*	*471*	*548*	*616*	*704*	*756*	*795*	*862*	*902*	*898*	*873*	*839*	*803*	*765*	*725*	*683*	*640*	*593*	*545*	*494*	*440*	*384*	*325*	*263*	*197*	*129*	*56*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	1,519	1,561	1,598	2,272	1,956	1,655	1,154	1,913	1,203	562	1,406	1,040	57	-451	-668	-703	-738	-776	-816	-858	-902	-948	-996	-1,047	-1,101	-1,157	-1,216	-1,278	-1,344	-1,413	-1,485	0	0	0	
Bi-Annual Drawdown	750	733	711	1,003	790	592	303	649	250	(97)	305	89	(423)	(675)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	-	-	-	
FV of Bi-Annual Drawdown at 5%	1,519	1,484	1,441	2,033	1,600	1,200	613	1,314	506	(197)	618	180	(856)	(1,367)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	-	-	-	
Annual Interest Cost on New Drawdowns	19	19	18	26	20	15	8	17	6	(2)	8	2	(11)	(17)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	-	-	-	
Annual Interest Cost on Opening Balance	-	78	158	239	356	456	540	599	697	759	788	860	913	916	893	858	822	785	745	703	659	613	565	514	460	404	345	282	217	148	76	0	0	0	
Total Annual Interest Cost	19	96	176	265	376	471	548	616	704	756	795	862	902	898	873	839	803	765	725	683	640	593	545	494	440	384	325	263	197	129	56	0	0	0	

Feb8 1e, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	
Interest Cost - Feb8 1e, 30-yr	*38*	*116*	*196*	*294*	*401*	*492*	*563*	*640*	*719*	*763*	*813*	*875*	*903*	*893*	*864*	*830*	*793*	*755*	*715*	*673*	*628*	*581*	*532*	*481*	*427*	*369*	*310*	*247*	*180*	*111*	*38*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	1,538	1,581	1,619	2,301	1,980	1,676	1,168	1,938	1,219	569	1,424	1,053	57	-457	-677	-711	-748	-786	-826	-869	-913	-960	-1,009	-1,060	-1,115	-1,172	-1,232	-1,295	-1,361	-1,430	-1,504	0	0	0	

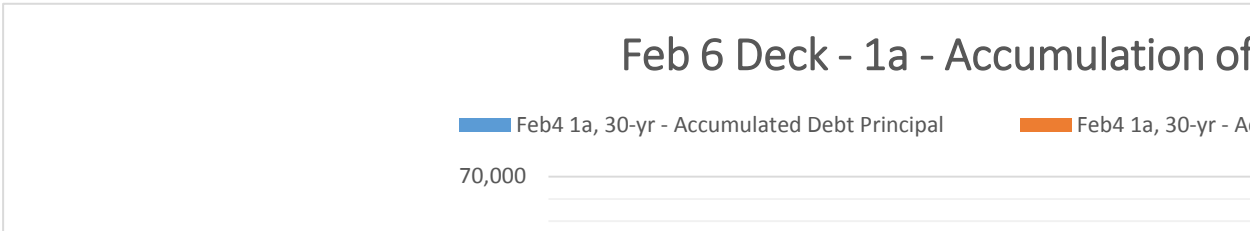
Feb 6 Deck

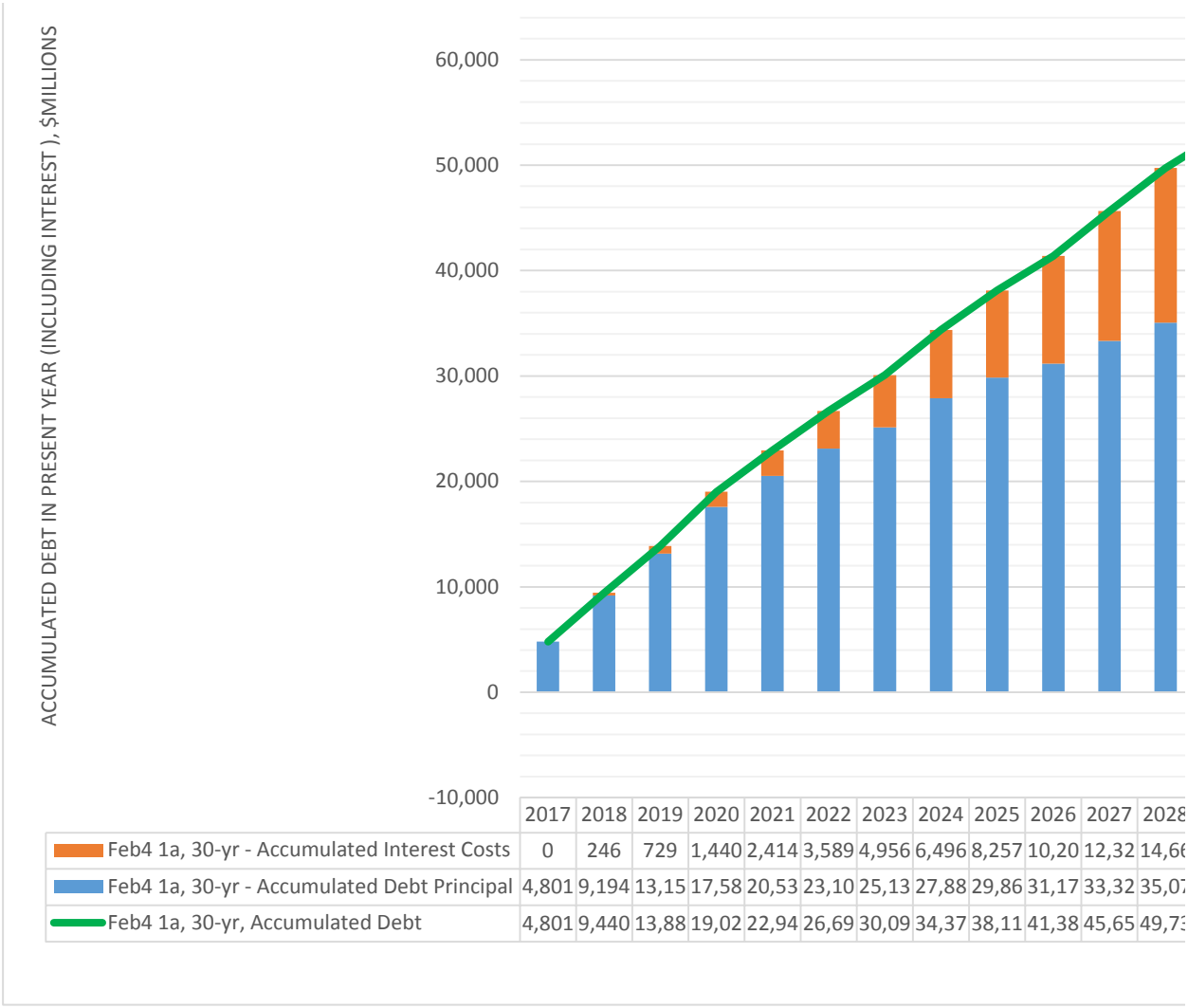
Feb 6 Deck - Scenario 1a, 1b, 1c - at 5.12% interest rate



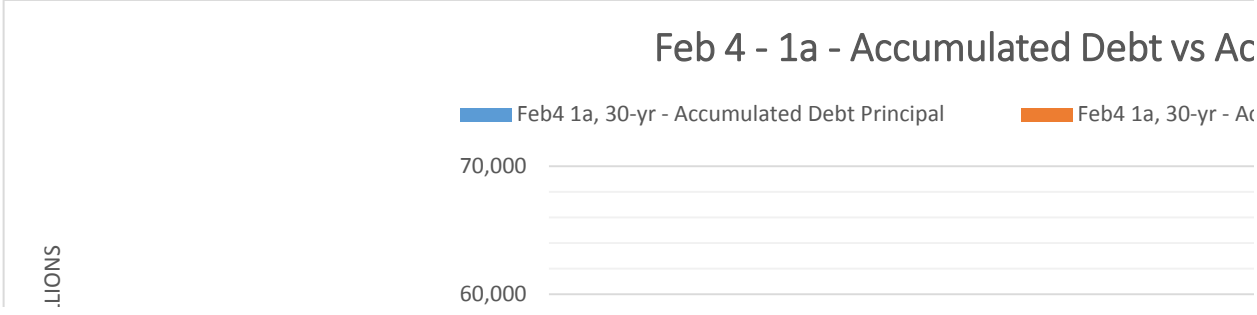
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	20
Feb4 1a, 30-yr	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,9
Feb4 1b, 30-yr	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,8
Feb4 1c, 30-yr	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	4(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73	53,03	56
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31

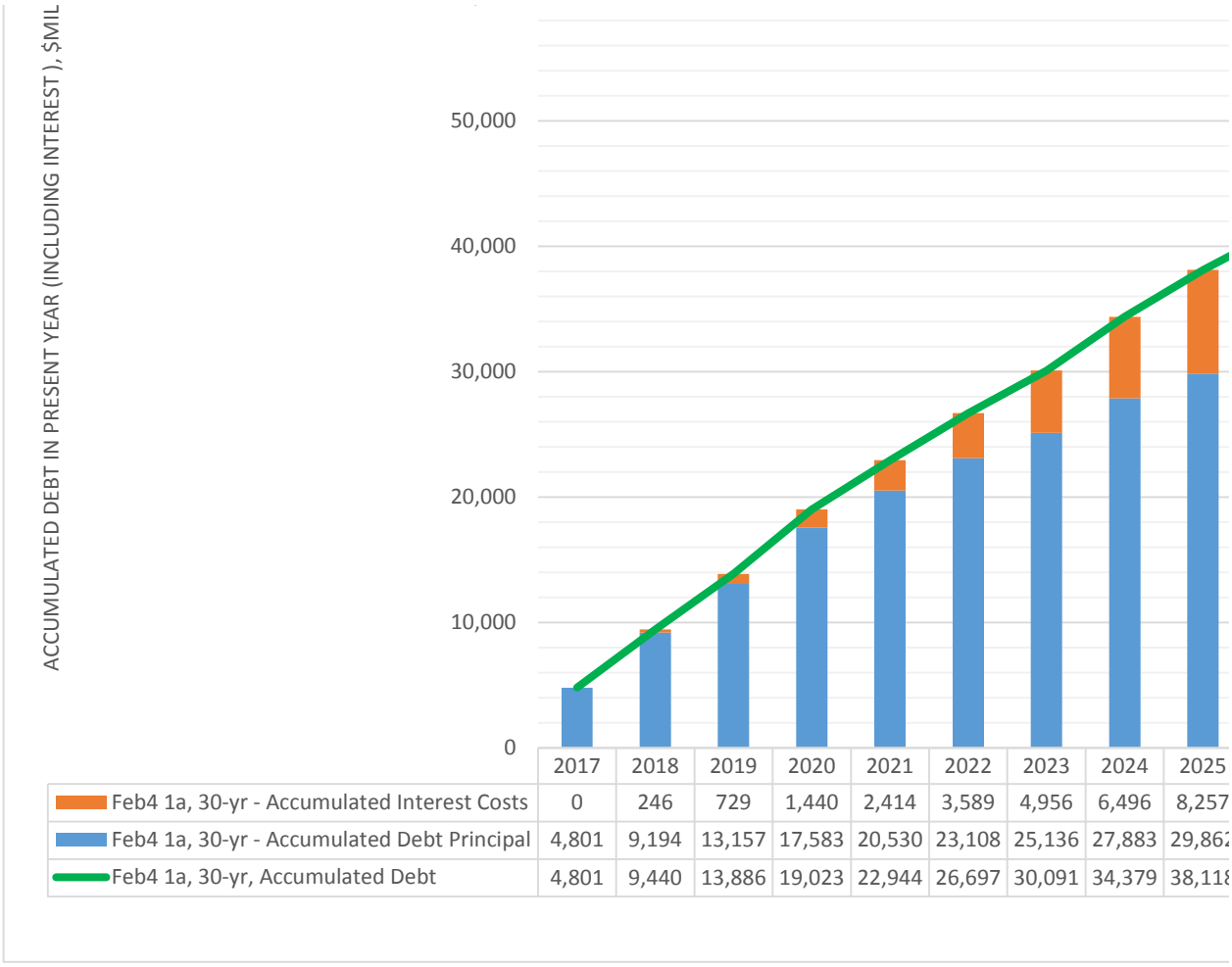
Feb 6 Deck - 1a - Accumulation of Debt (Principal and Interest)



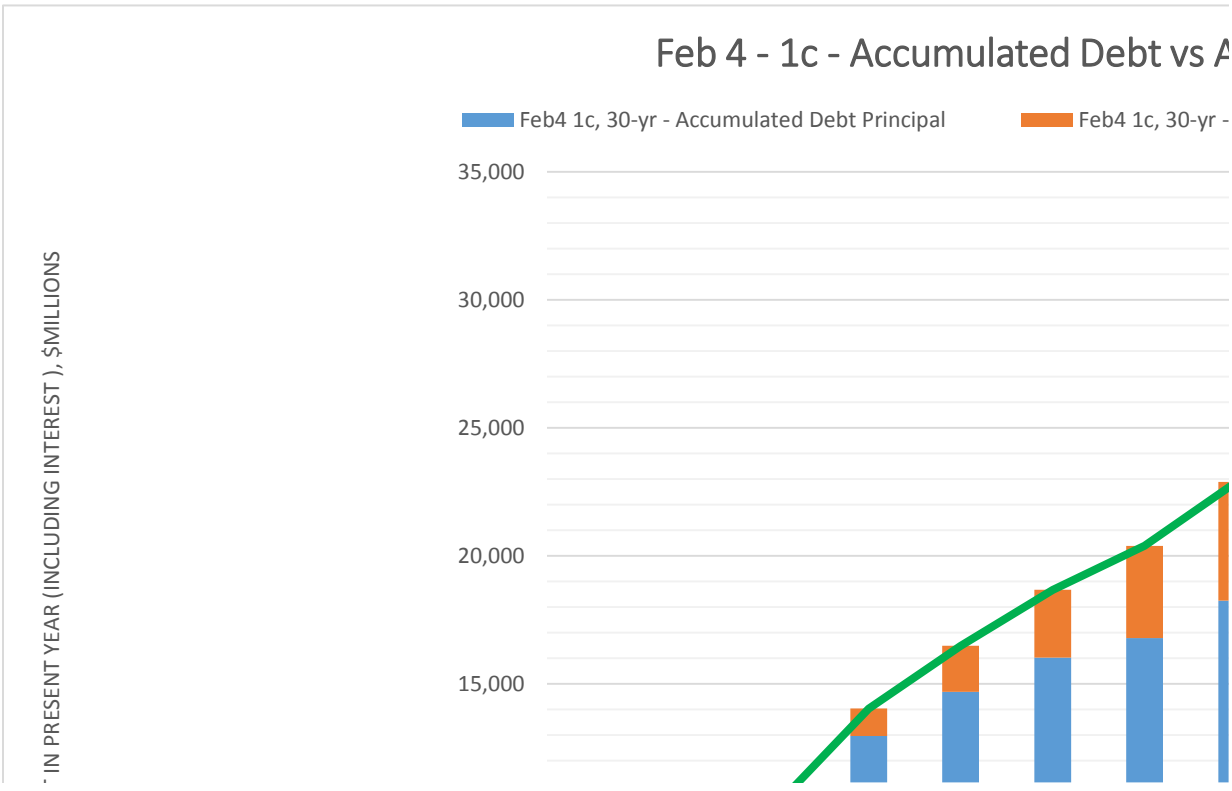


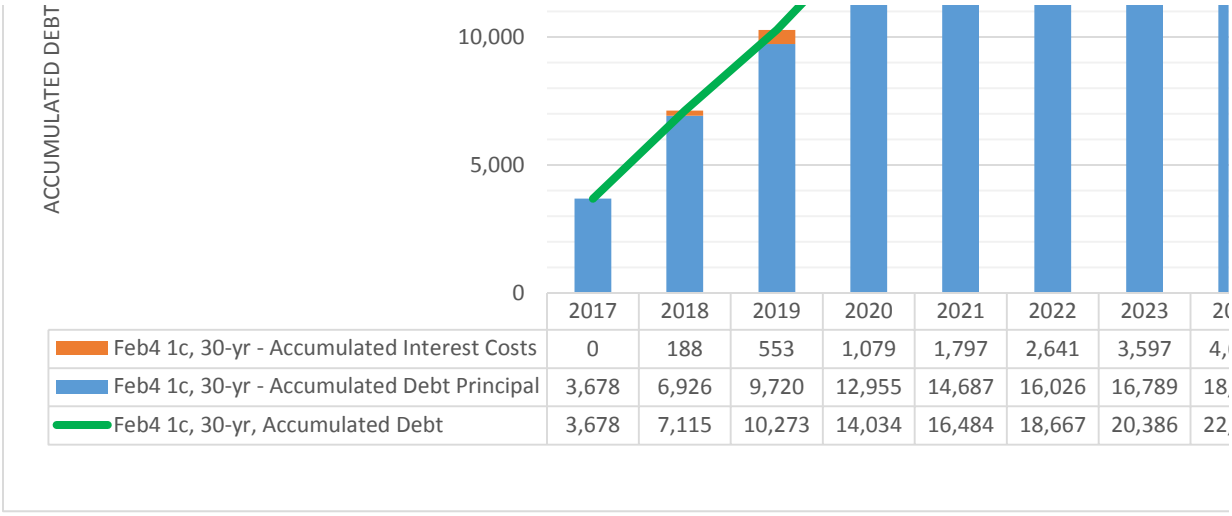
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,66
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,07
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73



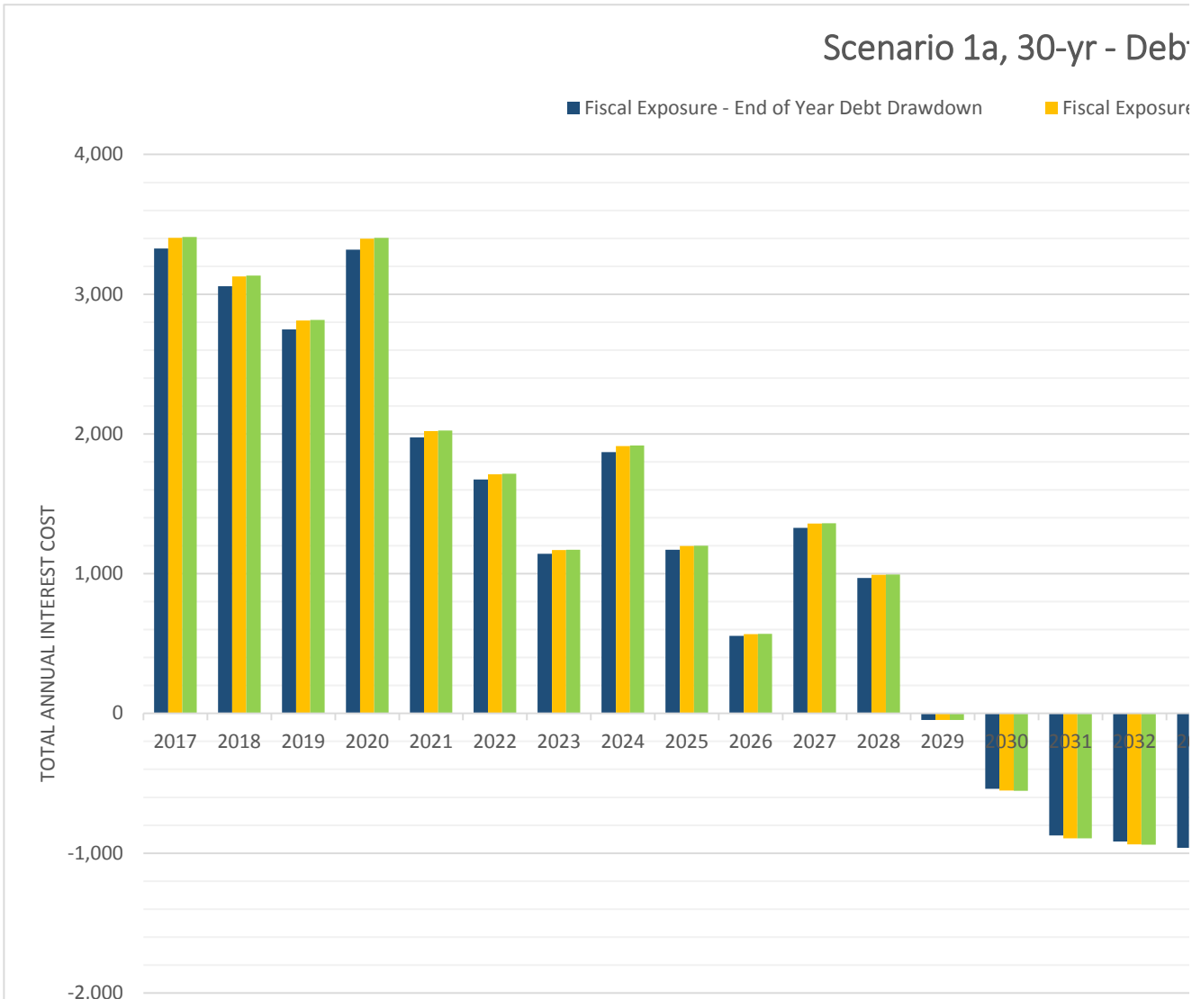


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



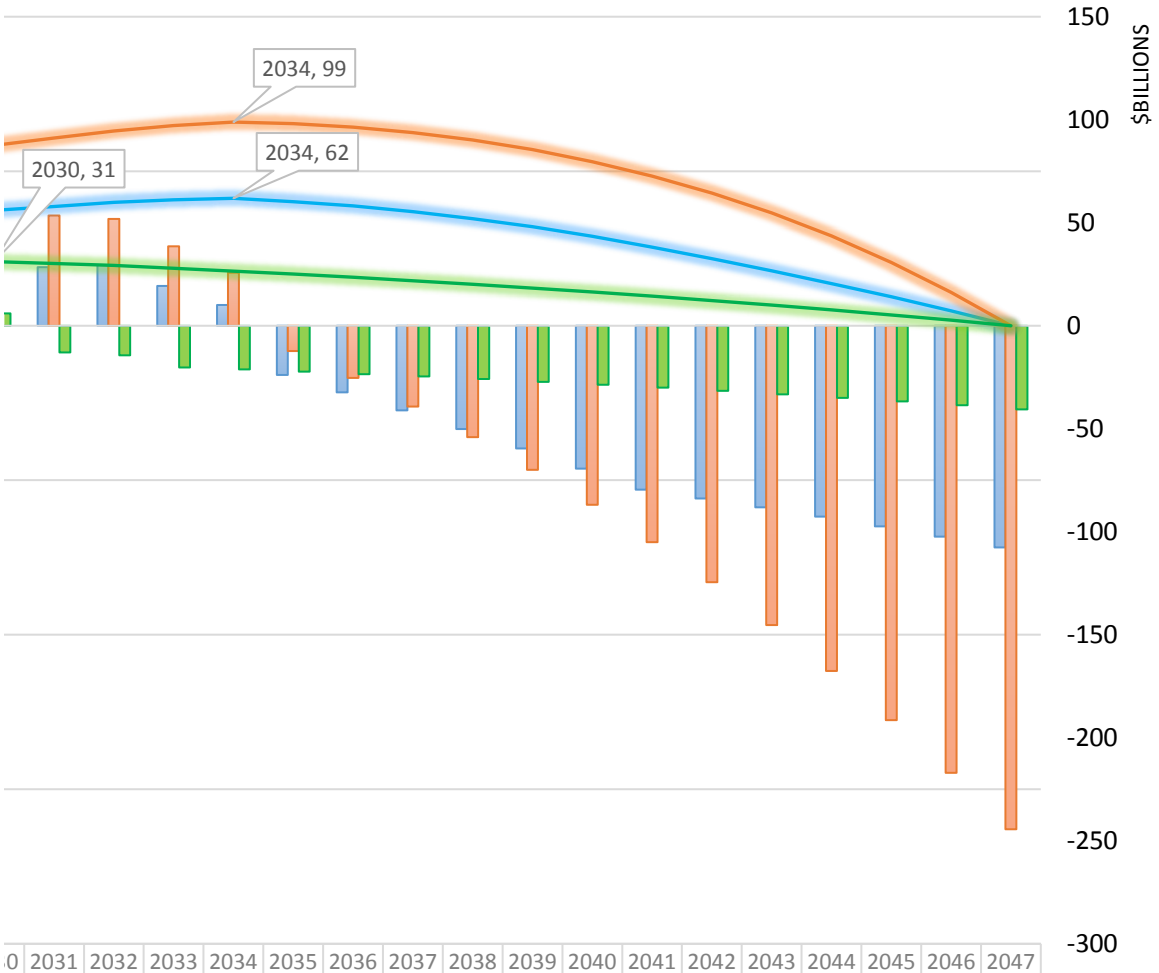


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22



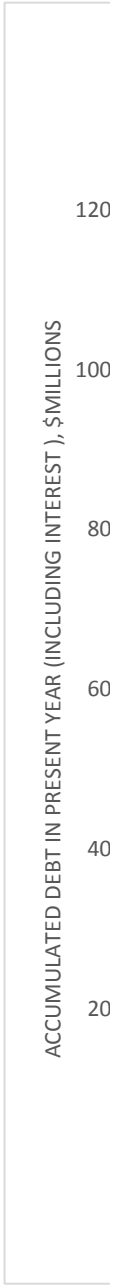

-3,000

lc - at 5.12% interest rate



0	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
98	1,896	1,966	1,288	672	-1,59	-2,15	-2,73	-3,34	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
26	3,568	3,457	2,571	1,716	-819	-1,68	-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
4	-860	-961	-1,34	-1,41	-1,48	-1,56	-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0
55	91,12	94,57	97,14	98,86	98,04	96,35	93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0
12	30,26	29,30	27,95	26,54	25,05	23,49	21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

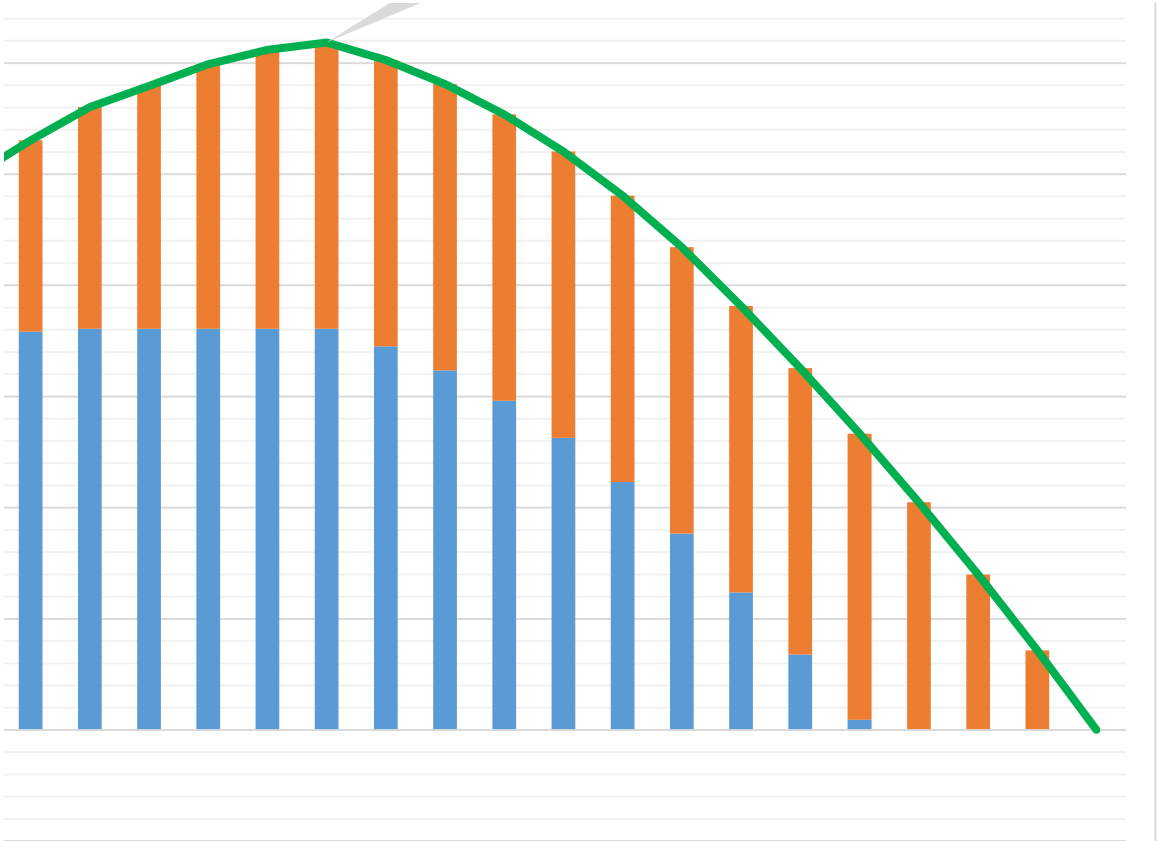
CALENDAR YEAR



Debt (Principal and Interest)

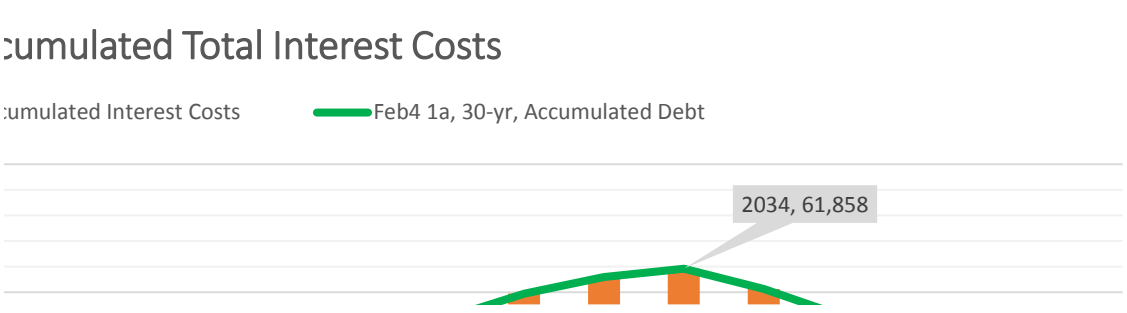
cumulated Interest Costs — Feb4 1a, 30-yr, Accumulated Debt

2034, 61,858

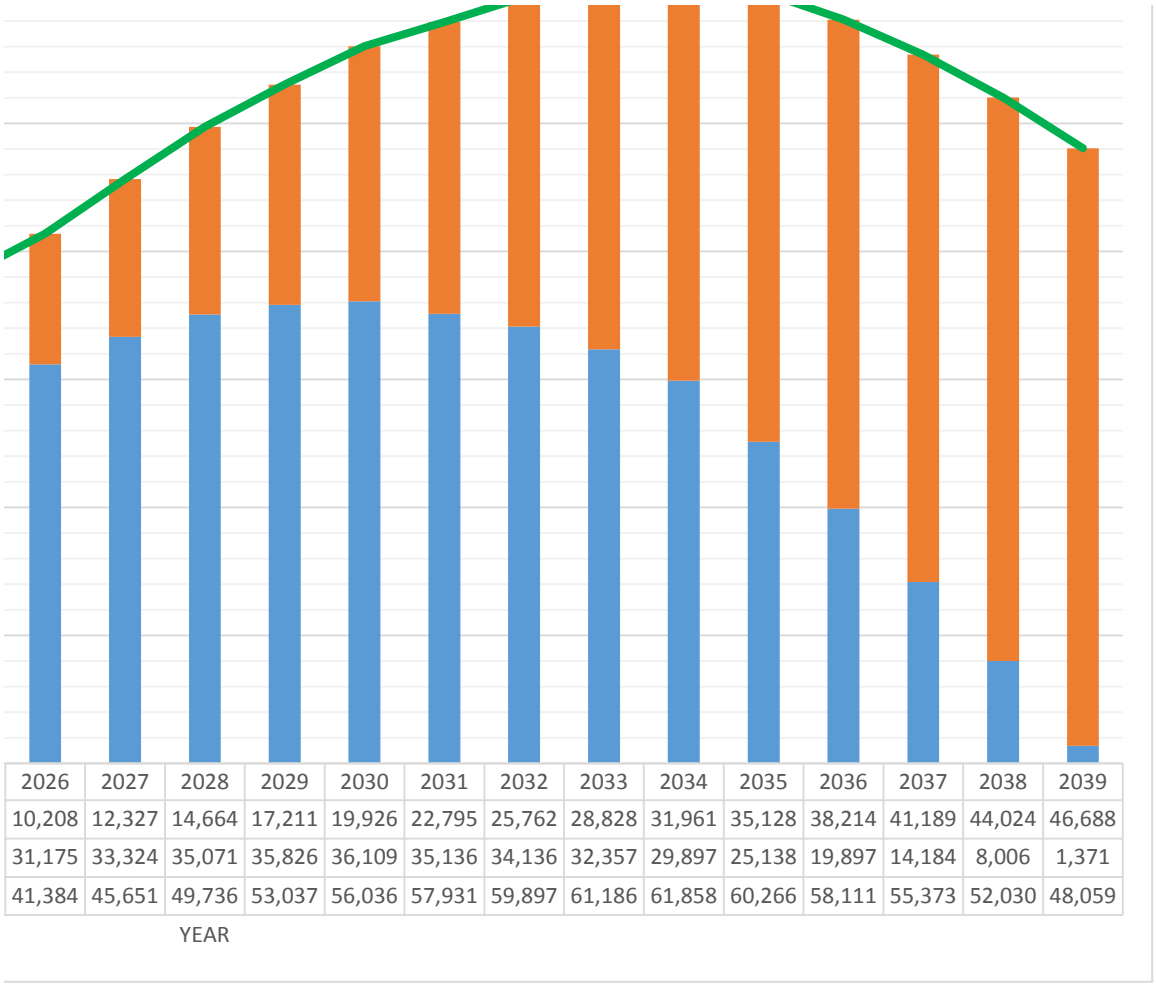


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



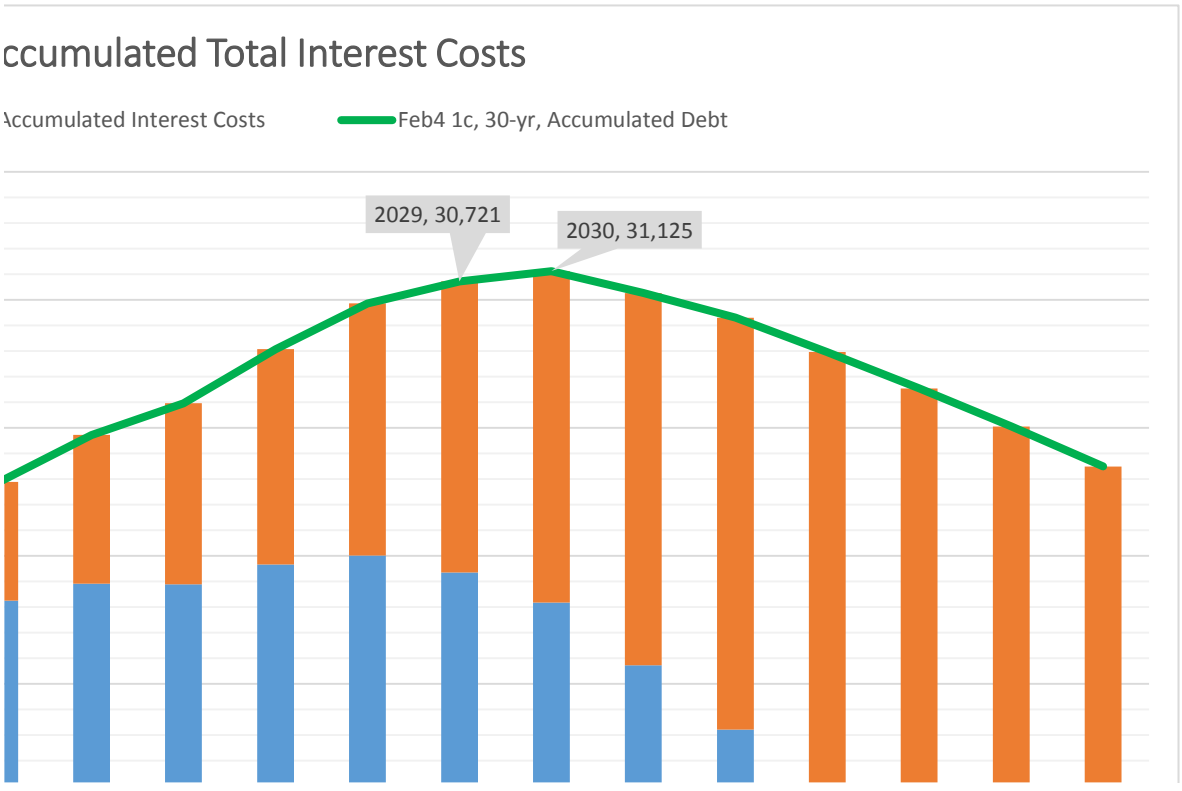
LIONS

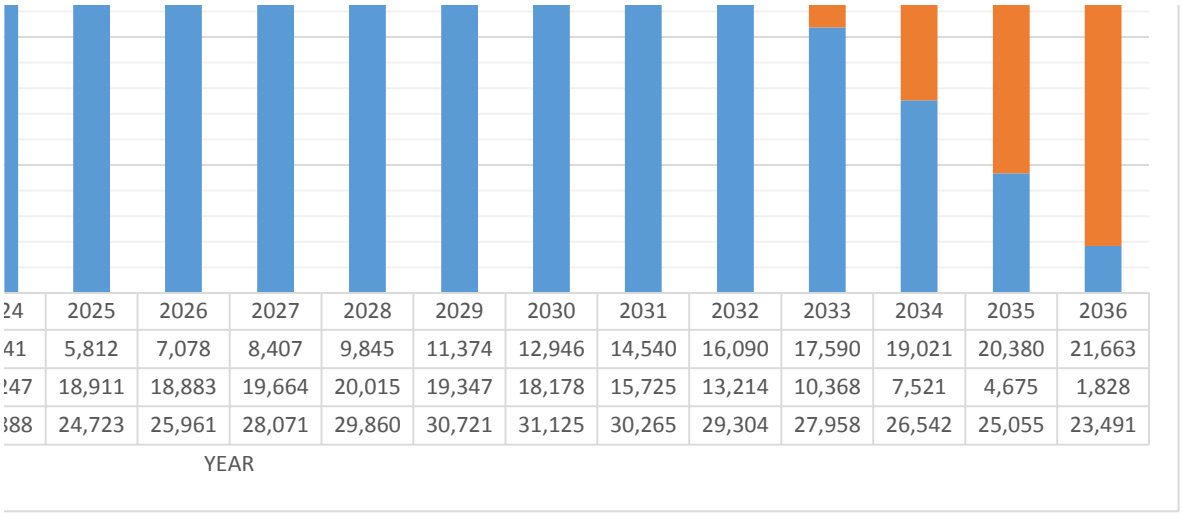


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

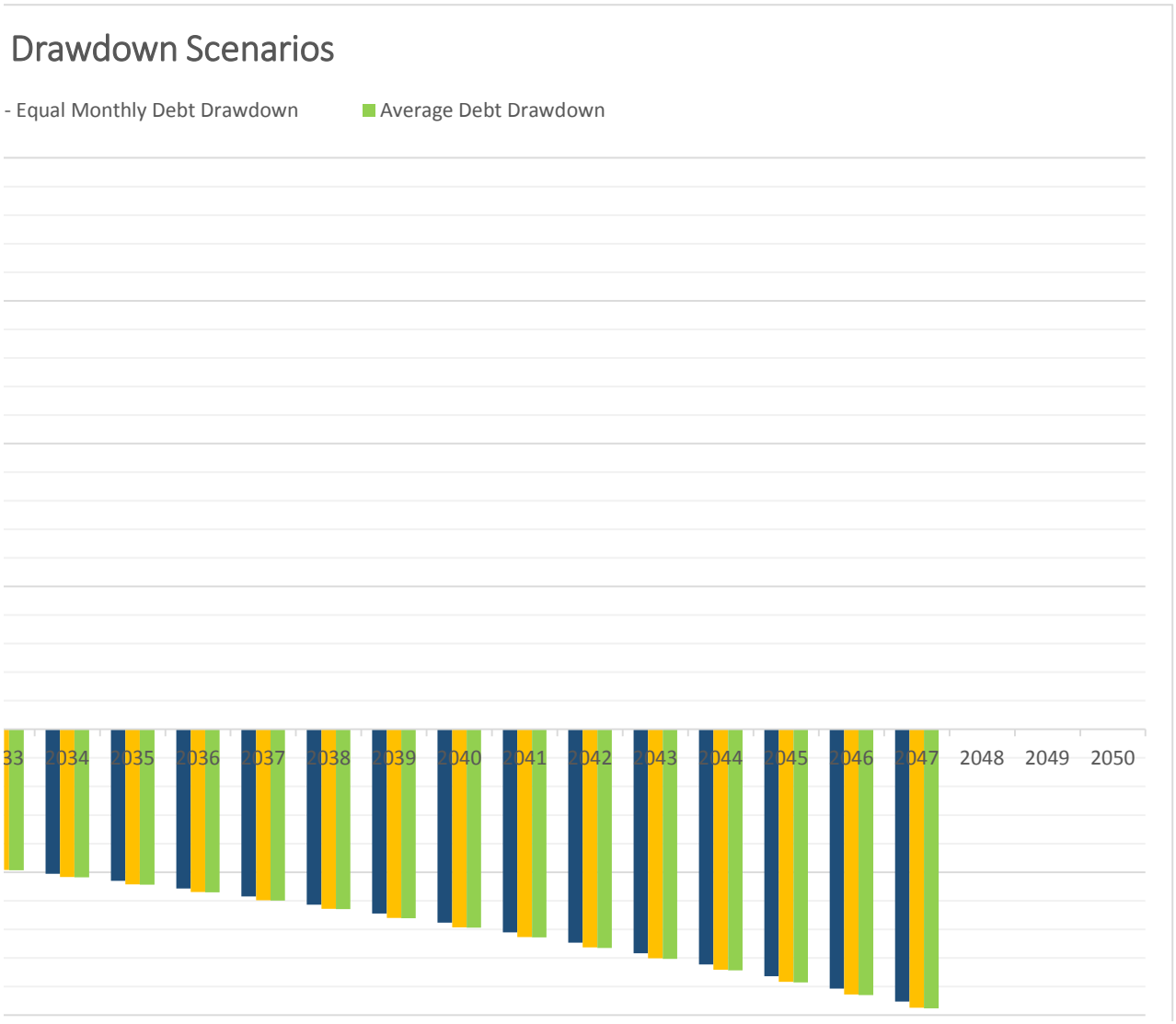
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





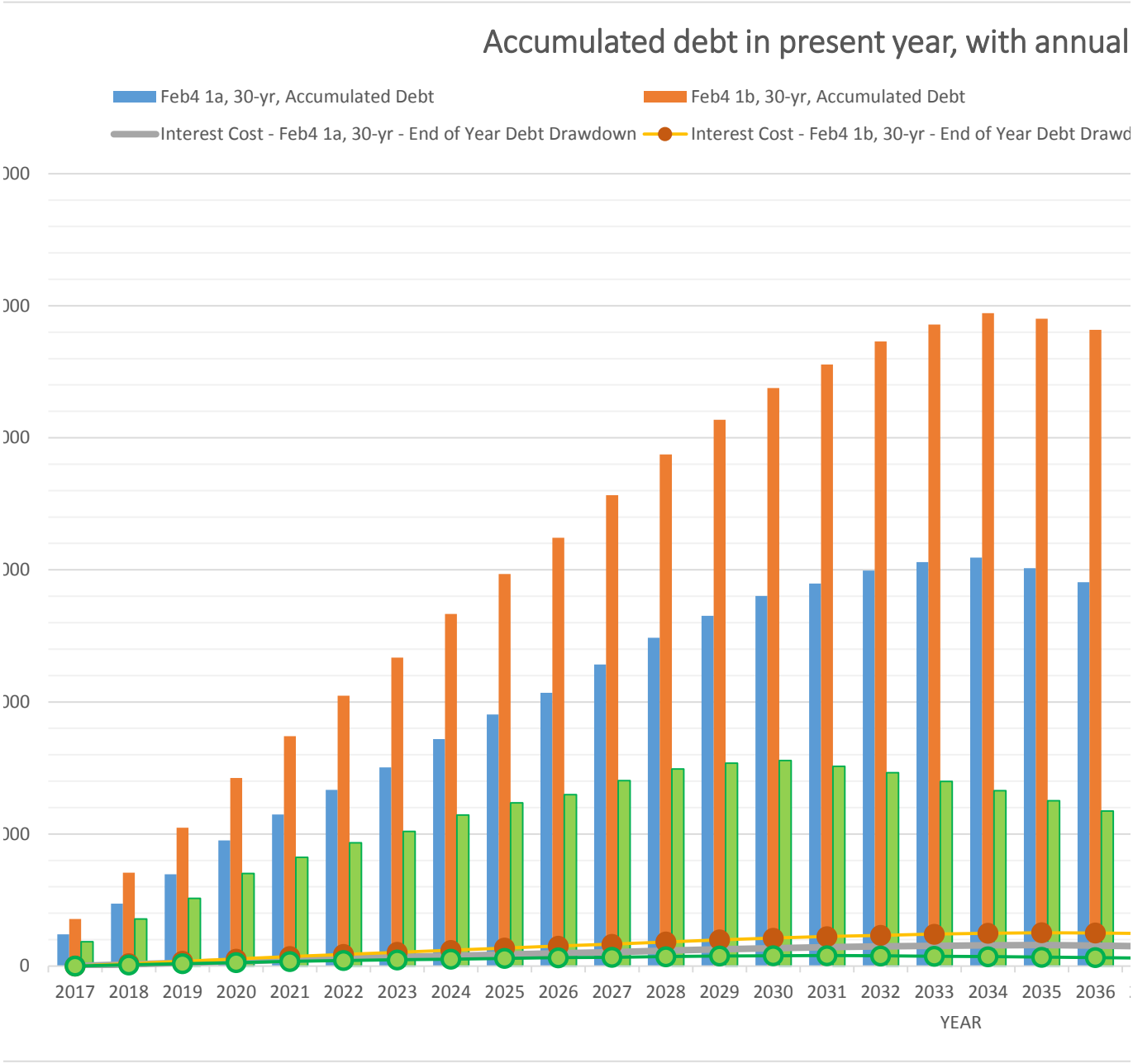
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

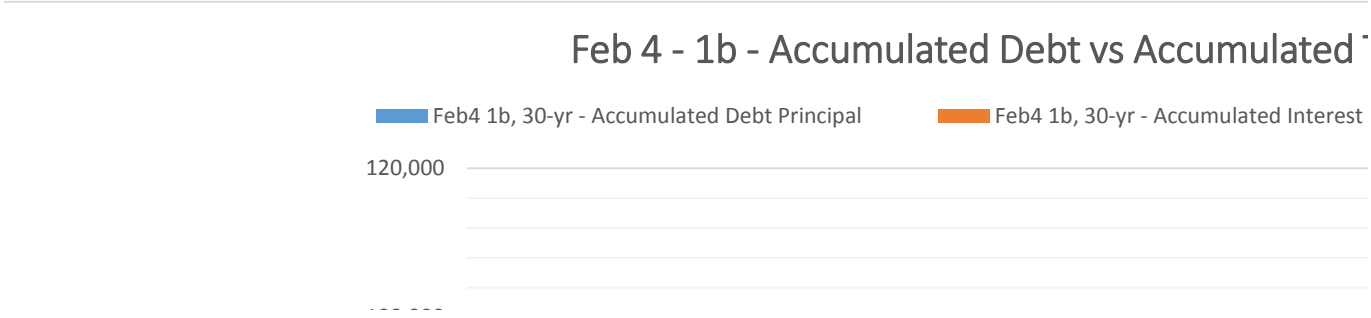
YEAR

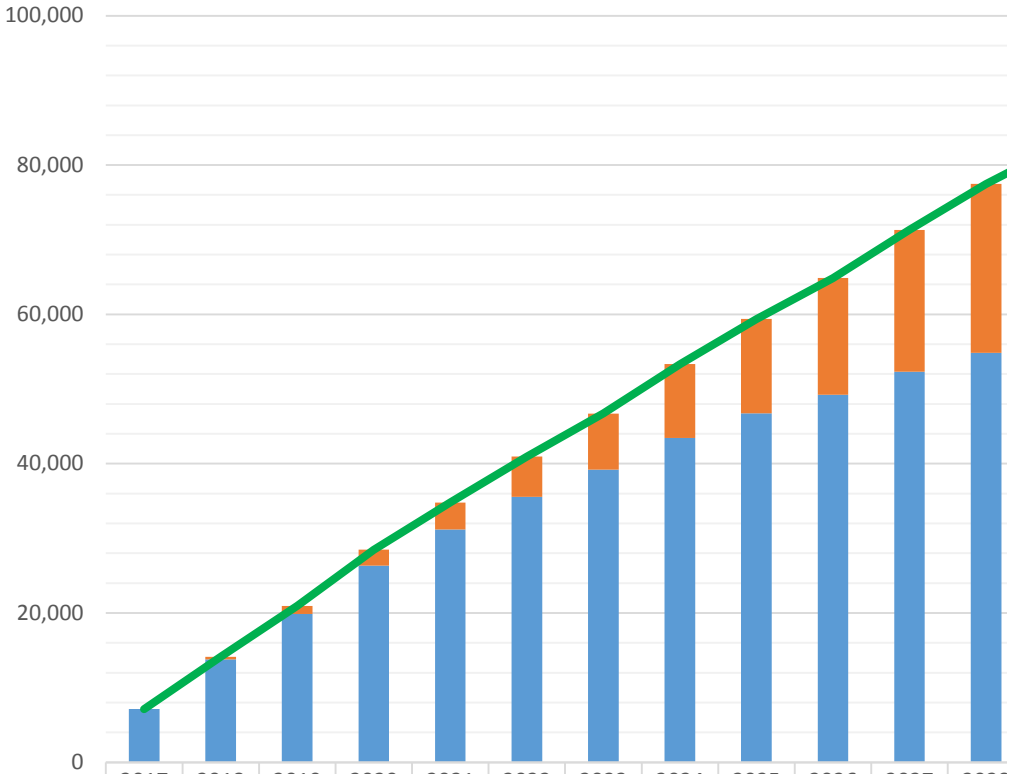


YEAR

ɜ - 25 year and 30 year Financing Terms, at 5% interest rate

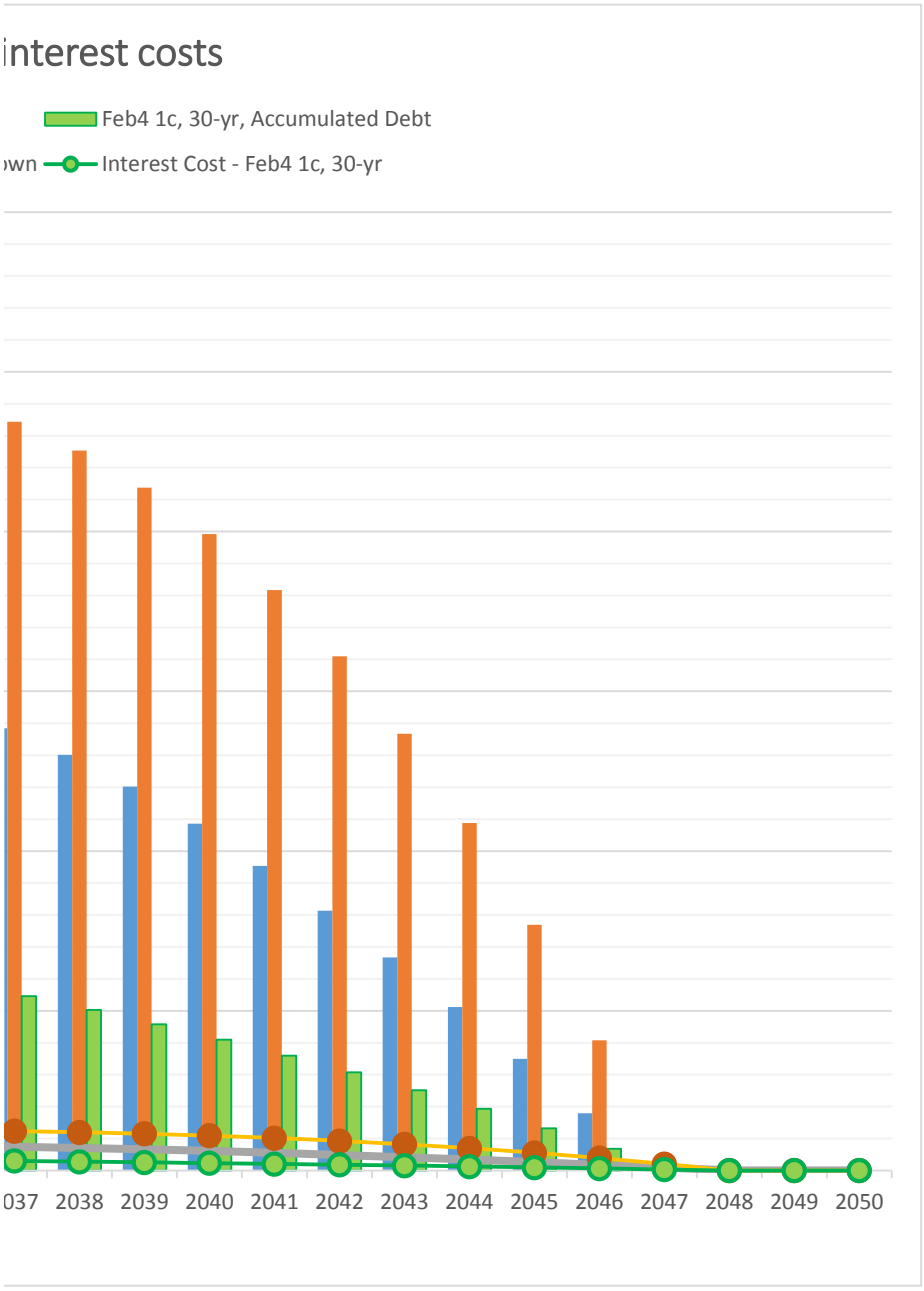


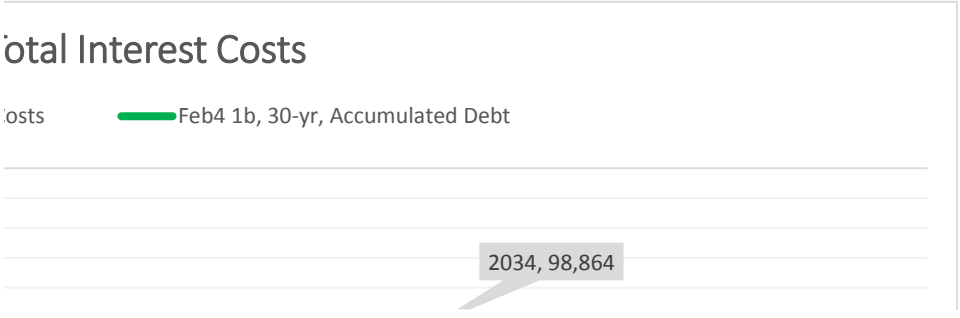

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

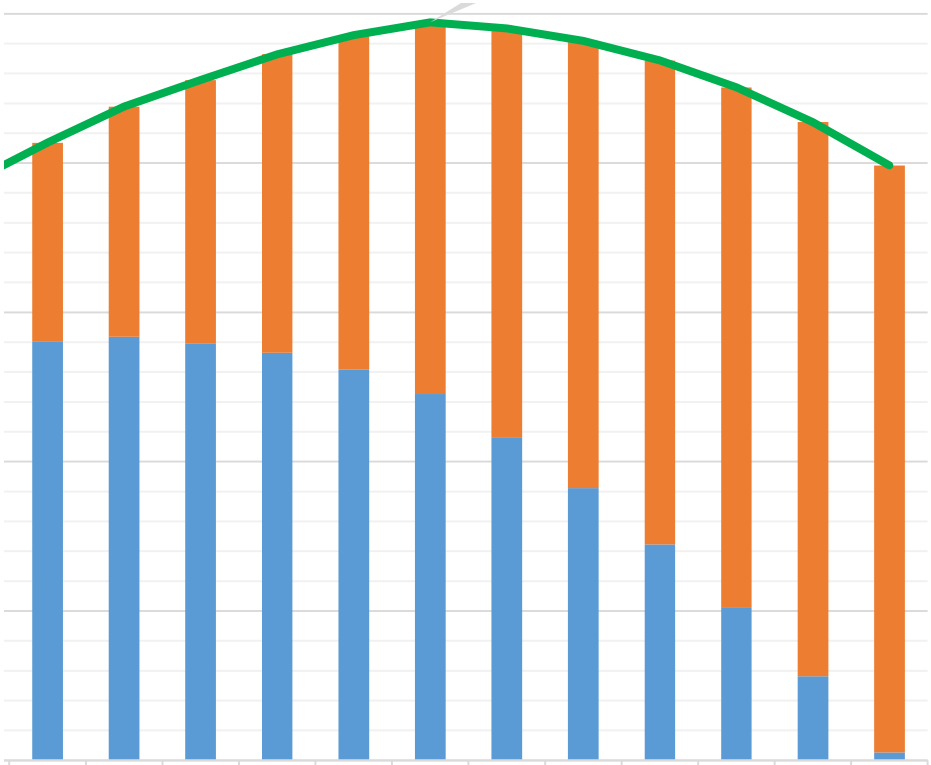


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y


interest costs
Feb4 1c, 30-yr, Accumulated Debt
wn
Interest Cost - Feb4 1c, 30-yr
037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR

Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

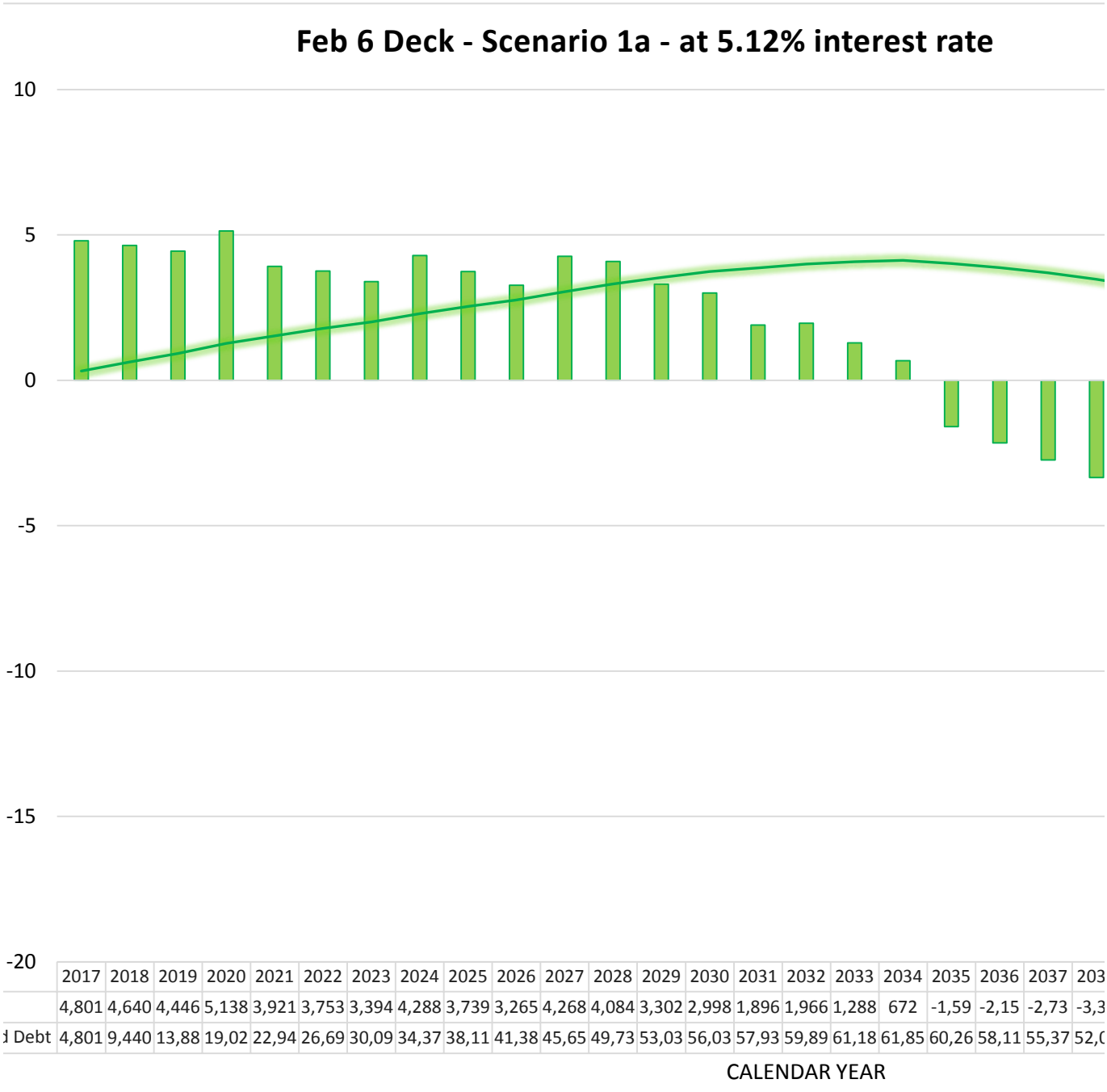
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

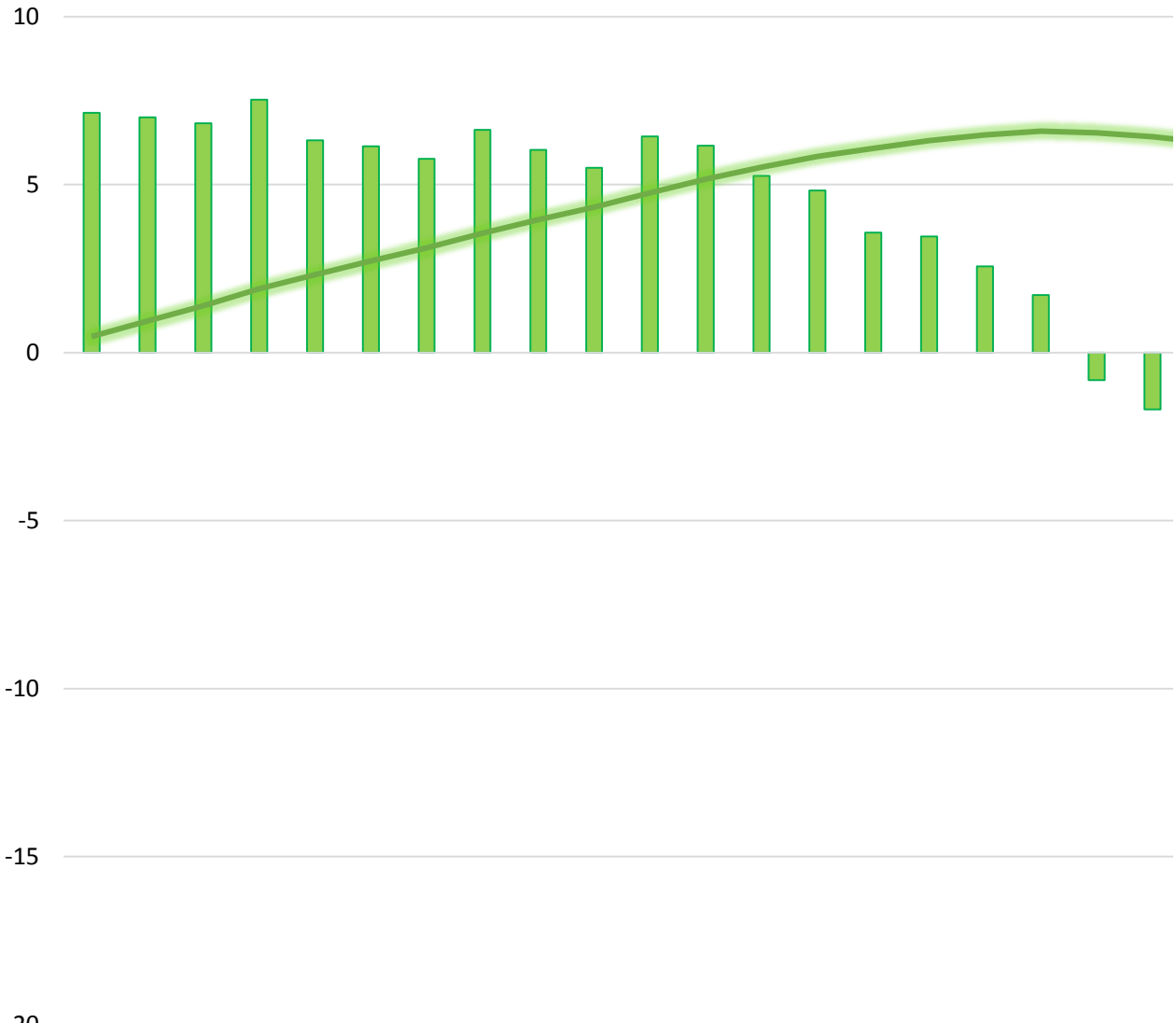
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

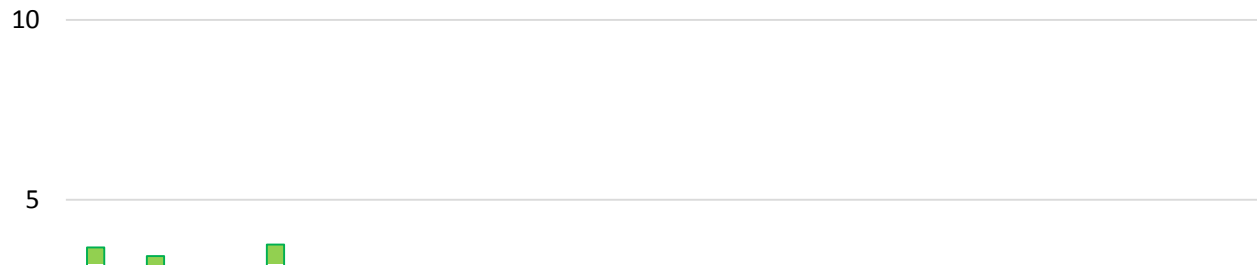
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

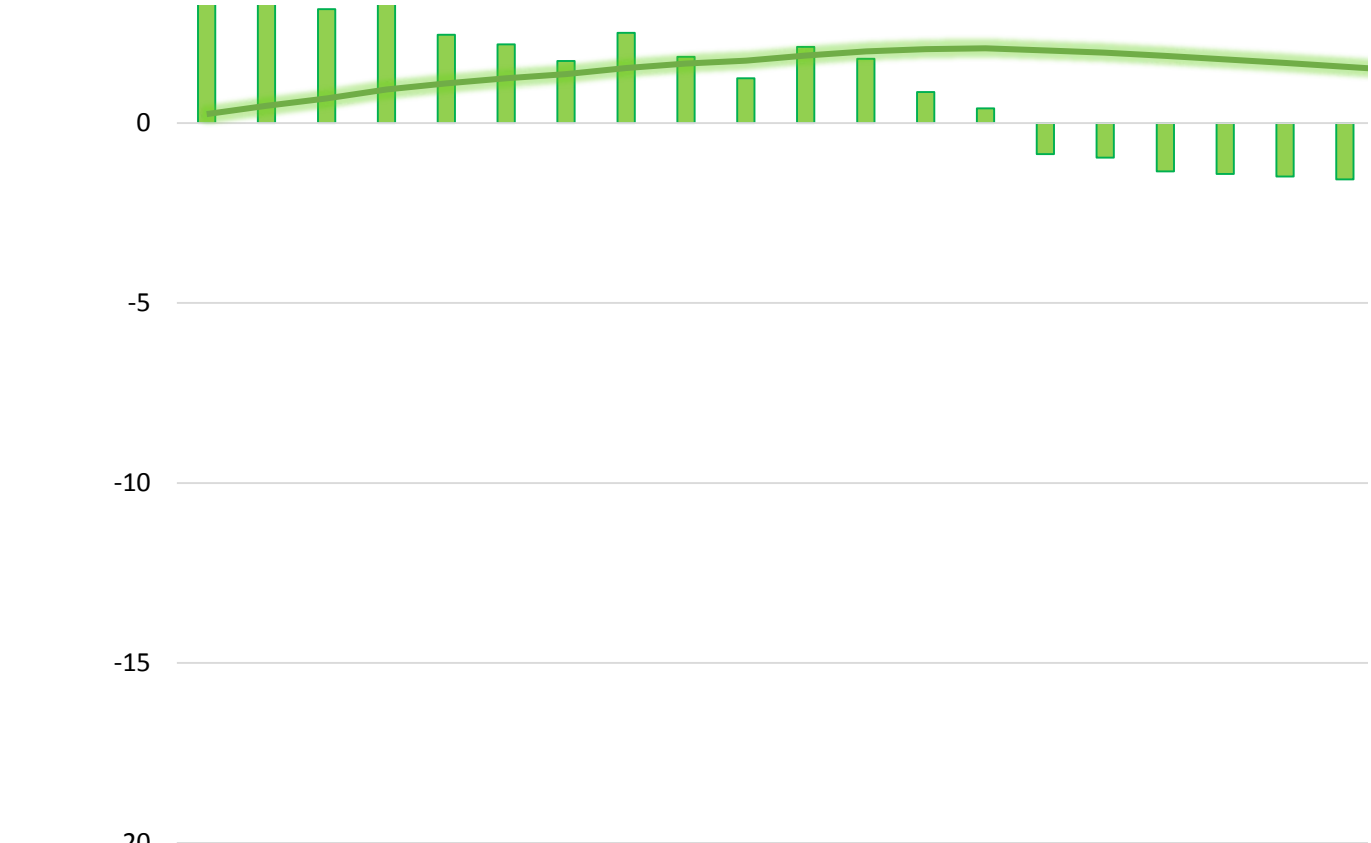


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



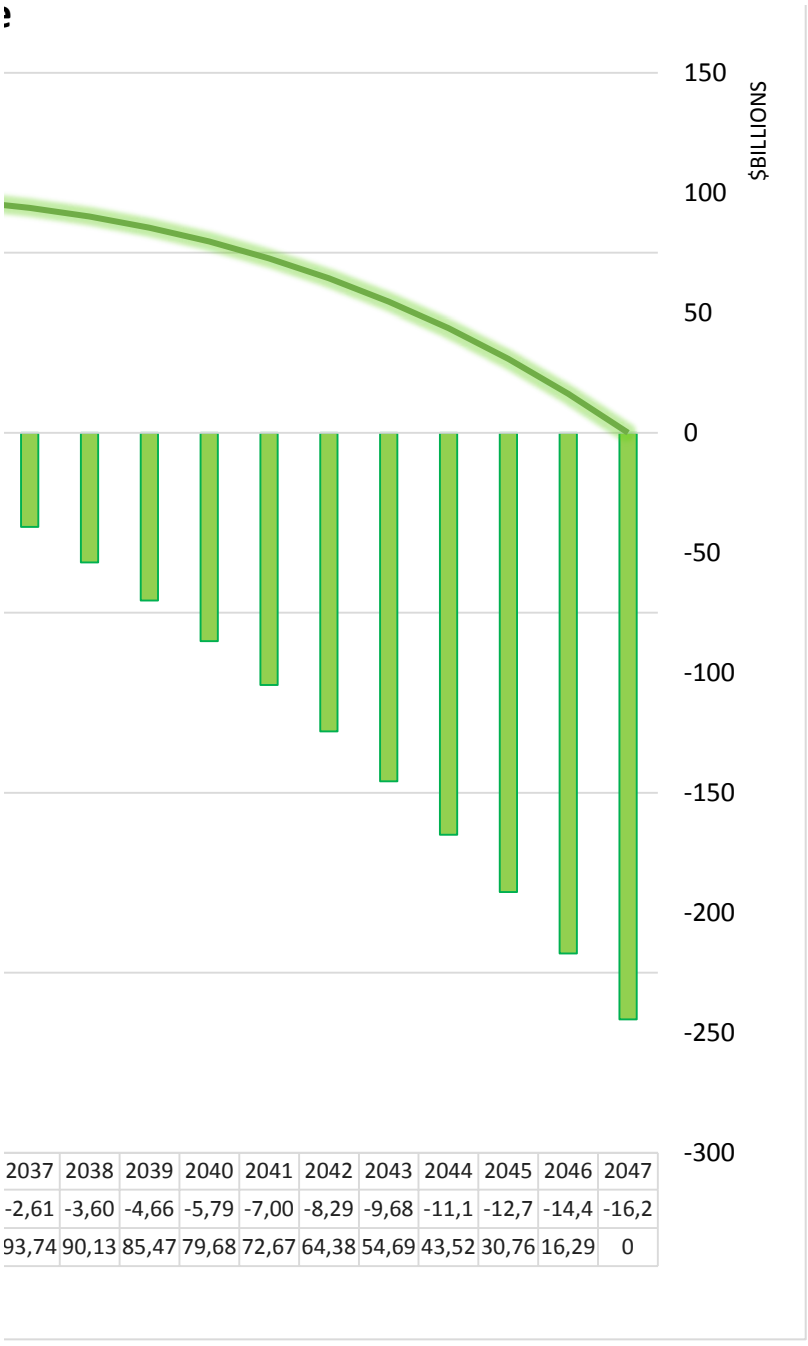


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

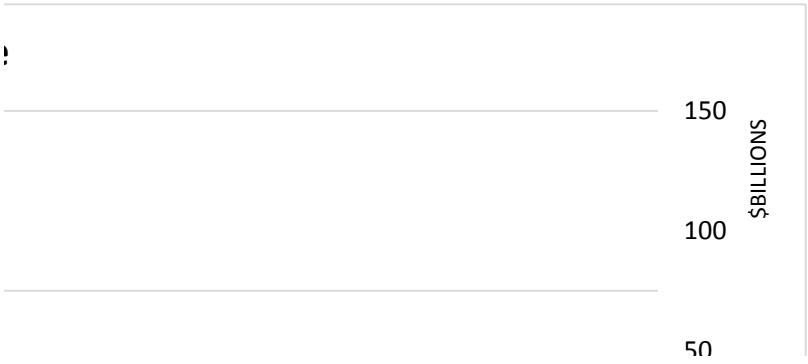
CALENDAR YEAR

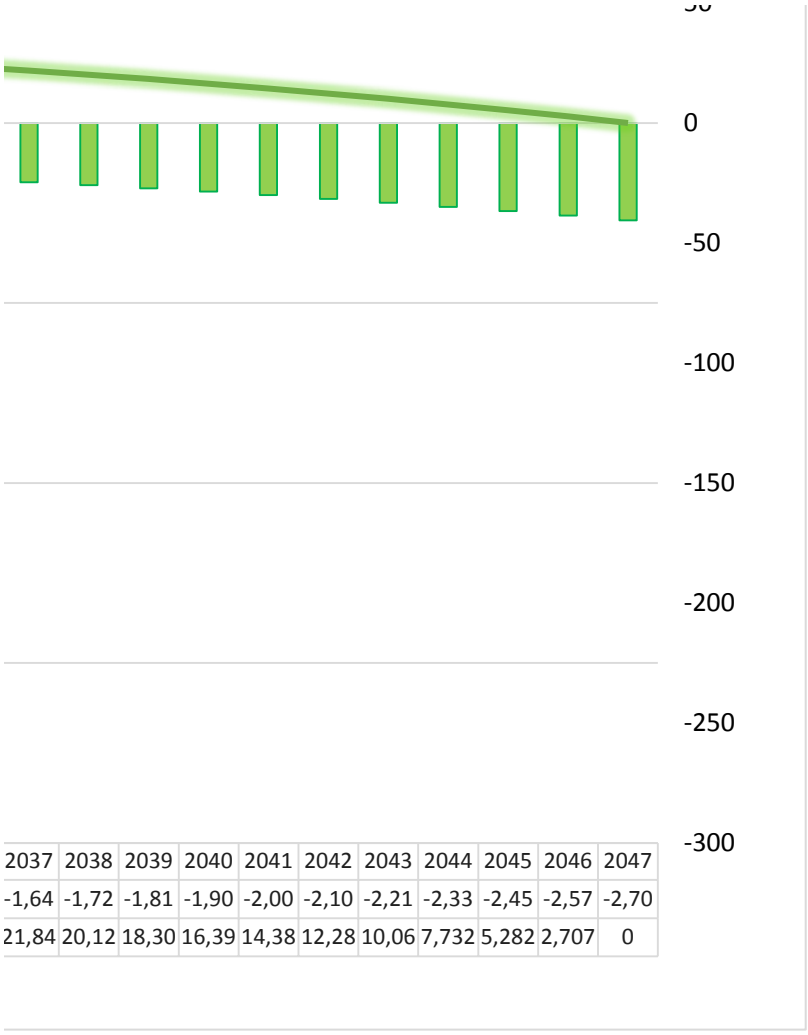


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Equal Monthly Debt Drawdown

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb4_1a_30yr

1a. GA Smoothing (Borrow ~$5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,801	4,640

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,200	4,760

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $62 billion, peakin
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary on accounting treatment.

7,133 7,133

Feb4_1b_30yr 7,133

1b. GA Smoothing (Borrow ~$7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	7,133	6,999

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,783	7,100

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $99 billion, peaking
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b on accounting treatment.

Feb4_1c_30yr

1c. GA Smoothing (Borrow ~$4 billion in 2017)

$ millions

Scenario 1C - 30-yr amortization	2017	2018
Annual Exposure[2]	3,678	3,437

	Fiscalized[3]	2016-17	2017-18
	Start: January 1st	919	3,617

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	1,783 - 1,200	7,100 - 4,760

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1200	4760
Debt-Finance Global Adjustment Costs, Option 1a	1783	7100
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18

Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1200**	**5000**
Total, B	1783	7340
Proposed Program Total:	1,783 - 1,200	7,340 - 5,000

ining

1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
4,446	5,138	3,921	3,753

2018-19	2019-20	2020-21	2021-2022
4,591	4,619	4,833	3,879

ng in 203 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
by approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
6,825	7,529	6,315	6,141

2018-19	2019-20	2020-21	2021-2022
6,956	7,001	7,226	6,272

g in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
3,158	3,761	2,450	2,183

2018-19	2019-20	2020-21	2021-2022
3,367	3,309	3,433	2,383

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
6,956 - 4,591	7,001 - 4,619	7,226 - 4,833	6,272 - 3,879

/1

2018-19[1]	2019-20[1]	2020-21[1]
4591	4619	4833
6956	7001	7226
225	279	323
60	60	60
18	18	18

4894	**4976**	**5234**
7259	7358	7627

7,259 - 4,894 7,358 - 4,976 7,627 - 5,234

1a. GA Smoothing (Borrow $5 billion in 2017)

	2017
IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	7,095
Additional GA Debt Drawdown, End of Year	5,000

Ratepayer GA Payment

Total Accumulated Debt *($ billion)*	5,000
Total Change in Accumulated Debt *($ billion)*	5000

1b. GA Smoothing (Borrow $7 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	5,095
Additional GA Debt Drawdown, End of Year	7,000

Total Accumulated Debt *($ billion)*	7000
Total Change in Accumulated Debt *($ billion)*	7000

1c. GA Smoothing (Borrow $4 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	8,095
Additional GA Debt Drawdown, End of Year	4,000

Total Accumulated Debt *($ billion)*	4000
Total Change in Accumulated Debt *($ billion)*	4000

2018	2019	2020	2021	2022	2023	2024	2025
11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
6,835	7,552	7,168	6,844	6,634	7,243	7,128	6,527
5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000

9,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000
5000	4000	5000	4000	4000	3000	4000	4000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
4,835	4,552	4,168	4,844	4,634	4,243	4,128	4,527
7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000

14000	21000	28000	35000	41000	47000	53000	59000
7000	7000	8000	6000	6000	6000	7000	6000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
8,835	8,552	8,168	8,844	8,634	8,243	8,128	8,527
3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000

7000	10000	14000	16000	19000	20000	23000	25000
3000	3000	4000	2000	2000	2000	3000	2000

2026	2027	2028	2029	2030	2031	2032	2033
10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
7,033	7,043	6,819	7,009	6,721	6,654	6,820	7,238
3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000

41,000	46,000	50,000	53,000	56,000	58,000	60,000	61,000
3000	4000	4000	3000	3000	2000	2000	1000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
4,033	5,043	4,819	5,009	4,721	4,654	5,820	5,238
6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000

65000	71000	77000	83000	88000	91000	95000	97000
6000	6000	6000	5000	5000	4000	3000	3000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
9,033	9,043	8,819	9,009	9,721	9,654	9,820	9,238
1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000

26000	28000	30000	31000	31000	30000	29000	28000
1000	2000	2000	1000	0	-1000	-1000	-1000

2034	2035	2036	2037	2038	2039	2040	2041
7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
6,756	7,662	7,389	8,129	7,881	8,645	9,421	9,207
1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000

62,000	60,000	58,000	55,000	52,000	48,000	43,000	38,000
1000	-2000	-2000	-3000	-3000	-4000	-5000	-5000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
5,756	6,662	7,389	8,129	8,881	9,645	10,421	11,207
2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000

99000	98000	96000	94000	90000	85000	80000	73000
2000	-1000	-2000	-3000	-4000	-5000	-6000	-7000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
8,756	6,662	7,389	7,129	6,881	6,645	6,421	6,207
-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000

27000	25000	23000	22000	20000	18000	16000	14000
-1000	-1000	-2000	-2000	-2000	-2000	-2000	-2000

2042	2043	2044	2045	2046	2047	2048		
4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
10,004	9,811	9,627	9,451	10,285	10,126	2,975		
-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0		

33,000	27,000	20,000	14,000	7,000	-	-	
-6000	-6000	-6000	-6000	-7000	-7000	0	

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
12,004	13,811	14,627	16,451	17,285	19,126	2,975		
-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0		

64000	55000	44000	31000	16000	0	0
-8000	-10000	-11000	-13000	-14000	-16000	0

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
6,004	5,811	5,627	5,451	6,285	6,126	2,975		
-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0		

12000	10000	8000	5000	3000	0	0
-2000	-2000	-2000	-2000	-3000	-3000	0

Feb4 1a, 30-yr - Debt Drawdown Scenarios

-92,247 -94598.515 58,489 36109.18 0

Feb4_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0
			114	110	106	122	93	89	81	102	89	78	102	97	79	71	45	47	31	16	-38	-51	-65	-80	-95	-110	-126	-133	-140	-147	-155	-162	-171	0	0	0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	5,138	3,167	58,489
Equal Monthly Debt Drawdown	5,260	3,149	

Maximum Accumulated Debt — Feb4 1a, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

End of Year Debt Drawdown	61,858	36,109
Equal Monthly Debt Drawdown	63,330	

			40%	37%	34%	36%	27%	24%																													
Feb4 1a, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
a	Debt, Beginning of Year		0	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	
c = a*5%	*Interest Cost - Feb4 1a, 30-yr - End of Year Debt Drawdown*		*0*	*246*	*483*	*711*	*974*	*1,175*	*1,367*	*1,541*	*1,760*	*1,952*	*2,119*	*2,337*	*2,546*	*2,716*	*2,869*	*2,966*	*3,067*	*3,133*	*3,167*	*3,086*	*2,975*	*2,835*	*2,664*	*2,461*	*2,224*	*1,952*	*1,666*	*1,365*	*1,049*	*717*	*367*	*0*	*0*	*0*	58,489
b	Additional GA Debt Drawdown, End of Year		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	21,822	23,788	25,076	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	20,490	13,998	7,173	0	0	0	
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	36,109	36,109	36,109	36,109	34,517	32,362	29,624	26,281	22,311	17,687	12,383	6,793	918	0	0	0	0	0	0	0	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688	49,149	51,372	53,325	54,991	56,356	57,405	58,122	58,489				
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371	-5,713	-13,241	-20,783	-28,325	-35,866	-43,408	-50,949	-58,489				
Fiscal Exposure - End of Year Debt Drawdown			4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0	

Feb4 1a, 30-yr	Equal Monthly Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			12																																		
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
3,149	*Interest Cost - Feb4 1a, 30-yr*		*114*	*356*	*589*	*833*	*1,067*	*1,264*	*1,448*	*1,643*	*1,849*	*2,029*	*2,220*	*2,435*	*2,625*	*2,787*	*2,914*	*3,013*	*3,097*	*3,149*	*3,129*	*3,034*	*2,910*	*2,756*	*2,569*	*2,351*	*2,098*	*1,819*	*1,526*	*1,218*	*895*	*554*	*197*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0	

	Monthly Drawdown		400	366	330	369	246	215	169	229	165	109	179	146	63	24	(81)	(83)	(148)	(205)	(397)	(437)	(476)	(515)	(553)	(590)	(627)	(629)	(628)	(628)	(628)	(628)	(628)	-	-	-
	FV of Monthly Drawdown at 5%		4,915	4,498	4,057	4,532	3,017	2,640	2,075	2,813	2,026	1,345	2,200	1,789	773	289	(996)	(1,024)	(1,821)	(2,519)	(4,872)	(5,365)	(5,849)	(6,325)	(6,793)	(7,253)	(7,707)	(7,722)	(7,721)	(7,721)	(7,721)	(7,721)	(7,720)	-	-	-
	Annual Interest Cost on New Drawdowns		114	105	94	105	70	61	48	65	47	31	51	42	18	7	(23)	(24)	(42)	(59)	(113)	(125)	(136)	(147)	(158)	(169)	(179)	(180)	(180)	(180)	(180)	(180)	(179)	-	-	-
	Annual Interest Cost on Opening Balance		-	252	495	728	997	1,203	1,399	1,577	1,802	1,998	2,169	2,393	2,607	2,780	2,937	3,037	3,140	3,207	3,243	3,159	3,046	2,903	2,727	2,519	2,277	1,999	1,706	1,398	1,074	734	376	(0)	(0)	(0)
	Total Annual Interest Cost		114	356	589	833	1,067	1,264	1,448	1,643	1,849	2,029	2,220	2,435	2,625	2,787	2,914	3,013	3,097	3,149	3,129	3,034	2,910	2,756	2,569	2,351	2,098	1,819	1,526	1,218	895	554	197	(0)	(0)	(0)

Feb4 1a, 30-yr	Bi-Annual Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			2																																		
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*61*	*305*	*540*	*777*	*1,024*	*1,223*	*1,410*	*1,596*	*1,808*	*1,993*	*2,173*	*2,390*	*2,589*	*2,754*	*2,893*	*2,991*	*3,083*	*3,141*	*3,147*	*3,058*	*2,940*	*2,792*	*2,613*	*2,401*	*2,156*	*1,881*	*1,591*	*1,286*	*966*	*629*	*275*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown			4,862	4,699	4,502	5,203	3,971	3,801	3,438	4,343	3,787	3,307	4,322	4,137	3,344	3,037	1,920	1,991	1,305	681	-1,612	-2,183	-2,773	-3,386	-4,021	-4,683	-5,372	-5,661	-5,951	-6,255	-6,575	-6,912	-7,265	0	0	0	

	Bi-Annual Drawdown		2,400	2,197	1,981	2,213	1,473	1,289	1,014	1,374	989	657	1,074	874	378	141	(487)	(500)	(889)	(1,230)	(2,379)	(2,620)	(2,857)	(3,089)	(3,317)	(3,542)	(3,764)	(3,771)	(3,771)	(3,771)	(3,771)	(3,771)	(3,770)	-	-	-
	FV of Bi-Annual Drawdown at 5%		4,862	4,450	4,013	4,483	2,984	2,612	2,053	2,783	2,004	1,331	2,176	1,769	765	286	(986)	(1,013)	(1,801)	(2,492)	(4,820)	(5,308)	(5,787)	(6,257)	(6,719)	(7,175)	(7,624)	(7,639)	(7,638)	(7,638)	(7,638)	(7,638)	(7,637)	-	-	-
	Annual Interest Cost on New Drawdowns		61	56	51	57	38	33	26	35	25	17	28	22	10	4	(12)	(13)	(23)	(31)	(61)	(67)	(73)	(79)	(85)	(91)	(96)	(97)	(97)	(97)	(97)	(97)	(97)	-	-	-
	Annual Interest Cost on Opening Balance		-	249	490	720	986	1,190	1,384	1,560	1,783	1,977	2,146	2,367	2,579	2,750	2,906	3,004	3,106	3,173	3,208	3,125	3,013	2,871	2,698	2,492	2,252	1,977	1,687	1,383	1,063	726	372	(0)	(0)	(0)
	Total Annual Interest Cost		61	305	540	777	1,024	1,223	1,410	1,596	1,808	1,993	2,173	2,390	2,589	2,754	2,893	2,991	3,083	3,141	3,147	3,058	2,940	2,792	2,613	2,401	2,156	1,881	1,591	1,286	966	629	275	(0)	(0)	(0)

Feb4 1a, 30-yr	Average Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*123*	*365*	*597*	*842*	*1,074*	*1,271*	*1,454*	*1,650*	*1,856*	*2,035*	*2,228*	*2,442*	*2,631*	*2,792*	*2,918*	*3,016*	*3,100*	*3,150*	*3,126*	*3,030*	*2,905*	*2,749*	*2,562*	*2,342*	*2,088*	*1,809*	*1,516*	*1,207*	*883*	*542*	*184*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
Fiscal Exposure - Average Debt Drawdown			4,923	4,758	4,559	5,269	4,021	3,849	3,481	4,398	3,835	3,349	4,377	4,189	3,386	3,075	1,944	2,016	1,321	689	-1,633	-2,210	-2,808	-3,428	-4,072	-4,742	-5,440	-5,733	-6,026	-6,334	-6,658	-6,999	-7,357	0	0	0	

Feb4 1b, 30-yr - Debt Drawdown Scenarios

-149,507 -153857.97 97,141 56717.33 0

Feb4_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0
			170	167	162	179	150	146	137	158	144	131	153	147	125	115	85	82	61	41	-19	-40	-62	-86	-111	-138	-167	-198	-231	-266	-304	-344	-388	0	0	0

0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown 7,529	5,062	97,141
Equal Monthly Debt Drawdown 7,708	5,042	

Maximum Accumulated Debt	Feb4 1b, 30-yr, Accumulated Debt	Total Principal Debt Borrowed
End of Year Debt Drawdown	98,864	56,717
Equal Monthly Debt Drawdown	101,217	

Feb4 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
a Debt, Beginning of Year	0	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	
c = a*5% *Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown*	*0*	*365*	*724*	*1,073*	*1,459*	*1,782*	*2,096*	*2,391*	*2,731*	*3,040*	*3,322*	*3,651*	*3,966*	*4,236*	*4,483*	*4,665*	*4,842*	*4,974*	*5,062*	*5,020*	*4,933*	*4,800*	*4,615*	*4,376*	*4,080*	*3,721*	*3,296*	*2,800*	*2,228*	*1,575*	*834*	*0*	*0*	*0*	97,141
b Additional GA Debt Drawdown, End of Year	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
d = a+b+c Accumulated debt in present year (including 5% annual interest)	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	0	
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,633	26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606	82,685	86,406	89,703	92,503	94,731	96,306	97,141				
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,831	56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076	-10,007	-22,027	-35,008	-48,980	-63,971	-80,013	-97,141				
Fiscal Exposure - End of Year Debt Drawdown	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0	

Feb4 1b, 30-yr — Equal Monthly Debt Drawdown

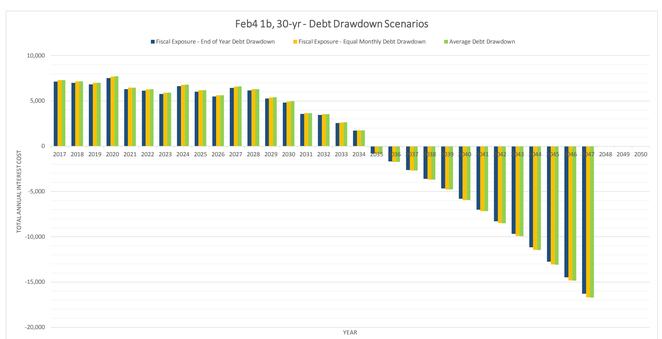
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	
5,042 *Interest Cost - Feb4 1b, 30-yr*	*170*	*532*	*886*	*1,252*	*1,609*	*1,928*	*2,234*	*2,549*	*2,874*	*3,171*	*3,475*	*3,797*	4,091	*4,350*	*4,568*	*4,748*	*4,904*	*5,015*	*5,042*	*4,980*	*4,871*	*4,714*	*4,504*	*4,238*	*3,913*	*3,524*	*3,066*	*2,534*	*1,925*	*1,231*	*446*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0	
Monthly Drawdown	594	553	508	538	405	363	306	353	275	205	259	209	108	49	(76)	(101)	(189)	(271)	(490)	(559)	(629)	(700)	(773)	(847)	(924)	(1,002)	(1,082)	(1,164)	(1,249)	(1,337)	(1,427)	(0)	-	-	
FV of Monthly Drawdown at 5%	7,303	6,792	6,247	6,610	4,972	4,463	3,755	4,338	3,383	2,523	3,184	2,565	1,327	605	(937)	(1,237)	(2,326)	(3,335)	(6,020)	(6,867)	(7,728)	(8,604)	(9,498)	(10,412)	(11,347)	(12,306)	(13,291)	(14,304)	(15,348)	(16,424)	(17,536)	(0)	-	-	
Annual Interest Cost on New Drawdowns	170	158	145	154	116	104	87	101	79	59	74	60	31	14	(22)	(29)	(54)	(78)	(140)	(160)	(180)	(200)	(221)	(242)	(264)	(286)	(309)	(333)	(357)	(382)	(408)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	374	741	1,099	1,493	1,824	2,146	2,448	2,796	3,112	3,401	3,738	4,061	4,336	4,589	4,776	4,958	5,092	5,182	5,139	5,051	4,914	4,725	4,481	4,177	3,810	3,375	2,867	2,281	1,612	854	0	(0)	(0)	
Total Annual Interest Cost	170	532	886	1,252	1,609	1,928	2,234	2,549	2,874	3,171	3,475	3,797	4,091	4,350	4,568	4,748	4,904	5,015	5,042	4,980	4,871	4,714	4,504	4,238	3,913	3,524	3,066	2,534	1,925	1,231	446	0	(0)	(0)	

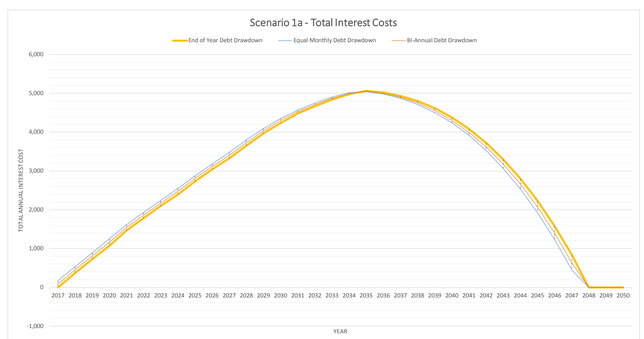
Feb4 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*91*	*455*	*811*	*1,169*	*1,539*	*1,861*	*2,170*	*2,476*	*2,808*	*3,110*	*3,404*	*3,730*	*4,034*	*4,297*	*4,528*	*4,710*	*4,875*	*4,996*	*5,051*	*4,998*	*4,900*	*4,753*	*4,555*	*4,302*	*3,990*	*3,615*	*3,172*	*2,657*	*2,065*	*1,390*	*626*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	7,225	7,089	6,913	7,626	6,396	6,220	5,838	6,713	6,113	5,574	6,514	6,235	5,330	4,888	3,614	3,501	2,603	1,738	-829	-1,709	-2,648	-3,651	-4,722	-5,867	-7,093	-8,405	-9,810	-11,314	-12,926	-14,652	-16,502	0	0	0	
Bi-Annual Drawdown	3,567	3,317	3,051	3,228	2,428	2,180	1,834	2,118	1,652	1,232	1,555	1,253	648	295	(457)	(604)	(1,136)	(1,629)	(2,940)	(3,354)	(3,774)	(4,202)	(4,639)	(5,085)	(5,542)	(6,010)	(6,491)	(6,986)	(7,495)	(8,021)	(8,564)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	7,225	6,719	6,180	6,539	4,919	4,415	3,715	4,291	3,347	2,496	3,150	2,538	1,313	598	(926)	(1,224)	(2,301)	(3,299)	(5,956)	(6,794)	(7,645)	(8,512)	(9,396)	(10,300)	(11,225)	(12,174)	(13,148)	(14,150)	(15,183)	(16,247)	(17,347)	(0)	-	-	
Annual Interest Cost on New Drawdowns	91	85	78	83	62	56	47	54	42	32	40	32	17	8	(12)	(15)	(29)	(42)	(75)	(86)	(97)	(108)	(119)	(130)	(142)	(154)	(166)	(179)	(192)	(205)	(219)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	370	733	1,087	1,477	1,805	2,123	2,422	2,766	3,079	3,364	3,698	4,017	4,290	4,540	4,725	4,904	5,038	5,127	5,084	4,997	4,861	4,674	4,432	4,132	3,769	3,338	2,836	2,257	1,595	845	0	0	0	
Total Annual Interest Cost	91	455	811	1,169	1,539	1,861	2,170	2,476	2,808	3,110	3,404	3,730	4,034	4,297	4,528	4,710	4,875	4,996	5,051	4,998	4,900	4,753	4,555	4,302	3,990	3,615	3,172	2,657	2,065	1,390	626	0	0	0	

Feb4 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*183*	*544*	*898*	*1,266*	*1,620*	*1,939*	*2,244*	*2,561*	*2,885*	*3,181*	*3,486*	*3,809*	*4,101*	*4,359*	*4,574*	*4,754*	*4,908*	*5,018*	*5,041*	*4,977*	*4,867*	*4,707*	*4,496*	*4,228*	*3,900*	*3,509*	*3,048*	*2,514*	*1,902*	*1,205*	*417*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	7,316	7,179	7,000	7,722	6,477	6,298	5,912	6,798	6,190	5,645	6,597	6,314	5,397	4,950	3,659	3,545	2,636	1,760	-840	-1,731	-2,682	-3,697	-4,782	-5,942	-7,183	-8,511	-9,934	-11,457	-13,089	-14,838	-16,711	0	0	0	





Feb4 1c, 30-yr - Debt Drawdown Scenarios

Feb4_1c_30yr

Annual Interest Rate = 5.1%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0
			88	82	75	90	58	52	41	60	44	29	50	43	20	10	-20	-23	-32	-34	-35	-37	-39	-41	-43	-45	-48	-50	-53	-55	-58	-61	-64	0	0	0

0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	3,761	1,594	29,477
Equal Monthly Debt Drawdown	3,851	1,583	

Maximum Accumulated Debt — Feb4 1c, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

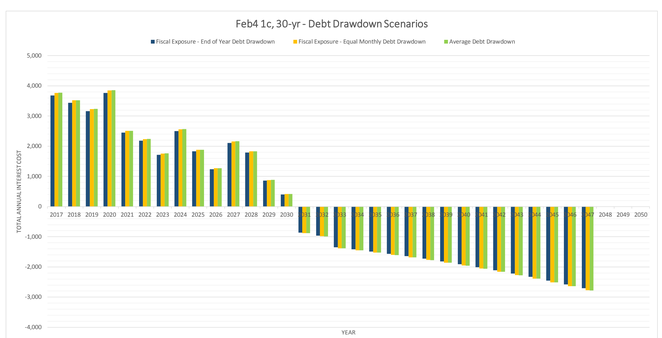
End of Year Debt Drawdown	31,125	20,043
Equal Monthly Debt Drawdown	31,866	

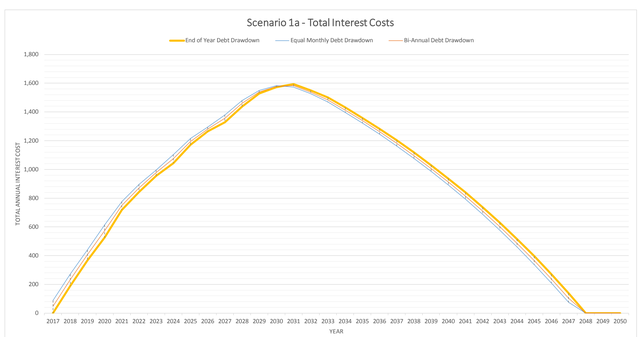
		30%	27%	24%	27%	16%	13%																														
Feb4 1c, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
a	Debt, Beginning of Year	0	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	
c = a*5%	*Interest Cost - Feb4 1c, 30-yr - End of Year Debt Drawdown*	*0*	*188*	*364*	*526*	*719*	*844*	*956*	*1,044*	*1,172*	*1,266*	*1,329*	*1,437*	*1,529*	*1,573*	*1,594*	*1,550*	*1,500*	*1,431*	*1,359*	*1,283*	*1,203*	*1,119*	*1,030*	*937*	*839*	*737*	*629*	*515*	*396*	*270*	*139*	*0*	*0*	*0*	*0*	29,477
b	Additional GA Debt Drawdown, End of Year	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	0	
	Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,641	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663	22,866	23,984	25,015	25,952	26,791	27,528	28,157	28,672	29,068	29,338	29,477				
	Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18,247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828	-1,018	-3,864	-6,710	-9,556	-12,402	-15,248	-18,094	-20,940	-23,786	-26,631	-29,477				
Fiscal Exposure - End of Year Debt Drawdown		3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0	

Feb4 1c, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	
1,583	*Interest Cost - Feb4 1c, 30-yr*	*88*	*270*	*439*	*615*	*777*	*896*	*997*	*1,103*	*1,216*	*1,295*	*1,379*	*1,480*	1,549	*1,583*	*1,573*	*1,527*	*1,468*	*1,398*	*1,324*	*1,246*	*1,164*	*1,077*	*987*	*892*	*792*	*686*	*576*	*460*	*338*	*209*	*74*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0	
	Monthly Drawdown	306	271	233	270	144	112	64	122	55	(2)	65	29	(56)	(97)	(204)	(209)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(0)	-	-	
	FV of Monthly Drawdown at 5%	3,765	3,326	2,861	3,312	1,773	1,371	781	1,493	679	(28)	799	360	(684)	(1,197)	(2,512)	(2,570)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,913)	(2,913)	(2,913)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	88	77	67	77	41	32	18	35	16	(1)	19	8	(16)	(28)	(58)	(60)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	193	373	538	736	864	979	1,069	1,200	1,296	1,361	1,471	1,565	1,610	1,632	1,586	1,536	1,465	1,391	1,313	1,231	1,145	1,055	959	859	754	644	527	405	277	142	0	0	0	
	Total Annual Interest Cost	88	270	439	615	777	896	997	1,103	1,216	1,295	1,379	1,480	1,549	1,583	1,573	1,527	1,468	1,398	1,324	1,246	1,164	1,077	987	892	792	686	576	460	338	209	74	0	0	0	

Feb4 1c, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*47*	*232*	*405*	*574*	*750*	*872*	*978*	*1,076*	*1,195*	*1,282*	*1,356*	*1,460*	*1,540*	*1,578*	*1,583*	*1,537*	*1,483*	*1,413*	*1,340*	*1,263*	*1,182*	*1,097*	*1,007*	*913*	*814*	*710*	*600*	*485*	*365*	*237*	*104*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,725	3,481	3,199	3,809	2,481	2,211	1,741	2,534	1,859	1,254	2,137	1,812	872	409	-871	-973	-1,363	-1,433	-1,506	-1,584	-1,665	-1,750	-1,839	-1,933	-2,032	-2,136	-2,246	-2,360	-2,481	-2,608	-2,742	0	0	0	
	Bi-Annual Drawdown	1,839	1,624	1,397	1,618	866	670	382	729	332	(14)	390	176	(334)	(584)	(1,227)	(1,255)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(0)	-	-	
	FV of Bi-Annual Drawdown at 5%	3,725	3,290	2,830	3,277	1,754	1,356	773	1,477	672	(28)	791	356	(677)	(1,184)	(2,485)	(2,542)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	47	42	36	41	22	17	10	19	8	(0)	10	5	(9)	(15)	(31)	(32)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	191	369	533	728	855	968	1,057	1,187	1,282	1,346	1,456	1,548	1,593	1,614	1,569	1,520	1,450	1,376	1,299	1,218	1,133	1,043	949	850	746	637	522	401	274	140	0	0	0	
	Total Annual Interest Cost	47	232	405	574	750	872	978	1,076	1,195	1,282	1,356	1,460	1,540	1,578	1,583	1,537	1,483	1,413	1,340	1,263	1,182	1,097	1,007	913	814	710	600	485	365	237	104	0	0	0	

Feb4 1c, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*94*	*276*	*445*	*622*	*781*	*900*	*1,000*	*1,108*	*1,219*	*1,298*	*1,383*	*1,483*	*1,551*	*1,583*	*1,572*	*1,525*	*1,466*	*1,395*	*1,321*	*1,243*	*1,161*	*1,074*	*984*	*888*	*788*	*683*	*572*	*456*	*333*	*205*	*69*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,772	3,525	3,239	3,857	2,513	2,239	1,763	2,566	1,882	1,270	2,164	1,835	883	414	-882	-985	-1,381	-1,451	-1,526	-1,604	-1,686	-1,772	-1,863	-1,958	-2,058	-2,163	-2,274	-2,390	-2,513	-2,641	-2,776	0	0	0	





30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

TO BE

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,556	3,123	1,728	1,400	836	1,560	821	167

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

E UPDATED

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

JK: Fixed the formula in the yellow highlighted cells. Pls. check. (SK: looks good to me)

	Tab
v16 GA Financing - Scenario 1a 1b v18 (with fiscal) - Feb 4_v2.xlsx	Powerpoint_Export Scenario tabs

Change Description

Added in trigger for later start in the year
Updated IESO forecast from Energy (IESO GA Cost Forecast 170207 (Feb 6 update).xlsx)

Equal Monthly Debt Drawdown

		Month	Months Remai
Scenario Start Date	**July**	7	6

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	3,180	2,888
Annual Exposure2 with start on July 1st	*1,590*	*2,888*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	795	3,107
Start: July 1st	-	*2,312*

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	851	3,335
Start: July 1st	-	*2,484*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	1,168	1,765
Annual Exposure2 with start on July 1st	*584*	*1,765*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	292	1,609
Start: July 1st	-	*1,025*

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,449	2,040
Annual Exposure2 with start on July 1st	*725*	*2,040*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,597
Start: July 1st	-	*1,959*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335
Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3575**
Total, B	362	1837
Proposed Program Total:	362 - 851	1,837 - 3,575

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,556	3,123	1,728	1,400
2,556	*3,123*	*1,728*	*1,400*

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646
2,805	*2,697*	*2,774*	*1,646*

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

ıking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
2,311	3,750	2,311	1,933
2,311	*3,750*	*2,311*	*1,933*

2018-19	2019-20	2020-21	2021-2022

1,901	2,671	3,391	2,217
1,901	*2,671*	*3,391*	*2,217*

2019	2020	2021	2022
2,581	4,016	2,598	2,241
2,581	*4,016*	*2,598*	*2,241*

2018-19	2019-20	2020-21	2021-2022
2,175	2,940	3,662	2,508
2,175	*2,940*	*3,662*	*2,508*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

/1

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052
2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

Equal Monthly Debt Drawdown

		Month	Months Remaining
Scenario Start Date	July	7	6

AS LONG AS >

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	3,180	2,888	2,556

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	795	3,107	2,805
Fiscal Exposure, 25%	199	777	701

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Annual Exposure[2]	3,404	3,128	2,812

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	851	3,335	3,049
Fiscal Exposure, 25%	213	834	762

Indicates year in which, similar to OPCD's exa
closest to 30%. As Fiscal 2016/17 is a partial y
month the GA deferral begins.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu
decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions	9%	14%	18%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	1,168	1,765	2,311

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	292	1,609	1,901
Fiscal Exposure, 25%	73	402	475

Scenario 1b - 30-yr amortization	2017	2018	2019
Annual Exposure[2]	1,449	2,040	2,581

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	362	1,597	2,175
Fiscal Exposure, 25%	91	399	544

Indicates year in which, similar to OPCD's exar closest to 30%.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 ar
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu on accounting treatment.

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]
Debt-Finance Global Adjustment Costs, Option 1a	213	834	762
Debt-Finance Global Adjustment Costs, Option 1b	91	399	544
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**213**	**1074**	**1065**
Total, B	91	639	847

Proposed Program Total:	91 - 213	639 - 1,074	847 - 1,065

($M)	2016-171	2017-181	2018-191
Debt-Finance Global Adjustment Costs, Option 1a	851	3335	3049
Debt-Finance Global Adjustment Costs, Option 1b	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**851**	**3575**	**3352**
Total, B	362	1837	2478

Proposed Program Total:	362 - 851	1,837 - 3,575	2,478 - 3,352

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6

7	July	7	
8	August	8	
9	September	9	
10	October	10	
11	November	11	
12	December	12	

30-year term	**2016-17**	**2017-18**	**2018-19**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335	2,175 - 3,049

ROWS HIDDEN

1	1 = Comparision Enabled

APRIL 1, 2017 25%

2020	2021	2022
3,123	1,728	1,400

2019-20	2020-21	2021-2022
2,697	2,774	1,646
674	693	412

2020	2021	2022
3,396	2,020	1,712

2019-20	2020-21	2021-2022
2,958	3,052	1,943
740	763	486

mple, the true cost of GA being deferred is
ear, exposure may be less subject to which

l $17-21 billion (at 3.5% interest rate), peaking in 2028.
$33-$36 million.

ıals per month based on month of the year. Actuals may also depend on

28%	17%	13%
2020	2021	2022
3,750	2,311	1,933

2019-20	2020-21	2021-2022
2,671	3,391	2,217
668	848	554

2020	2021	2022
4,016	2,598	2,241

2019-20	2020-21	2021-2022
2,940	3,662	2,508
735	915	627

mple, the true cost of GA being deferred is

ıd $17-21 billion (at 3.5% interest rate), peaking in 2028.
$118-$134 million.

ıals per month based on month of the year. Actuals may also depend on decision

2019-20[1]	2020-21[1]
740	763
735	915
279	323
60	60
18	18
1097	**1164**
1092	1316

1,092 - 1,097 1,316 - 1,164

2019-201	2020-211
2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453





2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964
Equal Monthly Debt Drawdown	3,180	952

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

		26%	23%	19%	22%	10%	7%																													
Scenario 1a, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

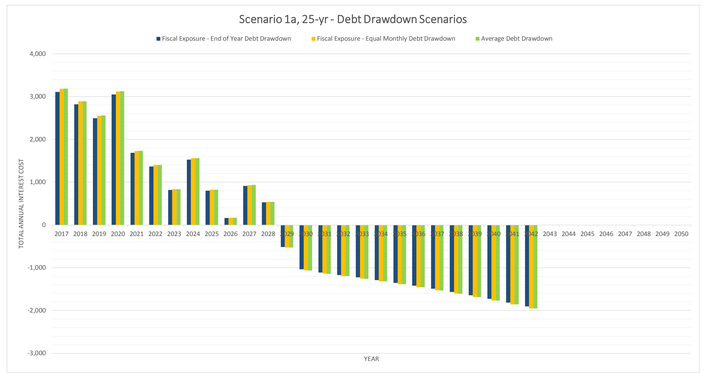
		26%	23%	19%	22%	10%	7%																													
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

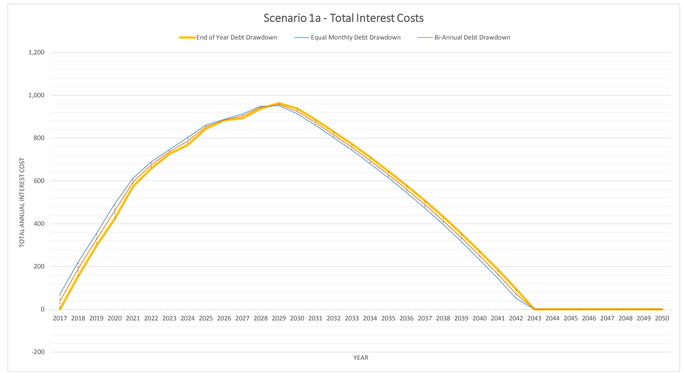
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

		26%	23%	19%	22%	10%	7%																													
Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1a, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	968	
Equal Monthly Debt Drawdown	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

			9%	14%	18%	28%	17%	13%																														
Scenario 1b, 25-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year		0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*		*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown			1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		**12**																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year		0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*		*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	[redacted]	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

	Monthly Drawdown		95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%		1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns		27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance		-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost		27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Scenario 1b, 25-yr	Bi-Annual Debt Drawdown		**2**																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year		0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr		*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown			1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown		571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%		1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns		14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance		-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost		14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Scenario 1b, 25-yr	Average Debt Drawdown																																				
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year		0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr		*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown			1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	

Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

		28%	24%	21%	24%	12%	9%																														
Scenario 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

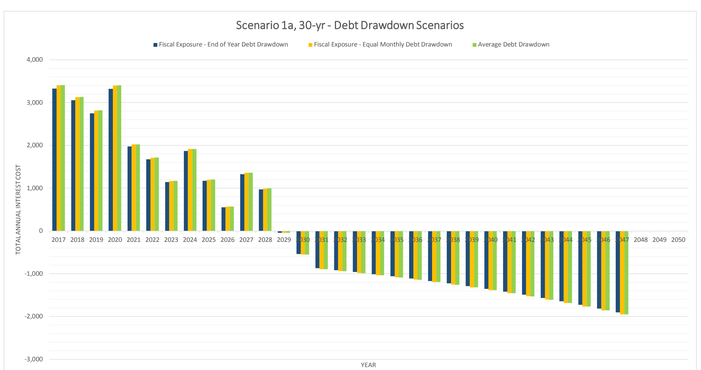
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	1,156	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

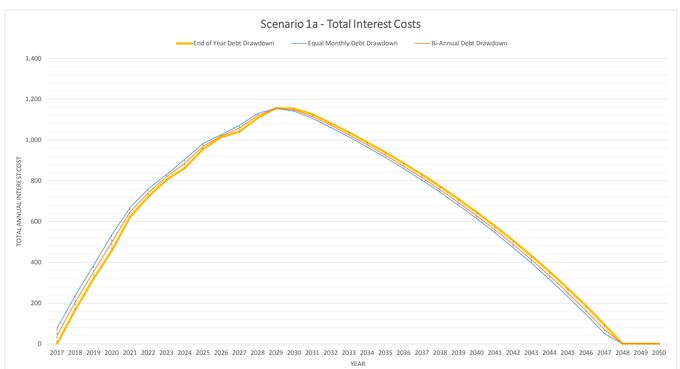
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

		12%	16%	20%	30%	19%	15%																													
Scenario 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

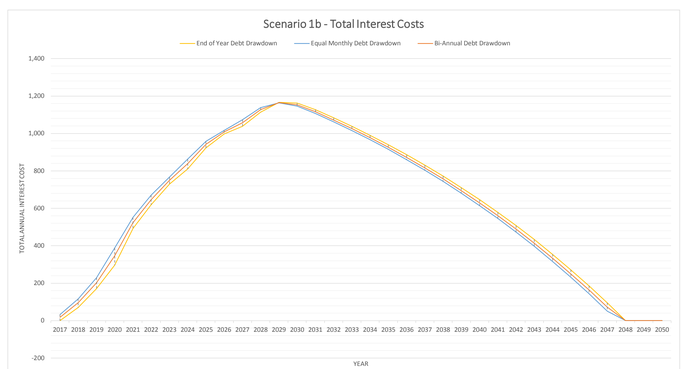
	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

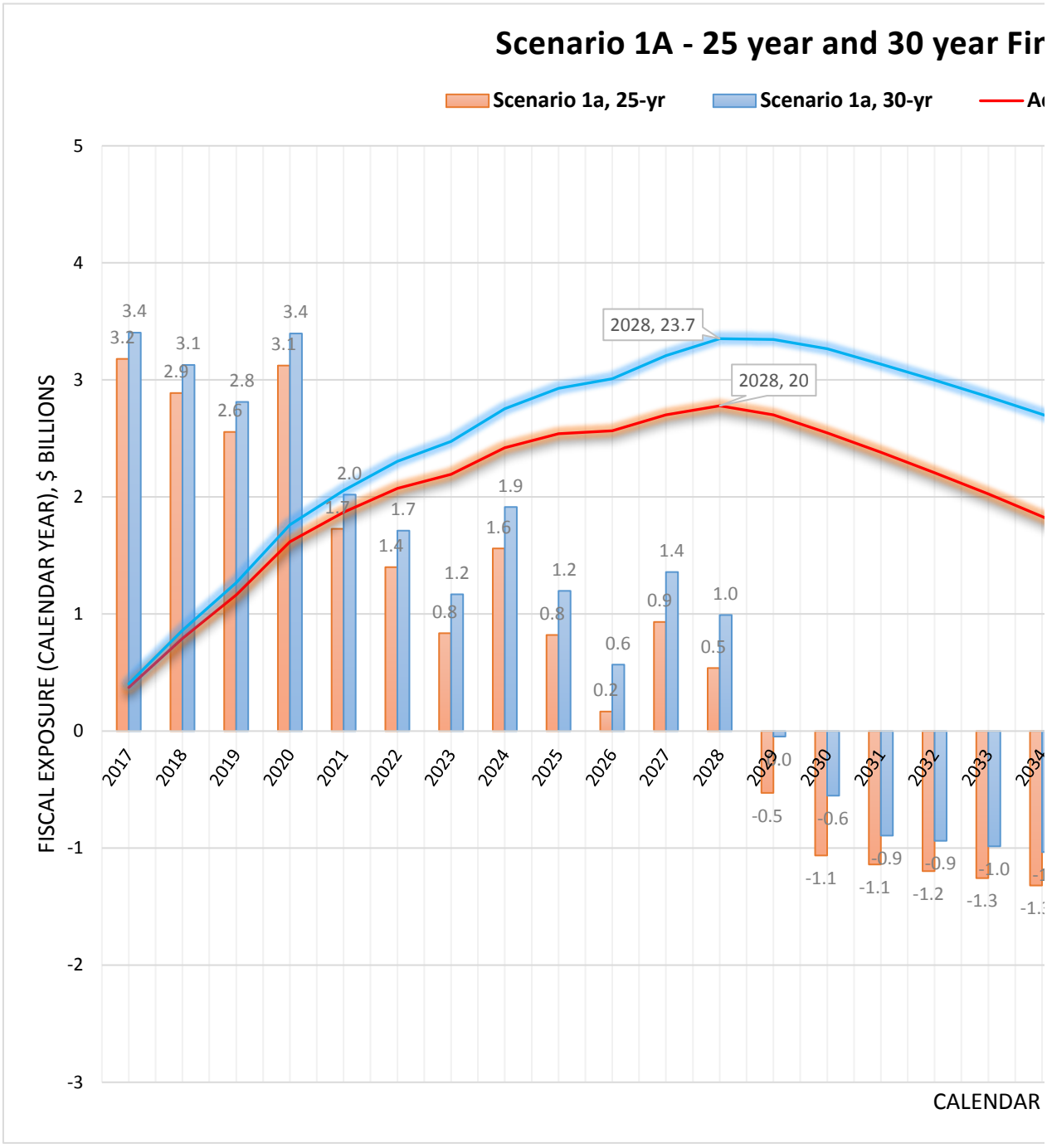
	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

Scenario 1b, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

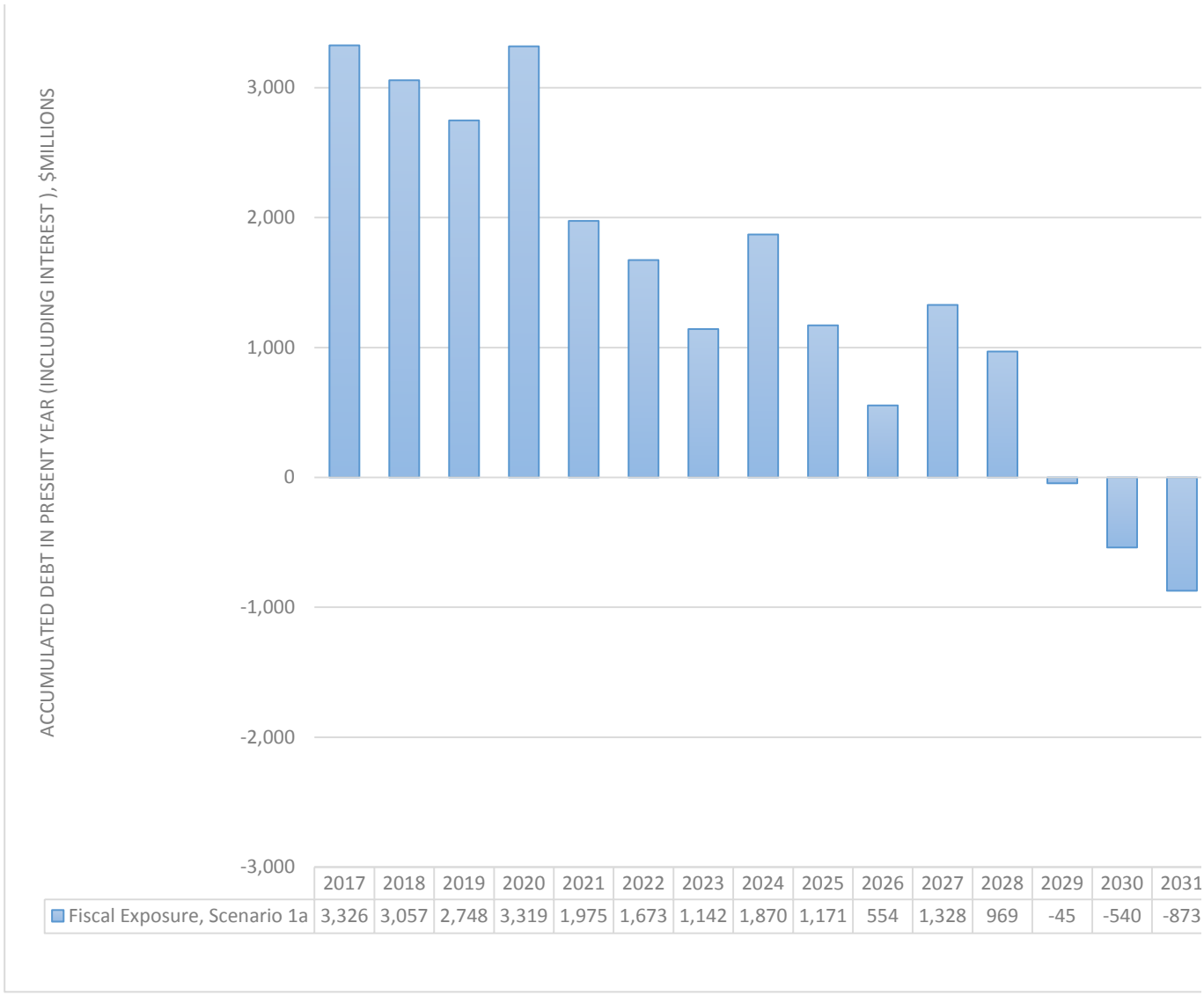




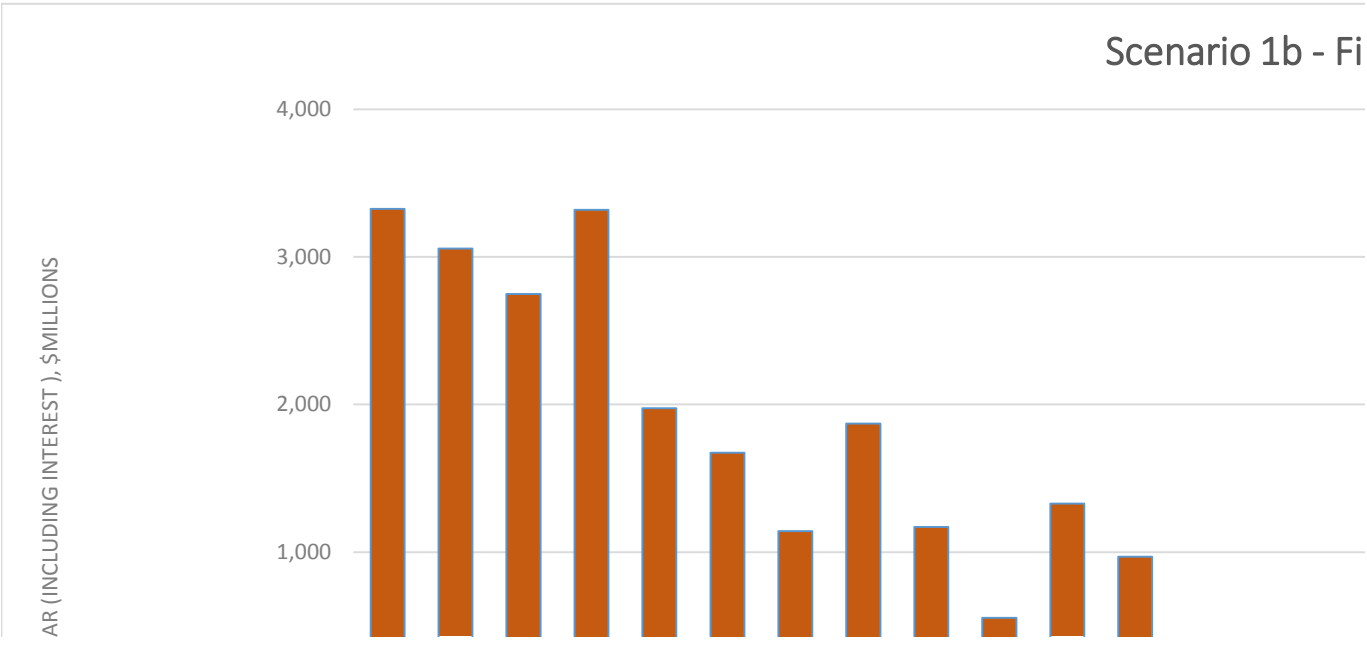
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

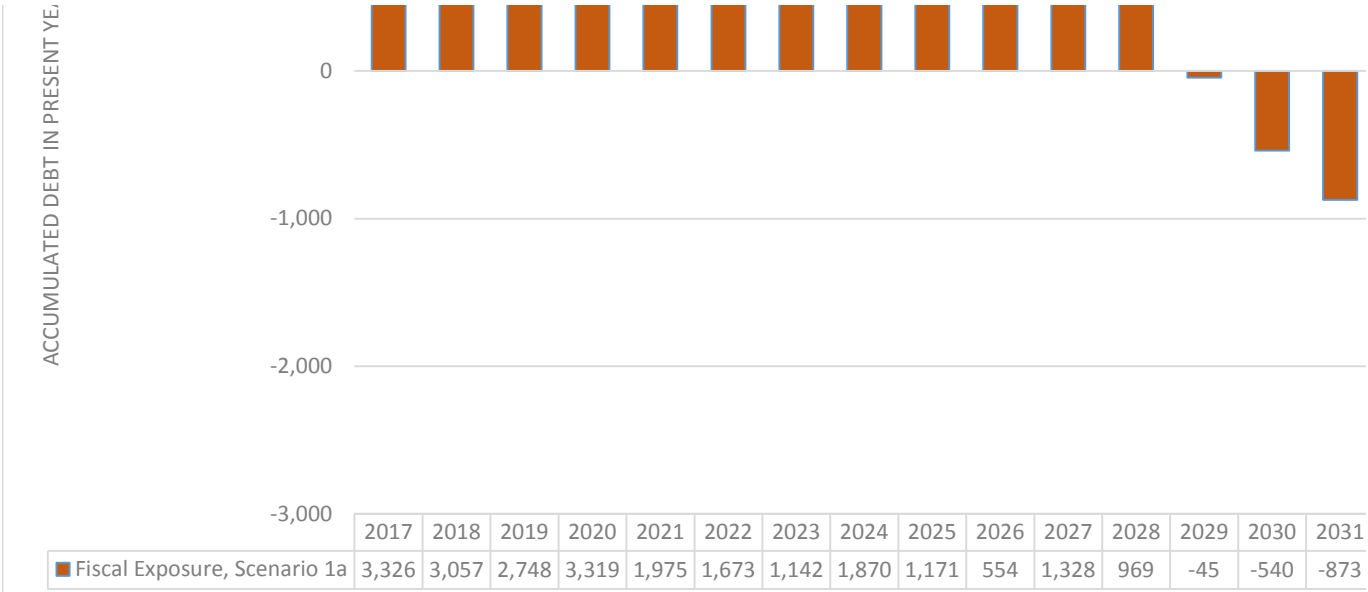




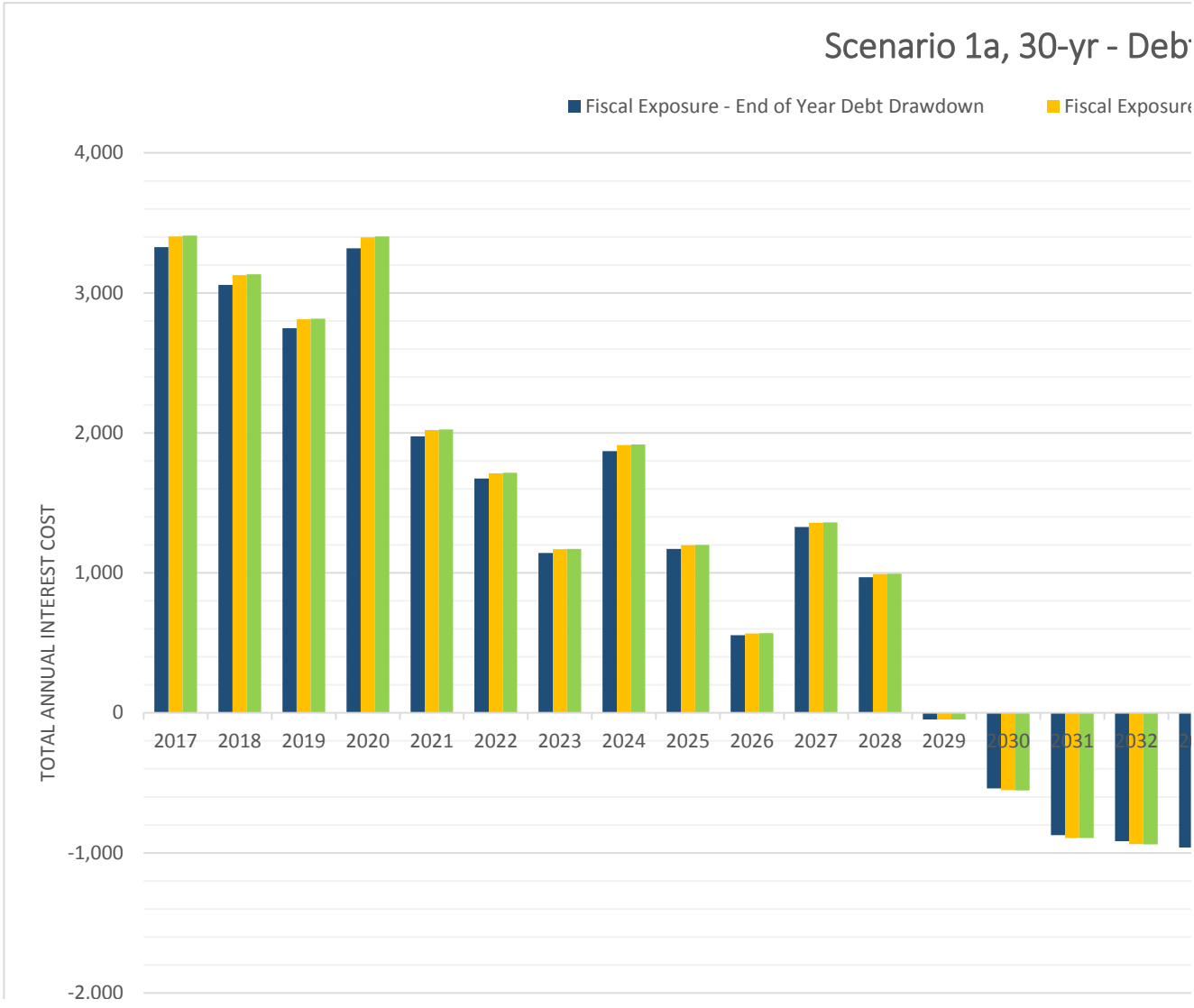


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



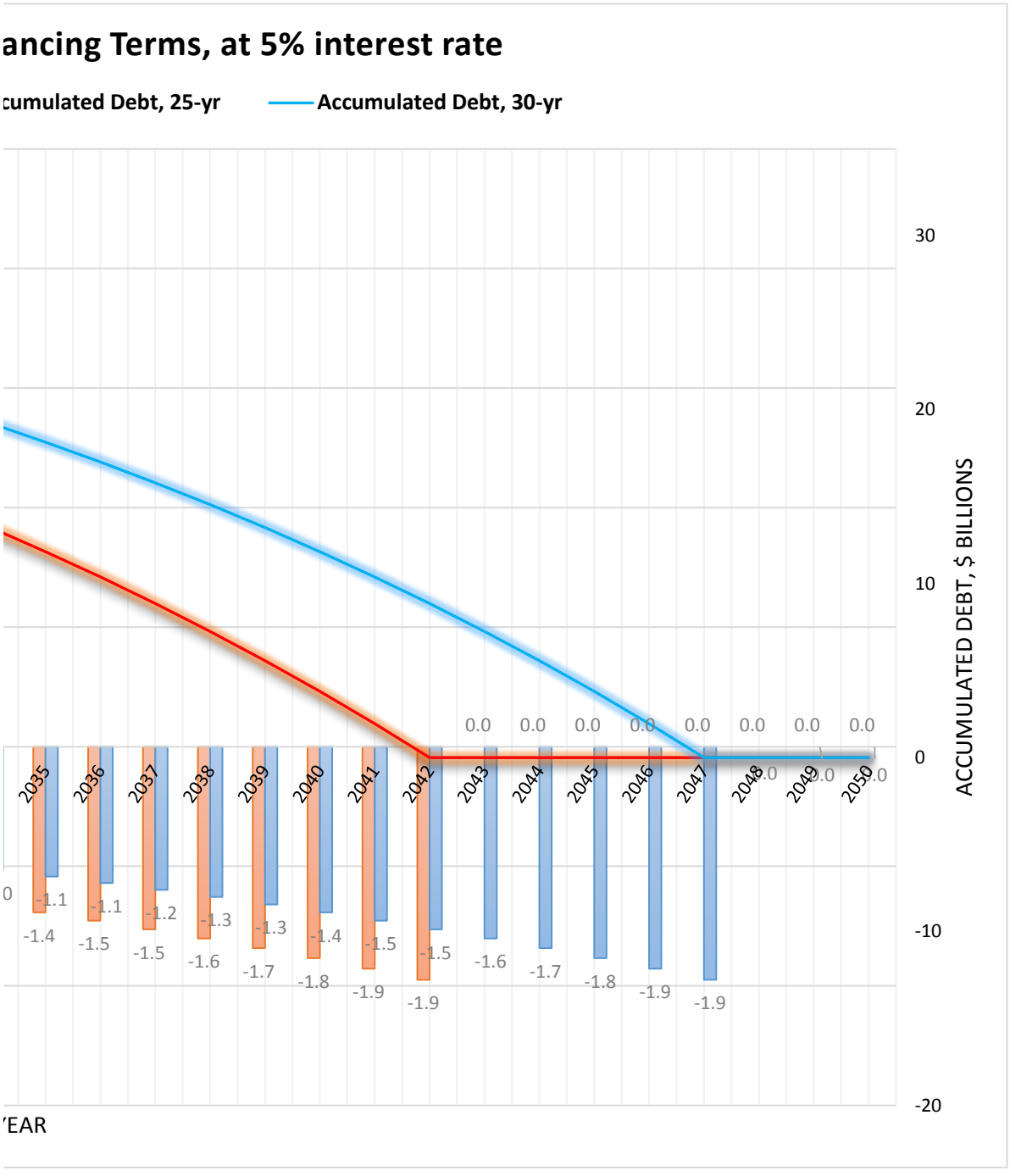


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



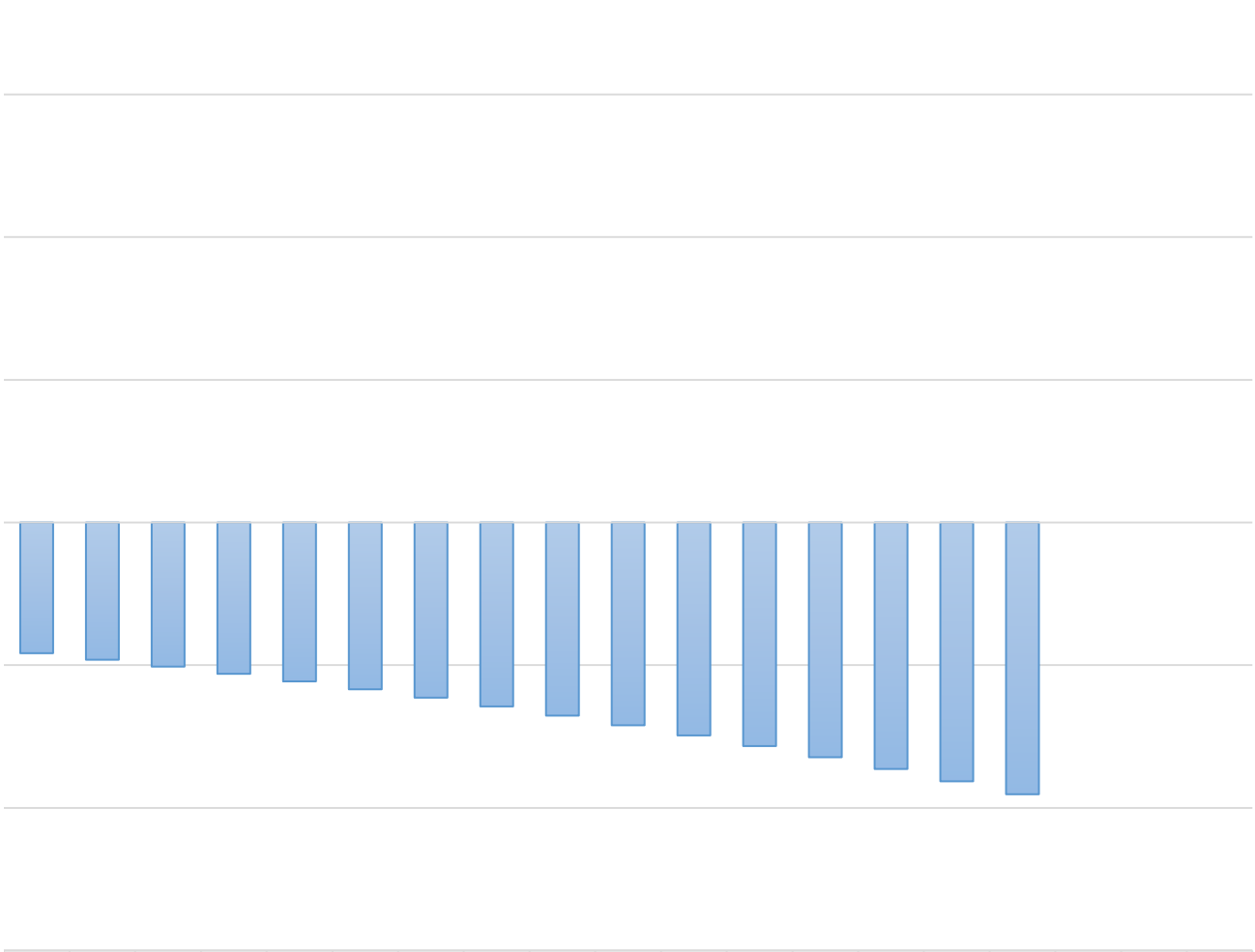

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

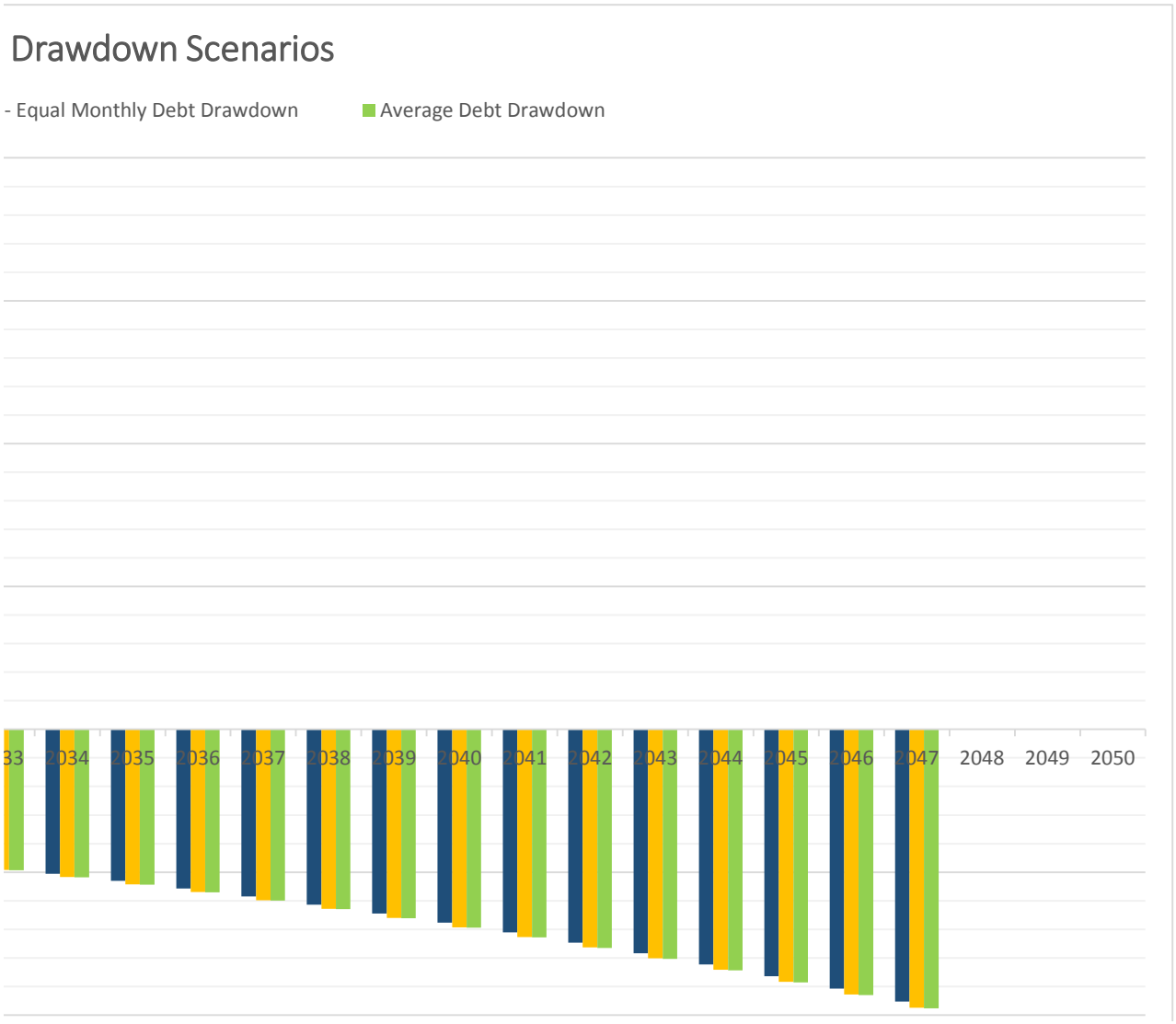
YEAR

cal Exposure



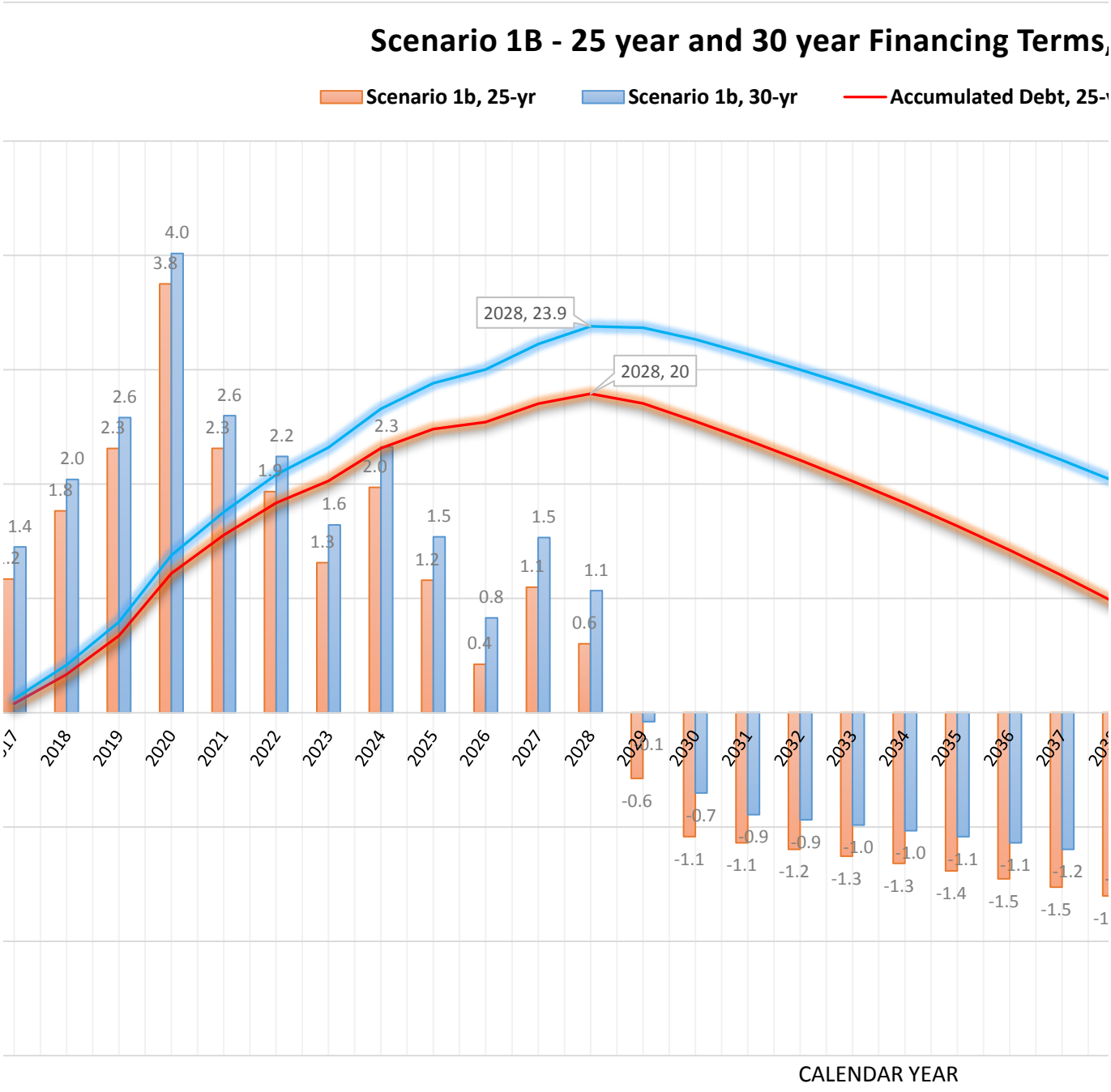
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

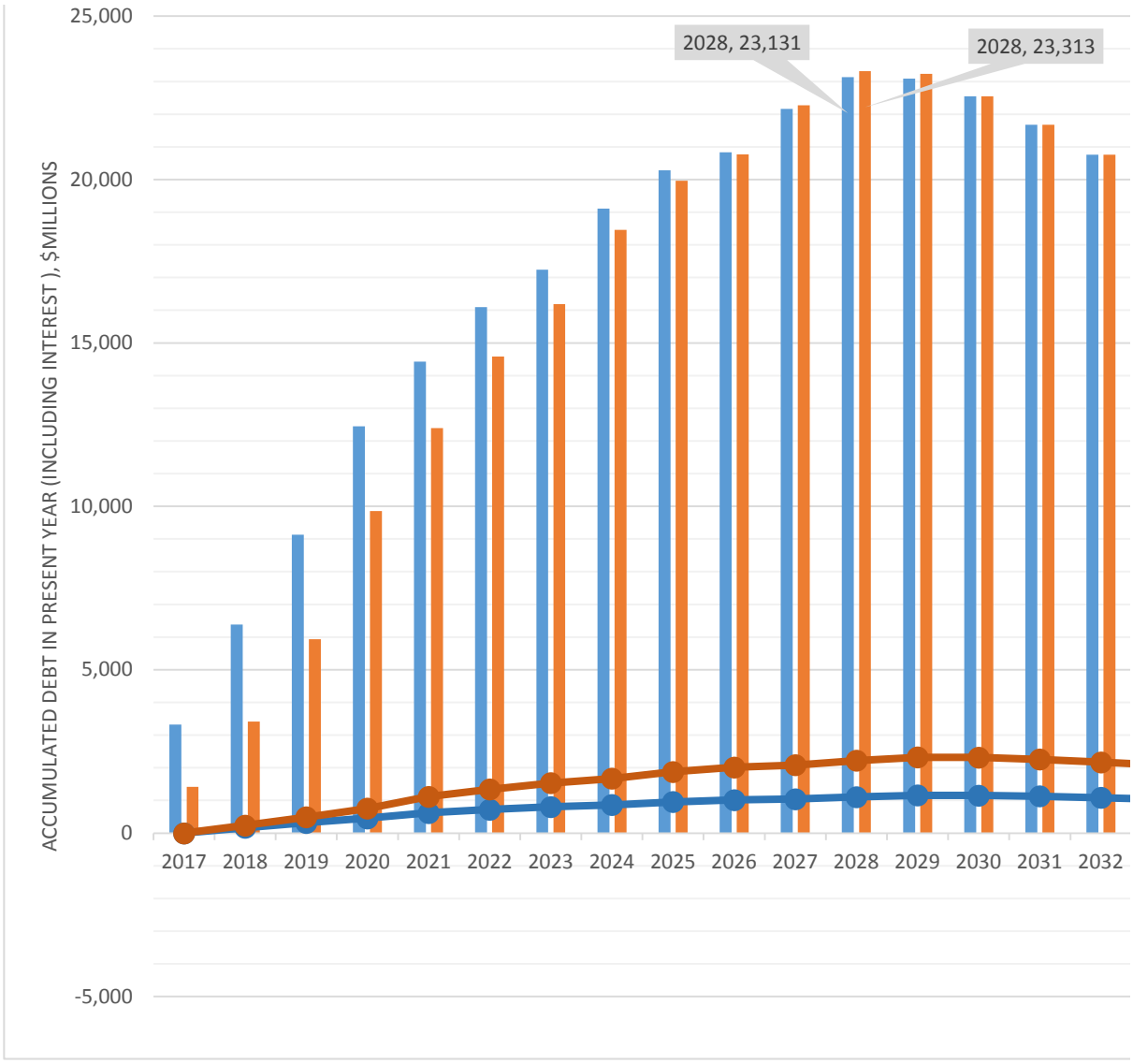


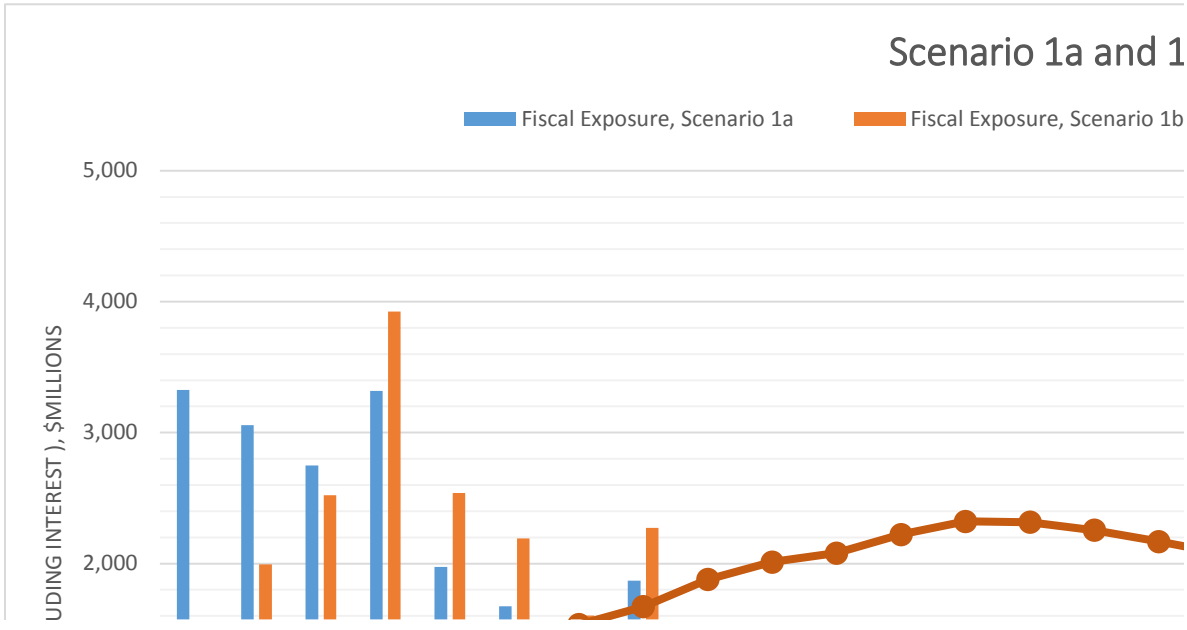
YEAR

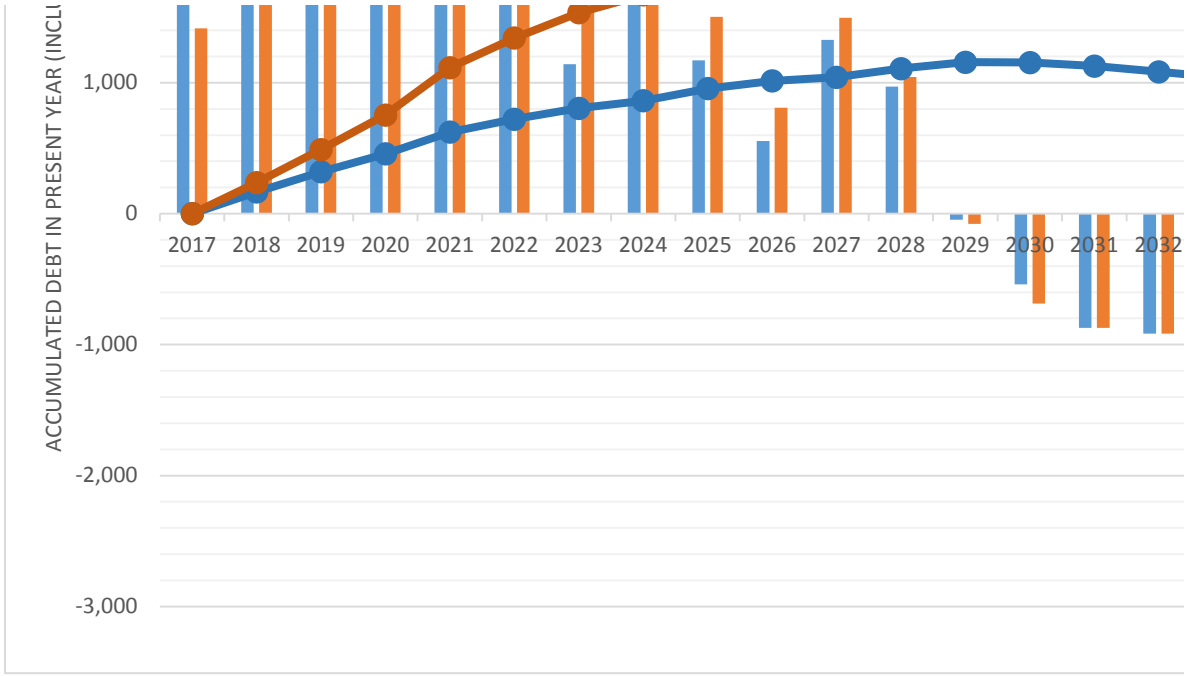
3 - 25 year and 30 year Financing Terms, at 5% interest rate

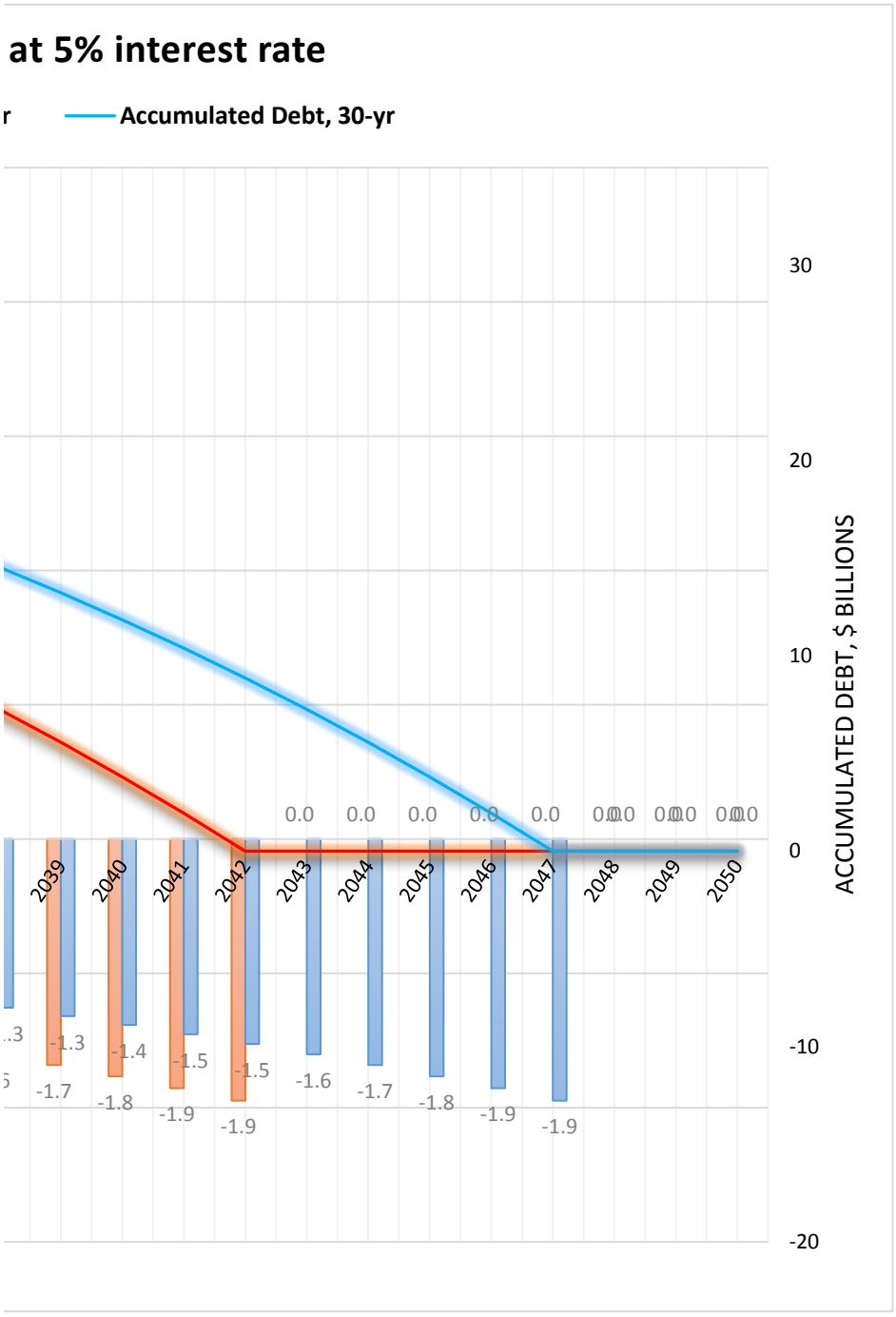





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

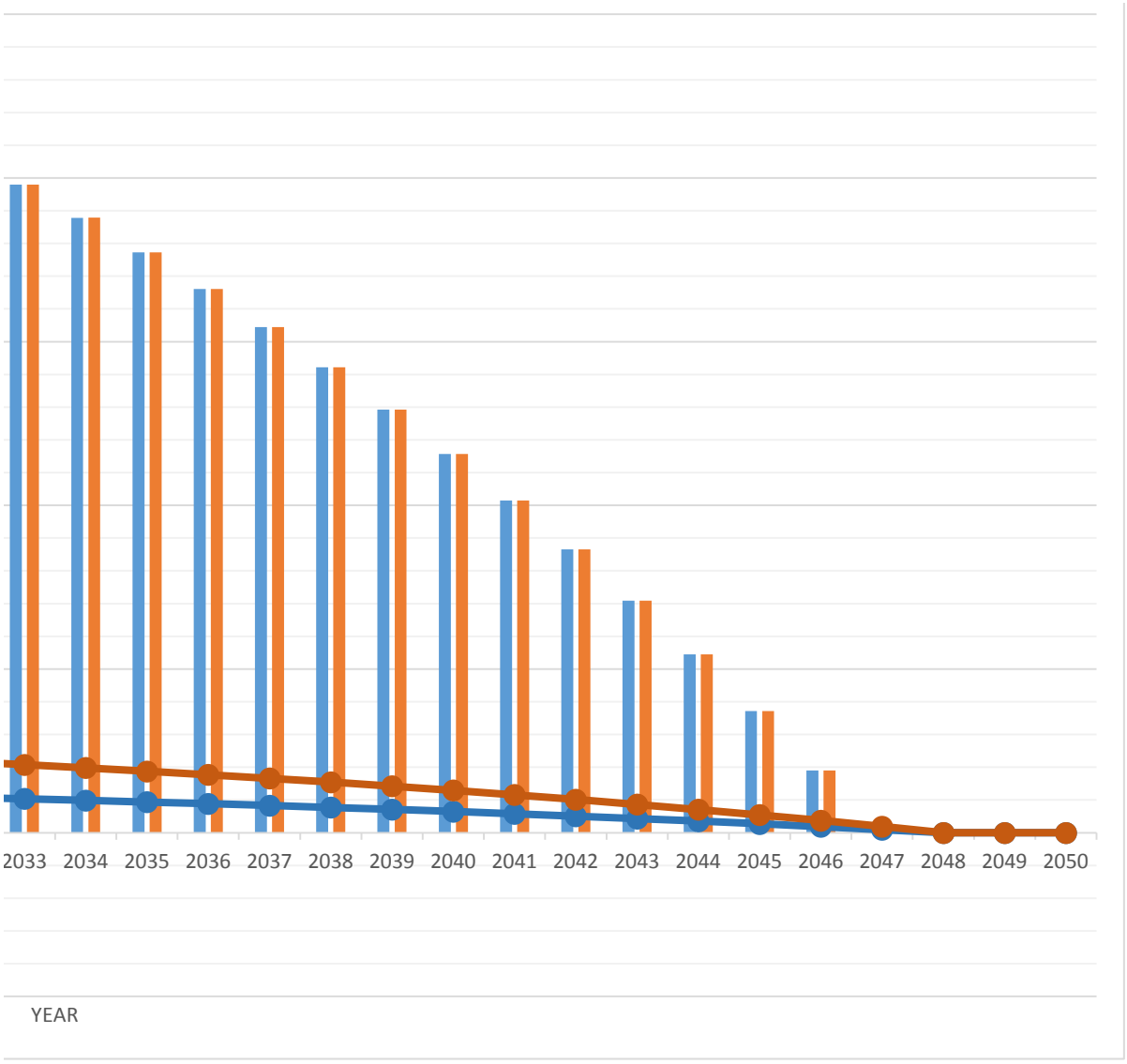

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

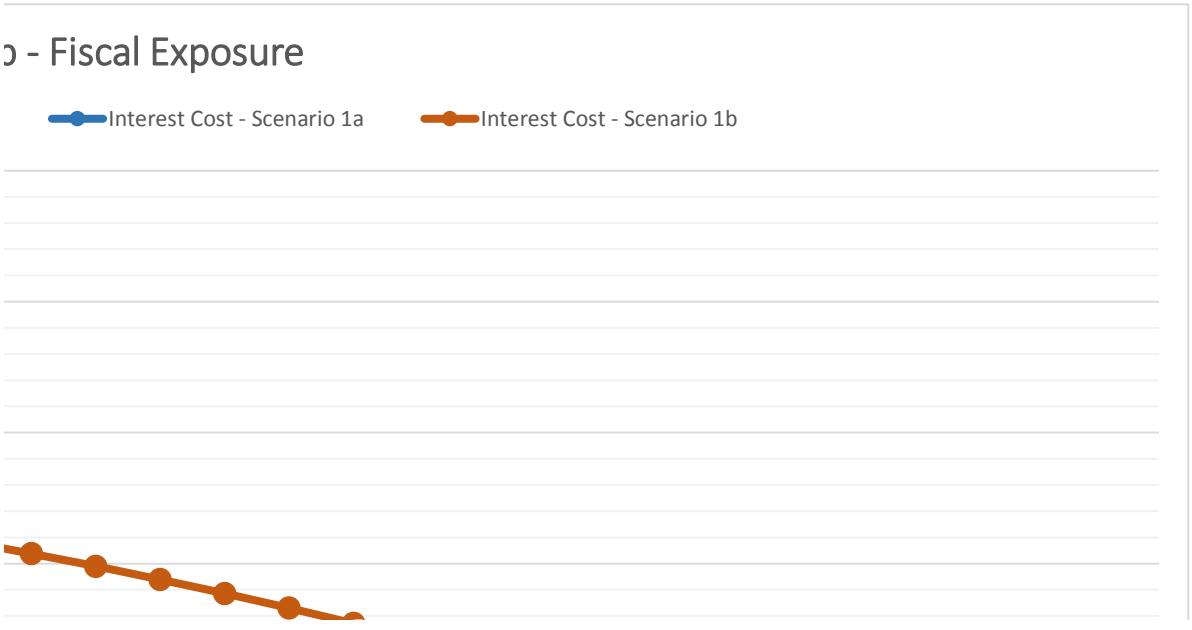

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

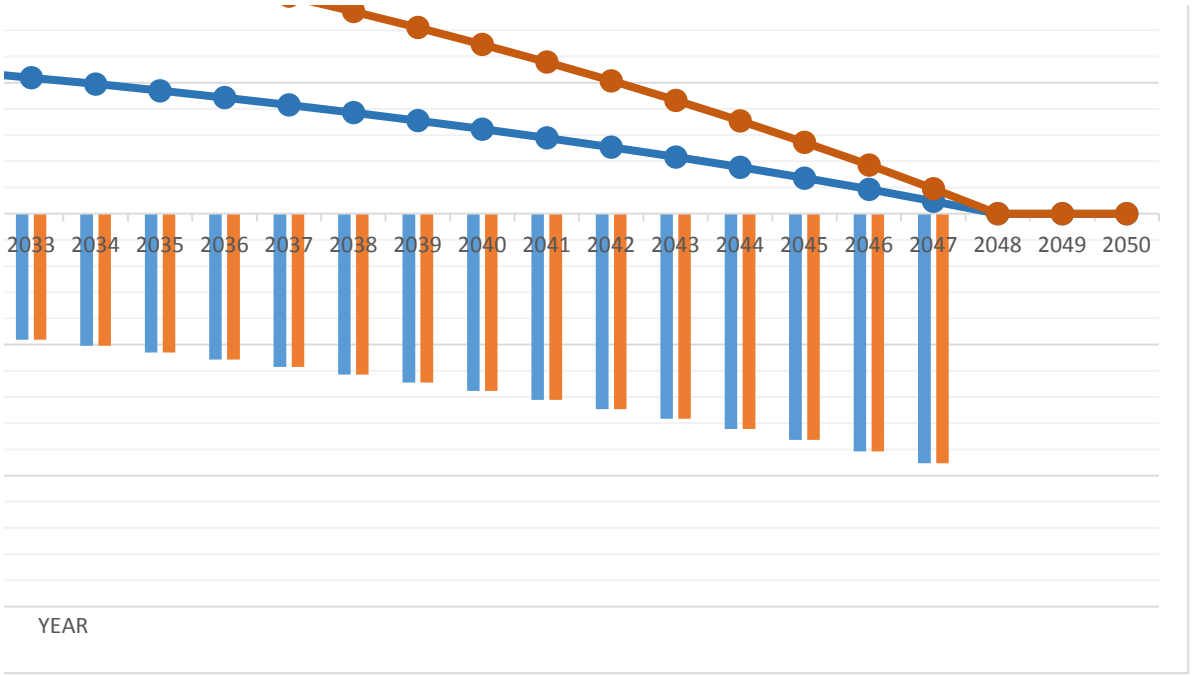


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

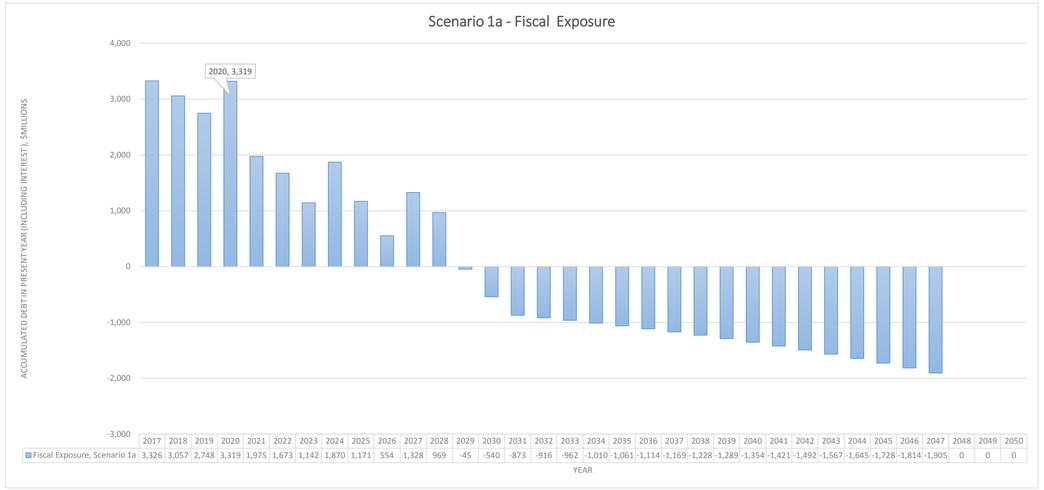
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

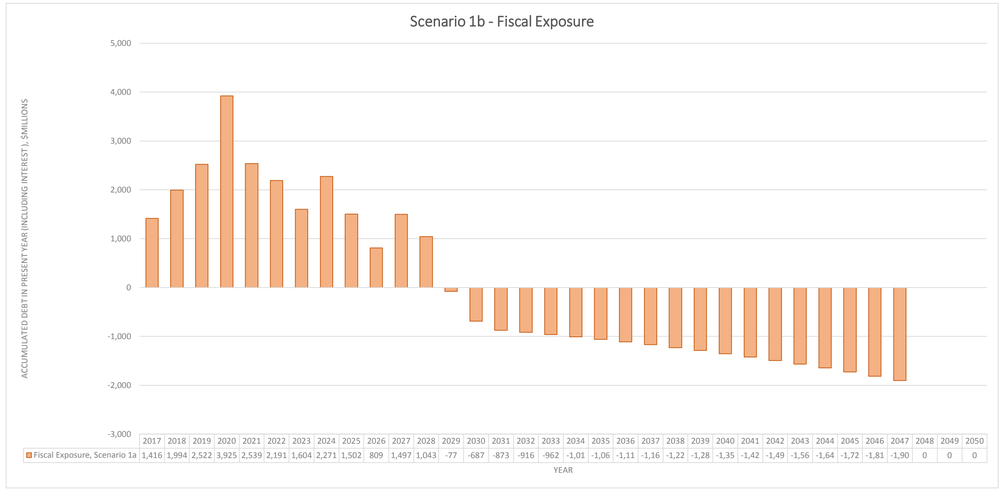
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

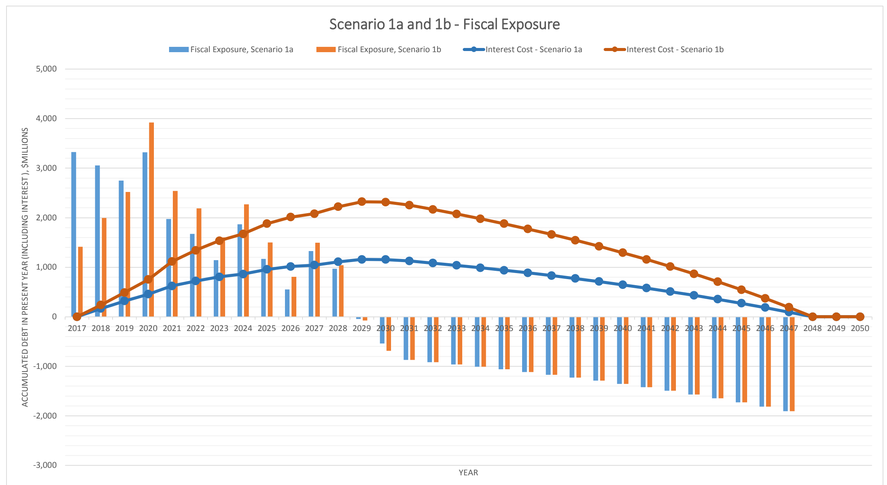
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

Notes:	Accounting treatment is to be determined.


Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0


Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0


Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

IESO GA cost forecast + extrapolation

Scenario
Option 1a
Borrow $3.3B, Bills Lowered 20%, No Cap

Option 1b
Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B

	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168

Ratepayer GA Payment	8,753	8,535	8,311	7,650
Total Accumulated Debt ($ billion)	3,342	6,812	10,402	15,452

Ratepayer GA Payment	9,781	9,661	9,367	8,733
Accumulated debt in present year (including 5% interest,	2,314	4,606	7,027	10,822

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528
19,868	24,126	28,033	32,843	37,110	40,911	45,720	50,350
8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717
13,761	16,470	18,755	21,866	24,355	26,295	29,156	31,750

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**
10009	9721	8654	8820	8238	7756	5662	5389

8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319
54,201	57,751	60,200	62,719	64,559	65,780	64,732	63,114
9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913
33,472	34,796	34,919	35,008	34,309	32,878	31,035	29,098

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627

10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485
60,904	58,078	54,611	50,476	45,641	40,076	33,745	26,613
8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151
27,063	24,923	22,673	20,309	17,823	15,210	12,464	9,577

2045	2046	2047	2048

3,451	3,285	3,126	2,975	2,831	2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695

12,786	13,095	13410.34	2975.154	2831.461	2694.708
18,640	9,784	4.85E-06	0	0	0

6,976	6,809	6650.631	2975.154	2831.461	2694.708
6,543	3,353	5E-12	0	0	0

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

		5.00%	
Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb15_1a_30yr

Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,342	3,470
Interest Portion	0	171

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	835	3,374
Interest Portion	-	43

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $66 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb15_1b_30yr

Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,314	2,292
Interest Portion	0	118

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	579	2,309
Interest Portion	-	30

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $35 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

#REF!		
$ millions		
30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	362	1,487

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
	1	
	2	
	3	
	4 April	4
	5 May	5
	6 June	6
	7 July	7
	8 August	8
	9 September	9
	10 October	10
	11 November	11
	12 December	12
30-year term	**2016-17**	**2017-18**

Fiscal Exposure - Equal Monthly Debt Drawdown 579 - 835 2,309 - 3,374

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	835	3374
Debt-Finance Global Adjustment Costs, Option 1a	579	2309
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60

First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**835**	**3614**
Total, B	579	2549
Proposed Program Total:	579 - 835	2,549 - 3,614

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Option 1a
Option 2b

Assumes an inte

2019	2020	2021	2022
3,589	5,050	4,416	4,258
349	532	791	1,016

2018-19	2019-20	2020-21	2021-2022
3,500	3,955	4,892	4,377
215	394	597	847

2034.

depend on decision on accounting treatment.

2019	2020	2021	2022
2,421	3,795	2,938	2,709
236	360	554	704

2018-19	2019-20	2020-21	2021-2022
2,324	2,765	3,581	2,881
148	267	408	591

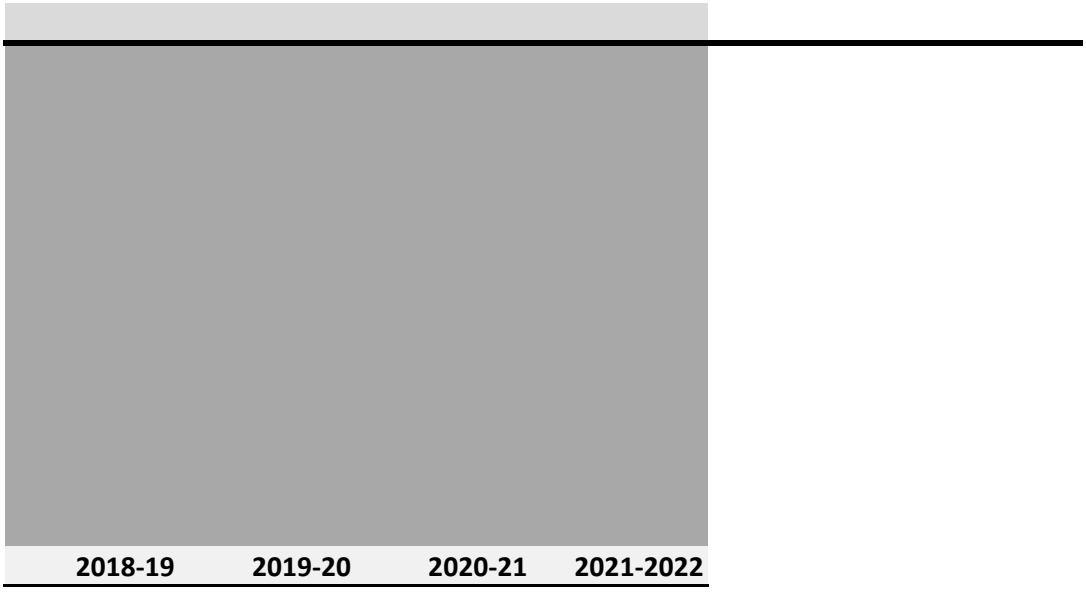
2032.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022

2,324 - 3,500 2,765 - 3,955 3,581 - 4,892 2,881 - 4,377

/1

2018-19[1]	2019-20[1]	2020-21[1]
3500	3955	4892
2324	2765	3581
225	279	323
60	60	60

18	18	18
3803	**4312**	**5293**
2627	3122	3982

2,627 - 3,803	3,122 - 4,312	3,982 - 5,293

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$38,864	$61,735	$65,781	occurs in Year 2034
$22,873	$32,368	$35,009	occurs in Year 2032

erest rate of 5.00% (compounded monthly).

Tab Name		Total Accumulated Interest Costs
Feb15_1a_30yr	$26,517	$34,278
Feb15_1b_30yr	$15,631	$20,378
	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$26,517 to $34,278
Option 2	$15,631 to $20,378
Option 3	$17,202 to $22,028

Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

Feb15_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,342	3,470	3,589	5,050	4,416	4,258	3,907	4,810	4,268	3,801	4,809	4,630	3,851	3,550	2,449	2,519	1,840	1,221	-1,048	-1,618	-2,210	-2,825	-3,467	-4,135	-4,834	-5,565	-6,330	-7,132	-7,973	-8,856	-9,783	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,421	3,553	3,675	5,171	4,521	4,359	4,000	4,924	4,369	3,891	4,923	4,740	3,943	3,635	2,508	2,579	1,884	1,250	-1,073	-1,656	-2,262	-2,893	-3,549	-4,234	-4,949	-5,697	-6,481	-7,302	-8,163	-9,067	-10,016	0	0	0	
			79	83	85	120	105	101	93	114	102	90	114	110	92	84	58	60	44	29	-25	-38	-53	-67	-82	-98	-115	-132	-151	-170	-190	-211	-233	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	5,050	3,365	61,735
Equal Monthly Debt Drawdown	5,171	3,341	

	Feb15 Option 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	65,781	2034	38,864
Equal Monthly Debt Drawdown	67,346		

Feb15 Option 1a, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
a	Debt, Beginning of Year	0	3,342	6,812	10,402	15,452	19,868	24,126	28,034	32,843	37,111	40,911	45,720	50,350	54,201	57,752	60,201	62,720	64,560	65,781	64,733	63,115	60,906	58,080	54,614	50,478	45,644	40,079	33,749	26,617	18,644	9,788	5	5	5	
c = a*5%	*Interest Cost - Feb15 Option 1a, 30-yr - End of Year Debt Drawdown*	*0*	*171*	*349*	*532*	*791*	*1,016*	*1,234*	*1,434*	*1,680*	*1,899*	*2,093*	*2,339*	*2,576*	*2,773*	*2,955*	*3,080*	*3,209*	*3,303*	*3,365*	*3,312*	*3,229*	*3,116*	*2,972*	*2,794*	*2,583*	*2,335*	*2,051*	*1,727*	*1,362*	*954*	*501*	*0*	*0*	*0*	61,735
b	Additional GA Debt Drawdown, End of Year	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	3,342	6,812	10,402	15,452	19,868	24,126	28,034	32,843	37,111	40,911	45,720	50,350	54,201	57,752	60,201	62,720	64,560	65,781	64,733	63,115	60,906	58,080	54,614	50,478	45,644	40,079	33,749	26,617	18,644	9,788	5	5	5	5	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	171	520	1,052	1,842	2,859	4,093	5,527	7,208	9,106	11,199	13,539	16,115	19,665	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	22,114	26,617	18,644	9,788	5	5	5	5	
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal	3,342	6,641	9,882	14,400	18,026	21,267	23,941	27,316	29,903	31,805	34,521	36,812	38,087	38,087	38,087	40,606	42,446	43,667	42,619	41,001	38,792	35,966	32,500	28,364	23,530	17,965	11,635	0	0	0	0	0	0	0	
	Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	171	520	1,052	1,842	2,859	4,093	5,527	7,208	9,106	11,199	13,539	16,115	18,888	21,842	24,922	28,131	31,434	34,800	38,112	41,341	44,457	47,428	50,222	52,805	55,140	57,191	58,917	60,279	61,233	61,734				
	Feb15 Option 1a, 30-yr - Accumulated Debt Principal	3,342	6,641	9,882	14,400	18,026	21,267	23,941	27,316	29,903	31,805	34,521	36,812	38,087	38,864	38,359	37,798	36,429	34,347	29,934	25,004	19,565	13,624	7,186	256	-7,161	-15,061	-23,442	-32,300	-41,635	-51,445	-61,729				
Fiscal Exposure - End of Year Debt Drawdown		3,342	3,470	3,589	5,050	4,416	4,258	3,907	4,810	4,268	3,801	4,809	4,630	3,851	3,550	2,449	2,519	1,840	1,221	-1,048	-1,618	-2,210	-2,825	-3,467	-4,135	-4,834	-5,565	-6,330	-7,132	-7,973	-8,856	-9,783	0	0	0	

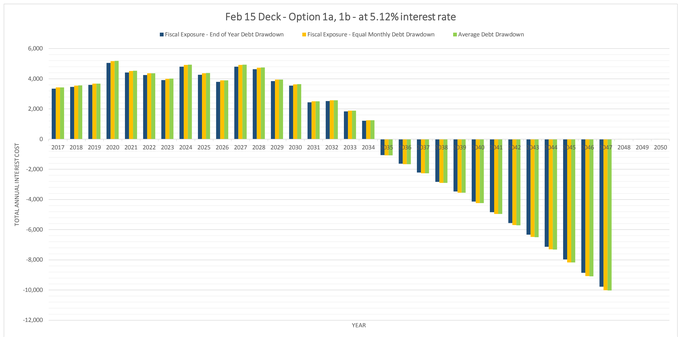
Feb15 Option 1a, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,421	6,974	10,649	15,820	20,341	24,700	28,700	33,624	37,993	41,885	46,808	51,548	55,491	59,125	61,633	64,212	66,096	67,346	66,273	64,617	62,354	59,462	55,913	51,679	46,730	41,033	34,552	27,250	19,087	10,021	5	5	5	
3,341	*Interest Cost - Feb15 Option 1a, 30-yr*	*79*	*254*	*434*	*652*	*896*	*1,118*	*1,327*	*1,549*	*1,782*	*1,989*	*2,207*	*2,449*	*2,668*	*2,857*	*3,013*	*3,140*	*3,253*	*3,332*	*3,341*	*3,273*	*3,177*	*3,049*	*2,889*	*2,696*	*2,468*	*2,203*	*1,900*	*1,557*	*1,172*	*743*	*268*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,421	6,974	10,649	15,820	20,341	24,700	28,700	33,624	37,993	41,885	46,808	51,548	55,491	59,125	61,633	64,212	66,096	67,346	66,273	64,617	62,354	59,462	55,913	51,679	46,730	41,033	34,552	27,250	19,087	10,021	5	5	5	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,421	3,553	3,675	5,171	4,521	4,359	4,000	4,924	4,369	3,891	4,923	4,740	3,943	3,635	2,508	2,579	1,884	1,250	-1,073	-1,656	-2,262	-2,893	-3,549	-4,234	-4,949	-5,697	-6,481	-7,302	-8,163	-9,067	-10,016	0	0	0	

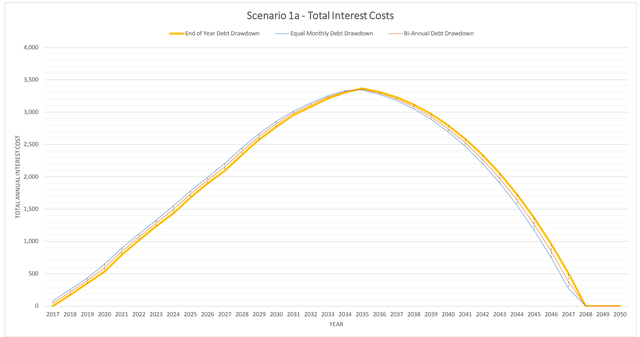
	Monthly Drawdown	278	275	270	377	302	270	223	281	216	159	226	191	106	65	(42)	(47)	(114)	(174)	(368)	(411)	(453)	(495)	(537)	(577)	(618)	(658)	(698)	(738)	(778)	(817)	(857)	-	-	-	
	FV of Monthly Drawdown at 5%	3,421	3,378	3,318	4,626	3,712	3,319	2,737	3,456	2,649	1,947	2,780	2,346	1,305	796	(517)	(574)	(1,401)	(2,132)	(4,518)	(5,047)	(5,568)	(6,083)	(6,591)	(7,094)	(7,593)	(8,088)	(8,580)	(9,069)	(9,557)	(10,043)	(10,529)	-	-	-	
	Annual Interest Cost on New Drawdowns	79	78	77	107	86	77	64	80	62	45	65	54	30	18	(12)	(13)	(33)	(50)	(105)	(117)	(129)	(141)	(153)	(165)	(176)	(188)	(199)	(211)	(222)	(233)	(245)	-	-	-	
	Annual Interest Cost on Opening Balance	-	175	357	545	809	1,041	1,264	1,468	1,720	1,944	2,143	2,395	2,637	2,839	3,025	3,153	3,285	3,382	3,446	3,391	3,306	3,190	3,042	2,861	2,644	2,391	2,099	1,768	1,394	977	513	0	0	0	
	Total Annual Interest Cost	79	254	434	652	896	1,118	1,327	1,549	1,782	1,989	2,207	2,449	2,668	2,857	3,013	3,140	3,253	3,332	3,341	3,273	3,177	3,049	2,889	2,696	2,468	2,203	1,900	1,557	1,172	743	268	0	0	0	

Feb15 Option 1a, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,385	6,899	10,535	15,650	20,122	24,435	28,392	33,263	37,585	41,435	46,305	50,994	54,895	58,490	60,971	63,523	65,386	66,623	65,561	63,923	61,685	58,823	55,312	51,124	46,228	40,592	34,181	26,958	18,882	9,913	5	5	5	
	Interest Cost - Feb15 Option 1a, 30-yr	*43*	*215*	*394*	*597*	*847*	*1,071*	*1,284*	*1,496*	*1,735*	*1,947*	*2,155*	*2,398*	*2,625*	*2,818*	*2,986*	*3,112*	*3,232*	*3,319*	*3,352*	*3,291*	*3,201*	*3,080*	*2,927*	*2,741*	*2,521*	*2,264*	*1,970*	*1,635*	*1,260*	*841*	*376*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,385	6,899	10,535	15,650	20,122	24,435	28,392	33,263	37,585	41,435	46,305	50,994	54,895	58,490	60,971	63,523	65,386	66,623	65,561	63,923	61,685	58,823	55,312	51,124	46,228	40,592	34,181	26,958	18,882	9,913	5	5	5	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,385	3,515	3,635	5,115	4,473	4,313	3,957	4,871	4,322	3,849	4,870	4,689	3,900	3,596	2,481	2,551	1,864	1,237	-1,061	-1,639	-2,238	-2,861	-3,511	-4,188	-4,896	-5,636	-6,411	-7,223	-8,075	-8,969	-9,909	0	0	0	

	Bi-Annual Drawdown	1,671	1,650	1,620	2,259	1,813	1,621	1,337	1,688	1,294	951	1,358	1,146	638	389	(253)	(280)	(684)	(1,041)	(2,207)	(2,465)	(2,719)	(2,971)	(3,219)	(3,465)	(3,708)	(3,950)	(4,190)	(4,429)	(4,667)	(4,905)	(5,142)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,385	3,341	3,282	4,576	3,672	3,283	2,707	3,418	2,620	1,926	2,750	2,320	1,291	787	(512)	(568)	(1,386)	(2,109)	(4,470)	(4,993)	(5,508)	(6,017)	(6,520)	(7,018)	(7,512)	(8,001)	(8,488)	(8,972)	(9,454)	(9,935)	(10,416)	-	-	-	
	Annual Interest Cost on New Drawdowns	43	42	41	58	46	41	34	43	33	24	35	29	16	10	(6)	(7)	(18)	(27)	(56)	(63)	(70)	(76)	(82)	(89)	(95)	(101)	(107)	(113)	(119)	(125)	(132)	-	-	-	
	Annual Interest Cost on Opening Balance	-	173	353	539	801	1,029	1,250	1,453	1,702	1,923	2,120	2,369	2,609	2,809	2,992	3,119	3,250	3,345	3,409	3,354	3,270	3,156	3,010	2,830	2,616	2,365	2,077	1,749	1,379	966	507	0	0	0	
	Total Annual Interest Cost	43	215	394	597	847	1,071	1,284	1,496	1,735	1,947	2,155	2,398	2,625	2,818	2,986	3,112	3,232	3,319	3,352	3,291	3,201	3,080	2,927	2,741	2,521	2,264	1,970	1,635	1,260	841	376	0	0	0	

Feb15 Option 1a, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1a - Borrow $3.3B, Bills Lowered 20%, No Cap																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,753	8,535	8,311	7,650	7,218	7,392	7,570	7,753	7,940	8,131	8,327	8,528	8,734	8,944	9,160	9,381	9,607	9,839	10,076	10,319	10,567	10,822	11,083	11,350	11,624	11,904	12,191	12,485	12,786	13,095	13,410	2,975	2,831	2,695	
	GA Debt Requirement	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Debt, Beginning of Year	0	3,427	6,986	10,668	15,847	20,376	24,743	28,751	33,683	38,060	41,958	46,890	51,638	55,588	59,229	61,741	64,325	66,212	67,464	66,389	64,730	62,464	59,566	56,011	51,770	46,812	41,104	34,612	27,298	19,121	10,038	5	5	5	
	Interest Cost - Feb15 Option 1a, 30-yr	*85*	*260*	*440*	*661*	*904*	*1,125*	*1,334*	*1,557*	*1,789*	*1,996*	*2,216*	*2,458*	*2,675*	*2,864*	*3,017*	*3,144*	*3,256*	*3,334*	*3,339*	*3,270*	*3,173*	*3,044*	*2,883*	*2,688*	*2,459*	*2,193*	*1,889*	*1,544*	*1,158*	*727*	*251*	*0*	*0*	*0*	61,735
	Additional GA Debt Drawdown	3,342	3,299	3,241	4,518	3,626	3,242	2,673	3,375	2,587	1,902	2,716	2,291	1,275	777	-505	-561	-1,369	-2,082	-4,413	-4,930	-5,439	-5,941	-6,438	-6,930	-7,417	-7,900	-8,381	-8,859	-9,335	-9,810	-10,284	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,427	6,986	10,668	15,847	20,376	24,743	28,751	33,683	38,060	41,958	46,890	51,638	55,588	59,229	61,741	64,325	66,212	67,464	66,389	64,730	62,464	59,566	56,011	51,770	46,812	41,104	34,612	27,298	19,121	10,038	5	5	5	6	
Fiscal Exposure - Average Debt Drawdown		3,427	3,559	3,681	5,180	4,529	4,367	4,007	4,933	4,377	3,898	4,932	4,749	3,950	3,641	2,512	2,584	1,887	1,252	-1,075	-1,659	-2,266	-2,898	-3,555	-4,241	-4,958	-5,707	-6,492	-7,314	-8,177	-9,083	-10,034	0	0	0	





Feb 15 Deck - Option 1a, 1b - at 5.12% interest rate

Feb15_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,314	2,292	2,421	3,795	2,938	2,709	2,285	3,111	2,489	1,940	2,862	2,594	1,722	1,324	123	89	-699	-1,431	-1,842	-1,937	-2,036	-2,140	-2,249	-2,364	-2,485	-2,613	-2,746	-2,887	-3,034	-3,190	-3,353	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,369	2,346	2,479	3,886	3,008	2,774	2,340	3,185	2,548	1,986	2,930	2,656	1,763	1,356	126	91	-716	-1,465	-1,886	-1,983	-2,084	-2,191	-2,303	-2,421	-2,544	-2,675	-2,812	-2,955	-3,107	-3,266	-3,433	0	0	0
			55	55	58	90	70	64	54	74	59	46	68	62	41	32	3	2	-17	-34	-44	-46	-48	-51	-54	-56	-59	-62	-65	-69	-72	-76	-80	0	0	0

0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,795	1,791	32,368
Equal Monthly Debt Drawdown	3,886	1,789	

	Feb15 Option 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	35,009	2032	22,873
Equal Monthly Debt Drawdown	35,841		

Feb15 Option 1a, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
a — Debt, Beginning of Year	0	2,314	4,606	7,027	10,822	13,761	16,470	18,755	21,866	24,355	26,295	29,157	31,751	33,472	34,797	34,920	35,009	34,310	32,879	31,036	29,100	27,064	24,924	22,675	20,310	17,825	15,212	12,466	9,579	6,545	3,355	3	3	3	
c = a*5% — *Interest Cost - Feb15 Option 1a, 30-yr - End of Year Debt Drawdown*	*0*	*118*	*236*	*360*	*554*	*704*	*843*	*960*	*1,119*	*1,246*	*1,345*	*1,492*	*1,624*	*1,713*	*1,780*	*1,787*	*1,791*	*1,755*	*1,682*	*1,588*	*1,489*	*1,385*	*1,275*	*1,160*	*1,039*	*912*	*778*	*638*	*490*	*335*	*172*	*0*	*0*	*0*	32,368
b — Additional GA Debt Drawdown, End of Year	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	2,314	4,606	7,027	10,822	13,761	16,470	18,755	21,866	24,355	26,295	29,157	31,751	33,472	34,797	34,920	35,009	34,310	32,879	31,036	29,100	27,064	24,924	22,675	20,310	17,825	15,212	12,466	9,579	6,545	3,355	3	3	3	3	
	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	
Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	118	354	714	1,267	1,971	2,814	3,773	4,892	6,138	7,484	8,975	10,600	11,924	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	12,047	9,579	6,545	3,355	3	3	3	3	
Feb15 Option 1a, 30-yr - Accumulated Debt Principal	2,314	4,488	6,673	10,109	12,493	14,499	15,941	18,092	19,463	20,157	21,673	22,775	22,873	22,873	22,873	22,961	22,262	20,831	18,989	17,052	15,017	12,877	10,627	8,263	5,778	3,165	419	0	0	0	0	0	0	0	
Feb15 Option 1a, 30-yr - Accumulated Interest Costs	0	118	354	714	1,267	1,971	2,814	3,773	4,892	6,138	7,484	8,975	10,600	12,312	14,092	15,879	17,670	19,425	21,108	22,695	24,184	25,569	26,844	28,004	29,043	29,955	30,733	31,371	31,861	32,196	32,368				
Feb15 Option 1a, 30-yr - Accumulated Debt Principal	2,314	4,488	6,673	10,109	12,493	14,499	15,941	18,092	19,463	20,157	21,673	22,775	22,873	22,485	20,828	19,130	16,639	13,453	9,929	6,404	2,880	-645	-4,169	-7,694	-11,218	-14,743	-18,267	-21,792	-25,316	-28,841	-32,365				
Fiscal Exposure - End of Year Debt Drawdown	2,314	2,292	2,421	3,795	2,938	2,709	2,285	3,111	2,489	1,940	2,862	2,594	1,722	1,324	123	89	-699	-1,431	-1,842	-1,937	-2,036	-2,140	-2,249	-2,364	-2,485	-2,613	-2,746	-2,887	-3,034	-3,190	-3,353	0	0	0	

Feb15 Option 1a, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Debt, Beginning of Year	0	2,369	4,716	7,194	11,080	14,088	16,862	19,201	22,386	24,934	26,920	29,850	32,506	34,269	35,625	35,751	35,841	35,126	33,661	31,774	29,792	27,708	25,517	23,214	20,793	18,249	15,574	12,763	9,807	6,701	3,435	3	3	3	
1,789 — *Interest Cost - Feb15 Option 1a, 30-yr*	*55*	*173*	*293*	*450*	*624*	*768*	*897*	*1,034*	*1,178*	*1,292*	*1,413*	*1,553*	*1,665*	*1,744*	*1,783*	*1,789*	*1,774*	*1,721*	*1,638*	*1,542*	*1,440*	*1,334*	*1,222*	*1,104*	*980*	*850*	*713*	*569*	*418*	*259*	*92*	*0*	*0*	*0*	32,368
Additional GA Debt Drawdown	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,369	4,716	7,194	11,080	14,088	16,862	19,201	22,386	24,934	26,920	29,850	32,506	34,269	35,625	35,751	35,841	35,126	33,661	31,774	29,792	27,708	25,517	23,214	20,793	18,249	15,574	12,763	9,807	6,701	3,435	3	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown	2,369	2,346	2,479	3,886	3,008	2,774	2,340	3,185	2,548	1,986	2,930	2,656	1,763	1,356	126	91	-716	-1,465	-1,886	-1,983	-2,084	-2,191	-2,303	-2,421	-2,544	-2,675	-2,812	-2,955	-3,107	-3,266	-3,433	0	0	0	

Monthly Drawdown	193	181	182	286	199	167	120	179	114	58	126	92	8	(32)	(138)	(141)	(208)	(266)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	(294)	-	-	-	
FV of Monthly Drawdown at 5%	2,369	2,225	2,237	3,518	2,441	2,053	1,477	2,202	1,403	710	1,553	1,128	100	(397)	(1,697)	(1,738)	(2,549)	(3,262)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	(3,608)	-	-	-	
Annual Interest Cost on New Drawdowns	55	52	52	82	57	48	34	51	33	17	36	26	2	(9)	(39)	(40)	(59)	(76)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	(84)	-	-	-	
Annual Interest Cost on Opening Balance	-	121	241	368	567	721	863	982	1,145	1,276	1,377	1,527	1,663	1,753	1,823	1,829	1,834	1,797	1,722	1,626	1,524	1,418	1,305	1,188	1,064	934	797	653	502	343	176	0	0	0	
Total Annual Interest Cost	55	173	293	450	624	768	897	1,034	1,178	1,292	1,413	1,553	1,665	1,744	1,783	1,789	1,774	1,721	1,638	1,542	1,440	1,334	1,222	1,104	980	850	713	569	418	259	92	0	0	0	

Feb15 Option 1a, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Debt, Beginning of Year	0	2,344	4,665	7,117	10,961	13,937	16,681	18,995	22,146	24,667	26,631	29,530	32,157	33,901	35,242	35,367	35,456	34,748	33,299	31,433	29,472	27,410	25,243	22,965	20,570	18,053	15,407	12,626	9,702	6,629	3,398	3	3	3	
Interest Cost - Feb15 Option 1a, 30-yr	*30*	*148*	*267*	*408*	*591*	*739*	*872*	*999*	*1,151*	*1,271*	*1,382*	*1,525*	*1,646*	*1,729*	*1,782*	*1,788*	*1,782*	*1,737*	*1,659*	*1,563*	*1,463*	*1,357*	*1,246*	*1,130*	*1,007*	*879*	*743*	*601*	*451*	*294*	*129*	*0*	*0*	*0*	32,368
Additional GA Debt Drawdown	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,344	4,665	7,117	10,961	13,937	16,681	18,995	22,146	24,667	26,631	29,530	32,157	33,901	35,242	35,367	35,456	34,748	33,299	31,433	29,472	27,410	25,243	22,965	20,570	18,053	15,407	12,626	9,702	6,629	3,398	3	3	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown	2,344	2,321	2,452	3,844	2,976	2,744	2,314	3,151	2,521	1,965	2,898	2,627	1,744	1,341	125	90	-708	-1,449	-1,866	-1,961	-2,062	-2,167	-2,278	-2,395	-2,517	-2,646	-2,781	-2,924	-3,073	-3,230	-3,396	0	0	0	

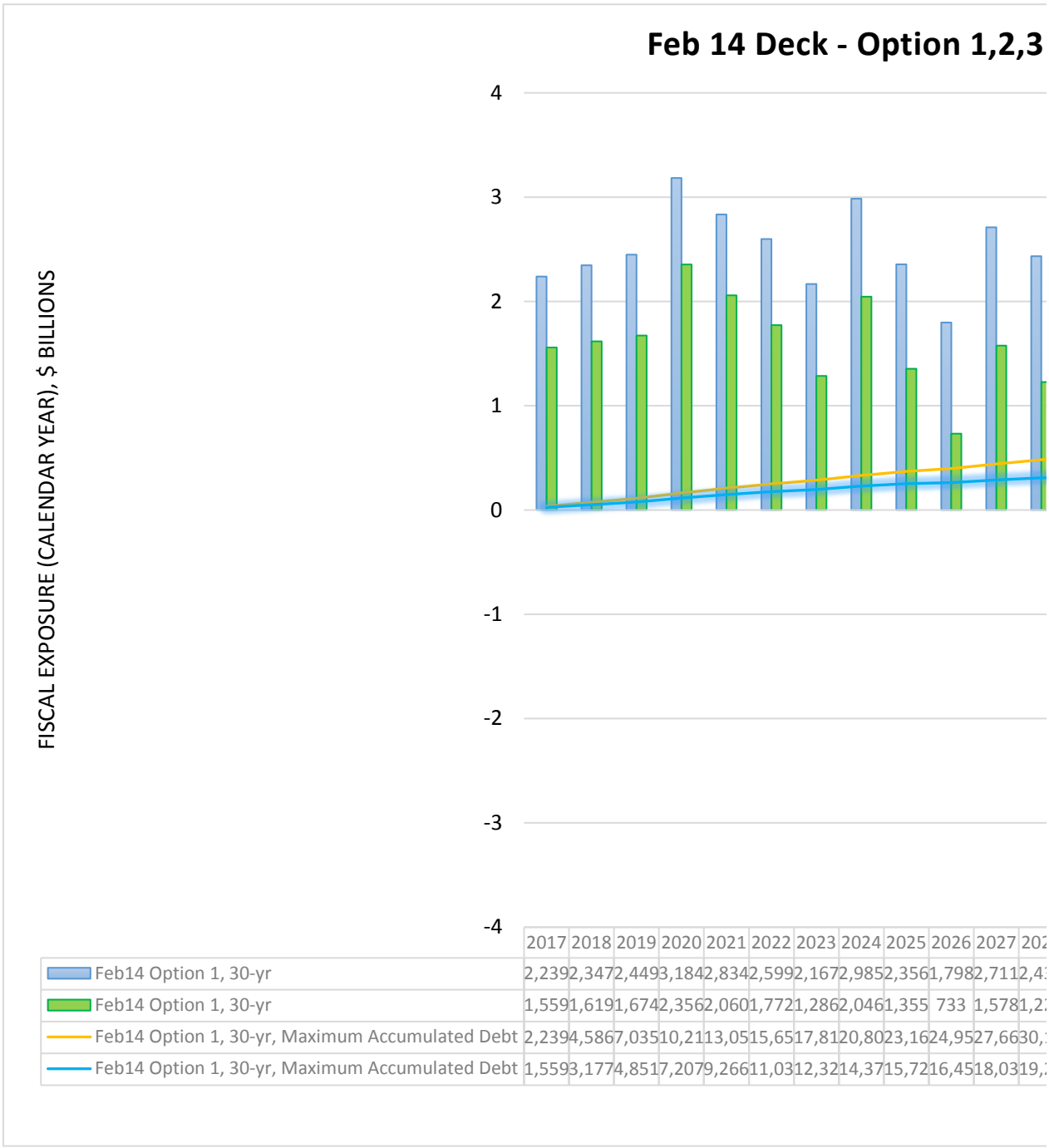
Bi-Annual Drawdown	1,157	1,087	1,093	1,718	1,192	1,003	721	1,076	685	347	758	551	49	(194)	(829)	(849)	(1,245)	(1,593)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	(1,762)	-	-	-	
FV of Bi-Annual Drawdown at 5%	2,344	2,201	2,213	3,480	2,415	2,031	1,461	2,179	1,388	703	1,536	1,116	99	(393)	(1,678)	(1,720)	(2,522)	(3,227)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	(3,570)	-	-	-	
Annual Interest Cost on New Drawdowns	30	28	28	44	30	26	18	28	18	9	19	14	1	(5)	(21)	(22)	(32)	(41)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	(45)	-	-	-	
Annual Interest Cost on Opening Balance	-	120	239	364	561	713	853	972	1,133	1,262	1,363	1,511	1,645	1,734	1,803	1,809	1,814	1,778	1,704	1,608	1,508	1,402	1,291	1,175	1,052	924	788	646	496	339	174	0	0	0	
Total Annual Interest Cost	30	148	267	408	591	739	872	999	1,151	1,271	1,382	1,525	1,646	1,729	1,782	1,788	1,782	1,737	1,659	1,563	1,463	1,357	1,246	1,130	1,007	879	743	601	451	294	129	0	0	0	

Feb15 Option 1a, 30-yr — Average Debt Drawdown

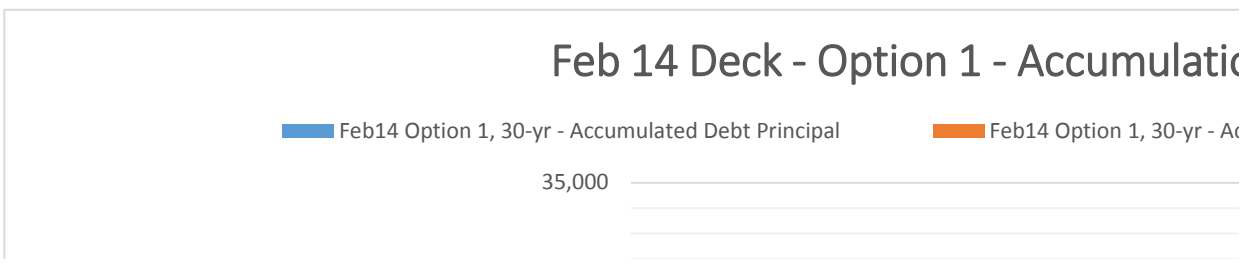
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1b - Borrow $2.3B, Bills Lowered 16%, Cap of $3.25B																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,781	9,661	9,367	8,733	8,459	8,628	8,801	8,977	9,156	9,340	9,526	9,717	9,911	10,109	10,312	10,518	10,728	10,943	9,187	8,913	8,653	8,405	8,170	7,945	7,732	7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831	2,695	
GA Debt Requirement	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Debt, Beginning of Year	0	2,373	4,724	7,207	11,099	14,113	16,891	19,235	22,425	24,978	26,968	29,902	32,563	34,329	35,687	35,813	35,904	35,187	33,720	31,830	29,844	27,756	25,562	23,255	20,830	18,281	15,601	12,785	9,824	6,712	3,441	3	3	3	
Interest Cost - Feb15 Option 1a, 30-yr	*59*	*177*	*298*	*457*	*629*	*773*	*901*	*1,039*	*1,182*	*1,296*	*1,419*	*1,558*	*1,668*	*1,746*	*1,783*	*1,789*	*1,773*	*1,719*	*1,635*	*1,538*	*1,437*	*1,330*	*1,218*	*1,100*	*976*	*845*	*708*	*564*	*412*	*253*	*86*	*0*	*0*	*0*	32,368
Additional GA Debt Drawdown	2,314	2,174	2,185	3,436	2,384	2,005	1,443	2,151	1,371	694	1,516	1,102	97	-388	-1,657	-1,698	-2,490	-3,186	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	-3,524	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,373	4,724	7,207	11,099	14,113	16,891	19,235	22,425	24,978	26,968	29,902	32,563	34,329	35,687	35,813	35,904	35,187	33,720	31,830	29,844	27,756	25,562	23,255	20,830	18,281	15,601	12,785	9,824	6,712	3,441	3	3	3	3	
Fiscal Exposure - Average Debt Drawdown	2,373	2,351	2,483	3,892	3,013	2,779	2,344	3,190	2,553	1,989	2,935	2,660	1,766	1,358	126	91	-717	-1,468	-1,889	-1,986	-2,088	-2,195	-2,307	-2,425	-2,549	-2,679	-2,816	-2,961	-3,112	-3,271	-3,439	0	0	0	

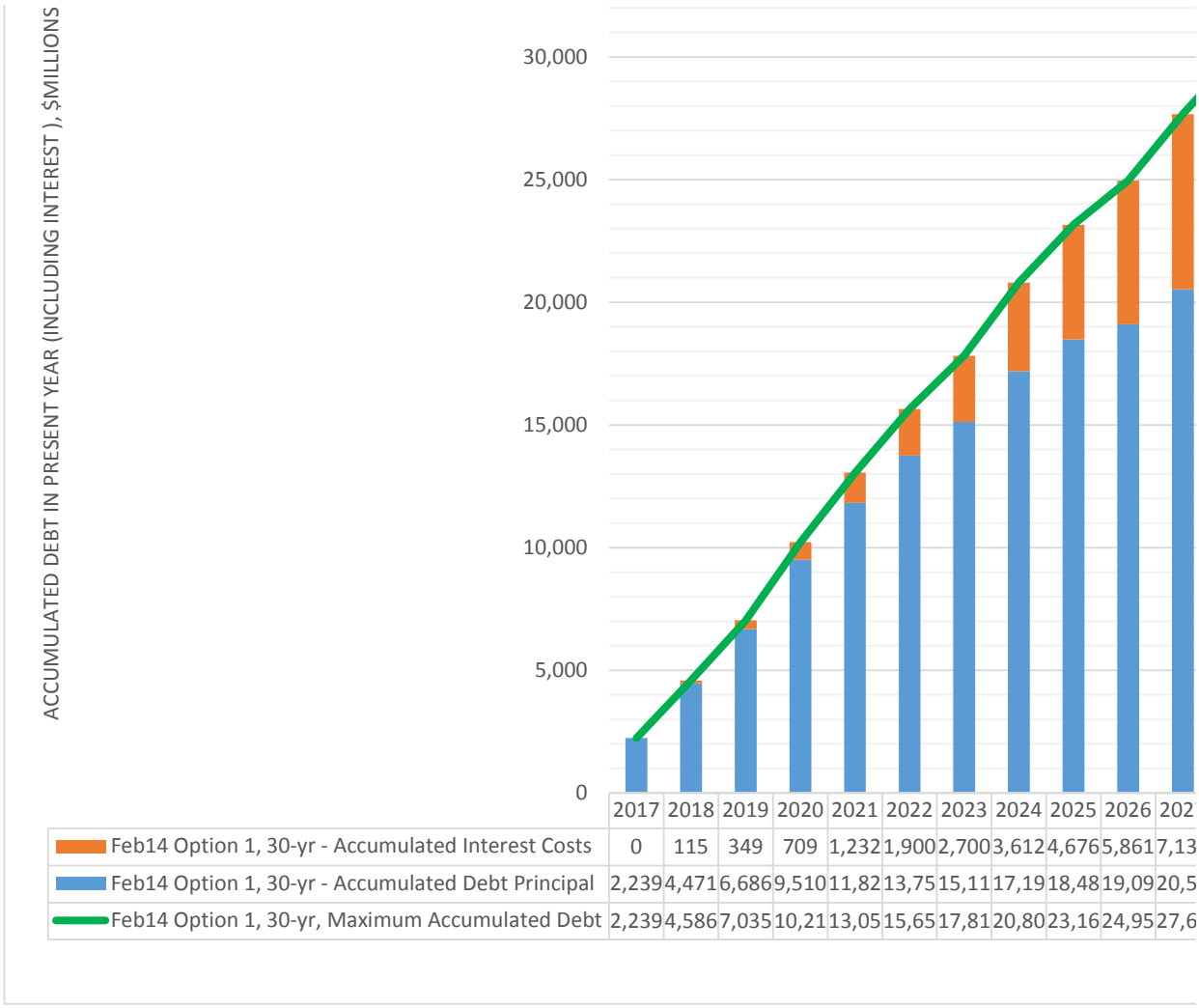
Feb 14 Deck

Feb 14 Deck - Option 1,2,3 - at 5.12% interest rate

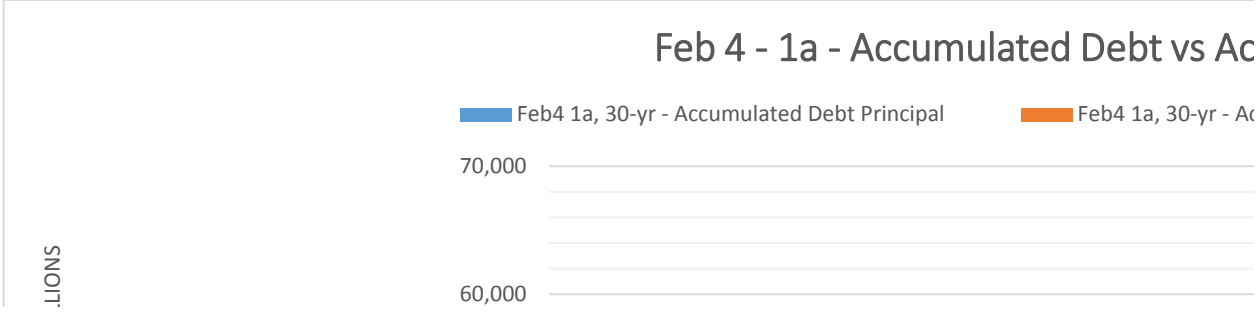


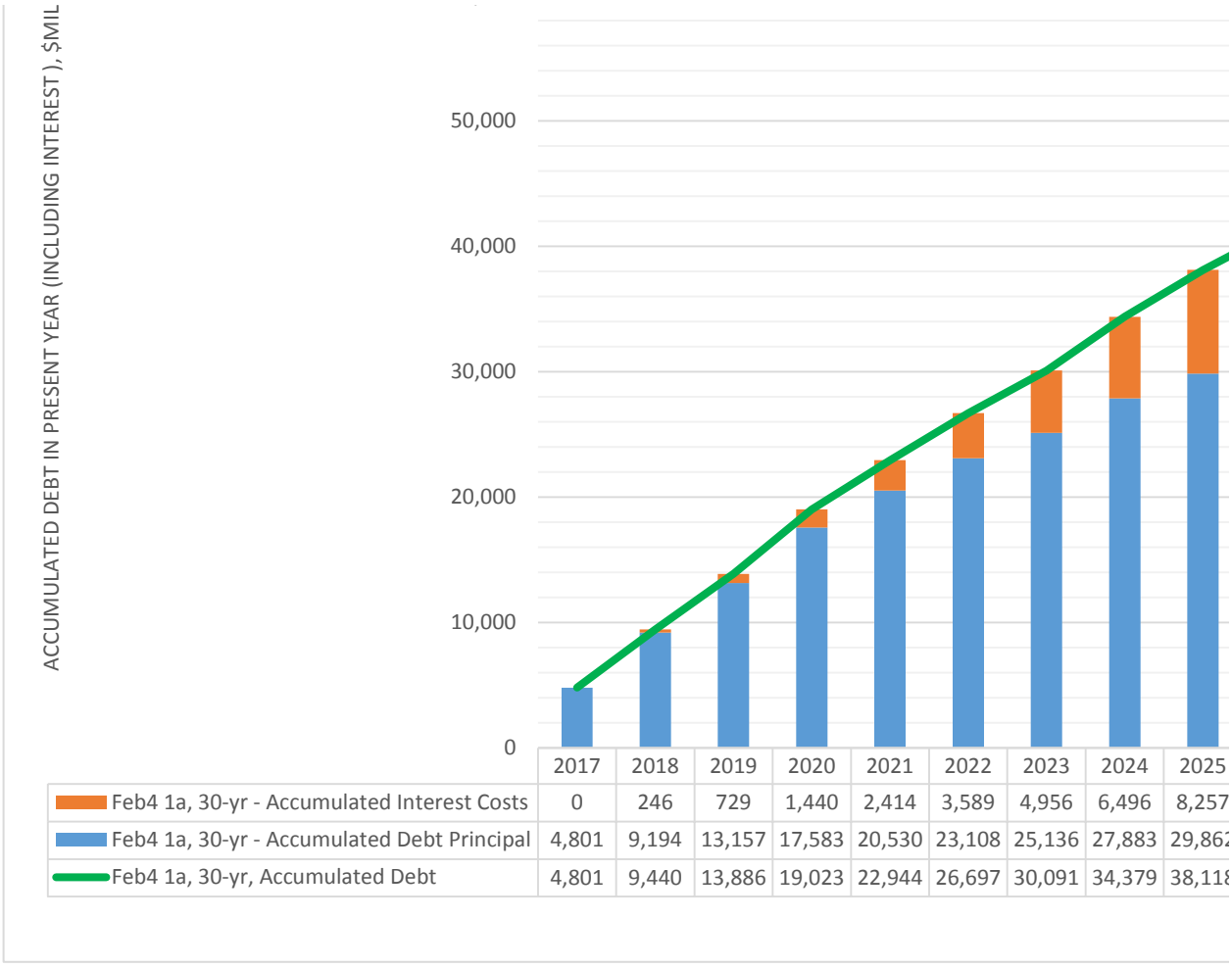
Feb 14 Deck - Option 1 - Accumulation of Debt (Principal and Interest)



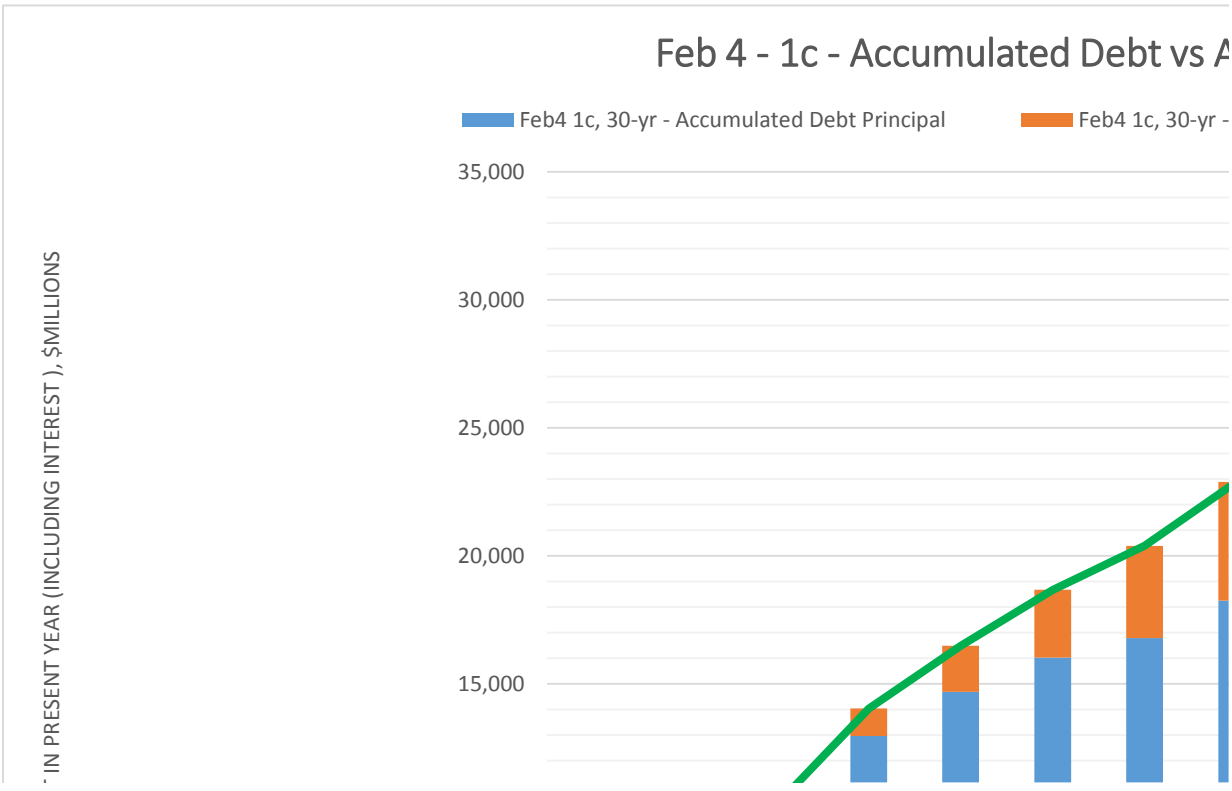


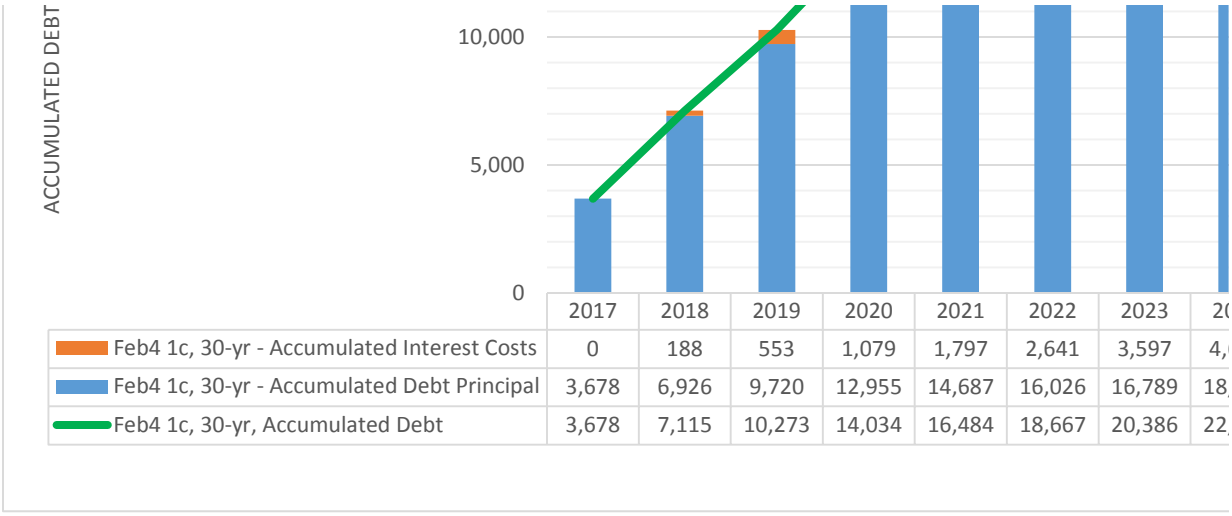
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	202
Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,13
Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,82	13,75	15,11	17,19	18,48	19,09	20,5
Feb14 Option 1, 30-yr, Maximum Accumulated Debt	2,239	4,586	7,035	10,21	13,05	15,65	17,81	20,80	23,16	24,95	27,6



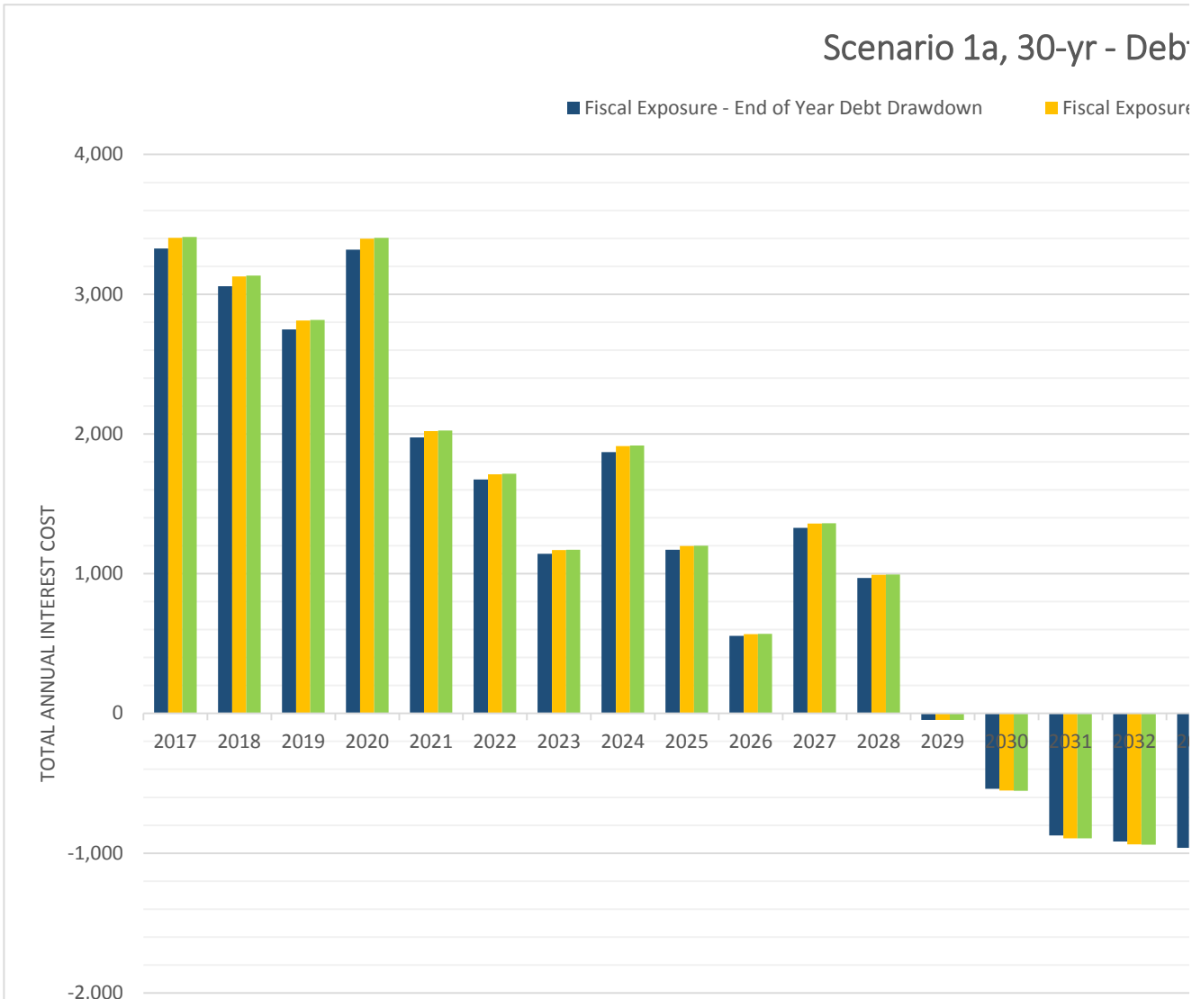


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



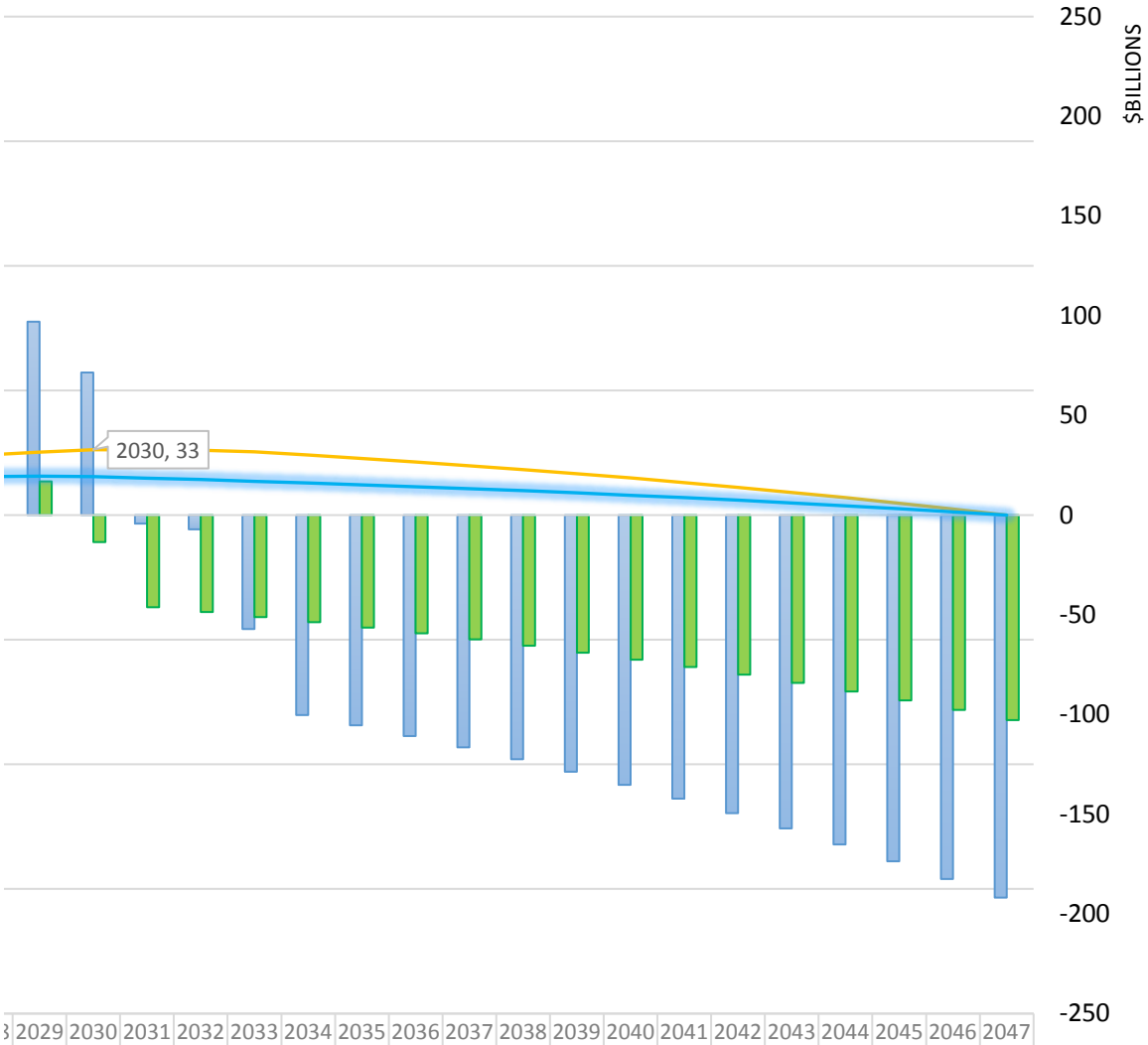


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

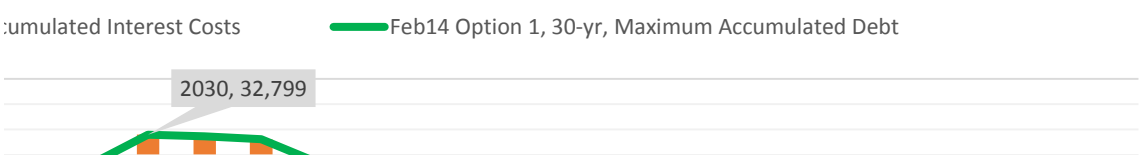
- at 5.12% interest rate

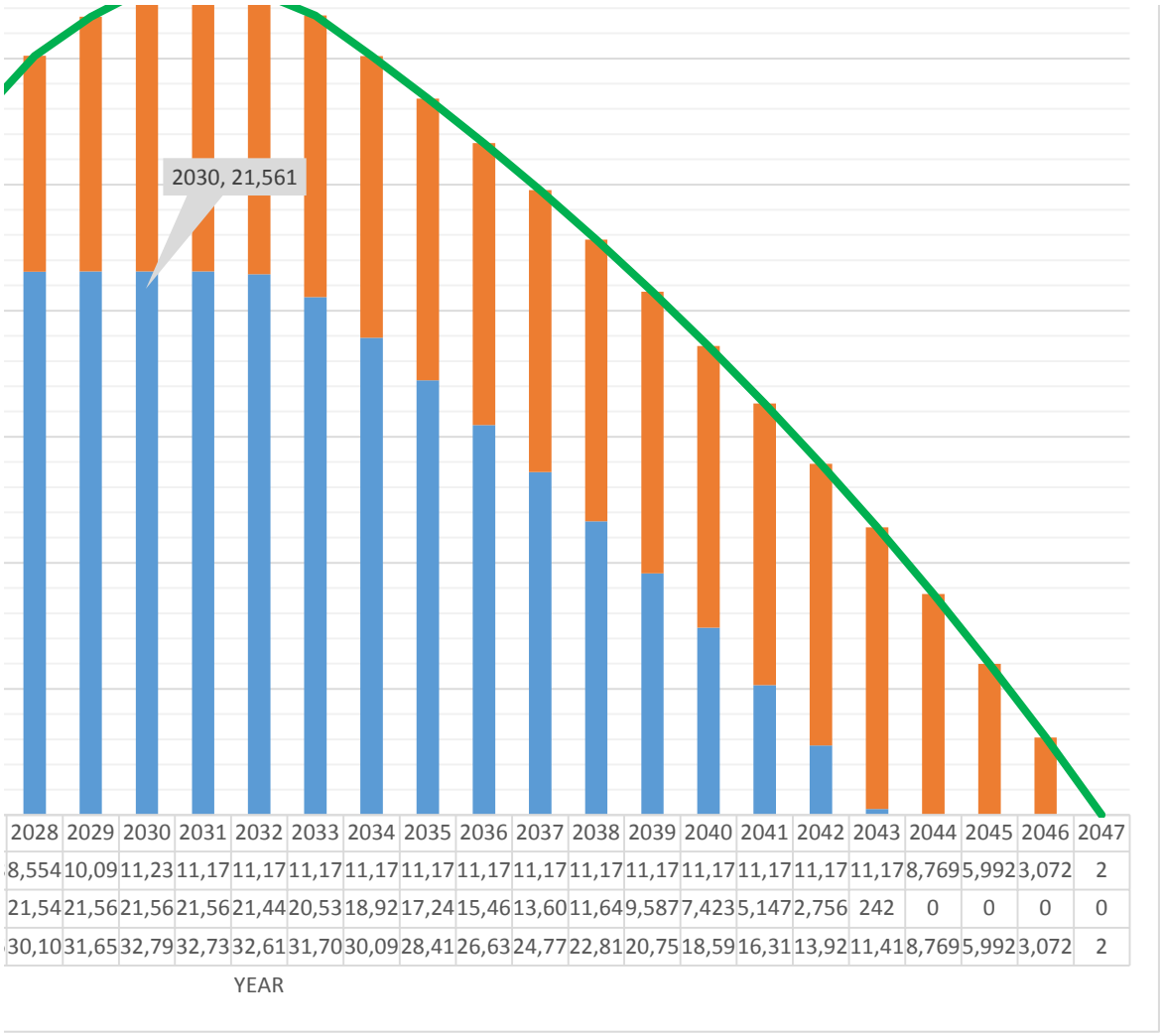


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
41,552	1,144	-68	-114	-914	-1,60	-1,68	-1,77	-1,86	-1,95	-2,05	-2,16	-2,27	-2,39	-2,51	-2,64	-2,77	-2,92	-3,06
3 271	-217	-740	-778	-818	-859	-903	-950	-998	-1,04	-1,10	-1,15	-1,21	-1,28	-1,34	-1,41	-1,48	-1,56	-1,64
031,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,769	5,992	3,072	2
519,53	19,31	18,57	17,79	16,98	16,12	15,21	14,26	13,27	12,22	11,11	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1

CALENDAR YEAR

n of Debt (Principal and Interest)

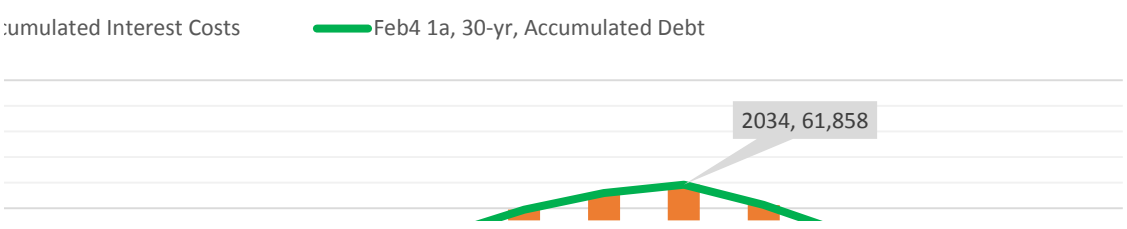




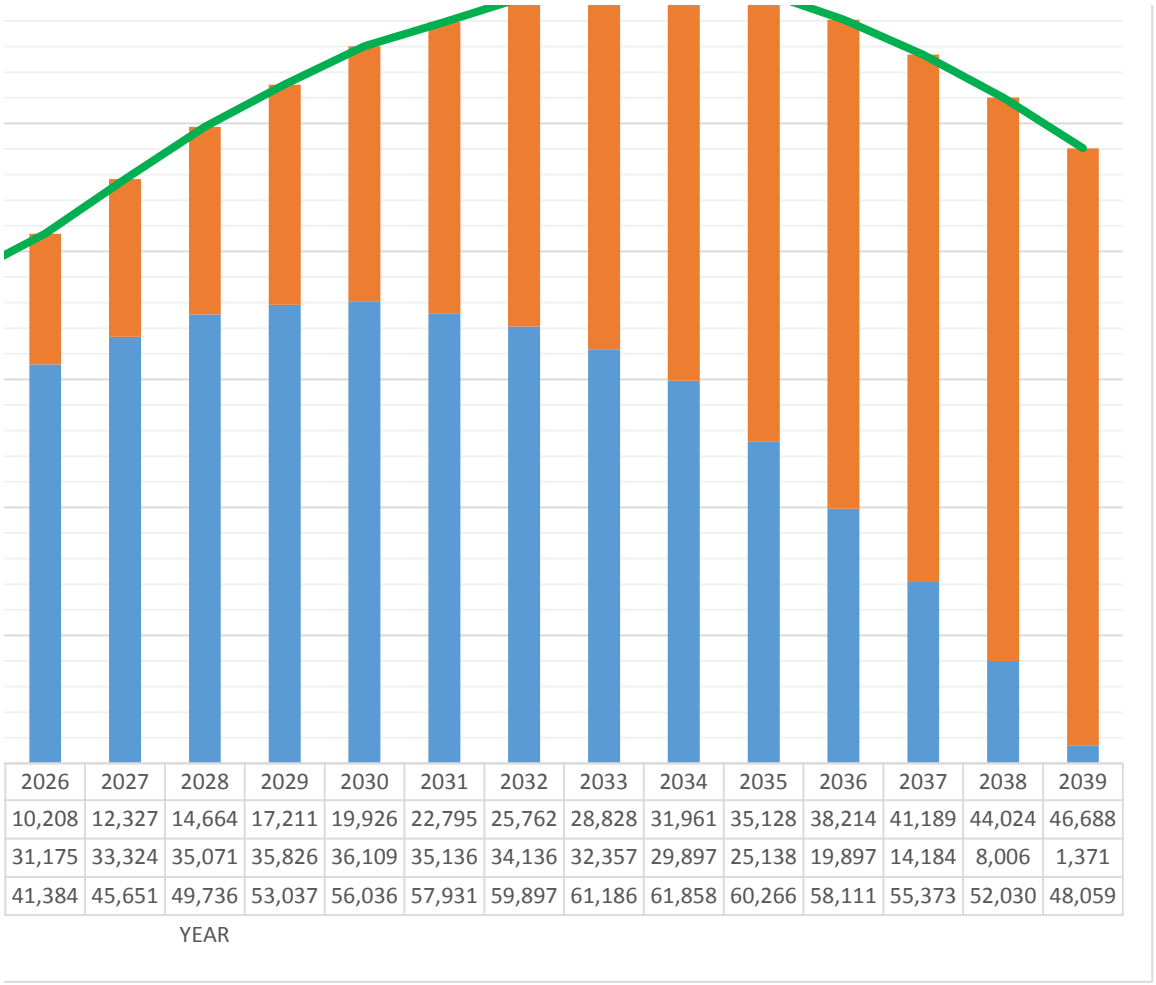
2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
8,554	10,09	11,23	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	11,17	8,769	5,992	3,072	2
21,54	21,56	21,56	21,56	21,44	20,53	18,92	17,24	15,46	13,60	11,64	9,587	7,423	5,147	2,756	242	0	0	0	0
30,10	31,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,769	5,992	3,072	2

YEAR

cumulated Total Interest Costs



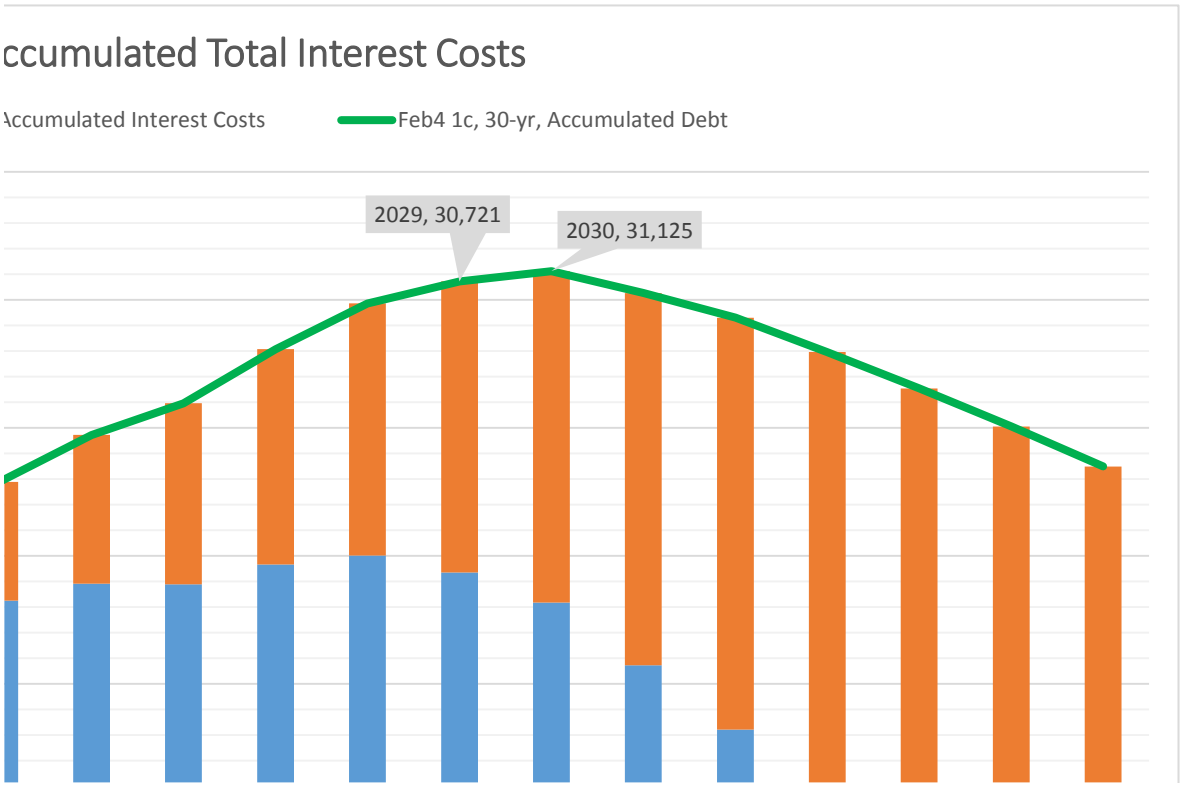
LIONS

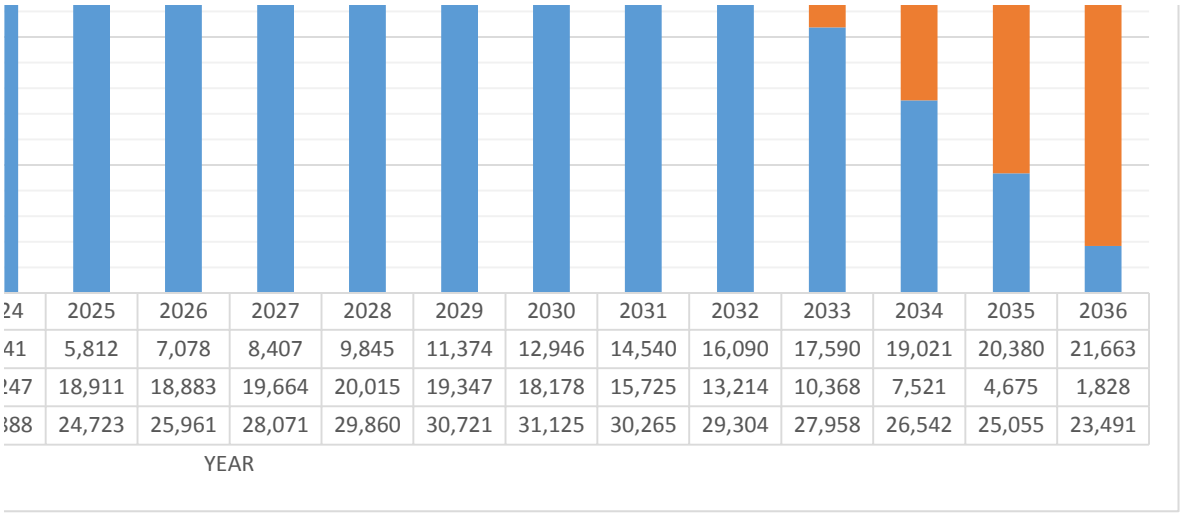


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

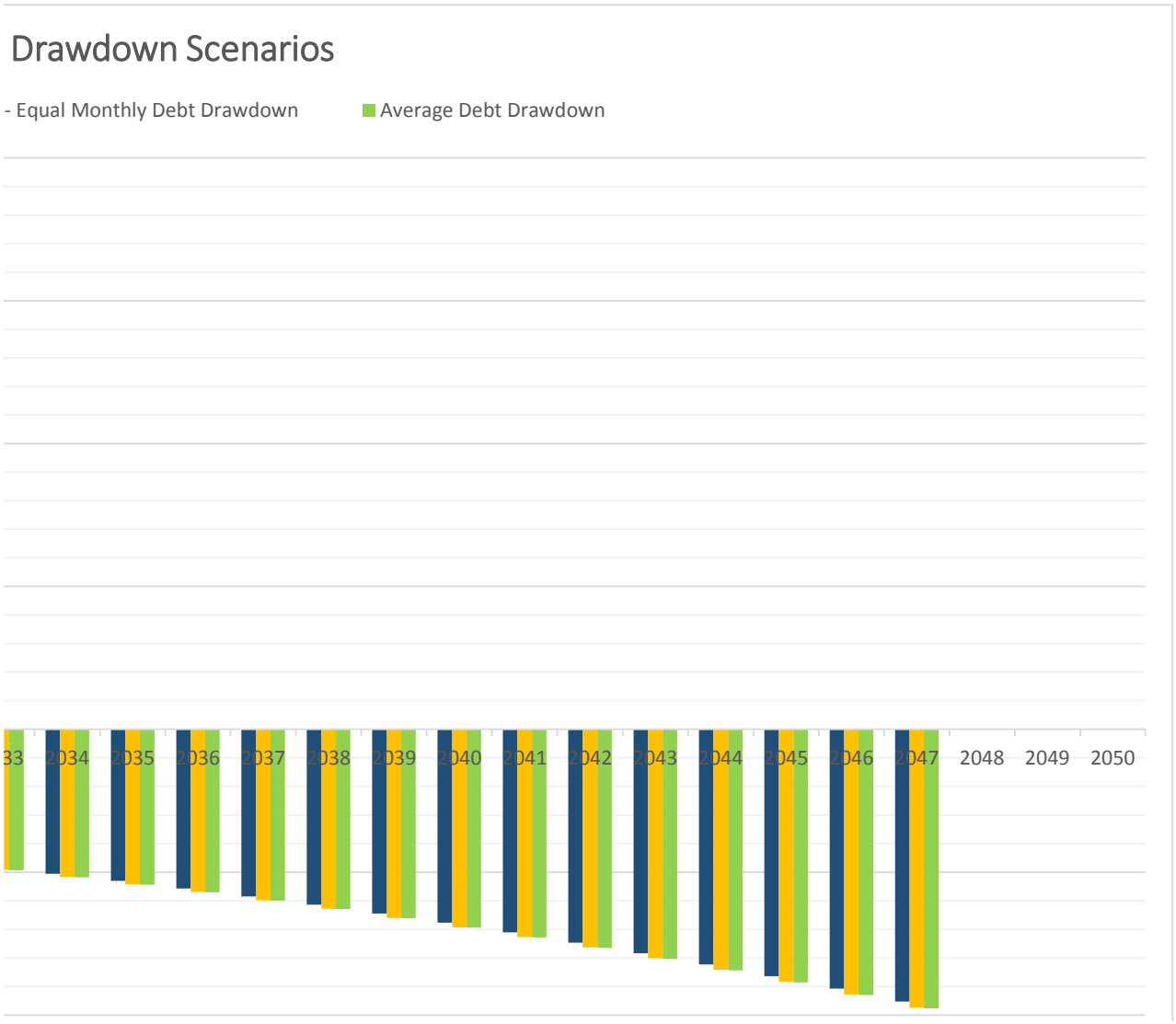
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





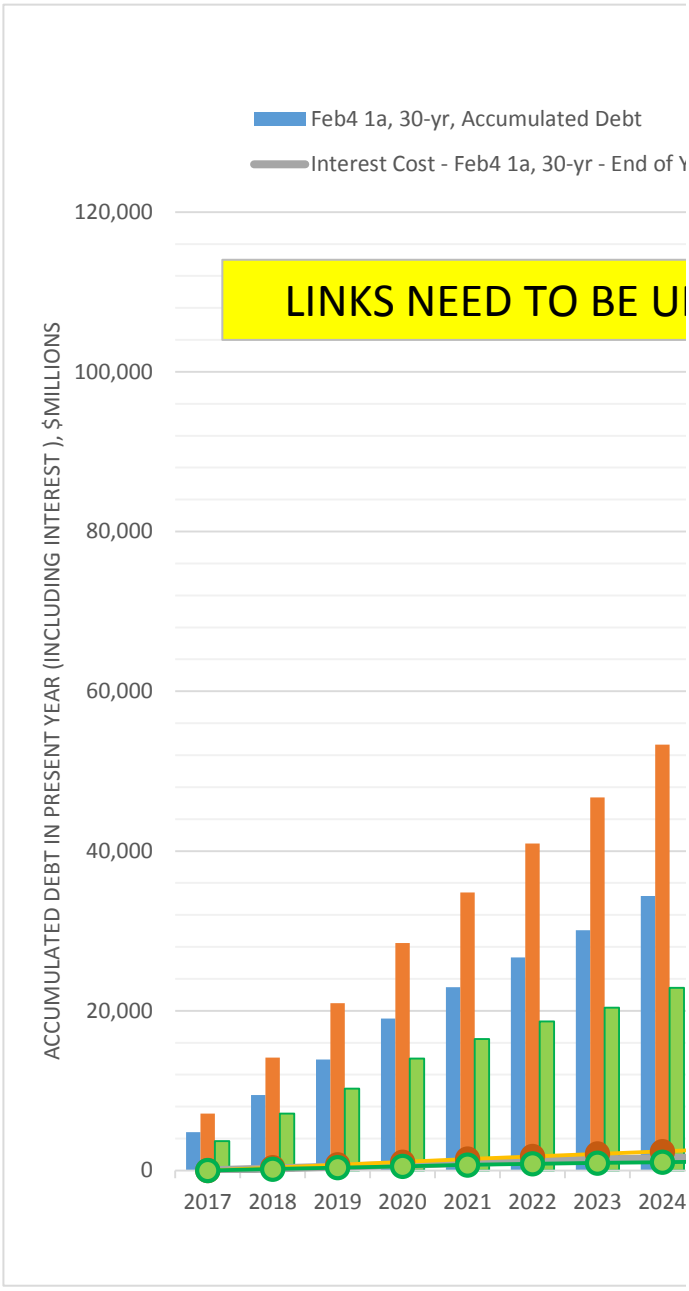
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

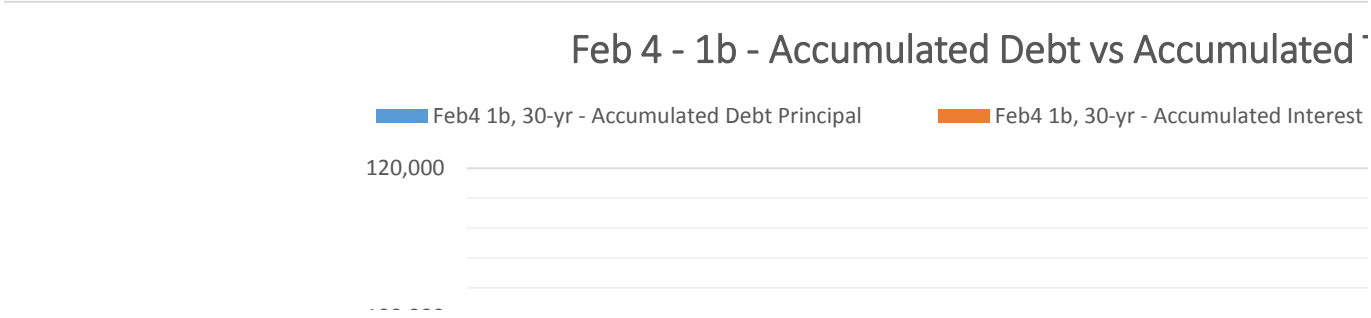
YEAR

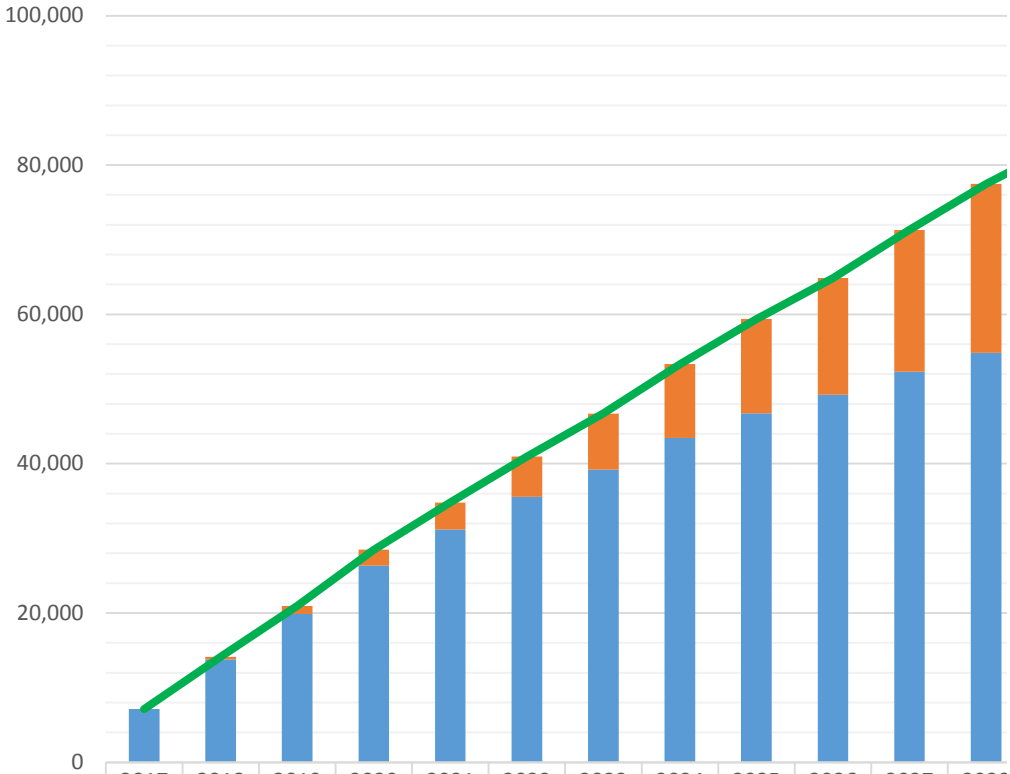


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate



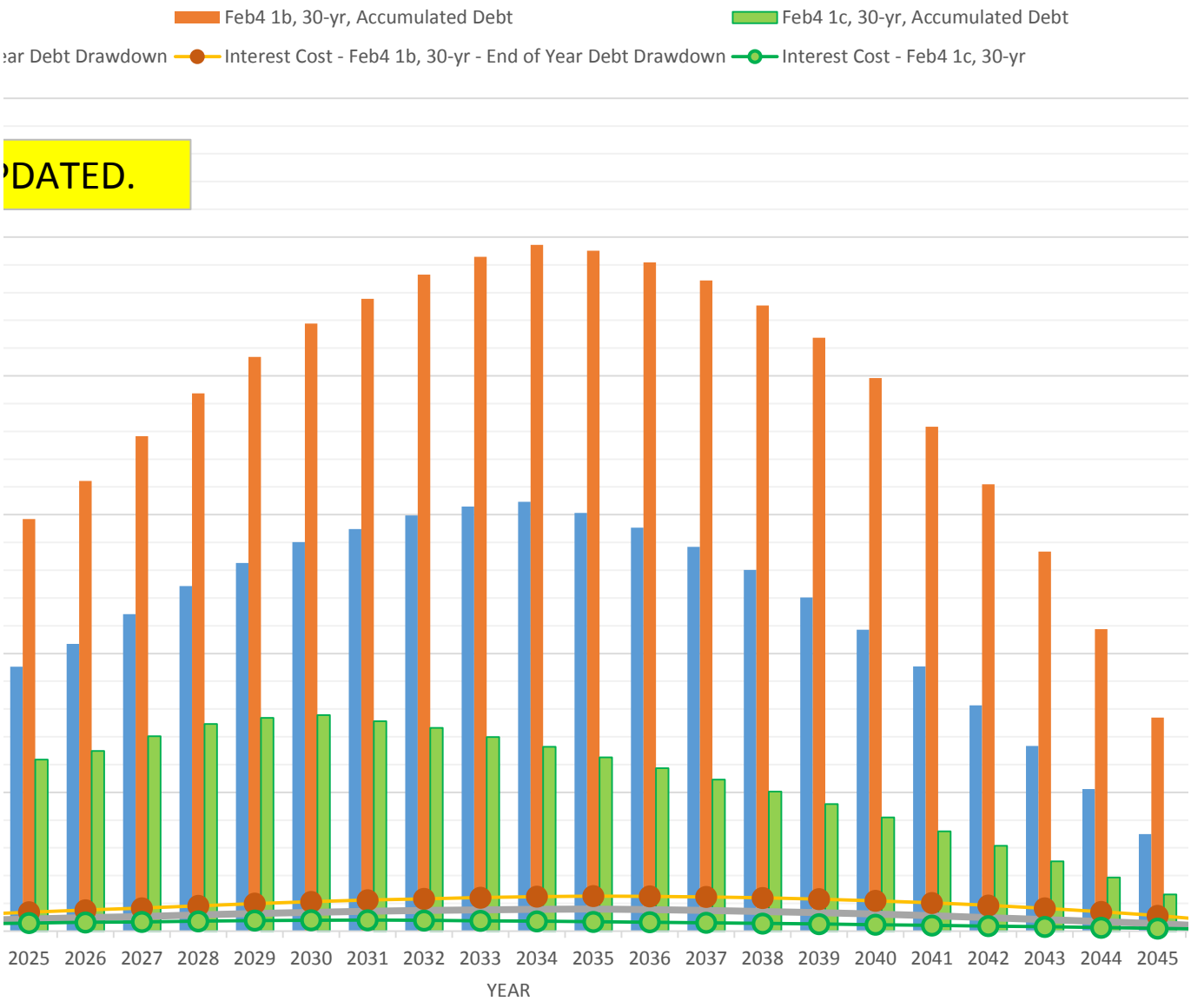

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000



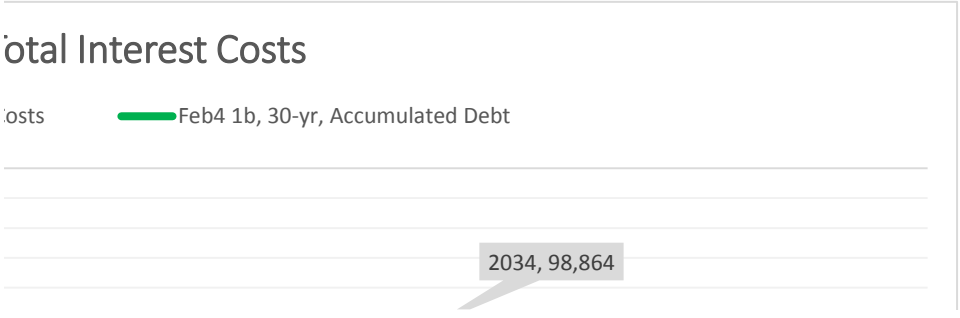
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

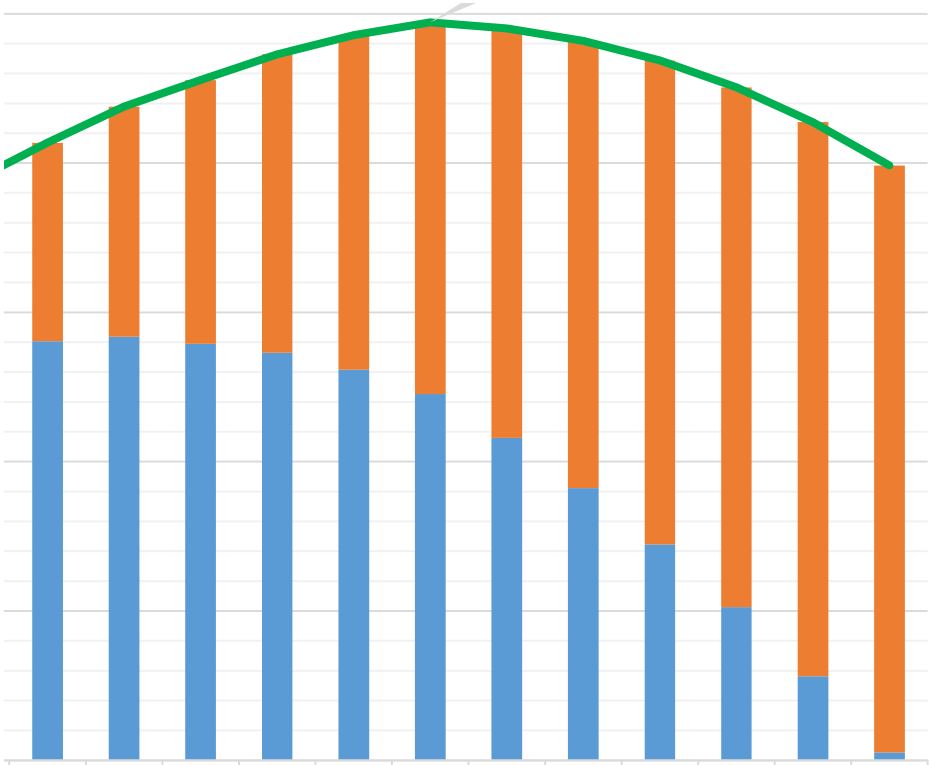
Y

Accumulated debt in present year, with annual interest costs



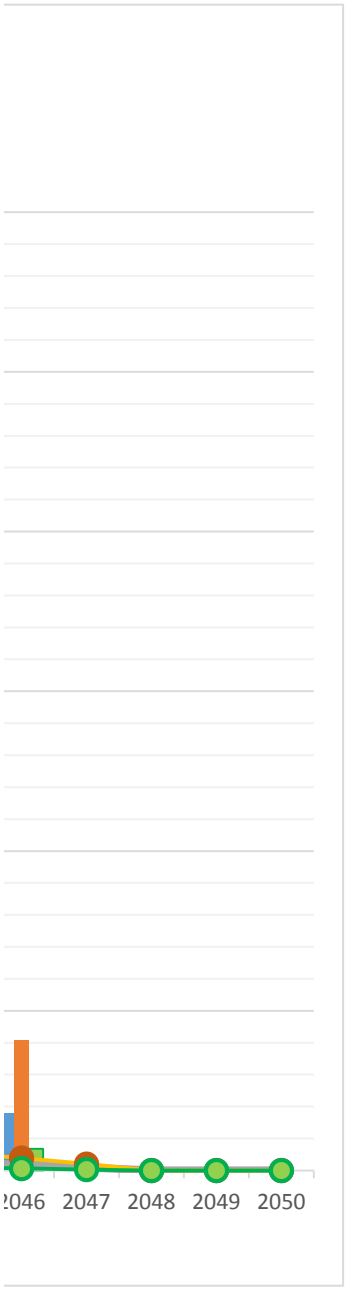
PDATED.


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864

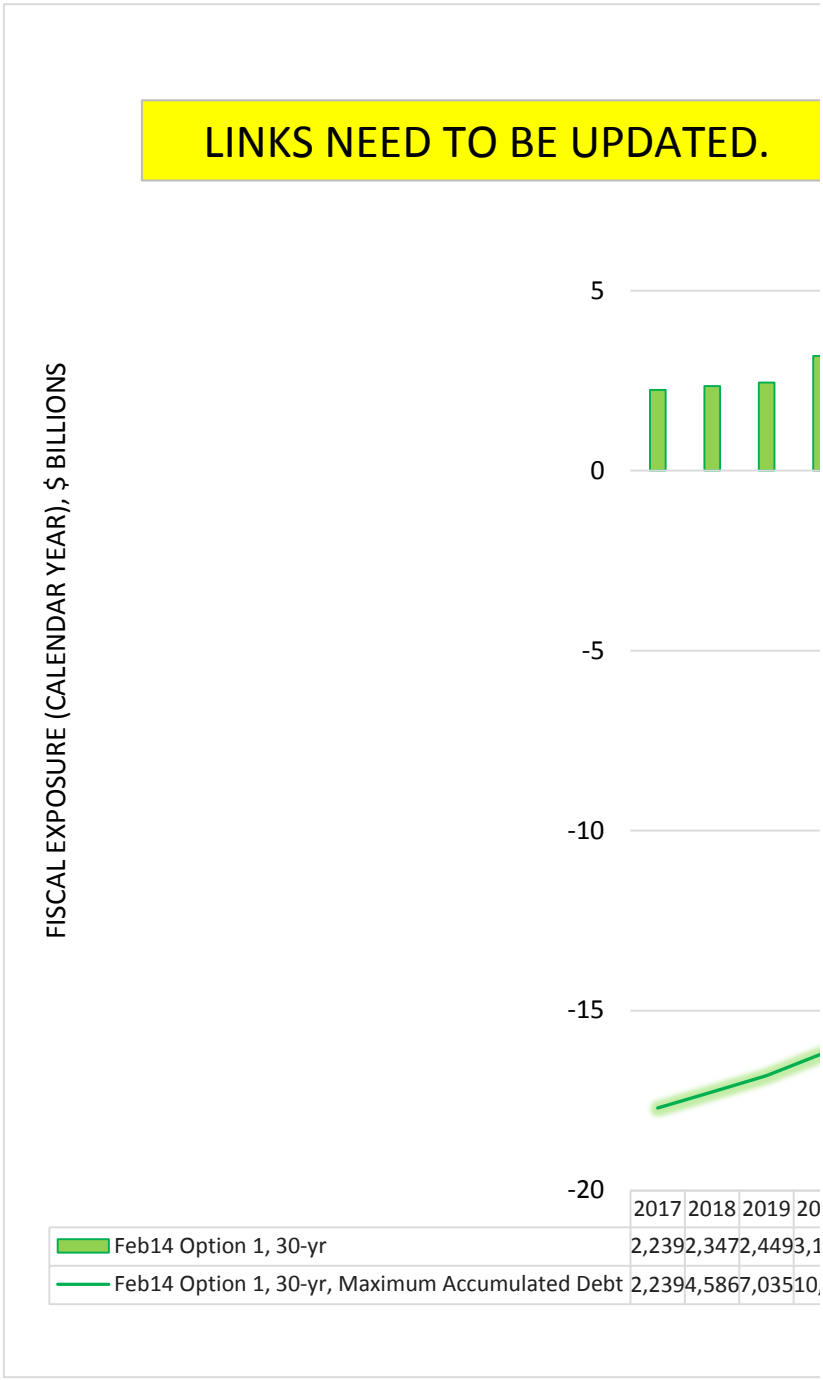


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



LINKS NEED TO BE UPDATED.



FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1b, 30-yr

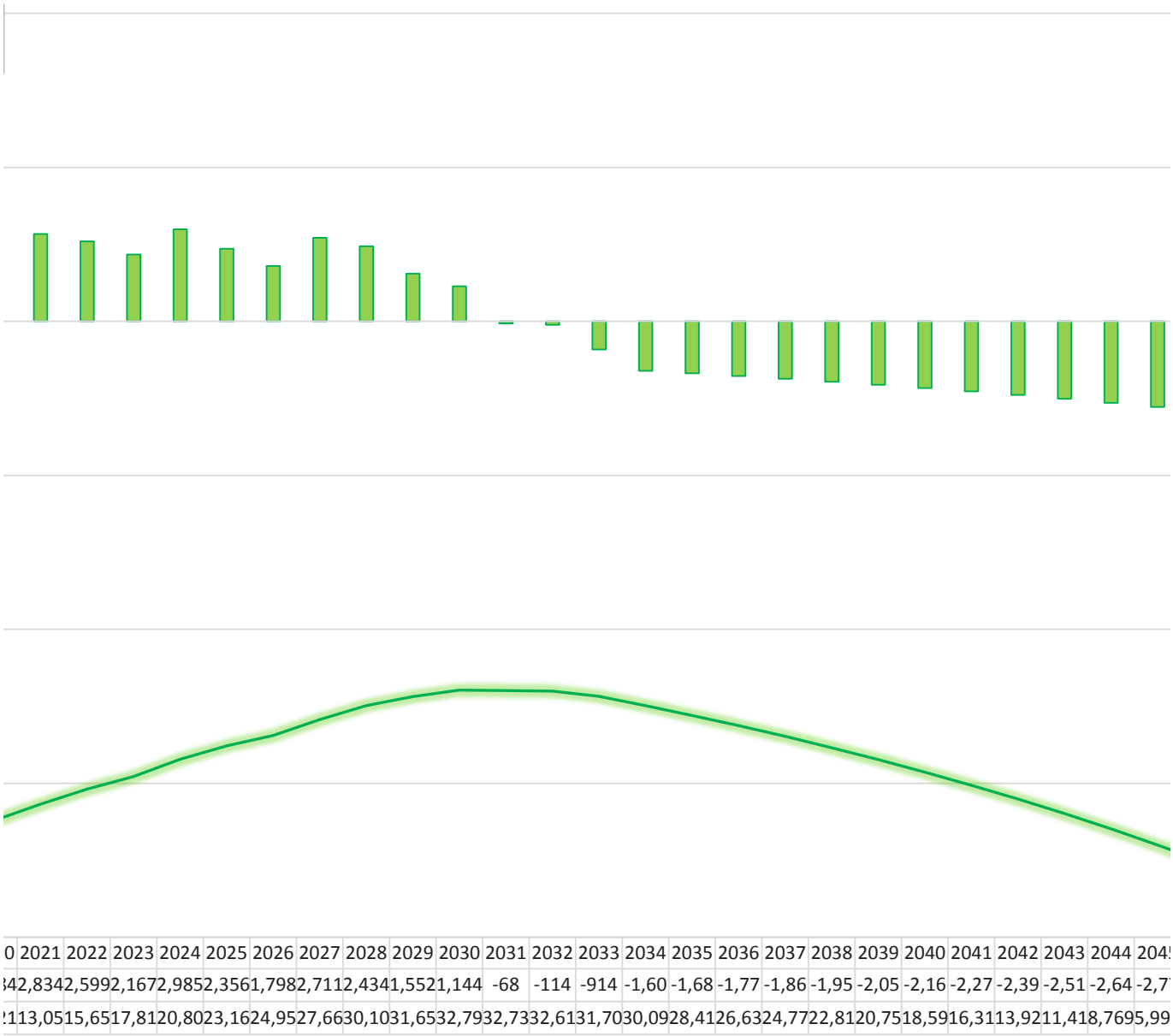
Feb4 1b, 30-yr,

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,

Feb 14 Deck - Option 1

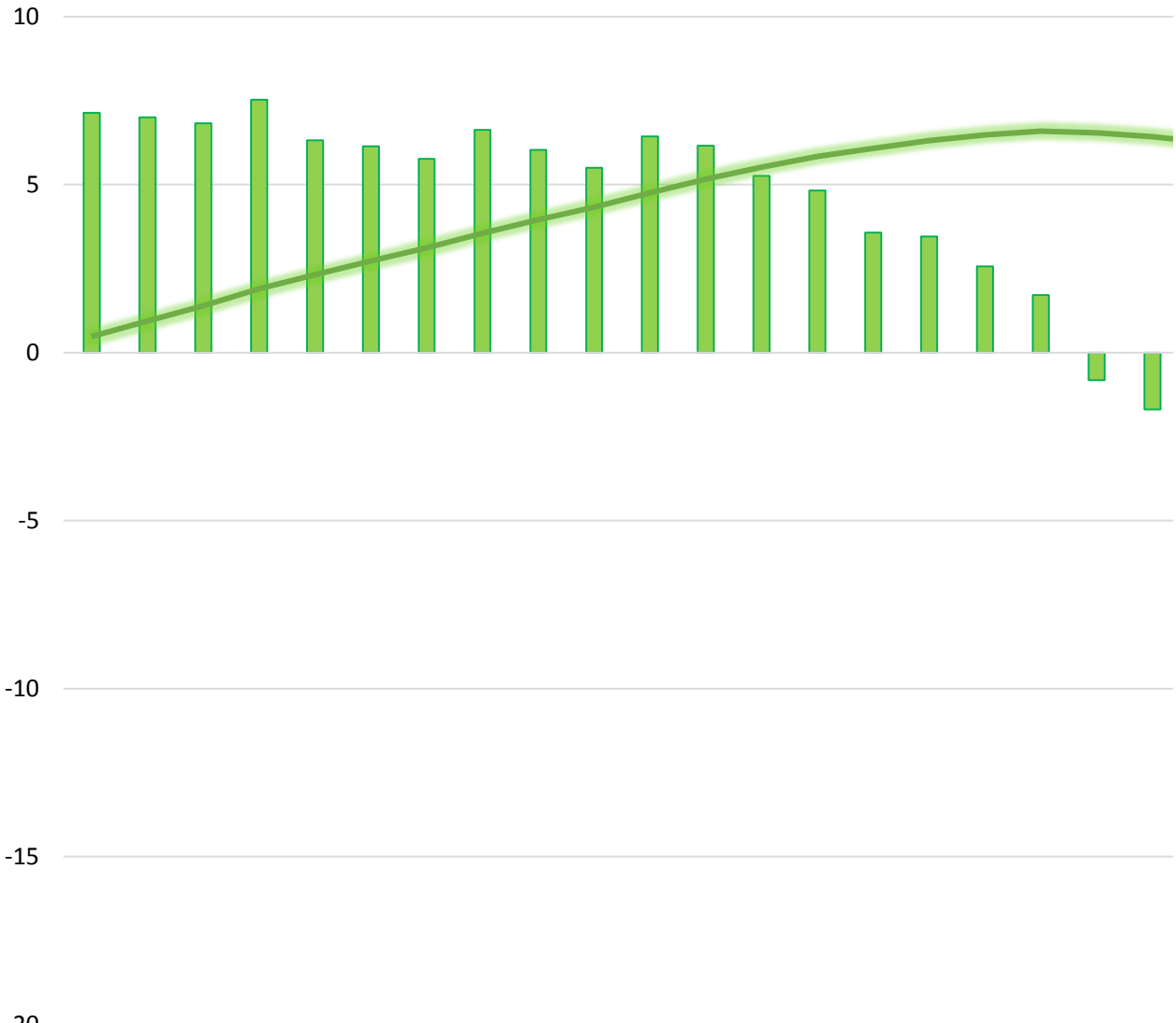


0	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	204
42	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,60	-1,68	-1,77	-1,86	-1,95	-2,05	-2,16	-2,27	-2,39	-2,51	-2,64	-2,7
113	05	15,65	17,81	20,80	23,16	24,95	27,66	30,10	31,65	32,79	32,73	32,61	31,70	30,09	28,41	26,63	24,77	22,81	20,75	18,59	16,31	13,92	11,41	8,76	95,99

CALENDAR YEAR

Feb 6 Deck - Scenario 1b - at 5.13% interest rat

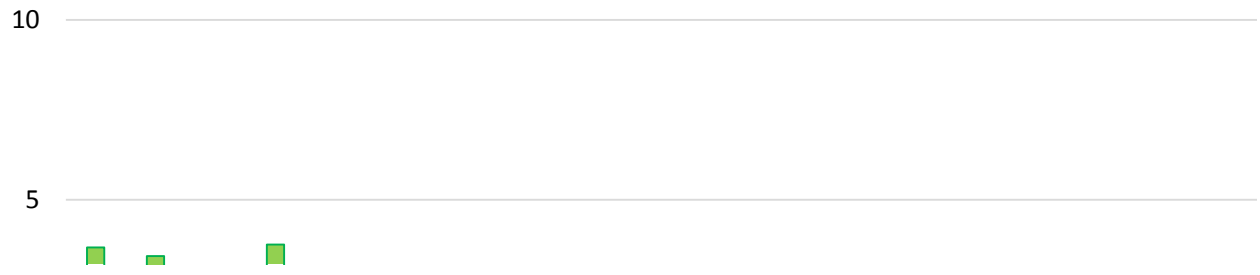
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

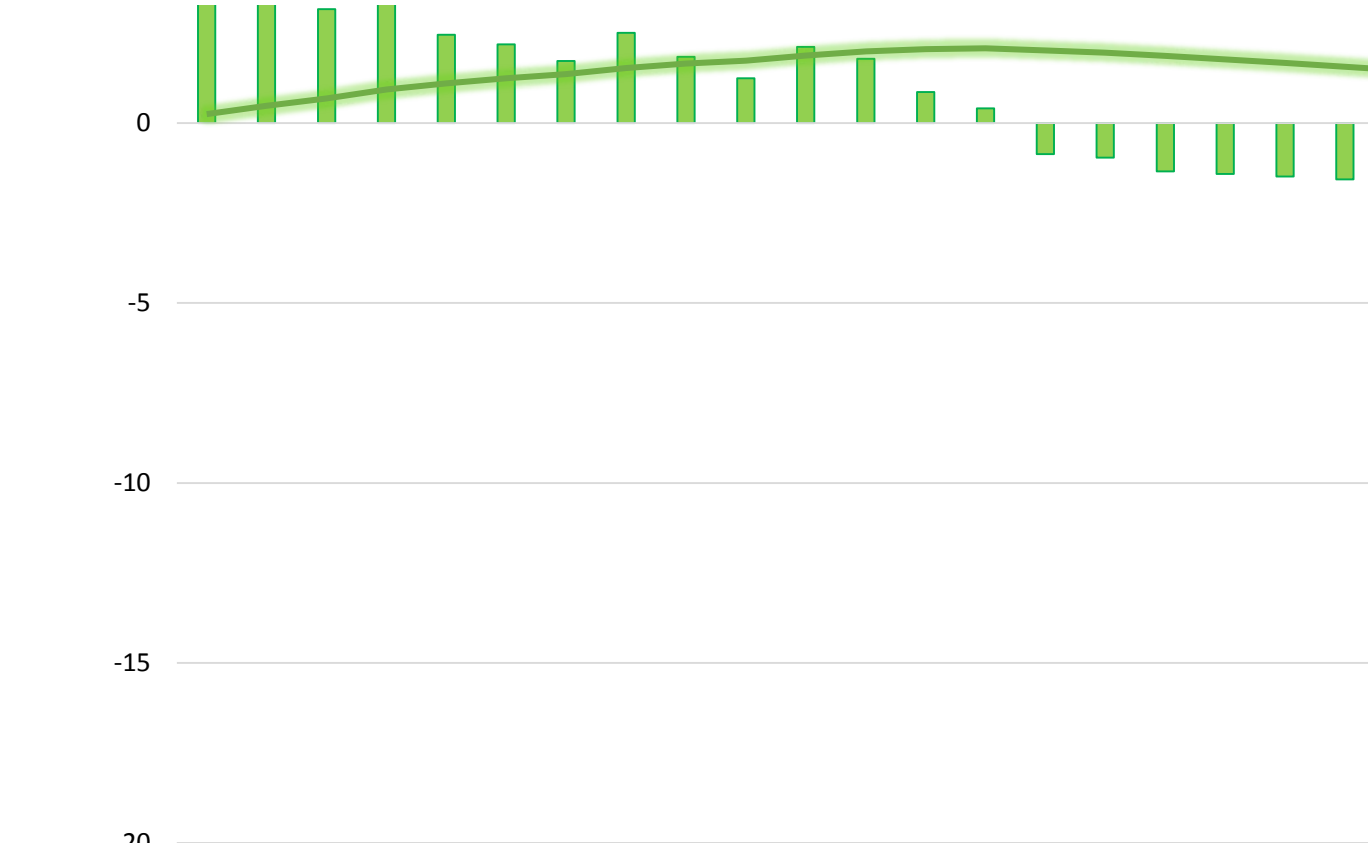


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

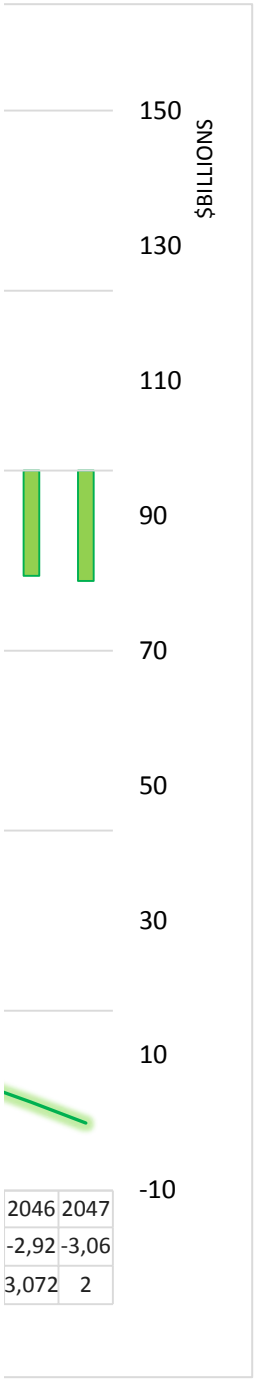
Feb 6 Deck - Scenario 1c - at 5.12% interest rat

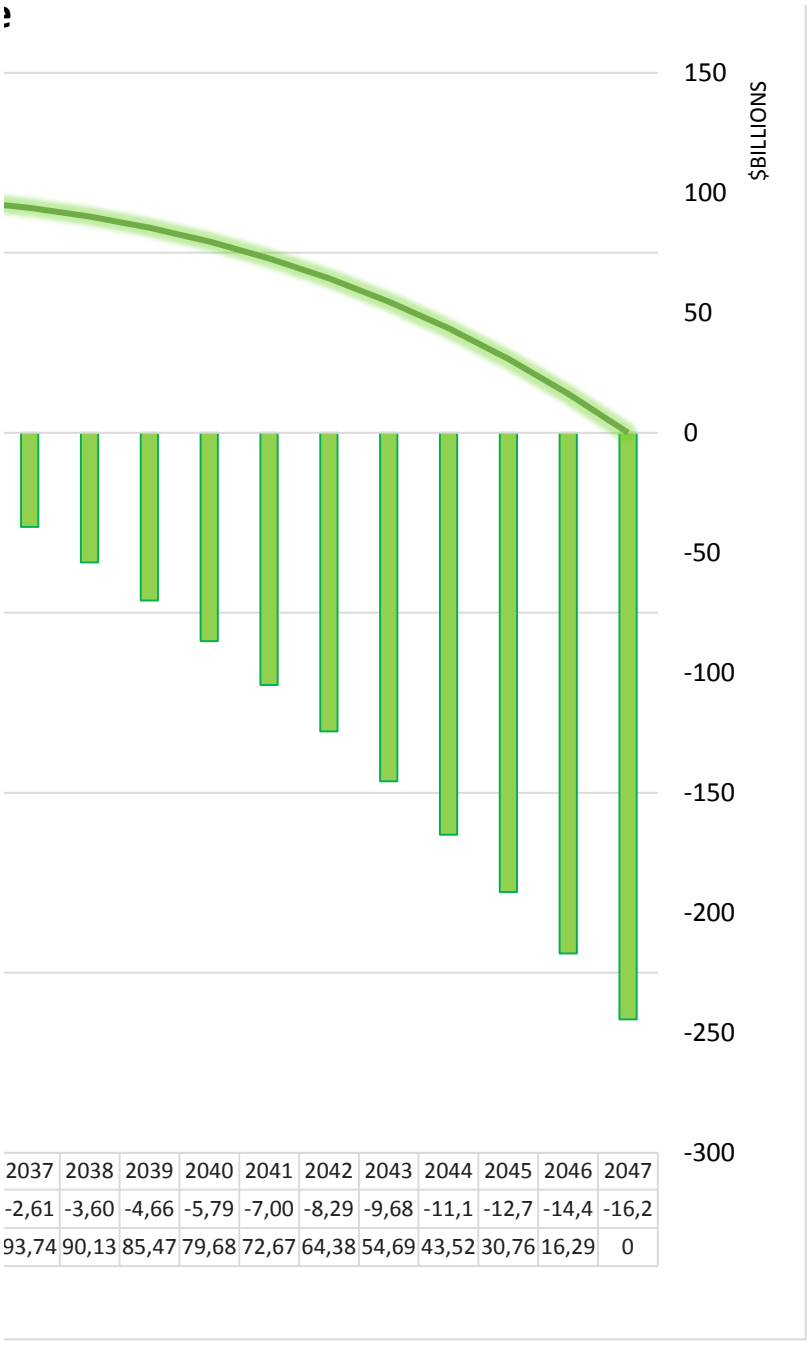




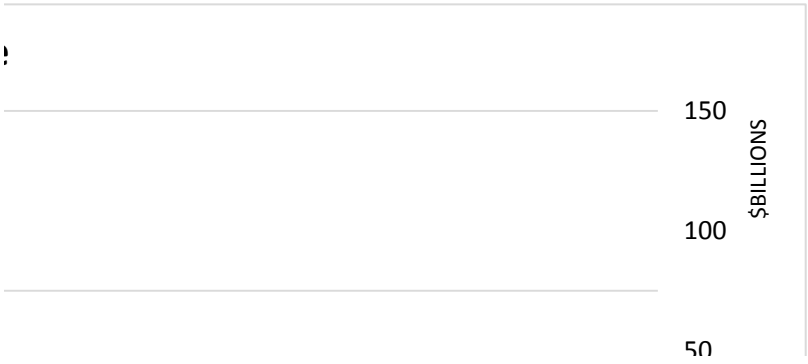
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

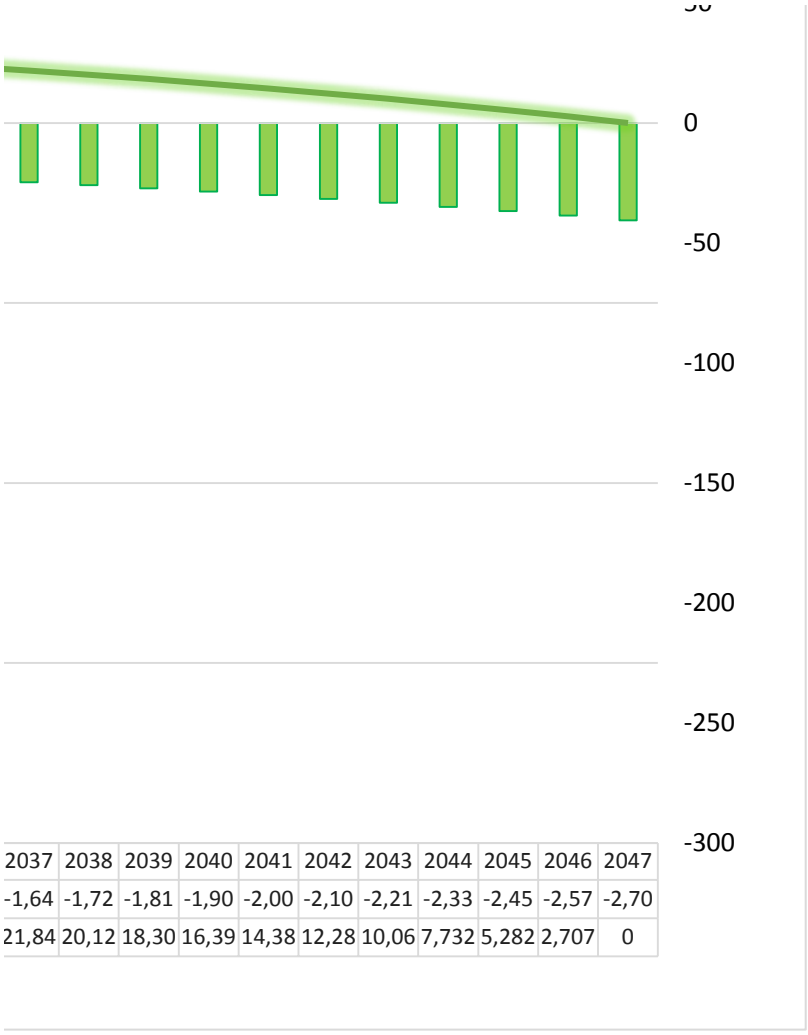
CALENDAR YEAR


150
130
110
90
70
50
30
10
-10
$BILLIONS
2046 2047
-2,92 -3,06
3,072 2



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest

IESO GA cost forecast + extrapolation

Scenario
Option 1
Bills Lowered 25%, RPP Only
Option 2
Bills Lowered 20%, RPP Only
Option 3
Bills Lowered 18%, contract/conservation refinancing, RPP Only

rate	2017	2018	2019	2020
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
Ratepayer GA Payment	9,856	9,602	9,338	9,344
Total Accumulated Debt ($ billion)	2,239	4,586	7,035	10,219
Ratepayer GA Payment	10,537	10,296	10,041	10,061
Accumulated debt in present year (including 5% interest,	1,559	3,177	4,851	7,207
Ratepayer GA Payment	10,648	10,303	10,186	10,873
Accumulated debt in present year (including 5% interest,	1,447	3,053	4,575	6,105
	12095.37	11834.681	11552.105	12168.428

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801
13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103
9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513
9,266	11,038	12,324	14,370	15,725	16,458	18,035	19,263
9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253
7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876
10843.555	10633.626	10243.432	11128.119	10527.018	10033.287	11042.844	10819.098

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389

9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615
31,654	32,799	32,730	32,616	31,702	30,097	28,411	26,638
10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117
19,534	19,317	18,577	17,799	16,981	16,122	15,218	14,268
9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837
18,843	19,521	20,007	20,312	20,325	19,755	18,549	17,050
10008.692	9721.4381	8654.4847	8819.9388	8238.0383	7756.4351	5662.3212	5388.8445

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627

8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853
24,774	22,815	20,756	18,591	16,316	13,924	11,410	8,767
6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355
13,270	12,221	11,118	9,958	8,740	7,458	6,112	4,696
7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712
15,464	13,694	12,062	10,556	9,143	7,810	6,672	5,928
5128.5761	4880.878	4645.1432	4420.7938	4207.28	4004.0783	3810.6908	3626.6435

2045	2046	2047	2048

3,451	3,285	3,126	2,975	2,831	2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
6,678	6,511	6,353	2,975	2,831	2,695
5,989	3,069	0	0	0	0
5,180	5,013	4,854	2,975	2,831	2,695
3,208	1,644	0	-	-	-
4,007	3,619	3,425	3,156	3,011	2,878
5,676	5,633	5,623	5,730	5,843	5,959
3451.485	3284.787	3126.139	2975.154	2831.461	2694.708

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

		5.00%	
Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb14_1_30yr

Option 1 - Bills Lowered 25%, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,239	2,347
Interest Portion	0	115

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	560	2,266
Interest Portion	-	29

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $33 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb14_2_30yr

Option 2 - Bills Lowered 20%, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,559	1,619
Interest Portion	0	80

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	390	1,574
Interest Portion	-	20

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in 2

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb14_3_30yr

Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,447	1,606
Interest Portion	0	74

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,487
Interest Portion	-	19

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Rough		
1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	390 - 560	1,574 - 2,266

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	560	2266
Debt-Finance Global Adjustment Costs, Option 1a	390	1574
RRRP		
OESP – Enhance Benefit		162

Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**560**	**2506**
Total, B	390	1814

Proposed Program Total:	390 - 560	1,814 - 2,506

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Option 1
Option 2
Option 3

Assumes an inte

2019	2020	2021	2022
2,449	3,184	2,834	2,599
235	360	523	668

2018-19	2019-20	2020-21	2021-2022
2,372	2,633	3,096	2,775
145	266	401	559

2030.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,674	2,356	2,060	1,772
163	248	369	474

2018-19	2019-20	2020-21	2021-2022
1,632	1,844	2,282	1,988
100	184	278	395

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
1,522	1,530	1,423	1,446
156	234	312	385

2018-19	2019-20	2020-21	2021-2022
1,585	1,524	1,503	1,429
95	176	254	331

2033.

› depend on decision on accounting treatment.



2018-19	2019-20	2020-21	2021-2022
1,632 - 2,372	1,844 - 2,633	2,282 - 3,096	1,988 - 2,775

/1

2018-19[1]	2019-20[1]	2020-21[1]
2372	2633	3096
1632	1844	2282
225	279	323

60	60	60
18	18	18
2675	**2990**	**3497**
1935	2201	2683

1,935 - 2,675	2,201 - 2,990	2,683 - 3,497

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
$21,561	$30,205	$32,799	occurs in Year 2030
$13,503	$17,883	$19,534	occurs in Year 2029
$12,862	$19,498	$20,326	occurs in Year 2033

erest rate of 5.00% (compounded monthly).

Tab Name		Total Accumulated Interest Costs
Feb14_1_30yr	$27,005	$34,278
Feb14_2_30yr	$15,940	$20,378
Feb14_3_30yr	$17,202	$22,028

	Total Accumulated Interest Costs
Option 1	$27,005 to $34,278**
Option 2	$15,940 to $20,378**
Option 3	$17,202 to $22,028**

** With a higher interest rate, the amortization period extend beyond the 30-year forecast

ted period resulting in a remaining balance at the end of the 30-year period. For specifics, see details belo

w.

Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,239	2,347	2,449	3,184	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,604	-1,687	-1,773	-1,864	-1,959	-2,059	-2,164	-2,275	-2,392	-2,514	-2,643	-2,778	-2,920	-3,069	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,292	2,403	2,507	3,260	2,902	2,660	2,219	3,056	2,412	1,841	2,776	2,492	1,589	1,171	-70	-117	-936	-1,643	-1,727	-1,815	-1,908	-2,005	-2,108	-2,216	-2,329	-2,448	-2,574	-2,705	-2,844	-2,989	-3,142	0	0	0
			53	56	58	76	67	62	52	71	56	43	64	58	37	27	-2	-3	-22	-38	-40	-42	-44	-47	-49	-51	-54	-57	-60	-63	-66	-69	-73	0	0	0

0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,184	1,678	30,205
Equal Monthly Debt Drawdown	3,260	1,676	

		Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,799	2030	21,561
Equal Monthly Debt Drawdown	33,579		

Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				26
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
a	Debt, Beginning of Year	0	2,239	4,586	7,035	10,219	13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103	31,655	32,799	32,731	32,617	31,703	30,098	28,412	26,639	24,775	22,816	20,757	18,593	16,318	13,926	11,412	8,769	5,992	3,072	2	3	3	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*115*	*235*	*360*	*523*	*668*	*801*	*912*	*1,064*	*1,185*	*1,277*	*1,416*	*1,540*	*1,620*	*1,678*	*1,675*	*1,669*	*1,622*	*1,540*	*1,454*	*1,363*	*1,268*	*1,167*	*1,062*	*951*	*835*	*712*	*584*	*449*	*307*	*157*	*0*	*0*	*0*	30,205
b	Additional GA Debt Drawdown, End of Year	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,239	4,586	7,035	10,219	13,053	15,651	17,819	20,804	23,160	24,958	27,669	30,103	31,655	32,799	32,731	32,617	31,703	30,098	28,412	26,639	24,775	22,816	20,757	18,593	16,318	13,926	11,412	8,769	5,992	3,072	2	3	3	3	
			FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,138	8,554	10,094	11,238	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170	8,769	5,992	3,072	2	3	3	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,821	13,752	15,118	17,192	18,483	19,097	20,531	21,549	21,561	21,561	21,561	21,447	20,533	18,928	17,242	15,469	13,605	11,646	9,587	7,423	5,147	2,756	242	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	115	349	709	1,232	1,900	2,700	3,612	4,676	5,861	7,138	8,554	10,094	11,714	13,392	15,066	16,735	18,357	19,897	21,350	22,713	23,981	25,148	26,210	27,161	27,996	28,709	29,293	29,741	30,048	30,205				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	2,239	4,471	6,686	9,510	11,821	13,752	15,118	17,192	18,483	19,097	20,531	21,549	21,561	21,086	19,339	17,551	14,968	11,741	8,515	5,288	2,062	-1,164	-4,391	-7,617	-10,844	-14,070	-17,297	-20,523	-23,750	-26,976	-30,202				
Fiscal Exposure - End of Year Debt Drawdown		2,239	2,347	2,449	3,184	2,834	2,599	2,167	2,985	2,356	1,798	2,711	2,434	1,552	1,144	-68	-114	-914	-1,604	-1,687	-1,773	-1,864	-1,959	-2,059	-2,164	-2,275	-2,392	-2,514	-2,643	-2,778	-2,920	-3,069	0	0	0	

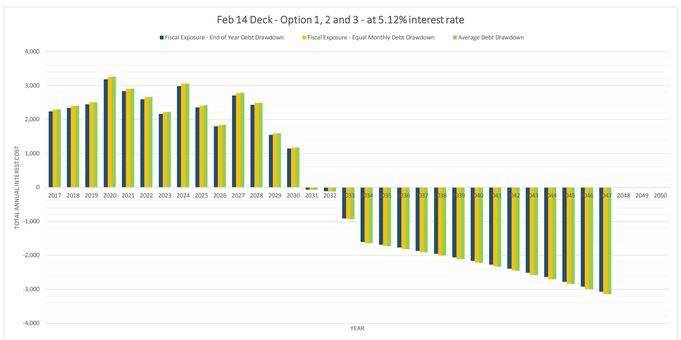
Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,292	4,695	7,202	10,462	13,363	16,024	18,243	21,299	23,711	25,552	28,327	30,819	32,408	33,579	33,510	33,393	32,457	30,814	29,087	27,272	25,365	23,359	21,251	19,035	16,706	14,257	11,683	8,978	6,134	3,145	2	3	3	
1,676	*Interest Cost - Feb14 Option 1, 30-yr*	*53*	*170*	*293*	*436*	*590*	*730*	*852*	*983*	*1,120*	*1,228*	*1,341*	*1,473*	*1,577*	*1,647*	*1,676*	*1,672*	*1,647*	*1,584*	*1,500*	*1,411*	*1,319*	*1,221*	*1,118*	*1,010*	*897*	*778*	*653*	*521*	*383*	*237*	*84*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,292	4,695	7,202	10,462	13,363	16,024	18,243	21,299	23,711	25,552	28,327	30,819	32,408	33,579	33,510	33,393	32,457	30,814	29,087	27,272	25,365	23,359	21,251	19,035	16,706	14,257	11,683	8,978	6,134	3,145	2	3	3	3	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,292	2,403	2,507	3,260	2,902	2,660	2,219	3,056	2,412	1,841	2,776	2,492	1,589	1,171	-70	-117	-936	-1,643	-1,727	-1,815	-1,908	-2,005	-2,108	-2,216	-2,329	-2,448	-2,574	-2,705	-2,844	-2,989	-3,142	0	0	0	

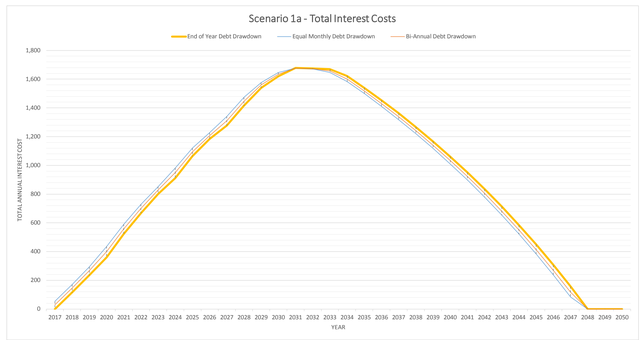
	Monthly Drawdown	187	186	185	235	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	-	-	-
	FV of Monthly Drawdown at 5%	2,292	2,285	2,267	2,891	2,366	1,977	1,399	2,123	1,322	628	1,468	1,043	12	(487)	(1,788)	(1,831)	(2,644)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	(3,303)	-	-	-
	Annual Interest Cost on New Drawdowns	53	53	53	67	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	(77)	-	-	-
	Annual Interest Cost on Opening Balance	-	117	240	368	535	684	820	933	1,090	1,213	1,307	1,449	1,577	1,658	1,718	1,714	1,708	1,661	1,577	1,488	1,395	1,298	1,195	1,087	974	855	729	598	459	314	161	0	0	0	
	Total Annual Interest Cost	53	170	293	436	590	730	852	983	1,120	1,228	1,341	1,473	1,577	1,647	1,676	1,672	1,647	1,584	1,500	1,411	1,319	1,221	1,118	1,010	897	778	653	521	383	237	84	0	0	0	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,268	4,645	7,125	10,349	13,220	15,852	18,047	21,070	23,456	25,277	28,023	30,488	32,060	33,219	33,150	33,034	32,108	30,483	28,775	26,980	25,092	23,108	21,023	18,831	16,526	14,104	11,558	8,882	6,068	3,111	2	3	3	
	Interest Cost - Feb14 Option 1, 30-yr	*29*	*145*	*266*	*401*	*559*	*701*	*828*	*950*	*1,095*	*1,208*	*1,312*	*1,447*	*1,560*	*1,634*	*1,677*	*1,673*	*1,657*	*1,601*	*1,518*	*1,431*	*1,339*	*1,242*	*1,141*	*1,034*	*922*	*804*	*680*	*550*	*413*	*269*	*118*	*0*	*0*	*0*	30,205
	Accumulated debt in present year (including 5% annual interest)	2,268	4,645	7,125	10,349	13,220	15,852	18,047	21,070	23,456	25,277	28,023	30,488	32,060	33,219	33,150	33,034	32,108	30,483	28,775	26,980	25,092	23,108	21,023	18,831	16,526	14,104	11,558	8,882	6,068	3,111	2	3	3	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,268	2,377	2,480	3,225	2,870	2,632	2,195	3,024	2,386	1,821	2,746	2,465	1,572	1,159	-69	-116	-926	-1,625	-1,708	-1,796	-1,887	-1,984	-2,085	-2,192	-2,304	-2,422	-2,546	-2,676	-2,813	-2,957	-3,109	0	0	0	

	Bi-Annual Drawdown	1,119	1,116	1,107	1,412	1,156	965	683	1,037	646	307	717	509	6	(238)	(873)	(894)	(1,291)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	(1,613)	-	-	-
	FV of Bi-Annual Drawdown at 5%	2,268	2,261	2,243	2,860	2,341	1,955	1,384	2,100	1,308	621	1,453	1,031	12	(481)	(1,769)	(1,812)	(2,616)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	(3,268)	-	-	-
	Annual Interest Cost on New Drawdowns	29	29	28	36	30	25	17	27	17	8	18	13	0	(6)	(22)	(23)	(33)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	-	-	-
	Annual Interest Cost on Opening Balance	-	116	238	365	529	676	811	923	1,078	1,200	1,293	1,434	1,560	1,640	1,700	1,696	1,690	1,643	1,560	1,472	1,380	1,284	1,182	1,076	963	846	722	591	454	310	159	0	0	0	
	Total Annual Interest Cost	29	145	266	401	559	701	828	950	1,095	1,208	1,312	1,447	1,560	1,634	1,677	1,673	1,657	1,601	1,518	1,431	1,339	1,242	1,141	1,034	922	804	680	550	413	269	118	0	0	0	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 1 - Bills Lowered 25%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,856	9,602	9,338	9,344	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,983	8,889	8,615	8,355	8,107	7,872	7,647	7,434	7,231	7,037	6,853	6,678	6,511	6,353	2,975	2,831	2,695	
	GA Debt Requirement	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Debt, Beginning of Year	0	2,296	4,703	7,215	10,480	13,387	16,052	18,275	21,336	23,752	25,596	28,377	30,873	32,465	33,638	33,568	33,451	32,514	30,868	29,138	27,320	25,409	23,400	21,288	19,068	16,735	14,282	11,704	8,994	6,145	3,150	2	3	3	
	Interest Cost - Feb14 Option 1, 30-yr	*57*	*175*	*297*	*441*	*595*	*734*	*856*	*988*	*1,125*	*1,231*	*1,346*	*1,478*	*1,580*	*1,649*	*1,676*	*1,672*	*1,645*	*1,581*	*1,497*	*1,408*	*1,315*	*1,217*	*1,115*	*1,007*	*893*	*774*	*648*	*516*	*378*	*232*	*79*	*0*	*0*	*0*	30,205
	Additional GA Debt Drawdown	2,239	2,232	2,214	2,824	2,311	1,931	1,367	2,074	1,292	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	-3,226	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,296	4,703	7,215	10,480	13,387	16,052	18,275	21,336	23,752	25,596	28,377	30,873	32,465	33,638	33,568	33,451	32,514	30,868	29,138	27,320	25,409	23,400	21,288	19,068	16,735	14,282	11,704	8,994	6,145	3,150	2	3	3	3	
Fiscal Exposure - Average Debt Drawdown		2,296	2,407	2,512	3,265	2,907	2,665	2,223	3,062	2,416	1,844	2,780	2,496	1,592	1,173	-70	-117	-937	-1,646	-1,730	-1,818	-1,911	-2,009	-2,112	-2,220	-2,333	-2,453	-2,578	-2,710	-2,849	-2,995	-3,148	0	0	0	





Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,559	1,619	1,674	2,356	2,060	1,772	1,286	2,046	1,355	733	1,578	1,228	271	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,415	-1,488	-1,564	-1,644	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0	
			37	38	40	56	49	42	31	49	32	17	38	29	6	-5	-18	-19	-19	-20	-21	-23	-24	-25	-26	-28	-29	-30	-32	-34	-35	-37	-39	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,356	999	17,883
Equal Monthly Debt Drawdown	2,412	994	

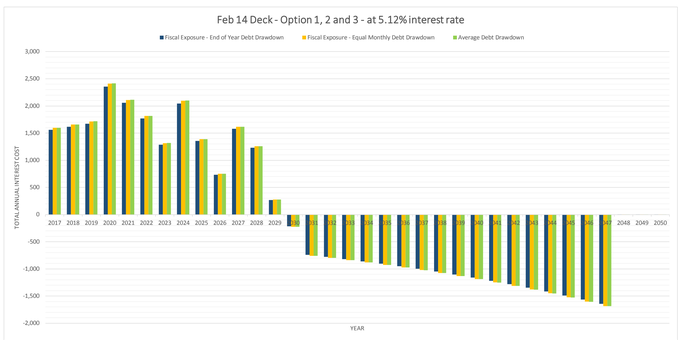
	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,534	2029	13,503
Equal Monthly Debt Drawdown	19,999		

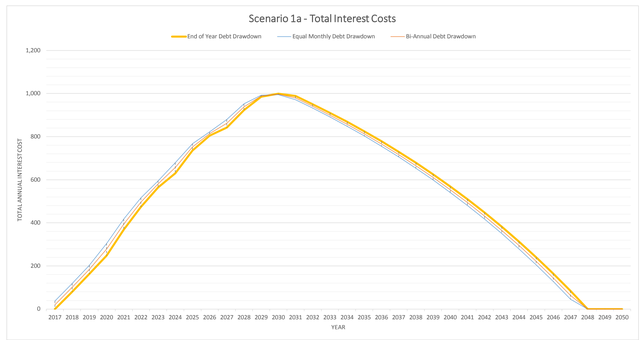
Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP Only																																				26
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
a	Debt, Beginning of Year	0	1,559	3,177	4,851	7,207	9,266	11,039	12,324	14,370	15,725	16,458	18,035	19,264	19,534	19,317	18,577	17,799	16,982	16,122	15,219	14,269	13,271	12,222	11,119	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1	2	2	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*80*	*163*	*248*	*369*	*474*	*565*	*631*	*735*	*805*	*842*	*923*	*986*	*999*	*988*	*950*	*911*	*869*	*825*	*779*	*730*	*679*	*625*	*569*	*510*	*447*	*382*	*313*	*240*	*164*	*84*	*0*	*0*	*0*	17,883
b	Additional GA Debt Drawdown, End of Year	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,559	3,177	4,851	7,207	9,266	11,039	12,324	14,370	15,725	16,458	18,035	19,264	19,534	19,317	18,577	17,799	16,982	16,122	15,219	14,269	13,271	12,222	11,119	9,959	8,741	7,460	6,113	4,697	3,210	1,646	1	2	2	2	
			TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE		
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	7,818	7,078	6,300	5,483	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,697	3,210	1,646	1	2	2	2	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,842	12,461	12,390	13,125	13,431	12,716	11,499	11,499	11,499	11,499	11,499	10,595	9,646	8,648	7,598	6,495	5,336	4,117	2,836	1,490	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	80	242	490	859	1,333	1,898	2,529	3,264	4,068	4,910	5,833	6,819	7,818	8,806	9,757	10,667	11,536	12,361	13,140	13,870	14,549	15,174	15,743	16,252	16,700	17,081	17,394	17,634	17,798	17,883				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,559	3,097	4,609	6,716	8,407	9,705	10,426	11,842	12,461	12,390	13,125	13,431	12,716	11,499	9,771	8,042	6,314	4,586	2,858	1,129	-599	-2,327	-4,055	-5,784	-7,512	-9,240	-10,968	-12,696	-14,425	-16,153	-17,881				
Fiscal Exposure - End of Year Debt Drawdown		1,559	1,619	1,674	2,356	2,060	1,772	1,286	2,046	1,355	733	1,578	1,228	271	-217	-740	-778	-818	-859	-903	-950	-998	-1,049	-1,103	-1,159	-1,219	-1,281	-1,347	-1,415	-1,488	-1,564	-1,644	0	0	0	

Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,019	18,223	17,385	16,506	15,581	14,609	13,587	12,512	11,383	10,196	8,948	7,637	6,258	4,809	3,286	1,685	2	2	2	
994	*Interest Cost - Feb14 Option 1, 30-yr*	*37*	*118*	*202*	*304*	*418*	*516*	*595*	*679*	*767*	*822*	*880*	*952*	*992*	*994*	*971*	*932*	*891*	*848*	*803*	*756*	*706*	*654*	*599*	*541*	*481*	*417*	*350*	*279*	*205*	*127*	*45*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,596	3,253	4,967	7,378	9,487	11,301	12,617	14,712	16,099	16,849	18,464	19,722	19,999	19,776	19,019	18,223	17,385	16,506	15,581	14,609	13,587	12,512	11,383	10,196	8,948	7,637	6,258	4,809	3,286	1,685	2	2	2	2	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,596	1,657	1,714	2,412	2,109	1,814	1,316	2,094	1,387	750	1,615	1,258	277	-223	-758	-796	-837	-880	-925	-972	-1,022	-1,074	-1,129	-1,187	-1,248	-1,312	-1,379	-1,449	-1,523	-1,601	-1,683	0	0	0	
	Monthly Drawdown	130	128	126	176	141	108	60	118	52	(6)	61	25	(60)	(101)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	(144)	-	-	-	
	FV of Monthly Drawdown at 5%	1,596	1,575	1,548	2,157	1,731	1,329	738	1,449	635	(74)	753	313	(732)	(1,246)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	(1,769)	-	-	-	
	Annual Interest Cost on New Drawdowns	37	37	36	50	40	31	17	34	15	(2)	17	7	(17)	(29)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	-	-	-	
	Annual Interest Cost on Opening Balance	-	82	166	254	377	485	578	646	753	824	862	945	1,009	1,023	1,012	973	932	889	844	797	747	695	640	582	522	458	391	320	246	168	86	0	0	0	
	Total Annual Interest Cost	37	118	202	304	418	516	595	679	767	822	880	952	992	994	971	932	891	848	803	756	706	654	599	541	481	417	350	279	205	127	45	0	0	0	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,815	18,027	17,199	16,328	15,413	14,452	13,441	12,378	11,261	10,087	8,852	7,555	6,191	4,758	3,251	1,667	1	2	2	
	Interest Cost - Feb14 Option 1, 30-yr	*20*	*100*	*184*	*278*	*395*	*497*	*581*	*657*	*753*	*814*	*862*	*938*	*989*	*997*	*979*	*940*	*900*	*858*	*813*	*766*	*717*	*666*	*611*	*554*	*494*	*431*	*364*	*295*	*221*	*144*	*63*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,579	3,218	4,913	7,299	9,385	11,180	12,482	14,554	15,926	16,668	18,266	19,510	19,784	19,564	18,815	18,027	17,199	16,328	15,413	14,452	13,441	12,378	11,261	10,087	8,852	7,555	6,191	4,758	3,251	1,667	1	2	2	2	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,579	1,639	1,696	2,386	2,086	1,795	1,302	2,072	1,372	742	1,598	1,244	274	-220	-749	-788	-828	-870	-915	-962	-1,011	-1,063	-1,117	-1,174	-1,234	-1,297	-1,364	-1,434	-1,507	-1,584	-1,665	0	0	0	
	Bi-Annual Drawdown	779	769	756	1,054	845	649	361	708	310	(36)	368	153	(358)	(608)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	(864)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,579	1,558	1,531	2,134	1,713	1,315	730	1,433	628	(73)	745	310	(724)	(1,232)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	-	-	-	
	Annual Interest Cost on New Drawdowns	20	20	19	27	22	17	9	18	8	(1)	9	4	(9)	(16)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	-	-	-	
	Annual Interest Cost on Opening Balance	-	81	165	251	373	480	572	639	745	815	853	935	998	1,012	1,001	963	922	880	835	789	739	688	633	576	516	453	387	317	243	166	85	0	0	0	
	Total Annual Interest Cost	20	100	184	278	395	497	581	657	753	814	862	938	989	997	979	940	900	858	813	766	717	666	611	554	494	431	364	295	221	144	63	0	0	0	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 2 - Bills Lowered 20%, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,537	10,296	10,041	10,061	9,153	9,336	9,522	9,713	9,907	10,105	10,307	10,513	10,724	10,938	10,383	10,548	9,966	9,485	7,391	7,117	6,857	6,609	6,373	6,149	5,936	5,732	5,539	5,355	5,180	5,013	4,854	2,975	2,831	2,695	
	GA Debt Requirement	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Debt, Beginning of Year	0	1,599	3,258	4,975	7,391	9,504	11,321	12,640	14,738	16,128	16,879	18,497	19,757	20,034	19,811	19,052	18,254	17,416	16,535	15,608	14,634	13,610	12,534	11,403	10,214	8,964	7,650	6,269	4,818	3,292	1,688	2	2	2	
	Interest Cost - Feb14 Option 1, 30-yr	*40*	*121*	*205*	*308*	*421*	*519*	*598*	*683*	*770*	*823*	*882*	*954*	*992*	*994*	*969*	*931*	*890*	*847*	*802*	*754*	*704*	*652*	*597*	*539*	*478*	*414*	*347*	*277*	*202*	*124*	*42*	*0*	*0*	*0*	17,883
	Additional GA Debt Drawdown	1,559	1,539	1,512	2,107	1,691	1,298	721	1,415	620	-72	736	306	-715	-1,217	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	-1,728	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,599	3,258	4,975	7,391	9,504	11,321	12,640	14,738	16,128	16,879	18,497	19,757	20,034	19,811	19,052	18,254	17,416	16,535	15,608	14,634	13,610	12,534	11,403	10,214	8,964	7,650	6,269	4,818	3,292	1,688	2	2	2	2	
Fiscal Exposure - Average Debt Drawdown		1,599	1,660	1,717	2,416	2,112	1,817	1,319	2,098	1,390	751	1,618	1,260	277	-223	-759	-798	-839	-881	-927	-974	-1,024	-1,076	-1,131	-1,189	-1,250	-1,314	-1,381	-1,452	-1,526	-1,604	-1,686	0	0	0	





Feb 14 Deck - Option 1, 2 and 3 - at 5.12% interest rate

Feb14_3_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	
			34	38	36	36	34	34	35	36	36	35	35	34	23	16	12	7	0	-14	-29	-36	-38	-42	-39	-36	-34	-32	-27	-18	-6	-1	0	3	3	3	142

		Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	1,606		1,040	19,498
Equal Monthly Debt Drawdown	1,644		1,040	

	Feb14 Option 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	20,326	2033	12,862
Equal Monthly Debt Drawdown	20,809		

Feb14 Option 1, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
a	Debt, Beginning of Year	0	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	
c = a*5%	*Interest Cost - Feb14 Option 1, 30-yr - End of Year Debt Drawdown*	*0*	*74*	*156*	*234*	*312*	*385*	*459*	*534*	*612*	*690*	*766*	*842*	*915*	*964*	*999*	*1,024*	*1,039*	*1,040*	*1,011*	*949*	*872*	*791*	*701*	*617*	*540*	*468*	*400*	*341*	*303*	*290*	*288*	*288*	*293*	*299*	19,498
b	Additional GA Debt Drawdown, End of Year	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,447	3,053	4,575	6,105	7,527	8,973	10,436	11,970	13,490	14,976	16,467	17,876	18,843	19,521	20,007	20,312	20,326	19,756	18,550	17,051	15,464	13,695	12,063	10,557	9,144	7,811	6,673	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,430	7,736	7,749	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	7,179	5,929	5,678	5,634	5,624	5,732	5,845	5,961	
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,577	12,577	12,577	12,577	11,371	9,872	8,285	6,516	4,884	3,378	1,966	633	-506	0	0	0	0	0	0	0	
	Feb14 Option 1, 30-yr - Accumulated Interest Costs	0	74	230	464	777	1,162	1,621	2,155	2,767	3,457	4,224	5,066	5,981	6,945	7,943	8,967	10,006	11,046	12,057	13,006	13,878	14,669	15,370	15,987	16,527	16,995	17,395	17,736	18,040	18,330	18,618				
	Feb14 Option 1, 30-yr - Accumulated Debt Principal	1,447	2,979	4,345	5,640	6,751	7,812	8,815	9,815	10,723	11,518	12,244	12,810	12,862	12,577	12,064	11,345	10,319	8,710	6,493	4,045	1,586	-974	-3,307	-5,431	-7,383	-9,184	-10,721	-11,807	-12,362	-12,696	-12,994				
Fiscal Exposure - End of Year Debt Drawdown		1,447	1,606	1,522	1,530	1,423	1,446	1,463	1,534	1,520	1,486	1,491	1,409	967	679	486	305	13	-570	-1,206	-1,499	-1,586	-1,769	-1,632	-1,506	-1,412	-1,333	-1,138	-744	-252	-43	-10	107	113	116	

Feb14 Option 1, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	
1,040	*Interest Cost - Feb14 Option 1, 30-yr*	*34*	*112*	*192*	*270*	*346*	*420*	*494*	*570*	*649*	*726*	*802*	*876*	*938*	*980*	*1,010*	*1,031*	*1,040*	*1,026*	*982*	*913*	*835*	*749*	*662*	*581*	*507*	*436*	*373*	*324*	*297*	*289*	*288*	*290*	*296*	*302*	19,640
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,482	3,126	4,684	6,250	7,706	9,187	10,684	12,255	13,811	15,332	16,859	18,301	19,291	19,986	20,483	20,796	20,809	20,226	18,991	17,456	15,832	14,021	12,350	10,808	9,362	7,997	6,832	6,071	5,813	5,768	5,758	5,868	5,984	6,102	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,482	1,644	1,558	1,566	1,457	1,480	1,498	1,570	1,556	1,521	1,527	1,442	990	695	497	312	14	-584	-1,235	-1,535	-1,624	-1,811	-1,671	-1,542	-1,446	-1,365	-1,165	-762	-258	-44	-10	110	116	118	

	Monthly Drawdown	121	128	114	108	93	88	84	83	76	66	60	47	4	(24)	(43)	(60)	(85)	(134)	(185)	(204)	(205)	(213)	(194)	(177)	(163)	(150)	(128)	(90)	(46)	(28)	(25)	(15)	(15)	(15)	
	FV of Monthly Drawdown at 5%	1,482	1,568	1,398	1,326	1,137	1,086	1,028	1,024	929	815	742	580	54	(292)	(525)	(736)	(1,050)	(1,648)	(2,269)	(2,506)	(2,517)	(2,621)	(2,389)	(2,174)	(1,999)	(1,844)	(1,574)	(1,111)	(568)	(342)	(306)	(185)	(184)	(188)	
	Annual Interest Cost on New Drawdowns	34	36	32	31	26	25	24	24	22	19	17	13	1	(7)	(12)	(17)	(24)	(38)	(53)	(58)	(58)	(61)	(55)	(51)	(46)	(43)	(37)	(26)	(13)	(8)	(7)	(4)	(4)	(4)	
	Annual Interest Cost on Opening Balance	-	76	160	240	320	394	470	547	627	707	784	863	936	987	1,023	1,048	1,064	1,065	1,035	972	893	810	717	632	553	479	409	350	311	297	295	295	300	306	
	Total Annual Interest Cost	34	112	192	270	346	420	494	570	649	726	802	876	938	980	1,010	1,031	1,040	1,026	982	913	835	749	662	581	507	436	373	324	297	289	288	290	296	302	

Feb14 Option 1, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	
	Interest Cost - Feb14 Option 1, 30-yr	*19*	*95*	*176*	*254*	*331*	*404*	*478*	*554*	*632*	*709*	*785*	*861*	*927*	*973*	*1,005*	*1,028*	*1,039*	*1,033*	*995*	*930*	*852*	*769*	*680*	*598*	*522*	*451*	*385*	*332*	*300*	*290*	*288*	*289*	*295*	*301*	19,575
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,466	3,092	4,633	6,183	7,624	9,088	10,570	12,123	13,662	15,167	16,678	18,105	19,084	19,771	20,263	20,572	20,586	20,008	18,787	17,269	15,662	13,870	12,217	10,692	9,261	7,911	6,759	6,005	5,750	5,706	5,696	5,805	5,920	6,037	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,466	1,626	1,541	1,549	1,441	1,465	1,482	1,554	1,539	1,505	1,510	1,427	979	687	492	309	13	-577	-1,221	-1,518	-1,607	-1,792	-1,653	-1,525	-1,430	-1,350	-1,153	-753	-255	-44	-10	109	115	117	

	Bi-Annual Drawdown	724	766	683	648	555	530	502	500	454	398	363	283	26	(143)	(256)	(359)	(513)	(805)	(1,108)	(1,224)	(1,229)	(1,280)	(1,167)	(1,062)	(976)	(900)	(769)	(543)	(278)	(167)	(149)	(90)	(90)	(92)	
	FV of Bi-Annual Drawdown at 5%	1,466	1,551	1,383	1,312	1,125	1,075	1,017	1,013	919	806	735	573	53	(289)	(519)	(728)	(1,039)	(1,630)	(2,245)	(2,479)	(2,490)	(2,593)	(2,363)	(2,150)	(1,977)	(1,824)	(1,557)	(1,099)	(562)	(338)	(302)	(183)	(182)	(186)	
	Annual Interest Cost on New Drawdowns	19	20	17	17	14	14	13	13	12	10	9	7	1	(4)	(7)	(9)	(13)	(21)	(28)	(31)	(31)	(33)	(30)	(27)	(25)	(23)	(20)	(14)	(7)	(4)	(4)	(2)	(2)	(2)	
	Annual Interest Cost on Opening Balance	-	75	158	237	316	390	465	541	620	699	776	853	926	976	1,012	1,037	1,053	1,053	1,024	961	884	801	710	625	547	474	405	346	307	294	292	291	297	303	
	Total Annual Interest Cost	19	95	176	254	331	404	478	554	632	709	785	861	927	973	1,005	1,028	1,039	1,033	995	930	852	769	680	598	522	451	385	332	300	290	288	289	295	301	

Feb14 Option 1, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Option 3 - Bills Lowered 18%, contract/conservation refinancing, RPP Only																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,648	10,303	10,186	10,873	9,733	9,573	9,240	10,128	9,620	9,238	10,318	10,253	9,956	10,007	9,167	9,538	9,264	9,366	7,879	7,837	7,587	7,441	6,978	6,544	6,160	5,805	5,348	4,712	4,007	3,619	3,425	3,156	3,011	2,878	
	GA Debt Requirement	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Debt, Beginning of Year	0	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	
	Interest Cost - Feb14 Option 1, 30-yr	*37*	*115*	*195*	*273*	*349*	*422*	*497*	*573*	*651*	*728*	*804*	*879*	*939*	*981*	*1,011*	*1,031*	*1,040*	*1,025*	*980*	*911*	*832*	*746*	*659*	*579*	*504*	*434*	*371*	*322*	*297*	*289*	*288*	*290*	*296*	*302*	19,651
	Additional GA Debt Drawdown	1,447	1,532	1,366	1,296	1,110	1,061	1,004	1,000	907	796	725	566	52	-286	-513	-718	-1,026	-1,610	-2,217	-2,448	-2,459	-2,560	-2,333	-2,123	-1,952	-1,801	-1,538	-1,085	-555	-334	-298	-180	-180	-183	
	Accumulated debt in present year (including 5% annual interest)	1,484	3,131	4,692	6,261	7,720	9,203	10,703	12,276	13,835	15,359	16,888	18,333	19,325	20,021	20,519	20,832	20,846	20,261	19,024	17,487	15,860	14,046	12,371	10,827	9,378	8,011	6,844	6,081	5,823	5,779	5,768	5,878	5,994	6,113	
Fiscal Exposure - Average Debt Drawdown		1,484	1,647	1,561	1,569	1,459	1,483	1,500	1,573	1,559	1,524	1,530	1,445	992	696	498	313	14	-585	-1,237	-1,537	-1,627	-1,814	-1,674	-1,545	-1,448	-1,367	-1,167	-763	-258	-44	-10	110	116	119	

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest ra

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest ra

IESO GA cost forecast + extrapolation

Scenario
Option 1

Option 2

ate	2017	2018	2019	2020
ate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	2200	4600	7000	10200

Total Accumulated Debt ($ billion)	2.2	4.6	7	10.2
	2,200	4,600	7,000	10,200

Total Accumulated Debt ($ billion)	1.6	3.2	4.9	7.2
	1,600	3,200	4,900	7,200

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
13100	15700	17800	20800	23200	25000	27700	30100

13.1 15.7 17.8 20.8 23.2 25 27.7 30.1
13,100 15,700 17,800 20,800 23,200 25,000 27,700 30,100

9.3 11 12.3 14.4 15.7 16.5 18 19.3
9,300 11,000 12,300 14,400 15,700 16,500 18,000 19,300

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
31700	32800	32700	32600	31700	30100	28400	26600

31.7	32.8	32.7	32.6	31.7	30.1	28.4	26.6
31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600

19.5	19.3	18.6	17.8	17	16.1	15.2	14.3
19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
24800	22800	20800	18600	16300	13900	11400	8800

24.8	22.8	20.8	18.6	16.3	13.9	11.4	8.8
24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800

13.3	12.2	11.1	10	8.7	7.5	6.1	4.7
13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	2046	2047	2048	2049	2050
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
6000	3100	0	0	0	0

6 3.1 0 0
6,000 3,100 - -

3.2 1.6 0 0
3,200 1,600 - -

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb9_1_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,200	2,400

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	550	2,250

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $33 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb9_2_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,600	1,600

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	400	1,600

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $20 billion peaking in

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,169	4,668

Actuals are subject to actual prices and actual interest rates.

#N/A

1 Based on an interest rate of 5.12%

2 Fiscal exposure based on annual drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	545	2,203

Actuals are subject to actual prices and actual interest rates.

#N/A

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542

Fiscalized[3]	2016-17	2017-18
Start: January 1st	375	1,510

Actuals are subject to actual prices and actual interest rates.

#N/A

Rough		
	1	
	2	
	3	
	4 April	4
	5 May	5
	6 June	6
	7 July	7
	8 August	8
	9 September	9
	10 October	10
	11 November	11
	12 December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	400 - 550	1,600 - 2,250

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	550	2250
Debt-Finance Global Adjustment Costs, Option 1a	400	1600
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**550**	**2490**
Total, B	400	1840
Proposed Program Total:	400 - 550	1,840 - 2,490

ining

0 1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1
Scenario 2

2019	2020	2021	2022
2,400	3,200	2,900	2,600

2018-19	2019-20	2020-21	2021-2022
2,400	2,600	3,125	2,825

2030.

depend on decision on accounting treatment.

2019	2020	2021	2022
1,700	2,300	2,100	1,700

2018-19	2019-20	2020-21	2021-2022
1,625	1,850	2,250	2,000

2029.

› depend on decision on accounting treatment.

2019	2020	2021	2022
4,589	5,867	5,031	4,861

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988

› depend on decision on accounting treatment.

2019	2020	2021	2022
2,353	3,072	2,817	2,580

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757

2019	2020	2021	2022
1,578	2,243	1,931	1,635

2018-19	2019-20	2020-21	2021-2022
1,551	1,745	2,165	1,857



2018-19	2019-20	2020-21	2021-2022
1,625 - 2,400	1,850 - 2,600	2,250 - 3,125	2,000 - 2,825

/1

2018-19[1]	2019-20[1]	2020-21[1]
2400	2600	3125
1625	1850	2250
225	279	323
60	60	60
18	18	18
2703	**2957**	**3526**
1928	2207	2651

1,928 - 2,703 2,207 - 2,957 2,651 - 3,526

Total Principal Debt	Total Accumulated Interest Costs		**Peak Total Debt**
21,601	30,211	32,800	occurs in Year 2030
13,466	17,886	19,500	occurs in Year 2029
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!

2,200

Tab Name
Feb9_1_30yr
Feb9_2_30yr

Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Feb9_1_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0	
			52	57	57	76	69	62	50	71	57	43	64	57	38	26	-2	-2	-21	-38	-40	-43	-43	-48	-48	-52	-55	-57	-59	-62	-67	-69	-74	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,200	1,678	30,211
Equal Monthly Debt Drawdown	3,276	1,676	

		Feb9 1, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,800	2030	21,601	
Equal Monthly Debt Drawdown	33,580			

Feb9 1, 30-yr — End of Year Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
	($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
a	Debt, Beginning of Year	0	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	
c = a*5%	*Interest Cost - Feb9 1, 30-yr - End of Year Debt Drowdown*	*0*	*113*	*235*	*358*	*522*	*670*	*803*	*911*	*1,064*	*1,187*	*1,279*	*1,417*	*1,540*	*1,622*	*1,678*	*1,673*	*1,668*	*1,622*	*1,540*	*1,453*	*1,361*	*1,269*	*1,166*	*1,064*	*952*	*834*	*711*	*583*	*450*	*307*	*159*	*0*	*0*	*0*	30,211
b	Additional GA Debt Drawdown, End of Year	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	0
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,200	4,600	7,000	10,200	13,100	15,700	17,800	20,800	23,200	25,000	27,700	30,100	31,700	32,800	32,700	32,600	31,700	30,100	28,400	26,600	24,800	22,800	20,800	18,600	16,300	13,900	11,400	8,800	6,000	3,100	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	11,621	11,521	10,621	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	8,800	6,000	3,100	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	21,079	21,079	21,079	21,079	19,379	17,579	15,779	13,779	11,779	9,579	7,279	4,879	2,379	0	0	0	0	0	0	0	
	Feb9 1, 30-yr - Accumulated Interest Costs	0	113	348	706	1,228	1,898	2,701	3,612	4,676	5,863	7,142	8,559	10,099	11,721	13,399	15,072	16,740	18,362	19,902	21,355	22,716	23,985	25,151	26,215	27,167	28,001	28,712	29,295	29,746	30,052	30,211				
	Feb9 1, 30-yr - Accumulated Debt Principal	2,200	4,487	6,652	9,494	11,872	13,802	15,099	17,188	18,524	19,137	20,558	21,541	21,601	21,079	19,301	17,528	14,960	11,738	8,498	5,245	2,084	-1,185	-4,351	-7,615	-10,867	-14,101	-17,312	-20,495	-23,746	-26,952	-30,211				
Fiscal Exposure - End of Year Debt Drawdown		2,200	2,400	2,400	3,200	2,900	2,600	2,100	3,000	2,400	1,800	2,700	2,400	1,600	1,100	-100	-100	-900	-1,600	-1,700	-1,800	-1,800	-2,000	-2,000	-2,200	-2,300	-2,400	-2,500	-2,600	-2,800	-2,900	-3,100	0	0	0	

Feb9 1, 30-yr — Equal Monthly Debt Drawdown

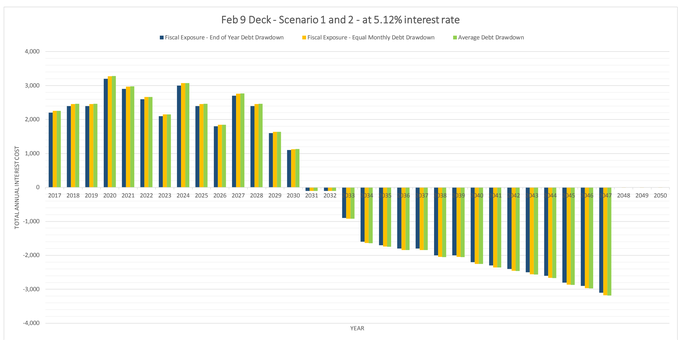
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
	1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
	($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	
1,676	*Interest Cost - Feb9 1, 30-yr*	*52*	*170*	*292*	*434*	*591*	*732*	*853*	*982*	*1,121*	*1,230*	*1,343*	*1,474*	*1,578*	*1,648*	*1,676*	*1,671*	*1,646*	*1,584*	*1,500*	*1,410*	*1,318*	*1,221*	*1,119*	*1,012*	*897*	*777*	*652*	*521*	*384*	*238*	*85*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,252	4,709	7,166	10,443	13,412	16,073	18,223	21,295	23,752	25,595	28,359	30,816	32,454	33,580	33,478	33,375	32,454	30,816	29,076	27,233	25,390	23,342	21,295	19,042	16,688	14,231	11,671	9,009	6,143	3,174	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,252	2,457	2,457	3,276	2,969	2,662	2,150	3,071	2,457	1,843	2,764	2,457	1,638	1,126	-102	-102	-921	-1,638	-1,740	-1,843	-1,843	-2,048	-2,048	-2,252	-2,355	-2,457	-2,559	-2,662	-2,867	-2,969	-3,174	0	0	0	
	Monthly Drawdown	183	191	180	237	198	161	108	174	111	51	118	82	5	(43)	(148)	(148)	(214)	(268)	(270)	(271)	(263)	(272)	(264)	(272)	(271)	(269)	(268)	(265)	(271)	(267)	(272)	-	-	-	
	FV of Monthly Drawdown at 5%	2,252	2,342	2,216	2,909	2,435	1,976	1,328	2,139	1,368	628	1,455	1,006	61	(534)	(1,820)	(1,815)	(2,629)	(3,298)	(3,317)	(3,330)	(3,236)	(3,347)	(3,242)	(3,342)	(3,329)	(3,311)	(3,288)	(3,259)	(3,328)	(3,283)	(3,336)	-	-	-	
	Annual Interest Cost on New Drawdowns	52	54	51	68	57	46	31	50	32	15	34	23	1	(12)	(42)	(42)	(61)	(77)	(77)	(77)	(75)	(78)	(75)	(78)	(77)	(76)	(76)	(76)	(77)	(76)	(78)	-	-	-	
	Annual Interest Cost on Opening Balance	-	115	241	367	534	686	822	932	1,089	1,215	1,309	1,451	1,577	1,660	1,718	1,713	1,708	1,660	1,577	1,488	1,393	1,299	1,194	1,089	974	854	728	597	461	314	162	(0)	(0)	(0)	
	Total Annual Interest Cost	52	170	292	434	591	732	853	982	1,121	1,230	1,343	1,474	1,578	1,648	1,676	1,671	1,646	1,584	1,500	1,410	1,318	1,221	1,119	1,012	897	777	652	521	384	238	85	(0)	(0)	(0)	

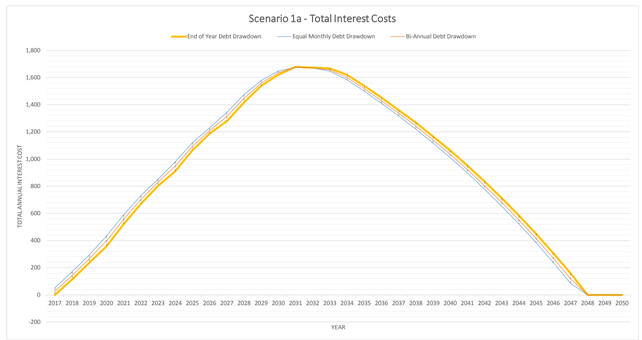
Feb9 1, 30-yr — Bi-Annual Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
	1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
	($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*28*	*143*	*266*	*399*	*559*	*703*	*830*	*949*	*1,095*	*1,210*	*1,314*	*1,448*	*1,560*	*1,636*	*1,677*	*1,672*	*1,656*	*1,601*	*1,518*	*1,430*	*1,338*	*1,243*	*1,141*	*1,036*	*922*	*803*	*679*	*550*	*414*	*270*	*119*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,228	4,659	7,090	10,330	13,268	15,901	18,028	21,066	23,497	25,320	28,054	30,485	32,105	33,220	33,118	33,017	32,105	30,485	28,763	26,940	25,117	23,092	21,066	18,838	16,508	14,078	11,546	8,913	6,077	3,140	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,228	2,431	2,431	3,241	2,937	2,633	2,127	3,038	2,431	1,823	2,735	2,431	1,620	1,114	-101	-101	-912	-1,620	-1,722	-1,823	-1,823	-2,026	-2,026	-2,228	-2,329	-2,431	-2,532	-2,633	-2,836	-2,937	-3,140	0	0	0	
	Bi-Annual Drawdown	1,100	1,144	1,082	1,421	1,189	965	648	1,045	668	307	710	491	30	(261)	(889)	(886)	(1,284)	(1,611)	(1,620)	(1,626)	(1,580)	(1,634)	(1,583)	(1,632)	(1,626)	(1,617)	(1,606)	(1,592)	(1,625)	(1,603)	(1,629)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,228	2,317	2,192	2,878	2,409	1,954	1,313	2,116	1,353	621	1,439	995	61	(529)	(1,801)	(1,796)	(2,601)	(3,263)	(3,281)	(3,295)	(3,201)	(3,311)	(3,207)	(3,306)	(3,293)	(3,275)	(3,252)	(3,224)	(3,292)	(3,248)	(3,300)	-	-	-	
	Annual Interest Cost on New Drawdowns	28	29	28	36	30	25	17	27	17	8	18	13	1	(7)	(23)	(23)	(33)	(41)	(41)	(42)	(40)	(42)	(41)	(42)	(42)	(41)	(41)	(41)	(42)	(41)	(42)	-	-	-	
	Annual Interest Cost on Opening Balance	-	114	238	363	529	679	814	922	1,078	1,202	1,295	1,435	1,560	1,643	1,700	1,694	1,689	1,643	1,560	1,472	1,378	1,285	1,181	1,078	964	845	720	591	456	311	161	0	0	0	
	Total Annual Interest Cost	28	143	266	399	559	703	830	949	1,095	1,210	1,314	1,448	1,560	1,636	1,677	1,672	1,656	1,601	1,518	1,430	1,338	1,243	1,141	1,036	922	803	679	550	414	270	119	0	0	0	

Feb9 1, 30-yr — Average Debt Drawdown

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
	($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,895	9,547	9,387	9,327	8,465	8,704	8,947	9,039	9,191	9,420	9,622	9,836	9,949	10,243	10,433	10,593	10,806	10,978	8,902	8,642	8,289	8,150	7,812	7,685	7,459	7,238	7,022	6,810	6,702	6,492	6,385	2,975	2,831	2,695	
	GA Debt Requirement	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Debt, Beginning of Year	0	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	
	Interest Cost - Feb9 1, 30-yr	*56*	*174*	*297*	*440*	*596*	*737*	*857*	*987*	*1,126*	*1,233*	*1,348*	*1,479*	*1,581*	*1,650*	*1,676*	*1,670*	*1,645*	*1,581*	*1,496*	*1,407*	*1,315*	*1,218*	*1,115*	*1,008*	*893*	*773*	*647*	*517*	*379*	*233*	*79*	*0*	*0*	*0*	30,211
	Additional GA Debt Drawdown	2,200	2,287	2,165	2,842	2,378	1,930	1,297	2,089	1,336	613	1,421	983	60	-522	-1,778	-1,773	-2,568	-3,222	-3,240	-3,253	-3,161	-3,269	-3,166	-3,264	-3,252	-3,234	-3,211	-3,183	-3,250	-3,207	-3,259	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,256	4,718	7,179	10,461	13,435	16,102	18,255	21,332	23,793	25,640	28,409	30,870	32,511	33,639	33,536	33,434	32,511	30,870	29,126	27,280	25,434	23,383	21,332	19,076	16,717	14,256	11,692	9,025	6,153	3,179	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		2,256	2,461	2,461	3,282	2,974	2,667	2,154	3,077	2,461	1,846	2,769	2,461	1,641	1,128	-103	-103	-923	-1,641	-1,743	-1,846	-1,846	-2,051	-2,051	-2,256	-2,359	-2,461	-2,564	-2,667	-2,872	-2,974	-3,179	0	0	0	





Feb 9 Deck - Scenario 1 and 2 - at 5.12% interest rate

Feb9_2_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0
			38	38	40	55	50	40	31	50	31	19	36	31	5	-5	-17	-19	-19	-21	-21	-21	-24	-26	-26	-26	-31	-29	-33	-33	-36	-38	-38	0	0	0

0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,300	998	17,886
Equal Monthly Debt Drawdown	2,355	993	

	Feb9 2, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	19,500	2029	13,466
Equal Monthly Debt Drawdown	19,964		

Feb9 2, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
a	Debt, Beginning of Year	0	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	
c = a*5%	*Interest Cost - Feb9 2, 30-yr - End of Year Debt Drawdown*	*0*	*82*	*164*	*251*	*368*	*476*	*563*	*629*	*737*	*803*	*844*	*921*	*987*	*998*	*987*	*952*	*911*	*870*	*824*	*778*	*732*	*680*	*624*	*568*	*512*	*445*	*384*	*312*	*240*	*164*	*82*	*0*	*0*	*0*	17,886
b	Additional GA Debt Drawdown, End of Year	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	1,600	3,200	4,900	7,200	9,300	11,000	12,300	14,400	15,700	16,500	18,000	19,300	19,500	19,300	18,600	17,800	17,000	16,100	15,200	14,300	13,300	12,200	11,100	10,000	8,700	7,500	6,100	4,700	3,200	1,600	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	7,123	6,323	5,523	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,700	3,200	1,600	0	0	0	
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	11,477	11,477	11,477	11,477	10,577	9,677	8,677	7,577	6,477	5,377	4,077	2,877	1,477	0	0	0	0	0	0	0	
	Feb9 2, 30-yr - Accumulated Interest Costs	0	82	246	496	865	1,340	1,903	2,533	3,269	4,072	4,917	5,838	6,825	7,823	8,810	9,762	10,672	11,542	12,366	13,143	13,875	14,556	15,180	15,748	16,259	16,704	17,088	17,400	17,641	17,804	17,886				
	Feb9 2, 30-yr - Accumulated Debt Principal	1,600	3,118	4,654	6,704	8,435	9,660	10,397	11,867	12,431	12,428	13,083	13,462	12,675	11,477	9,790	8,038	6,328	4,558	2,834	1,157	-575	-2,356	-4,080	-5,748	-7,559	-9,204	-10,988	-12,700	-14,441	-16,204	-17,886				
Fiscal Exposure - End of Year Debt Drawdown		1,600	1,600	1,700	2,300	2,100	1,700	1,300	2,100	1,300	800	1,500	1,300	200	-200	-700	-800	-800	-900	-900	-900	-1,000	-1,100	-1,100	-1,100	-1,300	-1,200	-1,400	-1,400	-1,500	-1,600	-1,600	0	0	0	

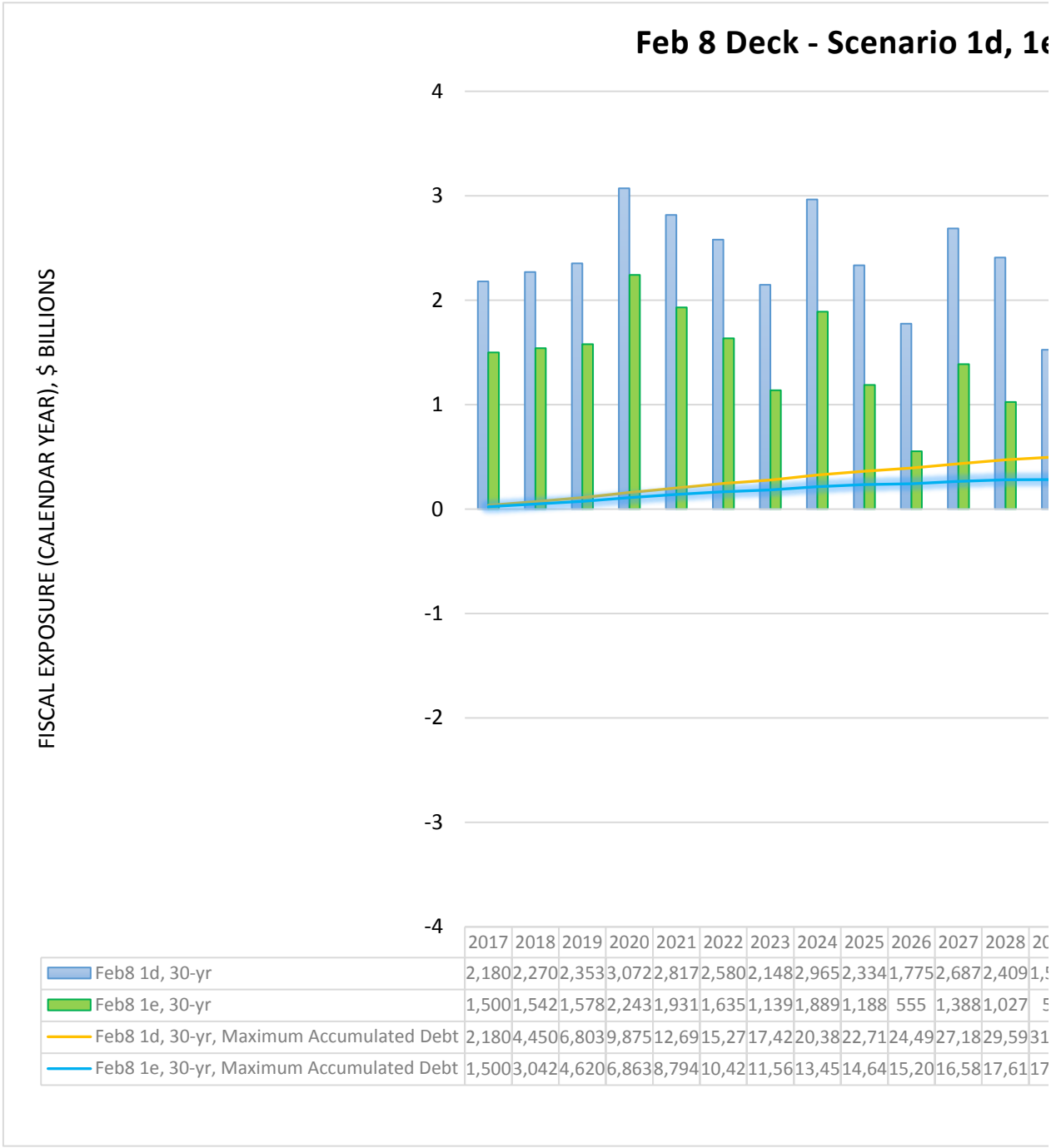
Feb9 2, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	
993	*Interest Cost - Feb9 2, 30-yr*	*38*	*120*	*204*	*305*	*418*	*516*	*594*	*679*	*768*	*822*	*880*	*952*	*992*	*993*	*971*	*933*	*892*	*848*	*802*	*756*	*708*	*654*	*598*	*542*	*481*	*417*	*350*	*279*	*205*	*126*	*44*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,638	3,276	5,017	7,371	9,521	11,262	12,593	14,743	16,073	16,892	18,428	19,759	19,964	19,759	19,042	18,223	17,404	16,483	15,562	14,640	13,616	12,490	11,364	10,238	8,907	7,678	6,245	4,812	3,276	1,638	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,638	1,638	1,740	2,355	2,150	1,740	1,331	2,150	1,331	819	1,536	1,331	205	-205	-717	-819	-819	-921	-921	-921	-1,024	-1,126	-1,126	-1,126	-1,331	-1,229	-1,433	-1,433	-1,536	-1,638	-1,638	0	0	0	
	Monthly Drawdown	133	127	128	171	144	102	61	123	47	(0)	55	32	(66)	(100)	(141)	(146)	(143)	(147)	(144)	(140)	(144)	(148)	(144)	(139)	(151)	(137)	(149)	(143)	(145)	(147)	(140)	-	-	-	
	FV of Monthly Drawdown at 5%	1,638	1,554	1,573	2,098	1,773	1,253	755	1,506	577	(3)	671	388	(806)	(1,226)	(1,728)	(1,793)	(1,751)	(1,812)	(1,765)	(1,718)	(1,773)	(1,823)	(1,765)	(1,708)	(1,855)	(1,684)	(1,826)	(1,753)	(1,782)	(1,806)	(1,722)	-	-	-	
	Annual Interest Cost on New Drawdowns	38	36	37	49	41	29	18	35	13	(0)	16	9	(19)	(28)	(40)	(42)	(41)	(42)	(41)	(40)	(41)	(42)	(41)	(40)	(43)	(39)	(42)	(41)	(41)	(42)	(40)	-	-	-	
	Annual Interest Cost on Opening Balance	-	84	168	257	377	487	576	644	754	822	864	943	1,011	1,021	1,011	974	932	890	843	796	749	697	639	581	524	456	393	320	246	168	84	0	0	0	
	Total Annual Interest Cost	38	120	204	305	418	516	594	679	768	822	880	952	992	993	971	933	892	848	802	756	708	654	598	542	481	417	350	279	205	126	44	0	0	0	

Feb9 2, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*20*	*102*	*185*	*280*	*395*	*498*	*579*	*656*	*753*	*813*	*863*	*938*	*990*	*995*	*978*	*941*	*900*	*858*	*812*	*766*	*719*	*666*	*610*	*554*	*495*	*430*	*366*	*294*	*221*	*143*	*61*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,620	3,241	4,963	7,292	9,419	11,141	12,457	14,584	15,901	16,711	18,230	19,547	19,749	19,547	18,838	18,028	17,217	16,306	15,394	14,483	13,470	12,356	11,242	10,128	8,811	7,596	6,178	4,760	3,241	1,620	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,620	1,620	1,722	2,329	2,127	1,722	1,317	2,127	1,317	810	1,519	1,317	203	-203	-709	-810	-810	-912	-912	-912	-1,013	-1,114	-1,114	-1,114	-1,317	-1,215	-1,418	-1,418	-1,519	-1,620	-1,620	0	0	0	
	Bi-Annual Drawdown	800	759	768	1,025	866	612	369	735	282	(2)	328	190	(394)	(599)	(844)	(876)	(855)	(885)	(862)	(839)	(866)	(890)	(862)	(834)	(906)	(823)	(892)	(856)	(870)	(882)	(841)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,620	1,538	1,556	2,076	1,754	1,240	747	1,490	570	(3)	664	384	(797)	(1,213)	(1,709)	(1,774)	(1,733)	(1,792)	(1,746)	(1,699)	(1,754)	(1,803)	(1,746)	(1,689)	(1,835)	(1,666)	(1,807)	(1,734)	(1,763)	(1,786)	(1,703)	-	-	-	
	Annual Interest Cost on New Drawdowns	20	19	20	26	22	16	9	19	7	(0)	8	5	(10)	(15)	(22)	(22)	(22)	(23)	(22)	(21)	(22)	(23)	(22)	(21)	(23)	(21)	(23)	(22)	(22)	(23)	(22)	-	-	-	
	Annual Interest Cost on Opening Balance	-	83	166	254	373	482	570	637	746	814	855	933	1,000	1,010	1,000	964	922	881	834	788	741	689	632	575	518	451	389	316	244	166	83	0	0	0	
	Total Annual Interest Cost	20	102	185	280	395	498	579	656	753	813	863	938	990	995	978	941	900	858	812	766	719	666	610	554	495	430	366	294	221	143	61	0	0	0	

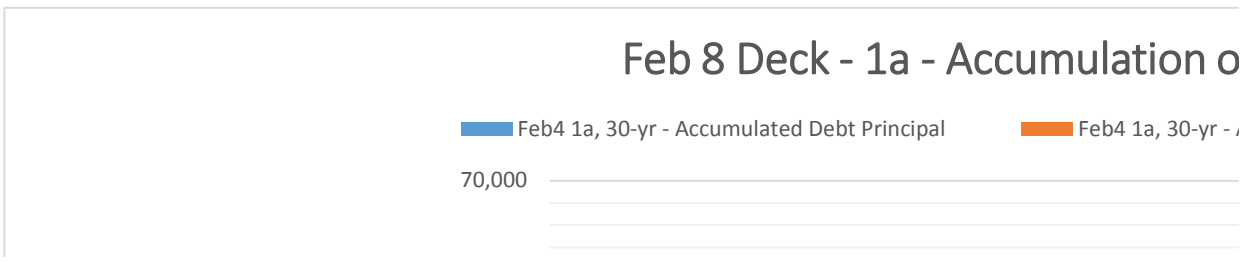
Feb9 2, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,495	10,317	10,016	10,119	9,112	9,409	9,506	9,657	9,964	10,037	10,387	10,440	10,796	10,919	10,342	10,572	9,949	9,526	7,386	7,067	6,860	6,661	6,369	6,089	6,019	5,649	5,594	5,339	5,192	5,049	4,808	2,975	2,831	2,695	
	GA Debt Requirement	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Debt, Beginning of Year	0	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	
	Interest Cost - Feb9 2, 30-yr	*41*	*123*	*207*	*310*	*422*	*519*	*596*	*683*	*770*	*824*	*883*	*954*	*993*	*993*	*970*	*931*	*890*	*847*	*801*	*755*	*706*	*652*	*596*	*540*	*478*	*414*	*348*	*276*	*202*	*123*	*41*	*0*	*0*	*0*	17,886
	Additional GA Debt Drawdown	1,600	1,518	1,536	2,049	1,732	1,224	737	1,471	563	-3	656	379	-787	-1,198	-1,687	-1,752	-1,711	-1,770	-1,724	-1,678	-1,732	-1,780	-1,724	-1,668	-1,812	-1,645	-1,784	-1,712	-1,740	-1,764	-1,682	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,641	3,282	5,025	7,384	9,538	11,281	12,615	14,768	16,102	16,922	18,460	19,794	19,999	19,794	19,076	18,255	17,435	16,512	15,589	14,666	13,640	12,512	11,384	10,256	8,923	7,692	6,256	4,820	3,282	1,641	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,641	1,641	1,743	2,359	2,154	1,743	1,333	2,154	1,333	820	1,538	1,333	205	-205	-718	-820	-820	-923	-923	-923	-1,026	-1,128	-1,128	-1,128	-1,333	-1,231	-1,436	-1,436	-1,538	-1,641	-1,641	0	0	0	

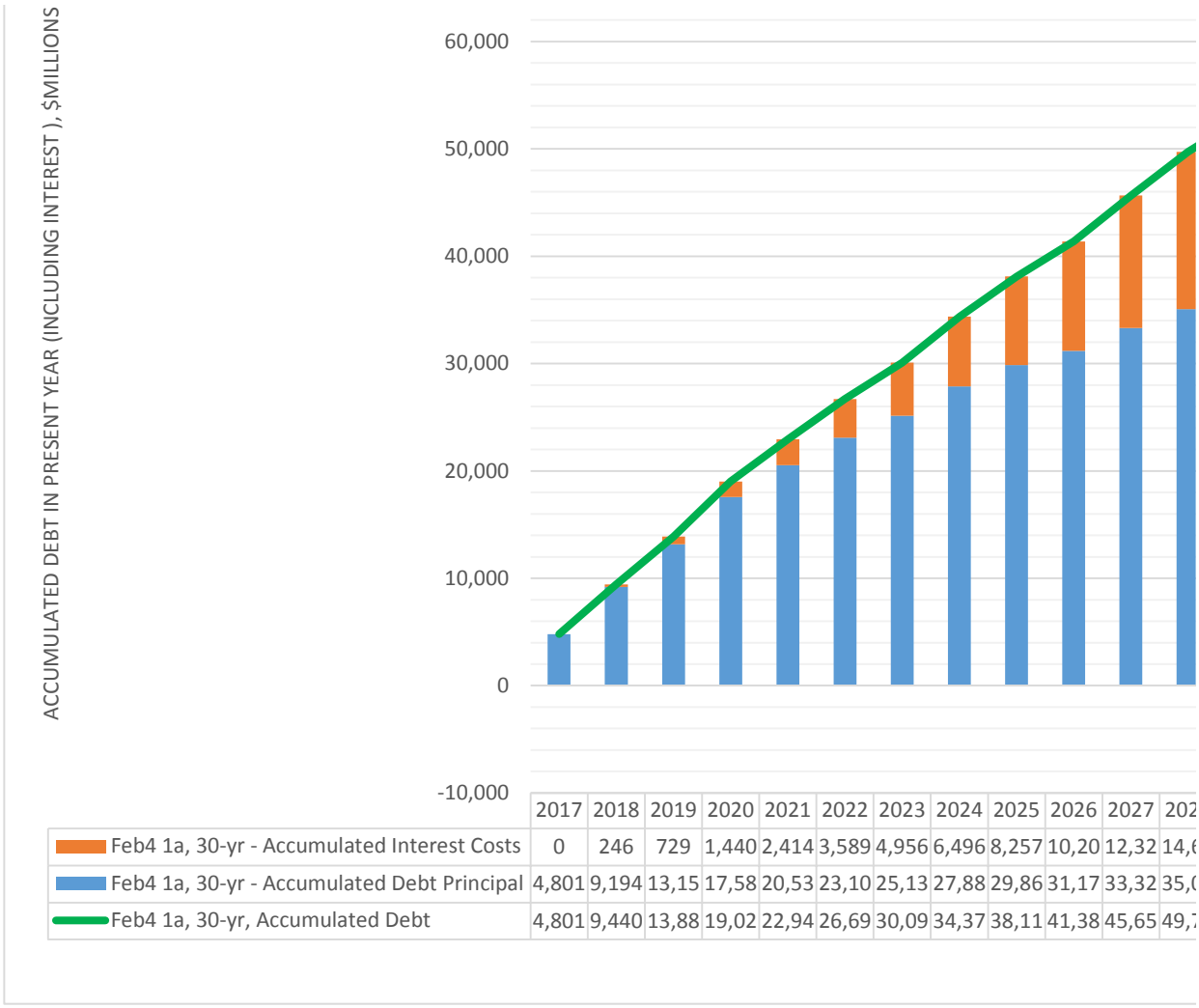
Feb 8 Deck

Feb 8 Deck - Scenario 1d, 1e - at 5.12% interest rate

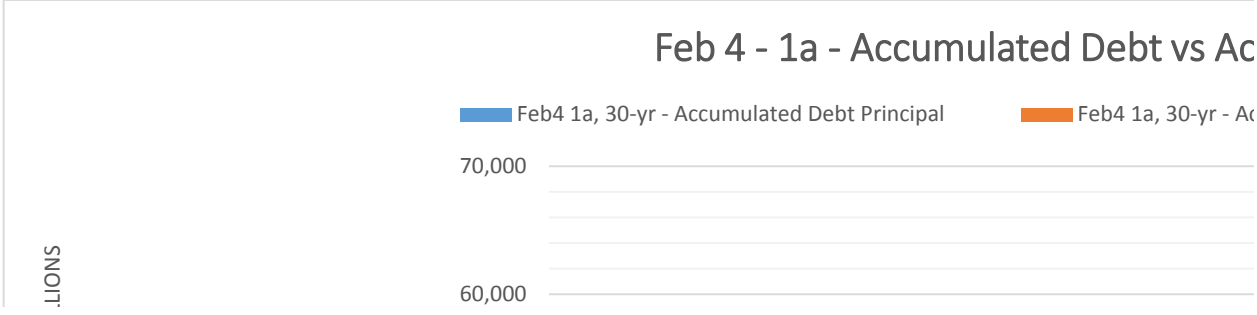


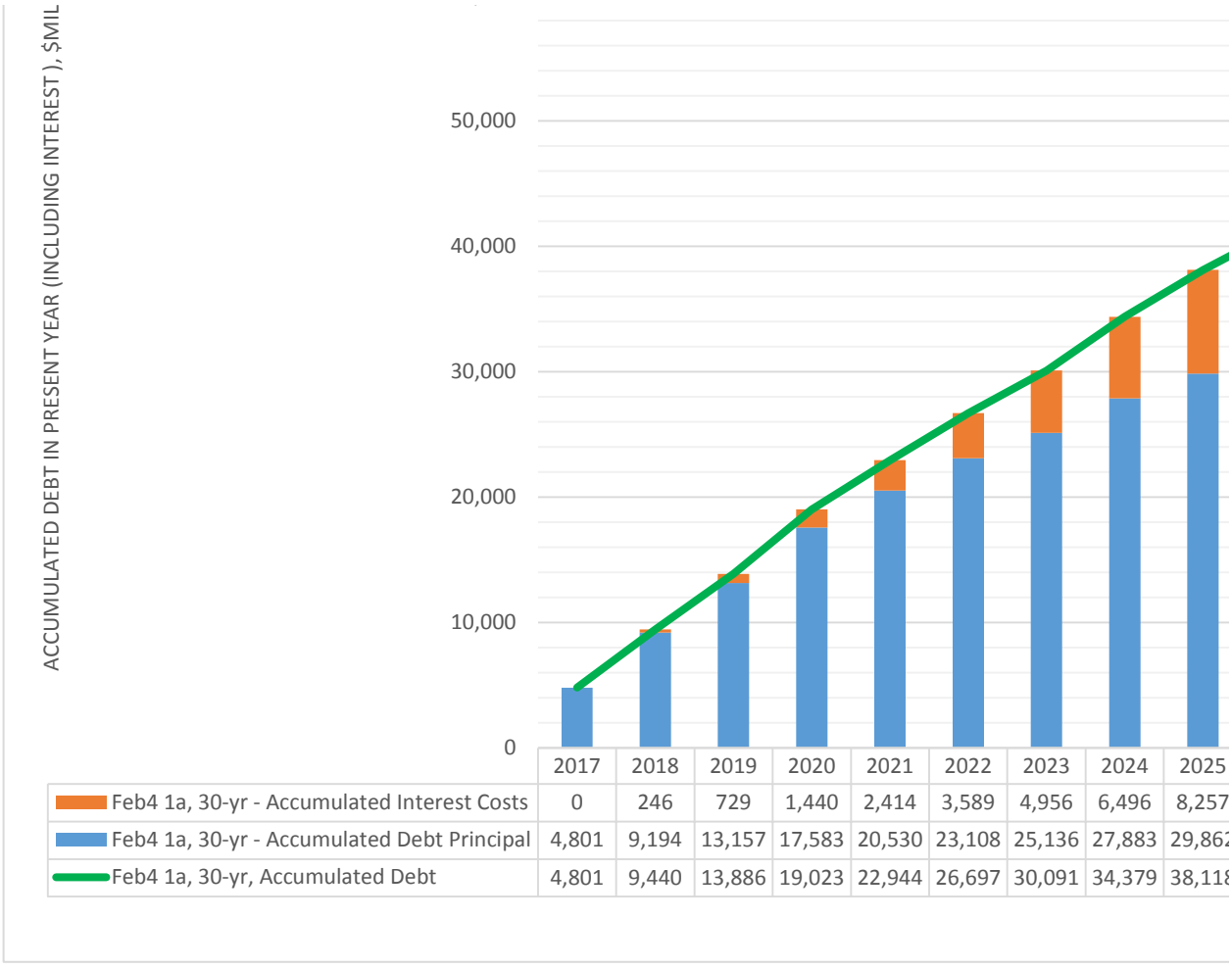
Feb 8 Deck - 1a - Accumulation of Debt (Principal and Interest)



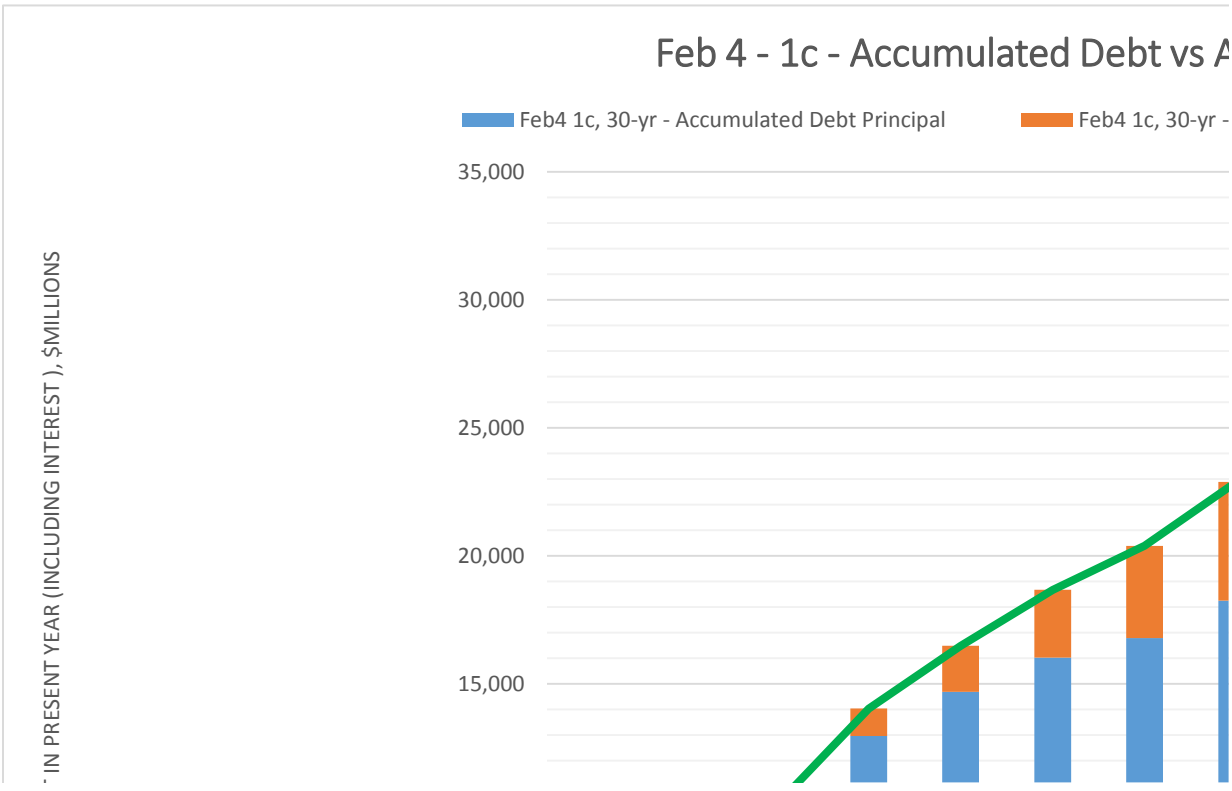


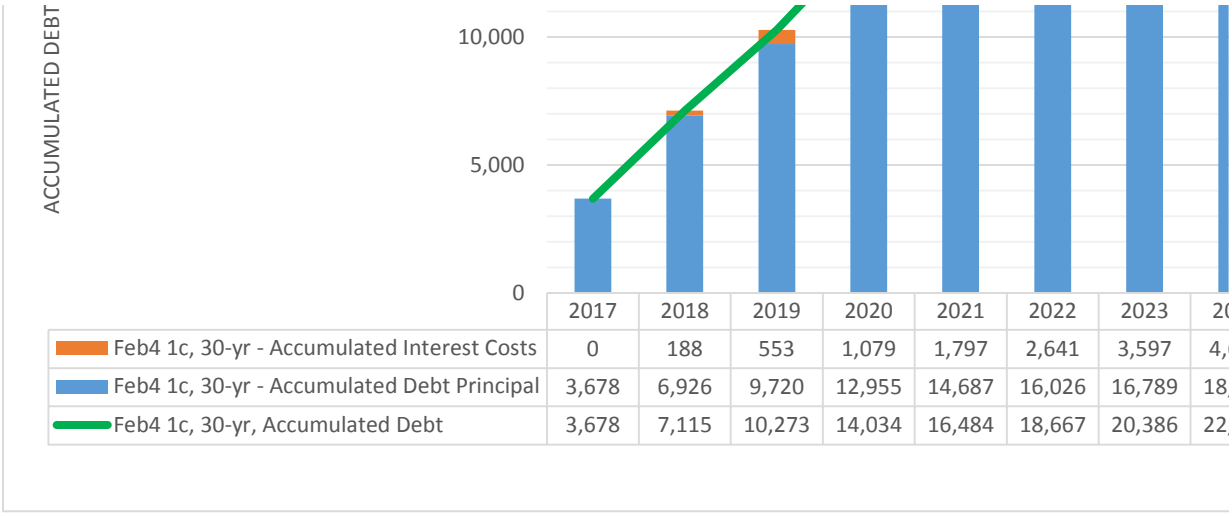
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	202
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,(
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,7



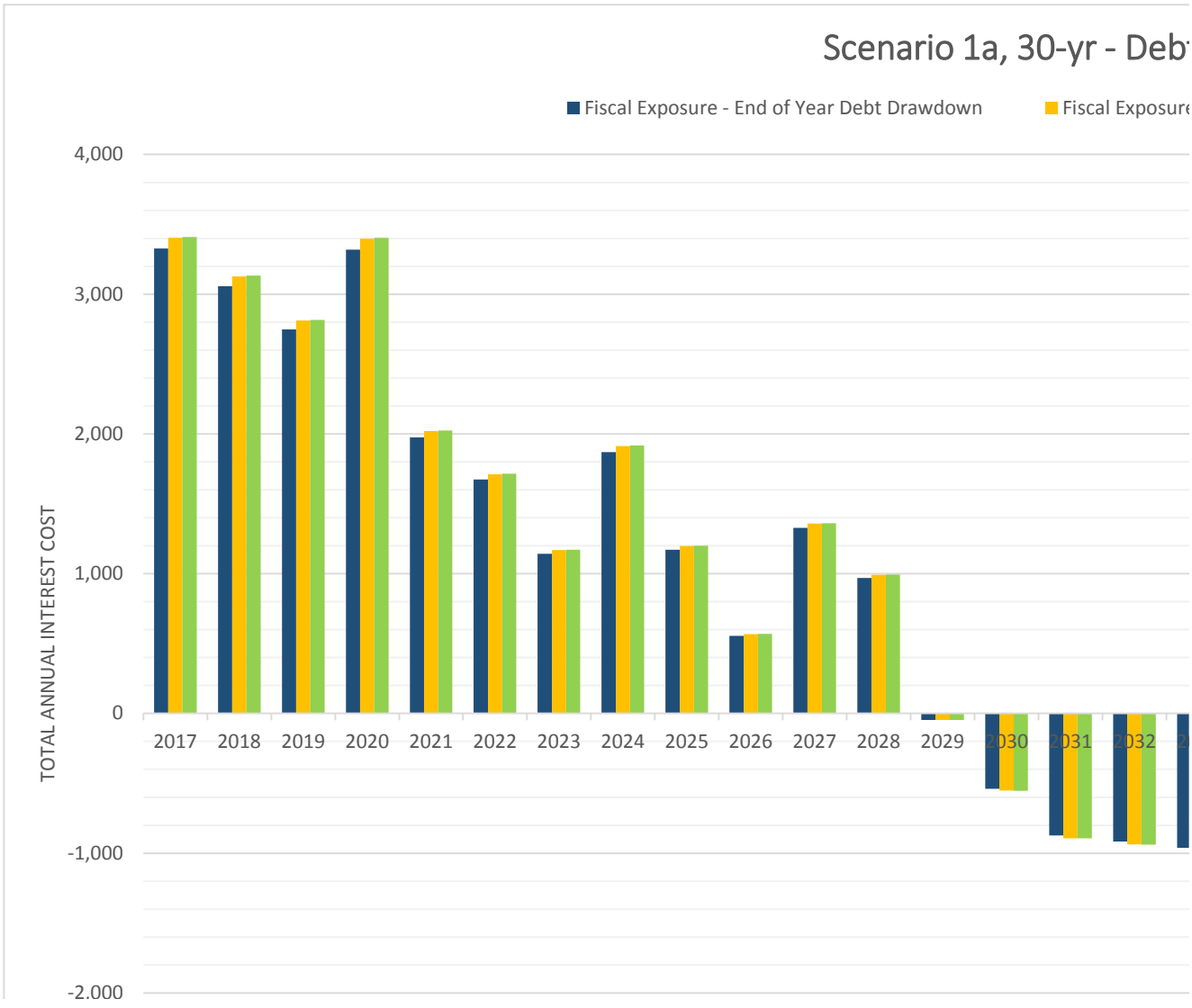


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



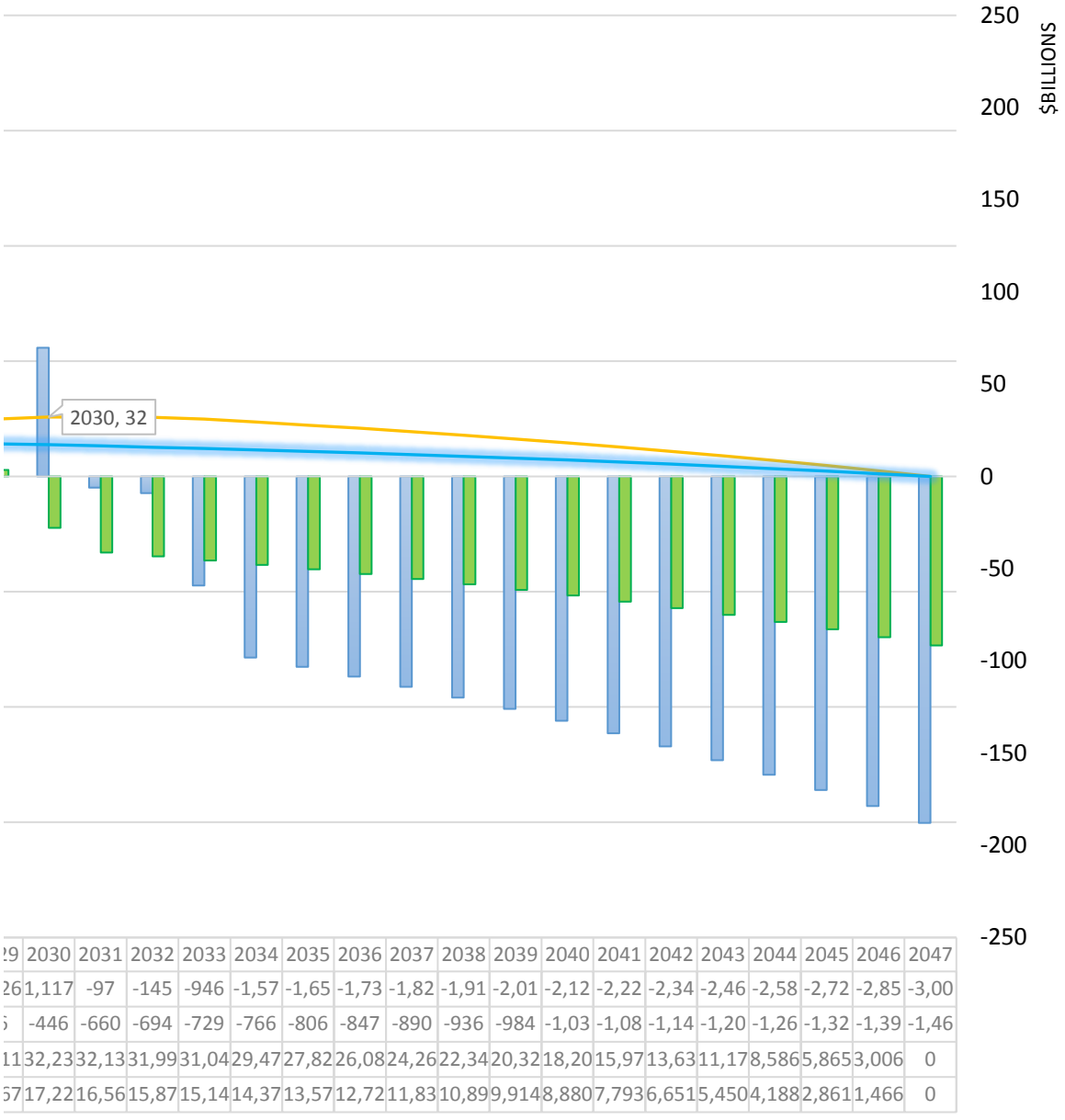


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

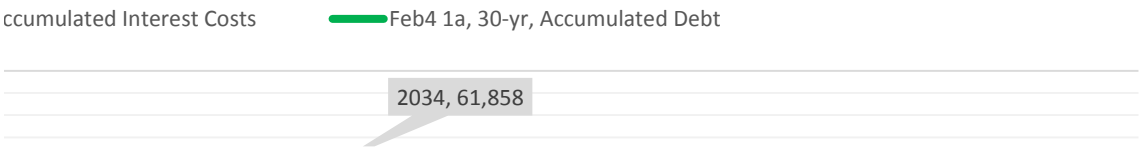
- at 5.12% interest rate

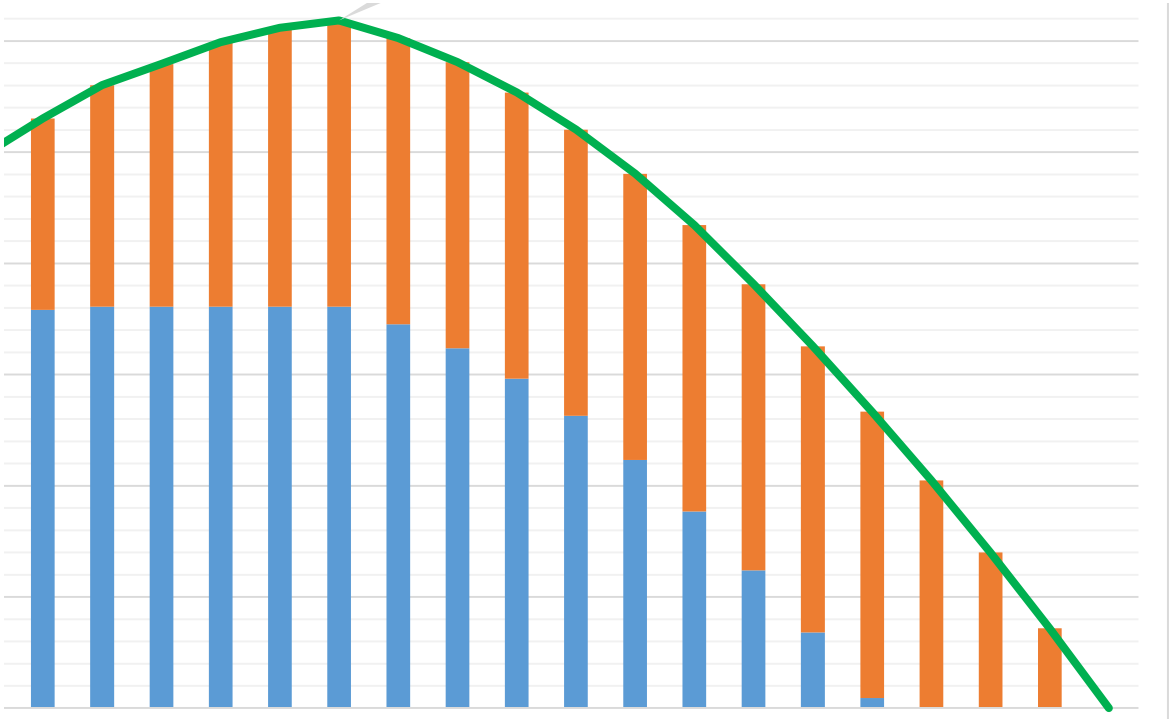


29	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
26	1,117	-97	-145	-946	-1,57	-1,65	-1,73	-1,82	-1,91	-2,01	-2,12	-2,22	-2,34	-2,46	-2,58	-2,72	-2,85	-3,00
5	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,03	-1,08	-1,14	-1,20	-1,26	-1,32	-1,39	-1,46
11	32,23	32,13	31,99	31,04	29,47	27,82	26,08	24,26	22,34	20,32	18,20	15,97	13,63	11,17	8,586	5,865	3,006	0
57	17,22	16,56	15,87	15,14	14,37	13,57	12,72	11,83	10,89	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0

CALENDAR YEAR

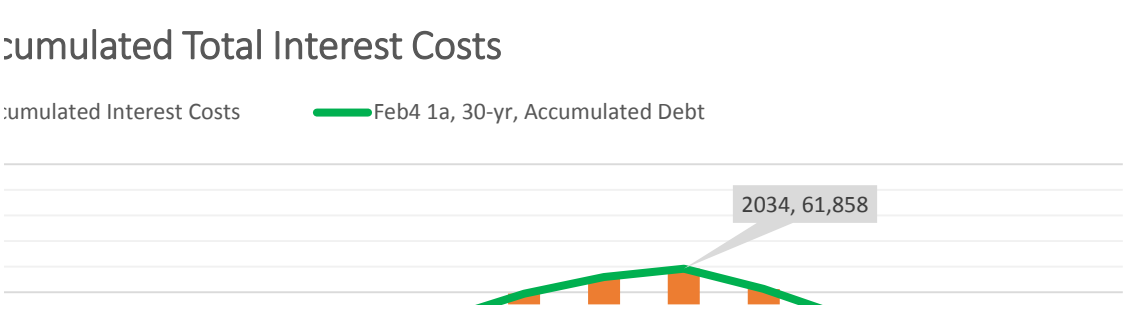
Debt (Principal and Interest)



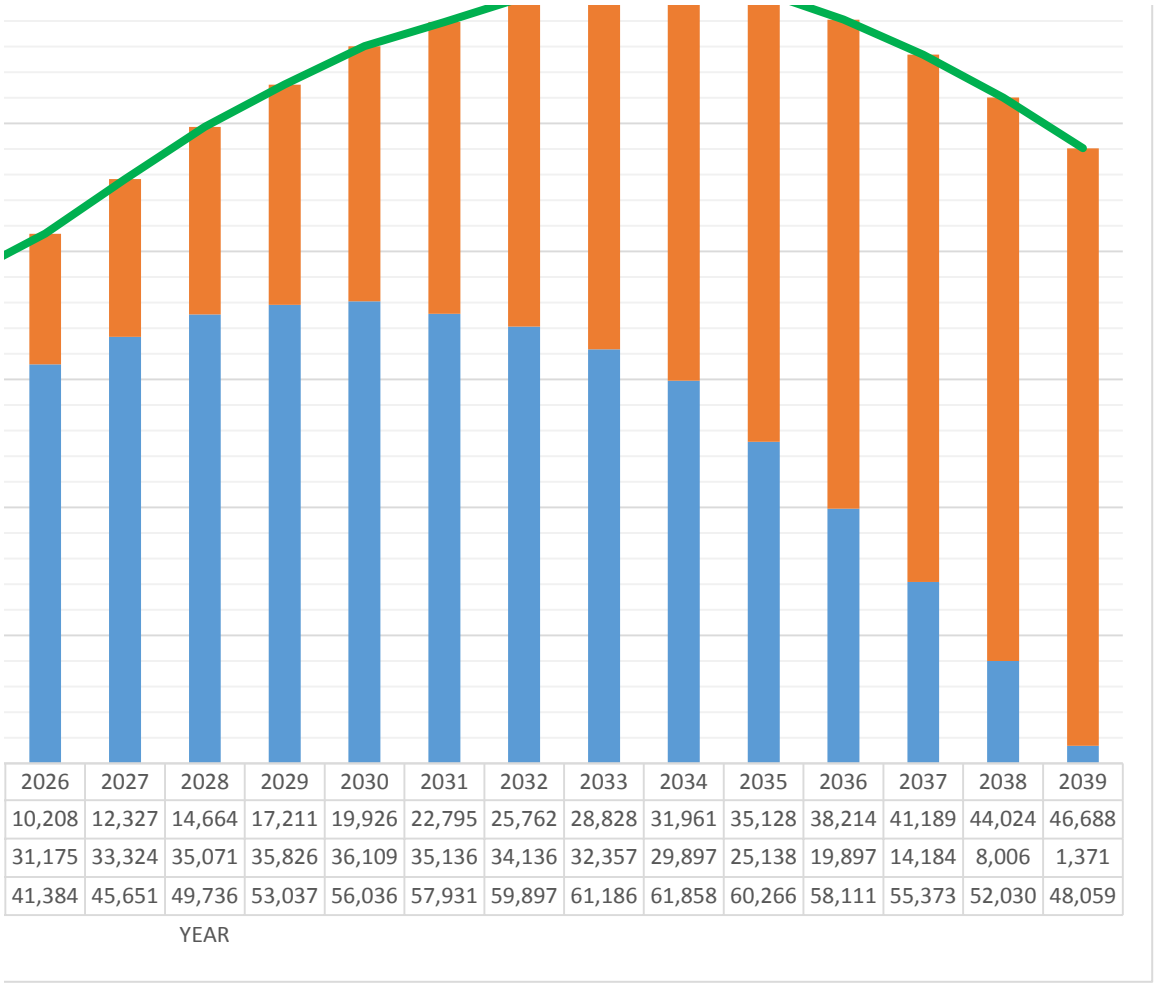


	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
5	17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
7	35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
3	53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



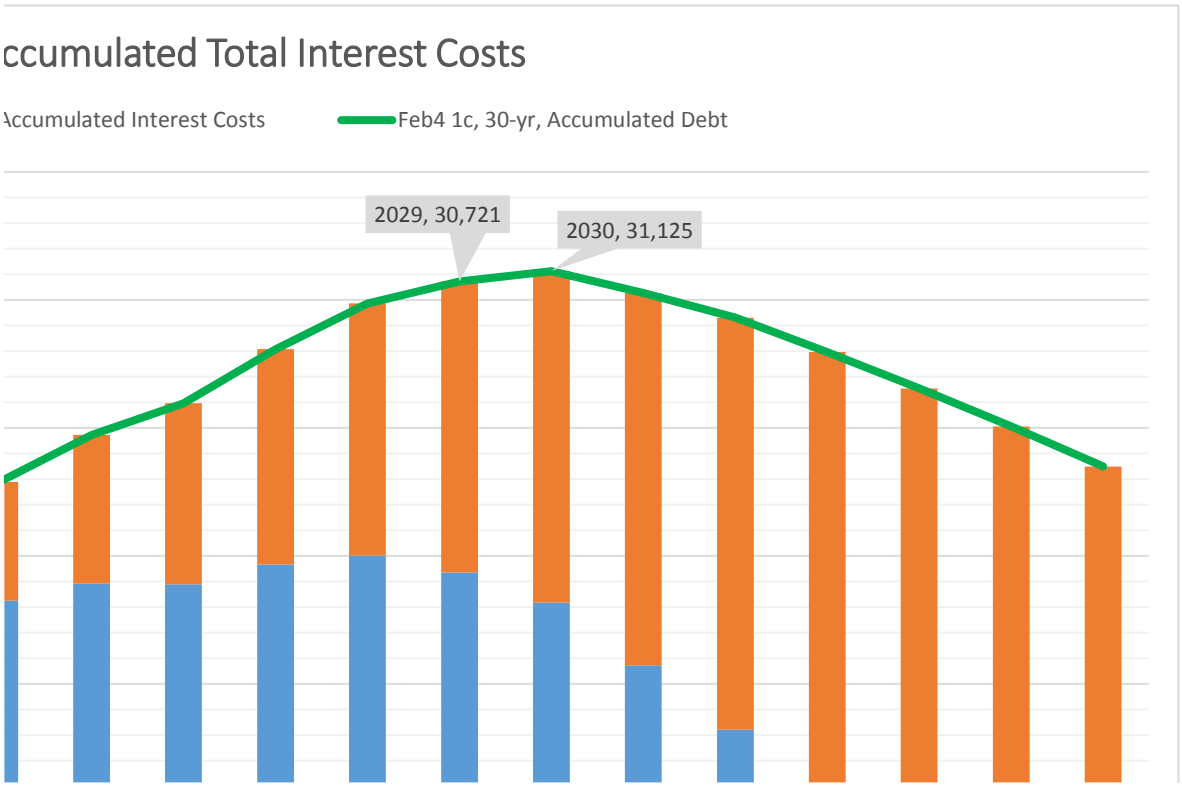
LIONS

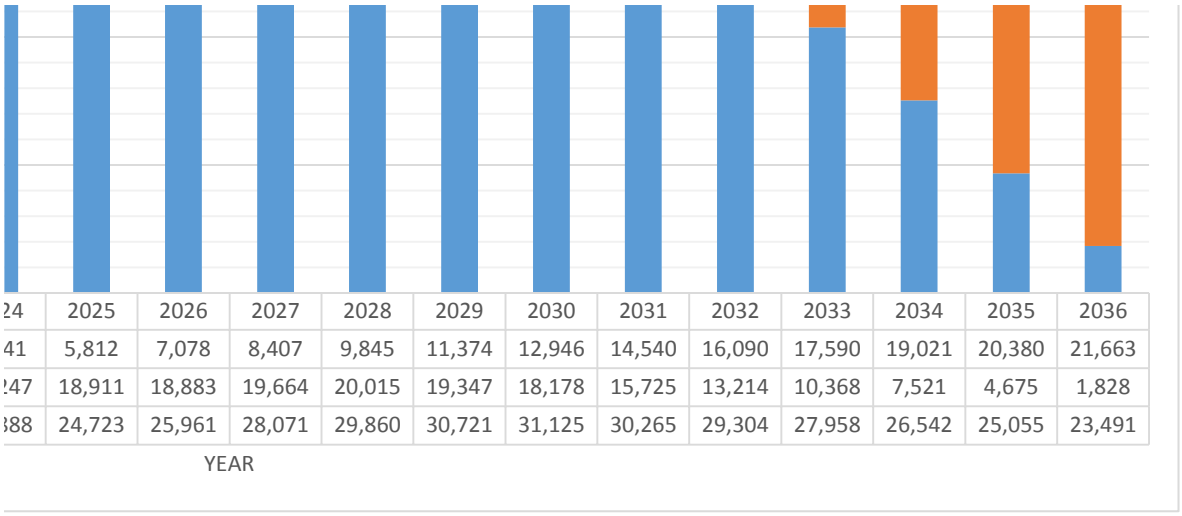


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

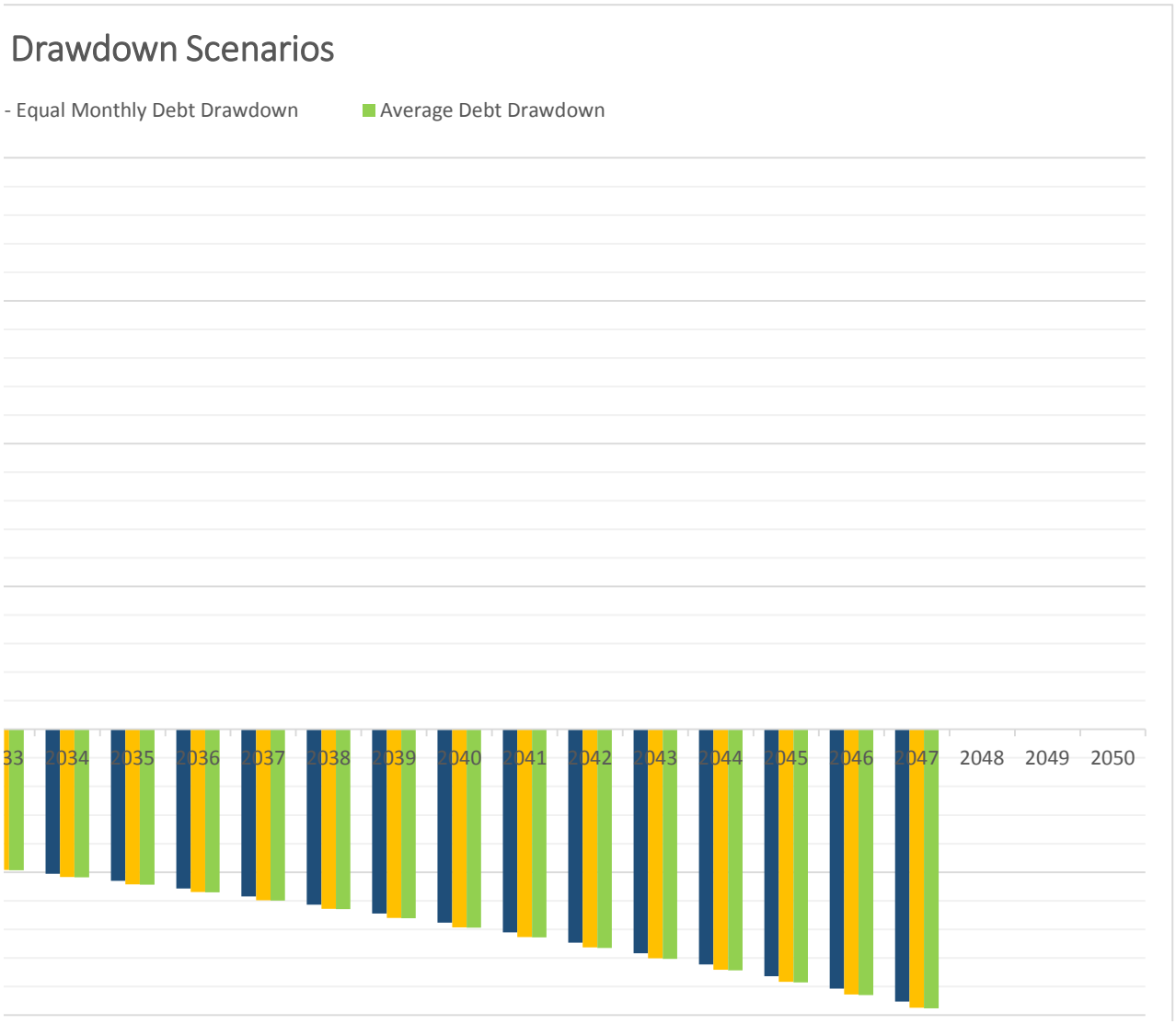
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





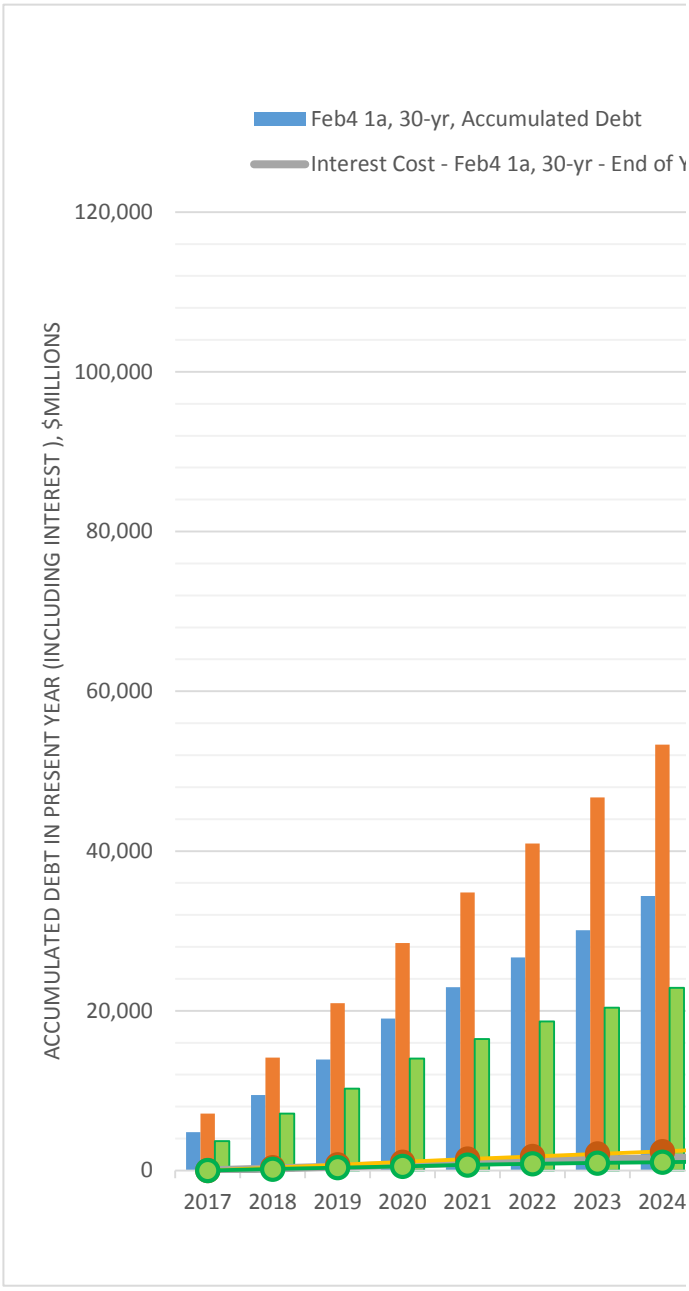
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

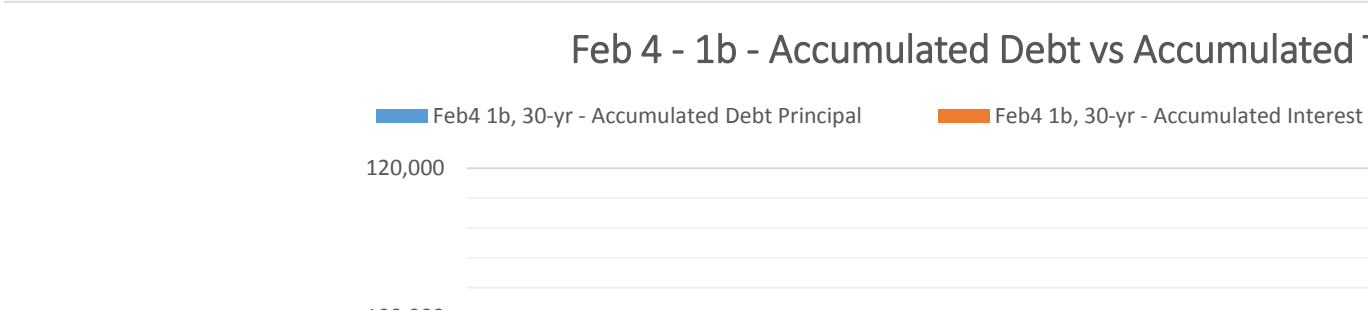
YEAR

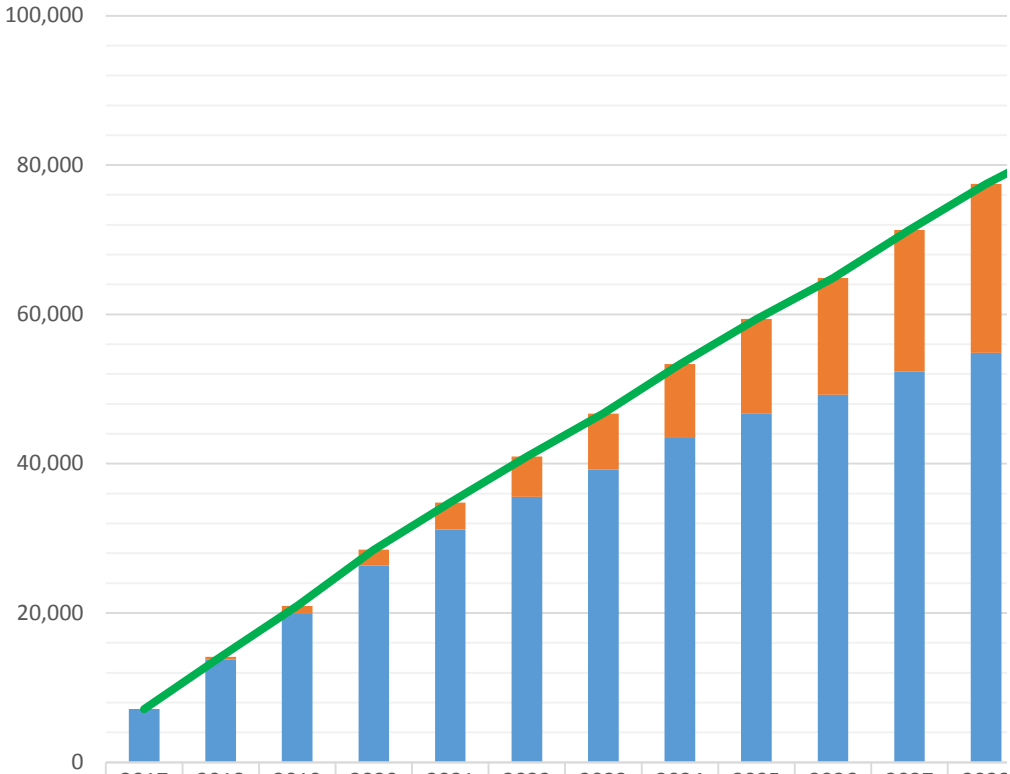


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate

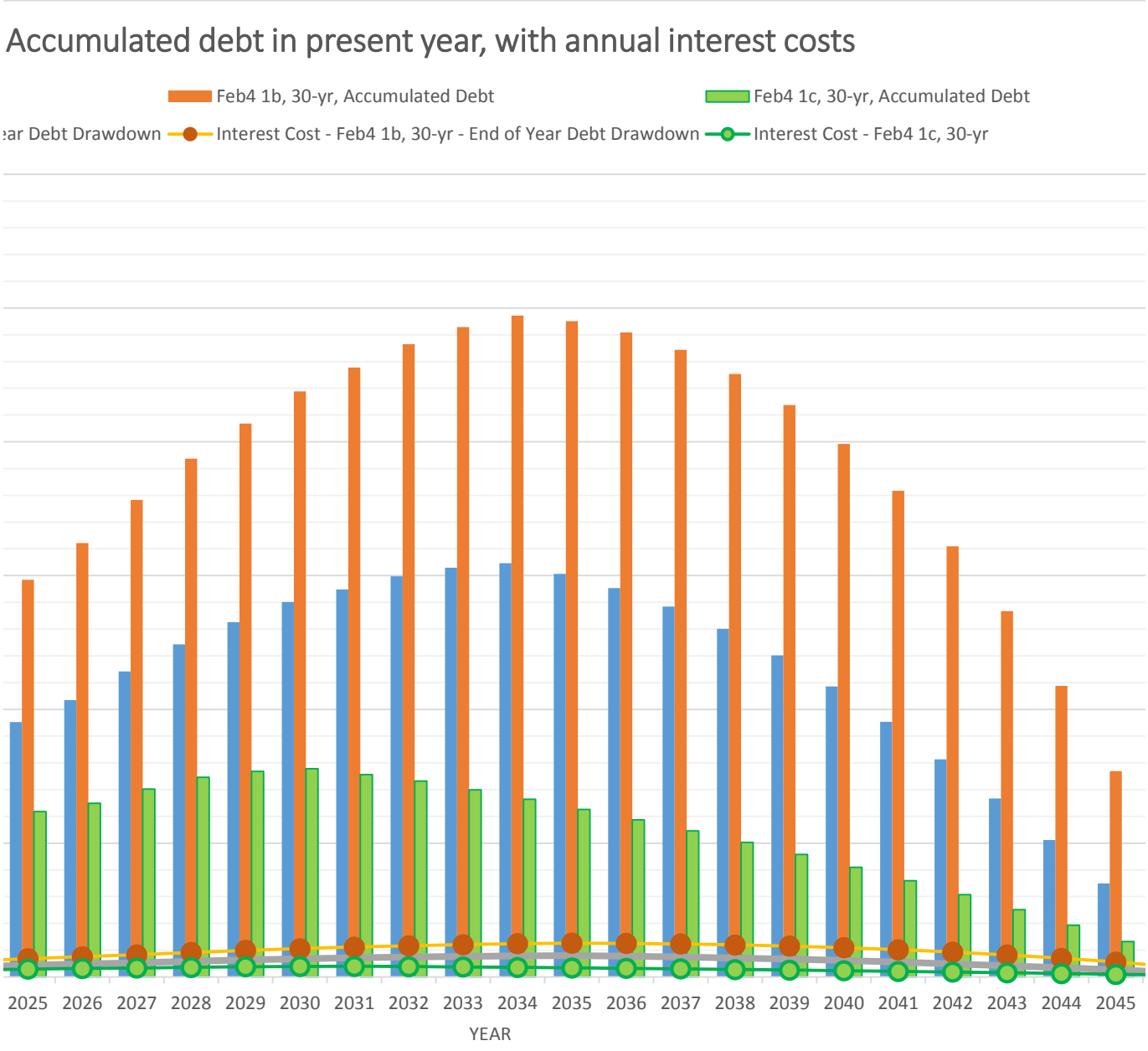


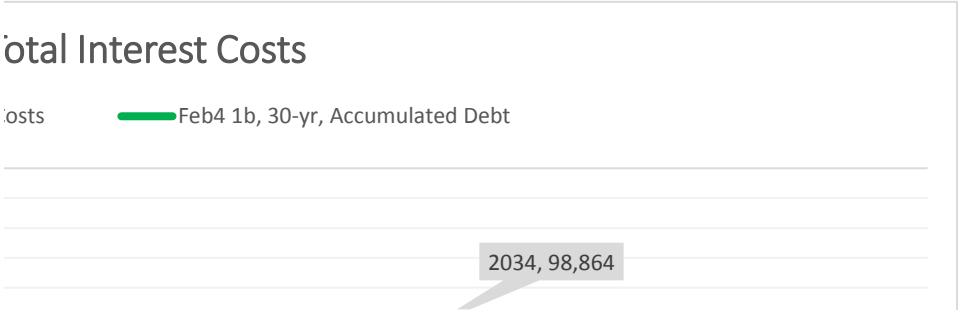

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

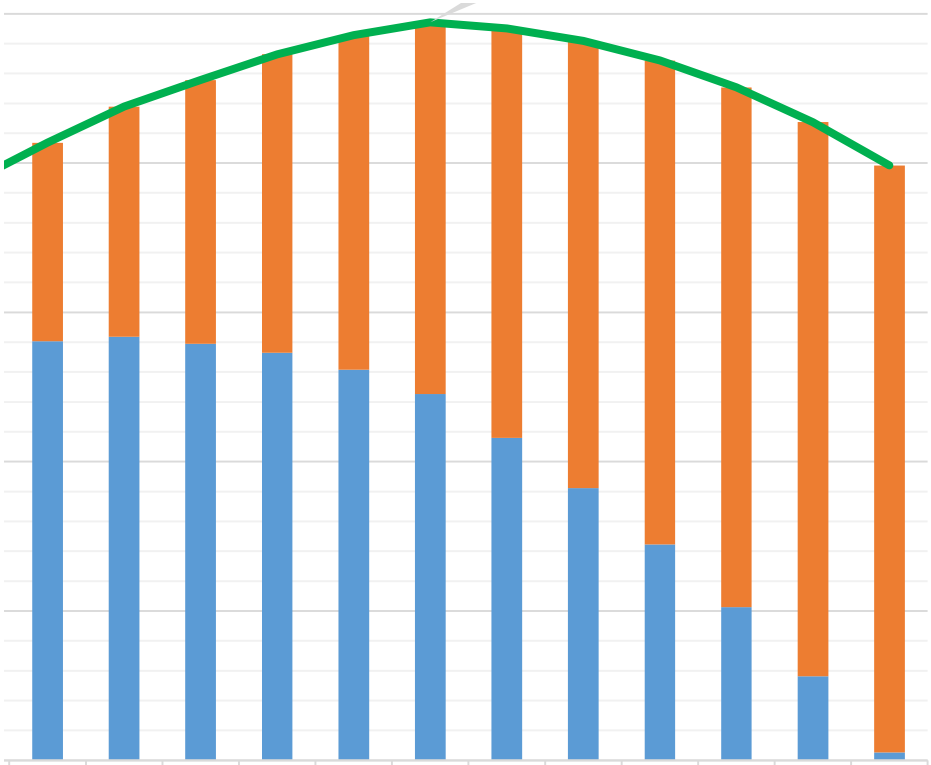


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y

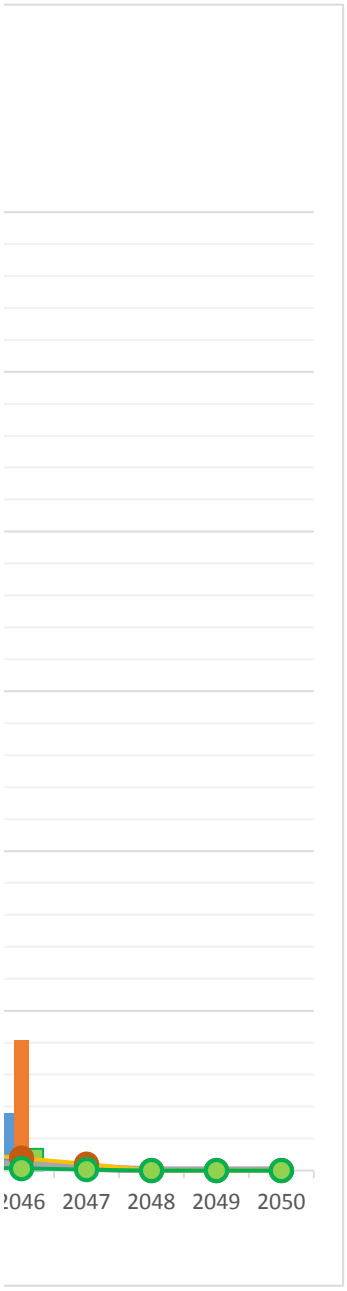

Accumulated debt in present year, with annual interest costs
Feb4 1b, 30-yr, Accumulated Debt
Feb4 1c, 30-yr, Accumulated Debt
ear Debt Drawdown
Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown
Interest Cost - Feb4 1c, 30-yr
2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045
YEAR


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

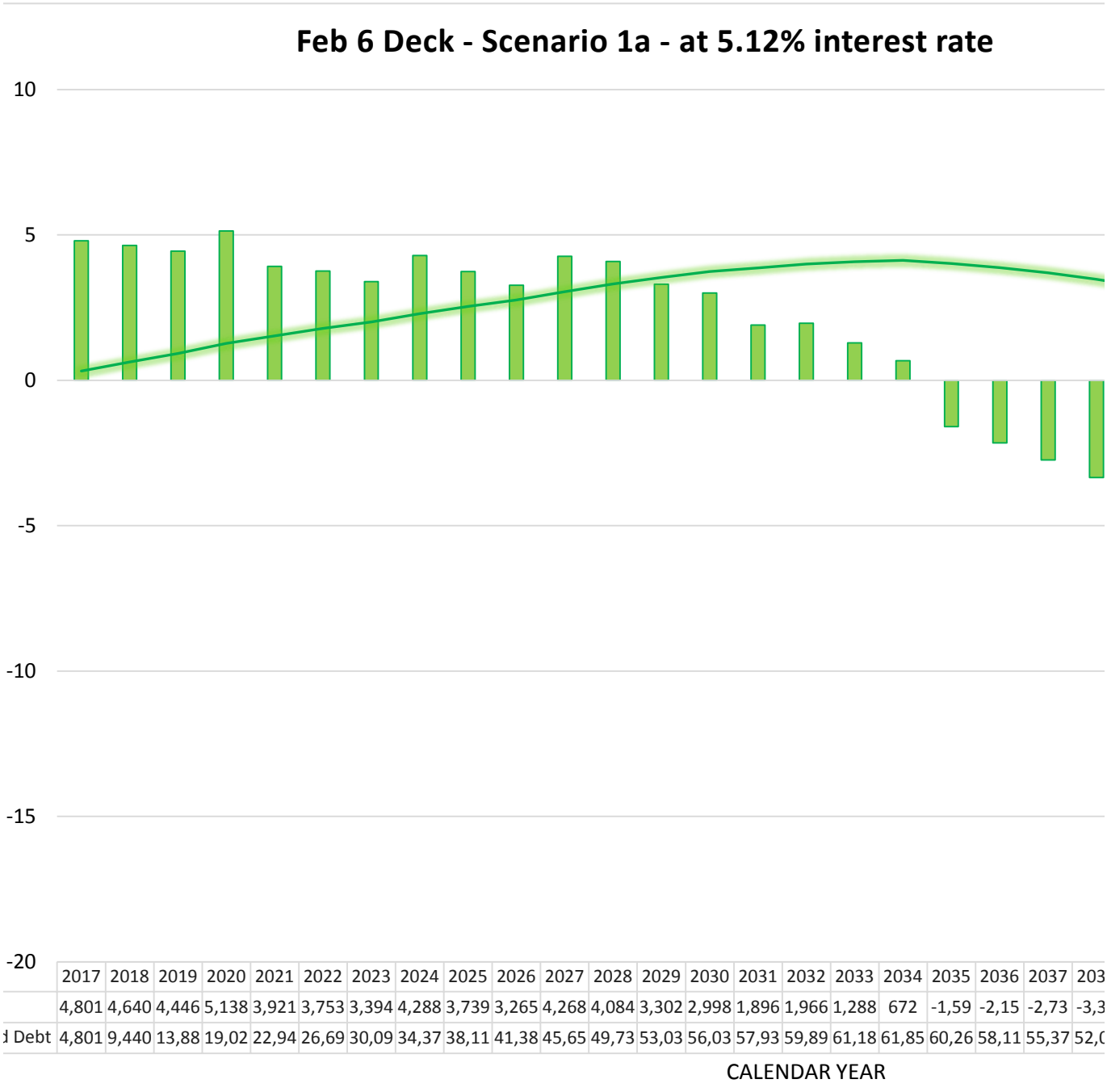
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

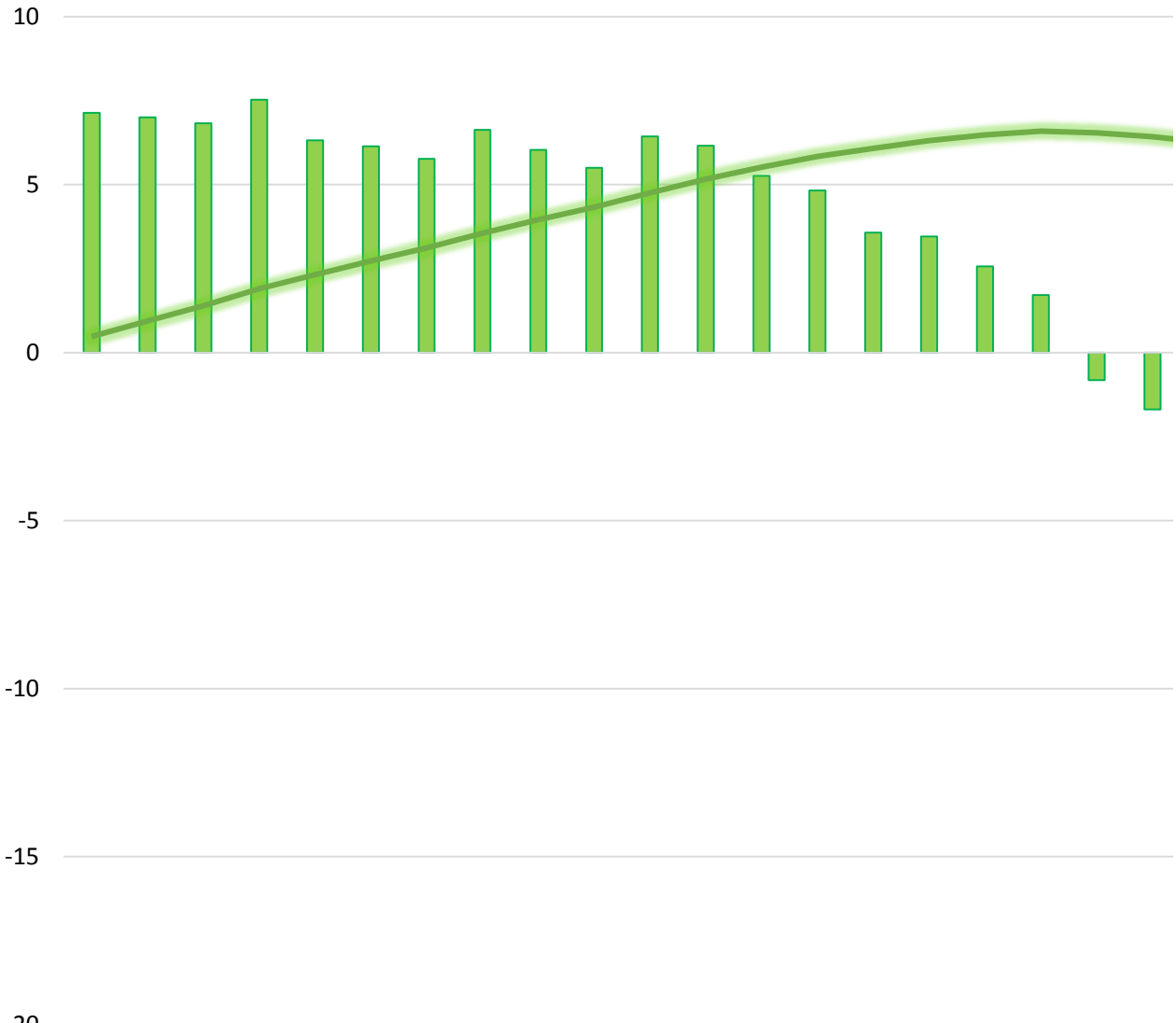
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

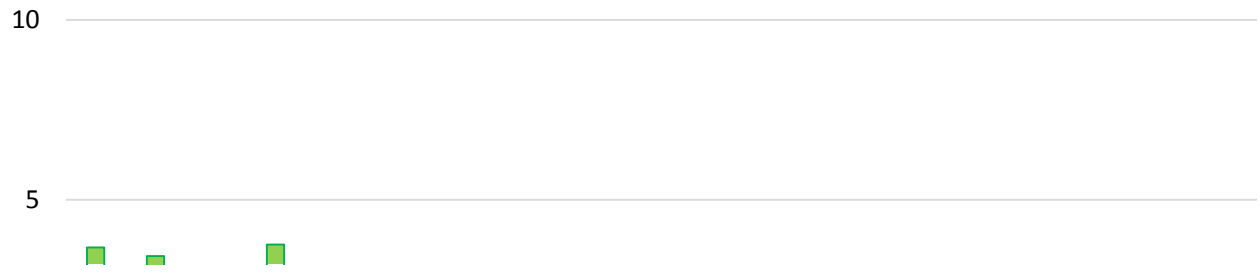
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

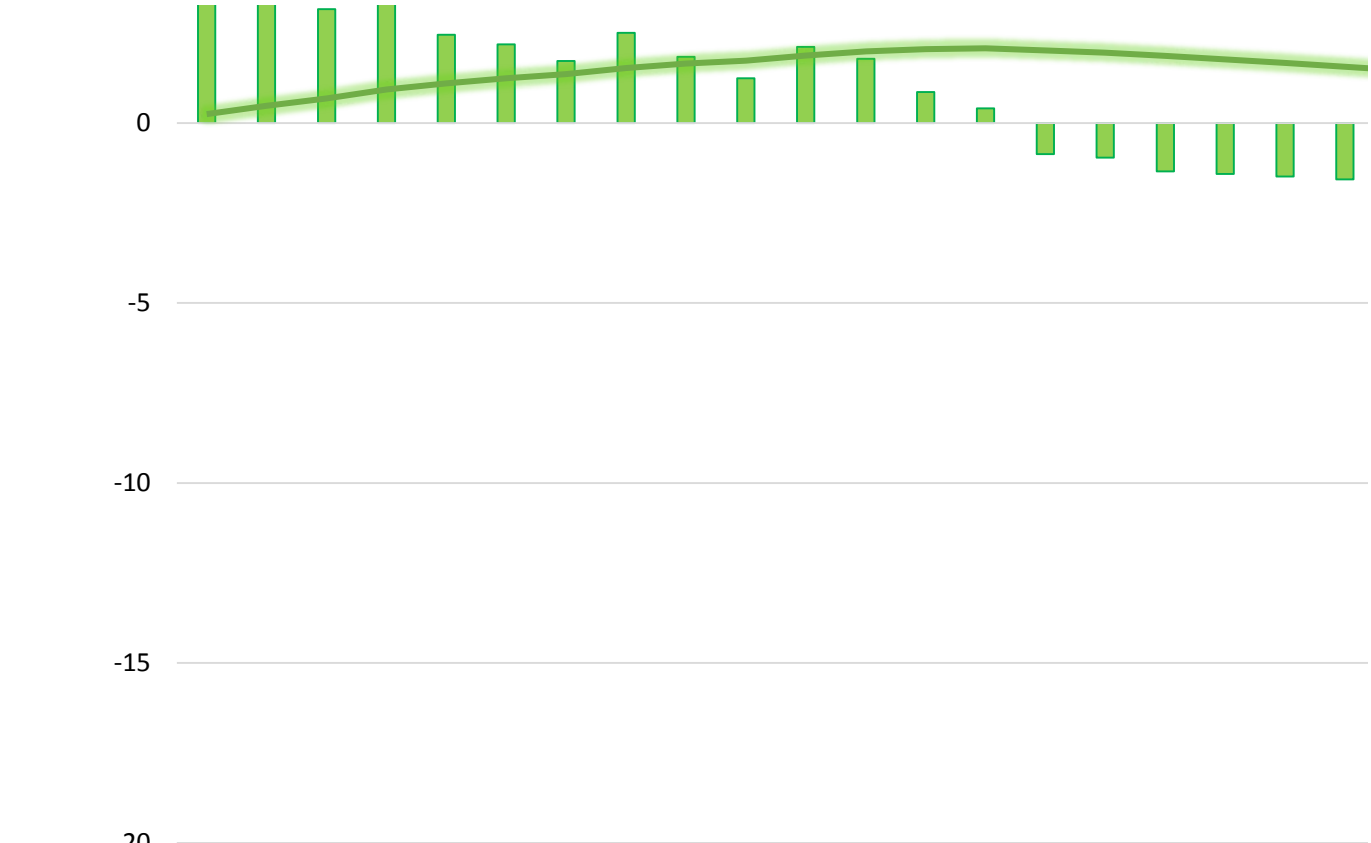


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



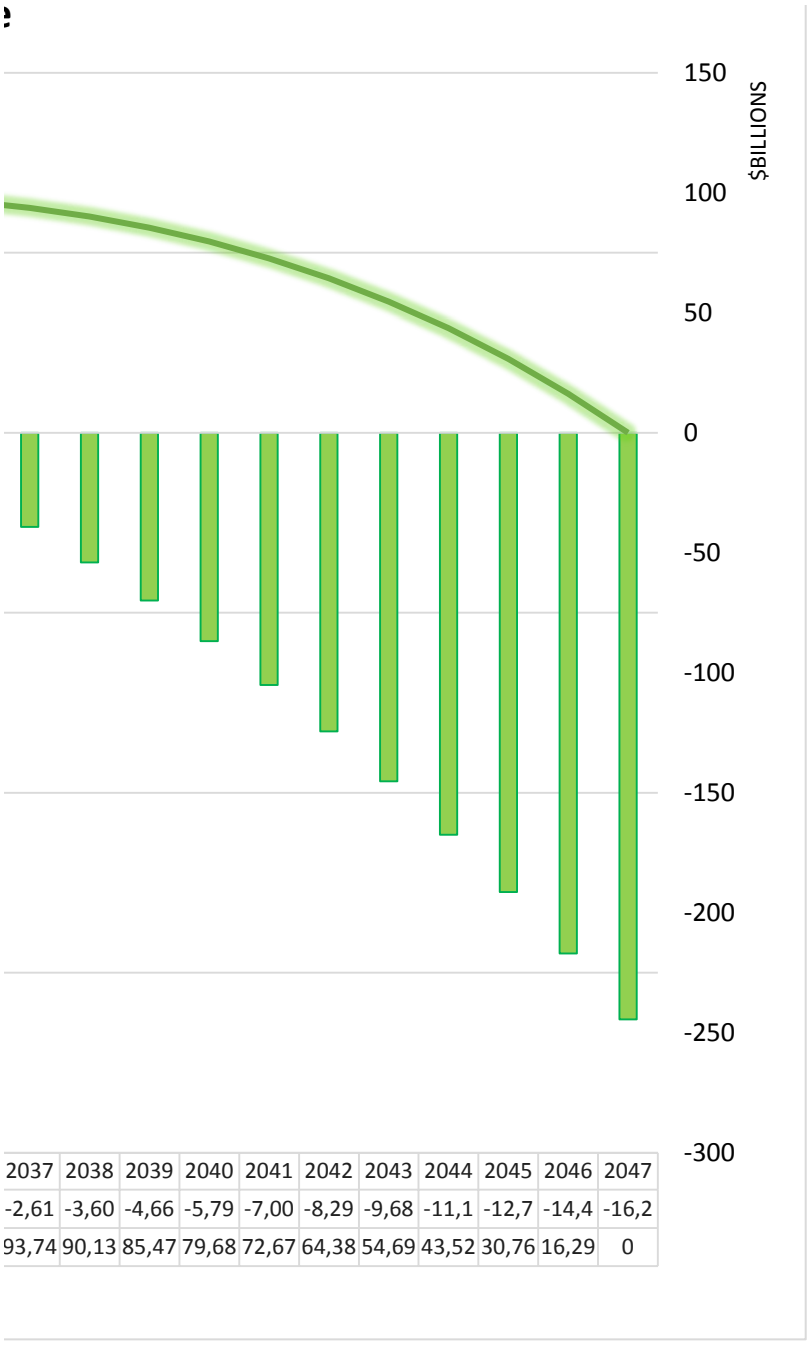


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

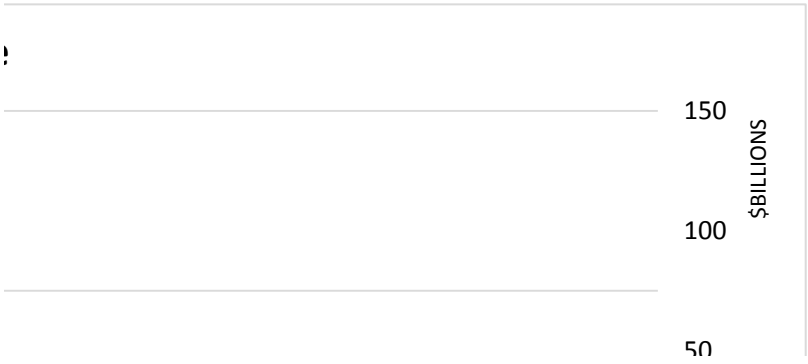
CALENDAR YEAR

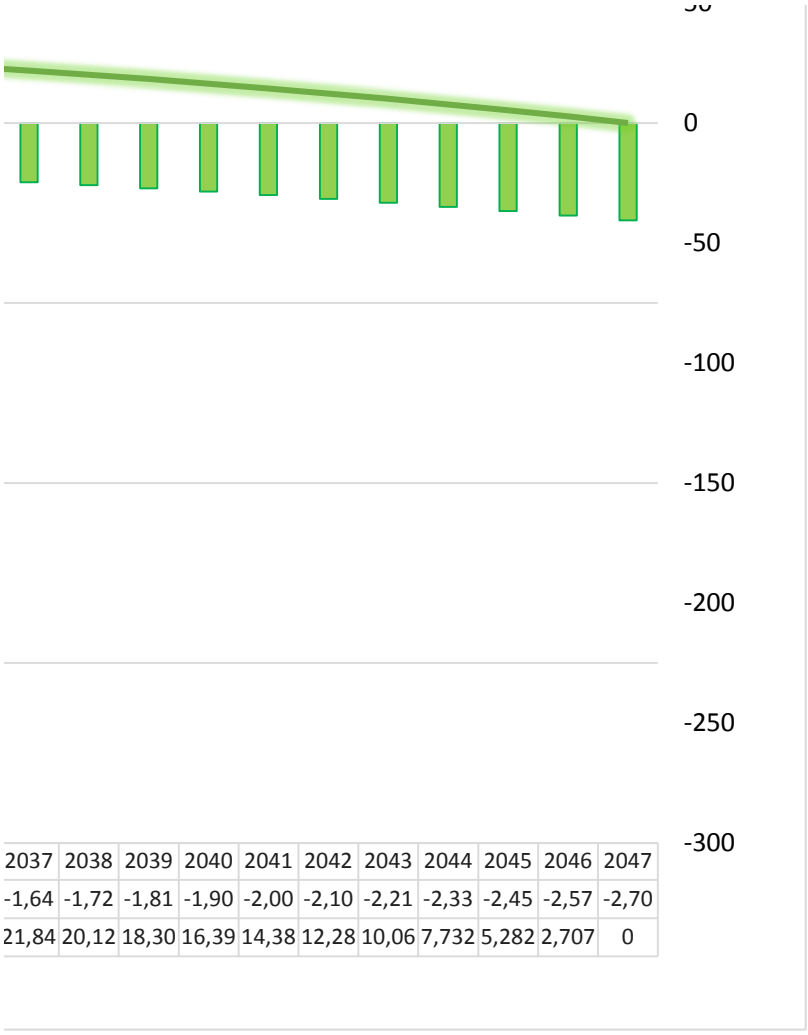


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Feb 8 Deck - Scenario 1a, 1b, 1c - at 5.12% interest
IESO GA cost forecast + extrapolation

Scenario
1a

1b

1c

1d

1e

	2017	2018	2019	2020
rate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	4674	9542	14587	21173

GA Payment from Impacted Rate Class	7421	7205	6995	6329
Accumulated debt in present year (including interest)	4674	9544	14589	21175

GA Payment from Impacted Rate Class	7421	7425	7440	7013
Accumulated debt in present year (including interest)	4674	9323	13913	19780

GA Payment from Impacted Rate Class	9915	9676	9427	9445
Accumulated debt in present year (including interest)	2180	4450	6803	9875

GA Payment from Impacted Rate Class	10596	10370	10129	10162
Accumulated debt in present year (including interest)	1500	3042	4620	6863

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
27212	33084	38588	44968	50769	56056	62291	68274

5890	6156	6434	6724	7028	7345	7677	8024
27212	33082	38585	44963	50762	56048	62281	68263

6825	7042	7266	7497	7736	7983	8237	8499
24810	29671	34167	39545	44359	48679	53976	59058

8532	8703	8877	9054	9236	9420	9609	9801
12692	15272	17420	20384	22719	24494	27181	29590

9264	9449	9638	9831	10027	10228	10432	10641
8794	10429	11568	13457	14645	15200	16588	17614

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
73391	78103	81594	85015	87596	89375	88679	87180

8386	8765	9160	9574	10006	10458	10931	11424
73378	78089	81578	84997	87577	89356	88659	87159

8770	9049	9337	9634	9941	10257	10584	10921
63318	67230	69987	72754	74773	76097	75068	73377

9997	10197	10401	10609	10821	10916	8822	8548
31116	32233	32135	31991	31045	29473	27822	26085

10854	11071	10196	10361	9779	9298	7203	6930
17670	17225	16565	15871	15142	14376	13570	12723

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
84828	81568	77341	72085	65730	58203	49425	39310

11940	12480	13043	13632	14248	14891	15564	16267
84806	81546	77320	72065	65711	58186	49409	39297

11269	11628	11998	12380	12774	13181	13600	14033
70990	67875	63995	59310	53778	47352	39985	31624

8288	8040	7805	7580	7367	7164	6970	6786
24260	22342	20325	18206	15978	13635	11173	8586

6670	6422	6186	5962	5748	5545	5352	5168
11833	10897	9914	8880	7793	6651	5450	4188

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
27767	14699	0	0	0	0

17001	17769	18572	2975	2831	2695
27758	14694	0	0	0	0

14480	14941	15417	2975	2831	2695
22213	11693	0	0	0	0

6611	6444	6286	2975	2831	2695
5865	3006	0	0	0	0

4993	4826	4667	2975	2831	2695
2861	1466	0	0	0	0

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb8_1a_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,867
Annual Exposure2 with start on July 1st	*2,337*	*4,867*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	3,554

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

1 Based on an interest rate of 5%.

2 Fiscal exposure based on equal monthly drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1b_30yr

1b. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,869
Annual Exposure2 with start on July 1st	*2,337*	*4,869*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	*3,554*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649
Annual Exposure2 with start on July 1st	*2,337*	*4,649*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,668
Start: July 1st	-	*3,499*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $76 billion peaking in

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270
Annual Exposure2 with start on July 1st	*1,090*	*2,270*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	545	2,203
Start: July 1st	-	*1,658*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $32 billion peaking in

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542
Annual Exposure2 with start on July 1st	*750*	*1,542*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	375	1,510
Start: July 1st	-	*1,135*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $18 billion peaking in

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	1,169 - 1,169	4,723 - 4,723

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1169**	**4963**
Total, B	1169	4963
Proposed Program Total:	1,169 - 1,169	4,963 - 4,963

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1a
Scenario 1b
Scenario 1c
Scenario 1d
Scenario 1e

2019	2020	2021	2022
5,045	6,586	6,039	5,872
5,045	*6,586*	*6,039*	*5,872*

2018-19	2019-20	2020-21	2021-2022
4,912	5,430	6,449	5,997
4,912	*5,430*	*6,449*	*5,997*

2034.

Actuals are subject t
- The highest debt ac
- Compared to a 5% i

[1] Based on an interes
[2] Fiscal exposure bas
[3] Fiscalized based on

depend on decision on accounting treatment.

2019	2020	2021	2022
5,045	6,586	6,037	5,870
5,045	*6,586*	*6,037*	*5,870*

2018-19	2019-20	2020-21	2021-2022
4,913	5,430	6,449	5,996
4,913	*5,430*	*6,449*	*5,996*

2034.

2019	2020	2021	2022
4,589	5,867	5,031	4,861
4,589	*5,867*	*5,031*	*4,861*

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988
4,634	*4,909*	*5,658*	*4,988*

2034.

2019	2020	2021	2022
2,353	3,072	2,817	2,580
2,353	*3,072*	*2,817*	*2,580*

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757
2,291	*2,533*	*3,008*	*2,757*

2030.

2019	2020	2021	2022
1,578	2,243	1,931	1,635
1,578	*2,243*	*1,931*	*1,635*

2018-19	2019-20	2020-21	2021-2022

1,551	1,745	2,165	1,857
1,551	*1,745*	*2,165*	*1,857*

2029.



2018-19	2019-20	2020-21	2021-2022
4,913 - 4,912	5,430 - 5,430	6,449 - 6,449	5,996 - 5,997

/1

2018-19[1]	2019-20[1]	2020-21[1]
4912	5430	6449
4913	5430	6449
225	279	323
60	60	60
18	18	18
5215	**5787**	**6850**
5216	5787	6850

5,216 - 5,215 5,787 - 5,787 6,850 - 6,850

Total Principal Debt	Total Accumulated Interest Costs	**Peak Total Debt**	
52,287	85,599	89,375	occurs in Year 2034
52,275	85,582	89,356	occurs in Year 2034
44,449	72,823	76,097	occurs in Year 2034
21,239	29,589	32,233	occurs in Year 2030
12,350	16,239	17,670	occurs in Year 2029

o actual prices and actual interest rates.
:cumulation (at 5% interest rate) is expected to be approximately $62 billion, peaking in 203 and $17-21 billion (at 3.5% interest
interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately $33-$36 million.

st rate of 5%.
sed on equal monthly drawdown of debt.
75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on mo

Feb8_1a_30yr
Feb8_1b_30yr
Feb8_1c_30yr
Feb8_1d_30yr
Feb8_1e_30yr

t rate), peaking in 2028.

nth of the year. Actuals may also depend on decision on accounting treatment.

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-275	-311	-350	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,573	85,599
Equal Monthly Debt Drawdown	6,743	4,556	

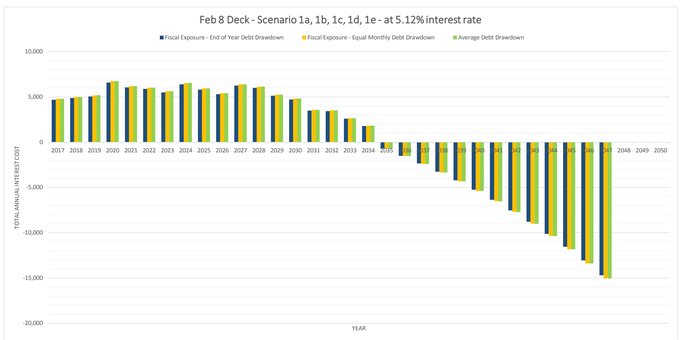
	Feb8 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,375	2034	52,287
Equal Monthly Debt Drawdown	91,501		

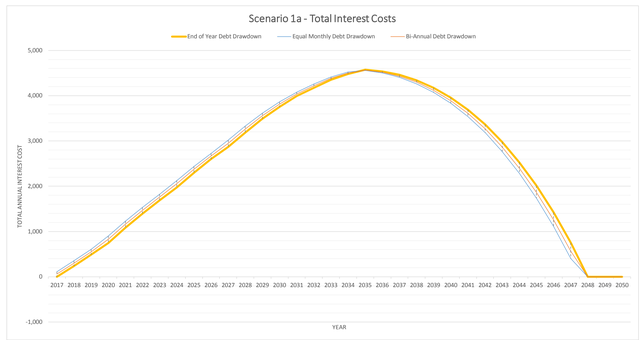
Feb8 1a, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	
c = a*5%	*Interest Cost - Feb8 1a, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,301*	*2,597*	*2,868*	*3,187*	*3,493*	*3,755*	*3,996*	*4,175*	*4,350*	*4,482*	*4,573*	*4,537*	*4,460*	*4,340*	*4,173*	*3,957*	*3,688*	*3,363*	*2,978*	*2,529*	*2,011*	*1,421*	*752*	*0*	*0*	*0*	85,599
b	Additional GA Debt Drawdown, End of Year	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,307	32,728	35,309	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	39,310	27,767	14,699	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	52,287	52,287	52,287	51,591	50,091	47,739	44,479	40,253	34,997	28,642	21,115	12,336	0	0	0	0	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,813	33,987	38,337	42,818	47,391	51,928	56,388	60,728	64,901	68,858	72,546	75,909	78,887	81,416	83,427	84,847	85,599				
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	51,781	51,028	49,259	46,557	41,288	35,252	28,440	20,840	12,440	3,227	-6,816	-17,706	-29,462	-42,106	-55,660	-70,149	-85,599				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	

Feb8 1a, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	
4,556	*Interest Cost - Feb8 1a, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,824*	*2,126*	*2,439*	*2,723*	*3,016*	*3,329*	*3,615*	*3,867*	*4,079*	*4,256*	*4,411*	*4,524*	*4,556*	*4,501*	*4,404*	*4,262*	*4,073*	*3,832*	*3,537*	*3,184*	*2,769*	*2,288*	*1,737*	*1,110*	*402*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
	Monthly Drawdown	390	386	380	487	413	373	318	367	292	224	281	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(980)	(1,054)	(1,129)	(1,207)	(1,288)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,738	4,665	5,979	5,074	4,586	3,902	4,510	3,584	2,753	3,447	2,863	1,662	980	(517)	(772)	(1,810)	(2,766)	(5,394)	(6,180)	(6,975)	(7,781)	(8,599)	(9,432)	(10,282)	(11,149)	(12,036)	(12,944)	(13,876)	(14,834)	(15,818)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	67	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(368)	-	-	-	
	Annual Interest Cost on Opening Balance		245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,263	3,576	3,844	4,091	4,274	4,453	4,588	4,681	4,645	4,566	4,443	4,272	4,051	3,776	3,443	3,049	2,589	2,059	1,454	770	(0)	(0)	(0)	
	Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,824	2,126	2,439	2,723	3,016	3,329	3,615	3,867	4,079	4,256	4,411	4,524	4,556	4,501	4,404	4,262	4,073	3,832	3,537	3,184	2,769	2,288	1,737	1,110	402	(0)	(0)	(0)	

Feb8 1a, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*60*	*301*	*553*	*831*	*1,160*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,948*	*3,263*	*3,558*	*3,815*	*4,041*	*4,218*	*4,383*	*4,504*	*4,564*	*4,518*	*4,430*	*4,298*	*4,119*	*3,890*	*3,607*	*3,267*	*2,866*	*2,399*	*1,864*	*1,253*	*564*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,930	5,110	6,670	6,116	5,947	5,575	6,461	5,875	5,354	6,315	6,060	5,182	4,773	3,535	3,464	2,614	1,802	-705	-1,518	-2,382	-3,302	-4,280	-5,324	-6,436	-7,623	-8,891	-10,244	-11,690	-13,236	-14,887	0	0	0	
	Bi-Annual Drawdown	2,337	2,314	2,279	2,920	2,478	2,240	1,906	2,203	1,750	1,345	1,684	1,398	812	479	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,800)	(4,200)	(4,607)	(5,021)	(5,445)	(5,878)	(6,322)	(6,777)	(7,245)	(7,725)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,687	4,615	5,914	5,019	4,537	3,860	4,462	3,545	2,724	3,410	2,832	1,644	970	(512)	(763)	(1,791)	(2,737)	(5,336)	(6,113)	(6,900)	(7,697)	(8,507)	(9,331)	(10,171)	(11,029)	(11,907)	(12,805)	(13,727)	(14,674)	(15,648)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	494	756	1,097	1,410	1,714	1,999	2,330	2,631	2,905	3,228	3,538	3,803	4,047	4,228	4,405	4,539	4,631	4,595	4,517	4,395	4,227	4,008	3,735	3,406	3,016	2,561	2,037	1,439	762	(0)	(0)	(0)	
	Total Annual Interest Cost	60	301	553	831	1,160	1,467	1,763	2,056	2,375	2,665	2,948	3,263	3,558	3,815	4,041	4,218	4,383	4,504	4,564	4,518	4,430	4,298	4,119	3,890	3,607	3,267	2,866	2,399	1,864	1,253	564	(0)	(0)	(0)	

Feb8 1a, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,723*	*3,027*	*3,340*	*3,624*	*3,875*	*4,085*	*4,262*	*4,416*	*4,527*	*4,555*	*4,499*	*4,400*	*4,257*	*4,065*	*3,822*	*3,525*	*3,170*	*2,753*	*2,270*	*1,716*	*1,086*	*376*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,992	5,174	6,754	6,193	6,022	5,645	6,543	5,950	5,422	6,395	6,137	5,248	4,833	3,580	3,508	2,647	1,825	-714	-1,537	-2,412	-3,343	-4,334	-5,391	-6,517	-7,720	-9,003	-10,374	-11,838	-13,403	-15,075	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-274	-311	-349	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,572	85,582
Equal Monthly Debt Drawdown	6,743	4,555	

	Feb8 1b, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,356	2034	52,275
Equal Monthly Debt Drawdown	91,481		

Feb8 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
a — Debt, Beginning of Year	0	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	
c = a*5% — *Interest Cost - Feb8 1b, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,300*	*2,597*	*2,867*	*3,186*	*3,492*	*3,754*	*3,995*	*4,174*	*4,349*	*4,481*	*4,572*	*4,536*	*4,459*	*4,339*	*4,172*	*3,956*	*3,687*	*3,362*	*2,977*	*2,528*	*2,011*	*1,420*	*752*	*0*	*0*	*0*	85,582
b — Additional GA Debt Drawdown, End of Year	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,309	32,722	35,302	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	39,297	27,758	14,694	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	52,275	52,275	52,275	52,275	51,578	50,078	47,725	44,465	40,239	34,984	28,630	21,105	12,328	0	0	0	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,809	33,983	38,331	42,812	47,384	51,920	56,379	60,718	64,890	68,846	72,533	75,895	78,871	81,399	83,410	84,830	85,582				
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	51,769	51,014	49,246	46,544	41,275	35,239	28,428	20,829	12,431	3,219	-6,822	-17,709	-29,462	-42,102	-55,652	-70,136	-85,582				
Fiscal Exposure - End of Year Debt Drawdown	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	

Feb8 1b, 30-yr — Equal Monthly Debt Drawdown

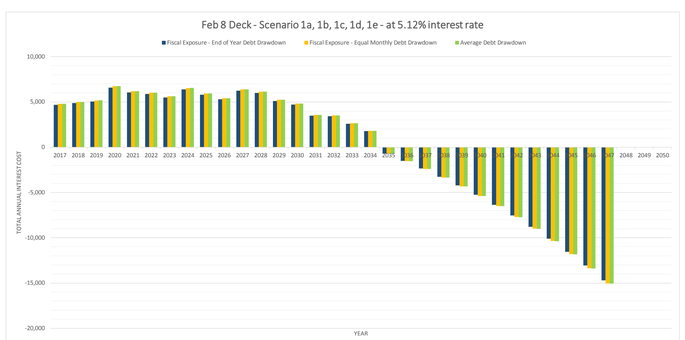
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	
4,555 — *Interest Cost - Feb8 1b, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,823*	*2,126*	*2,438*	*2,723*	*3,016*	*3,329*	*3,614*	*3,866*	*4,078*	*4,255*	*4,410*	*4,523*	*4,555*	*4,500*	*4,403*	*4,261*	*4,072*	*3,831*	*3,536*	*3,183*	*2,768*	*2,287*	*1,736*	*1,109*	*402*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
Monthly Drawdown	390	386	380	487	413	373	317	367	292	224	280	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(979)	(1,053)	(1,129)	(1,207)	(1,287)	(0)	-	-	
FV of Monthly Drawdown at 5%	4,786	4,740	4,665	5,979	5,072	4,585	3,900	4,509	3,582	2,752	3,446	2,862	1,661	979	(518)	(772)	(1,811)	(2,766)	(5,394)	(6,179)	(6,974)	(7,780)	(8,598)	(9,431)	(10,279)	(11,146)	(12,033)	(12,941)	(13,872)	(14,829)	(15,813)	(0)	-	-	
Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	66	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(367)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,262	3,576	3,843	4,090	4,273	4,452	4,587	4,680	4,644	4,565	4,442	4,271	4,050	3,775	3,442	3,048	2,588	2,058	1,454	770	0	0	0	
Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,823	2,126	2,438	2,723	3,016	3,329	3,614	3,866	4,078	4,255	4,410	4,523	4,555	4,500	4,403	4,261	4,072	3,831	3,536	3,183	2,768	2,287	1,736	1,109	402	0	0	0	

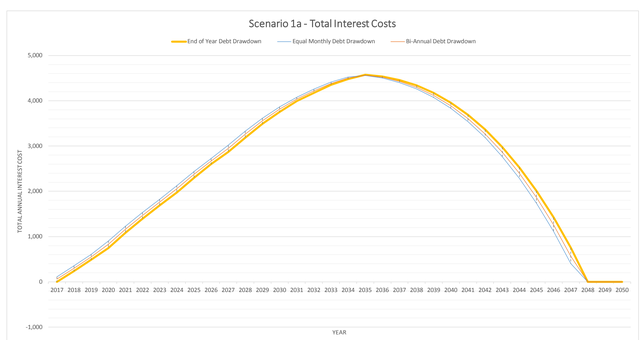
Feb8 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*60*	*301*	*553*	*831*	*1,161*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,947*	*3,263*	*3,558*	*3,814*	*4,040*	*4,217*	*4,382*	*4,503*	*4,563*	*4,517*	*4,429*	*4,297*	*4,118*	*3,889*	*3,606*	*3,266*	*2,865*	*2,399*	*1,863*	*1,253*	*564*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	4,734	4,931	5,110	6,670	6,115	5,945	5,573	6,460	5,874	5,353	6,313	6,058	5,181	4,771	3,534	3,463	2,613	1,801	-706	-1,519	-2,383	-3,302	-4,280	-5,323	-6,435	-7,622	-8,889	-10,242	-11,687	-13,231	-14,882	0	0	0	
Bi-Annual Drawdown	2,337	2,315	2,279	2,920	2,477	2,239	1,905	2,202	1,750	1,344	1,683	1,398	811	478	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,799)	(4,199)	(4,606)	(5,020)	(5,444)	(5,877)	(6,320)	(6,775)	(7,242)	(7,723)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	4,734	4,689	4,615	5,914	5,017	4,535	3,859	4,460	3,544	2,722	3,409	2,831	1,643	969	(513)	(764)	(1,791)	(2,737)	(5,336)	(6,113)	(6,899)	(7,696)	(8,506)	(9,329)	(10,169)	(11,027)	(11,904)	(12,802)	(13,723)	(14,670)	(15,643)	(0)	-	-	
Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	242	495	756	1,097	1,410	1,714	1,999	2,330	2,630	2,904	3,227	3,537	3,802	4,046	4,227	4,404	4,538	4,630	4,594	4,516	4,394	4,225	4,006	3,734	3,405	3,015	2,560	2,036	1,438	761	0	(0)	(0)	
Total Annual Interest Cost	60	301	553	831	1,161	1,467	1,763	2,056	2,375	2,665	2,947	3,263	3,558	3,814	4,040	4,217	4,382	4,503	4,563	4,517	4,429	4,297	4,118	3,889	3,606	3,266	2,865	2,399	1,863	1,253	564	0	(0)	(0)	

Feb8 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,732*	*3,027*	*3,339*	*3,623*	*3,875*	*4,084*	*4,261*	*4,415*	*4,526*	*4,554*	*4,498*	*4,399*	*4,255*	*4,064*	*3,821*	*3,524*	*3,169*	*2,752*	*2,269*	*1,715*	*1,086*	*376*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	4,794	4,994	5,174	6,754	6,192	6,020	5,643	6,541	5,948	5,420	6,393	6,135	5,246	4,831	3,578	3,507	2,646	1,824	-715	-1,538	-2,413	-3,343	-4,334	-5,390	-6,516	-7,718	-9,001	-10,371	-11,835	-13,398	-15,070	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1c_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	
			111	111	109	140	120	116	107	128	115	103	126	121	101	93	66	66	48	32	-24	-40	-57	-74	-92	-111	-132	-153	-175	-199	-224	-250	-278	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	5,867	3,893	72,823
Equal Monthly Debt Drawdown	6,006	3,869	

	Feb8 1c, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	76,097	2034	44,449
Equal Monthly Debt Drawdown	77,907		

Feb8 1c, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	
c = a*5%	*Interest Cost - Feb8 1c, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*477*	*712*	*1,012*	*1,269*	*1,518*	*1,748*	*2,023*	*2,270*	*2,491*	*2,762*	*3,022*	*3,239*	*3,440*	*3,581*	*3,722*	*3,826*	*3,893*	*3,841*	*3,754*	*3,632*	*3,473*	*3,274*	*3,034*	*2,751*	*2,423*	*2,046*	*1,618*	*1,136*	*598*	*0*	*0*	*0*	72,823
b	Additional GA Debt Drawdown, End of Year	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	
	Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	25,538	28,304	30,324	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,624	22,213	11,693	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	44,449	44,449	44,449	44,449	43,420	41,729	39,342	36,228	32,347	27,662	22,130	15,704	8,337	0	0	0	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	26,221	29,801	33,524	37,349	41,242	45,083	48,837	52,469	55,942	59,216	62,250	65,002	67,424	69,470	71,088	72,224	72,823				
	Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	43,767	42,952	41,249	38,748	33,826	28,294	22,153	15,406	8,054	94	-8,473	-17,649	-27,439	-37,846	-48,875	-60,532	-72,823				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	

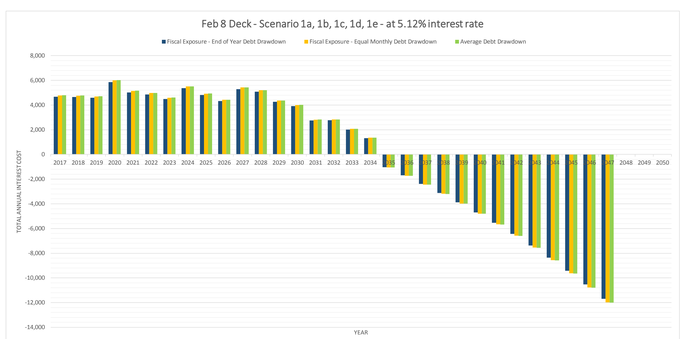
Feb8 1c, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
3,869	Debt, Beginning of Year	0	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*111*	*350*	*586*	*851*	*1,132*	*1,385*	*1,625*	*1,876*	*2,138*	*2,372*	*2,617*	*2,882*	*3,123*	*3,333*	*3,505*	*3,646*	*3,770*	*3,857*	*3,869*	*3,800*	*3,697*	*3,558*	*3,380*	*3,163*	*2,903*	*2,599*	*2,247*	*1,847*	*1,394*	*886*	*320*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	

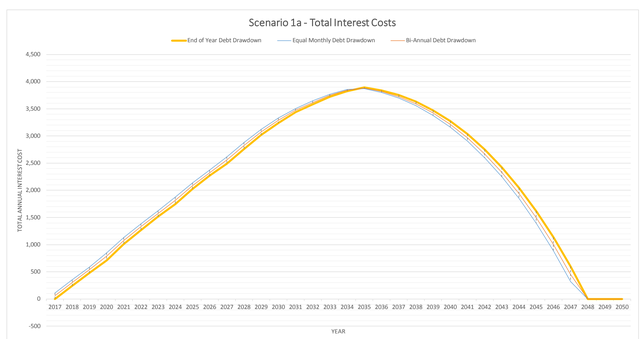
	Monthly Drawdown	390	367	343	430	335	299	248	303	233	171	234	193	103	56	(57)	(68)	(142)	(208)	(410)	(461)	(512)	(562)	(613)	(663)	(714)	(765)	(816)	(867)	(919)	(971)	(1,024)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,515	4,210	5,278	4,114	3,677	3,048	3,717	2,857	2,099	2,873	2,375	1,268	689	(699)	(834)	(1,744)	(2,561)	(5,039)	(5,664)	(6,286)	(6,907)	(7,528)	(8,148)	(8,771)	(9,395)	(10,023)	(10,654)	(11,291)	(11,934)	(12,583)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	105	98	123	96	85	71	86	66	49	67	55	29	16	(16)	(19)	(41)	(59)	(117)	(132)	(146)	(160)	(175)	(189)	(204)	(218)	(233)	(248)	(262)	(277)	(292)	-	-	-	
	Annual Interest Cost on Opening Balance	-	245	488	729	1,036	1,300	1,554	1,790	2,071	2,323	2,550	2,827	3,093	3,317	3,521	3,666	3,811	3,917	3,986	3,932	3,843	3,718	3,555	3,352	3,107	2,817	2,480	2,094	1,656	1,163	612	(0)	(0)	(0)	
	Total Annual Interest Cost	111	350	586	851	1,132	1,385	1,625	1,876	2,138	2,372	2,617	2,882	3,123	3,333	3,505	3,646	3,770	3,857	3,869	3,800	3,697	3,558	3,380	3,163	2,903	2,599	2,247	1,847	1,394	886	320	(0)	(0)	(0)	

Feb8 1c, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*60*	*299*	*536*	*787*	*1,076*	*1,332*	*1,576*	*1,817*	*2,085*	*2,325*	*2,558*	*2,827*	*3,076*	*3,290*	*3,475*	*3,616*	*3,748*	*3,842*	*3,880*	*3,819*	*3,724*	*3,592*	*3,423*	*3,214*	*2,964*	*2,669*	*2,328*	*1,939*	*1,498*	*1,002*	*449*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,708	4,648	5,942	5,095	4,923	4,553	5,447	4,876	4,375	5,364	5,147	4,315	3,962	2,792	2,802	2,045	1,341	-1,042	-1,713	-2,417	-3,155	-3,930	-4,745	-5,603	-6,508	-7,461	-8,468	-9,531	-10,655	-11,842	0	0	0	

	Bi-Annual Drawdown	2,337	2,205	2,056	2,578	2,009	1,796	1,489	1,815	1,395	1,025	1,403	1,160	620	336	(341)	(407)	(852)	(1,251)	(2,461)	(2,766)	(3,070)	(3,373)	(3,676)	(3,980)	(4,283)	(4,588)	(4,895)	(5,203)	(5,514)	(5,828)	(6,146)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,466	4,165	5,221	4,070	3,638	3,015	3,677	2,826	2,077	2,842	2,350	1,255	681	(691)	(825)	(1,725)	(2,533)	(4,985)	(5,603)	(6,219)	(6,833)	(7,447)	(8,061)	(8,676)	(9,294)	(9,915)	(10,540)	(11,170)	(11,806)	(12,448)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	56	53	66	51	46	38	46	36	26	36	30	16	9	(9)	(10)	(22)	(32)	(63)	(71)	(79)	(86)	(94)	(102)	(110)	(117)	(125)	(133)	(141)	(149)	(157)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	483	721	1,025	1,286	1,537	1,770	2,049	2,299	2,522	2,797	3,060	3,281	3,484	3,626	3,770	3,874	3,943	3,890	3,802	3,678	3,517	3,316	3,073	2,787	2,454	2,072	1,639	1,151	606	(0)	(0)	(0)	
	Total Annual Interest Cost	60	299	536	787	1,076	1,332	1,576	1,817	2,085	2,325	2,558	2,827	3,076	3,290	3,475	3,616	3,748	3,842	3,880	3,819	3,724	3,592	3,423	3,214	2,964	2,669	2,328	1,939	1,498	1,002	449	(0)	(0)	(0)	

Feb8 1c, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*120*	*358*	*594*	*862*	*1,141*	*1,394*	*1,633*	*1,886*	*2,146*	*2,380*	*2,626*	*2,892*	*3,130*	*3,340*	*3,510*	*3,651*	*3,774*	*3,859*	*3,867*	*3,797*	*3,693*	*3,552*	*3,373*	*3,154*	*2,893*	*2,587*	*2,234*	*1,832*	*1,377*	*867*	*299*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,768	4,707	6,017	5,160	4,985	4,610	5,516	4,937	4,431	5,432	5,212	4,370	4,012	2,828	2,837	2,071	1,358	-1,055	-1,735	-2,447	-3,195	-3,979	-4,805	-5,674	-6,590	-7,556	-8,575	-9,652	-10,789	-11,992	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1d_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
			52	54	56	73	67	61	51	71	56	42	64	57	36	27	-2	-3	-23	-37	-39	-41	-43	-46	-48	-50	-53	-56	-59	-62	-65	-68	-71	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,072	1,649	29,589
Equal Monthly Debt Drawdown	3,145	1,647	

	Feb8 1d, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,233	2030	21,239
Equal Monthly Debt Drawdown	32,999		

Feb8 1d, 30-yr — End of Year Debt Drawdown

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
a	Debt, Beginning of Year	0	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	
c = a*5%	*Interest Cost - Feb8 1d, 30-yr - End of Year Debt Drawdown*	*0*	*112*	*228*	*348*	*505*	*649*	*781*	*891*	*1,043*	*1,162*	*1,253*	*1,391*	*1,514*	*1,592*	*1,649*	*1,644*	*1,637*	*1,588*	*1,508*	*1,423*	*1,335*	*1,241*	*1,143*	*1,040*	*931*	*817*	*698*	*572*	*439*	*300*	*154*	*0*	*0*	*0*	29,589
b	Additional GA Debt Drawdown, End of Year	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	11,372	11,227	10,281	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,586	5,865	3,006	0	0	0	0	
	Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	20,763	20,763	20,763	20,763	19,112	17,375	15,550	13,632	11,616	9,496	7,268	4,926	2,464	0	0	0	0	0	0	0	
	Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	13,118	14,763	16,399	17,988	19,495	20,919	22,253	23,495	24,638	25,678	26,609	27,426	28,124	28,696	29,135	29,435	29,589				
	Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	19,017	17,228	14,645	11,486	8,326	5,167	2,007	-1,153	-4,312	-7,472	-10,631	-13,791	-16,951	-20,110	-23,270	-26,429	-29,589				
Fiscal Exposure - End of Year Debt Drawdown		2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	

Feb8 1d, 30-yr — Equal Monthly Debt Drawdown

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Debt, Beginning of Year	0	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	
1,647	*Interest Cost - Feb8 1d, 30-yr*	*52*	*166*	*284*	*421*	*572*	*711*	*832*	*962*	*1,098*	*1,205*	*1,317*	*1,448*	*1,550*	*1,619*	*1,647*	*1,641*	*1,614*	*1,551*	*1,469*	*1,382*	*1,291*	*1,196*	*1,095*	*989*	*878*	*762*	*639*	*510*	*375*	*232*	*82*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
	Monthly Drawdown	182	180	177	227	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	-	-	-	
	FV of Monthly Drawdown at 5%	2,232	2,210	2,176	2,788	2,366	1,977	1,399	2,123	1,322	628	1,468	1,042	12	(487)	(1,788)	(1,831)	(2,644)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	-	-	-	
	Annual Interest Cost on New Drawdowns	52	51	51	65	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	-	-	-	
	Annual Interest Cost on Opening Balance	-	114	233	356	517	665	800	912	1,068	1,190	1,283	1,424	1,550	1,630	1,688	1,683	1,676	1,626	1,544	1,457	1,366	1,271	1,170	1,065	954	837	714	585	450	307	157	0	0	0	
	Total Annual Interest Cost	52	166	284	421	572	711	832	962	1,098	1,205	1,317	1,448	1,550	1,619	1,647	1,641	1,614	1,551	1,469	1,382	1,291	1,196	1,095	989	878	762	639	510	375	232	82	0	0	0	

Feb8 1d, 30-yr — Bi-Annual Debt Drawdown

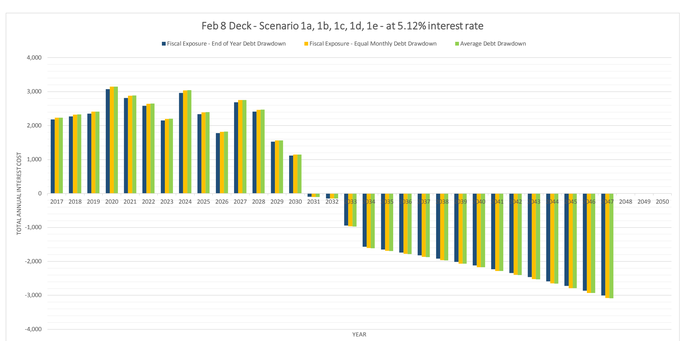
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

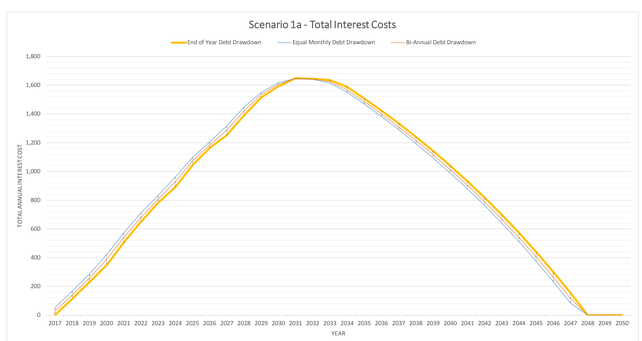
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Debt, Beginning of Year	0	2,208	4,507	6,890	10,001	12,854	15,467	17,642	20,645	23,009	24,807	27,529	29,969	31,514	32,645	32,546	32,400	31,442	29,850	28,177	26,419	24,571	22,628	20,585	18,439	16,182	13,810	11,316	8,695	5,940	3,044	0	0	0	
	Interest Cost - Feb8 1d, 30-yr	*28*	*141*	*258*	*387*	*541*	*682*	*809*	*929*	*1,073*	*1,185*	*1,288*	*1,421*	*1,533*	*1,606*	*1,648*	*1,642*	*1,625*	*1,568*	*1,487*	*1,401*	*1,311*	*1,217*	*1,117*	*1,013*	*903*	*787*	*666*	*539*	*404*	*264*	*115*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,208	4,507	6,890	10,001	12,854	15,467	17,642	20,645	23,009	24,807	27,529	29,969	31,514	32,645	32,546	32,400	31,442	29,850	28,177	26,419	24,571	22,628	20,585	18,439	16,182	13,810	11,316	8,695	5,940	3,044	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		2,208	2,299	2,383	3,111	2,853	2,613	2,175	3,003	2,364	1,798	2,722	2,440	1,545	1,131	-98	-147	-958	-1,591	-1,673	-1,758	-1,848	-1,943	-2,042	-2,147	-2,257	-2,372	-2,493	-2,621	-2,755	-2,896	-3,044	0	0	0	
	Bi-Annual Drawdown	1,090	1,079	1,063	1,362	1,156	965	683	1,037	646	307	717	509	6	(238)	(873)	(894)	(1,291)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	2,208	2,186	2,153	2,758	2,341	1,955	1,384	2,100	1,308	621	1,453	1,031	12	(481)	(1,769)	(1,812)	(2,616)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	-	-	-	
	Annual Interest Cost on New Drawdowns	28	28	27	35	30	25	17	27	17	8	18	13	0	(6)	(22)	(23)	(33)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	-	-	-	
	Annual Interest Cost on Opening Balance	-	113	231	353	512	658	791	903	1,056	1,177	1,269	1,408	1,533	1,612	1,670	1,665	1,658	1,609	1,527	1,442	1,352	1,257	1,158	1,053	943	828	707	579	445	304	156	0	0	0	
	Total Annual Interest Cost	28	141	258	387	541	682	809	929	1,073	1,185	1,288	1,421	1,533	1,606	1,648	1,642	1,625	1,568	1,487	1,401	1,311	1,217	1,117	1,013	903	787	666	539	404	264	115	0	0	0	

Feb8 1d, 30-yr — Average Debt Drawdown

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)
($ millions)

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Debt, Beginning of Year	0	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	
	Interest Cost - Feb8 1d, 30-yr	*56*	*170*	*288*	*427*	*577*	*715*	*836*	*967*	*1,103*	*1,208*	*1,322*	*1,452*	*1,553*	*1,621*	*1,647*	*1,640*	*1,613*	*1,548*	*1,466*	*1,379*	*1,288*	*1,192*	*1,091*	*986*	*874*	*758*	*635*	*505*	*370*	*227*	*77*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		2,236	2,328	2,413	3,150	2,889	2,646	2,203	3,041	2,394	1,821	2,756	2,471	1,565	1,145	-100	-148	-970	-1,612	-1,694	-1,781	-1,872	-1,967	-2,068	-2,174	-2,285	-2,402	-2,525	-2,654	-2,790	-2,933	-3,083	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1e_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0
			36	37	38	53	46	39	27	45	28	13	33	24	1	-11	-16	-16	-17	-18	-19	-20	-21	-22	-23	-25	-26	-27	-29	-30	-32	-33	-35	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,243	904	16,239
Equal Monthly Debt Drawdown	2,297	903	

	Feb8 1e, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	17,670	2029	12,350
Equal Monthly Debt Drawdown	18,091		

Feb8 1e, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
a Debt, Beginning of Year	0	1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	
c = a*5% *Interest Cost - Feb8 1e, 30-yr - End of Year Debt Drawdown*	*0*	*77*	*156*	*236*	*351*	*450*	*534*	*592*	*688*	*749*	*778*	*849*	*901*	*904*	*881*	*847*	*812*	*775*	*735*	*694*	*651*	*605*	*558*	*507*	*454*	*399*	*340*	*279*	*214*	*146*	*75*	*0*	*0*	*0*	16,239
b Additional GA Debt Drawdown, End of Year	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
d = a+b+c Accumulated debt in present year (including 5.12% annual interest)	1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
Feb8 1e, 30-yr - Accumulated Interest Costs	0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	6,605	5,911	5,182	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,188	2,861	1,466	0	0	0	0
Feb8 1e, 30-yr - Accumulated Debt Principal	1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	9,960	9,960	9,960	9,960	9,155	8,308	7,418	6,482	5,498	4,465	3,378	2,235	1,035	0	0	0	0	0	0	0	
Feb8 1e, 30-yr - Accumulated Interest Costs	0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	8,146	8,993	9,805	10,580	11,315	12,010	12,661	13,266	13,824	14,331	14,785	15,184	15,524	15,803	16,017	16,164	16,239				
Feb8 1e, 30-yr - Accumulated Debt Principal	1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	8,419	6,878	5,337	3,796	2,255	714	-827	-2,369	-3,910	-5,451	-6,992	-8,533	-10,074	-11,615	-13,156	-14,697	-16,239				
Fiscal Exposure - End of Year Debt Drawdown	1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	

Feb8 1e, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	
903 *Interest Cost - Feb8 1e, 30-yr*	*36*	*113*	*193*	*290*	*397*	*489*	*561*	*637*	*717*	*762*	*811*	*873*	*903*	*893*	*866*	*831*	*795*	*756*	*716*	*674*	*630*	*583*	*534*	*483*	*428*	*372*	*312*	*249*	*183*	*113*	*40*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	
Monthly Drawdown	125	122	119	167	132	99	50	108	42	(16)	51	15	(70)	(112)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	-	-	-	
FV of Monthly Drawdown at 5%	1,536	1,500	1,457	2,055	1,617	1,213	620	1,328	512	(199)	625	182	(865)	(1,382)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	-	-	-	
Annual Interest Cost on New Drawdowns	36	35	34	48	38	28	14	31	12	(5)	15	4	(20)	(32)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	-	-	-	
Annual Interest Cost on Opening Balance	-	79	159	242	359	461	546	606	705	767	796	869	923	926	902	868	831	793	753	711	666	620	571	519	465	408	348	285	219	150	77	0	0	0	
Total Annual Interest Cost	36	113	193	290	397	489	561	637	717	762	811	873	903	893	866	831	795	756	716	674	630	583	534	483	428	372	312	249	183	113	40	0	0	0	

Feb8 1e, 30-yr — Bi-Annual Debt Drawdown

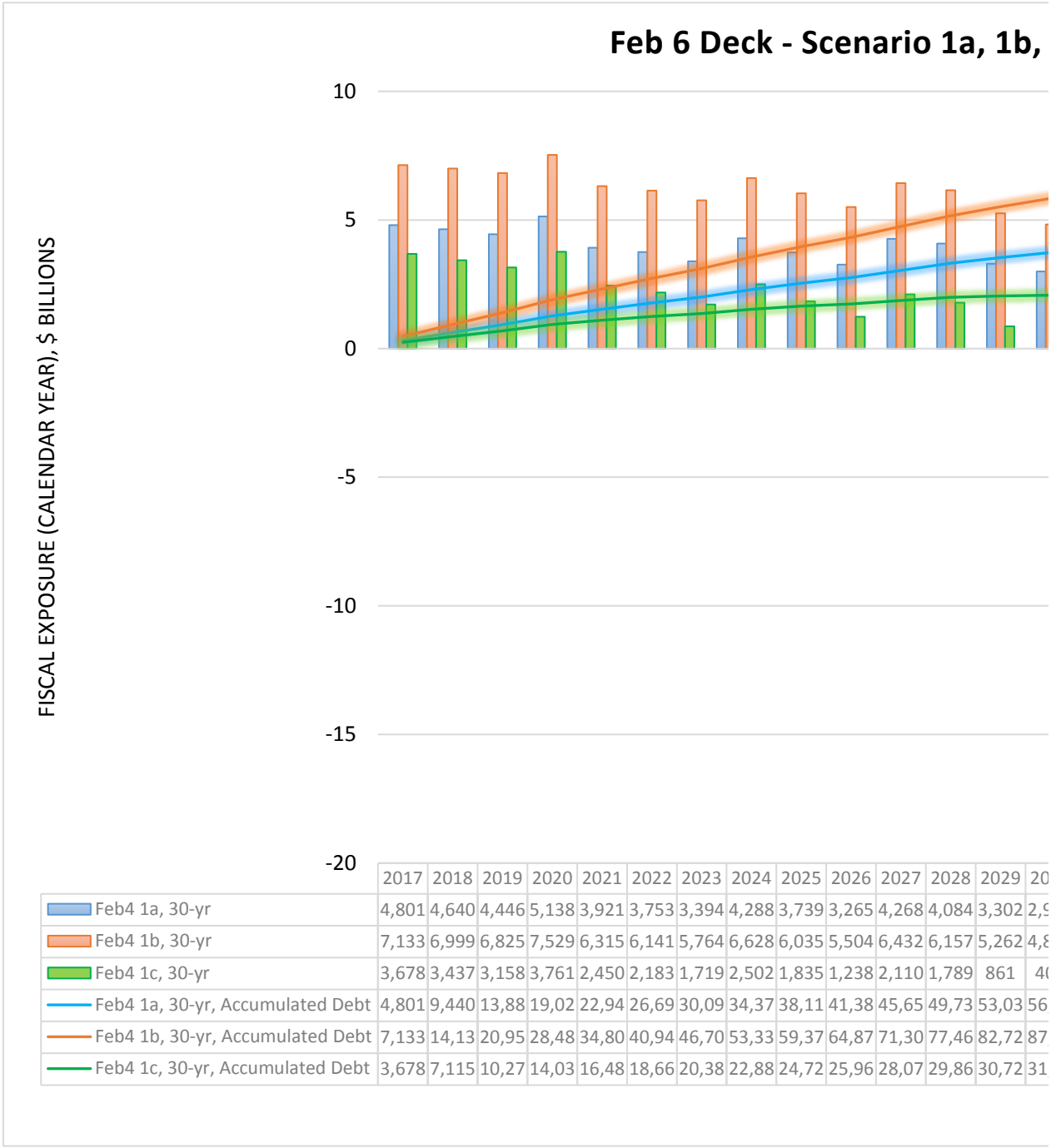
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	
Interest Cost - Feb8 1e, 30-yr	*19*	*96*	*176*	*265*	*376*	*471*	*548*	*616*	*704*	*756*	*795*	*862*	*902*	*898*	*873*	*839*	*803*	*765*	*725*	*683*	*640*	*593*	*545*	*494*	*440*	*384*	*325*	*263*	*197*	*129*	*56*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	1,519	1,561	1,598	2,272	1,956	1,655	1,154	1,913	1,203	562	1,406	1,040	57	-451	-668	-703	-738	-776	-816	-858	-902	-948	-996	-1,047	-1,101	-1,157	-1,216	-1,278	-1,344	-1,413	-1,485	0	0	0	
Bi-Annual Drawdown	750	733	711	1,003	790	592	303	649	250	(97)	305	89	(423)	(675)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	-	-	-	
FV of Bi-Annual Drawdown at 5%	1,519	1,484	1,441	2,033	1,600	1,200	613	1,314	506	(197)	618	180	(856)	(1,367)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	-	-	-	
Annual Interest Cost on New Drawdowns	19	19	18	26	20	15	8	17	6	(2)	8	2	(11)	(17)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	-	-	-	
Annual Interest Cost on Opening Balance	-	78	158	239	356	456	540	599	697	759	788	860	913	916	893	858	822	785	745	703	659	613	565	514	460	404	345	282	217	148	76	0	0	0	
Total Annual Interest Cost	19	96	176	265	376	471	548	616	704	756	795	862	902	898	873	839	803	765	725	683	640	593	545	494	440	384	325	263	197	129	56	0	0	0	

Feb8 1e, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	
Interest Cost - Feb8 1e, 30-yr	*38*	*116*	*196*	*294*	*401*	*492*	*563*	*640*	*719*	*763*	*813*	*875*	*903*	*893*	*864*	*830*	*793*	*755*	*715*	*673*	*628*	*581*	*532*	*481*	*427*	*369*	*310*	*247*	*180*	*111*	*38*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)	1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	1,538	1,581	1,619	2,301	1,980	1,676	1,168	1,938	1,219	569	1,424	1,053	57	-457	-677	-711	-748	-786	-826	-869	-913	-960	-1,009	-1,060	-1,115	-1,172	-1,232	-1,295	-1,361	-1,430	-1,504	0	0	0	

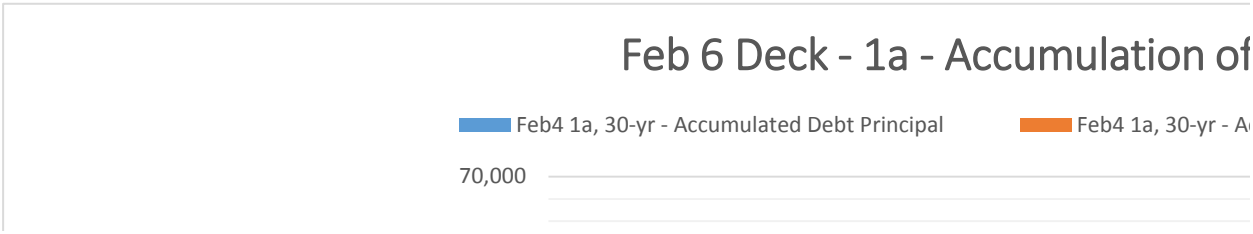
Feb 6 Deck

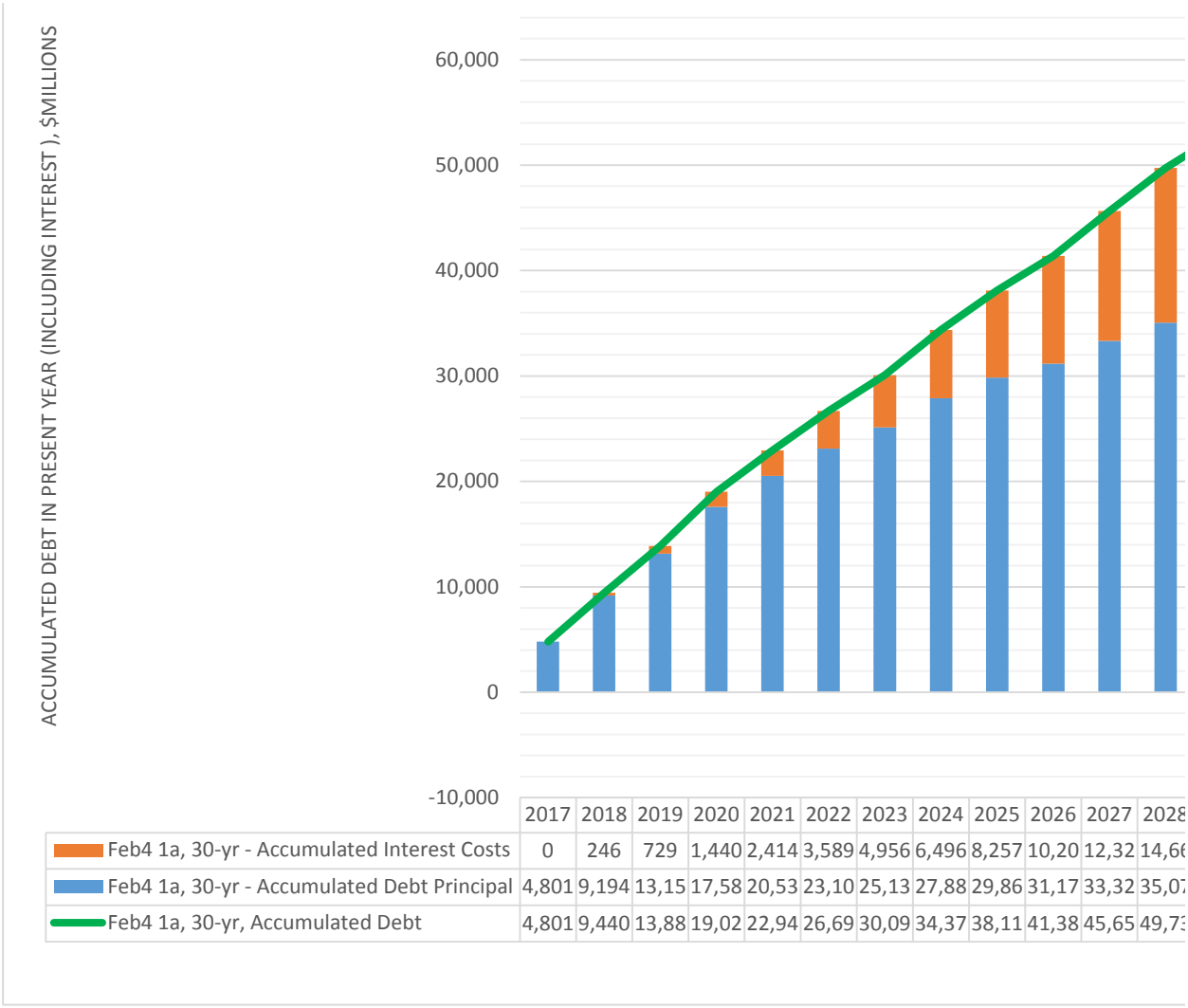
Feb 6 Deck - Scenario 1a, 1b, 1c - at 5.12% interest rate



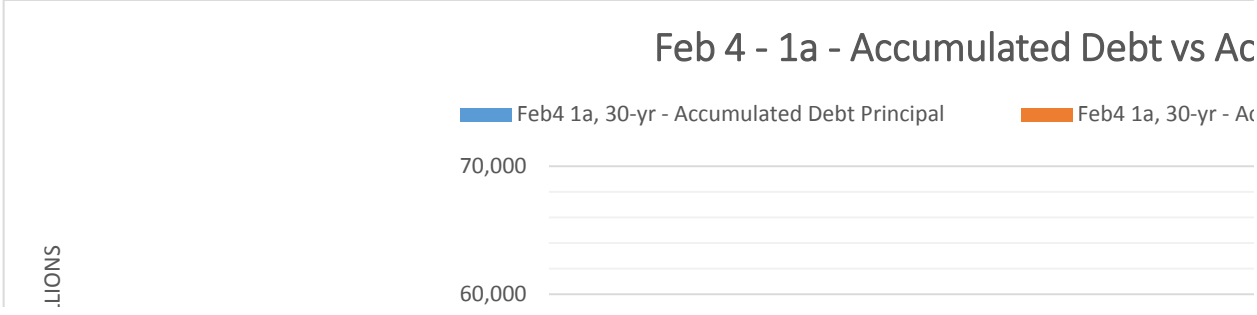
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	20
Feb4 1a, 30-yr	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,9
Feb4 1b, 30-yr	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,8
Feb4 1c, 30-yr	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	4(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73	53,03	56
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31

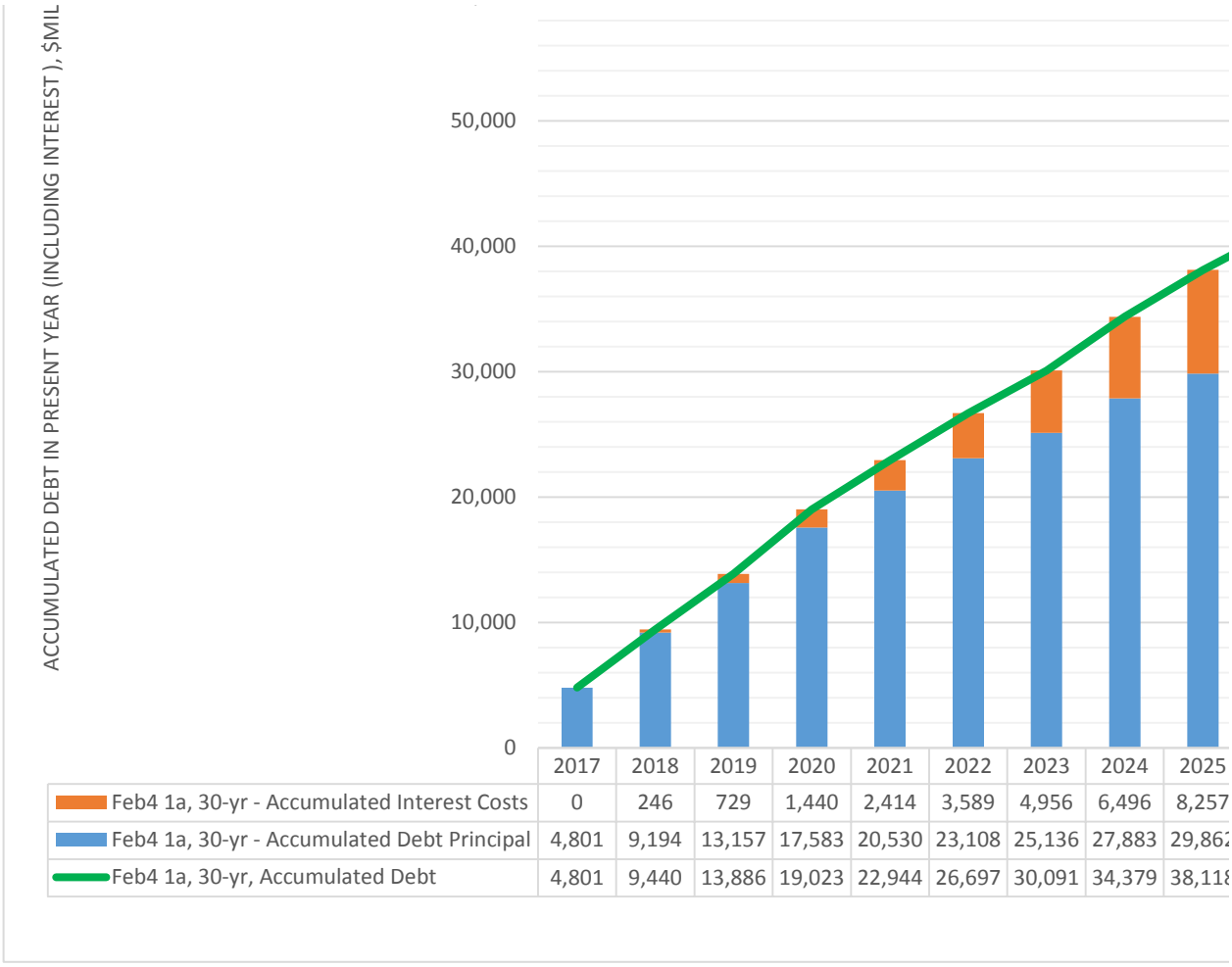
Feb 6 Deck - 1a - Accumulation of Debt (Principal and Interest)



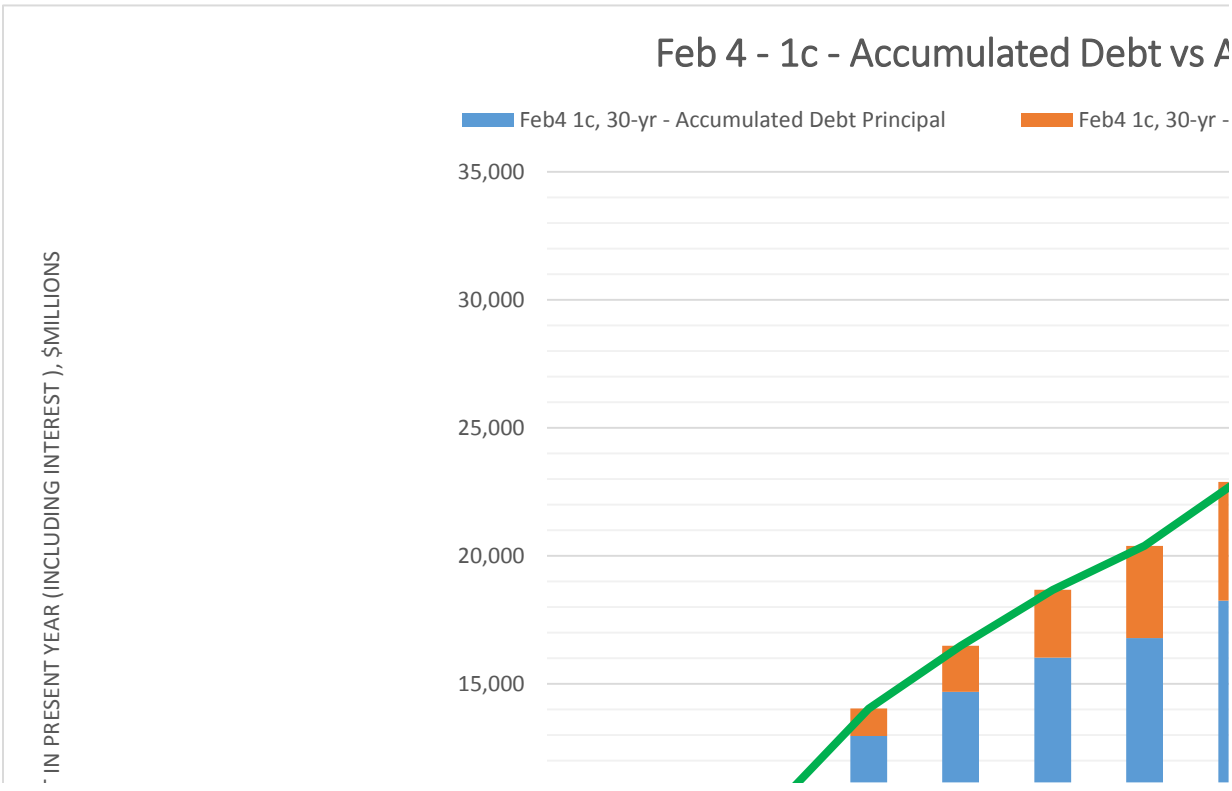


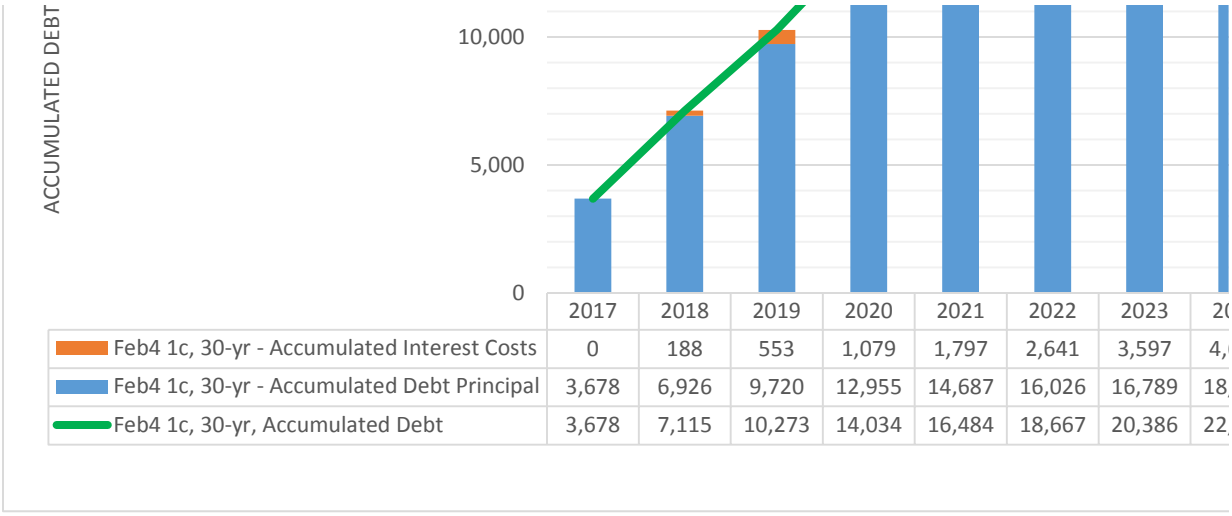
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,66
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,07
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73



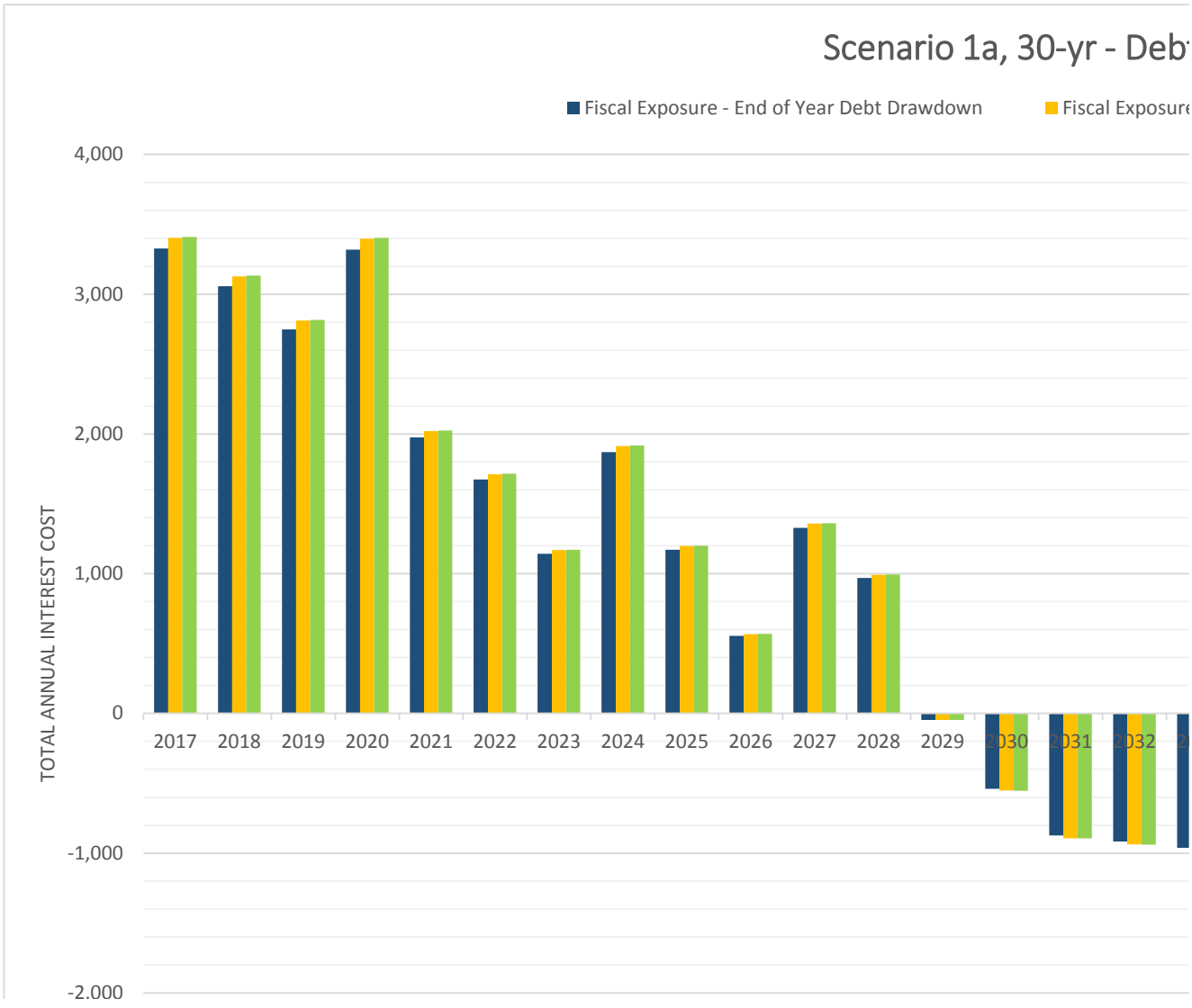


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



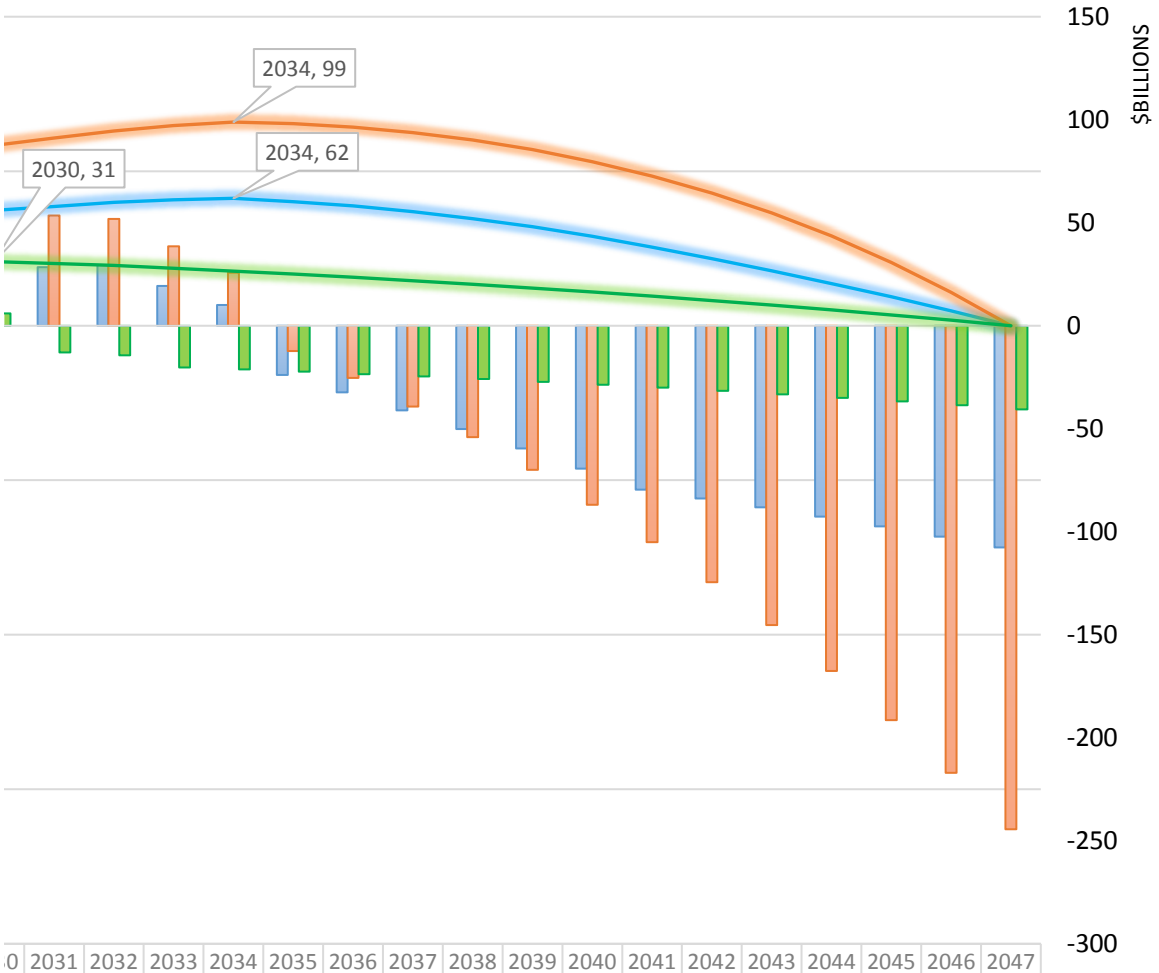


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22



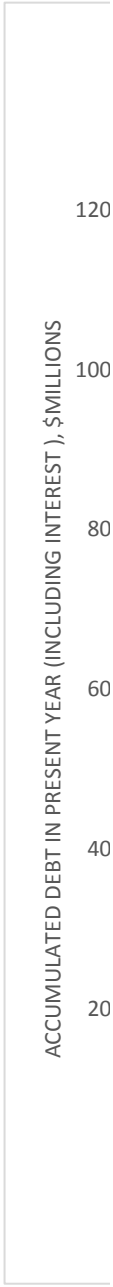

-3,000

lc - at 5.12% interest rate



0	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
98	1,896	1,966	1,288	672	-1,59	-2,15	-2,73	-3,34	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
26	3,568	3,457	2,571	1,716	-819	-1,68	-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
4	-860	-961	-1,34	-1,41	-1,48	-1,56	-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0
55	91,12	94,57	97,14	98,86	98,04	96,35	93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0
12	30,26	29,30	27,95	26,54	25,05	23,49	21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

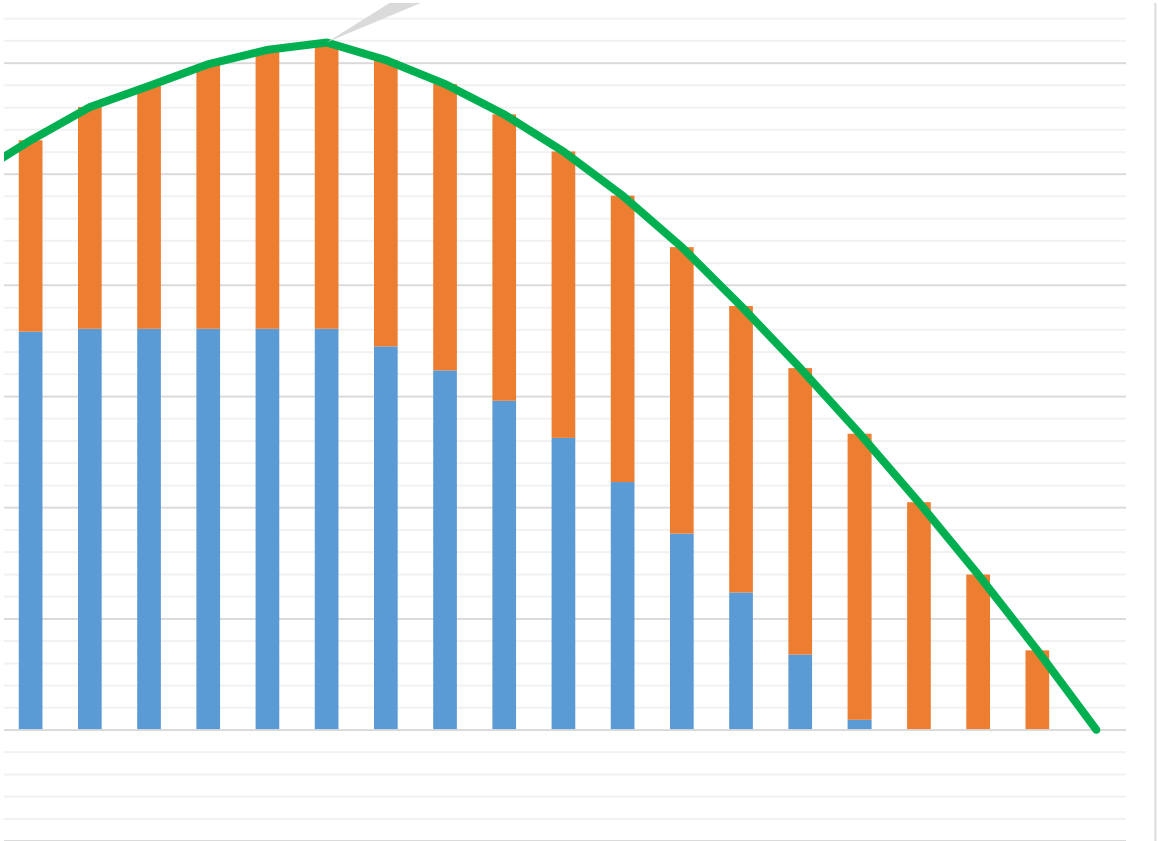
CALENDAR YEAR



Debt (Principal and Interest)

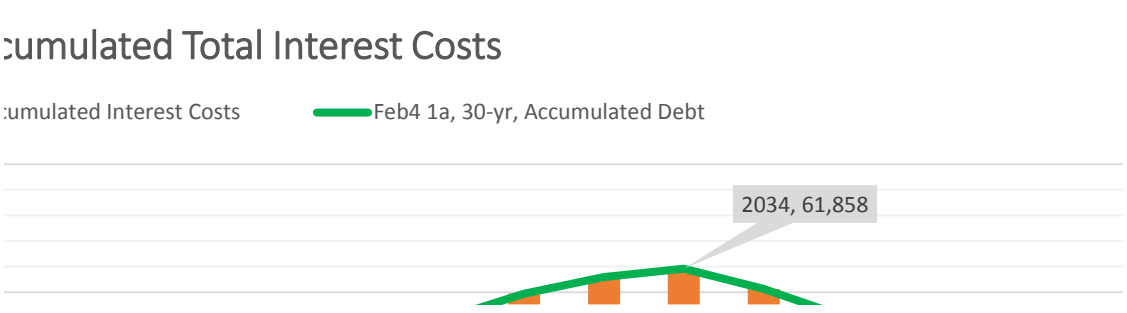
cumulated Interest Costs — Feb4 1a, 30-yr, Accumulated Debt

2034, 61,858

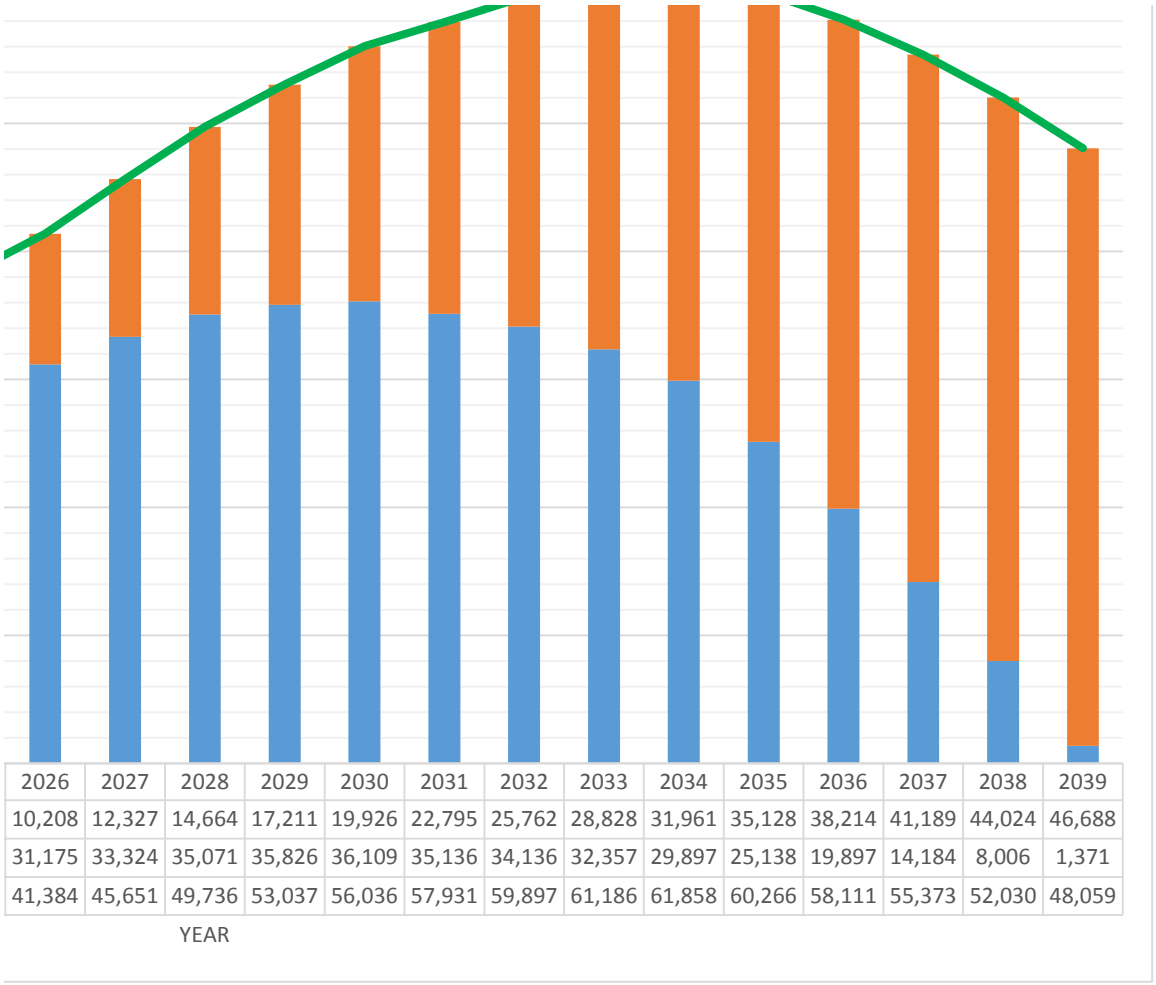


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



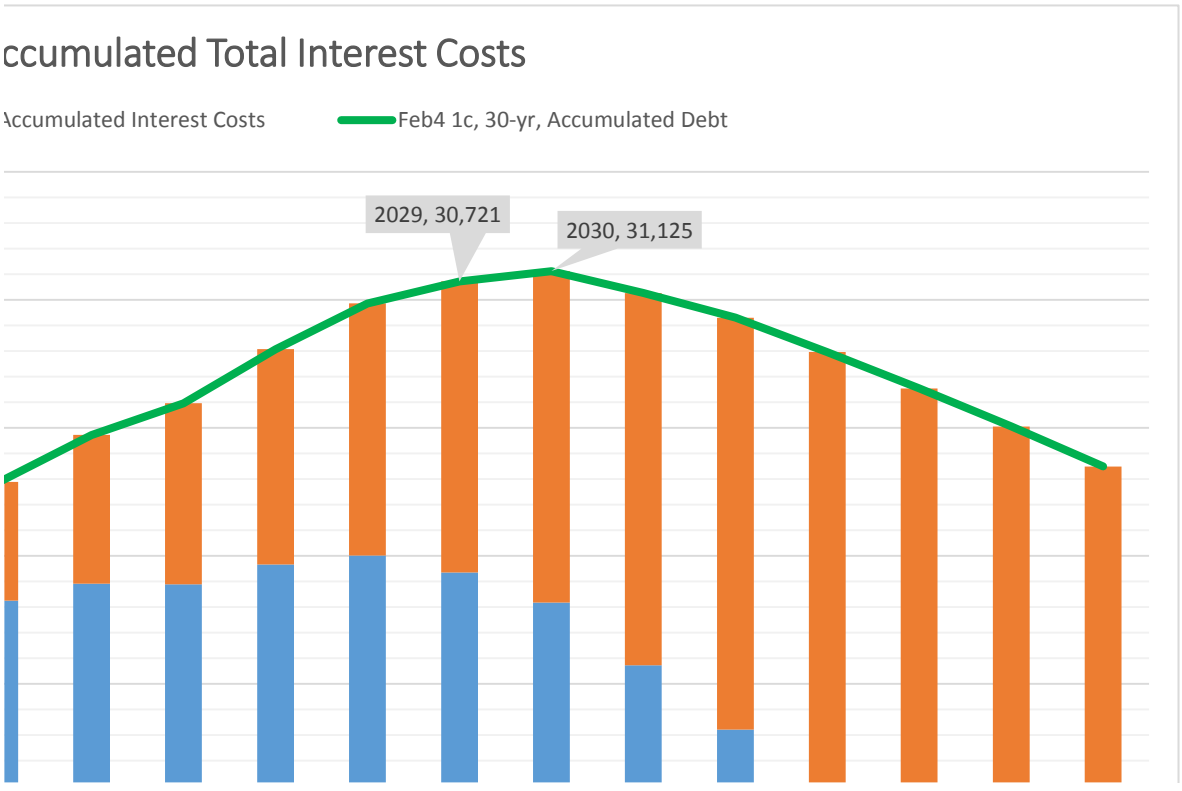
LIONS

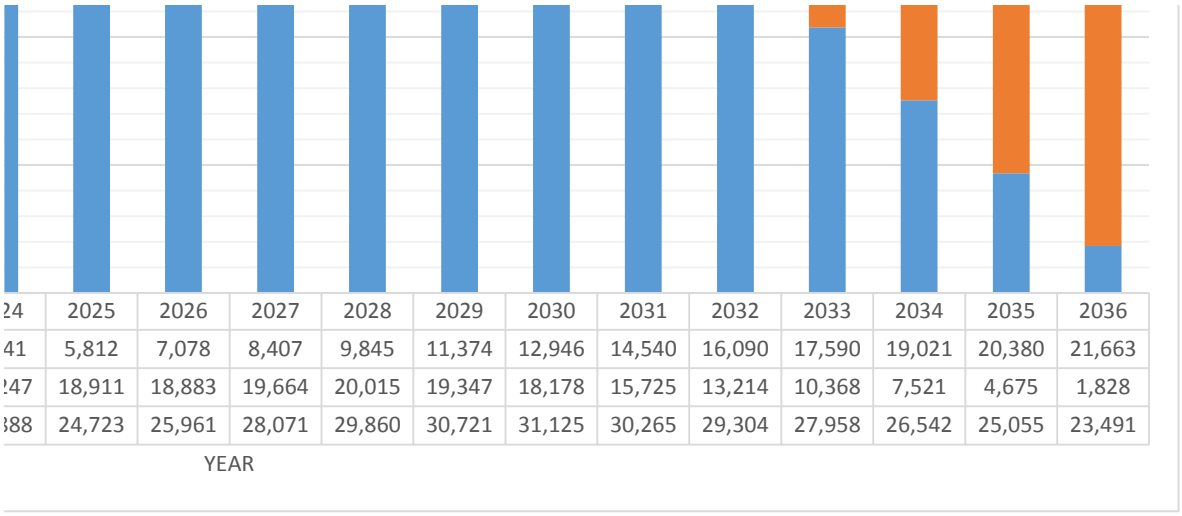


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

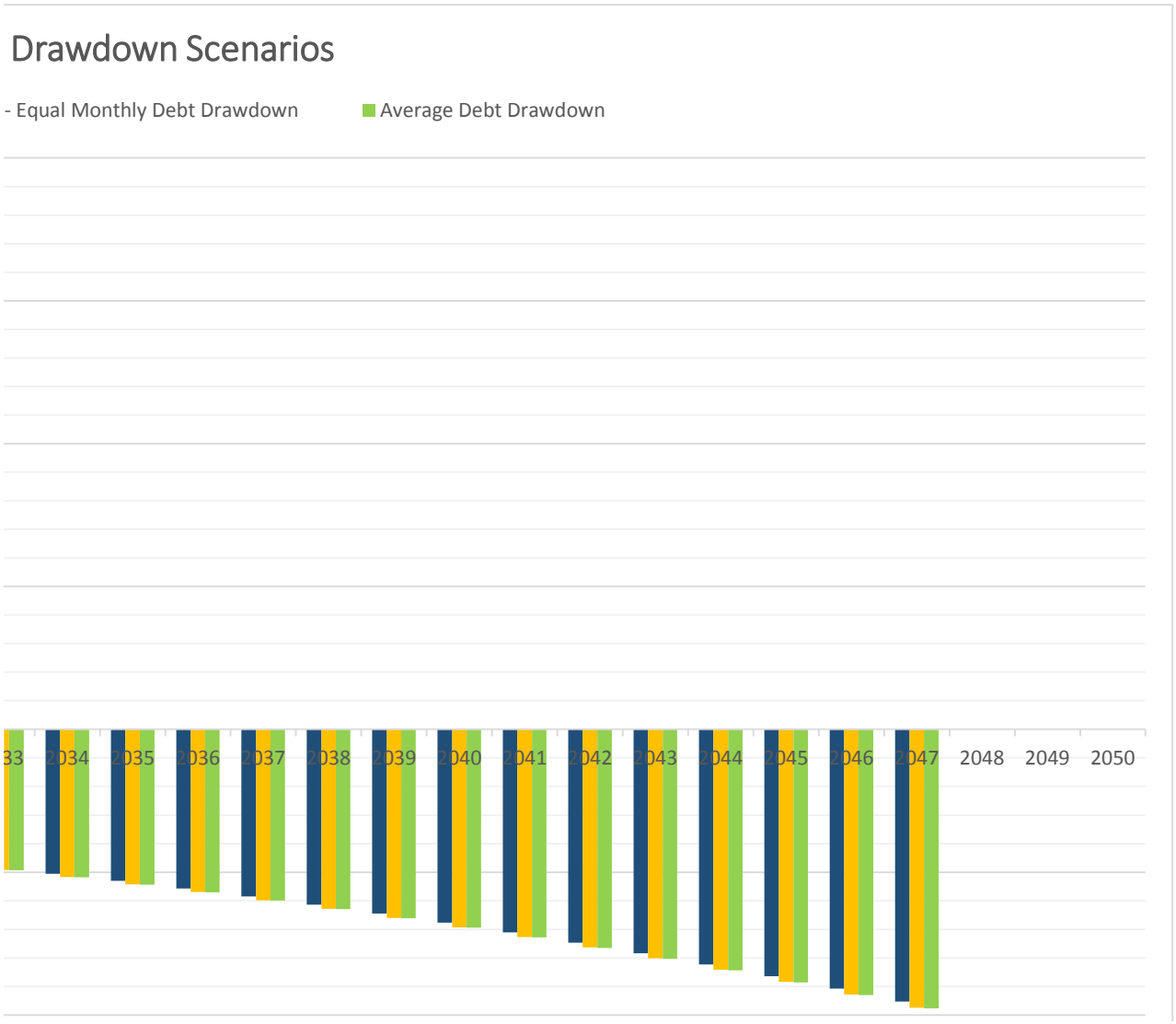
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





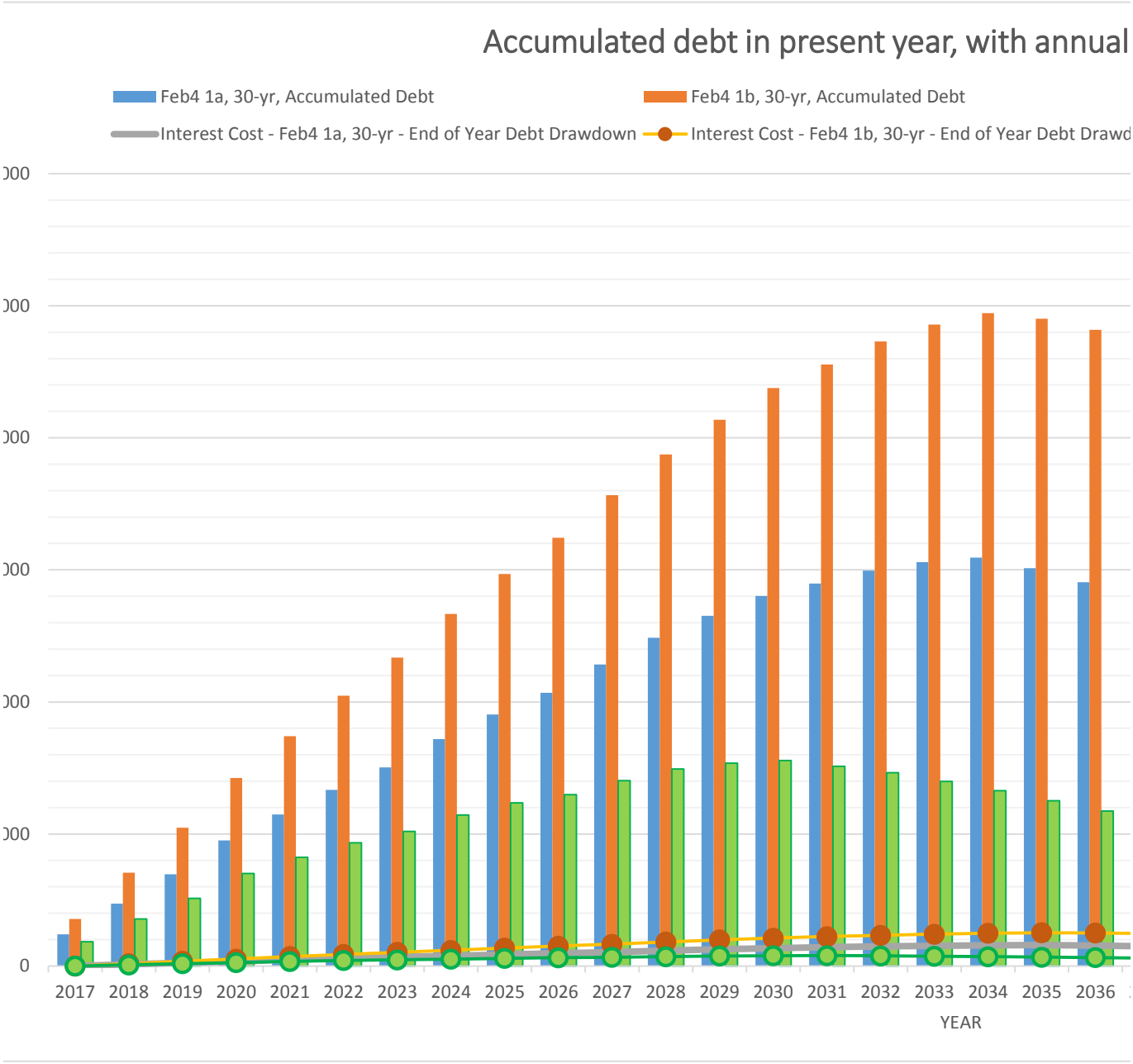
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

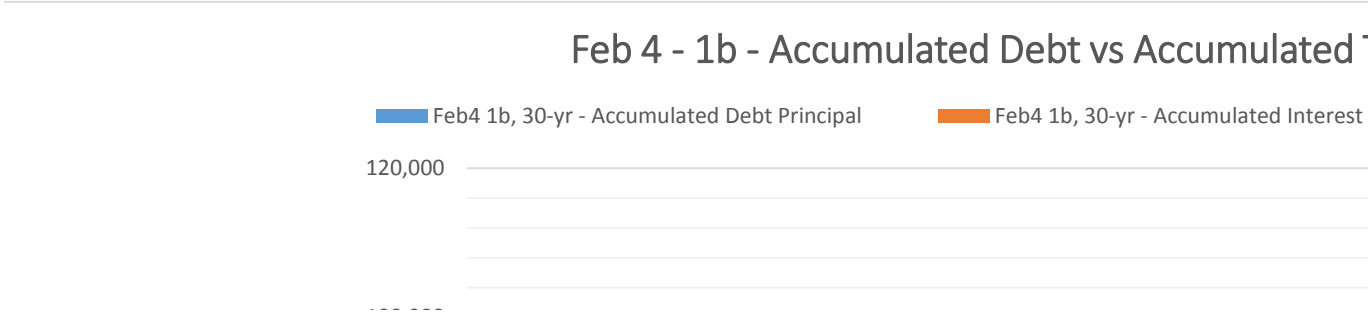
YEAR

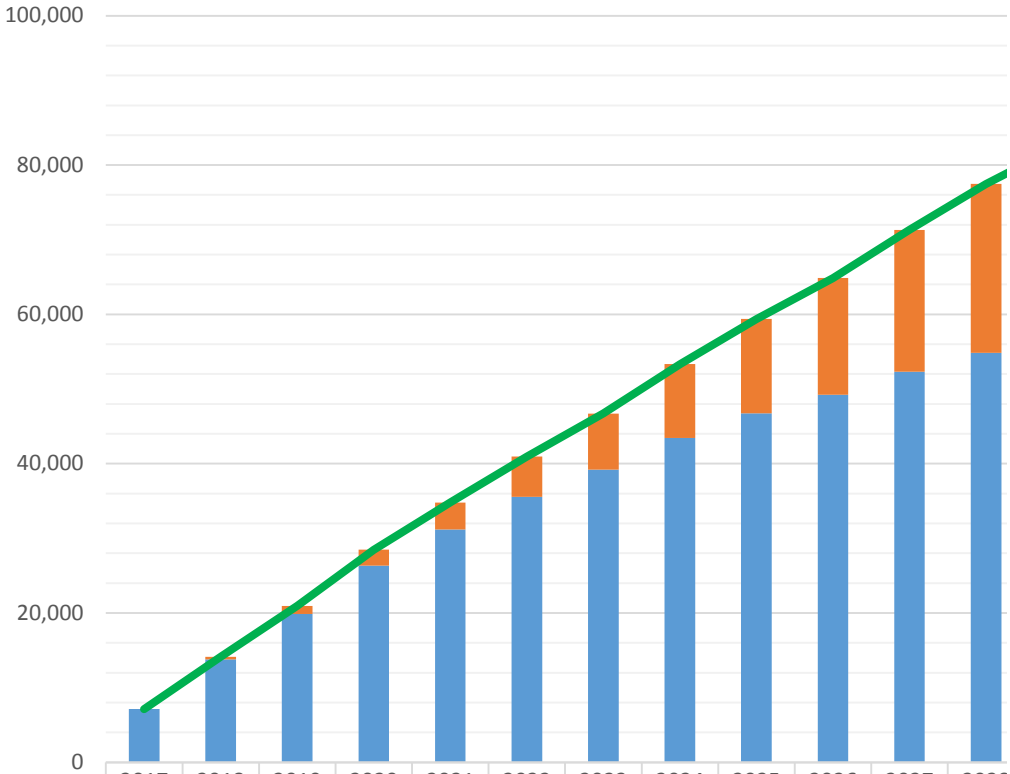


YEAR

ɜ - 25 year and 30 year Financing Terms, at 5% interest rate

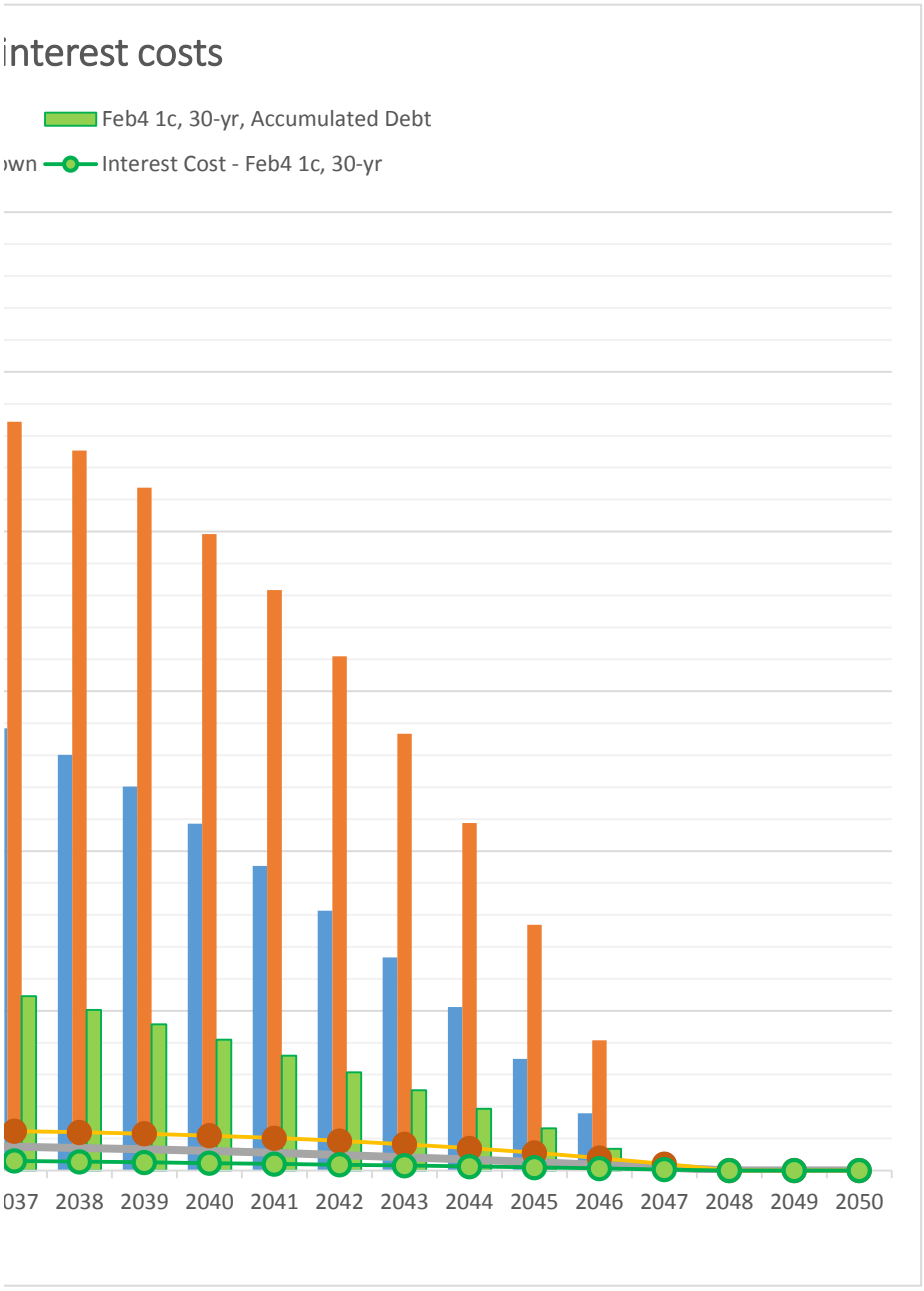


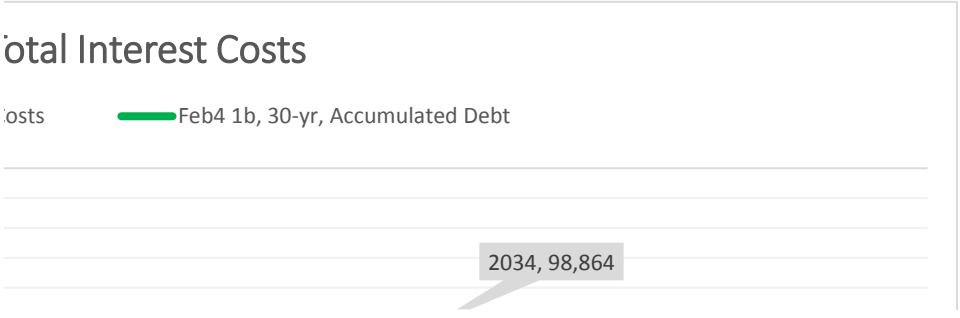

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

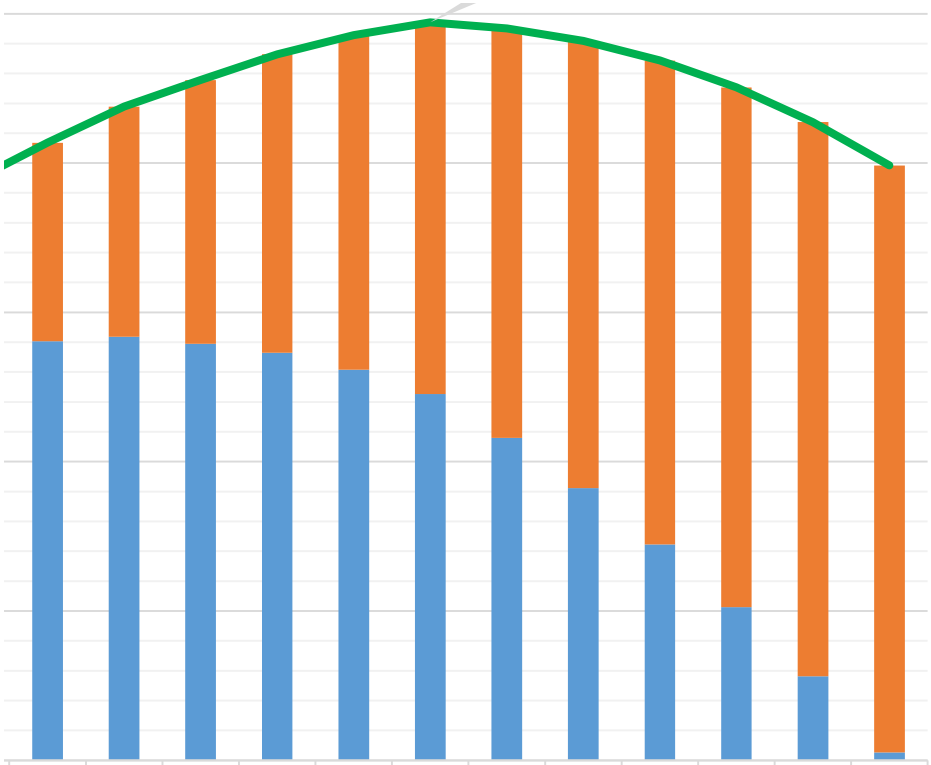


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y


interest costs
Feb4 1c, 30-yr, Accumulated Debt
wn
Interest Cost - Feb4 1c, 30-yr
037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR

Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

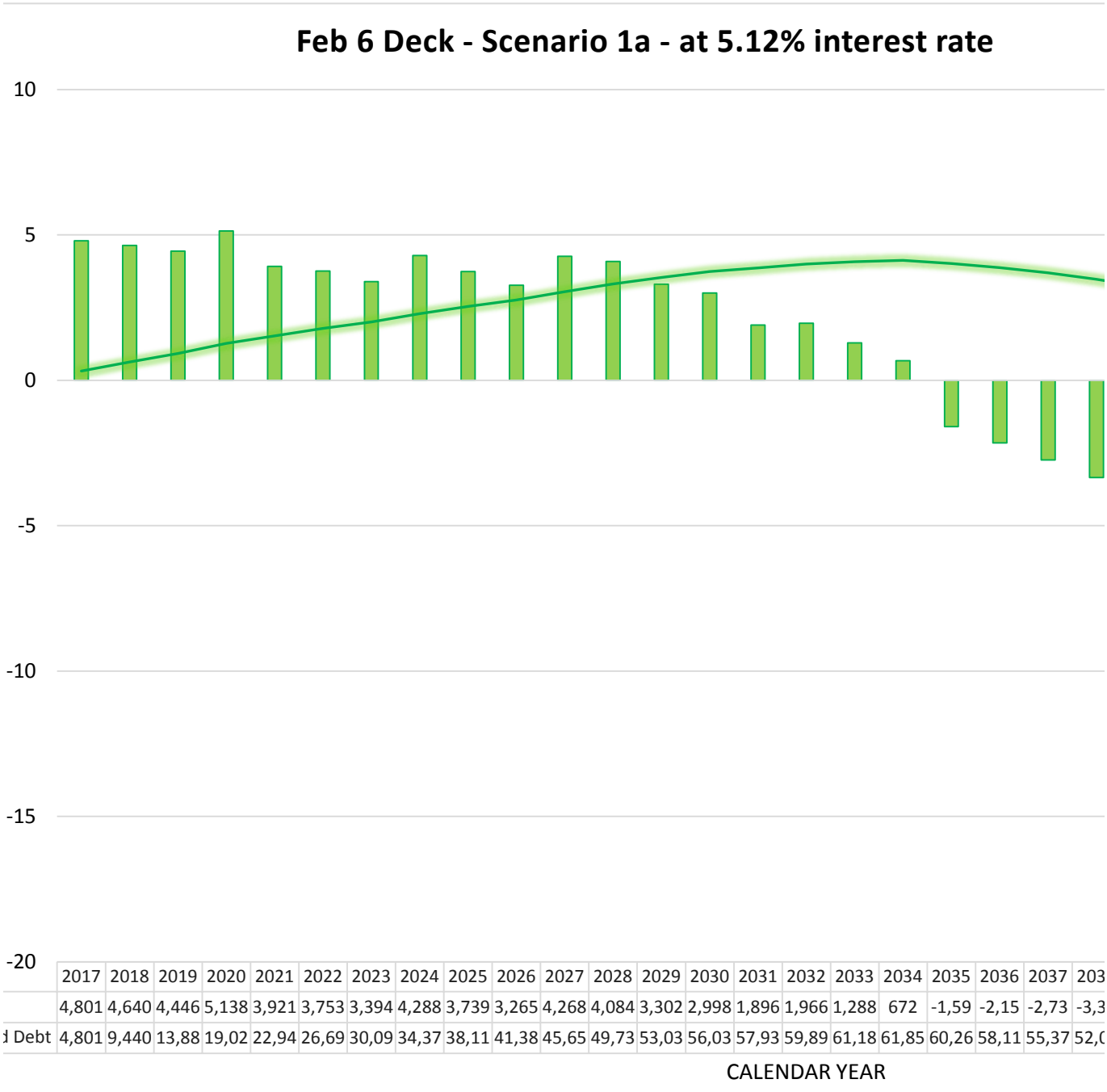
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

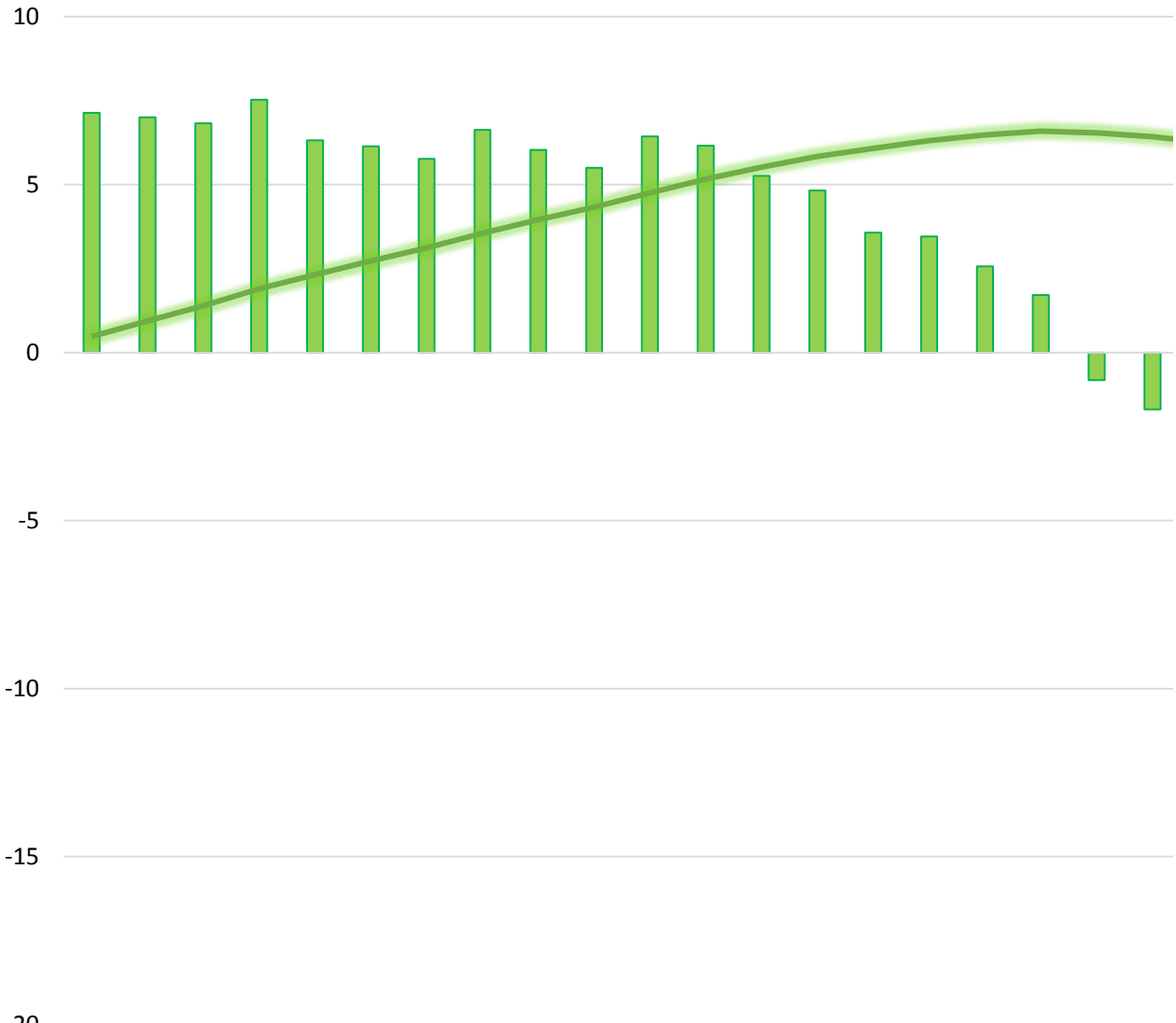
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

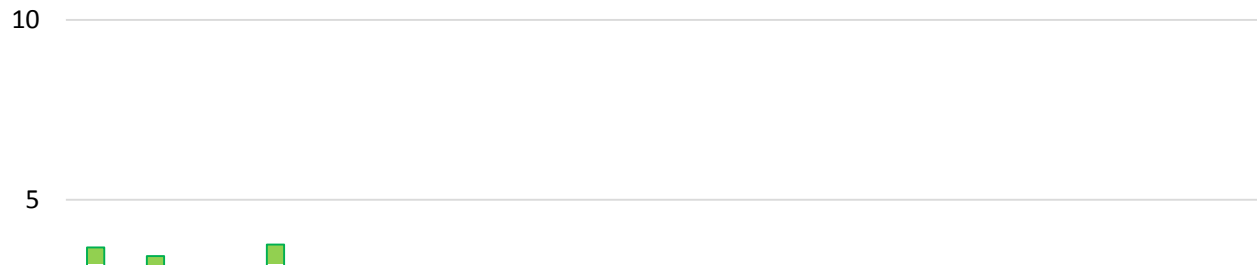
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

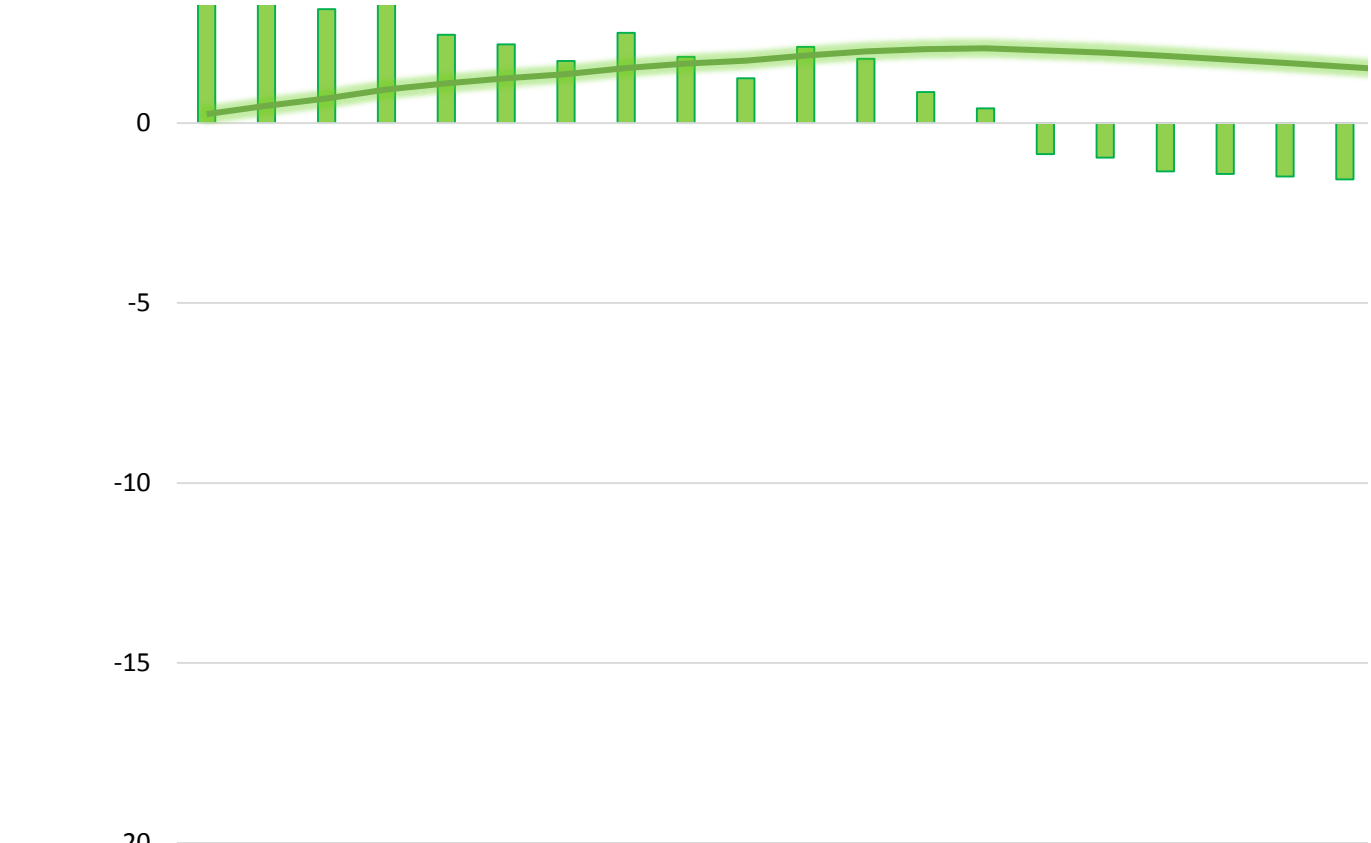


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



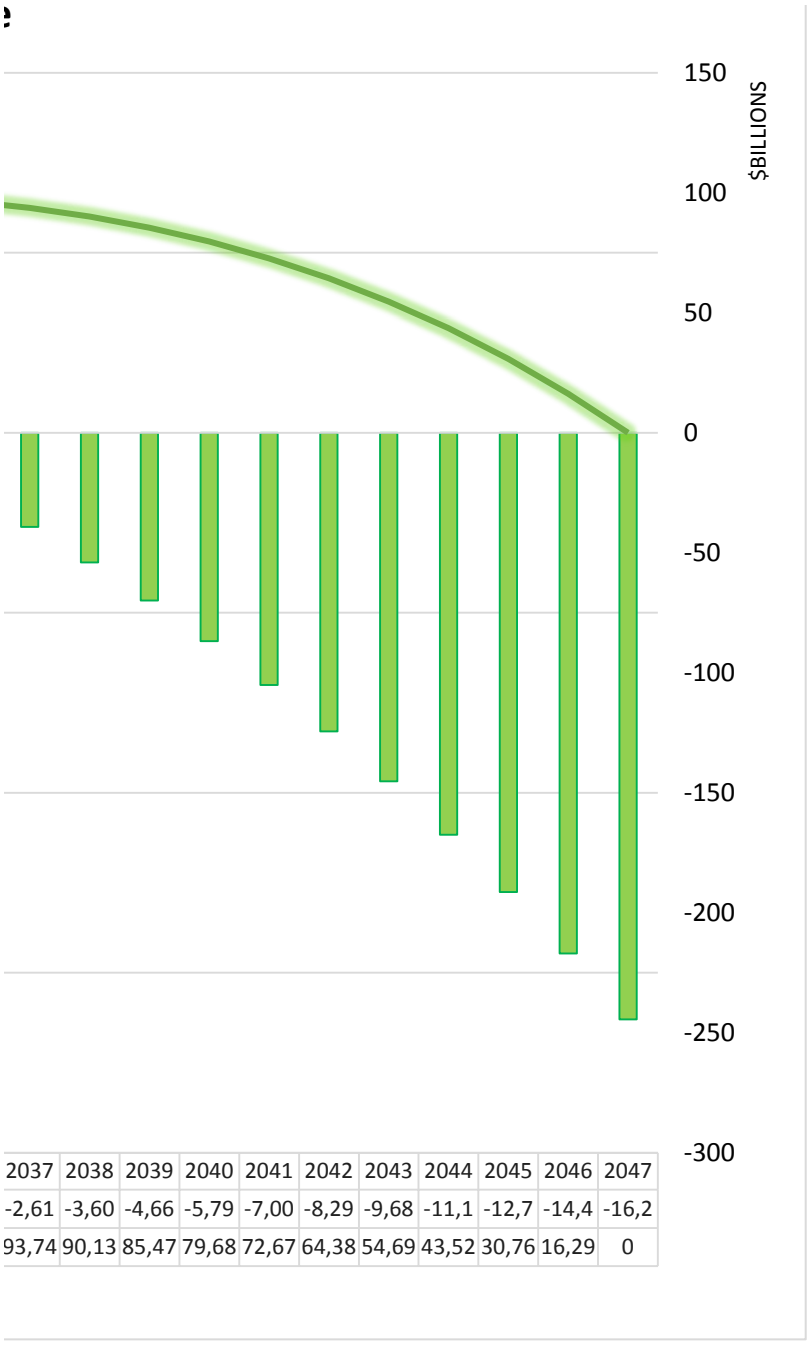


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

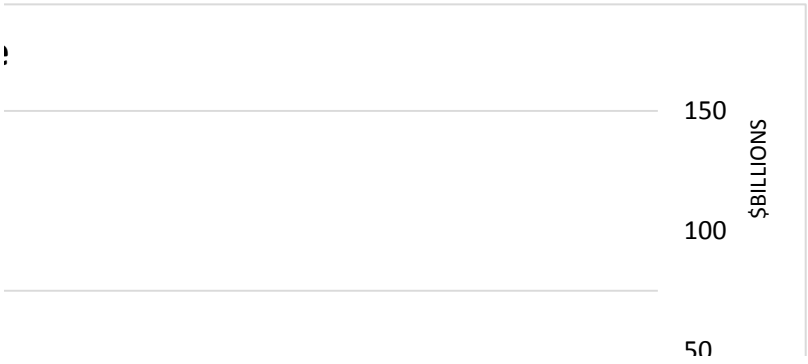
CALENDAR YEAR

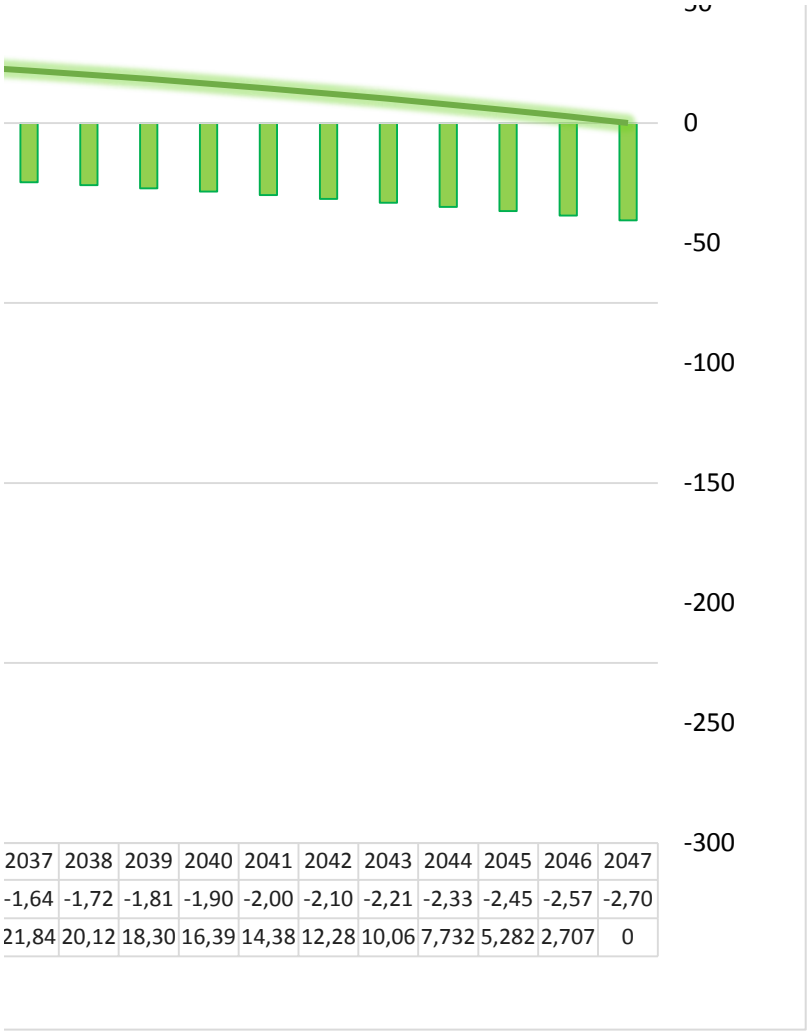


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Equal Monthly Debt Drawdown

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb4_1a_30yr

1a. GA Smoothing (Borrow ~$5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,801	4,640

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,200	4,760

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $62 billion, peakin
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary on accounting treatment.

7,133 7,133

Feb4_1b_30yr 7,133

1b. GA Smoothing (Borrow ~$7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	7,133	6,999

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,783	7,100

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $99 billion, peaking
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b on accounting treatment.

Feb4_1c_30yr

1c. GA Smoothing (Borrow ~$4 billion in 2017)

$ millions

Scenario 1C - 30-yr amortization	2017	2018
Annual Exposure[2]	3,678	3,437

	Fiscalized[3]	2016-17	2017-18
	Start: January 1st	919	3,617

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	1,783 - 1,200	7,100 - 4,760

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1200	4760
Debt-Finance Global Adjustment Costs, Option 1a	1783	7100
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18

Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1200**	**5000**
Total, B	1783	7340
Proposed Program Total:	1,783 - 1,200	7,340 - 5,000

ining

1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
4,446	5,138	3,921	3,753

2018-19	2019-20	2020-21	2021-2022
4,591	4,619	4,833	3,879

ng in 203 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
by approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
6,825	7,529	6,315	6,141

2018-19	2019-20	2020-21	2021-2022
6,956	7,001	7,226	6,272

g in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
3,158	3,761	2,450	2,183

2018-19	2019-20	2020-21	2021-2022
3,367	3,309	3,433	2,383

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
6,956 - 4,591	7,001 - 4,619	7,226 - 4,833	6,272 - 3,879

/1

2018-19[1]	2019-20[1]	2020-21[1]
4591	4619	4833
6956	7001	7226
225	279	323
60	60	60
18	18	18

4894	**4976**	**5234**
7259	7358	7627

7,259 - 4,894 7,358 - 4,976 7,627 - 5,234

1a. GA Smoothing (Borrow $5 billion in 2017)

	2017
IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	7,095
Additional GA Debt Drawdown, End of Year	5,000

Ratepayer GA Payment

Total Accumulated Debt *($ billion)*	5,000
Total Change in Accumulated Debt *($ billion)*	5000

1b. GA Smoothing (Borrow $7 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	5,095
Additional GA Debt Drawdown, End of Year	7,000

Total Accumulated Debt *($ billion)*	7000
Total Change in Accumulated Debt *($ billion)*	7000

1c. GA Smoothing (Borrow $4 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	8,095
Additional GA Debt Drawdown, End of Year	4,000

Total Accumulated Debt *($ billion)*	4000
Total Change in Accumulated Debt *($ billion)*	4000

2018	2019	2020	2021	2022	2023	2024	2025
11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
6,835	7,552	7,168	6,844	6,634	7,243	7,128	6,527
5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000

9,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000
5000	4000	5000	4000	4000	3000	4000	4000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
4,835	4,552	4,168	4,844	4,634	4,243	4,128	4,527
7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000

14000	21000	28000	35000	41000	47000	53000	59000
7000	7000	8000	6000	6000	6000	7000	6000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
8,835	8,552	8,168	8,844	8,634	8,243	8,128	8,527
3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000

7000	10000	14000	16000	19000	20000	23000	25000
3000	3000	4000	2000	2000	2000	3000	2000

2026	2027	2028	2029	2030	2031	2032	2033
10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
7,033	7,043	6,819	7,009	6,721	6,654	6,820	7,238
3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000

41,000	46,000	50,000	53,000	56,000	58,000	60,000	61,000
3000	4000	4000	3000	3000	2000	2000	1000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
4,033	5,043	4,819	5,009	4,721	4,654	5,820	5,238
6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000

65000	71000	77000	83000	88000	91000	95000	97000
6000	6000	6000	5000	5000	4000	3000	3000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
9,033	9,043	8,819	9,009	9,721	9,654	9,820	9,238
1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000

26000	28000	30000	31000	31000	30000	29000	28000
1000	2000	2000	1000	0	-1000	-1000	-1000

2034	2035	2036	2037	2038	2039	2040	2041
7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
6,756	7,662	7,389	8,129	7,881	8,645	9,421	9,207
1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000

62,000	60,000	58,000	55,000	52,000	48,000	43,000	38,000
1000	-2000	-2000	-3000	-3000	-4000	-5000	-5000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
5,756	6,662	7,389	8,129	8,881	9,645	10,421	11,207
2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000

99000	98000	96000	94000	90000	85000	80000	73000
2000	-1000	-2000	-3000	-4000	-5000	-6000	-7000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
8,756	6,662	7,389	7,129	6,881	6,645	6,421	6,207
-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000

27000	25000	23000	22000	20000	18000	16000	14000
-1000	-1000	-2000	-2000	-2000	-2000	-2000	-2000

2042	2043	2044	2045	2046	2047	2048		
4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
10,004	9,811	9,627	9,451	10,285	10,126	2,975		
-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0		

33,000	27,000	20,000	14,000	7,000	-	-	
-6000	-6000	-6000	-6000	-7000	-7000	0	

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
12,004	13,811	14,627	16,451	17,285	19,126	2,975		
-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0		

64000	55000	44000	31000	16000	0	0
-8000	-10000	-11000	-13000	-14000	-16000	0

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
6,004	5,811	5,627	5,451	6,285	6,126	2,975		
-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0		

12000	10000	8000	5000	3000	0	0
-2000	-2000	-2000	-2000	-3000	-3000	0

Feb4 1a, 30-yr - Debt Drawdown Scenarios

-92,247 -94598.515 58,489 36109.18 0

Feb4_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0
			114	110	106	122	93	89	81	102	89	78	102	97	79	71	45	47	31	16	-38	-51	-65	-80	-95	-110	-126	-133	-140	-147	-155	-162	-171	0	0	0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	5,138	3,167	58,489
Equal Monthly Debt Drawdown	5,260	3,149	

Maximum Accumulated Debt — Feb4 1a, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

End of Year Debt Drawdown	61,858	36,109
Equal Monthly Debt Drawdown	63,330	

			40%	37%	34%	36%	27%	24%																													
Feb4 1a, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
a	Debt, Beginning of Year		0	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	
c = a*5%	*Interest Cost - Feb4 1a, 30-yr - End of Year Debt Drawdown*		*0*	*246*	*483*	*711*	*974*	*1,175*	*1,367*	*1,541*	*1,760*	*1,952*	*2,119*	*2,337*	*2,546*	*2,716*	*2,869*	*2,966*	*3,067*	*3,133*	*3,167*	*3,086*	*2,975*	*2,835*	*2,664*	*2,461*	*2,224*	*1,952*	*1,666*	*1,365*	*1,049*	*717*	*367*	*0*	*0*	*0*	58,489
b	Additional GA Debt Drawdown, End of Year		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	21,822	23,788	25,076	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	20,490	13,998	7,173	0	0	0	
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	36,109	36,109	36,109	36,109	34,517	32,362	29,624	26,281	22,311	17,687	12,383	6,793	918	0	0	0	0	0	0	0	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688	49,149	51,372	53,325	54,991	56,356	57,405	58,122	58,489				
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371	-5,713	-13,241	-20,783	-28,325	-35,866	-43,408	-50,949	-58,489				
Fiscal Exposure - End of Year Debt Drawdown			4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0	

Feb4 1a, 30-yr	Equal Monthly Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			12																																		
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
3,149	*Interest Cost - Feb4 1a, 30-yr*		*114*	*356*	*589*	*833*	*1,067*	*1,264*	*1,448*	*1,643*	*1,849*	*2,029*	*2,220*	*2,435*	*2,625*	*2,787*	*2,914*	*3,013*	*3,097*	*3,149*	*3,129*	*3,034*	*2,910*	*2,756*	*2,569*	*2,351*	*2,098*	*1,819*	*1,526*	*1,218*	*895*	*554*	*197*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0	

	Monthly Drawdown		400	366	330	369	246	215	169	229	165	109	179	146	63	24	(81)	(83)	(148)	(205)	(397)	(437)	(476)	(515)	(553)	(590)	(627)	(629)	(628)	(628)	(628)	(628)	(628)	-	-	-
	FV of Monthly Drawdown at 5%		4,915	4,498	4,057	4,532	3,017	2,640	2,075	2,813	2,026	1,345	2,200	1,789	773	289	(996)	(1,024)	(1,821)	(2,519)	(4,872)	(5,365)	(5,849)	(6,325)	(6,793)	(7,253)	(7,707)	(7,722)	(7,721)	(7,721)	(7,721)	(7,721)	(7,720)	-	-	-
	Annual Interest Cost on New Drawdowns		114	105	94	105	70	61	48	65	47	31	51	42	18	7	(23)	(24)	(42)	(59)	(113)	(125)	(136)	(147)	(158)	(169)	(179)	(180)	(180)	(180)	(180)	(180)	(179)	-	-	-
	Annual Interest Cost on Opening Balance		-	252	495	728	997	1,203	1,399	1,577	1,802	1,998	2,169	2,393	2,607	2,780	2,937	3,037	3,140	3,207	3,243	3,159	3,046	2,903	2,727	2,519	2,277	1,999	1,706	1,398	1,074	734	376	(0)	(0)	(0)
	Total Annual Interest Cost		114	356	589	833	1,067	1,264	1,448	1,643	1,849	2,029	2,220	2,435	2,625	2,787	2,914	3,013	3,097	3,149	3,129	3,034	2,910	2,756	2,569	2,351	2,098	1,819	1,526	1,218	895	554	197	(0)	(0)	(0)

Feb4 1a, 30-yr	Bi-Annual Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			2																																		
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*61*	*305*	*540*	*777*	*1,024*	*1,223*	*1,410*	*1,596*	*1,808*	*1,993*	*2,173*	*2,390*	*2,589*	*2,754*	*2,893*	*2,991*	*3,083*	*3,141*	*3,147*	*3,058*	*2,940*	*2,792*	*2,613*	*2,401*	*2,156*	*1,881*	*1,591*	*1,286*	*966*	*629*	*275*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown			4,862	4,699	4,502	5,203	3,971	3,801	3,438	4,343	3,787	3,307	4,322	4,137	3,344	3,037	1,920	1,991	1,305	681	-1,612	-2,183	-2,773	-3,386	-4,021	-4,683	-5,372	-5,661	-5,951	-6,255	-6,575	-6,912	-7,265	0	0	0	

	Bi-Annual Drawdown		2,400	2,197	1,981	2,213	1,473	1,289	1,014	1,374	989	657	1,074	874	378	141	(487)	(500)	(889)	(1,230)	(2,379)	(2,620)	(2,857)	(3,089)	(3,317)	(3,542)	(3,764)	(3,771)	(3,771)	(3,771)	(3,771)	(3,771)	(3,770)	-	-	-
	FV of Bi-Annual Drawdown at 5%		4,862	4,450	4,013	4,483	2,984	2,612	2,053	2,783	2,004	1,331	2,176	1,769	765	286	(986)	(1,013)	(1,801)	(2,492)	(4,820)	(5,308)	(5,787)	(6,257)	(6,719)	(7,175)	(7,624)	(7,639)	(7,638)	(7,638)	(7,638)	(7,638)	(7,637)	-	-	-
	Annual Interest Cost on New Drawdowns		61	56	51	57	38	33	26	35	25	17	28	22	10	4	(12)	(13)	(23)	(31)	(61)	(67)	(73)	(79)	(85)	(91)	(96)	(97)	(97)	(97)	(97)	(97)	(97)	-	-	-
	Annual Interest Cost on Opening Balance		-	249	490	720	986	1,190	1,384	1,560	1,783	1,977	2,146	2,367	2,579	2,750	2,906	3,004	3,106	3,173	3,208	3,125	3,013	2,871	2,698	2,492	2,252	1,977	1,687	1,383	1,063	726	372	(0)	(0)	(0)
	Total Annual Interest Cost		61	305	540	777	1,024	1,223	1,410	1,596	1,808	1,993	2,173	2,390	2,589	2,754	2,893	2,991	3,083	3,141	3,147	3,058	2,940	2,792	2,613	2,401	2,156	1,881	1,591	1,286	966	629	275	(0)	(0)	(0)

Feb4 1a, 30-yr	Average Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*123*	*365*	*597*	*842*	*1,074*	*1,271*	*1,454*	*1,650*	*1,856*	*2,035*	*2,228*	*2,442*	*2,631*	*2,792*	*2,918*	*3,016*	*3,100*	*3,150*	*3,126*	*3,030*	*2,905*	*2,749*	*2,562*	*2,342*	*2,088*	*1,809*	*1,516*	*1,207*	*883*	*542*	*184*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
Fiscal Exposure - Average Debt Drawdown			4,923	4,758	4,559	5,269	4,021	3,849	3,481	4,398	3,835	3,349	4,377	4,189	3,386	3,075	1,944	2,016	1,321	689	-1,633	-2,210	-2,808	-3,428	-4,072	-4,742	-5,440	-5,733	-6,026	-6,334	-6,658	-6,999	-7,357	0	0	0	

Feb4 1b, 30-yr - Debt Drawdown Scenarios

-149,507 -153857.97 97,141 56717.33 0

Feb4_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0
			170	167	162	179	150	146	137	158	144	131	153	147	125	115	85	82	61	41	-19	-40	-62	-86	-111	-138	-167	-198	-231	-266	-304	-344	-388	0	0	0

0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown 7,529	5,062	97,141
Equal Monthly Debt Drawdown 7,708	5,042	

Maximum Accumulated Debt	Feb4 1b, 30-yr, Accumulated Debt	Total Principal Debt Borrowed
End of Year Debt Drawdown	98,864	56,717
Equal Monthly Debt Drawdown	101,217	

Feb4 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
a Debt, Beginning of Year	0	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	
c = a*5% *Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown*	*0*	*365*	*724*	*1,073*	*1,459*	*1,782*	*2,096*	*2,391*	*2,731*	*3,040*	*3,322*	*3,651*	*3,966*	*4,236*	*4,483*	*4,665*	*4,842*	*4,974*	*5,062*	*5,020*	*4,933*	*4,800*	*4,615*	*4,376*	*4,080*	*3,721*	*3,296*	*2,800*	*2,228*	*1,575*	*834*	*0*	*0*	*0*	97,141
b Additional GA Debt Drawdown, End of Year	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
d = a+b+c Accumulated debt in present year (including 5% annual interest)	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	0	
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,633	26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606	82,685	86,406	89,703	92,503	94,731	96,306	97,141				
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,831	56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076	-10,007	-22,027	-35,008	-48,980	-63,971	-80,013	-97,141				
Fiscal Exposure - End of Year Debt Drawdown	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0	

Feb4 1b, 30-yr — Equal Monthly Debt Drawdown

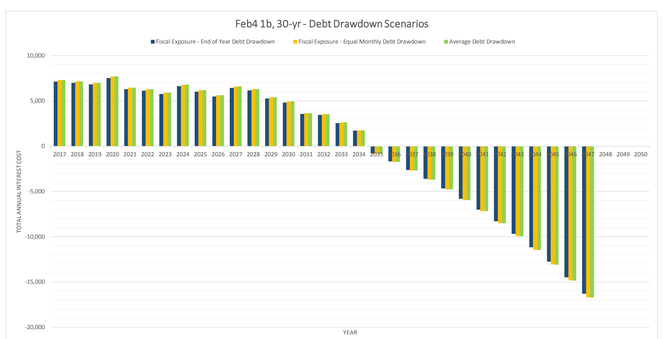
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	
5,042 *Interest Cost - Feb4 1b, 30-yr*	*170*	*532*	*886*	*1,252*	*1,609*	*1,928*	*2,234*	*2,549*	*2,874*	*3,171*	*3,475*	*3,797*	4,091	*4,350*	*4,568*	*4,748*	*4,904*	*5,015*	*5,042*	*4,980*	*4,871*	*4,714*	*4,504*	*4,238*	*3,913*	*3,524*	*3,066*	*2,534*	*1,925*	*1,231*	*446*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0	
Monthly Drawdown	594	553	508	538	405	363	306	353	275	205	259	209	108	49	(76)	(101)	(189)	(271)	(490)	(559)	(629)	(700)	(773)	(847)	(924)	(1,002)	(1,082)	(1,164)	(1,249)	(1,337)	(1,427)	(0)	-	-	
FV of Monthly Drawdown at 5%	7,303	6,792	6,247	6,610	4,972	4,463	3,755	4,338	3,383	2,523	3,184	2,565	1,327	605	(937)	(1,237)	(2,326)	(3,335)	(6,020)	(6,867)	(7,728)	(8,604)	(9,498)	(10,412)	(11,347)	(12,306)	(13,291)	(14,304)	(15,348)	(16,424)	(17,536)	(0)	-	-	
Annual Interest Cost on New Drawdowns	170	158	145	154	116	104	87	101	79	59	74	60	31	14	(22)	(29)	(54)	(78)	(140)	(160)	(180)	(200)	(221)	(242)	(264)	(286)	(309)	(333)	(357)	(382)	(408)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	374	741	1,099	1,493	1,824	2,146	2,448	2,796	3,112	3,401	3,738	4,061	4,336	4,589	4,776	4,958	5,092	5,182	5,139	5,051	4,914	4,725	4,481	4,177	3,810	3,375	2,867	2,281	1,612	854	0	(0)	(0)	
Total Annual Interest Cost	170	532	886	1,252	1,609	1,928	2,234	2,549	2,874	3,171	3,475	3,797	4,091	4,350	4,568	4,748	4,904	5,015	5,042	4,980	4,871	4,714	4,504	4,238	3,913	3,524	3,066	2,534	1,925	1,231	446	0	(0)	(0)	

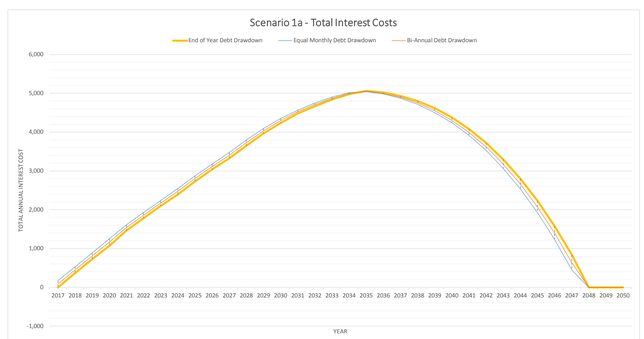
Feb4 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*91*	*455*	*811*	*1,169*	*1,539*	*1,861*	*2,170*	*2,476*	*2,808*	*3,110*	*3,404*	*3,730*	*4,034*	*4,297*	*4,528*	*4,710*	*4,875*	*4,996*	*5,051*	*4,998*	*4,900*	*4,753*	*4,555*	*4,302*	*3,990*	*3,615*	*3,172*	*2,657*	*2,065*	*1,390*	*626*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	7,225	7,089	6,913	7,626	6,396	6,220	5,838	6,713	6,113	5,574	6,514	6,235	5,330	4,888	3,614	3,501	2,603	1,738	-829	-1,709	-2,648	-3,651	-4,722	-5,867	-7,093	-8,405	-9,810	-11,314	-12,926	-14,652	-16,502	0	0	0	
Bi-Annual Drawdown	3,567	3,317	3,051	3,228	2,428	2,180	1,834	2,118	1,652	1,232	1,555	1,253	648	295	(457)	(604)	(1,136)	(1,629)	(2,940)	(3,354)	(3,774)	(4,202)	(4,639)	(5,085)	(5,542)	(6,010)	(6,491)	(6,986)	(7,495)	(8,021)	(8,564)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	7,225	6,719	6,180	6,539	4,919	4,415	3,715	4,291	3,347	2,496	3,150	2,538	1,313	598	(926)	(1,224)	(2,301)	(3,299)	(5,956)	(6,794)	(7,645)	(8,512)	(9,396)	(10,300)	(11,225)	(12,174)	(13,148)	(14,150)	(15,183)	(16,247)	(17,347)	(0)	-	-	
Annual Interest Cost on New Drawdowns	91	85	78	83	62	56	47	54	42	32	40	32	17	8	(12)	(15)	(29)	(42)	(75)	(86)	(97)	(108)	(119)	(130)	(142)	(154)	(166)	(179)	(192)	(205)	(219)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	370	733	1,087	1,477	1,805	2,123	2,422	2,766	3,079	3,364	3,698	4,017	4,290	4,540	4,725	4,904	5,038	5,127	5,084	4,997	4,861	4,674	4,432	4,132	3,769	3,338	2,836	2,257	1,595	845	0	0	0	
Total Annual Interest Cost	91	455	811	1,169	1,539	1,861	2,170	2,476	2,808	3,110	3,404	3,730	4,034	4,297	4,528	4,710	4,875	4,996	5,051	4,998	4,900	4,753	4,555	4,302	3,990	3,615	3,172	2,657	2,065	1,390	626	0	0	0	

Feb4 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*183*	*544*	*898*	*1,266*	*1,620*	*1,939*	*2,244*	*2,561*	*2,885*	*3,181*	*3,486*	*3,809*	*4,101*	*4,359*	*4,574*	*4,754*	*4,908*	*5,018*	*5,041*	*4,977*	*4,867*	*4,707*	*4,496*	*4,228*	*3,900*	*3,509*	*3,048*	*2,514*	*1,902*	*1,205*	*417*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	7,316	7,179	7,000	7,722	6,477	6,298	5,912	6,798	6,190	5,645	6,597	6,314	5,397	4,950	3,659	3,545	2,636	1,760	-840	-1,731	-2,682	-3,697	-4,782	-5,942	-7,183	-8,511	-9,934	-11,457	-13,089	-14,838	-16,711	0	0	0	





Feb4 1c, 30-yr - Debt Drawdown Scenarios

Feb4_1c_30yr

Annual Interest Rate = 5.1%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0
			88	82	75	90	58	52	41	60	44	29	50	43	20	10	-20	-23	-32	-34	-35	-37	-39	-41	-43	-45	-48	-50	-53	-55	-58	-61	-64	0	0	0

0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	3,761	1,594	29,477
Equal Monthly Debt Drawdown	3,851	1,583	

Maximum Accumulated Debt — Feb4 1c, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

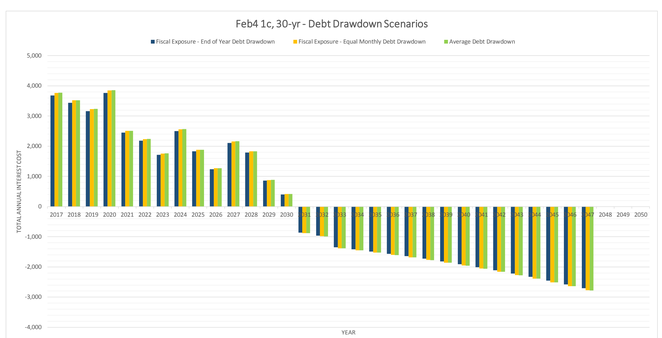
End of Year Debt Drawdown	31,125	20,043
Equal Monthly Debt Drawdown	31,866	

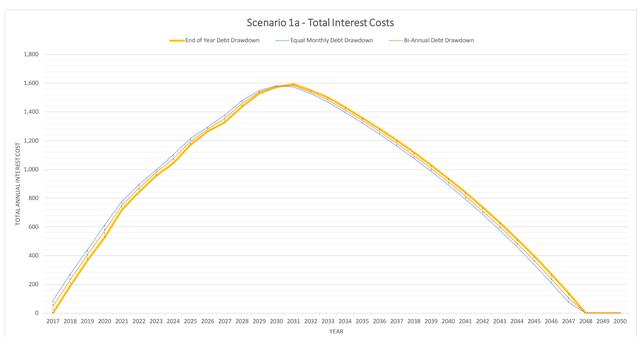
		30%	27%	24%	27%	16%	13%																														
Feb4 1c, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
a	Debt, Beginning of Year	0	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	
c = a*5%	*Interest Cost - Feb4 1c, 30-yr - End of Year Debt Drawdown*	*0*	*188*	*364*	*526*	*719*	*844*	*956*	*1,044*	*1,172*	*1,266*	*1,329*	*1,437*	*1,529*	*1,573*	*1,594*	*1,550*	*1,500*	*1,431*	*1,359*	*1,283*	*1,203*	*1,119*	*1,030*	*937*	*839*	*737*	*629*	*515*	*396*	*270*	*139*	*0*	*0*	*0*	*0*	29,477
b	Additional GA Debt Drawdown, End of Year	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	0	
	Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,641	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663	22,866	23,984	25,015	25,952	26,791	27,528	28,157	28,672	29,068	29,338	29,477				
	Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18,247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828	-1,018	-3,864	-6,710	-9,556	-12,402	-15,248	-18,094	-20,940	-23,786	-26,631	-29,477				
Fiscal Exposure - End of Year Debt Drawdown		3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0	

Feb4 1c, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	
1,583	*Interest Cost - Feb4 1c, 30-yr*	*88*	*270*	*439*	*615*	*777*	*896*	*997*	*1,103*	*1,216*	*1,295*	*1,379*	*1,480*	1,549	*1,583*	*1,573*	*1,527*	*1,468*	*1,398*	*1,324*	*1,246*	*1,164*	*1,077*	*987*	*892*	*792*	*686*	*576*	*460*	*338*	*209*	*74*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0	
	Monthly Drawdown	306	271	233	270	144	112	64	122	55	(2)	65	29	(56)	(97)	(204)	(209)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(0)	-	-	
	FV of Monthly Drawdown at 5%	3,765	3,326	2,861	3,312	1,773	1,371	781	1,493	679	(28)	799	360	(684)	(1,197)	(2,512)	(2,570)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,913)	(2,913)	(2,913)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	88	77	67	77	41	32	18	35	16	(1)	19	8	(16)	(28)	(58)	(60)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	193	373	538	736	864	979	1,069	1,200	1,296	1,361	1,471	1,565	1,610	1,632	1,586	1,536	1,465	1,391	1,313	1,231	1,145	1,055	959	859	754	644	527	405	277	142	0	0	0	
	Total Annual Interest Cost	88	270	439	615	777	896	997	1,103	1,216	1,295	1,379	1,480	1,549	1,583	1,573	1,527	1,468	1,398	1,324	1,246	1,164	1,077	987	892	792	686	576	460	338	209	74	0	0	0	

Feb4 1c, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*47*	*232*	*405*	*574*	*750*	*872*	*978*	*1,076*	*1,195*	*1,282*	*1,356*	*1,460*	*1,540*	*1,578*	*1,583*	*1,537*	*1,483*	*1,413*	*1,340*	*1,263*	*1,182*	*1,097*	*1,007*	*913*	*814*	*710*	*600*	*485*	*365*	*237*	*104*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,725	3,481	3,199	3,809	2,481	2,211	1,741	2,534	1,859	1,254	2,137	1,812	872	409	-871	-973	-1,363	-1,433	-1,506	-1,584	-1,665	-1,750	-1,839	-1,933	-2,032	-2,136	-2,246	-2,360	-2,481	-2,608	-2,742	0	0	0	
	Bi-Annual Drawdown	1,839	1,624	1,397	1,618	866	670	382	729	332	(14)	390	176	(334)	(584)	(1,227)	(1,255)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(0)	-	-	
	FV of Bi-Annual Drawdown at 5%	3,725	3,290	2,830	3,277	1,754	1,356	773	1,477	672	(28)	791	356	(677)	(1,184)	(2,485)	(2,542)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	47	42	36	41	22	17	10	19	8	(0)	10	5	(9)	(15)	(31)	(32)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	191	369	533	728	855	968	1,057	1,187	1,282	1,346	1,456	1,548	1,593	1,614	1,569	1,520	1,450	1,376	1,299	1,218	1,133	1,043	949	850	746	637	522	401	274	140	0	0	0	
	Total Annual Interest Cost	47	232	405	574	750	872	978	1,076	1,195	1,282	1,356	1,460	1,540	1,578	1,583	1,537	1,483	1,413	1,340	1,263	1,182	1,097	1,007	913	814	710	600	485	365	237	104	0	0	0	

Feb4 1c, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*94*	*276*	*445*	*622*	*781*	*900*	*1,000*	*1,108*	*1,219*	*1,298*	*1,383*	*1,483*	*1,551*	*1,583*	*1,572*	*1,525*	*1,466*	*1,395*	*1,321*	*1,243*	*1,161*	*1,074*	*984*	*888*	*788*	*683*	*572*	*456*	*333*	*205*	*69*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,772	3,525	3,239	3,857	2,513	2,239	1,763	2,566	1,882	1,270	2,164	1,835	883	414	-882	-985	-1,381	-1,451	-1,526	-1,604	-1,686	-1,772	-1,863	-1,958	-2,058	-2,163	-2,274	-2,390	-2,513	-2,641	-2,776	0	0	0	





30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

TO BE

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,556	3,123	1,728	1,400	836	1,560	821	167

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

E UPDATED

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

JK: Fixed the formula in the yellow highlighted cells. Pls. check. (SK: looks good to me)

	Tab
v16 GA Financing - Scenario 1a 1b v18 (with fiscal) - Feb 4_v2.xlsx	Powerpoint_Export Scenario tabs

Change Description

Added in trigger for later start in the year
Updated IESO forecast from Energy (IESO GA Cost Forecast 170207 (Feb 6 update).xlsx)

Equal Monthly Debt Drawdown

		Month	Months Remai
Scenario Start Date	**July**	7	6

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	3,180	2,888
Annual Exposure2 with start on July 1st	*1,590*	*2,888*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	795	3,107
Start: July 1st	-	*2,312*

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	851	3,335
Start: July 1st	-	*2,484*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	1,168	1,765
Annual Exposure2 with start on July 1st	*584*	*1,765*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	292	1,609
Start: July 1st	-	*1,025*

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,449	2,040
Annual Exposure2 with start on July 1st	*725*	*2,040*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,597
Start: July 1st	-	*1,959*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335
Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3575**
Total, B	362	1837
Proposed Program Total:	362 - 851	1,837 - 3,575

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,556	3,123	1,728	1,400
2,556	*3,123*	*1,728*	*1,400*

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646
2,805	*2,697*	*2,774*	*1,646*

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

ıking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
2,311	3,750	2,311	1,933
2,311	*3,750*	*2,311*	*1,933*

2018-19	2019-20	2020-21	2021-2022

1,901	2,671	3,391	2,217
1,901	*2,671*	*3,391*	*2,217*

2019	2020	2021	2022
2,581	4,016	2,598	2,241
2,581	*4,016*	*2,598*	*2,241*

2018-19	2019-20	2020-21	2021-2022
2,175	2,940	3,662	2,508
2,175	*2,940*	*3,662*	*2,508*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

/1

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052
2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

Equal Monthly Debt Drawdown

		Month	Months Remaining
Scenario Start Date	July	7	6

AS LONG AS >

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	3,180	2,888	2,556

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	795	3,107	2,805
Fiscal Exposure, 25%	199	777	701

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Annual Exposure[2]	3,404	3,128	2,812

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	851	3,335	3,049
Fiscal Exposure, 25%	213	834	762

Indicates year in which, similar to OPCD's exa
closest to 30%. As Fiscal 2016/17 is a partial y
month the GA deferral begins.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu
decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions	9%	14%	18%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	1,168	1,765	2,311

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	292	1,609	1,901
Fiscal Exposure, 25%	73	402	475

Scenario 1b - 30-yr amortization	2017	2018	2019
Annual Exposure[2]	1,449	2,040	2,581

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	362	1,597	2,175
Fiscal Exposure, 25%	91	399	544

Indicates year in which, similar to OPCD's exar closest to 30%.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 ar
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu on accounting treatment.

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]
Debt-Finance Global Adjustment Costs, Option 1a	213	834	762
Debt-Finance Global Adjustment Costs, Option 1b	91	399	544
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**213**	**1074**	**1065**
Total, B	91	639	847

Proposed Program Total:	91 - 213	639 - 1,074	847 - 1,065

($M)	2016-171	2017-181	2018-191
Debt-Finance Global Adjustment Costs, Option 1a	851	3335	3049
Debt-Finance Global Adjustment Costs, Option 1b	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**851**	**3575**	**3352**
Total, B	362	1837	2478

Proposed Program Total:	362 - 851	1,837 - 3,575	2,478 - 3,352

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6

7	July	7	
8	August	8	
9	September	9	
10	October	10	
11	November	11	
12	December	12	

30-year term	**2016-17**	**2017-18**	**2018-19**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335	2,175 - 3,049

ROWS HIDDEN

1	1 = Comparision Enabled

APRIL 1, 2017 25%

2020	2021	2022
3,123	1,728	1,400

2019-20	2020-21	2021-2022
2,697	2,774	1,646
674	693	412

2020	2021	2022
3,396	2,020	1,712

2019-20	2020-21	2021-2022
2,958	3,052	1,943
740	763	486

mple, the true cost of GA being deferred is
ear, exposure may be less subject to which

l $17-21 billion (at 3.5% interest rate), peaking in 2028.
$33-$36 million.

ıals per month based on month of the year. Actuals may also depend on

28%	17%	13%
2020	2021	2022
3,750	2,311	1,933

2019-20	2020-21	2021-2022
2,671	3,391	2,217
668	848	554

2020	2021	2022
4,016	2,598	2,241

2019-20	2020-21	2021-2022
2,940	3,662	2,508
735	915	627

mple, the true cost of GA being deferred is

ıd $17-21 billion (at 3.5% interest rate), peaking in 2028.
$118-$134 million.

ıals per month based on month of the year. Actuals may also depend on decision

2019-20[1]	2020-21[1]
740	763
735	915
279	323
60	60
18	18
1097	**1164**
1092	1316

1,092 - 1,097 1,316 - 1,164

2019-201	2020-211
2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453





2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964
Equal Monthly Debt Drawdown	3,180	952

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

		26%	23%	19%	22%	10%	7%																													
Scenario 1a, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

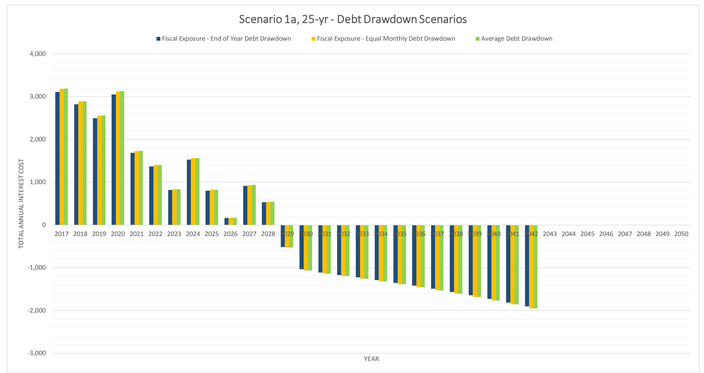
		26%	23%	19%	22%	10%	7%																													
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

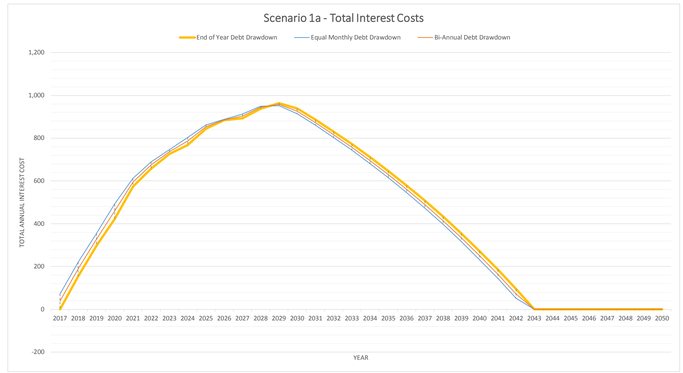
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

		26%	23%	19%	22%	10%	7%																													
Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1a, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	968	
Equal Monthly Debt Drawdown	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

			9%	14%	18%	28%	17%	13%																														
Scenario 1b, 25-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year		0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*		*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown			1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		**12**																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year		0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*		*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	[redacted]	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

	Monthly Drawdown		95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%		1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns		27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance		-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost		27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Scenario 1b, 25-yr	Bi-Annual Debt Drawdown		**2**																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year		0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr		*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown			1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown		571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%		1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns		14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance		-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost		14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Scenario 1b, 25-yr	Average Debt Drawdown																																				
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment		10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year		0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr		*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown		1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown			1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	

Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

		28%	24%	21%	24%	12%	9%																														
Scenario 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

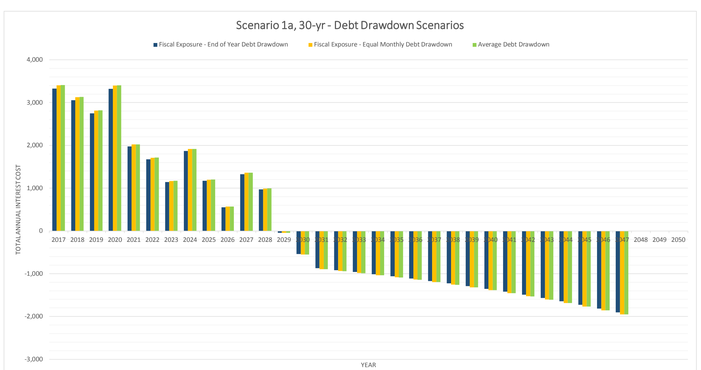
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	1,156	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

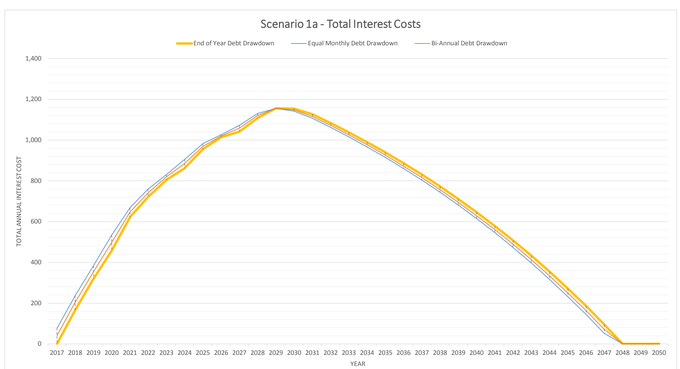
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

		12%	16%	20%	30%	19%	15%																													
Scenario 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

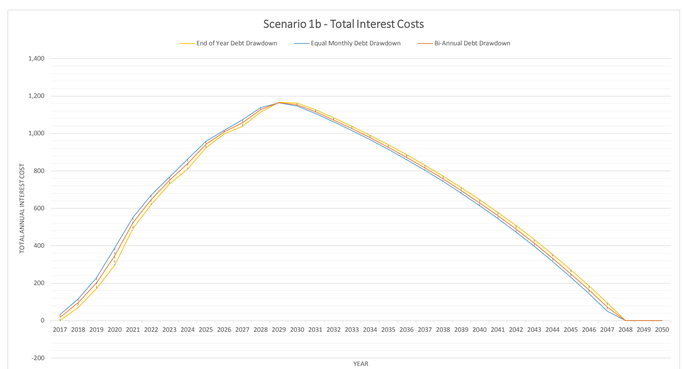
	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

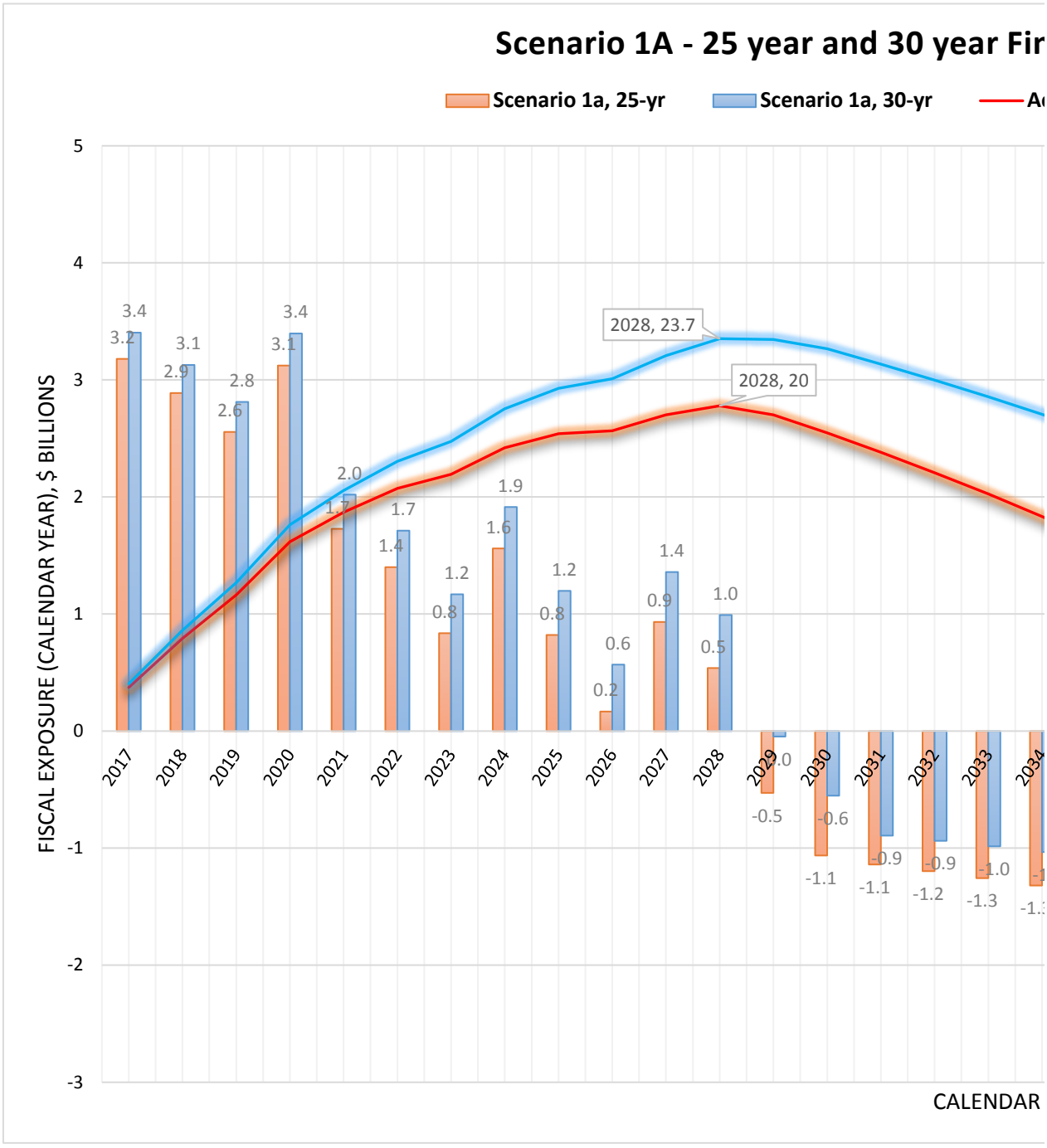
	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

Scenario 1b, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

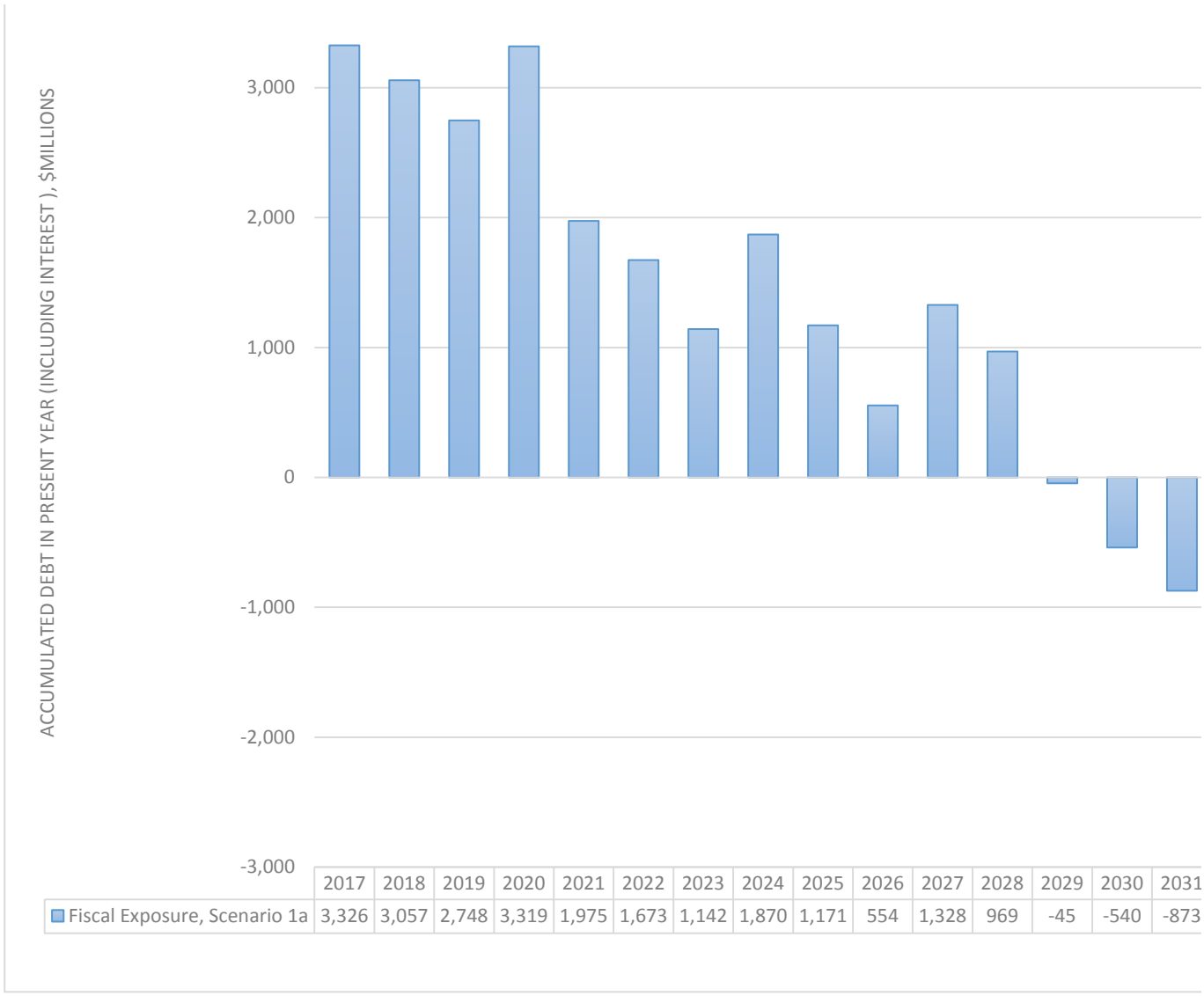




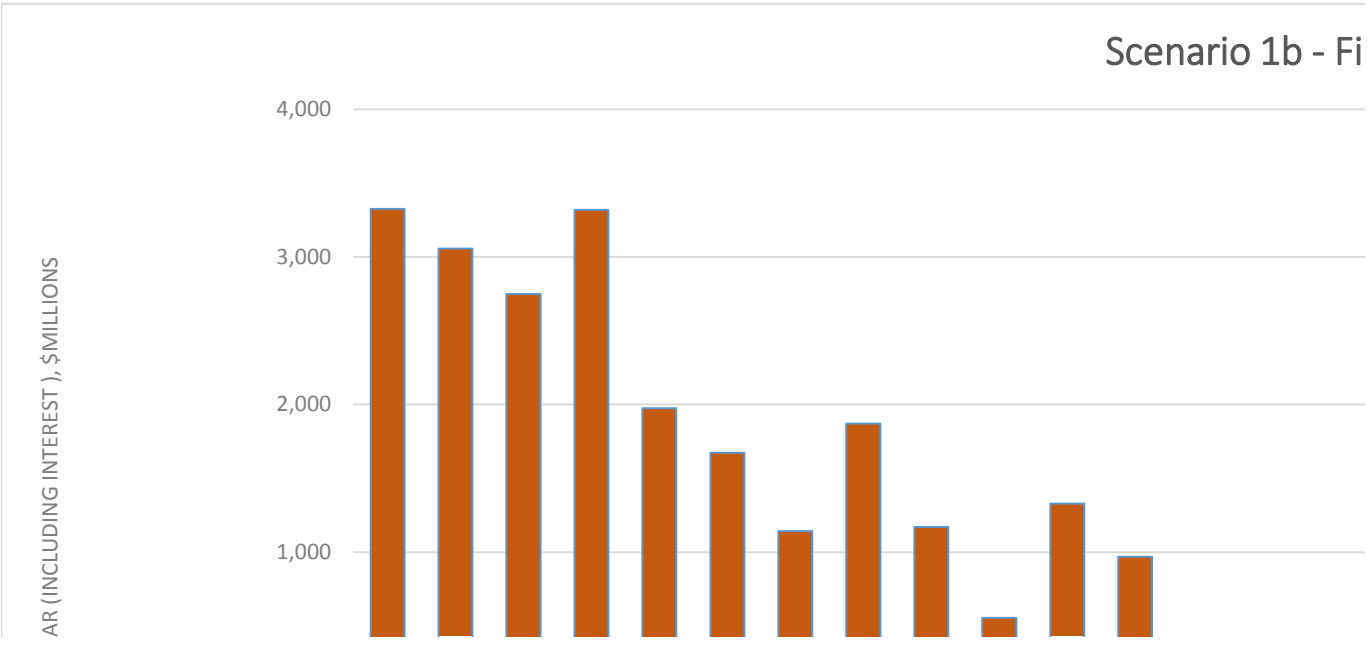
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

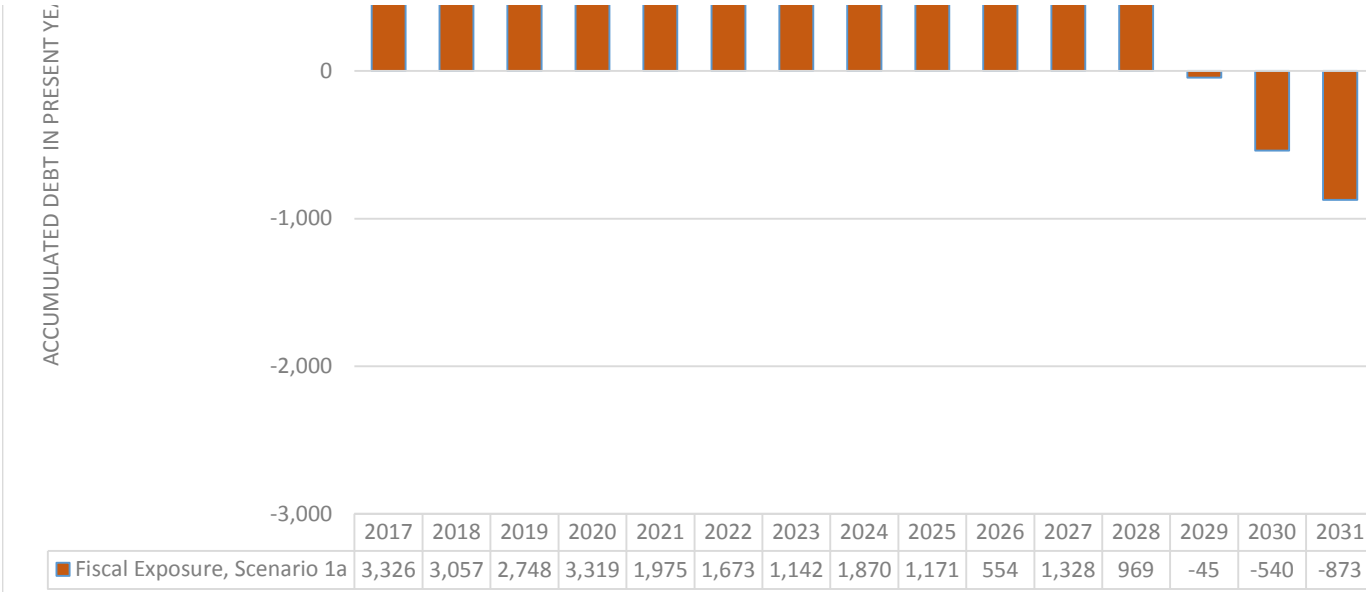




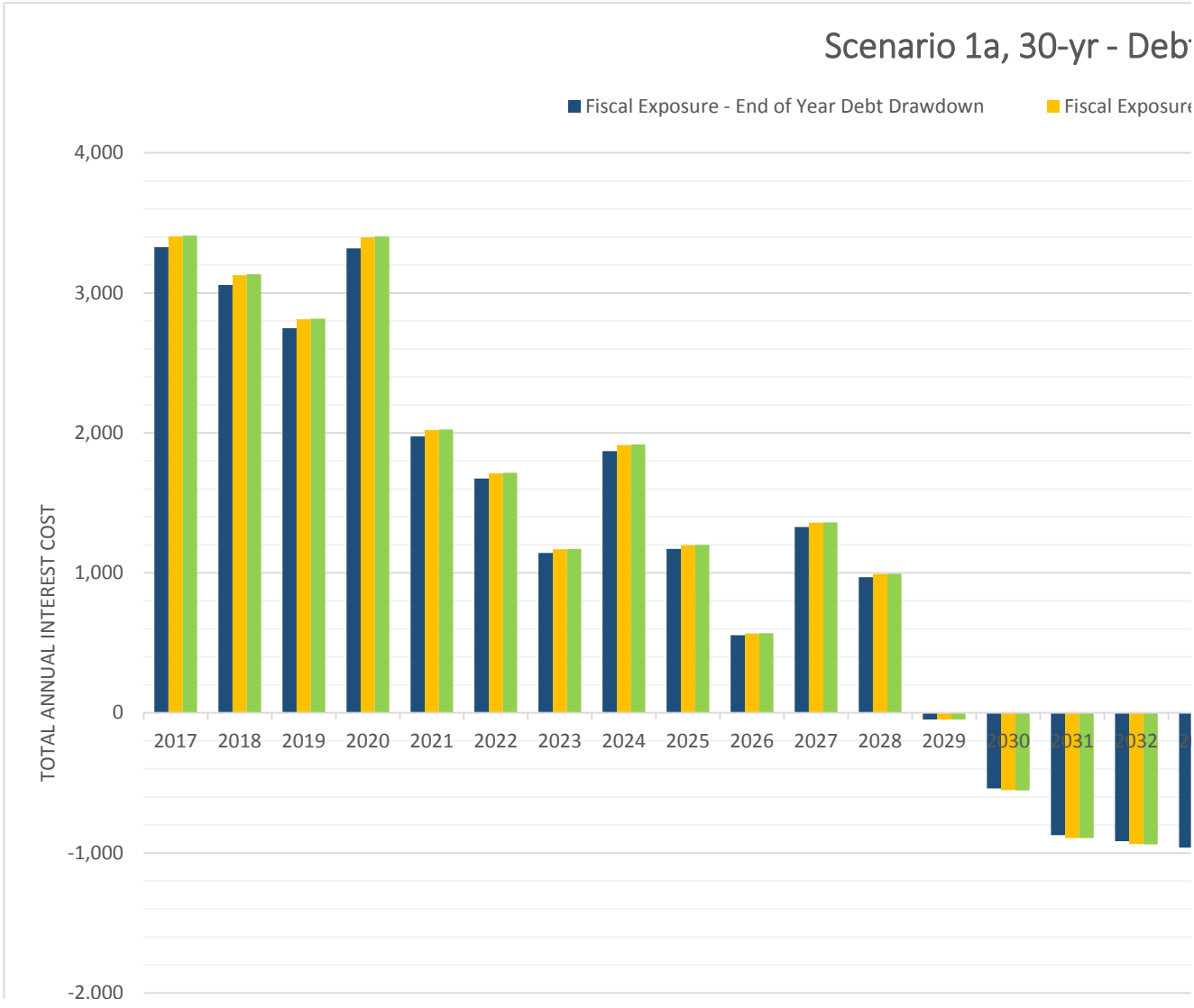


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



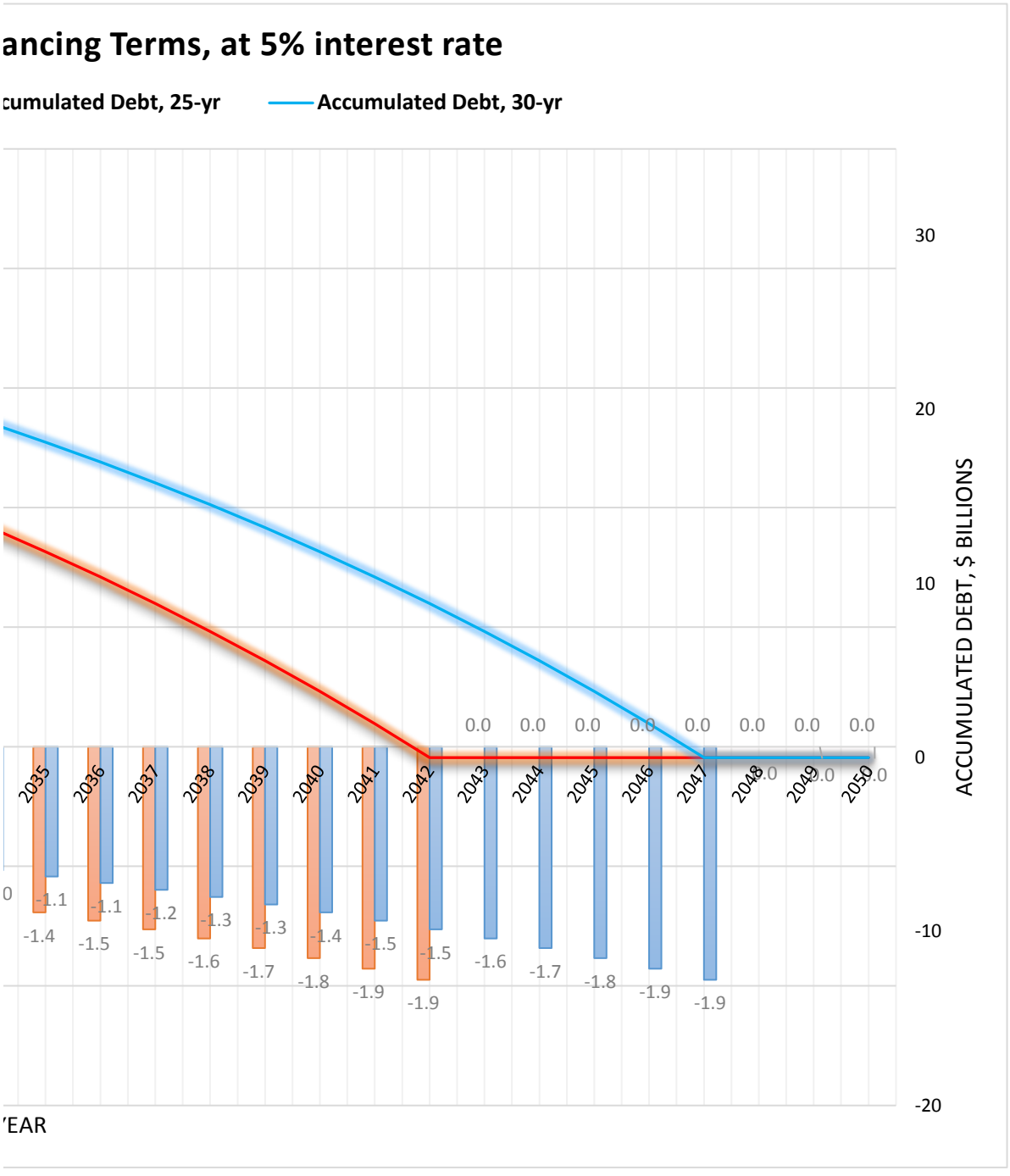


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



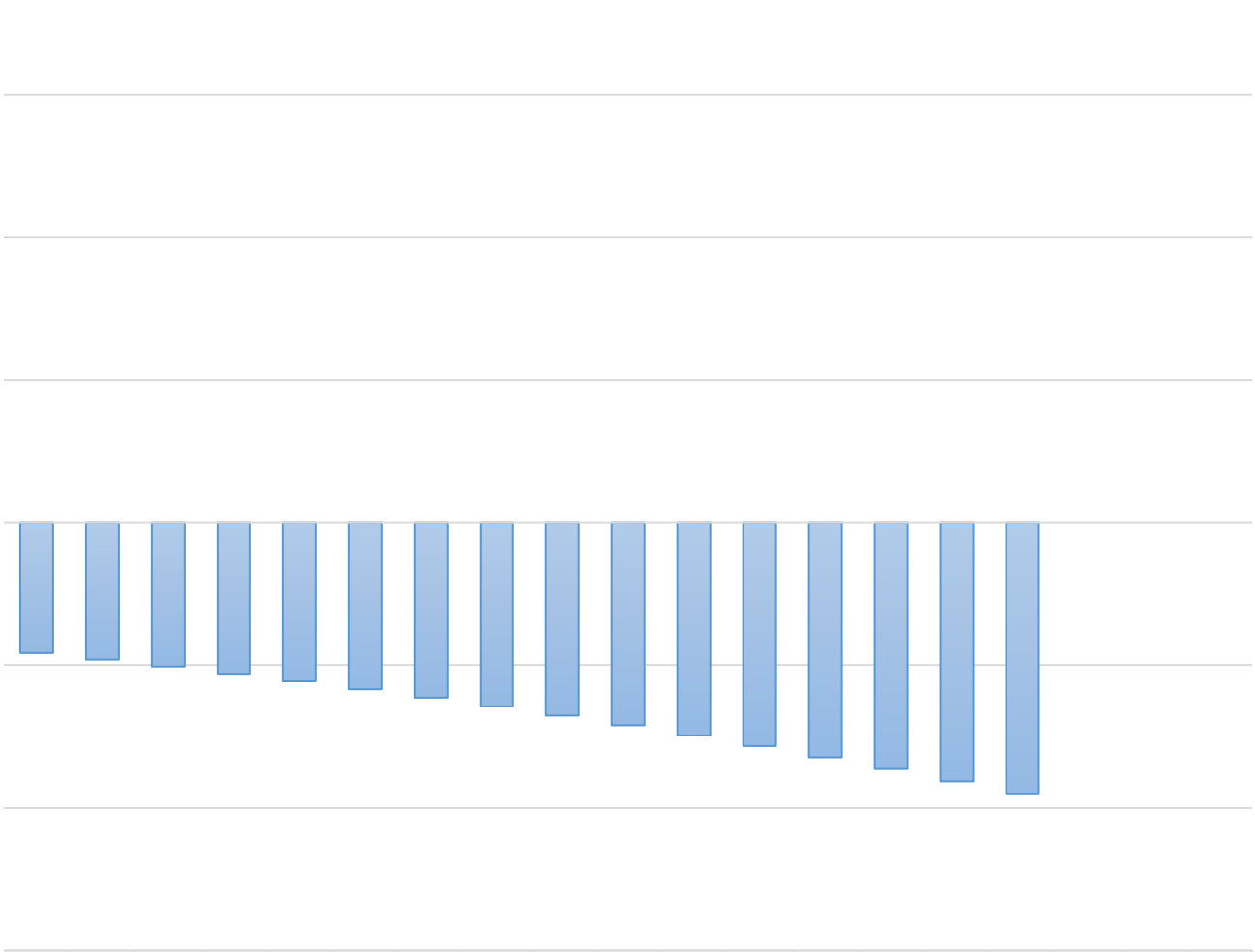

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

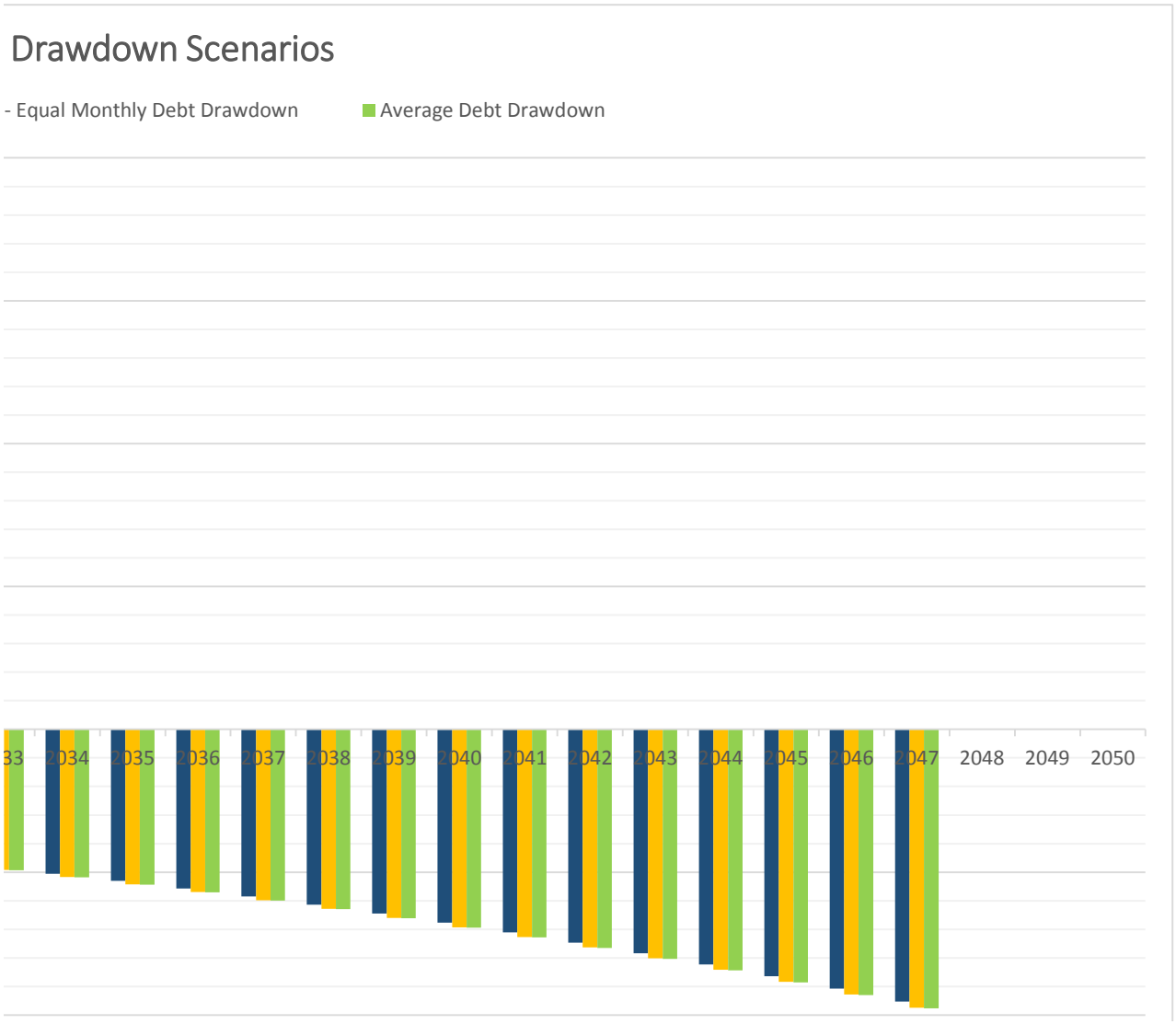
YEAR

cal Exposure



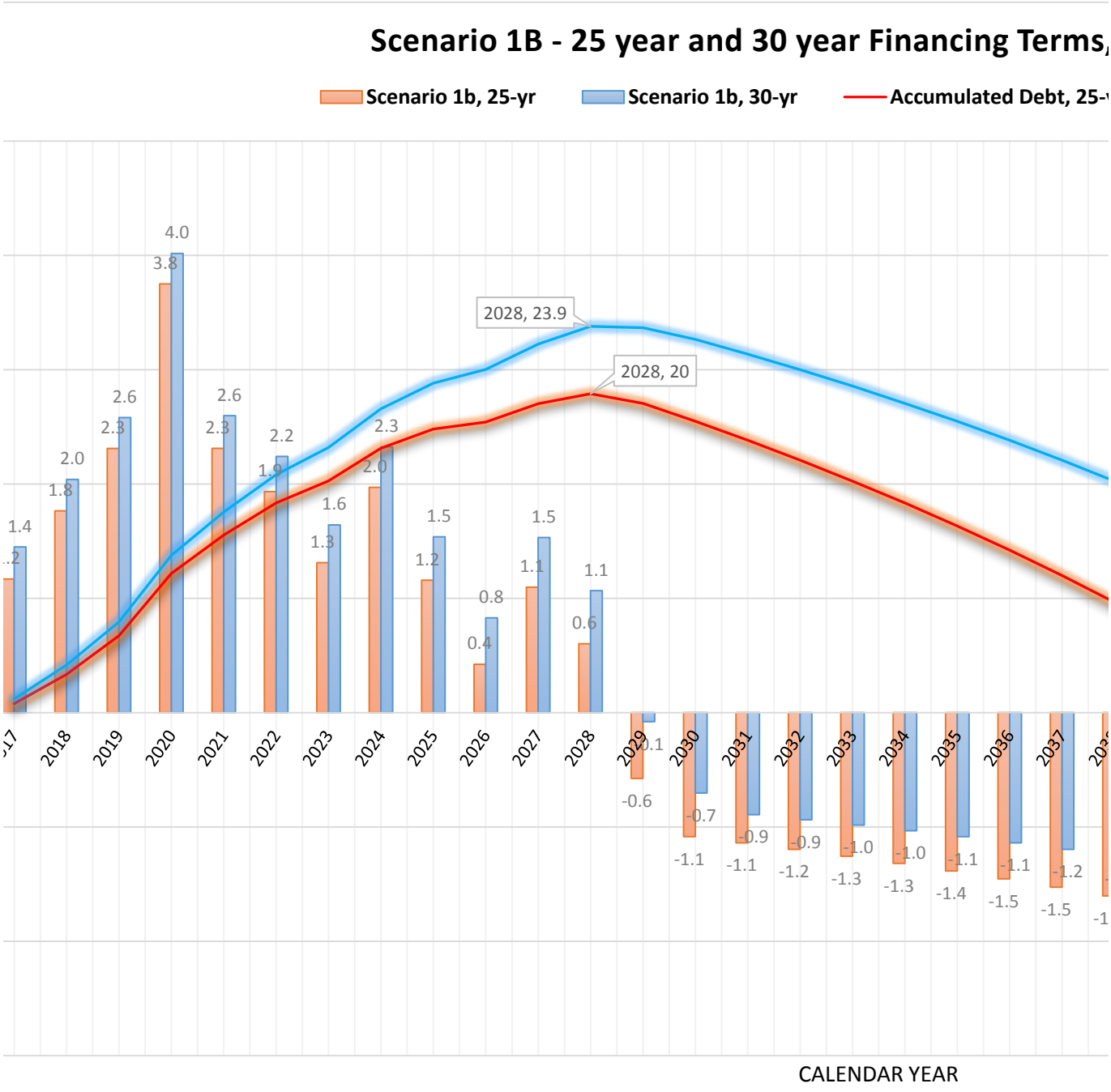
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

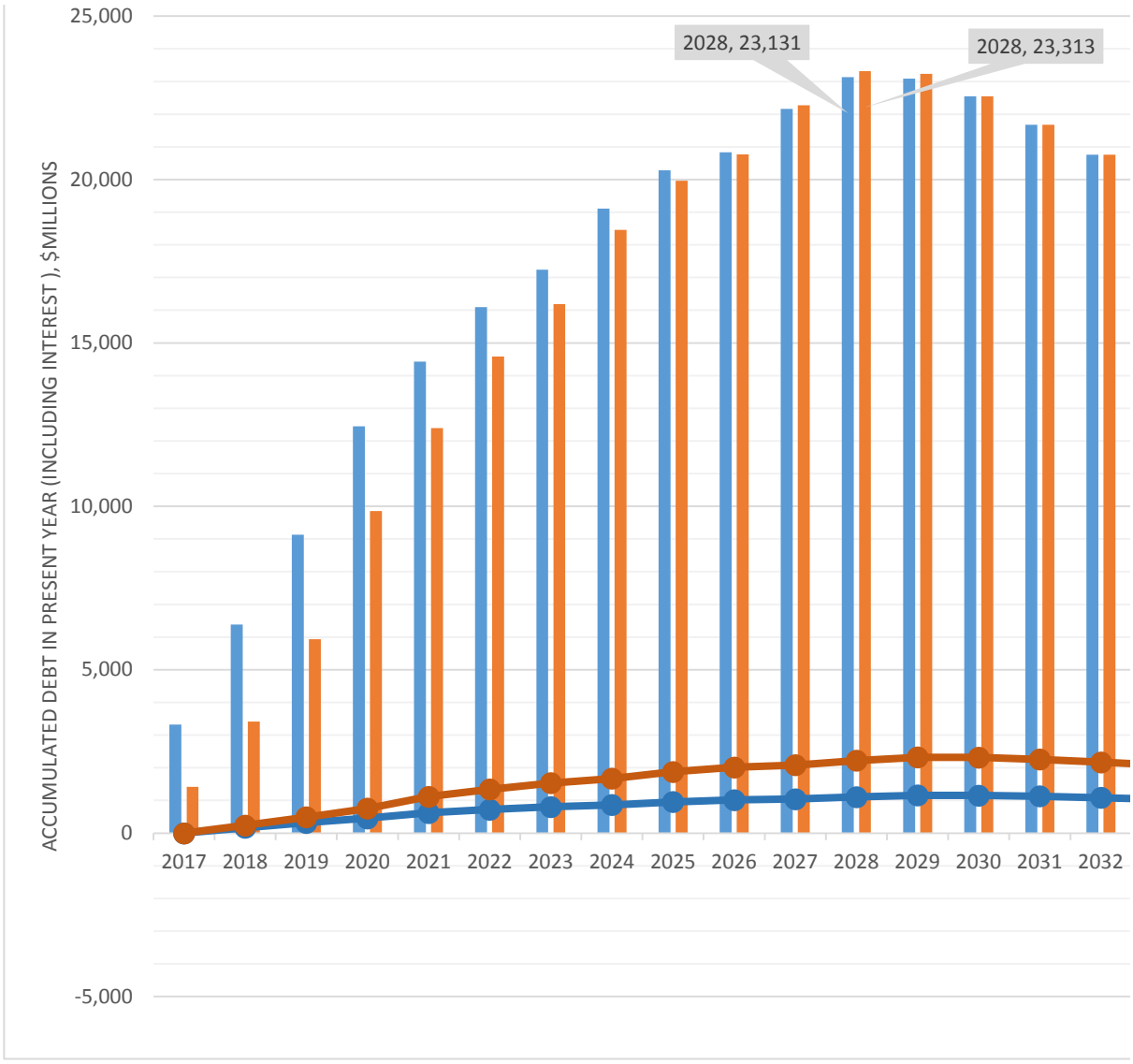


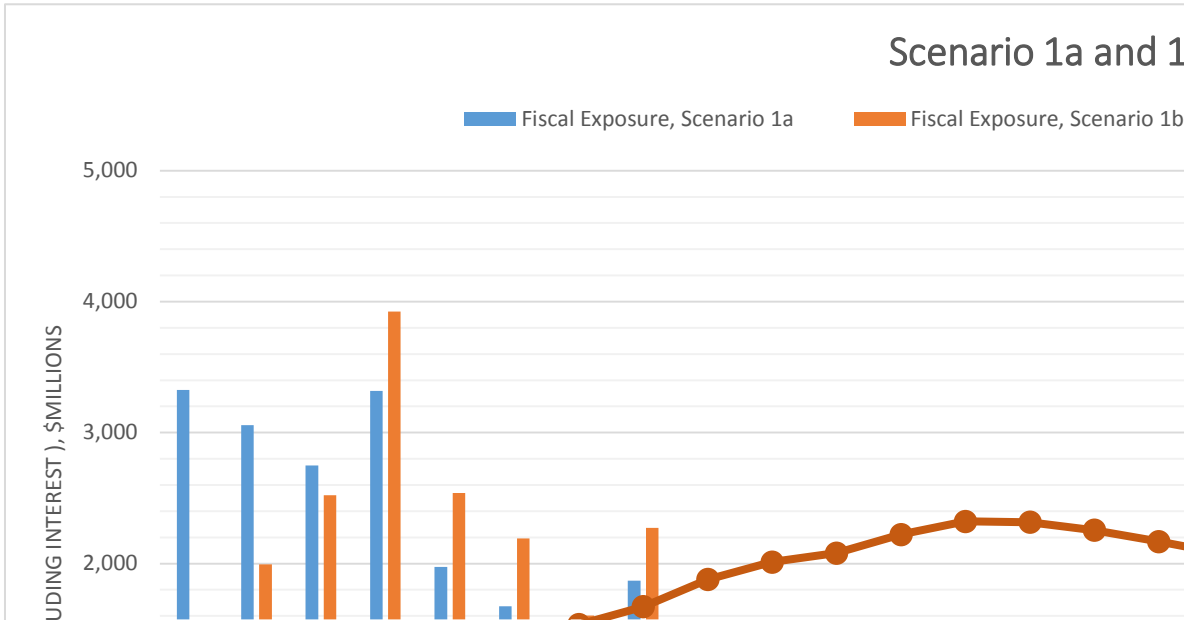
YEAR

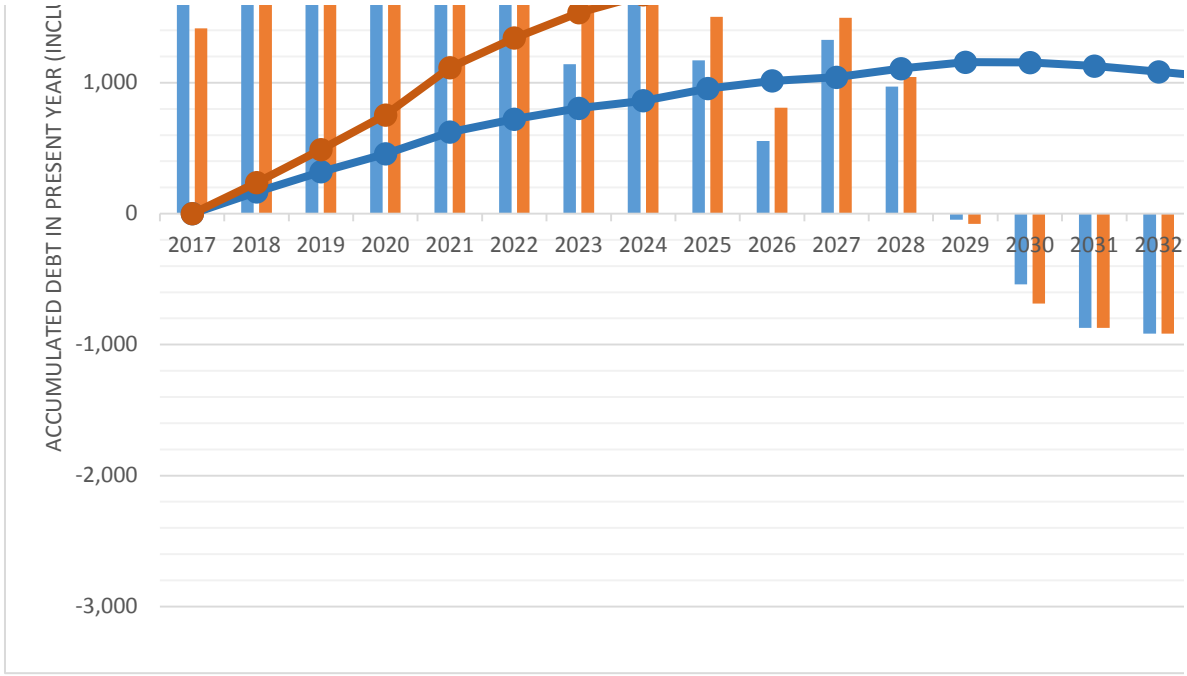
3 - 25 year and 30 year Financing Terms, at 5% interest rate

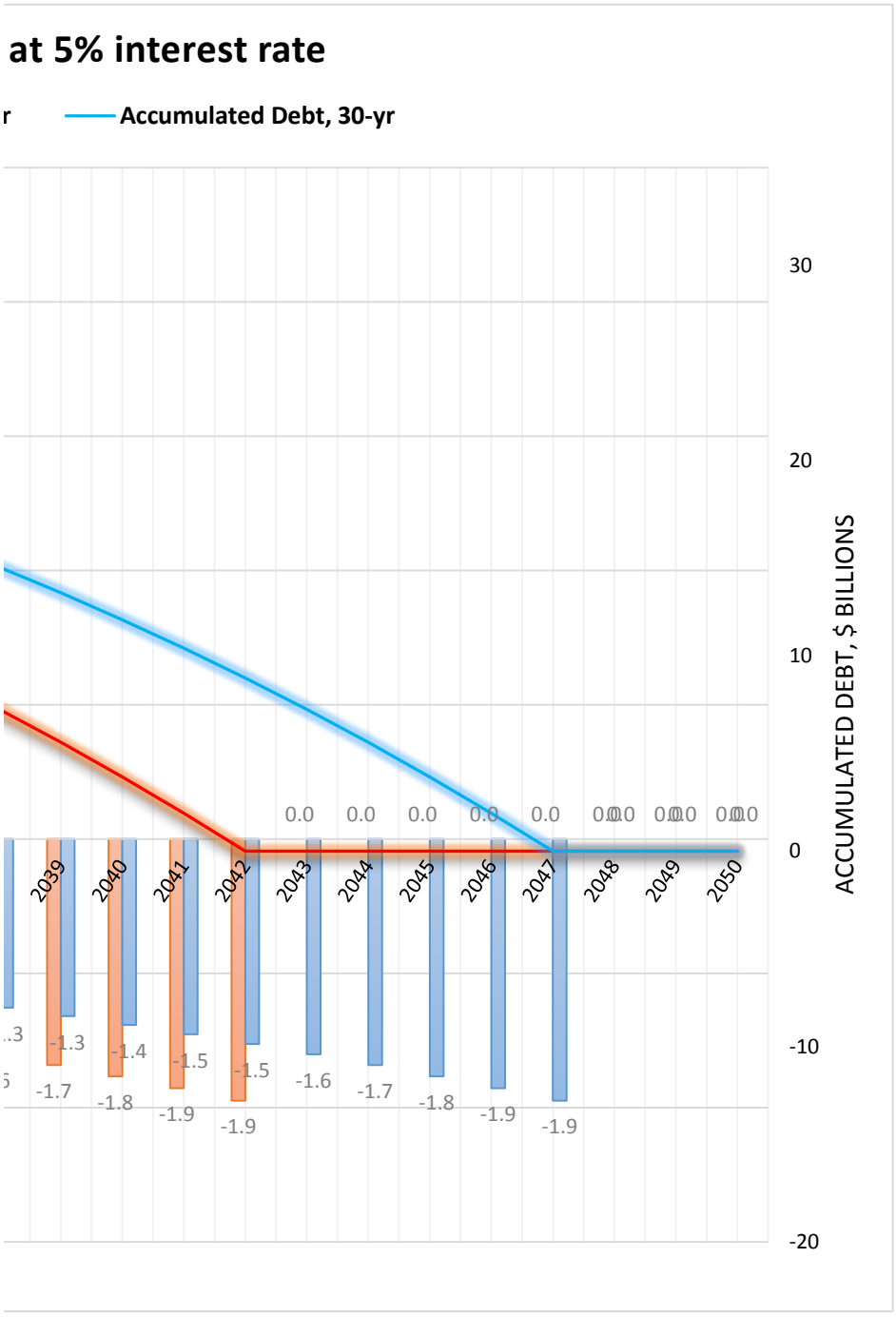





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

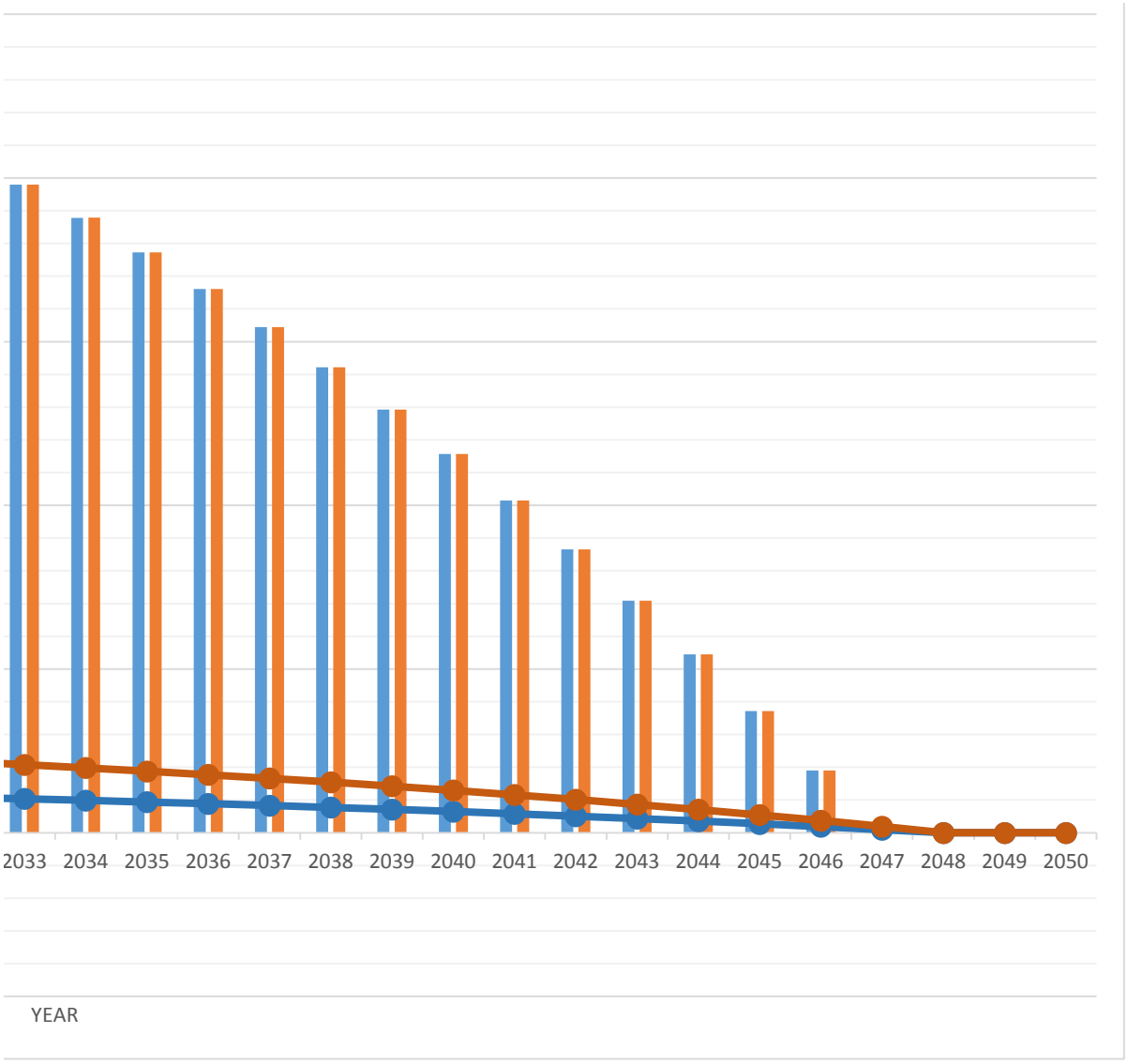

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

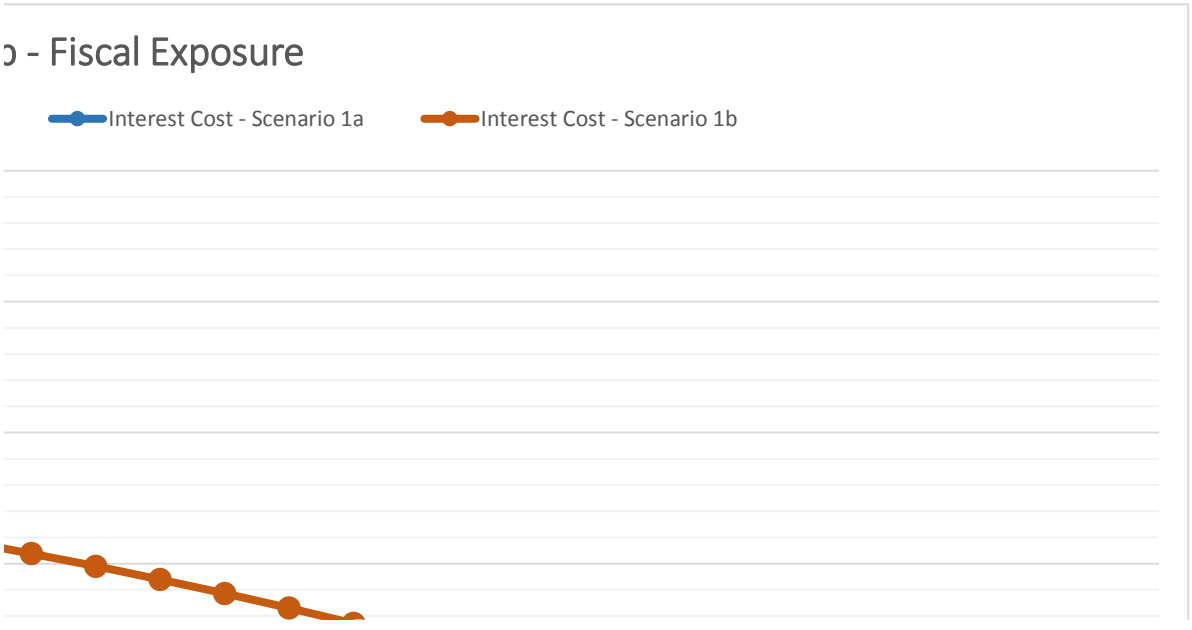

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

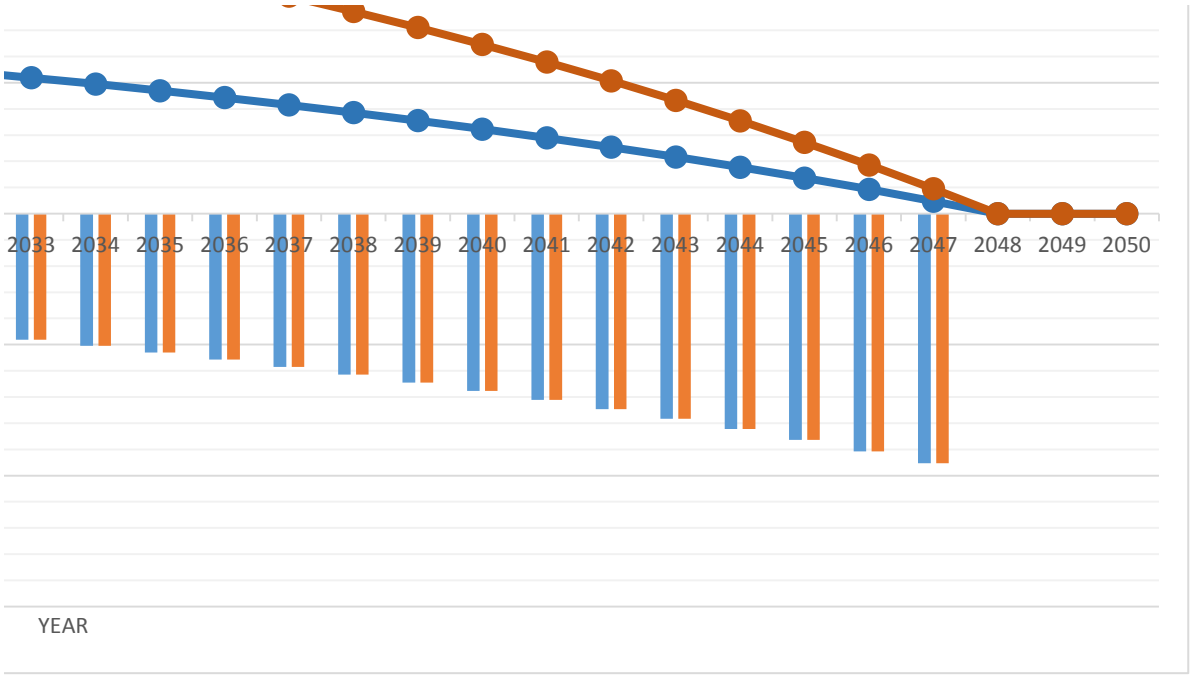


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

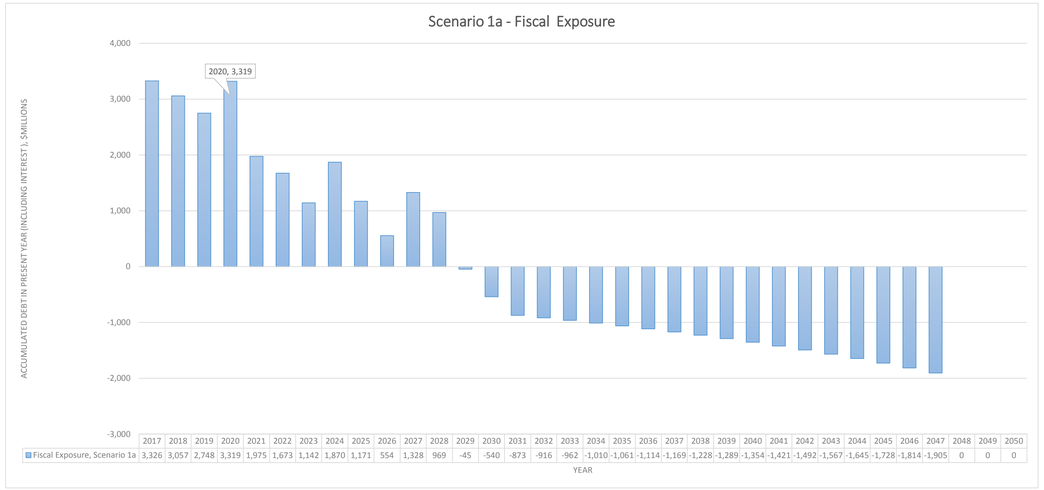
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

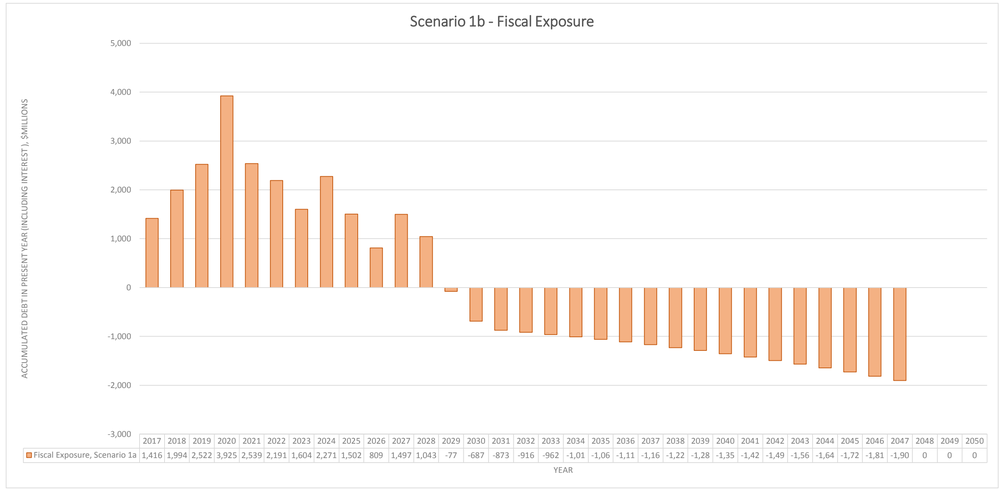
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

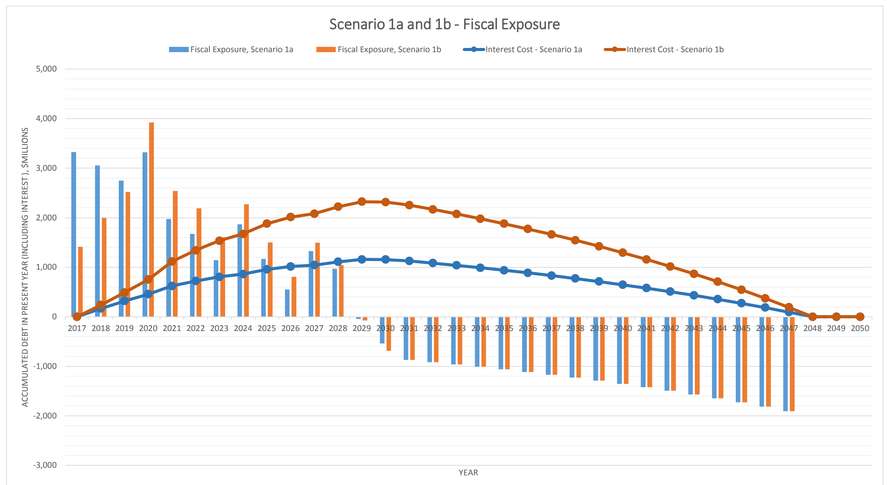
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

Notes:	Accounting treatment is to be determined.

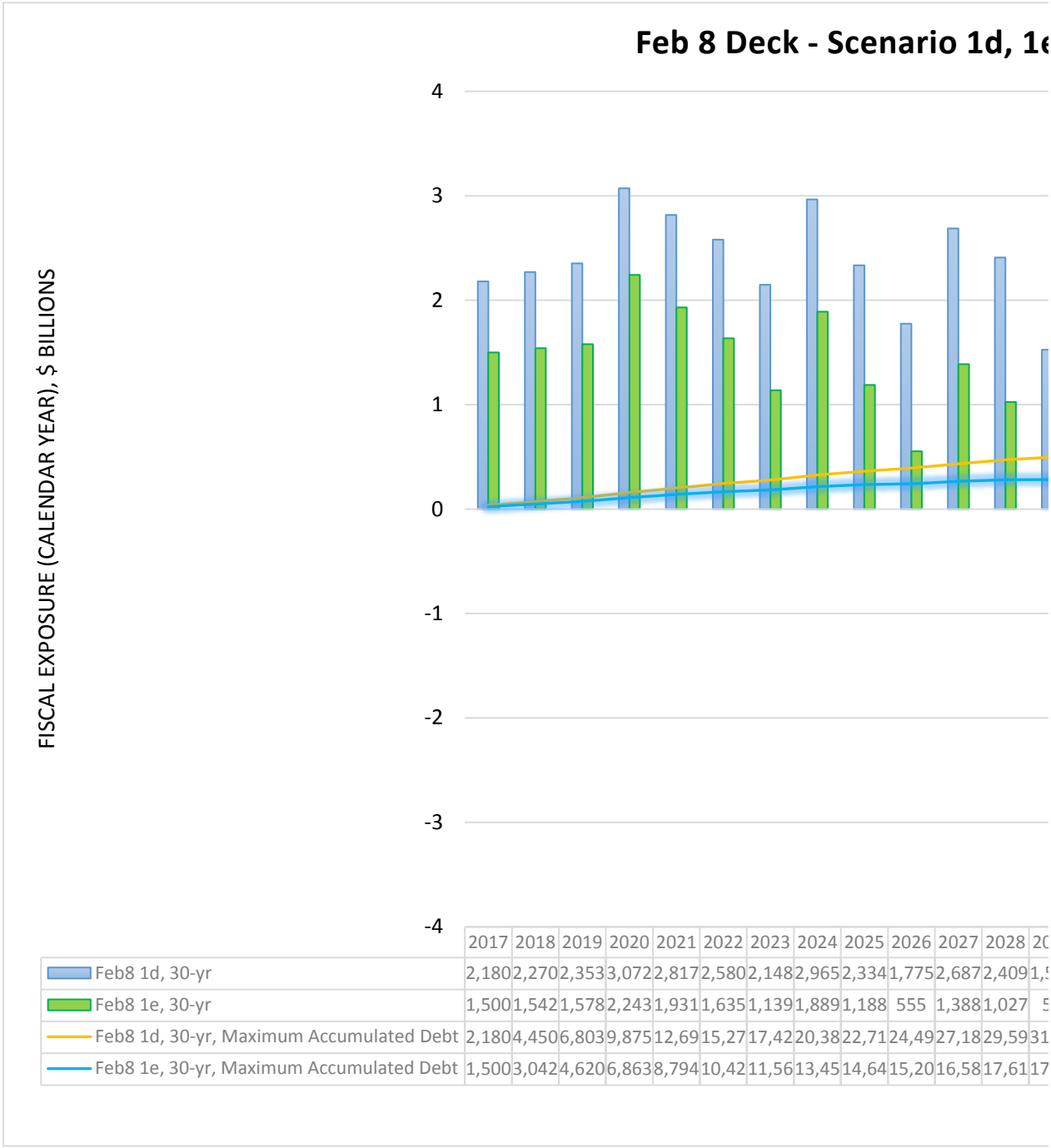

Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0


Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0

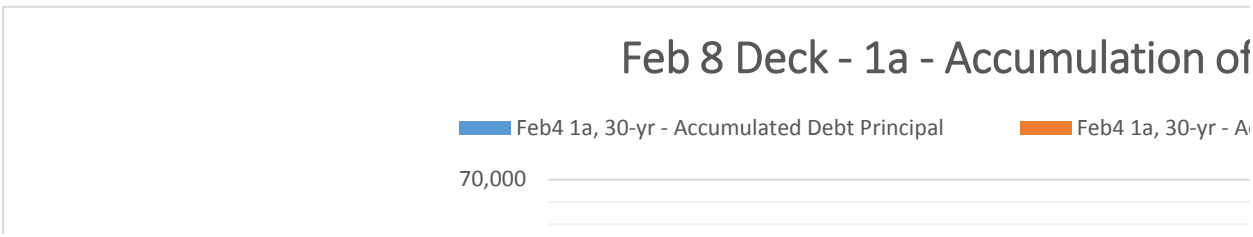

Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

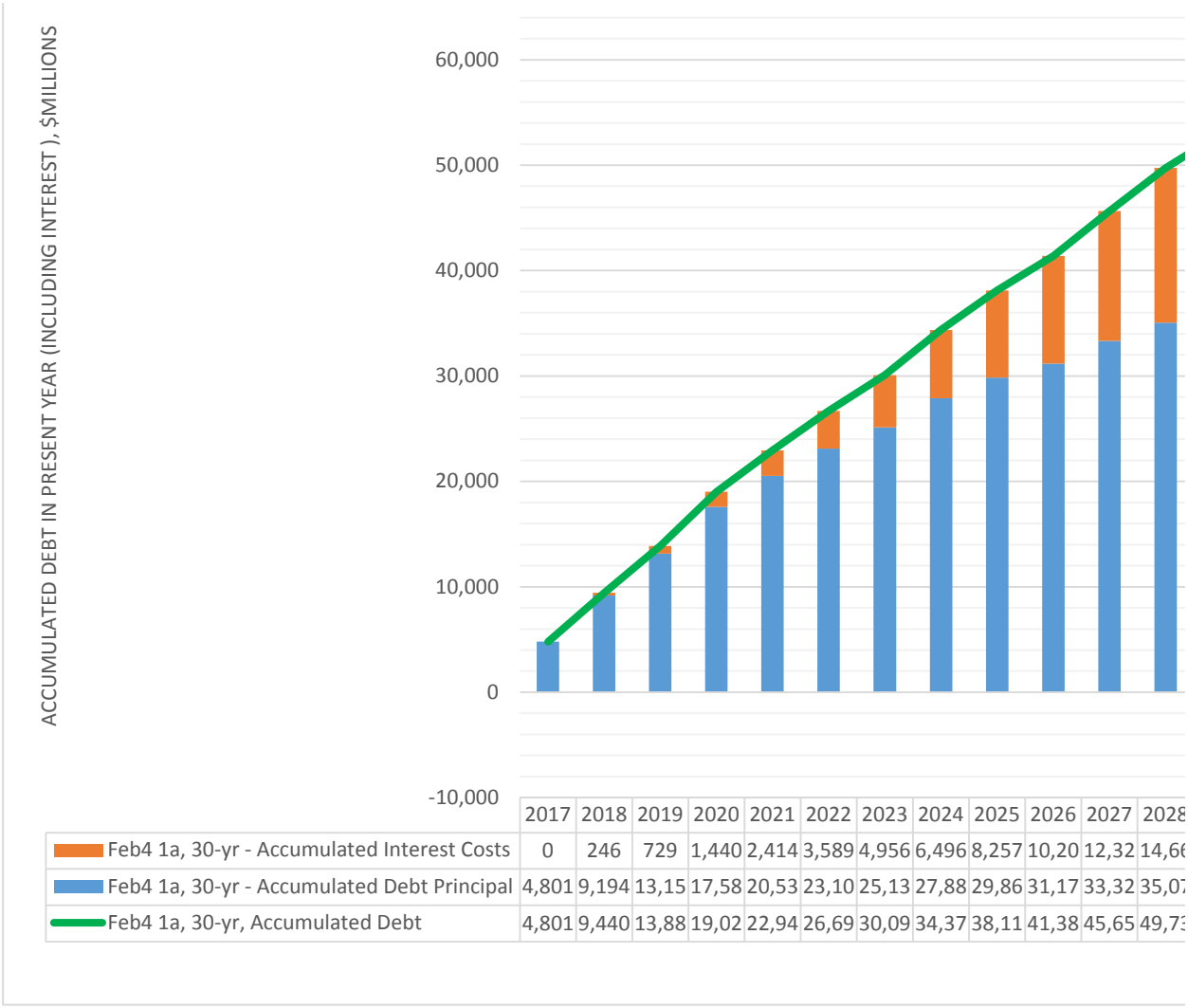
Feb 8 Deck

Feb 8 Deck - Scenario 1d, 1e - at 5.12% interest rate

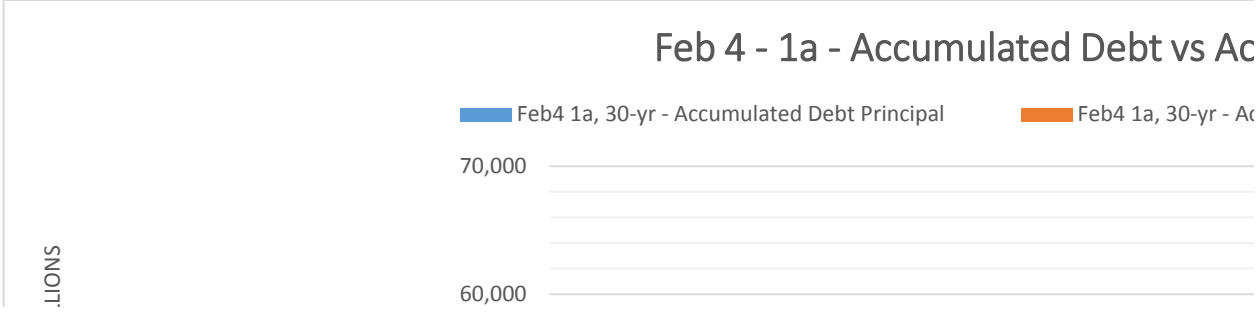


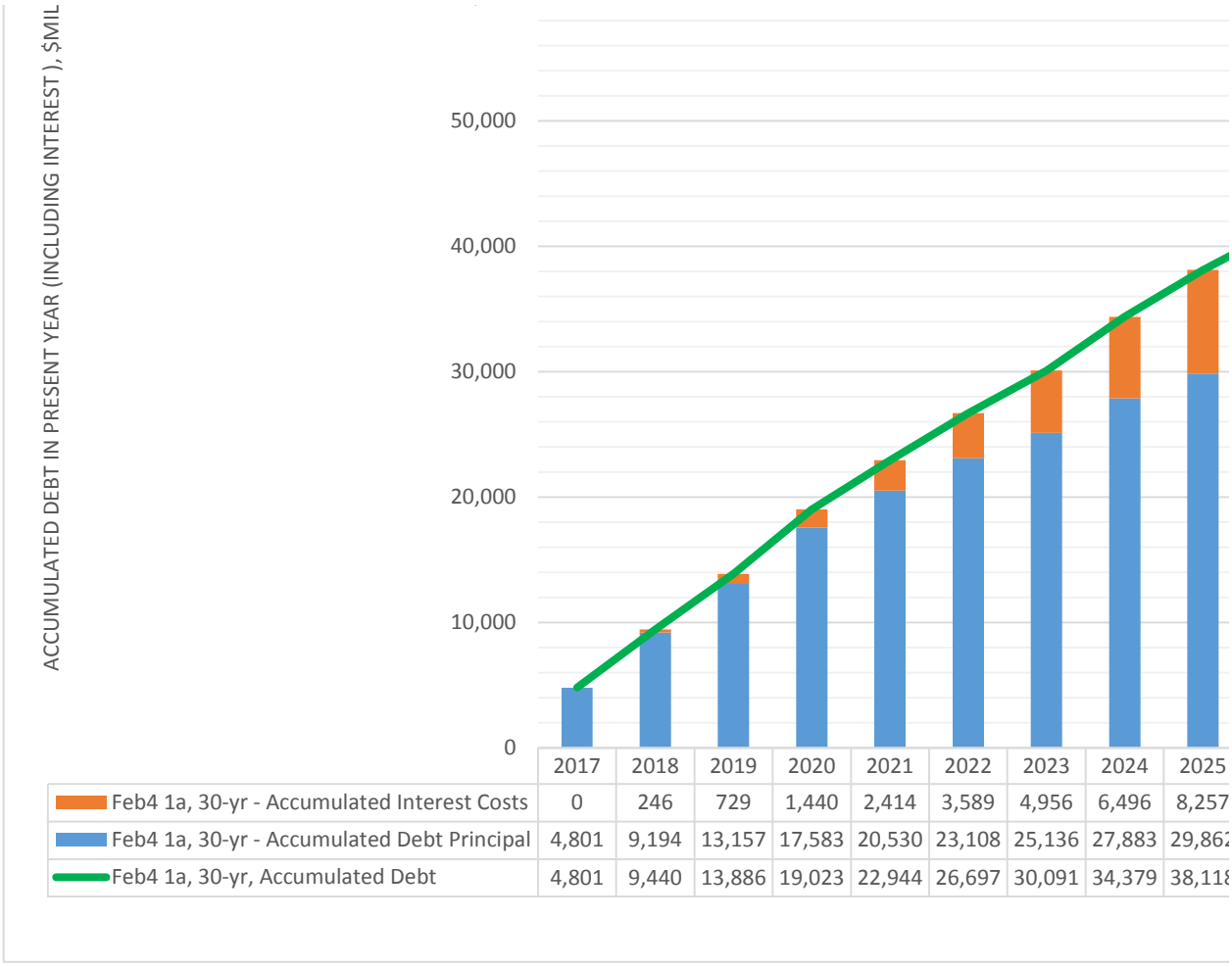
Feb 8 Deck - 1a - Accumulation of Debt (Principal and Interest)



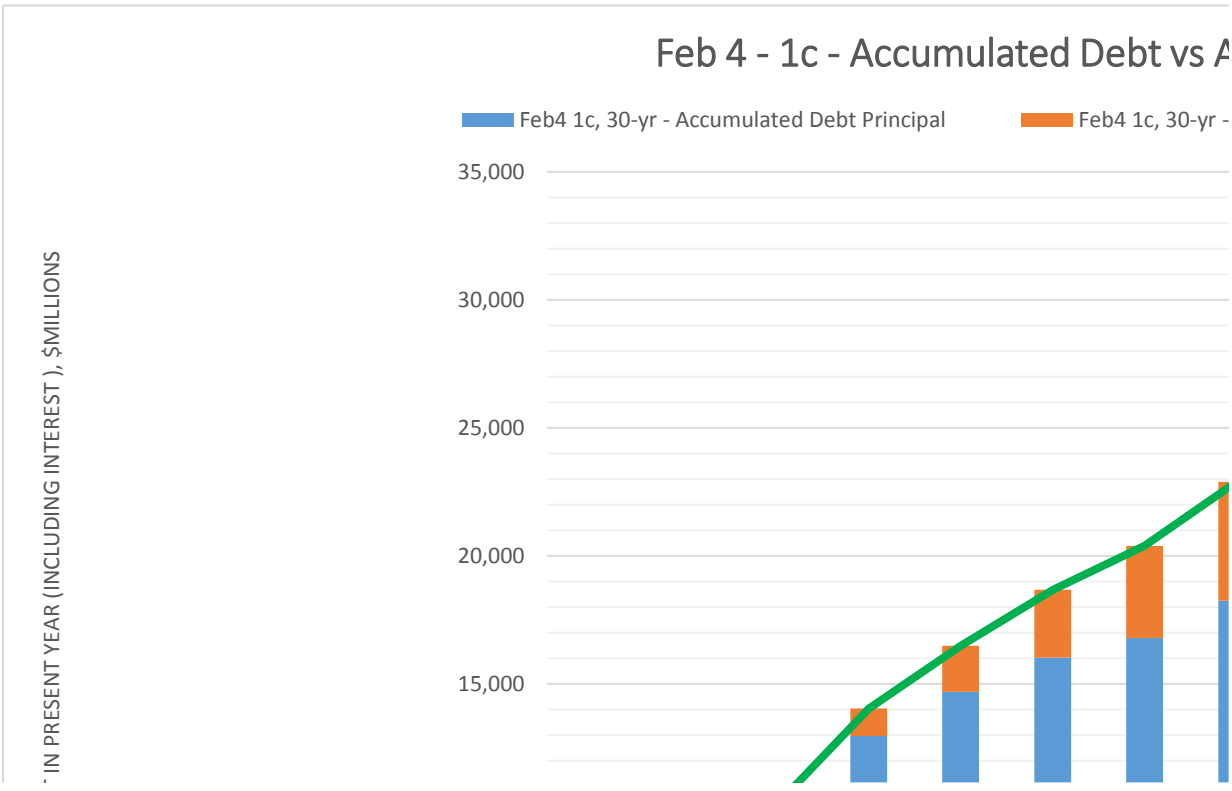


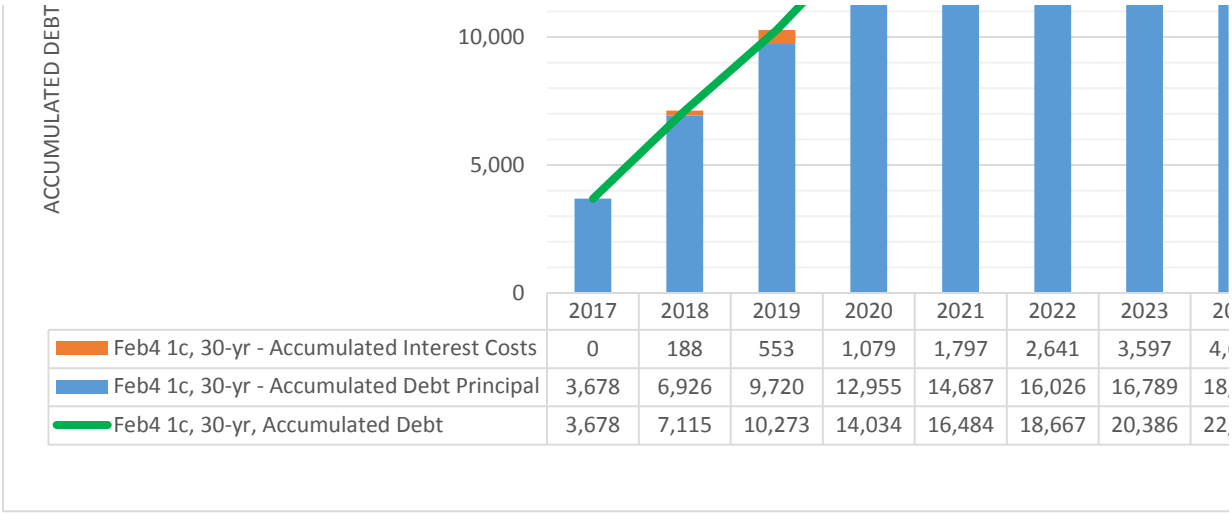
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,66
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,07
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73



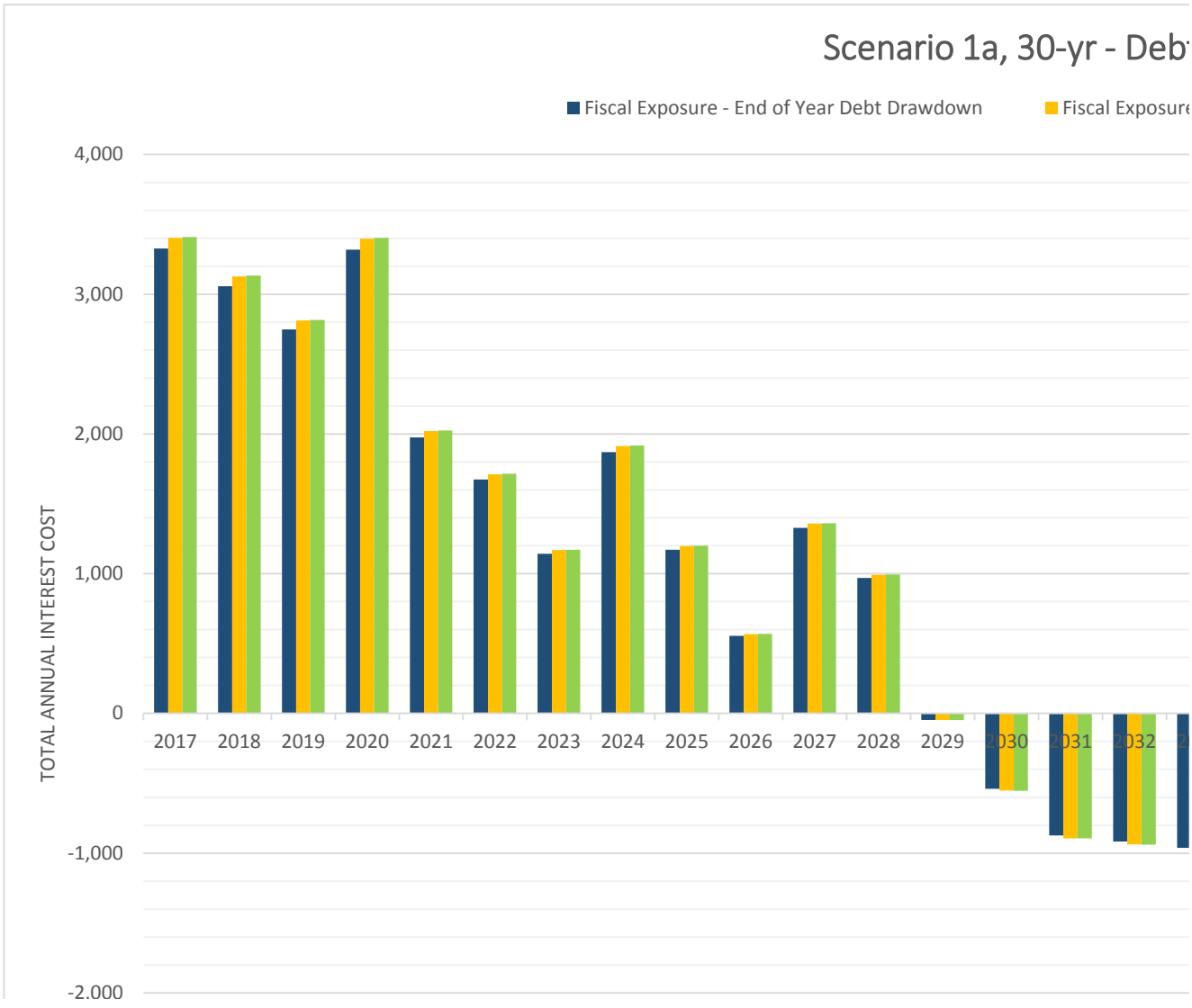


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



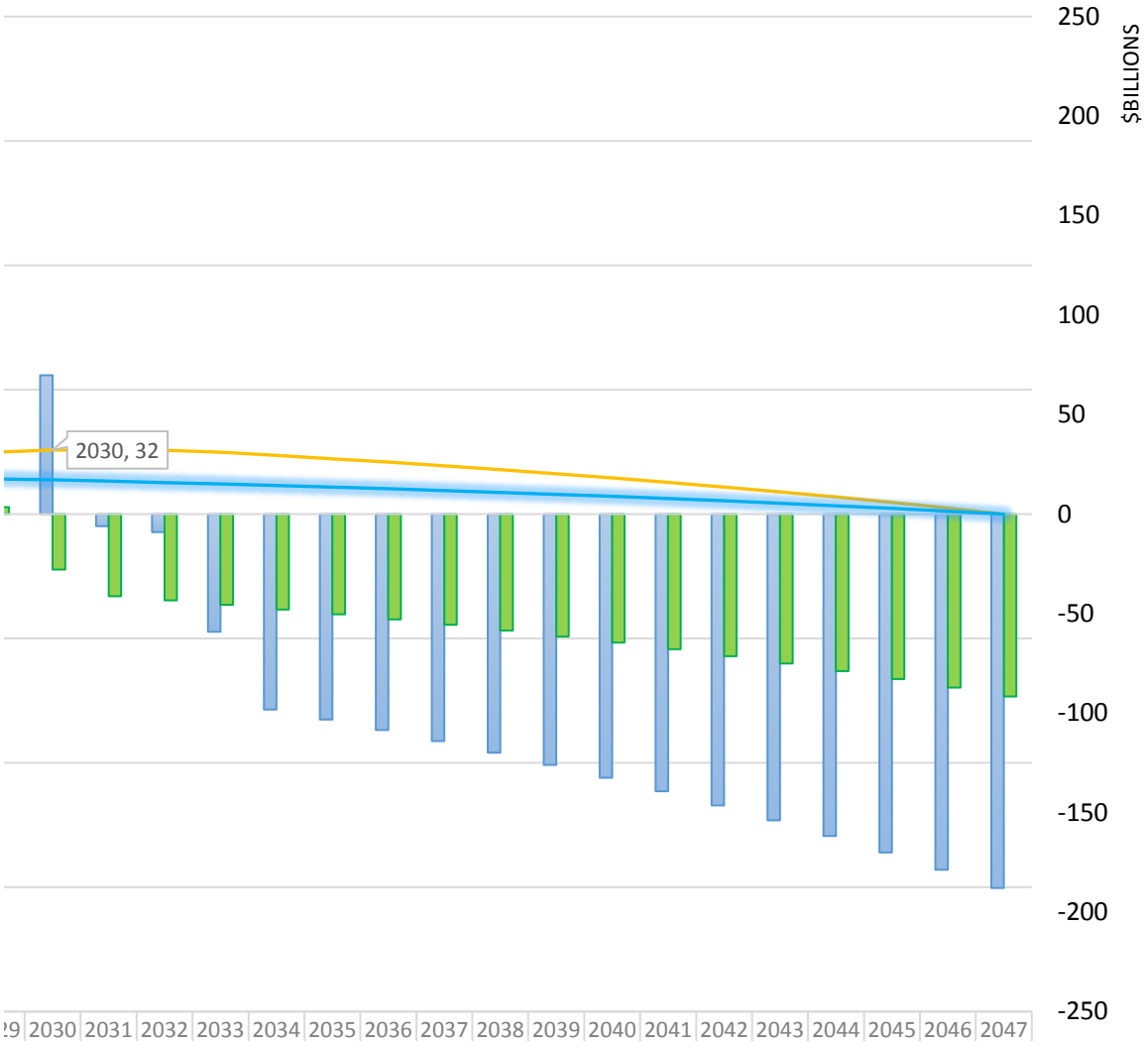


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22

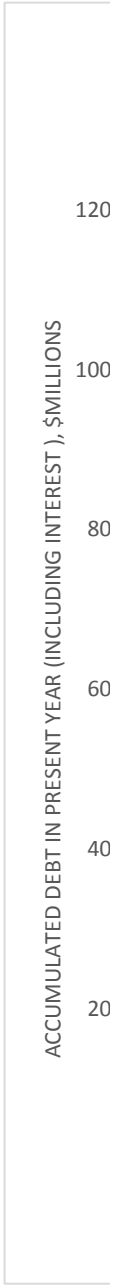


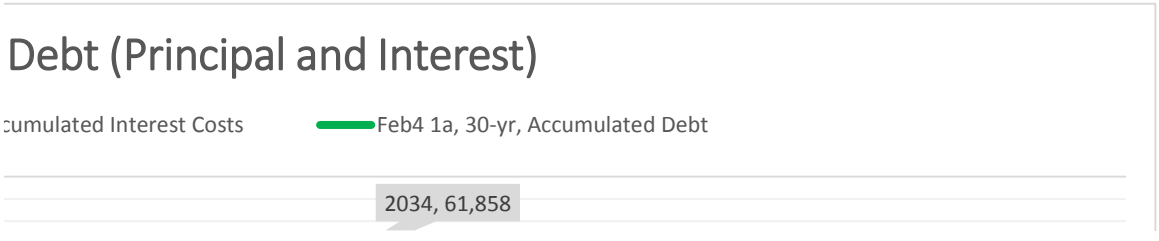

-3,000

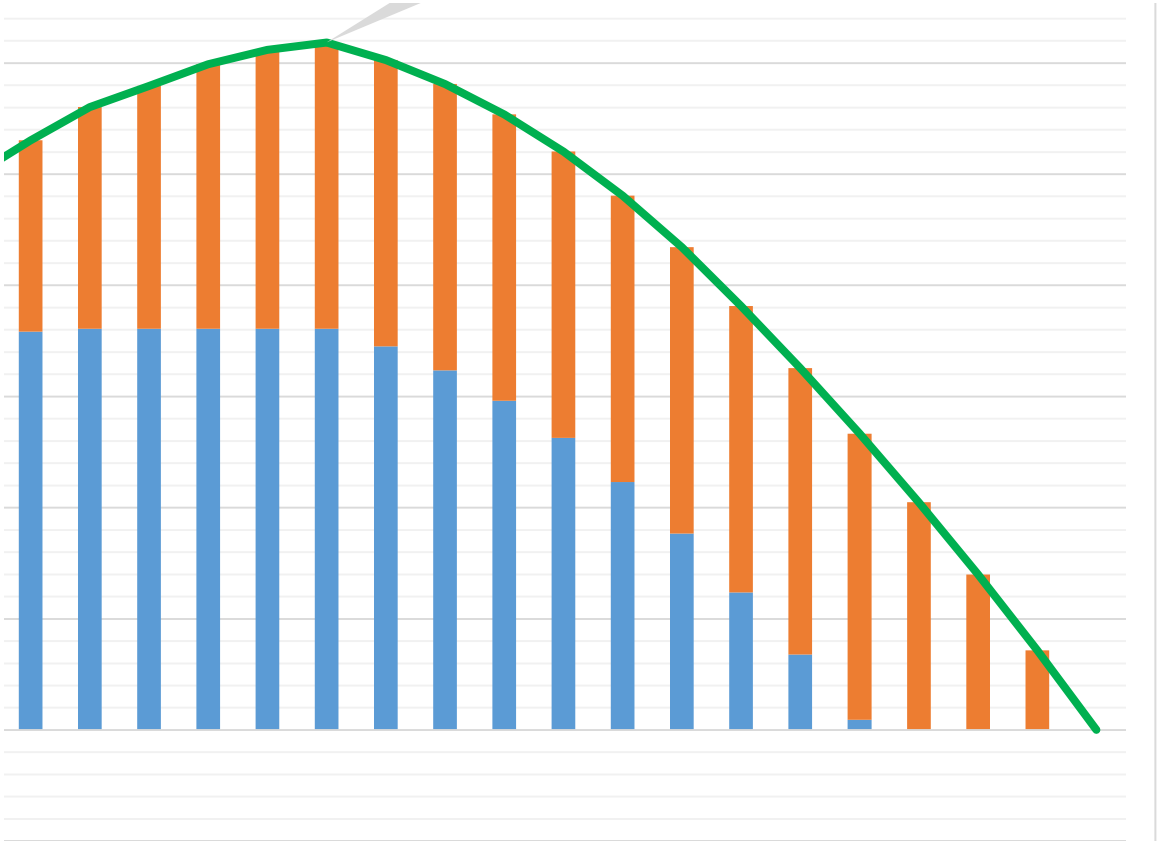
- at 5.12% interest rate



29	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
26	1,117	-97	-145	-946	-1,57	-1,65	-1,73	-1,82	-1,91	-2,01	-2,12	-2,22	-2,34	-2,46	-2,58	-2,72	-2,85	-3,00
5	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,03	-1,08	-1,14	-1,20	-1,26	-1,32	-1,39	-1,46
11	32,23	32,13	31,99	31,04	29,47	27,82	26,08	24,26	22,34	20,32	18,20	15,97	13,63	11,17	8,586	5,865	3,006	0
67	17,22	16,56	15,87	15,14	14,37	13,57	12,72	11,83	10,89	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0

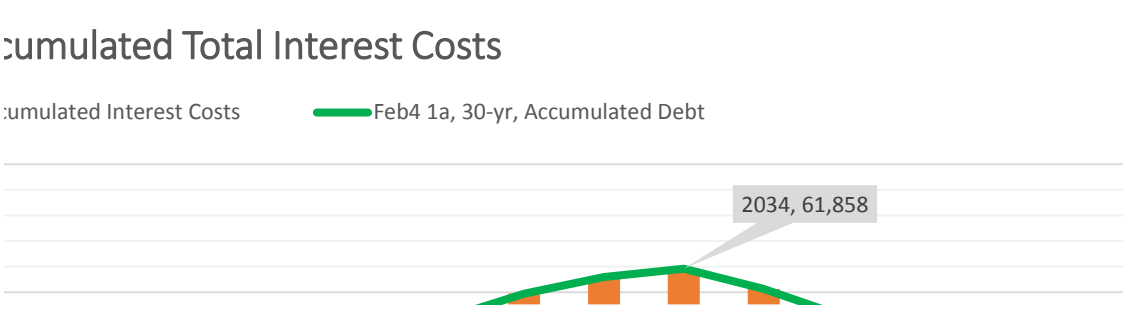




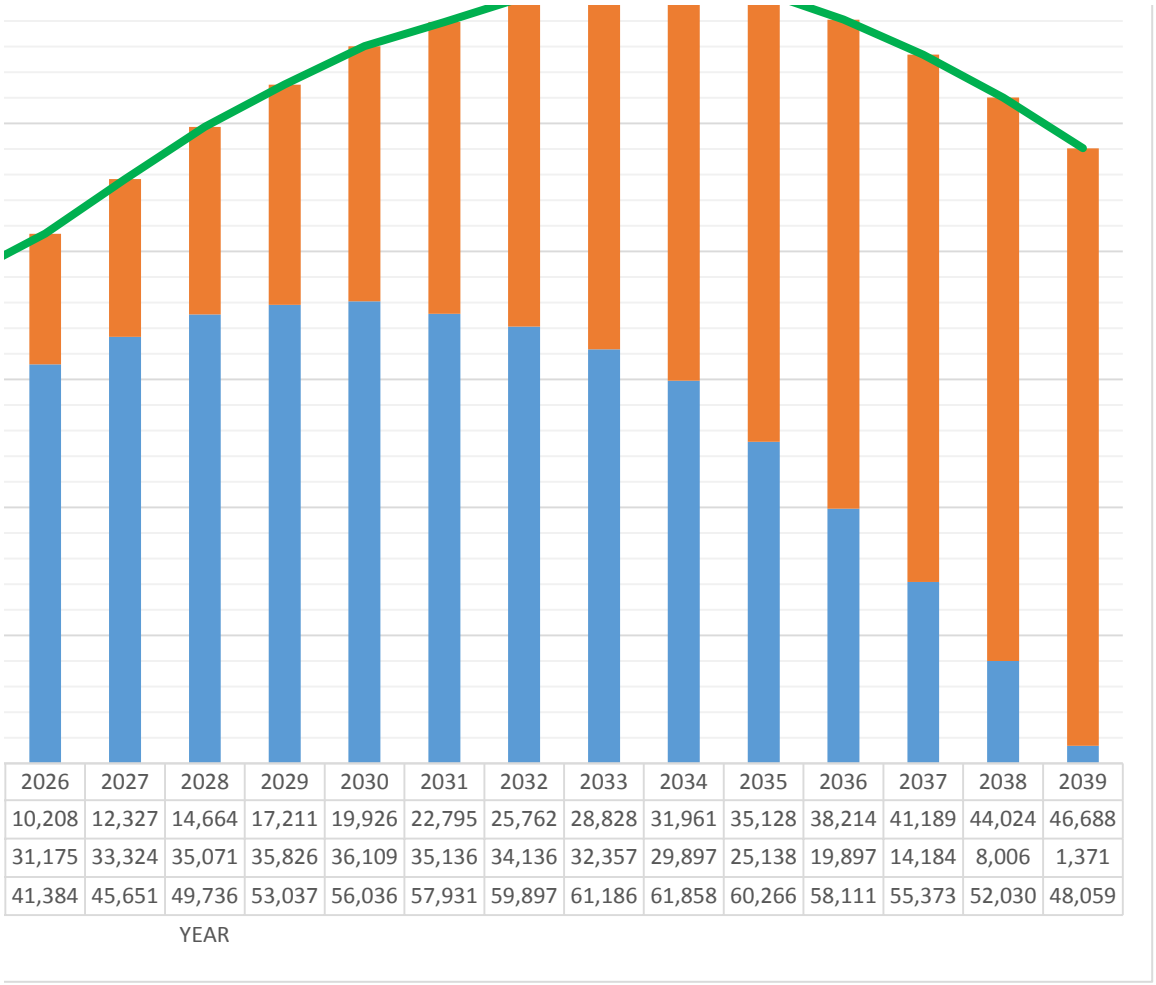


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



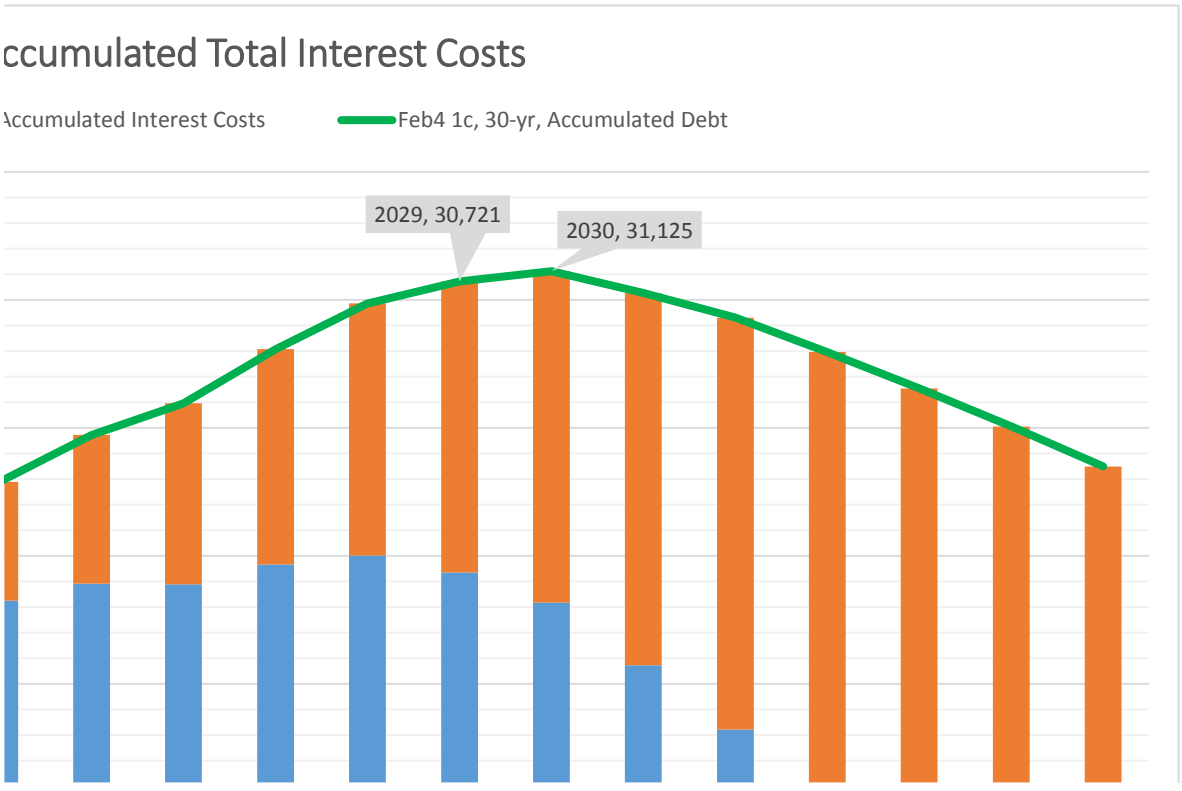
LIONS

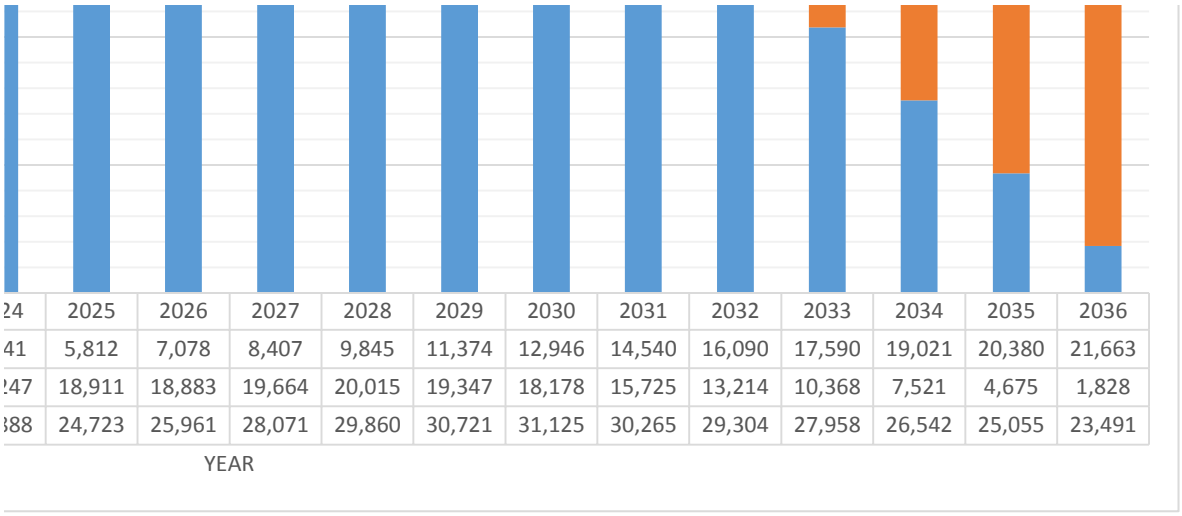


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

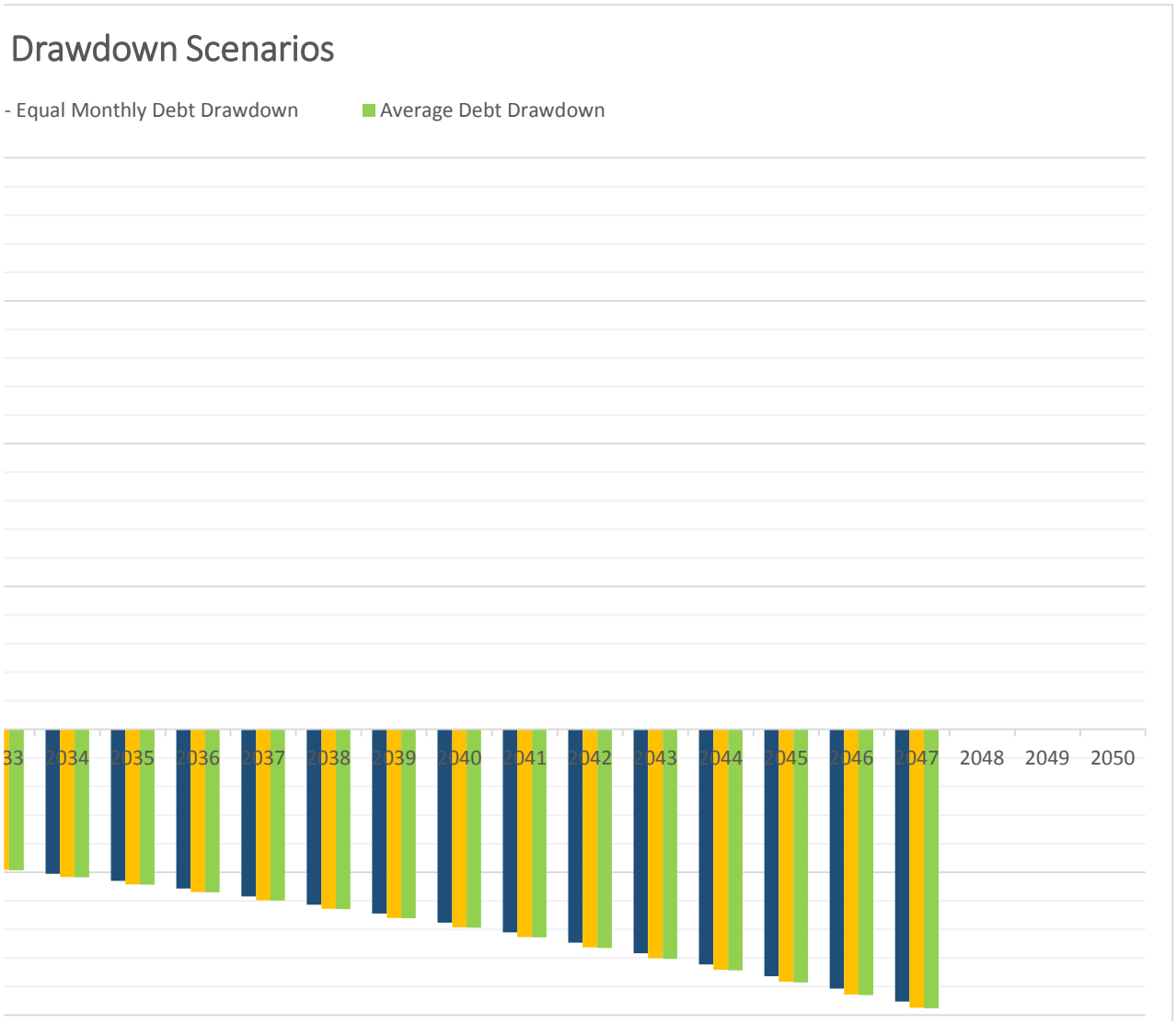
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





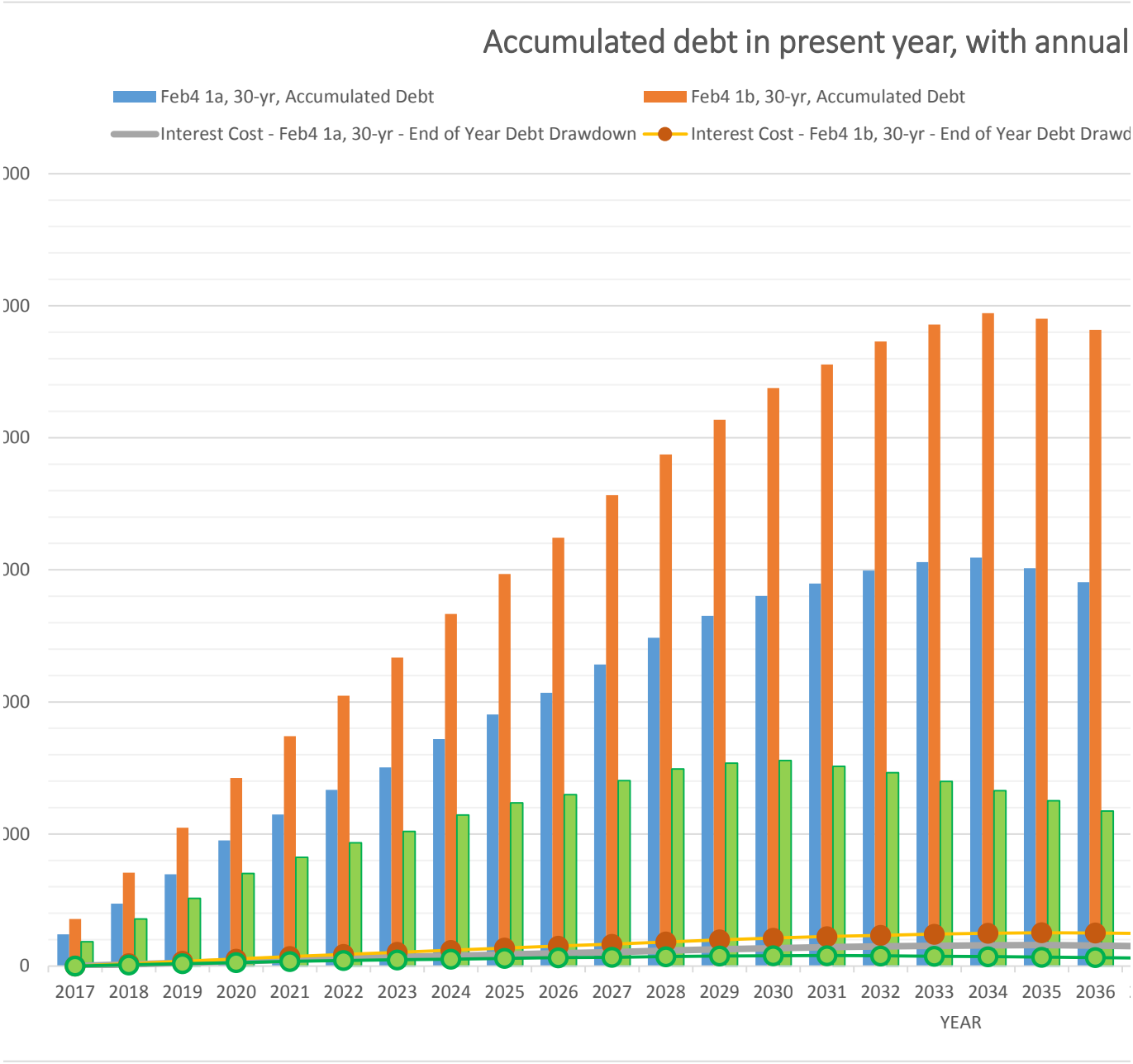
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

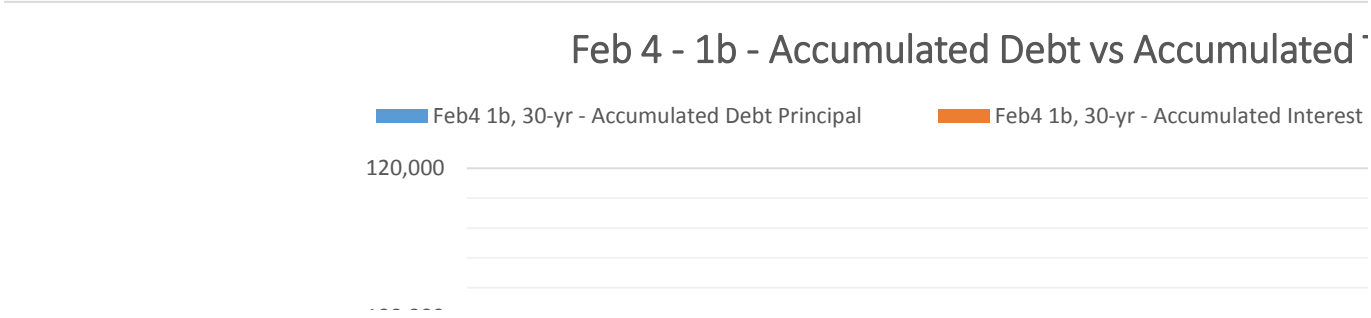
YEAR

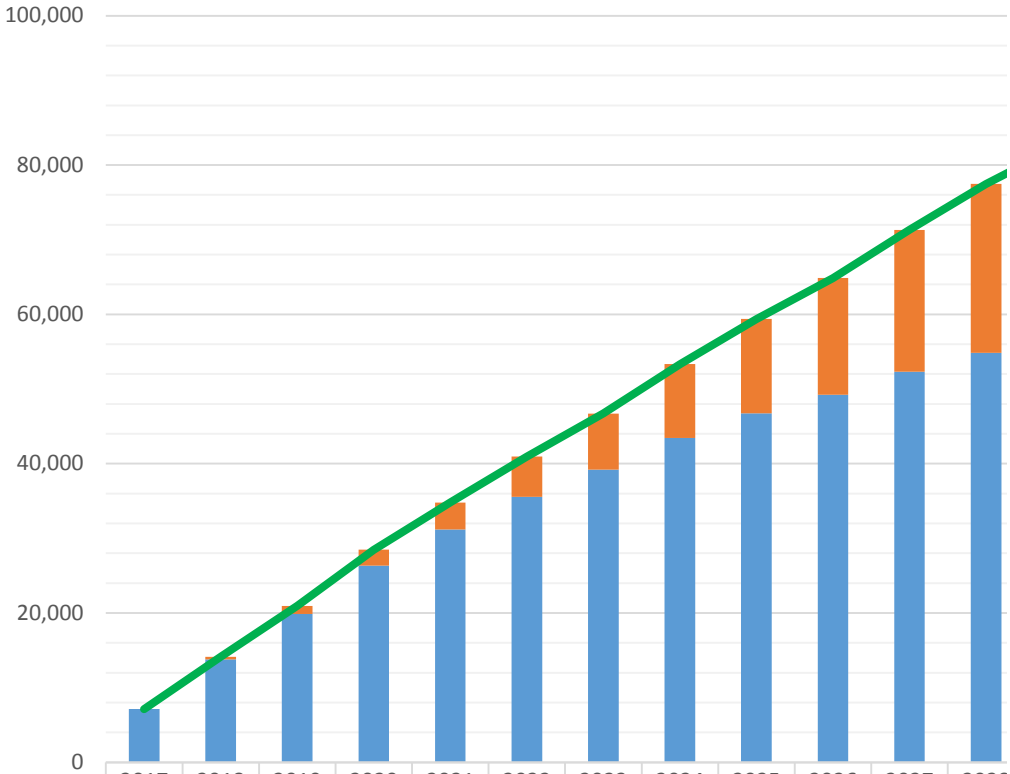


YEAR

ɜ - 25 year and 30 year Financing Terms, at 5% interest rate

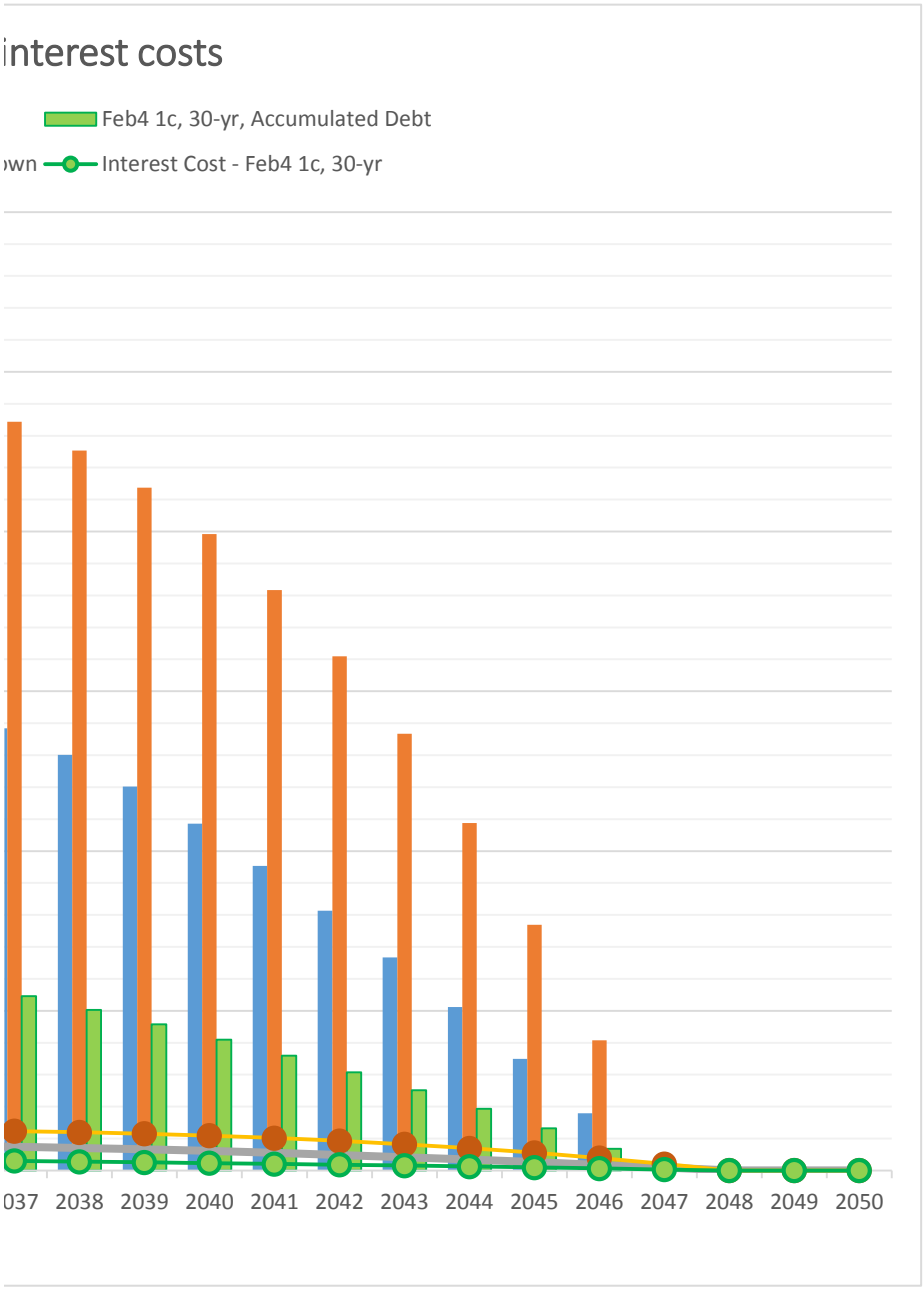


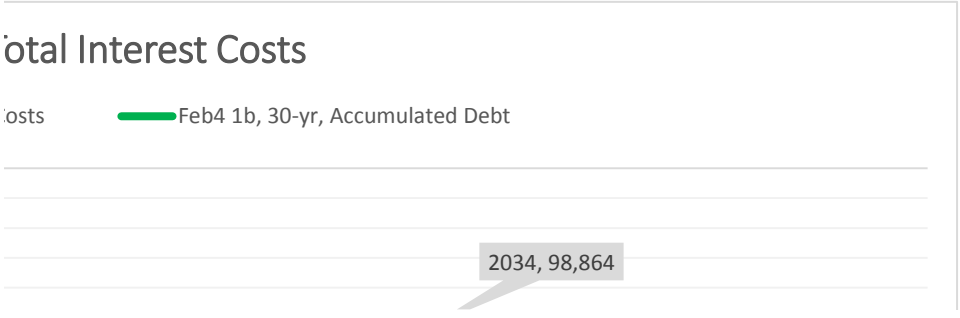

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

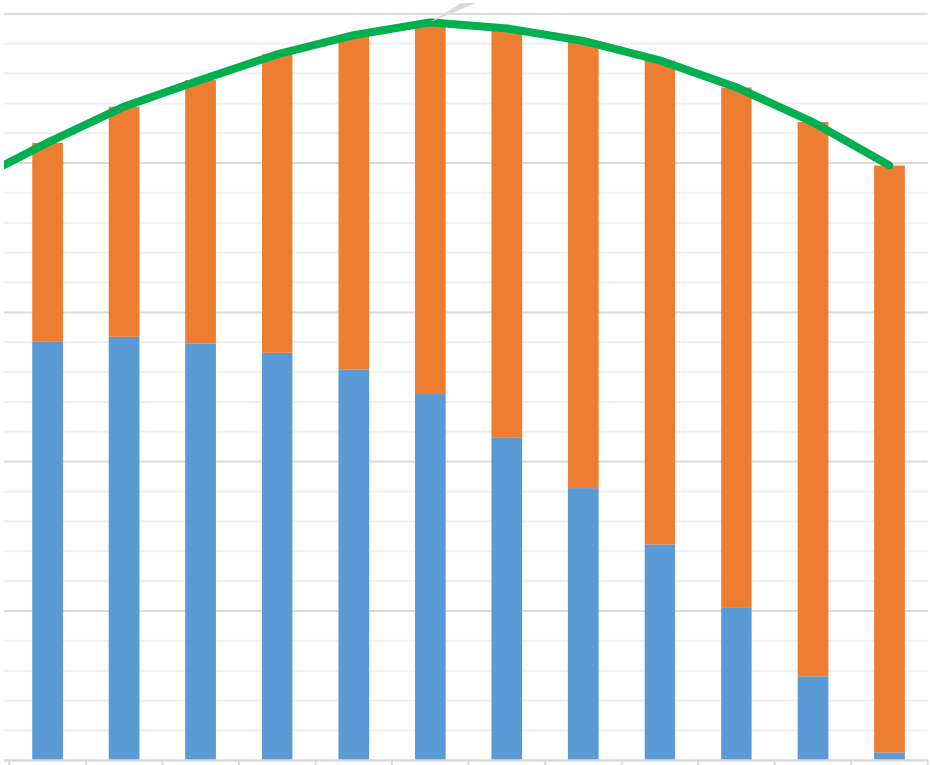


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y


interest costs
Feb4 1c, 30-yr, Accumulated Debt
wn
Interest Cost - Feb4 1c, 30-yr
037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR

Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

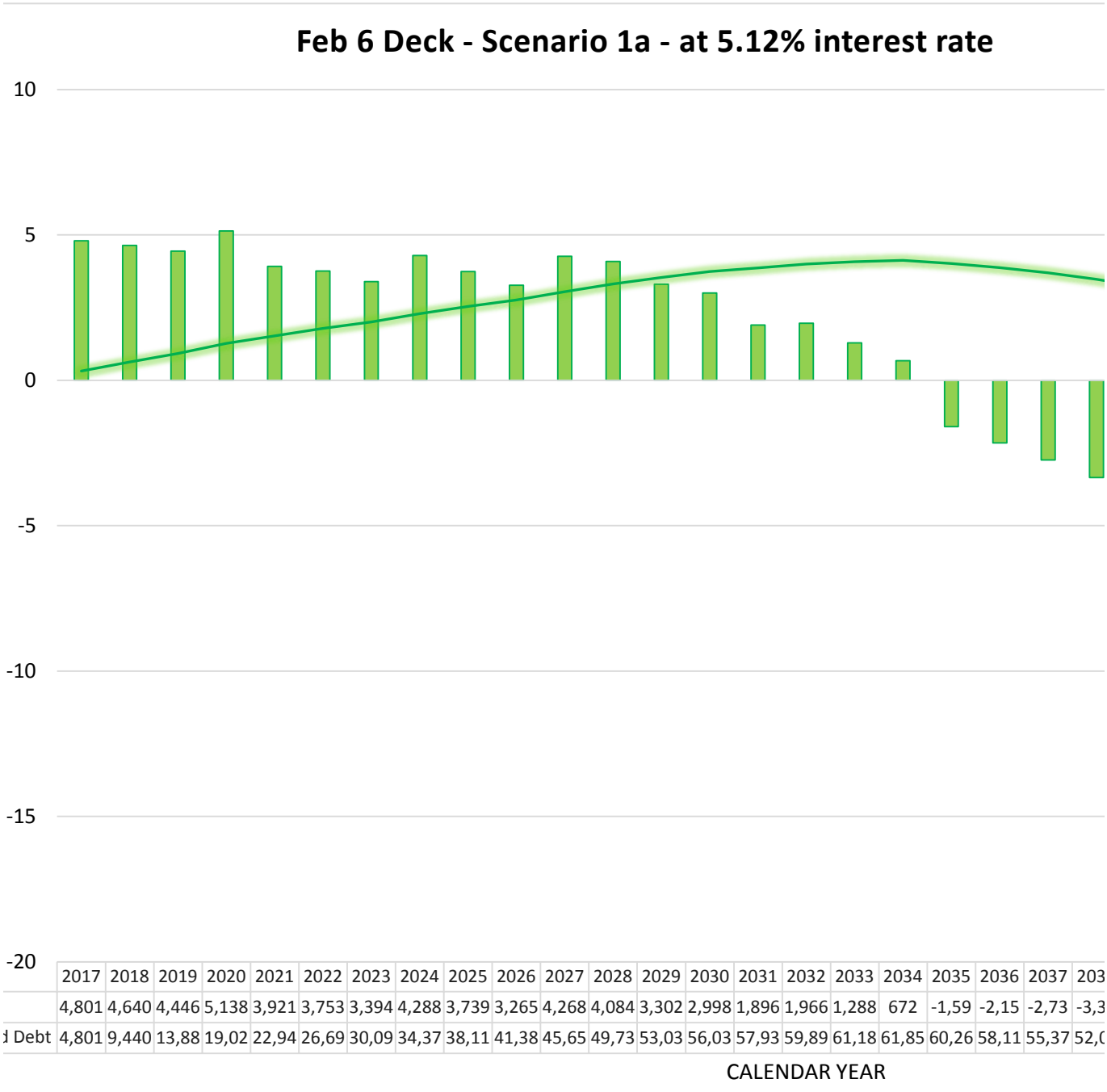
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

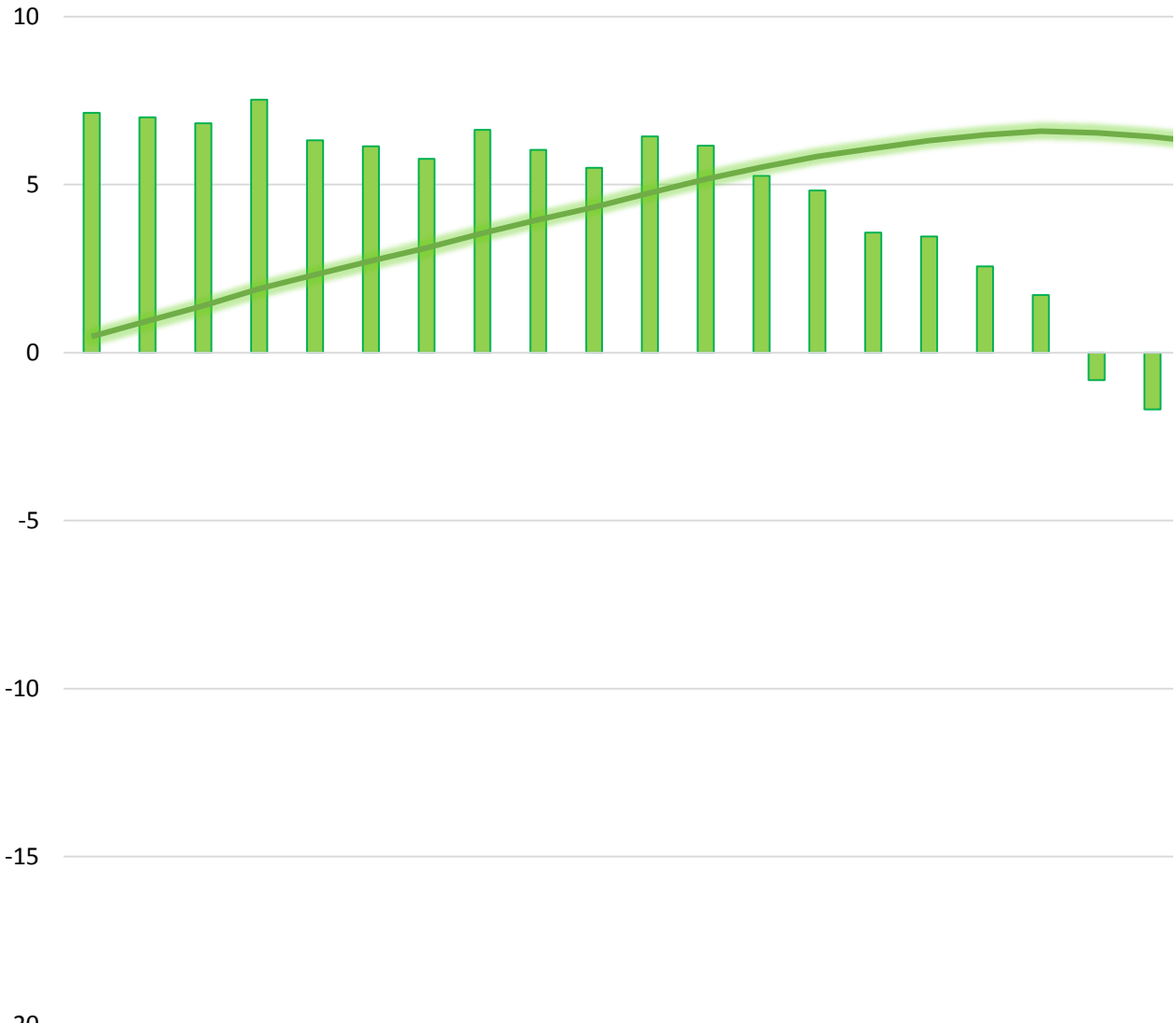
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

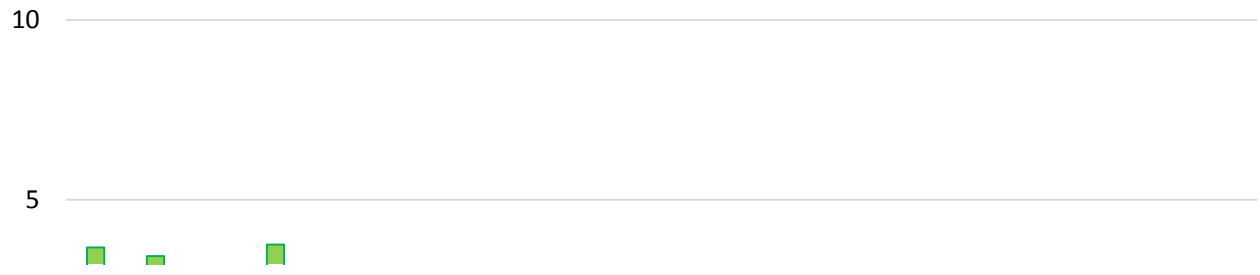
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

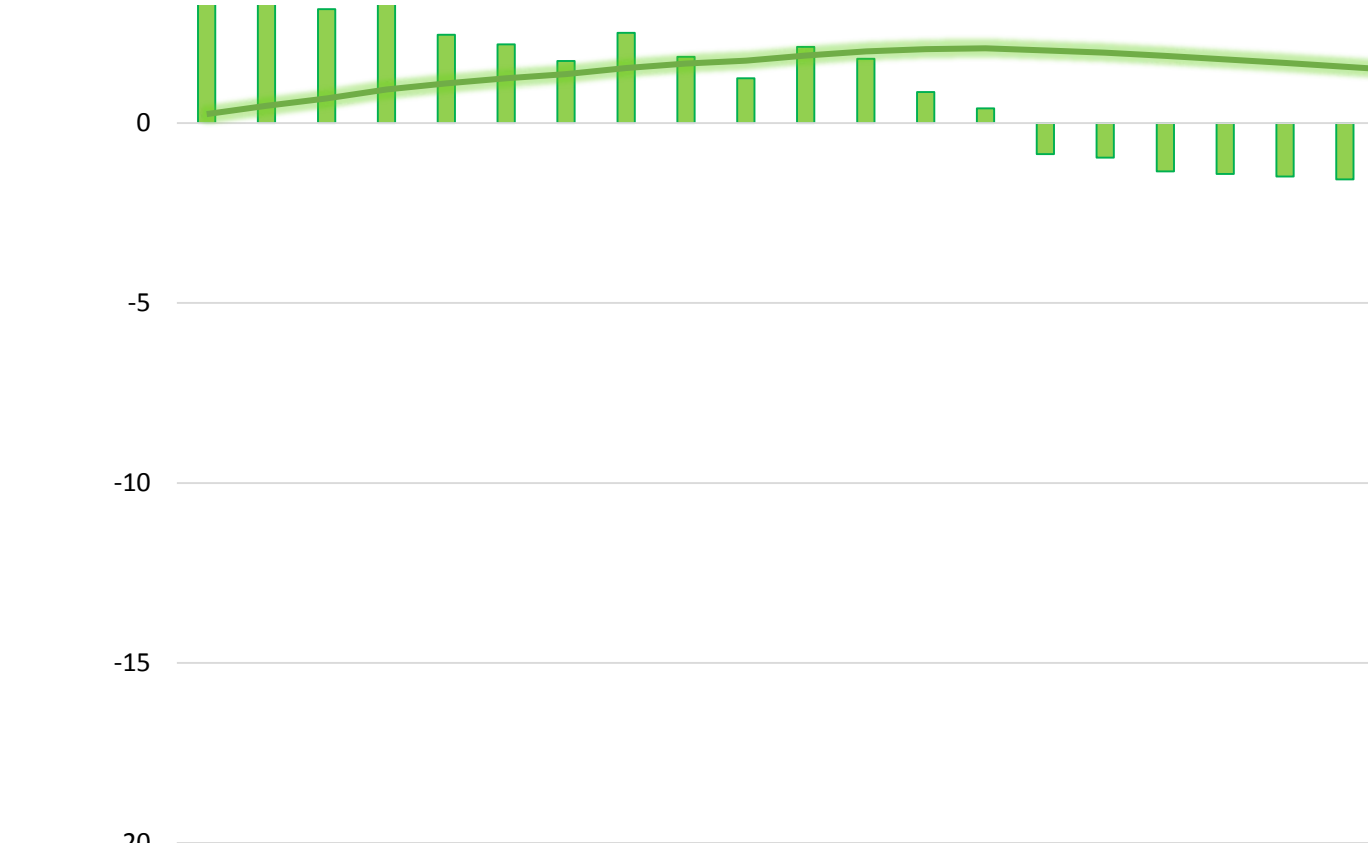


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



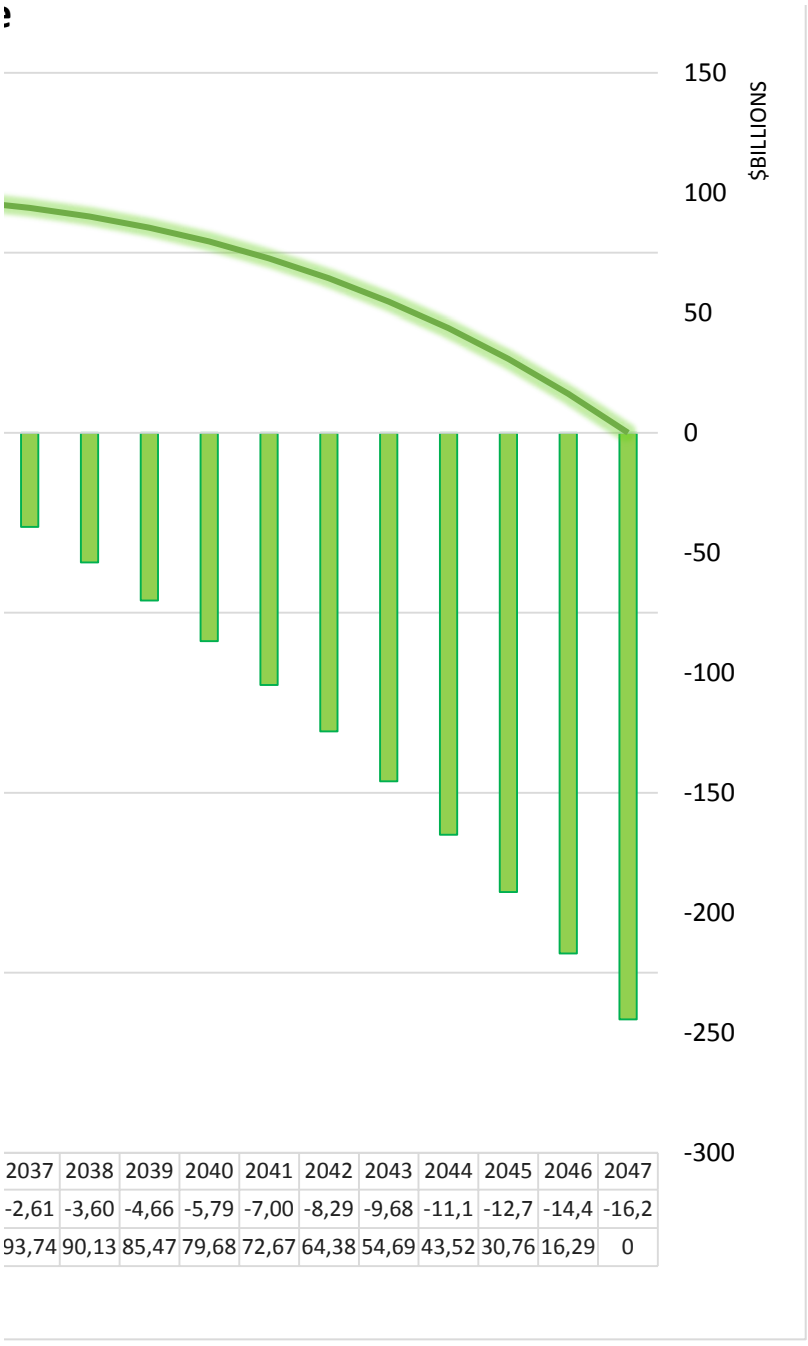


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

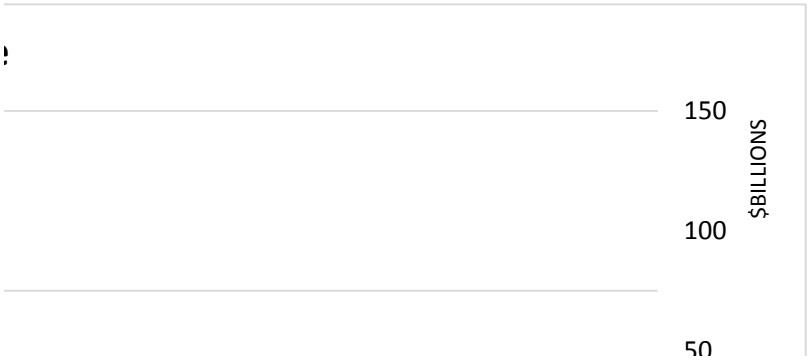
CALENDAR YEAR

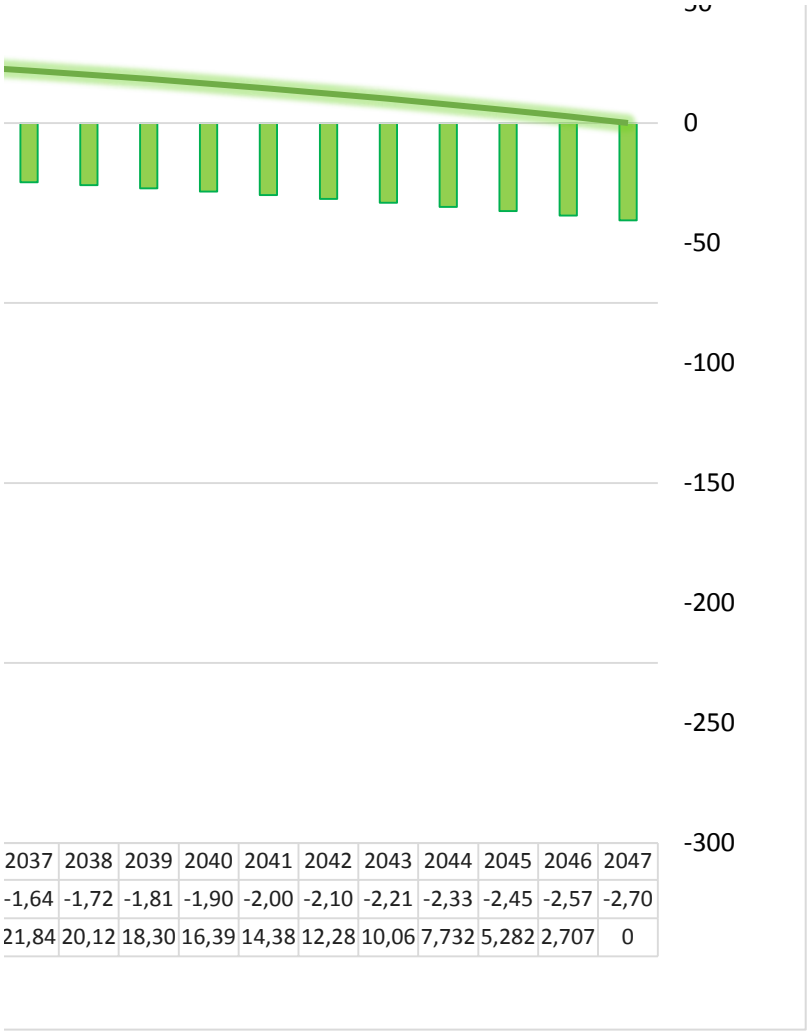


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Feb 8 Deck - Scenario 1a, 1b, 1c - at 5.12% interest
IESO GA cost forecast + extrapolation

Scenario
1a

1b

1c

1d

1e

	2017	2018	2019	2020
rate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	4674	9542	14587	21173

GA Payment from Impacted Rate Class	7421	7205	6995	6329
Accumulated debt in present year (including interest)	4674	9544	14589	21175

GA Payment from Impacted Rate Class	7421	7425	7440	7013
Accumulated debt in present year (including interest)	4674	9323	13913	19780

GA Payment from Impacted Rate Class	9915	9676	9427	9445
Accumulated debt in present year (including interest)	2180	4450	6803	9875

GA Payment from Impacted Rate Class	10596	10370	10129	10162
Accumulated debt in present year (including interest)	1500	3042	4620	6863

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
27212	33084	38588	44968	50769	56056	62291	68274

5890	6156	6434	6724	7028	7345	7677	8024
27212	33082	38585	44963	50762	56048	62281	68263

6825	7042	7266	7497	7736	7983	8237	8499
24810	29671	34167	39545	44359	48679	53976	59058

8532	8703	8877	9054	9236	9420	9609	9801
12692	15272	17420	20384	22719	24494	27181	29590

9264	9449	9638	9831	10027	10228	10432	10641
8794	10429	11568	13457	14645	15200	16588	17614

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
73391	78103	81594	85015	87596	89375	88679	87180

8386	8765	9160	9574	10006	10458	10931	11424
73378	78089	81578	84997	87577	89356	88659	87159

8770	9049	9337	9634	9941	10257	10584	10921
63318	67230	69987	72754	74773	76097	75068	73377

9997	10197	10401	10609	10821	10916	8822	8548
31116	32233	32135	31991	31045	29473	27822	26085

10854	11071	10196	10361	9779	9298	7203	6930
17670	17225	16565	15871	15142	14376	13570	12723

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
84828	81568	77341	72085	65730	58203	49425	39310

11940	12480	13043	13632	14248	14891	15564	16267
84806	81546	77320	72065	65711	58186	49409	39297

11269	11628	11998	12380	12774	13181	13600	14033
70990	67875	63995	59310	53778	47352	39985	31624

8288	8040	7805	7580	7367	7164	6970	6786
24260	22342	20325	18206	15978	13635	11173	8586

6670	6422	6186	5962	5748	5545	5352	5168
11833	10897	9914	8880	7793	6651	5450	4188

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
27767	14699	0	0	0	0

17001	17769	18572	2975	2831	2695
27758	14694	0	0	0	0

14480	14941	15417	2975	2831	2695
22213	11693	0	0	0	0

6611	6444	6286	2975	2831	2695
5865	3006	0	0	0	0

4993	4826	4667	2975	2831	2695
2861	1466	0	0	0	0

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb8_1a_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,867

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,169	4,723

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $62 billion peak

4,674 4,674

Feb8_1b_30yr 4,674

1b. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,869

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,169	4,723

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

Scenario 1C - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649

	Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	1,169	4,668

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

Scenario 1D - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	545	2,203

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

Scenario 1E - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	375	1,510

Rough

1		
2		
3		
4	April	4

5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	1,169 - 1,169	4,723 - 4,723

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	**2016-17[1]**	**2017-18[1]**

Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1169**	**4963**
Total, B	1169	4963

Proposed Program Total:	1,169 - 1,169	4,963 - 4,963

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
5,045	6,586	6,039	5,872

2018-19	2019-20	2020-21	2021-2022
4,912	5,430	6,449	5,997

Scenario
1a
1b
1c
1d
1e

king in 203X".

2019	2020	2021	2022
5,045	6,586	6,037	5,870

2018-19	2019-20	2020-21	2021-2022
4,913	5,430	6,449	5,996

Actuals are subjec
- The highest debt
- Compared to a 5

[1] Based on an inte
[2] Fiscal exposure l
[3] Fiscalized based

2019	2020	2021	2022
4,589	5,867	5,031	4,861

2018-19	2019-20	2020-21	2021-2022

4,634	4,909	5,658	4,988

2019	2020	2021	2022
2,353	3,072	2,817	2,580

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757

2019	2020	2021	2022
1,578	2,243	1,931	1,635

2018-19	2019-20	2020-21	2021-2022
1,551	1,745	2,165	1,857



2018-19	2019-20	2020-21	2021-2022
4,913 - 4,912	5,430 - 5,430	6,449 - 6,449	5,996 - 5,997

/1

2018-19[1]	2019-20[1]	2020-21[1]

4912	5430	6449
4913	5430	6449
225	279	323
60	60	60
18	18	18
5215	**5787**	**6850**
5216	5787	6850

5,216 - 5,215 5,787 - 5,787 6,850 - 6,850

Total Principal Debt	Total Accumulated Interest Costs	Peak Total Debt	in Year
52,287	85,599	89,375	

ct to actual prices and actual interest rates.
t accumulation (at 5% interest rate) is expected to be approximately $62 billion, peaking in 203 and $17-21 billion (at 3.5% interest r
% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately $33-$36 million.

erest rate of 5%.
based on equal monthly drawdown of debt.
on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on mon

rate), peaking in 2028.

ıth of the year. Actuals may also depend on decision on accounting treatment.

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-275	-311	-350	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,573	85,599
Equal Monthly Debt Drawdown	6,743	4,556	

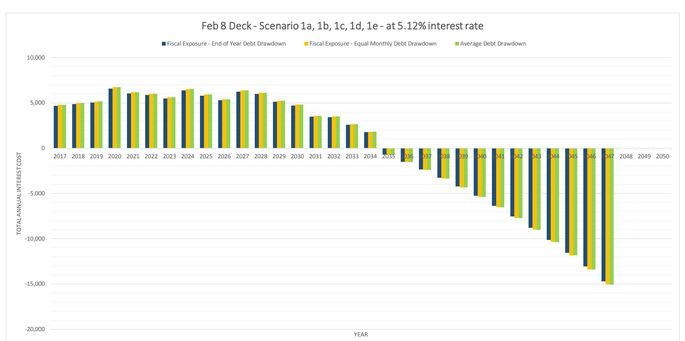
	Feb8 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,375	2034	52,287
Equal Monthly Debt Drawdown	91,501		

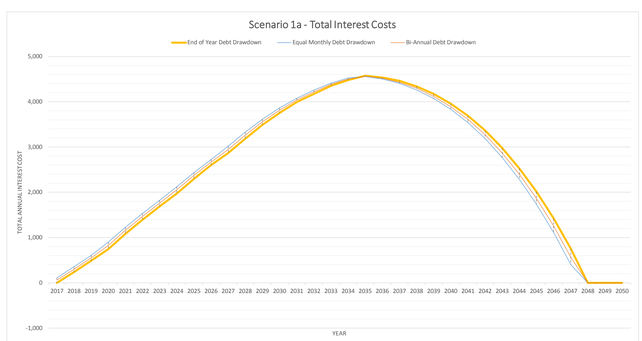
			39%	39%	39%	48%	46%	42%																													
Feb8 1a, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement		4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
a	Debt, Beginning of Year		0	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	
c = a*5%	*Interest Cost - Feb8 1a, 30-yr - End of Year Debt Drawdown*		*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,301*	*2,597*	*2,868*	*3,187*	*3,493*	*3,755*	*3,996*	*4,175*	*4,350*	*4,482*	*4,573*	*4,537*	*4,460*	*4,340*	*4,173*	*3,957*	*3,688*	*3,363*	*2,978*	*2,529*	*2,011*	*1,421*	*752*	*0*	*0*	*0*	85,599
b	Additional GA Debt Drawdown, End of Year		4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)		4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1a, 30-yr - Accumulated Interest Costs		0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,307	32,728	35,309	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	39,310	27,767	14,699	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Debt Principal		4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	52,287	52,287	52,287	52,287	51,591	50,091	47,739	44,479	40,253	34,997	28,642	21,115	12,336	0	0	0	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Interest Costs		0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,813	33,987	38,337	42,818	47,391	51,928	56,388	60,728	64,901	68,858	72,546	75,909	78,887	81,416	83,427	84,847	85,599				
	Feb8 1a, 30-yr - Accumulated Debt Principal		4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	51,781	51,028	49,259	46,557	41,288	35,252	28,440	20,840	12,440	3,227	-6,816	-17,706	-29,462	-42,106	-55,660	-70,149	-85,599				
Fiscal Exposure - End of Year Debt Drawdown			4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	

Feb8 1a, 30-yr	Equal Monthly Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement		4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year		0	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	
4,556	*Interest Cost - Feb8 1a, 30-yr*		*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,824*	*2,126*	*2,439*	*2,723*	*3,016*	*3,329*	*3,615*	*3,867*	*4,079*	*4,256*	*4,411*	*4,524*	*4,556*	*4,501*	*4,404*	*4,262*	*4,073*	*3,832*	*3,537*	*3,184*	*2,769*	*2,288*	*1,737*	*1,110*	*402*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown		4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	

	Monthly Drawdown		390	386	380	487	413	373	318	367	292	224	281	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(980)	(1,054)	(1,129)	(1,207)	(1,288)	-	-	-	
	FV of Monthly Drawdown at 5%		4,786	4,738	4,665	5,979	5,074	4,586	3,902	4,510	3,584	2,753	3,447	2,863	1,662	980	(517)	(772)	(1,810)	(2,766)	(5,394)	(6,180)	(6,975)	(7,781)	(8,599)	(9,432)	(10,282)	(11,149)	(12,036)	(12,944)	(13,876)	(14,834)	(15,818)	-	-	-	
	Annual Interest Cost on New Drawdowns		111	110	108	139	118	107	91	105	83	64	80	67	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(368)	-	-	-	
	Annual Interest Cost on Opening Balance		-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,263	3,576	3,844	4,091	4,274	4,453	4,588	4,681	4,645	4,566	4,443	4,272	4,051	3,776	3,443	3,049	2,589	2,059	1,454	770	(0)	(0)	(0)	
	Total Annual Interest Cost		111	355	608	903	1,227	1,532	1,824	2,126	2,439	2,723	3,016	3,329	3,615	3,867	4,079	4,256	4,411	4,524	4,556	4,501	4,404	4,262	4,073	3,832	3,537	3,184	2,769	2,288	1,737	1,110	402	(0)	(0)	(0)	

Feb8 1a, 30-yr	Bi-Annual Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement		4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year		0	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	
	Interest Cost - Feb8 1a, 30-yr		*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,733*	*3,027*	*3,340*	*3,624*	*3,875*	*4,085*	*4,262*	*4,416*	*4,527*	*4,555*	*4,499*	*4,400*	*4,257*	*4,065*	*3,822*	*3,525*	*3,170*	*2,753*	*2,270*	*1,716*	*1,086*	*376*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown		4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	
Fiscal Exposure - Average Debt Drawdown			4,794	4,992	5,174	6,754	6,193	6,022	5,645	6,543	5,950	5,422	6,395	6,137	5,248	4,833	3,580	3,508	2,647	1,825	-714	-1,537	-2,412	-3,343	-4,334	-5,391	-6,517	-7,720	-9,003	-10,374	-11,838	-13,403	-15,075	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-274	-311	-349	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,572	85,582
Equal Monthly Debt Drawdown	6,743	4,555	

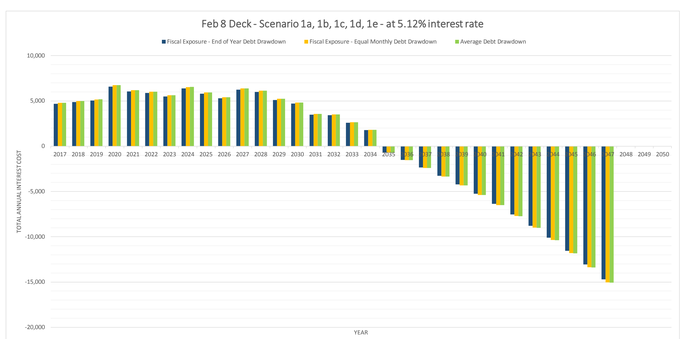
	Feb8 1b, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,356	2034	52,275
Equal Monthly Debt Drawdown	91,481		

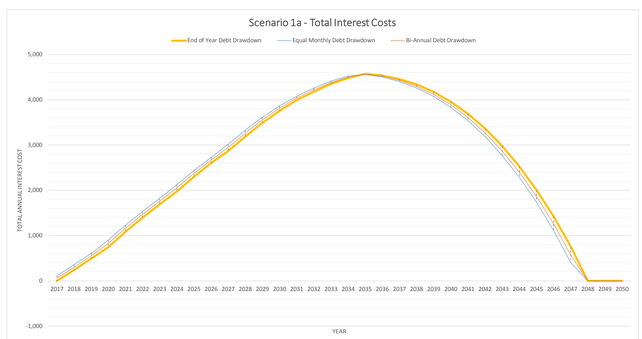
			39%	39%	39%	48%	46%	42%																													
Feb8 1b, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
	GA Debt Requirement		4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
	Debt, Beginning of Year		0	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	
a	*Interest Cost - Feb8 1b, 30-yr - End of Year Debt Drawdown*		*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,300*	*2,597*	*2,867*	*3,186*	*3,492*	*3,754*	*3,995*	*4,174*	*4,349*	*4,481*	*4,572*	*4,536*	*4,459*	*4,339*	*4,172*	*3,956*	*3,687*	*3,362*	*2,977*	*2,528*	*2,011*	*1,420*	*752*	*0*	*0*	*0*	85,582
c = a*5%	Additional GA Debt Drawdown, End of Year		4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
b	Accumulated debt in present year (including 5.12% annual interest)		4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	0	
d = a+b+c				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb8 1b, 30-yr - Accumulated Interest Costs		0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,303	32,722	35,302	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	39,297	27,758	14,694	0	0	0	0	
	Feb8 1b, 30-yr - Accumulated Debt Principal		4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	52,275	52,275	52,275	52,275	51,578	50,078	47,725	44,465	40,239	34,984	28,630	21,105	12,328	0	0	0	0	0	0	0	
	Feb8 1b, 30-yr - Accumulated Interest Costs		0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,809	33,983	38,331	42,812	47,384	51,920	56,379	60,718	64,890	68,846	72,533	75,895	78,871	81,399	83,410	84,830	85,582				
	Feb8 1b, 30-yr - Accumulated Debt Principal		4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	51,769	51,014	49,246	46,544	41,275	35,239	28,428	20,829	12,431	3,219	-6,822	-17,709	-29,462	-42,102	-55,652	-70,136	-85,582				
Fiscal Exposure - End of Year Debt Drawdown			4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	

Feb8 1b, 30-yr	Equal Monthly Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			12																																			
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
	GA Debt Requirement		4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
	Debt, Beginning of Year		0	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	
4,555	*Interest Cost - Feb8 1b, 30-yr*		*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,823*	*2,126*	*2,438*	*2,723*	*3,016*	*3,329*	*3,614*	*3,866*	*4,078*	*4,255*	*4,410*	*4,523*	*4,555*	*4,500*	*4,403*	*4,261*	*4,072*	*3,831*	*3,536*	*3,183*	*2,768*	*2,287*	*1,736*	*1,109*	*402*	*0*	*0*	*0*	85,582
	Additional GA Debt Drawdown		4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
	Monthly Drawdown		390	386	380	487	413	373	317	367	292	224	280	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(979)	(1,053)	(1,129)	(1,207)	(1,287)	(0)	-	-	
	FV of Monthly Drawdown at 5%		4,786	4,740	4,665	5,979	5,072	4,585	3,900	4,509	3,582	2,752	3,446	2,862	1,661	979	(518)	(772)	(1,811)	(2,766)	(5,394)	(6,179)	(6,974)	(7,780)	(8,598)	(9,431)	(10,279)	(11,146)	(12,033)	(12,941)	(13,872)	(14,829)	(15,813)	(0)	-	-	
	Annual Interest Cost on New Drawdowns		111	110	108	139	118	107	91	105	83	64	80	66	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(367)	(0)	-	-	
	Annual Interest Cost on Opening Balance		-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,262	3,576	3,843	4,090	4,273	4,452	4,587	4,680	4,644	4,565	4,442	4,271	4,050	3,775	3,442	3,048	2,588	2,058	1,454	770	0	0	0	
	Total Annual Interest Cost		111	355	608	903	1,227	1,532	1,823	2,126	2,438	2,723	3,016	3,329	3,614	3,866	4,078	4,255	4,410	4,523	4,555	4,500	4,403	4,261	4,072	3,831	3,536	3,183	2,768	2,287	1,736	1,109	402	0	0	0	

Feb8 1b, 30-yr	Bi-Annual Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			2																																			
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
	GA Debt Requirement		4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
	Debt, Beginning of Year		0	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	
	Interest Cost - Feb8 1b, 30-yr		*60*	*301*	*553*	*831*	*1,161*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,947*	*3,263*	*3,558*	*3,814*	*4,040*	*4,217*	*4,382*	*4,503*	*4,563*	*4,517*	*4,429*	*4,297*	*4,118*	*3,889*	*3,606*	*3,266*	*2,865*	*2,399*	*1,863*	*1,253*	*564*	*0*	*0*	*0*	85,582
	Additional GA Debt Drawdown		4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown			4,734	4,931	5,110	6,670	6,115	5,945	5,573	6,460	5,874	5,353	6,313	6,058	5,181	4,771	3,534	3,463	2,613	1,801	-706	-1,519	-2,383	-3,302	-4,280	-5,323	-6,435	-7,622	-8,889	-10,242	-11,687	-13,231	-14,882	0	0	0	
	Bi-Annual Drawdown		2,337	2,315	2,279	2,920	2,477	2,239	1,905	2,202	1,750	1,344	1,683	1,398	811	478	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,799)	(4,199)	(4,606)	(5,020)	(5,444)	(5,877)	(6,320)	(6,775)	(7,242)	(7,723)	(0)	-	-	
	FV of Bi-Annual Drawdown at 5%		4,734	4,689	4,615	5,914	5,017	4,535	3,859	4,460	3,544	2,722	3,409	2,831	1,643	969	(513)	(764)	(1,791)	(2,737)	(5,336)	(6,113)	(6,899)	(7,696)	(8,506)	(9,329)	(10,169)	(11,027)	(11,904)	(12,802)	(13,723)	(14,670)	(15,643)	(0)	-	-	
	Annual Interest Cost on New Drawdowns		60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	(0)	-	-	
	Annual Interest Cost on Opening Balance		-	242	495	756	1,097	1,410	1,714	1,999	2,330	2,630	2,904	3,227	3,537	3,802	4,046	4,227	4,404	4,538	4,630	4,594	4,516	4,394	4,225	4,006	3,734	3,405	3,015	2,560	2,036	1,438	761	0	(0)	(0)	
	Total Annual Interest Cost		60	301	553	831	1,161	1,467	1,763	2,056	2,375	2,665	2,947	3,263	3,558	3,814	4,040	4,217	4,382	4,503	4,563	4,517	4,429	4,297	4,118	3,889	3,606	3,266	2,865	2,399	1,863	1,253	564	0	(0)	(0)	

Feb8 1b, 30-yr	Average Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
	GA Debt Requirement		4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
	Debt, Beginning of Year		0	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	
	Interest Cost - Feb8 1b, 30-yr		*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,732*	*3,027*	*3,339*	*3,623*	*3,875*	*4,084*	*4,261*	*4,415*	*4,526*	*4,554*	*4,498*	*4,399*	*4,255*	*4,064*	*3,821*	*3,524*	*3,169*	*2,752*	*2,269*	*1,715*	*1,086*	*376*	*0*	*0*	*0*	85,582
	Additional GA Debt Drawdown		4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	
Fiscal Exposure - Average Debt Drawdown			4,794	4,994	5,174	6,754	6,192	6,020	5,643	6,541	5,948	5,420	6,393	6,135	5,246	4,831	3,578	3,507	2,646	1,824	-715	-1,538	-2,413	-3,343	-4,334	-5,390	-6,516	-7,718	-9,001	-10,371	-11,835	-13,398	-15,070	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1c_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	
			111	111	109	140	120	116	107	128	115	103	126	121	101	93	66	66	48	32	-24	-40	-57	-74	-92	-111	-132	-153	-175	-199	-224	-250	-278	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	5,867	3,893	72,823
Equal Monthly Debt Drawdown	6,006	3,869	

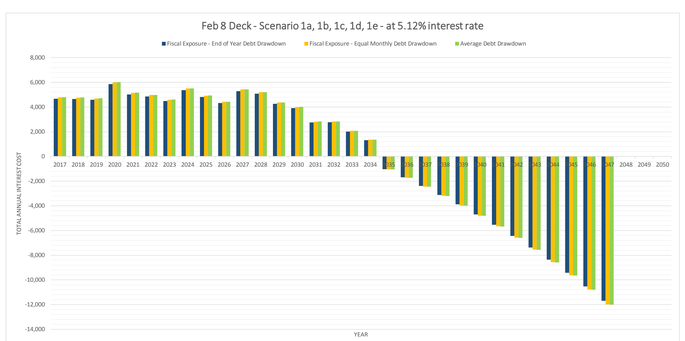
	Feb8 1c, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	76,097	2034	44,449
Equal Monthly Debt Drawdown	77,907		

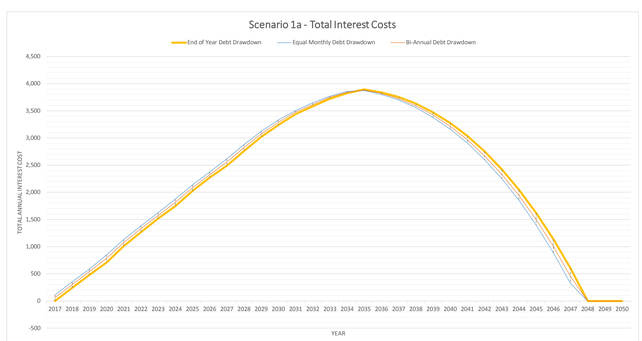
			39%	37%	36%	42%	37%	34%																													
Feb8 1c, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement		4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
a	Debt, Beginning of Year		0	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	
c = a*5%	*Interest Cost - Feb8 1c, 30-yr - End of Year Debt Drawdown*		*0*	*239*	*477*	*712*	*1,012*	*1,269*	*1,518*	*1,748*	*2,023*	*2,270*	*2,491*	*2,762*	*3,022*	*3,239*	*3,440*	*3,581*	*3,722*	*3,826*	*3,893*	*3,841*	*3,754*	*3,632*	*3,473*	*3,274*	*3,034*	*2,751*	*2,423*	*2,046*	*1,618*	*1,136*	*598*	*0*	*0*	*0*	72,823
b	Additional GA Debt Drawdown, End of Year		4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)		4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	
	Feb8 1c, 30-yr - Accumulated Interest Costs		0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	25,538	28,304	30,324	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,624	22,213	11,693	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Debt Principal		4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	44,449	44,449	44,449	44,449	43,420	41,729	39,342	36,228	32,347	27,662	22,130	15,704	8,337	0	0	0	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Interest Costs		0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	26,221	29,801	33,524	37,349	41,242	45,083	48,837	52,469	55,942	59,216	62,250	65,002	67,424	69,470	71,088	72,224	72,823				
	Feb8 1c, 30-yr - Accumulated Debt Principal		4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	43,767	42,952	41,249	38,748	33,826	28,294	22,153	15,406	8,054	94	-8,473	-17,649	-27,439	-37,846	-48,875	-60,532	-72,823				
Fiscal Exposure - End of Year Debt Drawdown			4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	

Feb8 1c, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	
3,869	*Interest Cost - Feb8 1c, 30-yr*	*111*	*350*	*586*	*851*	*1,132*	*1,385*	*1,625*	*1,876*	*2,138*	*2,372*	*2,617*	*2,882*	*3,123*	*3,333*	*3,505*	*3,646*	*3,770*	*3,857*	*3,869*	*3,800*	*3,697*	*3,558*	*3,380*	*3,163*	*2,903*	*2,599*	*2,247*	*1,847*	*1,394*	*886*	*320*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	

	Monthly Drawdown	390	367	343	430	335	299	248	303	233	171	234	193	103	56	(57)	(68)	(142)	(208)	(410)	(461)	(512)	(562)	(613)	(663)	(714)	(765)	(816)	(867)	(919)	(971)	(1,024)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,515	4,210	5,278	4,114	3,677	3,048	3,717	2,857	2,099	2,873	2,375	1,268	689	(699)	(834)	(1,744)	(2,561)	(5,039)	(5,664)	(6,286)	(6,907)	(7,528)	(8,148)	(8,771)	(9,395)	(10,023)	(10,654)	(11,291)	(11,934)	(12,583)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	105	98	123	96	85	71	86	66	49	67	55	29	16	(16)	(19)	(41)	(59)	(117)	(132)	(146)	(160)	(175)	(189)	(204)	(218)	(233)	(248)	(262)	(277)	(292)	-	-	-	
	Annual Interest Cost on Opening Balance	-	245	488	729	1,036	1,300	1,554	1,790	2,071	2,323	2,550	2,827	3,093	3,317	3,521	3,666	3,811	3,917	3,986	3,932	3,843	3,718	3,555	3,352	3,107	2,817	2,480	2,094	1,656	1,163	612	(0)	(0)	(0)	
	Total Annual Interest Cost	111	350	586	851	1,132	1,385	1,625	1,876	2,138	2,372	2,617	2,882	3,123	3,333	3,505	3,646	3,770	3,857	3,869	3,800	3,697	3,558	3,380	3,163	2,903	2,599	2,247	1,847	1,394	886	320	(0)	(0)	(0)	

Feb8 1c, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*120*	*358*	*594*	*862*	*1,141*	*1,394*	*1,633*	*1,886*	*2,146*	*2,380*	*2,626*	*2,892*	*3,130*	*3,340*	*3,510*	*3,651*	*3,774*	*3,859*	*3,867*	*3,797*	*3,693*	*3,552*	*3,373*	*3,154*	*2,893*	*2,587*	*2,234*	*1,832*	*1,377*	*867*	*299*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,768	4,707	6,017	5,160	4,985	4,610	5,516	4,937	4,431	5,432	5,212	4,370	4,012	2,828	2,837	2,071	1,358	-1,055	-1,735	-2,447	-3,195	-3,979	-4,805	-5,674	-6,590	-7,556	-8,575	-9,652	-10,789	-11,992	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1d_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
			52	54	56	73	67	61	51	71	56	42	64	57	36	27	-2	-3	-23	-37	-39	-41	-43	-46	-48	-50	-53	-56	-59	-62	-65	-68	-71	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,072	1,649	29,589
Equal Monthly Debt Drawdown	3,145	1,647	

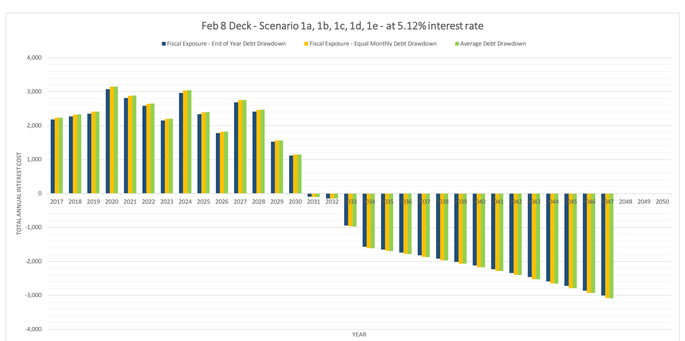
	Feb8 1d, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,233	2030	21,239
Equal Monthly Debt Drawdown	32,999		

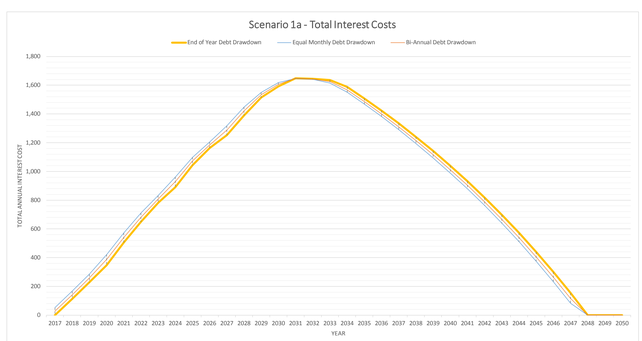
			18%	18%	18%	22%	21%	18%																													
Feb8 1d, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement		2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
a	Debt, Beginning of Year		0	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	
c = a*5%	*Interest Cost - Feb8 1d, 30-yr - End of Year Debt Drawdown*		*0*	*112*	*228*	*348*	*505*	*649*	*781*	*891*	*1,043*	*1,162*	*1,253*	*1,391*	*1,514*	*1,592*	*1,649*	*1,644*	*1,637*	*1,588*	*1,508*	*1,423*	*1,335*	*1,241*	*1,143*	*1,040*	*931*	*817*	*698*	*572*	*439*	*300*	*154*	*0*	*0*	*0*	29,589
b	Additional GA Debt Drawdown, End of Year		2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)		2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1d, 30-yr - Accumulated Interest Costs		0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	11,372	11,227	10,281	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,586	5,865	3,006	0	0	0	
	Feb8 1d, 30-yr - Accumulated Debt Principal		2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	20,763	20,763	20,763	20,763	19,112	17,375	15,550	13,632	11,616	9,496	7,268	4,926	2,464	0	0	0	0	0	0	0	
	Feb8 1d, 30-yr - Accumulated Interest Costs		0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	13,118	14,763	16,399	17,988	19,495	20,919	22,253	23,495	24,638	25,678	26,609	27,426	28,124	28,696	29,135	29,435	29,589				
	Feb8 1d, 30-yr - Accumulated Debt Principal		2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	19,017	17,228	14,645	11,486	8,326	5,167	2,007	-1,153	-4,312	-7,472	-10,631	-13,791	-16,951	-20,110	-23,270	-26,429	-29,589				
Fiscal Exposure - End of Year Debt Drawdown			2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	

Feb8 1d, 30-yr	Equal Monthly Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			12																																			
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement		2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
1,647	Debt, Beginning of Year		0	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	
	Interest Cost - Feb8 1d, 30-yr		*52*	*166*	*284*	*421*	*572*	*711*	*832*	*962*	*1,098*	*1,205*	*1,317*	*1,448*	*1,550*	*1,619*	*1,647*	*1,641*	*1,614*	*1,551*	*1,469*	*1,382*	*1,291*	*1,196*	*1,095*	*989*	*878*	*762*	*639*	*510*	*375*	*232*	*82*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown		2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
	Monthly Drawdown		182	180	177	227	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	-	-	-	
	FV of Monthly Drawdown at 5%		2,232	2,210	2,176	2,788	2,366	1,977	1,399	2,123	1,322	628	1,468	1,042	12	(487)	(1,788)	(1,831)	(2,644)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	-	-	-	
	Annual Interest Cost on New Drawdowns		52	51	51	65	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	-	-	-	
	Annual Interest Cost on Opening Balance		-	114	233	356	517	665	800	912	1,068	1,190	1,283	1,424	1,550	1,630	1,688	1,683	1,676	1,626	1,544	1,457	1,366	1,271	1,170	1,065	954	837	714	585	450	307	157	0	0	0	
	Total Annual Interest Cost		52	166	284	421	572	711	832	962	1,098	1,205	1,317	1,448	1,550	1,619	1,647	1,641	1,614	1,551	1,469	1,382	1,291	1,196	1,095	989	878	762	639	510	375	232	82	0	0	0	

Feb8 1d, 30-yr	Bi-Annual Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			2																																			
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement		2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Debt, Beginning of Year		0	2,208	4,507	6,890	10,001	12,854	15,467	17,642	20,645	23,009	24,807	27,529	29,969	31,514	32,645	32,546	32,400	31,442	29,850	28,177	26,419	24,571	22,628	20,585	18,439	16,182	13,810	11,316	8,695	5,940	3,044	0	0	0	
	Interest Cost - Feb8 1d, 30-yr		*28*	*141*	*258*	*387*	*541*	*682*	*809*	*929*	*1,073*	*1,185*	*1,288*	*1,421*	*1,533*	*1,606*	*1,648*	*1,642*	*1,625*	*1,568*	*1,487*	*1,401*	*1,311*	*1,217*	*1,117*	*1,013*	*903*	*787*	*666*	*539*	*404*	*264*	*115*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown		2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		2,208	4,507	6,890	10,001	12,854	15,467	17,642	20,645	23,009	24,807	27,529	29,969	31,514	32,645	32,546	32,400	31,442	29,850	28,177	26,419	24,571	22,628	20,585	18,439	16,182	13,810	11,316	8,695	5,940	3,044	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown			2,208	2,299	2,383	3,111	2,853	2,613	2,175	3,003	2,364	1,798	2,722	2,440	1,545	1,131	-98	-147	-958	-1,591	-1,673	-1,758	-1,848	-1,943	-2,042	-2,147	-2,257	-2,372	-2,493	-2,621	-2,755	-2,896	-3,044	0	0	0	
	Bi-Annual Drawdown		1,090	1,079	1,063	1,362	1,156	965	683	1,037	646	307	717	509	6	(238)	(873)	(894)	(1,291)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	(1,580)	-	-	-	
	FV of Bi-Annual Drawdown at 5%		2,208	2,186	2,153	2,758	2,341	1,955	1,384	2,100	1,308	621	1,453	1,031	12	(481)	(1,769)	(1,812)	(2,616)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	(3,200)	-	-	-	
	Annual Interest Cost on New Drawdowns		28	28	27	35	30	25	17	27	17	8	18	13	0	(6)	(22)	(23)	(33)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	-	-	-	
	Annual Interest Cost on Opening Balance		-	113	231	353	512	658	791	903	1,056	1,177	1,269	1,408	1,533	1,612	1,670	1,665	1,658	1,609	1,527	1,442	1,352	1,257	1,158	1,053	943	828	707	579	445	304	156	0	0	0	
	Total Annual Interest Cost		28	141	258	387	541	682	809	929	1,073	1,185	1,288	1,421	1,533	1,606	1,648	1,642	1,625	1,568	1,487	1,401	1,311	1,217	1,117	1,013	903	787	666	539	404	264	115	0	0	0	

Feb8 1d, 30-yr	Average Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
	GA Debt Requirement		2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Debt, Beginning of Year		0	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	
	Interest Cost - Feb8 1d, 30-yr		*56*	*170*	*288*	*427*	*577*	*715*	*836*	*967*	*1,103*	*1,208*	*1,322*	*1,452*	*1,553*	*1,621*	*1,647*	*1,640*	*1,613*	*1,548*	*1,466*	*1,379*	*1,288*	*1,192*	*1,091*	*986*	*874*	*758*	*635*	*505*	*370*	*227*	*77*	*0*	*0*	*0*	29,589
	Additional GA Debt Drawdown		2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	
Fiscal Exposure - Average Debt Drawdown			2,236	2,328	2,413	3,150	2,889	2,646	2,203	3,041	2,394	1,821	2,756	2,471	1,565	1,145	-100	-148	-970	-1,612	-1,694	-1,781	-1,872	-1,967	-2,068	-2,174	-2,285	-2,402	-2,525	-2,654	-2,790	-2,933	-3,083	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1e_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	
			36	37	38	53	46	39	27	45	28	13	33	24	1	-11	-16	-16	-17	-18	-19	-20	-21	-22	-23	-25	-26	-27	-29	-30	-32	-33	-35	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,243	904	16,239
Equal Monthly Debt Drawdown	2,297	903	

	Feb8 1e, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	17,670	2029	12,350
Equal Monthly Debt Drawdown	18,091		

			12%	12%	12%	16%	15%	11%																													
Feb8 1e, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																					
($ millions)																																					
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
	GA Debt Requirement		1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
a	Debt, Beginning of Year		0	1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	
c = a*5%	*Interest Cost - Feb8 1e, 30-yr - End of Year Debt Drawdown*		*0*	*77*	*156*	*236*	*351*	*450*	*534*	*592*	*688*	*749*	*778*	*849*	*901*	*904*	*881*	*847*	*812*	*775*	*735*	*694*	*651*	*605*	*558*	*507*	*454*	*399*	*340*	*279*	*214*	*146*	*75*	*0*	*0*	*0*	16,239
b	Additional GA Debt Drawdown, End of Year		1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)		1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1e, 30-yr - Accumulated Interest Costs		0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	6,605	5,911	5,182	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,188	2,861	1,466	0	0	0	0	
	Feb8 1e, 30-yr - Accumulated Debt Principal		1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	9,960	9,960	9,960	9,960	9,155	8,308	7,418	6,482	5,498	4,465	3,378	2,235	1,035	0	0	0	0	0	0	0	
	Feb8 1e, 30-yr - Accumulated Interest Costs		0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	8,146	8,993	9,805	10,580	11,315	12,010	12,661	13,266	13,824	14,331	14,785	15,184	15,524	15,803	16,017	16,164	16,239				
	Feb8 1e, 30-yr - Accumulated Debt Principal		1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	8,419	6,878	5,337	3,796	2,255	714	-827	-2,369	-3,910	-5,451	-6,992	-8,533	-10,074	-11,615	-13,156	-14,697	-16,239				
Fiscal Exposure - End of Year Debt Drawdown			1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	

Feb8 1e, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																			
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
	GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
	Debt, Beginning of Year	0	1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	
903	*Interest Cost - Feb8 1e, 30-yr*	*36*	*113*	*193*	*290*	*397*	*489*	*561*	*637*	*717*	*762*	*811*	*873*	*903*	*893*	*866*	*831*	*795*	*756*	*716*	*674*	*630*	*583*	*534*	*483*	*428*	*372*	*312*	*249*	*183*	*113*	*40*	*0*	*0*	*0*	16,239
	Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	

	Monthly Drawdown	125	122	119	167	132	99	50	108	42	(16)	51	15	(70)	(112)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	-	-	-	
	FV of Monthly Drawdown at 5%	1,536	1,500	1,457	2,055	1,617	1,213	620	1,328	512	(199)	625	182	(865)	(1,382)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	-	-	-	
	Annual Interest Cost on New Drawdowns	36	35	34	48	38	28	14	31	12	(5)	15	4	(20)	(32)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	-	-	-	
	Annual Interest Cost on Opening Balance	-	79	159	242	359	461	546	606	705	767	796	869	923	926	902	868	831	793	753	711	666	620	571	519	465	408	348	285	219	150	77	0	0	0	
	Total Annual Interest Cost	36	113	193	290	397	489	561	637	717	762	811	873	903	893	866	831	795	756	716	674	630	583	534	483	428	372	312	249	183	113	40	0	0	0	

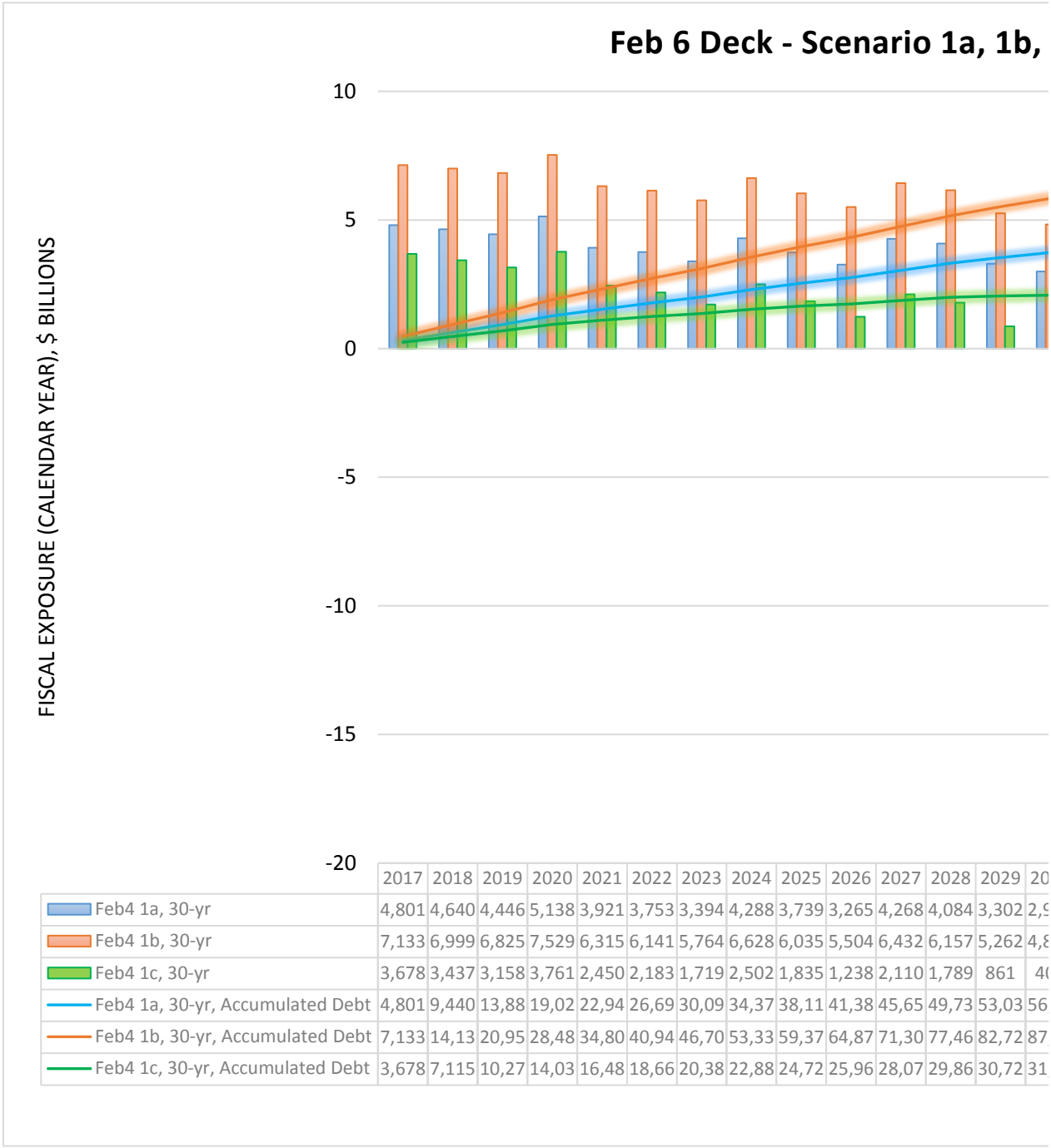
Feb8 1e, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																			
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
	GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
	Debt, Beginning of Year	0	1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	
	Interest Cost - Feb8 1e, 30-yr	*96*	*176*	*265*	*376*	*471*	*548*	*616*	*704*	*756*	*795*	*862*	*902*	*898*	*873*	*839*	*803*	*765*	*725*	*683*	*640*	*593*	*545*	*494*	*440*	*384*	*325*	*263*	*197*	*129*	*56*	*0*	*0*	*0*	16,239	
	Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,519	1,561	1,598	2,272	1,956	1,655	1,154	1,913	1,203	562	1,406	1,040	57	-451	-668	-703	-738	-776	-816	-858	-902	-948	-996	-1,047	-1,101	-1,157	-1,216	-1,278	-1,344	-1,413	-1,485	0	0	0	

	Bi-Annual Drawdown	750	733	711	1,003	790	592	303	649	250	(97)	305	89	(423)	(675)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,519	1,484	1,441	2,033	1,600	1,200	613	1,314	506	(197)	618	180	(856)	(1,367)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	-	-	-	
	Annual Interest Cost on New Drawdowns	19	19	18	26	20	15	8	17	6	(2)	8	2	(11)	(17)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	-	-	-	
	Annual Interest Cost on Opening Balance	-	78	158	239	356	456	540	599	697	759	788	860	913	916	893	858	822	785	745	703	659	613	565	514	460	404	345	282	217	148	76	0	0	0	
	Total Annual Interest Cost	19	96	176	265	376	471	548	616	704	756	795	862	902	898	873	839	803	765	725	683	640	593	545	494	440	384	325	263	197	129	56	0	0	0	

Feb8 1e, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
	GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
	Debt, Beginning of Year	0	1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	
	Interest Cost - Feb8 1e, 30-yr	*98*	*179*	*268*	*381*	*477*	*555*	*624*	*713*	*763*	*813*	*875*	*903*	*893*	*864*	*830*	*793*	*755*	*715*	*673*	*628*	*581*	*532*	*481*	*427*	*369*	*310*	*247*	*180*	*111*	*38*	*0*	*0*	*0*	16,239	
	Additional GA Debt Drawdown	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,538	1,581	1,619	2,301	1,980	1,676	1,168	1,938	1,219	569	1,424	1,053	57	-457	-677	-711	-748	-786	-826	-869	-913	-960	-1,009	-1,060	-1,115	-1,172	-1,232	-1,295	-1,361	-1,430	-1,504	0	0	0	

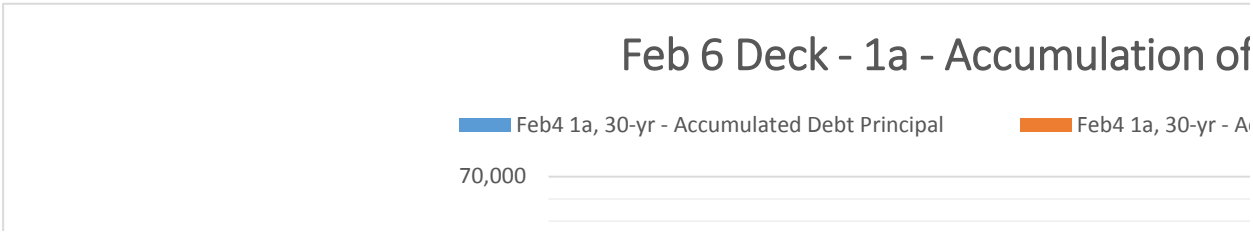
Feb 6 Deck

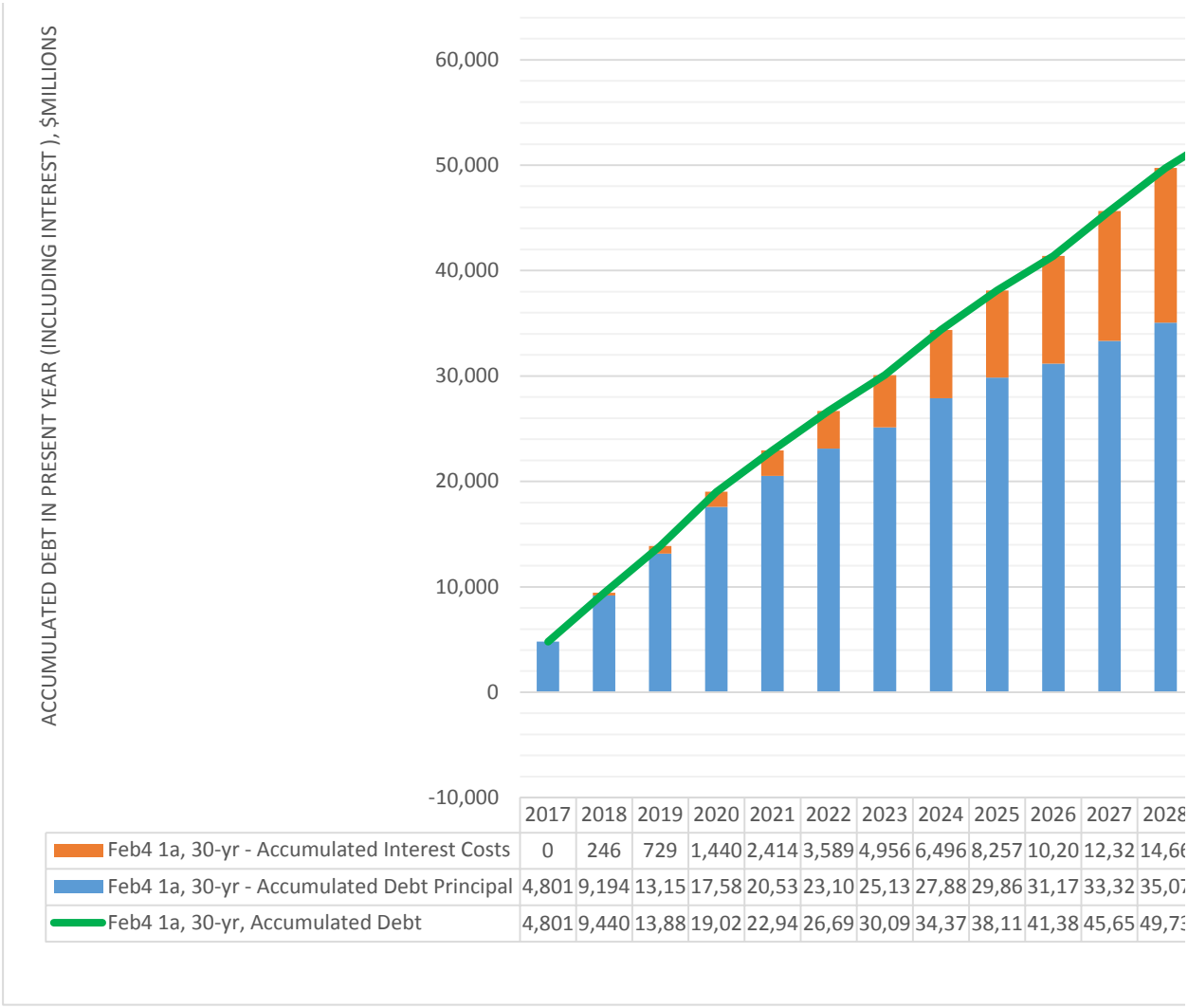
Feb 6 Deck - Scenario 1a, 1b, 1c - at 5.12% interest rate



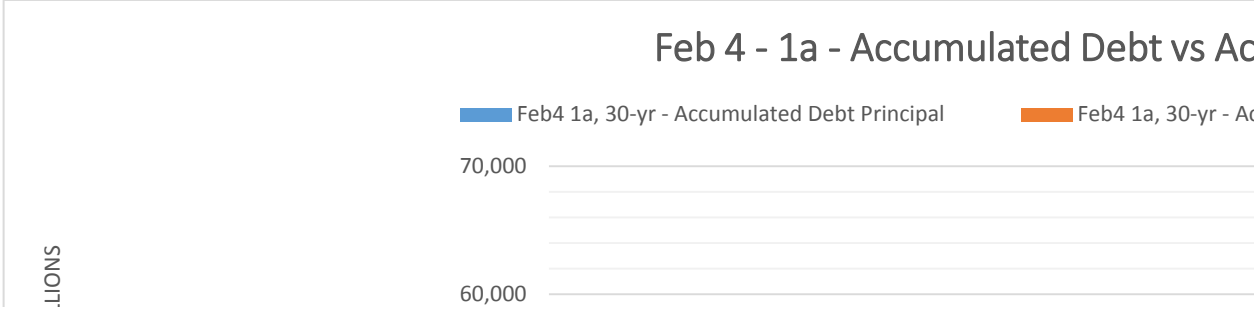
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	20
Feb4 1a, 30-yr	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,9
Feb4 1b, 30-yr	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,8
Feb4 1c, 30-yr	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	4(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73	53,03	56
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31

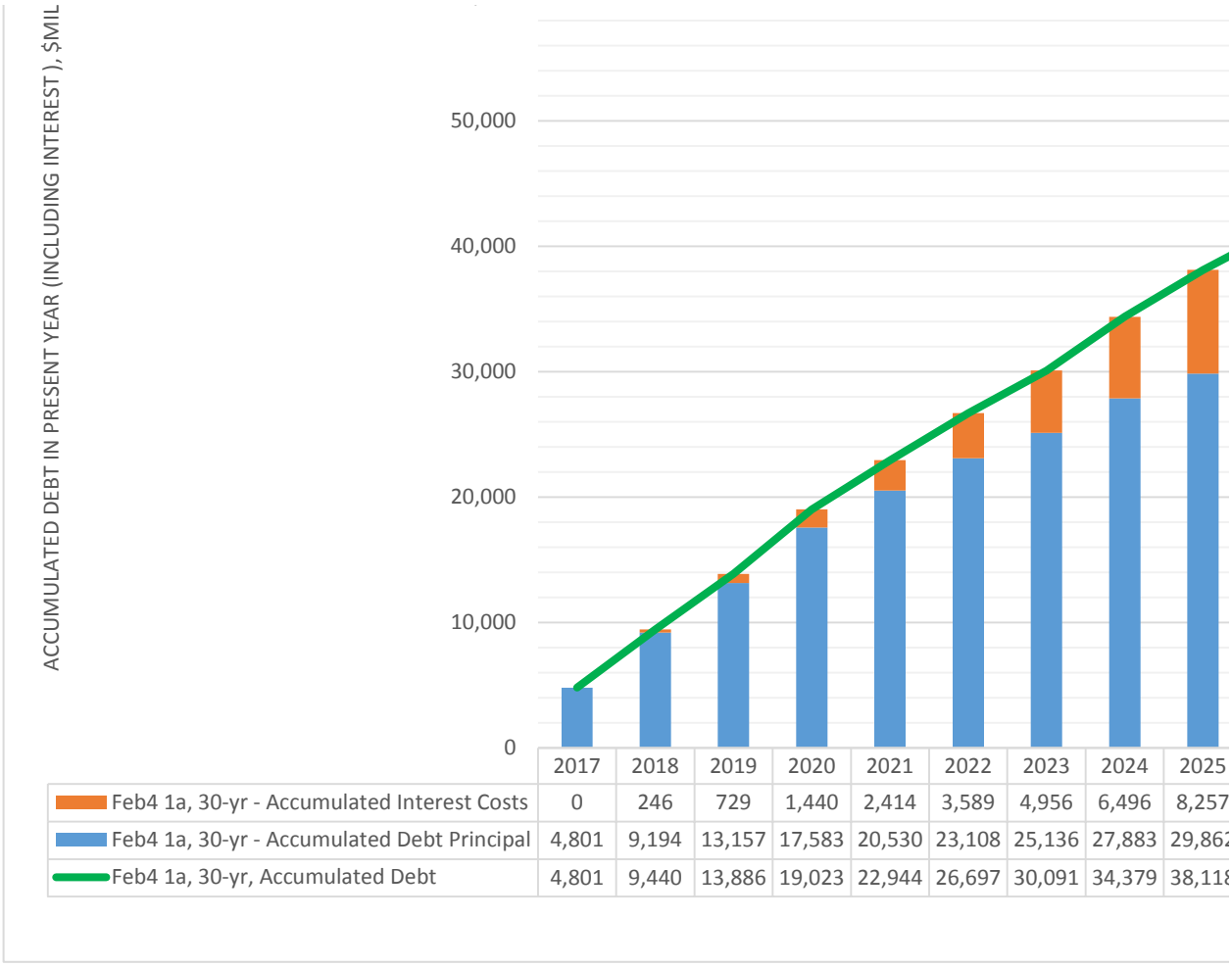
Feb 6 Deck - 1a - Accumulation of Debt (Principal and Interest)



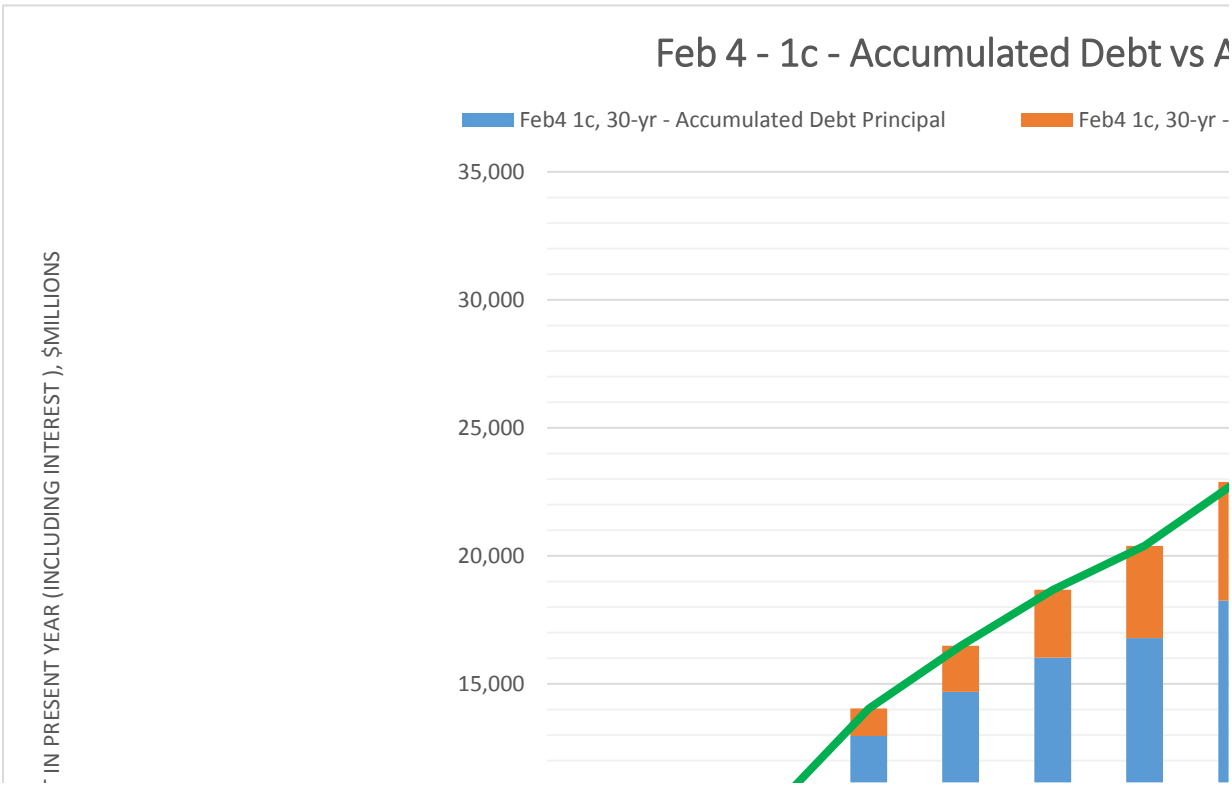


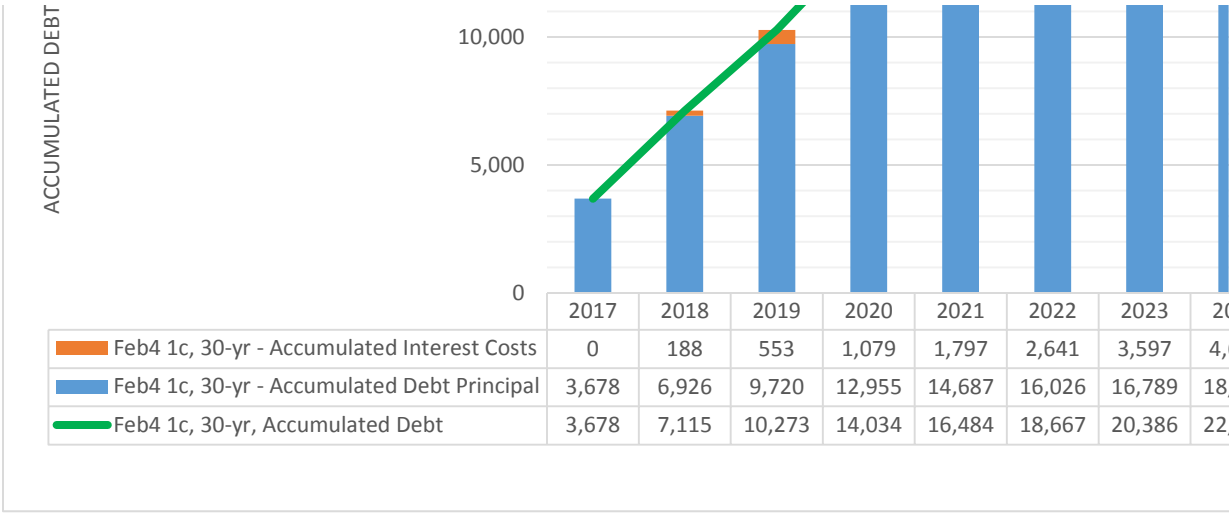
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,66
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,07
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73



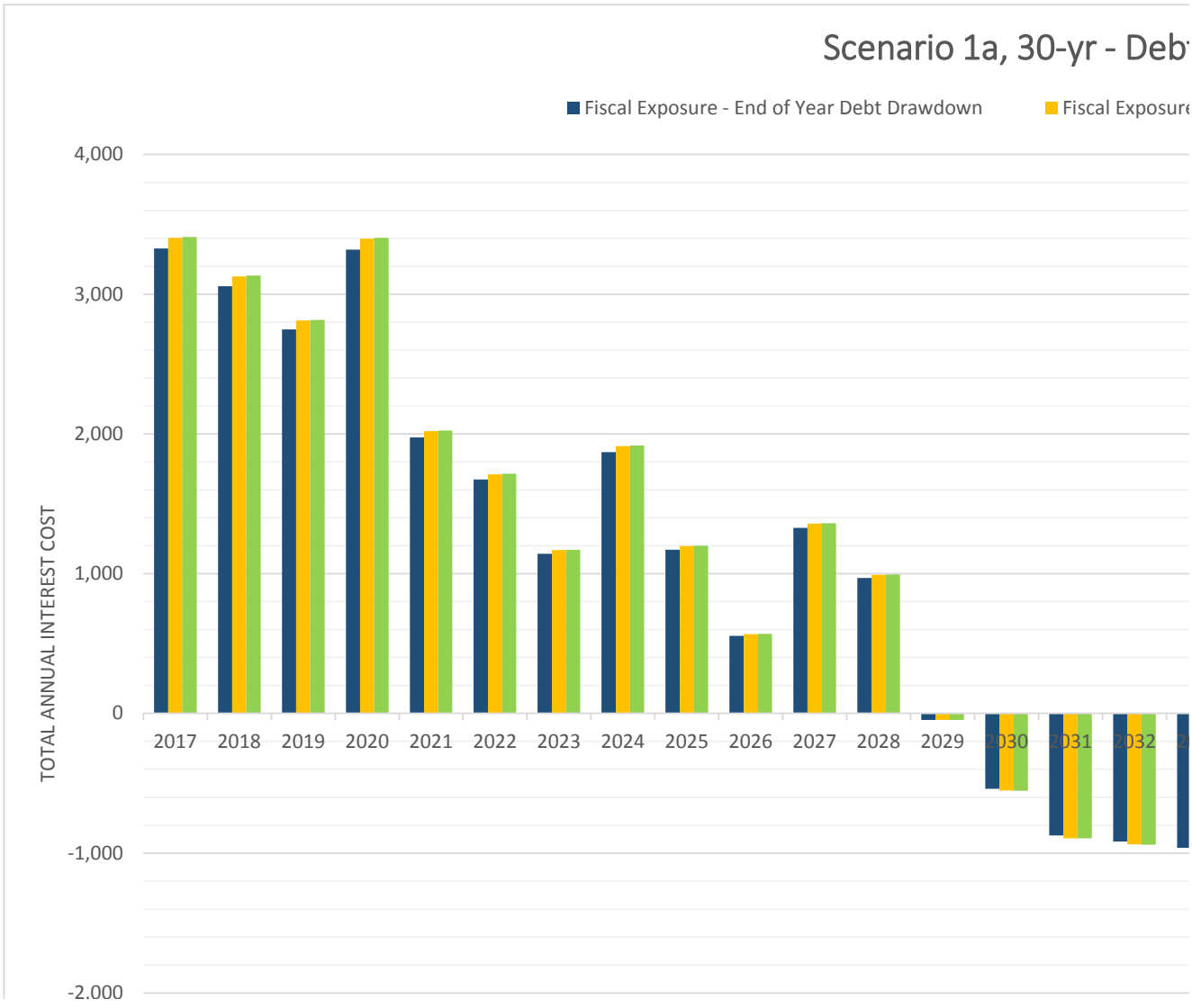


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



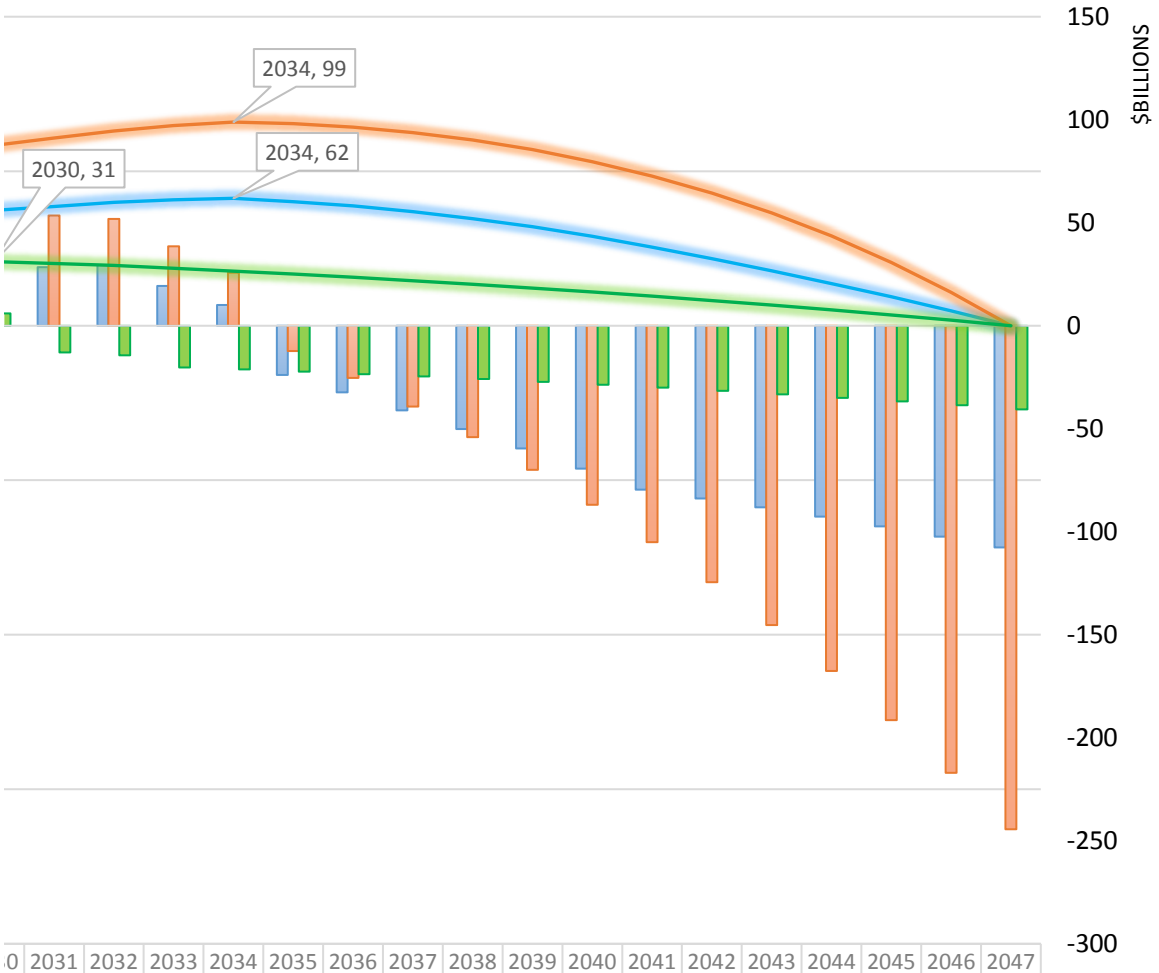


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22



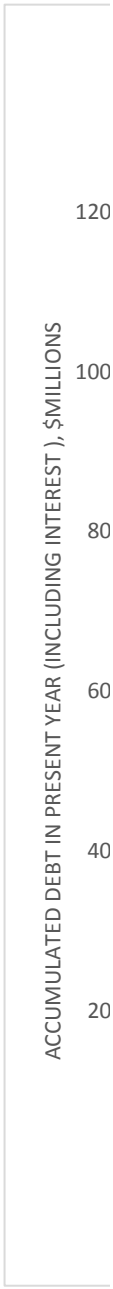

-3,000

lc - at 5.12% interest rate



0	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
98	1,896	1,966	1,288	672	-1,59	-2,15	-2,73	-3,34	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
26	3,568	3,457	2,571	1,716	-819	-1,68	-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
4	-860	-961	-1,34	-1,41	-1,48	-1,56	-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0
55	91,12	94,57	97,14	98,86	98,04	96,35	93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0
12	30,26	29,30	27,95	26,54	25,05	23,49	21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

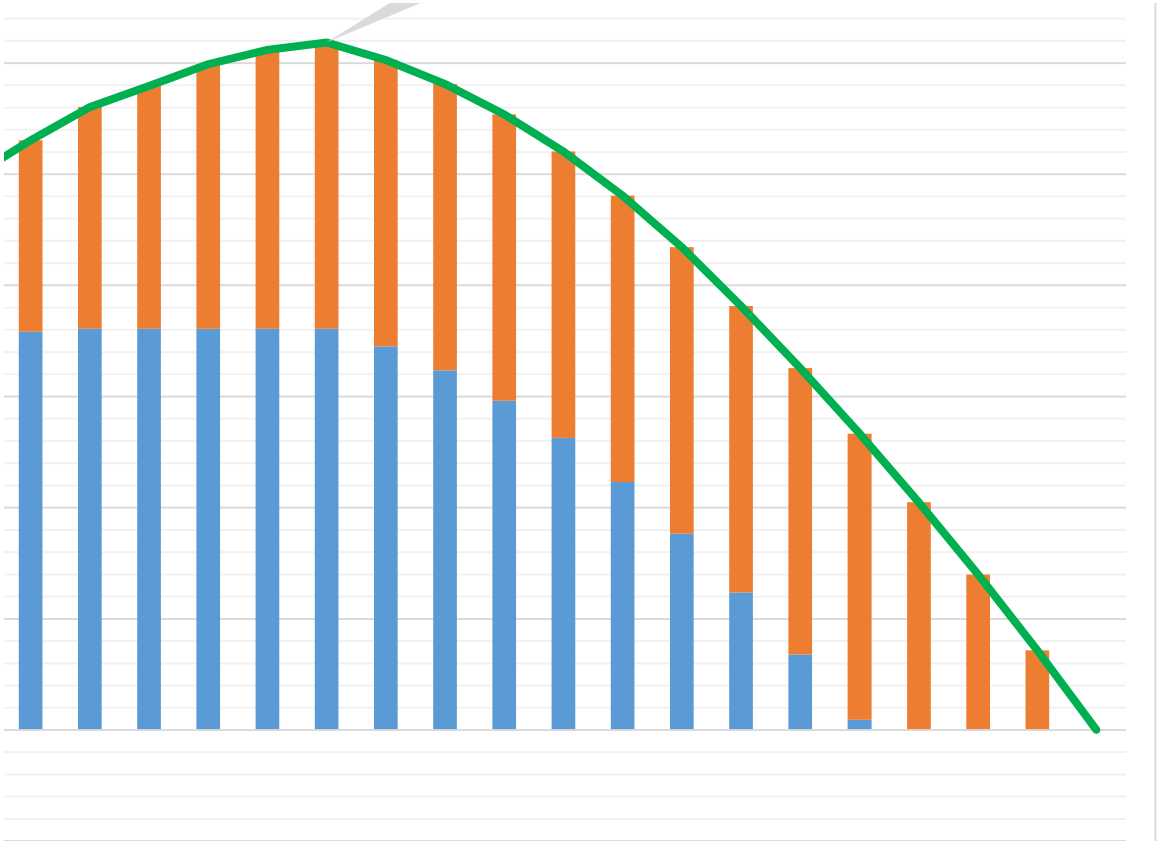
CALENDAR YEAR



Debt (Principal and Interest)

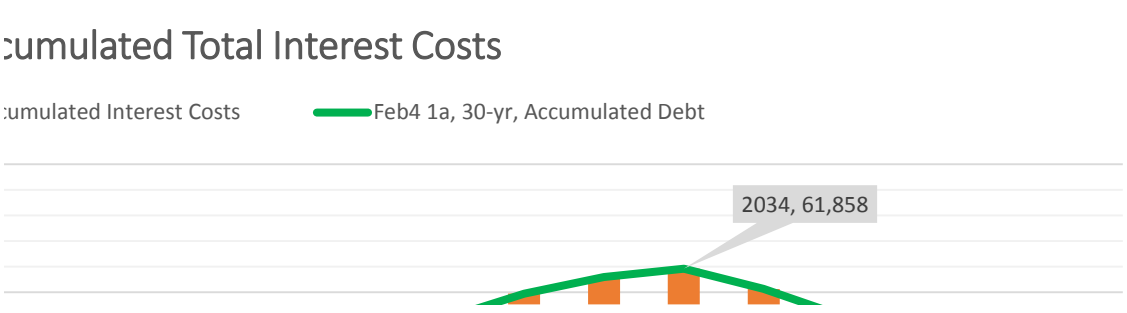
cumulated Interest Costs — Feb4 1a, 30-yr, Accumulated Debt

2034, 61,858

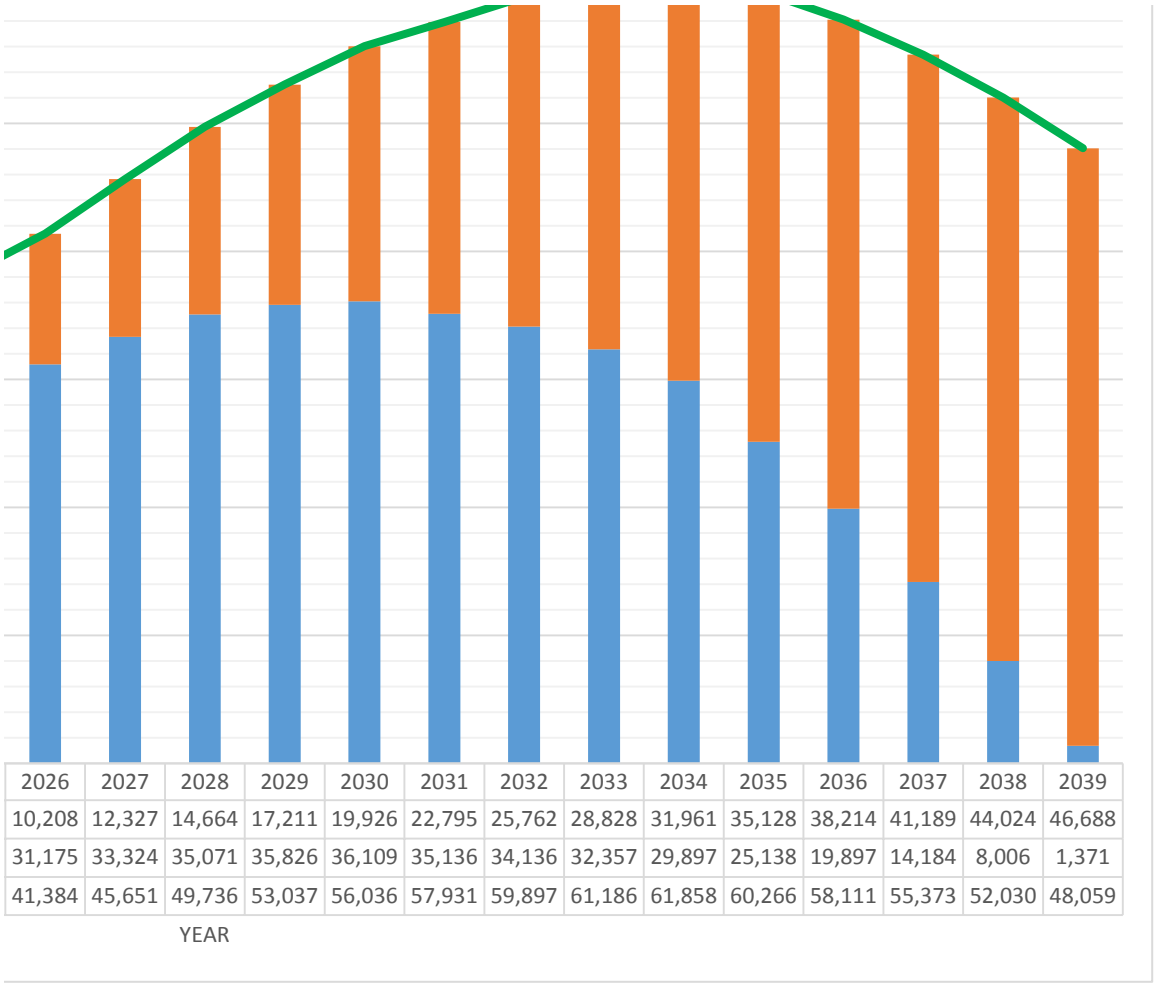


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



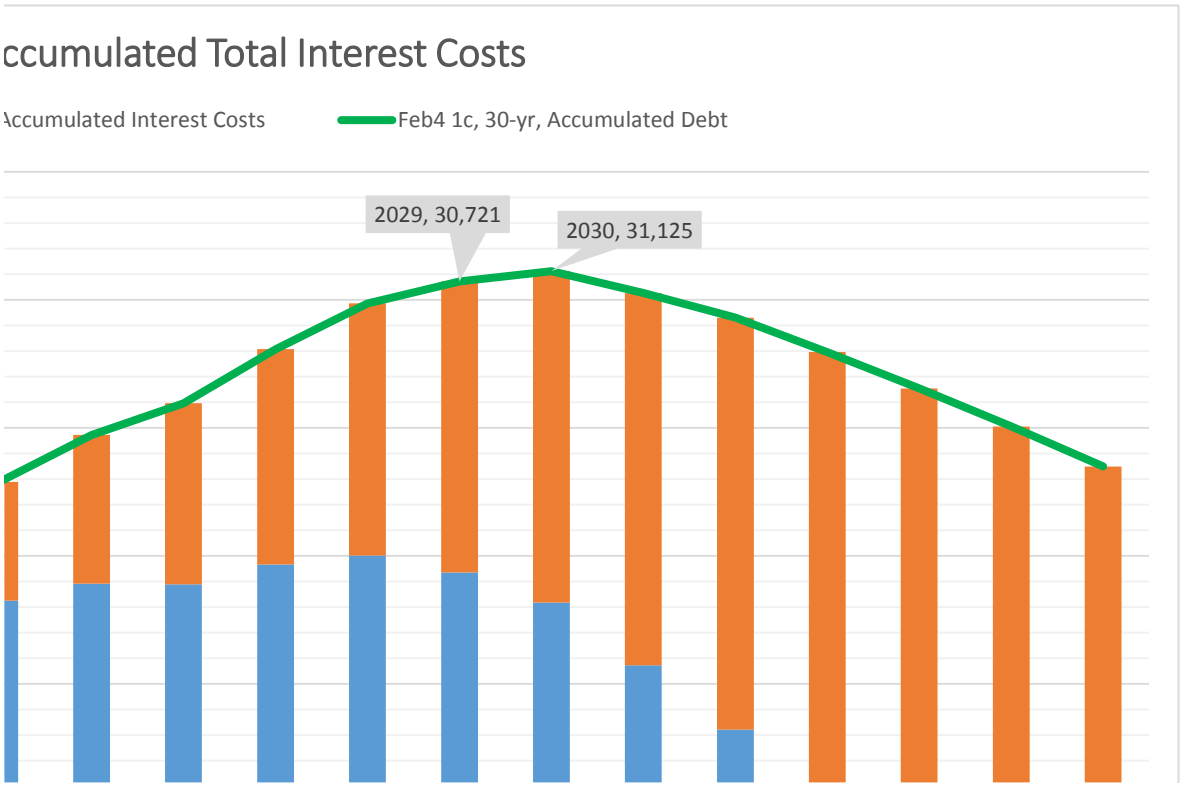
LIONS

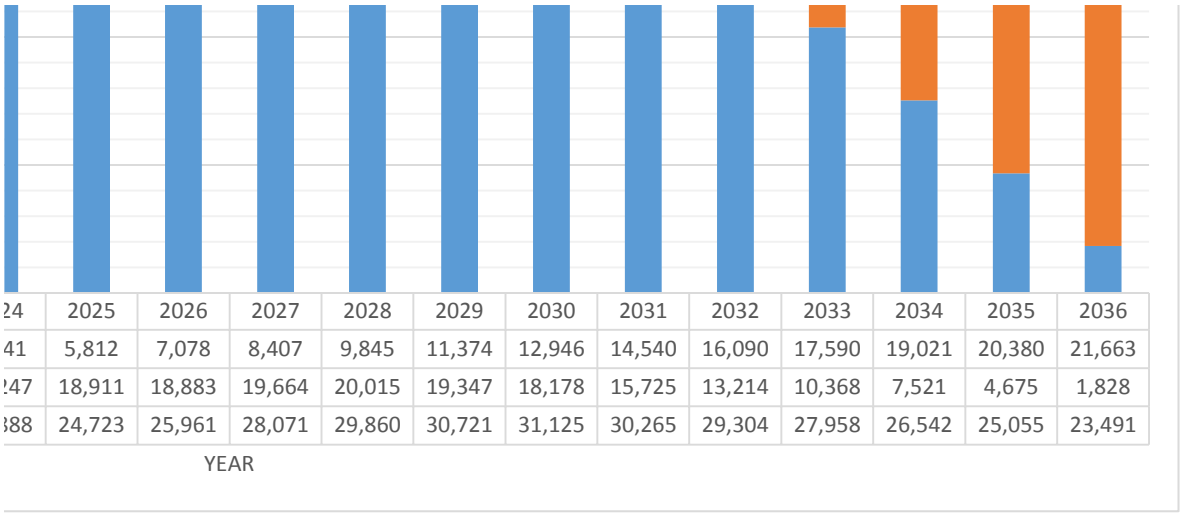


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

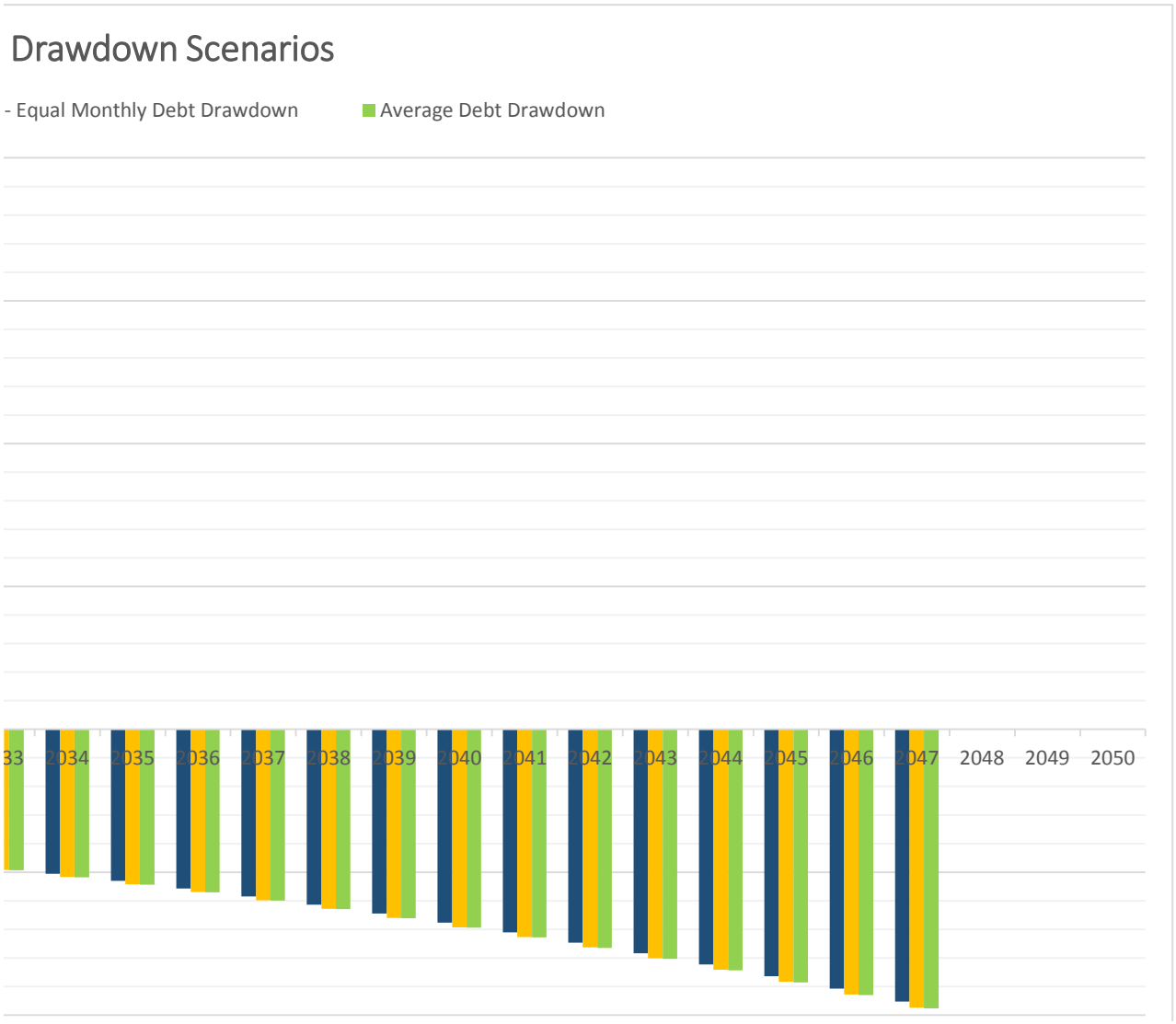
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





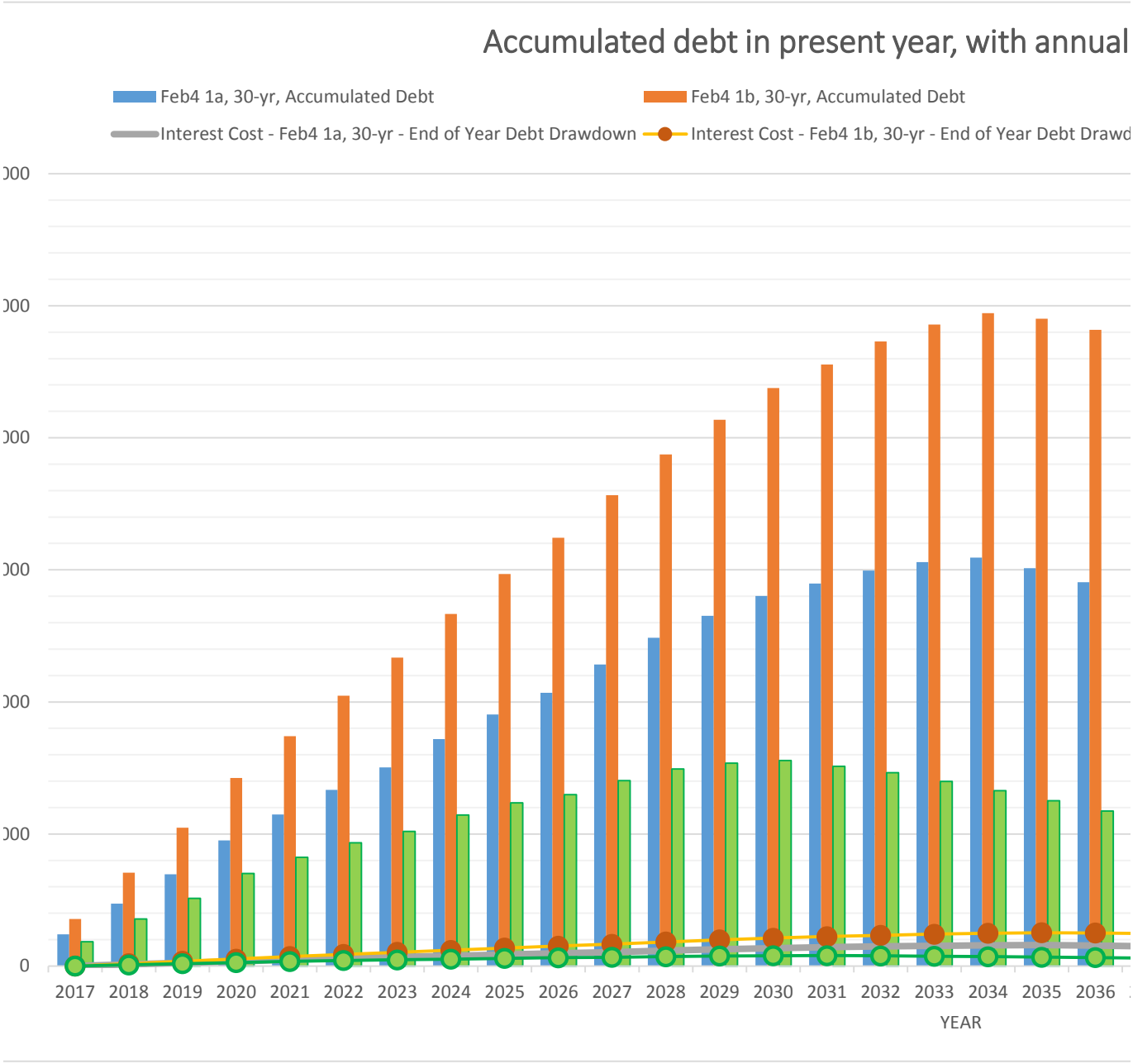
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

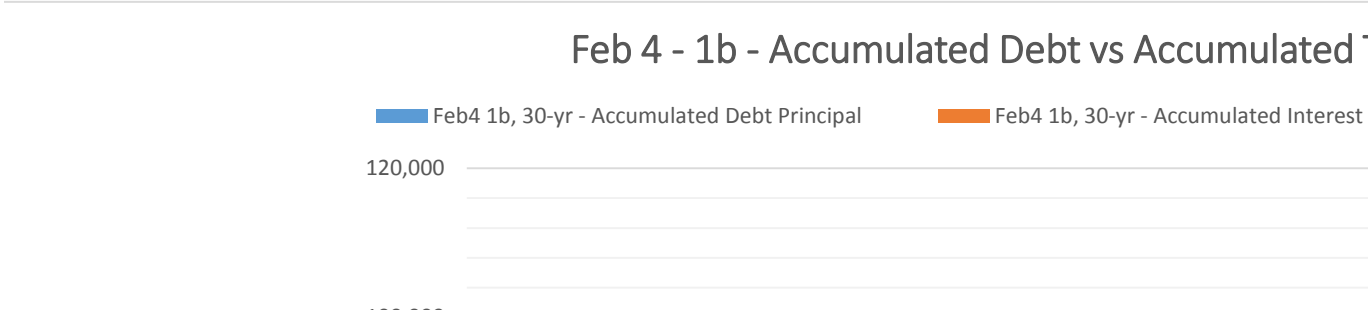
YEAR

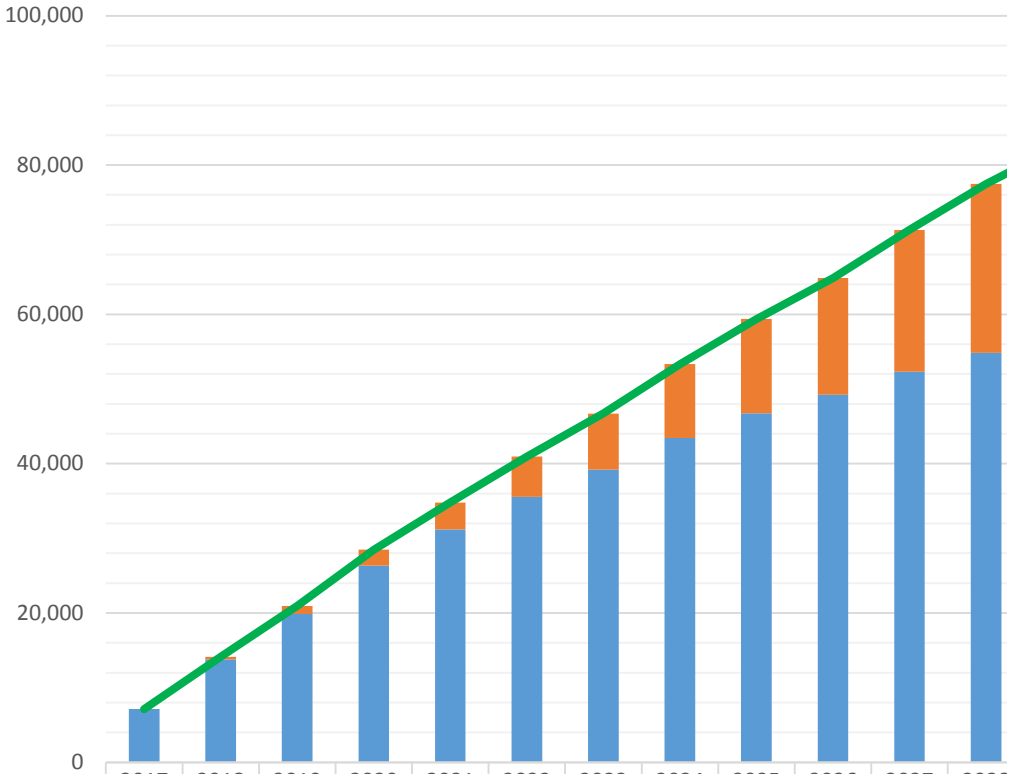


YEAR

ɜ - 25 year and 30 year Financing Terms, at 5% interest rate

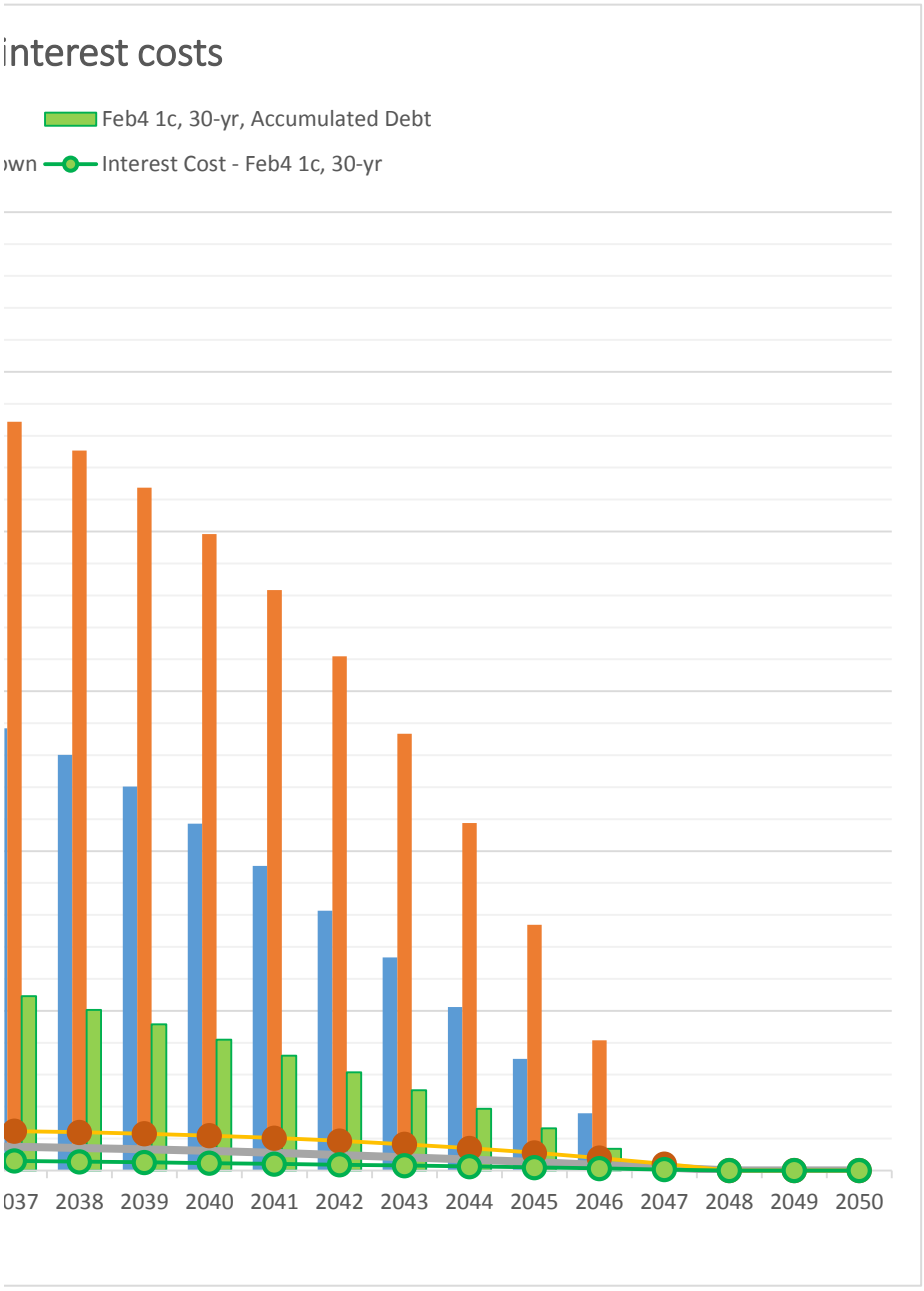


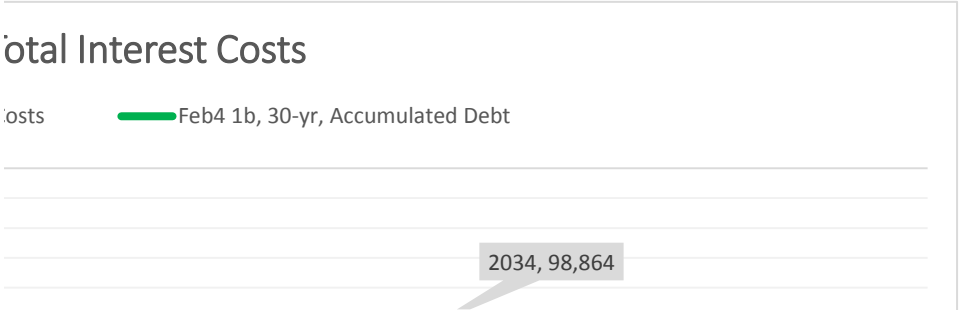

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

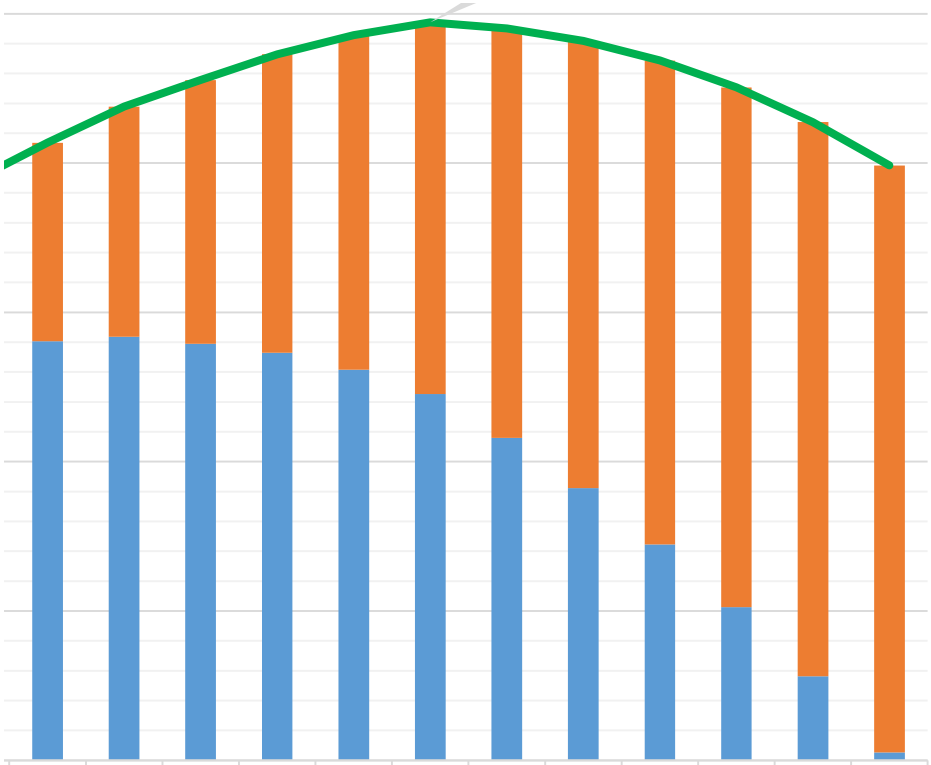


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y


interest costs
Feb4 1c, 30-yr, Accumulated Debt
wn
Interest Cost - Feb4 1c, 30-yr
037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR

Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

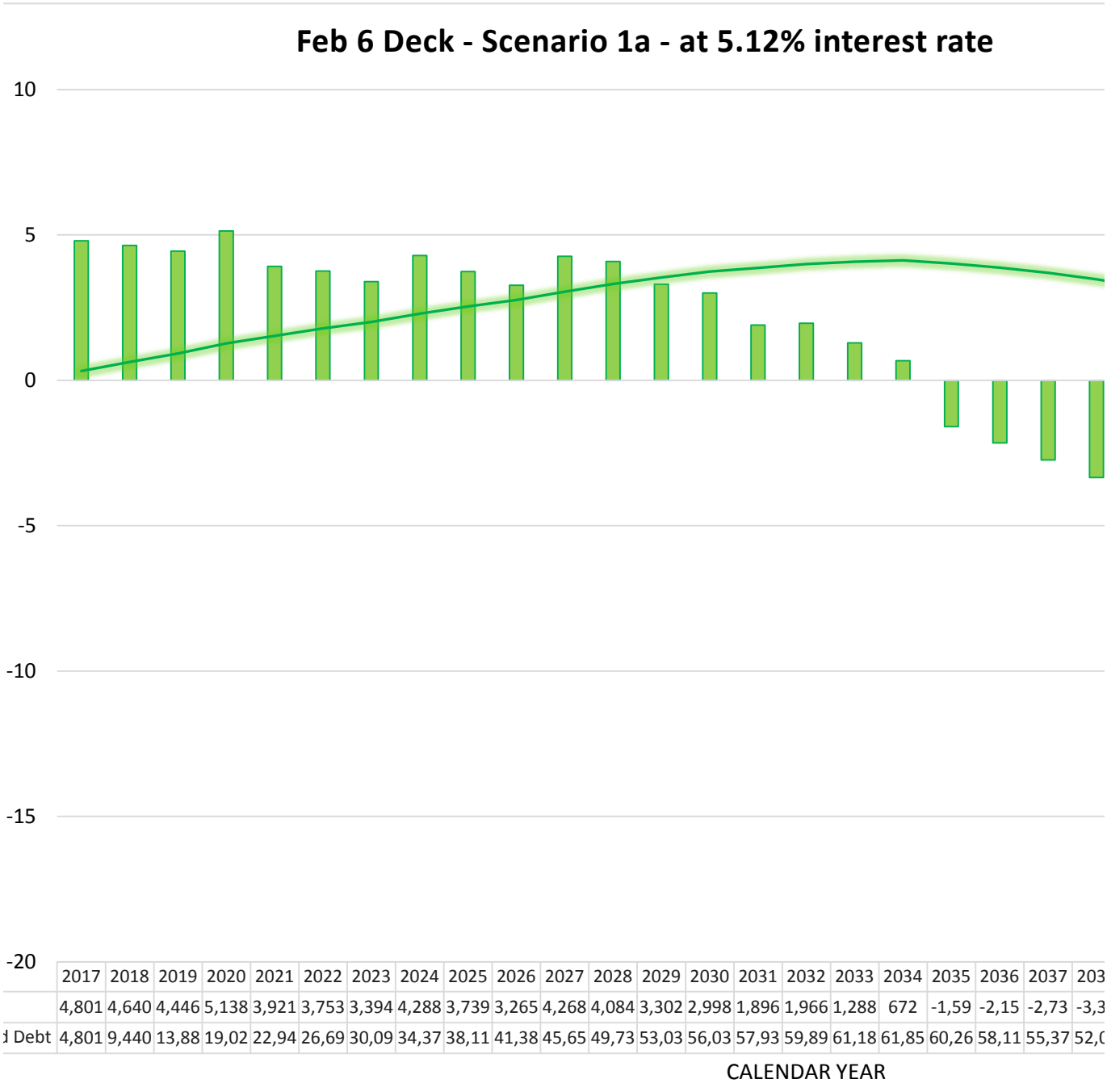
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

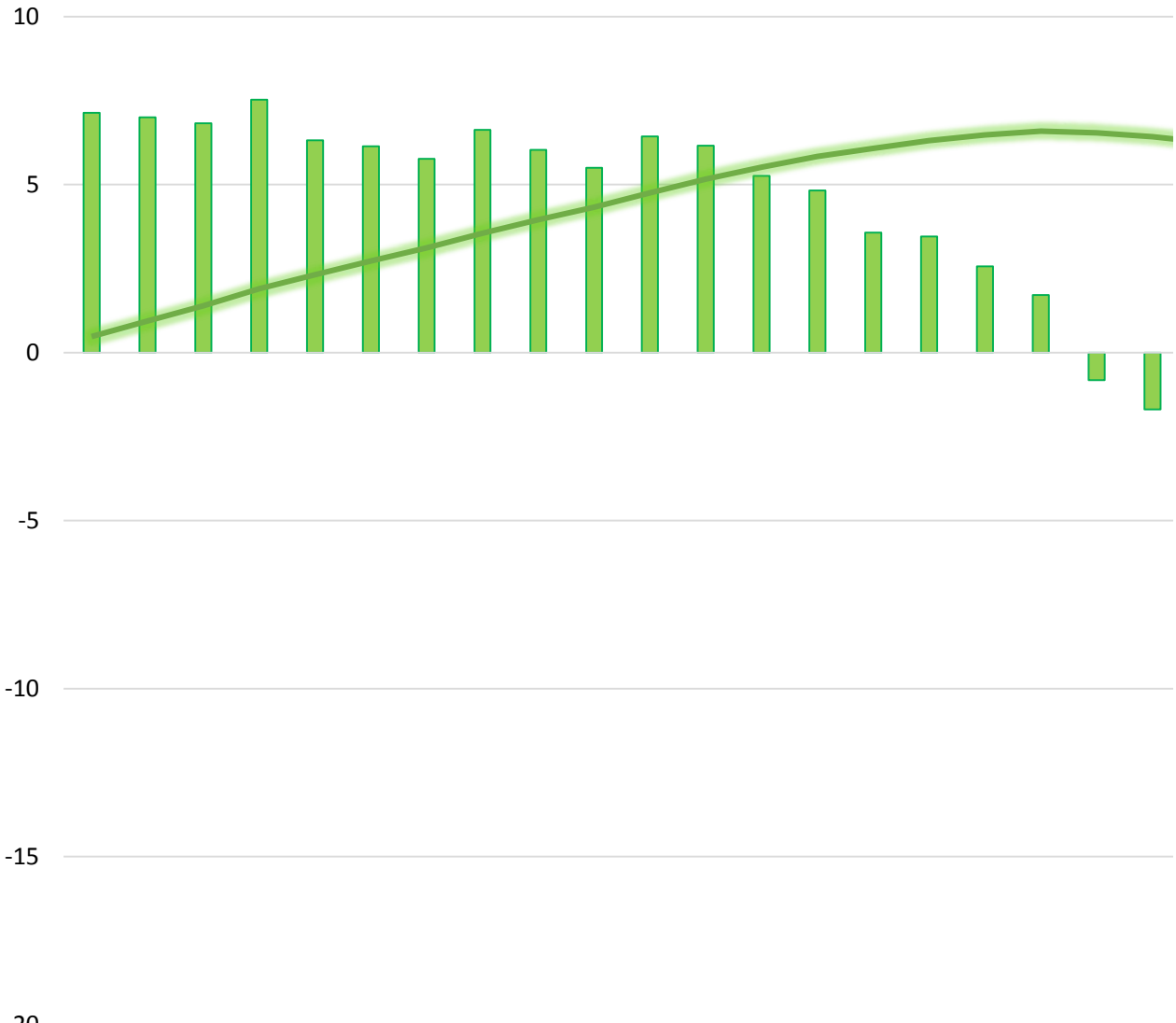
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

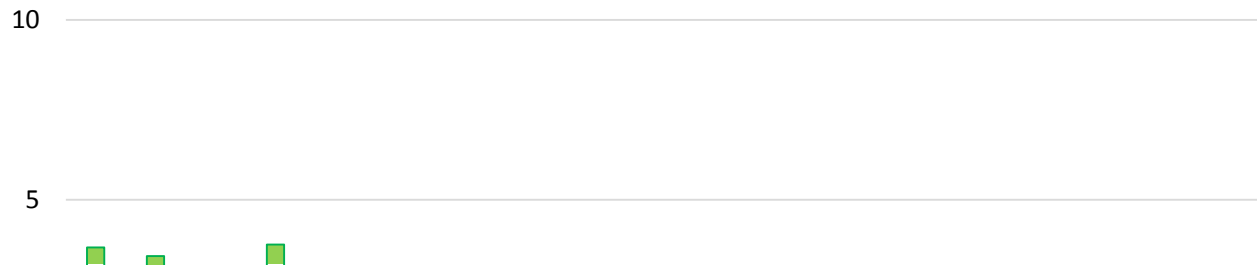
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

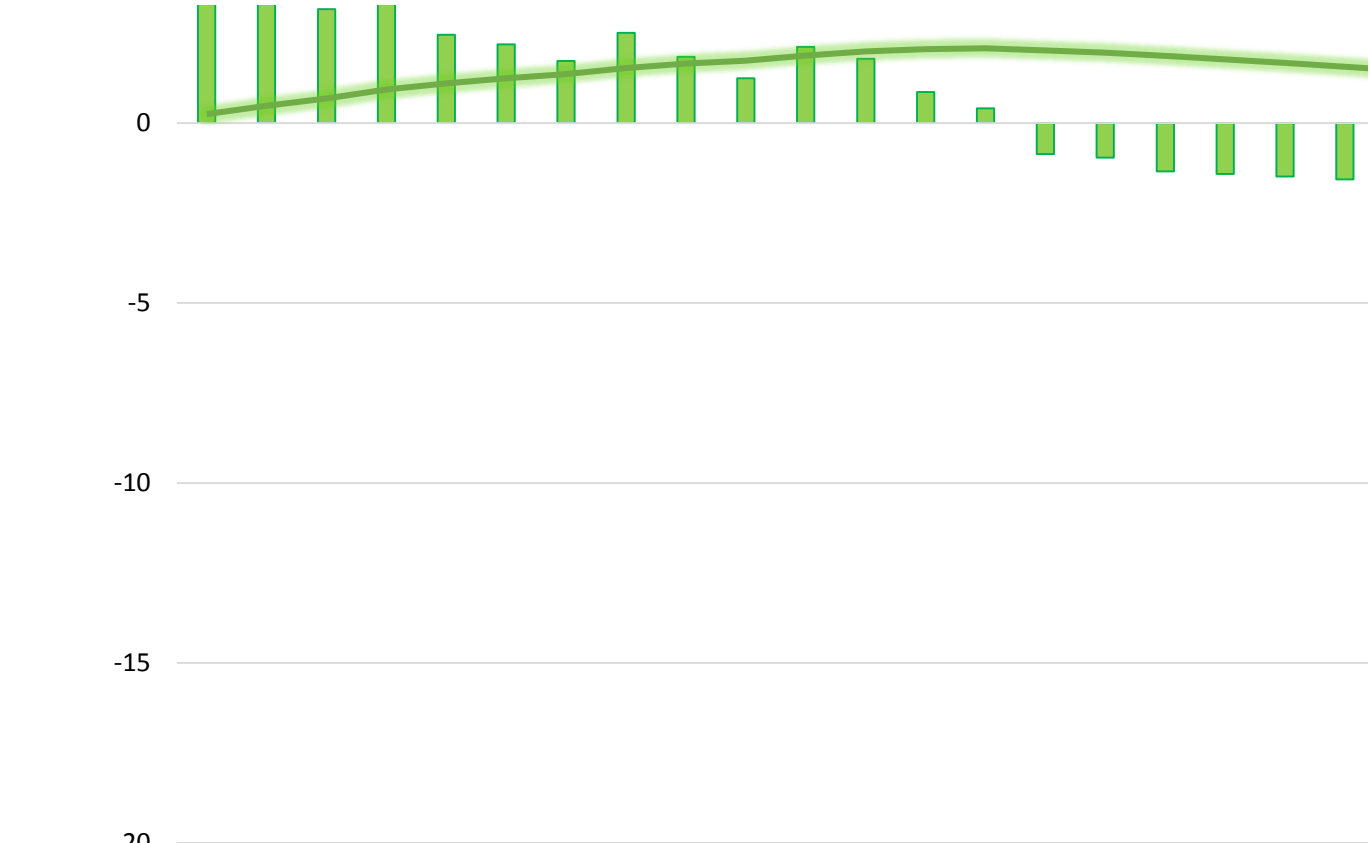


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



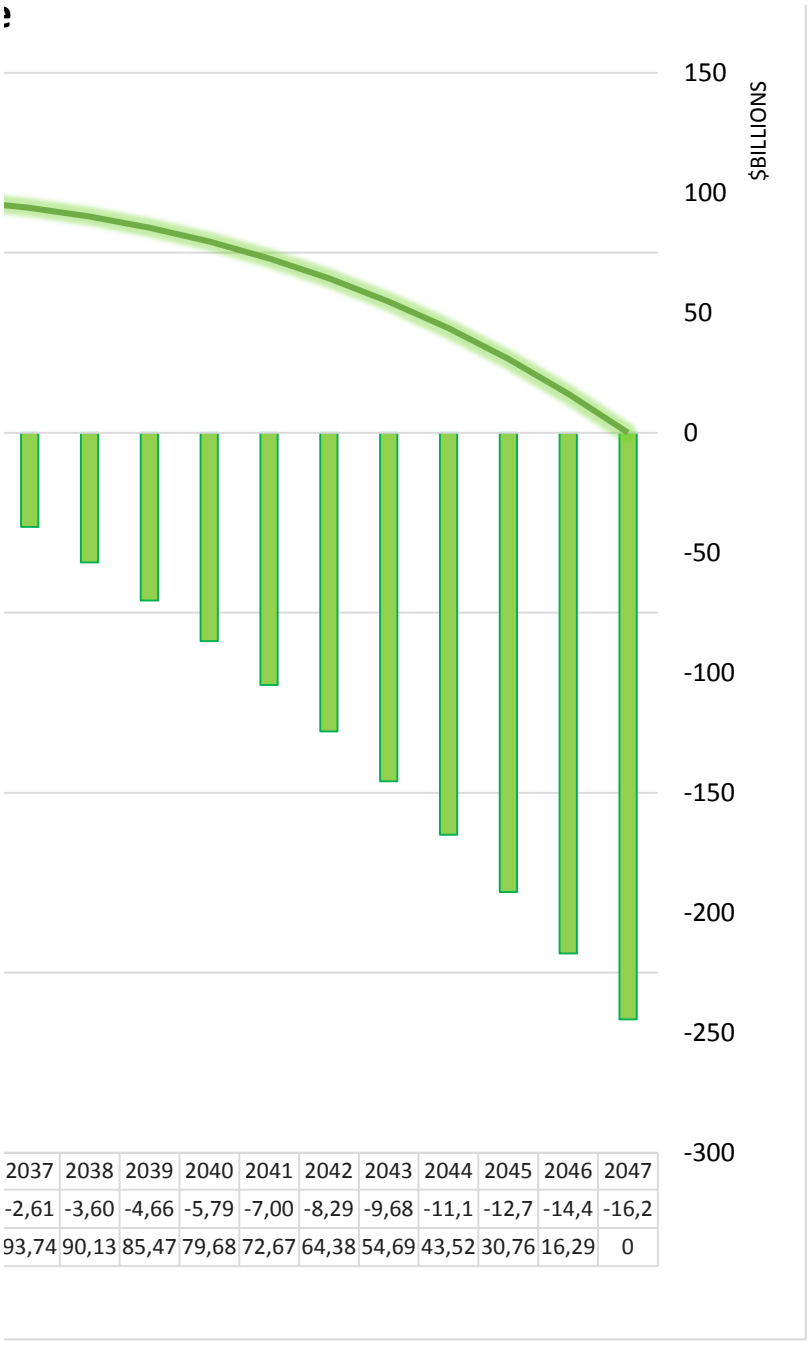


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

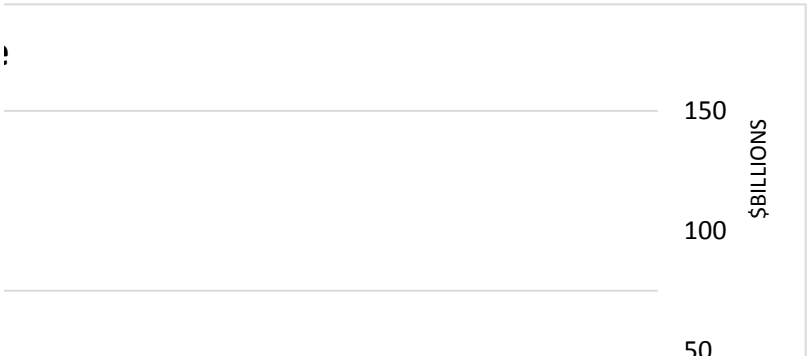
CALENDAR YEAR

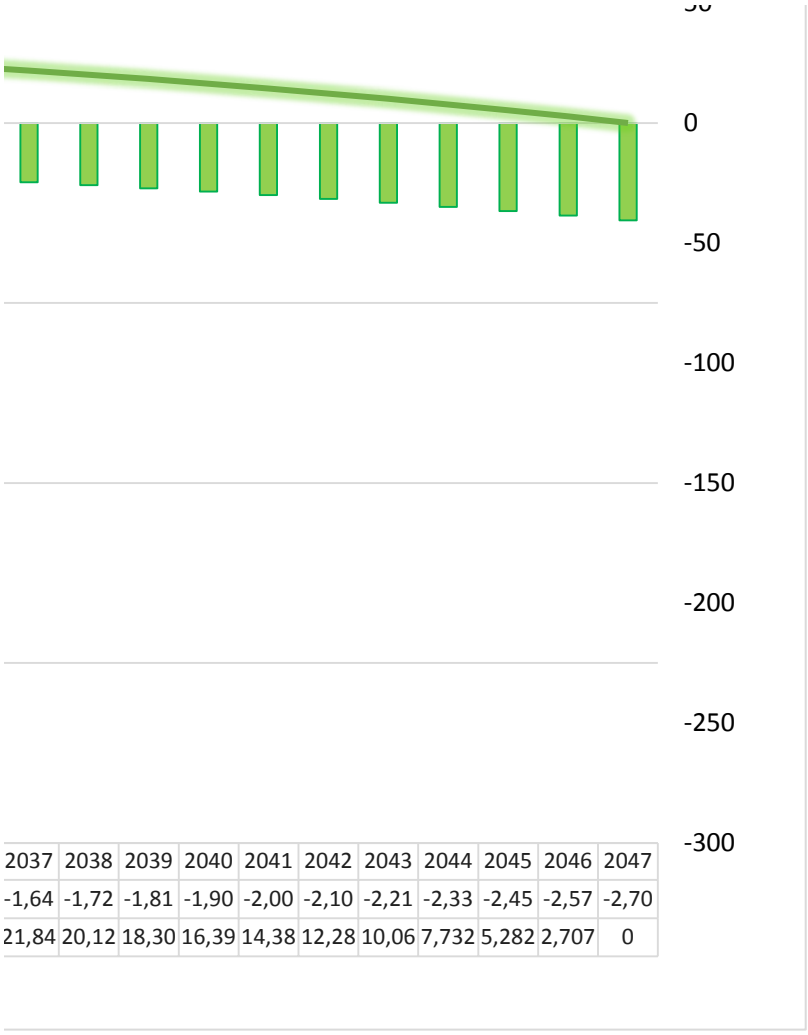


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Equal Monthly Debt Drawdown

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb4_1a_30yr

1a. GA Smoothing (Borrow ~$5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,801	4,640

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,200	4,760

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $62 billion, peakin
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary on accounting treatment.

7,133 7,133

Feb4_1b_30yr 7,133

1b. GA Smoothing (Borrow ~$7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	7,133	6,999

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,783	7,100

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $99 billion, peaking
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b on accounting treatment.

Feb4_1c_30yr

1c. GA Smoothing (Borrow ~$4 billion in 2017)

$ millions

Scenario 1C - 30-yr amortization	2017	2018
Annual Exposure[2]	3,678	3,437

	Fiscalized[3]	2016-17	2017-18
	Start: January 1st	919	3,617

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	1,783 - 1,200	7,100 - 4,760

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1200	4760
Debt-Finance Global Adjustment Costs, Option 1a	1783	7100
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18

Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1200**	**5000**
Total, B	1783	7340
Proposed Program Total:	1,783 - 1,200	7,340 - 5,000

ining

1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
4,446	5,138	3,921	3,753

2018-19	2019-20	2020-21	2021-2022
4,591	4,619	4,833	3,879

ng in 203 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
by approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
6,825	7,529	6,315	6,141

2018-19	2019-20	2020-21	2021-2022
6,956	7,001	7,226	6,272

g in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
3,158	3,761	2,450	2,183

2018-19	2019-20	2020-21	2021-2022
3,367	3,309	3,433	2,383

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
6,956 - 4,591	7,001 - 4,619	7,226 - 4,833	6,272 - 3,879

/1

2018-19[1]	2019-20[1]	2020-21[1]
4591	4619	4833
6956	7001	7226
225	279	323
60	60	60
18	18	18

4894	**4976**	**5234**
7259	7358	7627

7,259 - 4,894 7,358 - 4,976 7,627 - 5,234

1a. GA Smoothing (Borrow $5 billion in 2017)

	2017
IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	7,095
Additional GA Debt Drawdown, End of Year	5,000

Ratepayer GA Payment

Total Accumulated Debt *($ billion)*	5,000
Total Change in Accumulated Debt *($ billion)*	5000

1b. GA Smoothing (Borrow $7 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	5,095
Additional GA Debt Drawdown, End of Year	7,000

Total Accumulated Debt *($ billion)*	7000
Total Change in Accumulated Debt *($ billion)*	7000

1c. GA Smoothing (Borrow $4 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	8,095
Additional GA Debt Drawdown, End of Year	4,000

Total Accumulated Debt *($ billion)*	4000
Total Change in Accumulated Debt *($ billion)*	4000

2018	2019	2020	2021	2022	2023	2024	2025
11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
6,835	7,552	7,168	6,844	6,634	7,243	7,128	6,527
5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000

9,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000
5000	4000	5000	4000	4000	3000	4000	4000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
4,835	4,552	4,168	4,844	4,634	4,243	4,128	4,527
7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000

14000	21000	28000	35000	41000	47000	53000	59000
7000	7000	8000	6000	6000	6000	7000	6000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
8,835	8,552	8,168	8,844	8,634	8,243	8,128	8,527
3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000

7000	10000	14000	16000	19000	20000	23000	25000
3000	3000	4000	2000	2000	2000	3000	2000

2026	2027	2028	2029	2030	2031	2032	2033
10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
7,033	7,043	6,819	7,009	6,721	6,654	6,820	7,238
3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000

41,000	46,000	50,000	53,000	56,000	58,000	60,000	61,000
3000	4000	4000	3000	3000	2000	2000	1000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
4,033	5,043	4,819	5,009	4,721	4,654	5,820	5,238
6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000

65000	71000	77000	83000	88000	91000	95000	97000
6000	6000	6000	5000	5000	4000	3000	3000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
9,033	9,043	8,819	9,009	9,721	9,654	9,820	9,238
1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000

26000	28000	30000	31000	31000	30000	29000	28000
1000	2000	2000	1000	0	-1000	-1000	-1000

2034	2035	2036	2037	2038	2039	2040	2041
7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
6,756	7,662	7,389	8,129	7,881	8,645	9,421	9,207
1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000

62,000	60,000	58,000	55,000	52,000	48,000	43,000	38,000
1000	-2000	-2000	-3000	-3000	-4000	-5000	-5000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
5,756	6,662	7,389	8,129	8,881	9,645	10,421	11,207
2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000

99000	98000	96000	94000	90000	85000	80000	73000
2000	-1000	-2000	-3000	-4000	-5000	-6000	-7000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
8,756	6,662	7,389	7,129	6,881	6,645	6,421	6,207
-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000

27000	25000	23000	22000	20000	18000	16000	14000
-1000	-1000	-2000	-2000	-2000	-2000	-2000	-2000

2042	2043	2044	2045	2046	2047	2048		
4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
10,004	9,811	9,627	9,451	10,285	10,126	2,975		
-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0		

33,000	27,000	20,000	14,000	7,000	-	-	
-6000	-6000	-6000	-6000	-7000	-7000	0	

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
12,004	13,811	14,627	16,451	17,285	19,126	2,975		
-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0		

64000	55000	44000	31000	16000	0	0
-8000	-10000	-11000	-13000	-14000	-16000	0

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
6,004	5,811	5,627	5,451	6,285	6,126	2,975		
-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0		

12000	10000	8000	5000	3000	0	0
-2000	-2000	-2000	-2000	-3000	-3000	0

Feb4 1a, 30-yr - Debt Drawdown Scenarios

-92,247 -94598.515 58,489 36109.18 0

Feb4_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0
			114	110	106	122	93	89	81	102	89	78	102	97	79	71	45	47	31	16	-38	-51	-65	-80	-95	-110	-126	-133	-140	-147	-155	-162	-171	0	0	0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	5,138	3,167	58,489
Equal Monthly Debt Drawdown	5,260	3,149	

Maximum Accumulated Debt — Feb4 1a, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

End of Year Debt Drawdown	61,858	36,109
Equal Monthly Debt Drawdown	63,330	

			40%	37%	34%	36%	27%	24%																												
Feb4 1a, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
a	Debt, Beginning of Year		0	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	
c = a*5%	*Interest Cost - Feb4 1a, 30-yr - End of Year Debt Drawdown*		*0*	*246*	*483*	*711*	*974*	*1,175*	*1,367*	*1,541*	*1,760*	*1,952*	*2,119*	*2,337*	*2,546*	*2,716*	*2,869*	*2,966*	*3,067*	*3,133*	*3,167*	*3,086*	*2,975*	*2,835*	*2,664*	*2,461*	*2,224*	*1,952*	*1,666*	*1,365*	*1,049*	*717*	*367*	*0*	*0*	*0*	58,489
b	Additional GA Debt Drawdown, End of Year		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	21,822	23,788	25,076	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	20,490	13,998	7,173	0	0	0	
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	36,109	36,109	36,109	36,109	34,517	32,362	29,624	26,281	22,311	17,687	12,383	6,793	918	0	0	0	0	0	0	0	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688	49,149	51,372	53,325	54,991	56,356	57,405	58,122	58,489				
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371	-5,713	-13,241	-20,783	-28,325	-35,866	-43,408	-50,949	-58,489				
Fiscal Exposure - End of Year Debt Drawdown			4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0	

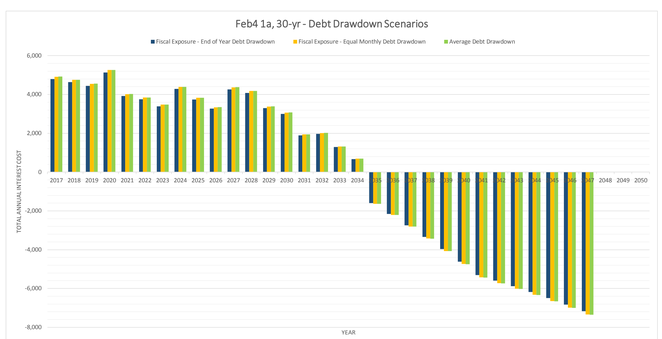
Feb4 1a, 30-yr	Equal Monthly Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			12																																		
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
3,149	*Interest Cost - Feb4 1a, 30-yr*		*114*	*356*	*589*	*833*	*1,067*	*1,264*	*1,448*	*1,643*	*1,849*	*2,029*	*2,220*	*2,435*	*2,625*	*2,787*	*2,914*	*3,013*	*3,097*	*3,149*	*3,129*	*3,034*	*2,910*	*2,756*	*2,569*	*2,351*	*2,098*	*1,819*	*1,526*	*1,218*	*895*	*554*	*197*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0	

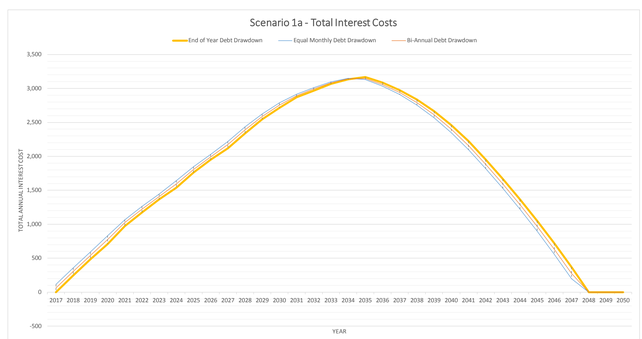
	Monthly Drawdown		400	366	330	369	246	215	169	229	165	109	179	146	63	24	(81)	(83)	(148)	(205)	(397)	(437)	(476)	(515)	(553)	(590)	(627)	(629)	(628)	(628)	(628)	(628)	(628)	-	-	-
	FV of Monthly Drawdown at 5%		4,915	4,498	4,057	4,532	3,017	2,640	2,075	2,813	2,026	1,345	2,200	1,789	773	289	(996)	(1,024)	(1,821)	(2,519)	(4,872)	(5,365)	(5,849)	(6,325)	(6,793)	(7,253)	(7,707)	(7,722)	(7,721)	(7,721)	(7,721)	(7,721)	(7,720)	-	-	-
	Annual Interest Cost on New Drawdowns		114	105	94	105	70	61	48	65	47	31	51	42	18	7	(23)	(24)	(42)	(59)	(113)	(125)	(136)	(147)	(158)	(169)	(179)	(180)	(180)	(180)	(180)	(180)	(179)	-	-	-
	Annual Interest Cost on Opening Balance		-	252	495	728	997	1,203	1,399	1,577	1,802	1,998	2,169	2,393	2,607	2,780	2,937	3,037	3,140	3,207	3,243	3,159	3,046	2,903	2,727	2,519	2,277	1,999	1,706	1,398	1,074	734	376	(0)	(0)	(0)
	Total Annual Interest Cost		114	356	589	833	1,067	1,264	1,448	1,643	1,849	2,029	2,220	2,435	2,625	2,787	2,914	3,013	3,097	3,149	3,129	3,034	2,910	2,756	2,569	2,351	2,098	1,819	1,526	1,218	895	554	197	(0)	(0)	(0)

Feb4 1a, 30-yr	Bi-Annual Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*61*	*305*	*540*	*777*	*1,024*	*1,223*	*1,410*	*1,596*	*1,808*	*1,993*	*2,173*	*2,390*	*2,589*	*2,754*	*2,893*	*2,991*	*3,083*	*3,141*	*3,147*	*3,058*	*2,940*	*2,792*	*2,613*	*2,401*	*2,156*	*1,881*	*1,591*	*1,286*	*966*	*629*	*275*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown			4,862	4,699	4,502	5,203	3,971	3,801	3,438	4,343	3,787	3,307	4,322	4,137	3,344	3,037	1,920	1,991	1,305	681	-1,612	-2,183	-2,773	-3,386	-4,021	-4,683	-5,372	-5,661	-5,951	-6,255	-6,575	-6,912	-7,265	0	0	0	

	Bi-Annual Drawdown		2,400	2,197	1,981	2,213	1,473	1,289	1,014	1,374	989	657	1,074	874	378	141	(487)	(500)	(889)	(1,230)	(2,379)	(2,620)	(2,857)	(3,089)	(3,317)	(3,542)	(3,764)	(3,771)	(3,771)	(3,771)	(3,771)	(3,771)	(3,770)	-	-	-
	FV of Bi-Annual Drawdown at 5%		4,862	4,450	4,013	4,483	2,984	2,612	2,053	2,783	2,004	1,331	2,176	1,769	765	286	(986)	(1,013)	(1,801)	(2,492)	(4,820)	(5,308)	(5,787)	(6,257)	(6,719)	(7,175)	(7,624)	(7,639)	(7,638)	(7,638)	(7,638)	(7,638)	(7,637)	-	-	-
	Annual Interest Cost on New Drawdowns		61	56	51	57	38	33	26	35	25	17	28	22	10	4	(12)	(13)	(23)	(31)	(61)	(67)	(73)	(79)	(85)	(91)	(96)	(97)	(97)	(97)	(97)	(97)	(97)	-	-	-
	Annual Interest Cost on Opening Balance		-	249	490	720	986	1,190	1,384	1,560	1,783	1,977	2,146	2,367	2,579	2,750	2,906	3,004	3,106	3,173	3,208	3,125	3,013	2,871	2,698	2,492	2,252	1,977	1,687	1,383	1,063	726	372	(0)	(0)	(0)
	Total Annual Interest Cost		61	305	540	777	1,024	1,223	1,410	1,596	1,808	1,993	2,173	2,390	2,589	2,754	2,893	2,991	3,083	3,141	3,147	3,058	2,940	2,792	2,613	2,401	2,156	1,881	1,591	1,286	966	629	275	(0)	(0)	(0)

Feb4 1a, 30-yr	Average Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*123*	*365*	*597*	*842*	*1,074*	*1,271*	*1,454*	*1,650*	*1,856*	*2,035*	*2,228*	*2,442*	*2,631*	*2,792*	*2,918*	*3,016*	*3,100*	*3,150*	*3,126*	*3,030*	*2,905*	*2,749*	*2,562*	*2,342*	*2,088*	*1,809*	*1,516*	*1,207*	*883*	*542*	*184*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
Fiscal Exposure - Average Debt Drawdown			4,923	4,758	4,559	5,269	4,021	3,849	3,481	4,398	3,835	3,349	4,377	4,189	3,386	3,075	1,944	2,016	1,321	689	-1,633	-2,210	-2,808	-3,428	-4,072	-4,742	-5,440	-5,733	-6,026	-6,334	-6,658	-6,999	-7,357	0	0	0	





Feb4 1b, 30-yr - Debt Drawdown Scenarios

-149,507 -153857.97 97,141 56717.33 0

Feb4_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0
			170	167	162	179	150	146	137	158	144	131	153	147	125	115	85	82	61	41	-19	-40	-62	-86	-111	-138	-167	-198	-231	-266	-304	-344	-388	0	0	0

0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown 7,529	5,062	97,141
Equal Monthly Debt Drawdown 7,708	5,042	

Maximum Accumulated Debt	Feb4 1b, 30-yr, Accumulated Debt	Total Principal Debt Borrowed
End of Year Debt Drawdown	98,864	56,717
Equal Monthly Debt Drawdown	101,217	

Feb4 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
a Debt, Beginning of Year	0	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	
c = a*5% *Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown*	*0*	*365*	*724*	*1,073*	*1,459*	*1,782*	*2,096*	*2,391*	*2,731*	*3,040*	*3,322*	*3,651*	*3,966*	*4,236*	*4,483*	*4,665*	*4,842*	*4,974*	*5,062*	*5,020*	*4,933*	*4,800*	*4,615*	*4,376*	*4,080*	*3,721*	*3,296*	*2,800*	*2,228*	*1,575*	*834*	*0*	*0*	*0*	97,141
b Additional GA Debt Drawdown, End of Year	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
d = a+b+c Accumulated debt in present year (including 5% annual interest)	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	0	
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,633	26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606	82,685	86,406	89,703	92,503	94,731	96,306	97,141				
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,831	56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076	-10,007	-22,027	-35,008	-48,980	-63,971	-80,013	-97,141				
Fiscal Exposure - End of Year Debt Drawdown	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0	

Feb4 1b, 30-yr — Equal Monthly Debt Drawdown

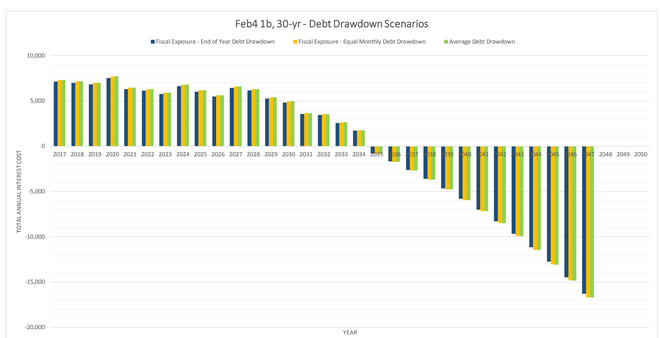
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	
5,042 *Interest Cost - Feb4 1b, 30-yr*	*170*	*532*	*886*	*1,252*	*1,609*	*1,928*	*2,234*	*2,549*	*2,874*	*3,171*	*3,475*	*3,797*	4,091	*4,350*	*4,568*	*4,748*	*4,904*	*5,015*	*5,042*	*4,980*	*4,871*	*4,714*	*4,504*	*4,238*	*3,913*	*3,524*	*3,066*	*2,534*	*1,925*	*1,231*	*446*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0	
Monthly Drawdown	594	553	508	538	405	363	306	353	275	205	259	209	108	49	(76)	(101)	(189)	(271)	(490)	(559)	(629)	(700)	(773)	(847)	(924)	(1,002)	(1,082)	(1,164)	(1,249)	(1,337)	(1,427)	(0)	-	-	
FV of Monthly Drawdown at 5%	7,303	6,792	6,247	6,610	4,972	4,463	3,755	4,338	3,383	2,523	3,184	2,565	1,327	605	(937)	(1,237)	(2,326)	(3,335)	(6,020)	(6,867)	(7,728)	(8,604)	(9,498)	(10,412)	(11,347)	(12,306)	(13,291)	(14,304)	(15,348)	(16,424)	(17,536)	(0)	-	-	
Annual Interest Cost on New Drawdowns	170	158	145	154	116	104	87	101	79	59	74	60	31	14	(22)	(29)	(54)	(78)	(140)	(160)	(180)	(200)	(221)	(242)	(264)	(286)	(309)	(333)	(357)	(382)	(408)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	374	741	1,099	1,493	1,824	2,146	2,448	2,796	3,112	3,401	3,738	4,061	4,336	4,589	4,776	4,958	5,092	5,182	5,139	5,051	4,914	4,725	4,481	4,177	3,810	3,375	2,867	2,281	1,612	854	0	(0)	(0)	
Total Annual Interest Cost	170	532	886	1,252	1,609	1,928	2,234	2,549	2,874	3,171	3,475	3,797	4,091	4,350	4,568	4,748	4,904	5,015	5,042	4,980	4,871	4,714	4,504	4,238	3,913	3,524	3,066	2,534	1,925	1,231	446	0	(0)	(0)	

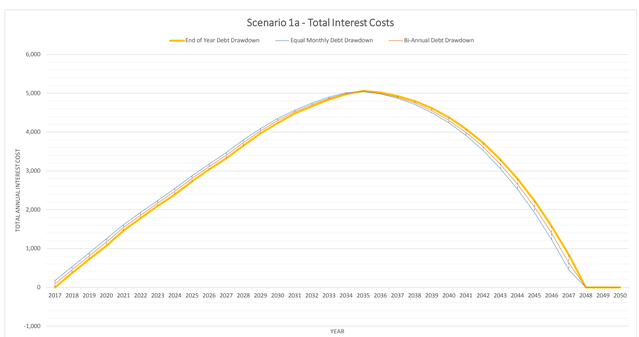
Feb4 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*91*	*455*	*811*	*1,169*	*1,539*	*1,861*	*2,170*	*2,476*	*2,808*	*3,110*	*3,404*	*3,730*	*4,034*	*4,297*	*4,528*	*4,710*	*4,875*	*4,996*	*5,051*	*4,998*	*4,900*	*4,753*	*4,555*	*4,302*	*3,990*	*3,615*	*3,172*	*2,657*	*2,065*	*1,390*	*626*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	7,225	7,089	6,913	7,626	6,396	6,220	5,838	6,713	6,113	5,574	6,514	6,235	5,330	4,888	3,614	3,501	2,603	1,738	-829	-1,709	-2,648	-3,651	-4,722	-5,867	-7,093	-8,405	-9,810	-11,314	-12,926	-14,652	-16,502	0	0	0	
Bi-Annual Drawdown	3,567	3,317	3,051	3,228	2,428	2,180	1,834	2,118	1,652	1,232	1,555	1,253	648	295	(457)	(604)	(1,136)	(1,629)	(2,940)	(3,354)	(3,774)	(4,202)	(4,639)	(5,085)	(5,542)	(6,010)	(6,491)	(6,986)	(7,495)	(8,021)	(8,564)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	7,225	6,719	6,180	6,539	4,919	4,415	3,715	4,291	3,347	2,496	3,150	2,538	1,313	598	(926)	(1,224)	(2,301)	(3,299)	(5,956)	(6,794)	(7,645)	(8,512)	(9,396)	(10,300)	(11,225)	(12,174)	(13,148)	(14,150)	(15,183)	(16,247)	(17,347)	(0)	-	-	
Annual Interest Cost on New Drawdowns	91	85	78	83	62	56	47	54	42	32	40	32	17	8	(12)	(15)	(29)	(42)	(75)	(86)	(97)	(108)	(119)	(130)	(142)	(154)	(166)	(179)	(192)	(205)	(219)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	370	733	1,087	1,477	1,805	2,123	2,422	2,766	3,079	3,364	3,698	4,017	4,290	4,540	4,725	4,904	5,038	5,127	5,084	4,997	4,861	4,674	4,432	4,132	3,769	3,338	2,836	2,257	1,595	845	0	0	0	
Total Annual Interest Cost	91	455	811	1,169	1,539	1,861	2,170	2,476	2,808	3,110	3,404	3,730	4,034	4,297	4,528	4,710	4,875	4,996	5,051	4,998	4,900	4,753	4,555	4,302	3,990	3,615	3,172	2,657	2,065	1,390	626	0	0	0	

Feb4 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*183*	*544*	*898*	*1,266*	*1,620*	*1,939*	*2,244*	*2,561*	*2,885*	*3,181*	*3,486*	*3,809*	*4,101*	*4,359*	*4,574*	*4,754*	*4,908*	*5,018*	*5,041*	*4,977*	*4,867*	*4,707*	*4,496*	*4,228*	*3,900*	*3,509*	*3,048*	*2,514*	*1,902*	*1,205*	*417*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	7,316	7,179	7,000	7,722	6,477	6,298	5,912	6,798	6,190	5,645	6,597	6,314	5,397	4,950	3,659	3,545	2,636	1,760	-840	-1,731	-2,682	-3,697	-4,782	-5,942	-7,183	-8,511	-9,934	-11,457	-13,089	-14,838	-16,711	0	0	0	





Feb4 1c, 30-yr - Debt Drawdown Scenarios

Feb4_1c_30yr

Annual Interest Rate = 5.1%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0
			88	82	75	90	58	52	41	60	44	29	50	43	20	10	-20	-23	-32	-34	-35	-37	-39	-41	-43	-45	-48	-50	-53	-55	-58	-61	-64	0	0	0

0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	3,761	1,594	29,477
Equal Monthly Debt Drawdown	3,851	1,583	

Maximum Accumulated Debt — Feb4 1c, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

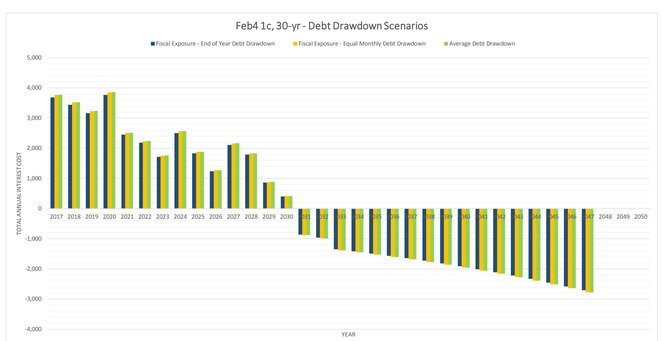
End of Year Debt Drawdown	31,125	20,043
Equal Monthly Debt Drawdown	31,866	

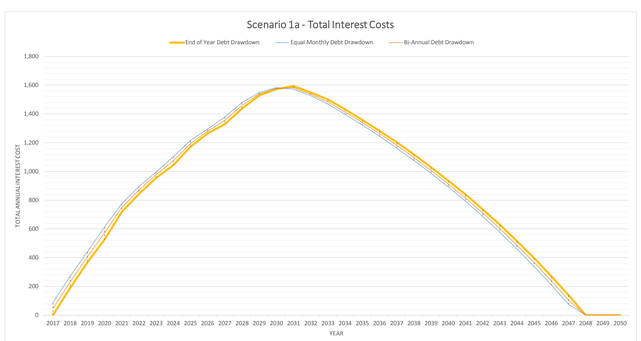
		30%	27%	24%	27%	16%	13%																														
Feb4 1c, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
a	Debt, Beginning of Year	0	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	
c = a*5%	*Interest Cost - Feb4 1c, 30-yr - End of Year Debt Drawdown*	*0*	*188*	*364*	*526*	*719*	*844*	*956*	*1,044*	*1,172*	*1,266*	*1,329*	*1,437*	*1,529*	*1,573*	*1,594*	*1,550*	*1,500*	*1,431*	*1,359*	*1,283*	*1,203*	*1,119*	*1,030*	*937*	*839*	*737*	*629*	*515*	*396*	*270*	*139*	*0*	*0*	*0*	*0*	29,477
b	Additional GA Debt Drawdown, End of Year	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	0	
	Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,641	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663	22,866	23,984	25,015	25,952	26,791	27,528	28,157	28,672	29,068	29,338	29,477				
	Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18,247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828	-1,018	-3,864	-6,710	-9,556	-12,402	-15,248	-18,094	-20,940	-23,786	-26,631	-29,477				
Fiscal Exposure - End of Year Debt Drawdown		3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0	

Feb4 1c, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	
1,583	*Interest Cost - Feb4 1c, 30-yr*	*88*	*270*	*439*	*615*	*777*	*896*	*997*	*1,103*	*1,216*	*1,295*	*1,379*	*1,480*	1,549	*1,583*	*1,573*	*1,527*	*1,468*	*1,398*	*1,324*	*1,246*	*1,164*	*1,077*	*987*	*892*	*792*	*686*	*576*	*460*	*338*	*209*	*74*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0	
	Monthly Drawdown	306	271	233	270	144	112	64	122	55	(2)	65	29	(56)	(97)	(204)	(209)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(0)	-	-	
	FV of Monthly Drawdown at 5%	3,765	3,326	2,861	3,312	1,773	1,371	781	1,493	679	(28)	799	360	(684)	(1,197)	(2,512)	(2,570)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,913)	(2,913)	(2,913)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	88	77	67	77	41	32	18	35	16	(1)	19	8	(16)	(28)	(58)	(60)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	193	373	538	736	864	979	1,069	1,200	1,296	1,361	1,471	1,565	1,610	1,632	1,586	1,536	1,465	1,391	1,313	1,231	1,145	1,055	959	859	754	644	527	405	277	142	0	0	0	
	Total Annual Interest Cost	88	270	439	615	777	896	997	1,103	1,216	1,295	1,379	1,480	1,549	1,583	1,573	1,527	1,468	1,398	1,324	1,246	1,164	1,077	987	892	792	686	576	460	338	209	74	0	0	0	

Feb4 1c, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*47*	*232*	*405*	*574*	*750*	*872*	*978*	*1,076*	*1,195*	*1,282*	*1,356*	*1,460*	*1,540*	*1,578*	*1,583*	*1,537*	*1,483*	*1,413*	*1,340*	*1,263*	*1,182*	*1,097*	*1,007*	*913*	*814*	*710*	*600*	*485*	*365*	*237*	*104*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,725	3,481	3,199	3,809	2,481	2,211	1,741	2,534	1,859	1,254	2,137	1,812	872	409	-871	-973	-1,363	-1,433	-1,506	-1,584	-1,665	-1,750	-1,839	-1,933	-2,032	-2,136	-2,246	-2,360	-2,481	-2,608	-2,742	0	0	0	
	Bi-Annual Drawdown	1,839	1,624	1,397	1,618	866	670	382	729	332	(14)	390	176	(334)	(584)	(1,227)	(1,255)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(0)	-	-	
	FV of Bi-Annual Drawdown at 5%	3,725	3,290	2,830	3,277	1,754	1,356	773	1,477	672	(28)	791	356	(677)	(1,184)	(2,485)	(2,542)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	47	42	36	41	22	17	10	19	8	(0)	10	5	(9)	(15)	(31)	(32)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	191	369	533	728	855	968	1,057	1,187	1,282	1,346	1,456	1,548	1,593	1,614	1,569	1,520	1,450	1,376	1,299	1,218	1,133	1,043	949	850	746	637	522	401	274	140	0	0	0	
	Total Annual Interest Cost	47	232	405	574	750	872	978	1,076	1,195	1,282	1,356	1,460	1,540	1,578	1,583	1,537	1,483	1,413	1,340	1,263	1,182	1,097	1,007	913	814	710	600	485	365	237	104	0	0	0	

Feb4 1c, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*94*	*276*	*445*	*622*	*781*	*900*	*1,000*	*1,108*	*1,219*	*1,298*	*1,383*	*1,483*	*1,551*	*1,583*	*1,572*	*1,525*	*1,466*	*1,395*	*1,321*	*1,243*	*1,161*	*1,074*	*984*	*888*	*788*	*683*	*572*	*456*	*333*	*205*	*69*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,772	3,525	3,239	3,857	2,513	2,239	1,763	2,566	1,882	1,270	2,164	1,835	883	414	-882	-985	-1,381	-1,451	-1,526	-1,604	-1,686	-1,772	-1,863	-1,958	-2,058	-2,163	-2,274	-2,390	-2,513	-2,641	-2,776	0	0	0	





30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

TO BE

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,556	3,123	1,728	1,400	836	1,560	821	167

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

E UPDATED

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

JK: Fixed the formula in the yellow highlighted cells. Pls. check. (SK: looks good to me)

	Tab
v16 GA Financing - Scenario 1a 1b v18 (with fiscal) - Feb 4_v2.xlsx	Powerpoint_Export Scenario tabs

Change Description

Added in trigger for later start in the year
Updated IESO forecast from Energy (IESO GA Cost Forecast 170207 (Feb 6 update).xlsx)

Equal Monthly Debt Drawdown

		Month	Months Remai
Scenario Start Date	**July**	7	6

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	3,180	2,888
Annual Exposure2 with start on July 1st	*1,590*	*2,888*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	795	3,107
Start: July 1st	-	*2,312*

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	851	3,335
Start: July 1st	-	*2,484*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	1,168	1,765
Annual Exposure2 with start on July 1st	*584*	*1,765*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	292	1,609
Start: July 1st	-	*1,025*

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,449	2,040
Annual Exposure2 with start on July 1st	*725*	*2,040*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,597
Start: July 1st	-	*1,959*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335
Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3575**
Total, B	362	1837
Proposed Program Total:	362 - 851	1,837 - 3,575

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,556	3,123	1,728	1,400
2,556	*3,123*	*1,728*	*1,400*

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646
2,805	*2,697*	*2,774*	*1,646*

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

ıking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
2,311	3,750	2,311	1,933
2,311	*3,750*	*2,311*	*1,933*

2018-19	2019-20	2020-21	2021-2022

1,901	2,671	3,391	2,217
1,901	*2,671*	*3,391*	*2,217*

2019	2020	2021	2022
2,581	4,016	2,598	2,241
2,581	*4,016*	*2,598*	*2,241*

2018-19	2019-20	2020-21	2021-2022
2,175	2,940	3,662	2,508
2,175	*2,940*	*3,662*	*2,508*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

/1

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052
2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

Equal Monthly Debt Drawdown

		Month	Months Remaining
Scenario Start Date	July	7	6

AS LONG AS >

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	3,180	2,888	2,556

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	795	3,107	2,805
Fiscal Exposure, 25%	199	777	701

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Annual Exposure[2]	3,404	3,128	2,812

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	851	3,335	3,049
Fiscal Exposure, 25%	213	834	762

Indicates year in which, similar to OPCD's exa
closest to 30%. As Fiscal 2016/17 is a partial y
month the GA deferral begins.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu
decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions	9%	14%	18%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	1,168	1,765	2,311

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	292	1,609	1,901
Fiscal Exposure, 25%	73	402	475

Scenario 1b - 30-yr amortization	2017	2018	2019
Annual Exposure[2]	1,449	2,040	2,581

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	362	1,597	2,175
Fiscal Exposure, 25%	91	399	544

Indicates year in which, similar to OPCD's exar closest to 30%.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 ar
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu on accounting treatment.

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]
Debt-Finance Global Adjustment Costs, Option 1a	213	834	762
Debt-Finance Global Adjustment Costs, Option 1b	91	399	544
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**213**	**1074**	**1065**
Total, B	91	639	847

Proposed Program Total:	91 - 213	639 - 1,074	847 - 1,065

($M)	2016-171	2017-181	2018-191
Debt-Finance Global Adjustment Costs, Option 1a	851	3335	3049
Debt-Finance Global Adjustment Costs, Option 1b	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**851**	**3575**	**3352**
Total, B	362	1837	2478

Proposed Program Total:	362 - 851	1,837 - 3,575	2,478 - 3,352

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6

7	July	7	
8	August	8	
9	September	9	
10	October	10	
11	November	11	
12	December	12	

30-year term	**2016-17**	**2017-18**	**2018-19**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335	2,175 - 3,049

ROWS HIDDEN

1	1 = Comparision Enabled

APRIL 1, 2017 25%

2020	2021	2022
3,123	1,728	1,400

2019-20	2020-21	2021-2022
2,697	2,774	1,646
674	693	412

2020	2021	2022
3,396	2,020	1,712

2019-20	2020-21	2021-2022
2,958	3,052	1,943
740	763	486

mple, the true cost of GA being deferred is
ear, exposure may be less subject to which

l $17-21 billion (at 3.5% interest rate), peaking in 2028.
$33-$36 million.

ıals per month based on month of the year. Actuals may also depend on

28%	17%	13%
2020	2021	2022
3,750	2,311	1,933

2019-20	2020-21	2021-2022
2,671	3,391	2,217
668	848	554

2020	2021	2022
4,016	2,598	2,241

2019-20	2020-21	2021-2022
2,940	3,662	2,508
735	915	627

mple, the true cost of GA being deferred is

ıd $17-21 billion (at 3.5% interest rate), peaking in 2028.
$118-$134 million.

ıals per month based on month of the year. Actuals may also depend on decision

2019-20[1]	2020-21[1]
740	763
735	915
279	323
60	60
18	18
1097	**1164**
1092	1316

1,092 - 1,097 1,316 - 1,164

2019-201	2020-211
2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453





2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964
Equal Monthly Debt Drawdown	3,180	952

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

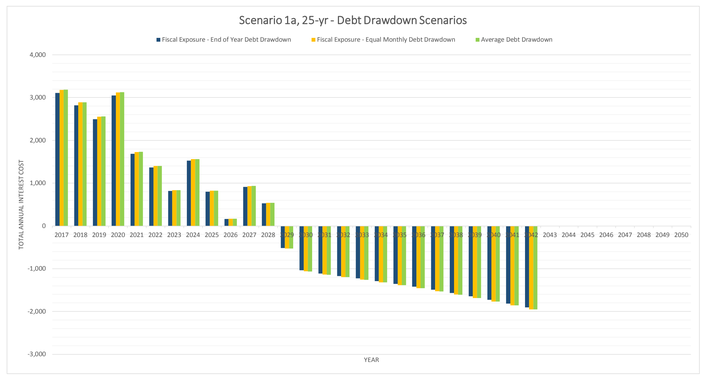
		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

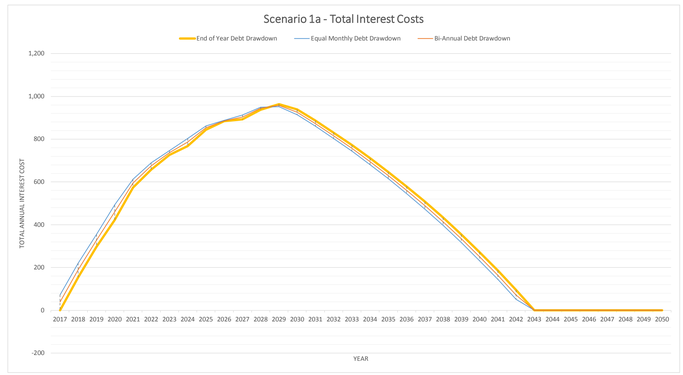
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	3,665	968	
Equal Monthly Debt Drawdown	3,750	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

		9%	14%	18%	28%	17%	13%																													
Scenario 1b, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

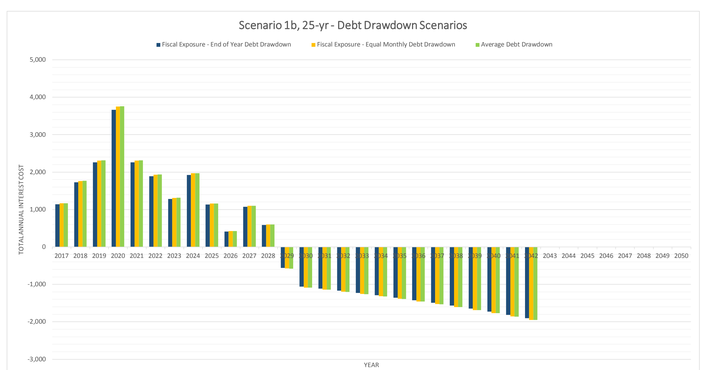
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	*954*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

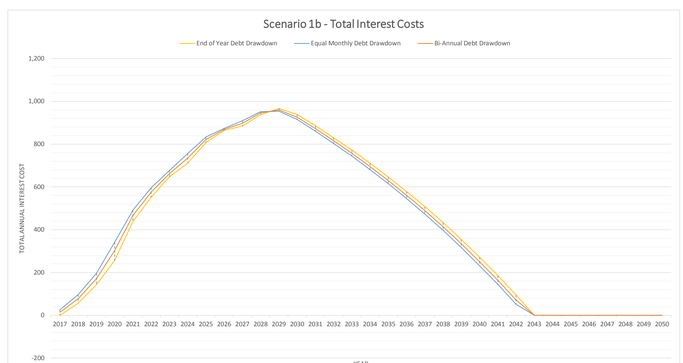
	Monthly Drawdown	95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

		28%	24%	21%	24%	12%	9%																													
Scenario 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1a, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	*1,156*	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

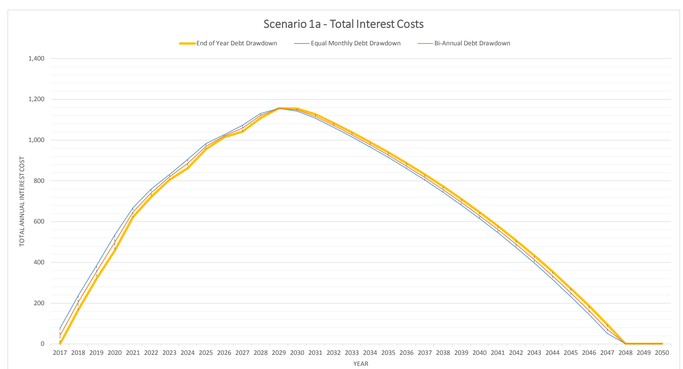
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

		12%	16%	20%	30%	19%	15%																													
Scenario 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

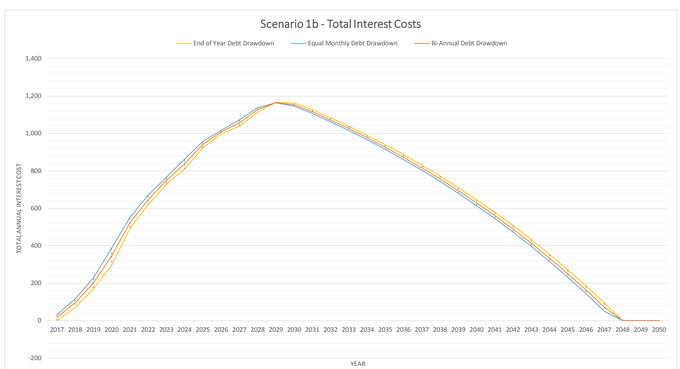
	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

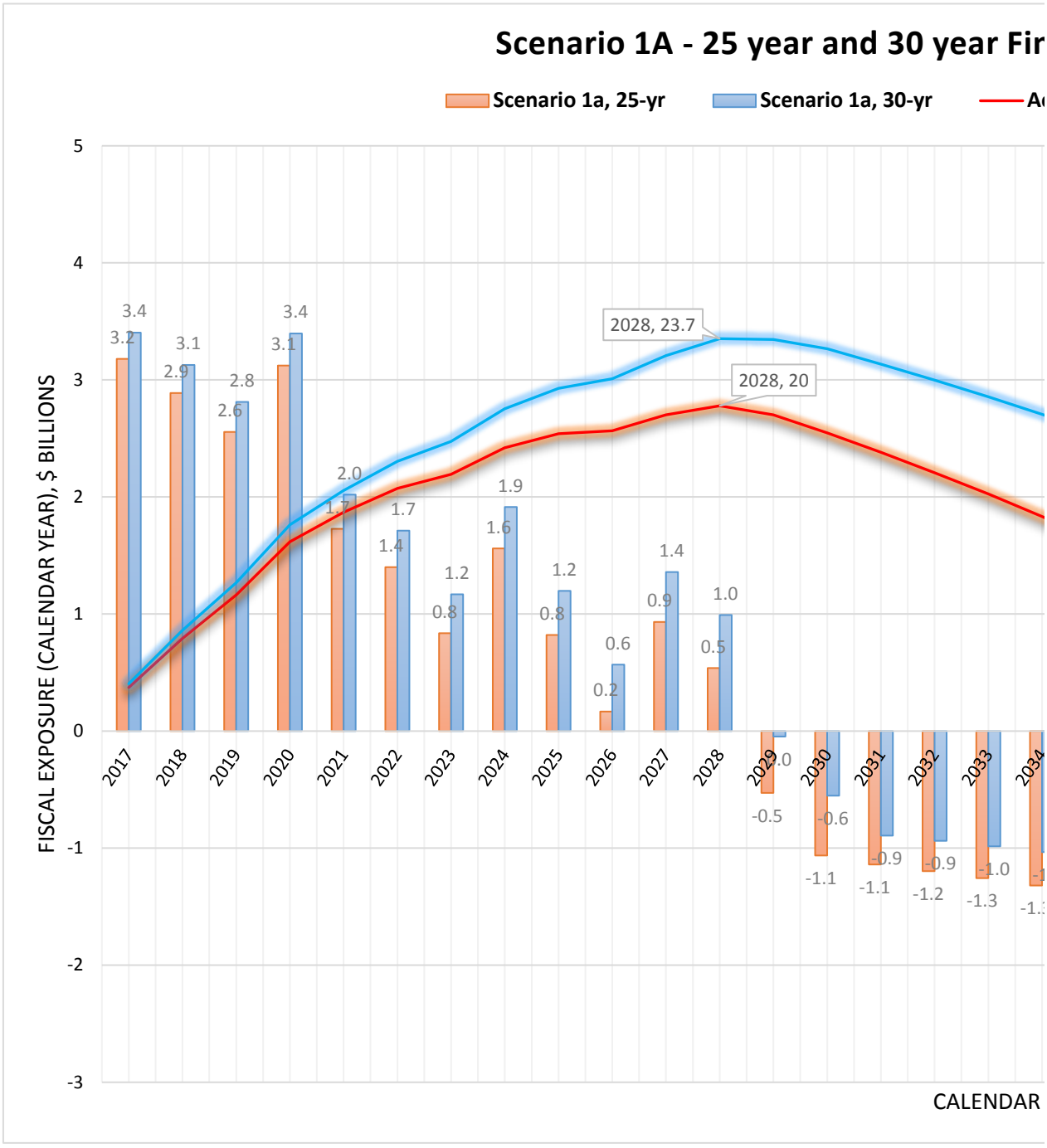
	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

Scenario 1b, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

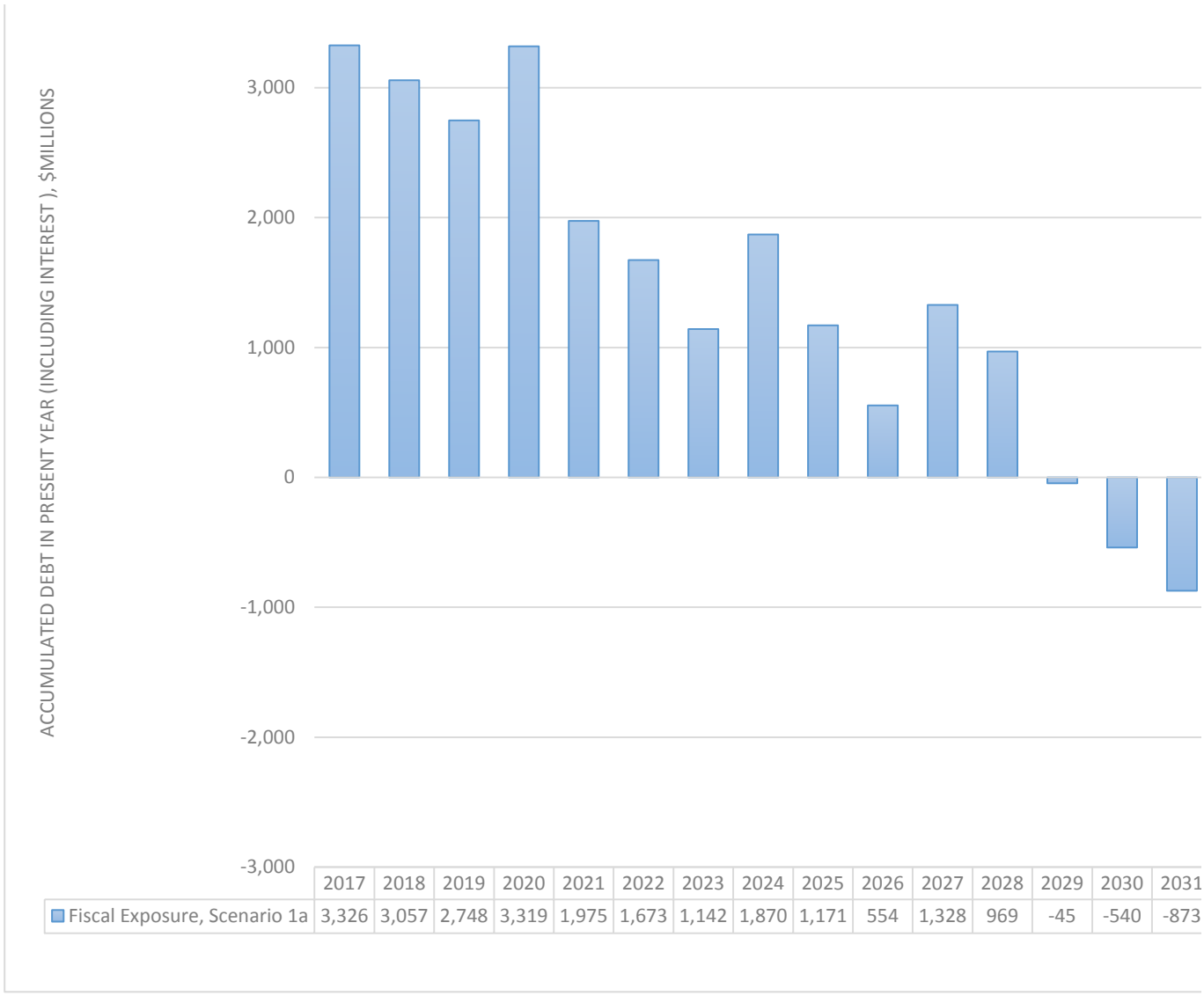




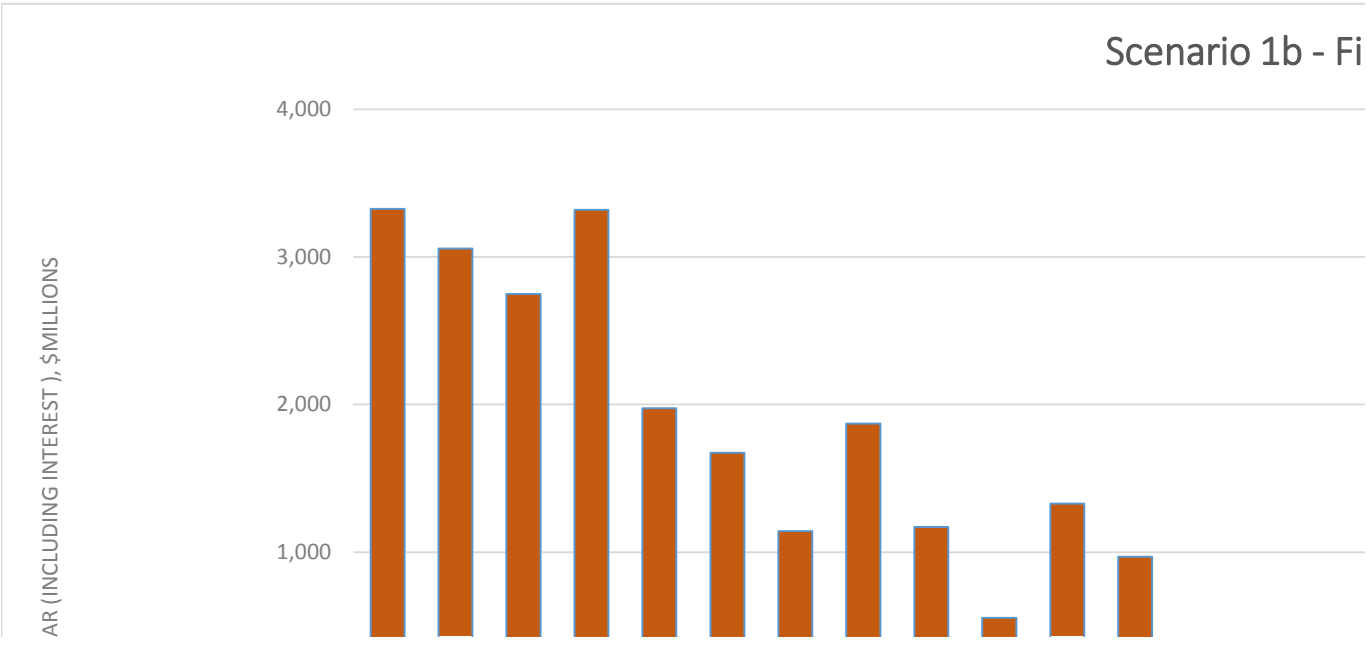
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

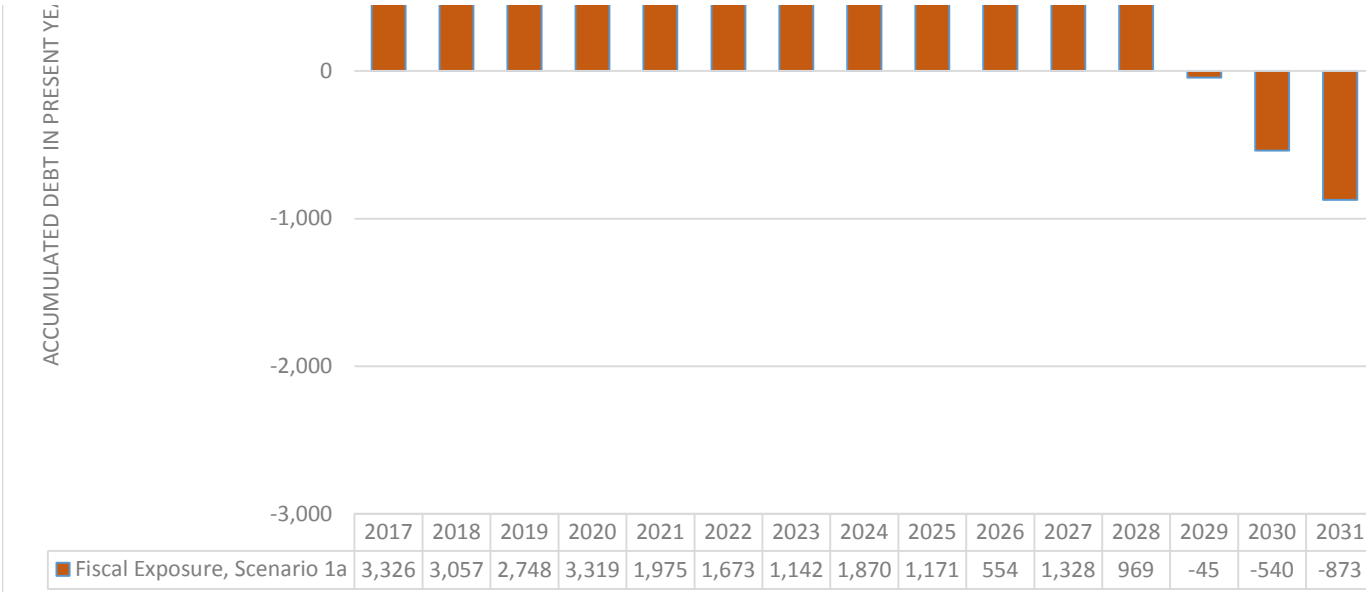




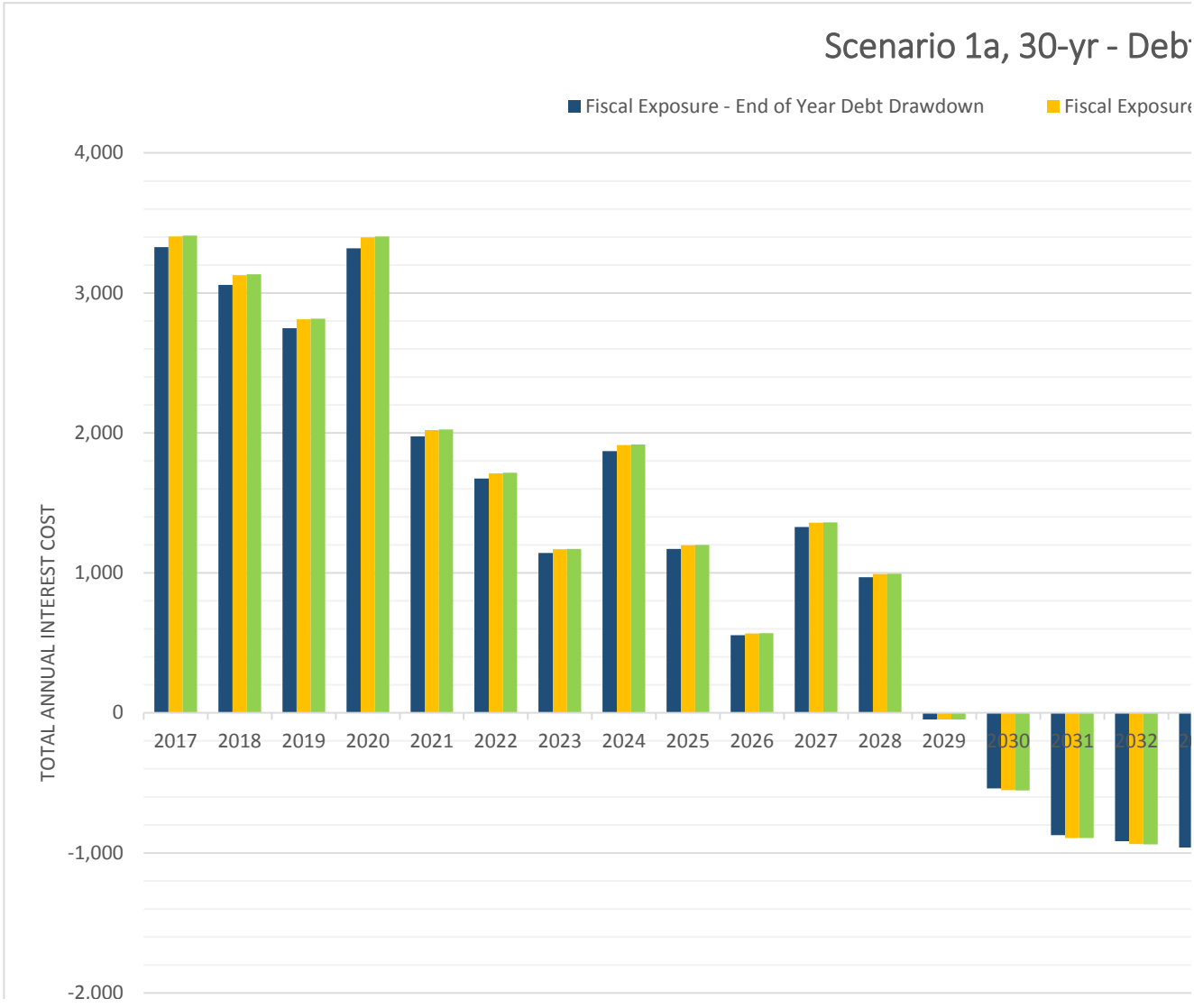


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



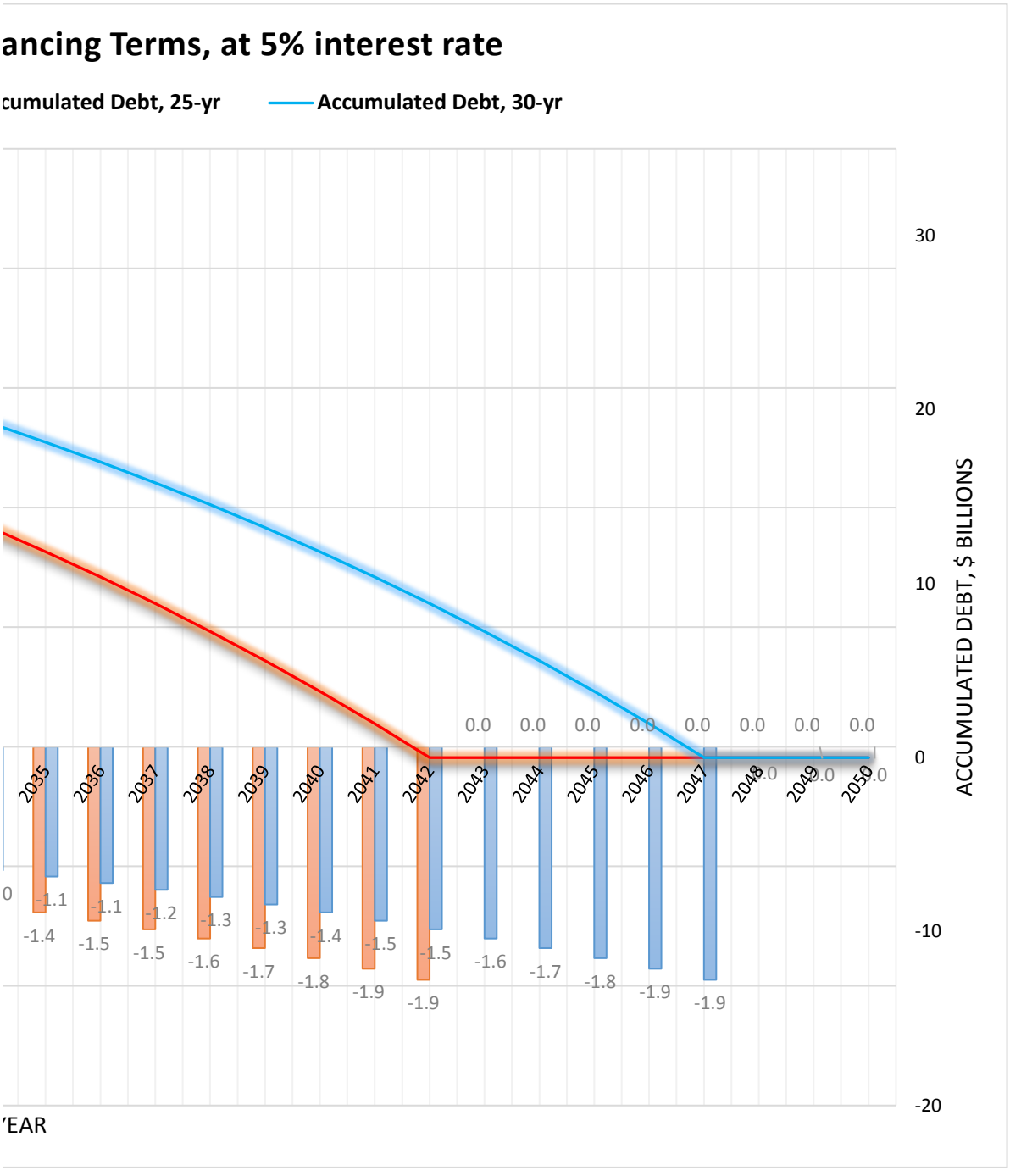


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



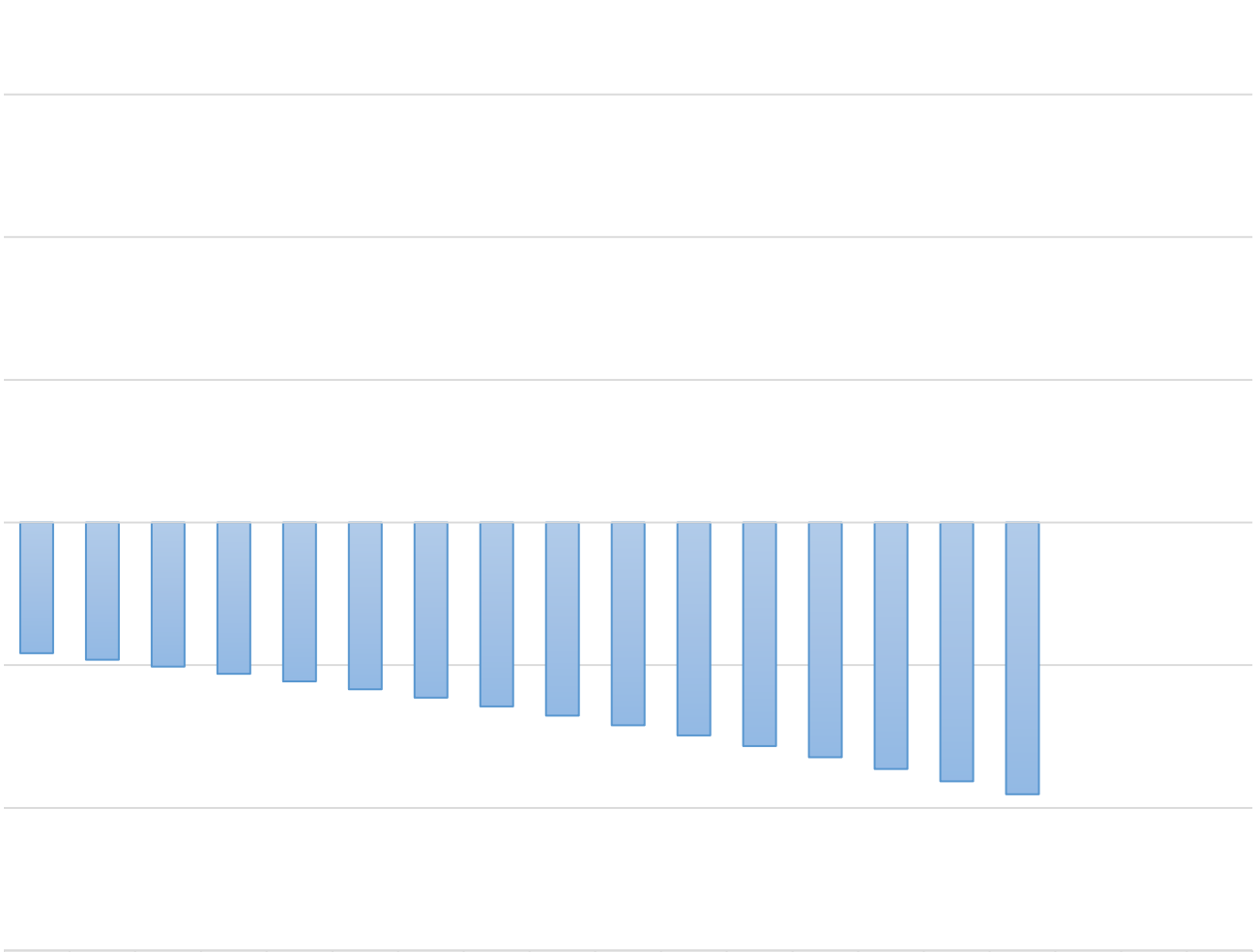

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

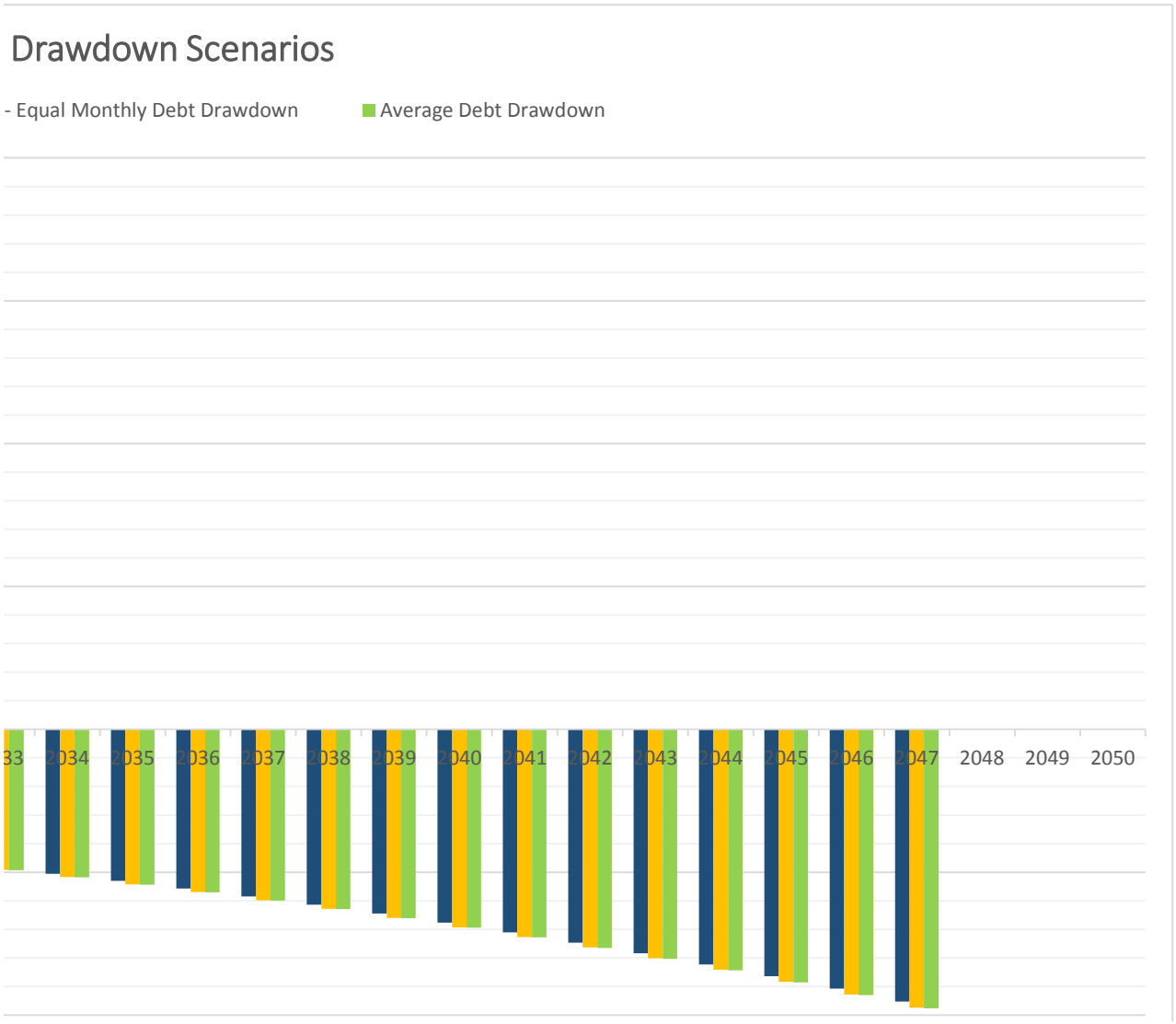
YEAR

cal Exposure



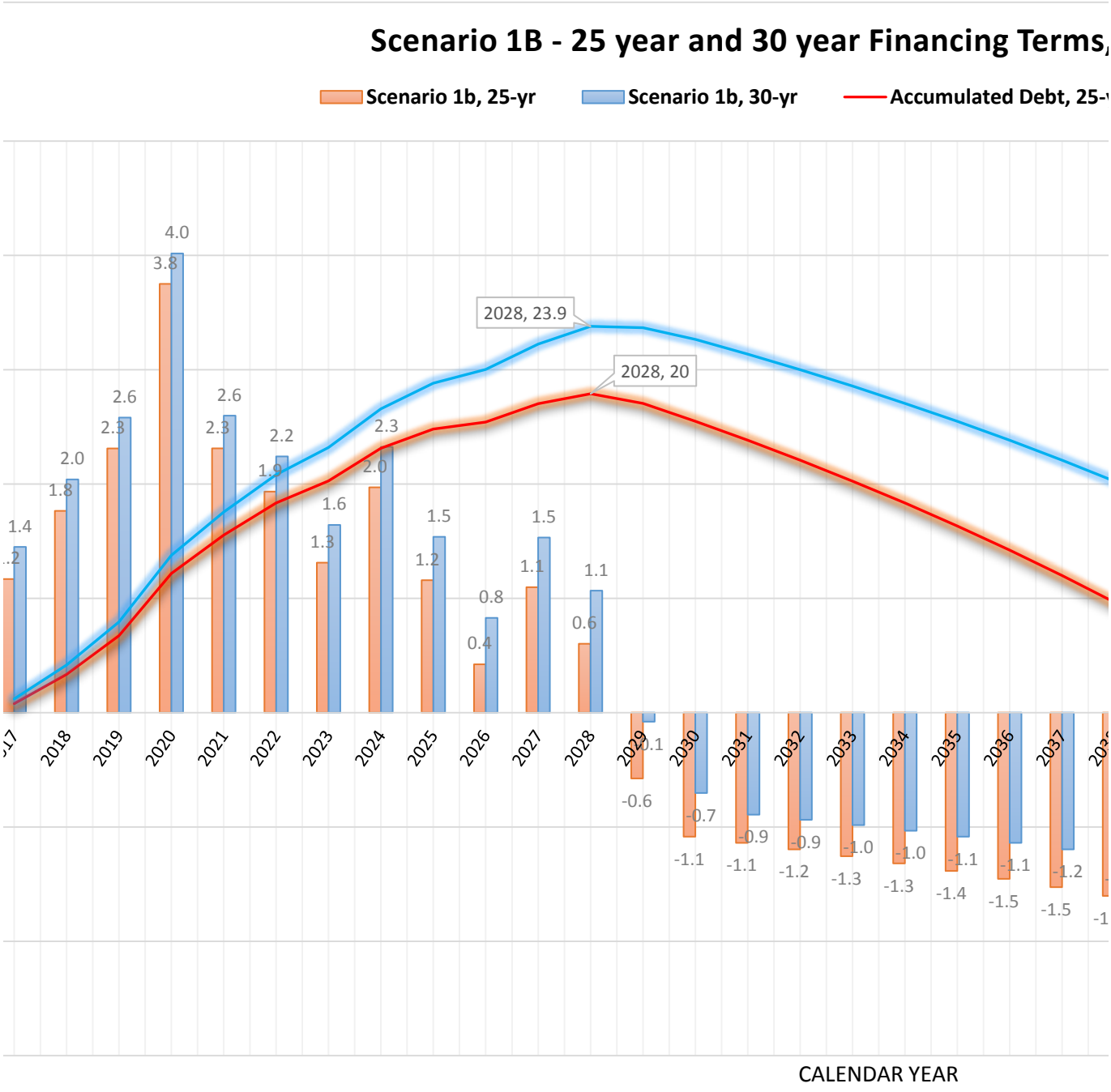
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

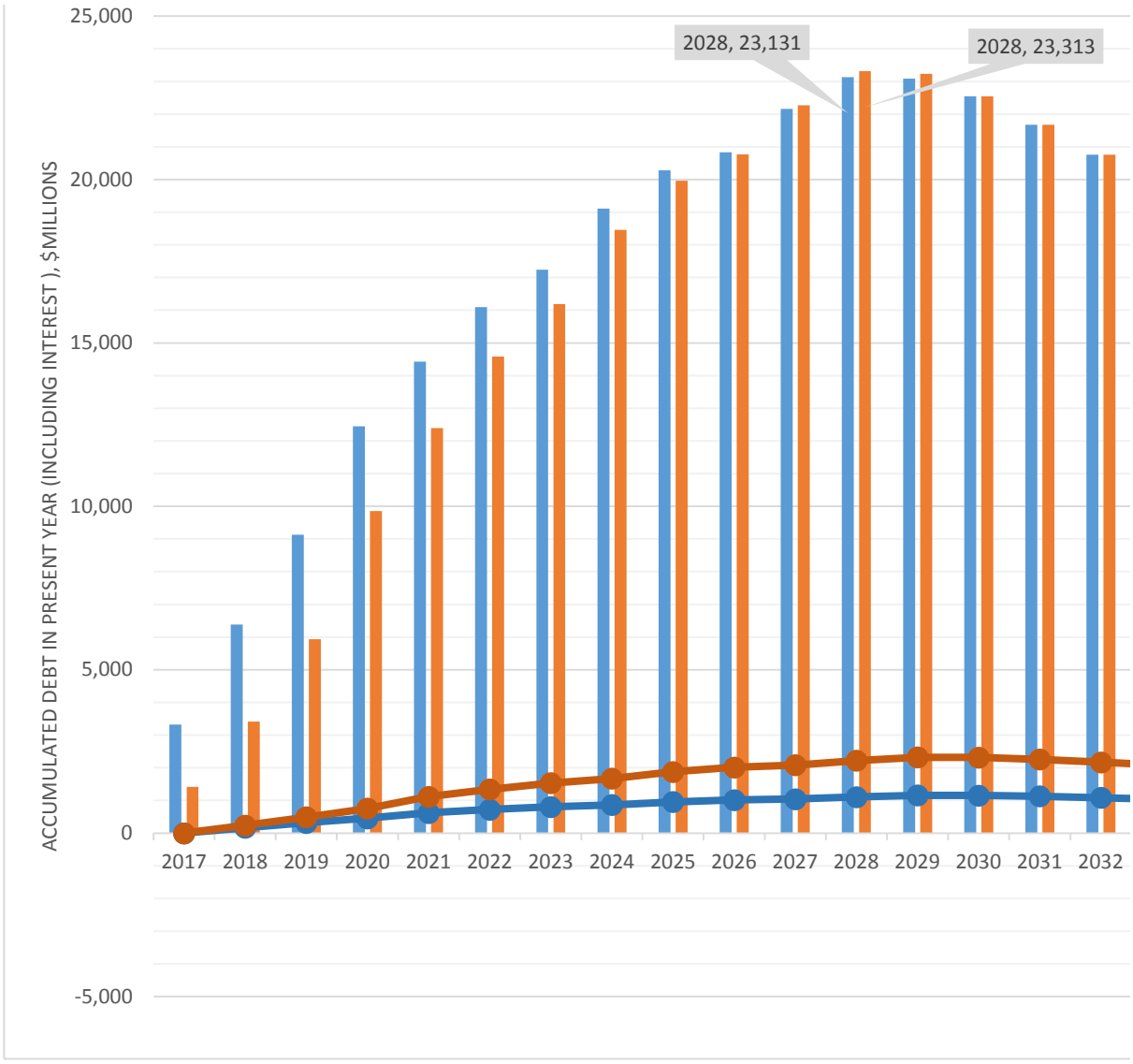


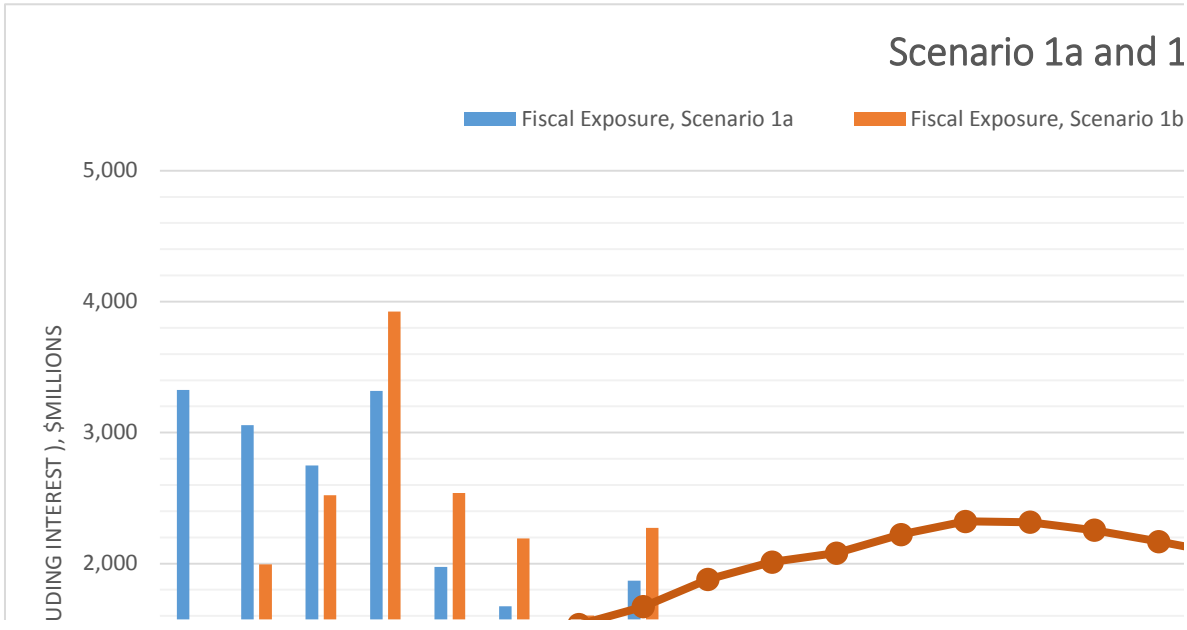
YEAR

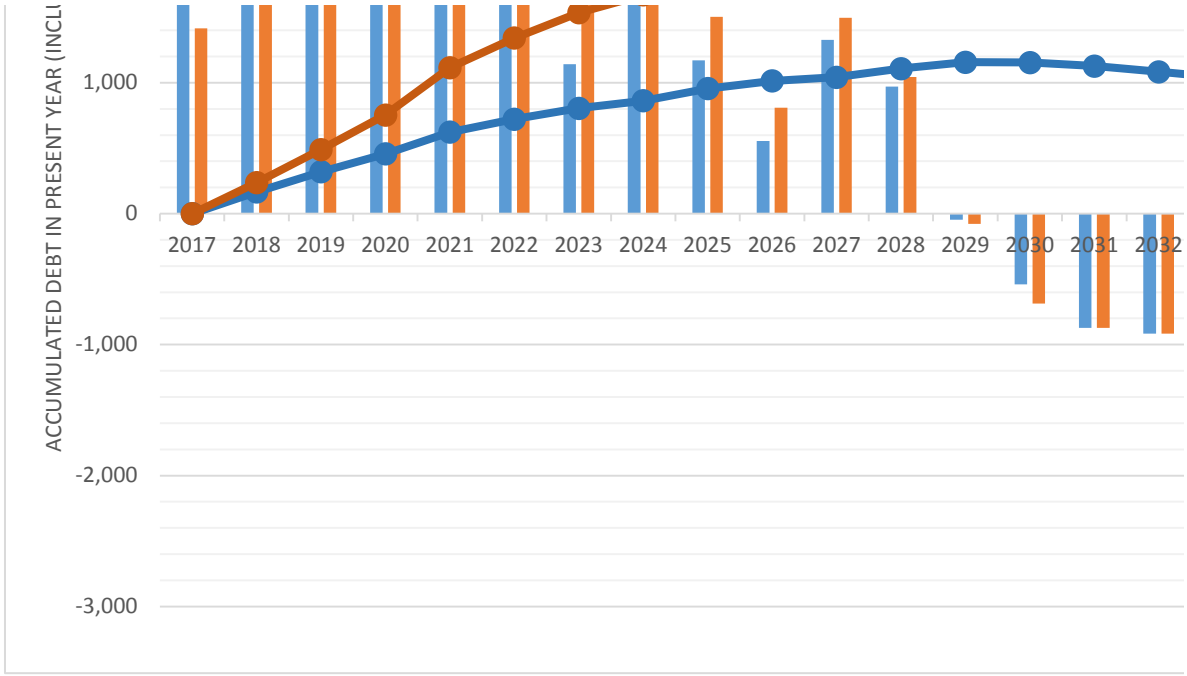
3 - 25 year and 30 year Financing Terms, at 5% interest rate

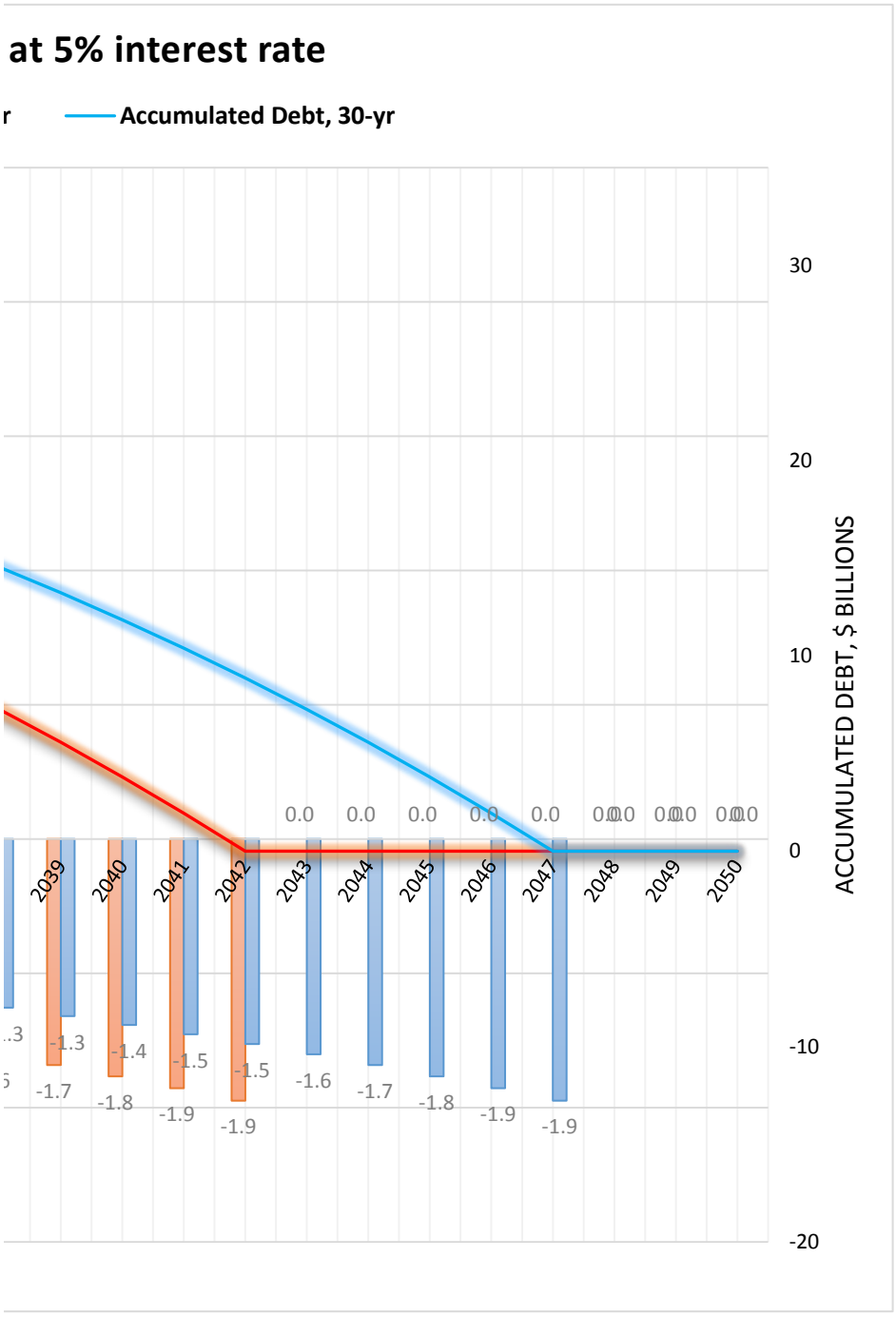





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

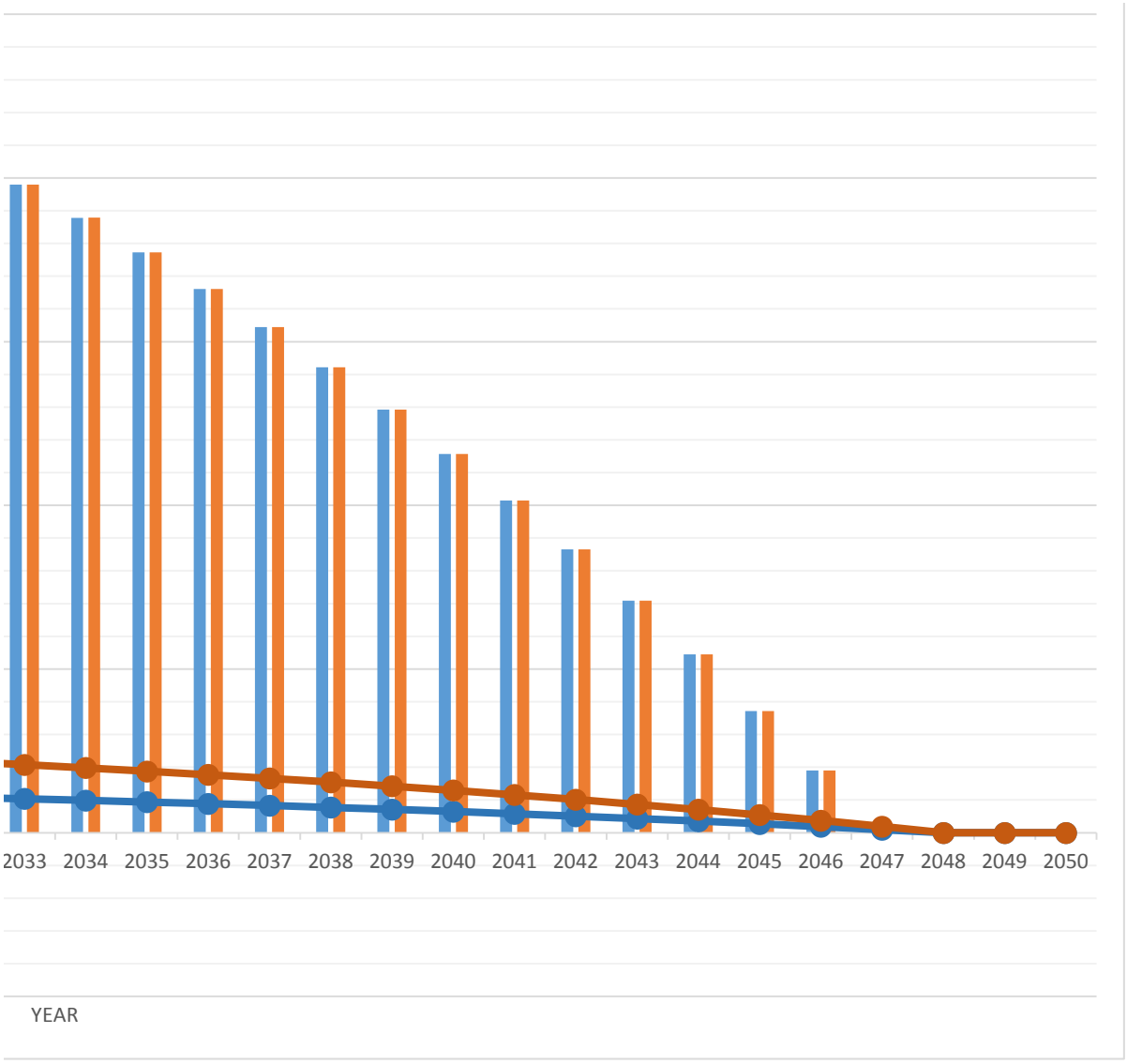

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

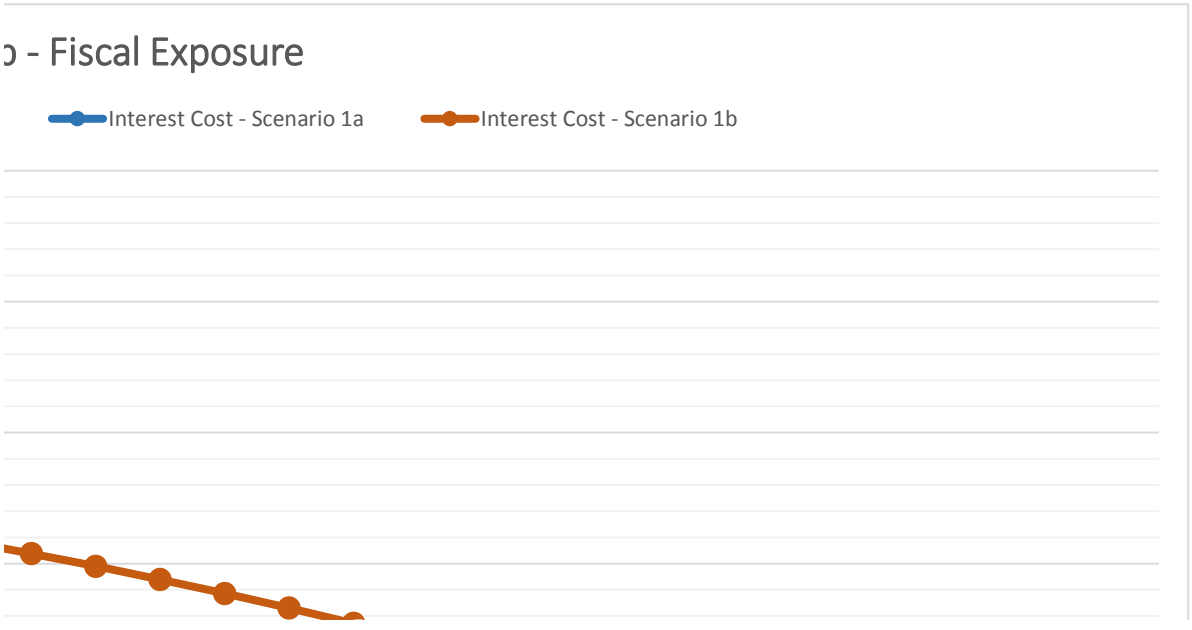

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

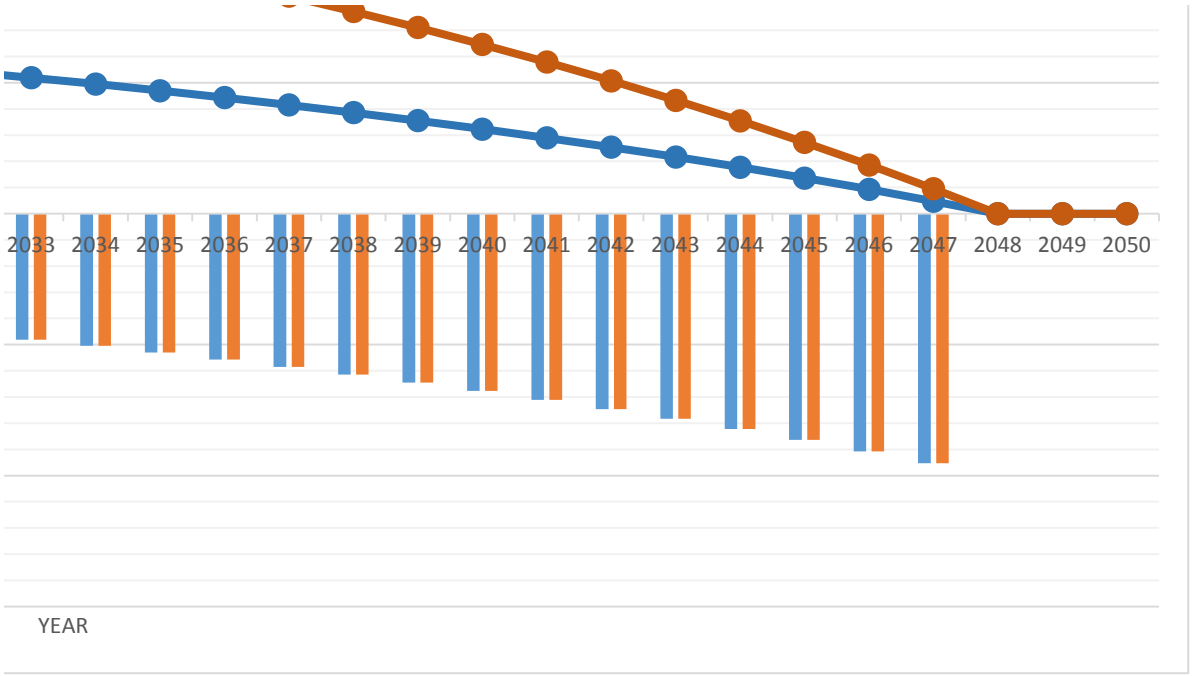


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

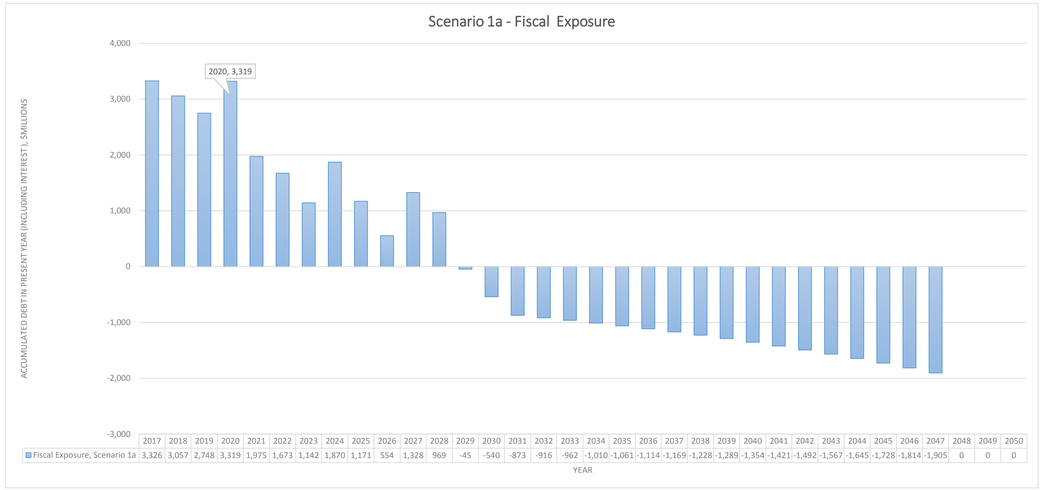
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

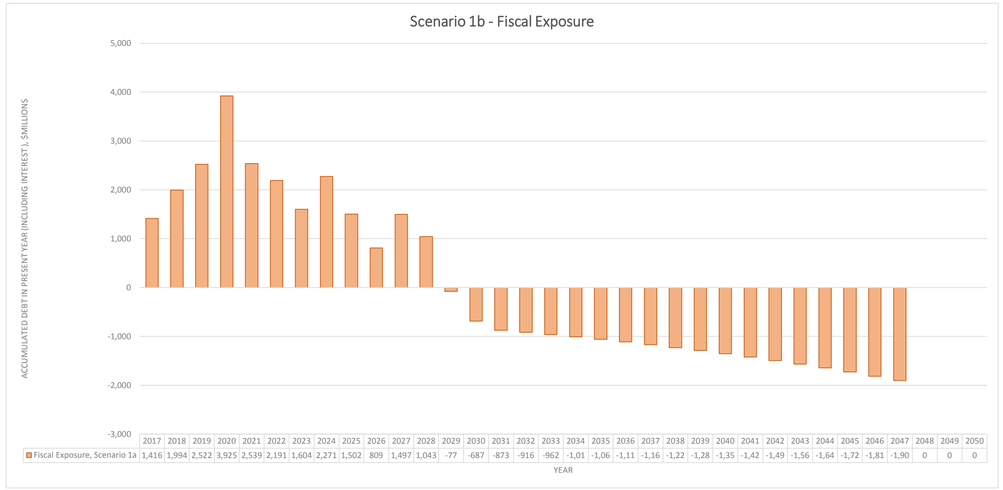
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

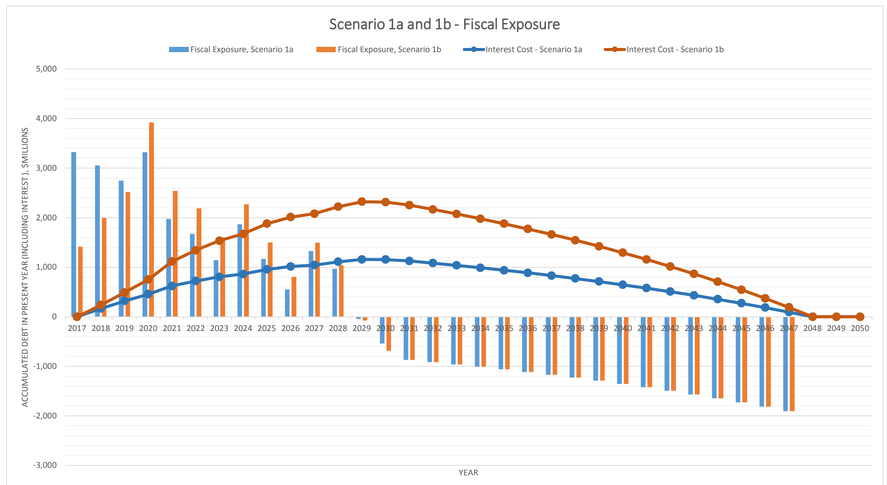
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

Notes:	Accounting treatment is to be determined.

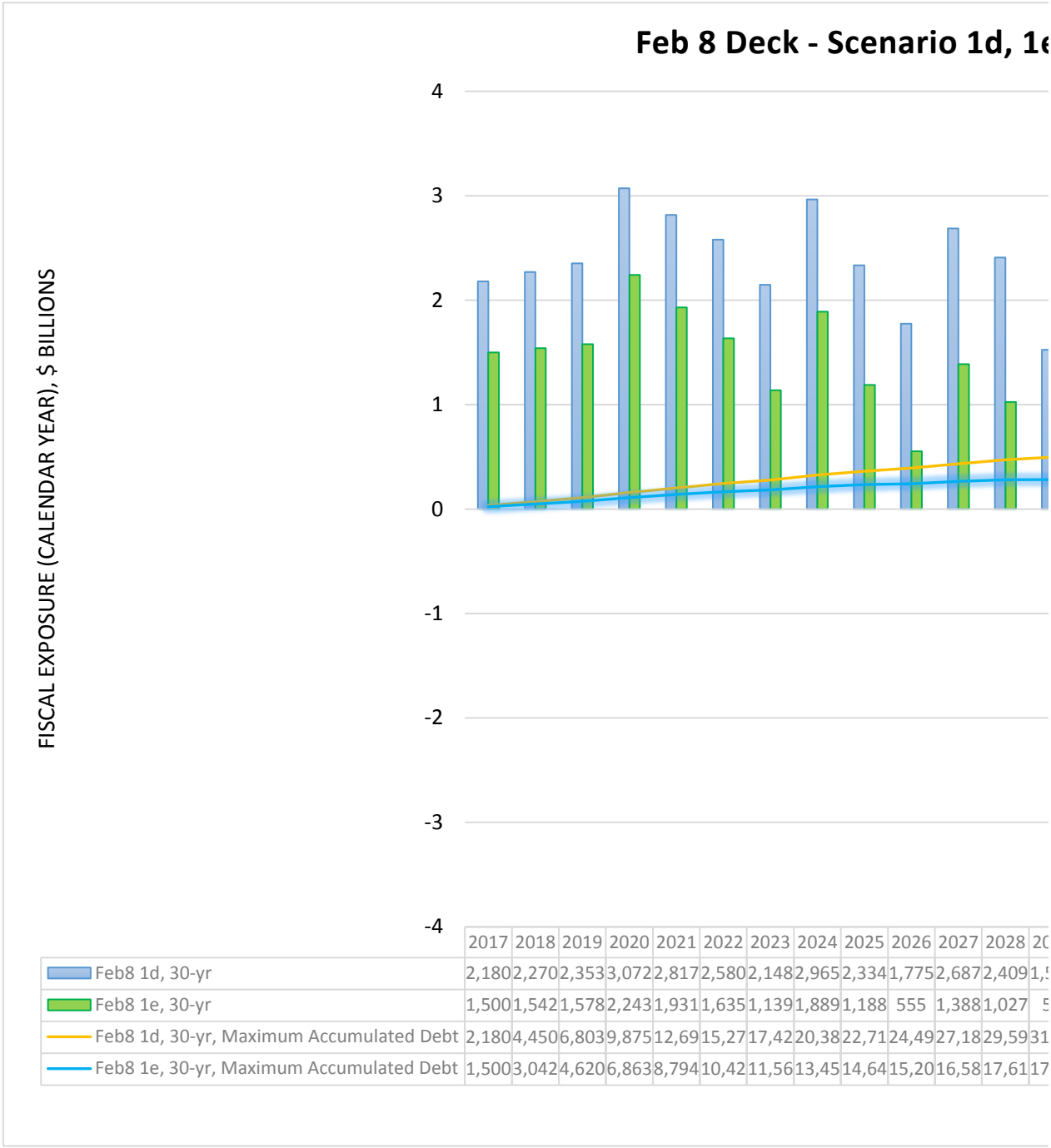

Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0


Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0

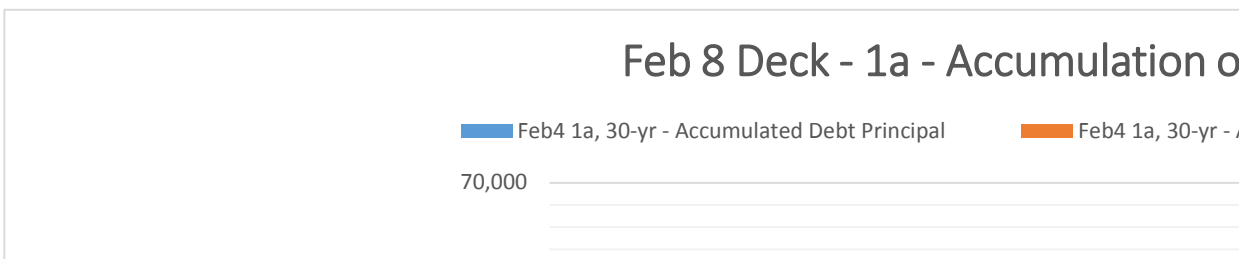

Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

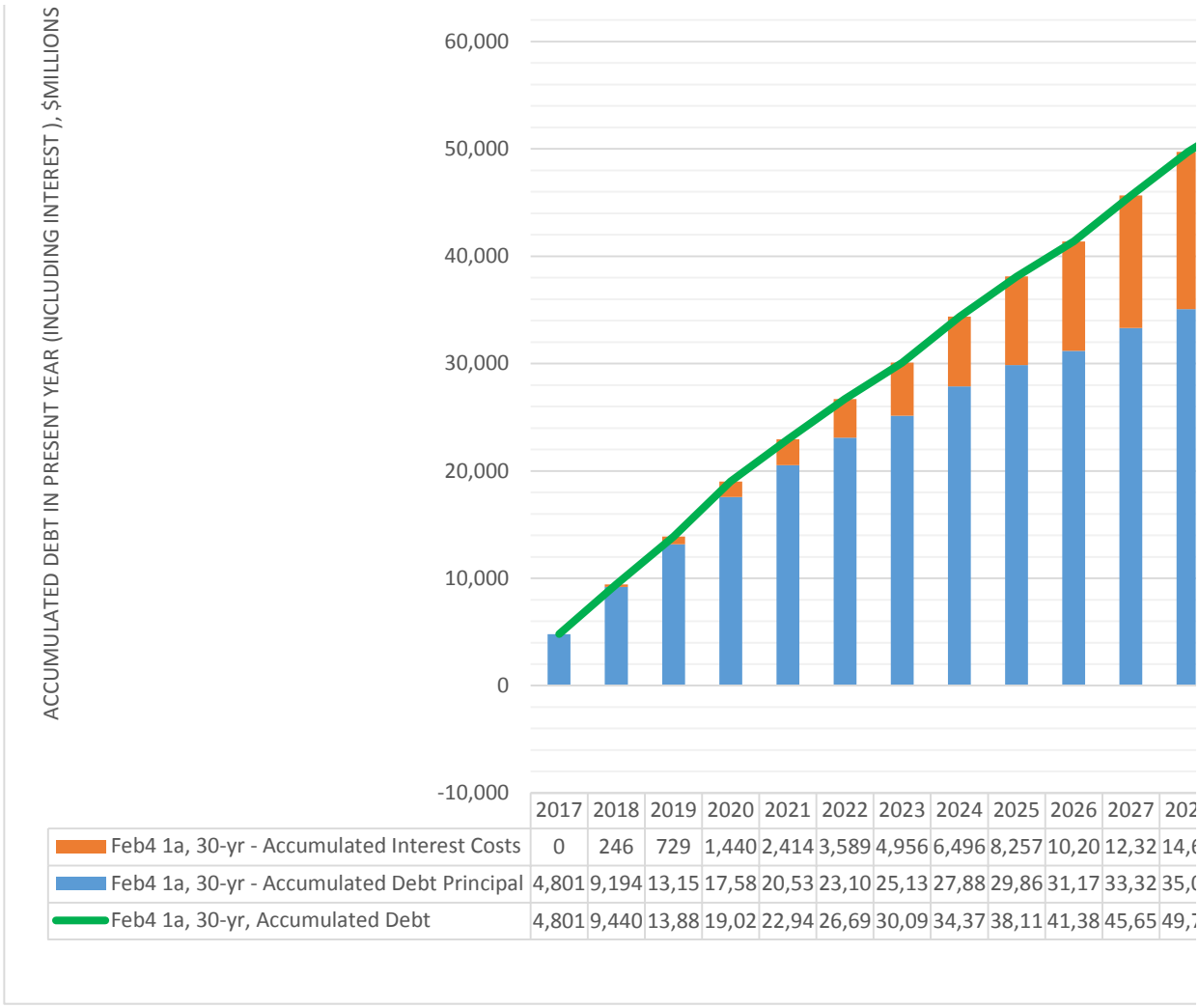
Feb 8 Deck

Feb 8 Deck - Scenario 1d, 1e - at 5.12% interest rate

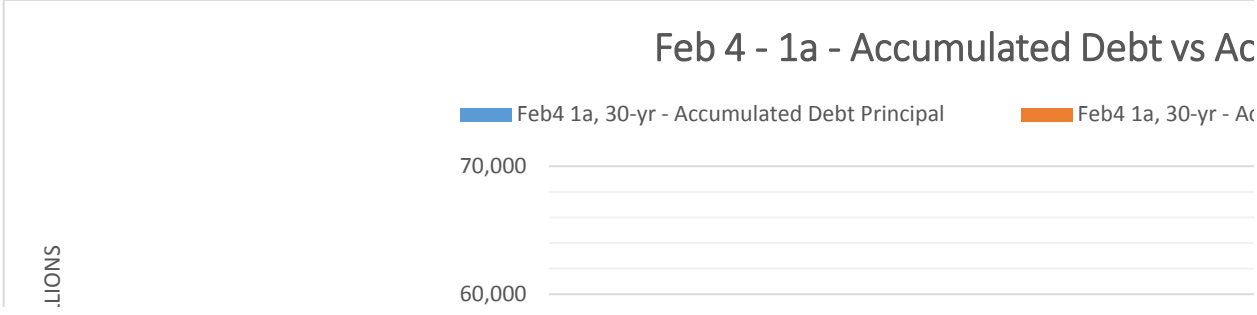


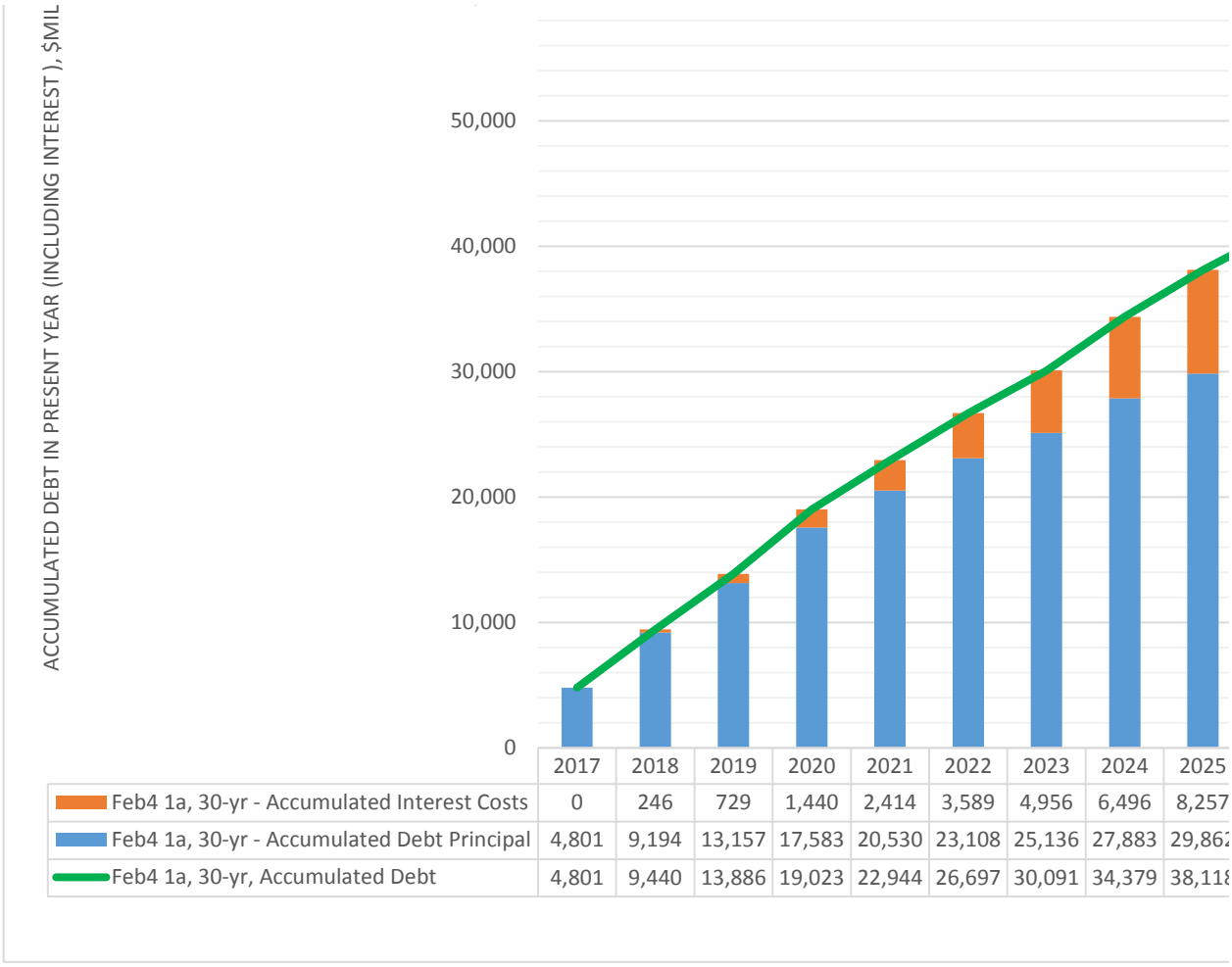
Feb 8 Deck - 1a - Accumulation of Debt (Principal and Interest)



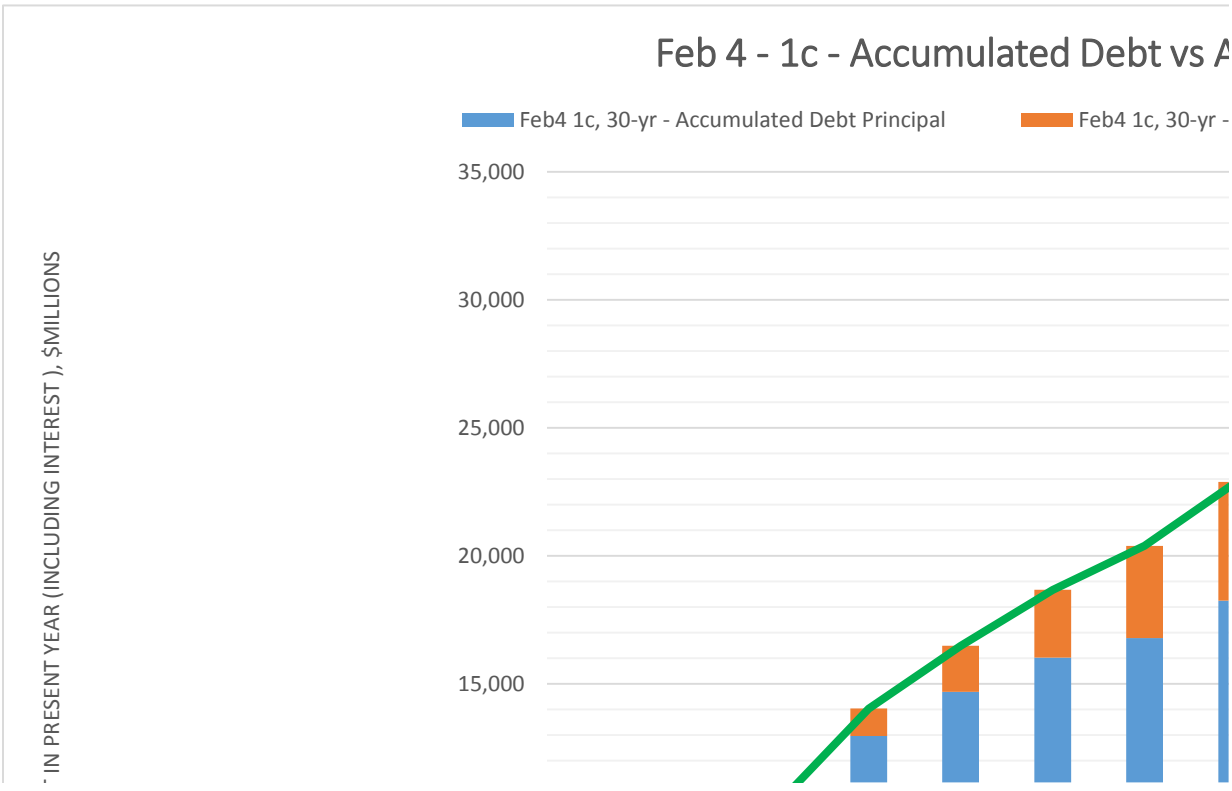


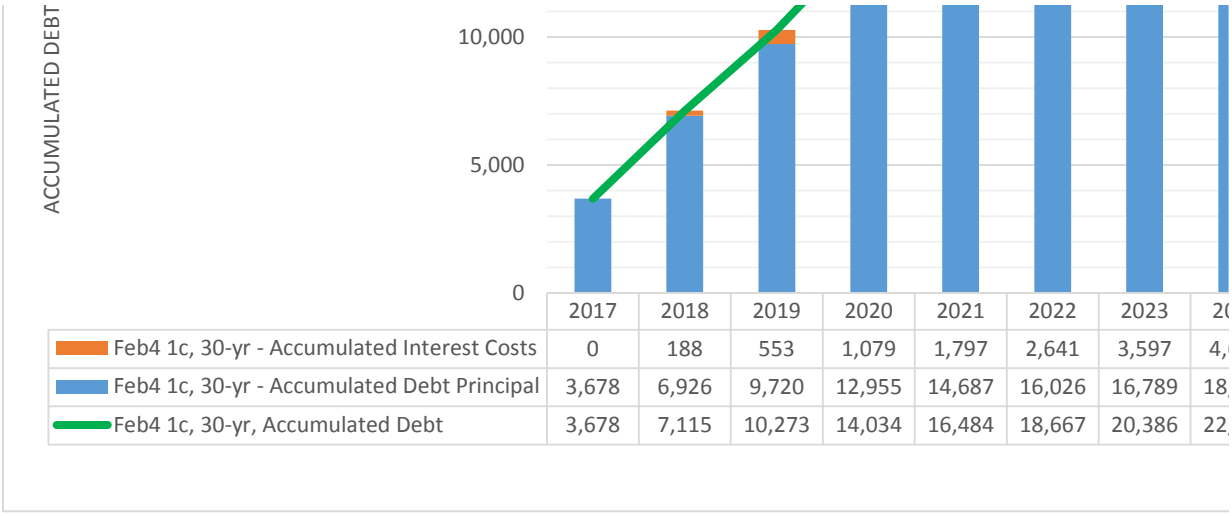
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	202
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,(
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,7



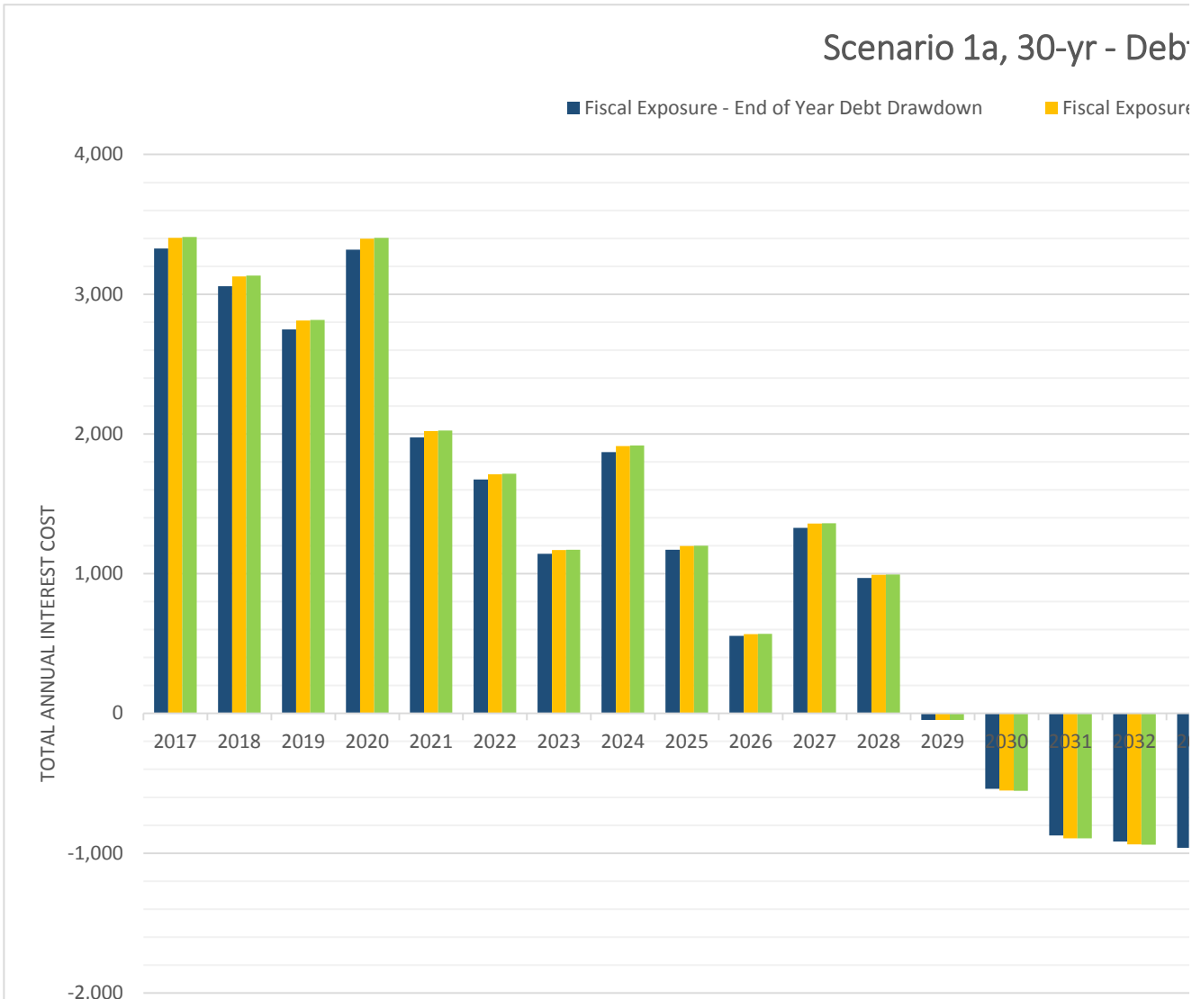


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



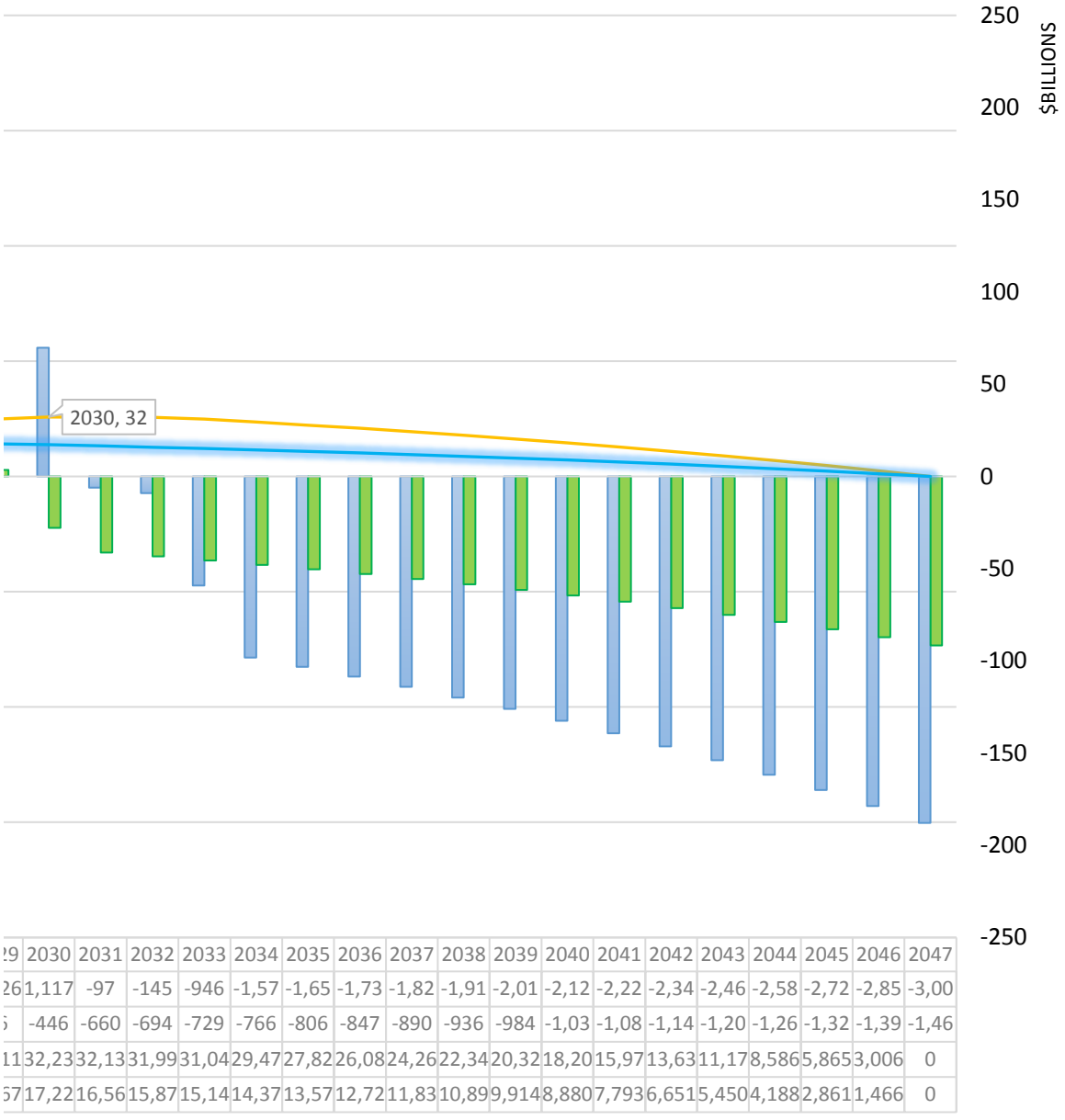


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22




-3,000

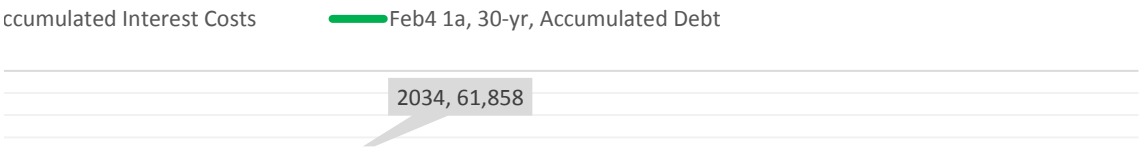
- at 5.12% interest rate

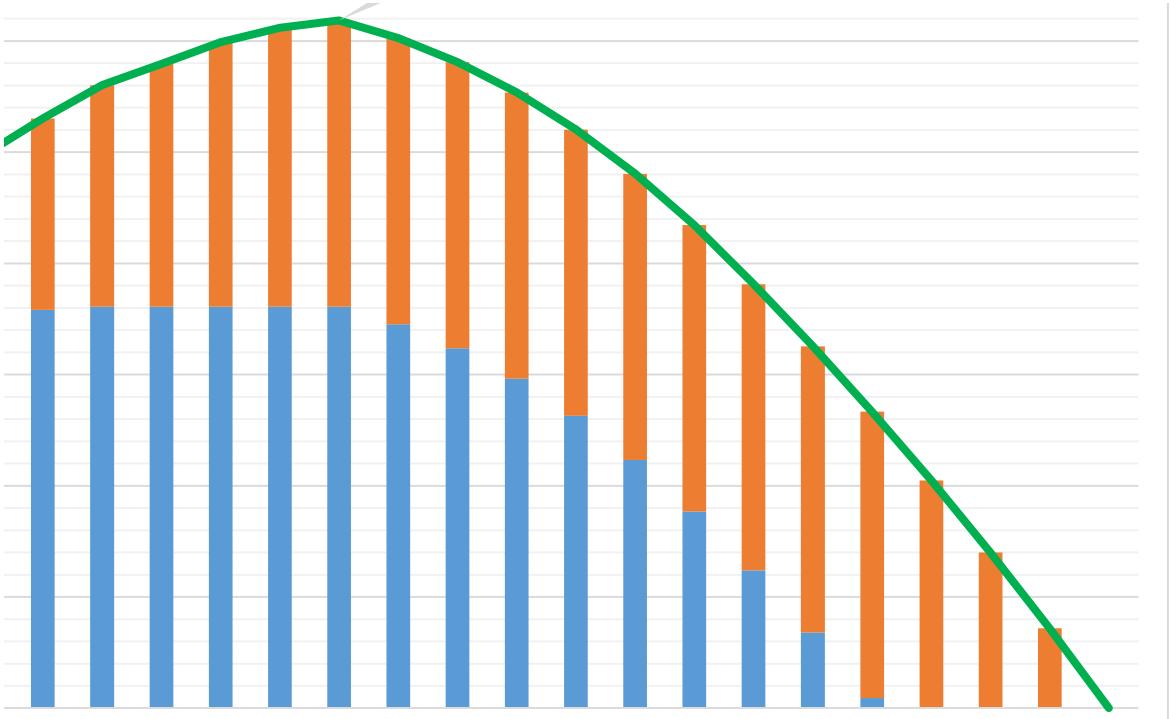


29	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
26	1,117	-97	-145	-946	-1,57	-1,65	-1,73	-1,82	-1,91	-2,01	-2,12	-2,22	-2,34	-2,46	-2,58	-2,72	-2,85	-3,00
5	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,03	-1,08	-1,14	-1,20	-1,26	-1,32	-1,39	-1,46
11	32,23	32,13	31,99	31,04	29,47	27,82	26,08	24,26	22,34	20,32	18,20	15,97	13,63	11,17	8,586	5,865	3,006	0
57	17,22	16,56	15,87	15,14	14,37	13,57	12,72	11,83	10,89	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0

CALENDAR YEAR

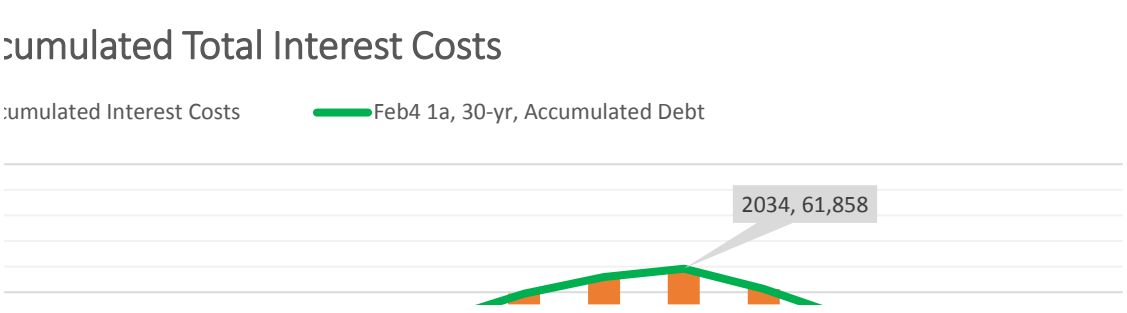
Debt (Principal and Interest)



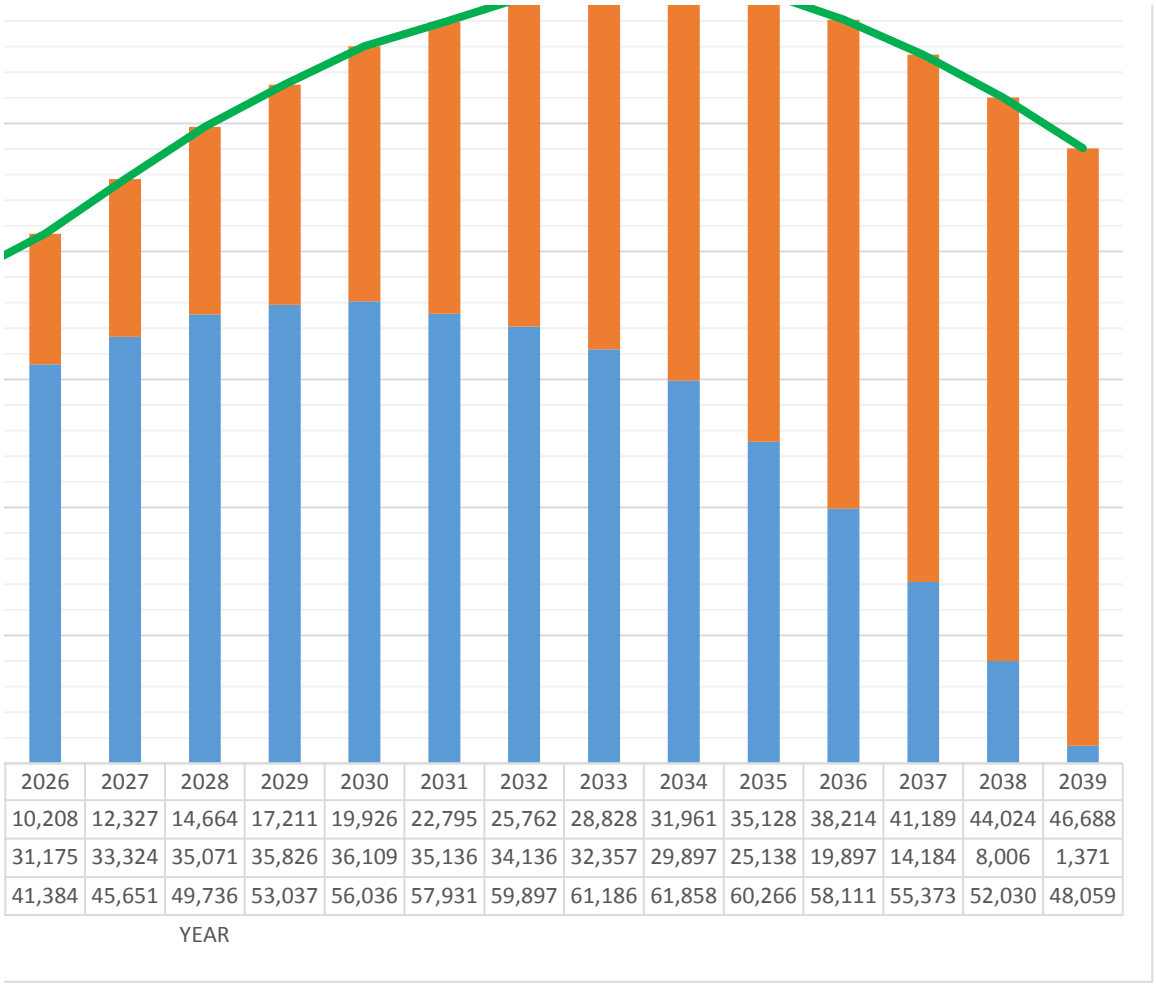


	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
5	17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
7	35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
3	53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



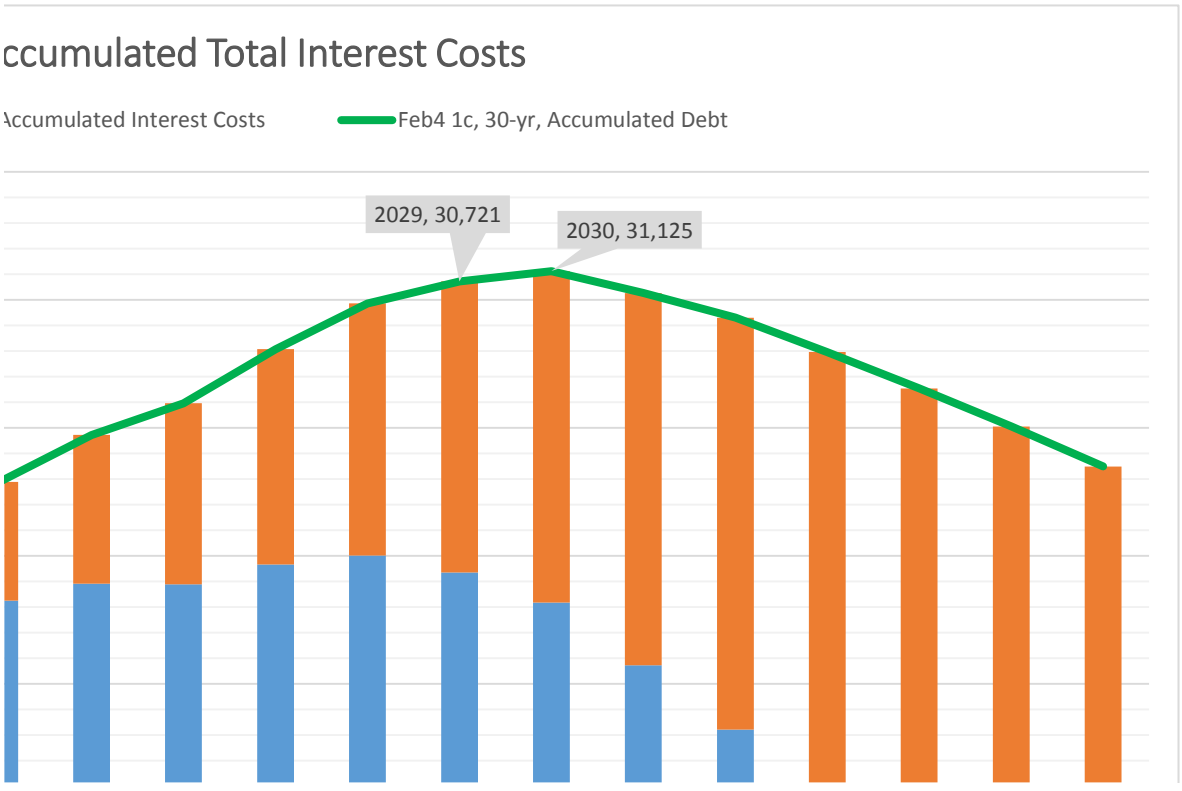
LIONS

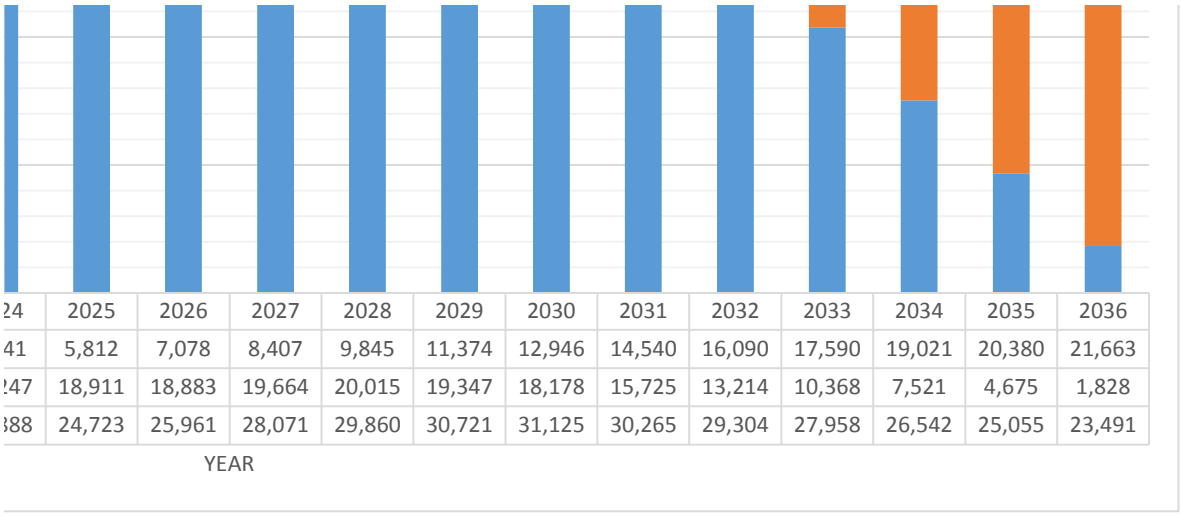


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

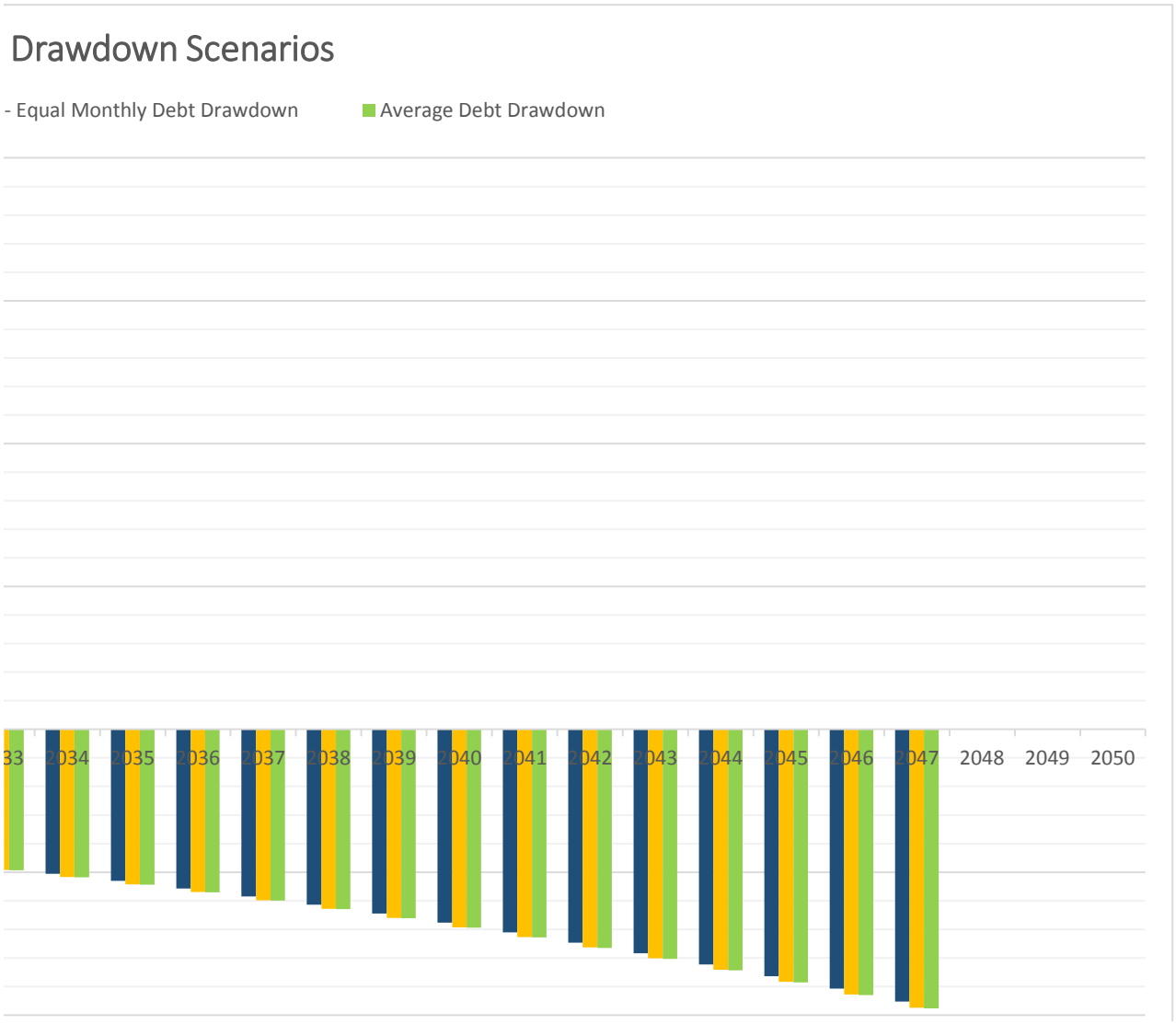
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





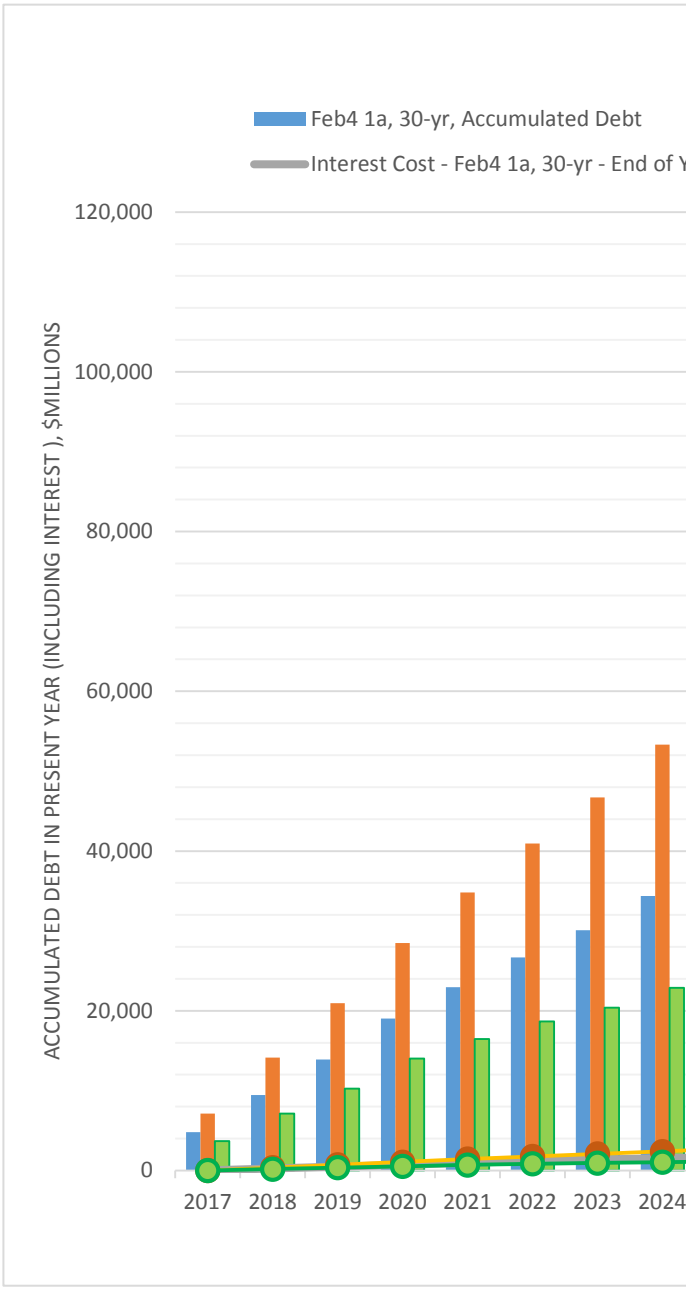
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

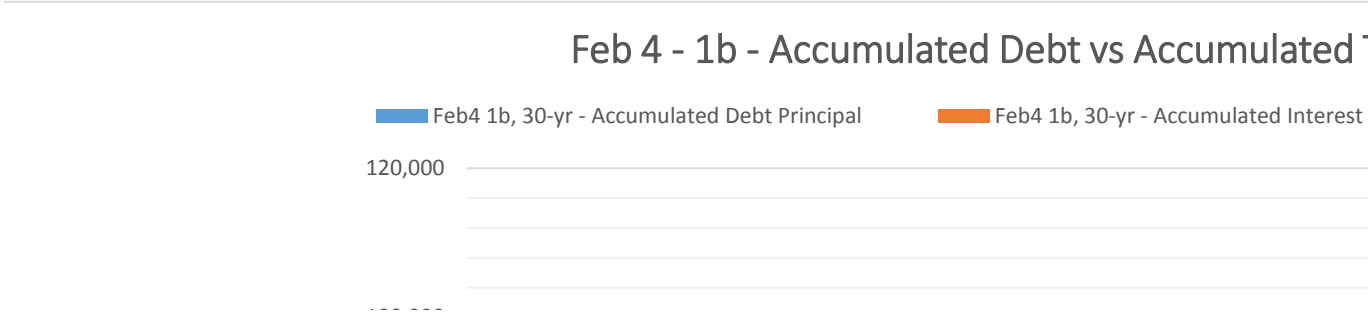
YEAR

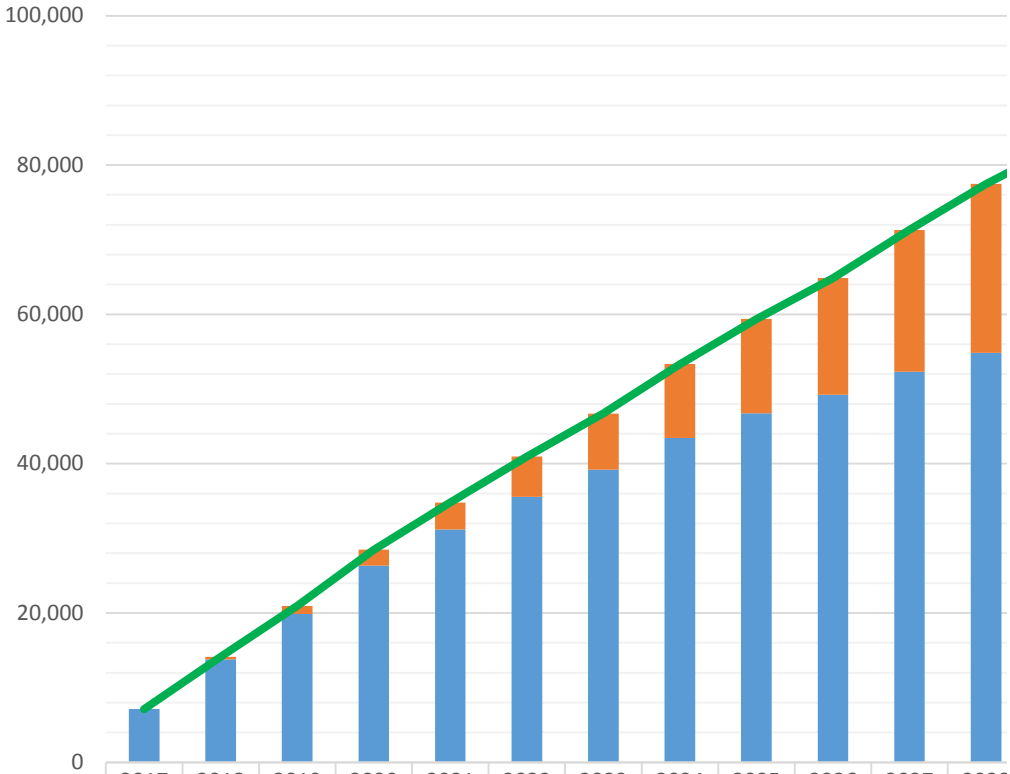


YEAR

3 - 25 year and 30 year Financing Terms, at 5% interest rate

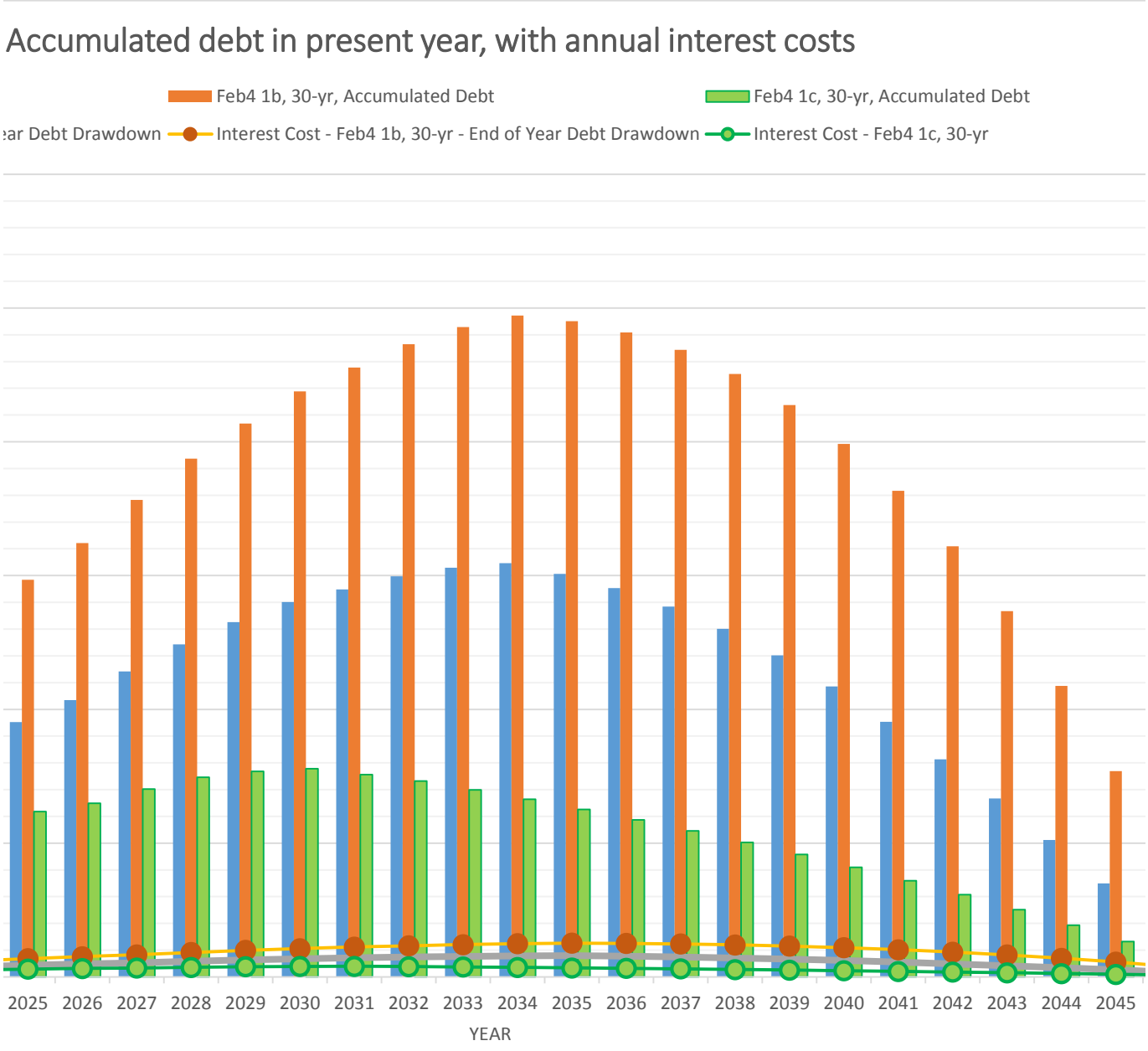


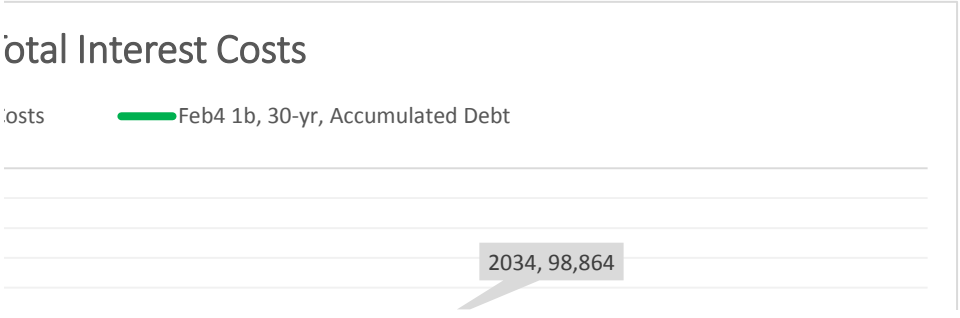

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

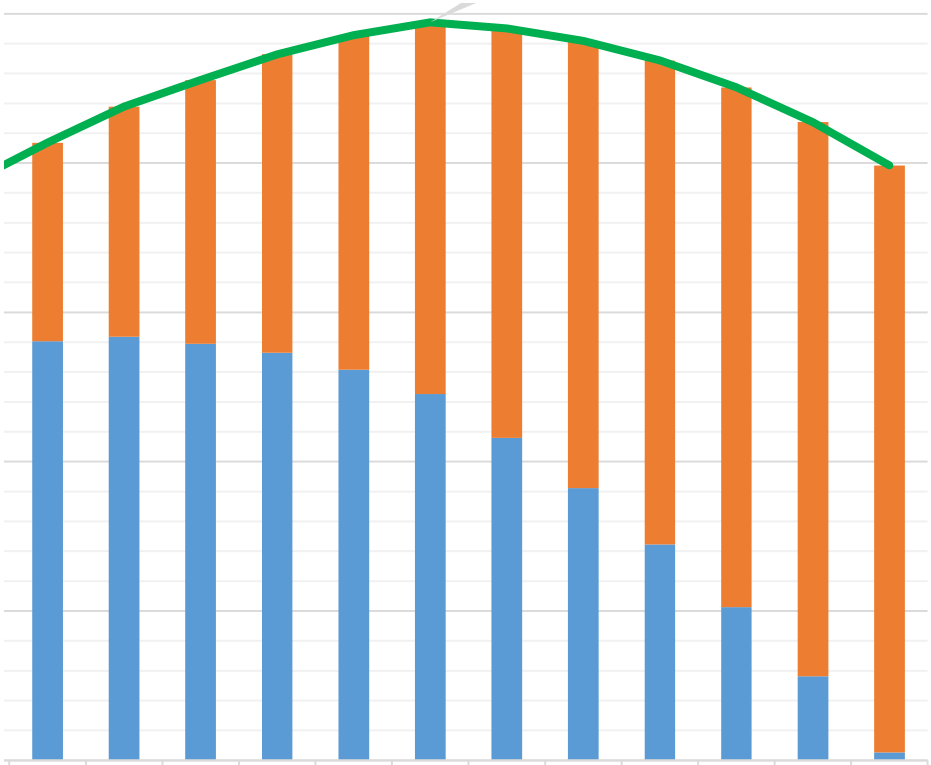


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y

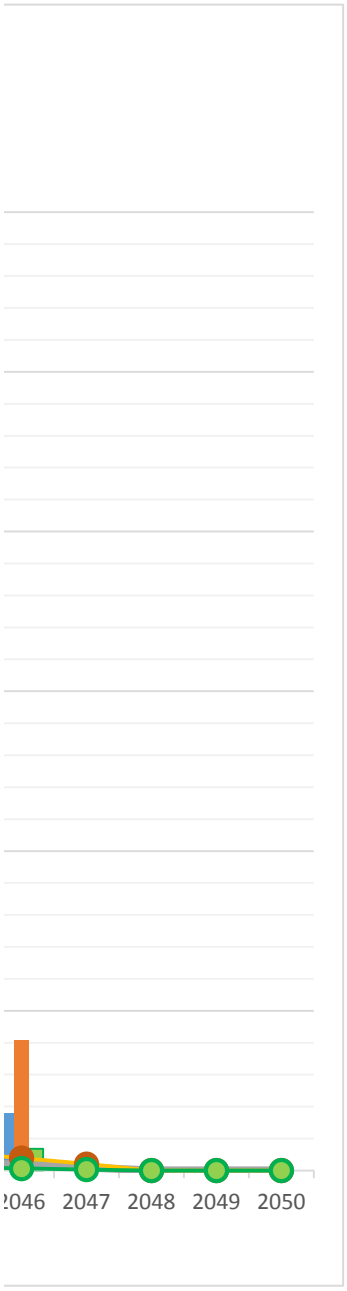

Accumulated debt in present year, with annual interest costs
Feb4 1b, 30-yr, Accumulated Debt
Feb4 1c, 30-yr, Accumulated Debt
ear Debt Drawdown
Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown
Interest Cost - Feb4 1c, 30-yr
2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045
YEAR


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR



Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

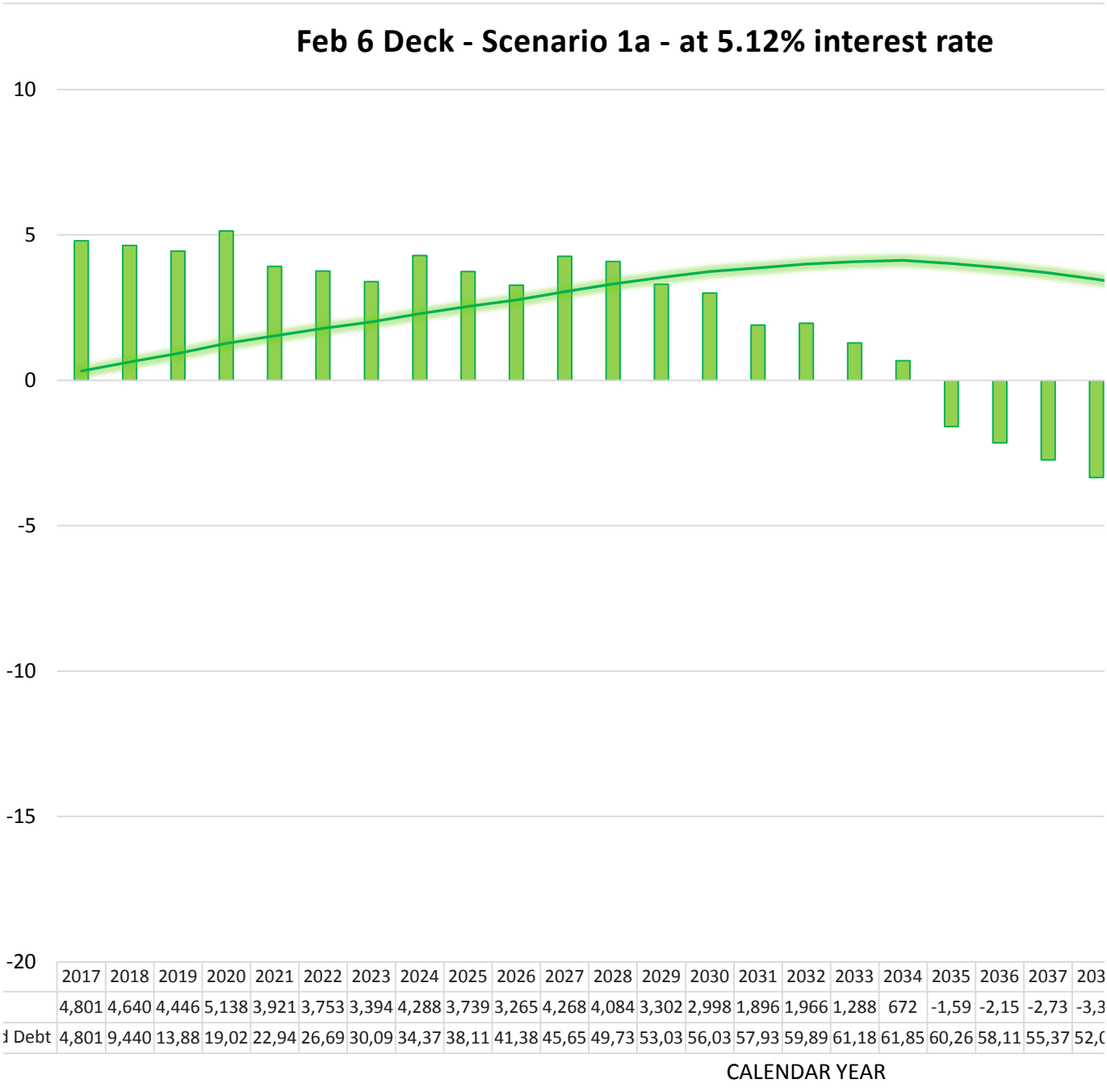
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

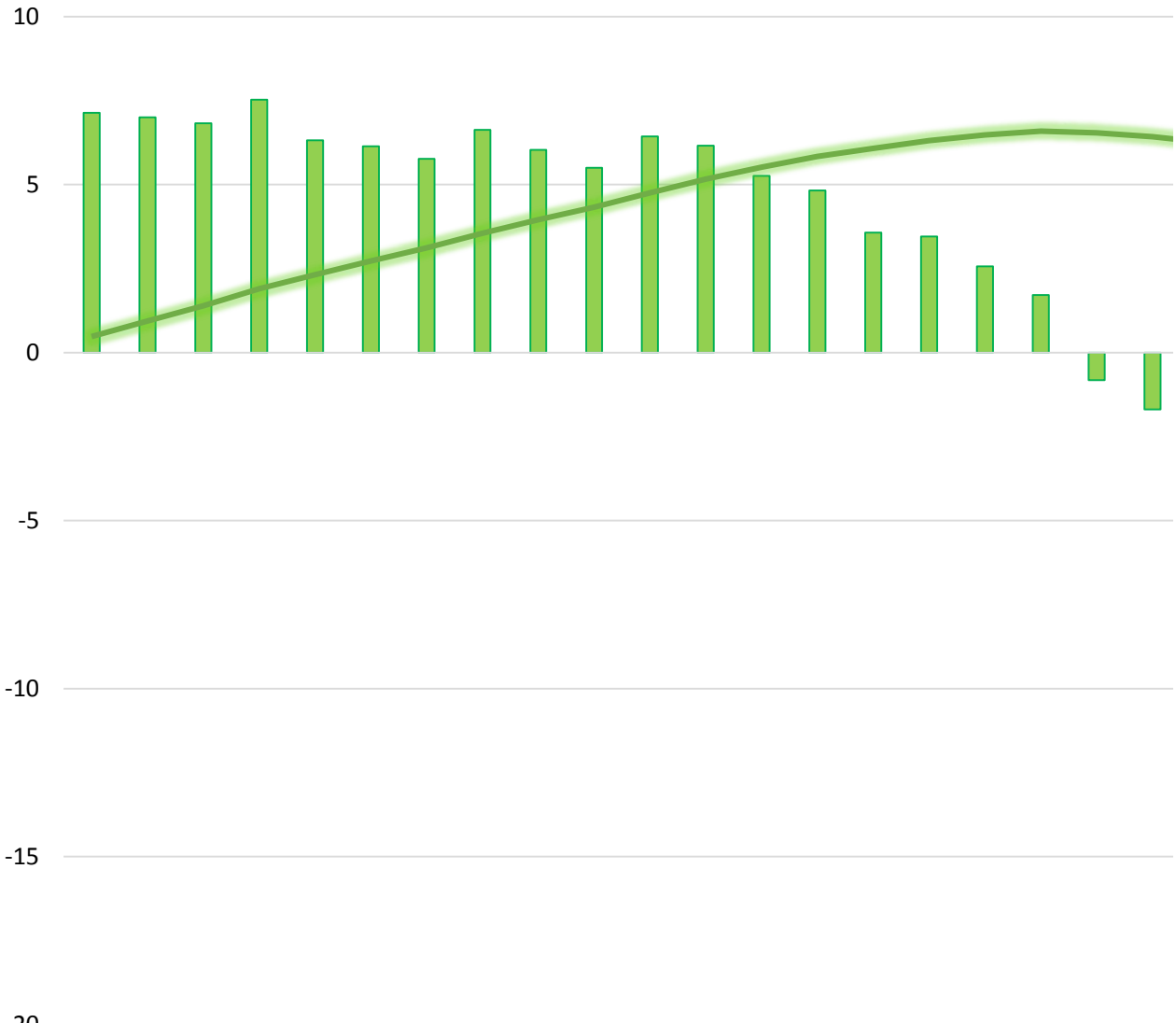
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

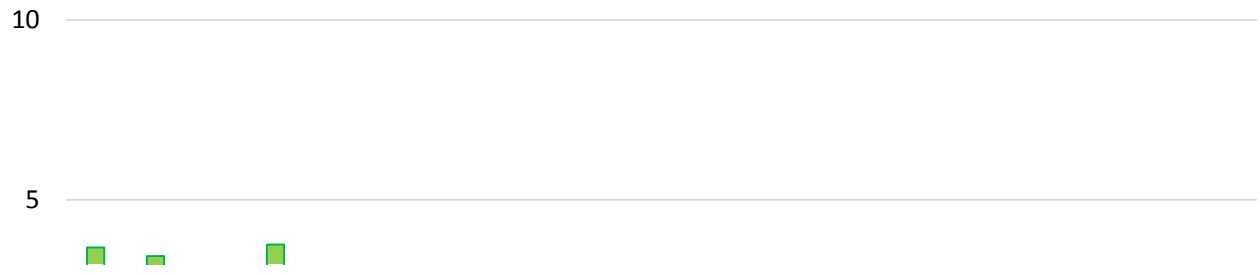
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

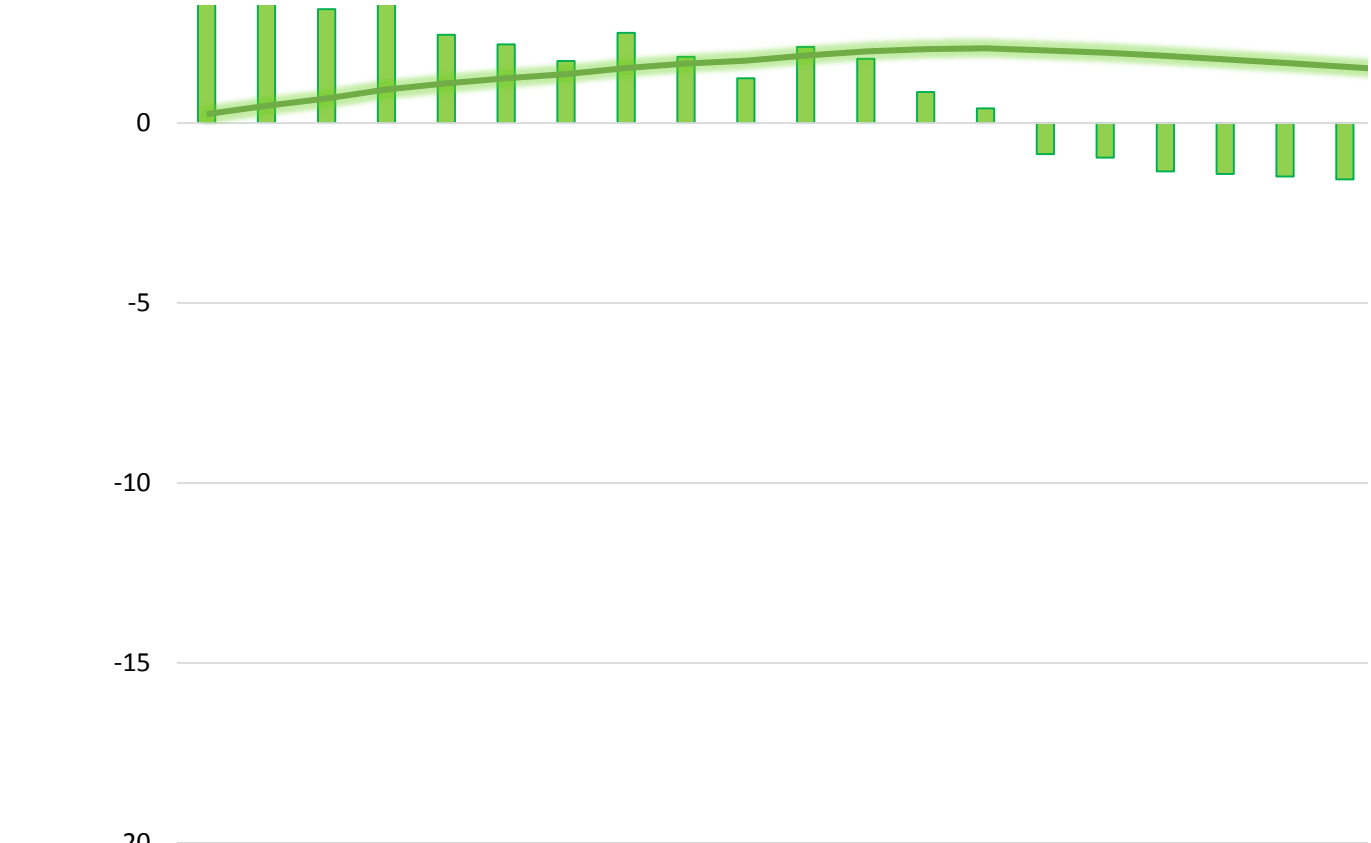


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



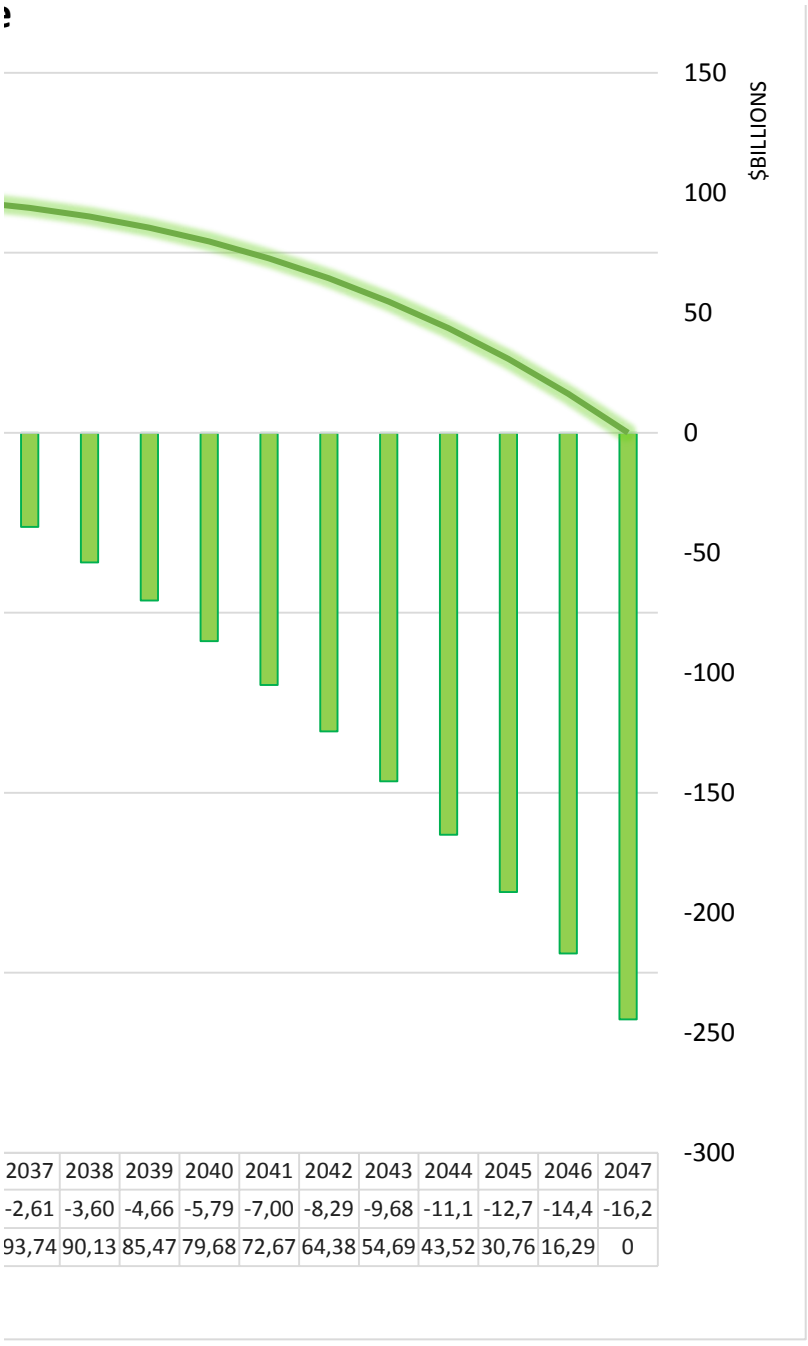


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

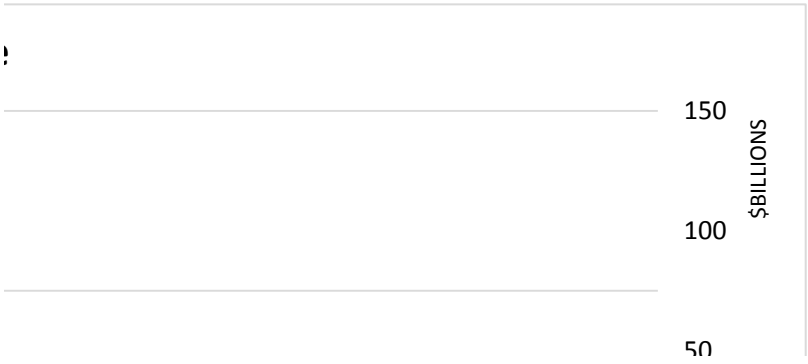
CALENDAR YEAR

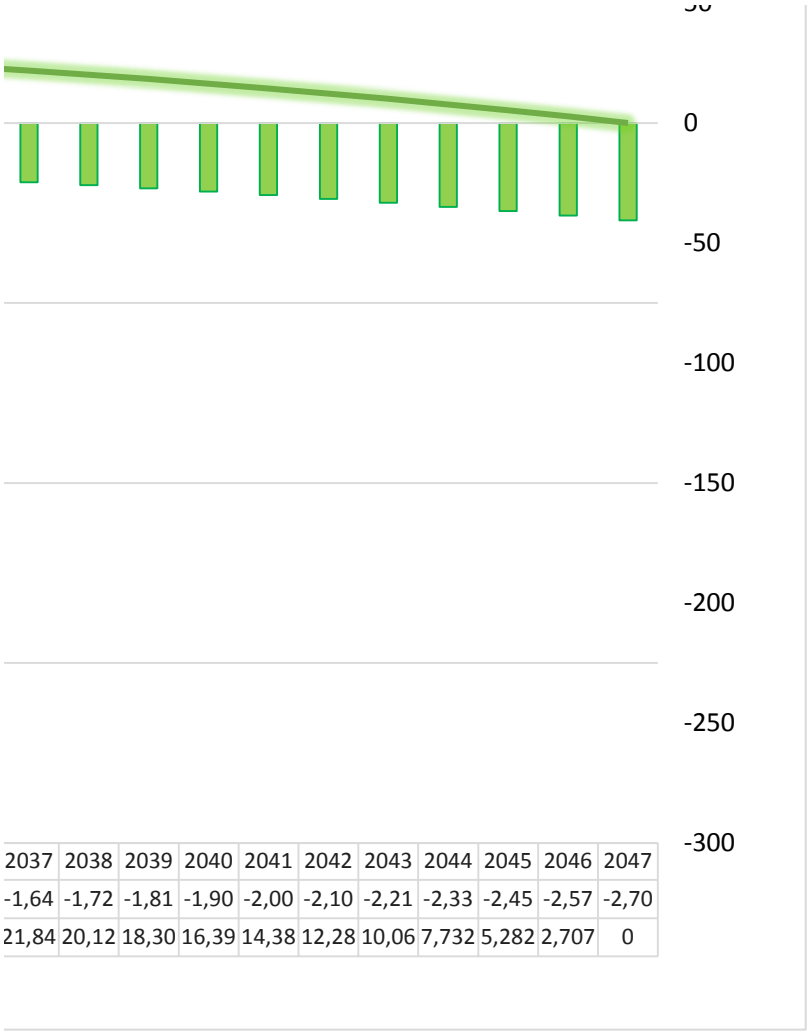


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Feb 8 Deck - Scenario 1a, 1b, 1c - at 5.12% interest
IESO GA cost forecast + extrapolation

Scenario
1a

1b

1c

1d

1e

	2017	2018	2019	2020
rate				
	12,095	11,835	11,552	12,168

($ million)	**2017**	**2018**	**2019**	**2020**
IESO GA cost forecast + extrapolation	12095	11835	11552	12168
GA Payment from Impacted Rate Class	7421	7206	6995	6329
Accumulated debt in present year (including interest)	4674	9542	14587	21173

GA Payment from Impacted Rate Class	7421	7205	6995	6329
Accumulated debt in present year (including interest)	4674	9544	14589	21175

GA Payment from Impacted Rate Class	7421	7425	7440	7013
Accumulated debt in present year (including interest)	4674	9323	13913	19780

GA Payment from Impacted Rate Class	9915	9676	9427	9445
Accumulated debt in present year (including interest)	2180	4450	6803	9875

GA Payment from Impacted Rate Class	10596	10370	10129	10162
Accumulated debt in present year (including interest)	1500	3042	4620	6863

2021	2022	2023	2024	2025	2026	2027	2028
10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819

2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
10844	10634	10243	11128	10527	10033	11043	10819
5888	6154	6432	6723	7026	7344	7676	8022
27212	33084	38588	44968	50769	56056	62291	68274

5890	6156	6434	6724	7028	7345	7677	8024
27212	33082	38585	44963	50762	56048	62281	68263

6825	7042	7266	7497	7736	7983	8237	8499
24810	29671	34167	39545	44359	48679	53976	59058

8532	8703	8877	9054	9236	9420	9609	9801
12692	15272	17420	20384	22719	24494	27181	29590

9264	9449	9638	9831	10027	10228	10432	10641
8794	10429	11568	13457	14645	15200	16588	17614

2029	2030	2031	2032	2033	2034	2035	2036
10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389

2029	2030	2031	2032	2033	2034	2035	2036
10009	9721	8654	8820	8238	7756	5662	5389
8385	8764	9160	9574	10006	10458	10931	11425
73391	78103	81594	85015	87596	89375	88679	87180

8386	8765	9160	9574	10006	10458	10931	11424
73378	78089	81578	84997	87577	89356	88659	87159

8770	9049	9337	9634	9941	10257	10584	10921
63318	67230	69987	72754	74773	76097	75068	73377

9997	10197	10401	10609	10821	10916	8822	8548
31116	32233	32135	31991	31045	29473	27822	26085

10854	11071	10196	10361	9779	9298	7203	6930
17670	17225	16565	15871	15142	14376	13570	12723

2037	2038	2039	2040	2041	2042	2043	2044
5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627

2037	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
5129	4881	4645	4421	4207	4004	3811	3627
11941	12481	13045	13634	14250	14894	15567	16270
84828	81568	77341	72085	65730	58203	49425	39310

11940	12480	13043	13632	14248	14891	15564	16267
84806	81546	77320	72065	65711	58186	49409	39297

11269	11628	11998	12380	12774	13181	13600	14033
70990	67875	63995	59310	53778	47352	39985	31624

8288	8040	7805	7580	7367	7164	6970	6786
24260	22342	20325	18206	15978	13635	11173	8586

6670	6422	6186	5962	5748	5545	5352	5168
11833	10897	9914	8880	7793	6651	5450	4188

2045	2046	2047	2048

3,451 3,285 3,126 2,975 2,831 2,695

2045	**2046**	**2047**	**2048**	**2049**	**2050**
3451	3285	3126	2975	2831	2695
17005	17774	18577	2975	2831	2695
27767	14699	0	0	0	0

17001	17769	18572	2975	2831	2695
27758	14694	0	0	0	0

14480	14941	15417	2975	2831	2695
22213	11693	0	0	0	0

6611	6444	6286	2975	2831	2695
5865	3006	0	0	0	0

4993	4826	4667	2975	2831	2695
2861	1466	0	0	0	0

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb8_1a_30yr

1a. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,867
Annual Exposure2 with start on July 1st	*2,337*	*4,867*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	3,554

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

1 Based on an interest rate of 5%.

2 Fiscal exposure based on equal monthly drawdown of debt.

3 Fiscalized based on 75/25 split of annual numbers provided by Energy.

Actual fiscalization would vary based on GA actuals per month based on month of the year. Actuals may also

Feb8_1b_30yr

1b. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,869
Annual Exposure2 with start on July 1st	*2,337*	*4,869*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,723
Start: July 1st	-	*3,554*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $89 billion peaking in

Feb8_1c_30yr

1c. GA Smoothing for All (Borrow $4.7 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,674	4,649
Annual Exposure2 with start on July 1st	*2,337*	*4,649*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	1,169	4,668
Start: July 1st	-	*3,499*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $76 billion peaking in

Feb8_1d_30yr

1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	2,180	2,270
Annual Exposure2 with start on July 1st	*1,090*	*2,270*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	545	2,203
Start: July 1st	-	*1,658*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $32 billion peaking in

Feb8_1e_30yr

1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)

$ millions

30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,500	1,542
Annual Exposure2 with start on July 1st	*750*	*1,542*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	375	1,510
Start: July 1st	-	*1,135*

Actuals are subject to actual prices and actual interest rates.

- The highest debt accumulation (at 5.12% interest rate) is expected to be approximately $18 billion peaking in

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6
7	July	7
8	August	8
9	September	9
10	October	10
11	November	11
12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	1,169 - 1,169	4,723 - 4,723

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
Debt-Finance Global Adjustment Costs, Option 1a	1169	4723
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1169**	**4963**
Total, B	1169	4963
Proposed Program Total:	1,169 - 1,169	4,963 - 4,963

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

$ millions

Scenario 1a
Scenario 1b
Scenario 1c
Scenario 1d
Scenario 1e

2019	2020	2021	2022
5,045	6,586	6,039	5,872
5,045	*6,586*	*6,039*	*5,872*

2018-19	2019-20	2020-21	2021-2022
4,912	5,430	6,449	5,997
4,912	*5,430*	*6,449*	*5,997*

2034.

Actuals are subject t
- The highest debt ac
- Compared to a 5% i

[1] Based on an interes
[2] Fiscal exposure bas
[3] Fiscalized based on

depend on decision on accounting treatment.

2019	2020	2021	2022
5,045	6,586	6,037	5,870
5,045	*6,586*	*6,037*	*5,870*

2018-19	2019-20	2020-21	2021-2022
4,913	5,430	6,449	5,996
4,913	*5,430*	*6,449*	*5,996*

2034.

2019	2020	2021	2022
4,589	5,867	5,031	4,861
4,589	*5,867*	*5,031*	*4,861*

2018-19	2019-20	2020-21	2021-2022
4,634	4,909	5,658	4,988
4,634	*4,909*	*5,658*	*4,988*

2034.

2019	2020	2021	2022
2,353	3,072	2,817	2,580
2,353	*3,072*	*2,817*	*2,580*

2018-19	2019-20	2020-21	2021-2022
2,291	2,533	3,008	2,757
2,291	*2,533*	*3,008*	*2,757*

2030.

2019	2020	2021	2022
1,578	2,243	1,931	1,635
1,578	*2,243*	*1,931*	*1,635*

2018-19	2019-20	2020-21	2021-2022

1,551	1,745	2,165	1,857
1,551	*1,745*	*2,165*	*1,857*

2029.



2018-19	2019-20	2020-21	2021-2022
4,913 - 4,912	5,430 - 5,430	6,449 - 6,449	5,996 - 5,997

/1

2018-19[1]	2019-20[1]	2020-21[1]
4912	5430	6449
4913	5430	6449
225	279	323
60	60	60
18	18	18
5215	**5787**	**6850**
5216	5787	6850

5,216 - 5,215 5,787 - 5,787 6,850 - 6,850

Total Principal Debt	Total Accumulated Interest Costs	**Peak Total Debt**	
52,287	85,599	89,375	occurs in Year 2034
52,275	85,582	89,356	occurs in Year 2034
44,449	72,823	76,097	occurs in Year 2034
21,239	29,589	32,233	occurs in Year 2030
12,350	16,239	17,670	occurs in Year 2029

o actual prices and actual interest rates.
:cumulation (at 5% interest rate) is expected to be approximately $62 billion, peaking in 203 and $17-21 billion (at 3.5% interest
interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately $33-$36 million.

st rate of 5%.
sed on equal monthly drawdown of debt.
75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actuals per month based on mo

Feb8_1a_30yr
Feb8_1b_30yr
Feb8_1c_30yr
Feb8_1d_30yr
Feb8_1e_30yr

t rate), peaking in 2028.

nth of the year. Actuals may also depend on decision on accounting treatment.

Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-275	-311	-350	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,573	85,599
Equal Monthly Debt Drawdown	6,743	4,556	

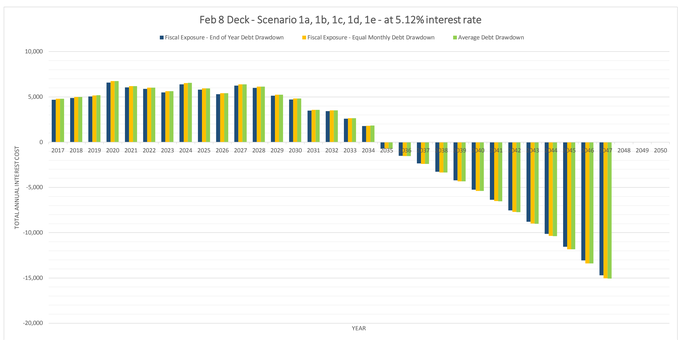
	Feb8 1a, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,375	2034	52,287
Equal Monthly Debt Drawdown	91,501		

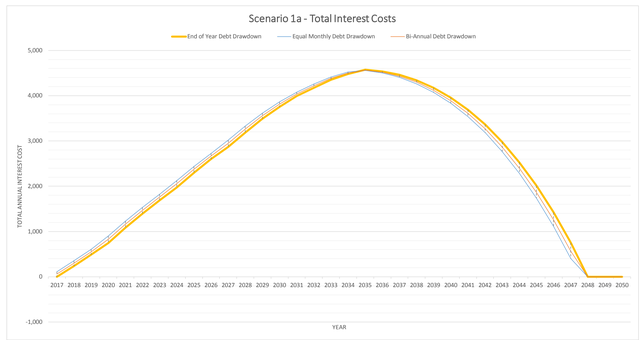
Feb8 1a, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	
c = a*5%	*Interest Cost - Feb8 1a, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,301*	*2,597*	*2,868*	*3,187*	*3,493*	*3,755*	*3,996*	*4,175*	*4,350*	*4,482*	*4,573*	*4,537*	*4,460*	*4,340*	*4,173*	*3,957*	*3,688*	*3,363*	*2,978*	*2,529*	*2,011*	*1,421*	*752*	*0*	*0*	*0*	85,599
b	Additional GA Debt Drawdown, End of Year	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,542	14,587	21,173	27,212	33,084	38,588	44,968	50,769	56,056	62,291	68,274	73,391	78,103	81,594	85,015	87,596	89,375	88,679	87,180	84,828	81,568	77,341	72,085	65,730	58,203	49,425	39,310	27,767	14,699	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,307	32,728	35,309	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	37,089	39,310	27,767	14,699	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	52,287	52,287	52,287	51,591	50,091	47,739	44,479	40,253	34,997	28,642	21,115	12,336	0	0	0	0	0	0	0	0	
	Feb8 1a, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,917	12,514	15,382	18,569	22,062	25,817	29,813	33,987	38,337	42,818	47,391	51,928	56,388	60,728	64,901	68,858	72,546	75,909	78,887	81,416	83,427	84,847	85,599				
	Feb8 1a, 30-yr - Accumulated Debt Principal	4,674	9,303	13,860	19,699	24,655	29,135	32,946	37,352	40,852	43,542	46,909	49,706	51,329	52,287	51,781	51,028	49,259	46,557	41,288	35,252	28,440	20,840	12,440	3,227	-6,816	-17,706	-29,462	-42,106	-55,660	-70,149	-85,599				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,867	5,045	6,586	6,039	5,872	5,504	6,380	5,801	5,287	6,235	5,984	5,117	4,712	3,491	3,421	2,581	1,780	-696	-1,499	-2,352	-3,260	-4,226	-5,256	-6,355	-7,527	-8,778	-10,115	-11,543	-13,068	-14,699	0	0	0	

Feb8 1a, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	
4,556	*Interest Cost - Feb8 1a, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,824*	*2,126*	*2,439*	*2,723*	*3,016*	*3,329*	*3,615*	*3,867*	*4,079*	*4,256*	*4,411*	*4,524*	*4,556*	*4,501*	*4,404*	*4,262*	*4,073*	*3,832*	*3,537*	*3,184*	*2,769*	*2,288*	*1,737*	*1,110*	*402*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,769	14,934	21,676	27,859	33,871	39,506	46,037	51,977	57,389	63,773	69,898	75,137	79,961	83,535	87,037	89,679	91,501	90,788	89,254	86,845	83,508	79,181	73,800	67,294	59,588	50,600	40,245	28,428	15,048	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,983	5,165	6,743	6,183	6,012	5,635	6,532	5,939	5,413	6,383	6,126	5,238	4,824	3,574	3,502	2,643	1,822	-713	-1,535	-2,408	-3,337	-4,327	-5,381	-6,506	-7,706	-8,987	-10,356	-11,817	-13,379	-15,048	0	0	0	
	Monthly Drawdown	390	386	380	487	413	373	318	367	292	224	281	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(980)	(1,054)	(1,129)	(1,207)	(1,288)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,738	4,665	5,979	5,074	4,586	3,902	4,510	3,584	2,753	3,447	2,863	1,662	980	(517)	(772)	(1,810)	(2,766)	(5,394)	(6,180)	(6,975)	(7,781)	(8,599)	(9,432)	(10,282)	(11,149)	(12,036)	(12,944)	(13,876)	(14,834)	(15,818)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	67	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(368)	-	-	-	
	Annual Interest Cost on Opening Balance	-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,263	3,576	3,844	4,091	4,274	4,453	4,588	4,681	4,645	4,566	4,443	4,272	4,051	3,776	3,443	3,049	2,589	2,059	1,454	770	(0)	(0)	(0)	
	Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,824	2,126	2,439	2,723	3,016	3,329	3,615	3,867	4,079	4,256	4,411	4,524	4,556	4,501	4,404	4,262	4,073	3,832	3,537	3,184	2,769	2,288	1,737	1,110	402	(0)	(0)	(0)	

Feb8 1a, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*60*	*301*	*553*	*831*	*1,160*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,948*	*3,263*	*3,558*	*3,815*	*4,041*	*4,218*	*4,383*	*4,504*	*4,564*	*4,518*	*4,430*	*4,298*	*4,119*	*3,890*	*3,607*	*3,267*	*2,866*	*2,399*	*1,864*	*1,253*	*564*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,664	14,774	21,444	27,560	33,507	39,081	45,543	51,418	56,773	63,088	69,148	74,330	79,102	82,638	86,102	88,716	90,518	89,813	88,295	85,913	82,611	78,331	73,007	66,571	58,948	50,057	39,813	28,122	14,887	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,930	5,110	6,670	6,116	5,947	5,575	6,461	5,875	5,354	6,315	6,060	5,182	4,773	3,535	3,464	2,614	1,802	-705	-1,518	-2,382	-3,302	-4,280	-5,324	-6,436	-7,623	-8,891	-10,244	-11,690	-13,236	-14,887	0	0	0	
	Bi-Annual Drawdown	2,337	2,314	2,279	2,920	2,478	2,240	1,906	2,203	1,750	1,345	1,684	1,398	812	479	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,800)	(4,200)	(4,607)	(5,021)	(5,445)	(5,878)	(6,322)	(6,777)	(7,245)	(7,725)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,687	4,615	5,914	5,019	4,537	3,860	4,462	3,545	2,724	3,410	2,832	1,644	970	(512)	(763)	(1,791)	(2,737)	(5,336)	(6,113)	(6,900)	(7,697)	(8,507)	(9,331)	(10,171)	(11,029)	(11,907)	(12,805)	(13,727)	(14,674)	(15,648)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	494	756	1,097	1,410	1,714	1,999	2,330	2,631	2,905	3,228	3,538	3,803	4,047	4,228	4,405	4,539	4,631	4,595	4,517	4,395	4,227	4,008	3,735	3,406	3,016	2,561	2,037	1,439	762	(0)	(0)	(0)	
	Total Annual Interest Cost	60	301	553	831	1,160	1,467	1,763	2,056	2,375	2,665	2,948	3,263	3,558	3,815	4,041	4,218	4,383	4,504	4,564	4,518	4,430	4,298	4,119	3,890	3,607	3,267	2,866	2,399	1,864	1,253	564	(0)	(0)	(0)	

Feb8 1a, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1a. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,206	6,995	6,329	5,888	6,154	6,432	6,723	7,026	7,344	7,676	8,023	8,385	8,764	9,160	9,574	10,006	10,459	10,931	11,425	11,941	12,481	13,045	13,634	14,250	14,894	15,567	16,270	17,005	17,774	18,577	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Debt, Beginning of Year	0	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	
	Interest Cost - Feb8 1a, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,723*	*3,027*	*3,340*	*3,624*	*3,875*	*4,085*	*4,262*	*4,416*	*4,527*	*4,555*	*4,499*	*4,400*	*4,257*	*4,065*	*3,822*	*3,525*	*3,170*	*2,753*	*2,270*	*1,716*	*1,086*	*376*	*0*	*0*	*0*	85,599
	Additional GA Debt Drawdown	4,674	4,628	4,557	5,840	4,956	4,480	3,811	4,406	3,501	2,689	3,367	2,797	1,624	958	-505	-754	-1,768	-2,702	-5,269	-6,036	-6,813	-7,600	-8,400	-9,213	-10,043	-10,890	-11,756	-12,644	-13,554	-14,489	-15,451	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,786	14,960	21,714	27,908	33,930	39,575	46,118	52,068	57,490	63,884	70,021	75,269	80,101	83,681	87,189	89,837	91,662	90,948	89,410	86,998	83,654	79,320	73,929	67,412	59,692	50,689	40,315	28,477	15,075	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,992	5,174	6,754	6,193	6,022	5,645	6,543	5,950	5,422	6,395	6,137	5,248	4,833	3,580	3,508	2,647	1,825	-714	-1,537	-2,412	-3,343	-4,334	-5,391	-6,517	-7,720	-9,003	-10,374	-11,838	-13,403	-15,075	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
			111	116	120	157	144	140	131	152	138	126	148	142	122	112	83	81	61	42	-17	-36	-56	-78	-101	-125	-151	-179	-209	-241	-274	-311	-349	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	6,586	4,572	85,582
Equal Monthly Debt Drawdown	6,743	4,555	

	Feb8 1b, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	89,356	2034	52,275
Equal Monthly Debt Drawdown	91,481		

Feb8 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
a — Debt, Beginning of Year	0	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	
c = a*5% — *Interest Cost - Feb8 1b, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*488*	*746*	*1,083*	*1,392*	*1,693*	*1,974*	*2,300*	*2,597*	*2,867*	*3,186*	*3,492*	*3,754*	*3,995*	*4,174*	*4,349*	*4,481*	*4,572*	*4,536*	*4,459*	*4,339*	*4,172*	*3,956*	*3,687*	*3,362*	*2,977*	*2,528*	*2,011*	*1,420*	*752*	*0*	*0*	*0*	85,582
b — Additional GA Debt Drawdown, End of Year	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
d = a+b+c — Accumulated debt in present year (including 5.12% annual interest)	4,674	9,544	14,589	21,175	27,212	33,082	38,585	44,963	50,762	56,048	62,281	68,263	73,378	78,089	81,578	84,997	87,577	89,356	88,659	87,159	84,806	81,546	77,320	72,065	65,711	58,186	49,409	39,297	27,758	14,694	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,303	32,722	35,302	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	37,081	39,297	27,758	14,694	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	52,275	52,275	52,275	52,275	51,578	50,078	47,725	44,465	40,239	34,984	28,630	21,105	12,328	0	0	0	0	0	0	0	
Feb8 1b, 30-yr - Accumulated Interest Costs	0	239	727	1,474	2,557	3,949	5,642	7,616	9,916	12,513	15,381	18,567	22,060	25,814	29,809	33,983	38,331	42,812	47,384	51,920	56,379	60,718	64,890	68,846	72,533	75,895	78,871	81,399	83,410	84,830	85,582				
Feb8 1b, 30-yr - Accumulated Debt Principal	4,674	9,304	13,861	19,701	24,655	29,133	32,943	37,347	40,846	43,534	46,900	49,695	51,318	52,275	51,769	51,014	49,246	46,544	41,275	35,239	28,428	20,829	12,431	3,219	-6,822	-17,709	-29,462	-42,102	-55,652	-70,136	-85,582				
Fiscal Exposure - End of Year Debt Drawdown	4,674	4,869	5,045	6,586	6,037	5,870	5,502	6,378	5,800	5,285	6,233	5,982	5,115	4,711	3,489	3,419	2,580	1,778	-697	-1,500	-2,353	-3,260	-4,226	-5,256	-6,354	-7,525	-8,776	-10,112	-11,539	-13,064	-14,694	0	0	0	

Feb8 1b, 30-yr — Equal Monthly Debt Drawdown

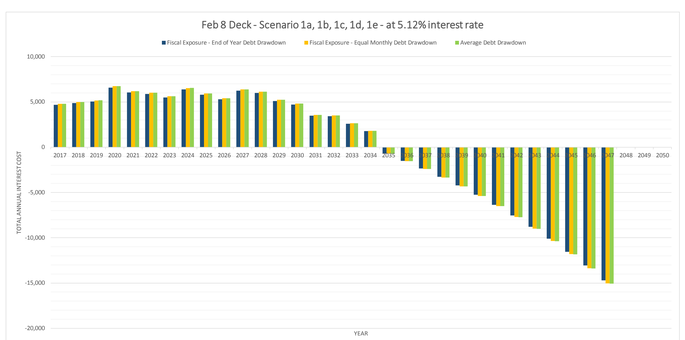
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	
4,555 — *Interest Cost - Feb8 1b, 30-yr*	*111*	*355*	*608*	*903*	*1,227*	*1,532*	*1,823*	*2,126*	*2,438*	*2,723*	*3,016*	*3,329*	*3,614*	*3,866*	*4,078*	*4,255*	*4,410*	*4,523*	*4,555*	*4,500*	*4,403*	*4,261*	*4,072*	*3,831*	*3,536*	*3,183*	*2,768*	*2,287*	*1,736*	*1,109*	*402*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,786	9,771	14,936	21,678	27,859	33,869	39,503	46,032	51,970	57,381	63,762	69,886	75,123	79,946	83,518	87,019	89,660	91,481	90,768	89,232	86,824	83,486	79,159	73,779	67,274	59,570	50,585	40,232	28,418	15,043	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	4,786	4,985	5,165	6,743	6,181	6,010	5,633	6,530	5,938	5,411	6,382	6,124	5,237	4,823	3,572	3,501	2,641	1,821	-714	-1,535	-2,409	-3,337	-4,327	-5,381	-6,505	-7,704	-8,985	-10,353	-11,814	-13,375	-15,043	0	0	0	
Monthly Drawdown	390	386	380	487	413	373	317	367	292	224	280	233	135	80	(42)	(63)	(147)	(225)	(439)	(503)	(568)	(633)	(700)	(768)	(837)	(907)	(979)	(1,053)	(1,129)	(1,207)	(1,287)	(0)	-	-	
FV of Monthly Drawdown at 5%	4,786	4,740	4,665	5,979	5,072	4,585	3,900	4,509	3,582	2,752	3,446	2,862	1,661	979	(518)	(772)	(1,811)	(2,766)	(5,394)	(6,179)	(6,974)	(7,780)	(8,598)	(9,431)	(10,279)	(11,146)	(12,033)	(12,941)	(13,872)	(14,829)	(15,813)	(0)	-	-	
Annual Interest Cost on New Drawdowns	111	110	108	139	118	107	91	105	83	64	80	66	39	23	(12)	(18)	(42)	(64)	(125)	(144)	(162)	(181)	(200)	(219)	(239)	(259)	(280)	(301)	(322)	(345)	(367)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	245	500	764	1,109	1,425	1,733	2,021	2,355	2,659	2,936	3,262	3,576	3,843	4,090	4,273	4,452	4,587	4,680	4,644	4,565	4,442	4,271	4,050	3,775	3,442	3,048	2,588	2,058	1,454	770	0	0	0	
Total Annual Interest Cost	111	355	608	903	1,227	1,532	1,823	2,126	2,438	2,723	3,016	3,329	3,614	3,866	4,078	4,255	4,410	4,523	4,555	4,500	4,403	4,261	4,072	3,831	3,536	3,183	2,768	2,287	1,736	1,109	402	0	0	0	

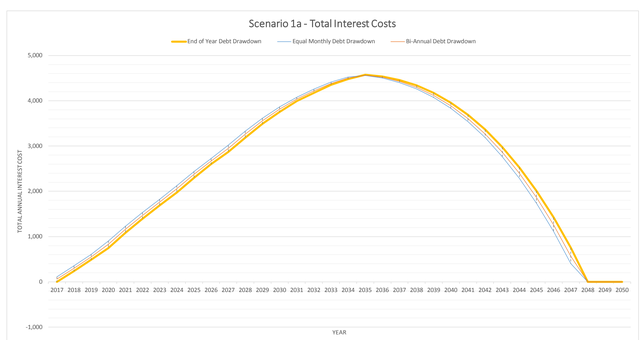
Feb8 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*60*	*301*	*553*	*831*	*1,161*	*1,467*	*1,763*	*2,056*	*2,375*	*2,665*	*2,947*	*3,263*	*3,558*	*3,814*	*4,040*	*4,217*	*4,382*	*4,503*	*4,563*	*4,517*	*4,429*	*4,297*	*4,118*	*3,889*	*3,606*	*3,266*	*2,865*	*2,399*	*1,863*	*1,253*	*564*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,734	9,666	14,775	21,446	27,560	33,506	39,078	45,538	51,412	56,764	63,078	69,136	74,316	79,088	82,621	86,084	88,697	90,499	89,793	88,274	85,891	82,589	78,309	72,986	66,552	58,930	50,041	39,800	28,113	14,882	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	4,734	4,931	5,110	6,670	6,115	5,945	5,573	6,460	5,874	5,353	6,313	6,058	5,181	4,771	3,534	3,463	2,613	1,801	-706	-1,519	-2,383	-3,302	-4,280	-5,323	-6,435	-7,622	-8,889	-10,242	-11,687	-13,231	-14,882	0	0	0	
Bi-Annual Drawdown	2,337	2,315	2,279	2,920	2,477	2,239	1,905	2,202	1,750	1,344	1,683	1,398	811	478	(253)	(377)	(884)	(1,351)	(2,634)	(3,018)	(3,406)	(3,799)	(4,199)	(4,606)	(5,020)	(5,444)	(5,877)	(6,320)	(6,775)	(7,242)	(7,723)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	4,734	4,689	4,615	5,914	5,017	4,535	3,859	4,460	3,544	2,722	3,409	2,831	1,643	969	(513)	(764)	(1,791)	(2,737)	(5,336)	(6,113)	(6,899)	(7,696)	(8,506)	(9,329)	(10,169)	(11,027)	(11,904)	(12,802)	(13,723)	(14,670)	(15,643)	(0)	-	-	
Annual Interest Cost on New Drawdowns	60	59	58	75	63	57	49	56	45	34	43	36	21	12	(6)	(10)	(23)	(35)	(67)	(77)	(87)	(97)	(107)	(118)	(128)	(139)	(150)	(162)	(173)	(185)	(198)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	242	495	756	1,097	1,410	1,714	1,999	2,330	2,630	2,904	3,227	3,537	3,802	4,046	4,227	4,404	4,538	4,630	4,594	4,516	4,394	4,225	4,006	3,734	3,405	3,015	2,560	2,036	1,438	761	0	(0)	(0)	
Total Annual Interest Cost	60	301	553	831	1,161	1,467	1,763	2,056	2,375	2,665	2,947	3,263	3,558	3,814	4,040	4,217	4,382	4,503	4,563	4,517	4,429	4,297	4,118	3,889	3,606	3,266	2,865	2,399	1,863	1,253	564	0	(0)	(0)	

Feb8 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing for All (Borrow $4.7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	7,421	7,205	6,995	6,329	5,890	6,156	6,434	6,724	7,028	7,345	7,677	8,024	8,386	8,765	9,161	9,574	10,007	10,459	10,931	11,425	11,940	12,480	13,043	13,632	14,248	14,891	15,564	16,267	17,001	17,769	18,572	2,975	2,831	2,695	
GA Debt Requirement	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Debt, Beginning of Year	0	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	
Interest Cost - Feb8 1b, 30-yr	*120*	*364*	*617*	*915*	*1,238*	*1,542*	*1,833*	*2,137*	*2,449*	*2,732*	*3,027*	*3,339*	*3,623*	*3,875*	*4,084*	*4,261*	*4,415*	*4,526*	*4,554*	*4,498*	*4,399*	*4,255*	*4,064*	*3,821*	*3,524*	*3,169*	*2,752*	*2,269*	*1,715*	*1,086*	*376*	*0*	*0*	*0*	85,582
Additional GA Debt Drawdown	4,674	4,630	4,557	5,840	4,954	4,478	3,810	4,404	3,499	2,688	3,366	2,795	1,623	957	-506	-754	-1,769	-2,702	-5,269	-6,036	-6,812	-7,599	-8,398	-9,212	-10,041	-10,887	-11,753	-12,640	-13,550	-14,484	-15,445	0	0	0	
Accumulated debt in present year (including 5% annual interest)	4,794	9,788	14,962	21,717	27,908	33,929	39,572	46,113	52,061	57,481	63,874	70,009	75,255	80,086	83,665	87,172	89,818	91,642	90,927	89,389	86,976	83,632	79,298	73,908	67,392	59,674	50,673	40,302	28,468	15,070	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	4,794	4,994	5,174	6,754	6,192	6,020	5,643	6,541	5,948	5,420	6,393	6,135	5,246	4,831	3,578	3,507	2,646	1,824	-715	-1,538	-2,413	-3,343	-4,334	-5,390	-6,516	-7,718	-9,001	-10,371	-11,835	-13,398	-15,070	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1c_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	
			111	111	109	140	120	116	107	128	115	103	126	121	101	93	66	66	48	32	-24	-40	-57	-74	-92	-111	-132	-153	-175	-199	-224	-250	-278	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	5,867	3,893	72,823
Equal Monthly Debt Drawdown	6,006	3,869	

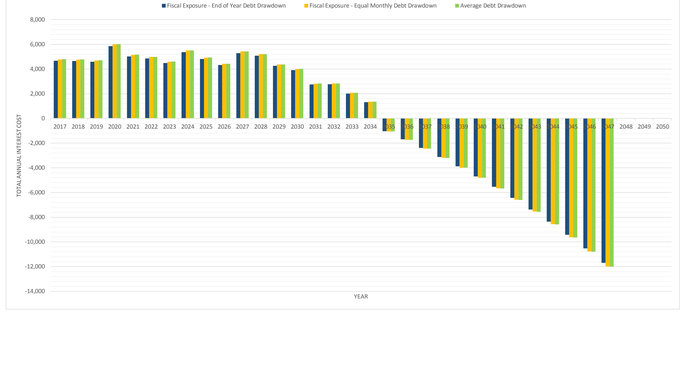
	Feb8 1c, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	76,097	2034	44,449
Equal Monthly Debt Drawdown	77,907		

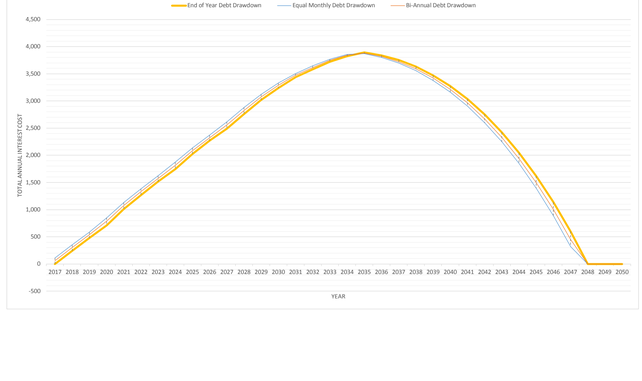
Feb8 1c, 30-yr	End of Year Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
a	Debt, Beginning of Year	0	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	
c = a*5%	*Interest Cost - Feb8 1c, 30-yr - End of Year Debt Drawdown*	*0*	*239*	*477*	*712*	*1,012*	*1,269*	*1,518*	*1,748*	*2,023*	*2,270*	*2,491*	*2,762*	*3,022*	*3,239*	*3,440*	*3,581*	*3,722*	*3,826*	*3,893*	*3,841*	*3,754*	*3,632*	*3,473*	*3,274*	*3,034*	*2,751*	*2,423*	*2,046*	*1,618*	*1,136*	*598*	*0*	*0*	*0*	72,823
b	Additional GA Debt Drawdown, End of Year	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)	4,674	9,323	13,913	19,780	24,810	29,671	34,167	39,545	44,359	48,679	53,976	59,058	63,318	67,230	69,987	72,754	74,773	76,097	75,068	73,377	70,990	67,875	63,995	59,310	53,778	47,352	39,985	31,624	22,213	11,693	0	0	0	0	
			TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	
	Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	25,538	28,304	30,324	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,648	31,624	22,213	11,693	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	44,449	44,449	44,449	44,449	43,420	41,729	39,342	36,228	32,347	27,662	22,130	15,704	8,337	0	0	0	0	0	0	0	
	Feb8 1c, 30-yr - Accumulated Interest Costs	0	239	716	1,428	2,440	3,709	5,227	6,975	8,999	11,268	13,759	16,520	19,542	22,781	26,221	29,801	33,524	37,349	41,242	45,083	48,837	52,469	55,942	59,216	62,250	65,002	67,424	69,470	71,088	72,224	72,823				
	Feb8 1c, 30-yr - Accumulated Debt Principal	4,674	9,084	13,197	18,352	22,371	25,962	28,939	32,570	35,361	37,411	40,217	42,538	43,777	44,449	43,767	42,952	41,249	38,748	33,826	28,294	22,153	15,406	8,054	94	-8,473	-17,649	-27,439	-37,846	-48,875	-60,532	-72,823				
Fiscal Exposure - End of Year Debt Drawdown		4,674	4,649	4,589	5,867	5,031	4,861	4,495	5,379	4,814	4,320	5,297	5,082	4,261	3,912	2,757	2,766	2,019	1,324	-1,029	-1,692	-2,386	-3,115	-3,880	-4,685	-5,532	-6,425	-7,367	-8,361	-9,411	-10,520	-11,693	0	0	0	

Feb8 1c, 30-yr	Equal Monthly Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		12																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
3,869	Debt, Beginning of Year	0	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*111*	*350*	*586*	*851*	*1,132*	*1,385*	*1,625*	*1,876*	*2,138*	*2,372*	*2,617*	*2,882*	*3,123*	*3,333*	*3,505*	*3,646*	*3,770*	*3,857*	*3,869*	*3,800*	*3,697*	*3,558*	*3,380*	*3,163*	*2,903*	*2,599*	*2,247*	*1,847*	*1,394*	*886*	*320*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,786	9,545	14,244	20,250	25,401	30,377	34,979	40,486	45,414	49,837	55,260	60,462	64,824	68,829	71,652	74,484	76,551	77,907	76,854	75,122	72,679	69,490	65,517	60,721	55,057	48,479	40,936	32,376	22,741	11,971	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		4,786	4,759	4,699	6,006	5,151	4,977	4,602	5,507	4,928	4,423	5,423	5,202	4,362	4,005	2,823	2,832	2,067	1,356	-1,053	-1,732	-2,443	-3,189	-3,972	-4,797	-5,664	-6,578	-7,542	-8,560	-9,635	-10,770	-11,971	0	0	0	
	Monthly Drawdown	390	367	343	430	335	299	248	303	233	171	234	193	103	56	(57)	(68)	(142)	(208)	(410)	(461)	(512)	(562)	(613)	(663)	(714)	(765)	(816)	(867)	(919)	(971)	(1,024)	-	-	-	
	FV of Monthly Drawdown at 5%	4,786	4,515	4,210	5,278	4,114	3,677	3,048	3,717	2,857	2,099	2,873	2,375	1,268	689	(699)	(834)	(1,744)	(2,561)	(5,039)	(5,664)	(6,286)	(6,907)	(7,528)	(8,148)	(8,771)	(9,395)	(10,023)	(10,654)	(11,291)	(11,934)	(12,583)	-	-	-	
	Annual Interest Cost on New Drawdowns	111	105	98	123	96	85	71	86	66	49	67	55	29	16	(16)	(19)	(41)	(59)	(117)	(132)	(146)	(160)	(175)	(189)	(204)	(218)	(233)	(248)	(262)	(277)	(292)	-	-	-	
	Annual Interest Cost on Opening Balance	-	245	488	729	1,036	1,300	1,554	1,790	2,071	2,323	2,550	2,827	3,093	3,317	3,521	3,666	3,811	3,917	3,986	3,932	3,843	3,718	3,555	3,352	3,107	2,817	2,480	2,094	1,656	1,163	612	(0)	(0)	(0)	
	Total Annual Interest Cost	111	350	586	851	1,132	1,385	1,625	1,876	2,138	2,372	2,617	2,882	3,123	3,333	3,505	3,646	3,770	3,857	3,869	3,800	3,697	3,558	3,380	3,163	2,903	2,599	2,247	1,847	1,394	886	320	(0)	(0)	(0)	

Feb8 1c, 30-yr	Bi-Annual Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
		2																																		
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*60*	*299*	*536*	*787*	*1,076*	*1,332*	*1,576*	*1,817*	*2,085*	*2,325*	*2,558*	*2,827*	*3,076*	*3,290*	*3,475*	*3,616*	*3,748*	*3,842*	*3,880*	*3,819*	*3,724*	*3,592*	*3,423*	*3,214*	*2,964*	*2,669*	*2,328*	*1,939*	*1,498*	*1,002*	*449*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,734	9,442	14,091	20,033	25,128	30,051	34,604	40,051	44,927	49,302	54,666	59,813	64,128	68,090	70,882	73,684	75,729	77,070	76,029	74,315	71,898	68,744	64,814	60,069	54,466	47,958	40,497	32,028	22,497	11,842	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		4,734	4,708	4,648	5,942	5,095	4,923	4,553	5,447	4,876	4,375	5,364	5,147	4,315	3,962	2,792	2,802	2,045	1,341	-1,042	-1,713	-2,417	-3,155	-3,930	-4,745	-5,603	-6,508	-7,461	-8,468	-9,531	-10,655	-11,842	0	0	0	
	Bi-Annual Drawdown	2,337	2,205	2,056	2,578	2,009	1,796	1,489	1,815	1,395	1,025	1,403	1,160	620	336	(341)	(407)	(852)	(1,251)	(2,461)	(2,766)	(3,070)	(3,373)	(3,676)	(3,980)	(4,283)	(4,588)	(4,895)	(5,203)	(5,514)	(5,828)	(6,146)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	4,734	4,466	4,165	5,221	4,070	3,638	3,015	3,677	2,826	2,077	2,842	2,350	1,255	681	(691)	(825)	(1,725)	(2,533)	(4,985)	(5,603)	(6,219)	(6,833)	(7,447)	(8,061)	(8,676)	(9,294)	(9,915)	(10,540)	(11,170)	(11,806)	(12,448)	-	-	-	
	Annual Interest Cost on New Drawdowns	60	56	53	66	51	46	38	46	36	26	36	30	16	9	(9)	(10)	(22)	(32)	(63)	(71)	(79)	(86)	(94)	(102)	(110)	(117)	(125)	(133)	(141)	(149)	(157)	-	-	-	
	Annual Interest Cost on Opening Balance	-	242	483	721	1,025	1,286	1,537	1,770	2,049	2,299	2,522	2,797	3,060	3,281	3,484	3,626	3,770	3,874	3,943	3,890	3,802	3,678	3,517	3,316	3,073	2,787	2,454	2,072	1,639	1,151	606	(0)	(0)	(0)	
	Total Annual Interest Cost	60	299	536	787	1,076	1,332	1,576	1,817	2,085	2,325	2,558	2,827	3,076	3,290	3,475	3,616	3,748	3,842	3,880	3,819	3,724	3,592	3,423	3,214	2,964	2,669	2,328	1,939	1,498	1,002	449	(0)	(0)	(0)	

Feb8 1c, 30-yr	Average Debt Drawdown	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1c. GA Smoothing for All (Borrow $4.7 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	7,421	7,425	7,440	7,013	6,825	7,042	7,266	7,498	7,736	7,983	8,237	8,499	8,770	9,049	9,337	9,634	9,941	10,258	10,584	10,921	11,269	11,628	11,998	12,380	12,774	13,181	13,601	14,034	14,480	14,941	15,417	2,975	2,831	2,695	
	GA Debt Requirement	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Debt, Beginning of Year	0	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	
	Interest Cost - Feb8 1c, 30-yr	*120*	*358*	*594*	*862*	*1,141*	*1,394*	*1,633*	*1,886*	*2,146*	*2,380*	*2,626*	*2,892*	*3,130*	*3,340*	*3,510*	*3,651*	*3,774*	*3,859*	*3,867*	*3,797*	*3,693*	*3,552*	*3,373*	*3,154*	*2,893*	*2,587*	*2,234*	*1,832*	*1,377*	*867*	*299*	*0*	*0*	*0*	72,823
	Additional GA Debt Drawdown	4,674	4,410	4,112	5,155	4,019	3,592	2,977	3,631	2,791	2,051	2,806	2,320	1,239	673	-683	-814	-1,703	-2,501	-4,922	-5,532	-6,140	-6,747	-7,353	-7,959	-8,567	-9,177	-9,790	-10,407	-11,029	-11,657	-12,291	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	4,794	9,562	14,269	20,286	25,445	30,430	35,041	40,557	45,494	49,925	55,357	60,568	64,938	68,950	71,778	74,615	76,685	78,044	76,989	75,254	72,806	69,612	65,632	60,827	55,153	48,564	41,008	32,433	22,781	11,992	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		4,794	4,768	4,707	6,017	5,160	4,985	4,610	5,516	4,937	4,431	5,432	5,212	4,370	4,012	2,828	2,837	2,071	1,358	-1,055	-1,735	-2,447	-3,195	-3,979	-4,805	-5,674	-6,590	-7,556	-8,575	-9,652	-10,789	-11,992	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1d_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
			52	54	56	73	67	61	51	71	56	42	64	57	36	27	-2	-3	-23	-37	-39	-41	-43	-46	-48	-50	-53	-56	-59	-62	-65	-68	-71	0	0	0	0

	Maximum Fiscal Exposure - Peak	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	3,072	1,649	29,589
Equal Monthly Debt Drawdown	3,145	1,647	

	Feb8 1d, 30-yr, Maximum Accumulated Debt	Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	32,233	2030	21,239
Equal Monthly Debt Drawdown	32,999		

Feb8 1d, 30-yr — End of Year Debt Drawdown

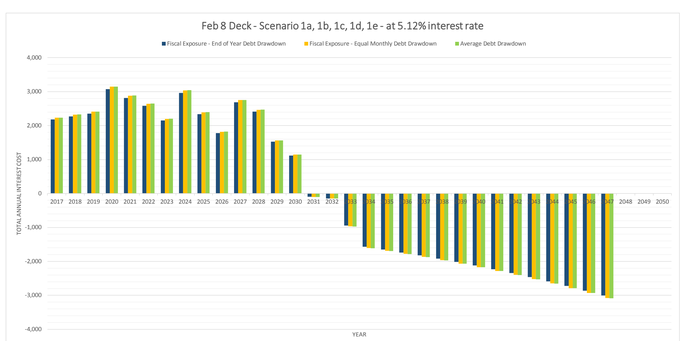
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
a Debt, Beginning of Year	0	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	
c = a*5% *Interest Cost - Feb8 1d, 30-yr - End of Year Debt Drawdown*	*0*	*112*	*228*	*348*	*505*	*649*	*781*	*891*	*1,043*	*1,162*	*1,253*	*1,391*	*1,514*	*1,592*	*1,649*	*1,644*	*1,637*	*1,588*	*1,508*	*1,423*	*1,335*	*1,241*	*1,143*	*1,040*	*931*	*817*	*698*	*572*	*439*	*300*	*154*	*0*	*0*	*0*	29,589
b Additional GA Debt Drawdown, End of Year	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
d = a+b+c Accumulated debt in present year (including 5.12% annual interest)	2,180	4,450	6,803	9,875	12,692	15,272	17,420	20,384	22,719	24,494	27,181	29,590	31,116	32,233	32,135	31,991	31,045	29,473	27,822	26,085	24,260	22,342	20,325	18,206	15,978	13,635	11,173	8,586	5,865	3,006	0	0	0	0	
		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	11,372	11,227	10,281	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,586	5,865	3,006	0	0	0	0	
Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	20,763	20,763	20,763	20,763	19,112	17,375	15,550	13,632	11,616	9,496	7,268	4,926	2,464	0	0	0	0	0	0	0	
Feb8 1d, 30-yr - Accumulated Interest Costs	0	112	339	687	1,193	1,842	2,623	3,514	4,557	5,720	6,973	8,363	9,877	11,469	13,118	14,763	16,399	17,988	19,495	20,919	22,253	23,495	24,638	25,678	26,609	27,426	28,124	28,696	29,135	29,435	29,589				
Feb8 1d, 30-yr - Accumulated Debt Principal	2,180	4,339	6,464	9,188	11,499	13,430	14,796	16,870	18,161	18,774	20,209	21,227	21,239	20,763	19,017	17,228	14,645	11,486	8,326	5,167	2,007	-1,153	-4,312	-7,472	-10,631	-13,791	-16,951	-20,110	-23,270	-26,429	-29,589				
Fiscal Exposure - End of Year Debt Drawdown	2,180	2,270	2,353	3,072	2,817	2,580	2,148	2,965	2,334	1,775	2,687	2,409	1,526	1,117	-97	-145	-946	-1,571	-1,652	-1,736	-1,825	-1,918	-2,017	-2,120	-2,228	-2,342	-2,462	-2,588	-2,720	-2,859	-3,006	0	0	0	

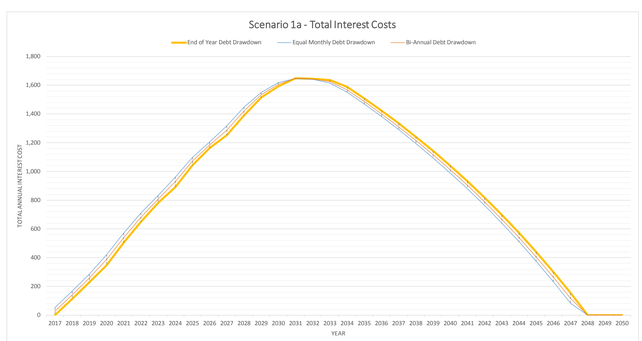
Feb8 1d, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Debt, Beginning of Year	0	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	
1,647 *Interest Cost - Feb8 1d, 30-yr*	*52*	*166*	*284*	*421*	*572*	*711*	*832*	*962*	*1,098*	*1,205*	*1,317*	*1,448*	*1,550*	*1,619*	*1,647*	*1,641*	*1,614*	*1,551*	*1,469*	*1,382*	*1,291*	*1,196*	*1,095*	*989*	*878*	*762*	*639*	*510*	*375*	*232*	*82*	*0*	*0*	*0*	29,589
Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,232	4,556	6,965	10,110	12,993	15,635	17,834	20,869	23,259	25,077	27,828	30,294	31,856	32,999	32,900	32,752	31,783	30,174	28,483	26,706	24,837	22,873	20,809	18,639	16,358	13,960	11,439	8,790	6,005	3,077	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	2,232	2,324	2,409	3,145	2,884	2,641	2,199	3,035	2,390	1,818	2,751	2,466	1,562	1,143	-99	-148	-969	-1,609	-1,691	-1,777	-1,868	-1,964	-2,064	-2,170	-2,281	-2,398	-2,521	-2,649	-2,785	-2,927	-3,077	0	0	0	
Monthly Drawdown	182	180	177	227	193	161	114	173	108	51	120	85	1	(40)	(146)	(149)	(215)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	(263)	-	-	-	
FV of Monthly Drawdown at 5%	2,232	2,210	2,176	2,788	2,366	1,977	1,399	2,123	1,322	628	1,468	1,042	12	(487)	(1,788)	(1,831)	(2,644)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	(3,235)	-	-	-	
Annual Interest Cost on New Drawdowns	52	51	51	65	55	46	33	49	31	15	34	24	0	(11)	(42)	(43)	(61)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	-	-	-	
Annual Interest Cost on Opening Balance	-	114	233	356	517	665	800	912	1,068	1,190	1,283	1,424	1,550	1,630	1,688	1,683	1,676	1,626	1,544	1,457	1,366	1,271	1,170	1,065	954	837	714	585	450	307	157	0	0	0	
Total Annual Interest Cost	52	166	284	421	572	711	832	962	1,098	1,205	1,317	1,448	1,550	1,619	1,647	1,641	1,614	1,551	1,469	1,382	1,291	1,196	1,095	989	878	762	639	510	375	232	82	0	0	0	

Feb8 1d, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1d. GA Smoothing for RPP Only (Borrow $2.2 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	9,915	9,676	9,427	9,445	8,532	8,703	8,877	9,054	9,236	9,420	9,609	9,801	9,997	10,197	10,401	10,609	10,821	10,916	8,822	8,548	8,288	8,040	7,805	7,580	7,367	7,164	6,970	6,786	6,611	6,444	6,286	2,975	2,831	2,695	
GA Debt Requirement	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Debt, Beginning of Year	0	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	
1,647 *Interest Cost - Feb8 1d, 30-yr*	*56*	*170*	*288*	*427*	*577*	*715*	*836*	*967*	*1,103*	*1,208*	*1,322*	*1,452*	*1,553*	*1,621*	*1,647*	*1,640*	*1,613*	*1,548*	*1,466*	*1,379*	*1,288*	*1,192*	*1,091*	*986*	*874*	*758*	*635*	*505*	*370*	*227*	*77*	*0*	*0*	*0*	29,589
Additional GA Debt Drawdown	2,180	2,159	2,125	2,724	2,311	1,931	1,367	2,074	1,291	613	1,434	1,018	12	-475	-1,746	-1,789	-2,583	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	-3,160	0	0	0	
Accumulated debt in present year (including 5% annual interest)	2,236	4,564	6,977	10,128	13,016	15,662	17,865	20,906	23,300	25,121	27,877	30,347	31,912	33,057	32,958	32,809	31,839	30,227	28,533	26,753	24,881	22,913	20,845	18,671	16,386	13,984	11,459	8,805	6,015	3,083	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	2,236	2,328	2,413	3,150	2,889	2,646	2,203	3,041	2,394	1,821	2,756	2,471	1,565	1,145	-100	-148	-970	-1,612	-1,694	-1,781	-1,872	-1,967	-2,068	-2,174	-2,285	-2,402	-2,525	-2,654	-2,790	-2,933	-3,083	0	0	0	





Feb 8 Deck - Scenario 1a, 1b, 1c, 1d, 1e - at 5.12% interest rate

Feb8_1e_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	
			36	37	38	53	46	39	27	45	28	13	33	24	1	-11	-16	-16	-17	-18	-19	-20	-21	-22	-23	-25	-26	-27	-29	-30	-32	-33	-35	0	0	0	0

		Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown	2,243	904	16,239
Equal Monthly Debt Drawdown	2,297	903	

		Occurs in Year:	Total Principal Debt Borrowed
End of Year Debt Drawdown	17,670	2029	12,350
Equal Monthly Debt Drawdown	18,091		

Feb8 1e, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	
c = a*5%	*Interest Cost - Feb8 1e, 30-yr - End of Year Debt Drawdown*		*0*	*77*	*156*	*236*	*351*	*450*	*534*	*592*	*688*	*749*	*778*	*849*	*901*	*904*	*881*	*847*	*812*	*775*	*735*	*694*	*651*	*605*	*558*	*507*	*454*	*399*	*340*	*279*	*214*	*146*	*75*	*0*	*0*	*0*	16,239
b	Additional GA Debt Drawdown, End of Year		1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5.12% annual interest)		1,500	3,042	4,620	6,863	8,794	10,429	11,568	13,457	14,645	15,200	16,588	17,614	17,670	17,225	16,565	15,871	15,142	14,376	13,570	12,723	11,833	10,897	9,914	8,880	7,793	6,651	5,450	4,188	2,861	1,466	0	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	
Feb8 1e, 30-yr - Accumulated Interest Costs			0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	6,605	5,911	5,182	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,188	2,861	1,466	0	0	0	0	
Feb8 1e, 30-yr - Accumulated Debt Principal			1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	9,960	9,960	9,960	9,960	9,155	8,308	7,418	6,482	5,498	4,465	3,378	2,235	1,035	0	0	0	0	0	0	0	
Feb8 1e, 30-yr - Accumulated Interest Costs			0	77	232	469	820	1,270	1,803	2,395	3,084	3,833	4,611	5,459	6,360	7,264	8,146	8,993	9,805	10,580	11,315	12,010	12,661	13,266	13,824	14,331	14,785	15,184	15,524	15,803	16,017	16,164	16,239				
Feb8 1e, 30-yr - Accumulated Debt Principal			1,500	2,965	4,388	6,394	7,974	9,159	9,764	11,062	11,561	11,367	11,977	12,155	11,310	9,960	8,419	6,878	5,337	3,796	2,255	714	-827	-2,369	-3,910	-5,451	-6,992	-8,533	-10,074	-11,615	-13,156	-14,697	-16,239				
Fiscal Exposure - End of Year Debt Drawdown			1,500	1,542	1,578	2,243	1,931	1,635	1,139	1,889	1,188	555	1,388	1,027	56	-446	-660	-694	-729	-766	-806	-847	-890	-936	-984	-1,034	-1,087	-1,142	-1,201	-1,262	-1,327	-1,395	-1,466	0	0	0	

Feb8 1e, 30-yr — Equal Monthly Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	
Interest Cost - Feb8 1e, 30-yr			*36*	*113*	*193*	*290*	*397*	*489*	*561*	*637*	*717*	*762*	*811*	*873*	*903*	*893*	*866*	*831*	*795*	*756*	*716*	*674*	*630*	*583*	*534*	*483*	*428*	*372*	*312*	*249*	*183*	*113*	*40*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown			1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)			1,536	3,114	4,730	7,026	9,003	10,677	11,843	13,777	14,993	15,561	16,982	18,033	18,091	17,635	16,959	16,249	15,502	14,718	13,893	13,026	12,115	11,157	10,150	9,091	7,979	6,809	5,580	4,287	2,929	1,501	0	0	0	0
Fiscal Exposure - Equal Monthly Debt Drawdown			1,536	1,578	1,616	2,297	1,977	1,673	1,166	1,934	1,216	568	1,421	1,051	57	-456	-676	-710	-746	-785	-825	-867	-911	-958	-1,007	-1,058	-1,113	-1,170	-1,229	-1,292	-1,358	-1,428	-1,501	0	0	0	
Monthly Drawdown			125	122	119	167	132	99	50	108	42	(16)	51	15	(70)	(112)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	-	-	-	
FV of Monthly Drawdown at 5%			1,536	1,500	1,457	2,055	1,617	1,213	620	1,328	512	(199)	625	182	(865)	(1,382)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	(1,578)	-	-	-	
Annual Interest Cost on New Drawdowns			36	35	34	48	38	28	14	31	12	(5)	15	4	(20)	(32)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	-	-	-	
Annual Interest Cost on Opening Balance			-	79	159	242	359	461	546	606	705	767	796	869	923	926	902	868	831	793	753	711	666	620	571	519	465	408	348	285	219	150	77	0	0	0	
Total Annual Interest Cost			36	113	193	290	397	489	561	637	717	762	811	873	903	893	866	831	795	756	716	674	630	583	534	483	428	372	312	249	183	113	40	0	0	0	

Feb8 1e, 30-yr — Bi-Annual Debt Drawdown

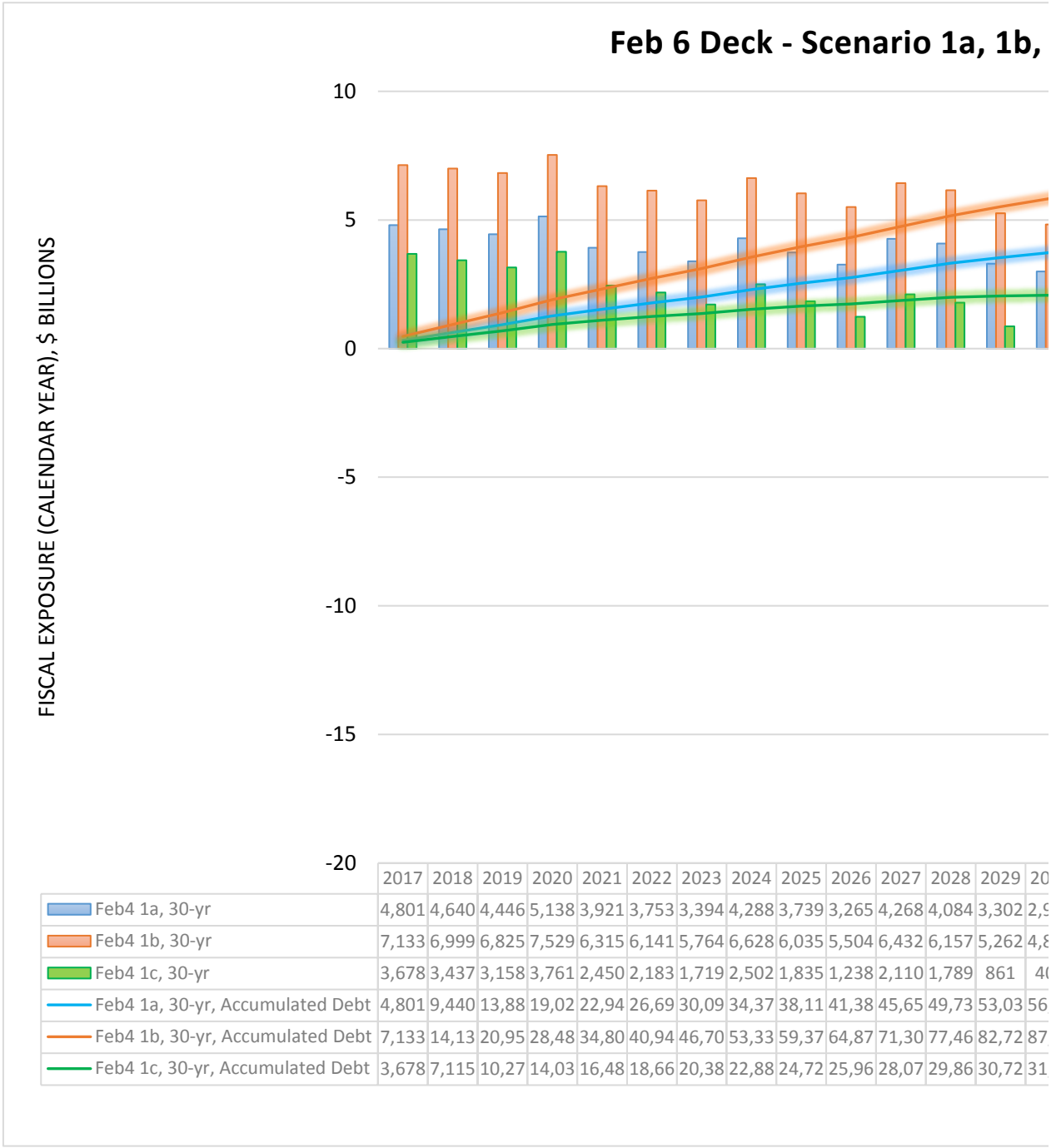
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	
Interest Cost - Feb8 1e, 30-yr			*19*	*96*	*176*	*265*	*376*	*471*	*548*	*616*	*704*	*756*	*795*	*862*	*902*	*898*	*873*	*839*	*803*	*765*	*725*	*683*	*640*	*593*	*545*	*494*	*440*	*384*	*325*	*263*	*197*	*129*	*56*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown			1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)			1,519	3,080	4,679	6,951	8,907	10,562	11,716	13,629	14,832	15,394	16,800	17,840	17,896	17,445	16,777	16,074	15,336	14,560	13,744	12,886	11,985	11,037	10,041	8,994	7,893	6,736	5,520	4,241	2,897	1,485	0	0	0	0
Fiscal Exposure - Bi-Annual Debt Drawdown			1,519	1,561	1,598	2,272	1,956	1,655	1,154	1,913	1,203	562	1,406	1,040	57	-451	-668	-703	-738	-776	-816	-858	-902	-948	-996	-1,047	-1,101	-1,157	-1,216	-1,278	-1,344	-1,413	-1,485	0	0	0	
Bi-Annual Drawdown			750	733	711	1,003	790	592	303	649	250	(97)	305	89	(423)	(675)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	(771)	-	-	-	
FV of Bi-Annual Drawdown at 5%			1,519	1,484	1,441	2,033	1,600	1,200	613	1,314	506	(197)	618	180	(856)	(1,367)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	(1,561)	-	-	-	
Annual Interest Cost on New Drawdowns			19	19	18	26	20	15	8	17	6	(2)	8	2	(11)	(17)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	-	-	-	
Annual Interest Cost on Opening Balance			-	78	158	239	356	456	540	599	697	759	788	860	913	916	893	858	822	785	745	703	659	613	565	514	460	404	345	282	217	148	76	0	0	0	
Total Annual Interest Cost			19	96	176	265	376	471	548	616	704	756	795	862	902	898	873	839	803	765	725	683	640	593	545	494	440	384	325	263	197	129	56	0	0	0	

Feb8 1e, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1e. GA Smoothing for RPP Only (Borrow $1.5 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	10,596	10,370	10,129	10,162	9,264	9,449	9,638	9,831	10,027	10,228	10,432	10,641	10,854	11,071	10,196	10,361	9,779	9,298	7,203	6,930	6,670	6,422	6,186	5,962	5,748	5,545	5,352	5,168	4,993	4,826	4,667	2,975	2,831	2,695	
GA Debt Requirement	1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Debt, Beginning of Year	0	1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	
Interest Cost - Feb8 1e, 30-yr			*38*	*116*	*196*	*294*	*401*	*492*	*563*	*640*	*719*	*763*	*813*	*875*	*903*	*893*	*864*	*830*	*793*	*755*	*715*	*673*	*628*	*581*	*532*	*481*	*427*	*369*	*310*	*247*	*180*	*111*	*38*	*0*	*0*	*0*	16,239
Additional GA Debt Drawdown			1,500	1,465	1,423	2,007	1,580	1,185	605	1,297	500	-195	610	178	-845	-1,350	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	-1,541	0	0	0	
Accumulated debt in present year (including 5% annual interest)			1,538	3,119	4,738	7,039	9,019	10,695	11,864	13,801	15,020	15,589	17,012	18,065	18,122	17,665	16,989	16,277	15,530	14,744	13,917	13,049	12,136	11,176	10,167	9,107	7,993	6,821	5,589	4,295	2,934	1,504	0	0	0	0
Fiscal Exposure - Average Debt Drawdown			1,538	1,581	1,619	2,301	1,980	1,676	1,168	1,938	1,219	569	1,424	1,053	57	-457	-677	-711	-748	-786	-826	-869	-913	-960	-1,009	-1,060	-1,115	-1,172	-1,232	-1,295	-1,361	-1,430	-1,504	0	0	0	

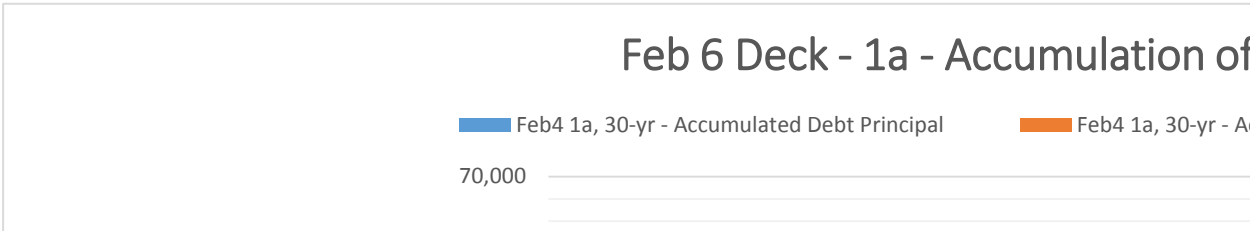
Feb 6 Deck

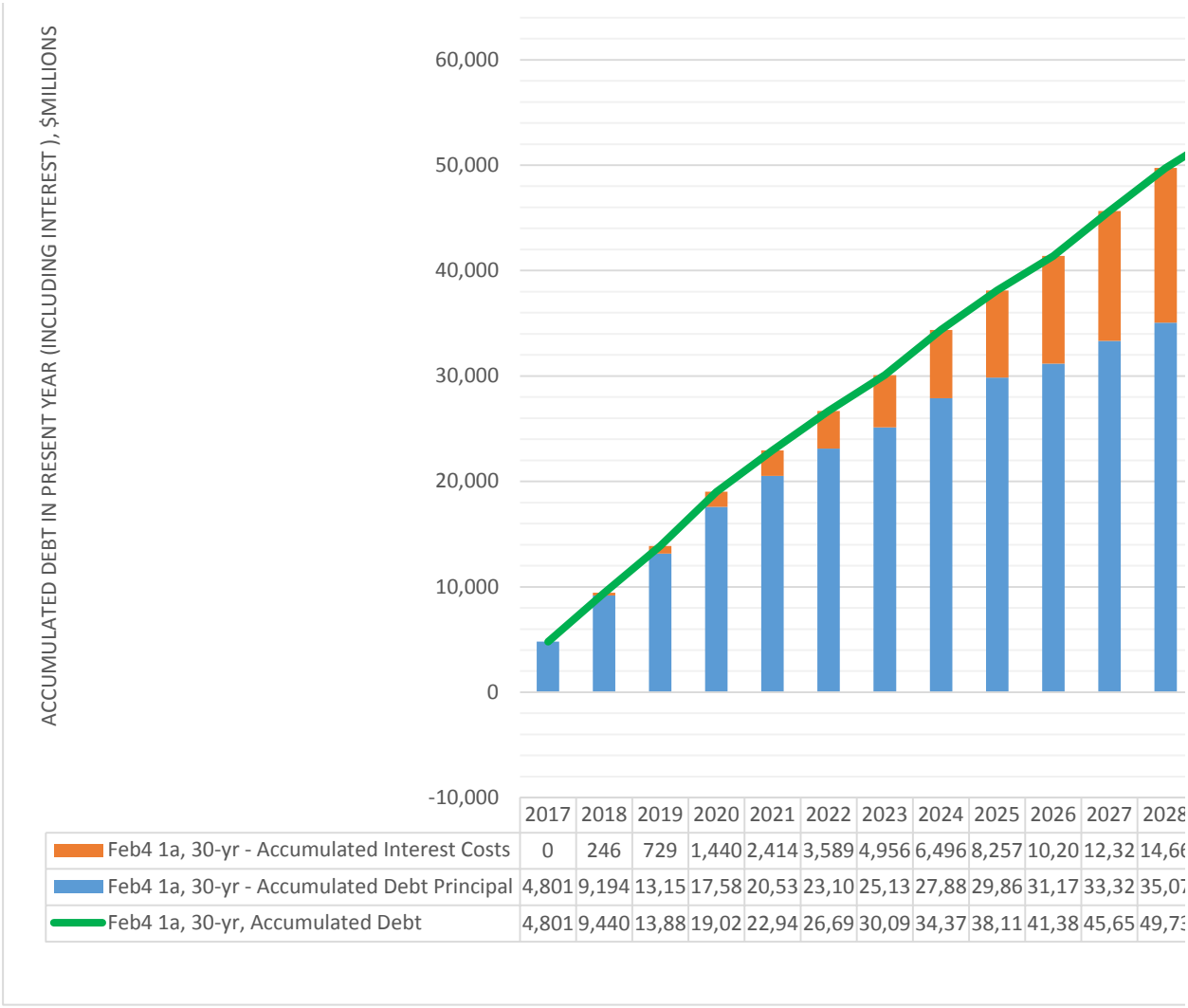
Feb 6 Deck - Scenario 1a, 1b, 1c - at 5.12% interest rate



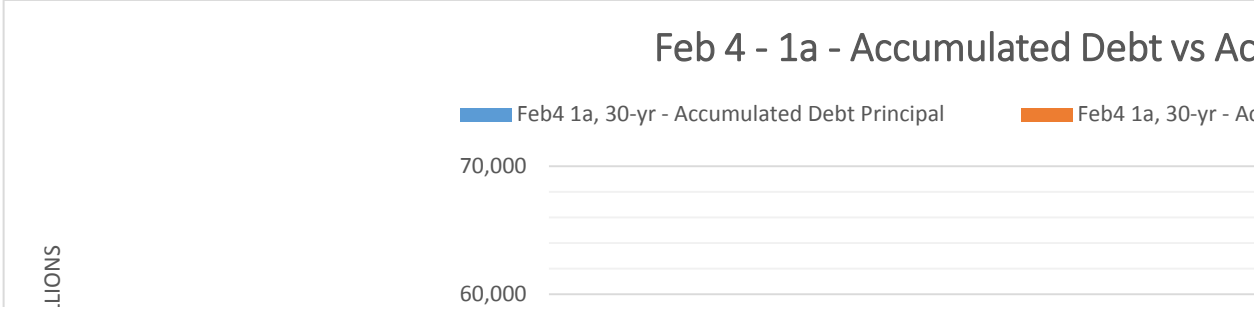
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	20
Feb4 1a, 30-yr	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,9
Feb4 1b, 30-yr	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,8
Feb4 1c, 30-yr	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	4(
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73	53,03	56
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31

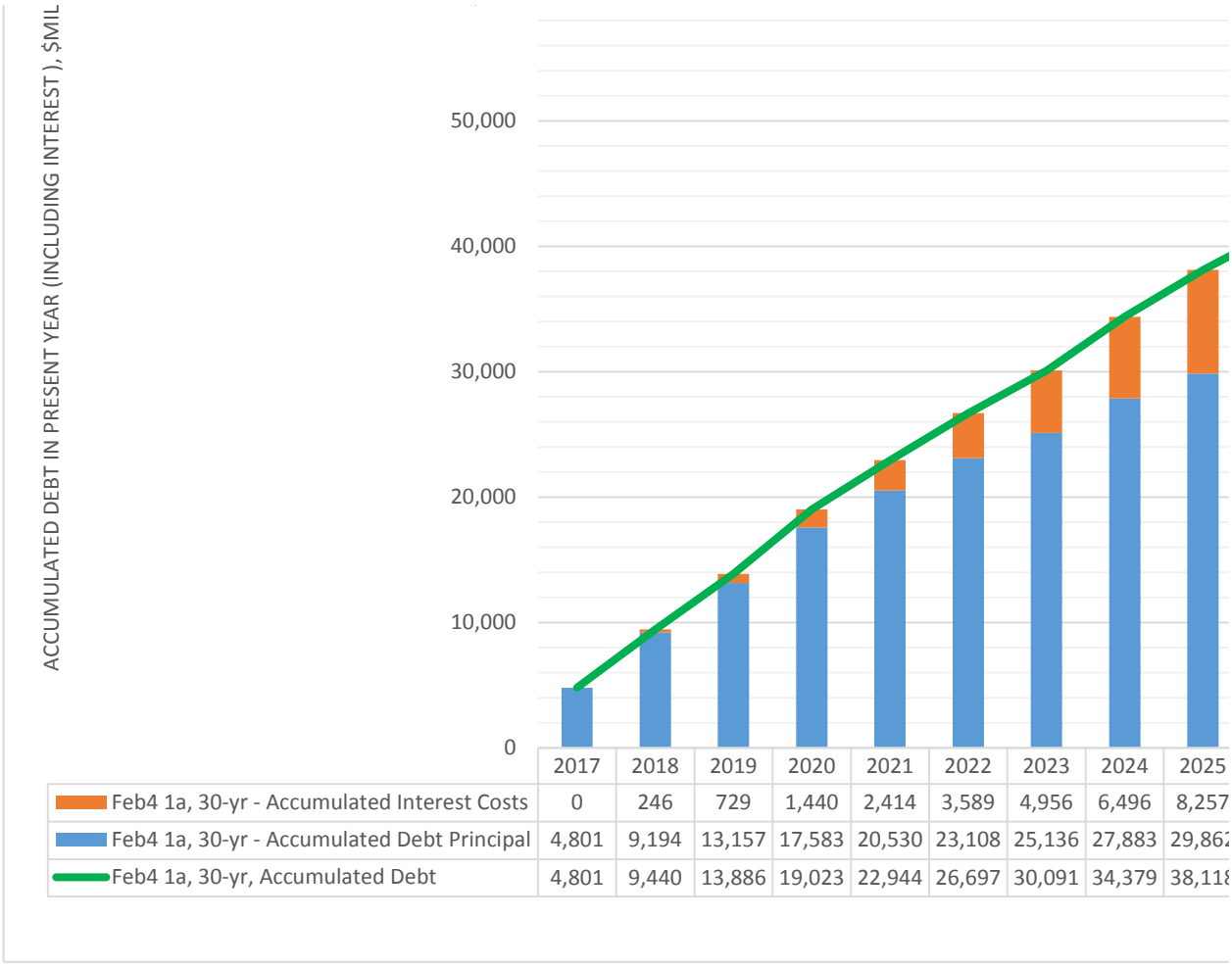
Feb 6 Deck - 1a - Accumulation of Debt (Principal and Interest)



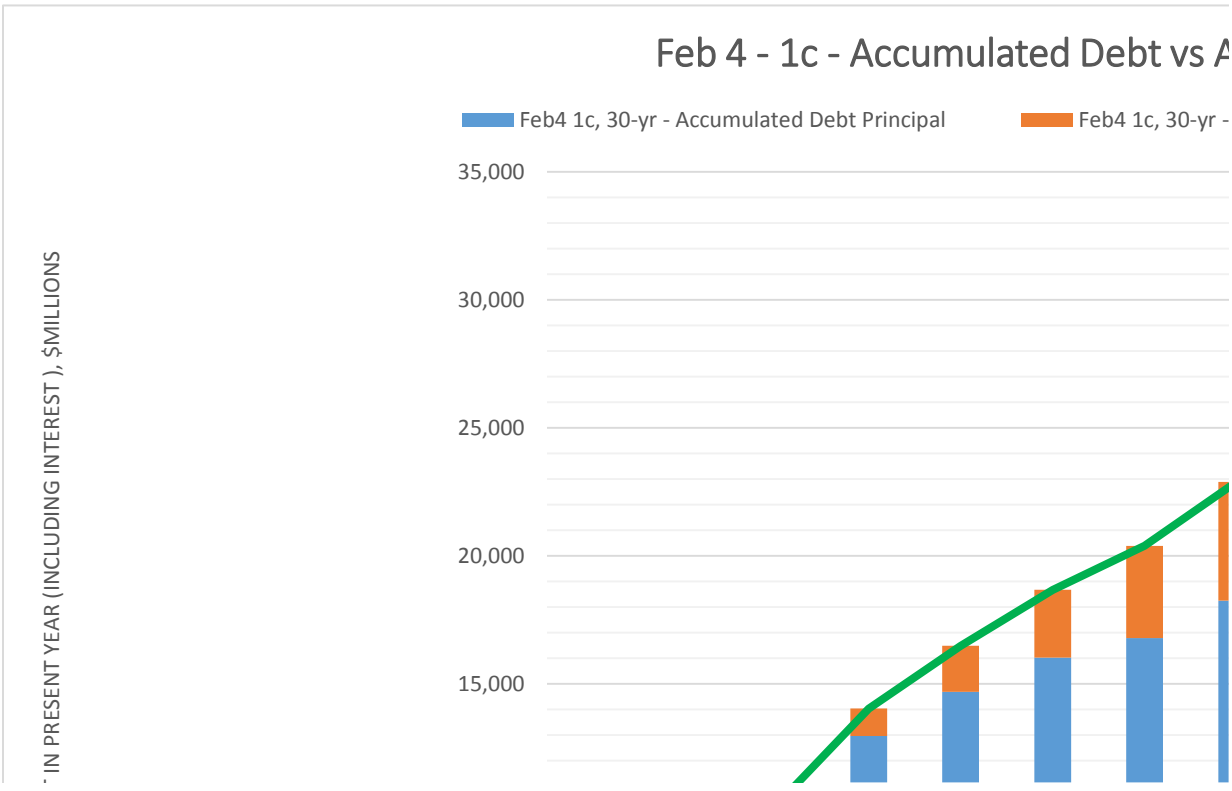


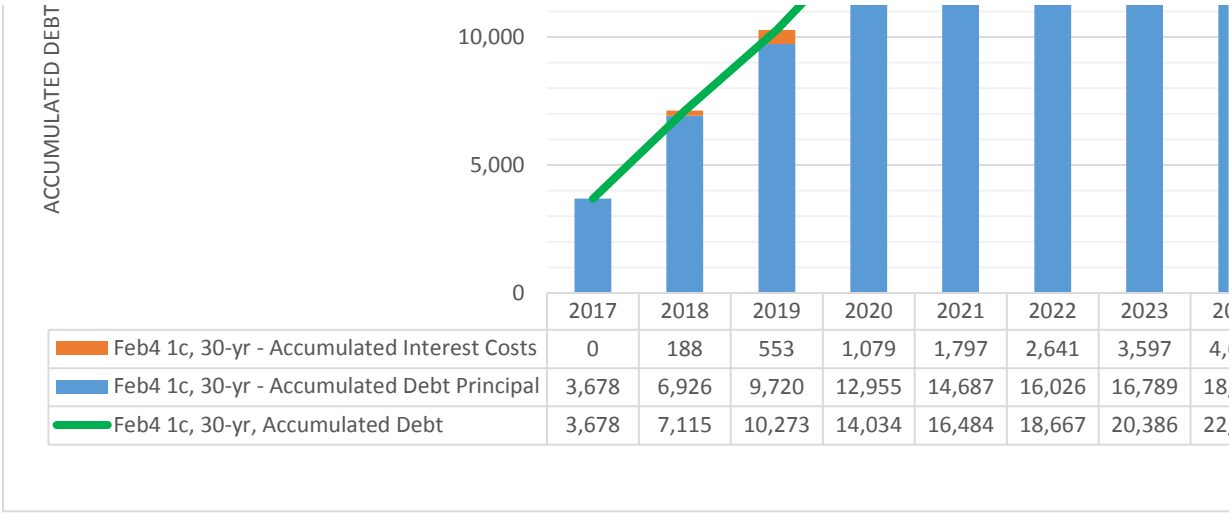
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,20	12,32	14,66
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,15	17,58	20,53	23,10	25,13	27,88	29,86	31,17	33,32	35,07
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,88	19,02	22,94	26,69	30,09	34,37	38,11	41,38	45,65	49,73



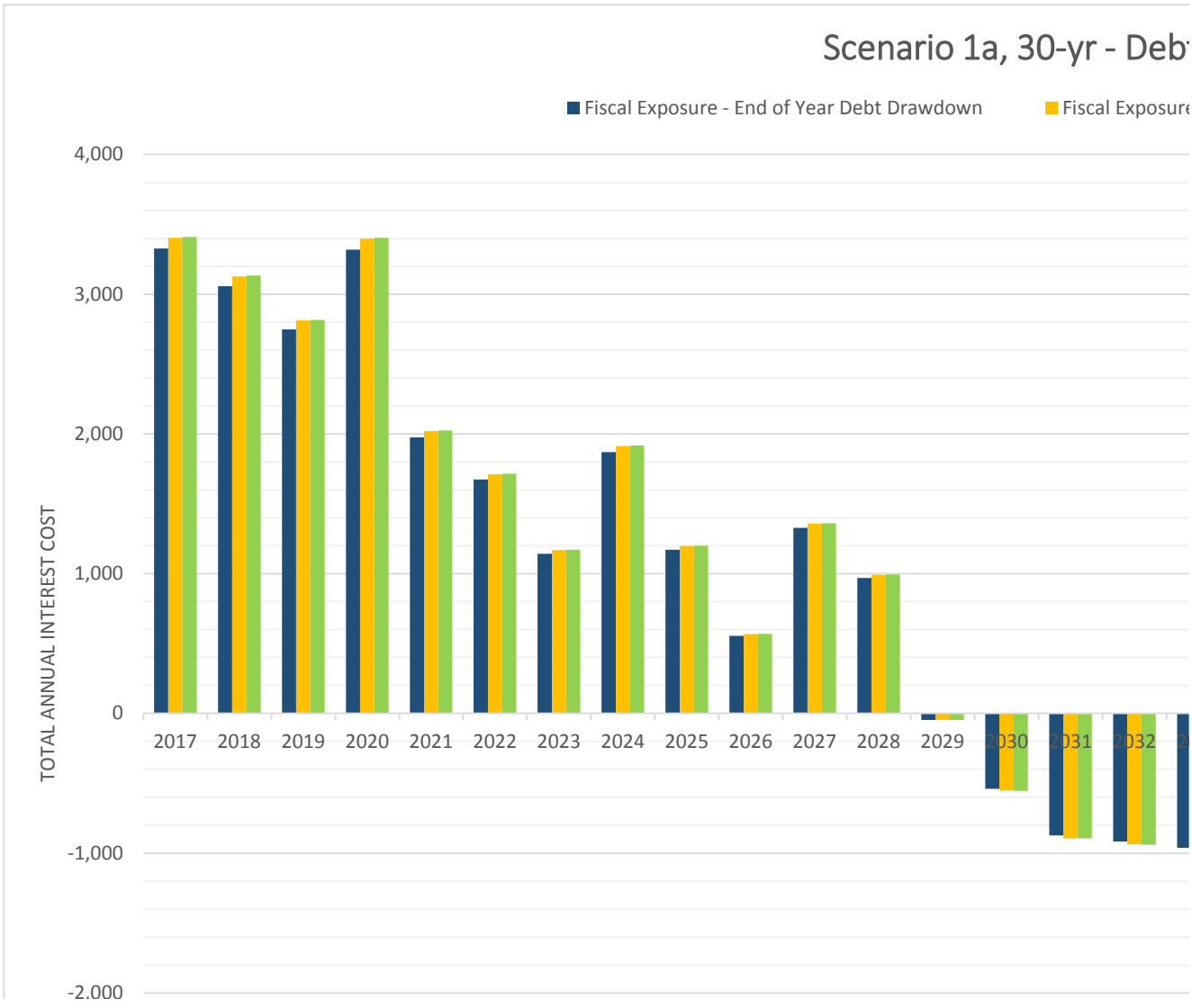


	2017	2018	2019	2020	2021	2022	2023	2024	2025
Feb4 1a, 30-yr - Accumulated Interest Costs	0	246	729	1,440	2,414	3,589	4,956	6,496	8,257
Feb4 1a, 30-yr - Accumulated Debt Principal	4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862
Feb4 1a, 30-yr, Accumulated Debt	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118



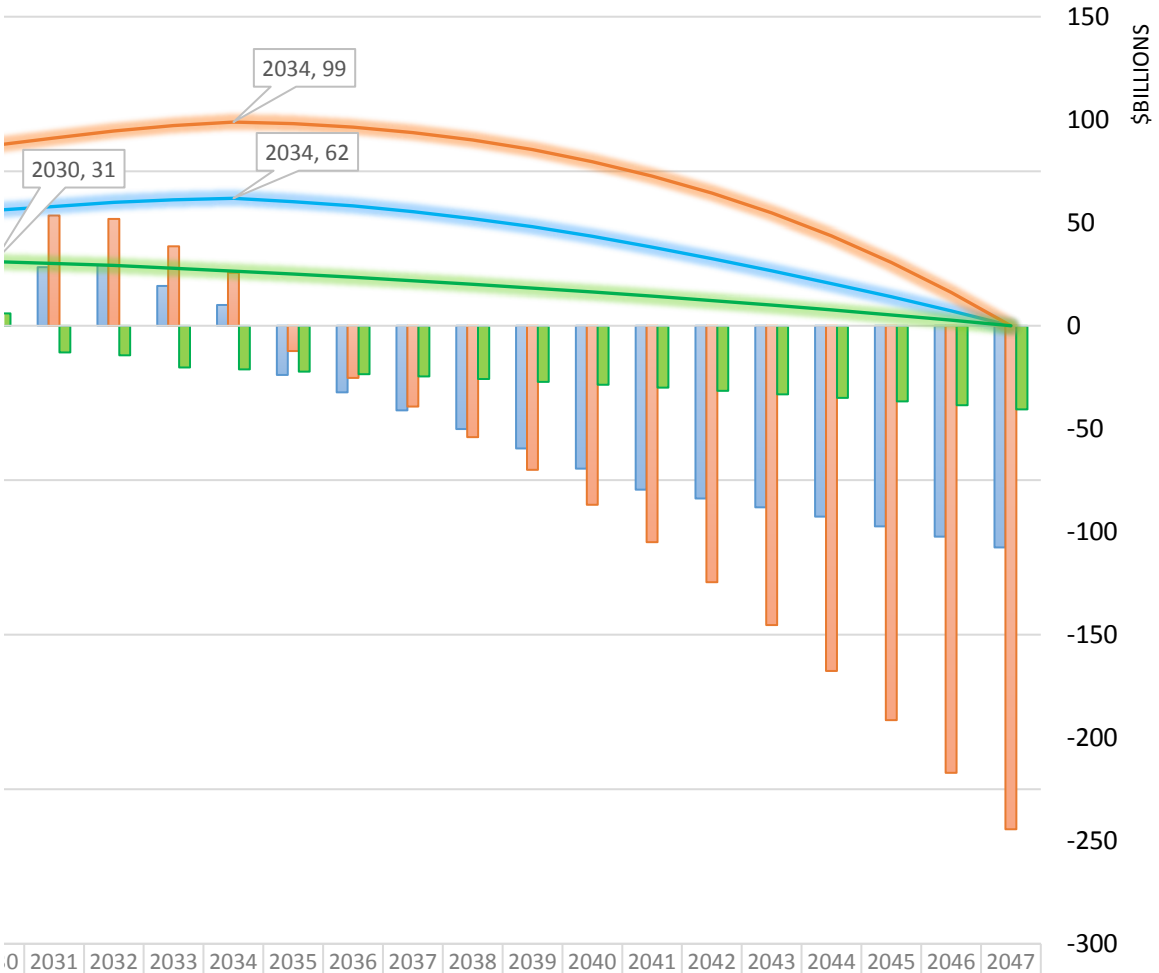


	2017	2018	2019	2020	2021	2022	2023	2(
Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,
Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18
Feb4 1c, 30-yr, Accumulated Debt	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22



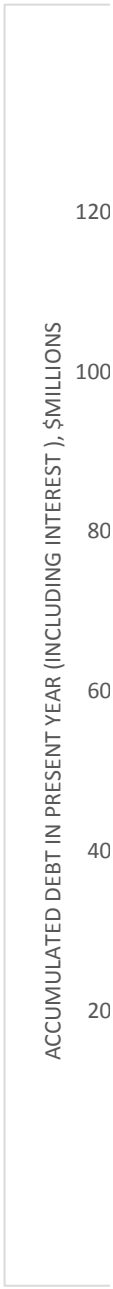

-3,000

lc - at 5.12% interest rate



0	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
98	1,896	1,966	1,288	672	-1,59	-2,15	-2,73	-3,34	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
26	3,568	3,457	2,571	1,716	-819	-1,68	-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
4	-860	-961	-1,34	-1,41	-1,48	-1,56	-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0
55	91,12	94,57	97,14	98,86	98,04	96,35	93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0
12	30,26	29,30	27,95	26,54	25,05	23,49	21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

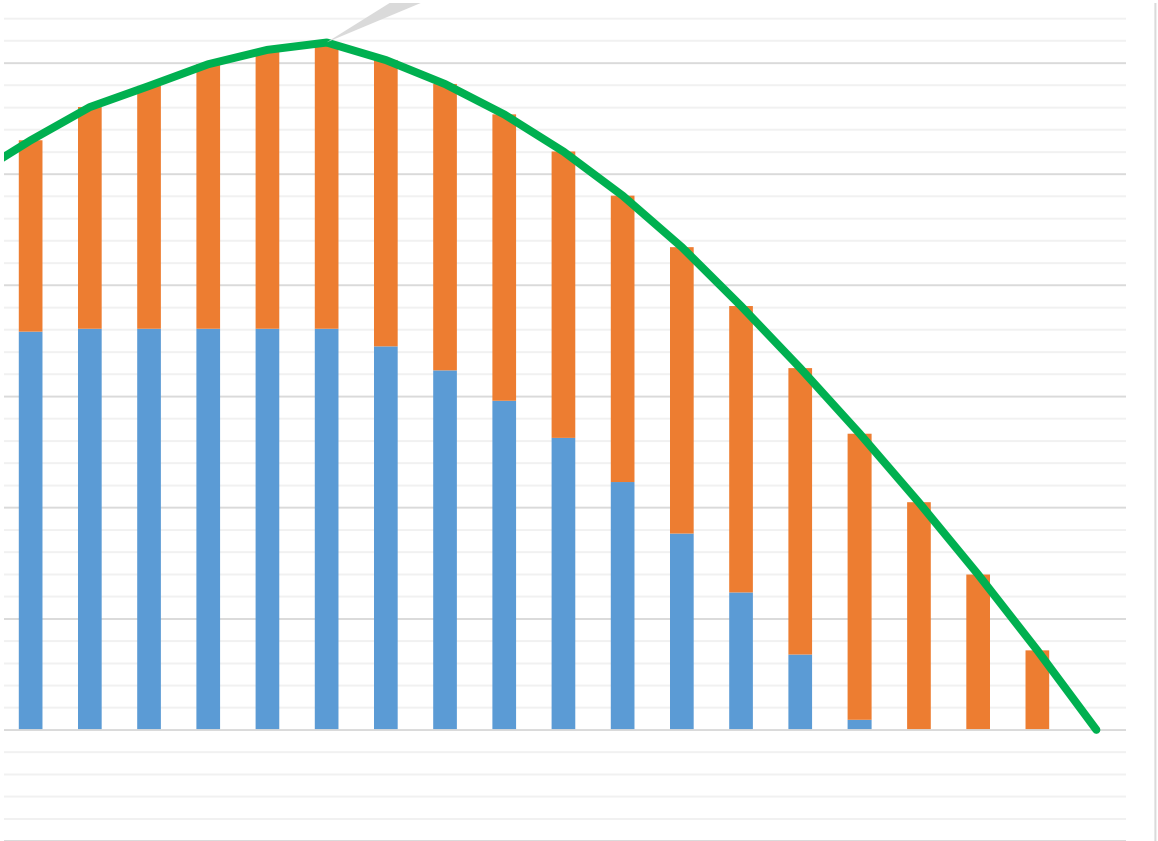
CALENDAR YEAR



Debt (Principal and Interest)

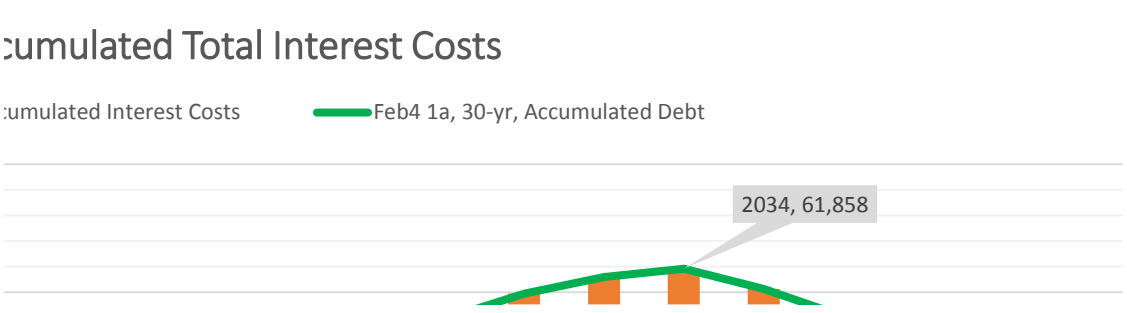
cumulated Interest Costs — Feb4 1a, 30-yr, Accumulated Debt

2034, 61,858

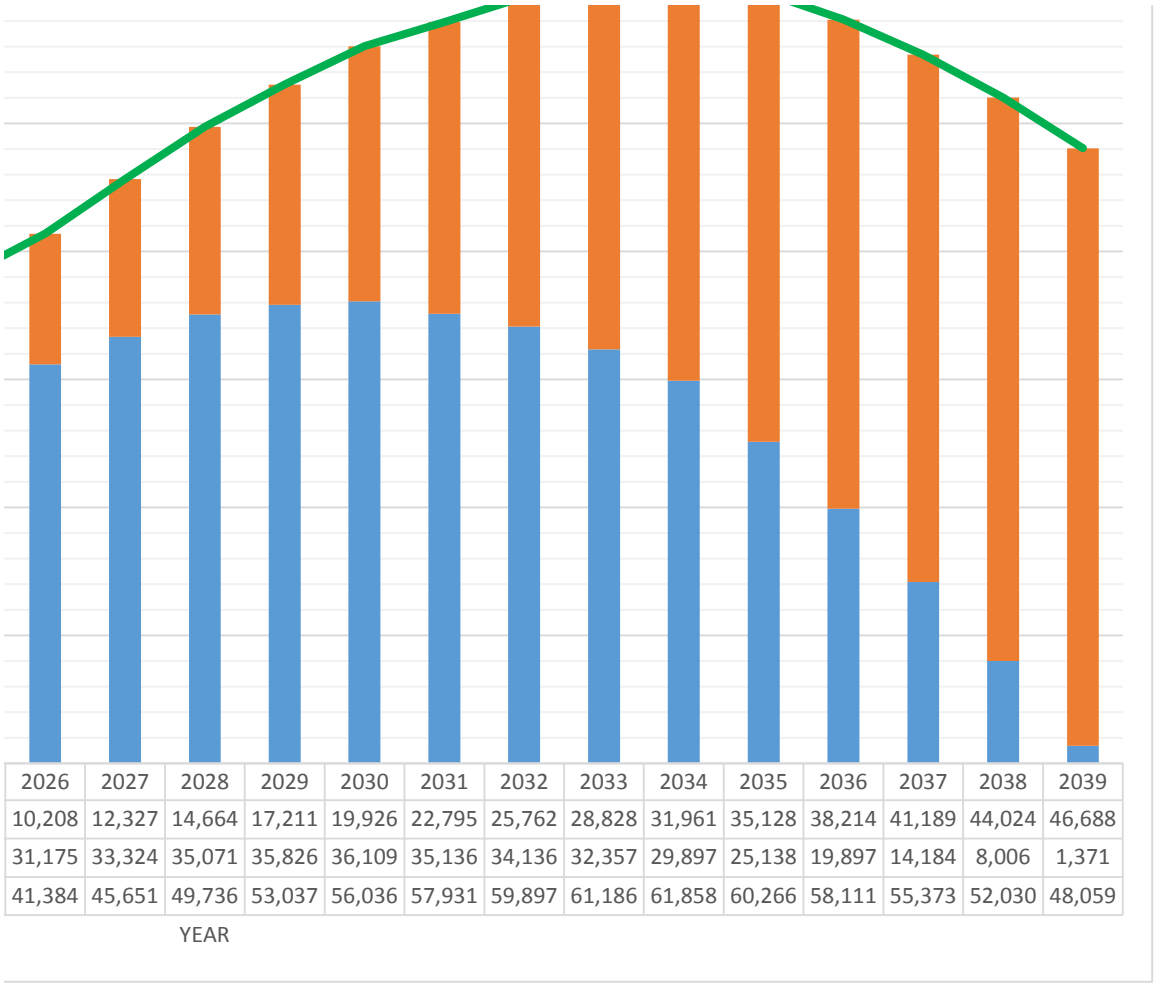


2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
17,21	19,92	21,82	23,78	25,07	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	25,74	20,49	13,99	7,173	0
35,82	36,10	36,10	36,10	36,10	36,10	34,51	32,36	29,62	26,28	22,31	17,68	12,38	6,793	918	0	0	0	0
53,03	56,03	57,93	59,89	61,18	61,85	60,26	58,11	55,37	52,03	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0

YEAR



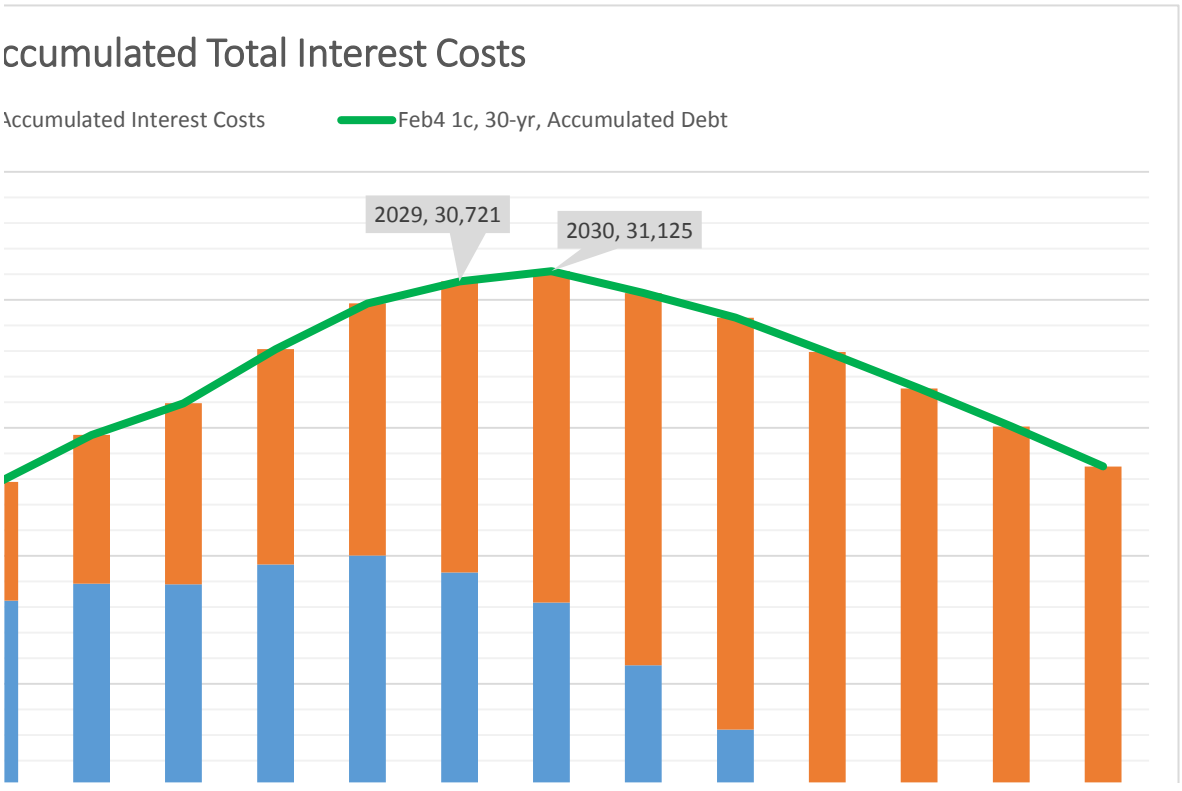
LIONS

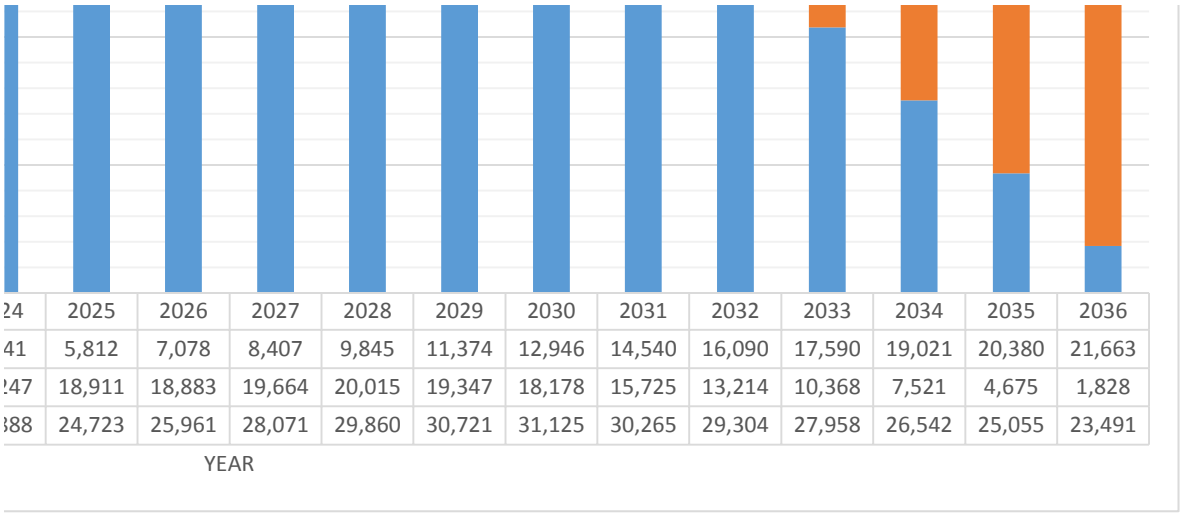


2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688
31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371
41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059

YEAR

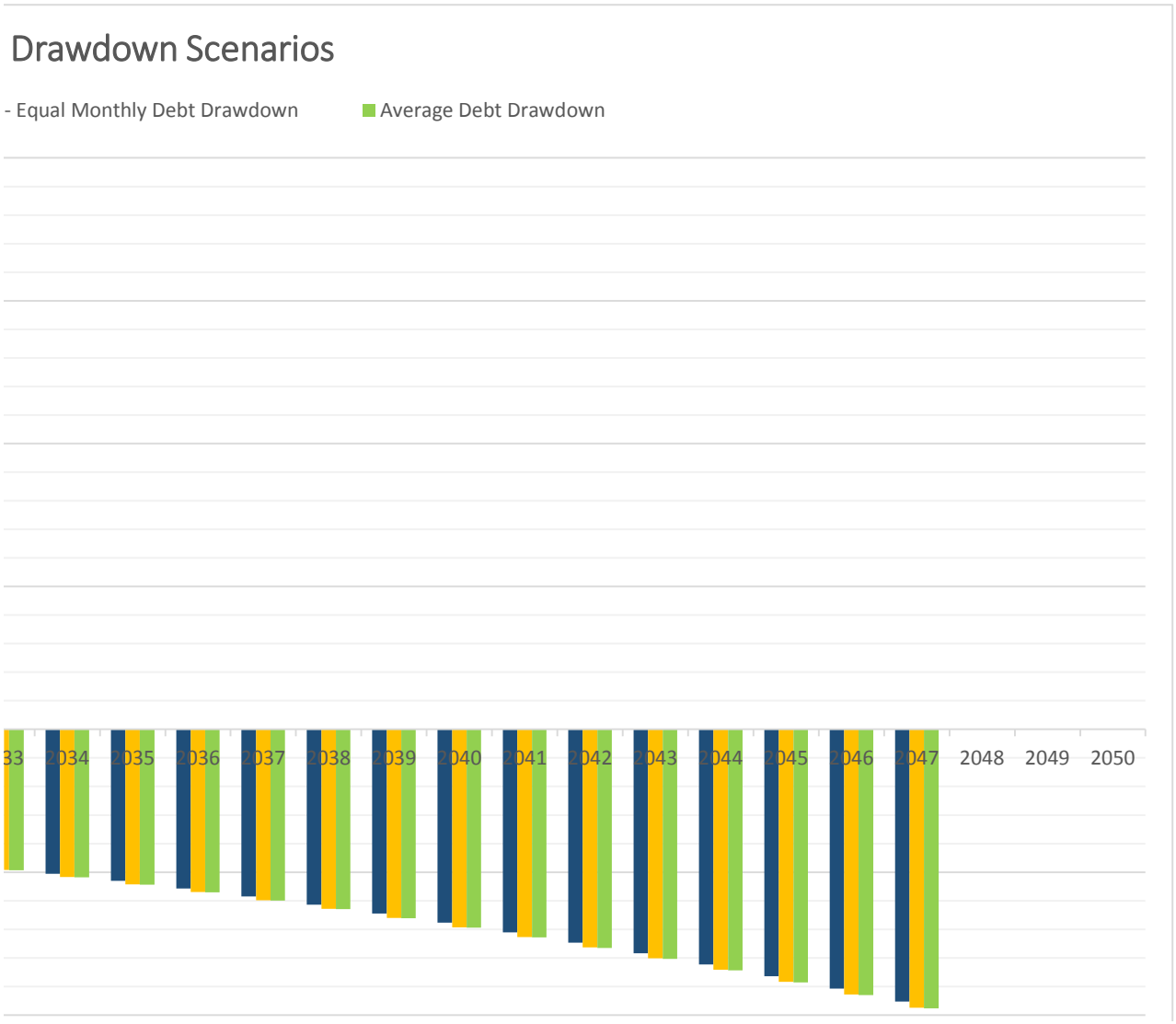
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MIL





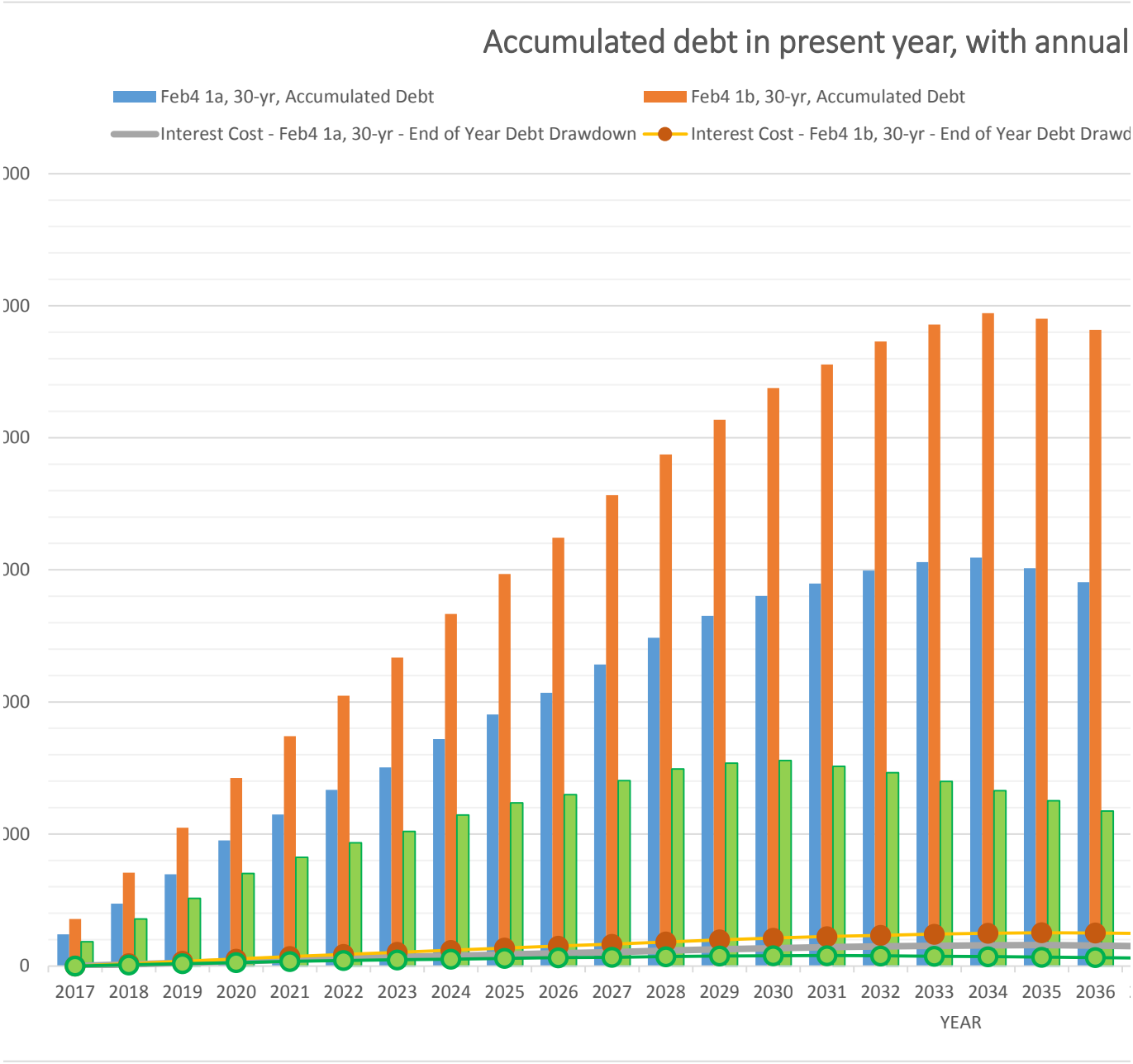
24	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
41	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663
247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828
388	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491

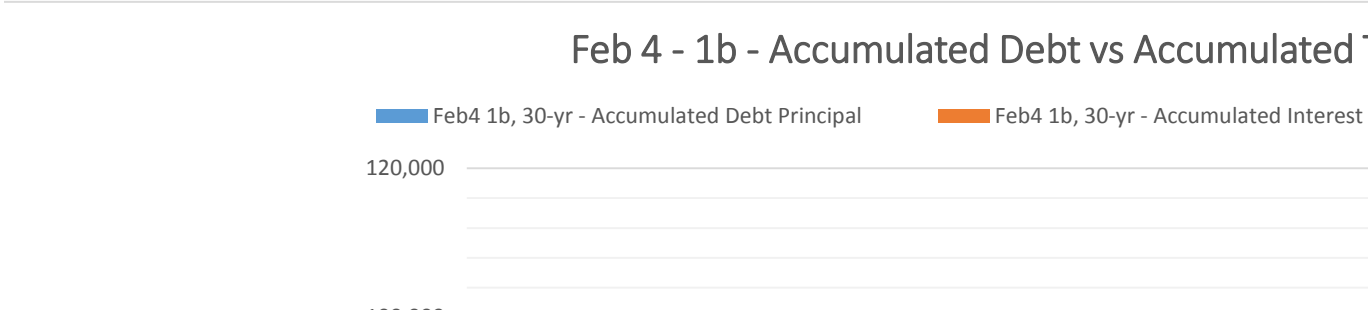
YEAR

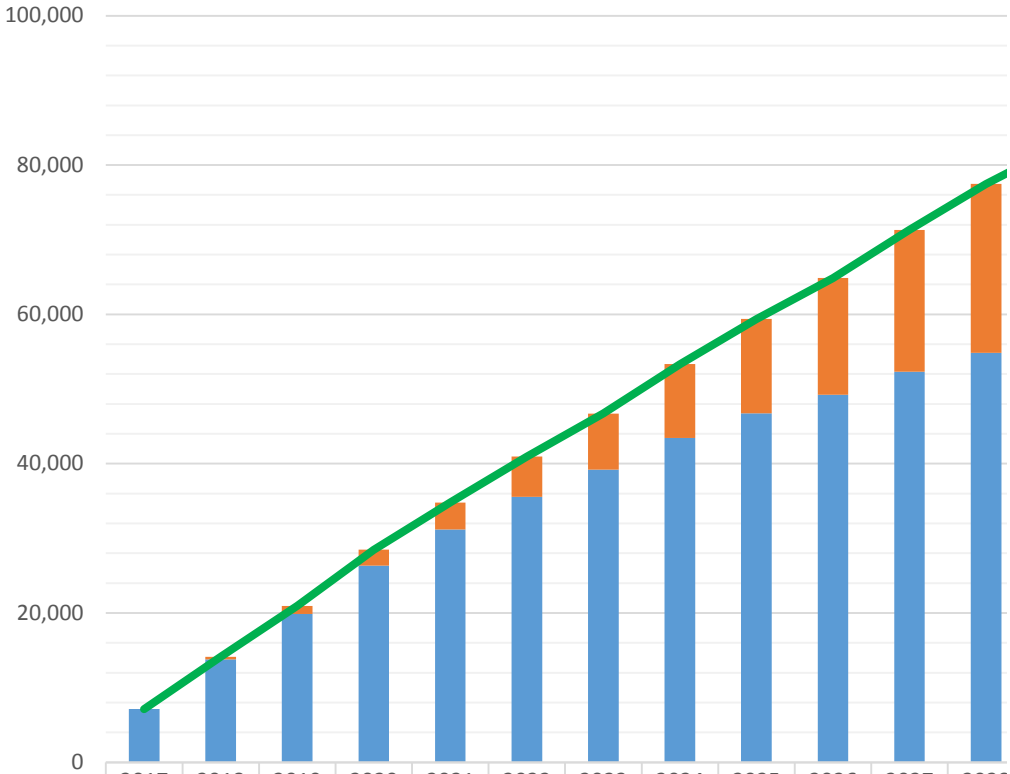


YEAR

ɜ - 25 year and 30 year Financing Terms, at 5% interest rate

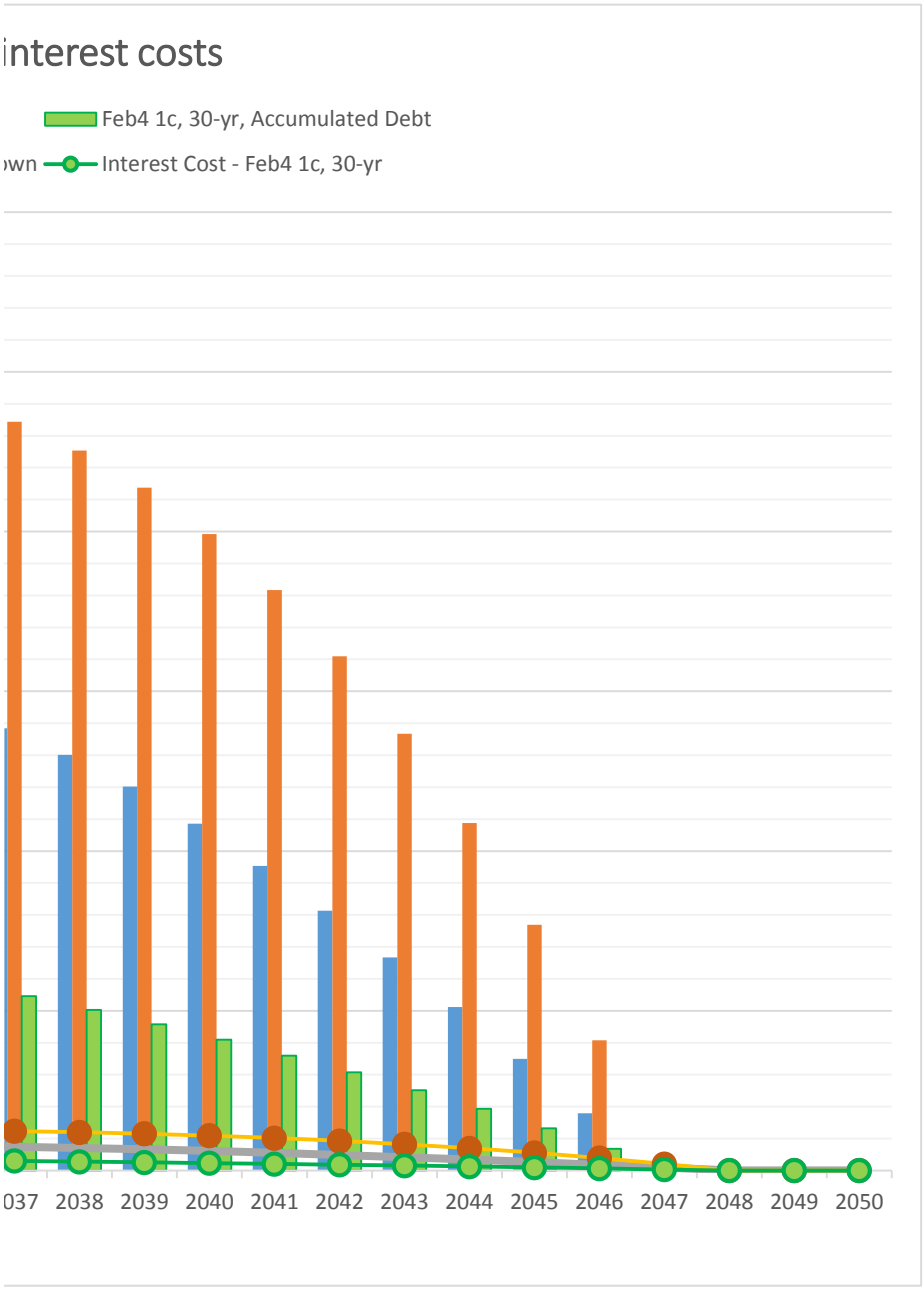


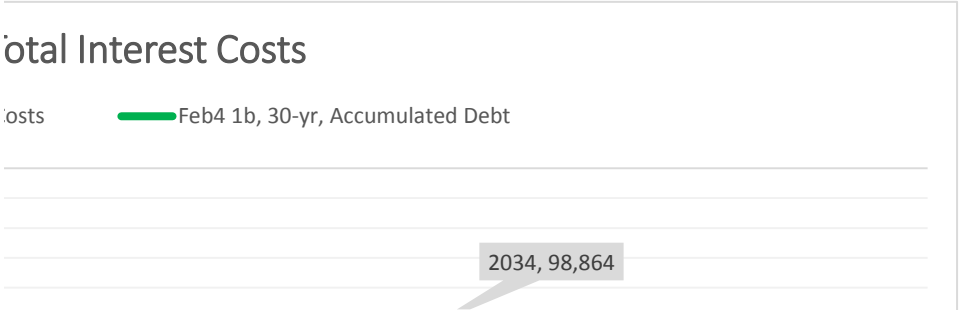

Feb 4 - 1b - Accumulated Debt vs Accumulated
Feb4 1b, 30-yr - Accumulated Debt Principal
Feb4 1b, 30-yr - Accumulated Interest
120,000

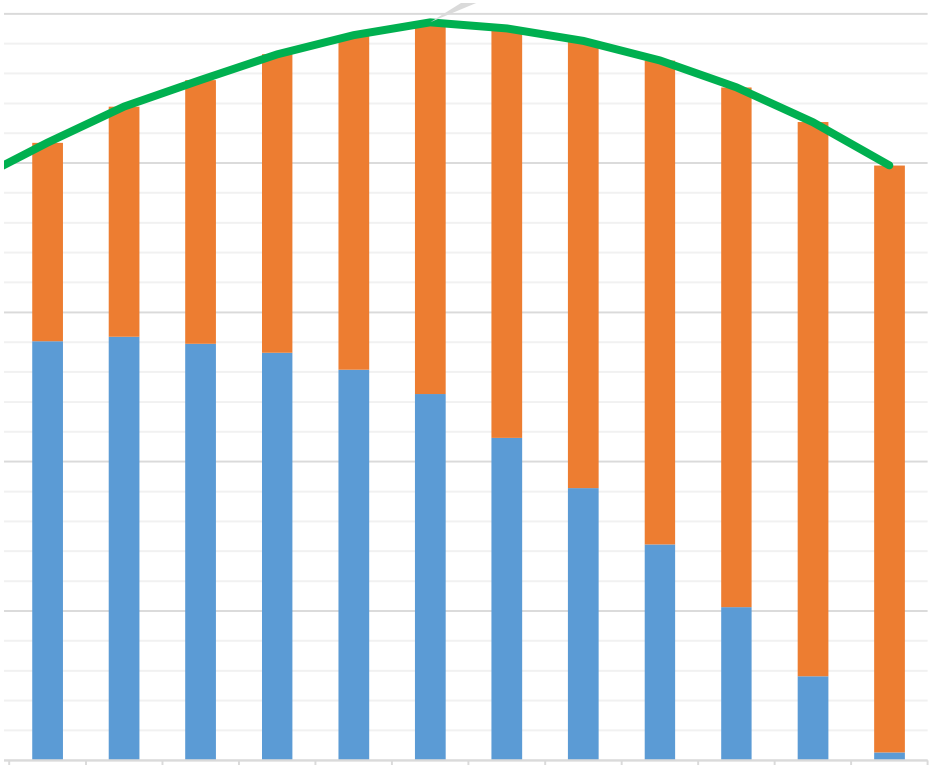


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,63
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,83
Feb4 1b, 30-yr, Accumulated Debt	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,46

Y


interest costs
Feb4 1c, 30-yr, Accumulated Debt
wn
Interest Cost - Feb4 1c, 30-yr
037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050


otal Interest Costs
osts
Feb4 1b, 30-yr, Accumulated Debt
2034, 98,864



2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606
56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076
82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682

:AR

Feb4 1b, 30-yr, Accumula

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1a, 30-yr

Feb4 1a, 30-yr, Accumulate

FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

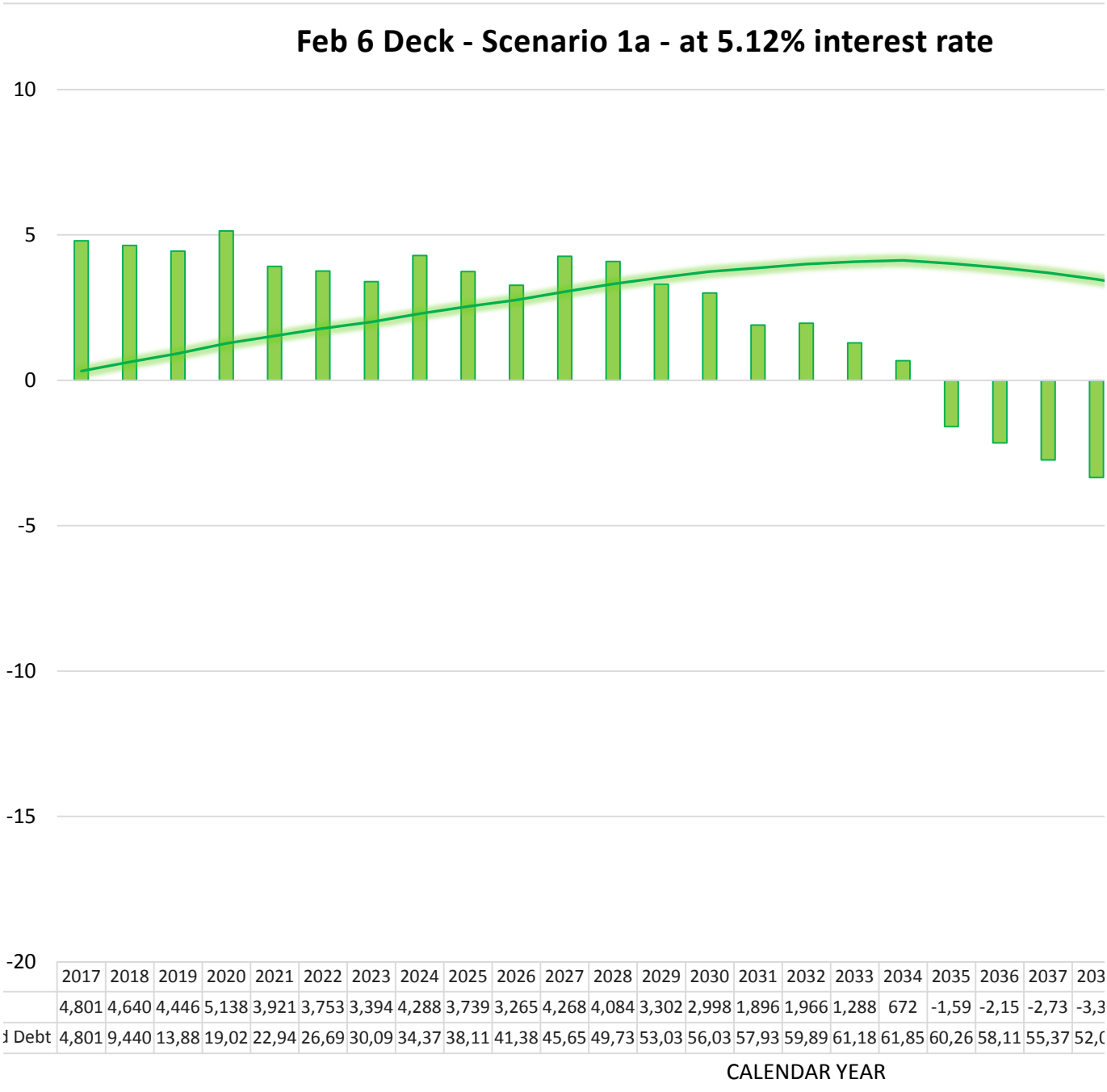
Feb4 1b, 30-yr

Feb4 1b, 30-yr,

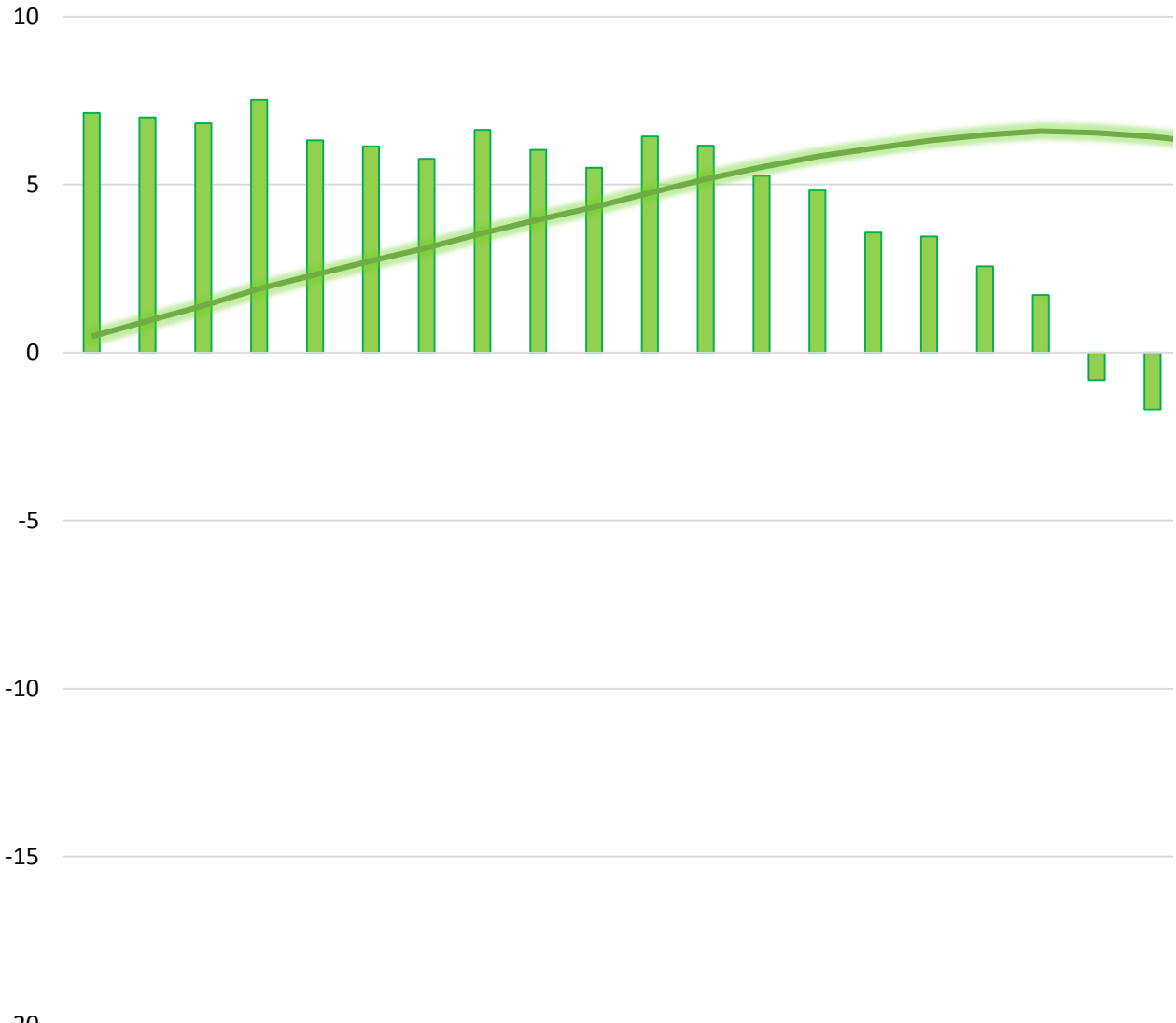
FISCAL EXPOSURE (CALENDAR YEAR), $ BILLIONS

Feb4 1c, 30-yr

Feb4 1c, 30-yr,


Feb 6 Deck - Scenario 1a - at 5.12% interest rate
10
5
0
-5
-10
-15
-20
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 203
4,801 4,640 4,446 5,138 3,921 3,753 3,394 4,288 3,739 3,265 4,268 4,084 3,302 2,998 1,896 1,966 1,288 672 -1,59 -2,15 -2,73 -3,3
Debt 4,801 9,440 13,88 19,02 22,94 26,69 30,09 34,37 38,11 41,38 45,65 49,73 53,03 56,03 57,93 59,89 61,18 61,85 60,26 58,11 55,37 52,(
CALENDAR YEAR

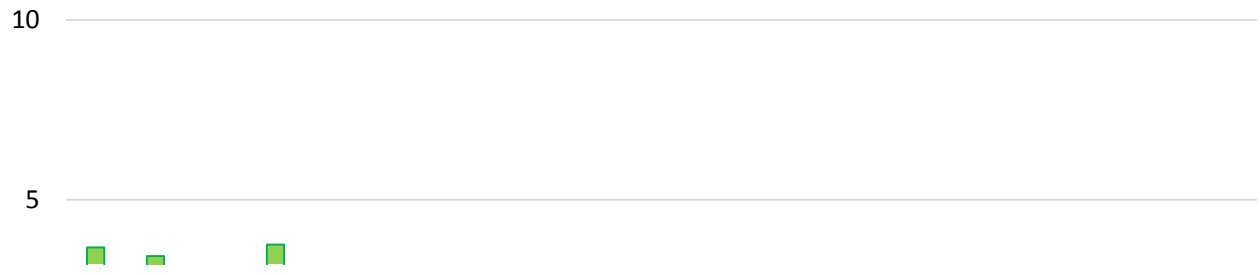
Feb 6 Deck - Scenario 1b - at 5.12% interest rat

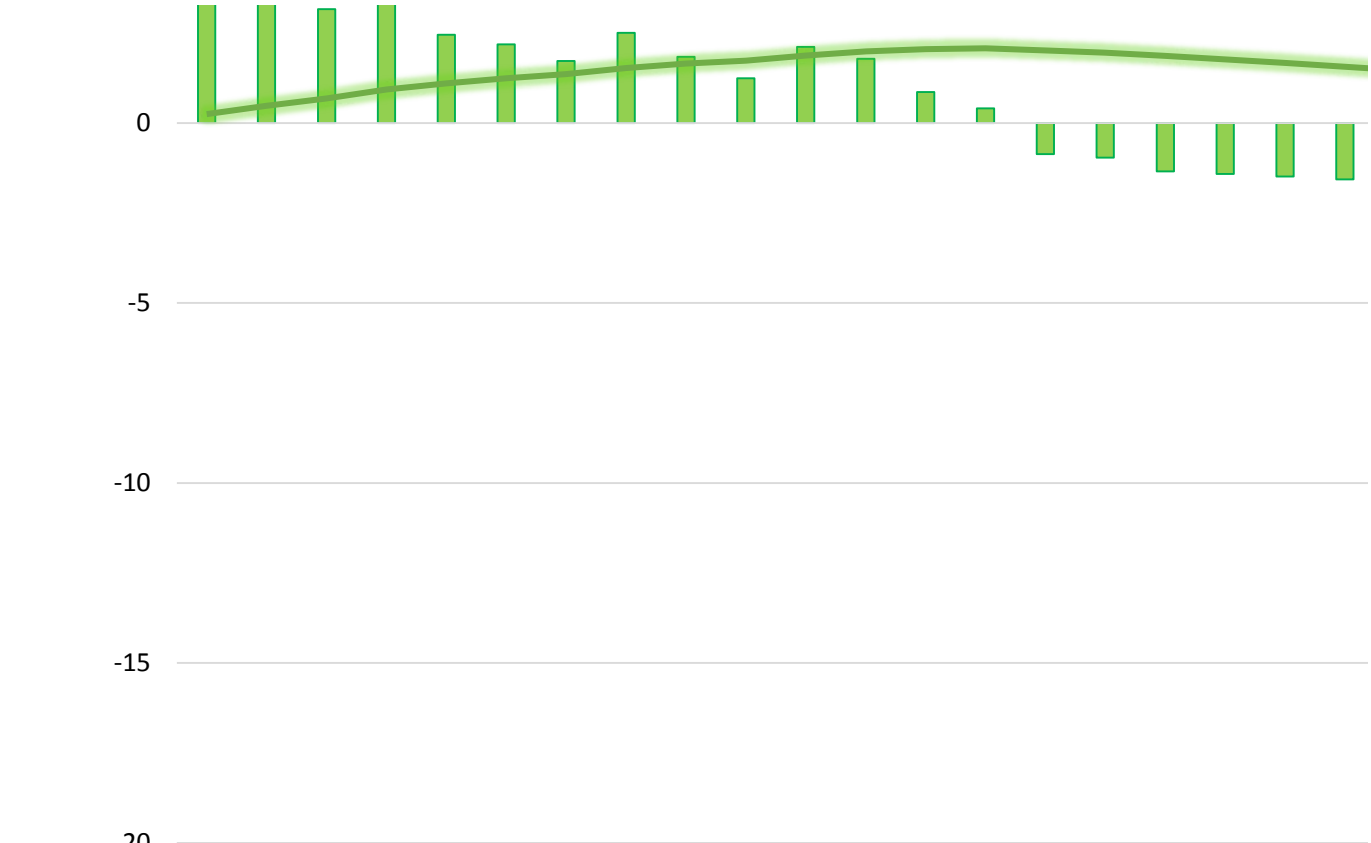


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,68
ccumulated Debt	7,133	14,13	20,95	28,48	34,80	40,94	46,70	53,33	59,37	64,87	71,30	77,46	82,72	87,55	91,12	94,57	97,14	98,86	98,04	96,35

CALENDAR YEAR

Feb 6 Deck - Scenario 1c - at 5.12% interest rat



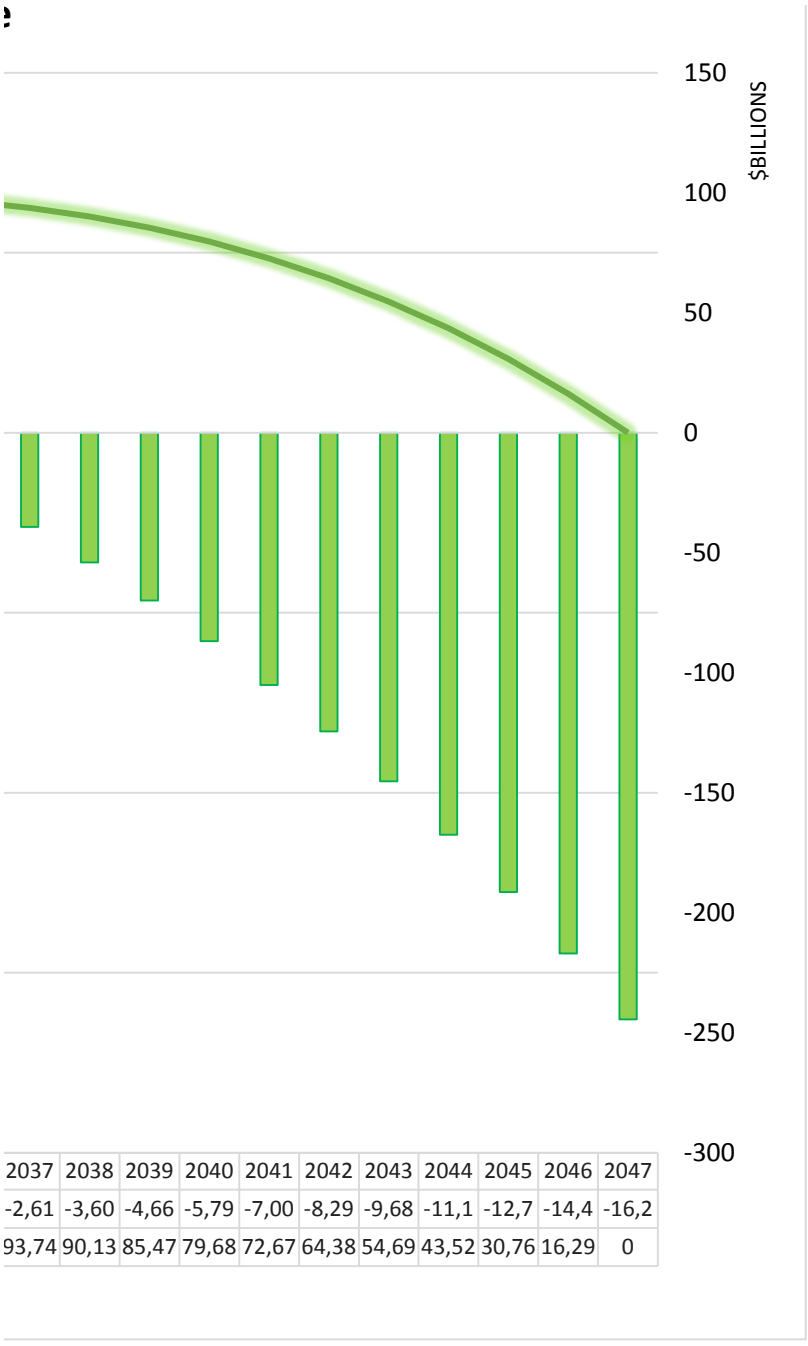


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,34	-1,41	-1,48	-1,56
ccumulated Debt	3,678	7,115	10,27	14,03	16,48	18,66	20,38	22,88	24,72	25,96	28,07	29,86	30,72	31,12	30,26	29,30	27,95	26,54	25,05	23,49

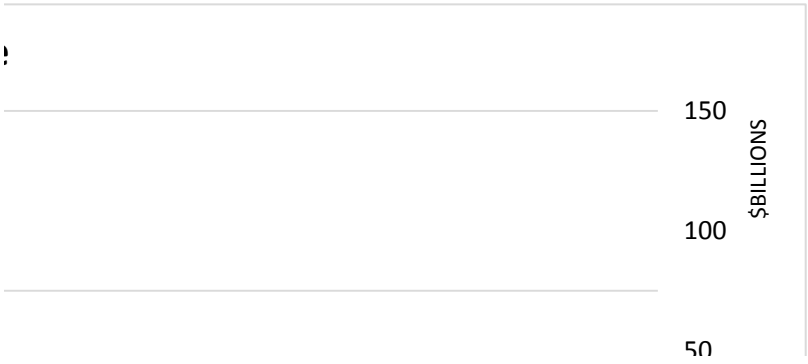
CALENDAR YEAR

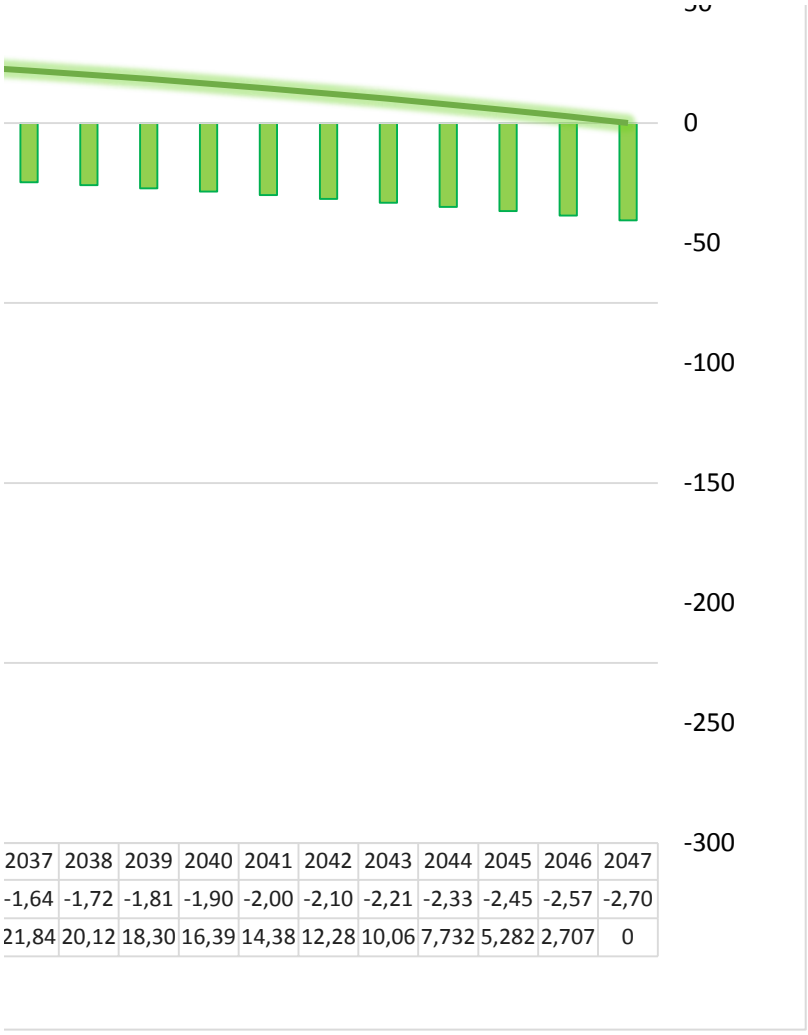


	2039	2040	2041	2042	2043	2044	2045	2046	2047
	-3,97	-4,62	-5,30	-5,59	-5,87	-6,17	-6,49	-6,82	-7,17
3	48,05	43,43	38,13	32,54	26,66	20,49	13,99	7,173	0



2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-2,61	-3,60	-4,66	-5,79	-7,00	-8,29	-9,68	-11,1	-12,7	-14,4	-16,2
93,74	90,13	85,47	79,68	72,67	64,38	54,69	43,52	30,76	16,29	0





2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
-1,64	-1,72	-1,81	-1,90	-2,00	-2,10	-2,21	-2,33	-2,45	-2,57	-2,70
21,84	20,12	18,30	16,39	14,38	12,28	10,06	7,732	5,282	2,707	0

Equal Monthly Debt Drawdown

Annual Interest Rate	**5.12%**	Month	Months Remai
Scenario Start Date	**July**	7	6

Feb4_1a_30yr

1a. GA Smoothing (Borrow ~$5 billion in 2017)

$ millions

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	4,801	4,640

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,200	4,760

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $62 billion, peakin
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary on accounting treatment.

7,133 7,133

Feb4_1b_30yr 7,133

1b. GA Smoothing (Borrow ~$7 billion in 2017)

$ millions

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	7,133	6,999

	Fiscalized[3]	**2016-17**	**2017-18**
	Start: January 1st	1,783	7,100

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $99 billion, peaking
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b on accounting treatment.

Feb4_1c_30yr

1c. GA Smoothing (Borrow ~$4 billion in 2017)

$ millions

Scenario 1C - 30-yr amortization	2017	2018
Annual Exposure[2]	3,678	3,437

	Fiscalized[3]	2016-17	2017-18
	Start: January 1st	919	3,617

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	1,783 - 1,200	7,100 - 4,760

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	1200	4760
Debt-Finance Global Adjustment Costs, Option 1a	1783	7100
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18

Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**1200**	**5000**
Total, B	1783	7340
Proposed Program Total:	1,783 - 1,200	7,340 - 5,000

ining

1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
4,446	5,138	3,921	3,753

2018-19	2019-20	2020-21	2021-2022
4,591	4,619	4,833	3,879

ng in 203 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
by approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
6,825	7,529	6,315	6,141

2018-19	2019-20	2020-21	2021-2022
6,956	7,001	7,226	6,272

g in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
3,158	3,761	2,450	2,183

2018-19	2019-20	2020-21	2021-2022
3,367	3,309	3,433	2,383

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
6,956 - 4,591	7,001 - 4,619	7,226 - 4,833	6,272 - 3,879

/1

2018-19[1]	2019-20[1]	2020-21[1]
4591	4619	4833
6956	7001	7226
225	279	323
60	60	60
18	18	18

4894	**4976**	**5234**
7259	7358	7627

7,259 - 4,894 7,358 - 4,976 7,627 - 5,234

1a. GA Smoothing (Borrow $5 billion in 2017)

	2017
IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	7,095
Additional GA Debt Drawdown, End of Year	5,000

Ratepayer GA Payment

Total Accumulated Debt *($ billion)*	5,000
Total Change in Accumulated Debt *($ billion)*	5000

1b. GA Smoothing (Borrow $7 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	5,095
Additional GA Debt Drawdown, End of Year	7,000

Total Accumulated Debt *($ billion)*	7000
Total Change in Accumulated Debt *($ billion)*	7000

1c. GA Smoothing (Borrow $4 billion in 2017)

IESO GA cost forecast + extrapolation	12,095
Ratepayer GA Payment	8,095
Additional GA Debt Drawdown, End of Year	4,000

Total Accumulated Debt *($ billion)*	4000
Total Change in Accumulated Debt *($ billion)*	4000

2018	2019	2020	2021	2022	2023	2024	2025
11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
6,835	7,552	7,168	6,844	6,634	7,243	7,128	6,527
5,000	4,000	5,000	4,000	4,000	3,000	4,000	4,000

9,000	14,000	19,000	23,000	27,000	30,000	34,000	38,000
5000	4000	5000	4000	4000	3000	4000	4000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
4,835	4,552	4,168	4,844	4,634	4,243	4,128	4,527
7,000	7,000	8,000	6,000	6,000	6,000	7,000	6,000

14000	21000	28000	35000	41000	47000	53000	59000
7000	7000	8000	6000	6000	6000	7000	6000

11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527
8,835	8,552	8,168	8,844	8,634	8,243	8,128	8,527
3,000	3,000	4,000	2,000	2,000	2,000	3,000	2,000

7000	10000	14000	16000	19000	20000	23000	25000
3000	3000	4000	2000	2000	2000	3000	2000

2026	2027	2028	2029	2030	2031	2032	2033
10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
7,033	7,043	6,819	7,009	6,721	6,654	6,820	7,238
3,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000

41,000	46,000	50,000	53,000	56,000	58,000	60,000	61,000
3000	4000	4000	3000	3000	2000	2000	1000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
4,033	5,043	4,819	5,009	4,721	4,654	5,820	5,238
6,000	6,000	6,000	5,000	5,000	4,000	3,000	3,000

65000	71000	77000	83000	88000	91000	95000	97000
6000	6000	6000	5000	5000	4000	3000	3000

10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238
9,033	9,043	8,819	9,009	9,721	9,654	9,820	9,238
1,000	2,000	2,000	1,000	0	-1,000	-1,000	-1,000

26000	28000	30000	31000	31000	30000	29000	28000
1000	2000	2000	1000	0	-1000	-1000	-1000

2034	2035	2036	2037	2038	2039	2040	2041
7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
6,756	7,662	7,389	8,129	7,881	8,645	9,421	9,207
1,000	-2,000	-2,000	-3,000	-3,000	-4,000	-5,000	-5,000

62,000	60,000	58,000	55,000	52,000	48,000	43,000	38,000
1000	-2000	-2000	-3000	-3000	-4000	-5000	-5000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
5,756	6,662	7,389	8,129	8,881	9,645	10,421	11,207
2,000	-1,000	-2,000	-3,000	-4,000	-5,000	-6,000	-7,000

99000	98000	96000	94000	90000	85000	80000	73000
2000	-1000	-2000	-3000	-4000	-5000	-6000	-7000

7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207
8,756	6,662	7,389	7,129	6,881	6,645	6,421	6,207
-1,000	-1,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000

27000	25000	23000	22000	20000	18000	16000	14000
-1000	-1000	-2000	-2000	-2000	-2000	-2000	-2000

2042	2043	2044	2045	2046	2047	2048		
4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
10,004	9,811	9,627	9,451	10,285	10,126	2,975		
-6,000	-6,000	-6,000	-6,000	-7,000	-7,000	0		

33,000	27,000	20,000	14,000	7,000	-	-	
-6000	-6000	-6000	-6000	-7000	-7000	0	

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
12,004	13,811	14,627	16,451	17,285	19,126	2,975		
-8,000	-10,000	-11,000	-13,000	-14,000	-16,000	0		

64000	55000	44000	31000	16000	0	0
-8000	-10000	-11000	-13000	-14000	-16000	0

4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
6,004	5,811	5,627	5,451	6,285	6,126	2,975		
-2,000	-2,000	-2,000	-2,000	-3,000	-3,000	0		

12000	10000	8000	5000	3000	0	0
-2000	-2000	-2000	-2000	-3000	-3000	0

Feb4 1a, 30-yr - Debt Drawdown Scenarios

-92,247 -94598.515 58,489 36109.18 0

Feb4_1a_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0
			114	110	106	122	93	89	81	102	89	78	102	97	79	71	45	47	31	16	-38	-51	-65	-80	-95	-110	-126	-133	-140	-147	-155	-162	-171	0	0	0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	5,138	3,167	58,489
Equal Monthly Debt Drawdown	5,260	3,149	

Maximum Accumulated Debt — Feb4 1a, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

End of Year Debt Drawdown	61,858	36,109
Equal Monthly Debt Drawdown	63,330	

			40%	37%	34%	36%	27%	24%																												
Feb4 1a, 30-yr	End of Year Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
a	Debt, Beginning of Year		0	4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	
c = a*5%	*Interest Cost - Feb4 1a, 30-yr - End of Year Debt Drawdown*		*0*	*246*	*483*	*711*	*974*	*1,175*	*1,367*	*1,541*	*1,760*	*1,952*	*2,119*	*2,337*	*2,546*	*2,716*	*2,869*	*2,966*	*3,067*	*3,133*	*3,167*	*3,086*	*2,975*	*2,835*	*2,664*	*2,461*	*2,224*	*1,952*	*1,666*	*1,365*	*1,049*	*717*	*367*	*0*	*0*	*0*	58,489
b	Additional GA Debt Drawdown, End of Year		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)		4,801	9,440	13,886	19,023	22,944	26,697	30,091	34,379	38,118	41,384	45,651	49,736	53,037	56,036	57,931	59,897	61,186	61,858	60,266	58,111	55,373	52,030	48,059	43,435	38,132	32,542	26,666	20,490	13,998	7,173	0	0	0	0	
				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	21,822	23,788	25,076	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	25,749	20,490	13,998	7,173	0	0	0	
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	36,109	36,109	36,109	36,109	34,517	32,362	29,624	26,281	22,311	17,687	12,383	6,793	918	0	0	0	0	0	0	0	
	Feb4 1a, 30-yr - Accumulated Interest Costs		0	246	729	1,440	2,414	3,589	4,956	6,496	8,257	10,208	12,327	14,664	17,211	19,926	22,795	25,762	28,828	31,961	35,128	38,214	41,189	44,024	46,688	49,149	51,372	53,325	54,991	56,356	57,405	58,122	58,489				
	Feb4 1a, 30-yr - Accumulated Debt Principal		4,801	9,194	13,157	17,583	20,530	23,108	25,136	27,883	29,862	31,175	33,324	35,071	35,826	36,109	35,136	34,136	32,357	29,897	25,138	19,897	14,184	8,006	1,371	-5,713	-13,241	-20,783	-28,325	-35,866	-43,408	-50,949	-58,489				
Fiscal Exposure - End of Year Debt Drawdown			4,801	4,640	4,446	5,138	3,921	3,753	3,394	4,288	3,739	3,265	4,268	4,084	3,302	2,998	1,896	1,966	1,288	672	-1,592	-2,155	-2,738	-3,343	-3,971	-4,624	-5,304	-5,590	-5,876	-6,176	-6,492	-6,824	-7,173	0	0	0	

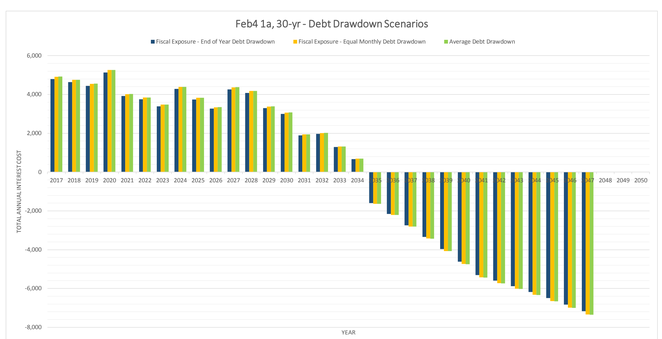
Feb4 1a, 30-yr	Equal Monthly Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
			12																																		
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
3,149	*Interest Cost - Feb4 1a, 30-yr*		*114*	*356*	*589*	*833*	*1,067*	*1,264*	*1,448*	*1,643*	*1,849*	*2,029*	*2,220*	*2,435*	*2,625*	*2,787*	*2,914*	*3,013*	*3,097*	*3,149*	*3,129*	*3,034*	*2,910*	*2,756*	*2,569*	*2,351*	*2,098*	*1,819*	*1,526*	*1,218*	*895*	*554*	*197*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,915	9,665	14,216	19,476	23,490	27,333	30,808	35,198	39,026	42,369	46,738	50,920	54,300	57,369	59,310	61,323	62,642	63,330	61,700	59,494	56,691	53,268	49,203	44,469	39,039	33,317	27,301	20,978	14,331	7,344	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown			4,915	4,750	4,551	5,260	4,014	3,843	3,475	4,390	3,828	3,343	4,369	4,182	3,380	3,070	1,941	2,013	1,319	688	-1,630	-2,206	-2,803	-3,422	-4,065	-4,734	-5,430	-5,723	-6,016	-6,323	-6,647	-6,987	-7,344	0	0	0	

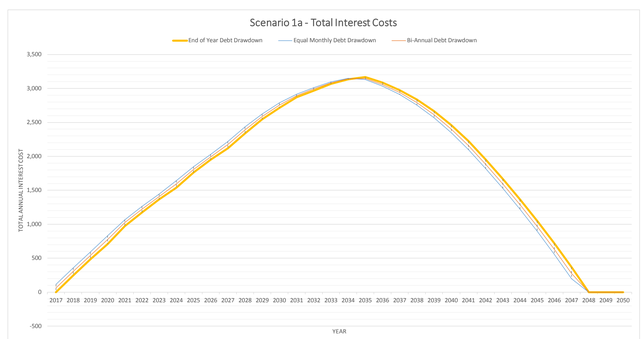
	Monthly Drawdown		400	366	330	369	246	215	169	229	165	109	179	146	63	24	(81)	(83)	(148)	(205)	(397)	(437)	(476)	(515)	(553)	(590)	(627)	(629)	(628)	(628)	(628)	(628)	(628)	-	-	-
	FV of Monthly Drawdown at 5%		4,915	4,498	4,057	4,532	3,017	2,640	2,075	2,813	2,026	1,345	2,200	1,789	773	289	(996)	(1,024)	(1,821)	(2,519)	(4,872)	(5,365)	(5,849)	(6,325)	(6,793)	(7,253)	(7,707)	(7,722)	(7,721)	(7,721)	(7,721)	(7,721)	(7,720)	-	-	-
	Annual Interest Cost on New Drawdowns		114	105	94	105	70	61	48	65	47	31	51	42	18	7	(23)	(24)	(42)	(59)	(113)	(125)	(136)	(147)	(158)	(169)	(179)	(180)	(180)	(180)	(180)	(180)	(179)	-	-	-
	Annual Interest Cost on Opening Balance		-	252	495	728	997	1,203	1,399	1,577	1,802	1,998	2,169	2,393	2,607	2,780	2,937	3,037	3,140	3,207	3,243	3,159	3,046	2,903	2,727	2,519	2,277	1,999	1,706	1,398	1,074	734	376	(0)	(0)	(0)
	Total Annual Interest Cost		114	356	589	833	1,067	1,264	1,448	1,643	1,849	2,029	2,220	2,435	2,625	2,787	2,914	3,013	3,097	3,149	3,129	3,034	2,910	2,756	2,569	2,351	2,098	1,819	1,526	1,218	895	554	197	(0)	(0)	(0)

Feb4 1a, 30-yr	Bi-Annual Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*61*	*305*	*540*	*777*	*1,024*	*1,223*	*1,410*	*1,596*	*1,808*	*1,993*	*2,173*	*2,390*	*2,589*	*2,754*	*2,893*	*2,991*	*3,083*	*3,141*	*3,147*	*3,058*	*2,940*	*2,792*	*2,613*	*2,401*	*2,156*	*1,881*	*1,591*	*1,286*	*966*	*629*	*275*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,862	9,561	14,063	19,267	23,237	27,039	30,476	34,819	38,606	41,913	46,236	50,372	53,716	56,753	58,673	60,664	61,969	62,649	61,037	58,855	56,081	52,696	48,674	43,991	38,620	32,958	27,008	20,752	14,177	7,265	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown			4,862	4,699	4,502	5,203	3,971	3,801	3,438	4,343	3,787	3,307	4,322	4,137	3,344	3,037	1,920	1,991	1,305	681	-1,612	-2,183	-2,773	-3,386	-4,021	-4,683	-5,372	-5,661	-5,951	-6,255	-6,575	-6,912	-7,265	0	0	0	

	Bi-Annual Drawdown		2,400	2,197	1,981	2,213	1,473	1,289	1,014	1,374	989	657	1,074	874	378	141	(487)	(500)	(889)	(1,230)	(2,379)	(2,620)	(2,857)	(3,089)	(3,317)	(3,542)	(3,764)	(3,771)	(3,771)	(3,771)	(3,771)	(3,771)	(3,770)	-	-	-
	FV of Bi-Annual Drawdown at 5%		4,862	4,450	4,013	4,483	2,984	2,612	2,053	2,783	2,004	1,331	2,176	1,769	765	286	(986)	(1,013)	(1,801)	(2,492)	(4,820)	(5,308)	(5,787)	(6,257)	(6,719)	(7,175)	(7,624)	(7,639)	(7,638)	(7,638)	(7,638)	(7,638)	(7,637)	-	-	-
	Annual Interest Cost on New Drawdowns		61	56	51	57	38	33	26	35	25	17	28	22	10	4	(12)	(13)	(23)	(31)	(61)	(67)	(73)	(79)	(85)	(91)	(96)	(97)	(97)	(97)	(97)	(97)	(97)	-	-	-
	Annual Interest Cost on Opening Balance		-	249	490	720	986	1,190	1,384	1,560	1,783	1,977	2,146	2,367	2,579	2,750	2,906	3,004	3,106	3,173	3,208	3,125	3,013	2,871	2,698	2,492	2,252	1,977	1,687	1,383	1,063	726	372	(0)	(0)	(0)
	Total Annual Interest Cost		61	305	540	777	1,024	1,223	1,410	1,596	1,808	1,993	2,173	2,390	2,589	2,754	2,893	2,991	3,083	3,141	3,147	3,058	2,940	2,792	2,613	2,401	2,156	1,881	1,591	1,286	966	629	275	(0)	(0)	(0)

Feb4 1a, 30-yr	Average Debt Drawdown		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1a. GA Smoothing (Borrow ~$5 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation		12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment		7,294	7,441	7,590	7,741	7,897	8,055	8,216	8,381	8,548	8,719	8,894	9,072	9,254	9,438	9,627	9,820	10,017	10,217	10,421	10,630	10,842	11,059	11,280	11,505	11,735	11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831	2,695	
	GA Debt Requirement		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Debt, Beginning of Year		0	4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
	Interest Cost - Feb4 1a, 30-yr		*123*	*365*	*597*	*842*	*1,074*	*1,271*	*1,454*	*1,650*	*1,856*	*2,035*	*2,228*	*2,442*	*2,631*	*2,792*	*2,918*	*3,016*	*3,100*	*3,150*	*3,126*	*3,030*	*2,905*	*2,749*	*2,562*	*2,342*	*2,088*	*1,809*	*1,516*	*1,207*	*883*	*542*	*184*	*0*	*0*	*0*	58,489
	Additional GA Debt Drawdown		4,801	4,394	3,962	4,427	2,947	2,579	2,027	2,747	1,979	1,314	2,149	1,747	755	283	-973	-1,000	-1,779	-2,461	-4,759	-5,241	-5,713	-6,178	-6,635	-7,084	-7,528	-7,542	-7,542	-7,542	-7,541	-7,541	-7,541	0	0	0	
	Accumulated debt in present year (including 5% annual interest)		4,923	9,682	14,241	19,510	23,531	27,381	30,862	35,260	39,094	42,443	46,820	51,009	54,395	57,470	59,415	61,431	62,752	63,441	61,809	59,598	56,790	53,362	49,289	44,547	39,108	33,375	27,349	21,015	14,356	7,357	0	0	0	
Fiscal Exposure - Average Debt Drawdown			4,923	4,758	4,559	5,269	4,021	3,849	3,481	4,398	3,835	3,349	4,377	4,189	3,386	3,075	1,944	2,016	1,321	689	-1,633	-2,210	-2,808	-3,428	-4,072	-4,742	-5,440	-5,733	-6,026	-6,334	-6,658	-6,999	-7,357	0	0	0	





Feb4 1b, 30-yr - Debt Drawdown Scenarios

-149,507 -153857.97 97,141 56717.33 0

Feb4_1b_30yr

Annual Interest Rate = 5.12%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0
			170	167	162	179	150	146	137	158	144	131	153	147	125	115	85	82	61	41	-19	-40	-62	-86	-111	-138	-167	-198	-231	-266	-304	-344	-388	0	0	0

0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	Total Interest Cost
End of Year Debt Drawdown 7,529	5,062	97,141
Equal Monthly Debt Drawdown 7,708	5,042	

Maximum Accumulated Debt	Feb4 1b, 30-yr, Accumulated Debt	Total Principal Debt Borrowed
End of Year Debt Drawdown	98,864	56,717
Equal Monthly Debt Drawdown	101,217	

Feb4 1b, 30-yr — End of Year Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
a Debt, Beginning of Year	0	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	
c = a*5% *Interest Cost - Feb4 1b, 30-yr - End of Year Debt Drawdown*	*0*	*365*	*724*	*1,073*	*1,459*	*1,782*	*2,096*	*2,391*	*2,731*	*3,040*	*3,322*	*3,651*	*3,966*	*4,236*	*4,483*	*4,665*	*4,842*	*4,974*	*5,062*	*5,020*	*4,933*	*4,800*	*4,615*	*4,376*	*4,080*	*3,721*	*3,296*	*2,800*	*2,228*	*1,575*	*834*	*0*	*0*	*0*	97,141
b Additional GA Debt Drawdown, End of Year	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
d = a+b+c Accumulated debt in present year (including 5% annual interest)	7,133	14,133	20,958	28,487	34,803	40,944	46,708	53,336	59,372	64,876	71,307	77,464	82,726	87,552	91,120	94,577	97,148	98,864	98,045	96,357	93,742	90,138	85,475	79,682	72,679	64,380	54,694	43,523	30,761	16,294	0	0	0	0	
Feb4 1b, 30-yr - Accumulated Interest Costs	0	365	1,089	2,162	3,620	5,402	7,499	9,890	12,621	15,661	18,982	22,633	26,599	30,835	35,318	39,983	44,825	49,799	54,861	59,881	64,815	69,614	74,229	78,606	82,685	86,406	89,703	92,503	94,731	96,306	97,141				
Feb4 1b, 30-yr - Accumulated Debt Principal	7,133	13,767	19,869	26,325	31,182	35,542	39,209	43,446	46,751	49,215	52,325	54,831	56,127	56,717	55,803	54,594	52,322	49,064	43,184	36,476	28,928	20,523	11,246	1,076	-10,007	-22,027	-35,008	-48,980	-63,971	-80,013	-97,141				
Fiscal Exposure - End of Year Debt Drawdown	7,133	6,999	6,825	7,529	6,315	6,141	5,764	6,628	6,035	5,504	6,432	6,157	5,262	4,826	3,568	3,457	2,571	1,716	-819	-1,688	-2,615	-3,605	-4,662	-5,793	-7,003	-8,299	-9,686	-11,171	-12,762	-14,467	-16,294	0	0	0	

Feb4 1b, 30-yr — Equal Monthly Debt Drawdown

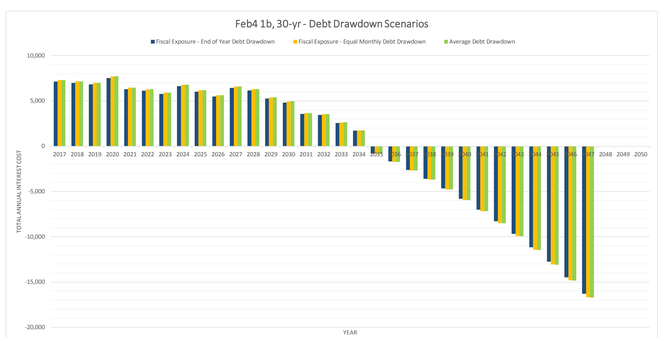
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	12																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	
5,042 *Interest Cost - Feb4 1b, 30-yr*	*170*	*532*	*886*	*1,252*	*1,609*	*1,928*	*2,234*	*2,549*	*2,874*	*3,171*	*3,475*	*3,797*	4,091	*4,350*	*4,568*	*4,748*	*4,904*	*5,015*	*5,042*	*4,980*	*4,871*	*4,714*	*4,504*	*4,238*	*3,913*	*3,524*	*3,066*	*2,534*	*1,925*	*1,231*	*446*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,303	14,469	21,457	29,165	35,631	41,918	47,820	54,606	60,785	66,420	73,005	79,308	84,695	89,636	93,289	96,828	99,460	101,217	100,379	98,651	95,974	92,283	87,510	81,579	74,409	65,912	55,996	44,559	31,493	16,681	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown	7,303	7,166	6,988	7,708	6,466	6,287	5,901	6,786	6,179	5,635	6,585	6,303	5,387	4,941	3,653	3,539	2,632	1,757	-838	-1,728	-2,677	-3,691	-4,773	-5,931	-7,170	-8,496	-9,916	-11,437	-13,066	-14,812	-16,681	0	0	0	
Monthly Drawdown	594	553	508	538	405	363	306	353	275	205	259	209	108	49	(76)	(101)	(189)	(271)	(490)	(559)	(629)	(700)	(773)	(847)	(924)	(1,002)	(1,082)	(1,164)	(1,249)	(1,337)	(1,427)	(0)	-	-	
FV of Monthly Drawdown at 5%	7,303	6,792	6,247	6,610	4,972	4,463	3,755	4,338	3,383	2,523	3,184	2,565	1,327	605	(937)	(1,237)	(2,326)	(3,335)	(6,020)	(6,867)	(7,728)	(8,604)	(9,498)	(10,412)	(11,347)	(12,306)	(13,291)	(14,304)	(15,348)	(16,424)	(17,536)	(0)	-	-	
Annual Interest Cost on New Drawdowns	170	158	145	154	116	104	87	101	79	59	74	60	31	14	(22)	(29)	(54)	(78)	(140)	(160)	(180)	(200)	(221)	(242)	(264)	(286)	(309)	(333)	(357)	(382)	(408)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	374	741	1,099	1,493	1,824	2,146	2,448	2,796	3,112	3,401	3,738	4,061	4,336	4,589	4,776	4,958	5,092	5,182	5,139	5,051	4,914	4,725	4,481	4,177	3,810	3,375	2,867	2,281	1,612	854	0	(0)	(0)	
Total Annual Interest Cost	170	532	886	1,252	1,609	1,928	2,234	2,549	2,874	3,171	3,475	3,797	4,091	4,350	4,568	4,748	4,904	5,015	5,042	4,980	4,871	4,714	4,504	4,238	3,913	3,524	3,066	2,534	1,925	1,231	446	0	(0)	(0)	

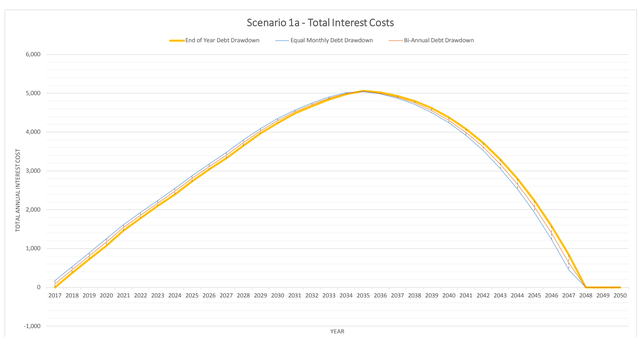
Feb4 1b, 30-yr — Bi-Annual Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
	2																																		
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*91*	*455*	*811*	*1,169*	*1,539*	*1,861*	*2,170*	*2,476*	*2,808*	*3,110*	*3,404*	*3,730*	*4,034*	*4,297*	*4,528*	*4,710*	*4,875*	*4,996*	*5,051*	*4,998*	*4,900*	*4,753*	*4,555*	*4,302*	*3,990*	*3,615*	*3,172*	*2,657*	*2,065*	*1,390*	*626*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,225	14,314	21,226	28,852	35,248	41,468	47,306	54,019	60,132	65,706	72,220	78,456	83,785	88,673	92,287	95,788	98,391	100,129	99,300	97,591	94,942	91,291	86,569	80,702	73,609	65,204	55,394	44,080	31,154	16,502	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown	7,225	7,089	6,913	7,626	6,396	6,220	5,838	6,713	6,113	5,574	6,514	6,235	5,330	4,888	3,614	3,501	2,603	1,738	-829	-1,709	-2,648	-3,651	-4,722	-5,867	-7,093	-8,405	-9,810	-11,314	-12,926	-14,652	-16,502	0	0	0	
Bi-Annual Drawdown	3,567	3,317	3,051	3,228	2,428	2,180	1,834	2,118	1,652	1,232	1,555	1,253	648	295	(457)	(604)	(1,136)	(1,629)	(2,940)	(3,354)	(3,774)	(4,202)	(4,639)	(5,085)	(5,542)	(6,010)	(6,491)	(6,986)	(7,495)	(8,021)	(8,564)	(0)	-	-	
FV of Bi-Annual Drawdown at 5%	7,225	6,719	6,180	6,539	4,919	4,415	3,715	4,291	3,347	2,496	3,150	2,538	1,313	598	(926)	(1,224)	(2,301)	(3,299)	(5,956)	(6,794)	(7,645)	(8,512)	(9,396)	(10,300)	(11,225)	(12,174)	(13,148)	(14,150)	(15,183)	(16,247)	(17,347)	(0)	-	-	
Annual Interest Cost on New Drawdowns	91	85	78	83	62	56	47	54	42	32	40	32	17	8	(12)	(15)	(29)	(42)	(75)	(86)	(97)	(108)	(119)	(130)	(142)	(154)	(166)	(179)	(192)	(205)	(219)	(0)	-	-	
Annual Interest Cost on Opening Balance	-	370	733	1,087	1,477	1,805	2,123	2,422	2,766	3,079	3,364	3,698	4,017	4,290	4,540	4,725	4,904	5,038	5,127	5,084	4,997	4,861	4,674	4,432	4,132	3,769	3,338	2,836	2,257	1,595	845	0	0	0	
Total Annual Interest Cost	91	455	811	1,169	1,539	1,861	2,170	2,476	2,808	3,110	3,404	3,730	4,034	4,297	4,528	4,710	4,875	4,996	5,051	4,998	4,900	4,753	4,555	4,302	3,990	3,615	3,172	2,657	2,065	1,390	626	0	0	0	

Feb4 1b, 30-yr — Average Debt Drawdown

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
1b. GA Smoothing (Borrow ~$7 billion in 2017)																																			
($ millions)																																			
IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
Ratepayer GA Payment	4,962	5,201	5,450	5,712	5,987	6,275	6,575	6,891	7,222	7,569	7,933	8,313	8,713	9,130	9,569	10,029	10,510	11,014	11,542	12,097	12,677	13,285	13,922	14,591	15,290	16,024	16,793	17,598	18,442	19,327	20,254	2,975	2,831	2,695	
GA Debt Requirement	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Debt, Beginning of Year	0	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	
Interest Cost - Feb4 1b, 30-yr	*183*	*544*	*898*	*1,266*	*1,620*	*1,939*	*2,244*	*2,561*	*2,885*	*3,181*	*3,486*	*3,809*	*4,101*	*4,359*	*4,574*	*4,754*	*4,908*	*5,018*	*5,041*	*4,977*	*4,867*	*4,707*	*4,496*	*4,228*	*3,900*	*3,509*	*3,048*	*2,514*	*1,902*	*1,205*	*417*	*0*	*0*	*0*	97,141
Additional GA Debt Drawdown	7,133	6,634	6,102	6,456	4,857	4,359	3,668	4,237	3,305	2,464	3,110	2,506	1,296	591	-915	-1,209	-2,272	-3,258	-5,880	-6,708	-7,548	-8,404	-9,277	-10,170	-11,083	-12,020	-12,982	-13,971	-14,991	-16,042	-17,128	0	0	0	
Accumulated debt in present year (including 5% annual interest)	7,316	14,495	21,495	29,216	35,694	41,992	47,904	54,702	60,892	66,536	73,133	79,447	84,844	89,794	93,453	96,998	99,635	101,395	100,555	98,824	96,142	92,445	87,664	81,722	74,539	66,028	56,094	44,637	31,548	16,711	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown	7,316	7,179	7,000	7,722	6,477	6,298	5,912	6,798	6,190	5,645	6,597	6,314	5,397	4,950	3,659	3,545	2,636	1,760	-840	-1,731	-2,682	-3,697	-4,782	-5,942	-7,183	-8,511	-9,934	-11,457	-13,089	-14,838	-16,711	0	0	0	





Feb4 1c, 30-yr - Debt Drawdown Scenarios

Feb4_1c_30yr

Annual Interest Rate = 5.1%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0
			88	82	75	90	58	52	41	60	44	29	50	43	20	10	-20	-23	-32	-34	-35	-37	-39	-41	-43	-45	-48	-50	-53	-55	-58	-61	-64	0	0	0

0

Maximum Fiscal Exposure — Maximum Annual Interest Cost — Total Interest Cost

End of Year Debt Drawdown	3,761	1,594	29,477
Equal Monthly Debt Drawdown	3,851	1,583	

Maximum Accumulated Debt — Feb4 1c, 30-yr, Accumulated Debt — Total Principal Debt Borrowed

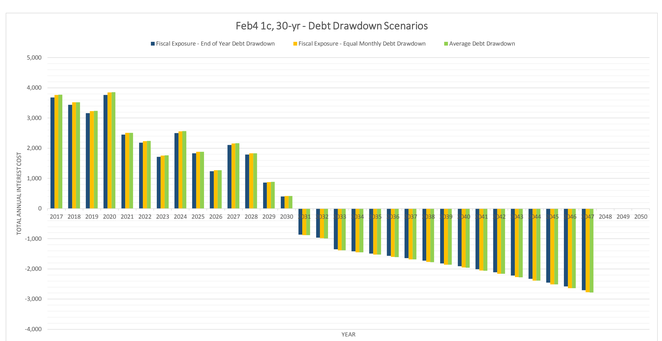
End of Year Debt Drawdown	31,125	20,043
Equal Monthly Debt Drawdown	31,866	

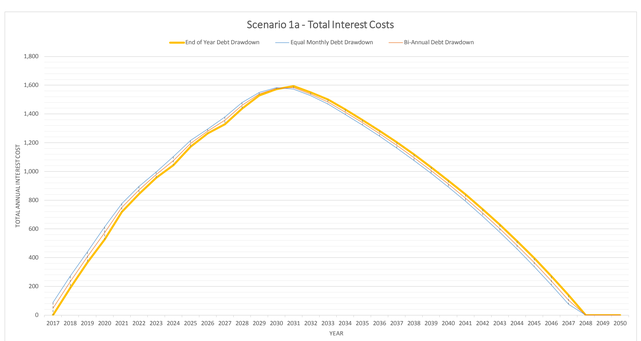
		30%	27%	24%	27%	16%	13%																														
Feb4 1c, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
a	Debt, Beginning of Year	0	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	
c = a*5%	*Interest Cost - Feb4 1c, 30-yr - End of Year Debt Drawdown*	*0*	*188*	*364*	*526*	*719*	*844*	*956*	*1,044*	*1,172*	*1,266*	*1,329*	*1,437*	*1,529*	*1,573*	*1,594*	*1,550*	*1,500*	*1,431*	*1,359*	*1,283*	*1,203*	*1,119*	*1,030*	*937*	*839*	*737*	*629*	*515*	*396*	*270*	*139*	*0*	*0*	*0*	*0*	29,477
b	Additional GA Debt Drawdown, End of Year	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,678	7,115	10,273	14,034	16,484	18,667	20,386	22,888	24,723	25,961	28,071	29,860	30,721	31,125	30,265	29,304	27,958	26,542	25,055	23,491	21,848	20,120	18,304	16,395	14,389	12,280	10,062	7,732	5,282	2,707	0	0	0	0	
	Feb4 1c, 30-yr - Accumulated Interest Costs	0	188	553	1,079	1,797	2,641	3,597	4,641	5,812	7,078	8,407	9,845	11,374	12,946	14,540	16,090	17,590	19,021	20,380	21,663	22,866	23,984	25,015	25,952	26,791	27,528	28,157	28,672	29,068	29,338	29,477				
	Feb4 1c, 30-yr - Accumulated Debt Principal	3,678	6,926	9,720	12,955	14,687	16,026	16,789	18,247	18,911	18,883	19,664	20,015	19,347	18,178	15,725	13,214	10,368	7,521	4,675	1,828	-1,018	-3,864	-6,710	-9,556	-12,402	-15,248	-18,094	-20,940	-23,786	-26,631	-29,477				
Fiscal Exposure - End of Year Debt Drawdown		3,678	3,437	3,158	3,761	2,450	2,183	1,719	2,502	1,835	1,238	2,110	1,789	861	404	-860	-961	-1,346	-1,415	-1,487	-1,564	-1,644	-1,728	-1,816	-1,909	-2,007	-2,109	-2,217	-2,331	-2,450	-2,575	-2,707	0	0	0	

Feb4 1c, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	
1,583	*Interest Cost - Feb4 1c, 30-yr*	*88*	*270*	*439*	*615*	*777*	*896*	*997*	*1,103*	*1,216*	*1,295*	*1,379*	*1,480*	1,549	*1,583*	*1,573*	*1,527*	*1,468*	*1,398*	*1,324*	*1,246*	*1,164*	*1,077*	*987*	*892*	*792*	*686*	*576*	*460*	*338*	*209*	*74*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,765	7,284	10,517	14,368	16,876	19,111	20,871	23,432	25,311	26,579	28,739	30,571	31,452	31,866	30,985	30,001	28,623	27,174	25,651	24,051	22,368	20,599	18,740	16,786	14,731	12,572	10,302	7,916	5,408	2,771	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,765	3,519	3,234	3,851	2,508	2,235	1,760	2,561	1,879	1,268	2,160	1,831	881	414	-881	-984	-1,378	-1,449	-1,523	-1,601	-1,683	-1,769	-1,859	-1,954	-2,054	-2,159	-2,270	-2,386	-2,508	-2,636	-2,771	0	0	0	
	Monthly Drawdown	306	271	233	270	144	112	64	122	55	(2)	65	29	(56)	(97)	(204)	(209)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(237)	(0)	-	-	
	FV of Monthly Drawdown at 5%	3,765	3,326	2,861	3,312	1,773	1,371	781	1,493	679	(28)	799	360	(684)	(1,197)	(2,512)	(2,570)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,914)	(2,913)	(2,913)	(2,913)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	88	77	67	77	41	32	18	35	16	(1)	19	8	(16)	(28)	(58)	(60)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	193	373	538	736	864	979	1,069	1,200	1,296	1,361	1,471	1,565	1,610	1,632	1,586	1,536	1,465	1,391	1,313	1,231	1,145	1,055	959	859	754	644	527	405	277	142	0	0	0	
	Total Annual Interest Cost	88	270	439	615	777	896	997	1,103	1,216	1,295	1,379	1,480	1,549	1,583	1,573	1,527	1,468	1,398	1,324	1,246	1,164	1,077	987	892	792	686	576	460	338	209	74	0	0	0	

Feb4 1c, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*47*	*232*	*405*	*574*	*750*	*872*	*978*	*1,076*	*1,195*	*1,282*	*1,356*	*1,460*	*1,540*	*1,578*	*1,583*	*1,537*	*1,483*	*1,413*	*1,340*	*1,263*	*1,182*	*1,097*	*1,007*	*913*	*814*	*710*	*600*	*485*	*365*	*237*	*104*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,725	7,206	10,404	14,214	16,695	18,906	20,647	23,181	25,039	26,293	28,430	30,242	31,114	31,523	30,652	29,679	28,315	26,882	25,376	23,792	22,128	20,378	18,539	16,605	14,573	12,437	10,191	7,831	5,350	2,742	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,725	3,481	3,199	3,809	2,481	2,211	1,741	2,534	1,859	1,254	2,137	1,812	872	409	-871	-973	-1,363	-1,433	-1,506	-1,584	-1,665	-1,750	-1,839	-1,933	-2,032	-2,136	-2,246	-2,360	-2,481	-2,608	-2,742	0	0	0	
	Bi-Annual Drawdown	1,839	1,624	1,397	1,618	866	670	382	729	332	(14)	390	176	(334)	(584)	(1,227)	(1,255)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(1,423)	(0)	-	-	
	FV of Bi-Annual Drawdown at 5%	3,725	3,290	2,830	3,277	1,754	1,356	773	1,477	672	(28)	791	356	(677)	(1,184)	(2,485)	(2,542)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,883)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(2,882)	(0)	-	-	
	Annual Interest Cost on New Drawdowns	47	42	36	41	22	17	10	19	8	(0)	10	5	(9)	(15)	(31)	(32)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(36)	(0)	-	-	
	Annual Interest Cost on Opening Balance	-	191	369	533	728	855	968	1,057	1,187	1,282	1,346	1,456	1,548	1,593	1,614	1,569	1,520	1,450	1,376	1,299	1,218	1,133	1,043	949	850	746	637	522	401	274	140	0	0	0	
	Total Annual Interest Cost	47	232	405	574	750	872	978	1,076	1,195	1,282	1,356	1,460	1,540	1,578	1,583	1,537	1,483	1,413	1,340	1,263	1,182	1,097	1,007	913	814	710	600	485	365	237	104	0	0	0	

Feb4 1c, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
1c. GA Smoothing (Borrow ~$4 billion in 2017)																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043	10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662	5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695	
	Ratepayer GA Payment	8,417	8,586	8,758	8,933	9,113	9,295	9,480	9,670	9,864	10,061	10,262	10,467	10,677	10,890	11,108	11,330	11,085	10,602	8,508	8,235	7,975	7,727	7,491	7,267	7,053	6,850	6,657	6,473	6,297	6,131	5,971	2,975	2,831	2,695	
	GA Debt Requirement	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Debt, Beginning of Year	0	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	
	Interest Cost - Feb4 1c, 30-yr	*94*	*276*	*445*	*622*	*781*	*900*	*1,000*	*1,108*	*1,219*	*1,298*	*1,383*	*1,483*	*1,551*	*1,583*	*1,572*	*1,525*	*1,466*	*1,395*	*1,321*	*1,243*	*1,161*	*1,074*	*984*	*888*	*788*	*683*	*572*	*456*	*333*	*205*	*69*	*0*	*0*	*0*	29,477
	Additional GA Debt Drawdown	3,678	3,249	2,794	3,235	1,731	1,339	763	1,458	663	-28	781	352	-668	-1,169	-2,454	-2,510	-2,847	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,846	-2,845	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,772	7,297	10,536	14,393	16,906	19,145	20,908	23,474	25,356	26,626	28,790	30,624	31,507	31,921	31,039	30,054	28,673	27,222	25,696	24,093	22,407	20,635	18,773	16,815	14,757	12,594	10,320	7,930	5,417	2,776	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,772	3,525	3,239	3,857	2,513	2,239	1,763	2,566	1,882	1,270	2,164	1,835	883	414	-882	-985	-1,381	-1,451	-1,526	-1,604	-1,686	-1,772	-1,863	-1,958	-2,058	-2,163	-2,274	-2,390	-2,513	-2,641	-2,776	0	0	0	





30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

TO BE

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,556	3,123	1,728	1,400	836	1,560	821	167

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2019	2020	2021	2022	2023	2024	2025	2026
2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

E UPDATED

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

30-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

		2017	2018
Scenario 1a, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	851	3,335

		2017	2018
Scenario 1b, 30-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	362	1597

25-year term	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292 - 795	1,317 - 3,107

		2017	2018
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	795	3,107

		2017	2018
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown		
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765

	2016-17	2017-18
Fiscal Exposure - Equal Monthly Debt Drawdown	292	1317

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335

Debt-Finance Global Adjustment Costs, Option 1b	362	1597
RRRP - Fixed Rate Enhancement (low)		*64*
RRRP - Fixed Rate Enhancement (high)		*90*
Total RRRP (low)		*306*
Total RRRP (high)		*332*
RRRP (low)		370
RRRP (high)		422
OESP – Enhance Benefit		162
Low Income Conservation Program - Home Assistance Program Enhancement		12.5
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3879**
Total, B	362	2193

Proposed Program Total:	362 - 851	2,193 - 3,879

RRRP (low)	544.5
RRRP (high)	596.5

2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

2019	2020	2021	2022	2023	2024	2025	2026
2,812	3,396	2,020	1,712	1,168	1,914	1,198	568

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943

2,581	4,016	2,598	2,241	1,642	2,325	1,538	829

2018-19	2019-20	2020-21	2021-2022
2175	2940	3662	2508

2018-19	2019-20	2020-21	2021-2022
1,901 - 2,805	2,671 - 2,697	3,391 - 2,774	2,217 - 1,646

2019	2020	2021	2022
2,556	3,123	1,728	1,400

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646

2,311	3,750	2,311	1,933	1,311	1,971	1,158	422

2018-19	2019-20	2020-21	2021-2022
1901	2671	3391	2217

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052

2175	2940	3662
52	*38*	*26*
72	*54*	*36*
300	*293*	*287*
320	*309*	*297*
352	331	313
392	363	333
225	279	323
30	30	22.5
18	18	18
3656	**3598**	**3711**
2822	3612	4340

2,822 - 3,656	3,612 - 3,598	4,340 - 3,711
607	640	658.5
647	672	678.5

2027	2028	2029	2030	2031	2032	2033	2034	2035
1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085
1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085
932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385
1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385

2036	2037	2038	2039	2040	2041	2042	2043	2044
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0
-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0

2045	2046	2047	2048	2049	2050	Total
-1,768	-1,856	-1,949	0	0	0	
-1,768	-1,856	-1,949	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Pick: **Scenario_1a_30yr**

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	**2017**	**2018**	**2019**	**2020**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396

Debt Borrowing/Payment Schedule for GA Financing				
$ millions	2031	2032	2033	2034
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*
Amount by which debt account changes in present year, including interest	893	938	984	1,034

Rough

Scenario_1a_25yr
Scenario_1b_25yr
Scenario_1a_30yr
Scenario_1b_30yr

D E F G
R S T U

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
-668	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-915	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

H	I	J	K	L	M	N	O	P	Q
V	W	X	Y	Z	AA	AB	AC	AD	AE

JK: Fixed the formula in the yellow highlighted cells. Pls. check. (SK: looks good to me)

	Tab
v16 GA Financing - Scenario 1a 1b v18 (with fiscal) - Feb 4_v2.xlsx	Powerpoint_Export Scenario tabs

Change Description

Added in trigger for later start in the year
Updated IESO forecast from Energy (IESO GA Cost Forecast 170207 (Feb 6 update).xlsx)

Equal Monthly Debt Drawdown

		Month	Months Remai
Scenario Start Date	**July**	7	6

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	3,180	2,888
Annual Exposure2 with start on July 1st	*1,590*	*2,888*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	795	3,107
Start: July 1st	-	*2,312*

Scenario 1a - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	3,404	3,128
Annual Exposure2 with start on July 1st	*1,702*	*3,128*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	851	3,335
Start: July 1st	-	*2,484*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing b

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions

Scenario 1b - 25-yr amortization[1]	**2017**	**2018**
Annual Exposure[2]	1,168	1,765
Annual Exposure2 with start on July 1st	*584*	*1,765*

Fiscalized[3]	**2016-17**	**2017-18**

Start: January 1st	292	1,609
Start: July 1st	-	*1,025*

Scenario 1b - 30-yr amortization	**2017**	**2018**
Annual Exposure[2]	1,449	2,040
Annual Exposure2 with start on July 1st	*725*	*2,040*

Fiscalized[3]	**2016-17**	**2017-18**
Start: January 1st	362	1,597
Start: July 1st	-	*1,959*

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, pea
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary b
on accounting treatment.

Rough			
	1		
	2		
	3		
	4	April	4
	5	May	5
	6	June	6
	7	July	7
	8	August	8
	9	September	9
	10	October	10
	11	November	11
	12	December	12

30-year term	**2016-17**	**2017-18**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v

($M)	2016-17[1]	2017-18[1]
Debt-Finance Global Adjustment Costs, Option 1a	851	3335
Debt-Finance Global Adjustment Costs, Option 1a	362	1597
RRRP		
OESP – Enhance Benefit		162
Low Income Conservation Program		60
First Nations Rate		18
Risk Exposure: OPG Operational Efficiencies		
Enhanced RPP Rebate		
Total, A	**851**	**3575**
Total, B	362	1837
Proposed Program Total:	362 - 851	1,837 - 3,575

ining

1	1 = Comparision Enabled

AS LONG AS > APRIL 1, 2017

2019	2020	2021	2022
2,556	3,123	1,728	1,400
2,556	*3,123*	*1,728*	*1,400*

2018-19	2019-20	2020-21	2021-2022
2,805	2,697	2,774	1,646
2,805	*2,697*	*2,774*	*1,646*

2019	2020	2021	2022
2,812	3,396	2,020	1,712
2,812	*3,396*	*2,020*	*1,712*

2018-19	2019-20	2020-21	2021-2022
3,049	2,958	3,052	1,943
3,049	*2,958*	*3,052*	*1,943*

ıking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
y approximately $33-$36 million.

based on GA actuals per month based on month of the year. Actuals may also depend on decision

2019	2020	2021	2022
2,311	3,750	2,311	1,933
2,311	*3,750*	*2,311*	*1,933*

2018-19	2019-20	2020-21	2021-2022

1,901	2,671	3,391	2,217
1,901	*2,671*	*3,391*	*2,217*

2019	2020	2021	2022
2,581	4,016	2,598	2,241
2,581	*4,016*	*2,598*	*2,241*

2018-19	2019-20	2020-21	2021-2022
2,175	2,940	3,662	2,508
2,175	*2,940*	*3,662*	*2,508*

aking in 2028 and $17-21 billion (at 3.5% interest rate), peaking in 2028.
approximately $118-$134 million.

ased on GA actuals per month based on month of the year. Actuals may also depend on decision



2018-19	2019-20	2020-21	2021-2022
2,175 - 3,049	2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

/1

2018-19[1]	2019-20[1]	2020-21[1]
3049	2958	3052
2175	2940	3662
225	279	323
60	60	60
18	18	18
3352	**3315**	**3453**
2478	3297	4063

2,478 - 3,352 3,297 - 3,315 4,063 - 3,453

Equal Monthly Debt Drawdown

		Month	Months Remaining
Scenario Start Date	July	7	6

AS LONG AS >

Scenario 1a - *GA 25/30 year financing*

$ millions

Scenario 1a - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	3,180	2,888	2,556

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	795	3,107	2,805
Fiscal Exposure, 25%	199	777	701

Scenario 1a - 30-yr amortization	**2017**	**2018**	**2019**
Annual Exposure[2]	3,404	3,128	2,812

Fiscalized[3]	**2016-17**	**2017-18**	**2018-19**
Start: January 1st	851	3,335	3,049
Fiscal Exposure, 25%	213	834	762

Indicates year in which, similar to OPCD's exa
closest to 30%. As Fiscal 2016/17 is a partial y
month the GA deferral begins.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-24 billion, peaking in 2028 and
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu
decision on accounting treatment.

Scenario 1b - *GA 25/30-year financing with delayed increase in payments*

$ millions	9%	14%	18%
Scenario 1b - 25-yr amortization[1]	**2017**	**2018**	**2019**
Annual Exposure[2]	1,168	1,765	2,311

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	292	1,609	1,901
Fiscal Exposure, 25%	73	402	475

Scenario 1b - 30-yr amortization	2017	2018	2019
Annual Exposure[2]	1,449	2,040	2,581

Fiscalized[3]	2016-17	2017-18	2018-19
Start: January 1st	362	1,597	2,175
Fiscal Exposure, 25%	91	399	544

Indicates year in which, similar to OPCD's exar closest to 30%.

Actuals are subject to actual prices and actual interest rates.
- The highest debt accumulation (at 5% interest rate) is expected to be approximately $20-$24 billion, peaking in 2028 ar
- Compared to a 5% interest rate, at 3.5%, the highest fiscal exposure will occur in 2017-18, decreasing by approximately

[1] Based on an interest rate of 5%.
[2] Fiscal exposure based on equal monthly drawdown of debt.
[3] Fiscalized based on 75/25 split of annual numbers provided by Energy. Actual fiscalization would vary based on GA actu on accounting treatment.

For Note: Comments on Energy Rate Mitigation Options_Jan 19-2017_v4 - CEFD Options v1

($M)	2016-17[1]	2017-18[1]	2018-19[1]
Debt-Finance Global Adjustment Costs, Option 1a	213	834	762
Debt-Finance Global Adjustment Costs, Option 1b	91	399	544
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**213**	**1074**	**1065**
Total, B	91	639	847

Proposed Program Total:	91 - 213	639 - 1,074	847 - 1,065

($M)	2016-171	2017-181	2018-191
Debt-Finance Global Adjustment Costs, Option 1a	851	3335	3049
Debt-Finance Global Adjustment Costs, Option 1b	362	1597	2175
RRRP			
OESP – Enhance Benefit		162	225
Low Income Conservation Program		60	60
First Nations Rate		18	18
Risk Exposure: OPG Operational Efficiencies			
Enhanced RPP Rebate			
Total, A	**851**	**3575**	**3352**
Total, B	362	1837	2478

Proposed Program Total:	362 - 851	1,837 - 3,575	2,478 - 3,352

Rough

1		
2		
3		
4	April	4
5	May	5
6	June	6

7	July	7	
8	August	8	
9	September	9	
10	October	10	
11	November	11	
12	December	12	

30-year term	**2016-17**	**2017-18**	**2018-19**
Fiscal Exposure - Equal Monthly Debt Drawdown	362 - 851	1,597 - 3,335	2,175 - 3,049

ROWS HIDDEN

1	1 = Comparision Enabled

APRIL 1, 2017 25%

2020	2021	2022
3,123	1,728	1,400

2019-20	2020-21	2021-2022
2,697	2,774	1,646
674	693	412

2020	2021	2022
3,396	2,020	1,712

2019-20	2020-21	2021-2022
2,958	3,052	1,943
740	763	486

mple, the true cost of GA being deferred is
ear, exposure may be less subject to which

l $17-21 billion (at 3.5% interest rate), peaking in 2028.
$33-$36 million.

ıals per month based on month of the year. Actuals may also depend on

28%	17%	13%
2020	2021	2022
3,750	2,311	1,933

2019-20	2020-21	2021-2022
2,671	3,391	2,217
668	848	554

2020	2021	2022
4,016	2,598	2,241

2019-20	2020-21	2021-2022
2,940	3,662	2,508
735	915	627

mple, the true cost of GA being deferred is

ıd $17-21 billion (at 3.5% interest rate), peaking in 2028.
$118-$134 million.

ıals per month based on month of the year. Actuals may also depend on decision

2019-20[1]	2020-21[1]
740	763
735	915
279	323
60	60
18	18
1097	**1164**
1092	1316

1,092 - 1,097 1,316 - 1,164

2019-201	2020-211
2958	3052
2940	3662
279	323
60	60
18	18
3315	**3453**
3297	4063

3,297 - 3,315 4,063 - 3,453





2019-20	2020-21	2021-2022
2,940 - 2,958	3,662 - 3,052	2,508 - 1,943

Scenario 1a, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy End of Year Debt Drawdown	Fiscal Exposure	3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0
CEFD Equal Monthly Debt Drawdown	Fiscal Exposure	3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0
		72	66	58	71	39	32	19	35	19	4	21	12	-12	-24	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure	Maximum Annual Interest Cost	15,334
End of Year Debt Drawdown	3,107	964
Equal Monthly Debt Drawdown	3,180	952

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,281
Equal Monthly Debt Drawdown	19,729

		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 25-yr - End of Year Debt Drawdown*	*0*	*155*	*296*	*421*	*574*	*658*	*727*	*768*	*844*	*884*	*892*	*938*	*964*	*938*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
b	Additional GA Debt Drawdown, End of Year	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,107	5,930	8,427	11,479	13,168	14,536	15,353	16,878	17,681	17,844	18,755	19,281	18,765	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,107	2,822	2,498	3,052	1,689	1,369	817	1,525	802	163	911	526	-516	-1,039	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

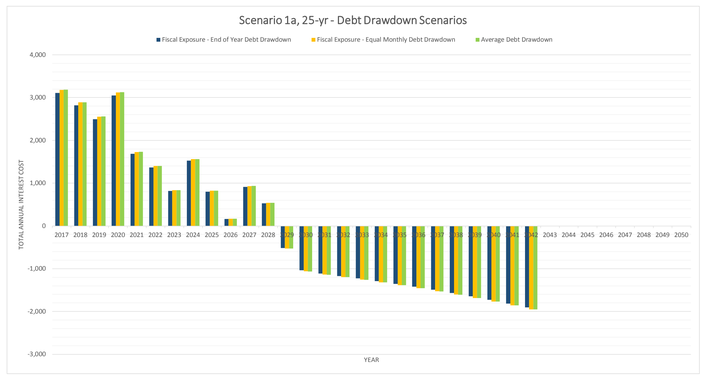
		26%	23%	19%	22%	10%	7%																												
Scenario 1a, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*72*	*221*	*355*	*492*	*613*	*690*	*746*	*803*	*863*	*888*	*913*	*950*	*952*	*914*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,180	6,068	8,623	11,746	13,474	14,874	15,710	17,270	18,091	18,258	19,191	19,729	19,201	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,180	2,888	2,556	3,123	1,728	1,400	836	1,560	821	167	932	539	-528	-1,063	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

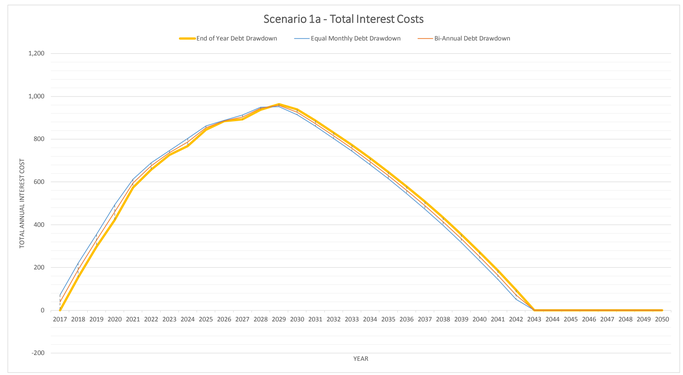
	Monthly Drawdown	259	222	183	219	93	59	8	63	(3)	(60)	2	(34)	(123)	(165)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-
	FV of Monthly Drawdown at 5%	3,180	2,729	2,252	2,691	1,141	727	92	775	(42)	(738)	19	(421)	(1,515)	(2,023)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	72	62	51	61	26	17	2	18	(1)	(17)	0	(10)	(34)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	159	303	431	587	674	744	786	864	905	913	960	986	960	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	72	221	355	492	613	690	746	803	863	888	913	950	952	914	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																			
($ millions)																																			
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*39*	*191*	*328*	*460*	*595*	*675*	*737*	*787*	*854*	*886*	*904*	*944*	*958*	*925*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,146	6,004	8,533	11,623	13,332	14,718	15,545	17,089	17,902	18,067	18,989	19,522	19,000	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,146	2,858	2,529	3,090	1,710	1,386	827	1,544	812	165	923	533	-523	-1,052	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	1,554	1,333	1,101	1,315	557	355	45	379	(21)	(360)	9	(206)	(740)	(988)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-
	FV of Bi-Annual Drawdown at 5%	3,146	2,700	2,229	2,663	1,129	719	91	767	(42)	(730)	19	(417)	(1,499)	(2,002)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-
	Annual Interest Cost on New Drawdowns	39	33	28	33	14	9	1	9	(1)	(9)	0	(5)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-
	Annual Interest Cost on Opening Balance	-	157	300	427	581	667	736	777	854	895	903	949	976	950	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Total Annual Interest Cost	39	191	328	460	595	675	737	787	854	886	904	944	958	925	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Scenario 1a, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,988	9,168	9,351	9,538	9,729	9,923	10,122	10,324	10,531	10,741	10,956	11,175	11,399	11,627	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1a, 25-yr	*78*	*226*	*359*	*498*	*616*	*693*	*747*	*806*	*864*	*888*	*915*	*951*	*951*	*912*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	15,334
	Additional GA Debt Drawdown	3,107	2,667	2,201	2,630	1,115	710	90	757	-41	-721	19	-411	-1,480	-1,977	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,185	6,078	8,638	11,766	13,497	14,900	15,737	17,300	18,123	18,290	19,224	19,763	19,234	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,185	2,893	2,560	3,128	1,731	1,403	838	1,563	822	167	934	539	-529	-1,065	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1b, 25-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	
			27	40	52	85	52	44	30	45	26	10	25	14	-13	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0	0	0	0	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	14,480
End of Year Debt Drawdown	3,665	968	
Equal Monthly Debt Drawdown	3,750	954	

Maximum Accumulated Debt	Accumulated Debt, 25-yr
End of Year Debt Drawdown	19,350
Equal Monthly Debt Drawdown	19,800

		9%	14%	18%	28%	17%	13%																													
Scenario 1b, 25-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*0*	*57*	*143*	*256*	*439*	*552*	*647*	*711*	*807*	*864*	*884*	*938*	*968*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown, End of Year	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,142	2,866	5,124	8,790	11,048	12,938	14,219	16,145	17,277	17,690	18,762	19,350	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,142	1,725	2,258	3,665	2,259	1,889	1,282	1,926	1,132	413	1,072	588	-563	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	0	0	0	0	0	

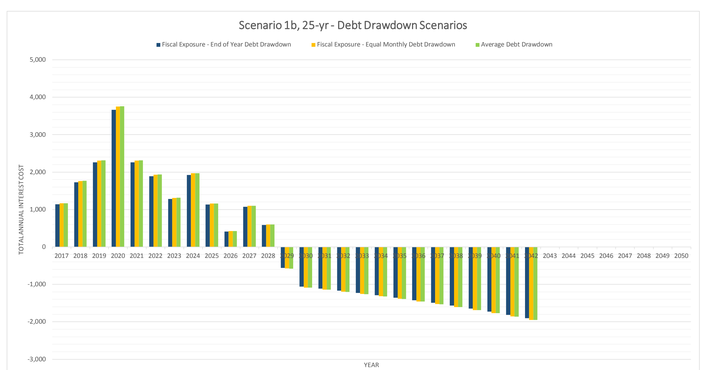
Scenario 1b, 25-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
a	Debt, Beginning of Year	0	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	
954 c = a*5%	*Interest Cost - Scenario 1b, 25-yr*	*27*	*97*	*196*	*341*	*492*	*596*	*677*	*756*	*834*	*873*	*909*	*952*	*954*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
b	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,168	2,933	5,244	8,994	11,305	13,238	14,550	16,520	17,679	18,101	19,198	19,800	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,168	1,765	2,311	3,750	2,311	1,933	1,311	1,971	1,158	422	1,097	602	-576	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	0	0	0	0	0	

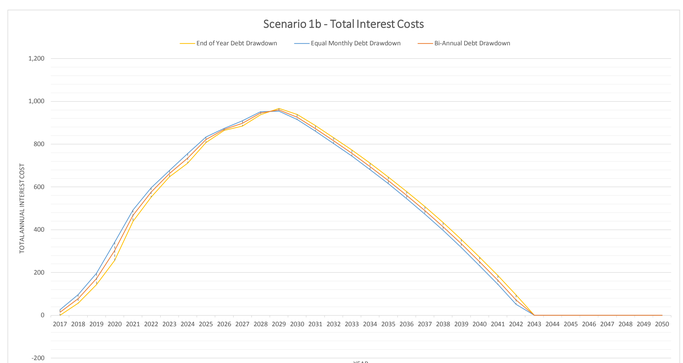
	Monthly Drawdown	95	139	176	284	152	111	53	101	27	(38)	16	(29)	(128)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	-	-	-	-	-	
	FV of Monthly Drawdown at 5%	1,168	1,706	2,164	3,488	1,862	1,368	650	1,243	332	(462)	192	(358)	(1,566)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	27	39	49	79	42	31	15	28	8	(10)	4	(8)	(36)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	147	262	450	565	662	727	826	884	905	960	990	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	27	97	196	341	492	596	677	756	834	873	909	952	954	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*14*	*79*	*172*	*302*	*468*	*576*	*663*	*735*	*821*	*869*	*898*	*945*	*960*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,156	2,902	5,189	8,899	11,187	13,100	14,397	16,347	17,493	17,911	18,996	19,592	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,156	1,746	2,286	3,711	2,287	1,913	1,298	1,950	1,146	418	1,085	596	-570	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	0	0	0	0	0	

	Bi-Annual Drawdown	571	834	1,057	1,704	910	668	317	607	162	(226)	94	(175)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	-	-	-	-	-	
	FV of Bi-Annual Drawdown at 5%	1,156	1,688	2,141	3,451	1,842	1,354	643	1,230	329	(457)	190	(354)	(1,550)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on New Drawdowns	14	21	26	43	23	17	8	15	4	(6)	2	(4)	(19)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	-	-	-	-	-	
	Annual Interest Cost on Opening Balance	-	58	145	259	445	559	655	720	817	875	896	950	980	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	Total Annual Interest Cost	14	79	172	302	468	576	663	735	821	869	898	945	960	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

Scenario 1b, 25-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,954	10,167	9,437	8,760	9,024	9,297	9,577	9,867	10,165	10,472	10,788	11,114	11,449	11,650	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	GA Debt Requirement	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Debt, Beginning of Year	0	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	
	Interest Cost - Scenario 1b, 25-yr	*29*	*100*	*200*	*348*	*496*	*600*	*679*	*759*	*836*	*874*	*911*	*953*	*953*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14,480
	Additional GA Debt Drawdown	1,142	1,667	2,115	3,409	1,819	1,337	635	1,215	325	-451	187	-350	-1,531	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	0	0	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,170	2,938	5,253	9,009	11,325	13,261	14,575	16,549	17,709	18,132	19,231	19,834	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	0	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,170	1,768	2,315	3,757	2,315	1,937	1,314	1,974	1,160	423	1,099	603	-577	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	0	0	0	0	0	





Scenario 1a, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			77	71	64	77	46	39	27	43	27	13	31	23	-1	-13	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,835
End of Year Debt Drawdown	3,326	1,157	
Equal Monthly Debt Drawdown	3,404	1,156	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,133
Equal Monthly Debt Drawdown	23,671

		28%	24%	21%	24%	12%	9%																													
Scenario 1a, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1a, 30-yr - End of Year Debt Drawdown*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,835
b	Additional GA Debt Drawdown, End of Year	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		3,326	3,057	2,748	3,319	1,974	1,673	1,142	1,871	1,171	555	1,328	969	-46	-539	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1a, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,156	*Interest Cost - Scenario 1a, 30-yr*	*77*	*237*	*383*	*534*	*668*	*760*	*831*	*905*	*983*	*1,027*	*1,073*	*1,131*	*1,156*	*1,142*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,404	6,531	9,343	12,740	14,760	16,472	17,641	19,555	20,753	21,320	22,679	23,671	23,624	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		3,404	3,128	2,812	3,396	2,020	1,712	1,168	1,914	1,198	568	1,359	992	-47	-552	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

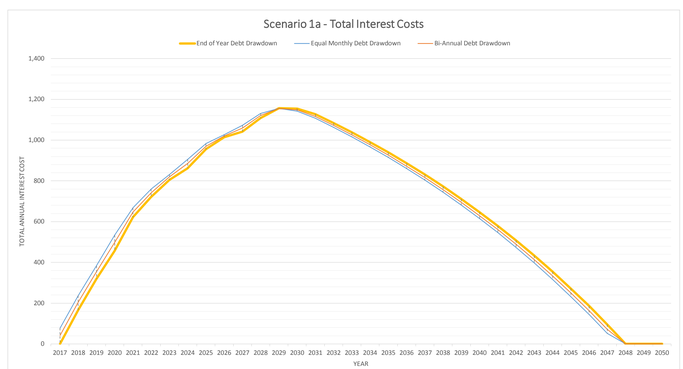
	Monthly Drawdown	277	241	202	239	113	79	28	84	18	(38)	24	(12)	(100)	(141)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-	
	FV of Monthly Drawdown at 5%	3,404	2,958	2,485	2,929	1,383	974	345	1,032	220	(470)	293	(142)	(1,230)	(1,733)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-	
	Annual Interest Cost on New Drawdowns	77	67	56	67	31	22	8	23	5	(11)	7	(3)	(28)	(39)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-	
	Annual Interest Cost on Opening Balance	-	170	327	467	637	738	824	882	978	1,038	1,066	1,134	1,184	1,181	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	0	0	0	
	Total Annual Interest Cost	77	237	383	534	668	760	831	905	983	1,027	1,073	1,131	1,156	1,142	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	0	0	0	

Scenario 1a, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*42*	*205*	*354*	*498*	*647*	*742*	*819*	*885*	*970*	*1,021*	*1,058*	*1,120*	*1,156*	*1,148*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,368	6,463	9,245	12,606	14,605	16,299	17,455	19,350	20,535	21,097	22,441	23,422	23,376	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		3,368	3,095	2,782	3,361	1,999	1,694	1,156	1,894	1,185	562	1,344	981	-46	-546	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

	Bi-Annual Drawdown	1,663	1,445	1,214	1,431	676	476	168	504	108	(230)	143	(70)	(601)	(847)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-	
	FV of Bi-Annual Drawdown at 5%	3,368	2,926	2,459	2,899	1,369	964	341	1,021	218	(465)	290	(141)	(1,217)	(1,715)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-	
	Annual Interest Cost on New Drawdowns	42	36	30	36	17	12	4	13	3	(6)	4	(2)	(15)	(21)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-	
	Annual Interest Cost on Opening Balance	-	168	323	462	630	730	815	873	967	1,027	1,055	1,122	1,171	1,169	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	0	0	0	
	Total Annual Interest Cost	42	205	354	498	647	742	819	885	970	1,021	1,058	1,120	1,156	1,148	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	0	0	0	

Scenario 1a, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1a, 30-yr	*83*	*243*	*388*	*540*	*672*	*763*	*833*	*909*	*985*	*1,028*	*1,075*	*1,132*	*1,156*	*1,141*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,835
	Additional GA Debt Drawdown	3,326	2,890	2,429	2,863	1,352	952	337	1,009	215	-459	286	-139	-1,202	-1,693	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	3,410	6,543	9,359	12,762	14,785	16,501	17,671	19,588	20,788	21,357	22,718	23,711	23,664	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		3,410	3,133	2,817	3,402	2,024	1,715	1,170	1,917	1,200	569	1,361	993	-47	-553	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	





Scenario 1b, 30-yr - Debt Drawdown Scenarios

Annual Interest Rate = 5.0%		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Energy	End of Year Debt Drawdown	Fiscal Exposure	1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0
CEFD	Equal Monthly Debt Drawdown	Fiscal Exposure	1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0
			33	46	59	91	59	51	37	53	35	19	35	24	-2	-16	-20	-21	-22	-23	-25	-26	-27	-29	-30	-31	-33	-35	-36	-38	-40	-42	-44	0	0	0

Maximum Fiscal Exposure		Maximum Annual Interest Cost	21,042
End of Year Debt Drawdown	3,925	1,166	
Equal Monthly Debt Drawdown	4,016	1,164	

Maximum Accumulated Debt	Accumulated Debt, 30-yr
End of Year Debt Drawdown	23,313
Equal Monthly Debt Drawdown	23,855

		12%	16%	20%	30%	19%	15%																													
Scenario 1b, 30-yr	End of Year Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown, End of Year	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
Fiscal Exposure - End of Year Debt Drawdown		1,416	1,993	2,522	3,925	2,539	2,190	1,604	2,272	1,503	810	1,497	1,043	-78	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	

Scenario 1b, 30-yr	Equal Monthly Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		12																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	
1,164 c = a*5%	*Interest Cost - Scenario 1b, 30-yr*	*33*	*117*	*229*	*388*	*552*	*671*	*767*	*862*	*958*	*1,017*	*1,073*	*1,138*	*1,164*	*1,146*	*1,107*	*1,062*	*1,016*	*966*	*915*	*860*	*803*	*744*	*681*	*615*	*546*	*473*	*397*	*316*	*232*	*144*	*51*	*0*	*0*	*0*	21,042
b	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,449	3,489	6,070	10,086	12,684	14,924	16,566	18,891	20,428	21,257	22,788	23,855	23,775	23,072	22,179	21,242	20,257	19,224	18,138	16,999	15,802	14,546	13,227	11,842	10,387	8,860	7,257	5,573	3,805	1,949	0	0	0	0	
Fiscal Exposure - Equal Monthly Debt Drawdown		1,449	2,040	2,581	4,016	2,598	2,241	1,642	2,325	1,538	829	1,531	1,067	-79	-703	-893	-938	-984	-1,034	-1,085	-1,140	-1,197	-1,256	-1,319	-1,385	-1,454	-1,527	-1,603	-1,684	-1,768	-1,856	-1,949	0	0	0	

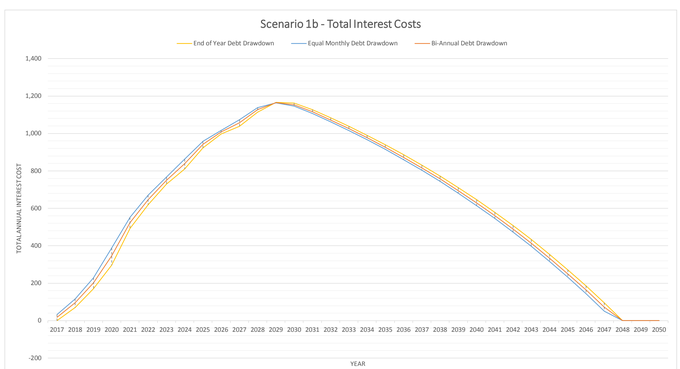
	Monthly Drawdown	118	160	196	302	170	131	73	122	48	(16)	38	(6)	(104)	(154)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	(167)	-	-	-
	FV of Monthly Drawdown at 5%	1,449	1,967	2,406	3,713	2,093	1,607	895	1,496	593	(193)	469	(73)	(1,272)	(1,892)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	-	-	-
	Annual Interest Cost on New Drawdowns	33	45	55	84	48	36	20	34	13	(4)	11	(2)	(29)	(43)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	174	303	504	634	746	828	945	1,021	1,063	1,139	1,193	1,189	1,154	1,109	1,062	1,013	961	907	850	790	727	661	592	519	443	363	279	190	97	(0)	(0)	(0)	
	Total Annual Interest Cost	33	117	229	388	552	671	767	862	958	1,017	1,073	1,138	1,164	1,146	1,107	1,062	1,016	966	915	860	803	744	681	615	546	473	397	316	232	144	51	(0)	(0)	(0)	

Scenario 1b, 30-yr	Bi-Annual Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
		2																																		
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*18*	*96*	*202*	*346*	*525*	*647*	*749*	*838*	*942*	*1,008*	*1,057*	*1,127*	*1,165*	*1,153*	*1,116*	*1,072*	*1,026*	*977*	*926*	*872*	*816*	*757*	*695*	*629*	*561*	*489*	*413*	*334*	*251*	*163*	*71*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,434	3,452	6,006	9,980	12,551	14,768	16,392	18,692	20,214	21,034	22,549	23,605	23,526	22,830	21,946	21,019	20,045	19,022	17,948	16,820	15,637	14,393	13,088	11,717	10,278	8,767	7,181	5,515	3,765	1,929	0	0	0	0	
Fiscal Exposure - Bi-Annual Debt Drawdown		1,434	2,018	2,554	3,974	2,570	2,217	1,624	2,300	1,521	820	1,515	1,056	-79	-696	-884	-928	-974	-1,023	-1,074	-1,128	-1,184	-1,243	-1,305	-1,371	-1,439	-1,511	-1,587	-1,666	-1,749	-1,837	-1,929	0	0	0	

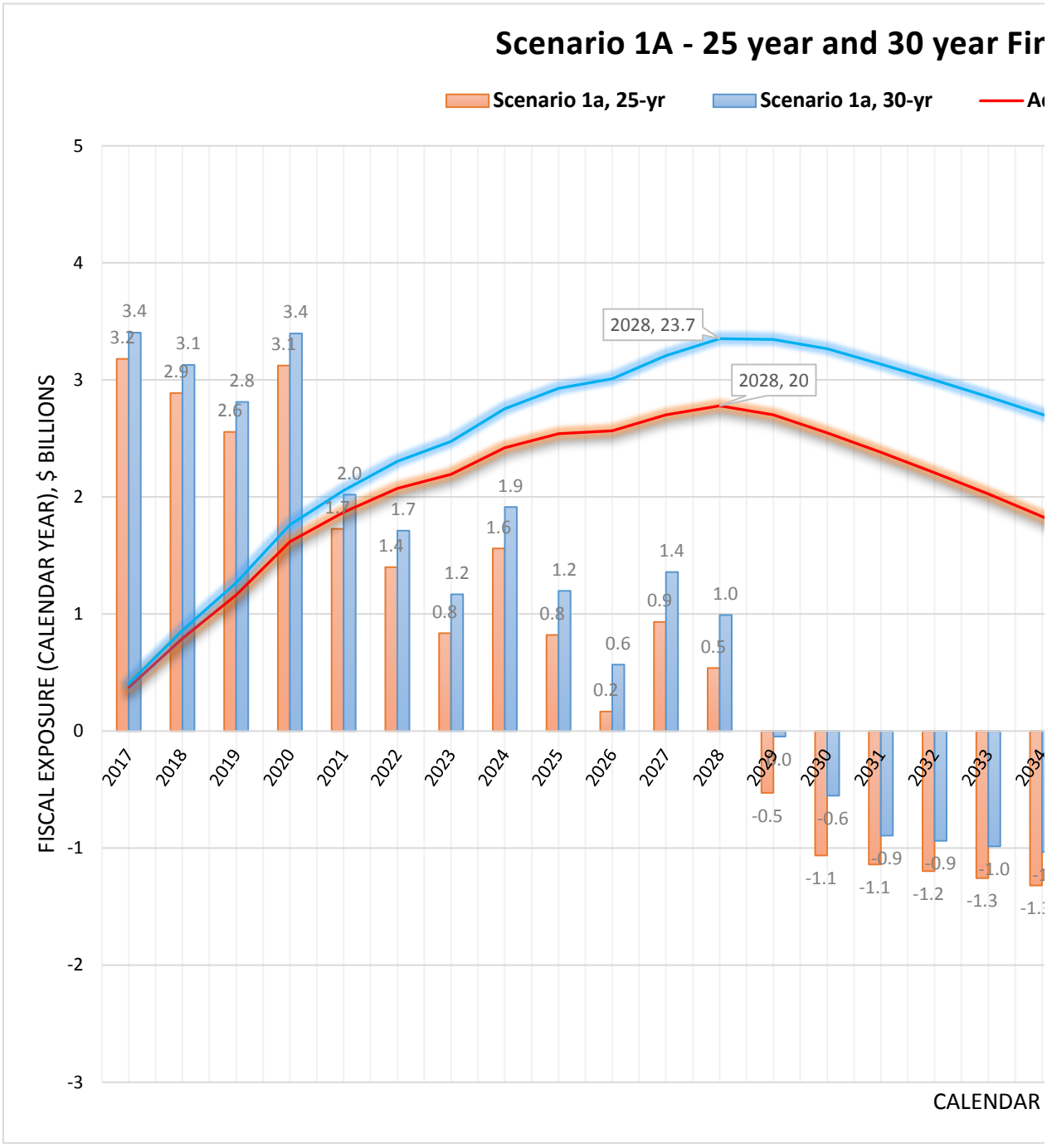
	Bi-Annual Drawdown	708	961	1,176	1,814	1,023	785	437	731	290	(94)	229	(35)	(622)	(925)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	-	-	-
	FV of Bi-Annual Drawdown at 5%	1,434	1,947	2,381	3,674	2,071	1,590	886	1,481	587	(191)	464	(72)	(1,259)	(1,872)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	(2,025)	-	-	-
	Annual Interest Cost on New Drawdowns	18	24	29	45	26	20	11	18	7	(2)	6	(1)	(16)	(23)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	-	-	-
	Annual Interest Cost on Opening Balance	-	72	173	300	499	628	738	820	935	1,011	1,052	1,127	1,180	1,176	1,141	1,097	1,051	1,002	951	897	841	782	720	654	586	514	438	359	276	188	96	(0)	(0)	(0)	
	Total Annual Interest Cost	18	96	202	346	525	647	749	838	942	1,008	1,057	1,127	1,165	1,153	1,116	1,072	1,026	977	926	872	816	757	695	629	561	489	413	334	251	163	71	(0)	(0)	(0)	

Scenario 1b, 30-yr	Average Debt Drawdown	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	Total
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Debt, Beginning of Year	0	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	
	Interest Cost - Scenario 1b, 30-yr	*35*	*121*	*234*	*395*	*556*	*675*	*769*	*866*	*961*	*1,018*	*1,076*	*1,140*	*1,164*	*1,145*	*1,106*	*1,061*	*1,014*	*965*	*913*	*858*	*801*	*741*	*679*	*612*	*543*	*470*	*394*	*313*	*229*	*141*	*48*	*0*	*0*	*0*	21,042
	Additional GA Debt Drawdown	1,416	1,922	2,352	3,629	2,046	1,570	875	1,462	580	-188	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
	Accumulated debt in present year (including 5% annual interest)	1,452	3,495	6,080	10,103	12,705	14,950	16,595	18,923	20,463	21,293	22,827	23,896	23,816	23,112	22,217	21,278	20,292	19,257	18,170	17,028	15,830	14,571	13,250	11,862	10,405	8,875	7,269	5,583	3,812	1,952	0	0	0	0	
Fiscal Exposure - Average Debt Drawdown		1,452	2,043	2,585	4,023	2,602	2,245	1,644	2,329	1,540	830	1,534	1,069	-80	-705	-894	-939	-986	-1,035	-1,087	-1,142	-1,199	-1,259	-1,321	-1,388	-1,457	-1,530	-1,606	-1,687	-1,771	-1,859	-1,952	0	0	0	

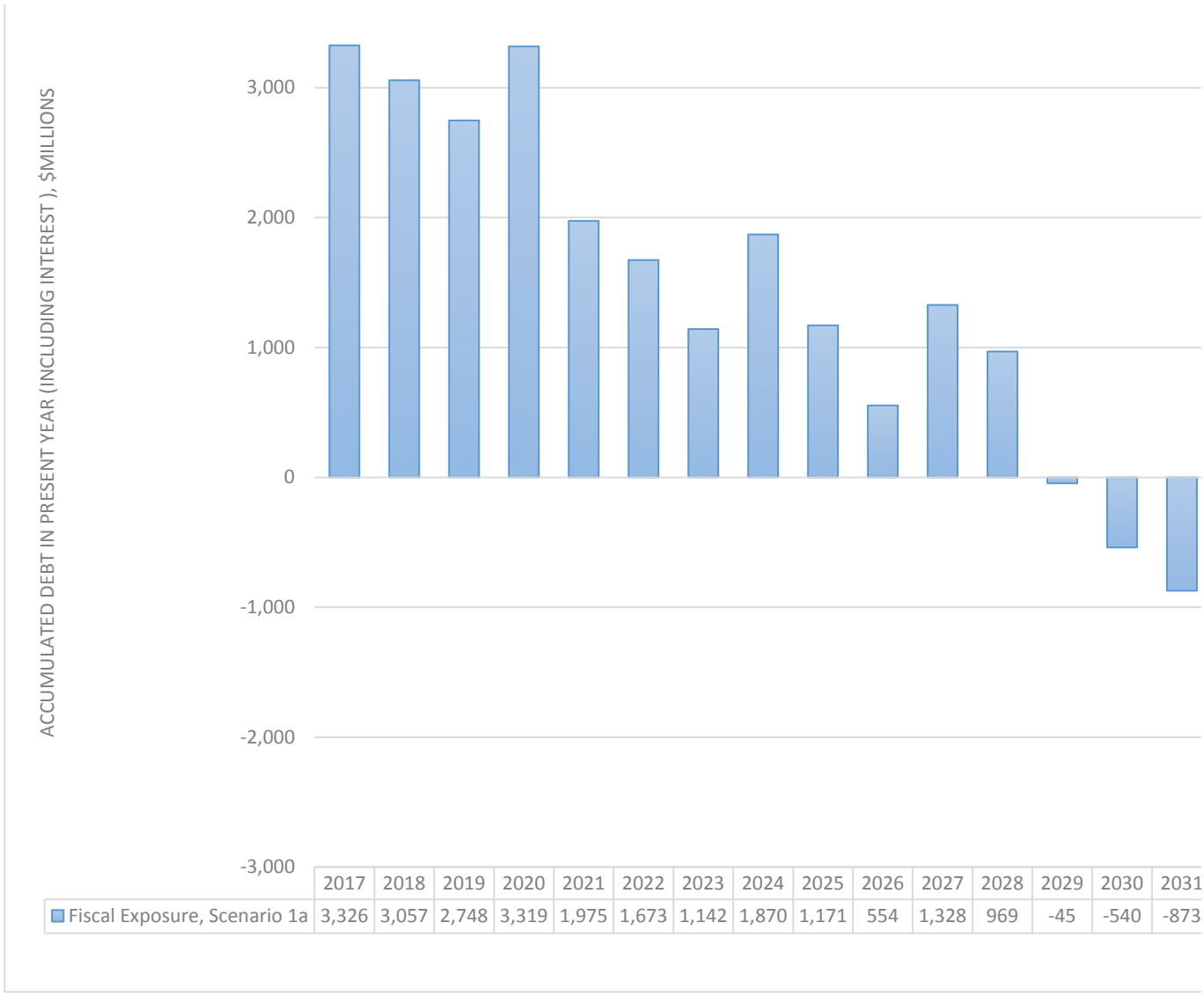




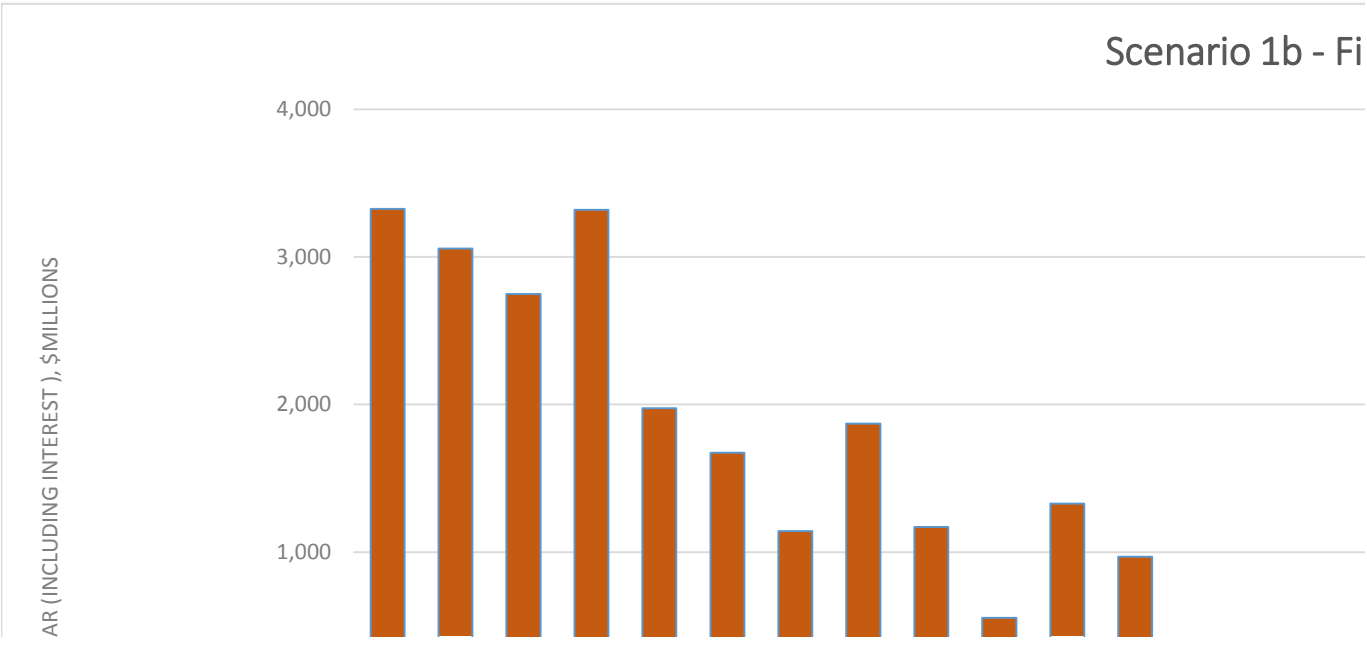
Scenario 1A - 25 year and 30 year Financing Terms, at 5% interest rate

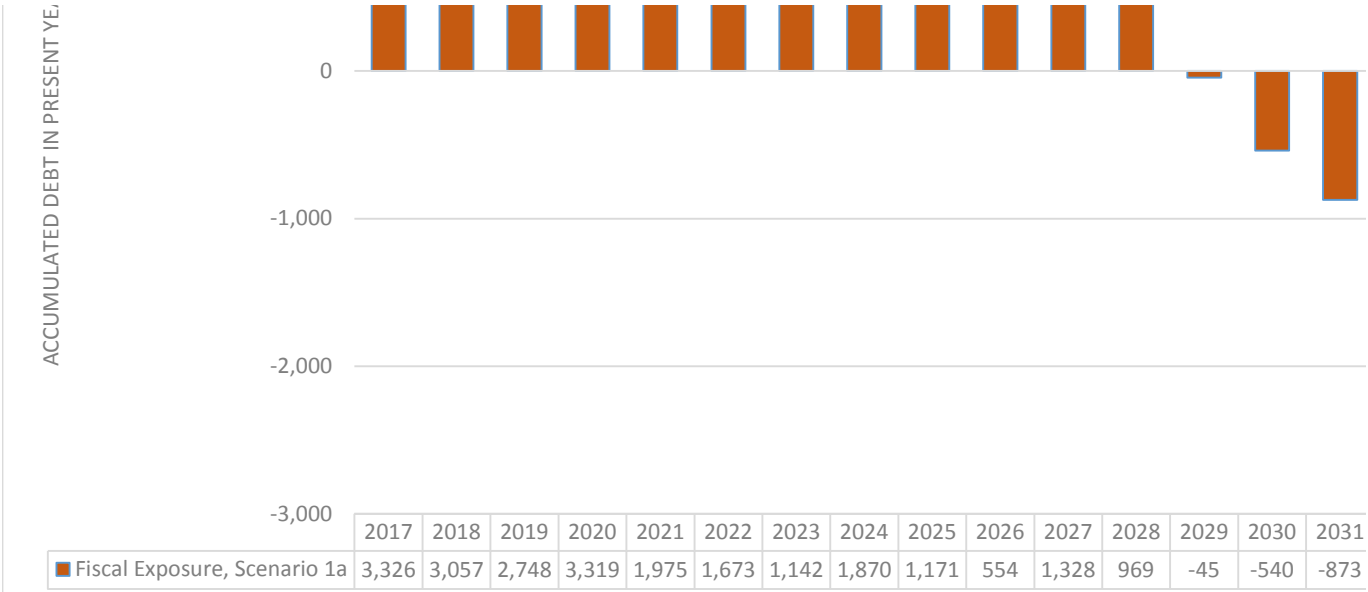




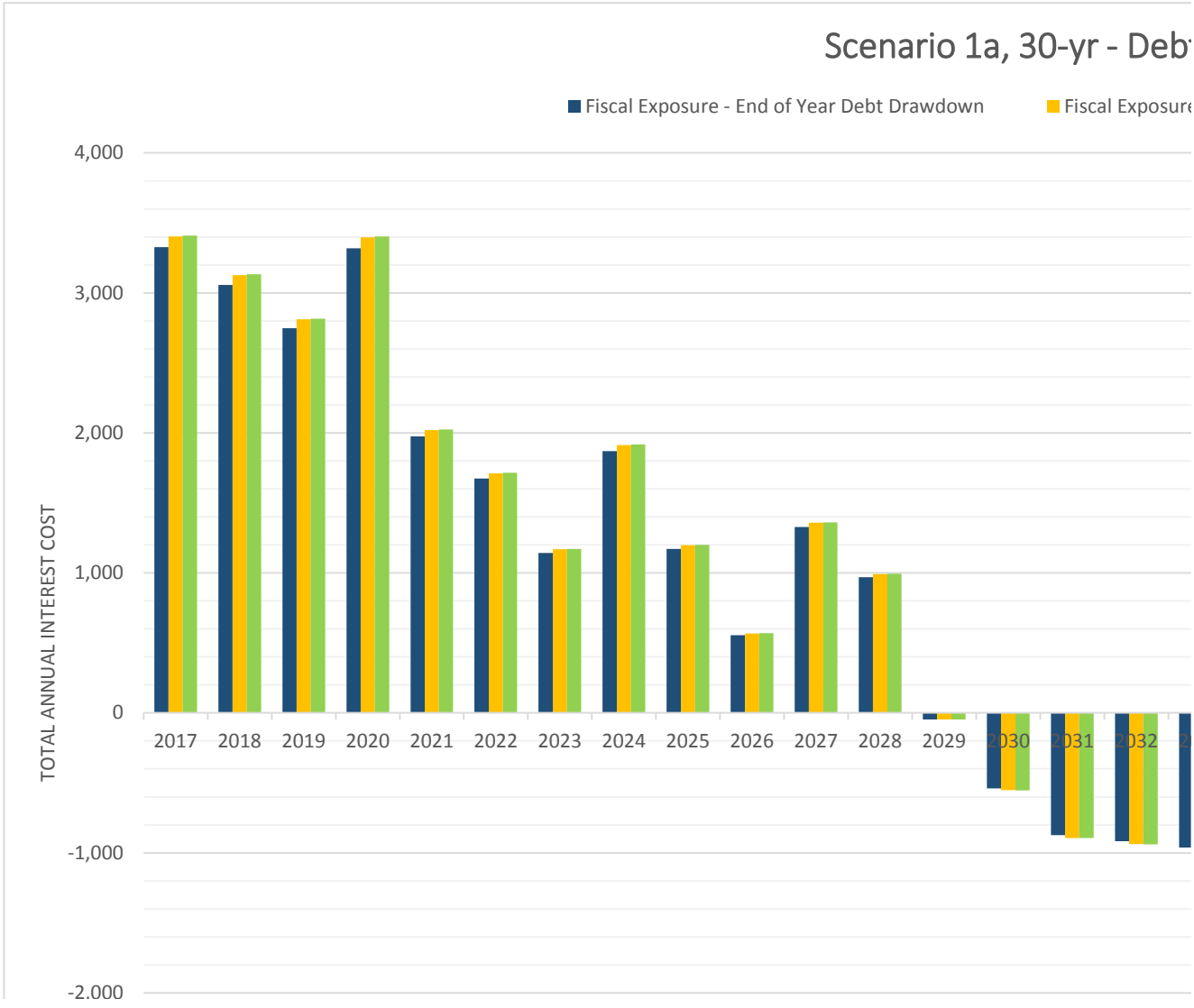


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



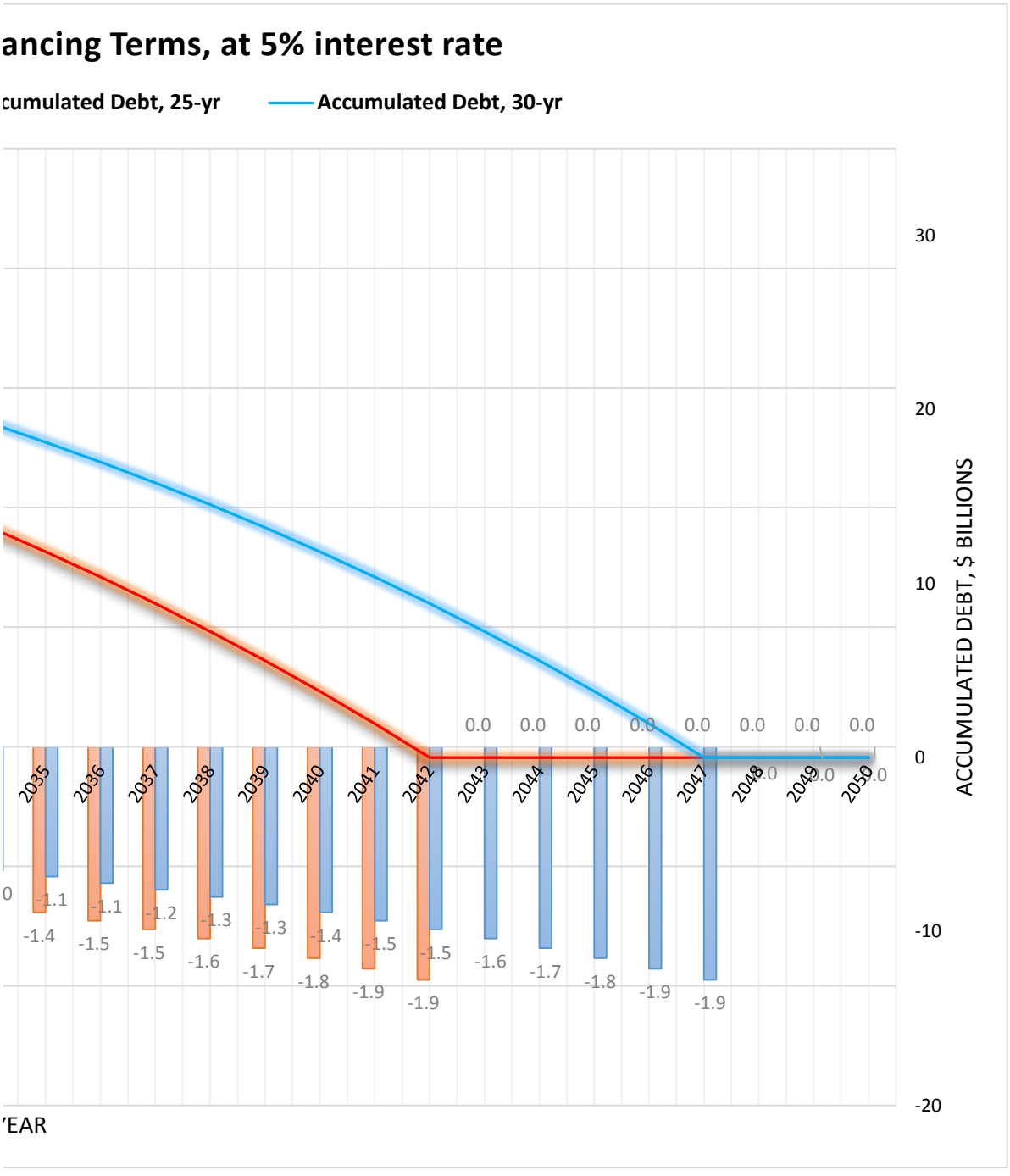


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fiscal Exposure, Scenario 1a	3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873



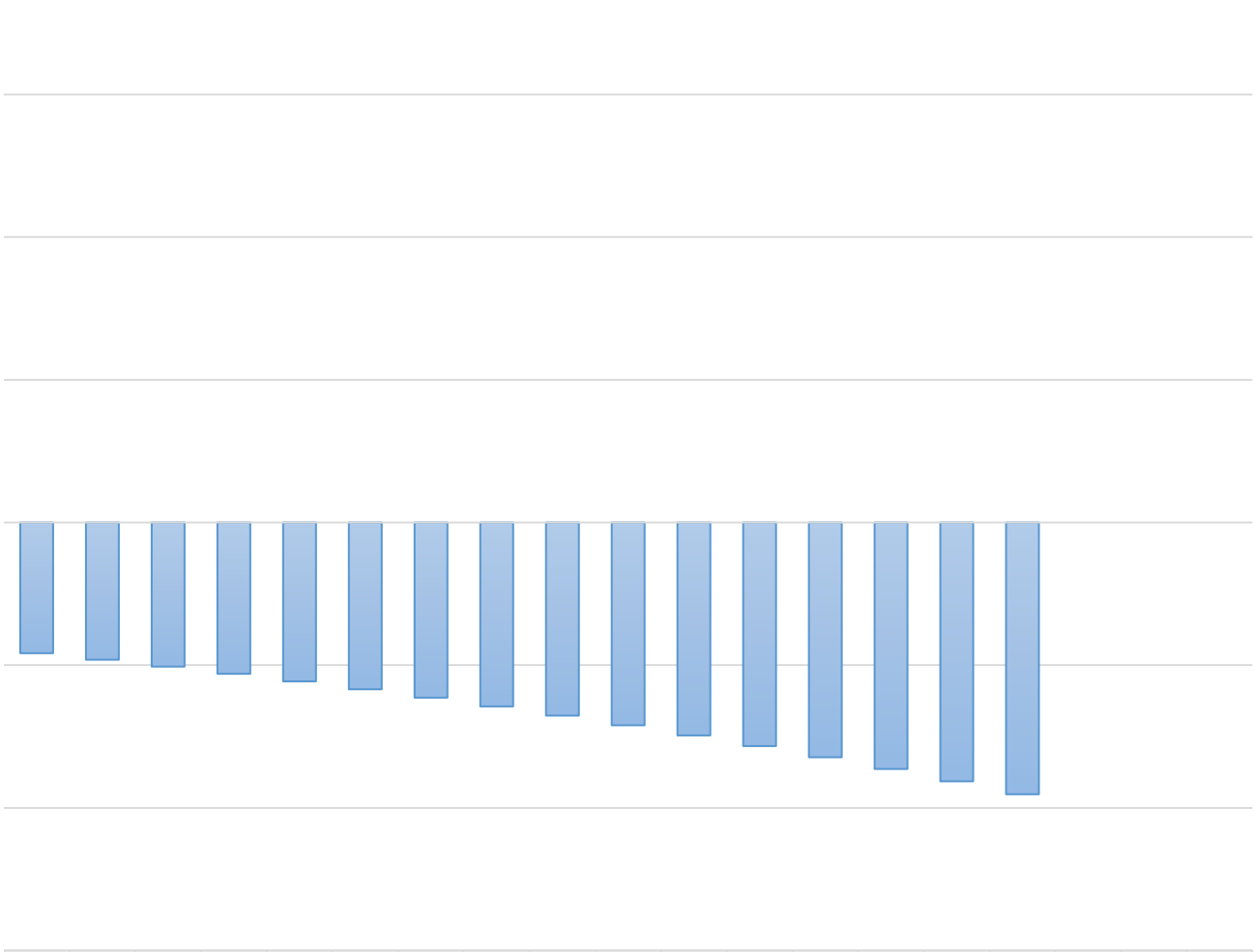

-3,000

Scenario 1E





cal Exposure



2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

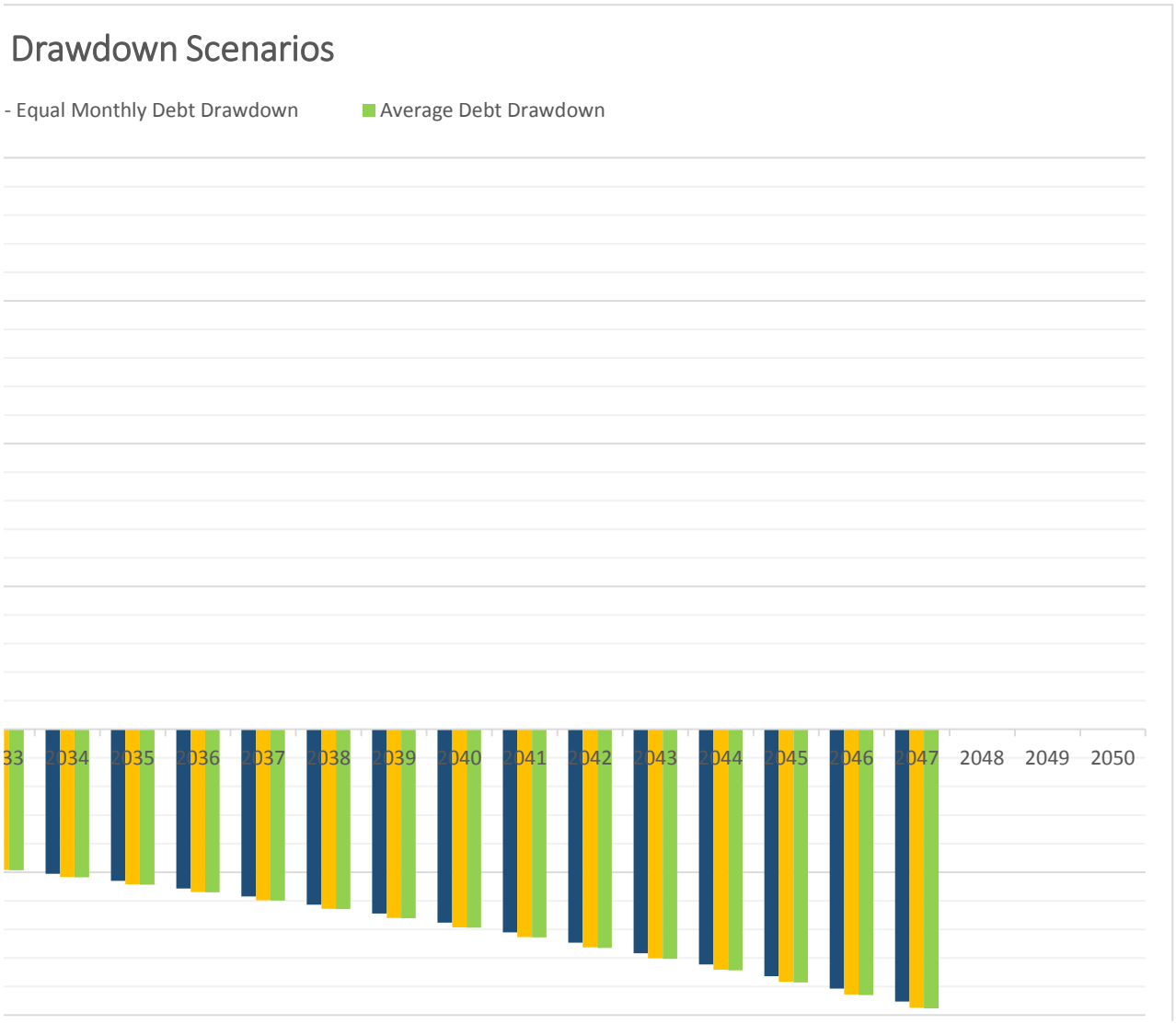
YEAR

cal Exposure



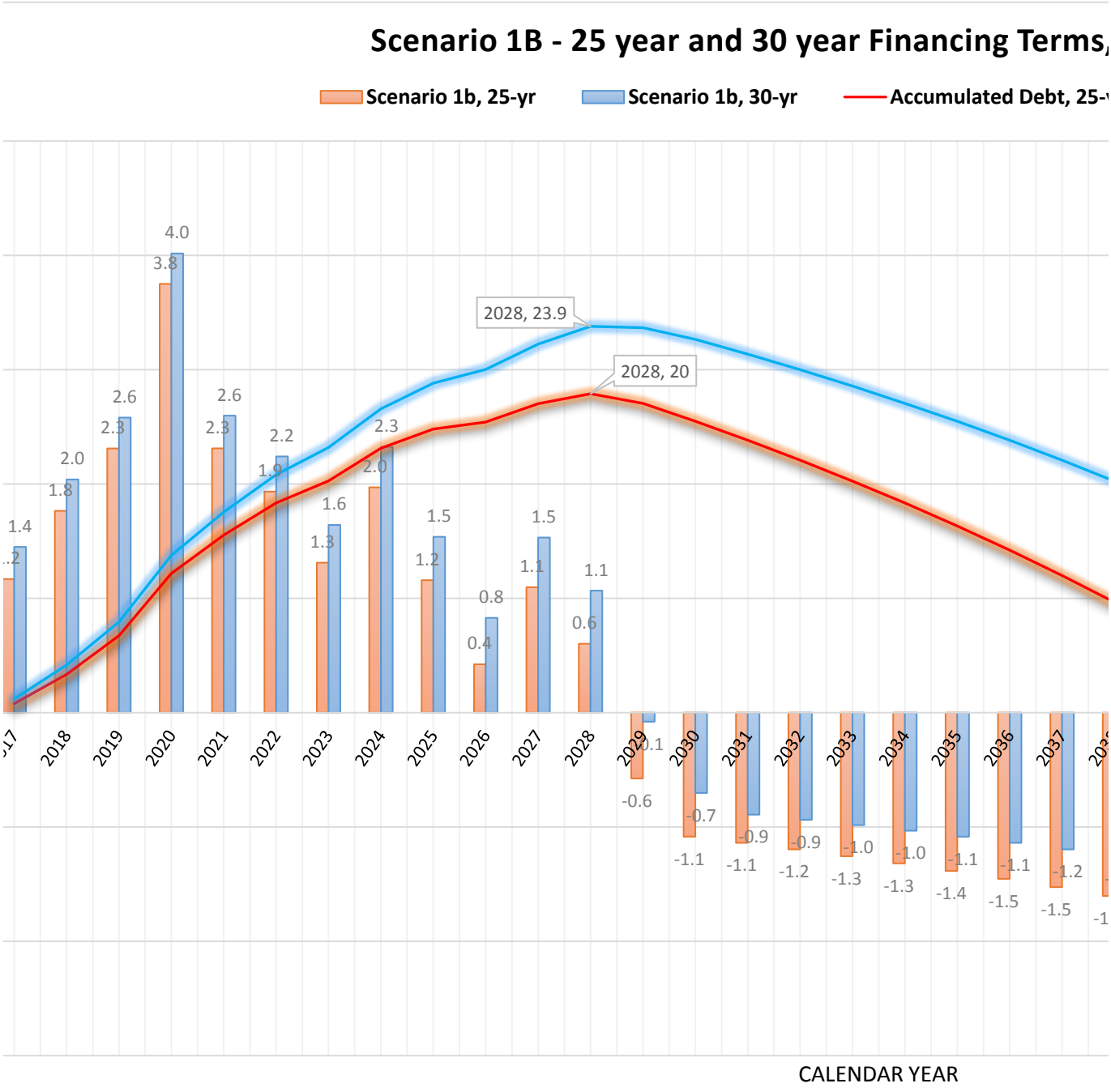
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0

YEAR

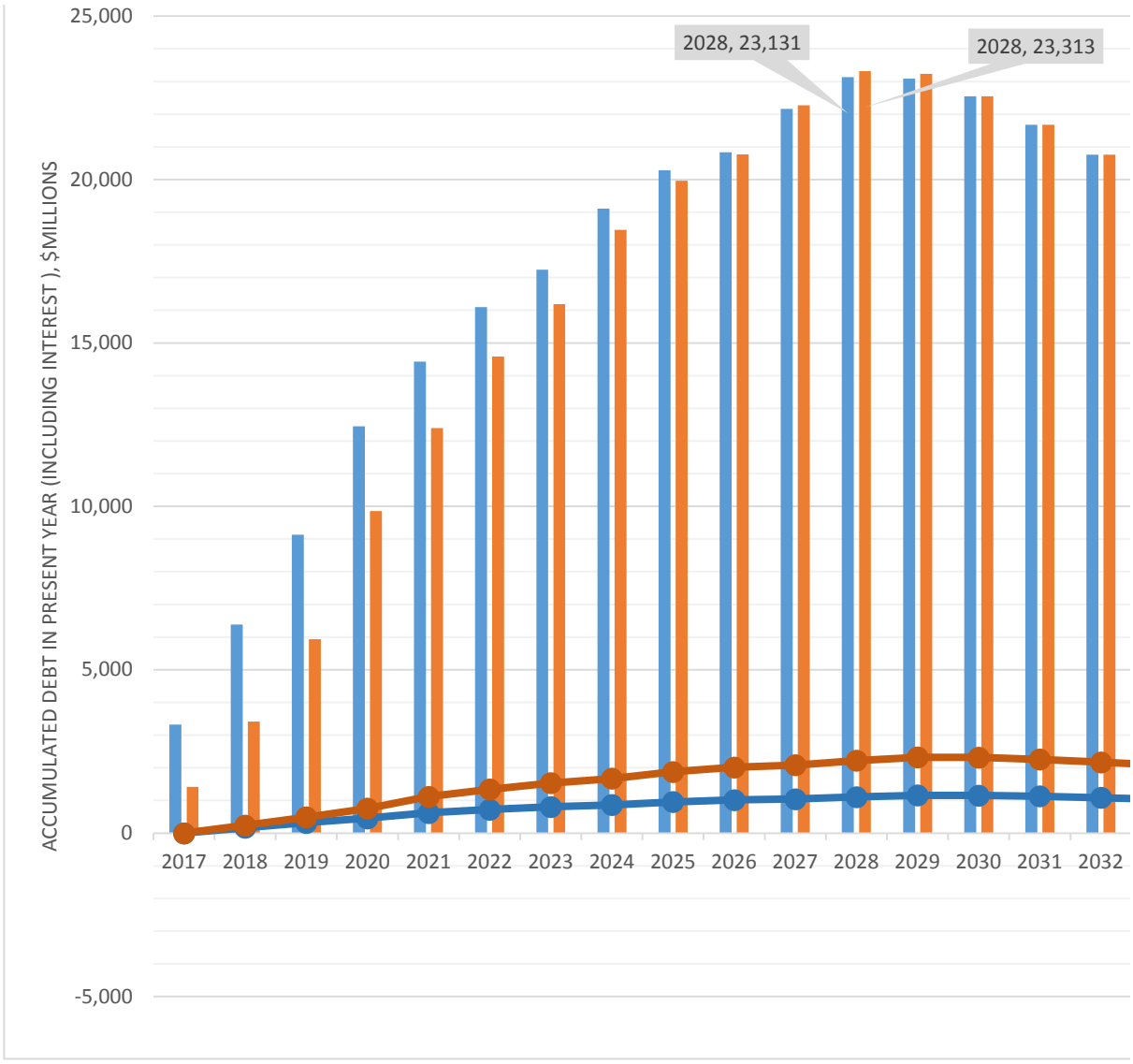


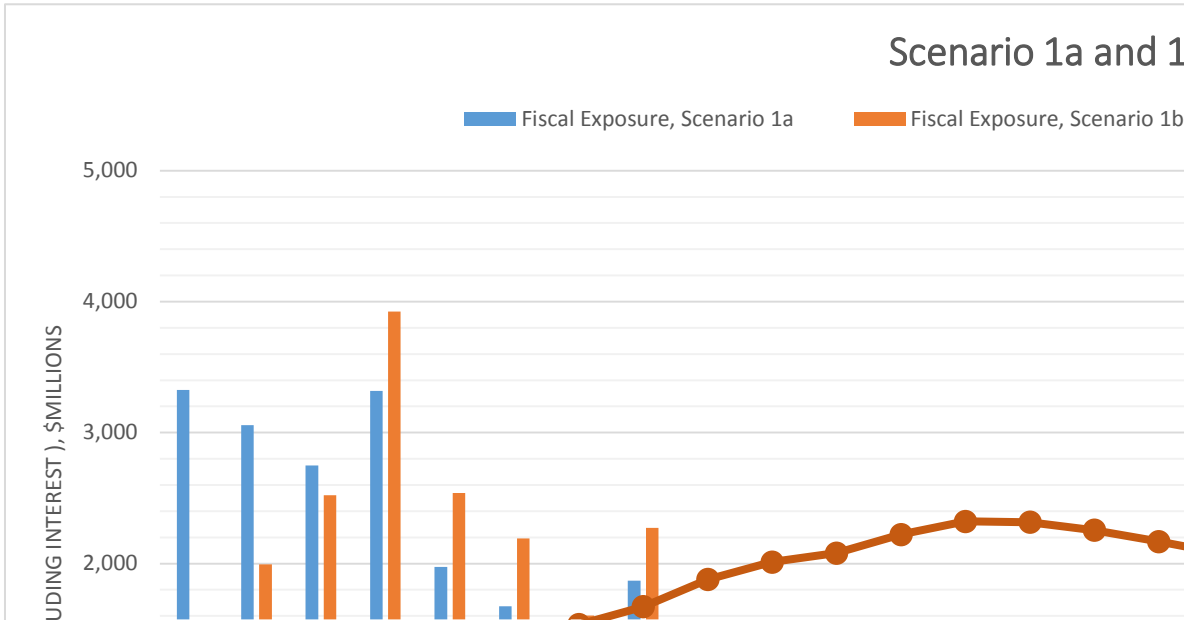
YEAR

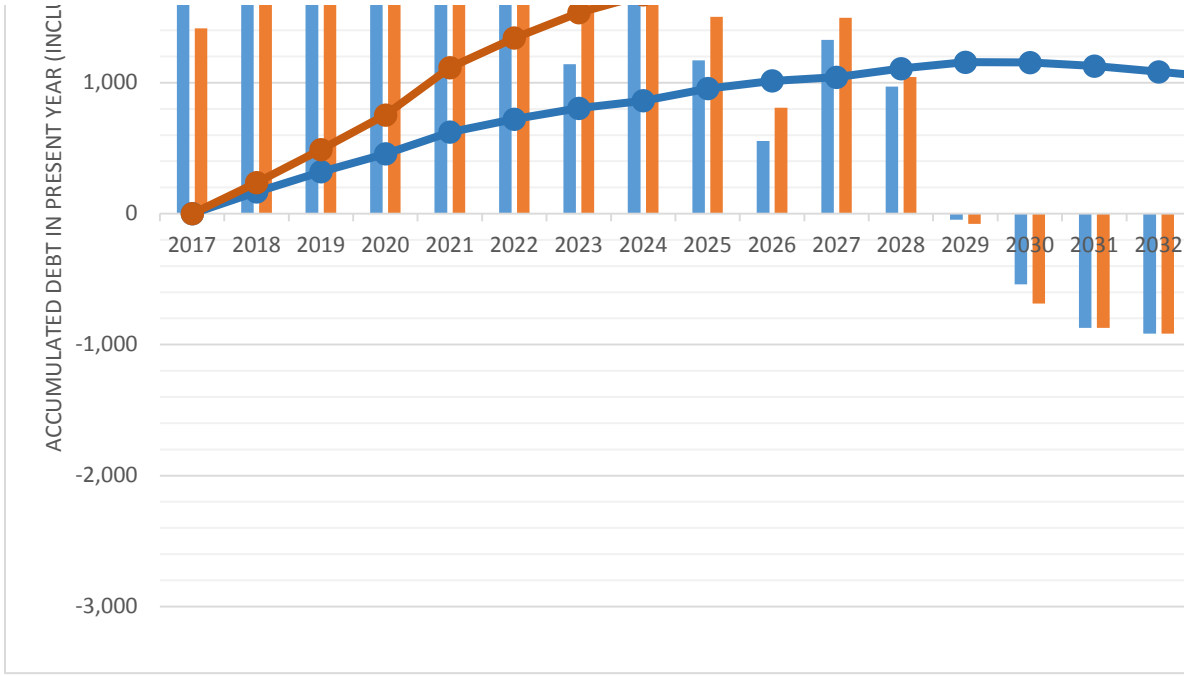
3 - 25 year and 30 year Financing Terms, at 5% interest rate

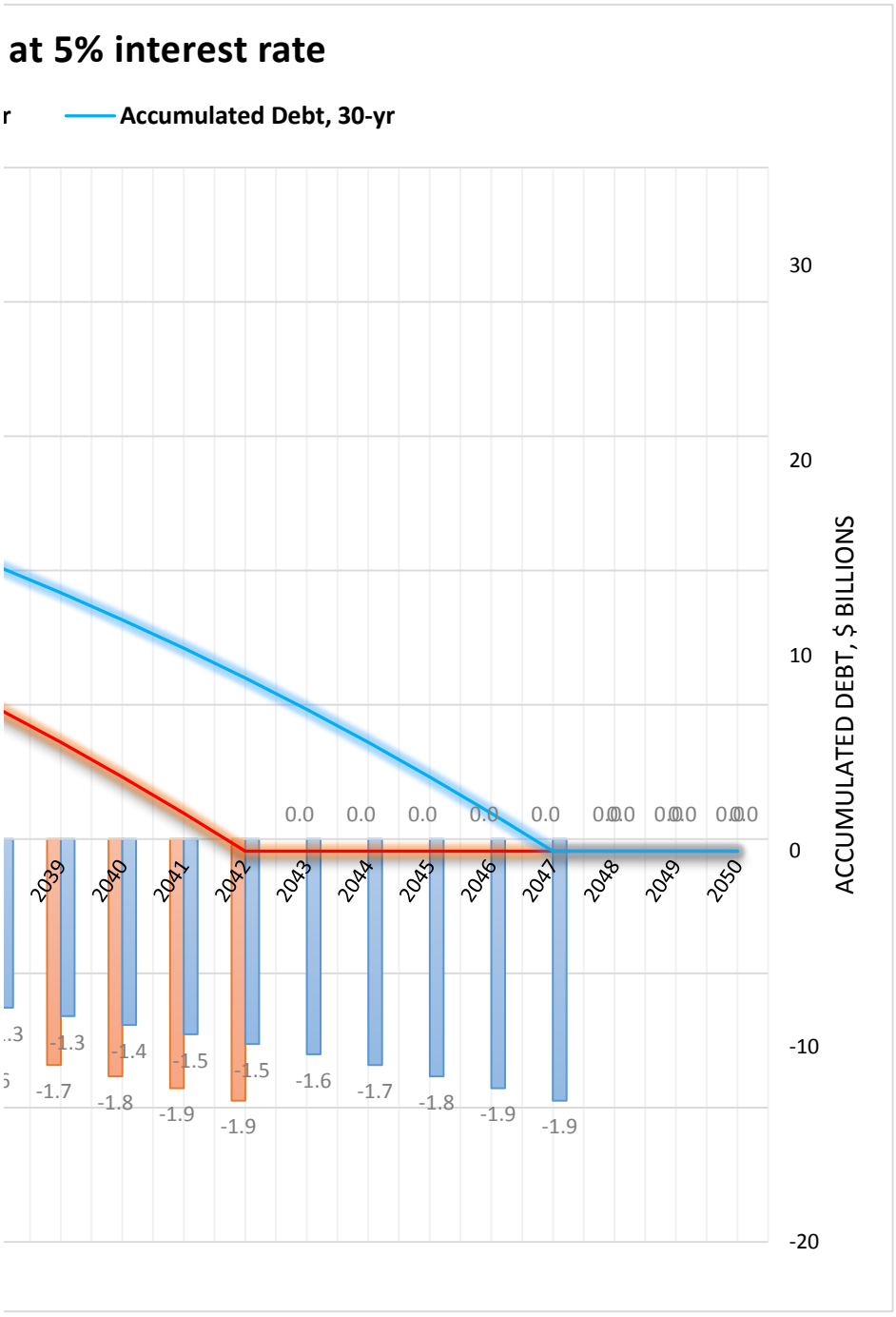





25,000
20,000
15,000
10,000
5,000
0
-5,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
2028, 23,131
2028, 23,313
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

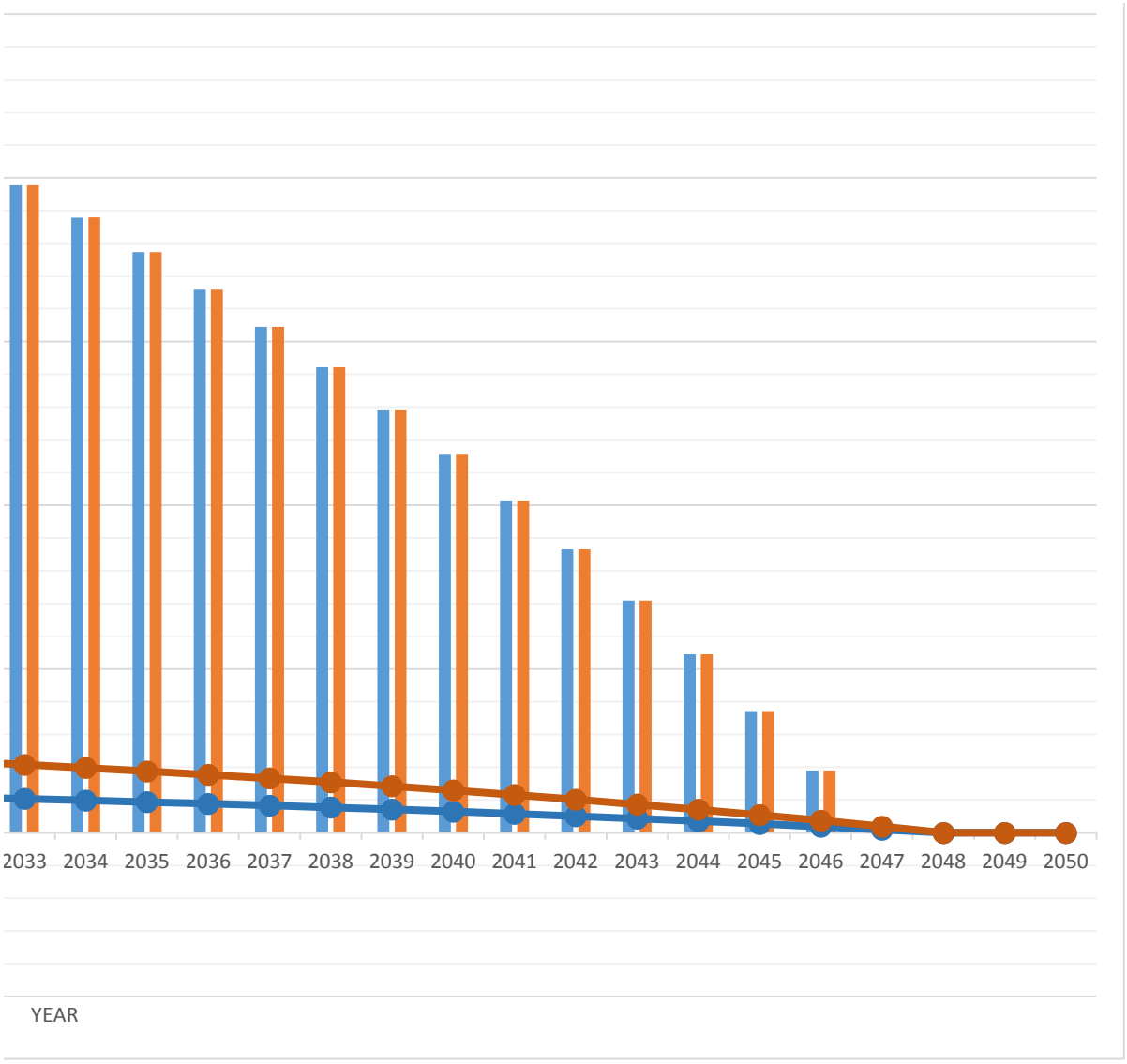

Scenario 1a and 1
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
5,000
4,000
3,000
2,000
UDING INTEREST), $MILLIONS

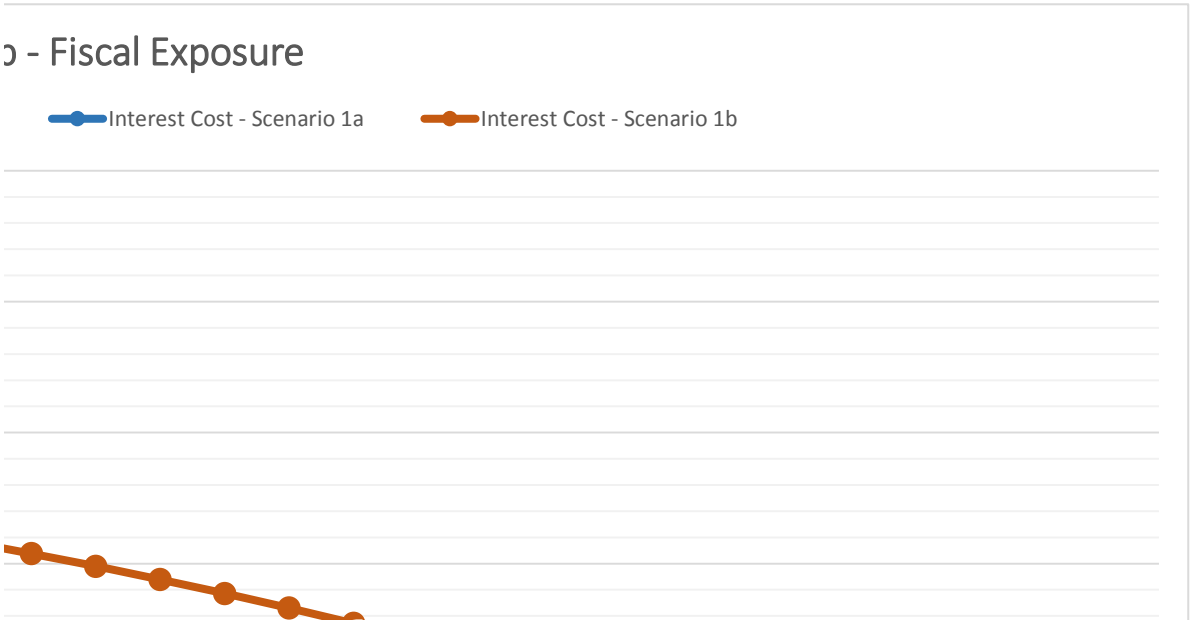

ACCUMULATED DEBT IN PRESENT YEAR (INCLI
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032

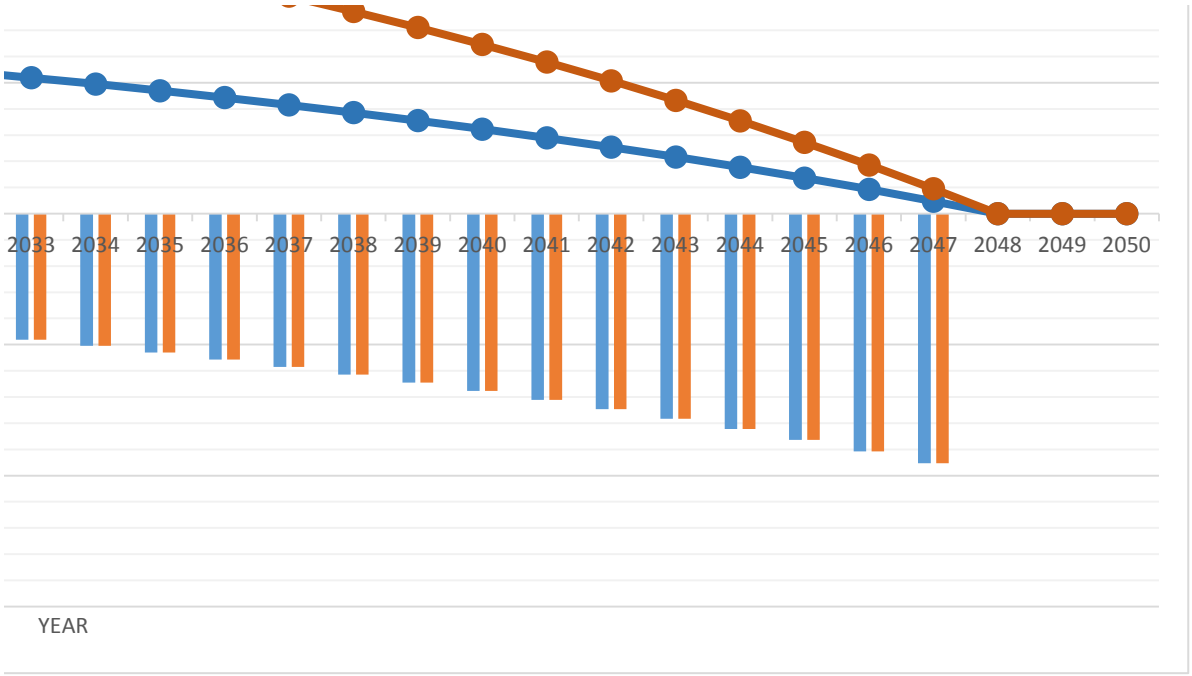


ear, with annual interest costs

t Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR


ɔ - Fiscal Exposure
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b


2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
YEAR

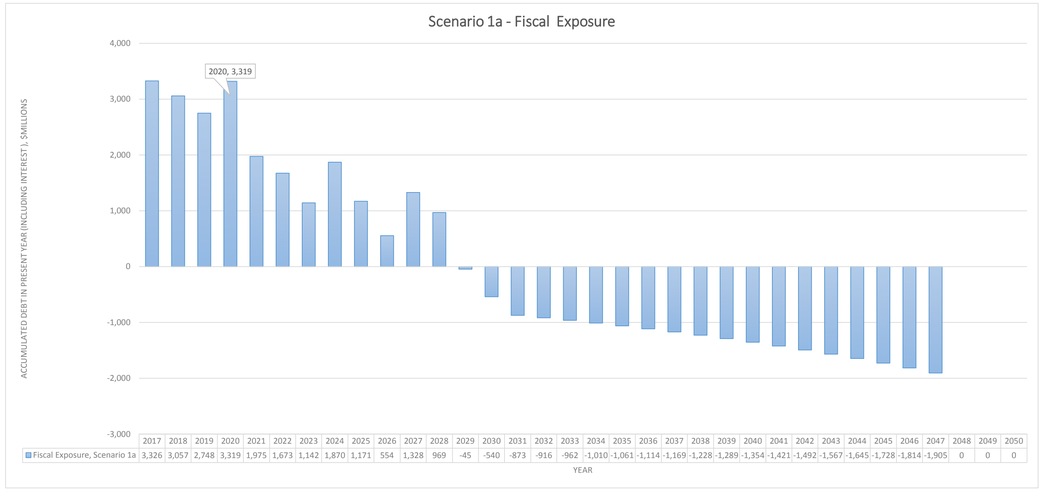
1	End of Year Debt Drawdown	1
	Equal Monthly Debt Drawdown	2
	Bi-Annual Debt Drawdown	3
	Average Debt Drawdown	4

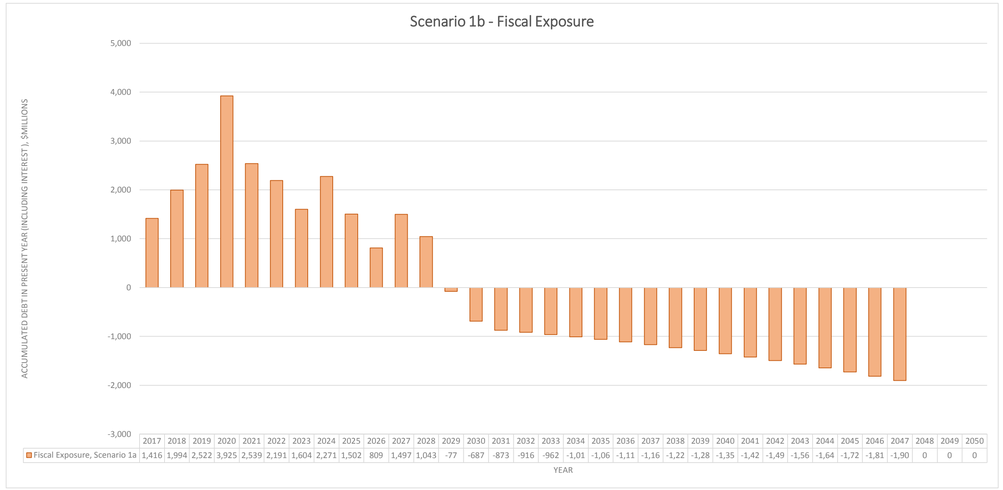
Annual Interest Rate = 5% | **End of Year Debt Drawdown**

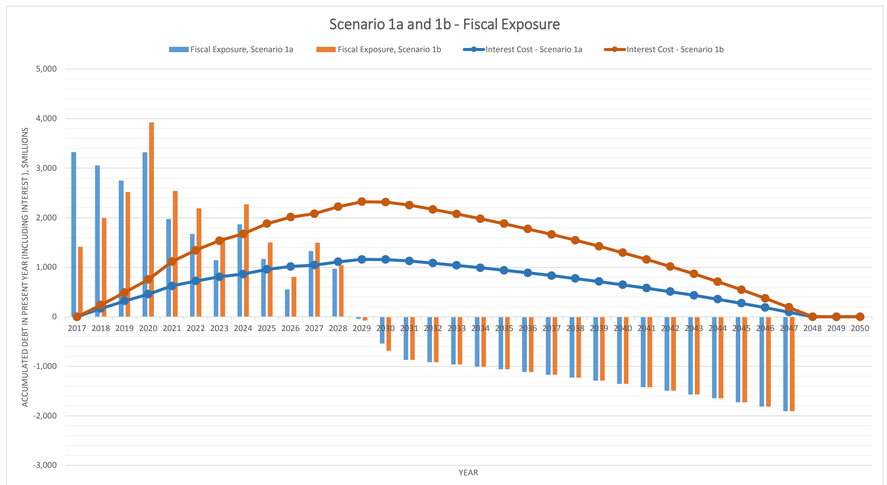
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1a		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing																																				
($ millions)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	8,769	8,944	9,123	9,306	9,492	9,682	9,875	10,073	10,274	10,480	10,689	10,903	11,121	11,344	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	
c = a*5%	*Interest Cost - Scenario 1a*	*0*	*166*	*319*	*457*	*623*	*721*	*805*	*862*	*956*	*1,014*	*1,042*	*1,108*	*1,157*	*1,154*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	3,326	2,891	2,429	2,862	1,352	952	337	1,008	215	-460	286	-139	-1,202	-1,694	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,450	14,425	16,098	17,240	19,110	20,280	20,834	22,162	23,131	23,086	22,546	21,674	20,758	19,795	18,785	17,725	16,611	15,442	14,214	12,925	11,571	10,150	8,657	7,090	5,445	3,717	1,903	-2	-2	-2	-2	
Fiscal Exposure, Scenario 1a		3,326	3,057	2,748	3,319	1,975	1,673	1,142	1,870	1,171	554	1,328	969	-45	-540	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	166	319	457	623	721	805	862	956	1,014	1,042	1,108	1,157	1,154	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	3,326	6,383	9,131	12,451	14,425	16,098	17,240	19,111	20,281	20,836	22,164	23,133	23,087	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	1	0	0	0	1	1	2	2	2	1	2	2	1	2	2	2	2	1	2	1	2	1	2	2	1	2	2	2	2	2	2	47

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Scenario 1b		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	
Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments																																				
($ million)																																				
	IESO GA cost forecast + extrapolation	12,095	11,835	11,552	12,168	10,844	10,634	10,212	11,081	10,489	10,020	10,975	10,764	9,919	9,650	8,587	8,758	8,147	7,670	5,553	5,281	5,022	4,777	4,543	4,320	4,109	3,908	3,717	3,535	3,362	3,197	3,041	2,892	2,750	2,616	
	Ratepayer GA Payment	10,679	9,912	9,200	8,540	8,798	9,063	9,337	9,619	9,910	10,209	10,517	10,835	11,162	11,499	10,587	10,758	10,147	9,670	7,553	7,281	7,022	6,777	6,543	6,320	6,109	5,908	5,717	5,535	5,362	5,197	5,041	2,892	2,750	2,616	
	GA Debt Requirement	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
a	Debt, Beginning of Year	0	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	
c = a*5%	*Interest Cost - Scenario 1b*	*0*	*71*	*170*	*297*	*493*	*620*	*729*	*809*	*923*	*998*	*1,039*	*1,114*	*1,166*	*1,162*	*1,127*	*1,084*	*1,038*	*990*	*939*	*886*	*831*	*772*	*711*	*646*	*579*	*508*	*433*	*355*	*272*	*186*	*95*	*0*	*0*	*0*	
b	Additional GA Debt Drawdown, End of Year	1,416	1,923	2,352	3,628	2,046	1,571	875	1,462	579	-189	458	-71	-1,243	-1,849	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	-2,000	0	0	0	
d = a+b+c	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,587	16,191	18,462	19,964	20,774	22,270	23,313	23,235	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,444	14,216	12,927	11,573	10,152	8,659	7,092	5,447	3,719	1,905	0	0	0	0	
Fiscal Exposure, Scenario 1b		1,416	1,994	2,522	3,925	2,539	2,191	1,604	2,271	1,502	809	1,497	1,043	-77	-687	-873	-916	-962	-1,010	-1,061	-1,114	-1,169	-1,228	-1,289	-1,354	-1,421	-1,492	-1,567	-1,645	-1,728	-1,814	-1,905	0	0	0	
		0	71	170	297	493	620	729	809	923	998	1,039	1,114	1,166	1,162	1,127	1,084	1,038	990	939	886	831	772	711	646	579	508	433	355	272	186	95	0	0	0	
Provided by Energy	Accumulated debt in present year (including 5% annual interest)	1,416	3,410	5,932	9,857	12,396	14,586	16,190	18,462	19,964	20,774	22,271	23,313	23,236	22,548	21,676	20,759	19,797	18,787	17,727	16,613	15,443	14,216	12,926	11,573	10,151	8,659	7,092	5,446	3,719	1,905	0	0	0	0	
	Errors	0	0	0	0	0	-1	-1	0	0	0	1	0	1	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	0	-1	0	0	0	0	0	0	-3

Notes:	Accounting treatment is to be determined.


Scenario 1a - Fiscal Exposure
2020, 3,319
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,171 554 1,328 969 -45 -540 -873 -916 -962 -1,010 -1,061 -1,114 -1,169 -1,228 -1,289 -1,354 -1,421 -1,492 -1,567 -1,645 -1,728 -1,814 -1,905 0 0 0


Scenario 1b - Fiscal Exposure
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR
Fiscal Exposure, Scenario 1a
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,271 1,502 809 1,497 1,043 -77 -687 -873 -916 -962 -1,01 -1,06 -1,11 -1,16 -1,22 -1,28 -1,35 -1,42 -1,49 -1,56 -1,64 -1,72 -1,81 -1,90 0 0 0


Scenario 1a and 1b - Fiscal Exposure
Fiscal Exposure, Scenario 1a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST), $MILLIONS
YEAR

GA Financing Impact - Scenario 1a.	###	###	###	###
Average Monthly Residential Bill Impact pre-tax ($/month)	-27.02	-24.73	-22.46	-25.09
Total Accumulated Debt ($ billion)	4.80	9.44	13.89	19.02
Total Change in Accumulated Debt ($ billion)	4.80	4.64	4.45	5.14

GA Financing Impact - Scenario 1b.	###	###	###	###
Average Monthly Residential Bill Impact pre-tax ($/month)	-40.15	-37.34	-34.59	-36.60
Total Accumulated Debt ($ billion)	7.13	14.13	20.96	28.49
Total Change in Accumulated Debt ($ billion)	7.13	7.00	6.83	7.53

GA Financing Impact - Scenario 1c.	###	###	###	###
Average Monthly Residential Bill Impact pre-tax ($/month)	-20.70	-18.29	-15.84	-18.34
Total Accumulated Debt ($ billion)	3.68	7.11	10.27	14.03
Total Change in Accumulated Debt ($ billion)	3.68	3.44	3.16	3.76

###	###	###	###	###	###	###	###	###	###	###	###	###	###	###
-16.71	-14.62	-11.50	-15.58	-11.22	-7.51	-12.19	-9.91	-4.29	-1.60	5.46	5.58	9.86	13.55	25.87
22.94	26.70	30.09	34.38	38.12	41.38	45.65	49.74	53.04	56.04	57.93	59.90	61.19	61.86	60.27
3.92	3.75	3.39	4.29	3.74	3.27	4.27	4.08	3.30	3.00	1.90	1.97	1.29	0.67	-1.59

###	###	###	###	###	###	###	###	###	###	###	###	###	###	###
-27.54	-24.72	-20.80	-24.03	-18.74	-14.08	-17.64	-14.22	-7.36	-3.34	5.13	6.73	12.59	17.94	31.96
34.80	40.94	46.71	53.34	59.37	64.88	71.31	77.46	82.73	87.55	91.12	94.58	97.15	98.86	98.05
6.32	6.14	5.76	6.63	6.04	5.50	6.43	6.16	5.26	4.83	3.57	3.46	2.57	1.72	-0.82

###	###	###	###	###	###	###	###	###	###	###	###	###	###	###
-9.82	-7.59	-4.33	-8.27	-3.77	0.15	-4.43	-2.00	3.78	6.57	13.80	14.02	15.79	15.69	15.47
16.48	18.67	20.39	22.89	24.72	25.96	28.07	29.86	30.72	31.12	30.26	29.30	27.96	26.54	25.06
2.45	2.18	1.72	2.50	1.84	1.24	2.11	1.79	0.86	0.40	-0.86	-0.96	-1.35	-1.42	-1.49

###	###	###	###	###	###	###	###	###	###	###	###	###
28.37	30.80	33.17	35.48	37.72	39.92	39.83	39.67	39.50	39.34	39.18	39.01	0.00
58.11	55.37	52.03	48.06	43.44	38.13	32.54	26.67	20.49	14.00	7.17	0.00	0.00
-2.16	-2.74	-3.34	-3.97	-4.62	-5.30	-5.59	-5.88	-6.18	-6.49	-6.82	-7.17	0.00

###	###	###	###	###	###	###	###	###	###	###	###	###
36.31	40.69	45.12	49.60	54.15	58.77	63.48	68.28	73.18	78.20	83.34	88.61	0.00
96.36	93.74	90.14	85.48	79.68	72.68	64.38	54.69	43.52	30.76	16.29	0.00	0.00
-1.69	-2.61	-3.60	-4.66	-5.79	-7.00	-8.30	-9.69	-11.17	-12.76	-14.47	-16.29	0.00

###	###	###	###	###	###	###	###	###	###	###	###	###
15.41	15.35	15.28	15.22	15.16	15.09	15.03	14.97	14.91	14.84	14.78	14.72	0.00
23.49	21.85	20.12	18.30	16.40	14.39	12.28	10.06	7.73	5.28	2.71	0.00	0.00
-1.56	-1.64	-1.73	-1.82	-1.91	-2.01	-2.11	-2.22	-2.33	-2.45	-2.58	-2.71	0.00

Year	IESO Forecast GA cost ($M)	Amount Paid by Ratepayer ($M)	Accumulated Debt ($M)
2017	12,095	9,900	2,195
2018	11,835	10,098	4,108
2019	11,552	10,300	5,688
2020	12,168	10,506	7,806
2021	10,844	10,716	8,558
2022	10,634	10,930	8,946
2023	10,212	11,149	8,725
2024	11,081	11,374	9,132
2025	10,489	11,599	8,753
2026	10,020	11,831	7,642
2027	10,975	12,068	7,160
2028	10,764	12,309	6,188
2029	9,919	12,556	4,046
2030	9,650	12,807	1,213
2031	8,587	13,063	
2032	8,758	8,758	
2033	8,147	8,147	
2034	7,670	7,670	
2035	5,553	5,553	
Total	190,953	201,334	

Estimated Fiscal Impact ($M)	Annual Debt/Repayment ($M)	Interest ($M)	
2,195	2,195	0	
1,913	1,737	176	
1,580	1,252	328	
2,118	1,662	456	
752	128	624	
388	-296	684	
-221	-937	716	
407	-293	700	
-379	-1,110	731	
-1,111	-1,811	700	
-482	-1,093	611	
-972	-1,545	573	
-2,142	-2,637	495	
-2,833	-3,157	324	
-1,213	-4,476	3,263	
0	0	0	
0	0	0	
0	0	0	
0	0	0	
0	-10,381	10,381	

Interest Rate
8.0%
8.0%
8.0%
8.0%
8.0%
8.0%
8.0%
8.0%
8.0%
8.0%
8.0%
8.0%
8.0%
269.0%

Year	IESO Forecast GA cost ($M)	Amount Paid by Ratepayer ($M)	Accumulated Debt ($M)
2017	12,095	9,900	2,195
2018	11,835	10,098	4,108
2019	11,552	10,300	5,688
2020	12,168	10,506	7,806
2021	10,844	10,716	8,558
2022	10,634	10,930	8,946
2023	10,212	11,149	8,725
2024	11,081	11,374	9,132
2025	10,489	11,599	8,753
2026	10,020	11,831	7,642
2027	10,975	12,068	7,160
2028	10,764	12,309	6,188
2029	9,919	12,556	4,046
2030	9,650	12,807	1,213
2031	8,587	13,063	
2032	8,758	8,758	
2033	8,147	8,147	
2034	7,670	7,670	
2035	5,553	5,553	
Total	190,953	201,334	

Estimated Fiscal Impact ($M)
2,195
1,913
1,580
2,118
752
388
-221
407
-379
-1,111
-482
-972
-2,142
-2,833
-1,213
0
0
0
0
0

Structure of the Global Adjustment Deferral Mechanism

Issue

The Province is working with Ontario Power Generation (OPG), the Ontario Energy Board (OEB), IESO, external accountants, and other agencies to develop a mechanism to defer the global adjustment (GA) payment as part of the recently announced Ontario Fair Hydro Plan. This note outlines current proposals for this mechanism.

Context

- Smoothing of GA costs over time would involve ratepayers paying only a portion of the GA cost in earlier years, while this shortfall would be made up by future rate payers paying more than the true cost of the GA in later years.
    - There will be a proposed cap of $2.242B on the annual additional cost over the GA to lessen the burden on ratepayers.

- The shortfall in GA payments in earlier years would represent deferred costs to ratepayers. However, the mechanism would still need to compensate power generators on an ongoing basis for the full cost of the GA and would therefore need to borrow and take on debt to make cash payments to power generators.
- Principal payments on debt would be mandatory, but there has been no clarification on whether or not interest payments will be capitalized (i.e., interest accumulates resulting in compounding) or if interest will be recovered from ratepayers on an on-going basis.
    - If interest payments are made by ratepayers on an on-going basis debt costs would be lower, however this would also have the effect of reducing ratepayer savings from the GA deferral mechanism. The commitment is for a 25% reduction on average for all residential customers, which would mean that the amount of principal needs to be larger to offset this effect.
- It has also been proposed that all administrative and other costs from the GA deferral would need to be collected from ratepayers immediately or recognized at the very least as a future benefit to the Province, adding to the costs passed on to ratepayers.

Structure (*refer to Exhibit A*)

- The deferred portion of the GA needs to be recognized as an asset – likely a regulatory asset – by the IESO, which gives the IESO the right to collect the deferred amount from ratepayers at a future date.
- This asset, in turn, would be sold to another party that would receive the revenues associated with this asset.
    - It is proposed that the IESO be required to recover the costs associated with this asset even after selling it.
    - To do this the IESO would need to sell the asset in order to settle its arrangements with generators, and ensure generators are not affected by the deferral.
        - Alternatively, the IESO could simply borrow funds (using the regulatory asset as collateral), but this poses risks for both consolidation on public accounts and credit ratings.
        - With respect to the credit rating risk, DBRS stated in a March 3, 2017 report that "*Provided the debt continues to be fully supported through the electricity rate base, DBRS will treat it as self-supported and exclude it from the calculation of tax-supported debt*".
- OPG is proposing to set up a special purpose vehicle, "OPG Trust", which would purchase the regulatory asset from the IESO.
    - The purchase would be funded by debt from the capital markets (51% of the deferred GA Cost), and OPG (49% of the deferred GA).
    - OPG would finance that 49% through debt from the capital markets (5%) and an equity injection from the Province (44%).

    - The debt would be set-up in tranches to ensure that the 51% of debt directly from the market would be senior, potentially mitigating the risk premium associated with high amounts of borrowing with an intangible, unique asset as collateral.
- There are several other considerations and requirements that would need to be attained in order for the mechanism to work, as detailed in the OPG White Paper sent to the Deputy Minister of Energy on February 27, 2017.

Equity Injection (*refer to Exhibit A & B*)

- The equity injection could lead to increasing, and then stabilizing dividend payouts in consistent with OPG's's risk profile and comparable business entities.
    - Principal and interest payments flowing from the ratepayers through the IESO and the Trust could be paid back to the Province.
    - This would increase steadily as ratepayers begin to pay back principal in about 10 years' time, eventually reaching a cap of $2.242B in principal and interest per year based on Energy's March estimates (based on the capitalized interest scenario).
    - The administrative costs and return for OPG/OPG Trust would also need to be collected by ratepayers, but the dividend payments would be net of these amounts and should still allow the Province to earn a substantial return.
    - Dividend payments could also allow OPG to eventually optimize its capital structure to the targeted or deemed 55%-45% debt to equity split, as dividends allow OPG to reduce its retained earnings thereby reducing equity.
- Recapitalization from the Province is preferable as there are no associated interest expenses or large principal payments that could affect OPG's credit rating.
- If debt financing was utilized, the change in the cost of borrowing could also impact OPG's rate applications for the return recovered from ratepayers through payment amounts, potentially offsetting ratepayer benefit of the GA deferral mechanism.
- The financing structure split between equity (44%) and debt (5% borrowed by OPG and 51% borrowed by OPG Trust) is roughly equivalent to the deemed capital structure of 55% debt and 45% equity for regulated distributors in Ontario.

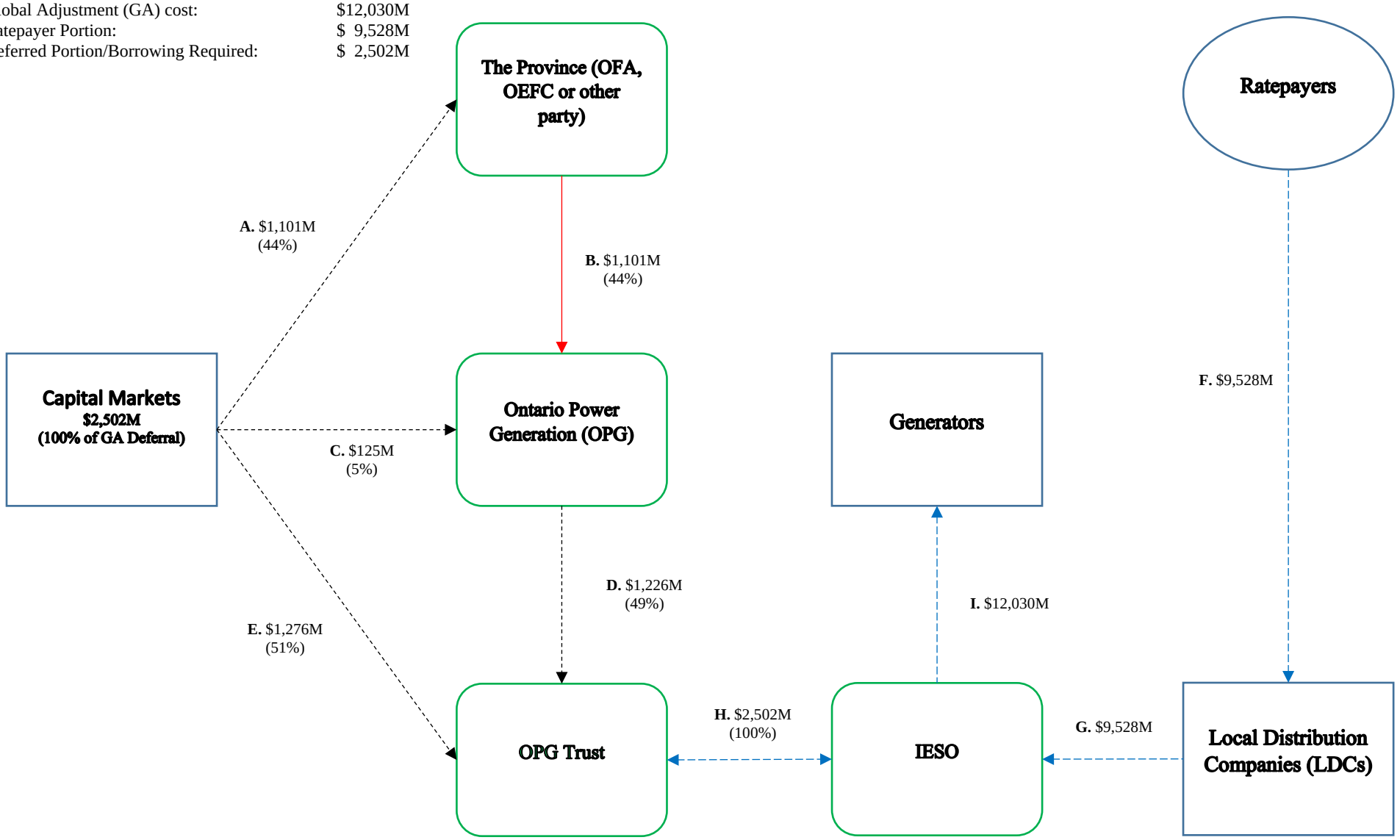
Collection of Interest Payments (*refer to Exhibit C*)

- There are different potential accounting treatments, depending on legislative and regulatory approval, that would impact the amount of borrowing and interest over the long term as well as the total fiscal impact.
    - **Option 1: Collect interest and administrative costs from ratepayers on an on-going basis:** Interest and the costs to finance/administer the GA deferral mechanism would be recovered from ratepayers along the way. This would allow cash and income to be recognized by OPG Trust equivalent to the total borrowing cost from the market (i.e., the interest on the 44% of the GA the Province borrowed from the market, the 5% of the GA OPG borrowed, and the 51% of the GA OPG Trust borrowed). Furthermore, some type of additional return for the risk premium could be made. Overall, there would be no fiscal cost, and less debt would build up over time due to the elimination of the compound effects on interest.
    - **Option 2: Collect interest costs associated with the senior debt**: There are variations on this concept which essentially proposes to only collect some of the interest costs from ratepayers, with the senior debt that OPG Trust borrows directly from the market of primary concern. This is "meeting halfway" between deferring all interest payments and collecting all interest payments from ratepayers immediately.

- Option 3: **Do not collect from ratepayers**. There is a fiscal impact equal to 100% of the interest on the total borrowings as an expense still needs to be recognized, even though cash interest has not been paid. There is also a compounding effect on interest.
- Option 4: **No collection from ratepayers but deferral of expense recognition (Same as Energy's analysis in its Cabinet Submission)**. For this option, there is no collection of interest payments from ratepayers, but OPG Trust is somehow allowed to defer the recognition of interest expense on its books and recognize as a regulatory asset, thus eliminating the fiscal impact.
    - If OPG Trust were allowed to recognize a regulatory asset, then it could defer the interest expense, instead recognizing it as an asset (similar to the idea of a prepaid expense).
    - Thus, OPG would recognize interest income from OPG Trust, but OPG Trust would not recognize an expense related to the amount owed to OPG and instead would increase the regulatory asset by the same amount.
    - The interest income earned by OPG for the 49% of the GA deferral it borrowed would offset the borrowing the Province made from the capital markets.
    - OPG Trust would also defer the recognition of the interest associated with the 51% of the GA deferral it borrowed from the market. The deferred amount would be recognized in a regulatory asset.
    - When OPG starts collecting principal and interest from ratepayers, it will recognize income, but will also amortize the regulatory asset at the same time, thus matching revenue and expenses with each other in the time period and potentially eliminating the fiscal impact.
    - Many factors, including the initial accounting treatment and the effect of consolidation, are significant barriers to the application of this approach.
    - **Alternatively, OPG Trust might be able to recognize income (with a receivable created to balance the transaction) to offset the interest expense without collecting from ratepayers**, i.e., it will be a cash transaction in the future (cash received offset by a decrease in the receivable; no effect on income statement).

Exhibit A; 2017-2018 Estimates for Balance Sheet Transactions

Global Adjustment (GA) cost:	$12,030M
Ratepayer Portion:	$ 9,528M
Deferred Portion/Borrowing Required:	$ 2,502M



Setting up the Trust

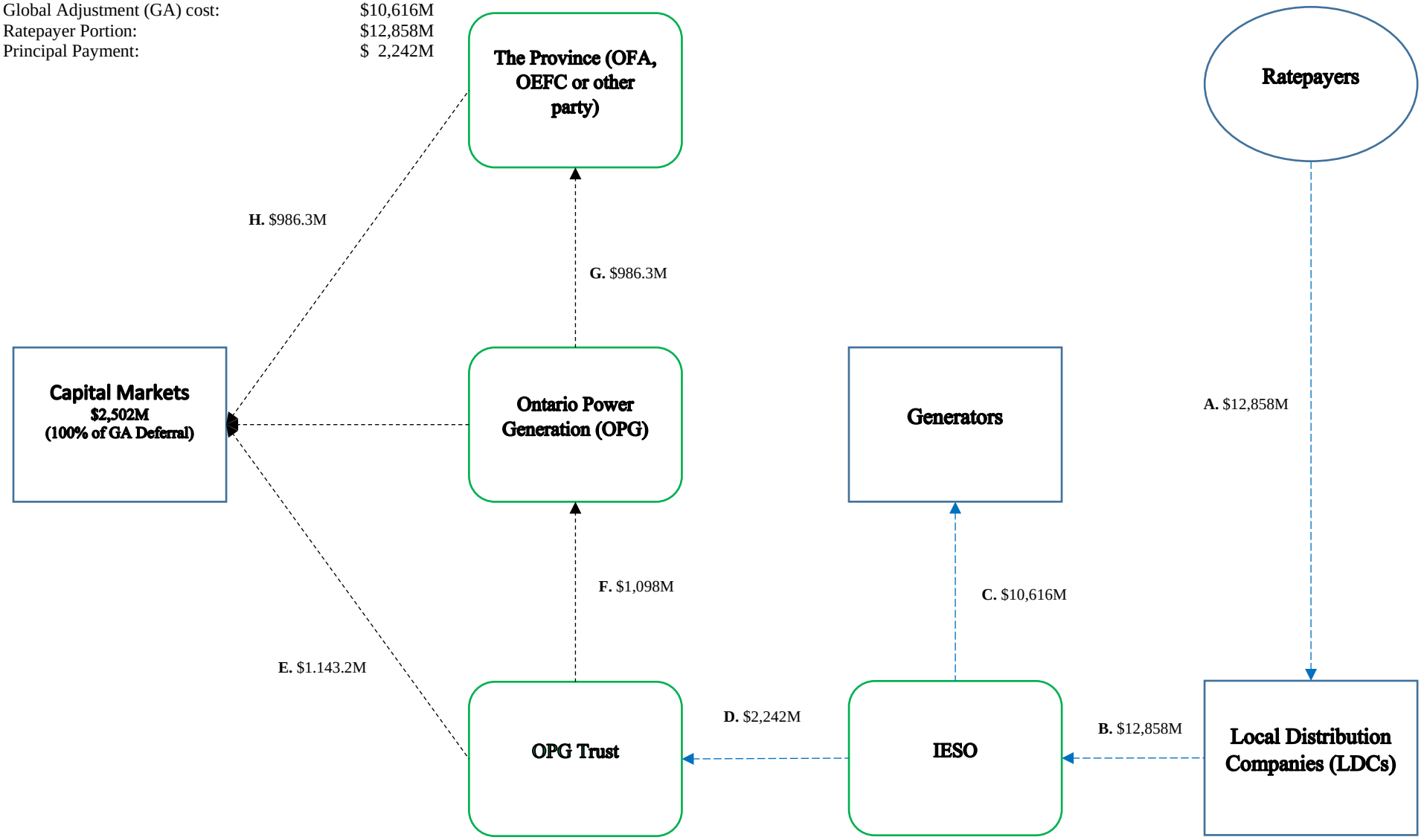
A. The Province borrows 44% of the deferred GA from the market.
B. The Province then funnels this amount to OPG through an equity injection.
C. OPG borrows 5% of the deferred GA from the market.
D. OPG lends an amount equal to the 5% and 44% from the market and the Province, respectively, to a separate legal entity called OPG Trust.
E. OPG Trust borrows 51% of the deferred GA from the market, ending up with 100% of the total $2.502M deferred GA in cash.

Deferral Mechanism

F. Ratepayers pay their portion of the GA to LDCs.
G. The LDCs remit this amount to IESO.
H. IESO, with the proper legislation and accounting treatment, is allowed to recognize a regulatory asset – the right to collect the deferred amount of $2,502M from ratepayers. It then sells this asset for cash to OPG Trust.
I. IESO uses the proceeds from the sale of the regulatory asset and the collection amount from LDCs to pay the full amount of the GA to Generators.

Exhibit B: 2028-2029 Estimates for Principal Payments

Global Adjustment (GA) cost:	$10,616M
Ratepayer Portion:	$12,858M
Principal Payment:	$ 2,242M



Collection of the GA

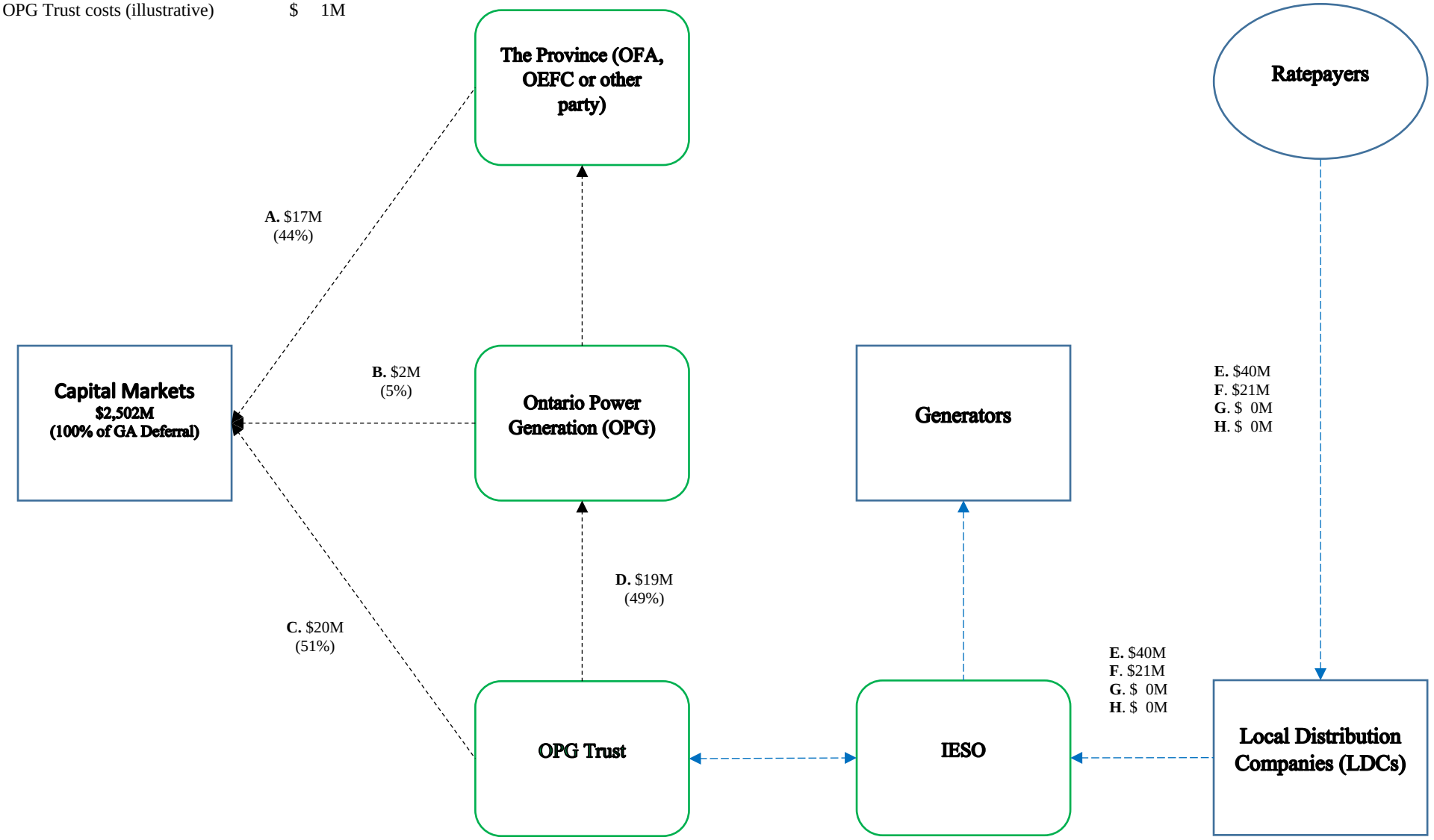
A. Ratepayers pay to LDCs the full cost of the GA plus an additional $2.242M that will be used to reduce the principal of the borrowing (or principal and interest if there is "interest on interest").
B. LDCs remit this amount to IESO.
C. IESO pays the full cost of the actual GA to generators.
D. IESO pays to OPG Trust the additional payment from the ratepayers over the actual GA cost. OPG Trust reduces the asset (for the right to collect GA deferral costs from ratepayers) by an equivalent amount.

Settlement of Principal.

E. OPG Trust pays off principal to the market. In this example, pays off 51%, but could pay more or less depending on various factors (e.g., subordinate debt, managing weighted average interest cost, etc.).
F. OPG Trust pays down principal related to the 49% of the GA Deferral it borrowed from OPG.
G. OPG could give a dividend to the Province equal in order to pay off the outstanding principal it borrowed from the market (44% of the total GA deferral cost)
H. The Province pays back principal to the market.

Exhibit C: 2017-2018 Estimates for Interest Recognition

Interest Recognized	$ 39M
OPG Trust costs (illustrative)	$ 1M



Recognition of Interest

A. The Province recognizes interest on the 44% of the deferred GA it borrowed from the market.

B. OPG recognizes interest on the 5% of the deferred GA it borrowed from the market.

C. OPG recognizes interest on the 51% of the deferred GA it borrowed from the market.

D. OPG Trust recognizes interest on the 49% of the GA it borrowed from OPG; OPG recognizes income for this transaction.

Options for Ratepayer collection

E. Option 1 – collect the entire interest amount from ratepayers plus the Trust administrative costs, thus offsetting the interest expense from total borrowing with the recognition of income. The end result is no fiscal impact.

F. Option 2 – only collect interest income for the 51% of deferred GA from the market and admin costs; OPG Trust would recognize income to offset the interest expense to the market but fiscal impact of 49% of the interest ($19M)

G. Option 3 – Do not collect from ratepayers – fiscal cost of 100% interest.

H. Option 4 – No collection from ratepayers, but OPG Trust is allowed to defer the recognition of interest expense on 100% of debt, leading to no fiscal impact.

Notes

- Assumptions based on Energy models and data, IESO forecasts, and CEFD validation models.
- Sources include Ministry of Energy decks, OPG reports and discussions, external accounting reports, and internal reports/discussions.

Corporate and Electricity Finance Division
Ontario Financing Authority
March 17, 2017

Structure of the Global Adjustment Deferral Mechanism

Issue

The Province is working with Ontario Power Generation (OPG), the Ontario Energy Board (OEB), IESO, external accountants, and other agencies to develop a mechanism to defer the global adjustment (GA) payment as part of the recently announced Ontario Fair Hydro Plan. This note outlines current proposals for this mechanism.

Context

- Smoothing of GA costs over time would involve ratepayers paying only a portion of the GA cost in earlier years, while this shortfall would be made up by future rate payers paying more than the true cost of the GA in later years.
    - There will be a proposed cap of $2.242B on the annual additional cost over the GA to lessen the burden on ratepayers.

- The shortfall in GA payments in earlier years would represent deferred costs to ratepayers. However, the ~~Province~~ mechanism would still need to compensate power generators on an ongoing basis for the full cost of the GA and would therefore need to borrow and take on debt to make cash payments to power generators.
- Principal payments on debt would be mandatory, but there has been no clarification on whether or not interest payments will be capitalized (i.e., interest accumulates resulting in ~~interest on interest costs~~compounding) or if interest will be recovered from ratepayers on an ~~frequent~~ on-going basis.
    - ~~If interest costs are capitalized, Having "interest on interest" (i.e., compounding effect) with deferrals on interest payments increases peak debt would increase by approximately $5B and leads additional accumulated interest costs would increase by an estimated $xxx, based on preliminary estimates.~~
    - ~~Alternatively, i~~If ~~However, if~~ interest payments are made by ratepayers on an ~~frequent~~ on-going basis~~,~~ debt costs would be lower, however this ~~it lessens the relief provided by the GA deferral mechanism and~~ would also have the effect of reducing ratepayer savings from the GA deferral mechanism. The commitment is for a 25% reduction on average for all residential customers, which would mean that the amount of ~~borrowing~~principal ~~simply~~ needs to be larger to offset this effect.
- ~~Furthermore, i~~It has also been proposed that all administrative and other costs from the GA deferral would need to be collected from ratepayers immediately or recognized at the very least as a future benefit to the Province, adding to the costs passed on to ratepayers.

Structure (*refer to Exhibit A*)

- The deferred portion of the GA needs to be recognized as an asset – likely a regulatory asset – by the IESO, ~~likely as a regulatory asset that~~ which gives the IESO the right to collect the deferred amount from ratepayers at a future date.
- This asset, in turn, would be sold to another party that would receive the revenues associated with this asset.
    - It is proposed that ~~The proposal states that~~ the IESO ~~would~~ be required to recover ~~collect~~ the costs associated with this asset even after selling it.
    - To do this t~~T~~he IESO would need~~s~~ to sell the asset in order to ~~secure cash to~~ settle its arrangements with generators, ~~thus~~ and ensur~~e~~ing ~~that~~ generators are not affected by the deferral.
        - Alternatively, the IESO could simply borrow funds (using the regulatory asset as collateral), but this poses risks ~~this has implications~~ for both consolidation on public accounts and ~~including the impact on~~ credit ratings.
        - With respect to the credit rating risk, ~~On the other hand,~~ DBRS stated in a March 3, 2017 report that "*Provided the debt continues to be fully supported through the electricity rate*

Commented [JK1]: A cap of $ amount?

Commented [AP2R1]: The cap on the current plan is $2.242B. It has been added.

Commented [BA3]: Can we put in a figure?

Commented [JK4]: Should we delete this bullet?

Commented [BA5]: ? borrowing would be less if ratepayers pay interest on an ongoing basis.. No?

Commented [AP6R5]: Yes the borrowing would be less if there is no firm savings target. But if interest rates are being paid immediately, this eats into the savings commitment of 25%. So one has to borrow a larger amount for the principal so that the total reduction in the GA less the interest costs is equal to 25%. I changed borrowing to principal to make this more understandable. Overall, the total borrowing in both situations are similar. See attached excel sheet for example.



GA interest vs no deferral.xlsx

Commented [BA7]: Recognized as expense with fiscal impact (or does this also get passed on to ratepayers?

Commented [AP8R7]: There could or could not be a fiscal impact, depending on the four options below. It could also be collected from ratepayers immediately, or recognized as an expense (with or without fiscal impact depending on offsetting entries) that would not be collected in cash from ratepayers until a later date.

base, DBRS will treat it as self-supported and exclude it from the calculation of tax-supported debt".

- OPG is proposing to set up a special purpose vehicle, "OPG Trust~~" that~~", which would purchase the regulatory asset from the IESO.
    - The purchase would be funded by debt from the capital markets (51% of the deferred GA Cost), and OPG (49% of the deferred GA).
    - OPG would finance that 49% through ~~a loan~~ debt from the capital markets (5%) and an equity injection from the P~~p~~rovince (44%).
    - The debt would be set-up in tranches to ensure that the 51% of debt directly from the market would be senior, potentially mitigating the risk premium associated with high amounts of borrowing with an intangible, unique asset as collateral.
- There are several other considerations and requirements that would need to be attained in order for the mechanism to work, as detailed in the OPG White Paper ~~released~~ sent to the Deputy Minister of Energy on February 27, 2017.

Equity Injection (*refer to Exhibit A & B*)

- The ~~rationale behind an~~ equity injection ~~is that it~~ could lead to increasing, and then stabilizing~~,~~ dividend payouts in ~~commensurate~~ consistent with ~~the~~ O~~ntario~~ PG's~~ower Generation~~'s risk profile and comparable business entities.
    - Principal ~~payments~~ and interest pay~~e~~me~~n~~ts flowing from the ratepayers through the IESO and the Trust could be ~~relayed~~ paid back to the Province.
    - This would increase steadily as ratepayers begin to pay back principal in about~~n estimated ten~~ 10 years[2] time, eventually reaching a cap of ~~an estimated~~ $2.242B in principal and interest per year based on Energy's March estimates (based on the capitalized ~~with the interest on~~ interest scenario).
    - The administrative costs and return for OPG/OPG Trust would also need to be collected by ratepayers, but the dividend payments would be net of these amounts and should still allow the Province to earn a substantial return.
    - Dividend payments could also allow OPG to eventually optimize its capital structure to the targeted or deemed 55%-45% debt to equity split, as dividends allow OPG to reduce its retained earnings thereby reducing equity.~~.~~
- Recapitalization from the Province is preferable as there are no associated interest expenses or large principal payments that could affect OPG's credit rating.
- If debt financing was utilized, the change in the cost of borrowing could also impact OPG's rate applications for the return recovered from ratepayers through payment amounts, potentially offsetting ratepayer benefit of the GA deferral mechanism.
- The financing structure split between equity (44%) and debt (~~56% –~~ 5% borrowed by OPG and 51% borrowed by OPG Trust) is roughly equivalent to the deemed capital structure of 55% debt and 45% equity for regulated distributors in Ontario.

Collection of Interest Payments (*refer to Exhibit C*)

- There are different potential accounting treatments ~~that can be undertaken~~, depending on legislative and regulatory approval, that would~~ill~~ impact the amount of borrowing and interest over the long term as well as the total fiscal impact.
    - **Option 1: Collect interest and administrative costs from ratepayers ~~immediately~~on an on-going basis:** Interest and the costs to finance/administer the GA deferral mechanism would be recovered from ratepayers ~~immediately~~along the way. This would allow cash and income to be

Commented [JK9]: Released? Is this in reference to the 14 conditions?

Commented [AP10R9]: Reference to the 14 conditions as well as a multitude of other requirements (e.g., accounting treatment, risks) that need to fall in place in order for the proposition to be a success.

Commented [SK811]: Please confirm if this is Feb 17.

Commented [AP12R11]: This is from a report OPG sent on February 27, 2017 to the DM of MOE.

Commented [SK813R11]: Thanks I was looking at something else.

Commented [BA14]: I am unsure of what the key message of this section is? My lack of understanding.

Is this mainly about how the Province gets repaid for its equity injection?
Is the optimizing capital structure a key message and is this capital structure something the market is looking for, or the Auditor General?

Commented [JK15R14]: I need a bit of a refresher, as well.

Commented [JK16]: Might want to clarify as what you're saying here is to lower equity in the immediate sense to get to 55-45 right away before starting to inject equity.

Commented [JK17]: Not sure what this means. Does this mean that it is preferable to OPG doing its own borrowing?

Commented [AP18R17]: Yes, it is basically saying that an equity injection (recapitalization) is preferable to OPG taking on that 44% every year in debt, from OPG;s perspective and possibly the Province's.

recognized by OPG Trust equivalent to the total borrowing cost from the market (i.e., the interest on the 44% of the GA the Province borrowed from the market, the 5% of the GA OPG borrowed, and the 51% of the GA OPG Trust borrowed). Furthermore, some type of additional return for the risk premium could be ~~collected as well~~made. Overall, there would be no fiscal cost, and less debt w~~ould~~~~ill~~ build up over time due to the elimination of the compound effects on interest. ~~However, the relief provided to ratepayers from the principal payments on deferred costs would be lowered mitigated by the amount of these~~~~is interest payments~~, ~~although this would be fairly moderate~~~~it is quite low for the initial 4 5 years.~~

- **Option 2: Collect interest costs associated with the senior debt**: There are variations on this concept which ~~is~~ essentially propose~~s~~~~ing~~ to only collect some of the interest costs from ratepayers, with the senior debt that OPG Trust borrows directly from the market of primary concern. This is "meeting halfway" between deferring all interest payments and collecting all interest payments from ratepayers immediately.
- Option 3: **Do not collect from ratepayers**. There is a fiscal impact equal to 100% of the interest on the total borrowings as an expense still needs to be recognized, even though cash interest has not been paid. There is also a compounding effect on interest. ~~There is a fiscal impact equal to 100% of the interest on the total borrowings. There is also a compounding effect on interest as even though cash interest has not been paid, an expense still needs to be recognized, even though cash interest has not been paid.~~
- Option 4: **No collection from ratepayers but deferral of expense recognition (Same as Energy's analysis in its Cabinet Submission)**. For this option, there is no collection of interest payments from ratepayers, but OPG Trust is somehow allowed to defer the recognition of interest expense on its books and recognize as a regulatory asset, thus eliminating the fiscal impact.
  - If OPG Trust were allowed to recognize a regulatory asset, then it could defer the interest expense, instead recognizing it as an asset (similar to the idea of a prepaid expense).
  - Thus, OPG would recognize interest income from OPG Trust, but OPG Trust would not recognize an expense related to the amount owed to OPG and instead would increase the regulatory asset by the same amount.
  - The interest income earned by OPG for the 49% of the GA deferral it borrowed would offset the borrowing the Province made from the capital markets.
  - OPG Trust would also defer the recognition of the interest associated with the 51% of the GA deferral it borrowed from the market. The deferred amount would be recognized in a regulatory asset.
  - When OPG starts collecting principal and interest from ratepayers, it will recognize income, but will also amortize the regulatory asset at the same time, thus matching revenue and expenses with each other in the time period and potentially eliminating the fiscal impact.
  - Many factors, including the initial accounting treatment and the effect of consolidation, are significant barriers to the application of this approach.
  - **Alternatively, OPG Trust might be able to recognize income (with a receivable created to balance the transaction) to offset the interest expense without collecting from ratepayers**, i.e., it will be a cash transaction in the future (cash received offset by a decrease in the receivable; no effect on income statement).

Commented [JK19]: I'd suggest delete as in the end the 25% commitment would lead to more GA deferral over time.

Commented [AP20R19]: Yes, if the 25% commitment is retained then it would result in slightly higher total borrowings. It has been deleted .

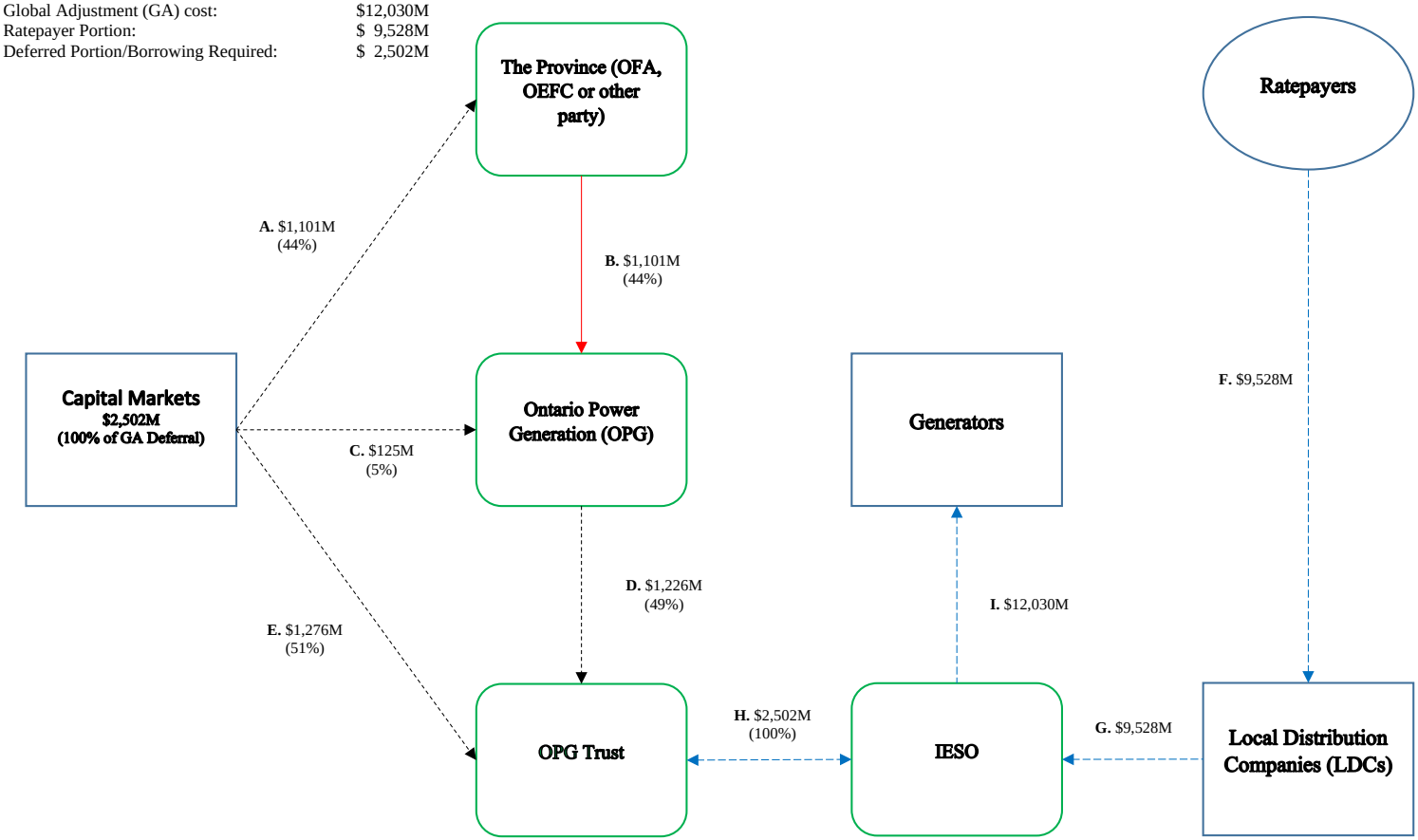
Commented [BA21]: Not sure I fully understand but does the last part of the 2nd sentence need to be moved up per the following:.

There is a fiscal impact equal to 100% of the interest on the total borrowings as an expense still needs to be recognized, even though cash interest has not been paid. There is also a compounding effect on interest.

Commented [AP22R21]: Thanks, your rewording works much better.

Exhibit A; 2017-2018 Estimates for Balance Sheet Transactions

Global Adjustment (GA) cost:	$12,030M
Ratepayer Portion:	$ 9,528M
Deferred Portion/Borrowing Required:	$ 2,502M

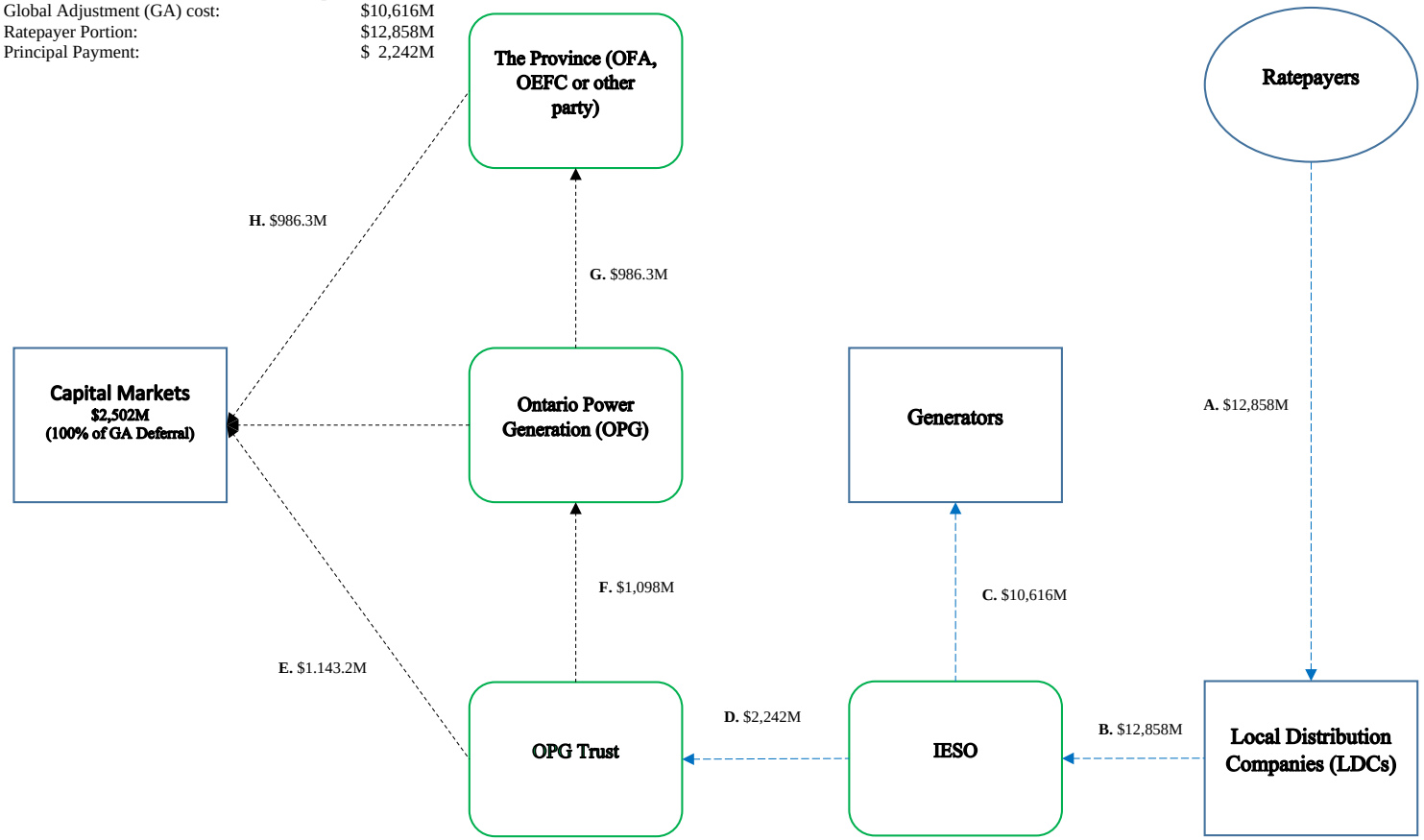


Setting up the Trust
A. The Province borrows 44% of the deferred GA from the market.
B. The Province then funnels this amount to OPG through an equity injection.
C. OPG borrows 5% of the deferred GA from the market.
D. OPG lends an amount equal to the 5% and 44% from the market and the Province, respectively, to a separate legal entity called OPG Trust.
E. OPG Trust borrows 51% of the deferred GA from the market, ending up with 100% of the total $2.502M deferred GA in cash.

Deferral Mechanism
F. Ratepayers pay their portion of the GA to LDCs.
G. The LDCs remit this amount to IESO.
H. IESO, with the proper legislation and accounting treatment, is allowed to recognize a regulatory asset – the right to collect the deferred amount of $2,502M from ratepayers. It then sells this asset for cash to OPG Trust.
I. IESO uses the proceeds from the sale of the regulatory asset and the collection amount from LDCs to pay the full amount of the GA to Generators.

Exhibit B: 2028-2029 Estimates for Principal Payments

Global Adjustment (GA) cost:	$10,616M
Ratepayer Portion:	$12,858M
Principal Payment:	$ 2,242M



Collection of the GA

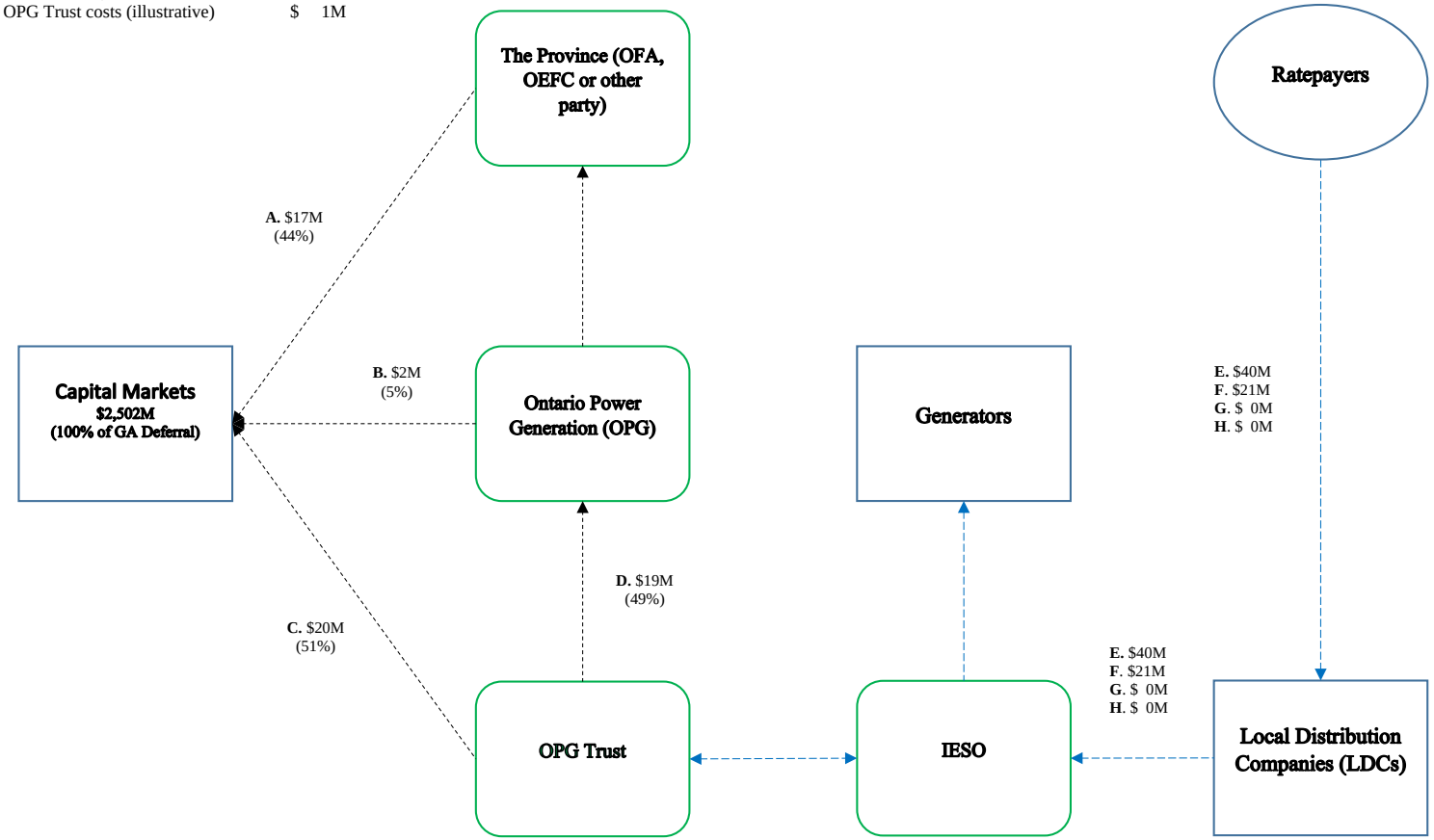
A. Ratepayers pay to LDCs the full cost of the GA plus an additional $2.242M that will be used to reduce the principal of the borrowing (or principal and interest if there is "interest on interest").
B. LDCs remit this amount to IESO.
C. IESO pays the full cost of the actual GA to generators.
D. IESO pays to OPG Trust the additional payment from the ratepayers over the actual GA cost. OPG Trust reduces the asset (for the right to collect GA deferral costs from ratepayers) by an equivalent amount.

Settlement of Principal.

E. OPG Trust pays off principal to the market. In this example, pays off 51%, but could pay more or less depending on various factors (e.g., subordinate debt, managing weighted average interest cost, etc.).
F. OPG Trust pays down principal related to the 49% of the GA Deferral it borrowed from OPG.
G. OPG could give a dividend to the Province equal in order to pay off the outstanding principal it borrowed from the market (44% of the total GA deferral cost)
H. The Province pays back principal to the market.

Exhibit C: 2017-2018 Estimates for Interest Recognition

Interest Recognized	$ 39M
OPG Trust costs (illustrative)	$ 1M



Recognition of Interest

A. The Province recognizes interest on the 44% of the deferred GA it borrowed from the market.

B. OPG recognizes interest on the 5% of the deferred GA it borrowed from the market.

C. OPG recognizes interest on the 51% of the deferred GA it borrowed from the market.

D. OPG Trust recognizes interest on the 49% of the GA it borrowed from OPG; OPG recognizes income for this transaction.

Options for Ratepayer collection

E. Option 1 – collect the entire interest amount from ratepayers plus the Trust administrative costs, thus offsetting the interest expense from total borrowing with the recognition of income. The end result is no fiscal impact.

F. Option 2 – only collect interest income for the 51% of deferred GA from the market and admin costs; OPG Trust would recognize income to offset the interest expense to the market but fiscal impact of 49% of the interest ($19M)

G. Option 3 – Do not collect from ratepayers – fiscal cost of 100% interest.

H. Option 4 – No collection from ratepayers, but OPG Trust is allowed to defer the recognition of interest expense on 100% of debt, leading to no fiscal impact.

Notes

- Assumptions based on Energy models and data, IESO forecasts, and CEFD validation models.
- Sources include Ministry of Energy decks, OPG reports and discussions, external accounting reports, and internal reports/discussions.

~~**Adam Prokop (416-325-6462)**~~
~~**Electricity and Finance Branch**~~
Corporate and Electricity Finance Division
Ontario Financing Authority
March ~~10~~17, 2017

Structure of the Global Adjustment Deferral Mechanism

Issue

The Province is working with Ontario Power Generation (OPG), the Ontario Energy Board (OEB), IESO, external accountants, and other agencies to develop a mechanism to defer the global adjustment (GA) payment as part of the recently announced Ontario Fair Hydro Plan. This note outlines current proposals for this mechanism.

Context

- Smoothing of GA costs over time would involve ratepayers paying only a portion of the GA cost in earlier years, while this shortfall would be made up by future rate payers paying more than the true cost of the GA in later years.
    - There will be a proposed cap of $2.242B on the annual additional cost over the GA to lessen the burden on ratepayers.

- The shortfall in GA payments in earlier years would represent deferred costs to ratepayers. However, the mechanism would still need to compensate power generators on an ongoing basis for the full cost of the GA and would therefore need to borrow and take on debt to make cash payments to power generators.
- Principal payments on debt would be mandatory, but there has been no clarification on whether or not interest payments will be capitalized (i.e., interest accumulates resulting in compounding) or if interest will be recovered from ratepayers on an on-going basis.
    - If interest payments are made by ratepayers on an on-going basis debt costs would be lower, however this would also have the effect of reducing ratepayer savings from the GA deferral mechanism. The commitment is for a 25% reduction on average for all residential customers, which would mean that the amount of principal needs to be larger to offset this effect.
- It has also been proposed that all administrative and other costs from the GA deferral would need to be collected from ratepayers immediately or recognized at the very least as a future benefit to the Province, adding to the costs passed on to ratepayers.

Structure (*refer to Exhibit A*)

- The deferred portion of the GA needs to be recognized as an asset – likely a regulatory asset – by the IESO, which gives the IESO the right to collect the deferred amount from ratepayers at a future date.
- This asset, in turn, would be sold to another party that would receive the revenues associated with this asset.
    - It is proposed that the IESO be required to recover the costs associated with this asset even after selling it.
    - To do this the IESO would need to sell the asset in order to settle its arrangements with generators, and ensure generators are not affected by the deferral.
        - Alternatively, the IESO could simply borrow funds (using the regulatory asset as collateral), but this poses risks for both consolidation on public accounts and credit ratings.
        - With respect to the credit rating risk, DBRS stated in a March 3, 2017 report that "*Provided the debt continues to be fully supported through the electricity rate base, DBRS will treat it as self-supported and exclude it from the calculation of tax-supported debt*".
- OPG is proposing to set up a special purpose vehicle, "OPG Trust", which would purchase the regulatory asset from the IESO.
    - The purchase would be funded by debt from the capital markets (51% of the deferred GA Cost), and OPG (49% of the deferred GA).
    - OPG would finance that 49% through debt from the capital markets (5%) and an equity injection from the Province (44%).

    - The debt would be set-up in tranches to ensure that the 51% of debt directly from the market would be senior, potentially mitigating the risk premium associated with high amounts of borrowing with an intangible, unique asset as collateral.
- There are several other considerations and requirements that would need to be attained in order for the mechanism to work, as detailed in the OPG White Paper sent to the Deputy Minister of Energy on February 27, 2017.

Equity Injection (*refer to Exhibit A & B*)

- The equity injection could lead to increasing, and then stabilizing dividend payouts in consistent with OPG's's risk profile and comparable business entities.
    - Principal and interest payments flowing from the ratepayers through the IESO and the Trust could be paid back to the Province.
    - This would increase steadily as ratepayers begin to pay back principal in about 10 years' time, eventually reaching a cap of $2.242B in principal and interest per year based on Energy's March estimates (based on the capitalized interest scenario).
    - The administrative costs and return for OPG/OPG Trust would also need to be collected by ratepayers, but the dividend payments would be net of these amounts and should still allow the Province to earn a substantial return.
    - Dividend payments could also allow OPG to eventually optimize its capital structure to the targeted or deemed 55%-45% debt to equity split, as dividends allow OPG to reduce its retained earnings thereby reducing equity.
- Recapitalization from the Province is preferable as there are no associated interest expenses or large principal payments that could affect OPG's credit rating.
- If debt financing was utilized, the change in the cost of borrowing could also impact OPG's rate applications for the return recovered from ratepayers through payment amounts, potentially offsetting ratepayer benefit of the GA deferral mechanism.
- The financing structure split between equity (44%) and debt (5% borrowed by OPG and 51% borrowed by OPG Trust) is roughly equivalent to the deemed capital structure of 55% debt and 45% equity for regulated distributors in Ontario.

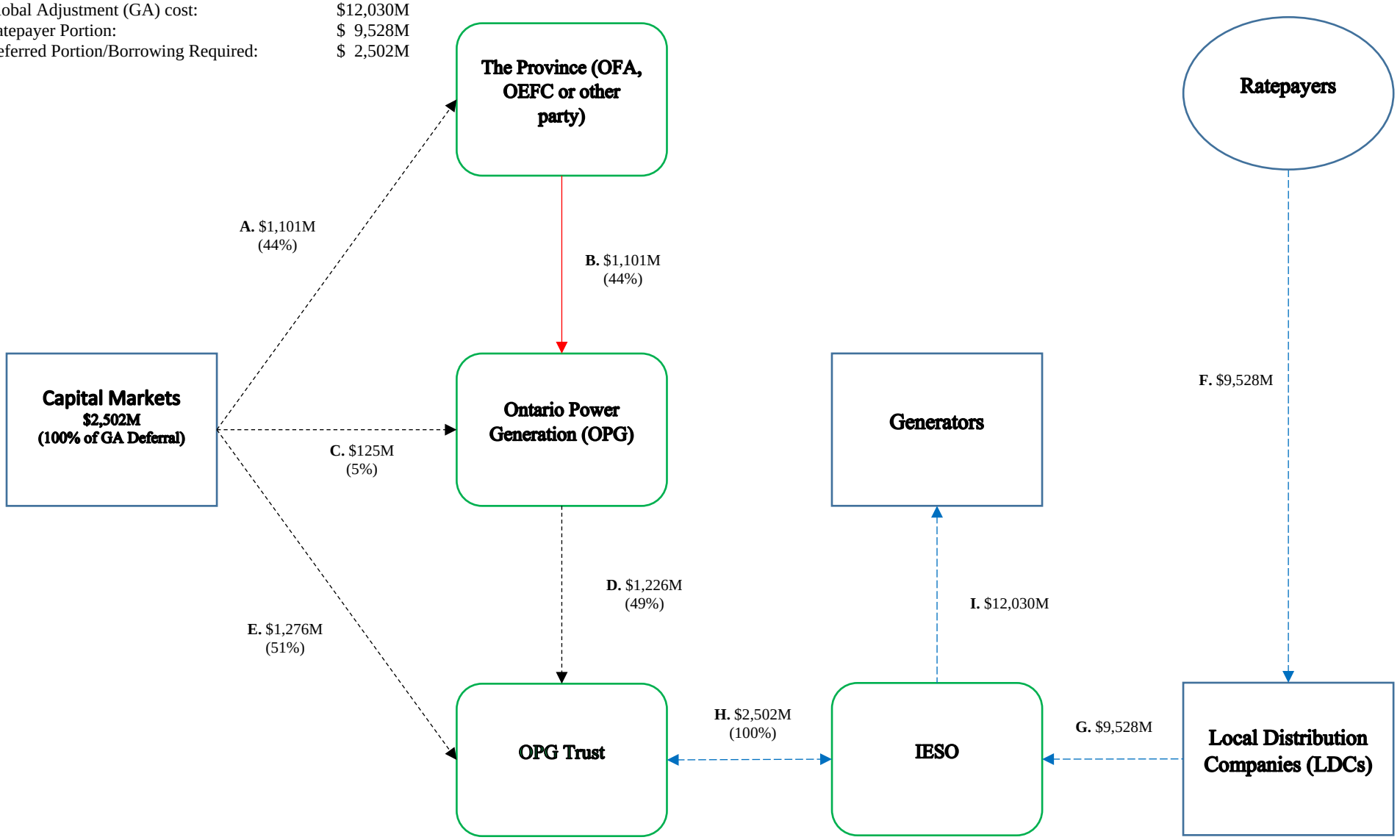
Collection of Interest Payments (*refer to Exhibit C*)

- There are different potential accounting treatments, depending on legislative and regulatory approval, that would impact the amount of borrowing and interest over the long term as well as the total fiscal impact.
    - **Option 1: Collect interest and administrative costs from ratepayers on an on-going basis:** Interest and the costs to finance/administer the GA deferral mechanism would be recovered from ratepayers along the way. This would allow cash and income to be recognized by OPG Trust equivalent to the total borrowing cost from the market (i.e., the interest on the 44% of the GA the Province borrowed from the market, the 5% of the GA OPG borrowed, and the 51% of the GA OPG Trust borrowed). Furthermore, some type of additional return for the risk premium could be made. Overall, there would be no fiscal cost, and less debt would build up over time due to the elimination of the compound effects on interest.
    - **Option 2: Collect interest costs associated with the senior debt**: There are variations on this concept which essentially proposes to only collect some of the interest costs from ratepayers, with the senior debt that OPG Trust borrows directly from the market of primary concern. This is "meeting halfway" between deferring all interest payments and collecting all interest payments from ratepayers immediately.

- Option 3: **Do not collect from ratepayers**. There is a fiscal impact equal to 100% of the interest on the total borrowings as an expense still needs to be recognized, even though cash interest has not been paid. There is also a compounding effect on interest.
- Option 4: **No collection from ratepayers but deferral of expense recognition (Same as Energy's analysis in its Cabinet Submission)**. For this option, there is no collection of interest payments from ratepayers, but OPG Trust is somehow allowed to defer the recognition of interest expense on its books and recognize as a regulatory asset, thus eliminating the fiscal impact.
    - If OPG Trust were allowed to recognize a regulatory asset, then it could defer the interest expense, instead recognizing it as an asset (similar to the idea of a prepaid expense).
    - Thus, OPG would recognize interest income from OPG Trust, but OPG Trust would not recognize an expense related to the amount owed to OPG and instead would increase the regulatory asset by the same amount.
    - The interest income earned by OPG for the 49% of the GA deferral it borrowed would offset the borrowing the Province made from the capital markets.
    - OPG Trust would also defer the recognition of the interest associated with the 51% of the GA deferral it borrowed from the market. The deferred amount would be recognized in a regulatory asset.
    - When OPG starts collecting principal and interest from ratepayers, it will recognize income, but will also amortize the regulatory asset at the same time, thus matching revenue and expenses with each other in the time period and potentially eliminating the fiscal impact.
    - Many factors, including the initial accounting treatment and the effect of consolidation, are significant barriers to the application of this approach.
    - **Alternatively, OPG Trust might be able to recognize income (with a receivable created to balance the transaction) to offset the interest expense without collecting from ratepayers**, i.e., it will be a cash transaction in the future (cash received offset by a decrease in the receivable; no effect on income statement).

Exhibit A; 2017-2018 Estimates for Balance Sheet Transactions

Global Adjustment (GA) cost:	$12,030M
Ratepayer Portion:	$ 9,528M
Deferred Portion/Borrowing Required:	$ 2,502M



Setting up the Trust

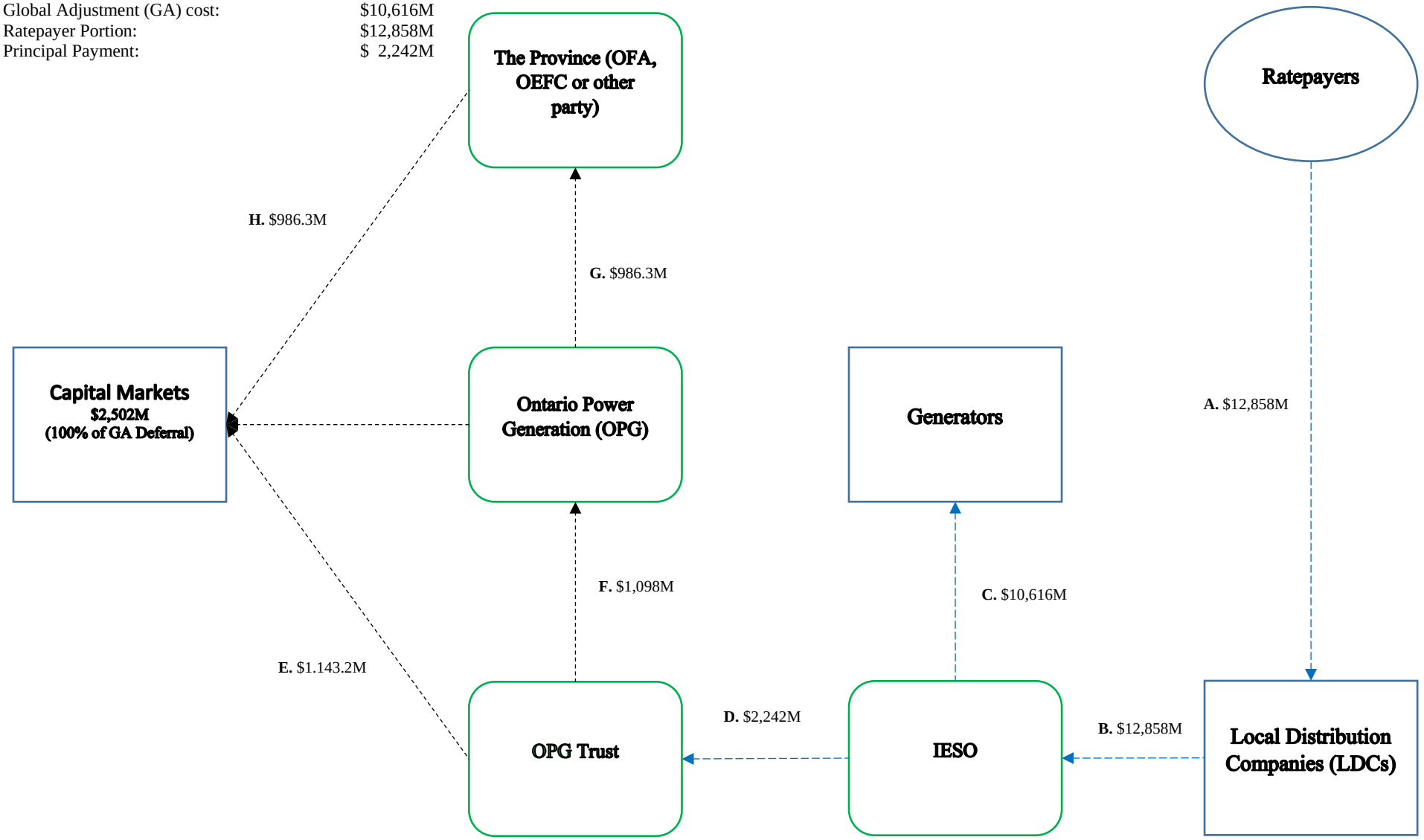
A. The Province borrows 44% of the deferred GA from the market.
B. The Province then funnels this amount to OPG through an equity injection.
C. OPG borrows 5% of the deferred GA from the market.
D. OPG lends an amount equal to the 5% and 44% from the market and the Province, respectively, to a separate legal entity called OPG Trust.
E. OPG Trust borrows 51% of the deferred GA from the market, ending up with 100% of the total $2.502M deferred GA in cash.

Deferral Mechanism

F. Ratepayers pay their portion of the GA to LDCs.
G. The LDCs remit this amount to IESO.
H. IESO, with the proper legislation and accounting treatment, is allowed to recognize a regulatory asset – the right to collect the deferred amount of $2,502M from ratepayers. It then sells this asset for cash to OPG Trust.
I. IESO uses the proceeds from the sale of the regulatory asset and the collection amount from LDCs to pay the full amount of the GA to Generators.

Exhibit B: 2028-2029 Estimates for Principal Payments

Global Adjustment (GA) cost:	$10,616M
Ratepayer Portion:	$12,858M
Principal Payment:	$ 2,242M



Collection of the GA

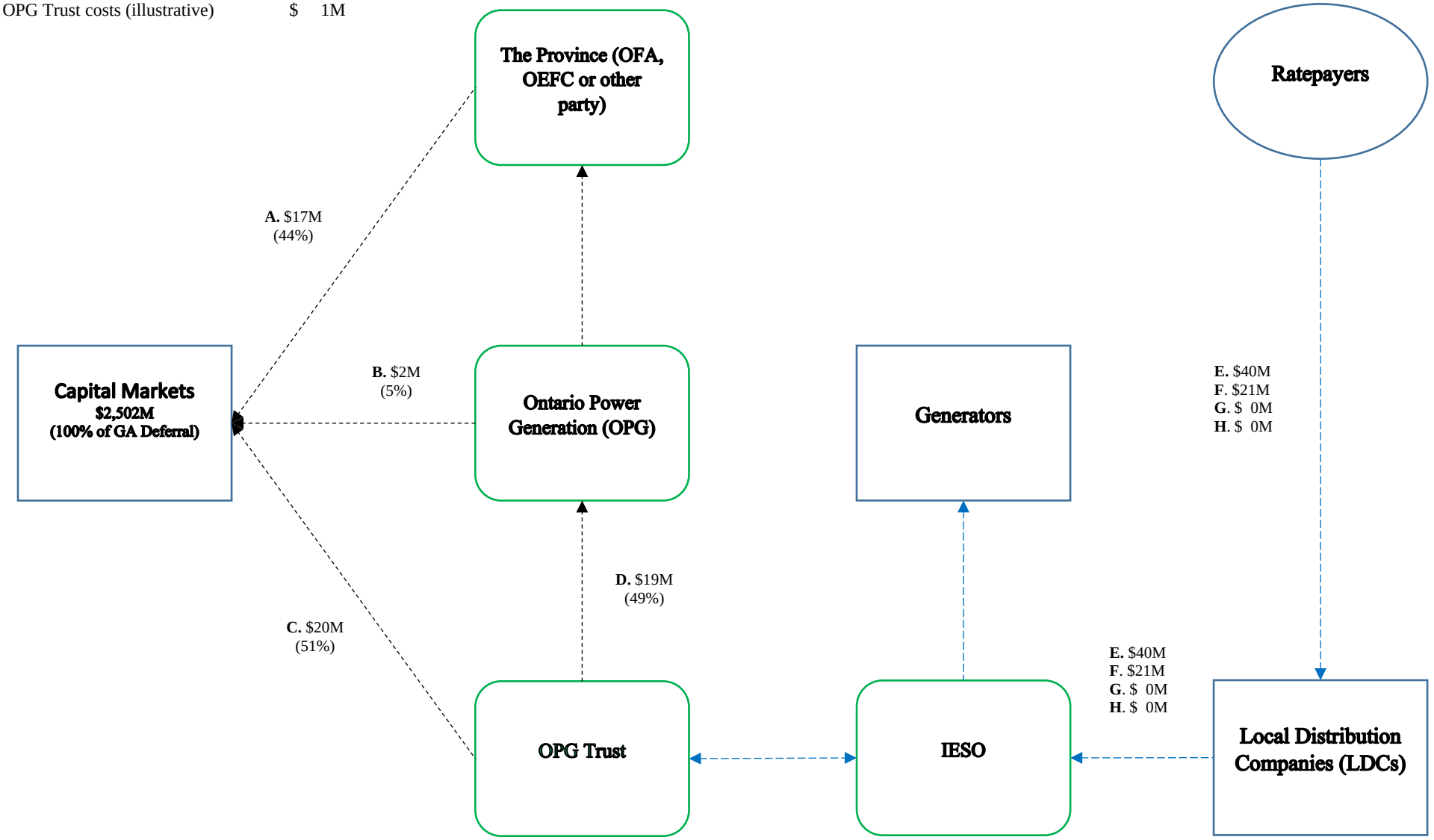
A. Ratepayers pay to LDCs the full cost of the GA plus an additional $2.242M that will be used to reduce the principal of the borrowing (or principal and interest if there is "interest on interest").
B. LDCs remit this amount to IESO.
C. IESO pays the full cost of the actual GA to generators.
D. IESO pays to OPG Trust the additional payment from the ratepayers over the actual GA cost. OPG Trust reduces the asset (for the right to collect GA deferral costs from ratepayers) by an equivalent amount.

Settlement of Principal.

E. OPG Trust pays off principal to the market. In this example, pays off 51%, but could pay more or less depending on various factors (e.g., subordinate debt, managing weighted average interest cost, etc.).
F. OPG Trust pays down principal related to the 49% of the GA Deferral it borrowed from OPG.
G. OPG could give a dividend to the Province equal in order to pay off the outstanding principal it borrowed from the market (44% of the total GA deferral cost)
H. The Province pays back principal to the market.

Exhibit C: 2017-2018 Estimates for Interest Recognition

Interest Recognized	$ 39M
OPG Trust costs (illustrative)	$ 1M



Recognition of Interest

A. The Province recognizes interest on the 44% of the deferred GA it borrowed from the market.

B. OPG recognizes interest on the 5% of the deferred GA it borrowed from the market.

C. OPG recognizes interest on the 51% of the deferred GA it borrowed from the market.

D. OPG Trust recognizes interest on the 49% of the GA it borrowed from OPG; OPG recognizes income for this transaction.

Options for Ratepayer collection

E. Option 1 – collect the entire interest amount from ratepayers plus the Trust administrative costs, thus offsetting the interest expense from total borrowing with the recognition of income. The end result is no fiscal impact.

F. Option 2 – only collect interest income for the 51% of deferred GA from the market and admin costs; OPG Trust would recognize income to offset the interest expense to the market but fiscal impact of 49% of the interest ($19M)

G. Option 3 – Do not collect from ratepayers – fiscal cost of 100% interest.

H. Option 4 – No collection from ratepayers, but OPG Trust is allowed to defer the recognition of interest expense on 100% of debt, leading to no fiscal impact.

Notes

- Assumptions based on Energy models and data, IESO forecasts, and CEFD validation models.
- Sources include Ministry of Energy decks, OPG reports and discussions, external accounting reports, and internal reports/discussions.

Corporate and Electricity Finance Division
Ontario Financing Authority
March 17, 2017

Structure of the Global Adjustment Deferral Mechanism

Issue

The Province is working with Ontario Power Generation (OPG), the Ontario Energy Board (OEB), IESO, external accountants, and other agencies to develop a mechanism to defer the global adjustment (GA) payment as part of the recently announced Ontario Fair Hydro Plan. This note outlines current proposals for this mechanism.

Context

- Smoothing of GA costs over time would involve ratepayers paying only a portion of the GA cost in earlier years, while this shortfall would be made up by future rate payers paying more than the true cost of the GA in later years.
    - There will be a proposed cap of $2.242B on the annual additional cost over the GA to lessen the burden on ratepayers.

- The shortfall in GA payments in earlier years would represent deferred costs to ratepayers. However, the mechanism would still need to compensate power generators on an ongoing basis for the full cost of the GA and would therefore need to borrow and take on debt to make cash payments to power generators.
- Principal payments on debt would be mandatory, but there has been no clarification on whether or not interest payments will be capitalized (i.e., interest accumulates resulting in compounding) or if interest will be recovered from ratepayers on an on-going basis.
    - If interest payments are made by ratepayers on an on-going basis debt costs would be lower, however this would also have the effect of reducing ratepayer savings from the GA deferral mechanism. The commitment is for a 25% reduction on average for all residential customers, which would mean that the amount of principal needs to be larger to offset this effect.
- It has also been proposed that all administrative and other costs from the GA deferral would need to be collected from ratepayers immediately or recognized at the very least as a future benefit to the Province, adding to the costs passed on to ratepayers.

Structure (*refer to Exhibit A*)

- The deferred portion of the GA needs to be recognized as an asset – likely a regulatory asset – by the IESO, which gives the IESO the right to collect the deferred amount from ratepayers at a future date.
- This asset, in turn, would be sold to another party that would receive the revenues associated with this asset.
    - It is proposed that the IESO be required to recover the costs associated with this asset even after selling it.
    - To do this the IESO would need to sell the asset in order to settle its arrangements with generators, and ensure generators are not affected by the deferral.
        - Alternatively, the IESO could simply borrow funds (using the regulatory asset as collateral), but this poses risks for both consolidation on public accounts and credit ratings.
        - With respect to the credit rating risk, DBRS stated in a March 3, 2017 report that "*Provided the debt continues to be fully supported through the electricity rate base, DBRS will treat it as self-supported and exclude it from the calculation of tax-supported debt*".
- OPG is proposing to set up a special purpose vehicle, "OPG Trust", which would purchase the regulatory asset from the IESO.
    - The purchase would be funded by debt from the capital markets (51% of the deferred GA Cost), and OPG (49% of the deferred GA).
    - OPG would finance that 49% through debt from the capital markets (5%) and an equity injection from the Province (44%).

    - The debt would be set-up in tranches to ensure that the 51% of debt directly from the market would be senior, potentially mitigating the risk premium associated with high amounts of borrowing with an intangible, unique asset as collateral.
- There are several other considerations and requirements that would need to be attained in order for the mechanism to work, as detailed in the OPG White Paper sent to the Deputy Minister of Energy on February 27, 2017.

Equity Injection (*refer to Exhibit A & B*)

- The equity injection could lead to increasing, and then stabilizing dividend payouts in consistent with OPG's's risk profile and comparable business entities.
    - Principal and interest payments flowing from the ratepayers through the IESO and the Trust could be paid back to the Province.
    - This would increase steadily as ratepayers begin to pay back principal in about 10 years' time, eventually reaching a cap of $2.242B in principal and interest per year based on Energy's March estimates (based on the capitalized interest scenario).
    - The administrative costs and return for OPG/OPG Trust would also need to be collected by ratepayers, but the dividend payments would be net of these amounts and should still allow the Province to earn a substantial return.
    - Dividend payments could also allow OPG to eventually optimize its capital structure to the targeted or deemed 55%-45% debt to equity split, as dividends allow OPG to reduce its retained earnings thereby reducing equity.
- Recapitalization from the Province is preferable as there are no associated interest expenses or large principal payments that could affect OPG's credit rating.
- If debt financing was utilized, the change in the cost of borrowing could also impact OPG's rate applications for the return recovered from ratepayers through payment amounts, potentially offsetting ratepayer benefit of the GA deferral mechanism.
- The financing structure split between equity (44%) and debt (5% borrowed by OPG and 51% borrowed by OPG Trust) is roughly equivalent to the deemed capital structure of 55% debt and 45% equity for regulated distributors in Ontario.

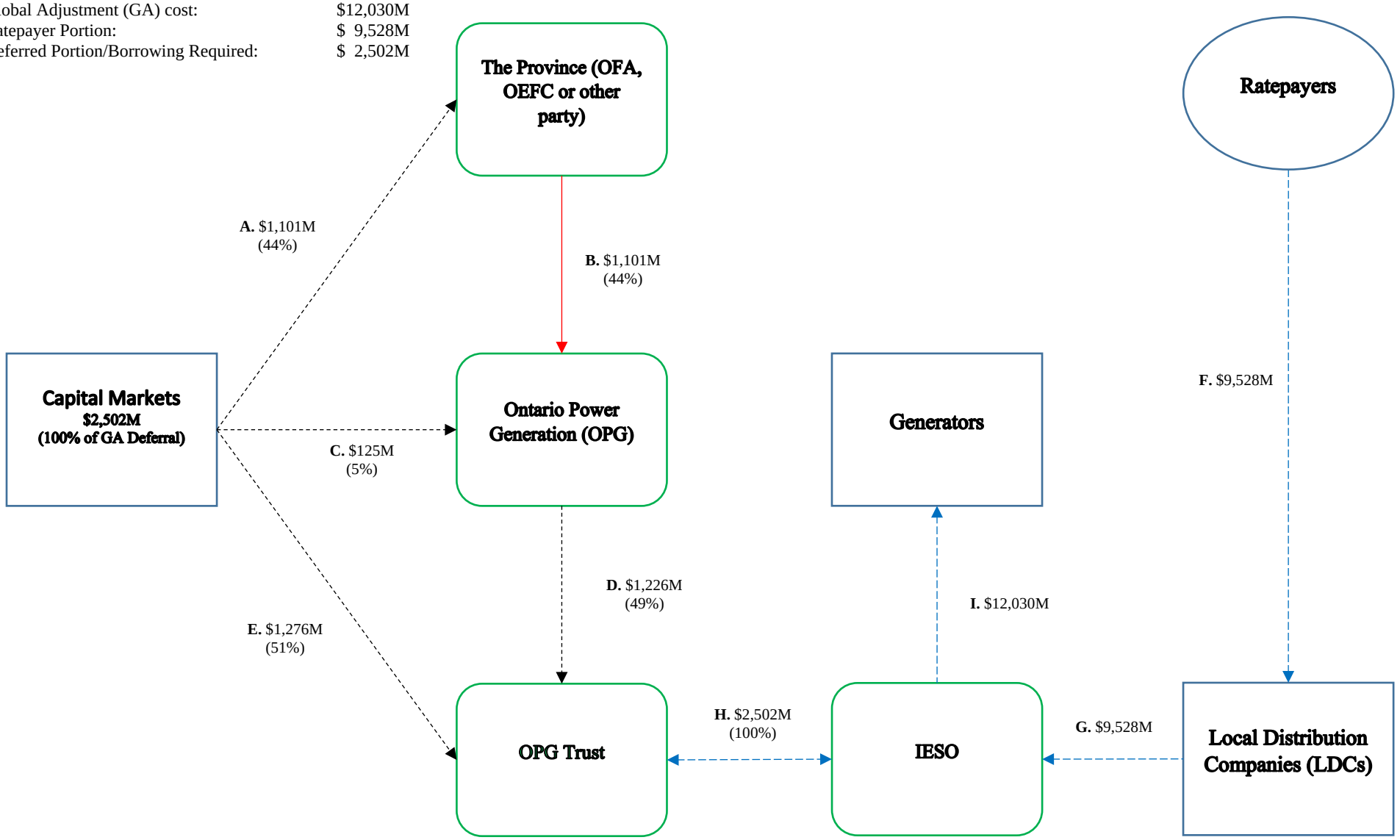
Collection of Interest Payments (*refer to Exhibit C*)

- There are different potential accounting treatments, depending on legislative and regulatory approval, that would impact the amount of borrowing and interest over the long term as well as the total fiscal impact.
    - **Option 1: Collect interest and administrative costs from ratepayers on an on-going basis:** Interest and the costs to finance/administer the GA deferral mechanism would be recovered from ratepayers along the way. This would allow cash and income to be recognized by OPG Trust equivalent to the total borrowing cost from the market (i.e., the interest on the 44% of the GA the Province borrowed from the market, the 5% of the GA OPG borrowed, and the 51% of the GA OPG Trust borrowed). Furthermore, some type of additional return for the risk premium could be made. Overall, there would be no fiscal cost, and less debt would build up over time due to the elimination of the compound effects on interest.
    - **Option 2: Collect interest costs associated with the senior debt**: There are variations on this concept which essentially proposes to only collect some of the interest costs from ratepayers, with the senior debt that OPG Trust borrows directly from the market of primary concern. This is "meeting halfway" between deferring all interest payments and collecting all interest payments from ratepayers immediately.

- Option 3: **Do not collect from ratepayers**. There is a fiscal impact equal to 100% of the interest on the total borrowings as an expense still needs to be recognized, even though cash interest has not been paid. There is also a compounding effect on interest.
- Option 4: **No collection from ratepayers but deferral of expense recognition (Same as Energy's analysis in its Cabinet Submission)**. For this option, there is no collection of interest payments from ratepayers, but OPG Trust is somehow allowed to defer the recognition of interest expense on its books and recognize as a regulatory asset, thus eliminating the fiscal impact.
    - If OPG Trust were allowed to recognize a regulatory asset, then it could defer the interest expense, instead recognizing it as an asset (similar to the idea of a prepaid expense).
    - Thus, OPG would recognize interest income from OPG Trust, but OPG Trust would not recognize an expense related to the amount owed to OPG and instead would increase the regulatory asset by the same amount.
    - The interest income earned by OPG for the 49% of the GA deferral it borrowed would offset the borrowing the Province made from the capital markets.
    - OPG Trust would also defer the recognition of the interest associated with the 51% of the GA deferral it borrowed from the market. The deferred amount would be recognized in a regulatory asset.
    - When OPG starts collecting principal and interest from ratepayers, it will recognize income, but will also amortize the regulatory asset at the same time, thus matching revenue and expenses with each other in the time period and potentially eliminating the fiscal impact.
    - Many factors, including the initial accounting treatment and the effect of consolidation, are significant barriers to the application of this approach.
    - **Alternatively, OPG Trust might be able to recognize income (with a receivable created to balance the transaction) to offset the interest expense without collecting from ratepayers**, i.e., it will be a cash transaction in the future (cash received offset by a decrease in the receivable; no effect on income statement).

Exhibit A; 2017-2018 Estimates for Balance Sheet Transactions

Global Adjustment (GA) cost:	$12,030M
Ratepayer Portion:	$ 9,528M
Deferred Portion/Borrowing Required:	$ 2,502M



Setting up the Trust

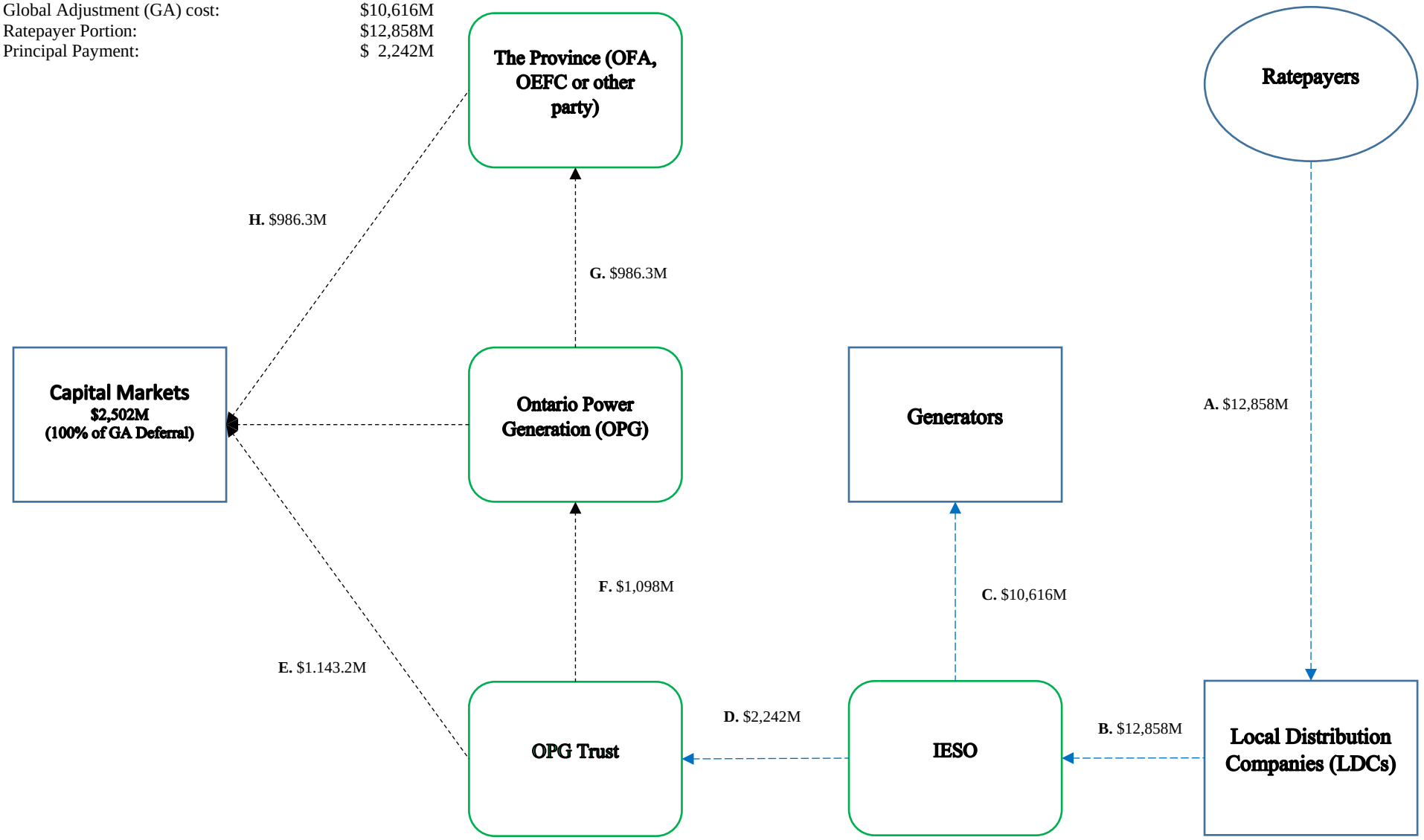
A. The Province borrows 44% of the deferred GA from the market.
B. The Province then funnels this amount to OPG through an equity injection.
C. OPG borrows 5% of the deferred GA from the market.
D. OPG lends an amount equal to the 5% and 44% from the market and the Province, respectively, to a separate legal entity called OPG Trust.
E. OPG Trust borrows 51% of the deferred GA from the market, ending up with 100% of the total $2.502M deferred GA in cash.

Deferral Mechanism

F. Ratepayers pay their portion of the GA to LDCs.
G. The LDCs remit this amount to IESO.
H. IESO, with the proper legislation and accounting treatment, is allowed to recognize a regulatory asset – the right to collect the deferred amount of $2,502M from ratepayers. It then sells this asset for cash to OPG Trust.
I. IESO uses the proceeds from the sale of the regulatory asset and the collection amount from LDCs to pay the full amount of the GA to Generators.

Exhibit B: 2028-2029 Estimates for Principal Payments

Global Adjustment (GA) cost:	$10,616M
Ratepayer Portion:	$12,858M
Principal Payment:	$ 2,242M



Collection of the GA

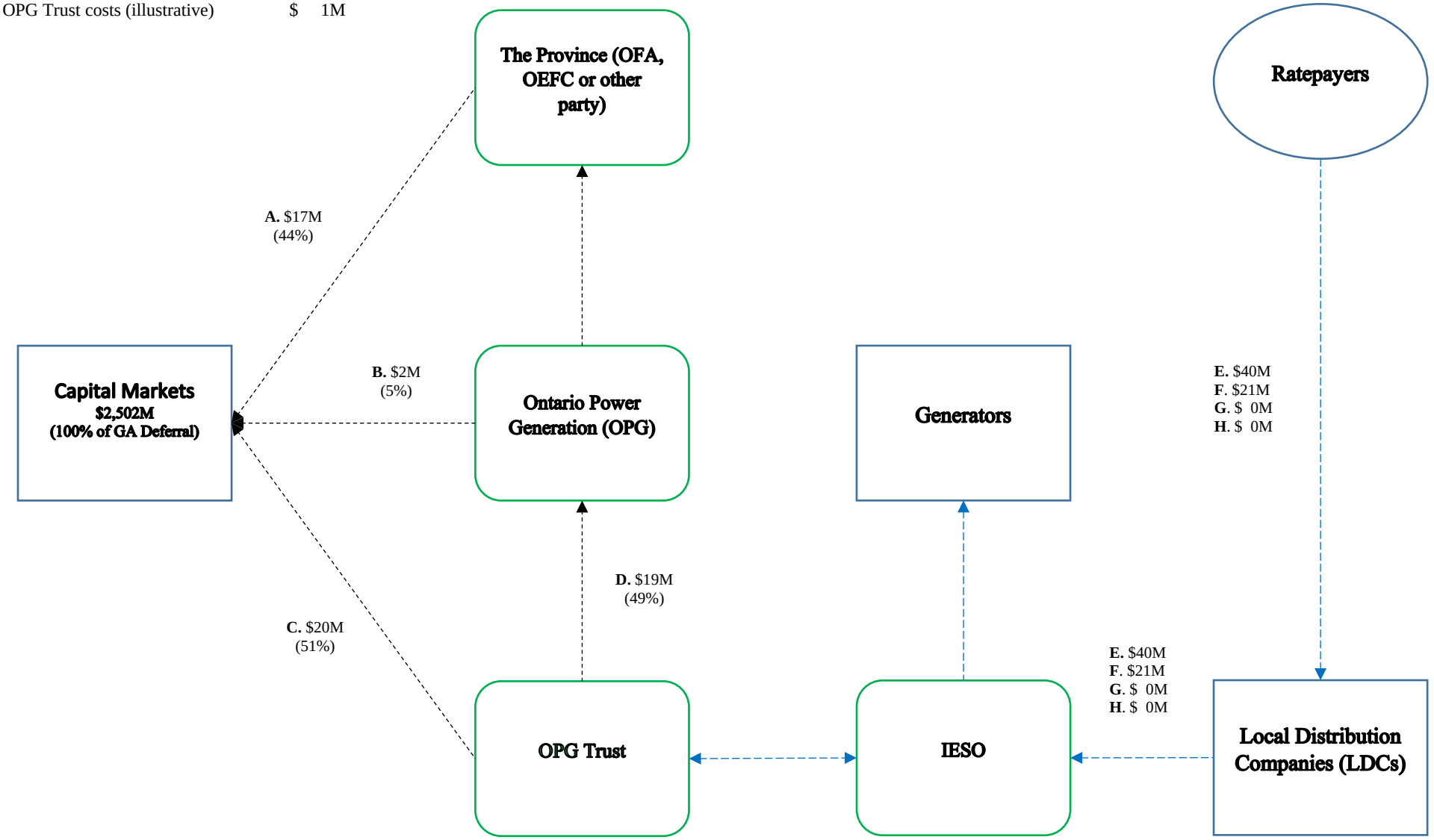
A. Ratepayers pay to LDCs the full cost of the GA plus an additional $2.242M that will be used to reduce the principal of the borrowing (or principal and interest if there is "interest on interest").
B. LDCs remit this amount to IESO.
C. IESO pays the full cost of the actual GA to generators.
D. IESO pays to OPG Trust the additional payment from the ratepayers over the actual GA cost. OPG Trust reduces the asset (for the right to collect GA deferral costs from ratepayers) by an equivalent amount.

Settlement of Principal.

E. OPG Trust pays off principal to the market. In this example, pays off 51%, but could pay more or less depending on various factors (e.g., subordinate debt, managing weighted average interest cost, etc.).
F. OPG Trust pays down principal related to the 49% of the GA Deferral it borrowed from OPG.
G. OPG could give a dividend to the Province equal in order to pay off the outstanding principal it borrowed from the market (44% of the total GA deferral cost)
H. The Province pays back principal to the market.

Exhibit C: 2017-2018 Estimates for Interest Recognition

Interest Recognized	$ 39M
OPG Trust costs (illustrative)	$ 1M



Recognition of Interest

A. The Province recognizes interest on the 44% of the deferred GA it borrowed from the market.

B. OPG recognizes interest on the 5% of the deferred GA it borrowed from the market.

C. OPG recognizes interest on the 51% of the deferred GA it borrowed from the market.

D. OPG Trust recognizes interest on the 49% of the GA it borrowed from OPG; OPG recognizes income for this transaction.

Options for Ratepayer collection

E. Option 1 – collect the entire interest amount from ratepayers plus the Trust administrative costs, thus offsetting the interest expense from total borrowing with the recognition of income. The end result is no fiscal impact.

F. Option 2 – only collect interest income for the 51% of deferred GA from the market and admin costs; OPG Trust would recognize income to offset the interest expense to the market but fiscal impact of 49% of the interest ($19M)

G. Option 3 – Do not collect from ratepayers – fiscal cost of 100% interest.

H. Option 4 – No collection from ratepayers, but OPG Trust is allowed to defer the recognition of interest expense on 100% of debt, leading to no fiscal impact.

Notes

- Assumptions based on Energy models and data, IESO forecasts, and CEFD validation models.
- Sources include Ministry of Energy decks, OPG reports and discussions, external accounting reports, and internal reports/discussions.

Corporate and Electricity Finance Division
Ontario Financing Authority
March 17, 2017

Structure of the Global Adjustment Deferral Mechanism

Issue

The Province is working with Ontario Power Generation (OPG), the Ontario Energy Board (OEB), IESO, external accountants, and other agencies to develop a mechanism to defer the global adjustment (GA) payment as part of the recently announced Ontario Fair Hydro Plan. This note outlines current proposals for this mechanism.

Context

- Smoothing of GA costs over time would involve ratepayers paying only a portion of the GA cost in earlier years, while this shortfall would be made up by future rate payers paying more than the true cost of the GA in later years.
    - There will be a proposed cap of $2.242B on the annual additional cost over the GA to lessen the burden on ratepayers.

- The shortfall in GA payments in earlier years would represent deferred costs to ratepayers. However, the mechanism would still need to compensate power generators on an ongoing basis for the full cost of the GA and would therefore need to borrow and take on debt to make cash payments to power generators.
- Principal payments on debt would be mandatory, but there has been no clarification on whether or not interest payments will be capitalized (i.e., interest accumulates resulting in compounding) or if interest will be recovered from ratepayers on an on-going basis.
    - If interest payments are made by ratepayers on an on-going basis debt costs would be lower, however this would also have the effect of reducing ratepayer savings from the GA deferral mechanism. The commitment is for a 25% reduction on average for all residential customers, which would mean that the amount of principal needs to be larger to offset this effect.
- It has also been proposed that all administrative and other costs from the GA deferral would need to be collected from ratepayers immediately or recognized at the very least as a future benefit to the Province, adding to the costs passed on to ratepayers.

Structure (*refer to Exhibit A*)

- The deferred portion of the GA needs to be recognized as an asset – likely a regulatory asset – by the IESO, which gives the IESO the right to collect the deferred amount from ratepayers at a future date.
- This asset, in turn, would be sold to another party that would receive the revenues associated with this asset.
    - It is proposed that the IESO be required to recover the costs associated with this asset even after selling it.
    - To do this the IESO would need to sell the asset in order to settle its arrangements with generators, and ensure generators are not affected by the deferral.
        - Alternatively, the IESO could simply borrow funds (using the regulatory asset as collateral), but this poses risks for both consolidation on public accounts and credit ratings.
        - With respect to the credit rating risk, DBRS stated in a March 3, 2017 report that "*Provided the debt continues to be fully supported through the electricity rate base, DBRS will treat it as self-supported and exclude it from the calculation of tax-supported debt*".
- OPG is proposing to set up a special purpose vehicle, "OPG Trust", which would purchase the regulatory asset from the IESO.
    - The purchase would be funded by debt from the capital markets (51% of the deferred GA Cost), and OPG (49% of the deferred GA).
    - OPG would finance that 49% through debt from the capital markets (5%) and an equity injection from the Province (44%).

    - The debt would be set-up in tranches to ensure that the 51% of debt directly from the market would be senior, potentially mitigating the risk premium associated with high amounts of borrowing with an intangible, unique asset as collateral.
- There are several other considerations and requirements that would need to be attained in order for the mechanism to work, as detailed in the OPG White Paper sent to the Deputy Minister of Energy on February 27, 2017.

Equity Injection (*refer to Exhibit A & B*)

- The equity injection could lead to increasing, and then stabilizing dividend payouts in consistent with OPG's's risk profile and comparable business entities.
    - Principal and interest payments flowing from the ratepayers through the IESO and the Trust could be paid back to the Province.
    - This would increase steadily as ratepayers begin to pay back principal in about 10 years time, eventually reaching a cap of $2.242B in principal and interest per year based on Energy's March estimates (based on the capitalized interest scenario).
    - The administrative costs and return for OPG/OPG Trust would also need to be collected by ratepayers, but the dividend payments would be net of these amounts and should still allow the Province to earn a substantial return.
    - Dividend payments could also allow OPG to eventually optimize its capital structure to the targeted or deemed 55%-45% debt to equity split, as dividends allow OPG to reduce its retained earnings thereby reducing equity.
- Recapitalization from the Province is preferable as there are no associated interest expenses or large principal payments that could affect OPG's credit rating.
- If debt financing was utilized, the change in the cost of borrowing could also impact OPG's rate applications for the return recovered from ratepayers through payment amounts, potentially offsetting ratepayer benefit of the GA deferral mechanism.
- The financing structure split between equity (44%) and debt (5% borrowed by OPG and 51% borrowed by OPG Trust) is roughly equivalent to the deemed capital structure of 55% debt and 45% equity for regulated distributors in Ontario.

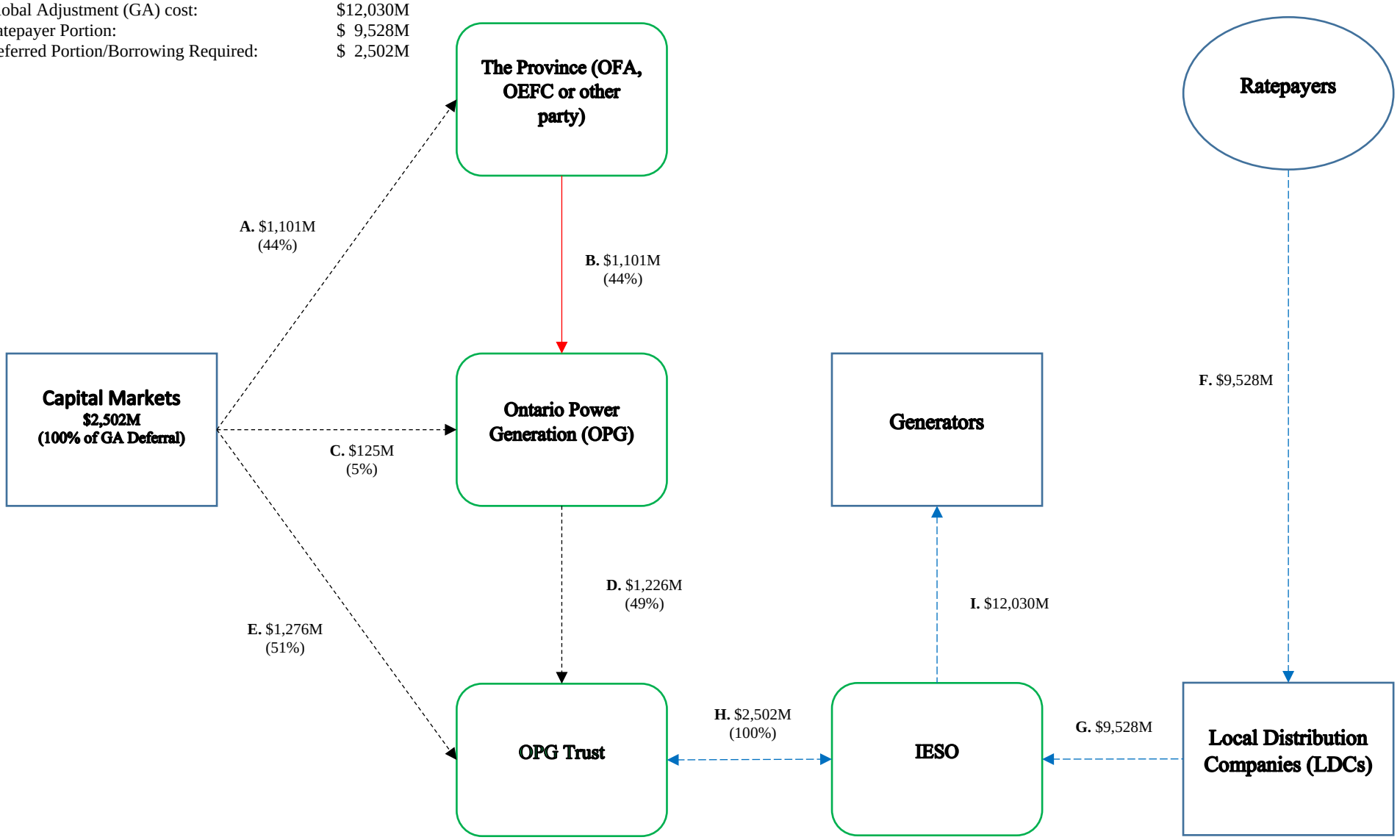
Collection of Interest Payments (*refer to Exhibit C*)

- There are different potential accounting treatments, depending on legislative and regulatory approval, that would impact the amount of borrowing and interest over the long term as well as the total fiscal impact.
    - **Option 1: Collect interest and administrative costs from ratepayers on an on-going basis:** Interest and the costs to finance/administer the GA deferral mechanism would be recovered from ratepayers along the way. This would allow cash and income to be recognized by OPG Trust equivalent to the total borrowing cost from the market (i.e., the interest on the 44% of the GA the Province borrowed from the market, the 5% of the GA OPG borrowed, and the 51% of the GA OPG Trust borrowed). Furthermore, some type of additional return for the risk premium could be made. Overall, there would be no fiscal cost, and less debt would build up over time due to the elimination of the compound effects on interest.
    - **Option 2: Collect interest costs associated with the senior debt**: There are variations on this concept which essentially proposes to only collect some of the interest costs from ratepayers, with the senior debt that OPG Trust borrows directly from the market of primary concern. This is "meeting halfway" between deferring all interest payments and collecting all interest payments from ratepayers immediately.

- Option 3: **Do not collect from ratepayers**. There is a fiscal impact equal to 100% of the interest on the total borrowings as an expense still needs to be recognized, even though cash interest has not been paid. There is also a compounding effect on interest.
- Option 4: **No collection from ratepayers but deferral of expense recognition (Same as Energy's analysis in its Cabinet Submission)**. For this option, there is no collection of interest payments from ratepayers, but OPG Trust is somehow allowed to defer the recognition of interest expense on its books and recognize as a regulatory asset, thus eliminating the fiscal impact.
    - If OPG Trust were allowed to recognize a regulatory asset, then it could defer the interest expense, instead recognizing it as an asset (similar to the idea of a prepaid expense).
    - Thus, OPG would recognize interest income from OPG Trust, but OPG Trust would not recognize an expense related to the amount owed to OPG and instead would increase the regulatory asset by the same amount.
    - The interest income earned by OPG for the 49% of the GA deferral it borrowed would offset the borrowing the Province made from the capital markets.
    - OPG Trust would also defer the recognition of the interest associated with the 51% of the GA deferral it borrowed from the market. The deferred amount would be recognized in a regulatory asset.
    - When OPG starts collecting principal and interest from ratepayers, it will recognize income, but will also amortize the regulatory asset at the same time, thus matching revenue and expenses with each other in the time period and potentially eliminating the fiscal impact.
    - Many factors, including the initial accounting treatment and the effect of consolidation, are significant barriers to the application of this approach.
    - **Alternatively, OPG Trust might be able to recognize income (with a receivable created to balance the transaction) to offset the interest expense without collecting from ratepayers**, i.e., it will be a cash transaction in the future (cash received offset by a decrease in the receivable; no effect on income statement).

Exhibit A; 2017-2018 Estimates for Balance Sheet Transactions

Global Adjustment (GA) cost:	$12,030M
Ratepayer Portion:	$ 9,528M
Deferred Portion/Borrowing Required:	$ 2,502M



Setting up the Trust

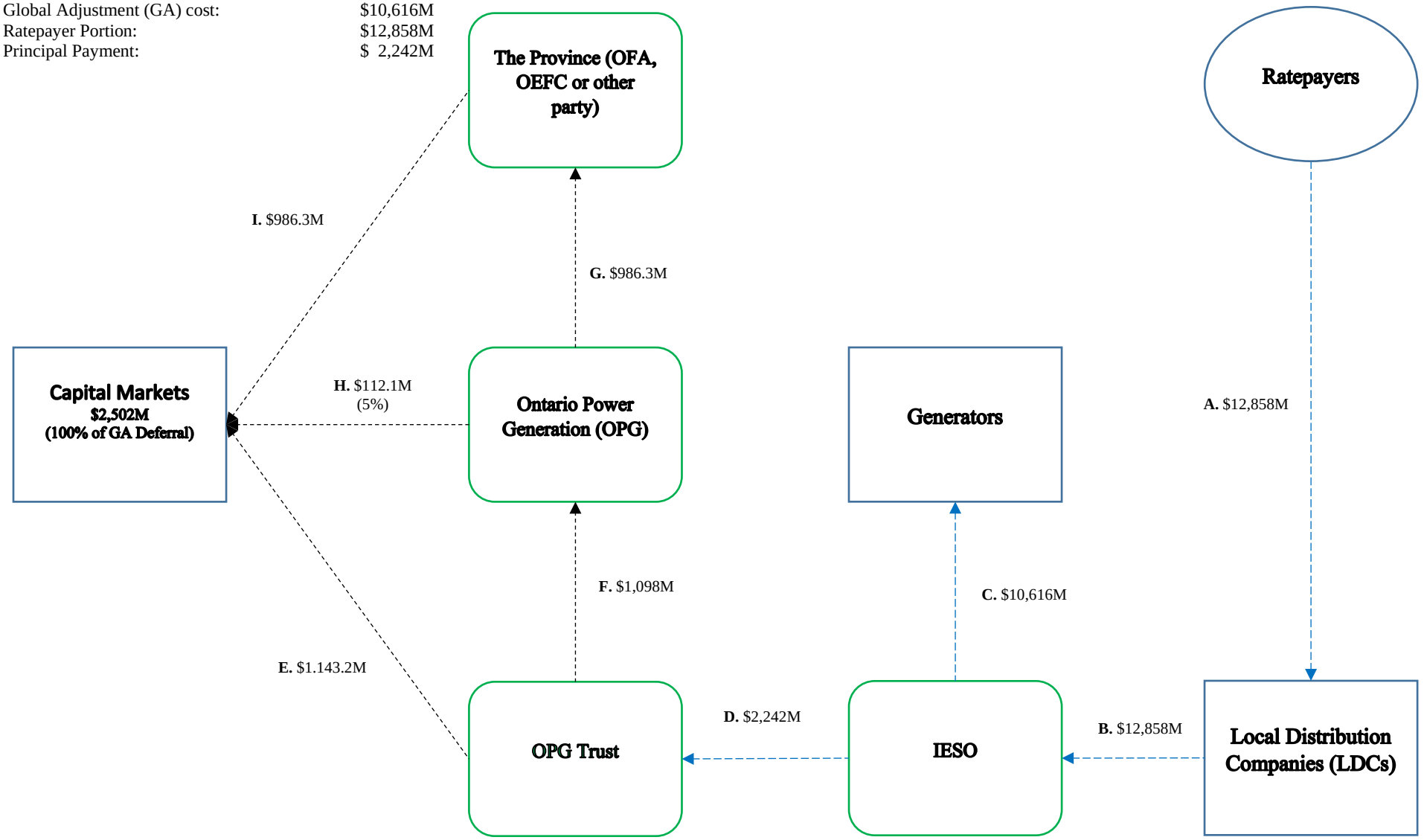
A. The Province borrows 44% of the deferred GA from the market.
B. The Province then funnels this amount to OPG through an equity injection.
C. OPG borrows 5% of the deferred GA from the market.
D. OPG lends an amount equal to the 5% and 44% from the market and the Province, respectively, to a separate legal entity called OPG Trust.
E. OPG Trust borrows 51% of the deferred GA from the market, ending up with 100% of the total $2.502M deferred GA in cash.

Deferral Mechanism

F. Ratepayers pay their portion of the GA to LDCs.
G. The LDCs remit this amount to IESO.
H. IESO, with the proper legislation and accounting treatment, is allowed to recognize a regulatory asset – the right to collect the deferred amount of $2,502M from ratepayers. It then sells this asset for cash to OPG Trust.
I. IESO uses the proceeds from the sale of the regulatory asset and the collection amount from LDCs to pay the full amount of the GA to Generators.

Exhibit B: 2028-2029 Estimates for Principal Payments

Global Adjustment (GA) cost:	$10,616M
Ratepayer Portion:	$12,858M
Principal Payment:	$ 2,242M



Collection of the GA

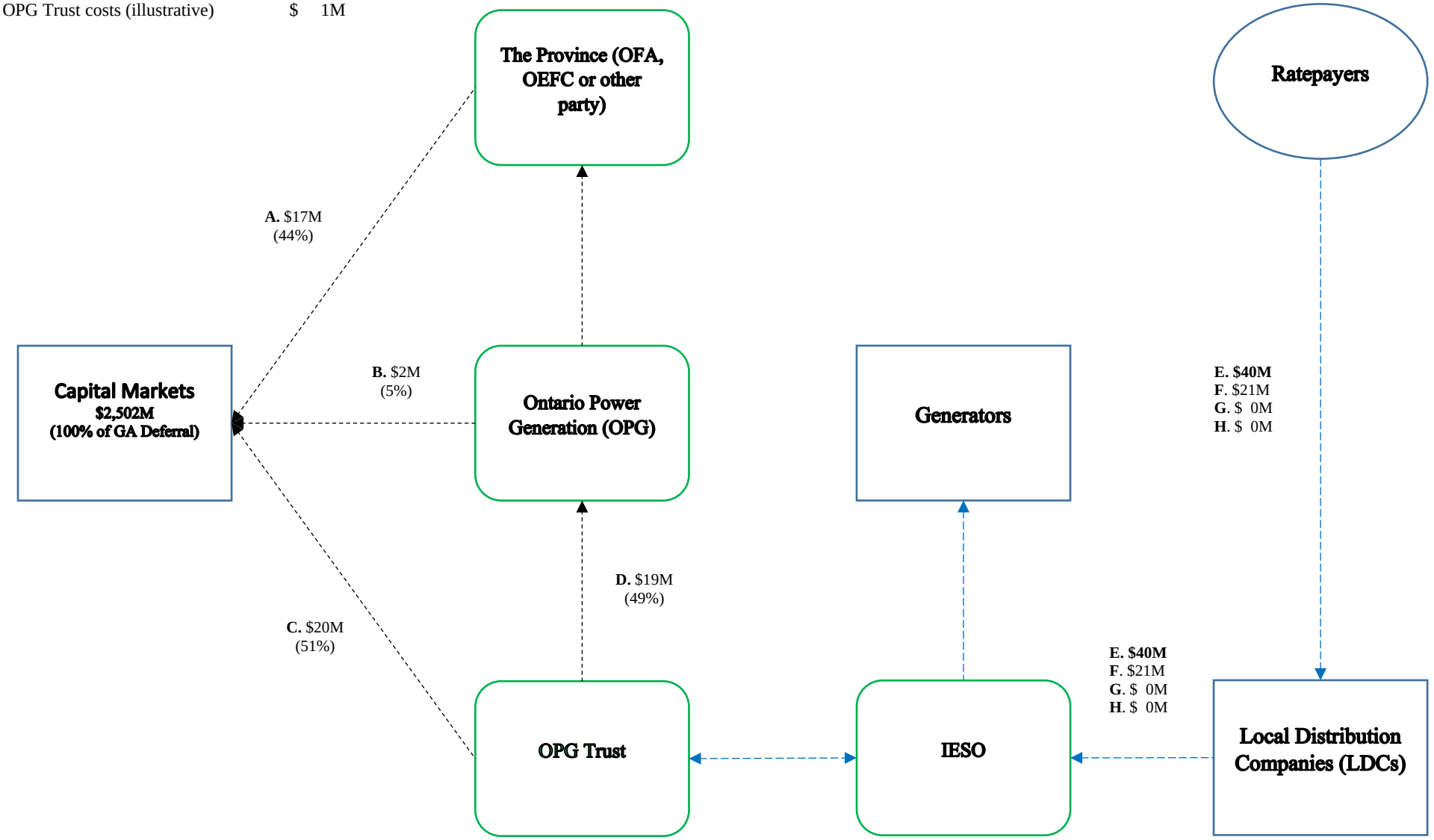
A. Ratepayers pay to LDCs the full cost of the GA plus an additional $2.242M that will be used to reduce the principal of the borrowing (or principal and interest if there is "interest on interest").
B. LDCs remit this amount to IESO.
C. IESO pays the full cost of the actual GA to generators.
D. IESO pays to OPG Trust the additional payment from the ratepayers over the actual GA cost. OPG Trust reduces the asset (for the right to collect GA deferral costs from ratepayers) by an equivalent amount.

Settlement of Principal.

E. OPG Trust pays off principal to the market. In this example, pays off 51%, but could pay more or less depending on various factors (e.g., subordinate debt, managing weighted average interest cost, etc.).
F. OPG Trust pays down principal related to the 49% of the GA Deferral it borrowed from OPG.
G. OPG could give a dividend to the Province equal in order to pay off the outstanding principal it borrowed from the market (44% of the total GA deferral cost).
H. OPG returns principal back related to 5% of deferral borrowed from the market.
I. The Province pays back principal to the market.

Exhibit C: 2017-2018 Estimates for Interest Recognition

Interest Recognized	$ 39M
OPG Trust costs (illustrative)	$ 1M



Recognition of Interest

A. The Province recognizes interest on the 44% of the deferred GA it borrowed from the market.

B. OPG recognizes interest on the 5% of the deferred GA it borrowed from the market.

C. OPG recognizes interest on the 51% of the deferred GA it borrowed from the market.

D. OPG Trust recognizes interest on the 49% of the GA it borrowed from OPG; OPG recognizes income for this transaction.

Options for Ratepayer collection

E. Option 1 – collect the entire interest amount from ratepayers plus the Trust administrative costs, thus offsetting the interest expense from total borrowing with the recognition of income. The end result is no fiscal impact.

F. Option 2 – only collect interest income for the 51% of deferred GA from the market and admin costs; OPG Trust would recognize income to offset the interest expense to the market but fiscal impact of 49% of the interest ($19M)

G. Option 3 – Do not collect from ratepayers – fiscal cost of 100% interest.

H. Option 4 – No collection from ratepayers, but OPG Trust is allowed to defer the recognition of interest expense on 100% of debt, leading to no fiscal impact.

Notes

- Assumptions based on Energy models and data, IESO forecasts, and CEFD validation models.
- Sources include Ministry of Energy decks, OPG reports and discussions, external accounting reports, and internal reports/discussions.

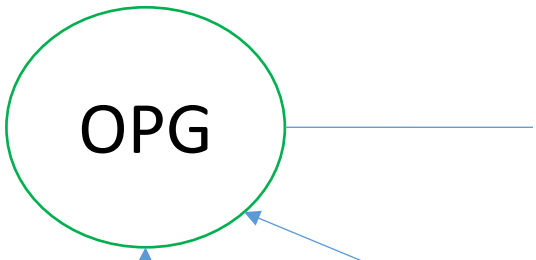
Corporate and Electricity Finance Division
Ontario Financing Authority
March 17, 2017

Use the left toggle to switch between fiscal years and the right toggle to switch between debt transactions and interest transactions

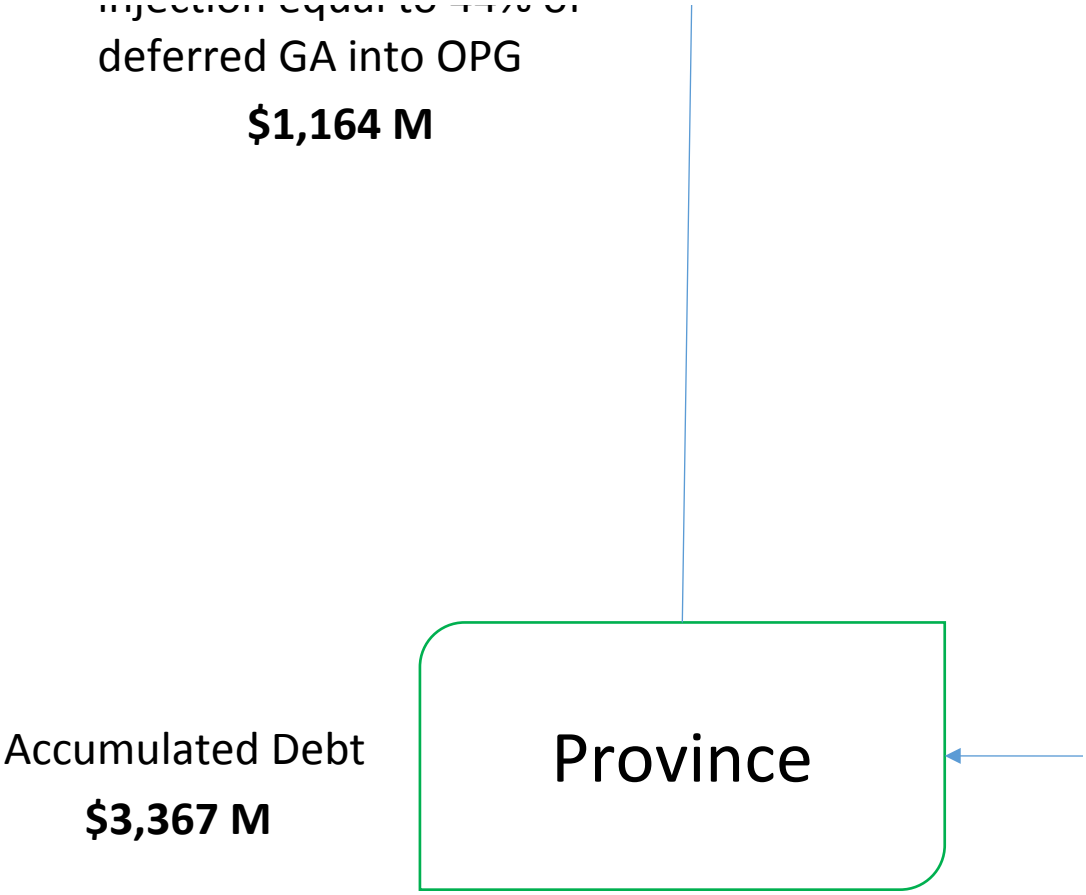
2019-20

B/S Transaction

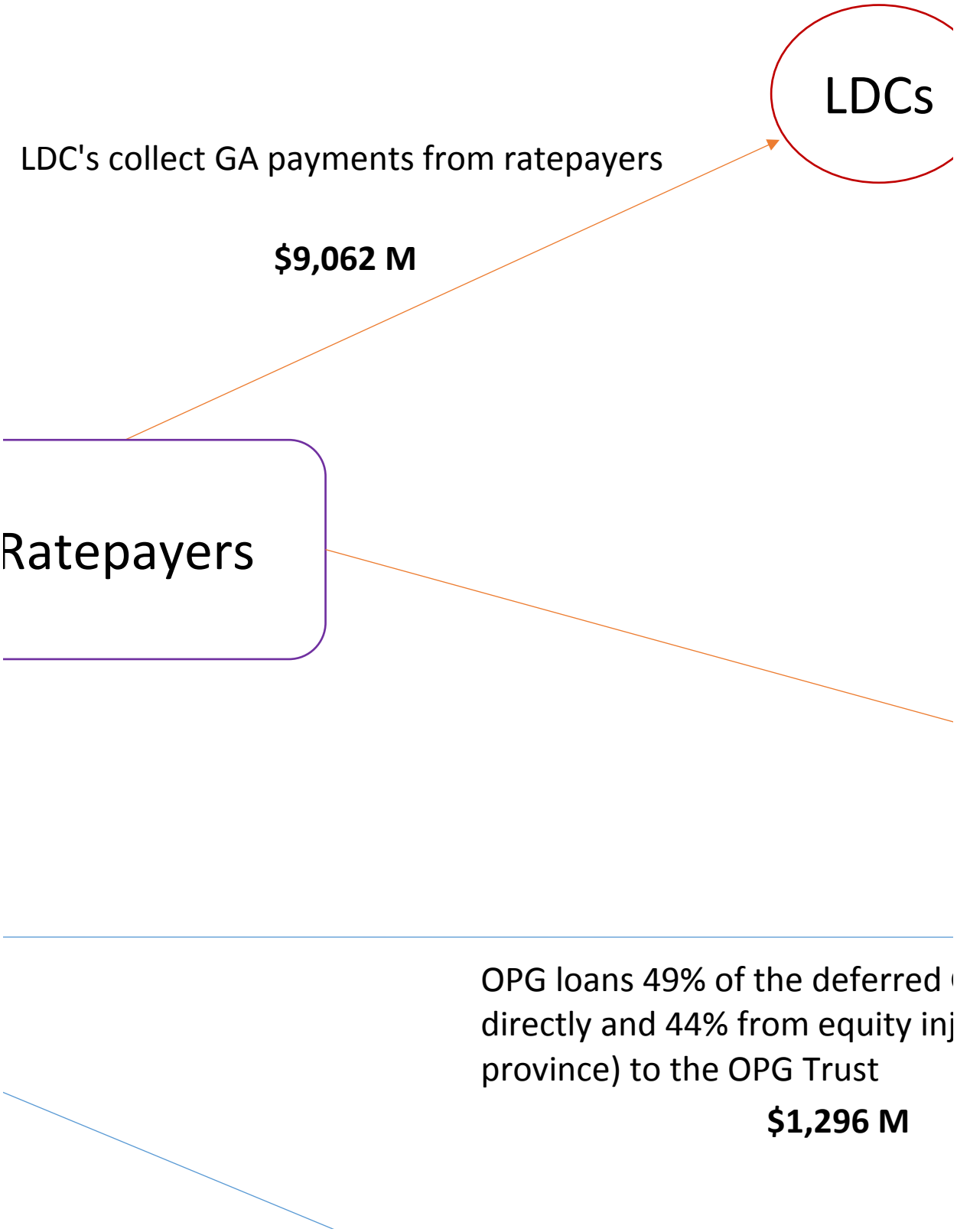
Accumulated Debt
$383 M



Province puts equity injection equal to 44% of


deferred GA into OPG
$1,164 M
Province
Accumulated Debt
$3,367 M

GA Deferral


LDCs
LDC's collect GA payments from ratepayers
$9,062 M
Ratepayers
OPG loans 49% of the deferred
directly and 44% from equity inj
province) to the OPG Trust
$1,296 M

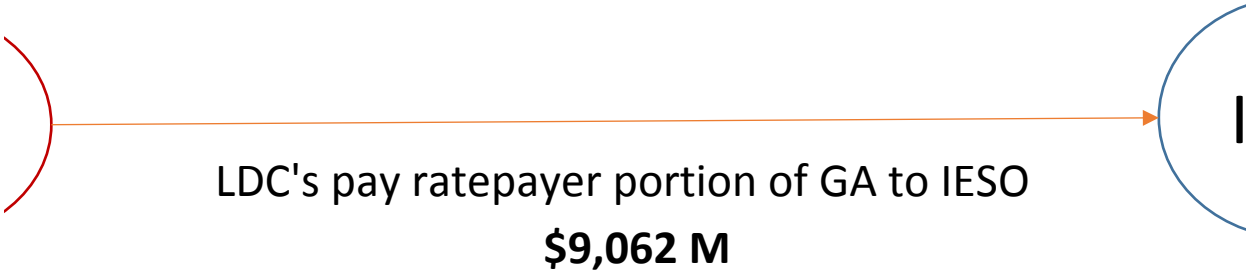
OPG borrows 5% of the deferred GA from the market

$132 M

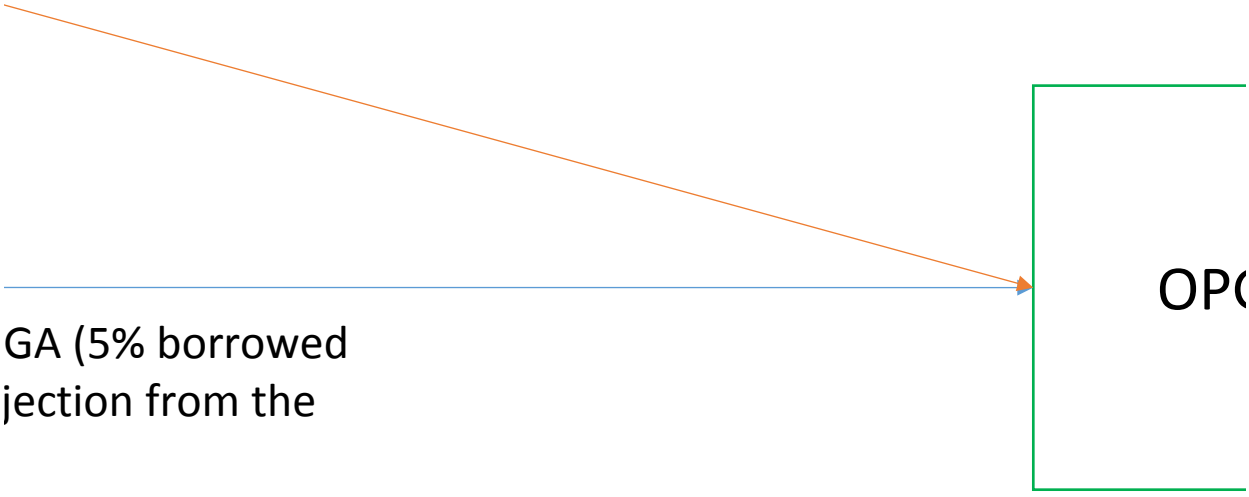
Province borrows 44 deferred GA from the r

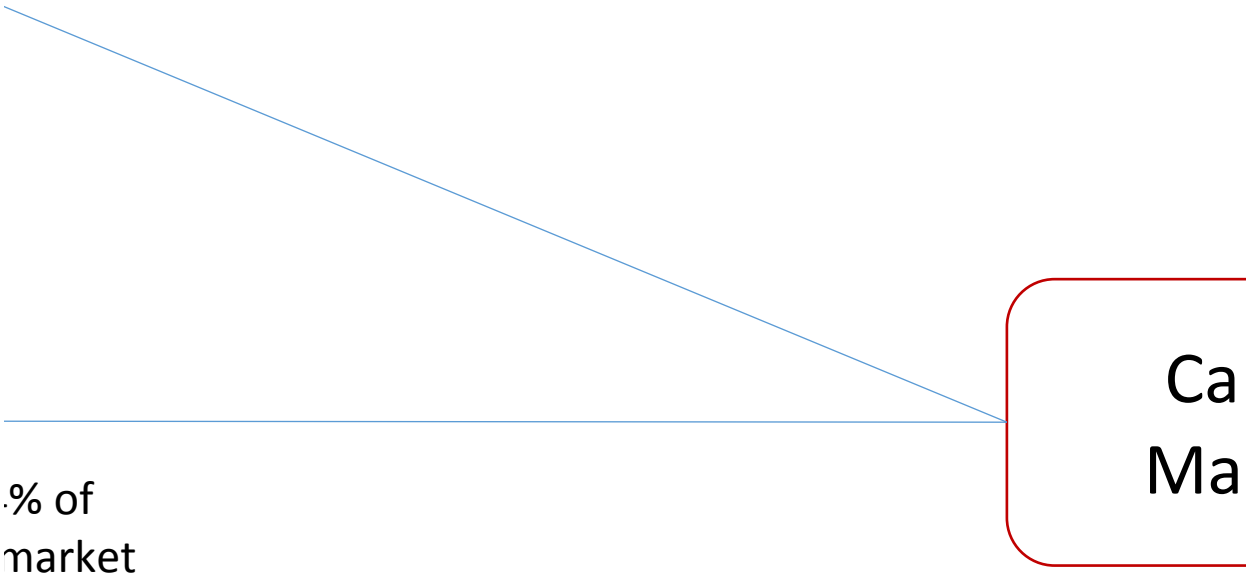
$1,164 M

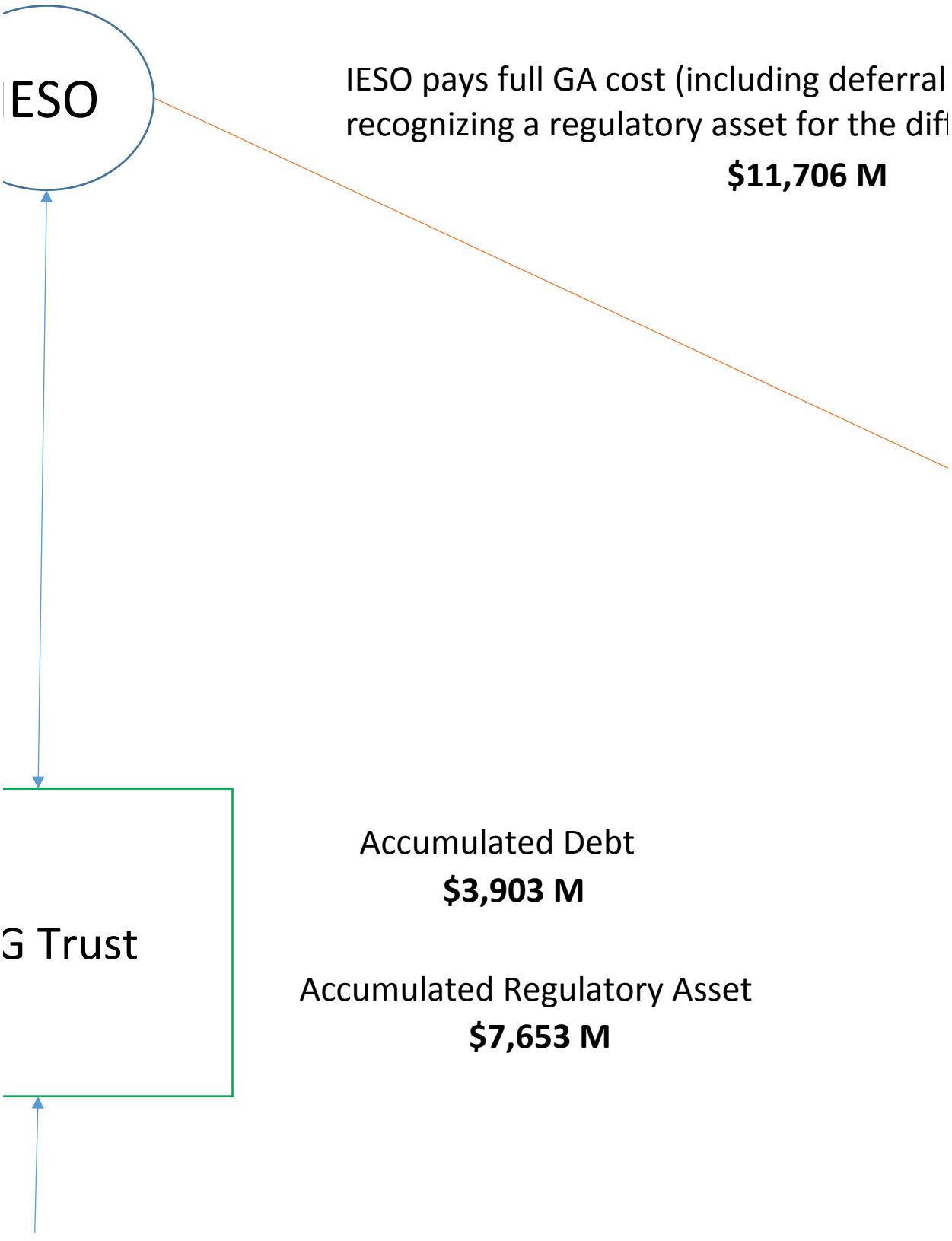
Mechanism



OPG trust purchases the regulatory asset from IESO in exchange for cash
$2,644 M



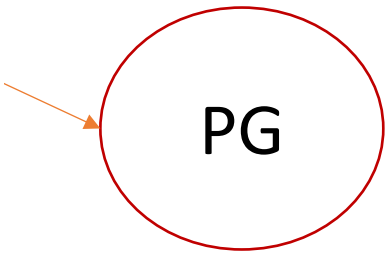

Ca
Ma
% of
market


ESO
IESO pays full GA cost (including deferral
recognizing a regulatory asset for the dif
$11,706 M
G Trust
Accumulated Debt
$3,903 M
Accumulated Regulatory Asset
$7,653 M

OPG Trust borrows 51% of the annual deferred GA from the market - **$1,349 M**

pital
rkets

) to the generators,
ference



44%
5%
51%

44%
5%
51%

B/S Transaction
Interest

B/S Transaction
B/S Transaction
B/S Transaction
B/S Transaction
B/S Transaction
B/S Transaction
B/S Transaction
B/S Transaction
B/S Transaction
B/S Transaction
B/S EOY
B/S EOY
B/S EOY
B/S EOY
Interest
Interest
Interest
Interest
Interest

GA Cost
Ratepayer Cost
Total Debt Borrowed
Province Share
OPG Share
OPG Trust share

Interest
2017-18
2018-19
2019-20
2020-21

Total
Province Share
OPG Share
OPG Trust share

Loan to OPG Trust from OPG

Province puts equity injection equal to 44% of deferred GA into OPG
Province borrows 44% of deferred GA from the market
OPG loans 49% of the deferred GA (5% borrowed directly and 44% from equity injection from the province) to the
OPG borrows 5% of the deferred GA from the market
OPG Trust borrows 51% of the annual deferred GA from the market -
IESO sells the regulatory asset to OPG Trust for cash used to make whole the power generators for the deferred G
OPG trust purchases the regulatory asset from IESO in exchange for cash
LDC's pay ratepayer portion of GA to IESO
LDC's collect GA payments from ratepayers
IESO pays full GA cost (including deferral) to the generators, recognizing a regulatory asset for the difference
Accumulated Regulatory Asset
Accumulated Debt
Accumulated Debt
Accumulated Debt
Interest due from Province to the Market for 44% GA Deferral
Interest due from OPG to the Market for 5% GA Deferral
Interest due from OPG Trust to the Market for 51% GA Deferral -
Interest due from OPG Trust to OPG from the 49% of GA Deferral loan (5% from OPG and 44% from equity injectio
Interest Income OPG Trust recognizes to be received from ratepayers to match 100% GA Deferral interest expens

Province puts equity injection equal to 44% of deferred GA into OPG
Province borrows 44% of deferred GA from the market
OPG loans 49% of the deferred GA (5% borrowed directly and 44% from equity injection from the province) to the
OPG borrows 5% of the deferred GA from the market
OPG Trust borrows 51% of the annual deferred GA from the market -
IESO sells the regulatory asset to OPG Trust for cash used to make whole the power generators for the deferred G
OPG trust purchases the regulatory asset from IESO in exchange for cash
LDC's pay ratepayer portion of GA to IESO
LDC's collect GA payments from ratepayers
IESO pays full GA cost (including deferral) to the generators, recognizing a regulatory asset for the difference
Accumulated Regulatory Asset
Accumulated Debt
Accumulated Debt
Accumulated Debt
Interest due from Province to the Market for 44% GA Deferral
Interest due from OPG to the Market for 5% GA Deferral
Interest due from OPG Trust to the Market for 51% GA Deferral -
Interest due from OPG Trust to OPG from the 49% of GA Deferral loan (5% from OPG and 44% from equity injectio

2017-18	2018-19	2019-20	2020-21
$12,030 M	$11,764 M	$11,706 M	$11,837 M
$9,528 M	$9,258 M	$9,062 M	$8,866 M
$2,502 M	$2,506 M	$2,644 M	$2,971 M
$1,101 M	$1,103 M	$1,164 M	$1,307 M
$125 M	$125 M	$132 M	$149 M
$1,276 M	$1,278 M	$1,349 M	$1,515 M
3.12%	3.63%	4.30%	4.30%
$39 M	$78 M	$78 M	$78 M
	$45 M	$91 M	$91 M
		$57 M	$114 M
			$64 M
$39 M	$124 M	$226 M	$347 M
$17 M	$54 M	$99 M	$153 M
$2 M	$6 M	$11 M	$17 M
$20 M	$63 M	$115 M	$177 M
$1,226 M	$1,228 M	$1,296 M	$1,456 M
1	3		
2017-18	**2018-19**	**2019-20**	**2020-21**
$1,101 M	$1,103 M	$1,164 M	$1,307 M
$1,101 M	$1,103 M	$1,164 M	$1,307 M
$1,226 M	$1,228 M	$1,296 M	$1,456 M
$125 M	$125 M	$132 M	$149 M
$1,276 M	$1,278 M	$1,349 M	$1,515 M
$2,502 M	$2,506 M	$2,644 M	$2,971 M
$2,502 M	$2,506 M	$2,644 M	$2,971 M
$9,528 M	$9,258 M	$9,062 M	$8,866 M
$9,528 M	$9,258 M	$9,062 M	$8,866 M
$12,030 M	$11,764 M	$11,706 M	$11,837 M
$2,502 M	$5,009 M	$7,653 M	$10,624 M
$1,101 M	$2,204 M	$3,367 M	$4,674 M
$125 M	$250 M	$383 M	$531 M
$1,276 M	$2,554 M	$3,903 M	$5,418 M
$17 M	$54 M	$99 M	$153 M
$2 M	$6 M	$11 M	$17 M
$20 M	$63 M	$115 M	$177 M
$19 M	$61 M	$111 M	$170 M
$39 M	$124 M	$226 M	$347 M

$1,164 M
$1,164 M
$1,296 M
$132 M
$1,349 M
$2,644 M
$2,644 M
$9,062 M
$9,062 M
$11,706 M
$7,653 M
$3,367 M
$383 M
$3,903 M
$99 M
$11 M
$115 M
$111 M

GA Financing Model

By changing the inputs, one can model different scenarios for the GA Debt financing.

Total Principal ($M)	$	20,332.32
Peak Debt ($M)	$	20,332.32
Accumulated Interest ($M)	$	9,763.24
Max Payment ($M)	$	2,241.55
Interest Type		Interest Paid annually
GA Scenario		March 3 - Option 1 - Ratepayer cost
Final Payment made in Year		2036
Maximum Payment ($M)	$	(2,241.55)
Payment Periods		12
Share of debt & interest		44%

Negative/positive	1.00
WEIGHT	3.12%
Interest Rate	3.12%

Change in ratepayer cost - Option `
Change in ratepayer cost - Option 2 `

	2017
IESO GA cost forecast + extrapolation	12,095
March 3 - Option 1 - Ratepayer cost	9,595
Feb 22 Option 1 - Ratepayer cost	9,595
Feb 15 Option 1 - Ratepayer cost	9,781
Feb 4 Option 1 - Ratepayer cost	7,294

GA Debt requirement

Option 1	2,501
Interest	3.17%
Debt Beginning of year	0
Interest on Debt	20
Additional GA Drawdown, end of year	2,501
Debt End of year	2,501
Principal	2,501

Fiscalized (44% share) - $M	**2017-18**
Interest	21

Notes

1. Based on Ministry of Energy model and associated assumptions.
2. GA forecast, ratepayer payments, and interest costs subject to change.
3. To forecast the payment of the remaining balance, a cap of $2.242 bn above the true cost of GA in any this period.

Please only change the yellow cells.

Please Select
Please Select

Can Change Share here

1.00	1.00	1.00	1.00	1.00
3.38%	3.68%	3.86%	3.95%	4.00%
3.63%	4.30%	4.30%	4.30%	4.30%
0	0	0	0	0
-2.79%	-2.95%	0.47%	-10.01%	-0.05%
-2.79%	-2.95%	0.47%	-10.01%	2.32%
2018	**2019**	**2020**	**2021**	**2022**
11,835	11,552	12,168	10,844	10,634
9,327	9,051	9,094	8,184	8,180
9,327	9,051	9,094	8,184	8,374
9,661	9,367	8,733	8,459	8,628
7,441	7,590	7,741	7,897	8,055
2,508	2,501	3,075	2,660	2,454
3.69%	4.39%	4.39%	4.39%	4.39%
2,501	5,009	7,509	10,584	13,244
136	269	389	512	622
2,508	2,501	3,075	2,660	2,454
5,009	7,509	10,584	13,244	15,698
5,009	7,509	10,584	13,244	15,698

2018-19	2019-20	2020-21	2021-22	2022-23
75	132	185	238	284

given year is applied. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is paic

1.00	1.00	1.00	0.00	0.00
4.04%	4.06%	4.07%	4.07%	4.07%
4.30%	4.30%	4.30%	4.30%	4.30%
0	0	0	0	0
0.32%	18.73%	-4.38%	9.88%	12.11%
2.32%	2.32%	2.32%	2.32%	2.32%
2023	**2024**	**2025**	**2026**	**2027**
10,243	11,128	10,527	10,033	11,043
8,206	9,743	9,316	10,236	11,476
8,569	8,768	8,972	9,180	9,394
8,801	8,977	9,156	9,340	9,526
8,216	8,381	8,548	8,719	8,894
2,038	1,386	1,211	-203	-433
4.39%	4.39%	4.39%	4.39%	4.39%
15,698	17,736	19,121	20,332	20,129
719	792	848	870	856
2,038	1,386	1,211	-203	-433
17,736	19,121	20,332	20,129	19,696
17,736	19,121	20,332	20,129	19,696

2023-24	2024-25	2025-26	2026-27	2027-28
324	355	376	381	370

ɪ down, with interest still accumulating over

	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4.07%	4.07%	4.07%	4.07%	4.07%	4.07%	4.07%
	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%
	0	0	0	0	0	0	0
	13.81%	-6.20%	-2.34%	-8.92%	1.52%	-5.26%	-4.60%
	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%
	2028	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
	10,819	10,009	9,721	8,654	8,820	8,238	7,756
	13,061	12,250	11,963	10,896	11,061	10,480	9,998
	9,612	9,835	10,064	10,298	10,537	10,782	11,033
	9,717	9,911	10,109	10,312	10,518	10,728	10,943
	9,072	9,254	9,438	9,627	9,820	10,017	10,217
	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242
	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%
	19,696	17,455	15,213	12,972	10,730	8,489	6,247
	799	702	606	510	413	317	220
	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242
	17,455	15,213	12,972	10,730	8,489	6,247	4,005
	17,455	15,213	12,972	10,730	8,489	6,247	4,005

2028-29	**2029-30**	**2030-31**	**2031-32**	**2032-33**	**2033-34**	**2034-35**
341	298	256	214	171	129	86

0.00	0.00	1.00	1.00	1.00	1.00	1.00
4.07%	4.07%	4.07%	4.07%	4.07%	4.07%	4.07%
4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%
0	1	1	1	1	1	1
-20.95%	-3.46%	-3.41%	-3.36%	-3.31%	-3.26%	-3.20%
-13.13%	-2.85%	-2.80%	-2.74%	-2.68%	-2.62%	-2.56%
2035	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**
5,662	5,389	5,129	4,881	4,645	4,421	4,207
7,904	7,630	7,370	7,122	6,887	6,662	6,449
9,585	9,311	9,051	8,803	8,567	8,343	8,130
9,187	8,913	8,653	8,405	8,170	7,945	7,732
10,421	10,630	10,842	11,059	11,280	11,505	11,735
-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242
4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%
4,005	1,764	0	0	0	0	0
124	38	0	0	0	0	0
-2,242	-1,764	0	0	0	0	0
1,764	0	0	0	0	0	0
1,764	0	0	0	0	0	0

2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42
45	13	0	0	0	0	0

1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
4.07%	4.07%	4.07%	4.07%	4.07%	4.07%	4.07%	4.07%
4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%
1	1	1	1	1	1	1	1
-3.15%	-3.10%	-3.04%	-2.98%	-2.93%	-2.87%	-44.57%	-4.83%
-2.50%	-2.44%	-2.38%	-2.32%	-2.26%	-2.20%	-57.79%	-4.83%
2042	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**
4,004	3,811	3,627	3,451	3,285	3,126	2,975	2,831
6,246	6,052	5,868	5,693	5,526	5,368	2,975	2,831
7,926	7,733	7,549	7,374	7,207	7,048	2,975	2,831
7,529	7,335	7,151	6,976	6,809	6,651	2,975	2,831
11,546	11,353	11,169	10,992	10,826	10,667	2,975	2,831
-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	0	0
4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0

2042-43	2043-44	2044-45	2045-46	2046-47	2047-48	2048-49	2049-50
0	0	0	0	0	0	0	0

1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
4.07%	4.07%	4.07%	4.07%	4.07%	4.07%	4.07%	4.07%	4.07%
4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%
1	1	1	1	1	1	1	1	1
-4.83%								
-4.83%								
2050	**2051**	**2052**	**2053**	**2054**	**2055**	**2056**	**2057**	**2058**
2,695								
2,695								
2,695								
2,695								
2,695								
0	0	0	0	0	0	0	0	0
4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

2050-51	**2051-52**	**2052-53**	**2053-54**	**2054-55**	**2055-56**	**2056-57**	**2057-58**	**2058-59**
0	0	0	0	0	0	0	0	0

1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
4.07%	4.07%	4.07%	4.07%	4.07%	4.07%	4.07%	4.07%	4.07%
4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%
1	1	1	1	1	1	1	1	1

2059	2060	2061	2062	2063	2064	2065	2066	2067
0	0	0	0	0	0	0	0	0
4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

2059-60	2060-61	2061-62	2062-63	2063-64	2064-65	2065-66	2066-67	2067-68
0	0	0	0	0	0	0	0	0

1.00	1.00	1.00
4.07%	4.07%	4.07%
4.30%	4.30%	4.30%
1	1	1

2068	2069	2070
0	0	0
4.39%	4.39%	4.39%
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

2068-69	2069-70
0	0

Fiscal Year

Change in Provincial Borrowing

OEP forecast as of Feb. 28

Interest Rate Forecast

IOD from Change in Long-Term Borrowing

2017-18

2018-19

2019-20

2020-21

Total IOD Impact

Reported to Fiscal last Week

GA Debt requirement / Calendar Year	**2017**
Option 1	2501
	12095
	9595

Fiscal Year Equivalent	2017-18
FY Adjusted Debt Requirement	2502
Provincial Borrowing Required	1101
	12030
	9528

2017-18		2018-19	2019-20	2020-21
$M		$M	$M	
	1,101	1,103	1,164	1,307
	OEP	OEP	15-Year Average	15-Year Average
	3.1%	3.6%	4.3%	4.3%
	17	34	34	34
		20	40	40
			25	50
				28
	17	**54**	**99**	**153**
	17	55	102	

2018	**2019**	**2020**	**2021**
2508	2501	3075	2660
11835	11552	12168	10844
9327	9051	9094	8184

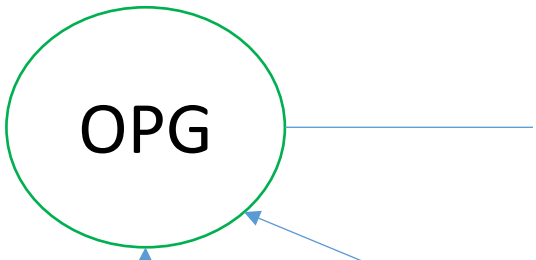
2018-19	2019-20	2020-21
2506	2644	2971
1103	1164	1307
11764	11706	11837
9258	9062	8866

Use the left toggle to switch between fiscal years and the right toggle to switch between debt transactions and interest transactions

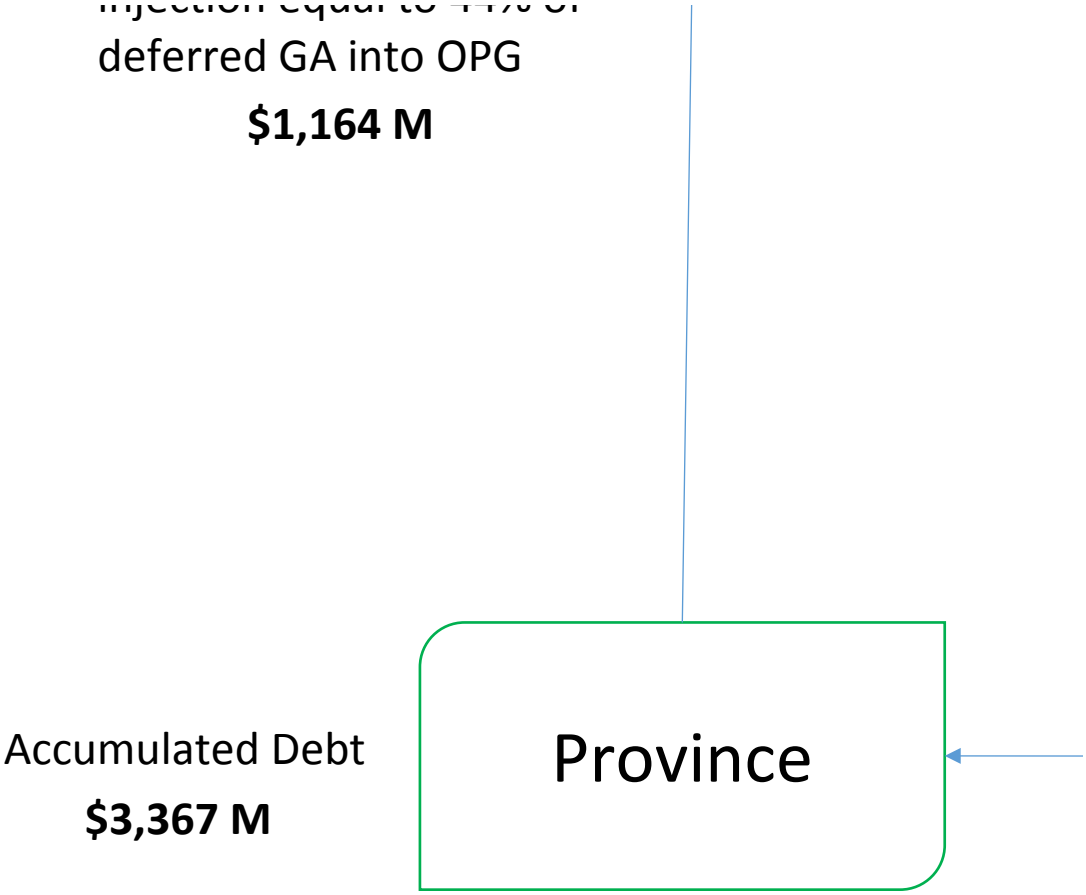
2019-20

B/S Transaction

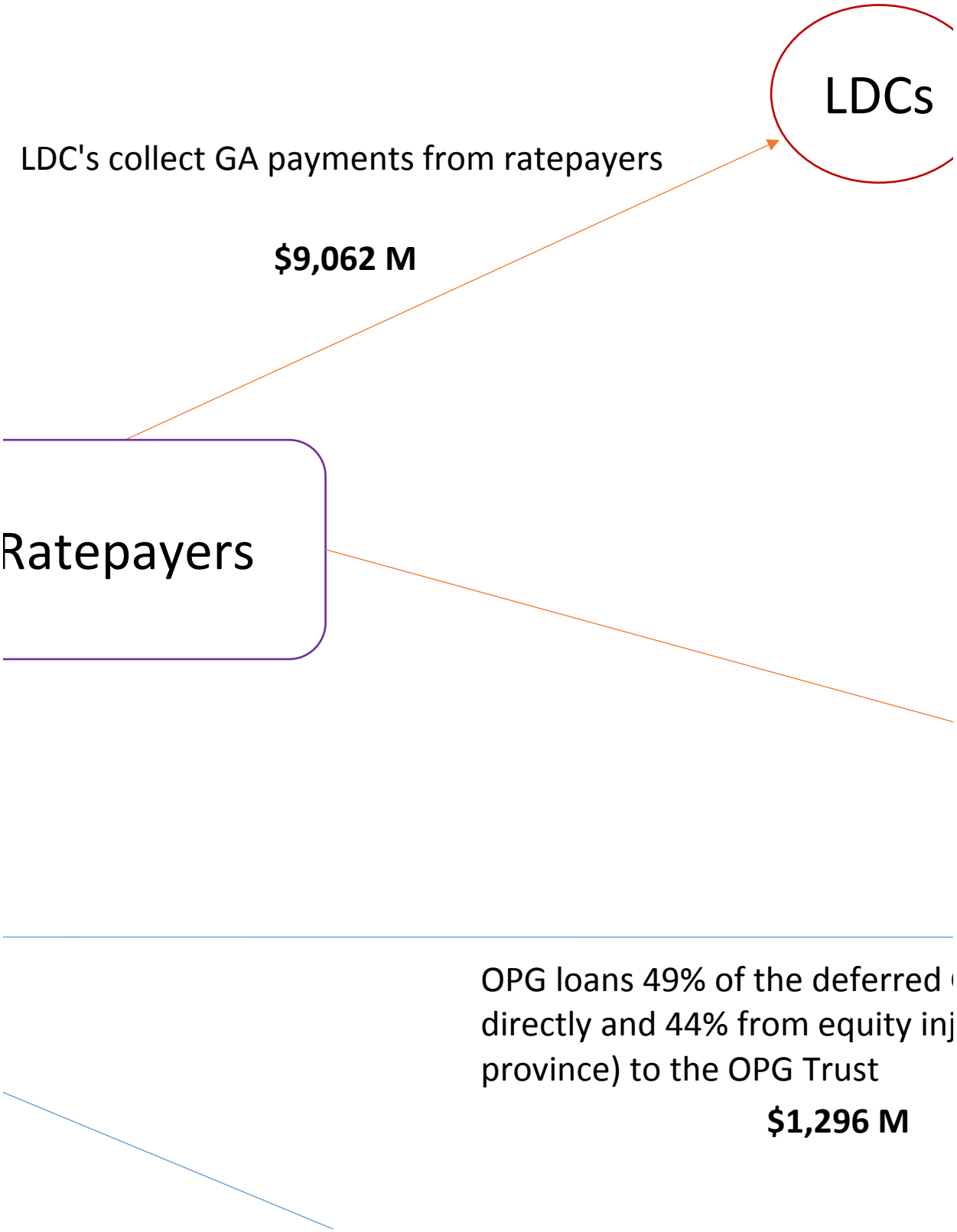
Accumulated Debt
$383 M



Province puts equity injection equal to 44% of


deferred GA into OPG
$1,164 M
Province
Accumulated Debt
$3,367 M

GA Deferral


LDCs
LDC's collect GA payments from ratepayers
$9,062 M
Ratepayers
OPG loans 49% of the deferred
directly and 44% from equity inj
province) to the OPG Trust
$1,296 M

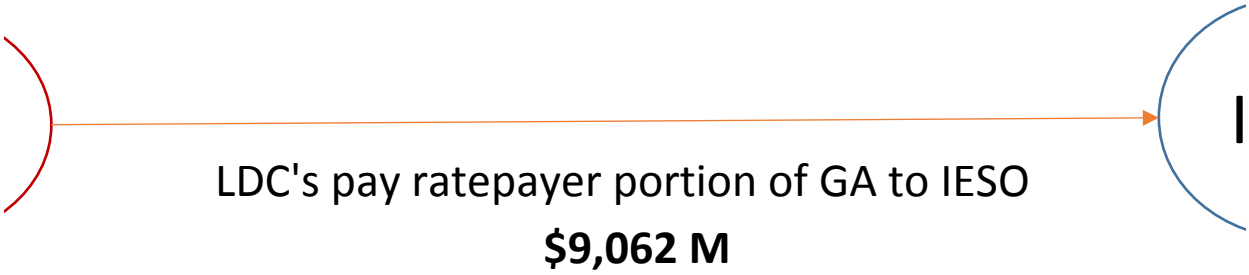
OPG borrows 5% of the deferred GA from the market

$132 M

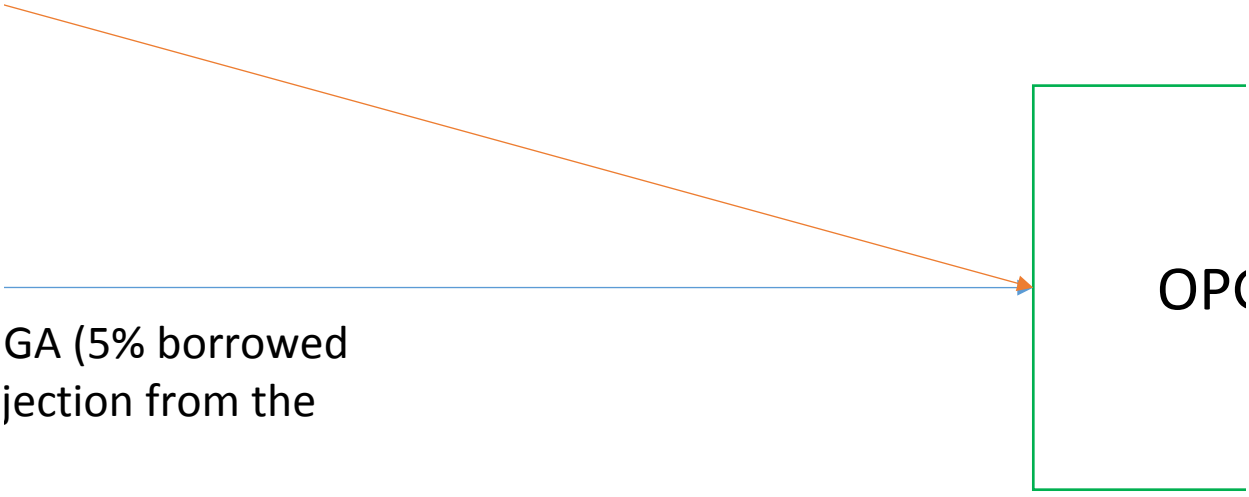
Province borrows 44 deferred GA from the r

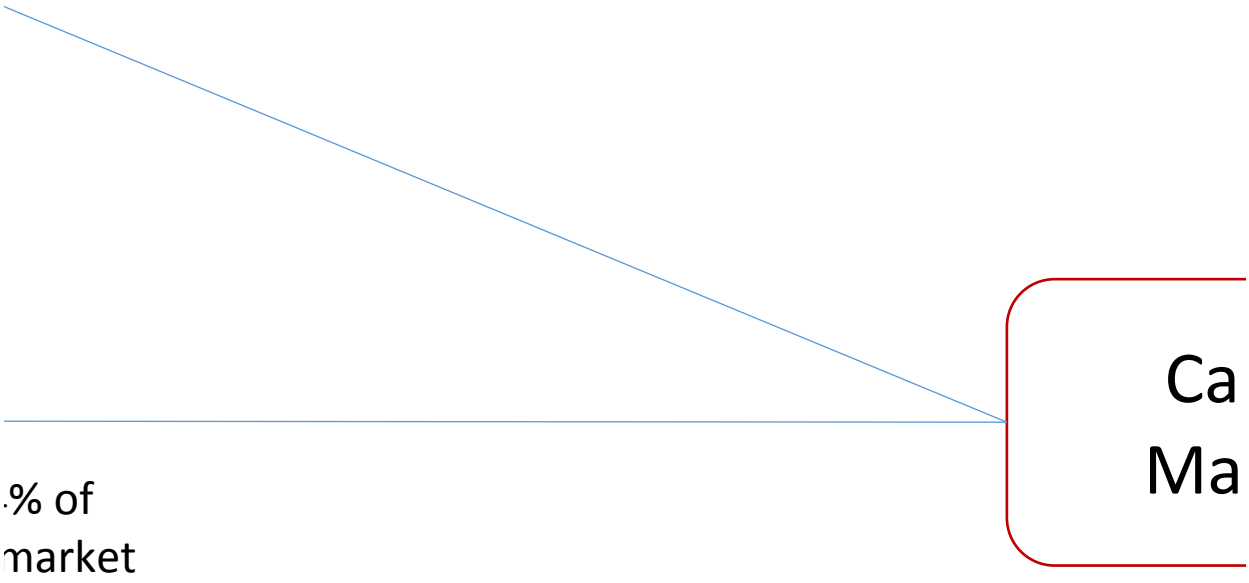
$1,164 M

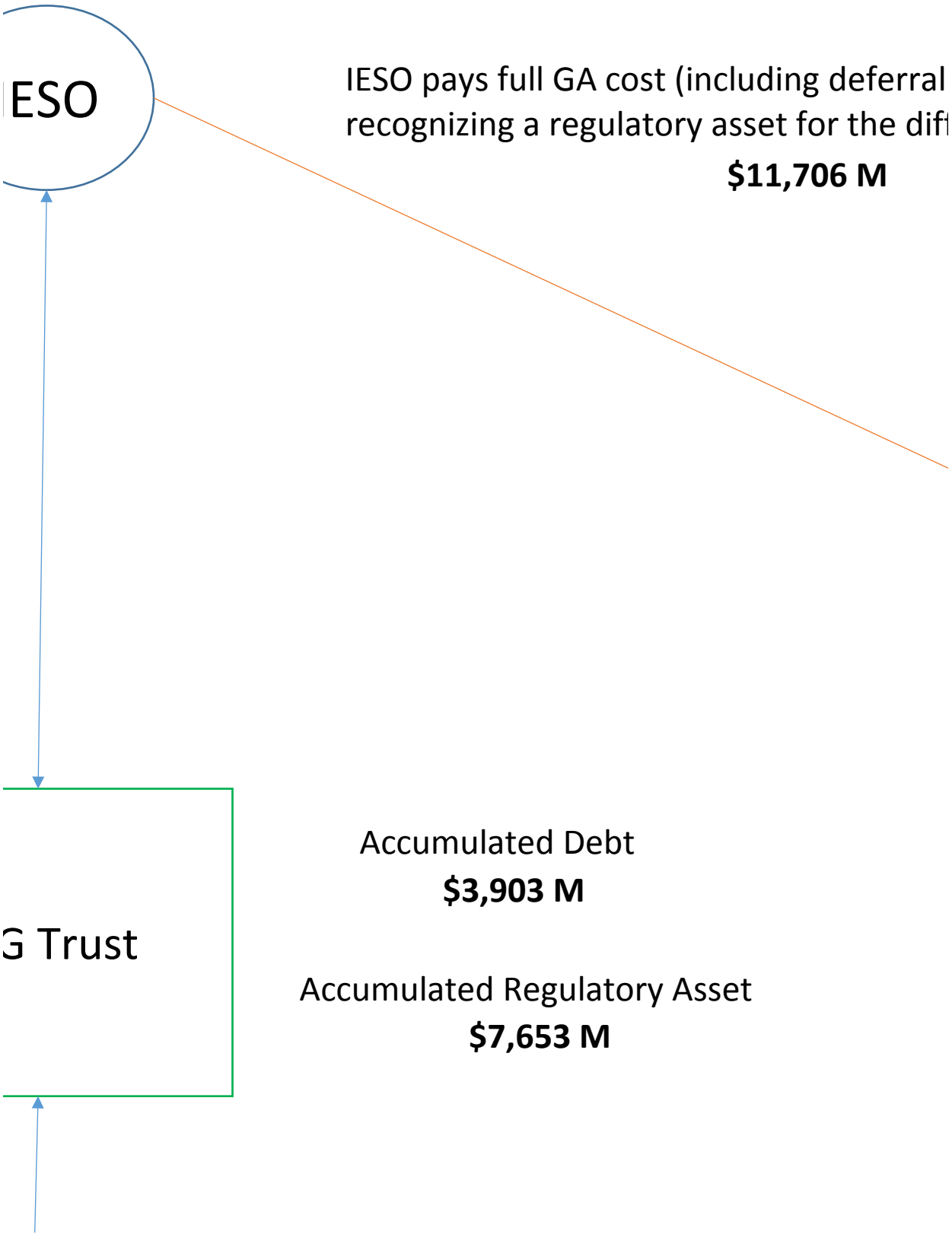
Mechanism



OPG trust purchases the regulatory asset from IESO in exchange for cash
$2,644 M



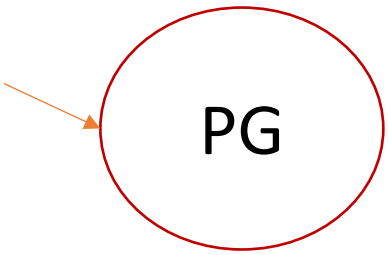

Ca
Ma
% of
market


ESO
IESO pays full GA cost (including deferral
recognizing a regulatory asset for the dif
$11,706 M
G Trust
Accumulated Debt
$3,903 M
Accumulated Regulatory Asset
$7,653 M

OPG Trust borrows 51% of the annual deferred GA from the market - **$1,349 M**

pital
rkets

) to the generators,
ference



44%
5%
51%

44%
5%
51%

B/S Transaction
Interest

B/S Transaction
B/S Transaction
B/S Transaction
B/S Transaction
B/S Transaction
B/S Transaction
B/S Transaction
B/S Transaction
B/S Transaction
B/S Transaction
B/S EOY
B/S EOY
B/S EOY
B/S EOY
Interest
Interest
Interest
Interest
Interest

GA Cost
Ratepayer Cost
Total Debt Borrowed
Province Share
OPG Share
OPG Trust share

Interest
2017-18
2018-19
2019-20
2020-21

Total
Province Share
OPG Share
OPG Trust share

Loan to OPG Trust from OPG

Province puts equity injection equal to 44% of deferred GA into OPG
Province borrows 44% of deferred GA from the market
OPG loans 49% of the deferred GA (5% borrowed directly and 44% from equity injection from the province) to the
OPG borrows 5% of the deferred GA from the market
OPG Trust borrows 51% of the annual deferred GA from the market -
IESO sells the regulatory asset to OPG Trust for cash used to make whole the power generators for the deferred G
OPG trust purchases the regulatory asset from IESO in exchange for cash
LDC's pay ratepayer portion of GA to IESO
LDC's collect GA payments from ratepayers
IESO pays full GA cost (including deferral) to the generators, recognizing a regulatory asset for the difference
Accumulated Regulatory Asset
Accumulated Debt
Accumulated Debt
Accumulated Debt
Interest due from Province to the Market for 44% GA Deferral
Interest due from OPG to the Market for 5% GA Deferral
Interest due from OPG Trust to the Market for 51% GA Deferral -
Interest due from OPG Trust to OPG from the 49% of GA Deferral loan (5% from OPG and 44% from equity injectio
Interest Income OPG Trust recognizes to be received from ratepayers to match 100% GA Deferral interest expens

Province puts equity injection equal to 44% of deferred GA into OPG
Province borrows 44% of deferred GA from the market
OPG loans 49% of the deferred GA (5% borrowed directly and 44% from equity injection from the province) to the
OPG borrows 5% of the deferred GA from the market
OPG Trust borrows 51% of the annual deferred GA from the market -
IESO sells the regulatory asset to OPG Trust for cash used to make whole the power generators for the deferred G
OPG trust purchases the regulatory asset from IESO in exchange for cash
LDC's pay ratepayer portion of GA to IESO
LDC's collect GA payments from ratepayers
IESO pays full GA cost (including deferral) to the generators, recognizing a regulatory asset for the difference
Accumulated Regulatory Asset
Accumulated Debt
Accumulated Debt
Accumulated Debt
Interest due from Province to the Market for 44% GA Deferral
Interest due from OPG to the Market for 5% GA Deferral
Interest due from OPG Trust to the Market for 51% GA Deferral -
Interest due from OPG Trust to OPG from the 49% of GA Deferral loan (5% from OPG and 44% from equity injectio

2017-18	2018-19	2019-20	2020-21
$12,030 M	$11,764 M	$11,706 M	$11,837 M
$9,528 M	$9,258 M	$9,062 M	$8,866 M
$2,502 M	$2,506 M	$2,644 M	$2,971 M
$1,101 M	$1,103 M	$1,164 M	$1,307 M
$125 M	$125 M	$132 M	$149 M
$1,276 M	$1,278 M	$1,349 M	$1,515 M
3.12%	3.63%	4.30%	4.30%
$39 M	$78 M	$78 M	$78 M
	$45 M	$91 M	$91 M
		$57 M	$114 M
			$64 M
$39 M	$124 M	$226 M	$347 M
$17 M	$54 M	$99 M	$153 M
$2 M	$6 M	$11 M	$17 M
$20 M	$63 M	$115 M	$177 M
$1,226 M	$1,228 M	$1,296 M	$1,456 M
1	3		
2017-18	**2018-19**	**2019-20**	**2020-21**
$1,101 M	$1,103 M	$1,164 M	$1,307 M
$1,101 M	$1,103 M	$1,164 M	$1,307 M
$1,226 M	$1,228 M	$1,296 M	$1,456 M
$125 M	$125 M	$132 M	$149 M
$1,276 M	$1,278 M	$1,349 M	$1,515 M
$2,502 M	$2,506 M	$2,644 M	$2,971 M
$2,502 M	$2,506 M	$2,644 M	$2,971 M
$9,528 M	$9,258 M	$9,062 M	$8,866 M
$9,528 M	$9,258 M	$9,062 M	$8,866 M
$12,030 M	$11,764 M	$11,706 M	$11,837 M
$2,502 M	$5,009 M	$7,653 M	$10,624 M
$1,101 M	$2,204 M	$3,367 M	$4,674 M
$125 M	$250 M	$383 M	$531 M
$1,276 M	$2,554 M	$3,903 M	$5,418 M
$17 M	$54 M	$99 M	$153 M
$2 M	$6 M	$11 M	$17 M
$20 M	$63 M	$115 M	$177 M
$19 M	$61 M	$111 M	$170 M
$39 M	$124 M	$226 M	$347 M

$1,164 M
$1,164 M
$1,296 M
$132 M
$1,349 M
$2,644 M
$2,644 M
$9,062 M
$9,062 M
$11,706 M
$7,653 M
$3,367 M
$383 M
$3,903 M
$99 M
$11 M
$115 M
$111 M

GA Financing Model

By changing the inputs, one can model different scenarios for the GA Debt financing.

Total Principal ($M)	$ 20,332.32	
Peak Debt ($M)	$ 26,336.62	
Accumulated Interest ($M)	$ 18,129.40	
Max Payment ($M)	$ 2,241.55	
Interest Type	Annualized	Please Select
Final Payment made in Year	2044	
Maximum Payment ($M)	$ (2,241.55)	
Payment Periods	12	
Share of debt & interest	44%	Can Change Sha

Weighted-average interest rate	3.12%	3.63%
		0
Change in ratepayer cost		-2.79%
	2017	**2018**
IESO GA cost forecast + extrapolation	12,095	11,835
Option 1 - Ratepayer cost	9,595	9,327
GA Debt requirement		
Option 1	2,501	2,508
Interest	3.17%	3.69%
Debt Beginning of year	0	2,501
Interest on Debt	0	92
Additional GA Drawdown, end of year	2,501	2,508
Debt End of year	2,501	5,101
Fiscalized (44% share) - $M	**2017-18**	**2018-19**
Interest Cost	10	55

Notes

1. Based on Ministry of Energy model and associated assumptions.
2. GA forecast, ratepayer payments, and interest costs subject to change.
3. To forecast the payment of the remaining balance, a cap of $2.242 bn above the true cost of G still accumulating over this period.

Please only change the yellow cells.

re here

4.30%	4.30%	4.30%	4.30%	4.30%
0	0	0	0	0
-2.95%	0.47%	-10.01%	-0.05%	0.32%
2019	**2020**	**2021**	**2022**	**2023**
11,552	12,168	10,844	10,634	10,243
9,051	9,094	8,184	8,180	8,206
2,501	3,075	2,660	2,454	2,038
4.39%	4.39%	4.39%	4.39%	4.39%
5,101	7,825	11,243	14,396	17,482
224	343	493	631	767
2,501	3,075	2,660	2,454	2,038
7,825	11,243	14,396	17,482	20,286

2019-20	2020-21	2021-22	2022-23	2023-24
112	167	232	293	351

GA in any given year is applied. Thus, every year a maximum of $2.242 bn is recovered by ratepayers until the debt is p

4.30%	4.30%	4.30%	4.30%	4.30%
0	0	0	0	0
18.73%	-4.38%	9.88%	12.11%	13.81%
2024	**2025**	**2026**	**2027**	**2028**
11,128	10,527	10,033	11,043	10,819
9,743	9,316	10,236	11,476	13,061
1,386	1,211	-203	-433	-2,242
4.39%	4.39%	4.39%	4.39%	4.39%
20,286	22,561	24,762	25,645	26,337
890	989	1086	1125	1155
1,386	1,211	-203	-433	-2,242
22,561	24,762	25,645	26,337	25,250

2024-25	2025-26	2026-27	2027-28	2028-29
402	446	482	498	503

aid down, with interest

4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%
0	0	0	0	0	0	0
-6.20%	-2.34%	-8.92%	1.52%	-5.26%	-4.60%	-20.95%
2029	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**
10,009	9,721	8,654	8,820	8,238	7,756	5,662
12,250	11,963	10,896	11,061	10,480	9,998	7,904
-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242
4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%
25,250	24,116	22,932	21,696	20,406	19,060	17,654
1107	1058	1006	952	895	836	774
-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242
24,116	22,932	21,696	20,406	19,060	17,654	16,187

2029-30	**2030-31**	**2031-32**	**2032-33**	**2033-34**	**2034-35**	**2035-36**
482	460	437	412	387	361	334

4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%
0	0	0	0	0	0	0
-3.46%	-3.41%	-3.36%	-3.31%	-3.26%	-3.20%	-3.15%
2036	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**
5,389	5,129	4,881	4,645	4,421	4,207	4,004
7,630	7,370	7,122	6,887	6,662	6,449	6,246
-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242
4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%
16,187	14,655	13,056	11,387	9,645	7,827	5,928
710	643	573	499	423	343	260
-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242
14,655	13,056	11,387	9,645	7,827	5,928	3,947

2036-37	**2037-38**	**2038-39**	**2039-40**	**2040-41**	**2041-42**	**2042-43**
305	275	244	211	177	142	105

4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%
0	1	1	1	1	1	1	1
-3.10%	-3.04%	-2.98%	-2.93%	-2.87%	-44.57%	-4.83%	-4.83%
2043	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**
3,811	3,627	3,451	3,285	3,126	2,975	2,831	2,695
6,052	5,868	5,693	5,526	5,368	2,975	2,831	2,695
-2,242	-2,242	-2,242	-2,242	-2,242	0	0	0
4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%
3,947	1,879	0	0	0	0	0	0
173	82	0	0	0	0	0	0
-2,242	-1,961	0	0	0	0	0	0
1,879	0	0	0	0	0	0	0

2043-44	**2044-45**	**2045-46**	**2046-47**	**2047-48**	**2048-49**	**2049-50**	**2050-51**
66	27	0	0	0	0	0	0

4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%
1	1	1	1	1	1	1	1	1

2051	2052	2053	2054	2055	2056	2057	2058	2059
0	0	0	0	0	0	0	0	0
4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

2051-52	2052-53	2053-54	2054-55	2055-56	2056-57	2057-58	2058-59	2059-60
0	0	0	0	0	0	0	0	0

4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%
1	1	1	1	1	1	1	1	1

2060	2061	2062	2063	2064	2065	2066	2067	2068
0	0	0	0	0	0	0	0	0
4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%	4.39%
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

2060-61	2061-62	2062-63	2063-64	2064-65	2065-66	2066-67	2067-68	2068-69
0	0	0	0	0	0	0	0	0

4.30%	4.30%
1	1

2069	2070
0	0
4.39%	4.39%
0	0
0	0
0	0
0	0

2069-70
0

Fiscal Year

Change in Provincial Borrowing

OEP forecast as of Feb. 28

Interest Rate Forecast

IOD from Change in Long-Term Borrowing

2017-18

2018-19

2019-20

2020-21

Total IOD Impact

Reported to Fiscal last Week

GA Debt requirement / Calendar Year	**2017**
Option 1	2501
	12095
	9595

Fiscal Year Equivalent	2017-18
FY Adjusted Debt Requirement	2502
Provincial Borrowing Required	1101
	12030
	9528

2017-18		2018-19	2019-20	2020-21
$M		$M	$M	
	1,101	1,103	1,164	1,307
	OEP	OEP	15-Year Average	15-Year Average
	3.1%	3.6%	4.3%	4.3%
	17	34	34	34
		20	40	40
			25	50
				28
	17	**54**	**99**	**153**
	17	55	102	

2018	**2019**	**2020**	**2021**
2508	2501	3075	2660
11835	11552	12168	10844
9327	9051	9094	8184

2018-19	2019-20	2020-21
2506	2644	2971
1103	1164	1307
11764	11706	11837
9258	9062	8866

06 A **government business enterprise** is a government organization that has all of the following characteristics:

(a) It is a separate entity with the power to contract in its own name and that can sue and be sued.

(b) It has been delegated the financial and operational authority to carry on a business.

(c) It sells goods and services to individuals and organizations outside of the government reporting entity as its principal activity.

(d) It can, in the normal course of its operations, maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity.

.095 To account for government business enterprises it controls, a government applies the modified equity method. When accounting for an entity using the modified equity method, the accounting principles of the entity are not adjusted to conform with those of the government. Because a government business enterprise carries on a business, its financial statements must adhere to the standards applicable to publicly accountable enterprises in the CPA Canada Handbook – Accounting. As a result, government business enterprises may report other comprehensive income in their financial statements.

.30 A government business enterprise should, in the normal course of its operations, be able to maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity. These revenues include not only amounts from the sale of goods and services, but also transfers 3 received from other governments or sources outside of the government reporting entity.

.32 A government business enterprise differs from other government organizations in its relationship to the government, and its objectives, and operations. A government enterprise represents a financial asset of the government and given its autonomy, business-oriented objectives, and financial self-sufficiency, equity accounting is appropriate.

.33 Accounting for a government business enterprise by the equity method avoids commingling the independently-managed business enterprise's budget and actual results with those of other government organizations on a line-by-line basis. It also avoids including the business enterprise's gross debt with that of other government organizations as the business enterprise is expected to repay that debt from its own revenues.

.34 Because a government enterprise carries on a business, its financial statements should be prepared on the same basis as a private sector business. This basis is most appropriate for measuring the government's investment in the organization and the impact it has on the government's financial position and results. As such, the modified equity method is the most suitable form of equity accounting.

.35 *Government business enterprises should be accounted for by the modified equity method.* [JUNE 1996]

.36 Accounting for government business enterprises by the modified equity method is outlined in INVESTMENTS IN GOVERNMENT BUSINESS ENTERPRISES, Section PS 3070.

1. Transactions and balances between governmental units and government business enterprises are not eliminated because government business enterprises are not consolidated, but are accounted for in government financial statements by the modified equity method, which does not require the elimination of inter-organizational transactions and balances (see INVESTMENTS IN GOVERNMENT BUSINESS ENTERPRISES, Section PS 3070). All unrealized gains and losses arising on transactions between governmental units and government business enterprises that remain within the reporting entity are, however, required to be eliminated.

.43 In most cases, the change in status of a governmental unit to a government business enterprise will not be an observable event. The change may occur over time and, therefore, most governments would assess the status of their government organizations only at year end when the financial statements are being prepared. In such circumstances, it is acceptable for a government to account for the organization as a government business enterprise for the whole period in which the change in status is identified. When the change is the result of an observable event, however, a government would apply both consolidation and modified equity accounting to the organization in the period, as appropriate, in accordance with paragraph PS 2510.42. Similarly, if the government creates a government business enterprise from the existing resources of a governmental unit during the period, the consolidated statement of operations and the consolidated statement of remeasurement gains and losses would only report income and other comprehensive income from the government business enterprise subsequent to the date of its creation.

Debt issued on behalf of government business enterprises

.05 A government issues debt for its government business enterprises in one of two ways:

(a) The proceeds of general government borrowing are subsequently loaned to a government business enterprise.

(b) Debt is issued by the government specifically on behalf of the government business enterprise and the government expects to realize the receivable from the government business enterprise and settle the external debt simultaneously.

.06 *When debt is issued by a government and some or all of the proceeds are subsequently loaned to a government business enterprise, except in the circumstances in paragraph* PS 3230.10*, the government should:*

(a) recognize the entire amount borrowed from sources external to the reporting entity as a liability and the related receivable from the government business enterprise as a financial asset in the consolidated statement of financial position; and

(b) recognize the interest on the entire amount of debt borrowed as an expense and the related interest earned from the government business enterprise as a revenue, in the consolidated statement of operations. [APRIL 2000]

.07 When a government undertakes general borrowing and then subsequently loans some or all of the debt proceeds to a government business enterprise, the

government would include the entire amount that it has borrowed from sources external to the reporting entity as a liability on its consolidated statement of financial position. Any amount subsequently loaned to a government business enterprise would be included on the consolidated statement of financial position as a receivable from a government business enterprise. The government business enterprise would record the amount loaned as a liability owed to the government.

.08 Similar reporting would be required for the interest related to such debt. When a government undertakes general borrowing and subsequently loans some or all of the debt proceeds to a government business enterprise, interest on the entire amount borrowed would be recognized as an expense of the government in the consolidated statement of operations each year. Normally, the government would then charge interest on the portion of the debt proceeds that it has loaned to the government business enterprise, resulting in a revenue to the government from the government business enterprise that would be recognized in the consolidated statement of operations.

.09 If a government charges little or no interest to the government business enterprise for the use of debt proceeds, the difference between the interest cost to the government and the interest charged to the government business enterprise is in the nature of a subsidy. Such circumstances would be taken into account in assessing if the organization continues to meet the financial self-sustainability requirement inherent in the definition of a government business enterprise in GOVERNMENT REPORTING ENTITY, Section PS 1300.

.10 *When there is sufficient evidence that debt has been issued by a government specifically on behalf of a government business enterprise:*

(a) the debt issued on behalf of the government business enterprise and the related receivable from the government business enterprise should be presented on a net basis in the consolidated statement of financial position; and

(b) the interest expense on the debt issued on behalf of the government business enterprise and the related interest revenue from the government business enterprise should be presented on a net basis in the consolidated statement of operations. [APRIL 2000]

.11 The net presentation in the financial statements of the intra-entity receivable and revenue from the government business enterprise against the corresponding government debt and expense respectively, is predicated on the following:

(a) a clear linkage exists between the debt issued by the government on behalf of the government business enterprise and the funds passed directly to the government business enterprise;

(b) the expected simultaneous settlement of the financial arrangement; and

(c) the financial self-sustainability criterion inherent in the definition of a government business enterprise.

.12 *Sufficient evidence that debt has been specifically issued by a government on behalf of a government business enterprise comprises:*

(a) details in the terms of the debt prospectus, borrowing by-laws, or other terms of the original debt issuance documentation, which require a specified amount of the proceeds of the debt issue to be passed directly from the government to the government business enterprise;

(b) the intention of the government and the government business enterprise that the government will realize the receivable from the government business enterprise and settle the external debt simultaneously, which is contractually supported by the details of the loan amount, interest rate, and timing and nature of repayment outlined in the terms of the agreement between the government and the government business enterprise; and

(c) the financial ability of the government business enterprise to fulfill the requirements in (b) as demonstrated by a realistic and specific business plan 3 *projecting the future results of operations of the government business enterprise.* [APRIL 2000]

.13 *When, in a period subsequent to the debt issue, the conditions in paragraph* PS 3230.12*(b) and/or (c) are no longer met, the government should report the remaining financial arrangement with the government business enterprise in accordance with paragraph* PS 3230.06. [APRIL 2000]

.14 In the circumstances in paragraph PS 3230.13, the government would also assess the collectibility of the receivable from the government business enterprise and report it at its net realizable value in the consolidated statement of financial position. It would also be appropriate in these circumstances to re-evaluate whether the organization continues to meet the definition of a government business enterprise. INVESTMENTS IN GOVERNMENT BUSINESS ENTERPRISES, Section PS 3070, deals with accounting for when a government organization no longer meets the definition of a government business enterprise.

February 27, 2017

Mr. Serge Imbrogno
Deputy Minister,
Ministry of Energy
4th Floor, Hearst Block
900 Bay Street
Toronto, Ontario
M7A 2E1

Dear Deputy:

Below is a summary of OPG's preliminary views on the implementation of the Province's proposed Global Adjustment Smoothing Account and financing structure. These views are contingent on the proposed terms and conditions that were sent to the Ministry of Energy on February 21, 2017.

Understanding that the finalization of the legal terms, the Trust indentures, financing structure and other detailed terms will take several months and will involve collaboration between legal counsel, input from capital markets, parties involved and other stakeholders, this letter is intended to provide the guideline and framework which could form the foundation of the plan.

Please do not hesitate to contact me if you have any questions regarding this summary.

Sincerely,

Mr. Ken Hartwick
Chief Financial Officer and Senior Vice President, Finance
Ontario Power Generation
W: 416-592-6985
C: 647-544-6985
ken.hartwick@ opg.com

cc. Jeff Lyash, President and CEO, OPG

Background:

The Province has indicated that it will take steps to reduce electricity bills in the near term. It has identified reductions in the Global Adjustment Charge (GAC) charged to electricity customers as a means to achieve its policy goals. The Province is proposing to temporarily reduce the amount of the GAC charged to electricity customers (primarily RPP-eligible customers). The exact quantum and duration of the program is still not known but based on discussions with the Province GAC charges of approximately $2-5B per year for the next 5-10 years would be deferred and collected over future periods commencing after the deferral period. A combination of senior debt and subordinated debt (mainly sourced by additional equity from the shareholder) would be issued to fund the amount deferred. The financing cost of the debt and other costs of running the program would form part of the amounts recovered from customers over the term of the program.

The Province has requested that OPG administer the GAC deferral, because of OPG's participation in the market, regulatory knowledge and the potential ability to consolidate the activity and accounting with OPG. Given the significant amount of financing required for the GAC deferral, OPG has developed a financing structure (depicted below) to:

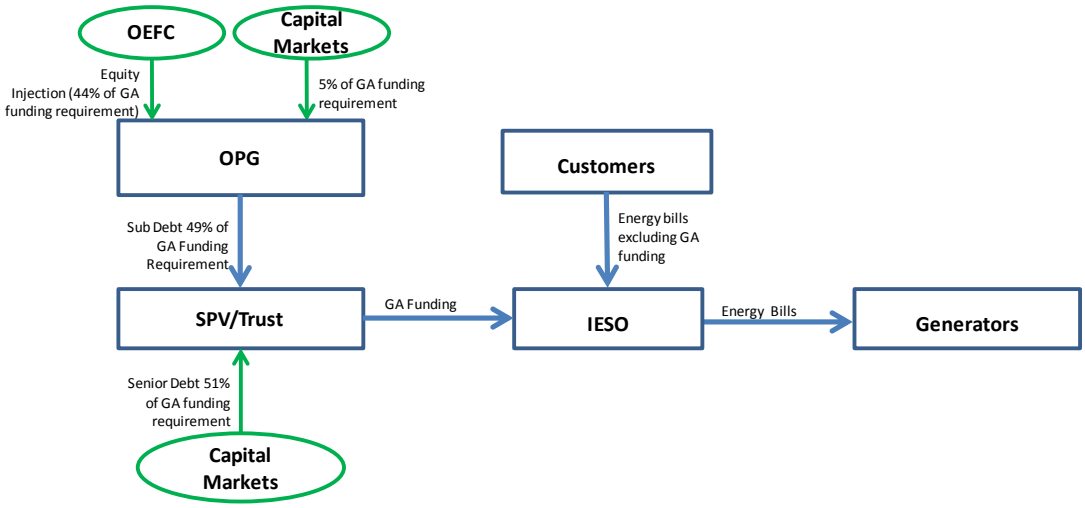
- restrict the risk to OPG;

- maximize the cost-effectiveness of the Trust or the Special Purpose Vehicle ("SPV") financing vehicle; and
- allow for consolidation into OPG financial statements.

The success of this structure is dependent on achieving a number of objectives which are reviewed in the following sections:

A. Ability to Recognize an Asset and Record Revenue
B. Ability to Consolidate the SPV into OPG
C. Ability to Finance
D. External Assessment
E. Risk Summary

All of the percentages shown in the graphic below are indicative and will be highly dependent on the legislation that the Province will enact:



Process:

The IESO will effectively sell the 'right to collect' deferred future revenue from ratepayers (GA Recovery Right asset) to the SPV in return for cash proceeds. In order for the SPV to purchase this asset the SPV will obtain the financing from two key sources: 51% directly from capital markets and 49% as subordinated debt from OPG. OPG will obtain 44% of this financing as an equity injection from the Province and 5% from capital markets.

A. Ability to Recognize an Asset and Record Revenue

Accounting Requirements under International Financial Reporting Standards (IFRS)

1) It is our understanding that the IESO and KPMG have concluded that the sale of this 'right to collect' future revenue (or regulatory asset) is not a financing transaction and will not be recorded as a financial liability. Based on that conclusion, the right to collect will be accounted for as an intangible asset in the SPV.

2) In order to the SPV to record this right as an intangible asset, the right must meet the following conditions:
   - The intangible asset must be separable and arise from a contractual or legal right (i.e. mandated by the Legislation and SPV Indenture Agreement).
   - The SPV must have the control and power to obtain future economic benefits from the intangible asset.
   - The SPV must be able to demonstrate that the intangible asset is purchased at fair value.

3) In order for the SPV to recognize appropriate revenue to offset any ongoing costs, the Legislation must require interest, carrying and administrative costs to be paid to the SPV on a monthly basis. This may result in additional amounts to be deferred to achieve the desired customer impact. Payment of revenue to the SPV is also important to service the interest expenses of the debt.

B. Ability to Consolidate the SPV into OPG under IFRS

OPG 'Control' of the SPV - Accounting Requirements

1) In order to meet the accounting definition of 'control', accounting guidance must be considered. There are no bright lines to determine whether OPG has exposure, or rights, to variable returns from its involvement with the SPV, or whether it has the ability to affect the returns of the SPV through its power over the SPV. Rather, all facts and circumstances are considered when assessing whether an entity has control over another entity. Based on the relevant accounting guidance under IFRS, OPG has proposed terms necessary to demonstrate that OPG has control over the SPV. OPG's external auditors, Ernst & Young, has provided their concurrence that based on the information provided to them to date that the following conditions should permit consolidation of the SPV by OPG.

Directive:

1. The SPV must be undertaken by OPG as a business initiative on its merits. A Shareholder Directive is to be limited to direct OPG to investigate the option of establishing a SPV vehicle to administer, finance and operate the Global Adjustment plan. The control, risk and rewards of that SPV will determine its consolidation into OPG as a business enterprise.

SPV:

2. The SPV should not operate in a predetermined way such that OPG does not have decision-making authority over the SPV's ongoing activities after its formation (i.e. should not operate on 'autopilot').
3. OPG must have the ability to appoint and remove the Trustee (or Board of Trustees), with no veto right by the Province. No party shall have the ability to remove OPG from its role and authority in the SPV.
4. The Province cannot have the right to veto OPG's decisions about the relevant activities of the SPV. OPG must have the power over the relevant activities of the SPV and be compensated. The relevant activities of the SPV include (but are not limited to) the evaluation and decisions on financing alternatives, duration, and the strategy to minimize financing costs. OPG must have the power to establish operating and capital budgets of the SPV.
5. OPG must have the power to determine or change operating and financing policies of the SPV, which will affect the variability of risks and returns.
6. The Province or its agencies must not directly or indirectly fund (through debt or equity) more than 50% of the following:
    - The SPV
    - Any of OPG's investments in the most subordinated debt of the Trust
7. OPG must own greater than 50% of the most subordinated debt and targeted to be no less than 5%[1] of the total debt of the SPV. Such ownership must be financed entirely by OPG through operating cash flows or external debt, without assistance from Provincial sources. A quantitative analysis should be performed at a later date to corroborate the appropriateness of the 5% threshold to support that the 5% subordinated debt investment is sufficient to absorb most of the expected variability in the SPV.
8. OPG must have the ability to earn variable returns by exercising its authority, which shall be accomplished as follows:

[1] While the rest of the letter refers to a 10% investment in the most junior subordinated debt with OPG owning 5%, it should be noted that OPG should own more than 50% of the most subordinate debt. For simplicity, the degree to which OPG's ownership beyond 50% is not shown in this letter.

a. The cash flow from the restructured asset shall include interest determined based on a relevant benchmark that is appropriate relative to the restructured asset, plus an appropriate margin consistent with the relevant market and other risks
b. OPG shall have the authority to determine the financing strategy, which will vary the financing costs with the objective of enabling the SPV to achieve a more favourable return compared to the return from the restructured asset
c. The SPV shall establish classes of liabilities (senior, subordinated and the most subordinated). The classes would allow the SPV to delineate financing of lower risk investment and investment that would bear higher residual risk. The delineation would limit OPG's self-funded investment to a reasonable level in order to allow OPG to remain a self-sustaining entity.
d. OPG shall, through its ownership of the most subordinated liability, be able to capture and retain the pricing difference between cost of financing and benchmark for interest on the restructured asset, or any residual risk of restructured asset. The targeted return of the subordinated liability should be reflective of the underlying risks and compensate holders for active management that would be required.
e. OPG should participate in the detailed design of the above and the SPV documentation to ensure that it has substantive power and variability, which will allow OPG's Board of Directors to evaluate the opportunity as a business initiative instead of through a shareholder directive.

Nothwithstanding the above, under certain Defined Forced Majeure for emergency events (e.g. unlikely credit market event or disruption where it is not possible to borrow from the market at a reasonable rate), the OEFC may provide bridge financing beyond the designated percentage for a defined period. The relevant terms should ensure that this temporary measure does not detract from the rights of OPG to direct all of the relevant activities of the SPV. Additionally, OPG should not be protected from risk of loss by the OEFC with respect to its subordinated investment, nor should it lose its right to derive the residual returns should such bridge financing be required.

Legislation

9. The Legislation must require interest, carrying and administrative costs to be paid to the SPV on a monthly basis, so that the SPV is able to recognize appropriate revenue to offset any ongoing costs.
10. The Legislation must dictate the manner in which the restructured asset would be determined, collected, and the period of collection, so that the determination of the restructured asset will not be subject to the Province's decisions on an ongoing basis, but determined based on a formula. Alternatively, the Legislation may allow for an adjustment to the pre-determined deferral formula based on specific parameters that would limit the adjustment to the restructured asset. Adjustments beyond the specific parameters would require approval by the Board of Trustees.
11. The Legislation must be written to avoid legal or constitutional challenges and be irrevocable to reduce the cost of borrowing and with a specific formula which determines the deferral amount. As irrevocability would be difficult under Canadian law one mitigation would be to provide a Provincial guarantee which only applies with cancellation or amendment of the legislation.
12. The spirit of the above terms should be reflected in the SPV Indenture Agreement as well as Legislation, wherever possible.

2) The Trust is expected to be financed as follows:
   - 51% senior secured debt from external markets
   - 39% senior subordinated debt from OPG (via Province equity injection into OPG)

- 10% junior subordinated debt from OPG (5% from external markets and 5% from Province equity injection into OPG).

When assessing control, an investor shall consider the nature of its relationship with other parties and whether those parties are acting on the investor's behalf (i.e. they are 'de facto agents'). If OPG is assessed to be a 'de facto agent' of the Province, it will compromise the ability for OPG to consolidate the Trust. The split above is to meet the following conditions to ensure that OPG is not considered a 'de facto agent' of the Province:

- The Province or its agencies must not directly or indirectly fund (through debt or equity) more than 50% of the following:
  - The Trust
  - Any of OPG's investments in the most subordinated debt of the Trust
- OPG must own greater than 50% of the most subordinated debt and targeted to own no less than 5% of the total debt of the Trust. Such ownership must be financed entirely by OPG through operating cash flows or external debt, without assistance from Provincial sources.

3) The Province will need to conclude on whether OPG still meets the definition of a Government Business Enterprise as defined under Public Sector Accounting Board standards in order to obtain the preferred consolidation treatment after the transaction. We also recommend that the Province to undertake the analysis deemed necessary to confirm the accounting treatment in its consolidated Public Accounts, including if the recognition of the intangible asset would result in an offsetting liability in the Public Accounts.

C. Ability to Finance

Property Right or Right to Collect
Legislative Requirements for Financing
The GA Recovery Right must be structured to encompass the following elements:

- Right to recover from and bill Ontario electricity customers for (1) the principal amount of GA that is being deferred, (2) all interest and other financing costs incurred in respect of the deferral of the GA, (3) all fees, expenses and other administrative costs associated with such financing;
- Repayment/amortization schedule as agreed by the IESO and any purchaser of such GA Recovery Right (or pursuant to a pre-defined schedule/formula that covers all of the purchaser's principal, interest and ongoing financing costs on a monthly basis);
- Repayment/amortization schedule must include a true up mechanism to ensure all costs associated with the deferral can be recovered from customers;
- IESO may dispose of the GA Recovery Right, provided that any such disposition shall be a true sale and absolute transfer to the purchaser of the IESO's right, title and interest in and to the GA Recovery Right;
- Purchaser will have the right to require the IESO (or any successor) to collect the principal amount of GA Recovery Right, together with interest, financing and administration costs, on the agreed repayment/amortization schedule;
- Right must be irrevocable and, if amended by future governments, debt holders have the right of action against the government to recover the amount outstanding including interest, fees, expenses and any damages resulting from the amendment;
- GA Recovery Right will not be subject to any set-off, counterclaim or other defence by the IESO or any successor or affiliated entity; and
- Make certain amendments to the Electricity Act to allow OPG to implement the SPV financing structure (e.g. allowing OPG to create subsidiaries and holding companies, and to have a beneficial interest in the SPV, etc). This would provide flexibility to accommodate possible variations to the financing structure that may be desirable over time.

Detailed legislative requirements are specified in the attachments as follows:

Attachment 1 Legislative requirements to allow deferral of global adjustment amounts to be financeable

Attachment 2 Statutory amendments

The proposed financing structure for the SPV is:

	Risk Profile	Source	% of Total Funding Requirements
Tranche A Senior Debt	The least risky	Capital Markets	51%
Tranche B Sub Debt	In between A&C	OPG via OEFC	39%
Tranche C Sub Debt)	The most risky	OPG via OEFC	5%
		OPG via Capital Markets	5%

SPV structure is used to accomplish the following:

- SPV holds right to charge customers for the benefit of debt holders;
- Allows the financing vehicle to be ring-fenced from OPG as an SPV structure is set up as generally single purpose entities with no other operations that could add risk to the SPV, dilute debt holder rights, allow parties from other operations to claim rights to the future recovery from customers or allow these other parties to initiate bankruptcy proceedings;
- Enables SPV to potentially get a higher credit rating than OPG;
- Supports consolidation with OPG provided accounting requirements are satisfied;

This approach supports a number of objectives of the GA Recovery Right:

- 51% external senior debt supports separation of the SPV from the Province
- 5% junior subordinated debt establishes OPG's "at risk" equity which supports separation of the SPV from the Province
- Subordinated debt provides flexibility to the financing structure and additional credit support to external debt holders
- Subordinated debt sourced from OPG (mainly funded by equity injection from the Province) minimizes impact on OPG credit metrics reducing risk of an OPG rating downgrade that could result in the SPV being consolidated directly with the Province as the SPV would be considered an arm of the Province.

Recent transactions used as precedents are:

Duke Energy Florida Project Finance LLC
June 2016
5 series of bonds totalling USD$1.3B
Weighted average life from 2 to 19 years with interest rates from 1.2% to 3.1%
Credit rating AAA

Utility Debt Securitization Authority
Sponsored by Long Island Power Authority
March 2016
Amount issued USD$0.6B
Weighted average life of 12 years and weighted average yield of 2.7%

August 2016
Amount issued USD$0.5B
Weighted average life of 7 years and weighted average yield of 2.0%

Credit rating AAA

Cumulative outstanding (including previous issuances): USD$4.2B

D. External Assessment

Shakerhill Partners, an external advisor, identified the following items in an assessment of the structure and financeability of the structure:

- The structure is financeable however there are a number of significant risks to the structure:
  - Canadian and Ontario law does not provide the same protection to property right as exists in the US federal and state constitutions to limit the ability of governments to adversely impair contracts to the detriment of the holder;
  - Legislation could mitigate some of the risks – deferred recovery asset to be "uncapped", regular semi-annual true up to ensure recovery, Province provides sufficient committed liquidity to the IESO so that temporary shortfall in recovery does not affect payments to SPV, term of the deferral recovery substantially exceeds the longest maturity of debt of the SPV and that true-up mechanism take account of potential for currency, interest rate and duration mis-match between the debt of the SPV and the recovery mechanism;
  - Size of the program may be too large for Canadian securitization market requiring access to the US securitization market;
- Final maturity of debt should not exceed 30 years from inception of the program
- True up mechanism should be designed such that the forecast of recovery is less than 10% of the customer bill under downside scenarios to limit growth of the deferral balance as a higher portion of the customer bill increases the political risk to debt holders which could result in a lower credit rating and potential impact on financeability
- Securitized debt products are specialized and price at a premium to other fixed rate instruments however a successful program supported by a strong credit rating this premium could shrink over time to a minor spread over Provincial debt
- OPG's credit rating should be maintained provided sufficient equity is injected to maintain credit metrics
- While the structure is not expected to impact the Province there are risks that the program could negatively impact the rating agencies view of the Province's financial management.

E. Risk Summary

i. Consolidation

- Elements of the proposed structure were established to support consolidation of the SPV into OPG. These items may not be sufficient to establish OPG as risk owner of the SPV and the SPV may need to be consolidated directly with the Province.

ii. Financeability

- The legislation establishing the structure and the property right for recovering the financing and associated costs may not be adequate for financing purposes resulting in more expensive financing or an inability to obtain the required external financing.

iii. Cost of Financing

- Future governments may enact legislation that changes the right of the SPV to recover amounts from customers.
- The right to recover amounts from future customers must be irrevocable and subject to full recovery from the government in the event that future governments reduce or eliminate the recovery. A legal structure that is weaker than the precedent US transactions increases the risk to debt holders and the cost of financing.
- Interest rates on bonds in the securitization market are higher than equivalent rated bonds. Rate for a AAA securitization credit is about 50 bps higher than GOC (rated AAA) for a 5 year term. This difference is attributable to the specialized structure of the bond, smaller investor pool for this bond, smaller size of the market and higher perceived risks of the bond.
- Any regulator involvement must not be seen to modify any terms of debt issued or the property right securing the debt as this would increase risk to debt holders.

- It may not be possible to issue debt to match the terms of the deferred asset so shorter term debt would be used which raises risk to re-finance the maturing debt as the market may no longer be interested in this product. As well, underlying reference interest rates may be higher and the market may require a higher spread to invest in this product.
- With the GA Recovery Right program continuing for 10 years, debt issued over this period is subject to changes in both the underlying reference interest rates and appetite of the market for this product.

iv. OPG Credit Rating

- Minimizing the impact of significant additional debt on OPG's credit rating is dependent on higher EBITDA arising from earned income on the GA Recovery Right in excess of external debt. Ability of the SPV to record revenue reflecting the growth in asset value.
- Potential OPG credit rating downgrade if legislative structure is not adequate to support long term recoverability, inability to record revenue from growth in asset value or agencies view equity injection as debt.
- OPG credit rating downgrade could result in loss of GBE status or result in SPV being consolidated directly with the Province.

Attachment 1

LEGISLATIVE REQUIREMENTS TO ALLOW DEFERRAL OF GLOBAL ADJUSTMENT AMOUNTS TO BE FINANCEABLE

The IESO currently has a right to collect GA monthly from ratepayers through provisions in the *Electricity Act, 1998*. It is proposed that collection of a certain portion of the monthly GA be deferred for collection in the future, and that the right to recover the deferred GA from ratepayers be used as a basis for structured financing/securitization.

The current proposal is for a trust to be created as a financing vehicle (the "**Trust**") in connection the deferred GA. The Trust will finance the deferral of the GA by purchasing the right to recover such deferred GA from the IESO for the principal amount of the GA being deferred. For example, if the amount of GA that is being deferred is $200 million in a given month, the Trust will purchase from the IESO the right to future recovery of the deferred GA and the associated financing costs (including interest and transaction costs) for $200 million in cash.

The Trust is expected to finance these purchases from the IESO through a combination of senior secured financing raised in the capital markets and subordinated financing from OPG (the funding for which will mostly be from equity injections from the OEFC/Province).

For accounting purposes, OPG will need to have the ability to direct the activities of the Trust, through a services agreement and/or through the Trust's constating document.

Based on securitized financing raised by utilities in the US (backed by utility cost recovery orders) and the current regulatory framework in Ontario, the legislation in Ontario would need to be amended to provide the following, at a minimum:

1. The IESO will be empowered to create an asset (the "**Regulatory Asset**") consisting of all right, title and interest in and to:

   (a) right to recover from and bill Ontario electricity ratepayers for:

   (i) the principal amount of GA that is being deferred for collection;
   (ii) all interest and other financing costs incurred in respect of the deferral of the GA (whether through senior debt raised in the public markets or subordinated debt raised from OPG or others); and
   (iii) (subject to the comments in paragraph 5 below in respect of OPG's internal administrative costs only) all fees, expenses and other administrative costs associated with such financing, including up-front and ongoing financing costs and any indemnity payments;

all on such repayment/amortization schedule as agreed by the IESO and any purchaser of such right (or pursuant to a pre-defined schedule/formula in the legislation that covers all of the purchaser's principal, interest and ongoing financing costs on a monthly basis); and

(b) all revenues, collections, claims, rights to payments, money or proceeds arising from the rights and interests set out in paragraph (a) above, regardless of whether such revenues, collections, claims, rights to payments, money or proceeds are imposed, billed, received, collected or maintained together with or commingled with other revenues, collections, rights to payments, payments, money or proceeds.

2. The IESO may dispose of the Regulatory Assets created from time to time on such terms as the IESO determines in accordance with the terms of directives to be issued to the IESO from time to time by the Minister, provided that any such disposition shall be a true sale and absolute transfer of the IESO's right, title and interest in and to a Regulatory Asset to the purchaser of the Regulatory Asset.

3. The Regulatory Assets will not be subject to any set-off, counterclaim or other defence by the IESO or any successor or affiliated entity thereof.

4. The legislation will need to recognize the Regulatory Assets as amounts that may be recovered by the IESO (e.g. it could be designated as a "GA Deferral" and would be included in the amounts collectible by the IESO through the GA collection mechanism, and would include interest and financing costs).

5. The purchaser of the Regulatory Asset will have the right to require the IESO (or any successor) to collect the principal amount of GA deferred, together with interest, financing and administration costs, on the agreed repayment/amortization schedule. **[NTD: In the LIPA securitization rate order, if the entity that is authorized to collect rates to service the bonds ends up defaulting, there is the ability to request a court to order "sequestration" and payments of amounts owing to the owner of the Regulatory Asset. Consider whether to include a similar right here. Alternatively, consider whether a security interest over the moneys collected by the IESO could be provided to the purchaser.]**

OEB would be provided with oversight over the internal administrative costs collected by the Financing Trust. This could be accomplished by (a) providing the purchaser of the Regulatory Asset with the right to require

the IESO or a successor to collect only the principal amount of GA together with interest and financing costs and third party fees and expenses, and (b) requiring the IESO to collect amounts through the global adjustment and make payments to the purchaser of the Regulatory Asset with respect to the internal administrative costs incurred by the purchaser in connection with the purchase and management of the Regulatory Asset and the Financing Trust, in accordance with the order of the OEB then in effect. Under this mechanism, the OEB would be required to review the purchaser's internal administrative costs through a streamlined process and issue such orders in accordance with rules to be prescribed under a new regulation under the OEB Act, which would clearly limit the OEB's scope of review and could establish the basis for the purchaser to receive an appropriate fee for its services.

6. In the event that any action is taken or permitted by the Province or any regulatory authority that limits, alters, or impairs the value of a Regulatory Asset or reduces the ability of the IESO or the purchaser of the Regulatory Asset to collect or recover the costs associated therewith, the owner of the Regulatory Asset and the holders of any bonds or other securities issued to finance the purchase of the Regulatory Asset, will have a right of action against the Province for any damages suffered as a result of such amendment.

Attachment 2

STATUTORY AMENDMENTS

The following is preliminary and is based on our current understanding of the proposed structure and objectives. For example, we have assumed that the structure will not entail the insertion of a new Holdco between OPG and the Province. As these aspects are refined, some of the suggested amendments described below may not be needed and other aspects that we are not aware of may need to be considered. Accordingly, these suggested amendments are provided for discussion purposes and are subject to change. We would welcome the opportunity to work with OPG and the Ministry on refining the scope and substance of required legislative and regulatory amendments.

A. Amendments to Implement Structure

Certain *Electricity Act, 1998* amendments would be needed to implement the anticipated structure (which we understand, as noted above, would not include a Holdco), as follows:

- **Section 53.1(1):** Amend to permit owning and operating generation facilities through subsidiaries (not only directly through OPG). In addition, amend to permit OPG to administer, manage, loan moneys to and have a beneficial interest in, if applicable, Financing Trust.

- **Section 53.2:** Amend to permit the Minister to acquire, hold, dispose of or otherwise deal with securities or debt obligations of, or any other interest in, OPG or any subsidiaries. This is to accommodate possible variations to the financing structure that may be desirable over time.

- **Section 53.■ (new):** New statutory section to permit the Minister to enter into arrangements relating to an exercise of powers under 53.2.

- **Section 53.■ (new)**: New statutory section providing that creditors of Financing Trust have no recourse to the assets of OPG or any of its subsidiaries (other than Financing Trust, if applicable). In addition, consideration should be given as to whether the Act should be amended so that the Financing Trust cannot be wound up or liquidated.

B. Miscellaneous Corporate Items to Address

- **OPG Articles:** Amend the OPG's articles to remove the private company restrictions.

- **MOA with Province:** Consider whether any amendments to OPG's MOA with the Province are required to contemplate the Financing Trust.

C. Amendments Under Electricity Act to Implement GA Smoothing

Based on our understanding that the global adjustment smoothing mechanism is intended to benefit residential and small business customers only and that the Minister will be responsible for determining how much global adjustment smoothing is to be applied in a given month, if any, amendments to the *Electricity Act*, *1998* and Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) would be needed to implement the mechanism, as follows:

(i) Electricity Act:

- **Section ■ (New):** Establish a new power for the Minister to make directives to the IESO in relation to the global adjustment smoothing mechanism and, particularly, for purposes of establishing global adjustment smoothing amounts from time to time (expected to be monthly). To the extent possible, the directive power should be drafted so as to limit the ability for a future Minister to require the IESO to do anything that would materially and adversely affect the Financing Trust or its lenders. **[NTD: While our understanding is that the Minister would direct this, we note from other materials we have seen that OPG may instead be recommending a formula approach. It is not clear what the formula would look like, where it would be set out or how it would be applied and by whom]**

- **Paragraph 25.33(1):** This section says that IESO shall make adjustments in accordance with the regulations to ensure that, over time, payments by prescribed classes of market participants reflect amounts paid to OPG, OEFC and distributors, as well as amounts paid to entities with whom IESO has a procurement contract. Add new subsection (c) so as to require IESO to ensure that, over time, payments by prescribed classes of market participants also reflect amounts paid to Financing Trust. **[NTD: Not certain this is needed if only to benefit residential and small business consumers, who are not market participants. May be needed in reference to payments from distributors and retailers]**

- **Paragraph 25.33(2):** This section says that distributors and retailers shall make adjustments in accordance with the regulations to ensure that, over time, payments by prescribed classes of consumers reflect amounts paid to OPG, OEFC and distributors, as well as amounts paid to entities with whom IESO has a procurement contract. Add new subsection (c) so as to require distributors and retailers to ensure that, over time, payments by prescribed classes of consumers also reflect amounts paid to Financing Trust.

- **Note**: As described below, the regulation will need to include new requirements for the IESO to record the global adjustment smoothing amounts in one or more variance accounts and to use those amounts to offset amounts otherwise recorded in the variance accounts under Section 25.33(3) of the Act. For context, we note:

    - Section 25.33(3) says that adjustments under (1) or (2) relating to electricity consumed by consumers whose rates are determined by

the OEB under s. 79.16 of the OEB Act (i.e. RPP Customers) shall instead be made in accordance with the regulations to one or more variance accounts established and maintained by the IESO.

- Section 25.33(4) says IESO, distributors and retailers shall make and receive such payments, set-offs and credits as may be required or permitted by the regulations with respect to consumers described in (3), i.e. RPP Customers.

- Section 25.33(5) says that IESO shall establish and maintain such variance accounts as may be needed to record all amounts payable or receivable by it under 25.33.

(ii) O. Reg. 429/04 (Adjustments Under Section 25.33 of the Act):

- **Section 1(1):** Consider adding definitions for "Financing Trust" and "global adjustment smoothing amount" or such other terms as may be preferred.

- **Section 1.2(1) (New):** Add section providing that, for the purposes of this Regulation, the global adjustment smoothing amount for a month is the amount determined by the IESO in accordance with a directive from the Minister under section ■ of the Electricity Act in respect of the month. **[NTD: See above note re use of Minister directives]**

- **Section 1.2(2) (New):** Consider adding a section providing that the IESO shall publish the global adjustment smoothing amount for a month by no later than the 10th business day of the following month [to align with general publication requirements for global adjustment under s. 1.1(2)].

- **Section 10(1):** Amend formula for calculating Class B GA rate by subtracting the global adjustment smoothing amount for a month from "M", which is the total amount of the global adjustment for the month. The global adjustment smoothing amount could be designated as "X", such that the formula would be (M-X-N)/(P-Q). Define "X" as the global adjustment smoothing amount for the month as determined by the IESO in accordance with the Minister's directive under section ■ of the Electricity Act for the month. **[NTD: See above note re use of Minister directives]**

- **Section 10.1 (New):** Add new section to deal with adjustments under subsection 25.33(3) of the Act, i.e. in respect of RPP consumers. This section should require the IESO to establish, within the variance account(s) it maintains pursuant to subsection 25.33(3) of the Act, one or more subaccounts in which it shall record the global adjustment smoothing amounts applicable to the classes of consumers described in subsection 25.33(3) of the Act. This section must also specify that the IESO shall apply the amounts recorded in the subaccounts against the balances in the variance accounts for purposes of section 79.16(3) of the OEB Act.

  - **Note:** This is a key aspect because, when the OEB determines RPP rates, it must take into account the balances in the variance accounts established by the IESO under s. 25.33 of the Electricity Act and make adjustments with a view to eliminating the balances within 12 months. This proposed new section 10.1 causes the IESO to reduce (in the near term) the variance account balances by the global adjustment smoothing amounts, as provided by Financing Trust, thereby enabling the OEB to determine RPP rates that, despite being lower for RPP consumers in the near term, still eliminate the relevant variance account balances within 12 months.

- **Paragraph 11(2)2.ii:** Amend the formula for calculating the allocation of global adjustment for a month to a licensed distributor that is a market participant by subtracting the global adjustment smoothing amount for a month from "M", which has the same meaning as under section 10(1). The global adjustment smoothing amount could be designated as "X", such that the formula would be [(M-X-N) x (R+S-T)]/(P-Q). Define "X" as suggested under section 10(1).

- **Paragraph 11(2)3:** Amend the formula for calculating the allocation of global adjustment for a month to each Class B market participant by subtracting the global adjustment smoothing amount for a month from "M", which has the same meaning as under section 10(1). The global adjustment smoothing amount could be designated as "X", such that the formula would be [(M-X-N) x U]/(P-Q). Define "X" as suggested under section 10(1).

- **Paragraph 16(7)4:** Consider amending the description of "Global Adjustment" that is required to be included on certain invoices so as to inform consumers that their portion of the global adjustment for the month (i) may have been reduced by the application of a global adjustment smoothing amount from the Financing Trust, or (ii) may include amounts payable to the Financing Trust in respect of global adjustment smoothing amounts previously applied.

- **Section 20(1):** This section establishes an obligation for the Ontario Electricity Financial Corporation and every licensed distributor that is a market participant to give the IESO such information as the IESO may require for the purposes of the Regulation in the form specified by the IESO and before the expiry of the period specified by the IESO. Consider amending to extend this obligation to the Financing Trust.

- **Section 20(6):** This section provides that on request by the OEB, the IESO, a licensed distributor, an embedded generator, a retailer or the OEFC shall give the OEB such information relating to this Regulation as the OEB may require, in the form and within the period specified by the OEB. Consider amending to extend this obligation to the Financing Trust.

D. Amendments Under OEB Act to Implement Cost Recovery for Financing Trust

Amendments to the *Ontario Energy Board Act*, including amendments to O. Reg. 95/05 (Classes of Consumers and Determination of Rates) and the introduction of a new regulation, would be needed to implement a cost recovery process for the Financing Trust in relation to the global adjustment smoothing mechanism, potentially with limited OEB oversight, as follows:

(i) Ontario Energy Board Act:

- **Section 78(3.3):** This provision establishes an obligation for the OEB, when determining rates for the retailing of electricity, to take into account balances in variance accounts established under section 25.33 of the Electricity Act and to make adjustments "with a view to eliminating those balances within 12 months or such shorter time periods as the Minister may direct." Consider whether any amendments are needed, and confirm this works with the framework being proposed.

- **Section 78.7 (New):** We understand that the Province may want the OEB to have an oversight role. One possible approach would be to establish a new statutory section establishing that the IESO shall make payments to the Financing Trust with respect to the internal administrative costs incurred by the Financing Trust in connection with the purchase and management of the Regulatory Asset and the Financing Trust. Such payments by the IESO would need to be made in accordance with the order of the OEB then in effect, which orders shall be made by the OEB in accordance with rules prescribed under a new regulation.

    - The new regulation would need to be clear that the OEB does not have jurisdiction to consider the principal amount or any interest, financing costs, third party fees or expenses. Rather, OEB's role would be limited to considering the internal administrative costs of the Financing Trust and ensuring the Financing Trust receives an appropriate fee for its services, all of which would be recovered by the Financing Trust from the IESO, which would collect those amounts in the global adjustment. Note that, if this approach is accepted, the IESO and distributors and retailers would need the authority to collect such amounts as part of the GA and IESO would need the authority to pay such amounts to the Financing Trust. As such, additional amendments would be needed under O. Reg. 429/04.

- **Note:** Section 79.16 of the OEB Act does not require changes, but the significance of this provision should be understood.

    - Section 79.16 gives the OEB responsibility for determining electricity commodity prices for eligible consumers. Eligibility is determined under Reg. 95/05 (Classes of Consumers and Determination of Rates), which is also known as the Regulated Price Plan (RPP) Regulation.
    - Section 4(2) of the RPP Regulation defines RPP-eligible consumers as low volume consumers (i.e. those who annually use less than 150,000 kWh

or such other amount as prescribed), consumers with demand of 50 kW or less, residential consumers that have accounts with distributors, consumers who annually use 150,000 to 250,000 kW of electricity, and consumers who have accounts with distributors if in the farming business.

- Paragraph 6(1)3 of the RPP Regulation provides that "In determining the rates (for RPP-eligible consumers), the Board shall forecast the cost of electricity to be consumed by the consumers to whom the rates apply, taking into consideration adjustments required under section 25.33 of the *Electricity Act, 1998* and shall ensure that the rates reflect those costs."
- The Ontario Energy Board has developed a Regulated Price Plan Manual (revised February 16, 2016) to describe the processes and methodologies it uses for determining electricity commodity prices that are charged to RPP consumers pursuant to Section 79.16 of the OEB Act and paragraph 6(1)3 of the RPP Regulation.

(ii) O. Reg. 95/05 (Classes of Consumers and Determination of Rates)

- **Paragraph 6(1)3:** Amend so as to require the Board, when forecasting the cost of electricity to be consumed by the consumers to whom the rates apply, to take into consideration not only the adjustments required under section 25.33 of the Electricity Act but also the application or prior application of global adjustment smoothing amounts determined by the IESO in accordance with Minister directives under section ■ of the Electricity Act, and to ensure that the RPP rates reflect those amounts. **[NTD: See above note re use of Minister directives]**

(iii) New Regulation (Payments to the Financing Trust)

- If the OEB is to be given the role of reviewing and approving the recovery of OPG's internal administrative costs for the Financing Trust under the potential section 78.7 (see above), then this regulation should describe the process and criteria pursuant through which the OEB would determine the amounts that the IESO would be required to collect through the global adjustment, in accordance with section 25.33 of the Electricity Act, and pay to the Financing Trust in respect of the provision of global adjustment smoothing amounts. This part of the regulation should establish:

    - any reporting requirements from the Financing Trust and/or the IESO to the OEB in connection with the global adjustment smoothing mechanism;
    - the frequency of the OEB making determinations under this part of the regulation;
    - the process through which the OEB shall make these determinations, which should be a streamlined administrative process rather than a public hearing process or, if a hearing is needed, then the scope of the proceeding should be clearly and narrowly constrained so as to deter intervenor involvement, lengthy proceedings and reduce/eliminate risk to recovery by Financing Trust;

- the basis for the OEB's determinations as to the payments that shall be made to the Financing Trust, which should specify that:
  - the Financing Trust shall recover its prudently incurred internal administrative costs on a forecast basis each year;
  - the Financing Trust shall receive an appropriate fee each year (with some guidance as to what would be appropriate); and
  - the approved payment amounts shall be collected by the IESO through the global adjustment and paid to the Financing Trust in accordance with the order of the OEB then in effect. Note that O. Reg. 429/04 would likely need amendments to permit IESO (and distributors and retailers) to collect these amounts through the global adjustment.

February 27, 2017

Mr. Serge Imbrogno
Deputy Minister,
Ministry of Energy
4th Floor, Hearst Block
900 Bay Street
Toronto, Ontario
M7A 2E1

Dear Deputy:

Below is a summary of OPG's preliminary views on the implementation of the Province's proposed Global Adjustment Smoothing Account and financing structure. These views are contingent on the proposed terms and conditions that were sent to the Ministry of Energy on February 21, 2017.

Understanding that the finalization of the legal terms, the Trust indentures, financing structure and other detailed terms will take several months and will involve collaboration between legal counsel, input from capital markets, parties involved and other stakeholders, this letter is intended to provide the guideline and framework which could form the foundation of the plan.

Please do not hesitate to contact me if you have any questions regarding this summary.

Sincerely,

Mr. Ken Hartwick
Chief Financial Officer and Senior Vice President, Finance
Ontario Power Generation
W: 416-592-6985
C: 647-544-6985
ken.hartwick@ opg.com

cc. Jeff Lyash, President and CEO, OPG

Background:

The Province has indicated that it will take steps to reduce electricity bills in the near term. It has identified reductions in the Global Adjustment Charge (GAC) charged to electricity customers as a means to achieve its policy goals. The Province is proposing to temporarily reduce the amount of the GAC charged to electricity customers (primarily RPP-eligible customers). The exact quantum and duration of the program is still not known but based on discussions with the Province GAC charges of approximately $2-5B per year for the next 5-10 years would be deferred and collected over future periods commencing after the deferral period. A combination of senior debt and subordinated debt (mainly sourced by additional equity from the shareholder) would be issued to fund the amount deferred. The financing cost of the debt and other costs of running the program would form part of the amounts recovered from customers over the term of the program.

The Province has requested that OPG administer the GAC deferral, because of OPG's participation in the market, regulatory knowledge and the potential ability to consolidate the activity and accounting with OPG. Given the significant amount of financing required for the GAC deferral, OPG has developed a financing structure (depicted below) to:

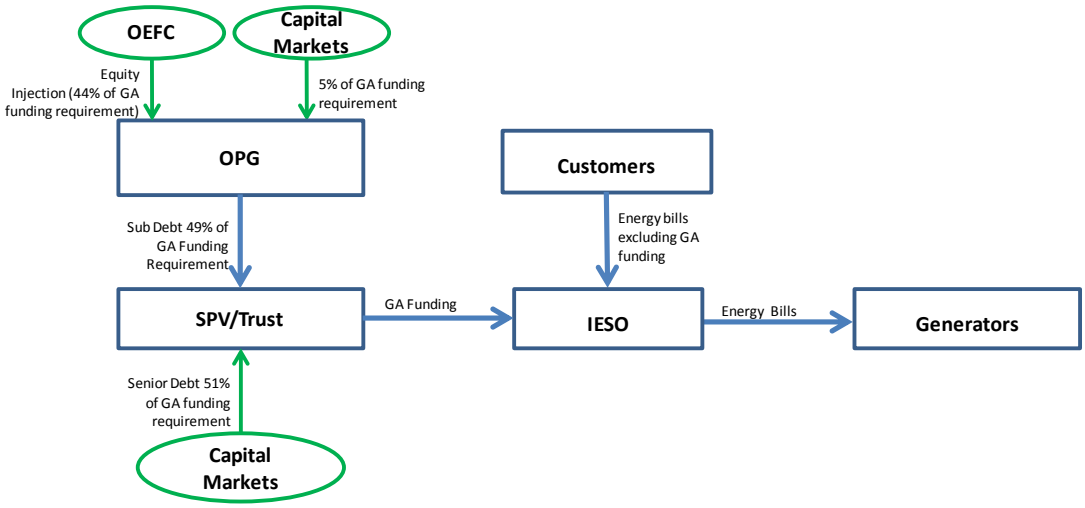
- restrict the risk to OPG;

- maximize the cost-effectiveness of the Trust or the Special Purpose Vehicle ("SPV") financing vehicle; and
- allow for consolidation into OPG financial statements.

The success of this structure is dependent on achieving a number of objectives which are reviewed in the following sections:

A. Ability to Recognize an Asset and Record Revenue
B. Ability to Consolidate the SPV into OPG
C. Ability to Finance
D. External Assessment
E. Risk Summary

All of the percentages shown in the graphic below are indicative and will be highly dependent on the legislation that the Province will enact:



Process:

The IESO will effectively sell the 'right to collect' deferred future revenue from ratepayers (GA Recovery Right asset) to the SPV in return for cash proceeds. In order for the SPV to purchase this asset the SPV will obtain the financing from two key sources: 51% directly from capital markets and 49% as subordinated debt from OPG. OPG will obtain 44% of this financing as an equity injection from the Province and 5% from capital markets.

A. Ability to Recognize an Asset and Record Revenue

Accounting Requirements under International Financial Reporting Standards (IFRS)

1) It is our understanding that the IESO and KPMG have concluded that the sale of this 'right to collect' future revenue (or regulatory asset) is not a financing transaction and will not be recorded as a financial liability. Based on that conclusion, the right to collect will be accounted for as an intangible asset in the SPV.

2) In order to the SPV to record this right as an intangible asset, the right must meet the following conditions:
   - The intangible asset must be separable and arise from a contractual or legal right (i.e. mandated by the Legislation and SPV Indenture Agreement).
   - The SPV must have the control and power to obtain future economic benefits from the intangible asset.
   - The SPV must be able to demonstrate that the intangible asset is purchased at fair value.

3) In order for the SPV to recognize appropriate revenue to offset any ongoing costs, the Legislation must require interest, carrying and administrative costs to be paid to the SPV on a monthly basis. This may result in additional amounts to be deferred to achieve the desired customer impact. Payment of revenue to the SPV is also important to service the interest expenses of the debt.

B. Ability to Consolidate the SPV into OPG under IFRS

OPG 'Control' of the SPV - Accounting Requirements

1) In order to meet the accounting definition of 'control', accounting guidance must be considered. There are no bright lines to determine whether OPG has exposure, or rights, to variable returns from its involvement with the SPV, or whether it has the ability to affect the returns of the SPV through its power over the SPV. Rather, all facts and circumstances are considered when assessing whether an entity has control over another entity. Based on the relevant accounting guidance under IFRS, OPG has proposed terms necessary to demonstrate that OPG has control over the SPV. OPG's external auditors, Ernst & Young, has provided their concurrence that based on the information provided to them to date that the following conditions should permit consolidation of the SPV by OPG.

Directive:

1. The SPV must be undertaken by OPG as a business initiative on its merits. A Shareholder Directive is to be limited to direct OPG to investigate the option of establishing a SPV vehicle to administer, finance and operate the Global Adjustment plan. The control, risk and rewards of that SPV will determine its consolidation into OPG as a business enterprise.

SPV:

2. The SPV should not operate in a predetermined way such that OPG does not have decision-making authority over the SPV's ongoing activities after its formation (i.e. should not operate on 'autopilot').
3. OPG must have the ability to appoint and remove the Trustee (or Board of Trustees), with no veto right by the Province. No party shall have the ability to remove OPG from its role and authority in the SPV.
4. The Province cannot have the right to veto OPG's decisions about the relevant activities of the SPV. OPG must have the power over the relevant activities of the SPV and be compensated. The relevant activities of the SPV include (but are not limited to) the evaluation and decisions on financing alternatives, duration, and the strategy to minimize financing costs. OPG must have the power to establish operating and capital budgets of the SPV.
5. OPG must have the power to determine or change operating and financing policies of the SPV, which will affect the variability of risks and returns.
6. The Province or its agencies must not directly or indirectly fund (through debt or equity) more than 50% of the following:
    - The SPV
    - Any of OPG's investments in the most subordinated debt of the Trust
7. OPG must own greater than 50% of the most subordinated debt and targeted to be no less than 5%[1] of the total debt of the SPV. Such ownership must be financed entirely by OPG through operating cash flows or external debt, without assistance from Provincial sources. A quantitative analysis should be performed at a later date to corroborate the appropriateness of the 5% threshold to support that the 5% subordinated debt investment is sufficient to absorb most of the expected variability in the SPV.
8. OPG must have the ability to earn variable returns by exercising its authority, which shall be accomplished as follows:

[1] While the rest of the letter refers to a 10% investment in the most junior subordinated debt with OPG owning 5%, it should be noted that OPG should own more than 50% of the most subordinate debt. For simplicity, the degree to which OPG's ownership beyond 50% is not shown in this letter.

a. The cash flow from the restructured asset shall include interest determined based on a relevant benchmark that is appropriate relative to the restructured asset, plus an appropriate margin consistent with the relevant market and other risks
b. OPG shall have the authority to determine the financing strategy, which will vary the financing costs with the objective of enabling the SPV to achieve a more favourable return compared to the return from the restructured asset
c. The SPV shall establish classes of liabilities (senior, subordinated and the most subordinated). The classes would allow the SPV to delineate financing of lower risk investment and investment that would bear higher residual risk. The delineation would limit OPG's self-funded investment to a reasonable level in order to allow OPG to remain a self-sustaining entity.
d. OPG shall, through its ownership of the most subordinated liability, be able to capture and retain the pricing difference between cost of financing and benchmark for interest on the restructured asset, or any residual risk of restructured asset. The targeted return of the subordinated liability should be reflective of the underlying risks and compensate holders for active management that would be required.
e. OPG should participate in the detailed design of the above and the SPV documentation to ensure that it has substantive power and variability, which will allow OPG's Board of Directors to evaluate the opportunity as a business initiative instead of through a shareholder directive.

Nothwithstanding the above, under certain Defined Forced Majeure for emergency events (e.g. unlikely credit market event or disruption where it is not possible to borrow from the market at a reasonable rate), the OEFC may provide bridge financing beyond the designated percentage for a defined period. The relevant terms should ensure that this temporary measure does not detract from the rights of OPG to direct all of the relevant activities of the SPV. Additionally, OPG should not be protected from risk of loss by the OEFC with respect to its subordinated investment, nor should it lose its right to derive the residual returns should such bridge financing be required.

Legislation

9. The Legislation must require interest, carrying and administrative costs to be paid to the SPV on a monthly basis, so that the SPV is able to recognize appropriate revenue to offset any ongoing costs.
10. The Legislation must dictate the manner in which the restructured asset would be determined, collected, and the period of collection, so that the determination of the restructured asset will not be subject to the Province's decisions on an ongoing basis, but determined based on a formula. Alternatively, the Legislation may allow for an adjustment to the pre-determined deferral formula based on specific parameters that would limit the adjustment to the restructured asset. Adjustments beyond the specific parameters would require approval by the Board of Trustees.
11. The Legislation must be written to avoid legal or constitutional challenges and be irrevocable to reduce the cost of borrowing and with a specific formula which determines the deferral amount. As irrevocability would be difficult under Canadian law one mitigation would be to provide a Provincial guarantee which only applies with cancellation or amendment of the legislation.
12. The spirit of the above terms should be reflected in the SPV Indenture Agreement as well as Legislation, wherever possible.

2) The Trust is expected to be financed as follows:
   - 51% senior secured debt from external markets
   - 39% senior subordinated debt from OPG (via Province equity injection into OPG)

- 10% junior subordinated debt from OPG (5% from external markets and 5% from Province equity injection into OPG).

When assessing control, an investor shall consider the nature of its relationship with other parties and whether those parties are acting on the investor's behalf (i.e. they are 'de facto agents'). If OPG is assessed to be a 'de facto agent' of the Province, it will compromise the ability for OPG to consolidate the Trust. The split above is to meet the following conditions to ensure that OPG is not considered a 'de facto agent' of the Province:

- The Province or its agencies must not directly or indirectly fund (through debt or equity) more than 50% of the following:
  - The Trust
  - Any of OPG's investments in the most subordinated debt of the Trust
- OPG must own greater than 50% of the most subordinated debt and targeted to own no less than 5% of the total debt of the Trust. Such ownership must be financed entirely by OPG through operating cash flows or external debt, without assistance from Provincial sources.

3) The Province will need to conclude on whether OPG still meets the definition of a Government Business Enterprise as defined under Public Sector Accounting Board standards in order to obtain the preferred consolidation treatment after the transaction. We also recommend that the Province to undertake the analysis deemed necessary to confirm the accounting treatment in its consolidated Public Accounts, including if the recognition of the intangible asset would result in an offsetting liability in the Public Accounts.

C. Ability to Finance

Property Right or Right to Collect
Legislative Requirements for Financing
The GA Recovery Right must be structured to encompass the following elements:

- Right to recover from and bill Ontario electricity customers for (1) the principal amount of GA that is being deferred, (2) all interest and other financing costs incurred in respect of the deferral of the GA, (3) all fees, expenses and other administrative costs associated with such financing;
- Repayment/amortization schedule as agreed by the IESO and any purchaser of such GA Recovery Right (or pursuant to a pre-defined schedule/formula that covers all of the purchaser's principal, interest and ongoing financing costs on a monthly basis);
- Repayment/amortization schedule must include a true up mechanism to ensure all costs associated with the deferral can be recovered from customers;
- IESO may dispose of the GA Recovery Right, provided that any such disposition shall be a true sale and absolute transfer to the purchaser of the IESO's right, title and interest in and to the GA Recovery Right;
- Purchaser will have the right to require the IESO (or any successor) to collect the principal amount of GA Recovery Right, together with interest, financing and administration costs, on the agreed repayment/amortization schedule;
- Right must be irrevocable and, if amended by future governments, debt holders have the right of action against the government to recover the amount outstanding including interest, fees, expenses and any damages resulting from the amendment;
- GA Recovery Right will not be subject to any set-off, counterclaim or other defence by the IESO or any successor or affiliated entity; and
- Make certain amendments to the Electricity Act to allow OPG to implement the SPV financing structure (e.g. allowing OPG to create subsidiaries and holding companies, and to have a beneficial interest in the SPV, etc). This would provide flexibility to accommodate possible variations to the financing structure that may be desirable over time.

Detailed legislative requirements are specified in the attachments as follows:

Attachment 1 Legislative requirements to allow deferral of global adjustment amounts to be financeable

Attachment 2 Statutory amendments

The proposed financing structure for the SPV is:

	Risk Profile	Source	% of Total Funding Requirements
Tranche A Senior Debt	The least risky	Capital Markets	51%
Tranche B Sub Debt	In between A&C	OPG via OEFC	39%
Tranche C Sub Debt)	The most risky	OPG via OEFC	5%
		OPG via Capital Markets	5%

SPV structure is used to accomplish the following:

- SPV holds right to charge customers for the benefit of debt holders;
- Allows the financing vehicle to be ring-fenced from OPG as an SPV structure is set up as generally single purpose entities with no other operations that could add risk to the SPV, dilute debt holder rights, allow parties from other operations to claim rights to the future recovery from customers or allow these other parties to initiate bankruptcy proceedings;
- Enables SPV to potentially get a higher credit rating than OPG;
- Supports consolidation with OPG provided accounting requirements are satisfied;

This approach supports a number of objectives of the GA Recovery Right:

- 51% external senior debt supports separation of the SPV from the Province
- 5% junior subordinated debt establishes OPG's "at risk" equity which supports separation of the SPV from the Province
- Subordinated debt provides flexibility to the financing structure and additional credit support to external debt holders
- Subordinated debt sourced from OPG (mainly funded by equity injection from the Province) minimizes impact on OPG credit metrics reducing risk of an OPG rating downgrade that could result in the SPV being consolidated directly with the Province as the SPV would be considered an arm of the Province.

Recent transactions used as precedents are:

Duke Energy Florida Project Finance LLC
June 2016
5 series of bonds totalling USD$1.3B
Weighted average life from 2 to 19 years with interest rates from 1.2% to 3.1%
Credit rating AAA

Utility Debt Securitization Authority
Sponsored by Long Island Power Authority
March 2016
Amount issued USD$0.6B
Weighted average life of 12 years and weighted average yield of 2.7%

August 2016
Amount issued USD$0.5B
Weighted average life of 7 years and weighted average yield of 2.0%

Credit rating AAA

Cumulative outstanding (including previous issuances): USD$4.2B

D. External Assessment

Shakerhill Partners, an external advisor, identified the following items in an assessment of the structure and financeability of the structure:

- The structure is financeable however there are a number of significant risks to the structure:
  - Canadian and Ontario law does not provide the same protection to property right as exists in the US federal and state constitutions to limit the ability of governments to adversely impair contracts to the detriment of the holder;
  - Legislation could mitigate some of the risks – deferred recovery asset to be "uncapped", regular semi-annual true up to ensure recovery, Province provides sufficient committed liquidity to the IESO so that temporary shortfall in recovery does not affect payments to SPV, term of the deferral recovery substantially exceeds the longest maturity of debt of the SPV and that true-up mechanism take account of potential for currency, interest rate and duration mis-match between the debt of the SPV and the recovery mechanism;
  - Size of the program may be too large for Canadian securitization market requiring access to the US securitization market;
- Final maturity of debt should not exceed 30 years from inception of the program
- True up mechanism should be designed such that the forecast of recovery is less than 10% of the customer bill under downside scenarios to limit growth of the deferral balance as a higher portion of the customer bill increases the political risk to debt holders which could result in a lower credit rating and potential impact on financeability
- Securitized debt products are specialized and price at a premium to other fixed rate instruments however a successful program supported by a strong credit rating this premium could shrink over time to a minor spread over Provincial debt
- OPG's credit rating should be maintained provided sufficient equity is injected to maintain credit metrics
- While the structure is not expected to impact the Province there are risks that the program could negatively impact the rating agencies view of the Province's financial management.

E. Risk Summary

i. Consolidation

- Elements of the proposed structure were established to support consolidation of the SPV into OPG. These items may not be sufficient to establish OPG as risk owner of the SPV and the SPV may need to be consolidated directly with the Province.

ii. Financeability

- The legislation establishing the structure and the property right for recovering the financing and associated costs may not be adequate for financing purposes resulting in more expensive financing or an inability to obtain the required external financing.

iii. Cost of Financing

- Future governments may enact legislation that changes the right of the SPV to recover amounts from customers.
- The right to recover amounts from future customers must be irrevocable and subject to full recovery from the government in the event that future governments reduce or eliminate the recovery. A legal structure that is weaker than the precedent US transactions increases the risk to debt holders and the cost of financing.
- Interest rates on bonds in the securitization market are higher than equivalent rated bonds. Rate for a AAA securitization credit is about 50 bps higher than GOC (rated AAA) for a 5 year term. This difference is attributable to the specialized structure of the bond, smaller investor pool for this bond, smaller size of the market and higher perceived risks of the bond.
- Any regulator involvement must not be seen to modify any terms of debt issued or the property right securing the debt as this would increase risk to debt holders.

- It may not be possible to issue debt to match the terms of the deferred asset so shorter term debt would be used which raises risk to re-finance the maturing debt as the market may no longer be interested in this product. As well, underlying reference interest rates may be higher and the market may require a higher spread to invest in this product.
- With the GA Recovery Right program continuing for 10 years, debt issued over this period is subject to changes in both the underlying reference interest rates and appetite of the market for this product.

iv. OPG Credit Rating

- Minimizing the impact of significant additional debt on OPG's credit rating is dependent on higher EBITDA arising from earned income on the GA Recovery Right in excess of external debt. Ability of the SPV to record revenue reflecting the growth in asset value.
- Potential OPG credit rating downgrade if legislative structure is not adequate to support long term recoverability, inability to record revenue from growth in asset value or agencies view equity injection as debt.
- OPG credit rating downgrade could result in loss of GBE status or result in SPV being consolidated directly with the Province.

Attachment 1

LEGISLATIVE REQUIREMENTS TO ALLOW DEFERRAL OF GLOBAL ADJUSTMENT AMOUNTS TO BE FINANCEABLE

The IESO currently has a right to collect GA monthly from ratepayers through provisions in the *Electricity Act, 1998*. It is proposed that collection of a certain portion of the monthly GA be deferred for collection in the future, and that the right to recover the deferred GA from ratepayers be used as a basis for structured financing/securitization.

The current proposal is for a trust to be created as a financing vehicle (the "**Trust**") in connection the deferred GA. The Trust will finance the deferral of the GA by purchasing the right to recover such deferred GA from the IESO for the principal amount of the GA being deferred. For example, if the amount of GA that is being deferred is $200 million in a given month, the Trust will purchase from the IESO the right to future recovery of the deferred GA and the associated financing costs (including interest and transaction costs) for $200 million in cash.

The Trust is expected to finance these purchases from the IESO through a combination of senior secured financing raised in the capital markets and subordinated financing from OPG (the funding for which will mostly be from equity injections from the OEFC/Province).

For accounting purposes, OPG will need to have the ability to direct the activities of the Trust, through a services agreement and/or through the Trust's constating document.

Based on securitized financing raised by utilities in the US (backed by utility cost recovery orders) and the current regulatory framework in Ontario, the legislation in Ontario would need to be amended to provide the following, at a minimum:

1. The IESO will be empowered to create an asset (the "**Regulatory Asset**") consisting of all right, title and interest in and to:

   (a) right to recover from and bill Ontario electricity ratepayers for:

   (i) the principal amount of GA that is being deferred for collection;
   (ii) all interest and other financing costs incurred in respect of the deferral of the GA (whether through senior debt raised in the public markets or subordinated debt raised from OPG or others); and
   (iii) (subject to the comments in paragraph 5 below in respect of OPG's internal administrative costs only) all fees, expenses and other administrative costs associated with such financing, including up-front and ongoing financing costs and any indemnity payments;

all on such repayment/amortization schedule as agreed by the IESO and any purchaser of such right (or pursuant to a pre-defined schedule/formula in the legislation that covers all of the purchaser's principal, interest and ongoing financing costs on a monthly basis); and

(b) all revenues, collections, claims, rights to payments, money or proceeds arising from the rights and interests set out in paragraph (a) above, regardless of whether such revenues, collections, claims, rights to payments, money or proceeds are imposed, billed, received, collected or maintained together with or commingled with other revenues, collections, rights to payments, payments, money or proceeds.

2. The IESO may dispose of the Regulatory Assets created from time to time on such terms as the IESO determines in accordance with the terms of directives to be issued to the IESO from time to time by the Minister, provided that any such disposition shall be a true sale and absolute transfer of the IESO's right, title and interest in and to a Regulatory Asset to the purchaser of the Regulatory Asset.

3. The Regulatory Assets will not be subject to any set-off, counterclaim or other defence by the IESO or any successor or affiliated entity thereof.

4. The legislation will need to recognize the Regulatory Assets as amounts that may be recovered by the IESO (e.g. it could be designated as a "GA Deferral" and would be included in the amounts collectible by the IESO through the GA collection mechanism, and would include interest and financing costs).

5. The purchaser of the Regulatory Asset will have the right to require the IESO (or any successor) to collect the principal amount of GA deferred, together with interest, financing and administration costs, on the agreed repayment/amortization schedule. **[NTD: In the LIPA securitization rate order, if the entity that is authorized to collect rates to service the bonds ends up defaulting, there is the ability to request a court to order "sequestration" and payments of amounts owing to the owner of the Regulatory Asset. Consider whether to include a similar right here. Alternatively, consider whether a security interest over the moneys collected by the IESO could be provided to the purchaser.]**

OEB would be provided with oversight over the internal administrative costs collected by the Financing Trust. This could be accomplished by (a) providing the purchaser of the Regulatory Asset with the right to require

the IESO or a successor to collect only the principal amount of GA together with interest and financing costs and third party fees and expenses, and (b) requiring the IESO to collect amounts through the global adjustment and make payments to the purchaser of the Regulatory Asset with respect to the internal administrative costs incurred by the purchaser in connection with the purchase and management of the Regulatory Asset and the Financing Trust, in accordance with the order of the OEB then in effect. Under this mechanism, the OEB would be required to review the purchaser's internal administrative costs through a streamlined process and issue such orders in accordance with rules to be prescribed under a new regulation under the OEB Act, which would clearly limit the OEB's scope of review and could establish the basis for the purchaser to receive an appropriate fee for its services.

6. In the event that any action is taken or permitted by the Province or any regulatory authority that limits, alters, or impairs the value of a Regulatory Asset or reduces the ability of the IESO or the purchaser of the Regulatory Asset to collect or recover the costs associated therewith, the owner of the Regulatory Asset and the holders of any bonds or other securities issued to finance the purchase of the Regulatory Asset, will have a right of action against the Province for any damages suffered as a result of such amendment.

Attachment 2

STATUTORY AMENDMENTS

The following is preliminary and is based on our current understanding of the proposed structure and objectives. For example, we have assumed that the structure will not entail the insertion of a new Holdco between OPG and the Province. As these aspects are refined, some of the suggested amendments described below may not be needed and other aspects that we are not aware of may need to be considered. Accordingly, these suggested amendments are provided for discussion purposes and are subject to change. We would welcome the opportunity to work with OPG and the Ministry on refining the scope and substance of required legislative and regulatory amendments.

A. Amendments to Implement Structure

Certain *Electricity Act, 1998* amendments would be needed to implement the anticipated structure (which we understand, as noted above, would not include a Holdco), as follows:

- **Section 53.1(1):** Amend to permit owning and operating generation facilities through subsidiaries (not only directly through OPG). In addition, amend to permit OPG to administer, manage, loan moneys to and have a beneficial interest in, if applicable, Financing Trust.

- **Section 53.2:** Amend to permit the Minister to acquire, hold, dispose of or otherwise deal with securities or debt obligations of, or any other interest in, OPG or any subsidiaries. This is to accommodate possible variations to the financing structure that may be desirable over time.

- **Section 53.■ (new):** New statutory section to permit the Minister to enter into arrangements relating to an exercise of powers under 53.2.

- **Section 53.■ (new)**: New statutory section providing that creditors of Financing Trust have no recourse to the assets of OPG or any of its subsidiaries (other than Financing Trust, if applicable). In addition, consideration should be given as to whether the Act should be amended so that the Financing Trust cannot be wound up or liquidated.

B. Miscellaneous Corporate Items to Address

- **OPG Articles:** Amend the OPG's articles to remove the private company restrictions.

- **MOA with Province:** Consider whether any amendments to OPG's MOA with the Province are required to contemplate the Financing Trust.

C. Amendments Under Electricity Act to Implement GA Smoothing

Based on our understanding that the global adjustment smoothing mechanism is intended to benefit residential and small business customers only and that the Minister will be responsible for determining how much global adjustment smoothing is to be applied in a given month, if any, amendments to the *Electricity Act*, *1998* and Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) would be needed to implement the mechanism, as follows:

(i) Electricity Act:

- **Section ■ (New):** Establish a new power for the Minister to make directives to the IESO in relation to the global adjustment smoothing mechanism and, particularly, for purposes of establishing global adjustment smoothing amounts from time to time (expected to be monthly). To the extent possible, the directive power should be drafted so as to limit the ability for a future Minister to require the IESO to do anything that would materially and adversely affect the Financing Trust or its lenders. **[NTD: While our understanding is that the Minister would direct this, we note from other materials we have seen that OPG may instead be recommending a formula approach. It is not clear what the formula would look like, where it would be set out or how it would be applied and by whom]**

- **Paragraph 25.33(1):** This section says that IESO shall make adjustments in accordance with the regulations to ensure that, over time, payments by prescribed classes of market participants reflect amounts paid to OPG, OEFC and distributors, as well as amounts paid to entities with whom IESO has a procurement contract. Add new subsection (c) so as to require IESO to ensure that, over time, payments by prescribed classes of market participants also reflect amounts paid to Financing Trust. **[NTD: Not certain this is needed if only to benefit residential and small business consumers, who are not market participants. May be needed in reference to payments from distributors and retailers]**

- **Paragraph 25.33(2):** This section says that distributors and retailers shall make adjustments in accordance with the regulations to ensure that, over time, payments by prescribed classes of consumers reflect amounts paid to OPG, OEFC and distributors, as well as amounts paid to entities with whom IESO has a procurement contract. Add new subsection (c) so as to require distributors and retailers to ensure that, over time, payments by prescribed classes of consumers also reflect amounts paid to Financing Trust.

- **Note**: As described below, the regulation will need to include new requirements for the IESO to record the global adjustment smoothing amounts in one or more variance accounts and to use those amounts to offset amounts otherwise recorded in the variance accounts under Section 25.33(3) of the Act. For context, we note:

    - Section 25.33(3) says that adjustments under (1) or (2) relating to electricity consumed by consumers whose rates are determined by

the OEB under s. 79.16 of the OEB Act (i.e. RPP Customers) shall instead be made in accordance with the regulations to one or more variance accounts established and maintained by the IESO.

- Section 25.33(4) says IESO, distributors and retailers shall make and receive such payments, set-offs and credits as may be required or permitted by the regulations with respect to consumers described in (3), i.e. RPP Customers.

- Section 25.33(5) says that IESO shall establish and maintain such variance accounts as may be needed to record all amounts payable or receivable by it under 25.33.

(ii) O. Reg. 429/04 (Adjustments Under Section 25.33 of the Act):

- **Section 1(1):** Consider adding definitions for "Financing Trust" and "global adjustment smoothing amount" or such other terms as may be preferred.

- **Section 1.2(1) (New):** Add section providing that, for the purposes of this Regulation, the global adjustment smoothing amount for a month is the amount determined by the IESO in accordance with a directive from the Minister under section ■ of the Electricity Act in respect of the month. **[NTD: See above note re use of Minister directives]**

- **Section 1.2(2) (New):** Consider adding a section providing that the IESO shall publish the global adjustment smoothing amount for a month by no later than the 10th business day of the following month [to align with general publication requirements for global adjustment under s. 1.1(2)].

- **Section 10(1):** Amend formula for calculating Class B GA rate by subtracting the global adjustment smoothing amount for a month from "M", which is the total amount of the global adjustment for the month. The global adjustment smoothing amount could be designated as "X", such that the formula would be (M-X-N)/(P-Q). Define "X" as the global adjustment smoothing amount for the month as determined by the IESO in accordance with the Minister's directive under section ■ of the Electricity Act for the month. **[NTD: See above note re use of Minister directives]**

- **Section 10.1 (New):** Add new section to deal with adjustments under subsection 25.33(3) of the Act, i.e. in respect of RPP consumers. This section should require the IESO to establish, within the variance account(s) it maintains pursuant to subsection 25.33(3) of the Act, one or more subaccounts in which it shall record the global adjustment smoothing amounts applicable to the classes of consumers described in subsection 25.33(3) of the Act. This section must also specify that the IESO shall apply the amounts recorded in the subaccounts against the balances in the variance accounts for purposes of section 79.16(3) of the OEB Act.

  - **Note:** This is a key aspect because, when the OEB determines RPP rates, it must take into account the balances in the variance accounts established by the IESO under s. 25.33 of the Electricity Act and make adjustments with a view to eliminating the balances within 12 months. This proposed new section 10.1 causes the IESO to reduce (in the near term) the variance account balances by the global adjustment smoothing amounts, as provided by Financing Trust, thereby enabling the OEB to determine RPP rates that, despite being lower for RPP consumers in the near term, still eliminate the relevant variance account balances within 12 months.

- **Paragraph 11(2)2.ii:** Amend the formula for calculating the allocation of global adjustment for a month to a licensed distributor that is a market participant by subtracting the global adjustment smoothing amount for a month from "M", which has the same meaning as under section 10(1). The global adjustment smoothing amount could be designated as "X", such that the formula would be [(M-X-N) x (R+S-T)]/(P-Q). Define "X" as suggested under section 10(1).

- **Paragraph 11(2)3:** Amend the formula for calculating the allocation of global adjustment for a month to each Class B market participant by subtracting the global adjustment smoothing amount for a month from "M", which has the same meaning as under section 10(1). The global adjustment smoothing amount could be designated as "X", such that the formula would be [(M-X-N) x U]/(P-Q). Define "X" as suggested under section 10(1).

- **Paragraph 16(7)4:** Consider amending the description of "Global Adjustment" that is required to be included on certain invoices so as to inform consumers that their portion of the global adjustment for the month (i) may have been reduced by the application of a global adjustment smoothing amount from the Financing Trust, or (ii) may include amounts payable to the Financing Trust in respect of global adjustment smoothing amounts previously applied.

- **Section 20(1):** This section establishes an obligation for the Ontario Electricity Financial Corporation and every licensed distributor that is a market participant to give the IESO such information as the IESO may require for the purposes of the Regulation in the form specified by the IESO and before the expiry of the period specified by the IESO. Consider amending to extend this obligation to the Financing Trust.

- **Section 20(6):** This section provides that on request by the OEB, the IESO, a licensed distributor, an embedded generator, a retailer or the OEFC shall give the OEB such information relating to this Regulation as the OEB may require, in the form and within the period specified by the OEB. Consider amending to extend this obligation to the Financing Trust.

D. Amendments Under OEB Act to Implement Cost Recovery for Financing Trust

Amendments to the *Ontario Energy Board Act*, including amendments to O. Reg. 95/05 (Classes of Consumers and Determination of Rates) and the introduction of a new regulation, would be needed to implement a cost recovery process for the Financing Trust in relation to the global adjustment smoothing mechanism, potentially with limited OEB oversight, as follows:

(i) Ontario Energy Board Act:

- **Section 78(3.3):** This provision establishes an obligation for the OEB, when determining rates for the retailing of electricity, to take into account balances in variance accounts established under section 25.33 of the Electricity Act and to make adjustments "with a view to eliminating those balances within 12 months or such shorter time periods as the Minister may direct." Consider whether any amendments are needed, and confirm this works with the framework being proposed.

- **Section 78.7 (New):** We understand that the Province may want the OEB to have an oversight role. One possible approach would be to establish a new statutory section establishing that the IESO shall make payments to the Financing Trust with respect to the internal administrative costs incurred by the Financing Trust in connection with the purchase and management of the Regulatory Asset and the Financing Trust. Such payments by the IESO would need to be made in accordance with the order of the OEB then in effect, which orders shall be made by the OEB in accordance with rules prescribed under a new regulation.

    - The new regulation would need to be clear that the OEB does not have jurisdiction to consider the principal amount or any interest, financing costs, third party fees or expenses. Rather, OEB's role would be limited to considering the internal administrative costs of the Financing Trust and ensuring the Financing Trust receives an appropriate fee for its services, all of which would be recovered by the Financing Trust from the IESO, which would collect those amounts in the global adjustment. Note that, if this approach is accepted, the IESO and distributors and retailers would need the authority to collect such amounts as part of the GA and IESO would need the authority to pay such amounts to the Financing Trust. As such, additional amendments would be needed under O. Reg. 429/04.

- **Note:** Section 79.16 of the OEB Act does not require changes, but the significance of this provision should be understood.

    - Section 79.16 gives the OEB responsibility for determining electricity commodity prices for eligible consumers. Eligibility is determined under Reg. 95/05 (Classes of Consumers and Determination of Rates), which is also known as the Regulated Price Plan (RPP) Regulation.
    - Section 4(2) of the RPP Regulation defines RPP-eligible consumers as low volume consumers (i.e. those who annually use less than 150,000 kWh

or such other amount as prescribed), consumers with demand of 50 kW or less, residential consumers that have accounts with distributors, consumers who annually use 150,000 to 250,000 kW of electricity, and consumers who have accounts with distributors if in the farming business.

- Paragraph 6(1)3 of the RPP Regulation provides that "In determining the rates (for RPP-eligible consumers), the Board shall forecast the cost of electricity to be consumed by the consumers to whom the rates apply, taking into consideration adjustments required under section 25.33 of the *Electricity Act, 1998* and shall ensure that the rates reflect those costs."
- The Ontario Energy Board has developed a Regulated Price Plan Manual (revised February 16, 2016) to describe the processes and methodologies it uses for determining electricity commodity prices that are charged to RPP consumers pursuant to Section 79.16 of the OEB Act and paragraph 6(1)3 of the RPP Regulation.

(ii) O. Reg. 95/05 (Classes of Consumers and Determination of Rates)

- **Paragraph 6(1)3:** Amend so as to require the Board, when forecasting the cost of electricity to be consumed by the consumers to whom the rates apply, to take into consideration not only the adjustments required under section 25.33 of the Electricity Act but also the application or prior application of global adjustment smoothing amounts determined by the IESO in accordance with Minister directives under section ■ of the Electricity Act, and to ensure that the RPP rates reflect those amounts. **[NTD: See above note re use of Minister directives]**

(iii) New Regulation (Payments to the Financing Trust)

- If the OEB is to be given the role of reviewing and approving the recovery of OPG's internal administrative costs for the Financing Trust under the potential section 78.7 (see above), then this regulation should describe the process and criteria pursuant through which the OEB would determine the amounts that the IESO would be required to collect through the global adjustment, in accordance with section 25.33 of the Electricity Act, and pay to the Financing Trust in respect of the provision of global adjustment smoothing amounts. This part of the regulation should establish:

    - any reporting requirements from the Financing Trust and/or the IESO to the OEB in connection with the global adjustment smoothing mechanism;
    - the frequency of the OEB making determinations under this part of the regulation;
    - the process through which the OEB shall make these determinations, which should be a streamlined administrative process rather than a public hearing process or, if a hearing is needed, then the scope of the proceeding should be clearly and narrowly constrained so as to deter intervenor involvement, lengthy proceedings and reduce/eliminate risk to recovery by Financing Trust;

- the basis for the OEB's determinations as to the payments that shall be made to the Financing Trust, which should specify that:
  - the Financing Trust shall recover its prudently incurred internal administrative costs on a forecast basis each year;
  - the Financing Trust shall receive an appropriate fee each year (with some guidance as to what would be appropriate); and
  - the approved payment amounts shall be collected by the IESO through the global adjustment and paid to the Financing Trust in accordance with the order of the OEB then in effect. Note that O. Reg. 429/04 would likely need amendments to permit IESO (and distributors and retailers) to collect these amounts through the global adjustment.

Annual GA Cost Forecast + Extrapolation ($ million)

	2017	2018	2019	2020	2021	2022
Status Quo	12095	11835	11552	12168	10844	10634

2023	2024	2025	2026	2027	2028	2029	2030	2031
10243	11128	10527	10033	11043	10819	10009	9721	8654

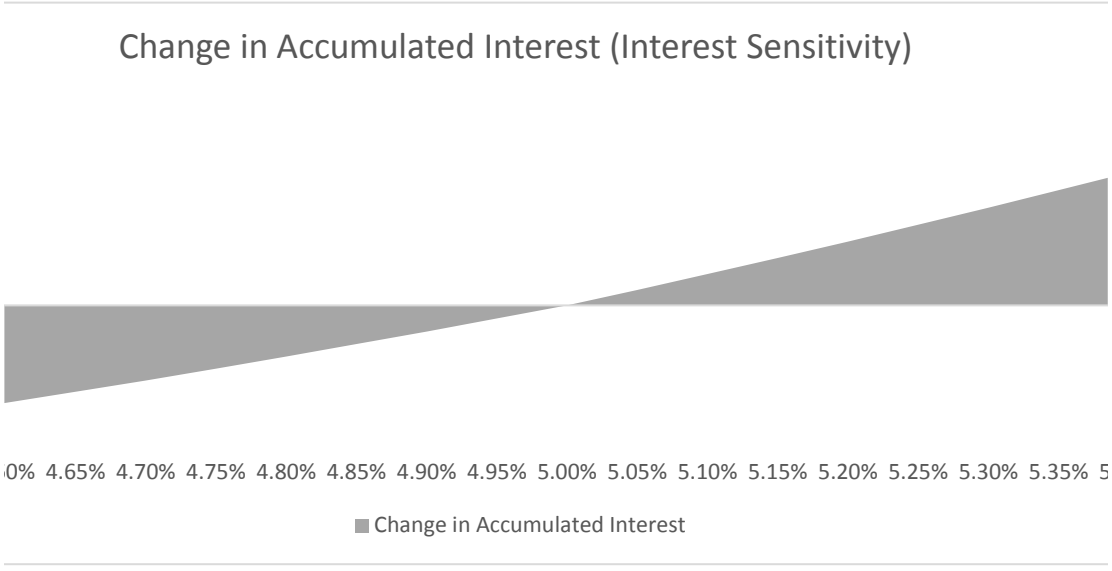
2032	2033	2034	2035	2036	2037	2038	2039	2040
8820	8238	7756	5662	5389	5129	4881	4645	4421

2041	2042	2043	2044	2045	2046	2047	2048	2049
4207	4004	3811	3627	3451	3285	3126	2975	2831

2050
2695


Billions
$12.0
$10.0
$8.0
$6.0
$4.0
$2.0
$-
$(2.0)
$(4.0)
$(6.0)
$(8.0)
4.50%
4.55%

4.50%
4.55%
4.60%
4.65%
4.70%
4.75%
4.80%
4.85%
4.90%
4.95%
5.00%
5.05%
5.10%
5.15%
5.20%
5.25%
5.30%
5.35%
5.40%
5.45%
5.50%



Accu interest		at 5%		Change in Accumulated Interest	
$	28,522.34	$	35,542.08	$	(7,019.74)
$	29,157.26	$	35,542.08	$	(6,384.82)
$	29,802.44	$	35,542.08	$	(5,739.64)
$	30,458.02	$	35,542.08	$	(5,084.06)
$	31,124.15	$	35,542.08	$	(4,417.93)
$	31,809.92	$	35,542.08	$	(3,732.16)
$	32,531.41	$	35,542.08	$	(3,010.67)
$	33,265.15	$	35,542.08	$	(2,276.93)
$	34,011.31	$	35,542.08	$	(1,530.77)
$	34,770.07	$	35,542.08	$	(772.01)
$	35,542.08	$	35,542.08	$	-
$	36,454.64	$	35,542.08	$	912.56
$	37,385.26	$	35,542.08	$	1,843.18
$	38,334.22	$	35,542.08	$	2,792.14
$	39,301.83	$	35,542.08	$	3,759.75
$	40,288.39	$	35,542.08	$	4,746.31
$	41,294.20	$	35,542.08	$	5,752.12
$	42,319.59	$	35,542.08	$	6,777.52
$	43,364.88	$	35,542.08	$	7,822.80
$	44,430.37	$	35,542.08	$	8,888.29
$	45,516.41	$	35,542.08	$	9,974.34



Balance Sheet As of December 31	Algoma Power Inc.	Atikokan Hydro Inc.	Bluewater Power Distribution Corporation	Brant County Power Inc.	Brantford Power Inc.	Burlington Hydro Inc.
Cash & cash equivalents	$ 407,099	$ 540,928	$ 1,176,740	$ 2,313,947	$ 12,148,482	$ 10,761,194
Receivables	6,484,797	921,648	22,763,492	6,971,002	21,890,075	43,193,941
Inventory	55,950	113,968	342,985	285,941	2,148,429	3,000,397
Inter-company receivables	-	-	680,509	-	-	463,344
Other current assets	481,502	44,929	954,236	348,545	385,437	2,909,960
Current assets	7,429,347	1,621,473	25,917,962	9,919,435	36,572,422	60,328,835
Property plant & equipment	161,699,757	6,172,646	104,365,905	40,568,107	105,973,065	256,781,930
Accumulated depreciation & amortization	(63,287,841)	(3,450,022)	(50,756,055)	(15,225,934)	(41,718,004)	(147,948,715)
	98,411,916	2,722,624	53,609,850	25,342,172	64,255,061	108,833,215
Regulatory assets	4,435,850	199,477	6,368,169	4,514,999	6,357,960	4,775,070
Inter-company investments	-	-	-	-	-	-
Other non-current assets	3,098,655	103,679	-	-	1,787,905	1,562,584
TOTAL ASSETS	$ 113,375,769	$ 4,647,253	$ 85,895,981	$ 39,776,606	$ 108,973,348	$ 175,499,704
Accounts payable & accrued charges	$ 5,564,782	$ 1,014,883	$ 16,501,034	$ 6,001,400	$ 15,230,613	$ 23,741,410
Other current liabilities	45,019	15,109	827,247	596,112	245,095	42,289
Inter-company payables	915,389	-	2,824,848	1,455,610	355,100	225,497
Loans and notes payable, and current portion of long term debt	-	117,723	45,233	-	2,561,334	865,636
Current liabilities	6,525,190	1,147,715	20,198,362	8,053,122	18,392,143	24,874,831
Long-term debt	52,000,000	187,617	23,918,540	-	17,022,603	14,184,769
Inter-company long-term debt & advances	-	342,000	-	8,000,000	24,189,168	47,878,608
Regulatory liabilities	1,613,930	144,621	3,024,683	4,184,111	5,129,689	4,466,574
Other deferred amounts & customer deposits	-	122,873	1,257,114	179,386	940,774	2,243,024
Employee future benefits	6,609,600	-	9,494,144	805,816	2,110,420	4,447,707
Deferred taxes	-	103,679	-	-	-	-
Total Liabilities	66,748,721	2,048,505	57,892,843	21,222,435	67,784,796	98,095,513
Shareholders' Equity	46,627,048	2,598,748	28,003,138	18,554,171	41,188,551	77,404,191
LIABILITIES & SHAREHOLDERS' EQUITY	$ 113,375,769	$ 4,647,253	$ 85,895,981	$ 39,776,606	$ 108,973,348	$ 175,499,704

Balance Sheet As of December 31	Cambridge and North Dumfries Hydro Inc.	Canadian Niagara Power Inc.	Centre Wellington Hydro Ltd.	Chapleau Public Utilities Corporation	COLLUS PowerStream Corp.	Cooperative Hydro Embrun Inc.
Cash & cash equivalents	$ 5,299,557	$ 2,760,923	$ 2,116,931	$ 575,925	$ 2,943,100	$ 1,718,040
Receivables	42,933,261	10,713,074	4,363,248	677,389	8,176,813	809,612
Inventory	2,210,674	54,956	348,515	50,763	285,875	-
Inter-company receivables	1,655,610	-	-	521,753	-	-
Other current assets	440,118	1,031,248	77,270	-	612,657	-
Current assets	52,539,219	14,560,201	6,905,966	1,825,830	12,018,444	2,527,652
Property plant & equipment	222,532,515	145,924,658	23,895,930	2,801,261	34,614,626	4,415,191
Accumulated depreciation & amortization	(106,886,492)	(58,572,804)	(10,605,835)	(1,674,089)	(18,105,612)	(1,956,580)
	115,646,022	87,351,854	13,290,095	1,127,171	16,509,014	2,458,611
Regulatory assets	6,407,457	4,583,152	819,228	366,873	5,140,434	279,157
Inter-company investments	34,894,618	529,000	-	-	-	-
Other non-current assets	558,760	4,725,424	838,723	-	-	20,648
TOTAL ASSETS	$ 210,046,077	$ 111,749,630	$ 21,854,011	$ 3,319,874	$ 33,667,893	$ 5,286,068
Accounts payable & accrued charges	$ 22,719,408	$ 10,109,491	$ 2,851,775	$ 446,816	$ 8,027,173	$ 880,589
Other current liabilities	2,309,934	59,706	84,635	1,152	3,381	-
Inter-company payables	-	31,785,122	-	440,605	-	-
Loans and notes payable, and current portion of long term debt	-	-	113,863	-	527,581	-
Current liabilities	25,029,342	41,954,319	3,050,273	888,573	8,558,136	880,589
Long-term debt	85,000,000	16,050,000	4,255,111	-	11,950,730	-
Inter-company long-term debt & advances	-	20,000,000	5,046,753	-	-	-
Regulatory liabilities	11,201,696	3,585,706	394,315	371,174	3,748,066	100,292
Other deferred amounts & customer deposits	9,291,790	-	803,418	25,054	281,456	21,663
Employee future benefits	2,277,521	7,402,200	164,416	-	328,535	-
Deferred taxes	-	1,775,934	-	-	-	-
Total Liabilities	132,800,349	90,768,159	13,714,286	1,284,801	24,866,922	1,002,544
Shareholders' Equity	77,245,728	20,981,471	8,139,725	2,035,073	8,800,971	4,283,523
LIABILITIES & SHAREHOLDERS' EQUITY	$ 210,046,077	$ 111,749,630	$ 21,854,011	$ 3,319,874	$ 33,667,893	$ 5,286,068

Balance Sheet As of December 31	E.L.K. Energy Inc.	Enersource Hydro Mississauga Inc.	Entegrus Powerlines Inc.	EnWin Utilities Ltd.	Erie Thames Powerlines Corporation	Espanola Regional Hydro Distribution Corporation
Cash & cash equivalents	$ 3,003,064	$ -	$ 3,597,626	$ 12,630,409	$ 21,415	$ 1,729,079
Receivables	5,747,186	141,305,275	20,772,603	51,505,084	10,437,457	1,887,344
Inventory	296,504	4,670,623	736,058	3,492,184	86,525	72,050
Inter-company receivables	109,954	130,982	-	5,850,572	91,041	-
Other current assets	403,917	9,696,025	590,358	1,301,488	781,046	266,694
Current assets	9,560,625	155,802,905	25,696,646	74,779,736	11,417,483	3,955,167
Property plant & equipment	23,727,673	786,506,176	141,643,656	275,076,299	52,970,451	9,203,378
Accumulated depreciation & amortization	(15,063,216)	(125,086,067)	(64,472,925)	(50,871,921)	(19,745,487)	(5,305,645)
	8,664,457	661,420,110	77,170,731	224,204,378	33,224,964	3,897,733
Regulatory assets	3,708,966	33,353,916	5,689,044	6,154,354	5,719,496	2,417,416
Inter-company investments	100	-	-	4,520,480	-	-
Other non-current assets	163,735	37,085,816	-	12,028,982	-	20,418
TOTAL ASSETS	$ 22,097,884	$ 887,662,747	$ 108,556,421	$ 321,687,930	$ 50,361,944	$ 10,290,734
Accounts payable & accrued charges	$ 4,024,391	$ 124,353,226	$ 14,678,760	$ 29,622,124	$ 9,418,110	$ 2,579,578
Other current liabilities	59,392	-	185,747	1,090,668	-	102,824
Inter-company payables	524,674	1,461,863	338,371	21,060,534	2,393,349	-
Loans and notes payable, and current portion of long term debt	-	14,562,432	-	326,359	1,695,391	-
Current liabilities	4,608,457	140,377,522	15,202,878	52,099,685	13,506,849	2,682,402
Long-term debt	5,100,000	60,000,000	-	51,000,000	18,038,524	2,400,000
Inter-company long-term debt & advances	-	334,000,000	47,523,326	-	-	1,524,511
Regulatory liabilities	2,444,546	28,361,283	6,620,097	20,904,852	3,053,245	293,587
Other deferred amounts & customer deposits	1,261,776	45,980,342	2,645,909	13,613,237	1,050,138	316,591
Employee future benefits	581,577	6,072,586	2,707,958	50,923,371	653,100	-
Deferred taxes	-	-	-	-	339,000	49,518
Total Liabilities	13,996,356	614,791,732	74,700,168	188,541,145	36,640,857	7,266,609
Shareholders' Equity	8,101,528	272,871,015	33,856,252	133,146,785	13,721,087	3,024,125
LIABILITIES & SHAREHOLDERS' EQUITY	$ 22,097,884	$ 887,662,747	$ 108,556,421	$ 321,687,930	$ 50,361,944	$ 10,290,734

Balance Sheet As of December 31	Essex Powerlines Corporation	Festival Hydro Inc.	Fort Frances Power Corporation	Greater Sudbury Hydro Inc.	Grimsby Power Incorporated	Guelph Hydro Electric Systems Inc.
Cash & cash equivalents	$ 2,481,502	$ 1,060	$ 3,127,236	$ 2,862,070	$ 749,804	$ 31,145,880
Receivables	12,805,289	11,995,121	2,234,864	25,891,082	3,672,266	40,047,929
Inventory	878,417	134,210	133,055	1,203,631	594,452	2,200,113
Inter-company receivables	-	67,446	-	638,231	21,914	1,185,998
Other current assets	606,815	393,951	78,798	2,058,748	340,927	2,558,048
Current assets	16,772,024	12,591,789	5,573,953	32,653,762	5,379,364	77,137,967
Property plant & equipment	75,915,611	58,169,922	11,998,440	198,132,819	31,556,690	163,140,672
Accumulated depreciation & amortization	(27,172,698)	(4,445,751)	(8,567,755)	(118,397,666)	(5,681,599)	(32,118,894)
	48,742,913	53,724,171	3,430,685	79,735,152	25,875,092	131,021,779
Regulatory assets	4,116,059	2,045,076	246,890	4,327,332	604,571	5,216,082
Inter-company investments	-	-	-	400,000	-	-
Other non-current assets	-	1,165,953	-	9,472,574	-	2,434,382
TOTAL ASSETS	$ 69,630,996	$ 69,526,989	$ 9,251,528	$ 126,588,820	$ 31,859,027	$ 215,810,209
Accounts payable & accrued charges	$ 14,659,114	$ 10,545,961	$ 875,501	$ 17,635,742	$ 2,710,883	$ 33,498,919
Other current liabilities	545,171	246,321	180,604	1,054,149	88,080	359,372
Inter-company payables	-	15,521,618	-	48,645,457	205,019	1,685,695
Loans and notes payable, and current portion of long term debt	4,116,155	810,909	-	2,400,682	4,621,356	564,990
Current liabilities	19,320,439	27,124,810	1,056,106	69,736,030	7,625,337	36,108,975
Long-term debt	17,212,218	14,220,869	-	816,550	4,760,755	95,000,000
Inter-company long-term debt & advances	373,943	-	-	-	5,782,746	-
Regulatory liabilities	5,176,367	923,786	440,306	5,593,107	549,625	6,804,714
Other deferred amounts & customer deposits	843,021	1,663,397	1,618,476	1,181,879	4,221,179	3,265,920
Employee future benefits	3,989,736	1,379,334	-	22,706,280	-	9,814,230
Deferred taxes	-	-	176,336	9,472,574	225,808	-
Total Liabilities	46,915,725	45,312,196	3,291,223	109,506,420	23,165,451	150,993,840
Shareholders' Equity	22,715,272	24,214,793	5,960,305	17,082,400	8,693,576	64,816,369
LIABILITIES & SHAREHOLDERS' EQUITY	$ 69,630,996	$ 69,526,989	$ 9,251,528	$ 126,588,820	$ 31,859,027	$ 215,810,209

Balance Sheet As of December 31	Haldimand County Hydro Inc.	Halton Hills Hydro Inc.	Hearst Power Distribution Company Limited	Horizon Utilities Corporation	Hydro 2000 Inc.	Hydro Hawkesbury Inc.
Cash & cash equivalents	$ 4,501,658	$ -	$ 3,107,393	$ 790,883	$ 190,032	$ 1,141,731
Receivables	9,968,801	14,640,520	1,986,736	108,318,754	294,077	2,709,066
Inventory	1,778,763	986,901	73,833	8,339,275	-	97,756
Inter-company receivables	190,296	556,027	-	4,168,506	-	-
Other current assets	5,835,657	1,667,752	22,294	2,978,513	15,422	29,644
Current assets	22,275,176	17,851,200	5,190,256	124,595,930	499,531	3,978,195
Property plant & equipment	53,789,956	63,470,803	2,042,599	563,273,667	1,356,273	7,483,103
Accumulated depreciation & amortization	(1,112,109)	(4,351,286)	(569,919)	(92,985,771)	(835,136)	(2,454,157)
	52,677,847	59,119,517	1,472,680	470,287,896	521,137	5,028,946
Regulatory assets	1,114,900	3,464,680	274,140	20,960,209	300,730	445,992
Inter-company investments	-	-	-	-	-	-
Other non-current assets	761,563	5,593,817	24,200	13,149,161	20,633	-
TOTAL ASSETS	$ 76,829,485	$ 86,029,213	$ 6,961,276	$ 628,993,196	$ 1,342,032	$ 9,453,133
Accounts payable & accrued charges	$ 7,326,748	$ 10,788,629	$ 1,867,673	$ 97,672,554	$ 217,024	$ 3,241,686
Other current liabilities	246,353	392,500	25,912	1,506,178	67,734	-
Inter-company payables	15,397	-	443,743	29,531,526	-	-
Loans and notes payable, and current portion of long term debt	-	7,586,602	-	16,626,000	-	744,429
Current liabilities	7,588,498	18,767,732	2,337,328	145,336,258	284,758	3,986,115
Long-term debt	-	9,258,402	1,250,000	-	-	663,217
Inter-company long-term debt & advances	17,966,269	16,141,969	-	190,000,000	-	-
Regulatory liabilities	4,765,432	1,689,384	193,321	14,294,058	51,215	357,606
Other deferred amounts & customer deposits	431,787	3,909,335	83,681	30,114,476	-	449,515
Employee future benefits	-	728,685	-	29,760,400	-	-
Deferred taxes	-	4,812,824	-	-	66,636	1,076
Total Liabilities	30,751,986	55,308,331	3,864,330	409,505,193	402,609	5,457,528
Shareholders' Equity	46,077,499	30,720,882	3,096,947	219,488,003	939,423	3,995,605
LIABILITIES & SHAREHOLDERS' EQUITY	$ 76,829,485	$ 86,029,213	$ 6,961,276	$ 628,993,196	$ 1,342,032	$ 9,453,133

Balance Sheet As of December 31	Hydro One Brampton Networks Inc.	Hydro One Networks Inc.	Hydro Ottawa Limited	Innpower Corporation	Kenora Hydro Electric Corporation Ltd.	Kingston Hydro Corporation
Cash & cash equivalents	$ 40,520,924	$ -	$ 5,557,416	$ -	$ 1,710,692	$ 3,728,254
Receivables	72,520,595	775,715,785	154,907,003	8,317,533	3,133,123	14,800,473
Inventory	1,073,625	3,886,533	12,398,683	451,746	179,742	1,496,021
Inter-company receivables	-	25,417,235,385	5,784,515	191,273	-	-
Other current assets	858,191	13,120,004	2,183,757	400,146	80,381	842,726
Current assets	114,973,335	26,209,957,707	180,831,374	9,360,699	5,103,938	20,867,474
Property plant & equipment	408,831,665	10,972,447,791	955,318,230	53,869,225	17,761,328	45,060,905
Accumulated depreciation & amortization	(25,355,760)	(3,941,452,799)	(158,393,111)	(3,926,480)	(9,329,726)	(3,476,866)
	383,475,905	7,030,994,992	796,925,118	49,942,745	8,431,602	41,584,039
Regulatory assets	14,298,705	330,727,000	14,225,142	1,698,748	635,776	15,189,023
Inter-company investments	-	0	-	-	-	-
Other non-current assets	8,021,342	585,319,384	458,815	569,226	287,680	-
TOTAL ASSETS	$ 520,769,286	$ 34,156,999,083	$ 992,440,450	$ 61,571,418	$ 14,458,996	$ 77,640,536
Accounts payable & accrued charges	$ 71,225,783	$ 1,124,596,895	$ 128,375,468	$ 5,572,570	$ 1,509,329	$ 9,499,832
Other current liabilities	1,754,463	183,368,534	1,571,468	553,677	30,178	-
Inter-company payables	-	25,417,312,482	2,377,170	1,852,080	491,004	-
Loans and notes payable, and current portion of long term debt	7,047,074	236,008,096	41,000,000	4,056,149	-	3,029,789
Current liabilities	80,027,320	26,961,286,007	173,324,107	12,034,476	2,030,511	12,529,621
Long-term debt	193,000,000	3,000,904,582	-	30,819,711	4,510,946	17,309,178
Inter-company long-term debt & advances	-	-	447,185,000	-	-	10,880,619
Regulatory liabilities	16,041,572	128,634,106	40,106,544	1,127,850	1,078,671	8,823,625
Other deferred amounts & customer deposits	25,937,383	99,146,366	18,313,604	296,760	60,647	1,268,263
Employee future benefits	4,324,000	861,527,743	10,707,093	163,498	257,800	1,024,617
Deferred taxes	2,607,217	426,903,767	-	-	-	-
Total Liabilities	321,937,492	31,478,402,571	689,636,349	44,442,295	7,938,575	51,835,923
Shareholders' Equity	198,831,794	2,678,596,512	302,804,101	17,129,123	6,520,421	25,804,613
LIABILITIES & SHAREHOLDERS' EQUITY	$ 520,769,286	$ 34,156,999,083	$ 992,440,450	$ 61,571,418	$ 14,458,996	$ 77,640,536

Balance Sheet As of December 31	Kitchener-Wilmot Hydro Inc.	Lakefront Utilities Inc.	Lakeland Power Distribution Ltd.	London Hydro Inc.	Midland Power Utility Corporation	Milton Hydro Distribution Inc.
Cash & cash equivalents	$ 20,147,278	$ 409,206	$ 510	$ 6,432,940	$ 51,482	$ 7,739,130
Receivables	49,089,472	5,194,428	9,005,620	70,792,181	4,548,072	20,289,915
Inventory	3,235,024	243,320	364,477	748,732	186,361	1,516,142
Inter-company receivables	272,848	-	70,849	-	-	2,744,593
Other current assets	1,231,330	62,680	296,426	1,826,436	156,382	502,617
Current assets	73,975,953	5,909,634	9,737,881	79,800,289	4,942,298	32,792,397
Property plant & equipment	344,063,198	18,488,107	45,636,395	448,419,044	25,554,371	140,310,255
Accumulated depreciation & amortization	(153,702,161)	(1,946,574)	(19,805,724)	(186,918,104)	(12,914,470)	(62,867,683)
	190,361,036	16,541,533	25,830,671	261,500,940	12,639,901	77,442,572
Regulatory assets	4,923,096	2,881,485	2,905,159	14,852,236	1,426,735	6,455,074
Inter-company investments	-	-	-	-	-	-
Other non-current assets	1,556,829	-	1,149,450	1,573,700	1,266,254	-
TOTAL ASSETS	$ 270,816,913	$ 25,332,652	$ 39,623,161	$ 357,727,164	$ 20,275,187	$ 116,690,043
Accounts payable & accrued charges	$ 36,070,467	$ 2,728,745	$ 6,648,673	$ 52,326,979	$ 3,057,765	$ 12,804,526
Other current liabilities	499,982	59,830	180,635	2,635,607	89,792	-
Inter-company payables	-	-	1,149,623	11,191,310	-	487,403
Loans and notes payable, and current portion of long term debt	1,066,445	197,498	713,024	2,304,000	1,754,418	1,565,791
Current liabilities	37,636,894	2,986,072	8,691,955	68,457,896	4,901,974	14,857,720
Long-term debt	3,990,232	9,887,391	6,186,387	96,130,000	3,862,716	50,857,464
Inter-company long-term debt & advances	76,962,142	-	-	-	-	-
Regulatory liabilities	5,852,745	2,672,277	2,068,976	15,201,504	417,911	6,489,310
Other deferred amounts & customer deposits	5,317,989	156,405	312,044	15,484,391	352,078	4,062,813
Employee future benefits	5,874,827	395,709	-	12,313,500	77,290	304,086
Deferred taxes	-	-	-	-	-	1,193,448
Total Liabilities	135,634,830	16,097,854	17,259,361	207,587,291	9,611,969	77,764,841
Shareholders' Equity	135,182,084	9,234,799	22,363,800	150,139,873	10,663,219	38,925,202
LIABILITIES & SHAREHOLDERS' EQUITY	$ 270,816,913	$ 25,332,652	$ 39,623,161	$ 357,727,164	$ 20,275,187	$ 116,690,043

Balance Sheet As of December 31	Newmarket-Tay Power Distribution Ltd.	Niagara Peninsula Energy Inc.	Niagara-on-the-Lake Hydro Inc.	North Bay Hydro Distribution Limited	Northern Ontario Wires Inc.	Oakville Hydro Electricity Distribution Inc.
Cash & cash equivalents	$ 10,130,641	$ 9,048,994	$ -	$ 11,529,842	$ -	$ 24,841,023
Receivables	22,184,846	31,989,976	6,036,890	13,222,757	3,324,458	38,925,137
Inventory	1,113,359	1,498,947	306,346	554,864	458,466	3,311,170
Inter-company receivables	-	-	-	483,180	-	-
Other current assets	5,039,806	2,556,577	116,574	857,358	126,217	600,095
Current assets	38,468,652	45,094,494	6,459,810	26,648,001	3,909,140	67,677,424
Property plant & equipment	119,218,520	257,271,676	48,003,030	115,816,807	12,123,107	296,959,938
Accumulated depreciation & amortization	(54,418,803)	(133,544,418)	(24,570,385)	(57,731,959)	(5,955,291)	(130,690,714)
	64,799,717	123,727,258	23,432,645	58,084,848	6,167,816	166,269,225
Regulatory assets	2,092,392	5,353,647	4,195,347	2,382,310	719,442	8,186,544
Inter-company investments	-	-	-	-	-	-
Other non-current assets	-	4,842,212	569,015	4,727,048	20,736	13,521,851
TOTAL ASSETS	$ 105,360,761	$ 179,017,611	$ 34,656,817	$ 91,842,207	$ 10,817,135	$ 255,655,045
Accounts payable & accrued charges	$ 12,621,139	$ 22,269,841	$ 4,694,088	$ 10,163,025	$ 1,846,453	$ 38,872,530
Other current liabilities	-	1,468	5,641	1,203,944	15,033	859,491
Inter-company payables	-	7,355	-	237,712	85,341	-
Loans and notes payable, and current portion of long term debt	1,644,454	1,420,498	2,333,748	1,263,005	1,044,549	4,585,464
Current liabilities	14,265,593	23,699,161	7,033,477	12,867,686	2,991,376	44,317,484
Long-term debt	30,117,076	34,441,572	916,667	10,352,249	3,964,066	20,278,482
Inter-company long-term debt & advances	2,473,010	25,605,090	7,788,942	19,511,601	-	70,310,869
Regulatory liabilities	8,615,055	15,912,956	2,231,484	4,017,014	420,849	4,184,071
Other deferred amounts & customer deposits	2,764,264	89,562	1,066,765	3,225,857	78,487	24,395,806
Employee future benefits	813,117	2,504,100	396,206	4,690,824	72,971	8,235,888
Deferred taxes	-	1,480,008	-	4,086,015	-	-
Total Liabilities	59,048,115	103,732,448	19,433,542	58,751,246	7,527,748	171,722,600
Shareholders' Equity	46,312,646	75,285,163	15,223,275	33,090,961	3,289,387	83,932,445
LIABILITIES & SHAREHOLDERS' EQUITY	$ 105,360,761	$ 179,017,611	$ 34,656,817	$ 91,842,207	$ 10,817,135	$ 255,655,045

Balance Sheet As of December 31	Orangeville Hydro Limited	Orillia Power Distribution Corporation	Oshawa PUC Networks Inc.	Ottawa River Power Corporation	Peterborough Distribution Incorporated	PowerStream Inc.
Cash & cash equivalents	$ 2,930,994	$ 601,839	$ 10,478,551	$ 1,121,953	$ 2,166,645	$ 845,125
Receivables	6,926,018	7,572,444	24,058,859	4,870,659	17,381,597	200,356,286
Inventory	305,852	500,828	119,940	507,413	1,125,139	3,225,638
Inter-company receivables	-	1,130,200	-	34,738	-	13,651,796
Other current assets	127,046	169,438	630,889	437,187	82,689	4,087,800
Current assets	10,289,911	9,974,749	35,288,240	6,971,949	20,756,070	222,166,646
Property plant & equipment	35,367,518	43,590,297	181,807,750	28,593,968	107,505,086	1,413,687,406
Accumulated depreciation & amortization	(18,757,497)	(21,058,807)	(88,941,319)	(19,740,643)	(46,979,696)	(196,030,015)
	16,610,021	22,531,490	92,866,430	8,853,325	60,525,390	1,217,657,391
Regulatory assets	1,390,642	2,942,054	7,895,607	3,164,114	6,178,336	34,588,711
Inter-company investments	-	-	-	-	-	8,827,607
Other non-current assets	370,000	1,389,000	924,283	617,299	2,329,000	16,581,097
TOTAL ASSETS	$ 28,660,574	$ 36,837,293	$ 136,974,560	$ 19,606,687	$ 89,788,796	$ 1,499,821,453
Accounts payable & accrued charges	$ 5,820,275	$ 5,856,656	$ 22,741,302	$ 2,863,229	$ 11,440,778	$ 127,846,215
Other current liabilities	1,308	106,782	413,428	101,243	239,774	7,120,953
Inter-company payables	-	318,483	7,266,763	-	-	16,627,232
Loans and notes payable, and current portion of long term debt	435,379	2,210,000	-	-	1,446,000	125,003,092
Current liabilities	6,256,961	8,491,921	30,421,493	2,964,472	13,126,552	276,597,493
Long-term debt	10,505,200	735,000	22,966,099	5,585,838	42,309,286	347,408,036
Inter-company long-term debt & advances	-	9,762,000	23,064,000	-	1,510,000	182,429,859
Regulatory liabilities	998,920	4,099,184	3,157,803	2,715,461	2,083,018	44,411,772
Other deferred amounts & customer deposits	691,964	453,335	4,455,987	213,209	1,237,164	181,964,559
Employee future benefits	356,886	659,213	11,779,208	190,866	43,924	18,308,585
Deferred taxes	370,000	-	-	-	-	5,520,701
Total Liabilities	19,179,931	24,200,653	95,844,590	11,669,847	60,309,944	1,056,641,004
Shareholders' Equity	9,480,643	12,636,640	41,129,970	7,936,840	29,478,852	443,180,449
LIABILITIES & SHAREHOLDERS' EQUITY	$ 28,660,574	$ 36,837,293	$ 136,974,560	$ 19,606,687	$ 89,788,796	$ 1,499,821,453

Balance Sheet As of December 31	PUC Distribution Inc.	Renfrew Hydro Inc.	Rideau St. Lawrence Distribution Inc.	Sioux Lookout Hydro Inc.	St. Thomas Energy Inc.	Thunder Bay Hydro Electricity Distribution Inc.
Cash & cash equivalents	$ 3,084,294	$ 620,644	$ 113,420	$ 391,689	$ 6,359,784	$ 6,123,274
Receivables	16,762,504	2,252,314	3,266,958	2,726,375	7,585,421	27,436,617
Inventory	1,493,197	324,433	220,012	79,417	642,396	1,932,887
Inter-company receivables	436,883	23,130	-	-	-	475,408
Other current assets	692,082	36,623	147,961	241,339	414,948	1,340,483
Current assets	22,468,959	3,257,144	3,748,351	3,438,820	15,002,550	37,308,670
Property plant & equipment	148,957,558	14,735,963	6,375,244	9,106,113	28,820,083	202,500,579
Accumulated depreciation & amortization	(62,342,059)	(9,511,412)	(705,672)	(4,306,855)	(2,230,179)	(105,674,001)
	86,615,499	5,224,551	5,669,573	4,799,258	26,589,904	96,826,577
Regulatory assets	2,141,441	847,462	956,430	647,499	4,067,171	3,009,422
Inter-company investments	-	-	-	-	-	114,331
Other non-current assets	-	229,937	178,756	124,850	1,130,853	2,815,043
TOTAL ASSETS	$ 111,225,900	$ 9,559,093	$ 10,553,109	$ 9,010,427	$ 46,790,478	$ 140,074,044
Accounts payable & accrued charges	$ 9,117,929	$ 948,617	$ 2,092,247	$ 3,395,478	$ 5,285,307	$ 22,144,730
Other current liabilities	-	-	10	-	36,743	214,587
Inter-company payables	-	1,248,994	1,554,968	-	8,427,754	101,559
Loans and notes payable, and current portion of long term debt	15,802,960	40,017	172,619	224,739	-	767,529
Current liabilities	24,920,889	2,237,629	3,819,844	3,620,217	13,749,804	23,228,404
Long-term debt	23,846,498	18,591	516,671	1,500,298	3,500,000	20,138,196
Inter-company long-term debt & advances	26,534,040	2,705,168	1,163,352	-	7,714,426	26,490,500
Regulatory liabilities	7,285,829	646,137	704,337	630,711	3,371,163	4,440,778
Other deferred amounts & customer deposits	-	110,344	207,536	187,241	293,977	141,585
Employee future benefits	-	168,422	28,608	96,955	1,235,576	2,599,871
Deferred taxes	-	-	-	-	1,130,753	-
Total Liabilities	82,587,255	5,886,292	6,440,348	6,035,422	30,995,700	77,039,334
Shareholders' Equity	28,638,644	3,672,801	4,112,761	2,975,005	15,794,779	63,034,710
LIABILITIES & SHAREHOLDERS' EQUITY	$ 111,225,900	$ 9,559,093	$ 10,553,109	$ 9,010,427	$ 46,790,478	$ 140,074,044

Balance Sheet As of December 31	Tillsonburg Hydro Inc.	Toronto Hydro-Electric System Limited	Veridian Connections Inc.	Wasaga Distribution Inc.	Waterloo North Hydro Inc.	Welland Hydro-Electric System Corp.
Cash & cash equivalents	$ 723,952	$ -	$ 6,415,858	$ 1,044,021	$ 3,179	$ 2,294,206
Receivables	5,489,726	501,591,349	58,030,541	3,624,915	39,556,584	7,135,699
Inventory	256,243	9,827,944	2,642,374	-	4,081,314	383,357
Inter-company receivables	-	949,071	-	-	-	106,338
Other current assets	81,622	10,808,441	575,018	329,469	939,846	269,226
Current assets	6,551,543	523,176,806	67,663,791	4,998,405	44,580,923	10,188,826
Property plant & equipment	21,000,720	4,074,177,648	462,369,987	25,080,040	337,632,201	57,940,326
Accumulated depreciation & amortization	(10,998,031)	(323,533,499)	(242,152,914)	(13,255,528)	(142,477,428)	(29,952,590)
	10,002,689	3,750,644,149	220,217,073	11,824,513	195,154,773	27,987,736
Regulatory assets	2,335,954	333,331,963	9,728,495	944,805	8,884,893	765,632
Inter-company investments	-	-	-	-	-	-
Other non-current assets	-	103,697,139	5,408,407	398,690	1,476,704	1,879,443
TOTAL ASSETS	$ 18,890,185	$ 4,710,850,057	$ 303,017,766	$ 18,166,414	$ 250,097,293	$ 40,821,637
Accounts payable & accrued charges	$ 2,517,015	$ 463,038,137	$ 46,247,887	$ 1,834,113	$ 34,806,397	$ 6,594,123
Other current liabilities	287,686	11,810,611	468,210	111,689	1,535,493	218,104
Inter-company payables	740,651	114,010,977	700,000	-	1,017,885	-
Loans and notes payable, and current portion of long term debt	142,910	196,521,453	933,200	-	10,272,075	-
Current liabilities	3,688,261	785,381,178	48,349,297	1,945,801	47,631,850	6,812,227
Long-term debt	258,747	-	54,653,077	-	101,898,336	-
Inter-company long-term debt & advances	-	1,875,984,003	74,688,000	3,593,269	-	13,499,953
Regulatory liabilities	2,123,919	182,816,697	9,270,586	1,628,024	6,537,627	1,274,568
Other deferred amounts & customer deposits	2,424,230	117,877,626	12,452,167	129,477	4,322,688	1,547,444
Employee future benefits	-	295,351,821	-	-	4,553,372	1,583,297
Deferred taxes	-	98,928,963	4,025,295	-	-	-
Total Liabilities	8,495,158	3,356,340,288	203,438,422	7,296,570	164,943,873	24,717,489
Shareholders' Equity	10,395,028	1,354,509,769	99,579,344	10,869,843	85,153,420	16,104,148
LIABILITIES & SHAREHOLDERS' EQUITY	$ 18,890,185	$ 4,710,850,057	$ 303,017,766	$ 18,166,414	$ 250,097,293	$ 40,821,637

Balance Sheet As of December 31	Wellington North Power Inc.	West Coast Huron Energy Inc.	Westario Power Inc.	Whitby Hydro Electric Corporation	Woodstock Hydro Services Inc.	Total Industry
Cash & cash equivalents	$ -	$ 1,611,038	$ 1,545,461	$ 3,072,319	$ 4,253,796	$ 311,494,083
Receivables	2,723,510	1,973,868	10,425,988	20,638,081	9,899,111	2,922,401,493
Inventory	101,159	480,846	530,202	1,083,145	561,191	98,121,286
Inter-company receivables	-	-	-	-	-	25,459,922,391
Other current assets	211,748	16,026	1,233,166	671,155	4,130,229	95,444,132
Current assets	3,036,417	4,081,778	13,734,817	25,464,699	18,844,327	28,887,383,385
Property plant & equipment	13,729,800	9,590,550	46,787,687	159,422,592	28,194,896	25,411,331,382
Accumulated depreciation & amortization	(7,408,161)	(697,029)	(3,460,423)	(85,766,640)	(269,936)	(7,522,677,347)
	6,321,639	8,893,521	43,327,264	73,655,952	27,924,960	17,888,654,036
Regulatory assets	2,228,976	920,034	6,376,973	5,937,379	4,206,410	1,021,045,942
Inter-company investments	-	-	-	-	-	49,286,136
Other non-current assets	283,145	-	318,095	996,785	-	859,649,681
TOTAL ASSETS	$ 11,870,176	$ 13,895,333	$ 63,757,149	$ 106,054,815	$ 50,975,696	**$ 48,706,019,179**
Accounts payable & accrued charges	$ 2,139,126	$ 1,703,455	$ 7,704,278	$ 13,525,118	$ 6,953,288	$ 2,850,305,805
Other current liabilities	-	32,131	-	593,917	153,714	226,656,808
Inter-company payables	-	-	-	3,081,869	-	25,750,118,032
Loans and notes payable, and current portion of long term debt	1,006,412	2,152,322	1,059,933	400,000	-	727,911,316
Current liabilities	3,145,538	3,887,908	8,764,211	17,600,905	7,107,002	29,554,991,961
Long-term debt	4,203,600	3,012,082	13,222,943	4,000,000	-	4,682,097,119
Inter-company long-term debt & advances	-	-	5,260,461	28,337,942	23,377,555	3,685,601,095
Regulatory liabilities	550,869	582,684	3,444,955	5,879,701	4,768,551	697,801,203
Other deferred amounts & customer deposits	199,383	405,261	701,492	1,178,369	2,286,414	663,628,146
Employee future benefits	144,261	303,457	398,965	-	1,163,519	1,415,607,692
Deferred taxes	281,000	20,439	1,821,000	-	0	565,391,991
Total Liabilities	8,524,650	8,211,831	33,614,027	56,996,916	38,703,041	41,265,119,207
Shareholders' Equity	3,345,526	5,683,502	30,143,122	49,057,899	12,272,655	7,440,899,972
LIABILITIES & SHAREHOLDERS' EQUITY	$ 11,870,176	$ 13,895,333	$ 63,757,149	$ 106,054,815	$ 50,975,696	**$ 48,706,019,179**

Income Statement For the year ended December 31	Algoma Power Inc.	Atikokan Hydro Inc.	Bluewater Power Distribution Corporation	Brant County Power Inc.	Brantford Power Inc.	Burlington Hydro Inc.
Power and Distribution Revenue	$ 46,769,679	$ 5,439,668	$ 122,412,893	$ 38,809,416	$ 124,799,217	$ 228,182,954
Cost of Power and Related Costs	23,635,241	3,998,251	100,260,264	32,683,898	107,276,399	197,721,069
Revenues from Service - Distribution	23,134,438	1,441,417	22,152,629	6,125,519	17,522,818	30,461,885
Other Income	(532,613)	66,952	653,487	(577,011)	214,719	923,261
Expenses						
Operating	1,417,407	323,884	3,791,562	711,340	1,554,358	5,326,505
Maintenance	4,879,021	111,689	180,125	742,373	1,562,869	3,701,170
Administrative	5,659,282	593,570	8,368,711	1,777,336	5,993,632	8,772,635
Depreciation and Amortization	3,136,802	180,844	4,554,631	949,167	3,004,084	4,973,073
Financing	2,761,725	22,255	1,446,903	392,205	2,290,852	3,198,166
	17,854,237	1,232,242	18,341,932	4,572,421	14,405,796	25,971,550
Net Income Before Taxes	4,747,588	276,127	4,464,184	976,087	3,331,741	5,413,596
PILs and Income Taxes						
Current	441,930	41,572	944,000	146,281	263,594	(1,013,637)
Deferred	139,079	-	-	159,410	(21,308)	509,575
	581,009	41,572	944,000	305,691	242,286	(504,062)
Net Income (Loss)	4,166,579	234,555	3,520,184	670,396	3,089,455	5,917,658
Other Comprehensive Income (Loss)	-	103,679	-	-	-	-
Comprehensive Income (Loss)	$ 4,166,579	$ 338,234	$ 3,520,184	$ 670,396	$ 3,089,455	$ 5,917,658

Income Statement For the year ended December 31	Cambridge and North Dumfries Hydro Inc.	Canadian Niagara Power Inc.	Centre Wellington Hydro Ltd.	Chapleau Public Utilities Corporation	COLLUS PowerStream Corp.	Cooperative Hydro Embrun Inc.
Power and Distribution Revenue	$ 178,367,144	$ 76,416,272	$ 20,529,003	$ 3,973,960	$ 40,657,993	$ 4,230,659
Cost of Power and Related Costs	150,234,159	57,860,531	17,099,926	3,115,911	33,644,023	3,422,003
Revenues from Service - Distribution	28,132,986	18,555,741	3,429,077	858,049	7,013,970	808,657
Other Income	1,111,864	1,857,805	158,668	(29,681)	70,642	40,276
Expenses						
Operating	2,169,275	1,702,685	322,470	208,239	721,686	39,764
Maintenance	2,012,916	1,912,871	310,601	-	1,667,027	26,251
Administrative	10,180,347	5,901,533	1,525,839	528,945	2,318,805	548,883
Depreciation and Amortization	5,093,494	4,175,124	543,004	50,827	742,598	118,183
Financing	4,484,505	2,638,501	514,498	4,490	468,211	843
	23,940,537	16,330,713	3,216,412	792,501	5,918,327	733,923
Net Income Before Taxes	5,304,313	4,082,833	371,333	35,866	1,166,286	115,009
PILs and Income Taxes						
Current	296,350	638,942	658	-	178,697	23,044
Deferred	-	266,835	(63,532)	-	-	-
	296,350	905,777	(62,874)	-	178,697	23,044
Net Income (Loss)	5,007,964	3,177,056	434,207	35,866	987,589	91,965
Other Comprehensive Income (Loss)	-	-	-	-	-	-
Comprehensive Income (Loss)	$ 5,007,964	$ 3,177,056	$ 434,207	$ 35,866	$ 987,589	$ 91,965

Income Statement For the year ended December 31	E.L.K. Energy Inc.	Enersource Hydro Mississauga Inc.	Entegrus Powerlines Inc.	EnWin Utilities Ltd.	Erie Thames Powerlines Corporation	Espanola Regional Hydro Distribution Corporation
Power and Distribution Revenue	$ 33,667,315	$ 921,296,231	$ 133,169,631	$ 296,341,445	$ 64,197,635	$ 9,264,440
Cost of Power and Related Costs	30,229,790	792,310,538	112,956,941	245,977,671	53,987,814	7,413,566
Revenues from Service - Distribution	3,437,525	128,985,693	20,212,690	50,363,775	10,209,821	1,850,875
Other Income	613,774	5,216,195	(865,344)	2,663,278	(431,231)	32,545
Expenses						
Operating	263,090	12,325,447	1,132,180	2,364,660	128,569	340,593
Maintenance	939,207	11,372,249	1,819,960	1,750,044	320,160	213,149
Administrative	1,412,193	36,764,198	6,487,443	20,432,970	5,408,106	818,020
Depreciation and Amortization	364,814	31,282,183	3,789,326	9,831,922	1,525,419	96,039
Financing	106,019	17,225,955	2,798,212	2,872,102	1,379,224	84,260
	3,085,322	108,970,031	16,027,120	37,251,697	8,761,479	1,552,060
Net Income Before Taxes	965,977	25,231,857	3,320,225	15,775,356	1,017,112	331,360
PILs and Income Taxes						
Current	172,500	1,932,217	722,031	2,967,771	28,000	(107,852)
Deferred	-	272,441	-	-	-	-
	172,500	2,204,658	722,031	2,967,771	28,000	(107,852)
Net Income (Loss)	793,477	23,027,200	2,598,194	12,807,585	989,112	439,212
Other Comprehensive Income (Loss)	-	(3,540)	-	-	-	28,237
Comprehensive Income (Loss)	$ 793,477	$ 23,023,660	$ 2,598,194	$ 12,807,585	$ 989,112	$ 467,449

Income Statement For the year ended December 31	Essex Powerlines Corporation	Festival Hydro Inc.	Fort Frances Power Corporation	Greater Sudbury Hydro Inc.	Grimsby Power Incorporated	Guelph Hydro Electric Systems Inc.
Power and Distribution Revenue	$ 76,563,568	$ 84,432,441	$ 10,780,869	$ 132,056,395	$ 25,195,960	$ 231,689,846
Cost of Power and Related Costs	62,236,119	71,472,888	8,851,332	108,090,383	20,602,605	201,577,465
Revenues from Service - Distribution	14,327,450	12,959,553	1,929,536	23,966,012	4,593,355	30,112,381
Other Income	127,215	148,603	109,107	231,307	20,078	1,031,146
Expenses						
Operating	1,174,581	904,645	427,285	6,009,107	648,822	4,891,380
Maintenance	1,594,293	1,290,960	297,334	1,996,669	505,940	1,281,593
Administrative	4,033,842	3,158,873	898,945	5,317,031	1,803,642	8,949,102
Depreciation and Amortization	2,537,950	2,428,856	217,683	3,844,521	794,526	4,892,433
Financing	906,168	1,971,975	3,341	4,705,453	486,429	3,647,859
	10,246,835	9,755,309	1,844,589	21,872,782	4,239,360	23,662,366
Net Income Before Taxes	4,207,829	3,352,847	194,054	2,324,537	374,074	7,481,161
PILs and Income Taxes						
Current	442,000	94,000	(65,622)	898,641	48,209	4,485,356
Deferred	35,000	-	-	-	128,168	394,430
	477,000	94,000	(65,622)	898,641	176,377	4,879,786
Net Income (Loss)	3,730,829	3,258,847	259,676	1,425,896	197,697	2,601,375
Other Comprehensive Income (Loss)	-	(18,518)	-	-	-	-
Comprehensive Income (Loss)	$ 3,730,829	$ 3,240,329	$ 259,676	$ 1,425,896	$ 197,697	$ 2,601,375

Income Statement For the year ended December 31	Haldimand County Hydro Inc.	Halton Hills Hydro Inc.	Hearst Power Distribution Company Limited	Horizon Utilities Corporation	Hydro 2000 Inc.	Hydro Hawkesbury Inc.
Power and Distribution Revenue	$ 61,964,510	$ 72,221,932	$ 11,292,050	$ 665,180,168	$ 2,612,961	$ 12,405,257
Cost of Power and Related Costs	49,246,272	61,900,483	9,879,823	551,899,480	2,064,481	10,727,236
Revenues from Service - Distribution	12,718,238	10,321,449	1,412,227	113,280,688	548,480	1,678,022
Other Income	463,382	336,164	49,305	2,434,343	10,016	10,906
Expenses						
Operating	1,537,803	1,442,651	175,120	28,850,125	30,115	55,990
Maintenance	2,075,695	299,559	422,733	4,270,407	17,164	179,949
Administrative	4,090,106	4,151,697	618,131	30,492,875	390,013	723,526
Depreciation and Amortization	2,183,925	1,780,440	344,309	22,186,329	51,899	188,834
Financing	1,010,697	909,972	84,011	7,230,110	5,849	7,110
	10,898,225	8,584,319	1,644,304	93,029,847	495,040	1,155,410
Net Income Before Taxes	2,283,395	2,073,295	(182,772)	22,685,184	63,456	533,518
PILs and Income Taxes						
Current	986,106	(154,599)	4,657	3,846,719	(8,656)	146,070
Deferred	(5,847,214)	(839,655)	(13,800)	989,927	18,561	(35,856)
	(4,861,108)	(994,254)	(9,143)	4,836,646	9,905	110,214
Net Income (Loss)	7,144,503	3,067,548	(173,629)	17,848,538	53,551	423,304
Other Comprehensive Income (Loss)	-	-	(39,813)	248,775	-	-
Comprehensive Income (Loss)	$ 7,144,503	$ 3,067,548	$ (213,442)	$ 18,097,313	$ 53,551	$ 423,304

Income Statement For the year ended December 31	Hydro One Brampton Networks Inc.	Hydro One Networks Inc.	Hydro Ottawa Limited	Innpower Corporation	Kenora Hydro Electric Corporation Ltd.	Kingston Hydro Corporation
Power and Distribution Revenue	$ 528,930,633	$ 4,341,609,171	$ 1,032,477,037	$ 39,170,121	$ 14,683,601	$ 87,601,416
Cost of Power and Related Costs	457,114,242	2,982,653,266	867,750,599	29,656,547	11,725,836	75,255,069
Revenues from Service - Distribution	71,816,392	1,358,955,905	164,726,438	9,513,573	2,957,765	12,346,347
Other Income	(359,882)	24,872,713	6,541,125	583,728	152,719	(771,727)
Expenses						
Operating	6,365,427	90,648,316	16,546,014	1,377,569	197,087	2,109,260
Maintenance	4,112,037	221,451,707	10,313,645	427,525	655,919	1,140,218
Administrative	17,372,857	255,881,441	53,488,795	3,767,469	1,475,430	4,317,057
Depreciation and Amortization	17,378,596	361,109,030	37,990,760	1,879,151	569,016	1,690,705
Financing	11,644,604	146,306,791	15,816,494	1,077,830	133,472	1,223,625
	56,873,520	1,075,397,285	134,155,708	8,529,545	3,030,923	10,480,865
Net Income Before Taxes	14,582,990	308,431,332	37,111,855	1,567,756	79,561	1,093,755
PILs and Income Taxes						
Current	2,011,734	63,193,158	1,216,566	(1,666)	3,817	109,773
Deferred	(1,681,732)	(12,069,024)	-	352,008	-	258,283
	330,002	51,124,134	1,216,566	350,342	3,817	368,056
Net Income (Loss)	14,252,988	257,307,199	35,895,289	1,217,414	75,744	725,699
Other Comprehensive Income (Loss)	140,000	-	-	-	-	-
Comprehensive Income (Loss)	$ 14,392,988	$ 257,307,199	$ 35,895,289	$ 1,217,414	$ 75,744	$ 725,699

Income Statement For the year ended December 31	Kitchener-Wilmot Hydro Inc.	Lakefront Utilities Inc.	Lakeland Power Distribution Ltd.	London Hydro Inc.	Midland Power Utility Corporation	Milton Hydro Distribution Inc.
Power and Distribution Revenue	$ 244,601,635	$ 33,263,213	$ 44,869,239	$ 448,290,550	$ 21,535,376	$ 118,347,331
Cost of Power and Related Costs	204,976,789	28,617,992	36,452,660	379,936,576	17,607,327	101,556,912
Revenues from Service - Distribution	39,624,846	4,645,221	8,416,579	68,353,973	3,928,049	16,790,419
Other Income	(3,547,234)	56,259	191,160	(1,983,774)	135,393	437,589
Expenses						
Operating	4,143,356	508,337	320,991	8,693,279	829,170	2,264,237
Maintenance	5,176,836	175,003	1,334,895	8,029,591	137,674	1,445,938
Administrative	7,199,651	1,587,580	3,484,955	17,959,416	1,430,999	6,188,032
Depreciation and Amortization	2,349,311	1,121,030	1,200,180	16,858,883	644,006	2,761,704
Financing	4,231,006	683,031	249,006	2,862,586	232,639	2,143,193
	23,100,159	4,074,981	6,590,027	54,403,755	3,274,487	14,803,104
Net Income Before Taxes	12,977,452	626,498	2,017,712	11,966,444	788,956	2,424,904
PILs and Income Taxes						
Current	1,894,663	79,245	380,775	2,648,385	75,797	248,590
Deferred	(10,947)	44,900	129,626	(836,700)	-	(721,383)
	1,883,716	124,145	510,401	1,811,685	75,797	(472,793)
Net Income (Loss)	11,093,736	502,353	1,507,311	10,154,759	713,159	2,897,697
Other Comprehensive Income (Loss)	-	-	-	-	-	-
Comprehensive Income (Loss)	$ 11,093,736	$ 502,353	$ 1,507,311	$ 10,154,759	$ 713,159	$ 2,897,697

Income Statement **For the year ended** **December 31**	Newmarket-Tay Power Distribution Ltd.	Niagara Peninsula Energy Inc.	Niagara-on-the-Lake Hydro Inc.	North Bay Hydro Distribution Limited	Northern Ontario Wires Inc.	Oakville Hydro Electricity Distribution Inc.
Power and Distribution Revenue	$ 89,880,689	$ 182,234,670	$ 27,656,164	$ 71,302,699	$ 17,563,904	$ 209,208,014
Cost of Power and Related Costs	72,426,484	150,844,155	22,753,049	58,509,961	14,422,963	170,915,015
Revenues from Service - Distribution	17,454,205	31,390,515	4,903,115	12,792,738	3,140,942	38,292,999
Other Income	(1,179,092)	592,125	19,043	(690,243)	49,606	1,006,322
Expenses						
Operating	1,240,277	4,310,481	548,540	629,042	589,862	7,512,896
Maintenance	1,453,713	2,345,782	451,578	1,739,889	445,342	2,309,944
Administrative	4,847,873	10,217,178	1,353,838	3,937,064	1,358,262	8,326,362
Depreciation and Amortization	2,904,007	6,099,694	775,384	1,693,086	368,228	8,545,048
Financing	1,485,565	3,357,781	490,526	1,232,424	185,369	6,031,002
	11,931,435	26,330,916	3,619,865	9,231,506	2,947,062	32,725,253
Net Income Before Taxes	4,343,677	5,651,724	1,302,293	2,870,990	243,485	6,574,069
PILs and Income Taxes						
Current	1,107,025	859,183	(340,559)	300,000	43,780	(35,752)
Deferred	-	(533,645)	919,552	-	(3,079)	215,022
	1,107,025	325,538	578,993	300,000	40,701	179,270
Net Income (Loss)	3,236,652	5,326,187	723,300	2,570,989	202,784	6,394,799
Other Comprehensive Income (Loss)	-	-	-	-	-	-
Comprehensive Income (Loss)	$ 3,236,652	$ 5,326,187	$ 723,300	$ 2,570,989	$ 202,784	$ 6,394,799

Income Statement For the year ended December 31	Orangeville Hydro Limited	Orillia Power Distribution Corporation	Oshawa PUC Networks Inc.	Ottawa River Power Corporation	Peterborough Distribution Incorporated	PowerStream Inc.
Power and Distribution Revenue	$ 34,822,577	$ 44,083,946	$ 138,989,272	$ 26,661,525	$ 110,522,361	$ 1,178,829,966
Cost of Power and Related Costs	29,745,385	35,509,377	118,112,195	22,247,618	95,126,224	1,002,088,778
Revenues from Service - Distribution	5,077,192	8,574,569	20,877,077	4,413,906	15,396,137	176,741,188
Other Income	(94,799)	(621,871)	391,929	144,830	(116,937)	8,553,825
Expenses						
Operating	460,635	827,250	1,591,251	583,969	2,225,370	21,816,083
Maintenance	500,883	945,462	1,205,389	623,326	1,007,332	9,127,085
Administrative	2,331,054	3,092,798	9,033,548	1,573,789	5,173,974	61,538,550
Depreciation and Amortization	667,675	1,121,075	3,797,997	765,290	2,874,800	42,259,383
Financing	370,375	694,790	2,197,661	438,316	1,779,886	24,140,326
	4,330,623	6,681,375	17,825,845	3,984,690	13,061,362	158,881,426
Net Income Before Taxes	651,770	1,271,323	3,443,160	574,046	2,217,838	26,413,587
PILs and Income Taxes						
Current	130,026	322,000	145,188	102,800	492,218	(4,313,423)
Deferred	-	76,000	-	-	124,000	-
	130,026	398,000	145,188	102,800	616,218	(4,313,423)
Net Income (Loss)	521,744	873,323	3,297,972	471,246	1,601,620	30,727,010
Other Comprehensive Income (Loss)	-	-	(493,186)	-	-	-
Comprehensive Income (Loss)	$ 521,744	$ 873,323	$ 2,804,786	$ 471,246	$ 1,601,620	$ 30,727,010

Income Statement For the year ended December 31	PUC Distribution Inc.	Renfrew Hydro Inc.	Rideau St. Lawrence Distribution Inc.	Sioux Lookout Hydro Inc.	St. Thomas Energy Inc.	Thunder Bay Hydro Electricity Distribution Inc.
Power and Distribution Revenue	$ 96,717,281	$ 12,786,649	$ 16,245,560	$ 10,104,920	$ 36,890,869	$ 131,219,428
Cost of Power and Related Costs	78,110,389	10,853,776	13,517,734	8,158,299	29,529,895	110,371,676
Revenues from Service - Distribution	18,606,892	1,932,872	2,727,826	1,946,621	7,360,974	20,847,752
Other Income	382,803	(134,659)	39,209	57,510	153,437	226,320
Expenses						
Operating	3,702,949	311,428	282,485	526,730	899,498	3,164,099
Maintenance	2,274,649	171,109	400,282	159,501	342,896	4,293,691
Administrative	5,300,225	847,621	1,457,425	736,357	2,728,623	6,795,717
Depreciation and Amortization	3,888,942	222,240	306,218	210,722	1,148,681	3,228,843
Financing	3,003,914	203,789	90,553	61,204	832,150	876,669
	18,170,679	1,756,187	2,536,963	1,694,514	5,951,848	18,359,018
Net Income Before Taxes	819,017	42,027	230,072	309,617	1,562,563	2,715,054
PILs and Income Taxes						
Current	(505,398)	16,113	10,429	34,506	192,526	(116,300)
Deferred	296,000	41,681	26,139	(41,964)	-	919,943
	(209,398)	57,794	36,568	(7,458)	192,526	803,643
Net Income (Loss)	1,028,415	(15,767)	193,504	317,075	1,370,037	1,911,411
Other Comprehensive Income (Loss)	-	-	-	-	-	-
Comprehensive Income (Loss)	$ 1,028,415	$ (15,767)	$ 193,504	$ 317,075	$ 1,370,037	$ 1,911,411

Income Statement For the year ended December 31	Tillsonburg Hydro Inc.	Toronto Hydro-Electric System Limited	Veridian Connections Inc.	Wasaga Distribution Inc.	Waterloo North Hydro Inc.	Welland Hydro-Electric System Corp.
Power and Distribution Revenue	$ 27,390,694	$ 3,493,783,356	$ 336,841,570	$ 18,858,883	$ 201,154,116	$ 52,485,503
Cost of Power and Related Costs	23,764,696	2,847,118,928	283,405,085	14,691,822	166,622,942	43,174,574
Revenues from Service - Distribution	3,625,998	646,664,428	53,436,485	4,167,061	34,531,174	9,310,929
Other Income	58,684	5,607,211	555,367	27,848	(3,325,043)	387,883
Expenses						
Operating	644,836	48,560,663	5,596,978	75,160	6,278,264	1,320,244
Maintenance	144,270	67,117,346	3,655,707	699,776	1,552,188	1,834,314
Administrative	1,711,781	128,303,498	17,169,227	2,088,863	5,431,518	3,168,711
Depreciation and Amortization	325,196	192,329,429	11,161,147	621,402	8,510,773	1,304,212
Financing	45,332	71,970,135	5,125,023	221,352	4,846,098	882,042
	2,871,415	508,281,071	42,708,082	3,706,553	26,618,841	8,509,523
Net Income Before Taxes	813,267	143,990,569	11,283,770	488,355	4,587,290	1,189,289
PILs and Income Taxes						
Current	118,500	3,518,763	1,406,956	54,187	(156,358)	127,169
Deferred	-	(19,437)	131,518	65,553	(559,981)	(157,463)
	118,500	3,499,326	1,538,474	119,740	(716,339)	(30,294)
Net Income (Loss)	694,767	140,491,242	9,745,296	368,615	5,303,629	1,219,583
Other Comprehensive Income (Loss)	-	-	-	-	-	-
Comprehensive Income (Loss)	$ 694,767	$ 140,491,242	$ 9,745,296	$ 368,615	$ 5,303,629	$ 1,219,583

Income Statement For the year ended December 31	Wellington North Power Inc.	West Coast Huron Energy Inc.	Westario Power Inc.	Whitby Hydro Electric Corporation	Woodstock Hydro Services Inc.	Total Industry
Power and Distribution Revenue	$ 13,976,945	$ 12,504,163	$ 61,323,910	$ 127,195,472	$ 55,208,808	$ 17,526,744,751
Cost of Power and Related Costs	11,503,368	10,081,745	51,288,235	104,164,489	46,689,924	13,971,429,157
Revenues from Service - Distribution	2,473,576	2,422,418	10,035,675	23,030,983	8,518,884	3,555,315,594
Other Income	(1,663)	89,029	108,868	(1,151,853)	(267,268)	53,335,647
Expenses						
Operating	376,893	140,160	264,132	3,351,111	919,729	333,745,397
Maintenance	235,310	390,269	1,398,823	1,861,257	609,186	411,451,263
Administrative	1,054,804	1,231,943	3,597,665	6,194,293	2,622,284	865,498,755
Depreciation and Amortization	346,404	257,196	1,653,966	3,588,586	1,455,368	863,846,599
Financing	182,064	218,542	1,095,382	2,184,139	1,296,142	385,800,727
	2,195,476	2,238,110	8,009,968	17,179,386	6,902,709	2,860,342,742
Net Income Before Taxes	276,437	273,337	2,134,575	4,699,745	1,348,907	748,308,499
PILs and Income Taxes						
Current	23,074	25,500	308,000	959,683	482,221	95,571,874
Deferred	-	22,060	(82,000)	-	(2,080,585)	(19,083,595)
	23,074	47,560	226,000	959,683	(1,598,364)	76,488,279
Net Income (Loss)	253,363	225,777	1,908,575	3,740,062	2,947,271	671,820,220
Other Comprehensive Income (Loss)	-	-	-	-	-	(34,366)
Comprehensive Income (Loss)	$ 253,363	$ 225,777	$ 1,908,575	$ 3,740,062	$ 2,947,271	$ 671,785,854

LDCs	KWh
Algoma Power Inc.	200,403,874.14
Atikokan Hydro Inc.	31,906,696.00
Bluewater Power Distribution Corporation	982,757,644.86
Brant County Power Inc.	273,412,881.00
Brantford Power Inc.	897,299,653.02
Burlington Hydro Inc.	1,602,596,369.00
Cambridge and North Dumfries Hydro Inc.	1,458,457,685.00
Canadian Niagara Power Inc.	469,574,623.58
Centre Wellington Hydro Ltd.	140,010,306.25
Chapleau Public Utilities Corporation	25,505,370.00
COLLUS PowerStream Corp.	293,879,144.16
Cooperative Hydro Embrun Inc.	28,382,390.00
E.L.K. Energy Inc.	177,997,150.00
Enersource Hydro Mississauga Inc.	7,178,598,049.14
Entegrus Powerlines Inc.	919,803,075.47
EnWin Utilities Ltd.	2,387,341,468.52
Erie Thames Powerlines Corporation	467,204,444.10
Espanola Regional Hydro Distribution Corporation	57,971,758.12
Essex Powerlines Corporation	485,087,490.36
Festival Hydro Inc.	601,111,819.13
Fort Frances Power Corporation	73,000,852.78
Greater Sudbury Hydro Inc.	877,687,417.42
Grimsby Power Incorporated	175,320,569.73
Guelph Hydro Electric Systems Inc.	1,762,268,866.20
Haldimand County Hydro Inc.	343,921,807.00
Halton Hills Hydro Inc.	507,140,139.00
Hearst Power Distribution Company Limited	83,575,639.00
Horizon Utilities Corporation	5,391,913,941.01
Hydro 2000 Inc.	23,707,543.00
Hydro Hawkesbury Inc.	139,212,994.00
Hydro One Brampton Networks Inc.	3,904,648,063.58
Hydro One Networks Inc.	21,546,815,701.41
Hydro Ottawa Limited	7,363,999,071.36
Innpower Corporation	238,226,420.72
Kenora Hydro Electric Corporation Ltd.	99,103,826.00
Kingston Hydro Corporation	697,350,972.37
Kitchener-Wilmot Hydro Inc.	1,738,135,120.66
Lakefront Utilities Inc.	237,152,739.16
Lakeland Power Distribution Ltd.	286,887,802.77
London Hydro Inc.	3,131,627,972.41
Midland Power Utility Corporation	188,511,656.97
Milton Hydro Distribution Inc.	840,528,148.00
Newmarket-Tay Power Distribution Ltd.	647,579,748.00
Niagara Peninsula Energy Inc.	1,195,836,051.00
Niagara-on-the-Lake Hydro Inc.	196,064,347.82
North Bay Hydro Distribution Limited	514,318,750.00
Northern Ontario Wires Inc.	121,108,573.00
Oakville Hydro Electricity Distribution Inc.	1,510,981,122.29
Orangeville Hydro Limited	242,959,344.36
Orillia Power Distribution Corporation	301,466,853.00

Oshawa PUC Networks Inc.	1,068,955,483.00
Ottawa River Power Corporation	182,354,843.00
Peterborough Distribution Incorporated	778,657,488.00
PowerStream Inc.	8,516,594,288.00
PUC Distribution Inc.	661,856,675.95
Renfrew Hydro Inc.	85,683,403.00
Rideau St. Lawrence Distribution Inc.	103,053,092.00
Sioux Lookout Hydro Inc.	79,024,821.44
St. Thomas Energy Inc.	267,491,474.80
Thunder Bay Hydro Electricity Distribution Inc.	927,798,308.96
Tillsonburg Hydro Inc.	194,055,148.59
Toronto Hydro-Electric System Limited	24,498,297,067.32
Veridian Connections Inc.	2,524,956,313.00
Wasaga Distribution Inc.	122,395,833.00
Waterloo North Hydro Inc.	1,393,089,682.00
Welland Hydro-Electric System Corp.	353,053,326.00
Wellington North Power Inc.	104,611,064.00
West Coast Huron Energy Inc.	149,636,729.61
Westario Power Inc.	427,347,680.00
Whitby Hydro Electric Corporation	851,628,567.00
Woodstock Hydro Services Inc.	388,266,461.00
Total	116,739,161,695.54

Revenue	Loans and notes payable, and current portion of long term debt
$ 46,769,679.44	-
$ 5,439,667.85	117,723
$ 122,412,893.00	45,233
$ 38,809,416.41	-
$ 124,799,216.51	2,561,334
$ 228,182,953.58	865,636
$ 178,367,144.36	-
$ 76,416,272.31	-
$ 20,529,003.17	113,863
$ 3,973,960.06	-
$ 40,657,992.77	527,581
$ 4,230,659.25	-
$ 33,667,314.84	-
$ 921,296,231.23	14,562,432
$ 133,169,631.22	-
$ 296,341,445.30	326,359
$ 64,197,635.20	1,695,391
$ 9,264,440.26	-
$ 76,563,568.15	4,116,155
$ 84,432,441.43	810,909
$ 10,780,868.53	-
$ 132,056,395.35	2,400,682
$ 25,195,959.95	4,621,356
$ 231,689,846.10	564,990
$ 61,964,510.13	-
$ 72,221,931.69	7,586,602
$ 11,292,049.89	-
$ 665,180,168.12	16,626,000
$ 2,612,960.96	-
$ 12,405,257.41	744,429
$ 528,930,633.20	7,047,074
$ 4,341,609,170.74	236,008,096
$ 1,032,477,036.75	41,000,000
$ 39,170,120.55	4,056,149
$ 14,683,601.03	-
$ 87,601,416.00	3,029,789
$ 244,601,635.22	1,066,445
$ 33,263,213.42	197,498
$ 44,869,239.05	713,024
$ 448,290,549.66	2,304,000
$ 21,535,376.34	1,754,418
$ 118,347,331.00	1,565,791
$ 89,880,688.51	1,644,454
$ 182,234,670.33	1,420,498
$ 27,656,164.26	2,333,748
$ 71,302,699.40	1,263,005
$ 17,563,904.41	1,044,549
$ 209,208,013.73	4,585,464
$ 34,822,576.62	435,379
$ 44,083,946.00	2,210,000

$	138,989,271.85		-
$	26,661,524.58		-
$	110,522,361.00		1,446,000
$	1,178,829,966.27		125,003,092
$	96,717,280.68		15,802,960
$	12,786,648.69		40,017
$	16,245,560.28		172,619
$	10,104,920.30		224,739
$	36,890,869.42		-
$	131,219,427.72		767,529
$	27,390,694.14		142,910
$	3,493,783,355.64		196,521,453
$	336,841,570.00		933,200
$	18,858,882.75		-
$	201,154,116.00		10,272,075
$	52,485,503.00		-
$	13,976,944.90		1,006,412
$	12,504,163.00		2,152,322
$	61,323,910.00		1,059,933
$	127,195,472.00		400,000
$	55,208,807.63		-
$	17,526,744,750.54	$	727,911,316.37

Long-term debt	Inter-company long-term debt & advances	Shareholders' Equity	Total Assets
52,000,000	-	46,627,048	$ 113,375,769
187,617	342,000	2,598,748	$ 4,647,253
23,918,540	-	28,003,138	$ 85,895,981
-	8,000,000	18,554,171	$ 39,776,606
17,022,603	24,189,168	41,188,551	$ 108,973,348
14,184,769	47,878,608	77,404,191	$ 175,499,704
85,000,000	-	77,245,728	$ 210,046,077
16,050,000	20,000,000	20,981,471	$ 111,749,630
4,255,111	5,046,753	8,139,725	$ 21,854,011
-	-	2,035,073	$ 3,319,874
11,950,730	-	8,800,971	$ 33,667,893
-	-	4,283,523	$ 5,286,068
5,100,000	-	8,101,528	$ 22,097,884
60,000,000	334,000,000	272,871,015	$ 887,662,747
-	47,523,326	33,856,252	$ 108,556,421
51,000,000	-	133,146,785	$ 321,687,930
18,038,524	-	13,721,087	$ 50,361,944
2,400,000	1,524,511	3,024,125	$ 10,290,734
17,212,218	373,943	22,715,272	$ 69,630,996
14,220,869	-	24,214,793	$ 69,526,989
-	-	5,960,305	$ 9,251,528
816,550	-	17,082,400	$ 126,588,820
4,760,755	5,782,746	8,693,576	$ 31,859,027
95,000,000	-	64,816,369	$ 215,810,209
-	17,966,269	46,077,499	$ 76,829,485
9,258,402	16,141,969	30,720,882	$ 86,029,213
1,250,000	-	3,096,947	$ 6,961,276
-	190,000,000	219,488,003	$ 628,993,196
-	-	939,423	$ 1,342,032
663,217	-	3,995,605	$ 9,453,133
193,000,000	-	198,831,794	$ 520,769,286
3,000,904,582	-	2,678,596,512	$ 34,156,999,083
-	447,185,000	302,804,101	$ 992,440,450
30,819,711	-	17,129,123	$ 61,571,418
4,510,946	-	6,520,421	$ 14,458,996
17,309,178	10,880,619	25,804,613	$ 77,640,536
3,990,232	76,962,142	135,182,084	$ 270,816,913
9,887,391	-	9,234,799	$ 25,332,652
6,186,387	-	22,363,800	$ 39,623,161
96,130,000	-	150,139,873	$ 357,727,164
3,862,716	-	10,663,219	$ 20,275,187
50,857,464	-	38,925,202	$ 116,690,043
30,117,076	2,473,010	46,312,646	$ 105,360,761
34,441,572	25,605,090	75,285,163	$ 179,017,611
916,667	7,788,942	15,223,275	$ 34,656,817
10,352,249	19,511,601	33,090,961	$ 91,842,207
3,964,066	-	3,289,387	$ 10,817,135
20,278,482	70,310,869	83,932,445	$ 255,655,045
10,505,200	-	9,480,643	$ 28,660,574
735,000	9,762,000	12,636,640	$ 36,837,293

22,966,099	23,064,000	41,129,970	$ 136,974,560
5,585,838	-	7,936,840	$ 19,606,687
42,309,286	1,510,000	29,478,852	$ 89,788,796
347,408,036	182,429,859	443,180,449	$ 1,499,821,453
23,846,498	26,534,040	28,638,644	$ 111,225,900
18,591	2,705,168	3,672,801	$ 9,559,093
516,671	1,163,352	4,112,761	$ 10,553,109
1,500,298	-	2,975,005	$ 9,010,427
3,500,000	7,714,426	15,794,779	$ 46,790,478
20,138,196	26,490,500	63,034,710	$ 140,074,044
258,747	-	10,395,028	$ 18,890,185
-	1,875,984,003	1,354,509,769	$ 4,710,850,057
54,653,077	74,688,000	99,579,344	$ 303,017,766
-	3,593,269	10,869,843	$ 18,166,414
101,898,336	-	85,153,420	$ 250,097,293
-	13,499,953	16,104,148	$ 40,821,637
4,203,600	-	3,345,526	$ 11,870,176
3,012,082	-	5,683,502	$ 13,895,333
13,222,943	5,260,461	30,143,122	$ 63,757,149
4,000,000	28,337,942	49,057,899	$ 106,054,815
-	23,377,555	12,272,655	$ 50,975,696

$ 4,682,097,119.00	$ 3,685,601,095.32	$ 7,440,899,971.76	$ 48,706,019,179

ts - interest bearing	Debt Ratio	Total Debt Ratio	Equity Ratio	LTD/Equity
$ 61,375,769	0.46	0.59	0.41	1.12
$ 3,999,912	0.14	0.44	0.56	0.25
$ 61,932,208	0.28	0.67	0.33	0.86
$ 31,776,606	0.20	0.53	0.47	0.43
$ 65,200,243	0.40	0.62	0.38	1.06
$ 112,570,691	0.36	0.56	0.44	0.81
$ 125,046,077	0.40	0.63	0.37	1.10
$ 75,699,630	0.32	0.81	0.19	1.72
$ 12,438,284	0.43	0.63	0.37	1.16
$ 3,319,874	0.00	0.39	0.61	0.00
$ 21,189,583	0.37	0.74	0.26	1.42
$ 5,286,068	0.00	0.19	0.81	0.00
$ 16,997,884	0.23	0.63	0.37	0.63
$ 479,100,315	0.46	0.69	0.31	1.50
$ 61,033,095	0.44	0.69	0.31	1.40
$ 270,361,570	0.16	0.59	0.41	0.39
$ 30,628,028	0.39	0.73	0.27	1.44
$ 6,366,223	0.38	0.71	0.29	1.30
$ 47,928,681	0.31	0.67	0.33	0.96
$ 54,495,211	0.22	0.65	0.35	0.62
$ 9,251,528	0.00	0.36	0.64	0.00
$ 123,371,589	0.03	0.87	0.13	0.19
$ 16,694,169	0.48	0.73	0.27	1.74
$ 120,245,220	0.44	0.70	0.30	1.47
$ 58,863,216	0.23	0.40	0.60	0.39
$ 53,042,239	0.38	0.64	0.36	1.07
$ 5,711,276	0.18	0.56	0.44	0.40
$ 422,367,196	0.33	0.65	0.35	0.94
$ 1,342,032	0.00	0.30	0.70	0.00
$ 8,045,488	0.15	0.58	0.42	0.35
$ 320,722,212	0.38	0.62	0.38	1.01
$ 30,920,086,406	0.09	0.92	0.08	1.21
$ 504,255,450	0.49	0.69	0.31	1.61
$ 26,695,558	0.57	0.72	0.28	2.04
$ 9,948,050	0.31	0.55	0.45	0.69
$ 46,420,950	0.40	0.67	0.33	1.21
$ 188,798,094	0.30	0.50	0.50	0.61
$ 15,247,764	0.40	0.64	0.36	1.09
$ 32,723,750	0.17	0.44	0.56	0.31
$ 259,293,164	0.28	0.58	0.42	0.66
$ 14,658,054	0.28	0.47	0.53	0.53
$ 64,266,788	0.45	0.67	0.33	1.35
$ 71,126,220	0.32	0.56	0.44	0.74
$ 117,550,451	0.34	0.58	0.42	0.82
$ 23,617,459	0.32	0.56	0.44	0.73
$ 60,715,352	0.34	0.64	0.36	0.94
$ 5,808,520	0.46	0.70	0.30	1.52
$ 160,480,229	0.37	0.67	0.33	1.13
$ 17,719,995	0.38	0.67	0.33	1.15
$ 24,130,293	0.34	0.66	0.34	1.01

$	90,944,461	0.34	0.70	0.30	1.12
$	14,020,849	0.28	0.60	0.40	0.70
$	44,523,510	0.50	0.67	0.33	1.54
$	844,980,466	0.44	0.70	0.30	1.48
$	45,042,402	0.60	0.74	0.26	2.31
$	6,795,316	0.29	0.62	0.38	0.75
$	8,700,467	0.18	0.61	0.39	0.45
$	7,285,391	0.19	0.67	0.33	0.58
$	35,576,052	0.24	0.66	0.34	0.71
$	92,677,819	0.34	0.55	0.45	0.75
$	18,488,528	0.02	0.45	0.55	0.04
$	2,638,344,601	0.44	0.71	0.29	1.53
$	172,743,489	0.43	0.67	0.33	1.31
$	14,573,145	0.20	0.40	0.60	0.33
$	137,926,882	0.45	0.66	0.34	1.32
$	27,321,684	0.33	0.61	0.39	0.84
$	6,660,165	0.44	0.72	0.28	1.56
$	8,730,929	0.37	0.59	0.41	0.91
$	44,213,812	0.31	0.53	0.47	0.65
$	73,316,873	0.31	0.54	0.46	0.67
$	27,598,142	0.46	0.76	0.24	1.90
$	39,610,409,648	0.19	0.85	0.15	0.94

1.22
2.31
0.00

Debt to Equity Ratio (Total Debt/Total Equity)	Allocation Factor - Market Share
1.43	0.27%
0.79	0.03%
2.07	0.70%
1.14	0.22%
1.65	0.71%
1.27	1.30%
1.72	1.02%
4.33	0.44%
1.68	0.12%
0.63	0.02%
2.83	0.23%
0.23	0.02%
1.73	0.19%
2.25	5.26%
2.21	0.76%
1.42	1.69%
2.67	0.37%
2.40	0.05%
2.07	0.44%
1.87	0.48%
0.55	0.06%
6.41	0.75%
2.66	0.14%
2.33	1.32%
0.67	0.35%
1.80	0.41%
1.25	0.06%
1.87	3.80%
0.43	0.01%
1.37	0.07%
1.62	3.02%
11.75	24.77%
2.28	5.89%
2.59	0.22%
1.22	0.08%
2.01	0.50%
1.00	1.40%
1.74	0.19%
0.77	0.26%
1.38	2.56%
0.90	0.12%
2.00	0.68%
1.27	0.51%
1.38	1.04%
1.28	0.16%
1.78	0.41%
2.29	0.10%
2.05	1.19%
2.02	0.20%
1.92	0.25%

2.33	0.79%
1.47	0.15%
2.05	0.63%
2.38	6.73%
2.88	0.55%
1.60	0.07%
1.57	0.09%
2.03	0.06%
1.96	0.21%
1.22	0.75%
0.82	0.16%
2.48	19.93%
2.04	1.92%
0.67	0.11%
1.94	1.15%
1.53	0.30%
2.55	0.08%
1.44	0.07%
1.12	0.35%
1.16	0.73%
3.15	0.31%
5.55	100.00%

Allocation Factor - Net Assets (interest bearing debt only)
0.15%
0.01%
0.16%
0.08%
0.16%
0.28%
0.32%
0.19%
0.03%
0.01%
0.05%
0.01%
0.04%
1.21%
0.15%
0.68%
0.08%
0.02%
0.12%
0.14%
0.02%
0.31%
0.04%
0.30%
0.15%
0.13%
0.01%
1.07%
0.00%
0.02%
0.81%
78.06%
1.27%
0.07%
0.03%
0.12%
0.48%
0.04%
0.08%
0.65%
0.04%
0.16%
0.18%
0.30%
0.06%
0.15%
0.01%
0.41%
0.04%
0.06%

0.23%
0.04%
0.11%
2.13%
0.11%
0.02%
0.02%
0.02%
0.09%
0.23%
0.05%
6.66%
0.44%
0.04%
0.35%
0.07%
0.02%
0.02%
0.11%
0.19%
0.07%

100.00%

Switch

		Scenario 3	
		$ 3,107,422,314	$ 5,929,768,083
	Total Debt	$ 2,330,566,735.74	$ 4,447,326,062.36
Allocation Factor - KWh		**2017**	**2018**
	0.17%	$ 4,000,839.10	$ 7,634,639.13
	0.03%	$ 636,981.48	$ 1,215,525.95
	0.84%	$ 19,619,656.70	$ 37,439,395.86
	0.23%	$ 5,458,382.23	$ 10,416,009.62
	0.77%	$ 17,913,583.52	$ 34,183,765.54
	1.37%	$ 31,994,043.25	$ 61,052,936.27
	1.25%	$ 29,116,475.71	$ 55,561,790.74
	0.40%	$ 9,374,531.92	$ 17,889,039.39
	0.12%	$ 2,795,149.10	$ 5,333,869.76
	0.02%	$ 509,186.17	$ 971,659.34
	0.25%	$ 5,866,968.27	$ 11,195,697.81
	0.02%	$ 566,622.66	$ 1,081,263.06
	0.15%	$ 3,553,513.93	$ 6,781,026.63
	6.15%	$ 143,312,677.42	$ 273,477,774.99
	0.79%	$ 18,362,839.17	$ 35,041,061.89
	2.05%	$ 47,660,601.06	$ 90,948,793.69
	0.40%	$ 9,327,213.94	$ 17,798,744.40
	0.05%	$ 1,157,341.28	$ 2,208,507.47
	0.42%	$ 9,684,228.95	$ 18,480,021.67
	0.51%	$ 12,000,524.84	$ 22,900,115.27
	0.06%	$ 1,457,380.34	$ 2,781,059.85
	0.75%	$ 17,522,047.18	$ 33,436,612.61
	0.15%	$ 3,500,079.00	$ 6,679,058.92
	1.51%	$ 35,181,725.99	$ 67,135,862.07
	0.29%	$ 6,866,014.04	$ 13,102,136.37
	0.43%	$ 10,124,485.40	$ 19,320,145.23
	0.07%	$ 1,668,494.11	$ 3,183,919.71
	4.62%	$ 107,643,528.45	$ 205,411,783.39
	0.02%	$ 473,294.57	$ 903,168.85
	0.12%	$ 2,779,231.65	$ 5,303,495.14
	3.34%	$ 77,951,929.41	$ 148,752,508.12
	18.46%	$ 430,158,065.26	$ 820,853,205.02
	6.31%	$ 147,014,001.37	$ 280,540,861.50
	0.20%	$ 4,755,923.92	$ 9,075,536.90
	0.08%	$ 1,978,496.99	$ 3,775,485.64
	0.60%	$ 13,921,831.85	$ 26,566,467.58
	1.49%	$ 34,699,922.76	$ 66,216,456.50
	0.20%	$ 4,734,489.07	$ 9,034,633.64
	0.25%	$ 5,727,393.96	$ 10,929,353.81
	2.68%	$ 62,519,448.27	$ 119,303,329.72
	0.16%	$ 3,763,424.29	$ 7,181,590.08
	0.72%	$ 16,780,203.95	$ 32,020,983.23
	0.55%	$ 12,928,205.05	$ 24,670,369.81
	1.02%	$ 23,873,528.65	$ 45,556,887.33
	0.17%	$ 3,914,205.31	$ 7,469,319.39
	0.44%	$ 10,267,798.34	$ 19,593,623.49
	0.10%	$ 2,417,797.14	$ 4,613,784.31
	1.29%	$ 30,165,047.37	$ 57,562,737.54
	0.21%	$ 4,850,411.45	$ 9,255,843.61
	0.26%	$ 6,018,448.39	$ 11,484,761.18

0.92%	$ 21,340,500.09	$	40,723,211.56
0.16%	$ 3,640,510.39	$	6,947,038.46
0.67%	$ 15,545,025.45	$	29,663,942.16
7.30%	$ 170,024,275.15	$	324,450,434.54
0.57%	$ 13,213,227.94	$	25,214,267.45
0.07%	$ 1,710,573.26	$	3,264,217.64
0.09%	$ 2,057,339.67	$	3,925,937.92
0.07%	$ 1,577,642.13	$	3,010,550.55
0.23%	$ 5,340,167.98	$	10,190,426.16
0.79%	$ 18,522,455.06	$	35,345,650.42
0.17%	$ 3,874,093.90	$	7,392,776.40
20.99%	$ 489,081,088.11	$	933,293,621.85
2.16%	$ 50,407,927.44	$	96,191,405.30
0.10%	$ 2,443,495.85	$	4,662,824.11
1.19%	$ 27,811,476.68	$	53,071,513.96
0.30%	$ 7,048,314.60	$	13,450,013.13
0.09%	$ 2,088,442.84	$	3,985,290.84
0.13%	$ 2,987,329.87	$	5,700,600.53
0.37%	$ 8,531,518.24	$	16,280,350.55
0.73%	$ 17,001,811.39	$	32,443,867.73
0.33%	$ 7,751,305.44	$	14,791,502.06

100.00%

$ 8,427,301,198	$ 11,479,012,413	$ 13,167,675,226	$ 14,536,265,101
$ 6,320,475,898.87	$ 8,609,259,309.65	$ 9,875,756,419.70	$ 10,902,198,825.40

2019	2020	2021	2022
$ 10,850,239.44	$ 14,779,349.91	$ 16,953,521.15	$ 18,715,595.09
$ 1,727,488.02	$ 2,353,049.44	$ 2,699,203.53	$ 2,979,746.80
$ 53,208,331.45	$ 72,476,239.17	$ 83,138,125.88	$ 91,779,134.66
$ 14,803,083.21	$ 20,163,605.40	$ 23,129,847.56	$ 25,533,861.53
$ 48,581,476.42	$ 66,173,898.11	$ 75,908,655.50	$ 83,798,265.13
$ 86,767,555.80	$ 118,187,997.15	$ 135,574,482.03	$ 149,665,493.55
$ 78,963,618.67	$ 107,558,082.65	$ 123,380,814.43	$ 136,204,470.11
$ 25,423,645.74	$ 34,630,107.33	$ 39,724,498.07	$ 43,853,286.55
$ 7,580,419.06	$ 10,325,455.61	$ 11,844,420.16	$ 13,075,476.77
$ 1,380,908.29	$ 1,880,965.57	$ 2,157,672.01	$ 2,381,930.89
$ 15,911,164.86	$ 21,672,947.80	$ 24,861,227.39	$ 27,445,193.32
$ 1,536,675.52	$ 2,093,139.54	$ 2,401,058.62	$ 2,650,614.02
$ 9,637,097.61	$ 13,126,902.73	$ 15,057,984.58	$ 16,623,044.84
$ 388,662,684.38	$ 529,405,995.27	$ 607,286,233.16	$ 670,404,875.99
$ 49,799,853.67	$ 67,833,476.58	$ 77,812,372.43	$ 85,899,845.98
$ 129,255,118.81	$ 176,061,241.70	$ 201,961,385.46	$ 222,952,357.85
$ 25,295,319.80	$ 34,455,311.75	$ 39,523,988.53	$ 43,631,936.94
$ 3,138,699.09	$ 4,275,291.09	$ 4,904,223.69	$ 5,413,946.99
$ 26,263,541.28	$ 35,774,147.52	$ 41,036,836.55	$ 45,302,023.68
$ 32,545,314.79	$ 44,330,689.46	$ 50,852,120.41	$ 56,137,464.70
$ 3,952,402.29	$ 5,383,654.14	$ 6,175,636.61	$ 6,817,504.94
$ 47,519,633.41	$ 64,727,538.38	$ 74,249,523.65	$ 81,966,690.46
$ 9,492,182.57	$ 12,929,510.76	$ 14,831,554.53	$ 16,373,080.65
$ 95,412,522.54	$ 129,963,496.59	$ 149,082,260.11	$ 164,577,210.29
$ 18,620,567.95	$ 25,363,485.36	$ 29,094,675.21	$ 32,118,646.95
$ 27,457,512.79	$ 37,400,482.41	$ 42,902,419.47	$ 47,361,507.03
$ 4,524,940.94	$ 6,163,521.63	$ 7,070,229.40	$ 7,805,077.75
$ 291,928,275.12	$ 397,641,927.69	$ 456,138,522.36	$ 503,547,541.21
$ 1,283,570.59	$ 1,748,379.74	$ 2,005,581.65	$ 2,214,032.92
$ 7,537,251.09	$ 10,266,655.57	$ 11,776,970.12	$ 13,001,016.26
$ 211,404,927.20	$ 287,959,303.49	$ 330,320,627.80	$ 364,652,691.64
$ 1,166,584,780.64	$ 1,589,030,801.46	$ 1,822,791,087.38	$ 2,012,243,924.14
$ 398,700,641.45	$ 543,078,917.48	$ 622,970,561.44	$ 687,719,363.92
$ 12,898,022.64	$ 17,568,680.47	$ 20,153,186.55	$ 22,247,819.55
$ 5,365,665.94	$ 7,308,691.65	$ 8,383,863.92	$ 9,255,245.62
$ 37,755,882.00	$ 51,428,117.73	$ 58,993,642.25	$ 65,125,180.29
$ 94,105,876.55	$ 128,183,685.33	$ 147,040,623.10	$ 162,323,374.57
$ 12,839,891.52	$ 17,489,498.79	$ 20,062,356.56	$ 22,147,549.09
$ 15,532,640.60	$ 21,157,351.58	$ 24,269,782.47	$ 26,792,276.22
$ 169,552,178.00	$ 230,950,752.81	$ 264,925,622.25	$ 292,460,818.69
$ 10,206,372.63	$ 13,902,324.76	$ 15,947,477.95	$ 17,604,988.21
$ 45,507,761.27	$ 61,987,123.07	$ 71,105,969.35	$ 78,496,409.04
$ 35,061,175.11	$ 47,757,598.16	$ 54,783,157.26	$ 60,477,076.12
$ 64,744,793.69	$ 88,190,308.25	$ 101,163,871.54	$ 111,678,396.53
$ 10,615,289.39	$ 14,459,319.28	$ 16,586,411.22	$ 18,310,329.38
$ 27,846,176.18	$ 37,929,889.36	$ 43,509,706.80	$ 48,031,913.12
$ 6,557,043.97	$ 8,931,493.89	$ 10,245,394.52	$ 11,310,255.47
$ 81,807,335.50	$ 111,431,571.93	$ 127,824,127.75	$ 141,109,601.76
$ 13,154,271.95	$ 17,917,723.30	$ 20,553,576.62	$ 22,689,824.39
$ 16,321,977.57	$ 22,232,524.83	$ 25,503,123.08	$ 28,153,804.80

$ 57,875,243.14	$ 78,833,142.28	$ 90,430,184.87	$ 99,829,097.98
$ 9,873,031.24	$ 13,448,273.12	$ 15,426,631.35	$ 17,030,007.12
$ 42,157,968.37	$ 57,424,296.44	$ 65,871,911.14	$ 72,718,345.99
$ 461,104,295.73	$ 628,080,308.23	$ 720,476,397.91	$ 795,359,525.41
$ 35,834,154.61	$ 48,810,490.55	$ 55,990,939.30	$ 61,810,389.68
$ 4,639,059.21	$ 6,318,964.64	$ 7,248,539.44	$ 8,001,920.54
$ 5,579,486.57	$ 7,599,941.43	$ 8,717,959.08	$ 9,624,065.16
$ 4,278,551.19	$ 5,827,908.73	$ 6,685,244.92	$ 7,380,079.68
$ 14,482,487.24	$ 19,726,914.57	$ 22,628,915.70	$ 24,980,865.03
$ 50,232,730.52	$ 68,423,107.66	$ 78,488,743.39	$ 86,646,515.94
$ 10,506,507.60	$ 14,311,145.21	$ 16,416,439.45	$ 18,122,691.50
$ 1,326,383,485.44	$ 1,806,696,133.79	$ 2,072,476,887.96	$ 2,287,880,961.56
$ 136,705,843.10	$ 186,210,037.22	$ 213,603,157.29	$ 235,804,123.91
$ 6,626,738.63	$ 9,026,426.52	$ 10,354,292.56	$ 11,430,471.89
$ 75,424,473.09	$ 102,737,334.58	$ 117,850,892.28	$ 130,099,792.34
$ 19,114,965.41	$ 26,036,915.03	$ 29,867,172.25	$ 32,971,433.92
$ 5,663,838.07	$ 7,714,838.48	$ 8,849,758.49	$ 9,769,563.21
$ 8,101,611.57	$ 11,035,383.40	$ 12,658,784.52	$ 13,974,482.55
$ 23,137,400.27	$ 31,515,962.07	$ 36,152,234.89	$ 39,909,738.15
$ 46,108,758.66	$ 62,805,754.83	$ 72,045,028.98	$ 79,533,070.38
$ 21,021,470.20	$ 28,633,807.16	$ 32,846,089.86	$ 36,259,967.04

$ 15,353,386,864	$ 16,878,176,520	$ 17,680,597,307	$ 17,843,677,229
$ 11,515,040,148.20	$ 12,658,632,390.05	$ 13,260,447,980.37	$ 13,382,757,921.47

2023	2024	2025	2026
$ 19,767,648.00	$ 21,730,830.81	$ 22,763,956.07	$ 22,973,923.19
$ 3,147,246.22	$ 3,459,808.43	$ 3,624,294.34	$ 3,657,723.62
$ 96,938,281.65	$ 106,565,505.30	$ 111,631,833.21	$ 112,661,487.93
$ 26,969,187.17	$ 29,647,575.85	$ 31,057,078.30	$ 31,343,538.41
$ 88,508,786.42	$ 97,298,852.30	$ 101,924,625.80	$ 102,864,744.49
$ 158,078,585.30	$ 173,777,830.94	$ 182,039,561.33	$ 183,718,633.41
$ 143,860,882.27	$ 158,148,126.32	$ 165,666,790.67	$ 167,194,845.79
$ 46,318,395.34	$ 50,918,410.35	$ 53,339,168.95	$ 53,831,151.62
$ 13,810,483.77	$ 15,182,043.21	$ 15,903,826.58	$ 16,050,518.16
$ 2,515,825.50	$ 2,765,679.47	$ 2,897,165.16	$ 2,923,887.64
$ 28,987,959.95	$ 31,866,838.85	$ 33,381,849.30	$ 33,689,752.33
$ 2,799,612.02	$ 3,077,649.66	$ 3,223,967.01	$ 3,253,703.81
$ 17,557,469.99	$ 19,301,153.58	$ 20,218,767.33	$ 20,405,258.48
$ 708,090,100.55	$ 778,412,594.88	$ 815,419,818.17	$ 822,940,978.09
$ 90,728,502.66	$ 99,739,015.04	$ 104,480,798.54	$ 105,444,494.51
$ 235,485,097.36	$ 258,871,809.60	$ 271,179,070.46	$ 273,680,335.59
$ 46,084,603.09	$ 50,661,399.51	$ 53,069,939.32	$ 53,559,438.70
$ 5,718,279.22	$ 6,286,178.21	$ 6,585,035.15	$ 6,645,773.31
$ 47,848,569.80	$ 52,600,550.91	$ 55,101,281.68	$ 55,609,517.49
$ 59,293,099.51	$ 65,181,670.26	$ 68,280,531.50	$ 68,910,328.31
$ 7,200,734.86	$ 7,915,860.85	$ 8,292,196.01	$ 8,368,680.46
$ 86,574,254.11	$ 95,172,195.94	$ 99,696,864.13	$ 100,616,434.69
$ 17,293,454.66	$ 19,010,918.10	$ 19,914,733.51	$ 20,098,420.35
$ 173,828,528.93	$ 191,091,947.43	$ 200,176,824.03	$ 202,023,188.16
$ 33,924,120.73	$ 37,293,224.16	$ 39,066,215.35	$ 39,426,549.07
$ 50,023,822.14	$ 54,991,833.90	$ 57,606,250.84	$ 58,137,591.65
$ 8,243,821.73	$ 9,062,539.73	$ 9,493,390.20	$ 9,580,954.06
$ 531,853,275.32	$ 584,673,176.22	$ 612,469,657.06	$ 618,118,872.52
$ 2,338,489.55	$ 2,570,731.77	$ 2,692,949.27	$ 2,717,788.14
$ 13,731,837.64	$ 15,095,586.51	$ 15,813,259.56	$ 15,959,115.79
$ 385,150,780.28	$ 423,401,228.27	$ 443,530,532.31	$ 447,621,509.74
$ 2,125,357,457.29	$ 2,336,432,908.88	$ 2,447,511,397.22	$ 2,470,086,424.49
$ 726,377,881.48	$ 798,516,588.70	$ 836,479,594.29	$ 844,195,002.56
$ 23,498,428.11	$ 25,832,125.58	$ 27,060,234.23	$ 27,309,828.79
$ 9,775,507.37	$ 10,746,341.53	$ 11,257,243.16	$ 11,361,076.21
$ 68,786,038.27	$ 75,617,380.47	$ 79,212,375.34	$ 79,943,003.82
$ 171,447,999.17	$ 188,475,000.31	$ 197,435,462.24	$ 199,256,540.96
$ 23,392,521.18	$ 25,715,700.73	$ 26,938,274.31	$ 27,186,743.96
$ 28,298,340.67	$ 31,108,731.46	$ 32,587,700.04	$ 32,888,278.10
$ 308,900,811.93	$ 339,578,653.04	$ 355,722,871.56	$ 359,003,940.46
$ 18,594,610.98	$ 20,441,296.07	$ 21,413,114.37	$ 21,610,621.78
$ 82,908,899.03	$ 91,142,823.75	$ 95,475,927.88	$ 96,356,565.93
$ 63,876,651.92	$ 70,220,428.64	$ 73,558,842.10	$ 74,237,324.27
$ 117,956,133.47	$ 129,670,701.32	$ 135,835,494.42	$ 137,088,395.63
$ 19,339,601.24	$ 21,260,273.48	$ 22,271,027.54	$ 22,476,448.06
$ 50,731,913.52	$ 55,770,247.90	$ 58,421,672.13	$ 58,960,534.12
$ 11,946,034.73	$ 13,132,430.31	$ 13,756,771.15	$ 13,883,659.01
$ 149,041,744.29	$ 163,843,514.87	$ 171,632,948.88	$ 173,216,033.85
$ 23,965,279.21	$ 26,345,341.03	$ 27,597,848.92	$ 27,852,402.25
$ 29,736,404.35	$ 32,689,613.45	$ 34,243,740.18	$ 34,559,593.00

$ 105,440,754.62	$ 115,912,383.68	$ 121,423,080.05	$ 122,543,045.97
$ 17,987,308.70	$ 19,773,680.82	$ 20,713,759.41	$ 20,904,816.21
$ 76,806,035.83	$ 84,433,867.39	$ 88,448,014.91	$ 89,263,829.84
$ 840,068,780.07	$ 923,498,462.22	$ 967,403,345.08	$ 976,326,350.27
$ 65,284,914.55	$ 71,768,549.94	$ 75,180,564.04	$ 75,874,004.44
$ 8,451,729.58	$ 9,291,095.51	$ 9,732,811.95	$ 9,822,584.16
$ 10,165,059.22	$ 11,174,580.91	$ 11,705,841.86	$ 11,813,812.63
$ 7,794,933.41	$ 8,569,070.99	$ 8,976,461.01	$ 9,059,256.89
$ 26,385,105.28	$ 29,005,487.09	$ 30,384,463.41	$ 30,664,719.54
$ 91,517,144.91	$ 100,605,979.64	$ 105,388,980.30	$ 106,361,053.04
$ 19,141,415.74	$ 21,042,405.60	$ 22,042,801.80	$ 22,246,117.23
$ 2,416,488,778.88	$ 2,656,477,331.63	$ 2,782,771,343.83	$ 2,808,438,696.82
$ 249,059,295.05	$ 273,794,100.48	$ 286,810,795.58	$ 289,456,242.52
$ 12,073,008.84	$ 13,272,014.58	$ 13,902,991.53	$ 14,031,228.08
$ 137,413,044.48	$ 151,059,934.94	$ 158,241,613.11	$ 159,701,180.87
$ 34,824,845.10	$ 38,283,402.10	$ 40,103,468.24	$ 40,473,369.23
$ 10,318,736.10	$ 11,343,519.89	$ 11,882,812.52	$ 11,992,415.61
$ 14,760,025.03	$ 16,225,886.20	$ 16,997,295.85	$ 17,154,073.23
$ 42,153,169.69	$ 46,339,523.99	$ 48,542,593.57	$ 48,990,334.23
$ 84,003,833.83	$ 92,346,499.72	$ 96,736,828.90	$ 97,629,097.09
$ 38,298,235.33	$ 42,101,744.85	$ 44,103,342.30	$ 44,510,136.80

$ 18,754,828,964	$ 19,281,126,402	$ 18,765,063,884	$ 17,726,503,273
$ 14,066,121,723.28	$ 14,460,844,801.74	$ 14,073,797,913.22	$ 13,294,877,454.67

2027	2028	2029	2030
$ 24,147,040.69	$ 24,824,654.21	$ 24,160,218.26	$ 22,823,060.48
$ 3,844,497.97	$ 3,952,382.15	$ 3,846,595.99	$ 3,633,704.47
$ 118,414,321.78	$ 121,737,260.86	$ 118,478,943.06	$ 111,921,674.49
$ 32,944,033.60	$ 33,868,508.06	$ 32,962,011.87	$ 31,137,715.01
$ 108,117,327.20	$ 111,151,312.33	$ 108,176,329.18	$ 102,189,263.26
$ 193,099,858.46	$ 198,518,620.79	$ 193,205,237.27	$ 182,512,209.49
$ 175,732,316.62	$ 180,663,711.53	$ 175,828,217.59	$ 166,096,928.51
$ 56,579,931.85	$ 58,167,676.17	$ 56,610,808.76	$ 53,477,658.96
$ 16,870,105.81	$ 17,343,514.21	$ 16,879,312.20	$ 15,945,119.33
$ 3,073,190.13	$ 3,159,429.89	$ 3,074,867.23	$ 2,904,687.37
$ 35,410,052.24	$ 36,403,728.04	$ 35,429,376.28	$ 33,468,522.06
$ 3,419,847.69	$ 3,515,815.35	$ 3,421,713.98	$ 3,232,337.73
$ 21,447,212.25	$ 22,049,063.26	$ 21,458,916.46	$ 20,271,263.41
$ 864,962,815.35	$ 889,235,375.47	$ 865,434,844.46	$ 817,536,977.08
$ 110,828,807.00	$ 113,938,881.60	$ 110,889,288.70	$ 104,752,072.85
$ 287,655,275.26	$ 295,727,448.81	$ 287,812,255.03	$ 271,883,160.76
$ 56,294,344.46	$ 57,874,074.64	$ 56,325,065.51	$ 53,207,730.30
$ 6,985,126.45	$ 7,181,142.86	$ 6,988,938.39	$ 6,602,132.56
$ 58,449,106.42	$ 60,089,303.46	$ 58,481,003.38	$ 55,244,346.85
$ 72,429,096.58	$ 74,461,599.68	$ 72,468,622.72	$ 68,457,815.32
$ 8,796,010.41	$ 9,042,843.78	$ 8,800,810.58	$ 8,313,725.90
$ 105,754,211.95	$ 108,721,883.41	$ 105,811,924.33	$ 99,955,717.42
$ 21,124,706.04	$ 21,717,506.90	$ 21,136,234.26	$ 19,966,440.19
$ 212,339,098.73	$ 218,297,752.04	$ 212,454,976.82	$ 200,696,563.84
$ 41,439,787.05	$ 42,602,669.08	$ 41,462,401.64	$ 39,167,647.01
$ 61,106,271.64	$ 62,821,033.97	$ 61,139,618.67	$ 57,755,819.92
$ 10,070,186.34	$ 10,352,775.60	$ 10,075,681.86	$ 9,518,038.87
$ 649,681,878.08	$ 667,913,231.11	$ 650,036,423.67	$ 614,059,875.46
$ 2,856,566.56	$ 2,936,727.44	$ 2,858,125.45	$ 2,699,941.26
$ 16,774,036.16	$ 17,244,748.65	$ 16,783,190.11	$ 15,854,317.17
$ 470,478,408.03	$ 483,680,958.75	$ 470,735,158.37	$ 444,682,116.57
$ 2,596,216,453.87	$ 2,669,071,400.76	$ 2,597,633,265.91	$ 2,453,866,124.51
$ 887,302,134.12	$ 912,201,579.52	$ 887,786,354.28	$ 838,651,432.89
$ 28,704,350.65	$ 29,509,851.26	$ 28,720,015.24	$ 27,130,493.52
$ 11,941,206.87	$ 12,276,300.65	$ 11,947,723.45	$ 11,286,471.50
$ 84,025,133.63	$ 86,383,044.36	$ 84,070,987.98	$ 79,418,042.63
$ 209,431,178.22	$ 215,308,229.55	$ 209,545,469.39	$ 197,948,084.37
$ 28,574,980.73	$ 29,376,850.97	$ 28,590,574.72	$ 27,008,216.95
$ 34,567,652.33	$ 35,537,688.73	$ 34,586,516.65	$ 32,672,310.87
$ 377,335,759.59	$ 387,924,544.16	$ 377,541,679.96	$ 356,646,471.69
$ 22,714,125.02	$ 23,351,528.10	$ 22,726,520.61	$ 21,468,711.46
$ 101,276,821.50	$ 104,118,848.58	$ 101,332,090.48	$ 95,723,821.92
$ 78,028,104.95	$ 80,217,727.25	$ 78,070,686.59	$ 73,749,830.53
$ 144,088,540.73	$ 148,131,948.96	$ 144,167,172.99	$ 136,188,178.18
$ 23,624,162.98	$ 24,287,103.52	$ 23,637,055.20	$ 22,328,852.11
$ 61,971,236.02	$ 63,710,270.95	$ 62,005,055.08	$ 58,573,358.37
$ 14,592,600.33	$ 15,002,097.44	$ 14,600,563.83	$ 13,792,489.28
$ 182,060,964.62	$ 187,169,953.86	$ 182,160,319.27	$ 172,078,577.28
$ 29,274,629.54	$ 30,096,133.30	$ 29,290,605.35	$ 27,669,504.07
$ 36,324,309.58	$ 37,343,641.25	$ 36,344,132.55	$ 34,332,650.75

$ 128,800,461.84	$ 132,414,856.46	$ 128,870,751.06	$ 121,738,343.37
$ 21,972,278.89	$ 22,588,864.31	$ 21,984,269.65	$ 20,767,540.69
$ 93,821,909.01	$ 96,454,736.56	$ 93,873,109.68	$ 88,677,661.65
$ 1,026,180,505.18	$ 1,054,977,151.19	$ 1,026,740,514.30	$ 969,915,114.56
$ 79,748,358.92	$ 81,986,254.94	$ 79,791,879.34	$ 75,375,763.12
$ 10,324,154.80	$ 10,613,870.91	$ 10,329,788.91	$ 9,758,082.26
$ 12,417,061.38	$ 12,765,508.58	$ 12,423,837.64	$ 11,736,234.95
$ 9,521,849.75	$ 9,789,051.61	$ 9,527,046.03	$ 8,999,767.53
$ 32,230,552.20	$ 33,135,004.97	$ 32,248,141.11	$ 30,463,353.74
$ 111,792,167.76	$ 114,929,276.16	$ 111,853,175.19	$ 105,662,612.62
$ 23,382,070.78	$ 24,038,217.73	$ 23,394,830.88	$ 22,100,033.81
$ 2,951,846,009.14	$ 3,034,680,621.75	$ 2,953,456,896.00	$ 2,789,996,541.24
$ 304,236,747.37	$ 312,774,229.69	$ 304,402,776.01	$ 287,555,472.15
$ 14,747,704.72	$ 15,161,554.35	$ 14,755,752.86	$ 13,939,089.31
$ 167,856,002.68	$ 172,566,372.70	$ 167,947,605.37	$ 158,652,472.20
$ 42,540,060.99	$ 43,733,818.88	$ 42,563,276.03	$ 40,207,593.03
$ 12,604,784.36	$ 12,958,499.44	$ 12,611,663.07	$ 11,913,665.10
$ 18,030,011.71	$ 18,535,969.35	$ 18,039,851.09	$ 17,041,427.69
$ 51,491,927.80	$ 52,936,892.70	$ 51,520,028.07	$ 48,668,629.74
$ 102,614,331.92	$ 105,493,892.17	$ 102,670,330.80	$ 96,987,996.75
$ 46,782,958.03	$ 48,095,779.97	$ 46,808,488.51	$ 44,217,852.38

Average - Debt allocated by net assets
Weighted Average

$ 16,612,828,437	$ 15,443,469,858	$ 14,215,643,351	$ 12,926,425,519
$ 12,459,621,327.41	$ 11,582,602,393.78	$ 10,661,732,513.47	$ 9,694,819,139.14

2031	2032	2033	2034
$ 21,389,192.35	$ 19,883,630.81	$ 18,302,791.19	$ 16,642,909.60
$ 3,405,415.49	$ 3,165,712.07	$ 2,914,023.48	$ 2,649,750.46
$ 104,890,149.40	$ 97,507,048.06	$ 89,754,791.65	$ 81,614,922.41
$ 29,181,475.30	$ 27,127,423.60	$ 24,970,669.32	$ 22,706,077.32
$ 95,769,180.89	$ 89,028,094.41	$ 81,949,953.61	$ 74,517,905.76
$ 171,045,805.10	$ 159,006,080.48	$ 146,364,369.64	$ 133,090,573.25
$ 155,661,820.88	$ 144,704,957.86	$ 133,200,251.69	$ 121,120,310.21
$ 50,117,903.11	$ 46,590,159.46	$ 42,886,028.64	$ 38,996,691.27
$ 14,943,360.67	$ 13,891,514.08	$ 12,787,075.16	$ 11,627,414.29
$ 2,722,199.20	$ 2,530,586.61	$ 2,329,393.40	$ 2,118,140.52
$ 31,365,848.44	$ 29,158,041.13	$ 26,839,843.47	$ 24,405,735.92
$ 3,029,264.79	$ 2,816,038.20	$ 2,592,150.28	$ 2,357,067.96
$ 18,997,712.97	$ 17,660,485.01	$ 16,256,395.66	$ 14,782,101.84
$ 766,174,881.29	$ 712,244,680.71	$ 655,617,970.10	$ 596,159,923.96
$ 98,170,980.93	$ 91,260,834.40	$ 84,005,180.55	$ 76,386,744.01
$ 254,801,989.71	$ 236,866,760.10	$ 218,034,769.02	$ 198,261,178.38
$ 49,864,932.82	$ 46,354,995.48	$ 42,669,561.27	$ 38,799,855.34
$ 6,187,350.87	$ 5,751,830.10	$ 5,294,533.29	$ 4,814,371.65
$ 51,773,598.10	$ 48,129,311.92	$ 44,302,811.44	$ 40,284,985.92
$ 64,156,925.00	$ 59,640,990.17	$ 54,899,258.60	$ 49,920,440.44
$ 7,791,412.66	$ 7,242,983.76	$ 6,667,133.41	$ 6,062,490.55
$ 93,675,958.49	$ 87,082,211.61	$ 80,158,777.39	$ 72,889,171.46
$ 18,712,040.40	$ 17,394,920.62	$ 16,011,944.85	$ 14,559,820.29
$ 188,087,719.93	$ 174,848,433.82	$ 160,947,183.41	$ 146,350,870.47
$ 36,706,923.53	$ 34,123,163.87	$ 31,410,216.23	$ 28,561,621.21
$ 54,127,286.85	$ 50,317,327.13	$ 46,316,869.42	$ 42,116,388.83
$ 8,920,064.18	$ 8,292,190.75	$ 7,632,923.65	$ 6,940,693.19
$ 575,481,312.01	$ 534,973,820.38	$ 492,440,954.17	$ 447,781,444.66
$ 2,530,316.34	$ 2,352,210.18	$ 2,165,198.71	$ 1,968,836.66
$ 14,858,263.19	$ 13,812,406.51	$ 12,714,257.01	$ 11,561,200.02
$ 416,744,780.26	$ 387,410,577.15	$ 356,609,663.87	$ 324,268,704.94
$ 2,299,700,979.10	$ 2,137,827,576.43	$ 1,967,860,503.61	$ 1,789,395,077.16
$ 785,962,812.75	$ 730,639,761.61	$ 672,550,557.91	$ 611,556,894.03
$ 25,426,009.14	$ 23,636,300.54	$ 21,757,106.51	$ 19,783,952.78
$ 10,577,394.30	$ 9,832,863.24	$ 9,051,105.63	$ 8,230,260.14
$ 74,428,571.54	$ 69,189,626.90	$ 63,688,735.02	$ 57,912,798.55
$ 185,511,914.81	$ 172,453,936.77	$ 158,743,059.82	$ 144,346,639.03
$ 25,311,414.64	$ 23,529,772.22	$ 21,659,047.68	$ 19,694,786.92
$ 30,619,659.54	$ 28,464,375.65	$ 26,201,327.56	$ 23,825,127.07
$ 334,240,010.87	$ 310,713,227.02	$ 286,010,103.97	$ 260,071,824.76
$ 20,119,930.86	$ 18,703,711.23	$ 17,216,680.62	$ 15,655,298.47
$ 89,709,933.56	$ 83,395,350.78	$ 76,765,038.86	$ 69,803,211.35
$ 69,116,467.19	$ 64,251,435.68	$ 59,143,152.60	$ 53,779,455.36
$ 127,632,100.05	$ 118,648,218.01	$ 109,215,141.86	$ 99,310,411.91
$ 20,926,032.83	$ 19,453,072.57	$ 17,906,464.30	$ 16,282,525.62
$ 54,893,463.11	$ 51,029,573.10	$ 46,972,488.58	$ 42,712,549.83
$ 12,925,970.49	$ 12,016,125.76	$ 11,060,788.78	$ 10,057,684.97
$ 161,267,670.10	$ 149,916,217.57	$ 137,997,192.41	$ 125,482,216.00
$ 25,931,156.13	$ 24,105,890.80	$ 22,189,362.20	$ 20,177,007.16
$ 32,175,687.89	$ 29,910,876.89	$ 27,532,825.33	$ 25,035,871.20

$ 114,090,082.03	$ 106,059,407.63	$ 97,627,199.50	$ 88,773,380.97
$ 19,462,811.43	$ 18,092,845.71	$ 16,654,381.70	$ 15,143,994.49
$ 83,106,451.20	$ 77,256,680.22	$ 71,114,420.70	$ 64,665,048.20
$ 908,979,799.81	$ 844,997,719.31	$ 777,816,534.79	$ 707,276,291.04
$ 70,640,249.90	$ 65,667,961.02	$ 60,447,057.69	$ 54,965,109.19
$ 9,145,026.74	$ 8,501,318.45	$ 7,825,424.74	$ 7,115,736.34
$ 10,998,901.18	$ 10,224,700.72	$ 9,411,790.23	$ 8,558,234.22
$ 8,434,353.44	$ 7,840,668.66	$ 7,217,299.63	$ 6,562,762.15
$ 28,549,481.05	$ 26,539,914.72	$ 24,429,870.08	$ 22,214,323.21
$ 99,024,315.66	$ 92,054,103.85	$ 84,735,381.45	$ 77,050,722.93
$ 20,711,590.12	$ 19,253,724.25	$ 17,722,965.09	$ 16,115,667.97
$ 2,614,713,864.58	$ 2,430,667,054.09	$ 2,237,417,903.07	$ 2,034,506,294.50
$ 269,489,681.71	$ 250,520,601.74	$ 230,603,067.78	$ 209,689,657.12
$ 13,063,360.31	$ 12,143,844.86	$ 11,178,353.63	$ 10,164,587.85
$ 148,685,065.58	$ 138,219,288.64	$ 127,230,222.84	$ 115,691,703.76
$ 37,681,534.51	$ 35,029,173.07	$ 32,244,193.55	$ 29,319,965.06
$ 11,165,184.20	$ 10,379,279.26	$ 9,554,079.08	$ 8,687,618.88
$ 15,970,793.01	$ 14,846,626.59	$ 13,666,251.86	$ 12,426,858.38
$ 45,611,003.12	$ 42,400,495.17	$ 39,029,461.82	$ 35,489,876.81
$ 90,894,686.09	$ 84,496,709.89	$ 77,778,834.89	$ 70,725,066.13
$ 41,439,847.67	$ 38,522,942.73	$ 35,460,192.54	$ 32,244,304.85

$	11,572,746,795	$	10,151,384,135	$	8,658,953,341	$	7,091,901,008
$	8,679,560,096.10	$	7,613,538,100.90	$	6,494,215,005.95	$	5,318,925,756.24

	2035		**2036**		**2037**		**2038**
$	14,900,033.92	$	13,070,014.46	$	11,148,494.03	$	9,130,897.57
$	2,372,263.78	$	2,080,902.78	$	1,774,973.72	$	1,453,748.21
$	73,068,059.72	$	64,093,853.89	$	54,670,937.77	$	44,776,875.84
$	20,328,255.72	$	17,831,543.04	$	15,209,994.73	$	12,457,369.01
$	66,714,255.52	$	58,520,422.77	$	49,916,898.38	$	40,883,197.77
$	119,153,087.04	$	104,518,726.52	$	89,152,647.98	$	73,018,265.51
$	108,436,371.66	$	95,118,236.18	$	81,134,193.92	$	66,450,949.56
$	34,912,887.04	$	30,624,892.59	$	26,122,498.42	$	21,394,984.54
$	10,409,770.38	$	9,131,244.27	$	7,788,791.86	$	6,379,216.82
$	1,896,325.01	$	1,663,418.71	$	1,418,867.11	$	1,162,087.92
$	21,849,922.99	$	19,166,319.41	$	16,348,535.66	$	13,389,862.72
$	2,110,231.53	$	1,851,053.28	$	1,578,916.11	$	1,293,172.09
$	13,234,093.32	$	11,608,684.38	$	9,902,005.00	$	8,109,991.64
$	533,728,975.51	$	468,176,479.64	$	399,346,358.97	$	327,074,732.27
$	68,387,385.64	$	59,988,059.35	$	51,168,766.75	$	41,908,509.52
$	177,498,908.21	$	155,698,524.53	$	132,808,121.66	$	108,773,198.65
$	34,736,664.12	$	30,470,313.34	$	25,990,645.02	$	21,286,993.29
$	4,310,201.92	$	3,780,823.70	$	3,224,976.57	$	2,641,337.09
$	36,066,269.14	$	31,636,616.51	$	26,985,481.25	$	22,101,789.23
$	44,692,681.38	$	39,203,534.37	$	33,439,930.01	$	27,388,145.42
$	5,427,615.55	$	4,760,996.79	$	4,061,047.10	$	3,326,099.92
$	65,256,085.23	$	57,241,344.69	$	48,825,867.12	$	39,989,615.68
$	13,035,089.50	$	11,434,122.18	$	9,753,106.48	$	7,988,040.01
$	131,024,741.89	$	114,932,306.88	$	98,035,250.12	$	80,293,340.52
$	25,570,596.44	$	22,430,020.43	$	19,132,415.61	$	15,669,930.56
$	37,705,884.21	$	33,074,854.36	$	28,212,273.01	$	23,106,562.60
$	6,213,851.21	$	5,450,667.13	$	4,649,323.85	$	3,807,913.41
$	400,888,959.66	$	351,651,850.42	$	299,952,885.71	$	245,668,972.77
$	1,762,656.52	$	1,546,167.36	$	1,318,853.75	$	1,080,174.46
$	10,350,490.19	$	9,079,244.86	$	7,744,437.27	$	6,342,889.30
$	290,310,698.05	$	254,654,790.83	$	217,216,088.24	$	177,905,450.52
$	1,602,006,379.38	$	1,405,248,246.72	$	1,198,652,207.42	$	981,726,366.15
$	547,513,546.95	$	480,268,032.51	$	409,660,242.36	$	335,522,062.70
$	17,712,141.37	$	15,536,739.38	$	13,252,567.29	$	10,854,186.60
$	7,368,372.37	$	6,463,390.21	$	5,513,158.95	$	4,515,416.12
$	51,848,065.25	$	45,480,095.29	$	38,793,726.83	$	31,773,039.95
$	129,230,397.20	$	113,358,343.28	$	96,692,686.66	$	79,193,747.21
$	17,632,313.11	$	15,466,715.62	$	13,192,838.25	$	10,805,267.01
$	21,330,116.55	$	18,710,355.51	$	15,959,606.41	$	13,071,319.87
$	232,836,631.60	$	204,239,678.78	$	174,212,878.32	$	142,684,737.83
$	14,015,847.22	$	12,294,423.41	$	10,486,928.41	$	8,589,058.66
$	62,493,292.46	$	54,817,877.62	$	46,758,692.05	$	38,296,547.19
$	48,147,573.26	$	42,234,097.05	$	36,024,947.04	$	29,505,339.52
$	88,910,445.47	$	77,990,480.70	$	66,524,517.69	$	54,485,256.53
$	14,577,390.01	$	12,786,997.62	$	10,907,085.60	$	8,933,177.99
$	38,239,614.15	$	33,543,031.68	$	28,611,620.09	$	23,433,637.92
$	9,004,425.95	$	7,898,503.99	$	6,737,285.93	$	5,518,006.97
$	112,341,490.76	$	98,543,729.26	$	84,056,079.69	$	68,844,047.63
$	18,064,034.38	$	15,845,412.96	$	13,515,860.46	$	11,069,830.34
$	22,414,069.36	$	19,661,177.43	$	16,770,640.91	$	13,735,577.55

$ 79,476,871.51	$ 69,715,536.58	$ 59,466,134.91	$ 48,704,263.15
$ 13,558,087.93	$ 11,892,886.03	$ 10,144,424.04	$ 8,308,538.94
$ 57,893,207.07	$ 50,782,773.89	$ 43,316,819.05	$ 35,477,566.47
$ 633,209,035.11	$ 555,438,416.38	$ 473,779,266.71	$ 388,037,159.56
$ 49,209,063.27	$ 43,165,215.05	$ 36,819,174.43	$ 30,155,831.77
$ 6,370,563.53	$ 5,588,132.07	$ 4,766,579.04	$ 3,903,948.36
$ 7,662,000.41	$ 6,720,954.91	$ 5,732,857.14	$ 4,695,354.48
$ 5,875,497.79	$ 5,153,870.22	$ 4,396,161.27	$ 3,600,566.87
$ 19,887,999.00	$ 17,445,358.57	$ 14,880,586.12	$ 12,187,575.05
$ 68,981,831.48	$ 60,509,495.47	$ 51,613,542.65	$ 42,272,792.18
$ 14,428,005.99	$ 12,655,960.91	$ 10,795,313.58	$ 8,841,633.89
$ 1,821,449,105.51	$ 1,597,739,057.06	$ 1,362,843,506.19	$ 1,116,203,177.78
$ 187,730,575.93	$ 164,673,540.68	$ 140,463,653.66	$ 115,043,272.30
$ 9,100,133.77	$ 7,982,457.00	$ 6,808,896.38	$ 5,576,657.73
$ 103,576,258.72	$ 90,855,041.43	$ 77,497,763.27	$ 63,472,621.21
$ 26,249,525.14	$ 23,025,563.23	$ 19,640,403.22	$ 16,085,985.21
$ 7,777,835.68	$ 6,822,563.31	$ 5,819,527.33	$ 4,766,339.54
$ 11,125,495.24	$ 9,759,063.93	$ 8,324,311.06	$ 6,817,820.55
$ 31,773,312.54	$ 27,870,920.06	$ 23,773,407.96	$ 19,471,020.26
$ 63,318,608.94	$ 55,541,828.88	$ 47,376,209.83	$ 38,802,309.82
$ 28,867,622.76	$ 25,322,106.58	$ 21,599,314.58	$ 17,690,382.98

$ 5,446,496,059	$ 3,718,820,862	$ 1,904,761,905	$ -
$ 4,084,872,044.06	$ 2,789,115,646.26	$ 1,428,571,428.57	$ -

2039	2040	2041	2042
$ 7,012,421.29	$ 4,788,021.20	$ 2,452,401.10	$ -
$ 1,116,461.42	$ 762,310.30	$ 390,451.62	$ -
$ 34,388,110.82	$ 23,479,907.55	$ 12,026,294.11	$ -
$ 9,567,111.99	$ 6,532,342.13	$ 3,345,833.77	$ -
$ 31,397,812.14	$ 21,438,157.22	$ 10,980,519.55	$ -
$ 56,077,163.91	$ 38,289,007.24	$ 19,611,442.73	$ -
$ 51,033,542.97	$ 34,845,266.06	$ 17,847,575.30	$ -
$ 16,431,094.97	$ 11,219,010.92	$ 5,746,322.67	$ -
$ 4,899,163.04	$ 3,345,106.56	$ 1,713,347.26	$ -
$ 892,469.77	$ 609,370.72	$ 312,116.71	$ -
$ 10,283,256.13	$ 7,021,319.21	$ 3,596,285.45	$ -
$ 993,140.86	$ 678,108.07	$ 347,323.65	$ -
$ 6,228,377.62	$ 4,252,682.89	$ 2,178,203.43	$ -
$ 251,189,524.24	$ 171,510,055.81	$ 87,846,613.95	$ -
$ 32,185,239.42	$ 21,975,805.82	$ 11,255,900.54	$ -
$ 83,536,529.50	$ 57,038,026.88	$ 29,214,599.13	$ -
$ 16,348,158.96	$ 11,162,382.92	$ 5,717,318.08	$ -
$ 2,028,515.63	$ 1,385,053.10	$ 709,417.44	$ -
$ 16,973,912.61	$ 11,589,642.15	$ 5,936,158.18	$ -
$ 21,033,771.61	$ 14,361,679.11	$ 7,355,981.98	$ -
$ 2,554,405.38	$ 1,744,126.12	$ 893,332.89	$ -
$ 30,711,551.66	$ 20,969,584.44	$ 10,740,518.86	$ -
$ 6,134,720.21	$ 4,188,734.41	$ 2,145,449.33	$ -
$ 61,664,335.44	$ 42,103,880.11	$ 21,565,402.01	$ -
$ 12,034,321.25	$ 8,216,931.48	$ 4,208,672.22	$ -
$ 17,745,566.66	$ 12,116,520.93	$ 6,206,022.92	$ -
$ 2,924,432.44	$ 1,996,777.42	$ 1,022,739.66	$ -
$ 188,670,864.19	$ 128,822,850.17	$ 65,982,435.45	$ -
$ 829,561.20	$ 566,417.29	$ 290,116.17	$ -
$ 4,871,263.93	$ 3,326,057.29	$ 1,703,590.32	$ -
$ 136,629,280.91	$ 93,289,302.83	$ 47,782,325.84	$ -
$ 753,954,232.83	$ 514,793,492.83	$ 263,674,715.84	$ -
$ 257,676,974.05	$ 175,939,630.97	$ 90,115,420.74	$ -
$ 8,335,886.88	$ 5,691,672.17	$ 2,915,246.72	$ -
$ 3,467,786.15	$ 2,367,774.68	$ 1,212,762.64	$ -
$ 24,401,318.72	$ 16,661,011.44	$ 8,533,688.78	$ -
$ 60,819,860.79	$ 41,527,280.05	$ 21,270,070.27	$ -
$ 8,298,317.21	$ 5,666,019.92	$ 2,902,107.76	$ -
$ 10,038,618.99	$ 6,854,283.07	$ 3,510,730.35	$ -
$ 109,580,190.32	$ 74,820,415.44	$ 38,322,651.81	$ -
$ 6,596,295.42	$ 4,503,894.02	$ 2,306,872.55	$ -
$ 29,411,295.10	$ 20,081,780.40	$ 10,285,789.96	$ -
$ 22,659,751.62	$ 15,471,884.34	$ 7,924,623.68	$ -
$ 41,844,032.31	$ 28,570,746.88	$ 14,633,797.18	$ -
$ 6,860,574.99	$ 4,684,341.85	$ 2,399,297.04	$ -
$ 17,996,756.64	$ 12,288,031.30	$ 6,293,869.69	$ -
$ 4,237,764.06	$ 2,893,509.01	$ 1,482,041.20	$ -
$ 52,871,413.98	$ 36,100,148.64	$ 18,490,320.04	$ -
$ 8,501,498.72	$ 5,804,750.51	$ 2,973,164.90	$ -
$ 10,548,761.03	$ 7,202,603.69	$ 3,689,138.47	$ -

$	37,404,297.80	$	25,539,334.18	$	13,081,122.39	$	-
$	6,380,859.60	$	4,356,796.28	$	2,231,529.80	$	-
$	27,246,351.25	$	18,603,575.28	$	9,528,660.51	$	-
$	298,007,947.05	$	203,477,273.92	$	104,220,067.13	$	-
$	23,159,321.97	$	15,812,986.69	$	8,099,334.65	$	-
$	2,998,186.15	$	2,047,135.82	$	1,048,532.98	$	-
$	3,605,976.68	$	2,462,129.99	$	1,261,090.97	$	-
$	2,765,192.75	$	1,888,049.93	$	967,049.96	$	-
$	9,359,913.43	$	6,390,868.73	$	3,273,371.79	$	-
$	32,465,004.20	$	22,166,826.82	$	11,353,740.56	$	-
$	6,790,270.21	$	4,636,338.34	$	2,374,709.88	$	-
$	857,230,832.94	$	585,309,870.87	$	299,792,860.69	$	-
$	88,351,871.86	$	60,325,901.41	$	30,898,632.43	$	-
$	4,282,807.15	$	2,924,264.04	$	1,497,793.78	$	-
$	48,746,222.04	$	33,283,502.92	$	17,047,647.84	$	-
$	12,353,846.31	$	8,435,100.45	$	4,320,417.30	$	-
$	3,660,492.37	$	2,499,352.84	$	1,280,156.33	$	-
$	5,236,005.51	$	3,575,099.72	$	1,831,148.63	$	-
$	14,953,513.16	$	10,210,130.72	$	5,229,579.15	$	-
$	29,799,714.81	$	20,346,990.05	$	10,421,629.05	$	-
$	13,586,004.81	$	9,276,407.72	$	4,751,330.79	$	-

2043	2044	2045	2046
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -

$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -

2047	2048	2049	2050
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -

$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -

2017	2018	2019	2020	2021	2022	2023	2024
1.20	1.28	1.35	1.43	1.48	1.52	1.54	1.58
0.49	0.72	0.91	1.15	1.29	1.40	1.46	1.58
1.56	2.19	2.76	3.44	3.82	4.13	4.32	4.66
0.73	0.99	1.23	1.52	1.68	1.81	1.88	2.03
1.50	1.89	2.24	2.67	2.91	3.10	3.21	3.43
1.23	1.60	1.93	2.34	2.56	2.75	2.86	3.06
1.48	1.82	2.12	2.49	2.70	2.86	2.96	3.15
2.16	2.57	2.93	3.37	3.61	3.81	3.93	4.15
1.50	1.81	2.09	2.43	2.61	2.76	2.85	3.02
0.25	0.48	0.68	0.92	1.06	1.17	1.24	1.36
2.08	2.69	3.23	3.88	4.24	4.54	4.71	5.04
0.13	0.25	0.36	0.49	0.56	0.62	0.65	0.72
1.07	1.47	1.82	2.25	2.49	2.68	2.80	3.01
2.02	2.50	2.92	3.44	3.72	3.95	4.09	4.35
1.95	2.44	2.87	3.41	3.70	3.94	4.08	4.35
0.74	1.07	1.36	1.71	1.90	2.06	2.15	2.33
2.12	2.74	3.28	3.95	4.32	4.62	4.80	5.13
1.68	2.03	2.34	2.71	2.92	3.09	3.19	3.38
1.38	1.77	2.11	2.53	2.76	2.95	3.06	3.27
1.12	1.57	1.96	2.45	2.72	2.94	3.07	3.31
0.24	0.47	0.66	0.90	1.04	1.14	1.21	1.33
1.21	2.15	2.97	3.98	4.53	4.99	5.26	5.76
2.15	2.51	2.84	3.23	3.45	3.63	3.73	3.93
2.02	2.51	2.95	3.48	3.77	4.01	4.16	4.42
0.54	0.67	0.79	0.94	1.02	1.09	1.13	1.20
1.40	1.70	1.97	2.29	2.47	2.62	2.70	2.86
0.94	1.43	1.86	2.39	2.69	2.92	3.07	3.33
1.43	1.88	2.27	2.75	3.02	3.24	3.36	3.61
0.50	0.96	1.37	1.86	2.13	2.36	2.49	2.74
1.05	1.68	2.24	2.92	3.30	3.61	3.79	4.13
1.40	1.75	2.07	2.45	2.67	2.84	2.94	3.14
1.37	1.51	1.64	1.80	1.89	1.96	2.00	2.08
2.10	2.54	2.93	3.41	3.67	3.88	4.01	4.25
2.31	2.57	2.79	3.06	3.21	3.33	3.41	3.54
1.00	1.27	1.51	1.81	1.98	2.11	2.19	2.34
1.75	2.24	2.67	3.20	3.50	3.73	3.88	4.14
0.86	1.10	1.30	1.55	1.69	1.81	1.88	2.00
1.60	2.07	2.48	2.99	3.26	3.49	3.63	3.88
0.56	0.80	1.00	1.25	1.39	1.51	1.57	1.70
1.07	1.45	1.78	2.19	2.42	2.60	2.71	2.92
0.88	1.20	1.48	1.83	2.02	2.18	2.27	2.44
1.78	2.17	2.52	2.94	3.17	3.36	3.48	3.69
1.02	1.27	1.50	1.77	1.92	2.05	2.12	2.26
1.13	1.42	1.68	1.99	2.16	2.30	2.38	2.54
0.98	1.22	1.42	1.67	1.81	1.93	2.00	2.12
1.25	1.53	1.78	2.09	2.26	2.39	2.47	2.63
2.26	2.93	3.52	4.24	4.64	4.96	5.15	5.52
1.49	1.82	2.11	2.46	2.66	2.82	2.91	3.09
1.67	2.13	2.54	3.04	3.32	3.55	3.68	3.93
1.48	1.91	2.30	2.76	3.02	3.23	3.36	3.59

	1.64	2.11	2.53	3.04	3.32	3.55	3.68	3.94
	1.16	1.58	1.95	2.40	2.65	2.85	2.97	3.20
	2.06	2.54	2.97	3.48	3.77	4.00	4.14	4.40
	1.86	2.21	2.52	2.89	3.10	3.27	3.37	3.56
	2.77	3.19	3.56	4.02	4.27	4.47	4.59	4.82
	1.22	1.64	2.02	2.47	2.73	2.93	3.05	3.28
	0.95	1.41	1.81	2.30	2.57	2.79	2.92	3.17
	1.11	1.59	2.02	2.54	2.83	3.06	3.20	3.46
	1.05	1.36	1.63	1.96	2.14	2.29	2.38	2.55
	1.05	1.31	1.55	1.84	2.00	2.13	2.20	2.35
	0.41	0.75	1.05	1.42	1.62	1.78	1.88	2.06
	1.89	2.22	2.51	2.86	3.06	3.22	3.31	3.49
	1.81	2.27	2.68	3.18	3.45	3.68	3.81	4.06
	0.56	0.76	0.94	1.16	1.28	1.38	1.44	1.55
	1.64	1.94	2.20	2.52	2.70	2.85	2.93	3.09
	1.28	1.67	2.03	2.46	2.69	2.89	3.00	3.22
	2.18	2.75	3.25	3.86	4.20	4.48	4.64	4.95
	1.43	1.91	2.33	2.85	3.14	3.37	3.51	3.76
	0.93	1.19	1.42	1.69	1.85	1.97	2.05	2.19
	1.01	1.33	1.61	1.95	2.14	2.29	2.38	2.55
	2.54	3.11	3.62	4.24	4.58	4.86	5.03	5.34

	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
LDC Average	**1.36**	**1.74**	**2.08**	**2.49**	**2.72**	**2.91**	**3.02**	**3.22**
Industry Average	**1.54**	**1.82**	**2.07**	**2.38**	**2.55**	**2.69**	**2.77**	**2.92**
Max	2.77	3.19	3.62	4.24	4.64	4.99	5.26	5.76
Min	0.13	0.25	0.36	0.49	0.56	0.62	0.65	0.72

	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Industry Average	1.54	1.82	2.07	2.38	2.55	2.69	2.77	2.92
Max	2.77	3.19	3.62	4.24	4.64	4.99	5.26	5.76
Min	0.13	0.25	0.36	0.49	0.56	0.62	0.65	0.72
LDC Average	1.36	1.74	2.08	2.49	2.72	2.91	3.02	3.22

2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
1.60	1.61	1.63	1.65	1.63	1.60	1.57	1.54	1.51	1.47
1.64	1.66	1.73	1.77	1.73	1.65	1.56	1.47	1.37	1.27
4.84	4.88	5.08	5.20	5.09	4.85	4.60	4.34	4.06	3.77
2.11	2.12	2.21	2.26	2.21	2.11	2.00	1.89	1.78	1.65
3.54	3.56	3.69	3.76	3.69	3.54	3.39	3.22	3.05	2.87
3.16	3.19	3.31	3.38	3.31	3.17	3.02	2.87	2.70	2.53
3.25	3.26	3.38	3.44	3.38	3.25	3.12	2.97	2.82	2.67
4.26	4.28	4.41	4.49	4.42	4.27	4.11	3.94	3.76	3.58
3.11	3.13	3.23	3.29	3.23	3.12	2.99	2.86	2.73	2.59
1.42	1.44	1.51	1.55	1.51	1.43	1.34	1.24	1.14	1.04
5.21	5.25	5.44	5.55	5.44	5.22	4.98	4.73	4.47	4.19
0.75	0.76	0.80	0.82	0.80	0.75	0.71	0.66	0.61	0.55
3.13	3.15	3.28	3.35	3.28	3.13	2.97	2.81	2.64	2.45
4.49	4.51	4.67	4.76	4.67	4.49	4.31	4.11	3.90	3.68
4.49	4.52	4.68	4.77	4.68	4.50	4.30	4.10	3.88	3.66
2.42	2.44	2.55	2.61	2.55	2.43	2.30	2.16	2.02	1.87
5.31	5.34	5.54	5.66	5.54	5.32	5.07	4.82	4.55	4.27
3.48	3.50	3.61	3.67	3.61	3.48	3.34	3.20	3.05	2.89
3.38	3.40	3.53	3.60	3.53	3.39	3.23	3.07	2.91	2.73
3.44	3.47	3.61	3.70	3.61	3.45	3.27	3.08	2.89	2.68
1.39	1.40	1.48	1.52	1.48	1.39	1.31	1.22	1.12	1.02
6.02	6.08	6.38	6.55	6.38	6.04	5.67	5.29	4.88	4.46
4.04	4.06	4.17	4.24	4.18	4.04	3.90	3.75	3.59	3.42
4.56	4.59	4.75	4.84	4.75	4.57	4.38	4.17	3.96	3.73
1.24	1.25	1.29	1.31	1.29	1.24	1.19	1.13	1.07	1.01
2.95	2.97	3.06	3.12	3.06	2.95	2.84	2.71	2.58	2.44
3.47	3.50	3.66	3.75	3.66	3.48	3.28	3.08	2.87	2.64
3.73	3.76	3.90	3.98	3.90	3.74	3.56	3.38	3.18	2.98
2.87	2.89	3.04	3.13	3.04	2.87	2.69	2.50	2.30	2.10
4.31	4.35	4.55	4.67	4.55	4.32	4.07	3.81	3.53	3.25
3.24	3.26	3.37	3.44	3.37	3.24	3.10	2.95	2.80	2.64
2.12	2.13	2.18	2.20	2.18	2.12	2.07	2.01	1.94	1.88
4.37	4.40	4.54	4.62	4.54	4.38	4.21	4.03	3.83	3.63
3.62	3.63	3.71	3.76	3.71	3.62	3.52	3.42	3.31	3.19
2.42	2.43	2.52	2.57	2.52	2.42	2.31	2.20	2.08	1.95
4.28	4.31	4.47	4.56	4.47	4.29	4.09	3.89	3.68	3.45
2.07	2.08	2.16	2.20	2.16	2.07	1.98	1.88	1.78	1.67
4.01	4.04	4.19	4.27	4.19	4.02	3.83	3.64	3.44	3.22
1.77	1.78	1.85	1.90	1.86	1.77	1.68	1.58	1.48	1.37
3.02	3.05	3.17	3.24	3.17	3.03	2.88	2.73	2.56	2.39
2.53	2.55	2.66	2.72	2.66	2.54	2.41	2.28	2.14	1.99
3.80	3.82	3.95	4.02	3.95	3.81	3.65	3.49	3.32	3.14
2.33	2.34	2.42	2.47	2.42	2.33	2.23	2.13	2.02	1.90
2.62	2.64	2.73	2.78	2.73	2.63	2.51	2.39	2.27	2.14
2.19	2.20	2.28	2.32	2.28	2.19	2.10	2.00	1.90	1.79
2.71	2.72	2.81	2.87	2.81	2.71	2.60	2.48	2.36	2.23
5.70	5.74	5.96	6.08	5.96	5.72	5.45	5.18	4.89	4.58
3.18	3.20	3.30	3.36	3.30	3.18	3.06	2.92	2.78	2.63
4.06	4.09	4.24	4.33	4.24	4.07	3.89	3.70	3.49	3.28
3.72	3.74	3.88	3.96	3.88	3.72	3.55	3.37	3.18	2.99

4.07	4.10	4.25	4.34	4.25	4.08	3.89	3.70	3.49	3.28
3.31	3.34	3.47	3.55	3.47	3.32	3.16	2.98	2.80	2.61
4.54	4.56	4.72	4.81	4.72	4.54	4.35	4.16	3.95	3.73
3.66	3.68	3.79	3.86	3.79	3.67	3.53	3.38	3.23	3.07
4.94	4.96	5.10	5.17	5.10	4.94	4.78	4.60	4.42	4.23
3.40	3.43	3.56	3.64	3.57	3.41	3.24	3.07	2.88	2.69
3.30	3.32	3.47	3.55	3.47	3.30	3.12	2.94	2.74	2.53
3.60	3.62	3.78	3.87	3.78	3.60	3.41	3.22	3.01	2.79
2.63	2.65	2.75	2.81	2.75	2.64	2.52	2.39	2.26	2.12
2.42	2.44	2.53	2.58	2.53	2.43	2.32	2.21	2.10	1.97
2.16	2.18	2.29	2.35	2.29	2.16	2.03	1.89	1.74	1.59
3.58	3.60	3.71	3.77	3.71	3.59	3.46	3.32	3.18	3.03
4.19	4.22	4.36	4.45	4.37	4.20	4.01	3.82	3.62	3.41
1.61	1.62	1.69	1.73	1.69	1.61	1.53	1.45	1.36	1.27
3.18	3.19	3.29	3.34	3.29	3.18	3.06	2.94	2.81	2.68
3.33	3.35	3.48	3.55	3.48	3.34	3.18	3.01	2.84	2.66
5.11	5.14	5.32	5.43	5.33	5.12	4.89	4.66	4.41	4.15
3.90	3.93	4.08	4.17	4.08	3.91	3.72	3.52	3.31	3.10
2.26	2.27	2.36	2.40	2.36	2.26	2.16	2.05	1.94	1.83
2.64	2.66	2.76	2.82	2.76	2.64	2.52	2.39	2.25	2.11
5.50	5.53	5.72	5.82	5.72	5.51	5.28	5.04	4.79	4.53

2025	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
3.33	**3.36**	**3.48**	**3.55**	**3.48**	**3.34**	**3.19**	**3.03**	**2.86**	**2.69**
3.00	**3.02**	**3.11**	**3.17**	**3.11**	**3.01**	**2.90**	**2.78**	**2.66**	**2.53**
6.02	6.08	6.38	6.55	6.38	6.04	5.67	5.29	4.89	4.58
0.75	0.76	0.80	0.82	0.80	0.75	0.71	0.66	0.61	0.55

2025	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
3.00	3.02	3.11	3.17	3.11	3.01	2.90	2.78	2.66	2.53
6.02	6.08	6.38	6.55	6.38	6.04	5.67	5.29	4.89	4.58
0.75	0.76	0.80	0.82	0.80	0.75	0.71	0.66	0.61	0.55
3.33	3.36	3.48	3.55	3.48	3.34	3.19	3.03	2.86	2.69

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
1.43	1.40	1.35	1.31	1.27	1.22	1.17	1.12	1.12	1.12
1.16	1.05	0.93	0.81	0.68	0.54	0.40	0.25	0.25	0.25
3.47	3.14	2.81	2.45	2.08	1.69	1.29	0.86	0.86	0.86
1.53	1.39	1.25	1.10	0.95	0.78	0.61	0.43	0.43	0.43
2.68	2.48	2.27	2.06	1.83	1.58	1.33	1.06	1.06	1.06
2.35	2.16	1.96	1.76	1.54	1.31	1.07	0.81	0.81	0.81
2.50	2.33	2.15	1.96	1.76	1.55	1.33	1.10	1.10	1.10
3.38	3.18	2.96	2.74	2.50	2.25	1.99	1.72	1.72	1.72
2.44	2.28	2.11	1.94	1.76	1.57	1.37	1.16	1.16	1.16
0.93	0.82	0.70	0.57	0.44	0.30	0.15	0.00	0.00	0.00
3.90	3.60	3.28	2.94	2.59	2.22	1.83	1.42	1.42	1.42
0.49	0.43	0.37	0.30	0.23	0.16	0.08	0.00	0.00	0.00
2.26	2.06	1.85	1.63	1.40	1.15	0.90	0.63	0.63	0.63
3.45	3.21	2.96	2.70	2.42	2.13	1.82	1.50	1.50	1.50
3.42	3.18	2.92	2.64	2.35	2.05	1.74	1.40	1.40	1.40
1.72	1.55	1.38	1.20	1.01	0.81	0.60	0.39	0.39	0.39
3.97	3.66	3.33	2.99	2.63	2.25	1.85	1.44	1.44	1.44
2.72	2.55	2.36	2.17	1.97	1.76	1.53	1.30	1.30	1.30
2.54	2.35	2.14	1.93	1.70	1.47	1.22	0.96	0.96	0.96
2.47	2.24	2.00	1.75	1.49	1.21	0.92	0.62	0.62	0.62
0.91	0.80	0.68	0.56	0.43	0.29	0.15	0.00	0.00	0.00
4.01	3.54	3.05	2.53	1.99	1.42	0.82	0.19	0.19	0.19
3.24	3.06	2.87	2.66	2.45	2.23	1.99	1.74	1.74	1.74
3.50	3.25	2.99	2.71	2.43	2.12	1.81	1.47	1.47	1.47
0.94	0.88	0.81	0.73	0.65	0.57	0.48	0.39	0.39	0.39
2.30	2.15	1.99	1.83	1.65	1.47	1.28	1.07	1.07	1.07
2.41	2.16	1.90	1.63	1.35	1.05	0.73	0.40	0.40	0.40
2.77	2.54	2.31	2.06	1.80	1.53	1.24	0.94	0.94	0.94
1.88	1.65	1.40	1.15	0.88	0.60	0.31	0.00	0.00	0.00
2.94	2.62	2.29	1.94	1.57	1.18	0.78	0.35	0.35	0.35
2.47	2.29	2.10	1.90	1.69	1.48	1.25	1.01	1.01	1.01
1.81	1.73	1.66	1.57	1.49	1.40	1.31	1.21	1.21	1.21
3.42	3.20	2.97	2.72	2.46	2.19	1.91	1.61	1.61	1.61
3.07	2.94	2.81	2.67	2.52	2.37	2.21	2.04	2.04	2.04
1.82	1.68	1.54	1.38	1.22	1.05	0.88	0.69	0.69	0.69
3.22	2.97	2.71	2.44	2.16	1.86	1.54	1.21	1.21	1.21
1.56	1.45	1.32	1.19	1.06	0.91	0.76	0.61	0.61	0.61
3.00	2.77	2.52	2.26	1.99	1.71	1.41	1.09	1.09	1.09
1.26	1.15	1.02	0.89	0.76	0.61	0.47	0.31	0.31	0.31
2.21	2.02	1.82	1.61	1.39	1.15	0.91	0.66	0.66	0.66
1.84	1.68	1.51	1.33	1.15	0.95	0.74	0.53	0.53	0.53
2.95	2.76	2.55	2.33	2.10	1.86	1.61	1.35	1.35	1.35
1.78	1.65	1.52	1.38	1.23	1.07	0.91	0.74	0.74	0.74
2.00	1.85	1.70	1.54	1.37	1.20	1.01	0.82	0.82	0.82
1.68	1.57	1.44	1.31	1.18	1.03	0.88	0.73	0.73	0.73
2.10	1.95	1.81	1.65	1.48	1.31	1.13	0.94	0.94	0.94
4.26	3.92	3.57	3.20	2.81	2.40	1.97	1.52	1.52	1.52
2.47	2.31	2.14	1.95	1.76	1.56	1.35	1.13	1.13	1.13
3.06	2.83	2.58	2.32	2.05	1.77	1.47	1.15	1.15	1.15
2.78	2.56	2.33	2.09	1.84	1.58	1.30	1.01	1.01	1.01

3.05	2.81	2.56	2.30	2.03	1.74	1.44	1.12	1.12	1.12
2.41	2.20	1.98	1.75	1.51	1.25	0.98	0.70	0.70	0.70
3.50	3.26	3.00	2.74	2.46	2.17	1.86	1.54	1.54	1.54
2.91	2.73	2.55	2.35	2.15	1.94	1.71	1.48	1.48	1.48
4.03	3.82	3.60	3.36	3.12	2.86	2.59	2.31	2.31	2.31
2.49	2.27	2.05	1.82	1.57	1.31	1.04	0.75	0.75	0.75
2.31	2.08	1.84	1.59	1.33	1.05	0.76	0.45	0.45	0.45
2.55	2.31	2.06	1.79	1.51	1.21	0.90	0.58	0.58	0.58
1.97	1.81	1.65	1.48	1.30	1.11	0.92	0.71	0.71	0.71
1.85	1.71	1.57	1.42	1.27	1.10	0.93	0.75	0.75	0.75
1.43	1.26	1.08	0.89	0.69	0.48	0.27	0.04	0.04	0.04
2.87	2.71	2.54	2.35	2.16	1.96	1.75	1.53	1.53	1.53
3.19	2.96	2.72	2.46	2.20	1.91	1.62	1.31	1.31	1.31
1.17	1.06	0.96	0.84	0.72	0.60	0.47	0.33	0.33	0.33
2.53	2.38	2.23	2.06	1.89	1.71	1.52	1.32	1.32	1.32
2.47	2.27	2.06	1.84	1.61	1.36	1.11	0.84	0.84	0.84
3.88	3.60	3.30	2.98	2.65	2.30	1.94	1.56	1.56	1.56
2.87	2.63	2.37	2.11	1.83	1.54	1.23	0.91	0.91	0.91
1.70	1.57	1.44	1.29	1.14	0.99	0.82	0.65	0.65	0.65
1.96	1.80	1.63	1.46	1.27	1.08	0.88	0.67	0.67	0.67
4.26	3.97	3.66	3.35	3.01	2.66	2.29	1.90	1.90	1.90

2035	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
2.51	**2.31**	**2.11**	**1.90**	**1.67**	**1.44**	**1.19**	**0.94**	**0.94**	**0.94**
2.39	**2.25**	**2.10**	**1.94**	**1.77**	**1.60**	**1.41**	**1.22**	**1.22**	**1.22**
4.26	3.97	3.66	3.36	3.12	2.86	2.59	2.31	2.31	2.31
0.49	0.43	0.37	0.30	0.23	0.16	0.08	0.00	0.00	0.00

2035	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
2.39	2.25	2.10	1.94	1.77	1.60	1.41	1.22	1.22	1.22
4.26	3.97	3.66	3.36	3.12	2.86	2.59	2.31	2.31	2.31
0.49	0.43	0.37	0.30	0.23	0.16	0.08	0.00	0.00	0.00
2.51	2.31	2.11	1.90	1.67	1.44	1.19	0.94	0.94	0.94

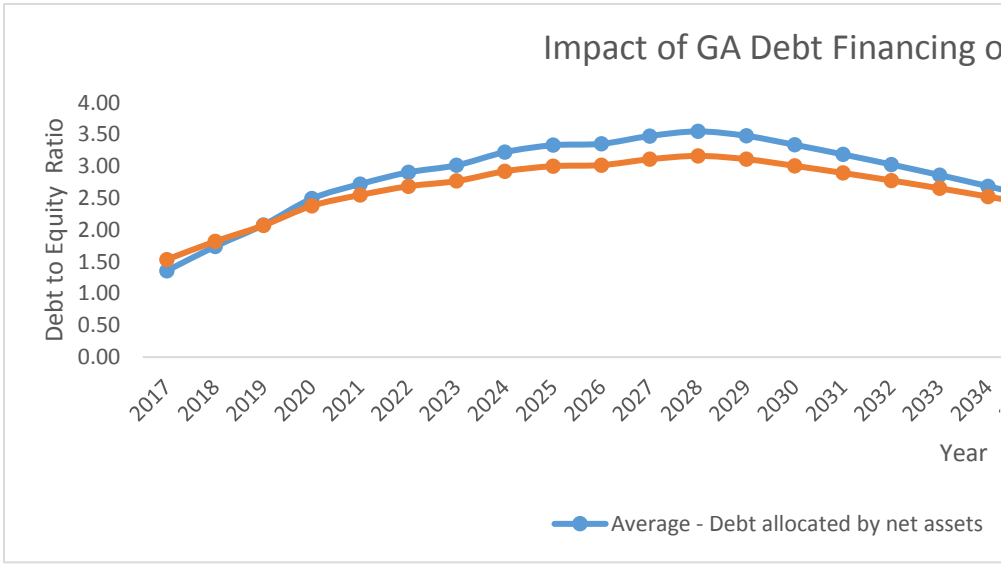
2045	2046	2047	2048	2049	2050
1.12	1.12	1.12	1.12	1.12	1.12
0.25	0.25	0.25	0.25	0.25	0.25
0.86	0.86	0.86	0.86	0.86	0.86
0.43	0.43	0.43	0.43	0.43	0.43
1.06	1.06	1.06	1.06	1.06	1.06
0.81	0.81	0.81	0.81	0.81	0.81
1.10	1.10	1.10	1.10	1.10	1.10
1.72	1.72	1.72	1.72	1.72	1.72
1.16	1.16	1.16	1.16	1.16	1.16
0.00	0.00	0.00	0.00	0.00	0.00
1.42	1.42	1.42	1.42	1.42	1.42
0.00	0.00	0.00	0.00	0.00	0.00
0.63	0.63	0.63	0.63	0.63	0.63
1.50	1.50	1.50	1.50	1.50	1.50
1.40	1.40	1.40	1.40	1.40	1.40
0.39	0.39	0.39	0.39	0.39	0.39
1.44	1.44	1.44	1.44	1.44	1.44
1.30	1.30	1.30	1.30	1.30	1.30
0.96	0.96	0.96	0.96	0.96	0.96
0.62	0.62	0.62	0.62	0.62	0.62
0.00	0.00	0.00	0.00	0.00	0.00
0.19	0.19	0.19	0.19	0.19	0.19
1.74	1.74	1.74	1.74	1.74	1.74
1.47	1.47	1.47	1.47	1.47	1.47
0.39	0.39	0.39	0.39	0.39	0.39
1.07	1.07	1.07	1.07	1.07	1.07
0.40	0.40	0.40	0.40	0.40	0.40
0.94	0.94	0.94	0.94	0.94	0.94
0.00	0.00	0.00	0.00	0.00	0.00
0.35	0.35	0.35	0.35	0.35	0.35
1.01	1.01	1.01	1.01	1.01	1.01
1.21	1.21	1.21	1.21	1.21	1.21
1.61	1.61	1.61	1.61	1.61	1.61
2.04	2.04	2.04	2.04	2.04	2.04
0.69	0.69	0.69	0.69	0.69	0.69
1.21	1.21	1.21	1.21	1.21	1.21
0.61	0.61	0.61	0.61	0.61	0.61
1.09	1.09	1.09	1.09	1.09	1.09
0.31	0.31	0.31	0.31	0.31	0.31
0.66	0.66	0.66	0.66	0.66	0.66
0.53	0.53	0.53	0.53	0.53	0.53
1.35	1.35	1.35	1.35	1.35	1.35
0.74	0.74	0.74	0.74	0.74	0.74
0.82	0.82	0.82	0.82	0.82	0.82
0.73	0.73	0.73	0.73	0.73	0.73
0.94	0.94	0.94	0.94	0.94	0.94
1.52	1.52	1.52	1.52	1.52	1.52
1.13	1.13	1.13	1.13	1.13	1.13
1.15	1.15	1.15	1.15	1.15	1.15
1.01	1.01	1.01	1.01	1.01	1.01

1.12	1.12	1.12	1.12	1.12	1.12
0.70	0.70	0.70	0.70	0.70	0.70
1.54	1.54	1.54	1.54	1.54	1.54
1.48	1.48	1.48	1.48	1.48	1.48
2.31	2.31	2.31	2.31	2.31	2.31
0.75	0.75	0.75	0.75	0.75	0.75
0.45	0.45	0.45	0.45	0.45	0.45
0.58	0.58	0.58	0.58	0.58	0.58
0.71	0.71	0.71	0.71	0.71	0.71
0.75	0.75	0.75	0.75	0.75	0.75
0.04	0.04	0.04	0.04	0.04	0.04
1.53	1.53	1.53	1.53	1.53	1.53
1.31	1.31	1.31	1.31	1.31	1.31
0.33	0.33	0.33	0.33	0.33	0.33
1.32	1.32	1.32	1.32	1.32	1.32
0.84	0.84	0.84	0.84	0.84	0.84
1.56	1.56	1.56	1.56	1.56	1.56
0.91	0.91	0.91	0.91	0.91	0.91
0.65	0.65	0.65	0.65	0.65	0.65
0.67	0.67	0.67	0.67	0.67	0.67
1.90	1.90	1.90	1.90	1.90	1.90

2045	**2046**	**2047**	**2048**	**2049**	**2050**
0.94	**0.94**	**0.94**	**0.94**	**0.94**	**0.94**
1.22	**1.22**	**1.22**	**1.22**	**1.22**	**1.22**
2.31	2.31	2.31	2.31	2.31	2.31
0.00	0.00	0.00	0.00	0.00	0.00

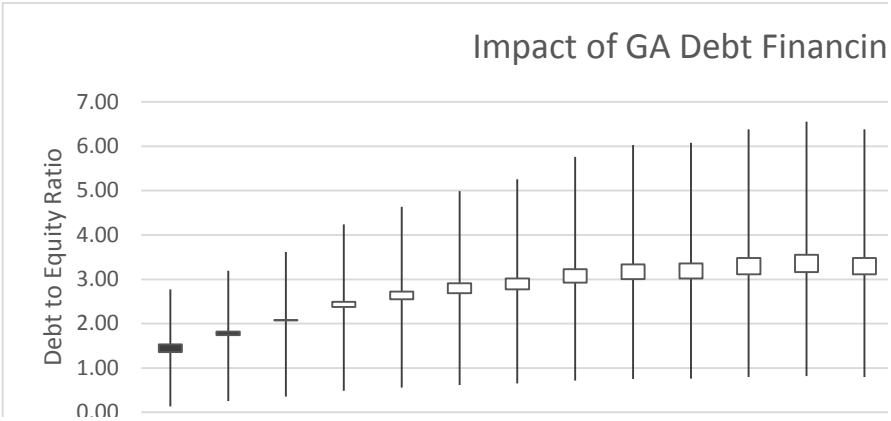
2045	**2046**	**2047**	**2048**	**2049**	**2050**
1.22	1.22	1.22	1.22	1.22	1.22
2.31	2.31	2.31	2.31	2.31	2.31
0.00	0.00	0.00	0.00	0.00	0.00
0.94	0.94	0.94	0.94	0.94	0.94

Scenario Scenario 3

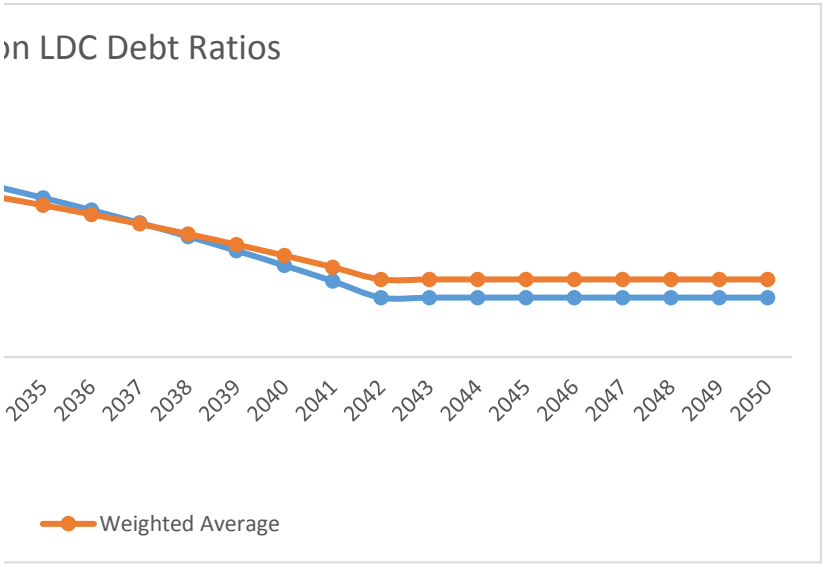


Debt to equity ratio is total interest-bearing debt divided by total equity.
Debt allocated to each LDC by their percentage of industry net assets (assets - i

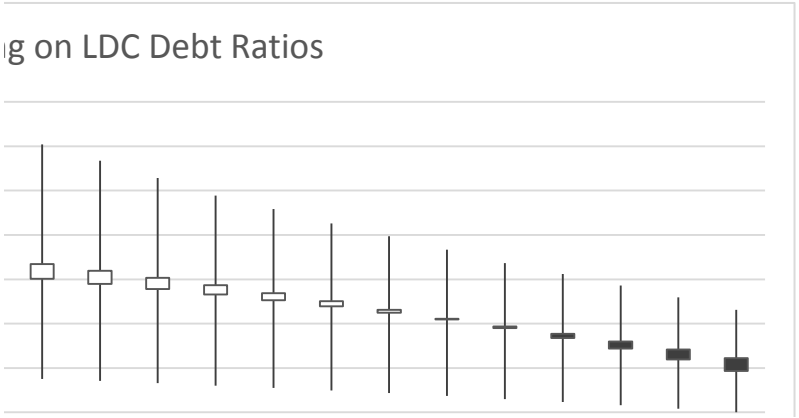
Scenario 1 Allocated by Revenue
Scenario 2 Allocated by net assets
Scenario 3 Allocated by Distribution

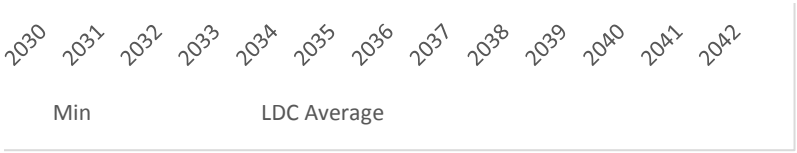



2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
Industry Average
Max



nterest bearing debt)




2030
2031
2032
2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
Min
LDC Average

Statistics by Customer Class For the year ended December 31	Algoma Power Inc.	Atikokan Hydro Inc.	Bluewater Power Distribution Corporation	Brant County Power Inc.	Brantford Power Inc.	Burlington Hydro Inc.
Residential Customers						
Number of Customers	11,635	1,402	32,326	8,631	35,892	60,366
Metered kWh	113,874,890	9,225,364	247,531,809	81,307,528	285,477,279	529,430,951
Distribution Revenue	$ 18,511,055	$ 773,234	$ 11,546,050	$ 3,099,596	$ 9,427,645	$ 17,515,273
Metered kWh per Customer	9,787	6,580	7,657	9,420	7,954	8,770
Distribution Revenue per Customer	$ 1,591	$ 552	$ 357	$ 359	$ 263	$ 290
General Service <50kW Customers						
Number of Customers	-	233	3,495	1,297	2,793	5,259
Metered kWh	-	5,110,232	104,997,601	33,835,458	99,263,741	168,383,559
Distribution Revenue	$ -	$ 275,148	$ 3,214,720	$ 1,051,633	$ 1,576,103	$ 3,881,114
Metered kWh per Customer	-	21,932	30,042	26,087	35,540	32,018
Distribution Revenue per Customer	-	$ 1,181	$ 920	$ 811	$ 564	$ 738
General Service >50kW, Large User (>5000kW) and Sub Transmission						
Number of GS >50kW Customers	43	18	384	130	442	1,031
Number of Large Users	-	-	3	-	-	-
Number of Sub Transmission Customers	-	-	-	-	-	-
Metered kWh	86,528,984	17,571,100	628,016,984	157,806,589	511,052,515	901,690,816
Distribution Revenue	$ 4,012,384	$ 227,970	$ 5,410,042	$ 1,385,470	$ 5,036,729	$ 7,098,026
Metered kWh per Customer	2,012,302	976,172	1,622,783	1,213,897	1,156,227	874,579
Distribution Revenue per Customer	$ 93,311	$ 12,665	$ 13,979	$ 10,657	$ 11,395	$ 6,885
Unmetered Scattered Load Connections						
Number of Connections	-	-	262	49	428	574
Metered kWh	-	-	2,211,250	463,306	1,506,118	3,091,043
Distribution Revenue	$ -	$ -	$ 112,504	$ 11,450	$ 77,396	$ 109,588
Metered kWh per Connection	-	-	8,440	9,455	3,519	5,385
Distribution Revenue per Connection	$ -	$ -	$ 429	$ 234	$ 181	$ 191

Statistics by Customer Class For the year ended December 31	Cambridge and North Dumfries Hydro Inc.	Canadian Niagara Power Inc.	Centre Wellington Hydro Ltd.	Chapleau Public Utilities Corporation	COLLUS PowerStream Corp.	Cooperative Hydro Embrun Inc.
Residential Customers						
Number of Customers	47,501	25,999	5,967	1,059	14,715	1,884
Metered kWh	401,332,022	199,739,669	45,096,928	13,727,288	121,577,300	19,377,540
Distribution Revenue	$ 13,535,024	$ 10,166,976	$ 1,792,121	$ 529,766	$ 4,242,211	$ 600,826
Metered kWh per Customer	8,449	7,683	7,558	12,963	8,262	10,285
Distribution Revenue per Customer	$ 285	$ 391	$ 300	$ 500	$ 288	$ 319
General Service <50kW Customers						
Number of Customers	4,887	2,496	742	157	1,742	164
Metered kWh	167,151,504	68,487,699	21,408,682	4,907,587	46,404,404	4,594,197
Distribution Revenue	$ 3,116,715	$ 2,399,395	$ 609,904	$ 158,801	$ 1,065,701	$ 99,843
Metered kWh per Customer	34,203	27,439	28,853	31,259	26,639	28,013
Distribution Revenue per Customer	$ 638	$ 961	$ 822	$ 1,011	$ 612	$ 609
General Service >50kW, Large User (>5000kW) and Sub Transmission						
Number of GS >50kW Customers	716	218	48	13	126	11
Number of Large Users	2	-	-	-	-	-
Number of Sub Transmission Customers	-	-	-	-	-	-
Metered kWh	888,000,620	199,846,714	72,940,858	6,867,603	125,497,989	4,316,369
Distribution Revenue	$ 9,220,525	$ 4,363,283	$ 674,146	$ 97,578	$ 1,008,778	$ 69,919
Metered kWh per Customer	1,236,770	916,728	1,519,601	528,277	996,016	392,397
Distribution Revenue per Customer	$ 12,842	$ 20,015	$ 14,045	$ 7,506	$ 8,006	$ 6,356
Unmetered Scattered Load Connections						
Number of Connections	470	36	13	4	30	18
Metered kWh	1,973,539	1,500,542	563,839	2,892	399,451	94,284
Distribution Revenue	$ 56,138	$ 78,374	$ 6,720	$ 1,307	$ 4,762	$ 4,935
Metered kWh per Connection	4,199	41,682	43,372	723	13,315	5,238
Distribution Revenue per Connection	$ 119	$ 2,177	$ 517	$ 327	$ 159	$ 274

Statistics by Customer Class For the year ended December 31	E.L.K. Energy Inc.	Enersource Hydro Mississauga Inc.	Entegrus Powerlines Inc.	EnWin Utilities Ltd.	Erie Thames Powerlines Corporation	Espanola Regional Hydro Distribution Corporation
Residential Customers						
Number of Customers	10,242	181,140	36,287	78,520	16,474	2,854
Metered kWh	90,738,393	1,475,669,385	280,745,450	598,907,059	136,893,462	30,864,957
Distribution Revenue	$ 2,248,530	$ 50,103,115	$ 10,908,631	$ 23,014,728	$ 5,715,607	$ 1,109,092
Metered kWh per Customer	8,859	8,147	7,737	7,627	8,310	10,815
Distribution Revenue per Customer	$ 220	$ 277	$ 301	$ 293	$ 347	$ 389
General Service <50kW Customers						
Number of Customers	1,360	17,894	3,913	7,442	1,799	406
Metered kWh	28,622,002	650,941,022	111,900,367	209,121,214	34,552,631	10,360,160
Distribution Revenue	$ 385,021	$ 17,222,050	$ 3,150,067	$ 6,144,116	$ 1,197,844	$ 330,318
Metered kWh per Customer	21,046	36,378	28,597	28,100	19,207	25,518
Distribution Revenue per Customer	$ 283	$ 962	$ 805	$ 826	$ 666	$ 814
General Service >50kW, Large User (>5000kW) and Sub Transmission						
Number of GS >50kW Customers	102	4,423	458	1,241	160	29
Number of Large Users	-	9	1	9	1	-
Number of Sub Transmission Customers	-	-	-	-	-	-
Metered kWh	58,377,148	5,041,234,706	525,909,455	1,577,019,393	295,214,659	16,623,337
Distribution Revenue	$ 434,811	$ 56,050,348	$ 4,721,342	$ 17,376,458	$ 2,091,043	$ 224,278
Metered kWh per Customer	572,325	1,137,463	1,145,772	1,261,616	1,833,631	573,219
Distribution Revenue per Customer	$ 4,263	$ 12,647	$ 10,286	$ 13,901	$ 12,988	$ 7,734
Unmetered Scattered Load Connections						
Number of Connections	18	2,968	251	780	111	21
Metered kWh	259,607	10,752,937	1,247,803	2,293,803	543,692	123,304
Distribution Revenue	$ 2,812	$ 476,966	$ 35,772	$ 106,871	$ 63,627	$ 5,434
Metered kWh per Connection	14,423	3,623	4,971	2,941	4,898	5,872
Distribution Revenue per Connection	$ 156	$ 161	$ 143	$ 137	$ 573	$ 259

Statistics by Customer Class For the year ended December 31	Essex Powerlines Corporation	Festival Hydro Inc.	Fort Frances Power Corporation	Greater Sudbury Hydro Inc.	Grimsby Power Incorporated	Guelph Hydro Electric Systems Inc.
Residential Customers						
Number of Customers	26,713	18,279	3,264	42,746	10,267	49,132
Metered kWh	246,568,730	138,916,796	36,038,802	379,394,019	93,153,599	388,506,233
Distribution Revenue	$ 9,894,481	$ 6,992,952	$ 1,208,841	$ 13,107,845	$ 3,052,544	$ 16,501,704
Metered kWh per Customer	9,230	7,600	11,041	8,876	9,073	7,907
Distribution Revenue per Customer	$ 370	$ 383	$ 370	$ 307	$ 297	$ 336
General Service <50kW Customers						
Number of Customers	1,926	2,061	418	4,032	767	4,035
Metered kWh	65,860,609	63,555,664	13,308,371	137,728,861	19,224,958	144,569,861
Distribution Revenue	$ 1,919,833	$ 2,038,199	$ 341,998	$ 3,647,393	$ 506,740	$ 3,494,879
Metered kWh per Customer	34,196	30,837	31,838	34,159	25,065	35,829
Distribution Revenue per Customer	$ 997	$ 989	$ 818	$ 905	$ 661	$ 866
General Service >50kW, Large User (>5000kW) and Sub Transmission						
Number of GS >50kW Customers	253	215	47	520	111	617
Number of Large Users	-	1	-	-	-	5
Number of Sub Transmission Customers	-	-	-	-	-	-
Metered kWh	171,092,211	397,976,147	23,591,051	359,288,499	62,576,607	1,227,295,952
Distribution Revenue	$ 1,598,368	$ 3,192,675	$ 226,131	$ 4,794,355	$ 488,135	$ 8,378,661
Metered kWh per Customer	676,254	1,842,482	501,937	690,939	563,753	1,973,145
Distribution Revenue per Customer	$ 6,318	$ 14,781	$ 4,811	$ 9,220	$ 4,398	$ 13,471
Unmetered Scattered Load Connections						
Number of Connections	134	227	6	317	70	554
Metered kWh	1,565,940	663,213	62,628	1,276,037	365,406	1,896,821
Distribution Revenue	$ 60,378	$ 37,186	$ 3,293	$ 41,843	$ 19,894	$ 7,387
Metered kWh per Connection	11,686	2,922	10,438	4,025	5,220	3,424
Distribution Revenue per Connection	$ 451	$ 164	$ 549	$ 132	$ 284	$ 13

Statistics by Customer Class For the year ended December 31	Haldimand County Hydro Inc.	Halton Hills Hydro Inc.	Hearst Power Distribution Company Limited	Horizon Utilities Corporation	Hydro 2000 Inc.	Hydro Hawkesbury Inc.
Residential Customers						
Number of Customers	18,899	19,801	2,259	221,272	1,071	4,815
Metered kWh	168,130,870	203,353,342	24,775,947	1,602,300,014	14,415,698	49,584,777
Distribution Revenue	$ 8,120,634	$ 5,811,065	$ 628,538	$ 66,976,355	$ 414,232	$ 919,327
Metered kWh per Customer	8,896	10,270	10,968	7,241	13,460	10,298
Distribution Revenue per Customer	$ 430	$ 293	$ 278	$ 303	$ 387	$ 191
General Service <50kW Customers						
Number of Customers	2,347	1,920	399	18,661	143	609
Metered kWh	54,442,760	50,702,250	11,205,853	595,106,735	4,666,022	19,208,911
Distribution Revenue	$ 1,838,726	$ 1,062,063	$ 170,052	$ 15,380,357	$ 78,774	$ 227,094
Metered kWh per Customer	23,197	26,407	28,085	31,890	32,630	31,542
Distribution Revenue per Customer	$ 783	$ 553	$ 426	$ 824	$ 551	$ 373
General Service >50kW, Large User (>5000kW) and Sub Transmission						
Number of GS >50kW Customers	161	208	45	2,042	11	86
Number of Large Users	-	-	-	11	-	-
Number of Sub Transmission Customers	-	-	-	-	-	-
Metered kWh	121,010,369	252,179,330	47,593,839	3,182,973,879	4,607,212	70,137,954
Distribution Revenue	$ 1,419,735	$ 2,283,508	$ 258,547	$ 22,915,947	$ 25,704	$ 379,507
Metered kWh per Customer	751,617	1,212,401	1,057,641	1,550,401	418,837	815,558
Distribution Revenue per Customer	$ 8,818	$ 10,978	$ 5,745	$ 11,162	$ 2,337	$ 4,413
Unmetered Scattered Load Connections						
Number of Connections	67	144	-	3,048	4	5
Metered kWh	337,808	905,217	-	11,533,313	18,611	281,352
Distribution Revenue	$ 15,403	$ 15,602	$ -	$ 574,626	$ 1,467	$ 1,461
Metered kWh per Connection	5,042	6,286	-	3,784	4,653	56,270
Distribution Revenue per Connection	$ 230	$ 108	$ -	$ 189	$ 367	$ 292

Statistics by Customer Class **For the year ended** **December 31**	Hydro One Brampton Networks Inc.	Hydro One Networks Inc.	Hydro Ottawa Limited	Innpower Corporation	Kenora Hydro Electric Corporation Ltd.	Kingston Hydro Corporation
Residential Customers						
Number of Customers	143,095	1,141,369	296,036	15,073	4,756	24,171
Metered kWh	1,236,002,484	13,066,791,986	2,242,517,759	149,314,119	36,105,481	183,596,950
Distribution Revenue	$ 38,550,665	$ 852,769,936	$ 86,662,173	$ 7,013,019	$ 1,632,541	$ 7,233,801
Metered kWh per Customer	8,638	11,448	7,575	9,906	7,592	7,596
Distribution Revenue per Customer	$ 269	$ 747	$ 293	$ 465	$ 343	$ 299
General Service <50kW Customers						
Number of Customers	9,374	107,260	24,563	1,010	750	2,969
Metered kWh	336,022,662	2,999,550,098	723,754,871	33,730,295	22,728,474	89,066,220
Distribution Revenue	$ 8,185,559	$ 170,954,842	$ 20,147,319	$ 753,743	$ 475,676	$ 1,979,521
Metered kWh per Customer	35,846	27,965	29,465	33,396	30,305	29,999
Distribution Revenue per Customer	$ 873	$ 1,594	$ 820	$ 746	$ 634	$ 667
General Service >50kW, Large User (>5000kW) and Sub Transmission						
Number of GS >50kW Customers	1,630	7,901	3,310	74	63	324
Number of Large Users	6	-	10	-	-	3
Number of Sub Transmission Customers	-	486	-	-	-	-
Metered kWh	2,327,391,997	5,449,839,774	4,381,728,727	54,718,914	40,093,939	423,502,075
Distribution Revenue	$ 19,001,392	$ 162,764,757	$ 50,209,953	$ 616,408	$ 543,963	$ 2,654,012
Metered kWh per Customer	1,422,611	649,796	1,319,798	739,445	636,412	1,295,113
Distribution Revenue per Customer	$ 11,615	$ 19,407	$ 15,123	$ 8,330	$ 8,634	$ 8,116
Unmetered Scattered Load Connections						
Number of Connections	1,542	5,495	3,400	73	33	145
Metered kWh	5,230,920	30,633,843	15,997,714	463,092	175,932	1,185,727
Distribution Revenue	$ 128,945	$ 3,547,821	$ 521,845	$ 16,741	$ 6,490	$ 37,737
Metered kWh per Connection	3,392	5,575	4,705	6,344	5,331	8,177
Distribution Revenue per Connection	$ 84	$ 646	$ 153	$ 229	$ 197	$ 260

Statistics by Customer Class For the year ended December 31	Kitchener-Wilmot Hydro Inc.	Lakefront Utilities Inc.	Lakeland Power Distribution Ltd.	London Hydro Inc.	Midland Power Utility Corporation	Milton Hydro Distribution Inc.
Residential Customers						
Number of Customers	83,642	8,917	11,057	139,861	6,212	32,992
Metered kWh	635,723,827	71,964,159	108,309,115	1,084,665,542	47,426,365	298,391,164
Distribution Revenue	$ 20,895,701	$ 2,135,010	$ 4,631,253	$ 39,974,345	$ 2,144,043	$ 10,395,434
Metered kWh per Customer	7,601	8,070	9,796	7,755	7,635	9,044
Distribution Revenue per Customer	$ 250	$ 239	$ 419	$ 286	$ 345	$ 315
General Service <50kW Customers						
Number of Customers	7,818	1,082	2,138	12,485	776	2,570
Metered kWh	237,964,967	31,699,519	58,576,548	399,647,918	23,916,365	89,184,096
Distribution Revenue	$ 5,404,890	$ 563,727	$ 1,728,866	$ 9,042,131	$ 557,945	$ 2,059,880
Metered kWh per Customer	30,438	29,297	27,398	32,010	30,820	34,702
Distribution Revenue per Customer	$ 691	$ 521	$ 809	$ 724	$ 719	$ 802
General Service >50kW, Large User (>5000kW) and Sub Transmission						
Number of GS >50kW Customers	943	126	150	1,598	108	300
Number of Large Users	1	-	-	3	-	3
Number of Sub Transmission Customers	-	-	-	-	-	-
Metered kWh	860,503,235	132,886,272	119,828,584	1,641,791,684	116,783,796	451,764,295
Distribution Revenue	$ 11,074,423	$ 1,139,826	$ 1,312,690	$ 14,299,226	$ 884,784	$ 3,057,123
Metered kWh per Customer	911,550	1,054,653	798,857	1,025,479	1,081,331	1,490,971
Distribution Revenue per Customer	$ 11,731	$ 9,046	$ 8,751	$ 8,931	$ 8,192	$ 10,090
Unmetered Scattered Load Connections						
Number of Connections	891	86	51	1,522	11	223
Metered kWh	3,943,092	602,790	173,556	5,522,828	385,131	1,188,593
Distribution Revenue	$ 125,568	$ 35,624	$ 18,378	$ 133,611	$ 5,498	$ 48,948
Metered kWh per Connection	4,425	7,009	3,403	3,629	35,012	5,330
Distribution Revenue per Connection	$ 141	$ 414	$ 360	$ 88	$ 500	$ 219

Statistics by Customer Class **For the year ended** **December 31**	Newmarket-Tay Power Distribution Ltd.	Niagara Peninsula Energy Inc.	Niagara-on-the-Lake Hydro Inc.	North Bay Hydro Distribution Limited	Northern Ontario Wires Inc.	Oakville Hydro Electricity Distribution Inc.
Residential Customers						
Number of Customers	31,620	47,518	7,551	21,093	5,219	61,231
Metered kWh	277,965,401	424,304,413	70,322,391	196,730,101	41,684,696	573,029,902
Distribution Revenue	$ 9,701,202	$ 17,632,794	$ 2,483,877	$ 6,746,590	$ 1,966,696	$ 19,956,477
Metered kWh per Customer	8,791	8,929	9,313	9,327	7,987	9,358
Distribution Revenue per Customer	$ 307	$ 371	$ 329	$ 320	$ 377	$ 326
General Service <50kW Customers						
Number of Customers	3,184	4,471	1,336	2,648	785	5,197
Metered kWh	92,196,807	125,782,373	41,712,512	83,568,205	19,810,828	165,498,611
Distribution Revenue	$ 2,891,465	$ 3,967,626	$ 1,084,578	$ 2,273,518	$ 552,009	$ 4,772,646
Metered kWh per Customer	28,956	28,133	31,222	31,559	25,237	31,845
Distribution Revenue per Customer	$ 908	$ 887	$ 812	$ 859	$ 703	$ 918
General Service >50kW, Large User (>5000kW) and Sub Transmission						
Number of GS >50kW Customers	367	781	121	255	71	959
Number of Large Users	-	-	-	-	-	-
Number of Sub Transmission Customers	-	-	-	-	-	-
Metered kWh	277,091,020	644,165,900	83,783,451	233,977,510	59,448,871	768,419,987
Distribution Revenue	$ 3,461,257	$ 7,228,162	$ 818,758	$ 2,074,960	$ 306,169	$ 10,852,488
Metered kWh per Customer	755,016	824,796	692,425	917,559	837,308	801,272
Distribution Revenue per Customer	$ 9,431	$ 9,255	$ 6,767	$ 8,137	$ 4,312	$ 11,316
Unmetered Scattered Load Connections						
Number of Connections	53	355	19	10	23	714
Metered kWh	326,520	1,583,365	245,994	42,934	164,178	4,032,623
Distribution Revenue	$ 27,753	$ 105,567	$ 5,395	$ 1,275	$ 6,536	$ 124,518
Metered kWh per Connection	6,161	4,460	12,947	4,293	7,138	5,648
Distribution Revenue per Connection	$ 524	$ 297	$ 284	$ 128	$ 284	$ 174

Statistics by Customer Class For the year ended December 31	Orangeville Hydro Limited	Orillia Power Distribution Corporation	Oshawa PUC Networks Inc.	Ottawa River Power Corporation	Peterborough Distribution Incorporated	PowerStream Inc.
Residential Customers						
Number of Customers	10,570	11,916	51,467	9,441	32,441	321,424
Metered kWh	84,589,267	105,211,614	479,266,201	77,615,395	283,216,564	2,818,851,612
Distribution Revenue	$ 3,090,922	$ 4,133,061	$ 11,464,889	$ 2,511,228	$ 8,309,529	$ 88,807,764
Metered kWh per Customer	8,003	8,829	9,312	8,221	8,730	8,770
Distribution Revenue per Customer	$ 292	$ 347	$ 223	$ 266	$ 256	$ 276
General Service <50kW Customers						
Number of Customers	1,132	1,361	3,964	1,301	3,513	32,425
Metered kWh	33,814,274	44,470,936	134,383,174	30,536,533	116,574,929	1,066,578,596
Distribution Revenue	$ 751,287	$ 1,467,186	$ 2,757,530	$ 679,468	$ 2,292,805	$ 25,153,691
Metered kWh per Customer	29,871	32,675	33,901	23,472	33,184	32,894
Distribution Revenue per Customer	$ 664	$ 1,078	$ 696	$ 522	$ 653	$ 776
General Service >50kW, Large User (>5000kW) and Sub Transmission						
Number of GS >50kW Customers	138	168	517	150	361	4,921
Number of Large Users	-	-	1	-	2	2
Number of Sub Transmission Customers	-	-	-	-	-	-
Metered kWh	124,173,673	150,959,154	454,459,131	68,528,024	377,024,836	4,617,219,936
Distribution Revenue	$ 826,561	$ 2,076,212	$ 4,353,264	$ 821,655	$ 2,831,342	$ 47,557,240
Metered kWh per Customer	899,809	898,566	877,334	456,853	1,038,636	937,887
Distribution Revenue per Customer	$ 5,990	$ 12,358	$ 8,404	$ 5,478	$ 7,800	$ 9,660
Unmetered Scattered Load Connections						
Number of Connections	96	156	248	76	446	2,928
Metered kWh	382,131	825,149	846,977	5,674,891	1,841,159	13,944,144
Distribution Revenue	$ 10,401	$ 28,235	$ 48,318	$ 2,447	$ 59,982	$ 469,288
Metered kWh per Connection	3,981	5,289	3,415	74,670	4,128	4,762
Distribution Revenue per Connection	$ 108	$ 181	$ 195	$ 32	$ 134	$ 160

Statistics by Customer Class For the year ended December 31	PUC Distribution Inc.	Renfrew Hydro Inc.	Rideau St. Lawrence Distribution Inc.	Sioux Lookout Hydro Inc.	St. Thomas Energy Inc.	Thunder Bay Hydro Electricity Distribution Inc.
Residential Customers						
Number of Customers	29,595	3,779	5,054	2,339	15,207	45,445
Metered kWh	310,458,240	29,589,161	40,938,311	33,774,408	116,087,199	326,028,975
Distribution Revenue	$ 8,968,697	$ 1,055,914	$ 1,418,451	$ 1,138,938	$ 4,556,975	$ 11,269,396
Metered kWh per Customer	10,490	7,830	8,100	14,440	7,634	7,174
Distribution Revenue per Customer	$ 303	$ 279	$ 281	$ 487	$ 300	$ 248
General Service <50kW Customers						
Number of Customers	3,416	430	742	391	1,733	4,687
Metered kWh	95,701,162	10,843,312	20,653,133	12,591,617	40,623,453	137,277,269
Distribution Revenue	$ 2,640,564	$ 307,567	$ 482,664	$ 296,931	$ 1,125,594	$ 3,364,545
Metered kWh per Customer	28,016	25,217	27,834	32,204	23,441	29,289
Distribution Revenue per Customer	$ 773	$ 715	$ 650	$ 759	$ 650	$ 718
General Service >50kW, Large User (>5000kW) and Sub Transmission						
Number of GS >50kW Customers	375	61	64	50	132	482
Number of Large Users	-	-	-	-	-	-
Number of Sub Transmission Customers	-	-	-	-	-	-
Metered kWh	254,784,565	45,095,566	40,918,077	32,657,495	110,780,822	462,288,932
Distribution Revenue	$ 4,015,917	$ 393,622	$ 448,662	$ 338,561	$ 1,041,326	$ 4,441,766
Metered kWh per Customer	679,426	739,272	639,345	653,150	839,249	959,106
Distribution Revenue per Customer	$ 10,709	$ 6,453	$ 7,010	$ 6,771	$ 7,889	$ 9,215
Unmetered Scattered Load Connections						
Number of Connections	20	33	59	1	-	447
Metered kWh	912,709	155,364	543,571	1,302	-	2,203,133
Distribution Revenue	$ 30,919	$ 18,729	$ 12,577	$ 189	$ -	$ 59,144
Metered kWh per Connection	45,635	4,708	9,213	1,302	-	4,929
Distribution Revenue per Connection	$ 1,546	$ 568	$ 213	$ 189	$ -	$ 132

Statistics by Customer Class For the year ended December 31	Tillsonburg Hydro Inc.	Toronto Hydro-Electric System Limited	Veridian Connections Inc.	Wasaga Distribution Inc.	Waterloo North Hydro Inc.	Welland Hydro-Electric System Corp.
Residential Customers						
Number of Customers	6,291	675,898	108,502	12,350	49,094	20,735
Metered kWh	49,342,185	5,028,787,640	956,409,096	88,213,194	404,728,028	157,973,719
Distribution Revenue	$ 2,142,991	$ 259,809,026	$ 32,867,321	$ 2,996,828	$ 18,031,469	$ 6,086,711
Metered kWh per Customer	7,843	7,440	8,815	7,143	8,244	7,619
Distribution Revenue per Customer	$ 341	$ 384	$ 303	$ 243	$ 367	$ 294
General Service <50kW Customers						
Number of Customers	674	71,427	8,909	785	5,619	1,775
Metered kWh	21,979,008	2,356,743,506	294,683,518	16,302,853	196,078,597	54,312,604
Distribution Revenue	$ 567,625	$ 86,713,434	$ 6,588,891	$ 352,184	$ 5,363,402	$ 1,054,960
Metered kWh per Customer	32,610	32,995	33,077	20,768	34,896	30,599
Distribution Revenue per Customer	$ 842	$ 1,214	$ 740	$ 449	$ 955	$ 594
General Service >50kW, Large User (>5000kW) and Sub Transmission						
Number of GS >50kW Customers	94	10,940	1,067	37	702	156
Number of Large Users	-	46	3	-	1	-
Number of Sub Transmission Customers	-	-	-	-	-	-
Metered kWh	122,346,548	17,072,057,272	1,268,996,599	17,621,053	789,633,877	139,796,962
Distribution Revenue	$ 591,290	$ 250,893,067	$ 10,021,367	$ 240,624	$ 9,771,861	$ 1,379,104
Metered kWh per Customer	1,301,559	1,553,983	1,185,978	476,245	1,123,235	896,134
Distribution Revenue per Customer	$ 6,290	$ 22,838	$ 9,366	$ 6,503	$ 13,900	$ 8,840
Unmetered Scattered Load Connections						
Number of Connections	61	11,988	845	41	530	255
Metered kWh	387,408	40,708,649	4,867,100	258,733	2,649,180	970,041
Distribution Revenue	$ 9,483	$ 2,646,773	$ 154,304	$ 3,937	$ 153,590	$ 43,074
Metered kWh per Connection	6,351	3,396	5,760	6,311	4,998	3,804
Distribution Revenue per Connection	$ 155	$ 221	$ 183	$ 96	$ 290	$ 169

Statistics by Customer Class For the year ended December 31	Wellington North Power Inc.	West Coast Huron Energy Inc.	Westario Power Inc.	Whitby Hydro Electric Corporation	Woodstock Hydro Services Inc.	Total Industry
Residential Customers						
Number of Customers	3,218	3,298	20,188	39,251	14,507	4,564,835
Metered kWh	24,960,131	24,557,478	185,320,983	358,809,051	106,077,253	40,862,307,663
Distribution Revenue	$ 1,186,443	$ 1,277,782	$ 5,975,351	$ 14,712,145	$ 4,830,407	$ 1,947,635,793
Metered kWh per Customer	7,756	7,446	9,180	9,141	7,312	8,952
Distribution Revenue per Customer	$ 369	$ 387	$ 296	$ 375	$ 333	$ 427
General Service <50kW Customers						
Number of Customers	467	467	2,528	2,179	1,261	434,999
Metered kWh	12,033,954	14,574,602	65,575,776	86,010,023	44,495,284	13,430,872,397
Distribution Revenue	$ 429,811	$ 345,263	$ 1,442,271	$ 2,473,102	$ 1,135,435	$ 461,766,752
Metered kWh per Customer	25,769	31,209	25,940	39,472	35,286	30,876
Distribution Revenue per Customer	$ 920	$ 739	$ 571	$ 1,135	$ 900	$ 1,062
General Service >50kW, Large User (>5000kW) and Sub Transmission						
Number of GS >50kW Customers	40	46	238	368	198	54,295
Number of Large Users	-	1	-	-	-	124
Number of Sub Transmission Customers	-	-	-	-	-	486
Metered kWh	67,611,795	110,421,550	176,163,146	405,044,147	237,119,664	62,248,261,742
Distribution Revenue	$ 637,975	$ 570,323	$ 1,546,107	$ 4,481,016	$ 1,840,789	$ 808,884,404
Metered kWh per Customer	1,690,295	2,349,395	740,181	1,100,663	1,197,574	1,133,745
Distribution Revenue per Customer	$ 15,949	$ 12,135	$ 6,496	$ 12,177	$ 9,297	$ 14,732
Unmetered Scattered Load Connections						
Number of Connections	1	3	57	376	131	44,053
Metered kWh	5,184	83,100	287,775	1,765,346	574,260	197,719,894
Distribution Revenue	$ 356	$ 5,680	$ 10,823	$ 98,142	$ 23,092	$ 10,720,929
Metered kWh per Connection	5,184	27,700	5,049	4,695	4,384	4,488
Distribution Revenue per Connection	$ 356	$ 1,893	$ 190	$ 261	$ 176	$ 243

Balance Sheet As of December 31	Algoma Power Inc.	Atikokan Hydro Inc.	Bluewater Power Distribution Corporation	Brant County Power Inc.	Brantford Power Inc.	Burlington Hydro Inc.
Cash & cash equivalents	$ 407,099	$ 540,928	$ 1,176,740	$ 2,313,947	$ 12,148,482	$ 10,761,194
Receivables	6,484,797	921,648	22,763,492	6,971,002	21,890,075	43,193,941
Inventory	55,950	113,968	342,985	285,941	2,148,429	3,000,397
Inter-company receivables	-	-	680,509	-	-	463,344
Other current assets	481,502	44,929	954,236	348,545	385,437	2,909,960
Current assets	7,429,347	1,621,473	25,917,962	9,919,435	36,572,422	60,328,835
Property plant & equipment	161,699,757	6,172,646	104,365,905	40,568,107	105,973,065	256,781,930
Accumulated depreciation & amortization	(63,287,841)	(3,450,022)	(50,756,055)	(15,225,934)	(41,718,004)	(147,948,715)
	98,411,916	2,722,624	53,609,850	25,342,172	64,255,061	108,833,215
Regulatory assets	4,435,850	199,477	6,368,169	4,514,999	6,357,960	4,775,070
Inter-company investments	-	-	-	-	-	-
Other non-current assets	3,098,655	103,679	-	-	1,787,905	1,562,584
TOTAL ASSETS	$ 113,375,769	$ 4,647,253	$ 85,895,981	$ 39,776,606	$ 108,973,348	$ 175,499,704
Accounts payable & accrued charges	$ 5,564,782	$ 1,014,883	$ 16,501,034	$ 6,001,400	$ 15,230,613	$ 23,741,410
Other current liabilities	45,019	15,109	827,247	596,112	245,095	42,289
Inter-company payables	915,389	-	2,824,848	1,455,610	355,100	225,497
Loans and notes payable, and current portion of long term debt	-	117,723	45,233	-	2,561,334	865,636
Current liabilities	6,525,190	1,147,715	20,198,362	8,053,122	18,392,143	24,874,831
Long-term debt	52,000,000	187,617	23,918,540	-	17,022,603	14,184,769
Inter-company long-term debt & advances	-	342,000	-	8,000,000	24,189,168	47,878,608
Regulatory liabilities	1,613,930	144,621	3,024,683	4,184,111	5,129,689	4,466,574
Other deferred amounts & customer deposits	-	122,873	1,257,114	179,386	940,774	2,243,024
Employee future benefits	6,609,600	-	9,494,144	805,816	2,110,420	4,447,707
Deferred taxes	-	103,679	-	-	-	-
Total Liabilities	66,748,721	2,048,505	57,892,843	21,222,435	67,784,796	98,095,513
Shareholders' Equity	46,627,048	2,598,748	28,003,138	18,554,171	41,188,551	77,404,191
LIABILITIES & SHAREHOLDERS' EQUITY	$ 113,375,769	$ 4,647,253	$ 85,895,981	$ 39,776,606	$ 108,973,348	$ 175,499,704

Balance Sheet As of December 31	Cambridge and North Dumfries Hydro Inc.	Canadian Niagara Power Inc.	Centre Wellington Hydro Ltd.	Chapleau Public Utilities Corporation	COLLUS PowerStream Corp.	Cooperative Hydro Embrun Inc.
Cash & cash equivalents	$ 5,299,557	$ 2,760,923	$ 2,116,931	$ 575,925	$ 2,943,100	$ 1,718,040
Receivables	42,933,261	10,713,074	4,363,248	677,389	8,176,813	809,612
Inventory	2,210,674	54,956	348,515	50,763	285,875	-
Inter-company receivables	1,655,610	-	-	521,753	-	-
Other current assets	440,118	1,031,248	77,270	-	612,657	-
Current assets	52,539,219	14,560,201	6,905,966	1,825,830	12,018,444	2,527,652
Property plant & equipment	222,532,515	145,924,658	23,895,930	2,801,261	34,614,626	4,415,191
Accumulated depreciation & amortization	(106,886,492)	(58,572,804)	(10,605,835)	(1,674,089)	(18,105,612)	(1,956,580)
	115,646,022	87,351,854	13,290,095	1,127,171	16,509,014	2,458,611
Regulatory assets	6,407,457	4,583,152	819,228	366,873	5,140,434	279,157
Inter-company investments	34,894,618	529,000	-	-	-	-
Other non-current assets	558,760	4,725,424	838,723	-	-	20,648
TOTAL ASSETS	$ 210,046,077	$ 111,749,630	$ 21,854,011	$ 3,319,874	$ 33,667,893	$ 5,286,068
Accounts payable & accrued charges	$ 22,719,408	$ 10,109,491	$ 2,851,775	$ 446,816	$ 8,027,173	$ 880,589
Other current liabilities	2,309,934	59,706	84,635	1,152	3,381	-
Inter-company payables	-	31,785,122	-	440,605	-	-
Loans and notes payable, and current portion of long term debt	-	-	113,863	-	527,581	-
Current liabilities	25,029,342	41,954,319	3,050,273	888,573	8,558,136	880,589
Long-term debt	85,000,000	16,050,000	4,255,111	-	11,950,730	-
Inter-company long-term debt & advances	-	20,000,000	5,046,753	-	-	-
Regulatory liabilities	11,201,696	3,585,706	394,315	371,174	3,748,066	100,292
Other deferred amounts & customer deposits	9,291,790	-	803,418	25,054	281,456	21,663
Employee future benefits	2,277,521	7,402,200	164,416	-	328,535	-
Deferred taxes	-	1,775,934	-	-	-	-
Total Liabilities	132,800,349	90,768,159	13,714,286	1,284,801	24,866,922	1,002,544
Shareholders' Equity	77,245,728	20,981,471	8,139,725	2,035,073	8,800,971	4,283,523
LIABILITIES & SHAREHOLDERS' EQUITY	$ 210,046,077	$ 111,749,630	$ 21,854,011	$ 3,319,874	$ 33,667,893	$ 5,286,068

Balance Sheet As of December 31	E.L.K. Energy Inc.	Enersource Hydro Mississauga Inc.	Entegrus Powerlines Inc.	EnWin Utilities Ltd.	Erie Thames Powerlines Corporation	Espanola Regional Hydro Distribution Corporation
Cash & cash equivalents	$ 3,003,064	$ -	$ 3,597,626	$ 12,630,409	$ 21,415	$ 1,729,079
Receivables	5,747,186	141,305,275	20,772,603	51,505,084	10,437,457	1,887,344
Inventory	296,504	4,670,623	736,058	3,492,184	86,525	72,050
Inter-company receivables	109,954	130,982	-	5,850,572	91,041	-
Other current assets	403,917	9,696,025	590,358	1,301,488	781,046	266,694
Current assets	9,560,625	155,802,905	25,696,646	74,779,736	11,417,483	3,955,167
Property plant & equipment	23,727,673	786,506,176	141,643,656	275,076,299	52,970,451	9,203,378
Accumulated depreciation & amortization	(15,063,216)	(125,086,067)	(64,472,925)	(50,871,921)	(19,745,487)	(5,305,645)
	8,664,457	661,420,110	77,170,731	224,204,378	33,224,964	3,897,733
Regulatory assets	3,708,966	33,353,916	5,689,044	6,154,354	5,719,496	2,417,416
Inter-company investments	100	-	-	4,520,480	-	-
Other non-current assets	163,735	37,085,816	-	12,028,982	-	20,418
TOTAL ASSETS	$ 22,097,884	$ 887,662,747	$ 108,556,421	$ 321,687,930	$ 50,361,944	$ 10,290,734
Accounts payable & accrued charges	$ 4,024,391	$ 124,353,226	$ 14,678,760	$ 29,622,124	$ 9,418,110	$ 2,579,578
Other current liabilities	59,392	-	185,747	1,090,668	-	102,824
Inter-company payables	524,674	1,461,863	338,371	21,060,534	2,393,349	-
Loans and notes payable, and current portion of long term debt	-	14,562,432	-	326,359	1,695,391	-
Current liabilities	4,608,457	140,377,522	15,202,878	52,099,685	13,506,849	2,682,402
Long-term debt	5,100,000	60,000,000	-	51,000,000	18,038,524	2,400,000
Inter-company long-term debt & advances	-	334,000,000	47,523,326	-	-	1,524,511
Regulatory liabilities	2,444,546	28,361,283	6,620,097	20,904,852	3,053,245	293,587
Other deferred amounts & customer deposits	1,261,776	45,980,342	2,645,909	13,613,237	1,050,138	316,591
Employee future benefits	581,577	6,072,586	2,707,958	50,923,371	653,100	-
Deferred taxes	-	-	-	-	339,000	49,518
Total Liabilities	13,996,356	614,791,732	74,700,168	188,541,145	36,640,857	7,266,609
Shareholders' Equity	8,101,528	272,871,015	33,856,252	133,146,785	13,721,087	3,024,125
LIABILITIES & SHAREHOLDERS' EQUITY	$ 22,097,884	$ 887,662,747	$ 108,556,421	$ 321,687,930	$ 50,361,944	$ 10,290,734

Balance Sheet As of December 31	Essex Powerlines Corporation	Festival Hydro Inc.	Fort Frances Power Corporation	Greater Sudbury Hydro Inc.	Grimsby Power Incorporated	Guelph Hydro Electric Systems Inc.
Cash & cash equivalents	$ 2,481,502	$ 1,060	$ 3,127,236	$ 2,862,070	$ 749,804	$ 31,145,880
Receivables	12,805,289	11,995,121	2,234,864	25,891,082	3,672,266	40,047,929
Inventory	878,417	134,210	133,055	1,203,631	594,452	2,200,113
Inter-company receivables	-	67,446	-	638,231	21,914	1,185,998
Other current assets	606,815	393,951	78,798	2,058,748	340,927	2,558,048
Current assets	16,772,024	12,591,789	5,573,953	32,653,762	5,379,364	77,137,967
Property plant & equipment	75,915,611	58,169,922	11,998,440	198,132,819	31,556,690	163,140,672
Accumulated depreciation & amortization	(27,172,698)	(4,445,751)	(8,567,755)	(118,397,666)	(5,681,599)	(32,118,894)
	48,742,913	53,724,171	3,430,685	79,735,152	25,875,092	131,021,779
Regulatory assets	4,116,059	2,045,076	246,890	4,327,332	604,571	5,216,082
Inter-company investments	-	-	-	400,000	-	-
Other non-current assets	-	1,165,953	-	9,472,574	-	2,434,382
TOTAL ASSETS	$ 69,630,996	$ 69,526,989	$ 9,251,528	$ 126,588,820	$ 31,859,027	$ 215,810,209
Accounts payable & accrued charges	$ 14,659,114	$ 10,545,961	$ 875,501	$ 17,635,742	$ 2,710,883	$ 33,498,919
Other current liabilities	545,171	246,321	180,604	1,054,149	88,080	359,372
Inter-company payables	-	15,521,618	-	48,645,457	205,019	1,685,695
Loans and notes payable, and current portion of long term debt	4,116,155	810,909	-	2,400,682	4,621,356	564,990
Current liabilities	19,320,439	27,124,810	1,056,106	69,736,030	7,625,337	36,108,975
Long-term debt	17,212,218	14,220,869	-	816,550	4,760,755	95,000,000
Inter-company long-term debt & advances	373,943	-	-	-	5,782,746	-
Regulatory liabilities	5,176,367	923,786	440,306	5,593,107	549,625	6,804,714
Other deferred amounts & customer deposits	843,021	1,663,397	1,618,476	1,181,879	4,221,179	3,265,920
Employee future benefits	3,989,736	1,379,334	-	22,706,280	-	9,814,230
Deferred taxes	-	-	176,336	9,472,574	225,808	-
Total Liabilities	46,915,725	45,312,196	3,291,223	109,506,420	23,165,451	150,993,840
Shareholders' Equity	22,715,272	24,214,793	5,960,305	17,082,400	8,693,576	64,816,369
LIABILITIES & SHAREHOLDERS' EQUITY	$ 69,630,996	$ 69,526,989	$ 9,251,528	$ 126,588,820	$ 31,859,027	$ 215,810,209

Balance Sheet As of December 31	Haldimand County Hydro Inc.	Halton Hills Hydro Inc.	Hearst Power Distribution Company Limited	Horizon Utilities Corporation	Hydro 2000 Inc.	Hydro Hawkesbury Inc.
Cash & cash equivalents	$ 4,501,658	$ -	$ 3,107,393	$ 790,883	$ 190,032	$ 1,141,731
Receivables	9,968,801	14,640,520	1,986,736	108,318,754	294,077	2,709,066
Inventory	1,778,763	986,901	73,833	8,339,275	-	97,756
Inter-company receivables	190,296	556,027	-	4,168,506	-	-
Other current assets	5,835,657	1,667,752	22,294	2,978,513	15,422	29,644
Current assets	22,275,176	17,851,200	5,190,256	124,595,930	499,531	3,978,195
Property plant & equipment	53,789,956	63,470,803	2,042,599	563,273,667	1,356,273	7,483,103
Accumulated depreciation & amortization	(1,112,109)	(4,351,286)	(569,919)	(92,985,771)	(835,136)	(2,454,157)
	52,677,847	59,119,517	1,472,680	470,287,896	521,137	5,028,946
Regulatory assets	1,114,900	3,464,680	274,140	20,960,209	300,730	445,992
Inter-company investments	-	-	-	-	-	-
Other non-current assets	761,563	5,593,817	24,200	13,149,161	20,633	-
TOTAL ASSETS	$ 76,829,485	$ 86,029,213	$ 6,961,276	$ 628,993,196	$ 1,342,032	$ 9,453,133
Accounts payable & accrued charges	$ 7,326,748	$ 10,788,629	$ 1,867,673	$ 97,672,554	$ 217,024	$ 3,241,686
Other current liabilities	246,353	392,500	25,912	1,506,178	67,734	-
Inter-company payables	15,397	-	443,743	29,531,526	-	-
Loans and notes payable, and current portion of long term debt	-	7,586,602	-	16,626,000	-	744,429
Current liabilities	7,588,498	18,767,732	2,337,328	145,336,258	284,758	3,986,115
Long-term debt	-	9,258,402	1,250,000	-	-	663,217
Inter-company long-term debt & advances	17,966,269	16,141,969	-	190,000,000	-	-
Regulatory liabilities	4,765,432	1,689,384	193,321	14,294,058	51,215	357,606
Other deferred amounts & customer deposits	431,787	3,909,335	83,681	30,114,476	-	449,515
Employee future benefits	-	728,685	-	29,760,400	-	-
Deferred taxes	-	4,812,824	-	-	66,636	1,076
Total Liabilities	30,751,986	55,308,331	3,864,330	409,505,193	402,609	5,457,528
Shareholders' Equity	46,077,499	30,720,882	3,096,947	219,488,003	939,423	3,995,605
LIABILITIES & SHAREHOLDERS' EQUITY	$ 76,829,485	$ 86,029,213	$ 6,961,276	$ 628,993,196	$ 1,342,032	$ 9,453,133

Balance Sheet As of December 31	Hydro One Brampton Networks Inc.	Hydro One Networks Inc.	Hydro Ottawa Limited	Innpower Corporation	Kenora Hydro Electric Corporation Ltd.	Kingston Hydro Corporation
Cash & cash equivalents	$ 40,520,924	$ -	$ 5,557,416	$ -	$ 1,710,692	$ 3,728,254
Receivables	72,520,595	775,715,785	154,907,003	8,317,533	3,133,123	14,800,473
Inventory	1,073,625	3,886,533	12,398,683	451,746	179,742	1,496,021
Inter-company receivables	-	25,417,235,385	5,784,515	191,273	-	-
Other current assets	858,191	13,120,004	2,183,757	400,146	80,381	842,726
Current assets	114,973,335	26,209,957,707	180,831,374	9,360,699	5,103,938	20,867,474
Property plant & equipment	408,831,665	10,972,447,791	955,318,230	53,869,225	17,761,328	45,060,905
Accumulated depreciation & amortization	(25,355,760)	(3,941,452,799)	(158,393,111)	(3,926,480)	(9,329,726)	(3,476,866)
	383,475,905	7,030,994,992	796,925,118	49,942,745	8,431,602	41,584,039
Regulatory assets	14,298,705	330,727,000	14,225,142	1,698,748	635,776	15,189,023
Inter-company investments	-	0	-	-	-	-
Other non-current assets	8,021,342	585,319,384	458,815	569,226	287,680	-
TOTAL ASSETS	$ 520,769,286	$ 34,156,999,083	$ 992,440,450	$ 61,571,418	$ 14,458,996	$ 77,640,536
Accounts payable & accrued charges	$ 71,225,783	$ 1,124,596,895	$ 128,375,468	$ 5,572,570	$ 1,509,329	$ 9,499,832
Other current liabilities	1,754,463	183,368,534	1,571,468	553,677	30,178	-
Inter-company payables	-	25,417,312,482	2,377,170	1,852,080	491,004	-
Loans and notes payable, and current portion of long term debt	7,047,074	236,008,096	41,000,000	4,056,149	-	3,029,789
Current liabilities	80,027,320	26,961,286,007	173,324,107	12,034,476	2,030,511	12,529,621
Long-term debt	193,000,000	3,000,904,582	-	30,819,711	4,510,946	17,309,178
Inter-company long-term debt & advances	-	-	447,185,000	-	-	10,880,619
Regulatory liabilities	16,041,572	128,634,106	40,106,544	1,127,850	1,078,671	8,823,625
Other deferred amounts & customer deposits	25,937,383	99,146,366	18,313,604	296,760	60,647	1,268,263
Employee future benefits	4,324,000	861,527,743	10,707,093	163,498	257,800	1,024,617
Deferred taxes	2,607,217	426,903,767	-	-	-	-
Total Liabilities	321,937,492	31,478,402,571	689,636,349	44,442,295	7,938,575	51,835,923
Shareholders' Equity	198,831,794	2,678,596,512	302,804,101	17,129,123	6,520,421	25,804,613
LIABILITIES & SHAREHOLDERS' EQUITY	$ 520,769,286	$ 34,156,999,083	$ 992,440,450	$ 61,571,418	$ 14,458,996	$ 77,640,536

Balance Sheet As of December 31	Kitchener-Wilmot Hydro Inc.	Lakefront Utilities Inc.	Lakeland Power Distribution Ltd.	London Hydro Inc.	Midland Power Utility Corporation	Milton Hydro Distribution Inc.
Cash & cash equivalents	$ 20,147,278	$ 409,206	$ 510	$ 6,432,940	$ 51,482	$ 7,739,130
Receivables	49,089,472	5,194,428	9,005,620	70,792,181	4,548,072	20,289,915
Inventory	3,235,024	243,320	364,477	748,732	186,361	1,516,142
Inter-company receivables	272,848	-	70,849	-	-	2,744,593
Other current assets	1,231,330	62,680	296,426	1,826,436	156,382	502,617
Current assets	73,975,953	5,909,634	9,737,881	79,800,289	4,942,298	32,792,397
Property plant & equipment	344,063,198	18,488,107	45,636,395	448,419,044	25,554,371	140,310,255
Accumulated depreciation & amortization	(153,702,161)	(1,946,574)	(19,805,724)	(186,918,104)	(12,914,470)	(62,867,683)
	190,361,036	16,541,533	25,830,671	261,500,940	12,639,901	77,442,572
Regulatory assets	4,923,096	2,881,485	2,905,159	14,852,236	1,426,735	6,455,074
Inter-company investments	-	-	-	-	-	-
Other non-current assets	1,556,829	-	1,149,450	1,573,700	1,266,254	-
TOTAL ASSETS	$ 270,816,913	$ 25,332,652	$ 39,623,161	$ 357,727,164	$ 20,275,187	$ 116,690,043
Accounts payable & accrued charges	$ 36,070,467	$ 2,728,745	$ 6,648,673	$ 52,326,979	$ 3,057,765	$ 12,804,526
Other current liabilities	499,982	59,830	180,635	2,635,607	89,792	-
Inter-company payables	-	-	1,149,623	11,191,310	-	487,403
Loans and notes payable, and current portion of long term debt	1,066,445	197,498	713,024	2,304,000	1,754,418	1,565,791
Current liabilities	37,636,894	2,986,072	8,691,955	68,457,896	4,901,974	14,857,720
Long-term debt	3,990,232	9,887,391	6,186,387	96,130,000	3,862,716	50,857,464
Inter-company long-term debt & advances	76,962,142	-	-	-	-	-
Regulatory liabilities	5,852,745	2,672,277	2,068,976	15,201,504	417,911	6,489,310
Other deferred amounts & customer deposits	5,317,989	156,405	312,044	15,484,391	352,078	4,062,813
Employee future benefits	5,874,827	395,709	-	12,313,500	77,290	304,086
Deferred taxes	-	-	-	-	-	1,193,448
Total Liabilities	135,634,830	16,097,854	17,259,361	207,587,291	9,611,969	77,764,841
Shareholders' Equity	135,182,084	9,234,799	22,363,800	150,139,873	10,663,219	38,925,202
LIABILITIES & SHAREHOLDERS' EQUITY	$ 270,816,913	$ 25,332,652	$ 39,623,161	$ 357,727,164	$ 20,275,187	$ 116,690,043

Balance Sheet As of December 31	Newmarket-Tay Power Distribution Ltd.	Niagara Peninsula Energy Inc.	Niagara-on-the-Lake Hydro Inc.	North Bay Hydro Distribution Limited	Northern Ontario Wires Inc.	Oakville Hydro Electricity Distribution Inc.
Cash & cash equivalents	$ 10,130,641	$ 9,048,994	$ -	$ 11,529,842	$ -	$ 24,841,023
Receivables	22,184,846	31,989,976	6,036,890	13,222,757	3,324,458	38,925,137
Inventory	1,113,359	1,498,947	306,346	554,864	458,466	3,311,170
Inter-company receivables	-	-	-	483,180	-	-
Other current assets	5,039,806	2,556,577	116,574	857,358	126,217	600,095
Current assets	38,468,652	45,094,494	6,459,810	26,648,001	3,909,140	67,677,424
Property plant & equipment	119,218,520	257,271,676	48,003,030	115,816,807	12,123,107	296,959,938
Accumulated depreciation & amortization	(54,418,803)	(133,544,418)	(24,570,385)	(57,731,959)	(5,955,291)	(130,690,714)
	64,799,717	123,727,258	23,432,645	58,084,848	6,167,816	166,269,225
Regulatory assets	2,092,392	5,353,647	4,195,347	2,382,310	719,442	8,186,544
Inter-company investments	-	-	-	-	-	-
Other non-current assets	-	4,842,212	569,015	4,727,048	20,736	13,521,851
TOTAL ASSETS	$ 105,360,761	$ 179,017,611	$ 34,656,817	$ 91,842,207	$ 10,817,135	$ 255,655,045
Accounts payable & accrued charges	$ 12,621,139	$ 22,269,841	$ 4,694,088	$ 10,163,025	$ 1,846,453	$ 38,872,530
Other current liabilities	-	1,468	5,641	1,203,944	15,033	859,491
Inter-company payables	-	7,355	-	237,712	85,341	-
Loans and notes payable, and current portion of long term debt	1,644,454	1,420,498	2,333,748	1,263,005	1,044,549	4,585,464
Current liabilities	14,265,593	23,699,161	7,033,477	12,867,686	2,991,376	44,317,484
Long-term debt	30,117,076	34,441,572	916,667	10,352,249	3,964,066	20,278,482
Inter-company long-term debt & advances	2,473,010	25,605,090	7,788,942	19,511,601	-	70,310,869
Regulatory liabilities	8,615,055	15,912,956	2,231,484	4,017,014	420,849	4,184,071
Other deferred amounts & customer deposits	2,764,264	89,562	1,066,765	3,225,857	78,487	24,395,806
Employee future benefits	813,117	2,504,100	396,206	4,690,824	72,971	8,235,888
Deferred taxes	-	1,480,008	-	4,086,015	-	-
Total Liabilities	59,048,115	103,732,448	19,433,542	58,751,246	7,527,748	171,722,600
Shareholders' Equity	46,312,646	75,285,163	15,223,275	33,090,961	3,289,387	83,932,445
LIABILITIES & SHAREHOLDERS' EQUITY	$ 105,360,761	$ 179,017,611	$ 34,656,817	$ 91,842,207	$ 10,817,135	$ 255,655,045

Balance Sheet As of December 31	Orangeville Hydro Limited	Orillia Power Distribution Corporation	Oshawa PUC Networks Inc.	Ottawa River Power Corporation	Peterborough Distribution Incorporated	PowerStream Inc.
Cash & cash equivalents	$ 2,930,994	$ 601,839	$ 10,478,551	$ 1,121,953	$ 2,166,645	$ 845,125
Receivables	6,926,018	7,572,444	24,058,859	4,870,659	17,381,597	200,356,286
Inventory	305,852	500,828	119,940	507,413	1,125,139	3,225,638
Inter-company receivables	-	1,130,200	-	34,738	-	13,651,796
Other current assets	127,046	169,438	630,889	437,187	82,689	4,087,800
Current assets	10,289,911	9,974,749	35,288,240	6,971,949	20,756,070	222,166,646
Property plant & equipment	35,367,518	43,590,297	181,807,750	28,593,968	107,505,086	1,413,687,406
Accumulated depreciation & amortization	(18,757,497)	(21,058,807)	(88,941,319)	(19,740,643)	(46,979,696)	(196,030,015)
	16,610,021	22,531,490	92,866,430	8,853,325	60,525,390	1,217,657,391
Regulatory assets	1,390,642	2,942,054	7,895,607	3,164,114	6,178,336	34,588,711
Inter-company investments	-	-	-	-	-	8,827,607
Other non-current assets	370,000	1,389,000	924,283	617,299	2,329,000	16,581,097
TOTAL ASSETS	$ 28,660,574	$ 36,837,293	$ 136,974,560	$ 19,606,687	$ 89,788,796	$ 1,499,821,453
Accounts payable & accrued charges	$ 5,820,275	$ 5,856,656	$ 22,741,302	$ 2,863,229	$ 11,440,778	$ 127,846,215
Other current liabilities	1,308	106,782	413,428	101,243	239,774	7,120,953
Inter-company payables	-	318,483	7,266,763	-	-	16,627,232
Loans and notes payable, and current portion of long term debt	435,379	2,210,000	-	-	1,446,000	125,003,092
Current liabilities	6,256,961	8,491,921	30,421,493	2,964,472	13,126,552	276,597,493
Long-term debt	10,505,200	735,000	22,966,099	5,585,838	42,309,286	347,408,036
Inter-company long-term debt & advances	-	9,762,000	23,064,000	-	1,510,000	182,429,859
Regulatory liabilities	998,920	4,099,184	3,157,803	2,715,461	2,083,018	44,411,772
Other deferred amounts & customer deposits	691,964	453,335	4,455,987	213,209	1,237,164	181,964,559
Employee future benefits	356,886	659,213	11,779,208	190,866	43,924	18,308,585
Deferred taxes	370,000	-	-	-	-	5,520,701
Total Liabilities	19,179,931	24,200,653	95,844,590	11,669,847	60,309,944	1,056,641,004
Shareholders' Equity	9,480,643	12,636,640	41,129,970	7,936,840	29,478,852	443,180,449
LIABILITIES & SHAREHOLDERS' EQUITY	$ 28,660,574	$ 36,837,293	$ 136,974,560	$ 19,606,687	$ 89,788,796	$ 1,499,821,453

Balance Sheet As of December 31	PUC Distribution Inc.	Renfrew Hydro Inc.	Rideau St. Lawrence Distribution Inc.	Sioux Lookout Hydro Inc.	St. Thomas Energy Inc.	Thunder Bay Hydro Electricity Distribution Inc.
Cash & cash equivalents	$ 3,084,294	$ 620,644	$ 113,420	$ 391,689	$ 6,359,784	$ 6,123,274
Receivables	16,762,504	2,252,314	3,266,958	2,726,375	7,585,421	27,436,617
Inventory	1,493,197	324,433	220,012	79,417	642,396	1,932,887
Inter-company receivables	436,883	23,130	-	-	-	475,408
Other current assets	692,082	36,623	147,961	241,339	414,948	1,340,483
Current assets	22,468,959	3,257,144	3,748,351	3,438,820	15,002,550	37,308,670
Property plant & equipment	148,957,558	14,735,963	6,375,244	9,106,113	28,820,083	202,500,579
Accumulated depreciation & amortization	(62,342,059)	(9,511,412)	(705,672)	(4,306,855)	(2,230,179)	(105,674,001)
	86,615,499	5,224,551	5,669,573	4,799,258	26,589,904	96,826,577
Regulatory assets	2,141,441	847,462	956,430	647,499	4,067,171	3,009,422
Inter-company investments	-	-	-	-	-	114,331
Other non-current assets	-	229,937	178,756	124,850	1,130,853	2,815,043
TOTAL ASSETS	$ 111,225,900	$ 9,559,093	$ 10,553,109	$ 9,010,427	$ 46,790,478	$ 140,074,044
Accounts payable & accrued charges	$ 9,117,929	$ 948,617	$ 2,092,247	$ 3,395,478	$ 5,285,307	$ 22,144,730
Other current liabilities	-	-	10	-	36,743	214,587
Inter-company payables	-	1,248,994	1,554,968	-	8,427,754	101,559
Loans and notes payable, and current portion of long term debt	15,802,960	40,017	172,619	224,739	-	767,529
Current liabilities	24,920,889	2,237,629	3,819,844	3,620,217	13,749,804	23,228,404
Long-term debt	23,846,498	18,591	516,671	1,500,298	3,500,000	20,138,196
Inter-company long-term debt & advances	26,534,040	2,705,168	1,163,352	-	7,714,426	26,490,500
Regulatory liabilities	7,285,829	646,137	704,337	630,711	3,371,163	4,440,778
Other deferred amounts & customer deposits	-	110,344	207,536	187,241	293,977	141,585
Employee future benefits	-	168,422	28,608	96,955	1,235,576	2,599,871
Deferred taxes	-	-	-	-	1,130,753	-
Total Liabilities	82,587,255	5,886,292	6,440,348	6,035,422	30,995,700	77,039,334
Shareholders' Equity	28,638,644	3,672,801	4,112,761	2,975,005	15,794,779	63,034,710
LIABILITIES & SHAREHOLDERS' EQUITY	$ 111,225,900	$ 9,559,093	$ 10,553,109	$ 9,010,427	$ 46,790,478	$ 140,074,044

Balance Sheet As of December 31	Tillsonburg Hydro Inc.	Toronto Hydro-Electric System Limited	Veridian Connections Inc.	Wasaga Distribution Inc.	Waterloo North Hydro Inc.	Welland Hydro-Electric System Corp.
Cash & cash equivalents	$ 723,952	$ -	$ 6,415,858	$ 1,044,021	$ 3,179	$ 2,294,206
Receivables	5,489,726	501,591,349	58,030,541	3,624,915	39,556,584	7,135,699
Inventory	256,243	9,827,944	2,642,374	-	4,081,314	383,357
Inter-company receivables	-	949,071	-	-	-	106,338
Other current assets	81,622	10,808,441	575,018	329,469	939,846	269,226
Current assets	6,551,543	523,176,806	67,663,791	4,998,405	44,580,923	10,188,826
Property plant & equipment	21,000,720	4,074,177,648	462,369,987	25,080,040	337,632,201	57,940,326
Accumulated depreciation & amortization	(10,998,031)	(323,533,499)	(242,152,914)	(13,255,528)	(142,477,428)	(29,952,590)
	10,002,689	3,750,644,149	220,217,073	11,824,513	195,154,773	27,987,736
Regulatory assets	2,335,954	333,331,963	9,728,495	944,805	8,884,893	765,632
Inter-company investments	-	-	-	-	-	-
Other non-current assets	-	103,697,139	5,408,407	398,690	1,476,704	1,879,443
TOTAL ASSETS	$ 18,890,185	$ 4,710,850,057	$ 303,017,766	$ 18,166,414	$ 250,097,293	$ 40,821,637
Accounts payable & accrued charges	$ 2,517,015	$ 463,038,137	$ 46,247,887	$ 1,834,113	$ 34,806,397	$ 6,594,123
Other current liabilities	287,686	11,810,611	468,210	111,689	1,535,493	218,104
Inter-company payables	740,651	114,010,977	700,000	-	1,017,885	-
Loans and notes payable, and current portion of long term debt	142,910	196,521,453	933,200	-	10,272,075	-
Current liabilities	3,688,261	785,381,178	48,349,297	1,945,801	47,631,850	6,812,227
Long-term debt	258,747	-	54,653,077	-	101,898,336	-
Inter-company long-term debt & advances	-	1,875,984,003	74,688,000	3,593,269	-	13,499,953
Regulatory liabilities	2,123,919	182,816,697	9,270,586	1,628,024	6,537,627	1,274,568
Other deferred amounts & customer deposits	2,424,230	117,877,626	12,452,167	129,477	4,322,688	1,547,444
Employee future benefits	-	295,351,821	-	-	4,553,372	1,583,297
Deferred taxes	-	98,928,963	4,025,295	-	-	-
Total Liabilities	8,495,158	3,356,340,288	203,438,422	7,296,570	164,943,873	24,717,489
Shareholders' Equity	10,395,028	1,354,509,769	99,579,344	10,869,843	85,153,420	16,104,148
LIABILITIES & SHAREHOLDERS' EQUITY	$ 18,890,185	$ 4,710,850,057	$ 303,017,766	$ 18,166,414	$ 250,097,293	$ 40,821,637

Balance Sheet As of December 31	Wellington North Power Inc.	West Coast Huron Energy Inc.	Westario Power Inc.	Whitby Hydro Electric Corporation	Woodstock Hydro Services Inc.	Total Industry
Cash & cash equivalents	$ -	$ 1,611,038	$ 1,545,461	$ 3,072,319	$ 4,253,796	$ 311,494,083
Receivables	2,723,510	1,973,868	10,425,988	20,638,081	9,899,111	2,922,401,493
Inventory	101,159	480,846	530,202	1,083,145	561,191	98,121,286
Inter-company receivables	-	-	-	-	-	25,459,922,391
Other current assets	211,748	16,026	1,233,166	671,155	4,130,229	95,444,132
Current assets	3,036,417	4,081,778	13,734,817	25,464,699	18,844,327	28,887,383,385
Property plant & equipment	13,729,800	9,590,550	46,787,687	159,422,592	28,194,896	25,411,331,382
Accumulated depreciation & amortization	(7,408,161)	(697,029)	(3,460,423)	(85,766,640)	(269,936)	(7,522,677,347)
	6,321,639	8,893,521	43,327,264	73,655,952	27,924,960	17,888,654,036
Regulatory assets	2,228,976	920,034	6,376,973	5,937,379	4,206,410	1,021,045,942
Inter-company investments	-	-	-	-	-	49,286,136
Other non-current assets	283,145	-	318,095	996,785	-	859,649,681
TOTAL ASSETS	$ 11,870,176	$ 13,895,333	$ 63,757,149	$ 106,054,815	$ 50,975,696	**$ 48,706,019,179**
Accounts payable & accrued charges	$ 2,139,126	$ 1,703,455	$ 7,704,278	$ 13,525,118	$ 6,953,288	$ 2,850,305,805
Other current liabilities	-	32,131	-	593,917	153,714	226,656,808
Inter-company payables	-	-	-	3,081,869	-	25,750,118,032
Loans and notes payable, and current portion of long term debt	1,006,412	2,152,322	1,059,933	400,000	-	727,911,316
Current liabilities	3,145,538	3,887,908	8,764,211	17,600,905	7,107,002	29,554,991,961
Long-term debt	4,203,600	3,012,082	13,222,943	4,000,000	-	4,682,097,119
Inter-company long-term debt & advances	-	-	5,260,461	28,337,942	23,377,555	3,685,601,095
Regulatory liabilities	550,869	582,684	3,444,955	5,879,701	4,768,551	697,801,203
Other deferred amounts & customer deposits	199,383	405,261	701,492	1,178,369	2,286,414	663,628,146
Employee future benefits	144,261	303,457	398,965	-	1,163,519	1,415,607,692
Deferred taxes	281,000	20,439	1,821,000	-	0	565,391,991
Total Liabilities	8,524,650	8,211,831	33,614,027	56,996,916	38,703,041	41,265,119,207
Shareholders' Equity	3,345,526	5,683,502	30,143,122	49,057,899	12,272,655	7,440,899,972
LIABILITIES & SHAREHOLDERS' EQUITY	$ 11,870,176	$ 13,895,333	$ 63,757,149	$ 106,054,815	$ 50,975,696	**$ 48,706,019,179**

Income Statement For the year ended December 31	Algoma Power Inc.	Atikokan Hydro Inc.	Bluewater Power Distribution Corporation	Brant County Power Inc.	Brantford Power Inc.	Burlington Hydro Inc.
Power and Distribution Revenue	$ 46,769,679	$ 5,439,668	$ 122,412,893	$ 38,809,416	$ 124,799,217	$ 228,182,954
Cost of Power and Related Costs	23,635,241	3,998,251	100,260,264	32,683,898	107,276,399	197,721,069
Revenues from Service - Distribution	23,134,438	1,441,417	22,152,629	6,125,519	17,522,818	30,461,885
Other Income	(532,613)	66,952	653,487	(577,011)	214,719	923,261
Expenses						
Operating	1,417,407	323,884	3,791,562	711,340	1,554,358	5,326,505
Maintenance	4,879,021	111,689	180,125	742,373	1,562,869	3,701,170
Administrative	5,659,282	593,570	8,368,711	1,777,336	5,993,632	8,772,635
Depreciation and Amortization	3,136,802	180,844	4,554,631	949,167	3,004,084	4,973,073
Financing	2,761,725	22,255	1,446,903	392,205	2,290,852	3,198,166
	17,854,237	1,232,242	18,341,932	4,572,421	14,405,796	25,971,550
Net Income Before Taxes	4,747,588	276,127	4,464,184	976,087	3,331,741	5,413,596
PILs and Income Taxes						
Current	441,930	41,572	944,000	146,281	263,594	(1,013,637)
Deferred	139,079	-	-	159,410	(21,308)	509,575
	581,009	41,572	944,000	305,691	242,286	(504,062)
Net Income (Loss)	4,166,579	234,555	3,520,184	670,396	3,089,455	5,917,658
Other Comprehensive Income (Loss)	-	103,679	-	-	-	-
Comprehensive Income (Loss)	$ 4,166,579	$ 338,234	$ 3,520,184	$ 670,396	$ 3,089,455	$ 5,917,658

Income Statement For the year ended December 31	Cambridge and North Dumfries Hydro Inc.	Canadian Niagara Power Inc.	Centre Wellington Hydro Ltd.	Chapleau Public Utilities Corporation	COLLUS PowerStream Corp.	Cooperative Hydro Embrun Inc.
Power and Distribution Revenue	$ 178,367,144	$ 76,416,272	$ 20,529,003	$ 3,973,960	$ 40,657,993	$ 4,230,659
Cost of Power and Related Costs	150,234,159	57,860,531	17,099,926	3,115,911	33,644,023	3,422,003
Revenues from Service - Distribution	28,132,986	18,555,741	3,429,077	858,049	7,013,970	808,657
Other Income	1,111,864	1,857,805	158,668	(29,681)	70,642	40,276
Expenses						
Operating	2,169,275	1,702,685	322,470	208,239	721,686	39,764
Maintenance	2,012,916	1,912,871	310,601	-	1,667,027	26,251
Administrative	10,180,347	5,901,533	1,525,839	528,945	2,318,805	548,883
Depreciation and Amortization	5,093,494	4,175,124	543,004	50,827	742,598	118,183
Financing	4,484,505	2,638,501	514,498	4,490	468,211	843
	23,940,537	16,330,713	3,216,412	792,501	5,918,327	733,923
Net Income Before Taxes	5,304,313	4,082,833	371,333	35,866	1,166,286	115,009
PILs and Income Taxes						
Current	296,350	638,942	658	-	178,697	23,044
Deferred	-	266,835	(63,532)	-	-	-
	296,350	905,777	(62,874)	-	178,697	23,044
Net Income (Loss)	5,007,964	3,177,056	434,207	35,866	987,589	91,965
Other Comprehensive Income (Loss)	-	-	-	-	-	-
Comprehensive Income (Loss)	$ 5,007,964	$ 3,177,056	$ 434,207	$ 35,866	$ 987,589	$ 91,965

Income Statement For the year ended December 31	E.L.K. Energy Inc.	Enersource Hydro Mississauga Inc.	Entegrus Powerlines Inc.	EnWin Utilities Ltd.	Erie Thames Powerlines Corporation	Espanola Regional Hydro Distribution Corporation
Power and Distribution Revenue	$ 33,667,315	$ 921,296,231	$ 133,169,631	$ 296,341,445	$ 64,197,635	$ 9,264,440
Cost of Power and Related Costs	30,229,790	792,310,538	112,956,941	245,977,671	53,987,814	7,413,566
Revenues from Service - Distribution	3,437,525	128,985,693	20,212,690	50,363,775	10,209,821	1,850,875
Other Income	613,774	5,216,195	(865,344)	2,663,278	(431,231)	32,545
Expenses						
Operating	263,090	12,325,447	1,132,180	2,364,660	128,569	340,593
Maintenance	939,207	11,372,249	1,819,960	1,750,044	320,160	213,149
Administrative	1,412,193	36,764,198	6,487,443	20,432,970	5,408,106	818,020
Depreciation and Amortization	364,814	31,282,183	3,789,326	9,831,922	1,525,419	96,039
Financing	106,019	17,225,955	2,798,212	2,872,102	1,379,224	84,260
	3,085,322	108,970,031	16,027,120	37,251,697	8,761,479	1,552,060
Net Income Before Taxes	965,977	25,231,857	3,320,225	15,775,356	1,017,112	331,360
PILs and Income Taxes						
Current	172,500	1,932,217	722,031	2,967,771	28,000	(107,852)
Deferred	-	272,441	-	-	-	-
	172,500	2,204,658	722,031	2,967,771	28,000	(107,852)
Net Income (Loss)	793,477	23,027,200	2,598,194	12,807,585	989,112	439,212
Other Comprehensive Income (Loss)	-	(3,540)	-	-	-	28,237
Comprehensive Income (Loss)	$ 793,477	$ 23,023,660	$ 2,598,194	$ 12,807,585	$ 989,112	$ 467,449

Income Statement For the year ended December 31	Essex Powerlines Corporation	Festival Hydro Inc.	Fort Frances Power Corporation	Greater Sudbury Hydro Inc.	Grimsby Power Incorporated	Guelph Hydro Electric Systems Inc.
Power and Distribution Revenue	$ 76,563,568	$ 84,432,441	$ 10,780,869	$ 132,056,395	$ 25,195,960	$ 231,689,846
Cost of Power and Related Costs	62,236,119	71,472,888	8,851,332	108,090,383	20,602,605	201,577,465
Revenues from Service - Distribution	14,327,450	12,959,553	1,929,536	23,966,012	4,593,355	30,112,381
Other Income	127,215	148,603	109,107	231,307	20,078	1,031,146
Expenses						
Operating	1,174,581	904,645	427,285	6,009,107	648,822	4,891,380
Maintenance	1,594,293	1,290,960	297,334	1,996,669	505,940	1,281,593
Administrative	4,033,842	3,158,873	898,945	5,317,031	1,803,642	8,949,102
Depreciation and Amortization	2,537,950	2,428,856	217,683	3,844,521	794,526	4,892,433
Financing	906,168	1,971,975	3,341	4,705,453	486,429	3,647,859
	10,246,835	9,755,309	1,844,589	21,872,782	4,239,360	23,662,366
Net Income Before Taxes	4,207,829	3,352,847	194,054	2,324,537	374,074	7,481,161
PILs and Income Taxes						
Current	442,000	94,000	(65,622)	898,641	48,209	4,485,356
Deferred	35,000	-	-	-	128,168	394,430
	477,000	94,000	(65,622)	898,641	176,377	4,879,786
Net Income (Loss)	3,730,829	3,258,847	259,676	1,425,896	197,697	2,601,375
Other Comprehensive Income (Loss)	-	(18,518)	-	-	-	-
Comprehensive Income (Loss)	$ 3,730,829	$ 3,240,329	$ 259,676	$ 1,425,896	$ 197,697	$ 2,601,375

Income Statement For the year ended December 31	Haldimand County Hydro Inc.	Halton Hills Hydro Inc.	Hearst Power Distribution Company Limited	Horizon Utilities Corporation	Hydro 2000 Inc.	Hydro Hawkesbury Inc.
Power and Distribution Revenue	$ 61,964,510	$ 72,221,932	$ 11,292,050	$ 665,180,168	$ 2,612,961	$ 12,405,257
Cost of Power and Related Costs	49,246,272	61,900,483	9,879,823	551,899,480	2,064,481	10,727,236
Revenues from Service - Distribution	12,718,238	10,321,449	1,412,227	113,280,688	548,480	1,678,022
Other Income	463,382	336,164	49,305	2,434,343	10,016	10,906
Expenses						
Operating	1,537,803	1,442,651	175,120	28,850,125	30,115	55,990
Maintenance	2,075,695	299,559	422,733	4,270,407	17,164	179,949
Administrative	4,090,106	4,151,697	618,131	30,492,875	390,013	723,526
Depreciation and Amortization	2,183,925	1,780,440	344,309	22,186,329	51,899	188,834
Financing	1,010,697	909,972	84,011	7,230,110	5,849	7,110
	10,898,225	8,584,319	1,644,304	93,029,847	495,040	1,155,410
Net Income Before Taxes	2,283,395	2,073,295	(182,772)	22,685,184	63,456	533,518
PILs and Income Taxes						
Current	986,106	(154,599)	4,657	3,846,719	(8,656)	146,070
Deferred	(5,847,214)	(839,655)	(13,800)	989,927	18,561	(35,856)
	(4,861,108)	(994,254)	(9,143)	4,836,646	9,905	110,214
Net Income (Loss)	7,144,503	3,067,548	(173,629)	17,848,538	53,551	423,304
Other Comprehensive Income (Loss)	-	-	(39,813)	248,775	-	-
Comprehensive Income (Loss)	$ 7,144,503	$ 3,067,548	$ (213,442)	$ 18,097,313	$ 53,551	$ 423,304

Income Statement For the year ended December 31	Hydro One Brampton Networks Inc.	Hydro One Networks Inc.	Hydro Ottawa Limited	Innpower Corporation	Kenora Hydro Electric Corporation Ltd.	Kingston Hydro Corporation
Power and Distribution Revenue	$ 528,930,633	$ 4,341,609,171	$ 1,032,477,037	$ 39,170,121	$ 14,683,601	$ 87,601,416
Cost of Power and Related Costs	457,114,242	2,982,653,266	867,750,599	29,656,547	11,725,836	75,255,069
Revenues from Service - Distribution	71,816,392	1,358,955,905	164,726,438	9,513,573	2,957,765	12,346,347
Other Income	(359,882)	24,872,713	6,541,125	583,728	152,719	(771,727)
Expenses						
Operating	6,365,427	90,648,316	16,546,014	1,377,569	197,087	2,109,260
Maintenance	4,112,037	221,451,707	10,313,645	427,525	655,919	1,140,218
Administrative	17,372,857	255,881,441	53,488,795	3,767,469	1,475,430	4,317,057
Depreciation and Amortization	17,378,596	361,109,030	37,990,760	1,879,151	569,016	1,690,705
Financing	11,644,604	146,306,791	15,816,494	1,077,830	133,472	1,223,625
	56,873,520	1,075,397,285	134,155,708	8,529,545	3,030,923	10,480,865
Net Income Before Taxes	14,582,990	308,431,332	37,111,855	1,567,756	79,561	1,093,755
PILs and Income Taxes						
Current	2,011,734	63,193,158	1,216,566	(1,666)	3,817	109,773
Deferred	(1,681,732)	(12,069,024)	-	352,008	-	258,283
	330,002	51,124,134	1,216,566	350,342	3,817	368,056
Net Income (Loss)	14,252,988	257,307,199	35,895,289	1,217,414	75,744	725,699
Other Comprehensive Income (Loss)	140,000	-	-	-	-	-
Comprehensive Income (Loss)	$ 14,392,988	$ 257,307,199	$ 35,895,289	$ 1,217,414	$ 75,744	$ 725,699

Income Statement For the year ended December 31	Kitchener-Wilmot Hydro Inc.	Lakefront Utilities Inc.	Lakeland Power Distribution Ltd.	London Hydro Inc.	Midland Power Utility Corporation	Milton Hydro Distribution Inc.
Power and Distribution Revenue	$ 244,601,635	$ 33,263,213	$ 44,869,239	$ 448,290,550	$ 21,535,376	$ 118,347,331
Cost of Power and Related Costs	204,976,789	28,617,992	36,452,660	379,936,576	17,607,327	101,556,912
Revenues from Service - Distribution	39,624,846	4,645,221	8,416,579	68,353,973	3,928,049	16,790,419
Other Income	(3,547,234)	56,259	191,160	(1,983,774)	135,393	437,589
Expenses						
Operating	4,143,356	508,337	320,991	8,693,279	829,170	2,264,237
Maintenance	5,176,836	175,003	1,334,895	8,029,591	137,674	1,445,938
Administrative	7,199,651	1,587,580	3,484,955	17,959,416	1,430,999	6,188,032
Depreciation and Amortization	2,349,311	1,121,030	1,200,180	16,858,883	644,006	2,761,704
Financing	4,231,006	683,031	249,006	2,862,586	232,639	2,143,193
	23,100,159	4,074,981	6,590,027	54,403,755	3,274,487	14,803,104
Net Income Before Taxes	12,977,452	626,498	2,017,712	11,966,444	788,956	2,424,904
PILs and Income Taxes						
Current	1,894,663	79,245	380,775	2,648,385	75,797	248,590
Deferred	(10,947)	44,900	129,626	(836,700)	-	(721,383)
	1,883,716	124,145	510,401	1,811,685	75,797	(472,793)
Net Income (Loss)	11,093,736	502,353	1,507,311	10,154,759	713,159	2,897,697
Other Comprehensive Income (Loss)	-	-	-	-	-	-
Comprehensive Income (Loss)	$ 11,093,736	$ 502,353	$ 1,507,311	$ 10,154,759	$ 713,159	$ 2,897,697

Income Statement **For the year ended** **December 31**	Newmarket-Tay Power Distribution Ltd.	Niagara Peninsula Energy Inc.	Niagara-on-the-Lake Hydro Inc.	North Bay Hydro Distribution Limited	Northern Ontario Wires Inc.	Oakville Hydro Electricity Distribution Inc.
Power and Distribution Revenue	$ 89,880,689	$ 182,234,670	$ 27,656,164	$ 71,302,699	$ 17,563,904	$ 209,208,014
Cost of Power and Related Costs	72,426,484	150,844,155	22,753,049	58,509,961	14,422,963	170,915,015
Revenues from Service - Distribution	17,454,205	31,390,515	4,903,115	12,792,738	3,140,942	38,292,999
Other Income	(1,179,092)	592,125	19,043	(690,243)	49,606	1,006,322
Expenses						
Operating	1,240,277	4,310,481	548,540	629,042	589,862	7,512,896
Maintenance	1,453,713	2,345,782	451,578	1,739,889	445,342	2,309,944
Administrative	4,847,873	10,217,178	1,353,838	3,937,064	1,358,262	8,326,362
Depreciation and Amortization	2,904,007	6,099,694	775,384	1,693,086	368,228	8,545,048
Financing	1,485,565	3,357,781	490,526	1,232,424	185,369	6,031,002
	11,931,435	26,330,916	3,619,865	9,231,506	2,947,062	32,725,253
Net Income Before Taxes	4,343,677	5,651,724	1,302,293	2,870,990	243,485	6,574,069
PILs and Income Taxes						
Current	1,107,025	859,183	(340,559)	300,000	43,780	(35,752)
Deferred	-	(533,645)	919,552	-	(3,079)	215,022
	1,107,025	325,538	578,993	300,000	40,701	179,270
Net Income (Loss)	3,236,652	5,326,187	723,300	2,570,989	202,784	6,394,799
Other Comprehensive Income (Loss)	-	-	-	-	-	-
Comprehensive Income (Loss)	$ 3,236,652	$ 5,326,187	$ 723,300	$ 2,570,989	$ 202,784	$ 6,394,799

Income Statement For the year ended December 31	Orangeville Hydro Limited	Orillia Power Distribution Corporation	Oshawa PUC Networks Inc.	Ottawa River Power Corporation	Peterborough Distribution Incorporated	PowerStream Inc.
Power and Distribution Revenue	$ 34,822,577	$ 44,083,946	$ 138,989,272	$ 26,661,525	$ 110,522,361	$ 1,178,829,966
Cost of Power and Related Costs	29,745,385	35,509,377	118,112,195	22,247,618	95,126,224	1,002,088,778
Revenues from Service - Distribution	5,077,192	8,574,569	20,877,077	4,413,906	15,396,137	176,741,188
Other Income	(94,799)	(621,871)	391,929	144,830	(116,937)	8,553,825
Expenses						
Operating	460,635	827,250	1,591,251	583,969	2,225,370	21,816,083
Maintenance	500,883	945,462	1,205,389	623,326	1,007,332	9,127,085
Administrative	2,331,054	3,092,798	9,033,548	1,573,789	5,173,974	61,538,550
Depreciation and Amortization	667,675	1,121,075	3,797,997	765,290	2,874,800	42,259,383
Financing	370,375	694,790	2,197,661	438,316	1,779,886	24,140,326
	4,330,623	6,681,375	17,825,845	3,984,690	13,061,362	158,881,426
Net Income Before Taxes	651,770	1,271,323	3,443,160	574,046	2,217,838	26,413,587
PILs and Income Taxes						
Current	130,026	322,000	145,188	102,800	492,218	(4,313,423)
Deferred	-	76,000	-	-	124,000	-
	130,026	398,000	145,188	102,800	616,218	(4,313,423)
Net Income (Loss)	521,744	873,323	3,297,972	471,246	1,601,620	30,727,010
Other Comprehensive Income (Loss)	-	-	(493,186)	-	-	-
Comprehensive Income (Loss)	$ 521,744	$ 873,323	$ 2,804,786	$ 471,246	$ 1,601,620	$ 30,727,010

Income Statement For the year ended December 31	PUC Distribution Inc.	Renfrew Hydro Inc.	Rideau St. Lawrence Distribution Inc.	Sioux Lookout Hydro Inc.	St. Thomas Energy Inc.	Thunder Bay Hydro Electricity Distribution Inc.
Power and Distribution Revenue	$ 96,717,281	$ 12,786,649	$ 16,245,560	$ 10,104,920	$ 36,890,869	$ 131,219,428
Cost of Power and Related Costs	78,110,389	10,853,776	13,517,734	8,158,299	29,529,895	110,371,676
Revenues from Service - Distribution	18,606,892	1,932,872	2,727,826	1,946,621	7,360,974	20,847,752
Other Income	382,803	(134,659)	39,209	57,510	153,437	226,320
Expenses						
Operating	3,702,949	311,428	282,485	526,730	899,498	3,164,099
Maintenance	2,274,649	171,109	400,282	159,501	342,896	4,293,691
Administrative	5,300,225	847,621	1,457,425	736,357	2,728,623	6,795,717
Depreciation and Amortization	3,888,942	222,240	306,218	210,722	1,148,681	3,228,843
Financing	3,003,914	203,789	90,553	61,204	832,150	876,669
	18,170,679	1,756,187	2,536,963	1,694,514	5,951,848	18,359,018
Net Income Before Taxes	819,017	42,027	230,072	309,617	1,562,563	2,715,054
PILs and Income Taxes						
Current	(505,398)	16,113	10,429	34,506	192,526	(116,300)
Deferred	296,000	41,681	26,139	(41,964)	-	919,943
	(209,398)	57,794	36,568	(7,458)	192,526	803,643
Net Income (Loss)	1,028,415	(15,767)	193,504	317,075	1,370,037	1,911,411
Other Comprehensive Income (Loss)	-	-	-	-	-	-
Comprehensive Income (Loss)	$ 1,028,415	$ (15,767)	$ 193,504	$ 317,075	$ 1,370,037	$ 1,911,411

Income Statement For the year ended December 31	Tillsonburg Hydro Inc.	Toronto Hydro-Electric System Limited	Veridian Connections Inc.	Wasaga Distribution Inc.	Waterloo North Hydro Inc.	Welland Hydro-Electric System Corp.
Power and Distribution Revenue	$ 27,390,694	$ 3,493,783,356	$ 336,841,570	$ 18,858,883	$ 201,154,116	$ 52,485,503
Cost of Power and Related Costs	23,764,696	2,847,118,928	283,405,085	14,691,822	166,622,942	43,174,574
Revenues from Service - Distribution	3,625,998	646,664,428	53,436,485	4,167,061	34,531,174	9,310,929
Other Income	58,684	5,607,211	555,367	27,848	(3,325,043)	387,883
Expenses						
Operating	644,836	48,560,663	5,596,978	75,160	6,278,264	1,320,244
Maintenance	144,270	67,117,346	3,655,707	699,776	1,552,188	1,834,314
Administrative	1,711,781	128,303,498	17,169,227	2,088,863	5,431,518	3,168,711
Depreciation and Amortization	325,196	192,329,429	11,161,147	621,402	8,510,773	1,304,212
Financing	45,332	71,970,135	5,125,023	221,352	4,846,098	882,042
	2,871,415	508,281,071	42,708,082	3,706,553	26,618,841	8,509,523
Net Income Before Taxes	813,267	143,990,569	11,283,770	488,355	4,587,290	1,189,289
PILs and Income Taxes						
Current	118,500	3,518,763	1,406,956	54,187	(156,358)	127,169
Deferred	-	(19,437)	131,518	65,553	(559,981)	(157,463)
	118,500	3,499,326	1,538,474	119,740	(716,339)	(30,294)
Net Income (Loss)	694,767	140,491,242	9,745,296	368,615	5,303,629	1,219,583
Other Comprehensive Income (Loss)	-	-	-	-	-	-
Comprehensive Income (Loss)	$ 694,767	$ 140,491,242	$ 9,745,296	$ 368,615	$ 5,303,629	$ 1,219,583

Income Statement For the year ended December 31	Wellington North Power Inc.	West Coast Huron Energy Inc.	Westario Power Inc.	Whitby Hydro Electric Corporation	Woodstock Hydro Services Inc.	Total Industry
Power and Distribution Revenue	$ 13,976,945	$ 12,504,163	$ 61,323,910	$ 127,195,472	$ 55,208,808	$ 17,526,744,751
Cost of Power and Related Costs	11,503,368	10,081,745	51,288,235	104,164,489	46,689,924	13,971,429,157
Revenues from Service - Distribution	2,473,576	2,422,418	10,035,675	23,030,983	8,518,884	3,555,315,594
Other Income	(1,663)	89,029	108,868	(1,151,853)	(267,268)	53,335,647
Expenses						
Operating	376,893	140,160	264,132	3,351,111	919,729	333,745,397
Maintenance	235,310	390,269	1,398,823	1,861,257	609,186	411,451,263
Administrative	1,054,804	1,231,943	3,597,665	6,194,293	2,622,284	865,498,755
Depreciation and Amortization	346,404	257,196	1,653,966	3,588,586	1,455,368	863,846,599
Financing	182,064	218,542	1,095,382	2,184,139	1,296,142	385,800,727
	2,195,476	2,238,110	8,009,968	17,179,386	6,902,709	2,860,342,742
Net Income Before Taxes	276,437	273,337	2,134,575	4,699,745	1,348,907	748,308,499
PILs and Income Taxes						
Current	23,074	25,500	308,000	959,683	482,221	95,571,874
Deferred	-	22,060	(82,000)	-	(2,080,585)	(19,083,595)
	23,074	47,560	226,000	959,683	(1,598,364)	76,488,279
Net Income (Loss)	253,363	225,777	1,908,575	3,740,062	2,947,271	671,820,220
Other Comprehensive Income (Loss)	-	-	-	-	-	(34,366)
Comprehensive Income (Loss)	$ 253,363	$ 225,777	$ 1,908,575	$ 3,740,062	$ 2,947,271	$ 671,785,854

LDCs	KWh
Algoma Power Inc.	200,403,874.14
Atikokan Hydro Inc.	31,906,696.00
Bluewater Power Distribution Corporation	982,757,644.86
Brant County Power Inc.	273,412,881.00
Brantford Power Inc.	897,299,653.02
Burlington Hydro Inc.	1,602,596,369.00
Cambridge and North Dumfries Hydro Inc.	1,458,457,685.00
Canadian Niagara Power Inc.	469,574,623.58
Centre Wellington Hydro Ltd.	140,010,306.25
Chapleau Public Utilities Corporation	25,505,370.00
COLLUS PowerStream Corp.	293,879,144.16
Cooperative Hydro Embrun Inc.	28,382,390.00
E.L.K. Energy Inc.	177,997,150.00
Enersource Hydro Mississauga Inc.	7,178,598,049.14
Entegrus Powerlines Inc.	919,803,075.47
EnWin Utilities Ltd.	2,387,341,468.52
Erie Thames Powerlines Corporation	467,204,444.10
Espanola Regional Hydro Distribution Corporation	57,971,758.12
Essex Powerlines Corporation	485,087,490.36
Festival Hydro Inc.	601,111,819.13
Fort Frances Power Corporation	73,000,852.78
Greater Sudbury Hydro Inc.	877,687,417.42
Grimsby Power Incorporated	175,320,569.73
Guelph Hydro Electric Systems Inc.	1,762,268,866.20
Haldimand County Hydro Inc.	343,921,807.00
Halton Hills Hydro Inc.	507,140,139.00
Hearst Power Distribution Company Limited	83,575,639.00
Horizon Utilities Corporation	5,391,913,941.01
Hydro 2000 Inc.	23,707,543.00
Hydro Hawkesbury Inc.	139,212,994.00
Hydro One Brampton Networks Inc.	3,904,648,063.58
Hydro One Networks Inc.	21,546,815,701.41
Hydro Ottawa Limited	7,363,999,071.36
Innpower Corporation	238,226,420.72
Kenora Hydro Electric Corporation Ltd.	99,103,826.00
Kingston Hydro Corporation	697,350,972.37
Kitchener-Wilmot Hydro Inc.	1,738,135,120.66
Lakefront Utilities Inc.	237,152,739.16
Lakeland Power Distribution Ltd.	286,887,802.77
London Hydro Inc.	3,131,627,972.41
Midland Power Utility Corporation	188,511,656.97
Milton Hydro Distribution Inc.	840,528,148.00
Newmarket-Tay Power Distribution Ltd.	647,579,748.00
Niagara Peninsula Energy Inc.	1,195,836,051.00
Niagara-on-the-Lake Hydro Inc.	196,064,347.82
North Bay Hydro Distribution Limited	514,318,750.00
Northern Ontario Wires Inc.	121,108,573.00
Oakville Hydro Electricity Distribution Inc.	1,510,981,122.29
Orangeville Hydro Limited	242,959,344.36
Orillia Power Distribution Corporation	301,466,853.00

Oshawa PUC Networks Inc.	1,068,955,483.00
Ottawa River Power Corporation	182,354,843.00
Peterborough Distribution Incorporated	778,657,488.00
PowerStream Inc.	8,516,594,288.00
PUC Distribution Inc.	661,856,675.95
Renfrew Hydro Inc.	85,683,403.00
Rideau St. Lawrence Distribution Inc.	103,053,092.00
Sioux Lookout Hydro Inc.	79,024,821.44
St. Thomas Energy Inc.	267,491,474.80
Thunder Bay Hydro Electricity Distribution Inc.	927,798,308.96
Tillsonburg Hydro Inc.	194,055,148.59
Toronto Hydro-Electric System Limited	24,498,297,067.32
Veridian Connections Inc.	2,524,956,313.00
Wasaga Distribution Inc.	122,395,833.00
Waterloo North Hydro Inc.	1,393,089,682.00
Welland Hydro-Electric System Corp.	353,053,326.00
Wellington North Power Inc.	104,611,064.00
West Coast Huron Energy Inc.	149,636,729.61
Westario Power Inc.	427,347,680.00
Whitby Hydro Electric Corporation	851,628,567.00
Woodstock Hydro Services Inc.	388,266,461.00
Total	116,739,161,695.54

Revenue	Loans and notes payable, and current portion of long term debt
$ 46,769,679.44	-
$ 5,439,667.85	117,723
$ 122,412,893.00	45,233
$ 38,809,416.41	-
$ 124,799,216.51	2,561,334
$ 228,182,953.58	865,636
$ 178,367,144.36	-
$ 76,416,272.31	-
$ 20,529,003.17	113,863
$ 3,973,960.06	-
$ 40,657,992.77	527,581
$ 4,230,659.25	-
$ 33,667,314.84	-
$ 921,296,231.23	14,562,432
$ 133,169,631.22	-
$ 296,341,445.30	326,359
$ 64,197,635.20	1,695,391
$ 9,264,440.26	-
$ 76,563,568.15	4,116,155
$ 84,432,441.43	810,909
$ 10,780,868.53	-
$ 132,056,395.35	2,400,682
$ 25,195,959.95	4,621,356
$ 231,689,846.10	564,990
$ 61,964,510.13	-
$ 72,221,931.69	7,586,602
$ 11,292,049.89	-
$ 665,180,168.12	16,626,000
$ 2,612,960.96	-
$ 12,405,257.41	744,429
$ 528,930,633.20	7,047,074
$ 4,341,609,170.74	236,008,096
$ 1,032,477,036.75	41,000,000
$ 39,170,120.55	4,056,149
$ 14,683,601.03	-
$ 87,601,416.00	3,029,789
$ 244,601,635.22	1,066,445
$ 33,263,213.42	197,498
$ 44,869,239.05	713,024
$ 448,290,549.66	2,304,000
$ 21,535,376.34	1,754,418
$ 118,347,331.00	1,565,791
$ 89,880,688.51	1,644,454
$ 182,234,670.33	1,420,498
$ 27,656,164.26	2,333,748
$ 71,302,699.40	1,263,005
$ 17,563,904.41	1,044,549
$ 209,208,013.73	4,585,464
$ 34,822,576.62	435,379
$ 44,083,946.00	2,210,000

$	138,989,271.85		-
$	26,661,524.58		-
$	110,522,361.00		1,446,000
$	1,178,829,966.27		125,003,092
$	96,717,280.68		15,802,960
$	12,786,648.69		40,017
$	16,245,560.28		172,619
$	10,104,920.30		224,739
$	36,890,869.42		-
$	131,219,427.72		767,529
$	27,390,694.14		142,910
$	3,493,783,355.64		196,521,453
$	336,841,570.00		933,200
$	18,858,882.75		-
$	201,154,116.00		10,272,075
$	52,485,503.00		-
$	13,976,944.90		1,006,412
$	12,504,163.00		2,152,322
$	61,323,910.00		1,059,933
$	127,195,472.00		400,000
$	55,208,807.63		-
$	17,526,744,750.54	$	727,911,316.37

Long-term debt	Inter-company long-term debt & advances	Shareholders' Equity	Total Assets
52,000,000	-	46,627,048	$ 113,375,769
187,617	342,000	2,598,748	$ 4,647,253
23,918,540	-	28,003,138	$ 85,895,981
-	8,000,000	18,554,171	$ 39,776,606
17,022,603	24,189,168	41,188,551	$ 108,973,348
14,184,769	47,878,608	77,404,191	$ 175,499,704
85,000,000	-	77,245,728	$ 210,046,077
16,050,000	20,000,000	20,981,471	$ 111,749,630
4,255,111	5,046,753	8,139,725	$ 21,854,011
-	-	2,035,073	$ 3,319,874
11,950,730	-	8,800,971	$ 33,667,893
-	-	4,283,523	$ 5,286,068
5,100,000	-	8,101,528	$ 22,097,884
60,000,000	334,000,000	272,871,015	$ 887,662,747
-	47,523,326	33,856,252	$ 108,556,421
51,000,000	-	133,146,785	$ 321,687,930
18,038,524	-	13,721,087	$ 50,361,944
2,400,000	1,524,511	3,024,125	$ 10,290,734
17,212,218	373,943	22,715,272	$ 69,630,996
14,220,869	-	24,214,793	$ 69,526,989
-	-	5,960,305	$ 9,251,528
816,550	-	17,082,400	$ 126,588,820
4,760,755	5,782,746	8,693,576	$ 31,859,027
95,000,000	-	64,816,369	$ 215,810,209
-	17,966,269	46,077,499	$ 76,829,485
9,258,402	16,141,969	30,720,882	$ 86,029,213
1,250,000	-	3,096,947	$ 6,961,276
-	190,000,000	219,488,003	$ 628,993,196
-	-	939,423	$ 1,342,032
663,217	-	3,995,605	$ 9,453,133
193,000,000	-	198,831,794	$ 520,769,286
3,000,904,582	-	2,678,596,512	$ 34,156,999,083
-	447,185,000	302,804,101	$ 992,440,450
30,819,711	-	17,129,123	$ 61,571,418
4,510,946	-	6,520,421	$ 14,458,996
17,309,178	10,880,619	25,804,613	$ 77,640,536
3,990,232	76,962,142	135,182,084	$ 270,816,913
9,887,391	-	9,234,799	$ 25,332,652
6,186,387	-	22,363,800	$ 39,623,161
96,130,000	-	150,139,873	$ 357,727,164
3,862,716	-	10,663,219	$ 20,275,187
50,857,464	-	38,925,202	$ 116,690,043
30,117,076	2,473,010	46,312,646	$ 105,360,761
34,441,572	25,605,090	75,285,163	$ 179,017,611
916,667	7,788,942	15,223,275	$ 34,656,817
10,352,249	19,511,601	33,090,961	$ 91,842,207
3,964,066	-	3,289,387	$ 10,817,135
20,278,482	70,310,869	83,932,445	$ 255,655,045
10,505,200	-	9,480,643	$ 28,660,574
735,000	9,762,000	12,636,640	$ 36,837,293

22,966,099	23,064,000	41,129,970	$ 136,974,560
5,585,838	-	7,936,840	$ 19,606,687
42,309,286	1,510,000	29,478,852	$ 89,788,796
347,408,036	182,429,859	443,180,449	$ 1,499,821,453
23,846,498	26,534,040	28,638,644	$ 111,225,900
18,591	2,705,168	3,672,801	$ 9,559,093
516,671	1,163,352	4,112,761	$ 10,553,109
1,500,298	-	2,975,005	$ 9,010,427
3,500,000	7,714,426	15,794,779	$ 46,790,478
20,138,196	26,490,500	63,034,710	$ 140,074,044
258,747	-	10,395,028	$ 18,890,185
-	1,875,984,003	1,354,509,769	$ 4,710,850,057
54,653,077	74,688,000	99,579,344	$ 303,017,766
-	3,593,269	10,869,843	$ 18,166,414
101,898,336	-	85,153,420	$ 250,097,293
-	13,499,953	16,104,148	$ 40,821,637
4,203,600	-	3,345,526	$ 11,870,176
3,012,082	-	5,683,502	$ 13,895,333
13,222,943	5,260,461	30,143,122	$ 63,757,149
4,000,000	28,337,942	49,057,899	$ 106,054,815
-	23,377,555	12,272,655	$ 50,975,696

$ 4,682,097,119.00	$ 3,685,601,095.32	$ 7,440,899,971.76	$ 48,706,019,179

ts - interest bearing	Debt Ratio	Total Debt Ratio	Equity Ratio	LTD/Equity
$ 61,375,769	0.46	0.59	0.41	1.12
$ 3,999,912	0.14	0.44	0.56	0.25
$ 61,932,208	0.28	0.67	0.33	0.86
$ 31,776,606	0.20	0.53	0.47	0.43
$ 65,200,243	0.40	0.62	0.38	1.06
$ 112,570,691	0.36	0.56	0.44	0.81
$ 125,046,077	0.40	0.63	0.37	1.10
$ 75,699,630	0.32	0.81	0.19	1.72
$ 12,438,284	0.43	0.63	0.37	1.16
$ 3,319,874	0.00	0.39	0.61	0.00
$ 21,189,583	0.37	0.74	0.26	1.42
$ 5,286,068	0.00	0.19	0.81	0.00
$ 16,997,884	0.23	0.63	0.37	0.63
$ 479,100,315	0.46	0.69	0.31	1.50
$ 61,033,095	0.44	0.69	0.31	1.40
$ 270,361,570	0.16	0.59	0.41	0.39
$ 30,628,028	0.39	0.73	0.27	1.44
$ 6,366,223	0.38	0.71	0.29	1.30
$ 47,928,681	0.31	0.67	0.33	0.96
$ 54,495,211	0.22	0.65	0.35	0.62
$ 9,251,528	0.00	0.36	0.64	0.00
$ 123,371,589	0.03	0.87	0.13	0.19
$ 16,694,169	0.48	0.73	0.27	1.74
$ 120,245,220	0.44	0.70	0.30	1.47
$ 58,863,216	0.23	0.40	0.60	0.39
$ 53,042,239	0.38	0.64	0.36	1.07
$ 5,711,276	0.18	0.56	0.44	0.40
$ 422,367,196	0.33	0.65	0.35	0.94
$ 1,342,032	0.00	0.30	0.70	0.00
$ 8,045,488	0.15	0.58	0.42	0.35
$ 320,722,212	0.38	0.62	0.38	1.01
$ 30,920,086,406	0.09	0.92	0.08	1.21
$ 504,255,450	0.49	0.69	0.31	1.61
$ 26,695,558	0.57	0.72	0.28	2.04
$ 9,948,050	0.31	0.55	0.45	0.69
$ 46,420,950	0.40	0.67	0.33	1.21
$ 188,798,094	0.30	0.50	0.50	0.61
$ 15,247,764	0.40	0.64	0.36	1.09
$ 32,723,750	0.17	0.44	0.56	0.31
$ 259,293,164	0.28	0.58	0.42	0.66
$ 14,658,054	0.28	0.47	0.53	0.53
$ 64,266,788	0.45	0.67	0.33	1.35
$ 71,126,220	0.32	0.56	0.44	0.74
$ 117,550,451	0.34	0.58	0.42	0.82
$ 23,617,459	0.32	0.56	0.44	0.73
$ 60,715,352	0.34	0.64	0.36	0.94
$ 5,808,520	0.46	0.70	0.30	1.52
$ 160,480,229	0.37	0.67	0.33	1.13
$ 17,719,995	0.38	0.67	0.33	1.15
$ 24,130,293	0.34	0.66	0.34	1.01

$	90,944,461	0.34	0.70	0.30	1.12
$	14,020,849	0.28	0.60	0.40	0.70
$	44,523,510	0.50	0.67	0.33	1.54
$	844,980,466	0.44	0.70	0.30	1.48
$	45,042,402	0.60	0.74	0.26	2.31
$	6,795,316	0.29	0.62	0.38	0.75
$	8,700,467	0.18	0.61	0.39	0.45
$	7,285,391	0.19	0.67	0.33	0.58
$	35,576,052	0.24	0.66	0.34	0.71
$	92,677,819	0.34	0.55	0.45	0.75
$	18,488,528	0.02	0.45	0.55	0.04
$	2,638,344,601	0.44	0.71	0.29	1.53
$	172,743,489	0.43	0.67	0.33	1.31
$	14,573,145	0.20	0.40	0.60	0.33
$	137,926,882	0.45	0.66	0.34	1.32
$	27,321,684	0.33	0.61	0.39	0.84
$	6,660,165	0.44	0.72	0.28	1.56
$	8,730,929	0.37	0.59	0.41	0.91
$	44,213,812	0.31	0.53	0.47	0.65
$	73,316,873	0.31	0.54	0.46	0.67
$	27,598,142	0.46	0.76	0.24	1.90
$	39,610,409,648	0.19	0.85	0.15	0.94

1.22
2.31
0.00

Debt to Equity Ratio (Total Debt/Total Equity)	Allocation Factor - Market Share
1.43	0.27%
0.79	0.03%
2.07	0.70%
1.14	0.22%
1.65	0.71%
1.27	1.30%
1.72	1.02%
4.33	0.44%
1.68	0.12%
0.63	0.02%
2.83	0.23%
0.23	0.02%
1.73	0.19%
2.25	5.26%
2.21	0.76%
1.42	1.69%
2.67	0.37%
2.40	0.05%
2.07	0.44%
1.87	0.48%
0.55	0.06%
6.41	0.75%
2.66	0.14%
2.33	1.32%
0.67	0.35%
1.80	0.41%
1.25	0.06%
1.87	3.80%
0.43	0.01%
1.37	0.07%
1.62	3.02%
11.75	24.77%
2.28	5.89%
2.59	0.22%
1.22	0.08%
2.01	0.50%
1.00	1.40%
1.74	0.19%
0.77	0.26%
1.38	2.56%
0.90	0.12%
2.00	0.68%
1.27	0.51%
1.38	1.04%
1.28	0.16%
1.78	0.41%
2.29	0.10%
2.05	1.19%
2.02	0.20%
1.92	0.25%

2.33	0.79%
1.47	0.15%
2.05	0.63%
2.38	6.73%
2.88	0.55%
1.60	0.07%
1.57	0.09%
2.03	0.06%
1.96	0.21%
1.22	0.75%
0.82	0.16%
2.48	19.93%
2.04	1.92%
0.67	0.11%
1.94	1.15%
1.53	0.30%
2.55	0.08%
1.44	0.07%
1.12	0.35%
1.16	0.73%
3.15	0.31%
5.55	100.00%

Allocation Factor - Net Assets (interest bearing debt only)
0.15%
0.01%
0.16%
0.08%
0.16%
0.28%
0.32%
0.19%
0.03%
0.01%
0.05%
0.01%
0.04%
1.21%
0.15%
0.68%
0.08%
0.02%
0.12%
0.14%
0.02%
0.31%
0.04%
0.30%
0.15%
0.13%
0.01%
1.07%
0.00%
0.02%
0.81%
78.06%
1.27%
0.07%
0.03%
0.12%
0.48%
0.04%
0.08%
0.65%
0.04%
0.16%
0.18%
0.30%
0.06%
0.15%
0.01%
0.41%
0.04%
0.06%

0.23%
0.04%
0.11%
2.13%
0.11%
0.02%
0.02%
0.02%
0.09%
0.23%
0.05%
6.66%
0.44%
0.04%
0.35%
0.07%
0.02%
0.02%
0.11%
0.19%
0.07%

100.00%

Switch

		Scenario 3	
		$ 3,107,422,314	$ 5,929,768,083
	Total Debt	$ 2,330,566,735.74	$ 4,447,326,062.36
Allocation Factor - KWh		**2017**	**2018**
	0.17%	$ 4,000,839.10	$ 7,634,639.13
	0.03%	$ 636,981.48	$ 1,215,525.95
	0.84%	$ 19,619,656.70	$ 37,439,395.86
	0.23%	$ 5,458,382.23	$ 10,416,009.62
	0.77%	$ 17,913,583.52	$ 34,183,765.54
	1.37%	$ 31,994,043.25	$ 61,052,936.27
	1.25%	$ 29,116,475.71	$ 55,561,790.74
	0.40%	$ 9,374,531.92	$ 17,889,039.39
	0.12%	$ 2,795,149.10	$ 5,333,869.76
	0.02%	$ 509,186.17	$ 971,659.34
	0.25%	$ 5,866,968.27	$ 11,195,697.81
	0.02%	$ 566,622.66	$ 1,081,263.06
	0.15%	$ 3,553,513.93	$ 6,781,026.63
	6.15%	$ 143,312,677.42	$ 273,477,774.99
	0.79%	$ 18,362,839.17	$ 35,041,061.89
	2.05%	$ 47,660,601.06	$ 90,948,793.69
	0.40%	$ 9,327,213.94	$ 17,798,744.40
	0.05%	$ 1,157,341.28	$ 2,208,507.47
	0.42%	$ 9,684,228.95	$ 18,480,021.67
	0.51%	$ 12,000,524.84	$ 22,900,115.27
	0.06%	$ 1,457,380.34	$ 2,781,059.85
	0.75%	$ 17,522,047.18	$ 33,436,612.61
	0.15%	$ 3,500,079.00	$ 6,679,058.92
	1.51%	$ 35,181,725.99	$ 67,135,862.07
	0.29%	$ 6,866,014.04	$ 13,102,136.37
	0.43%	$ 10,124,485.40	$ 19,320,145.23
	0.07%	$ 1,668,494.11	$ 3,183,919.71
	4.62%	$ 107,643,528.45	$ 205,411,783.39
	0.02%	$ 473,294.57	$ 903,168.85
	0.12%	$ 2,779,231.65	$ 5,303,495.14
	3.34%	$ 77,951,929.41	$ 148,752,508.12
	18.46%	$ 430,158,065.26	$ 820,853,205.02
	6.31%	$ 147,014,001.37	$ 280,540,861.50
	0.20%	$ 4,755,923.92	$ 9,075,536.90
	0.08%	$ 1,978,496.99	$ 3,775,485.64
	0.60%	$ 13,921,831.85	$ 26,566,467.58
	1.49%	$ 34,699,922.76	$ 66,216,456.50
	0.20%	$ 4,734,489.07	$ 9,034,633.64
	0.25%	$ 5,727,393.96	$ 10,929,353.81
	2.68%	$ 62,519,448.27	$ 119,303,329.72
	0.16%	$ 3,763,424.29	$ 7,181,590.08
	0.72%	$ 16,780,203.95	$ 32,020,983.23
	0.55%	$ 12,928,205.05	$ 24,670,369.81
	1.02%	$ 23,873,528.65	$ 45,556,887.33
	0.17%	$ 3,914,205.31	$ 7,469,319.39
	0.44%	$ 10,267,798.34	$ 19,593,623.49
	0.10%	$ 2,417,797.14	$ 4,613,784.31
	1.29%	$ 30,165,047.37	$ 57,562,737.54
	0.21%	$ 4,850,411.45	$ 9,255,843.61
	0.26%	$ 6,018,448.39	$ 11,484,761.18

0.92%	$ 21,340,500.09	$	40,723,211.56
0.16%	$ 3,640,510.39	$	6,947,038.46
0.67%	$ 15,545,025.45	$	29,663,942.16
7.30%	$ 170,024,275.15	$	324,450,434.54
0.57%	$ 13,213,227.94	$	25,214,267.45
0.07%	$ 1,710,573.26	$	3,264,217.64
0.09%	$ 2,057,339.67	$	3,925,937.92
0.07%	$ 1,577,642.13	$	3,010,550.55
0.23%	$ 5,340,167.98	$	10,190,426.16
0.79%	$ 18,522,455.06	$	35,345,650.42
0.17%	$ 3,874,093.90	$	7,392,776.40
20.99%	$ 489,081,088.11	$	933,293,621.85
2.16%	$ 50,407,927.44	$	96,191,405.30
0.10%	$ 2,443,495.85	$	4,662,824.11
1.19%	$ 27,811,476.68	$	53,071,513.96
0.30%	$ 7,048,314.60	$	13,450,013.13
0.09%	$ 2,088,442.84	$	3,985,290.84
0.13%	$ 2,987,329.87	$	5,700,600.53
0.37%	$ 8,531,518.24	$	16,280,350.55
0.73%	$ 17,001,811.39	$	32,443,867.73
0.33%	$ 7,751,305.44	$	14,791,502.06

100.00%

$ 8,427,301,198	$ 11,479,012,413	$ 13,167,675,226	$ 14,536,265,101
$ 6,320,475,898.87	$ 8,609,259,309.65	$ 9,875,756,419.70	$ 10,902,198,825.40

2019	2020	2021	2022
$ 10,850,239.44	$ 14,779,349.91	$ 16,953,521.15	$ 18,715,595.09
$ 1,727,488.02	$ 2,353,049.44	$ 2,699,203.53	$ 2,979,746.80
$ 53,208,331.45	$ 72,476,239.17	$ 83,138,125.88	$ 91,779,134.66
$ 14,803,083.21	$ 20,163,605.40	$ 23,129,847.56	$ 25,533,861.53
$ 48,581,476.42	$ 66,173,898.11	$ 75,908,655.50	$ 83,798,265.13
$ 86,767,555.80	$ 118,187,997.15	$ 135,574,482.03	$ 149,665,493.55
$ 78,963,618.67	$ 107,558,082.65	$ 123,380,814.43	$ 136,204,470.11
$ 25,423,645.74	$ 34,630,107.33	$ 39,724,498.07	$ 43,853,286.55
$ 7,580,419.06	$ 10,325,455.61	$ 11,844,420.16	$ 13,075,476.77
$ 1,380,908.29	$ 1,880,965.57	$ 2,157,672.01	$ 2,381,930.89
$ 15,911,164.86	$ 21,672,947.80	$ 24,861,227.39	$ 27,445,193.32
$ 1,536,675.52	$ 2,093,139.54	$ 2,401,058.62	$ 2,650,614.02
$ 9,637,097.61	$ 13,126,902.73	$ 15,057,984.58	$ 16,623,044.84
$ 388,662,684.38	$ 529,405,995.27	$ 607,286,233.16	$ 670,404,875.99
$ 49,799,853.67	$ 67,833,476.58	$ 77,812,372.43	$ 85,899,845.98
$ 129,255,118.81	$ 176,061,241.70	$ 201,961,385.46	$ 222,952,357.85
$ 25,295,319.80	$ 34,455,311.75	$ 39,523,988.53	$ 43,631,936.94
$ 3,138,699.09	$ 4,275,291.09	$ 4,904,223.69	$ 5,413,946.99
$ 26,263,541.28	$ 35,774,147.52	$ 41,036,836.55	$ 45,302,023.68
$ 32,545,314.79	$ 44,330,689.46	$ 50,852,120.41	$ 56,137,464.70
$ 3,952,402.29	$ 5,383,654.14	$ 6,175,636.61	$ 6,817,504.94
$ 47,519,633.41	$ 64,727,538.38	$ 74,249,523.65	$ 81,966,690.46
$ 9,492,182.57	$ 12,929,510.76	$ 14,831,554.53	$ 16,373,080.65
$ 95,412,522.54	$ 129,963,496.59	$ 149,082,260.11	$ 164,577,210.29
$ 18,620,567.95	$ 25,363,485.36	$ 29,094,675.21	$ 32,118,646.95
$ 27,457,512.79	$ 37,400,482.41	$ 42,902,419.47	$ 47,361,507.03
$ 4,524,940.94	$ 6,163,521.63	$ 7,070,229.40	$ 7,805,077.75
$ 291,928,275.12	$ 397,641,927.69	$ 456,138,522.36	$ 503,547,541.21
$ 1,283,570.59	$ 1,748,379.74	$ 2,005,581.65	$ 2,214,032.92
$ 7,537,251.09	$ 10,266,655.57	$ 11,776,970.12	$ 13,001,016.26
$ 211,404,927.20	$ 287,959,303.49	$ 330,320,627.80	$ 364,652,691.64
$ 1,166,584,780.64	$ 1,589,030,801.46	$ 1,822,791,087.38	$ 2,012,243,924.14
$ 398,700,641.45	$ 543,078,917.48	$ 622,970,561.44	$ 687,719,363.92
$ 12,898,022.64	$ 17,568,680.47	$ 20,153,186.55	$ 22,247,819.55
$ 5,365,665.94	$ 7,308,691.65	$ 8,383,863.92	$ 9,255,245.62
$ 37,755,882.00	$ 51,428,117.73	$ 58,993,642.25	$ 65,125,180.29
$ 94,105,876.55	$ 128,183,685.33	$ 147,040,623.10	$ 162,323,374.57
$ 12,839,891.52	$ 17,489,498.79	$ 20,062,356.56	$ 22,147,549.09
$ 15,532,640.60	$ 21,157,351.58	$ 24,269,782.47	$ 26,792,276.22
$ 169,552,178.00	$ 230,950,752.81	$ 264,925,622.25	$ 292,460,818.69
$ 10,206,372.63	$ 13,902,324.76	$ 15,947,477.95	$ 17,604,988.21
$ 45,507,761.27	$ 61,987,123.07	$ 71,105,969.35	$ 78,496,409.04
$ 35,061,175.11	$ 47,757,598.16	$ 54,783,157.26	$ 60,477,076.12
$ 64,744,793.69	$ 88,190,308.25	$ 101,163,871.54	$ 111,678,396.53
$ 10,615,289.39	$ 14,459,319.28	$ 16,586,411.22	$ 18,310,329.38
$ 27,846,176.18	$ 37,929,889.36	$ 43,509,706.80	$ 48,031,913.12
$ 6,557,043.97	$ 8,931,493.89	$ 10,245,394.52	$ 11,310,255.47
$ 81,807,335.50	$ 111,431,571.93	$ 127,824,127.75	$ 141,109,601.76
$ 13,154,271.95	$ 17,917,723.30	$ 20,553,576.62	$ 22,689,824.39
$ 16,321,977.57	$ 22,232,524.83	$ 25,503,123.08	$ 28,153,804.80

$ 57,875,243.14	$ 78,833,142.28	$ 90,430,184.87	$ 99,829,097.98
$ 9,873,031.24	$ 13,448,273.12	$ 15,426,631.35	$ 17,030,007.12
$ 42,157,968.37	$ 57,424,296.44	$ 65,871,911.14	$ 72,718,345.99
$ 461,104,295.73	$ 628,080,308.23	$ 720,476,397.91	$ 795,359,525.41
$ 35,834,154.61	$ 48,810,490.55	$ 55,990,939.30	$ 61,810,389.68
$ 4,639,059.21	$ 6,318,964.64	$ 7,248,539.44	$ 8,001,920.54
$ 5,579,486.57	$ 7,599,941.43	$ 8,717,959.08	$ 9,624,065.16
$ 4,278,551.19	$ 5,827,908.73	$ 6,685,244.92	$ 7,380,079.68
$ 14,482,487.24	$ 19,726,914.57	$ 22,628,915.70	$ 24,980,865.03
$ 50,232,730.52	$ 68,423,107.66	$ 78,488,743.39	$ 86,646,515.94
$ 10,506,507.60	$ 14,311,145.21	$ 16,416,439.45	$ 18,122,691.50
$ 1,326,383,485.44	$ 1,806,696,133.79	$ 2,072,476,887.96	$ 2,287,880,961.56
$ 136,705,843.10	$ 186,210,037.22	$ 213,603,157.29	$ 235,804,123.91
$ 6,626,738.63	$ 9,026,426.52	$ 10,354,292.56	$ 11,430,471.89
$ 75,424,473.09	$ 102,737,334.58	$ 117,850,892.28	$ 130,099,792.34
$ 19,114,965.41	$ 26,036,915.03	$ 29,867,172.25	$ 32,971,433.92
$ 5,663,838.07	$ 7,714,838.48	$ 8,849,758.49	$ 9,769,563.21
$ 8,101,611.57	$ 11,035,383.40	$ 12,658,784.52	$ 13,974,482.55
$ 23,137,400.27	$ 31,515,962.07	$ 36,152,234.89	$ 39,909,738.15
$ 46,108,758.66	$ 62,805,754.83	$ 72,045,028.98	$ 79,533,070.38
$ 21,021,470.20	$ 28,633,807.16	$ 32,846,089.86	$ 36,259,967.04

$ 15,353,386,864	$ 16,878,176,520	$ 17,680,597,307	$ 17,843,677,229
$ 11,515,040,148.20	$ 12,658,632,390.05	$ 13,260,447,980.37	$ 13,382,757,921.47

2023	2024	2025	2026
$ 19,767,648.00	$ 21,730,830.81	$ 22,763,956.07	$ 22,973,923.19
$ 3,147,246.22	$ 3,459,808.43	$ 3,624,294.34	$ 3,657,723.62
$ 96,938,281.65	$ 106,565,505.30	$ 111,631,833.21	$ 112,661,487.93
$ 26,969,187.17	$ 29,647,575.85	$ 31,057,078.30	$ 31,343,538.41
$ 88,508,786.42	$ 97,298,852.30	$ 101,924,625.80	$ 102,864,744.49
$ 158,078,585.30	$ 173,777,830.94	$ 182,039,561.33	$ 183,718,633.41
$ 143,860,882.27	$ 158,148,126.32	$ 165,666,790.67	$ 167,194,845.79
$ 46,318,395.34	$ 50,918,410.35	$ 53,339,168.95	$ 53,831,151.62
$ 13,810,483.77	$ 15,182,043.21	$ 15,903,826.58	$ 16,050,518.16
$ 2,515,825.50	$ 2,765,679.47	$ 2,897,165.16	$ 2,923,887.64
$ 28,987,959.95	$ 31,866,838.85	$ 33,381,849.30	$ 33,689,752.33
$ 2,799,612.02	$ 3,077,649.66	$ 3,223,967.01	$ 3,253,703.81
$ 17,557,469.99	$ 19,301,153.58	$ 20,218,767.33	$ 20,405,258.48
$ 708,090,100.55	$ 778,412,594.88	$ 815,419,818.17	$ 822,940,978.09
$ 90,728,502.66	$ 99,739,015.04	$ 104,480,798.54	$ 105,444,494.51
$ 235,485,097.36	$ 258,871,809.60	$ 271,179,070.46	$ 273,680,335.59
$ 46,084,603.09	$ 50,661,399.51	$ 53,069,939.32	$ 53,559,438.70
$ 5,718,279.22	$ 6,286,178.21	$ 6,585,035.15	$ 6,645,773.31
$ 47,848,569.80	$ 52,600,550.91	$ 55,101,281.68	$ 55,609,517.49
$ 59,293,099.51	$ 65,181,670.26	$ 68,280,531.50	$ 68,910,328.31
$ 7,200,734.86	$ 7,915,860.85	$ 8,292,196.01	$ 8,368,680.46
$ 86,574,254.11	$ 95,172,195.94	$ 99,696,864.13	$ 100,616,434.69
$ 17,293,454.66	$ 19,010,918.10	$ 19,914,733.51	$ 20,098,420.35
$ 173,828,528.93	$ 191,091,947.43	$ 200,176,824.03	$ 202,023,188.16
$ 33,924,120.73	$ 37,293,224.16	$ 39,066,215.35	$ 39,426,549.07
$ 50,023,822.14	$ 54,991,833.90	$ 57,606,250.84	$ 58,137,591.65
$ 8,243,821.73	$ 9,062,539.73	$ 9,493,390.20	$ 9,580,954.06
$ 531,853,275.32	$ 584,673,176.22	$ 612,469,657.06	$ 618,118,872.52
$ 2,338,489.55	$ 2,570,731.77	$ 2,692,949.27	$ 2,717,788.14
$ 13,731,837.64	$ 15,095,586.51	$ 15,813,259.56	$ 15,959,115.79
$ 385,150,780.28	$ 423,401,228.27	$ 443,530,532.31	$ 447,621,509.74
$ 2,125,357,457.29	$ 2,336,432,908.88	$ 2,447,511,397.22	$ 2,470,086,424.49
$ 726,377,881.48	$ 798,516,588.70	$ 836,479,594.29	$ 844,195,002.56
$ 23,498,428.11	$ 25,832,125.58	$ 27,060,234.23	$ 27,309,828.79
$ 9,775,507.37	$ 10,746,341.53	$ 11,257,243.16	$ 11,361,076.21
$ 68,786,038.27	$ 75,617,380.47	$ 79,212,375.34	$ 79,943,003.82
$ 171,447,999.17	$ 188,475,000.31	$ 197,435,462.24	$ 199,256,540.96
$ 23,392,521.18	$ 25,715,700.73	$ 26,938,274.31	$ 27,186,743.96
$ 28,298,340.67	$ 31,108,731.46	$ 32,587,700.04	$ 32,888,278.10
$ 308,900,811.93	$ 339,578,653.04	$ 355,722,871.56	$ 359,003,940.46
$ 18,594,610.98	$ 20,441,296.07	$ 21,413,114.37	$ 21,610,621.78
$ 82,908,899.03	$ 91,142,823.75	$ 95,475,927.88	$ 96,356,565.93
$ 63,876,651.92	$ 70,220,428.64	$ 73,558,842.10	$ 74,237,324.27
$ 117,956,133.47	$ 129,670,701.32	$ 135,835,494.42	$ 137,088,395.63
$ 19,339,601.24	$ 21,260,273.48	$ 22,271,027.54	$ 22,476,448.06
$ 50,731,913.52	$ 55,770,247.90	$ 58,421,672.13	$ 58,960,534.12
$ 11,946,034.73	$ 13,132,430.31	$ 13,756,771.15	$ 13,883,659.01
$ 149,041,744.29	$ 163,843,514.87	$ 171,632,948.88	$ 173,216,033.85
$ 23,965,279.21	$ 26,345,341.03	$ 27,597,848.92	$ 27,852,402.25
$ 29,736,404.35	$ 32,689,613.45	$ 34,243,740.18	$ 34,559,593.00

$ 105,440,754.62	$ 115,912,383.68	$ 121,423,080.05	$ 122,543,045.97
$ 17,987,308.70	$ 19,773,680.82	$ 20,713,759.41	$ 20,904,816.21
$ 76,806,035.83	$ 84,433,867.39	$ 88,448,014.91	$ 89,263,829.84
$ 840,068,780.07	$ 923,498,462.22	$ 967,403,345.08	$ 976,326,350.27
$ 65,284,914.55	$ 71,768,549.94	$ 75,180,564.04	$ 75,874,004.44
$ 8,451,729.58	$ 9,291,095.51	$ 9,732,811.95	$ 9,822,584.16
$ 10,165,059.22	$ 11,174,580.91	$ 11,705,841.86	$ 11,813,812.63
$ 7,794,933.41	$ 8,569,070.99	$ 8,976,461.01	$ 9,059,256.89
$ 26,385,105.28	$ 29,005,487.09	$ 30,384,463.41	$ 30,664,719.54
$ 91,517,144.91	$ 100,605,979.64	$ 105,388,980.30	$ 106,361,053.04
$ 19,141,415.74	$ 21,042,405.60	$ 22,042,801.80	$ 22,246,117.23
$ 2,416,488,778.88	$ 2,656,477,331.63	$ 2,782,771,343.83	$ 2,808,438,696.82
$ 249,059,295.05	$ 273,794,100.48	$ 286,810,795.58	$ 289,456,242.52
$ 12,073,008.84	$ 13,272,014.58	$ 13,902,991.53	$ 14,031,228.08
$ 137,413,044.48	$ 151,059,934.94	$ 158,241,613.11	$ 159,701,180.87
$ 34,824,845.10	$ 38,283,402.10	$ 40,103,468.24	$ 40,473,369.23
$ 10,318,736.10	$ 11,343,519.89	$ 11,882,812.52	$ 11,992,415.61
$ 14,760,025.03	$ 16,225,886.20	$ 16,997,295.85	$ 17,154,073.23
$ 42,153,169.69	$ 46,339,523.99	$ 48,542,593.57	$ 48,990,334.23
$ 84,003,833.83	$ 92,346,499.72	$ 96,736,828.90	$ 97,629,097.09
$ 38,298,235.33	$ 42,101,744.85	$ 44,103,342.30	$ 44,510,136.80

$ 18,754,828,964	$ 19,281,126,402	$ 18,765,063,884	$ 17,726,503,273
$ 14,066,121,723.28	$ 14,460,844,801.74	$ 14,073,797,913.22	$ 13,294,877,454.67

2027	2028	2029	2030
$ 24,147,040.69	$ 24,824,654.21	$ 24,160,218.26	$ 22,823,060.48
$ 3,844,497.97	$ 3,952,382.15	$ 3,846,595.99	$ 3,633,704.47
$ 118,414,321.78	$ 121,737,260.86	$ 118,478,943.06	$ 111,921,674.49
$ 32,944,033.60	$ 33,868,508.06	$ 32,962,011.87	$ 31,137,715.01
$ 108,117,327.20	$ 111,151,312.33	$ 108,176,329.18	$ 102,189,263.26
$ 193,099,858.46	$ 198,518,620.79	$ 193,205,237.27	$ 182,512,209.49
$ 175,732,316.62	$ 180,663,711.53	$ 175,828,217.59	$ 166,096,928.51
$ 56,579,931.85	$ 58,167,676.17	$ 56,610,808.76	$ 53,477,658.96
$ 16,870,105.81	$ 17,343,514.21	$ 16,879,312.20	$ 15,945,119.33
$ 3,073,190.13	$ 3,159,429.89	$ 3,074,867.23	$ 2,904,687.37
$ 35,410,052.24	$ 36,403,728.04	$ 35,429,376.28	$ 33,468,522.06
$ 3,419,847.69	$ 3,515,815.35	$ 3,421,713.98	$ 3,232,337.73
$ 21,447,212.25	$ 22,049,063.26	$ 21,458,916.46	$ 20,271,263.41
$ 864,962,815.35	$ 889,235,375.47	$ 865,434,844.46	$ 817,536,977.08
$ 110,828,807.00	$ 113,938,881.60	$ 110,889,288.70	$ 104,752,072.85
$ 287,655,275.26	$ 295,727,448.81	$ 287,812,255.03	$ 271,883,160.76
$ 56,294,344.46	$ 57,874,074.64	$ 56,325,065.51	$ 53,207,730.30
$ 6,985,126.45	$ 7,181,142.86	$ 6,988,938.39	$ 6,602,132.56
$ 58,449,106.42	$ 60,089,303.46	$ 58,481,003.38	$ 55,244,346.85
$ 72,429,096.58	$ 74,461,599.68	$ 72,468,622.72	$ 68,457,815.32
$ 8,796,010.41	$ 9,042,843.78	$ 8,800,810.58	$ 8,313,725.90
$ 105,754,211.95	$ 108,721,883.41	$ 105,811,924.33	$ 99,955,717.42
$ 21,124,706.04	$ 21,717,506.90	$ 21,136,234.26	$ 19,966,440.19
$ 212,339,098.73	$ 218,297,752.04	$ 212,454,976.82	$ 200,696,563.84
$ 41,439,787.05	$ 42,602,669.08	$ 41,462,401.64	$ 39,167,647.01
$ 61,106,271.64	$ 62,821,033.97	$ 61,139,618.67	$ 57,755,819.92
$ 10,070,186.34	$ 10,352,775.60	$ 10,075,681.86	$ 9,518,038.87
$ 649,681,878.08	$ 667,913,231.11	$ 650,036,423.67	$ 614,059,875.46
$ 2,856,566.56	$ 2,936,727.44	$ 2,858,125.45	$ 2,699,941.26
$ 16,774,036.16	$ 17,244,748.65	$ 16,783,190.11	$ 15,854,317.17
$ 470,478,408.03	$ 483,680,958.75	$ 470,735,158.37	$ 444,682,116.57
$ 2,596,216,453.87	$ 2,669,071,400.76	$ 2,597,633,265.91	$ 2,453,866,124.51
$ 887,302,134.12	$ 912,201,579.52	$ 887,786,354.28	$ 838,651,432.89
$ 28,704,350.65	$ 29,509,851.26	$ 28,720,015.24	$ 27,130,493.52
$ 11,941,206.87	$ 12,276,300.65	$ 11,947,723.45	$ 11,286,471.50
$ 84,025,133.63	$ 86,383,044.36	$ 84,070,987.98	$ 79,418,042.63
$ 209,431,178.22	$ 215,308,229.55	$ 209,545,469.39	$ 197,948,084.37
$ 28,574,980.73	$ 29,376,850.97	$ 28,590,574.72	$ 27,008,216.95
$ 34,567,652.33	$ 35,537,688.73	$ 34,586,516.65	$ 32,672,310.87
$ 377,335,759.59	$ 387,924,544.16	$ 377,541,679.96	$ 356,646,471.69
$ 22,714,125.02	$ 23,351,528.10	$ 22,726,520.61	$ 21,468,711.46
$ 101,276,821.50	$ 104,118,848.58	$ 101,332,090.48	$ 95,723,821.92
$ 78,028,104.95	$ 80,217,727.25	$ 78,070,686.59	$ 73,749,830.53
$ 144,088,540.73	$ 148,131,948.96	$ 144,167,172.99	$ 136,188,178.18
$ 23,624,162.98	$ 24,287,103.52	$ 23,637,055.20	$ 22,328,852.11
$ 61,971,236.02	$ 63,710,270.95	$ 62,005,055.08	$ 58,573,358.37
$ 14,592,600.33	$ 15,002,097.44	$ 14,600,563.83	$ 13,792,489.28
$ 182,060,964.62	$ 187,169,953.86	$ 182,160,319.27	$ 172,078,577.28
$ 29,274,629.54	$ 30,096,133.30	$ 29,290,605.35	$ 27,669,504.07
$ 36,324,309.58	$ 37,343,641.25	$ 36,344,132.55	$ 34,332,650.75

$ 128,800,461.84	$ 132,414,856.46	$ 128,870,751.06	$ 121,738,343.37
$ 21,972,278.89	$ 22,588,864.31	$ 21,984,269.65	$ 20,767,540.69
$ 93,821,909.01	$ 96,454,736.56	$ 93,873,109.68	$ 88,677,661.65
$ 1,026,180,505.18	$ 1,054,977,151.19	$ 1,026,740,514.30	$ 969,915,114.56
$ 79,748,358.92	$ 81,986,254.94	$ 79,791,879.34	$ 75,375,763.12
$ 10,324,154.80	$ 10,613,870.91	$ 10,329,788.91	$ 9,758,082.26
$ 12,417,061.38	$ 12,765,508.58	$ 12,423,837.64	$ 11,736,234.95
$ 9,521,849.75	$ 9,789,051.61	$ 9,527,046.03	$ 8,999,767.53
$ 32,230,552.20	$ 33,135,004.97	$ 32,248,141.11	$ 30,463,353.74
$ 111,792,167.76	$ 114,929,276.16	$ 111,853,175.19	$ 105,662,612.62
$ 23,382,070.78	$ 24,038,217.73	$ 23,394,830.88	$ 22,100,033.81
$ 2,951,846,009.14	$ 3,034,680,621.75	$ 2,953,456,896.00	$ 2,789,996,541.24
$ 304,236,747.37	$ 312,774,229.69	$ 304,402,776.01	$ 287,555,472.15
$ 14,747,704.72	$ 15,161,554.35	$ 14,755,752.86	$ 13,939,089.31
$ 167,856,002.68	$ 172,566,372.70	$ 167,947,605.37	$ 158,652,472.20
$ 42,540,060.99	$ 43,733,818.88	$ 42,563,276.03	$ 40,207,593.03
$ 12,604,784.36	$ 12,958,499.44	$ 12,611,663.07	$ 11,913,665.10
$ 18,030,011.71	$ 18,535,969.35	$ 18,039,851.09	$ 17,041,427.69
$ 51,491,927.80	$ 52,936,892.70	$ 51,520,028.07	$ 48,668,629.74
$ 102,614,331.92	$ 105,493,892.17	$ 102,670,330.80	$ 96,987,996.75
$ 46,782,958.03	$ 48,095,779.97	$ 46,808,488.51	$ 44,217,852.38

Average - Debt allocated by net assets
Weighted Average

$ 16,612,828,437	$ 15,443,469,858	$ 14,215,643,351	$ 12,926,425,519
$ 12,459,621,327.41	$ 11,582,602,393.78	$ 10,661,732,513.47	$ 9,694,819,139.14

2031	2032	2033	2034
$ 21,389,192.35	$ 19,883,630.81	$ 18,302,791.19	$ 16,642,909.60
$ 3,405,415.49	$ 3,165,712.07	$ 2,914,023.48	$ 2,649,750.46
$ 104,890,149.40	$ 97,507,048.06	$ 89,754,791.65	$ 81,614,922.41
$ 29,181,475.30	$ 27,127,423.60	$ 24,970,669.32	$ 22,706,077.32
$ 95,769,180.89	$ 89,028,094.41	$ 81,949,953.61	$ 74,517,905.76
$ 171,045,805.10	$ 159,006,080.48	$ 146,364,369.64	$ 133,090,573.25
$ 155,661,820.88	$ 144,704,957.86	$ 133,200,251.69	$ 121,120,310.21
$ 50,117,903.11	$ 46,590,159.46	$ 42,886,028.64	$ 38,996,691.27
$ 14,943,360.67	$ 13,891,514.08	$ 12,787,075.16	$ 11,627,414.29
$ 2,722,199.20	$ 2,530,586.61	$ 2,329,393.40	$ 2,118,140.52
$ 31,365,848.44	$ 29,158,041.13	$ 26,839,843.47	$ 24,405,735.92
$ 3,029,264.79	$ 2,816,038.20	$ 2,592,150.28	$ 2,357,067.96
$ 18,997,712.97	$ 17,660,485.01	$ 16,256,395.66	$ 14,782,101.84
$ 766,174,881.29	$ 712,244,680.71	$ 655,617,970.10	$ 596,159,923.96
$ 98,170,980.93	$ 91,260,834.40	$ 84,005,180.55	$ 76,386,744.01
$ 254,801,989.71	$ 236,866,760.10	$ 218,034,769.02	$ 198,261,178.38
$ 49,864,932.82	$ 46,354,995.48	$ 42,669,561.27	$ 38,799,855.34
$ 6,187,350.87	$ 5,751,830.10	$ 5,294,533.29	$ 4,814,371.65
$ 51,773,598.10	$ 48,129,311.92	$ 44,302,811.44	$ 40,284,985.92
$ 64,156,925.00	$ 59,640,990.17	$ 54,899,258.60	$ 49,920,440.44
$ 7,791,412.66	$ 7,242,983.76	$ 6,667,133.41	$ 6,062,490.55
$ 93,675,958.49	$ 87,082,211.61	$ 80,158,777.39	$ 72,889,171.46
$ 18,712,040.40	$ 17,394,920.62	$ 16,011,944.85	$ 14,559,820.29
$ 188,087,719.93	$ 174,848,433.82	$ 160,947,183.41	$ 146,350,870.47
$ 36,706,923.53	$ 34,123,163.87	$ 31,410,216.23	$ 28,561,621.21
$ 54,127,286.85	$ 50,317,327.13	$ 46,316,869.42	$ 42,116,388.83
$ 8,920,064.18	$ 8,292,190.75	$ 7,632,923.65	$ 6,940,693.19
$ 575,481,312.01	$ 534,973,820.38	$ 492,440,954.17	$ 447,781,444.66
$ 2,530,316.34	$ 2,352,210.18	$ 2,165,198.71	$ 1,968,836.66
$ 14,858,263.19	$ 13,812,406.51	$ 12,714,257.01	$ 11,561,200.02
$ 416,744,780.26	$ 387,410,577.15	$ 356,609,663.87	$ 324,268,704.94
$ 2,299,700,979.10	$ 2,137,827,576.43	$ 1,967,860,503.61	$ 1,789,395,077.16
$ 785,962,812.75	$ 730,639,761.61	$ 672,550,557.91	$ 611,556,894.03
$ 25,426,009.14	$ 23,636,300.54	$ 21,757,106.51	$ 19,783,952.78
$ 10,577,394.30	$ 9,832,863.24	$ 9,051,105.63	$ 8,230,260.14
$ 74,428,571.54	$ 69,189,626.90	$ 63,688,735.02	$ 57,912,798.55
$ 185,511,914.81	$ 172,453,936.77	$ 158,743,059.82	$ 144,346,639.03
$ 25,311,414.64	$ 23,529,772.22	$ 21,659,047.68	$ 19,694,786.92
$ 30,619,659.54	$ 28,464,375.65	$ 26,201,327.56	$ 23,825,127.07
$ 334,240,010.87	$ 310,713,227.02	$ 286,010,103.97	$ 260,071,824.76
$ 20,119,930.86	$ 18,703,711.23	$ 17,216,680.62	$ 15,655,298.47
$ 89,709,933.56	$ 83,395,350.78	$ 76,765,038.86	$ 69,803,211.35
$ 69,116,467.19	$ 64,251,435.68	$ 59,143,152.60	$ 53,779,455.36
$ 127,632,100.05	$ 118,648,218.01	$ 109,215,141.86	$ 99,310,411.91
$ 20,926,032.83	$ 19,453,072.57	$ 17,906,464.30	$ 16,282,525.62
$ 54,893,463.11	$ 51,029,573.10	$ 46,972,488.58	$ 42,712,549.83
$ 12,925,970.49	$ 12,016,125.76	$ 11,060,788.78	$ 10,057,684.97
$ 161,267,670.10	$ 149,916,217.57	$ 137,997,192.41	$ 125,482,216.00
$ 25,931,156.13	$ 24,105,890.80	$ 22,189,362.20	$ 20,177,007.16
$ 32,175,687.89	$ 29,910,876.89	$ 27,532,825.33	$ 25,035,871.20

$ 114,090,082.03	$ 106,059,407.63	$ 97,627,199.50	$ 88,773,380.97
$ 19,462,811.43	$ 18,092,845.71	$ 16,654,381.70	$ 15,143,994.49
$ 83,106,451.20	$ 77,256,680.22	$ 71,114,420.70	$ 64,665,048.20
$ 908,979,799.81	$ 844,997,719.31	$ 777,816,534.79	$ 707,276,291.04
$ 70,640,249.90	$ 65,667,961.02	$ 60,447,057.69	$ 54,965,109.19
$ 9,145,026.74	$ 8,501,318.45	$ 7,825,424.74	$ 7,115,736.34
$ 10,998,901.18	$ 10,224,700.72	$ 9,411,790.23	$ 8,558,234.22
$ 8,434,353.44	$ 7,840,668.66	$ 7,217,299.63	$ 6,562,762.15
$ 28,549,481.05	$ 26,539,914.72	$ 24,429,870.08	$ 22,214,323.21
$ 99,024,315.66	$ 92,054,103.85	$ 84,735,381.45	$ 77,050,722.93
$ 20,711,590.12	$ 19,253,724.25	$ 17,722,965.09	$ 16,115,667.97
$ 2,614,713,864.58	$ 2,430,667,054.09	$ 2,237,417,903.07	$ 2,034,506,294.50
$ 269,489,681.71	$ 250,520,601.74	$ 230,603,067.78	$ 209,689,657.12
$ 13,063,360.31	$ 12,143,844.86	$ 11,178,353.63	$ 10,164,587.85
$ 148,685,065.58	$ 138,219,288.64	$ 127,230,222.84	$ 115,691,703.76
$ 37,681,534.51	$ 35,029,173.07	$ 32,244,193.55	$ 29,319,965.06
$ 11,165,184.20	$ 10,379,279.26	$ 9,554,079.08	$ 8,687,618.88
$ 15,970,793.01	$ 14,846,626.59	$ 13,666,251.86	$ 12,426,858.38
$ 45,611,003.12	$ 42,400,495.17	$ 39,029,461.82	$ 35,489,876.81
$ 90,894,686.09	$ 84,496,709.89	$ 77,778,834.89	$ 70,725,066.13
$ 41,439,847.67	$ 38,522,942.73	$ 35,460,192.54	$ 32,244,304.85

$	11,572,746,795	$	10,151,384,135	$	8,658,953,341	$	7,091,901,008
$	8,679,560,096.10	$	7,613,538,100.90	$	6,494,215,005.95	$	5,318,925,756.24

	2035		**2036**		**2037**		**2038**
$	14,900,033.92	$	13,070,014.46	$	11,148,494.03	$	9,130,897.57
$	2,372,263.78	$	2,080,902.78	$	1,774,973.72	$	1,453,748.21
$	73,068,059.72	$	64,093,853.89	$	54,670,937.77	$	44,776,875.84
$	20,328,255.72	$	17,831,543.04	$	15,209,994.73	$	12,457,369.01
$	66,714,255.52	$	58,520,422.77	$	49,916,898.38	$	40,883,197.77
$	119,153,087.04	$	104,518,726.52	$	89,152,647.98	$	73,018,265.51
$	108,436,371.66	$	95,118,236.18	$	81,134,193.92	$	66,450,949.56
$	34,912,887.04	$	30,624,892.59	$	26,122,498.42	$	21,394,984.54
$	10,409,770.38	$	9,131,244.27	$	7,788,791.86	$	6,379,216.82
$	1,896,325.01	$	1,663,418.71	$	1,418,867.11	$	1,162,087.92
$	21,849,922.99	$	19,166,319.41	$	16,348,535.66	$	13,389,862.72
$	2,110,231.53	$	1,851,053.28	$	1,578,916.11	$	1,293,172.09
$	13,234,093.32	$	11,608,684.38	$	9,902,005.00	$	8,109,991.64
$	533,728,975.51	$	468,176,479.64	$	399,346,358.97	$	327,074,732.27
$	68,387,385.64	$	59,988,059.35	$	51,168,766.75	$	41,908,509.52
$	177,498,908.21	$	155,698,524.53	$	132,808,121.66	$	108,773,198.65
$	34,736,664.12	$	30,470,313.34	$	25,990,645.02	$	21,286,993.29
$	4,310,201.92	$	3,780,823.70	$	3,224,976.57	$	2,641,337.09
$	36,066,269.14	$	31,636,616.51	$	26,985,481.25	$	22,101,789.23
$	44,692,681.38	$	39,203,534.37	$	33,439,930.01	$	27,388,145.42
$	5,427,615.55	$	4,760,996.79	$	4,061,047.10	$	3,326,099.92
$	65,256,085.23	$	57,241,344.69	$	48,825,867.12	$	39,989,615.68
$	13,035,089.50	$	11,434,122.18	$	9,753,106.48	$	7,988,040.01
$	131,024,741.89	$	114,932,306.88	$	98,035,250.12	$	80,293,340.52
$	25,570,596.44	$	22,430,020.43	$	19,132,415.61	$	15,669,930.56
$	37,705,884.21	$	33,074,854.36	$	28,212,273.01	$	23,106,562.60
$	6,213,851.21	$	5,450,667.13	$	4,649,323.85	$	3,807,913.41
$	400,888,959.66	$	351,651,850.42	$	299,952,885.71	$	245,668,972.77
$	1,762,656.52	$	1,546,167.36	$	1,318,853.75	$	1,080,174.46
$	10,350,490.19	$	9,079,244.86	$	7,744,437.27	$	6,342,889.30
$	290,310,698.05	$	254,654,790.83	$	217,216,088.24	$	177,905,450.52
$	1,602,006,379.38	$	1,405,248,246.72	$	1,198,652,207.42	$	981,726,366.15
$	547,513,546.95	$	480,268,032.51	$	409,660,242.36	$	335,522,062.70
$	17,712,141.37	$	15,536,739.38	$	13,252,567.29	$	10,854,186.60
$	7,368,372.37	$	6,463,390.21	$	5,513,158.95	$	4,515,416.12
$	51,848,065.25	$	45,480,095.29	$	38,793,726.83	$	31,773,039.95
$	129,230,397.20	$	113,358,343.28	$	96,692,686.66	$	79,193,747.21
$	17,632,313.11	$	15,466,715.62	$	13,192,838.25	$	10,805,267.01
$	21,330,116.55	$	18,710,355.51	$	15,959,606.41	$	13,071,319.87
$	232,836,631.60	$	204,239,678.78	$	174,212,878.32	$	142,684,737.83
$	14,015,847.22	$	12,294,423.41	$	10,486,928.41	$	8,589,058.66
$	62,493,292.46	$	54,817,877.62	$	46,758,692.05	$	38,296,547.19
$	48,147,573.26	$	42,234,097.05	$	36,024,947.04	$	29,505,339.52
$	88,910,445.47	$	77,990,480.70	$	66,524,517.69	$	54,485,256.53
$	14,577,390.01	$	12,786,997.62	$	10,907,085.60	$	8,933,177.99
$	38,239,614.15	$	33,543,031.68	$	28,611,620.09	$	23,433,637.92
$	9,004,425.95	$	7,898,503.99	$	6,737,285.93	$	5,518,006.97
$	112,341,490.76	$	98,543,729.26	$	84,056,079.69	$	68,844,047.63
$	18,064,034.38	$	15,845,412.96	$	13,515,860.46	$	11,069,830.34
$	22,414,069.36	$	19,661,177.43	$	16,770,640.91	$	13,735,577.55

$ 79,476,871.51	$ 69,715,536.58	$ 59,466,134.91	$ 48,704,263.15
$ 13,558,087.93	$ 11,892,886.03	$ 10,144,424.04	$ 8,308,538.94
$ 57,893,207.07	$ 50,782,773.89	$ 43,316,819.05	$ 35,477,566.47
$ 633,209,035.11	$ 555,438,416.38	$ 473,779,266.71	$ 388,037,159.56
$ 49,209,063.27	$ 43,165,215.05	$ 36,819,174.43	$ 30,155,831.77
$ 6,370,563.53	$ 5,588,132.07	$ 4,766,579.04	$ 3,903,948.36
$ 7,662,000.41	$ 6,720,954.91	$ 5,732,857.14	$ 4,695,354.48
$ 5,875,497.79	$ 5,153,870.22	$ 4,396,161.27	$ 3,600,566.87
$ 19,887,999.00	$ 17,445,358.57	$ 14,880,586.12	$ 12,187,575.05
$ 68,981,831.48	$ 60,509,495.47	$ 51,613,542.65	$ 42,272,792.18
$ 14,428,005.99	$ 12,655,960.91	$ 10,795,313.58	$ 8,841,633.89
$ 1,821,449,105.51	$ 1,597,739,057.06	$ 1,362,843,506.19	$ 1,116,203,177.78
$ 187,730,575.93	$ 164,673,540.68	$ 140,463,653.66	$ 115,043,272.30
$ 9,100,133.77	$ 7,982,457.00	$ 6,808,896.38	$ 5,576,657.73
$ 103,576,258.72	$ 90,855,041.43	$ 77,497,763.27	$ 63,472,621.21
$ 26,249,525.14	$ 23,025,563.23	$ 19,640,403.22	$ 16,085,985.21
$ 7,777,835.68	$ 6,822,563.31	$ 5,819,527.33	$ 4,766,339.54
$ 11,125,495.24	$ 9,759,063.93	$ 8,324,311.06	$ 6,817,820.55
$ 31,773,312.54	$ 27,870,920.06	$ 23,773,407.96	$ 19,471,020.26
$ 63,318,608.94	$ 55,541,828.88	$ 47,376,209.83	$ 38,802,309.82
$ 28,867,622.76	$ 25,322,106.58	$ 21,599,314.58	$ 17,690,382.98

$ 5,446,496,059	$ 3,718,820,862	$ 1,904,761,905	$ -
$ 4,084,872,044.06	$ 2,789,115,646.26	$ 1,428,571,428.57	$ -

2039	2040	2041	2042
$ 7,012,421.29	$ 4,788,021.20	$ 2,452,401.10	$ -
$ 1,116,461.42	$ 762,310.30	$ 390,451.62	$ -
$ 34,388,110.82	$ 23,479,907.55	$ 12,026,294.11	$ -
$ 9,567,111.99	$ 6,532,342.13	$ 3,345,833.77	$ -
$ 31,397,812.14	$ 21,438,157.22	$ 10,980,519.55	$ -
$ 56,077,163.91	$ 38,289,007.24	$ 19,611,442.73	$ -
$ 51,033,542.97	$ 34,845,266.06	$ 17,847,575.30	$ -
$ 16,431,094.97	$ 11,219,010.92	$ 5,746,322.67	$ -
$ 4,899,163.04	$ 3,345,106.56	$ 1,713,347.26	$ -
$ 892,469.77	$ 609,370.72	$ 312,116.71	$ -
$ 10,283,256.13	$ 7,021,319.21	$ 3,596,285.45	$ -
$ 993,140.86	$ 678,108.07	$ 347,323.65	$ -
$ 6,228,377.62	$ 4,252,682.89	$ 2,178,203.43	$ -
$ 251,189,524.24	$ 171,510,055.81	$ 87,846,613.95	$ -
$ 32,185,239.42	$ 21,975,805.82	$ 11,255,900.54	$ -
$ 83,536,529.50	$ 57,038,026.88	$ 29,214,599.13	$ -
$ 16,348,158.96	$ 11,162,382.92	$ 5,717,318.08	$ -
$ 2,028,515.63	$ 1,385,053.10	$ 709,417.44	$ -
$ 16,973,912.61	$ 11,589,642.15	$ 5,936,158.18	$ -
$ 21,033,771.61	$ 14,361,679.11	$ 7,355,981.98	$ -
$ 2,554,405.38	$ 1,744,126.12	$ 893,332.89	$ -
$ 30,711,551.66	$ 20,969,584.44	$ 10,740,518.86	$ -
$ 6,134,720.21	$ 4,188,734.41	$ 2,145,449.33	$ -
$ 61,664,335.44	$ 42,103,880.11	$ 21,565,402.01	$ -
$ 12,034,321.25	$ 8,216,931.48	$ 4,208,672.22	$ -
$ 17,745,566.66	$ 12,116,520.93	$ 6,206,022.92	$ -
$ 2,924,432.44	$ 1,996,777.42	$ 1,022,739.66	$ -
$ 188,670,864.19	$ 128,822,850.17	$ 65,982,435.45	$ -
$ 829,561.20	$ 566,417.29	$ 290,116.17	$ -
$ 4,871,263.93	$ 3,326,057.29	$ 1,703,590.32	$ -
$ 136,629,280.91	$ 93,289,302.83	$ 47,782,325.84	$ -
$ 753,954,232.83	$ 514,793,492.83	$ 263,674,715.84	$ -
$ 257,676,974.05	$ 175,939,630.97	$ 90,115,420.74	$ -
$ 8,335,886.88	$ 5,691,672.17	$ 2,915,246.72	$ -
$ 3,467,786.15	$ 2,367,774.68	$ 1,212,762.64	$ -
$ 24,401,318.72	$ 16,661,011.44	$ 8,533,688.78	$ -
$ 60,819,860.79	$ 41,527,280.05	$ 21,270,070.27	$ -
$ 8,298,317.21	$ 5,666,019.92	$ 2,902,107.76	$ -
$ 10,038,618.99	$ 6,854,283.07	$ 3,510,730.35	$ -
$ 109,580,190.32	$ 74,820,415.44	$ 38,322,651.81	$ -
$ 6,596,295.42	$ 4,503,894.02	$ 2,306,872.55	$ -
$ 29,411,295.10	$ 20,081,780.40	$ 10,285,789.96	$ -
$ 22,659,751.62	$ 15,471,884.34	$ 7,924,623.68	$ -
$ 41,844,032.31	$ 28,570,746.88	$ 14,633,797.18	$ -
$ 6,860,574.99	$ 4,684,341.85	$ 2,399,297.04	$ -
$ 17,996,756.64	$ 12,288,031.30	$ 6,293,869.69	$ -
$ 4,237,764.06	$ 2,893,509.01	$ 1,482,041.20	$ -
$ 52,871,413.98	$ 36,100,148.64	$ 18,490,320.04	$ -
$ 8,501,498.72	$ 5,804,750.51	$ 2,973,164.90	$ -
$ 10,548,761.03	$ 7,202,603.69	$ 3,689,138.47	$ -

$	37,404,297.80	$	25,539,334.18	$	13,081,122.39	$	-
$	6,380,859.60	$	4,356,796.28	$	2,231,529.80	$	-
$	27,246,351.25	$	18,603,575.28	$	9,528,660.51	$	-
$	298,007,947.05	$	203,477,273.92	$	104,220,067.13	$	-
$	23,159,321.97	$	15,812,986.69	$	8,099,334.65	$	-
$	2,998,186.15	$	2,047,135.82	$	1,048,532.98	$	-
$	3,605,976.68	$	2,462,129.99	$	1,261,090.97	$	-
$	2,765,192.75	$	1,888,049.93	$	967,049.96	$	-
$	9,359,913.43	$	6,390,868.73	$	3,273,371.79	$	-
$	32,465,004.20	$	22,166,826.82	$	11,353,740.56	$	-
$	6,790,270.21	$	4,636,338.34	$	2,374,709.88	$	-
$	857,230,832.94	$	585,309,870.87	$	299,792,860.69	$	-
$	88,351,871.86	$	60,325,901.41	$	30,898,632.43	$	-
$	4,282,807.15	$	2,924,264.04	$	1,497,793.78	$	-
$	48,746,222.04	$	33,283,502.92	$	17,047,647.84	$	-
$	12,353,846.31	$	8,435,100.45	$	4,320,417.30	$	-
$	3,660,492.37	$	2,499,352.84	$	1,280,156.33	$	-
$	5,236,005.51	$	3,575,099.72	$	1,831,148.63	$	-
$	14,953,513.16	$	10,210,130.72	$	5,229,579.15	$	-
$	29,799,714.81	$	20,346,990.05	$	10,421,629.05	$	-
$	13,586,004.81	$	9,276,407.72	$	4,751,330.79	$	-

2043	2044	2045	2046
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -

$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -

2047	2048	2049	2050
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -

$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -

5.52% Equity growth rate

1	2	3	4	5	6	7	8
2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
1.14	1.15	1.15	1.16	1.13	1.10	1.06	1.03
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.46	2.06	2.59	3.24	3.60	3.90	4.08	4.41
0.73	0.99	1.23	1.52	1.68	1.81	1.88	2.03
1.38	1.69	1.95	2.24	2.39	2.51	2.58	2.70
1.18	1.52	1.81	2.16	2.34	2.49	2.58	2.74
1.37	1.66	1.91	2.21	2.37	2.50	2.58	2.72
2.03	2.37	2.66	3.00	3.18	3.33	3.42	3.58
1.39	1.66	1.88	2.15	2.30	2.42	2.48	2.61
0.22	0.42	0.59	0.79	0.89	0.98	1.03	1.12
1.93	2.46	2.92	3.46	3.75	3.98	4.12	4.38
0.13	0.25	0.35	0.47	0.53	0.59	0.62	0.68
0.96	1.28	1.56	1.87	2.03	2.16	2.24	2.38
2.01	2.47	2.87	3.35	3.62	3.83	3.96	4.19
1.85	2.28	2.64	3.08	3.32	3.51	3.62	3.83
0.67	0.94	1.16	1.43	1.57	1.68	1.74	1.86
1.92	2.42	2.85	3.35	3.61	3.82	3.95	4.18
1.62	1.93	2.19	2.51	2.68	2.82	2.90	3.06
1.25	1.55	1.81	2.11	2.27	2.40	2.48	2.61
1.02	1.41	1.75	2.14	2.36	2.53	2.63	2.81
0.23	0.43	0.60	0.81	0.92	1.01	1.06	1.15
1.15	1.99	2.70	3.55	4.00	4.35	4.56	4.95
2.12	2.46	2.75	3.09	3.28	3.44	3.53	3.69
1.90	2.26	2.55	2.88	3.05	3.18	3.25	3.39
0.48	0.59	0.69	0.80	0.86	0.90	0.93	0.98
1.27	1.51	1.72	1.96	2.10	2.21	2.27	2.39
0.92	1.39	1.80	2.29	2.57	2.79	2.92	3.16
1.34	1.73	2.07	2.48	2.70	2.87	2.98	3.17
0.48	0.89	1.24	1.65	1.86	2.03	2.13	2.31
0.98	1.53	2.00	2.56	2.85	3.09	3.23	3.48
1.36	1.67	1.94	2.25	2.41	2.55	2.63	2.77
1.30	1.40	1.48	1.57	1.62	1.66	1.68	1.73
1.95	2.32	2.64	3.02	3.22	3.39	3.48	3.66
2.16	2.38	2.58	2.81	2.94	3.05	3.11	3.23
0.90	1.12	1.31	1.54	1.66	1.76	1.82	1.92
1.56	1.97	2.33	2.75	2.98	3.17	3.28	3.48
0.82	1.03	1.21	1.43	1.55	1.64	1.70	1.80
1.48	1.86	2.19	2.58	2.78	2.94	3.04	3.22
0.54	0.75	0.94	1.16	1.28	1.38	1.44	1.54
0.99	1.31	1.59	1.91	2.08	2.22	2.30	2.45
0.85	1.15	1.41	1.72	1.89	2.02	2.10	2.25
1.69	2.02	2.31	2.65	2.84	2.98	3.07	3.23
0.97	1.20	1.39	1.61	1.74	1.83	1.89	2.00
1.04	1.28	1.48	1.72	1.85	1.96	2.02	2.13
0.93	1.14	1.32	1.54	1.65	1.75	1.80	1.91
1.18	1.43	1.65	1.90	2.04	2.15	2.22	2.34
2.15	2.75	3.28	3.90	4.24	4.52	4.68	4.98
1.40	1.69	1.93	2.22	2.38	2.51	2.58	2.72
1.48	1.84	2.13	2.47	2.64	2.78	2.86	3.01
1.37	1.75	2.07	2.45	2.66	2.83	2.92	3.10

	1.51	1.91	2.25	2.66	2.88	3.05	3.16	3.35
	1.08	1.44	1.74	2.10	2.29	2.45	2.54	2.70
	1.90	2.29	2.63	3.02	3.23	3.40	3.49	3.68
	1.76	2.05	2.29	2.59	2.74	2.87	2.94	3.08
	2.50	2.82	3.09	3.41	3.59	3.72	3.80	3.95
	1.11	1.47	1.78	2.15	2.35	2.51	2.61	2.78
	0.83	1.21	1.53	1.91	2.12	2.28	2.38	2.56
	1.05	1.47	1.83	2.26	2.49	2.67	2.78	2.98
	1.00	1.27	1.50	1.77	1.91	2.03	2.09	2.22
	0.99	1.21	1.40	1.63	1.75	1.84	1.90	2.00
	0.39	0.70	0.97	1.29	1.46	1.60	1.68	1.83
	1.79	2.08	2.33	2.62	2.79	2.92	2.99	3.14
	1.78	2.19	2.55	2.97	3.19	3.37	3.48	3.68
	0.50	0.68	0.83	1.01	1.10	1.18	1.23	1.31
	1.49	1.73	1.92	2.15	2.28	2.37	2.43	2.54
	1.24	1.61	1.94	2.33	2.54	2.71	2.81	3.00
	2.01	2.51	2.93	3.44	3.72	3.94	4.07	4.32
	1.34	1.75	2.10	2.52	2.74	2.91	3.01	3.20
	0.84	1.04	1.21	1.41	1.51	1.60	1.64	1.73
	0.94	1.21	1.44	1.70	1.84	1.96	2.02	2.15
	2.43	2.94	3.39	3.93	4.22	4.46	4.60	4.86

	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
LDC Average	**1.26**	**1.59**	**1.87**	**2.20**	**2.38**	**2.52**	**2.61**	**2.76**
Industry Average	**1.54**	**1.82**	**2.07**	**2.38**	**2.55**	**2.69**	**2.77**	**2.92**
Max	2.50	2.94	3.39	3.93	4.24	4.52	4.68	4.98
Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Max	**2.50**	**2.94**	**3.39**	**3.93**	**4.24**	**4.52**	**4.68**	**4.98**
Min	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
LDC Average	**1.26**	**1.59**	**1.87**	**2.20**	**2.38**	**2.52**	**2.61**	**2.76**
LDC Average	1.26	1.59	1.87	2.20	2.38	2.52	2.61	2.76

9	10	11	12	13	14	15	16	17	18
2025	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
0.99	0.94	0.90	0.86	0.81	0.76	0.70	0.65	0.60	0.56
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4.59	4.64	4.84	4.97	4.87	4.66	4.43	4.19	3.93	3.66
2.11	2.12	2.21	2.26	2.21	2.11	2.00	1.89	1.78	1.65
2.76	2.77	2.84	2.88	2.84	2.76	2.67	2.57	2.47	2.36
2.83	2.84	2.94	2.99	2.94	2.83	2.71	2.59	2.46	2.32
2.80	2.81	2.90	2.95	2.90	2.80	2.70	2.59	2.47	2.35
3.66	3.68	3.77	3.82	3.77	3.66	3.55	3.43	3.30	3.16
2.68	2.69	2.76	2.81	2.76	2.68	2.59	2.49	2.39	2.28
1.17	1.18	1.23	1.26	1.23	1.17	1.11	1.03	0.96	0.88
4.51	4.54	4.69	4.78	4.69	4.52	4.33	4.14	3.93	3.71
0.71	0.71	0.75	0.77	0.75	0.71	0.67	0.62	0.57	0.52
2.45	2.47	2.55	2.59	2.55	2.46	2.36	2.25	2.13	2.01
4.32	4.34	4.48	4.56	4.49	4.33	4.15	3.97	3.78	3.58
3.94	3.96	4.08	4.15	4.08	3.94	3.79	3.63	3.46	3.29
1.92	1.93	2.00	2.04	2.00	1.92	1.84	1.75	1.65	1.55
4.29	4.32	4.45	4.53	4.45	4.30	4.14	3.96	3.78	3.58
3.13	3.15	3.24	3.29	3.24	3.14	3.03	2.91	2.79	2.66
2.68	2.70	2.78	2.82	2.78	2.69	2.59	2.48	2.37	2.25
2.91	2.93	3.03	3.10	3.04	2.91	2.78	2.64	2.49	2.33
1.20	1.21	1.27	1.30	1.27	1.21	1.14	1.06	0.98	0.90
5.15	5.19	5.42	5.55	5.42	5.16	4.89	4.59	4.27	3.93
3.78	3.80	3.90	3.96	3.90	3.79	3.67	3.54	3.40	3.26
3.46	3.47	3.55	3.59	3.55	3.46	3.37	3.26	3.15	3.02
1.01	1.02	1.05	1.06	1.05	1.01	0.97	0.93	0.89	0.85
2.45	2.46	2.53	2.57	2.53	2.45	2.37	2.28	2.18	2.08
3.29	3.31	3.46	3.54	3.46	3.29	3.12	2.93	2.73	2.53
3.27	3.29	3.41	3.47	3.41	3.28	3.14	2.99	2.83	2.67
2.40	2.42	2.53	2.58	2.53	2.41	2.28	2.14	1.99	1.83
3.62	3.64	3.79	3.87	3.79	3.62	3.44	3.24	3.04	2.81
2.84	2.86	2.94	2.99	2.95	2.85	2.74	2.63	2.52	2.39
1.75	1.75	1.78	1.79	1.78	1.75	1.72	1.69	1.65	1.61
3.75	3.77	3.88	3.94	3.88	3.76	3.63	3.49	3.35	3.19
3.29	3.30	3.37	3.41	3.37	3.30	3.21	3.12	3.03	2.93
1.98	1.99	2.05	2.08	2.05	1.98	1.90	1.82	1.74	1.65
3.59	3.61	3.73	3.79	3.73	3.59	3.45	3.29	3.13	2.95
1.86	1.87	1.93	1.97	1.93	1.86	1.79	1.71	1.62	1.53
3.31	3.32	3.43	3.49	3.43	3.31	3.19	3.05	2.91	2.75
1.60	1.61	1.67	1.71	1.67	1.60	1.52	1.44	1.36	1.27
2.53	2.55	2.64	2.69	2.64	2.54	2.43	2.31	2.19	2.06
2.33	2.34	2.43	2.48	2.43	2.33	2.22	2.11	1.99	1.86
3.32	3.33	3.43	3.48	3.43	3.32	3.20	3.08	2.95	2.81
2.05	2.07	2.13	2.16	2.13	2.06	1.98	1.90	1.81	1.72
2.19	2.20	2.27	2.31	2.27	2.20	2.11	2.03	1.93	1.84
1.96	1.97	2.03	2.07	2.03	1.96	1.89	1.81	1.73	1.64
2.41	2.42	2.49	2.53	2.49	2.41	2.32	2.23	2.13	2.02
5.13	5.17	5.34	5.44	5.34	5.14	4.93	4.70	4.45	4.19
2.79	2.81	2.89	2.94	2.89	2.80	2.70	2.59	2.48	2.36
3.08	3.10	3.18	3.23	3.18	3.09	2.98	2.87	2.75	2.62
3.20	3.22	3.32	3.38	3.32	3.20	3.07	2.93	2.79	2.63

3.45	3.47	3.58	3.65	3.58	3.46	3.32	3.17	3.01	2.85
2.79	2.81	2.90	2.96	2.91	2.80	2.68	2.55	2.41	2.27
3.77	3.79	3.89	3.95	3.89	3.77	3.64	3.51	3.36	3.20
3.15	3.17	3.25	3.29	3.25	3.15	3.06	2.95	2.84	2.72
4.03	4.05	4.13	4.18	4.14	4.04	3.93	3.81	3.69	3.56
2.87	2.89	2.99	3.05	2.99	2.88	2.75	2.62	2.48	2.32
2.65	2.67	2.78	2.84	2.78	2.66	2.53	2.39	2.25	2.09
3.08	3.10	3.22	3.28	3.22	3.09	2.95	2.79	2.63	2.46
2.28	2.30	2.37	2.41	2.37	2.29	2.20	2.10	2.00	1.89
2.05	2.06	2.12	2.16	2.12	2.06	1.98	1.90	1.82	1.73
1.91	1.93	2.01	2.07	2.02	1.91	1.80	1.69	1.57	1.44
3.21	3.23	3.31	3.36	3.31	3.21	3.11	3.00	2.89	2.76
3.78	3.80	3.92	3.98	3.92	3.79	3.64	3.49	3.33	3.16
1.35	1.36	1.41	1.44	1.41	1.36	1.30	1.23	1.16	1.09
2.59	2.60	2.66	2.70	2.67	2.60	2.52	2.44	2.35	2.26
3.09	3.11	3.23	3.29	3.23	3.10	2.96	2.82	2.67	2.51
4.44	4.47	4.61	4.70	4.62	4.45	4.28	4.09	3.89	3.68
3.30	3.32	3.43	3.49	3.43	3.31	3.17	3.03	2.87	2.71
1.78	1.79	1.84	1.87	1.84	1.78	1.72	1.65	1.58	1.50
2.21	2.22	2.29	2.34	2.30	2.21	2.13	2.03	1.93	1.82
5.00	5.02	5.18	5.27	5.18	5.01	4.82	4.62	4.40	4.18

2025	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
2.84	**2.86**	**2.95**	**3.00**	**2.95**	**2.85**	**2.73**	**2.61**	**2.48**	**2.35**
3.00	**3.02**	**3.11**	**3.17**	**3.11**	**3.01**	**2.90**	**2.78**	**2.66**	**2.53**
5.15	5.19	5.42	5.55	5.42	5.16	4.93	4.70	4.45	4.19
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2025	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
5.15	**5.19**	**5.42**	**5.55**	**5.42**	**5.16**	**4.93**	**4.70**	**4.45**	**4.19**
0.00	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
2.84	**2.86**	**2.95**	**3.00**	**2.95**	**2.85**	**2.73**	**2.61**	**2.48**	**2.35**
2.84	2.86	2.95	3.00	2.95	2.85	2.73	2.61	2.48	2.35

19	20	21	22	23	24	25	26	27	28
2035	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
0.52	0.48	0.44	0.40	0.37	0.34	0.30	0.28	0.26	0.25
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3.37	3.07	2.74	2.40	2.04	1.66	1.26	0.84	0.84	0.84
1.53	1.39	1.25	1.10	0.95	0.78	0.61	0.43	0.43	0.43
2.24	2.11	1.96	1.81	1.64	1.45	1.24	1.02	1.02	1.02
2.17	2.01	1.84	1.66	1.46	1.25	1.03	0.79	0.79	0.79
2.22	2.08	1.94	1.78	1.61	1.44	1.25	1.04	1.04	1.04
3.01	2.85	2.68	2.50	2.31	2.11	1.88	1.65	1.65	1.65
2.16	2.04	1.90	1.76	1.61	1.45	1.28	1.09	1.09	1.09
0.79	0.70	0.60	0.50	0.39	0.27	0.14	0.00	0.00	0.00
3.47	3.22	2.96	2.67	2.37	2.05	1.71	1.34	1.34	1.34
0.47	0.42	0.36	0.29	0.23	0.16	0.08	0.00	0.00	0.00
1.88	1.73	1.58	1.41	1.23	1.03	0.82	0.59	0.59	0.59
3.37	3.14	2.90	2.65	2.39	2.11	1.81	1.50	1.50	1.50
3.10	2.89	2.68	2.45	2.20	1.94	1.66	1.36	1.36	1.36
1.43	1.31	1.18	1.04	0.89	0.73	0.55	0.36	0.36	0.36
3.36	3.13	2.89	2.62	2.34	2.03	1.70	1.34	1.34	1.34
2.52	2.37	2.22	2.05	1.88	1.69	1.49	1.27	1.27	1.27
2.12	1.98	1.84	1.68	1.50	1.31	1.11	0.89	0.89	0.89
2.15	1.97	1.78	1.57	1.35	1.11	0.85	0.58	0.58	0.58
0.81	0.72	0.62	0.51	0.40	0.27	0.14	0.00	0.00	0.00
3.57	3.18	2.77	2.32	1.85	1.33	0.78	0.18	0.18	0.18
3.11	2.94	2.77	2.59	2.40	2.19	1.98	1.74	1.74	1.74
2.89	2.74	2.57	2.39	2.20	1.98	1.73	1.46	1.46	1.46
0.80	0.75	0.69	0.64	0.57	0.51	0.43	0.36	0.36	0.36
1.97	1.86	1.73	1.61	1.47	1.32	1.16	0.99	0.99	0.99
2.31	2.08	1.84	1.58	1.31	1.02	0.72	0.40	0.40	0.40
2.49	2.30	2.10	1.89	1.66	1.42	1.17	0.89	0.89	0.89
1.66	1.47	1.27	1.06	0.82	0.57	0.30	0.00	0.00	0.00
2.57	2.32	2.05	1.75	1.44	1.10	0.73	0.34	0.34	0.34
2.26	2.11	1.96	1.80	1.62	1.43	1.23	1.01	1.01	1.01
1.57	1.53	1.48	1.43	1.38	1.32	1.26	1.19	1.19	1.19
3.03	2.86	2.67	2.47	2.26	2.03	1.79	1.53	1.53	1.53
2.82	2.71	2.59	2.47	2.34	2.21	2.06	1.91	1.91	1.91
1.55	1.44	1.33	1.21	1.08	0.95	0.80	0.64	0.64	0.64
2.77	2.57	2.36	2.14	1.90	1.65	1.38	1.09	1.09	1.09
1.44	1.34	1.23	1.12	1.00	0.87	0.73	0.59	0.59	0.59
2.59	2.41	2.22	2.02	1.80	1.56	1.31	1.03	1.03	1.03
1.17	1.07	0.96	0.84	0.72	0.59	0.45	0.30	0.30	0.30
1.92	1.77	1.61	1.44	1.26	1.06	0.85	0.62	0.62	0.62
1.73	1.59	1.43	1.27	1.10	0.92	0.73	0.52	0.52	0.52
2.66	2.50	2.34	2.16	1.96	1.76	1.54	1.30	1.30	1.30
1.62	1.52	1.40	1.29	1.16	1.02	0.88	0.72	0.72	0.72
1.73	1.62	1.50	1.37	1.23	1.09	0.93	0.76	0.76	0.76
1.54	1.44	1.34	1.22	1.10	0.98	0.84	0.70	0.70	0.70
1.91	1.79	1.67	1.53	1.39	1.24	1.08	0.90	0.90	0.90
3.92	3.63	3.32	3.00	2.65	2.28	1.89	1.47	1.47	1.47
2.23	2.10	1.95	1.80	1.64	1.46	1.28	1.08	1.08	1.08
2.48	2.32	2.16	1.98	1.78	1.56	1.33	1.07	1.07	1.07
2.47	2.29	2.10	1.90	1.69	1.46	1.21	0.95	0.95	0.95

2.67	2.48	2.28	2.07	1.84	1.60	1.34	1.06	1.06	1.06
2.11	1.95	1.77	1.58	1.38	1.16	0.92	0.67	0.67	0.67
3.03	2.85	2.66	2.45	2.23	1.99	1.73	1.45	1.45	1.45
2.59	2.46	2.32	2.16	2.00	1.82	1.63	1.43	1.43	1.43
3.42	3.28	3.12	2.95	2.77	2.57	2.36	2.14	2.14	2.14
2.16	1.99	1.81	1.62	1.41	1.19	0.95	0.70	0.70	0.70
1.92	1.75	1.56	1.36	1.14	0.91	0.67	0.40	0.40	0.40
2.27	2.08	1.87	1.64	1.40	1.14	0.86	0.56	0.56	0.56
1.78	1.65	1.52	1.38	1.22	1.06	0.88	0.69	0.69	0.69
1.63	1.53	1.42	1.30	1.18	1.04	0.89	0.73	0.73	0.73
1.30	1.15	0.99	0.83	0.65	0.46	0.25	0.04	0.04	0.04
2.63	2.50	2.35	2.20	2.03	1.86	1.67	1.47	1.47	1.47
2.98	2.78	2.58	2.36	2.12	1.87	1.60	1.31	1.31	1.31
1.01	0.93	0.84	0.75	0.65	0.54	0.43	0.31	0.31	0.31
2.16	2.05	1.94	1.82	1.69	1.55	1.39	1.23	1.23	1.23
2.34	2.16	1.97	1.76	1.55	1.32	1.08	0.82	0.82	0.82
3.46	3.22	2.97	2.70	2.42	2.12	1.80	1.46	1.46	1.46
2.53	2.34	2.14	1.92	1.68	1.43	1.16	0.87	0.87	0.87
1.41	1.32	1.23	1.12	1.00	0.88	0.75	0.60	0.60	0.60
1.71	1.59	1.46	1.32	1.16	1.00	0.83	0.64	0.64	0.64
3.95	3.70	3.43	3.15	2.85	2.54	2.20	1.84	1.84	1.84

2035	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
2.20	**2.05**	**1.89**	**1.71**	**1.53**	**1.33**	**1.11**	**0.88**	**0.88**	**0.88**
2.39	**2.25**	**2.10**	**1.94**	**1.77**	**1.60**	**1.41**	**1.22**	**1.22**	**1.22**
3.95	3.70	3.43	3.15	2.85	2.57	2.36	2.14	2.14	2.14
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2035	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
3.95	**3.70**	**3.43**	**3.15**	**2.85**	**2.57**	**2.36**	**2.14**	**2.14**	**2.14**
0.00	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
2.20	**2.05**	**1.89**	**1.71**	**1.53**	**1.33**	**1.11**	**0.88**	**0.88**	**0.88**
2.20	2.05	1.89	1.71	1.53	1.33	1.11	0.88	0.88	0.88

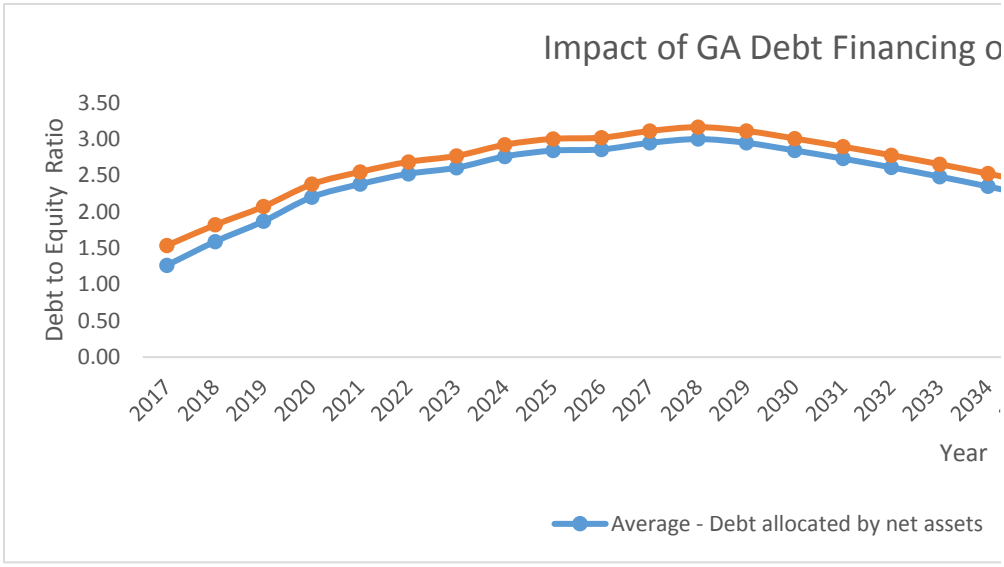
29	30	31	32	33	34
2045	**2046**	**2047**	**2048**	**2049**	**2050**
0.23	0.22	0.21	0.20	0.19	0.18
0.00	0.00	0.00	0.00	0.00	0.00
0.85	0.85	0.85	0.85	0.85	0.85
0.43	0.43	0.43	0.43	0.43	0.43
1.02	1.02	1.02	1.02	1.02	1.02
0.79	0.79	0.79	0.79	0.79	0.79
1.04	1.04	1.04	1.04	1.04	1.04
1.65	1.65	1.65	1.65	1.65	1.65
1.09	1.09	1.09	1.09	1.09	1.09
0.00	0.00	0.00	0.00	0.00	0.00
1.34	1.34	1.34	1.34	1.34	1.34
0.00	0.00	0.00	0.00	0.00	0.00
0.59	0.59	0.59	0.59	0.59	0.59
1.50	1.50	1.50	1.50	1.50	1.50
1.36	1.36	1.36	1.36	1.36	1.36
0.36	0.36	0.36	0.36	0.36	0.36
1.34	1.34	1.34	1.34	1.34	1.34
1.27	1.27	1.27	1.27	1.27	1.27
0.89	0.89	0.89	0.89	0.89	0.89
0.58	0.58	0.58	0.58	0.58	0.58
0.00	0.00	0.00	0.00	0.00	0.00
0.18	0.18	0.18	0.18	0.18	0.18
1.74	1.74	1.74	1.74	1.74	1.74
1.46	1.46	1.46	1.46	1.46	1.46
0.36	0.36	0.36	0.36	0.36	0.36
0.99	0.99	0.99	0.99	0.99	0.99
0.40	0.40	0.40	0.40	0.40	0.40
0.89	0.89	0.89	0.89	0.89	0.89
0.00	0.00	0.00	0.00	0.00	0.00
0.34	0.34	0.34	0.34	0.34	0.34
1.01	1.01	1.01	1.01	1.01	1.01
1.19	1.19	1.19	1.19	1.19	1.19
1.53	1.53	1.53	1.53	1.53	1.53
1.91	1.91	1.91	1.91	1.91	1.91
0.64	0.64	0.64	0.64	0.64	0.64
1.09	1.09	1.09	1.09	1.09	1.09
0.59	0.59	0.59	0.59	0.59	0.59
1.03	1.03	1.03	1.03	1.03	1.03
0.30	0.30	0.30	0.30	0.30	0.30
0.62	0.62	0.62	0.62	0.62	0.62
0.52	0.52	0.52	0.52	0.52	0.52
1.30	1.30	1.30	1.30	1.30	1.30
0.72	0.72	0.72	0.72	0.72	0.72
0.76	0.76	0.76	0.76	0.76	0.76
0.70	0.70	0.70	0.70	0.70	0.70
0.90	0.90	0.90	0.90	0.90	0.90
1.47	1.47	1.47	1.47	1.47	1.47
1.08	1.08	1.08	1.08	1.08	1.08
1.07	1.07	1.07	1.07	1.07	1.07
0.95	0.95	0.95	0.95	0.95	0.95

1.06	1.06	1.06	1.06	1.06	1.06
0.67	0.67	0.67	0.67	0.67	0.67
1.45	1.45	1.45	1.45	1.45	1.45
1.43	1.43	1.43	1.43	1.43	1.43
2.14	2.14	2.14	2.14	2.14	2.14
0.70	0.70	0.70	0.70	0.70	0.70
0.40	0.40	0.40	0.40	0.40	0.40
0.56	0.56	0.56	0.56	0.56	0.56
0.69	0.69	0.69	0.69	0.69	0.69
0.73	0.73	0.73	0.73	0.73	0.73
0.04	0.04	0.04	0.04	0.04	0.04
1.47	1.47	1.47	1.47	1.47	1.47
1.31	1.31	1.31	1.31	1.31	1.31
0.31	0.31	0.31	0.31	0.31	0.31
1.23	1.23	1.23	1.23	1.23	1.23
0.82	0.82	0.82	0.82	0.82	0.82
1.46	1.46	1.46	1.46	1.46	1.46
0.87	0.87	0.87	0.87	0.87	0.87
0.60	0.60	0.60	0.60	0.60	0.60
0.64	0.64	0.64	0.64	0.64	0.64
1.84	1.84	1.84	1.84	1.84	1.84

2045	**2046**	**2047**	**2048**	**2049**	**2050**
0.88	**0.88**	**0.88**	**0.88**	**0.88**	**0.88**
1.22	**1.22**	**1.22**	**1.22**	**1.22**	**1.22**
2.14	2.14	2.14	2.14	2.14	2.14
0.00	0.00	0.00	0.00	0.00	0.00

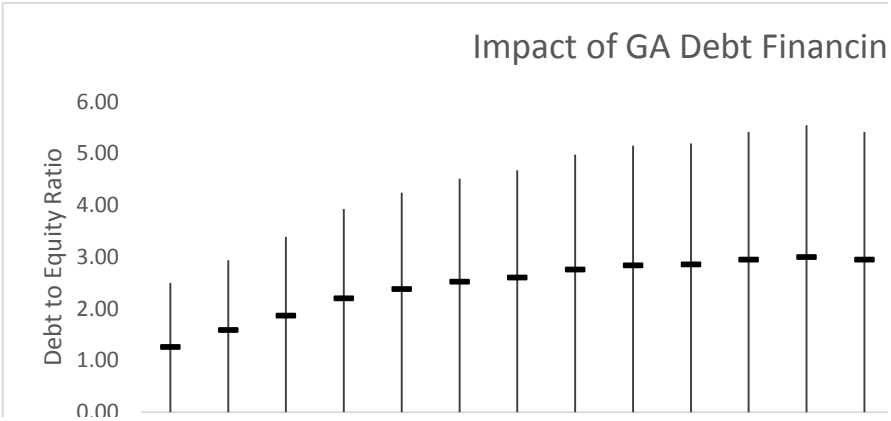
2045	**2046**	**2047**	**2048**	**2049**	**2050**
2.14	**2.14**	**2.14**	**2.14**	**2.14**	**2.14**
0.00	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
0.88	**0.88**	**0.88**	**0.88**	**0.88**	**0.88**
0.88	0.88	0.88	0.88	0.88	0.88

Scenario Scenario 3

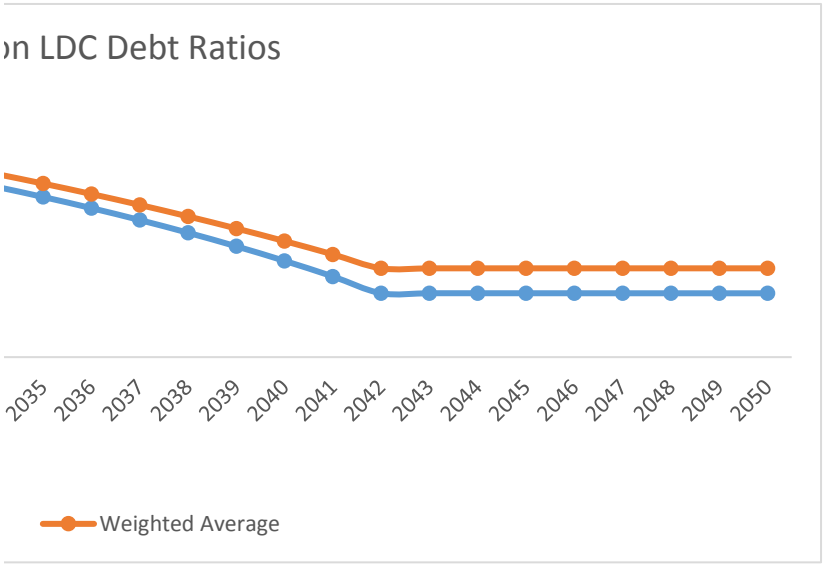


Debt to equity ratio is total interest-bearing debt divided by total equity.
Debt allocated to each LDC by their percentage of industry net assets (assets - i

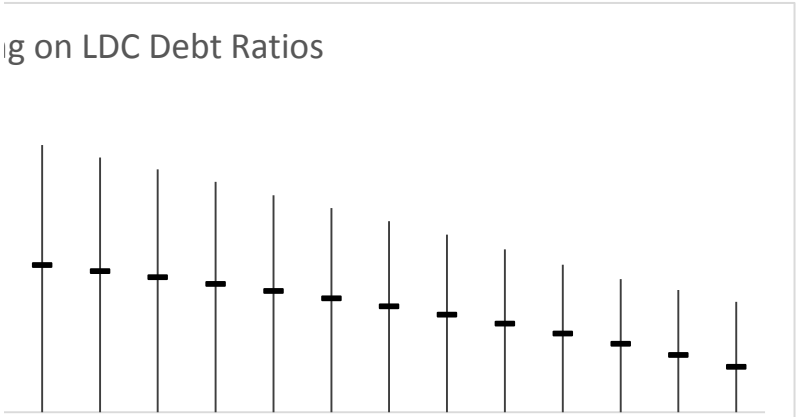
Scenario 1 Allocated by Revenue
Scenario 2 Allocated by net assets
Scenario 3 Allocated by Distribution




2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
Max
Min
LDC Average



nterest bearing debt)




2030
2031
2032
2033
2034
2035
2036
2037
2038
2039
2040
2041
2042

Statistics by Customer Class For the year ended December 31	Algoma Power Inc.	Atikokan Hydro Inc.	Bluewater Power Distribution Corporation	Brant County Power Inc.	Brantford Power Inc.	Burlington Hydro Inc.
Residential Customers						
Number of Customers	11,635	1,402	32,326	8,631	35,892	60,366
Metered kWh	113,874,890	9,225,364	247,531,809	81,307,528	285,477,279	529,430,951
Distribution Revenue	$ 18,511,055	$ 773,234	$ 11,546,050	$ 3,099,596	$ 9,427,645	$ 17,515,273
Metered kWh per Customer	9,787	6,580	7,657	9,420	7,954	8,770
Distribution Revenue per Customer	$ 1,591	$ 552	$ 357	$ 359	$ 263	$ 290
General Service <50kW Customers						
Number of Customers	-	233	3,495	1,297	2,793	5,259
Metered kWh	-	5,110,232	104,997,601	33,835,458	99,263,741	168,383,559
Distribution Revenue	$ -	$ 275,148	$ 3,214,720	$ 1,051,633	$ 1,576,103	$ 3,881,114
Metered kWh per Customer	-	21,932	30,042	26,087	35,540	32,018
Distribution Revenue per Customer	-	$ 1,181	$ 920	$ 811	$ 564	$ 738
General Service >50kW, Large User (>5000kW) and Sub Transmission						
Number of GS >50kW Customers	43	18	384	130	442	1,031
Number of Large Users	-	-	3	-	-	-
Number of Sub Transmission Customers	-	-	-	-	-	-
Metered kWh	86,528,984	17,571,100	628,016,984	157,806,589	511,052,515	901,690,816
Distribution Revenue	$ 4,012,384	$ 227,970	$ 5,410,042	$ 1,385,470	$ 5,036,729	$ 7,098,026
Metered kWh per Customer	2,012,302	976,172	1,622,783	1,213,897	1,156,227	874,579
Distribution Revenue per Customer	$ 93,311	$ 12,665	$ 13,979	$ 10,657	$ 11,395	$ 6,885
Unmetered Scattered Load Connections						
Number of Connections	-	-	262	49	428	574
Metered kWh	-	-	2,211,250	463,306	1,506,118	3,091,043
Distribution Revenue	$ -	$ -	$ 112,504	$ 11,450	$ 77,396	$ 109,588
Metered kWh per Connection	-	-	8,440	9,455	3,519	5,385
Distribution Revenue per Connection	$ -	$ -	$ 429	$ 234	$ 181	$ 191

Statistics by Customer Class For the year ended December 31	Cambridge and North Dumfries Hydro Inc.	Canadian Niagara Power Inc.	Centre Wellington Hydro Ltd.	Chapleau Public Utilities Corporation	COLLUS PowerStream Corp.	Cooperative Hydro Embrun Inc.
Residential Customers						
Number of Customers	47,501	25,999	5,967	1,059	14,715	1,884
Metered kWh	401,332,022	199,739,669	45,096,928	13,727,288	121,577,300	19,377,540
Distribution Revenue	$ 13,535,024	$ 10,166,976	$ 1,792,121	$ 529,766	$ 4,242,211	$ 600,826
Metered kWh per Customer	8,449	7,683	7,558	12,963	8,262	10,285
Distribution Revenue per Customer	$ 285	$ 391	$ 300	$ 500	$ 288	$ 319
General Service <50kW Customers						
Number of Customers	4,887	2,496	742	157	1,742	164
Metered kWh	167,151,504	68,487,699	21,408,682	4,907,587	46,404,404	4,594,197
Distribution Revenue	$ 3,116,715	$ 2,399,395	$ 609,904	$ 158,801	$ 1,065,701	$ 99,843
Metered kWh per Customer	34,203	27,439	28,853	31,259	26,639	28,013
Distribution Revenue per Customer	$ 638	$ 961	$ 822	$ 1,011	$ 612	$ 609
General Service >50kW, Large User (>5000kW) and Sub Transmission						
Number of GS >50kW Customers	716	218	48	13	126	11
Number of Large Users	2	-	-	-	-	-
Number of Sub Transmission Customers	-	-	-	-	-	-
Metered kWh	888,000,620	199,846,714	72,940,858	6,867,603	125,497,989	4,316,369
Distribution Revenue	$ 9,220,525	$ 4,363,283	$ 674,146	$ 97,578	$ 1,008,778	$ 69,919
Metered kWh per Customer	1,236,770	916,728	1,519,601	528,277	996,016	392,397
Distribution Revenue per Customer	$ 12,842	$ 20,015	$ 14,045	$ 7,506	$ 8,006	$ 6,356
Unmetered Scattered Load Connections						
Number of Connections	470	36	13	4	30	18
Metered kWh	1,973,539	1,500,542	563,839	2,892	399,451	94,284
Distribution Revenue	$ 56,138	$ 78,374	$ 6,720	$ 1,307	$ 4,762	$ 4,935
Metered kWh per Connection	4,199	41,682	43,372	723	13,315	5,238
Distribution Revenue per Connection	$ 119	$ 2,177	$ 517	$ 327	$ 159	$ 274

Statistics by Customer Class For the year ended December 31	E.L.K. Energy Inc.	Enersource Hydro Mississauga Inc.	Entegrus Powerlines Inc.	EnWin Utilities Ltd.	Erie Thames Powerlines Corporation	Espanola Regional Hydro Distribution Corporation
Residential Customers						
Number of Customers	10,242	181,140	36,287	78,520	16,474	2,854
Metered kWh	90,738,393	1,475,669,385	280,745,450	598,907,059	136,893,462	30,864,957
Distribution Revenue	$ 2,248,530	$ 50,103,115	$ 10,908,631	$ 23,014,728	$ 5,715,607	$ 1,109,092
Metered kWh per Customer	8,859	8,147	7,737	7,627	8,310	10,815
Distribution Revenue per Customer	$ 220	$ 277	$ 301	$ 293	$ 347	$ 389
General Service <50kW Customers						
Number of Customers	1,360	17,894	3,913	7,442	1,799	406
Metered kWh	28,622,002	650,941,022	111,900,367	209,121,214	34,552,631	10,360,160
Distribution Revenue	$ 385,021	$ 17,222,050	$ 3,150,067	$ 6,144,116	$ 1,197,844	$ 330,318
Metered kWh per Customer	21,046	36,378	28,597	28,100	19,207	25,518
Distribution Revenue per Customer	$ 283	$ 962	$ 805	$ 826	$ 666	$ 814
General Service >50kW, Large User (>5000kW) and Sub Transmission						
Number of GS >50kW Customers	102	4,423	458	1,241	160	29
Number of Large Users	-	9	1	9	1	-
Number of Sub Transmission Customers	-	-	-	-	-	-
Metered kWh	58,377,148	5,041,234,706	525,909,455	1,577,019,393	295,214,659	16,623,337
Distribution Revenue	$ 434,811	$ 56,050,348	$ 4,721,342	$ 17,376,458	$ 2,091,043	$ 224,278
Metered kWh per Customer	572,325	1,137,463	1,145,772	1,261,616	1,833,631	573,219
Distribution Revenue per Customer	$ 4,263	$ 12,647	$ 10,286	$ 13,901	$ 12,988	$ 7,734
Unmetered Scattered Load Connections						
Number of Connections	18	2,968	251	780	111	21
Metered kWh	259,607	10,752,937	1,247,803	2,293,803	543,692	123,304
Distribution Revenue	$ 2,812	$ 476,966	$ 35,772	$ 106,871	$ 63,627	$ 5,434
Metered kWh per Connection	14,423	3,623	4,971	2,941	4,898	5,872
Distribution Revenue per Connection	$ 156	$ 161	$ 143	$ 137	$ 573	$ 259

Statistics by Customer Class For the year ended December 31	Essex Powerlines Corporation	Festival Hydro Inc.	Fort Frances Power Corporation	Greater Sudbury Hydro Inc.	Grimsby Power Incorporated	Guelph Hydro Electric Systems Inc.
Residential Customers						
Number of Customers	26,713	18,279	3,264	42,746	10,267	49,132
Metered kWh	246,568,730	138,916,796	36,038,802	379,394,019	93,153,599	388,506,233
Distribution Revenue	$ 9,894,481	$ 6,992,952	$ 1,208,841	$ 13,107,845	$ 3,052,544	$ 16,501,704
Metered kWh per Customer	9,230	7,600	11,041	8,876	9,073	7,907
Distribution Revenue per Customer	$ 370	$ 383	$ 370	$ 307	$ 297	$ 336
General Service <50kW Customers						
Number of Customers	1,926	2,061	418	4,032	767	4,035
Metered kWh	65,860,609	63,555,664	13,308,371	137,728,861	19,224,958	144,569,861
Distribution Revenue	$ 1,919,833	$ 2,038,199	$ 341,998	$ 3,647,393	$ 506,740	$ 3,494,879
Metered kWh per Customer	34,196	30,837	31,838	34,159	25,065	35,829
Distribution Revenue per Customer	$ 997	$ 989	$ 818	$ 905	$ 661	$ 866
General Service >50kW, Large User (>5000kW) and Sub Transmission						
Number of GS >50kW Customers	253	215	47	520	111	617
Number of Large Users	-	1	-	-	-	5
Number of Sub Transmission Customers	-	-	-	-	-	-
Metered kWh	171,092,211	397,976,147	23,591,051	359,288,499	62,576,607	1,227,295,952
Distribution Revenue	$ 1,598,368	$ 3,192,675	$ 226,131	$ 4,794,355	$ 488,135	$ 8,378,661
Metered kWh per Customer	676,254	1,842,482	501,937	690,939	563,753	1,973,145
Distribution Revenue per Customer	$ 6,318	$ 14,781	$ 4,811	$ 9,220	$ 4,398	$ 13,471
Unmetered Scattered Load Connections						
Number of Connections	134	227	6	317	70	554
Metered kWh	1,565,940	663,213	62,628	1,276,037	365,406	1,896,821
Distribution Revenue	$ 60,378	$ 37,186	$ 3,293	$ 41,843	$ 19,894	$ 7,387
Metered kWh per Connection	11,686	2,922	10,438	4,025	5,220	3,424
Distribution Revenue per Connection	$ 451	$ 164	$ 549	$ 132	$ 284	$ 13

Statistics by Customer Class For the year ended December 31	Haldimand County Hydro Inc.	Halton Hills Hydro Inc.	Hearst Power Distribution Company Limited	Horizon Utilities Corporation	Hydro 2000 Inc.	Hydro Hawkesbury Inc.
Residential Customers						
Number of Customers	18,899	19,801	2,259	221,272	1,071	4,815
Metered kWh	168,130,870	203,353,342	24,775,947	1,602,300,014	14,415,698	49,584,777
Distribution Revenue	$ 8,120,634	$ 5,811,065	$ 628,538	$ 66,976,355	$ 414,232	$ 919,327
Metered kWh per Customer	8,896	10,270	10,968	7,241	13,460	10,298
Distribution Revenue per Customer	$ 430	$ 293	$ 278	$ 303	$ 387	$ 191
General Service <50kW Customers						
Number of Customers	2,347	1,920	399	18,661	143	609
Metered kWh	54,442,760	50,702,250	11,205,853	595,106,735	4,666,022	19,208,911
Distribution Revenue	$ 1,838,726	$ 1,062,063	$ 170,052	$ 15,380,357	$ 78,774	$ 227,094
Metered kWh per Customer	23,197	26,407	28,085	31,890	32,630	31,542
Distribution Revenue per Customer	$ 783	$ 553	$ 426	$ 824	$ 551	$ 373
General Service >50kW, Large User (>5000kW) and Sub Transmission						
Number of GS >50kW Customers	161	208	45	2,042	11	86
Number of Large Users	-	-	-	11	-	-
Number of Sub Transmission Customers	-	-	-	-	-	-
Metered kWh	121,010,369	252,179,330	47,593,839	3,182,973,879	4,607,212	70,137,954
Distribution Revenue	$ 1,419,735	$ 2,283,508	$ 258,547	$ 22,915,947	$ 25,704	$ 379,507
Metered kWh per Customer	751,617	1,212,401	1,057,641	1,550,401	418,837	815,558
Distribution Revenue per Customer	$ 8,818	$ 10,978	$ 5,745	$ 11,162	$ 2,337	$ 4,413
Unmetered Scattered Load Connections						
Number of Connections	67	144	-	3,048	4	5
Metered kWh	337,808	905,217	-	11,533,313	18,611	281,352
Distribution Revenue	$ 15,403	$ 15,602	$ -	$ 574,626	$ 1,467	$ 1,461
Metered kWh per Connection	5,042	6,286	-	3,784	4,653	56,270
Distribution Revenue per Connection	$ 230	$ 108	$ -	$ 189	$ 367	$ 292

Statistics by Customer Class **For the year ended** **December 31**	Hydro One Brampton Networks Inc.	Hydro One Networks Inc.	Hydro Ottawa Limited	Innpower Corporation	Kenora Hydro Electric Corporation Ltd.	Kingston Hydro Corporation
Residential Customers						
Number of Customers	143,095	1,141,369	296,036	15,073	4,756	24,171
Metered kWh	1,236,002,484	13,066,791,986	2,242,517,759	149,314,119	36,105,481	183,596,950
Distribution Revenue	$ 38,550,665	$ 852,769,936	$ 86,662,173	$ 7,013,019	$ 1,632,541	$ 7,233,801
Metered kWh per Customer	8,638	11,448	7,575	9,906	7,592	7,596
Distribution Revenue per Customer	$ 269	$ 747	$ 293	$ 465	$ 343	$ 299
General Service <50kW Customers						
Number of Customers	9,374	107,260	24,563	1,010	750	2,969
Metered kWh	336,022,662	2,999,550,098	723,754,871	33,730,295	22,728,474	89,066,220
Distribution Revenue	$ 8,185,559	$ 170,954,842	$ 20,147,319	$ 753,743	$ 475,676	$ 1,979,521
Metered kWh per Customer	35,846	27,965	29,465	33,396	30,305	29,999
Distribution Revenue per Customer	$ 873	$ 1,594	$ 820	$ 746	$ 634	$ 667
General Service >50kW, Large User (>5000kW) and Sub Transmission						
Number of GS >50kW Customers	1,630	7,901	3,310	74	63	324
Number of Large Users	6	-	10	-	-	3
Number of Sub Transmission Customers	-	486	-	-	-	-
Metered kWh	2,327,391,997	5,449,839,774	4,381,728,727	54,718,914	40,093,939	423,502,075
Distribution Revenue	$ 19,001,392	$ 162,764,757	$ 50,209,953	$ 616,408	$ 543,963	$ 2,654,012
Metered kWh per Customer	1,422,611	649,796	1,319,798	739,445	636,412	1,295,113
Distribution Revenue per Customer	$ 11,615	$ 19,407	$ 15,123	$ 8,330	$ 8,634	$ 8,116
Unmetered Scattered Load Connections						
Number of Connections	1,542	5,495	3,400	73	33	145
Metered kWh	5,230,920	30,633,843	15,997,714	463,092	175,932	1,185,727
Distribution Revenue	$ 128,945	$ 3,547,821	$ 521,845	$ 16,741	$ 6,490	$ 37,737
Metered kWh per Connection	3,392	5,575	4,705	6,344	5,331	8,177
Distribution Revenue per Connection	$ 84	$ 646	$ 153	$ 229	$ 197	$ 260

Statistics by Customer Class For the year ended December 31	Kitchener-Wilmot Hydro Inc.	Lakefront Utilities Inc.	Lakeland Power Distribution Ltd.	London Hydro Inc.	Midland Power Utility Corporation	Milton Hydro Distribution Inc.
Residential Customers						
Number of Customers	83,642	8,917	11,057	139,861	6,212	32,992
Metered kWh	635,723,827	71,964,159	108,309,115	1,084,665,542	47,426,365	298,391,164
Distribution Revenue	$ 20,895,701	$ 2,135,010	$ 4,631,253	$ 39,974,345	$ 2,144,043	$ 10,395,434
Metered kWh per Customer	7,601	8,070	9,796	7,755	7,635	9,044
Distribution Revenue per Customer	$ 250	$ 239	$ 419	$ 286	$ 345	$ 315
General Service <50kW Customers						
Number of Customers	7,818	1,082	2,138	12,485	776	2,570
Metered kWh	237,964,967	31,699,519	58,576,548	399,647,918	23,916,365	89,184,096
Distribution Revenue	$ 5,404,890	$ 563,727	$ 1,728,866	$ 9,042,131	$ 557,945	$ 2,059,880
Metered kWh per Customer	30,438	29,297	27,398	32,010	30,820	34,702
Distribution Revenue per Customer	$ 691	$ 521	$ 809	$ 724	$ 719	$ 802
General Service >50kW, Large User (>5000kW) and Sub Transmission						
Number of GS >50kW Customers	943	126	150	1,598	108	300
Number of Large Users	1	-	-	3	-	3
Number of Sub Transmission Customers	-	-	-	-	-	-
Metered kWh	860,503,235	132,886,272	119,828,584	1,641,791,684	116,783,796	451,764,295
Distribution Revenue	$ 11,074,423	$ 1,139,826	$ 1,312,690	$ 14,299,226	$ 884,784	$ 3,057,123
Metered kWh per Customer	911,550	1,054,653	798,857	1,025,479	1,081,331	1,490,971
Distribution Revenue per Customer	$ 11,731	$ 9,046	$ 8,751	$ 8,931	$ 8,192	$ 10,090
Unmetered Scattered Load Connections						
Number of Connections	891	86	51	1,522	11	223
Metered kWh	3,943,092	602,790	173,556	5,522,828	385,131	1,188,593
Distribution Revenue	$ 125,568	$ 35,624	$ 18,378	$ 133,611	$ 5,498	$ 48,948
Metered kWh per Connection	4,425	7,009	3,403	3,629	35,012	5,330
Distribution Revenue per Connection	$ 141	$ 414	$ 360	$ 88	$ 500	$ 219

Statistics by Customer Class **For the year ended** **December 31**	Newmarket-Tay Power Distribution Ltd.	Niagara Peninsula Energy Inc.	Niagara-on-the-Lake Hydro Inc.	North Bay Hydro Distribution Limited	Northern Ontario Wires Inc.	Oakville Hydro Electricity Distribution Inc.
Residential Customers						
Number of Customers	31,620	47,518	7,551	21,093	5,219	61,231
Metered kWh	277,965,401	424,304,413	70,322,391	196,730,101	41,684,696	573,029,902
Distribution Revenue	$ 9,701,202	$ 17,632,794	$ 2,483,877	$ 6,746,590	$ 1,966,696	$ 19,956,477
Metered kWh per Customer	8,791	8,929	9,313	9,327	7,987	9,358
Distribution Revenue per Customer	$ 307	$ 371	$ 329	$ 320	$ 377	$ 326
General Service <50kW Customers						
Number of Customers	3,184	4,471	1,336	2,648	785	5,197
Metered kWh	92,196,807	125,782,373	41,712,512	83,568,205	19,810,828	165,498,611
Distribution Revenue	$ 2,891,465	$ 3,967,626	$ 1,084,578	$ 2,273,518	$ 552,009	$ 4,772,646
Metered kWh per Customer	28,956	28,133	31,222	31,559	25,237	31,845
Distribution Revenue per Customer	$ 908	$ 887	$ 812	$ 859	$ 703	$ 918
General Service >50kW, Large User (>5000kW) and Sub Transmission						
Number of GS >50kW Customers	367	781	121	255	71	959
Number of Large Users	-	-	-	-	-	-
Number of Sub Transmission Customers	-	-	-	-	-	-
Metered kWh	277,091,020	644,165,900	83,783,451	233,977,510	59,448,871	768,419,987
Distribution Revenue	$ 3,461,257	$ 7,228,162	$ 818,758	$ 2,074,960	$ 306,169	$ 10,852,488
Metered kWh per Customer	755,016	824,796	692,425	917,559	837,308	801,272
Distribution Revenue per Customer	$ 9,431	$ 9,255	$ 6,767	$ 8,137	$ 4,312	$ 11,316
Unmetered Scattered Load Connections						
Number of Connections	53	355	19	10	23	714
Metered kWh	326,520	1,583,365	245,994	42,934	164,178	4,032,623
Distribution Revenue	$ 27,753	$ 105,567	$ 5,395	$ 1,275	$ 6,536	$ 124,518
Metered kWh per Connection	6,161	4,460	12,947	4,293	7,138	5,648
Distribution Revenue per Connection	$ 524	$ 297	$ 284	$ 128	$ 284	$ 174

Statistics by Customer Class For the year ended December 31	Orangeville Hydro Limited	Orillia Power Distribution Corporation	Oshawa PUC Networks Inc.	Ottawa River Power Corporation	Peterborough Distribution Incorporated	PowerStream Inc.
Residential Customers						
Number of Customers	10,570	11,916	51,467	9,441	32,441	321,424
Metered kWh	84,589,267	105,211,614	479,266,201	77,615,395	283,216,564	2,818,851,612
Distribution Revenue	$ 3,090,922	$ 4,133,061	$ 11,464,889	$ 2,511,228	$ 8,309,529	$ 88,807,764
Metered kWh per Customer	8,003	8,829	9,312	8,221	8,730	8,770
Distribution Revenue per Customer	$ 292	$ 347	$ 223	$ 266	$ 256	$ 276
General Service <50kW Customers						
Number of Customers	1,132	1,361	3,964	1,301	3,513	32,425
Metered kWh	33,814,274	44,470,936	134,383,174	30,536,533	116,574,929	1,066,578,596
Distribution Revenue	$ 751,287	$ 1,467,186	$ 2,757,530	$ 679,468	$ 2,292,805	$ 25,153,691
Metered kWh per Customer	29,871	32,675	33,901	23,472	33,184	32,894
Distribution Revenue per Customer	$ 664	$ 1,078	$ 696	$ 522	$ 653	$ 776
General Service >50kW, Large User (>5000kW) and Sub Transmission						
Number of GS >50kW Customers	138	168	517	150	361	4,921
Number of Large Users	-	-	1	-	2	2
Number of Sub Transmission Customers	-	-	-	-	-	-
Metered kWh	124,173,673	150,959,154	454,459,131	68,528,024	377,024,836	4,617,219,936
Distribution Revenue	$ 826,561	$ 2,076,212	$ 4,353,264	$ 821,655	$ 2,831,342	$ 47,557,240
Metered kWh per Customer	899,809	898,566	877,334	456,853	1,038,636	937,887
Distribution Revenue per Customer	$ 5,990	$ 12,358	$ 8,404	$ 5,478	$ 7,800	$ 9,660
Unmetered Scattered Load Connections						
Number of Connections	96	156	248	76	446	2,928
Metered kWh	382,131	825,149	846,977	5,674,891	1,841,159	13,944,144
Distribution Revenue	$ 10,401	$ 28,235	$ 48,318	$ 2,447	$ 59,982	$ 469,288
Metered kWh per Connection	3,981	5,289	3,415	74,670	4,128	4,762
Distribution Revenue per Connection	$ 108	$ 181	$ 195	$ 32	$ 134	$ 160

Statistics by Customer Class For the year ended December 31	PUC Distribution Inc.	Renfrew Hydro Inc.	Rideau St. Lawrence Distribution Inc.	Sioux Lookout Hydro Inc.	St. Thomas Energy Inc.	Thunder Bay Hydro Electricity Distribution Inc.
Residential Customers						
Number of Customers	29,595	3,779	5,054	2,339	15,207	45,445
Metered kWh	310,458,240	29,589,161	40,938,311	33,774,408	116,087,199	326,028,975
Distribution Revenue	$ 8,968,697	$ 1,055,914	$ 1,418,451	$ 1,138,938	$ 4,556,975	$ 11,269,396
Metered kWh per Customer	10,490	7,830	8,100	14,440	7,634	7,174
Distribution Revenue per Customer	$ 303	$ 279	$ 281	$ 487	$ 300	$ 248
General Service <50kW Customers						
Number of Customers	3,416	430	742	391	1,733	4,687
Metered kWh	95,701,162	10,843,312	20,653,133	12,591,617	40,623,453	137,277,269
Distribution Revenue	$ 2,640,564	$ 307,567	$ 482,664	$ 296,931	$ 1,125,594	$ 3,364,545
Metered kWh per Customer	28,016	25,217	27,834	32,204	23,441	29,289
Distribution Revenue per Customer	$ 773	$ 715	$ 650	$ 759	$ 650	$ 718
General Service >50kW, Large User (>5000kW) and Sub Transmission						
Number of GS >50kW Customers	375	61	64	50	132	482
Number of Large Users	-	-	-	-	-	-
Number of Sub Transmission Customers	-	-	-	-	-	-
Metered kWh	254,784,565	45,095,566	40,918,077	32,657,495	110,780,822	462,288,932
Distribution Revenue	$ 4,015,917	$ 393,622	$ 448,662	$ 338,561	$ 1,041,326	$ 4,441,766
Metered kWh per Customer	679,426	739,272	639,345	653,150	839,249	959,106
Distribution Revenue per Customer	$ 10,709	$ 6,453	$ 7,010	$ 6,771	$ 7,889	$ 9,215
Unmetered Scattered Load Connections						
Number of Connections	20	33	59	1	-	447
Metered kWh	912,709	155,364	543,571	1,302	-	2,203,133
Distribution Revenue	$ 30,919	$ 18,729	$ 12,577	$ 189	$ -	$ 59,144
Metered kWh per Connection	45,635	4,708	9,213	1,302	-	4,929
Distribution Revenue per Connection	$ 1,546	$ 568	$ 213	$ 189	$ -	$ 132

Statistics by Customer Class For the year ended December 31	Tillsonburg Hydro Inc.	Toronto Hydro-Electric System Limited	Veridian Connections Inc.	Wasaga Distribution Inc.	Waterloo North Hydro Inc.	Welland Hydro-Electric System Corp.
Residential Customers						
Number of Customers	6,291	675,898	108,502	12,350	49,094	20,735
Metered kWh	49,342,185	5,028,787,640	956,409,096	88,213,194	404,728,028	157,973,719
Distribution Revenue	$ 2,142,991	$ 259,809,026	$ 32,867,321	$ 2,996,828	$ 18,031,469	$ 6,086,711
Metered kWh per Customer	7,843	7,440	8,815	7,143	8,244	7,619
Distribution Revenue per Customer	$ 341	$ 384	$ 303	$ 243	$ 367	$ 294
General Service <50kW Customers						
Number of Customers	674	71,427	8,909	785	5,619	1,775
Metered kWh	21,979,008	2,356,743,506	294,683,518	16,302,853	196,078,597	54,312,604
Distribution Revenue	$ 567,625	$ 86,713,434	$ 6,588,891	$ 352,184	$ 5,363,402	$ 1,054,960
Metered kWh per Customer	32,610	32,995	33,077	20,768	34,896	30,599
Distribution Revenue per Customer	$ 842	$ 1,214	$ 740	$ 449	$ 955	$ 594
General Service >50kW, Large User (>5000kW) and Sub Transmission						
Number of GS >50kW Customers	94	10,940	1,067	37	702	156
Number of Large Users	-	46	3	-	1	-
Number of Sub Transmission Customers	-	-	-	-	-	-
Metered kWh	122,346,548	17,072,057,272	1,268,996,599	17,621,053	789,633,877	139,796,962
Distribution Revenue	$ 591,290	$ 250,893,067	$ 10,021,367	$ 240,624	$ 9,771,861	$ 1,379,104
Metered kWh per Customer	1,301,559	1,553,983	1,185,978	476,245	1,123,235	896,134
Distribution Revenue per Customer	$ 6,290	$ 22,838	$ 9,366	$ 6,503	$ 13,900	$ 8,840
Unmetered Scattered Load Connections						
Number of Connections	61	11,988	845	41	530	255
Metered kWh	387,408	40,708,649	4,867,100	258,733	2,649,180	970,041
Distribution Revenue	$ 9,483	$ 2,646,773	$ 154,304	$ 3,937	$ 153,590	$ 43,074
Metered kWh per Connection	6,351	3,396	5,760	6,311	4,998	3,804
Distribution Revenue per Connection	$ 155	$ 221	$ 183	$ 96	$ 290	$ 169

Statistics by Customer Class For the year ended December 31	Wellington North Power Inc.	West Coast Huron Energy Inc.	Westario Power Inc.	Whitby Hydro Electric Corporation	Woodstock Hydro Services Inc.	Total Industry
Residential Customers						
Number of Customers	3,218	3,298	20,188	39,251	14,507	4,564,835
Metered kWh	24,960,131	24,557,478	185,320,983	358,809,051	106,077,253	40,862,307,663
Distribution Revenue	$ 1,186,443	$ 1,277,782	$ 5,975,351	$ 14,712,145	$ 4,830,407	$ 1,947,635,793
Metered kWh per Customer	7,756	7,446	9,180	9,141	7,312	8,952
Distribution Revenue per Customer	$ 369	$ 387	$ 296	$ 375	$ 333	$ 427
General Service <50kW Customers						
Number of Customers	467	467	2,528	2,179	1,261	434,999
Metered kWh	12,033,954	14,574,602	65,575,776	86,010,023	44,495,284	13,430,872,397
Distribution Revenue	$ 429,811	$ 345,263	$ 1,442,271	$ 2,473,102	$ 1,135,435	$ 461,766,752
Metered kWh per Customer	25,769	31,209	25,940	39,472	35,286	30,876
Distribution Revenue per Customer	$ 920	$ 739	$ 571	$ 1,135	$ 900	$ 1,062
General Service >50kW, Large User (>5000kW) and Sub Transmission						
Number of GS >50kW Customers	40	46	238	368	198	54,295
Number of Large Users	-	1	-	-	-	124
Number of Sub Transmission Customers	-	-	-	-	-	486
Metered kWh	67,611,795	110,421,550	176,163,146	405,044,147	237,119,664	62,248,261,742
Distribution Revenue	$ 637,975	$ 570,323	$ 1,546,107	$ 4,481,016	$ 1,840,789	$ 808,884,404
Metered kWh per Customer	1,690,295	2,349,395	740,181	1,100,663	1,197,574	1,133,745
Distribution Revenue per Customer	$ 15,949	$ 12,135	$ 6,496	$ 12,177	$ 9,297	$ 14,732
Unmetered Scattered Load Connections						
Number of Connections	1	3	57	376	131	44,053
Metered kWh	5,184	83,100	287,775	1,765,346	574,260	197,719,894
Distribution Revenue	$ 356	$ 5,680	$ 10,823	$ 98,142	$ 23,092	$ 10,720,929
Metered kWh per Connection	5,184	27,700	5,049	4,695	4,384	4,488
Distribution Revenue per Connection	$ 356	$ 1,893	$ 190	$ 261	$ 176	$ 243

LDCs	KWh
West Coast Huron Energy Inc.	149,636,729.61
Hydro 2000 Inc.	23,707,543.00
Cooperative Hydro Embrun Inc.	28,382,390.00
Woodstock Hydro Services Inc.	388,266,461.00
Entegrus Powerlines Inc.	919,803,075.47
Algoma Power Inc.	200,403,874.14
Hydro Ottawa Limited	7,363,999,071.36
Veridian Connections Inc.	2,524,956,313.00
Thunder Bay Hydro Electricity Distribution Inc.	927,798,308.96
Kingston Hydro Corporation	697,350,972.37
Kitchener-Wilmot Hydro Inc.	1,738,135,120.66
Milton Hydro Distribution Inc.	840,528,148.00
Midland Power Utility Corporation	188,511,656.97
Espanola Regional Hydro Distribution Corporation	57,971,758.12
Innpower Corporation	238,226,420.72
PUC Distribution Inc.	661,856,675.95
Rideau St. Lawrence Distribution Inc.	103,053,092.00
St. Thomas Energy Inc.	267,491,474.80
Horizon Utilities Corporation	5,391,913,941.01
PowerStream Inc.	8,516,594,288.00
Chapleau Public Utilities Corporation	25,505,370.00
Ottawa River Power Corporation	182,354,843.00
Oakville Hydro Electricity Distribution Inc.	1,510,981,122.29
Toronto Hydro-Electric System Limited	24,498,297,067.32
Renfrew Hydro Inc.	85,683,403.00
Whitby Hydro Electric Corporation	851,628,567.00
Hydro One Networks Inc.	21,546,815,701.41
Oshawa PUC Networks Inc.	1,068,955,483.00
EnWin Utilities Ltd.	2,387,341,468.52
Wasaga Distribution Inc.	122,395,833.00
Westario Power Inc.	427,347,680.00
North Bay Hydro Distribution Limited	514,318,750.00
Lakefront Utilities Inc.	237,152,739.16
Kenora Hydro Electric Corporation Ltd.	99,103,826.00
Hearst Power Distribution Company Limited	83,575,639.00
Wellington North Power Inc.	104,611,064.00
Niagara Peninsula Energy Inc.	1,195,836,051.00
Bluewater Power Distribution Corporation	982,757,644.86
Halton Hills Hydro Inc.	507,140,139.00
COLLUS PowerStream Corp.	293,879,144.16
Newmarket-Tay Power Distribution Ltd.	647,579,748.00
Orangeville Hydro Limited	242,959,344.36
Guelph Hydro Electric Systems Inc.	1,762,268,866.20
Atikokan Hydro Inc.	31,906,696.00
Hydro One Brampton Networks Inc.	3,904,648,063.58
Hydro Hawkesbury Inc.	139,212,994.00
Brantford Power Inc.	897,299,653.02
Sioux Lookout Hydro Inc.	79,024,821.44
London Hydro Inc.	3,131,627,972.41
Burlington Hydro Inc.	1,602,596,369.00

Tillsonburg Hydro Inc.	194,055,148.59
Haldimand County Hydro Inc.	343,921,807.00
Waterloo North Hydro Inc.	1,393,089,682.00
Erie Thames Powerlines Corporation	467,204,444.10
E.L.K. Energy Inc.	177,997,150.00
Niagara-on-the-Lake Hydro Inc.	196,064,347.82
Essex Powerlines Corporation	485,087,490.36
Centre Wellington Hydro Ltd.	140,010,306.25
Brant County Power Inc.	273,412,881.00
Canadian Niagara Power Inc.	469,574,623.58
Welland Hydro-Electric System Corp.	353,053,326.00
Fort Frances Power Corporation	73,000,852.78
Festival Hydro Inc.	601,111,819.13
Cambridge and North Dumfries Hydro Inc.	1,458,457,685.00
Lakeland Power Distribution Ltd.	286,887,802.77
Grimsby Power Incorporated	175,320,569.73
Peterborough Distribution Incorporated	778,657,488.00
Orillia Power Distribution Corporation	301,466,853.00
Greater Sudbury Hydro Inc.	877,687,417.42
Enersource Hydro Mississauga Inc.	7,178,598,049.14
Northern Ontario Wires Inc.	121,108,573.00
Total	116,739,161,695.54

Revenue	Loans and notes payable, and current portion of long term debt
$ 12,504,163.00	2,152,322
$ 2,612,960.96	-
$ 4,230,659.25	-
$ 55,208,807.63	-
$ 133,169,631.22	-
$ 46,769,679.44	-
$ 1,032,477,036.75	41,000,000
$ 336,841,570.00	933,200
$ 131,219,427.72	767,529
$ 87,601,416.00	3,029,789
$ 244,601,635.22	1,066,445
$ 118,347,331.00	1,565,791
$ 21,535,376.34	1,754,418
$ 9,264,440.26	-
$ 39,170,120.55	4,056,149
$ 96,717,280.68	15,802,960
$ 16,245,560.28	172,619
$ 36,890,869.42	-
$ 665,180,168.12	16,626,000
$ 1,178,829,966.27	125,003,092
$ 3,973,960.06	-
$ 26,661,524.58	-
$ 209,208,013.73	4,585,464
$ 3,493,783,355.64	196,521,453
$ 12,786,648.69	40,017
$ 127,195,472.00	400,000
$ 4,341,609,170.74	236,008,096
$ 138,989,271.85	-
$ 296,341,445.30	326,359
$ 18,858,882.75	-
$ 61,323,910.00	1,059,933
$ 71,302,699.40	1,263,005
$ 33,263,213.42	197,498
$ 14,683,601.03	-
$ 11,292,049.89	-
$ 13,976,944.90	1,006,412
$ 182,234,670.33	1,420,498
$ 122,412,893.00	45,233
$ 72,221,931.69	7,586,602
$ 40,657,992.77	527,581
$ 89,880,688.51	1,644,454
$ 34,822,576.62	435,379
$ 231,689,846.10	564,990
$ 5,439,667.85	117,723
$ 528,930,633.20	7,047,074
$ 12,405,257.41	744,429
$ 124,799,216.51	2,561,334
$ 10,104,920.30	224,739
$ 448,290,549.66	2,304,000
$ 228,182,953.58	865,636

$	27,390,694.14		142,910
$	61,964,510.13		-
$	201,154,116.00		10,272,075
$	64,197,635.20		1,695,391
$	33,667,314.84		-
$	27,656,164.26		2,333,748
$	76,563,568.15		4,116,155
$	20,529,003.17		113,863
$	38,809,416.41		-
$	76,416,272.31		-
$	52,485,503.00		-
$	10,780,868.53		-
$	84,432,441.43		810,909
$	178,367,144.36		-
$	44,869,239.05		713,024
$	25,195,959.95		4,621,356
$	110,522,361.00		1,446,000
$	44,083,946.00		2,210,000
$	132,056,395.35		2,400,682
$	921,296,231.23		14,562,432
$	17,563,904.41		1,044,549
$	17,526,744,750.54	$	727,911,316.37

Long-term debt	Inter-company long-term debt & advances	Shareholders' Equity	Total Assets
3,012,082	-	5,683,502	$ 13,895,333
-	-	939,423	$ 1,342,032
-	-	4,283,523	$ 5,286,068
-	23,377,555	12,272,655	$ 50,975,696
-	47,523,326	33,856,252	$ 108,556,421
52,000,000	-	46,627,048	$ 113,375,769
-	447,185,000	302,804,101	$ 992,440,450
54,653,077	74,688,000	99,579,344	$ 303,017,766
20,138,196	26,490,500	63,034,710	$ 140,074,044
17,309,178	10,880,619	25,804,613	$ 77,640,536
3,990,232	76,962,142	135,182,084	$ 270,816,913
50,857,464	-	38,925,202	$ 116,690,043
3,862,716	-	10,663,219	$ 20,275,187
2,400,000	1,524,511	3,024,125	$ 10,290,734
30,819,711	-	17,129,123	$ 61,571,418
23,846,498	26,534,040	28,638,644	$ 111,225,900
516,671	1,163,352	4,112,761	$ 10,553,109
3,500,000	7,714,426	15,794,779	$ 46,790,478
-	190,000,000	219,488,003	$ 628,993,196
347,408,036	182,429,859	443,180,449	$ 1,499,821,453
-	-	2,035,073	$ 3,319,874
5,585,838	-	7,936,840	$ 19,606,687
20,278,482	70,310,869	83,932,445	$ 255,655,045
-	1,875,984,003	1,354,509,769	$ 4,710,850,057
18,591	2,705,168	3,672,801	$ 9,559,093
4,000,000	28,337,942	49,057,899	$ 106,054,815
3,000,904,582	-	2,678,596,512	$ 34,156,999,083
22,966,099	23,064,000	41,129,970	$ 136,974,560
51,000,000	-	133,146,785	$ 321,687,930
-	3,593,269	10,869,843	$ 18,166,414
13,222,943	5,260,461	30,143,122	$ 63,757,149
10,352,249	19,511,601	33,090,961	$ 91,842,207
9,887,391	-	9,234,799	$ 25,332,652
4,510,946	-	6,520,421	$ 14,458,996
1,250,000	-	3,096,947	$ 6,961,276
4,203,600	-	3,345,526	$ 11,870,176
34,441,572	25,605,090	75,285,163	$ 179,017,611
23,918,540	-	28,003,138	$ 85,895,981
9,258,402	16,141,969	30,720,882	$ 86,029,213
11,950,730	-	8,800,971	$ 33,667,893
30,117,076	2,473,010	46,312,646	$ 105,360,761
10,505,200	-	9,480,643	$ 28,660,574
95,000,000	-	64,816,369	$ 215,810,209
187,617	342,000	2,598,748	$ 4,647,253
193,000,000	-	198,831,794	$ 520,769,286
663,217	-	3,995,605	$ 9,453,133
17,022,603	24,189,168	41,188,551	$ 108,973,348
1,500,298	-	2,975,005	$ 9,010,427
96,130,000	-	150,139,873	$ 357,727,164
14,184,769	47,878,608	77,404,191	$ 175,499,704

258,747	-	10,395,028	$ 18,890,185
-	17,966,269	46,077,499	$ 76,829,485
101,898,336	-	85,153,420	$ 250,097,293
18,038,524	-	13,721,087	$ 50,361,944
5,100,000	-	8,101,528	$ 22,097,884
916,667	7,788,942	15,223,275	$ 34,656,817
17,212,218	373,943	22,715,272	$ 69,630,996
4,255,111	5,046,753	8,139,725	$ 21,854,011
-	8,000,000	18,554,171	$ 39,776,606
16,050,000	20,000,000	20,981,471	$ 111,749,630
-	13,499,953	16,104,148	$ 40,821,637
-	-	5,960,305	$ 9,251,528
14,220,869	-	24,214,793	$ 69,526,989
85,000,000	-	77,245,728	$ 210,046,077
6,186,387	-	22,363,800	$ 39,623,161
4,760,755	5,782,746	8,693,576	$ 31,859,027
42,309,286	1,510,000	29,478,852	$ 89,788,796
735,000	9,762,000	12,636,640	$ 36,837,293
816,550	-	17,082,400	$ 126,588,820
60,000,000	334,000,000	272,871,015	$ 887,662,747
3,964,066	-	3,289,387	$ 10,817,135

$ 4,682,097,119.00	$ 3,685,601,095.32	$ 7,440,899,971.76	$ 48,706,019,179

ts - interest bearing	Debt Ratio	Total Debt Ratio	Equity Ratio	LTD/Equity
$ 8,730,929	0.37	0.59	0.41	0.91
$ 1,342,032	0.00	0.30	0.70	0.00
$ 5,286,068	0.00	0.19	0.81	0.00
$ 27,598,142	0.46	0.76	0.24	1.90
$ 61,033,095	0.44	0.69	0.31	1.40
$ 61,375,769	0.46	0.59	0.41	1.12
$ 504,255,450	0.49	0.69	0.31	1.61
$ 172,743,489	0.43	0.67	0.33	1.31
$ 92,677,819	0.34	0.55	0.45	0.75
$ 46,420,950	0.40	0.67	0.33	1.21
$ 188,798,094	0.30	0.50	0.50	0.61
$ 64,266,788	0.45	0.67	0.33	1.35
$ 14,658,054	0.28	0.47	0.53	0.53
$ 6,366,223	0.38	0.71	0.29	1.30
$ 26,695,558	0.57	0.72	0.28	2.04
$ 45,042,402	0.60	0.74	0.26	2.31
$ 8,700,467	0.18	0.61	0.39	0.45
$ 35,576,052	0.24	0.66	0.34	0.71
$ 422,367,196	0.33	0.65	0.35	0.94
$ 844,980,466	0.44	0.70	0.30	1.48
$ 3,319,874	0.00	0.39	0.61	0.00
$ 14,020,849	0.28	0.60	0.40	0.70
$ 160,480,229	0.37	0.67	0.33	1.13
$ 2,638,344,601	0.44	0.71	0.29	1.53
$ 6,795,316	0.29	0.62	0.38	0.75
$ 73,316,873	0.31	0.54	0.46	0.67
$ 30,920,086,406	0.09	0.92	0.08	1.21
$ 90,944,461	0.34	0.70	0.30	1.12
$ 270,361,570	0.16	0.59	0.41	0.39
$ 14,573,145	0.20	0.40	0.60	0.33
$ 44,213,812	0.31	0.53	0.47	0.65
$ 60,715,352	0.34	0.64	0.36	0.94
$ 15,247,764	0.40	0.64	0.36	1.09
$ 9,948,050	0.31	0.55	0.45	0.69
$ 5,711,276	0.18	0.56	0.44	0.40
$ 6,660,165	0.44	0.72	0.28	1.56
$ 117,550,451	0.34	0.58	0.42	0.82
$ 61,932,208	0.28	0.67	0.33	0.86
$ 53,042,239	0.38	0.64	0.36	1.07
$ 21,189,583	0.37	0.74	0.26	1.42
$ 71,126,220	0.32	0.56	0.44	0.74
$ 17,719,995	0.38	0.67	0.33	1.15
$ 120,245,220	0.44	0.70	0.30	1.47
$ 3,999,912	0.14	0.44	0.56	0.25
$ 320,722,212	0.38	0.62	0.38	1.01
$ 8,045,488	0.15	0.58	0.42	0.35
$ 65,200,243	0.40	0.62	0.38	1.06
$ 7,285,391	0.19	0.67	0.33	0.58
$ 259,293,164	0.28	0.58	0.42	0.66
$ 112,570,691	0.36	0.56	0.44	0.81

$	18,488,528	0.02	0.45	0.55	0.04
$	58,863,216	0.23	0.40	0.60	0.39
$	137,926,882	0.45	0.66	0.34	1.32
$	30,628,028	0.39	0.73	0.27	1.44
$	16,997,884	0.23	0.63	0.37	0.63
$	23,617,459	0.32	0.56	0.44	0.73
$	47,928,681	0.31	0.67	0.33	0.96
$	12,438,284	0.43	0.63	0.37	1.16
$	31,776,606	0.20	0.53	0.47	0.43
$	75,699,630	0.32	0.81	0.19	1.72
$	27,321,684	0.33	0.61	0.39	0.84
$	9,251,528	0.00	0.36	0.64	0.00
$	54,495,211	0.22	0.65	0.35	0.62
$	125,046,077	0.40	0.63	0.37	1.10
$	32,723,750	0.17	0.44	0.56	0.31
$	16,694,169	0.48	0.73	0.27	1.74
$	44,523,510	0.50	0.67	0.33	1.54
$	24,130,293	0.34	0.66	0.34	1.01
$	123,371,589	0.03	0.87	0.13	0.19
$	479,100,315	0.46	0.69	0.31	1.50
$	5,808,520	0.46	0.70	0.30	1.52
$	39,610,409,648	0.19	0.85	0.15	0.94

1.22
2.31
0.00

Debt to Equity Ratio (Total Debt/Total Equity)	Allocation Factor - Market Share
1.44	0.07%
0.43	0.01%
0.23	0.02%
3.15	0.31%
2.21	0.76%
1.43	0.27%
2.28	5.89%
2.04	1.92%
1.22	0.75%
2.01	0.50%
1.00	1.40%
2.00	0.68%
0.90	0.12%
2.40	0.05%
2.59	0.22%
2.88	0.55%
1.57	0.09%
1.96	0.21%
1.87	3.80%
2.38	6.73%
0.63	0.02%
1.47	0.15%
2.05	1.19%
2.48	19.93%
1.60	0.07%
1.16	0.73%
11.75	24.77%
2.33	0.79%
1.42	1.69%
0.67	0.11%
1.12	0.35%
1.78	0.41%
1.74	0.19%
1.22	0.08%
1.25	0.06%
2.55	0.08%
1.38	1.04%
2.07	0.70%
1.80	0.41%
2.83	0.23%
1.27	0.51%
2.02	0.20%
2.33	1.32%
0.79	0.03%
1.62	3.02%
1.37	0.07%
1.65	0.71%
2.03	0.06%
1.38	2.56%
1.27	1.30%

0.82	0.16%
0.67	0.35%
1.94	1.15%
2.67	0.37%
1.73	0.19%
1.28	0.16%
2.07	0.44%
1.68	0.12%
1.14	0.22%
4.33	0.44%
1.53	0.30%
0.55	0.06%
1.87	0.48%
1.72	1.02%
0.77	0.26%
2.66	0.14%
2.05	0.63%
1.92	0.25%
6.41	0.75%
2.25	5.26%
2.29	0.10%
5.55	100.00%

Allocation Factor - Net Assets (interest bearing debt only)
0.02%
0.00%
0.01%
0.07%
0.15%
0.15%
1.27%
0.44%
0.23%
0.12%
0.48%
0.16%
0.04%
0.02%
0.07%
0.11%
0.02%
0.09%
1.07%
2.13%
0.01%
0.04%
0.41%
6.66%
0.02%
0.19%
78.06%
0.23%
0.68%
0.04%
0.11%
0.15%
0.04%
0.03%
0.01%
0.02%
0.30%
0.16%
0.13%
0.05%
0.18%
0.04%
0.30%
0.01%
0.81%
0.02%
0.16%
0.02%
0.65%
0.28%

0.05%
0.15%
0.35%
0.08%
0.04%
0.06%
0.12%
0.03%
0.08%
0.19%
0.07%
0.02%
0.14%
0.32%
0.08%
0.04%
0.11%
0.06%
0.31%
1.21%
0.01%

100.00%

Switch

		Scenario 3	
		$ 3,107,422,314	$ 5,929,768,083
	Total Debt	$ 2,330,566,735.74	$ 4,447,326,062.36

Allocation Factor - KWh		**2017**	**2018**
0.13%	$	2,987,329.87	$ 5,700,600.53
0.02%	$	473,294.57	$ 903,168.85
0.02%	$	566,622.66	$ 1,081,263.06
0.33%	$	7,751,305.44	$ 14,791,502.06
0.79%	$	18,362,839.17	$ 35,041,061.89
0.17%	$	4,000,839.10	$ 7,634,639.13
6.31%	$	147,014,001.37	$ 280,540,861.50
2.16%	$	50,407,927.44	$ 96,191,405.30
0.79%	$	18,522,455.06	$ 35,345,650.42
0.60%	$	13,921,831.85	$ 26,566,467.58
1.49%	$	34,699,922.76	$ 66,216,456.50
0.72%	$	16,780,203.95	$ 32,020,983.23
0.16%	$	3,763,424.29	$ 7,181,590.08
0.05%	$	1,157,341.28	$ 2,208,507.47
0.20%	$	4,755,923.92	$ 9,075,536.90
0.57%	$	13,213,227.94	$ 25,214,267.45
0.09%	$	2,057,339.67	$ 3,925,937.92
0.23%	$	5,340,167.98	$ 10,190,426.16
4.62%	$	107,643,528.45	$ 205,411,783.39
7.30%	$	170,024,275.15	$ 324,450,434.54
0.02%	$	509,186.17	$ 971,659.34
0.16%	$	3,640,510.39	$ 6,947,038.46
1.29%	$	30,165,047.37	$ 57,562,737.54
20.99%	$	489,081,088.11	$ 933,293,621.85
0.07%	$	1,710,573.26	$ 3,264,217.64
0.73%	$	17,001,811.39	$ 32,443,867.73
18.46%	$	430,158,065.26	$ 820,853,205.02
0.92%	$	21,340,500.09	$ 40,723,211.56
2.05%	$	47,660,601.06	$ 90,948,793.69
0.10%	$	2,443,495.85	$ 4,662,824.11
0.37%	$	8,531,518.24	$ 16,280,350.55
0.44%	$	10,267,798.34	$ 19,593,623.49
0.20%	$	4,734,489.07	$ 9,034,633.64
0.08%	$	1,978,496.99	$ 3,775,485.64
0.07%	$	1,668,494.11	$ 3,183,919.71
0.09%	$	2,088,442.84	$ 3,985,290.84
1.02%	$	23,873,528.65	$ 45,556,887.33
0.84%	$	19,619,656.70	$ 37,439,395.86
0.43%	$	10,124,485.40	$ 19,320,145.23
0.25%	$	5,866,968.27	$ 11,195,697.81
0.55%	$	12,928,205.05	$ 24,670,369.81
0.21%	$	4,850,411.45	$ 9,255,843.61
1.51%	$	35,181,725.99	$ 67,135,862.07
0.03%	$	636,981.48	$ 1,215,525.95
3.34%	$	77,951,929.41	$ 148,752,508.12
0.12%	$	2,779,231.65	$ 5,303,495.14
0.77%	$	17,913,583.52	$ 34,183,765.54
0.07%	$	1,577,642.13	$ 3,010,550.55
2.68%	$	62,519,448.27	$ 119,303,329.72
1.37%	$	31,994,043.25	$ 61,052,936.27

0.17%	$	3,874,093.90	$ 7,392,776.40
0.29%	$	6,866,014.04	$ 13,102,136.37
1.19%	$	27,811,476.68	$ 53,071,513.96
0.40%	$	9,327,213.94	$ 17,798,744.40
0.15%	$	3,553,513.93	$ 6,781,026.63
0.17%	$	3,914,205.31	$ 7,469,319.39
0.42%	$	9,684,228.95	$ 18,480,021.67
0.12%	$	2,795,149.10	$ 5,333,869.76
0.23%	$	5,458,382.23	$ 10,416,009.62
0.40%	$	9,374,531.92	$ 17,889,039.39
0.30%	$	7,048,314.60	$ 13,450,013.13
0.06%	$	1,457,380.34	$ 2,781,059.85
0.51%	$	12,000,524.84	$ 22,900,115.27
1.25%	$	29,116,475.71	$ 55,561,790.74
0.25%	$	5,727,393.96	$ 10,929,353.81
0.15%	$	3,500,079.00	$ 6,679,058.92
0.67%	$	15,545,025.45	$ 29,663,942.16
0.26%	$	6,018,448.39	$ 11,484,761.18
0.75%	$	17,522,047.18	$ 33,436,612.61
6.15%	$	143,312,677.42	$ 273,477,774.99
0.10%	$	2,417,797.14	$ 4,613,784.31

100.00%

$ 8,427,301,198	$ 11,479,012,413	$ 13,167,675,226	$ 14,536,265,101
$ 6,320,475,898.87	$ 8,609,259,309.65	$ 9,875,756,419.70	$ 10,902,198,825.40

2019	2020	2021	2022
$ 8,101,611.57	$ 11,035,383.40	$ 12,658,784.52	$ 13,974,482.55
$ 1,283,570.59	$ 1,748,379.74	$ 2,005,581.65	$ 2,214,032.92
$ 1,536,675.52	$ 2,093,139.54	$ 2,401,058.62	$ 2,650,614.02
$ 21,021,470.20	$ 28,633,807.16	$ 32,846,089.86	$ 36,259,967.04
$ 49,799,853.67	$ 67,833,476.58	$ 77,812,372.43	$ 85,899,845.98
$ 10,850,239.44	$ 14,779,349.91	$ 16,953,521.15	$ 18,715,595.09
$ 398,700,641.45	$ 543,078,917.48	$ 622,970,561.44	$ 687,719,363.92
$ 136,705,843.10	$ 186,210,037.22	$ 213,603,157.29	$ 235,804,123.91
$ 50,232,730.52	$ 68,423,107.66	$ 78,488,743.39	$ 86,646,515.94
$ 37,755,882.00	$ 51,428,117.73	$ 58,993,642.25	$ 65,125,180.29
$ 94,105,876.55	$ 128,183,685.33	$ 147,040,623.10	$ 162,323,374.57
$ 45,507,761.27	$ 61,987,123.07	$ 71,105,969.35	$ 78,496,409.04
$ 10,206,372.63	$ 13,902,324.76	$ 15,947,477.95	$ 17,604,988.21
$ 3,138,699.09	$ 4,275,291.09	$ 4,904,223.69	$ 5,413,946.99
$ 12,898,022.64	$ 17,568,680.47	$ 20,153,186.55	$ 22,247,819.55
$ 35,834,154.61	$ 48,810,490.55	$ 55,990,939.30	$ 61,810,389.68
$ 5,579,486.57	$ 7,599,941.43	$ 8,717,959.08	$ 9,624,065.16
$ 14,482,487.24	$ 19,726,914.57	$ 22,628,915.70	$ 24,980,865.03
$ 291,928,275.12	$ 397,641,927.69	$ 456,138,522.36	$ 503,547,541.21
$ 461,104,295.73	$ 628,080,308.23	$ 720,476,397.91	$ 795,359,525.41
$ 1,380,908.29	$ 1,880,965.57	$ 2,157,672.01	$ 2,381,930.89
$ 9,873,031.24	$ 13,448,273.12	$ 15,426,631.35	$ 17,030,007.12
$ 81,807,335.50	$ 111,431,571.93	$ 127,824,127.75	$ 141,109,601.76
$ 1,326,383,485.44	$ 1,806,696,133.79	$ 2,072,476,887.96	$ 2,287,880,961.56
$ 4,639,059.21	$ 6,318,964.64	$ 7,248,539.44	$ 8,001,920.54
$ 46,108,758.66	$ 62,805,754.83	$ 72,045,028.98	$ 79,533,070.38
$ 1,166,584,780.64	$ 1,589,030,801.46	$ 1,822,791,087.38	$ 2,012,243,924.14
$ 57,875,243.14	$ 78,833,142.28	$ 90,430,184.87	$ 99,829,097.98
$ 129,255,118.81	$ 176,061,241.70	$ 201,961,385.46	$ 222,952,357.85
$ 6,626,738.63	$ 9,026,426.52	$ 10,354,292.56	$ 11,430,471.89
$ 23,137,400.27	$ 31,515,962.07	$ 36,152,234.89	$ 39,909,738.15
$ 27,846,176.18	$ 37,929,889.36	$ 43,509,706.80	$ 48,031,913.12
$ 12,839,891.52	$ 17,489,498.79	$ 20,062,356.56	$ 22,147,549.09
$ 5,365,665.94	$ 7,308,691.65	$ 8,383,863.92	$ 9,255,245.62
$ 4,524,940.94	$ 6,163,521.63	$ 7,070,229.40	$ 7,805,077.75
$ 5,663,838.07	$ 7,714,838.48	$ 8,849,758.49	$ 9,769,563.21
$ 64,744,793.69	$ 88,190,308.25	$ 101,163,871.54	$ 111,678,396.53
$ 53,208,331.45	$ 72,476,239.17	$ 83,138,125.88	$ 91,779,134.66
$ 27,457,512.79	$ 37,400,482.41	$ 42,902,419.47	$ 47,361,507.03
$ 15,911,164.86	$ 21,672,947.80	$ 24,861,227.39	$ 27,445,193.32
$ 35,061,175.11	$ 47,757,598.16	$ 54,783,157.26	$ 60,477,076.12
$ 13,154,271.95	$ 17,917,723.30	$ 20,553,576.62	$ 22,689,824.39
$ 95,412,522.54	$ 129,963,496.59	$ 149,082,260.11	$ 164,577,210.29
$ 1,727,488.02	$ 2,353,049.44	$ 2,699,203.53	$ 2,979,746.80
$ 211,404,927.20	$ 287,959,303.49	$ 330,320,627.80	$ 364,652,691.64
$ 7,537,251.09	$ 10,266,655.57	$ 11,776,970.12	$ 13,001,016.26
$ 48,581,476.42	$ 66,173,898.11	$ 75,908,655.50	$ 83,798,265.13
$ 4,278,551.19	$ 5,827,908.73	$ 6,685,244.92	$ 7,380,079.68
$ 169,552,178.00	$ 230,950,752.81	$ 264,925,622.25	$ 292,460,818.69
$ 86,767,555.80	$ 118,187,997.15	$ 135,574,482.03	$ 149,665,493.55

$ 10,506,507.60	$ 14,311,145.21	$ 16,416,439.45	$ 18,122,691.50
$ 18,620,567.95	$ 25,363,485.36	$ 29,094,675.21	$ 32,118,646.95
$ 75,424,473.09	$ 102,737,334.58	$ 117,850,892.28	$ 130,099,792.34
$ 25,295,319.80	$ 34,455,311.75	$ 39,523,988.53	$ 43,631,936.94
$ 9,637,097.61	$ 13,126,902.73	$ 15,057,984.58	$ 16,623,044.84
$ 10,615,289.39	$ 14,459,319.28	$ 16,586,411.22	$ 18,310,329.38
$ 26,263,541.28	$ 35,774,147.52	$ 41,036,836.55	$ 45,302,023.68
$ 7,580,419.06	$ 10,325,455.61	$ 11,844,420.16	$ 13,075,476.77
$ 14,803,083.21	$ 20,163,605.40	$ 23,129,847.56	$ 25,533,861.53
$ 25,423,645.74	$ 34,630,107.33	$ 39,724,498.07	$ 43,853,286.55
$ 19,114,965.41	$ 26,036,915.03	$ 29,867,172.25	$ 32,971,433.92
$ 3,952,402.29	$ 5,383,654.14	$ 6,175,636.61	$ 6,817,504.94
$ 32,545,314.79	$ 44,330,689.46	$ 50,852,120.41	$ 56,137,464.70
$ 78,963,618.67	$ 107,558,082.65	$ 123,380,814.43	$ 136,204,470.11
$ 15,532,640.60	$ 21,157,351.58	$ 24,269,782.47	$ 26,792,276.22
$ 9,492,182.57	$ 12,929,510.76	$ 14,831,554.53	$ 16,373,080.65
$ 42,157,968.37	$ 57,424,296.44	$ 65,871,911.14	$ 72,718,345.99
$ 16,321,977.57	$ 22,232,524.83	$ 25,503,123.08	$ 28,153,804.80
$ 47,519,633.41	$ 64,727,538.38	$ 74,249,523.65	$ 81,966,690.46
$ 388,662,684.38	$ 529,405,995.27	$ 607,286,233.16	$ 670,404,875.99
$ 6,557,043.97	$ 8,931,493.89	$ 10,245,394.52	$ 11,310,255.47

$ 15,353,386,864	$ 16,878,176,520	$ 17,680,597,307	$ 17,843,677,229
$ 11,515,040,148.20	$ 12,658,632,390.05	$ 13,260,447,980.37	$ 13,382,757,921.47

	2023	2024	2025	2026
$	14,760,025.03	$ 16,225,886.20	$ 16,997,295.85	$ 17,154,073.23
$	2,338,489.55	$ 2,570,731.77	$ 2,692,949.27	$ 2,717,788.14
$	2,799,612.02	$ 3,077,649.66	$ 3,223,967.01	$ 3,253,703.81
$	38,298,235.33	$ 42,101,744.85	$ 44,103,342.30	$ 44,510,136.80
$	90,728,502.66	$ 99,739,015.04	$ 104,480,798.54	$ 105,444,494.51
$	19,767,648.00	$ 21,730,830.81	$ 22,763,956.07	$ 22,973,923.19
$	726,377,881.48	$ 798,516,588.70	$ 836,479,594.29	$ 844,195,002.56
$	249,059,295.05	$ 273,794,100.48	$ 286,810,795.58	$ 289,456,242.52
$	91,517,144.91	$ 100,605,979.64	$ 105,388,980.30	$ 106,361,053.04
$	68,786,038.27	$ 75,617,380.47	$ 79,212,375.34	$ 79,943,003.82
$	171,447,999.17	$ 188,475,000.31	$ 197,435,462.24	$ 199,256,540.96
$	82,908,899.03	$ 91,142,823.75	$ 95,475,927.88	$ 96,356,565.93
$	18,594,610.98	$ 20,441,296.07	$ 21,413,114.37	$ 21,610,621.78
$	5,718,279.22	$ 6,286,178.21	$ 6,585,035.15	$ 6,645,773.31
$	23,498,428.11	$ 25,832,125.58	$ 27,060,234.23	$ 27,309,828.79
$	65,284,914.55	$ 71,768,549.94	$ 75,180,564.04	$ 75,874,004.44
$	10,165,059.22	$ 11,174,580.91	$ 11,705,841.86	$ 11,813,812.63
$	26,385,105.28	$ 29,005,487.09	$ 30,384,463.41	$ 30,664,719.54
$	531,853,275.32	$ 584,673,176.22	$ 612,469,657.06	$ 618,118,872.52
$	840,068,780.07	$ 923,498,462.22	$ 967,403,345.08	$ 976,326,350.27
$	2,515,825.50	$ 2,765,679.47	$ 2,897,165.16	$ 2,923,887.64
$	17,987,308.70	$ 19,773,680.82	$ 20,713,759.41	$ 20,904,816.21
$	149,041,744.29	$ 163,843,514.87	$ 171,632,948.88	$ 173,216,033.85
$	2,416,488,778.88	$ 2,656,477,331.63	$ 2,782,771,343.83	$ 2,808,438,696.82
$	8,451,729.58	$ 9,291,095.51	$ 9,732,811.95	$ 9,822,584.16
$	84,003,833.83	$ 92,346,499.72	$ 96,736,828.90	$ 97,629,097.09
$	2,125,357,457.29	$ 2,336,432,908.88	$ 2,447,511,397.22	$ 2,470,086,424.49
$	105,440,754.62	$ 115,912,383.68	$ 121,423,080.05	$ 122,543,045.97
$	235,485,097.36	$ 258,871,809.60	$ 271,179,070.46	$ 273,680,335.59
$	12,073,008.84	$ 13,272,014.58	$ 13,902,991.53	$ 14,031,228.08
$	42,153,169.69	$ 46,339,523.99	$ 48,542,593.57	$ 48,990,334.23
$	50,731,913.52	$ 55,770,247.90	$ 58,421,672.13	$ 58,960,534.12
$	23,392,521.18	$ 25,715,700.73	$ 26,938,274.31	$ 27,186,743.96
$	9,775,507.37	$ 10,746,341.53	$ 11,257,243.16	$ 11,361,076.21
$	8,243,821.73	$ 9,062,539.73	$ 9,493,390.20	$ 9,580,954.06
$	10,318,736.10	$ 11,343,519.89	$ 11,882,812.52	$ 11,992,415.61
$	117,956,133.47	$ 129,670,701.32	$ 135,835,494.42	$ 137,088,395.63
$	96,938,281.65	$ 106,565,505.30	$ 111,631,833.21	$ 112,661,487.93
$	50,023,822.14	$ 54,991,833.90	$ 57,606,250.84	$ 58,137,591.65
$	28,987,959.95	$ 31,866,838.85	$ 33,381,849.30	$ 33,689,752.33
$	63,876,651.92	$ 70,220,428.64	$ 73,558,842.10	$ 74,237,324.27
$	23,965,279.21	$ 26,345,341.03	$ 27,597,848.92	$ 27,852,402.25
$	173,828,528.93	$ 191,091,947.43	$ 200,176,824.03	$ 202,023,188.16
$	3,147,246.22	$ 3,459,808.43	$ 3,624,294.34	$ 3,657,723.62
$	385,150,780.28	$ 423,401,228.27	$ 443,530,532.31	$ 447,621,509.74
$	13,731,837.64	$ 15,095,586.51	$ 15,813,259.56	$ 15,959,115.79
$	88,508,786.42	$ 97,298,852.30	$ 101,924,625.80	$ 102,864,744.49
$	7,794,933.41	$ 8,569,070.99	$ 8,976,461.01	$ 9,059,256.89
$	308,900,811.93	$ 339,578,653.04	$ 355,722,871.56	$ 359,003,940.46
$	158,078,585.30	$ 173,777,830.94	$ 182,039,561.33	$ 183,718,633.41

$ 19,141,415.74	$ 21,042,405.60	$ 22,042,801.80	$ 22,246,117.23
$ 33,924,120.73	$ 37,293,224.16	$ 39,066,215.35	$ 39,426,549.07
$ 137,413,044.48	$ 151,059,934.94	$ 158,241,613.11	$ 159,701,180.87
$ 46,084,603.09	$ 50,661,399.51	$ 53,069,939.32	$ 53,559,438.70
$ 17,557,469.99	$ 19,301,153.58	$ 20,218,767.33	$ 20,405,258.48
$ 19,339,601.24	$ 21,260,273.48	$ 22,271,027.54	$ 22,476,448.06
$ 47,848,569.80	$ 52,600,550.91	$ 55,101,281.68	$ 55,609,517.49
$ 13,810,483.77	$ 15,182,043.21	$ 15,903,826.58	$ 16,050,518.16
$ 26,969,187.17	$ 29,647,575.85	$ 31,057,078.30	$ 31,343,538.41
$ 46,318,395.34	$ 50,918,410.35	$ 53,339,168.95	$ 53,831,151.62
$ 34,824,845.10	$ 38,283,402.10	$ 40,103,468.24	$ 40,473,369.23
$ 7,200,734.86	$ 7,915,860.85	$ 8,292,196.01	$ 8,368,680.46
$ 59,293,099.51	$ 65,181,670.26	$ 68,280,531.50	$ 68,910,328.31
$ 143,860,882.27	$ 158,148,126.32	$ 165,666,790.67	$ 167,194,845.79
$ 28,298,340.67	$ 31,108,731.46	$ 32,587,700.04	$ 32,888,278.10
$ 17,293,454.66	$ 19,010,918.10	$ 19,914,733.51	$ 20,098,420.35
$ 76,806,035.83	$ 84,433,867.39	$ 88,448,014.91	$ 89,263,829.84
$ 29,736,404.35	$ 32,689,613.45	$ 34,243,740.18	$ 34,559,593.00
$ 86,574,254.11	$ 95,172,195.94	$ 99,696,864.13	$ 100,616,434.69
$ 708,090,100.55	$ 778,412,594.88	$ 815,419,818.17	$ 822,940,978.09
$ 11,946,034.73	$ 13,132,430.31	$ 13,756,771.15	$ 13,883,659.01

$ 18,754,828,964	$ 19,281,126,402	$ 18,765,063,884	$ 17,726,503,273
$ 14,066,121,723.28	$ 14,460,844,801.74	$ 14,073,797,913.22	$ 13,294,877,454.67

2027	2028	2029	2030
$ 18,030,011.71	$ 18,535,969.35	$ 18,039,851.09	$ 17,041,427.69
$ 2,856,566.56	$ 2,936,727.44	$ 2,858,125.45	$ 2,699,941.26
$ 3,419,847.69	$ 3,515,815.35	$ 3,421,713.98	$ 3,232,337.73
$ 46,782,958.03	$ 48,095,779.97	$ 46,808,488.51	$ 44,217,852.38
$ 110,828,807.00	$ 113,938,881.60	$ 110,889,288.70	$ 104,752,072.85
$ 24,147,040.69	$ 24,824,654.21	$ 24,160,218.26	$ 22,823,060.48
$ 887,302,134.12	$ 912,201,579.52	$ 887,786,354.28	$ 838,651,432.89
$ 304,236,747.37	$ 312,774,229.69	$ 304,402,776.01	$ 287,555,472.15
$ 111,792,167.76	$ 114,929,276.16	$ 111,853,175.19	$ 105,662,612.62
$ 84,025,133.63	$ 86,383,044.36	$ 84,070,987.98	$ 79,418,042.63
$ 209,431,178.22	$ 215,308,229.55	$ 209,545,469.39	$ 197,948,084.37
$ 101,276,821.50	$ 104,118,848.58	$ 101,332,090.48	$ 95,723,821.92
$ 22,714,125.02	$ 23,351,528.10	$ 22,726,520.61	$ 21,468,711.46
$ 6,985,126.45	$ 7,181,142.86	$ 6,988,938.39	$ 6,602,132.56
$ 28,704,350.65	$ 29,509,851.26	$ 28,720,015.24	$ 27,130,493.52
$ 79,748,358.92	$ 81,986,254.94	$ 79,791,879.34	$ 75,375,763.12
$ 12,417,061.38	$ 12,765,508.58	$ 12,423,837.64	$ 11,736,234.95
$ 32,230,552.20	$ 33,135,004.97	$ 32,248,141.11	$ 30,463,353.74
$ 649,681,878.08	$ 667,913,231.11	$ 650,036,423.67	$ 614,059,875.46
$ 1,026,180,505.18	$ 1,054,977,151.19	$ 1,026,740,514.30	$ 969,915,114.56
$ 3,073,190.13	$ 3,159,429.89	$ 3,074,867.23	$ 2,904,687.37
$ 21,972,278.89	$ 22,588,864.31	$ 21,984,269.65	$ 20,767,540.69
$ 182,060,964.62	$ 187,169,953.86	$ 182,160,319.27	$ 172,078,577.28
$ 2,951,846,009.14	$ 3,034,680,621.75	$ 2,953,456,896.00	$ 2,789,996,541.24
$ 10,324,154.80	$ 10,613,870.91	$ 10,329,788.91	$ 9,758,082.26
$ 102,614,331.92	$ 105,493,892.17	$ 102,670,330.80	$ 96,987,996.75
$ 2,596,216,453.87	$ 2,669,071,400.76	$ 2,597,633,265.91	$ 2,453,866,124.51
$ 128,800,461.84	$ 132,414,856.46	$ 128,870,751.06	$ 121,738,343.37
$ 287,655,275.26	$ 295,727,448.81	$ 287,812,255.03	$ 271,883,160.76
$ 14,747,704.72	$ 15,161,554.35	$ 14,755,752.86	$ 13,939,089.31
$ 51,491,927.80	$ 52,936,892.70	$ 51,520,028.07	$ 48,668,629.74
$ 61,971,236.02	$ 63,710,270.95	$ 62,005,055.08	$ 58,573,358.37
$ 28,574,980.73	$ 29,376,850.97	$ 28,590,574.72	$ 27,008,216.95
$ 11,941,206.87	$ 12,276,300.65	$ 11,947,723.45	$ 11,286,471.50
$ 10,070,186.34	$ 10,352,775.60	$ 10,075,681.86	$ 9,518,038.87
$ 12,604,784.36	$ 12,958,499.44	$ 12,611,663.07	$ 11,913,665.10
$ 144,088,540.73	$ 148,131,948.96	$ 144,167,172.99	$ 136,188,178.18
$ 118,414,321.78	$ 121,737,260.86	$ 118,478,943.06	$ 111,921,674.49
$ 61,106,271.64	$ 62,821,033.97	$ 61,139,618.67	$ 57,755,819.92
$ 35,410,052.24	$ 36,403,728.04	$ 35,429,376.28	$ 33,468,522.06
$ 78,028,104.95	$ 80,217,727.25	$ 78,070,686.59	$ 73,749,830.53
$ 29,274,629.54	$ 30,096,133.30	$ 29,290,605.35	$ 27,669,504.07
$ 212,339,098.73	$ 218,297,752.04	$ 212,454,976.82	$ 200,696,563.84
$ 3,844,497.97	$ 3,952,382.15	$ 3,846,595.99	$ 3,633,704.47
$ 470,478,408.03	$ 483,680,958.75	$ 470,735,158.37	$ 444,682,116.57
$ 16,774,036.16	$ 17,244,748.65	$ 16,783,190.11	$ 15,854,317.17
$ 108,117,327.20	$ 111,151,312.33	$ 108,176,329.18	$ 102,189,263.26
$ 9,521,849.75	$ 9,789,051.61	$ 9,527,046.03	$ 8,999,767.53
$ 377,335,759.59	$ 387,924,544.16	$ 377,541,679.96	$ 356,646,471.69
$ 193,099,858.46	$ 198,518,620.79	$ 193,205,237.27	$ 182,512,209.49

$ 23,382,070.78	$ 24,038,217.73	$ 23,394,830.88	$ 22,100,033.81
$ 41,439,787.05	$ 42,602,669.08	$ 41,462,401.64	$ 39,167,647.01
$ 167,856,002.68	$ 172,566,372.70	$ 167,947,605.37	$ 158,652,472.20
$ 56,294,344.46	$ 57,874,074.64	$ 56,325,065.51	$ 53,207,730.30
$ 21,447,212.25	$ 22,049,063.26	$ 21,458,916.46	$ 20,271,263.41
$ 23,624,162.98	$ 24,287,103.52	$ 23,637,055.20	$ 22,328,852.11
$ 58,449,106.42	$ 60,089,303.46	$ 58,481,003.38	$ 55,244,346.85
$ 16,870,105.81	$ 17,343,514.21	$ 16,879,312.20	$ 15,945,119.33
$ 32,944,033.60	$ 33,868,508.06	$ 32,962,011.87	$ 31,137,715.01
$ 56,579,931.85	$ 58,167,676.17	$ 56,610,808.76	$ 53,477,658.96
$ 42,540,060.99	$ 43,733,818.88	$ 42,563,276.03	$ 40,207,593.03
$ 8,796,010.41	$ 9,042,843.78	$ 8,800,810.58	$ 8,313,725.90
$ 72,429,096.58	$ 74,461,599.68	$ 72,468,622.72	$ 68,457,815.32
$ 175,732,316.62	$ 180,663,711.53	$ 175,828,217.59	$ 166,096,928.51
$ 34,567,652.33	$ 35,537,688.73	$ 34,586,516.65	$ 32,672,310.87
$ 21,124,706.04	$ 21,717,506.90	$ 21,136,234.26	$ 19,966,440.19
$ 93,821,909.01	$ 96,454,736.56	$ 93,873,109.68	$ 88,677,661.65
$ 36,324,309.58	$ 37,343,641.25	$ 36,344,132.55	$ 34,332,650.75
$ 105,754,211.95	$ 108,721,883.41	$ 105,811,924.33	$ 99,955,717.42
$ 864,962,815.35	$ 889,235,375.47	$ 865,434,844.46	$ 817,536,977.08
$ 14,592,600.33	$ 15,002,097.44	$ 14,600,563.83	$ 13,792,489.28

Average - Debt allocated by net assets
Weighted Average

$ 16,612,828,437	$ 15,443,469,858	$ 14,215,643,351	$ 12,926,425,519
$ 12,459,621,327.41	$ 11,582,602,393.78	$ 10,661,732,513.47	$ 9,694,819,139.14

2031	2032	2033	2034
$ 15,970,793.01	$ 14,846,626.59	$ 13,666,251.86	$ 12,426,858.38
$ 2,530,316.34	$ 2,352,210.18	$ 2,165,198.71	$ 1,968,836.66
$ 3,029,264.79	$ 2,816,038.20	$ 2,592,150.28	$ 2,357,067.96
$ 41,439,847.67	$ 38,522,942.73	$ 35,460,192.54	$ 32,244,304.85
$ 98,170,980.93	$ 91,260,834.40	$ 84,005,180.55	$ 76,386,744.01
$ 21,389,192.35	$ 19,883,630.81	$ 18,302,791.19	$ 16,642,909.60
$ 785,962,812.75	$ 730,639,761.61	$ 672,550,557.91	$ 611,556,894.03
$ 269,489,681.71	$ 250,520,601.74	$ 230,603,067.78	$ 209,689,657.12
$ 99,024,315.66	$ 92,054,103.85	$ 84,735,381.45	$ 77,050,722.93
$ 74,428,571.54	$ 69,189,626.90	$ 63,688,735.02	$ 57,912,798.55
$ 185,511,914.81	$ 172,453,936.77	$ 158,743,059.82	$ 144,346,639.03
$ 89,709,933.56	$ 83,395,350.78	$ 76,765,038.86	$ 69,803,211.35
$ 20,119,930.86	$ 18,703,711.23	$ 17,216,680.62	$ 15,655,298.47
$ 6,187,350.87	$ 5,751,830.10	$ 5,294,533.29	$ 4,814,371.65
$ 25,426,009.14	$ 23,636,300.54	$ 21,757,106.51	$ 19,783,952.78
$ 70,640,249.90	$ 65,667,961.02	$ 60,447,057.69	$ 54,965,109.19
$ 10,998,901.18	$ 10,224,700.72	$ 9,411,790.23	$ 8,558,234.22
$ 28,549,481.05	$ 26,539,914.72	$ 24,429,870.08	$ 22,214,323.21
$ 575,481,312.01	$ 534,973,820.38	$ 492,440,954.17	$ 447,781,444.66
$ 908,979,799.81	$ 844,997,719.31	$ 777,816,534.79	$ 707,276,291.04
$ 2,722,199.20	$ 2,530,586.61	$ 2,329,393.40	$ 2,118,140.52
$ 19,462,811.43	$ 18,092,845.71	$ 16,654,381.70	$ 15,143,994.49
$ 161,267,670.10	$ 149,916,217.57	$ 137,997,192.41	$ 125,482,216.00
$ 2,614,713,864.58	$ 2,430,667,054.09	$ 2,237,417,903.07	$ 2,034,506,294.50
$ 9,145,026.74	$ 8,501,318.45	$ 7,825,424.74	$ 7,115,736.34
$ 90,894,686.09	$ 84,496,709.89	$ 77,778,834.89	$ 70,725,066.13
$ 2,299,700,979.10	$ 2,137,827,576.43	$ 1,967,860,503.61	$ 1,789,395,077.16
$ 114,090,082.03	$ 106,059,407.63	$ 97,627,199.50	$ 88,773,380.97
$ 254,801,989.71	$ 236,866,760.10	$ 218,034,769.02	$ 198,261,178.38
$ 13,063,360.31	$ 12,143,844.86	$ 11,178,353.63	$ 10,164,587.85
$ 45,611,003.12	$ 42,400,495.17	$ 39,029,461.82	$ 35,489,876.81
$ 54,893,463.11	$ 51,029,573.10	$ 46,972,488.58	$ 42,712,549.83
$ 25,311,414.64	$ 23,529,772.22	$ 21,659,047.68	$ 19,694,786.92
$ 10,577,394.30	$ 9,832,863.24	$ 9,051,105.63	$ 8,230,260.14
$ 8,920,064.18	$ 8,292,190.75	$ 7,632,923.65	$ 6,940,693.19
$ 11,165,184.20	$ 10,379,279.26	$ 9,554,079.08	$ 8,687,618.88
$ 127,632,100.05	$ 118,648,218.01	$ 109,215,141.86	$ 99,310,411.91
$ 104,890,149.40	$ 97,507,048.06	$ 89,754,791.65	$ 81,614,922.41
$ 54,127,286.85	$ 50,317,327.13	$ 46,316,869.42	$ 42,116,388.83
$ 31,365,848.44	$ 29,158,041.13	$ 26,839,843.47	$ 24,405,735.92
$ 69,116,467.19	$ 64,251,435.68	$ 59,143,152.60	$ 53,779,455.36
$ 25,931,156.13	$ 24,105,890.80	$ 22,189,362.20	$ 20,177,007.16
$ 188,087,719.93	$ 174,848,433.82	$ 160,947,183.41	$ 146,350,870.47
$ 3,405,415.49	$ 3,165,712.07	$ 2,914,023.48	$ 2,649,750.46
$ 416,744,780.26	$ 387,410,577.15	$ 356,609,663.87	$ 324,268,704.94
$ 14,858,263.19	$ 13,812,406.51	$ 12,714,257.01	$ 11,561,200.02
$ 95,769,180.89	$ 89,028,094.41	$ 81,949,953.61	$ 74,517,905.76
$ 8,434,353.44	$ 7,840,668.66	$ 7,217,299.63	$ 6,562,762.15
$ 334,240,010.87	$ 310,713,227.02	$ 286,010,103.97	$ 260,071,824.76
$ 171,045,805.10	$ 159,006,080.48	$ 146,364,369.64	$ 133,090,573.25

$ 20,711,590.12	$ 19,253,724.25	$ 17,722,965.09	$ 16,115,667.97
$ 36,706,923.53	$ 34,123,163.87	$ 31,410,216.23	$ 28,561,621.21
$ 148,685,065.58	$ 138,219,288.64	$ 127,230,222.84	$ 115,691,703.76
$ 49,864,932.82	$ 46,354,995.48	$ 42,669,561.27	$ 38,799,855.34
$ 18,997,712.97	$ 17,660,485.01	$ 16,256,395.66	$ 14,782,101.84
$ 20,926,032.83	$ 19,453,072.57	$ 17,906,464.30	$ 16,282,525.62
$ 51,773,598.10	$ 48,129,311.92	$ 44,302,811.44	$ 40,284,985.92
$ 14,943,360.67	$ 13,891,514.08	$ 12,787,075.16	$ 11,627,414.29
$ 29,181,475.30	$ 27,127,423.60	$ 24,970,669.32	$ 22,706,077.32
$ 50,117,903.11	$ 46,590,159.46	$ 42,886,028.64	$ 38,996,691.27
$ 37,681,534.51	$ 35,029,173.07	$ 32,244,193.55	$ 29,319,965.06
$ 7,791,412.66	$ 7,242,983.76	$ 6,667,133.41	$ 6,062,490.55
$ 64,156,925.00	$ 59,640,990.17	$ 54,899,258.60	$ 49,920,440.44
$ 155,661,820.88	$ 144,704,957.86	$ 133,200,251.69	$ 121,120,310.21
$ 30,619,659.54	$ 28,464,375.65	$ 26,201,327.56	$ 23,825,127.07
$ 18,712,040.40	$ 17,394,920.62	$ 16,011,944.85	$ 14,559,820.29
$ 83,106,451.20	$ 77,256,680.22	$ 71,114,420.70	$ 64,665,048.20
$ 32,175,687.89	$ 29,910,876.89	$ 27,532,825.33	$ 25,035,871.20
$ 93,675,958.49	$ 87,082,211.61	$ 80,158,777.39	$ 72,889,171.46
$ 766,174,881.29	$ 712,244,680.71	$ 655,617,970.10	$ 596,159,923.96
$ 12,925,970.49	$ 12,016,125.76	$ 11,060,788.78	$ 10,057,684.97

$ 11,572,746,795	$ 10,151,384,135	$ 8,658,953,341	$ 7,091,901,008
$ 8,679,560,096.10	$ 7,613,538,100.90	$ 6,494,215,005.95	$ 5,318,925,756.24

2035	2036	2037	2038
$ 11,125,495.24	$ 9,759,063.93	$ 8,324,311.06	$ 6,817,820.55
$ 1,762,656.52	$ 1,546,167.36	$ 1,318,853.75	$ 1,080,174.46
$ 2,110,231.53	$ 1,851,053.28	$ 1,578,916.11	$ 1,293,172.09
$ 28,867,622.76	$ 25,322,106.58	$ 21,599,314.58	$ 17,690,382.98
$ 68,387,385.64	$ 59,988,059.35	$ 51,168,766.75	$ 41,908,509.52
$ 14,900,033.92	$ 13,070,014.46	$ 11,148,494.03	$ 9,130,897.57
$ 547,513,546.95	$ 480,268,032.51	$ 409,660,242.36	$ 335,522,062.70
$ 187,730,575.93	$ 164,673,540.68	$ 140,463,653.66	$ 115,043,272.30
$ 68,981,831.48	$ 60,509,495.47	$ 51,613,542.65	$ 42,272,792.18
$ 51,848,065.25	$ 45,480,095.29	$ 38,793,726.83	$ 31,773,039.95
$ 129,230,397.20	$ 113,358,343.28	$ 96,692,686.66	$ 79,193,747.21
$ 62,493,292.46	$ 54,817,877.62	$ 46,758,692.05	$ 38,296,547.19
$ 14,015,847.22	$ 12,294,423.41	$ 10,486,928.41	$ 8,589,058.66
$ 4,310,201.92	$ 3,780,823.70	$ 3,224,976.57	$ 2,641,337.09
$ 17,712,141.37	$ 15,536,739.38	$ 13,252,567.29	$ 10,854,186.60
$ 49,209,063.27	$ 43,165,215.05	$ 36,819,174.43	$ 30,155,831.77
$ 7,662,000.41	$ 6,720,954.91	$ 5,732,857.14	$ 4,695,354.48
$ 19,887,999.00	$ 17,445,358.57	$ 14,880,586.12	$ 12,187,575.05
$ 400,888,959.66	$ 351,651,850.42	$ 299,952,885.71	$ 245,668,972.77
$ 633,209,035.11	$ 555,438,416.38	$ 473,779,266.71	$ 388,037,159.56
$ 1,896,325.01	$ 1,663,418.71	$ 1,418,867.11	$ 1,162,087.92
$ 13,558,087.93	$ 11,892,886.03	$ 10,144,424.04	$ 8,308,538.94
$ 112,341,490.76	$ 98,543,729.26	$ 84,056,079.69	$ 68,844,047.63
$ 1,821,449,105.51	$ 1,597,739,057.06	$ 1,362,843,506.19	$ 1,116,203,177.78
$ 6,370,563.53	$ 5,588,132.07	$ 4,766,579.04	$ 3,903,948.36
$ 63,318,608.94	$ 55,541,828.88	$ 47,376,209.83	$ 38,802,309.82
$ 1,602,006,379.38	$ 1,405,248,246.72	$ 1,198,652,207.42	$ 981,726,366.15
$ 79,476,871.51	$ 69,715,536.58	$ 59,466,134.91	$ 48,704,263.15
$ 177,498,908.21	$ 155,698,524.53	$ 132,808,121.66	$ 108,773,198.65
$ 9,100,133.77	$ 7,982,457.00	$ 6,808,896.38	$ 5,576,657.73
$ 31,773,312.54	$ 27,870,920.06	$ 23,773,407.96	$ 19,471,020.26
$ 38,239,614.15	$ 33,543,031.68	$ 28,611,620.09	$ 23,433,637.92
$ 17,632,313.11	$ 15,466,715.62	$ 13,192,838.25	$ 10,805,267.01
$ 7,368,372.37	$ 6,463,390.21	$ 5,513,158.95	$ 4,515,416.12
$ 6,213,851.21	$ 5,450,667.13	$ 4,649,323.85	$ 3,807,913.41
$ 7,777,835.68	$ 6,822,563.31	$ 5,819,527.33	$ 4,766,339.54
$ 88,910,445.47	$ 77,990,480.70	$ 66,524,517.69	$ 54,485,256.53
$ 73,068,059.72	$ 64,093,853.89	$ 54,670,937.77	$ 44,776,875.84
$ 37,705,884.21	$ 33,074,854.36	$ 28,212,273.01	$ 23,106,562.60
$ 21,849,922.99	$ 19,166,319.41	$ 16,348,535.66	$ 13,389,862.72
$ 48,147,573.26	$ 42,234,097.05	$ 36,024,947.04	$ 29,505,339.52
$ 18,064,034.38	$ 15,845,412.96	$ 13,515,860.46	$ 11,069,830.34
$ 131,024,741.89	$ 114,932,306.88	$ 98,035,250.12	$ 80,293,340.52
$ 2,372,263.78	$ 2,080,902.78	$ 1,774,973.72	$ 1,453,748.21
$ 290,310,698.05	$ 254,654,790.83	$ 217,216,088.24	$ 177,905,450.52
$ 10,350,490.19	$ 9,079,244.86	$ 7,744,437.27	$ 6,342,889.30
$ 66,714,255.52	$ 58,520,422.77	$ 49,916,898.38	$ 40,883,197.77
$ 5,875,497.79	$ 5,153,870.22	$ 4,396,161.27	$ 3,600,566.87
$ 232,836,631.60	$ 204,239,678.78	$ 174,212,878.32	$ 142,684,737.83
$ 119,153,087.04	$ 104,518,726.52	$ 89,152,647.98	$ 73,018,265.51

$ 14,428,005.99	$ 12,655,960.91	$ 10,795,313.58	$ 8,841,633.89
$ 25,570,596.44	$ 22,430,020.43	$ 19,132,415.61	$ 15,669,930.56
$ 103,576,258.72	$ 90,855,041.43	$ 77,497,763.27	$ 63,472,621.21
$ 34,736,664.12	$ 30,470,313.34	$ 25,990,645.02	$ 21,286,993.29
$ 13,234,093.32	$ 11,608,684.38	$ 9,902,005.00	$ 8,109,991.64
$ 14,577,390.01	$ 12,786,997.62	$ 10,907,085.60	$ 8,933,177.99
$ 36,066,269.14	$ 31,636,616.51	$ 26,985,481.25	$ 22,101,789.23
$ 10,409,770.38	$ 9,131,244.27	$ 7,788,791.86	$ 6,379,216.82
$ 20,328,255.72	$ 17,831,543.04	$ 15,209,994.73	$ 12,457,369.01
$ 34,912,887.04	$ 30,624,892.59	$ 26,122,498.42	$ 21,394,984.54
$ 26,249,525.14	$ 23,025,563.23	$ 19,640,403.22	$ 16,085,985.21
$ 5,427,615.55	$ 4,760,996.79	$ 4,061,047.10	$ 3,326,099.92
$ 44,692,681.38	$ 39,203,534.37	$ 33,439,930.01	$ 27,388,145.42
$ 108,436,371.66	$ 95,118,236.18	$ 81,134,193.92	$ 66,450,949.56
$ 21,330,116.55	$ 18,710,355.51	$ 15,959,606.41	$ 13,071,319.87
$ 13,035,089.50	$ 11,434,122.18	$ 9,753,106.48	$ 7,988,040.01
$ 57,893,207.07	$ 50,782,773.89	$ 43,316,819.05	$ 35,477,566.47
$ 22,414,069.36	$ 19,661,177.43	$ 16,770,640.91	$ 13,735,577.55
$ 65,256,085.23	$ 57,241,344.69	$ 48,825,867.12	$ 39,989,615.68
$ 533,728,975.51	$ 468,176,479.64	$ 399,346,358.97	$ 327,074,732.27
$ 9,004,425.95	$ 7,898,503.99	$ 6,737,285.93	$ 5,518,006.97

$ 5,446,496,059	$ 3,718,820,862	$ 1,904,761,905	$ -
$ 4,084,872,044.06	$ 2,789,115,646.26	$ 1,428,571,428.57	$ -

2039	2040	2041	2042
$ 5,236,005.51	$ 3,575,099.72	$ 1,831,148.63	$ -
$ 829,561.20	$ 566,417.29	$ 290,116.17	$ -
$ 993,140.86	$ 678,108.07	$ 347,323.65	$ -
$ 13,586,004.81	$ 9,276,407.72	$ 4,751,330.79	$ -
$ 32,185,239.42	$ 21,975,805.82	$ 11,255,900.54	$ -
$ 7,012,421.29	$ 4,788,021.20	$ 2,452,401.10	$ -
$ 257,676,974.05	$ 175,939,630.97	$ 90,115,420.74	$ -
$ 88,351,871.86	$ 60,325,901.41	$ 30,898,632.43	$ -
$ 32,465,004.20	$ 22,166,826.82	$ 11,353,740.56	$ -
$ 24,401,318.72	$ 16,661,011.44	$ 8,533,688.78	$ -
$ 60,819,860.79	$ 41,527,280.05	$ 21,270,070.27	$ -
$ 29,411,295.10	$ 20,081,780.40	$ 10,285,789.96	$ -
$ 6,596,295.42	$ 4,503,894.02	$ 2,306,872.55	$ -
$ 2,028,515.63	$ 1,385,053.10	$ 709,417.44	$ -
$ 8,335,886.88	$ 5,691,672.17	$ 2,915,246.72	$ -
$ 23,159,321.97	$ 15,812,986.69	$ 8,099,334.65	$ -
$ 3,605,976.68	$ 2,462,129.99	$ 1,261,090.97	$ -
$ 9,359,913.43	$ 6,390,868.73	$ 3,273,371.79	$ -
$ 188,670,864.19	$ 128,822,850.17	$ 65,982,435.45	$ -
$ 298,007,947.05	$ 203,477,273.92	$ 104,220,067.13	$ -
$ 892,469.77	$ 609,370.72	$ 312,116.71	$ -
$ 6,380,859.60	$ 4,356,796.28	$ 2,231,529.80	$ -
$ 52,871,413.98	$ 36,100,148.64	$ 18,490,320.04	$ -
$ 857,230,832.94	$ 585,309,870.87	$ 299,792,860.69	$ -
$ 2,998,186.15	$ 2,047,135.82	$ 1,048,532.98	$ -
$ 29,799,714.81	$ 20,346,990.05	$ 10,421,629.05	$ -
$ 753,954,232.83	$ 514,793,492.83	$ 263,674,715.84	$ -
$ 37,404,297.80	$ 25,539,334.18	$ 13,081,122.39	$ -
$ 83,536,529.50	$ 57,038,026.88	$ 29,214,599.13	$ -
$ 4,282,807.15	$ 2,924,264.04	$ 1,497,793.78	$ -
$ 14,953,513.16	$ 10,210,130.72	$ 5,229,579.15	$ -
$ 17,996,756.64	$ 12,288,031.30	$ 6,293,869.69	$ -
$ 8,298,317.21	$ 5,666,019.92	$ 2,902,107.76	$ -
$ 3,467,786.15	$ 2,367,774.68	$ 1,212,762.64	$ -
$ 2,924,432.44	$ 1,996,777.42	$ 1,022,739.66	$ -
$ 3,660,492.37	$ 2,499,352.84	$ 1,280,156.33	$ -
$ 41,844,032.31	$ 28,570,746.88	$ 14,633,797.18	$ -
$ 34,388,110.82	$ 23,479,907.55	$ 12,026,294.11	$ -
$ 17,745,566.66	$ 12,116,520.93	$ 6,206,022.92	$ -
$ 10,283,256.13	$ 7,021,319.21	$ 3,596,285.45	$ -
$ 22,659,751.62	$ 15,471,884.34	$ 7,924,623.68	$ -
$ 8,501,498.72	$ 5,804,750.51	$ 2,973,164.90	$ -
$ 61,664,335.44	$ 42,103,880.11	$ 21,565,402.01	$ -
$ 1,116,461.42	$ 762,310.30	$ 390,451.62	$ -
$ 136,629,280.91	$ 93,289,302.83	$ 47,782,325.84	$ -
$ 4,871,263.93	$ 3,326,057.29	$ 1,703,590.32	$ -
$ 31,397,812.14	$ 21,438,157.22	$ 10,980,519.55	$ -
$ 2,765,192.75	$ 1,888,049.93	$ 967,049.96	$ -
$ 109,580,190.32	$ 74,820,415.44	$ 38,322,651.81	$ -
$ 56,077,163.91	$ 38,289,007.24	$ 19,611,442.73	$ -

$ 6,790,270.21	$ 4,636,338.34	$ 2,374,709.88	$ -
$ 12,034,321.25	$ 8,216,931.48	$ 4,208,672.22	$ -
$ 48,746,222.04	$ 33,283,502.92	$ 17,047,647.84	$ -
$ 16,348,158.96	$ 11,162,382.92	$ 5,717,318.08	$ -
$ 6,228,377.62	$ 4,252,682.89	$ 2,178,203.43	$ -
$ 6,860,574.99	$ 4,684,341.85	$ 2,399,297.04	$ -
$ 16,973,912.61	$ 11,589,642.15	$ 5,936,158.18	$ -
$ 4,899,163.04	$ 3,345,106.56	$ 1,713,347.26	$ -
$ 9,567,111.99	$ 6,532,342.13	$ 3,345,833.77	$ -
$ 16,431,094.97	$ 11,219,010.92	$ 5,746,322.67	$ -
$ 12,353,846.31	$ 8,435,100.45	$ 4,320,417.30	$ -
$ 2,554,405.38	$ 1,744,126.12	$ 893,332.89	$ -
$ 21,033,771.61	$ 14,361,679.11	$ 7,355,981.98	$ -
$ 51,033,542.97	$ 34,845,266.06	$ 17,847,575.30	$ -
$ 10,038,618.99	$ 6,854,283.07	$ 3,510,730.35	$ -
$ 6,134,720.21	$ 4,188,734.41	$ 2,145,449.33	$ -
$ 27,246,351.25	$ 18,603,575.28	$ 9,528,660.51	$ -
$ 10,548,761.03	$ 7,202,603.69	$ 3,689,138.47	$ -
$ 30,711,551.66	$ 20,969,584.44	$ 10,740,518.86	$ -
$ 251,189,524.24	$ 171,510,055.81	$ 87,846,613.95	$ -
$ 4,237,764.06	$ 2,893,509.01	$ 1,482,041.20	$ -

2043	2044	2045	2046
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -

$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -

2047	2048	2049	2050
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -

$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -

2017	2018	2019	2020	2021	2022	2023	2024
1.15	1.99	2.70	3.55	4.00	4.35	4.56	4.95
2.15	2.75	3.28	3.90	4.24	4.52	4.68	4.98
2.43	2.94	3.39	3.93	4.22	4.46	4.60	4.86
1.46	2.06	2.59	3.24	3.60	3.90	4.08	4.41
1.93	2.46	2.92	3.46	3.75	3.98	4.12	4.38
2.01	2.51	2.93	3.44	3.72	3.94	4.07	4.32
2.01	2.47	2.87	3.35	3.62	3.83	3.96	4.19
1.92	2.42	2.85	3.35	3.61	3.82	3.95	4.18
2.50	2.82	3.09	3.41	3.59	3.72	3.80	3.95
1.85	2.28	2.64	3.08	3.32	3.51	3.62	3.83
1.78	2.19	2.55	2.97	3.19	3.37	3.48	3.68
2.12	2.46	2.75	3.09	3.28	3.44	3.53	3.69
1.90	2.29	2.63	3.02	3.23	3.40	3.49	3.68
1.95	2.32	2.64	3.02	3.22	3.39	3.48	3.66
0.98	1.53	2.00	2.56	2.85	3.09	3.23	3.48
2.03	2.37	2.66	3.00	3.18	3.33	3.42	3.58
1.56	1.97	2.33	2.75	2.98	3.17	3.28	3.48
1.51	1.91	2.25	2.66	2.88	3.05	3.16	3.35
1.90	2.26	2.55	2.88	3.05	3.18	3.25	3.39
0.92	1.39	1.80	2.29	2.57	2.79	2.92	3.16
1.34	1.75	2.10	2.52	2.74	2.91	3.01	3.20
1.48	1.86	2.19	2.58	2.78	2.94	3.04	3.22
1.69	2.02	2.31	2.65	2.84	2.98	3.07	3.23
1.34	1.73	2.07	2.48	2.70	2.87	2.98	3.17
2.16	2.38	2.58	2.81	2.94	3.05	3.11	3.23
1.37	1.75	2.07	2.45	2.66	2.83	2.92	3.10
1.79	2.08	2.33	2.62	2.79	2.92	2.99	3.14
1.62	1.93	2.19	2.51	2.68	2.82	2.90	3.06
1.76	2.05	2.29	2.59	2.74	2.87	2.94	3.08
1.24	1.61	1.94	2.33	2.54	2.71	2.81	3.00
1.05	1.47	1.83	2.26	2.49	2.67	2.78	2.98
1.48	1.84	2.13	2.47	2.64	2.78	2.86	3.01
1.02	1.41	1.75	2.14	2.36	2.53	2.63	2.81
1.11	1.47	1.78	2.15	2.35	2.51	2.61	2.78
1.36	1.67	1.94	2.25	2.41	2.55	2.63	2.77
1.18	1.52	1.81	2.16	2.34	2.49	2.58	2.74
1.08	1.44	1.74	2.10	2.29	2.45	2.54	2.70
1.37	1.66	1.91	2.21	2.37	2.50	2.58	2.72
1.40	1.69	1.93	2.22	2.38	2.51	2.58	2.72
1.38	1.69	1.95	2.24	2.39	2.51	2.58	2.70
0.83	1.21	1.53	1.91	2.12	2.28	2.38	2.56
1.25	1.55	1.81	2.11	2.27	2.40	2.48	2.61
1.39	1.66	1.88	2.15	2.30	2.42	2.48	2.61
1.49	1.73	1.92	2.15	2.28	2.37	2.43	2.54
0.99	1.31	1.59	1.91	2.08	2.22	2.30	2.45
0.96	1.28	1.56	1.87	2.03	2.16	2.24	2.38
0.48	0.89	1.24	1.65	1.86	2.03	2.13	2.31
1.27	1.51	1.72	1.96	2.10	2.21	2.27	2.39
1.18	1.43	1.65	1.90	2.04	2.15	2.22	2.34
0.85	1.15	1.41	1.72	1.89	2.02	2.10	2.25

	1.00	1.27	1.50	1.77	1.91	2.03	2.09	2.22
	0.94	1.21	1.44	1.70	1.84	1.96	2.02	2.15
	1.04	1.28	1.48	1.72	1.85	1.96	2.02	2.13
	0.73	0.99	1.23	1.52	1.68	1.81	1.88	2.03
	0.97	1.20	1.39	1.61	1.74	1.83	1.89	2.00
	0.99	1.21	1.40	1.63	1.75	1.84	1.90	2.00
	0.90	1.12	1.31	1.54	1.66	1.76	1.82	1.92
	0.93	1.14	1.32	1.54	1.65	1.75	1.80	1.91
	0.39	0.70	0.97	1.29	1.46	1.60	1.68	1.83
	0.67	0.94	1.16	1.43	1.57	1.68	1.74	1.86
	0.82	1.03	1.21	1.43	1.55	1.64	1.70	1.80
	0.84	1.04	1.21	1.41	1.51	1.60	1.64	1.73
	1.30	1.40	1.48	1.57	1.62	1.66	1.68	1.73
	0.54	0.75	0.94	1.16	1.28	1.38	1.44	1.54
	0.50	0.68	0.83	1.01	1.10	1.18	1.23	1.31
	0.23	0.43	0.60	0.81	0.92	1.01	1.06	1.15
	0.22	0.42	0.59	0.79	0.89	0.98	1.03	1.12
	0.48	0.59	0.69	0.80	0.86	0.90	0.93	0.98
	1.14	1.15	1.15	1.16	1.13	1.10	1.06	1.03
	0.13	0.25	0.35	0.47	0.53	0.59	0.62	0.68
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
LDC Average	**1.26**	**1.59**	**1.87**	**2.20**	**2.38**	**2.52**	**2.61**	**2.76**
Industry Average	**1.54**	**1.82**	**2.07**	**2.38**	**2.55**	**2.69**	**2.77**	**2.92**
Max	2.50	2.94	3.39	3.93	4.24	4.52	4.68	4.98
Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Max	**2.50**	**2.94**	**3.39**	**3.93**	**4.24**	**4.52**	**4.68**	**4.98**
Min	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
LDC Average	**1.26**	**1.59**	**1.87**	**2.20**	**2.38**	**2.52**	**2.61**	**2.76**
LDC Average	1.26	1.59	1.87	2.20	2.38	2.52	2.61	2.76

2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
5.15	5.19	5.42	5.55	5.42	5.16	4.89	4.59	4.27	3.93
5.13	5.17	5.34	5.44	5.34	5.14	4.93	4.70	4.45	4.19
5.00	5.02	5.18	5.27	5.18	5.01	4.82	4.62	4.40	4.18
4.59	4.64	4.84	4.97	4.87	4.66	4.43	4.19	3.93	3.66
4.51	4.54	4.69	4.78	4.69	4.52	4.33	4.14	3.93	3.71
4.44	4.47	4.61	4.70	4.62	4.45	4.28	4.09	3.89	3.68
4.32	4.34	4.48	4.56	4.49	4.33	4.15	3.97	3.78	3.58
4.29	4.32	4.45	4.53	4.45	4.30	4.14	3.96	3.78	3.58
4.03	4.05	4.13	4.18	4.14	4.04	3.93	3.81	3.69	3.56
3.94	3.96	4.08	4.15	4.08	3.94	3.79	3.63	3.46	3.29
3.78	3.80	3.92	3.98	3.92	3.79	3.64	3.49	3.33	3.16
3.78	3.80	3.90	3.96	3.90	3.79	3.67	3.54	3.40	3.26
3.77	3.79	3.89	3.95	3.89	3.77	3.64	3.51	3.36	3.20
3.75	3.77	3.88	3.94	3.88	3.76	3.63	3.49	3.35	3.19
3.62	3.64	3.79	3.87	3.79	3.62	3.44	3.24	3.04	2.81
3.66	3.68	3.77	3.82	3.77	3.66	3.55	3.43	3.30	3.16
3.59	3.61	3.73	3.79	3.73	3.59	3.45	3.29	3.13	2.95
3.45	3.47	3.58	3.65	3.58	3.46	3.32	3.17	3.01	2.85
3.46	3.47	3.55	3.59	3.55	3.46	3.37	3.26	3.15	3.02
3.29	3.31	3.46	3.54	3.46	3.29	3.12	2.93	2.73	2.53
3.30	3.32	3.43	3.49	3.43	3.31	3.17	3.03	2.87	2.71
3.31	3.32	3.43	3.49	3.43	3.31	3.19	3.05	2.91	2.75
3.32	3.33	3.43	3.48	3.43	3.32	3.20	3.08	2.95	2.81
3.27	3.29	3.41	3.47	3.41	3.28	3.14	2.99	2.83	2.67
3.29	3.30	3.37	3.41	3.37	3.30	3.21	3.12	3.03	2.93
3.20	3.22	3.32	3.38	3.32	3.20	3.07	2.93	2.79	2.63
3.21	3.23	3.31	3.36	3.31	3.21	3.11	3.00	2.89	2.76
3.13	3.15	3.24	3.29	3.24	3.14	3.03	2.91	2.79	2.66
3.15	3.17	3.25	3.29	3.25	3.15	3.06	2.95	2.84	2.72
3.09	3.11	3.23	3.29	3.23	3.10	2.96	2.82	2.67	2.51
3.08	3.10	3.22	3.28	3.22	3.09	2.95	2.79	2.63	2.46
3.08	3.10	3.18	3.23	3.18	3.09	2.98	2.87	2.75	2.62
2.91	2.93	3.03	3.10	3.04	2.91	2.78	2.64	2.49	2.33
2.87	2.89	2.99	3.05	2.99	2.88	2.75	2.62	2.48	2.32
2.84	2.86	2.94	2.99	2.95	2.85	2.74	2.63	2.52	2.39
2.83	2.84	2.94	2.99	2.94	2.83	2.71	2.59	2.46	2.32
2.79	2.81	2.90	2.96	2.91	2.80	2.68	2.55	2.41	2.27
2.80	2.81	2.90	2.95	2.90	2.80	2.70	2.59	2.47	2.35
2.79	2.81	2.89	2.94	2.89	2.80	2.70	2.59	2.48	2.36
2.76	2.77	2.84	2.88	2.84	2.76	2.67	2.57	2.47	2.36
2.65	2.67	2.78	2.84	2.78	2.66	2.53	2.39	2.25	2.09
2.68	2.70	2.78	2.82	2.78	2.69	2.59	2.48	2.37	2.25
2.68	2.69	2.76	2.81	2.76	2.68	2.59	2.49	2.39	2.28
2.59	2.60	2.66	2.70	2.67	2.60	2.52	2.44	2.35	2.26
2.53	2.55	2.64	2.69	2.64	2.54	2.43	2.31	2.19	2.06
2.45	2.47	2.55	2.59	2.55	2.46	2.36	2.25	2.13	2.01
2.40	2.42	2.53	2.58	2.53	2.41	2.28	2.14	1.99	1.83
2.45	2.46	2.53	2.57	2.53	2.45	2.37	2.28	2.18	2.08
2.41	2.42	2.49	2.53	2.49	2.41	2.32	2.23	2.13	2.02
2.33	2.34	2.43	2.48	2.43	2.33	2.22	2.11	1.99	1.86

2.28	2.30	2.37	2.41	2.37	2.29	2.20	2.10	2.00	1.89
2.21	2.22	2.29	2.34	2.30	2.21	2.13	2.03	1.93	1.82
2.19	2.20	2.27	2.31	2.27	2.20	2.11	2.03	1.93	1.84
2.11	2.12	2.21	2.26	2.21	2.11	2.00	1.89	1.78	1.65
2.05	2.07	2.13	2.16	2.13	2.06	1.98	1.90	1.81	1.72
2.05	2.06	2.12	2.16	2.12	2.06	1.98	1.90	1.82	1.73
1.98	1.99	2.05	2.08	2.05	1.98	1.90	1.82	1.74	1.65
1.96	1.97	2.03	2.07	2.03	1.96	1.89	1.81	1.73	1.64
1.91	1.93	2.01	2.07	2.02	1.91	1.80	1.69	1.57	1.44
1.92	1.93	2.00	2.04	2.00	1.92	1.84	1.75	1.65	1.55
1.86	1.87	1.93	1.97	1.93	1.86	1.79	1.71	1.62	1.53
1.78	1.79	1.84	1.87	1.84	1.78	1.72	1.65	1.58	1.50
1.75	1.75	1.78	1.79	1.78	1.75	1.72	1.69	1.65	1.61
1.60	1.61	1.67	1.71	1.67	1.60	1.52	1.44	1.36	1.27
1.35	1.36	1.41	1.44	1.41	1.36	1.30	1.23	1.16	1.09
1.20	1.21	1.27	1.30	1.27	1.21	1.14	1.06	0.98	0.90
1.17	1.18	1.23	1.26	1.23	1.17	1.11	1.03	0.96	0.88
1.01	1.02	1.05	1.06	1.05	1.01	0.97	0.93	0.89	0.85
0.99	0.94	0.90	0.86	0.81	0.76	0.70	0.65	0.60	0.56
0.71	0.71	0.75	0.77	0.75	0.71	0.67	0.62	0.57	0.52
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2025	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
2.84	**2.86**	**2.95**	**3.00**	**2.95**	**2.85**	**2.73**	**2.61**	**2.48**	**2.35**
3.00	**3.02**	**3.11**	**3.17**	**3.11**	**3.01**	**2.90**	**2.78**	**2.66**	**2.53**
5.15	5.19	5.42	5.55	5.42	5.16	4.93	4.70	4.45	4.19
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2025	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
5.15	**5.19**	**5.42**	**5.55**	**5.42**	**5.16**	**4.93**	**4.70**	**4.45**	**4.19**
0.00	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
2.84	**2.86**	**2.95**	**3.00**	**2.95**	**2.85**	**2.73**	**2.61**	**2.48**	**2.35**
2.84	2.86	2.95	3.00	2.95	2.85	2.73	2.61	2.48	2.35

2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
3.57	3.18	2.77	2.32	1.85	1.33	0.78	0.18	0.18	0.18
3.92	3.63	3.32	3.00	2.65	2.28	1.89	1.47	1.47	1.47
3.95	3.70	3.43	3.15	2.85	2.54	2.20	1.84	1.84	1.84
3.37	3.07	2.74	2.40	2.04	1.66	1.26	0.84	0.84	0.84
3.47	3.22	2.96	2.67	2.37	2.05	1.71	1.34	1.34	1.34
3.46	3.22	2.97	2.70	2.42	2.12	1.80	1.46	1.46	1.46
3.37	3.14	2.90	2.65	2.39	2.11	1.81	1.50	1.50	1.50
3.36	3.13	2.89	2.62	2.34	2.03	1.70	1.34	1.34	1.34
3.42	3.28	3.12	2.95	2.77	2.57	2.36	2.14	2.14	2.14
3.10	2.89	2.68	2.45	2.20	1.94	1.66	1.36	1.36	1.36
2.98	2.78	2.58	2.36	2.12	1.87	1.60	1.31	1.31	1.31
3.11	2.94	2.77	2.59	2.40	2.19	1.98	1.74	1.74	1.74
3.03	2.85	2.66	2.45	2.23	1.99	1.73	1.45	1.45	1.45
3.03	2.86	2.67	2.47	2.26	2.03	1.79	1.53	1.53	1.53
2.57	2.32	2.05	1.75	1.44	1.10	0.73	0.34	0.34	0.34
3.01	2.85	2.68	2.50	2.31	2.11	1.88	1.65	1.65	1.65
2.77	2.57	2.36	2.14	1.90	1.65	1.38	1.09	1.09	1.09
2.67	2.48	2.28	2.07	1.84	1.60	1.34	1.06	1.06	1.06
2.89	2.74	2.57	2.39	2.20	1.98	1.73	1.46	1.46	1.46
2.31	2.08	1.84	1.58	1.31	1.02	0.72	0.40	0.40	0.40
2.53	2.34	2.14	1.92	1.68	1.43	1.16	0.87	0.87	0.87
2.59	2.41	2.22	2.02	1.80	1.56	1.31	1.03	1.03	1.03
2.66	2.50	2.34	2.16	1.96	1.76	1.54	1.30	1.30	1.30
2.49	2.30	2.10	1.89	1.66	1.42	1.17	0.89	0.89	0.89
2.82	2.71	2.59	2.47	2.34	2.21	2.06	1.91	1.91	1.91
2.47	2.29	2.10	1.90	1.69	1.46	1.21	0.95	0.95	0.95
2.63	2.50	2.35	2.20	2.03	1.86	1.67	1.47	1.47	1.47
2.52	2.37	2.22	2.05	1.88	1.69	1.49	1.27	1.27	1.27
2.59	2.46	2.32	2.16	2.00	1.82	1.63	1.43	1.43	1.43
2.34	2.16	1.97	1.76	1.55	1.32	1.08	0.82	0.82	0.82
2.27	2.08	1.87	1.64	1.40	1.14	0.86	0.56	0.56	0.56
2.48	2.32	2.16	1.98	1.78	1.56	1.33	1.07	1.07	1.07
2.15	1.97	1.78	1.57	1.35	1.11	0.85	0.58	0.58	0.58
2.16	1.99	1.81	1.62	1.41	1.19	0.95	0.70	0.70	0.70
2.26	2.11	1.96	1.80	1.62	1.43	1.23	1.01	1.01	1.01
2.17	2.01	1.84	1.66	1.46	1.25	1.03	0.79	0.79	0.79
2.11	1.95	1.77	1.58	1.38	1.16	0.92	0.67	0.67	0.67
2.22	2.08	1.94	1.78	1.61	1.44	1.25	1.04	1.04	1.04
2.23	2.10	1.95	1.80	1.64	1.46	1.28	1.08	1.08	1.08
2.24	2.11	1.96	1.81	1.64	1.45	1.24	1.02	1.02	1.02
1.92	1.75	1.56	1.36	1.14	0.91	0.67	0.40	0.40	0.40
2.12	1.98	1.84	1.68	1.50	1.31	1.11	0.89	0.89	0.89
2.16	2.04	1.90	1.76	1.61	1.45	1.28	1.09	1.09	1.09
2.16	2.05	1.94	1.82	1.69	1.55	1.39	1.23	1.23	1.23
1.92	1.77	1.61	1.44	1.26	1.06	0.85	0.62	0.62	0.62
1.88	1.73	1.58	1.41	1.23	1.03	0.82	0.59	0.59	0.59
1.66	1.47	1.27	1.06	0.82	0.57	0.30	0.00	0.00	0.00
1.97	1.86	1.73	1.61	1.47	1.32	1.16	0.99	0.99	0.99
1.91	1.79	1.67	1.53	1.39	1.24	1.08	0.90	0.90	0.90
1.73	1.59	1.43	1.27	1.10	0.92	0.73	0.52	0.52	0.52

1.78	1.65	1.52	1.38	1.22	1.06	0.88	0.69	0.69	0.69
1.71	1.59	1.46	1.32	1.16	1.00	0.83	0.64	0.64	0.64
1.73	1.62	1.50	1.37	1.23	1.09	0.93	0.76	0.76	0.76
1.53	1.39	1.25	1.10	0.95	0.78	0.61	0.43	0.43	0.43
1.62	1.52	1.40	1.29	1.16	1.02	0.88	0.72	0.72	0.72
1.63	1.53	1.42	1.30	1.18	1.04	0.89	0.73	0.73	0.73
1.55	1.44	1.33	1.21	1.08	0.95	0.80	0.64	0.64	0.64
1.54	1.44	1.34	1.22	1.10	0.98	0.84	0.70	0.70	0.70
1.30	1.15	0.99	0.83	0.65	0.46	0.25	0.04	0.04	0.04
1.43	1.31	1.18	1.04	0.89	0.73	0.55	0.36	0.36	0.36
1.44	1.34	1.23	1.12	1.00	0.87	0.73	0.59	0.59	0.59
1.41	1.32	1.23	1.12	1.00	0.88	0.75	0.60	0.60	0.60
1.57	1.53	1.48	1.43	1.38	1.32	1.26	1.19	1.19	1.19
1.17	1.07	0.96	0.84	0.72	0.59	0.45	0.30	0.30	0.30
1.01	0.93	0.84	0.75	0.65	0.54	0.43	0.31	0.31	0.31
0.81	0.72	0.62	0.51	0.40	0.27	0.14	0.00	0.00	0.00
0.79	0.70	0.60	0.50	0.39	0.27	0.14	0.00	0.00	0.00
0.80	0.75	0.69	0.64	0.57	0.51	0.43	0.36	0.36	0.36
0.52	0.48	0.44	0.40	0.37	0.34	0.30	0.28	0.26	0.25
0.47	0.42	0.36	0.29	0.23	0.16	0.08	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2035	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
2.20	**2.05**	**1.89**	**1.71**	**1.53**	**1.33**	**1.11**	**0.88**	**0.88**	**0.88**
2.39	**2.25**	**2.10**	**1.94**	**1.77**	**1.60**	**1.41**	**1.22**	**1.22**	**1.22**
3.95	3.70	3.43	3.15	2.85	2.57	2.36	2.14	2.14	2.14
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2035	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
3.95	**3.70**	**3.43**	**3.15**	**2.85**	**2.57**	**2.36**	**2.14**	**2.14**	**2.14**
0.00	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
2.20	**2.05**	**1.89**	**1.71**	**1.53**	**1.33**	**1.11**	**0.88**	**0.88**	**0.88**
2.20	2.05	1.89	1.71	1.53	1.33	1.11	0.88	0.88	0.88

2045	2046	2047	2048	2049	2050
0.18	0.18	0.18	0.18	0.18	0.18
1.47	1.47	1.47	1.47	1.47	1.47
1.84	1.84	1.84	1.84	1.84	1.84
0.85	0.85	0.85	0.85	0.85	0.85
1.34	1.34	1.34	1.34	1.34	1.34
1.46	1.46	1.46	1.46	1.46	1.46
1.50	1.50	1.50	1.50	1.50	1.50
1.34	1.34	1.34	1.34	1.34	1.34
2.14	2.14	2.14	2.14	2.14	2.14
1.36	1.36	1.36	1.36	1.36	1.36
1.31	1.31	1.31	1.31	1.31	1.31
1.74	1.74	1.74	1.74	1.74	1.74
1.45	1.45	1.45	1.45	1.45	1.45
1.53	1.53	1.53	1.53	1.53	1.53
0.34	0.34	0.34	0.34	0.34	0.34
1.65	1.65	1.65	1.65	1.65	1.65
1.09	1.09	1.09	1.09	1.09	1.09
1.06	1.06	1.06	1.06	1.06	1.06
1.46	1.46	1.46	1.46	1.46	1.46
0.40	0.40	0.40	0.40	0.40	0.40
0.87	0.87	0.87	0.87	0.87	0.87
1.03	1.03	1.03	1.03	1.03	1.03
1.30	1.30	1.30	1.30	1.30	1.30
0.89	0.89	0.89	0.89	0.89	0.89
1.91	1.91	1.91	1.91	1.91	1.91
0.95	0.95	0.95	0.95	0.95	0.95
1.47	1.47	1.47	1.47	1.47	1.47
1.27	1.27	1.27	1.27	1.27	1.27
1.43	1.43	1.43	1.43	1.43	1.43
0.82	0.82	0.82	0.82	0.82	0.82
0.56	0.56	0.56	0.56	0.56	0.56
1.07	1.07	1.07	1.07	1.07	1.07
0.58	0.58	0.58	0.58	0.58	0.58
0.70	0.70	0.70	0.70	0.70	0.70
1.01	1.01	1.01	1.01	1.01	1.01
0.79	0.79	0.79	0.79	0.79	0.79
0.67	0.67	0.67	0.67	0.67	0.67
1.04	1.04	1.04	1.04	1.04	1.04
1.08	1.08	1.08	1.08	1.08	1.08
1.02	1.02	1.02	1.02	1.02	1.02
0.40	0.40	0.40	0.40	0.40	0.40
0.89	0.89	0.89	0.89	0.89	0.89
1.09	1.09	1.09	1.09	1.09	1.09
1.23	1.23	1.23	1.23	1.23	1.23
0.62	0.62	0.62	0.62	0.62	0.62
0.59	0.59	0.59	0.59	0.59	0.59
0.00	0.00	0.00	0.00	0.00	0.00
0.99	0.99	0.99	0.99	0.99	0.99
0.90	0.90	0.90	0.90	0.90	0.90
0.52	0.52	0.52	0.52	0.52	0.52

0.69	0.69	0.69	0.69	0.69	0.69
0.64	0.64	0.64	0.64	0.64	0.64
0.76	0.76	0.76	0.76	0.76	0.76
0.43	0.43	0.43	0.43	0.43	0.43
0.72	0.72	0.72	0.72	0.72	0.72
0.73	0.73	0.73	0.73	0.73	0.73
0.64	0.64	0.64	0.64	0.64	0.64
0.70	0.70	0.70	0.70	0.70	0.70
0.04	0.04	0.04	0.04	0.04	0.04
0.36	0.36	0.36	0.36	0.36	0.36
0.59	0.59	0.59	0.59	0.59	0.59
0.60	0.60	0.60	0.60	0.60	0.60
1.19	1.19	1.19	1.19	1.19	1.19
0.30	0.30	0.30	0.30	0.30	0.30
0.31	0.31	0.31	0.31	0.31	0.31
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00
0.36	0.36	0.36	0.36	0.36	0.36
0.23	0.22	0.21	0.20	0.19	0.18
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00

2045	**2046**	**2047**	**2048**	**2049**	**2050**
0.88	**0.88**	**0.88**	**0.88**	**0.88**	**0.88**
1.22	**1.22**	**1.22**	**1.22**	**1.22**	**1.22**
2.14	2.14	2.14	2.14	2.14	2.14
0.00	0.00	0.00	0.00	0.00	0.00

2045	**2046**	**2047**	**2048**	**2049**	**2050**
2.14	**2.14**	**2.14**	**2.14**	**2.14**	**2.14**
0.00	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
0.88	**0.88**	**0.88**	**0.88**	**0.88**	**0.88**
0.88	0.88	0.88	0.88	0.88	0.88

0.19	6.55
1.52	6.08
1.9	5.82
1.44	5.66
1.42	5.55
2015	**2028**
1.12	1.65
0	1.55
0	1.52
0.39	1.31
0	0.82

Debt	Equity
86.75%	1.00

Algoma Power Inc.
Atikokan Hydro Inc.
Bluewater Power Distribution Corporation
Brant County Power Inc.
Brantford Power Inc.
Burlington Hydro Inc.
Cambridge and North Dumfries Hydro Inc.
Canadian Niagara Power Inc.
Centre Wellington Hydro Ltd.
Chapleau Public Utilities Corporation
COLLUS PowerStream Corp.
Cooperative Hydro Embrun Inc.
E.L.K. Energy Inc.
Enersource Hydro Mississauga Inc.
Entegrus Powerlines Inc.
EnWin Utilities Ltd.
Erie Thames Powerlines Corporation
Espanola Regional Hydro Distribution Corporation
Essex Powerlines Corporation
Festival Hydro Inc.
Fort Frances Power Corporation
Greater Sudbury Hydro Inc.
Grimsby Power Incorporated
Guelph Hydro Electric Systems Inc.
Haldimand County Hydro Inc.
Halton Hills Hydro Inc.
Hearst Power Distribution Company Limited
Horizon Utilities Corporation
Hydro 2000 Inc.
Hydro Hawkesbury Inc.
Hydro One Brampton Networks Inc.
Hydro One Networks Inc.
Hydro Ottawa Limited
Innpower Corporation
Kenora Hydro Electric Corporation Ltd.
Kingston Hydro Corporation
Kitchener-Wilmot Hydro Inc.
Lakefront Utilities Inc.
Lakeland Power Distribution Ltd.
London Hydro Inc.
Midland Power Utility Corporation
Milton Hydro Distribution Inc.
Newmarket-Tay Power Distribution Ltd.
Niagara Peninsula Energy Inc.
Niagara-on-the-Lake Hydro Inc.
North Bay Hydro Distribution Limited
Northern Ontario Wires Inc.
Oakville Hydro Electricity Distribution Inc.
Orangeville Hydro Limited
Orillia Power Distribution Corporation
Oshawa PUC Networks Inc.
Ottawa River Power Corporation

Peterborough Distribution Incorporated
PowerStream Inc.
PUC Distribution Inc.
Renfrew Hydro Inc.
Rideau St. Lawrence Distribution Inc.
Sioux Lookout Hydro Inc.
St. Thomas Energy Inc.
Thunder Bay Hydro Electricity Distribution Inc.
Tillsonburg Hydro Inc.
Toronto Hydro-Electric System Limited
Veridian Connections Inc.
Wasaga Distribution Inc.
Waterloo North Hydro Inc.
Welland Hydro-Electric System Corp.
Wellington North Power Inc.
West Coast Huron Energy Inc.
Westario Power Inc.
Whitby Hydro Electric Corporation
Woodstock Hydro Services Inc.

Algoma Power Inc.
Atikokan Hydro Inc.
Bluewater Power Distribution Corporation
Brant County Power Inc.
Brantford Power Inc.
Burlington Hydro Inc.
Cambridge and North Dumfries Hydro Inc.
Canadian Niagara Power Inc.
Centre Wellington Hydro Ltd.
Chapleau Public Utilities Corporation
COLLUS PowerStream Corp.
Cooperative Hydro Embrun Inc.
E.L.K. Energy Inc.
Enersource Hydro Mississauga Inc.
Entegrus Powerlines Inc.
EnWin Utilities Ltd.
Erie Thames Powerlines Corporation
Espanola Regional Hydro Distribution Corporation
Essex Powerlines Corporation
Festival Hydro Inc.
Fort Frances Power Corporation
Greater Sudbury Hydro Inc.
Grimsby Power Incorporated
Guelph Hydro Electric Systems Inc.
Haldimand County Hydro Inc.
Halton Hills Hydro Inc.
Hearst Power Distribution Company Limited
Horizon Utilities Corporation
Hydro 2000 Inc.
Hydro Hawkesbury Inc.
Hydro One Brampton Networks Inc.
Hydro One Networks Inc.
Hydro Ottawa Limited
Innpower Corporation
Kenora Hydro Electric Corporation Ltd.
Kingston Hydro Corporation
Kitchener-Wilmot Hydro Inc.
Lakefront Utilities Inc.
Lakeland Power Distribution Ltd.
London Hydro Inc.
Midland Power Utility Corporation
Milton Hydro Distribution Inc.
Newmarket-Tay Power Distribution Ltd.
Niagara Peninsula Energy Inc.
Niagara-on-the-Lake Hydro Inc.
North Bay Hydro Distribution Limited
Northern Ontario Wires Inc.
Oakville Hydro Electricity Distribution Inc.
Orangeville Hydro Limited
Orillia Power Distribution Corporation
Oshawa PUC Networks Inc.
Ottawa River Power Corporation

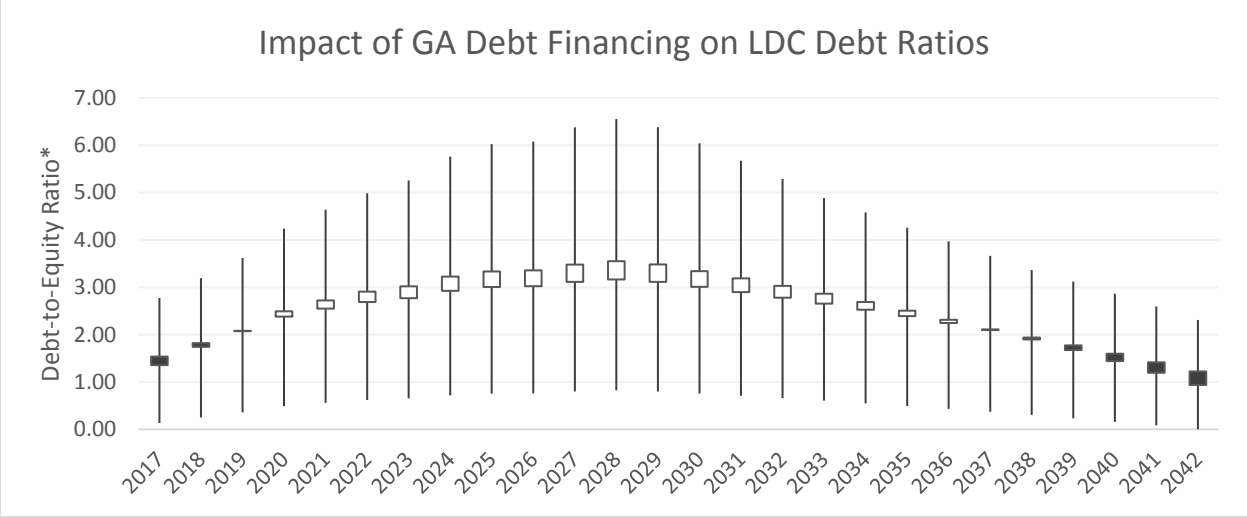
Peterborough Distribution Incorporated
PowerStream Inc.
PUC Distribution Inc.
Renfrew Hydro Inc.
Rideau St. Lawrence Distribution Inc.
Sioux Lookout Hydro Inc.
St. Thomas Energy Inc.
Thunder Bay Hydro Electricity Distribution Inc.
Tillsonburg Hydro Inc.
Toronto Hydro-Electric System Limited
Veridian Connections Inc.
Wasaga Distribution Inc.
Waterloo North Hydro Inc.
Welland Hydro-Electric System Corp.
Wellington North Power Inc.
West Coast Huron Energy Inc.
Westario Power Inc.
Whitby Hydro Electric Corporation
Woodstock Hydro Services Inc.

2013	2014
41,683,727	42,460,469
1,995,013	2,384,315
24,981,599	26,719,298
17,072,904	17,924,657
37,203,260	39,301,924
69,349,889	73,699,453
72,695,188	75,384,708
16,964,302	17,804,416
7,141,592	7,697,938
1,850,723	1,999,207
7,665,076	8,221,490
4,066,904	4,191,558
6,475,262	7,308,051
253,278,174	270,258,824
30,320,309	32,758,059
113,685,077	118,764,248
13,531,271	14,731,975
2,005,234	2,564,302
19,374,900	20,470,458
24,392,139	23,909,252
5,693,372	5,700,629
15,824,266	16,274,160
8,046,710	8,035,623
62,406,329	65,215,320
36,474,602	38,876,080
26,916,937	29,039,693
3,214,304	3,310,389
213,500,296	213,509,710
660,561	779,502
3,376,373	3,664,774
122,008,195	129,322,016
2,464,717,382	2,594,974,606
268,838,560	281,908,812
15,837,337	15,756,882
6,055,052	6,442,029
24,876,088	26,067,098
121,018,900	128,354,047
8,937,100	9,089,715
14,694,633	21,067,844
140,447,639	149,985,115
10,001,589	10,500,060
35,335,806	37,027,508
42,684,166	44,246,101
68,496,330	70,743,037
14,135,888	14,999,975
30,513,103	31,775,977
2,826,736	3,086,652
75,807,438	82,237,646
9,012,142	9,303,524
11,880,887	13,086,438
38,943,978	40,125,187
7,656,463	7,738,426

30,523,224	29,077,232
373,722,742	425,568,900
26,462,762	27,610,230
3,583,566	3,644,409
3,807,743	3,900,922
3,038,399	3,019,692
13,679,463	14,474,462
58,156,778	61,123,299
9,392,974	9,850,260
1,117,735,375	1,212,636,558
93,655,868	94,878,556
10,144,768	10,404,682
82,635,291	83,437,814
14,953,016	15,581,523
2,812,792	3,092,163
5,342,394	5,506,127
27,843,220	29,242,436
46,810,638	48,132,601
14,409,721	14,891,721

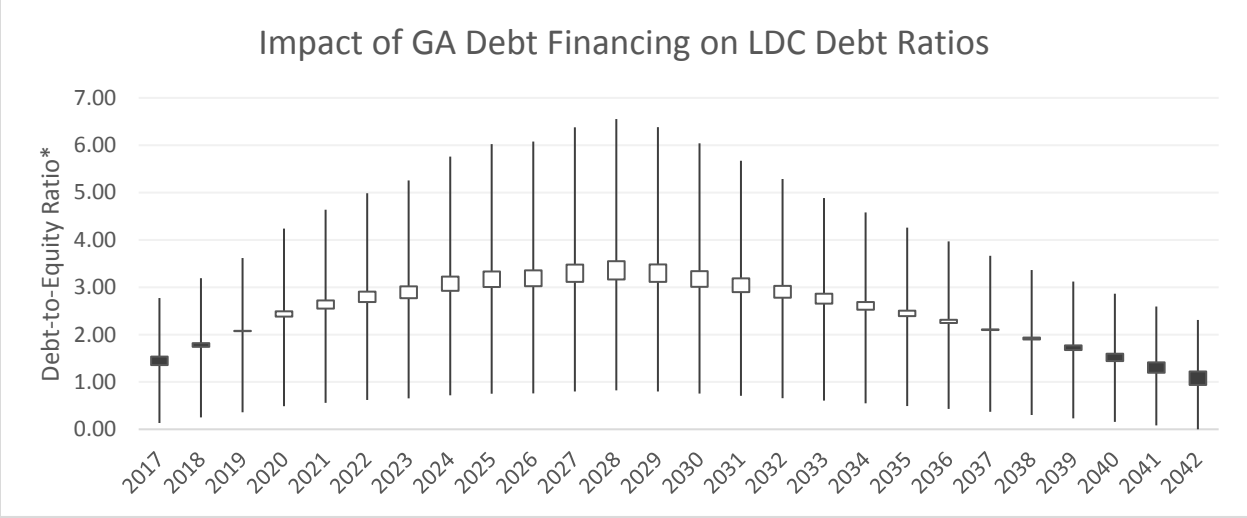
2015	
46,627,048	5.76%
2,598,748	14.13%
28,003,138	5.87%
18,554,171	4.25%
41,188,551	5.22%
77,404,191	5.65%
77,245,728	3.08%
20,981,471	11.21%
8,139,725	6.76%
2,035,073	4.86%
8,800,971	7.15%
4,283,523	2.63%
8,101,528	11.85%
272,871,015	3.80%
33,856,252	5.67%
133,146,785	8.22%
13,721,087	0.70%
3,024,125	22.81%
22,715,272	8.28%
24,214,793	-0.36%
5,960,305	2.32%
17,082,400	3.90%
8,693,576	3.94%
64,816,369	1.91%
46,077,499	12.40%
30,720,882	6.83%
3,096,947	-1.84%
219,488,003	1.39%
939,423	19.25%
3,995,605	8.78%
198,831,794	27.66%
2,678,596,512	4.25%
302,804,101	6.13%
17,129,123	4.00%
6,520,421	3.77%
25,804,613	1.85%
135,182,084	5.69%
9,234,799	1.65%
22,363,800	23.37%
150,139,873	3.39%
10,663,219	3.25%
38,925,202	4.96%
46,312,646	4.16%
75,285,163	4.84%
15,223,275	3.77%
33,090,961	4.14%
3,289,387	7.87%
83,932,445	5.22%
9,480,643	2.57%
12,636,640	3.13%
41,129,970	2.77%
7,936,840	1.81%

29,478,852	-1.73%
443,180,449	8.90%
28,638,644	4.03%
3,672,801	1.24%
4,112,761	3.93%
2,975,005	-1.05%
15,794,779	7.45%
63,034,710	4.11%
10,395,028	5.20%
1,354,509,769	10.08%
99,579,344	3.11%
10,869,843	3.51%
85,153,420	1.51%
16,104,148	3.78%
3,345,526	9.06%
5,683,502	3.14%
30,143,122	4.05%
49,057,899	2.37%
12,272,655	-7.71%



**Debt ratio is calculated as the total interest-bearing debt divided by the total equity for each LDC. The chart shows the effect of LDCs taking on their share of the Global Adjustment (GA) Debt Financing for the portion of the GA not passed on to ratepayers. In this scenario, it is assumed that 75% of the additional GA debt financing is absorbed on LDC balance sheets. The debt is allocated to the LDCs based on their percentage share of the total LDC KWh production. A nearly identical result is replicated if the allocation factor is based off of revenue market share. Financial data is from the financials of 71 LDCs on record in Ontario as of December 31, 2015 as recorded by the Ontario Energy Board. Annual drawdown is assumed for the additional debt, with a 5% accumulated interest incorporated into the total debt amount. Pre-existing debt is kept stable over the analysis; likely that other interest-bearing debt for normal LDC operations would increase over time based on historical growth; this would further increase the forecasted ratios.*

At the end of 2015, the average LDC had a debt-to-equity ratio of 0.94 (total industry LDC interest bearing debt/total industry LDC equity was 1.22) based on 71 LDCs. The range of the debt-to-equity ratios was from 0.00 to 2.31. When assessing the impact of the GA Debt Financing proposal, the average debt-to-equity ratio peaks to over 3.0 in 2028, with a range from 0.82 to 6.55. This ratio would decrease over time as repayments of debt begin in 2028.



**Debt-to-equity ratio is calculated as the total interest-bearing debt divided by the total equity for each LDC. The chart shows the effect of LDCs taking on their share of the Global Adjustment (GA) Debt Financing for the portion of the GA not passed on to ratepayers. In this scenario, it is assumed that 75% of the additional GA debt financing is absorbed on LDC balance sheets. The debt is allocated to the LDCs based on their percentage share of the total LDC KWh production. A nearly identical result is replicated if the allocation factor is based off of revenue market share. Financial data is from the financials of 71 LDCs on record in Ontario as of December 31, 2015 as recorded by the Ontario Energy Board. Annual drawdown is assumed for the additional debt, with a 5% accumulated interest incorporated into the total debt amount. Pre-existing debt and equityis kept stable over the analysis; likely that other interest-bearing debt for normal LDC operations would increase over time based on historical growth; this would further increase the forecasted ratios.*

At the end of 2015, the average LDC had a debt-to-equity ratio of 0.94 (total industry LDC interest-bearing debt/total industry LDC equity was 1.22) based on 71 LDCs. The range of the debt-to-equity ratios was from 0.00 to 2.31. When assessing the impact of the GA Debt Financing proposal, the average debt-to-equity ratio peaks to over 3.0 in 2028, with a range from 0.82 to 6.55. This ratio would decrease over time as repayments of debt begin in 2028.

DRAFT

GA Financing Scenario

Option 1a/1b – Annual vs Monthly Drawdown

Corporate and Electricity Finance Division

January 30, 2017

DRAFT

GA Smoothing – Schedule of Borrowing and Re-Payments

Scenario 1B, 25-year, Yearly Drawdowns, **as per MOE**

- The table below shows a sample schedule of borrowing and re-payments under financing of the GA.

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Amount by which debt account changes in present year, not including interest	-1,142	-1,667	-2,115	-3,409	-1,819	-1,337	-635	-1,215	-325	451	-187	350	1,531	2,000
Amount by which debt account changes in present year, including interest	-1,142	-1,725	-2,258	-3,665	-2,259	-1,889	-1,282	-1,926	-1,132	-413	-1,072	-588	563	1,061
$ millions	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	0	0
Amount by which debt account changes in present year, including interest	1,114	1,169	1,228	1,289	1,354	1,421	1,492	1,567	1,645	1,728	1,814	1,905	0	0

DRAFT

GA Smoothing – Schedule of Borrowing and Re-Payments

Scenario 1B, 25-year, Monthly Drawdowns

- The table below shows a sample schedule of borrowing and re-payments under financing of the GA. Schedule below assumes monthly drawdown or compounding of debt, as calculated by CEFD staff.

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Amount by which debt account changes in present year, not including interest	-1,142	-1,667	-2,115	-3,409	-1,819	-1,337	-635	-1,215	-325	451	-187	350	1,531	2,000
Annual Interest Costs	*-27*	*-97*	*-196*	*-341*	*-492*	*-596*	*-677*	*-756*	*-834*	*-873*	*-909*	*-952*	*-954*	*-915*
Amount by which debt account changes in present year, including interest	-1,168	-1,765	-2,311	-3,750	-2,311	-1,933	-1,311	-1,971	-1,158	-422	-1,097	-602	576	1,085

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	0	0
Annual Interest Costs	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*	*-232*	*-144*	*-51*	*0*	*0*
Amount by which debt account changes in present year, including interest	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684	1,768	1,856	1,949	0	0

DRAFT

GA Smoothing – Schedule of Borrowing and Re-Payments

Scenario 1B, 30-year, Monthly Drawdowns

- The table below shows a sample schedule of borrowing and re-payments under financing of the GA. Schedule below assumes monthly drawdown or compounding of debt, as calculated by CEFD staff.

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Amount by which debt account changes in present year, not including interest	-1,416	-1,922	-2,352	-3,629	-2,046	-1,570	-875	-1,462	-580	188	-458	71	1,243	1,849
Annual Interest Costs	*-33*	*-117*	*-229*	*-388*	*-552*	*-671*	*-767*	*-862*	*-958*	*-1,017*	*-1,073*	*-1,138*	*-1,164*	*-1,146*
Amount by which debt account changes in present year, including interest	-1,449	-2,040	-2,581	-4,016	-2,598	-2,241	-1,642	-2,325	-1,538	-829	-1,531	-1,067	79	703

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*	*-915*	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
Amount by which debt account changes in present year, including interest	893	938	984	1,034	1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

DRAFT

GA Smoothing – Schedule of Borrowing and Re-Payments

Scenario 1A, 25-year, Monthly Drawdowns

- The table below shows a sample schedule of borrowing and re-payments under financing of the GA. Schedule below assumes monthly drawdown or compounding of debt, as calculated by CEFD staff.

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Amount by which debt account changes in present year, not including interest	-3,107	-2,667	-2,201	-2,630	-1,115	-710	-90	-757	41	721	-19	411	1,480	1,977
Annual Interest Costs	*-72*	*-221*	*-355*	*-492*	*-613*	*-690*	*-746*	*-803*	*-863*	*-888*	*-913*	*-950*	*-952*	*-914*
Amount by which debt account changes in present year, including interest	-3,180	-2,888	-2,556	-3,123	-1,728	-1,400	-836	-1,560	-821	-167	-932	-539	528	1,063

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	0	0
Annual Interest Costs	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*	*-232*	*-144*	*-51*	*0*	*0*
Amount by which debt account changes in present year, including interest	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684	1,768	1,856	1,949	0	0

DRAFT

GA Smoothing – Schedule of Borrowing and Re-Payments

Scenario 1A, 30-year, Monthly Drawdowns

- The table below shows a sample schedule of borrowing and re-payments under financing of the GA. Schedule below assumes monthly drawdown or compounding of debt, as calculated by CEFD staff.

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Amount by which debt account changes in present year, not including interest	-3,326	-2,890	-2,429	-2,863	-1,352	-952	-337	-1,009	-215	459	-286	139	1,202	1,693
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*	*-668*	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
Amount by which debt account changes in present year, including interest	-3,404	-3,128	-2,812	-3,396	-2,020	-1,712	-1,168	-1,914	-1,198	-568	-1,359	-992	47	552

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*	*-915*	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
Amount by which debt account changes in present year, including interest	893	938	984	1,034	1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

Ontario
Executive Council
Conseil exécutif

Order in Council
Décret

On the recommendation of the undersigned, the Lieutenant Governor, by and with the advice and concurrence of the Executive Council, orders that:

Sur la recommandation de la personne soussignée, le lieutenant-gouverneur, sur l'avis et avec le consentement du Conseil exécutif, décrète ce qui suit :

WHEREAS pursuant to Order in Council 675/97 made under subsection 22(1) of the *Capital Investment Plan Act, 1993*, the Minister of Finance is authorized to lend Two Billion One Hundred and Sixty Million Dollars in lawful money of Canada to the Ontario Financing Authority (the "OFA");

AND WHEREAS pursuant to Order in Council 767/99 made under subsection 22(1) of the *Capital Investment Plan Act, 1993*, the Minister of Finance is authorized to lend Six Hundred and Fifty-six Million Dollars in lawful money of Canada to the OFA;

AND WHEREAS pursuant to Order in Council 1883/2006 made under subsection 22(1) of the *Capital Investment Plan Act, 1993*, the Minister of Finance is authorized to lend Eight Hundred Million Dollars in lawful money of Canada to the OFA;

AND WHEREAS pursuant to Order in Council 2144/2007 made under subsection 22(1) of the *Capital Investment Plan Act, 1993*, the Minister of Finance is authorized to lend Two Billion Dollars in lawful money of Canada to the OFA;

AND WHEREAS pursuant to Order in Council 300/2010 made under subsection 22(1) of the *Capital Investment Plan Act, 1993,* the Minister of Finance is authorized to lend One Billion Eight Hundred Million Dollars in lawful money of Canada to the OFA;

AND WHEREAS pursuant to Order in Council 163/2012 made under subsection 22(1) of the *Capital Investment Plan Act, 1993,* the Minister of Finance is authorized to lend One Billion Seven Hundred Million Dollars in lawful money of Canada to the OFA;

AND WHEREAS the Province considers it expedient to amend Order in Council 675/97, Order in Council 767/99, Order in Council 1883/2006, Order in Council 2144/2007, Order in Council 300/2010 and Order in Council 163/2012 to allow the Minister of Finance to determine the spread to be retained by the OFA on advances made by the Minister of Finance to the OFA where the OFA subsequently loans those moneys to public bodies;

THEREFORE:

1. Order in Council 675/97, as amended by Order in Council 1709/98, Order in Council 844/2008, Order in Council 1723/2009 and Order in Council 1268/2010, is hereby amended by:

(i) deleting subparagraph (d)(ii) and replacing said subparagraph with the following subparagraph:

"(d)(ii) in the event that moneys included in an Advance are used by the OFA for the purpose of funding loans to third parties (a "Third Party Loan"), the rate of interest payable by the OFA to the Province on the portion of the Advance so used shall be adjusted effective as of the date that the portion of the Advance is used to fund the Third Party Loan so that the per annum rate of interest payable by the OFA on such moneys is equivalent to the per annum rate of interest payable to the OFA under the Third Party Loan less an amount as may be determined by the Minister of Finance in respect of such Third Party Loan or a class of such Third Party Loans, until but excluding the date on which the Third Party Loan is repaid, at which time the interest rate set out in subparagraph (i) shall again be applicable to that portion of the Advance; and"

2. Order in Council 767/99, as amended by Order in Council 844/2008, Order in Council 1723/2009 and Order in Council 1268/2010, is hereby amended by:

(i) deleting subparagraph (d)(ii) and replacing said subparagraph with the following subparagraph:

"(d)(ii) in the event that moneys included in an Advance are used by the OFA for the purpose of funding loans to third parties (a "Third Party Loan"), the rate of interest payable by the OFA to the Province on the portion of the Advance so used shall be adjusted effective as of the date that the portion of the Advance is used to fund the Third Party Loan so that the per annum rate of interest payable by the OFA on such moneys is equivalent to the per annum rate of interest payable to the OFA under the Third Party Loan less an amount as may be determined by the Minister of Finance in respect of such Third Party Loan or a class of such Third Party Loans, until but excluding the date on which the Third Party Loan is repaid, at which time the interest rate set out in

subparagraph (i) shall again be applicable to that portion of the Advance; and"

3. Order in Council 1883/2006, as amended by Order in Council 844/2008, Order in Council 1723/2009 and Order in Council 1268/2010, is hereby amended by:

(i) deleting subparagraph (c)(ii) and replacing said subparagraph with the following subparagraph:

"(c)(ii) in the event that moneys included in an Advance are used by the OFA for the purpose of funding loans to third parties (a "Third Party Loan"), the rate of interest payable by the OFA to the Province on the portion of the Advance so used shall be adjusted effective as of the date that the portion of the Advance is used to fund the Third Party Loan so that the per annum rate of interest payable by the OFA on such moneys is equivalent to the per annum rate of interest payable to the OFA under the Third Party Loan less an amount as may be determined by the Minister of Finance in respect of such Third Party Loan or a class of such Third Party Loans, until but excluding the date on which the Third Party Loan is repaid, at which time the interest rate set out in subparagraph (i) shall again be applicable to that portion of the Advance; and"

4. Order in Council 2144/2007, as amended by Order in Council 844/2008, Order in Council 1723/2009 and Order in Council 1268/2010, is hereby amended by:

(i) deleting subparagraph (c)(ii) and replacing said subparagraph with the following subparagraph:

"(c)(ii) in the event that moneys included in an Advance are used by the OFA for the purpose of funding loans to third parties (a "Third Party Loan"), the rate of interest payable by the OFA to the Province on the portion of the Advance so used shall be adjusted effective as of the date that the portion of the Advance is used to fund the Third Party Loan so that the per annum rate of interest payable by the OFA on such moneys is equivalent to the per annum rate of interest payable to the OFA under the Third Party Loan less an amount as may be determined by the Minister of Finance in respect of such Third Party Loan or a class of such Third Party Loans, until but excluding the date on which the Third Party Loan is repaid, at which time the interest rate set out in subparagraph (i) shall again be applicable to that portion of the Advance; and"

5. Order in Council 300/2010, as amended by Order in Council 1268/2010, is hereby amended by:

(i) deleting subparagraph (c)(ii) and replacing said subparagraph with the following subparagraph:

"(c)(ii) in the event that moneys included in an Advance are used by the OFA for the purpose of funding loans to third parties (a "Third Party Loan"), the rate of interest payable by the OFA to the Province on the portion of the Advance so used shall be adjusted effective as of the date that the portion of the Advance is used to fund the Third Party Loan so that the per annum rate of interest payable by the OFA on such moneys is equivalent to the per annum rate of interest payable to the OFA under the Third Party Loan less an amount as may be determined by the Minister of Finance in respect of such Third Party Loan or a class of such Third Party Loans, until but excluding the date on which the Third Party Loan is repaid, at which time the interest rate set out in subparagraph (i) shall again be applicable to that portion of the Advance: and"

6. Order in Council 163/2012 is hereby amended by:

(i) deleting subparagraph (c)(ii) and replacing said subparagraph with the following subparagraph:

"(c)(ii) in the event that moneys included in an Advance are used by the OFA for the purpose of funding loans to third parties (a "Third Party Loan"), the rate of interest payable by the OFA to the Province on the portion of the Advance so used shall be adjusted effective as of the date that the portion of the Advance is used to fund the Third Party Loan so that the per annum rate of interest payable by the OFA on such moneys is equivalent to the per annum rate of interest payable to the OFA under the Third Party Loan less an amount as may be determined by the Minister of Finance in respect of such Third Party Loan or a class of such Third Party Loans, until but excluding the date on which the Third Party Loan is repaid, at which time the interest rate set out in subparagraph (i) shall again be applicable to that portion of the Advance: and"

7. The forms of promissory note which evidence the loans pursuant to Order in Council 675/97, Order in Council 767/99, Order in Council 1883/2006, Order in Council 2144/2007, Order in Council 300/2010 and Order in Council 163/2012, are

hereby amended, as applicable, to reflect the above changes to the Orders in Council in respect of all amounts advanced to the OFA on or after the date of this Order.

Recommended _____
Minister of Finance

Concurred _____
Chair of Cabinet

Approved and Ordered

JUL 18 2012
Date

_____
Lieutenant Governor

OFA Loan

Ontario

Executive Council
Conseil exécutif

O.C./Décret 675/97

I hereby certify that the attached is a true copy of an Order made on April 2nd, 1997, by Her Honour the Honourable Hilary M. Weston, Lieutenant Governor of the Province of Ontario in Council.

Deputy Clerk, Executive Council of Ontario

Dated at Toronto,
April 3rd, 1997

Ontario
Executive Council
Conseil des ministres

Order in Council
Décret

On the recommendation of the undersigned, the Lieutenant Governor, by and with the advice and concurrence of the Executive Council, orders that:

Sur la recommandation du soussigné, le lieutenant-gouverneur, sur l'avis et avec le consentement du Conseil des ministres, décrète ce qui suit :

WHEREAS pursuant to subsection 22(1) of the *Capital Investment Plan Act, 1993* (the "Act"), the Minister of Finance may purchase securities of or make loans to corporations established under subsection 2(1) of the Act in such amounts, at such times and on such terms and conditions as the Lieutenant Governor in Council considers expedient;

AND WHEREAS the Ontario Financing Authority (the "OFA") is a corporation established under subsection 2(1) of the Act;

AND WHEREAS pursuant to subsection 6(3) of the Act, the power of a corporation to borrow and issue securities, among other things, may only be exercised under the authority of a by-law that has been approved by the Minister of Finance;

AND WHEREAS the OFA wishes to borrow Two Billion One Hundred and Sixty Million Dollars from the Minister of Finance and has been authorized to do so by a borrowing by-law approved in accordance with the Act;

THEREFORE:

Pursuant to subsection 22 (1) of the Act, the Minister of Finance is authorized to lend a maximum of Two Billion One Hundred and Sixty Million Dollars in lawful money of Canada to the OFA on the following terms and conditions:

(a) the loan may be advanced in such amounts and at such time or times as required by the OFA;

(b) repayment of advances made under the loan plus accrued interest may be made in whole or in part at any time provided that the loan plus accrued interest shall be fully repaid by August 31, 2027;

(c) the OFA shall be entitled to use the loan as a revolving credit facility allowing for successive advances of moneys repaid under the loan; provided that the maximum principal amount of the loan outstanding at any time shall not exceed Two Billion One Hundred and Sixty Million Dollars;

(d) each advance (an "Advance") made under the loan hereby authorized shall bear interest at a rate which is determined as follows:

(i) from the date of advance to (but excluding) the date of repayment the Advance shall bear interest at a per annum rate equivalent to the yield earned on ninety day Province of Ontario treasury bills (determined as at the auction date immediately preceding the date of the Advance), provided that if an Advance is outstanding for longer than ninety days, the interest rate shall be reset on the last day of each ninety day period (the "Reset Date") to the yield earned on ninety day Province of Ontario treasury bills as at the auction date immediately preceding the Reset Date for such ninety day period;

(ii) in the event that moneys included in an Advance are subsequently loaned by the OFA to third parties for the purposes contemplated in the Act, (a "Third Party Loan") the rate of interest payable by the OFA to the Province on the portion of the Advance so loaned may be adjusted at the option of the OFA effective as of the date of the Third Party Loan so that the per annum rate of interest payable by the OFA on such moneys is equivalent to either:

(A) the per annum rate of interest payable to the OFA under the Third Party Loan, or

(B) the per annum rate of interest payable to the OFA under the Third Party Loan less 25 basis points,

until but excluding the date on which the Third Party Loan is repaid, at which time the interest rate set out in subparagraph (i) shall again be applicable to that portion of the Advance; and

(iii) in the event that moneys described in subparagraph (ii), once repaid, are subsequently loaned to third parties again, subparagraph (ii) shall again be applicable in determining the interest rate payable to the Province on that portion of the Advance included in any subsequent loan, and so on, until the Advance shall be repaid to the Province in full;

(e) interest for any period of less than one year shall be payable for the actual number of days included in such period, computed on the basis of a 365-day year;

(f) the loan hereby authorized shall be evidenced by a promissory note in a form acceptable to the Minister of Finance.

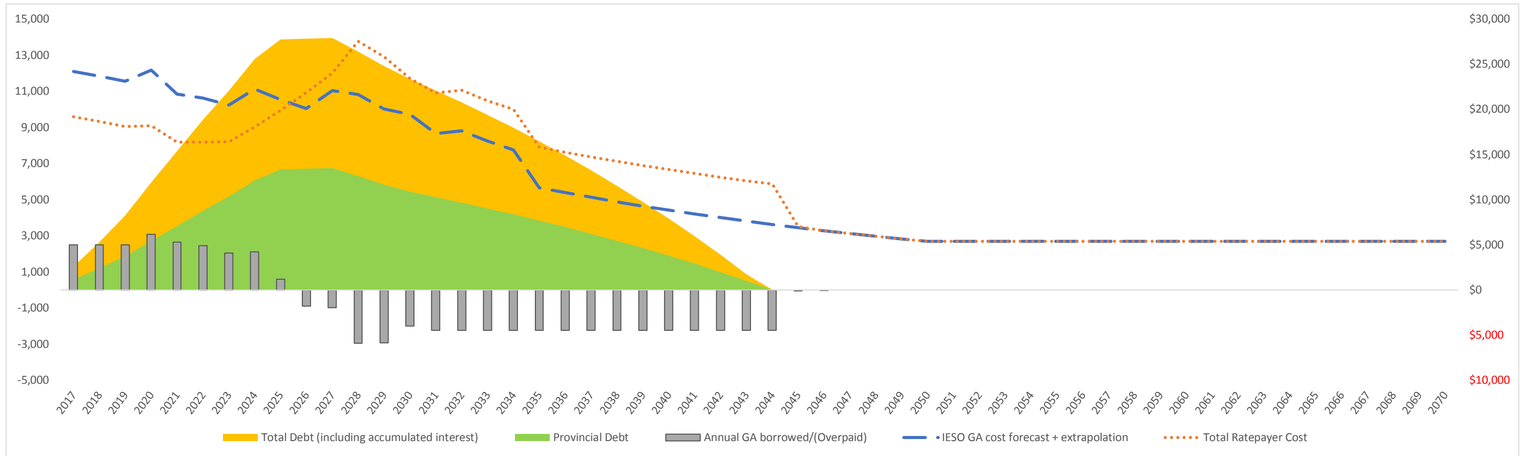
Recommended
Minister of Finance

Concurred
Chair of Cabinet

Approved and Ordered
APR - 2 1997
Date

Lieutenant Governor

Preferred Share Return Calculation



Provincial Interest rate	**3.5%**
OPG Rate	**5.0%**
Preferred Share rate	**3.8%**
Ratepayer Charge	**4.47%**
Length of payment period	**28**

Preferred Share Rate to compensate Provincial Costs ($1B cushion)

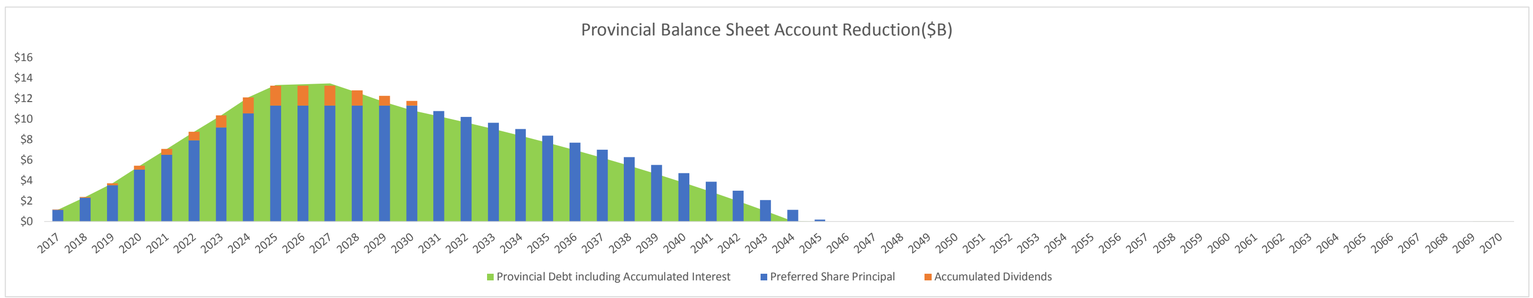
	OPG/OPG Trust rate				
Provincial Borrowing	**2%**	**3%**	**4%**	**5%**	**6%**
2.00%	2.47%	2.39%	2.43%	2.32%	2.30%
2.50%	2.98%	2.85%	2.84%	2.82%	2.70%
3.00%	3.38%	3.35%	3.36%	3.24%	3.26%
3.50%	3.92%	3.85%	3.79%	3.80%	3.72%
4.00%	4.34%	4.35%	4.23%	4.28%	4.23%
4.50%	4.94%	4.80%	4.85%	4.79%	4.77%
5.00%	5.42%	5.45%	5.38%	5.33%	5.32%
5.50%	5.94%	6.01%	5.96%	5.90%	5.88%
6.00%	6.65%	6.60%	6.49%	6.51%	6.51%

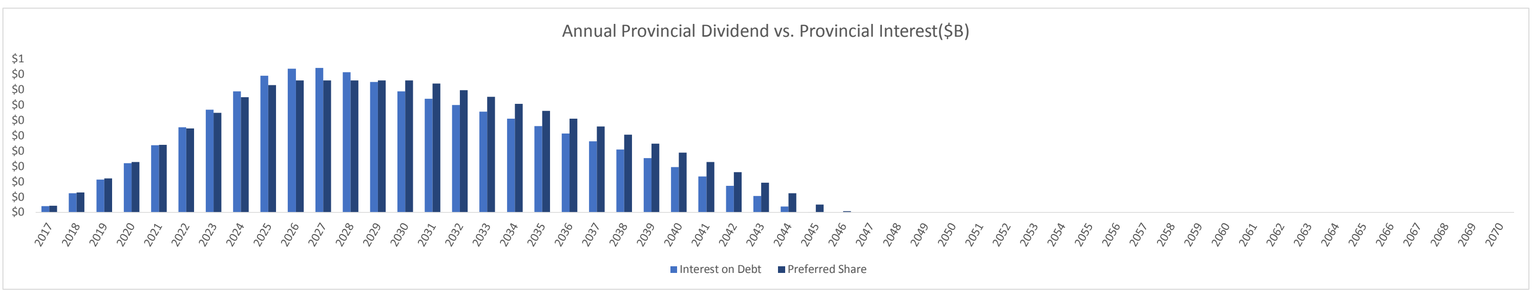
Length of repayment period (years)

	OPG/OPG Trust rate				
Provincial Borrowing	**2%**	**3%**	**4%**	**5%**	**6%**
2.00%	22	25	24	25	27
2.50%	23	23	24	26	30
3.00%	23	24	25	26	28
3.50%	24	25	26	27	29
4.00%	24	26	28	28	30
4.50%	25	27	28	29	32
5.00%	25	28	30	31	36
5.50%	27	28	30	34	38
6.00%	27	29	32	33	40

Assumptions

Excess Cash from deferred preferred share dividends used after 10 years to pay down cumulative preferred shares.
Maximum increase from 2022-2027 kept below 10%
Payment of OPG debt (5%), preferred shares (44%) and capital markets debt (51%) kept with same ratio after deducting accumulated interest/dividend payments.
Minimum $1B cushion from preferred share return
Maximum annual payment over the true GA cost is $2.242B in line with Energy's cabinet submission
Administration costs ignored





Assumptions	Weighted Ownership	4.47% Interest	**Approximat** Preferred
Equity Injection	44%	3.50%	3.79%
OPG	5%	5.0%	
OPG Trust	51%	5.0%	
Maximum payment	-$ 2,241.55		
Final Payment Year	2045		
Defined Benefit	2,501	2,508	2,501
	-	-	-
	2017	**2018**	**2019**
IESO GA cost forecast + extrapolation	12,095	11,835	11,552
March 3 - Option 1 - Ratepayer cost	9,538	9,152	8,754
Cash (Interest/dividends) Collected	$57	$174	$297
Total Ratepayer Cost	9,595	9,327	9,051
Difference	2,501	2,508	2,501
Adjustment			
Total Benefit	-21%	-21%	-22%
Change		-2.79%	-2.96%
True Ratepayer Cost	9,595	9,327	9,051
Annual Deferred Payment	$2,558	$2,682	$2,798
Province	$1,125	$1,180	$1,231
OPG	$128	$134	$140
OPG Trust	$1,304	$1,368	$1,427
Cumulative Principal			
Province	$1,125	$2,306	$3,537
OPG	$128	$262	$402
OPG Trust	$1,304	$2,672	$4,099
Provincial Dividend	$21	$65	$111
OPG Interest	$3	$10	$17
OPG Trust Interest	$33	$99	$169
Cash Collected annually	$57	$174	$297
Debt Beginning of the Year	$0	$1,145	$2,388
Interest on Debt	$20	$62	$107
Cash reserves			
Additional GA drawdown	$1,125	$1,180	$1,231
Ending Debt	$1,145	$2,388	$3,726
Accumulated Interest	$20	$82	$189
Total Debt (including accumulated interest)	$2,578	$5,322	$8,227
Weighted interest rate	4.47%	4.47%	4.47%
Beginning Preferred Share Principal	$0	$1,125	$2,306

Equity Injection	$1,125	$1,180	$1,231
Beginning Cumulative	$0	$21	$86
Preferred Share	$21	$65	$111
Preferred Shares Paid			
Ending Cumulative	**$21**	**$86**	**$197**
Principal Payment			
Ending Principal	$1,125	$2,306	$3,537
Ending	$2,294	$3,659	$5,162
Cumulative Interest	$20	$82	$189
OPG Cash starting	0	$21	$86
OPG Cash	$21	$65	$111
Cash utilized			
Ending Balance	$21	$86	$197
Preferred	$21	$65	$111
Cumulative preferred	$21	$86	$197

Ignore Below

Preferred	$21	$65	$111
Cumulative preferred	$21	$86	$197
Beginning Debt	$0	$1,145	$2,388
OPG Equity Injections	$1,125	$1,180	$1,231
Cost of Interest	$20	$62	$107
Ending Debt	$1,145	$2,388	$3,726
Cumulative Equity Injection	$1,125	$2,306	$3,537
Cumulative Interest	$20	$82	$189
Annual GA borrowed/(Overpaid)	2,501	2,508	2,501

e rate needed to be charged to ratepayers on total principal borrowed (100% GA deferral) including ac

Cushion

Difference	$(1,000)	-$ 2,242

Refresh

			7,450	8,873	8,341	10,236	11,476
3,075	2,660	2,454	2,038	1,386	1,211		
-	-	-	-	-	-	-	-
2020	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
12,168	10,844	10,634	10,243	11,128	10,527	10,033	11,043
8,656	7,595	7,446	7,336	8,022	8,817	10,202	11,294
$438	$589	$733	$869	$1,003	$1,111	$1,149	$1,149
9,094	8,183	8,179	8,205	9,026	9,928	11,351	12,443
3,075	2,660	2,454	2,038	2,102	599	-1,318	-1,400
						-1,149	-1,149
-25%	-25%	-23%	-20%	-19%	-6%	13%	13%
0.47%	-10.01%	-0.05%	0.32%	10.00%	10.00%	10.01%	10.00%
9,094	8,183	8,179	8,205	9,026	9,928	10,922	12,014
$3,513	$3,249	$3,187	$2,907	$3,106	$1,710	$0	$0
$1,546	$1,430	$1,402	$1,279	$1,366	$752	$0	$0
$176	$162	$159	$145	$155	$85	$0	$0
$1,791	$1,657	$1,625	$1,483	$1,584	$872	$0	$0
$5,082	$6,512	$7,914	$9,193	$10,560	$11,312	$11,312	$11,312
$578	$740	$899	$1,045	$1,200	$1,285	$1,285	$1,285
$5,891	$7,548	$9,173	$10,656	$12,240	$13,112	$13,112	$13,112
$164	$220	$274	$325	$375	$415	$429	$429
$24	$33	$41	$49	$56	$62	$64	$64
$250	$336	$418	$496	$572	$634	$656	$656
$438	$589	$733	$869	$1,003	$1,111	$1,149	$1,149
$3,726	$5,431	$7,080	$8,759	$10,373	$12,134	$13,331	$13,409
$160	$219	$277	$335	$394	$446	$468	$471
						$(429)	$(429)
$1,546	$1,430	$1,402	$1,279	$1,366	$752	$39	$42
$5,431	$7,080	$8,759	$10,373	$12,134	$13,331	$13,409	$13,492
$349	$568	$845	$1,180	$1,574	$2,020	$2,488	$2,958
$11,900	$15,368	$18,832	$22,074	$25,573	$27,728	$27,806	$27,889
4.47%	4.47%	4.47%	4.47%	4.47%	4.47%	4.47%	4.47%
$3,537	$5,082	$6,512	$7,914	$9,193	$10,560	$11,312	$11,312

$1,546	$1,430	$1,402	$1,279	$1,366	$752	$0	$0
$197	$361	$581	$854	$1,179	$1,554	$1,969	$1,969
$164	$220	$274	$325	$375	$415	$429	$429
						$(429)	$(429)
$361	**$581**	**$854**	**$1,179**	**$1,554**	**$1,969**	**$1,969**	**$1,969**
						$0	$0
$5,082	$6,512	$7,914	$9,193	$10,560	$11,312	$11,312	$11,312
$7,349	$9,103	$11,025	$12,830	$15,034	$16,001	$15,249	$15,249
$349	$568	$845	$1,180	$1,574	$2,020	$2,488	$2,958
$197	$361	$581	$854	$1,179	$1,554	$1,969	$1,539
$164	$220	$274	$325	$375	$415		
				$0	$0	$429	$429
$361	$581	$854	$1,179	$1,554	$1,969	$1,539	$1,110
$164	$220	$274	$325	$375	$415	$429	$429
$361	$581	$854	$1,179	$1,554	$1,969	$2,398	$2,827

$164	$220	$274	$325	$375	$415	$429	$429
$361	$581	$854	$1,179	$1,554	$1,969	$2,398	$2,827
$3,726	$5,431	$7,080	$8,759	$10,373	$12,134	$13,331	$13,806
$1,546	$1,430	$1,402	$1,279	$1,366	$752	$0	$0
$160	$219	$277	$335	$394	$446	$475	$492
$5,431	$7,080	$8,759	$10,373	$12,134	$13,331	$13,806	$14,298
$5,082	$6,512	$7,914	$9,193	$10,560	$11,312	$11,312	$11,312
$349	$568	$845	$1,180	$1,574	$2,020	$2,494	$2,986
3,075	2,660	2,454	2,038	2,102	599	-889	-971

cumulated interest.

-	-	-	-	-	-	-	-
2028	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**
10,819	10,009	9,721	8,654	8,820	8,238	7,756	5,662
13,061	12,250	11,963	10,896	11,061	10,480	9,998	7,904
$1,134	$1,102	$1,070	$1,026	$971	$912	$852	$788
14,194	13,352	11,963	10,896	11,061	10,480	9,998	7,904
-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242
-1,108	-1,139	-1,172	-1,215	-1,271	-1,329	-1,390	-1,453
31%	33%	23%	26%	25%	27%	29%	40%
14.57%	-6.12%	-9.38%	-6.96%	1.52%	-5.26%	-4.60%	-20.95%
13,765	12,923	11,711	10,896	11,061	10,480	9,998	7,904
$(1,108)	$(1,139)	$(1,172)	$(1,215)	$(1,271)	$(1,329)	$(1,390)	$(1,453)
$(488)	$(501)	$(516)	$(535)	$(559)	$(585)	$(612)	$(639)
$(55)	$(57)	$(59)	$(61)	$(64)	$(66)	$(69)	$(73)
$(565)	$(581)	$(598)	$(620)	$(648)	$(678)	$(709)	$(741)
$11,312	$11,312	$11,312	$11,312	$10,777	$10,218	$9,633	$9,022
$1,230	$1,173	$1,114	$1,054	$990	$924	$854	$782
$12,546	$11,965	$11,368	$10,748	$10,100	$9,422	$8,713	$7,972
$429	$429	$429	$419	$398	$377	$354	$330
$63	$60	$57	$54	$51	$48	$44	$41
$641	$613	$583	$553	$521	$488	$453	$417
$1,134	$1,102	$1,070	$1,026	$971	$912	$852	$788
$13,492	$12,603	$11,668	$10,866	$10,282	$9,673	$9,040	$8,379
$457	$425	$394	$370	$349	$327	$305	$281
$(429)	$(429)	$(252)	$0	$0	$0	$0	$0
$(917)	$(931)	$(945)	$(954)	$(958)	$(961)	$(965)	$(970)
$12,603	$11,668	$10,866	$10,282	$9,673	$9,040	$8,379	$7,691
$3,415	$3,840	$4,234	$4,604	$4,953	$5,281	$5,586	$5,867
$26,379	$24,806	$23,348	$22,083	$20,763	$19,385	$17,946	$16,444
4.46%	4.45%	4.43%	4.42%	4.41%	4.40%	4.40%	4.39%
$11,312	$11,312	$11,312	$11,312	$10,777	$10,218	$9,633	$9,022

$0	$0	$0	$0	$0	$0	$0	$0
$1,969	$1,481	$980	$464	$0	$0	$0	$0
$429	$429	$429	$419	$398	$377	$354	$330
$(917)	$(931)	$(945)	$(883)	$(398)	$(377)	$(354)	$(330)
$1,481	**$980**	**$464**	**$0**	**$0**	**$0**	**$0**	**$0**
$0	$0	$0	$(535)	$(559)	$(585)	$(612)	$(639)
$11,312	$11,312	$11,312	$10,777	$10,218	$9,633	$9,022	$8,382
$14,274	$13,271	$12,240	$10,242	$9,659	$9,048	$8,410	$7,743
$3,415	$3,840	$4,234	$4,604	$4,953	$5,281	$5,586	$5,867
$1,110	$681	$252	$0	$0	$0	$0	$0
$429	$429	$252	$0	$0	$0	$0	$0
$681	$252	$0	$0	$0	$0	$0	$0
$429	$429	$429	$429	$419	$398	$377	$354
$3,256	$3,685	$4,115	$4,544	$4,963	$5,361	$5,738	$6,092
$429	$429	$429	$429	$429	$429	$429	$429
$3,256	$3,685	$4,115	$4,544	$4,973	$5,402	$5,831	$6,261
$14,298	$14,808	$15,335	$15,881	$16,447	$17,033	$17,640	$18,268
$0	$0	$0	$0	$0	$0	$0	$0
$509	$527	$546	$566	$586	$607	$628	$651
$14,808	$15,335	$15,881	$16,447	$17,033	$17,640	$18,268	$18,919
$11,312	$11,312	$11,312	$11,312	$11,312	$11,312	$11,312	$11,312
$3,496	$4,023	$4,569	$5,135	$5,721	$6,328	$6,956	$7,607
-2,946	-2,914	-1,990	-2,242	-2,242	-2,242	-2,242	-2,242

-	-	-	-	-	-	-	-
2036	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**
5,389	5,129	4,881	4,645	4,421	4,207	4,004	3,811
7,630	7,370	7,122	6,887	6,662	6,449	6,246	6,052
$722	$652	$580	$504	$424	$341	$254	$163
7,630	7,370	7,122	6,887	6,662	6,449	6,246	6,052
-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242
-1,520	-1,589	-1,662	-1,738	-1,817	-1,900	-1,987	-2,078
42%	44%	46%	48%	51%	53%	56%	59%
-3.46%	-3.41%	-3.36%	-3.31%	-3.26%	-3.20%	-3.15%	-3.10%
7,630	7,370	7,122	6,887	6,662	6,449	6,246	6,052
$(1,520)	$(1,589)	$(1,662)	$(1,738)	$(1,817)	$(1,900)	$(1,987)	$(2,078)
$(669)	$(699)	$(731)	$(765)	$(800)	$(836)	$(874)	$(914)
$(76)	$(79)	$(83)	$(87)	$(91)	$(95)	$(99)	$(104)
$(775)	$(811)	$(848)	$(886)	$(927)	$(969)	$(1,014)	$(1,060)
$8,382	$7,713	$7,014	$6,283	$5,518	$4,719	$3,882	$3,008
$706	$626	$543	$456	$365	$270	$171	$67
$7,197	$6,386	$5,539	$4,652	$3,725	$2,756	$1,743	$683
$305	$279	$252	$224	$194	$163	$131	$97
$37	$33	$29	$25	$21	$16	$11	$6
$379	$340	$298	$255	$209	$162	$112	$61
$722	$652	$580	$504	$424	$341	$254	$163
$7,691	$6,973	$6,225	$5,446	$4,634	$3,787	$2,905	$1,986
$257	$231	$204	$176	$147	$117	$86	$53
$0	$0	$0	$0	$0	$0	$0	$0
$(974)	$(979)	$(984)	$(989)	$(994)	$(999)	$(1,005)	$(1,011)
$6,973	$6,225	$5,446	$4,634	$3,787	$2,905	$1,986	$1,027
$6,123	$6,354	$6,559	$6,735	$6,882	$7,000	$7,085	$7,138
$14,875	$13,238	$11,528	$9,742	$7,878	$5,932	$3,899	$1,777
4.38%	4.37%	4.36%	4.35%	4.32%	4.29%	4.23%	4.13%
$8,382	$7,713	$7,014	$6,283	$5,518	$4,719	$3,882	$3,008

$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0
$305	$279	$252	$224	$194	$163	$131	$97
$(305)	$(279)	$(252)	$(224)	$(194)	$(163)	$(131)	$(97)
$0	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
$(669)	$(699)	$(731)	$(765)	$(800)	$(836)	$(874)	$(914)
$7,713	$7,014	$6,283	$5,518	$4,719	$3,882	$3,008	$2,094
$7,045	$6,315	$5,552	$4,753	$3,919	$3,046	$2,133	$1,179
$6,123	$6,354	$6,559	$6,735	$6,882	$7,000	$7,085	$7,138
$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0
$330	$305	$279	$252	$224	$194	$163	$131
$6,422	$6,727	$7,007	$7,259	$7,483	$7,677	$7,840	$7,971

$429	$429	$429	$429	$429	$429	$429	$429
$6,690	$7,119	$7,548	$7,977	$8,407	$8,836	$9,265	$9,694
$18,919	$19,593	$20,291	$21,014	$21,762	$22,538	$23,340	$24,172
$0	$0	$0	$0	$0	$0	$0	$0
$674	$698	$723	$749	$775	$803	$831	$861
$19,593	$20,291	$21,014	$21,762	$22,538	$23,340	$24,172	$25,033
$11,312	$11,312	$11,312	$11,312	$11,312	$11,312	$11,312	$11,312
$8,281	$8,979	$9,702	$10,450	$11,226	$12,028	$12,860	$13,721
-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242

-	1	1	1	1	1	1	1	1
2044	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	**2051**	**2052**
3,627	3,451	3,285	3,126	2,975	2,831	2,695	2,695	2,695
5,868	5,693	5,526	5,368	5,217	5,073	4,936	4,936	4,936
$80	$25	$3	$0	$0	$0	$0	$0	$0
5,868	5,693	5,526	5,368	5,217	5,073	4,936	4,936	4,936
-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242
-2,161	-2,217	-2,238	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242
62%	65%	68%	72%	75%	79%	83%	83%	83%
-3.04%	-40.18%	-6.33%	-4.92%	-4.83%	-4.83%	-4.83%	0.00%	0.00%
5,868	3,510	3,288	3,126	2,975	2,831	2,695	2,695	2,695
$(2,161)	$(2,217)	$(2,238)	$(2,242)	$(2,242)	$(2,242)	$(2,242)	$(2,242)	$(2,242)
$(951)	$(975)	$(985)	$(986)	$(986)	$(986)	$(986)	$(986)	$(986)
$(67)	$0	$0	$0	$0	$0	$0	$0	$0
$(683)	$0	$0	$0	$0	$0	$0	$0	$0
$2,094	$1,142	$167	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$61	$25	$3	$0	$0	$0	$0	$0	$0
$2	$0	$0	$0	$0	$0	$0	$0	$0
$17	$0	$0	$0	$0	$0	$0	$0	$0
$80	$25	$3	$0	$0	$0	$0	$0	$0
$1,027	$33	$0	$0	$0	$0	$0	$0	$0
$19	$1	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$(1,012)	$(59)	$(3)	$0	$0	$0	$0	$0	$0
$33	$0	$0	$0	$0	$0	$0	$0	$0
$7,156	$7,157	$7,157	$7,157	$7,157	$7,157	$7,157	$7,157	$7,157
$33	$0	$0	$0	$0	$0	$0	$0	$0
3.95%	3.79%	3.79%	3.79%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
$2,094	$1,142	$167	$0	$0	$0	$0	$0	$0

$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$61	$25	$3	$0	$0	$0	$0	$0	$0
$(61)	$(25)	$(3)	$0	$0	$0	$0	$0	$0
$0	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
$(951)	$(975)	$(167)	$0	$0	$0	$0	$0	$0
$1,142	$167	$0	$0	$0	$0	$0	$0	$0
$191	$(808)	$(167)	$0	$0	$0	$0	$0	$0
$7,156	$7,157	$7,157	$7,157	$7,157	$7,157	$7,157	$7,157	$7,157
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$97	$61	$25	$3	$0	$0	$0	$0	$0
$8,068	$8,129	$8,154	$8,157	$8,157	$8,157	$8,157	$8,157	$8,157

$429	$429	$429	$429	$429	$429	$429	$429	$429
$10,123	$10,553	$10,982	$11,411	$11,840	$12,269	$12,699	$13,128	$13,557
$25,033	$25,925	$26,848	$27,805	$28,795	$29,821	$30,883	$31,983	$33,123
$0	$0	$0	$0	$0	$0	$0	$0	$0
$892	$924	$956	$990	$1,026	$1,062	$1,100	$1,139	$1,180
$25,925	$26,848	$27,805	$28,795	$29,821	$30,883	$31,983	$33,123	$34,303
$11,312	$11,312	$11,312	$11,312	$11,312	$11,312	$11,312	$11,312	$11,312
$14,613	$15,536	$16,493	$17,483	$18,509	$19,571	$20,672	$21,811	$22,991
-2,242	-59	-3	0	0	0	0	0	0

1	1	1	1	1	1	1	1	1
2053	**2054**	**2055**	**2056**	**2057**	**2058**	**2059**	**2060**	**2061**
2,695	2,695	2,695	2,695	2,695	2,695	2,695	2,695	2,695
4,936	4,936	4,936	4,936	4,936	4,936	4,936	4,936	4,936
$0	$0	$0	$0	$0	$0	$0	$0	$0
4,936	4,936	4,936	4,936	4,936	4,936	4,936	4,936	4,936
-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242
-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242
83%	83%	83%	83%	83%	83%	83%	83%	83%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2,695	2,695	2,695	2,695	2,695	2,695	2,695	2,695	2,695
$(2,242)	$(2,242)	$(2,242)	$(2,242)	$(2,242)	$(2,242)	$(2,242)	$(2,242)	$(2,242)
$(986)	$(986)	$(986)	$(986)	$(986)	$(986)	$(986)	$(986)	$(986)
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$7,157	$7,157	$7,157	$7,157	$7,157	$7,157	$7,157	$7,157	$7,157
$0	$0	$0	$0	$0	$0	$0	$0	$0
#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
$0	$0	$0	$0	$0	$0	$0	$0	$0

$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$7,157	$7,157	$7,157	$7,157	$7,157	$7,157	$7,157	$7,157	$7,157
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$8,157	$8,157	$8,157	$8,157	$8,157	$8,157	$8,157	$8,157	$8,157

$429	$429	$429	$429	$429	$429	$429	$429	$429
$13,986	$14,415	$14,845	$15,274	$15,703	$16,132	$16,561	$16,991	$17,420
$34,303	$35,525	$36,790	$38,101	$39,458	$40,864	$42,319	$43,827	$45,388
$0	$0	$0	$0	$0	$0	$0	$0	$0
$1,222	$1,266	$1,311	$1,357	$1,406	$1,456	$1,508	$1,561	$1,617
$35,525	$36,790	$38,101	$39,458	$40,864	$42,319	$43,827	$45,388	$47,005
$11,312	$11,312	$11,312	$11,312	$11,312	$11,312	$11,312	$11,312	$11,312
$24,213	$25,478	$26,789	$28,146	$29,552	$31,008	$32,515	$34,076	$35,693
0	0	0	0	0	0	0	0	0

1	1	1	1	1	1	1	1	1
2062	**2063**	**2064**	**2065**	**2066**	**2067**	**2068**	**2069**	**2070**
2,695	2,695	2,695	2,695	2,695	2,695	2,695	2,695	2,695
4,936	4,936	4,936	4,936	4,936	4,936	4,936	4,936	4,936
$0	$0	$0	$0	$0	$0	$0	$0	$0
4,936	4,936	4,936	4,936	4,936	4,936	4,936	4,936	4,936
-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242
-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242	-2,242
83%	83%	83%	83%	83%	83%	83%	83%	83%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2,695	2,695	2,695	2,695	2,695	2,695	2,695	2,695	2,695
$(2,242)	$(2,242)	$(2,242)	$(2,242)	$(2,242)	$(2,242)	$(2,242)	$(2,242)	$(2,242)
$(986)	$(986)	$(986)	$(986)	$(986)	$(986)	$(986)	$(986)	$(986)
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$7,157	$7,157	$7,157	$7,157	$7,157	$7,157	$7,157	$7,157	$7,157
$0	$0	$0	$0	$0	$0	$0	$0	$0
#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
$0	$0	$0	$0	$0	$0	$0	$0	$0

$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$7,157	$7,157	$7,157	$7,157	$7,157	$7,157	$7,157	$7,157	$7,157
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$8,157	$8,157	$8,157	$8,157	$8,157	$8,157	$8,157	$8,157	$8,157

$429	$429	$429	$429	$429	$429	$429	$429	$429
$17,849	$18,278	$18,707	$19,137	$19,566	$19,995	$20,424	$20,853	$21,283
$47,005	$48,681	$50,417	$52,216	$54,080	$56,012	$58,013	$60,087	$62,236
$1	$2	$3	$4	$5	$6	$7	$8	$9
$1,675	$1,734	$1,796	$1,860	$1,927	$1,995	$2,067	$2,141	$2,217
$48,681	$50,417	$52,216	$54,080	$56,012	$58,013	$60,087	$62,236	$64,462
$11,313	$11,315	$11,318	$11,322	$11,327	$11,333	$11,340	$11,348	$11,357
$37,368	$39,102	$40,898	$42,758	$44,685	$46,680	$48,747	$50,888	$53,105
0	0	0	0	0	0	0	0	0

Customer Bill				
			New Yr	
		1	2	3
Bill		100	105	95
Bill Deferral		-30.77	-33.89	-32.55
Interest		0.77	2.39	4.05
Total Bill		70	73.5	66.5

Interest expense		5%	5%	5%
Loan #1		0.34	1.05	1.78
Loan #2		0.04	0.12	0.20
External		0.39	1.22	2.06
		0.77	2.39	4.05
Balance				
Loan #1	44%	13.54	14.91	14.32
Accumulated Loan #1		**13.54**	**28.45**	**42.77**
Loan #2	5%	1.54	1.69	1.63
Accumulated Loan #2		**1.54**	**3.23**	**4.86**
External	51%	15.69	17.28	16.60
Accumulated External		**15.69**	**32.98**	**49.58**

DR (CR)

OPG

Equity injection from OFA			
Dr. Cash	13.54	14.91	14.32
Cr. Equity	-13.54	-14.91	-14.32
Loan to Trust - #1			
Dr. Receivable from Trust	13.54	14.91	14.32
Cr. Cash	-13.54	-14.91	-14.32
Borrow from the market			
Dr. Cash	1.54	1.69	1.63
Cr. Long-term debt	-1.54	-1.69	-1.63
Loan to Trust - #2			
Dr. Receivable from Trust	1.54	1.69	1.63
Cr. Cash	-1.54	-1.69	-1.63
Recognize interest from Trust - #1			
Dr. Cash	0.34	1.05	1.78
Cr. Interest income	-0.34	-1.05	-1.78
Recognize interest from Trust -- #2			
Dr. Cash	0.04	0.12	0.20
Cr. Interest income	-0.04	-0.12	-0.20

Recognize interest expense on long-term debt			
Dr. interest expense	0.04	0.12	0.20
Cr. Cash	-0.04	-0.12	-0.20

Trust

Amount collected from customers (The current proposal is to have the Trust collect revenue from customers, so the Trust should recognize revenue (which comprise of interest and other recovery amounts) before we start collecting the principal amount from the customers (i.e. before year 5) - assume interest only for simplicity			
Dr. Cash	0.77	2.39	4.05
Cr. Revenue	-0.77	-2.39	-4.05
Loan #1 from OPG			
Dr. Cash	13.54	14.91	14.32
Cr. Due to OPG	-13.54	-14.91	-14.32
Loan #2 from OPG			
Dr. Cash	1.54	1.69	1.63
Cr. Due to OPG	-1.54	-1.69	-1.63
External financing			
Dr. Cash	15.69	17.28	16.60
Cr. Long-term debt	-15.69	-17.28	-16.60
Purchase cash flow stream from IESO			
Dr. Intangible asset	30.77	33.89	32.55
Cr. Cash	-30.77	-33.89	-32.55
Interest expense on Loan #1 to OPG			
Dr. Interest expense	0.34	1.05	1.78
Cr. Cash	-0.34	-1.05	-1.78
Interest expense on Loan #2 to OPG			
Dr. Interest expense	0.04	0.12	0.20
Cr. Cash	-0.04	-0.12	-0.20
Interest expense on external financing			
Dr. Interest expense	0.39	1.22	2.06
Cr. Cash	-0.39	-1.22	-2.06

OPG

Cash	0.34	1.05	1.78
Equity	-13.88	-15.96	-16.10

Receivable from OPG Trust	15.08	16.61	15.95
Long-term Debt	-1.54	-1.69	-1.63
Interest income	-0.38	-1.17	-1.98
Interest expense	0.04	0.12	0.20
Trust			
Cash	0.00	0.00	0.00
Intangible asset	30.77	33.89	32.55
Loans payable to OPG	-15.08	-16.61	-15.95
Long-term Debt	-15.69	-17.28	-16.60
Revenue	-0.77	-2.39	-4.05
Interest expense	0.77	2.39	4.05
Consolidated			
Cash	0.34	1.05	1.78
Intangible asset	30.77	33.89	32.55
Loans between Trust and OPG	0.00	0.00	0.00
Equity from Province	-13.88	-15.96	-16.10
Long-term Debt	-17.23	-18.98	-18.23
Consolidated net income	**-0.34**	**-1.05**	**-1.78**

DRAFT

OPG & IESO Financial Position

Balance Sheet Comparison

In $ Millions

Entity	**OPG**	**IESO**
Statement Date	Nov-16	Dec-15
Assets		
Cash & Cash equivalents	426	15
Securities	233	37
Receivables	438	33
Other Current Assets	763	6
Net Tangible Capital Assets	21,297	104
Net Intangibles	95	
Nuclear Assets	15,878	
Regulatory Assets	5,647	
Other Long-term Assets	704	
	45,481	**195**
Liabilities		
Accounts Payable/Accrued Charges	1,223	49
Financial Debt	5,699	90
Nuclear Liabilities	20,845	
Pension & OPEB	5,646	121
Regulatory Liabilities	241	
Other Liabilities	1,294	10
Total Liabilities	**34,948**	**269**
Equity/Accumulated Deficit	**10,533**	**(74)**
Total Liabilities & Equity	**45,481**	**195**
Net Assets*	15,500	(74)
Net Debt**	(4,602)	(5)
Public Accounts Net Assets (15/16)	13,005	

*Net Assets is total assets less total liabilities
**Net Debt is total financial debt less (Cash & Cash Equivalents + Securities + Receivables); presented in brackets

Balance Sheet Comparison

In $ Millions

Entity
Statement Date
Assets
Cash & Cash equivalents
Securities
Receivables
Other Current Assets
Net Tangible Capital Assets
Net Intangibles
Nuclear Assets
Regulatory Assets
Other Long-term Assets
Liabilities
Accounts Payable/Accrued Charges
Financial Debt
Nuclear Liabilities
Pension & OPEB
Regulatory Liabilities
Other Liabilities
Total Liabilities
Equity/Accumulated Deficit
Total Liabilities & Equity
Net Assets*
Net Debt**
Public Accounts Net Assets (15/16)

OPG	IESO
Nov-16	Dec-15
426	15
233	37
438	33
763	6
21,297	104
95	
15,878	
5,647	
704	
45,481	**195**
1,223	49
5,699	90
20,845	
5,646	121
241	
1,294	10
34,948	**269**
10,533	**(74)**
45,481	**195**
15,500	(74)
(4,602)	(5)
13,005	

CPA Canada Public Sector Accounting Handbook

The CPA Canada Public Sector Accounting Handbook, available at www.knotia.ca, is the authorized version of standards approved by the Public Sector Accounting Board.

Revised to: Update No. 45 (12/16)

public sector accounting standards

introduction to public sector accounting standards

December 2014

AUTHORITY

.01 The Public Sector Accounting Board (PSAB) issues standards and guidance with respect to matters of accounting in the public sector. PSAB issues such standards and guidance to serve the public interest by strengthening accountability in the public sector through developing, recommending and gaining acceptance of accounting and financial reporting standards of good practice.

.02 "Public sector" refers to governments, government components, government organizations and government partnerships. Each of these entities is a "public sector entity".

.03 PSAB's rules of membership and Terms of Reference are approved by the Accounting Standards Oversight Council.

DEFINITIONS

.04 A **government component** is an integral part of government, such as a department, ministry or fund. It is not a separate entity with the power to contract in its own name and that can sue and be sued.

.05 A **government organization** is any organization controlled by a government that is a separate entity with the power to contract in its own name and that can sue and be sued. (Control is explained in GOVERNMENT REPORTING ENTITY, paragraphs PS 1300.07-.24.)

.06 A **government business enterprise** is a government organization that has all of the following characteristics:

(a) It is a separate entity with the power to contract in its own name and that can sue and be sued.

(b) It has been delegated the financial and operational authority to carry on a business.

(c) It sells goods and services to individuals and organizations outside of the government reporting entity as its principal activity.

(d) It can, in the normal course of its operations, maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity.

(These characteristics are explained in GOVERNMENT REPORTING ENTITY, paragraphs PS 1300.29-.31.)

.07 A **government not-for-profit organization** is a government organization that has all of the following characteristics:

(a) It is a separate entity with the power to contract in its own name and that can sue and be sued.

(b) It has counterparts outside the public sector as defined in paragraph .02.

(c) It is an entity normally without transferable ownership interests.

(d) It is an entity organized and operated exclusively for social, educational, professional, religious, health, charitable or any other not-for-profit purpose.

(e) Its members, contributors and other resource providers do not, in such capacity, receive any financial return directly from the organization.

.08 An **other government organization** is a government organization that has all of the following characteristics:

(a) It is a separate entity with the power to contract in its own name and that can sue and be sued.

(b) It is neither a government business enterprise nor a government not-for-profit organization.

.09 A **government partnership** is not a government organization but is a contractual arrangement between the government or a government organization and a party or parties outside of the reporting entity that has all of the following characteristics:

(a) The partners co-operate toward achieving significant, clearly defined common goals.

(b) The partners make a financial investment in the government partnership.

(c) The partners share control of decisions related to the financial and operating policies of the government partnership on an ongoing basis.

(d) The partners share, on an equitable basis, the significant risks and benefits associated with the operations of the government partnership.

(These characteristics are explained in GOVERNMENT PARTNERSHIPS, paragraphs PS 3060.11-.28.)

.10 A **government business partnership** is a government partnership that has all of the following characteristics:

(a) It is a separate entity with the power to contract in its own name and that can sue and be sued.

(b) It has been delegated the financial and operational authority to carry on a business.

(c) It sells goods and services to individuals and organizations other than the partners as its principal activity.

(d) It can, in the normal course of its operations, maintain its operations and meet its liabilities from revenues received from sources other than the partners.

(These characteristics are explained in GOVERNMENT PARTNERSHIPS, paragraphs PS 3060.11-.22, PS 3060.27-.28 and PS 3060.33.)

APPLICATION

.11 These standards apply to all public sector entities that issue general purpose financial statements unless:

(a) specifically directed or permitted to use alternative standards by PSAB, or

(b) limited in applicability as outlined in the individual Sections.

When applying the CPA Canada Public Sector Accounting (PSA) Handbook, where the standards are silent on an issue, public sector entities should apply GENERALLY ACCEPTED ACCOUNTING PRINCIPLES, Section PS 1150.

.12 General purpose financial statements are financial statements prepared in accordance with a financial reporting framework designed to meet the common financial information needs of a wide range of users. Not all public sector entities issue general purpose financial statements. Public sector entities that issue general purpose financial statements should comply with the applicable accounting standards in accordance with this Introduction. For purposes of the PSA Handbook, the use of the term "financial statements" means general purpose financial statements.

.13 In contrast, special purpose financial statements are financial statements prepared in accordance with a financial reporting framework that is designed to meet the financial information needs of specific users. The broad distribution of special purpose financial statements does not make these financial statements general purpose. The PSA Handbook is not required for the preparation of special purpose financial statements.

.14 For purposes of preparing general purpose financial statements, governments apply the standards for governments in the PSA Handbook.

.15 For purposes of preparing general purpose financial statements, government components 1 apply the standards for governments in the PSA Handbook.

.16 For purposes of determining the appropriate standards, a government organization may be classified as:

(a) a government business enterprise;

(b) a government not-for-profit organization; or

(c) an other government organization.

.17 For purposes of preparing general purpose financial statements, government business enterprises apply the standards for publicly accountable enterprises in Part I of the CPA Canada Handbook – Accounting.

.18 For purposes of preparing general purpose financial statements, government not-for-profit organizations apply the standards for not-for-profit organizations in the PSA Handbook or the standards in the PSA Handbook without Sections PS 4200 to PS 4270 (the PS 4200 series). 2

.19 For purposes of preparing general purpose financial statements, other government organizations would normally apply the standards for governments in the PSA Handbook. When these standards do not meet their financial statement users' needs, the standards applicable to publicly accountable enterprises in Part I of the CPA Canada Handbook – Accounting should be considered. The standards determined to be most appropriate should be disclosed and consistently applied.

.20 Determining the most appropriate standards for other government organizations requires the application of professional judgment. Factors to consider in assessing users' needs, in addition to those outlined in FINANCIAL STATEMENT CONCEPTS, Section PS 1000, include, but are not limited to, whether an organization:

(a) has issued, or is in the process of issuing, debt or equity instruments that are, or will be, outstanding and traded in a public market (for example, a domestic or foreign stock exchange or an over-the-counter market, including local and regional markets);

(b) holds assets in a fiduciary capacity for a broad group of outsiders as one of its primary businesses;

(c) has commercial-type operations and substantially derives its revenue from these activities; and

(d) receives limited government assistance on an ongoing basis.

The degree of importance of these factors further depends on the particular circumstances in each case, including the nature of an organization's mandate and considering its purpose, objectives and limitations. In some situations, a particular factor may provide a high degree of evidence of the appropriateness of a particular set of standards whereas, in other situations, the importance of the same factor may not be as significant. Positive responses to one or a combination of these factors would indicate standards applicable to publicly accountable enterprises in Part I of the CPA Canada Handbook – Accounting may be more appropriate.

.21 For purposes of preparing general purpose financial statements, government partnerships between two or more public sector entities, 3 except for government business partnerships, would normally apply the standards for governments in the PSA Handbook. When these standards do not meet their financial statement users' needs, the standards applicable to publicly accountable enterprises in Part I of the CPA Canada Handbook – Accounting should be considered. Factors to consider in assessing users' needs are included in paragraph .20. The standards determined to be most appropriate should be disclosed and consistently applied.

.22 For purposes of preparing general purpose financial statements, government business partnerships between two or more public sector entities 4 apply the standards for publicly accountable enterprises in Part I of the CPA Canada Handbook – Accounting.

.23 The standards used by government partnerships and government business partnerships with one or more private sector partners is not specified by the PSA Handbook but, instead, determined by the partners.

.24 The chart included as Appendix A to this Introduction is intended to assist in applying the appropriate standards to various types of public sector entities.

.25 GENERALLY ACCEPTED ACCOUNTING PRINCIPLES, paragraph PS 1150.14, describes the relationship between italicized and non-italicized paragraphs. The use of the term "standards" in the PSA Handbook refers to both italicized and non-italicized paragraphs.

SIGNIFICANCE AND JUDGMENT

.26 These standards are not intended to apply to immaterial or insignificant items or matters.

.27 In developing its standards, PSAB recognizes that no rule of general application can be phrased to suit all circumstances or combinations of circumstances that may arise, nor is there any substitute for the exercise of professional judgment in the determination of what constitutes fair presentation or good practice in a particular case.

EFFECTIVE DATE

.28 Italicized paragraphs issued before February 2002 are dated to show when they were approved by PSAB. PSAB encourages the adoption of its standards as soon as practicable.

.29 Italicized paragraphs issued after February 2002 have effective dates after which compliance with the principles expressed therein is required. Unless otherwise indicated, standards are effective with respect to financial statements and financial reports relating to years

commencing on or after the first of the month noted beside the italicized paragraph. Standards being amended remain in force until the effective date of the amendments. In many cases, however, preparers will adopt new or amended standards before the effective date.

NEUTRALITY IN STANDARD SETTING

.30 Neutrality in accounting has a greater significance for those who set accounting standards than for those who have to apply those standards in preparing financial reports, but the concept has substantially the same meaning for the two groups, and both will maintain neutrality in the same way. Neutrality means that either in formulating or implementing standards, the primary concern should be the relevance and reliability of the information that results, not the effect that the new rule may have on a particular interest. As a matter of policy, PSAB assesses the merits of proposed standards from a position of neutrality. That is, the soundness of standards is not evaluated on the grounds of their possible impact on behaviour. PSAB does not choose standards according to the kinds of behaviour it wishes to promote and the kinds it wishes to discourage. At the same time, it is admitted that some standards will often have the effect of influencing behaviour, and PSAB is alert to the economic impact of the standards that it promulgates. However, the justification for standards is conceptual and not in terms of their impact.

ADDITIONS AND REVISIONS

.31 Establishing standards for the public sector is an evolutionary process building on research, widespread experimentation, practical experience and consensus. As this process evolves, standards will be developed to respond to changing information needs. There will also be periodic review and amendment of material previously issued.

.32 The approval of at least two-thirds of the members of PSAB is required for new standards and for changes in existing standards. PSAB issues public exposure drafts to ensure that those affected have the opportunity to comment on proposed standards before they are approved by PSAB.

APPENDIX A



Footnotes

1. Government components that adopt the standards issued by the Public Sector Accounting Board should do so for fiscal periods beginning on or after January 1, 2017. Earlier adoption is permitted. Government components that expect to change their basis of accounting should disclose this fact in the periods preceding the period the change becomes effective. The adoption

of the standards should be accounted for by retroactive application with restatement of prior periods in accordance with FIRST-TIME ADOPTION, Section PS 2125.

2. Standards for not-for-profit organizations in the PSA Handbook include Sections PS 4200 to PS 4270. Only government not-for-profit organizations are permitted to follow these Sections. Government not-for-profit organizations should adopt the standards for not-for-profit organizations in the PSA Handbook or the standards in the PSA Handbook without Sections PS 4200 to PS 4270 for fiscal periods beginning on or after January 1, 2012. Government not-for-profit organizations that change their basis of accounting should disclose this fact in the periods preceding the period the change becomes effective. The adoption of the standards for not-for-profit organizations in the PSA Handbook or the standards in the PSA Handbook without Sections PS 4200 to PS 4270 should be accounted for by retroactive application with restatement of prior periods in accordance with FIRST-TIME ADOPTION, Section PS 2125.

3. Government partnerships that determine standards applicable to publicly accountable enterprises are most appropriate for their partnership should do so for fiscal periods beginning on or after January 1, 2017. Government partnerships that adopt the standards issued by the Public Sector Accounting Board should also do so for fiscal periods beginning on or after January 1, 2017. Earlier adoption is permitted. Government partnerships that expect to change their basis of accounting should disclose this fact in the periods preceding the period the change becomes effective. The adoption of the standards issued by the Public Sector Accounting Board should be accounted for by retroactive application with restatement of prior periods in accordance with FIRST-TIME ADOPTION, Section PS 2125.

4. Government business partnerships that adopt the standards applicable to publicly accountable enterprises should do so for fiscal periods beginning on or after January 1, 2017. Earlier adoption is permitted. Government business partnerships that expect to change their basis of accounting should disclose this fact in the periods preceding the period the change becomes effective.



View Terms and Conditions and Privacy Policy

Help desk: Mon-Fri, 9am-5pm ET 1-866-256-6842 Contact Us

© 2001-2016, EYEP and/or E&Y LLP and/or CPA Canada. All rights reserved.

public sector accounting standards
concepts & principles
Sections PS 1000 — PS 1300

SECTION PS 1000
financial statement concepts



TABLE OF CONTENTS

	Paragraph
Purpose and scope	.01-.06
Context of government financial statements	.07-.13
Users and user information needs	.14-.20
Financial statements objectives	.21
Benefit versus cost constraint	.22
Qualitative characteristics	.23-.32
Relevance	.26-.28
Reliability	.29
Comparability	.30
Understandability and clear presentation	.31
Qualitative characteristics trade-off	.32
Elements of financial statements	.33-.51
Recognition	.52-.59
Measurement	.60-.63

PURPOSE AND SCOPE

.01 This Section describes the concepts underlying the development and use of accounting principles in government financial statements. Such financial statements are designed to meet the common information needs of external users of financial information about a government.

.02 "Financial statements" refers to the summary financial statements published by a government that report on the financial position and changes in financial position of the government reporting entity. Financial statements include the notes and schedules supporting the statements. "Government" refers to the elected and appointed policy-makers and administrators who together perform the executive function and are the preparers of financial statements.

.03 This Section is to be used by preparers and auditors of financial statements in exercising their professional judgment as to the application of generally accepted accounting principles and in establishing accounting policies in areas in which accounting principles are developing.

.04 This Section does not establish standards for particular measurement or disclosure issues. Nothing in the Section overrides any specific standard in another Section of the CPA Canada Public Sector Accounting Handbook. The Public Sector Accounting Board (the Board) will review any inconsistency between this Section and another Section when that other Section is re-examined.

.05 Financial reporting and accounting standards are evolutionary and are revised to reflect changes in conditions. Standards are the concepts, conventions and postulates that provide principles to measure, recognize, present and disclose the financial information considered necessary for accountability and useful for decision making. In government standards, the unique characteristics of government (see Appendix A to FINANCIAL STATEMENT OBJECTIVES, Section PS 1100) are a primary consideration in setting the parameters of the government reporting model.

.06 Standards generally do not prescribe format, ordering of financial statements or financial statement elements, or terminology except as required to meet the measurement and presentation requirements of the standards. Standards do, however, specify what measure(s) must be reported on a statement, and the calculation of those measures may demand a certain ordering of the financial statement elements reported. In all other aspects, preparers of government financial statements use professional judgment to design financial statements tailored to their users' needs.

CONTEXT OF GOVERNMENT FINANCIAL STATEMENTS

.07 *A government financial report should present information that is useful in evaluating the government's financial condition at the end of the accounting period and its financial performance during the accounting period. Government financial statements are a fundamental component of a government financial report.* [APRIL 2005]

.08 The financial position of a government as measured in the financial statements is only one factor in determining the financial condition of a government. Financial condition is a broad, complex concept with both short- and long-term implications that describes a government's financial health in the context of the overall economic and financial environment. Nevertheless, financial statements provide information that is critical to evaluating the financial condition of the government, and they form the cornerstone of a government financial report.

.09 The changes in the government's financial position presented in the financial statements are essential factors in assessing the financial performance of the government in the accounting period. They are, however, not the sole measures of government financial performance in the period. Additional financial performance information that draws on information external to the financial statements supplements and adds further depth to the picture of financial performance illustrated in the financial statements.

.10 The complex nature of government, its myriad of objectives and its public accountability requires multi-faceted reporting. Accordingly, total government reporting envisions a multidimensional accountability report comprising: a financial report that includes government financial statements; other information about a government's financial condition, and supplementary financial performance information; as well as non-financial information.

.11 All governments in Canada publish financial statements that display their financial position and the changes in financial position in the period. These financial statements are general purpose statements that serve, to the extent possible, the needs of a variety of users. Such statements are commonly required by law, audited and issued annually and, while most often addressed to legislatures or councils, are available to all interested parties.

.12 Financial statements cannot be expected to fulfill all of the users' needs served by a government's financial reporting system. Governments produce many kinds of financial reports in addition to financial statements. For example, there are reports prepared by individual entities to comply with legislation; there are reports to measure and report on the performance of individual funds, programs and activities; and there are special purpose reports designed to meet particular needs of specific users. In addition, governments set out their fiscal plan in budgets and estimates of expenses or expenditures. Some information, such as related performance information and narrative explanations, can only be provided in other financial reports or as supplementary information to the financial statements themselves. Thus, certain information is better provided, or can only be provided, by financial reports other than financial statements.

.13 Nevertheless, financial statements are a central feature of government financial reporting. They serve as a means by which a government provides an accounting of its administration of public financial affairs and resources. These financial statements are a principal means of communicating financial information to those not involved in the government's financial administration and present aggregated information capable of integration with other financial statements, schedules and reports provided by the government. Because of this key role, the objectives of government financial statements (see FINANCIAL STATEMENT OBJECTIVES, Section PS 1100) are a significant factor in the selection of accounting policies used in government financial reporting and in the determination of information required from the accounting system.

USERS AND USER INFORMATION NEEDS

.14 Government financial statements serve the interests of a variety of users: the public, legislators, councillors, investors, analysts and other governments.

.15 Legislatures, councils and governments are accountable to the public, who provide the revenues and resources necessary for government operations, who receive government services and who are the beneficial owners of the public money and property for which legislatures, councils and governments are responsible. The public is comprised of groups with a variety of interests and views.

.16 As elected representatives of the public, legislators and councillors are primary users of government financial statements. They grant authority to the government to administer public resources and financial affairs, and hold the government accountable for its financial administration.

.17 Investors in government securities and enterprises provide financial resources. Government has an interest in providing information useful to them in evaluating its ability to finance its activities and to meet its liabilities and contractual obligations. Economic and financial analysts serve legislators and councillors, investors and other interested parties. They use financial statements and other information to analyze and evaluate financial issues.

.18 Users are interested in the state of a government's finances, its financial viability both in the short and long term, its revenues and financing sources, the allocation and use of its economic resources, the nature and extent of its economic activities and the quality of its financial management. In particular, government financial statements need to report the information required by users to help them make assessments and judgments concerning government financial operations and management.

.19 More specifically, users look to financial statements to provide information about:

(a) the sources and types of government revenues;

(b) the allocation and use of economic resources;

(c) the cost of goods and services provided in the accounting period;

(d) the extent to which the costs of the period were met by the revenues of the period;

(e) the government's financial position;

(f) the stock, allocation and use of non-financial resources;

(g) the extent to which revenues were sufficient to meet expenditures;

(h) how the government financed its activities and how it met its cash requirements;

(i) actual results of activities of the period in comparison with those originally planned and those of past periods; and

(j) whether public economic resources were managed in accordance with legislative authorities.

.20 Information in financial statements may be used for a number of diverse purposes depending on the interests of the users. For example, information presented in the financial statements, when used with other information, is useful in gaining an understanding of and assessing:

(a) a government's ability to meet its financial obligations, both short- and long-term;

(b) a government's ability to maintain the level and quality of its services and to finance new programs;

(c) future tax and other revenue requirements;

(d) government spending priorities;

(e) the impact of government economic activities on the economy; and

(f) the performance of government in managing the economic resources for which it is responsible.

FINANCIAL STATEMENT OBJECTIVES

.21 The information needed to aid understanding and assessments of government financial operations and to promote accountability extends beyond reporting surpluses and deficits. A government's financial statements must provide information that describes liabilities and financial assets, its non-financial assets that are available for use in providing future services, the cost of using its economic resources in the delivery of services, as well as information about investing and financing activities and potential assets and liabilities. Further, this information needs to highlight measures (for example, net debt and net economic resources) that help users assess whether the government's financial position has improved or deteriorated and explain the changes in financial position. The information reported in financial statements must also reflect the full nature and extent of the government's

resources, obligations and financial affairs. The objectives of government financial statements are outlined in FINANCIAL STATEMENT OBJECTIVES, Section PS 1100, and are consistent with the financial statement concepts of this Section.

BENEFIT VERSUS COST CONSTRAINT

.22 The benefits expected to arise from providing information in financial statements should exceed the cost of doing so. This constraint also applies to the development of accounting standards by the Board. It is also a consideration when preparing financial statements in accordance with those standards (for example, in considering disclosure of information beyond that required by the standards). The Board recognizes that the benefits and costs may accrue to different parties and that the evaluation of the nature and amount of benefits and costs is substantially a judgmental process.

QUALITATIVE CHARACTERISTICS

.23 The function of financial statements is the communication of information to users. To fulfill this function effectively, the information must be relevant and reliable, and communicated in a manner that best facilitates its use.

.24 *Financial statements should communicate information that is relevant to the needs of those for whom the statements are prepared, reliable, comparable, understandable and clearly presented in a manner that maximizes its usefulness.* [APRIL 2005]

.25 Financial statements provide evidence of accountability and report information required by users to help them make assessments and judgments concerning government financial operations and management. To adequately serve these needs in a manner that maximizes its usefulness, information in financial statements must possess certain basic qualities. These qualities are essential to the utility of government financial statements. The information required to meet the objectives of government financial statements needs to embody these essential characteristics.

Relevance

.26 For the information provided in financial statements to be useful, it must be relevant to the decisions made by users and for assessing accountability. Information is relevant by its nature when it can influence the decisions of users by helping them evaluate the financial impact or potential financial impact of past, present or future transactions and events or confirm, or correct, previous evaluations. For the information in government financial statements to be relevant to the needs of users, it must also be of a nature, and presented in a manner, that helps users assess the accountability of the government for its administration of public resources and financial affairs.

.27 Financial statements are not intended to provide all of the information necessary to users for decision making or for assessing government accountability. Nevertheless, they provide a fundamental component of the information needed for such purposes.

.28 Relevance is achieved through information that has predictive, feedback and accountability value, and is timely.

(a) **Predictive value and feedback value**
Information that helps users to predict a government's future financial results and cash flows has predictive value.

Although the data provided in financial statements will not normally be a prediction in itself, it may be useful in making predictions. The predictive value of the statement of operations, for example, is enhanced if abnormal items are separately disclosed. Information that confirms or corrects previous predictions has feedback value. Information often has both predictive value and feedback value.

(b) **Accountability value**

Information that helps users assess a government's stewardship of the resources entrusted to it, including how resources have been applied and consumed in providing services, has accountability value. Information in government financial statements must be presented in a manner that assists in discharging this accountability. To provide accountability value, financial statements should reflect the nature and dimensions of financial position and performance that are characteristic of and appropriate to the unique nature of government. Accountability value is enhanced when financial statements identify the financial objectives and targets normally established by formal process and measure actual achievements against those financial objectives and targets. The accountability value of the information in the financial statements is also enhanced when the financial and non-financial performance information disclosed elsewhere in the Public Accounts, annual report or other report of the government can be related to the information in financial statements.

(c) **Timeliness**

Information should be timely. Financial statements issued long after the end of the fiscal period are of historical interest only. For information to be useful for decision making and accountability, the decision maker or stakeholder must receive it before it loses its capacity to influence decisions. The usefulness of information for decision making and assessing accountability declines as time elapses.

Reliability

.29 Information should be reliable. Inaccurate, inappropriate or incomplete information, or information that is biased or does not faithfully represent what it purports to represent, will inhibit rather than enhance understanding, evaluation and decision making by users and adversely affect the accountability provided by the financial statements to stakeholders. Reliable information has the following characteristics.

(a) **Representational faithfulness**

Representational faithfulness is achieved when transactions and events affecting the entity are presented in financial statements in a manner that is in agreement with the actual underlying transactions and events. Thus, transactions and events are accounted for and presented in a manner that conveys their substance rather than necessarily their legal or other form. The substance of transactions and events may not always be consistent with that apparent from their legal or other form. To determine the substance of a transaction or event, it may be necessary to consider a group of related knowledgeable and independent observers would concur that it is in agreement with the actual underlying transaction or event with a reasonable degree of precision.

(b) **Completeness**

Information is complete when none of the data necessary to achieve representational faithfulness is lacking. Completeness of disclosure means providing sufficient information about transactions, circumstances or events of such size, nature or incidence that their disclosure is necessary to understand the government's finances. In assessing the degree of completeness of the information provided in financial statements, the benefit / cost constraint in paragraph PS 1000.22 and the qualitative characteristics trade-off described in paragraph PS 1000.32 would be considered. Reliability implies completeness of information, at least within the bounds of what is

material and feasible, considering the cost. An omission can rob information of its claim to neutrality if the omission is material and is intended to induce or inhibit some particular mode of behaviour.

(c) **Neutrality**

Information is neutral when it is free from bias that would lead users towards making decisions that are influenced by the way the information is measured or presented. Bias in measurement occurs when a measure tends to consistently overstate or understate the items being measured. In the selection of accounting principles, bias may occur when the selection is made with the interests of particular users or with particular economic or political objectives in mind. Financial statements that do not include everything necessary for faithful representation of transactions and events affecting the entity would be incomplete and, therefore, potentially biased.

Neutrality does not mean "without purpose", nor does it mean that accounting should be without influence on human behaviour. Accounting information cannot avoid affecting behaviour, nor should it. It is, above all, the predetermination of a desired result, and the consequential selection of information to induce that result, that negates neutrality in accounting. To be neutral, accounting information must report economic activity as faithfully as possible, without colouring the image it communicates for the purpose of influencing behaviour in some particular direction.

(d) **Conservatism**

The application of conservatism in making judgments under conditions of uncertainty affects the neutrality of financial statements in an acceptable manner. When uncertainty exists, estimates of a conservative nature attempt to ensure that assets, revenues and gains are not overstated and, conversely, that liabilities, expenses and losses are not understated. Conservatism does not, however, encompass the deliberate understatement of assets and revenues or the deliberate overstatement of liabilities and expenses.

(e) **Verifiability**

The financial statement representation of a transaction or event is verifiable if knowledgeable and independent observers would concur that it is in agreement with the actual underlying transaction or event with a reasonable degree of precision. Verifiability focuses on the correct application of a basis of measurement rather than its appropriateness.

Comparability

.30 Comparability is a characteristic of the relationship between two pieces of information rather than of a particular piece of information by itself. It enables users to identify similarities in and differences between the information provided by two sets of financial statements. Uniformity in application of principles is important when comparing the financial statements of two different entities. Consistency in application is important when comparing the financial statements of the same entity over two periods or at two different points in time. Consistency helps prevent misconceptions that might result from the application of different accounting policies in different periods. When a change in accounting policy is deemed to be appropriate, disclosure of the effects of the change is necessary to maintain comparability.

Understandability and clear presentation

.31 Information should be understandable and clearly presented. Excessive detail, vague or overly technical descriptions, and complex presentation formats result in confusion and misinterpretation. Users need information presented clearly and simply. For the information provided in financial statements to be useful, it must be capable

of being understood by users. Users are assumed to have a reasonable understanding of economic activities and accounting, together with a willingness to study the information with reasonable diligence.

Qualitative characteristics trade-off

.32 In practice, a trade-off between qualitative characteristics is often necessary, particularly between relevance and reliability. For example, there is often a trade-off between the timeliness of producing financial statements and the reliability of the information reported in the statements. There may also be a trade-off between the accountability value of information and the level of detail appropriate to the financial statements, as well as the cost of providing it. As described in paragraph PS 1000.12, some information may be better provided by other reports in the government's reporting system. Generally, the aim is to achieve an appropriate balance among the characteristics in order to meet the objectives of financial statements. The relative importance of the characteristics in different cases is a matter of professional judgment.

ELEMENTS OF FINANCIAL STATEMENTS

.33 Elements of financial statements are the basic categories of items portrayed therein in order to meet the objectives of financial statements. There are two types of elements: those that describe the economic (financial and non-financial) resources, obligations and accumulated surplus or deficit of a government at a point in time, and those that describe changes in economic resources, obligations and accumulated surplus or deficit over a period of time. Notes to financial statements, which are useful for the purpose of clarification or further explanation of the items in financial statements, while an integral part of financial statements, are not considered to be an element.

.34 The elements of government financial statements include: assets (both financial and non-financial), liabilities, revenues, and expenses. Revenues and expenses and, therefore, operating results for an accounting period, result only from changes in assets and liabilities. Operating results, when taken together with amounts reported in the statement of remeasurement gains and losses, account for the change in net economic resources for an entity for a period and, except in specific circumstances, articulate that change (economic, financial and non-financial resources are defined in FINANCIAL STATEMENT OBJECTIVES, Section PS 1100). Specific circumstances affecting net economic resources that are excluded from operations are identified in individual Sections of the PSA Handbook, for example ACCOUNTING CHANGES, Section PS 2120. Definitions of the elements that together comprise operating results, revenues and expenses, are derived from the definitions of assets and liabilities. [Former paragraph PS 1000.34 retained in Archived Pronouncements.]

.35 **Assets** are economic resources controlled by a government as a result of past transactions or events and from which future economic benefits are expected to be obtained.

.36 Assets have three essential characteristics:

(a) they embody future economic benefits that involve a capacity, singly or in combination with other assets, to provide goods and services, to provide future cash inflows, or to reduce cash outflows;

(b) the public sector entity can control the economic resource and access to the future economic benefits; and

(c) the transaction or event giving rise to the public sector entity's control has already occurred. [Former paragraph PS 1000.36 retained in Archived Pronouncements.]

.37 An item is not an asset of a government if it lacks one or more of the essential characteristics listed in the preceding paragraph. Thus, for example, an item does not qualify as an asset of a government if the item involves:

(a) no future economic benefit;

(b) future economic benefit, but the government cannot obtain it; or

(c) future economic benefit that the government may obtain, but the events or circumstances that give the government control of the benefit have not yet occurred.

(paragraph PS 1000.38 deleted) [Former paragraph PS 1000.38 retained in Archived Pronouncements.]

.39 **Financial assets** are assets that could be used to discharge existing liabilities or finance future operations and are not for consumption in the normal course of operations.

.40 A financial asset is any asset that is:

(a) cash;

(b) a realizable asset that is convertible to cash;

(c) a contractual right to receive cash or another financial asset from another party;

(d) a contractual right to exchange financial instruments with another party under conditions that are potentially favourable to the government;

(e) an equity instrument of another entity;

(f) an investment in a government business enterprise or government business partnership;

(g) a financial claim on an outside organization or individual; or

(h) an inventory or item for sale that meets the criteria in FINANCIAL STATEMENT PRESENTATION, paragraph PS 1201.055. [Former paragraph PS 1000.40 retained in Archived Pronouncements.]

.41 Non-financial assets include tangible capital assets, and other assets such as prepaid expenses and inventories of supplies.

.42 **Non-financial assets** are acquired, constructed or developed assets that do not normally provide resources to discharge existing liabilities, but instead:

(a) are normally employed to deliver government services;

(b) may be consumed in the normal course of operations; and

(c) are not for sale in the normal course of operations.

.43 **Tangible capital assets** are non-financial assets 1 having physical substance that:

(a) are held for use in the production or supply of goods and services, for rental to others, for administrative purposes or for the development, construction, maintenance or repair of other tangible capital assets;

(b) have useful economic lives extending beyond an accounting period;

(c) are to be used on a continuing basis; and

(d) are not for sale in the ordinary course of operations.

.44 **Liabilities** are present obligations of a government to others arising from past transactions or events, the settlement of which is expected to result in the future sacrifice of economic benefits.

.45 Liabilities have three essential characteristics:

(a) they embody a duty or responsibility to others, leaving a government little or no discretion to avoid settlement of the obligation;

(b) the duty or responsibility to others entails settlement by future transfer or use of assets, provision of goods or services, or other form of economic settlement at a specified or determinable date, on occurrence of a specified event, or on demand; and

(c) the transactions or events obligating the government have already occurred.

.46 **Revenues**, including gains, are increases in economic resources, either by way of increases of assets or decreases of liabilities, resulting from the operations, transactions and events of the accounting period.

.47 Revenues, other than gains, can arise from: taxation; the sale of goods; the rendering of services; the use by others of government economic resources yielding rent, interest, royalties or dividends; or receiving contributions such as grants, donations and bequests. Revenues do not include borrowings, such as proceeds from debt issues or transfers from other governmental units in the government reporting entity or amounts collected on behalf of others.

.48 Gains can arise from peripheral or incidental transactions and events affecting a government. Such transactions and events include the disposition of assets purchased for use and not for resale, and the liquidation or refinancing of debt.

.49 **Expenses**, including losses, are decreases in economic resources, either by way of decreases in assets or increases in liabilities, resulting from the operations, transactions and events of the accounting period.

.50 Expenses include the cost of economic resources consumed in and identifiable with the operations of the accounting period. For example, the cost of tangible capital assets is amortized to expenses as the assets are used in delivering government programs (see TANGIBLE CAPITAL ASSETS, Section PS 3150). Expenses do not include debt repayments or transfers to other governmental units in the government reporting entity.

.51 Losses can arise from peripheral or incidental transactions and events affecting a government. Such transactions and events include the disposition of assets purchased for use and not for resale, and the liquidation or refinancing of debt.

RECOGNITION

.52 Recognition is the process of including an item in the financial statements of an entity. Recognition consists of the addition of the amount involved into item totals on a financial statement together with a narrative description of the item (for example, receivables, user fees, grants) in a statement. Similar items may be grouped together in the financial statements for the purpose of presentation.

.53 Recognition means inclusion of an item within one or more individual statements and does not mean disclosure in the notes to the financial statements. Notes either provide further details about items recognized in the financial statements, or provide information about items that do not meet the criteria for recognition and thus are not recognized in the financial statements.

.54 The recognition criteria below provide general guidance on when an item is recognized in the financial statements. Whether a particular item is recognized or not will require the application of professional judgment in considering whether the specific circumstances meet the recognition criteria.

.55 The recognition criteria are as follows:

(a) the item has an appropriate basis of measurement, and a reasonable estimate can be made of the amount involved; and

(b) for an item that involves obtaining or giving up future economic benefits, it is expected that such benefits will be obtained or given up.

.56 It is possible that an item will meet the definition of an element but still not be recognized in the financial statements because it is not expected that future economic benefits will be obtained or given up or because a reasonable estimate cannot be made of the amount involved. It may be appropriate to provide information about items that do not meet the recognition criteria in notes to the financial statements. "Expected" is used with its usual general meaning and refers to that which can reasonably be anticipated, contemplated or believed on the basis of available evidence or logic but is neither certain nor proved. The use of the word in the recognition criteria is intended to acknowledge that economic activities occur in an environment characterized by uncertainty. It is not intended to accommodate the recognition of items that do not meet the definition of one of the elements of financial statements. By implication, recognition would, therefore, not be appropriate without the occurrence of a past transaction or economic event that gives rise to an asset, liability, revenue or expense as defined in this Section.

.57 Purchased natural resources and Crown lands are recognized in government financial statements. However, when natural resources and Crown lands have been inherited by the government in right of the Crown and have not been purchased, they are not given accounting recognition as assets in government financial statements. These items are not recognized as assets because the costs, benefits and economic value of such items cannot be reasonably and verifiably quantified using existing methods. Similarly, art and historic treasures are also not recognized as assets.

.58 In the absence of appropriate public sector recognition and measurement criteria for intangibles, all intangibles, including those that have been purchased, developed, constructed or inherited in right of the Crown, are not recognized as assets in government financial statements. The intangible often called "human capital" that embodies the talent or intellectual capital of government employees is not recognized as an asset under existing accounting principles.

.59 Items recognized in government financial statements are accounted for in accordance with the accrual basis of accounting. The accrual basis of accounting recognizes the effect of transactions and events in the period in which the transactions and events occur, regardless of whether there has been a receipt or payment of cash or its equivalent. Accrual accounting recognizes a liability until the obligation or condition(s) underlying the liability is partly or wholly satisfied. Accrual accounting recognizes an asset until the future economic benefit underlying the asset is partly or wholly used or lost.

MEASUREMENT

.60 Measurement is the process of determining the amount at which an item is recognized in the financial statements. There are a number of bases on which an amount can be measured. Government financial statements are, however, prepared primarily using the historical cost basis of measurement, whereby transactions and events are recognized in financial statements at the amount of cash or cash equivalents paid or received or the fair value ascribed to them when they took place. Other bases of measurement are also used, but only in limited circumstances.

(a) Replacement cost is the amount that would be needed currently to acquire an equivalent asset. This may be used, for example, when inventories are valued at the lower of historical cost and replacement cost.

(b) Realizable value is the amount that would be received by selling an asset. This may be used, for example, to value portfolio investments. Market value may be used to estimate realizable value when a market for an asset exists.

.61 Present value is the discounted amount of future cash flows expected to be received from an asset or required to settle a liability. Present value is not a basis of measurement, but a valuation technique that may be used within historical cost-based or current-value models. This technique is used in the government reporting model, for example, to estimate the cost of retirement benefits, when determining the estimated total expenditure for closure and post-closure care of a solid waste landfill site, and when determining the "grant portion" of concessionary loans and portfolio investments.

.62 Government financial statements are prepared on the basis that recognized economic resources used up are measured in financial terms with no adjustments made for the effect of a change in the general purchasing power of the currency during the period. Although a government's performance in the management of its service potential 2 is generally a focus more appropriate to the nature and objectives of government, it cannot entirely be measured in financial terms.

.63 Financial statements are prepared on the assumption that the government is a going concern, meaning it will continue in operation, and will be able to realize assets and discharge liabilities and meet its statutory obligations in the normal course of operations for the foreseeable future.

Footnotes

1. Tangible capital assets are defined to include computer software.

2. Service potential embodies both the quality of service provided and the efficiency with which it is provided.

SECTION PS 1100
financial statement objectives



TABLE OF CONTENTS	Paragraph
Purpose and scope	.01-.03
Role of objectives in standard setting	.04-.05
Government operations	.06-.12
Objectives of government financial statements	.13-.66
Scope of government financial statements	.14-.18
Reporting financial position	.19-.33
Reporting changes in financial position	.34-.56
Reporting government operations	.37-.47
Reporting the change in net debt	.48-.52
Reporting cash flow	.53-.56
Legislative control and government financial accountability	.57-.66
Unique characteristics of government	Appendix A

PURPOSE AND SCOPE

.01 This Section identifies and describes objectives of government financial statements that are generally acceptable to the users and preparers of the statements. These objectives provide the basis for determining standards of financial statement reporting and accounting principles that are consistent with one another and appropriate for government. Their goal is to improve government financial statements and enhance their comparability.

.02 "Financial statements" refers to the summary financial statements published by a government that report on the financial position and changes in financial position of the government reporting entity. Financial statements include the notes and schedules supporting the statements. "Government" refers to the elected and appointed policy-makers and administrators who together perform the executive function and are the preparers of financial statements.

.03 This Section does not discuss objectives of special purpose financial statements or other financial reports published by government.

ROLE OF OBJECTIVES IN STANDARD SETTING

.04 A conceptual framework for accounting consists of an interrelated and compatible system of objectives, standards or principles, and practices or procedures, all linked rationally to the needs of users (outlined in FINANCIAL STATEMENT CONCEPTS, Section PS 1000). Since financial statement objectives identify goals and purposes, the qualitative characteristics of financial information, and recognition, measurement, presentation and disclosure standards follow logically from them and provide guidelines for the development of compatible accounting practices.

.05 The objectives of financial statements define the nature of the information needed to meet the requirements of the users of the statements. Substantial agreement on the objectives by both the users and preparers of the financial statements is requisite to setting appropriate accounting and reporting standards. If standards were set without agreement on objectives, there would be no basis for preferring one standard over another or judging the effectiveness of alternative standards in fulfilling the purposes of the financial statements.

GOVERNMENT OPERATIONS

.06 Governments are inherently different from businesses. The unique characteristics of government have reporting implications as outlined in Appendix A.

.07 The objectives of financial reporting for governments and business are not the same. Specifically, the accounting standards for business do not adequately prescribe the recognition, measurement, presentation and disclosure of government financial information that is needed for accountability by governments and useful for decision making by the users of government financial statements.

.08 The goals of government are not the same as those of business. The primary goal of a business is profit and its resources are employed to that end. Investors put up capital in expectation of a return, and financial statements report the success or failure of the business in providing that return. Results of operations are measured and reported in terms of profit or loss and it is added to or deducted from the owners' investment to measure financial position. Annual and accumulated earnings or losses are key measures of the performance of a business.

.09 Governments differ from business in both their objectives and financing. In general, governments provide public services and redistribute wealth for a variety of social and economic purposes. The delivery of a service does not, however, normally give rise to revenue, and the payment of taxes does not necessarily entitle a taxpayer to any particular public service or benefit. Because governments are granted the power to tax, their revenues are not substantially dependent upon voluntary contributions nor on the profitable sale of goods and services in the marketplace. Thus, except for commercial-type activities, the relationship between revenues and costs in any given period is not the same for government as it is for business.

.10 In any given period, a government may finance its operations from tax and other revenues or by borrowing or incurring other liabilities. The financial resources required are forecast and the government's financing plan is set out in the budget. Financial statements report the actual results of government operations and the extent to which revenues raised in the period were or were not sufficient to meet the expenses of that period. Users of the statements look to the operating surplus or deficit for the period, both on its own and in relation to the government's plan, in evaluating the government's fiscal management. Expenses, however, do not necessarily represent the total financial resources required. Governments, for example, also spend, lend and invest in addition to consuming economic resources in each accounting period. It is, therefore, also important to provide information about how a government financed its activities and met its cash requirements.

.11 Over the years, a government accumulates liabilities that must be settled and assets that provide resources for future operations. Information that reports the extent of the financial obligations that will have to be settled, or the extent of the assets that are available for future operations, is useful because it bears directly on future revenue requirements and on a government's ability to settle its obligations and finance its operations.

.12 The information needed to promote accountability and to aid understanding and assessments of government operations extends beyond reporting surpluses or deficits. For example, financial statements should provide information that describes the nature and purpose of government spending and the sources of its revenues and financing. They should also provide information that describes a government's non-financial resources that can be used in future operations and the cost of using those resources in service delivery. They should also provide information on investments and on potential obligations that may result from guarantees or indemnities.

OBJECTIVES OF GOVERNMENT FINANCIAL STATEMENTS

.13 The objectives of government financial statements that follow are based on the information needs of users, taking into account the limitations of financial statements as a reporting medium, the nature of government operations and legislative control.

Scope of government financial statements

.14 Governments carry out policies and deliver services through a variety of entities. Some are organizational and accounting entities (such as departments, special funds and accounts) that are integral to the overall government organization and through which the government directly performs its executive function. Others are separate corporate entities with their own management, which, under legislation, have been delegated financial powers and operational authority.

.15 To help users understand and assess the management of the public financial affairs and resources entrusted to governments, financial statements would account for the full nature and extent of the financial affairs and resources which a government controls. Financial statements would account for not only the organizational and accounting entities through which a government directly performs its function, but also the separate funds, agencies and enterprises which a government controls.

.16 **Objective 1**

Financial statements should provide an accounting of the full nature and extent of the financial affairs and resources which the government controls, including those related to the activities of its agencies and enterprises. [APRIL 2005]

.17 The presentation of information in the financial statements may need to vary in order to recognize the different nature and purpose of individual entities and their relationship to the government. However, the information reported in the financial statements, together with that in the notes and schedules integral to those statements, should provide a useful summary accounting of the full nature and extent of the financial activities authorized by the legislature and administered through government departments, special funds, agencies and enterprises.

.18 Government financial statements are not intended to replace the separate financial statements of individual departments, funds, agencies and enterprises. Those separate statements constitute important accountability reports by their respective managements. However, those statements alone do not provide the public and other users with

an understandable overview of the full nature and extent of the financial resources and affairs which the government controls.

Reporting financial position

.19 Financial statement information is used to gain an understanding of, and assess the state of, a government's finances at a point in time. Such information facilitates assessments of the government's financial viability, future tax and revenue requirements, and ability to maintain and expand the level and quality of its services.

.20 **Objective 2**

Financial statements should present information to describe the government's financial position at the end of the accounting period. Such information should be useful in evaluating:

(a) the government's ability to finance its activities and to meet its liabilities and contractual obligations; and

(b) the government's ability to provide future services. [APRIL 2005]

.21 Governments provide public services and redistribute wealth for a variety of social and economic purposes. To meet those objectives, governments need information about the cost of services and the affordability of services. An understanding of the extent of the financial "lien" the government has on its ability to provide future services as a result of past transactions and events is essential information. Governments also need to have an appreciation of the magnitude of the total economic resources they have on hand to deliver services. A government's net financial resources / net debt position, assessed in combination with the non-financial resources position of the government, provides a measure of the net recognized economic resources available to the government at the financial statement date to provide services in the future.

(paragraph PS 1100.22 deleted) [Former paragraph PS 1100.22 retained in Archived Pronouncements.]

.23 **Financial resources** include cash, claims to cash, investments and any other resources of the government that are not for consumption in the normal course of operations and are expected to contribute to net cash inflows (such as inventories for resale). A government's financial assets, as defined in FINANCIAL STATEMENT CONCEPTS, Section PS 1000, comprise the financial resources of a government.

.24 **Non-financial resources** include all items of a fixed or permanent nature (such as tangible capital property), claims to goods and services (such as prepaid items) and consumable goods (such as inventories of supplies). Non-financial resources also include intangibles, Crown lands and natural resources.

.25 Certain non-financial resources are, however, not given accounting recognition as assets in government financial statements. For example, all government intangibles, and all natural resources and Crown lands that have not been purchased by the government, are not given accounting recognition in government financial statements. A government's non-financial assets, as defined in FINANCIAL STATEMENT CONCEPTS, Section PS 1000, comprise the recognized non-financial resources of a government.

.26 Because the non-financial resources of government are different in nature from those held by a business, however, the financial position of a government has two dimensions:

(a) the net financial resources or net debt of a government; and

(b) the recognized non-financial resources of the government, which represent unexpired service potential available to be consumed by the government in the future.

.27 The term "net debt" is used to describe the first indicator of a government's financial position in this Section. The net assets of a government represent the net economic resources recognizable by the government. The two dimensions of the government's financial position are combined to calculate this second indicator of a government's financial position, called its accumulated surplus or deficit.

.28 Net debt is measured as the difference between a government's liabilities and financial assets. This difference bears directly on the government's future revenue requirements and on its ability to finance its activities and meet its liabilities and contractual obligations. Net debt provides a measure of the future revenues required to pay for past transactions and events. The extent of a government's net debt and the financial ability of the government to service that debt is an important test of the sustainability of that government. When a government's financial assets exceed its liabilities, this indicator of a government's financial position would be called "net financial assets" and it would provide a measure of the net financial assets on hand that can provide financial resources to finance future operations.

.29 A government's net debt is an important indicator of a government's financial position, highlighting the financial affordability of future government service provision. A net debt position represents a "lien" on the ability of the government to apply financial resources and future revenues to provide services. Non-financial assets are added to net debt to calculate the other indicator of a government's financial position — its accumulated surplus or deficit. Non-financial assets are "prepaid service potential". Reporting a government's recognized non-financial resources as part of its financial position provides information necessary for a more complete understanding of a government's debt position, financial position and future operating requirements.

.30 The nature of the majority of government non-financial assets is different from the nature of those held by a business. Capital assets are held by a business in order to generate future net cash inflows to provide a return to investors, as well as to finance operations, expansion and debt retirement. If the net realizable value of an asset of a business is greater than the present value of its expected future net cash inflows to the business, it would normally be sold. In contrast, for government, like not-for-profit organizations, recognition and valuation of capital assets are based on their service potential; for the most part, such assets do not generate future net cash inflows. In addition, they do not normally provide resources to discharge the liabilities of the government, unless they are sold and thus converted back into financial assets.

.31 The tangible capital assets and other non-financial assets of a government form part of its financial position because they provide resources that the government can employ in the future to accomplish its objectives. The government can use these assets to provide services. The services that the government can provide as a result of owning a capital asset are the future benefits embodied by the asset. Including such assets in the government's financial position provides a more complete picture of the economic resources available to and utilized by the government.

.32 A key distinction between the financial and non-financial assets of a government is the degree of choice in application associated with them. Financial assets can be used to discharge liabilities or provide services, while non-financial assets can normally be used only for service provision. Given that many users are more familiar with the nature of the elements reported in the financial statements of profit-oriented enterprises, it is crucial that the financial statements identify this fundamental characteristic of government non-financial assets.

.33 In addition, users expect financial statements to disclose the nature and term of liabilities and assets and of potential liabilities represented by contractual obligations and contingencies such as guarantees and indemnities.

Reporting changes in financial position

.34 Users look to government financial statements to provide a meaningful summary of the sources, allocation and consumption of the resources administered by the government in the period. They also need to understand the extent to which the expenses of the accounting period were met by the revenues recognized in the period.

.35 This information is useful in gaining an understanding of and assessing a government's resource requirements, the purposes for which resources were used and applied and the nature and extent of its revenue-raising activities. The statements also inform users about the extent to which resources will be required from future revenues to pay for programs and activities of the period, the cost of resources consumed in delivering goods and services in the period and how the government financed its activities in the period.

.36 **Objective 3**

Financial statements should present information to describe the changes in a government's financial position in the accounting period. Such information should be useful in evaluating:

(a) the sources, allocation and consumption of the government's recognized economic resources in the accounting period;

(b) how the activities of the accounting period have affected the net debt of the government; and

(c) how the government financed its activities in the accounting period and how it met its cash requirements. [APRIL 2005]

Reporting government operations

.37 Financial statements should show how and where a government gets its revenues to provide information that is useful in: analyzing the impact of a government's revenue-raising activities on the economy; gaining an understanding of a government's finances by showing its revenue sources and their relative contributions; and evaluating the revenue-producing capacity of its investments.

.38 Financial statements should report the nature and purpose of a government's expenses in the period to show the allocation and consumption of resources. To account for all expenses by nature and purpose, a government could provide a variety of information. For example, financial statements could show expenses by function or major program to display the resources consumed by each type of government activity; by object of expense to disclose the nature of the resources consumed by a government; and by department or ministry to reflect its responsibility for costs.

.39 Expenses represent the cost of resources consumed in delivering government goods and services in the period. When used in conjunction with output and outcome information, cost information provides a basis for assessing the performance of government programs and activities and the government's use of the resources entrusted to it. By showing all government expenses by nature and purpose, the financial statements disclose the resources consumed by each type of government activity.

.40 Businesses exist to generate profits. Governments exist to provide services to their constituents. Accordingly, net income as measured by a business is not an appropriate measure of a government's service output. Outputs and outcomes of government programs are best measured using both financial and non-financial performance information. Such evaluations would include consideration of the cost / benefit of each program.

.41 Still, it is important to account for the extent to which revenues raised in the period were sufficient to meet the expenses of that period. This difference measures the net change in a government's liabilities and assets in the accounting period and is important in explaining the change in the government's financial position in the period.

.42 Government revenues are recognized when the transactions or events giving rise to the revenues occur, and expenses are recognized when incurred; thus, revenues and expenses are reflected in the financial statements in accordance with the timing of the effect of the related transaction or event on the economic resources of the government.

.43 One dimension of the relationship that exists between government revenues and expenses is the link between the revenue-raising capacity of the government and the estimated cost of government services in any one period that is assessed when governments budget. Government budgeting is an iterative process whereby a government considers both its revenue-raising capacity for the period in looking at what expenses it can budget for, as well as estimating the expenses that should be incurred in the period, and the revenues that would need to be raised to cover those costs, as well as any other needs, such as debt retirement.

.44 Another dimension of the relationship between revenues and expenses is that the net difference between them is a measure of the extent to which the net economic resources of the government have been maintained after the activities of the period have been taken into account. Regardless of whether the revenues were specifically raised to fund the costs they are netted against, this information is important because the extent of a government's net economic resources provides an indication of its ability to provide services in the future.

.45 Investors and creditors of profit-oriented enterprises are interested, for the purpose of making resource allocation decisions, in predicting the ability of the entity to earn income and generate cash flows in the future to meet its obligations and to generate a return on investment. The public, elected officials and other users of government financial statements are interested, for making resource allocation and other decisions, as well as for assessing government accountability, in the government's cost of service and how that cost was funded, and in predicting the ability of the government to meet its obligations and achieve its service delivery objectives.

.46 The financial statements summarize cost of service information at a functional level. The more detailed service costs that underlie this summary provide the government with the management information to meet objectives such as cost control, cost recovery, alternative service delivery, results-based management and performance measurement.

.47 Measuring the cost of services is relevant to taxpayers because this accounting provides information for evaluating government services. Measuring the cost of services, however, deals only with the cost side of a cost / benefit analysis and does not address the non-financial aspects of the effectiveness of services. Nevertheless, judgments as to the value of the service and the government's effectiveness in meeting program objectives cannot be made without cost data as a starting point.

Reporting the change in net debt

.48 In any given period, a government finances its expenditures by raising revenues, applying existing financial resources or incurring liabilities. Unlike expenses, which are the cost of goods and services consumed in the accounting period, **expenditures** are the cost of goods and services acquired by the government in the period. Expenditures include transfer payments due where no value is received directly in return.

.49 The information presented in a statement of change in net debt provides important accountability regarding the extent to which the expenditures of the government in the accounting period have been met by revenues recognized in the period.

.50 The statement of change in net debt needs to report the significant items that explain the difference between the surplus or deficit of the government for the accounting period as reported on the statement of operations and the change in net debt in the period. The statement can provide information useful for explaining why a government can have a surplus from operations, but still have an increase in its net debt. In this way, the financial statements articulate and display the relationship between the change in recognized net economic resources and the change in net debt in the accounting period.

.51 For example, many significant items that explain the nature of the difference in the two measures result from the effects of the capitalization of non-financial assets. Some items are taken into account in calculating the (expense-based) operating surplus or deficit for the accounting period, but are excluded from the calculation of the (expenditure-based) change in net debt for the period. For example, the cost of consuming tangible capital assets (amortization) is reflected in an expense-based operating surplus or deficit for the period, while the cost of acquiring non-financial assets in the period is reflected in the change in net debt.

.52 A statement of change in net debt summarizes several key "change in position" messages:

(a) the extent to which the costs of services provided in the period have been met by the revenues recognized in the period (the operating surplus or deficit for the period);

(b) the extent of the capital expenditures in the period;

(c) the extent to which the expenditures of the period have been met by the revenues recognized in the period (the change in net debt in the period);

(d) on a summary basis, the extent to which the planned amount for each of the above noted items, and any other explanatory items, has been achieved in the period; and

(e) the net remeasurement gains and losses in the accounting period.

Reporting cash flow

.53 In any given period, a government finances its activities and meets its obligations by revenue raising, by external borrowing and by using existing cash balances. Financial statements should show how a government financed its activities and met its cash requirements.

.54 The amount of cash flows arising from operating activities is a key measure of the extent to which the operations of the government have generated sufficient cash flows to maintain the programs and services of the government, invest in new capital assets, repay loans, and make new investments without recourse to external sources of financing. Cash flows from operating activities are primarily derived from the principal revenue-raising

activities of the government. Therefore, they generally result from the transactions and other events that enter into the determination of the results of the accounting period.

.55 Some transactions, such as the sale of a capital asset, may give rise to an accounting gain or loss, which is included in the determination of results for the accounting period. The cash flows relating to such transactions are, however, cash flows from capital activities.

.56 Unlike the cash flow statement of a business, a government cash flow statement reports cash flow related to capital acquisitions as being used in or from capital activities because unlike the capital assets of a business, there are no future cash inflows associated with many government assets, only future service potential. So, there is no "return on investment" associated with these capital "investments" as there is for a business. Investing is a term that can only be applied to government financial assets because of the nature of government non-financial assets.

Legislative control and government financial accountability

.57 Legislative control over finances is essential to responsible government. While it is the sole prerogative of the government to propose plans for spending and financing of government activities, all costs, spending, revenue raising, investing and borrowing must be sanctioned by legislation. Legislation may provide direct authority to government to provide services at specified costs, to spend, to raise revenue, to invest and to borrow, or it may delegate powers that provide similar authority to government agencies or enterprises.

.58 Because it provides financial authority and powers, the legislature or council has the right and responsibility to hold the government accountable for the management of financial affairs and the use of resources. Legislators and councillors seek assurance that financing and operations were carried out in accordance with the authorities and powers granted. They, along with investors and the public, are also interested in assessing the government's performance in the management of financial affairs. Government financial statements should provide information that is useful in providing such assurance and in making such assessments.

.59 Users need information that helps them assess the government's results in the management of its resources and financial affairs. Financial information that makes it possible to identify variances, to compute trends and to analyze operations is useful in fulfilling this need. A comparison of the actual results with those originally forecast by the fiscal plan (the budget and main estimates of expenses or expenditures) and with those of prior periods is necessary to identify significant variances. To facilitate meaningful comparisons, planned and prior period results need to be reported on a basis and for a scope consistent with that used to report the actual results of the current period. In addition, financial statements must provide information necessary to establish trends in spending, revenues, investing and borrowing, cost of operations and in key relationships such as debt or debt-servicing costs to revenue.

.60 Users look to financial statement information as a principal means of determining whether the public resources entrusted to the government were administered in accordance with legislative authorities. For example, legislative authorities for spending usually specify the purpose of the spending and set some limits either in amount or by way of other conditions. Financial statements must provide information at an appropriate level of aggregation to show that activities were within the limits established by the appropriate legislative authorities. For example, the financial statements of a government should provide information to highlight when its revenue, expense, expenditure, borrowing and investing activities were not carried out within the amounts authorized by the legislature. Such summary information would be capable of being supported by supplementary information reported by government on a more detailed basis.

.61 **Objective 4**

Financial statements should demonstrate the accountability of a government for the resources, obligations and financial affairs for which it is responsible by providing information useful in:

(a) evaluating the financial results of the government's management of its resources, obligations and financial affairs in the accounting period; and

(b) assessing whether resources were administered by the government in accordance with the limits established by the appropriate legislative authorities. [APRIL 2005]

.62 The financial statements provide a measure of a government's performance in the achievement of its objectives. The financial statements also show the cumulative effect of past budgetary decisions on the financial position and results of government operations. Important accountability information about the budget decisions of the current period is provided when financial statements include a comparison of the government's actual and planned financial results of its management of its resources, obligations and financial affairs in the period.

.63 Unlike the continuity and relatively focused direction provided by a company's board of directors, the organizational objectives of a government tend to be very broad, are continuously redefined in each budget, and are often completely revamped whenever there is a change of government. The budget plays a dominant role in portraying public policy. It establishes estimates of revenues and expenses / expenditures. The budget includes financing requirements for both operating and capital spending. It is used to set tax rates and determine borrowing requirements. A government's budget is a critical element in the accountability cycle and the standard against which subsequent performance is judged. Governments are thus held publicly accountable for the choices they have made, for their programs, the cost of services, and the financial position of their jurisdiction.

.64 Two comparisons of actual and budgeted results, on the statement of operations and the statement of change in net debt respectively, provide the key accountability information integral to evaluating the government's performance in achieving its operational and spending plans:

(a) a comparison of the actual and planned financial results of the government's management of its recognized economic resources, obligations and financial affairs; and

(b) a more focused comparison of the government's actual and planned financial results in the management of its financial resources, obligations and financial affairs.

.65 The incremental accountability provided by including budget figures on the statement of change in net debt can be attributed to the provision of information about actual and budgeted spending on non-financial assets, to the display of the actual and budgeted extent to which expenditures of the period were met by revenues recognized in the period, and to the inclusion of actual and budgeted opening and closing net debt numbers.

.66 If a government's budget or appropriations are prepared on a different basis or for a different scope than its financial statements, the government needs to provide a link with the financial statements so that the legislature or council understands how the government's results for the period compare to the results it planned and the amounts authorized to accomplish those plans. In either circumstance, or when neither the budgeted scope nor basis is consistent with that used for reporting actual results, the financial statements will need to provide a reconciliation of the planned information included in the financial statements with that originally budgeted.

APPENDIX A

UNIQUE CHARACTERISTICS OF GOVERNMENT

#	Unique characteristics	Explanation	Reporting implications
1	Government's goal is to provide services and redistribute resources, not make a profit.	Government accountability is primarily for the level, quality and cost of services provided. Some governments redistribute resources through grants, concessionary loans and other transfers, in accordance with government objectives. In fact, most resource redistribution involves service provision by one level of government or another, except for welfare and other monetary assistance programs. The ability of a government to afford existing services and meet the need for new services is also key information.	**Net cost of services** and affordability of services should be reported. The **net economic resources (net assets)** available to use in providing future services should be reported.
2	Most government tangible capital assets are different in nature than those held by a business.	Most government tangible capital assets represent service capability, rather than future cash inflows to the government. They, and other non-financial assets, therefore represent the portion of the government's financial position that is unexpired service potential. The distinction between financial and non-financial assets of a government is the degree of choice in application associated with them. Financial assets can be used to discharge liabilities or provide services, while non-financial assets are normally used only for service provision, unless they are sold and thus converted back into financial assets.	**Financial assets** and **non-financial assets** should be reported separately on the statement of financial position. The **net financial resources / net debt** of the government and the **net economic resources (accumulated surplus / [deficit])** measures should both be reported on the statement of financial position as they represent different perspectives of the government's financial position.
3	Government capital spending may not focus on maximizing financial return because government objectives are broader.	A business is interested in what acquired capital will produce — the end product and the related net cash inflows. For government, the end product might not always be financial. Sometimes it is the process of building the capital that achieves a government objective (for example, providing employment or regional development).	**Capital spending and its effect on net debt** must be highlighted in the financial statements.
4	The principal source of revenue for governments is taxation.	The payment of taxes is obligatory — not part of an exchange transaction nor a voluntary contribution or investment. The bulk of government revenues do not arise from the direct sale of goods and services.	Ability to tax = ability to spend. So **net debt** needs to be reported because it represents the government's future revenue requirements based on past transactions and events (such as spending) to be met from future taxes and is an indication, therefore, of the affordability of additional spending.
5	Senior governments hold assets acquired in right of the Crown.	For many governments, the value and use of these items far outweigh the value and use of recognized assets. A business does not have access to these types of assets unless they are paid for.	Practical issues regarding the measurement and valuation of these assets prevent their financial statement recognition; however, disclosure of the existence of these assets is key to understanding the government's total

			economic resources.
6	Governments operate in a non-competitive environment. 1a	No competitive market for most government outputs means that there is no independent indication of their value. And many of the services provided by government are unlikely to be provided by anyone else, such as welfare and defence. The benefits of government services cannot be measured solely by a bottom line that shows net revenues or expenses.	**Net cost of services** and affordability of services are the financial measures required, but these are not enough to show the efficiency and effectiveness of government services. Performance measurement information is needed, too. There is no one measure of government performance. Non-financial performance measures are also needed.
7	A government's budget portrays public policy, establishes estimates of revenue, expense, expenditure and financing requirements and is an important part of the government accountability cycle.	The budget includes financing requirements for operating and capital spending. It sets tax rates and decides borrowing requirements. A comparison of actual-to-budget amounts demonstrates public accountability for government finances.	**Actual-to-budget comparisons** should be provided in the financial statements.
8	Some governments have debt capacities unparalleled by most other organizations in Canada.	Some governments' only limits on their borrowing are the ability of their tax base to bear the debt burden and the financial community's assessment of that ability. Businesses are normally reined in sooner than governments. The federal government can control the money supply and has access to international agreements that no other organizations have recourse to. Both factors are taken into account in any assessment of its ability to service its debt load. High debt levels affect the flexibility of all levels of government in providing programs and services, especially in times of economic downturns.	**Debt** and **net debt** are crucial to highlight in government financial statements.
9	Governments are held to a higher standard of accountability than a business or a not-for-profit organization.	A broader public accountability must be demonstrated in government financial statements because the nature of a democratically elected government requires a degree of transparency in financial reporting that most private sector reports do not offer. The level of understanding of government finances held by most financial statement users demands this greater transparency. Governments are accountable to taxpayers on many levels, in contrast to the more limited accountability a company has for return on investment to a limited group of investors.	The nature of taxpayers as contributors to government finances requires that they be given simple yet robust information about what has been done with their money — that is, complete information about the government's financial position and results is needed and each financial statement should convey clear, key messages about government finances.

Footnotes

1a. Some government business enterprises (as defined in GOVERNMENT REPORTING ENTITY, Section PS 1300) operate in competitive environments. For the purposes of their own financial statements, government business enterprises follow the standards in the CPA Canada Handbook – Accounting for profit-oriented enterprises.

SECTION PS 1150
generally accepted accounting principles

TABLE OF CONTENTS	Paragraph
Purpose and scope	.01-.02
Definitions	.03
Sources of GAAP	.04-.24
Primary sources of GAAP	.14-.17
Other sources	.18-.24
Transitional provisions	.25-.26

PURPOSE AND SCOPE

.01 This Section:

(a) establishes standards for financial reporting in accordance with generally accepted accounting principles;

(b) describes what constitutes generally accepted accounting principles, and their sources; and

(c) provides guidance on sources to consult when selecting accounting policies and determining appropriate disclosures, when a matter is not dealt with explicitly in the primary sources of generally accepted accounting principles.

.02 This Section applies to all governments. It also applies to those organizations that consider the CPA Canada Public Sector Accounting Handbook (CPA Canada PSA Handbook) to be the most appropriate to their objectives and circumstances. An entity applying this Section is referred to as a "public sector reporting entity".

DEFINITIONS

.03 The following definitions have been adopted for the purposes of this Section:

(a) **Accounting policies** encompass the specific principles, and the methods used in their application, that are selected by a public sector reporting entity in preparing financial statements.

(b) **Generally accepted accounting principles (GAAP)** encompass broad principles and conventions of general application, as well as rules and procedures that determine accepted accounting practices at a particular time.

(c) **Primary sources of GAAP** are, in descending order of authority:

(i) standards in Sections PS 1201-PS 3510;

(ii) Public Sector Guidelines; and

(iii) appendices and illustrative material of those pronouncements described in (i)-(ii) above.

SOURCES OF GAAP

.04 *A public sector reporting entity should apply every primary source of GAAP that deals with the accounting and reporting in financial statements of transactions or events encountered by the public sector reporting entity.* [APRIL 2005]

.05 *When the primary sources of GAAP do not deal with the accounting and reporting in financial statements of transactions or events encountered by the public sector reporting entity, or additional guidance is needed to apply a primary source to specific circumstances, the selection of an appropriate accounting policy requires the exercise of professional judgment. In these circumstances, a public sector reporting entity should adopt accounting policies and disclosures that are consistent with:*

(a) the primary sources of GAAP; and

(b) the application of the concepts described in FINANCIAL STATEMENT CONCEPTS, Section PS 1000. [APRIL 2005 *]

.06 The primary sources of GAAP provide the financial statement accounting and reporting requirements, as well as explanations and guidance for most transactions and events encountered by a public sector reporting entity. Management is required to be knowledgeable about the primary sources of GAAP. As well, management is required to be aware of changes to the primary sources, because what constitutes GAAP at a particular time changes and adapts to reflect economic and social conditions.

.07 No rule of general application can be phrased to suit all circumstances or combinations of circumstances that may arise. As a result, matters may arise that are not specifically addressed in the primary sources of GAAP. It is necessary to refer to other sources when the primary sources do not deal with the accounting and reporting in financial statements of transactions or events that a public sector reporting entity encounters, or when additional guidance is needed to apply a primary source to specific circumstances.

.08 A public sector reporting entity consults sources other than primary sources of GAAP to assist in selecting accounting policies and disclosures only when these sources comply with paragraph PS 1150.05. The public sector reporting entity evaluates sources in selecting the appropriate accounting policies and disclosures based on all of the following criteria:

(a) The specificity of the source — A source that deals with the specific circumstances is likely to be more relevant than one from which the public sector reporting entity must analogize.

(b) The authority of the issuer or author — A source issued by an accounting standard setter in its own jurisdiction is likely to be more relevant than a source issued by others in the same jurisdiction.

(c) The continued relevance of the source — The passage of time may diminish the relevance of certain sources.

(d) The development process for the source — A source developed after extensive consultation and debate is likely to be more relevant than a source developed without such discipline.

.09 The selection of appropriate accounting policies and disclosures requires the exercise of professional judgment. In exercising professional judgment, a public sector reporting entity takes into account the primary sources of GAAP, as well as the concepts described in paragraph PS 1150.05(b). The public sector reporting entity would not analogize to a primary source of GAAP if the source used states that it applies only to the particular circumstances described therein.

.10 A public sector reporting entity considers all sources of GAAP that it consults in the context of the concepts described in paragraph PS 1150.05(b), which describes the concepts underlying the development and use of accounting principles in financial statements. A public sector reporting entity adopts accounting policies that are consistent with these concepts. The Public Sector Accounting Board (the Board) considers a source to be consistent with the concepts in paragraph PS 1150.05(b) when the guidance in that source is compatible with the qualitative characteristics of financial information, the elements of financial statements, and the recognition and measurement criteria in paragraph PS 1150.05(b).

.11 In selecting appropriate accounting policies and disclosures, interpretations of a source do not constitute evidence that the criteria in paragraph PS 1150.05 have been met if it is likely that most parties, exercising professional judgment, would reject them as not resulting in a fair presentation in accordance with GAAP.

.12 When the concepts described in paragraph PS 1150.05(b) conflict with a primary source of GAAP, the requirements of the primary source of GAAP prevail. The Board is guided by the concepts described in paragraph PS 1150.05(b) in the development of future pronouncements and in its review of existing pronouncements. Therefore, the number of cases of conflicts between the concepts described in paragraph PS 1150.05(b) and primary sources of GAAP will diminish over time.

.13 A public sector reporting entity may be required to prepare financial statements in accordance with regulatory, legislative or contractual requirements. When these requirements are within the range of acceptable choices allowed by this Section, the basis of accounting can be described as being in accordance with GAAP. At times, conflict between GAAP and regulatory, legislative or contractual requirements may exist. In such cases, users of financial statements need to know that the statements are not prepared in accordance with GAAP. Therefore, if the basis of accounting used to prepare such financial statements conflicts with the requirements of this Section, that basis cannot be described as being in accordance with GAAP.

Primary sources of GAAP

.14 In CPA Canada PSA Handbook Sections, italicized and non-italicized paragraphs have equal authority. Italicized paragraphs generally state the main principles, while non-italicized paragraphs generally explain the principles or their application to a particular situation. In addition, non-italicized paragraphs may include guidance for practices that are encouraged or desirable, but not required. To be in accordance with GAAP, a public sector reporting entity needs to comply with the non-italicized paragraphs as well as the principles. When there appear to be different ways of interpreting the non-italicized paragraphs, the public sector reporting entity selects the treatment that is most consistent with the principles.

.15 Public Sector Guidelines set out the Board's interpretations of existing Handbook Sections, or its opinions on other issues of concern with respect to matters of financial accounting policies and disclosures for which the process of issuing exposure drafts and eventual Handbook Sections does not apply or cannot be undertaken on a timely basis.

.16 Appendices are an integral part of the primary sources of GAAP. Illustrative material included in Appendices indicates how the accounting policies and disclosures specified in a document might be applied in particular situations or summarizes aspects of the underlying document. Illustrative material includes an introductory statement specifying that it is illustrative only.

.17 The Board issues Statements of Recommended Practice (SORPs) with respect to matters of reporting in the public sector. The objective of SORPs is to enhance decision making and accountability by improving the understandability of reports issued in the public sector. SORPs do not form part of generally accepted accounting principles.

Other sources

.18 Paragraphs PS 1150.19-.24 identify some of the other sources that a public sector reporting entity might consult to assist in selecting accounting policies and disclosures that comply with paragraph PS 1150.05.

.19 Pronouncements issued by other bodies authorized to issue accounting standards may be useful sources to consult. For example, accounting pronouncements published with the authority of the Canadian Accounting Standards Board (AcSB), International Accounting Standards Board (IASB), US Federal Accounting Standards Advisory Board (FASAB), US Governmental Accounting Standards Board (GASB), or International Public Sector Accounting Standards Board (IPSASB) are often important sources to consult on matters not covered by primary sources of GAAP or for assistance in applying a primary source of GAAP to specific circumstances.

.20 When a public sector reporting entity chooses to consult a source described in paragraph PS 1150.19, it applies professional judgment and evaluates the source in the context of the relative manner in which the standard setter requires its pronouncements to be applied, as well as in the context of the related pronouncement. When an accounting standard setter does not have a conceptual framework that is similar to the concepts referred to in paragraph PS 1150.05(b), the public sector reporting entity needs to ensure that the selected source is consistent with those concepts.

.21 In exercising professional judgment, a public sector reporting entity might wish to consult exposure drafts and other documents approved by the Board for public comment when no primary source of GAAP applies to the particular situation. The requirements of any existing accounting pronouncement that would be affected by the proposals in draft material remain in force until the effective date of the superseding material. Since the proposals in draft material are subject to revision, public sector reporting entities need to consider the consequences of any changes that may be made to the proposals as they are finalized. A document at a more advanced stage of the consultation process supersedes earlier versions.

.22 CPA Canada research reports and studies may also be consulted to the extent that they comply with paragraph PS 1150.05. In addition, organizations other than the Board may issue guidance indicating how primary sources of GAAP may be applied in particular circumstances. Since the guidance in these sources has not received Board approval, the views of the Board may differ. Therefore, caution needs to be exercised in using these sources.

.23 Accounting textbooks, journals, studies and articles that take the Canadian public sector environment into account are consulted in preference to those that do not.

.24 Sometimes, a practice has been established that does not result from written material. The relevance of such a practice is demonstrated by its compliance with paragraph PS 1150.05 and not by its general use.

TRANSITIONAL PROVISIONS

.25 This Section applies to fiscal years beginning on or after April 1, 2005.

.26 For local governments that are currently required by legislation or regulation to prepare their financial statements in accordance with a basis of accounting other than GAAP, this Section applies to fiscal years beginning on or after April 1, 2006.

Footnotes

* Editorial change — February 2007.

SECTION PS 1200
financial statement presentation

(Replaced by Section PS 1201 — June 2011)

SECTION PS 1201
financial statement presentation

Basis for Conclusions

Financial instruments: transitional provisions, Sections PS 2601 and PS 3450 (September 2012)

Financial statement presentation, Section PS 1201 (July 2011)

FOR THOSE WHO CHOOSE NOT TO EARLY ADOPT THIS SECTION,
see Section PS 1200 in Archived Pronouncements.

TABLE OF CONTENTS Paragraph

Purpose and scope	.001-.003
General reporting principles	.004-.028
Standards of presentation and disclosure	.029-.138
Reporting financial position	.036-.074
Liabilities	.044-.048
Assets	.049-.069
Financial assets	.049-.056
Non-financial assets	.057-.069
Contractual obligations	.070
Contingencies	.071
Contractual rights	.072
Reporting changes in financial position	.075-.126
Reporting operations	.076-.091
Revenues	.081-.084
Expenses	.085-.088
Losses arising from asset impairment and changes in valuation allowances	.089-.091
Reporting remeasurement gains and losses	.092-.096
Reporting the change in net debt	.097-.103
Reporting cash flow	.104-.126
Reporting legislative control and financial accountability	.127-.138
Comparison of actual and budgeted results	.127-.133
Reporting on legislative authority	.134-.137
Reporting on funds and reserves	.138
Transitional provisions	.139
Illustrative financial statements — federal, provincial and territorial governments	Appendix A
Illustrative financial statements — local governments	Appendix B

PURPOSE AND SCOPE

.001 This Section establishes general reporting principles and standards for the disclosure of information in government financial statements. The principles and standards are based on the concepts underlying government financial statements in FINANCIAL STATEMENT CONCEPTS, Section PS 1000, and the objectives of government financial statements set out in FINANCIAL STATEMENT OBJECTIVES, Section PS 1100.

.002 "Financial statements" refers to the summary financial statements published by a government that report on the financial position and changes in financial position of the government reporting entity. Such statements present aggregated information and serve as a means by which a government demonstrates its accountability for the resources, obligations and financial affairs for which it is responsible. They report information required to make assessments of and judgments on government financial operations and management. Financial statements are not intended, however, to provide all of the information needed to assess government financial condition or the efficiency and effectiveness of government operations. Such assessments require information additional to that provided in the financial statements.

.003 In this Section, the term "net debt" is used to describe the first indicator of a government's financial position. When a government's financial assets exceed its liabilities, this indicator of a government's financial position would be termed "net financial assets", and a government would prepare a statement of change in net financial assets.

GENERAL REPORTING PRINCIPLES

.004 The function of financial statements is to communicate information to users that is relevant to the needs of those for whom the statements are prepared, reliable, comparable, understandable and clearly presented in a manner that maximizes its usefulness. These general reporting principles provide guidance on the reporting of information in financial statements to fulfill that function.

.005 *The financial statements of a government should be clearly identified and should include or be accompanied by an acknowledgment of the government's responsibility for their preparation.* [APRIL 2005]

.006 The financial statements prepared to report on a government's financial position, results of operations, remeasurement gains and losses, change in net debt and cash flow need to be clearly identified. If included in the Public Accounts or other document, the financial statements, and the notes and schedules integral to them, would be presented together. The financial statements must include an acknowledgment of the government's responsibility for their preparation to ensure that users are aware of who is responsible for their preparation and that the government has approved them. Such an acknowledgment could be expressed in narrative form signed by the appropriate minister or elected official, or a delegated government official.

.007 *Notes and schedules that are integral to the financial statements should be clearly identified.* [APRIL 2005]

.008 Notes and schedules that are integral to the financial statements report information that is necessary for a fair presentation of a government's financial position, results of operations, remeasurement gains and losses, change in net debt and cash flow. They are useful for clarifying and explaining items in the financial statements and are cross-referenced to the specific financial statement items to which they relate. They have the same significance as if the information or explanations were set forth in the body of the statements themselves.

.009 Some governments include references to information provided in other separate financial statements and reports to help users find additional information about specific financial statement items. Those other financial statements and reports are not a part of a government's financial statements. References to them need to be distinguished clearly from references to notes and schedules integral to the financial statements.

.010 *Notes and supporting schedules in financial statements should not be used as a substitute for proper accounting treatment.* [APRIL 2005]

.011 Financial statements include notes and schedules that are useful for the purpose of clarification or further explanation of items in the financial statements. Such notes and schedules cannot, however, be used as a substitute for proper accounting treatment. Inappropriate accounting treatment of financial statement items is not rectified either by disclosure of accounting policies used or by notes or explanatory schedules.

.012 *Financial statements should present any information required for the fair presentation of a government's financial position, results of operations, remeasurement gains and losses, change in net debt and cash flow.* [APRIL 2012]

.013 Fair note disclosure is not separable from fair presentation of financial statements generally, because classification and presentation within the statements of financial position, operations, remeasurement gains and losses, change in net debt and cash flow provide the basis for fair disclosure, which is augmented and supported by the accompanying notes. When there are transactions, circumstances or events, of such size, nature or incidence that their disclosure is necessary to understand the government's financial position, results of operations, remeasurement gains and losses, change in net debt and cash flows, a government would provide sufficient information about the extent and nature of such transactions, circumstances or events, so that the effect on the financial statements is transparent and understandable. This information would include the significant terms and conditions of such transactions, as well as the nature of such circumstances or events and their financial effects.

.014 The CPA Canada Public Sector Accounting Handbook (CPA Canada PSA Handbook) provides guidance for determining the information required in financial statements for fair presentation of a government's financial position and changes in financial position, and for demonstrating a government's accountability for the financial results of its management of its resources, obligations and financial affairs. The determination of what information is needed in a particular case requires the exercise of professional judgment. No rule of general application can be phrased to suit all circumstances that may arise. GENERALLY ACCEPTED ACCOUNTING PRINCIPLES, Section PS 1150, describes what constitutes GAAP and its sources and provides guidance on sources to consult when a matter is not dealt with explicitly in the CPA Canada PSA Handbook.

.015 Public Sector Accounting Standards and Guidelines need not be applied to immaterial items. Materiality is a matter of professional judgment in the particular circumstances. Materiality may be judged in relation to the reasonable prospect of its significance in the making of assessments and judgments by the users of financial statements. A material item would be expected to affect assessments of and judgments on government financial operations and management.

.016 *Financial statements should be presented in such form and use such terminology and classification of items that significant information is readily understandable.* [APRIL 2005]

.017 Excessive detail, vague or overly technical descriptions, and complex presentation formats can result in confusion and misinterpretation. Financial statement formats, terminology and classifications should ensure that significant information is presented clearly and is readily understandable. Items not significant in themselves would be grouped with such other items as most closely approximate their nature.

.018 *Financial statements should present a comparison of current period amounts with those of the prior period(s).* [APRIL 2005]

.019 A comparison of current period amounts with those of the prior period(s) is important financial statement information. It helps users identify or compute trends in a government's financial position and changes in financial position, and make comparisons from one period to the next. To facilitate meaningful comparisons, prior period

information needs to be reported on a basis and for a scope consistent with that used to report current period information.

.020 *The bases for determining the reported amounts of assets and liabilities should be applied consistently and, where the bases are not self-evident, they should be disclosed.* [APRIL 2005]

.021 Once a basis for determining and fairly presenting a class of assets or liabilities has been selected, it is presumed that it will be followed consistently from one period to another. Changes to such bases would be made only when they result in a more appropriate presentation. ACCOUNTING CHANGES, Section PS 2120, provides guidance for disclosure of changes in accounting policies.

.022 *Financial statements should be issued on a timely basis.* [APRIL 2005]

.023 Financial statement information is used to help make assessments of, and judgments on, government financial operations and management. The usefulness of information, however, diminishes as time elapses. Financial statements should be issued on a timely basis so that users can assess a government's financial results in the context of other current information. Therefore, financial statements should, be completed as soon as possible after the end of the accounting period and issued as soon as completed.

.024 *Where the financial statements are subject to an independent audit, the auditor's report should be appended to the statements. Unaudited financial statements should be clearly identified as such.* [APRIL 2005]

.025 The audit report provides an independent professional opinion on the fairness of the information presented by the financial statements. When no audit has been performed, the financial statements would be identified as unaudited.

.026 *Financial statements should present the substance of transactions and events.* [APRIL 2005]

.027 Financial statement information is reliable to the extent that users can depend on it to account for, and fairly present, the substance of transactions and events in accordance with their financial reality.

.028 Governments endeavour to account for the substance of transactions and events. However, legislation sometimes requires, that certain transactions or balances be accounted for, or reported in, a manner that does not reflect their substance. Compliance with such legislative reporting requirements would be met by preparing special purpose financial statements or reports.

STANDARDS OF PRESENTATION AND DISCLOSURE

.029 The following standards and guidance describe financial statement information required in the presentation of a government's financial position, results of operations, remeasurement gains and losses, change in net debt and cash flow for the accounting period, as well as for reporting on legislative authorities and the government's accountability for the financial results of its management of its resources, obligations and financial affairs.

.030 The content of financial statements is usually limited to financial information about transactions and events. Financial statements are based on representations of past, rather than future, transactions and events although they often require estimates to be made in anticipation of future transactions and events and include measurements that may, by their nature, be approximations.

.031 *Financial statements should include a statement of financial position, a statement of operations, a statement of remeasurement gains and losses, a statement of change in net debt and a statement of cash flow.* [APRIL 2012]

.032 The statement of financial position highlights four key figures that describe the financial position of the government at the financial statement date.

(a) The cash resources of the government are its cash and cash equivalents.

(b) The net debt position of the government is calculated as the difference between its liabilities and financial assets.

(c) The non-financial assets of the government are assets that are, by nature, normally for use in service provision and include purchased, constructed, contributed, developed or leased tangible capital assets, inventories of supplies, and prepaid expenses.

(d) The accumulated surplus or deficit of the government is calculated as the sum of the net debt of the government and its non-financial assets. This indicator represents the net assets of the government.

.033 Together, the statement of operations and the statement of remeasurement gains and losses measure, in monetary terms, the extent to which a government has maintained its net assets in the period.

(a) The statement of operations reports the surplus or deficit from operations in the accounting period. The statement displays the cost of government services provided in the period, the revenues other than remeasurement gains, it has recognized in the period and the difference between them.

(b) The statement of remeasurement gains and losses reports certain changes in the values of financial assets and financial liabilities arising from their remeasurement at current exchange rates and/or fair value in accordance with the primary sources of GAAP (see GENERALLY ACCEPTED ACCOUNTING PRINCIPLES, Section PS 1150).

.034 The statement of change in net debt reports information that is important in understanding changes in the financial assets and liabilities of a government. This measure is displayed by reporting the items that explain the difference between the operating surplus or deficit and the change in net debt for the period.

.035 The statement of cash flow reports the change in cash and cash equivalents in the accounting period, and how a government financed its activities in the period and met its cash requirements.

Reporting financial position

.036 Financial statements need to provide information to describe a government's financial position in terms of its assets and liabilities at the end of the accounting period. They must report the government's net debt and its accumulated surplus or deficit because these figures are indicators that can be used to determine whether a government's financial position has improved or deteriorated.

.037 One important indicator of a government's financial position is its net debt, calculated as the difference between its liabilities and financial assets. The statement of financial position must account for and clearly present that difference because it bears directly on future revenue requirements and on a government's ability to finance its activities and meet its liabilities and commitments. Net debt provides a measure of the future revenues required to

pay for past transactions and events. If the government's financial assets exceed its liabilities, then the indicator is a net financial asset position, indicating that there are net financial assets on hand, which can provide financial resources to finance future operations.

.038 Reporting on a government's liabilities and financial assets alone is not sufficient to provide an adequate description of a government's financial position. Financial statements also need to report information about a government's tangible capital assets and other non-financial assets because such information is necessary for a more complete understanding of a government's debt position, financial position and future operating requirements.

.039 The statement of financial position must also account for the government's accumulated surplus or deficit. The accumulated surplus or deficit of a government, or its net assets, is the residual interest in its assets after deducting its liabilities. In government financial statements, that residual interest is accounted for by:

(a) reporting as a subtotal the difference between liabilities and financial assets; and then

(b) reporting non-financial assets to calculate and report the government's accumulated surplus or deficit.

Both the net debt and accumulated surplus / deficit indicators reveal important information about the government's financial position.

.040 *The statement of financial position should report net debt and the accumulated surplus / deficit as the two indicators that together explain the financial position at the end of the accounting period.*

(a) The statement of financial position should report liabilities and financial assets and report the difference between them as the measure of the government's net debt.

(b) Below the net debt indicator, the statement of financial position should report non-financial assets and account for and report the sum of the government's net debt and its non-financial assets as the accumulated surplus / deficit of the government at the end of the accounting period. [APRIL 2005]

.041 *When reporting on changes in a government's financial position, the primary sources of GAAP require certain amounts to be reported in the statement of remeasurement gains and losses. When this is the case, a government should report the following additional information about the composition of its accumulated surplus / deficit at the financial statement date:*

(a) the accumulated operating surplus or deficit; and

(b) the accumulated remeasurement gains and losses. [APRIL 2012]

.042 To inform users, information is provided on the statement of financial position detailing the two components that together comprise a government's accumulated surplus / deficit at the financial statement date. The accumulated operating surplus or deficit and accumulated remeasurement gains and losses are the two components. The accumulated operating surplus or deficit is equal to the net liabilities (or net assets) of the government less any accumulated remeasurement gains and losses. Reporting the balance of each component of accumulated surplus / deficit links this measure of financial position to the statement of operations and the statement of remeasurement gains and losses.

.043 In addition, information on a government's potential assets and liabilities represented by contractual obligations and contingencies must also be provided. Such information is useful for assessing revenues that may be required in the future.

Liabilities

.044 Reporting on a government's total liabilities at the financial statement date is necessary to ensure a complete reporting of transactions and events, and to understand and assess demands on resources. When used with other available financial data, adequate information about the nature and terms of liabilities facilitates assessments of such matters as debt management and exposure to foreign exchange fluctuations.

.045 *The statement of financial position should report liabilities segregated by main classifications, such as:*

(a) accounts payable and accrued liabilities;

(b) liabilities for employee future benefits;

(c) deferred revenue;

(d) borrowings; and

(e) loans from other governments. [APRIL 2005]

.046 *Financial statements should disclose adequate information about the nature and terms of a government's liabilities.* [APRIL 2005]

.047 Information to describe the nature and terms of a government's employee future benefits is outlined in RETIREMENT BENEFITS, Section PS 3250, and POST-EMPLOYMENT BENEFITS, COMPENSATED ABSENCES AND TERMINATION BENEFITS, Section PS 3255. Information to describe a government's long-term debt is outlined in LONG-TERM DEBT, Section PS 3230.

.048 Information to describe the nature and terms of a government's liabilities to other governments includes, at a minimum, the amounts outstanding, interest rates, the amounts payable on demand and within a year, appropriate description of amounts payable after one year and the existence of sinking fund or redemption provisions.

Assets

Financial assets

.049 Information about the nature and terms of a government's financial assets and the method of valuation is necessary to understand and assess the financial resources available to discharge existing liabilities or finance future operations.

.050 *The statement of financial position should report financial assets segregated by main classifications, such as:*

(a) cash and cash equivalents;

(b) revenues receivable;

(c) inventories for resale and other assets held for sale that meet the requirements of paragraph PS 1201.055*;*

(d) loans to other governments;

(e) other loans;

(f) portfolio investments;

(g) investments in government business enterprises; and

(h) investments in government business partnerships. [APRIL 2005 *]

.051 *Financial statements should disclose adequate information about the nature and terms of a government's financial assets together with any valuation allowances.* [APRIL 2005]

.052 Cash and cash equivalents are defined in paragraphs PS 1201.104-.105. Accounting and reporting for those financial assets that are financial instruments, including derivatives, is outlined in FINANCIAL INSTRUMENTS, Section PS 3450. Information to describe the nature and terms of a government's loans is outlined in LOANS RECEIVABLE, Section PS 3050. Information to describe a government's investments is outlined in PORTFOLIO INVESTMENTS, Section PS 3041, and INVESTMENTS IN GOVERNMENT BUSINESS ENTERPRISES, Section PS 3070. Investments in government business partnerships are dealt with in GOVERNMENT PARTNERSHIPS, Section PS 3060. Information to describe the nature and terms of a government's investments includes the carrying amounts and the method of valuation. Inventories for resale and other assets held for sale are items that are held for sale in the ordinary course of operations and, therefore, are expected to provide resources to discharge existing liabilities or finance future operations.

.053 *Valuation allowances should be used to reflect financial assets at their net recoverable or other appropriate value.* [APRIL 2005]

.054 Valuation allowances for financial assets include such items as allowances for doubtful revenue receivables, allowances for unrecoverable loans and accrued interest, allowances for amounts recoverable only through future appropriations and allowances for the valuation of investments.

.055 *An asset held for sale should be recognized as a financial asset when all of the following criteria are met:*

(a) prior to the date of the financial statements, the government body, management board or an individual with the appropriate level of authority commits the government to selling the asset;

(b) the asset is in a condition to be sold;

(c) the asset is publicly seen to be for sale;

(d) there is an active market for the asset;

(e) there is a plan in place for selling the asset; and

(f) it is reasonably anticipated that the sale to a purchaser external to the government reporting entity will be completed within one year of the financial statement date. [APRIL 2005]

.056 The plan in place for selling the asset must identify all significant actions to be taken to sell the asset. Actions required by the plan will begin as soon as possible after the commitment to sell is made.

Non-financial assets

.057 *The statement of financial position should report non-financial assets segregated by main classifications, such as:*

(a) tangible capital assets;

(b) inventories held for consumption or use; and

(c) prepaid expenses. [APRIL 2005]

.058 In government financial statements, recognition and valuation of non-financial assets is largely based on their service potential. Readers of government financial statements need sufficient information to appreciate the nature of government non-financial assets, as distinct from similar assets held by a business, without reference to these standards, which prescribe and explain government financial statements.

.059 *The financial statements should disclose the nature of government non-financial assets as assets that are normally employed to provide future services.* [APRIL 2005]

.060 Governments acquire tangible capital assets that have economic lives extending beyond the accounting period. They are available for use, require operating and maintenance expenditures, and may need to be replaced in the future. They include assets on hand and available for use by government in the near future, such as equipment, and assets for use over a longer period, such as buildings and land. Governments also acquire and make available to the public tangible capital assets that are complex network systems, such as highways, bridges, waterways and railways.

.061 Regardless of whether they contribute net cash inflows to the government, all tangible capital assets except those meeting the criteria to be reported as financial assets in accordance with paragraph PS 1201.055 are required to be reported as non-financial assets. This requirement is consistent with the objective of clearly distinguishing in government financial statements the primarily service nature of government non-financial assets. Generally, non-financial assets that are being developed for sale are no longer being employed to provide services. Such non-financial assets are under development and not yet in a condition to be sold and, therefore, cannot be reported as financial assets in accordance with paragraph PS 1201.055. They continue, however, to meet the non-financial asset definition because it states only that non-financial assets are "normally" employed to provide services.

.062 *Any asset that:*

(a) is not held for sale as described in paragraph PS 1201.055*; and*

(b) would otherwise meet the definition of a tangible capital asset except for its ability to contribute to the net cash inflows of the government;

should be recognized as a non-financial asset. [APRIL 2005]

.063 Information about tangible capital assets is useful for understanding and assessing a government's accountability for and management of its tangible capital asset base and future expenditure requirements for maintenance and replacement. This information also helps users understand that net debt is represented in part by expenditures on tangible capital assets with future service potential. The tangible capital assets of a government form part of its financial position because they provide economic resources, normally in the form of unconsumed service potential, that the government can employ in the future to accomplish its objectives. Including tangible capital assets in the government's financial position provides a more complete picture of the economic resources available to and utilized by the government.

.064 The disclosure of information regarding tangible capital assets in government financial statements includes: the types of assets; the additions, disposals, consumption and valuation adjustments of tangible capital assets in the accounting period; and the net carrying amount of the assets.

.065 Standards for accounting for tangible capital assets are provided in TANGIBLE CAPITAL ASSETS, Section PS 3150.

.066 Inventories held for consumption or use are tangible non-financial assets that will be used or consumed by the government in the course of its operations. Because the purpose of a government's operations is to provide services, the future economic benefit to the government of inventories for consumption or use is embodied in their capacity to render service that will further the government's objectives. "Raw material" inventory that is intended for use in development or production of inventory or other assets for sale would also be recognized as a non-financial asset. Such materials would only be included in assets for sale when they have been converted into an asset or part of an asset that is in a condition to be sold according to the requirements of paragraph PS 1201.055.

.067 A prepaid expense is a cash disbursement or other transfer of economic resources, other than an outlay for inventory or capital property, before the criteria for expense recognition have been met, that is expected to yield economic benefits over one or more future periods. It is recorded as an asset at the time of incurrence and amortized to expenses over the periods expected to benefit from it. Prepaid expenses generally expire either through the passage of time, such as prepaid rent or insurance, or through use or consumption.

.068 *Financial statements should disclose that all intangibles, and items inherited by right of the Crown, such as Crown lands, forests, water, and mineral resources, are not recognized in government financial statements.* [APRIL 2005]

.069 FINANCIAL STATEMENT CONCEPTS, paragraphs PS 1000.57-.58, specify that all intangibles, items inherited by right of the Crown, and art and historic treasures are not recognized as assets in government financial statements.

Contractual obligations

.070 Contractual obligations are obligations of a government to others that will become liabilities when the terms of those contracts or agreements are met (see CONTRACTUAL OBLIGATIONS, Section PS 3390).

Contingencies

.071 Contingencies are the result of existing conditions or situations involving uncertainty that will ultimately be resolved when one or more future events occur or fail to occur. Resolution of the uncertainty may confirm the acquisition of an asset, the reduction of a liability, the loss or impairment of an asset, or the incurrence of a

liability. Contingencies result from such matters as pending or threatened litigation, guarantees of the indebtedness of others, indemnities, and provisions related to insurance programs. They also include grants or contributions that are recoverable if certain future events occur or fail to occur (see CONTINGENT LIABILITIES, Section PS 3300, and CONTINGENT ASSETS, Section PS 3320). [Former paragraph PS 1201.071 retained in Archived Pronouncements.]

Contractual rights

.072 Contractual rights are rights to economic resources arising from contracts or agreements that will result in both an asset and revenue in the future (see CONTRACTUAL RIGHTS, Section PS 3380). [Former paragraph PS 1201.072 retained in Archived Pronouncements.]

(paragraphs PS 1201.073-.074 deleted) [Former paragraphs PS 1201.073-.074 retained in Archived Pronouncements.]

Reporting changes in financial position

.075 Financial statements provide a meaningful summary of the sources, allocation and consumption of the government's economic resources in the accounting period, how the activities of the period have affected the net debt of the government, how the government financed its activities in the period and how it met its cash requirements. The statement of operations, the statement of remeasurement gains and losses, the statement of change in net debt and the statement of cash flow described in paragraphs PS 1201.033-.035 together explain the change in a government's liabilities and assets in the accounting period.

Reporting operations

.076 The statement of operations provides important information about a government's accountability for its operations and the related achievement of its objectives. Financial statements are not intended, however, to provide all of the information needed to assess the efficiency and effectiveness of government operations. Such assessments require performance information additional to that provided in the financial statements. Nevertheless, the statement of operations summarizes cost-of-service information at a functional level. The more detailed service costs that underlie this summary provide the government with management information necessary to meet objectives such as cost control, cost recovery, alternative service delivery, results-based management, and other performance measurement needs. The actual-to-budget comparison to be provided on the statement of operations in accordance with paragraph PS 1201.130 also provides information important for assessing whether a government has achieved its operating objectives.

.077 A government's statement of operations reports the surplus or deficit from a government's operations in the accounting period. It measures, in monetary terms, the change in a government's accumulated operating surplus or deficit in the period. This change includes raising revenues sufficient to meet the cost of consuming non-financial assets in the period. Such consumption costs include the amortization of capital assets, and the periodic consumption or allocation of other non-financial assets, including prepayments. The statement displays the cost of government services provided and the revenues recognized in operations for the accounting period and the difference between them.

.078 *The statement of operations should:*

(a) report revenues, other than remeasurement gains, of the accounting period segregated by significant types of revenues from taxes, non-tax sources and transfers from other governments;

(b) report expenses, other than remeasurement losses, of the period by function or major program;

(c) account for the difference between revenues and expenses reported in the statement of operations in the period, as the measure of the operating surplus or deficit for the period; and

(d) report the accumulated operating surplus / deficit at the beginning and end of the period, unless these figures are reconciled with the surplus / deficit for the period on a separate statement. [APRIL 2012]

.079 Information showing the sources and types of a government's revenues is useful for understanding and assessing the impact of revenue raising on the economy, the relative contributions of revenue sources and the revenue-producing capacity of investments. Significant revenue types include corporate and personal income taxes, other tax revenues, user fees, investment and natural resource revenues, and transfers from other governments.

.080 Information showing the nature and purpose of expenses is useful for understanding the cost of the government's economic resources consumed in delivering government programs in the accounting period. A functional display provides such information. Major government functions or programs could include health, education, social services, transportation, natural resource development, public protection, communications and general government.

Revenues

.081 *Revenues, including gains, should be recognized in the period in which the transactions or events occurred that gave rise to the revenues. Gains are generally recognized when realized in the statement of operations. Items not practicably measurable until cash is received would be accounted for at that time.* [APRIL 2012]

.082 Revenues are accounted for in the period the transactions or events giving rise to the revenues occurred (for example, user fees in the period the goods or services are provided). GOVERNMENT TRANSFERS, Section PS 3410, sets out the recognition criteria for revenue arising from government transfers. TAX REVENUE, Section PS 3510, sets out the recognition criteria for revenue arising from tax transactions. Accounting for all of a government's revenues ensures that related assets are accounted for in the period they are created.

.083 *Financial statements should disclose the gross amounts of revenues.* [APRIL 2005]

.084 Gross revenues are disclosed to ensure that the total magnitude of a government's revenue raising is reflected in the financial statements. Such information is necessary for understanding and assessing the financial impact of a government's revenue raising and for enhancing legislative control. TAX REVENUE, Section PS 3510, identifies tax concessions as an exception to this requirement for gross reporting.

Expenses

.085 *Financial statements should disclose the gross amounts of expenses.* [APRIL 2005]

.086 *Financial statements should disclose the expenses of the accounting period by object.* [APRIL 2005]

.087 Gross expenses are disclosed to ensure that the total magnitude of a government's consumption of, or reduction in, economic resources in the period is reflected in the financial statements. Such information is helpful in understanding and assessing the cost of government services.

.088 Expenses are reported by function or major program and in total on the statement of operations in accordance with paragraph PS 1201.078, and are disclosed by object and in total in the note or schedule that provides the detail of expenses by object. Disclosure in the notes or schedules of expenses by object provides information that is useful in evaluating the major types of expenses incurred by a government in the period. This disclosure supports the functional display of expenses provided in the statement of operations by offering a different perspective of the expenses of the period. A display by object outlines the major types of expenses incurred, such as the cost of salaries and benefits, debt servicing costs, the cost of transfer payments to other governments and to the public, as well as the amortization of the cost of tangible capital assets.

Losses arising from asset impairment and changes in valuation allowances

.089 Losses arising from asset impairment and changes in valuation allowances are accounted for in the statement of operations to ensure that these changes in the carrying value of assets are measured in operating surplus or deficit for the period.

.090 *Losses arising from asset impairment and changes in valuation allowances should be recognized as expenses in the statement of operations in the accounting period. The change in the value of a financial asset that is attributable to a remeasurement gain or loss should be reported in the statement of remeasurement gains and losses.* [APRIL 2012]

.091 Changes in valuation allowances are allocated by function on the statement of operations when practicable because information showing the nature and purpose of expenses is useful for understanding the cost of assets consumed in delivering government programs in the accounting period. When allocation by function is not possible, however, changes in valuation allowances are reported on the statement of operations as a specific item with the main types of provisions disclosed. The provisions relate to the main classification of financial assets, such as revenues receivable, loans, and investments.

Reporting remeasurement gains and losses

.092 *The statement of remeasurement gains and losses should report:*

(a) the accumulated remeasurement gains and losses at the beginning of the period;

(b) remeasurement gains and losses during the period, distinguishing between:

(i) amounts arising during the period; and

(ii) amounts reclassified during the period to the statement of operations;

(c) any other comprehensive income that arises when a government includes the results of government business enterprises and government business partnerships in its summary financial statements; and

(d) the accumulated remeasurement gains and losses at the end of the period. [APRIL 2012]

.093 A government discloses the amounts of remeasurement gains and losses reported in the statement of remeasurement gains and losses during the period, distinguishing between:

(a) exchange gains and losses on items in the amortized cost category denominated in a foreign currency; and

(b) changes in the fair value of:

(i) derivatives;

(ii) portfolio investments in equity instruments that are quoted in an active market; and

(iii) financial instruments designated to the fair value category.

.094 When an item designated to the fair value category is denominated in a foreign currency, there is no separate disclosure of the exchange gain or loss.

.095 To account for government business enterprises it controls, a government applies the modified equity method. When accounting for an entity using the modified equity method, the accounting principles of the entity are not adjusted to conform with those of the government. Because a government business enterprise carries on a business, its financial statements must adhere to the standards applicable to publicly accountable enterprises in the CPA Canada Handbook – Accounting. As a result, government business enterprises may report other comprehensive income in their financial statements.

.096 The government's proportionate share of other comprehensive income reported in the financial statements of government business enterprises and government business partnerships is reported in the statement of remeasurement gains and losses. Other comprehensive income is excluded from the government's statement of operations as other comprehensive income is not attributable to the net income reported by the government business enterprise or government business partnership.

Reporting the change in net debt

.097 Unlike expenses, which include the cost of goods and services consumed in the accounting period, expenditures are the cost of goods and services acquired by the government in the period. Expenditures and expenses both include transfer payments due where no value is received directly in return.

.098 In any given period, a government finances its expenditures by raising revenues, applying existing financial resources, or incurring liabilities. The statement of change in net debt provides important accountability information regarding the extent to which the expenditures of the accounting period are met by the revenues recognized in the statement of operations during the period. This statement also reports the extent of the change in the government's net debt resulting from net remeasurement gains and losses in the accounting period and the opening and closing balances of net debt. The actual-to-budget comparison to be provided on the statement of change in net debt in accordance with paragraph PS 1201.131 provides information about whether a government has achieved its spending plans. Important uses of the information provided by the change in net debt statement include evaluating a government's performance in the management of the financial affairs and financial resources entrusted to it and assessing future revenue requirements.

.099 *The statement of change in net debt should report the extent to which the expenditures of the accounting period are met by the revenues recognized in operations for the period and the extent to which net debt changed due to net remeasurement gains and losses in the accounting period.* [APRIL 2012]

.100 *The statement of change in net debt should report the acquisition of tangible capital assets in the accounting period as well as other significant items that explain the difference between the operating surplus or deficit for the accounting period and the change in net debt in the period.* [APRIL 2012]

.101 Other significant items that explain the difference between the operating surplus or deficit for the accounting period and the change in net debt in the period may include:

(a) the amortization of tangible capital assets;

(b) the net carrying amount of any tangible capital assets disposed of;

(c) any adjustments relating to write-downs of tangible capital assets;

(d) any interest capitalized in the period as a function of constructing or developing tangible capital assets;

(e) any other expenditures, such as those for salaries and benefits of employees, capitalized in the period as a function of constructing or developing tangible capital assets;

(f) the consumption of other non-financial assets;

(g) expenditures to acquire other non-financial assets, such as prepaid expenses;

(h) other comprehensive income arising in applying the modified equity method when reporting on the results of government business enterprises and government business partnerships; and

(i) remeasurement gains and losses.

.102 *The statement of change in net debt should report net debt at both the beginning and end of the accounting period.* [APRIL 2005]

.103 The statement of change in net debt explains the difference between the government's operating surplus or deficit for the accounting period and its change in net debt in the period. Expenditures to acquire tangible capital assets in the accounting period as well as other significant items that explain the nature of the difference in the two measures would be reported as explanatory items. A desirable presentation for the explanatory items would be to categorize them, as a minimum, into items that relate to tangible capital assets and those that relate to other non-financial assets. Regardless of the presentation chosen, one item that must be clearly identified in the statement is the amount of capital expenditures incurred in the accounting period.

Reporting cash flow

.104 Cash comprises cash on hand and demand deposits.

.105 Cash equivalents are short-term highly liquid investments that are readily convertible to known amounts of cash and that are subject to an insignificant risk of changes in value. Cash equivalents are held for the purpose of meeting short-term cash commitments rather than for investing or other purposes. An investment would normally

qualify as a cash equivalent only when it has a short maturity of, say, three months or less from the date of acquisition. Equity investments are excluded from cash equivalents unless they are, in substance, cash equivalents. When bank overdrafts, which are repayable on demand, form an integral part of a government's cash management, such that the government's bank balance often fluctuates from being positive to overdrawn, bank overdrafts are included as a component of cash and cash equivalents.

.106 Information about the cash flows of a government enables users of its financial statements to assess the capacity of the government to generate cash and cash equivalents and the needs of the government for cash resources. Cash is generated by revenue raising, by the conversion of other financial assets into cash and cash equivalents, and by external borrowing. A statement of cash flow reports the effects of a government's activities on its cash resources by showing how a government financed its activities in the accounting period and met its cash requirements. Important uses of such information include evaluating a government's liquidity and accountability for the use of cash resources as well as assessing future cash requirements. Historical cash flow information may be useful as an indicator of the amount, the timing and the certainty of future cash flows.

.107 *The statement of cash flow should report how a government generated and used cash and cash equivalents in the accounting period and the change in cash and cash equivalents in the period. The statement of cash flow should report the cash and cash equivalents at both the beginning and end of the accounting period.* [APRIL 2005]

.108 *The statement of cash flow should report cash flows during the period classified by operating, capital, investing and financing activities.* [APRIL 2005]

.109 The information provided in a statement of cash flow would focus on the effects of a government's activities on its cash resources. Cash and cash equivalents represent a pool of cash or ready sources of cash available to a government.

.110 The change in a government's cash resources can be explained in the context of four major activities — operations, capital, investing and financing.

.111 A government may report cash flows from operating activities using either the direct method or the indirect method. Governments are encouraged to report such cash flows using the direct method. The direct method provides information that may be useful in estimating future cash flows and that is not available under the indirect method.

.112 Using the direct method, the major classes of gross cash receipts and gross cash payments related to operating activities are disclosed, such as:

(a) cash receipts from taxation;

(b) cash receipts from user fees, licenses, permits, fines, penalties and other fees;

(c) cash receipts from the sale of goods and the rendering of services;

(d) cash receipts from enterprises;

(e) cash receipts from dividends;

(f) cash transfers to/from other governments;

(g) cash transfers to individuals;

(h) cash payments to suppliers;

(i) cash payments to and on behalf of employees; and

(j) cash receipts and payments of interest included in the determination of results for the accounting period.

.113 Using the indirect method, cash used in or available from operations would be calculated by adjusting the operating surplus or deficit for the accounting period for the effects of non-cash items included in the operating surplus or deficit and for any accruals of past or future operating cash receipts or payments. Examples of non-cash items include:

(a) amortization of tangible capital assets;

(b) draw-downs of prepayments;

(c) pension expenses not funded in the period;

(d) gains and losses on disposals of tangible capital assets; and

(e) the recognition of previously deferred revenue.

.114 Cash flows relating to interest received and paid and included in the determination of the operating surplus or deficit for the accounting period would be classified as cash flows from operating activities. When a government uses the indirect method in calculating its cash flows from operating activities, cash flows relating to interest received or paid and included in the determination of the operating surplus or deficit for the accounting period would be disclosed separately and, when a material difference exists between such cash flows and the related amounts recognized in the statement of operations, the amount of the difference and the reasons for it would be disclosed. For example, there may be financing situations where there are significant differences between interest paid and interest expense for the period because a government has prepaid interest or is permitted to defer the payment of interest.

.115 *When a government is employing the indirect method and there is a significant difference between the interest revenue or expense recognized in the statement of operations and the interest receipt or payment recognized in the cash flow statement, the financial statements should disclose the amount of the difference and the reason(s) for it.* [APRIL 2005]

.116 Cash receipts and outflows relating to tangible capital assets are included in capital activities for a government, in contrast with a business, which shows such cash flows as investing activities. This additional category for a government reflects the fact that cash flows from investing activities are supposed to represent expenditures made to acquire assets that will generate future income and cash inflows. Most government tangible capital assets have future service potential, rather than future cash inflows associated with them. Examples include:

(a) cash paid on acquisition of tangible capital assets; and

(b) cash received on disposal of tangible capital assets.

Under the indirect method, adjustments for gains and losses arising on the sale of tangible capital assets would be adjusted for in the calculation of cash flows from operating activities.

.117 Cash flow information related to investing would include investments made and realized during the period.

.118 Cash flow information related to financing would include both domestic and foreign debt issued and repaid during the period.

.119 *The statement of cash flow should report separately major classes of gross cash receipts and gross cash payments arising from capital, investing and financing activities, except to the extent that cash flows described in paragraphs* PS 1201.120-.*121 are presented on a net basis.* [APRIL 2005]

.120 *Cash flows arising from each of the following operating, capital, investing or financing activities may be presented on a net basis:*

(a) cash receipts collected and payments made on behalf of entities external to the government reporting entity, including taxpayers and beneficiaries, when the cash flows reflect the activities of the external party rather than those of the government; and

(b) cash receipts and payments for items for which the turnover is rapid, the amounts are large and the maturities are short. [APRIL 2005]

.121 *Cash flows arising from interest paid on debt issued on behalf of government business enterprises and interest received from those government business enterprises should be presented on a net basis when the debt meets the criteria in LONG-TERM DEBT, paragraph* PS 3230.12. [APRIL 2005]

.122 Examples of the exclusion in paragraph PS 1201.120(a) include:

(a) taxes collected by a government on behalf of another level of government (see TAX REVENUE, Section PS 3510), not including taxes collected by a government for its own use as part of a tax-sharing arrangement;

(b) funds held for parties external to the government reporting entity by a government organization that is an investment or trust entity; and

(c) rents collected by a government organization on behalf of, and paid over to, owners of property that are external to the government reporting entity.

.123 Examples of the exclusion in paragraph PS 1201.120(b) include cash advances and repayments related to:

(a) the purchase and sale of investments; and

(b) other short-term borrowings (for example, those that have a maturity period of three months or less).

.124 *Capital, investing and financing transactions that do not require the use of cash or cash equivalents should be excluded from the statement of cash flow. Such transactions should be disclosed in the financial statements in a way that provides all the relevant information about these capital, investing and financing activities.* [APRIL 2005]

.125 Many capital, investing and financing activities do not have a direct impact on current cash flows, although they do affect the assets and obligations of a government. For example, acquisitions of assets by assuming directly related liabilities affect the assets and liabilities of a government, but may have no cash flow impact in the current period. The exclusion of non-cash transactions from the statement of cash flow is consistent with the objective of a cash flow statement, as these items do not involve sources or uses of cash in the current period.

.126 *The financial statements should disclose the components of cash and cash equivalents and should present a reconciliation of the amounts in the statement of cash flow with the equivalent items presented in the statement of financial position. A government should disclose the policy it adopts in determining the composition of cash and cash equivalents.* [APRIL 2005]

Reporting legislative control and financial accountability

Comparison of actual and budgeted results

.127 Financial statements need to provide a comparison of the actual and budgeted financial results of the government's management of its economic resources, obligations and financial affairs. In addition, a more focused comparison of the government's actual and budgeted financial results in its management of its financial resources, obligations and financial affairs alone needs to be provided. Such comparisons serve as a starting point for understanding and assessing trends in government operations and future revenue requirements as well as for identifying variances that need to be explained.

.128 A comparison of actual and budgeted amounts is reported on the statement of operations, which has an economic resources (expense-based) focus, and on the statement of change in net debt, which has a financial resources (expenditure-based) focus.

.129 The comparisons of actual and budgeted financial results of the government's management of both its economic and financial resources provide key accountability information about the government's performance in achieving its operational and spending plans.

.130 *The statement of operations should present a comparison of the results for the accounting period with those originally planned. Planned results should be presented for the same scope of activities and on a basis consistent with that used for actual results.* [APRIL 2005]

.131 *The statement of change in net debt should present a comparison of the items that comprise the change in net debt for the accounting period, as well as the change in net debt for the period, with the figures originally planned. Planned amounts should be presented for the same scope of activities and on a basis consistent with that used for actual amounts.* [APRIL 2005]

.132 On the statement of operations or the statement of change in net debt, when the scope of financial activity reported in the fiscal plan is not the same as that reported in the financial statements, it may be necessary to restrict the comparison of actual and budgeted results to the scope of financial activity reported in the budget or main estimates of expenditures. This comparison would be presented in a note or supporting schedule. To ensure that this disclosure is reconcilable to the information reported in the financial statements, a government would highlight the differences between the reporting entity used for the financial statements and that used for the fiscal plan.

.133 On the statement of operations or the statement of change in net debt, when a government's fiscal plan is not prepared on a basis consistent with that used to report the actual results, planned results should be reported on the same basis as that used to report the results of the current period. In those circumstances, it would be necessary to provide a reconciliation of the restated information with that originally presented in the fiscal plan.

Reporting on legislative authority

.134 Users look to financial statements to determine whether the economic resources entrusted to the government were administered in accordance with legislative authorities.

.135 *Financial statements should disclose information to show where a government has exceeded its revenue, borrowing, investing, expense or expenditure authority limits.* [APRIL 2005]

.136 Financial statements need to provide information that highlights when the revenue, expense, expenditure, investing and borrowing activities underlying the financial statements were not carried out within the financial limits authorized by legislation.

.137 This disclosure would be provided in schedules or notes to the financial statements.

Reporting on funds and reserves

.138 Funds and reserves would be disclosed in accordance with PUBLIC SECTOR GUIDELINE PSG-4, Funds and Reserves.

TRANSITIONAL PROVISIONS

.139 This Section applies in the period FOREIGN CURRENCY TRANSLATION, Section PS 2601, and FINANCIAL INSTRUMENTS, Section PS 3450, are adopted.

APPENDIX A

ILLUSTRATIVE FINANCIAL STATEMENTS — FEDERAL, PROVINCIAL AND TERRITORIAL GOVERNMENTS

The following examples have been prepared by CPA Canada staff to illustrate how the standards in Section PS 1201 might be implemented.

The examples are illustrative only and matters of principle relating to particular situations should be decided in the context of the Section. They are not intended to indicate preferred formats nor to prescribe standardized note disclosure, as variations in format and wording will be necessary to meet the requirements of differing circumstances.

For ease of presentation, selections are made from accounting alternatives permitted by the Section.

Note: Government financial statements consolidate the financial statements of organizations comprising the government reporting entity, except for government business enterprises, which are included in the financial statements on a modified equity basis.

Consolidated Statement of Financial Position

As at March 31 ($ millions)	20X2	20X1
Financial assets		
Cash and cash equivalents	1,577	1,366
Accounts receivable	1,864	1,708
Portfolio investments	2,254	1,331
Derivatives	35	0
Commercial enterprises equity	331	207
Loans	4,909	5,659
Inventories for resale	109	135
	11,079	10,406
Liabilities		
Accounts payable and accrued liabilities	2,383	2,644
Derivatives	10	105
Debt	5,610	5,768
Debt of municipal financing corporation	3,788	4,028
Pension obligations	4,813	4,890
Other accrued liabilities	1,395	1,510
Deferred revenue	308	331
	18,307	19,276
Net debt	(7,228)	(8,870)
Non-financial assets (see Note X)		
Tangible capital assets	7,218	7,215
Inventories of supplies	112	222
Prepaid expenses	30	20
	7,360	7,457
Accumulated surplus / (deficit)	132	(1,413)
	======	======
Accumulated surplus / (deficit) is comprised of:		
Accumulated operating surplus / (deficit)	10	(1,366)
Accumulated remeasurement gains / (losses)	122	(47)
	132	(1,413)

	======	======	

See accompanying notes to the consolidated financial statements

Consolidated Statement of Operations

For the year ended March 31 ($ millions)	20X2 Budget	20X2 Actual	20X1 Actual
Revenues			
Personal income tax	5,392	5,969	5,655
Corporate taxes	2,642	2,659	3,848
Sales tax	1,265	1,408	1,543
Fuel tax	470	547	558
Tobacco tax	345	341	330
Lottery revenues	660	770	705
Health insurance premiums	641	680	652
Fees, permits, licenses and fines	581	651	669
Liquor commission	427	485	465
Income from enterprises	50	525	97
Miscellaneous revenues	100	342	402
Investment income	409	610	747
Canada Health and Social Transfer	940	970	903
Other transfers	355	365	280
	14,277	16,322	16,854
Expenses			
Education	4,329	4,287	4,168
Health	4,541	4,626	4,457
Agriculture, environment, development	1,706	1,856	1,740
Social services	1,654	1,701	1,709
Transportation and utilities	626	823	807
Recreation and culture	281	272	217
General government	551	627	560
Justice	468	487	462
Interest expense	93	267	183
	14,249	14,946	14,303

Operating surplus	28	1,376	2,551
Accumulated operating deficit at beginning of year (a)	(1,366)	(1,366)	(3,917)
Accumulated operating surplus / (deficit) at end of year	(1,338)	10	(1,366)

(a) The reconciliation to the accumulated operating surplus at the end of year may be done on a separate statement.

Consolidated Statement of Remeasurement Gains and Losses

For the year ending March 31 ($ millions)	20X2	20X1
Accumulated remeasurement gains and (losses) at beginning of year	(47)	0
Unrealized gains (losses) attributable to:		
Foreign exchange	(35)	0
Derivatives	130	(105)
Portfolio investments	54	108
Amounts reclassified to the statement of operations:		
Portfolio investments	20	(50)
Net remeasurement gains and (losses) for the year	169	(47)
Accumulated remeasurement gains and (losses) at end of year	122	(47)

Consolidated Statement of Change in Net Debt

For the year ended March 31 ($ millions)	20X2 Budget	20X2 Actual	20X1 Actual
Operating surplus	28	1,376	2,551
Acquisition of tangible capital assets	(294)	(294)	(250)
Amortization of tangible capital assets	226	226	230
(Gain) / loss on sale of tangible capital assets	0	(5)	(19)
Proceeds on sale of tangible capital assets	0	46	72
Write-downs of tangible capital assets	0	24	44
	(68)	(3)	77
Acquisition of supplies inventories	0	0	(324)
Acquisition of prepaid expense	0	(30)	(20)

Consumption of supplies inventories	0	110	102
Use of prepaid expense	0	20	0
	0	100	(242)
	(40)	1,473	2,386
Net remeasurement gains and (losses)	—	169	(47)
(Increase) / decrease in net debt	(40)	1,642	2,339
Net debt at beginning of year	(8,870)	(8,870)	(11,209)
Net debt at end of year	(8,910)	(7,228)	(8,870)

Direct method

Consolidated Statement of Cash Flow

For the year ended March 31 ($ millions)	20X2	20X1
Operating transactions		
Cash received from:		
Taxes	8,239	7,267
Transfers	1,541	1,943
Non-renewable resources	2,118	3,808
Fees, permits, licenses and fines	1,581	1,291
Enterprises	1,401	983
Investments	1,564	1,675
Other	1,676	1,516
	18,120	18,483
Cash paid for:		
Salaries, wages, employment contracts and benefits	1,345	1,276
Material and supplies	3,192	2,936
Grants and other transfers	12,074	10,290
Financing charges	282	733
Travel and communication	108	102
	17,001	15,337
Cash provided by operating transactions	1,119	3,146
Capital transactions		
Proceeds on sale of tangible capital assets	46	72

Cash used to acquire tangible capital assets	(294)	(250)
Cash applied to capital transactions	(248)	(178)
Investing transactions		
Proceeds from disposals and redemptions of portfolio investments	262	2,997
Repayment of loans and advances	768	1,129
Portfolio investments	(594)	(4,089)
Loans and advances	(290)	(280)
Other	(17)	(15)
Cash provided by (applied to) investing transactions	129	(258)
Financing transactions		
Public debt issues	13,970	3,694
Public debt retirement	(14,759)	(6,175)
Cash applied to financing transactions	(789)	(2,481)
Increase in cash and cash equivalents	211	229
Cash and cash equivalents at beginning of year	1,366	1,137
Cash and cash equivalents at end of year	1,577	1,366
	======	======

Indirect method

Consolidated Statement of Cash Flow

For the year ended March 31 ($ millions)	20X2	20X1
Operating transactions		
Annual surplus	1,376	2,551
Non-cash items including amortization	504	522
Prepaid expenses	(30)	(20)
Change in deferred revenue	(23)	16
Other	(708)	77
Cash provided by operating transactions	1,119	3,146
Capital transactions		
Proceeds on sale of tangible capital assets	46	72
Cash used to acquire tangible capital assets	(294)	(250)
Cash applied to capital transactions	(248)	(178)
Investing transactions		

Proceeds from disposals and redemptions of portfolio investments	262	2,997
Repayment of loans and advances	768	1,129
Portfolio investments	(594)	(4,089)
Loans and advances	(290)	(280)
Other	(17)	(15)
Cash provided by (applied to) investing transactions	129	(258)
Financing transactions		
Public debt issues	13,970	3,694
Public debt retirement	(14,759)	(6,175)
Cash applied to financing transactions	(789)	(2,481)
Increase in cash and cash equivalents	211	229
Cash and cash equivalents at beginning of year	1,366	1,137
Cash and cash equivalents at end of year	1,577	1,366
	======	=====

Notes to the Consolidated Financial Statements (excerpts)

Note X: Non-financial assets

Tangible capital and other non-financial assets are accounted for as assets by the government because they can be used to provide government services in future periods. These assets do not normally provide resources to discharge the liabilities of the government unless they are sold.

APPENDIX B

ILLUSTRATIVE FINANCIAL STATEMENTS — LOCAL GOVERNMENTS

The following examples have been prepared by CPA Canada staff to illustrate how the standards in Section PS 1201 might be implemented.

The examples are illustrative only and matters of principle relating to particular situations should be decided in the context of the Section. They are not intended to indicate preferred formats nor to prescribe standardized note disclosure, as variations in format and wording will be necessary to meet the requirements of differing circumstances.

For ease of presentation, selections are made from accounting alternatives permitted by the Section.

Note: Government financial statements consolidate the financial statements of organizations comprising the government reporting entity, except for government business enterprises, which are included in the financial statements on a modified equity basis.

Consolidated Statement of Financial Position

As at December 31 ($ thousands)	20X9	20X8
Financial assets		
Cash and cash equivalents	1,577	1,366
Accounts receivable	1,864	1,708
Portfolio investments	7,031	6,932
Business enterprise equity	331	207
Inventories for resale	109	135
	10,912	10,348
Liabilities		
Accounts payable and accrued liabilities	2,383	2,644
Debt	9,363	9,796
Pensions and other employee benefits	4,813	4,890
Other accrued liabilities	1,703	1,841
	18,262	19,171
Net debt	(7,350)	(8,823)
Non-financial assets (see Note X)		
Tangible capital assets	87,218	97,215
Inventories of supplies	112	222
Prepaid expenses	30	20
	87,360	97,457
Accumulated surplus	80,010	88,634
	=====	=====

See accompanying notes to the consolidated financial statements

Consolidated Statement of Operations

For the year ended December 31 ($ thousands)	20X9	20X9	20X8
Revenues	Budget	Actual	Actual
Property taxes	8,034	8,628	9,503
User fees	3,381	3,746	3,788
Government transfers	1,722	1,820	1,648
Fees, permits, licenses and fines	581	651	669
Investment income	409	610	747
Income from enterprises	50	525	97

Miscellaneous revenues	100	342	402
Total revenue	14,277	16,322	16,854
Expenses			
Protection to persons and property	4,329	4,061	3,938
Water and sewage	8,541	8,626	8,457
Roadways and transportation	7,360	7,557	7,449
Recreation and culture	3,094	3,310	3,269
General government	832	899	777
Other	93	493	413
Total expenses	24,249	24,946	24,303
Annual deficit	(9,972)	(8,624)	(7,449)
Accumulated surplus at beginning of year (a)	88,634	88,634	96,083
Accumulated surplus at end of year	78,662	80,010	88,634

(a) The reconciliation to the closing accumulated surplus / (deficit) may be done on a separate statement.

Consolidated Statement of Change in Net Debt

For the year ended December 31 ($ thousands)	20X9 Budget	20X9 Actual	20X8 Actual
Annual deficit	(9,972)	(8,624)	(7,449)
Acquisition of tangible capital assets	(294)	(294)	(250)
Amortization of tangible capital assets	10,000	10,226	10,230
(Gain) / loss on sale of tangible capital assets	0	(5)	(19)
Proceeds on sale of tangible capital assets	0	46	72
Write-downs of tangible capital assets	0	24	44
	9,706	9,997	10,077
Acquisition of supplies inventories	0	0	(324)
Acquisition of prepaid expense	0	(30)	(20)
Consumption of supplies inventories	0	110	102
Use of prepaid expense	0	20	0
	0	100	(242)
Change in net financial assets / net debt	(266)	1,473	2,386

Net financial assets / net debt at beginning of year	(8,823)	(8,823)	(11,209)
Net financial assets / net debt at end of year	(9,089)	(7,350)	(8,823)
	=====	=====	=====
Direct method			
Consolidated Statement of Cash Flow			
For the year ended December 31 ($ thousands)		20X9	20X8
Operating transactions			
Cash received from:			
Taxes		9,239	8,267
Transfers		1,541	1,943
User fees		3,618	4,808
Fees, permits, licenses and fines		581	791
Enterprises		1,401	983
Investments		564	675
Other		1,176	1,016
		18,120	18,483
Cash paid for:			
Salaries, wages, employment contracts and benefits		7,345	7,276
Material and supplies		7,192	5,936
Contracted services		2,074	1,290
Financing charges		501	835
		17,112	15,337
Cash provided by operating transactions		1,008	3,146
Capital transactions			
Proceeds on sale of tangible capital assets		46	72
Cash used to acquire tangible capital assets		(294)	(250)
Cash applied to capital transactions		(248)	(178)
Investing transactions			
Proceeds from portfolio investments		1,030	4,126
Portfolio investments		(1,129)	(4,369)
Other		(17)	(15)
Cash provided by (applied to) investing transactions		(116)	(258)

Financing transactions		
Proceeds from debt issues	13,970	3,694
Debt repayment	(14,403)	(6,175)
Cash applied to financing transactions	(433)	(2,481)
Increase in cash and cash equivalents	211	229
Cash and cash equivalents at beginning of year	1,366	1,137
Cash and cash equivalents at end of year	1,577	1,366

Indirect method

Consolidated Statement of Cash Flow

For the year ended December 31 ($ thousands)	20X9	20X8
Operating transactions		
Annual deficit	(8,624)	(7,449)
Non-cash items including amortization	10,504	10,522
Prepaid expenses	(30)	(20)
Change in deferred revenue	(23)	16
Other	(819)	77
Cash provided by operating transactions	1,008	3,146
Capital transactions		
Proceeds on sale of tangible capital assets	46	72
Cash used to acquire tangible capital assets	(294)	(250)
Cash applied to capital transactions	(248)	(178)
Investing transactions		
Proceeds from portfolio investments	1,030	4,126
Portfolio investments	(1,129)	(4,369)
Other	(17)	(15)
Cash provided by (applied to) investing transactions	(116)	(258)
Financing transactions		
Proceeds from debt issues	13,970	3,694
Debt repayment	(14,403)	(6,175)
Cash applied to financing transactions	(433)	(2,481)
Increase in cash and cash equivalents	211	229

Cash and cash equivalents at beginning of year	1,366	1,137
Cash and cash equivalents at end of year	1,577	1,366
	======	======

Notes to the Consolidated Financial Statements (excerpts)

Note X: Non-financial assets

Tangible capital and other non-financial assets are accounted for as assets by the government because they can be used to provide government services in future periods. These assets do not normally provide resources to discharge the liabilities of the government unless they are sold.

Footnotes

* Editorial change — March 2012.

SECTION PS 1300
government reporting entity

TABLE OF CONTENTS

	Paragraph
Purpose and scope	.01-.06
Defining the government reporting entity	.07-.16
Determining whether control exists	.17-.24
Indicators of control	.18-.24
Accounting for government organizations	.25-.36
Defining a government business enterprise	.28-.31
Accounting for a government business enterprise	.32-.36
Accounting for portfolio investments	.38
Disclosure	.39
Trusts under administration	.40-.46
Transitional provisions	.47-.52

Characteristics of government organizations that are eligible for the transitional provisions	.48-.52
Applying the transitional provisions	Appendix A

PURPOSE AND SCOPE

.01 This Section defines the scope of the government reporting entity in terms of the organizations whose financial affairs and resources would be included in government financial statements and establishes standards on how to account for and disclose those organizations in government financial statements. It also establishes standards on how to account for and disclose portfolio investments and trusts under administration.

.02 The standards are intended to apply to the financial statements of the federal, provincial, territorial and local governments. Each of these governments is a separate financial reporting entity and would be excluded from the financial reporting entity of any other government.

.03 FINANCIAL STATEMENT OBJECTIVES, Section PS 1100, states that government financial statements should provide an accounting of the full nature and extent of the financial affairs and resources which the government controls, including those related to the activities of government agencies and enterprises. This Section also states that those financial statements are a principal means by which a government demonstrates its accountability for the financial affairs and resources entrusted to it and should provide information useful in evaluating a government's performance in the management of its financial affairs and resources.

.04 Governments carry out their policies and deliver services through various organizations. Some organizations, such as departments or ministries, are integral to the operations of the government. These organizations carry out government operations, provide services for government and receive all or most of their operational direction from government.

.05 Other organizations, such as boards, commissions and Crown corporations, have broader financial powers and operational authority delegated to their management under legislation. They generally have more discretion in establishing their systems and practices and are not bound by all of the directives and guidelines that apply to ministries or departments. Some of these organizations are enterprises whose principal activity is carrying on a business.

.06 These organizations may prepare separate financial statements that constitute important accountability reports. Financial statements for the government reporting entity as a whole are prepared to provide an understandable overview of the full nature and extent of the financial affairs and resources which the government controls.

DEFINING THE GOVERNMENT REPORTING ENTITY

.07 *The government reporting entity should comprise government components and those organizations that are controlled by the government.* [Former paragraph PS 1300.07 retained in Archived Pronouncements.] [APRIL 2005 *]

.08 Control is the power to govern the financial and operating policies of another organization with expected benefits or the risk of loss to the government from the other organization's activities.

.09 A government may choose not to exercise its power; nevertheless, control exists by virtue of the government's ability to do so. Control must exist at the financial statement date, without the need to amend legislation or agreements.

.10 Whether a government controls an organization is a question of fact that must be determined by reference to the definition of control established in paragraph PS 1300.08 and the particular circumstances of each case. The determination of the fact that control exists will require the application of professional judgment. Government achieves its objectives through a wide range of organizations which individually will fall somewhere along a continuum. At one end of the continuum, it will be clear that an organization does not have the power to act independently and is controlled by the government. At the other end, the organization will have the power to act independently and, while government will have a level of influence on the organization, it will be clear that it does not have control. Along the continuum, consideration needs to be given to the nature of the relationship between the government and the organization in order to determine whether control exists. This Section provides guidance intended to assist in this assessment.

.11 In applying this guidance, it is necessary to determine the substance of the relationship between the government and the organization. The true nature of certain relationships may not be completely reflected by their legal form. All relevant aspects and implications of the relationship would be considered in determining whether or not the government controls the organization. Where various aspects of the relationship are designed, in effect, to achieve an overall objective, they would be viewed as a whole.

.12 Control does not stem simply from the government having constitutional responsibility, but rather from the nature of the relationship between the government and the organization. For example, where a government has constitutional responsibility for health care, the government may choose to deliver those services through a controlled organization, such as a government department, or through an independent contractor. Constitutional responsibility does not mean that the government controls the entities that are used in delivering the services.

.13 Financial and operating policies are principles and practices that determine how an organization conducts its activities. The ability to govern these policies is an important element of government control because it establishes the fundamental basis for the conduct of the organization's operations and the achievement of its mission and mandate.

.14 There are a variety of ways to govern the financial and operating policies of an organization. For example:

(a) a government may establish an organization's fundamental purpose and eliminate or significantly limit the ability of the organization to make future decisions by predetermining the financial and operating policies of the organization;

(b) a government may direct the financial and operating policies of an organization on an ongoing basis; or

(c) a government may veto, overrule or modify the financial and operating policies established by an organization.

.15 A government does not need to manage an organization's activities on a day-to-day basis to control the organization. It is the government's existing authority to determine the policies governing those activities that is important.

.16 For the purposes of this Section, it is assumed that where the government has the power to govern the financial and operating policies of an organization, it expects to derive a financial or non-financial benefit. The government may also be exposed to the risk of loss.

DETERMINING WHETHER CONTROL EXISTS

.17 As noted in paragraphs PS 1300.10-.11, whether a government controls an organization is a question of fact that requires the application of professional judgment based on the definition of control in this Section and the substance of the relationship in each case. The following guidance would be applied in the context of the definition of control and the particular circumstances of each case. It is the preponderance of evidence that would be considered in assessing whether a government controls an organization.

Indicators of control

.18 There are certain indicators that provide more persuasive evidence of control:

(a) government has the power to unilaterally appoint or remove a majority of the members of the governing body of the organization;

(b) government has ongoing access to the assets of the organization, has the ability to direct the ongoing use of those assets, or has ongoing responsibility for losses;

(c) government holds the majority of the voting shares or a "golden share" 1 that confers the power to govern the financial and operating policies of the organization; and

(d) government has the unilateral power to dissolve the organization and thereby access its assets and become responsible for its obligations.

.19 Other indicators that may provide evidence of control exist when the government has the power to:

(a) provide significant input into the appointment of members of the governing body of the organization by appointing a majority of those members from a list of nominees provided by others or being otherwise involved in the appointment or removal of a significant number of members;

(b) appoint or remove the CEO or other key personnel;

(c) establish or amend the mission or mandate of the organization;

(d) approve the business plans or budgets for the organization and require amendments, either on a net or line-by-line basis;

(e) establish borrowing or investment limits or restrict the organization's investments;

(f) restrict the revenue-generating capacity of the organization, notably the sources of revenue; and

(g) establish or amend the policies that the organization uses to manage, such as those relating to accounting, personnel, compensation, collective bargaining or deployment of resources.

.20 For each indicator that applies in a particular circumstance, the degree of government influence would determine its importance as evidence of control. In weighing the evidence, it would be necessary to consider the indicators collectively as well as individually. For example, where an organization is governed by a publicly elected board, this is not necessarily, in and of itself, sufficient evidence to conclude that the government does not control the organization. Similarly, where a government appoints a majority of the members of the governing body of an organization, this is not necessarily, in and of itself, sufficient evidence that the government controls the organization.

.21 The degree of importance of the indicators of control, as set out in paragraphs PS 1300.18-.19, further depends on the particular circumstances in each case. In some situations, a particular indicator may provide a high degree of evidence of control whereas, in other situations, the importance of the same indicator may not be as significant.

.22 A government's ability to take temporary control of another organization in exceptional circumstances, such as a crisis situation like bankruptcy or a board failure, does not, in and of itself, constitute control for the purposes of this Section. Such circumstances would arise as a result of a specific event that caused the government to intervene in the activities of the organization. Temporary control is short term in nature with the intention to relinquish control as soon as the crisis has been addressed.

.23 A government's ability to regulate an organization does not, in and of itself, constitute control. Government may establish the regulatory environment in an industry or sector within which organizations operate and impose conditions or sanctions on their operations. The governing bodies of those regulated organizations make independent decisions within the regulatory framework. A government may require the organization to submit reports to demonstrate compliance with the regulations. These reports are not considered evidence of control because the government's interest in these organizations extends only to the regulatory aspects of operations.

.24 An organization's financial dependence on the government, in and of itself, does not constitute control. While financial dependence would usually give rise to a relationship based on influence, it is unlikely that financial dependence alone would enable the government to control an organization. The governing body of that organization may make independent decisions on its financial and operating policies. A government may require the organization to submit reports to demonstrate compliance with the terms and conditions of funding. These reports are not considered evidence of control because the government's interest in the organization extends only to the funding aspects of operations. For example, a private sector day care service that receives government funding may be required to demonstrate compliance with the terms and conditions of government funding. However, the governing body retains discretion as to whether it will take funding from, or do business with, the government.

ACCOUNTING FOR GOVERNMENT ORGANIZATIONS

.25 Reporting on a consolidated basis presents summary information that aggregates the individual financial statements of organizations comprising a reporting entity. Consolidation is a method of accounting that combines the accounts of those organizations line-by-line on a uniform basis of accounting and eliminates inter-organizational balances and transactions. The mechanics of preparing government consolidated financial statements are outlined in BASIC PRINCIPLES OF CONSOLIDATION, Section PS 2500, and ADDITIONAL AREAS OF CONSOLIDATION, Section PS 2510.

.25A A **governmental unit** is a government component, government not-for-profit organization or other government organization.

.26 Consolidation is the most appropriate method of accounting for organizations integral to the overall operations of government in directly performing its executive function. Such organizations include, for example, government departments, funds and government organizations that exist primarily to provide services to government.

.27 *Government financial statements should consolidate the financial statements of governmental units comprising the government reporting entity.* 2 [Former paragraph PS 1300.27 retained in Archived Pronouncements.] [JUNE 1996 *]

Defining a government business enterprise

.28 A government business enterprise is an organization that has all of the following characteristics:

(a) it is a separate legal entity with the power to contract in its own name and that can sue and be sued;

(b) it has been delegated the financial and operational authority to carry on a business;

(c) it sells goods and services to individuals and organizations outside of the government reporting entity as its principal activity; and

(d) it can, in the normal course of its operations, maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity.

.29 Selling goods and services involves a direct exchange relationship between the revenues and the goods and services provided. Selling prices are related to the quantity and quality of goods or services sold, and not just to the recovery of administrative costs. Imposed fees and penalties, such as licenses and fines, do not represent sales of goods and services. Insurance premiums charged by a government organization are a sale of a service and not an imposed fee.

.30 A government business enterprise should, in the normal course of its operations, be able to maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity. These revenues include not only amounts from the sale of goods and services, but also transfers 3 received from other governments or sources outside of the government reporting entity.

.31 When determining if an organization can maintain its operations and meet its liabilities with revenues received from outside of the government reporting entity, the following factors should be considered:

(a) the organization's history of maintaining its operations and meeting its liabilities;

(b) whether the organization would continue to maintain its operations and meet its liabilities without relying on sales to, or subsidies in cash or kind from, the government reporting entity;

(c) past, present and future economic conditions within which the organization operates; and

(d) whether the organization has realistic and specific plans that show how it expects to be able to maintain its operations and meet its liabilities in the future.

Accounting for a government business enterprise

.32 A government business enterprise differs from other government organizations in its relationship to the government, and its objectives, and operations. A government enterprise represents a financial asset of the government and given its autonomy, business-oriented objectives, and financial self-sufficiency, equity accounting is appropriate.

.33 Accounting for a government business enterprise by the equity method avoids commingling the independently-managed business enterprise's budget and actual results with those of other government organizations on a line-by-line basis. It also avoids including the business enterprise's gross debt with that of other government organizations as the business enterprise is expected to repay that debt from its own revenues.

.34 Because a government enterprise carries on a business, its financial statements should be prepared on the same basis as a private sector business. This basis is most appropriate for measuring the government's investment in the organization and the impact it has on the government's financial position and results. As such, the modified equity method is the most suitable form of equity accounting.

.35 *Government business enterprises should be accounted for by the modified equity method.* [JUNE 1996]

.36 Accounting for government business enterprises by the modified equity method is outlined in INVESTMENTS IN GOVERNMENT BUSINESS ENTERPRISES, Section PS 3070.

ACCOUNTING FOR PORTFOLIO INVESTMENTS

(paragraph PS 1300.37 deleted) [Former paragraph PS 1300.37 retained in Archived Pronouncements.]

.38 Governments may invest in organizations that do not form part of the government reporting entity. Such investments are called portfolio investments and would be accounted for in accordance with PORTFOLIO INVESTMENTS, Section PS 3041, and FINANCIAL INSTRUMENTS, Section PS 3450. [Former paragraph PS 1300.38 retained in Archived Pronouncements.]

DISCLOSURE

.39 *Government financial statements should disclose, in notes or schedules, a listing of the major organizations comprising the reporting entity, separately identifying those that are consolidated and those that are accounted for by the modified equity method.* [SEPT. 1997]

TRUSTS UNDER ADMINISTRATION

.40 *Trusts administered by a government or government organization should be excluded from the government reporting entity.* [JUNE 1996]

.41 Trusts are defined as property that has been conveyed or assigned to a trustee to be administered as directed by agreement or statute. In a trust relationship, the trustee holds title to property for the benefit of, and stands in a fiduciary relationship to, the beneficiary.

.42 To meet the definition in paragraph PS 1300.41, the property conveyed or assigned to the government or government organization acting as a trustee, must be provided to fulfill a particular objective of the donor of the property conveyed or assigned. The government or government organization would merely administer the terms and conditions embodied in the agreement and has no unilateral authority to change the conditions set out in the

trust indenture. For this reason, the assets and activities of the trust are excluded from the government's reporting entity.

.43 A government or government organization acts as trustee when it administers trusts on behalf of the beneficiaries specified in the agreement or statute. As trustee, the government is accountable to third parties for the use and disposition of trust assets and for the funds derived from those trust activities. Trust assets are not owned by the Crown in right of Canada, a province or territory, or by a local government, and should not be included in the government reporting entity.

.44 *Government financial statements should disclose, in a note or schedule, a description of trusts under administration by a government or government organization, and a summary of trust balances.* [JUNE 1996]

.45 To acknowledge and report on the magnitude of trusts administered by a government or government organization, a note or schedule to government financial statements would describe the trust assets under administration and would set out a summary of trust balances.

.46 Often the term "trusts" is applied to assets earmarked as a result of a government policy decision when no trust liability exists. Such assets are special funds that comprise part of the government reporting entity and would be consolidated.

TRANSITIONAL PROVISIONS

.47 This Section applies to fiscal years beginning on or after April 1, 2005. However, when a government organization that was not included as part of the government reporting entity in the financial statements of the previous fiscal year is newly included and the government organization has all of the characteristics set out in paragraph PS 1300.49, a government may choose to include the government organization in the financial statements on a modified equity basis, rather than fully consolidating, from the date of initial application until fiscal years beginning on or after April 1, 2009. For fiscal years beginning on or after April 1, 2009, a government fully consolidates these government organizations, in accordance with paragraph PS 1300.27. Earlier adoption is encouraged (see Appendix A, which is intended to assist in applying the transitional provisions).

Characteristics of government organizations that are eligible for the transitional provisions

.48 There are certain government organizations that meet the control criteria for inclusion in the government reporting entity, established in paragraphs PS 1300.18-.19, yet exercise considerable local responsibility and decision making. The government's governance is focused on providing global funding, defining standards and reviewing / assessing program outcomes. For these government organizations, the transitional provisions of paragraph PS 1300.47 apply.

.49 Government organizations eligible for the transitional provisions have all of the following characteristics:

(a) they are separate legal entities with the power to contract in their own name, and that can sue and be sued;

(b) they have the financial and operational authority to provide a government service within a defined service area;

(c) there is a governance framework of appointed or elected local board representatives from the defined service area; and

(d) there are significant restrictions on the government's ability to access their assets.

.50 These government organizations generally have a significant level of autonomy in carrying out the services they provide. Often they interact regularly with the service recipients and are viewed by these recipients as being responsible for the service. At a localized level, these government organizations have considerable discretion with respect to day-to-day operations, although they are controlled by the government. Local decision making is generally reinforced through a strong local board that is responsible to its stakeholders and clients.

.51 These government organizations are often part of a group of geographically dispersed similar organizations that provide services within the jurisdiction as part of the same overall government program. Government support provided to these government organizations may be based on funding formulae whose application is shared by other local jurisdictions for the same service. These government organizations have similar objectives and responsibilities, and normally operate under a comprehensive senior government legislative framework.

.52 Generally, the assets of these government organizations cannot be used for other government purposes and may not revert to the government even on dissolution of the organization. For example, the government's access may be restricted to repayment of government capital grants on asset disposal. There is no expectation that government can directly access the assets without the co-operation of the local authority or board.

APPENDIX A

APPLYING THE TRANSITIONAL PROVISIONS

Footnotes

* Editorial change — December 2014.

1. "Golden share" refers to a class of share that entitles the holder to specified powers or rights generally exceeding those normally associated with the holder's ownership interest or representation on the governing body.

2. In those circumstances where a non-controlling interest exists in a government organization that is not a government business enterprise, the organization would be included in the government's financial statements on a proportionate consolidation basis in accordance with ADDITIONAL AREAS OF CONSOLIDATION, paragraphs PS 2510.05-.10.

* Editorial change — December 2014.

3. Government transfers are defined in GOVERNMENT TRANSFERS, Section PS 3410.

SECTION PS 1400
objectives of financial statements — federal, provincial & territorial governments

(Replaced by Section PS 1100 — January 2003)

SECTION PS 1500
general standards of financial statement presentation — federal, provincial & territorial governments

(Replaced by Section PS 1200 — January 2003)

SECTION PS 1600
financial reporting entity — federal, provincial & territorial governments

(Replaced by Section PS 1300 — June 1996)

SECTION PS 1700
objectives of financial statements — local governments

(Withdrawn February 2007)

SECTION PS 1800
general standards of financial statement presentation — local governments

(Withdrawn February 2007)

View Terms and Conditions and Privacy Policy

Help desk: Mon-Fri, 9am-5pm ET 1-866-256-6842 Contact Us

© 2001-2016, EYEP and/or E&Y LLP and/or CPA Canada. All rights reserved.

public sector accounting standards
specific items — financial reporting
Sections PS 2100 — PS 2700

SECTION PS 2100
disclosure of accounting policies

.01 This Section establishes disclosure standards on the accounting policies adopted by an entity in the preparation and presentation of its financial statements. Accounting policies are the specific accounting principles used by a reporting entity and the methods for applying those principles.

DISCLOSURE

.02 There are a number of alternative accounting policies that may be applied to similar items. Because alternative accounting policies can produce significantly different results, a description of the accounting policies is necessary for the reader to interpret the financial statements and to become aware of differences when comparing them with the statements of similar entities. The description is an integral part of the financial statements since it is necessary for their interpretation. It should be concise or it may not be read, yet be clear to facilitate understanding and consistent interpretation. The description of accounting policies would not include amounts, analytical data or cross-references to specific items. Such information would be included in other notes to the financial statements.

.03 *A clear and concise description of all significant accounting policies of a reporting entity should be included as an integral part of its financial statements.* [SEPT. 1983]

.04 Appropriate accounting policies are those that result in fair disclosure of financial information. It is important that accounting policies be selected to meet this objective. There are a number of general considerations involved in this selection, including prudence, substance over form and materiality:

(a) Prudence requires that inevitable uncertainties surrounding many transactions be recognized and that the policy selected be directed toward an unbiased result that is neither overly optimistic nor pessimistic.

(b) Substance over form requires that transactions and other events be accounted for and presented in accordance with their financial reality.

(c) Materiality requires taking into account the significance of an item to users of financial statements.

Inappropriate accounting policies can result in reporting misleading information in the financial statements. Disclosure of such policies is not a substitute for the selection of accounting policies that result in appropriate and adequate information.

.05 The provisions of this Section apply to all complete sets of financial statements issued by a reporting entity, whether on annual or interim bases. Some entities also publish abridged or partial financial statements on an interim basis, which may not disclose accounting policies. In the absence of specific disclosure, the

reader is entitled to assume that accounting policies have not changed from those published in the latest annual financial statements. Accordingly, differences from the accounting policies used in the previously issued annual financial statements would be disclosed in the interim abridged financial statements.

CONTENT

.06 Certain accounting policies are of such significance that it is essential that they be adequately described in the financial statements in order to provide an understanding of the reporting entity's financial results and position.

.07 The description of the significant accounting policies includes the source of the basis of accounting used in accordance with the Introduction to Public Sector Accounting Standards (i.e., the financial statements have been prepared in accordance with Canadian public sector accounting standards), a definition of the reporting entity to which the financial statements relate and, in the case of consolidated statements, the basis for including and excluding related entities.

.08 Specific accounting policies for similar items may differ from one entity to another, and it cannot be assumed that users of the financial statements will be familiar with these differences. Consequently, the specific accounting policies applied to items material to the financial statements are also clearly described (for example, disclosure of accounting policies for recognizing revenues, the cost of resources consumed and expenditures, valuing assets, estimating liabilities and, where applicable, consolidation). Policies on such important specific items as tangible capital assets, employee benefit plans and contractual obligations are clearly delineated. It is also important to define terminology that is peculiar to the various types of reporting entities. Governments, for instance, use terms such as "budgetary expenditures" and "non-budgetary expenditures", which may not be readily understood by all readers.

.09 *As a minimum, disclosure of information on accounting policies should identify and describe:*

(a) the reporting entity and, where applicable, the method of consolidation;

(b) the source of the basis of accounting used in the financial statements; and

(c) the specific accounting policies selected and applied to significant assets, liabilities, revenues and expenses. [SEPT. 1983 *]

PRESENTATION

.10 In order to provide the reader with an easily accessible overview, all significant accounting policies of an entity are disclosed together rather than in individual notes to the financial statements. It is desirable that the accounting policies be disclosed either as a separate summary cross-referenced to the financial statements or as the first note to the financial statements.

.11 *All significant accounting policies of a reporting entity should be disclosed in one place.* [SEPT. 1983]

Footnotes

* Editorial change — January 2003 and February 2005.

SECTION PS 2120
accounting changes

.01 This Section establishes standards on how to account for and disclose:

(a) a change in an accounting policy;

(b) a change in an accounting estimate; and

(c) a correction of an error relating to prior period financial statements.

CHANGE IN AN ACCOUNTING POLICY

.02 Accounting policies encompass the specific principles and the methods used in their application that are selected by a government in preparing financial statements. There is a general presumption that the accounting policies followed by a government are consistent within each accounting period and from one period to the next. However, a change in an accounting policy may be made: to conform to new Public Sector Accounting Standards; to adopt Public Sector Accounting Standards for the first time; or, if it is considered that the change would result in a more appropriate presentation of events or transactions in the financial statements of the government.

.03 Generally, changes in accounting policy affect, or have a potential effect on, either the operating results or the accumulated surplus / deficit, but may also affect other items. Changes in accounting policy would include, for example, a change in the method of determining the costs applicable to items in inventory held for resale when such change is not the result of changed circumstances, experience or new information.

.04 Neither (a), the initial adoption or alteration of an accounting policy necessitated by events or transactions that are clearly different in substance from those previously occurring, nor (b), the initial adoption of an accounting policy in recognition of events or transactions occurring for the first time or that previously were immaterial in their effect, is considered to be a change in an accounting policy.

.05 The classification of an item in the financial statements of the current period may be different from that in the financial statements of prior periods as a result of a change in the allocation or grouping of items within or among relevant categories. Such a change in classification is a matter of presentation and is not, in itself, a change in an accounting policy. However, to enhance comparability with the financial statements of the current period, the item is reclassified in the financial statements of the prior periods to conform with the new basis. 1

.06 Various treatments have been advocated to deal with a change in an accounting policy, including the following:

(a) Prospective application. The new accounting policy is applied only to events and transactions occurring after the date of the change and to any outstanding related balances existing at the date of the change. No cumulative catch-up adjustment is made to such balances.

(b) Retroactive application with no restatement of prior periods. The new accounting policy is applied to events and transactions from the date of origin of such items and a cumulative adjustment representing the effect of the change in an accounting policy on prior periods is made in the period in which the change is made. Two different treatments of the cumulative adjustment have been followed: an item reflected in the operating results or an adjustment of the opening balance of the accumulated surplus / deficit.

(c) Retroactive application with restatement of prior periods. The new accounting policy is applied to events and transactions from the date of origin of such items. The financial statements for each prior period presented for comparative purposes are restated to reflect the new policy. The balance of the accumulated surplus / deficit at the beginning of the earliest period presented is restated to reflect the cumulative effect of the change on periods prior to that date.

.07 Proponents of prospective application argue that a restatement of previously reported figures dilutes public confidence in financial statements and has an unsettling effect on parties that have made decisions on the basis of the financial statements as originally issued. Since prospective application does not result in a restatement of prior period financial statements, however, the current and subsequent periods would not be fully comparable with periods prior to the change.

.08 Retroactive application with no restatement of prior periods would result in uniform accounting policies being applied to similar items in periods subsequent to the change. This approach would avoid dilution of confidence in the financial statements that may result from restatement of prior periods. Although periods subsequent to the change may not be fully comparable with periods prior to the change, proponents of this approach argue that inter-period comparability may be achieved by disclosing pro forma data to show what the effect would have been if the new policy had been followed in prior periods.

.09 Retroactive application with restatement of all prior periods that are presented provides consistency in accounting policies from one period to another. It assists in interpreting trends in a government's performance and other analytical data that are based on comparisons.

.10 In certain circumstances, it may be extremely difficult to obtain the necessary financial data to enable a change in an accounting policy to be applied retroactively. In such circumstances, the new accounting policy would be applied prospectively.

.11 The standards in this Section do not override any specific provisions as to prospective or retroactive application contained in other Public Sector Accounting Standards.

.12 A distinction can be made between the two primary reasons for a change in accounting policy: a government may change an accounting policy in order to comply with new Public Sector Accounting Standards, or to adopt Public Sector Accounting Standards for the first time; or, a change in accounting policy may be made when there is a choice from among two or more appropriate principles, or methods used in their application, and a government chooses to change the policy applied because it believes that the change would result in a more appropriate presentation of events or transactions in its financial statements.

.13 When a change in an accounting policy is made to conform to new Public Sector Accounting Standards or to adopt Public Sector Accounting Standards for the first time, 2 the new standards may be applied retroactively or prospectively.

.14 *When there is a choice from among two or more appropriate principles or methods used in their application and a change is made, the new accounting policy should be applied retroactively, unless the necessary financial data are not reasonably determinable.* [SEPT. 1997]

.15 In some circumstances, while the total cumulative effect of a change in an accounting policy on prior periods can be determined, the effect with respect to specific prior periods may not be reasonably determinable. In such cases, the retroactive effect of the change in the accounting policy is accounted for as a cumulative adjustment of the opening balance of the accumulated surplus / deficit of the period in which the change is made.

.16 When there has been a change in an accounting policy, a description of the nature of the change as well as its effect on the current and prior periods assists in understanding the significance of the change and its impact on the financial statements. Depending on the nature of the change, it may be appropriate to disclose its effect on significant items such as operating results.

.17 *When a change in an accounting policy is applied retroactively, the financial statements of all prior periods presented for comparative purposes should be restated to give effect to the new accounting policy, except in those circumstances when the effect of the new accounting policy is not reasonably determinable for individual prior periods. In such circumstances, an adjustment should be made to the opening balance of the accumulated surplus / deficit of the current period, or such earlier period as is appropriate, to reflect the cumulative effect of the change on prior periods.* [SEPT. 1997]

.18 *For each change in an accounting policy in the current period, the following information should be disclosed:*

(a) a description of the change;

(b) the effect of the change on the financial statements of the current period; and

(c) the reason for the change. [SEPT. 1997]

.19 *When a change in an accounting policy has been applied retroactively and prior periods have been restated, the fact that the financial statements of prior periods that are presented have been restated and the effect of the change on those prior periods should be disclosed.* [SEPT. 1997]

.20 *When a change in an accounting policy has been applied retroactively but prior periods have not been restated, the fact that the financial statements of prior periods that are presented have not been restated should be disclosed. The cumulative adjustment to the opening balance of the accumulated surplus / deficit of the current period should also be disclosed.* [SEPT. 1997]

.21 *When a change in an accounting policy has not been applied retroactively, this fact should be disclosed.* [SEPT. 1997]

.22 *The disclosure of particulars, including dollar amounts, applies to each change in an accounting policy; it is not appropriate to net items when considering materiality.* [SEPT. 1997]

.23 *A change in an accounting policy that does not have a material effect in the current period but is likely to have a material effect in future periods should be disclosed.* [SEPT. 1997]

.24 Some governments include in their financial statements, public accounts or other reports, historical summaries of their financial results for a series of accounting periods, some for as many as ten years. Such summaries are often used for trend analysis. In order for such summaries and the resulting analyses to provide meaningful information to readers, the accounting principles used would be comparable from year to year. Therefore, when a government reports an historical summary of its financial results, it is desirable practice that the amounts included in the summary from prior years be adjusted to reflect the accounting policies applied in calculating the results for the current year, regardless of whether the government has accounted for changes in accounting policy retroactively in its financial statements.

CHANGE IN AN ACCOUNTING ESTIMATE

.25 Changes in estimates used in accounting are the necessary consequences of the periodic preparation of financial statements. Estimating, of course, requires the exercise of judgment and reappraisal as new events occur, as more experience is acquired, or as additional information is obtained. Examples of items for which estimates are necessary include doubtful accounts and loans receivable and inventory obsolescence.

.26 It is sometimes difficult to distinguish between a change in an accounting policy and a change in an accounting estimate. For example, a government may change from deferring and amortizing certain costs to expensing them as incurred because, as a result of new information, the future benefits of the costs have become doubtful. Changes of this type are often related to the continuing process of obtaining additional information and revising estimates. In cases where it is difficult to draw a clear distinction, it is usual for such a change to be treated as a change in an estimate, not as a change in an accounting policy.

.27 A change in an estimate may affect the financial results of future periods, as well as those of the current period. One point of view would argue that, in such cases, a cumulative adjustment should be made in the current period representing the retroactive effect of the revision on prior periods so that the financial results of future periods would be on the new basis. The preferred accounting treatment, however, is that a change in an estimate not be given retroactive effect since it arises from new information or developments. The effect of a change in an estimate ought to be allocated to the period of revision and applicable future periods if it affects both.

.28 *The effect of a change in an accounting estimate should be accounted for in:*

(a) the period of change, if the change affects the financial results of that period only; or

(b) the period of change and applicable future periods, if the change affects the financial results of both current and future periods. [SEPT. 1997]

Disclosure of the nature and effect on the current period may be desirable for a change in an accounting estimate that is rare or unusual and that may affect the financial results of both current and future periods. On the other hand, disclosure is usually not necessary for a change in an estimate made each period in the course of accounting for normal operating activities, such as allowances for doubtful accounts.

CORRECTION OF AN ERROR IN PRIOR PERIOD FINANCIAL STATEMENTS

.29 On rare occasions, an unintentional error is so material that the financial statements of prior periods can no longer be considered to have been fairly presented at the date of their issue. Such errors may occur from a mistake in computation affecting the financial statements, from a misinterpretation or misrepresentation of information, from an oversight of information available at the time the financial statements were prepared that ought to have been taken into account, or from a misappropriation of assets.

.30 *The amount of the correction of an error that impairs the fairness of financial statements of prior periods should be reported retroactively. Comparative information should be restated, unless it is impracticable to do so.* [SEPT. 1997]

.31 An issue raised with a government by its auditor in one period but not corrected by the government until a subsequent period is not an error, for purposes of this Section; the issue would be accounted for in the period in which the correction is made.

.32 A correction of an error needs to be distinguished from a change in an accounting estimate. An estimate made as part of the normal process of accounting, which is proved by subsequent events to be inaccurate, is not considered to be an error. A change in an accounting estimate results from new information, more experience or subsequent developments.

.33 The financial statements, including the comparative information for prior periods, are presented as if the error had been corrected in the period in which it was made. Therefore, the amount of the correction that relates to each period presented is included in the restated results for that period. The amount of the correction relating to periods prior to those included in the comparative information in the financial statements is adjusted retroactively. Any other information reported with respect to prior periods, such as historical summaries of financial data, is also restated.

.34 *When there has been a correction in the current period of an error in prior period financial statements, the following information should be disclosed:*

(a) a description of the error;

(b) the effect of the correction of the error on the financial statements of the current and prior periods; and

(c) the fact that the financial statements of prior periods that are presented have been restated. [SEPT. 1997]

Depending on the nature of the error, it may be appropriate to disclose the effect of its correction on significant items such as the change in net debt.

PRIOR PERIOD ADJUSTMENTS

.35 *Financial statements of prior periods should be adjusted only for a change in an accounting policy or for a correction of an error in prior period financial statements, in accordance with this Section.* [SEPT. 1997]

Footnotes

1. FINANCIAL STATEMENT CONCEPTS, paragraphs PS 1000.24 and .30, provides reasons, such as consistency and comparability, to support the disclosure of reclassifications of financial statement items.

2. That is, when moving from a non-GAAP basis of accounting or in circumstances other than those described in paragraph PS 2120.04.

SECTION PS 2125
first-time adoption

Basis for Conclusions

First-time adoption by government organizations, Section PS 2125 (August 2010)

First-time adoption by government organizations: transitional provisions, Section PS 2125 (May 2013)

TABLE OF CONTENTS	Paragraph
Purpose and scope	.01-.02
Definitions	.03
Recognition, measurement and presentation	.04-.19
Opening statement of financial position	.04
Accounting policies	.05-.07
Exemptions	.08-.14
Retirement and post-employment benefits	.09-.10
Business combinations	.11
Investments in government business enterprises	.12
Government business partnerships	.13
Tangible capital asset impairment	.14
Exception to retroactive application	.15-.19
Accounting estimates	.17-.19
Disclosure	.20-.22
Transitional provisions	.23

PURPOSE AND SCOPE

.01 The purpose of this Section is to ensure that the first financial statements of a government component, government organization or government partnership, prepared in accordance with Public Sector Accounting Standards, contain high-quality information that:

(a) is transparent for users of the financial statements and comparable over all periods presented;

(b) provides a suitable starting point for accounting in accordance with Public Sector Accounting Standards; and

(c) can be generated at a cost that does not exceed the benefits to users.

Governments adopting Public Sector Accounting Standards for the first time would refer to ACCOUNTING CHANGES, Section PS 2120. Government business enterprises, government business partnerships, and other government organizations or government partnerships adopting the standards applicable to publicly accountable enterprises in the CPA Canada Handbook – Accounting would refer to International Financial Reporting Standard (IFRS) 1 *First-time Adoption of International Financial Reporting Standards*. [Former paragraph PS 2125.01 retained in Archived Pronouncements.]

.02 A government component, government organization or government partnership applies this Section to its first financial statements prepared in accordance with Public Sector Accounting Standards when transitioning from another basis of generally accepted accounting principles (GAAP). The adoption of Public Sector Accounting Standards is to be accounted for by retroactive application with restatement of prior periods subject to the requirements in this Section. [Former paragraph PS 2125.02 retained in Archived Pronouncements.]

DEFINITIONS

.03 The following terms are used in this Section with the meanings specified:

(a) The **date of transition to Public Sector Accounting Standards** is the beginning of the earliest period for which a government organization presents full comparative information in accordance with Public Sector Accounting Standards.

(b) The **first Public Sector Accounting Standards financial statements** are the first financial statements in which a government organization adopts Public Sector Accounting Standards.

(c) A **first-time adopter** is a government organization that presents Public Sector Accounting Standards financial statements for the first time.

(d) An **opening statement of financial position** is a government organization's statement of financial position at the date of transition to Public Sector Accounting Standards.

RECOGNITION, MEASUREMENT AND PRESENTATION

Opening statement of financial position

.04 A government organization prepares and presents an opening statement of financial position at the date of transition to Public Sector Accounting Standards. This opening statement of financial position is the starting point for the government organization's accounting in accordance with Public Sector Accounting Standards.

Accounting policies

.05 *A government organization should use the same accounting policies in its opening statement of financial position and throughout all periods presented in its first financial statements prepared in accordance with Public Sector Accounting Standards. Those accounting policies should comply with the accounting policies effective at the end of the year the government organization adopts Public Sector Accounting Standards, except as otherwise specified in this Section.* [JAN. 2011]

.06 Except as noted in paragraphs PS 2125.08 and PS 2125.15, a government organization, in its opening statement of financial position prepared in accordance with Public Sector Accounting Standards:

(a) recognizes all assets and liabilities whose recognition is required by the standards;

(b) does not recognize items as assets or liabilities if the standards do not permit such recognition;

(c) reclassifies items that it recognized previously as one type of asset or liability, but are recognized as a different type of asset or liability under the standards; and

(d) applies the standards in measuring all recognized assets and liabilities.

.07 *The accounting policies that a government organization uses in its opening statement of financial position prepared in accordance with Public Sector Accounting Standards may differ from those that it used for the same date using its previous accounting policies. Any resulting adjustments arise from events and transactions before the date of transition to Public Sector Accounting Standards. A government organization should recognize such adjustments directly in accumulated surplus / deficit at the date of transition to Public Sector Accounting Standards.* [JAN. 2011]

Exemptions

.08 *A government organization may elect to use one or more of the following exemptions:*

(a) retirement and post-employment benefits;

(b) business combinations;

(c) investments in government business enterprises;

(d) government business partnerships; and

(e) tangible capital asset impairment.

A government organization should not apply these exemptions by analogy to any other items. [JAN. 2011]

Retirement and post-employment benefits

.09 Under RETIREMENT BENEFITS, Section PS 3250, for defined benefit plans, and under POST-EMPLOYMENT BENEFITS, COMPENSATED ABSENCES AND TERMINATION BENEFITS, Section PS 3255, accrued benefit obligations, post-employment benefits and compensated absences are determined by a government organization by applying a discount rate with reference to its plan asset earnings or with reference

to its cost of borrowing. Retroactive application of these Sections requires a government organization to recalculate accrued benefit obligations, post-employment benefits and compensated absences at the time of transition to Public Sector Accounting Standards. However, a first-time adopter may elect to delay application of these Sections relative to the discount rate used until the date of their next actuarial valuation or within three years of the transition date to Public Sector Accounting Standards, whichever is sooner. If a first-time adopter uses this election, it shall apply it to all plans.

.10 Under RETIREMENT BENEFITS, Section PS 3250, for defined benefit plans, and under POST-EMPLOYMENT BENEFITS, COMPENSATED ABSENCES AND TERMINATION BENEFITS, Section PS 3255, a government organization amortizes actuarial gains and losses to the liability or asset, and the related expense in a systematic and rational manner over the expected average remaining service life of the related employee group. Retroactive application of this approach requires a government organization to split the cumulative actuarial gains and losses from the inception of the plan until the date of transition to Public Sector Accounting Standards into a recognized portion and an unrecognized portion. However, a first-time adopter may elect to recognize all cumulative actuarial gains and losses as the date of transition to Public Sector Accounting Standards directly in accumulated surplus / deficit. Actuarial gains and losses after the date of transition to Public Sector Accounting Standards are to be accounted for in accordance with Sections PS 3250 and PS 3255. If a first-time adopter uses this election, it shall apply it to all plans.

Business combinations

.11 ADDITIONAL AREAS OF CONSOLIDATION, Section PS 2510, indicates the accounting requirements for an acquisition by a government organization when applying the purchase method. A first-time adopter need not comply with those requirements for an acquisition that was incurred prior to the date of transition to Public Sector Accounting Standards, with the exception of paragraph PS 2510.23. If a first-time adopter uses this exemption, the purchase method in Section PS 2510 is applied to acquisitions subsequent to the date of transition to Public Sector Accounting Standards. The first-time adopter excludes from its opening statement of financial position any item recognized under previous financial reporting standards that does not qualify for recognition as an asset or liability under Public Sector Accounting Standards including FINANCIAL STATEMENT CONCEPTS, Section PS 1000. However, if a first-time adopter restates any business combination to comply with Section PS 2510, it restates all subsequent business combinations from the date of the business combination.

Investments in government business enterprises

.12 INVESTMENTS IN GOVERNMENT BUSINESS ENTERPRISES, Section PS 3070, requires investments in government business enterprises to be accounted for by the modified equity method. A first-time adopter need not comply with those requirements for an investment in a government business enterprise that was incurred prior to the date of transition to Public Sector Accounting Standards. If a first-time adopter uses this exemption, the modified equity method in Section PS 3070 is applied on a prospective basis from the date of transition. The investment in a government business enterprise balance reflected in the opening statement of financial position is based on the asset and liability balances reflected in the government business enterprise financial statements on the date of transition as calculated under the basis of GAAP being followed by the government business enterprise. However, if a first-time adopter restates any investment in government business enterprises to comply with Section PS 3070, it restates all subsequent investments in government business enterprises from the date of the investment in a government business enterprise.

Government business partnerships

.13 GOVERNMENT PARTNERSHIPS, Section PS 3060, requires government business partnerships to be accounted for by the modified equity method. A first-time adopter need not comply with those requirements for a government business partnership entered into prior to the date of transition to Public Sector Accounting Standards. If a first-time adopter uses this exemption, the modified equity method in Section PS 3060 is applied on a prospective basis from the date of transition. The balance reflected in the opening statement of financial position is based on the asset and liability balances reflected in the government business partnership financial statements on the date of transition as calculated under the basis of GAAP being followed by the government business partnership. However, if a first-time adopter restates any government business partnership to comply with Section PS 3060, it restates all subsequent government business partnerships from the date of the government business partnership.

Tangible capital asset impairment

.14 TANGIBLE CAPITAL ASSETS, Section PS 3150, indicates the conditions when a write-down of a tangible capital asset should be accounted for. A first-time adopter need not comply with those requirements for write-downs of tangible capital assets that were incurred prior to the date of transition to Public Sector Accounting Standards. If a first-time adopter uses this exemption, the conditions for a write-down of a tangible capital asset in Section PS 3150 are applied on a prospective basis from the date of transition. Alternatively, a government organization may reassess all write-downs on tangible capital assets taken prior to the date of transition based on the requirements of Section PS 3150.

Exception to retroactive application

.15 *This Section prohibits retroactive application to accounting estimates.* [Former paragraph PS 2125.15 retained in Archived Pronouncements.] [APRIL 2012]

(paragraph PS 2125.16 deleted) [Former paragraph PS 2125.16 retained in Archived Pronouncements.]

Accounting estimates

.17 A government organization's estimates in its opening statement of financial position prepared in accordance with Public Sector Accounting Standards are consistent with estimates in its balance sheet for the same date prepared using its previous accounting policies (after adjustments to reflect any difference in accounting policies), unless there is objective evidence that those estimates were in error.

.18 A government organization may receive information after the date of transition to Public Sector Accounting Standards about estimates that it had made previously. A government organization treats the receipt of that information in the same way as non-adjusting events after the statement of financial position date under SUBSEQUENT EVENTS, Section PS 2400.

.19 A government organization may need to make estimates for purposes of its opening statement of financial position prepared in accordance with Public Sector Accounting Standards that were not required for the balance sheet for that date using its previous accounting policies. Those estimates reflect conditions that existed at the date of the opening statement of financial position prepared in accordance with Public Sector Accounting Standards.

DISCLOSURE

.20 *In the year of adoption of Public Sector Accounting Standards, a government organization should disclose:*

(a) the amount of each charge to accumulated surplus / deficit at the date of transition to Public Sector Accounting Standards resulting from the adoption of these standards and the reason therefor; and

(b) a reconciliation of the net income reported in the government organization's most recent previously issued financial statements to its annual surplus / deficit under Public Sector Accounting Standards for the same period. [JAN. 2011]

.21 *The disclosures required by paragraph* PS 2125.20 *should give sufficient detail to enable users to understand the material adjustments to the statement of financial position and statement of operations. If a government organization presented a cash flow statement under its previous accounting policies, it should explain the material adjustments to the statement of cash flow.* [JAN. 2011]

.22 *When a government organization elects to use one or more of the exemptions in paragraphs* PS 2125.09-.*14, it should disclose the exemptions used.* [JAN. 2011]

TRANSITIONAL PROVISIONS

.23 This Section does not apply to a change in accounting policy in a government organization's first Public Sector Accounting Standards financial statements to conform to new Public Sector Accounting Standards issued after August 2010.

SECTION PS 2130
measurement uncertainty

PURPOSE AND SCOPE

.01 This Section establishes disclosure standards for measurement uncertainty arising from items recognized or disclosed in financial statements. The disclosure standards in this Section supplement the standards in other Sections.

DEFINITIONS

.02 The following definitions have been adopted for the purposes of this Section:

(a) **Near term** is a period of time not to exceed one year from the date of the financial statements.

(b) **Measurement uncertainty** is uncertainty in the determination of the amount at which an item is recognized or disclosed in financial statements. Such uncertainty exists when there is a variance between the recognized or disclosed amount and another reasonably possible amount.

.03 Part of the measurement process includes the review of amounts of financial statement items to assess the need for a revision of an amount. Measurement uncertainty may exist even if an amount is not revised. Many items are measured using management's best estimates based on assumptions that reflect the most probable set of economic conditions and planned courses of action.

.04 The effect of using alternative accounting policies or methods that are disclosed in accordance with DISCLOSURE OF ACCOUNTING POLICIES, Section PS 2100, is not considered a measurement uncertainty.

DISCLOSURE

.05 When a material change in an amount that is recognized or disclosed is reasonably possible in the near term, the notes to the financial statements would provide information about the nature and extent of uncertainty.

.06 *The nature of measurement uncertainty that is material should be disclosed.* [APRIL 2005]

.07 *The extent of measurement uncertainty that is material should be disclosed when it is reasonably possible that the amount could change by a material amount in the near term.* [APRIL 2005]

.08 *When disclosure has been made in accordance with paragraph* PS 2130.06 *or PS 2130.07, the amount of the item subject to measurement uncertainty should be disclosed, except when disclosure of the amount would have a significant adverse effect on the entity. When the amount is not disclosed, the notes should indicate the reason(s) for non-disclosure.* [APRIL 2005]

.09 The materiality of the effect of the measurement uncertainty on the financial statements is the sole criterion for determining whether disclosure of measurement uncertainty in accordance with paragraphs PS 2130.06-.07 would be made. Materiality is the term used to describe significance of financial statement information to decision makers. An item of information, or an aggregate of items, is material if it is probable that its omission or misstatement would influence or change a decision. Materiality is a matter of professional judgment in the particular circumstances.

.10 There is a degree of uncertainty associated with the measurement of many amounts recognized or disclosed in the financial statements. In many cases, however, such uncertainty is not material. A decision about whether measurement uncertainty has a material effect on the financial statements is a matter of professional judgment. Management would consider information such as the range of reasonably possible amounts; whether the amount could change by a material amount; the impact of other reasonably possible amounts on the government's economic resources, obligations and net assets; and the possible timing of the impact. A judgment about materiality of measurement uncertainty would be made considering the effect that a different reasonably possible amount would have on the financial statements.

.11 Disclosure of the nature of the measurement uncertainty would include a description of the circumstances giving rise to the uncertainty and relevant information about the anticipated resolution of the uncertainty.

.12 The estimation of the amount of an item to be accrued or disclosed in financial statements may be based on information that provides a range of amounts. When a particular amount within such a range appears to be a better estimate than any other, that amount would be used. When uncertainty exists, estimates used would

attempt to ensure that assets, revenues and gains are not overstated and that liabilities, expenses and losses are not understated. Estimates of the financial effect are determined using professional judgment, supplemented by experience of similar transactions and, in some cases, reports from independent experts. Estimates include any additional evidence provided by subsequent events occurring after the financial statement date.

.13 As a result of the estimation process, a government would be able to determine a range of reasonably possible amounts in accordance with assumptions that are realistic, supportable, internally consistent, and consistent with planned courses of action. The range of reasonably possible amounts would exclude amounts at the outer edges of possibility since such amounts, while possible, are considered to be outside the best estimate range. Relevant information available to the government to develop a reasonable range includes past experience, precedents, and opportunities to reach alternative arrangements.

.14 Disclosure of the extent and/or range of reasonably possible amounts or the effect of a change in the underlying assumptions used to estimate the amount would be provided unless it would have a significant adverse effect on the outcome.

.15 Consideration would also be given to disclosing other relevant information to describe the measurement uncertainty, such as:

(a) a description of the key assumptions used in estimating the amounts and whether the assumptions are susceptible to change;

(b) an explanation of the changes made to past assumptions, if the uncertainty remains unresolved; and

(c) when a range of reasonably possible amounts is disclosed:

(i) the sensitivity of the range to changes in the assumptions used to determine the range; and

(ii) the reason for the sensitivity.

TRANSITIONAL PROVISIONS

.16 This Section applies for fiscal years beginning on or after April 1, 2005. Earlier adoption is encouraged.

SECTION PS 2200
related party disclosures

Basis for Conclusions

Related party disclosures, PS 2200 (March 2015)

Withdrawal of disclosure of related party transactions by not-for-profit organizations, Section PS 4260 (December 2016)

FOR THOSE NOT-FOR-PROFIT ORGANIZATIONS THAT APPLY THE PSA HANDBOOK WITH SECTIONS PS 4200 TO PS 4270 WHO CHOOSE NOT TO EARLY ADOPT THIS SECTION,
see Section PS 4260 in Archived Pronouncements.

TABLE OF CONTENTS

	Paragraph
Purpose and scope	.01-.04
Definitions	.05
Identifying a related party	.06-.13
Key management personnel	.10-.11
Close family members of key management personnel	.12-.13
Disclosure	.14-.21
Transitional provisions	.22
Decision tree	Appendix A

PURPOSE AND SCOPE

.01 This Section defines a related party and establishes disclosures required for related party transactions.

.02 This Section does not deal with:

(a) restructuring transactions;

(b) for consolidated financial statements, transactions that are eliminated on consolidation and those with entities accounted for under the modified equity method; and

(c) disclosure of key management personnel compensation arrangements, expense allowances and other similar payments routinely paid in exchange for services rendered.

.03 It is expected that reasonable efforts would be made to identify related party transactions. This may involve adopting policies and procedures designed to ensure that these transactions are appropriately identified, measured and disclosed in the financial statements.

.04 Not all related party relationships or transactions occurring between related parties are required to be disclosed. Disclosure is generally required when related party transactions have occurred at a value different from that which would have been arrived at if the parties were unrelated. However, not all of these transactions are reportable under this Section. Only those transactions that have or could have a material financial effect on the financial statements are disclosed.

DEFINITIONS

.05 The following terms are used in this Section with the meanings specified:

(a) **Commonly controlled entities** are all public sector entities that comprise a government's reporting entity (see GOVERNMENT REPORTING ENTITY, Section PS 1300).

(b) **Control** is the power of a public sector entity to govern the financial and operating policies of another entity with expected benefits or the risk of loss to the public sector entity from the other's activities (see the indicators of control in GOVERNMENT REPORTING ENTITY, Section PS 1300).

(c) **Key management personnel** are those individuals having authority and responsibility for planning, directing and controlling the activities of the entity.

(d) A **related party** exists when one party has the ability to exercise control or shared control over the other. Two or more parties are related when they are subject to common control or shared control. Related parties also include key management personnel and close family members. 1

(e) A **related party transaction** is a transfer of economic resources or obligations between related parties, or the provision of services by one party to a related party. These transfers are related party transactions whether or not there is an exchange of considerations or transactions have been given accounting recognition. The parties to the transaction are related prior to the transaction. When the relationship arises as a result of the transaction, the transaction is not one between related parties.

(f) **Shared control** occurs when two or more entities are bound by a contractual arrangement that specifies the agreed sharing of the ongoing power to determine financial and operating policies (see the characteristics of shared control in GOVERNMENT PARTNERSHIPS, Section PS 3060).

IDENTIFYING A RELATED PARTY

.06 A related party can be an entity or an individual.

.07 From the perspective of the entity that is reporting, parties related to it typically include those:

(a) entities that control it, share control of it or it controls;

(b) entities that are subject to common control;

(c) entities that it shares control of with other commonly controlled entities;

(d) entities that are subject to shared control by other commonly controlled entities;

(e) entities that it shares control of with other entities;

(f) entities that are subject to shared control by other commonly controlled entities and other entities;

(g) individuals who are members of key management personnel or close family members of those individuals; and

(h) entities controlled by, or under shared control of, a member of key management personnel or a close family member of that individual.

.08 When two entities have a member of key management personnel in common, it is necessary to consider the level of influence the individual has over the decision-making process of both entities and the likelihood that the individual is able to affect the policies of both entities in their mutual dealings. For example, a member of key management personnel of the entity that is reporting may serve as a board member of a not-for-profit organization. This individual, in their role as a board member, could participate in the financial and operating policy decisions of the entity. In such a case, it may be determined that the two entities are related.

.09 Parties that share control of an entity are not necessarily related. The determination of whether the parties that share control are related would be based on the definition of a related party. For example, if two or more parties that share control of an entity are under common control, they would be related.

Key management personnel

.10 The determination of whether an individual is included in key management personnel requires judgment. Key management personnel could include:

(a) directors or members of the governing body of the entity, where that body has authority and responsibility for planning, directing and controlling the activities of the entity; and

(b) senior management of the entity, including the chief executive or permanent head and senior management group who have the day-to-day responsibility for managing the entity's activities and operations, and who have been delegated authority and executive powers to implement the planning, directing and controlling decisions and initiatives of the governing body.

.11 An entity may also be related if a member of key management personnel holds an ownership interest that allows the individual to govern or share the power to determine the ongoing financial and operating decisions of that entity.

Close family members of key management personnel

.12 The determination of whether an individual would be identified as a close family member requires judgment. Close family members of key management personnel normally include an individual's spouse and those dependent on either the individual or the individual's spouse.

.13 An entity may also be related if a close family member of key management holds an ownership interest that allows the individual to govern or share the power to determine the ongoing financial and operating decisions of that entity.

DISCLOSURE

.14 Entities prepare financial statements to provide users with relevant and reliable information for demonstrating accountability for the resources entrusted to the entity and for decision-making purposes. Typically, transactions between two willing parties are recognized in financial statements at the amount of cash or cash equivalents paid or received, which is generally the fair value ascribed to them when they took place.

.15 Disclosing sufficient information about the terms and conditions of related party transactions and the relationship underlying them is important for accountability and decision-making purposes. It enables users to

assess the effect that they have had, or, if not recognized, may have had, on an entity's reported financial position and changes in it.

.16 In some cases, it may be difficult to determine whether transactions occurring between related parties have or could have a material financial effect on the financial statements. Factors to consider in determining whether information about transactions occurring between related parties would be disclosed include, but are not limited to, the following:

(a) whether the transactions are undertaken on different terms and conditions that it is reasonable to expect would have been adopted if the parties were dealing at arm's length in the same circumstances;

(b) the materiality of the effect the transactions, individually or taken as a whole, have or could have on the entity's financial position and changes in financial position reported in financial statements;

(c) the relevance of the information to the decisions of users and their evaluation of the financial effect or potential financial effect of the transactions on the financial statements of the entity;

(d) the contribution the information would have to users' understanding of the operating environment and the financial statements of the entity; and

(e) the need for the information to enable users to compare the entity's financial position and changes in financial position reported in financial statements with that of other entities.

For example, for users to understand the environment within which the entity that is reporting operates, it may be necessary to disclose information about goods and services the entity received from a related party at no cost.

.17 *An entity should disclose:*

(a) adequate information about the nature of the relationship with related parties involved in related party transactions;

(b) the types of related party transactions that have been recognized;

(c) the amounts of the transactions recognized classified by financial statement category;

(d) the basis of measurement used;

(e) the amount of outstanding balances and the terms and conditions attached to them;

(f) contractual obligations with related parties, separate from other contractual obligations;

(g) contingent liabilities involving related parties, separate from other contingent liabilities; and

(h) the types of related party transactions that have occurred for which no amount has been recognized.

Items of a similar nature should be disclosed in aggregate. [APRIL 2017]

.18 Judgment is required to determine the level of detail to be disclosed. Factors that would be considered in making the determination include, but are not limited to:

(a) the significance of the transactions, individually or taken as a whole, in terms of size; and

(b) whether the transactions were carried out on non-market terms.

.19 Items of a similar nature would be disclosed in aggregate except when separate disclosure is necessary for an understanding of the effects of related party transactions on the financial statements of the entity. Judgment is required to determine whether it is necessary to disclose information that is already reported on the face of the financial statements or in other notes to the financial statements. It may be necessary to disclose information about these transactions for users to understand their effect on an entity's financial position and changes in it.

.20 An exchange of goods or services between related parties that has not been given accounting recognition is a related party transaction. Such transactions could have a material effect on the financial position and changes in financial position reported in financial statements. An entity would disclose information about related party transactions that have occurred for which no amount has been recognized in sufficient detail to enable users of its financial statements to understand the operating environment.

.21 The information would include either a qualitative or quantitative indication of the extent of unrecognized related party transactions. When only qualitative information is disclosed about unrecognized related party transactions, it may be difficult for users to determine the terms and conditions under which they might have been transacted had the parties been unrelated. However, an explanation about the transactions helps users of financial statements detect and explain possible differences or evaluate their significance to the changes in financial position reported in the financial statements of the entity.

TRANSITIONAL PROVISIONS

.22 This Section applies to fiscal years beginning on or after April 1, 2017. Earlier adoption is permitted. This Section would be applied prospectively.

APPENDIX A
DECISION TREE — SCOPE OF APPLICABILITY

The following decision tree has been prepared to illustrate the accounting treatment specified in this Section. The decision tree is illustrative only and matters of principle relating to particular situations should be decided in the context of the Section.

Footnotes

1. In the case of a not-for-profit organization that applies the PSA Handbook with Sections PS 4200 to PS 4270, a related party would also include when one party has significant influence over the other, two or more parties are subject to common significant influence, or a not-for-profit organization has an economic interest in another not-for-profit organization. (Further discussion of the definitions of significant influence and economic interest is presented in REPORTING CONTROLLED AND RELATED ENTITIES BY NOT-FOR-PROFIT ORGANIZATIONS, Section PS 4250.)

SECTION PS 2400
subsequent events

.01 This Section establishes standards on how to account for and disclose events occurring between the financial statement date and the date of their completion. Financial statements 1 are prepared to reflect a government's financial position at a particular date and changes in financial position for a period ended on that date. However, events occurring after the financial statement date may indicate a need to adjust items or to make specific disclosures in those statements. Therefore, in preparing financial statements, the implications and financial effects of subsequent events would be considered.

.02 The period during which subsequent events are considered will depend on the government's managerial structure and procedures followed in completing the financial statements. The appropriate cut-off point for subsequent events is a matter of judgment taking into account the particular circumstances and reporting requirements.

.03 In general, there are two types of subsequent events:

(a) those which provide further evidence of conditions which existed at the financial statement date, and

(b) those which are indicative of conditions which arose subsequent to the financial statement date.

The extent to which, and the manner in which, the effect of a subsequent event is reflected in the financial statements will depend on its type.

.04 Elected government officials may announce government intentions in the period after the financial statement date and before completion of the financial statements. In order to be treated as subsequent events according to the provisions of this Section and, therefore, reported or disclosed in the government's financial statements, such intentions need to be supported by sufficient evidence that they can and will be fulfilled.

.05 Announced government intentions in the period after the financial statement date and before the completion of the financial statements require careful evaluation to determine whether there is a clear relationship to conditions existing at the financial statement date that affect the estimates involved in the preparation of the financial statements, as described in paragraph PS 2400.09. Such intentions would not normally require the adjustment of the financial statements. Instead, they would generally qualify for disclosure as a subsequent event if supported by sufficient evidence that they can and will be fulfilled.

.06 For a federal, provincial or territorial government, evidence to support such an announced government intention would be the enactment of new legislation, or the exercise of an authority under existing legislation in the period after the financial statement date and before the completion of the financial statements.

.07 For local governments, evidence to support such an announced government intention would be a council resolution or by-law, new provincial legislation or the exercise of an authority under existing provincial legislation in the period after the financial statement date and before the completion of the financial statements.

ACCOUNTING TREATMENT

Adjustment to financial statements

.08 Subsequent events may provide additional information relating to items included in the financial statements and may reveal conditions existing at the financial statement date that affect the estimates involved in the preparation of financial statements. All such information that becomes available prior to completion of the financial statements would be used in evaluating the estimates made and the financial statements would be adjusted where necessary. For example, the restructuring of the terms of the loans receivable in a significant government lending program, subsequent to the date of the financial statements, may be indicative of the underlying financial situation of the program and its debtors at the date of the financial statements. If the provision for those loans were inadequate, adjustment of the financial statements would be required.

.09 *Financial statements should be adjusted when events occurring between the date of the financial statements and the date of their completion provide sufficient, additional evidence relating to conditions that existed at the date of the financial statements.* [MARCH 1997]

.09A Financial statements are complete when:

(a) a complete set of financial statements, including all required note disclosures, has been prepared (see FINANCIAL STATEMENT PRESENTATION, Section PS 1201);

(b) all final adjusting journal entries have been reflected in the financial statements;

(c) no changes to the financial statements are planned or expected; and

(d) financial statements meeting the above requirements have been approved in accordance with the government's process to finalize its financial statements.

Disclosure in financial statements

.10 Adjustment of the financial statements for subsequent events is not appropriate if such events do not relate to conditions existing at the financial statement date. To reflect the effect of such events would not be consistent with the concept that a statement of financial position represents the financial position of a government at the financial statement date.

.11 Some events occurring after the financial statement date may have a significant effect, in a subsequent period, on the assets and liabilities or future operations of a government and disclosure could be important to users in their interpretation of the financial statements.

.12 Examples of subsequent events which would not require adjustment of the financial statements but, if significant in their effect and unusual in their nature, may require disclosure in notes to the financial statements include:

(a) an event such as a fire or flood or other natural disaster where the government is obligated to provide relief;

(b) a decline in the market value of investments;

(c) commencement of litigation where the cause of action arose subsequent to the date of the financial statements;

(d) changes in foreign currency exchange rates;

(e) the issue of long-term debt;

(f) significant restructuring of the public service;

(g) significant restructuring of the legislation regulating local governments.

For some governments, however, it may not be unusual to issue long-term debt in the period between the financial statement date and the date of completion of the financial statements, or for there to be significant changes in currency exchange rates in that same period. Judgment should be applied in assessing what is considered "unusual" in nature for a government given its size and the nature of its transactions.

.13 *Financial statements should not be adjusted for, but disclosure should be made of, those events occurring between the date of the financial statements and the date of their completion that do not relate to conditions that existed at the date of the financial statements but:*

(a) cause significant changes to assets or liabilities in the subsequent period; or

(b) will, or may, have a significant effect on the future operations of the government. [MARCH 1997]

.14 Disclosure of a subsequent event that does not require adjustment of the financial statements would be made by way of a note to the financial statements indicating both the nature of the event and, when practicable, the estimated financial effect.

.15 *Disclosure of a subsequent event that does not require adjustment of the financial statements should include:*

(a) a description of the nature of the event; and

(b) an estimate of the financial effect, when practicable, or a statement that such an estimate cannot be made. [MARCH 1997]

Footnotes

1. The term "financial statements" refers to the summary financial statements published by a government that report on the financial position and changes in financial position of the government reporting entity.

SECTION PS 2500
basic principles of consolidation



TABLE OF CONTENTS	Paragraph
Purpose and scope	.01-.03
Definitions	.04
Basic principles	.05-.21
Inter-governmental unit revenues and expenses	.09-.14
Functional presentation of expenses on the statement of operations	.11-.13
Disclosure of expenses by object in the notes to the financial statements	.14
Unrealized gains and losses on inter-governmental unit sales or transfers of assets	.15-.18
Tangible capital assets	.18
Statements at different dates	.19-.21
Government reporting entity framework	Appendix A

PURPOSE AND SCOPE

.01 This Section establishes standards on the basic principles of consolidation involved in preparing government financial statements as required by GOVERNMENT REPORTING ENTITY, paragraph PS 1300.27. Additional consolidation issues such as accounting for governmental units with non-controlling interests, acquisitions and sales of government investments in governmental units, and accounting for the change in status of a governmental unit to a government business enterprise, are dealt with in ADDITIONAL AREAS OF CONSOLIDATION, Section PS 2510.

.02 Government financial statements are the financial statements of the government reporting entity. The government reporting entity, defined in GOVERNMENT REPORTING ENTITY, paragraph PS 1300.07, comprises government organizations. Government organizations include governmental units and government

business enterprises. Governmental units are consolidated in the financial statements and government business enterprises are included in the financial statements on a modified equity basis. Governmental units are included in a government's financial statements after their accounting policies have been conformed to those of the government. A similar adjustment is not required when including government business enterprises in the financial statements because under the modified equity method the accounting policies of a government business enterprise are not conformed to those of the government. The chart included as Appendix A to this Section outlines this government reporting entity framework in more detail.

.03 This Section does not deal with accounting for:

(a) government business enterprises (see INVESTMENTS IN GOVERNMENT BUSINESS ENTERPRISES, Section PS 3070); or

(b) government portfolio investments (see PORTFOLIO INVESTMENTS, Section PS 3041).

DEFINITIONS

.04 The following definitions have been adopted for the purposes of this Section:

(a) A **government business enterprise** is a government organization that has all of the following characteristics:

(i) it is a separate legal entity with the power to contract in its own name and that can sue and be sued;

(ii) it has been delegated the financial and operational authority to carry on a business;

(iii) it sells goods and services to individuals and organizations outside of the government reporting entity as its principal activity; and

(iv) it can, in the normal course of its operations, maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity.

These criteria are explained in GOVERNMENT REPORTING ENTITY, paragraphs PS 1300.29-.31.

(b) A **government not-for-profit organization** is a government organization that meets the definition of a not-for-profit organization in the CPA Canada Handbook – Accounting, and which has counterparts outside the public sector. The definition of a not-for-profit organization is outlined in FINANCIAL STATEMENT PRESENTATION BY NOT-FOR-PROFIT ORGANIZATIONS, CPA CANADA HANDBOOK – ACCOUNTING paragraph 4400.02. The definition of the public sector is outlined in the Introduction to Public Sector Accounting Standards, paragraph .03.

(c) A **government organization** is any organization that is controlled by the government. GOVERNMENT REPORTING ENTITY, Section PS 1300, provides guidance on the interpretation and application of control.

(d) **Government financial statements** are summary financial statements published by a government that report on the financial position and changes in financial position of the government reporting entity through the consolidation of all government organizations except government business enterprises, which are included on a modified equity basis.

(e) A **governmental unit** is a government component, government not-for-profit organization or other government organization.

(f) **Internal charges** are charges between governmental units, such as cost allocations or service charges for the use of assets or the provision of services.

[Former paragraph PS 2500.04 retained in Archived Pronouncements.]

BASIC PRINCIPLES

.05 The purpose of government financial statements is to present the effects of transactions of the government reporting entity, as defined in GOVERNMENT REPORTING ENTITY, Section PS 1300, with organizations and individuals external to that entity, taking into consideration the accounting for government business enterprises described in INVESTMENTS IN GOVERNMENT BUSINESS ENTERPRISES, Section PS 3070. 1

.06 *Government financial statements should consolidate governmental units* 2 *line-by-line on a uniform basis of accounting after eliminating inter-governmental unit transactions and balances.* [MAY 1999]

.07 The basic steps of consolidation required by paragraph PS 2500.06 are as follows:

(a) The accounting policies of governmental units are conformed to those of the government.

(b) The balances of assets, liabilities and accumulated surplus / deficit of the governmental units, after being adjusted in accordance with (a), are added together and included on the consolidated statement of financial position for the government reporting entity. The assets and liabilities are accounted for in government financial statements at their carrying value in the records of the governmental units being consolidated, taking into account the adjustments required in (a).

(c) The revenues and expenses of the governmental units, after being adjusted in accordance with (a), are added together and the current and the most recent prior period aggregated amounts would be reported on the consolidated statement of operations and the consolidated statement of remeasurement gains and losses.

(d) The effects of inter-governmental unit transactions on assets, liabilities, accumulated surplus / deficit, revenues and expenses are eliminated, as described in paragraphs PS 2500.08-.18.

(e) Governmental units are included in government financial statements from the date of their creation or the date they became eligible for inclusion, and are removed from those financial statements from the date of their sale or other form of disposition or dissolution. If a governmental unit becomes eligible for inclusion as a result of a reinterpretation of existing circumstances, it would be included in the financial statements as if it had always been part of the government reporting entity. Such circumstances would, therefore, involve a restatement of comparative numbers. Accounting for the circumstances when a governmental unit changes in status to become a government business enterprise is dealt with in ADDITIONAL AREAS OF CONSOLIDATION, paragraphs PS 2510.42-.49.

.08 Eliminating the effects of inter-governmental unit transactions ensures that the consolidated accounts do not overstate or understate assets, liabilities, accumulated surplus / deficit, revenues and expenses because of

inter-governmental unit transactions. Therefore, consolidation eliminations are required to remove the following effects of transactions between governmental units:

(a) inter-governmental unit assets and liabilities, including any investments in governmental units recorded by other governmental units in the form of shares or contributed surplus; 3

(b) inter-governmental unit revenues and expenses, including transfers, and internal charges as described in paragraphs PS 2500.09-.14;

(c) inter-governmental unit dividends, if any, that have been declared; and

(d) unrealized inter-governmental unit gains and losses, including those related to inter-governmental unit sales or transfers of tangible capital assets, as described in paragraph PS 2500.18.

Inter-governmental unit revenues and expenses

.09 The consolidation eliminations relating to inter-governmental unit revenues and expenses would vary depending on whether expenses are presented by function or by object. The presentation of expenses by both function and object in the financial statements may require two different sets of elimination entries. However, the need for elimination entries will vary depending on how inter-governmental unit transactions are recorded.

.10 The total expenses reported by function should be equal to the total expenses disclosed by object. Consistent with paragraph PS 2500.05, consolidated revenues should not be created, increased or decreased as a result of inter-governmental unit transactions.

Functional presentation of expenses on the statement of operations

.11 FINANCIAL STATEMENT PRESENTATION, Section PS 1201, requires that a government's expenses of the accounting period be reported on the statement of operations by function or major program. Reporting by function or major program is recommended because this information shows users the purposes for which goods and services have been acquired or consumed and helps them assess the allocation of resources to government functions or programs.

.12 The objectives of functional reporting are achieved in a government's financial statements when inter-governmental unit expenses are included in the expenses of the governmental unit that ultimately bears the cost and, therefore, the ultimate accountability for that cost.

.13 Depending on how a governmental unit records internal charges to other governmental units, inter-governmental unit revenues may need to be eliminated to achieve the objectives of paragraph PS 2500.10. For example, for a functional presentation:

(a) If the originating governmental unit records revenue from internal charges, an elimination entry would be required to eliminate such revenue against the related expense in that originating governmental unit.

(b) In contrast, if the originating governmental unit records a recovery of an expense from internal charges, no elimination entry would be required. The expenses and recovery of expenses would offset each other in the accounts of the originating governmental unit.

Disclosure of expenses by object in the notes to the financial statements

.14 FINANCIAL STATEMENT PRESENTATION, Section PS 1201, requires that a government's expenses be disclosed by object. The objective of disclosure of expenses by object is to provide information that is useful in evaluating the economic impact of government acquiring or consuming various types of resources. For the purposes of preparing such disclosure, expenses would reflect the resources acquired by the originating governmental unit, such as employees' salaries, goods and services and tangible capital assets.

Unrealized gains and losses on inter-governmental unit sales or transfers of assets

.15 *Inter-governmental unit gains and losses arising on the sale or transfer of assets and liabilities remaining within the government reporting entity should be eliminated.* [Former paragraph PS 2500.15 retained in Archived Pronouncements.] [APRIL 2012]

.16 Unless items measured at cost or amortized cost are transferred at their carrying value, elimination of unrealized inter-governmental gains and losses on the sale or transfer of assets and liabilities is required to ensure the consolidated financial statements are presented in accordance with paragraph PS 2500.05. [Former paragraph PS 2500.16 retained in Archived Pronouncements.]

.16A Operating gains and losses associated with inter-governmental unit sales or transfers of financial assets and financial liabilities in the fair value category require elimination. When the related instrument is still held within the consolidated entity, an adjustment is required to eliminate a gain or loss as it is unrealized. To accomplish this, the gain or loss is reclassified from the consolidated statement of operations and presented on the consolidated statement of remeasurement gains and losses.

.17 The existence of unrealized inter-governmental unit losses may indicate a decline in the value of assets. When a loss is attributed to impairment or a permanent decline in value, it is reported in the statement of operations. [Former paragraph PS 2500.17 retained in Archived Pronouncements.]

Tangible capital assets

.18 A government is required to report tangible capital assets in accordance with FINANCIAL STATEMENT PRESENTATION, Section PS 1201. Those standards require that the net book value of the government's tangible assets be reported as non-financial assets on the statement of financial position. The consumption of tangible capital assets must be recognized as an expense in the government's statement of operations. So, in a government's financial statements, adjustments would need to be made to ensure that the assets are presented at historical cost to the government reporting entity, as follows:

(a) The amount reported for tangible capital assets on the government's consolidated statement of financial position would exclude any unrealized inter-governmental unit gains and losses arising on the sale or transfer of tangible capital assets and the portion of accumulated amortization attributable to such inter-governmental unit gains and losses on tangible capital assets.

(b) The amortization of tangible capital assets recognized in the expenses reported on a government's consolidated statement of operations would be adjusted to eliminate the portion of the amortization charges attributable to unrealized inter-governmental unit gains and losses arising on the sale or transfer of tangible capital assets.

(c) In a government's disclosure of tangible capital assets in the notes or schedules to its financial statements, the cost and amortization amounts reported for tangible capital assets would exclude any unrealized inter-governmental unit gains and losses arising on the sale or transfer of tangible capital assets and any related effect of such gains and losses on amortization amounts.

Statements at different dates

.19 A difference in fiscal periods of a government reporting entity and a governmental unit does not justify the exclusion of the governmental unit from consolidation. Normally the governmental unit can prepare for consolidation purposes, statements for a period that exactly or nearly coincides with the fiscal period of the government reporting entity.

.20 *When, for purposes of consolidation, it is not possible to use governmental unit financial statements for a period that substantially coincides with that of the government's financial statements, this fact, and the period covered by the governmental unit financial statements used, should be disclosed.* [MAY 1999]

.21 *When the fiscal periods of a government reporting entity and a governmental unit are not the same, events relating to or transactions of the governmental unit that have occurred during the intervening period and significantly affect the financial position or results of operations of the government reporting entity should be recorded in the government's financial statements.* [MAY 1999]

APPENDIX A

GOVERNMENT REPORTING ENTITY FRAMEWORK



Footnotes

1. Transactions and balances between governmental units and government business enterprises are not eliminated because government business enterprises are not consolidated, but are accounted for in government financial statements by the modified equity method, which does not require the elimination of inter-organizational transactions and balances (see INVESTMENTS IN GOVERNMENT BUSINESS ENTERPRISES, Section PS 3070). All unrealized gains and losses arising on transactions between governmental units and government business enterprises that remain within the reporting entity are, however, required to be eliminated.

2. Governments normally create governmental units, often through a restructuring of existing government resources, rather than acquire them. Accounting for acquired governmental units is dealt with in ADDITIONAL AREAS OF CONSOLIDATION, paragraphs PS 2510.11-.32.

3. When government financial statements are prepared, the investment account of the government is replaced by the identifiable assets and liabilities of the governmental unit. Many governmental units, however, are not "investments" of the government but, instead, are departments or agencies or funds that are integral to and derive their sole purpose from the legal or legislative responsibilities of government. In addition, many governmental units do not even issue share capital.

SECTION PS 2510
additional areas of consolidation

TABLE OF CONTENTS

	Paragraph
Purpose and scope	.01-.03
Definitions	.04
Non-controlling interest	.05-.10
Losses in a governmental unit with a non-controlling interest	.08-.10
Acquisitions	.11-.32
Applying the purchase method	.14-.26
Determining the purchase cost	.14-.18
Allocating the purchase cost	.19-.24
Expenses related to the acquisition	.25-.26
Inter-governmental unit transactions and balances	.27-.31
Presentation and disclosure of an acquisition	.32
Sale of all or part of a government's investment in a governmental unit	.33-.41
When a governmental unit becomes a government business enterprise	.42-.51
Transitional provisions	.52

PURPOSE AND SCOPE

.01 This Section establishes standards on the following consolidation issues that are rare or require particular consideration:

(a) accounting for governmental units with non-controlling interests;

(b) acquisitions of governmental units;

(c) sales of government investments in governmental units; and

(d) accounting for the change in status of a governmental unit to a government business enterprise.

.02 This Section should be read in conjunction with BASIC PRINCIPLES OF CONSOLIDATION, Section PS 2500, which outlines the basic principles of consolidation involved in preparing government financial statements as required by GOVERNMENT REPORTING ENTITY, paragraph PS 1300.27. Nothing in this Section is intended to supersede BASIC PRINCIPLES OF CONSOLIDATION, Section PS 2500. The standards and guidance in this Section are intended to supplement and/or apply the basic steps of consolidation outlined in BASIC PRINCIPLES OF CONSOLIDATION, Section PS 2500, to the consolidation issues specified. Together, these two Sections are intended to provide guidance on the preparation of government financial statements.

.03 This Section does not deal with accounting for:

(a) government business enterprises (see INVESTMENTS IN GOVERNMENT BUSINESS ENTERPRISES, Section PS 3070); or

(b) government portfolio investments (see PORTFOLIO INVESTMENTS, Section PS 3041).

DEFINITIONS

.04 The following definitions have been adopted for the purposes of this Section:

(a) **Fair value** is the amount of the consideration that would be agreed upon in an arm's length transaction between knowledgeable, willing parties who are under no compulsion to act.

(b) A **non-controlling interest** is the equity of owners who do not hold the controlling interest in a governmental unit and is represented by the shares of a governmental unit that are owned by interests outside of the government reporting entity.

NON-CONTROLLING INTEREST

.05 *When a non-controlling interest exists in a governmental unit, the government reporting entity should include that governmental unit in its financial statements on a proportionate consolidation basis. The financial statements should disclose the existence and extent of a non-controlling interest in a governmental unit.* [MAY 1999]

.06 Using the proportionate consolidation method results in the government recognizing the following:

(a) Its proportionate share of any adjustments required to conform the accounting policies of the governmental unit to those of the government.

(b) Its proportionate share of the assets, liabilities and accumulated surplus / deficit of the governmental unit, adjusted in accordance with (a). The government's consolidated statement of financial position would include these items on a line-by-line basis, after elimination of the government's proportionate share of inter-governmental unit balances in accordance with BASIC PRINCIPLES OF CONSOLIDATION, paragraphs PS 2500.08-.18.

(c) Its proportionate share of the revenues or expenses and operating results of the governmental unit, adjusted in accordance with (a). The government's consolidated statement of operations and consolidated statement of remeasurement gains and losses would include these items on a line-by-line basis, after elimination of the government's proportionate share of inter-governmental unit transactions in accordance with BASIC PRINCIPLES OF CONSOLIDATION, paragraphs PS 2500.08-.18.

.07 In this manner, the non-controlling interest in the assets, liabilities, accumulated surplus / deficit, revenues and expenses of the governmental unit is excluded from the financial statements.

Losses in a governmental unit with a non-controlling interest

.08 When a governmental unit in which there is a non-controlling interest incurs losses:

(a) the non-controlling interest shares in the losses incurred; and

(b) the government only recognizes its share of the losses in the financial statements.

When, however, the non-controlling interest in the governmental unit's accumulated losses equals its share of the capital of the governmental unit, no further share of losses can be attributed to the non-controlling interest. The non-controlling interest cannot be forced to contribute further capital to the governmental unit unless it has guaranteed obligations or is otherwise committed to further financial support of the governmental unit. If the governmental unit continues to operate in these circumstances it is usually being financed by advances from the government and the full risk of loss is attributable to the government. Subsequent earnings would be allocated entirely to the government until previously absorbed losses relating to the non-controlling interest are recovered.

.09 *When accumulated losses applicable to the non-controlling interest in a governmental unit exceed the non-controlling interest's share in the capital of the governmental unit, the excess and any further losses otherwise applicable to the non-controlling interest should be allocated only to the government's interest. Subsequent earnings should be allocated entirely to the government's interest until previously absorbed losses relating to the non-controlling interest are recovered.* [MAY 1999]

.10 *Government financial statements should disclose any accumulated losses accounted for in accordance with* PS 2510.09. [MAY 1999]

ACQUISITIONS

.11 Governments normally create governmental units, often through a restructuring of existing government resources, rather than acquire them. In the rare circumstances when a government acquires a governmental unit, the acquisition is normally made for policy reasons. An acquisition means that the government has acquired control of a governmental unit and the government, as the buyer, pays cash or other consideration to the seller either for shares representing voting control or for net assets.

.12 *Government financial statements should consolidate acquired governmental units line-by-line on a uniform basis of accounting, after eliminating inter-governmental unit transactions and balances in accordance with BASIC PRINCIPLES OF CONSOLIDATION, paragraphs* PS 2500.08-.18*, and taking into account paragraph* PS 2510.31. [MAY 1999]

.13 When including acquired governmental units in their financial statements, governments would apply the mechanics of the purchase method of combination, with one exception: when the purchase cost exceeds the government's share of the fair value of the net assets of the acquired governmental unit, the excess would be recognized as an expense in the period of acquisition in accordance with paragraphs PS 2510.23-.24.

Applying the purchase method

Determining the purchase cost

.14 Under the purchase method, the government's interest in assets acquired and liabilities assumed is accounted for in the financial statements at the cost to the government. The consolidated operating results of the government would include the government's proportionate share of the results of the acquired governmental unit from the date of acquisition only.

.15 *The purchase cost of a governmental unit to a government should be determined by the fair value of the consideration given. In those cases where the fair value of the consideration is not clearly evident, the government's share of the fair value of the net assets acquired should be used as the purchase cost to the government.* [MAY 1999]

.16 The general principles to be applied in determining the purchase cost will depend upon the nature of the transaction. Where the consideration given is cash or other assets, the cost will be the amount of cash disbursed or the fair value of other assets distributed. Where debt securities are issued or liabilities incurred, the cost to the government will be the present value thereof.

.17 *The purchase cost and the amounts assigned to assets acquired and liabilities assumed should be determined as of the date of the acquisition.* [MAY 1999]

.18 *For the period in which a purchase of a governmental unit occurs, government financial statements should reflect the government's proportionate share of the results of the acquired governmental unit from the date of acquisition.* [MAY 1999]

Allocating the purchase cost

.19 At the date of acquisition, it will be necessary to assign the purchase cost to identifiable assets acquired (either individually or by type) and liabilities assumed. The government's interest in identifiable assets acquired and liabilities assumed would be based on their fair values at the date of acquisition. The allocation of the purchase cost would precede any adjustments which are necessary to put the accounting policies previously followed by the acquired organization on a common basis with those of the government.

.20 Any excess of the purchase cost over the government's interest in the amounts assigned to identifiable assets acquired less liabilities assumed would be considered to be a purchase premium which would be accounted for in accordance with paragraph PS 2510.23.

.21 Net assets acquired would not be recorded at more than cost. Accordingly, where the government's interest in the amounts assigned to identifiable assets acquired and liabilities assumed exceeds the purchase cost, it will be necessary to adjust such amounts to eliminate this excess. The allocation of the reduction to individual non-monetary assets or groups of non-monetary assets requires a re-examination of values

previously assigned; this is a matter of judgment and should be determined having regard to the circumstances of the acquisition.

.22 *The government's interest in identifiable assets acquired and liabilities assumed should be based on their fair values at the date of acquisition. When there is a difference between the purchase cost and the government's share of the fair value of the net assets of the acquired governmental unit:*

(a) any excess of the purchase cost over the government's interest in identifiable assets acquired and liabilities assumed, based on their fair values, should be accounted for as a purchase premium in accordance with paragraph PS 2510.23.

(b) such that the government's interest in the identifiable assets acquired and liabilities assumed, based on their fair values, exceeds the purchase cost, the amounts assigned to identifiable non-monetary assets should be reduced to the extent that the excess is eliminated. [MAY 1999]

.23 *When the purchase of a governmental unit gives rise to a purchase premium, it should be recognized as an expense in the period of acquisition.* [MAY 1999]

.24 A purchase premium arising on acquisition of a governmental unit would be charged to expenses in the period of acquisition because the future net cash flows associated with a governmental unit, by definition, are unlikely to indicate that the purchase premium has been paid for anything but policy reasons. Governmental units receive funding from the government in order to pursue their activities and meet their debt requirements. Consequently, it is unlikely that the portion of the purchase cost related to the purchase premium could be tied to projected future profits from revenues received from sources external to the government reporting entity and so should be a cost of the period of acquisition.

Expenses related to the acquisition

.25 *Expenses directly incurred in effecting an acquisition of a governmental unit accounted for as a purchase should be included as part of the cost of the purchase.* [MAY 1999]

.26 The cost of the purchase includes expenses directly incurred by the government with respect to the acquisition. Such expenses will therefore be included in the amounts to be assigned to the individual assets acquired and liabilities assumed in accordance with paragraph PS 2510.22.

Inter-governmental unit transactions and balances

.27 *Balances at the date of acquisition between existing governmental units and a newly acquired governmental unit should be eliminated on consolidation.* [MAY 1999]

.28 At the date of acquisition, the government and an acquired governmental unit are considered to be a single economic entity. Therefore, any inter-governmental unit asset and liability balances between existing governmental units and the newly acquired governmental unit which are still present at the date of acquisition should be eliminated.

.29 Revenue and expense transactions occurring before the date of acquisition between existing governmental units and a newly acquired governmental unit would not be eliminated because at the time they occurred they were transactions between two independent entities dealing at arm's length.

.30 *When the carrying value of the assets of an existing governmental unit includes gains and losses arising from transactions with the newly acquired governmental unit which took place prior to the date of acquisition, such gains and losses should not be eliminated unless the transactions were made in contemplation of acquisition.* [MAY 1999]

.31 When, since the date of acquisition, depreciable tangible capital assets have been sold or transferred within the government reporting entity, the carrying value of such assets may include unrealized inter-governmental unit gains and losses. As such tangible capital assets will be depreciated in the financial statements on the basis of their cost to the government reporting entity, a complete elimination of inter-governmental unit gains and losses will necessitate the adjustment of the portion of the depreciation charges attributable to such gains and losses.

Presentation and disclosure of an acquisition

.32 *When a government acquires a governmental unit, the following should be disclosed:*

(a) the name and a brief description of the governmental unit acquired and, when shares are acquired, the percentage of voting shares held;

(b) the date of acquisition and the period for which the results of the acquired governmental unit are included in the consolidated statement of operations;

(c) net assets acquired:

(i) total assets at the amount assigned thereto;

(ii) total liabilities at the amount assigned thereto; and

(d) the amount and type of consideration given, at fair value and the resulting amount of any purchase premium that has been charged to expenses in the period. [MAY 1999]

SALE OF ALL OR PART OF A GOVERNMENT'S INVESTMENT IN A GOVERNMENTAL UNIT

.33 A government may sell all or part of its investment in a governmental unit. A government's investment in a governmental unit comprises the government's equity as a shareholder. Sales of government investments in governmental units are unusual transactions as many governmental units are integral to and derive their sole purpose from the legal or legislative responsibilities of government. Many governmental units would not, therefore, lend themselves to privatization or sale. In addition, governmental units with share capital are rare and, therefore, many of the capital transactions that would affect the ownership and control of a private sector corporation would not occur.

.34 *When all or part of a government's investment in a governmental unit is sold, the gain or loss on sale should be based on the carrying value of the governmental unit's net assets in the consolidated statement of financial position at the date of sale.* [MAY 1999]

.35 The estimate of the carrying value of a governmental unit at the date of sale would be the carrying value of the net assets of the governmental unit at the date of sale, after adjustments made in accordance with BASIC PRINCIPLES OF CONSOLIDATION, paragraph PS 2500.07(a) and (d).

.36 *The gain or loss on the sale of all or part of an investment in a governmental unit should be included in the determination of consolidated operating results in the period of sale.* [MAY 1999]

.37 When a government sells all or part of its investment in a governmental unit, one of three situations will arise:

(a) the entire investment in the governmental unit is sold;

(b) part of a government's investment in the governmental unit is sold, but the government still retains control of the governmental unit and, therefore, the governmental unit is still considered to be part of the government reporting entity; or

(c) part of a government's investment in the governmental unit is sold and the government no longer retains control of the organization and, therefore, the organization no longer forms part of the government reporting entity.

.38 When the entire investment in a governmental unit is sold on the same date, as could be the case when a government privatizes a governmental unit, the government would recognize a gain or loss on the sale in the period of sale and the organization would no longer be included as part of the government reporting entity.

.39 When a government sells part of its investment in a governmental unit, but the government still retains control of the governmental unit, the governmental unit is still considered to be part of the government reporting entity, and it would be included in the financial statements on a proportionate consolidation basis in accordance with paragraph PS 2510.05.

.40 When part of a government's investment in a governmental unit is sold and as a result the government no longer retains control of the organization, that organization no longer forms part of the government reporting entity. If the remaining investment is determined to be a portfolio investment, it would be accounted for in accordance with PORTFOLIO INVESTMENTS, Section PS 3041, and FINANCIAL INSTRUMENTS, Section PS 3450.

.41 When a governmental unit issues shares to interests outside the government reporting entity, the net effect of the change in the government's interest as a result of the share issue should enter into the determination of consolidated operating results.

WHEN A GOVERNMENTAL UNIT BECOMES A GOVERNMENT BUSINESS ENTERPRISE

.42 When the nature of a governmental unit changes so that it meets the definition of a government business enterprise, the organization would be accounted for as a government business enterprise by the modified equity method in accordance with GOVERNMENT REPORTING ENTITY, Section PS 1300. Accordingly:

(a) the organization would no longer be consolidated but would instead be accounted for by the modified equity method from the date its status changes to that of a government business enterprise; and

(b) the individual revenues and expenses of the organization would be included with those of the other governmental units and recognized in the consolidated statement of operations and the consolidated statement of remeasurement gains and losses up until the date the status of the organization changed. From that date

forward, the net income and other comprehensive income of the government business enterprise would be recorded in accordance with the modified equity method.

.43 In most cases, the change in status of a governmental unit to a government business enterprise will not be an observable event. The change may occur over time and, therefore, most governments would assess the status of their government organizations only at year end when the financial statements are being prepared. In such circumstances, it is acceptable for a government to account for the organization as a government business enterprise for the whole period in which the change in status is identified. When the change is the result of an observable event, however, a government would apply both consolidation and modified equity accounting to the organization in the period, as appropriate, in accordance with paragraph PS 2510.42. Similarly, if the government creates a government business enterprise from the existing resources of a governmental unit during the period, the consolidated statement of operations and the consolidated statement of remeasurement gains and losses would only report income and other comprehensive income from the government business enterprise subsequent to the date of its creation.

.44 The financial position and results of prior periods would not be adjusted to reflect the change in status of the organization as if it had always been a government business enterprise. It is important for the financial statements to show that a governmental unit has changed its status to become a government business enterprise.

.45 *When a governmental unit changes in status to a government business enterprise, the change cannot:*

(a) create revenue; or

(b) result in reporting tangible capital assets that would improve the net financial position of the government reporting entity. [MAY 1999 *]

.46 Unrealized gains arising on tangible capital assets of a governmental unit that changes its status to a government business enterprise would be eliminated in order not to improve the government's net financial position merely as a result of the change in status.

.47 The situation in paragraph PS 2510.46 is analogous to transfers of assets from a governmental unit to a government business enterprise. When tangible capital assets are transferred, an unrealized increase in the financial position of the government may be created depending on the value at which the asset is transferred. Such unrealized gains on tangible capital assets would be eliminated when the modified equity method is applied to the new government business enterprise in preparing the government's financial statements.

.48 The amount of the elimination would vary depending on whether the asset of the former governmental unit is depreciable and, if so, the extent of the depreciation recorded on the asset by the government business enterprise.

(a) A depreciable asset: The amount of the elimination entry needed to eliminate the unrealized gain is reduced as the related asset is depreciated by the government business enterprise. As a result, the net financial position of the government is unaffected by the change in status of a governmental unit to a government business enterprise. In effect, the unrealized gain is "realized" on the same basis as the depreciable asset of the former governmental unit is consumed over time by a government business enterprise using it to generate cash inflows. The reduction in the amount of the elimination could be seen as a realization of the gain. Such "realization" would occur because, by definition, government business enterprises are self-sustaining from

revenues received from outside of the government reporting entity. So, an unrealized gain eliminated in accordance with paragraph PS 2510.45 would be realized as the related asset fulfills its earning potential to the government business enterprise, not at the time of status change of the organization, when such earnings potential is only an assumption.

(b) A group of depreciable assets: Where a group of depreciable tangible capital assets of a former governmental unit comprises a significant number of relatively small dollar amounts, any related unrealized gain would be realized over the estimated useful life of the asset group, on the same basis as the asset group is depreciated by the government business enterprise.

(c) Sale of an asset: The need for an elimination entry to eliminate an unrealized gain related to a tangible capital asset of a former governmental unit would cease, and the unrealized gain would be realized to the extent of the sale proceeds, when a government business enterprise sells the asset to an entity outside of the government reporting entity. In most cases, an unrealized gain related to a non-depreciable asset would be realized only when the related asset is sold to an entity outside the government reporting entity.

.49 Any impairment or other adjustment made by a government business enterprise to the recorded value of a tangible capital asset of a former governmental unit would also affect the amount of the elimination entry needed to eliminate any unrealized gain arising on the asset.

.50 When a governmental unit changes in status to a government business enterprise, the investment in a government business enterprise measured by applying the modified equity method may differ from the amount otherwise included in the net financial position of the government reporting entity. This result may arise because in applying the modified equity method, accounting principles are no longer conformed with those of the government.

.51 *When the government's net investment balance increases or decreases because of a change in the status of a governmental unit to a government business enterprise, the amount of the increase or decrease should be accounted for as an adjustment to the opening balance of accumulated surplus / deficit. A description of the change, with details of changes to the recorded amounts of individual financial statement items, should be disclosed.* [OCT. 2006]

TRANSITIONAL PROVISIONS

.52 Paragraph PS 2510.51 applies when the government business enterprise has adopted FINANCIAL INSTRUMENTS — RECOGNITION AND MEASUREMENT, Section 3855, and HEDGES, Section 3865 in Part V of the CPA Canada Handbook – Accounting.

Footnotes

* Editorial change — April 2006.

SECTION PS 2600
foreign currency translation

(Replaced by Section PS 2601 — June 2011)

SECTION PS 2601
foreign currency translation 1



FOR THOSE WHO CHOOSE NOT TO EARLY ADOPT THIS SECTION,
see Section PS 2600 in Archived Pronouncements.

TABLE OF CONTENTS	Paragraph
Purpose and scope	.01-.02
Definitions	.03
Accounting	.04-.16
Initial recognition	.11-.12
Subsequent financial statement dates	.13-.14
Exchange gains or losses	.15-.16
Presentation	.17-.19
Disclosure	.20-.22
Transitional provisions	.23-.26

PURPOSE AND SCOPE

.01 This Section establishes standards on how to account for and report transactions that are denominated in a foreign currency in government financial statements.

.02 This Section does not apply to:

(a) the translation of balances derived from foreign exchange transactions intended to sustain foreign exchange reserves and orderly conditions in the foreign exchange market for the Canadian dollar or to provide assistance to foreign countries;

(b) balances with the International Monetary Fund, whether in the form of subscriptions, notes, or Special Drawing Rights; and

(c) the translation of the financial statements of foreign operations. A foreign operation of a government is typically financially or operationally interdependent with the government such that the exposure to exchange rate changes is similar to the exposure that would exist had the transactions and activities of the foreign operation been undertaken by the government itself.

DEFINITIONS

.03 The following definitions have been adopted for the purposes of this Section:

(a) **Currency risk** is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates.

(b) **Exchange gain or loss** is the difference that arises when a monetary item denominated in a foreign currency or a non-monetary item denominated in a foreign currency that is included in the fair value category in accordance with FINANCIAL INSTRUMENTS, Section PS 3450, is settled or translated at an exchange rate different from that at which it was previously recorded or carried.

(c) **Exchange rate** is the ratio for exchange of two currencies.

(d) **Fair value** is the amount of the consideration that would be agreed upon in an arm's length transaction between knowledgeable, willing parties who are under no compulsion to act.

(e) **Foreign currency** is a currency other than the reporting currency of a government.

(f) **Foreign currency transactions** are transactions of the government whose terms are denominated in a currency other than its reporting currency.

(g) **Monetary items** are money and claims to money the value of which, in terms of the monetary unit, whether foreign or domestic, is fixed by contract or otherwise.

(h) **Remeasurement gains and losses** encompass revenues and expenses arising:

(i) when prior to an item's settlement an **exchange gain or loss** is recognized in accordance with the provisions of this Section; and

(ii) when financial instruments in the fair value category are remeasured in accordance with FINANCIAL INSTRUMENTS, Section PS 3450.

ACCOUNTING

.04 The financial statements reflect a government's exposure to foreign currency risk.

.05 In order to include foreign currency transactions in the financial statements of a government, the transaction would be expressed in the government's reporting currency. It is assumed that the government's financial statements are prepared in Canadian dollars.

.06 A foreign currency transaction is a transaction that is denominated in or requires settlement in a foreign currency, including transactions arising when a government either:

(a) borrows or lends funds when the amounts payable or receivable are denominated in a foreign currency; or

(b) becomes a party to a contract involving foreign currencies.

.07 Translation of a transaction denominated in a foreign currency conforms its reported value to the Canadian dollar equivalent.

.08 The statement of operations reports revenues and expenses denominated in a foreign currency at a rate that approximates the exchange rate on the date of the transaction. Consequently, until a financial instrument included in the fair value category is derecognized, any gain or loss due to remeasurement is recognized in the statement of remeasurement gains and losses.

.09 The statement of financial position reports monetary items that have yet to be settled at the exchange rate in effect on the financial statement date. The exchange rate in effect on the financial statement date is also applied to items measured at fair value in accordance with FINANCIAL INSTRUMENTS, Section PS 3450. Consequently, non-monetary items are translated at the exchange rate in effect on the financial statement date when they are equity instruments included in the fair value category. It would be illogical to apply the exchange rate in effect at the transaction date (i.e., a historical exchange rate) to items measured at fair value.

.10 Recognizing and measuring foreign currency transactions will involve one or more of the following stages:

(a) translation to record the transaction as at the transaction date;

(b) translation of monetary items and items measured at fair value outstanding at the financial statement date to reflect the effect of movements in exchange rates subsequent to the transaction date or previous financial statement date; and

(c) translation, on settlement, of monetary items and items measured at fair value.

Initial recognition

.11 *At the transaction date, each asset, liability and amount reported in the statement of operations arising from a foreign currency transaction of the government should be translated into Canadian dollars by applying the exchange rate in effect at that date.* [APRIL 1, 2019 *]

.12 For practical reasons, a rate that approximates the actual rate at the date of transaction is often used. For example, an average rate for a week or a month might be used for all transactions in each foreign currency occurring during that period. However, if exchange rates fluctuate significantly, the use of the average rate for a period is unreliable.

Subsequent financial statement dates

.13 If a transaction denominated in a foreign currency is not settled by the financial statement date, the exchange rate has likely changed from the transaction date or previous financial statement date. The effect of the change in exchange rate would be recognized in the government's financial statements.

.14 *At each financial statement date:*

(a) monetary assets and monetary liabilities denominated in a foreign currency; and

(b) non-monetary items denominated in a foreign currency that are included in the fair value category in accordance with FINANCIAL INSTRUMENTS, Section PS 3450*;*

should be adjusted to reflect the exchange rate in effect at that date. [APRIL 1, 2019 *]

Exchange gains or losses

.15 Changes in the foreign exchange rate between the transaction date and subsequent financial statement dates give rise to an exchange gain or loss. This resulting exchange gain or loss would be accounted for in the financial statements.

.16 During the life of a foreign currency denominated item, there is uncertainty as to the actual gain or loss that will arise on its settlement. Substantial unrealized gains or losses may result from translating an asset or liability into Canadian dollar equivalents for financial statement purposes.

PRESENTATION

.17 Presentation of exchange gains and losses reflects the inherent uncertainty associated with foreign exchange. Some of these amounts are tentative in nature and subject to fluctuation.

.18 *An exchange gain or loss that arises prior to settlement is recognized in the statement of remeasurement gains and losses.* [APRIL 1, 2019 *]

.19 *In the period of settlement:*

(a) the cumulative amount of remeasurement gains and losses is reversed in the statement of remeasurement gains and losses; and

(b) an exchange gain or loss measured in relation to the exchange rate at the date of the item's initial recognition is recognized in the statement of operations. [APRIL 1, 2019 *]

DISCLOSURE

.20 LONG-TERM DEBT, Section PS 3230, contains specific disclosures for long-term debt that would be applied for long-term foreign currency denominated monetary items as well.

.21 Currency risk is a specific market risk a government may face when holding and transacting financial instruments. A government applies FINANCIAL INSTRUMENTS, paragraphs PS 3450.094-.095, to determine the information it discloses. When an item designated to the fair value category is denominated in a foreign currency, there is no separate disclosure of the exchange gain or loss.

.22 *A government should disclose the exchange gains and losses recognized in the statement of operations and the statement of remeasurement gains and losses.* [APRIL 1, 2019 *]

TRANSITIONAL PROVISIONS

.23 This Section applies to fiscal years beginning on or after April 1, 2019. For those government organizations that applied the CPA Canada Handbook – Accounting prior to their adoption of the CPA Canada Public Sector Accounting Handbook, this Section applies to fiscal years beginning on or after April 1, 2012. Governments and government organizations would also adopt FINANCIAL INSTRUMENTS, Section PS 3450, at the same time. Earlier adoption is permitted.

(paragraph PS 2601.24 deleted)

.25 The following provisions are applied at the beginning of the fiscal year (the transition date) in which this Section is initially adopted.

(a) Hedge accounting policies followed in financial statements for periods prior to the fiscal year this Section is adopted are not reversed and, therefore, those financial statements are not restated. Any gain or loss arising prior to the transition date on a derivative hedging instrument, and any foreign exchange gain or loss arising prior to the transition date on a non-derivative hedging instrument is accounted for as an adjustment in the balance of the accumulated remeasurement gains and losses at the transition date to the extent those gains or losses have not been recognized in net income or operations prior to the transition date. The carrying value of the hedged item is adjusted based on the foreign exchange rate on the transition date and is accounted for as an adjustment in the balance of the accumulated remeasurement gains and losses at the transition date.

(b) Any unamortized exchange gain or loss relating to a long-term foreign currency denominated monetary item deferred on the statement of financial position is accounted for as an adjustment in the balance of the accumulated remeasurement gains and losses at the transition date.

(c) If no unamortized exchange gain or loss is associated with an item in the cost or amortized cost category that is a monetary asset or a monetary liability as at the date of transition, the exchange rate at the date of transition (instead of the exchange rate at the date of the item's initial recognition) is used in measuring the exchange gain or loss recognized in the statement of operations in the period settlement occurs.

(d) A government organization transitioning from the standards in the CPA Canada Handbook – Accounting recognizes an amount in accumulated remeasurement gains and losses at the beginning of the fiscal year in which this Section is initially applied equal to the closing accumulated other comprehensive income 2 attributable to the translation of the financial statements of a self-sustaining foreign operation.

.26 When a government organization applies this Section in the same period it adopts Public Sector Accounting Standards for the first time, this Section cannot be applied retroactively. Comparative amounts are presented in accordance with the accounting policies applied by the government organization immediately preceding its adoption of Public Sector Accounting Standards.

Footnotes

1. References in this Section to a government apply as well to a government organization.

* See explanation of effective date in paragraph PS 2601.23.

* See explanation of effective date in paragraph PS 2601.23.

* See explanation of effective date in paragraph PS 2601.23.

* See explanation of effective date in paragraph PS 2601.23.

* See explanation of effective date in paragraph PS 2601.23.

2. In the case of a not-for-profit organization, as recognized in net assets.

SECTION PS 2700
segment disclosures

TABLE OF CONTENTS

	Paragraph
Purpose and scope	.01-.06
Defining segments	.07
Identifying segments	.08-.14
Attributing items to segments	.15-.21
Segment accounting policies	.22-.23
Changes in segments	.24-.25
Disclosure	.26-.33
Other disclosure matters	.30-.33
Transitional provisions	.34

PURPOSE AND SCOPE

.01 This Section establishes standards on how to define and disclose segments in a government's consolidated financial statements.

.02 These standards apply to government financial statements. Other government organizations that apply the standards of the CPA Canada Public Sector Accounting Handbook (CPA Canada PSA Handbook) are encouraged to provide the disclosures established in this Section when their operations are diverse enough to warrant such disclosures.

.03 Consolidated financial statements provide aggregated information about government and serve as a means by which a government demonstrates its accountability for the financial affairs and resources entrusted to it. Generally, however, the activities of a government are so broad and encompass so wide a range of different activities that it is valuable to disclose selected disaggregated financial information about particular segments of a government in the consolidated financial statements.

.04 The guidance in this Section is intended to start with the consolidated financial statements and separate out key financial information into segments in order to provide relevant information for accountability and decision-making purposes, while ensuring that the information is consistent with the consolidated financial statements.

.05 The objectives of disclosing information about segments are to:

(a) help users of the financial statements identify the resources allocated to support the major activities of the government;

(b) help users of the financial statements make more informed judgments about the government reporting entity and about its major activities;

(c) help users of financial statements better understand the manner in which the organizations in government are organized and how the government discharges its accountability obligations;

(d) enhance the transparency of financial reporting; and

(e) help users of the financial statements better understand the performance of the segments and the government reporting entity.

.06 Users of financial statements have a variety of needs that segment disclosures may be useful in addressing. For example, segment disclosures may assist users in assessing future net cash flows of the government.

DEFINING SEGMENTS

.07 For the purposes of this Section, a **segment** is a distinguishable activity or group of activities of a government for which it is appropriate to separately report financial information to achieve the objectives of this Section as set out in paragraph PS 2700.05.

IDENTIFYING SEGMENTS

.08 Determining the activities that should be grouped as segments requires the application of professional judgment. As a starting point, the major classifications of activities used in creating, presenting or managing budget information may be appropriate for identifying segments. Identifying segments in this manner often reflects the existing accountability framework for government and the way in which operations are managed. It also helps ensure that financial statement preparers are able to provide the required information in a cost-effective and timely manner.

.09 In identifying segments, preparers of financial statements will consider the definition of a segment and other factors, including:

(a) the objectives of disclosing financial information by segment;

(b) the expectations of members of the community and their elected or appointed representatives regarding the key activities and accountabilities of the government;

(c) the qualitative characteristics of financial reporting as set out in FINANCIAL STATEMENT CONCEPTS, Section PS 1000;

(d) the homogeneous nature of the activities, service delivery, or recipients of the services;

(e) whether the activities relate to the achievement of common outcomes or services as reflected in government performance reports and plans;

(f) whether discrete financial information is reported or available; and

(g) the nature of the relationship between the government and its organizations (within the reporting entity).

.10 There are different bases of segmentation that may be considered appropriate. The government would choose the basis of segmentation that best addresses the factors in paragraph PS 2700.09. Some examples of how financial information may be aggregated and reported are:

(a) By major functional classifications of activities undertaken by the government, such as health, education, defense, welfare, and major trading activities undertaken by GBEs, such as utilities and insurance entities.

(b) By service line segments that are distinguished by outputs or achieving particular operating objectives, such as police services and parks and recreation. Government departments and agencies are often managed along service lines because this reflects the way in which major outputs are identified, their achievements monitored and their resource needs identified and budgeted.

(c) By segments that reflect the different accountability and control relationships between the government and various organizations within the reporting entity, such as ministries, crown corporations, and the SUCH (schools, universities, colleges and hospitals) sector.

.11 Governments sometimes provide supplementary disclosures at a broad level (for example, operating, capital and other funds) or a detailed level (unaudited), or provide audited financial statements of components of the government reporting entity. In many cases, this supplementary disclosure does not meet the requirements of this Section. In providing segment disclosures, what is important within the consolidated financial statements is that the definition of a segment is met, the objectives for segment disclosures are satisfied and an appropriate basis of segmentation is chosen.

.12 In some cases, a government may report on the basis of more than one segment structure, for example, by service segments and functional classifications. If the achievement of a government's objectives is strongly affected both by the different products and services it provides and by its different functional classifications, reporting on the basis of both service segments and functional classifications may provide useful information.

.13 Not every part of a government is necessarily a segment. For example, certain activities may best be considered part of general government operations rather than related to a specific segment.

.14 There may be a practical limit to the number of segments that a government separately discloses, beyond which segment information may become overly detailed. Although no precise limit has been determined, as the number of segments identified increases, the government would consider whether a practical limit has been reached in terms of the value of the information being disclosed compared to the cost of compiling it.

ATTRIBUTING ITEMS TO SEGMENTS

.15 For each reportable segment, some items are directly attributable to a segment while others will be allocated on a reasonable basis. Where an item can be allocated in whole or in part to a segment on a reasonable basis, this would be done. The government's financial reporting system would normally be the starting point for identifying items that can be directly attributed or reasonably allocated to segments.

.16 In some cases, an item may have been allocated to segments for internal financial reporting purposes on a basis that is understood by government management but that is subjective or arbitrary. Such an allocation would not constitute a reasonable basis of allocation under this Section. Conversely, a government may choose not to allocate some items for internal financial reporting purposes even though a reasonable basis for doing so exists. For the purposes of segment disclosures, such items would be allocated.

.17 A detailed calculation made in applying a particular accounting policy at the government-wide level would be allocated to segments if there is a reasonable basis for doing so. Employee entitlement calculations, for example, are often made for a government as a whole, but the government-wide figures may be allocated to segments based on salary and demographic data for the segments.

.18 Some revenues and expenses may not be directly attributable or allocable on a reasonable basis to individual segments because they support a wide range of service delivery activities across a number of segments or relate to general administration activities that are not identified as a separate segment. These unattributed or unallocated revenues and expenses would be reported as unallocated amounts in reconciling the segment disclosures to the government's consolidated financial statements.

.19 Governments carry out their policies and deliver services through various organizations, including government business enterprises and government business partnerships, accounted for on a modified equity basis. Where the modified equity-accounted income can be directly attributed or reliably allocated to a segment, this attribution or allocation would be done. Similarly, segment revenue and segment expense would include the segment's share of revenue and expense of a government partnership that is accounted for by proportionate consolidation.

.20 When a government accounts for certain government organizations on a modified equity basis in accordance with GOVERNMENT REPORTING ENTITY, paragraph PS 1300.47, if the modified equity-accounted income can be directly attributed or reliably allocated to a segment, this attribution or allocation would be done.

.21 In accordance with BASIC PRINCIPLES OF CONSOLIDATION, Section PS 2500, transactions and balances between controlled entities are eliminated when preparing consolidated financial statements. However, for segment disclosures, segment revenue and segment expense are determined before these eliminations. The only exception occurs when transactions and balances are between entities within a single segment. In this case, eliminating entries would be done before determining segment amounts.

SEGMENT ACCOUNTING POLICIES

.22 *Segment information should be prepared in accordance with the accounting policies adopted for preparing and presenting the consolidated financial statements of the government.* [APRIL 2007]

.23 For purposes of their financial reporting, government organizations base their accounting policies on the standards of the CPA Canada Handbook – Accounting or the CPA Canada PSA Handbook as directed in the Introduction to Public Sector Accounting Standards. For purposes of segment reporting, all accounting policies, other than those for government business enterprises, would be conformed to the accounting policies adopted for preparing and presenting the consolidated financial statements of the government. These would be the standards of the CPA Canada PSA Handbook.

CHANGES IN SEGMENTS

.24 *If there is a change in segments, prior period segment data presented for comparative purposes should be restated to reflect the newly reported segment(s) unless the necessary financial data are not reasonably determinable.* [APRIL 2007]

.25 Changes in segments may occur as a result of new organizations being included in the government reporting entity and being allocated to segments. Changes may also occur if a new segment is identified or as a result of a change in the basis of segmentation. For example, a government may undertake significant new or additional activities, or increase the extent to which an activity previously operating as an internal support service provides services to external parties. When this occurs, prior period comparative data would be restated, if practicable, to reflect the current segment structure.

DISCLOSURE

.26 *Government financial statements should separately disclose the following information, in notes or schedules, about each of a government's segments identified in accordance with paragraph* PS 2700.07*:*

(a) the basis for identifying segments, the nature of the segments and the activities they encompass, and the method of significant allocations to segments;

(b) segment expense by major object or category;

(c) segment revenue by source and type;

(d) the aggregate of the income of government business enterprises and government business partnerships accounted for under the modified equity method for each segment, if applicable; and

(e) a reconciliation between the information disclosed for segments and the consolidated information in the financial statements. [APRIL 2007 *]

.27 In addition to these disclosures, governments are encouraged to provide other segment information where useful to users of the financial statements. Examples of other disclosures that may be desirable include separate disclosure of the total carrying amount of assets by segment, separate disclosure of the total carrying amount of liabilities by segment, separate disclosure of tangible capital assets by segment, separate disclosure of additions to tangible capital assets by segment and any other significant elements of the financial statements by segment.

.28 In providing segment disclosures, it is important that users be able to reconcile the financial information provided to the government's consolidated financial statements. Various presentations of the reconciliation are possible but, regardless of format, segment revenues would be reconciled to government revenues and segment expenses would be reconciled to government expenses.

.29 While a single aggregate amount is disclosed pursuant to the requirements of paragraph PS 2700.26(d), each government business enterprise or government business partnership is assessed individually to determine whether its operations are to be included within a segment or segments.

Other disclosure matters

.30 *In measuring and reporting segment revenue from transactions with other segments, inter-segment transfers should be measured on the basis that the government used to price those transfers. The basis of pricing inter-segment transfers and any change therein should be disclosed in the financial statements.* [APRIL 2007]

.31 A change in the method that a government uses to price inter-segment transfers is not a change in accounting policy for which prior period segment data would be restated.

.32 *Changes in accounting policies related specifically to segment reporting that have a material effect on segment information should be disclosed. Prior period segment information presented for comparative purposes should be restated unless the necessary financial data are not reasonably determinable. Such disclosure should include:*

(a) a description of the nature of the change;

(b) the reasons for the change;

(c) the fact that comparative information has been restated or that the necessary financial data are not reasonably determinable; and

(d) the financial effect of the change, if reasonably determinable. [APRIL 2007]

.33 Some changes in accounting policies relate specifically to segment reporting, for example, a change in the basis for allocating revenues and expenses to segments. Such changes can have a significant impact on the segment information reported, but will not change aggregated financial information reported for the government. To enable users to understand the changes and to assess trends, prior period segment information that is included in the financial statements for comparative purposes would be restated, when practicable, to reflect the new accounting policies.

TRANSITIONAL PROVISIONS

.34 This Section applies to fiscal years beginning on or after April 1, 2007. Earlier adoption is encouraged.

Footnotes

* Editorial change — March 2012.

public sector accounting standards
specific items — financial statement items
Sections PS 3030 — PS 3510

SECTION PS 3030
temporary investments

(Withdrawn March 2012; retained in Archived Pronouncements)

SECTION PS 3040
portfolio investments

(Replaced by Section PS 3041 — March 2012)

SECTION PS 3041
portfolio investments



FOR THOSE WHO CHOOSE NOT TO EARLY ADOPT THIS SECTION,
see Section PS 3040 in Archived Pronouncements.

TABLE OF CONTENTS	Paragraph
Purpose and scope	.01
Definitions	.02
Accounting	.03-.26
Portfolio investments held by sinking funds	.06
Loss in value of a portfolio investment	.07-.14

Gains and losses on sales of portfolio investments	.15-.16
Portfolio investments with concessionary terms	.17-.26
Presentation and disclosure	.27-.33
Transitional provisions	.34

PURPOSE AND SCOPE

.01 This Section establishes standards on how to account for and report portfolio investments in government financial statements. 1 This Section does not deal with accounting for derivatives.

DEFINITIONS

.02 The following definitions have been adopted for the purposes of this Section:

(a) **Portfolio investments** are investments in organizations that do not form part of the government reporting entity. Such investments are normally in equity instruments or debt instruments issued by the investee. Portfolio investments do not include:

(i) investments in government business enterprises, as defined in GOVERNMENT REPORTING ENTITY, Section PS 1300; or

(ii) loans receivable, as defined in LOANS RECEIVABLE, Section PS 3050.

(b) **Amortized cost** is the amount at which a financial asset or a financial liability is measured at initial recognition minus principal repayments, plus or minus the cumulative amortization using the effective interest method of any difference between the initial amount and the maturity amount, and minus any reduction (directly or through the use of an allowance account) for impairment or uncollectibility.

(c) The **effective interest method** is a method of calculating the amortized cost of a financial asset or financial liability (or a group of financial assets or financial liabilities) and of allocating the interest income or interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument or, when appropriate, a shorter period to the net carrying amount of the financial asset or financial liability (see FINANCIAL INSTRUMENTS, paragraphs PS 3450.A41-.A45).

ACCOUNTING

.03 Unless a portfolio investment contains significant concessionary terms, it is recognized and measured in accordance with FINANCIAL INSTRUMENTS, Section PS 3450. Portfolio investments with significant concessionary terms are initially measured in accordance with paragraphs PS 3041.17-.26 and are categorized and subsequently accounted for in accordance with Section PS 3450.

.04 For fixed term securities, any discount or premium arising on purchase is amortized over the period to maturity. As a result of the amortization, earnings from the investment would reflect a yield based on purchase costs, not on coupon rates, and the carrying value of the investment would be adjusted systematically, during the period it is held, toward the amount expected to be realized at maturity or an earlier call date.

.05 When a government does not control the organization that it has invested in, as is the case when it acquires an equity instrument that is a portfolio investment, it is inappropriate for the government to include any portion of the undistributed income of the investee in the operating results of the government. Dividends received in excess of the government's pro rata share of post-acquisition income are accounted for as a reduction of the cost of the investment. Earnings from portfolio investments are recognized only to the extent received or receivable.

Portfolio investments held by sinking funds

.06 Portfolio investments held by sinking funds should be accounted for in accordance with paragraphs PS 3041.03-.26. However, the presentation and disclosure standards in paragraphs PS 3041.27-.33 would not apply to portfolio investments held in externally restricted sinking funds. Presentation and disclosure requirements relating to externally restricted sinking funds are outlined in LONG-TERM DEBT, Section PS 3230. When a sinking fund is not externally restricted, in addition to the requirements within this Section, a government may disclose information about its designated assets as outlined in RESTRICTED ASSETS AND REVENUES, Section PS 3100.

Loss in value of a portfolio investment

.07 *When there has been a loss in value of a portfolio investment that is other than a temporary decline, the investment should be written down to recognize the loss. The write-down should be included in the statement of operations. In the case of an item in the fair value category, a reversal of any net remeasurements should be reported in the statement of remeasurement gains and losses.* [APRIL 2012 *]

.08 *A write-down of a portfolio investment to reflect a loss in value should not be reversed if there is a subsequent increase in value.* [MARCH 1999]

.09 A loss in value of a portfolio investment that is other than a temporary decline occurs when the actual value of the investment to the government becomes lower than its cost or amortized cost, adjusted for any write-downs recorded in previous reporting periods, and the impairment is expected to remain for a prolonged period.

.10 A decline in market value may be only temporary in nature or may reflect conditions that are more persistent. Declines may be attributable to general market conditions that reflect prospects of the economy as a whole or prospects of a particular industry. Such declines may or may not indicate the likelihood of ultimate recovery of the cost or amortized cost of an investment. A decline in quoted market value below cost or amortized cost of an investment with a fixed maturity amount may be considered temporary unless it is anticipated that the investment will be disposed of before it matures or that the cost or amortized cost may not be realizable.

.11 A loss in value of a portfolio investment that is other than a temporary decline is obvious in some cases, such as bankruptcy or an agreement to sell an investment at an amount which will result in a loss. In less obvious situations, impairment of the value of an investment may be indicated by conditions such as:

(a) a prolonged period during which the quoted market value of the investment is less than its cost or amortized cost;

(b) severe losses by the investee in the current year or current and prior years;

(c) continued losses by the investee for a period of years;

(d) liquidity or going concern problems of the investee; and

(e) the current fair value of the investment (for example, an appraisal) is less than its cost or amortized cost.

.12 The disappearance of an active market because the securities are no longer publicly traded is not, of itself, evidence of impairment, although it may be evidence of impairment when considered with other available information.

.13 When a condition, indicating that an impairment in value of a portfolio investment may have occurred, has persisted for a period of three or four years, there is a general presumption that there has been a loss in value which is other than a temporary decline. This presumption can only be rebutted by persuasive evidence to the contrary.

.14 When a portfolio investment has been written down to recognize a loss, the new carrying value is deemed to be the new cost basis for subsequent accounting purposes and, accordingly, a subsequent increase in value would be recognized in the statement of operations only when realized.

Gains and losses on sales of portfolio investments

.15 *For the purposes of calculating a gain or loss on the sale of a portfolio investment, the cost of the investment sold should be calculated on the basis of the average carrying value of the portfolio investment as measured in relation to cost or amortized cost. The gain or loss on the sale of a portfolio investment should be included in the statement of operations in the period of sale.* [APRIL 2012]

.16 The average carrying value method does not require that the cost of specific purchases of a particular security be tracked for the purpose of calculating a gain or loss on the sale of all or part of the government's investment in the security. Gains or losses on individual sales are considered to be part of the ultimate gain or loss on the entire holding of each portfolio investment.

Portfolio investments with concessionary terms

.17 *When the terms associated with a government's portfolio investment are so concessionary that the substance of the transaction is that all or a significant part of the investment is in the nature of a grant, the grant portion of the transaction should be recognized as an expense when the investment is made.* [MARCH 1999]

.18 Portfolio investments with significant concessionary terms at the date of investment require particular consideration because of their nature. When a government invests in an organization and the terms associated with the investment are so concessionary that the government expects to make little or no return on its investment or may not expect the return of its capital in the future, all or a significant part of that investment is in the nature of a grant and should be accounted for as such when the investment is made.

.19 If all or a portion of an investment transaction is considered to be in the nature of a grant because of the terms specified, that grant portion should be accounted for as a grant in accordance with GOVERNMENT TRANSFERS, Section PS 3410, when the investment is made. The nature and substance of the terms specified for the portfolio investment would determine how to account for the transaction:

(a) When the terms of a portfolio investment are such that a government does not expect the return of its capital in the future, the entire investment is in the nature of a grant and should be accounted for as such when the investment is made.

(b) When the terms of a portfolio investment are such that a government expects little or no return on its investment, but expects the return of its capital at a specified date in the future, present value techniques would be used to quantify the portion of the investment transaction that is, in substance, a grant. In such circumstances, the net remaining balance of the transaction would be accounted for as a discounted portfolio investment in accordance with this Section.

(c) There may be instances where the accounting proposed in both (a) and (b) of this paragraph must be applied in accounting for a portfolio investment. Such circumstances would exist when:

(i) at the date of investment, the government does not expect the full return of its capital; and

(ii) the terms of the portfolio investment are such that the government expects little or no return on its investment, but expects the return of part of its capital at a specified date in the future.

In such circumstances, a government would recognize the portion of the investment capital that it does not expect to recover as a grant at the date of investment. Present value techniques would then be used to quantify the portion of the remainder of the investment that is, in substance, a grant because of the concessionary terms associated with it, in accordance with paragraphs PS 3041.20-.26.

.20 When present value techniques are used to quantify the portion of a portfolio investment that is, in substance, a grant, the government's average borrowing rate may be appropriate to use as the discount rate in determining the present value of the investment. The grant portion, or "investment discount", would be calculated as the difference between the cost of the investment and its present value.

.21 *When a government uses present value techniques to recognize part of a portfolio investment as a grant, the recorded value of the investment at the date of investment should be its cost less the amount calculated as the investment discount. The amount of the investment discount should be amortized to revenue applying the effective interest method over the term to redemption or maturity of the investment.* [APRIL 2012]

.22 The amortization of the investment discount would be recorded as an increase in the carrying value of the investment and investment income.

.23 The dividends or interest earned, as specified in the terms of the investment, should cease to be accrued when the collectibility of such investment income is not reasonably assured. Continuing to accrue dividends or interest in such circumstances would overstate revenue.

.24 Amortization of the investment discount would cease if the collectibility of the dividends or interest earned is not reasonably assured, or if the return of the government's capital is no longer reasonably assured. In such circumstances, consideration would be given to whether an impairment in the government's portfolio investment had occurred, and should be accounted for, in accordance with paragraphs PS 3041.07-.14.

.25 When the collectibility of the dividends or interest earned is not reasonably assured, any dividends or interest previously accrued but not received, to the extent that their collection is doubtful, should either be provided for through a valuation allowance or written off in the financial statements.

.26 When an investment has been recorded as a grant in accordance with paragraph PS 3041.19(a) and the government subsequently receives all or part of its capital back, the return of capital would be recognized as revenue when received.

PRESENTATION AND DISCLOSURE

.27 *Portfolio investments should be reported separately on the statement of financial position.* [MARCH 1999]

.28 *The basis of valuation of portfolio investments should be disclosed.* [MARCH 1999]

.29 *Income from portfolio investments should be reported separately on the statement of operations.* [MARCH 1999]

.30 *When portfolio investments include marketable securities, the quoted market value of such securities as well as their carrying value should be disclosed.* [MARCH 1999]

.31 When presenting its portfolio investments and supporting disclosures, a government also considers the applicable standards in FINANCIAL INSTRUMENTS, Section PS 3450.

.32 Governments may make portfolio investments to promote economic or regional development, to assist, for policy reasons, an organization in financial difficulties, or to obtain a return on investment, whether by means of interest or dividends or by means of an increase in the value of the investment. Regardless of the reasons for a portfolio investment, disclosure of its quoted market value can provide objective and useful evidence relating to the financial health of the investee and the value of the government's investment.

.33 In circumstances where the terms of an investment are so concessionary that all or a significant part of the transaction is recognized as a grant when the investment is made in accordance with PS 3041.17, disclosure of the original amount paid for the investment should be provided in addition to its carrying value and market value, if any, in order that complete information about the entire transaction is provided. This information could be provided in conjunction with information about the basis of valuation of the investment.

TRANSITIONAL PROVISIONS

.34 This Section applies in the period FINANCIAL STATEMENT PRESENTATION, Section PS 1201, FOREIGN CURRENCY TRANSLATION, Section PS 2601, and FINANCIAL INSTRUMENTS, Section PS 3450, are adopted.

Footnotes

1. The term "financial statements" refers to the summary financial statements published by a government that report on the financial position and changes in financial position of the government reporting entity.

* Editorial change — May 2012.

SECTION PS 3050
loans receivable

TABLE OF CONTENTS

	Paragraph
Purpose and scope	.01-.02
Definition	.03-.09
Loans to be repaid through future appropriations	.10-.16
Forgivable loans	.17-.19
Loans with significant concessionary terms	.20-.25
Recognition	.26-.29
Valuation	.30-.37
Write-offs	.38-.42
Recognition of interest revenue	.43-.48
Loan restructuring	.49-.52
Disclosure	.53-.61
Transitional provisions	.62-.63
Flowchart of standards	Appendix A

PURPOSE AND SCOPE

.01 This Section establishes standards on how to account for and report loans receivable in government financial statements. 1 The standards apply to loans to borrowers outside of the government reporting entity. 2

.02 Governments lend money primarily to achieve policy objectives and, to a lesser extent, to earn a return on the use of government funds. To support regional development or give economic assistance, governments often lend at concessionary terms that include low interest rates, extended repayment terms and forgiveness clauses.

DEFINITION

.03 For the purposes of this Section, a **loan receivable** is a financial asset of a government (the lender) represented by a promise by a borrower to repay a specific amount, at a specified time or times, or on demand, usually with interest.

.04 The term "loan" refers to both loans and advances.

.05 A loan receivable is a financial asset as defined in FINANCIAL STATEMENT CONCEPTS, paragraph PS 1000.40. Key to the definition is the fact that financial assets provide resources to discharge existing liabilities or finance future operations. Many of the accounting issues related to government loans receivable hinge on this aspect of the loan receivable definition.

.06 A "borrower" may be an individual, an organization (including a corporation), or another government.

.07 The terms of a loan agreement describe when a loan is due. The terms may specify a calendar date or dates for repayment, or may describe the particular time(s) or circumstance(s) that will determine repayment. For example, repayment may be contingent on future events, such as commodity prices or operating results. As well, a loan could be repayable on demand, or it could become repayable on demand if the borrower is in contravention of the terms of the loan agreement.

.08 Most loans have a stated interest rate. However, some loans earn a return because the cash disbursed to the borrower is less than the amount that has to be repaid. The lender effectively earns a return, even though there is no stated interest rate.

.09 All or part of some "loans" that governments make do not meet the definition of a loan receivable because they are not, in substance, financial assets. They include loans issued by governments in the expectation that they will be repaid through future government funding to the borrower, loans with forgivable conditions and loans with significant concessionary terms.

LOANS TO BE REPAID THROUGH FUTURE APPROPRIATIONS

.10 *The amount of a loan that is expected to be recovered from future appropriations should be accounted for in the statement of operations as an expense in the period when a direct relationship can be established between the repayment of the loan and a government's funding to the borrower.* [JUNE 1995 *]

.11 Governments sometimes make loans to borrowers that will be recoverable only through future appropriations from the government to the borrower. The effect of the individual loan transaction on the government's funding to the borrower is the key in determining how to account for these loans.

.12 If a direct relationship can be established between the government assistance given to a borrower and repayment of the loan, the loan does not meet the definition of a financial asset. The government would not receive any resources from the loan transaction that could be used to discharge existing liabilities or finance future operations. Such transactions are in the nature of grants, and should be accounted for as expenses in accordance with GOVERNMENT TRANSFERS, Section PS 3410.

.13 A direct relationship would exist if the government assists the borrower to repay the loan through:

(a) specific repayment grants; or

(b) increases in existing government assistance as a result of the loan.

There may be other financing arrangements that, in substance, result in a direct relationship between the repayment of a loan and the government's assistance to the borrower.

.14 Financial dependence alone may not be sufficient evidence that a direct relationship exists between the repayment of a loan and the government funding received by the borrower. For example, if the government does not change its funding to the borrower as a result of the loan, the government will get back funds from the borrower, through repayment of the loan, that it would not have received otherwise. The borrower would manage its loan repayments within the funding it received before the loan from the government existed. In such circumstances, the loan transaction could be recorded as a financial asset.

.15 If the government assistance provided to a borrower is consistent with that provided to similar organizations which have not received government loans, this may be evidence that a direct relationship does not exist and that the loan is a financial asset.

.16 To ensure that expenses are not overstated in future years, repayments received on loans or portions of loans, which have been treated as grants, should be offset against the related expenses.

FORGIVABLE LOANS

.17 *When an amount is advanced with forgivable conditions, it should be accounted for as a grant unless it meets the definition of a loan receivable and there is sufficient evidence of a reasonable expectation of its recovery.* [APRIL 1993]

.18 A forgivable loan is one which includes, in the terms of the loan agreement, conditions under which the principal and any accrued interest would be forgiven. A conditional grant is one that may be recoverable because it has conditions that can trigger repayment. Conditional grants should be accounted for in accordance with GOVERNMENT TRANSFERS, Section PS 3410.

.19 The difference between a forgivable loan and a conditional grant lies in the program objective(s), the expectation of recovery of the funds issued, and the terms of the underlying agreement(s).

(a) The nature and objectives of a particular loan program may give some indication of the government's intentions and expectation of recovery:

(i) If the government expects to be repaid, except under specific conditions, the amounts may be more in the nature of loans. The government has financial assets until the loans are forgiven.

(ii) If, on the other hand, the government advances funds and doesn't expect to be repaid unless certain conditions are not met, the amounts may be more in the nature of grants. The government does not have financial assets unless unexpected future events occur.

The key is whether it is repayment, or forgiveness, that is contingent on a future event.

(b) Evidence that the transaction is operating as a loan in the period before forgiveness would support the government's stated program intentions and expectation of recovery. The terms of the loan program may provide such evidence. If interest is payable on the amounts outstanding, and/or repayments are due, from the date the funds are advanced, the amounts are forgivable loans. If interest and repayments are not due unless recipients fail to meet certain conditions, the transactions are more in the nature of conditional grants.

LOANS WITH SIGNIFICANT CONCESSIONARY TERMS

.20 *When the terms of a loan are so concessionary that the substance of the transaction is that all or a significant part of the loan is more in the nature of a grant, the grant portion of the transaction should be recognized in the statement of operations as an expense when the loan is made.* [APRIL 1993 *]

.21 Loans with significant concessionary terms at the date of issue require particular consideration because of their nature. The terms of the loan may be such that some or all of the amount advanced is more in the nature of a grant. For example, this may be the case when the interest rate on a loan is significantly below the government's average cost of borrowing at the date of issue.

.22 Loans with significant concessionary terms should be accounted for based on the substance of the transaction. If all or a portion of the loan transaction is considered to be more in the nature of a grant, because of concessionary terms given when the loan is made, that grant portion should be accounted for as a grant in accordance with GOVERNMENT TRANSFERS, Section PS 3410. The net remaining balance of the transaction would be accounted for as a discounted loan in accordance with this Section.

.23 Present value techniques would be used to quantify the portion of a loan transaction that is, in substance, a grant. The government's average borrowing rate may be appropriate to use as the discount rate in determining the present value of the loan. The grant portion would be the difference between the face value of the loan and its present value.

.24 *The recorded value of the loan at the date of issue should be its face value discounted by the amount of the grant portion. The amount of the loan discount should be amortized to revenue in a rational and systematic manner over the term of the loan.* [APRIL 1993]

.25 The loan discount is amortized using the effective interest rate method. The amortization of the discount would be recorded as an increase in the loan balance and a credit to revenue. [Former paragraph PS 3050.25 retained in Archived Pronouncements.]

RECOGNITION

.26 *A loan receivable should be recognized on a government's statement of financial position when:*

(a) the government assumes the risks associated with, and acquires the right to receive, repayment of principal and any related payments of interest; and

(b) the amount of the loan can be reliably measured.

This normally coincides with the disbursement of funds, exchange of other assets, or assumption of liabilities. [APRIL 1993]

.27 In most cases, a government assumes the risks 3 and the repayment and interest rights associated with a loan when it disburses the funds to the borrower, or exchanges other assets, or assumes liabilities. At that point, the government has a financial asset because it has the contractual right to receive cash from the borrower at a future date. [Former paragraph PS 3050.27 retained in Archived Pronouncements.]

.28 *A loan receivable should be removed from a government's statement of financial position when it has been repaid, the risks and rewards associated with the loan have been transferred, the right to repayment has expired or been waived, or it is written off.* [APRIL 1993]

.29 A loan is generally extinguished, and removed from the statement of financial position, when the principal is repaid in accordance with the terms of the loan agreement. The risks and rewards could also be transferred in a sale or exchange, or repayment of principal and/or interest could be waived. As well, if the amount of a loss associated with a loan is known with sufficient precision, the loan would be written down or written off. In the case of a forgivable loan, when the borrower meets the forgiveness conditions, the outstanding principal and accrued interest would be removed from the statement of financial position.

VALUATION

.30 *Loans receivable should be initially reported on a government's statement of financial position at cost. Valuation allowances should be used to reflect loans receivable at the lower of cost and net recoverable value.* [APRIL 1993]

.31 The cost of a loan receivable is the cash or value of other assets given up, or liabilities assumed in the loan transaction, except as follows:

(a) The cost of a significantly concessionary loan, when issued, is the discounted value of the loan after the grant portion has been charged to expenses. That cost would be adjusted to reflect the amortization of the discount over the term of the loan.

(b) When it has been established that a portion of a loan will be repaid through future appropriations, the cost of that loan would be the reduced value of the loan transaction after the grant portion has been charged to expenses.

.32 Valuation allowances for loans should be used to reflect collectibility and risk of loss. That assessment can be done on an individual loan basis, or for a particular class of loans. In certain situations, it is not cost-effective to carry out a review of collectibility or risk of loss on a loan-by-loan basis. For example, loans may be assessed collectively because the class of loans consists of a large number of relatively small dollar-value loans. The estimate of potential uncollectibility or risk of loss could be based, for example, on historical experience with similar types of loans, or economic conditions facing the borrowers.

.33 The valuation allowance should also be used to reflect a provision for expected forgiveness of an individual loan or a particular class of loans. For example, if a class of loans carries standard forgiveness conditions, it may be possible to estimate a provision for forgiveness based on experience with that class of loans.

.34 Valuation allowances should be determined using the best estimates available in light of past events, current conditions, and taking into account all circumstances known at the date of the preparation of the financial statements. The following factors might be considered in establishing a valuation allowance:

(a) recent collection experience for the loan (principal and interest);

(b) recent financial performance of the borrower;

(c) security held for the loan;

(d) factors known at the time of reporting that are likely to affect the borrower's ability to repay the loan in the future;

(e) economic conditions in the country or region in which the borrower operates; and

(f) conditions in the industry in which the borrower operates.

.35 *Loans receivable should be reported net of their related valuation allowances on a government's statement of financial position. Changes in valuation allowances should be recognized in expenses in the statement of operations.* [SEPT. 1997 *]

.36 The loans receivable balance is the cost of the loans initially recognized, adjusted for repayments received, amortization of loan discounts, write-downs or forgiveness. That balance should be reported net of related valuation allowances on the statement of financial position.

.37 When events or circumstances result in the expectation of a loss, it should be reflected through a valuation provision. A valuation provision is a change in the valuation allowance and is set up through a charge to the statement of operations and a credit to the valuation allowance. If a loan is provided for in a valuation allowance, in part or in total, and recovery of the loan is subsequently assessed as likely, the valuation allowance for the loan may be reduced.

WRITE-OFFS

.38 *When the amount of a loss is known with sufficient precision, and there is no realistic prospect of recovery, the loan receivable should be reduced by the amount of that loss.* [APRIL 1993]

.39 When a loss is considered probable, the loan receivable would be adjusted to the lower of its cost and its estimated net recoverable value through a valuation allowance. When the amount of a loss is known with sufficient precision and there is no realistic prospect of recovery, the loan receivable would be written down or written off to reflect the amount of that loss.

.40 Formal write-downs or write-offs of a loan are generally decisions that require approval through an Order in Council or the Treasury Board, or, in some jurisdictions, through an act, resolution, or by-law, which may take some time to accomplish. However, valuation allowances may not require the same approval process as write-offs.

.41 The net financial position is the same whether a loss is recognized by writing off all or part of the loan or by providing a valuation allowance. The use of the valuation allowance to provide for losses until a loan can be written off is an acceptable compromise to reflect a proper accounting value while adhering to the legislative process.

.42 Once all or a part of a loan has been written off, the write-off should not be reversed.

RECOGNITION OF INTEREST REVENUE

.43 *Interest revenue should be recognized on a loan receivable when earned. Interest revenue should cease to be accrued on a loan when the collectibility of either principal or interest is not reasonably assured.* [APRIL 1993]

.44 Revenues should be accounted for in the period in which the transactions or events occurred that gave rise to the revenues. 4 Interest is earned over the term of a loan according to the terms of the underlying

agreement. Therefore, interest revenue should be recognized from the date of initial loan recognition, which is usually the date the funds are disbursed to the borrower (or the date of the exchange of other assets or assumption of liabilities).

.45 The total revenue on significantly concessionary loans is the contractual interest earned plus the amortization of the discount.

.46 Interest revenue should cease to be accrued when the collectibility of either principal or interest is not reasonably assured. Continuing to accrue interest in the financial statements under such circumstances would overstate revenue. Amortization of the loan discount for concessionary loans should also cease if the collectibility of either the principal or interest related to the loan transaction is not reasonably assured.

.47 When collectibility of the principal and interest is not reasonably assured, any previously accrued but uncollected interest, to the extent that its collection is doubtful, should either be provided for through a valuation allowance or written off in the financial statements. Reasonable assurance of collectibility means that there is sufficient and appropriate evidence that the loan will be recovered.

.48 Interest earned on loans recoverable only through future appropriations should be offset against the related expense.

LOAN RESTRUCTURING

.49 A loan agreement may be restructured before the end of its term. A loan restructuring usually involves some cost with respect to principal or interest previously accrued. A loan restructuring may be done when the borrower is having trouble meeting the terms of the original loan agreement. It may involve, for example, the forgiveness of a portion of the principal or interest in arrears, the deferral of interest payments, the extension of the term of the loan, the capitalization of interest, or a reduction in the interest rate with no change in the principal balance.

.50 A loan restructuring is, in substance, an exchange transaction in which the original loan is "settled" and replaced by a new loan agreement. Any related costs should be reflected as expenses in the statement of operations at the time of a loan restructuring so that future accounting periods will not be charged with these costs. A restructured loan should not be recorded on the statement of financial position at an amount exceeding what is reasonably expected to be recovered.

.51 *The costs of concessions in a loan restructuring, if any, relating to principal or interest previously accrued, should be recognized in the statement of operations as expenses at the time of a loan restructuring.* [APRIL 1993 *]

.52 *Interest should not be capitalized on the restructuring of a loan receivable unless its recovery over the term of the loan is reasonably assured.* [APRIL 1993]

DISCLOSURE

.53 DISCLOSURE OF ACCOUNTING POLICIES, paragraphs PS 2100.03 and PS 2100.09, states that a clear and concise description of all significant accounting policies of a government reporting entity that have been selected and applied to significant assets, liabilities, revenues and expenses, should be included as an integral part of its financial statements.

.54 *In describing the accounting policies selected by a government and applied to its loans receivable, governments should disclose:*

(a) the basis of initial valuation on the statement of financial position;

(b) the policy with respect to valuation allowances, write-offs and recoveries; and

(c) the policy for the recognition of interest revenue. [APRIL 1993]

.55 Governments undertake various loan programs and, therefore, hold different classes of loans. The purpose of the additional disclosure requirements below is to provide sufficient information in the financial statements for readers to understand the nature and terms of those diverse classes of loans.

.56 *Government financial statements should disclose the nature and terms of significant classes of loans receivable, including:*

(a) the recorded cost, the related valuation allowance and the net recoverable value;

(b) general terms and conditions of the loans receivable, such as:

(i) repayment terms;

(ii) interest terms;

(iii) a description of forgiveness and other conditions attached to the loans; and

(iv) security held for the class of loans; and

(c) the amount of loans receivable outstanding in foreign currencies, the currencies in which such amounts are receivable, the Canadian dollar equivalents, and the basis of translation. [APRIL 1993]

.57 The level of detail disclosed by governments should reflect the highly aggregated nature of financial statements. In deciding the level of detail to disclose, governments should consider the usefulness of the information to the reader in assessing the nature of, the earning capacity of, and the costs associated with, a government's loan programs. The level of disclosure would also consider the sensitivity of the information in relation to the government's or the borrower's financial position.

.58 The outstanding loan balance for each significant class of loans receivable, the related valuation allowance and the net recoverable loan balance should be disclosed in the notes or schedules to the financial statements. Some governments might wish to provide this level of detail on the statement of financial position.

.59 Information about repayment terms and interest rates is important. They are indicators of expected interest revenue and cash flows, and indicators of the economic costs, or benefits, of holding loans. If a government holds a significant number of fairly small loans, either ranges of interest rates related to particular types of loans or a weighted composite rate could be disclosed. Whether a composite rate or a range of interest rates is more meaningful disclosure for a particular class of loans will depend on the mix of terms in that individual loan class. A composite rate would be more relevant, the more homogeneous the class of loans.

.60 Disclosure of information about the forgiveness and other conditions of a loan class, in addition to the interest and repayment terms, will assist readers in understanding the economic value and the earning capacity of the government's loans.

.61 In order to assess the government's exposure to currency fluctuations, the amount of loans outstanding in foreign currency should be identified. In addition, the information disclosed should include the currencies in which such amounts are receivable, the Canadian dollar equivalent, and the basis of translation.

TRANSITIONAL PROVISIONS

.62 This Section applies to all loans receivable held by a government. If application of the Section results in a change of accounting policy, ACCOUNTING CHANGES, Section PS 2120, applies.

.63 The requirement to apply the effective interest method stated in paragraph PS 3050.25 applies in the period FINANCIAL INSTRUMENTS, Section PS 3450, is adopted.

APPENDIX A

DECISION TREE — LOANS



Footnotes

1. The term "financial statements" refers to the summary financial statements published by a government that report on the financial position and changes in financial position of the government reporting entity.

2. The government reporting entity is defined in GOVERNMENT REPORTING ENTITY, Section PS 1300.

* Editorial change — March 2012.

* Editorial change — March 2012.

3. The primary risk associated with a loan receivable is credit risk (i.e., the risk that principal and interest payments will not be received in accordance with the terms and conditions of the loan agreement), but there may also be interest rate risk or currency risk, depending on how the loan is structured.

* Editorial change — January 2003.

4. See FINANCIAL STATEMENT PRESENTATION, paragraph PS 1200.077.

* Editorial change — March 2012 and June 2015.

SECTION PS 3060
government partnerships



TABLE OF CONTENTS

	Paragraph
Purpose and scope	.01-.05
Definitions	.06-.10
Elements that define a government partnership	.11-.22
Contractual arrangement	.11-.16
Significant clearly defined common goals	.17-.18
Financial investment	.19
Shared control	.20
Shared risks and benefits	.21-.22
Forms and structures of government partnerships	.23-.28
Operations under shared control	.23-.25
Assets under shared control	.26
Organizations under shared control	.27-.28
Accounting for the government's interest	.29-.40
Government partnerships other than government business partnerships	.29-.31
Government business partnerships	.32-.35
Change in circumstances	.36-.40
Accounting for investments of assets	.41-.54
Reporting tangible capital assets	.49-.54
Investments of tangible capital assets by the reporting government	.53
Investments of tangible capital assets by the other partners	.54
Presentation and disclosure	.55-.60
Types of government contractual arrangements	Appendix A

PURPOSE AND SCOPE

.01 This Section defines a government partnership and establishes standards on how to account for and report a government's interest in government partnerships in government financial statements, 1 regardless of the structures and forms under which the government partnership activities take place. This Section does not deal with accounting by the government partnership itself.

.02 The standards are intended to apply to governments.

.03 This Section applies in situations where economic activities meet the definitions and criteria outlined in paragraph PS 3060.06 and paragraphs PS 3060.11-.28, even though such activities may not be referred to as government partnerships. However, this Section does not apply in situations where economic activities do not meet the definitions and criteria set out in those paragraphs even though they may sometimes be referred to as government partnerships. Accounting for such activities should be governed by their substance.

.04 For the purposes of this Section, an economic activity is not restricted to activities that generate a financial return, but extends to activities for the production and delivery of non-market goods and services that provide benefits to the community, such as law and order. That is, the partners may be motivated by factors other than the generation of financial return, such as the improvement of the welfare of their citizens.

.05 This Section does not apply to arrangements that are in and of themselves:

(a) Executory contracts such as leases and sale-leaseback transactions.

(b) Purchase / sale transactions such as outsourcing of services, management contracts and privatization. For guidance on how to account for revenues and expenses related to purchase / sale transactions, refer to FINANCIAL STATEMENT PRESENTATION, Section PS 1201.

(c) Transfers such as shared-cost arrangements and government programs. For guidance on how to account for government transfers, refer to GOVERNMENT TRANSFERS, Section PS 3410.

(d) Loans. For guidance on how to account for loans, refer to LOANS RECEIVABLE, Section PS 3050.

(e) Loan guarantees. For guidance on how to account for loan guarantees, refer to LOAN GUARANTEES, Section PS 3310.

DEFINITIONS

.06 The following definitions have been adopted for the purposes of this Section:

A **government partnership** is not a government organization but is a contractual arrangement 2 between the government and a party or parties outside of the government reporting entity 3 that has all of the following characteristics:

(a) the partners co-operate toward achieving significant clearly defined common goals;

(b) the partners make a financial investment in the government partnership;

(c) the partners share control of decisions related to the financial and operating policies of the government partnership on an ongoing basis; and

(d) the partners share, on an equitable basis, the significant risks and benefits associated with the operations of the government partnership.

The contractual arrangement establishes that the parties have shared control over the government partnership, regardless of the difference in their ownership interest. Nevertheless, overall, there must be an equitable relationship between the financial investment of the government in the government partnership, the extent of control it is able to exercise over the activities of the government partnership, and the risks and benefits that accrue to the government from the government partnership. Government partnerships may be structured as operations under shared control, assets under shared control or organizations under shared control. [Former paragraph PS 3060.06 retained in Archived Pronouncements.]

.07 A **government business partnership** is a government partnership that has all of the following characteristics:

(a) it is a separate legal entity with the power to contract in its own name and that can sue and be sued;

(b) it has been delegated the financial and operational authority to carry on a business;

(c) it sells goods and services to individuals and organizations other than the partners as its principal activity; and

(d) it can, in the normal course of its operations, maintain its operations and meet its liabilities from revenues received from sources other than the partners.

.08 A **partner** is a party to a government partnership.

.09 **Proportionate consolidation** 4 is a basis of accounting for a government's interest in government partnerships, other than government business partnerships, whereby a government's pro rata share of each of the assets, liabilities, revenues and expenses that are subject to shared control, is combined on a line-by-line basis with similar items in the government's financial statements. ADDITIONAL AREAS OF CONSOLIDATION, paragraph PS 2510.06, provides details for applying the proportionate consolidation method.

.10 **Modified equity** is a basis of accounting for a government's interest in government business partnerships whereby the equity method of accounting is modified only to the extent that the government business partnership's accounting principles are not adjusted to conform with those of the government.

ELEMENTS THAT DEFINE A GOVERNMENT PARTNERSHIP

Contractual arrangement

.11 A distinctive characteristic common to all government partnerships is that two or more partners are bound by a contractual arrangement which establishes that the partners have shared control over the government partnership. This characteristic of shared control distinguishes a government's interest in a government partnership from investments in other activities in which the government may exercise control (see GOVERNMENT REPORTING ENTITY, Section PS 1300, BASIC PRINCIPLES OF CONSOLIDATION, Section PS 2500, ADDITIONAL AREAS OF CONSOLIDATION, Section PS 2510, and PORTFOLIO INVESTMENTS, Section PS 3041).

.12 Activities conducted with no formal contractual arrangement, but which meet the definition of a government partnership set out in paragraph PS 3060.06, are in substance government partnerships for the purposes of this Section.

.13 The contractual arrangement establishes shared control over the government partnership. Such a requirement ensures that no single partner is in a position to control the activities of the government partnership unilaterally. The arrangement identifies those decisions in areas essential to the goals of the government partnership that require the consent of all the partners and those decisions which may require the consent of a specified majority of partners.

.14 The contractual arrangement may be evidenced in a number of ways, for example, by a contract between the partners or minutes of discussions between the partners. In some cases, the arrangement is incorporated in the enabling legislation, articles or other by-laws of the government partnership. Whatever its form, the contractual arrangement is usually in writing and deals with such matters as:

(a) the activity, duration and reporting obligations of the government partnership;

(b) the appointment of the board of directors or equivalent governing body of the government partnership and the voting rights of the partners;

(c) the financial investments by the partners; and

(d) the sharing by the partners of the output, revenues, expenses or surpluses or deficits of the government partnership.

.15 In some cases, the contractual arrangement may designate a partner, or an outside party or parties, as the manager or operator of the government partnership. The manager does not control the government partnership, nor does the manager exercise shared control with the partners solely by virtue of his or her management role. Rather, the manager acts within the financial and operating policies that the partners have prescribed.

.16 A government may incorporate regulations in any contractual arrangement it enters into (e.g., level of service, level of maintenance of an asset that may be returned to it at the end of a set term). Governments regulate a variety of activities with which they have no ongoing operational involvement. As such, regulations in and of themselves do not constitute shared control.

Significant clearly defined common goals

.17 Common goals are those that all partners share. For example, a number of communities may join together to build and operate a landfill site or a recreational facility. The significant common goals of the communities involve service provision and sharing the costs and revenues associated with the operations of the facility, and so, the arrangement would qualify as a government partnership.

.18 On the other hand, a community may hire an individual or organization to operate a recreational facility for a fee. The significant goals of the government are to provide a service and cost savings, while the significant goal of the management organization is to earn revenues from the contract to manage the facility. While the significant goals of each party are mutually beneficial, they are not common to both parties to the contract, and so, the arrangement does not qualify as a government partnership.

Financial investment

.19 A financial investment may be in the form of assets and/or assuming responsibility for ongoing operating costs. The investment of financial assets and tangible capital assets in the government partnership would be accounted for in accordance with paragraphs PS 3060.41-.54. The value assigned to the responsibility for ongoing operating costs would be that determined in the contractual arrangement for the government partnership.

Shared control

.20 Shared control of a government partnership means that the partners make decisions related to the financial and operating activities of the government partnership on an ongoing basis based on the terms of the contractual arrangement; none of the partners is in a position to exercise unilateral control over the government partnership. When there is shared control, partners have an active ongoing interest or relationship in the arrangement other than as passive investors or as parties to a purchase / sale transaction. Shared control would exist, for example, when a joint board is established to oversee the provision of police or fire protection services for a number of local governments.

Shared risks and benefits

.21 In a government partnership, each partner is exposed to a share of the combined risks and shares in the benefits related to the common goals of the government partnership. In a government partnership, there must be an equitable sharing among the partners of the significant risks and benefits. For example, the government partners may operate a landfill site to provide a service to their constituents on a shared cost basis. The partners would generally share the operating and environmental risks, as well as the revenues associated with operating the landfill site.

.22 Risks and benefits would not be considered to be equitably shared in an arrangement where the government retains the full risk of owning an asset while allowing another party to receive the benefit of earning revenue from user fees derived from that asset. Risks and benefits would not be equitably shared when, for example, a government owned a highway that it allowed a private sector organization to operate and earn revenues from, based on the agreement and any necessary legislation.

FORMS AND STRUCTURES OF GOVERNMENT PARTNERSHIPS

Operations under shared control

.23 The operations of some government partnerships may involve the use of the assets and other resources of the partners, rather than the establishment of an organization or a financial structure that is separate from the partners themselves. In these circumstances, each partner may use its own assets for the purposes of the activities of the government partnership. The assets remain under the ownership and control of each partner. Each partner also incurs its own expenses and liabilities and raises its own financing, which represent its own obligations. The arrangement may provide a means by which the revenue from the sale of goods or services by the government partnership and any expenses incurred in common are shared among the partners.

.24 An example of operations under shared control is when two or more partners combine their resources and expertise for use in the operation of a landfill site. One partner may provide the land, others the equipment and others cash.

.25 In other cases, the activities of the government partnership may be carried out by the employees of one of the partners alongside the partner's similar activities. For example, provision of social services through a government partnership may involve one of the government partners being responsible for the staffing and administration of the program while all partners contribute ongoing funding.

Assets under shared control

.26 Some government partnerships involve the shared control, and often the shared ownership, by the partners of one or more assets invested in, or acquired for and dedicated to the purposes of, the government partnership. Assets under shared control are used to obtain benefits for the partners. Such a government partnership does not involve the establishment of a corporation or other organization, or a financial entity that is separate from the partners themselves. For example, several local governments may form a government partnership to acquire fire protection equipment to provide service to their constituents.

Organizations under shared control

.27 An organization under shared control is a type of government partnership which involves the establishment of a separate organization (e.g., a corporation) in which each partner has an interest. The organization operates similarly to other organizations, except that a contractual arrangement between the partners establishes shared control over the economic activities of the organization.

.28 In an organization under shared control, each partner usually contributes cash or other resources to the government partnership. The organization owns the assets of the government partnership and incurs liabilities and expenses. It may enter into contracts in its own name and raise financing for the purposes of the activities of the government partnership. For example, several local governments may operate a transit organization to provide transit services to their constituents.

ACCOUNTING FOR THE GOVERNMENT'S INTEREST

Government partnerships other than government business partnerships

.29 *Government financial statements should recognize the government's interest in government partnerships, except for government business partnerships, using the proportionate consolidation method.* [OCT. 1999]

.30 Governments may enter into government partnerships that are similar to governmental units 5 except for the extent of government control — the government shares control of the government partnership with its partners, while it controls the governmental unit. Governmental units are government organizations that carry out government activities that are integral to a government's operations in directly performing its executive function and are consolidated in the government's financial statements under GOVERNMENT REPORTING ENTITY, Section PS 1300. Government partnerships that carry out similar activities to governmental units would be accounted for using proportionate consolidation.

.31 Proportionate consolidation of such government partnerships provides financial statement users with the same sort of information about the financial position and results of operations of the government as would be available if the government managed the resources and operations through a governmental unit. Proportionate consolidation also reflects the level of activities (e.g., costs and revenues) on the government's statement of operations, the financial resources available, and the risks to which the government is exposed for such activities.

Government business partnerships

.32 *Government business partnerships should be accounted for by the modified equity method applied using the government's share of the government business partnership.* [OCT. 1999]

.33 Governments may enter into government business partnerships that are similar to government business enterprises 6 except for the extent of government control. Such government partnerships may also carry out similar activities to government business enterprises. A government business partnership differs from other government partnerships in its relationship to the government, and its objectives and operations. A government business partnership represents a financial asset of the government and given its autonomy, business-oriented objectives, and financial self-sufficiency, 7 equity accounting is appropriate. Consistent with GOVERNMENT REPORTING ENTITY, Section PS 1300, for government business enterprises, the modified equity method is the most suitable form of equity accounting for government business partnerships.

.34 Accounting for government business partnerships by the modified equity method avoids commingling the budget and actual results of government business partnerships on a line-by-line basis with those of government activities having different objectives. It also avoids including the government's share of the gross debt of government business partnerships with the gross debt of other government organizations, as the government business partnerships are expected to repay that debt from their own revenues.

.35 The modified equity method supplemented with disclosure of condensed financial information gives financial statement users an informative accounting of the full nature and extent of the financial affairs and resources of those government business partnerships. It provides a measure of the impact that government business partnerships may have on a government's ability to discharge its liabilities or to provide financial resources for future operations.

Change in circumstances

.36 A change in circumstances over the life of a government partnership could affect either the valuation of the government's interest in the government partnership or in some cases, whether the arrangement would continue to be treated as a government partnership.

.37 In some cases, impairments in value of an asset invested in a government partnership or recognition of a contingent liability would require a write-down in the value of the government's reported interest in the government partnership.

.38 In other cases, the sharing of control, risks and benefits may change to such an extent as to cause an arrangement to no longer meet the definition of a government partnership. In such cases, the government's interest would be accounted for in accordance with GOVERNMENT REPORTING ENTITY, Section PS 1300, or other relevant Public Sector Accounting Standards or Guidelines. 8

.39 The circumstances affecting a government business partnership may also change so that it no longer meets the definition of a government business partnership. Failure to meet any of the four elements of the government business partnership definition in paragraph PS 3060.07, would require such a change in status of the government business partnership.

.40 The alteration of an accounting treatment necessitated by events or transactions that reflect a difference in substance from those previously occurring is not considered to be a change in accounting policy or change

in classification as described in ACCOUNTING CHANGES, Section PS 2120. Therefore, the change in accounting treatment would not be applied retroactively. Nevertheless, the change in accounting treatment, the underlying reasons for the change and the financial effect of the change would be disclosed.

ACCOUNTING FOR INVESTMENTS OF ASSETS

.41 *When a government invests assets in a government partnership and receives in exchange an interest in the government partnership, any loss* 9 *that occurs should be recognized at the time of the initial investment in the statement of operations.* [OCT. 1999]

.42 The existence of such a loss would usually provide evidence of a decline that is other than temporary, in the carrying value of the relevant assets retained by the government. It is also necessary for the government investing the assets to recognize the decline in value of the portion of the assets retained.

.43 *When a government invests assets in a government partnership and receives in exchange an interest in the government partnership, any gain* 10 *that occurs should be reported in the financial statements of the government as a deferred gain at the time of the initial investment only to the extent of the interests of the other non-related partners.* [OCT. 1999]

.44 The amount of the deferred gain is equal to the other partners' proportionate share of the difference between the fair value and net carrying amount of the asset.

.45 *When a government partnership other than a government business partnership is dissolved, any deferred gain related to the assets invested by the government should be recognized as revenue.* [OCT. 1999]

.46 For government partnerships other than government business partnerships, the deferred gain would not be amortized. It would only be realized at the time the government partnership is dissolved and the assets are distributed to the partners.

.47 *For government business partnerships, any deferred gain related to the assets invested by the government should be amortized to net operating results in a rational and systematic manner over the life of the invested assets. If the invested assets are non-depreciable, the deferred gain should be amortized to net operating results on a basis appropriate to the expected revenue or service to be obtained from their use by the government business partnership. When the invested assets are disposed of by the government business partnership to an independent third party, any unamortized portion of the deferred gain should be recognized as revenue.* [OCT. 1999]

.48 When the government invests assets in a government business partnership, the deferred gain would be amortized. As an asset is consumed over time by a government business partnership using it to generate cash inflows, deferred gains arising from the government's investment of assets in the government business partnership would become realized. Realization would occur because, by definition, government business partnerships are self-sustaining from revenues received from outside of the government business partnership. Deferred gains related to government business partnerships would also become realized when a government business partnership sells an asset invested by the government to an independent third party or when the government business partnership is dissolved.

Reporting tangible capital assets

.49 *When tangible capital assets are invested in a government partnership other than a government business partnership, the government should report those assets as follows:*

(a) the other non-related partners' share of assets invested by the government would be treated as disposals by the government; and

(b) the government's share of assets invested by the other non-related partners would be treated as purchases by the government in accordance with the relevant standards in FINANCIAL STATEMENT PRESENTATION, Section PS 1201*, and TANGIBLE CAPITAL ASSETS, Section* PS 3150. [OCT. 1999 *]

.50 Under FINANCIAL STATEMENT PRESENTATION, Section PS 1201, a government reports tangible capital assets as assets on the statement of financial position. TANGIBLE CAPITAL ASSETS, Section PS 3150, describes the accounting for the tangible capital assets of a government.

.51 The tangible capital assets of a government business partnership would be reflected in the government's financial statements in its one-line investment account (the "equity pickup"). The financial statements of a government business partnership would be prepared on the same basis as a private sector business. Under the modified equity method, the accounting policies of the government business partnership are not modified before determining the amount of the government's interest in the government business partnership. As a result, the government would not report the tangible capital assets of a government business partnership as described in paragraph PS 3060.49 and paragraphs PS 3060.53-.54.

(paragraph PS 3060.52 deleted)

Investments of tangible capital assets by the reporting government

.53 When a government invests an asset in a government partnership other than a government business partnership, the government would report the other non-related partners' proportionate share of an asset invested by the government as a disposal. In particular:

(a) Governments would account for the other partners' share of the net carrying amount of the asset as a disposal.

(b) Governments would recognize the net carrying amount in the statement of financial position, and would calculate deferred gains and losses based on the fair value less the net carrying amount of the assets.

Investments of tangible capital assets by the other partners

.54 When a non-related partner invests a tangible capital asset in a government partnership other than a government business partnership, the government would report its proportionate share of that tangible capital asset as a purchase. In particular, governments would treat that amount as an increase in the tangible capital assets reported in the statement of financial position.

PRESENTATION AND DISCLOSURE

.55 *Government financial statements should disclose, in notes or schedules:*

(a) a description of the nature and purpose of government partnerships;

(b) a listing of government partnerships, including the government's share, separately identifying those that are accounted for using the proportionate consolidation method and those that are accounted for by the modified equity method; and

(c) condensed supplementary financial information relative to government partnerships. Such financial information should be provided separately for those government partnerships accounted for using proportionate consolidation and those accounted for using modified equity, on:

(i) the financial position and results of operations, including:

— total assets and liabilities segregated by main classification;

— net assets or liabilities, separately displaying accumulated other comprehensive income;

— total revenues and expenses; and

— net operating results for the period, separately displaying other comprehensive income;

(ii) the nature and amount of any adjustments to net assets or net operating results, as shown in the financial statements of the government partnerships, to arrive at the amount included in the government's statement of financial position or statement of operations; and

(iii) transactions and balances with organizations included in the government reporting entity. [OCT. 2006]

.56 *The government should disclose its share of any contingencies and contractual obligations of government partnerships and those contingencies that exist when the government is contingently liable for the liabilities of other parties to those government partnerships.* [OCT. 1999 *]

.57 *Deferred gains arising from the government's investment of assets in the government partnership should be reported with liabilities in the government's statement of financial position.* [OCT. 1999]

.58 Users of government financial statements need an appreciation of the magnitude of financial activities conducted by government partnerships and the effect of their operations on the government. This information would usually be presented on a combined basis.

.59 Separate disclosure of the government's share of any contingencies and contractual obligations of government partnerships would include, as appropriate:

(a) the government's share of any contingencies and contractual obligations of the government partnership; and

(b) the government's responsibility, if any, for the other partners' share of the contingencies of the government partnership.

If the government guarantees more than its proportionate share of a government partnership's liabilities, such a guarantee would be disclosed.

.60 The level of detail disclosed by governments should reflect the highly aggregated nature of financial statements. In deciding the level of detail to disclose, governments should consider the usefulness of the information to the reader in assessing the nature of, and the costs associated with, government partnerships.

APPENDIX A



Footnotes

1. The term "financial statements" refers to the summary financial statements published by a government that report on the financial position and changes in financial position of the government reporting entity.

2. A chart showing the various types of government contractual arrangements, including government partnerships, is included as Appendix A.

3. In arrangements where government employees jointly manage an employee benefit program (e.g., a pension plan) with the government, the employees are not considered to be parties outside of the financial reporting entity for the purposes of applying the definition of a government partnership.

4. Detailed guidance on the application of proportionate consolidation is set out in ADDITIONAL AREAS OF CONSOLIDATION, Section PS 2510.

5. Governmental units are defined in BASIC PRINCIPLES OF CONSOLIDATION, Section PS 2500.

6. GOVERNMENT REPORTING ENTITY, paragraph PS 1300.28, defines a government business enterprise.

7. GOVERNMENT REPORTING ENTITY, paragraph PS 1300.31, identifies factors for determining the financial self-sufficiency of a government business enterprise. Those factors would be considered when assessing the financial self-sufficiency of a government business partnership.

8. BASIC PRINCIPLES OF CONSOLIDATION, Section PS 2500, ADDITIONAL AREAS OF CONSOLIDATION, Section PS 2510, PORTFOLIO INVESTMENTS, Section PS 3041, and FINANCIAL INSTRUMENTS, Section PS 3450, may also provide relevant guidance in some cases where the arrangement no longer meets the definition of a government partnership.

9. A loss occurs when the fair value of the asset invested is less than its net carrying amount in the government's financial statements.

10. A gain occurs when the fair value of the asset invested is greater than its net carrying amount in the government's financial statements.

* Editorial change — January 2003, February 2007 and June 2011.

* Editorial change — September 2004.

SECTION PS 3070
investments in government business enterprises

TABLE OF CONTENTS

	Paragraph
Purpose and scope	.01-.02
Definitions	.03
Method of accounting	.04-.39
Investment in a government business enterprise	.07
Income from an investment in a government business enterprise	.08-.09
Cost of the investment	.10-.14
Expenses related to the acquisition	.15-.16
Purchase premium	.17-.18
Fair value increments	.19
Loss in value of an investment in a government business enterprise	.20-.28
Inter-organizational transactions and balances	.29-.34
Inter-organizational bond holdings	.35-.38
Sale of all or part of an investment in a government business enterprise	.40-.44
Statements at different dates	.45-.47
When an organization no longer meets the definition of a government business enterprise	.48-.56
Presentation and disclosure	.57-.70
Acquisitions	.69-.70

PURPOSE AND SCOPE

.01 This Section establishes standards on how to account for and report investments in government business enterprises in government financial statements by the modified equity method of accounting. GOVERNMENT REPORTING ENTITY, Section PS 1300, specifies the circumstances in which the modified equity method applies. This Section outlines how to apply the modified equity method to investments in government business enterprises. In addition, this Section addresses how to account for the change in status of a government

business enterprise to a governmental unit. ADDITIONAL AREAS OF CONSOLIDATION, Section PS 2510, deals with the change in status of a governmental unit to a government business enterprise.

.02 This Section does not deal with accounting for:

(a) other government organizations (see GOVERNMENT REPORTING ENTITY, Section PS 1300, BASIC PRINCIPLES OF CONSOLIDATION, Section PS 2500, and ADDITIONAL AREAS OF CONSOLIDATION, Section PS 2510); or

(b) government portfolio investments (see PORTFOLIO INVESTMENTS, Section PS 3041).

DEFINITIONS

.03 The following definitions have been adopted for the purposes of this Section:

(a) **Fair value increments** are created upon the acquisition of an organization when the government's interest in the amounts assigned to identifiable assets acquired and liabilities assumed, based on their fair values at the date of acquisition, exceeds their carrying values in the accounts of the acquired organization at acquisition. Fair value increments are recorded as a component of the investment in a government business enterprise when a government business enterprise is included in government financial statements by the modified equity method. Those fair value increments related to depreciable assets are amortized over the useful lives of the related assets. Fair value increments do not adjust the carrying values of the identifiable assets acquired and liabilities assumed in an acquisition in the accounts of the acquired organization.

(b) A **government business enterprise** is a government organization that has all of the following characteristics:

(i) it is a separate legal entity with the power to contract in its own name and that can sue and be sued;

(ii) it has been delegated the financial and operational authority to carry on a business;

(iii) it sells goods and services to individuals and organizations outside of the government reporting entity as its principal activity; and

(iv) it can, in the normal course of its operations, maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity.

These criteria are explained in GOVERNMENT REPORTING ENTITY, paragraphs PS 1300.29-.31.

(c) **Government financial statements** are summary financial statements published by a government that report on the financial position and changes in financial position of the government reporting entity through the consolidation of all government organizations except government business enterprises, which are included on a modified equity basis.

(d) A **governmental unit** is a government component, government not-for-profit organization or other government organization.

(e) A **purchase premium** is any excess of a government's purchase cost of an acquired organization over the government's interest in the amounts assigned to identifiable assets acquired less liabilities assumed of the organization based on their fair values at the date of acquisition. A purchase premium is sometimes called "goodwill".

(f) A **purchase price discrepancy** is any excess of a government's purchase cost of an acquired organization over the government's interest in the carrying values of the identifiable assets acquired and liabilities assumed in the accounts of the acquired organization at acquisition. A purchase price discrepancy equals the sum of any fair value increments recorded in an acquisition plus any purchase premium arising on the acquisition.

[Former paragraph PS 3070.03 retained in Archived Pronouncements.]

METHOD OF ACCOUNTING

.04 GOVERNMENT REPORTING ENTITY, paragraph PS 1300.35, states:

"*Government business enterprises should be accounted for by the modified equity method*."

.05 Under the modified equity method, the equity method of accounting is modified only to the extent that the government business enterprise's accounting principles are not adjusted to conform with those of the government. Thus, the government aggregates a government business enterprise's net assets and net income by adjusting the investment shown in the government's consolidated statement of financial position and by presenting the net income as a separate item on the government's consolidated statement of operations.

.06 The modified equity method would be applied from the date:

(a) the government acquired or created a government business enterprise;

(b) when a governmental unit changed in status to become a government business enterprise as described in ADDITIONAL AREAS OF CONSOLIDATION, Section PS 2510; and

(c) a government applies GOVERNMENT REPORTING ENTITY, Section PS 1300, for the first time. 1

Investment in a government business enterprise

.07 The investment in a government business enterprise, as reflected in government financial statements under the modified equity method, includes the cost of the government's investment in the government business enterprise, calculated in accordance with paragraphs PS 3070.10-.11, and, subsequent to the date when the use of the modified equity method first became appropriate, also includes adjustments for:

(a) the government's proportionate share of the earnings of the government business enterprise after discontinued operations and extraordinary items of the government business enterprise;

(b) the government's proportionate share of dividends paid or payable by the government business enterprise;

(c) the government's proportionate share of prior period adjustments (i.e., a change in an accounting policy or a correction of an error relating to prior period financial statements), capital transactions, accumulated other

comprehensive income and cumulative foreign currency translation adjustments of the government business enterprise;

(d) the accumulated amortization of any purchase premium and/or fair value increments on depreciable assets related to an acquired government business enterprise;

(e) the elimination of any unrealized inter-organizational gains and losses on assets remaining within the government reporting entity at the financial statement date;

(f) any gains or losses arising on inter-organizational bond holdings; and

(g) any impairments in the value of the purchase price discrepancy component of a government's investment in an acquired government business enterprise recognized by the government since acquisition.

Income from an investment in a government business enterprise

.08 Under the modified equity method, income from an investment in a government business enterprise as reported in government financial statements includes the government's proportionate share of the government business enterprise's earnings, calculated based on earnings after discontinued operations and extraordinary items of the government business enterprise in the period, and also includes adjustments for:

(a) the amortization of any purchase premium, in relation to an acquired government business enterprise, over the lesser of its life and 20 years;

(b) the amortization of any fair value increments on depreciable assets, in relation to an acquired government business enterprise, over the useful lives of the related assets;

(c) the elimination of any unrealized inter-organizational gains and losses on assets remaining within the government reporting entity at the financial statement date;

(d) any gains or losses arising on inter-organizational bond holdings; and

(e) any write-downs associated with any impairments in the value of the purchase price discrepancy component of a government's investment in an acquired government business enterprise recognized by the government in the period.

.08A The government's proportionate share of the government business enterprise's other comprehensive income is reported in the statement of remeasurement gains and losses.

.09 Income from an investment in a government business enterprise is recognized by the government when it is earned by the government business enterprise and not when dividends are declared by the government business enterprise. Under the modified equity method, such dividends represent the conversion, first into dividends receivable and then into cash, of the increase in the investment already recognized by the government.

Cost of the investment

.10 For created government business enterprises, the cost of the government's investment in a government business enterprise is the carrying value of the net assets transferred to the government business enterprise as reflected in the consolidated statement of financial position at the date the government business enterprise is created. Using the carrying value specified means that any tangible capital assets transferred to the government business enterprise from a governmental unit on creation of the government business enterprise would be accounted for as described in paragraphs PS 3070.32-.33.

.11 For acquired government business enterprises, the cost of the government's investment is the purchase cost of the acquisition. The purchase cost to the government is the sum of the fair value of the consideration given in the acquisition plus the expenses directly incurred by the government to effect the acquisition. At the date of acquisition, the total purchase cost is assigned to identifiable assets acquired and liabilities assumed. The government's interest in identifiable assets acquired and liabilities assumed would be based on their fair values at the date of acquisition. Any excess of the purchase cost over the government's interest in the amounts assigned to identifiable assets acquired less liabilities assumed would be considered to be a purchase premium which would be accounted for in accordance with paragraph PS 3070.17. The components of a government's investment in an acquired government business enterprise include, therefore:

(a) the unamortized portion of any purchase premium;

(b) the unamortized portion of any fair value increments; and

(c) the government's share of the carrying value of the net assets of the government business enterprise, adjusted for inter-organizational gains and losses on assets remaining within the reporting entity at the financial statement date and any gains or losses arising on inter-organizational bond holdings.

The total of components (a) and (b) comprise the remaining balance of any purchase price discrepancy.

.12 At the date of acquisition, the government reporting entity and an acquired government business enterprise are considered to be a single economic entity. Because government business enterprises are accounted for in government financial statements using the modified equity method, any inter-organizational receivable and payable balances between the government reporting entity and the newly acquired government business enterprise which are still present at the date of acquisition are not eliminated, as they would be if the acquired organization was being consolidated.

.13 Sometimes the carrying value of the assets of the government reporting entity or the acquired government business enterprise includes gains and losses arising from transactions between the two entities prior to the date of acquisition. Since transactions that took place prior to the date of acquisition are ordinarily assumed to have taken place at arm's length, the amounts involved in such transactions constitute objective evidence of value. Accordingly, such gains and losses would not be eliminated when a government business enterprise is included in government financial statements using the modified equity method, unless the related transactions were made in contemplation of acquisition.

.14 *When the carrying value of the assets of the government reporting entity or the acquired government business enterprise include gains and losses arising from inter-organizational transactions which took place prior to the date of acquisition, such gains and losses should not be eliminated unless the transactions were made in contemplation of acquisition.* [APRIL 2000]

Expenses related to the acquisition

.15 *Expenses directly incurred in effecting an acquisition of a government business enterprise should be included as part of the cost of the purchase.* [APRIL 2000]

.16 The cost of the purchase includes expenses directly incurred by the government with respect to the acquisition. Direct expenses consist of incremental costs incurred to acquire the government business enterprise. Only costs that are incurred because of the acquisition are recognized; examples of such costs are finder's fees and other amounts paid to lawyers, accountants, appraisers and other consultants. Allocations of internal costs are not incremental costs and are recognized as expenses as incurred.

Purchase premium

.17 *A purchase premium arising on the acquisition of a government business enterprise should be deferred and amortized to the government's income from an investment in a government business enterprise. The amortization period should be the lesser of the life of the purchase premium and twenty years. The method of amortization should be:*

(a) the straight line method; or

(b) another systematic method when it can be demonstrated to be more appropriate in the circumstances than the straight line method. [APRIL 2000]

.18 In order for a purchase premium to be deferred and recorded as a component of a government's investment in a government business enterprise and then amortized over future periods, the government business enterprise must have in place a realistic and specific business plan 2 that demonstrates that the projected future results of operations of the government business enterprise would be sufficient to recover the purchase premium over its amortization period. The absence of such evidence would indicate that the purchase premium should not be deferred but should be charged to expenses at acquisition.

Fair value increments

.19 *Fair value increments related to depreciable assets should be amortized to the government's income from an investment in a government business enterprise over the estimated useful lives of the related assets.* [APRIL 2000]

Loss in value of an investment in a government business enterprise

.20 A government's investment in a created government business enterprise, or the value of the component described in paragraph PS 3070.11(c) of a government's investment in an acquired government business enterprise, is not likely to be impaired without calling into question the status of the organization as a government business enterprise. A government organization meeting conditions that may indicate impairment of a portfolio investment, as outlined in PORTFOLIO INVESTMENTS, paragraphs PS 3041.09-.11, would be unlikely to meet the narrow financial sustainability criterion in the definition of a government business enterprise. Permanent impairments in the value of a purchase price discrepancy component of an investment in a government business enterprise are, however, possible.

.21 A purchase price discrepancy would become permanently impaired when:

(a) the projected future results of operations of the government business enterprise, as evidenced by a specific and realistic business plan, will be insufficient to recover the purchase price discrepancy over its average remaining amortization period; or

(b) the value of any underlying assets are permanently impaired.

.22 *When there has been a permanent impairment in value of the unamortized balance of a purchase price discrepancy, it should be written down. The write-down should be charged against the government's income from an investment in a government business enterprise.* [APRIL 2000]

.23 *A write-down of a government's investment in a government business enterprise to reflect a loss in value should not be reversed.* [APRIL 2000]

.24 On a regular basis, or when specific circumstances warrant, a re-evaluation of the projected future results of operations of a government business enterprise would be made to determine whether they will be sufficient to recover any unamortized balance of a purchase price discrepancy over its average remaining amortization period.

.25 In a period that it is determined that the evidence no longer supports the carrying value of a purchase price discrepancy, the government would write down or write off the remaining balance to its income from an investment in a government business enterprise. In such circumstances, an assessment of whether the acquired organization continues to meet the definition of a government business enterprise may also be appropriate.

.26 When an acquired government business enterprise disposes of assets to which fair value increments have been assigned by the government, the related unamortized fair value increments would be written off and charged to the government's income from an investment in a government business enterprise in the period of disposal. When an acquired government business enterprise disposes of assets with which a purchase premium was specifically identified by the government at acquisition, the related unamortized purchase premium would be written off and charged to the government's income from an investment in a government business enterprise in the period of disposal.

.27 Conditions that may also indicate a write-down of a purchase price discrepancy is appropriate include:

(a) The probability of the occurrence of an assumed event that was significant in setting the acquisition price has changed significantly from the time the price was set.

(b) An unfavourable change has occurred in the status of, or expectations about, one or more of the underlying elements of the purchase price discrepancy.

.28 When a government writes down a purchase price discrepancy, the amortization periods for any remaining unamortized purchase premium and/or fair value increments would be reconsidered.

Inter-organizational transactions and balances

.29 Inter-organizational transactions and balances are not eliminated under the modified equity method.

.30 Inter-organizational gains and losses are, however, eliminated on assets remaining within the government reporting entity at the financial statement date. As a result, gains or losses related to sales and

purchases of services for example, between a government business enterprise and other government organizations would not be eliminated when the government business enterprise is included in government consolidated financial statements by the modified equity method.

.31 For financial assets, such as inventories for resale, that are transferred between a governmental unit and a government business enterprise, unrealized gains or losses may occur. The existence of unrealized losses may indicate a permanent decline in the value of the relevant assets. It may be necessary to recognize this decline by writing down such assets.

.32 Transfers of assets from a governmental unit to a government business enterprise normally result in an increase to the assets and contributed surplus of the government business enterprise. When tangible capital assets are transferred, an unrealized increase in the financial position of the government reporting entity may be created. When tangible capital assets are transferred to a government business enterprise, they are recorded by the government reporting entity as an investment and reported as a financial asset in government consolidated financial statements. Any unrealized gains on tangible capital assets would be eliminated when the government business enterprise is included in government consolidated financial statements on a modified equity basis.

.33 The situation in paragraph PS 3070.32 is analogous to that which arises regarding tangible capital assets when a governmental unit changes in status to be a government business enterprise as described in ADDITIONAL AREAS OF CONSOLIDATION, paragraphs PS 2510.46-.49. The amount of the adjustment to eliminate an unrealized gain arising on the transfer of a tangible capital asset to a government business enterprise in any given period would vary depending on whether the transferred asset is depreciable and, if so, the extent of the depreciation recorded on the asset by the government business enterprise. Any impairment or other adjustment made by a government business enterprise to the recorded value of a tangible capital asset transferred from a governmental unit to the government business enterprise would also affect the amount of the elimination entry.

.34 *The transfer or sale of a tangible capital asset from a governmental unit to a government business enterprise should not improve the net operating results of the period or otherwise improve the net financial position of the government reporting entity.* [APRIL 2000]

Inter-organizational bond holdings

.35 From the point of view of the government reporting entity, constructive debt retirement occurs when:

(a) another government organization purchases the bonds, notes or other debt instruments of a government business enterprise; or

(b) a government business enterprise purchases the bonds, notes or other debt instruments of another government organization,

from an organization external to the government reporting entity. The debt retirement is "constructive" because the debt remains outstanding from the viewpoint of the issuer as a separate legal entity and remains an investment from the point of view of the acquirer as a separate legal entity. As a result of such purchases, a constructive gain or loss, equal to the difference between the carrying value of the debt in the accounts of the issuer and the cost to the acquirer, is recognized in government consolidated financial statements at the date of acquisition. The gain or loss is "constructive" because it is realized and recognized at acquisition from the

viewpoint of the government reporting entity, but no gain or loss is recognized at acquisition in the books of the issuing or the acquiring government organization. A constructive gain or loss arises because the acquirer has purchased the debt at a premium or discount and/or the issuer originally issued the debt at a premium or discount.

.36 Neither the carrying values of the inter-organizational bond holdings between a government business enterprise and another government organization, nor the related interest income and expense would be eliminated when the government business enterprise is included in government consolidated financial statements by the modified equity method. However, the amortization of the premium or discount on the books of the acquirer and the amortization of the premium or discount on the books of the issuer would be eliminated. The eliminations would be reflected in the government's investment in a government business enterprise and its income from an investment in a government business enterprise.

.37 Because the debt remains outstanding from the viewpoint of the acquirer and the issuer, they would continue to account for the portion of the debt deemed to be constructively retired, and any related premiums or discounts, and would, therefore, recognize the constructive gain or loss in their own accounts over the period to the maturity or sale of the debt. As the constructive gain or loss was recognized by the government reporting entity in the period the debt was constructively retired, elimination of the gain or loss being recognized by the acquirer and the issuer in each subsequent accounting period through the amortization of any premium or discount related to the debt will be required when the government business enterprise is included in government consolidated financial statements by the modified equity method. In making such eliminations, the government's proportionate ownership of the government business enterprise would need to be taken into account when the government business enterprise is the issuer of the debt.

.38 Regardless of whether the government or a government business enterprise is the acquirer in such a transaction, the government's investment in a government business enterprise and its income from an investment in a government business enterprise would be adjusted to recognize the constructive gain or loss in government consolidated financial statements in the year of the acquisition. In recognizing the gain or loss, the government's proportionate ownership of the government business enterprise would need to be taken into account when the government business enterprise is the issuer of the debt.

(paragraph PS 3070.39 deleted) [Former paragraph PS 3070.39 retained in Archived Pronouncements.]

SALE OF ALL OR PART OF AN INVESTMENT IN A GOVERNMENT BUSINESS ENTERPRISE

.40 *When all or part of a government's investment in a government business enterprise is sold, for the purposes of calculating a gain or loss on the sale of an investment, the cost of the portion of the total investment sold should be calculated on the basis of the carrying value of the investment at the date of sale.* [APRIL 2000]

.41 *The gain or loss on the sale of all or part of a government's investment in a government business enterprise should be included in the determination of consolidated operating results in the period of sale.* [APRIL 2000]

.42 When a government's entire investment in a government business enterprise is sold on the same date, such as when a government privatizes one of its business enterprises, the government would recognize a gain or loss on the sale and the investment would no longer be included as part of its financial position. Income

from an investment in a government business enterprise would be recognized up to the date of sale and a gain or loss on sale recognized at the date of sale.

.43 When a government disposes of a large segment of an acquired government business enterprise, or an entire acquired government business enterprise, any related unamortized purchase premium and/or fair value increments would be taken into account in determining the gain or loss on disposal.

.44 When a government sells a percentage of its shares in one of its government business enterprises or, when a government business enterprise issues shares to interests outside the government reporting entity, the nature of the organization as a government business enterprise does not necessarily change. As long as the government still retains control of the organization, it would continue to be accounted for as a government business enterprise on the modified equity basis. However, if the change in the government's interest in the government business enterprise means that its interest is no longer sufficient to represent control, the organization would no longer form part of the government reporting entity. In such circumstances, if the government's remaining investment meets the definition of a portfolio investment, it would be accounted for in accordance with PORTFOLIO INVESTMENTS, Section PS 3041, and FINANCIAL INSTRUMENTS, Section PS 3450. The government would discontinue accruing its share of the income and losses of the organization. The income and losses that relate to the investment retained by the government and that were previously accrued would remain as a part of the carrying value of the investment. The investment would not be adjusted retroactively under these conditions. However, accumulated dividends received by the government in subsequent periods that exceed its share of accumulated earnings for such periods would be applied as a reduction of the carrying value of the investment. [Former paragraph PS 3070.44 retained in Archived Pronouncements.]

STATEMENTS AT DIFFERENT DATES

.45 A difference in fiscal periods of the government reporting entity and a government business enterprise does not justify the exclusion of the government business enterprise from government consolidated financial statements. Normally the government business enterprise can prepare for the purposes of government consolidated financial statements, financial statements for its own operations for a period which exactly or nearly coincides with the fiscal period of the government reporting entity.

.46 *When, for purposes of preparing government consolidated financial statements, it is not possible to use financial statements of a government business enterprise for a period which substantially coincides with that of the government's consolidated financial statements, this fact, and the period covered by the financial statements of the government business enterprise that are used, should be disclosed.* [APRIL 2000]

.47 *When the fiscal periods of the government reporting entity and a government business enterprise are not the same, events relating to, or transactions of, the government business enterprise that have occurred during the intervening period and significantly affect the consolidated financial position or results of operations of the government reporting entity should be recorded in government consolidated financial statements.* [APRIL 2000]

WHEN AN ORGANIZATION NO LONGER MEETS THE DEFINITION OF A GOVERNMENT BUSINESS ENTERPRISE

.48 The circumstances affecting a government organization may change so that it no longer meets the definition of a government business enterprise. Failure to meet any of the four characteristics of the government business enterprise definition would require such a change in status of the enterprise.

.49 When the nature of a government organization changes such that it no longer meets the definition of a government business enterprise, the organization would become a governmental unit and would be consolidated in government financial statements in accordance with BASIC PRINCIPLES OF CONSOLIDATION, Section PS 2500 and ADDITIONAL AREAS OF CONSOLIDATION, Section PS 2510, instead of being accounted for on a modified equity basis.

.50 When the change in status of a government business enterprise to a governmental unit is the result of an observable event, a government would apply both modified equity and consolidation accounting to the organization in the period, as appropriate. The individual revenues and expenses of the former government business enterprise would be included with those of the other governmental units and recognized in the consolidated statement of operations subsequent to the date the status of the organization changes. Prior to the date of change, only income from an investment in a government business enterprise would be recorded, calculated in accordance with the modified equity method.

.51 When the change in status of a government business enterprise to a governmental unit is not a specific observable event, but occurs over time, a government would account for the organization as a governmental unit for the reporting period in which the change in status occurs.

.52 When an organization ceases to meet the definition of a government business enterprise and that organization applies accounting policies that differ from those of the government reporting entity, the accounting policies of that organization must be conformed to those of the government reporting entity for the purposes of its consolidation in government financial statements. For example, when an acquired government business enterprise changes its status to a governmental unit, any remaining unamortized purchase premium would be written off to consolidated operating results in the period the status changed in accordance with the accounting treatment for purchase premiums required by ADDITIONAL AREAS OF CONSOLIDATION, Section PS 2510.

.53 *In the period that a government organization no longer meets the definition of a government business enterprise, the effect of conforming its accounting policies to those of the government reporting entity for the purposes of consolidation should be included in the determination of consolidated operating results.* [APRIL 2000]

.54 When part of a government business enterprise, such as a division or other discrete component, is sold, but the government still retains control of the organization that remains, that organization is still considered to be part of the government reporting entity. If the part of the organization that remains does not on its own meet the definition of a government business enterprise, it would be consolidated in government financial statements. If the part of the organization that remains continues on its own to meet the definition of a government business enterprise, it would continue to be accounted for on the modified equity basis as a government business enterprise.

.55 When the circumstances affecting a government organization change so that it no longer meets the definition of a government business enterprise, the change in accounting treatment would not be applied retroactively. The alteration of an accounting treatment necessitated by events or transactions that reflect a

difference in substance from those previously occurring is not considered to be a change in accounting policy 3 or a change in classification. 4 The financial position and results of prior periods would not be adjusted to reflect the change in status of the organization as if it had always been a governmental unit. It is important for government consolidated financial statements to show that a government business enterprise has changed its status to become a governmental unit.

.56 *When the circumstances affecting a government organization change such that it no longer meets the definition of a government business enterprise, the resulting change in accounting treatment, the underlying reasons for the change, and the financial effect of the change should be disclosed.* [APRIL 2000]

PRESENTATION AND DISCLOSURE

.57 *A government's investment in government business enterprises should be reported separately on the consolidated statement of financial position.* [APRIL 2000]

.58 *Income from investments in government business enterprises should be reported separately on the consolidated statement of operations.* [APRIL 2000]

.58A *Other comprehensive income from investments in government business enterprises should be reported separately on the consolidated statement of remeasurement gains and losses.* [APRIL 2012]

.59 A significant factor in evaluating income from investments in government business enterprises is the relationship of the income reported to the investments from which such income is derived. For this reason, investments in government business enterprises reported in the consolidated statement of financial position, income from investments in government business enterprises reported in the consolidated statement of operations and other comprehensive income reported in the consolidated statement of remeasurement gains and losses are reported as separate line items.

.60 *Government consolidated financial statements should disclose, in notes or schedules, condensed supplementary financial information relative to government business enterprises. Such financial information should be provided on:*

(a) the financial position and results of operations, including:

(i) total assets and liabilities segregated by main classification;

(ii) net assets or liabilities, separately displaying accumulated other comprehensive income;

(iii) total revenues and expenses;

(iv) net income or loss for the period; and

(v) other comprehensive income for the period;

(b) the nature and amount of any adjustments of the net assets or the net income, as shown in the government business enterprises' financial statements, to arrive at the amount included in the government's consolidated statement of financial position and the consolidated statement of operations;

(c) transactions and balances with other organizations included in the government reporting entity;

(d) contractual obligations and contingencies;

(e) the nature and terms of any government guarantees relating to outstanding debt issued by the government business enterprise; and

(f) the government's percentage ownership of any government business enterprise that the government does not wholly own. [OCT. 2006]

.61 Using the modified equity method, when supplemented with disclosure of condensed financial information relative to government business enterprises, gives financial statement users an informative accounting of the full nature and extent of the financial affairs and resources of government business enterprises. It provides a measure of the impact government business enterprises may have on a government's ability to discharge its liabilities or to provide financial resources for future operations.

.62 Users of financial statements need an appreciation of the magnitude of financial activities conducted by government business enterprises and the effect of their operations on the government reporting entity. Accounting for government business enterprises by the modified equity method reports only their aggregated net assets and changes in net assets in government financial statements. Consequently, it is important to provide condensed supplementary information on their financial position and operating results. Such information could be presented by individual government business enterprises or grouped by major lines of business, such as public utilities, transportation, communications, insurance and finance.

.63 Condensed information on the financial position of government business enterprises could be presented by main classification of assets and liabilities, such as accounts receivable, investments, capital assets, accounts payable and long-term borrowings; condensed information on the results of operations could present total revenues and total expenses. Such information would provide an understandable summary that would allow users to assess the ability of government business enterprises to generate revenues to finance their own operations and to contribute financial resources to the government reporting entity.

.64 Important information to be included in the condensed financial information about a government business enterprise is information concerning the repayment of the long-term debt of the government business enterprise. Such disclosure would include the aggregate amounts of the long-term debt to be repaid in each of the next five years and thereafter, that distinguishes between the repayments due on debt owed to other organizations in the government reporting entity and those due to parties external to the government reporting entity.

.65 Government business enterprises may enter into significant transactions with other government organizations in the government reporting entity. Since the modified equity method of accounting does not eliminate inter-organizational transactions and balances, such as loans and advances, users need supplementary information to identify amounts owing to or receivable from, and revenues received from or paid to, other government organizations in the government reporting entity.

.66 In addition, because unrealized gains or losses on amounts that remain within the government reporting entity are eliminated, users need information on any adjustments that have been made to the reported net assets and net income of the government business enterprise. Furthermore, users need information on any contractual

obligations and contingencies of government business enterprises to understand and assess the future revenue requirements of the government reporting entity.

.67 One result of accounting for a government business enterprise by the modified equity method is that the outstanding debt issued by a government business enterprise is not included in the debt reported by the government reporting entity on its consolidated statement of financial position. Disclosure in government consolidated financial statements of the nature and terms of any government guarantees relating to debt issued by a government business enterprise would serve to highlight a government's contingent exposure to and responsibility for any debt of government business enterprises arising as a result of specific guarantees.

.68 When the nature of the business of a government business enterprise is not self-explanatory, governments are also encouraged to disclose by enterprise, or category of enterprise where appropriate, the nature of the business in which the enterprise(s) are engaged.

Acquisitions

.69 *When a government acquires a government business enterprise, the following should be disclosed:*

(a) the name and a brief description of the government business enterprise acquired and, when shares are acquired, the percentage of voting shares held;

(b) the date of acquisition and the period for which the results of the acquired government business enterprise are included in the consolidated statement of operations and the consolidated statement of remeasurement gains and losses;

(c) net assets acquired:

(i) total assets at the government business enterprise's original carrying amount and at the amount assigned thereto, and

(ii) total liabilities at the government business enterprise's original carrying amount and at the amount assigned thereto;

(d) the amount and type of consideration given, at fair value and the resulting amount of any purchase premium, together with the period of amortization; and

(e) a description of the nature of the purchase premium, how the useful life of the purchase premium was determined and the method of amortization. [APRIL 2012]

.70 *When there has been a permanent impairment in value of the unamortized portion of a purchase price discrepancy, the amount of the purchase price discrepancy that has been charged to the government's income from an investment in a government business enterprise should be disclosed. The facts and circumstances leading to the impairment should also be disclosed.* [APRIL 2000]

Footnotes

1. ACCOUNTING CHANGES, paragraph PS 2120.13, states: "When a change in an accounting policy is made to conform to new Public Sector Accounting Standards or to adopt Public Sector Accounting Standards for the first time, the new Standards may be applied retroactively or prospectively."

2. GOVERNMENT REPORTING ENTITY, paragraph PS 1300.24, states that one of the factors in assessing if a government business enterprise meets the financial sustainability criterion inherent in the definition of a government business enterprise is whether the organization has in place "realistic and specific plans that show how it expects to be able to maintain its operations and meet its liabilities in the future."

3. See ACCOUNTING CHANGES, paragraph PS 2120.04.

4. See ACCOUNTING CHANGES, paragraph PS 2120.05.

SECTION PS 3100
restricted assets and revenues



TABLE OF CONTENTS

	Paragraph
Purpose and scope	.01-.03
Definitions	.04
External restrictions	.05-.19
Revenue recognition	.07-.13
Disclosure	.14-.19
Internally restricted entities	.20-.26
Designated assets	.27-.31

PURPOSE AND SCOPE

.01 This Section establishes standards on how to account for and report restricted assets and revenues in government financial statements. The standards do not apply to:

(a) trusts under administration, which are excluded from the government reporting entity (see GOVERNMENT REPORTING ENTITY, paragraph PS 1300.40); and

(b) government transfers, which are addressed in GOVERNMENT TRANSFERS, Section PS 3410. 1

.02 Assets and revenues subject to restrictions are not available to meet the government's general obligations and finance its other activities. Accordingly, financial statement users need information about restrictions on the government's resources to assess the government's financial position and results.

.03 Governments operate under different types of limitations, which may restrict the government's access to resources by varying degrees. Some restrictions are imposed by agreements with external parties or by legislation of another government. Others are imposed by a government's own legislation, where the terms and conditions of the legislation establish an accountability relationship with an external party. Finally, some limitations are designations of assets set aside by governments for a particular purpose. The different types of limitations affect how each is accounted for and reported.

DEFINITIONS

.04 For the purposes of this Section:

(a) **External restrictions** are stipulations imposed by an agreement with an external party, or through legislation of another government, that specify the purpose or purposes for which resources are to be used.

(b) **Internally restricted entities** are separate legal entities, within the government reporting entity, created by the government's own legislation. This legislation establishes an accountability relationship with parties external to the government reporting entity to use the entity's assets or net assets as specified while that legislation is in effect. Such legislation stipulates, either explicitly or implicitly through the terms of the legislation, that:

(i) the entity's revenues, which are derived principally from identified parties external to the government reporting entity in exchange for specified goods or services, can only be used to provide those goods and services; and

(ii) the government cannot use the assets or net assets of the entity for a purpose other than providing the goods and services for which the resources were received.

(c) **Designated assets** are assets that have been formally designated by the government to indicate the government's intention to use those assets for a specific purpose.

EXTERNAL RESTRICTIONS

.05 Resources restricted by agreement with an external party, or by legislation of another government, are the least accessible of the government's resources. They cannot be used for other than the stipulated purpose unless the government obtains approval or permission from the external party or there is a change in the pertinent legislation.

.06 Often, external restrictions are associated with inflows of resources received from external parties who stipulate that amounts received be used in a particular manner. There may also be external restrictions imposed on the government's own assets, as can be the case with most sinking fund investments.

Revenue recognition

.07 Governments receive resources from external parties in the course of their ongoing operations. If the external parties specify how those resources are to be used, those inflows would be restricted in nature. For example, local governments often receive development contributions that are restricted under specific agreements or the terms of relevant legislation. Such restrictions may identify specific expenditures or classes of expenditures that must be made.

.08 The class of expenditures may be defined by reference to the type of expenditure or intended use, or to the time period in which the expenditures are to be made. Some restrictions simply stipulate a broad area of the government's activities in which the contributed resources are to be used, such as economic development. In order to be restricted, it is not necessary that the economic development expenditures be more specifically identified in the agreement or legislation.

.09 Some restricted inflows may be received in the same period as the expenditures, related to the use of the restricted resources, are incurred. When this is the case, the restrictions associated with the inflows have effectively been complied with by the financial statement date. Therefore, the externally restricted inflows would be recognized as revenue in the same period.

.10 Other restricted inflows may be received before the period in which the related expenditures will be incurred and, therefore, should not be recognized as revenues in the current period. In such cases, the government has an obligation to use the resources as stipulated in a future period and that obligation is best reflected by recording the unspent portion as a liability (deferred revenue).

.11 *Externally restricted inflows should be recognized as revenue in a government's financial statements in the period in which the resources are used for the purpose or purposes specified. An externally restricted inflow received before this criterion has been met should be reported as a liability until the resources are used for the purpose or purposes specified.* [JUNE 1997]

.12 Income on externally restricted assets may or may not be restricted, depending on the terms of the agreement or legislation. If the provisions of the relevant agreement or legislation require that the income be restricted, then the revenue recognition principle in paragraph PS 3100.11 would apply. For example, governing legislation may stipulate that income on unspent development contributions also has to be used for development. Such income would be recorded as a liability until used for the purpose or purposes specified.

.13 Income on sinking fund assets may be subject to restrictions that it be set aside in the sinking fund. Once the income has been attributed to the sinking fund, it has been used for the purpose specified and would be recognized as revenue.

Disclosure

.14 When the terms and conditions of agreements with external parties or legislation of another government impose restrictions on the use of resources, users need to understand both the nature and source of those restrictions and their impact on the government's financial position and results. Therefore, users need information about the policies followed in accounting for externally restricted inflows, as well as the nature and source of external restrictions, the amount of deferred revenue attributable to major categories of external restrictions and the changes in those balances.

.15 Externally restricted assets may be associated with externally restricted inflows. Often, however, governments do not physically segregate these restricted assets, but commingle them with other resources for

management purposes. In such cases, reporting deferred revenue to show the obligation to use resources in the future for the restricted purpose or purposes, together with disclosure of the nature and source of the restriction, is usually adequate. However, when those assets are required to be segregated from other government assets and cannot be used, or borrowed, for other purposes, that information would be disclosed.

.16 External restrictions on assets may also arise as a direct result of an agreement with external parties to set assets aside for a specific purpose, such as sinking funds set aside to retire debt or unspent debenture proceeds of a local government earmarked for specific capital works. Often these assets will be segregated and information about them would be disclosed.

.17 When externally restricted assets, such as sinking fund assets, are significant in relation to the government's total assets, it may also be desirable to identify them separately on the statement of financial position (see LONG-TERM DEBT, paragraph PS 3230.03).

.18 *Government financial statements should disclose in notes or schedules:*

(a) a general description of the nature and source of any external restrictions;

(b) the amounts of externally restricted inflows by major source;

(c) the amount of, and changes in, the deferred revenue balance attributable to each major category of external restrictions; and

(d) any externally restricted assets that are segregated, including an explanation of the relationship of those assets to the related liability. [JUNE 1997]

.19 The disclosure provided by governments would reflect the highly aggregated nature of financial statements. In deciding the level of detail to provide on sources of externally restricted inflows and segregated assets, governments would consider the usefulness of the information to the reader. Users must be able to assess the nature and extent of externally restricted assets and revenues and their impact on the government's financial position and results.

INTERNALLY RESTRICTED ENTITIES

.20 Restrictions on the use of the assets or net assets of certain entities can also be imposed by a government's own legislation. However, since a government can change its own legislation, such restrictions are different from those imposed by external parties.

.21 When an organization included in the reporting entity is internally restricted, legislation establishes that the revenues and assets or net assets of that entity can be used only to finance the entity's operations. They are not available to discharge other government liabilities or to finance other government programs. The key distinction is that the terms of the legislation establish, either explicitly or implicitly, a relationship between the government and external parties who have a direct interest in how funds contributed to the entity have been used. In such circumstances, even though the government has the power to change the restriction without the consent of the external parties, there is a direct accountability to those parties to use the resources as specified while that legislation is in effect. Disclosing information about internally restricted entities in the government's financial statements demonstrates that accountability to those external parties.

.22 It is also important for users of financial statements to understand the extent to which a government's resources can only be used to finance the operations of internally restricted entities. Since these internal restrictions limit the government's financial flexibility, they are important in assessing the government's financial position.

.23 Users of financial statements need to understand the nature of the restrictions imposed by the government's own legislation on the revenues, assets and net assets of government entities. Users also need an appreciation of the magnitude of government resources that are restricted for use in internally restricted entities. As internally restricted entities are fully integrated in the government's financial statements (whether consolidated or accounted for on a modified equity basis if they are business enterprises), it is important to provide condensed supplementary information on their financial position and operating results.

.24 *Government financial statements should disclose, in notes or schedules, condensed supplementary financial information relative to internally restricted entities. The financial information should be provided for internally restricted entities or groups of similar entities, and for all internally restricted entities as a whole. The information provided should report the financial position and results of operations, including:*

(a) total assets and liabilities segregated by main classification;

(b) net assets or liabilities;

(c) total revenues and expenses; and

(d) net operating results for the period.

In addition, a general description of the nature of the internal restriction should be provided. [JUNE 1997]

.25 Condensed supplementary financial information for internally restricted entities could be presented by individual government entity or grouped for entities with similar types of restrictions. Such information would provide an understandable summary that would allow users to assess the extent to which government resources are inaccessible.

.26 Where an internally restricted entity's financial position and/or results of operations are significant in relation to the government's overall financial position and/or results of operations, a government may choose to identify this information separately on the financial statements.

DESIGNATED ASSETS

.27 Governments may designate a portion of their total assets to reflect their intention to use those assets for certain purposes. Assets may be designated for a specific purpose as a result of government legislation, by-law or resolution that limits the use of assets to specified purposes.

.28 Designated assets are distinct from restricted assets. Unlike restricted assets, governments can readily change the legislation, by-law or resolution and use the designated assets for another purpose if the need arises. Designated assets are often available to support reserves, although not all reserves are supported by designated assets.

.29 Designated assets, that are not otherwise restricted in use, may be disclosed in the notes. Even though such assets may be commingled with other assets for management purposes, the government must be able to identify the underlying assets that are to be used. Generally, such assets will be cash or investments.

.30 *When a government chooses to provide information about designated assets, it should do so in the notes, not on the statement of financial position. Such disclosure should include a description of the assets and their intended use.* [JUNE 1997]

.31 The disclosure provided by governments would reflect the highly aggregated nature of financial statements. In deciding the disclosure to provide, governments would consider the usefulness of the information to the reader in assessing the nature of a government's designated assets.

Footnotes

1. The transitional provisions relating to this scope restriction are set out in GOVERNMENT TRANSFERS, paragraph PS 3410.37.

SECTION PS 3150
tangible capital assets



TABLE OF CONTENTS

	Paragraph
Purpose and scope	.01-.04
Definitions	.05
Accounting	.06-.39
Measurement	.09-.39
Cost	.09-.21
Amortization	.22-.30
Write-downs	.31-.37
Disposals	.38-.39
Presentation and disclosure	.40-.42
Transitional provisions for local governments	.43-.48

PURPOSE AND SCOPE

.01 This Section establishes standards on how to account for and report tangible capital assets in government financial statements. 1

.02 Tangible capital assets are a significant economic resource managed by governments and a key component in the delivery of many government programs. Tangible capital assets include such diverse items as roads, buildings, vehicles, equipment, land, water and other utility systems, aircraft, computer hardware and software, dams, canals, and bridges.

.03 This Section does not apply to intangible assets, natural resources, and Crown lands that have not been purchased by the government.

.04 Government capital grants and government transfers of tangible capital assets would be accounted for in accordance with GOVERNMENT TRANSFERS, Section PS 3410.

DEFINITIONS

.05 The following definitions have been adopted for the purposes of this Section:

(a) **Tangible capital assets** are non-financial assets 2 having physical substance that:

(i) are held for use in the production or supply of goods and services, for rental to others, for administrative purposes or for the development, construction, maintenance or repair of other tangible capital assets;

(ii) have useful economic lives extending beyond an accounting period;

(iii) are to be used on a continuing basis; and

(iv) are not for sale in the ordinary course of operations.

(b) **Cost** is the gross amount of consideration given up to acquire, construct, develop or better a tangible capital asset, and includes all costs directly attributable to acquisition, construction, development or betterment of the tangible capital asset, including installing the asset at the location and in the condition necessary for its intended use. The cost of a contributed tangible capital asset, including a tangible capital asset in lieu of a developer charge, is considered to be equal to its fair value at the date of contribution. Capital grants would not be netted against the cost of the related tangible capital asset. The cost of a leased tangible capital asset is determined in accordance with PUBLIC SECTOR GUIDELINE PSG-2, Leased Tangible Capital Assets.

(c) **Fair value** is the amount of the consideration that would be agreed upon in an arm's length transaction between knowledgeable, willing parties who are under no compulsion to act.

(d) **Net book value** of a tangible capital asset is its cost, less both accumulated amortization and the amount of any write-downs.

(e) **Residual value** is the estimated net realizable value of a tangible capital asset at the end of its useful life to a government.

(f) **Service potential** is the output or service capacity of a tangible capital asset, and is normally determined by reference to attributes such as physical output capacity, quality of output, associated operating costs, and useful life.

(g) **Useful life** is the estimate of either the period over which a tangible capital asset is expected to be used by a government, or the number of production or similar units that can be obtained from the tangible capital asset by a government. The life of a tangible capital asset may extend beyond the useful life of a tangible capital asset to a government. The life of a tangible capital asset, other than land, is finite, and is normally the shortest of the physical, technological, commercial and legal life.

ACCOUNTING

.06 Governments need to present information about the complete stock of their tangible capital assets and amortization in the financial statements to demonstrate stewardship and the cost of using those assets to deliver programs and provide services.

.07 *Tangible capital assets should be accounted for and reported as assets on the statement of financial position.* [APRIL 2005]

.08 Works of art and historical treasures are property that has cultural, aesthetic or historical value that is worth preserving perpetually. Works of art and historical treasures would not be recognized as tangible capital assets in government financial statements because a reasonable estimate of the future benefits associated with such property cannot be made. Nevertheless, the existence of such property should be disclosed (see paragraph PS 3150.42(e)).

Measurement

Cost

.09 *Tangible capital assets should be recorded at cost.* [SEPT. 1997]

.10 The cost of a tangible capital asset includes the purchase price of the asset and other acquisition costs such as installation costs, design and engineering fees, legal fees, survey costs, site preparation costs, freight charges, transportation insurance costs, and duties. The cost of a constructed asset would normally include direct construction or development costs (such as materials and labour) and overhead costs directly attributable to the construction or development activity. The activities necessary to prepare a tangible capital asset for its intended use encompass more than the physical construction of the tangible capital asset. They include the technical and administrative work prior to the commencement of and during construction.

.11 The cost of each tangible capital asset acquired as part of a single purchase (for example, the purchase of a building and land for a single amount) is determined by allocating the total price paid for all of the tangible capital assets acquired to each one on the basis of its relative fair value at the time of acquisition.

.12 Many tangible capital assets, particularly complex network systems such as those for water and sewage treatment, consist of a number of components. Whether a government decides to record and account for each component as a separate asset will be determined by the usefulness of the resulting information to the government and the cost versus the benefit of collecting and maintaining it.

.13 When, at the time of acquisition, a portion of the acquired tangible capital asset is not intended for use, its costs and any costs of disposal, net of any estimated proceeds, are attributed to that portion of the acquired tangible capital asset that is intended for use. For example, the cost of acquired land that includes a building that will be demolished includes the cost of the acquired property and the cost of demolishing the building.

.14 Governments may receive contributions of tangible capital assets. The cost of a contributed asset is considered equal to its fair value at the date of contribution. Fair value of a contributed tangible capital asset may be estimated using market or appraisal values. In unusual circumstances, where an estimate of fair value cannot be made, the tangible capital asset would be recognized at nominal value. When a contributed tangible capital asset is received from an entity that is part of the same government reporting entity, refer to INTER-ENTITY TRANSACTIONS, Section PS 3420.

.15 The cost of a tangible capital asset that is acquired, constructed or developed over time includes carrying costs directly attributable to the acquisition, construction or development activity, such as interest costs when the government's policy is to capitalize interest costs.

.16 Carrying costs incurred while land acquired for building purposes is held without any associated construction or development activity do not qualify for capitalization.

.17 Capitalization of carrying costs ceases when no construction or development is taking place or when a tangible capital asset is ready for use in producing goods or services. A tangible capital asset is normally ready for productive use when the acquisition, construction or development is substantially complete.

.18 Determining when a tangible capital asset, or a portion thereof, is ready for productive use requires consideration of the circumstances in which it is to be operated. Normally it would be predetermined by a government by reference to factors such as productive capacity, occupancy level, or the passage of time.

.19 Costs of betterments are considered to be part of the cost of a tangible capital asset and would be added to the recorded cost of the related asset. A betterment is a cost incurred to enhance the service potential of a tangible capital asset. In general, for tangible capital assets other than complex network systems, service potential may be enhanced when there is an increase in the previously assessed physical output or service capacity, where associated operating costs are lowered, the useful life of the property is extended or the quality of the output is improved.

.20 This definition of a betterment is more difficult to apply to tangible capital assets that are complex network systems and are very long-lived, such as highway and water systems, because identifying expenditures that would extend their lives may not be practicable. For example, expenditures on road systems to widen the roads or add to the number of lanes expand the capacity of the road system to provide services and are clearly betterments. On the other hand, expenditures incurred to maintain the originally anticipated service potential of a road, or its estimated useful life, are more in the nature of maintenance.

.21 For complex network systems, therefore, the following basic distinctions can be used to identify maintenance and betterments:

(a) Maintenance and repairs maintain the predetermined service potential of a tangible capital asset for a given useful life. Such expenditures are charged in the accounting period in which they are made.

(b) Betterments increase service potential (and may or may not increase the remaining useful life of the tangible capital asset). Such expenditures would be included in the cost of the related asset.

Amortization

.22 *The cost, less any residual value, of a tangible capital asset with a limited life should be amortized over its useful life in a rational and systematic manner appropriate to its nature and use by the government.* [SEPT. 1997]

.23 *The amortization of the costs of tangible capital assets should be accounted for as expenses in the statement of operations.* [SEPT. 1997 *]

.24 Land normally has an unlimited life and would not be amortized.

.25 Most tangible capital assets, however, have limited useful lives. This fact is recognized by amortizing the cost of tangible capital assets in a rational and systematic manner over their useful lives. Amortization expense is an important part of the cost associated with providing government services, regardless of how the acquisition of tangible capital assets is funded. Information about a program or activity's total costs is relevant to any assessment of the benefits the program or activity provides.

.26 Different methods of amortizing a tangible capital asset result in different patterns of cost recognition. The objective is to provide a systematic and rational basis for allocating the cost of a tangible capital asset, less any residual value, over its useful life. A straight-line method reflects a constant charge for the service as a function of time. A variable charge method reflects service as a function of usage. Other methods may be appropriate in certain situations.

.27 Where a government expects the residual value of a tangible capital asset to be significant, it would be factored into the calculation of amortization.

.28 The useful life of a tangible capital asset depends on its expected use by the government. Factors to be considered in estimating the useful life of a tangible capital asset include:

(a) expected future usage;

(b) effects of technological obsolescence;

(c) expected wear and tear from use or the passage of time;

(d) the maintenance program;

(e) studies of similar items retired; and

(f) the condition of existing comparable items.

.29 *The amortization method and estimate of the useful life of the remaining unamortized portion of a tangible capital asset should be reviewed on a regular basis and revised when the appropriateness of a change can be clearly demonstrated.* [SEPT. 1997]

.30 Significant events that may indicate a need to revise the amortization method or the estimate of the remaining useful life of a tangible capital asset include:

(a) a change in the extent to which the tangible capital asset is used;

(b) a change in the manner in which the tangible capital asset is used;

(c) removal of the tangible capital asset from service for an extended period of time;

(d) physical damage;

(e) significant technological developments;

(f) a change in the demand for the services provided through use of the tangible capital asset; and

(g) a change in the law or environment affecting the period of time over which the tangible capital asset can be used.

Write-downs

.31 *When conditions indicate that a tangible capital asset no longer contributes to a government's ability to provide goods and services, or that the value of future economic benefits associated with the tangible capital asset is less than its net book value, the cost of the tangible capital asset should be reduced to reflect the decline in the asset's value.* [SEPT. 1997]

.32 *The net write-downs of tangible capital assets should be accounted for as expenses in the statement of operations.* [SEPT. 1997 *]

.33 *A write-down should not be reversed.* [SEPT. 1997]

.34 A government would write down the cost of a tangible capital asset when it can demonstrate that the reduction in future economic benefits is expected to be permanent. Conditions that may indicate that the future economic benefits associated with a tangible capital asset have been reduced and a write-down is appropriate include:

(a) a change in the extent to which the tangible capital asset is used;

(b) a change in the manner in which the tangible capital asset is used;

(c) significant technological developments;

(d) physical damage;

(e) removal of the tangible capital asset from service;

(f) a decline in, or cessation of, the need for the services provided by the tangible capital asset;

(g) a decision to halt construction of the tangible capital asset before it is complete or in usable or saleable condition; and

(h) a change in the law or environment affecting the extent to which the tangible capital asset can be used.

.35 The persistence of such conditions over several successive years increases the probability that a write-down is required unless there is persuasive evidence to the contrary.

.36 When the tangible capital asset no longer contributes to the government's ability to provide goods and services, it would be written down to residual value, if any. This would be appropriate when the government has no intention of continuing to use the asset in its current capacity, and there is no alternative use for the asset.

.37 In other circumstances, it will be necessary to estimate the value of expected remaining future economic benefits. Where a government can objectively estimate a reduction in the value of the asset's service potential to the government, and has persuasive evidence that the reduction is expected to be permanent in nature, the tangible capital asset would be written down to the revised estimate of the value of the asset's remaining service potential to the government.

Disposals

.38 *The difference between the net proceeds on disposal of a tangible capital asset and the net book value of the asset should be accounted for as a revenue or expense in the statement of operations.* [SEPT. 1997 *]

.39 Disposals of government tangible capital assets in the accounting period may occur by sale, destruction, loss or abandonment. Such disposals represent a reduction in a government's investment in tangible capital assets, regardless of how that investment is reported.

PRESENTATION AND DISCLOSURE

.40 *The financial statements should disclose, for each major category of tangible capital assets and in total:*

(a) cost at the beginning and end of the period;

(b) additions in the period;

(c) disposals in the period;

(d) the amount of any write-downs in the period;

(e) the amount of amortization of the costs of tangible capital assets for the period;

(f) accumulated amortization at the beginning and end of the period; and

(g) net carrying amount at the beginning and end of the period. [APRIL 2005]

.41 Major categories of tangible capital assets would be determined by type of asset, such as land, buildings, equipment, roads, water and other utility systems, and bridges.

.42 *Financial statements should also disclose the following information about tangible capital assets:*

(a) the amortization method used, including the amortization period or rate for each major category of tangible capital asset;

(b) the net book value of tangible capital assets not being amortized because they are under construction or development or have been removed from service;

(c) the nature and amount of contributed tangible capital assets received in the period and recognized in the financial statements;

(d) the nature and use of tangible capital assets recognized at nominal value;

(e) the nature of the works of art and historical treasures held by the government; and

(f) the amount of interest capitalized in the period. [SEPT. 1997]

TRANSITIONAL PROVISIONS FOR LOCAL GOVERNMENTS

.43 This Section applies to local governments for fiscal years beginning on or after January 1, 2009. Earlier adoption is encouraged.

.44 This Section applies to all tangible capital assets.

.45 When, during the period of transition, a local government has information on some but not all categories of its tangible capital assets, the local government would disclose information in accordance with PUBLIC SECTOR GUIDELINE PSG-7, Tangible Capital Assets of Local Governments.

.46 All government tangible capital assets would be recorded in a government's accounting system according to this Section. The information recorded would include the actual or estimated original cost of the tangible capital assets, their estimated useful lives and the related estimated accumulated amortization. When recording the initial value of a tangible capital asset for the purposes of applying this Section, consideration would be given to whether the net book value of the tangible capital asset is in excess of the future economic benefits expected from its use and, therefore, whether a write-down is required to establish more appropriate cost and accumulated amortization amounts for the asset.

.47 When a government does not have historical cost accounting records for its tangible capital assets, it will need to use other methods to estimate the cost and accumulated amortization of the assets. It may be possible to derive information for recording tangible capital assets from records of government departments that manage those assets. A government would apply a consistent method of estimating the cost of the tangible capital assets for which it does not have historical cost records, except in circumstances where it can be demonstrated that a different method would provide a more accurate estimate of the cost of a particular type of tangible capital asset.

.48 Some government tangible capital assets that are still in use by the government may not have any unamortized cost remaining because of their age and the amortization period set for that type of tangible capital asset. A record of such tangible capital assets would, however, need to be set up for asset control purposes. If a government has the information to estimate the historical cost and accumulated amortization of such fully amortized assets, then that information would be recorded in the accounting records. If a local government does not have this detailed information on its fully amortized assets, it would disclose them at an initial value

equal to their residual value, where material and previously known. Otherwise it would disclose them at a nominal value.

Footnotes

1. The term "financial statements" refers to the summary financial statements published by a government that report on the financial position and changes in financial position of the government reporting entity.

2. For the purposes of this Section, tangible capital assets are defined to include computer software.

* Editorial change — January 2003.

* Editorial change — January 2003.

* Editorial change — January 2003.

SECTION PS 3200
liabilities

TABLE OF CONTENTS

Purpose and scope	.01-.02
Recognition	.03
Liabilities	.04-.27
Discretion	.07-.17
Sacrifice economic benefits	.18-.21
Past transactions and events	.22-.27
Disclosure	.28-.30
Decision tree — obligations	Appendix

PURPOSE AND SCOPE

.01 This Section:

(a) provides guidance for applying the definition of liabilities set out in FINANCIAL STATEMENT CONCEPTS, Section PS 1000, and establishes general recognition and disclosure standards for liabilities; but

(b) does not include standards for recognition and disclosure of specific types of liabilities, which are dealt with in individual CPA Canada Public Sector Accounting Handbook Sections.

.02 It may be useful to read this Section in conjunction with CONTINGENT LIABILITIES, Section PS 3300, and CONTRACTUAL OBLIGATIONS, Section PS 3390.

RECOGNITION

.03 *Liabilities should be recognized in the financial statements when:*

(a) there is an appropriate basis of measurement; and

(b) a reasonable estimate can be made of the amount involved. [SEPT. 2004]

LIABILITIES

.04 Liabilities arise from many types of obligations. Obligations result in a government being bound or committed to a particular course of action. They can arise from:

(a) agreements or contracts, including situations where only one party has fulfilled its obligation or where both parties have partially fulfilled their obligations;

(b) another government's legislation (for example, environmental legislation of one level of government could place legal obligations on another to prevent, abate or clean up environmental damage);

(c) a government's own legislation (for example, legislation may require the government to make transfers to organizations and individuals that meet certain criteria set out in that legislation);

(d) constructive obligations (that is, those that can be inferred from the facts in a particular situation); and

(e) equitable obligations (that is, those that are based on ethical or moral considerations).

.05 **Liabilities** are present obligations of a government to others arising from past transactions or events, the settlement of which is expected to result in the future sacrifice of economic benefits. Liabilities have three essential characteristics:

(a) they embody a duty or responsibility to others, leaving a government little or no discretion to avoid settlement of the obligation;

(b) the duty or responsibility to others entails settlement by future transfer or use of assets, provision of goods or services, or other form of economic settlement at a specified or determinable date, on occurrence of a specified event, or on demand; and

(c) the transactions or events obligating the government have already occurred.

.06 Obligations are not liabilities unless they meet the three characteristics of liabilities.

Discretion

.07 Discretion is the ability to make individual choices, judgments or decisions. Decisions such as budgeting for purchases or transfers and future program expenditures are not present obligations. In these circumstances a government is not bound to a particular course of action, as the government has realistic alternatives to change or avoid the obligation through its own actions.

.08 Having little or no discretion means that a government has no realistic alternative but to settle the obligation. The obligation does not depend on future actions of the government or other transactions or events. The government has given up its freedom to make further choices, judgments and decisions related to the obligation.

.09 For constructive and equitable obligations, determining when a government has little or no discretion to avoid the obligation can be a matter of professional judgment. In assessing when a government may have lost its discretion to make decisions and judgments, one would consider whether a government has created a valid expectation among others and, as a result, has no realistic alternative but to settle its obligation.

.10 For these types of obligations, a government has little or no discretion when there is a preponderance of evidence that:

(a) the government acknowledges and indicates it will act upon its decision to accept responsibility for the obligation; and

(b) the government has sufficiently communicated its decision to the affected parties.

.11 Intentions and individual items of evidence on their own may not be sufficient for determining whether a government has little or no discretion. However, when taken together, there may be a preponderance of evidence indicating that it has. Each circumstance needs to be judged individually given the available information.

.12 Evidence that a government has acknowledged and will act upon its decision to accept responsibility for the obligation can include, but is not limited to, consideration of the following:

(a) past practices;

(b) established policies;

(c) cabinet minutes, orders-in-council, ministerial orders;

(d) approved plans;

(e) ministerial letters; and

(f) approval of legislation at various stages, such as first, second or third reading.

.13 If those affected are unaware of the government making its decision, no obligation can exist; the decision must be communicated to the parties affected. Communication to affected parties needs to be sufficient so that it creates a valid expectation among others resulting in a government not being able to withdraw from the obligation and having no realistic alternative but to settle the obligation.

.14 Evidence that a government has sufficiently communicated its decision to affected parties could include, but is not limited to, the following:

(a) an announcement of the amount the government is providing;

(b) identification of the individuals, organizations or groups affected by the decision; and

(c) an announcement of the time frame for implementing the decision.

.15 When taken together, a government's decision and communication of that decision can raise a valid expectation among others that it will accept certain responsibilities and, as a result, the government has little or no discretion to avoid the obligation and cannot realistically withdraw from it.

.16 There may be situations where a government is contemplating a particular program and evidence of the program may be found in approved plans or other similar documents. However, without sufficient evidence that the government has accepted responsibility for and communicated its decision, a person may be acting on that information to his or her own detriment.

.17 Not all established patterns of past practice or policy decisions lead to a loss of discretion. There are numerous examples where a government, in the past, has enhanced pension and other similar benefits to employees. However, more recently, governments have been reducing or eliminating those benefits, so in this case past practice is not sufficient to indicate that a government has little or no discretion to avoid the obligation.

Sacrifice of economic benefits

.18 Sacrificing economic benefits embodies a duty or responsibility to others to a future transfer or use of assets, provision of goods or services, or other form of economic settlement at a specified or determinable date, on occurrence of a specified event, or on demand.

.19 The obligation to sacrifice economic benefits must be to a third party. It is necessary that the entity or individual exist at the financial statement date. It is not necessary, however, for the government to know the specific identity of the party or parties involved, as the obligation may be to the public at large or to a specific group of recipients.

.20 Some obligations to sacrifice economic benefits may be shared, as two or more governments may be jointly and severally liable. Most obligations bind a single government, and those that bind two or more governments are commonly ranked rather than shared. For example, a primary debtor and a guarantor may both be obligated for a debt, but they would not have the same obligation — the guarantor must sacrifice economic benefits only if the primary debtor defaults.

.21 The timing of the sacrifice of economic benefits in the future must be specified. An obligation to sacrifice economic benefit to others requires settlement at a specified or determinable date, such as within 30 days, on occurrence of a specified event such as those related to cost-sharing agreements, or on demand, such as with certain bank loans.

Past transactions and events

.22 It is the occurrence of a past obligating transaction or event on or before the financial statement date that distinguishes a present obligation to sacrifice economic benefits from a future obligation.

.23 The obligating transaction or event arising from exchange agreements or contracts usually occurs at the point of exchange. Once title to the good is assumed by a government, that government is obligated to settle.

.24 The actions of others, such as meeting eligibility criteria, often determine when an obligating transaction or event occurs in non-exchange agreements and contracts. Shared cost agreements are an example where the obligating transaction or event occurs when the recipient incurs eligible expenditures.

.25 The existence of another government's legislation on its own is not an obligating transaction or event. Environmental legislation, for example, may establish basic rules that, if not complied with, can result in a present obligation. However, normally it is the occurrence of environmental damage that is the obligating transaction or event.

.26 The existence of a government's own legislation containing details of the government's policy in relation to a particular program is not an obligating transaction or event:

(a) for programs such as entitlements until recipients meet the eligibility criteria;

(b) for programs that provide relief assistance to natural disaster victims until such a disaster occurs.

.27 Legislation having retroactive application cannot create a past obligating transaction or event. Any obligations related to such legislation would be accounted for in the current period, not in the period of the effective date of the legislation.

DISCLOSURE

.28 An obligation may meet the definition of a liability; however, it is not capable of being recognized in financial statements because a reasonable estimate of the amount involved cannot be made.

.29 For unrecognized liabilities, disclosing the nature of the liability provides information about the potential effect on the government's financial statements when the liability becomes measurable.

.30 *Information about the nature of liabilities that cannot be recognized should be disclosed in notes together with the reason(s) why a reasonable estimate cannot be made of the amount involved.* [SEPT. 2004]

APPENDIX

DECISION TREE — OBLIGATIONS



SECTION PS 3210
assets



TABLE OF CONTENTS	Paragraph
Purpose and scope	.01-.02
Assets	.03-.33
Economic resources	.06-.10
Future economic benefits	.11-.15
Control	.16-.24
Past transactions and events	.25-.29
Disclosure	.30-.32
Transitional provisions	.33
Decision tree	Appendix A

PURPOSE AND SCOPE

.01 This Section:

(a) provides guidance for applying the definition of assets set out in FINANCIAL STATEMENT CONCEPTS, Section PS 1000, and establishes general disclosure standards for assets; but

(b) does not include standards for recognition and disclosure of specific types of assets, which are dealt with in other Handbook Sections.

.02 It may be useful to read this Section in conjunction with CONTINGENT ASSETS, Section PS 3320, and CONTRACTUAL RIGHTS, Section PS 3380.

ASSETS

.03 **Assets** are economic resources controlled by a public sector entity as a result of past transactions or events and from which future economic benefits are expected to be obtained.

.04 Assets have three essential characteristics:

(a) They embody future economic benefits that involve a capacity, singly or in combination with other assets, to provide goods and services, to provide future cash inflows, or to reduce cash outflows.

(b) The public sector entity can control the economic resource and access to the future economic benefits.

(c) The transaction or event giving rise to the public sector entity's control has already occurred.

.05 Economic resources are not assets unless they meet the three characteristics of assets.

Economic resources

.06 Economic resources embody value because they enable an entity to meet its objectives, such as the provision of public goods and services, redistribution of wealth, generation of cash inflows or reduction of cash outflows.

.07 To embody value as an economic resource, there must also be some restriction on its availability. For example, the air we breathe generally cannot be an economic resource unless access to it is restricted.

.08 Economic resources can arise from, but are not limited to, the following:

(a) contracts or agreements (for example, accounts receivable and leases);

(b) another government's legislation (for example, transfers receivable);

(c) government's own legislation (for example, taxes, fines and penalties);

(d) voluntary contributions (for example, donations); or

(e) construction and development (for example, roads).

.09 Economic resources can be:

(a) financial in nature (for example, cash, accounts receivable and investments); or

(b) non-financial in nature (for example, tangible capital property, prepaid items and inventories of supplies).

.10 Without an economic resource, future economic benefits cannot be obtained. For example, a fire truck (the economic resource) needs to exist before it can provide fire suppression services (the future economic benefits).

Future economic benefits

.11 The essence of assets are their future economic benefits. Assets embody future economic benefits that allow public sector entities to achieve their objectives. The future economic benefits embodied in assets involve a capacity, singly or in combination with other assets, to provide goods and services, to provide future cash inflows or to reduce cash outflows.

.12 Often the public is the beneficiary of the goods and services provided by a public sector entity. For example, assets such as fire trucks are used to provide fire suppression services to the public. Hospital buildings and medical equipment are used to provide health care services. Parks, schools and libraries provide recreational, educational and research opportunities to the public. Water treatment plants provide goods, such as potable water. Such assets benefit public sector entities as they assist in achieving the entity's primary objective of providing public goods and services. This benefit is different from the benefit that the public receives.

.13 The future economic benefits embodied in an asset may also be in the form of generating future cash inflows. Cash inflows benefit the public sector entity because cash can be used to purchase or to provide goods and services, redistribute wealth or settle liabilities. Benefits in the form of cash inflows relate to resources, such as loans receivable, inventory for resale and portfolio investments. Also, some public sector resources generate cash inflows because they have user fees associated with them.

.14 The future economic benefits may also take the form of a capacity to reduce cash outflows. For example, this may be the case when betterment of a tangible capital asset reduces the cost of providing goods and services.

.15 There is a close association between incurring a cost and the generation of an asset. However, not all costs result in a future economic benefit. For example, costs incurred to maintain the current service capacity of an asset do not provide a future economic benefit. Also, a public sector entity may obtain an asset without incurring costs. For example, items that have been donated to the public sector entity may provide that entity with future economic benefits and, hence, satisfy the definition of assets.

Control

.16 A public sector entity controls the economic resource and access to the future economic benefits when it:

(a) can benefit from the economic resource through its capacity to provide goods and services, to provide future cash inflows or to reduce cash outflows;

(b) can deny or regulate access to those benefits by others; and

(c) is exposed to the risks associated with the economic resource.

.17 An entity that controls an economic resource has the ability to benefit from the economic resource. For example, a recipient of a transfer benefits from the transfer as it can use the transfer to provide goods or services.

.18 An entity that controls an economic resource has the ability to deny or regulate access to the future economic benefits associated with the economic resource by others. For example, an entity controlling a bus has the ability to deny or regulate access to the related transportation services.

.19 An entity that controls an economic resource is exposed to the risks associated with the economic resource. For example, the entity may hold an investment, the value of which may decline and result in a loss.

.20 Some economic resources are subject to certain external restrictions that specify the purpose(s) for which resources are to be used. For example, there may be external restrictions imposed on the public sector entity's own assets, as is the case with some sinking fund investments. Such restrictions on the use of an economic resource do not negate the public sector entity's control of the economic resource.

.21 Although control may be seen as applying to an asset as a whole, the concept can also be applied to individual rights related to the asset. For example, a single leased asset embodies different economic benefits. It may give the lessee the right to use the property and the lessor the right to receive rents and any residual value. Thus, both parties may have assets corresponding to their respective rights.

.22 Control of an economic resource and of access to the future economic benefits are essential characteristics of an asset, whereas possession or ownership is not. For example, a public sector entity may control the economic resource and access to the future economic benefits through a capital lease arrangement yet not own the economic resource.

.23 A public sector entity's ability to regulate an economic resource does not, in and of itself, constitute control of an asset. A public sector entity may establish the regulatory environment in an industry or sector within which organizations operate and impose conditions or sanctions on their operations. For example, a pollution control authority may have the ability to close down the operations of entities that are not complying with environmental regulations. However, this power does not constitute control because the pollution control authority's interest extends only to the regulatory use of the economic resources and does not include the ability to control access to the future economic benefits.

.24 A public sector entity may act as trustee when it administers trusts on behalf of the beneficiaries specified in the agreement or statute. As trustee, the public sector entity merely administers the assets, following the terms and conditions set out in the agreement. It does not control the asset because it does not have access to the future economic benefits. Those benefits flow to the beneficiaries.

Past transactions and events

.25 It is the occurrence of a past transaction or event on or before the financial statement date that distinguishes a present economic resource controlled by a public sector entity from an economic resource that may be controlled by a public sector entity in the future.

.26 The past transaction or event that gives rise to control of an economic resource resulting from exchange agreements or contracts usually occurs at the point of exchange. This arises when substantially all the benefits and risks of ownership have been transferred to the public sector entity and normally coincides with the disbursement of funds, exchange of other assets or assumption of liabilities.

.27 Meeting the eligibility criteria under an authorized transfer often determines the past transaction or event giving rise to control of an economic resource in non-exchange contracts or agreements. Shared cost agreements (reimbursement arrangements) are an example where the control of an economic resource arises when the recipient incurs eligible expenditures.

.28 The existence of a law, by-law or policy in relation to a particular program is not a past transaction or event that gives rise to control of an economic resource. Control does not exist until the underlying event occurs.

.29 The past transaction or event giving rise to control of an economic resource must have occurred by the financial statement date. Legislation having retroactive application cannot create a past transaction or event. Any economic resources related to that legislation would be accounted for in the current and relevant future periods, not in the period of the effective date of the legislation.

DISCLOSURE

.30 An economic resource may meet the definition of an asset. However;

(a) it is not capable of being recognized in the financial statements because an appropriate basis of measurement and a reasonable estimate of the amount involved cannot be made; or

(b) other Handbook Sections prohibit its recognition.

.31 For unrecognized assets, disclosing the major categories of assets provides information about the economic resources available to the public sector entity. The major categories of assets would be determined by type of asset, such as Crown land.

.32 *Information about the major categories of assets that are not recognized should be disclosed in the notes. When an asset is not recognized because a reasonable estimate of the amount involved cannot be made, the reason(s) for this should be disclosed.* [APRIL 2017]

TRANSITIONAL PROVISIONS

.33 This Section applies to fiscal years beginning on or after April 1, 2017. Earlier adoption is permitted.

APPENDIX A
DECISION TREE — ECONOMIC RESOURCES

The following decision tree has been prepared to illustrate the accounting treatment specified in this Section. The decision tree is illustrative only and matters of principle relating to particular situations should be decided in the context of the Section.

SECTION PS 3230
long-term debt

TABLE OF CONTENTS

	Paragraph
Purpose and scope	.01
Financial statement presentation	.02-.14
Debt issued on behalf of government business enterprises	.05-.14
Disclosure	.15-.25

PURPOSE AND SCOPE

.01 This Section establishes standards on how to account for and report long-term debt in government financial statements, 1 including debt issued on behalf of a government business enterprise. It does not address

the presentation and disclosure of other long-term obligations of a government. General guidance regarding the presentation and disclosure of a government's liabilities is provided in FINANCIAL STATEMENT PRESENTATION, paragraphs PS 1201.044-.048. Retirement benefits are specifically dealt with in RETIREMENT BENEFITS, Section PS 3250. Other employee future benefits are specifically dealt with in POST-EMPLOYMENT BENEFITS, COMPENSATED ABSENCES AND TERMINATION BENEFITS, Section PS 3255.

FINANCIAL STATEMENT PRESENTATION

.02 *The statement of financial position should report a government's long-term debt at the end of the accounting period.* [MARCH 1997]

.03 *When a government has externally restricted sinking funds* 2 *set aside to retire its long-term debt, the following information should be provided:*

(a) the gross amount of the long-term debt to be retired by the sinking funds; and

(b) the amount of sinking fund assets available to retire the debt. [MARCH 1997]

.04 Governments would disclose this externally restricted sinking fund information in the notes or schedules to the financial statements or report it on their statement of financial position.

Debt issued on behalf of government business enterprises

.05 A government issues debt for its government business enterprises in one of two ways:

(a) The proceeds of general government borrowing are subsequently loaned to a government business enterprise.

(b) Debt is issued by the government specifically on behalf of the government business enterprise and the government expects to realize the receivable from the government business enterprise and settle the external debt simultaneously.

.06 *When debt is issued by a government and some or all of the proceeds are subsequently loaned to a government business enterprise, except in the circumstances in paragraph* PS 3230.10, *the government should:*

(a) recognize the entire amount borrowed from sources external to the reporting entity as a liability and the related receivable from the government business enterprise as a financial asset in the consolidated statement of financial position; and

(b) recognize the interest on the entire amount of debt borrowed as an expense and the related interest earned from the government business enterprise as a revenue, in the consolidated statement of operations. [APRIL 2000]

.07 When a government undertakes general borrowing and then subsequently loans some or all of the debt proceeds to a government business enterprise, the government would include the entire amount that it has borrowed from sources external to the reporting entity as a liability on its consolidated statement of financial position. Any amount subsequently loaned to a government business enterprise would be included on the

consolidated statement of financial position as a receivable from a government business enterprise. The government business enterprise would record the amount loaned as a liability owed to the government.

.08 Similar reporting would be required for the interest related to such debt. When a government undertakes general borrowing and subsequently loans some or all of the debt proceeds to a government business enterprise, interest on the entire amount borrowed would be recognized as an expense of the government in the consolidated statement of operations each year. Normally, the government would then charge interest on the portion of the debt proceeds that it has loaned to the government business enterprise, resulting in a revenue to the government from the government business enterprise that would be recognized in the consolidated statement of operations.

.09 If a government charges little or no interest to the government business enterprise for the use of debt proceeds, the difference between the interest cost to the government and the interest charged to the government business enterprise is in the nature of a subsidy. Such circumstances would be taken into account in assessing if the organization continues to meet the financial self-sustainability requirement inherent in the definition of a government business enterprise in GOVERNMENT REPORTING ENTITY, Section PS 1300.

.10 *When there is sufficient evidence that debt has been issued by a government specifically on behalf of a government business enterprise:*

(a) the debt issued on behalf of the government business enterprise and the related receivable from the government business enterprise should be presented on a net basis in the consolidated statement of financial position; and

(b) the interest expense on the debt issued on behalf of the government business enterprise and the related interest revenue from the government business enterprise should be presented on a net basis in the consolidated statement of operations. [APRIL 2000]

.11 The net presentation in the financial statements of the intra-entity receivable and revenue from the government business enterprise against the corresponding government debt and expense respectively, is predicated on the following:

(a) a clear linkage exists between the debt issued by the government on behalf of the government business enterprise and the funds passed directly to the government business enterprise;

(b) the expected simultaneous settlement of the financial arrangement; and

(c) the financial self-sustainability criterion inherent in the definition of a government business enterprise.

.12 *Sufficient evidence that debt has been specifically issued by a government on behalf of a government business enterprise comprises:*

(a) details in the terms of the debt prospectus, borrowing by-laws, or other terms of the original debt issuance documentation, which require a specified amount of the proceeds of the debt issue to be passed directly from the government to the government business enterprise;

(b) the intention of the government and the government business enterprise that the government will realize the receivable from the government business enterprise and settle the external debt simultaneously, which is

contractually supported by the details of the loan amount, interest rate, and timing and nature of repayment outlined in the terms of the agreement between the government and the government business enterprise; and

(c) the financial ability of the government business enterprise to fulfill the requirements in (b) as demonstrated by a realistic and specific business plan 3 *projecting the future results of operations of the government business enterprise.* [APRIL 2000]

.13 *When, in a period subsequent to the debt issue, the conditions in paragraph* PS 3230.12*(b) and/or (c) are no longer met, the government should report the remaining financial arrangement with the government business enterprise in accordance with paragraph* PS 3230.06. [APRIL 2000]

.14 In the circumstances in paragraph PS 3230.13, the government would also assess the collectibility of the receivable from the government business enterprise and report it at its net realizable value in the consolidated statement of financial position. It would also be appropriate in these circumstances to re-evaluate whether the organization continues to meet the definition of a government business enterprise. INVESTMENTS IN GOVERNMENT BUSINESS ENTERPRISES, Section PS 3070, deals with accounting for when a government organization no longer meets the definition of a government business enterprise.

DISCLOSURE

.15 *Financial statements should disclose information to highlight the composition of a government's long-term debt as follows:*

(a) the gross amount outstanding;

(b) the amounts issued specifically on behalf of government business enterprises and reported in accordance with paragraph PS 3230.10*;*

(c) the net amount reported on the consolidated statement of financial position;

(d) the gross interest paid or payable for the period relating to the debt described in (a);

(e) the interest revenue for the period received or receivable from government business enterprises on debt issued specifically by the government on behalf of government business enterprises and reported in accordance with paragraph PS 3230.10*; and*

(f) the net amount of interest expense reported on the consolidated statement of operations. [APRIL 2000]

.15A FINANCIAL INSTRUMENTS, Section PS 3450, sets out other disclosures that may apply.

.16 The gross amount of long-term debt outstanding in paragraph PS 3230.15(a) and the gross amount of interest paid or payable in paragraph PS 3230.15(d) refer to the total debt of the government reporting entity excluding those amounts which have been borrowed directly by existing government business enterprises from sources external to the government reporting entity, and the related interest.

.17 *Financial statements should disclose adequate information about the nature and terms of a government's long-term debt, as described in paragraph* PS 3230.15*(a), including:*

(a) interest rates;

(b) the existence of sinking fund and redemption provisions;

(c) an appropriate description of repayment dates and amounts and the nature of the repayment; and

(d) any amounts payable on demand. [APRIL 2000]

.18 *Financial statements should disclose the aggregate amount of payments estimated to be required in each of the next five years and thereafter to meet sinking fund or retirement provisions for the debt disclosed in accordance with paragraph* PS 3230.15*(a), as well as the amounts to be recovered in each of those years and thereafter from government business enterprises in relation to the debt disclosed in accordance with paragraph PS 3230.15(b).* [APRIL 2000]

.19 The interest expense disclosed would include the amortization of long-term debt discount or premium and issue expenses.

.20 Disclosure of a government's total interest expense for the period provides one important element for assessing the extent to which revenues of the accounting period were applied to debt charges as compared to operating or program expenses. Trend analysis of this comparison serves to highlight whether a government is living within its means and whether program spending is being affected as a result of debt charges.

.21 The level of detail disclosed by governments should reflect the highly aggregated nature of financial statements. In deciding the level of detail to disclose, governments should consider the usefulness of the information to the readers in assessing the nature of, the costs associated with, and the cash requirements related to, the government's long-term debt obligations.

.22 *When a government holds its own securities at the end of the accounting period, including securities derecognized in accordance with FINANCIAL INSTRUMENTS, paragraphs* PS 3450.042-*.051, the following should be disclosed:*

(a) the gross amount of the long-term debt classes to which the securities relate; and

(b) the amount of the government's own securities purchased but not cancelled. [APRIL 2012]

(Paragraph PS 3230.23 deleted)

.24 *If any of the liabilities are secured, they should be stated separately and the fact that they are secured should be indicated. Where assets of a government are pledged as security against liabilities, the nature and, where practicable, the carrying value of such assets should be disclosed.* [MARCH 1997]

.25 *The details of any defaults of the government in principal, interest, sinking fund or redemption provisions with respect to any outstanding obligation should be disclosed.* [MARCH 1997]

Footnotes

1. The term "financial statements" refers to the summary financial statements published by a government that report on the financial position and changes in financial position of the government reporting entity.

2. External restrictions are defined in RESTRICTED ASSETS AND REVENUES, paragraph PS 3100.04(a).

3. GOVERNMENT REPORTING ENTITY, paragraph PS 1300.31, states that one of the factors in assessing if a government business enterprise meets the financial sustainability criterion inherent in the definition of a government business enterprise is whether the organization has in place "realistic and specific plans that show how it expects to be able to maintain its operations and meet its liabilities in the future."

SECTION PS 3250
retirement benefits



TABLE OF CONTENTS

	Paragraph
Purpose and scope	.001-.014
The objectives of funding and accounting	.008-.010
Defined benefit and defined contribution plans	.011-.014
Defined benefit plans	.015-.094
Liability and expense	.015-.021
Actuarial cost methods	.022-.032
Asset valuation	.033-.038
Measurement date	.039
Actuarial assumptions	.040-.049
Limit on the carrying amount of an accrued benefit asset	.050-.059
Actuarial gains and losses	.060-.062
Prior period service costs arising from plan amendments	.063-.072
Temporary deviation from the benefit plan	.073
Plan settlements and curtailments	.074-.078
Joint defined benefit plans	.079-.082
Disclosure	.083-.094

Defined contribution plans	.095-.104
Liability and expense	.096-.099
Disclosure	.100-.104
Multiemployer and multiple-employer benefit plans	.105-.114
Multiemployer plans	.105-.111
Multiple-employer plans	.112-.114
Transitional provisions	.115-.117
Timing of actuarial valuations	.118-.119
Glossary	Gloss
Limit on accrued benefit asset	Appendix A
Illustrative examples	Appendix B

PURPOSE AND SCOPE

.001 This Section establishes standards on how to account for and report obligations for employee retirement benefits in government financial statements. Other employee future benefits are specifically dealt with in POST-EMPLOYMENT BENEFITS, COMPENSATED ABSENCES AND TERMINATION BENEFITS, Section PS 3255.

.002 In this Section, terms that appear in **bold type** are defined in the glossary of terms.

.003 Obligations for **retirement benefits** result from a promise by a government to provide these benefits to employees because of retirement in return for their services. Pensions and other retirement benefits, such as extended health care and life insurance benefits, are a form of compensation offered for services rendered and accrue over the years employees render those services. The fundamental accounting task is to determine the amount of the obligation for retirement benefits to attribute to each period of employee service. Determining such amounts involves not only accounting for past transactions and events; it also requires forecasts of future events, such as inflation, investment returns, medical costs and employee turnover and mortality.

.004 If employees and/or retirees are covered by more than one **retirement benefit plan**, then a government needs to determine its obligation separately for each plan.

.005 The standards in this Section are based on the accounting framework recommended in FINANCIAL STATEMENT OBJECTIVES, Section PS 1100, and FINANCIAL STATEMENT PRESENTATION, Section PS 1201. That framework emphasizes the need to account for all liabilities incurred by a government to help legislators, taxpayers, investors and other users of **financial statements** assess: a government's future cash requirements from taxes and other revenues; its ability to meet financial obligations, both short-term and long-term; and its ability to maintain current services and finance new programs. Such assessments are essential when making financial decisions in government and when evaluating those decisions.

.006 Accounting for all of the retirement benefits incurred by governments is particularly important because many of those governments have accumulated significant liabilities. Many governments have chosen not to set aside funds to meet retirement benefit payments when they become due. Where those liabilities have not been

recorded, financial statements do not adequately provide all of the information needed by users to help them assess a government's financial position and results of operations. It is important that financial statements account for a government's liabilities for all retirement benefits to show clearly the extent to which these obligations are to be paid from cash to be raised from future tax and other revenue sources.

.007 The basis for determining obligations for retirement benefits set out in this Section is also appropriate for determining a government's contractual obligations arising from guarantees or commitments to employee retirement benefit plans of other public sector organizations that are not part of the government reporting entity. Such obligations exist, for example, when a provincial government agrees to guarantee defined retirement benefits for employees of local school boards, agrees to guarantee a minimum rate of return on retirement benefit fund assets, or agrees to provide a significant portion of the funds required by a plan sponsor. A careful reading and evaluation of such agreements is necessary to determine the substance of the obligation and whether a **liability**, **contractual obligation** or **contingency** exists that would be reported in a government's financial statements.

The objectives of funding and accounting

.008 Determining whether a retirement benefit plan should be funded and the amount to be funded each period is a financial management matter. The funding objective is to determine an acceptable policy for financing the estimated ultimate cost of a benefit plan. An **actuarial valuation for funding purposes** is performed to calculate the contributions required to secure the benefits promised.

.009 The accounting objective is to measure and report the obligation for employee retirement benefits and to attribute the costs of those benefits to the periods in which the related services are rendered. To meet that objective, a method is needed to determine the amount of the obligation for retirement benefits outstanding, which represents the liability at the financial statement date, and the value of the benefits employees earned during the period, which represents the expense of that period. Accordingly, it is necessary to develop accounting estimates of liabilities for retirement benefits and expenses using an **actuarial cost method** and **actuarial assumptions** that ensure essential information required for fair presentation of financial condition and results of operations can be reported in government financial statements.

.010 Because the objectives of determining the most appropriate funding policy are not necessarily the same as those of determining the most appropriate accounting method, the liability for accounting purposes may not be the same as the amount due but not yet funded at the financial statement date according to the funding plan. In addition, the retirement benefit expense of the period for accounting purposes may not be the same as the contribution computed in the period for funding purposes.

Defined benefit and defined contribution plans

.011 Two types of benefit plans are addressed in this Section — **defined benefit plans** and **defined contribution plans**. A defined benefit plan is one that specifies either the benefits to be received by employees after retirement or the method for determining those benefits. Generally, the amount and value of the benefits to be paid depend on a number of factors and events. These include how long the employee and any survivors live, how many years of service the employee renders, and the employee's compensation and retirement age. When a government provides benefits under a defined benefit plan, it is at risk with respect to the amount of the benefit that each employee will receive (actuarial risk) and with respect to the investment returns on any assets set aside to pay for the cost of these benefits (investment risk).

.012 When a government provides benefits under a defined contribution plan, it does not assume the actuarial and investment risks inherent in a defined benefit plan. A defined contribution plan (or money purchase plan) is one in which a government's contributions in respect of services rendered by employees are specified. The government is required by the plan to make a specific fixed contribution each period. If that contribution is made, no additional government contributions are required now or in the future for the related service. The employees are at risk. This is generally because the amount of the benefit that will be payable to an employee is dependent upon the funds accumulated for each employee's account and the investment earnings on the accumulated funds.

.013 Because benefit plans are often complex, careful analysis and professional judgment are needed to determine whether the substance of a particular plan makes it a defined benefit or a defined contribution plan.

.014 In some circumstances, a benefit plan may include both defined benefit and defined contribution promises. The plan, for example, may guarantee a basic defined retirement benefit and state that additional benefits, such as inflation protection, will be provided on a defined contribution basis. In such circumstances, a government would determine its obligation for the defined benefit component of the plan as a defined benefit plan and the defined contribution component of the plan as a defined contribution plan. Once the type(s) of promise is identified, the accounting and reporting principles in this Section would be followed accordingly.

DEFINED BENEFIT PENSION PLANS

Liability and expense

.015 Obligations for retirement benefits result from a promise by a government to provide retirement benefits to employees because of retirement in return for their services. The obligations arise as employees render services. Therefore, as employees render services, the value of the retirement benefits attributed to those services would be recorded as a liability and expense as are other forms of current compensation.

.016 *The statement of financial position should report the retirement benefit liability and the statement of operations should report the expenses for retirement benefits on the basis of the value of the benefits attributed to employee service to the financial statement date.* [SEPT. 2001]

.017 The components of the **retirement benefit liability** are:

(a) **accrued benefit obligation** including the effects of plan amendments, settlements and curtailments;

(b) **plan assets**, if any; and

(c) unamortized **actuarial gains and losses**.

.018 The cost of retirement benefits promised during the period is comprised of the **retirement benefits expense**, and the **retirement benefits interest expense**.

.019 The components of the retirement benefits expense are:

(a) **current period benefit cost**;

(b) cost of plan amendments incurred during the period;

(c) net actuarial gains or losses recognized in the determination of the cost of a plan amendment in accordance with paragraphs PS 3250.068 and PS 3250.071;

(d) gains and losses arising from plan settlements and curtailments incurred during the period;

(e) amortization of actuarial gains and losses;

(f) the amount recognized as a result of a temporary deviation from the plan, determined in accordance with paragraph PS 3250.073;

(g) the change in a valuation allowance against the carrying amount of an **accrued benefit asset**, determined in accordance with paragraph PS 3250.050; less

(h) employee contributions made during the period.

.020 The retirement benefits interest expense is the net of:

(a) the interest cost on the accrued benefit obligation determined by applying the discount rate determined at the beginning of the period in accordance with paragraph PS 3250.044 to the average value of the accrued benefit obligation for the period; and

(b) the expected return on plan assets for a defined benefit plan, determined by applying the assumed rate of return on plan assets to the average market-related value of assets for the period.

.021 The retirement benefits expense and the retirement benefits interest expense would be disclosed separately in the notes to the financial statements. A separate disclosure is needed to ensure that the amount reported as the retirement benefit expense is not affected by the purely financial decision of a government to fund or not fund the plan.

Actuarial cost methods

.022 Accounting for retirement benefits on the basis of employee services reflects the fact that there is no obligation for an employee when hired and that an obligation for retirement benefits exists as the employee renders service. The accounting task is to determine how to attribute the cost of the total retirement benefits promised to each period of employee service.

.023 For defined benefit plans, there are two main groups of actuarial cost methods. They are **level cost methods** and **accrued benefit methods**. Under the level cost methods, retirement benefit expenses are computed in such a manner as to produce a total current period benefit cost that remains constant, either in absolute dollars or as a percentage of salary, throughout an employee's service life. However, level cost methods are not recommended for accounting purposes because they do not reflect the cost of benefits earned by employees to the financial statement date.

.024 Under the accrued benefit methods, a distinct unit of retirement benefit is associated with each year of employee service rendered to the financial statement date. The actuarial present value of that unit of benefit is computed separately for the period during which it accrued. These methods are recommended because they reflect more directly the cost of retirement benefits earned by employees to the financial statement date.

.025 *An accrued benefit method should be used to attribute the cost of retirement benefits to the periods of employee service.* [SEPT. 2001]

.026 For certain **flat benefit retirement plans**, benefits vary only with periods of service rendered. For those plans, future salary and wage changes do not enter into the determination of the cost of retirement benefits earned to the financial statement date. For other defined benefit plans, such as **final pay retirement plans**, future salary and wage changes need to be incorporated into the cost of retirement benefits earned to the financial statement date because the benefit promise is based on future salary and wage levels. To estimate those levels, forecasts are needed of future inflation rates and of future salary increases. Similarly, for retirement medical plans, forecasts are needed of medical inflation rates.

.027 Accounting for the effect of future salary and wage changes ensures consistency when determining the present value of the cost of the retirement benefits earned to the financial statement date, i.e., the accrued benefit obligation. Because the discount rate used to determine that obligation includes an inflation component, for consistency the amount of the retirement benefits to be discounted must also include an inflation component. If only the discount rate used to determine the obligation includes an inflation component, then the accrued benefit obligation and expense would be understated significantly.

.028 One accrued benefit method that incorporates the effect of future salary and wage changes and attributes the value of retirement benefits to the years of employee service is the **projected benefit method prorated on services**. Under this method, generally an equal portion of the total estimated benefit, with salary projection for final pay plans and projection of medical inflation for retirement medical plans, is attributed to each year of service. The actuarial present value of the accrued retirement benefits is derived after the benefits are attributed to the years of service up to the financial statement date.

.029 *The projected benefit method prorated on services should be used to attribute the cost of retirement benefits to the periods of employee service.* [SEPT. 2001]

.030 When a retirement plan provides benefits that accrue in a non-uniform manner, the projected benefit method prorated on services may need to be adjusted to reflect the manner in which retirement benefits are earned by employees. For example, a pension plan formula may state that the pension benefit accrues at one percent of salary for the first 15 years and at two percent of salary for the final 20 years. In this circumstance, the prorating of the total estimated benefit to each accounting period would be adjusted to reflect the rates at which pension benefits are earned in that 35-year period.

.031 In some retirement plans, benefits promised in a contractual agreement or in legislation include inflation protection for current and future retirees and for former employees who have **vested** retirement benefits. For those plans, it is necessary to incorporate the impact of inflation protection in the determination of the cost of retirement benefits earned to the financial statement date.

.032 In other retirement plans, regular benefit increases for inflation protection may be provided even when such protection is not promised in a contractual agreement or in legislation. For those plans, careful analysis and professional judgment are needed to determine the substance of a government's obligation. If a regular pattern of benefit increases can be established over a reasonable period, it may be appropriate to incorporate the cost of such inflation protection in the cost of retirement benefits earned to the financial statement date and reported as an accrued benefit obligation.

Asset valuation

.033 The periodic valuation of plan assets is important because, to determine its retirement benefit liability and expense, a government needs to value the assets set aside for the purpose of meeting benefit payments.

.034 Most government plans require contributions from the employees as well as from the sponsoring government. Some governments place those contributions in a separate fund, which invests them in marketable assets. Those contributions and earnings are used to meet benefit payments to current and future retirees.

.035 When determining a government's retirement benefit liability and expense, plan assets would be valued at market-related values. Under this method, plan assets are recorded at market value or they are adjusted to market value over a period not to exceed five years. Values adjusted to market closely approximate current economic value in a manner that can minimize short-term fluctuations. Market-related values would be used because they are objective and verifiable. Once a basis of valuation is chosen it would be applied consistently.

.036 For some assets, such as real estate investments or non-marketable securities, market values are not readily available. For such assets, a method that approximates market can be used. For example, independent appraisals could be obtained, market values of similar properties could be reviewed, or future expected cash flows discounted at a market rate could be determined.

.037 *For a defined benefit plan, plan assets should be valued at market-related values.* [SEPT. 2001]

.038 In some cases governments issue non-marketable securities to their benefit funds on the condition that those securities are held in the fund to maturity. Market-related values for these assets may not be readily determinable. In such cases, non-marketable securities can be valued at cost.

Measurement date

.039 For a defined benefit plan, the plan assets and the accrued benefit obligation would usually be measured at the date of the financial statements. As a practical matter, an earlier date may be used provided the government adopts this practice consistently from year to year and as long as no significant change relevant to the valuation of the plan occurs between the valuation date and the financial statement date.

Actuarial assumptions

.040 Accounting for retirement benefit obligations of defined benefit plans requires forecasts of future events, such as inflation rates, investment returns, interest rates, wage and salary increases, medical inflation and employee turnover and mortality. Such forecasts form the basis of actuarial assumptions.

.041 Each key actuarial assumption would be based on the government's best estimate of those future events that have an effect on the accrued benefit obligation. The assumptions would take into account the expected long-term experience of the plan and the short-term forecast. Such an approach ensures that the reported accrued benefit obligation and expense recognize the long-term nature of retirement benefit promises as well as the experience of the plan expected in the short term. Assumptions about the long-term future, however, are not to be unduly influenced by the experience expected in the short term. At each actuarial valuation, assumptions need to be reassessed; they would be revised if expectations about the future change. All assumptions are based on the presumption that the plan will continue in effect in the absence of evidence to the contrary.

.042 *Actuarial assumptions should be based on the government's best estimates of expected long-term experience and short-term forecasts.* [SEPT. 2001]

.043 One commonly used approach that meets this standard is the use of streamed rate assumptions. Under the streamed rate approach, the short-term forecast of fund asset earnings, for example, would reflect the rates of return that assets currently held in the fund will earn until their maturity. As those assets mature, assumptions about their expected earnings on reinvestment would move to the expected long-term rate. Similarly, there would be streamed rate assumptions for salary increases.

.044 The actuarial assumptions underlying the valuation of the retirement benefit liability and expense would be internally consistent. For example, when a government determines its discount rates by reference to its plan asset earnings, the assumptions used to determine the short-term forecast incorporated in the discount rates would be consistent with the short-term forecast of rates of return on assets currently held in the fund. When a government determines its discount rates by reference to its cost of borrowing, the assumptions used to determine the short-term forecast incorporated in the discount rates would be consistent with the specific rates of interest and the periods committed to by the government on the amounts borrowed.

.045 *Actuarial assumptions should be internally consistent.* [SEPT. 2001]

.046 Internally consistent assumptions about future inflation rates are particularly important because of the significant impact those rates have on the reported accrued benefit obligation and related expenses. The same assumptions about future inflation need to be used when forecasting future rates of return on fund assets, future costs of borrowing and future salary and wage increases, and when determining the appropriate discount rates. In addition, methods of developing actuarial assumptions need to be consistent over time.

.047 Measurement of the cost of future medical benefits requires assumptions about the level and frequency of future claims and the cost of meeting those claims. The level and frequency of claims are particularly sensitive to the age of employees (and their beneficiaries) and may be sensitive to other factors, such as gender and geographical location. A government estimates future medical costs on the basis of historical data about its own experience, supplemented when necessary by historical data from other entities, insurance enterprises, medical providers or other sources. Historical data is adjusted to reflect any differences in demographic mix of the population or when there is reliable evidence that historical trends will not continue.

.048 Certain medical claims may be covered by governmental programs under existing law or by other providers of health care benefits. Benefit coverage by governmental programs is assumed to continue as provided by the present law and by other providers pursuant to their present plans.

.049 When making assumptions about future events, a government would obtain expert assistance from internal or external sources. One source of expert assistance is the **actuary** carrying out the actuarial computations. Periodic assessments are needed to ensure that the assumptions continue to be relevant.

Limit on the carrying amount of an accrued benefit asset

.050 *An accrued benefit asset should be presented on a government's statement of financial position net of any valuation allowance. When a defined benefit plan gives rise to an accrued benefit asset, a government should recognize a valuation allowance for any excess of the adjusted benefit asset over the expected future benefit. A change in valuation allowance should be recognized in the statement of operations for the period in which the change occurs.* [SEPT. 2001]

.051 A government with a defined benefit plan may have an accrued benefit asset for accounting purposes. An accrued benefit asset arises when the government's total contributions to the plan, including interest earned thereon, are greater than the retirement benefit expense recognized since the start of the plan. Contributions reflect the funding objectives of the plan. The benefit expense reflects the accounting objectives and may differ for a number of reasons, including the fact that actuarial gains and losses are deferred and amortized in future periods.

.052 A government may benefit from an accrued benefit asset either by withdrawing surplus assets or by taking a contribution holiday or receiving a refund of contributions. The accrued benefit asset may become impaired when there is a plan surplus for accounting purposes that the government is not entitled to benefit from fully. For example, there may be a regulatory moratorium on pension surplus withdrawals or uncertainties as to a government's legal right to use a plan's accounting surplus.

.053 To determine the extent to which an accrued benefit asset may be impaired, the government first determines the **adjusted benefit asset**. The adjusted benefit asset is the accrued benefit asset less net unamortized actuarial losses (determined on a basis using market value of assets).

.054 The adjusted benefit asset is then compared to the **expected future benefit**. When the expected future benefit exceeds the adjusted benefit asset, the accrued benefit asset is not impaired and, accordingly, no valuation allowance is required. The chart included as Appendix A to this Section is intended to set out the relationship between the various defined terms.

.055 The objective of the standard in paragraph PS 3250.050 is to limit a government's accrued benefit asset to the amount it can realize in the future. The expected future benefit is a calculated amount representing the benefit a government expects to realize from a plan surplus. An expected future benefit includes any withdrawable surplus or reduction in future contributions.

.056 A government determines its expected future benefit as the sum of:

(a) the present value of its expected future accruals for service for the current number of active employees, less the present value of required employee contributions and minimum contributions the government is required to make regardless of any surplus; and

(b) the amount of the plan surplus that can be withdrawn in accordance with the existing plan and any applicable laws and regulations.

.057 A government's expected future accruals for service for the current number of active employees are determined on a basis consistent with that used to determine its accrued benefit obligation. These expected future accruals for service, less required employee contributions and minimum contributions the government is required to make regardless of any surplus, are then discounted back to the current period to determine the present value. The interest rate used to calculate this present value is the expected rate of return on plan assets used to determine the benefit expense in the period.

.058 When administration expenses are paid by the plan and included in the normal cost calculation, a best estimate of the future administration expense is included in the expected future accruals for service. When administration expenses are paid by the plan and not included in the normal cost calculation, the rate of return on plan assets is adjusted to reflect the deduction of the administrative expenses.

.059 A key factor in determining a government's expected future benefit from a defined benefit plan with a plan surplus for accounting purposes is the ability of the government to withdraw assets from the plan. The expected future benefit includes amounts to which a government has a legally enforceable right of withdrawal. It excludes any withdrawable plan surplus a government is currently required, or intends, to allocate to employees. A government may not anticipate obtaining a legally enforceable right to withdraw a portion of a plan surplus to which it is not currently entitled, whether on the basis of precedent or otherwise. Accordingly, when withdrawal of plan surplus requires the approval of employees or an appropriate regulatory authority or a court of law, a government excludes any amount subject to this restriction from its expected future benefit until such approval has been obtained. A change in the allocation of surplus between a government and its employees is incorporated into the calculation of the expected future benefit only when it has been agreed to and, when required, approved by the appropriate regulatory authorities.

Actuarial gains and losses

.060 The periodic actuarial valuation of a government's obligation for retirement benefits will usually determine that adjustments are required due to experience different from that assumed or to changes in actuarial assumptions. Adjustments are needed when the actual experience of the benefit plan is different than that expected. Adjustments due to changes in actuarial assumptions are needed when a government believes revised assumptions are necessary to reflect a relatively permanent change in expected experience or to reflect new information. Adjustments are inevitable because the actuarial valuation requires ongoing forecasts of uncertain future events.

.061 Actuarial gains and losses would be amortized over a reasonable future period because of their tentative nature and because further adjustments will likely be required in the future. A reasonable future period is the **expected average remaining service life of the related employee group**. Amortization may commence in the period following the determination of the adjustment. Actuarial gains and losses would be determined on a market value basis or a basis adjusted to market value, consistent with paragraph PS 3250.035.

.062 *Except in the circumstances in paragraph* PS 3250.068, PS 3250.071 *and* PS 3250.078, *actuarial gains and losses should be amortized to the liability or asset and the related expense in a systematic and rational manner over the expected average remaining service life of the related employee group.* [SEPT. 2001]

Prior period service costs arising from plan amendments

.063 A plan amendment occurs when a benefit plan is changed or initiated. In such circumstances, retroactive credit may be given to employees for services rendered previously and, as a result, **prior period service costs** are incurred. For example, if the benefit formula is changed from one percent to two percent of final pay per year of service, the extra one percent may be credited to employees for years of service prior to the change.

.064 Plan amendments include the inception of a new plan that grants retroactive credit for past service, an increase in benefits related to past service for active employees, or an increase in benefits for former employees already retired.

.065 The cost of plan amendments related to prior period employee services would be accounted for as an expense in the period of the plan amendment. This method is recommended because it ensures that, when a government provides retroactive credit to employees for past services, legislators, taxpayers and investors are provided a full accounting of the cost of that decision in the period the decision is made. Such an accounting

ensures that the effect of that decision, as it relates to the cost of prior period services, is recognized as an expense in the period a liability is incurred. It also provides information needed to assess the extent to which future revenues are required by a government to pay for past transactions because all retirement benefit liabilities are accounted for in the financial statements.

.066 *The cost of plan amendments related to prior period employee services should be accounted for in the period of the plan amendment.* [SEPT. 2001]

.067 While all plan amendments related to prior period employee services are accounted for in the period of the plan amendment, the existence of the plan amendment may affect the recognition of actuarial gains, as described in paragraph PS 3250.068.

.068 *In the period of a plan amendment related to prior period employee services that results in an increase in the accrued benefit obligation, if net unamortized actuarial gains exist, these should be recognized immediately, to a maximum of the prior period service cost, and offset against the prior period service cost in the statement of operations, with separate disclosure in the notes.* [SEPT. 2001]

.069 When a government makes a plan amendment related to prior period employee services and has net unamortized actuarial gains, it would recognize these net unamortized actuarial gains immediately in the statement of operations, to a maximum of the prior period service cost. Recognition would be applied first to the oldest net unamortized actuarial gains within a plan. These actuarial gains would be deducted from the prior period service cost in the statement of operations. The notes to the financial statements would disclose this information.

.070 A plan amendment may decrease, rather than increase, a government's accrued benefit obligation. A decrease in the accrued benefit obligation would be accounted for immediately in the period of the plan amendment. The existence of the plan amendment may affect the recognition of actuarial losses as described in paragraph PS 3250.071.

.071 *In the period of a plan amendment related to prior period employee services that results in a decrease in the accrued benefit obligation, if net unamortized actuarial losses exist, these should be recognized immediately, to a maximum of the decrease in the accrued benefit obligation. The net amount would be recognized in the statement of operations, with separate disclosure in the notes.* [SEPT. 2001]

.072 In the period of a plan amendment that decreases the accrued benefit obligation any net unamortized actuarial losses would be recognized immediately to a maximum of the decrease in the accrued benefit obligation. Recognition would be applied first to the oldest unamortized net actuarial losses within a plan.

Temporary deviation from the benefit plan

.073 A government may decide to deviate temporarily from the provisions of a benefit plan to increase or decrease the government's share of the benefit costs incurred in the current period or past periods. For example, a government may grant an employee contribution holiday as a temporary deviation from the normal terms of the benefit plan. A government would look to the substance of the temporary deviation to determine the most appropriate accounting.

Plan settlements and curtailments

.074 A **plan settlement** and a partial plan settlement consist of the discharge, in whole or in part, of a government's obligation existing under a retirement benefit plan. They are irrevocable events by which a government or a plan is relieved of the primary obligation to pay all or some of the benefits promised and is relieved of significant risks in relation to the obligation or the assets used to make settlement. When a full plan settlement occurs, a future actuarial valuation is not required because the government no longer has an obligation related to that plan. Because the cost of discharging the obligation may differ from the related liability recognized previously, a gain or loss may arise.

.075 A **plan curtailment** is an event that reduces significantly the expected years of future service of present employees or eliminates, for a significant number of employees, the accrual of defined benefits for some or all of their future services. Plan curtailments include termination of a significant number of employees earlier than expected which may involve eliminating a government organization or program; they also include suspension of a plan so that a significant number of employees do not earn additional defined benefits for future services. When a plan curtailment occurs, future actuarial valuations are required because, even though the government's future obligations have been reduced, the government continues to have an obligation related to that plan.

.076 Generally, the act of settling or curtailing a retirement plan will result in a gain or loss because the actual cost of the settlement or curtailment will differ from the obligation recorded previously. Gains and losses determined upon a plan settlement or curtailment would be accounted for in the statement of operations in the period of the settlement or curtailment. This approach is recommended for plan settlements because the amount of the liability is known, it relates to services previously provided and it has been settled. Similarly, if a government settles only a part of a retirement plan obligation, the related gains and losses would be recognized immediately. This approach is also recommended for plan curtailments because the retirement benefit obligation is known with greater certainty, it relates to past employee services and the employees might no longer work for the government. For plan curtailments, the portion of the total gains and losses that would be accounted for would relate to the employees affected by the curtailment.

.077 In some circumstances, there will be unamortized actuarial gains and losses incurred prior to the plan settlement or curtailment. The net unamortized balances related to the obligation settled or to the employees affected by the curtailment would be recognized in the period of settlement or curtailment, and is included as part of the gain or loss arising on settlement or curtailment.

.078 *Gains and losses determined upon a plan settlement or curtailment should be accounted for in the period of the settlement or curtailment.* [SEPT. 2001]

Joint defined benefit plans

.079 Governments may participate jointly in defined benefit plans where the government shares the risks and rewards jointly with plan participants, represented by a sponsor or sponsors. **Joint defined benefit plans** are governed by a formal agreement between the sponsors, which establishes that the sponsors have shared control over the plan. A governing board is generally appointed by the joint sponsors with equal representation and a mutually agreed-upon chair.

.080 A government would consider the characteristics of the plan to determine whether it meets the definition of a joint defined benefit plan. In a joint defined benefit plan, funding contributions are shared mutually between the government and the plan members. The sponsors have control over decisions related to the administration of the plan and the level of benefits and contributions on an ongoing basis based on the

terms of the contractual agreement. The sponsors share, on an equitable basis, the significant risks associated with the benefit plan. Risk would not be considered to be equitably shared in an arrangement where the government and the joint sponsors fund the plan equally but where the government retains the full risk of the accrued benefit obligation. If the government retains the residual risks it is unlikely that the plan meets the definition of a joint defined benefit plan.

.081 *When a government participates in a joint defined benefit plan, the government's risk is limited to its portion of the plan. The government should account for its portion of the plan in accordance with the standards for defined benefit plans.* [SEPT. 2001]

.082 A government may convert an existing defined benefit plan for which it is the sole sponsor to a joint defined benefit plan where the risks and benefits are shared. When converting to a joint plan, a government would consider whether there are any special accounting issues that arise, including whether the predecessor plan has been settled or partially settled and/or curtailed or partially curtailed. In assessing such issues a government would have regard to its specific circumstances and the terms of the joint defined benefit plan.

Disclosure

.083 The notes and schedules integral to the financial statements would disclose the methods and judgments applied in accounting for accrued benefit obligations and expenses. Full disclosure is particularly important for retirement obligations because the measurements depend heavily upon judgments rather than objective evidence.

.084 *Financial statements should disclose:*

(a) a general description of retirement benefit plans, benefit formulae and funding policy, including a description of significant changes to retirement benefit plans during the period;

(b) the accrued benefit obligation at the end of the period, as determined by the actuarial valuation;

(c) the market value of plan assets at the beginning and the end of the period and, if different, the market-related value of plan assets at the beginning and the end of the period;

(d) the amount of retirement benefit liability or accrued benefit asset at the end of the period, indicating separately the amount of any valuation allowance determined in accordance with paragraph PS 3250.050.

(e) unamortized actuarial gains and losses and the periods of amortization;

(f) current period benefit cost;

(g) cost of plan amendments incurred during the period;

(h) net actuarial gains or losses recognized in the determination of the cost of plan amendments in accordance with paragraphs PS 3250.068 *and* PS 3250.071*;*

(i) other gains and losses on accrued benefit obligations arising during the period;

(j) other gains and losses on plan assets arising during the period;

(k) gains and losses arising from plan settlements and curtailments incurred during the period;

(l) amortization of actuarial gains and losses reflected in the current year expense;

(m) the amount recognized as a result of a temporary deviation from the plan, determined in accordance with paragraph PS 3250.073*;*

(n) the change in a valuation allowance determined in accordance with paragraph PS 3250.050*;*

(o) the amount of contributions by employees during the period;

(p) the components of the retirement benefits interest expense for the period;

(q) the amount of contributions by the government during the period;

(r) the amount of benefits paid during the period;

(s) the expected return and actual return on plan assets during the period;

(t) assumptions about long-term inflation rates, expected rate of return on plan assets, assumed health care cost trends, rate of compensation increase (for pay-related plans) and discount rate; and

(u) the date of the most recent actuarial valuation performed for accounting purposes. [SEPT. 2001]

.085 Some of this disclosure information may be presented in reconciliations of the beginning and ending balances of the accrued benefit obligation and plan assets for the period, taking into account any unamortized actuarial gains or losses existing at the financial statement date.

.086 A reconciliation of the beginning and ending balances of the accrued benefit obligation would include the items disclosed in accordance with paragraph PS 3250.084(b), (i), (k) and (o)-(r). A reconciliation of the beginning and ending balance of plan assets for the period would include the items disclosed in accordance with paragraph PS 3250.084(c), (f)-(g), (j)-(k), (m), (o)-(p) and (r).

.087 *A government should provide these disclosures separately for plans that provide pension benefits and plans that provide retirement benefits other than pensions.* [SEPT. 2001]

.088 *A government that has aggregated disclosures for its defined benefit pension plans, or for its other defined benefit retirement plans, should provide the disclosures separately for the aggregate of plans with accrued benefit obligations in excess of plan assets.* [SEPT. 2001]

.089 The level of detail disclosed by governments would reflect the highly aggregated nature of financial statements. In deciding the level of detail to disclose, governments would consider the usefulness of the information to the reader in assessing the nature of, and the costs associated with, a government's retirement benefit plans. The level of disclosure would also consider the sensitivity of the information in relation to the government's financial position.

.090 The description of the significant benefit plans and benefit formulae might include the plan surplus or deficit at the end of the period, demographic information about the participants and whether the benefit obligation includes the cost of inflation protection. The description of the funding policy might include the

major types of plan assets and the basis of their valuation. The extent to which the fund holds securities of the sponsoring government would normally be disclosed.

.091 Governments are encouraged to provide additional disclosures about the significant actuarial assumptions underlying the reported amount of a government's accrued benefit obligation when the disclosures will enhance the financial statement users' understanding of that amount.

.092 A government may also choose to disclose a forecast of the cash required to pay its retirement benefit obligations in the short term, the medium term and the long term. If provided, such a forecast would include the amounts required in the next five years, and thereafter.

.093 *For joint defined benefit plans, in addition to the disclosures required in paragraphs* PS 3250.084 *government financial statements should disclose:*

(a) the significant accounting policies for joint plans;

(b) a description of the unique nature and terms of any joint plans;

(c) the government's share of the risks and benefits under the plans; and

(d) the total financial status of any joint plans. [SEPT. 2001]

.094 Users of government financial statements need an appreciation of the magnitude of the retirement benefit plans that governments jointly sponsor and the government's responsibility under the terms of any joint plans.

DEFINED CONTRIBUTION PLANS

.095 When a government establishes a defined contribution plan, it does not assume the actuarial and investment risks inherent in a defined benefit plan. The government typically agrees to contribute a certain amount in each period for services rendered by the employees and has no responsibility to make any further contributions. It is the employees who are at risk. This is generally because the amount of the benefit that will be payable to them is entirely dependent upon the amount of funds accumulated for each employee's account and the economic conditions prevailing at the retirement date (see paragraphs PS 3250.011-.014 for a further discussion of defined contribution plans).

Liability and expense

.096 For the most part, defined contribution plans do not present particular accounting problems. If the formula calls for government contributions on a regular predetermined basis and if those contributions have been made, then the expense recorded in the statement of operations is simply the required contribution of the accounting period. If the contributions have not been made as required, the retirement benefit expenses would include interest accrued during the period on any outstanding amounts payable to the fund. The liability for retirement benefits recorded in the statement of financial position would be the difference between the amount the government was required to contribute and the amount that was contributed to the financial statement date, including accumulated interest on any outstanding amounts payable to the fund at the financial statement date.

.097 *For defined contribution plans:*

(a) the liability for retirement benefits should be the difference between the amount a government was required to contribute and the amount that was contributed by the financial statement date including accumulated interest on any outstanding amounts payable to the fund at the financial statement date;

(b) the retirement benefit liability should be accounted for in the statement of financial position;

(c) the expense for retirement benefits should be the amount of required contributions provided for employees' services rendered in the period. Interest accrued during the period on any outstanding amounts payable to the fund should be accounted for as a retirement benefit interest expense; and

(d) the retirement benefit expense and the retirement benefit interest expense should be accounted for in the statement of operations. [SEPT. 2001]

.098 When a defined contribution plan is amended, a government may agree to make contributions in respect of past service. The cost of current and expected future years' contributions related to a past service plan amendment is recognized immediately in the period the decision is made to amend the plan.

.099 *For a defined contribution plan, the cost of current and expected future years' contributions related to a past service plan amendment should be accounted for in the period of the plan amendment.* [SEPT. 2001]

Disclosure

.100 *For defined contribution plans, financial statements should disclose:*

(a) a general description of benefit plans, contribution formulae and funding policy;

(b) the expense recognized for the period; and

(c) a description of significant changes to benefit plans during the period. [SEPT. 2001]

.101 The description of the significant retirement benefit plans and contribution formulae might include demographic information about the participants.

.102 The description of the funding policy might also include: the employee and government contributions during the accounting period; the major types of plan assets, the total amounts and the basis of their valuation; and the extent to which the fund holds securities of the sponsoring government.

.103 The description of significant changes to the plan or to the financing of the plan might also include which employee group(s) is affected and a description of the impact of such changes on current and future retirement benefit liabilities and related expenses.

.104 The level of detail disclosed by governments would reflect the highly aggregated nature of financial statements. In deciding the level of detail to disclose, governments would consider the usefulness of the information to the reader in assessing the nature of, and the costs associated with, a government's retirement benefit plans. The level of disclosure would also consider the sensitivity of the information in relation to the government's financial position.

MULTIEMPLOYER AND MULTIPLE-EMPLOYER BENEFIT PLANS

Multiemployer plans

.105 A **multiemployer plan** is a defined benefit plan to which two or more governments or government organizations contribute, usually pursuant to legislation or one or more collective bargaining agreements. The main distinguishing characteristic of a multiemployer plan is that the contributions by one participating entity are not segregated in a separate account or restricted to provide benefits only to employees of the entity and thus may be used to provide benefits to employees of all participating entities.

.106 The federal and most provincial governments sponsor defined benefit plans in which many public sector organizations participate. Many local governments participate in such multiemployer plans. When benefits are provided to employees through a multiemployer plan, the amount for which an individual government is obligated under the plan may not be quantified. Generally, a contribution rate is established for each period to ensure that the plan assets are adequate to cover the plan's future benefit payments.

.107 When a government sponsors a defined benefit multiemployer retirement benefit plan, it has the responsibility to ensure that the defined benefits promised to employees are met. In that circumstance the sponsoring government is at risk for future experience gains or losses and would account for its related obligation for the entire multiemployer plan as a defined benefit plan.

.108 *When a government sponsors a defined benefit multiemployer retirement plan, the government should follow the standards for defined benefit plans in accounting for its obligation for the plan.* [SEPT. 2001]

.109 Although a multiemployer plan may have the characteristics of a defined benefit plan, sufficient information to follow the standards for defined benefit plans is normally not available for each participating employer other than the sponsoring government. For this reason, a multiemployer plan is accounted for by each participating government following the standards for defined contribution plans.

.110 *When benefits are provided to employees through a multiemployer retirement benefit plan, each entity participating in the plan, other than the sponsoring government, should follow the standards for defined contribution plans.* [SEPT. 2001]

.111 *The government should disclose any available information about any surplus or deficit in a multiemployer plan, the basis used to determine the surplus or deficit and the implications, if any, for the government.* [SEPT. 2001]

Multiple-employer plans

.112 A **multiple-employer plan** is a defined benefit plan maintained by more than one entity that is not a multiemployer plan. In contrast to multiemployer plans, a multiple-employer plan maintains separate accounts for each entity so that contributions provide benefits only for employees of the contributing entity. In addition, multiple-employer plans are intended to allow participating entities, commonly in the same industry, to pool their plan assets for investment purposes and to reduce the cost of plan administration. Multiple-employer plans may have features that allow participating entities to have different benefit formulae, with the entity's contributions to the plan based on the benefit formula selected by the entity.

.113 When benefits are provided to employees through a defined benefit multiple-employer plan, each government in the plan follows the standards on defined benefit plans and bases its accounting for plan assets on its proportionate interest in the assets of the multiple-employer plan.

.114 *When benefits are provided to employees through a defined benefit multiple-employer retirement plan, each entity in the plan should follow the standards for defined benefit plans.* [SEPT. 2001]

TRANSITIONAL PROVISIONS

.115 When implementing this Section, governments may have an initial unrecorded liability.

.116 The initial unrecorded liability would be accounted for as a change in accounting policy applied retroactively. This method is recommended because it ensures that all liabilities incurred to the financial statement date are accounted for in the statement of financial position. Such an accounting is needed to help users of financial statements assess the impact those liabilities may have on:

(a) a government's future cash requirements from revenues and other sources;

(b) a government's ability to meet its financial obligations, both short-term and long-term; and

(c) a government's ability to maintain the level and quality of its services and to finance new programs.

.117 *This Section should be accounted for as a change in accounting policy applied retroactively.* [SEPT. 2001]

TIMING OF ACTUARIAL VALUATIONS

.118 Most governments do not have full actuarial valuations performed annually because of the magnitude of the information gathering and processing required. **Actuarial valuations for accounting purposes** would generally be done once every three years because of the financial importance of retirement benefit obligations. They would be done as close to the related financial statement date as is practical. In the years between valuations, an extrapolation would be used to compute the expected accrued benefit obligation and related expenses. Each year the government reviews matters such as changes to the plan, the actuarial assumptions, occurrence of settlements and curtailments, changes to the employee group and the rate of return on plan assets, and determines whether such matters necessitate any adjustments to the extrapolations. When the effect of any change is significant, a new valuation may be necessary.

.119 In the period a government implements this Section, it would need to assess whether a new actuarial valuation of its retirement benefit obligations is needed. A new valuation would be needed, for example, if the prior one is not current or is not prepared in accordance with this Section.

GLOSSARY

An **accrued benefit asset** is the amount of any asset recognized on a government's statement of financial position in respect of employee retirement benefits before deducting any valuation allowance that may be required. It is the sum of the government's accumulated cash contributions less the sum of the current and prior years' benefit expenses (before any change in the valuation allowance).

An **accrued benefit obligation** is the value of retirement benefits attributed to services rendered by employees and former employees to the financial statement date.

Actuarial assumptions are made as to the occurrence of a future event that will affect retirement benefit costs and obligations. They include assumptions about such matters as mortality, withdrawal, disability and retirement and about changes in compensation, interest on obligations and investment earnings.

Actuarial cost methods are used to determine the cost of providing retirement benefits and to allocate that cost to specific time periods. The two main families of actuarial valuation methods are:

Accrued benefit methods (also known as unit credit or single premium actuarial cost methods) — Under these methods a distinct unit of retirement benefit is associated with each year of credited service and the actuarial present value of that unit of benefit is separately computed for the period during which it is presumed to have accrued. Salary projection, when appropriate, is required.

Projected benefit method prorated on services — Under this accrued benefit method, generally an equal portion of the total estimated benefit (i.e., with salary projection, when appropriate) is attributed to each year of service. The actuarial present value of the accrued retirement benefits is derived after the benefits are attributed to the years of service up to the date of determination.

Level cost methods — Under these methods the retirement benefit cost assigned to any period is either the same dollar amount or the same percentage of compensation as any other period, and is a portion of the cost of the total prospective benefits of an employee group, either in absolute dollars or as a percentage of salary. (Entry age, attained age and aggregate actuarial cost methods are included in this family of methods.)

Actuarial gains and losses are changes in the value of the accrued benefit obligation and the plan assets resulting from:

(a) experience different from that assumed; or

(b) changes in an actuarial assumption.

An **actuarial valuation for accounting purposes** is an assessment of the financial status of a benefit plan. It consists of the valuation of assets held by the plan and calculation of the actuarial present value of benefits to be paid under the plan. The valuation provides the information needed to determine the retirement benefit liability and related expenses in accordance with this Section.

An **actuarial valuation for funding purposes** is an assessment of the financial status of a benefit plan. It consists of the valuation of assets held to discharge the benefit liability and calculation of the actuarial present value of benefits to be paid under the plan. The valuation results in a calculation of the required future contributions and a determination of any gains or losses since the last valuation.

An **actuary** is a Fellow of the Canadian Institute of Actuaries.

An **adjusted benefit asset** is an accrued benefit asset less the amount, if any, by which the aggregate of any unamortized actuarial losses exceeds the aggregate of any unamortized actuarial gains.

A **contingency** is the result of an existing condition or situation involving uncertainty that will ultimately be resolved when one or more future events occur or fail to occur. Resolution of the uncertainty may confirm the acquisition of an asset or the reduction of a liability or the loss or impairment of an asset or the incurrence of a liability.

Contractual obligations are obligations of a government to others that will become liabilities when the terms of those contracts or agreements are met.

The **current period benefit cost** is the actuarial present value of benefits attributed to services rendered by employees in the period.

A **defined benefit plan** specifies either the benefits to be received by employees after retirement or the method for determining those benefits. The most commonly used defined benefit plans are:

Final pay plan — Bases benefits on an employee's length of service and compensation over a specified number of years (usually the years of an employee's highest earnings).

Flat benefit plan — Provides a specified benefit for each year of service rendered; the benefit earned in each period is usually fixed and determinable under the terms of the plan and the amount of benefits to be received varies only with the years of service rendered.

A **defined contribution plan** is one in which the employer's contributions are fixed, usually as a percentage of compensation, and allocated to specific individuals. The retirement benefit for each employee is the amount that can be provided at retirement based on the accumulated contributions made on that individual's behalf and investment earnings on those contributions.

The **expected average remaining service life (EARSL) of the related employee group** is the total number of years of future services expected to be rendered by that group divided by the number of employees in the group. The calculation of expected future services considers population decrements based on the actuarial assumptions but is not weighted by benefits or compensation.

The **expected future benefit** is a calculated amount representing the benefit a government expects to realize from a plan surplus. An expected future benefit includes any withdrawable surplus or reduction in future contributions. A government determines its expected future benefit as the sum of:

(a) the present value of its expected future accruals for service for the current number of active employees, less the present value of required employee contributions and minimum contributions the government is required to make regardless of any surplus; and

(b) the amount of the plan surplus that can be withdrawn in accordance with the existing plan and any applicable laws and regulations.

Financial statements are summary financial statements published by a government that report on the financial position and changes in financial position of the government reporting entity. Such statements present aggregated information and serve as a means by which a government demonstrates its accountability for the financial affairs and resources entrusted to it.

A **joint defined benefit plan** is a contractual arrangement between the government and another sponsor or sponsors representing plan participants that has all of the following characteristics:

(a) the sponsors co-operate toward achieving the significant clearly defined common goal of providing retirement benefits in exchange for services rendered by the employees;

(b) funding contributions are shared mutually between the government and the plan members, represented by the non-government sponsor;

(c) the sponsors share control of decisions related to the administration of the retirement benefit plan and to the level of benefits and contributions on an ongoing basis; and

(d) the significant risks associated with the retirement benefit plan are shared on an equitable basis between the government and the plan members, represented by the non-government sponsor.

The contractual arrangement establishes that the sponsors have shared control over the retirement benefit plan, and ensures that neither party is in a position to control the plan unilaterally. Nevertheless, overall, there must be an equitable relationship between the funding by the government of the retirement benefit plan, the extent of control it is able to exercise over the plan and the risks and benefits that accrue to the government from the plan.

Liabilities are present obligations of a government to others arising from past transactions or events, the settlement of which is expected to result in the future sacrifice of economic benefits.

A **multiemployer plan** is a defined benefit plan to which two or more governments or government organizations contribute, usually pursuant to legislation or one or more collective bargaining agreements. The main distinguishing characteristic of a multiemployer plan is that the contributions by one participating entity are not segregated in a separate account or restricted to provide benefits only to employees of the entity and, thus may be used to provide benefits to employees of all participating entities.

A **multiple-employer plan** is a defined benefit plan maintained by more than one entity that is not a multiemployer plan. In contrast to multiemployer plans, a multiple-employer plan maintains separate accounts for each entity so that contributions provide benefits only for employees of the contributing entity. In addition, multiple-employer plans are intended to allow participating entities, commonly in the same industry, to pool their plan assets for investment purposes and to reduce the cost of plan administration. Multiple-employer plans may have features that allow participating entities to have different benefit formulae, with the entity's contributions to the plan based on the benefit formula selected by the entity.

A **plan asset** is an asset segregated and restricted in a trust or other legal entity separate from the reporting government to provide for retirement benefits under the following conditions:

(a) the assets in the separate entity are to be used only to settle the related accrued benefit obligation, are not available to the government's own creditors, and either cannot be returned to the government or can be returned to the government only if the remaining assets of the trust are sufficient to meet the plan's obligations; and

(b) to the extent that sufficient assets are in the separate entity, the government will have no obligation to pay the related retirement benefits directly.

For purposes of this Section, plan assets do not include amounts held by the government and not yet paid into the trust or other legal entity.

A **plan curtailment** occurs when the expected years of future service to be rendered by the existing employee group are reduced significantly or when benefits will not be earned by employees for some or all future periods.

A **plan settlement** occurs when an employer legally discharges the obligation for accrued retirement benefits either by transferring assets directly to plan participants in exchange for their rights to retirement benefits or by purchasing annuity contracts in which a third party unconditionally undertakes to pay all accrued retirement benefits.

A **prior period service cost** is the increase in the accrued benefit obligation associated with past service benefit improvements.

The **retirement benefit expense** is the cost of the retirement benefits promised during the period in exchange for services rendered during the period.

The **retirement benefit interest expense** is the cost of financing an unfunded retirement benefit obligation during the period.

The **retirement benefit liability** is the amount of any liability recognized on a government's statement of financial position in respect of retirement benefits. It is the sum of the current and prior years' benefits expenses less the government's accumulated cash contributions.

A **retirement benefit plan** is any arrangement (contractual or otherwise) by which a program is established to provide retirement income and other benefits to employees and/or retirees.

Retirement benefits are benefits expected to be provided after retirement to employees and their beneficiaries. These benefits include pension income, health care benefits, life insurance, and other miscellaneous benefits provided to employees after retirement.

Vesting is the recognition of the employees' rights to receive retirement benefits that are no longer conditional on the employees remaining in the service of the employer.

APPENDIX A

Limit on accrued benefit asset



The carrying amount on the statement of financial position would be the accrued benefit asset of $30 less the valuation allowance of $7 for an amount of $23.

APPENDIX B

ILLUSTRATIVE EXAMPLES

The following examples have been prepared by CPA Canada staff to illustrate how the standards in Section PS 3250 might be implemented.

The examples are illustrative only and matters of principle relating to particular situations should be decided in the context of the Section. They are not intended to indicate preferred formats nor to prescribe standardized note disclosure, as variations in format and wording will be necessary to meet the requirements of differing circumstances.

For ease of presentation, selections are made from accounting alternatives permitted by the Section.

Example 1 — Defined benefit pension plan, assuming a separate pension fund is maintained

Example 2 — Defined benefit plan for retirement benefits other than pensions, assuming a separate fund is not maintained

Example 1 — Defined benefit pension plan, assuming a separate pension fund is maintained

The government sponsors contributory defined benefit pension plans for substantially all of its employees and for members of its Legislature. There are three main plans — the Public Service Plan, the Provincial Judges' Plan and the Elected Representatives' Plan. The Public Service and the Provincial Judges' plans provide for pensions equal to 1.5 percent of the average of the five highest years' salary for each year of service to a maximum of 35 years. The Elected Representatives' Plan provides for pensions equal to four percent of the average of five years' session indemnities for each year of service to a maximum of 15 years. The plans do not provide inflation protection. The average age of the 45,000 active employees is 42. There are 5,000 former employees who are entitled to deferred pension benefits and 11,000 retirees now receiving benefits.

Each year employees contribute seven percent of their salary to a separate pension fund and the government contributes an equal amount. While the government and employees are required to contribute equal amounts into the pension fund, the government retains the full risk of the accrued benefit obligation. The pension fund invests monies from the contributions in securities of organizations external to the government reporting entity as well as investing in some non-marketable bonds of the government.

At the beginning of fiscal year 20X1, an actuarial valuation of the government's employee pension obligations was done for accounting purposes using the projected benefit method prorated on services. The liability for pensions recorded in the statement of financial position was $400 million. For purposes of this example it is assumed that there were no unamortized actuarial gains or losses at that time.

Key actuarial assumptions used in the valuation were based on the government's best estimates. Those assumptions involve forecasts of expected future inflation rates, investment returns, wage and salary increases, and employee turnover and mortality. A second actuarial valuation for accounting purposes was performed at the end of fiscal year 20X3. During the second valuation, the actuarial assumptions included in the first one were reviewed and no changes were considered necessary.

During fiscal 20X4, a plan amendment was made to the Public Service Plan increasing the benefits from 1.5 percent to two percent of the average of the five highest years' salary for each year of service to a maximum of 35 years. The plan amendment was effective March 31, 20X4 and relates to both future and past services. The government is responsible for funding the pension liability of $25 million related to past services over the next 12 years. The increase in current period benefit costs due to rendering of service for fiscal 20X5 was $1.5 million.

	April 1, 20X0	March 31, 20X3
Accrued benefit obligation	$1.5 billion	$2.2 billion
Pension fund asset	$1.1 billion	$1.8 billion
Pension liability recorded in the statement of financial	$ .4 billion	$ .4 billion

position

	========	========
Expected average remaining service life of related employee groups (EARSL)		12 years
Plan amendment March 31, 20X4		$25,000
Expected current period benefit cost:		
20X1	$200 million	
20X2	$220 million	
20X3	$240 million	
20X4		$240 million
20X5		$250 million
20X5 related to plan amendment		$1.5 million
20X6		$260 million
Expected rates of return	8%	
Expected salary escalations	5%	
Expected inflation rates	3%	

The following amounts related to other pension experience incurred throughout the period:

($ millions)	20X1	20X2	20X3	20X4
Employee funding contributions	110	115	120	126
Government funding contributions:				
— related to current service	110	115	120	126
Benefit payments to retirees	105	109	115	119

Exhibit I — Interest during the year on the average pension liability outstanding during the year

($ thousands)	20X1	20X2	20X3	20X4
Interest on expected average accrued benefit obligation:				
Accrued benefit obligation —	1,500,000	1,718,800	1,971,744	2,200,000

opening balance (a)				
Add: Current period benefit cost (b)	100,000	110,000	120,000	120,000
Deduct: Benefit payments (b)	(52,500)	(54,500)	(57,500)	(59,500)
Average accrued benefit obligation	1,547,500	1,774,300	2,034,244	2,260,500
	=======	=======	=======	=======
Interest at 8% on average accrued benefit obligation	123,800	141,944	162,740	180,840
Expected earnings on average pension fund assets:				
Pension fund assets — opening balance (a)	1,100,000	1,417,600	1,598,048	1,800,000
Add: Employee and government funding contributions (b)	110,000	115,000	120,000	126,000
Deduct: Benefit payments (b)	(52,500)	(54,500)	(57,500)	(59,500)
Average pension fund assets	1,157,500	1,478,100	1,660,548	1,866,500
	=======	=======	=======	=======
Expected earnings on average pension fund assets at 8%	92,600	118,248	132,844	149,320
Total interest during the period on the average pension liability outstanding during the period (c)	31,200	23,696	29,896	31,520

(a) In the period of an actuarial valuation, the opening balance of the accrued benefit obligation is the actuarially determined amounts (opening balances 20X1 and 20X4). In the periods between valuations (20X2 and 20X3), the opening balance is equal to the expected closing balance for the previous year as determined in Exhibit II. The opening balance of pension fund assets is the actual amount reported in the financial records of the fund.

(b) Accrued, or assumed to take place, evenly throughout the year, therefore interest is accrued on one-half of the total.

(c) Interest during the year on average pension liability outstanding during the year = 8% of [(average accrued benefit obligation) – (average pension fund assets)].

Exhibit II — Expected closing balance of accrued benefit obligation

($ thousands)	20X1	20X2	20X3	20X4
Accrued benefit obligation — opening balance	1,500,000	1,718,800	1,971,744	2,200,000

Add: Current period benefit cost	200,000	220,000	240,000	240,000
Increase due to plan amendment	—	—	—	25,000
Interest accrued (Exhibit I)	123,800	141,944	162,740	180,840
Deduct: Benefit payments	(105,000)	(109,000)	(115,000)	(119,000)
Expected closing balance	1,718,800	1,971,744	2,259,484	2,526,840

Exhibit III — Expected closing balance of pension fund assets

($ thousands)	20X1	20X2	20X3	20X4
Pension fund assets — opening balance (actual)	1,100,000	1,417,600	1,598,048	1,800,000
Add: Employee and government funding and contributions	220,000	230,000	240,000	252,000
Expected earnings (Exhibit I)	92,600	118,248	132,844	149,320
Deduct: Benefit payments	(105,000)	(109,000)	(115,000)	(119,000)
Expected closing balance	1,307,600	1,656,848	1,855,892	2,082,320

Exhibit IV — Amortization of actuarial gains / losses on accrued benefit obligation (a)

($ thousands)	20X1	20X2	20X3	20X4
Expected closing balance of accrued benefit obligation at March 31 (Exhibit II)	N/A	N/A	2,259,484	N/A
Actual accrued benefit obligation (per the March 31, 20X3 actuarial valuation)			2,200,000	
Actuarial gain			59,484	
EARSL			12 years	
Annual amortization over EARSL			4,957	

(a) A straight-line method is used to amortize actuarial gains and losses over the expected average remaining service life of the related employee groups. Amortization commences in the year following the effective date of the related actuarial valuation.

Exhibit V — Amortization of actuarial gains / losses on pension fund asset earnings

($ thousands)	20X1	20X2	20X3	20X4

Expected closing balance of pension fund assets at March 31 (Exhibit III)	1,307,600	1,656,848	1,855,892	2,082,320
Actual pension fund assets	1,417,600	1,598,048	1,800,000	2,142,320
Actuarial gain (loss)	110,000	(58,800)	(55,892)	60,000
	=======	=======	=======	=======
EARSL	12 years	12 years	12 years	12 years
Annual amortization over EARSL	9,167	(4,900)	(4,658)	5,000

Exhibit VI — Unamortized actuarial gains and losses

($ thousands)	20X1	20X2	20X3	20X4
Unamortized actuarial gains and losses — opening balance	—	110,000	42,033	41,358
Actuarial gains (losses) due to:				
— accrued benefit obligation (Exhibit IV)	—	—	59,484	—
— earnings on pension fund assets (Exhibit V)	110,000	(58,800)	(55,892)	60,000
Amortization recorded during the year:				
— accrued benefit obligation (Exhibit IV)	—	—	—	(4,957)
— earnings on pension fund assets (Exhibit V)	—	(9,167)	(4,267)	391
— recognition of net unamortized actuarial gains as an offset to prior period service cost (a)	—	—	—	(25,000)
Unamortized actuarial gains and losses — closing balance	110,000	42,033	41,358	71,792
	=======	=======	=======	=======

(a) When the cost of a plan amendment that improves a benefit related to prior service is offset against net actuarial gains, the cost is offset first against the oldest gains. Additionally, it is only offset against gains in the Public Service Plan.

Exhibit VII — Liability recorded in the statement of financial position

($ thousands)	20X1	20X2	20X3	20X4
Accrued benefit obligation — closing	1,718,800	1,971,744	2,200,000	2,526,840

balance (a) (Exhibit II)				
Deduct: Pension fund assets — closing balance (Exhibit III)	(1,417,600)	(1,598,048)	(1,800,000)	(2,142,320)
Unamortized actuarial gains / losses (Exhibit VI)	110,000	42,033	41,358	71,792
Pension liability	411,200	415,729	441,358	456,312

(a) In the period of an actuarial valuation, this is the actuarially determined amount (closing balance 20X3). In the periods between valuations, this is an expected closing balance.

Exhibit VIII — Expenses recorded in the statement of operations

($ thousands)	20X1	20X2	20X3	20X4
Pension expense:				
Current period benefit cost	200,000	220,000	240,000	240,000
Prior period cost of plan amendment incurred during the year	—	—	—	25,000
Recognition of unamortized net actuarial gains	—	—	—	(25,000)
Amortization of actuarial gains / losses (Exhibit VI)	—	(9,167)	(4,267)	(4,566)
	200,000	210,833	235,733	235,434
Less: Employee contributions	(110,000)	(115,000)	(120,000)	(126,000)
Pension expense	90,000	95,833	115,733	109,434
Pension interest expense:				
Interest during year on the average pension liability outstanding during the year (Exhibit I)	31,200	23,696	29,896	31,520
Total pension-related expenses	121,200	119,529	145,629	140,954

Exhibit IX — Non-cash items recorded in the statement of cash flow

($ thousands)	20X1	20X2	20X3	20X4
Pension liability:				
— beginning of year (Exhibit VII)	400,000	411,200	415,729	441,358

— end of year (Exhibit VII)	411,200	415,729	441,358	456,312
Increase in pension liability	11,200	4,529	25,629	14,954
	======	======	======	======

Financial statement disclosure

Illustrative Note to the Financial Statements

The government sponsors contributory defined benefit pension plans for substantially all of its employees and for members of its Legislature. There are three main plans — the Public Service Plan, the Provincial Judges' Plan and the Elected Representatives' Plan. The plans provide pensions based on length of service and final average earnings. They do not provide for inflation protection. The average age of the 45,000 active employees covered by the plans is 42. There are 5,000 former employees who are entitled to deferred pension benefits. At present, the plans provide benefits for 11,000 retirees; benefit payments were $119 million in 20X4 and $115 million in 20X3.

Employees make contributions equal to seven percent of their salary and the government contributes an equal amount. In 20X4, total contributions for current year's service were $252 million (20X3 — $240 million). Total benefit payments to retirees during the year were $119 million (20X3 — $115 million). A separate pension fund is maintained. Pension fund assets are invested primarily in marketable investments of organizations external to the government reporting entity, with some invested in non-marketable bonds of the government. The pension liability at March 31 includes the following components:

($ thousands)	20X4	20X3
Accrued benefit obligation	2,526,840	2,200,000
Pension fund assets:		
Marketable securities	(1,942,320)	(1,610,000)
Government bonds	(200,000)	(190,000)
	384,520	400,000
Unamortized actuarial gains / losses	71,792	41,358
Pension liability	456,312	441,358
	========	========

Actuarial valuations for accounting purposes are performed triennially using the projected benefit method prorated on services. The most recent actuarial report was prepared at March 31, 20X3. The accrued benefit obligation shown for 20X4 is based on an extrapolation of that 20X3 valuation. There is a net unamortized actuarial gain to be amortized on a straight-line basis over the expected average remaining service life of the related employee groups (12 years).

The actuarial valuation was based on a number of assumptions about future events, such as inflation rates, interest rates, wage and salary increases and employee turnover and mortality. The assumptions used reflect the

government's best estimates. The expected inflation rate is three percent. The discount rate used to determine the accrued benefit obligation is eight percent.

Pension fund assets are valued at market values. The expected rate of return on plan assets is eight percent. The actual return on plan assets was 8.6 percent. Plan assets include government bonds valued at an estimated market value of $200 million (20X3 — $190 million).

The total expenses related to pensions include the following components:

($ thousands)	20X4	20X3
Current period benefit cost	240,000	240,000
Prior period cost of plan amendment	25,000	—
Recognition of net unamortized actuarial gains	(25,000)	—
Amortization of actuarial gains / losses	(4,566)	(4,267)
	235,434	235,733
Less: Employee contributions	(126,000)	(120,000)
Pension expense	109,434	115,733
Interest cost on the average accrued benefit obligation	180,840	162,740
Expected return on average pension plan assets	(149,320)	(132,844)
Pension interest expense	31,520	29,896
Total expenses related to pensions	140,954	145,629
	=======	=======

The pension expense is included in the statement of operations as a component of program expenses. The pension interest expense is included in the public debt interest expense.

On March 31, 20X4, a plan amendment was made to the Public Service Plan increasing the rate at which pension benefits accrue. The amendment relates to both future and past service. The benefit accrual of $25 million is based on an actuarial valuation of the increase in the accrued benefit obligation due to past service. The government intends to fund this amount over a 12-year period ($1 million in 20X4).

Statement of Financial Position (excerpts)		
As at March 31 ($ thousands)	20X4	20X3
Liabilities		
Accounts payable	x	x
Accrued liabilities	x	x
Borrowings		

Treasury bills	x	x
From other governments	x	x
Bonds payable to pension fund (note)	200,000	190,000
Other	x	x
Pension liability (note)	456,312	441,358
Total liabilities	x	x
Excess of liabilities over financial assets	x	x
	=======	=======

Statement of Operations (excerpts)			
For the year ended March 31 ($ thousands)		20X4	20X3
Expenses			
Health	(includes pension expense)	x	x
Education		x	x
...etc.			
Public debt interest (includes pension interest expense)		x	x
		x	x
		=====	=====

Example 2 — Other retirement benefits plan

The government provides certain retiree health and life insurance benefits to its employees. The plan is unfunded and requires no contribution from employees.

In 20X3 the government adopted accrual accounting for the benefit plan. Prior to that date the government recognized benefit expenses equal to its payments for the actual costs incurred by the retirees and no liability for retirement benefits other than pensions was recorded in the statement of financial position.

At the beginning of fiscal year 20X3, an actuarial valuation of the government's obligations for retirement benefits other than pensions was done for accounting purposes using the projected benefit method prorated on services. Key actuarial assumptions used in the valuation were based on the government's best estimates. Those assumptions involve forecasts of expected future inflation rates, cost of long-term debt, employee mortality and medical costs. A second actuarial valuation for accounting purposes was performed at the end of fiscal year 20X5. During the second valuation, the actuarial assumptions included in the first one were reviewed and no changes were considered necessary.

($ thousands)	April 1, 20X2	March 31, 20X5
Accrued benefit obligation	100,000	150,000

Expected average remaining service life of related employee groups (EARSL)	12 years		
Plan amendment September 30, 20X5			10,000
Expected current period benefit cost:			
20X3		3,500	
20X4		3,800	
20X5		4,000	
20X6			4,000
20X6 related to plan amendment			500
20X7			5,200
20X8			5,400
Expected cost of long-term debt	8%		
Expected salary escalations	5.5%		
Expected medical inflation rates	10%		
Expected inflation rates	5.5%		
Benefit payments to retirees	20X3	2,500	
	20X4	2,800	
	20X5	2,900	
	20X6	3,100	

Exhibit I — Interest during the year on the average liability for retirement benefits other than pensions outstanding during the year

($ thousands)	20X3	20X4	20X5	20X6
Interest on expected average accrued benefit obligation:				
Accrued benefit obligation — opening balance (a)	100,000	109,040	118,803	150,000
Add: Current period benefit cost (b)	1,750	1,900	2,000	2,125
Increase in accrued benefit obligation	—	—	—	5,000

due to plan amendment (c)				
Deduct: Benefit payments (b)	(1,250)	(1,400)	(1,450)	(1,550)
Average accrued benefit obligation	100,500	109,540	119,353	155,575
	======	======	======	======
Interest at 8% on average accrued benefit obligation (d)	8,040	8,763	9,548	12,446

(a) In the period of an actuarial valuation, the opening balance of the accrued benefit obligation is the actuarially determined amounts (opening balances 20X3 and 20X6). In the periods between valuations (20X4 and 20X5), the opening balance is equal to the expected closing balance for the previous year.

(b) Accrued, or assumed to take place, evenly throughout the year, therefore interest is accrued on one-half of the total.

(c) Since the plan amendment was effective mid-year, interest is earned for one-half of the year on the increase in accrued benefit obligation due to past service = ½ (10,000). Similarly, interest is earned on the increase in the current period benefit cost following the plan amendment. The average current period benefit cost in 20X6 is, therefore, = ½ (4,000) + ¼ (500).

(d) Interest during the year on average liability outstanding during the year = 8% of average accrued benefit obligation.

Exhibit II — Expected closing balance of accrued benefit obligation

($ thousands)	20X3	20X4	20X5	20X6
Accrued benefit obligation — opening balance	100,000	109,040	118,803	150,000
Add: Current period benefit cost	3,500	3,800	4,000	4,500
Increase due to plan amendment	—	—	—	10,000
Interest accrued (Exhibit I)	8,040	8,763	9,548	12,446
Deduct: Benefit payments	(2,500)	(2,800)	(2,900)	(3,100)
Expected closing balance	109,040	118,803	129,451	173,846
	======	======	======	======

Exhibit III — Amortization of actuarial gains / losses on accrued benefit obligation (a)

($ thousands)	20X3	20X4	20X5	20X6
Expected closing balance of accrued benefit obligation at March 31 (Exhibit II)	N/A	N/A	129,451	N/A
Actual accrued benefit obligation (per			150,000	

the March 31, 20X5 actuarial valuation)	
Actuarial gain (loss)	(20,549)
	======
EARSL	12 years
Annual amortization over EARSL	(1,712)

(a) A straight-line method is used to amortize actuarial gains and losses over the expected average remaining service life of the related employee groups. Amortization commences in the year following the effective date of the related actuarial valuation.

Exhibit IV — Unamortized actuarial gains and losses

($ thousands)	20X3	20X4	20X5	20X6
Unamortized actuarial gains and losses — opening balance	N/A	N/A	—	(20,549)
Actuarial gains (losses) due to:				
— accrued benefit obligation (Exhibit III)			(20,549)	—
Amortization recorded during the year:				
— accrued benefit obligation (Exhibit III)			—	1,712
— recognition of net unamortized actuarial gains as an offset to prior period service cost			—	—
			(20,549)	(18,837)
			======	======

Exhibit V — Liability for retirement benefits recorded in the statement of financial position

($ thousands)	20X3	20X4	20X5	20X6
Accrued benefit obligation — closing balance (a) (Exhibit II)	109,040	118,803	150,000	173,846
Unamortized actuarial gains / losses (Exhibit IV)	—	—	(20,549)	(18,837)
Liability for retirement benefits	109,040	118,803	129,451	155,009
	======	======	======	======

(a) In the period of an actuarial valuation, this is the actuarially determined amount (closing balance 20X5). In the periods between valuations, this is an expected closing balance.

Exhibit VI — Expenses recorded in the statement of operations

($ thousands)	20X3	20X4	20X5	20X6
Retirement benefit expense:				
Current period benefit cost	3,500	3,800	4,000	4,500
Prior period cost of plan amendment incurred during the year	—	—	—	10,000
Recognition of unamortized net actuarial gains	—	—	—	—
Amortization of actuarial gains / losses (Exhibit III)	x	x	x	1,712
Retirement benefit expense	3,500	3,800	4,000	16,212
Retirement benefit interest expense (Exhibit I)	8,040	8,763	9,548	12,446
Total expenses related to retirement benefits	11,540	12,563	13,548	28,658

Financial statement disclosure

Illustrative Note to the Financial Statements

The government sponsors a defined benefit plan for retirement benefits other than pensions for substantially all of its employees. The plan provides extended health and dental as well as life insurance to employees.

Total benefit payments to retirees during the year were $3.1 million (20X5 — $2.9 million). The plan is unfunded and requires no contribution from employees. The retirement benefit liability at March 31 includes the following components:

($ thousands)	20X6	20X5
Accrued benefit obligation	173,846	150,000
Unamortized actuarial gains / losses	(18,837)	(20,459)
Retirement benefit liability	155,009	129,451

Actuarial valuations for accounting purposes are performed triennially using the projected benefit method prorated on services. The most recent actuarial report was prepared at March 31, 20X5. The accrued benefit obligation shown for 20X6 is based on an extrapolation of that 20X5 valuation. There is a net unamortized actuarial loss to be amortized on a straight-line basis over the expected average remaining service life of the related employee groups (12 years).

The actuarial valuation was based on a number of assumptions about future events, such as inflation rates, interest rates, medical inflation rates, wage and salary increases, and employee turnover and mortality. The assumptions used reflect the government's best estimates. The expected inflation rate is 5.5 percent. The discount rate used to determine the accrued benefit obligation is eight percent.

The total expenses related to retirement benefits other than pensions include the following components:

($ thousands)	20X6	20X5
Current period benefit cost	4,500	4,000
Prior period cost of plan amendment	10,000	—
Amortization of actuarial gains / losses	1,712	—
Retirement benefit expense	16,212	4,000
Retirement benefit interest expense	12,446	9,548
Total expenses related to retirement benefits	28,658	13,548

The retirement benefit expense is included in the statement of operations as a component of program expenses. The retirement benefit interest expense is included in the public debt interest expense.

On September 30, 20X5, a plan amendment was made to the plan increasing the rate at which retirement benefits accrue. The amendment relates to both future and past service. The benefit accrual of $10 million is based on an actuarial valuation of the increase in the accrued benefit obligation due to past service.

Statement of Financial Position (excerpts)		
As at March 31 ($ thousands)	20X6	20X5
Liabilities		
Accounts payable	x	x
Accrued liabilities	x	x
Borrowings		
Treasury bills	x	x
From other governments	x	x
Other	x	x
Retirement benefit liability (note)	155,009	129,451
Total liabilities	x	x
Excess of liabilities over financial assets (a)	x	x

(a) The opening balance of the excess of liabilities over financial assets in 20X3 has been restated to reflect a change in accounting policy for employee retirement benefit obligations

applied retroactively. The effect of this restatement is as follows:

($ thousands)

Excess of liabilities over financial assets — beginning of year:	
As previously reported	x
Adjustments due to change in accounting policy applied retroactively	100,000
As restated	x
Excess of expenses over revenues during the year	x
Excess of liabilities over financial assets — end of year	x

Statement of Operations (excerpts)

For the year ended March 31 ($ thousands)		20X6	20X5
Expenses			
Health	(includes retirement benefit expense)	x	x
Education		x	x
...etc.			
Public debt interest (includes retirement benefit interest expense)		x	x
		x	x

SECTION PS 3255
post-employment benefits, compensated absences and termination benefits

TABLE OF CONTENTS

	Paragraph
Purpose and scope	.01-.10
The objectives of funding and accounting	.08-.10
Post-employment benefits and compensated absences	.11-.25
The characteristics of benefit plans	.11-.14
Benefits that vest or accumulate	.15-.20
Event-driven benefits	.21-.25
Termination benefits	.26-.34
Disclosure	.35-.36

Transitional provisions	.37-.40
Characteristics of benefit plans	Appendix A
Illustrative example	Appendix B

PURPOSE AND SCOPE

.01 This Section establishes standards on how to account for and report obligations for post-employment benefits, compensated absences and termination benefits in government financial statements.

.02 This Section applies to post-employment benefits, compensated absences and termination benefits earned by employees and expected to be provided to them when they are no longer providing active service either on a temporary or permanent basis. For the purposes of this Section:

(a) **Post-employment benefits** are expected to be provided after employment but before retirement to employees and their beneficiaries. These benefits include long- and short-term disability income benefits (including workers' compensation), severance benefits, salary continuation, supplemental unemployment benefits, job training and counselling, and continuation of benefits such as health care benefits and life insurance.

(b) **Compensated absences** are benefits for employee absences for which employees will be paid. These benefits include parental leaves, accumulated sick days, and sabbaticals that provide compensated, unrestricted time off for past service.

(c) **Termination benefits** include the following:

(i) Contractual termination benefits are benefits required to be provided to employees under the existing terms of a benefit arrangement when a specific event occurs that results in the downsizing and termination of a group of employees.

(ii) Special termination benefits are benefits that are not contractual termination benefits and that are offered to employees for a short period of time, normally not exceeding twelve months, in exchange for employees' voluntary or involuntary termination of employment.

.03 The glossary in RETIREMENT BENEFITS, Section PS 3250, provides definitions for other relevant terms.

.04 This Section does not apply to short-term employee benefits, which would be accounted for under the general provisions for accruing liabilities. This accounting is generally straightforward because no actuarial assumptions are required and the liabilities are measured on an undiscounted basis.

.05 Examples of such short-term employee benefits are:

(a) salaries, wages, bonuses, fringe benefits and similar items a government provides in the current reporting period or within twelve months thereafter, in exchange for services rendered by employees in the current reporting period; and

(b) occasional sick days and vacation days that do not vest or accumulate beyond twelve months after the current reporting period.

.06 Post-employment benefits, compensated absences and termination benefits are liabilities of a government. Accounting for all benefit plans is important because many governments have accumulated significant related liabilities. The fundamental accounting task is to determine the amount of the liability for these benefits and to what periods to attribute the costs.

.07 These standards are consistent with those established in RETIREMENT BENEFITS, Section PS 3250. The standards set out in that Section are appropriate for accounting for and disclosing post-employment benefits, compensated absences and termination benefits of a government. For example, a government providing these types of benefits through a defined contribution plan, multiemployer plan or joint defined benefit plan would refer to the guidance set out in Section PS 3250. This Section sets out those areas where the accounting and reporting are different from Section PS 3250.

The objectives of funding and accounting

.08 Determining whether an employee future benefit plan should be funded and the amount to be funded each period is a financial management matter. The funding objective is to determine an acceptable policy for financing the estimated ultimate cost of a benefit plan. An actuarial valuation for funding purposes is performed to calculate the contributions required to secure the benefits promised.

.09 The accounting objective is to measure and report the obligation for employee future benefits and to attribute the costs of those benefits to the appropriate periods. Accordingly, it is necessary to develop accounting estimates of liabilities for post-employment benefits, compensated absences and termination benefits and for expenses using an actuarial cost method and actuarial assumptions that ensure essential information required for fair presentation of financial condition and results of operations can be reported in government financial statements. In some circumstances, estimates and averages may provide a reliable approximation of the detailed computations required by this Section.

.10 Because the objectives of determining the most appropriate funding policy are not necessarily the same as those of determining the most appropriate accounting method, the liability for accounting purposes may not be the same as the amount due but not yet funded at the financial statement date according to the funding plan. In addition, the benefit expense of the period for accounting purposes may not be the same as the contribution computed in the period for funding purposes.

POST-EMPLOYMENT BENEFITS AND COMPENSATED ABSENCES

The characteristics of benefit plans

.11 Post-employment benefits and compensated absences may have different characteristics. Some benefits may be vesting or accumulating while others are not. Distinguishing whether or not the post-employment benefits or compensated absences vest or accumulate is important since the accounting recognition of the liability and expense depends on the characteristics of the individual benefit arrangements. Because benefit plans are often complex, careful analysis and professional judgment are needed to determine the substance of a particular plan. The chart included as Appendix A is intended to assist in determining the appropriate accounting standards for various types of benefits.

.12 A benefit vests if, after a specific or determinable date, the employees' right to receive the benefit is no longer conditional on the employees remaining in the service of the government.

.13 A benefit accumulates if the employee rendering service earns the right to the benefit and, based on the length of service provided, the amount of the benefit increases. The benefit is earned but unused; the employee retains the right to use the benefit in future periods. This would be the case even if benefits increase only once as more years of service are rendered. Examples of this type of benefit include severance plans not related to retirement that provide a defined benefit based on years of service and accumulating sick leave entitlements.

.14 Post-employment benefits and compensated absences that vest or accumulate are accounted for in accordance with paragraphs PS 3255.15-.20. Post-employment benefits and compensated absences that do not vest or accumulate (event-driven benefits) are accounted for in accordance with paragraphs PS 3255.21-.25.

Benefits that vest or accumulate

.15 For post-employment benefits and compensated absences that vest or accumulate, obligations result from a government promise to provide benefits to employees in return for their services. As employees render services, the value of the post-employment benefits and compensated absences attributed to those services would be recorded as a liability and expense. RETIREMENT BENEFITS, Section PS 3250, provides general principles that are appropriate to govern the accounting for and disclosure of post-employment benefits and compensated absences that vest or accumulate.

.16 *A government should recognize a liability and an expense for post-employment benefits and compensated absences that vest or accumulate in the period in which employees render services to the government in return for the benefits. RETIREMENT BENEFITS, Section* PS 3250*, should be followed in accounting for such benefits.* [JAN. 2004]

.17 Examples of post-employment benefits and compensated absences are sick days that are paid out when the employee terminates, or sabbaticals in which the leave is granted to provide unrestricted time off for past service. Under some sabbatical arrangements, leave is granted only for an employee to perform research or public service to enhance the reputation of, or otherwise benefit, the government. In such circumstances, a liability is not accrued in advance for the cost of the employee's services during such leave.

.18 If a benefit vests or accumulates, the accrued benefit obligation is accrued as employees render the service that gives rise to the benefits, assuming payment of benefits is probable and the amounts can be reasonably estimated. The service period would be the period from the date the employee is first eligible for benefits (generally the date of hire) to the expected date of the payment of the benefits.

.19 Sick pay benefits or other benefits that accumulate but do not vest are normally paid only upon an illness or injury-related absence. Such benefits are obligations and would be recognized.

.20 The measurement of the obligation for benefits that accumulate but do not vest would consider the expectation of future utilization of the benefits. After review of the circumstances, it may be determined that this obligation is not significant and may not justify accrual. For example, when measuring the obligation for accumulating non-vesting sick pay benefits, a government would consider the extent to which accumulated sick days are expected to be used by employees.

Event-driven benefits

.21 For post-employment benefits or compensated absences that do not vest or accumulate, a liability is recognized when an event that obligates the government occurs. The expected cost of providing the benefits is recognized immediately in the period when the event that obligates the government occurs. For example, benefits provided to employees in the event of an accident or injury would be accrued when the accident or injury occurs. Examples of such benefits are self-insured short-term and long-term disability benefits not related to service and self-insured workers' compensation benefits.

.22 *A government should recognize a liability and an expense for post-employment benefits and compensated absences that do not vest or accumulate when the event that obligates the government occurs.* [JAN. 2004]

.23 As noted in paragraph PS 3255.07, RETIREMENT BENEFITS, Section PS 3250, sets out principles appropriate for accounting for and disclosing post-employment benefits and compensated absences. This Section sets out those areas where the accounting and disclosure are different. For event-driven benefits, the treatment of actuarial gains and losses is one such exception.

.24 *For a separately measured plan providing post-employment benefits or compensated absences that do not vest or accumulate, a government should recognize any actuarial gain or loss:*

(a) immediately, in the period in which it arises; or

(b) over a period linked to the type of benefit. [JAN. 2004]

.25 As an example, actuarial gains and losses arising under a plan providing long-term disability benefits to former employees may be recognized immediately or amortized over the average expected period during which benefits will be paid. Once chosen, the basis for recognizing actuarial gains and losses is applied consistently.

TERMINATION BENEFITS

.26 Termination benefits addressed by this Section include early retirement window enhancements, closure benefits and severance benefits relating to a government reorganization or downsizing. Termination benefits are defined in paragraph PS 3255.02.

.27 Some governments provide employee benefits described as termination benefits or severance benefits. Many of these benefits are actually retirement benefits or post-employment benefits rather than termination benefits. Such benefits are payable regardless of the reason for an employee's departure. In other words, the payment of such benefits is certain but the timing of their payment is uncertain. A government would account for such benefits following the standards set out for retirement benefits or post-employment benefits.

.28 *A government should recognize termination benefits as a liability and expense when it is demonstrably committed to either:*

(a) terminate the employment of an employee or group of employees; or

(b) provide termination benefits as a result of an offer to encourage voluntary termination. [JAN. 2004]

.29 A government is demonstrably committed to provide voluntary special termination benefits when the employee accepts the offer and the amount can be reasonably estimated.

.30 For contractual termination benefits, a government is demonstrably committed when it is probable that the specific event that results in the downsizing and termination of a group of employees will occur and the amount can be reasonably estimated.

.31 A government is demonstrably committed to provide involuntary special termination benefits when:

(a) the government body, management board or person with the appropriate level of authority has committed the government to the plan of termination and establishes the benefits that employees will receive upon their termination of employment;

(b) the termination benefits arrangements have been communicated to employees in sufficient detail to enable them to determine the type and amount of benefits they will receive when their employment is terminated;

(c) the plan of termination specifically identifies the target level of reduction in the number of employees, the job classifications or functions and their locations; and

(d) the time frame for implementing the plan has been identified and indicates that significant changes to the plan of termination are not likely.

When all of these factors exist, the government cannot realistically withdraw from a detailed plan for the termination.

.32 If the time frame for implementing a plan relates to several accounting periods, the estimated cost of the involuntary termination benefits would be determined on a present value basis in the current period and recognized as a liability and expense in that period. Estimates may need to be re-evaluated as new events occur, as more experience is acquired, or as additional information is obtained.

.33 Terminations may result in increases or decreases in obligations of benefit plans in which terminating employees participate. Changes in liabilities directly related to the termination of employees, such as the value of the additional benefit that arises from the offer of termination benefits, would be accounted for as part of the termination. Accounting for termination benefits does not impact the timing and recognition of actuarial gains and losses.

.34 Other changes in the liability not directly related to the termination of employees would be recognized either in the determination of actuarial gains or losses or as a curtailment gain or loss.

DISCLOSURE

.35 For post-employment benefits and compensated absences, financial statements would disclose information similar to the disclosures required in RETIREMENT BENEFITS, Section PS 3250. Some of the required disclosures will not be relevant for certain of these other types of benefits. For example, current period benefit cost and the components of the retirement benefits interest expense may not be relevant for event-driven post-employment benefits. In such circumstances, a simplified basis of disclosure may be appropriate.

Professional judgment will be necessary to determine what disclosures will meet the requirements set out in PS 3250.

.36 For post-employment benefits and compensated absences, governments are encouraged to disclose a general description of the plans, information about key assumptions, a reconciliation of assets and accrued benefit obligations from the beginning of a fiscal period to the end of a fiscal period, and the expense for the period. The reconciliation of assets and accrued benefit obligations would specifically identify the effects of termination benefits. Similarly, the expense for the period would specifically identify the amount due to termination benefits.

TRANSITIONAL PROVISIONS

.37 This Section applies to fiscal years beginning on or after January 1, 2004. Earlier adoption is encouraged.

.38 When implementing this Section, governments may have an initial unrecorded liability.

.39 The initial unrecorded liability would be accounted for as a change in accounting policy applied retroactively. This method is recommended because it ensures that all liabilities incurred to the financial statement date are accounted for in the statement of financial position. Such an accounting is needed to help users of financial statements assess the impact those liabilities may have on:

(a) a government's future cash requirements from revenues and other sources;

(b) a government's ability to meet its financial obligations, both short-term and long-term; and

(c) a government's ability to maintain the level and quality of its services and to finance new programs.

.40 *This Section should be accounted for as a change in accounting policy applied retroactively.* [JAN. 2004]

APPENDIX A

CHARACTERISTICS OF BENEFIT PLANS

The following chart assists in determining which paragraphs of this Section apply based on the characteristics of the benefits. The examples provided are illustrative only and are not intended to be a complete listing of the possible types of benefit arrangements.

Does the benefit vest?	Does the benefit accumulate?	Paragraphs that apply	Example of benefit
Yes	Yes	PS 3255.15-.20 (accrual accounting)	Sick leave bank paid upon termination or retirement
			>Unrestricted sabbatical

Yes	No	PS 3255.15-.20 (accrual accounting)	Future lump sum amounts paid unconditionally under certain job guarantee clauses
No	Yes	PS 3255.15-.20 (accrual accounting)	Self-insured long-term disability income benefits where the benefit is a function of years of service
			Accumulating non-vesting sick leave paid only upon illness-related absence
No	No	PS 3255.21-.25 (event-driven accounting)	Self-insured long-term disability income benefits where the benefit is not a function of service
			Health and dental benefits that continue during disability

APPENDIX B

ILLUSTRATIVE EXAMPLE

The following example has been prepared by CPA Canada staff to illustrate how the standards in Section PS 3255 might be implemented.

The example is illustrative only and matters of principle relating to particular situations should be decided in the context of the Section. It is not intended to indicate preferred formats nor to prescribe standardized note disclosure, as variations in format and wording will be necessary to meet the requirements of differing circumstances.

For ease of presentation, selections are made from accounting alternatives permitted by the Section.

Accumulating sick leave bank

The government provides benefits for sick leave under the following conditions:

(a) All employees receive one day of sick leave per month.

(b) Sick leave can only be used for paid time off for illness of the employee or dependent. Sick leave taken off in time is paid at the employee's normal rate of pay.

(c) Unused sick days are accumulated in a bank. There is no limit to the accumulation of sick leave balances.

(d) If an employee terminates with at least 10 years of service, he or she will be paid in cash for 50 percent of the days accumulated in the sick leave bank. Payment is made at the final pay rate.

The government has a reserve fund set aside to partially fund the liability. This reserve fund was established under government by-law and does not meet the definition of a plan asset as described in RETIREMENT BENEFITS, Section PS 3250. Therefore, for purposes of this Section, the plan is considered unfunded.

In 20X3 the government adopted accrual accounting for the sick leave plan. Prior to that date the government recognized benefit expenses equal to its payments for the actual payouts and no liability for accumulated sick leave was recorded in the statement of financial position.

At the beginning of fiscal year 20X3, an actuarial valuation of the government's obligations for the accumulated sick leave bank was done for accounting purposes using the projected benefit method pro rated on services. Key actuarial assumptions used in the valuation were based on the government's best estimates. Those assumptions involve forecasts of expected future inflation rates, wage and salary increases, cost of long-term debt, and employee turnover and mortality. A second actuarial valuation for accounting purposes was performed at the end of fiscal year 20X5. During the second valuation, the actuarial assumptions included in the first one were reviewed and no changes were considered necessary.

($ thousands)		April 1, 20X2	March 31, 20X5
Accrued benefit obligation		10,000	12,000
Expected average remaining service life of related employee groups (EARSL)			12
Expected current period benefit cost:			
20X3		350	
20X4		380	
20X5		400	
20X6			400
20X7			420
20X8			440
Expected cost of long-term debt (%)		8%	
Expected salary escalations		5.5%	
Expected inflation rates		5.5%	
Benefit payments	20X3	250	
	20X4	280	
	20X5	290	
	20X6	310	

Exhibit I — Interest during the year on the average liability for sick leave

($ thousands)	20X3	20X4	20X5	20X6
Interest on expected average accrued benefit obligation:				
Accrued benefit obligation — opening	10,000	10,904	11,880	12,000

balance (a)				
Add: Current period benefit cost (b)	175	190	200	200
Deduct: Benefit payments (b)	(125)	(140)	(145)	(155)
Average accrued benefit obligation	10,050	10,954	11,935	12,045
	=====	=====	=====	=====
Interest at 8% on average accrued benefit obligation (c)	804	876	955	964

(a) In the period of an actuarial valuation, the opening balance of the accrued benefit obligation is the actuarially determined amounts (opening balances 20X3 and 20X6). In the periods between valuations (20X4 and 20X5), the opening balance is equal to the expected closing balance for the previous year.

(b) Accrued, or assumed to take place, evenly throughout the year, therefore interest is accrued on one-half of the total.

(c) Interest during the year on average liability outstanding during the year = 8% of average accrued benefit obligation.

Exhibit II — Expected closing balance of accrued benefit obligation

($ thousands)	20X3	20X4	20X5	20X6
Accrued benefit obligation — opening balance (a)	10,000	10,904	11,880	12,000
Add: Current period benefit cost	350	380	400	400
Interest accrued (Exhibit I)	804	876	955	964
Deduct: Benefit payments	(250)	(280)	(290)	(310)
Expected closing balance	10,904	11,880	12,945	13,054
	=====	=====	=====	=====

(a) A straight-line method is used to amortize actuarial gains and losses over the expected average remaining service life of the related employee groups. Amortization commences in the year following the effective date of the related actuarial valuation.

Exhibit III — Amortization of actuarial gains / losses on accrued benefit obligation (a)

($ thousands)	20X3	20X4	20X5	20X6
Expected closing balance of accrued benefit obligation at March 31 (Exhibit II)	N/A	N/A	12,945	N/A
Actual accrued benefit obligation (per the March 31, 20X3 actuarial valuation)			12,000	
Actuarial gain (loss)			945	

	======
EARSL	12 years
Annual amortization over EARSL	79

(a) A straight-line method is used to amortize actuarial gains and losses over the expected average remaining service life of the related employee groups. Amortization commences in the year following the effective date of the related actuarial valuation.

Exhibit IV — Unamortized actuarial gains and losses

($ thousands)	20X3	20X4	20X5	20X6
Unamortized actuarial gains and losses — opening balance	N/A	N/A	—	945
Actuarial gains (losses) due to:				
— accrued benefit obligation (Exhibit III)			945	—
Amortization recorded during the year:				
— accrued benefit obligation (Exhibit III)			—	79
			945	866
			===	===

Exhibit V — Liability for accumulating sick leave recorded in the statement of financial position

($ thousands)	20X3	20X4	20X5	20X6
Accrued benefit obligation — closing balance (a) (Exhibit II)	10,904	11,880	12,000	13,054
Unamortized actuarial gains / losses (Exhibit IV)	—	—	945	866
Liability for accumulating sick leave	10,904	11,880	12,945	13,920
	=====	=====	=====	=====

(a) In the period of an actuarial valuation, this is the actuarially determined amount (closing balance 20X5). In the periods between valuations, this is an expected closing balance.

Exhibit VI — Expenses recorded in the statement of operations

($ thousands)	20X3	20X4	20X5	20X6
Sick leave expense:				
Current period benefit cost	350	380	400	400
Amortization of actuarial gains / losses (Exhibit III)	—	—	—	79

Sick leave benefit expense	350	380	400	321
Sick leave interest expense (Exhibit I)	804	876	955	964
Total expenses related to sick leave benefits	1,154	1,256	1,355	1,285
	====	====	====	====

SECTION PS 3260
liability for contaminated sites

TABLE OF CONTENTS

Purpose and scope	.01-.07
Recognition	.08-.39
Environmental standard	.09-.13
Contamination	.14-.17
Direct responsibility	.18-.22
Accepting responsibility	.23-.31
Future economic benefits	.32-.35
Uncertain responsibility	.36-.39
Measurement	.40-.64
Disclosure	.65-.69
Transitional provisions	.70
Glossary	Gloss
Decision tree	Appendix A
Illustrative examples	Appendix B

PURPOSE AND SCOPE

.01 This Section establishes standards on how to account for and report a liability associated with the **remediation** of contaminated sites. Specifically, it:

(a) defines which activities would be included in a liability for remediation;

(b) establishes when to recognize and how to measure a liability for remediation; and

(c) provides the related financial statement presentation and disclosure requirements.

.02 In this Section, terms that appear in **bold** type are defined in the glossary of terms.

.03 This Section provides guidance for applying the definition of liabilities set out in FINANCIAL STATEMENT CONCEPTS, Section PS 1000, and the general recognition and disclosure standards in LIABILITIES, Section PS 3200, in accounting for and reporting a liability for contaminated sites. It may be useful to read this Section in conjunction with CONTINGENT LIABILITIES, Section PS 3300, and CONTRACTUAL OBLIGATIONS, Section PS 3390. Nothing in this Section overrides any standard in another Section of the CPA Canada Public Sector Accounting Handbook.

.04 For the purposes of this Section, contamination is the introduction into air, soil, water or sediment of a chemical, organic or radioactive material or live organism that exceeds an **environmental standard**. A contaminated site is a site at which substances occur in concentrations that exceed the maximum acceptable amounts under an environmental standard. A contaminated site does not include airborne contamination or **contaminants** in the earth's atmosphere unless such contaminants have been introduced into soil, water bodies or sediment.

.05 For the purposes of this Section, a liability for remediation normally results from items such as:

(a) all or part of an operation of the government or government organization that is no longer in productive use (for example, abandoned military installations);

(b) all or part of an operation of entities outside the government reporting entity that is no longer in productive use for which the government accepts responsibility (for example, an abandoned gas station);

(c) changes to environmental standards relating to all or part of an operation that is no longer in productive use (for example, new regulations requiring the destruction of stored polychlorinated biphenyls (PCBs)); and

(d) an unexpected event resulting in contamination (for example, accidental toxic chemical spills or natural disasters).

.06 This Section does not apply to:

(a) costs for acquisition or betterment of tangible capital assets that are within the scope of TANGIBLE CAPITAL ASSETS, Section PS 3150, to the extent that such costs do not exceed the future economic benefits related to the asset or post-remediation fair value of the asset if held for sale (for example, redevelopment of a contaminated site for use or sale);

(b) liabilities associated with the retirement of a long-lived tangible capital asset in productive use that result from its acquisition, construction or development and ongoing use (for example, operating a nuclear facility);

(c) liabilities associated with the disposal or sale of long-lived tangible capital assets (for example, privatization of water utility); and

(d) liabilities for closure and post-closure care of a solid waste landfill site when the site or a phase stops accepting waste specifically dealt with under SOLID WASTE LANDFILL CLOSURE AND POST-CLOSURE LIABILITY, Section PS 3270.

.07 This Section does not deal with disclosure requirements for the following items:

(a) measurement uncertainty related to the estimate of a liability for remediation recognized or disclosed in financial statements (see MEASUREMENT UNCERTAINTY, Section PS 2130);

(b) a liability for remediation when a reasonable estimate of the amount involved cannot be made (see LIABILITIES, Section PS 3200); and

(c) a contingent liability for remediation (see CONTINGENT LIABILITIES, Section PS 3300).

RECOGNITION

.08 *A liability for remediation of contaminated sites should be recognized when, as at the financial reporting date:*

(a) an environmental standard exists;

(b) contamination exceeds the environmental standard;

(c) the government:

(i) is directly responsible; or

(ii) accepts responsibility;

(d) it is expected that future economic benefits will be given up; and

(e) a reasonable estimate of the amount can be made.

An obligation for remediation of contaminated sites cannot be recognized as a liability unless all criteria above are satisfied. [APRIL 2014]

Environmental standard

.09 An environmental standard is generally set out in the form of a statute, regulation, by-law, order, permit, contract or agreement. As a result, it is legally enforceable and binding, and compliance is mandatory. Breaches may be enforced through prosecution, fines, jail and similar penalties, order or loss of permit. Compliance may also be enforced through administrative proceedings.

.10 A government would evaluate the existence of an environmental standard based on existing or enacted legislation, contract or agreement in effect at the financial statement date. In determining whether an environmental standard exists, the government would not take into account proposed changes in legislation that may create an environmental standard, regardless of the effective date. A change in or adoption of a new environmental standard may result in a future obligation to remediate existing contamination, but at the financial reporting date, there is no existing environmental standard that would be precedent to recognition of a liability. If changes in legislation occur between the date of the financial statements and the date of their completion, refer to SUBSEQUENT EVENTS, Section PS 2400, for appropriate disclosures.

.11 An environmental standard may be both quantitative and qualitative. A quantitative environmental standard may stipulate an acceptable or desirable ambient concentration of substances in soil and groundwater. Quantitative environmental standards are generally the most easily verifiable.

.12 Regulatory provisions may prohibit adverse environmental impacts in qualitative terms. In such cases, the benchmarks for determining whether the environmental standard has been breached are highly variable. Exercise of professional judgment would be required in determining whether the government has a liability.

.13 In some cases, environmental standards may be created by internal government policy or by guidelines developed by organizations external to the government (for example, recognized business, industry or government associations). Voluntary compliance with such environmental standards may create a liability. The determination would require the exercise of professional judgment considering the individual circumstances and the criteria for recognition of a liability in this Section and LIABILITIES, Section PS 3200.

Contamination

.14 The existence of an environmental standard in and of itself is not the obligating event that creates a liability. The existence of contamination that exceeds an environmental standard at the financial reporting date is a necessary condition for recognition of a liability. For example, a site assessment completed at the site of a discontinued mine operation on Crown land has identified soil contamination that imposes an obligation on the government to undertake remediation activities. It is the occurrence of the contamination that exceeds an environmental standard that is the past event or transaction that may result in the sacrifice of future economic benefits.

.15 To determine if contamination exists that exceeds an environmental standard, it would be necessary to assemble and review all available historical and current information pertaining to the site or group of sites. Factors to consider include, but are not limited to, the following:

(a) the nature of past activities at the site(s) or adjacent properties;

(b) site(s) location, hydrology and geology;

(c) results from testing and field investigations;

(d) similarities to and experience at other known contaminated sites;

(e) significance of site(s); and

(f) cost versus benefit of conducting detailed site assessments.

.16 The determination of whether contamination exceeds an environmental standard may be uncertain. Uncertainty about the existence or non-existence of contamination does not eliminate the need to determine whether a liability exists and would be recognized.

.17 The determination will depend on the probability that future site investigations will confirm that contamination that exceeds an environmental standard existed at the financial statement date. If the probability is likely that future site investigations will confirm contamination, a liability would be recognized if the amount can be reasonably estimated.

Direct responsibility

.18 A government may be directly responsible for remediation:

(a) because of its own past activities that, even though they may have been consistent with the environmental requirements at the time, have caused contamination (for example, military installations, operation of transportation works yards); and

(b) when activities such as mining or exploration occurred on government-owned land or on land that the government has since acquired, and a responsible party cannot be identified or, if identifiable, lacks the means to remediate the damage (for example, "inherited" responsibility for abandoned mines on Crown land through bankruptcy proceedings and court decisions).

.19 A legal obligation establishes a clear duty or responsibility to another party that justifies recognition of a liability. For purposes of this Section, a legal obligation can result from:

(a) agreements or contracts;

(b) legislation of another government; or

(c) a government's own legislation.

.20 An agreement or contract could take the form of a certificate of approval governing the operation of a government facility. The certificate of approval contains enforceable requirements for the facility's operation. Non-compliance with the terms and conditions of the certificate of approval could result in the government incurring a liability for remediation of environmental damage. For example, a government has a pesticide storage facility that it operates under an environmental certificate of approval. It could be responsible under the certificate of approval for cleanup of contaminated ground water as a result of the failure of the facility's containment system.

.21 In the event of contamination, another government's legislation may create a legally enforceable obligation for a government. For example, as a result of inventory shrinkage, a provincial ministry of environment has issued an order under petroleum storage regulations of its environmental protection act to a local government to replace petroleum storage tanks in its public works yard and clean up contamination. The local government would recognize a liability for removal and clean up costs.

.22 A government's own legislation that contains details of the government's policy in relation to a particular program or regulation of its activities can create a legal obligation when it or one of its organizations is non-compliant with legislation. In these circumstances, this Section would require that the government recognize a liability if other recognition criteria are met.

Accepting responsibility

.23 A government may voluntarily assume responsibility for remediation of contaminated sites (for example, abandoned gas stations) through its own actions or promises. However, only those assumed obligations for remediation that meet the definition of a liability at the financial statement date can be recognized. Obligations that are based on intention or policy of a government may not satisfy the three essential characteristics of a liability for recognition.

.24 Most liabilities for remediation arise from legal obligations, settlement of which can be enforced by a court of law. LIABILITIES, Section PS 3200, recognizes that present obligations do not only result from legally enforceable agreements, contracts or legislation, but may also result from constructive and equitable

obligations. Some constructive and equitable obligations may be enforced by a court in accordance with the legal principle known as **promissory estoppel** or other legal principles having similar effect.

.25 Constructive and equitable obligations require the careful application of the definitions because determining when a government has such an obligation can be a matter of professional judgment. In the absence of legally enforceable agreements, contracts and legislation, it is often difficult to determine whether a government is actually bound by an obligation to a third party. In exercising professional judgment in the assessment of whether a constructive and equitable obligation exists at the financial reporting date, the government would consider the criteria in LIABILITIES, Section PS 3200, that would indicate the government has created a valid expectation among others that leaves it with no realistic alternative but to remediate a contaminated site or group of sites.

.26 A government may have a policy or an established pattern of past practice of complying with its own internal environmental standards or guidelines established by external organizations. Absent evidence to the contrary, others can presume that the government will continue its policy or past practice. In these situations, the government may have created a valid expectation that it will continue to remediate contaminated sites in compliance with these standards and guidelines. It may have little or no discretion but to take action. In these cases, it may have a constructive and equitable obligation that it needs to record as a liability. On the other hand, if the government has discretion to alter its policy or past practice, it may not have a constructive and equitable obligation or a liability.

.27 An essential characteristic of a liability is that there is a present obligation resulting from a past event that leaves the government little, if any, discretion to avoid settling it. Only present obligations arising from past events existing independently of the government's future actions result in liabilities. An intention to incur an expenditure in the future is not sufficient to give rise to a present obligation even if the outflow is necessary for the government to fulfill its inherent responsibilities.

.28 Evidence that a government may have a present obligation for remediation separate from legal documents can include, but is not limited to, consideration of the following:

(a) The government body, management board or person with the appropriate level of authority has committed the government to a remediation plan.

(b) The remediation plan identifies the specific location of the contaminated site or sites.

(c) The remediation plan has been communicated to those directly affected (for example, residents of surrounding communities) through public consultation, information sessions, workshops or other activities in such detail as to allow those affected to determine the benefits that would accrue to them.

(d) The remediation plan specifically identifies the target level of reduction in risk the site(s) pose to human health and the environment and the amount of the environmental costs to be incurred to achieve those targets.

(e) The time frame for implementing the plan has been identified and indicates that significant changes to the plan are not likely.

(f) The details of the plan are such that there is a reasonable expectation that the promise can be relied upon.

.29 The mere act of budgeting for remediation activities does not result in incurring a liability. Just because a government budgets for remediation activities does not mean a liability actually exists. As well, care must be exercised in using budgeted amounts as the basis of measurement of a liability that may or may not reflect the full extent of the liability.

.30 A government announcement to provide long-term funding for remediation activities may not result in a liability. In some cases, the government maintains total discretion over the eventual disposition of the funds committed to remediation activities. Alternatively, a government may commit funding for remediation for higher risk sites. However, there may be similar sites of lesser significance and risk that the government is not committing to remediate. Nevertheless, these lesser risk sites may still represent a liability for the government.

.31 Elected representatives or government officials may announce government intentions in a period following the financial statement date but before the completion of the financial statements. If a condition or situation did not exist at the date of the financial statements, there is no liability. However, it may be a subsequent event (see SUBSEQUENT EVENTS, Section PS 2400).

Future economic benefits

.32 The existence of contamination that exceeds an environmental standard may create a liability regardless of whether a government chooses to perform remediation activities or not. A government may have a present obligation to remediate the contamination now or at some future date. The timing of the settlement does not relieve the government of its present obligation or recognition of the associated liability. The timing would be reflected in the measurement of the liability.

.33 It is possible that a present obligation would not be recognized as a liability because it is not expected that future economic benefits will be given up. "Expected" is used with its usual general meaning and refers to that which can reasonably be anticipated, contemplated or believed on the basis of available evidence or logic but is neither certain nor proved.

.34 Whether a present obligation is recognized as a liability or not will require the exercise of professional judgment in determining whether the specific circumstances meet recognition criteria. Consideration would be given to all information available, supplemented by experience in similar situations and, in some cases, reports from independent experts.

.35 If a liability is not recognized, it may be appropriate to provide information about the existence, nature and extent of the present obligation in notes to the financial statements. For further guidance, refer to FINANCIAL STATEMENT CONCEPTS, Section PS 1000, LIABILITIES, Section PS 3200, and CONTINGENT LIABILITIES, Section PS 3300.

Uncertain responsibility

.36 There may be a situation when an environmental standard exists and contamination exceeds the standard. The government has determined that it is not directly responsible, nor does it accept responsibility. However, there is uncertainty as to whether the government may be responsible.

.37 A government may have a contingent liability. The existence of contamination that exceeds an environmental standard is an existing condition or situation. In some cases, a future confirming event is required to determine a government's responsibility. This situation is a matter of professional judgment and

requires an assessment of the likelihood that the future event will confirm responsibility. CONTINGENT LIABILITIES, paragraph PS 3300.13, outlines the range of probabilities.

.38 If it is likely that the future event will confirm the government's responsibility, a liability would be recognized if the amount can be reasonably estimated. If it is unlikely that a government will be responsible, no liability would be recognized. If the outcome of the future event cannot be determined, the existence, nature and extent of the contingent liability would be disclosed. CONTINGENT LIABILITIES, Section PS 3300, provides additional guidance.

.39 If there is uncertainty about whether contamination exists that exceeds an environmental standard, the future event that resolves the uncertainty is within the government's control (for example, completion of a site assessment). The fact that a government has evidence to suggest that contamination may exist, but lacks specific information to confirm with certainty the nature and extent, is a measurement issue. This type of uncertainty does not constitute the type of uncertainty that characterizes a contingent liability.

MEASUREMENT

.40 *The estimate of a liability should include costs directly attributable to remediation activities. Costs would include post-remediation operation, maintenance and monitoring that are an integral part of the remediation strategy for a contaminated site. The estimate would include costs of assets acquired as part of remediation activities to the extent those assets have no alternative use.* [APRIL 2014]

.41 Directly attributable costs would include, but are not limited to, payroll and benefits, equipment and facilities, materials, and legal and other professional services. Costs related to natural resource damage (for example, revegetation outlays) are included only if incurred as part of an environmental standard.

.42 Estimated costs would be those required to bring a site up to the current minimum standard for its use prior to contamination. For example, there may be a lower standard for land that was used for industrial purposes as opposed to residential purposes.

.43 In some cases, the remediation strategy for a contaminated site involves ongoing activities such as treatment of effluent from a contaminated site. These are part of the remediation activities rather than a separate future service obligation. When ongoing operation, maintenance and monitoring are an integral part of the remediation strategy for a contaminated site, the estimate of the liability would include the costs for such activities.

.44 Remediation activities may involve the acquisition of an asset that would otherwise meet the definition of a tangible capital asset. Although the asset is providing goods and services, there are no ongoing operations against which the costs can be allocated. The cost of the asset required for remediation activities is reported as an expense, not an asset, in the period when a liability is recognized.

.45 An asset acquired as part of remediation activities may have an alternative use. If the asset has an alternative future use, only that portion of its estimated cost related to its use in remediation activities would be included in the estimate of a liability. When the asset is actually acquired, only those expenditures that relate to the alternative use would be capitalized and would be amortized to expense over the remainder of its useful life in the periods of alternative use.

.46 *A liability for remediation should be estimated based on information available at the financial statement date.* [APRIL 2014]

.47 The estimate of a liability for remediation should be based on existing environmental standards and technology expected to be used in remediation activities. The effect of new legislation would not be taken into consideration in estimating the liability until such legislation is enacted regardless of effective date.

.48 A government's total liability may not necessarily become determinable at a specific point in time. The amount of a liability may become determinable over a continuum of events and activities as information becomes available. For example, the estimate of costs may only become known as the government completes the various stages of assessing the extent of the contamination. In these cases, the government would recognize a liability based on management's best estimate at the time.

.49 When a government is able to estimate the environmental costs of all stages of remediation activities because the situation is common, the government would use its experience as the basis for the estimate. For example, the remediation activity involves removal of underground fuel storage tanks or is similar to other situations with which the government has experience. In these cases, the government would recognize the entire estimated liability.

.50 If new information becomes available between the financial statement date and the date of completion of the financial statements that would affect the estimates of a liability, this would be accounted for in accordance with SUBSEQUENT EVENTS, Section PS 2400.

.51 It may often be necessary to estimate the amount of a liability in situations when a detailed site investigation has not been completed, but there is evidence to suggest that contamination exists that exceeds an environmental standard. Consideration would be given to available site assessment information and experience gained at other sites that have typical or common characteristics such as similarities in historical land use activities. Estimating the amount of a liability requires the exercise of professional judgment. Amounts recognized would be based on the best available information.

.52 In some cases, an estimate of a liability may only be based on an individual site investigation that takes into consideration unique site characteristics such as the historical land use, site-specific conditions and nature and extent of contamination. If a reasonable estimate of the amount cannot be made, it may be necessary to disclose the nature of the liability and the potential effect on the government's financial statements when the liability becomes measurable.

.53 When the estimate is based on a site assessment, a government may not complete a subsequent site assessment in each reporting period because of the cost of gathering and processing information required. In the years between completion of site reassessments, a review of the estimate of the liability could be based on an extrapolation of previously completed site assessments, taking into consideration such factors as changes to the remediation strategies, technological changes, experience gained, changes to assumptions, actual expenditures, changes in legislative standards, unforeseen changes in cost estimates. When the effect of any change is significant, recognition of a new estimate may be necessary.

.54 Events that may indicate a need to do a detailed reassessment of contaminated sites upon which the estimate of the liability is based can include, but are not limited to, consideration of the following:

(a) technological developments;

(b) lapsed time since the last site assessments were completed;

(c) new information from detailed site assessments, site characterizations, or technical reviews done on similar contaminated sites; and

(d) a change in legislation.

.55 *The measurement technique adopted by a government should result in the best estimate of the amount required to remediate contaminated sites.* [APRIL 2014]

.56 The best estimate can be described as the amount that a government would rationally pay to settle or otherwise extinguish the liability at the financial statement date. The amount would be based on the best estimate of the expenditures required to complete the remediation. The estimate of expenditures would require professional judgment supplemented by experience, third party quotes and, in some cases, reports of independent experts.

.57 Professional judgment will be required in assessing the appropriate measurement technique that results in the best estimate of the amount required to settle or otherwise extinguish the liability. The appropriate measurement technique depends on the extent and complexity of contamination, materiality of the damage, and time frame over which remediation activities will occur.

.58 When the cash flows required to settle or otherwise extinguish a liability are expected to occur over extended future periods, a present value technique is often the best available technique with which to estimate the measure of a liability.

.59 *The carrying amount of a liability for remediation should be reviewed at each financial reporting date. Any revisions to the amount previously recognized should be accounted for in the period in which revisions are made.* [APRIL 2014]

.60 A liability continues to be recognized until it is settled or otherwise extinguished. Disbursements would be deducted from the reported liability when they are made.

.61 Continual assessment of the carrying amount of a liability is required. When a change in an estimate of the amount of a liability is required, it would be accounted for in accordance with ACCOUNTING CHANGES, Section PS 2120.

.62 *A liability for remediation of contaminated sites should be reduced by expected net recoveries if the recognition criteria outlined in FINANCIAL STATEMENT CONCEPTS, paragraphs* PS 1000.54-*.56, are satisfied.* [APRIL 2014]

.63 The amount of a recovery is an element of the liability and would be taken into account in measuring the amount. Recoveries would be recognized when they have an appropriate basis of measurement and a reasonable estimate of the amount involved can be made and it is expected that future economic benefits will be obtained. Recoveries would be net of costs associated with the effort to collect them.

.64 The estimate of a government's liability would include remediation work that the government expects to perform for other parties. However, expected recoveries from those other parties, and insurance recoveries, reduce the measurement of the government's remediation expense when reasonably estimable.

DISCLOSURE

.65 *A financial statement should disclose information about:*

(a) the nature and source of the liability;

(b) the basis for the estimate of the liability;

(c) when a net present value technique is used, the estimated total undiscounted expenditures and discount rate;

(d) the reasons for not recognizing a liability; and

(e) the estimated recoveries. [APRIL 2014]

.66 The level of detail disclosed by a government reflects the highly aggregated nature of financial statements. When deciding the level of detail to disclose, governments consider the usefulness of the information to readers in assessing the nature and extent of a government's liability for remediation of contaminated sites. It may be useful to group similar items together. The level of disclosure also considers the sensitivity of the information.

.67 The notes to the financial statements would disclose the basis of recognition and measurement of the liability. Disclosures would include the significant assumptions underlying the reported amount. If a present value technique is used to estimate the liability, the estimated total future expenditures for settlement of the liability and the discount rate would be disclosed. When possible, the anticipated timing of future expenditures would also be disclosed. Additional disclosures are encouraged when the disclosures will enhance the financial statement users' understanding of the estimate of the liability.

.68 When a liability is not recognized, the reason why a reasonable estimate of the amount involved cannot be made or why it is not expected that economic benefits will be given up would be disclosed.

.69 Uncertainties affecting the measurement of a liability for remediation of contaminated sites are disclosed in accordance with MEASUREMENT UNCERTAINTY, Section PS 2130.

TRANSITIONAL PROVISIONS

.70 This Section applies to fiscal years beginning on or after April 1, 2014. If application of the Section results in a change in accounting policy, ACCOUNTING CHANGES, Section PS 2120, applies. Earlier adoption is encouraged.

GLOSSARY

Contaminants are any physical, chemical, biological or radiological substance in air, soil, water or sediment that has an adverse effect. Any chemical substance whose concentration exceeds background concentrations or that is not naturally occurring in the environment.

An **environmental standard** refers to any guidelines, objectives, criteria or other kinds of limits placed on the presence or discharge of a contaminant into the natural environment.

Promissory estoppel is defined in *Black's Law Dictionary* as "the principle that a promise made without consideration may nonetheless be enforced to prevent injustice if the promisor should have reasonably expected the promisee to rely on the promise and the promisee did actually rely on the promise to his or her detriment. The Quebec Civil Code does not recognize the doctrine of promissory estoppel but Quebec courts have developed a similar concept known as "la fin de non-recevoir".

Remediation means the improvement of a contaminated site to prevent, minimize or mitigate damage to human health or the environment. Remediation involves the development and application of a planned approach that removes, destroys, contains, or otherwise reduces availability of contaminants to receptors of concern.

APPENDIX A

DECISION TREE — LIABILITY FOR CONTAMINATED SITES

The following decision tree has been prepared to illustrate the accounting treatment specified in this Section. The decision tree is illustrative only and matters of principle relating to particular situations should be decided in the context of the Section.



APPENDIX B

ILLUSTRATIVE EXAMPLES

The following examples have been prepared by CPA Canada staff to illustrate how the accounting treatment specified in this Section might be applied. The examples discuss generalized situations. Unless otherwise stated, the examples assume that it is expected that future economic benefits will be given up and a reasonable estimate of the amount can be made.

The specific facts and circumstances of each situation that may require recognition of a liability for contaminated sites need to be considered carefully in applying the Section. Matters of principle relating to particular situations should be decided in the context of the Section.

TABLE OF CONTENTS

	Paragraph
Recognition	B1-B16
Example 1 – Quantitative environmental standard exceeded	B2-B4
Example 2 – Qualitative environmental standard exceeded	B5-B7
Example 3 – Uncertainty about the existence of contamination	B8-B10
Example 4 – Contaminated site not expected to result in giving up of future economic benefits	B11-B13
Example 5 – Responsibility is uncertain	B14-B16
Measurement	B17-B23

Example 6 – Acquisition of an asset as part of remediation activities	B18-B20
Example 7 – Acquisition of an asset as part of remediation activities with an alternative use	B21-B23

RECOGNITION

B1 Examples 1-5 incorporate simplified assumptions to illustrate the recognition provisions of this Section.

Example 1 — Quantitative environmental standard exceeded

B2 Environmental protection legislation has established a maximum standard for concentrations of arsenic for ground water runoff at 10 parts per billion to protect environmental quality and human health from the long-term effects of exposure to arsenic. Legislation requires a responsible party to perform remediation activities if the concentrations in runoff exceed the standard.

B3 Runoff from tailings at an abandoned mine site on Crown lands contains concentrations of arsenic that exceed the accepted maximum standard. The operator of the mine no longer exists. The government is responsible for remediation because it owns the land.

B4 The government would recognize a liability for the cost of remediation to reduce the concentrations of arsenic in runoff from the site to the maximum standard as a responsible party under legislation.

Example 2 — Qualitative environmental standard exceeded

B5 Environmental protection legislation for a jurisdiction stipulates that no person may discharge a contaminant into the natural environment that causes an adverse effect. An adverse effect could be impairment of the natural environment for any use that can be made of it.

B6 Leachate from a landfill operation has contaminated ground water and drinking water systems adjacent to the site. Under legislation, the local government is responsible to remediate contamination.

B7 The government would recognize a liability for the cost of remediation of the contaminated drinking water systems.

Example 3 — Uncertainty about existence of contamination

B8 A government has compiled an inventory of abandoned mine sites on Crown land within its jurisdiction that are known or suspected to be contaminated. Identification of the sites is intended to assist with effective allocation of resources to investigate, manage and remediate sites with the highest potential to negatively impact public health and the environment.

B9 The government has completed environmental site assessments at some of the more significant sites in the inventory. The results confirm that contamination exists that exceeds an environmental standard. Based on the available information, there is evidence to suggest that other sites in the group have been contaminated and could require remediation.

B10 Uncertainty about the existence or non-existence of contamination does not eliminate the need to determine whether a liability exists. Determining whether a liability for remediation of a contaminated site exists requires an assessment of the probability that future site investigations will confirm that contamination existed at the financial statement date. If it is likely that some or all of the other sites in the group have been contaminated and require remediation, a liability would be recognized.

Example 4 — Contaminated site not expected to result in giving up of future economic benefits

B11 An entity is responsible for an abandoned mine site on Crown land where a site assessment has confirmed that contamination exists that exceeds an environmental standard. The site is in a remote location and the contamination is contained at the site. The contamination is not likely to affect public health and safety, cause damage, or otherwise impair the quality of the surrounding environment. Due to these factors, the government does not expect to remediate the site. The site will continue to be monitored as part of the government's ongoing environmental protection program.

B12 Whether the present obligation to remediate the contaminated site is recognized or not will require the application of professional judgment. In this case, the present obligation to remediate the contaminated site meets the criteria in paragraph PS 3260.08(a)-(c) and (e). However, the government does not expect to perform remediation activities, nor is it likely to be required to remediate the site. Since the government does not expect that the present obligation will result in the giving up of future economic benefits, it would not recognize a liability because the criterion in paragraph PS 3260.08(d) has not been met.

B13 Therefore, a present obligation to remediate a contaminated site may have all the essential characteristics of a liability, but still not be recognized as a liability because it does not meet all the recognition criteria. That is, in this case, it is not expected that future economic benefits will be given up. The determination of whether economic benefits will be given up or not will require the application of professional judgment considering the specific circumstances. If a present obligation is not recognized, it may be appropriate to provide information about it in notes to the financial statements. For further guidance, refer to FINANCIAL STATEMENT CONCEPTS, Section PS 1000, and LIABILITIES, Section PS 3200.

Example 5 — Responsibility is uncertain

B14 Underground sources of drinking water within a government's jurisdiction are contaminated. The government operates a solid waste landfill site within the vicinity of the contaminated wells. As at the financial statement date, the environmental regulator for the jurisdiction is conducting an investigation into the nature and source of the contamination. The government has determined it is not responsible, nor does it accept responsibility, for remediation of the contamination. However, there is uncertainty about responsibility that will be resolved by a ruling of the environmental regulator.

B15 The government may have a contingent liability. The existence of contamination that exceeds an environmental standard is an existing condition or situation. A decision by the environmental regulator that a government is or is not responsible is the future event not wholly within the government's control that will resolve the uncertainty. The outcome of the future event will confirm the incurrence or non-incurrence of a liability.

B16 Determining whether a liability for remediation of a contaminated site exists at the financial statement date requires an assessment of the probability that the outcome of the future event will confirm responsibility. For appropriate recognition and disclosure guidance, refer to CONTINGENT LIABILITIES, Section PS 3300.

MEASUREMENT

B17 Examples 6-7 incorporate simplified assumptions to illustrate the measurement provisions of this Section.

Example 6 — Acquisition of an asset as part of remediation activities

B18 As part of a remediation plan, a water treatment plant is required to treat water effluent from an abandoned mine site on Crown land. The water treatment plant will be required for an extended period. The asset will not have an alternative future use.

B19 The acquisition of the water treatment plant would otherwise meet the definition of a tangible capital asset. The useful economic life of the water treatment plant will extend over more than one accounting period and it will be used to treat effluent from the site on a continuing basis. Although the water treatment plant is used in the production or supply of goods and services, there are no ongoing operations against which the costs can be allocated.

B20 The estimated cost of the water treatment plant asset required for remediation activities is reported as an expense, not an asset, in the period when the liability is recognized.

Example 7 — Acquisition of an asset as part of remediation activities with an alternative use

B21 The situation is similar to Example 6, except that the water treatment plant is also going to be used for the treatment of potable water for consumption.

B22 The portion of the water treatment plant that is held for use in the production or supply of potable water would meet the definition of a tangible capital asset. The expenditures related to the portion of the water treatment plant that will be used in the production or supply of potable water for consumption would be capitalized at the time of acquisition and amortized over its useful life when put into service.

B23 Only that portion of the estimated cost of the water treatment plant related to its use in remediation activities would be reported as an expense, not an asset, in the period when a liability is recognized.

SECTION PS 3270
solid waste landfill closure and post-closure liability

TABLE OF CONTENTS

	Paragraph
Purpose and scope	.01-.03
Landfill operations	.04-.07
Definitions	.08-.11
Recognition and measurement	.12-.20
Disclosure	.21

PURPOSE AND SCOPE

.01 This Section establishes standards on how to account for and report the liability for closure and post-closure care of a solid waste landfill site in government financial statements. Specifically, it:

(a) defines which activities should be included in closure and post-closure care;

(b) establishes when to recognize and how to measure the closure and post-closure care liability; and

(c) provides the related financial statement presentation and disclosure requirements.

.02 The Section applies to all operating and closed landfill sites of governments and their organizations.

.03 This Section does not address accounting and reporting for:

(a) opening expenditures, such as those associated with locating a site or constructing a leachate collection system;

(b) end-use expenditures, such as those that transform the site into park land, as they would be attributable to that end-use and not to the landfill; and

(c) unforeseen or catastrophic events, such as a major leachate collection system failure.

LANDFILL OPERATIONS

.04 A solid waste landfill site is a defined area of land or excavation that receives waste that may include household waste, commercial solid waste, non-hazardous sludge, and industrial solid waste.

.05 Government legislation and regulations set out a stringent environmental approval process for landfill sites. That process may establish:

(a) how sites are selected and operated;

(b) when sites should be closed;

(c) for how long into the future the sites should be monitored to determine if environmental damage is being caused; and

(d) in some cases, that financial assets be available to satisfy the liability.

.06 Generally, there is a landfill "footprint" that represents the impression of an entire landfill site and comprises the total expected capacity of the site. The footprint can be divided into individual "phases". Under the environmental approval process, the entire footprint may require approval or each phase may require separate approval. A phase may comprise a series of individual "cells", so that only a portion of each phase would be used at any one time.

.07 A landfill operator must agree to certain obligations prior to receiving environmental approval and accepting any waste. Those obligations include responsibility for closure and post-closure care of the approved site.

DEFINITIONS

.08 Certain activities relating to a site or phase are required before it opens, during its operating life and when it stops accepting waste. Only the expenditures relating to those activities required when the site or phase stops accepting waste are included in the closure and post-closure care liability.

.09 **Closure activities** include all activities related to closing the landfill site. These may include:

(a) final cover and vegetation; and

(b) completing facilities for:

(i) drainage control features;

(ii) leachate monitoring;

(iii) water quality monitoring; and

(iv) monitoring and recovery of gas.

.10 **Post-closure care activities** include all activities related to monitoring the site once it can no longer accept waste. These may include:

(a) acquisition of any additional land for buffer zones;

(b) treatment and monitoring of leachate;

(c) monitoring ground water and surface water;

(d) gas monitoring and recovery; and

(e) ongoing maintenance of various control systems, drainage systems, and final cover.

.11 Some closure and post-closure care activities may not be listed above, or may not be applicable in every situation. Closure and post-closure care activities may differ depending on the method used for the landfill operations, the type of waste accepted, the environmental conditions within which the landfill is situated, and the environmental requirements needed to comply with regulations. Reference should be made to the environmental approval and legislative or contracted requirements when determining which activities to include in closure and post-closure care.

RECOGNITION AND MEASUREMENT

.12 Under environmental law, there is a liability for closure and post-closure care. It is not sufficient to disclose the closure and post-closure care liability as a contingency or a contractual obligation as the existence of the liability is known with certainty.

.13 *Financial statements should recognize a liability for closure and post-closure care as the landfill site's capacity is used. Usage should be measured on a volumetric basis (e.g., cubic metres).* [FEB. 1998]

.14 The liability for closure and post-closure care begins when the site starts accepting waste. Normally, it would be recognized over the operations of the site, beginning when the site first accepts waste and be fully recognized when the site stops accepting waste. If the site is operated on a phase basis, the closure and post-closure liability associated with that phase would be fully recognized when the phase stops accepting waste.

.15 The change in the liability and the expense for the site or phase would be calculated as follows:

(Estimated total	x	Cumulative capacity used)	–	Expenditures
(expenditure		Total estimated capacity)		previously recognized

.16 The estimated total expenditure represents the sum of the discounted future cash flows associated with closure and post-closure care activities. The government's average long-term borrowing rate, determined on a consistent basis, may be appropriate to use as the discount rate.

.17 When determining the estimated total expenditure for closure and post-closure care, consideration needs to be given to current technology, the length of the post-closure care period, and the environmental regulations at the time the estimate is made.

.18 The capacity used would be estimated based on a rational and systematic method and on the best available information. It is important that the basis for estimating the total capacity and the capacity used be applied consistently so that the liability and results are comparable over time. At least once every three years, an assessment of the need for a comprehensive review of capacity would be completed.

.19 The reported liability may be affected by changes in the estimated total expenditure, capacity used or total capacity. Changes could result from new technology, the demand for landfill space, the settling of waste, inflation rates, interest rates, regulatory requirements, or amendments to the approved size of the site or phase. A change in the estimated total expenditure, capacity used or total capacity would be recognized in accordance with the recognition formula set out in paragraph PS 3270.15.

.20 Closure and post-closure care disbursements would be deducted from the reported liability when they are made.

DISCLOSURE

.21 *The notes to the financial statements should disclose:*

(a) the nature and source of landfill closure and post-closure care requirements;

(b) the basis of recognition and measurement of the liability for closure and post-closure care;

(c) the reported liability for closure and post-closure care at the balance sheet date, the estimated total expenditures for closure and post-closure care, and the amount remaining to be recognized;

(d) the remaining capacity of the site and the estimated remaining landfill life in years;

(e) how any requirements for closure and post-closure care financial assurance are being met, e.g., performance bonds;

(f) the amount of any assets designated for settling closure and post-closure care liabilities; and

(g) the estimated length of time needed for post-closure care. [FEB. 1998]

SECTION PS 3300
contingent liabilities

TABLE OF CONTENTS

	Paragraph
Purpose and scope	.01-.02
Definition	.03
Characteristics of contingent liabilities	.04-.12
Existing condition or situation	.07-.09
Confirming future event	.10-.12
Existence uncertainty	.13-.14
Recognition	.15-.23
Measurement	.24-.25
Disclosure	.26-.32

PURPOSE AND SCOPE

.01 This Section:

(a) defines and establishes standards on how to account for and report contingent liabilities in government financial statements; but

(b) does not include standards for specific types of contingent liabilities, which are dealt with in individual CPA Canada Public Sector Accounting Handbook Sections.

.02 It may be useful to read this Section in conjunction with LIABILITIES, Section PS 3200, and CONTRACTUAL OBLIGATIONS, Section PS 3390.

DEFINITION

.03 **Contingent liabilities** are possible obligations that may result in the future sacrifice of economic benefits arising from existing conditions or situations involving uncertainty. That uncertainty will ultimately be resolved when one or more future events not wholly within the government's control occurs or fails to occur. Resolution of the uncertainty will confirm the incurrence or non-incurrence of a liability.

CHARACTERISTICS OF CONTINGENT LIABILITIES

.04 Contingent liabilities are distinct from liabilities as there is a degree of uncertainty as to whether a present obligation to sacrifice economic benefits exists at the financial statement date.

.05 There are two basic characteristics of contingent liabilities:

(a) there must be an existing condition or situation; and

(b) there must be an expected future event that will resolve the uncertainty as to whether a present obligation to sacrifice economic benefits exists.

.06 The mere fact that an estimate of an amount is involved (measurement uncertainty) does not of itself constitute the type of uncertainty that characterizes a contingent liability. For example, amounts owed for goods or services received but not billed are not contingent liabilities, even though the amounts may be estimated. There is nothing uncertain about the fact that these liabilities have been incurred; any uncertainty is related solely to the amounts thereof. Contingent liabilities are characterized by the uncertainty related to the existence of a liability at the financial statement date.

Existing condition or situation

.07 For a contingent liability to be present there must be an existing condition or situation (event) at the financial statement date that indicates that a government may have a liability. The existing condition or situation could be, for example, an existing loan guarantee or an ongoing legal case.

.08 A government may be involved in a lawsuit (the existing condition or situation), however, it may not be known with certainty whether this event will ultimately result in a liability. It is only the future event (the settlement of the suit) that will confirm that the government has a liability.

.09 Passing legislation that has retroactive application after the financial statement date cannot create an existing condition or situation at the financial statement date. Further, elected or government officials may announce government intentions in a period following the financial statement date but before the completion of the financial statements. If a condition or situation did not exist at the date of the financial statements, there is no contingent liability (see SUBSEQUENT EVENTS, Section PS 2400).

Confirming future event

.10 For a contingent liability to exist there must also be an expected confirming future event(s) that will resolve the uncertainty. The expected confirming future event provides additional information as to whether a government has a liability at the financial statement date. The confirming future event does not create a liability — it only proves or disproves its existence at the financial statement date.

.11 The future confirming event cannot be wholly within the control of the reporting government. Where a government has guaranteed a loan of another party, the future confirming event (default) is not within the control of that government.

.12 Legislation may pass after the financial statement date but before the completion of the financial statements. The passing of such legislation is within the control of the reporting entity and hence it is not a confirming future event. However, it may be a subsequent event (see SUBSEQUENT EVENTS, Section PS 2400).

EXISTENCE UNCERTAINTY

.13 The determination of whether a liability exists at the financial statement date depends on an assessment of the probability of a future event occurring or not occurring confirming that a liability existed at the financial statement date. The uncertainty relating to the occurrence or non-occurrence of the future event(s) can be expressed by a range of probabilities. Three areas of this range are as follows:

(a) likely — the probability of the occurrence (or non-occurrence) of the future event(s) is high;

(b) unlikely — the probability of the occurrence (or non-occurrence) of the future event(s) is slight; and

(c) not determinable — the probability of the occurrence (or non-occurrence) of the future event(s) cannot be determined.

.14 Assessing the likelihood of the future confirming event occurring and estimating its financial effects are matters for judgment by those responsible for preparing the financial statements. In identifying contingent liabilities and determining their amount, consideration would be given to all information available prior to completion of the financial statements (see SUBSEQUENT EVENTS, Section PS 2400), supplemented by experience in similar transactions and, in some cases, reports from independent experts.

RECOGNITION

.15 *A contingent liability should be recognized in the financial statements when:*

(a) it is likely that a future event will confirm that a liability has been incurred at the date of the financial statements; and

(b) the amount can be reasonably estimated. [SEPT. 2004]

.16 A condition or situation may exist at the financial statement date and, if it is likely that a future event will confirm the existence of a liability, accrual of its financial effects is required. This accounting treatment recognizes that the likely incurrence of a liability is related to a condition or situation existing at the financial statement date and not to the confirming future event.

.17 A condition or situation may exist at the financial statement date; however, it is unlikely that a future event will confirm the existence of a liability. In this case, a contingent liability would not be accrued. A government may, for example, provide building inspections, but there is only a remote possibility that at some time in the future it could be found that a building inspection was carried out in a negligent manner. While there is a possibility that a government could be responsible in the future, given what is known at the financial statement date, the probability of a future confirming event happening is unlikely.

.18 A condition or situation may exist at the financial statement date, but it is not determinable as to whether a liability exists. In this case, a contingent liability would not be accrued. A government may, for example, be involved in a lawsuit where the outcome of the claim cannot be determined as there is no clear evidence or precedent supporting the outcome one way or the other. While there is a possibility that the government could be responsible, there is no evidence that a liability existed at the financial statement date.

.19 If there is conflicting or insufficient evidence on which to base a decision as to the outcome of a contingent liability, one or both of the conditions for accrual set out in paragraph PS 3300.15 may not be met. In these circumstances, accrual would be inappropriate.

.20 A contingent liability continues to be recognized until it is settled or otherwise extinguished, or until the probability of the occurrence of the future confirming event is considered unlikely. Part of this process includes a requirement for continual assessment of the likelihood of the future confirming event occurring.

.21 *A contingent liability should be derecognized when it is settled or otherwise extinguished, or when it is determined that the existence of a liability at the financial statement date is unlikely.* [SEPT. 2004]

.22 Derecognition should not occur as a result of the likelihood of the future confirming event becoming undeterminable. Derecognition should only occur if the likelihood of the future confirming event becomes unlikely and if there is a reasonable expectation that this status will not change in the near future.

.23 When it is determined that the future confirming event associated with the accrued contingent liability is unlikely to occur, the derecognition of the contingent liability should be accounted for in the current period and not as a prior period adjustment (see ACCOUNTING CHANGES, Section PS 2120).

MEASUREMENT

.24 Continual assessment of the carrying amount of a contingent liability is required. When a change in an estimate of the amount of a contingent liability is required, it would be accounted for in accordance with ACCOUNTING CHANGES, Section PS 2120.

.25 A recognized contingent liability may be mitigated by a counterclaim or another claim against a third party. In such a case, the amount of the recovery is an element of the contingent liability and would be taken into account in measuring the amount, provided that the probability of recovery is likely. If, however, the probability of success in the related action is less than likely, a potential recovery would not be taken into account. If there is a contingent liability resulting from litigation that is covered by insurance, for example, the recovery may be netted against the liability if the probability of recovery is likely.

DISCLOSURE

.26 In assessing the government's financial position and results, it is important to understand its risks and exposure to contingent liabilities. Regardless of whether contingent liabilities should be accrued, as a minimum, knowledge of the existence, nature and extent of these types of obligations is warranted because they indicate a possible claim on the economic resources of the government. The relevance of such information to the decision-making process arguably outweighs the inherent uncertainty.

.27 *The existence of a contingent liability at the date of the financial statements should be disclosed in notes to the financial statements when:*

(a) the occurrence of the confirming future event is likely but the amount of the liability cannot be reasonably estimated;

(b) the occurrence of the confirming future event is likely and an accrual has been made, but there exists an exposure to liability in excess of the amount accrued; or

(c) the occurrence of the confirming future event is not determinable. [SEPT. 2004]

.28 *The following information should be disclosed in notes or schedules relative to a contingent liability, unless its occurrence is unlikely:*

(a) the nature;

(b) the extent, except in those cases where the extent cannot be measured or disclosure of the extent would have an adverse effect on the outcome;

(c) the reason(s) for any non-disclosure of the extent; and

(d) when an estimate of the amount has been made, the basis for that estimate. [SEPT. 2004]

.29 Disclosure of the nature of contingent liabilities includes a description of the circumstances giving rise to the uncertainty and information about the anticipated resolution of the uncertainty.

.30 Disclosure of the extent of a contingent liability includes the government's best estimate and a range of possible amounts, unless it would have an adverse effect on the outcome. A financial statement user may not find disclosure of a broad range of amounts, which may extend from the minimum possible amount to the maximum possible amount, as useful as a narrower range that comprises what is reasonable.

.31 It may also be useful to disclose the significant assumptions underlying the contingent liability that are subject to change, and the impact that a change would have on the estimate. Disclosure of the extent could also be accomplished by disclosing the maximum likely amount of the contingent liability, accompanied by an explanation of the significant factors that could affect the resolution of the contingent liability and the prospects that any contingent liability will be less than the maximum likely amount.

.32 The level of detail disclosed by a government reflects the highly aggregated nature of financial statements. When deciding the level of detail to disclose, governments consider the usefulness of the information to assessing the nature and extent of a government's contingent liabilities. In some cases, it may be useful to group similar items together. The level of disclosure also considers the sensitivity of the information.

SECTION PS 3310
loan guarantees

TABLE OF CONTENTS

	Paragraph
Purpose and scope	.01-.05
Providing for losses	.06-.09
Estimating the provision for losses	.10-.18
Removal of the provision of losses from the financial statements	.19-.21

Guaranteed loans to be repaid from future government assistance	.22-.27
Disclosure	.28-.33
Transitional provisions	.34

PURPOSE AND SCOPE

.01 This Section establishes standards on how to account for and report government loan guarantees in government financial statements. 1 The standards apply to loan guarantees to persons and to organizations outside of the government reporting entity. They are not intended to apply to contractual obligations, or to other contingencies such as indemnities, self-insurance or government insurance programs.

.02 Loan guarantees are a significant tool that governments use to achieve policy objectives. Loan guarantees may be used, for example, to allow organizations to obtain lower cost financing, to support regional development or to give economic assistance to certain industries or to individuals who meet specific criteria. Federal, provincial, territorial and local governments may extend loan guarantees to individuals, organizations and other governments, under programs that apply to a large number of borrowers operating in similar circumstances, or on an individual ad hoc basis. Users of financial statements need information about the current and potential costs of government activities, including the government's exposure to loss and the estimated losses under various classes of loan guarantees.

.03 For the purposes of this Section, a **loan guarantee** is a promise to pay all or a part of the principal and/or interest on a debt obligation in the event of default by the borrower.

.04 A loan guarantee is a contingent liability of the government. The generally accepted accounting principles for contingent liabilities are, therefore, appropriate for loan guarantees. The key accounting principles for contingent liabilities are disclosure of contingent liabilities in the notes to the financial statements and recognition of liabilities when it is determined that losses are likely.

.05 *Government loan guarantees should be accounted for and reported as contingent liabilities in the government's financial statements.* [JUNE 1995]

PROVIDING FOR LOSSES

.06 The key issue in accounting for loan guarantees is assessing when a provision for losses on loan guarantees should be recognized as a liability and an expense. Liabilities are present obligations of a government to others arising from past transactions or events, the settlement of which is expected to result in the future sacrifice of economic benefits. 2

.07 Proper accounting treatment requires recognition of losses when it is determined that they are likely. In most cases, it is known that a loss is likely at some time before the government must make payment with respect to a loan guarantee. It is not sufficient to disclose loan guarantees as contingent liabilities in the notes and schedules when a loss is likely, as disclosure is not a substitute for proper accounting treatment.

.08 *A provision for losses on loan guarantees should be established when it is determined that a loss is likely, and should be accounted for as a liability and in the statement of operations as an expense.* [JUNE 1995 *]

.09 The following factors may indicate that a loss is likely on a loan guarantee or a class of loan guarantees:

(a) recent financial performance of the borrower(s), including financial statements that portray a decline in the current financial position of a borrower, particularly its liquidity, as evidenced by severe losses in the current year or recent years, a serious deficiency in working capital or cash flow, or an excess of liabilities over assets;

(b) factors known at the time of reporting that are likely to affect the ability of the borrower(s) to repay the loan(s) in the future, including economic conditions in the country, region or industry in which the organizations operate, and for individuals, income stability and income earning potential;

(c) recent collection experience for the loan(s), including a current default in making interest or principal payments when due on debt obligations;

(d) failure to meet debt covenants on existing debt obligations;

(e) independent credit reports that indicate concerns about an individual's or an organization's ability to meet its continuing obligations;

(f) a decline in the market value of a traded debt instrument issued by a borrower that is unrelated to a change in market interest rates; and

(g) the adequacy of the security pledged for the loan(s), including the type of assets and the ratio of their current market value to the loan principal amount outstanding.

ESTIMATING THE PROVISION FOR LOSSES

.10 *The provision for losses on loan guarantees should take into account the principal amount outstanding, accrued and unpaid interest if it is guaranteed, and amounts recoverable from the borrower and from the sale of assets pledged as security.* [JUNE 1995]

.11 If the government guarantees the interest payments as well as the loan principal, the amount of accrued and unpaid interest would increase the estimated loss.

.12 In addition, the government may have recourse to recover from the borrower, amounts it has paid with respect to the loan guarantee. Amounts expected to be recovered from the borrower would reduce the estimated loss.

.13 Loan guarantees may also be secured with assets of the borrower. Depending on the loan guarantee agreement, either the lender or the government may be responsible for selling the asset pledged as security. Expected net proceeds from the sale of the asset would reduce the estimated loss.

.14 *The provision for losses on loan guarantees should be determined using the best estimates available in light of past events, current conditions, and taking into account all circumstances known at the date of preparation of the financial statements.* [JUNE 1995]

.15 In estimating the provision for losses, different techniques may be required. For individual loan guarantees, the provision could be based on the current circumstances of the individual borrowers. For guarantee programs consisting of a large number of similar loans, the provision could be based on historical experience, or on economic conditions facing that group of borrowers.

.16 Present value techniques may be used to measure the provision. The government's average borrowing rate may be appropriate to use as the discount rate in determining the present value of the estimated loss.

.17 Estimates that are recognized in the financial statements require reappraisal as new events occur, as more experience is acquired, or as additional information is obtained. Changes in the circumstances of the borrower may require changes to the provision for losses on loan guarantees. Changes in the provision for losses on loan guarantees would be charged or credited to expenses in the statement of operations.

.18 *The provision for losses on loan guarantees should be reviewed on an ongoing basis. Any changes in the provision for losses on loan guarantees should be charged or credited to expenses in the statement of operations.* [JUNE 1995 *]

REMOVAL OF THE PROVISION FOR LOSSES FROM THE FINANCIAL STATEMENTS

.19 The government's obligation with respect to a loan guarantee would end as specified in the terms of the guarantee. It may end, for example, when the loan is paid in full or when the term of the guarantee has expired. If the government had previously recognized a provision for losses related to the guarantee, the provision would need to be removed from the financial statements once the government's obligation with respect to the loan guarantee has ended.

.20 *The provision for loss on a loan guarantee should be removed from the government's statement of financial position when the guaranteed loan has been discharged or the term of the loan guarantee has expired.* [JUNE 1995]

.21 If the government has made payments under the terms of a guarantee and has recourse to recover amounts paid from the borrower, such amounts should be accounted for in accordance with LOANS RECEIVABLE, Section PS 3050.

GUARANTEED LOANS TO BE REPAID FROM FUTURE GOVERNMENT ASSISTANCE

.22 Governments may guarantee loans to borrowers and provide the borrower with funding that allows the borrower to repay the guaranteed loan. Such guarantees may be provided by the government itself or through an organization that is part of the government reporting entity. If a direct relationship can be established between government assistance to a borrower and the repayment of a guaranteed loan, the amount of the guaranteed loan that is expected to be repaid from that assistance is, in substance, a liability of the government. In effect, the government has assumed the obligation for repayment of all or a portion of the guaranteed loan.

.23 The amount of the guaranteed loan that is expected to be repaid from future government assistance should be accounted for as a liability and an expense in the statement of operations. The amount of the

guaranteed loan that will not be repaid through future government assistance would be accounted for in accordance with the other standards in this Section.

.24 *The amount of a guaranteed loan that is expected to be repaid from future government assistance should be accounted for as a liability and an expense in the statement of operations in the period when a direct relationship can be established between the repayment of the loan and the government's funding to the borrower.* [JUNE 1995 *]

.25 A direct relationship would be indicated if the government assists the borrower to repay the loan through specific grants or increases in existing government assistance. There may be other financing arrangements that, in substance, result in a direct relationship between the repayment of a guaranteed loan and the government's assistance to the borrower.

.26 Financial dependence alone, however, would not be sufficient evidence that a direct relationship exists between the repayment of a guaranteed loan and the government funding received by the borrower. For example, if the government does not change its funding to the borrower as a result of the loan guarantee, or if the government assistance provided to a borrower is consistent with that provided to similar organizations that have not received government loan guarantees, a direct relationship likely does not exist. In such cases, the loan guarantee is a contingent liability.

.27 To ensure that expenses are not overstated when the future government assistance is provided to the borrower, the portion of the assistance that is used to make principal payments on a guaranteed loan accounted for in accordance with paragraph PS 3310.24 would be charged against the liability. The portion of the assistance related to interest on the guaranteed loan would be accounted for as an expense in the statement of operations.

DISCLOSURE

.28 DISCLOSURE OF ACCOUNTING POLICIES, paragraphs PS 2100.03 and PS 2100.09, state that a clear and concise description of all significant accounting policies selected and applied to significant liabilities and expenses be included as an integral part of the financial statements.

.29 *Government financial statements should disclose information to describe the accounting policies selected and applied to loan guarantees, including:*

(a) the basis for initial recognition and measurement of the provision for losses on loan guarantees; and

(b) the policy with respect to changes in the amount of the provision. [JUNE 1995]

.30 Governments need to disclose sufficient information in notes or schedules for readers to understand the nature, terms and risk of loss of the government's significant classes of loan guarantees.

.31 *Government financial statements should disclose in notes or schedules the nature and terms of significant classes of loan guarantees. Information that should be disclosed includes:*

(a) the authorized limit;

(b) the principal amount outstanding;

(c) the amount of provision for losses; and

(d) general terms and conditions. [JUNE 1995]

.32 General terms and conditions of significant classes of loan guarantees may include:

(a) a general description of loan guarantee programs;

(b) the period covered by the class of loan guarantees;

(c) interest terms;

(d) special conditions; and

(e) security pledged.

.33 The level of detail disclosed by governments should reflect the highly aggregated nature of financial statements. In deciding the level of detail to disclose, governments should consider the usefulness of the information to the reader in assessing the nature of, and the costs associated with, a government's loan guarantee programs. The level of disclosure would also consider the sensitivity of the information, particularly any provision for losses on loan guarantees, in relation to the government's or the borrower's financial position.

TRANSITIONAL PROVISIONS

.34 This Section applies to all loan guarantees of the government. If application of the Section results in a change of accounting policy, ACCOUNTING CHANGES, Section PS 2120, applies.

Footnotes

1. The term "financial statements" refers to the summary financial statements published by a government that report on the financial position and changes in financial position of the government reporting entity.

2. See FINANCIAL STATEMENT CONCEPTS, paragraph PS 1000.44.

* Editorial change — March 2012.

* Editorial change — June 2011.

* Editorial change — June 2011.

SECTION PS 3320
contingent assets



TABLE OF CONTENTS	Paragraph
Purpose and scope	.01-.02
Definition	.03
Characteristics of contingent assets	.04-.11
Existing condition or situation	.08-.09
Confirming future event	.10-.11
Existence of uncertainty	.12-.13
Disclosure	.14-.20
Transitional provisions	.21

PURPOSE AND SCOPE

.01 This Section:

(a) defines and establishes disclosure standards on contingent assets; but

(b) does not include disclosure standards for specific types of contingent assets.

.02 It may be useful to read this Section in conjunction with ASSETS, Section PS 3210, and CONTRACTUAL RIGHTS, Section PS 3380.

DEFINITION

.03 **Contingent assets** are possible assets arising from existing conditions or situations involving uncertainty. That uncertainty will ultimately be resolved when one or more future events not wholly within the public sector entity's control occurs or fails to occur. Resolution of the uncertainty will confirm the existence or non-existence of an asset.

CHARACTERISTICS OF CONTINGENT ASSETS

.04 Contingent assets are distinct from assets because they are characterized by the uncertainty related to the existence of an asset at the financial statement date.

.05 Contingent assets usually arise from unplanned or unexpected events that lead to an existing condition or situation the outcome of which is uncertain. The outcome or resolution of the condition or situation after the financial statement date will confirm whether an asset exists.

.06 Contingent assets have two basic characteristics:

(a) An existing condition or situation that is unresolved at the financial statement date.

(b) An expected future event that will resolve the uncertainty as to whether an asset exists.

.07 The mere fact that an estimate of an amount is involved (measurement uncertainty) does not, in and of itself, constitute the type of uncertainty that characterizes a contingent asset. For example, even though there may be measurement uncertainty related to income tax receivable, there is nothing uncertain about the fact that this asset exists. Any uncertainty is related solely to the amount thereof.

Existing condition or situation

.08 For a contingent asset to be present, there usually is an unplanned or unexpected event leading to an existing condition or situation where the evidence indicates that a public sector entity may have an asset. For example, a public sector entity may have incurred an unexpected loss and there is sufficient evidence for potential recovery. The potential for recovery constitutes the existing condition or situation giving rise to a possible asset. It is a possible asset because of the uncertainty around recovery and it is only a future event that will confirm whether an asset exists.

.09 Passing legislation that has retroactive application after the financial statement date cannot create an existing condition or situation at the financial statement date. Further, elected or public sector entity officials may announce public sector entity intentions in a period following the financial statement date but before the completion of the financial statements. If a condition or situation did not exist at the date of the financial statements, there is no contingent asset. However, there may be a subsequent event.

Confirming future event

.10 For a contingent asset to exist, there must also be an expected confirming future event that will resolve the uncertainty. The expected confirming future event provides additional information as to whether a public sector entity had an asset at the financial statement date. The confirming future event does not create an asset – it only proves or disproves its existence at the financial statement date.

.11 The future confirming event cannot be wholly within the control of the public sector entity. For example, when a public sector entity is involved in a lawsuit, the future confirming event (the resolution of the lawsuit) is not within the control of that public sector entity.

EXISTENCE OF UNCERTAINTY

.12 The determination of whether an asset exists at the financial statement date depends on an assessment of the probability of a future event occurring, or not occurring, confirming that an asset existed at the financial statement date. This probability can be expressed by the following:

(a) likely — the probability of the occurrence (or non-occurrence) of the future event(s) is high;

(b) unlikely — the probability of the occurrence (or non-occurrence) of the future event(s) is slight; and

(c) not determinable — the probability of the occurrence (or non-occurrence) of the future event(s) cannot be determined.

.13 Assessing the likelihood of the future confirming event occurring and estimating its financial effects are matters for judgment by those responsible for preparing the financial statements. In identifying contingent assets and determining their amount, consideration would be given to all information available prior to completion of the financial statements, supplemented by experience in similar transactions and, in some cases, reports from independent experts.

DISCLOSURE

.14 In assessing the public sector entity's financial position and results, it is important to understand its contingent assets. As a minimum, knowledge of the existence, nature and extent of contingent assets is warranted because they indicate the economic resources that may be available to the public sector entity. The relevance of such information to the decision-making process arguably outweighs the inherent uncertainty.

.15 Disclosure of the nature of contingent assets includes a description of the circumstances giving rise to the uncertainty and information about the anticipated resolution of the uncertainty.

.16 When a reasonable estimate can be made, disclosure of the extent of a contingent asset includes the public sector entity's best estimate and a range of possible amounts, unless it would have an adverse effect on the outcome. A financial statement user may not find disclosure of a broad range of amounts, which may extend from the minimum possible amount to the maximum possible amount, as useful as a narrower range that comprises what is reasonable.

.17 When an estimate of the amount has been made, the basis for that estimate would be disclosed. It may also be useful to disclose the significant assumptions underlying the contingent asset that are subject to change and the impact that a change would have on the estimate. Disclosure of the extent could also be accomplished by disclosing the minimum likely amount of the contingent asset, accompanied by an explanation of the significant factors that could affect the resolution of the contingent asset and the prospects that any contingent asset will be more than the minimum likely amount.

.18 The level of disclosure also considers the sensitivity of the information.

.19 *The existence of a contingent asset at the date of the financial statements should be disclosed in notes to the financial statements when the occurrence of the confirming future event is likely.* [APRIL 2017]

.20 *The following information should be disclosed in notes or schedules relative to a contingent asset:*

(a) the nature;

(b) the extent, except in those cases where the extent cannot be measured or disclosure of the extent would have an adverse effect on the outcome;

(c) the reason(s) for any non-disclosure of the extent; and

(d) when an estimate of the amount has been made, the basis for that estimate. [APRIL 2017]

TRANSITIONAL PROVISIONS

.21 This Section applies to fiscal years beginning on or after April 1, 2017. Earlier adoption is permitted.

SECTION PS 3380
contractual rights

TABLE OF CONTENTS

	Paragraph
Purpose and scope	.01-.02
Definition	.03
Characteristics of contractual rights	.04-.09
Disclosure	.10-.12
Transitional provisions	.13

PURPOSE AND SCOPE

.01 This Section:

(a) defines and establishes disclosure standards on contractual rights; but

(b) does not include disclosure standards for specific types of contractual rights; and

(c) does not include those contractual rights to exchange one asset for another where revenue does not arise.

.02 It may be useful to read this Section in conjunction with ASSETS, Section PS 3210, and CONTINGENT ASSETS, Section PS 3320.

DEFINITION

.03 **Contractual rights** are rights to economic resources arising from contracts or agreements that will result in both an asset and revenue in the future.

CHARACTERISTICS OF CONTRACTUAL RIGHTS

.04 By definition, a contractual right arises out of a contract or agreement that is binding between two or more parties, has clear economic consequences and is enforceable by law.

.05 Contractual rights may include, but are not limited to, contractual rights to receive payments under a shared cost agreement or contractual rights to receive lease payments.

.06 Contractual rights are distinct from assets because there has been no past transaction or event giving rise to an asset at the financial statement date. Until a transaction or event occurs under a contract or agreement, an

entity only has a contractual right to an economic resource. Once the entity has received an asset, it no longer has a contractual right.

.07 Derivatives are unlike contractual rights, such as a sale agreement, where an asset does not exist until the good or service that is the object of the contract is provided. Derivatives are accounted for in accordance with FINANCIAL INSTRUMENTS, Section PS 3450.

.08 Contractual rights are distinct from contingent assets as there is no uncertainty related to the existence of the contractual right. Once the terms of the contract or agreement are met, the contractual right will give rise to an asset and revenue.

.09 Contractual rights are governed by contract law and are distinct from certain public sector entity rights, such as the right to tax or the right to license. Such rights are derived from legislation based on constitutional authority or delegated constitutional authority.

DISCLOSURE

.10 Disclosure of a public sector entity's contractual rights is useful because it provides an understanding of the economic resources available in the future to meet the public sector entity's obligations or to finance future operations.

.11 *Information about a public sector entity's contractual rights should be disclosed in notes or schedules to the financial statements and should include descriptions about their nature and extent and the timing.* [APRIL 2017]

.12 The exercise of professional judgment would be required when determining contractual rights that would be disclosed. Factors to consider include, but are not limited to:

(a) contractual rights to revenue that are abnormal in relation to the financial position or usual business operations; and

(b) contractual rights that will govern the level of certain type of revenue for a considerable period into the future.

TRANSITIONAL PROVISIONS

.13 This Section applies to fiscal years beginning on or after April 1, 2017. Earlier adoption is permitted.

SECTION PS 3390
contractual obligations

PURPOSE AND SCOPE

.01 This Section:

(a) defines and establishes disclosure standards on contractual obligations in government financial statements; but

(b) does not include disclosure standards for specific types of contractual obligations.

.02 It may be useful to read this Section in conjunction with LIABILITIES, Section PS 3200, and CONTINGENT LIABILITIES, Section PS 3300.

DEFINITION

.03 **Contractual obligations** are obligations of a government to others that will become liabilities in the future when the terms of those contracts or agreements are met.

.04 Contractual obligations are distinct from liabilities as there has been no past transaction or event obligating the government to a future sacrifice of economic benefits at the financial statement date. Until a transaction or event occurs under a contract, a government does not have a liability. Disclosure of information about contractual obligations relates to the unperformed portion of those contracts.

.05 Derivatives are unlike contractual obligations, such as a purchase agreement, where a liability does not arise until the good or service that is the object of the contract is provided. Derivatives are accounted for in accordance with FINANCIAL INSTRUMENTS, Section PS 3450.

.06 Contractual obligations are distinct from contingent liabilities as there is no uncertainty related to the contractual obligation's existence.

.07 Contractual obligations do not include a government's obligations related to ongoing programs such as health, welfare and education. In these cases, a government does not have a contractual obligation to others and maintains complete discretion as to whether to change the level or quality of its programs or the delivery of these programs. However, once a government enters into a contract or agreement, a contractual obligation exists and a certain degree of discretion to avoid the obligation is lost.

DISCLOSURE

.08 Disclosing a government's contractual obligations is useful because it provides information about the nature and extent to which a government's resources are already committed to meet its obligations.

.09 *Information about a government's contractual obligations should be disclosed in notes or schedules to the financial statements and should include descriptions of their nature and extent and the timing of the related expenditures.* [Former paragraph PS 3390.09 retained in Archived Pronouncements.] [APRIL 2017]

.10 Contractual obligations that would be disclosed include, but are not limited to, the following types:

(a) contractual obligations that involve a high degree of speculative risk;

(b) contractual obligations to make expenditures that are abnormal in relation to the financial position or usual business operations; and

(c) contractual obligations that will govern the level of a certain type of expenditure for a considerable period into the future.

SECTION PS 3410
government transfers

TABLE OF CONTENTS

Purpose and scope	.01-.06
Recognition	.07-.34
Transferring government	.12-.15
Recipient government	.16-.27
Authorization	.28-.34
Transferring government	.28-.32
Recipient government	.33-.34
Presentation and disclosure	.35-.36
Transitional provisions	.37
Glossary	Gloss
Decision tree — recognition	Appendix A
Distinguishing types of transfers	Appendix B

PURPOSE AND SCOPE

.01 This Section establishes standards on how to account for and report government transfers to individuals, organizations and other governments from both a transferring government and a recipient government perspective.

.02 In this Section, terms that appear in **bold type** are defined in the glossary.

.03 A decision tree in Appendix A illustrates how the recognition criteria would be applied by transferring and recipient governments. Appendix B distinguishes entitlements and shared cost agreements from other transfers.

.04 Government transfers are transfers of **monetary assets** or tangible capital assets from a government to an individual, an organization or another government for which the government making the transfer does not:

(a) receive any goods or services directly in return, as would occur in a purchase / sale or other exchange transaction;

(b) expect to be repaid in the future, as would be expected in a loan; or

(c) expect a direct financial return, as would be expected in an investment.

.05 This Section does not deal with:

(a) transfers made through a tax system that are authorized through tax legislation; 1

(b) grants in lieu of taxes; 2

(c) settlements of lawsuits or other types of legal compensation provided by governments;

(d) Canada Pension Plan (CPP) and Quebec Pension Plan (QPP) payments; 3 and

(e) transfers of **non-monetary assets** other than tangible capital assets. Examples of transfers of non-monetary assets that are excluded from the scope of the Section are: transfers of purchased natural resources and rights, transfers of equity investments, transfers of items inherited in right of the Crown or transfers of works of art and historical treasures. 4

.06 Government transfers do not include:

(a) taxes or other money collected by one government on behalf of another government or organization, including local government requisitions; and

(b) flow-through arrangements where a government agrees to act merely as an intermediary to administer funds on behalf of another party and has no ability to make decisions regarding the use of the funds.

Taxes or other money collected by one government on behalf of another and subsequently disbursed to that other government are not government transfers. Similarly, when funds are received as a result of an administrative flow-through arrangement in which a recipient government serves only as a cash conduit (i.e., it has no direct financial involvement in the program or decision-making capability in relation to the program) the receipt and disbursement of cash would not be recognized as transfers in that recipient government's financial statements.

RECOGNITION

.07 All government transfer programs are ultimately discretionary and wholly under the direction of the transferring government, although negotiation regarding transfer terms occurs. The transferring government also has the ability to impose transfer terms called **eligibility criteria** and **stipulations**.

.08 Eligibility criteria describe who a recipient must be or what it must do in order to be able to get a government transfer. Stipulations describe how a recipient must use transferred resources or the actions it must perform in order to keep the transfer. No matter how a transfer term is identified in legislation, regulations, by-

laws or a transfer agreement (i.e., as an eligibility criterion or a stipulation), the crucial characteristic that distinguishes the substance of these two types of transfer terms is when they are required to be or are met by a recipient. If a term is required to be and is met before the transfer is provided, it is an eligibility criterion for the purposes of this Section. If a transfer term is met after the transfer is provided, it is a stipulation for the purposes of this Section. Transfer stipulations do not affect the timing of recognition of a transfer in expenses by a transferring government. However, stipulations may affect the timing of recognition of a transfer in revenue by a recipient government. Examples of eligibility criteria and stipulations are set out in the glossary.

.09 This Section does not require symmetrical accounting by the transferor and recipient of a government transfer. Symmetrical accounting by the parties to a transaction is not a fundamental principle of accounting theory. In some cases, when it reflects the substance of the transaction for all parties to a transfer, symmetrical accounting will result. In others, the evidence available to support recognition or the ability to estimate the transfer may vary between the transferor and recipient and symmetrical accounting will not occur.

.10 The past event(s) that create(s) a liability 5 for a transferring government to provide a transfer or that creates a transfer receivable 6 for a recipient government, comprises both the meeting of eligibility criteria by a transfer recipient and the authorization of the transfer by the transferring government.

.11 The recognition requirements for transferring and recipient governments apply equally to operating transfers, capital transfers and transfers of tangible capital assets.

Transferring government

.12 *A government transfer should be recognized by a transferring government as an expense in the period the transfer is authorized and all eligibility criteria have been met by the recipient.* [APRIL 2012]

.13 Given the non-exchange nature of government transfers, a transferring government does not receive a direct economic benefit that it can control in exchange for a transfer, as is required by the definition of an asset. 7 As a result, the transferring government incurs an expense and does not acquire an asset by providing a transfer.

.14 The transfer of a tangible capital asset is recognized as an expense by a transferring government at the net book value of the tangible capital asset transferred.

.15 Some transfer programs may require recipients to apply and meet eligibility criteria only once. Other programs may require periodic application as well as evidence of ongoing eligibility (i.e., continually meeting eligibility criteria) over the periods funded. The nature and extent of eligibility criteria may have an impact on the extent of a transferring government's liability under a transfer program at the **financial statement date**.

Recipient government

.16 *A transfer without eligibility criteria or stipulations should be recognized as revenue by a recipient government when the transfer is authorized.* [APRIL 2012]

.17 *A transfer with eligibility criteria but without stipulations should be recognized as revenue by a recipient government when the transfer is authorized and all eligibility criteria have been met.* [APRIL 2012]

.18 If a recipient government creates an obligation that meets the definition of a liability before the financial statement date to use a transfer received without stipulations, the two events — the receipt of a transfer and the creation of a liability — would be recognized separately.

.19 *A transfer with or without eligibility criteria but with stipulations should be recognized by a recipient government as revenue in the period the transfer is authorized and all eligibility criteria have been met, except when and to the extent that the transfer gives rise to an obligation that meets the definition of a liability for the recipient government in accordance with LIABILITIES, Section* PS 3200. [APRIL 2012]

.20 The determination under paragraph PS 3410.19 as to whether a liability would arise for a recipient government in relation to a transfer would be influenced by:

(a) the stipulations of the transfer alone; or,

(b) the stipulations of the transfer taken together with the actions and communications of the recipient government before the financial statement date;

and whether either set of circumstances would create an obligation that meets the definition of a liability in LIABILITIES, Section PS 3200. Paragraph PS 3410.08 provides guidance for evaluating the extent to which transfer terms meet the definition of stipulations for the purposes of this Section.

.21 There may be circumstances when the stipulations of a transfer alone are too broad to create an obligation that meets the definition of a liability as set out in paragraph PS 3410.20(a). In such cases, a recipient government would review its own actions and communications by the financial statement date to evaluate whether they are consistent with the substance and intent of the transfer stipulations, and determine whether the nature and extent of those actions and communications together with the transfer stipulations create an obligation that meets the definition of a liability for the purposes of paragraph PS 3410.20(b). A recipient government would refer to LIABILITIES, Section PS 3200 and in particular paragraphs PS 3200.07-.17, and the definition of a liability in order to make this determination.

.22 Under paragraph PS 3410.20(b), the combination of two events — a government's receipt of a transfer with stipulations and the recipient government's own actions and communications — could create an obligation that is consistent with the transferring government's stipulations and meets the definition of a liability. In this case, the recipient government would initially recognize an asset and a liability. Revenue would be subsequently recognized as the liability is settled.

.23 Obligations are not recognized as liabilities unless they meet the three characteristics of liabilities in LIABILITIES, Section PS 3200. Depending on the circumstances, an obligation may or may not arise in relation to:

(a) an operating transfer;

(b) a capital transfer for the purpose of acquiring or developing a tangible capital asset;

(c) a capital transfer for the purpose of acquiring or developing a tangible capital asset for use in providing services for a defined number of years; or

(d) a transfer of a tangible capital asset that is to be used to provide services for a defined number of years.

In each case, a recipient government would examine the transfer stipulations and its own actions and communications related to the transfer as described in paragraphs PS 3410.20-.22 to determine if they create an obligation that meets the definition of a liability in LIABILITIES, Section PS 3200. If a liability is created, those same transfer stipulations and recipient government actions and communications, if any, would define the terms of the liability and thus would be examined to determine the timing of revenue recognition of the transfer for the purposes of paragraph PS 3410.26.

.24 Under paragraph PS 3410.20(b), if the recipient government is using the transferred resources received to provide a subsequent transfer, the requirements of paragraph PS 3410.12 would apply in determining whether an obligation that meets the definition of a liability is created at the financial statement date (i.e., the recipient government becomes a transferring government). In particular, paragraph PS 3410.10 clarifies that the past event(s) for such a subsequent transfer comprises both the meeting of eligibility criteria by a transfer recipient and the authorization of the transfer by the financial statement date.

.25 *A liability recognized in accordance with paragraph* PS 3410.19 *should be reduced and an equivalent amount of revenue recognized as the liability is settled. Revenue recognition should occur in a manner consistent with the circumstances and evidence used to support the initial recognition of the transfer as a liability.* [APRIL 2012]

.26 Depending on the circumstances and evidence used to support the initial recognition of a transfer as a liability in paragraphs PS 3410.19-.22, the timing of the revenue recognition of the transfer would be as the related liability is settled. Thus revenue recognition may occur:

(a) as the transfer stipulations are met; or

(b) in accordance with the recipient government's actions and communications that determined the use of the transfer, which are consistent with the substance and intent of the transfer stipulations.

For a capital transfer, in either of case (a) or (b) revenue recognition may occur over the related asset's useful life or over a lesser period depending on the terms of the liability.

.27 A transfer of non-depreciable assets such as land would be recognized as revenue when received or receivable under the recognition principles of this Section. 8 A capital transfer relating to non-depreciable assets such as land would only meet the definition of a liability until the asset is acquired. At the date of acquisition the capital transfer would be recognized in revenue.

Authorization

Transferring government

.28 *For a transferring government, a government transfer is authorized for the purposes of this Section when either the authorization described in (a) or (b) is in place.*

(a) There is evidence that both of the following have occurred by the financial statement date:

(i) the enabling authority to provide a transfer is in place, which is conveyed through approved legislation, regulations or by-laws of the transferring government, and

(ii) an exercise of authority under that approved legislation, regulations or by-laws has occurred. In essence, a decision has been made by the transferring government under the approved legislation, regulations or by-laws that clearly demonstrates that it has lost its discretion to avoid proceeding with the transfer.

(b) There is evidence that both of the following have occurred:

(i) actions and communications of the transferring government by the financial statement date clearly demonstrate that it has lost its discretion to avoid proceeding with a transfer and thus the government is demonstrably committed to approving the enabling legislation, regulations or by-laws for the transfer and proceeding with the transfer; and

*(ii) final approval in the **stub period** of the enabling legislation, regulations or by-laws confirms that the transferring government was demonstrably committed to approving and proceeding with the transfer at the financial statement date.*

In some cases, the authority to pay may be part of the authorization process for the purposes of this Section and its absence at the financial statement date may indicate that the exercise of authority required by (a) or (b) is not complete. In such cases, the government may retain its discretion to avoid proceeding with a transfer until the authority to pay is in place. [APRIL 2012]

.29 Most government transfers will be authorized by the financial statement date as described in paragraph PS 3410.28(a). In rare cases, authorization as described in paragraph PS 3410.28(a) may not yet be in place but the transferring government may have a preponderance of evidence that it is demonstrably committed to both:

(a) approving the legislation, regulations or by-laws related to a transfer or transfer program; and

(b) proceeding with the transfer or transfer program,

such that recognition of a liability for the transfer or transfer program at the financial statement date can be justified on the basis that the government has lost its discretion to avoid the obligation for the transfer and the obligation meets the definition of a liability. This situation is most likely to occur in relation to new transfers or new or revised transfer programs occurring at or near the financial statement date. Final approval in the stub period of the enabling legislation, regulations or by-laws is required to confirm that a transferring government was demonstrably committed to approving and proceeding with a transfer at the financial statement date as described in paragraph PS 3410.28(b)(i).

.30 A government would refer to the guidance in LIABILITIES, paragraphs PS 3200.07-.17, to determine whether it has a preponderance of evidence at the financial statement date that it is demonstrably committed to approving the legislation, regulations or by-laws for a transfer and proceeding with the transfer as described in this Section.

.31 Individual items of evidence on their own may not be sufficient for determining whether a transferring government is demonstrably committed to approving and proceeding with a transfer at the financial statement date. However, when taken together, there may be a preponderance of evidence indicating that it has. Each circumstance needs to be judged individually given the available information.

.32 The authority to pay is evidenced by a supply or appropriations act or special warrant or local government budget. A transferring government can have a liability in advance of receiving the authority to

pay. This situation may arise when a government loses its discretion to avoid proceeding with a transfer when a recipient meets the eligibility criteria. In other cases, such as discretionary or multi-year transfers, the authority to pay may need to be considered in establishing when a government has lost the discretion to avoid proceeding with a transfer and thus when the transfer is authorized for the purposes of recognition in accordance with this Section.

Recipient government

.33 *For a recipient government, a government transfer is authorized for the purposes of this Section when the transfer is authorized by the transferring government as described in paragraph* PS 3410.28*(a).* [APRIL 2012]

.34 A recipient government recognizes an asset arising from a transfer when:

(a) it gains control of resources that meet the definition of an asset; and

(b) the general recognition criteria set out in FINANCIAL STATEMENT CONCEPTS, Section PS 1000, are met.

Transfers satisfy the definition of an asset when the recipient government controls the resources as a result of a past event and expects to receive future economic benefits from those resources. Only authorization of a transfer as described in paragraph PS 3410.28(a), together with the meeting of all eligibility criteria, comprise a past event for a recipient government that gives it control of the transfer and justifies the recognition of a transfer receivable. Transfers satisfy the criteria for recognition as an asset when it is expected that the inflow of resources will occur and their value can be reliably measured.

PRESENTATION AND DISCLOSURE

.35 *Financial statements should disclose major kinds of transfers recognized in the accounting period.* [APRIL 2012]

.36 *Financial statements should disclose information about the nature and terms of liabilities, if any, arising from government transfers received.* [APRIL 2012]

TRANSITIONAL PROVISIONS

.37 This Section applies to fiscal periods beginning on or after April 1, 2012. Earlier adoption is encouraged. This Section may be applied retroactively or prospectively.

GLOSSARY

Eligibility criteria are terms imposed by a transferring government that specify who qualifies to receive a transfer and/or the actions necessary to qualify for a transfer. The nature and substance of the eligibility criteria is such that they must be met before a transfer is provided. They are pre-conditions that must be satisfied in advance in order for a recipient to qualify for a transfer. (Contrast with stipulations.) Eligibility criteria may include the following:

(a) Criteria set out by the transferring government that specify the characteristics that a transfer recipient must have in order to qualify for a transfer (i.e., required characteristics of recipients). In some cases, eligible recipients may have to apply and provide evidence that they have the required characteristics. This is often the case for entitlements. However, in other cases, these characteristics require no action by recipients — they either have the characteristics or they do not. Examples include the type of recipient organization or individual, the size of a recipient organization and the location of a recipient organization or individual.

(b) Criteria set out by the transferring government that specify that the transferring government offers resources on a reimbursement (expenditure-driven) basis (i.e., reimbursements). In order to qualify for such a transfer, a recipient must have incurred allowable expenditures under the applicable program. An example is a transfer under a shared cost agreement.

(c) Criteria set out by the transferring government that specify that the transferring government's offer of resources is dependent upon a specified action of the recipient (i.e., dependencies). The specified action must be accomplished in order for the recipient to qualify for a transfer. Examples include requiring a recipient to raise a specific amount of resources from third parties before it can qualify to receive a transfer, requiring a recipient to match the transferring government's offer of resources before it can qualify to receive a transfer and requiring a recipient to complete the hiring of a certain number of new full-time employees before it can qualify to receive a transfer.

The **financial statement date** is the date at which a government is reporting its financial position and changes in financial position (for example, the fiscal year end).

Monetary assets are money or claims to future cash flows that are fixed or determinable in amounts and timing by contract or other arrangement. Examples are cash, and accounts and notes receivable in cash.

Non-monetary assets are assets that are not monetary. Examples are inventories, investments in common stock and tangible capital assets.

Stipulations are terms imposed by a transferring government regarding the use of transferred resources or the actions a recipient must perform in order to keep a transfer. Stipulations must be met by recipients who have already qualified to receive (by meeting eligibility criteria), or have received, a transfer. The nature and substance of stipulations is such that they are met after a transfer is provided. They are often terms that need to be satisfied through direct application of the transfer. (Contrast with eligibility criteria.) Stipulations may include the following:

(a) Stipulations set out by the transferring government that specify the purpose(s) for which transferred resources must be used (i.e., purpose stipulations). Examples include:

(i) use the resources to acquire or develop a tangible capital asset;

(ii) use the resources to carry out a particular activity; and

(iii) use the resources for relocation to a specified region or for hiring a specified number of new employees.

(b) Stipulations set out by the transferring government that specify when transferred resources must be used (i.e., time stipulations). Examples include:

(i) a particular period of use;

(ii) the date when use is first permitted;

(iii) the start and end date of the period within which the transferred funds must be used; and

(iv) a pattern of use for the transferred funds in specified annual periods of time.

The **stub period** is the period between the financial statement date (see "financial statement date") and the date the financial statements are completed. 9

APPENDIX A

DECISION TREE — RECOGNITION

The following decision tree has been prepared to illustrate the transferring and recipient government accounting set out in Section PS 3410. The decision tree is illustrative only and matters of principle relating to particular situations should be decided in the context of the Section.



APPENDIX B

DISTINGUISHING TYPES OF TRANSFERS

Entitlements

B1 Entitlements are transfers that a government must make if the recipient meets the specified eligibility criteria. For such transfers, both:

(a) "who" is eligible to receive the transfer; and

(b) "how much" is transferred

are prescribed in legislation, regulations or by-laws. By their nature, the exercise of authority to provide such transfers is coincident with the approval of the authorizing legislation, regulations or by-laws and the meeting of eligibility criteria.

B2 There are two types of entitlements — those of individuals and those of other governments or institutions.

Entitlements of individuals

B3 Many transfers to individuals are entitlements. Governing legislation, regulations or by-laws identify the specific eligibility criteria that recipients must meet. Once those criteria have been met, the recipient is entitled to receive the transfer. There are no stipulations attached to how the recipient spends the money. The amount to be transferred is usually specified in the legislation, regulations or by-laws. The amount transferred may vary depending on the circumstances of the recipient.

B4 A key characteristic of an entitlement is that the government must make the transfer to all individuals who meet the specified eligibility criteria. The key criterion for recognizing an entitlement of individuals is whether the recipient has met the specified eligibility criteria.

B5 Employment insurance benefits are an example of an entitlement individuals receive from the federal government. Another example is old age security benefits. Canadians who reach the age of 65 and have met specified residency requirements are entitled to receive old age security benefits. Individuals may also receive entitlements under provincial or local government social assistance programs. Under such programs, governments may be required to make a series of payments over some future period, but these are future, rather than present, obligations of the government and would not be recognized as liabilities. While there may be legislation in place authorizing the entitlements, no obligation similar to that under a contract or agreement exists until the related recipients meet the criteria for eligibility or the program is delivered. In the case of some entitlements, recipients must continually meet the eligibility criteria to be eligible for the program. Governments may have current liabilities for amounts already owed to eligible individuals but not yet paid.

B6 When a reasonable estimate of the unpaid entitlements to individuals meeting the eligibility criteria at the financial statement date can be made, that estimate would be recorded. Such estimates might be based on past experience or a reliable forecast, taking into account those who are eligible but have not yet applied by the financial statement date. However, in some circumstances, it may be difficult to estimate the amount due to those eligible who have not yet applied. Eligible recipients might not apply until well after the financial statement date, and sometimes experience is not an appropriate basis for estimating the number of eligible recipients who are likely to apply in the future. In such circumstances, receipt of the application might be the most reasonable basis for estimating the amount of the liability.

Entitlements of other governments or institutions

B7 A number of significant intergovernmental transfers are entitlements. Entitlements of one government from another include such formula-based transfers as federal / provincial Equalization, health and social funding, and per capita transfers from provincial governments to local governments. Some transfers to institutions are also entitlements.

B8 The governing legislation or regulations for these transfers set out the bases for determining the amount of the entitlement. Some, such as federal / provincial Equalization, are based on complex formulae. Others may be calculated on a per capita or other unit basis.

Shared cost agreements: reimbursement versus financing arrangements

B9 There are two types of transfers under shared cost agreements: reimbursement arrangements and financing arrangements. Both involve different parties, such as different levels of government that are jointly sharing financial responsibility for specific types of costs related to a project. In either type of arrangement, the transferring government may agree to pay for all or only a portion of the expenditures as it may be only one contributor to the funding of a project. The funding of expenditures for a project may be shared by the transfer recipient as well as with other governments or entities.

B10 Some shared cost agreements might involve both reimbursements and advance financing. In such cases:

(a) the reimbursement of eligible expenditures would be accounted for as a reimbursement arrangement as set out in paragraph PS 3410.B14; and

(b) the advance financing would be accounted for as a financing arrangement as set out in paragraph PS 3410.B17.

Reimbursement arrangements

B11 Transfers under reimbursement arrangements involve the reimbursement by a transferring government to a recipient of eligible expenditures already incurred by the recipient (i.e., expenditures incurred before the transfer is provided).

B12 Transfers under reimbursement arrangements are similar to entitlements because the recipient is "entitled" to the transfer after it has incurred eligible expenditures. Reimbursement arrangements are different from other entitlements, however, because the recipient must first incur expenditures in order to be entitled to any reimbursement. Reimbursement arrangements are generally established so that a government can reimburse the recipient over time on the basis of eligible expenditures incurred. A choice of this funding strategy may be indicative of the relationship of the recipient with the government and the government's need to have a greater degree of influence over the types of expenditures reimbursed or for other accountability reasons. The eligible expenditures under a reimbursement arrangement might be operating or capital in nature. For example, some infrastructure transfers are set up as reimbursement arrangements. In such a case, the eligible expenditure(s) would be the purchase or development of a specified type of infrastructure asset.

B13 The specific terms of a transfer under a reimbursement arrangement may be found in legislation or in signed contracts. There may also be a ceiling on the total amount that will be shared. The clearest evidence that a transfer is made under a reimbursement arrangement is the presence of a negotiated, signed, written agreement at the financial statement date indicating that certain specific expenditures or a portion thereof will be reimbursed by the transferring government after they have been incurred. The agreement or other evidence would have to support the contention that the recipient would have real legal recourse against the government to obtain the funds should it incur the specified expenditures. Evaluating whether the agreement has sufficient rigour to support the accounting for the arrangement as a transfer under a reimbursement arrangement is a matter of professional judgment.

B14 As long as it is authorized, a transfer under a reimbursement arrangement would be recognized by the transferring government in expenses as the recipient incurs eligible expenditures because, under the agreement, the transferring government must reimburse the recipient for the specified percentage of those eligible expenditures. A recipient government would not have a receivable for such a transfer until it has incurred eligible expenditures under the agreement and the transfer is authorized.

Financing arrangements

B15 Transfers under financing arrangements involve a government transferring resources up front to provide the recipient with advance financing to be able to incur eligible expenditures (i.e., the eligible expenditures do not have to be incurred in advance in order to qualify for the transfer). If eligible expenditures are to be incurred or are incurred after the receipt of the transfer, for the purposes of this Section the shared cost agreement is a "financing arrangement".

B16 In a financing arrangement, the requirements to incur eligible expenditures are in essence stipulations to be met by the recipient after the transfer has been provided. Advancing funds before transfer terms described in an agreement as eligibility criteria have been met represents a decision of the transferring government that the eligible expenditures can be incurred after the transfer has been provided (i.e., that the transaction is a

financing arrangement not a reimbursement arrangement). It is this decision that determines the timing of recognition of the transfer in expenses for the transferring government, not the flow of resources.

B17 For the purposes of paragraph PS 3410.12, a transfer under a financing arrangement would be recognized as an expense by the transferring government when it is provided as long as it has been authorized. In a financing arrangement the requirements to incur eligible expenditures are transfer stipulations, and would be considered as such in determining the appropriate timing of recognition of the transfer in revenue by a recipient government in accordance with paragraphs PS 3410.16-.27.

Other transfers

B18 Other transfers can include cultural transfers, scholarships, research transfers, infrastructure transfers and regional development transfers. In most cases, recipients have to apply for the money or meet some eligibility criteria. However, in contrast to entitlements and shared cost agreements, applying or meeting the eligibility criteria may not guarantee that the recipient will receive the money. The government may still have discretion to decide whether or not to make the transfer and who to provide it to. There is usually a ceiling on the total amount that may be transferred under a particular transfer program and some transfer recipients are subject to performance or reporting requirements. For these other more discretionary transfers, the authorization of the transfer is usually the key trigger for recognition.

B19 When a transfer is discretionary, the government cannot be obligated to provide a transfer until the transfer is authorized as described in paragraph PS 3410.28. At that point, the transfer becomes, in effect, non-discretionary and would be a liability of the government once all eligibility criteria have been met. In some cases, the timing of when the government receives the authority to pay may play a role in determining when the government has lost its discretion to avoid proceeding with the transfer.

B20 Some transfers may appear to have characteristics of more than one type of transfer. For example, some provincial transfers to hospitals and universities may appear to have characteristics of entitlements but may in reality be discretionary transfers of the government. A provincial government may have a statutory responsibility, or a perceived obligation due to a well-established practice, to maintain the hospitals or universities in its jurisdiction. However, this responsibility does not comprise an entitlement and the transferring government retains some discretion. The government might determine annually the amount that will be transferred and how it will be distributed among the hospitals or universities in its jurisdiction. The amount determined at the beginning of the year might even be changed during the year. Whether a transferring government has a liability in relation to such a transfer at the financial statement date would be evaluated in terms of the authorization requirements of this Section, whether eligibility criteria have been met and the definition of a liability in LIABILITIES, Section PS 3200.

Footnotes

1. See TAX REVENUE, paragraph PS 3510.41.

2. Governments are not precluded from applying the standards if, in their judgment, the standards are appropriate because their grants in lieu of taxes have the characteristics of government transfers.

3. CPP and QPP payments are not considered to meet the definition of a government transfer.

4. In accordance with FINANCIAL STATEMENT CONCEPTS, Section PS 1000, all intangibles, and items inherited by right of the Crown, such as Crown lands, forests, water and mineral resources, as well as works of art and historical treasures, are not recognized as assets in government financial statements.

5. See LIABILITIES, paragraph PS 3200.05(c).

6. See FINANCIAL STATEMENT CONCEPTS, paragpraph PS 1000.36(c).

7. See FINANCIAL STATEMENT CONCEPTS, paragraphs PS 1000.35-.38.

8. TANGIBLE CAPITAL ASSETS, Section PS 3150, prescribes the value at which to recognize a contributed tangible capital asset.

9. The date of completion of the financial statements to be used in this Section is consistent with that required in SUBSEQUENT EVENTS, Section PS 2400.

SECTION PS 3420
inter-entity transactions

TABLE OF CONTENTS

	Paragraph
Purpose and scope	.01-.03
Definitions	.04
Recognition	.05-.13
Transfers of assets or liabilities	.08-.09
Cost allocation and recovery	.10
Unallocated costs	.11-.13
Measurement	.14-.22
Transactions similar to arm's length transactions	.15-.16
Assets or liabilities transferred for nominal or no consideration	.17-.18
Gains or losses on transferred assets and liabilities	.19
Cost allocation and recovery	.20

Unallocated costs	.21-.22
Disclosure	.23-.24
Transitional provisions	.25
Decision tree	Appendix A

PURPOSE AND SCOPE

.01 This Section establishes standards on how to account for and report transactions between public sector entities that comprise a government's reporting entity from both a provider and recipient perspective.

.02 This Section does not deal with:

(a) restructuring transactions; and

(b) transactions between a partner and a government partnership (see GOVERNMENT PARTNERSHIPS, Section PS 3060).

.03 It may be useful to read this Section in conjunction with RELATED PARTY DISCLOSURES, Section PS 2200.

DEFINITIONS

.04 The following terms are used in this Section with the meanings specified:

(a) **Carrying amount** is the amount of an item transferred, or cost of services provided, as recorded in the accounts of the provider, after adjustments, if any, such as for amortization, impairment or changes in the fair value. For a tangible capital asset, the carrying amount is the net of cost and accumulated amortization. For other assets, the carrying amount may be the net of cost and valuation allowances or fair value, as appropriate.

(b) **Commonly controlled entities** are all public sector entities that comprise a government's reporting entity (see GOVERNMENT REPORTING ENTITY, Section PS 1300).

(c) **Cost allocation and recovery** is the allocation of costs of activities associated with providing goods or services to another entity and the recovery of the costs incurred from the other entities. Recoveries between entities may be a direct exchange of consideration or an accounting entry.

(d) **Exchange amount** is the amount of the consideration given for the item transferred or service provided as established and agreed to by the related parties.

(e) **Fair value** is the amount of the consideration that would be agreed upon in an arm's length transaction between knowledgeable and willing parties who are under no compulsion to act.

(f) **Goods and services** include such items as materials and supplies, services, use of facilities or licences. They do not include financial or non-financial assets (for example, tangible capital assets).

(g) **Inter-entity transactions** are those transactions occurring between commonly controlled entities.

(h) **Provider** is the entity that is transferring an asset or liability or providing goods and services to another entity.

(i) **Recipient** is the entity that is receiving assets or liabilities or receiving goods and services from another entity.

(j) **Unallocated costs** represent the cost of resources recorded by the providing entity in its operating activities that are incurred on behalf of a recipient entity.

RECOGNITION

.05 To achieve their objectives, governments generally conduct activities through a variety of different entities. These entities can include those integral to the operations of government such as government components, government organizations and government partnerships.

.06 Governments may establish operating relationships between these entities that allow them to operate together to achieve the government's overall objectives. In some cases, the terms and conditions for inter-entity transactions may reflect the policy objectives, accountability structures and budgetary practices of the government or another controlling entity. These practices may be different than those that would have been adopted if the entities were operating at arm's length. In other cases, inter-entity transactions may reflect similar terms and conditions that would be present if the transaction took place at arm's length.

.07 The terms and conditions for inter-entity transactions may result in assets and liabilities being transferred between commonly controlled entities at amounts different from cost or fair value or for no consideration. A government may have established a central entity (such as a department) responsible for common services (such as debt management, pension administration, procurement and other shared services) that apply across all controlled entities. The central entity may follow a policy of allocating and recovering costs from the other entities. Alternatively, the central entity may not allocate costs to the other entities and fund those costs through its own appropriations or other revenue sources.

Transfers of assets or liabilities

.08 *Inter-entity transactions involving the transfer of assets or liabilities should be recognized by both the provider and the recipient.* [APRIL 2017]

.09 If inter-entity transactions involve the transfer of assets or liabilities, both entities would recognize the transactions. The provider would remove the assets or liabilities from its financial statements and any difference between the net proceeds received, if any, and the carrying amounts transferred would be accounted for as a revenue or expense in the statement of operations. The recipient would recognize assets or liabilities in its financial statements when the items satisfy the definition and recognition criteria for an asset and liability in FINANCIAL STATEMENT CONCEPTS, Section PS 1000.

Cost allocation and recovery

.10 *When there is a policy of cost allocation and recovery for the provision of goods and services:*

(a) the provider should report all revenues and expenses on a gross basis; and

(b) the recipient should report expenses on a gross basis. [APRIL 2017]

Unallocated costs

.11 It is not unusual that certain activities are undertaken by a central entity to support the activities of other departments and agencies. For example, the providing entity may be responsible for the debt management, pension administration, procurement or other shared services that apply across all government entities. The provider may have a policy of funding expenses related to these common services through appropriations or other revenue sources and not allocating the costs to recipients.

.12 *When there is no policy for allocating costs, the recipient may choose to recognize these costs when they would otherwise have been purchased and a reasonable estimate of the amount involved can be made.* [APRIL 2017]

.13 *When the recipient chooses to recognize unallocated costs it reports these items as revenues and expenses.* [APRIL 2017]

MEASUREMENT

.14 *Inter-entity transactions should be recorded at the carrying amount as determined at the transaction date unless:*

(a) transactions are undertaken on similar terms and conditions to those adopted if the entities were dealing at arm's length;

(b) assets or liabilities are transferred for nominal or no consideration;

(c) transactions are allocated costs and recoveries; or

(d) transactions are unallocated costs. [APRIL 2017]

Transactions similar to arm's length transactions

.15 *Inter-entity transactions should be recorded at the exchange amount when they are undertaken on similar terms and conditions to those adopted if the entities were dealing at arm's length.* [APRIL 2017]

.16 Examples of transactions on similar terms and conditions to those adopted if the entities were dealing at arm's length may include the sale and purchase of utilities and the sale or purchase of an inventory item.

Assets or liabilities transferred for nominal or no consideration

.17 *When inter-entity transactions involve the transfer of assets or liabilities for nominal or no consideration, they should be measured at the carrying amount by the provider and at the carrying amount or fair value by the recipient.* [APRIL 2017]

.18 This does not require symmetrical accounting by the provider and recipient.

Gains or losses on transferred assets and liabilities

.19 *When there is a difference between the exchange amount and the carrying amount of a transferred or exchanged asset or liability, a gain or loss should be reported in the statement of operations.* [APRIL 2017]

Cost allocation and recovery

.20 *Allocated costs and recoveries should be measured at the exchange amount.* [APRIL 2017]

Unallocated costs

.21 *When recognized by the recipient, unallocated costs should be measured at the carrying amount or fair value unless policy, budget practices or accountability structures dictate otherwise.* [APRIL 2017]

.22 If unallocated costs are recognized by the recipient, policy, budget practices or accountability structures may impact how the transactions would be measured. In the absence of such, they would be measured at the carrying amount or fair value.

DISCLOSURE

.23 *An entity should disclose information about inter-entity transactions, whether or not given accounting recognitions, in accordance with RELATED PARTY DISCLOSURES, Section* PS 2200. [APRIL 2017]

.24 Transactions between commonly controlled entities are related party transactions. Disclosure of information about the transactions and the underlying relationships is necessary for users to understand the effect of those transactions on an entity's assets, liabilities, revenues and expenses.

TRANSITIONAL PROVISIONS

.25 This Section applies to fiscal years beginning on or after April 1, 2017. Earlier adoption is permitted. If application of the Section results in a change of accounting policy, ACCOUNTING CHANGES, Section PS 2120, applies.

APPENDIX A
DECISION TREE — ACCOUNTING

The following decision tree has been prepared to illustrate the accounting treatment specified in this Section. The decision tree is illustrative only and matters of principle relating to particular situations should be decided in the context of the Section.

SECTION PS 3430
restructuring transactions

TABLE OF CONTENTS

	Paragraph
Purpose and scope	.01-.06
Definitions	.07
Characteristics of restructuring transactions	.08-.19
Non-purchase nature	.09-.16
Transfers of an integrated set of assets and/or liabilities with related responsibilities	.17-.19
Recognition	.20-.35
Assets and liabilities transferred and received	.20-.25
Compensation	.26-.29
Restructuring-related costs and events	.30-.35
Measurement	.36-.45
Individual assets and liabilities to be transferred	.36
Individual assets and liabilities transferred and received	.37-.45
Classification	.46-.47
Presentation and disclosure	.48-.61
Disclosure in the reporting period prior to the restructuring	.55
Disclosure in the reporting period in which the restructuring occurs	.56-.58
Optional disclosure	.59-.61
Transitional provisions	.62

PURPOSE AND SCOPE

.01 This Section establishes standards on how to account for and report restructuring transactions by both transferors and recipients of assets and/or liabilities, together with related program or operating responsibilities.

.02 Restructuring activities include, but are not limited to:

(a) amalgamation of entities or operations within the government reporting entity;

(b) amalgamation of local governments;

(c) annexation or boundary alteration between neighbouring local governments;

(d) transfers of operations or programs from one entity to another; and

(e) shared service arrangements entered into by local governments in a region.

Restructurings can be initiated by the entities involved or imposed by a higher level of government through legislation or by the controlling government.

.03 This Section applies to all restructuring transactions that meet the definition in paragraph .07(g). It only applies to entities that adhere to the standards in the CPA Canada Public Sector Accounting Handbook (PSA Handbook) for their financial reporting. However, restructuring transactions addressed in this Section are not limited to those involving only entities that adhere to PSA standards.

.04 There can be more than one transferor and one recipient in a restructuring transaction. An entity can be both a transferor and a recipient if it transfers and receives assets and/or liabilities, together with related program or operating responsibilities, to/from one or more entities in a restructuring transaction. An entity may swap assets, liabilities and responsibilities with another entity in a restructuring transaction. An entity that is both a transferor and a recipient would apply guidance that is applicable to transferors to account for the assets and/or liabilities it transfers and apply guidance that is applicable to recipients to account for the assets and/or liabilities it receives in a restructuring transaction.

.05 This Section does not deal with:

(a) acquisition of a group of assets, an operation, or an entity;

(b) contribution of asset or assumption of liability; or

(c) disposal and abandonment of assets, or discontinuance of operations that is not part of a restructuring transaction.

.06 Accounting for an acquisition of an operation or an entity is addressed in ADDITIONAL AREAS OF CONSOLIDATION, Section PS 2510, and INVESTMENT IN GOVERNMENT BUSINESS ENTERPRISES, Section PS 3070.

DEFINITIONS

.07 The following terms are used in this Section with the meaning specified:

(a) The **carrying amount** of an asset or a liability transferred in a restructuring transaction is the amount reported in the statement of financial position of the transferor at the restructuring date, net of valuation allowance.

(b) **Compensation** is a payment made in a restructuring transaction by a transferor to a recipient or vice versa that is not based on the fair value of the individual assets and liabilities transferred.

(c) **Consideration** is a payment made in an acquisition that is based on, but not necessarily equal to, the fair value of the individual assets and liabilities or the programs or operations acquired.

(d) The **net effect of a restructuring transaction** is the sum of:

(i) the increase in net assets or net liabilities resulting from recognition and derecognition of individual assets, and liabilities received from all transferors and transferred to all recipients; and

(ii) the amount of any compensation recognized.

It does not include restructuring-related costs or the effects of any restructuring-related events and transactions.

(e) A **recipient** is an entity that receives assets and/or liabilities, together with related program or operating responsibilities, from one or more entities in a restructuring transaction. A recipient may exist prior to the restructuring or it may be formed as a result of the restructuring.

(f) The **restructuring date** is the date the recipient obtains control of the assets and becomes obligated for the liabilities transferred in a restructuring transaction.

(g) A **restructuring transaction** is a transfer of an integrated set of assets and/or liabilities, together with related program or operating responsibilities without consideration based primarily on the fair value of the individual assets and liabilities transferred.

(h) A **transferor** is an entity that transfers assets and/or liabilities, together with related program or operating responsibilities, to one or more entities in a restructuring transaction. A transferor may continue or cease to exist after the restructuring.

CHARACTERISTICS OF RESTRUCTURING TRANSACTIONS

.08 The key characteristics of restructuring transactions are:

(a) their non-purchase nature;

(b) transfers of an integrated set of assets and/or liabilities that are not random or unrelated; and

(c) transfers of program or operating responsibilities related to the assets and liabilities transferred.

Non-purchase nature

.09 The absence of consideration that is primarily based on, but not necessarily equal to, the fair value of the individual assets and liabilities transferred generally reflects the non-purchase nature of restructuring transactions. This is the key distinction between a restructuring transaction and an acquisition which is similar to a purchase.

.10 Paying a reasonable consideration for net assets or controlling shares acquired in an acquisition usually involves estimating the fair value of the individual assets and liabilities transferred, and/or the fair value of a transferred program or operation that is of a business or a revenue-generating nature. How the payment in a transfer of assets and/or liabilities with related responsibilities is determined indicates whether it is consideration for an acquisition. Terms and conditions of applicable agreements and the circumstance under which the payment is made would also be taken into account in the exercise of professional judgment.

.11 Most operations or programs transferred in the public sector are of a service delivery or administrative nature. Their operating costs are likely higher than any revenue they may generate. The fair value of such programs or operations is often irrelevant for determining any payment to the transferor. Future service level and related costs, as well as future revenue of these programs or operations may be so uncertain that no reasonable or supportable assumption can be made to estimate their fair values. Consideration provided in public sector acquisitions is likely based on the fair value of the individual assets acquired and liabilities assumed rather than the fair value of the transferred programs or operations.

.12 Fair value of transferred operations or programs is only relevant in determining consideration for acquisitions in the public sector when the transferred program or operation is of a business or revenue-generating nature. The fair value amount can only be evidence of consideration for acquisitions if it meets the qualitative characteristics of reliable information including representational faithfulness and verifiability.

.13 Acquisitions, involving consideration based on the fair value of the assets and liabilities or the operations transferred, rarely occur in the public sector. Restructuring transactions, involving no payment, nominal payment, or compensation that is not based on the fair value of the individual assets and liabilities transferred, occur more frequently.

.14 A transfer of an integrated set of assets and/or liabilities, together with related program or operating responsibilities in the public sector, usually involves no or nominal payment. Depending on the nature of a restructuring transaction and its effects on the entities involved, a transferor may provide compensation that is not based on the fair value of the individual assets and liabilities transferred to a recipient and vice versa.

.15 Compensation provided in a restructuring transaction may be of a substantial amount. For example, recipients in some annexations may agree to compensate the transferor for its loss of future property tax revenue by providing a lump sum payment at the restructuring date that is equivalent to the present value of property tax revenue for an extended period based on the current tax rate and assessment. Compensation provided in a restructuring transaction may be equal to the net carrying amount of the individual assets and liabilities transferred. The total carrying amount of the individual assets transferred may be equal to the total carrying amount of the individual liabilities transferred in a restructuring transaction.

.16 An entity does not need to know the fair value of the individual assets and liabilities transferred to determine whether a transaction is an acquisition or a restructuring transaction. When the fair value of the individual assets and liabilities transferred are unknown and no effort has been made to estimate their fair value, unless there is other evidence to the contrary, this transaction is likely a restructuring transaction. The fact that the fair values are unknown indicates that any consideration that may be involved in the transaction would not be based on the fair value of the assets and liabilities transferred.

Transfers of an integrated set of assets and/or liabilities with related responsibilities

.17 The assets and liabilities transferred in a restructuring transaction are not random or isolated assets or liabilities. They are an integrated set that is somewhat complete in supporting the program or operation for which the responsibility is also transferred in the restructuring. This distinguishes a restructuring transaction from an acquisition of a group of assets or an assumption of liabilities.

.18 Assumption of program or operating responsibility previously performed by the entity that transfers the related assets and liabilities distinguishes restructuring transactions from receipts of contributions, gifts or government transfers. For example, an entity that received a building from another entity without providing

consideration received a gift or a government transfer. On the other hand, an entity that received a building and the transferor's previous responsibility for delivering community programs located in that building did not receive a gift or a government transfer. This is considered a restructuring transaction.

.19 While a recipient will continue to meet the service and operational needs associated with the transferred responsibilities, it may fulfil the program and administrative responsibilities in a format that is different from the transferor. For example, services may be delivered in different locations or at a different service level subsequent to the restructuring date to achieve the objective of the restructuring, such as economies of scale, more effective and efficient service delivery and elimination of duplication.

RECOGNITION

Assets and liabilities transferred and received

.20 *Individual assets and liabilities received in a restructuring transaction should be recognized by the recipient if they meet the definitions of assets and liabilities and applicable recognition criteria at the restructuring date.* [APRIL 2018]

.21 *Individual assets and liabilities transferred in a restructuring transaction should be derecognized by the transferor if they no longer meet the definitions of assets and liabilities and applicable recognition criteria at the restructuring date.* [APRIL 2018]

.22 Assets and liabilities are defined in FINANCIAL STATEMENT CONCEPTS, Section PS 1000. Recognition criteria and definitions of individual asset and liability items are specified in individual Sections of the PSA Handbook.

.23 *The increase in net assets or net liabilities resulting from recognition and derecognition of individual assets and liabilities received from all transferors and transferred to all recipients in a restructuring transaction should be recognized as revenue or as an expense.* [APRIL 2018]

.24 When a transferor continues to be involved in the individual assets and/or liabilities it transferred to a recipient subsequent to the restructuring date, it would assess the nature and extent of its continued involvement against the definitions of assets and liabilities and applicable recognition criteria to evaluate whether:

(a) derecognition of the asset and liability transferred would be appropriate; and

(b) its continued involvement gives rise to a new asset or new liability that needs to be recognized.

.25 A new asset or new liability may arise from a restructuring due to a transferor's continued involvement in the individual assets and liabilities transferred (for example, if it agrees to guarantee repayment of all or a portion of a transferred liability or leases back a portion of a transferred asset). As the new asset or new liability is not transferred, together with related program or operating responsibilities, they are not part of the restructuring transaction. They would be accounted for in accordance with individual Sections of the PSA Handbook by both the transferors and recipients.

Compensation

.26 Depending on the nature of a restructuring transaction and its effects on the entities involved, a transferor may provide some forms of compensation to a recipient and vice versa. Some compensation may depend on the occurrence of future events or transactions such as future revenue. Entities involved in such a compensation arrangement would assess the nature and terms of the compensation against individual Sections of the PSA Handbook to determine if the compensation gives rise to a liability or an asset at the restructuring date.

.27 *Compensation not dependent on the occurrence of future events or transactions should be recognized as an expense and revenue at the restructuring date, regardless of when the payment is made.* [APRIL 2018]

.28 In some annexations, a recipient may agree to compensate a transferor for its loss of future property tax revenue by making a lump sum payment at the restructuring date equivalent to the present value of, for example, 30 years' property tax revenue based on the tax rate and assessment of the year immediately before the year in which the restructuring occurs. Another recipient may make the payment annually over a 30-year period. In both cases, the present value of the 30 years' payments would be recognized by the recipient as an expense and the transferor as revenue at the restructuring date, even though the payment will be made over 30 years in the latter example.

.29 A recipient may promise to pay a transferor a fee for continuing to provide services subsequent to the restructuring date until it establishes the operation to deliver the services for which the responsibility was transferred in a restructuring transaction. Although arising from restructuring, the promise to pay is a fee for future services and not compensation for the restructuring. The recipient does not have a liability and the transferor does not have an asset until services are provided.

Restructuring-related costs and events

.30 Transferors and recipients may incur incremental costs that are directly attributable to or result from a restructuring transaction. Payments of such restructuring-related costs are made to parties other than the transferors or recipients of a restructuring transaction.

.31 Restructuring-related costs include, but are not limited to:

(a) costs to enable a restructuring transaction, such as legal, accounting and professional services costs; and

(b) costs to achieve the objectives of restructuring, such as those related to exiting an activity, terminating and combining programs, relocating and terminating employees, and terminating contracts.

.32 Restructuring-related costs would be recognized as an expense when incurred in accordance with individual Sections of the PSA Handbook. Restructuring is not an event that can justify a delay or an advance in recognition of these costs as expenses. For example, termination benefits would be recognized as an expense in accordance with guidance in POST-EMPLOYMENT BENEFITS, COMPENSATED ABSENCES AND TERMINATION BENEFITS, paragraph PS 3255.28.

.33 Restructuring may give rise to certain events or transactions that are not part of the restructuring transaction. Restructuring-related events or transactions would be accounted for in accordance with individual Sections of the PSA Handbook.

.34 Restructuring may trigger a curtailment of a transferor's retirement benefit plans due to reduction of a significant number of employees. A transferor may decide to partially settle its obligation under a retirement

benefit plan as a result of restructuring. Gain or loss on plan curtailment or settlement would be recognized in accordance with RETIREMENT BENEFITS, Section PS 3250.

.35 Subsequent to the restructuring date, a recipient may decide to change the manner and duration of use of a tangible capital asset it received. A write-down of the asset may be needed in accordance with TANGIBLE CAPITAL ASSETS, Section PS 3150.

MEASUREMENT

Individual assets and liabilities to be transferred

.36 A transferor continues to measure individual assets and liabilities to be transferred in an upcoming restructuring transaction on the same basis prior to the restructuring date. For example, it does not write down a tangible capital asset that will be transferred in a restructuring transaction simply because of the upcoming restructuring or its expected change in use after the restructuring. It only considers any change in the use of the asset prior to the restructuring date to determine whether a write-down is required in accordance with TANGIBLE CAPITAL ASSETS, Section PS 3150.

Individual assets and liabilities transferred and received

.37 *A transferor should derecognize individual assets and liabilities transferred in a restructuring transaction at their carrying amount at the restructuring date.* [APRIL 2018]

.38 *A recipient should recognize individual assets and liabilities received in a restructuring transaction at their carrying amount with the following adjustments, where applicable, at the restructuring date:*

(a) to comply with PSA standards;

(b) to align with accounting policies, methods and assumptions to be adopted by the recipient; and

(c) to reflect the circumstances of the recipient. [APRIL 2018]

.39 These adjustments to the carrying amount are made at the restructuring date because they arise from the restructuring transaction, not from results of operations of the recipient subsequent to restructuring.

.40 The carrying amount of the assets and liabilities received would be adjusted to comply with PSA standards before they can be recognized by the recipient if the transferor does not prepare its financial statements in accordance with PSA standards.

.41 A transferor may have adopted different accounting policies and methods from those to be adopted by the recipient. The economic assumptions used by the transferor, such as the expected inflation escalation and discount rate in determining the long-term liabilities transferred in a restructuring, may not be consistent with those to be used by the recipient.

.42 The carrying amount of the assets and liabilities received may need to be adjusted to align with the accounting policies, methods and assumptions to be adopted by the recipient to establish consistent basis for reporting subsequent to the restructuring date. For example, the carrying amount of a transferred long-term liability at the restructuring date would be adjusted to reflect a different discount rate to be used by the

recipient. However, the carrying amount of a transferred tangible capital asset at the restructuring date would not be adjusted to reflect a different total amortization period to be used by the recipient. A longer or shorter remaining amortization period would apply to the unamortized balance at the restructuring date for reporting periods subsequent to the restructuring date.

.43 Adjustment to the carrying amount of assets and liabilities received may be required as the circumstances of the recipient affecting the transferred assets and liabilities may be different from those of the transferor. Such adjustments would only be made to reflect changes that are effective upon restructuring and circumstances existing at the restructuring date. Plans for future change or anticipated future conditions would not be recognized earlier than they would have been otherwise by applying the individual Sections of the PSA Handbook.

.44 One example of a different circumstance of a recipient is the manner and duration of use of a tangible capital asset received. If a capital asset is subject to a lower usage by the recipient effective upon its transfer, adjustment to its carrying amount at the restructuring date may be needed to recognize any impairment loss. However, consistent with TANGIBLE CAPITAL ASSETS, Section PS 3150, no increase to the carrying amount of a transferred asset would be made including a reversal of a previous write-down by the transferor.

.45 Another example of a different circumstance of a recipient is the applicable environmental standards in its jurisdiction. If the environmental standards applicable to the transferor and recipient of a solid waste landfill site or a contaminated site transferred in a restructuring transaction are different, adjustment to the carrying amount of these liabilities may be required at the restructuring date.

CLASSIFICATION

.46 Individual assets and liabilities received in a restructuring transaction are initially classified in the statement of financial position of the recipient based on its accounting policy and circumstances at the restructuring date.

.47 Aligning with the accounting policies to be adopted by the recipient may require reclassification of assets and liabilities received in a restructuring transaction at the restructuring date. For example, reclassification would be required if the transferor and the recipient have different accounting policies on designating financial assets and financial liabilities in the fair value category under FINANCIAL INSTRUMENTS, paragraph PS 3450.023, and the restructuring does not give rise to changes in how risks would be managed and performance would be evaluated.

PRESENTATION AND DISCLOSURE

.48 *The net effect of a restructuring transaction should be presented as a separate revenue or expense item in the statement of operations.* [APRIL 2018]

.49 Presenting the net effect of all assets and liabilities an entity transferred to all recipients and received from all transferors and compensation recognized as a single revenue or expense item in the statement of operations for the period in which the restructuring transaction occurs reflects the highly aggregated nature of financial statements.

.50 *A transferor and a recipient should not restate its financial position or results of operations prior to the restructuring date to retroactively report the effects of a restructuring transaction in its financial statements as if the restructuring transaction took place prior to the restructuring date.* [APRIL 2018]

.51 Restructuring is an event that changes the economics of the transferors and recipients from the restructuring date onward. It does not change their history or accountability for the past. Retroactive application with restatement of prior periods is only appropriate when there is a change in an accounting policy or a correction of a prior period error that does not arise from a change in the economic circumstance of an entity.

.52 A recipient discloses the initial amounts recognized for individual assets and liabilities received rather than presenting them in its statement of financial position. The net effect of a restructuring transaction is presented as a separate revenue or expense item in the statement of operations for the period in which the restructuring transaction occurs. The results of operations of the transferred responsibilities from the restructuring date to the end of the reporting period are combined with the results of the recipient's pre-restructuring operations, if any, for the entire reporting period in the statement of operations in the period the restructuring transaction occurs.

.53 A transferor would separately identify the revenue and expenses of the programs or operations for which the responsibilities are transferred in the statement of operations in the period the restructuring transaction occurs, including the comparative amounts, if they are significant in relation to the results of operations. Otherwise, it would disclose the information.

.54 *A transferor and a recipient should disclose sufficient information to enable users to assess the nature and financial effects of a restructuring transaction on their financial position and operations.* [APRIL 2018]

Disclosure in the reporting period prior to the restructuring

.55 A transferor and a recipient provide a description of the restructuring and an estimate of its financial effect, when practicable, or a statement that such an estimate cannot be made, in the notes to its financial statements of the reporting period preceding the restructuring if:

(a) a restructuring agreement is reached prior to completion of the financial statements; and

(b) the restructuring would have a significant effect on its assets, liabilities and future operations.

Disclosure in the reporting period in which the restructuring occurs

.56 A transferor and a recipient provide a description of the restructuring transaction in the notes including:

(a) the entities involved and the nature of their relationships if there is any control, common control or shared control relationship among them;

(b) the reason for the restructuring;

(c) the restructuring date;

(d) the nature of assets, liabilities and related responsibilities transferred;

(e) the nature and terms of any compensation;

(f) the nature and extent of any contingent liability and contractual obligations transferred;

(g) the nature of any restructuring-related costs incurred; and

(h) the nature and, where applicable, terms of other restructuring-related events, arrangements and transactions.

.57 In addition to the disclosures set out in paragraphs .52 and .53, a transferor and a recipient disclose the following information, in aggregate and by recipients / transferors where applicable and significant, in the notes:

(a) the carrying amount of assets and liabilities transferred and received at the restructuring date by major classifications;

(b) any adjustments made to the carrying amount of assets and liabilities received and the rationale for the adjustments;

(c) the amount of any compensation recognized;

(d) the amount of and the line item in which the net effect of the restructuring transaction is recognized;

(e) the amount of and the line items in which restructuring-related costs are recognized;

(f) the amount of and the line items in which the effects of any restructuring-related events and transactions are recognized.

.58 A recipient also discloses the revenue and expenses related to the transferred responsibilities that are included in the statement of operations by major classifications.

Optional disclosure

.59 Disclosure of information about the transferred assets and liabilities, and results of operations related to the transferred responsibilities prior to the restructuring date by the recipient, is encouraged but not required. Whether this information would be disclosed, as well as the extent and format of such a disclosure, would be determined based on:

(a) the usefulness of the information to the readers;

(b) the materiality of the financial effects;

(c) the cost associated with and the practicality of providing the information.

.60 A transferor or a recipient may determine that restating the financial position and results of operations prior to a restructuring date as if the restructuring transaction took place since its formation provides useful information for readers. If it chooses to provide this information, it may do so in the notes and schedules to the financial statements, but not on the statements, and clearly marks it as pro forma information.

.61 Disclosure of information about a recipient's assets and liabilities, and results of operations, prior to the restructuring date is encouraged but not required.

TRANSITIONAL PROVISIONS

.62 This Section applies to restructuring transactions occurring in fiscal years beginning on or after April 1, 2018. Earlier adoption is permitted. ACCOUNTING CHANGES, Section PS 2120, does not apply to this Section.

SECTION PS 3450
financial instruments 1

Basis for Conclusions

Financial instruments, Section PS 3450 (July 2011)

Financial instruments: transitional provisions, Sections PS 2601 and PS 3450 (September 2012)

TABLE OF CONTENTS

	Paragraph
Purpose and scope	.001-.008
Recognition	.009-.014
Measurement	.015-.041
Measurement categories	.015-.026
Derivatives	.016-.017
Equity instruments	.018-.019
Fair value	.020-.026
Fair value measurement considerations	.027-.029
Transaction costs	.030-.032
Effective interest method	.033
Impairment of financial assets	.034-.036
Reclassification	.037-.041
Derecognition of a financial liability	.042-.051
Presentation	.052-.067
Remeasurement gains and losses	.052-.055
Interest, dividends, gains and losses	.056-.058
Offsetting of a financial asset and a financial liability	.059-.067

Financial statement disclosures	.068-.084
Classes of financial instruments and level of disclosure	.068
Significance of financial instruments for financial position and changes in financial position	.069
Statement of financial position	.070-.075
Collateral	.073
Defaults and breaches	.074-.075
Statement of remeasurement gains and losses	.076-.077
Other disclosures	.078-.084
Risk Disclosures	.085-.096
Nature and extent of risks arising from financial instruments	.085-.086
Qualitative disclosures	.087
Quantitative disclosures	.088-.096
Credit risk	.090
Financial assets that are either past due or impaired	.091
Collateral and other credit enhancements obtained	.092
Liquidity risk	.093
Market risk	.094-.095
Other market risk disclosures	.096
Transitional provisions	.097-.100
Glossary	Gloss
Applying the requirements	Appendix A

PURPOSE AND SCOPE

.001 This Section establishes standards on how to account for and report all types of **financial instruments** including **derivatives**. Financial instruments include primary instruments (such as receivables, payables and **equity instruments**) and derivative financial instruments (such as financial options, futures and forwards, interest rate swaps and currency swaps). Derivative financial instruments meet the definition of a financial instrument and, accordingly, are within the scope of this Section.

.002 In this Section, terms that appear in **bold type** are defined in the glossary.

.003 This Section does not apply to:

(a) tax receivables and payables relating to taxes including payments-in-lieu of taxes;

(b) inventories or an asset held for sale according to the criteria in FINANCIAL STATEMENT PRESENTATION, paragraph PS 1201.055;

(c) investments in organizations controlled by a government that are accounted for in accordance with GOVERNMENT REPORTING ENTITY, Section PS 1300;

(d) investments in government partnerships that are accounted for in accordance with GOVERNMENT PARTNERSHIPS, Section PS 3060;

(e) rights and obligations under leases to which PUBLIC SECTOR GUIDELINE PSG-2, Leased Tangible Capital Assets, applies; however, the scope of this exception does not extend to:

(i) requirements to evaluate impairment for the lessor's receivable from the lessee under a direct financing or sales-type lease;

(ii) **derecognition** provisions applicable to the lessee's liability to the lessor under a capital lease; and

(iii) derivatives embedded in leases;

(f) employer's rights and obligations for employee future benefits that are accounted for in accordance with RETIREMENT BENEFITS, Section PS 3250, and POST-EMPLOYMENT BENEFITS, COMPENSATED ABSENCES AND TERMINATION BENEFITS, Section PS 3255;

(g) liabilities that are accounted for in accordance with SOLID WASTE LANDFILL CLOSURE AND POST-CLOSURE LIABILITY, Section PS 3270, and LIABILITY FOR CONTAMINATED SITES, Section PS 3260;

(h) monetary gold;

(i) balances with the International Monetary Fund, whether in the form of subscriptions, notes, or Special Drawing Rights;

(j) liabilities arising from the issuance of currency and coinage;

(k) insurance contracts held or issued by a government, other than freestanding derivative instruments (see paragraph PS 3450.A2);

(l) contracts that require a payment based on climatic, geological or other physical variables that are not traded on an exchange (see paragraph PS 3450.A3); however, this Section applies to derivatives embedded in such contracts;

(m) contracts that require a payment based on specified volumes of sales or service revenues of one of the parties to the contract and that are not traded on an exchange;

(n) guarantees other than loan guarantees accounted for in accordance with LOAN GUARANTEES, Section PS 3310;

(o) loan commitments other than those outlined in paragraph PS 3450.008; and

(p) contracts to buy or sell non-financial items when quantities are in accordance with a government's expected purchase, sale or usage requirements.

.004 The definition for **financial assets** given in FINANCIAL STATEMENT PRESENTATION, Section PS 1201, applies. However, as paragraph PS 3450.003 establishes, the requirements of this Section do not apply to all financial assets. Certain items, such as inventories for resale and an asset held for sale according to the criteria set out in paragraph PS 1201.055, are physical assets and are excluded from the scope of this Section.

.005 This Section applies to contracts to buy or sell a non-financial item in quantities in excess of a government's expected purchase, sale or usage requirements where contracts can be settled net in cash or another financial instrument, or by exchanging financial instruments, as if the contracts were financial instruments.

.006 This Section applies when a financial instrument takes the form of a reinsurance contract principally involving the transfer of **financial risks** and applies to derivatives that are embedded in insurance contracts held by a government.

.007 This Section applies when a financial guarantee contract provides for payments to be made in response to the change in a specified interest rate, financial instrument price, commodity price, foreign exchange rate, index of prices or rates, credit rating or credit index, or other variable, provided in the case of a non-financial variable that variable is not specific to a party to the contract. For example, a financial guarantee contract that provides for payments to be made if the credit rating of a debtor falls below a particular level is subject to all of the requirements of this Section.

.008 The following loan commitments are within the scope of this Section:

(a) Loan commitments that a government has designated to the **fair value** category — A government that has a past practice of selling the assets resulting from its loan commitments shortly after origination would apply this Section to all its loan commitments in the same class.

(b) Loan commitments that can be settled net in cash or by delivering or issuing another financial instrument — These loan commitments are derivatives. A loan commitment is not regarded as settled net merely because the loan is paid out in instalments (for example, a mortgage that is paid out in instalments in line with the progress of construction).

RECOGNITION

.009 A contract establishing a financial instrument creates, at its inception, rights and obligations to receive or deliver economic benefits. The financial assets and **financial liabilities** portray these rights and obligations in financial statements. The assessment of those benefits is a measurement question and does not affect the timing of **recognition**. Recognition occurs when a government becomes a party to a financial instrument or non-financial derivative contract.

.010 From inception, derivative financial instruments give one party the contractual right to exchange financial assets or financial liabilities with another party under conditions that are potentially favourable, or a contractual obligation to exchange financial assets or financial liabilities with another party under conditions that are potentially unfavourable. Derivatives create rights and obligations that have the effect of transferring

between the parties to the instrument one or more of the financial risks inherent in an underlying primary financial instrument (see paragraph PS 3450.A17).

.011 *A government should recognize a financial asset or a financial liability on its statement of financial position when, and only when, a government becomes a party to the contractual provisions of the instrument.* [APRIL 1, 2019 *]

.012 Contracts may contain provisions that cause certain of its future cash flows to vary in response to changes in a rate, price, index of prices or rates, credit index or other variable in a way similar to a stand-alone derivative. In support of the objectives of financial reporting, a derivative embedded in a host contract is evaluated for recognition.

.013 Not all contracts containing provisions with the features of an embedded derivative will warrant the recognition of the embedded derivative and measurement of its value. Generally, this is only necessary when contractual provisions with the characteristics of a derivative are not closely related to the economic characteristics and risks of the contract itself. For example, an interest or principal payment indexed to the price of a commodity (such as oil) that is embedded in a debt instrument is not closely related to the host instrument because the risks inherent in the host and the embedded derivative are dissimilar.

.014 *A government should identify contracts containing one or more embedded derivatives and apply paragraphs* PS 3450.A18-.*A26 in determining if they are to be recognized.* [APRIL 1, 2019 *]

MEASUREMENT

Measurement categories

.015 All items within the scope of this Section are assigned to one of two measurement categories:

(a) fair value; or

(b) cost or **amortized cost**.

Derivatives

.016 Governments generally enter into derivatives for risk management purposes. One of the defining characteristics of a derivative is that it has an initial net investment smaller than required for other types of contracts expected to have a similar response to changes in market factors. An option contract meets that definition because the premium is less than the investment that would be required to obtain the underlying financial instrument to which the option is linked. A currency swap that requires an initial exchange of different currencies of equal fair values meets the definition because it has a zero initial net investment.

.017 By their nature, derivatives exhibit highly variable cash flows. Fair value is the only relevant basis for their measurement because the historical cost of a derivative is at most a nominal value. Fair value depicts the market's assessment of the present value of the net future cash flows directly or indirectly embodied in a derivative contract, discounted to reflect both current interest rates and the market's assessment of the risk that the cash flows will not occur. Fair value reflects a current cash equivalent rather than the price of a past transaction.

Equity instruments

.018 As equity instruments represent a residual ownership interest, information about their cost is of limited usefulness, particularly when they are held over an extended period. When equity instruments that are quoted in an active market are portfolio investments, their market value provides a readily available and reliable measure of value at the financial statement date.

.019 An equity instrument is regarded as quoted in an active market when quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service or regulatory agency, and those prices reflect actual and regularly occurring market transactions on an arm's length basis.

Fair value

.020 *A government should include the following items in the fair value category:*

(a) derivatives; and

(b) portfolio investments in equity instruments that are quoted in an active market. [APRIL 1, 2019 *]

.021 Apart from items such as derivatives and equity instruments, the cash flows of a large portion of the financial instruments held by governments are fixed or slightly variable. The incremental benefit of fair value measurement for such items is often limited and may be outweighed by cost constraints.

.022 When governments manage and report performance for groups of financial assets, financial liabilities or both on a fair value basis, they may wish to report these items on this basis in their financial statements. Also, when reporting on a contract with the features of a derivative embedded in its terms (a contract with an "embedded derivative"), a government may determine that it is practical to designate the entire contract for fair value measurement rather than separately accounting for its derivative features. In each case, measuring items at fair value is seen to enhance the decision usefulness of the information provided to those using financial statements. For these reasons, the option to measure these items at fair value is provided.

.023 *A government that defines and implements a risk management or investment strategy to manage and evaluate the performance of a group of financial assets, financial liabilities or both on a fair value basis, may include those items that are within the scope of this Section in the fair value category.* [APRIL 1, 2019 *]

.024 Classification of a group of financial assets, financial liabilities or both to the fair value category is an accounting policy decision. A government defines and discloses the characteristics of financial instruments in the class and discloses this information in accordance with DISCLOSURE OF ACCOUNTING POLICIES, Section PS 2100. The policy determines the categorization of financial assets and financial liabilities upon their initial recognition.

.025 *Derivatives that are linked to and must be settled by delivery of unquoted equity instruments should be measured at cost.* [APRIL 1, 2019 *]

.026 *A government may designate a contract to be a financial instrument carried at fair value if it contains one or more embedded derivatives unless:*

(a) the embedded derivative(s) do not significantly modify the cash flows that otherwise would be required by the contract; or

(b) separation of the embedded derivative(s) is prohibited when applying paragraphs PS 3450.A18-.*A26.* [APRIL 1, 2019 *]

Fair value measurement considerations

.027 *A government should apply paragraphs* PS 3450.A27-.*A40 in measuring financial instruments in the fair value category.* [APRIL 1, 2019 *]

.028 The best evidence of fair value is quoted prices in an active market. If the market for a financial instrument is not active, a government establishes fair value by using a valuation technique. The objective of using a valuation technique is to establish what the transaction price would have been on the measurement date in an arm's length exchange motivated by normal business considerations. Valuation techniques include using recent arm's length market transactions between knowledgeable, willing parties, if available, reference to the current fair value of another instrument that is substantially the same, discounted cash flow analysis and option pricing models. If there is a valuation technique commonly used by market participants to price the instrument and that technique has been demonstrated to provide reliable estimates of prices obtained in actual market transactions, a government uses that technique. The chosen valuation technique makes maximum use of market inputs and relies as little as possible on inputs specific to that government. It incorporates all factors that market participants would consider in setting a price and is consistent with accepted economic methodologies for pricing financial instruments. Periodically, a government calibrates the valuation technique and tests it for validity using prices from any observable current market transactions in the same instrument (i.e., without modification or repackaging) or based on any available observable market data.

.029 The fair value of a financial liability with a demand feature (for example, a demand deposit) is not less than the amount payable on demand, discounted from the first date that the amount could be required to be paid.

Transaction costs

.030 Transaction costs are incremental costs directly attributable to the acquisition or issue of a financial asset or a financial liability. An incremental cost is one that would not have been incurred if a government had not acquired or issued the financial instrument.

.031 Transaction costs are added to the carrying value of items in the cost or amortized cost category when they are initially recognized. However, when items in the fair value category are initially recognized, transaction costs are expensed. If transaction costs were added, the initial carrying amount would exceed fair value. This would be inconsistent with the measurement of other items within the category.

.032 Transaction costs include fees and commissions paid to agents, advisors, brokers and transfer taxes and duties. Transaction costs do not include debt premiums or discounts, financing costs or internal administrative or holding costs.

Effective interest method

.033 *A government should measure interest using the* ***effective interest method****.* [APRIL 1, 2019 *]

Impairment of financial assets

.034 At each financial statement date, a government assesses financial assets or groups of financial assets to determine whether there is any objective evidence of impairment. If any such evidence exists, a government would apply:

(a) PORTFOLIO INVESTMENTS, Section PS 3041, to assess whether portfolio investments are impaired and to account for any such impairment; or

(b) LOANS RECEIVABLE, Section PS 3050, to assess whether loans receivable are impaired and to account for any such impairment.

.035 The requirement to assess financial assets for impairment includes non-derivative financial assets in the fair value category. Impairment charges are indicative of a loss in value that reflects the expectation that the underlying economic resource has diminished in a manner that is other than temporary.

.036 *Impairment losses (such as write-downs of portfolio investments, write-offs of loan receivables, etc.) should be reported in the statement of operations.* [APRIL 1, 2019 *]

Reclassification

.037 The classification of financial instruments is determined upon its initial recognition. When financial assets and financial liabilities are included in the fair value category pursuant to paragraph PS 3450.023, they are not reclassified for the duration of the period they are held and, consequently, the requirements in paragraphs PS 3450.038-.041 do not apply to these items.

.038 When a quoted price in an active market is no longer available for an equity instrument that is a portfolio investment, it is reclassified. The most recent value at which the equity instrument traded becomes its new cost.

.039 *When a quoted price in an active market is no longer available for an equity instrument that is a portfolio investment, a government should measure the portfolio investment at cost. The most recent quoted price becomes its new cost.* [APRIL 1, 2019 *]

.040 When a quoted price in an active market becomes available for an equity instrument that is a portfolio investment for which such a price previously was not available, it is reclassified into the fair value category. The full amount of any change in its value is reported as a remeasurement gain or loss in the period of reclassification.

.041 *When a quoted price in an active market becomes available for an equity instrument that is a portfolio investment for which such a price previously was not available, the asset should be remeasured at fair value and the difference between its carrying value and fair value is reported as a remeasurement gain or loss.* [APRIL 1, 2019 *]

DERECOGNITION OF A FINANCIAL LIABILITY

.042 *A government should remove a financial liability (or part of a financial liability) from its statement of financial position when, and only when, it is extinguished (i.e., when the obligation specified in the contract is discharged or cancelled, or expires).* [APRIL 1, 2019 *]

.043 A financial liability (or part of a financial liability) is extinguished when the debtor either:

(a) discharges the liability (or part of it) by paying the creditor, normally with cash, other financial assets, goods or services; or

(b) is legally released from primary responsibility for the liability (or part of it) either by process of law or by the creditor. (When the debtor has given a guarantee, this condition may still be met.)

.044 If an issuer of a debt instrument repurchases that instrument, the debt is extinguished even if the issuer is a market maker in that instrument or intends to resell it in the near term. A market maker facilitates market operations by standing ready to buy and sell a particular instrument. However, irrespective of the role or intent of a government, repurchases of its own securities are accounted for as an extinguishment.

.045 Inter-organizational bond holdings are accounted for in accordance with INVESTMENTS IN GOVERNMENT BUSINESS ENTERPRISES, paragraphs PS 3070.35-.39. When a government acquires a bond accounted for in accordance with LONG-TERM DEBT, paragraph PS 3230.10, the debt instrument acquired is not accounted for as an extinguishment. This treatment is consistent with the principle that debt issued by a government specifically for a government business enterprise is in substance issued by the government business enterprise.

.046 Payment to a third party, including a trust (sometimes called "in-substance defeasance"), does not, by itself, relieve the debtor of its primary obligation to the creditor in the absence of legal release.

.047 If a debtor pays a third party to assume an obligation and notifies its creditor that the third party has assumed its debt obligation, the debtor does not derecognize the debt obligation, unless the condition in paragraph PS 3450.043(b) is met. If the debtor pays a third party to assume an obligation and obtains a legal release from its creditor, the debtor has extinguished the debt. However, if the debtor agrees to make payments on the debt to the third party or direct to the original creditor, the debtor recognizes a new debt obligation to the third party.

.048 *An exchange between an existing borrower and lender of debt instruments with substantially different terms should be accounted for as an extinguishment of the original financial liability and the recognition of a new financial liability. Similarly, a substantial modification of the terms of an existing financial liability or part of it (whether or not attributable to the financial difficulty of the debtor) should be accounted for as an extinguishment of the original financial liability and the recognition of a new financial liability.* [APRIL 1, 2019 *]

.049 For the purpose of paragraph PS 3450.048, the terms are substantially different if the discounted present value of the cash flows under the new terms, including any fees paid net of any fees received and discounted using the original effective interest rate, is at least 10 percent different from the discounted present value of the remaining cash flows of the original financial liability. If an exchange of debt instruments or modification of terms is accounted for as an extinguishment, any costs or fees incurred are recognized as part of the gain or loss on the extinguishment. If the exchange or modification is not accounted for as an

extinguishment, any costs or fees incurred adjust the carrying amount of the liability and are amortized over the remaining term of the modified liability.

.050 *The difference between the carrying amount of a financial liability (or part of a financial liability) extinguished or transferred to another party and the consideration paid, including any non-cash assets transferred or liabilities assumed, should be recognized as a revenue or expense in the statement of operations.* [APRIL 1, 2019 *]

.051 *If a government repurchases a part of a financial liability, it should allocate the previous carrying amount of the financial liability between the part that continues to be recognized and the part that is derecognized based on the relative fair values of those parts on the date of the repurchase. The difference between the carrying amount allocated to the part derecognized and the consideration paid, including any non-cash assets transferred or liabilities assumed, for the part derecognized should be recognized as a revenue or expense in the statement of operations.* [APRIL 1, 2019 *]

PRESENTATION

Remeasurement gains and losses

.052 A government distinguishes remeasurement gains and losses from those revenues and expenses that are not remeasurement gains and losses. This distinction is achieved by recognizing remeasurement gains and losses in the statement of remeasurement gains and losses.

.053 *A change in the fair value of a financial instrument in the fair value category should be recognized in the statement of remeasurement gains and losses as a remeasurement gain or loss until the financial instrument is derecognized.* [APRIL 1, 2019 *]

.053A *A change in fair value of a financial asset in the fair value category that is externally restricted should be accounted for in accordance with RESTRICTED ASSETS AND REVENUES, paragraphs* PS 3100.11-.*12.* [APRIL 1, 2019 *]

.054 In the reporting period that a financial instrument in the fair value category is derecognized, the accumulated remeasurement gain or loss associated with the derecognized item is reversed and reclassified to the statement of operations.

.055 By presenting remeasurement gains and losses separately, changes in the carrying value of financial instruments arising from fair value measurement are distinguished from revenues and expenses reported in the statement of operations. The statement of operations reports the extent to which revenues raised in the period were sufficient to meet the expenses incurred. Remeasurement gains and losses attributable to financial instruments in the fair value category do not affect this assessment as they are recognized in the statement of remeasurement gains and losses. Taken together, the two statements account for changes in a government's net liabilities (or net assets) in the period.

Interest, dividends, gains and losses

.056 Interest and dividends attributable to financial instruments are reported in the statement of operations and are not remeasurement gains or losses. Similarly, net settlements on derivative financial instruments attributable to the reporting period are reported in the statement of operations and are not remeasurement gains

and losses. However, income attributable to a financial instrument that is externally restricted is accounted for in accordance with RESTRICTED ASSETS AND REVENUES, paragraphs PS 3100.11-.12.

.057 *When a financial instrument is derecognized, a gain or loss is recognized in the statement of operations.* [APRIL 1, 2019 *]

.057A *A gain or loss associated with a financial instrument that is externally restricted is accounted for in accordance with RESTRICTED ASSETS AND REVENUES, paragraphs* PS 3100.11-*.12.* [APRIL 1, 2019 *]

.058 When a financial instrument in the fair value category is derecognized, the cumulative amount of remeasurement gains and losses previously reported is reversed and a gain or loss on disposal is recognized in the statement of operations.

Offsetting of a financial asset and a financial liability

.059 *A financial asset and a financial liability should be offset and the net amount reported in the statement of financial position when, and only when, a government:*

(a) currently has a legally enforceable right to set off the recognized amounts; and

(b) intends either to settle on a net basis, or to realize the asset and settle the liability simultaneously. [APRIL 1, 2019 *]

.060 Financial assets and financial liabilities are presented on a net basis when doing so reflects a government's expected future cash flows from settling two or more separate financial instruments. When a government has the right to receive or pay a single net amount and intends to do so, it has, in effect, only a single financial asset or financial liability. In other circumstances, financial assets and financial liabilities are presented separately from each other consistent with their characteristics as resources or obligations of a government.

.061 Offsetting a recognized financial asset and a recognized financial liability and presenting the net amount differs from derecognition of a financial asset or a financial liability. Unlike derecognition, offsetting does not give rise to a gain or loss. When the conditions in paragraph PS 3450.059 are satisfied, a government has, in effect, a single cash flow and a single financial asset or financial liability.

.062 A right of set-off is a debtor's legal right, by contract or otherwise, to settle or otherwise eliminate all or a portion of an amount due to a creditor by applying against that amount an amount due from the creditor. In unusual circumstances, a debtor may have a legal right to apply an amount due from a third party against the amount due to a creditor, provided there is an agreement between the three parties that clearly establishes the debtor's right of set-off. Because the right of set-off is a legal right, the conditions supporting the right may vary from one legal jurisdiction to another, and the laws applicable to the relationships between the parties need to be considered.

.063 The existence of an enforceable right to set off a financial asset and a financial liability affects the rights and obligations associated with a financial asset and a financial liability and may affect a government's exposure to credit and **liquidity risk**. However, the existence of the right, by itself, is not a sufficient basis for offsetting. In the absence of an intention to exercise the right or to settle simultaneously, the amount and timing of a government's future cash flows are not affected. When a government intends to exercise the right or to

settle simultaneously, presentation of the asset and liability on a net basis reflects more appropriately the amounts and timing of the expected future cash flows, as well as the risks to which those cash flows are exposed. An intention by one or both parties to settle on a net basis without the legal right to do so is not sufficient to justify offsetting because the rights and obligations associated with the individual financial asset and financial liability remain unaltered.

.064 A government's intentions with respect to settlement of particular assets and liabilities may be influenced by its normal practices, the requirements of the financial markets, and other circumstances that may limit the ability to settle net or to settle simultaneously. When a government has a right of set-off, but does not intend to settle net or to realize the asset and settle the liability simultaneously, the effect of the right on its **credit risk** exposure is disclosed in accordance with paragraph PS 3450.090.

.065 Simultaneous settlement of two financial instruments may occur through, for example, the operation of a clearing house in an organized financial market or a face-to-face exchange. In these circumstances, the cash flows are, in effect, equivalent to a single net amount and there is no exposure to credit or liquidity risk. In other circumstances, a government may settle two instruments by receiving and paying separate amounts, becoming exposed to credit risk for the full amount of the asset or liquidity risk for the full amount of the liability. Such risk exposures may be significant even though relatively brief. Accordingly, realization of a financial asset and settlement of a financial liability are treated as simultaneous only when the transactions occur at the same moment.

.066 The conditions set out in paragraph PS 3450.059 are generally not satisfied and offsetting is usually inappropriate when:

(a) several different financial instruments are used to emulate the features of a single financial instrument (a "synthetic instrument");

(b) financial assets and financial liabilities arise from financial instruments having the same primary risk exposure (for example, assets and liabilities within a portfolio of forward contracts or other derivative instruments) but involve different counterparties;

(c) financial or other assets are pledged as collateral for non-recourse financial liabilities;

(d) financial assets are set aside in trust by a debtor for the purpose of discharging an obligation without those assets having been accepted by the creditor in settlement of the obligation (for example, a sinking fund arrangement); or

(e) obligations incurred as a result of events giving rise to losses are expected to be recovered from a third party by virtue of a claim made under an insurance contract.

.067 A government that undertakes a number of financial instrument transactions with a single counterparty may enter into a "master netting arrangement" with that counterparty. Such an agreement provides for a single net settlement of all financial instruments covered by the agreement in the event of default on, or termination of, any one contract. These arrangements are commonly used by financial institutions to provide protection against loss in the event of bankruptcy or other circumstances that result in a counterparty being unable to meet its obligations. A master netting arrangement commonly creates a right of set-off that becomes enforceable and affects the realization or settlement of individual financial assets and financial liabilities only following a specified event of default or in other circumstances not expected to arise in the normal course of operations. A

master netting arrangement does not provide a basis for offsetting, unless both of the criteria in paragraph PS 3450.059 are satisfied. When financial assets and financial liabilities subject to a master netting arrangement are not offset, the effect of the arrangement on a government's exposure to credit risk is disclosed in accordance with paragraph PS 3450.090.

FINANCIAL STATEMENT DISCLOSURES

Classes of financial instruments and level of disclosure

.068 When this Section requires disclosures by class of financial instrument, a government groups financial instruments into classes that are appropriate to the nature of the information disclosed and that takes into account the characteristics of those financial instruments. A government provides sufficient information to permit reconciliation to the line items presented in the statement of financial position.

Significance of financial instruments for financial position and changes in financial position

.069 *A government should disclose information that enables users of its financial statements to evaluate the significance of financial instruments for its financial position and changes in its financial position.* [APRIL 1, 2019 *]

Statement of financial position

.070 The carrying amounts of financial assets of each of the following categories are disclosed either in the statement of financial position or in the notes:

(a) cost or amortized cost;

(b) fair value, showing separately:

(i) derivatives;

(ii) portfolio investments in equity instruments that are quoted in an active market; and

(iii) financial assets designated to the fair value category.

.071 The carrying amounts of financial liabilities of each of the following categories are disclosed either in the statement of financial position or in the notes:

(a) cost or amortized cost;

(b) fair value, showing separately:

(i) derivatives; and

(ii) financial liabilities designated to the fair value category.

.072 If, at the financial statement date, a government holds items that it has designated to the fair value category, it provides the disclosures in paragraphs PS 3450.A51-.A54.

Collateral

.073 A government discloses:

(a) the carrying value of financial assets it has pledged as collateral for liabilities or contingent liabilities; and

(b) the terms and conditions relating to its pledge.

Defaults and breaches

.074 For loans payable recognized at the financial statement date, a government discloses:

(a) details of any defaults during the period of principal, interest, sinking fund, or redemption terms of those loans payable;

(b) the carrying amount of the loans payable in default at the end of the reporting period; and

(c) whether the default was remedied, or the terms of the loans payable were renegotiated, before the date the financial statements were completed.

.075 If, during the period, there were breaches of loan agreement terms other than those described in paragraph PS 3450.074, a government discloses the same information as required in paragraph PS 3450.074 if those breaches permitted the lender to demand accelerated repayment (unless the breaches were remedied, or the terms of the loan were renegotiated, on or before the financial statement date).

Statement of remeasurement gains and losses

.076 A government reports remeasurement gains and losses, distinguishing between:

(a) amounts arising during the period; and

(b) the reclassification of remeasurement gains and losses to the statement of operations for financial instruments derecognized during the period.

.077 Remeasurement gains and losses are presented in a manner that informs readers as to their origins by distinguishing among:

(a) derivatives;

(b) portfolio investments in equity instruments that are quoted in an active market; and

(c) financial instruments designated to the fair value category.

Gains and losses may be reported on a net basis within each of (a), (b) and (c).

Other disclosures

.078 In accordance with DISCLOSURE OF ACCOUNTING POLICIES, Section PS 2100, a government discloses the measurement basis (or bases) used in preparing the financial statements and other accounting policies that are relevant to an understanding of the financial statements.

.079 A government holding derivatives discloses information to explain the purpose of its use of derivatives. It provides information to explain how derivatives support managing the nature and extent of risks arising from financial instruments disclosed in accordance with the requirements in paragraphs PS 3450.085-.096. In preparing this information, consideration is given to derivatives traded during the period as well as holdings as at the financial statement date.

.080 A government holding derivatives or items it has designated to the fair value category at the financial statement date discloses the methods and, when a valuation technique is used, the assumptions applied in determining fair values of each class of financial assets or financial liabilities. For example, if applicable, a government discloses information about the assumptions relating to prepayment rates, rates of estimated credit losses, and interest rates or discount rates. If there has been a change in valuation technique, a government discloses that change and the reasons for making it.

.081 To make the disclosures required in paragraph PS 3450.082, a government classifies fair value measurements using a fair value hierarchy that reflects the significance of the inputs used in making the measurements. The fair value hierarchy used has the following levels:

(a) quoted prices (unadjusted) in active markets for identical assets or liabilities (Level 1);

(b) inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e., as prices) or indirectly (i.e., derived from prices) (Level 2); and

(c) inputs for the asset or liability that are not based on observable market data (unobservable inputs) (Level 3).

When measurement of an item requires the use of inputs from more than one level, the measurement level attributable is determined on the basis of the lowest level input that is significant to the fair value measurement in its entirety. For this purpose, the significance of an input is assessed against the fair value measurement in its entirety. If a fair value measurement uses observable inputs that require significant adjustment based on unobservable inputs, that measurement is a Level 3 measurement. Assessing the significance of a particular input to the fair value measurement in its entirety requires judgment, considering factors specific to the asset or liability.

.082 For fair value measurements recognized in the statement of financial position, a government discloses the following for each class of financial instruments.

(a) The level in the fair value hierarchy into which the fair value measurements are categorized in their entirety, segregating fair value measurements in accordance with the levels defined in paragraph PS 3450.081.

(b) Any significant transfers between Level 1 and Level 2 of the fair value hierarchy and the reasons for those transfers. Transfers into each level are disclosed and discussed separately from transfers out of each level. For this purpose, significance is judged with respect to remeasurement gains and losses and total financial assets or total liabilities.

(c) For fair value measurements in Level 3 of the fair value hierarchy, a reconciliation from the beginning balances to the ending balances, disclosing separately changes during the period attributable to the following:

(i) total gains or losses for the period recognized in the statement of remeasurement gains and losses;

(ii) purchases, sales, issues and settlements (each type of movement disclosed separately); and

(iii) transfers in or out of Level 3 (for example, transfers attributable to changes in the observability of market data) and the reasons for those transfers; and

(d) for fair value measurements in Level 3, if changing one or more of the inputs to reasonably possible alternative assumptions would change fair value significantly, a government states that fact and discloses the effect of those changes.

In the case of significant transfers in or out of Level 3, transfers into Level 3 are disclosed and discussed separately from transfers out of Level 3. A government discloses how the effect of a change to a reasonably possible alternative assumption was calculated. In these cases, significance is judged with respect to remeasurement gains and losses and total financial assets or total liabilities.

.083 If the market for a financial instrument is not active, a government establishes its fair value using a valuation technique (see paragraphs PS 3450.A33-.A39). Nevertheless, the best evidence of fair value at initial recognition is the transaction price (i.e., the fair value of the consideration given or received), unless conditions described in paragraph PS 3450.A35 are met. It follows that there could be a difference between the fair value at initial recognition and the amount that would be determined at that date using the valuation technique. If such a difference exists, a government discloses, by class of financial instrument:

(a) its accounting policy for reporting that difference in remeasurement gains and losses to reflect a change in factors (including time) that market participants would consider in setting a price (see paragraph PS 3450.A36); and

(b) the aggregate difference yet to be reported in remeasurement gains and losses at the beginning and end of the period and a reconciliation of changes in the balance of this difference.

.084 Disclosure of fair values for financial assets and financial liabilities in the cost or amortized cost measurement category is not required except when a government discloses the quoted market value as well as the carrying value of portfolio investments.

RISK DISCLOSURES

Nature and extent of risks arising from financial instruments

.085 *A government should disclose information that enables users of its financial statements to evaluate the nature and extent of risks arising from financial instruments to which it is exposed at the financial statement date.* [APRIL 1, 2019 *]

.086 The required disclosures focus on the risks that arise from financial instruments and how they have been managed. These risks typically include credit risk, liquidity risk and **market risk**. Market risk comprises three types of risk: **currency risk**, **interest rate risk** and **other price risk**. Disclosures assist users in

understanding the nature and extent of these risks. The disclosures required in paragraphs PS 3450.087-.096 are provided in the notes to the financial statements. Alternatively, the disclosures may appear within a financial statement discussion and analysis that is an integral part of, and cross-referenced to, a government's financial statements.

Qualitative disclosures

.087 For each type of risk arising from financial instruments, a government discloses:

(a) the exposures to risk and how they arise;

(b) its objectives, policies and processes for managing the risk and the methods used to measure the risk; and

(c) any changes in (a) or (b) from the previous period.

Quantitative disclosures

.088 For each type of risk arising from financial instruments, a government discloses:

(a) summary quantitative data about its exposure to that risk at the financial statement date;

(b) the disclosures required by paragraphs PS 3450.090-.096 to the extent not provided in accordance with (a); and

(c) concentrations of risk if not apparent from the disclosures made in accordance with (a) and (b).

The disclosure relating to summary quantitative data is based on the information provided internally to key management personnel (for example, the government's deputy minister of finance or chief financial officer).

.089 If the quantitative data disclosed as at the financial statement date are unrepresentative of a government's exposure to risk during the period, a government provides further information that is representative.

Credit risk

.090 A government discloses, by class of financial instrument:

(a) the amount that best represents its maximum exposure to credit risk at the financial statement date without taking account of any collateral held or other credit enhancements (for example, netting agreements that do not qualify for offset in accordance with paragraph PS 3450.059);

(b) a description of collateral held as security, and other credit enhancements and their financial effect (for example, a quantification of the extent to which collateral and other credit enhancements mitigate credit risk) in respect of the amount that best represents the maximum exposure to credit risk (whether disclosed in accordance with (a) or represented by the carrying amount of a financial instrument); and

(c) information about the credit quality of financial assets that are neither past due nor impaired.

The disclosure relating to the amount that best represents its maximum exposure to credit risk is not required for financial instruments whose carrying amount best represents the maximum exposure to credit risk.

Financial assets that are either past due or impaired

.091 A government discloses, by class of financial asset:

(a) an analysis of the age of financial assets that are past due as at the financial statement date but not impaired; and

(b) an analysis of financial assets that are individually determined to be impaired as at the financial statement date, including the factors the government considered in determining that they are impaired.

Collateral and other credit enhancements obtained

.092 When a government obtains financial or non-financial assets during the period by taking possession of collateral it holds as security or calling on other credit enhancements (for example, guarantees), and such assets meet the recognition criteria (see FINANCIAL STATEMENT CONCEPTS, Section PS 1000), a government discloses for such assets held at the financial statement date:

(a) the nature and carrying amount of the assets; and

(b) when the assets are not readily convertible into cash, its policies for disposing of such assets or for using them in its operations.

Liquidity risk

.093 A government discloses:

(a) a maturity analysis for non-derivative financial liabilities that shows the remaining contractual maturities;

(b) a maturity analysis for derivative financial liabilities; and

(c) a description of how it manages the liquidity risk inherent in (a) and (b).

The maturity analysis in (b) includes the remaining contractual maturities for those derivative financial liabilities for which contractual maturities are essential for an understanding of the timing of cash flows.

Market risk

.094 Unless a government complies with paragraph PS 3450.095, it discloses:

(a) a sensitivity analysis for each type of market risk to which it is exposed at the financial statement date, showing how operating results for the period (and remeasurement gains and losses, when necessary) would have been affected by changes in the relevant risk variable that were reasonably possible at that date;

(b) the methods and assumptions used in preparing the sensitivity analysis; and

(c) changes from the previous period in the methods and assumptions used, and the reasons for such changes.

.095 If a government prepares a sensitivity analysis, such as value at risk, that reflects interdependencies between risk variables (for example, interest rates and exchange rates) and uses it to manage financial risks, it may use that sensitivity analysis in place of the analysis specified in paragraph PS 3450.094. A government also discloses:

(a) an explanation of the method used in preparing such a sensitivity analysis, and of the main parameters and assumptions underlying the data provided; and

(b) an explanation of the objective of the method used and of limitations that may result in the information not fully reflecting the fair value of the assets and liabilities involved.

Other market risk disclosures

.096 When the sensitivity analyses disclosed in accordance with paragraphs PS 3450.094-.095 are unrepresentative of a risk inherent in a financial instrument (for example, because the exposure at the financial statement date does not reflect the exposure during the year), a government would disclose that fact and the reason it believes the sensitivity analyses are unrepresentative.

TRANSITIONAL PROVISIONS

.097 This Section applies to fiscal years beginning on or after April 1, 2019. For those government organizations that applied the CPA Canada Handbook – Accounting prior to their adoption of the CPA Canada Public Sector Accounting Handbook, this Section applies to fiscal years beginning on or after April 1, 2012. Governments and government organizations would also adopt FOREIGN CURRENCY TRANSLATION, Section PS 2601, at the same time. Earlier adoption is permitted.

(paragraph PS 3450.098 deleted)

.099 The transition to this Section is as follows:

(a) Recognition, derecognition and measurement policies followed in financial statements for periods prior to the effective date of this Section are not reversed and, therefore, those financial statements are not restated. When transitioning to this Section, it is disclosed that the financial statements of prior periods, including comparative information, have not been restated.

(b) At the beginning of the fiscal year in which this Section is initially applied, a government or government organization:

(i) recognizes all financial assets and financial liabilities on its statement of financial position and classifies items in accordance with paragraph PS 3450.059;

(ii) applies the criteria in paragraphs PS 3450.020 and PS 3450.023 in identifying those financial assets and financial liabilities to be measured at fair value; and

(iii) applies the measurement provisions of this Section prospectively. Any adjustment of the previous carrying amount is recognized as an adjustment to the accumulated remeasurement gains and losses at the beginning of the fiscal year in which this Section is initially applied.

(c) A government organization transitioning from the standards in the CPA Canada Handbook – Accounting recognizes an amount in accumulated remeasurement gains and losses at the beginning of the fiscal year in which this Section is initially applied equal to the closing accumulated other comprehensive income 2 attributable to items classified as available for sale.

(d) In transitioning to this Section, no adjustment to an item's carrying value is made to retroactively expense transaction costs applicable to items in the fair value category.

(e) A government or government organization establishes an accounting policy that applies to the identification of embedded derivatives in contracts entered into by it. The policy, and its application, recognizes as separate assets and liabilities those embedded derivatives required to be reported in accordance with provisions of this Section on either a retroactive or prospective basis. Disclosure is made of the accounting policy and any adjustment to the accumulated remeasurement gains and losses at the beginning of the fiscal period in which this Section is initially applied.

.099A Paragraphs PS 3450.053A and PS 3450.057A apply to fiscal years beginning on or after March 1, 2013. Earlier adoption is permitted as of the beginning of the fiscal year in which this Section is first applied. As well, the following transitional provisions apply:

(a) A government or government organization applying paragraph PS 3450.099(b)(iii) recognizes any adjustment to the previous carrying amount of a financial asset that is externally restricted as a liability.

(b) A government organization applying paragraph PS 3450.099(c) recognizes any accumulated other comprehensive income associated with items categorized as available for sale and generating externally restricted income as a liability.

.100 When a government organization applies this Section in the same period it adopts Public Sector Accounting Standards for the first time, this Section cannot be applied retroactively. Comparative amounts are presented in accordance with the accounting policies applied by the government organization immediately preceding its adoption of Public Sector Accounting Standards.

GLOSSARY

Amortized cost is the amount at which a financial asset or a financial liability is measured at initial recognition minus principal repayments, plus or minus the cumulative amortization using the effective interest method of any difference between that initial amount and the maturity amount, and minus any reduction (directly or through the use of an allowance account) for impairment or uncollectibility.

Derecognition is the removal of previously recognized financial assets or financial liabilities from a government's statement of financial position.

Derivatives are financial instruments or other contracts within the scope of this Section (see paragraphs PS 3450.003-.008) with all three of the following characteristics:

(a) their value changes in response to the change in a specified interest rate, financial instrument price, commodity price, foreign exchange rate, index of prices or rates, credit rating or credit index, or other variable, provided in the case of a non-financial variable that the variable is not specific to a party to the contract (sometimes called the "underlying");

(b) they require no initial net investment or an initial net investment that is smaller than would be required for other types of contracts that would be expected to have a similar response to changes in market factors; and

(c) they are settled at a future date(s).

The **effective interest method** is a method of calculating the amortized cost of a financial asset or a financial liability (or group of financial assets or financial liabilities) and of allocating the interest income or interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument or, when appropriate, a shorter period to the net carrying amount of the financial asset or financial liability (see paragraphs PS 3450.A41-.A45).

Equity instruments are any contracts that evidence a residual interest in the assets of an entity after deducting all of its liabilities.

Fair value is the amount of the consideration that would be agreed upon in an arm's length transaction between knowledgeable, willing parties who are under no compulsion to act.

Financial assets are assets that could be used to discharge existing liabilities or finance future operations and are not for consumption in the normal course of operations.

Financial instruments are any contracts that give rise to financial assets of one entity and financial liabilities or equity instruments of another entity.

Financial liabilities are any liabilities that are contractual obligations:

(a) to deliver cash or another financial asset to another entity; or

(b) to exchange financial instruments with another entity under conditions that are potentially unfavourable to a government.

Financial risks involve credit risk, currency risk, interest rate risk, liquidity risk, market risk and other price risk, defined as follows:

Credit risk is the risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge an obligation.

Currency risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates.

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates.

Liquidity risk is the risk that a government will encounter difficulty in meeting obligations associated with financial liabilities.

Market risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: currency risk, interest rate risk and other price risk.

Other price risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices (other than those arising from interest rate risk or currency risk), whether those changes are caused by factors specific to the individual financial instrument or its issuer, or factors affecting all similar financial instruments traded in the market.

Recognition is the process of including an item in the financial statements. It means inclusion of an item within one or more individual statements and does not mean disclosure in the notes to the financial statements.

Remeasurement gains and losses are revenues and expenses arising:

(a) when, prior to an item's settlement, an exchange gain or loss is recognized in accordance with the provisions of FOREIGN CURRENCY TRANSLATION, Section PS 2601; and

(b) when financial instruments in the fair value category are remeasured in accordance with the requirements of this Section.

APPENDIX A

APPLYING THE REQUIREMENTS

This Appendix is an integral part of this Section.

TABLE OF CONTENTS	Paragraph
Purpose and scope	A1-A3
Definitions	A4-A14
Financial instrument	A4-A9
Derivative financial instruments	A10-A12
Contracts to buy or sell non-financial items	A13-A14
Recognition	A15-A26
Traded securities — use of "trade date" accounting	A15-A16
Derivatives	A17
Embedded derivatives	A18-A26
Measurement	A27-A45
Fair value measurement considerations	A27-A29
Active market — quoted price	A30-A32

No active market — valuation technique	A33-A39
Inputs to valuation techniques	A40
Effective interest method	A41-A45
Presentation of remeasurement gains and losses	A46-A47
Financial statement disclosures	A48-A54
Classes of financial instruments and level of disclosure	A48-A50
Disclosures that apply to items designated to the fair value category	A51-A54
Risk disclosures	A55-A76
Quantitative disclosures	A55-A56
Maximum credit risk exposure	A57-A59
Liquidity risk	A60-A66
Market risk	A67-A71
Interest rate risk	A72
Currency risk	A73-A74
Other price risk	A75-A76

Purpose and scope

A1 Governments are not themselves issuers of equity instruments. However, they may hold equity instruments issued by others for their own account. The requirements of this Section apply when accounting for an investment in equity instruments held by a government that is not a controlling interest.

A2 In general, insurance contracts held or issued by a government are excluded from the requirements of this Section. This exclusion does not extend to freestanding derivative instruments but excludes contracts under which one entity (the insurer) accepts significant insurance risk from another entity (the policyholder) by agreeing to compensate the policyholder if a specified uncertain future event (the insured event) adversely affects the policyholder.

A3 Contracts that require a payment based on climatic, geological or other physical variables are commonly used as insurance policies. (Those based on climatic variables are sometimes referred to as weather derivatives.) In such cases, the payment is based on the amount of loss to the insured entity. Rights and obligations under insurance contracts are excluded from the scope of this Section by paragraph PS 3450.003(k). The payout under some contracts that require a payment based on climatic, geological or other physical variables is unrelated to the amount of an insured government's loss. Such contracts are excluded from the scope of this Section by paragraph PS 3450.003(l) unless they are traded on an exchange. A contract based only partially on climatic geological or other physical variables may contain an embedded derivative. For example, when an interest rate swap is contingent on a climatic variable, such as heating degree days, the interest rate swap element is an embedded derivative that is within the scope of this Section.

Definitions

Financial instrument

A4 Currency (cash) is a financial asset because it represents the medium of exchange and, therefore, is the basis on which all transactions are measured and recognized in financial statements. A deposit of cash with a bank or similar financial institution is a financial asset because it represents the contractual right of the depositor to obtain cash from the institution or to draw a cheque or similar instrument against the balance in favour of a creditor in payment of a financial liability.

A5 Common examples of financial assets representing a contractual right to receive cash in the future and corresponding financial liabilities representing a contractual obligation to deliver cash in the future are:

(a) accounts receivable and payable;

(b) notes receivable and payable;

(c) loans receivable and payable; and

(d) bonds receivable and payable.

In each case, one party's contractual right to receive (or obligation to pay) cash is matched by the other party's corresponding obligation to pay (or right to receive).

A6 A contractual right or contractual obligation to receive, deliver or exchange financial instruments is itself a financial instrument. A chain of contractual rights or contractual obligations meets the definition of a financial instrument if it will ultimately lead to the receipt or payment of cash or to the acquisition of an equity instrument.

A7 The ability to exercise a contractual right or the requirement to satisfy a contractual obligation may be absolute, or it may be contingent on the occurrence of a future event. For example, a financial guarantee is a contractual right of the lender to receive cash from the guarantor, and a corresponding contractual obligation of the guarantor to pay the lender, if the borrower defaults. The contractual right and obligation exist because of a past transaction or event (assumption of the guarantee), even though the lender's ability to exercise its right and the requirement for the guarantor to perform under its obligation are both contingent on a future act of default by the borrower. A contingent right and obligation meet the definition of a financial asset and a financial liability, even though such assets and liabilities are not always recognized in the financial statements. Some of these contingent rights and obligations may be insurance contracts.

A8 Physical assets (such as inventories of supplies, tangible capital assets), and leased assets are not financial assets. Control of such assets creates an opportunity to produce or supply goods and services, rent to others, use for administrative purposes or for the development, construction or repair of other tangible capital assets. Control of such assets does not give rise to a present right to receive cash or another financial asset.

A9 Assets, such as prepaid expenses, for which the future economic benefit is the receipt of goods or services rather than the right to receive cash or another financial asset, are not financial assets. Similarly, certain deferred liabilities are not financial liabilities when the outflow of economic benefits associated with them is in the nature of goods or services rather than a contractual obligation to pay cash or another financial asset.

Derivative financial instruments

A10 Derivative financial instruments create rights and obligations that have the effect of transferring between the parties to the instrument one or more of the financial risks inherent in an underlying primary financial instrument. On inception, derivative financial instruments give one party a contractual right to exchange financial assets or financial liabilities with another party under conditions that are potentially favourable, or a contractual obligation to exchange financial assets or financial liabilities with another party under conditions that are potentially unfavourable. However, they generally do not result in a transfer of the underlying primary financial instrument on inception of the contract, nor does such a transfer necessarily take place on maturity of the contract. 1a Some instruments embody both a right and an obligation to make an exchange. Because the terms of the exchange are determined on inception of the derivative instrument, as prices in financial markets change those terms may become either favourable or unfavourable.

A11 A derivative usually has a notional amount, which is an amount of currency, a number of shares, a number of units of weight or volume, or other units specified in the contract. However, a derivative instrument does not require the holder or writer to invest or receive the notional amount at the inception of the contract. Alternatively, a derivative could require a fixed payment or payment of an amount that can change (but not proportionately with a change in the underlying item) as a result of some future event that is unrelated to a notional amount. For example, a contract may require a fixed payment of $1,000 if the six-month London Interbank Offered Rate (LIBOR) increases by 100 basis points. Such a contract is a derivative even though a notional amount is not specified.

A12 One of the defining characteristics of a derivative is that it has an initial net investment that is smaller than would be required for other types of contracts that would be expected to have a similar response to changes in market factors. An option contract meets that definition because the premium is less than the investment that would be required to obtain the underlying financial instrument to which the option is linked. A currency swap that requires an initial exchange of different currencies of equal fair values meets the definition because it has a zero initial net investment.

Contracts to buy or sell non-financial items

A13 Contracts to buy or sell non-financial items do not meet the definition of a financial instrument because the contractual right of one party to receive a non-financial asset or service and the corresponding obligation of the other party do not establish a present right or obligation of either party to receive, deliver or exchange a financial asset. For example, contracts that provide for settlement only by the receipt or delivery of a non-financial item (such as an option, futures or forward contract on oil) are not financial instruments. Many commodity contracts are of this type. Some are standardized in form and traded on organized markets in much the same fashion as some derivative financial instruments. For example, a commodity futures contract may be bought and sold readily for cash because it is listed for trading on an exchange and may change hands many times. However, the parties buying and selling the contract are, in effect, trading the underlying commodity. The ability to buy or sell a commodity contract for cash, the ease with which it may be bought or sold and the possibility of negotiating a cash settlement of the obligation to receive or deliver the commodity do not alter the fundamental character of the contract in a way that creates a financial instrument. Nevertheless, some contracts to buy or sell non-financial items that can be settled net or by exchanging financial instruments, or in which the non-financial item is readily convertible to cash, are within the scope of this Section as if they were financial instruments (see paragraph PS 3450.005).

A14 A contract that involves the receipt or delivery of physical assets does not give rise to a financial asset of one party and a financial liability of the other party, unless any corresponding payment is deferred past the date on which the physical assets are transferred. Such is the case with the purchase or sale of goods on trade credit.

Recognition

Traded securities — use of "trade-date" accounting

A15 The purchase or sale of financial assets traded on a recognized exchange (a regular-way purchase or sale) gives rise to a fixed-price commitment between the trade date and settlement date that meets the definition of a derivative. However, because of the short duration of the commitment, it is not recognized as a derivative financial instrument.

A16 When a government purchases or sells an asset through a recognized exchange or securities market it:

(a) recognizes the asset to be received and the liability to pay for it on the trade date; and

(b) derecognizes the asset that is sold, recognizing any gain or loss on its disposal, and recognizes a receivable from the buyer for payment on the trade date.

In general, interest does not start to accrue on the asset and corresponding liability until the settlement date when title passes.

Derivatives

A17 As a consequence of the principle in paragraph PS 3450.011, a government recognizes all of its contractual rights and obligations under derivatives on its statement of financial position as assets and liabilities. The following are examples of applying this principle.

(a) Unconditional receivables and payables are recognized as assets or liabilities when a government becomes a party to the contract and, as a consequence, has a legal right to receive or a legal obligation to pay cash.

(b) Assets to be acquired and liabilities to be incurred as a result of a firm commitment to purchase or sell goods or services are generally not recognized until at least one of the parties has performed under the agreement. For example, a government ordering goods does not generally recognize a liability at the time of the commitment but, rather, delays recognition until the ordered goods or services have been shipped, delivered or rendered. If a firm commitment to buy or sell non-financial items is within the scope of this Section, its net fair value is recognized as an asset or liability on the commitment date (see (c) below).

(c) A forward contract that is within the scope of this Section is recognized as an asset or a liability on the commitment date, rather than on the date on which settlement takes place. When a government becomes a party to a forward contract, the fair values of the right and obligation are often equal, so that the net fair value of the forward is zero. If the net fair value of the right and obligation is not zero, the contract is recognized as an asset or liability.

(d) Option contracts that are within the scope of this Section are recognized as assets or liabilities when the holder or writer becomes a party to the contract.

(e) Planned future transactions, no matter how likely, are not assets and liabilities because a government has not become a party to a contract.

Embedded derivatives

A18 An embedded derivative is a component of a hybrid (combined) instrument that also includes a non-derivative host contract — with the effect that some of the cash flows of the combined instrument vary in a way similar to a stand-alone derivative. An embedded derivative causes some or all of the cash flows that otherwise would be required by the contract to be modified according to a specified interest rate, financial instrument price, commodity price, foreign exchange rate, index of prices or rates, credit rating or credit index, or other variable, provided in the case of a non-financial variable that the variable is not specific to a party to the contract. A derivative that is attached to a financial instrument but is contractually transferable independently of that instrument, or has a different counterparty from that instrument, is not an embedded derivative, but a separate financial instrument.

A19 An embedded derivative is separated from the host contract and accounted for as a derivative if, and only if, all of the following conditions are met:

(a) the economic characteristics and risks of the embedded derivative are not closely related to the economic characteristics and risks of the host contract;

(b) a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative; and

(c) the hybrid (combined) instrument is not measured at fair value (i.e., derivatives embedded in financial instruments in the fair value category are not separated).

A20 If an embedded derivative is separated, the host contract would be accounted for applying the provisions in this Section if it is a financial instrument, and in accordance with other appropriate standards if it is not a financial instrument.

A21 A government assesses whether an embedded derivative is required to be separated from the host contract and accounted for as a derivative when a government first becomes a party to the contract. Subsequent reassessment is prohibited, unless there is a change in the terms of the contract that significantly modifies the cash flows that otherwise would be required under the contract. A government determines whether a modification to cash flows is significant by considering the extent to which the expected cash flows associated with the embedded derivative, the host contract or both have changed and whether the change is significant relative to the previously expected cash flows on the contract.

A22 If a contract contains one or more embedded derivatives, a government may designate the entire hybrid (combined) contract as a financial instrument carried at fair value (paragraph PS 3450.026). This designation is irrevocable.

A23 If a government is required to separate an embedded derivative from its host contract, but is unable to measure the embedded derivative separately either at acquisition or at a subsequent reporting date, it would treat the entire hybrid (combined) contract as a financial instrument carried at fair value.

A24 An embedded non-option derivative (such as an embedded forward or swap) is separated from its host contract on the basis of its stated or implied substantive terms, so as to result in it having a fair value of zero at initial recognition. An embedded option-based derivative (such as an embedded put, call, cap, floor or swaption) is separated from its host contract on the basis of the stated terms of the option feature. The initial carrying amount of the host instrument is the residual amount after separating the embedded derivative.

A25 The economic characteristics and risks of an embedded derivative are not closely related to the host contract (see paragraph PS 3450.A19(a)) in the following examples. In these examples, assuming the conditions in paragraph PS 3450.A19(b)-(c) are met, a government accounts for the embedded derivative separately from the host contract.

(a) An option or automatic provision to extend the remaining term to maturity of a debt instrument is not closely related to the host debt instrument unless there is a concurrent adjustment to the approximate current market rate of interest at the time of the extension.

(b) Equity-indexed interest or principal payments embedded in a host debt instrument — by which the amount of interest or principal is indexed to the value of equity instruments — are not closely related to the host instrument because the risks inherent in the host and the embedded derivative are dissimilar.

(c) Commodity-indexed interest or principal payments embedded in a host debt instrument — by which the amount of interest or principal is indexed to the price of a commodity (such as oil) — are not closely related to the host instrument because the risks inherent in the host and the embedded derivative are dissimilar.

(d) A call, put, or prepayment option embedded in a host debt contract is not closely related to the host contract unless the option's exercise price is approximately equal on each exercise date to the amortized cost of the host debt instrument.

(e) Credit derivatives that are embedded in a host debt instrument and allow one party (the beneficiary) to transfer the credit risk of a particular reference asset, which it may not own, to another party (the guarantor) are not closely related to the host debt instrument. Such credit derivatives allow the guarantor to assume the credit risk associated with the reference asset without directly owning it.

A26 The economic characteristics and risks of an embedded derivative are closely related to the economic characteristics and risks of the host contract in the following examples. In these examples, a government does not account for the embedded derivative separately from the host contract.

(a) An embedded derivative in which the underlying is an interest rate or interest rate index that can change the amount of interest that would otherwise be paid or received on an interest-bearing host debt contract is closely related to the host contract unless the combined instrument can be settled in such a way that the holder would not recover substantially all of its recognized investment, or the embedded derivative could at least double the holder's initial rate of return on the host contract and could result in a rate of return that is at least twice what the market return would be for a contract with the same terms as the host contract.

(b) An embedded floor or cap on the interest rate on a debt contract is closely related to the host contract, provided the cap is at or above the market rate of interest and the floor is at or below the market rate of interest when the contract is issued, and the cap or floor is not leveraged in relation to the host contract. Similarly, provisions included in a contract to purchase or sell an asset (for example, a commodity) that establish a cap and a floor on the price to be paid or received for the asset are closely related to the host contract if both the cap and floor were out of the money at inception and are not leveraged.

(c) An embedded foreign currency derivative that provides a stream of principal or interest payments that are denominated in a foreign currency and is embedded in a host debt instrument (for example, a dual currency bond) is closely related to the host debt instrument. Such a derivative is not separated from the host instrument because FOREIGN CURRENCY TRANSLATION, Section PS 2601, requires foreign currency gains and losses on monetary items to be recognized in the financial statements.

(d) An embedded foreign currency derivative in a host contract that is not a financial instrument (such as a contract for the purchase or sale of a non-financial item where the price is denominated in a foreign currency) is closely related to the host contract, provided it is not leveraged, does not contain an option feature, and requires payments denominated in one of the following currencies:

(i) the functional currency of any substantial party to that contract;

(ii) the currency in which the price of the related good or service that is acquired or delivered is routinely denominated in commercial transactions around the world (such as the US dollar for crude oil transactions); or

(iii) a currency that is commonly used in contracts to purchase or sell non-financial items in the economic environment in which the transaction takes place (for example, a relatively stable and liquid currency that is commonly used in local business transactions or external trade).

(e) An embedded prepayment option in an interest-only or principal-only strip is closely related to the host contract provided the host contract:

(i) initially resulted from separating the right to receive contractual cash flows of a financial instrument that, in and of itself, did not contain an embedded derivative; and

(ii) does not contain any terms not present in the original host debt contract.

(f) An embedded derivative in a host lease contract is closely related to the host contract if the embedded derivative is:

(i) an inflation-related index such as an index of lease payments to a consumer price index, provided the lease is not leveraged and the index relates to inflation in the entity's own economic environment);

(ii) contingent rentals based on related sales; or

(iii) contingent rentals based on variable interest rates.

Measurement

Fair value measurement considerations

A27 For financial instruments in the fair value category, the provisions in paragraphs PS 3450.A28-.A40 explain the application of fair value measurement including the use of valuation techniques. Valuation techniques may be required to measure some derivatives and when a quoted market price is not available for financial assets or financial liabilities that are designated by a government to the fair value category.

A28 Underlying the definition of fair value is a presumption that a government is a going concern without any intention or need to liquidate or undertake a transaction on adverse terms. Fair value is not, therefore, the amount that a government would receive or pay in a forced transaction, involuntary liquidation or distress sale. However, fair value reflects the credit quality of the instrument.

A29 This Section uses the terms "bid price" and "asking price" (sometimes referred to as "current offer price") in the context of quoted market prices, and the term "the bid-ask spread" to include only transaction costs. Other adjustments to arrive at fair value (for example, for counterparty credit risk) are not included in the term "bid-ask spread".

Active market — quoted price

A30 A financial instrument is regarded as quoted in an active market if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. Fair value is defined in terms of a price agreed by a willing buyer and a willing seller in an arm's length transaction. The objective of determining fair value for a financial instrument that is traded in an active market is to arrive at the price at which a transaction would occur at the end of the period in that instrument (i.e., without modifying or repackaging the instrument) in the most advantageous active market to which a government has immediate access. However, a government adjusts the price in the more advantageous market to reflect any differences in counterparty credit risk between instruments traded in that market and the one being valued. The existence of published price quotations in an active market is the best evidence of fair value and when they exist they are used to measure the financial asset or financial liability.

A31 The appropriate quoted market price for an asset held or liability to be issued is usually the current bid price and, for an asset to be acquired or liability held, the asking price. When a government has assets and liabilities with offsetting market risks, it may use mid-market prices as a basis for establishing fair values for the offsetting risk positions and apply the bid or asking price to the net open position as appropriate. When current bid and asking prices are unavailable, the price of the most recent transaction provides evidence of the current fair value as long as there has not been a significant change in economic circumstances since the time of the transaction. If conditions have changed since the time of the transaction (for example, a change in the risk-free interest rate following the most recent price quote for a corporate bond), the fair value reflects the change in conditions by reference to current prices or rates for similar financial instruments, as appropriate. Similarly, if a government can demonstrate that the last transaction price is not fair value (for example, because it reflected the amount that an entity would receive or pay in a forced transaction, involuntary liquidation or distress sale), that price is adjusted. The fair value of a portfolio of financial instruments is the product of the number of units of the instrument and its quoted market price. If a published price quotation in an active market does not exist for a financial instrument in its entirety, but active markets exist for its component parts, fair value is determined on the basis of the relevant market prices for the component parts.

A32 If a rate (rather than a price) is quoted in an active market, a government uses that market-quoted rate as an input into a valuation technique to determine fair value. If the market-quoted rate does not include credit

risk or other factors that market participants would include in valuing the instrument, a government adjusts for those factors.

No active market — valuation technique

A33 If the market for a financial instrument is not active, a government establishes fair value by using a valuation technique. Valuation techniques include using recent arm's length market transactions between knowledgeable, willing parties, if available, reference to the current fair value of another instrument that is substantially the same, discounted cash flow analysis and option pricing models. If there is a valuation technique commonly used by market participants to price the instrument and that technique has been demonstrated to provide reliable estimates of prices obtained in actual market transactions, a government uses that technique.

A34 The objective of using a valuation technique is to establish what the transaction price would have been on the measurement date in an arm's length exchange motivated by normal business considerations. Fair value is estimated on the basis of the results of a valuation technique that makes maximum use of market inputs, and relies as little as possible on entity-specific inputs. A valuation technique would be expected to arrive at a realistic estimate of the fair value when:

(a) it reasonably reflects how the market could be expected to price the instrument; and

(b) the inputs to the valuation technique reasonably represent market expectations and measures of the risk-return factors inherent in the financial instrument.

A35 Therefore, a valuation technique:

(a) incorporates all factors that market participants would consider in setting a price; and

(b) is consistent with accepted economic methodologies for pricing financial instruments.

Periodically, a government calibrates the valuation technique and tests it for validity using prices from any observable current market transactions in the same instrument (i.e., without modification or repackaging) or based on any available observable market data. A government obtains market data consistently in the same market where the instrument was originated or purchased. The best evidence of the fair value of a financial instrument at initial recognition is the transaction price (i.e., the fair value of the consideration given or received), unless the fair value of that instrument is evidenced by comparison with other observable current market transactions in the same instrument (i.e., without modification or repackaging) or based on a valuation technique whose variables include only data from observable markets.

A36 The application of paragraph PS 3450.A35 may result in no gain or loss being recognized on the initial recognition of a financial asset or a financial liability. In such a case, the financial asset or financial liability is subsequently measured, and gains and losses are subsequently recognized, in accordance with this Section. Accordingly, a gain or loss is recognized after initial recognition only to the extent that it arises from a change in a factor that market participants would consider in setting a price.

A37 The initial acquisition or origination of a financial asset or incurrence of a financial liability is a market transaction that provides a foundation for estimating the fair value of the financial instrument. In particular, if the financial instrument is a debt instrument (such as a loan), its fair value can be determined by reference to

the market conditions that existed at its acquisition or origination date and current market conditions or interest rates currently charged by a government or by others for similar debt instruments (for example, similar remaining maturity, cash flow pattern, currency, credit risk, collateral and interest basis). Alternatively, provided there is no change in the credit risk of the debtor and applicable credit spreads after the origination of the debt instrument, an estimate of the current market interest rate may be derived by using a benchmark interest rate reflecting a better credit quality than the underlying debt instrument, holding the credit spread constant, and adjusting for the change in the benchmark interest rate from the origination date. When conditions have changed since the most recent market transaction, the corresponding change in the fair value of the financial instrument being valued is determined by reference to current prices or rates for similar financial instruments, adjusted as appropriate, for any differences from the instrument being valued.

A38 The same information may not be available at each measurement date. For example, at the date that a government makes a loan or acquires a debt instrument that is not actively traded, it has a transaction price that is also a market price. However, no new transaction information may be available at the next measurement date and, although a government can determine the general level of market interest rates, it may not know what level of credit or other risk market participants would consider in pricing the instrument on that date. A government may not have information from recent transactions to determine the appropriate credit spread over the basic interest rate to use in determining a discount rate for a present value computation. It would be reasonable to assume, in the absence of evidence to the contrary, that no changes have taken place in the spread that existed at the date the loan was made. However, a government would be expected to make reasonable efforts to determine whether there is evidence that there has been a change in such factors. When evidence of a change exists, a government would consider the effects of the change in determining the fair value of the financial instrument.

A39 In applying discounted cash flow analysis, a government uses one or more discount rates equal to the prevailing rates of return for financial instruments having substantially the same terms and characteristics, including the credit quality of the instrument, the remaining term over which the contractual interest rate is fixed, the remaining term to repayment of the principal and the currency in which payments are to be made.

Inputs to valuation techniques

A40 An appropriate technique for estimating the fair value of a particular financial instrument would incorporate observable market data about the market conditions and other factors that are likely to affect the instrument's fair value. The fair value of a financial instrument will be based on one or more of the following factors (and perhaps others).

(a) The time value of money (i.e., interest at the basic or risk-free rate) — Basic interest rates can usually be derived from observable government bond prices and are often quoted in financial publications. These rates typically vary with the expected dates of the projected cash flows along a yield curve of interest rates for different time horizons. For practical reasons, a government may use a well-accepted and readily observable general rate, such as LIBOR or a swap rate, as the benchmark rate. (Because a rate such as LIBOR is not the risk-free interest rate, the credit risk adjustment appropriate to the particular financial instrument is determined on the basis of its credit risk in relation to the credit risk in this benchmark rate.)

(b) Credit risk — The effect on fair value of credit risk (i.e., the premium over the basic interest rate for credit risk) may be derived from observable market prices for traded instruments of different credit quality or from observable interest rates charged by lenders for loans of various credit ratings.

(c) Foreign currency exchange prices — Active currency exchange markets exist for most major currencies, and prices are quoted daily in financial publications.

(d) Commodity prices — There are observable market prices for many commodities.

(e) Equity prices — Prices (and indexes of prices) of traded equity instruments are readily observable.

(f) Volatility (i.e., magnitude of future changes in price of the financial instrument or other item) — Measures of the volatility of actively traded items can normally be reasonably estimated on the basis of historical market data or by using volatilities implied in current market prices.

(g) Prepayment risk and surrender risk — Expected prepayment patterns for financial assets and expected surrender patterns for financial liabilities can be estimated on the basis of historical data. (The fair value of a financial liability that can be surrendered by the counterparty cannot be less than the present value of the surrender amount — see paragraph PS 3450.029.)

(h) Servicing costs for a financial asset or a financial liability — Costs of servicing can be estimated using comparisons with current fees charged by other market participants. If the costs of servicing a financial asset or a financial liability are significant and other market participants would face comparable costs, the issuer would consider them in determining the fair value of that financial asset or financial liability. It is likely that the fair value at inception of a contractual right to future fees equals the origination costs paid for them, unless future fees and related costs are out of line with market comparables.

Effective interest method

A41 When calculating the effective interest rate, a government would estimate cash flows considering all contractual terms of the financial instrument (for example, prepayment, call and similar options) but would not consider future credit losses. The calculation includes all fees and points paid or received between parties to the contract that are an integral part of the effective interest rate, transaction costs, and all other premiums or discounts. There is a presumption that the cash flows and the expected life of a group of similar financial instruments can be estimated reliably. However, in those rare cases when it is not possible to estimate reliably the cash flows or the expected life of a financial instrument (or group of financial instruments), a government would use the contractual cash flows over the full contractual term of the financial instrument (or group of financial instruments).

A42 When applying the effective interest method, a government generally amortizes any fees, points paid or received, transaction costs and other premiums or discounts included in the calculation of the effective interest rate over the expected life of the instrument. However, a shorter period is used if this is the period to which the fees, points paid or received, transaction costs, premiums or discounts relate. This will be the case when the variable to which the fees, points paid or received, transaction costs, premiums or discounts relate is repriced to market rates before the expected maturity of the instrument. In such a case, the appropriate amortization period is the period to the next such repricing date. For example, if a premium or discount on a floating rate instrument reflects interest that has accrued on the instrument since interest was last paid, or changes in market rates since the floating interest rate was reset to market rates, it will be amortized to the next date when the floating interest is reset to market rates. This is because the premium or discount relates to the period to the next interest reset date because, at that date, the variable to which the premium or discount relates (i.e., interest rates) is reset to market rates. If, however, the premium or discount results from a change in the credit spread

over the floating rate specified in the instrument, or other variables that are not reset to market rates, it is amortized over the expected life of the instrument.

A43 In some cases, financial assets are acquired at a deep discount that reflects incurred credit losses. Governments include such incurred credit losses in the estimated cash flows when computing the effective interest rate.

A44 For floating rate financial assets and floating rate financial liabilities, periodic re-estimation of cash flows to reflect movements in market rates of interest alters the effective interest rate. If a floating rate financial asset or floating rate financial liability is recognized initially at an amount equal to the principal receivable or payable on maturity, re-estimating the future interest payments normally has no significant effect on the carrying amount of the asset or liability.

A45 If a financial asset or a group of similar interest-bearing financial assets has been written down as a result of an impairment loss, interest income is thereafter recognized using the rate of interest used to discount the future cash flows for the purpose of measuring the impairment loss.

Presentation of remeasurement gains and losses

A46 In the period a government derecognizes financial instruments in the fair value category upon which remeasurement gains and losses were reported in preceding periods, it reports an adjustment to reverse the cumulative remeasurement gain or loss within the statement of remeasurement gains and losses.

A47 For example, a government has a fiscal period end of December 31. On April 15, 20X1, it makes a portfolio investment in the stock of a publicly traded company listed on a major stock exchange. The purchase price, excluding the commissions it expensed, is $100,000. The closing quoted market price for the investment at December 31, 20X1 is $125,000. On October 31, 20X2 it sells the stock for proceeds of $115,000. The amounts included in the statement of operations and statement of remeasurement gains and losses are set out below.

Statement of Operations

For the year ended December 31 ($ thousands)	20X2	20X2	20X1
Revenues	Budget	Actual	Actual
Gain on portfolio investment	5	15	—
Expenses	—	—	—
Operating surplus	5	15	—
Accumulated operating surplus, beginning of year		—	—
Accumulated operating surplus, end of year		15	—
		==	==

Statement of Remeasurement Gains and Losses

For the year ended December 31 ($ thousands)	20X2	20X1
Accumulated remeasurement gains and losses, beginning of year	25	—

Unrealized gain / (loss) on portfolio investment	(10)	25
Realized gain on portfolio investment, reclassified to operations	(15)	—
Accumulated remeasurement gains and losses, end of year	—	25
	===	==

Financial statement disclosures

Classes of financial instruments and level of disclosure

A48 Paragraph PS 3450.068 requires a government to group financial instruments into classes that are appropriate to the nature of the information disclosed and that take into account the characteristics of those financial instruments. The classes described in paragraph PS 3450.068 are determined by it and, thus, are distinct from the two categories of financial instruments specified in this Section, which determine how financial instruments are measured and where changes in fair value are presented.

A49 At a minimum, in determining classes of financial instruments, a government:

(a) distinguishes instruments measured at cost or amortized cost from those measured at fair value; and

(b) treats as a separate class or classes those financial instruments outside the scope of this Section.

A50 A government decides, in the light of its circumstances, how much detail it provides to satisfy the financial statement and risk disclosure requirements, how much emphasis it places on different aspects of the requirements and how it aggregates information to display the overall picture without combining information with different characteristics. It is necessary to strike a balance between overburdening financial statements with excessive detail that may not assist users of financial statements and obscuring important information as a result of too much aggregation. For example, a government does not obscure important information by including it among a large amount of insignificant detail. Similarly, a government does not disclose information that is so aggregated that it obscures important differences between individual transactions or associated risks.

Disclosures that apply to items designated to the fair value category

A51 When a government has designated items as financial instruments to the fair value category, the disclosures in set out in paragraphs PS 3450.A52-.A54 apply to items held at the financial statement date.

A52 If a government has designated a loan or receivable (or a group of loans or receivables) to the fair value category, it discloses:

(a) the maximum exposure to credit risk of the loan or receivable (or group of loans or receivables) at the financial statement date;

(b) the amount by which any related credit derivatives or similar instruments mitigate that maximum exposure to credit risk;

(c) the amount of change, during the period and cumulatively, in the fair value of the loan or receivable (or group of loans or receivables) that is attributable to changes in the credit risk of the financial asset determined either:

(i) as the amount of change in its fair value that is not attributable to changes in market conditions that give rise to market risk; or

(ii) using an alternative method a government believes more faithfully represents the amount of change in its fair value that is attributable to changes in the credit risk of the asset; and

(d) the amount of the change in the fair value of any related credit derivatives or similar instruments that has occurred during the period and cumulatively since the loan or receivable was designated.

Changes in market conditions that give rise to market risk include changes in an observed (benchmark) interest rate, commodity price, foreign exchange rate or index of prices or rates.

A53 If a government has designated a financial liability (or a group of financial liabilities) to the fair value category, it discloses:

(a) the amount of change, during the period and cumulatively, in the fair value of the financial liability that is attributable to changes in the credit risk of that liability determined either:

(i) as the amount of change in its fair value that is not attributable to changes in market conditions that give rise to market risk; or

(ii) using an alternative method a government believes more faithfully represents the amount of change in its fair value that is attributable to changes in the credit risk of the liability; and

(b) the difference between the financial liability's carrying amount and the amount a government would be contractually required to pay at maturity to the holder of the obligation.

Changes in market conditions that give rise to market risk include changes in a benchmark interest rate, the price of another entity's financial instrument, a commodity price, a foreign exchange rate or an index of prices or rates. For contracts that include a unit-linking feature (i.e., the return on the contract is linked to the return on an identified asset or pool of assets), changes in market conditions include changes in the performance of the related asset(s).

A54 A government discloses:

(a) the methods used to comply with the requirements in paragraphs PS 3450.A52(c) and PS 3450.A53(a); and

(b) if a government believes that the disclosure it has given to comply with the requirements in paragraphs PS 3450.A52(c) and PS 3450.A53(a) does not faithfully represent the change in the fair value of the financial asset or financial liability attributable to changes in its credit risk, the reasons for reaching this conclusion and the factors it believes are relevant.

Risk disclosures

Quantitative disclosures

A55 Paragraph PS 3450.088(a) requires disclosures of summary quantitative data about a government's exposure to risks based on the information provided internally to a government's key management personnel. When a government uses several methods to manage a risk exposure, it would disclose information using the method or methods that provide the most relevant and reliable information. FINANCIAL STATEMENT CONCEPTS, Section PS 1000, addresses relevance and reliability.

A56 Paragraph PS 3450.088(c) requires disclosures about concentrations of risk. Concentrations of risk arise from financial instruments that have similar characteristics and are affected similarly by changes in economic or other conditions. The identification of concentrations of risk requires judgment taking into account the circumstances of a government. Disclosure of concentrations of risk would include:

(a) a description of how management determines concentrations;

(b) a description of the shared characteristic that identifies each concentration (for example, by counterparty, geographical area, currency or market); and

(c) the amount of the risk exposure associated with all financial instruments sharing that characteristic.

Maximum credit risk exposure

A57 Paragraph PS 3450.090 requires disclosure of the amount that best represents a government's maximum exposure to credit risk. For a financial asset, this is typically the gross carrying amount, net of:

(a) any amounts offset in accordance with paragraph PS 3450.059; and

(b) any impairment losses or changes in valuation allowances recognized in accordance with FINANCIAL STATEMENT PRESENTATION, paragraph PS 1201.053, PORTFOLIO INVESTMENTS, Section PS 3041, and LOANS RECEIVABLE, Section PS 3050.

A58 Activities conducted with entities outside of a government's reporting entity that give rise to credit risk and the associated maximum exposure to credit risk include, but are not limited to, the following.

(a) Making loans and advances to borrowers and placing deposits with other entities. In these cases, the maximum exposure to credit risk is the carrying amount of the related financial assets.

(b) Entering into derivative contracts (for example, foreign exchange contracts, interest rate swaps and credit derivatives). When the resulting asset is measured at fair value, the maximum exposure to credit risk at the financial statement date will equal the carrying amount.

(c) Granting loan guarantees. In this case, the maximum exposure to credit risk is the maximum amount a government could have to pay if the guarantee is called on, which may be significantly greater than the provision for loss on the loan guarantee.

(d) Making a loan commitment that is irrevocable over the life of the facility or is revocable only in response to a material adverse change. If a government cannot settle the loan commitment net in cash or another financial instrument, the maximum credit exposure is the full amount of the commitment. This is because it is

uncertain whether the amount of any undrawn portion may be drawn upon in the future. This may be significantly greater than the amount recognized as a liability.

A59 In accordance with paragraph PS 3450.093, a government discloses summary quantitative data about its exposure to liquidity risk on the basis of the information provided internally to key management personnel. A government explains how such data is determined. If the outflows of cash (or another financial asset) included in the data could either:

(a) occur significantly earlier than indicated in the data; or

(b) be for significantly different amounts from those indicated in the data (i.e., for a derivative that is included in the data on a net settlement basis but for which the counterparty has the option to require gross settlement);

a government states that fact and provides quantitative information that enables users of its financial statements to evaluate the extent of this risk, unless that information is included in the contractual maturity analyses required by paragraph PS 3450.093(a) or (b).

Liquidity risk

A60 In preparing the maturity analyses required by paragraph PS 3450.093, a government uses its judgment to determine an appropriate number of time bands. For example, a government might determine that the following time bands are appropriate:

(a) not later than six months;

(b) later than six months and not later than one year;

(c) later than one year and not later than five years; and

(d) later than five years.

A61 In complying with paragraph PS 3450.093(a)-(b), a government does not separate an embedded derivative from a hybrid (combined) financial instrument. For such an instrument, a government applies paragraph PS 3450.093(a).

A62 Paragraph PS 3450.093(b) requires a government to disclose a quantitative maturity analysis for derivative financial liabilities that shows remaining contractual maturities if the contractual maturities are essential for an understanding of the timing of cash flows. For example, this would be the case for an interest swap with a remaining maturity of five years in a cash flow hedge of a variable rate financial asset or liability.

A63 Paragraph PS 3450.093(a)-(b) requires a government to disclose maturity analyses for financial liabilities that show the remaining contractual maturities for some financial liabilities. A government considers the following in preparing its disclosures:

(a) When a counterparty has a choice of when an amount is paid, the liability is allocated to the earliest period in which a government can be required to pay. For example, financial liabilities that a government can be required to pay on demand (for example, demand deposits) are included in the earliest time band.

(b) When a government is committed to make amounts available in instalments, each instalment is allocated to the earliest period in which a government can be required to pay. For example, when a bond is redeemable at the holder's option, repayment of the bond is allocated to the earliest period in which the bond could be redeemed.

A64 The contractual amounts disclosed in the maturity analyses as required by paragraph PS 3450.093(a)-(b) are the contractual undiscounted cash flows, for example:

(a) gross finance lease obligations (before deducting finance charges);

(b) prices specified in forward agreements to purchase financial assets for cash;

(c) net amounts for pay-floating / receive-fixed interest rate swaps for which net cash flows are exchanged; and

(d) contractual amounts to be exchanged in a derivative financial instrument (for example, a currency swap) for which gross cash flows are exchanged.

Such undiscounted cash flows differ from the amount included in the statement of financial position because the amount in that statement is based on discounted cash flows. When the amount payable is not fixed, the amount disclosed is determined by reference to the conditions existing at the financial statement date. For example, when the amount payable varies with changes in an index, the amount disclosed may be based on the level of the index at the end of the period.

A65 Paragraph PS 3450.093(c) requires a government to describe how it manages the liquidity risk inherent in the items disclosed in the quantitative disclosures required in paragraph PS 3450.093(a)-(b). A government discloses a maturity analysis of financial assets it holds for managing liquidity risk (for example, financial assets that are readily saleable or expected to generate cash inflows to meet cash outflows on financial liabilities), if that information is necessary to enable users of its financial statements to evaluate the nature and extent of liquidity risk.

A66 Other factors a government might consider in providing the disclosure required in paragraph PS 3450.093(c) include, but are not limited to, whether a government:

(a) has committed borrowing facilities or lines of credit that it can access to meet liquidity needs;

(b) has very diverse funding sources;

(c) has significant concentrations of liquidity risk in either its assets or its funding sources;

(d) has internal control processes and contingency plans for managing liquidity risk;

(e) has instruments that include accelerated repayment terms (for example, as might arise on the downgrade of a government's credit rating);

(f) has instruments that could require the posting of collateral (for example, margin calls for derivatives); and

(g) has instruments that are subject to master netting agreements.

Market risk

A67 Paragraph PS 3450.094 requires a sensitivity analysis for each type of market risk to which a government is exposed. In accordance with paragraph PS 3450.A50, a government decides how it aggregates information to display the overall picture without combining information with different characteristics about exposures to risks from significantly different economic environments. Some examples are given below:

(a) A government that designates financial instruments to the fair value category that would otherwise be measured at amortized cost might disclose this information separately for financial instruments in the fair value category and those reported at cost or amortized cost.

(b) A government would not aggregate its exposure to market risks from within Canada with its exposure to the same market risks arising in foreign countries.

If a government has exposure to only one type of market risk in only one economic environment, it would not show disaggregated information.

A68 Paragraph PS 3450.094(a) requires the sensitivity analysis to show the effect on operating results for the period (and remeasurement gains and losses, when necessary) of reasonably possible changes in the relevant risk variable (for example, prevailing market interest rates, currency rates, equity prices or commodity prices). In applying this requirement, a government evaluates these considerations:

(a) Governments are not required to determine what the operating results would have been if relevant risk variables had been different. Instead, governments disclose the effect on operating results and remeasurement gains and losses, when necessary) assuming that a reasonably possible change in the relevant risk variable had occurred at the financial statement date and had been applied to the risk exposures in existence at that date. For example, if a government has a floating rate liability at the end of the year, a government would disclose the effect on interest expense for the current year if interest rates had varied by reasonably possible amounts.

(b) Governments are not required to disclose the effect on operating results for the period for each change within a range of reasonably possible changes of the relevant risk variable. Disclosure of the effects of the changes at the limits of the reasonably possible range would be sufficient.

A69 In determining what a reasonably possible change in the relevant risk variable requires that consideration be given to the factors listed below:

(a) A government considers the economic environments in which it operates. A reasonably possible change does not involve remote or "worst case" scenarios or "stress tests". Moreover, if the rate of change in the underlying risk variable is stable, a government need not alter the chosen reasonably possible change in the risk variable. For example, assume that interest rates are five percent and a government determines that a fluctuation in interest rates of ±50 basis points is reasonably possible. It would disclose the effect on operating surplus or deficit for the period and net debt if interest rates were to change to 4.5 percent or 5.5 percent. In the next period, interest rates have increased to 5.5 percent. It continues to believe that interest rates may fluctuate by ±50 basis points (i.e., that the rate of change in interest rates is stable). A government would disclose the effect on operating surplus or deficit for the period and net debt if interest rates were to change to five percent or six percent. A government would not be required to revise its assessment that interest rates might reasonably

fluctuate by ±50 basis points, unless there is evidence that interest rates have become significantly more volatile.

(b) The time frame over which it is making the assessment. The sensitivity analysis would show the effects of changes that are considered to be reasonably possible over the period until a government will next present these disclosures, which is usually its next accounting period.

A70 Paragraph PS 3450.095 allows a government to use a sensitivity analysis that reflects interdependencies between risk variables, such as a value-at-risk methodology, if it uses this analysis to manage its exposure to financial risks. This applies even if such a methodology measures only the potential for loss and does not measure the potential for gain. A government might comply with paragraph PS 3450.095(a) by disclosing the type of value-at-risk model used (for example, whether the model relies on Monte Carlo simulations), an explanation about how the model works and the main assumptions (for example, the holding period and confidence level). Governments might also disclose the historical observation period and weightings applied to observations within that period, an explanation of how options are dealt with in the calculations, and which volatilities and correlations (or, alternatively, Monte Carlo probability distribution simulations) are used.

A71 A government provides sensitivity analyses for the whole of the reporting entity, but may provide different types of sensitivity analysis for different classes of financial instruments.

Interest rate risk

A72 Interest rate risk arises on interest-bearing financial instruments recognized in the statement of financial position (for example, loans and receivables and debt instruments issued).

Currency risk

A73 Currency risk (or foreign exchange risk) arises on financial instruments that are denominated in a foreign currency, (i.e., in a currency other than a government's reporting currency). For the purpose of this Section, currency risk does not arise from financial instruments that are non-monetary items or from financial instruments denominated in a government's reporting currency. It is assumed that a government's summary financial statements are prepared in Canadian dollars.

A74 A sensitivity analysis is disclosed for each currency to which a government has significant exposure.

Other price risk

A75 Other price risk arises on financial instruments because of changes in, for example, commodity prices or equity prices. To comply with paragraph PS 3450.094(a), a government might disclose the effect of a decrease in a specified stock market index, commodity price, or other risk variable. For example, if a government gives residual value guarantees that are financial instruments, a government discloses an increase or decrease in the value of the assets to which the guarantee applies.

A76 Two examples of financial instruments that give rise to equity price risk are a holding of equities in another entity, and an investment in an investment pool or sovereign wealth fund, which in turn holds investments in equity instruments. Other examples include forward contracts and options to buy or sell specified quantities of an equity instrument and swaps that are indexed to equity prices. The fair values of such financial instruments are affected by changes in the market price of the underlying equity instruments.

Footnotes

1. References in this Section to a government apply as well to a government organization.

* See explanation of effective date in paragraph PS 3450.097.

* See explanation of effective date in paragraph PS 3450.097.

* See explanation of effective date in paragraph PS 3450.097.

* See explanation of effective date in paragraph PS 3450.097.

* See explanation of effective date in paragraph PS 3450.097.

* See explanation of effective date in paragraph PS 3450.097.

* See explanation of effective date in paragraph PS 3450.097.

* See explanation of effective date in paragraph PS 3450.097.

* See explanation of effective date in paragraph PS 3450.097.

* See explanation of effective date in paragraph PS 3450.097.

* See explanation of effective date in paragraph PS 3450.097.

* See explanation of effective date in paragraph PS 3450.097.

* See explanation of effective date in paragraph PS 3450.097.

* See explanation of effective date in paragraph PS 3450.097.

* See explanation of effective date in paragraph PS 3450.097.

* See explanation of effective date in paragraph PS 3450.097.

* See explanation of effective date in paragraph PS 3450.097.

* See explanation of effective date in paragraph PS 3450.097.

* See explanation of effective date in paragraph PS 3450.097.

* See explanation of effective date in paragraph PS 3450.097.

* See explanation of effective date in paragraph PS 3450.097.

* See explanation of effective date in paragraph PS 3450.097.

2. In the case of a not-for-profit organization, as recognized in net assets.

1a. This is true of most, but not all, derivatives. For example, in some cross-currency interest rate swaps, principal is exchanged on inception (and re-exchanged on maturity).

SECTION PS 3510
tax revenue



TABLE OF CONTENTS

	Paragraph
Purpose and scope	.01-.06
Definitions	.07
Recognition	.08-.21
Attribution of tax revenue	.11-.14
Taxes imposed on behalf of others	.12-.13
Taxes collected on behalf of others	.14
Authorization	.15-.19
The taxable event	.20
Taxes received in advance	.21
Measurement	.22-.32
Initial measurement	.23-.30
Subsequent measurement	.31-.32
Transfers made through a tax system and tax concessions	.33-.44
Transfers made through a tax system	.37-.41
Tax concessions	.42-.44
Presentation and disclosure	.45-.46
Transitional provisions	.47
Decision tree	Appendix A

PURPOSE AND SCOPE

.01 This Section establishes standards on how to account for and report tax revenue in government financial statements.

.02 Taxes are economic resources compulsorily paid or payable to governments in accordance with laws and/or regulations normally established to provide revenue for public purposes to the government. Tax transactions are non-exchange transactions.

.03 Taxes are a major source of revenue for governments. A government levies taxes on individuals and other entities, known as taxpayers, within its jurisdiction by use of its sovereign powers in the case of the federal, provincial and territorial governments, or through rights granted it in provincial or territorial legislation in the case of local governments.

.04 Tax laws establish a government's right to collect the tax, identify the basis on which tax is calculated, and establish procedures to administer the tax such as those to calculate the tax receivable and ensure payment is received. Tax laws often require taxpayers to file periodic returns to the government agency that administers a particular tax. In such cases, the taxpayer generally provides details and evidence of the level of activity attracting tax and the amount of tax receivable by the government is calculated.

.05 Taxpayers generally provide resources to government without directly receiving equivalent value in return. Taxpayers benefit from a range of social policies and programs established by the government. However, these are not provided in consideration of the payment of taxes. The payment of taxes does not necessarily entitle a taxpayer to any particular public service or benefit. Because governments are granted the power to tax, their revenues are not substantially dependent upon voluntary contributions or on the profitable sale of goods and services in the marketplace.

.06 For the purposes of applying this Section, tax revenue does not include:

(a) fines or penalties, such as those imposed for breaches of tax law;

(b) interest earned on tax receivables;

(c) transactions that are more in the nature of exchange transactions, such as user fees, license or permit fees; or

(d) non-compulsory transfers to the government or entities charged with tax collection for the government, such as donations, contributions and the payment of fees.

The revenue recognition of developer charges is addressed in RESTRICTED ASSETS AND REVENUES, Section PS 3100. The revenue recognition of resource royalties is not addressed in this Section.

DEFINITIONS

.07 The following definitions have been adopted for the purposes of this Section:

(a) **Exchange transactions** are transactions in which one entity receives assets or services, or has liabilities extinguished, and directly gives approximately equal value (primarily in the form of cash, goods, services, or use of assets) to another entity in exchange.

(b) **Non-exchange transactions** are transactions that are not exchange transactions. In a non-exchange transaction, an entity either receives value from another entity without directly giving approximately equal value in exchange, or gives value to another entity without directly receiving approximately equal value in exchange.

(c) The **taxable event** is the event that the government, legislature, council or other authority has determined will be subject to taxation.

(d) **Tax concessions** (often referred to as "tax expenditures") are preferential provisions of the tax law that are only available to taxpayers and can include exemptions, deductions, deferrals and credits that affect the level and distribution of tax. They may include special tax rates. They provide tax relief of taxes previously paid or currently owing and are seen as "foregone revenue".

(e) **Transfers made through a tax system** are financial benefits provided or determined through a tax system that are made for a purpose other than the relieving of taxes previously paid or currently owing.

RECOGNITION

.08 *Taxes should be recognized as assets and revenue when:*

(a) they meet the definition of an asset set out in FINANCIAL STATEMENT CONCEPTS, Section PS 1000*;*

(b) they are authorized as described in paragraph PS 3510.17*; and*

(c) the taxable event occurs. [APRIL 2012]

.09 A government would only recognize tax revenue that it expects to collect in accordance with the general recognition criteria in FINANCIAL STATEMENT CONCEPTS, paragraph PS 1000.55. If at the time the tax is imposed, the government expects for specific or exceptional reasons that it is unlikely to collect it, the tax revenue would not be recognized. This determination made at the time of initial recognition is contrasted with the evaluation of the ultimate collectability of tax receivables considered under "subsequent measurement of tax receivables" set out in paragraphs PS 3510.31-.32.

.10 Taxes related to unreported taxable events or unidentified economic events that would be taxable events if disclosed or known to the government (i.e., "the underground economy") would be recognized only when such events are known, the related taxes are quantifiable and the amounts are collectible.

Attribution of tax revenue

.11 Except as provided in paragraph PS 3510.12, a government is considered to have imposed a tax and would recognize tax revenue in accordance with paragraph PS 3510.08 if the government directly levies the tax:

(a) by exercising the taxing authority provided in its own legislation, regulations or by-laws (for example, income taxes); or

(b) in accordance with the taxing authority granted to it in the legislation of another level of government (for example, municipalities granted taxing authority under provincial legislation).

Taxes imposed on behalf of others

.12 A government may impose a tax on behalf of another government or other public sector entity (for example, a school board or transit authority that is outside the government reporting entity) pursuant to an existing agreement or legislation in place at the financial statement date that is purely a flow-through arrangement. Such a flow-through arrangement might arise as a result of a community charter that requires a province to exercise its taxing authority to impose a tax on behalf of a municipality when deemed appropriate by the municipality. Evidence that such a flow-through arrangement exists would require:

(a) details in the terms of the agreement or relevant legislation mandating that the proceeds of the tax be passed directly from the government imposing the tax on behalf of others to the other government or public sector entity named in the agreement or legislation; and

(b) that the government imposing the tax on behalf of others act merely as an intermediary to impose the tax on behalf of another government or public sector entity and have no existing ability to make decisions regarding the use of the funds or unilaterally cease the flow through.

In such flow-through arrangements, the government imposing the tax on behalf of others would not recognize tax revenue in accordance with paragraph PS 3510.08. A government may impose a tax on behalf of another government or other public sector entity without also collecting that tax on behalf of the other government or entity.

.13 A government that has another government impose a tax on its behalf as described in paragraph PS 3510.12 would recognize the related tax revenue in accordance with paragraph PS 3510.08.

Taxes collected on behalf of others

.14 Amounts collected as an agent of the government or other third parties will not give rise to an increase in net assets or revenue of the agent. Thus, except as provided in paragraph PS 3510.12, tax revenue arises only for the government that imposes the tax and not for other entities, such as a tax agency, or another government that collects a tax on behalf of the government imposing the tax. For example, when a government imposes a tax that is collected by its tax agent, assets and revenue accrue to the government, not the tax agent. When a single entity collects taxes on behalf of several other entities, it is acting as an agent for all of them. For example, when the federal revenue agency collects income tax for provincial and territorial governments, the federal government does not recognize revenue in respect of those collected taxes. The individual governments that impose the taxes recognize assets and revenue in respect of the taxes. Similar accounting would occur when a lower-tier municipal government collects taxes on behalf of an upper tier municipal government that has imposed the taxes.

Authorization

.15 An intention to levy tax is not a past event that gives rise to an asset in the form of a claim against a taxpayer. Only taxes that have been authorized by a legislature or council would be recognized in government financial statements. Authorization of a new tax or tax change determines whether the tax or tax change can be accrued at the financial statement date. An effective date for an authorized new tax or tax change, when considered in conjunction with the related taxable event, determines how much tax revenue can be accrued for that tax at the financial statement date.

.16 The timing of revenue recognition in a jurisdiction will be based on the framework and precedents that apply in that particular jurisdiction. Thus, some governments might not recognize tax revenue until the related legislation, regulations or by-laws have been approved by the legislature or council. Others might have a recognized practice (for example, supported by precedents established in a court of law) of allowing the assessment and collection of taxes at an earlier point in the authorization of proposed tax measures prior to formal approval by a legislature, which has been called "legislative convention" for the purposes of this Section.

.17 *A tax is considered authorized by a legislature or council for revenue recognition purposes when the effective date of the tax has passed and the earlier of the following has occurred:*

(a) the related legislation, regulations or by-laws have been approved by the legislature or council; or

(b) the ability to assess and collect tax has been provided through legislative convention. [APRIL 2012]

.18 At the local government level any tax changes are set out in the budget or separate tax by-laws that are approved by the financial statement date as described in paragraph PS 3510.17(a). Thus, a question of the timing of authorization is unlikely to arise.

.19 Legislative convention comprises a well-established practice, written or unwritten, that clearly establishes the legislature's acceptance of the practice and the government's right to levy and collect a tax. Thus, legislative convention would exist to support the assessment and collection of taxes in advance of the formal approval of tax measures by a legislature when:

(a) a Notice of Ways and Means, or a Resolution or Motion related to the Budget that sets out the tax measures has been tabled in the legislature by the government; and

(b) there is also persuasive evidence in addition to well-established historical practice in a particular jurisdiction that:

(i) the framework and precedents that apply in the jurisdiction allow the assessment and collection of taxes at an earlier point in the authorization of tax measures than final approval by the legislature; and

(ii) when the tax measures relate to the current reporting period, the government has plans to assess taxes on the tax measures or provide the related tax concession or transfer made through a tax system.

The taxable event

.20 Similar types of taxes are levied in many jurisdictions. A government would examine the tax law in its own jurisdiction to determine what the taxable event is for the various taxes levied for the purposes of paragraph PS 3510.08. For example, the taxable event for:

(a) income tax is the earning of taxable income during the taxation period by the taxpayer;

(b) property tax is the period for which the tax is levied because the tax is levied on a periodic basis;

(c) value-added or sales tax is the purchase or sale of taxable goods and services during the taxation period; and

(d) customs duty is the movement of dutiable goods or services across the customs boundary.

Taxes received in advance

.21 Taxes received in advance of the recognition criteria in paragraph PS 3510.08 being met would be recognized as an asset and a related liability because the past event that gives rise to the government's control of the asset has not occurred, notwithstanding that the government has already received an inflow of resources. Taxes are unlikely to be received by governments in advance of being authorized. However, in rare circumstances, taxes may be received by a government from taxpayers in advance of the occurrence of the taxable event. Advance receipts in respect of taxes are recognized as a liability until the recognition criteria in paragraph PS 3510.08 are met, which would normally be as the taxable event occurs. As the taxable event occurs, the liability is discharged and revenue is recognized. If the taxable event does not occur, the government has an obligation to refund the taxes paid or offset such taxes received in advance against other taxes due from the taxpayer. Income tax instalments are not considered to be examples of taxes paid in advance of the taxable event because the taxable event is the earning of income over the reporting period. The timing of income tax instalments is thus intended to simulate the timing of the taxes that would be levied on those earnings as they occur. Therefore, income tax instalments are deemed to be based on the occurrence of the related taxable event.

MEASUREMENT

.22 There are two aspects of measurement to be considered in relation to tax revenue — initial measurement and subsequent measurement. Initial measurement of tax revenue involves management's best estimate of the amount of tax revenue as a result of the original taxable event in accordance with the tax legislation. Subsequent measurement involves a regular assessment of how much of the tax receivable is ultimately collectible.

Initial measurement

.23 Tax revenue is not known with certainty at the point of initial measurement — even if that revenue is based on actual tax assessments. As time passes, management obtains better information as a result of events such as audits, appeals, and court decisions. As that better information becomes available, the resulting tax revenue adjustments are accounted for as changes in estimates in accordance with ACCOUNTING CHANGES, Section PS 2120.

.24 *An asset acquired through a tax transaction should be measured initially at its realizable value at the date of acquisition.* [APRIL 2012]

.25 Realizable value is the amount of cash or its equivalent into which an asset is expected to be converted in the due course of operations. It is expected at initial recognition that assets acquired in tax transactions by a government will be cash or cash equivalents, or tax receivables that will be settled in cash or cash equivalents. Thus the amount of revenue recognized would be the amount of cash or cash equivalents received or receivable.

.26 Subsequent to initial recognition, other types of assets may be received by a government in settlement of outstanding tax receivables. In such cases, the asset(s) received would be measured at their fair value as at the date of acquisition by the government in determining whether they settle the tax receivable in full or outstanding receivables remain or a refund is owed the taxpayer.

.27 A government may incur expenses in relation to a tax revenue transaction such as administrative costs or commissions paid for tax collection. The tax revenue would be the inflow of future economic benefits; any outflow of resources would be recognized separately as an expense related to the transaction.

.28 When there is a separation between the timing of the taxable event and the timing of the collection of taxes, governments would measure assets arising from tax transactions using estimates. Such estimates would consider a variety of information and circumstances particular to individual taxes and jurisdictions. For example, they might consider:

(a) cash receipts from taxpayers;

(b) declarations made by taxpayers;

(c) the relationship of taxes receivable to other events in the economy;

(d) taxpayers failing to file returns on a timely basis;

(e) valuing non-monetary assets for tax assessment purposes;

(f) complexities in tax law requiring extended periods for assessing taxes due from taxpayers; and

(g) tax laws permitting taxpayers to defer payment of some taxes, etc.

.29 Measuring assets arising from tax transactions and the related revenue using estimates may result in the actual amount of assets and revenue assessed being different from the estimated amount recognized. For example, a statistical model might be appropriate for a jurisdiction with a stable tax base but less appropriate for one with a volatile tax base. Such estimates have a more explicit linkage to current events but may be more subjective. In contrast, an approach that uses cash receipts as a basis for estimating the tax revenue accrual may be more objective and verifiable. However, it may also be less responsive to economic changes. Governments that table their financial statements close to their fiscal year end may have limited assessment data on which to base their tax revenue accrual necessitating the use of different estimation techniques. Some jurisdictions may use a combination of these estimation techniques. Revisions to estimates are made in accordance with ACCOUNTING CHANGES, Section PS 2120. Many major tax systems are based on voluntary disclosure. Therefore, even with the best estimation techniques or models, reassessments will occur. Disclosure of the measurement uncertainty related to the estimation of tax assets and revenue would be made in accordance with MEASUREMENT UNCERTAINTY, Section PS 2130. The nature of the measurement uncertainty related to the estimation of tax revenue would also be indicated in the accounting policy note for tax revenue.

.30 In some cases, the assets arising from tax transactions and the related revenue cannot be reliably measured until some time after the taxable event occurs. This may occur if a tax base is volatile and estimation is not practicable. In such cases, the assets and revenue may be recognized in the period subsequent to the occurrence of the taxable event. However, in exceptional circumstances, several reporting periods may pass before a taxable event results in an inflow of resources embodying future economic benefits that meets the definition of an asset and satisfies the criteria for recognition as an asset. Consequently, the recognition criteria may not be satisfied until payment is received.

Subsequent measurement

.31 At each financial statement date, a government would evaluate the extent to which its tax receivables are ultimately collectible and valuation allowances would be used to reflect tax receivables at their net recoverable amount. Taxes receivable are financial assets similar to accounts receivable. A government's accounting policy for the measurement of tax assets will generally be consistent with its policies for the measurement of other receivables. The accounting policy for the measurement of tax assets takes into account both the expectation that the tax assets will flow to the government, and the value of those assets.

.32 *At each financial statement date, the government should evaluate the likelihood of having to repay taxes collected under tax measures that have been deemed authorized using the concept of legislative convention set out in paragraph* PS 3510.17*(b) and recognize a liability when required by LIABILITIES, Section* PS 3200*. Related refunds should be accounted for as a change in an estimate in accordance with ACCOUNTING CHANGES, Section* PS 2120*.* [APRIL 2012]

TRANSFERS MADE THROUGH A TAX SYSTEM AND TAX CONCESSIONS

.33 *Transfers made through a tax system should be recognized in expenses and not as a reduction of tax revenue.* [APRIL 2012]

.34 *Tax revenue should not be grossed up for the amount of tax concessions.* [APRIL 2012]

.35 Professional judgment would be applied in classifying a payment or reduction in taxes payable as a transfer made through a tax system or a tax concession. Non-refundable tax credits are not transfers made through a tax system. They are always tax concessions due to their nature. Refundable tax credits may be either tax concessions or transfers made through a tax system depending on their substance. In classifying an item, a government would consider:

(a) the definitions of tax concessions and transfers made through a tax system set out in paragraph PS 3510.07;

(b) the criteria set out in paragraphs PS 3510.37-.44; and

(c) the decision tree in Appendix A.

.36 An individual tax transaction cannot simultaneously possess multiple features given the specific nature and intent of tax legislation, so individual tax transactions cannot be part transfer and part tax concession. An individual tax transaction would need to be classified as either a transfer made through a tax system or a tax concession and be accounted for accordingly. However, for the government as a whole, a tax program might provide benefits of different substance for different identified classes of taxpayers. Such a tax program might provide transfers as well as tax concessions. It would be split into its component parts and each accounted for in accordance with this Section.

Transfers made through a tax system

.37 Transfers made through a tax system do not change the amount of the tax liability of the taxpayer (i.e., they do not provide relief against taxes paid previously or currently owing). Transfers made through a tax system:

(a) may be available to individuals or entities that are not taxpayers and thus might be provided through cheques or other means in addition to primary distribution through the tax system;

(b) provide a financial benefit that is other than a relief of taxes previously paid or currently owing to the government providing the transfer, to designated beneficiaries that may include taxpayers but are not restricted to taxpayers;

(c) can relate to taxes that are not a revenue source of the government providing the transfer as described in paragraph PS 3510.40; and

(d) have the potential to result in outflows of resources from the taxing government, in particular if not all potential beneficiaries are taxpayers.

.38 The amount of a transfer made through a tax system is the gross amount provided to all beneficiaries regardless of how that benefit was provided to them — either as a cheque, a refund through the tax system or a reduction of the amount otherwise payable by the taxpayer through the tax system.

.39 Transfers are made through a tax system primarily as an administrative convenience. The tax system may be used to identify transfer recipients, calculate the amount of the transfer or pay the transfer to identified recipients. For example, if a child benefit is administered through a tax system but is available to all individuals that meet a means test and have children in a specified age range, irrespective of whether they pay taxes, this payment is likely a transfer made through a tax system.

.40 Tax credits, deductions, or exemptions provided by a government related to types of taxes that are not a revenue source of that government would be treated as transfers made through a tax system of the government providing the credits, deductions or exemptions and accounted for accordingly. They do not provide tax relief against taxes levied by the government granting the credit, deduction or exemption, so they are not tax concessions of that government.

.41 Transfers made through a tax system would be recognized in one of two ways. The timing of the recognition is the primary distinction. There is potential for earlier recognition under the circumstances in (b) than those in (a).

(a) When the transfer is authorized under legislation that is not tax legislation, it would be recognized in accordance with GOVERNMENT TRANSFERS, Section PS 3410.

(b) When the transfer is authorized under tax legislation, it would be recognized as a transfer made through a tax system in accordance with this Section. By their nature, the meeting of eligibility criteria for such transfers is normally coincident with the authorization of the related tax legislation, so these transfers would be recognized as expenses when the related tax measures are considered to be authorized as described in paragraph PS 3510.17.

Tax concessions

.42 Tax concessions affect the amount of a taxpayer's current tax liability or taxes previously paid. Tax concessions:

(a) are foregone revenue for the taxing government;

(b) are only provided to taxpayers or the only direct beneficiaries are taxpayers;

(c) are only provided through the tax system;

(d) reduce taxes otherwise owing by a taxpayer (i.e., they provide relief to taxpayers from taxes previously paid or currently owing); and

(e) can only relate to the relief of taxes that are a revenue source to the government providing the tax concession.

For example, if a property tax credit is administered as a reduction of property taxes but is available only to individuals who have paid property taxes in the period (directly or through rent), the credit would be a tax concession when the taxing government is the same government that is providing the credit. An offset of taxes (income, sales, goods and services tax) for low income individuals or for corporations of a particular taxable income, size or industry may also be a tax concession when the taxing government is the same government that is providing the offset.

.43 Refundable tax credits, deductions, or exemptions provided by a government related to types of taxes that are a revenue source of that government may be either transfers made through a tax system or tax concessions. However, further to paragraph PS 3510.42(e), when they provide tax relief to taxpayers through one tax system (such as the income tax system) but are related to other types of taxes (such as sales taxes) that are also a source of revenue to the government granting the relief, the substance of the transaction is a tax concession and would be accounted for accordingly.

.44 Tax concessions are often designed to encourage or discourage certain kinds of activities or behaviour, or to serve other objectives such as providing assistance to lower-income or elderly individuals. As foregone revenue, tax concessions do not give rise to assets or expenses of the taxing government. Thus, tax revenue would not be grossed up for the amount of tax concessions. Tax concessions would be netted against the type of tax revenue for which they are providing relief. For example, sales tax concessions would be netted against sales tax revenue and property tax concessions against property tax revenue even if both credits are provided through the income tax system. Even though such credits might be administered through the income tax system they are not income tax relief.

PRESENTATION AND DISCLOSURE

.45 *The financial statements should disclose:*

(a) the accounting policies adopted for the recognition of tax revenue;

(b) the accounting policies adopted for the recognition and valuation of tax receivables if they are different from those for other receivables; and

(c) the total tax revenue recognized in the accounting period and in each of the major categories of tax. [APRIL 2012]

.46 Disclosure related to transfers made through a tax system would be consistent with that for other transfers in accordance with GOVERNMENT TRANSFERS, Section PS 3410.

TRANSITIONAL PROVISIONS

.47 This Section applies to fiscal years beginning on or after April 1, 2012. Earlier adoption is encouraged.

APPENDIX A
DECISION TREE — Transfers made through a tax system and tax concessions

The following decision tree has been prepared to illustrate how the distinction made between tax concessions and transfers made through a tax system in Section PS 3510 might be applied. The decision tree is illustrative only and matters of principle relating to particular situations should be decided in the context of the Section.



public sector accounting standards
specific items — government organizations
Section PS 3800

SECTION PS 3800
government assistance
application of CICA Handbook – Accounting Section 3800



(Withdrawn June 2010)

public sector accounting standards
government not-for-profit organizations
Sections PS 4200 — PS 4270

introduction to accounting standards that apply only to
government not-for-profit organizations



December 2010

.01 The CPA Canada Public Sector Accounting (CPA Canada PSA) Handbook applies to all governments and those organizations that consider it to be the appropriate source of generally accepted accounting principles

(GAAP) with respect to their objectives and circumstances. A government not-for-profit organization (GNFPO) is a government organization that meets the definition of a not-for-profit organization 1 and has counterparts outside the public sector as defined in the INTRODUCTION TO PUBLIC SECTOR ACCOUNTING STANDARDS, paragraph .07.

.02 The Sections that follow this Introduction apply only to GNFPOs that elect to follow the standards for not-for-profit organizations in the CPA Canada PSA Handbook. These Sections deal with matters that are unique to not-for-profit organizations, or with issues where the needs of financial statement users indicate that different requirements from those that apply to governments, other government organizations or government business enterprises are appropriate. These Sections have not been assessed for consistency with the concepts set out in FINANCIAL STATEMENT CONCEPTS, Section PS 1000.

.03 GENERALLY ACCEPTED ACCOUNTING PRINCIPLES, Section PS 1150, is applicable to GNFPOs and establishes standards for financial reporting in accordance with GAAP. It describes what constitutes Canadian GAAP for the public sector and its sources for organizations that consider the CPA Canada PSA Handbook to be the most appropriate to their objectives and circumstances. The Section also provides guidance on sources to consult when selecting accounting policies and determining appropriate disclosures, when a matter is not dealt with explicitly in the primary sources of GAAP. A GNFPO should apply the provisions of Section PS 1150 when reporting in accordance with Canadian GAAP for the public sector, and would thus apply the requirements of Public Sector Guidelines and other primary sources of GAAP, to the extent they are applicable in the organization's circumstances.

.04 The following table sets out the applicability of CPA Canada PSA Handbook Sections to GNFPOs that elect to follow the standards for not-for-profit organizations in the CPA Canada PSA Handbook. Sections are considered to be of general applicability if they address matters that should be considered by all GNFPOs. Other Sections are applicable to the extent that a particular organization has the transactions or circumstances dealt with in the Section. The remaining Sections are of very limited or no applicability to GNFPOs.

Section	General applicability	Applies to GNFPOs with relevant transactions or circumstances	Limited or no applicability to GNFPOs
PS 1000, FINANCIAL STATEMENT CONCEPTS	X 2		
PS 1100, FINANCIAL STATEMENT OBJECTIVES	X		
PS 1150, GENERALLY ACCEPTED ACCOUNTING PRINCIPLES	X		
PS 1201, FINANCIAL STATEMENT PRESENTATION	X 3		

PS 1300, GOVERNMENT REPORTING ENTITY			X 4
PS 2100, DISCLOSURE OF ACCOUNTING POLICIES	X		
PS 2120, ACCOUNTING CHANGES	X		
PS 2125, FIRST TIME ADOPTION	X		
PS 2130, MEASUREMENT UNCERTAINTY	X		
PS 2200, RELATED PARTY DISCLOSURES		X	
PS 2400, SUBSEQUENT EVENTS	X		
PS 2500, BASIC PRINCIPLES OF CONSOLIDATION		X	
PS 2510, ADDITIONAL AREAS OF CONSOLIDATION		X	
PS 2601, FOREIGN CURRENCY TRANSLATION		X	
PS 2700, SEGMENT DISCLOSURES	X		
PS 3041, PORTFOLIO INVESTMENTS		X	
PS 3050, LOANS RECEIVABLE		X	
PS 3060, GOVERNMENT PARTNERSHIPS		X	
PS 3070, INVESTMENTS IN GOVERNMENT BUSINESS ENTERPRISES			X 5
PS 3100, RESTRICTED ASSETS AND REVENUES			X 6
PS 3150, TANGIBLE			X 7

CAPITAL ASSETS			
PS 3200, LIABILITIES		X	
PS 3210, ASSETS		X	
PS 3230, LONG-TERM DEBT		X	
PS 3250, RETIREMENT BENEFITS		X	
PS 3255, POST-EMPLOYMENT BENEFITS, COMPENSATED ABSENCES AND TERMINATION BENEFITS		X	
PS 3260, LIABILITY FOR CONTAMINATED SITES			X
PS 3270, SOLID WASTE LANDFILL CLOSURE AND POST-CLOSURE LIABILITY		X	
PS 3300, CONTINGENT LIABILITIES	X		
PS 3310, LOAN GUARANTEES		X	
PS 3320, CONTINGENT ASSETS	X		
PS 3380, CONTRACTUAL RIGHTS	X		
PS 3390, CONTRACTUAL OBLIGATIONS	X		
PS 3410, GOVERNMENT TRANSFERS			X 8
PS 3420, INTER-ENTITY TRANSACTIONS	X		
PS 3430, RESTRUCTURING TRANSACTIONS		X	
PS 3450, FINANCIAL		X	

INSTRUMENTS			
PS 3510, TAX REVENUE			X

Footnotes

1. Not-for-profit organizations are defined in FINANCIAL STATEMENT PRESENTATION BY NOT-FOR-PROFIT ORGANIZATIONS, Section PS 4200.

2. In the event that the provisions of Section PS 1000 conflict with Sections PS 4210 and PS 4230 on the deferral of contributions and costs, Sections PS 4210 and PS 4230, respectively, apply.

3. Section PS 1201 applies for preparing the statement of cash flows and statement of remeasurement gains and losses. Section PS 4200 applies for the remaining financial statements.

4. Section PS 4250 applies.

5. Section PS 4250 applies.

6. Section PS 4210 applies.

7. Section PS 4230 applies.

8. Section PS 3200 applies for grants made. Section PS 4210 applies for government grants received.

SECTION PS 4200
financial statement presentation by not-for-profit organizations

TABLE OF CONTENTS	Paragraph
Purpose and scope	.01
Definitions	.02-.03
General	.04
Financial statements	.05
Fund accounting	.06-.17
Interfund transfers and balances	.12-.17
Statement of financial position	.18-.29

Disclosure of restrictions	.24-.25
Disclosure of restrictions — deferral method	.26-.27
Disclosure of restrictions — restricted fund method	.28-.29
Statement of operations	.30-.38
Statement of operations — deferral method	.33-.34
Statement of operations — restricted fund method	.35-.36
Presentation of revenues and expenses	.37-.38
Statement of changes in net assets	.41-.44
Statement of cash flows	.46-.53
Illustrative examples	Appendix A

PURPOSE AND SCOPE

.01 This Section establishes presentation and disclosure standards for financial statements of not-for-profit organizations. These standards supplement those in FINANCIAL STATEMENT PRESENTATION, Section PS 1201, which apply to governments.

DEFINITIONS

.02 The following terms are used in this Section with the meanings specified. Definitions for financial statement elements, such as assets and liabilities, are included in FINANCIAL STATEMENT CONCEPTS, Section PS 1000. Additional definitions of particular relevance to financial reporting by not-for-profit organizations are presented in CONTRIBUTIONS — REVENUE RECOGNITION, Section PS 4210, and CAPITAL ASSETS HELD BY NOT-FOR-PROFIT ORGANIZATIONS, Section PS 4230.

(a) **Not-for-profit organizations** are entities, normally without transferable ownership interests, organized and operated exclusively for social, educational, professional, religious, health, charitable or any other not-for-profit purpose. A not-for-profit organization's members, contributors and other resource providers do not, in such capacity, receive any financial return directly from the organization.

(b) **Restrictions** are stipulations imposed that specify how resources must be used. External restrictions are imposed from outside the organization, usually by the contributor of the resources. Internal restrictions are imposed in a formal manner by the organization itself, usually by resolution of the board of directors. Restrictions on contributions may only be externally imposed. Net assets or fund balances may be internally or externally restricted. Internally restricted net assets or fund balances are often referred to as reserves or appropriations.

(c) **Fund accounting** comprises the collective accounting procedures resulting in a self-balancing set of accounts for each fund established by legal, contractual or voluntary actions of an organization. Elements of a fund can include assets, liabilities, net assets, revenues and expenses (and gains and losses, where appropriate). Fund accounting involves an accounting segregation, although not necessarily a physical segregation, of resources.

(d) The **restricted fund method** of accounting for contributions is a specialized type of fund accounting that involves the reporting of details of financial statement elements by fund in such a way that the organization reports total general funds, one or more restricted funds, and an endowment fund, if applicable. Reporting of financial statement elements segregated on a basis other than that of use restrictions (for example, by program or geographic location) does not constitute the restricted fund method. Other definitions related to the restricted fund method appear in CONTRIBUTIONS — REVENUE RECOGNITION, Section PS 4210.

(e) Under the **deferral method** of accounting for contributions, restricted contributions related to expenses of future periods are deferred and recognized as revenue in the period in which the related expenses are incurred. Endowment contributions are reported as direct increases in net assets. All other contributions are reported as revenue of the current period. Organizations that use fund accounting in their financial statements without following the restricted fund method would account for contributions under the deferral method.

.03 A not-for-profit organization would follow either the deferral method or the restricted fund method of accounting for contributions. (A detailed discussion of these two methods is presented in CONTRIBUTIONS — REVENUE RECOGNITION, Section PS 4210.) An organization's choice of method of accounting for contributions has implications for financial statement presentation. For example, the deferral method and the restricted fund method result in differences in the recognition of restricted contributions in the statement of operations and in the presentation of restricted resources in the statement of financial position. Most of the requirements of this Section apply to both the deferral and the restricted fund methods. Other requirements apply only to one of the deferral or the restricted fund method and are identified as such.

GENERAL

.04 *A clear and concise description of a not-for-profit organization's purpose, its intended community of service, its status under income tax legislation and its legal form should be included as an integral part of its financial statements.* [JAN. 2012]

FINANCIAL STATEMENTS

.05 Financial statements for a not-for-profit organization normally include:

(a) a statement of financial position;

(b) a statement of operations;

(c) a statement of changes in net assets; 1 and

(d) a statement of cash flows.

These names are used for descriptive purposes only. Organizations may use whatever titles are appropriate in the circumstances as long as each financial statement provides the information necessary to meet the requirements of this and other Sections in a manner that results in the fair presentation in accordance with generally accepted accounting principles of the organization's financial position, results of operations and cash flows. The statement of changes in net assets may be combined with the statement of operations. Notes to financial statements and supporting schedules to which the financial statements are cross-referenced are an integral part of such statements.

FUND ACCOUNTING

.06 *An organization that uses fund accounting in its financial statements should provide a brief description of the purpose of each fund reported.* [JAN. 2012]

.07 A description of the specific purpose of each fund reported provides useful information for understanding the organization's use of fund accounting. This description would include the extent to which the particular fund is used to report restricted resources and the types of expenses that are reported in the fund.

.08 Each fund reported would be presented on a consistent basis from year to year. Particular revenues and expenses reported in a given fund would continue to be reported in that fund in future periods. Any change in the revenues and expenses reported in a particular fund would constitute a change in accounting policy, unless the change results from events or transactions that are clearly different from those previously occurring or from the recognition of events or transactions occurring for the first time (see ACCOUNTING CHANGES, Section PS 2120).

.09 Financial statements that are reported using fund accounting may follow the multi-column format whereby resources or similar groups of resources are each assigned a separate column. The multi-column format presents information about fund components together with certain totals for the organization as a whole, in accordance with this Section, to give a complete understanding of the total resources available to the organization.

.10 Other formats may be used to report using fund accounting provided that financial information about the organization as a whole is presented in the organization's financial statements in accordance with this Section.

.11 An organization may present its financial statements using different formats for the individual statements, as long as it does so in a way that satisfies the requirements of this Section. For example, a statement of operations and changes in net assets presented in the multi-column format may be accompanied by a statement of financial position that presents assets, liabilities and net assets in a single column without presenting each financial statement item by individual fund. The formats selected for individual statements would be based on the particular circumstances of the organization.

Interfund transfers and balances

.12 *Interfund transfers should be presented in the statement of changes in net assets.* [JAN. 2012]

.13 *The amount and purpose of interfund transfers during the reporting period should be disclosed.* [JAN. 2012]

.14 *The amounts, terms and conditions of interfund loans outstanding at the reporting date should be disclosed.* [JAN. 2012]

.15 Transfers between funds or between funds and reserves during a reporting period do not result in increases or decreases in the economic resources of the organization as a whole and therefore are reported in the statement of changes in net assets rather than in the statement of operations. Allocations of revenues and expenses between funds that are made when the organization first recognizes the revenue or expense are not considered to be transfers. Under the restricted fund method, however, unrestricted revenues would be

recognized initially in the general fund and would only be allocated to restricted funds by way of interfund transfer (see CONTRIBUTIONS — REVENUE RECOGNITION, Section PS 4210).

.16 Judgment would be exercised in determining the level of disclosure to provide for interfund transfers. For example, it may not be necessary to disclose individual transfers. It may be appropriate to aggregate and disclose as a single amount interfund transfers that are similar in nature.

.17 When an organization presents its financial statements using a multi-column format, interfund loans and advances would be presented in individual funds and eliminated in the totals column of the statement of financial position. When using a single column approach, the only disclosure of interfund loans and amounts receivable would be made in notes to the financial statements.

STATEMENT OF FINANCIAL POSITION

.18 *For each financial statement item, the statement of financial position should present a total that includes all funds reported.* [JAN. 2012]

.19 *The statement of financial position should present the following:*

(a) net assets subject to restrictions requiring that they be maintained permanently as endowments;

(b) other restricted net assets;

(c) unrestricted net assets; and

(d) total net assets. [JAN. 2012]

.20 The primary purpose of a statement of financial position is to present the organization's economic resources, obligations and net assets as at the reporting date. The statement of financial position, together with the other statements and the notes, provides useful information for assessing whether the organization will continue to be able to provide services, achieve its objectives and meet its obligations. This information is normally provided by grouping similar amounts not significant in themselves as financial statement items (for example, cash, capital assets, accounts payable, deferred contributions) and providing totals for all funds related to each of these financial statement items reported. The statement of financial position may also be referred to as the balance sheet.

.21 Information about the organization's liquidity is presented by classifying current assets separately from non-current assets and current liabilities separately from non-current liabilities. Cash and other assets subject to external restrictions limiting their use to beyond one year from the date of the statement of financial position would be classified as non-current assets.

.22 Net assets may also be referred to as fund balances or as accumulated surplus or deficit. Total net assets represents the organization's residual interest in its assets after deducting its liabilities. The net assets balance therefore provides information about the net resources the organization has available for carrying out its service delivery activities in the future. Restrictions on net assets may be externally or internally imposed. To fully understand the nature of the organization's net assets balance, financial statement users require information about the portions of net assets attributable to endowments, and to other external restrictions, none

of which can readily be used for other purposes. Financial statement users also require information about the portions of net assets that are subject to internal restrictions.

.23 [not used]

Disclosure of restrictions

.24 Restrictions on resources may be external or internal. Externally restricted resources would be presented either as deferred contributions or as part of net assets, depending on the organization's policies for accounting for contributions. Externally restricted resources are not available for use at the organization's discretion. The existence of external restrictions can have a significant effect on the organization's financial flexibility and ability to provide certain services in the future. Therefore, it is important that users be made aware of the amounts of resources subject to external restrictions and of the nature of the restrictions.

.24A Internal restrictions can be removed by the organization and the assets can be made available for other purposes, if necessary. Therefore, it is important that users be made aware of the amounts of resources subject to internal restrictions and the nature of the restrictions.

.24B Under the deferral method of accounting for contributions, one common type of internal restriction is to present net assets invested in capital assets as a component of net assets separately from the unrestricted net assets balance. Organizations that adopt this form of internal restriction consider that the internally restricted amount represents net assets that are not available for other purposes because they have been invested in capital assets. When an organization segregates the amount of net assets invested in capital assets, the organization may either present the amount as a component of net assets in the statement of financial position or disclose the amount in a note to the financial statements. Net assets invested in capital assets are generally presented as the unamortized portion of capital assets purchased with unrestricted resources, less related debt, plus the carrying amount, less related debt, of capital assets that will not be amortized. Under the restricted fund method, net assets (fund balances) invested in capital assets may also be internally restricted and generally represent the net book value of all capital assets, less related debt.

.25 Specific requirements related to the disclosure of restrictions for organizations following the deferral method of accounting for contributions appear in paragraphs PS 4200.26-.27. Specific requirements for organizations following the restricted fund method appear in paragraphs PS 4200.28-.29. Organizations need not provide the disclosures set out below separately for each restriction. Judgment would be exercised in disclosing major categories of restrictions. In determining how to categorize restrictions, the organization would consider the intended use of the resources and the length of time that is likely to elapse before the restrictions are complied with.

Disclosure of restrictions — deferral method

.26 *The following should be disclosed:*

(a) the amounts of deferred contributions attributable to each major category of external restrictions with a description of the restrictions;

(b) the amount of net assets subject to external restrictions requiring that they be maintained permanently as endowments; and

(c) the amount of net assets subject to internal restrictions and, separately, external restrictions other than those in (b) above. [JAN. 2012]

.27 Under the deferral method of accounting for contributions, endowment contributions are accumulated in the net assets balance. Internally restricted balances are reflected as appropriations of unrestricted net assets in the net assets balance. Externally restricted contributions are accumulated in the statement of financial position as deferred contributions.

Disclosure of restrictions — restricted fund method

.28 *The following should be disclosed:*

(a) the amount of net assets (fund balances) subject to external restrictions requiring that they be maintained permanently as endowments;

(b) the amounts of net assets (fund balances) attributable to each major category of internal restrictions and, separately, external restrictions other than those in (a) above, with a description of the restrictions; and

(c) the amounts of deferred contributions attributable to each major category of external restrictions with a description of the restrictions. [JAN. 2012]

.29 Under the restricted fund method of accounting for contributions, endowment contributions are accumulated in the endowment fund balance. Other internally and externally restricted contributions are accumulated in the statement of financial position as part of the appropriate restricted fund balance. If there is no appropriate restricted fund, externally restricted contributions are accumulated as deferred contributions in the general fund.

STATEMENT OF OPERATIONS

.30 The primary purpose of a statement of operations is to communicate information about changes in the organization's economic resources and obligations for the period. Specifically, this statement provides information about the cost of the organization's service delivery activities for the period and the extent to which these expenses were financed or funded by contributions and other revenue. The information provided in the statement of operations is useful in evaluating the organization's performance during the period, including its ability to continue to provide services, and in assessing how the organization's management has discharged its stewardship responsibilities. The statement of operations may also be referred to as the statement of revenues and expenses.

.31 Not-for-profit organizations may classify expenses in the statement of operations by object (for example, salaries, rent, utilities), by function (for example, administrative, research, ancillary operations) or by program. Classification of expenses by function or program may be desirable when the organization operates several different programs or has different areas of interest. Classification of expenses by object can also be useful. An organization would classify its expenses in the manner that results in the most meaningful presentation in the circumstances. Whether the organization prepares its budgets by function or object would be a factor to consider in deciding which method of expense classification would be most appropriate for the organization's financial statements.

.32 Specific requirements related to the statement of operations for organizations following the deferral method of accounting for contributions appear in paragraphs PS 4200.33-.34. Specific requirements for organizations following the restricted fund method appear in paragraphs PS 4200.35-.36.

Statement of operations — deferral method

.33 *The statement of operations should present:*

(a) for each financial statement item, a total that includes all funds reported; and

(b) total excess or deficiency of revenues and gains over expenses and losses for the period. [JAN. 2012]

.34 The statement of operations would present similar items of revenue and similar items of expense grouped together in meaningful categories as financial statement items. Under the deferral method of accounting for contributions, total excess of revenues over expenses for all funds reports the change in the organization's unrestricted resources in the period. When an organization following the deferral method reports using a method of fund accounting other than the restricted fund method, the total for all funds related to each financial statement item presented in the statement of operations would be reported together with the total excess of revenues over expenses for all funds.

Statement of operations — restricted fund method

.35 *The statement of operations should present the following for the period:*

(a) the total for each financial statement item recognized in the general fund;

(b) the total for each financial statement item recognized in the restricted funds, other than the endowment fund;

(c) the total for each financial statement item recognized in the endowment fund; and

(d) excess or deficiency of revenues and gains over expenses and losses for each of the general fund, restricted funds other than the endowment fund and the endowment fund. [JAN. 2012]

.36 The statement of operations would present similar items of revenue and similar items of expense grouped together in meaningful categories as financial statement items. Under the restricted fund method of accounting for contributions, the general fund presents all revenues and expenses related to unrestricted resources. The total excess of revenues over expenses in the general fund reports the change in the organization's unrestricted resources in the period. The restricted funds present revenues and expenses related to restricted resources. Endowment contributions are presented in the endowment fund. In order to understand the impact of operations for the period on the organization's financial position, financial statement readers require information about operations related to each of the general fund, the restricted funds and the endowment fund. In addition, it may be desirable to present totals that include all the funds reported for each financial statement item in the statement of operation.

Presentation of revenues and expenses

.37 *Revenues and expenses should be recognized and presented at their gross amounts when an organization is acting as a principal in transactions.* [JAN. 2012]

.38 Information about an organization's total gross revenues and expenses is necessary for users to understand fully the organization's operations. When an organization has expenses and revenues from the provision of goods or services, acting as a principal in the transactions involved, it recognizes the expenses and the revenues on a gross basis. When an organization is not acting as a principal in the transactions, it has earned the equivalent of a commission or fee, or received the equivalent of a contribution, and recognizes only the net amount received.

.39-.40 [not used]

STATEMENT OF CHANGES IN NET ASSETS

.41 *The statement of changes in net assets should present changes in the following for the period:*

(a) net assets subject to restrictions requiring that they be maintained permanently as endowments;

(b) internally restricted net assets and, separately, externally restricted net assets other than those in (a);

(c) unrestricted net assets; and

(d) total net assets. [JAN. 2012]

.42 [not used]

.43 The statement of changes in net assets may be referred to as the statement of changes in fund balances when the organization uses fund accounting in its financial statements. Total net assets represents the organization's residual interest in its assets after deducting its liabilities. The net assets balance therefore provides information about the net resources the organization has available for carrying out its service delivery activities in the future. To fully understand the nature of the organization's financial activities in the period, financial statement users require information about changes in the portions of net assets attributable to endowments and to other external and internal restrictions as well as those revenues, expenses, gains and losses that have not been included in the statement of operations. The statement of changes in net assets provides this information and shows the extent to which the organization's operations and other revenues, expenses, gains and losses that have not been included in the statement of operations have resulted in an accumulation or depletion of net assets.

.44 The statement of changes in net assets may be combined with the statement of operations.

.45 [not used]

STATEMENT OF CASH FLOWS

.46 *The statement of cash flows should be prepared in accordance with FINANCIAL STATEMENT PRESENTATION, Section* PS 1201. [JAN. 2012 *]

.47 [not used]

.48 The information provided in the statement of cash flows helps financial statement users evaluate how management has discharged its stewardship responsibilities over the resources with which it has been entrusted.

.49 Certain resource providers to a not-for-profit organization may be particularly interested in the statement of cash flows because it shows cash received in the period and how it was used. Resource providers may look to the statement of cash flows in determining whether the cash provided to the organization was used in the manner that the resource provider intended. This statement could form the basis for supplementary schedules or reports prepared to meet resource providers' needs.

.50 [not used]

.51 Cash flows from operations include all cash receipts and disbursements resulting from the main, ongoing service delivery activities of an organization and exclude cash flows from financing, capital and investing activities. Cash receipts from operations include unrestricted contributions, restricted contributions that are to be used for operations and other revenues arising from the organization's ordinary activities, such as fees for services, proceeds on the sale of goods and unrestricted investment income. Cash disbursements for operations would comprise expenditures made by the organization in carrying out its service delivery activities.

.52 Components of cash flows from financing activities would include cash contributed that is restricted for the purpose of acquiring capital assets and cash contributed for endowment. Cash receipts and disbursements related to the assumption and repayment of debt would also be presented as components of cash flows from financing activities. Components of cash flows from investing activities would include the purchase of investments and the proceeds on disposal of major categories of assets, such as investments. Components of cash flows from capital activities would include the acquisition of capital assets and the proceeds on disposal of major categories of assets, such as capital assets.

.53 An organization following the restricted fund method of accounting for contributions that presents its statement of cash flows using the indirect method, reconciles the excess of revenues over expenses for the general fund and any restricted funds of an operating nature to cash flows from operations.

APPENDIX A

ILLUSTRATIVE EXAMPLES

These examples are illustrative only and matters of principle relating to particular situations should be decided in the context of the Section. They are not intended to indicate preferred formats nor to prescribe standardized note disclosure, as variations in format and wording will be necessary to meet the requirements of differing circumstances.

Other disclosures and methods of presentation not illustrated may also comply with this Section.

The following decision tree is intended to point out three alternative methods of presentation of financial statements of not-for-profit organizations.



SITUATION I
NFP A Follows the Deferral Method and
does not Report Using Fund Accounting

In this example, the following transactions and circumstances are assumed.

- NFP A follows the deferral method of accounting for contributions.

- NFP A has chosen to internally restrict the amount of net assets invested in capital assets and report the amount net of the mortgage payable and deferred capital contributions.

- NFP A receives core operating funding every year from federal government. The amount of the funding is based on an approved operating budget. For 20X1 and 20X2, this funding amounted to $100,000 and $105,000, respectively. Funding is received just prior to the year to which it relates. $110,000, representing the funding for 20X3, was received at the end of 20X2.

- NFP A also receives funding for research every year from federal government. This funding amounted to $25,000 and $30,000 for 20X1 and 20X2, respectively. This funding is not received until after the fiscal year being funded.

- From time to time, NFP A receives contributions for endowment. By the end of 20X1, NFP A had accumulated contributions for endowment amounting to $100,000. The investment income on the $100,000 is subject to restrictions imposed by the contributor stipulating that it be spent on research activities. In 20X2, NFP A received an additional contribution for endowment amounting to $50,000. The income earned on this contribution is unrestricted.

- NFP A has land and a building that were purchased 11 years ago using funds restricted for that purpose and that cost $50,000 and $140,000, respectively. The estimated useful life of the building is 20 years.

- Part way through 20X2, NFP A purchased another parcel of land and a building that cost $100,000 and $400,000, respectively. This purchase was financed using unrestricted funds of $50,000 and mortgage financing of $450,000. By the end of 20X2, $3,000 of the principal amount of the mortgage had been repaid. The estimated useful life of the building is 20 years.

- Over the years, NFP A has purchased equipment. By the end of 20X1, equipment with an original cost of $25,000 had been purchased out of unrestricted resources. Equipment with a fair value of $5,000 was contributed to NFP A at the beginning of 20X2. At the end of 20X2, equipment costing $10,000 was purchased using unrestricted funds.

- During 20X2, NFP A launched a building campaign to raise $500,000 for a major expansion to NFP A's older building. Contributions to this campaign amounted to $78,000 in 20X2. Contributors to the building campaign do so with the understanding that resources contributed will be invested and that the accumulated investment income will be spent on the building expansion. Investment income earned on amounts contributed was $2,000 in 20X2.

- NFP A runs seminars for which it charges fees.

- NFP A also receives contributions from XYZ Foundation, which is not related to NFP A.

NFP A
Statement of Financial Position

As at December 31	20X2		20X1
Current assets			
Cash and term deposits	$ 122,000		$ 160,000
Accounts receivable	20,000		10,000
Grant receivable	30,000		25,000
	172,000		195,000
Investments (market $244,000 — 20X1 $102,000)	240,000		100,000
Capital assets, net (note 3)	627,000		135,000
	$1,039,000		$430,000
Current liabilities			
Accounts payable and accrued liabilities	$ 25,000		$ 20,000
Mortgage payable — current (note 4)	6,000		—
	31,000		20,000
Mortgage payable — long-term (note 4)	441,000		—
Deferred contributions (note 5)	118,000		105,000
Deferred contributions related to capital assets (note 6)	67,000		70,000
Deferred building campaign contributions and related investment income (note 7)	80,000		—
	265,000		175,000
Net assets			
Net assets invested in capital assets (note 8)	113,000	(a)	65,000
Net assets restricted for endowment purposes (note 8)	160,000		100,000
Net assets internally restricted for research purposes (note 8)	25,000		—
Unrestricted net assets	4,000		70,000
	302,000		235,000
	$1,039,000		$430,000

(a) Consists of

Capital assets, net	$627,000
Mortgage payable — current	(6,000)
Mortgage payable — long-term	(441,000)
Deferred contributions related to capital assets	(67,000)
Net investment in capital assets	$113,000

NFP A
Statement of Operations

For the year ended December 31	20X2	20X1
Revenues		
Federal government grants — core operating	$105,000	$100,000
Federal government grants — research	30,000	25,000
General contributions (note 9)	55,000	30,000
Contribution from XYZ Foundation	25,000	20,000
Seminar fees	80,000	75,000
Investment income (note 10)	10,000	15,000
Amortization of deferred contributions (note 6)	8,000	7,000
	313,000	272,000
Expenses		
Service delivery — salaries, benefits and purchased materials and services	223,000	195,000
Research — salaries, benefits and purchased materials and services	32,000	30,000
Amortization of capital assets	23,000	12,000
Mortgage interest (note 4)	18,000	—
	296,000	237,000
Excess of revenues over expenses	$17,000	$35,000

NFP A
Statement of Changes in Net Assets

For the year ended December 31

	Invested in capital assets	Restricted for endowment	Restricted for research purposes

Net assets			purposes		Unrestricted	20X2 Total	20X1 Total
Balance, beginning of year	$65,000		$100,000	$ —	$70,000	$235,000	$200,000
Excess (deficiency) of revenues over expenses	(15,000)	(a)	—	—	32,000	17,000	35,000
Endowment contributions	—		50,000	—	—	50,000	—
Investment in capital assets	63,000	(b)	—	—	(63,000)	—	—
Internally imposed restriction (note 8)	—		10,000	25,000	(35,000)	—	—
Balance, end of year	$113,000		$160,000	$ 25,000	$ 4,000	$302,000	$235,000

(a) Consists of

Amortization expense	$23,000
Less amount related to capital assets purchased with restricted contributions	(8,000)
Reduction in net assets invested in capital assets	$15,000

(b) Consists of

Down payment on new land and building	$50,000
Repayment of mortgage principal	3,000
Purchase of equipment with unrestricted resources	10,000
Increase in net assets invested in capital assets	$63,000

NFP A
Statement of Cash Flows

For the year ended December 31

Cash flows from operating activities (a)	20X2	20X1

Cash received from Federal government for operations	$110,000	$105,000
Cash received from Federal government for research	25,000	20,000
Cash received from general contributors	55,000	30,000
Cash received from XYZ Foundation	25,000	20,000
Cash received for seminars	70,000	70,000
Investment income received for operating purposes	18,000	15,000
Cash paid for salaries and benefits	(230,000)	(225,000)
Cash paid for materials and services	(20,000)	(15,000)
Mortgage interest paid	(18,000)	—
Net cash generated through operating activities	35,000	20,000
Cash flows from capital activities		
Purchase of capital assets	(510,000)	—
Contributed equipment put in service	(5,000)	—
Net cash used in capital activities	(515,000)	—
Cash flows from financing activities		
Mortgage financing	450,000	—
Contributions of cash for endowment	50,000	—
Cash contributions resulting from the building campaign	78,000	—
Income received on building campaign investments	2,000	—
Contribution of equipment	5,000	—
Net cash generated through financing activities	585,000	—
Cash flows from investing activities		
Purchase of investments	(140,000)	—
Mortgage principal repayments	(3,000)	—
Net cash used in investing activities	(143,000)	—
Net (decrease) increase in cash and term deposits	(38,000)	20,000
Cash and term deposits, beginning of year	160,000	140,000
Cash and term deposits, end of year	$122,000	$160,000
	========	=======

(a) Operating activities include service delivery, administrative and research activities. Statement has been prepared using the direct method (see FINANCIAL STATEMENT PRESENTATION, paragraph PS 1201.112).

NFP A
Notes to Financial Statements

1. Purpose of the Organization

NFP A is a national organization operating programs and performing research aimed at helping those who have lost family members in automobile accidents. NFP A is incorporated under the Canada Corporations Act as a not-for-profit organization and is a registered charity under the Income Tax Act.

2. Significant Accounting Policies

Revenue recognition

NFP A follows the deferral method of accounting for contributions. Restricted contributions are recognized as revenue in the year in which the related expenses are incurred. Unrestricted contributions are recognized as revenue when received or receivable if the amount to be received can be reasonably estimated and collection is reasonably assured. Endowment contributions are recognized as direct increases in net assets.

Restricted investment income is recognized as revenue in the year in which the related expenses are incurred. Unrestricted investment income is recognized as revenue when earned.

Seminar fees are recognized as revenue when the seminars are held.

Capital assets

Purchased capital assets are recorded at cost. Contributed capital assets are recorded at fair value at the date of contribution. Amortization is provided on a straight-line basis over the assets' estimated useful lives, which for buildings is 20 years and for equipment is 5 years.

Investments

Investments are recorded at the lower of amortized cost and market value.

Contributed services

Volunteers contribute about 500 hours per year to assist NFP A in carrying out its service delivery activities. Because of the difficulty of determining their fair value, contributed services are not recognized in the financial statements.

3. Capital assets

	Cost		Accumulated amortization		Net book value	
	20X2	20X1	20X2	20X1	20X2	20X1
Land	$150,000	$50,000	$ —	$ —	$150,000	$ 50,000
Buildings	540,000	140,000	87,000	70,000	453,000	70,000
Equipment	40,000	25,000	16,000	10,000	24,000	15,000

$730,000	$215,000	$103,000	$ 80,000	$627,000	$135,000
=======	=======	=======	======	=======	=======

4. Mortgage payable

The mortgage payable is due July 1, 20X7 and has an interest rate of 8%. It is repayable at the rate of $3,474 per month including principal and interest. The building at 123 King St. is pledged as collateral.

5. Deferred contributions

Deferred contributions represent unspent resources externally restricted for research purposes and restricted operating funding received in the current period that is related to the subsequent period. Changes in the deferred contributions balance are as follows:

	20X2	20X1
Beginning balance, related to operating funding	$105,000	$100,000
Less amount recognized as revenue in the year	(105,000)	(100,000)
Add amount received related to the following year	110,000	105,000
Ending balance, related to operating funding	110,000	105,000
Investment revenue restricted for research purposes	10,000	—
Less amount recognized as investment income in the year	(2,000)	—
Ending balance	$118,000	$105,000
	=======	=======

6. Deferred contributions related to capital assets

Deferred contributions related to capital assets represent contributed capital assets and restricted contributions with which one of NFP A's buildings was originally purchased. The changes in the deferred contributions balance for the period are as follows:

	20X2	20X1
Beginning balance	$70,000	$77,000
Contributed equipment	5,000	—
Amounts amortized to revenue	(8,000)	(7,000)
Ending balance	$67,000	$70,000
	======	======

7. Building campaign

In 20X2, NFP A launched a building campaign to raise $500,000 by 20X5 for a major expansion to one of NFP A's buildings. The $80,000 deferred building campaign contributions balance comprises $78,000 contributed to date and related investment income of $2,000, which is also externally restricted for the building expansion.

8. Restrictions on net assets

Of the net assets restricted for endowment purposes $150,000 is subject to externally imposed restrictions stipulating that the resources be maintained permanently. Investment income on $100,000 (20X1 — $100,000) of this amount is externally restricted for research purposes. Investment income on the remaining $50,000 (20X1 — $0) is unrestricted. In 20X2, NFP A's board of directors internally restricted $10,000 (20X1 — $0) of unrestricted net assets to be held for endowment purposes and $25,000 (20X1 — $0) of unrestricted net assets to be used for research purposes. The board of directors also has internally restricted net assets invested in capital assets of $113,000 (20X1 — $65,000). These internally restricted amounts are not available for other purposes without approval of the board of directors.

9. 25th Anniversary dinner

During 20X2, NFP A sponsored a special 25th anniversary dinner to raise funds for general operations. Contributions reported in the Statement of Operations include net revenue from this event of $5,000. Gross revenue and expenses related to this event were $15,000 and $10,000, respectively.

10. Investment income

Investment income earned is reported as follows:

	20X2	20X1
Income earned on unrestricted resources	$ 4,000	$ 5,000
Income earned on building campaign resources	2,000	—
Income earned on resources held for endowment:		
Unrestricted	4,000	—
Restricted for research purposes	10,000	10,000
Total investment income earned in the period	20,000	15,000
Less amounts deferred		
Restricted for research purposes	(8,000)	—
Restricted for building campaign	(2,000)	—
Total investment income recognized as revenue	$10,000	$15,000

SITUATION II
NFP A Follows the Restricted Fund Method

The transaction and circumstances assumed for this example are the same as for Situation I, except that NFP A follows the restricted fund method of accounting for contributions.

NFP A
Statement of Financial Position

As at December 31

	General fund	Research fund	Capital asset fund	Endowment fund	20X2 Total	20X1 Total
Current assets						
Cash and term deposits	$118,000	$4,000	$ —	$ —	$122,000	$160,000
Accounts receivable	20,000	—	—	—	20,000	10,000
Grant receivable	—	30,000	—	—	30,000	25,000
	138,000	34,000	—	—	172,000	195,000
Investments (market $244,000 — 20X1 $102,000)	—	—	80,000	160,000	240,000	100,000
Capital assets, net (note 3)	—	—	627,000	—	627,000	135,000
	$138,000	$34,000	$707,000	$160,000	$1,039,000	$430,000
	=====	=====	=====	=====	======	=====
Current liabilities						
Accounts payable and accrued liabilities	$24,000	$1,000	$ —	$ —	$25,000	$20,000
Mortgage payable — current (note 4)	—	—	6,000	—	6,000	—
	24,000	1,000	6,000	—	31,000	20,000
Mortgage payable — long-term (note 4)	—	—	441,000	—	441,000	—
Deferred						

contributions						
Deferred operating grant (note 5)	110,000	—	—	—	110,000	105,000
	110,000	—	—	—	110,000	105,000
Fund balances						
Invested in capital assets (note 7)	—	—	180,000 (a)	—	180,000	135,000
Externally restricted (note 6)	—	8,000	80,000	150,000	238,000	100,000
Internally restricted (note 7)	—	25,000	—	10,000	35,000	—
Unrestricted	4,000	—	—	—	4,000	70,000
	4,000	33,000	260,000	160,000	457,000	305,000
	$138,000	$34,000	$707,000	$160,000	$1,039,000	$430,000
	=======	======	======	=======	========	=======

(a) Consists of

Capital assets, net	$627,000
Mortgage payable — current	(6,000)
Mortgage payable — long-term	(441,000)
Fund balance invested in capital assets	$180,000
	=======

NFP A
Statement of Operations and Changes in Fund Balances

For the year ended December 31

	General fund		Restricted funds			Endowment fund		
	20X2	20X1	Research 20X2	Capital asset 20X2	Total 20X2	Total 20X1	20X2	20X1
Revenues								
Federal government	$105,000	$100,000	$30,000	$ —	$30,000	$25,000	$ —	$ —

grants								
Contributions (notes 8 and 9)	80,000	65,000	—	83,000	83,000	—	50,000	—
Seminar fees	80,000	75,000	—	—	—	—	—	—
Investment income (note 10)	8,000	5,000	10,000	2,000	12,000	10,000	—	—
	273,000	245,000	40,000	85,000	125,000	35,000	50,000	—
Expenses								
Salaries and benefits	200,000	173,000	30,000	—	30,000	27,000	—	—
Purchased materials and services	23,000	22,000	2,000	—	2,000	3,000	—	—
Amortization of capital assets	—	—	—	23,000	23,000	12,000	—	—
Mortgage interest (note 4)	—	—	—	18,000	18,000	—	—	—
	223,000	195,000	32,000	41,000	73,000	42,000	—	—
Excess (deficiency) of revenues over expenses	50,000	50,000	8,000	44,000	52,000	(7,000)	50,000	—
Fund balances, beginning of year	70,000	20,000	—	135,000	135,000	142,000	100,000	100,000
Interfund transfers (note 7)	(116,000)	—	25,000	81,000	(a) 106,000	—	10,000	—
Fund balances, end of year	$ 4,000	$70,000	$33,000	$260,000	$293,000	$135,000	$160,000	$100,000

(a) Consists of

Down payment for new land and building	$50,000
Purchase of equipment	10,000

Mortgage principal and interest repayments	21,000
Total transfer from General Fund	$81,000
	======

NFP A
Statement of Cash Flows (a)

For the year ended December 31

	Operating activities				Financing, capital and investing activities			
	General fund 20X2	Research fund 20X2	Total 20X2	Total 20X1	Capital asset fund 20X2	Endowment fund 20X2	Total 20X2	Total 20X1
Sources of cash								
Federal government	$110,000	$25,000	$135,000	$125,000	$ —	$ —	$ —	$ —
Contributions	55,000	—	55,000	30,000	83,000	50,000	133,000	—
XYZ Foundation	25,000	—	25,000	20,000	—	—	—	—
Seminar fees	70,000	—	70,000	70,000	—	—	—	—
Investment income	8,000	10,000	18,000	15,000	2,000	—	2,000	—
Mortgage	—	—	—	—	450,000	—	450,000	—
Uses of cash								
Salaries and benefits	(200,000)	(30,000)	(230,000)	(225,000)	—	—	—	—
Materials and services	(19,000)	(1,000)	(20,000)	(15,000)	—	—	—	—
Purchase of capital assets	—	—	—	—	(510,000)	—	(510,000)	—
Purchase of investments	—	—	—	—	(80,000)	(60,000)	(140,000)	—
Contributed equipment put in service	—	—	—	—	(5,000)	—	(5,000)	—
Mortgage interest and principal (b)	(18,000)	—	(18,000)	—	(3,000)	—	(3,000)	—

Net increase (decrease) in cash and term deposits	31,000	4,000	35,000	20,000	(63,000)	(10,000)	(73,000)	—
Cash and term deposits, beginning	185,000	(25,000)	160,000	140,000	—	—	—	—
Interfund adjustments (b)	(98,000)	25,000	(73,000)	—	63,000	10,000	73,000	—
Cash and term deposits, end of year	$118,000	$4,000	$122,000	$160,000	$ —	$ —	$ —	$ —

(a) Statement prepared on a fund accounting basis using the direct method (see FINANCIAL STATEMENT PRESENTATION, paragraph PS 1201.112).

(b) Interest is recognized in the Statement of Operations as an expense of the Capital Asset Fund but is reported here as an item affecting cash from operating activities. This explains the difference between interfund adjustments reported here and interfund transfers reported in the Statement of Operations.

NFP A
Notes to Financial Statements

1. Purpose of the Organization

NFP A is a national organization operating programs and performing research aimed at helping those who lost family members in automobile accidents. NFP A is incorporated under the Canada Corporations Act as a not-for-profit organization and is a registered charity under the Income Tax Act.

2. Significant Accounting Policies

Fund accounting

NFP A follows the restricted fund method of accounting for contributions.

The General Fund accounts for the organization's program delivery and administrative activities. This fund reports unrestricted resources and restricted operating grants.

The Research Fund reports only restricted resources that are to be used for research purposes.

The Capital Asset Fund reports the assets, liabilities, revenues and expenses related to NFP A's capital assets and building expansion campaign.

The Endowment Fund reports resources contributed for endowment. Investment income earned on resources of the Endowment Fund is reported in the Research or General Fund depending on the nature of any restrictions imposed by contributors of funds for endowment.

Capital assets

Purchased capital assets are recorded at cost. Contributed capital assets are recorded at fair value at the date of contribution. Amortization is provided on a straight-line basis over the assets' estimated useful lives, which for buildings is 20 years and for equipment is 5 years. Amortization expense is reported in the Capital Asset Fund.

Investments

Investments are recorded at the lower of amortized cost and market value.

Revenue recognition

Restricted contributions related to general operations are recognized as revenue of the General Fund in the year in which the related expenses are incurred. All other restricted contributions are recognized as revenue of the appropriate restricted fund.

Unrestricted contributions are recognized as revenue of the General Fund in the year received or receivable if the amount to be received can be reasonably estimated and collection is reasonably assured.

Contributions for endowment are recognized as revenue in the Endowment Fund.

Investment income earned on Endowment Fund resources that must be spent on research activities is recognized as revenue of the Research Fund. Unrestricted investment income earned on Endowment Fund resources is recognized as revenue of the General Fund. Investment income earned on building campaign resources is recognized as revenue of the Capital Asset Fund. Other investment income is recognized as revenue of the General Fund when earned.

Seminar fees are recognized as revenue of the General Fund when the seminars are held.

Contributed services

Volunteers contribute about 500 hours per year to assist NFP A in carrying out its service delivery activities. Because of the difficulty of determining their fair value, contributed services are not recognized in the financial statements.

3. Capital assets

	Cost		Accumulated amortization		Net book value	
	20X2	20X1	20X2	20X1	20X2	20X1
Land	$150,000	$ 50,000	$ —	$ —	$150,000	$ 50,000
Buildings	540,000	140,000	87,000	70,000	453,000	70,000
Equipment	40,000	25,000	16,000	10,000	24,000	15,000
	$730,000	$215,000	$103,000	$80,000	$627,000	$135,000
	=======	=======	=======	======	=======	=======

4. Mortgage payable

The mortgage payable is due July 1, 20X7 and has an interest rate of 8%. It is repayable at the rate of $3,474 per month including principal and interest. The building at 123 King St. is pledged as collateral.

5. Deferred operating grant

The deferred operating grant reported in the General Fund represents restricted operating funding received in the current period that is related to the subsequent period. Changes in the deferred operating grant balance are as follows:

	20X2	20X1
Beginning balance	$105,000	$100,000
Less amount recognized as revenue in the year	(105,000)	(100,000)
Add amounts received related to next year	110,000	105,000
Ending balance	$110,000	$105,000

6. Externally restricted net assets

Major categories of externally imposed restrictions on net assets are as follows:

	20X2	20X1
Restricted for research purposes	$ 8,000	$ —
Restricted related to building campaign (see below)	80,000	—
Endowments, the income from which must be used for research purposes	100,000	100,000
Endowments, the income from which is unrestricted	50,000	—
	$238,000	$100,000

In 20X2, NFP A launched a building campaign to raise $500,000 by 20X5 for a major expansion to NFP A's existing building. the campaign has raised contributions of $78,000 to date, which have been invested in marketable securities. Related investment income of $2,000, restricted for the building expansion, is also reported in the Capital Asset Fund.

7. Interfund transfers and internally restricted net assets

In 20X2, NFP A's board of directors internally restricted $25,000 to be used for research purposes and $10,000 to be held for endowment purposes. Transfers of these amounts were made from the General Fund to the Research Fund and the Endowment Fund, respectively. In addition, $81,000 was transferred from the General Fund to the Capital Asset Fund in order to fund the cash outlays for capital asset acquisitions and

mortgage principal and interest payments. The board of directors also has internally restricted net assets invested in capital assets of $180,000 (20X1 — $135,000). These internally restricted amounts are not available for unrestricted purposes without approval of the board of directors.

8. Donated capital asset

Contributions recognized in the Capital Asset Fund include contributed equipment received in 20X2 having a fair value of $5,000.

9. 25th Anniversary dinner

During 20X2, NFP A sponsored a special 25th anniversary dinner to raise funds for general operations. Contributions reported in the General Fund include net revenue from this event of $5,000. Gross revenue and expenses related to this event were $15,000 and $10,000, respectively.

10. Investment income

Investment income including income earned on resources held for endowment, which is reported in the following funds:

	General fund		Research fund		Capital asset fund	
	20X2	20X1	20X2	20X1	20X2	20X1
Investment income earned on:						
Endowment Fund resources	$4,000	$ —	$10,000	$10,000	$ —	$ —
Building campaign resources	—	—	—	—	2,000	—
Other investments	4,000	5,000	—	—	—	—
	$8,000	$5,000	$10,000	$10,000	$2,000	—

SITUATION III
NFP A Follows the Deferral Method and Reports Using Fund Accounting

The transactions and circumstances assumed for this example are the same as for Situations I and II, except that NFP A follows the deferral method of accounting for contributions and reports using fund accounting.

NFP A
Statement of Financial Position

As at December 31

	Operating	Research	Capital	Endowment	Total	Total

	fund	fund	asset fund		fund	20X2	20X1
Current assets							
Cash and term deposits	$118,000	$4,000	$ —		$ —	$122,000	$160,000
Accounts receivable	20,000	—	—		—	20,000	10,000
Grant receivable	—	30,000	—		—	30,000	25,000
	138,000	34,000				172,000	195,000
Investments (market $244,000 — 20X1 $102,000)	—	—	80,000		160,000	240,000	100,000
Capital assets, net (note 3)	—	—	627,000		—	627,000	135,000
	$138,000	$34,000	$707,000		$160,000	$1,039,000	$430,000
	=======	======	=======		=======	=======	=======
Current liabilities							
Accounts payable and accrued liabilities	$24,000	$1,000	$ —		$ —	$25,000	$20,000
Mortgage payable — current (note 4)	—	—	6,000		—	6,000	—
	24,000	1,000	6,000		—	31,000	20,000
Mortgage payable — long-term (note 4)	—	—	441,000		—	441,000	—
Deferred contributions (notes 5 and 6)	110,000	8,000	147,000		—	265,000	175,000
Fund balances							
Invested in capital assets (note 8)	—	—	113,000	(a)	—	113,000	65,000
Externally restricted (note 7)	—	—	—		150,000	150,000	100,000
Internally restricted	—	25,000	—		10,000	35,000	—

(note 8)						
Unrestricted	4,000	—	—	—	4,000	70,000
	4,000	25,000	113,000	160,000	302,000	235,000
	$138,000	$34,000	$707,000	$160,000	$1,039,000	$430,000

(a) Consists of

Capital assets, net	$627,000
Mortgage payable — current	(6,000)
Mortgage payable — long-term	(441,000)
Deferred contributions related to capital assets	(67,000)
Fund balance invested in capital assets	$113,000

NFP A
Statement of Operations and Changes in Fund Balances
For the year ended December 31

	Operating fund	Research fund	Capital asset fund	Endowment fund	Total 20X2	Total 20X1
Revenues						
Federal government grants (note 5)	$105,000	$30,000	$ —	$ —	$135,000	$125,000
General contributions (note 9)	55,000	—	—	—	55,000	50,000
Contribution from XYZ Foundation	25,000	—	—	—	25,000	—
Amortization of deferred contributions (note 6)	—	—	8,000	—	8,000	7,000
Seminar fees	80,000	—	—	—	80,000	75,000
Investment income (note 10)	8,000	2,000	—	—	10,000	15,000
	273,000	32,000	8,000	—	313,000	272,000
Expenses						

Salaries and benefits	200,000	30,000	—	—	230,000	195,000
Purchased materials and services	23,000	2,000	—	—	25,000	30,000
Amortization of capital assets	—	—	23,000	—	23,000	12,000
Mortgage interest (note 4)	—	—	18,000	—	18,000	—
	223,000	32,000	41,000	—	296,000	237,000
Excess (deficiency) of revenues over expenses	50,000	—	(33,000)	—	17,000	35,000
Fund balances, beginning	70,000	—	65,000	100,000	235,000	200,000
Endowment contributions	—	—	—	50,000	—	—
Interfund transfers (note 8)	(116,000)	25,000	81,000	(a) 10,000	—	—
Fund balances, ending	$ 4,000	$25,000	$113,000	$160,000	$302,000	$235,000

(a) Consists of

Down payment for new land and building	$50,000
Purchase of equipment	10,000
Mortgage principal and interest repayments	21,000
Total transfer from Operating Fund	$81,000

NFP A
Statement of Cash Flows

For the year ended December 31	20X2	20X1
Cash from operating activities (a)		
Excess of revenues over expenses	$17,000	$35,000
Amortization of capital assets	23,000	12,000

Amortization of deferred contributions related to capital assets	(8,000)	(7,000)
Net change in non-cash working capital	(10,000)	(25,000)
Increase in deferred contributions related to operations and research	13,000	5,000
Net cash generated through operating activities	35,000	20,000
Cash flows from capital activities		
Purchase of capital assets	(510,000)	—
Contributed equipment put in service	(5,000)	—
Net cash used in capital activities	(515,000)	—
Cash from financing activities		
Endowment contributions	50,000	—
Deferred contributions and interest related to building campaign	80,000	—
Contributed equipment	5,000	—
Mortgage proceeds	450,000	—
Net cash generated through financing activities	585,000	—
Cash from investing activities		
Mortgage principal repayments	(3,000)	—
Purchase of investments	(140,000)	—
Net cash used in investing activities	(143,000)	—
Net (decrease) increase in cash and term deposits	(38,000)	20,000
Cash and term deposits, beginning of year	160,000	140,000
Cash and term deposits, end of year	$122,000	$160,000
	=======	=======

(a) Statement prepared using the indirect method (see FINANCIAL STATEMENT PRESENTATION, paragraph PS 1201.113).

NFP A
Notes to Financial Statements

1. Purpose of the Organization

NFP A is a national organization operating programs and performing research aimed at helping those who have lost family members in automobile accidents. NFP A is incorporated under the Canada Corporations Act as a not-for-profit organization and is a registered charity under the Income Tax Act.

2. Significant Accounting Policies

NFP A follows the deferral method of accounting for contributions.

Fund accounting

Revenues and expenses related to program delivery and administrative activities are reported in the Operating Fund.

Revenues and expenses related to research activities are reported in the Research Fund.

The Capital Asset Fund reports the assets, liabilities, revenues and expenses related to NFP A's capital assets and building expansion campaign.

Endowment contributions are reported in the Endowment Fund. Investment income earned on resources of the Endowment Fund is reported in the Research or Operating Fund depending on the nature of any restrictions imposed by contributors of funds for endowment.

Revenue recognition

Restricted contributions are recognized as revenue of the appropriate fund in the year in which the related expenses are incurred. Unrestricted contributions are recognized as revenue of the appropriate fund when received or receivable if the amount to be received can be reasonably estimated and collection is reasonably assured.

Endowment contributions are recognized as direct increases in the Endowment Fund balance.

Restricted investment income is recognized as revenue of the appropriate fund in the year in which the related expenses are incurred. Unrestricted investment income is recognized as revenue when earned.

Seminar fees are recognized as revenue of the Operating Fund when the seminars are held.

Capital assets

Purchased capital assets are recorded in the Capital Asset Fund at cost. Contributed capital assets are recorded in the Capital Asset Fund at fair value at the date of contribution. Amortization is provided on a straight-line basis over the assets' estimated useful lives, which for buildings is 20 years and for equipment is 5 years. Amortization expense is reported in the Capital Asset Fund.

Investments

Investments are recorded at the lower of amortized cost and market value.

Contributed services

Volunteers contribute about 500 hours per year to assist NFP A in carrying out its service delivery activities. Because of the difficulty of determining their fair value, contributed services are not recognized in the financial statements.

3. Building and equipment

	Cost		Accumulated amortization		Net book value	
	20X2	20X1	20X2	20X1	20X2	20X1
Land	$150,000	$ 50,000	$ —	$ —	$150,000	$ 50,000
Buildings	540,000	140,000	87,000	70,000	453,000	70,000
Equipment	40,000	25,000	16,000	10,000	24,000	15,000
	$730,000	$215,000	$103,000	$80,000	$627,000	$135,000

4. Mortgage payable

The mortgage payable is due July 1, 20X7 and has an interest rate of 8%. It is repayable at the rate of $3,474 per month including principal and interest. The building at 123 King St. is pledged as collateral.

5. Deferred contributions

Deferred contributions reported in the Operating Fund relate to restricted operating funding received in the current period that is related to the subsequent period. Changes in the deferred contributions balance reported in the Operating Fund are as follows:

	20X2	20X1
Beginning balance	$105,000	$100,000
Less amount recognized as revenue in the year	(105,000)	(100,000)
Add amount received related to the following year	110,000	105,000
Ending balance	$110,000	$105,000

In addition, deferred contributions of $8,000 (20X1 — $0) are reported in the Research Fund. These deferred contributions relate to the unspent portion of investment income restricted for research purposes.

6. Deferred contributions related to capital assets

Deferred contributions reported in the Capital Asset Fund include the unamortized portions of contributed capital assets and restricted contributions with which one of NFP A's buildings was originally purchased.

In 20X2, NFP A launched a building campaign to raise $500,000 by 20X5 for a major expansion to NFP A's existing building. Externally restricted contributions and investment income related to the building campaign are also included in deferred contributions reported in the Capital Asset Fund.

The changes for the year in the deferred contributions balance reported in the Capital Asset Fund are as follows:

	20X2	20X1
Beginning balance	$70,000	$77,000
Contributed equipment	5,000	—
Amounts amortized to revenue	(8,000)	(7,000)
Building campaign contributions	78,000	—
Investment income related to building campaign funds	2,000	—
Ending balance	$147,000	$70,000

7. External restrictions on fund balances

Major categories of externally imposed restrictions on fund balances are as follows:

	20X2	20X1
Endowments, the income from which must be used for research purposes	$100,000	$100,000
Endowments, the income from which is unrestricted	$50,000	—
Externally restricted portion of Endowment Fund balance	$150,000	$100,000

8. Interfund transfers and internally restricted fund balances

In 20X2, NFP A's board of directors internally restricted resources amounting to $35,000. Of this amount, $25,000 is to be used for research purposes and $10,000 is to be maintained for endowment purposes. Transfers of these amounts were made from the Operating Fund to the Research Fund and the Endowment Fund, respectively. In addition, $81,000 was transferred from the Operating Fund to the Capital Asset Fund in order to fund the cash outlays for capital asset acquisitions and mortgage principal and interest payments. The board of directors also has internally restricted net assets invested in capital assets of $113,000 (20X1 — $65,000). These internally restricted amounts are not available for other purposes without approval of the board of directors.

9. 25th Anniversary dinner

During 20X2, NFP A sponsored a special 25th anniversary dinner to raise funds for general operations. Contributions reported in the Operating Fund include net revenue from this event of $5,000. Gross revenue and expenses related to this event were $15,000 and $10,000, respectively.

10. Investment income

Investment income earned is reported as follows:

	20X2	20X1

Income earned on unrestricted resources	$4,000	$5,000
Income earned on building campaign resources	2,000	—
Income earned on resources held for endowment:		
Unrestricted	4,000	—
Restricted for research purposes	10,000	10,000
Total investment income earned in the period	20,000	15,000
Less amounts deferred		
Restricted for research purposes	(8,000)	—
Restricted for building campaign	(2,000)	—
Total investment income recognized as revenue	$10,000	$15,000

Footnotes

1. FOREIGN CURRENCY TRANSLATION, Section PS 2601, and FINANCIAL INSTRUMENTS, Section PS 3450, may require an organization to present a statement of remeasurement gains and losses.

* Editorial change — June 2011.

SECTION PS 4210
contributions — revenue recognition

TABLE OF CONTENTS	Paragraph
Purpose and scope	.01
Definitions	.02-.09
Restricted contributions	.06-.07
Restricted government funding — special considerations	.08-.09
Revenue recognition	.10-.18
Contributed materials and services	.16-.18
Measurement	.19-.20

Disclosure	.21-.27
Deferral method	.28-.56
Recognition of endowment contributions	.29-.30
Recognition of restricted contributions for expenses of future periods	.31-.32
Recognition of restricted contributions for the purchase of capital assets	.33-.37
Recognition of restricted contributions for the repayment of debt	.38-.44
Recognition of restricted contributions for expenses of the current period	.45-.46
Recognition of unrestricted contributions	.47-.48
Recognition of net investment income	.49-.51
Presentation and disclosure	.52-.56
Restricted fund method	.57-.77
Recognition of endowment contributions	.60-.61
Recognition of restricted contributions reported in restricted funds	.62-.64
Recognition of restricted contributions reported in the general fund	.65-.67
Recognition of unrestricted contributions	.68-.69
Recognition of net investment income	.70-.72
Presentation and disclosure	.73-.77
Decision trees	Appendix A

PURPOSE AND SCOPE

.01 This Section establishes standards for the recognition, measurement, presentation and disclosure of contributions, and related investment income, received by not-for-profit organizations. For purposes of this Section, contributions include contributions receivable recognized in the financial statements in accordance with CONTRIBUTIONS RECEIVABLE, Section PS 4220. This Section does not deal with contributions of non-monetary assets from related parties dealt with in INTER-ENTITY TRANSACTIONS, Section PS 3420. The recognition of other revenue by not-for-profit organizations, such as that arising from the sale of services or goods, is dealt with in FINANCIAL STATEMENT PRESENTATION, Section PS 1201.

DEFINITIONS

.02 The following definitions have been adopted for purposes of this Section.

(a) **Not-for-profit organizations** are entities, normally without transferable ownership interests, organized and operated exclusively for social, educational, professional, religious, health, charitable or any other not-for-profit purpose. A not-for-profit organization's members, contributors and other resource providers do not, in such capacity, receive any financial return directly from the organization.

(b) A **contribution** is a non-reciprocal transfer to a not-for-profit organization of cash or other assets or a non-reciprocal settlement or cancellation of its liabilities. Government funding provided to a not-for-profit organization is considered to be a contribution.

There are three types of contributions identified for purposes of this Section:

(i) A **restricted contribution** is a contribution subject to externally imposed stipulations that specify the purpose for which the contributed asset is to be used. A contribution restricted for the purchase of a capital asset or a contribution of the capital asset itself is a type of restricted contribution.

(ii) An **endowment contribution** is a type of restricted contribution subject to externally imposed stipulations specifying that the resources contributed be maintained permanently, although the constituent assets may change from time to time.

(iii) An **unrestricted contribution** is a contribution that is neither a restricted contribution nor an endowment contribution.

(c) **Restrictions** are stipulations imposed that specify how resources must be used. External restrictions are imposed from outside the organization, usually by the contributor of the resources. Internal restrictions are imposed in a formal manner by the organization itself, usually by resolution of the board of directors. Restrictions on contributions may only be externally imposed. Net assets or fund balances may be internally or externally restricted. Internally restricted net assets or fund balances are often referred to as reserves or appropriations.

(d) Under the **deferral method** of accounting for contributions, restricted contributions related to expenses of future periods are deferred and recognized as revenue in the period in which the related expenses are incurred. Endowment contributions are reported as direct increases in net assets. All other contributions are reported as revenue of the current period. Organizations that use fund accounting in their financial statements without following the restricted fund method would account for contributions under the deferral method.

(e) The **restricted fund method** of accounting for contributions is a specialized type of fund accounting which involves the reporting of details of financial statement elements by fund in such a way that the organization reports total general funds, one or more restricted funds, and an endowment fund, if applicable. Reporting of financial statement elements segregated on a basis other than that of use restrictions (for example, by program or geographic location) does not constitute the restricted fund method. The following definitions relate to the restricted fund method of accounting for contributions:

(i) A **restricted fund** is a self-balancing set of accounts the elements of which are restricted or relate to the use of restricted resources. Only restricted contributions, other than endowment contributions, and other externally restricted revenue would be reported as revenue in a restricted fund. Allocations of resources that result from the imposition of internal restrictions are recorded as interfund transfers to the restricted fund.

(ii) An **endowment fund** is a self-balancing set of accounts which reports the accumulation of endowment contributions. Only endowment contributions and investment income subject to restrictions stipulating that it be added to the principal amount of the endowment fund would be reported as revenue of the endowment fund. Allocations of resources to the endowment fund that result from the imposition of internal restrictions are recorded as interfund transfers.

(iii) A **general fund** is a self-balancing set of accounts which reports all unrestricted revenue and restricted contributions for which no corresponding restricted fund is presented. The fund balance represents net assets that are not subject to externally imposed restrictions.

(f) **Fair value** is the amount of the consideration that would be agreed upon in an arm's length transaction between knowledgeable, willing parties who are under no compulsion to act.

.03 Contributions can come from many sources, including individuals, corporations, governments and other not-for-profit organizations. Contributions include contributions receivable that meet the criteria for recognition in the financial statements (see CONTRIBUTIONS RECEIVABLE, Section PS 4220).

.04 Certain types of government funding are calculated and paid as if they were fees for services. However, because the services being funded are provided to the not-for-profit organization's community of service, and not directly to the government funder, government funding is considered to be a contribution for purposes of this Section.

.05 Many not-for-profit organizations receive membership fees. Such fees are considered fees for services when members receive services having a value commensurate with fees paid. In other cases, membership fees may be in substance contributions. An organization would decide whether its membership fees are contributions or fees for services and account for them accordingly on a consistent basis. Some membership fees have characteristics of both fees for services and contributions. Such fees would be divided into the portion that relates to fees for services and the portion that is in substance a contribution.

Restricted contributions

.06 The distinction between restricted contributions and unrestricted contributions is important since different reporting principles apply. The fact that an organization does not expect or is unable to spend a contribution received in the current period, perhaps because the contribution was received late in the year, would not be sufficient grounds for presenting it as restricted. Most externally imposed restrictions will be explicitly stated by the contributor. However, external restrictions may also be clear from the purpose for which the contribution was solicited by the organization. Such implicit restrictions must bind the organization to use the resources contributed for the purposes specified. An organization would be considered to be bound by implicit restrictions as long as the contributor is aware of the purposes for which the contribution will be used and would have recourse if the contributed resources were not used in the ways specified. Implicit and explicit restrictions may be evident by a requirement to report to the contributor that the contribution was used in a way that fulfills the restrictions. Restricted contributions that will not be used in the manner stipulated may have to be returned, unless the contributor gives permission for another use.

.07 Restrictions stipulate uses for the contributed resources that are more specific than broad limits resulting from the nature of the organization or the environment in which it operates. A restriction may stipulate an area of the organization's activities in which the contributed resources are to be used. Alternatively, an organization may receive a contribution subject to restrictions that the contribution be used for the organization's general

operations in a future period. A contribution received with instructions that it be used for general operations and without any indication of the period in which it should be used or of the specific operating expenses it is intended to fund would not be considered restricted.

Restricted government funding — special considerations

.08 Government funding is a significant component of many not-for-profit organizations' total contributions. The assessment of whether government funding in a particular situation represents a restricted or an unrestricted contribution depends on the characteristics of the contribution. Restrictions on government funding may be indicated by the fact that the funding is provided based on the organization's approved operating budget. Another indication that funding is restricted may be a requirement to report to the funder as to how the resources were actually used. Sometimes restricted government funding left over at the end of the period must be returned to the funder.

.09 Some annual government funding arrangements relate more closely to time periods than to the incurring of specific expenses. For example, a funder may contribute funds for a particular period without specifically identifying the expenses towards which the contribution is to be applied. Such contributions, when received in advance of the period that is being funded, are in effect restricted contributions related to expenses of the future period being funded.

REVENUE RECOGNITION

.10 *An organization should recognize contributions in accordance with either:*

(a) the deferral method (see paragraphs PS 4210.28-.56)*; or*

(b) the restricted fund method (see paragraphs PS 4210.57-.77). [JAN. 2012]

.11 A unique characteristic of contributions is that they are often subject to externally imposed restrictions that specify how the resources contributed are to be used or, in some cases, that they be maintained permanently. Not-for-profit organizations have three types of contributions to report: endowment contributions, restricted contributions and unrestricted contributions. To show the extent to which the organization has been able to obtain resources to cover the expenses associated with service delivery for the period, it is necessary to report in a way that distinguishes the different types of contributions. This reporting is achieved by following either the deferral method or the restricted fund method of accounting for contributions.

.12 An organization would select one of the methods for recognizing contributions set out in paragraph PS 4210.10 and apply that method consistently to all contributions received. If an organization changes its method of accounting for contributions, the change would be treated as a change in accounting policy in accordance with ACCOUNTING CHANGES, Section PS 2120.

.13 Under the deferral method, contributions for which externally imposed restrictions remain unfulfilled are accumulated as deferred contributions in the statement of financial position. Under this method, endowment contributions are not recognized as revenue at all since they must be maintained permanently.

.14 The restricted fund method is a specialized use of fund accounting in which the organization presents total general funds and at least one restricted fund. Most restricted contributions and endowment contributions are reported separately from unrestricted resources by using restricted funds and an endowment fund.

Contributions for which externally imposed restrictions remain unfulfilled, as well as endowment contributions, are presented in the appropriate fund balance.

.15 Not all uses of fund accounting will meet the definition of the restricted fund method. An organization may present its financial statements on a fund accounting basis without following the restricted fund method. The restricted fund method is a specific use of fund accounting in which the various funds are used primarily to segregate restricted resources from unrestricted resources. Fund accounting may be used for purposes other than to report restrictions, for example to report on different programs in such a way that individual funds include both restricted and unrestricted resources. When fund accounting is not being used in a way that meets the definition of the restricted fund method, the organization would recognize contributions using the deferral method in the various funds reported. (A general discussion of fund accounting is presented in FINANCIAL STATEMENT PRESENTATION BY NOT-FOR-PROFIT ORGANIZATIONS, Section PS 4200.)

Contributed materials and services

.16 *An organization may choose to recognize contributions of materials and services, but should do so only when a fair value can be reasonably estimated and when the materials and services are used in the normal course of the organization's operations and would otherwise have been purchased.* [JAN. 2012]

.17 Organizations may receive substantial contributed materials and services. Often these contributions are not recorded because of record-keeping and valuation difficulties. For example, it may be impractical to record the receipt of contributed services where the organization depends heavily on the use of volunteers to provide services. Where contributed materials and services meet the criteria in paragraph PS 4210.16, recording their value would provide useful information.

.18 Contributed materials and services that are part of a constructed capital asset would be recognized at fair value in accordance with CAPITAL ASSETS HELD BY NOT-FOR-PROFIT ORGANIZATIONS, Section PS 4230. When the contributed material and services is from an entity that is part of the same government reporting entity, refer to INTER-ENTITY TRANSACTIONS, Section PS 3420.

MEASUREMENT

.19 *Contributions should be measured at fair value at the date of contribution if fair value can be reasonably estimated.* [JAN. 2012]

.20 A contribution of assets other than cash would be measured at fair value. Fair value would be estimated using market or appraisal values. For contributed materials and services that are normally purchased, fair value would be determined in relation to the purchase of similar materials and services.

DISCLOSURE

.21 *An organization should disclose:*

(a) the policy followed in accounting for endowment contributions; and

(b) the policies followed in accounting for restricted contributions. [JAN. 2012]

.22 *An organization should disclose its contributions by major source.* [JAN. 2012]

.23 *An organization should disclose the policy followed in accounting for contributed materials and services.* [JAN. 2012]

.24 *An organization should disclose the nature and amount of contributed materials and services recognized in the financial statements.* [JAN. 2012]

.25 Organizations will report contributions differently depending on whether they follow the deferral method or the restricted fund method. An organization would disclose its policies for accounting for each different type of contribution.

.26 Information about the sources of contributions will help financial statement users to assess the organization's economic relationship with other entities and to predict its ability to generate future cash flows. This information would be disclosed for each source of significant contributions to the organization. The sources would be grouped by major categories, such as different levels of government, foundations, corporate contributors, individuals and other not-for-profit organizations. It may be desirable to name individual entities providing significant levels of support unless there is reason for them to remain anonymous.

.27 The disclosures required by paragraphs PS 4210.21-.24 would be provided by all not-for-profit organizations. Specific presentation and disclosure requirements related to organizations following the deferral method and to those following the restricted fund method are discussed in paragraphs PS 4210.52-.56 and paragraphs PS 4210.73-.77, respectively.

DEFERRAL METHOD

.28 Under the deferral method, restricted contributions for which the related restrictions remain unfulfilled are accumulated as deferred contributions. As a result, the organization's excess of revenue over expenses for the period represents the increase in resources that are not restricted to cover specific expenses of a future period. Organizations that choose to follow the restricted fund method would refer to paragraphs PS 4210.57-.77.

Recognition of endowment contributions

.29 *Endowment contributions should be recognized as direct increases in net assets in the current period.* [JAN. 2012]

.30 Endowment contributions will never be available to meet expenses associated with the organization's service delivery activities. Therefore, an organization following the deferral method would exclude such contributions from revenue available for current expenses by recognizing them as direct increases in net assets. Net investment income earned on resources held for endowment would be accounted for in accordance with paragraph PS 4210.49.

Recognition of restricted contributions for expenses of future periods

.31 *Restricted contributions for expenses of one or more future periods should be deferred and recognized as revenue in the same period or periods as the related expenses are recognized.* [JAN. 2012]

.32 The deferral of restricted contributions related to expenses of future periods provides the organization with a means to segregate those contributions of resources that must be set aside to cover expenses in the

future. The deferred contributions balances reported on the statement of financial position represent the amount of restricted contributions that are related to expenses of future periods. When these contributions are recognized as revenue, they will be matched with the expenses that they were intended to fund. When the only restriction on a contribution is that it cannot be used until a particular future period, the total amount of the contribution would be recognized as revenue in that future period, whether or not it has been spent.

Recognition of restricted contributions for the purchase of capital assets

.33 *Restricted contributions for the purchase of capital assets that will be amortized should be deferred and recognized as revenue on the same basis as the amortization expense related to the acquired capital assets.* [JAN. 2012]

.34 *Restricted contributions for the purchase of capital assets that will not be amortized should be recognized as direct increases in net assets.* [JAN. 2012]

.35 The deferral of contributions restricted for the purchase of capital assets that will be amortized provides a means to match such contributions with the benefits provided by the capital assets acquired. Such contributions will be recognized as revenue over the useful life of the acquired capital asset to reflect the fact that the contribution provides benefits in all the periods in which the organization has the use of the capital asset. When the acquired capital asset will not be subject to amortization because it has an unlimited useful life, it is not possible to match the contribution with the benefits provided since these benefits are unlimited. Therefore, contributions restricted for the purchase of capital assets that will not be amortized are recognized as direct increases in net assets.

.36 A restricted contribution may be provided for a certain area of activity, for example research, without the contributor specifying which portion is to be used to acquire capital assets. In order for a contribution to be accounted for as a contribution restricted for the purchase of a capital asset, the contributor must specify the portion of the contribution that is to be used to purchase capital assets. If the contributor does not so specify, then the contribution would be recognized as revenue when spent for the particular purpose covered by the restriction, regardless of the fact that some of the expenditures may relate to the purchase of capital assets.

.37 Organizations that meet the criteria in CAPITAL ASSETS HELD BY NOT-FOR-PROFIT ORGANIZATIONS, paragraph PS 4230.03, and that expense capital assets on acquisition would account for restricted contributions for the purchase of capital assets in accordance with paragraph PS 4210.31 or PS 4210.45, as appropriate. If capital assets are capitalized but not amortized, restricted contributions for the purchase of capital assets would be accounted for in accordance with paragraph PS 4210.34.

Recognition of restricted contributions for the repayment of debt

.38 *Restricted contributions for the repayment of debt that was incurred to fund expenses of one or more future periods should be deferred and recognized as revenue in the same period or periods as the related expenses are recognized.* [JAN. 2012]

.39 *Restricted contributions for the repayment of debt that was incurred to fund the purchase of a capital asset that will not be amortized should be recognized as direct increases in net assets.* [JAN. 2012]

.40 *Restricted contributions for the repayment of debt that was incurred for purposes other than those described in paragraph* PS 4210.38 *or PS 4210.39 should be recognized as revenue in the current period.* [JAN. 2012]

.41 When an organization obtains debt financing for specific purposes, contributions restricted for the repayment of that debt would be recognized as if the contribution itself were restricted for the same purpose as the debt financing was used. For example, a restricted contribution for the repayment of the mortgage on an organization's building would be recognized as revenue in the same periods as the amortization expense associated with the building. (This treatment is consistent with the accounting for restricted contributions for the purchase of capital assets set out in paragraph PS 4210.33.) When the restricted contribution to repay the mortgage is received as a lump sum, matching with the related amortization expense would be achieved by deferring the contribution and recognizing it as revenue over the remaining useful life of the building. When the restricted contributions for the repayment of the mortgage are received to fund the periodic mortgage repayments, matching with the related amortization expense may be achieved by recognizing the contributions as revenue when received.

.42 In considering whether debt was incurred to fund specific expenses, the organization would consider the timing of the debt financing in relation to the incurring of the expenses. If debt financing is obtained to coincide with a particular project, then it may be linked with the expenses related to that project. Debt would likely be considered to be linked with a particular capital asset if the debt were used to finance the acquisition and the capital asset were pledged as security. Because of their current nature, most short-term operating loans would be considered to be related to expenses of the current period.

.43 Debt financing may be incurred to fund the purchase of a capital asset that will not be amortized, such as land. Any contributions restricted for the repayment of such debt would be recognized as direct increases in net assets. This treatment is consistent with the accounting for restricted contributions for the purchase of capital assets that will not be amortized (see paragraph PS 4210.34).

.44 Restricted contributions for the repayment of debt that was incurred for purposes other than to fund expenses of future periods or the acquisition of capital assets that will not be amortized would be recognized as revenue in the current period. Such contributions are similar to unrestricted contributions since they effectively allow the organization the use of unrestricted resources that would otherwise have been used to repay its debt.

Recognition of restricted contributions for expenses of the current period

.45 *Restricted contributions for expenses of the current period should be recognized as revenue in the current period.* [JAN. 2012]

.46 When a restricted contribution is received or recognized as a contribution receivable in the same period in which the related expenses are incurred, the restrictions have been complied with by the reporting date. Therefore, such restricted contributions would be recognized as revenue in the current period.

Recognition of unrestricted contributions

.47 *Unrestricted contributions should be recognized as revenue in the current period.* [JAN. 2012]

.48 Since unrestricted contributions are for use at the organization's discretion, they are available to fund operations of current and future periods as required. This increase in economic resources is recognized when it occurs by reporting such contributions as revenue of the current period.

Recognition of net investment income

.49 *An organization should recognize:*

(a) net investment income that is not externally restricted in the statement of operations;

(b) externally restricted net investment income that must be added to the principal amount of resources held for endowment as direct increases, or decreases, in net assets; and

(c) other externally restricted net investment income in the statement of operations, in the appropriate deferred contributions balance or in net assets, depending on the nature of restrictions, on the same basis as described in paragraphs PS 4210.31-.*48.* [JAN. 2012]

.50 Net investment income may be subject to externally imposed restrictions. In order to ensure the appropriate reporting of restricted and unrestricted resources, an organization would account for net investment income in the manner appropriate to the nature of any external restrictions imposed.

.51 For purposes of this Section, net investment income includes revenue, gains or losses on investments. Any gains or losses on investments would be considered to be restricted or unrestricted based on the restrictions imposed, if any, on the resources originally contributed. For example, if losses were recognized on investments purchased with contributions subject to externally imposed restrictions that the related income is to be used for a particular project, the losses would be recognized as decreases in the deferred contributions balance related to that project. If there were no deferred contributions balance related to that project, such losses would be recognized in the statement of operations.

Presentation and disclosure

Deferred contributions

.52 *Deferred contributions balances should be presented in the statement of financial position outside net assets.* [JAN. 2012]

.53 *An organization should disclose the nature and amount of changes in deferred contributions balances for the period.* [JAN. 2012]

.54 The deferral method of reporting contributions is an alternative to the restricted fund method. Disclosure of changes in deferred contributions balances permits comparisons between organizations that follow the deferral method and those that follow the restricted fund method. Increases in deferred contributions balances normally result from the receipt of restricted contributions for which the related expenses will not be recognized until a later period. Decreases normally result from the recognition in revenue of previously deferred contributions. It may be desirable to present the changes in deferred contributions balances as a separate statement.

Net investment income earned on resources held for endowment

.55 *An organization should disclose the following related to net investment income earned on resources held for endowment:*

(a) the amounts recognized in the statement of operations in the period;

(b) the amounts deferred in the period;

(c) the amounts recognized as direct increases or decreases in net assets in the period; and

(d) the total earned in the period. [JAN. 2012]

.56 Net investment income earned on resources held for endowment is in effect a contribution and would be reported based on the nature of any related externally imposed restrictions (see paragraphs PS 4210.49-.51). As a result, some portions of net investment income earned in the period may be recognized immediately as revenue, while other portions may be deferred or reported as direct increases in net assets. Disclosure of total net investment income will allow financial statement readers to assess the performance of investments held for endowment. This disclosure would be presented in a way that shows which portions of total net investment income appear in the financial statements as revenue, deferred contributions and direct increases in net assets. Similar disclosure may be useful for other externally restricted net investment income.

RESTRICTED FUND METHOD

.57 The restricted fund method is a specialized use of fund accounting. Organizations using fund accounting in ways that do not meet the definition of the restricted fund method would follow the deferral method in accordance with paragraphs PS 4210.28-.56. When an organization follows the restricted fund method, it presents a single general fund, or the total of all general funds, and one or more restricted funds. The purpose of a restricted fund is to record the receipt and use of resources that are subject to restrictions. An organization following the restricted fund method would also present a separate endowment fund if it receives endowment contributions. All revenue reported in a restricted fund is externally restricted. Resources transferred to a restricted or endowment fund as a result of the organization imposing internal restrictions would be recognized as interfund transfers in accordance with the general requirements on fund accounting presented in FINANCIAL STATEMENT PRESENTATION BY NOT-FOR PROFIT ORGANIZATIONS, paragraphs PS 4200.06-.17.

.58 The restricted fund method requires that a general fund be used to report changes in unrestricted net assets. Organizations may choose to report more than one general fund as long as a total for all general funds is presented. Restricted contributions would be recognized in the general fund using the deferral method when an appropriate restricted fund does not exist. The excess or deficiency of revenues over expenses in the general fund represents the change in net assets that are not restricted to cover future periods' expenses.

.59 An organization following the restricted fund method of accounting for contributions would choose which restricted funds to report. Because of this choice, two organizations following the restricted fund method may each report similar kinds of restricted contributions differently. For example, one organization may present contributions restricted for research in a separate restricted research fund. Another organization may not report a separate research fund. In this case, contributions that are restricted for research purposes would be reported in the general fund using the deferral method. What is important is that all similar contributions recognized by the organization be treated in a consistent manner.

Recognition of endowment contributions

.60 *Endowment contributions should be recognized as revenue of the endowment fund in the current period.* [JAN. 2012]

.61 The only revenue reported in the endowment fund would be endowment contributions and net investment income subject to externally imposed restrictions stipulating that it be added to the endowment fund. Any allocations of internally restricted resources to the endowment fund would be accounted for as interfund transfers. The endowment fund balance represents the accumulation of resources subject to both externally and internally imposed restrictions specifying that they be maintained permanently. Net investment income earned on resources held for endowment would be recognized in the manner appropriate to whether it is restricted or unrestricted, in accordance with paragraph PS 4210.70.

Recognition of restricted contributions reported in restricted funds

.62 *Restricted contributions for which a corresponding restricted fund is presented should be recognized as revenue of that fund in the current period.* [JAN. 2012]

.63 Under the restricted fund method, an organization would report one or more restricted funds. Each restricted fund would accumulate resources that are restricted for similar purposes. Contributions subject to similar external restrictions would all be accounted for the same way on a consistent basis from year to year. For example, if an organization reports a restricted research fund, all contributions received subject to restrictions stipulating that they be used for research would be reported as revenue of the restricted research fund. A change in the restricted funds reported would be treated as a change in accounting policy in accordance with ACCOUNTING CHANGES, Section PS 2120.

.64 The only revenue reported in a restricted fund would be restricted contributions and other revenue subject to externally imposed restrictions, such as income earned on resources held for endowment. Any allocations of internally restricted resources to a restricted fund would be accounted for as interfund transfers. The restricted fund balance at the reporting date represents the accumulation of resources subject to internal or external restrictions that have yet to be complied with.

Recognition of restricted contributions reported in the general fund

.65 *Restricted contributions for which no corresponding restricted fund is presented should be recognized in the general fund in accordance with the deferral method* (see paragraph PS 4210.31, PS 4210.33, PS 4210.34, PS 4210.38, PS 4210.39, PS 4210.40 or PS 4210.45). [JAN. 2012]

.66 Organizations following the restricted fund method would present a general fund, the purpose of which is to account for both unrestricted revenues and restricted contributions for which there is not a corresponding restricted fund. For example, core operating funding that is provided to fund specifically identified expenses would be considered to be a restricted contribution. An organization may prefer to report core operating funding in the general fund. The same recognition principles that apply to an organization using the deferral method apply to the general fund. Therefore, a restricted contribution reported in the general fund would be accounted for in accordance with paragraph PS 4210.31, PS 4210.33, PS 4210.34, PS 4210.38, PS 4210.39, PS 4210.40 or PS 4210.45, depending on the nature of the restrictions imposed on the contribution.

.67 When an organization receives a restricted contribution for which it does not present a corresponding restricted fund, it may decide to establish such a fund. All subsequent restricted contributions for similar purposes would be reported in the restricted fund established for that purpose. Since such a change represents a change in accounting policy, prior years' financial statements would be retroactively restated if similar contributions had been reported in the general fund in prior periods (see ACCOUNTING CHANGES, Section PS 2120). Any resources allocated to the new fund based on internal restrictions would be recorded as interfund transfers.

Recognition of unrestricted contributions

.68 *Unrestricted contributions should be recognized as revenue of the general fund in the current period.* [JAN. 2012]

.69 Unrestricted contributions are available for use at the organization's discretion. When all such contributions are reported as revenue of the general fund, the excess of revenues over expenses in the general fund represents the increase in unrestricted net assets after deducting the expenses of the current period. Unrestricted resources may be allocated to a restricted fund but this allocation would be reported as an interfund transfer.

Recognition of net investment income

.70 *An organization should recognize:*

(a) net investment income that is not externally restricted in the statement of operations in the general fund;

(b) externally restricted net investment income that must be added to the principal amount of resources held for endowment in the statement of operations in the endowment fund; and

(c) other externally restricted net investment income in the statement of operations in the appropriate restricted fund or, if there is no appropriate restricted fund, in the general fund on the same basis as that described in paragraph PS 4210.65. [JAN. 2012]

.71 Net investment income may be subject to externally imposed restrictions. In order to ensure the appropriate reporting of restricted and unrestricted resources, an organization would account for net investment income in the manner appropriate to the nature of any external restrictions imposed.

.72 For purposes of this Section, net investment income includes revenue, gains or losses on investments. Any gains or losses would be considered to be restricted or unrestricted based on the restrictions imposed, if any, on the resources originally contributed. For example, losses recognized on investments purchased with contributions subject to externally imposed restrictions that the related income be used for research would be recognized in the statement of operations in the research fund.

Presentation and disclosure

Deferred contributions

.73 *When restricted contributions are recognized in the general fund in accordance with paragraph* PS 4210.65*, any deferred contributions balances should be presented in the statement of financial position outside net assets.* [JAN. 2012]

.74 *When restricted contributions are recognized in the general fund in accordance with paragraph* PS 4210.65*, the nature and amount of changes in deferred contributions balances for the period should be disclosed.* [JAN. 2012]

.75 Deferred contributions may be recognized in the general fund related to restricted contributions for which no corresponding restricted fund is reported. Increases in deferred contributions balances normally result from the receipt of restricted contributions for which the related expenses will not be recognized until a later period. Decreases normally result from the recognition in revenue of previously deferred contributions. It may be desirable to present the changes in deferred contributions balances as a separate statement.

Net investment income earned on resources held for endowment

.76 *An organization should disclose the following related to net investment income earned on resources held for endowment:*

(a) the amounts recognized in the general fund in the period;

(b) the amounts recognized in each restricted fund in the period;

(c) the amounts recognized in the endowment fund in the period;

(d) any amounts deferred in the period; and

(e) the total earned in the period. [JAN. 2012]

.77 Net investment income earned on resources held for endowment is to be reported based on the nature of any associated restrictions (see paragraphs PS 4210.70-.72). As a result, some portions of net investment income earned in the period may be reported in the general fund while other portions would be reported in the appropriate restricted fund or in the endowment fund. Disclosure of total net investment income will allow financial statement readers to assess the performance of investments held for endowment. This disclosure would be presented in a way that shows which portions of total net investment income appear in the general, restricted and endowment funds. Similar disclosure may be useful for other externally restricted net investment income.

APPENDIX A

DECISION TREES

These Decision Trees are illustrative only.

Decision tree 1 — Organization following the deferral method

Decision tree 2 — Organization following the restricted fund method

Decision tree 1

Decision tree 2

SECTION PS 4220
contributions receivable

TABLE OF CONTENTS	Paragraph
Purpose and scope	.01
Definitions	.02
Recognition	.03-.07
Pledges and bequests	.05-.07
Disclosure	.08-.09

PURPOSE AND SCOPE

.01 This Section establishes standards for the recognition and disclosure of contributions receivable by not-for-profit organizations. Requirements dealing with revenue recognition appear in CONTRIBUTIONS — REVENUE RECOGNITION, Section PS 4210.

DEFINITIONS

.02 The following definitions have been adopted for purposes of this Section.

(a) **Not-for-profit organizations** are entities, normally without transferable ownership interests, organized and operated exclusively for social, educational, professional, religious, health, charitable or any other not-for-profit purpose. A not-for-profit organization's members, contributors and other resource providers do not, in such capacity, receive any financial return directly from the organization.

(b) A **contribution** is a non-reciprocal transfer to a not-for-profit organization of cash or other assets or a non-reciprocal settlement or cancellation of its liabilities. Government funding provided to a not-for-profit organization is considered to be a contribution.

RECOGNITION

.03 *A contribution receivable should be recognized as an asset when it meets the following criteria:*

(a) the amount to be received can be reasonably estimated; and

(b) ultimate collection is reasonably assured. [JAN. 2012]

.04 An organization may have reason to expect that a particular contribution is forthcoming, such as when funding is provided under a contractual arrangement. A contribution receivable would be recognized as an asset only if the amount to be received can be reasonably estimated and ultimate collection is reasonably assured. Because of the non-reciprocal nature of contributions, there may be considerable uncertainty surrounding collectibility. When this uncertainty exists, a contribution would not be recognized until the contributed assets have been received. Generally, the further in the future the contributed assets are expected to be received the greater is the uncertainty associated with collectibility.

Pledges and bequests

.05 A pledge is a promise to contribute cash or other assets to a not-for-profit organization. Similar to any other contribution receivable, an uncollected pledge would only be recognized if it meets the criteria in paragraph PS 4220.03. Whether or not a pledge will be collected depends on factors outside the organization's control, such as current economic conditions and the continued goodwill and ability to pay of the individual or entity making the pledge. In many cases, pledges would not meet the criteria for recognition and therefore would not be recognized until the pledged assets are received.

.06 There are circumstances, however, in which pledges would meet the criteria for recognition. Organizations that have large, annual fundraising campaigns may find that they can estimate the realizable value of pledges quite accurately based on historical results. Such organizations may therefore conclude that reasonable assurance exists that a certain proportion of the total amount pledged will be collected and would recognize that proportion before it is collected. An organization would consider whether or not pledges come from recurring sources and the length of time before pledges fall due in order to assess whether there is reasonable assurance with respect to the proportion of outstanding pledges that will be collected. The uncertainty associated with pledges due more than a year from the reporting date would normally be so great as to preclude their recognition.

.07 Bequests are often subject to considerable uncertainty surrounding both the timing of the receipt and the amount that will actually be received. In many cases, the recognition criteria in paragraph PS 4220.03 will not be satisfied and the bequest will not be recognized until it is received.

DISCLOSURE

.08 *When a not-for-profit organization has recognized outstanding pledges and bequests in its financial statements, the following should be disclosed:*

(a) the amount recognized as assets at the reporting date; and

(b) the amount recognized as revenue in the period. [JAN. 2012]

.09 In many cases, pledges will not be recognized until collected because the organization cannot make a reasonable estimate of the amount that will be collected and collection is not reasonably assured. The recognition of pledges outstanding involves a considerable degree of judgment on the part of the organization. Disclosure of outstanding pledges and bequests recognized in the financial statements will help financial statement users to understand the significance of these uncollected amounts to the organization's financial position.

SECTION PS 4230
capital assets held by not-for-profit organizations

TABLE OF CONTENTS	Paragraph
Purpose and scope	.01-.04A
Definitions	.05
Recognition and measurement	.06-.30
Cost	.06-.15
Amortization	.16-.24
Write-downs	.28-.29
Disposal	.30
Presentation and disclosure	.31-.39
Contributed capital assets	.37-.39
Capital assets held by small organizations	.40

PURPOSE AND SCOPE

.01 This Section deals with accounting for capital assets held by not-for-profit organizations. Items held as part of a collection are accounted for in accordance with COLLECTIONS HELD BY NOT-FOR-PROFIT ORGANIZATIONS, Section PS 4240.

.02 This Section applies to capital assets recognized under PUBLIC SECTOR GUIDELINE PSG-2, Leased Tangible Capital Assets, and PSG-5, Sale-Leaseback Transactions.

.03 Organizations may limit the application of this Section to the requirements in paragraph PS 4230.40 if the average of annual revenues recognized in the statement of operations for the current and preceding period of the organization and any entities it controls is less than $500,000.

.04 The Public Sector Accounting Board encourages even those organizations meeting the criterion in paragraph PS 4230.03 to follow all of the requirements of this Section. However, the Public Sector Accounting Board recognizes that there are numerous small not-for-profit organizations for which this would be difficult and costly. Those organizations that meet the criterion in paragraph PS 4230.03 and for which the cost of following all of the requirements of this Section may exceed the benefits, may choose to provide only the disclosure required by paragraph PS 4230.40. Once an organization fails to meet the criterion in paragraph PS 4230.03, it is expected that it would continue to follow all the requirements of this Section, even if average revenues subsequently fall below $500,000.

.04A Organizations that capitalize their capital assets follow all other relevant provisions of this Section and other relevant Handbook Sections and thus capitalize all classes of capital assets, amortize and write down those assets in accordance with this and other relevant Handbook Sections.

DEFINITIONS

.05 The definitions that follow have been adopted for purposes of this Section.

(a) **Not-for-profit organizations** are entities, normally without transferable ownership interests, organized and operated exclusively for social, educational, professional, religious, health, charitable or any other not-for-profit purpose. A not-for-profit organization's members, contributors and other resource providers do not, in such capacity, receive any financial return directly from the organization.

(b) **Capital assets**, comprising tangible properties such as land, buildings and equipment, and intangible properties are identifiable assets that meet all of the following criteria:

(i) are held for use in the provision of services, for administrative purposes, for production of goods or for the maintenance, repair, development or construction of other capital assets;

(ii) have been acquired, constructed or developed with the intention of being used on a continuing basis;

(iii) are not intended for sale in the ordinary course of operations; and

(iv) are not held as part of a collection (see COLLECTIONS HELD BY NOT-FOR-PROFIT ORGANIZATIONS, Section PS 4240).

(c) **Intangible properties** are capital assets that lack physical substance. Examples of intangible properties include copyrights, patents and software.

(d) **Cost** is the amount of consideration given up to acquire, construct, develop, or better a capital asset and includes all costs directly attributable to the acquisition, construction, development or betterment of the capital asset including installing it at the location and in the condition necessary for its intended use. For a contributed capital asset, cost is considered to be fair value at the date of contribution. Cost includes any asset retirement cost.

(e) **Fair value** is the amount of the consideration that would be agreed upon in an arm's length transaction between knowledgeable, willing parties who are under no compulsion to act.

(f) **Net carrying amount** of a capital asset is cost less both accumulated amortization and the amount of any write-downs.

(g) **Residual value** is the estimated net realizable value of a capital asset at the end of its useful life to an organization.

(h) **Service potential** is used to describe the service capacity or output of a capital asset and is normally determined by reference to attributes such as useful life, associated operating costs, physical output capacity and quality of output.

(i) **Useful life** is the estimate of the period over which a capital asset is expected to be used by an organization or the number of production or similar units that can be obtained from the capital asset by the organization. The life of a capital asset may extend beyond its useful life to an organization. The life of a capital asset is normally the shortest of the physical, technological and legal life.

RECOGNITION AND MEASUREMENT

Cost

.06 *A capital asset should be recorded on the statement of financial position at cost. For a contributed capital asset, cost is considered to be fair value at the date of contribution. In unusual circumstances when fair value cannot be reasonably determined, the capital asset should be recorded at nominal value.* [JAN. 2012]

.07 Capital assets represent significant economic resources for many not-for-profit organizations. Without capital assets, many organizations would not be able to provide the same level of service without incurring other expenses, such as rent. Therefore, recording capital assets on the organization's statement of financial position provides financial statement users with information that is important for assessing the organization's ability to continue to achieve its service objectives.

.08 The cost of a capital asset includes the purchase price and other acquisition costs such as installation costs, design and engineering fees, legal fees, survey costs, site preparation costs, freight charges, transportation insurance costs and duties.

.09 Organizations may receive substantial contributions of capital assets. Recognition of contributions of capital assets helps provide an understanding of the resources available to the organization and enables users of the financial statements to make comparisons with other organizations. A contributed capital asset would be recognized at its fair value at the date of contribution. Fair value of a contributed capital asset may be estimated using market or appraisal values. When an estimate of fair value cannot reasonably be made, both the capital asset and the related contribution would be recognized at nominal value.

.10 A capital asset purchased by a not-for-profit organization at substantially below fair value would also be recognized at its fair value with the difference between the consideration paid for the capital asset and fair value reported as a contribution. When the capital asset is purchased from an entity that is part of the same government reporting entity, refer to INTER-ENTITY TRANSACTIONS, Section PS 3420.

.11 The cost of each capital asset acquired together as part of a single purchase (for example, the purchase of a building and land for a single amount) is determined by allocating the total price paid for all the capital assets acquired to each one on the basis of its relative fair value at the time of acquisition.

.12 When, at the time of acquisition, a portion of the acquired capital asset is not intended for use, its cost and any costs of disposal, net of any estimated proceeds, are attributed to that portion of the acquired capital asset which is intended for use. For example, the cost of acquired land that includes a building which will be demolished comprises the cost of the acquired property and the cost of demolishing the building.

Construction or development over time

.13 The cost of a capital asset includes direct construction or development costs (such as materials and labour) and overhead costs directly attributable to the construction or development activity. A capital asset

which is developed or constructed by an organization might include contributed materials or labour, which would be recognized at fair value at the date of contribution.

.14 The degree of certainty as to future benefits to be derived from costs attributable to developing intangible property varies and, in many cases, the expected future benefits may be too uncertain to justify asset recognition. When future benefits are reasonably assured, however, such costs are capitalized.

Betterment

.15 The cost incurred to enhance the service potential of a capital asset is a betterment. Service potential may be enhanced when there is an increase in the previously assessed service capacity, associated operating costs are lowered, the useful life is extended, or the quality of output is improved. The cost incurred in the maintenance of the service potential of a capital asset is a repair, not a betterment. If a cost has the attributes of both a repair and a betterment, the portion considered to be a betterment is included in the cost of the capital asset.

Amortization

.16 *The cost, less any residual value, of a capital asset with a limited life should be amortized over its useful life in a rational and systematic manner appropriate to its nature and use by the organization. Amortization should be recognized as an expense in the organization's statement of operations.* [JAN. 2012]

.17 Most capital assets have limited useful lives. This fact is recognized by amortizing capital assets in a rational and systematic manner over their useful lives. Recognizing amortization in this way allocates the cost of capital assets to the periods of service provided. Amortization expense is an important part of the cost associated with providing an organization's services, regardless of how the acquisition of capital assets is funded. Information about the organization's total costs is relevant to any assessment of the benefits the organization provides.

.18 Different methods of amortizing a capital asset result in different patterns of expense recognition. The objective is to provide a rational and systematic basis for allocating the cost of a capital asset, less any residual value, over its useful life. A straight line method reflects a constant charge for the service as a function of time. A variable charge method reflects service as a function of usage. Other methods may be appropriate in certain situations.

.19 Residual value is the amount that the organization expects to be able to realize on disposal of a capital asset at the end of its useful life to the organization. In most cases, residual value would be negligible and would be ignored for the purpose of calculating amortization. However, when the organization expects the residual value of a capital asset to be significant, it would be factored into the calculation of amortization.

.20 The useful life of a capital asset depends on its expected use by the organization. The fact that a capital asset is capable of lasting for a certain time period would not be justification for establishing a useful life for amortization purposes that is longer than the period over which the organization expects to be able to use the asset. Factors to be considered in estimating the useful life of a capital asset include expected future usage, effects of technological obsolescence, expected wear and tear from use or the passage of time, the maintenance program, and the condition of existing comparable items.

Land and certain works of art and historical treasures

.21 Land normally has an unlimited life and would not be amortized. Certain works of art and historical treasures may have lives that are so long as to be virtually unlimited. Works of art and historical treasures in this category are those that have cultural, aesthetic, or historical value that is worth preserving perpetually. In addition, the organization must have the technological and financial ability to continue to protect and preserve them. Works of art and historical treasures of this type would not be amortized. Collections of works of art and historical treasures are subject to specific organizational policies that demonstrate the organization's commitment to protect and preserve them. Because of the significant valuation problems associated with collections, they are dealt with in a separate Section, COLLECTIONS HELD BY NOT-FOR-PROFIT ORGANIZATIONS, Section PS 4240.

Amortization when a fund accounting basis of reporting is used

.22 When a fund accounting basis of reporting is used, the choice of the fund or funds to which amortization expense would be charged would be based on providing the most meaningful presentation (see FINANCIAL STATEMENT PRESENTATION BY NOT-FOR-PROFIT ORGANIZATIONS, Section PS 4200, for a discussion of reporting on a fund accounting basis). Some organizations may wish to show amortization as an expense of the operating fund. This presentation emphasizes that amortization is part of the cost of service delivery. Other organizations may prefer to show amortization as an expense of the capital asset or plant fund. This presentation shows all revenues and expenses associated with capital assets in a single fund.

Review of amortization

.23 *The amortization method and the estimate of the useful life of a capital asset should be reviewed on a regular basis.* [JAN. 2012]

.24 Significant events that may indicate a need to revise the amortization method or the estimate of the useful life of a capital asset include:

(a) a change in the extent the capital asset is used;

(b) a change in the manner in which the capital asset is used;

(c) removal of the capital asset from service for an extended period of time;

(d) physical damage;

(e) significant technological developments; and

(f) a change in the law or environment affecting the period of time over which the capital asset can be used.

.25-.27 [not used]

Write-downs

.28 *When a capital asset no longer has any long-term service potential to the organization, the excess of its net carrying amount over any residual value should be recognized as an expense in the statement of operations. A write-down should not be reversed.* [JAN. 2012]

.29 When a capital asset no longer contributes to the organization's ability to provide services, its carrying amount would be written down to residual value, if any. A write-down would be necessary, for example, when the organization no longer plans to use the capital asset because it has been damaged or rendered obsolete. When a capital asset's carrying amount is written down, a corresponding amount of any unamortized deferred contributions related to the capital asset would be recognized as revenue, provided that all restrictions have been complied with (see CONTRIBUTIONS — REVENUE RECOGNITION, Section PS 4210).

Disposal

.30 On disposal of a capital asset, whether by sale, destruction, loss, abandonment or expropriation, the difference between the net proceeds on disposal and the net carrying amount is recognized in the statement of operations. Any unamortized deferred contributions related to the capital asset disposed of would be recognized as revenue in the period of the disposal, provided that all restrictions have been complied with (see CONTRIBUTIONS — REVENUE RECOGNITION, Section PS 4210).

PRESENTATION AND DISCLOSURE

.31 *For each major category of capital assets there should be disclosure of:*

(a) cost;

(b) accumulated amortization, including the amount of any write-downs; and

(c) the amortization method used, including the amortization period or rate. [JAN. 2012]

.32 *The net carrying amounts of major categories of capital assets not being amortized should be disclosed.* [JAN. 2012]

.33 *The amount of amortization of capital assets recognized as an expense for the period should be disclosed.* [JAN. 2012]

.34 *The amount of any write-downs of capital assets should be disclosed in the financial statements for the period in which the write-downs are made.* [JAN. 2012]

.35 Major categories of capital assets are determined by reference to type (for example, land, buildings, office equipment, leasehold improvements, vehicles, patents) and/or nature of operations or program (for example, operating, research).

.36 Capital assets not being amortized would include land, works of art and historical treasures meeting the criteria in paragraph PS 4230.21, capital assets under construction or development, and may include capital assets removed from service for an extended period of time. The net carrying amounts of major categories of such assets would be disclosed in accordance with paragraph PS 4230.32.

Contributed capital assets

.37 *The nature and amount of contributed capital assets received in the period and recognized in the financial statements should be disclosed.* [JAN. 2012]

.38 *Information should be disclosed about contributed capital assets recognized at nominal value.* [JAN. 2012]

.39 A contributed capital asset is recognized at nominal value in the financial statements of a not-for-profit organization when its fair value at the date of contribution cannot be reasonably determined. Information about such capital assets helps provide an understanding of the organization's economic resources. This information would likely include any details about the assets that would affect their usefulness to the organization: their ages, locations, present or potential uses and estimated remaining useful lives.

CAPITAL ASSETS HELD BY SMALL ORGANIZATIONS

.40 *Organizations meeting the criterion in paragraph* PS 4230.03 *and not following the other requirements of this Section should disclose the following:*

(a) the policy followed in accounting for capital assets;

(b) information about major categories of capital assets not recorded in the statement of financial position, including a description of the assets; and

(c) if capital assets are expensed when acquired, the amount expensed in the current period. [JAN. 2012]

SECTION PS 4240
collections held by not-for-profit organizations

TABLE OF CONTENTS

	Paragraph
Purpose and scope	.01-.02
Definitions	.03
Nature of collections	.04-.06
Disclosure	.07-.11

PURPOSE AND SCOPE

.01 This Section establishes disclosure standards for collections held by not-for-profit organizations.

.02 Works of art, historical treasures and similar items that are not part of a collection are dealt with in CAPITAL ASSETS HELD BY NOT-FOR-PROFIT ORGANIZATIONS, Section PS 4230.

DEFINITIONS

.03 The following definitions have been adopted for purposes of this Section:

(a) **Not-for-profit organizations** are entities, normally without transferable ownership interests, organized and operated exclusively for social, educational, professional, religious, health, charitable or any other not-for-

profit purpose. A not-for-profit organization's members, contributors and other resource providers do not, in such capacity, receive any financial return directly from the organization.

(b) **Collections** are works of art, historical treasures or similar assets that are:

(i) held for public exhibition, education or research;

(ii) protected, cared for and preserved; and

(iii) subject to an organizational policy that requires any proceeds from their sale to be used to acquire other items to be added to the collection or for the direct care of the existing collection.

NATURE OF COLLECTIONS

.04 Although items meeting the definition of a collection exhibit the characteristics of assets set out in FINANCIAL STATEMENT CONCEPTS, Section PS 1000, they are not recognized in financial statements issued by governments and they are excluded from the definition of capital assets. Collections are made up of items that are often rare and unique. They have cultural and historical significance. Although collections are usually held by museums or galleries, other organizations may also have items that meet the definition of a collection. For example, an organization's library may include rare books which would be considered to be a collection for purposes of this Section. The regular library materials, however, would not usually meet the definition of a collection.

.05 Organizations holding collections act as custodians for the public interest. They undertake to protect and preserve the collection for public exhibition, education or research. The existence of a policy requiring that any proceeds on the sale of collection items be used to acquire additional items or for the direct care of the collection provides evidence of the organization's commitment to act as custodian of the collection.

.06 The cost of capitalizing collections often would exceed the incremental benefit of the information gained, especially for organizations that have been in existence for several decades. Accordingly, although the capitalization of collections is not precluded, it is not required.

DISCLOSURE

.07 *A not-for-profit organization should disclose the following:*

(a) a description of its collection;

(b) the accounting policies followed with respect to the collection;

(c) details of any significant changes to the collection in the period;

(d) the amount of expenditures on collection items in the period; and

(e) proceeds of any sales of collection items in the period and how the proceeds were used. [JAN. 2012]

.08 A description of the organization's collection may include the number and nature of items held or on display, including their relative significance. For large, diverse collections, such disclosure may take the form of a description by major categories, rather than by individual items.

.09 Accounting policies related to collections may vary from organization to organization. Disclosure of the organization's accounting policies with respect to collections would include whether or not the collection is recognized in the statement of financial position and, if so, at what value. This disclosure would also state how contributed and purchased collection items are accounted for.

.10 Changes in the collection resulting from acquisitions and disposals would also be disclosed. The disclosure would include a description of significant items acquired during the period and, where known, the fair values of contributed items. Also, the disclosure would include a description of significant items sold, given away, damaged, destroyed, lost or otherwise disposed of during the period. For larger collections with many changes to report, the disclosure may be provided by major category, rather than by individual item.

.11 According to the definition of collections, proceeds from the sale of collection items would be used either to acquire new items for the collection or for the direct care of the collection. In accordance with paragraph PS 4240.07, the organization would disclose how any proceeds on the sale of collection items were used. If not all of the proceeds on sales have been used either to acquire new items for the collection or for the direct care of the collection by the reporting date, the organization would disclose how it plans to use the proceeds.

SECTION PS 4250
reporting controlled and related entities by not-for-profit organizations

TABLE OF CONTENTS

	Paragraph
Purpose and scope	.01
Definitions	.02-.13
Control	.04-.08
Significant influence	.09
Economic interest	.10-.12
Relationships with funding bodies	.13
Presentation and disclosure of controlled not-for-profit organizations	.14-.29
Consolidated financial statements	.19-.21
Controlled organizations that are not consolidated	.22-.25
Control over a large number of individually immaterial organizations	.26-.29
Presentation and disclosure of controlled profit-oriented enterprises	.30-.35
Presentation and disclosure of joint ventures	.36-.39

Disclosure of significantly influenced not-for-profit organizations	.40-.42
Presentation of significantly influenced profit-oriented enterprises	.43-.44
Disclosure of economic interest	.45-.46
Financial information at different dates	.47-.49
Decision trees	Appendix A
Illustrative examples	Appendix B

PURPOSE AND SCOPE

.01 This Section establishes standards for the presentation and disclosure of controlled, significantly influenced and other related entities in the financial statements of not-for-profit organizations. RELATED PARTY DISCLOSURES, Section PS 2200, establishes additional disclosure standards for situations when there are transactions with related parties.

DEFINITIONS

.02 The following terms are used in this Section with the meanings specified:

(a) **Not-for-profit organizations** are entities, normally without transferable ownership interests, organized and operated exclusively for social, educational, professional, religious, health, charitable or any other not-for-profit purpose. A not-for-profit organization's members, contributors and other resource providers do not, in such capacity, receive any financial return directly from the organization.

(b) **Control** is the power of a public sector entity to govern the financial and operating policies of another entity with expected benefits or the risk of loss to the public sector entity from the other's activities (see the indicators of control in GOVERNMENT REPORTING ENTITY, Section PS 1300).

(c) **Shared control** occurs when two or more entities are bound by a contractual arrangement that specifies the agreed sharing of the ongoing power to determine financial and operating policies (see the characteristics of shared control in GOVERNMENT PARTNERSHIPS, Section PS 3060).

(d) A **joint venture** is an economic activity resulting from a contractual arrangement whereby two or more venturers share control of the economic activity.

(e) **Significant influence** over an entity is the ability to affect the strategic operating, investing and financing policies of the entity.

(f) An **economic interest** in another not-for-profit organization exists if:

(i) the other organization holds resources that must be used to produce revenue or provide services for the reporting organization; or

(ii) the reporting organization is responsible for the liabilities of the other organization.

[Former paragraph PS 4250.02 retained in Archived Pronouncements.]

.03 Not-for-profit organizations can have many different types of relationships with other entities, both not for profit and profit oriented. An organization may have control over another entity. A discussion of the definition of control follows in paragraphs PS 4250.04-.08. Presentation and disclosure of controlled entities is dealt with in paragraphs PS 4250.14-.35. When the relationship falls short of control, the organization may instead have significant influence over the other entity. A discussion of the definition of significant influence appears in paragraph PS 4250.09. Presentation and disclosure of significantly influenced entities is dealt with in paragraphs PS 4250.40-.44. Economic interest is a concept unique to relationships among not-for-profit organizations. It may be an indicator of either control or significant influence. Alternatively, an economic interest may exist without control or significant influence. A discussion of the definition of economic interest appears in paragraphs PS 4250.10-.12. Disclosure of economic interest when it exists without control or significant influence is dealt with in paragraphs PS 4250.45-.46.

Control

.04 Strategic operating, investing and financing policies establish the basis for the conduct of an entity's operations and the deployment of its resources. The holder of the right to appoint the majority of the voting members of an entity's board of directors (or board of governors) would normally have the power to determine the entity's strategic policies. The right to appoint the majority of an entity's board of directors may be held in the form of ownership of the other entity's voting shares. Not-for-profit organizations are usually established without a transferable ownership interest. Therefore, the right to appoint the majority of another not-for-profit organization's board of directors is normally established by other means. For example, appointment of the board of directors may be dealt with in the organization's by-laws or articles of incorporation.

.05 One organization is presumed to control another entity when it has the right to appoint the majority of the voting members of the other entity's board of directors. When two organizations have the same board of directors, the presumption is that one organization controls the other. The presumption of control would only be overcome if there is clear evidence that control does not exist. The more directors appointed by the reporting organization beyond a simple majority, the more persuasive this evidence must be to overcome the presumption that control exists. The presumption of control based on the ability to appoint the majority of another entity's board of directors applies to questions of control over both not-for-profit organizations and profit-oriented enterprises. Further factors to be considered in determining whether the organization controls another organization are presented in GOVERNMENT REPORTING ENTITY, paragraphs PS 1300.18-.24.

.06 In the absence of the right to appoint the majority of the voting members of another not-for-profit organization's board of directors, the reporting organization would consider the characteristics of its relationship with the other organization to determine if any indicators of control are present. Possible indicators of control are:

(a) a significant economic interest in the other organization (see paragraphs PS 4250.10-.12 for a discussion of economic interest);

(b) provisions in the other organization's charter or bylaws that cannot be changed without the reporting organization's consent and that limit the other organization to activities that provide future economic benefits to the reporting organization; or

(c) the other organization's purpose is integrated with that of the reporting organization so that the two organizations have common or complementary objectives.

.07 In some cases, the presence of a single indicator of control is sufficient for the organization to conclude that control exists. For example, whether or not an organization has an economic interest in another organization is an important characteristic of its relationship with the other organization. The significance of economic interest as an indicator of control can vary. If an organization is only able to raise funds and transfer them exclusively to the reporting organization, the economic interest may be so significant that the reporting organization may have control over the other organization, even without the ability to appoint the majority of the other organization's board of directors. A less significant economic interest would have less impact on the question of whether or not control exists.

.08 In other cases, more than one indicator of control may be necessary in order for the organization to conclude that control exists. For example, local not-for-profit organizations sometimes join an associated group or create a national organization in order to achieve their common objectives. These local organizations may receive certain membership rights and privileges (for example, centralized fund raising, investing or public education). In exchange, the local organizations may agree to operate under a common name and be bound by certain standards and policies of the national organization. In such cases, additional indicators of control beyond common objectives may be required to provide evidence that the national organization controls the local organizations.

Significant influence

.09 In situations where it is concluded that control does not exist, an organization may be able to exercise significant influence over the strategic operating, financing and investing activities of another entity. Factors that may indicate that the reporting organization has significant influence over another entity would include representation on the board of directors, the existence of an economic interest, participation in policy-making processes, material inter-entity transactions, or interchange of managerial personnel. A temporary ability to affect the other entity's strategic policies would not be considered to be significant influence for purposes of this Section.

Economic interest

.10 The reporting organization has an economic interest in another not-for-profit organization when the other organization holds resources for the benefit of the reporting organization. An economic interest also exists when the reporting organization is responsible for the other organization's liabilities. The following are possible indicators of economic interest:

(a) The other organization solicits funds in the name of and with the expressed or implied approval of the reporting organization, and substantially all of the funds solicited are intended by the contributor or are otherwise required to be transferred to the reporting organization or used at its discretion or direction;

(b) The reporting organization transfers significant resources to the other organization, whose resources are held for the benefit of the reporting organization;

(c) The other organization is required to perform significant functions on behalf of the reporting organization that are integral to the reporting organization's achieving its objectives; or

(d) The reporting organization guarantees significant liabilities of the other organization.

.11 Economic interests can exist in varying degrees of significance. At one extreme, the reporting organization would not be able to function in its current form without the organization in which it has an economic interest. In such cases, the existence of the economic interest may be a strong indicator that control exists. At the other extreme, economic interests are much more limited and exist without control or significant influence.

.12 In determining if an economic interest in another organization exists, the reporting organization would consider whether the other organization is required to transfer resources to or perform significant functions for the reporting organization. For example, externally imposed restrictions on the other organization's resources could create an economic interest. However, a funding relationship where the other organization is not obliged to provide resources to the reporting organization may not be considered to be an economic interest. Similarly, a situation where another organization holds fund raising events from time to time for the benefit of the reporting organization may not result in an economic interest.

Relationships with funding bodies

.13 Government and other entities that provide resources to not-for-profit organizations may have some influence over such organizations by virtue of the fact that funding may be withdrawn if the funder disagrees with the funded organization's strategic policies. The fact that an organization depends on the reporting organization for resources is not by itself an indication of control or significant influence for purposes of this Section. In addition to the funding relationship, other indicators, such as representation on the board of directors or the existence of an economic interest, would have to be present in order to conclude that control or significant influence exists. In cases where the reporting organization itself is economically dependent on particular resource providers this fact would be clear from the disclosure of contributions by major source in accordance with CONTRIBUTIONS — REVENUE RECOGNITION, Section PS 4210.

PRESENTATION AND DISCLOSURE OF CONTROLLED NOT-FOR-PROFIT ORGANIZATIONS

.14 *An organization should report each controlled not-for-profit organization in one of the following ways:*

(a) by consolidating the controlled organization in its financial statements;

(b) by providing the disclosure set out in paragraph PS 4250.22*; or*

(c) if the controlled organization is one of a large number of individually immaterial organizations, by providing the disclosure set out in paragraph PS 4250.26*.* [JAN. 2012]

.15 *For a controlled not-for-profit organization, regardless of whether or not it is consolidated, the following should be disclosed:*

(a) the policy followed in reporting the controlled organization;

(b) a description of the relationship with the controlled organization;

(c) a clear and concise description of the controlled organization's purpose, its intended community of service, its status under income tax legislation and its legal form; and

(d) the nature and extent of any economic interest that the reporting organization has in the controlled organization. [JAN. 2012]

.16 Controlled organizations can have a significant impact on the resources and operations of the reporting organization. Therefore, financial statement users need information about the relationship with each controlled organization and its significance to the reporting organization. This information is provided by presenting consolidated financial statements to include controlled organizations or by disclosing information about controlled organizations. Similar controlled organizations may be grouped together for disclosure purposes.

.17 Control over another organization will often be accompanied by an economic interest in that organization. The nature of the economic interest may be clear from the disclosure of the controlled organization's purpose. The nature and extent of any other economic interest would be specifically disclosed. (See paragraphs PS 4250.45-.46 for a further discussion of the disclosure of economic interest.)

.18 An organization may follow different policies for reporting different controlled organizations. For example, one group of controlled organizations may be consolidated in the financial statements, while another group is disclosed in accordance with either part (b) or part (c) of paragraph PS 4250.14. Similar types of controlled organizations would be reported in the same manner. The organization's policy for reporting each controlled organization or group of controlled organizations would be disclosed.

Consolidated financial statements

.19 BASIC PRINCIPLES OF CONSOLIDATION, Section PS 2500, and ADDITIONAL AREAS OF CONSOLIDATION, Section PS 2510, set out the requirements to be followed when consolidated financial statements are presented. Consolidated financial statements would be prepared by aggregating the financial statement elements of the controlled organization with those of the reporting organization. Transactions between the organizations and inter-organization balances would be eliminated in the consolidated financial statements. In the not-for-profit sector, consolidated financial statements have often been referred to as combined financial statements.

.20 The resources of controlled organizations may be subject to restrictions on their use. Information about major categories of restrictions on resources would be provided for all the organizations included in consolidated financial statements in accordance with FINANCIAL STATEMENT PRESENTATION BY NOT-FOR-PROFIT ORGANIZATIONS, Section PS 4200. Depending on the significance of controlled organizations to the reporting organization, broader categories of restrictions on controlled organizations' resources may be disclosed in the reporting organization's financial statements than in the controlled organizations' own financial statements. Information about external restrictions that require resources to flow to the reporting organization and external restrictions that preclude the transfer of resources to the reporting organization would be disclosed.

.21 The accounting policies of each controlled organization would be adjusted to conform with those of the reporting organization for purposes of consolidation.

Controlled organizations that are not consolidated

.22 *For each controlled not-for-profit organization or group of similar controlled organizations not consolidated in the reporting organization's financial statements, the following should be disclosed, unless the*

group of controlled organizations is comprised of a large number of individually immaterial organizations (see paragraph PS 4250.26)*:*

(a) total assets, liabilities and net assets at the reporting date;

(b) revenues (including gains), expenses (including losses) and cash flows from operating, financing and investing activities reported in the period;

(c) details of any restrictions, by major category, on the resources of the controlled organizations; and

(d) significant differences in accounting policies from those followed by the reporting organization. [JAN. 2012]

.23 When the reporting organization controls another organization it effectively controls that other organization's resources by virtue of its power to determine the strategic policies governing the deployment of resources. Presenting consolidated financial statements is one means of providing financial statement users with information about these controlled resources. When a controlled organization is not consolidated in the reporting organization's financial statements, information about the resources of this controlled organization would be disclosed in the reporting organization's financial statements in accordance with paragraph PS 4250.22.

.24 The resources of the controlled organization may be subject to restrictions on their use. Information about major categories of restrictions on controlled organizations' resources would be disclosed. Depending on the significance of controlled organizations to the reporting organization, broader categories of restrictions on controlled organizations' resources may be disclosed in the reporting organization's financial statements than in the controlled organizations' own financial statements. Information about external restrictions that require resources to flow to the reporting organization and external restrictions that preclude the transfer of resources to the reporting organization would be disclosed.

.25 It is desirable for the information disclosed in accordance with paragraph PS 4250.22 to be presented using the same accounting policies as the reporting organization. If this is not the case, significant differences in the accounting policies used to present financial information related to unconsolidated controlled organizations would be disclosed.

Control over a large number of individually immaterial organizations

.26 *An organization may exclude a group of controlled organizations from both consolidation and the disclosure set out in paragraph* PS 4250.22*, provided that:*

(a) the group of organizations is comprised of a large number of organizations that are individually immaterial; and

(b) the reporting organization discloses the reasons why the controlled organizations have been neither consolidated nor included in the disclosure set out in paragraph PS 4250.22. [JAN. 2012]

.27 Some not-for-profit organizations have control over dozens, hundreds or even thousands of individually immaterial organizations. Because of the large number and the relative insignificance of each controlled organization, the reporting organization may choose not to exercise financial control over these small

organizations. As a result, the reporting organization may not receive financial information from these organizations on a timely basis, if at all. Furthermore, the financial information that is received from these small organizations will often not be in the form of financial statements prepared using generally accepted accounting principles. In such cases, the expense and effort of preparing consolidated financial statements or providing the information set out in paragraph PS 4250.22 may far exceed any benefits from doing so. In addition to the disclosure required by paragraph PS 4250.15, the reasons for not providing consolidated financial statements or financial information about the controlled organizations would also be disclosed. Possible reasons could include cost / benefit considerations and the decision not to exercise financial control.

.28 Judgment would be exercised in determining whether the number of controlled organizations is sufficient to justify the organization following the requirements in paragraph PS 4250.26 and whether individual organizations are immaterial. The number of organizations would have to be sufficiently large that collecting financial information would be unduly onerous. The materiality of individual organizations would be assessed in relation to the reporting organization excluding the controlled organizations that are being considered for reporting under paragraph PS 4250.26.

.29 An organization may find that some of the organizations it controls qualify for reporting under paragraph PS 4250.26, while others may not. For example, a national organization that controls both provincial and local branches may find that provincial branches do not meet the criterion in paragraph PS 4250.26(a) since they are all material. Small local branches, on the other hand, may meet this criterion if they are numerous and individually immaterial. In such cases, the organization would consolidate the controlled provincial branches or disclose the information set out in paragraph PS 4250.22 about the controlled provincial branches. Reasons for not consolidating or providing financial information about the large number of controlled local branches would be disclosed in accordance with paragraph PS 4250.26.

PRESENTATION AND DISCLOSURE OF CONTROLLED PROFIT-ORIENTED ENTERPRISES

.30 *An organization should report each controlled profit-oriented enterprise in either of the following ways:*

(a) by consolidating the controlled enterprise in its financial statements; or

(b) by accounting for its investment in the controlled enterprise using the modified equity method and providing the disclosure set out in paragraph PS 4250.32. [JAN. 2012]

.31 *For a controlled profit-oriented enterprise, regardless of whether it is consolidated or accounted for using the modified equity method, the following should be disclosed:*

(a) the policy followed in reporting the controlled enterprise; and

(b) a description of the relationship with the controlled enterprise. [JAN. 2012]

.32 *For each controlled profit-oriented enterprise or group of similar controlled enterprises accounted for using the modified equity method, the following should be disclosed:*

(a) total assets, liabilities and shareholders' equity at the reporting date; and

(b) revenues (including gains), expenses (including losses), net income and cash flows from operating, financing and investing activities reported in the period. [JAN. 2012]

.33 An organization may present consolidated financial statements to include controlled entities. Consolidated financial statements would be prepared in accordance with BASIC PRINCIPLES OF CONSOLIDATION, Section PS 2500, and ADDITIONAL AREAS OF CONSOLIDATION, Section PS 2510. Investments in controlled profit-oriented enterprises that are not consolidated would be accounted for using the modified equity method in accordance with INVESTMENTS IN GOVERNMENT BUSINESS ENTERPRISES, Section PS 3070. When the modified equity method is used, additional financial information about the controlled entity would be disclosed to provide users with information about the controlled entity's financial position and results of operations. Similar controlled enterprises may be grouped together for purposes of disclosure. An organization may choose to consolidate some controlled enterprises and to account for others using the modified equity method. Similar types of controlled enterprises would be reported in the same manner. The organization's policy in accounting for each controlled enterprise or group of enterprises would be disclosed.

.34 Disclosure of the relationship with a controlled enterprise would be provided whether the enterprise is consolidated or accounted for using the modified equity method. This disclosure would include information about how the controlled entity's operations relate to or complement those of the reporting organization.

.35 BASIC PRINCIPLES OF CONSOLIDATION, Section PS 2500, and ADDITIONAL AREAS OF CONSOLIDATION, Section PS 2510, present disclosure requirements for when consolidated financial statements are presented. When a controlled enterprise is consolidated, its accounting policies would be adjusted to conform with those of the reporting organization.

PRESENTATION AND DISCLOSURE OF JOINT VENTURES

.36 *An organization should report each interest in a joint venture in either of the following ways:*

(a) by accounting for its interest using the proportionate consolidation method in accordance with GOVERNMENT PARTNERSHIPS, Section PS 3060*; or*

(b) by accounting for its interest using the modified equity method and disclosing the information set out in paragraph PS 4250.38. [JAN. 2012]

.37 *For an interest in a joint venture, regardless of whether it is reported using the proportionate consolidation or the modified equity method, the following should be disclosed:*

(a) the policy followed in reporting the interest; and

(b) a description of the relationship with the joint venture. [JAN. 2012]

.38 *For each interest in a joint venture, or group of similar interests, accounted for using the modified equity method, the following should be disclosed:*

(a) the reporting organization's share of the joint venture's total assets, liabilities and net assets, or shareholders' equity, at the reporting date;

(b) the reporting organization's share of the joint venture's revenues (including gains), expenses (including losses), and cash flows from operating, financing and investing activities reported in the period; and

(c) significant differences in accounting policies from those followed by the reporting organization. [JAN. 2012]

.39 An organization may enter into a joint venture with other entities. (GOVERNMENT PARTNERSHIPS, Section PS 3060, provides guidance on different types of joint ventures and how they may be identified.) A situation when the reporting organization's proportionate share of assets, liabilities, revenues or expenses related to the activity under shared control is not determinable would not be considered to meet the definition of a joint venture for purposes of this Section. The organization would instead consider whether such a situation would be reported as one of significant influence or economic interest. A reporting organization has shared control over the joint ventures in which it has an interest. In order to provide information about all the economic resources under its control, the reporting organization would report its interest in a joint venture in accordance with paragraph PS 4250.36. An organization may follow different policies for reporting different interests in joint ventures. The organization's accounting policies with respect to reporting joint ventures would be disclosed. Interests in similar joint ventures may be grouped together for purposes of disclosure. [Former paragraph PS 4250.39 retained in Archived Pronouncements.]

DISCLOSURE OF SIGNIFICANTLY INFLUENCED NOT-FOR-PROFIT ORGANIZATIONS

.40 *When the reporting organization has significant influence in another not-for-profit organization, the following should be disclosed:*

(a) a description of the relationship with the significantly influenced organization;

(b) a clear and concise description of the significantly influenced organization's purpose, its intended community of service, its status under income tax legislation and its legal form; and

(c) the nature and extent of any economic interest that the reporting organization has in the significantly influenced organization. [JAN. 2012]

.41 Since not-for-profit organizations are usually established without transferable ownership interest, significant influence over another not-for-profit organization will normally exist through other means. In such cases, there would be no ownership interest to be reflected in the reporting organization's financial statements and the information required by paragraph PS 4250.40 would be disclosed. Similar significantly influenced organizations may be grouped together for purposes of disclosure.

.42 Significant influence involves the ability to affect, rather than control, how the other organization's resources are used. Therefore, the reporting organization would not provide information about all the significantly influenced organization's resources. Details about the significantly influenced organization's purpose would be disclosed. Information about any economic interest would also be provided so that users are aware of resources from which the reporting organization will benefit in the future and of risks to which the reporting organization may be exposed. See paragraphs PS 4250.45-.46 for a further discussion of the disclosure of economic interest.

PRESENTATION OF SIGNIFICANTLY INFLUENCED PROFIT-ORIENTED ENTERPRISES

.43 *When the reporting organization has significant influence over a profit-oriented enterprise, the investment should be accounted for using the modified equity method in accordance with GOVERNMENT PARTNERSHIPS, Section* PS 3060. [JAN. 2012]

.44 GOVERNMENT PARTNERSHIPS, paragraphs PS 3060.55-.60, sets out the presentation and disclosure requirements for the reporting organization's share of significantly influenced investees.

DISCLOSURE OF ECONOMIC INTEREST

.45 *When an organization has an economic interest in another not-for-profit organization over which it does not have control or significant influence, the nature and extent of this interest should be disclosed.* [JAN. 2012]

.46 Information about the nature and extent of an economic interest will help financial statement users assess the reporting organization's financial position by making them aware of resources from which that organization will benefit in the future and of the risks to which it may be exposed. If, for example, the economic interest takes the form of assets that will flow to the reporting organization, the amount of these assets and the purposes for which they are to be used would be disclosed. If the economic interest takes the form of an arrangement to solicit funds on behalf of the reporting organization, details of this arrangement would be disclosed. The extent to which the economic interest involves responsibility for the other organization's liabilities would also be disclosed.

FINANCIAL INFORMATION AT DIFFERENT DATES

.47 *When the fiscal periods of the reporting organization and the other entity do not substantially coincide, the financial information required to be disclosed in accordance with paragraph* PS 4250.22, PS 4250.32 *and* PS 4250.38 *should be as at the other entity's most recent reporting date and the following should be disclosed:*

(a) the reporting period covered by the financial information; and

(b) the details of any events or transactions in the intervening period that are significant to the reporting organization's financial position or results of operations. [JAN. 2012]

.48 It is expected that reasonable efforts would be made to obtain the financial information required by paragraphs PS 4250.22, PS 4250.32 and PS 4250.38 for financial reporting periods that substantially coincide with that of the reporting organization. However, in cases where this is not possible, the exclusion of the financial information about the controlled entity or entity under shared control would not be justified. Financial information for the other entity's most recent reporting date would be disclosed. Details of events or transactions in the intervening period would include the magnitude of their effect on any of the financial information disclosed about the controlled or significantly influenced entity. [Former paragraph PS 4250.48 retained in Archived Pronouncements.]

.49 The presentation of consolidated financial statements when the reporting organization and the controlled entity's reporting periods do not substantially coincide is dealt with in BASIC PRINCIPLES OF CONSOLIDATION, Section PS 2500. The guidance in Section PS 2500 is appropriate for consolidations of both controlled profit-oriented enterprises and controlled not-for-profit organizations with reporting periods that differ from that of the reporting organization. INVESTMENTS IN GOVERNMENT BUSINESS ENTERPRISES, Section PS 3070, deals with accounting for an investee using the modified equity method when the reporting organization and the investee have different reporting periods.

APPENDIX A

DECISION TREE — REPORTING OF CONTROLLED AND SIGNIFICANTLY INFLUENCED NOT-FOR-PROFIT ORGANIZATIONS AND ECONOMIC INTERESTS IN NOT-FOR-PROFIT ORGANIZATIONS

This Decision Tree is illustrative only.



DECISION TREE — REPORTING OF CONTROLLED AND SIGNIFICANTLY INFLUENCED PROFIT-ORIENTED ENTERPRISES

This Decision Tree is illustrative only.



APPENDIX B

ILLUSTRATIVE EXAMPLES

This material is illustrative only.

These examples illustrate how the accounting treatment specified in this Section might be applied in particular situations. Matters of principle relating to particular situations should be decided in the context of this Section.

Example 1 — Disclosure of controlled entities that are not consolidated

Example 2 — Disclosure of a significantly influenced not-for-profit organization

Example 1 — Disclosure of controlled entities that are not consolidated

ABC University
Notes to the Financial Statements (extract)

Note X: Investments

ABC University (the University) controls ABC University Foundation (the Foundation) and a wholly owned subsidiary, Research Inc. The Foundation raises funds from the University's alumni and from the community. The Foundation is incorporated under the Canada Corporations Act and is a registered charity under the Income Tax Act. The University appoints the majority of the Foundation's Board of Directors and, according to the Foundation's bylaws, all resources of the Foundation must be provided to the University or used for the University's benefit.

Research Inc. was established to create and operate a joint University-industry research centre to provide overall economic growth for its government sponsors, business growth for its industry sponsors, expanded quality education and research for its University sponsors, and stimulating research opportunities for its staff.

Neither the Foundation nor Research Inc. has been consolidated in the University's financial statements. Financial statements of the Foundation and of Research Inc. are available on request. Financial summaries of these unconsolidated entities as at March 31, 20X2 and 20X1 and for the years then ended are as follows:

ABC University Foundation
Financial Position

($ thousands)	20X2	20X1
Total assets	$3,778	$3,800
Total liabilities	$ 109	$ 184
Total net assets (a)	3,669	3,616
	$3,778	$3,800

(a) All of the Foundation's net assets must be provided to the University or used for the University's benefit. In accordance with donor imposed restrictions, $250 (20X1 — $195) of the Foundation's net assets must be used to expand the University's library collection. A further $1,300 (20X1 — $1,114) of the Foundation's net assets is subject to donor imposed restrictions that they be maintained permanently with the investment revenue earned to be used to provide scholarships for worthy students studying science.

Results of Operations

($ thousands)	20X2	20X1
Total revenues	$3,323	$2,991
Total expenses (a)	3,270	2,943
Excess of revenue over expenses	$ 53	$ 48

(a) Total expenses include contributions of $3,110 (20X1 — $2,885) to the University.

Cash Flows

($ thousands)	20X2	20X1
Cash from operations	$ 80	$ 72
Cash used in financing and investing activities	(100)	(90)
Decrease in cash	$ 20	$ 18

Research Inc.
Financial Position

($ thousands)	20X2	20X1

Total assets	$3,940	$3,626
	=====	=====
Total liabilities (a)	$ 339	$ 305
Shareholders' equity	3,601	3,321
	$3,940	$3,626
	=====	=====

(a) Research Inc. has long-term debt of $250 (20X1 — $275), which has been guaranteed by the University.

Results of Operations		
($ thousands)	20X2	20X1
Total revenues	$8,899	$8,009
Total expenses	8,619	7,757
Net income	$ 280	$ 252
	=====	=====

Cash Flows		
($ thousands)	20X2	20X1
Cash from operations	$325	$293
Cash used in financing activities	(40)	(36)
Cash used in investing activities	(95)	(86)
Increase in cash	$190	$171
	====	====

Example 2 — Disclosure of a significantly influenced not-for-profit organization

NFP B
Notes to the Financial Statements (extract)

Note X: Investments

NFP B exercises significant influence over NFP B Foundation (the Foundation) by virtue of its ability to appoint some of the Foundation's Board of Directors. The Foundation was established to raise funds for the use of NFP B and of other organizations in the community with objectives similar to those of NFP B. The Foundation is incorporated under the Canada Corporations Act and is a registered charity under the Income Tax Act. Resources of the Foundation amounting to $335,000 (20X1 — $347,000) are to be transferred to NFP B and used for purposes to be agreed upon by NFP B and the Foundation.

SECTION PS 4270
disclosure of allocated expenses by not-for-profit organizations

(withdrawn December 2016)

SECTION PS 4270
disclosure of allocated expenses by not-for-profit organizations

TABLE OF CONTENTS

	Paragraph
Purpose and scope	.01-.02
Attribution and allocation of expenses	.03-.07
Disclosure of allocated expenses	.08-.09
Application guidance	Appendix A
Illustrative examples	Appendix B

PURPOSE AND SCOPE

.01 This Section establishes disclosure standards for a not-for-profit organization that classifies its expenses by function (see FINANCIAL STATEMENT PRESENTATION BY NOT-FOR-PROFIT ORGANIZATIONS, paragraph PS 4200.31) and allocates its expenses to a number of functions to which the expenses relate.

.02 This Section does not require organizations to classify their expenses by function or to undertake any allocations.

ATTRIBUTION AND ALLOCATION OF EXPENSES

.03 Reporting expenses by function frequently requires an organization to attribute individual expenses among the functions to which they relate. Some expenses contribute to, or produce the output of, more than one function and are considered directly related to the output of each of those functions, for example, the remuneration of a staff person who works in more than one separately reported function. An organization also incurs expenses of a general support nature that, although necessary to perform its other functions, do not directly contribute to, or produce the output of, such functions.

.04 When all of the expenses of a function have been accumulated within that function, an organization may wish to allocate some expenses from that function to another function when there is a clear relationship between those expenses and the other function. A common example is the allocation of certain specific fundraising and general support expenses to other functions to which they relate. As aggregate amounts reported for the fundraising and general support functions are often of particular significance to financial statement users, allocations involving these two functions are addressed by this Section.

.05 Occasionally, fundraising expenses include amounts which are specifically directed at another function (for example, education). In determining whether any expenses included in the fundraising function might be allocated to another function, there must be a reasonable basis for making such an allocation, applied on a consistent basis.

.06 General support expenses are incurred to support the variety of functions undertaken by the organization, including revenue generating functions, if any, such as fundraising. General support expenses include expenses of the administration or general office activities (for example, corporate governance, general management, payroll administration, budgeting and accounting, information technology, human resources, and financing).

.07 General support expenses are either considered a function in their own right or are allocated on a reasonable and consistent basis to the relevant functions that they support.

DISCLOSURE OF ALLOCATED EXPENSES

.08 *When allocations of fundraising and general support expenses have been made to other functions, the accounting policy disclosure should explain the policies adopted for the allocation of expenses among functions, the nature of the expenses being allocated and the basis on which such allocations have been made. In addition, the amounts allocated from each of these two functions, and the amounts and the functions to which they have been allocated, should be disclosed.* [JAN. 2012]

.09 The results of operations of each function are important to users. However, additional scrutiny is often applied to the total cost of fundraising and the total cost of general support of not-for-profit organizations that receive funds from the public. Disclosure of allocations that have been made in the case of fundraising and general support expenses, including amounts, enhances a reader's ability to understand the effect of the allocations, and thus improves the ability to conduct comparisons among organizations' financial statements.

APPENDIX A

APPLICATION GUIDANCE

This Application Guidance is an integral part of this Section and is applicable to an organization that chooses to classify its expenses by function.

Attribution of expenses

A1 When attributing an expense among various operating functions, an organization considers an approach such as the following:

(a) An expense that contributes directly to the output of one function is applied directly to that function, for example, the cost of a staff member exclusively devoted to that function.

(b) An expense that contributes directly to the output of more than one function is attributed on a reasonable and consistent basis to each function to which it applies (for example, the rent applicable to the space used for more than one separately reported function, and the remuneration expense of an executive director of a small health care organization who, in addition to managing the organization, provides direct health care services to clients of that organization).

Bases for attribution

A2 The bases adopted for attribution are appropriate to the category of expense concerned and to the organization's particular circumstances.

A3 There are a number of bases for attributing expenses that may be applied. Examples include:

(a) time — on the basis of hours incurred directly in undertaking a function;

(b) usage — on the basis of measured or estimated consumption attributable to the function;

(c) per capita — on the basis of the number of people employed within a function; and

(d) space — on the basis of floor area occupied by a function.

Allocation of expenses

A4 Once accumulated by function, expenses may only be allocated to another function when there is a clear relationship between those expenses and the other function. For example, information about the organization's objectives and projects is often provided in the context of its fundraising activities. In determining whether some of those fundraising expenses might be allocated to an education function, a distinction needs to be drawn between:

(a) information involved in raising the profile of the organization which is associated with fundraising (expenses of generating funds); and

(b) information that is provided by the fundraising activities in furtherance of the organization's objectives, such as education (expenses of delivering services).

A5 In the context of a fundraising activity, for information to be regarded as, for example, also contributing to an education objective, it is supplied in an educational manner. To achieve an educational purpose, information supplied meets the following three criteria. The information is:

(a) targeted at individuals or others who can use the information in furtherance of the organization's objectives;

(b) advice on which the recipient can act in an informed manner in furtherance of the organization's objectives; and

(c) related to the educational activities or objectives undertaken by the organization.

If the information provided in conjunction with the fundraising activity does not meet these criteria, it would be regarded as targeted at potential donors and therefore relating wholly to the fundraising activity.

A6 For example, a health education organization targets high-risk groups of people or the medical profession by supplying information as to health risks or symptom recognition and advising on steps to be taken. Such information falls within service delivery expenses as it is targeted at specific recipients, advises on specific steps that can be taken, and is directly related to the organization's specified activities or objectives in

health education. Therefore, when such information is provided in the context of a fundraising activity to those target populations, expenses may be allocated between the fundraising and service delivery activities.

A7 In the example in the previous paragraph, if it were determined that the information supplied is either only of marginal value to the target population or its value to the target population cannot be determined with any reasonable certainty, the educational component would not be satisfied and the expenses would be treated entirely as fundraising expenses.

A8 The expenses related to fundraising activities targeted at prior donors, or at individuals or corporations otherwise selected based on their ability or likelihood to donate to the organization, are presumed to relate solely to fundraising. In determining whether this presumption may be overcome, an organization considers the extent to which the targeted individual or corporation is selected based on its ability or likelihood to donate to the organization and contrasts that with the extent to which it is selected for one or more of the reasons in paragraph A5. For example, if the target's likelihood to donate is a significant factor in its selection and it has a need for the educational component described in paragraph A5, but having that need is an insignificant factor in its selection, the presumption would not be overcome.

Changes in bases for allocation of expenses

A9 The bases adopted for allocation of expenses are accounting policies to which ACCOUNTING CHANGES, Section PS 2120, applies when a change is made.

APPENDIX B

ILLUSTRATIVE EXAMPLES

This material is illustrative only.

These examples illustrate how the accounting treatment specified in this Section might be applied in particular situations. Matters of principle relating to particular situations should be decided in the context of this Section.

Cost allocation when an organization chooses to report by function

	Function 1 (Patient care)	Function 2 (Education)	Function 3 (Fundraising)	Function 4 (General support)
Attribution of expenses				
Expense A	100%			
Expense B		100%		
Expense C (a)	50%	25%	15%	10%

(a) For purposes of this illustration, Expense C is an expense that contributes directly to the output of several functions. In accordance with this Section, no additional disclosure is required with respect to the attribution of this expense among the various functions to which it relates.

	Function 1 (Patient care)	Function 2 (Education)	Function 3 (Fundraising)	Function 4 (General support)
Allocation from one function to another				
Fundraising expenses, if allocated		10%	90%	
— Disclosure of policy and dollar amounts is required				
General support expenses are either:				
• Not allocated				100%
— No disclosure				
• Allocated	30%	25%	15%	30%
— Disclosure of policy and dollar amounts is required				

Disclosure of allocated expenses by a not-for-profit organization

This example assumes that the organization has chosen to report its operations by function.

Note A: Accounting policy — allocation of expenses

NFP A engages in patient care, education and fundraising programs. The costs of each program include the costs of personnel, premises and other expenses that are directly related to providing the program. NFP A also incurs a number of general support expenses that are common to the administration of the organization and each of its programs.

Both the education and fundraising programs include the use of the same brochures to further the work of NFP A. The brochures are designed and intended to achieve a specific educational objective. The cost of the brochures used directly by the education and the fundraising program is included in each program. Some of the brochures included in direct mail fundraising campaigns are mailed to individuals who have been identified as potential beneficiaries of the educational component of the brochures. The cost of those specific brochures has been allocated from the fundraising to the education program. The majority of the direct mail campaign expenses remain a cost of the fundraising program.

NFP A allocates certain of its general support expenses by identifying the appropriate basis of allocating each component expense, and applies that basis consistently each year. Corporate governance and general management expenses are not allocated; other general support expenses are allocated on the following bases:

Human resources department costs — proportionately on the same percentage as the direct salaries and benefits of the program

Information technology department costs — proportionately on the basis of the total costs of the program excluding IT department costs

Note X: Allocation of expenses

Fundraising expenses

Fundraising expenses reported in the statement of operations of $77,000 (20X1 — $72,000) are reported after allocation of $6,000 (20X1 — $5,200) to the education program representing the cost of brochures that were part of the direct mail campaign and were sent to specific individuals who can benefit from the educational content therein.

General support expenses

Human resources and information technology department expenses of $99,000 (20X0 — $92,000) have been allocated as follows:

	20X1	20X0
Patient care	$29,000	$27,000
Education	25,000	23,000
Fundraising	15,000	14,000
Administration	30,000	28,000
Total	$99,000	$92,000
	======	======

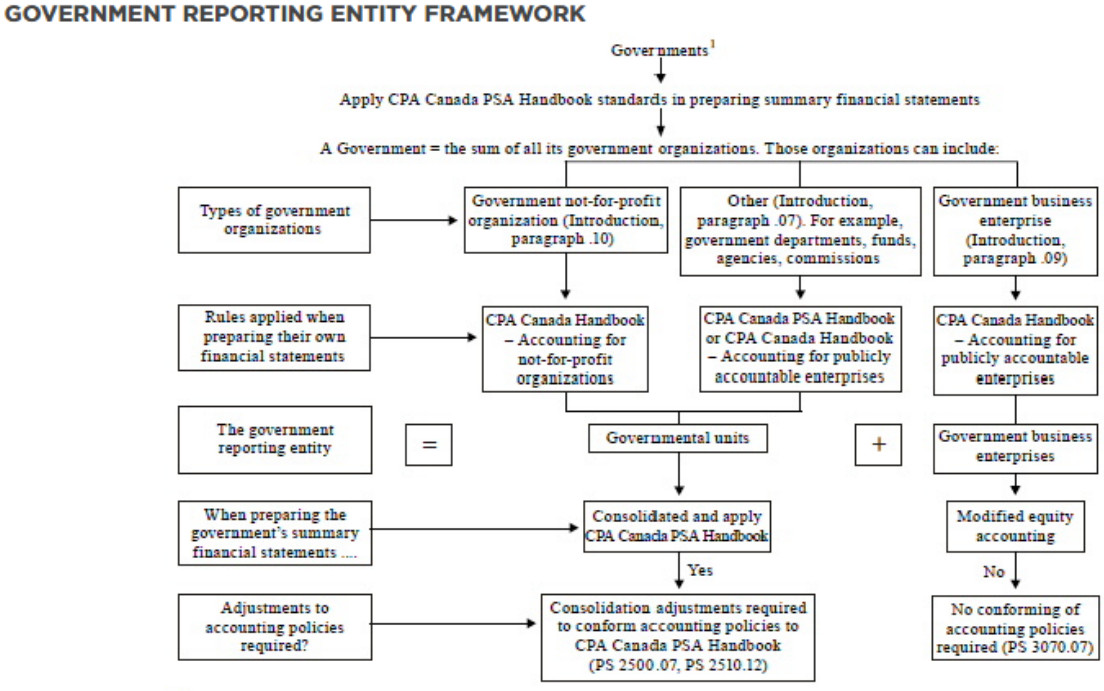
View Terms and Conditions and Privacy Policy

Help desk: Mon-Fri, 9am-5pm ET 1-866-256-6842 Contact Us

© 2001-2016, EYEP and/or E&Y LLP and/or CPA Canada. All rights reserved.

PSAB Regulatory Asset Recognition

- IESO, which follows Canadian Public Sector Accounting Standards (PSAB), has two regulatory asset accounts in its financial statements of approximately $65.1M ($88.2M in 2015).
    - One asset account is for unrecovered smart metre expenses, while the other is for uncovered costs from readjustments to accounting statements in prior years due to IESO adopting PSAB in the beginning of 2011.
        - The majority of the unrecovered PSAB costs deal with changes in pension and other post-employment benefits that led to previously unrecognized losses.
- PSAB (The latest December 2014 version) has no standards for regulatory assets.
- PSAB states that other government reporting entities (this includes IESO, as not a GBE) could consider the CPA Handbook – Part I for standard setting if PSAB does not meet financial statement user needs.
    - CPA Handbook – Part I is Canadian GAAP which is essentially International Financial Reporting Standards that have been adopted by the Accounting Standards Board after an approval process.
    - *The policy of the Accounting Standards Board is to adopt International Financial Reporting Standards without modification* (From CPA Handbook Part I, Introduction, 2017 Edition)
- Governmental units are included in a government's financial statements after their accounting policies have been conformed to those of the government.
    - Need to confirm if IESO, on consolidation in Provincial accounts, has the regulatory assets recognized.
- Even if IESO is allowed to recognize regulatory assets, unlikely that the Province can recognize this upon consolidation:



Supporting Evidence – from PSAB standards and IESO 2016 Financial statement

IESO

- IESO's financial statements are prepared on a going concern basis and in accordance with Canadian public sector accounting standards (PSAB) and reflect the following significant accounting policies.
- IESO, which is consolidated line-by-line with the Province, has two regulated assets recognised
    - **Unrecovered smart metering expenses:** The smart metering expenses result from the IESO's role as the Smart Metering Entity. As such, the IESO funds its SME operating costs and capital investment in the meter data management/repository (MDM/R) through fees from users of smart meters in Ontario. The OEB approves the Smart Metering Entity charge and the charge is intended to cover the costs of developing and operating the MDM/R.
    - **Unrecovered PSAB transition items**: The unrecovered PSAB transition items result from the IESO's adoption of Canadian public sector accounting standards effective January 1, 2011. The adoption of PSAB was accounted for by retroactive application with restatement of prior periods subject to the requirements in Section PS 2125, First-time Adoption by Government Organizations.

Regulated assets consist of the following:

As of December 31 (in thousands of Canadian dollars)	2016	2015
	$	$
Unrecovered smart metering expenses	21,623	40,849
Unrecovered PSAB transition items	43,441	47,353
Closing balance	**65,064**	**88,202**

- As of January 1, 2016, the IESO changed its accounting policy regarding the recognition of assets and liabilities subject to rate regulation. The change was made to better reflect the economic substance of certain types of expenses that may not be directly recovered through the normal revenue requirement model.
- IESO also has an OEB approved regulatory deferral account:
    - Historically, the IESO's approved regulatory deferral account balance has been maintained at a maximum of $10.0 million ($5.0 million each of the former IESO and OPA for a combined $10.0 million).

Introduction to PSAB

.19 For purposes of preparing general purpose financial statements, other government organizations would normally apply the standards for governments in the PSA Handbook. When these standards do not meet their financial statement users' needs, the standards applicable to publicly accountable enterprises in Part I of the CPA Canada Handbook – Accounting should be considered. The standards determined to be most appropriate should be disclosed and consistently applied.

.20 Determining the most appropriate standards for other government organizations requires the application of professional judgment. Factors to consider in assessing users' needs, in addition to those outlined in FINANCIAL STATEMENT CONCEPTS, Section PS 1000, include, but are not limited to, whether an organization:

(a) has issued, or is in the process of issuing, debt or equity instruments that are, or will be, outstanding and traded in a public market (for example, a domestic or foreign stock exchange or an over-the-counter market, including local and regional markets);

(b) holds assets in a fiduciary capacity for a broad group of outsiders as one of its primary businesses;

(c) has commercial-type operations and substantially derives its revenue from these activities; and

(d) receives limited government assistance on an ongoing basis.

The degree of importance of these factors further depends on the particular circumstances in each case, including the nature of an organization's mandate and considering its purpose, objectives and limitations. In some situations, a particular factor may provide a high degree of evidence of the appropriateness of a particular set of standards whereas, in other situations, the importance of the same factor may not be as significant. Positive responses to one or a combination of these factors would indicate standards applicable to publicly accountable enterprises in Part I of the CPA Canada Handbook – Accounting may be more appropriate.

PS 1000 - CONTEXT OF GOVERNMENT FINANCIAL STATEMENTS

.07 *A government financial report should present information that is useful in evaluating the government's financial condition at the end of the accounting period and its financial performance during the accounting period. Government financial statements are a fundamental component of a government financial report.* [APRIL 2005]

.35 **Assets** are economic resources controlled by a government as a result of past transactions or events and from which future economic benefits are expected to be obtained.

.36 Assets have three essential characteristics:

(a) they embody future economic benefits that involve a capacity, singly or in combination with other assets, to provide goods and services, to provide future cash inflows, or to reduce cash outflows;

(b) the public sector entity can control the economic resource and access to the future economic benefits; and

(c) the transaction or event giving rise to the public sector entity's control has already occurred.

.37 An item is not an asset of a government if it lacks one or more of the essential characteristics listed in the preceding paragraph. Thus, for example, an item does not qualify as an asset of a government if the item involves:

(a) no future economic benefit;

(b) future economic benefit, but the government cannot obtain it; or

(c) future economic benefit that the government may obtain, but the events or circumstances that give the government control of the benefit have not yet occurred.

Ontario

Province of Ontario Credit Ratings

A credit rating is a current assessment of the creditworthiness of a borrower with respect to a specified obligation. It indicates the capacity and willingness of a borrower to pay interest and principal in a timely manner.

The Province of Ontario's current ratings are as follows:

	Long-term	Short-term
Moody's Investors Service	Aa2	P-1
Fitch	AA-	F1+
DBRS	AA (low)	R-1 (mid)
Standard & Poor's	A+	A-1+

Long-term Ratings are also assigned an outlook indicating the likely direction of an issuer's rating over the intermediate term, typically ranging from 6 months to 2 years. The outlook is denoted (P) for Positive Outlook, (N) for Negative Outlook or (D) for Developing Outlook. No identifier is attached to the rating if the outlook is Stable.

Short-term Ratings are for debt maturities of less than one year. Ratings are graded into several categories, ranging from the highest-quality obligations to default.

ABOUT OFA

Mandate and Corporate Governance
Board of Directors
CEO's Corner
Divisions
Annual Reports
Travel and Hospitality Expense Disclosure

BORROWING AND DEBT

Foreign Denominated Bonds
Borrowing Program
Bond Database
Debt Portfolio & History
Debt Issuance Programs
Risk Management

INVESTOR RELATIONS

Quarterly Finances
Meetings and Events
Credit Ratings
Regulatory Filings and Proxy Rates

GREEN BONDS

Overview
Use of Proceeds & Reporting
Assurance
Issues
Newsletter & Press Releases
Projects
External Links

Ontario Savings Bonds | Aboriginal Loan Guarantee Program | Contact OFA | Email Alerts | Links | Open Data Directive

Visit the Ontario Ministry of Finance: www.fin.gov.on.ca/en/

Connect with OFA:

Legal Disclaimer | Privacy | Accessibility | Copyright © Queen's Printer of Ontario 2017

PROVINCIAL GUARANTEE FAIR HYDRO PLAN – ISSUES AND ~~NEXT STEPS~~OTHER FINANCING ISSUES

Formatted: Bottom: 0.44"

Formatted: No underline

Provincial Guarantee ~~–~~ OPG Proposed Draft Term Sheet Summary

OFA received the latest OPG proposed re-draft of a Provincial support agreement term sheet, which would provide a Provincial step-in protection for the Financing Entity's debt under an activation event.

Provincial Guarantee Activation Events:

- Decisions by the Legislative Assembly – Repeal, amendments to statute ~~and/or financing transaction agreements~~, adverse decisions of the courts and change in the organizational structure of IESO, adversely impacting the Financing Entity.

Guarantee:

- The Province to take over ~~the all of~~ the obligations of the Financing Entity including payments to service providers – trustees, auditors, rating agencies, etc. Provincial guarantee will continue until all obligations of the Financing Entity are discharged.

Commented [RK1]: Would it be important to note that there would, as such, be no penalty, fee, "make-whole" etc.

- Pending MOF Legal [and Blake's] review and additional drafting, OFA generally agree to the concept in the proposed draft. ~~[Insert bullet on status – e.g., generally agreed to in concept. Legal drafting to come.]~~

Commented [JK2]: Assuming this is OK with everyone.

Recommendation:

Formatted: Normal, No bullets or numbering

- [Assuming we are moving ahead with the guarantee – pending MOF Legal's review.]

Other Discussions and Considerations

There also continue to be discussions on other aspects, such as what had been referred to as servicing or performance guarantees, and on the "warehousing" financing.

Commingling Risk:

- Add bullet to define the issue. Could note that this has been referred to in the past as a "performance guarantee" issue, as people in the briefing may recall that issue.

Commented [JK3]: Will leave this to Ken and Anna to draft as I have not been close to the 'other' discussion items.

- OPG proposes that IESO ~~to~~ would provide either a Letter of Credit or assume responsibility for this risk amounting to the expected Clean Energy Adjustment from the non-investment Grade LDCs over the next 45-60 days. IOPG estimates the L/C to be approximately $50 million.

Warehouse Takeout Risk:

- [Insert bullet to define the issue.]

Commented [JK4]: Same as above.

- Warehouse Default Event – failure to repay the warehouse facility at the end of the commitment term of 12 to 24 months.

Commented [RK5]: Likely should note the take-out periodicity too – every 3-6 months – which would indicate when an issue might become readily apparent.

-
- Incurs a cost to the ratepayer in the form of higher interest rates from the step –up pricing clause in the Financing Entity's agreement with the banks providing the warehouse facility.

Business Issues to be resolved:

Formatted: Font: Bold, Underline

- IESO expressed reluctance on issuing either an L/C or assuming responsibility for the commingling risk. Counter to FHP direction to-date wrt IESO being relieved of a role once the regulatory asset is sold. Accounting would need to be considered.
- IESO to discuss internally and respond
  - ~~Potential legal issues – MOF and Energy Legal along with Blake's to review Term Sheet~~

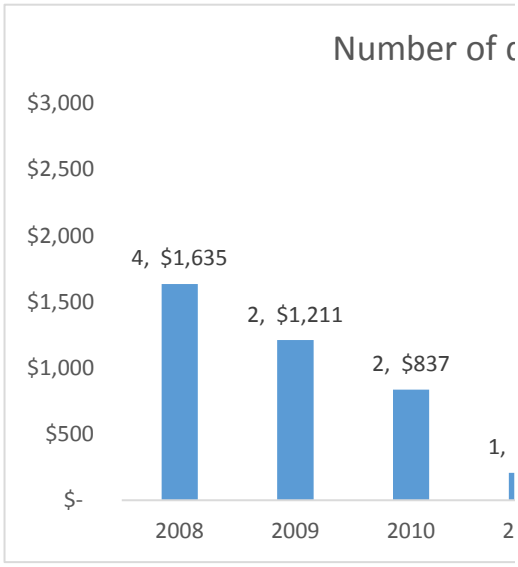
Next Steps:

- MOF and Energy Legal along with Blake's to review Term Sheet
- Respond to OPG with issues
- Provide OPG with a timeline for the up-coming TB submission on the guarantee so that deadlines are established for resoling outstanding issues and completing a draft version of the guarantee.

Ontario Financing Authority
August 15, 2017

Formatted: Indent: Left: 0.5", No bullets or numbering
Formatted: Font: Bold, Underline
Formatted: Space After: 0 pt, Line spacing: single
Formatted: Font: Bold
Formatted: Font: Bold

	2008	2009	2010
Size	$ 1,635	$ 1,211	$ 837
Number of deals	4	2	2



Recent New Issue

ESOT DEF 2016-A ($1,294m) Duke Energy Florida IncRBC, GUG Jun 15, 2016

Class	$(M)	WAL	MO	SP	FI
A2018	183	2	Aaa	AAA	AAA
A2021	150	5	Aaa	AAA	AAA
A2026	436	10	Aaa	AAA	AAA
A2032	250	15.2	Aaa	AAA	AAA
A2035	275.29	18.7	Aaa	AAA	AAA

ESOT ENOI 2015-1 ($99m) Entergy CorporationCTI Jul 14, 2015

Class	$(M)	WAL	MO	SP	FI
A	98.73	4.97	Aa1	AAA	-

ESOT HGEMS 2014-A ($150m) State of HawaiiGSC Nov 4, 2014

Class	$(M)	WAL	MO	SP	FI
A1	50	3.05	Aaa	AAA	AAA
A2	100	10.21	Aaa	AAA	AAA

ESOT LCDA 2014-ELL ($244m) Louisiana Local Government Environmental Facilities and Co

Class	$(M)	WAL	MO	SP	FI
A	91.7	3	Aaa	AAA	-
B	152.15	8.91	Aaa	AAA	-

ESOT LCDA 2014-EGSL ($71m) Louisiana Local Government Environmental Facilities and Co

Class	$(M)	WAL	MO	SP	FI
-	71	6.73	Aaa	AAA	-

ESOT CMS 2014-A ($378m) Consumers Energy CompanyCTI, GSC Jul 14, 2014

Class	$(M)	WAL	MO	SP	FI
A	123.4	3	Aaa	AAA	-
A2	139.4	8	Aaa	AAA	-
A3	115.2	12.26	Aaa	AAA	-

ESOT UDSA 2013-T ($483m) Long Island Power AuthorityMOS, GSC Dec 12, 2013

Class	$(M)	WAL	MO	SP	FI
T1	100	4.91	Aaa	AAA	AAA
T2	100	5.92	Aaa	AAA	AAA
T3	100	6.79	Aaa	AAA	AAA
T4	182.93	8.77	Aaa	AAA	AAA

ESOT AEPWV 2013-1 ($380m) Appalachian Power CompanyMOS, RBS Nov 6, 2013

Class	$(M)	WAL	MO	SP	FI
A1	215.8	5	Aaa	AAA	-
A2	164.5	12.24	Aaa	AAA	-

ESOT AEPOH 2013-1 ($267m) Ohio Power CoCTI, RBS Jul 23, 2013

Class	$(M)	WAL	MO	SP	FI
A1	164.9	2.25	Aaa	AAA	-
A2	102.51	5.08	Aaa	AAA	-

ESOT FEOH 2013-1 ($890m) FirstEnergy OhioCTI, CAG, GSC Jun 12, 2013

Class	$(M)	WAL	MO	SP	FI
A1	111.83	1.6	-	-	-
A1	111.97		Aaa	AAA	AAA
A2	70.31	5.07	-	-	-
A2	70.47		Aaa	AAA	AAA
A3	262.56	13.69	-	-	-
A3	262.48		Aaa	AAA	AAA

ESOT AEPTC 2012-1 ($800m) Appalachian Power CompanyMOS, CTI Mar 7, 2012

Class	$(M)	WAL	MO	SP	FI
A1	307.3	3	Aaa	AAA	AAA
A2	179.4	7	Aaa	AAA	AAA
A3	313.3	10.76	Aaa	AAA	AAA

ESOT CNP 2012-1 ($1,695m) CenterPoint Energy Houston Electric LLCCTI, MOS Jan 11, 201

Class	$(M)	WAL	MO	SP	FI

A1	606.22	3	Aaa	AAA	AAA
A2	407.52	7	Aaa	AAA	AAA
A3	681.26	10.81	Aaa	AAA	AAA

ESOT ELL 2011-A ($207m) Entergy CorporationMOS Sep 15, 2011

Class	$(M)	WAL	MO	SP	FI
A1	207.16	5.38	Aaa	AAA	AAA

ESOT EAI 2010-A ($124m) Entergy CorporationMOS Aug 11, 2010

Class	$(M)	WAL	MO	SP	FI
A1	124.1	5.45	Aaa	AAA	AAA

ESOT EGSL 2010-1 ($713m) Entergy CorporationCTI Jul 15, 2010

Class	$(M)	WAL	MO	SP	FI
A1	97	3	Aaa	AAA	AAA
A1	112	2	Aaa	AAA	AAA
A2	60	7	Aaa	AAA	AAA
A2	111	5	Aaa	AAA	AAA
A3	87.1	10.4	Aaa	AAA	AAA
A3	121	8	Aaa	AAA	AAA
A4	124.9	10.9	Aaa	AAA	AAA

ESOT CNP 2009-1 ($665m) CenterPoint Energy Houston Electric LLCGSC Nov 18, 2009

Class	$(M)	WAL	MO	SP	FI
A1	224.79	3	Aaa	AAA	AAA
A2	160.15	7	Aaa	AAA	AAA
A3	279.92	10.82	Aaa	AAA	AAA

ESOT ETRF 2009-1 ($546m) Entergy CorporationMOS Oct 30, 2009

Class	$(M)	WAL	MO	SP	FI
A1	182.5	3	Aaa	AAA	AAA
A2	144.8	7	Aaa	AAA	AAA
A3	218.6	10.87	Aaa	AAA	AAA

ESOT EGSL 2008-A ($278m) Entergy CorporationCTI Aug 21, 2008

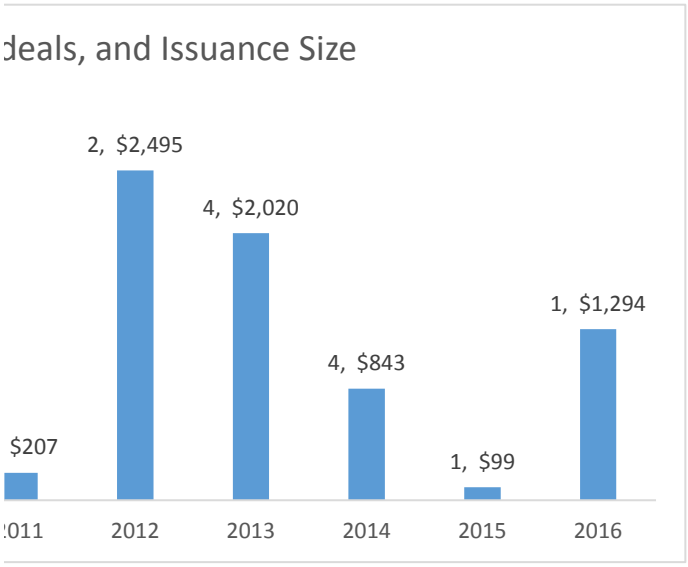
Class	$(M)	WAL	MO	SP	FI
A1	103	2.66	Aaa	AAA	AAA
A2	90	6.24	Aaa	AAA	AAA
A3	85.4	8.97	Aaa	AAA	AAA

ESOT EGSL 2008-A ($688m) Entergy CorporationCTI Jul 22, 2008

ESOT CLECO 2008-1 ($181m) Cleco Corporate Holdings LLCCSG Feb 28, 2008

Class	$(M)	WAL	MO	SP	FI
A1	113	5	Aaa	AAA	AAA
A2	67.6	10.58	Aaa	AAA	AAA

2011	2012	2013	2014	2015	2016
$ 207 1	$ 2,495 2	$ 2,020 4	$ 843 4	$ 99 1	$ 1,294 1



DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD
-	-	-	Fixed	Tsy	-	-	1.20%	1.20%
-	-	-	Fixed	Tsy	-	-	1.73%	1.73%
-	-	-	Fixed	Tsy	-	-	2.54%	2.54%
-	-	-	Fixed	Tsy	-	-	2.86%	2.86%
-	-	-	Fixed	Tsy	-	-	3.11%	3.11%

DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD
-	-	-	Fixed	Swaps	-	90	-	2.67%

DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD
-	-	-	Fixed	Swaps	-	30	1.47%	1.47%
-	-	-	Fixed	Swaps	-	75	3.24%	3.24%

DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD
-	-	-	Fixed	Swaps	-	51	1.66%	1.67%
-	-	-	Fixed	Swaps	-	77	3.24%	3.24%

DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD
-	-	-	Fixed	Swaps	-	70	2.86%	2.86%

DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD
-	-	-	Fixed	Swaps	30a	27	1.33%	1.33%
-	-	-	Fixed	Swaps	65a	57	2.96%	2.96%
-	-	-	Fixed	Swaps	75a	70	3.53%	3.53%

DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD
-	-	-	Fixed	-	-	50	2.04%	2.04%
-	-	-	Fixed	-	-	63	2.55%	2.55%
-	-	-	Fixed	-	-	73	2.94%	2.93%
-	-	-	Fixed	-	-	75	3.44%	3.43%

DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD
-	-	-	Fixed	-	-	54	-	-
-	-	-	Fixed	-	-	70	-	-

DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD
-	-	-	Fixed	Swaps	-	40	0.96%	0.96%
-	-	-	Fixed	Swaps	-	52	2.05%	2.05%

DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD
-	-	-	Fixed	EDSF	-	25	0.68%	0.68%
-	-	-	Fixed	EDSF	-	25	0.68%	0.68%
-	-	-	Fixed	Swaps	-	40	1.73%	1.73%
-	-	-	Fixed	Swaps	-	40	1.73%	1.73%
-	-	-	Fixed	Swaps	-	70	3.45%	3.45%
-	-	-	Fixed	Swaps	-	70	3.45%	3.45%

DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD
-	-	-	Fixed	Swaps	-	20	0.88%	0.88%
-	-	-	Fixed	Swaps	-	40	1.98%	1.98%
-	-	-	Fixed	-	-	70	2.84%	2.84%

DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD

-	-	-	Fixed	Swaps	-	18	0.90%	0.90%
-	-	-	Fixed	Swaps	-	55	2.16%	2.16%
-	-	-	Fixed	Swaps	-	90	3.02%	3.03%

DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD
-	-	-	Fixed	-	-	75	2.04%	2.04%

DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD
-	-	-	Fixed	Swaps	-	55	2.30%	2.31%

DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD
-	-	-	Fixed	Swaps	-	30	1.52%	1.53%
-	-	-	Fixed	Swaps	-	25	1.11%	1.12%
-	-	-	Fixed	Swaps	-	70	3.22%	3.22%
-	-	-	Fixed	Swaps	-	50	2.47%	2.47%
-	-	-	Fixed	Swaps	-	95	3.99%	4.00%
-	-	-	Fixed	Swaps	-	73	3.45%	3.45%
-	-	-	Fixed	Swaps	-	85	3.96%	3.96%

DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD
-	-	-	Fixed	Swaps	-	20	1.83%	1.83%
-	-	-	Fixed	Swaps	-	45	3.46%	3.46%
-	-	-	Fixed	Swaps	-	70	4.24%	4.24%

DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD
-	-	-	Fixed	Swaps	-	20	2.12%	2.12%
-	-	-	Fixed	Swaps	-	40	3.65%	3.65%
-	-	-	Fixed	Swaps	-	65	4.39%	4.38%

DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD
-	-	-	Fixed	Swaps	-	145	4.95%	4.95%
-	-	-	Fixed	Swaps	-	170	5.88%	5.88%
-	-	-	Fixed	Swaps	-	210	6.55%	6.54%

DR	KR	MS	FX/FL	BNCH	GDNC	SPRD	CPN	YLD
-	-	-	Fixed	Swaps	-	80	4.41%	4.41%
-	-	-	Fixed	Swaps	-	115	4.41%	4.41%

Price
99.999
99.998
99.996
99.995
99.994

Price
99.9756

Price
-
-

Price
-
-

Price
-

Price
-
-
-

Price
99.999
99.995
99.997
99.994

Price
-
-

Price
99.9988
99.9987

Price
99.9999
99.9999
99.9954
99.9954
99.9979
99.9979

Price
99.9997
99.9997
99.9995

Price

99.9999
99.9998
99.9993

Price
99.9835

Price
99.9712

Price
99.9794
99.9849
99.973
99.97
99.883
99.9621
99.9507

Price
99.9973
99.9907
99.9841

Price
99.9933
99.9704
99.9249

Price
99.9458
99.9396
99.9728

Price
99.9379
99.9379

Ontario

MINISTRY OF
ENERGY

Rate Mitigation Plan Options

Working Draft

January 2017

CONFIDENTIAL DRAFT

Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity costs for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8% rebate ($11/month savings), updating RRRP ($45/month savings), expanding ICI (up to one-third savings for participants) and suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings).

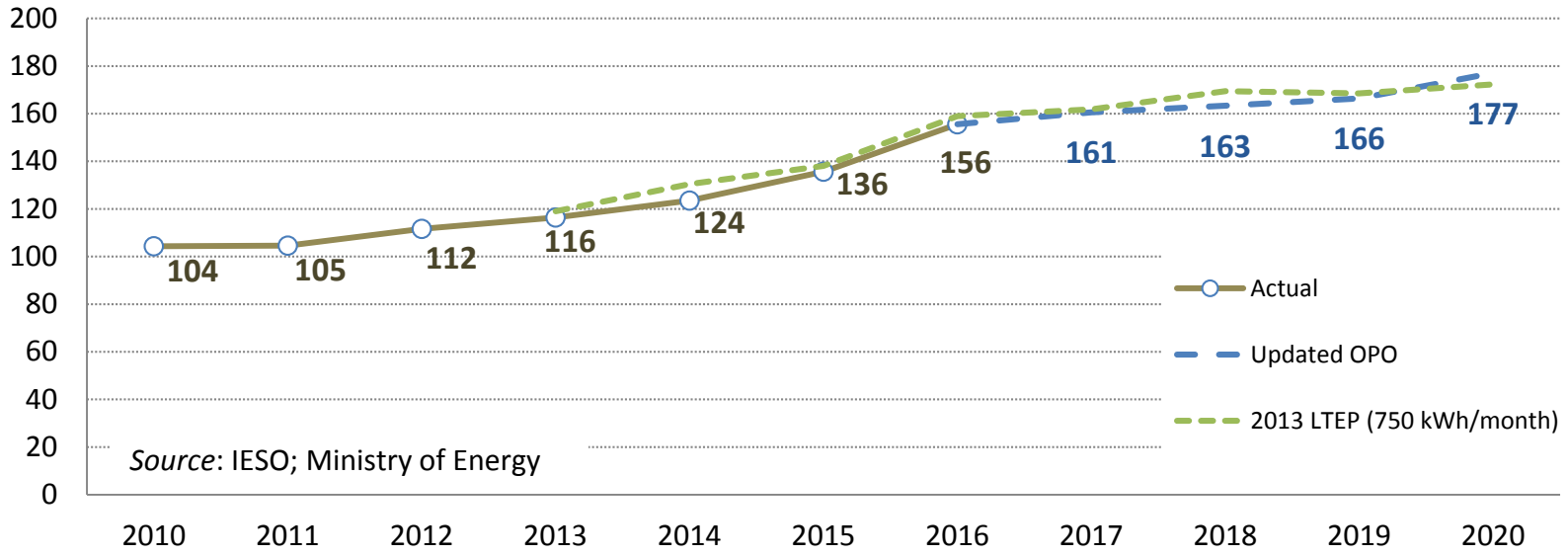
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

Context – Residential Electricity Prices

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bill is currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecast.

Typical Residential Electricity Bills
Historical and Forecast in $/month

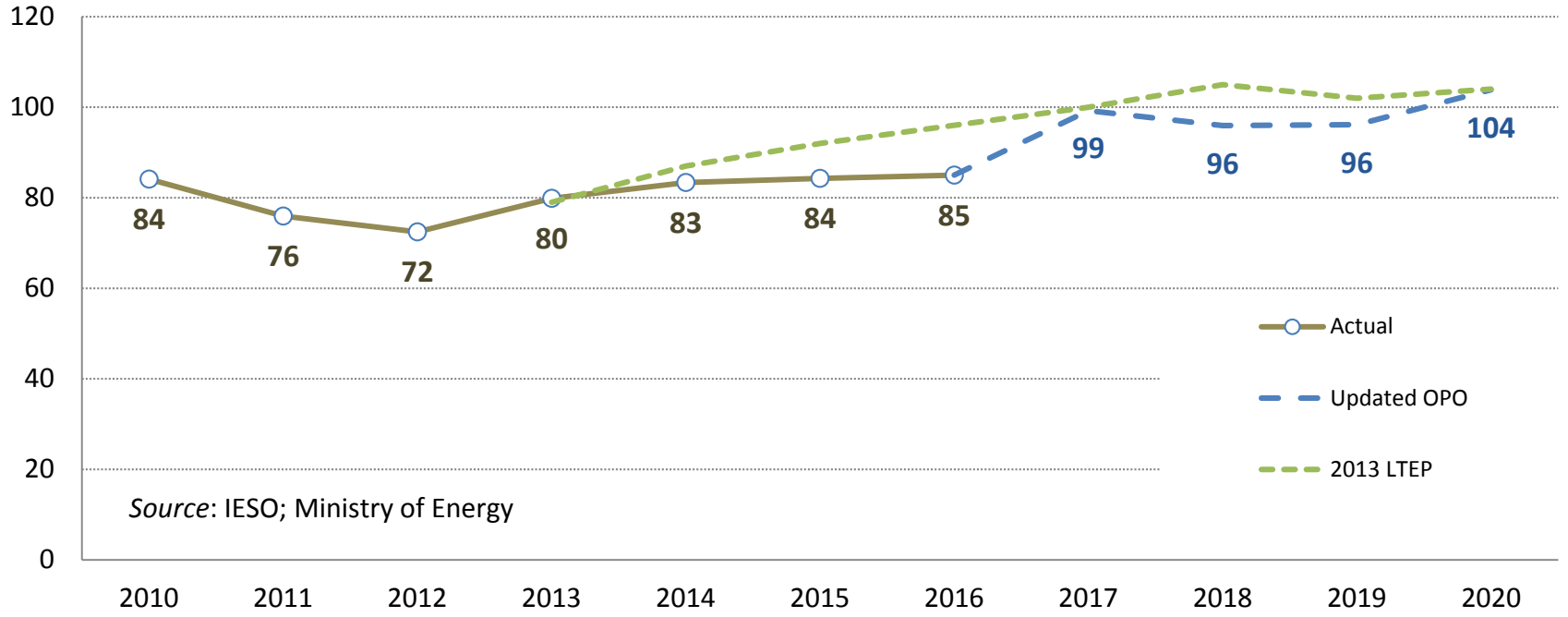


Note: The 2013 LTEP forecast for residential bills was based on 800 kWh/month without RRRP or electric heating; the above has been rebased to 750 kWh/month for comparison purposes. Typical residential are based on Toronto Hydro. The updated OPO forecast above includes the 8% rebate to offset the provincial portion of HST, ICI expansion and RRRP expansion.

Context – Large Industrial Electricity Prices

- Industrial electricity prices continue to be a concern for many businesses.
  - **Note:** The typical industrial electricity price is currently below the 2013 LTEP forecast.

Typical Class A Electricity Prices
Historical and Forecast in $/MWh



Note: The 2013 LTEP forecast for industrial reflects a transmission connected Class A electricity consumer. The updated OPO forecast above includes ICI expansion and RRRP expansion.

Broad Policy Themes / Rationale

- In recognition of the costs borne by ratepayers related to the to decarbonizing and modernizing the province's electricity sector:
  1. Provide significant and immediate rate relief through cost deferral of the global adjustment (GA).

  2. Provide a greater focus on vulnerable consumers by funding electricity support programs, such as the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Protection, (RRRP) through the tax-base. In addition, provide greater support for lower income Ontarians by enhancing the OESP, etc.

  3. Empower energy agencies to increase cost effectiveness and improve efficiency by having – Independent Electricity System Operator (IESO) modernize Ontario's electricity market through electricity market renewal initiatives, the Ontario Energy Board (OEB) identify opportunities for future LDC cost reductions/efficiencies and work with Ontario Power Generation (OPG) to find further efficiencies in operations and pass on savings to ratepayers.

  4. Enhance the existing 8% rebate that went into effect January 1, 2017.

Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

$/750kWh	2016	2017	2018	2019	2020	2021	2022	Timing of Benefit
1. Global Adjustment (GA) Financing (Moderate)	-	17.49	15.01	12.49	14.91	6.32	4.03	Immediate
2. Fund Electricity Support Programs Through the Tax-Base								
a. Rural or Remote Rate Protection (RRRP)	-	1.58	1.62	1.66	1.70	1.75	1.79	Immediate
b. Ontario Electricity Support Program (OESP)*	-	0.83	0.83	0.83	0.83	0.83	0.83	Immediate
c. Low-Income Conservation	-	-	-	-	-	-	-	
d. First Nations Rate	-	-	-	-	-	-	-	
3. Empowering Energy Agencies To Increase Cost Effectiveness and Improve Efficiency								
a. IESO – Market Renewal	-	-	-	-	-	1.00	1.03	Long-Term
b. OEB – LDC Efficiencies/Rates*	-	TBD	TBD	TBD	TBD	TBD	TBD	Medium-Term
c. OPG – Operational Efficiencies	-	0.71	0.89	1.08	1.22	1.35	1.24	Immediate
4. Enhanced Tax-based RPP Rebate (5%)	-	7.04	7.17	7.31	7.77	7.61	7.83	Immediate

***Note**: Savings based on currently approved OESP rate set by OEB.
Note: The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Class B includes small-medium enterprises (SMEs).

Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

$/MWh	2016	2017	2018	2019	2020	2021	2022	Timing of Benefit
1. Global Adjustment (GA) Financing (Moderate)	-	14.49	12.43	10.33	12.35	5.23	3.33	Immediate
2. Fund Electricity Support Programs Through the Tax-Base								
a. RRRP	-	2.10	2.15	2.21	2.26	2.32	2.38	Immediate
b. OESP*	-	1.10	1.10	1.10	1.10	1.10	1.10	Immediate
c. Low-Income Conservation	-	-	-	-	-	-	-	
d. First Nations Rate	-	-	-	-	-	-	-	
3. Empowering Energy Agencies To Increase Cost Effectiveness and Improve Efficiency								
a. IESO – Market Renewal	-	-	-	-	-	1.34	1.38	Long-Term
b. OEB – LDC Efficiencies / Rates*	-	TBD	TBD	TBD	TBD	TBD	TBD	Medium-Term
c. OPG – Operational Efficiencies	-	0.59	0.74	0.89	1.01	1.12	1.03	Immediate
4. Enhanced Tax-based RPP Rebate (5%)	-	-	-	-	-	-	-	Immediate

***Note:** Savings based on current OESP charge as set by OEB.

Fiscal Impacts

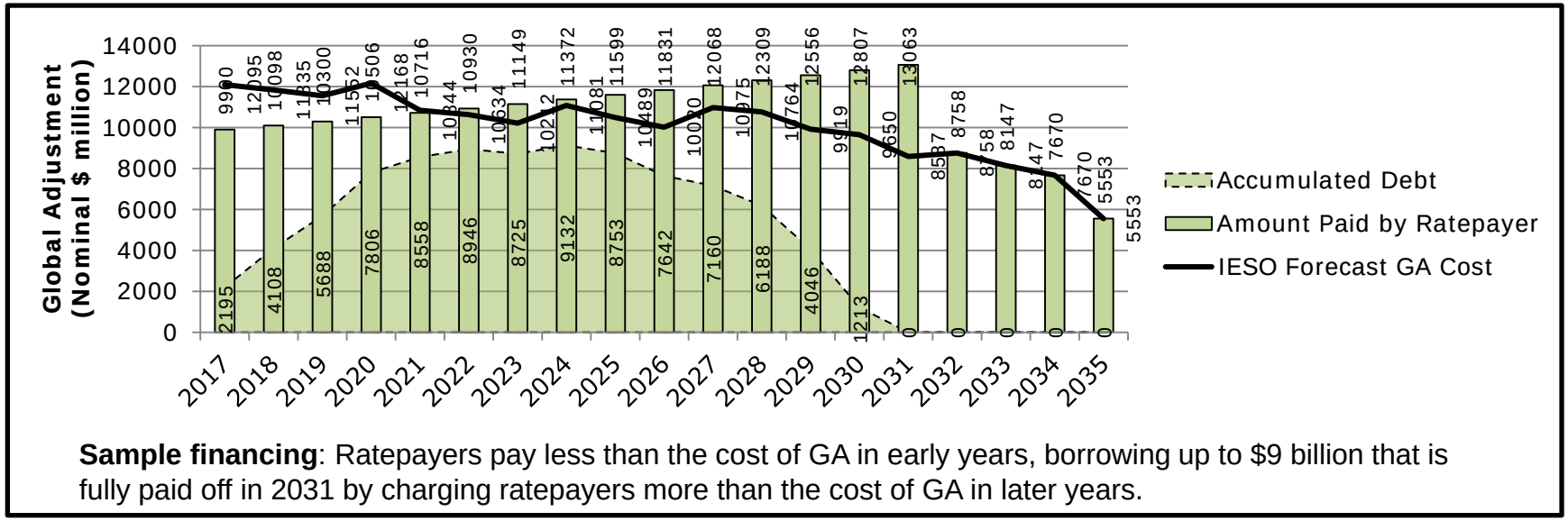
$M	2016-17	2017-18	2018-19	2019-20	2020-21
1. Global Adjustment (GA) Financing (Moderate)	TBC	TBC	TBC	TBC	TBC
2. Fund Electricity Support Programs Through the Tax-Base*					
a. RRRP	-	$457	$469	$479	$493
b. OESP	-	162	225	279	323
c. Low-Income Conservation	-	60	60	60	60
d. First Nations Rate	-	18	18	18	18
3. Empowering Energy Agencies To Increase Cost Effectiveness and Improve Efficiency					
a. IESO – Market Renewal	-	-	-	-	-
b. OEB – LDC Efficiencies / Rates	-	-	-	-	-
c. OPG – Operational Efficiencies**	-	-	-	-	-
4. Enhanced Tax-based RPP Rebate (5%)	169	699	679	732	724

***Note:** Includes costs of program expansion and various assumptions as detailed on relevant slides.
**** Note:** Risk to fiscal plan of up to $240 million annually (foregone net income) if OPG is unable to reach more aggressive operational efficiency targets.

Source: Ministry of Finance, Energy

1. Global Adjustment (GA) Financing

- It is proposed that the amount of global adjustment (GA) paid by ratepayers in each year over the forecast period is set at a fixed amount and money is borrowed to make up the remainder of the GA cost in each year.
- Starting on January 1, 2017, the amount of GA paid by ratepayers is set at a value lower than the true cost of GA in 2017 and is increased according to a pre-defined schedule until the debt has been paid off.
- GA costs will be “smoothed” over time by lowering costs in the short term and increasing costs in the long term.
- In some scenarios, the amount of GA paid by ratepayers *above* the expected actual cost of GA is capped so as to limit large increases in the cost of electricity in any given year.
- All analysis is based on forecasts from Independent Electricity System Operator (IESO), assumes a 5% annual borrowing interest rate and an inflation rate of 2% per year.



Sample financing: Ratepayers pay less than the cost of GA in early years, borrowing up to $9 billion that is fully paid off in 2031 by charging ratepayers more than the cost of GA in later years.

1. GA Financing – Options

1a. Moderate / GA Financing

- The amount of GA paid by ratepayers in 2017 is lowered by $3.2 and $3.4 billion below the true cost of GA and increases at 2% in each subsequent year until the total amount of money borrowed is paid off in 25 and 30 years respectively.
- Future GA over-payments above the true cost of GA are capped at $2 billion to limit electricity cost increases in any given year.

1b. Moderate / GA Financing with Delayed Increase

- The starting GA payment from all ratepayers in 2017 is lowered by $1.1 billion, ratepayer payments *decrease* in the short term to keep residential bills relatively flat, then increases at 3% each year – up to a maximum of $2 billion above the true cost of GA – until the borrowed money is paid back over a 25 and 30 year financing period respectively.

Low / GA Financing (see in Appendix)

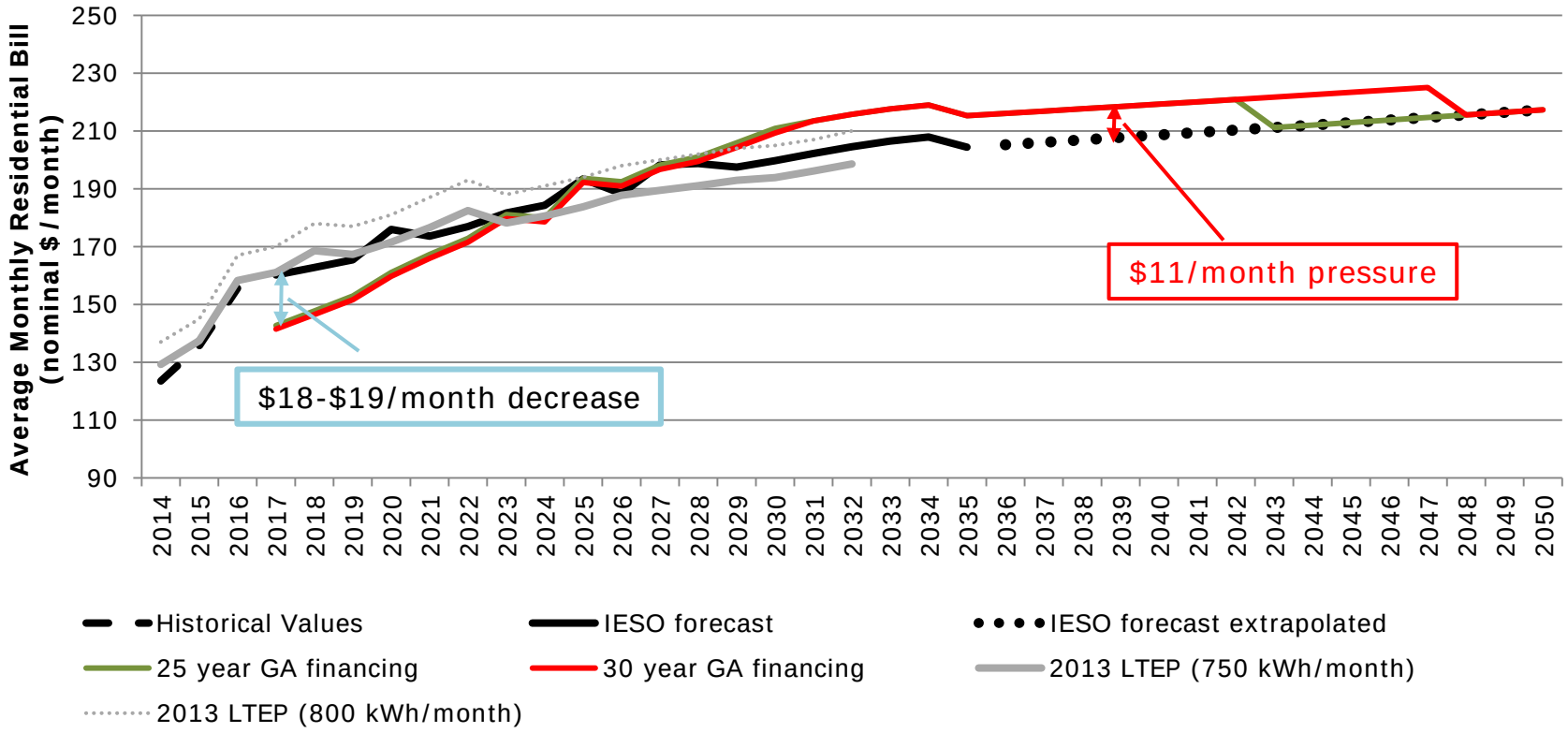
- The amount of GA paid by ratepayers in 2017 is lowered by $2.5 billion below the true cost of GA and increases in each subsequent year until the total amount of money borrowed is paid off.
- Future GA over-payments above the true cost of GA are capped at $2 billion to limit electricity cost increases in any given year.

High / GA Financing (see in Appendix)

- The amount of GA paid by ratepayers in 2017 is lowered by $4.4 and $5 billion below the true cost of GA and increases at 2% in each subsequent year until the total amount of money borrowed is paid off in 25 and 30 years respectively.
- No limit is placed on the amount charged to ratepayers above the true cost of GA.

1a. Moderate / GA Financing – Impact on Residential Electricity Bills

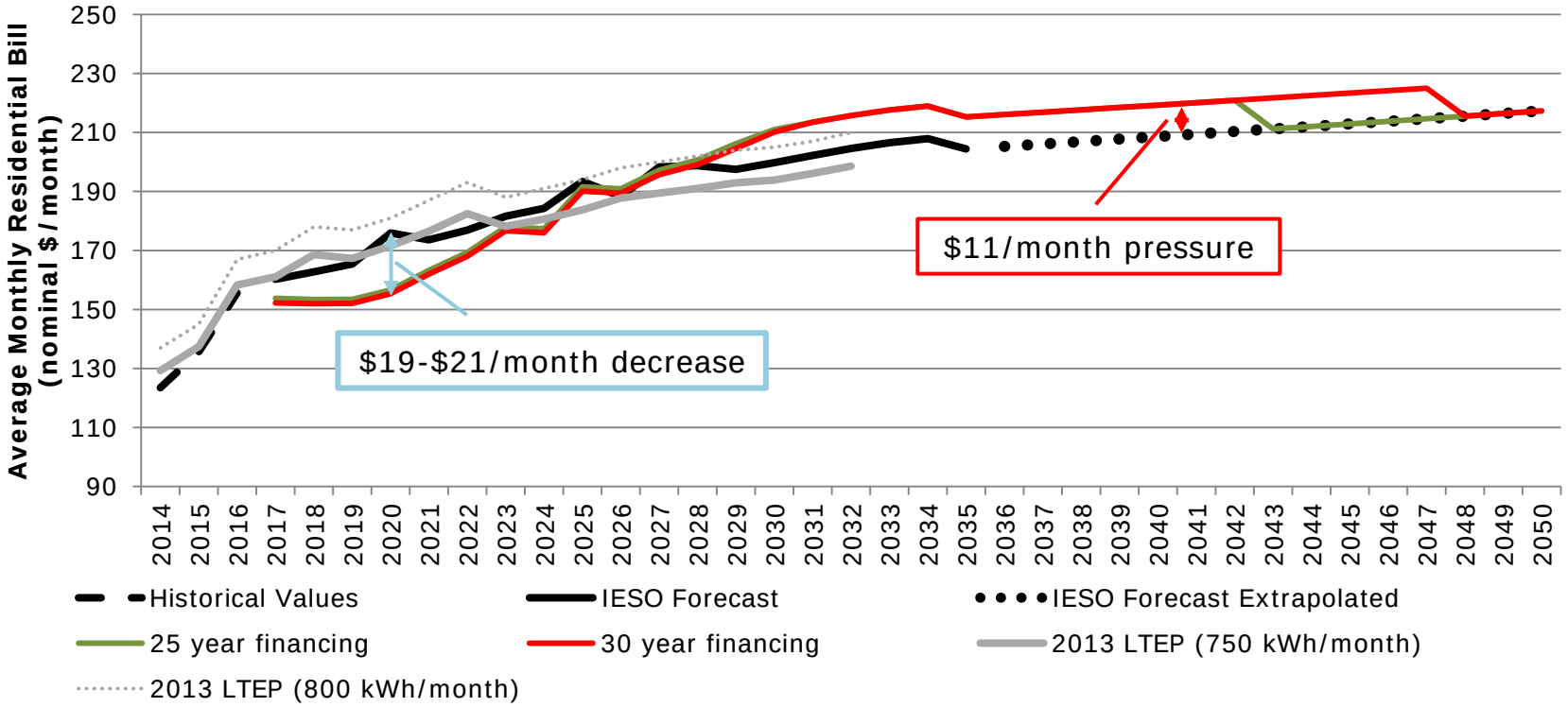
- In this scenario, the starting GA payment from all ratepayers in 2017 is lowered by $3.1 billion (green line) and $3.3 billion (red line) and increases at 2% each year – up to a cap of no more than $2 billion more than the true cost of GA in any year – until the borrowed money is paid back in 25 and 30 years respectively.



- By **borrowing up to $23 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $17-$19/month** at the cost of **increased future electricity bills over 14-19 years of up to $11/month** above the true cost of electricity production.

1b. Moderate / GA Financing with Delayed Increase in Payments – Impact on Residential Electricity Bills

- In this option, the starting GA payment from all ratepayers in 2017 is lowered by $1.1 billion, ratepayer payments *decrease* in the short term to keep residential bills relatively flat, then increases at 3% each year – up to a maximum of $2 billion above the true cost of GA – until the borrowed money is paid back over a 25 and 30 year financing period respectively.

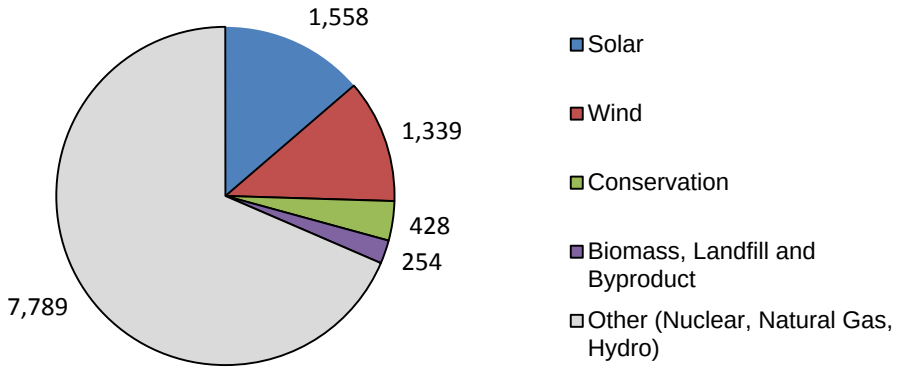


- By **borrowing up to $23 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $19-$21/month** at the cost of **increased future electricity bills over 14-19 years of up to $11/month** above the true cost of electricity production.

1. GA Financing – Cost Breakout

- The allocation of GA costs for most of 2016 are as follows:

GA costs year-to-date November 2016 ($ million)



- This cost breakdown will evolve over time as 2,181 MW of contracted generation comes online in the coming years.
- The proportion of GA costs is compared with the proportion of generation in the table below:

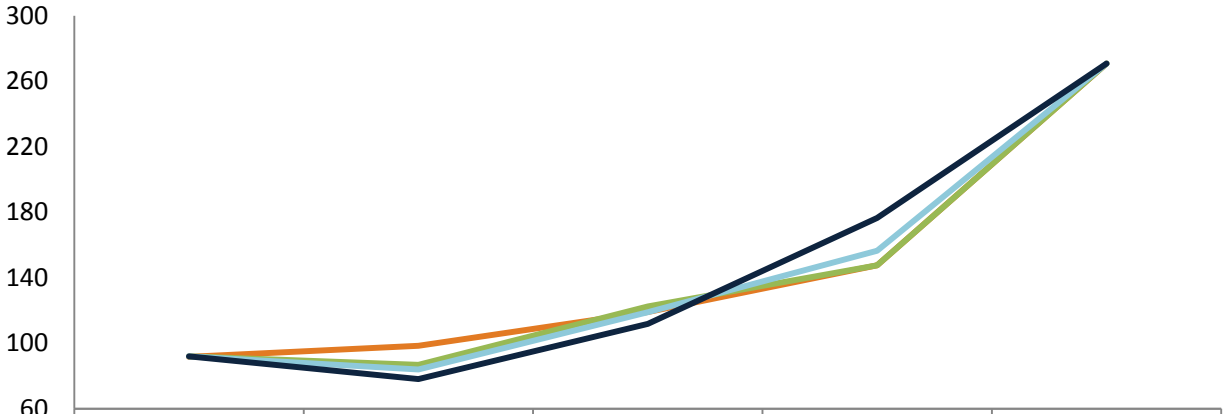
	Fraction of GA Cost	Fraction of Generation*
Solar	14%	0.3%
Wind	12%	6.0%
Biomass, Landfill and Byproduct	2%	0.3%
Conservation	4%	0.0%
Other (Nuclear, Natural Gas, Hydro)	69%	93.4%

***Note:** Only includes generation directly connected to the transmission system. Most solar generation, for example, is connected to the distribution system and is not represented in the generation column.

1. GA Financing – Impact of the Level of Financing on Large Industrial Electricity Consumers

- Below graph illustrates the estimated impact of the level of GA financing for an average Class A electricity consumer over a 25 year amortization period.

Estimated All-In Electricity Price
for Average Class A in $/MWh



	2016	2017	2027	2037	2047
Status Quo	92	98	119	148	271
Low Financing		87	122	148	271
Moderate Financing	-	84	119	157	271
High Financing		78	112	177	271

Note: Assumes that demand by industrial sector continues at average 2011-2015 levels. Please see the Appendix or more information on the estimated impact on large industrial electricity consumers.

1. GA Financing – Considerations

Considerations

Ratepayer:

- Borrowing money to finance the GA, while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.

- The GA financing proposal involves borrowing large amounts of money over a long period of time (16-30 years, depending on the scenario) to reduce electricity rates. This debt would be highly sensitive to interest rates which could extend repayment timelines or put significant pressure on electricity rates. A long-term interest rate of 5% is assumed for this analysis.

- GA and HOEP provide a natural hedge against each other – when one goes up, the other goes down – keeping total electricity costs relatively stable and predictable. Smoothing only the GA would lead to greater price volatility for consumers unless the schedule and amount of ratepayer payments was defined relative to the actual cost of GA.

- Some Class A consumers pay limited Global Adjustment and would receive little benefit under the financing proposal. These consumers also currently pay very low rates.

- Should Ontario electricity demand be lower than forecasted, the cost of paying off the debt will be spread over a smaller pool of consumption, further increasing future costs for individual ratepayers.

- In recognition that Class B electricity consumers pay the majority of GA costs, could limit GA cost reductions through financing to Class B consumers only.

1. GA Financing – Considerations (cont'd)

Considerations

Fiscal / Accounting:

- Further analysis is required on whether such changes to the financing of the GA would affect the Province's current accounting treatment for the GA and represent a potential fiscal risk. As such, early engagement with Legal Services Branch and Treasury Board Secretariat is advised.
  - It is unclear whether legislation could determine the manner in which this initiative is accounted for. Further work is required.

- Historically electricity sector financing has been conducted by the Ontario Financing Authority (i.e., managing OEFC's stranded debt and borrowing on behalf of IESO). Further consultation with the OFA will be required to determine the appropriate vehicle for additional borrowing.

- The significant amount of additional Provincial borrowing needed to finance the GA, and associated risks (e.g., interest rates, repayment timelines), could put pressure on the Province's credit rating and overall borrowing capacity. Further analysis is required and would suggest early engagement with the OFA through which money will be borrowed.

- The significant deferral of electricity system costs over a long time-horizon and associated interest costs may draw criticism from some stakeholders as creating a new "stranded debt" in the sector. **Note:** the Debt Retirement Charge (DRC) was removed from residential bills in 2016 and will be removed for remaining customers in 2018.

1. GA Financing – Guiding Principles (cont'd)

- Based on preliminary discussions with KPMG, the following key steps have been identified:
  - Create an "asset" (and confirm that it meets accounting requirements);
  - Identify who will hold the asset(s), this could include:
    - Province (e.g., OEFC, etc);
    - IESO; or
    - LDCs.
  - Determine the source of the financing (e.g., OFA, IO, etc)

- ENERGY is working with LSB, IESO, MOF, TBS and external accountants to identify legislative, regulatory and accounting requirements associated with GA financing option.

1. GA Financing – Considerations (cont'd)

Considerations

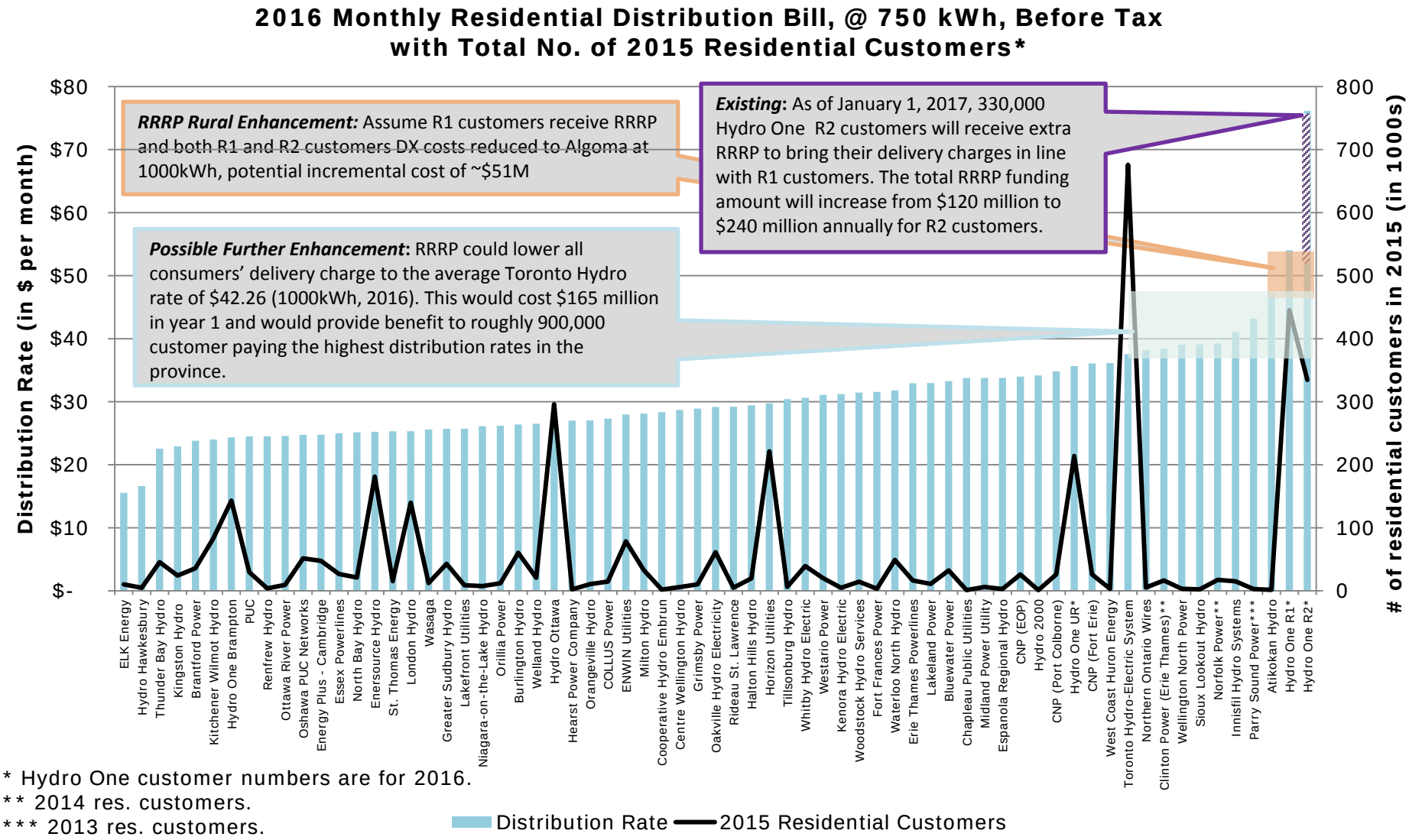
Legal:

- Legislation would be required to authorize the financing proposal.
  - Amendments to the *Electricity Act, 1998* (EA) could authorize the financing of certain costs within or part of the GA. However, whether any other legislation requires amendment is not known at this time.
  - The GA regime currently provides that "true costs" represent the true costs of making payments to generators or counter parties to contracts, not the incurring of discretionary financing or interest costs.
  - Considerations such as the need to analyze legal risks or the need to address costs retroactively (if the proposal requires a January 1, 2017 start) could add to the legal and drafting complexity. Further legal analysis is required.

2a. Fund Electricity Support Programs Through the Tax-Base – Rural or Remote Rate Protection (RRRP)

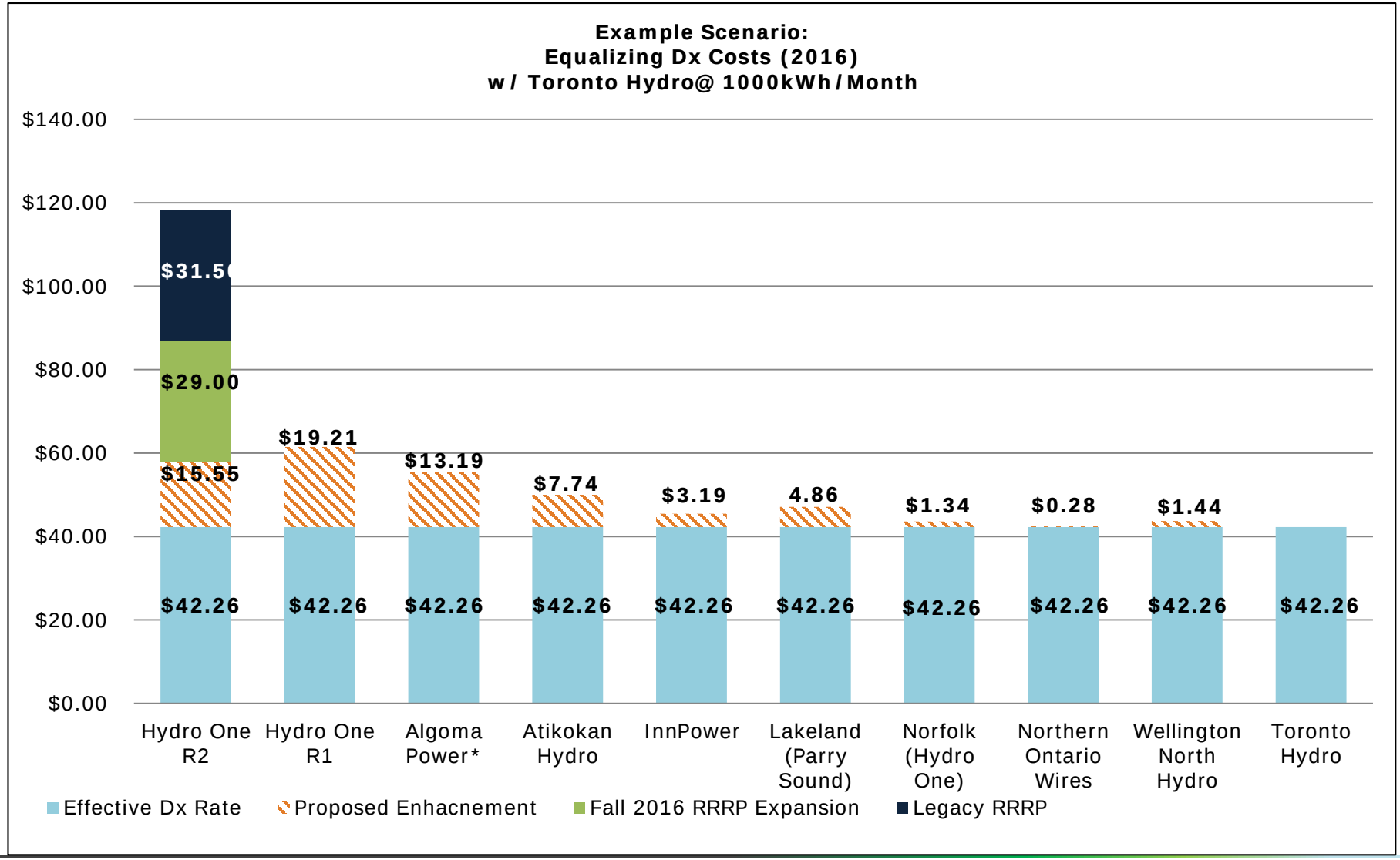
- RRRP supports the most costly-to-serve distributors in Ontario. It is not income tested and most of the support goes to Hydro One's R2 (low density) rate class and remote communities.
- The objective of the program is to reduce extreme distribution costs experienced in low density communities, and bring rates closer to those paid by other customers across the Province.
  - The OEB mandates that low density consumers pay the full cost of service and in recent rate filings has asked Hydro One to ensure this through cost allocation studies. RRRP is thus the mechanism by which these costs can be partly subsidized by all provincial ratepayers.
- Effective January 1, 2017, Ontario has enhanced program funding to further reduce Hydro One R2 distribution rates. As a result, a typical Hydro One R2 customer now pays roughly the same as a Hydro One R1 (medium density) customers, the next highest distribution rate.
- There is opportunity to continue the mitigation of delivery costs for the most costly-to-serve Ontario consumers by revising the program to either:
  - Bring other density based rural costs down by providing benefits to Hydro One R1 customers and ensuring that all RRRP recipients would pay roughly the same delivery costs; or
  - Expanding the program to other distributors that are costly to serve for reasons beyond density (e.g. to bring their distribution rates down to levels currently paid by customers of Toronto Hydro).
- An expansion of the program would result in a cost for all other ratepayers as the RRRP regulatory charge would need to be increased. In order to avoid this and not place an additional burden on consumers, the RRRP program could be transferred to the taxbase.
  - If left on the ratebase, program costs to consumers could rise from an average of $1.58/month to roughly $3.15/month.

2a. RRRP Expansion (cont'd)



* Hydro One customer numbers are for 2016.
** 2014 res. customers.
*** 2013 res. customers.

2a. RRRP Expansion – Ratepayer Impacts



***Note:** Algoma Power also receives $13.5 million (2017) to support operational costs.

2a. RRRP Expansion – Fiscal Impacts

- Table below shows estimate of program costs up to 2022

Year	RRRP Status Quo($M)	RRRP Enhancement Phase 1 ($M)	RRRP Enhancement Phase 2 ($M)	TOTAL RANGE ($M)
2017	$292	$51	$114	**$343 - $457**
2018	$300	$52	$117	**$352 - $469**
2019	$306	$54	$119	**$360 - $479**
2020	$315	$55	$123	**$370 - $493**
2021	$322	$56	$127	**$378 - $505**
2022	$329	$58	$129	**$387 - $516**

- Baseline cost of $292M includes all existing funding for Hydro One R2 (including recent $116 million expansion), Hydro One Remotes, and Algoma Power. Providing the enhanced support would cost an additional $165 million (Phase 1 – $51 million + Phase 2 – $114 million) in year 1.
- For forecast purposes, fiscal impacts are escalated at 2.6%/year. This reflects an estimate of the average yearly distribution rate increase.
  - The current RRRP program includes an adjustment mechanism to increase program funding by the same percentage as the average yearly distribution rate increase.
  - The continuation and appropriateness of this mechanism (and in fact all program design characteristics) would be considered in moving the program to the tax base.

2a. RRRP Expansion – Considerations

Considerations

- **Framework:** New legislation would be required to establish and define the parameters of a tax based RRRP. This may reveal additional considerations.
- **Policy Rationale:** Historically, RRRP has supported costs of LDCs that meet a density threshold. Expanding funding to additional LDCs that do not represent a density threshold (and selecting a specific LDC rate to serve as a cost cap) results in a fundamental change in the program. Program objectives must be considered if expansion is limited to specific LDCs.
- **Program Design:** Program specifics will affect eligible customers, credit amounts, and fiscal impact widely. Issues such as how eligibility is determined and if benefits are equal for all customers within an eligible LDC need to be examined. Financial flow-through mechanisms would need to be considered in consultation with IESO and LDCs. Likely to be modeled after processes used for the Ontario Rebate for Electricity Consumers (OREC).
- **Continuing Support:** There are multiple options and mechanisms available to adjust funding year-over-year depending on desired objective (continuously peg to Toronto, cover annual rate increases, provide inflationary support, amend as needed, etc…). Selection will impact fiscal projections.
- **Fiscal Risk:** As LDC rates change year-over-year, LDCs eligible for tax-based support will change and can cause significant fluctuation in fiscal projects and impacts. For example, if Toronto Hydro meets eligibility criteria in any given year, over 700,000 customers could become newly entitled to taxbase support.
- **Legal Risk:** The OEB is the energy sector's independent regulator and has sole authority to set rates. Ministry-OEB authority must be considered when prescribing cost levels.
- **Hydro One:** Providing tax-based support for Hydro One may be controversial following the broadening of ownership. Hydro One is also transitioning seasonal customers to its R2 and R1 classes; program eligibility will need to be considered.

2b. Ontario Electricity Support Program (OESP) Expansion

- The OESP is an income-tested, application based program that lowers the electricity costs of the most vulnerable consumers by providing a rebate directly on their electricity bills.
- The OESP provides basic benefits to most consumers and enhanced benefits to Indigenous customers and customers with electric heat and medical devices.
- OESP funding is collected from a charge levied on all electricity ratepayers. Based on current level of program up-take and funding collection, OESP program benefits could be increased across the board by 50%. This would mean:
  - Single low income consumers would see an increase from $30 to $45/ month ($540/year);
  - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year); and
  - Indigenous and Métis consumers would also see benefit increases at the same level as those with electric heat and medical devices.
    - The Ministry is also considering options to support a “Delivery” line credit for Indigenous consumers. This would cost ~$18 million/year (Option 2d on slide 8) and would save Indigenous consumers between $75 and $100/month.
- Greater focus and support can be placed on lower income Ontarians by funding OESP through the tax base. This would also reduce costs for all consumers as a result of eliminating the OESP charge.
  - Average residential customer savings: $0.83/month; and
  - Average industrial customer savings: $1.10/MWh.

2b. OESP Expansion – Fiscal Impacts

- Table below shows estimate of program costs up to 2022:

Year	OESP Status Quo($M)	+50%($M)	TOTAL ($M)
2017	$108	$54	**$162**
2018	$150	$75	**$225**
2019	$186	$93	**$279**
2020	$215	$108	**$323**
2021	$243	$122	**$365**
2022	$272	$136	**$408**

- 2017 program costs are based at current program sign-up rate – 30% of eligible consumers. Cost projections assume the program grows to 100% of eligible consumers by 2022 and remains at that level.
- At the time of program design, it was estimated that 40-50% participation would be high for an application-based program delivered through electricity bills. However OESP can be enhanced by working to ensure the program uptake is as close as possible to 100%:
  - Streamlining the application process to make it easier and quicker to get through;
  - Putting in place a more aggressive communications strategy to make sure people are aware of the program;
  - Increasing funding for key partner agencies to work directly with individuals who are applying; and
  - Exploring automatic OESP qualification for those who receive provincial programs (e.g., ODSP).
- OEB is currently exploring options for simplifying the OESP process, including exploring options with MCSS on auto-enrollment options, discussing options to eliminate wet signature consent forms with the federal government, and working with partners to do open houses to better reach vulnerable consumers.

2b. OESP Expansion – Considerations

- **Framework:** New legislation would be required to establish and define the parameters of a tax-based OESP. This may reveal additional considerations, including possible assessment as a tax credit.
- **Implementation:** Financial flow-through mechanisms would need to be considered in consultation with IESO and LDCs. Likely to be modeled after processes used for the Ontario Rebate for Electricity Consumers (OREC).
- **Alternative Delivery:** If the OESP was funded by the tax-base, it could also be explored whether the OESP could be better delivered as a provincial program via the tax system. This may help ensure that the program's participation rate is as high as possible, and could expand coverage to the ~142,000 low-income households that do not receive an electricity bill.
- **Transition to Social Assistance:** Moving OESP to the taxbase can be a transitional step in folding this program into a reform of social and disability assistance programs and enhancement of MCSS' Social Assistance Management System moving forward.
- **Additional Enhancements:** The enhanced credit could be expanded to include additional eligibility categories of customers. For example, a new "Low Density Consumer" category could be introduced that provides Hydro One R2 and/or R1 customers (highest distribution rates) who are already OESP eligible with the enhanced credit.
- **Variance Account:** The OEB has been collecting program funding in excess of program costs and has accrued a positive balance. This balance must be addressed when moving to the tax base.

2c. Low Income Conservation Benefit Program

- Existing low income programs delivered by LDCs and IESO help qualified homeowners and social and/or assisted housing providers improve the energy efficiency of their homes.
  - Programs include the Home Assistance Program and the Retrofit Program (Social Housing Stream).
- A new Low Income Conservation Benefit Program would build on existing programs.
  - Participants could receive incentives for conservation measures not currently covered (e.g. air conditioning, heat pumps (electric heated homes)).
  - Increased incentive amounts (e.g., under the existing Retrofit Program, incentives cover approx. 60% of the total cost of the energy efficiency upgrade).
  - Targeted education and awareness initiatives.
- The new program would be delivered through LDCs and/or IESO.
- The new program would coordinate with CCAP initiatives.
- The budget estimate below is illustrative and assumes annual program budgets three times the 2015 spending for the Home Assistance Program.

	2017	2018	2019	2020	2021	2022
Proposed Budget ($ Million)	$60	$60	$60	$60	$60	$60

- Further analysis is required on costing and implementation details, including alignment with the Conservation First Framework.

3a. IESO – Market Renewal

- Continue to move forward with Independent Electricity System Operator's (IESO) Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

Considerations

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2021, leading to a reduction of:
  - About $1/month or less than 1% at current retail prices for a typical residential bill; and
  - About $1.30/MWh at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.
- IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.

3b. OEB – LDC Efficiencies and Rates

- Reducing costs and having LDCs become more efficient could result in a reduction of distribution costs on electricity bills.
  - Currently, LDCs recover costs through the Delivery line of the electricity bill, which is broken into Distribution and Transmission costs. LDCs are responsible for the Distribution costs of the electricity bill which account which account for about 20% of the total bill.
- Distribution costs vary across the province as LDCs have different service territories and needs (e.g., geography, number of customers, density of customers, life/health of capital assets, etc). See next slide for more detail.
  - For example, comparing 2016 with 2006, distribution rates have increased by about 24.5% (or about 2.2% per year, compounded annually) across the Province, with significant variation between regions and LDCs (-17% to 148%). Overall consumer price inflation in Ontario for the same period increased by about 19% or 1.8% per year.
- Over the same time period, distribution sector productivity and cost efficiency have decreased. This trend raises concern that customers are not realizing a net benefit from sector cost increases, as customers receive less value from the distribution portion of their bill.
  - OM&A costs per customer have increased on average from $235 in 2006 to $319 in 2015.
  - For the period 2002-2012, sector productivity has decreased by an annual average of -0.93% when including Hydro One and Toronto Hydro, the worst performers.
- In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. The Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities. The panel recommended legislation to mandate consolidation.
  - Rather than mandating consolidation, the government response was to pursue voluntary consolidation and put in place tax incentive for consolidation \further changes to the tax incentives and/or revisiting legislated consolidation could be considered.
- The Ontario Energy Board (OEB) has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates. Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- ENERGY could help promote or accelerate these efforts by asking the OEB – through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and/or the 2017 Mandate Letter and other agency business planning processes – to consider opportunities to further drive these efficiency, productivity, and performance improvements.

3b. OEB – LDC Efficiencies and Rates – Potential LDC Cost Reduction Measures (cont'd)

Option	Description	Potential Cost Impacts*	Timeline**	Notes
Performance Standards with Rewards & Penalties	Strengthen LDC scorecard by connecting to LDC financial performance through earnings sharing or penalties paid to consumers. Ex: SAIDI/SAIFI; OM&A per customer	• 1-2% of revenue requirement could be recycled back to customers. • Performance penalties would be real, periodic on-bill $ reductions. • Cost reduction would only occur if standards are not met.	1 year	UK Regulator Ofgem requires utilities to pay consumers up to £50 if reliability standards are not met.
Enhanced Economic Regulation	Revise rate-setting to reflect tightening productivity requirements and capital cost avoidance.	• <1% reduction in rates annually, with additional capital investment avoidance. • Methods include stronger productivity factors, broader peer comparisons, and elimination of ICM.	1-3 years	Incents innovation by requiring LDCs to provide equal or better service on less inflation-adjusted revenue annually.
LDC Collaboration Incentives	Create regulatory incentives for LDCs to pursue efficiencies and service sharing agreements.	• Potential to avoid individual LDC capital investments of up to six figures, plus additional OM&A tightening. • Actual level of rate reduction dependent on specific LDC proposals.	1 year for new guidelines, savings to be realized through LDC planning process.	LDCs have already indicated an interest in pursuing such arrangements but have expressed concern on regulatory barriers and costs.
Line Loss Accountability	Create appropriate benefit-sharing mechanism so LDCs are incented to pursue line loss reductions.	• Potential for 1-3% reduction in commodity charges associated with losses. • Requirements dependent on business cases so costs don't outweigh benefits.	1-2 years	Potential linkages with related proposal for in-front of the meter conservation.

***Note:** Dependent on implementation specifics as determined by OEB

****Note:** Timelines begin from Ministry approval of OEB LTEP Implementation Plan

3b. OEB – LDC Efficiencies and Rates – Considerations

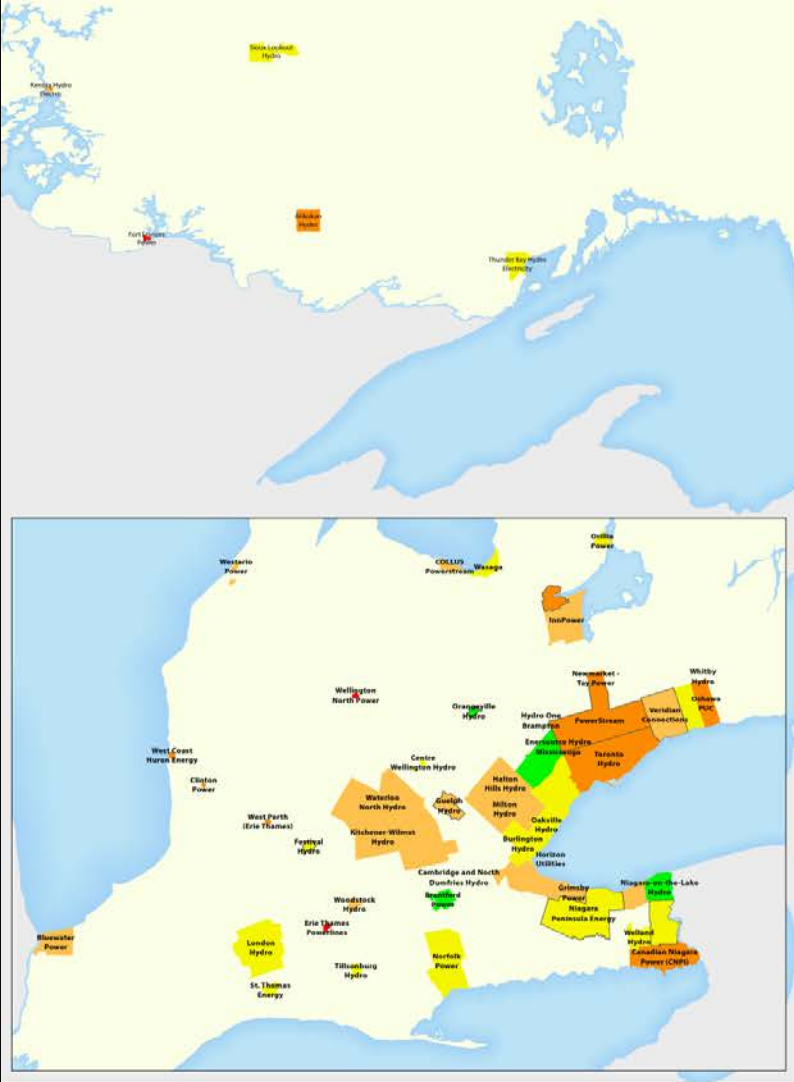
Sector:

- Exact bill reduction levels are unknown, but real OM&A and some capital cost avoidance can reasonably be expected.
- Could indirectly incent consolidation if LDCs feel they are unable to adequately manage their assets in light of tightening requirements.
- Any initiatives that have a direct impact on LDC profitability could affect the value of Hydro One.
- There is a tension between requiring productivity enhancements and creating firm performance standards. LDCs have to invest to maintain system levels, but also finding cost efficiencies, which is an incentive for innovation. The Ministry and the OEB may have to also explore reducing regulatory burden/barriers on LDCs so they have the tools available to satisfy new performance expectations.

Regulatory:

- The OEB is the electricity distribution sector's independent regulator and as such is responsible for establishing rate-setting mechanisms in line with its statutory objectives.
  - The Ministry would engage with OEB to align on approach, and provide only high-level direction so as to respect OEB's role in determining implementation specifics.
  - The OEB would likely need to conduct policy hearings and stakeholder consultations on these initiatives, though Ministry could request new rules be in place for next major LDC rate cycle.
- LDCs are resistant to peer comparison for a variety of historical and service territory issues. OEB econometric analysis has generally supported limiting peer comparisons. As comparisons would be an important component of benchmarking performance standards, the Ministry may experience sector pushback.
- Updating rate-setting mechanisms and regulatory processes could create regulatory uncertainty and limit LDC activity. The OEB has revised its processes multiple times over the past 15 years.

LDC Distribution Rate Changes (2006 vs 2016)



Total Dx Rate	2006	2016	% Rate Change
Hydro One UR (High Density)	$29.13	$35.65	22.4%
Hydro One R1 (Medium Density)	$37.73	$54.02	43.2%
Hydro One R2 (Low Density)	$44.65	$76.14	70.5%

Legend

LDC Rate Comparison 2006 vs 2016

% Total Rate Change (# of LDCs)

- -17.3% to 0% (5)
- 0.1% to 15% (25)
- 15.1% to 30% (21)
- 30.1% to 60% (16)
- 60.1% to 89.3% (4)
- Merged LDCs

Below LDCs had either acquired or merged: (# of merged LDCs)

a. Powerstream Inc. (5)
b. Chatham-Kent Hydro Inc. (13)
c. Veridian Connections Inc. (4)
d. Guelph Hydro Electric Systems Inc. (2)
e. Festival Hydro Inc. (2)
f. Orangeville Hydro Limited (2)
g. Niagara Peninsula Energy Inc. (3)
h. Peterborough Distribution Incorporated (3)

Only LDCs with distribution rates of 2006 and 2016 are shown.
Only the largest distribution areas are shown and smaller satellite areas are not all shown.

Data source: Rate database, Rate orders and OEB yearbook
Produced by Strategic Policy and Analytics Branch,
Strategic Network and Agency Policy Division,
Ministry of Energy

0 30 60 120 180 240
Kilometers

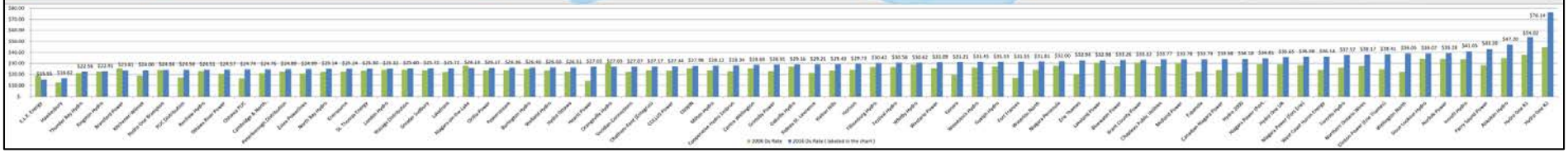
Published December 2016

KEY FINDINGS

- In summary, distribution rates (including rate riders) have increased by about 24.5% across the Province, with significant variation between regions and LDCs (-17% to 148%).
- There is generally no correlation between LDC size or location and distribution rate increase in absolute or percentage terms.
- The current analysis shows no clear relationship between the percentage rate increase and the absolute rate level (that is, high rate increase LDCs may still have among the lowest rates, and low rate increases may have higher rates.
- No clear relationship between amalgamation and rates.
- The analysis does suggest that Hydro One has the highest rates, and some of their customers have seen higher than average rate increases.

NOTES

- **Rate Calculation:** Monthly residential distribution bill rates, before taxes, are based on consumption of 750 kWh. Distribution charges account for approximately 23% of the average 2016 residential bill.
  All figures calculated by ENERGY staff without input from OEB.
- **Colours:** Colour coding of the map only depicts the change in LDC rate amounts (i.e. LDCs in red don't necessarily have the highest total rates).
- **Mergers:** Rates for customers in merged LDCs have experienced different levels of change. For merged entities, the largest LDC in 2006 was used. An accompanying map focuses on merged entities.
- **Points in Time:** Current analysis compares 2016 and 2006 only. Rates could have had an uneven trajectory, especially considering regulatory decisions such as time limited charges/rebates with temporary impacts.



3c. OPG – Operational Efficiencies

- Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh).

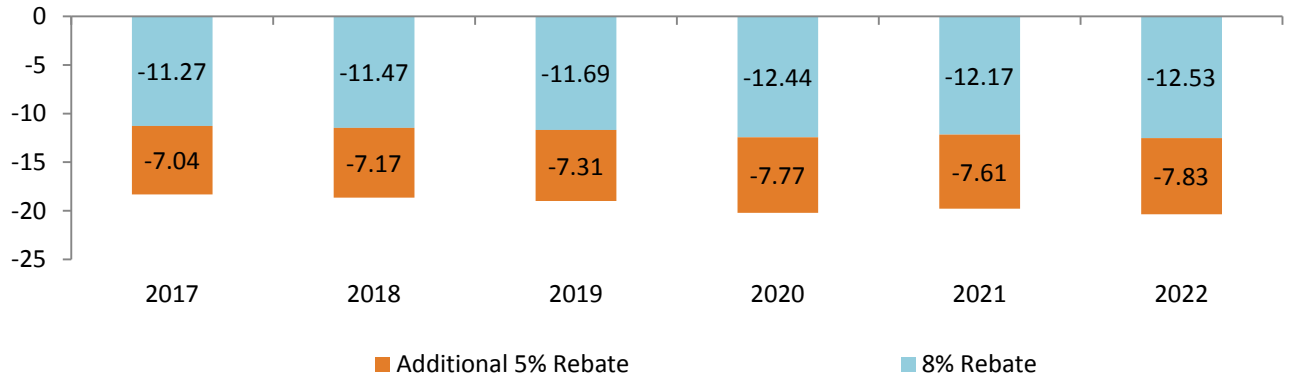
Considerations

- OPG recently submitted its 2017-19 business plan to the Province for concurrence. That plan includes the following:
  - Enterprise total generating cost increasing from $48/MWh in 2016 to an average of $55/MWh over the plan period.
  - An average residential monthly bill increases of $1.05/month annually from 2017-2021.
- Much of this increase is due to the Darlington refurbishment project, which increases costs and reduces OPG's generation over the planning period.
- OPG has also shared its stretch targets for total cost of generation, which average $52/MWh over the 2017-19 plan, a ~$3/MWh reduction (5-6%) relative to its $55/MWh business plan targets.
- The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This is a public document that OEB would likely review and incorporate as part of OPG's current rate application.
- Consistent with regulations under the *Ontario Energy Board Act*, OPG is seeking smoothed rates for nuclear as part of its 2017-2021 rate application.
  - As a result, the benefit to ratepayers of reducing generation costs is uncertain.
  - Given that the application extends beyond the business plan period, and to ensure OPG does not delay costs beyond the planning horizon, the Province may want to provide additional direction for out year expenditures.
- If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.
  - The total cost of $3/MWh based on OPG's forecast production of 74 TWh/yr is about $240 million per year.
- The Province could work with OPG to craft language in the concurrence letter in order to avoid setting unintended precedents for future rate application processes.

4. Enhanced Tax-Base RPP Rebate (5%)

- Enhancing the rebate by a further 5% on the amount before tax provides an average savings of about $7 each month or $84 annually for a typical residential electricity consumer.
- As of January 1, 2017, electricity consumers eligible for the Regulated Price Plan (RPP) receive an 8% rebate equivalent to the provincial portion of HST on their pre-tax bill.
- The eligibility criteria for the 8% rebate is as follows:
  - Consumers with a demand of 50 kW or less;
  - Consumers with a demand of 250,000 kWh/year or less;
  - Farms;
  - Multi-unit residential buildings and other facilities used as residential rental units;
  - Dwellings;
  - Condominiums; and
  - Co-operatives with housing units.

Benefit for a Typical Residential RPP Consumer
in $/750-kWh month



4. Enhanced Tax-Base RPP Rebate (5%) (cont'd)

Considerations

- Amendments would be required related to the *Ontario Rebate for Electricity Consumers Act, 2016.*
- The Act authorizes the making of regulations to reimburse electricity vendors for amounts credited to consumers' accounts under the Act. The Act authorizes the making of other regulations to put in place mechanisms needed to implement the financial assistance.
- The rebate could be made retroactive to January 1, 2017. Similar to the current 8% rebate, electricity consumers would receive a retroactive payment once the local distributor begins issuing the rebates if the distributor needs more time to adjust its billing systems.

Fiscal Cost of an Enhanced Rebate
in $millions

Cost ($M)	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Cost of 8% rebate	271	1,119	1,086	1,171	1,159	1,208
Cost of 13% rebate	440	1,818	1,764	1,903	1,884	1,963
Cost of incremental 5% rebate	169	699	679	732	724	755

Appendix

Existing Rate Mitigation Programs – Overview

- There are a number of existing programs funded by electricity ratepayers that help mitigate electricity bills for some customers, each of which has a unique policy rationale.

- Programs such as the as the Rural or Remote Rate Protection (RRRP) program are targeted at all customers who face the highest delivery costs in the province, while others such as the Ontario Electricity Support Program (OESP), are income tested and targeted at the most vulnerable energy consumers.
  - These program are not mutually exclusive and a customer could receive both the RRRP and the OESP.
  - There are other programs that are still under development such as options for a First Nations Rate currently being developed by the OEB as per the request of the Minister of Energy. These options are ailed to alleviate high delivery costs for on-reserve indigenous consumers.

- There are opportunities to enhance each of these programs. However, if enhancements are funded through the electricity rate-base, while they would lower costs for eligible consumers, they would raise costs for all other ratepayers.

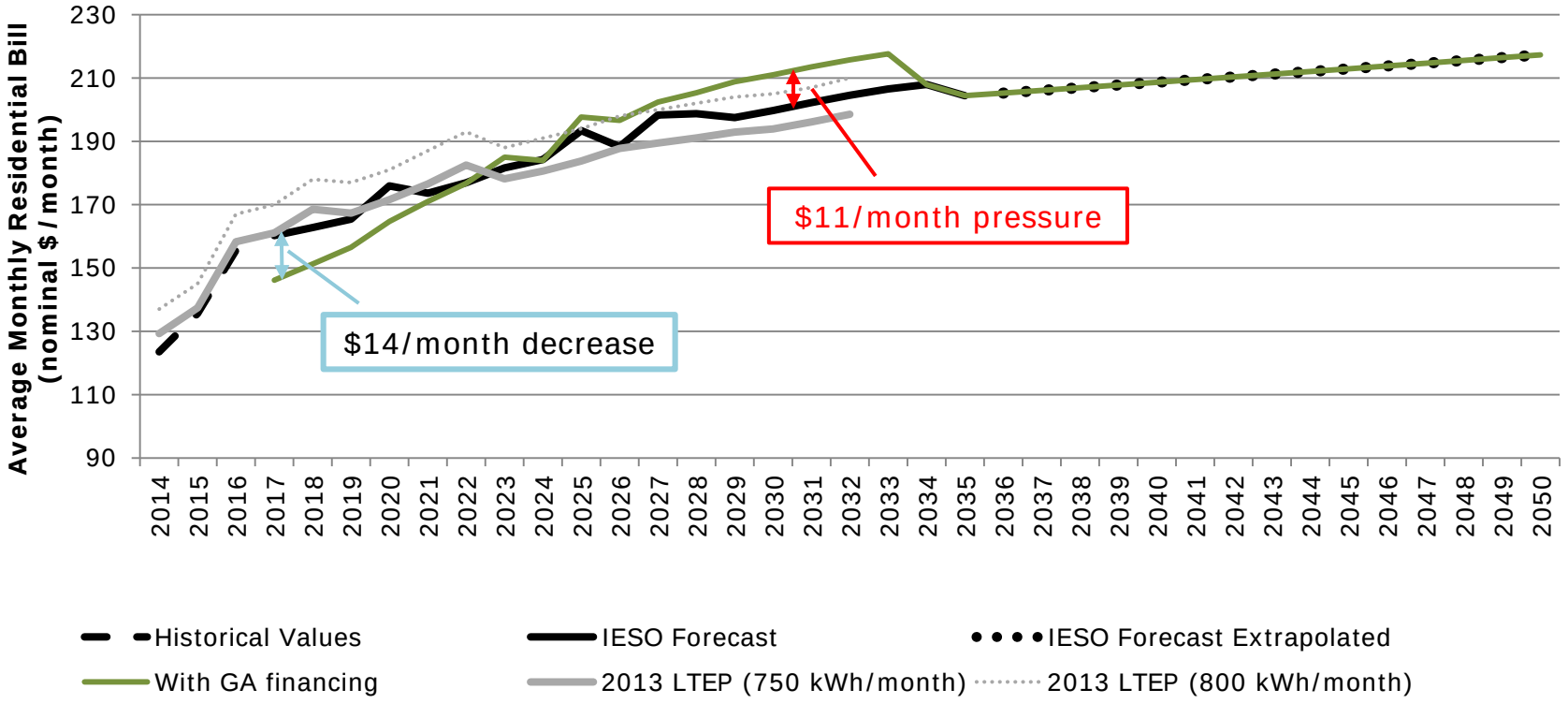
- Given that these programs focus on promoting equity between different area of the province (RRRP) or on social equity (OESP), they could be funded by the tax-base rather than the rate-base. This would allow their goals to be achieved and enhanced without increasing electricity rates. The following slides explore options to enhance each program using the tax-base.

Global Adjustment (GA) Financing

- The global adjustment (GA) is comprised of costs for regulated and contracted generation, as well as conservation.
- Some contracted generation assets are expected to have a useful life that extends beyond the term of their current financial contracts (typically 20-years).
- Similarly, conservation costs are recovered through the GA on an annual basis while conservation initiatives provide benefits to the electricity system over the course of many years.
- Since the GA only includes costs related to the contractual life of these assets, there may be an opportunity to recognize the longer-term benefit of these assets to the electricity system and “bring forward” that benefit for ratepayers today, while deferring some of the current costs.
- An indicative GA financing proposal is presented that lowers ratepayers costs over the short term by borrowing money but increases costs over the long term when GA costs are forecast to be lower.
- **Note:** Not all generating assets will continue operations at the end of their contract term. Regulatory constraints (i.e., nuclear licences) or low demand conditions (i.e., as experienced with current expiring NUGs) would mean that some generators will shutdown at the expiry of their contract. Future ratepayers would be paying for these assets that are no longer producing power.

Low / GA Financing – Impact on Residential Electricity Bills

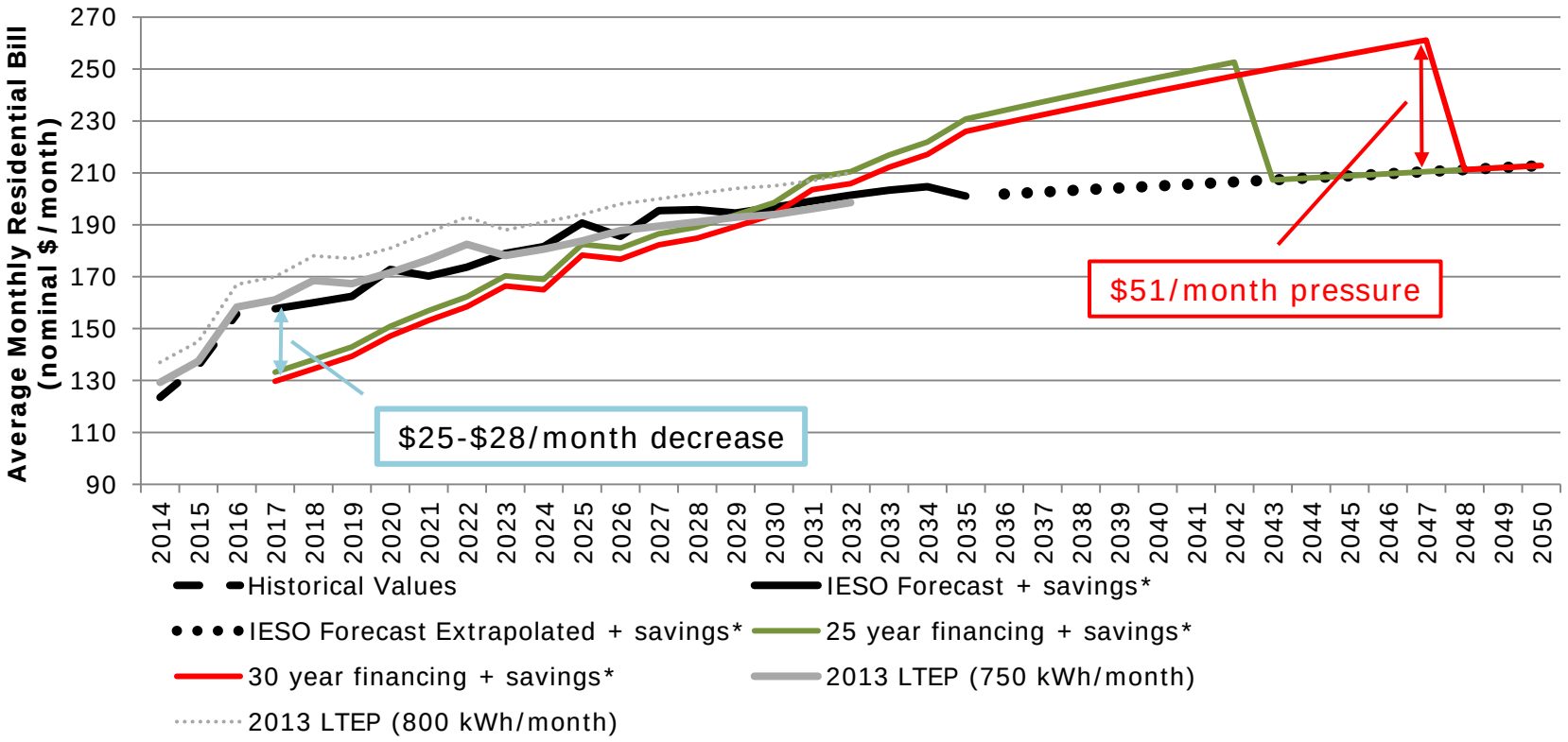
- In this option, the starting GA payment from all ratepayers in 2017 is lowered by $2.5 billion and increases at 2% each year – up to a cap of no more than $2 billion more than the true cost of GA in any year – until the borrowed money is paid back in 2032.



- By **borrowing up to $9.3 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $14/month** at the cost of **increased future electricity bills over 10 years of up to $11/month** above the true cost of electricity production.

High / GA Financing – Impact on Residential Electricity Bills

- In this option, the starting GA payment from all ratepayers in 2017 is lowered by $4.4 and $5 billion and increases at 2% each year until the borrowed money is paid back over a 25 and 30 year financing period respectively.

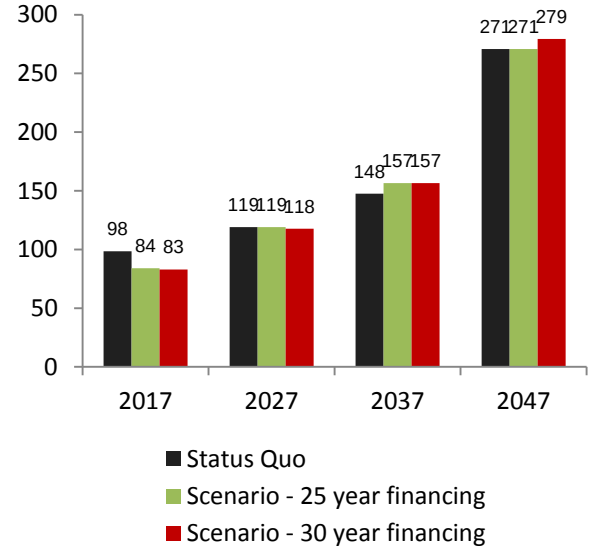


- By **borrowing up to $65 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $25-$28/month** at the cost of **increased future electricity bills over 12-17 years of up to $46-$51/month** above the true cost of electricity production.

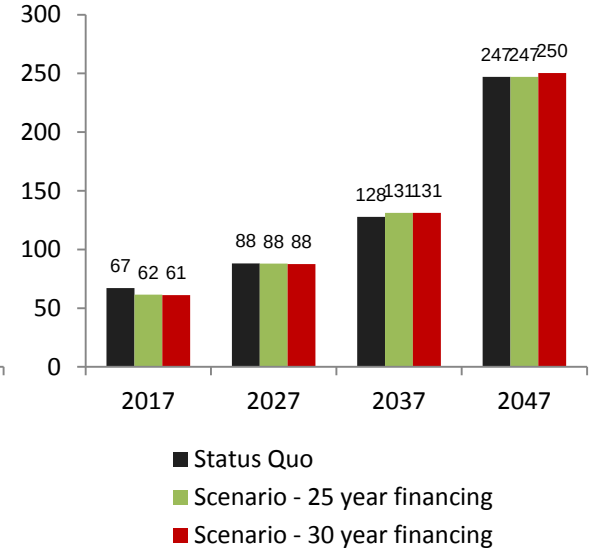
GA Financing – Illustrative Impact for Large Industrial Electricity Consumers

- Below graphs illustrate the estimated impact under the moderate GA financing scenario for an average Class A electricity consumer, a consumer that pays low GA (i.e., pulp and paper) and high GA (i.e., refining and chemical manufacturing).

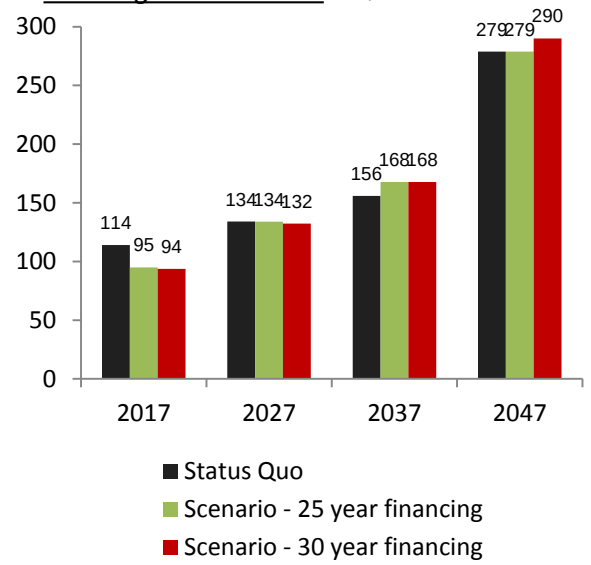
Estimated All-In Electricity Price
for Average Class A in $/MWh



Estimated All-In Electricity Price
for Pulp & Paper in $/MWh

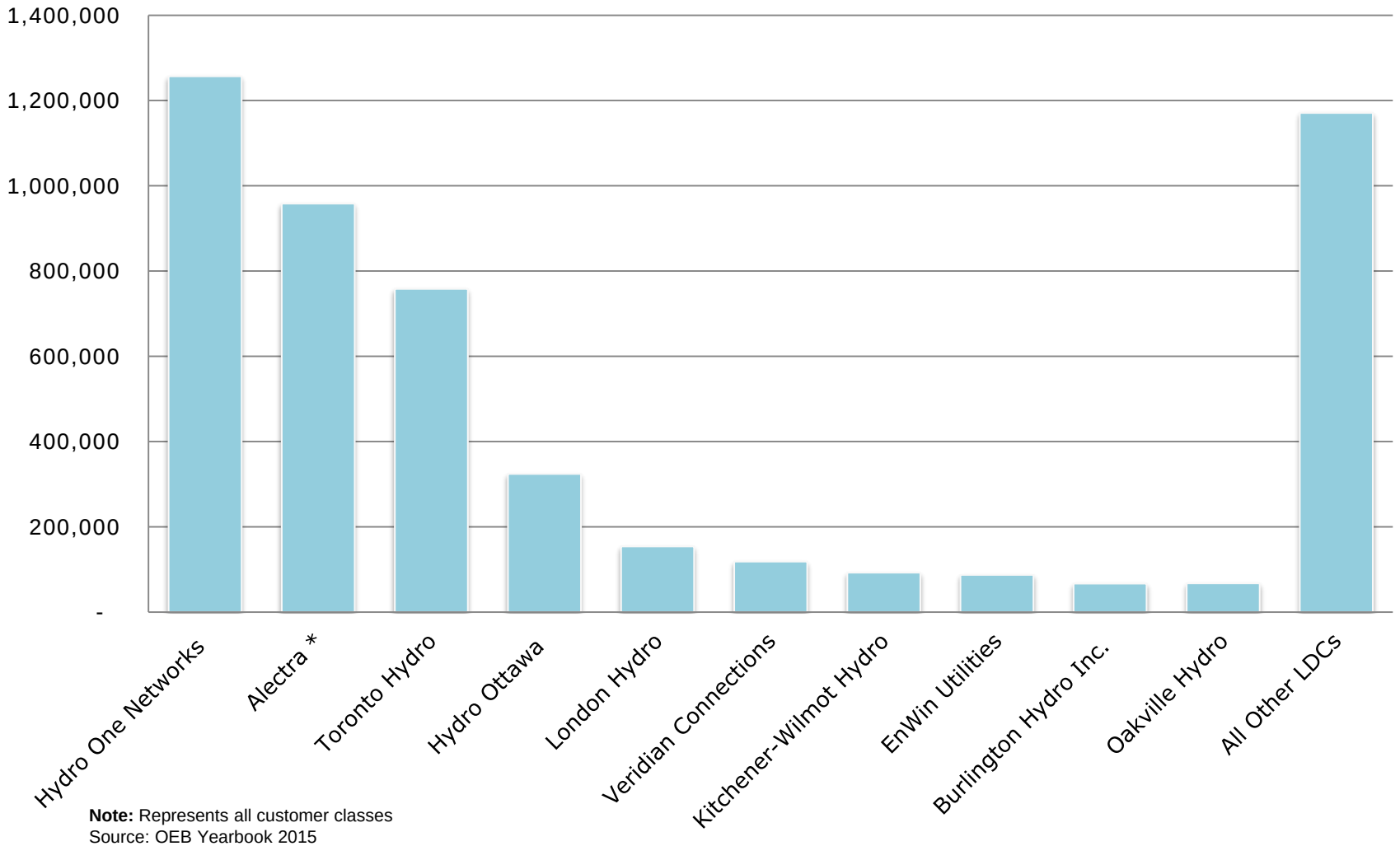


Estimated All-In Electricity Price
for Refining & Chemicals in $/MWh



Note: Assumes that demand by industrial sector continues at average 2011-2015 levels.

Largest LDCs by Customer Base



Note: Represents all customer classes
Source: OEB Yearbook 2015
*Recently approved merger of Powerstream, Enersource, Horizon, and Hydro One Brampton

Extend Length of Existing Wind / Solar Contracts

- Wind and solar developments are typically contracted through standard offer procurements on 20 year fixed terms at fixed pricing.
- Many of these projects have already reached commercial operation.
- The province could explore options for IESO to negotiate extensions to existing renewable energy contracts, for example, by 10 years, in return for the contract holders agreeing to a lower price in the near term.

Considerations

- Projects in commercial operation offer potential for near-term rate reduction whereas projects that have yet to reach commercial operation provide potential to mitigate future rate increases only.
- The attractiveness of this option to contract holders would vary from project to project and would depend on project economics.
- Revised pricing would be subject to negotiation, and associated ratepayer savings would be difficult to forecast accurately.
- The duration of contract renegotiation is difficult to forecast and may not be achievable in the near term.
  - Proponents may have to renegotiate their project financing arrangements, ensure project investors are satisfied with any changes in ROI, and extend land leases.
- Project host communities and Indigenous communities whose traditional territory the projects are sited in may not be interested in these projects extending their operational period; discussions/consultation may be required in advance of this potential option moving forward.

Extend Length of Existing Wind / Solar Contracts (cont'd)

Considerations (cont'd)

- Should Ontario be successful in negotiating lower prices in the near term, it should be noted that contract holders will be in a strong bargaining position (given their existing fixed-priced contracts), and will likely extract additional value from the negotiations.

- The Province is not a party to the contracts and has never been involved in the negotiation of the contracts themselves. IESO would be required to renegotiate the contracts, which would likely involve a direction or directive to IESO.

- Further analysis is required as to how ENERGY could express its policy intent to have IESO renegotiate the contracts for a reduced rate at a longer term, however it is unlikely that IESO could guarantee the outcome.

- Further analysis is also required to ascertain whether there is scope within the existing contracts for IESO to renegotiate their terms in this manner.

- Extending contract terms may require investments in component replacement and additional operation and maintenance costs that developers would seek to recover under any renegotiated contract.

- Extending contract terms would reduce planned flexibility and increase the risk of overpayment as this existing capacity would now be contracted into the 2040s and not the 2030s.

Extend Length of Existing Wind / Solar Contracts (cont'd)

Considerations (cont'd)

- Ontario has over 4,500 MW of wind in commercial operation, with the vast majority being large scale (>500kW) developments.
  - This includes over 2,700 MW of large FIT 1 and GEIA wind projects representing 47 contracts (average size ~58 MW) and over 1,000 MW of solar projects representing 103 contracts.
- Below are two potential approaches to reducing ratepayer costs in the near term by extending contract terms at reduced prices. An illustrative example of a typical large wind project is used.
- **Example:** 100 MW FIT 1 wind project achieving Commercial Operation in 2014 (i.e., 17 years remaining on initial 20 year contract), assuming a 10 year contract extension negotiated at the LRP I low weighted average wind price of $64.5/MWh
  - (17 years @ $135/MWh + 10 years @ $64.5/MWh)
- **Potential Approach 1:** Provide a single new contract price that is the average of the lower extension price and the FIT contract price over the new contract term. The new price would be lower over a longer term.
  - **Illustrative Example:** New contract for 27 years at $129/MWh.
  - New contract price set to allow 10% rate of return over 27 year contract per FIT pricing approach.

100 MW Wind Project	Status Quo	27 Year Contract (remaining term extended for 10 additional years)
Contract Cost (NPV 2017)	$550 Million	$582 Million
Average Monthly Ratepayer Impact Over First 5 Years	$0.03 savings	
Average Monthly Ratepayer Impact Over Remaining 22 Years	$0.02 increase	
Average Monthly Ratepayer Impact Over Entire 27 Year Contract	$0.01 increase	

Extend Length of Existing Wind / Solar Contracts (cont'd)

Considerations (cont'd)

- **Potential Approach 2:** Offer facilities a revised contract that extends terms and is structured to offer lower pricing in the initial contract years and higher pricing in the later years of the contract.
  - **Illustrative Example:** New contract for 27 years at $85.9/MWh over the first 5 years and $169/MWh over the remaining 22 years.
    - Price over first 5 years is LRP I weighted average wind price.
    - Price over remaining 22 years is set to allow 10% rate of return over entire 27 year contract per FIT pricing approach.

100 MW Wind Project	Status Quo	27 Year Contract	
		Initial 5 Years	Last 22 Years
Contract Cost (NPV 2017)	$550 Million	$632 Million	
Monthly Average Ratepayer Impact Over First 5 Years	$0.09 savings		
Monthly Average Ratepayer Impact Over Remaining 22 Years	$0.07 increase		
Monthly Average Ratepayer Impact Over Entire 27 Year Contract	$0.04 increase		

Extend Length of Existing Wind / Solar Contracts (cont'd)

- Below are illustrative estimates of potential GA savings if all contracts for large FIT and GEIA wind and solar projects in commercial operation are renegotiated according to the approaches illustrated above.
- Estimates are for large (10 MW or greater) FIT 1 and GEIA wind and solar projects in commercial operation, totalling about 2,700 MW of wind and about 900 MW of solar capacity. A 10 year contract extension is assumed at a price of:
  - **For Wind:** LRP I low weighted wind price of $64.5/MWh
  - **For Solar:** LRP I low weighted solar price of $141.5/MWh

Potential Approach 1:

	Current Contracts*	**New Extended Contracts**
Total Value (NPV 2017)	$22.9 Billion	$22.8 Billion
Average Annual Contract Value (First 5 Years)	$1.5 Billion	$1.3 Billion
*Figures assume projects remain operational after contract expiry at the LRP I low weighted price inflated to the year of contract expiry, as per OPO assumptions .		

Potential Approach 2"

	Current Contracts	**New Extended Contracts**
Total Value (NPV 2017)	$ 22.9 Billion	$ 25.3 Billion
Average Annual Contract Value (First 5 Years)	1.5 Billion	$1.0 Billion

Extend Length of Existing Wind / Solar Contracts (cont'd)

- Contract re-negotiations could be piloted with large wind and solar contract holders.
- For example, the top 5 contract holders by portfolio value (online projects 10 MW and larger) include:

Contract Holder	Technology	# of Contracts	Capacity (MW)	Estimated Value (NPV 2017)
Samsung	Wind & Solar	5	799	$4.6 Billion
NextERA	Wind	6	534	$2.7 Billion
Pattern / Capital Power	Wind	1	270	$1.5 Billion
ENGIE	Wind	4	265	$1.2 Billion
Northland Power	Wind & Solar	15	290	$1.2 Billion

Other Options Considered – Typical Residential Electricity Consumer

$/750kWh	2017	2018	2019	2020	2021	2022	Timing of Benefit
Conservation Funding Options							
a. Amortize Conservation Program Costs (15-Year Amortization)	1.62	1.88	1.16	1.20	0.82	0.69	Immediate
b. Fund Conservation Programs Through The Tax-Base	3.47	3.83	3.17	3.35	2.84	2.90	Immediate
Eliminate the Industrial Conservation Initiative (ICI)	4.40	4.24	4.10	4.24	3.73	3.58	Immediate
Cancel LRP I	-	-	TBD	TBD	TBD	TBD	Medium-Term
Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc.)	-	-	-	2.16	2.16	2.17	Medium to Long-Term
Dedicate Departure Tax	1.39	1.39	1.39	1.39	1.39	1.39	Immediate
Give Residential Consumers More Rate Choices	-	-	-	-	-	-	n/a
Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)**	-	-	-	-	-	-	n/a

Note: The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

Options Considered – Average Industrial Electricity Consumers

$/MWh	2017	2018	2019	2020	2021	2022	Timing of Benefit
Conservation Funding Options							
a. Amortize Conservation Program Costs (15-Year Amortization)	1.12	1.30	0.80	0.83	0.57	0.47	Immediate
b. Fund Conservation Programs Through The Tax-Base	2.88	3.17	2.66	2.77	2.36	2.41	Immediate
Eliminate the Industrial Conservation Initiative (ICI)	(24.12)	(23.21)	(22.45)	(23.23)	(20.42)	(19.61)	Immediate
Cancel LRP I	-	-	TBD	TBD	TBD	TBD	Medium-Term
Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc.)	-	-	-	1.79	1.79	1.79	Medium to Long-Term
Dedicate Departure Tax	1.86	1.86	1.86	1.86	1.86	1.86	Immediate
Give Residential Consumers More Rate Choices	-	-	-	-	-	-	n/a
Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)**	-	-	-	-	-	-	n/a

Note: The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

Ontario

MINISTRY OF
ENERGY

Rate Mitigation Options for Class B Electricity Consumers

Working Draft

February 16, 2017

CONFIDENTIAL DRAFT

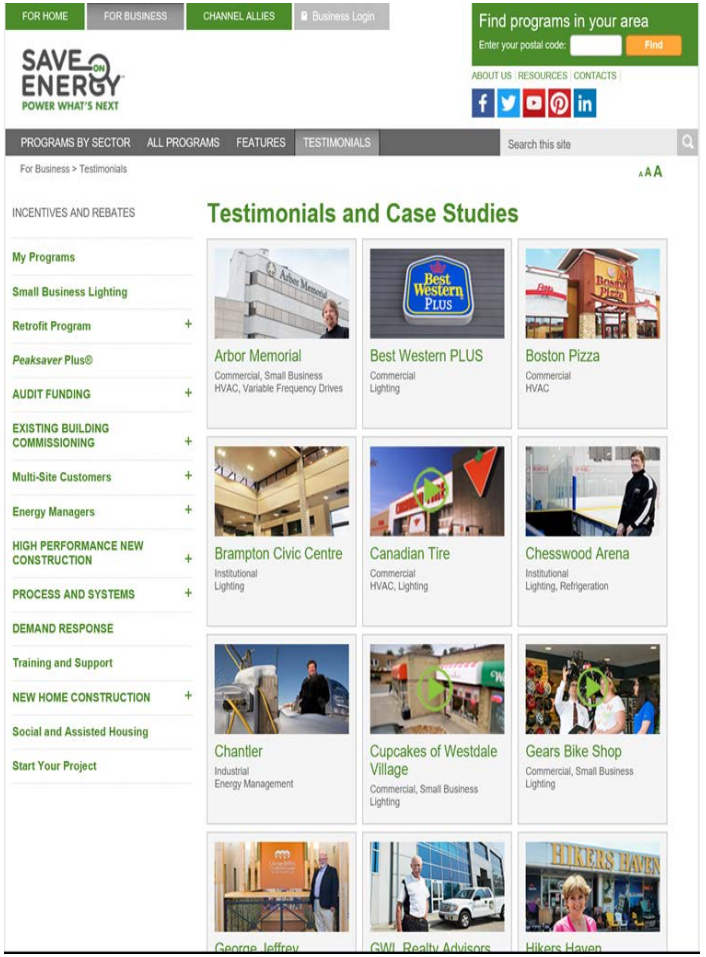
Context

- Class B electricity consumers comprise about 50,000 customers, including many mid-size manufacturers (i.e., automotive parts suppliers, plastics manufacturers), large commercial buildings (i.e., office blocks, mid-sized shopping malls) and broader public sector facilities (i.e., hospitals, college campuses).

- Through saveONenergy, many Class B consumers have already taken advantage of energy efficiency programs.

  - Although saveONenergy programs like Process and Systems Upgrade Incentive exist, these programs generally require significant investment on behalf of the customer in addition to the incentives and therefore may be difficult to take advantage of.

  - For Class B manufacturers whose electricity consumption is primarily based on process activities (e.g., injection moulding, welding, etc), traditional conservation measures like lighting and ventilation upgrades have limited benefit.

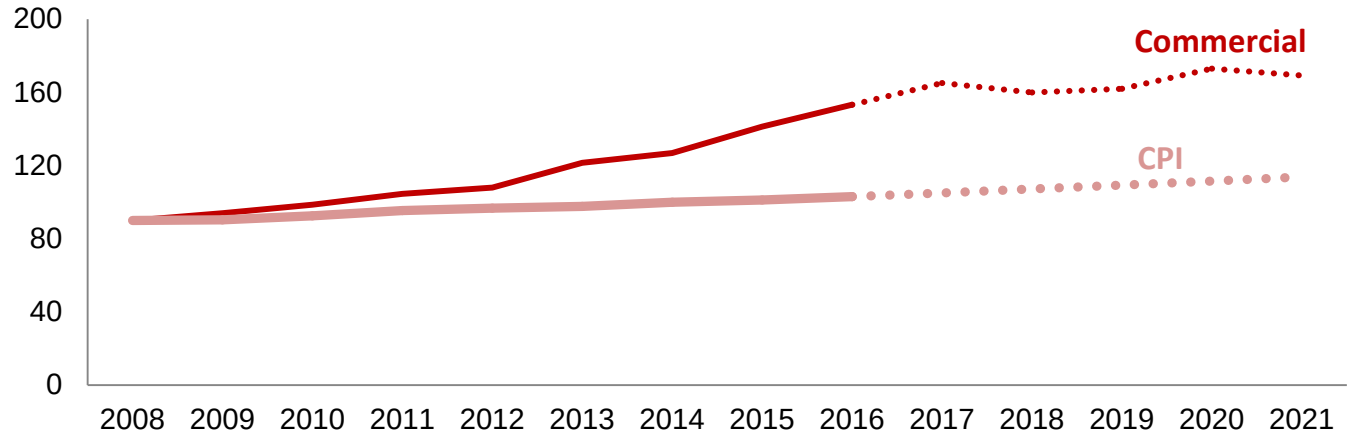


***Source*:** IESO; OEB; Ministry of Energy

Context (cont'd)

- Class B consumers are too large for the Regulated Price Plan (so do not qualify for the 8% rebate for small businesses or Time-Of-Use pricing) and too small to be Class A (so do not qualify for the Industrial Conservation Initiative (ICI) for large consumers).
- Price mitigation initiatives could be provided to Class B to address stakeholders' concerns (e.g., Coalition of Concerned Manufacturers of Ontario, etc).
- The chart below highlights that the cost of electricity for Class B consumers has risen faster than CPI.

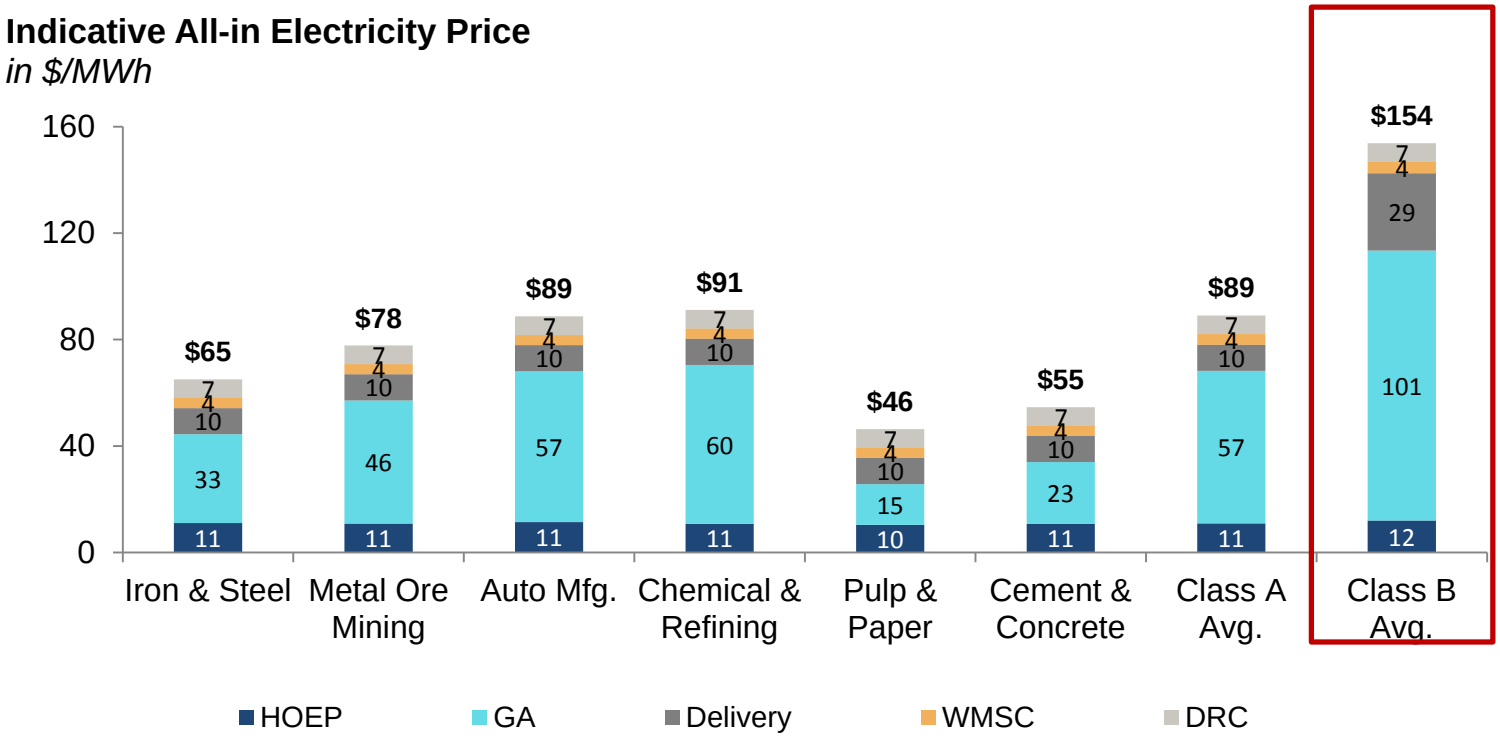
Illustrative Electricity Prices
in $/MWh



***Source*:** IESO; OEB; Ministry of Energy

Context (cont'd)

- Class B electricity consumers pay higher electricity prices compared to Class A due to their inability to qualify for Industrial Conservation Initiative (ICI):



Note: Estimates reflect year-to-date June 2016.

Rate Mitigation Options

- Options for consideration include:
  1) GA Smoothing for All;
  2) Lower the Cost of Global Adjustment (GA) by Funding a Portion of Conservation through the GGRA;
  3) Remove Debt Retirement Charge Early (DRC) for Non-RPP Class B Consumers;
  4) Extend 8% Rebate to include Class B Consumers; and
  5) Provide Tax-Based Assistance Package for Class B Consumers (i.e., SMEs).

- The options listed above can be combined to reduce prices for all electricity consumers including Class B or to target Class B specifically.

1a. GA Smoothing for All – Residential Bills Lowered by 20% (with Tax-Base Funded 8% Rebate and Social Programs, 2% increase)

- Total bill below is based on a revised IESO forecast. See footnotes for more information.

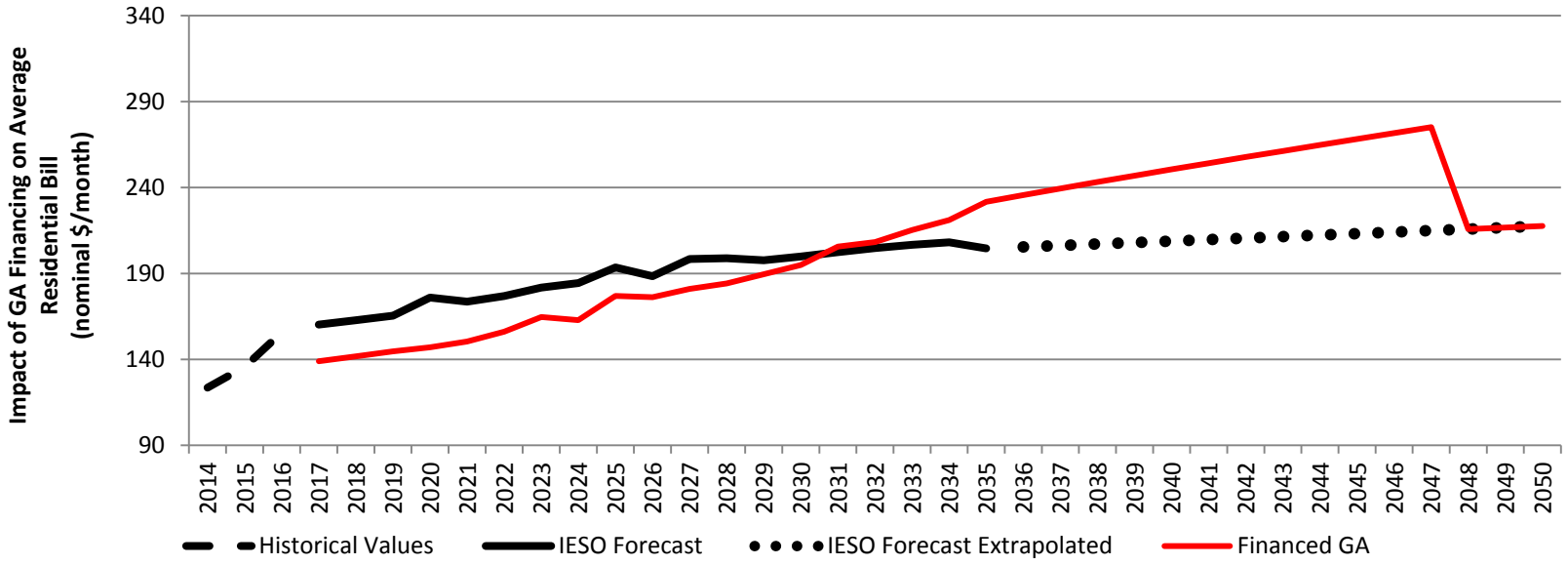
Residential (750 kWh/month)	Actual 2016	2017	2018	2019	2020	2021
Total Bill (includes HST)	**163**	**172**	**175**	**178**	**189**	**187**
Total Bill (excludes HST)	145	153	155	158	168	165
Impact of GA Financing		-19	-19	-18	-26	-21
Impact of Tax-Basing Social Programs		-2	-2	-2	-3	-3
Subtotal		131	134	137	139	142
8% rebate		-11	-11	-11	-11	-11
HST		17	17	18	18	18
Revised Bill (includes HST)	**163**	**138**	**141**	**144**	**146**	**149**
Year-over-Year Change		-16%	2%	2%	2%	2%
Change from Forecast		**-20%**	**-20%**	**-19%**	**-23%**	**-20%**

Commercial & Small Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class B Total (excludes HST)	**160**	**165**	**160**	**162**	**173**	**169**
Class B Revised Total (excludes HST)	**160**	**137**	**132**	**134**	**135**	**138**
Year-over-Year Change		-14%	-4%	2%	1%	2%
Change from Forecast		-17%	-18%	-17%	-22%	-18%

Large Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class A Total (excludes HST)	**90**	**91**	**93**	**88**	**95**	**96**
Class A Revised Total (excludes HST)	**90**	**72**	**74**	**69**	**70**	**76**
Year-over-Year Change		-20%	3%	-7%	2%	7%
Change from Forecast		-21%	-20%	-21%	-26%	-21%

Notes: Based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. Above Class B estimate based on a 1 MW customer connected to Toronto Hydro, assumes delivery charge escalates as per residential forecast. "Social programs" refers to existing RRRP and OESP. While initiatives would take several months to implement, the above estimate for 2017 reflects a full-year impact. The 8% rebate above represents savings compared to status quo due to the reduction in the sub-total from GA financing. RPP does not include customers on retail contracts.

1a. GA Smoothing for All (Borrow $3.3 billion in 2017, Residential Bills Lowered by 20%)



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Average Monthly Residential Bill Impact pre-tax *($/month)*	-18.8	-18.6	-18.4	-25.6	-20.6	-18.4	-15.2	-19.1	-14.7	-10.9	-15.4	-13.0	-7.2	-4.4	2.8	3.1	7.6	11.5	24.0	26.7	29.3	31.9	34.4	36.9	39.3	41.7	44.1	46.4	48.7	51.0	53.2	0.0
Total Accumulated Debt *($ billion)*	3.3	6.8	10.4	15.5	19.9	24.1	28.0	32.8	37.1	40.9	45.7	50.3	54.2	57.8	60.2	62.7	64.6	65.8	64.7	63.1	60.9	58.1	54.6	50.5	45.6	40.1	33.7	26.6	18.6	9.8	0.0	0.0
Total Change in Accumulated Debt *($ billion)*	3.3	3.5	3.6	5.1	4.4	4.3	3.9	4.8	4.3	3.8	4.8	4.6	3.9	3.6	2.4	2.5	1.8	1.2	-1.0	-1.6	-2.2	-2.8	-3.5	-4.1	-4.8	-5.6	-6.3	-7.1	-8.0	-8.9	-9.8	0.0

Notes: Assumes 30 year financing period and a nominal interest rate of 5% (compounded monthly). Ratepayer GA payments increase annually beyond 2021 at the rate of inflation with no limit above the true cost of GA in any given year. IESO forecast is based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. RPP does not include customers on retail contracts.

1b. GA Smoothing for All - Residential Bills Lowered by 16% (with Tax-Base Funded 8% Rebate and Social Programs, 2% increase)

- Total bill below is based on a revised IESO forecast. See footnotes for more information.

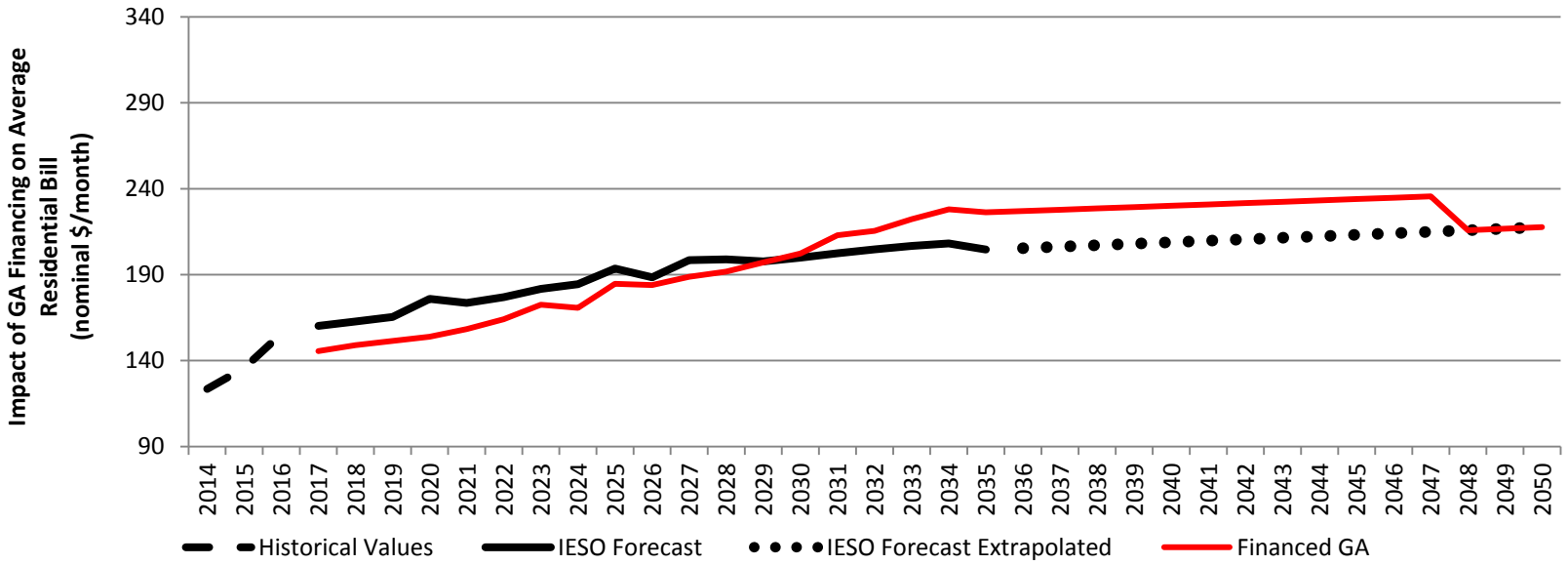
Residential (750 kWh/month)	Actual 2016	2017	2018	2019	2020	2021
Total Bill (includes HST)	**163**	**172**	**175**	**178**	**189**	**187**
Total Bill (excludes HST)		153	155	158	168	165
Impact of GA Financing		-13	-12	-12	-19	-14
Impact of Tax-Basing Social Programs		-2	-2	-2	-3	-3
Subtotal		137	140	143	146	149
8% rebate		-11	-11	-11	-12	-12
HST		18	18	19	19	19
Revised Bill (includes HST)	**163**	**144**	**147**	**150**	**153**	**157**
Year-over-Year Change		-12%	2%	2%	2%	3%
Change from Forecast		**-16%**	**-16%**	**-16%**	**-19%**	**-16%**

Commercial & Small Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class B Total (excludes HST)	**160**	**165**	**160**	**162**	**173**	**169**
Class B Revised Total (excludes HST)	**160**	**145**	**140**	**142**	**144**	**148**
Year-over-Year Change		-9%	-3%	1%	1%	3%
Change from Forecast		-12%	-12%	-12%	-17%	-13%

Large Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class A Total (excludes HST)	**90**	**91**	**93**	**88**	**95**	**96**
Class A Revised Total (excludes HST)	**90**	**77**	**80**	**74**	**76**	**81**
Year-over-Year Change		-14%	3%	-7%	2%	8%
Change from Forecast		-15%	-14%	-15%	-21%	-15%

Notes: Based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. Above Class B estimate based on a 1 MW customer connected to Toronto Hydro, assumes delivery charge escalates as per residential forecast. "Social programs" refers to existing RRRP and OESP. While initiatives would take several months to implement, the above estimate for 2017 reflects a full-year impact. The 8% rebate above represents savings compared to status quo due to the reduction in the sub-total from GA financing. RPP does not include customers on retail contracts.

1b. GA Smoothing for All (Borrow $2.3 billion in 2017, Residential Bills Lowered by 16%)



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Average Monthly Residential Bill Impact pre-tax *($/month)*	-13.0	-12.2	-12.4	-19.5	-13.5	-11.4	-8.2	-12.2	-7.8	-4.0	-8.6	-6.2	-0.6	2.2	9.3	9.5	13.8	17.6	19.2	19.1	19.0	18.9	18.9	18.8	18.7	18.6	18.5	18.5	18.4	18.3	18.2	0.0
Total Accumulated Debt *($ billion)*	2.3	4.6	7.0	10.8	13.8	16.5	18.8	21.9	24.4	26.3	29.2	31.8	33.5	34.8	34.9	35.0	34.3	32.9	31.0	29.1	27.1	24.9	22.7	20.3	17.8	15.2	12.5	9.6	6.5	3.4	0.0	0.0
Total Change in Accumulated Debt *($ billion)*	2.3	2.3	2.4	3.8	2.9	2.7	2.3	3.1	2.5	1.9	2.9	2.6	1.7	1.3	0.1	0.1	-0.7	-1.4	-1.8	-1.9	-2.0	-2.1	-2.2	-2.4	-2.5	-2.6	-2.7	-2.9	-3.0	-3.2	-3.4	0.0

Notes: Assumes 30 year financing period and a nominal interest rate of 5% (compounded monthly). Ratepayer GA payments increase annually beyond 2021 at the rate of inflation with a limit of $3.25billion above the true cost of GA in any given year. IESO forecast is based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. RPP does not include customers on retail contracts.

2. Lower the Cost of Global Adjustment (GA) by Funding a Portion of Conservation Through the GGRA

- Under the Climate Change Action Plan (CCAP), Ontario committed $1 billion to $1.32 billion of intended Greenhouse Gas Reduction Account (GGRA) funding over the 2017 to 2020 period to keep electricity rates affordable.

- Conservation supports the reduction of GHGs by avoiding/deferring future energy infrastructure investments and reducing natural gas peaking generation and related GHGs.
  - Electricity conservation programs between 2015 and 2020 are expected to result in 1.3 Mt of GHG reduction in 2020, equivalent to taking 300,000 cars off the road in that year.

- The cost of conservation could be shifted away from the rate-base to provide price mitigation for all electricity consumers, including Class B.

- Assuming the CCAP funding is spread equally over the four year period at $250 million to $330 million annually, Class B commercial and small industrial consumer would be reduced by up to $2.50/MWh. See below for the corresponding estimates.
  - Alternatively, funding could be ramped over the course of the four year period – starting at a lower funding envelope in 2017 and increasing over time to total $1 billion to $1.32 billion.

Estimated Benefit	2017	2018	2019	2020	2021
Class B ($/MWh)	1.90 – 2.50	1.90 – 2.50	1.90 – 2.50	1.90 – 2.50	1.90 – 2.50
Class A ($/MWh)	1.20 – 1.56	1.20 – 1.56	1.20 – 1.56	1.20 – 1.56	1.20 – 1.56
Residential Bill ($/750 kWh)	1.43 – 1.90	1.43 – 1.90	1.43 – 1.90	1.43 – 1.90	1.43 – 1.90

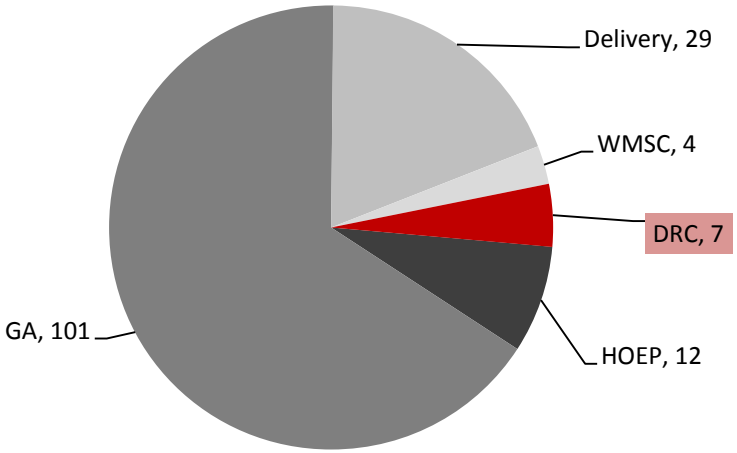
3. Remove Debt Retirement Charge Early (DRC) for Non-RPP Class B Consumers

- The Debt Retirement Charge (DRC) has already been removed from residential bills. For all other consumers the DRC is scheduled to be removed by April 2018.

- Eliminating DRC earlier would save $7/MWh for all non-RPP Class B consumers.
  - This would represent a 4% reduction for a Class B consumer based on current prices.

- Options include:
  1) Shifting DRC which otherwise would be paid by Class B to Class A consumers. This could require extending the legislated DRC retirement date;
  2) Providing a reduction in DRC rather than complete elimination for Class B; or
  3) Removing the DRC completely for non-RPP Class B.

Typical Non-RPP Class B Price
in $/MWh



Fiscal Impact ($M)11	2017-18	2018-19
1) Shift Class B DRC to Class A*	197	-197
2) Reduce DRC by $3.50/MWh	148	-
3) Remove DRC completely for Class B	295	-

*** Note:** Estimates assume elimination of DRC is retroactive to January 1, 2017 and could be reflected in bills as early as April 1, 2017. Legislative / regulatory amendments to shift the cost to Class A would come into effect by January 1, 2018.

4. Extend 8% Rebate to Include Class B Consumers

- Ontario currently rebates the provincial portion of the HST from the pre-tax bills of electricity consumers eligible for RPP (e.g., residential, small business and farms) as of January 1, 2017.
- The 8% rebate could be extended beyond RPP eligible consumers to non-RPP Class B.
- Providing the rebate to more consumers would increase the cost by an estimated $770 million per year over the next four years.
  - Fiscal impacts would vary depending on changes in demand from Class B, including consumers that switch from Class A to Class B to take advantage of the rebate, as well as the impact of retail contracts on the total bills of Class B consumers.
- Ministry of Energy would work with the MOF on implementation as necessary.

Class B Impact ($/MWh)	2017	2018	2019	2020	2021
Extend 8% Rebate	-13	-13	-13	-14	-14

Fiscal Impact ($M)	2017-18	2018-19	2019-20	2020-21	2021-22
Extend 8% Rebate	762	749	770	801	TBC

5. Tax-Based Assistance Package for Class B Consumers (i.e., SMEs)

- Consideration could be given to provide a comprehensive package of tax-based measures to reduce prices for Class B consumers, including:
  - Lowering corporate taxes for SMEs;
  - Tax credits; and
  - Tax-based incentives.

- Tax-based incentives are offered in a number of jurisdictions such as New York, Minnesota, Iowa and South Carolina to reduce the cost of electricity that retain jobs or are considered electricity intensive.

- Fiscal impacts would vary depending on the design of the strategy. Further analysis would be required on the potential impacts for consumers and the fiscal plan. Ministry of Energy will work with MEDG, TBS and MOF as necessary.

Considerations – Ratepayer / Fiscal Impacts

- Below are estimated ratepayer and fiscal impacts:

Class B Impact ($/MWh)	2017	2018	2019	2020	2021
GA Financing for All (Scenario 1a)	-25	-25	-24	-34	-28
Fund a portion of Conservation through GGRA**	-2.5	-2.5	-2.5	-2.5	-2.5
Eliminate DRC for Non-RPP Class B	-7	-	-	-	-
Extend 8% Rebate	-13	-13	-13	-14	-14
Tax-based Initiatives	TBC	TBC	TBC	TBC	TBC

Fiscal Impact ($M)	2017-18	2018-19	2019-20	2020-21	2021-22
GA Financing for All (Scenario 1a)*	-	-	-	-	-
Fund a portion of Conservation through GGRA**	225-330	225-330	225-330	225-330	225-330
Eliminate DRC for Non-RPP Class B	295	-	-	-	-
Extend 8% Rebate	762	749	770	801	TBC
Tax-based Initiatives	TBC	TBC	TBC	TBC	TBC

***Note:** GA smoothing does not have a fiscal impact because it is assumed that both legal authority and accounting treatment are met.
****Note:** Funding via the Greenhouse Gas Reduction Account (GGRA), estimated impact illustrates the high end of the range.

Considerations

Global Adjustment Smoothing

- GA smoothing accounting / legal analysis is ongoing.

Lower the Cost of Global Adjustment (GA) by Funding a Portion of Conservation Through the GGRA

- It is difficult to quantify the legal risk of a successful constitutional challenge to the cap and trade program associated with a single initiative in isolation. The risk will depend on a holistic assessment of the amount of money deposited into the GGRA and the character of all initiatives supported by cap and trade auction proceeds.

- In principle, there should be only a low risk if the government used cap and trade auction proceeds to defray the ongoing costs of conservation programs currently funded out of the global adjustment mechanism. This is because the programs are collectively expected to reduce CO2 emissions by hundreds of thousands of tonnes each year which seems to fit squarely within the regulatory purpose of the CCMLcE Act.

- However, initiatives which provide a rebate on electricity attract particular scrutiny as they tend to incent consumers to use more rather than less electricity which may frustrate the purpose of the CCMLcE Act. To the extent that funding conservation costs out of the GGRA constitutes a substantial portion of total GGRA spending, it will invite further scrutiny and will increase the legal risk of a successful challenge.

Remove Debt Retirement Charge Early (DRC) for Non-RPP Class B Consumers

- There is precedent for removing DRC from electricity consumers' bills. Effective January 1, 2016, DRC was removed for residential electricity bills. However, removing DRC early would only provide Class B consumers relief until April 2018 (i.e., approximately 1-yr of relief).
- Trade implications should be considers.

Extend 8% Rebate to Include Class B Consumers

- Trade implications should be considers.

Provide Tax-Based Assistance Package for Class B Consumers (i.e., SMEs)

- The Ministry of Energy would work with MOF and MEDG to develop targeted tax-based credits and initiatives.

Ontario

MINISTRY OF
ENERGY

Rate Mitigation Options for Class B Electricity Consumers

Working Draft

February 16, 2017

CONFIDENTIAL DRAFT

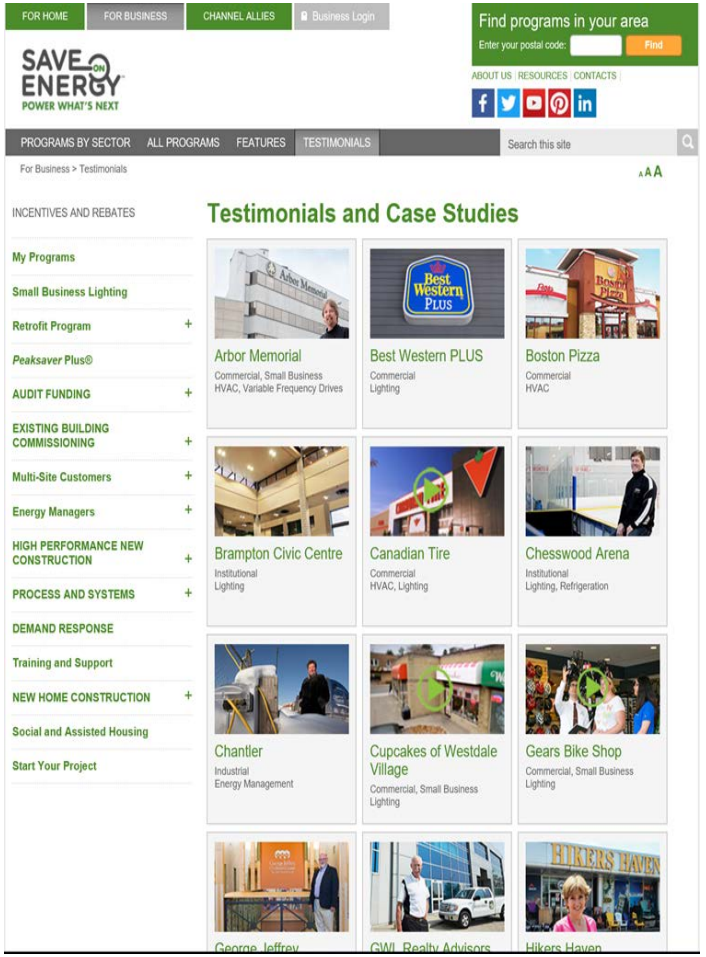
Context

- Class B electricity consumers comprise about 50,000 customers, including many mid-size manufacturers (i.e., automotive parts suppliers, plastics manufacturers), large commercial buildings (i.e., office blocks, mid-sized shopping malls) and broader public sector facilities (i.e., hospitals, college campuses).

- Through saveONenergy, many Class B consumers have already taken advantage of energy efficiency programs.

  - Although saveONenergy programs like Process and Systems Upgrade Incentive exist, these programs generally require significant investment on behalf of the customer in addition to the incentives and therefore may be difficult to take advantage of.

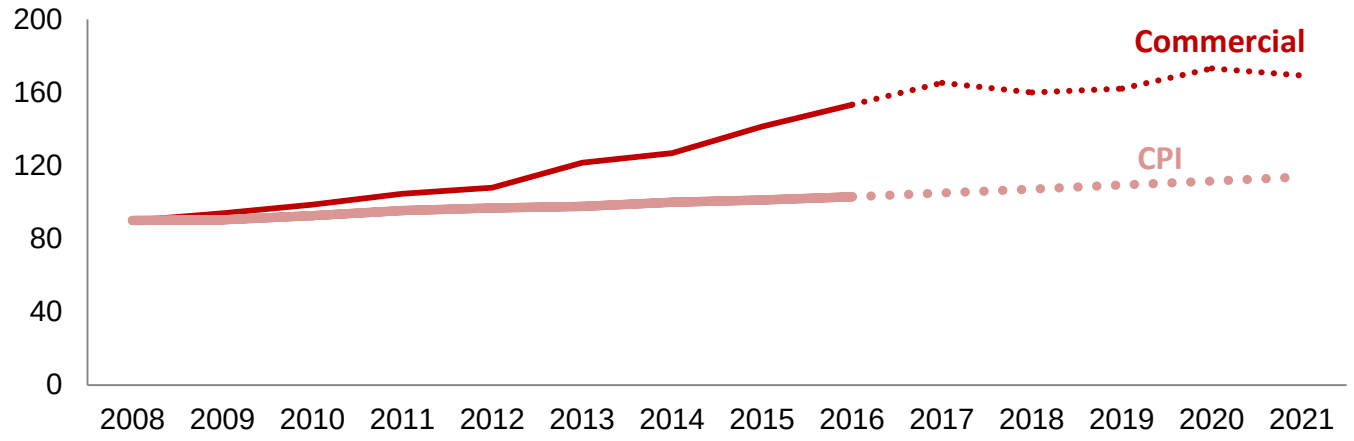
  - For Class B manufacturers whose electricity consumption is primarily based on process activities (e.g., injection moulding, welding, etc), traditional conservation measures like lighting and ventilation upgrades have limited benefit.



Context (cont'd)

- Class B consumers are too large for the Regulated Price Plan (so do not qualify for the 8% rebate for small businesses or Time-Of-Use pricing) and too small to be Class A (so do not qualify for the Industrial Conservation Initiative (ICI) for large consumers).
- Price mitigation initiatives could be provided to Class B to address stakeholders' concerns (e.g., Coalition of Concerned Manufacturers of Ontario, etc).
- The chart below highlights that the cost of electricity for Class B consumers has risen faster than CPI.

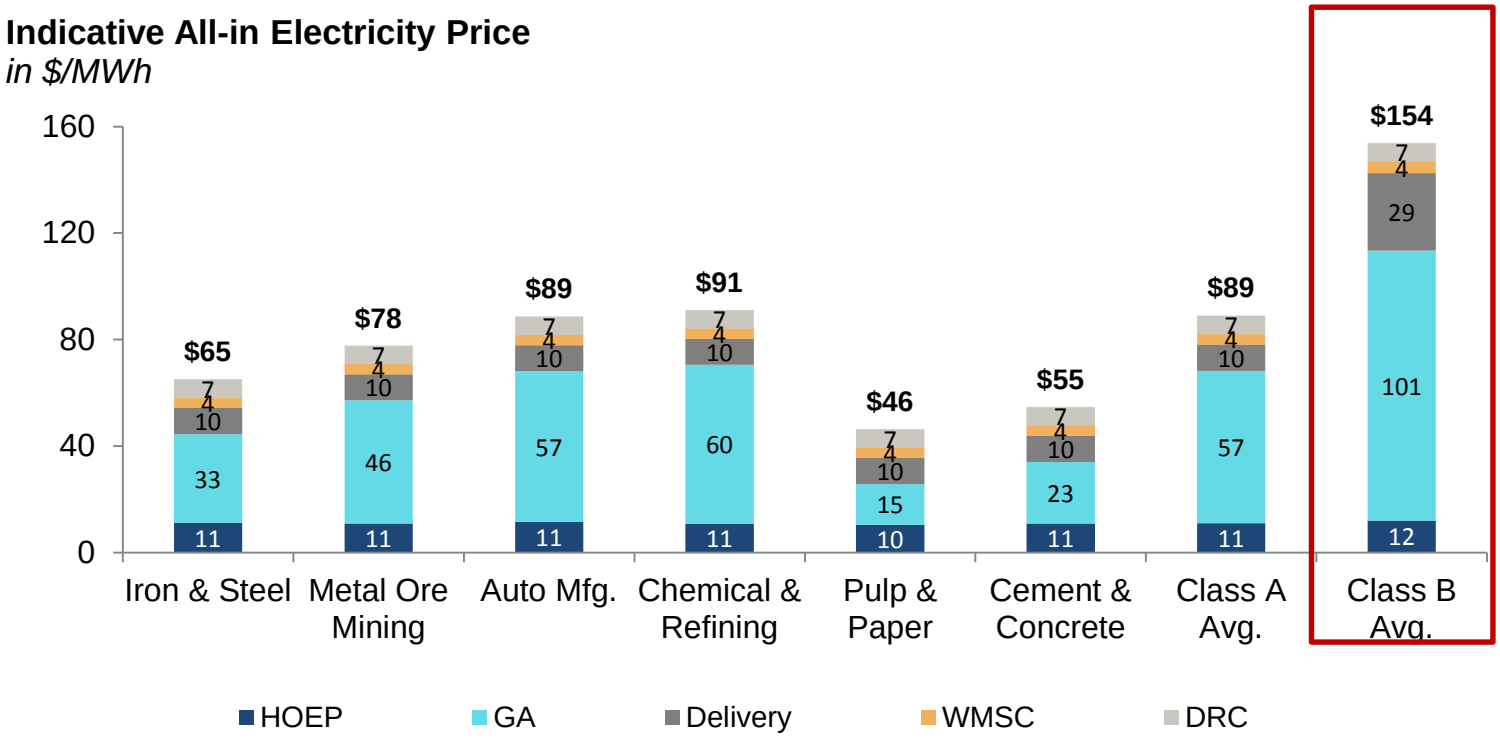
Illustrative Electricity Prices
in $/MWh



***Source*:** IESO; OEB; Ministry of Energy

Context (cont'd)

- Class B electricity consumers pay higher electricity prices compared to Class A due to their inability to qualify for Industrial Conservation Initiative (ICI):



Note: Estimates reflect year-to-date June 2016.

Rate Mitigation Options

- Options for consideration include:
  1) GA Smoothing for All;
  2) Lower the Cost of Global Adjustment (GA) by Funding a Portion of Conservation through the GGRA;
  3) Remove Debt Retirement Charge Early (DRC) for Non-RPP Class B Consumers;
  4) Extend 8% Rebate to include Class B Consumers; and
  5) Provide Tax-Based Assistance Package for Class B Consumers (i.e., SMEs).

- The options listed above can be combined to reduce prices for all electricity consumers including Class B or to target Class B specifically.

1a. GA Smoothing for All – Residential Bills Lowered by 20% (with Tax-Base Funded 8% Rebate and Social Programs, 2% increase)

- Total bill below is based on a revised IESO forecast. See footnotes for more information.

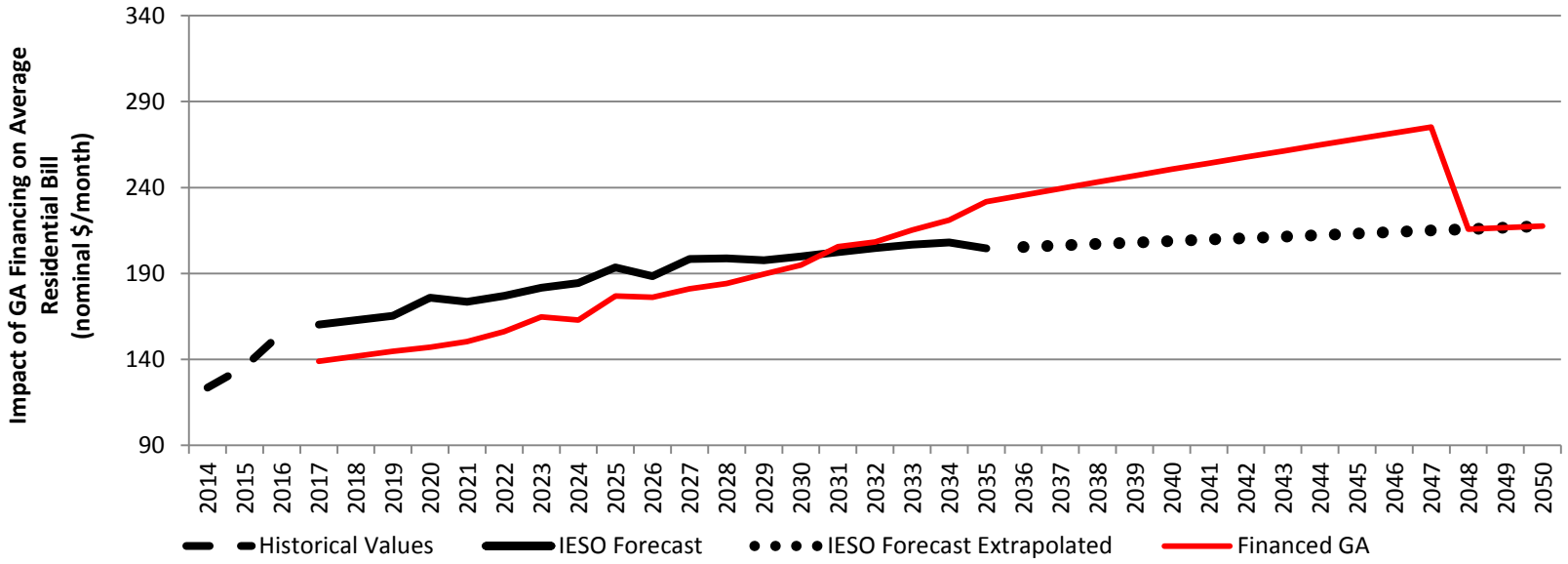
Residential (750 kWh/month)	Actual 2016	2017	2018	2019	2020	2021
Total Bill (includes HST)	**163**	**172**	**175**	**178**	**189**	**187**
Total Bill (excludes HST)	145	153	155	158	168	165
Impact of GA Financing		-19	-19	-18	-26	-21
Impact of Tax-Basing Social Programs		-2	-2	-2	-3	-3
Subtotal		131	134	137	139	142
8% rebate		-11	-11	-11	-11	-11
HST		17	17	18	18	18
Revised Bill (includes HST)	**163**	**138**	**141**	**144**	**146**	**149**
Year-over-Year Change		-16%	2%	2%	2%	2%
Change from Forecast		**-20%**	**-20%**	**-19%**	**-23%**	**-20%**

Commercial & Small Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class B Total (excludes HST)	**160**	**165**	**160**	**162**	**173**	**169**
Class B Revised Total (excludes HST)	**160**	**137**	**132**	**134**	**135**	**138**
Year-over-Year Change		-14%	-4%	2%	1%	2%
Change from Forecast		-17%	-18%	-17%	-22%	-18%

Large Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class A Total (excludes HST)	**90**	**91**	**93**	**88**	**95**	**96**
Class A Revised Total (excludes HST)	**90**	**72**	**74**	**69**	**70**	**76**
Year-over-Year Change		-20%	3%	-7%	2%	7%
Change from Forecast		-21%	-20%	-21%	-26%	-21%

Notes: Based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. Above Class B estimate based on a 1 MW customer connected to Toronto Hydro, assumes delivery charge escalates as per residential forecast. "Social programs" refers to existing RRRP and OESP. While initiatives would take several months to implement, the above estimate for 2017 reflects a full-year impact. The 8% rebate above represents savings compared to status quo due to the reduction in the sub-total from GA financing. RPP does not include customers on retail contracts.

1a. GA Smoothing for All (Borrow $3.3 billion in 2017, Residential Bills Lowered by 20%)



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Average Monthly Residential Bill Impact pre-tax *($/month)*	-18.8	-18.6	-18.4	-25.6	-20.6	-18.4	-15.2	-19.1	-14.7	-10.9	-15.4	-13.0	-7.2	-4.4	2.8	3.1	7.6	11.5	24.0	26.7	29.3	31.9	34.4	36.9	39.3	41.7	44.1	46.4	48.7	51.0	53.2	0.0
Total Accumulated Debt *($ billion)*	3.3	6.8	10.4	15.5	19.9	24.1	28.0	32.8	37.1	40.9	45.7	50.3	54.2	57.8	60.2	62.7	64.6	65.8	64.7	63.1	60.9	58.1	54.6	50.5	45.6	40.1	33.7	26.6	18.6	9.8	0.0	0.0
Total Change in Accumulated Debt *($ billion)*	3.3	3.5	3.6	5.1	4.4	4.3	3.9	4.8	4.3	3.8	4.8	4.6	3.9	3.6	2.4	2.5	1.8	1.2	-1.0	-1.6	-2.2	-2.8	-3.5	-4.1	-4.8	-5.6	-6.3	-7.1	-8.0	-8.9	-9.8	0.0

Notes: Assumes 30 year financing period and a nominal interest rate of 5% (compounded monthly). Ratepayer GA payments increase annually beyond 2021 at the rate of inflation with no limit above the true cost of GA in any given year. IESO forecast is based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. RPP does not include customers on retail contracts.

1b. GA Smoothing for All - Residential Bills Lowered by 16% (with Tax-Base Funded 8% Rebate and Social Programs, 2% increase)

- Total bill below is based on a revised IESO forecast. See footnotes for more information.

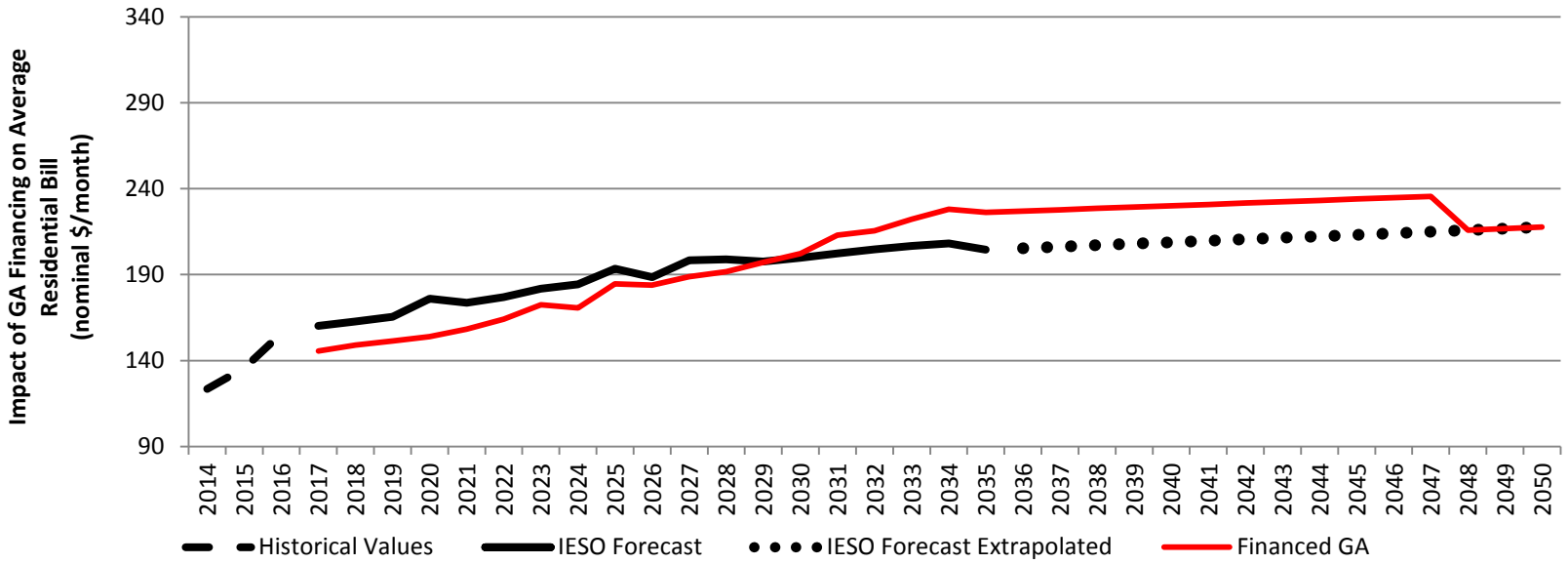
Residential (750 kWh/month)	Actual 2016	2017	2018	2019	2020	2021
Total Bill (includes HST)	**163**	**172**	**175**	**178**	**189**	**187**
Total Bill (excludes HST)		153	155	158	168	165
Impact of GA Financing		-13	-12	-12	-19	-14
Impact of Tax-Basing Social Programs		-2	-2	-2	-3	-3
Subtotal		137	140	143	146	149
8% rebate		-11	-11	-11	-12	-12
HST		18	18	19	19	19
Revised Bill (includes HST)	**163**	**144**	**147**	**150**	**153**	**157**
Year-over-Year Change		-12%	2%	2%	2%	3%
Change from Forecast		**-16%**	**-16%**	**-16%**	**-19%**	**-16%**

Commercial & Small Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class B Total (excludes HST)	**160**	**165**	**160**	**162**	**173**	**169**
Class B Revised Total (excludes HST)	**160**	**145**	**140**	**142**	**144**	**148**
Year-over-Year Change		-9%	-3%	1%	1%	3%
Change from Forecast		-12%	-12%	-12%	-17%	-13%

Large Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class A Total (excludes HST)	**90**	**91**	**93**	**88**	**95**	**96**
Class A Revised Total (excludes HST)	**90**	**77**	**80**	**74**	**76**	**81**
Year-over-Year Change		-14%	3%	-7%	2%	8%
Change from Forecast		-15%	-14%	-15%	-21%	-15%

Notes: Based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. Above Class B estimate based on a 1 MW customer connected to Toronto Hydro, assumes delivery charge escalates as per residential forecast. "Social programs" refers to existing RRRP and OESP. While initiatives would take several months to implement, the above estimate for 2017 reflects a full-year impact. The 8% rebate above represents savings compared to status quo due to the reduction in the sub-total from GA financing. RPP does not include customers on retail contracts.

1b. GA Smoothing for All (Borrow $2.3 billion in 2017, Residential Bills Lowered by 16%)



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Average Monthly Residential Bill Impact pre-tax *($/month)*	-13.0	-12.2	-12.4	-19.5	-13.5	-11.4	-8.2	-12.2	-7.8	-4.0	-8.6	-6.2	-0.6	2.2	9.3	9.5	13.8	17.6	19.2	19.1	19.0	18.9	18.9	18.8	18.7	18.6	18.5	18.5	18.4	18.3	18.2	0.0
Total Accumulated Debt *($ billion)*	2.3	4.6	7.0	10.8	13.8	16.5	18.8	21.9	24.4	26.3	29.2	31.8	33.5	34.8	34.9	35.0	34.3	32.9	31.0	29.1	27.1	24.9	22.7	20.3	17.8	15.2	12.5	9.6	6.5	3.4	0.0	0.0
Total Change in Accumulated Debt *($ billion)*	2.3	2.3	2.4	3.8	2.9	2.7	2.3	3.1	2.5	1.9	2.9	2.6	1.7	1.3	0.1	0.1	-0.7	-1.4	-1.8	-1.9	-2.0	-2.1	-2.2	-2.4	-2.5	-2.6	-2.7	-2.9	-3.0	-3.2	-3.4	0.0

Notes: Assumes 30 year financing period and a nominal interest rate of 5% (compounded monthly). Ratepayer GA payments increase annually beyond 2021 at the rate of inflation with a limit of $3.25billion above the true cost of GA in any given year. IESO forecast is based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. RPP does not include customers on retail contracts.

2. Lower the Cost of Global Adjustment (GA) by Funding a Portion of Conservation Through the GGRA

- Under the Climate Change Action Plan (CCAP), Ontario committed $1 billion to $1.32 billion of intended Greenhouse Gas Reduction Account (GGRA) funding over the 2017 to 2020 period to keep electricity rates affordable.

- Conservation supports the reduction of GHGs by avoiding/deferring future energy infrastructure investments and reducing natural gas peaking generation and related GHGs.
  - Electricity conservation programs between 2015 and 2020 are expected to result in 1.3 Mt of GHG reduction in 2020, equivalent to taking 300,000 cars off the road in that year.

- The cost of conservation could be shifted away from the rate-base to provide price mitigation for all electricity consumers, including Class B.

- Assuming the CCAP funding is spread equally over the four year period at $250 million to $330 million annually, Class B commercial and small industrial consumer would be reduced by up to $2.50/MWh. See below for the corresponding estimates.
  - Alternatively, funding could be ramped over the course of the four year period – starting at a lower funding envelope in 2017 and increasing over time to total $1 billion to $1.32 billion.

Estimated Benefit	2017	2018	2019	2020	2021
Class B ($/MWh)	1.90 – 2.50	1.90 – 2.50	1.90 – 2.50	1.90 – 2.50	1.90 – 2.50
Class A ($/MWh)	1.20 – 1.56	1.20 – 1.56	1.20 – 1.56	1.20 – 1.56	1.20 – 1.56
Residential Bill ($/750 kWh)	1.43 – 1.90	1.43 – 1.90	1.43 – 1.90	1.43 – 1.90	1.43 – 1.90

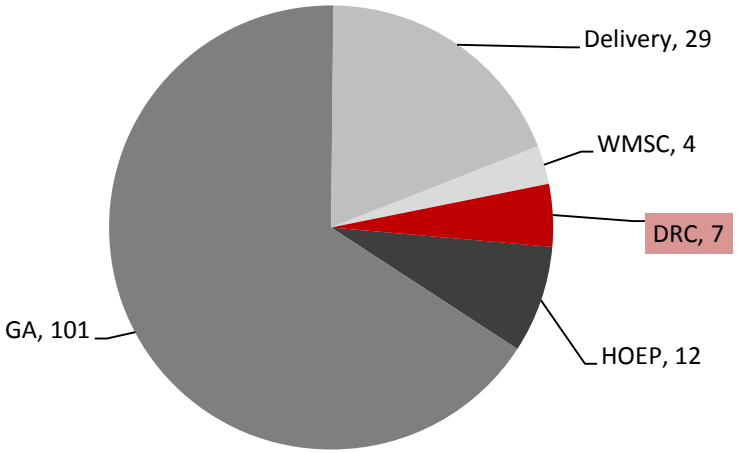
3. Remove Debt Retirement Charge Early (DRC) for Non-RPP Class B Consumers

- The Debt Retirement Charge (DRC) has already been removed from residential bills. For all other consumers the DRC is scheduled to be removed by April 2018.

- Eliminating DRC earlier would save $7/MWh for <u>all</u> non-RPP Class B consumers.
  - This would represent a 4% reduction for a Class B consumer based on current prices.

- Options include:
  1) Shifting DRC which otherwise would be paid by Class B to Class A consumers. This could require extending the legislated DRC retirement date;
  2) Providing a reduction in DRC rather than complete elimination for Class B; or
  3) Removing the DRC completely for non-RPP Class B.

Typical Non-RPP Class B Price
in $/MWh



Fiscal Impact ($M)11	2017-18	2018-19
1) Shift Class B DRC to Class A*	197	-197
2) Reduce DRC by $3.50/MWh	148	-
3) Remove DRC completely for Class B	295	-

*** Note:** Estimates assume elimination of DRC is retroactive to January 1, 2017 and could be reflected in bills as early as April 1, 2017. Legislative / regulatory amendments to shift the cost to Class A would come into effect by January 1, 2018.

4. Extend 8% Rebate to Include Class B Consumers

- Ontario currently rebates the provincial portion of the HST from the pre-tax bills of electricity consumers eligible for RPP (e.g., residential, small business and farms) as of January 1, 2017.
- The 8% rebate could be extended beyond RPP eligible consumers to non-RPP Class B.
- Providing the rebate to more consumers would increase the cost by an estimated $770 million per year over the next four years.
  - Fiscal impacts would vary depending on changes in demand from Class B, including consumers that switch from Class A to Class B to take advantage of the rebate, as well as the impact of retail contracts on the total bills of Class B consumers.
- Ministry of Energy would work with the MOF on implementation as necessary.

Class B Impact ($/MWh)	2017	2018	2019	2020	2021
Extend 8% Rebate	-13	-13	-13	-14	-14

Fiscal Impact ($M)	2017-18	2018-19	2019-20	2020-21	2021-22
Extend 8% Rebate	762	749	770	801	TBC

5. Tax-Based Assistance Package for Class B Consumers (i.e., SMEs)

- Consideration could be given to provide a comprehensive package of tax-based measures to reduce prices for Class B consumers, including:
  - Lowering corporate taxes for SMEs;
  - Tax credits; and
  - Tax-based incentives.

- Tax-based incentives are offered in a number of jurisdictions such as New York, Minnesota, Iowa and South Carolina to reduce the cost of electricity that retain jobs or are considered electricity intensive.

- Fiscal impacts would vary depending on the design of the strategy. Further analysis would be required on the potential impacts for consumers and the fiscal plan. Ministry of Energy will work with MEDG, TBS and MOF as necessary.

Considerations – Ratepayer / Fiscal Impacts

- Below are estimated ratepayer and fiscal impacts:

Class B Impact ($/MWh)	2017	2018	2019	2020	2021
GA Financing for All (Scenario 1a)	-25	-25	-24	-34	-28
Fund a portion of Conservation through GGRA**	-2.5	-2.5	-2.5	-2.5	-2.5
Eliminate DRC for Non-RPP Class B	-7	-	-	-	-
Extend 8% Rebate	-13	-13	-13	-14	-14
Tax-based Initiatives	TBC	TBC	TBC	TBC	TBC

Fiscal Impact ($M)	2017-18	2018-19	2019-20	2020-21	2021-22
GA Financing for All (Scenario 1a)*	-	-	-	-	-
Fund a portion of Conservation through GGRA**	225-330	225-330	225-330	225-330	225-330
Eliminate DRC for Non-RPP Class B	295	-	-	-	-
Extend 8% Rebate	762	749	770	801	TBC
Tax-based Initiatives	TBC	TBC	TBC	TBC	TBC

***Note:** GA smoothing does not have a fiscal impact because it is assumed that both legal authority and accounting treatment are met.
****Note:** Funding via the Greenhouse Gas Reduction Account (GGRA), estimated impact illustrates the high end of the range.

Considerations

Global Adjustment Smoothing

- GA smoothing accounting / legal analysis is ongoing.

Lower the Cost of Global Adjustment (GA) by Funding a Portion of Conservation Through the GGRA

- It is difficult to quantify the legal risk of a successful constitutional challenge to the cap and trade program associated with a single initiative in isolation. The risk will depend on a holistic assessment of the amount of money deposited into the GGRA and the character of all initiatives supported by cap and trade auction proceeds.

- In principle, there should be only a low risk if the government used cap and trade auction proceeds to defray the ongoing costs of conservation programs currently funded out of the global adjustment mechanism. This is because the programs are collectively expected to reduce CO2 emissions by hundreds of thousands of tonnes each year which seems to fit squarely within the regulatory purpose of the CCMLcE Act.

- However, initiatives which provide a rebate on electricity attract particular scrutiny as they tend to incent consumers to use more rather than less electricity which may frustrate the purpose of the CCMLcE Act. To the extent that funding conservation costs out of the GGRA constitutes a substantial portion of total GGRA spending, it will invite further scrutiny and will increase the legal risk of a successful challenge.

Remove Debt Retirement Charge Early (DRC) for Non-RPP Class B Consumers

- There is precedent for removing DRC from electricity consumers' bills. Effective January 1, 2016, DRC was removed for residential electricity bills. However, removing DRC early would only provide Class B consumers relief until April 2018 (i.e., approximately 1-yr of relief).
- Trade implications should be considers.

Extend 8% Rebate to Include Class B Consumers

- Trade implications should be considers.

Provide Tax-Based Assistance Package for Class B Consumers (i.e., SMEs)

- The Ministry of Energy would work with MOF and MEDG to develop targeted tax-based credits and initiatives.

RATE REDUCTION BONDS – A PRIMER

INTRODUCTION

Efforts to deregulate U.S. local electricity markets in the Nineties culminated in 1996 in the enactment of legislation by the states of California and Pennsylvania establishing state-mandated frameworks for converting regulated electrical utility monopolies into competitive market-based entities. Other states soon followed suit with similar measures. The goal of these legislative efforts was to provide consumers with choices, resulting in lower prices achieved through the creation of competitive electricity markets.

The legislation recognized, however, that the movement away from regulated monopoly pricing to lower retail prices would prevent utilities from recovering the costs associated with earlier capital outlays spent on the construction of nuclear and alternative energy production facilities that became uneconomic after the transition away from regulatory protection. The term "stranded cost" stems from this constraint.

The laws authorized local public utility commissions to mandate the recovery of stranded costs over time through fees , known as "competitive transition charges" or "CTC's," collected from customers on their regular electricity bill. The CTC's may be a mandatory percentage of a customer's bill, a flat fee, or charge based on kilowatt hourage. The imposition of CTC's has resulted in the creation of stable, long-term cashflows.

The use of securitization backed by CTC's has also frequently been authorized to advance the recovery of stranded costs. Issuance of *Rate Reduction Bonds*, or "RRB's," often with multi-tranche tenors of five to ten-years or more, therefore, immediately improved utilities' capital structure due to reduced funding costs over a term longer than the legislatively-mandated transition period.

STRUCTURE

As with all asset-backed securitization, rate reduction bonds are based on the creation of a "Special Purpose Entity" or "SPE." The SPE issues rate reduction bonds backed by the right to receive CTC payments from utility customers. Proceeds of the issue flow through the SPE to the utility, which use them to retire debt or equity.

The utility's right to the CTC is transferred to the SPE via a "true sale" of the asset, which ensures "bankruptcy remoteness" to the SPE from any credit deterioration in the utility. The portion of customer billings consisting of the CTC (separate from "base rate" charges) is passed through to the SPE and in turn allocated to the amortization of principal and payment of interest on the bonds.

The SEC does not view stranded cost charges as financial assets in a manner consistent with FASB 125, therefore the charges do not qualify for "off-balance sheet" treatment. The SEC considers RRBs to be either debt or deferred revenue of the utility. This makes RRBs somewhat different than other ABS classes whose assets qualify as off-balance sheet under FASB 125, in

that the "Business Trust" format is used to create the bankruptcy remote entity, as opposed to a grantor or owner trust format.

A business trust is "looked through" for accounting and tax purposes, allowing for the critical true sale legal opinion upon which bankruptcy remoteness depends. Also, legislation often specifically recognizes the transfer of stranded cost charges as a true sale, which despite being "on balance sheet," effectively mandates bankruptcy remoteness. Individual legislation has, however, differed from state to state and is carefully examined.

A key feature of much stranded cost securitization is known as a "True Up Mechanism." Projected cashflows on RRBs are based on utilities' comprehensive historical data on market demand based on seasonal weather patterns, economic activity, customer composition, and demographics. If, in a given period, some downward shift in the demand curve occurs resulting in revenue insufficient to cover payment of principal and interest to RRB investors, the CTC will be increased in order to create sufficient cashflow to cover the obligation. This process functions in the opposite manner as well.

As a result of the state mandates backing stranded cost securitizations, the effect is to provide credit enhancement guaranteeing the projected flow of funds to investors, making RRBs relatively less risky than competing ABS classes relying on other structural forms of credit enhancement. Triple-A credit ratings result. Rate reduction bonds may also be enhanced by 50 basis point reserve funds as well.

Servicing of RRBs is also enhanced via the true up mechanism. Utilities service the receivables generated by their individual customer base, therefore, credit status of the utility becomes an element in the assessment of RRB value.

ELECTRICITY MARKETS

Electricity markets are unique from state to state depending upon the previously mentioned deregulatory initiatives passed therein, as well as the geographic, climate, population, and economic development patterns exhibited (e.g. industrial vs. agricultural concentrations.) The well-publicized problems encountered in the California markets during Summer 2001 were, in part, a result of the specific approach mandated by that state's deregulatory legislation, which prevented utilities from passing the increased wholesale costs of acquired power through to customers. These constraints imposed severe operating difficulties upon the affected utilities, ultimately forcing Pacific Gas and Electric to declare bankruptcy. Also, grass roots challenges to legislation have contributed to the "headline risk" sometimes associated with RRBs. To date, significant legal challenges to legislation authorizing issuance of RRBs have been unsuccessful in various jurisdictions.

TIERING

The unique, often esoteric, differences between states' electricity markets based on the above points (and by no means limited to those) has led to a tiering framework in RRBs.

Benchmark states include New Jersey and Connecticut. Characteristics of these states' markets include well-rated utilities with the right to recover costs, an attractive mix between residential/industrial customers, and a lack of legal challenges to enacted legislation.

Behind these lie a large mid-tier of states where risk is perceived to be relatively greater due to a unique issue, such as utility credit weakness, nature of the deregulatory initiative passed, prospective legal or legislative questions (such as a pending voter propositions), or extreme industrial customer base concentration. Such is often the case with Eastern and Mid-Western states.

The weakest tier consists of the securities of California utilities, which, despite solid legal foundations, and defeat of grass roots rollback initiatives, were issued during a period of strong economic growth, alleged power supply manipulation, and enflamed passions, resulting in severe distress for the utilities. Restabilization of the California energy market is expected to bolster performance of this tier in the long-run, given its inherent quality.

RELATIVE VALUE

Relative to other ABS sectors, RRBs provide returns similar to consumer-based receivables sectors like credit cards and auto loans, but have recently been subject to headline risk that has caused performance to lag competing sectors, despite AAA ratings. As these issues have resolved themselves, the differential has subsided.

The AAA credit quality of RRBs has also become attractive to traditional corporate bond investors due to the dearth of AAA issuance available in that sector.

An advantage of RRBs is their superior cashflow stability, based on legislatively mandated competitive transition charges and associated true-up mechanisms, and low prepayment risk.

Also, RRBs experience reduced delinquency and default performance patterns relative to other consumer receivables due to the inelasticity of demand for electrical power in regions with strong residential concentrations. Whereas charge-offs in the credit card and auto loan ABS can increase substantially in periods of economic weakness, with rising unemployment and personal bankruptcies, residential demand for electrical power rarely wanes, creating a relatively more stable pool of receivables featuring a superior AAA credit profile.

REQUIREMENTS FOR THE OFA TO LEND TO THE IESO

The IESO will require a revolving credit facility in its role for delivering on the Fair Hydro Plan under the proposed Fair Hydro Act. As the OFA currently provides a $975 million credit facility to the IESO for other purposes, it is proposed that the OFA provide a new credit facility to the IESO, in an amount of up to $3 billion [TBC].

Approvals Required by the OFA

The following approvals are required by the OFA to accommodate the request to provide financing to the IESO:

1) An Order-in-Council is required for the Minister of Finance to lend to the OFA.
2) A Directive from Minister of Finance is required for the OFA to on-lend to the IESO.
3) An executed credit agreement between the OFA and the IESO.

1. Order-in-Council (OIC)

An OIC is required to authorize the Minister of Finance to lend to the OFA. Ministry of Finance Legal Services Branch would need to be engaged to facilitate the request.

- The existing $975 million credit facility was covered under OIC 675/97 which authorized the Minister of Finance to lend a revolving $2.16 billion to the OFA. This OIC was originally obtained in 1997.

It is understood that upon drafting the OIC (by MOF Legal), the OIC would need final approval from LGIC as required under section 22(1) of the *Capital Investment Plan Act*, 1993.

- The OIC would go through Deputy Minister of Finance, Minister of Finance, Chair of Cabinet and finally to the LGIC.

To draft the OIC, the following details will be required:

i. Dollar Value of Loan from the Minister of Finance to the OFA
ii. Maturity Date of the Loan

Interest Rate of the Loan (in the past, this was Ontario 90-day T-bill or the interest rate to be charged by OFA to borrower +/- spread)

Formatted: List Paragraph, Indent: Left: 0.25"

2. Minister's Directive

Once the Minister of Finance has the authority under an OIC, a Minister's Directive can authorize the OFA to lend to IESO. The Directive can outline specific terms and conditions as needed.

3. Executed Credit Agreement

With a Minister's Directive approved, the OFA and IESO can work to execute a credit agreement, subject to any terms and conditions of the Directive and any policy considerations.

Deputy → Minister, [TB approval], Chair of Cabinet, and LGIC, CIPA - 22(1)

REQUIREMENTS FOR THE OFA TO LEND TO THE IESO

The IESO will require a revolving credit facility in its role for delivering on the Fair Hydro Plan under the proposed Fair Hydro Act. As the OFA currently provides a $975 million credit facility to the IESO for other purposes, it is proposed that the OFA provide a new credit facility to the IESO, in an amount of up to $3 billion [TBC].

Approvals Required by the OFA

The following approvals are required by the OFA to accommodate the request to provide financing to the IESO:

1) An Order-in-Council is required for the Minister of Finance to lend to the OFA.
2) A Directive from Minister of Finance is required for the OFA to on-lend to the IESO.
3) An executed credit agreement between the OFA and the IESO.

1. Order-in-Council (OIC)

An OIC is required to authorize the Minister of Finance to lend to the OFA. Ministry of Finance Legal Services Branch would need to be engaged to facilitate the request.

- The existing $975 million credit facility was covered under OIC 675/97 which authorized the Minister of Finance to lend a revolving $2.16 billion to the OFA. This OIC was originally obtained in 1997.

It is understood that upon drafting the OIC (by MOF Legal), the OIC would need final approval from Lieutenant Governor in Council LGIC as required under section 22(1) of the *Capital Investment Plan Act*, 1993.

- The OIC would go through Deputy Minister of Finance, Minister of Finance, Chair of Cabinet for briefing/sign-offs and finally to the LGIC for approval.

To draft the OIC, the following details will be required:

i. Dollar Value of Loan from the Minister of Finance to the OFA
ii. Maturity Date of the Loan

Interest Rate of the Loan (in the past, this was Ontario 90-day T-bill or the interest rate to be charged by OFA to borrower +/- spread)

2. Minister's Directive

Once the Minister of Finance has the authority under an OIC, a Minister's Directive can authorize the OFA to lend to IESO. The Directive can outline specific terms and conditions as needed.

3. Executed Credit Agreement

With a Minister's Directive approved, the OFA and IESO can work to execute a credit agreement, subject to any terms and conditions of the Directive and any policy considerations.

REQUIREMENTS FOR THE OFA TO LEND TO THE IESO

The IESO will require a revolving credit facility in its role for delivering on the Fair Hydro Plan under the proposed Fair Hydro Act. As the OFA currently provides a $975 million credit facility to the IESO for other purposes, it is proposed that the OFA provide a new credit facility to the IESO, in an amount of up to $3 billion [TBC].

Approvals Required by the OFA

The following approvals are required by the OFA to accommodate the request to provide financing to the IESO:

1) An Order-in-Council is required for the Minister of Finance to lend to the OFA.
2) A Directive from Minister of Finance is required for the OFA to on-lend to the IESO.
3) An executed credit agreement between the OFA and the IESO.

1. Order-in-Council (OIC)

An OIC is required to authorize the Minister of Finance to lend to the OFA. Ministry of Finance Legal Services Branch would need to be engaged to facilitate the request.

- The existing $975 million credit facility was covered under OIC 675/97 which authorized the Minister of Finance to lend a revolving $2.16 billion to the OFA. This OIC was originally obtained in 1997.

It is understood that upon drafting the OIC (by MOF Legal), the OIC would need final approval from Lieutenant Governor in Council LGIC as required under section 22(1) of the *Capital Investment Plan Act*, 1993.

- The OIC would go through Deputy Minister of Finance, Minister of Finance, Chair of Cabinet for briefing/sign-offs and finally to the LGIC for approval.

To draft the OIC, the following details will be required:

~~—~~Dollar Value of Loan from the Minister of Finance to the OFA

i.

~~i.~~ Maturity Date of the Loan

ii.

iii. Interest Rate of the Loan ~~(in the past, this was Ontario 90-day T-bill or the interest rate to be charged by OFA to borrower +/- spread)~~

The following are recommended to accommodate IESO's need for financing:

i. Dollar Value of Loan:
$3 billion, as per request. The OIC would provide the maximum limit of any

Formatted: Numbered + Level: 1 + Numbering Style: i, ii, iii, … + Start at: 1 + Alignment: Right + Aligned at: 0.5" + Indent at: 0.75"

Formatted: Font: (Default) Arial, 12 pt

Formatted: Font: (Default) Arial, 12 pt

Formatted: Numbered + Level: 1 + Numbering Style: i, ii, iii, … + Start at: 1 + Alignment: Right + Aligned at: 0.5" + Indent at: 0.75"

Formatted: Normal

Formatted: Underline

loan to IESO and it may be advisable to add a cushion and provide an OIC for $3.5 billion.

ii. Maturity Date of the Loan:

OIC maturing March 31, 2048 would provide approximately 30-year term to match the Fair Hydro Plan. It may be advisable to add a cushion and set a maturity date to March 31, 2053 (cushion of 5-years).

iii. Interest Rate of the Loan

Interest rates on the loans from the Minister of Finance to the OFA have typically been a 1) Ontario 90-day t-bill rates, 2) flow-through of the rates charged to the third-party by the OFA and/or 3) the rate charged to the third-party by the OFA less 25bps.

It is recommended to keep this unchanged to provide consistency with past OICs but also to provide flexibility in the rates that could potentially be charged to IESO, to be determined by the Minister of Finance, by way of the Minister's Directive.

2. Minister's Directive

Once the Minister of Finance has the authority under an OIC, a Minister's Directive can authorize the OFA to lend to IESO. The Directive can outline specific terms and conditions as needed.

3. Executed Credit Agreement

With a Minister's Directive approved, the OFA and IESO can work to execute a credit agreement, subject to any terms and conditions of the Directive and any policy considerations.

Formatted: Underline
Formatted: Underline
Formatted: Numbered + Level: 1 + Numbering Style: i, ii, iii, … + Start at: 1 + Alignment: Right + Aligned at: 0.5" + Indent at: 0.75"
Formatted: Underline
Formatted: Font: (Default) Arial, 12 pt, Underline
Formatted: Font: 11 pt
Formatted: Space After: 0 pt, Line spacing: single

REQUIREMENTS FOR THE OFA TO LEND TO THE IESO

IESO staff haves noted that theyIESO may need to cover clean energy costs if for some reason the Trust, at any time, chooses not to purchase a portion of the regulatory assetdeferred Global Adjustment amounts. The legislation does not compel the Trust to purchase 100% of the regulatory asset at any given time.

The IESO will require a revolving credit facility in its role for delivering on the Fair Hydro Plan under the proposed Fair Hydro Act. As the OFA currently provides a $975 million credit facility to the IESO for other purposes, it is proposed that the OFA provide a new credit facility to the IESO, in an amount of up to $3 billion [TBC].

ConsiderationT

The use of this credit facility for a length of time could pose a potential fiscal impact to the Province upon consolidation of IESO.

Formatted: Font: (Default) Arial, 12 pt, Font color: Text 1

Formatted: Font: (Default) Arial, 12 pt, Font color: Text 1

Formatted: Font: (Default) Arial, 12 pt, Font color: Text 1

Formatted: Font: (Default) Arial, 12 pt, Font color: Text 1

Formatted: Font: (Default) Arial, 12 pt, Font color: Text 1

Formatted: Font: (Default) Arial, 12 pt, Font color: Text 1

Formatted: Font: (Default) Arial, 12 pt, Font color: Text 1

Formatted: Font: Bold, Underline

Formatted: Font: Bold, Underline

Approvals Required by the OFA

The following approvals are required by the OFA to accommodate the request to provide financing to the IESO:

1) An Order-in-Council is required for the Minister of Finance to lend to the OFA.
2) A Directive from Minister of Finance is required for the OFA to on-lend to the IESO.
3) An executed credit agreement between the OFA and the IESO.

1. Order-in-Council (OIC)

An OIC is required to authorize the Minister of Finance to lend to the OFA. Ministry of Finance Legal Services Branch would need to be engaged to facilitate the request.

- The existing $975 million credit facility was covered under OIC 675/97 which authorized the Minister of Finance to lend a revolving $2.16 billion to the OFA. This OIC was originally obtained in 1997.

It is understood that upon drafting the OIC (by MOF Legal), the OIC would need final approval from Lieutenant Governor in Council LGIC as required under section 22(1) of the *Capital Investment Plan Act*, 1993.

- The OIC would go through Deputy Minister of Finance, Minister of Finance, Chair of Cabinet for briefing/sign-offs and finally to the LGIC for approval.

To draft the OIC, the following details will be required:

~~Dollar Value of Loan from the Minister of Finance to the OFA~~

~~i.~~

~~i.~~ Maturity Date of the Loan

ii.

iii. Interest Rate of the Loan ~~(in the past, this was Ontario 90-day T-bill or the interest rate to be charged by OFA to borrower +/- spread)~~

The following are recommended to accommodate IESO's need for financing:

i. Dollar Value of Loan:
$3 billion, as per request. The OIC would provide the maximum limit of any loan to IESO and it may be advisable to add a cushion and provide an OIC for $3.5 billion.

ii. Maturity Date of the Loan:

OIC maturing March 31, 2048 would provide approximately 30-year term to match the Fair Hydro Plan. It may be advisable to add a cushion and set a maturity date to March 31, 2053 (cushion of 5-years).

iii. Interest Rate of the Loan

Interest rates on the loans from the Minister of Finance to the OFA have typically been a 1) Ontario 90-day t-bill rates, 2) flow-through of the rates charged to the third-party by the OFA and/or 3) the rate charged to the third-party by the OFA less 25bps.

It is recommended to keep this unchanged to provide consistency with past OICs but also to provide flexibility in the rates that could potentially be charged to IESO, to be determined by the Minister of Finance, by way of the Minister's Directive.

Formatted: Numbered + Level: 1 + Numbering Style: i, ii, iii, … + Start at: 1 + Alignment: Right + Aligned at: 0.5" + Indent at: 0.75"

Formatted: Font: (Default) Arial, 12 pt

Formatted: Font: (Default) Arial, 12 pt

Formatted: Numbered + Level: 1 + Numbering Style: i, ii, iii, … + Start at: 1 + Alignment: Right + Aligned at: 0.5" + Indent at: 0.75"

Formatted: Normal

Formatted: Underline

Formatted: Underline

Formatted: Underline

Formatted: Numbered + Level: 1 + Numbering Style: i, ii, iii, … + Start at: 1 + Alignment: Right + Aligned at: 0.5" + Indent at: 0.75"

Formatted: Underline

Formatted: Font: (Default) Arial, 12 pt, Underline

2. Minister's Directive

Once the Minister of Finance has the authority under an OIC, a Minister's Directive can authorize the OFA to lend to IESO. The Directive can outline specific terms and conditions as needed.

3. Executed Credit Agreement

With a Minister's Directive approved, the OFA and IESO can work to execute a

credit agreement, subject to any terms and conditions of the Directive and any policy considerations.

Formatted: Font: 11 pt

Formatted: Space After: 0 pt, Line spacing: single

REQUIREMENTS FOR THE OFA TO LEND TO THE IESO

IESO staff have noted that IESO may need to cover clean energy costs if for some reason the Trust, at any time, chooses not to purchase a portion of the deferred Global Adjustment amounts. The legislation does not compel the Trust to purchase 100% of the regulatory asset at any given time.

As the OFA currently provides a $975 million credit facility to the IESO for other purposes, it is proposed that the OFA provide a new credit facility to the IESO, in an amount of up to $3 billion [TBC].

The use of this credit facility for a length of time could pose a potential fiscal impact to the Province upon consolidation of IESO.

Approvals Required for OFA Financing

The following approvals are required by the OFA to accommodate the request to provide financing to the IESO:

1) An Order-in-Council is required for the Minister of Finance to lend to the OFA.
2) A Directive from Minister of Finance is required for the OFA to on-lend to the IESO.
3) An executed credit agreement between the OFA and the IESO.

1. Order-in-Council (OIC)

An OIC is required to authorize the Minister of Finance to lend to the OFA. Ministry of Finance Legal Services Branch would need to be engaged to facilitate the request.

- The existing $975 million credit facility was covered under OIC 675/97 which authorized the Minister of Finance to lend a revolving $2.16 billion to the OFA. This OIC was originally obtained in 1997.

It is understood that upon drafting the OIC (by MOF Legal), the OIC would need final approval from Lieutenant Governor in Council LGIC as required under section 22(1) of the *Capital Investment Plan Act*, 1993.

- The OIC would go through Deputy Minister of Finance, Minister of Finance, Chair of Cabinet for briefing/sign-offs and finally to the LGIC for approval.

To draft the OIC, the following details will be required:

i. Dollar Value of Loan from the Minister of Finance to the OFA
ii. Maturity Date of the Loan
iii. Interest Rate of the Loan

The following are recommended to accommodate IESO's need for financing:

i. Dollar Value of Loan:
$3 billion, as per request. The OIC would provide the maximum limit of any loan to IESO and it may be advisable to add a cushion and provide an OIC for $3.5 billion.

ii. Maturity Date of the Loan:

OIC maturing March 31, 2048 would provide approximately 30-year term to match the Fair Hydro Plan. It may be advisable to add a cushion and set a maturity date to March 31, 2053 (cushion of 5-years).

iii. Interest Rate of the Loan

Interest rates on the loans from the Minister of Finance to the OFA have typically been a 1) Ontario 90-day t-bill rates, 2) flow-through of the rates charged to the third-party by the OFA and/or 3) the rate charged to the third-party by the OFA less 25bps.

It is recommended to keep this unchanged to provide consistency with past OICs but also to provide flexibility in the rates that could potentially be charged to IESO, to be determined by the Minister of Finance, by way of the Minister's Directive.

2. Minister's Directive

Once the Minister of Finance has the authority under an OIC, a Minister's Directive can authorize the OFA to lend to IESO. The Directive can outline specific terms and conditions as needed.

3. Executed Credit Agreement

With a Minister's Directive approved, the OFA and IESO can work to execute a credit agreement, subject to any terms and conditions of the Directive and any policy considerations.

REQUIREMENTS FOR THE OFA TO LEND TO THE IESO

IESO staff have noted that IESO may need to cover clean energy costs if for some reason the Trust, at any time, chooses not to purchase a portion of the deferred Global Adjustment amounts under the proposed Fair Hydro Act. The legislation does not compel the Trust to purchase 100% of the regulatory asset at any given time.

As the Ontario Financing Authority ("OFA") currently provides a $975 million credit facility to the IESO for other purposes, it is proposed that the OFA provide a new credit facility to the IESO, in an amount of up to $3 billion [TBC].

The use of this credit facility for a length of time could pose a potential fiscal impact to the Province upon consolidation of IESO.

Approvals Required for OFA Financing

- As per section 3(1) of the *Capital Investment Plan Act, 1993*, ("CIPA") the Minister of Finance is responsible for the administration of CIPA with respect to the OFA.
- It is also under CIPA that a statutory appropriation exists for the Minister of Finance to lend money to the OFA.
- Under the OFA's General Borrowing and Financing By-Law (By-Law #12), the OFA is permitted to "*…borrow from the Minister of Finance, such amounts as the Minister of Finance is authorized by order in council to lend to the Corporation.*"
- In order for the OFA to lend money to IESO, it must also receive a loan from the Minister of Finance. The OFA on-lends the loan from the Minister of Finance.

The following approvals are required by the OFA to accommodate the request to provide financing to the IESO:

1) An Order-in-Council is required for the Minister of Finance to lend to the OFA.
2) A Directive from Minister of Finance is required for the OFA to on-lend to the IESO.
3) An executed credit agreement between the OFA and the IESO.

1. Order-in-Council (OIC)

An OIC is required to authorize the Minister of Finance to lend to the OFA. Ministry of Finance Legal Services Branch would need to be engaged to facilitate the request.

- The existing $975 million credit facility was covered under OIC 675/97 which authorized the Minister of Finance to lend a revolving $2.16 billion to the OFA. This OIC was originally obtained in 1997.

It is understood that upon drafting the OIC (by MOF Legal), the OIC would need final approval from Lieutenant Governor in Council LGIC as required under section 22(1) of the *Capital Investment Plan Act*, 1993.

- The OIC would go through Deputy Minister of Finance, Minister of Finance, Chair of Cabinet for briefing/sign-offs and finally to the LGIC for approval.

To draft the OIC, the following details will be required:

i. Dollar Value of Loan from the Minister of Finance to the OFA
ii. Maturity Date of the Loan
iii. Interest Rate of the Loan

The following are recommended to accommodate IESO's need for financing:

i. <u>Dollar Value of Loan:</u>
$3 billion, as per request. The OIC would provide the maximum limit of any loan to IESO and it may be advisable to add a cushion and provide an OIC for $3.5 billion.

ii. <u>Maturity Date of the Loan:</u>

OIC maturing March 31, 2048 would provide approximately 30-year term to match the Fair Hydro Plan. It may be advisable to add a cushion and set a maturity date to March 31, 2053 (cushion of 5-years).

iii. <u>Interest Rate of the Loan</u>

Interest rates on the loans from the Minister of Finance to the OFA have typically been a 1) Ontario 90-day t-bill rates, 2) flow-through of the rates charged to the third-party by the OFA and/or 3) the rate charged to the third-party by the OFA less 25bps.

It is recommended to keep this unchanged to provide consistency with past OICs but also to provide flexibility in the rates that could potentially be charged to IESO, to be determined by the Minister of Finance, by way of the Minister's Directive.

2. Minister's Directive

Once the Minister of Finance has the authority under an OIC, a Minister's Directive can authorize the OFA to lend to the IESO. The Directive can outline specific terms and conditions as needed.

3. Executed Credit Agreement

With a Minister's Directive approved, the OFA and IESO can work to execute a credit agreement, subject to any terms and conditions of the Directive and any policy considerations.

- Specific terms and conditions such as interest rate on the loan from the OFA to the IESO is still to be determined.

Other Considerations

A consideration can be given to provide the loan to IESO directly from the Minister of Finance. Considering the following key points, it may, however, not be the most direct approach:

- The OFA has provided a line of credit to the IESO and deviating from this would raise questions as to why status quo was not followed.
- A statutory appropriation exists for loans from Minister of Finance to the OFA. If the Minister of Finance was to provide a loan directly to the IESO, it would be necessary to find other appropriation for this loan.

Corporate and Electricity Finance Division, OFA
May 8, 2017

REQUIREMENTS FOR THE OFA TO LEND TO THE IESO

IESO staff have noted that IESO may need to cover clean energy costs if for some reason the Trust, at any time, chooses not to purchase a portion of the deferred Global Adjustment amounts under the proposed Fair Hydro Act. The legislation does not compel the Trust to purchase 100% of the regulatory asset at any given time.

As the Ontario Financing Authority ("OFA") currently provides a $975 million credit facility to the IESO for other purposes, it is proposed that the OFA provide a new credit facility to the IESO, in an amount of up to $3 billion [TBC].

The use of this credit facility for a length of time could pose a potential fiscal impact to the Province upon consolidation of IESO.

Approvals Required for OFA Financing

- As per section 3(1) of the *Capital Investment Plan Act, 1993*, ("CIPA") the Minister of Finance is responsible for the administration of CIPA with respect to the OFA.
- It is also under CIPA that a statutory appropriation exists for the Minister of Finance to lend money to the OFA.
- Under the OFA's General Borrowing and Financing By-Law (By-Law #12), the OFA is permitted to "*…borrow from the Minister of Finance, such amounts as the Minister of Finance is authorized by order in council to lend to the Corporation.*"
- In order for the OFA to lend money to IESO, it must also receive a loan from the Minister of Finance. The OFA on-lends the loan from the Minister of Finance.

The following approvals are required by the OFA to accommodate the request to provide financing to the IESO:

1) An Order-in-Council is required for the Minister of Finance to lend to the OFA.
2) A Directive from Minister of Finance is required for the OFA to on-lend to the IESO.
3) An executed credit agreement between the OFA and the IESO.

1. Order-in-Council (OIC)

An OIC is required to authorize the Minister of Finance to lend to the OFA. Ministry of Finance Legal Services Branch would need to be engaged to facilitate the request.

- The existing $975 million credit facility was covered under OIC 675/97 which authorized the Minister of Finance to lend a revolving $2.16 billion to the OFA. This OIC was originally obtained in 1997.

Formatted: Heading 1

Formatted: Font: (Default) Arial, 12 pt

Formatted: List Paragraph, Bulleted + Level: 1 + Aligned at: 0" + Indent at: 0.25"

Formatted: Font: Italic

Formatted: Underline

It is understood that upon drafting the OIC (by MOF Legal), the OIC would need final approval from Lieutenant Governor in Council LGIC as required under section 22(1) of the *Capital Investment Plan Act*, 1993.

- The OIC would go through Deputy Minister of Finance, Minister of Finance, Chair of Cabinet for briefing/sign-offs and finally to the LGIC for approval.

To draft the OIC, the following details will be required:

i. Dollar Value of Loan from the Minister of Finance to the OFA
ii. Maturity Date of the Loan
iii. Interest Rate of the Loan

The following are recommended to accommodate IESO's need for financing:

i. Dollar Value of Loan:
$3 billion, as per request. The OIC would provide the maximum limit of any loan to IESO and it may be advisable to add a cushion and provide an OIC for $3.5 billion.

ii. Maturity Date of the Loan:

OIC maturing March 31, 2048 would provide approximately 30-year term to match the Fair Hydro Plan. It may be advisable to add a cushion and set a maturity date to March 31, 2053 (cushion of 5-years).

iii. Interest Rate of the Loan

Interest rates on the loans from the Minister of Finance to the OFA have typically been a 1) Ontario 90-day t-bill rates, 2) flow-through of the rates charged to the third-party by the OFA and/or 3) the rate charged to the third-party by the OFA less 25bps.

It is recommended to keep this unchanged to provide consistency with past OICs but also to provide flexibility in the rates that could potentially be charged to IESO, to be determined by the Minister of Finance, by way of the Minister's Directive.

2. Minister's Directive

Once the Minister of Finance has the authority under an OIC, a Minister's Directive can authorize the OFA to lend to the IESO. The Directive can outline specific terms and conditions as needed.

3. Executed Credit Agreement

With a Minister's Directive approved, the OFA and IESO can work to execute a credit agreement, subject to any terms and conditions of the Directive and any policy considerations.

3. Specific terms and conditions such as interest rate on the loan from the OFA to the IESO is still to be determined.

Other Considerations

A consideration can be given to provide the loan to IESO directly from the Minister of Finance. Considering the following key points, it may, however, not be the most direct approach:

- The OFA has provided a line of credit to the IESO and deviating from this would raise questions as to why status quo was not followed.
- A statutory appropriation exists for loans from Minister of Finance to the OFA. If the Minister of Finance was to provide a loan directly to the IESO, it would be necessary to find other appropriation for this loan.

Formatted: Font: Bold

Formatted

Formatted: Heading 1

Formatted: List Paragraph, Bulleted + Level: 1 + Aligned at: 0.25" + Indent at: 0.5"

Formatted: Font: (Default) Arial

Corporate and Electricity Finance Division, OFA
May 85, 2017

REQUIREMENTS FOR THE OFA TO LEND TO THE IESO

IESO staff have noted that IESO may need to cover clean energy costs if for some reason the Trust, at any time, chooses not to purchase a portion of the deferred Global Adjustment amounts under the proposed Fair Hydro Act. The legislation does not compel the Trust to purchase 100% of the regulatory asset at any given time.

As the Ontario Financing Authority ("OFA") currently provides a $975 million credit facility to the IESO for other purposes, it is proposed that the OFA provide a new credit facility to the IESO, in an amount of up to $3 billion [TBC].

The use of this credit facility for a length of time could pose a potential fiscal impact to the Province upon consolidation of IESO.

Approvals Required for OFA Financing

- As per subsection 3(1) of the *Capital Investment Plan Act, 1993*, ("CIPA") the Minister of Finance is responsible for the administration of CIPA with respect to the OFA.
- Subsection 22(1) of CIPA authorizes the Minister of Finance to make loans to the OFA if authorized by the LGIC. Subsection 22(2) provides a statutory appropriation for loans made by the Minister to the OFA under 22(1).
-
- Under subsection 6(3) of CIPA, the OFA may only borrow under authority of a by-law approved by the Minister of Finance. ~~It is also under CIPA that a statutory appropriation exists for the Minister of Finance to lend money to the OFA.~~
- ~~Unde~~Tr ~~t~~he OFA's General Borrowing and Financing By-Law (By-Law #12), authorizes the OFA~~the OFA is permitted~~ to "*…borrow from the Minister of Finance, such amounts as the Minister of Finance is authorized by order in council to lend to the Corporation.*"
- In order for the OFA to lend money to IESO, ~~it must also receive a loan from the Minister of Finance. T~~he OFA on-lends the loan from the Minister of Finance.

The following approvals are required by the OFA to accommodate the request to provide financing to the IESO:

1) An Order-in-Council is required for the Minister of Finance to lend to the OFA.
2) A Directive from Minister of Finance is required for the OFA to on-lend to the IESO.
3) An executed credit agreement between the OFA and the IESO.

1. Order-in-Council (OIC)

An OIC is required to authorize the Minister of Finance to lend to the OFA. Ministry of Finance Legal Services Branch would need to be engaged to facilitate the request.

- The existing $975 million credit facility was covered under OIC 675/97 which authorized the Minister of Finance to lend a revolving $2.16 billion to the OFA. This OIC was originally obtained in 1997.

It is understood that upon drafting the OIC (by MOF Legal), the OIC would need final approval from Lieutenant Governor in Council LGIC as required under section 22(1) of the *Capital Investment Plan Act*, 1993.

- The OIC would go through Deputy Minister of Finance, Minister of Finance, Chair of Cabinet for briefing/sign-offs and finally to the LGIC for approval.

To draft the OIC, the following details will be required:

i. Dollar Value of Loan from the Minister of Finance to the OFA
ii. Maturity Date of the Loan
iii. Interest Rate of the Loan

The following are recommended to accommodate IESO's need for financing:

i. Dollar Value of Loan:
   $3 billion, as per request. The OIC would provide the maximum limit of any loan to IESO and it may be advisable to add a cushion and provide an OIC for $3.5 billion.

ii. Maturity Date of the Loan:

   A maturity date of~~OIC maturing~~ March 31, 2048 would provide approximately 30-year term to match the Fair Hydro Plan. It may be advisable to add a cushion and set a maturity date to March 31, 2053 (cushion of 5-years).

iii. Interest Rate of the Loan

   Interest rates on the loans from the Minister of Finance to the OFA have typically been a 1) Ontario 90-day t-bill rates, 2) flow-through of the rates charged to the third-party by the OFA and/or 3) the rate charged to the third-party by the OFA less 25bps.

   It is recommended to keep this unchanged to provide consistency with past OICs but also to provide flexibility in the rates that could potentially be charged to IESO, to be determined by the Minister of Finance, by way of the Minister's Directive.

2. Minister's Directive

Once the Minister of Finance has the authority under an OIC, a Minister's Directive can authorize the OFA to lend to the IESO. The Directive can outline specific terms and conditions as needed.

3. Executed Credit Agreement

With a Minister's Directive approved, the OFA and IESO can work to execute a credit agreement, subject to any terms and conditions of the Directive and any policy considerations.

- Specific terms and conditions such as interest rate on the loan from the OFA to the IESO is still to be determined.

Other Considerations

A consideration can be given to provide the loan to IESO directly from the Minister of Finance. Considering the following key points, it may, however, not be the most direct approach:

- The OFA has provided a line of credit to the IESO and deviating from this would raise questions as to why status quo was not followed.
- A statutory appropriation exists for loans from Minister of Finance to the OFA. If the Minister of Finance was to provide a loan directly to the IESO, it would be necessary to find other appropriation for this loan.

Corporate and Electricity Finance Division, OFA
May 8, 2017

REQUIREMENTS FOR THE OFA TO LEND TO THE IESO

IESO staff have noted that IESO may need to cover clean energy costs if for some reason the Trust, at any time, chooses not to purchase a portion of the deferred Global Adjustment amounts under the proposed Fair Hydro Act. The legislation does not compel the Trust to purchase 100% of the regulatory asset at any given time.

As the Ontario Financing Authority ("OFA") currently provides a $975 million credit facility to the IESO for other purposes, it is proposed that the OFA provide a new credit facility to the IESO, in an amount of up to $3 billion [TBC].

The use of this credit facility for a length of time could pose a potential fiscal impact to the Province upon consolidation of IESO.

Approvals Required for OFA Financing

- As per subsection 3(1) of the *Capital Investment Plan Act, 1993*, ("CIPA") the Minister of Finance is responsible for the administration of CIPA with respect to the OFA.
- Subsection 22(1) of CIPA authorizes the Minister of Finance to make loans to the OFA if authorized by the LGIC. Subsection 22(2) provides a statutory appropriation for loans made by the Minister to the OFA under 22(1).
- Under subsection 6(3) of CIPA, the OFA may only borrow under authority of a by-law approved by the Minister of Finance. The OFA's General Borrowing and Financing By-Law (By-Law #12), authorizes the OFA to "*…borrow from the Minister of Finance, such amounts as the Minister of Finance is authorized by order in council to lend to the Corporation.*"
- In order for the OFA to lend money to IESO, the OFA on-lends the loan from the Minister of Finance.

The following approvals are required by the OFA to accommodate the request to provide financing to the IESO:

1) An Order-in-Council is required for the Minister of Finance to lend to the OFA.
2) A Directive from Minister of Finance is required for the OFA to on-lend to the IESO.
3) An executed credit agreement between the OFA and the IESO.

1. Order-in-Council (OIC)

An OIC is required to authorize the Minister of Finance to lend to the OFA. Ministry of Finance Legal Services Branch would need to be engaged to facilitate the request.

- The existing $975 million credit facility was covered under OIC 675/97 which authorized the Minister of Finance to lend a revolving $2.16 billion to the OFA.

This OIC was originally obtained in 1997.

It is understood that upon drafting the OIC (by MOF Legal), the OIC would need final approval from Lieutenant Governor in Council LGIC as required under section 22(1) of the *Capital Investment Plan Act*, 1993.

- The OIC would go through Deputy Minister of Finance, Minister of Finance, Chair of Cabinet for briefing/sign-offs and finally to the LGIC for approval.

To draft the OIC, the following details will be required:

i. Dollar Value of Loan from the Minister of Finance to the OFA
ii. Maturity Date of the Loan
iii. Interest Rate of the Loan

The following are recommended to accommodate IESO's need for financing:

i. Dollar Value of Loan:
$3 billion, as per request. The OIC would provide the maximum limit of any loan to IESO and it may be advisable to add a cushion and provide an OIC for $3.5 billion.

ii. Maturity Date of the Loan:

A maturity date of March 31, 2048 would provide approximately 30-year term to match the Fair Hydro Plan. It may be advisable to add a cushion and set a maturity date to March 31, 2053 (cushion of 5-years).

iii. Interest Rate of the Loan

Interest rates on the loans from the Minister of Finance to the OFA have typically been a 1) Ontario 90-day t-bill rates, 2) flow-through of the rates charged to the third-party by the OFA and/or 3) the rate charged to the third-party by the OFA less 25bps.

It is recommended to keep this unchanged to provide consistency with past OICs but also to provide flexibility in the rates that could potentially be charged to IESO, to be determined by the Minister of Finance, by way of the Minister's Directive.

2. Minister's Directive

Once the Minister of Finance has the authority under an OIC, a Minister's Directive can authorize the OFA to lend to the IESO. The Directive can outline specific terms

and conditions as needed.

3. Executed Credit Agreement

With a Minister's Directive approved, the OFA and IESO can work to execute a credit agreement, subject to any terms and conditions of the Directive and any policy considerations.

- Specific terms and conditions such as interest rate on the loan from the OFA to the IESO is still to be determined.

Other Considerations

A consideration can be given to provide the loan to IESO directly from the Minister of Finance. Considering the following key points, it may, however, not be the most direct approach:

- The OFA has provided a line of credit to the IESO and deviating from this would raise questions as to why status quo was not followed.
- A statutory appropriation exists for loans from Minister of Finance to the OFA. If the Minister of Finance was to provide a loan directly to the IESO, it would be necessary to find other appropriation for this loan.

Corporate and Electricity Finance Division, OFA
May 8, 2017

REQUIREMENTS FOR THE OFA TO LEND TO THE IESO

The IESO will require a revolving credit facility in its role for delivering on the Fair Hydro Plan under the proposed Fair Hydro Act. As the OFA currently provides a $975 million credit facility to the IESO for other purposes, it is proposed that the OFA provide a new credit facility to the IESO, in an amount of up to $3 billion [TBC].

Approvals Required by the OFA

The following approvals are required by the OFA to accommodate the request to provide financing to the IESO:

1) An Order-in-Council is required for the Minister of Finance to lend to the OFA.
2) A Directive from Minister of Finance is required for the OFA to on-lend to the IESO.
3) An executed credit agreement between the OFA and the IESO.

1. Order-in-Council (OIC)

An OIC is required to authorize the Minister of Finance to lend to the OFA. Ministry of Finance Legal Services Branch would need to be engaged to facilitate the request.

- The existing $975 million credit facility was covered under OIC 675/97 which authorized the Minister of Finance to lend a revolving $2.16 billion to the OFA. This OIC was originally obtained in 1997.

It is understood that upon drafting the OIC (by MOF Legal), the OIC would need final approval from LGIC as required under section 22(1) of the *Capital Investment Plan Act*, 1993.

- The OIC would go through Deputy Minister of Finance, Minister of Finance, Chair of Cabinet and finally to the LGIC.

To draft the OIC, the following details will be required:

i. Dollar Value of Loan from the Minister of Finance to the OFA
ii. Maturity Date of the Loan

Interest Rate of the Loan (in the past, this was Ontario 90-day T-bill or the interest rate to be charged by OFA to borrower +/- spread)

Formatted: List Paragraph, Indent: Left: 0.25"

2. Minister's Directive

Once the Minister of Finance has the authority under an OIC, a Minister's Directive can authorize the OFA to lend to IESO. The Directive can outline specific terms and conditions as needed.

3. Executed Credit Agreement

With a Minister's Directive approved, the OFA and IESO can work to execute a credit agreement, subject to any terms and conditions of the Directive and any policy considerations.

Deputy → Minister, [TB approval], Chair of Cabinet, and LGIC, CIPA - 22(1)

Ontario

MINISTRY OF
ENERGY

Financing the Global Adjustment

January 13, 2017

Working Draft for Discussion Purposes Only

Purpose

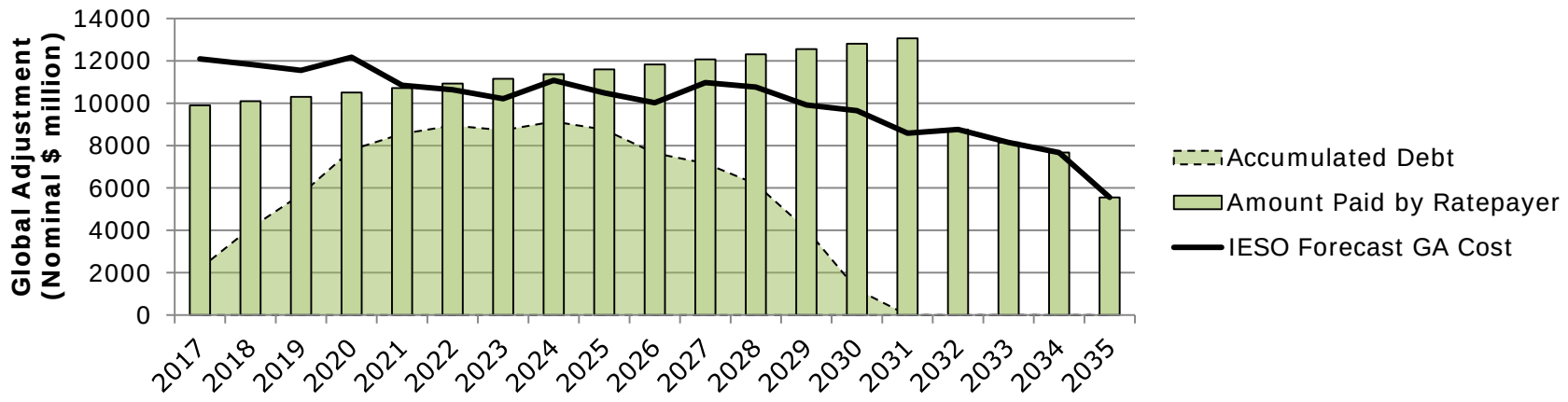
- To analyze the impact of partially financing the cost of the global adjustment (GA) to defer some of the cost to later years.
- The economic, legal and fiscal risks to ratepayers, stakeholders and government are qualitatively discussed.
- The remainder of the presentation quantitatively examines several different scenarios for financing the GA, showing:
  - The impact on residential bills; and
  - The amount of debt incurred.

Rationale for Financing the GA

- The GA is comprised of costs for regulated and contracted generation, as well as conservation.
- Some contracted generation assets are expected to have a useful life that extends beyond the term of their current financial contracts (typically 20-years).
- Similarly, conservation costs are recovered through the GA on an annual basis while conservation initiatives provide benefits to the electricity system over the course of many years.
- Since the GA only includes costs related to the contractual life of these assets, there may be an opportunity to recognize the longer-term benefit of these assets to the electricity system and “bring forward” that benefit for ratepayers today, while deferring some of the current costs.
- An indicative GA financing proposal is presented that lowers ratepayers costs over the short term by borrowing money but increases costs over the long term when GA costs are forecast to be lower.
- Note that not all generating assets will continue operations at the end of their contract term. Regulatory constraints (i.e., nuclear licences) or low demand conditions (i.e., as experienced with current expiring NUGs) would mean that some generators will shutdown at the expiry of their contract. Future ratepayers would be paying for these assets that are no longer producing power.

Indicative Proposal to Finance the Global Adjustment

- For the purpose of discussion, it is proposed that the amount of GA paid by ratepayers in each year over the forecast period is set at a fixed amount until the total amount of money borrowed has been completely paid back.
- All scenarios are assumed to begin January 1, 2017, setting the 2017 amount of GA paid by ratepayers at a value lower than the true cost of GA and increasing that amount year-over-year at inflation (assumed to be 2%) until the debt has been paid off.
- In this way, GA costs will be "smoothed" over time by lowering costs in the short term and increasing costs in the long term.
- In some scenarios, the amount of GA paid by ratepayers *above* the expected true cost of GA is capped so as to limit large increases in the cost of electricity in any given year.
- All analysis is based on forecasts from Independent Electricity System Operator's (IESO) Ontario Planning Outlook and assumes a 5% borrowing interest rate.



Sample financing: Ratepayers pay less than the cost of GA in early years, borrowing up to $9 billion that is fully paid off in 2031 by charging ratepayers more than the cost of GA in later years.

Considerations and Risks – Ratepayer

Ratepayer:

- Borrowing money to finance the GA, while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.

- The GA financing proposal involves borrowing large amounts of money over a long period of time (16-30 years, depending on the scenario) to reduce electricity rates. This debt would be highly sensitive to interest rates which could extend repayment timelines or put significant pressure on electricity rates. A long-term interest rate of 5% is assumed for this analysis.

- GA and HOEP provide a natural hedge against each other – when one goes up, the other goes down – keeping total electricity costs relatively stable and predictable. Smoothing only the GA would lead to greater price volatility for consumers.

    - For example, if HOEP is higher than expected (due to higher gas or carbon prices, for example), all-in rates will rise significantly as the natural decrease in GA would not occur given the prescribed GA rate described in the indicative proposal.

- Should Ontario electricity demand be lower than forecasted, the cost of paying off the debt will be spread over a smaller pool of consumption, further increasing future costs for individual ratepayers.

Considerations and Risks – Fiscal and Stakeholder

Fiscal / Accounting:

- Further analysis is required on whether such changes to the financing of the GA would affect the Province's current accounting treatment for the GA and represent a potential fiscal risk. As such, early engagement with Legal Services Branch and Treasury Board Secretariat is advised.
    - It is unclear whether legislation could determine the manner in which this initiative is accounted for. Further work is required.
- Historically electricity sector financing has been conducted by the Ontario Financing Authority, e.g., managing OEFC's stranded debt and borrowing on behalf of IESO. Further consultation with the OFA will be required to determine the appropriate vehicle for additional borrowing.
- The significant amount of additional Provincial borrowing needed to finance the GA, and associated risks (e.g., interest rates, repayment timelines), could put pressure on the Province's credit rating and overall borrowing capacity. Further analysis is required and would suggest early engagement with the OFA through which money will be borrowed.

Stakeholder:

- The significant deferral of electricity system costs over a long time-horizon and associated interest costs may draw criticism from some stakeholders as creating a new "stranded debt" in the sector. Note: the Debt Retirement Charge was removed from residential bills in 2016 and will be removed for remaining customers in 2018.

Considerations and Risks – Legal

Legal:

- Legislation would be required to authorize the financing proposal.
  - Amendments to the *Electricity Act, 1998* (EA) could authorize the financing of certain costs within or part of the GA. However, whether any other legislation requires amendment is not known at this time.
  - The GA regime currently provides that “true costs” represent the true costs of making payments to generators or counter parties to contracts, not the incurring of discretionary financing or interest costs.
  - Considerations such as the need to analyze legal risks or the need to address costs retroactively (if the proposal requires a January 1, 2017 start) could add to the legal and drafting complexity;

- Introduction of a bill in the week of February 20th is an aggressive timeline that could require diversion of resources from other initiatives.

GA Debt Financing Scenarios

1. Status Quo

   - Ratepayers continue paying the full cost of the GA in each year without incurring any debt.

2. Moderate short-term cost reductions with limits

   - The amount of GA paid by ratepayers in 2017 is lowered by $2.5 billion below the true cost of GA and increases at inflation (assumed to be 2%) in each subsequent year until the total amount of money borrowed is paid off.
   - Future GA over-payments above the true cost of GA are capped at $2 billion to limit electricity cost increases in any given year.

3. Maximized short-term cost reductions with limits

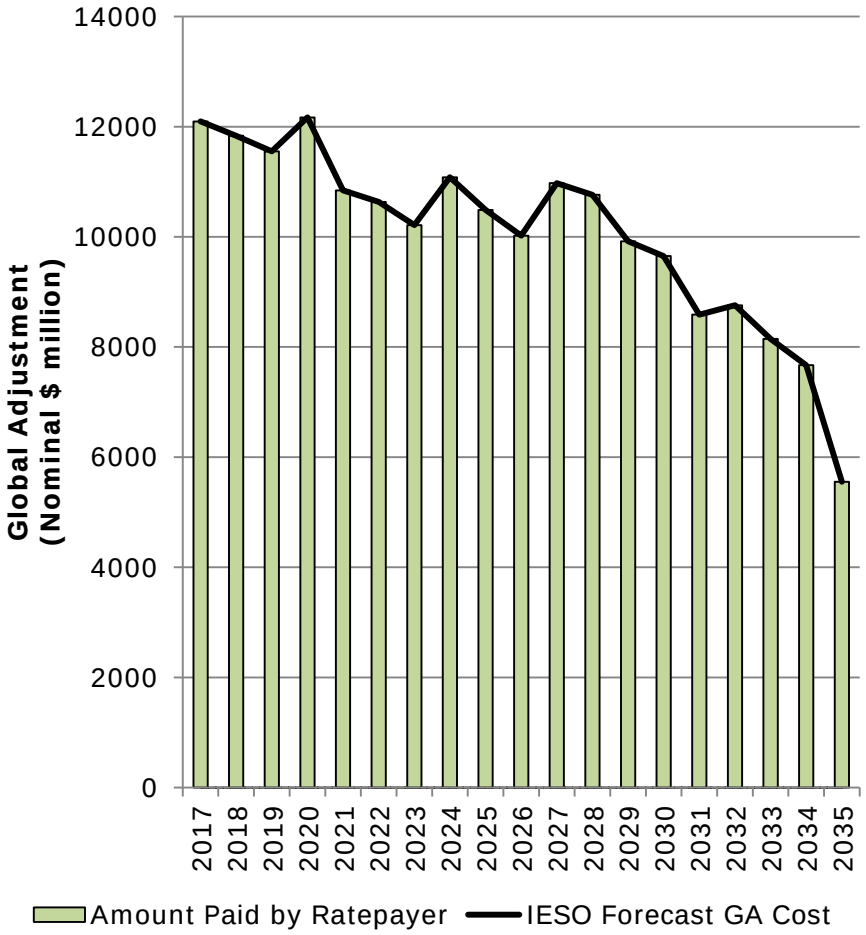
   - This scenario considers the maximum amount by which ratepayer GA costs in 2017 can be reduced such that the total amount of money borrowed is paid off over a 25-30 year financing period.
   - Future GA over-payments above the true cost of GA are capped at $2 billion to limit electricity cost increases in any given year.

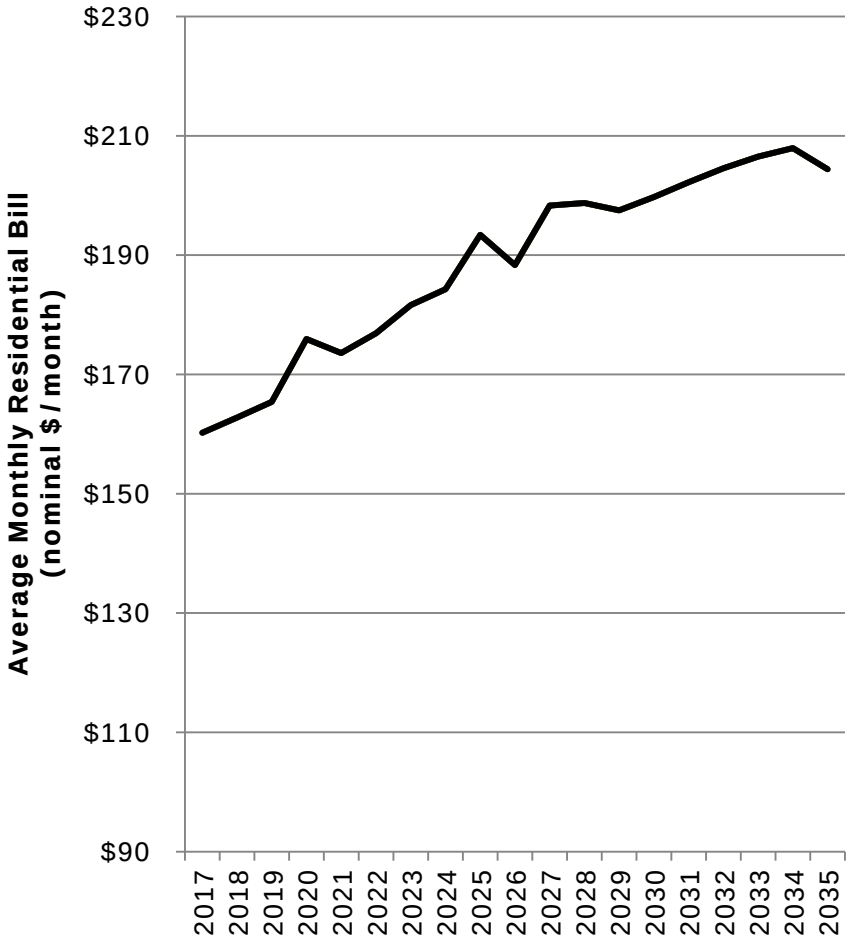
4. Maximized short-term cost reductions, no limits

   - This scenario considers the maximum amount by which ratepayer GA costs in 2017 can be reduced such that the total amount of money borrowed is paid off over a 25-30 year financing period.
   - No limit is placed on the amount charged to ratepayers above the true cost of GA.

1. Status Quo – Global and Residential Impacts

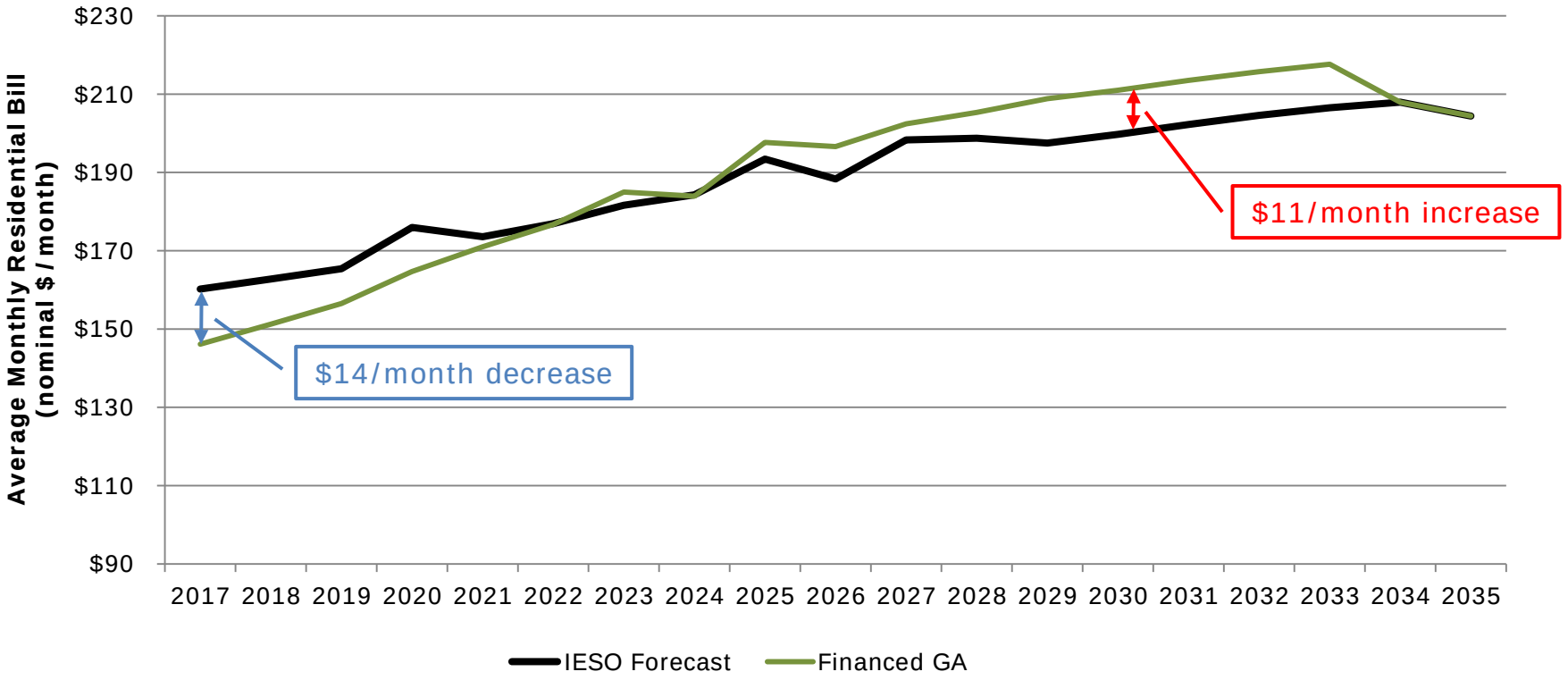
- Ratepayers continue paying the true cost of GA.





2. Moderate Short-term Cost Reduction with limits – Residential Impacts

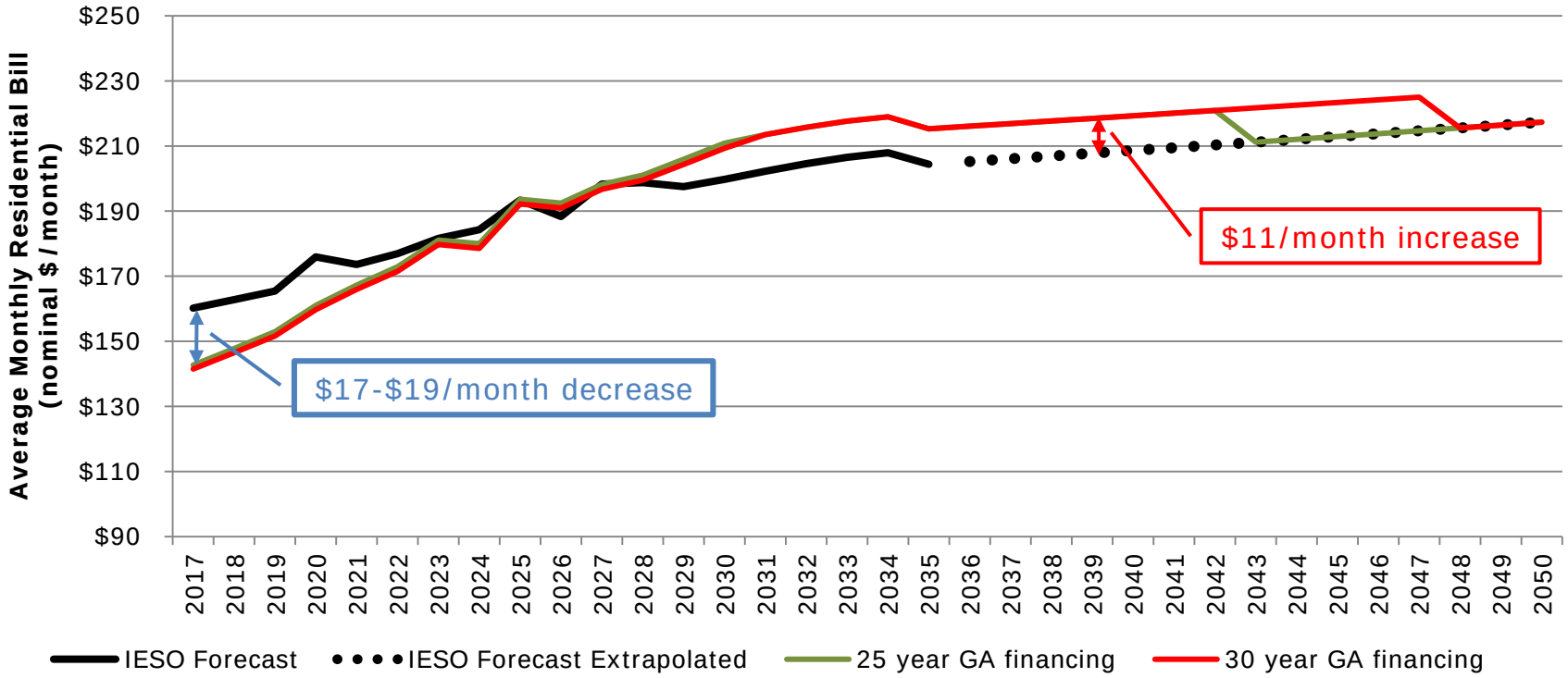
- In this scenario, the starting GA payment from all ratepayers in 2017 is lowered by $2.5 billion below the true cost of GA and is increased at inflation in subsequent years – subject to a cap of no more than $2 billion above the true cost of GA in any given year – until the borrowed money is repaid.



- By **borrowing up to $10.7 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $14/month** at the cost of **a long-term increase over 12 years of up to $11/month** above the true cost of electricity production.

3. Maximized Short-term Cost Reduction with limits – Residential Impacts

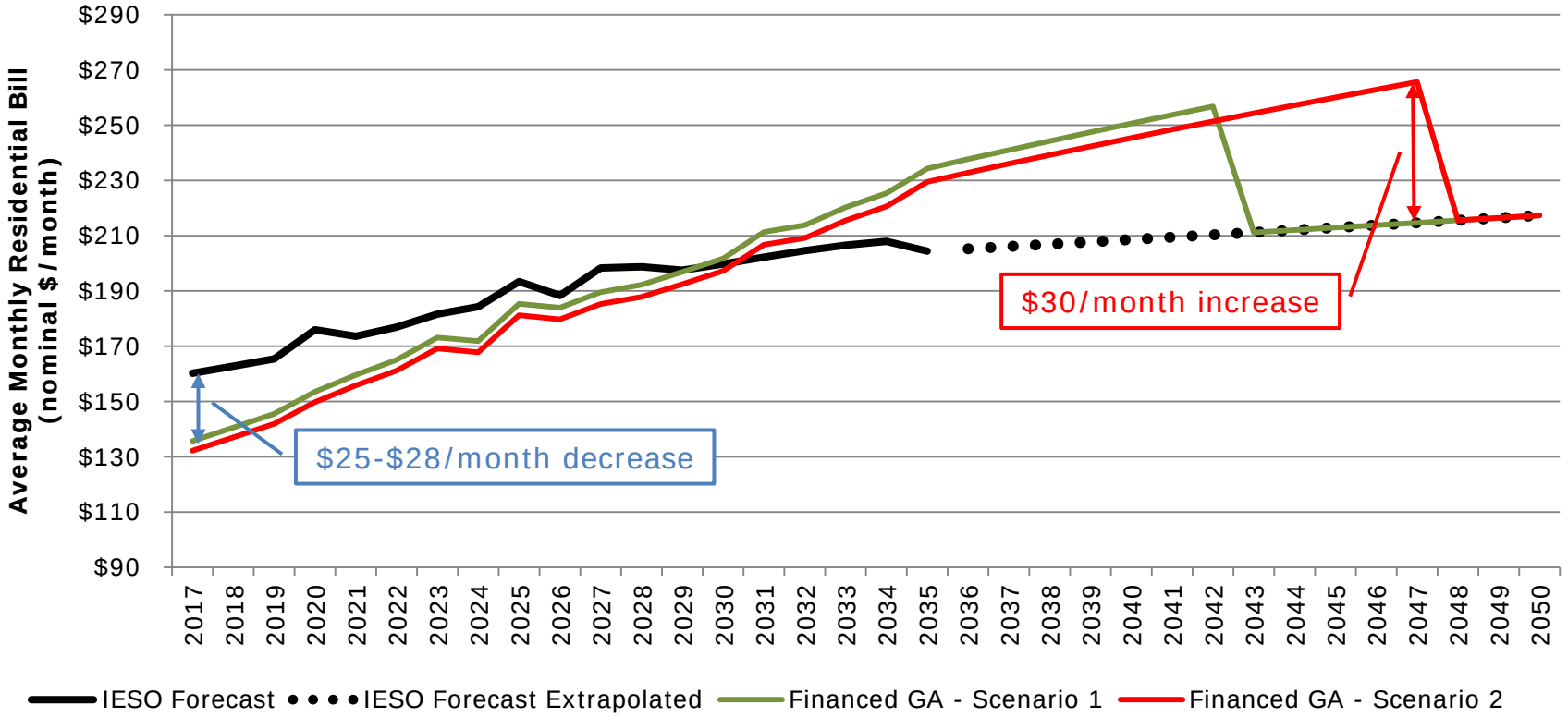
- In this scenario, the starting GA payment from all ratepayers in 2017 is lowered as much as possible and is increased at inflation in subsequent years – subject to a cap of no more than $2 billion above the true cost of GA in any given year – such that the borrowed money is paid back in 25 years (green line) and 30 years (red line) respectively.



- By **borrowing up to $23 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $17-$19/month** at the cost of **a long-term increase over 17-22 years of up to $11/month** above the true cost of electricity production.

4. Maximized Short-term Cost Reduction, no limits – Residential Impacts

- In this scenario, the starting GA payment from all ratepayers in 2017 is lowered as much as possible and is increased at inflation in subsequent years such that the borrowed money is paid back in 25 years (green line) and 30 years (red line) respectively. No limit is placed on the ratepayer GA over-payments in later years.



- By **borrowing up to $66 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $25-$28/month** at the cost of **a long-term increase over 12-17 years of up to $25-$30/month** above the true cost of electricity production.

TD Securities

A Confidential Presentation



Capital Injection Discussion

April 25, 2017

Presented By

Introduction

- The Province of Ontario (the "Province") is considering alternatives to fund its capital injection (the "Capital Injection") into Ontario Power Generation Inc. ("OPG"), which represents 44% of the Global Adjustment deferral financing requirement
- When evaluating the Province's alternatives, TD Securities Inc. ("TD Securities") understands that the Province's objectives are:
  1. **Equity Treatment:** Ensuring that the Capital Injection is treated as equity so as to mitigate the credit rating impact to OPG associated with 100% consolidation of the Special Purpose Vehicle ("SPV")/Trust
  2. **Managing Cash Flows for Interest Payments:** Timing, size, and priority of cash flows to repay interest used to fund the Capital Injection
  3. **Managing Cash Flows for Debt Repayments**: Timing, size, and priority of cash flows to repay the maturing principal for debt used to fund the Capital Injection
- In addition, simplicity is preferred to a complex structure

Capital Injection Options

	Common Equity	Preferred Equity	Fixed-to-Floating Sub. Notes, Convertible to Preferred Equity[1]	Mandatory Convertible Preferred Equity
Characteristics				
Instrument	▪ Equity instrument with no fixed dividend	▪ Preferred equity instrument with a fixed, floating, or resettable dividend	▪ A fixed income instrument with a fixed rate, which automatically converts into floating rate preferred shares, subject to an issuer cash redemption feature	▪ A preferred equity instrument that pays fixed, floating, or resettable dividends, which automatically converts into common equity
Capital Structure Ranking	▪ Lowest priority	▪ Priority to common equity	▪ Until converted, usually ranks higher than preferred equity, but lower than other fixed income instruments	▪ Priority to common equity until converted
OPG Tax Treatment	▪ Dividends are not tax-deductible	▪ Dividends are not tax-deductible	▪ Initial interest payments tax-deductible	▪ Dividends are not tax-deductible
DBRS Equity Treatment Methodology	▪ Considered equity	▪ Allocated an equity percentage (100% to 0%) based on (1) permanence, (2) subordination, and (3) legal implications (default considerations) ▪ Any less "equity-like" features reduce equity weighting allocated to the instrument ▪ Hybrid instruments[2] can receive 100% equity treatment, but limited to a quantity proportionate to 20% of common equity ▪ 100% of preferred dividends or interest payments are subtracted from cash flow credit metrics, regardless of equity treatment ▪ Cannot have a investor cash redemption provision to be considered equity		
S&P Equity Treatment Methodology	▪ Considered equity	▪ Hybrids placed into one of three categories based on equity content for purposes of calculating credit metrics: • High: 100% equity; Intermediate: 50% equity, 50% debt; Minimal: 0% equity ▪ Key considerations are: (1) ongoing payments, (2) permanence, and (3) subordination / credit default cushion ▪ Generally, equity content treatment applies to hybrids in proportions equal to or below 15% of total capitalization ▪ Same equity treatment methodology is applied in calculating cash flow credit metrics ▪ Must have at least 20 years or more remaining to the effective maturity to be given any equity content, subject to other features		
Objectives				
1. Equity Treatment	▪ Considered equity	▪ Typically given 50% and 100% equity treatment by S&P and DBRS, respectively, subject to quantity limits	▪ Recent hybrid sub-debt offerings given intermediate equity content by S&P ▪ Quantity limited by DBRS & S&P	▪ Typically given 100% equity treatment, depending on conversion length ▪ Quantity limited by DBRS & S&P
2. Cash Flows for Interest Payments	▪ By way of dividends ▪ **Dividend Timing:** flexible (monthly, quarterly, yearly) ▪ **Dividend Size:** flexible ▪ **Dividend Priority:** can be deferred indefinitely	▪ By way of preferred dividends ▪ **Dividend Timing:** fixed ▪ **Dividend Rate:** flexible at initiation ▪ **Dividend Priority:** can be deferred indefinitely, but prioritized above common dividends • Cumulative or non-cumulative	▪ By way of fixed interest payments until converted ▪ **Interest Timing:** flexible at initiation ▪ **Interest Rate:** flexible at initiation ▪ **Interest Priority:** can be deferred indefinitely, but prioritized above common dividends	▪ By way of preferred dividends until converted ▪ **Dividend Timing:** flexible at initiation ▪ **Dividend Rate:** flexible at initiation ▪ **Dividend Priority:** can be deferred indefinitely, but prioritized above common dividends until converted
3. Cash Flows for Debt Principal Payments	▪ Special dividends can be utilized to match timing of principal repayments	▪ Little incentive for principal repayment unless other features are added	▪ Interest rate step-up incentivizes redemption by the issuer at conversion, but may affect equity treatment	▪ Once converted, special dividends can be utilized to match timing of principal repayments

(1) Also referred to as U.S. Hybrids, with recent examples including TransCanada's US$1.25B offering in February 2017 and Emera's US$1.2B offering in June 2016
(2) Instruments that have both debt-like and equity-like features

Discussion

- Common equity provides the most flexibility to OPG with respect to:
  - Greater certainty in attaining equity treatment by credit rating agencies
  - Cash flow timing in the event that SPV/Trust payments are delayed
- Hybrid instruments(1) are an alternative in satisfying the Province's Capital Injection into OPG
  - Companies usually issue hybrids for specific purposes related to access to capital markets, credit rating, equity dilution, and tax considerations
- Two considerations required for OPG to consolidate the SPV/Trust that may directly affect the timing and amount of cash available to pay the Province are:
  - **Decision Making** – OPG needs to make funding / dividend decisions independent of the Province
  - **Business Risk** – OPG needs to demonstrate that it has variability of returns
- The two above considerations may result in cash not being distributed from the SPV/Trust to OPG, such that OPG cannot pay a dividend or special dividend to the Province
- Additionally, the dividend / interest rate on the Province's Capital Injection relative to the interest rate of the debt issued by the Province and the debt issued to OPG by the SPV/Trust determines where the excess cash will accumulate

(1) Instruments that have both debt-like and equity-like features, including the preferred equity, fixed-to-floating sub. notes, convertible to preferred equity, and mandatory convertible preferred equity discussed on page 3

Discussion (cont'd)

- Hybrid instruments(1) can be used to increase the Province's certainty of cash flows to cover the interest and principal payments on the underlying debt the Province issues
  - Subordination is less of a concern as the Province owns 100% of OPG
  - Direct trade-off exists between adding debt-like features to the hybrid instruments and reducing their degree of equity treatment for OPG by credit rating agencies
  - However, the instruments have to demonstrate some degree of permanency to warrant equity treatment and the total amount that receive equity treatment is limited by credit rating agencies
- At its simplest, the Capital Injection could take the form of common shares to the Province
  - Normal dividends set by the OPG Board, which the Province has the ability to direct, to equal the interest payments on the underlying debt
  - Repayment of principal through special dividends as cash becomes available at OPG after receiving distributions from the SPV/Trust
- Investing at market value as opposed to book value is more of a concern when allocating value between new and existing shareholders, which in not applicable in this case

The Province should have a detailed discussion with OPG and its auditors, and ultimately, the credit rating agencies when evaluating its alternatives in the context of its objectives

(1) Instruments that have both debt-like and equity-like features, including the preferred equity, fixed-to-floating sub. notes, convertible to preferred equity, and mandatory convertible preferred equity discussed on page 3

Disclaimer

These materials were prepared exclusively for the benefit and internal use of the TD Securities client to whom it is directly addressed and delivered in order to assist the Company in evaluating, on a preliminary basis, the feasibility of a possible transaction or transactions. These materials were compiled or prepared on a confidential basis solely and exclusively for the use of the Company and not with a view to public disclosure (whether under any securities laws or otherwise). The information is for discussion purposes only. These materials may not be used for any purpose other than as may be specifically contemplated by a written agreement with TD Securities.

The information in this presentation reflects prevailing conditions and our views as of this date, all of which are accordingly subject to change. TD Securities' opinions and estimates constitute TD Securities' judgment and should be regarded as indicative, preliminary and for illustrative purposes only. In preparing the materials, TD Securities has relied upon documents and information prepared or supplied to TD Securities from the Company and other sources, without independent verification by TD Securities. Any estimates and projections contained herein have been based upon estimates and projections contained in such documents and third party sources and there is no assurance that such estimates and projections will be realized. Neither TD Securities nor any of its employees, affiliates, advisors or representatives makes any representations (express or implied) as to the accuracy or completeness of such information contained herein and nothing contained herein is or shall be construed or relied upon as, a representation, whether as to the past, present or future. Nothing herein should be construed as tax, accounting or legal advice. TD Securities does not have any obligation to update or otherwise revise the materials and information contained herein.

TD Securities believes that these materials must be considered as a whole and that selecting portions of the analyses and the factors considered by TD Securities, without considering all of the factors and analyses together, could create a misleading view of the presentation. The preparation of a presentation such as this is complex and is not necessarily susceptible to partial analysis or summary description. Any attempt to do so could lend to undue emphasis on any particular factor or analysis.

These materials must not be disclosed, copied or reproduced, distributed or passed to others at any time without the prior written consent of TD Securities.

Notwithstanding anything herein to the contrary, the Company and each of its employees, representatives or other agents may disclose to any and all persons, without limitation of any kind, the U.S. federal and state income tax structure of the transactions contemplated hereby and all materials of any kind (including opinions or other tax analyses) that are provided to the Company relating to such tax treatment and tax structure insofar as such treatment and/or structure relates to a U.S. federal or state income tax strategy provided to the Company by TD Securities.

TD Securities' policies prohibit employees from offering, directly or indirectly, a favorable research rating or specific price target, or offering to change a rating or price target, to a subject company as consideration or inducement for the receipt of business or for compensation. TD Securities also prohibits its research analysts from being compensated for involvement in investment banking transactions except to the extent that such participation is intended to benefit investors.

"TD Securities" is a trademark of The Toronto-Dominion Bank and represents TD Securities Inc., TD Securities (USA) LLC., TD Securities Ltd and certain investment and corporate banking activities of The Toronto-Dominion Bank and its regulated subsidiaries. The Toronto-Dominion Bank, TD Bank Europe Ltd and TD Securities Ltd are regulated for investment business conducted in the UK by the FSA. TD Global Finance is regulated for investment business conducted in Ireland by the Central Bank of Ireland. This document is prepared, issued or approved for issuance in the UK and Europe by TD Securities Ltd on behalf of or as agent and introducer for TD Bank.

These materials do not constitute a commitment by any TD Securities entity to underwrite, subscribe for or place any securities or to extend or arrange credit or to provide any other services.

CONFIDENTAL

Draft for discussion purposes

Date: Feb 17, 2017

Terms necessary for OPG to consolidate the Trust:

1. The Trust should not operate in a predetermined way such that OPG does not have decision-making authority over the Trust's ongoing activities after its formation (i.e. should not operate on 'autopilot').

2. OPG must have the ability to appoint and remove the Trustee (or Board of Trustees), with no veto right by the Province.

3. No party shall have the ability to remove OPG from its role and authority in the Trust.

4. The Province ~~can not~~cannot have the right to be able to veto OPG's decisions about the relevant activities of the Trust. OPG must have the power over the relevant activities of the Trust and be compensated. The relevant activities of the Trust include (but are not limited to) the evaluation and decisions on financing alternatives, duration, and the strategy to minimize financing costs.

5. OPG must have the power to determine or change operating and financing policies of the Trust, which will affect the variability of risks and returns.

6. OPG must have the power to establish operating and capital budgets of the Trust.

7. The Province or its agencies must not directly or indirectly fund (through debt or equity) more than 50% of the following:
    a. The Trust
    b. Any of OPG's investments in the Trust
    c. The most subordinated debt of the Trust

8. OPG must own greater than 50% of the most subordinated debt and must be no less than 5% of the subordinated debt of the Trust. Such ownership must be financed entirely by OPG through external debt, without assistance from Provincial sources.

9. OPG must have the ability to earn variable returns by exercising its authority, which shall be accomplished as follows:
    a. The cash flow from the restructured asset shall include interest determined based on a relevant benchmark that is appropriate relative to the restructured asset, plus an appropriate margin consistent with the relevant market and other risks
    b. OPG shall have the authority to determine the financing strategy, which will vary the financing costs with the objective of enabling the Trust to achieve a more favourable return compared to the benchmark for interest on the restructured asset
    c. The Trust shall establish classes of liabilities (senior, subordinated and the most subordinated). The classes would allow the Trust to delineate financing of lower risk investment and investment that would bear higher residual risk. The delineation would limit

Commented [AP1]: But the Province has the power as sole shareholder to influence OPG executives and management, thus has indirect control of the Trust.

Commented [AP2]: As mentioned before in a prior proposal, will be consolidated on OPG's books.

Commented [AP3]: The uncertainty of collection, as well as the intangible assets used essentially as "collateral" for the billions of debt to be borrowed, could result in the market putting a large risk premium on any debt associated with this transaction.

Commented [AP4]: If this is true, then any favourable returns from the financing strategy should result in a reduction in the regulatory asset and recovery from ratepayers to ensure only the actual financing cost is being recovered.

OPG's self-funded investment to a reasonable level in order to allow OPG to remain a self-sustaining entity.

d. OPG shall, through its ownership of the most subordinated liability, be able to capture and retain the pricing difference between cost of financing and benchmark for interest on the restructured asset, or any residual risk of restructured asset. The targeted return of the subordinated liability should be reflective of the underlying risks and compensate holders for active management that would be required.

e. OPG should participate in the detailed design of the above and the Trust documentation to ensure that it has substantive power and variability, which will allow OPG's Board of Directors to evaluate the opportunity as a business initiative instead of through a shareholder directive.

f. If there is a Defined Forced Majeure for emergency events (e.g. unlikely credit market event or disruption where it is not possible to borrow from the market at a reasonable rate), OEFC may provide bridge financing beyond the designated percentage.

10. The Legislation must require interest, carrying and administrative costs to be paid to the Trust on a monthly basis, so that the Trust is able to recognize appropriate revenue to offset any ongoing costs.

11. The Legislation must dictate the manner in which the restructured asset would be determined, collected, and the period of collection, so that the determination of the restructured asset will not be subject to the Province's decisions on an ongoing basis, but determined based on a formula. Alternatively, the Legislation may allow for an adjustment to the pre-determined deferral formula based on specific parameters that would limit the adjustment to the restructured asset. Adjustments beyond the specific parameters would require approval by the Board of Trustee.

Others:

12. The spirit of the above terms should be reflected in the Trust Indenture Agreement as well as Legislation, wherever possible.

13. The Legislation must be written to avoid legal or constitutional challenges and be irrevocable to reduce the cost of borrowing and with a specific formula which determines the deferral amount.

14. The Trust must be undertaken by OPG as a business initiative. If a Directive is to be issued to OPG, the Directive shall be issued to direct OPG's Board of Directors to investigate the viability of the option. However, this Directive cannot remove the Board of Directors' the responsibility to evaluate this opportunity as a business initiative.

Commented [AP5]: Potential to threaten OPG's GBE status.

Commented [AP6]: Will OPG consider swaps or other derivatives to mitigate the interest rate risk; how will the different classes of debt be rated and affect OPG's credit rating?

Commented [AP7]: Who is paying these costs? With a regulatory asset, cash can still be paid to the Trust without revenue or expenses (as they are being deferred to a later period of collection) hitting the income statement.

Commented [AP8]: What role does the OEB play in this matter as they determine the rates for OPG and other distributors/transmitters in Ontario? Should the OEB, and not the Board of Trustee, be responsible for adjustments to the recovery of this restructured asset?

Commented [AP9R8]: A strict formula can lead to potential problems in the future (e.g., what if electricity usage falls rapidly, population grows less than expected, etc.). May be better to have valuation reports on a frequent basis to assess collectability, the estimated time of recovery, and revalue the asset/liability.

CONFIDENTAL

Draft for discussion purposes

Date: Feb 17, 2017

Terms necessary for OPG to consolidate the Trust:

1. The Trust should not operate in a predetermined way such that OPG does not have decision-making authority over the Trust's ongoing activities after its formation (i.e. should not operate on 'autopilot').

2. OPG must have the ability to appoint and remove the Trustee (or Board of Trustees), with no veto right by the Province.

3. No party shall have the ability to remove OPG from its role and authority in the Trust.

4. The Province ~~can not~~cannot have the right to be able to veto OPG's decisions about the relevant activities of the Trust. OPG must have the power over the relevant activities of the Trust and be compensated. The relevant activities of the Trust include (but are not limited to) the evaluation and decisions on financing alternatives, duration, and the strategy to minimize financing costs.

5. OPG must have the power to determine or change operating and financing policies of the Trust, which will affect the variability of risks and returns.

6. OPG must have the power to establish operating and capital budgets of the Trust.

7. The Province or its agencies must not directly or indirectly fund (through debt or equity) more than 50% of the following:
    a. The Trust
    b. Any of OPG's investments in the Trust
    c. The most subordinated debt of the Trust

8. OPG must own greater than 50% of the most subordinated debt and must be no less than 5% of the subordinated debt of the Trust. Such ownership must be financed entirely by OPG through external debt, without assistance from Provincial sources.

9. OPG must have the ability to earn variable returns by exercising its authority, which shall be accomplished as follows:
    a. The cash flow from the restructured asset shall include interest determined based on a relevant benchmark that is appropriate relative to the restructured asset, plus an appropriate margin consistent with the relevant market and other risks
    b. OPG shall have the authority to determine the financing strategy, which will vary the financing costs with the objective of enabling the Trust to achieve a more favourable return compared to the benchmark for interest on the restructured asset
    c. The Trust shall establish classes of liabilities (senior, subordinated and the most subordinated). The classes would allow the Trust to delineate financing of lower risk investment and investment that would bear higher residual risk. The delineation would limit

Commented [AP1]: But the Province has the power as sole shareholder to influence OPG executives and management, thus has indirect control of the Trust.

Commented [AP2]: As mentioned before in a prior proposal, will be consolidated on OPG's books.

Commented [AP3]: The uncertainty of collection, as well as the intangible assets used essentially as "collateral" for the billions of debt to be borrowed, could result in the market putting a large risk premium on any debt associated with this transaction.

Commented [AP4]: If this is true, then any favourable returns from the financing strategy should result in a reduction in the regulatory asset and recovery from ratepayers to ensure only the actual financing cost is being recovered.

OPG's self-funded investment to a reasonable level in order to allow OPG to remain a self-sustaining entity.

d. OPG shall, through its ownership of the most subordinated liability, be able to capture and retain the pricing difference between cost of financing and benchmark for interest on the restructured asset, or any residual risk of restructured asset. The targeted return of the subordinated liability should be reflective of the underlying risks and compensate holders for active management that would be required.

e. OPG should participate in the detailed design of the above and the Trust documentation to ensure that it has substantive power and variability, which will allow OPG's Board of Directors to evaluate the opportunity as a business initiative instead of through a shareholder directive.

f. If there is a Defined Forced Majeure for emergency events (e.g. unlikely credit market event or disruption where it is not possible to borrow from the market at a reasonable rate), OEFC may provide bridge financing beyond the designated percentage.

10. The Legislation must require interest, carrying and administrative costs to be paid to the Trust on a monthly basis, so that the Trust is able to recognize appropriate revenue to offset any ongoing costs.

11. The Legislation must dictate the manner in which the restructured asset would be determined, collected, and the period of collection, so that the determination of the restructured asset will not be subject to the Province's decisions on an ongoing basis, but determined based on a formula. Alternatively, the Legislation may allow for an adjustment to the pre-determined deferral formula based on specific parameters that would limit the adjustment to the restructured asset. Adjustments beyond the specific parameters would require approval by the Board of Trustee.

Others:

12. The spirit of the above terms should be reflected in the Trust Indenture Agreement as well as Legislation, wherever possible.

13. The Legislation must be written to avoid legal or constitutional challenges and be irrevocable to reduce the cost of borrowing and with a specific formula which determines the deferral amount.

14. The Trust must be undertaken by OPG as a business initiative. If a Directive is to be issued to OPG, the Directive shall be issued to direct OPG's Board of Directors to investigate the viability of the option. However, this Directive cannot remove the Board of Directors' the responsibility to evaluate this opportunity as a business initiative.

Commented [AP5]: Potential to threaten OPG's GBE status.

Commented [AP6]: Will OPG consider swaps or other derivatives to mitigate the interest rate risk; how will the different classes of debt be rated and affect OPG's credit rating?

Commented [AP7]: Who is paying these costs? With a regulatory asset, cash can still be paid to the Trust without revenue or expenses (as they are being deferred to a later period of collection) hitting the income statement.

Commented [AP8]: What role does the OEB play in this matter as they determine the rates for OPG and other distributors/transmitters in Ontario? Should the OEB, and not the Board of Trustee, be responsible for adjustments to the recovery of this restructured asset?

Commented [AP9R8]: A strict formula can lead to potential problems in the future (e.g., what if electricity usage falls rapidly, population grows less than expected, etc.). May be better to have valuation reports on a frequent basis to assess collectability, the estimated time of recovery, and revalue the asset/liability.

GA Smoothing – Schedule of Borrowing and Re-Payments

- The table below shows a sample schedule of borrowing and re-payments under financing of the GA. Schedule assumes a 5% interest rate compounded annually.

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Amount by which debt account changes in present year, not including interest	-1,142	-1,667	-2,115	-3,409	-1,819	-1,337	-635	-1,215	-325	451	-187	350	1,531	2,000
Amount by which debt account changes in present year, including interest	-1,142	-1,725	-2,258	-3,665	-2,259	-1,889	-1,282	-1,926	-1,132	-413	-1,072	-588	563	1,061
$ millions	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	0	0
Amount by which debt account changes in present year, including interest	1,114	1,169	1,228	1,289	1,354	1,421	1,492	1,567	1,645	1,728	1,814	1,905	0	0

GA Smoothing – Schedule of Borrowing and Re-Payments

Scenario 1B, 25 Year, Monthly Drawdowns

- The table below shows a sample schedule of borrowing and re-payments under financing of the GA. Schedule below assumes monthly drawdown or compounding of debt, as calculated by CEFD staff.

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Amount by which debt account changes in present year, not including interest	-1,142	-1,667	-2,115	-3,409	-1,819	-1,337	-635	-1,215	-325	451	-187	350	1,531	2,000
Annual Interest Costs	*-27*	*-97*	*-196*	*-341*	*-492*	*-596*	*-677*	*-756*	*-834*	*-873*	*-909*	*-952*	*-954*	*-915*
Amount by which debt account changes in present year, including interest	-1,168	-1,765	-2,311	-3,750	-2,311	-1,933	-1,311	-1,971	-1,158	-422	-1,097	-602	576	1,085

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	0	0
Annual Interest Costs	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*	*-232*	*-144*	*-51*	*0*	*0*
Amount by which debt account changes in present year, including interest	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684	1,768	1,856	1,949	0	0

GA Smoothing – Schedule of Borrowing and Re-Payments

Scenario 1B, 30 Year, Monthly Drawdowns

- The table below shows a sample schedule of borrowing and re-payments under financing of the GA. Schedule below assumes monthly drawdown or compounding of debt, as calculated by CEFD staff.

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Amount by which debt account changes in present year, not including interest	-1,416	-1,667	-2,115	-3,409	-1,819	-1,337	-635	-1,215	-325	451	-187	350	1,531	2,000
Annual Interest Costs	*-33*	*-117*	*-229*	*-388*	*-552*	*-671*	*-767*	*-862*	*-958*	*-1,017*	*-1,073*	*-1,138*	*-1,164*	*-1,146*
Amount by which debt account changes in present year, including interest	-1,449	-1,785	-2,344	-3,797	-2,371	-2,008	-1,401	-2,077	-1,283	-566	-1,261	-788	367	854

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*	*-915*	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
Amount by which debt account changes in present year, including interest	893	938	984	1,034	1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

GA Smoothing – Schedule of Borrowing and Re-Payments

Scenario 1A, 25 Year, Monthly Drawdowns

- The table below shows a sample schedule of borrowing and re-payments under financing of the GA. Schedule below assumes monthly drawdown or compounding of debt, as calculated by CEFD staff.

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Amount by which debt account changes in present year, not including interest	-3,107	-1,667	-2,115	-3,409	-1,819	-1,337	-635	-1,215	-325	451	-187	350	1,531	2,000
Annual Interest Costs	*-72*	*-221*	*-355*	*-492*	*-613*	*-690*	*-746*	*-803*	*-863*	*-888*	*-913*	*-950*	*-952*	*-914*
Amount by which debt account changes in present year, including interest	-3,180	-1,888	-2,469	-3,901	-2,433	-2,027	-1,381	-2,018	-1,187	-437	-1,101	-600	578	1,086

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	0	0
Annual Interest Costs	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*	*-232*	*-144*	*-51*	*0*	*0*
Amount by which debt account changes in present year, including interest	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684	1,768	1,856	1,949	0	0

GA Smoothing – Schedule of Borrowing and Re-Payments

Scenario 1A, 30 Year, Monthly Drawdowns

- The table below shows a sample schedule of borrowing and re-payments under financing of the GA. Schedule below assumes monthly drawdown or compounding of debt, as calculated by CEFD staff.

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Amount by which debt account changes in present year, not including interest	-3,326	-1,667	-2,115	-3,409	-1,819	-1,337	-635	-1,215	-325	451	-187	350	1,531	2,000
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*	*-668*	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
Amount by which debt account changes in present year, including interest	-3,404	-1,905	-2,498	-3,943	-2,488	-2,097	-1,466	-2,120	-1,307	-576	-1,260	-781	375	858

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*	*-915*	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
Amount by which debt account changes in present year, including interest	893	938	984	1,034	1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

DRAFT

GA Smoothing – Schedule of Borrowing and Re-Payments

Scenario 1B, 25-year, Yearly Drawdowns, **as per MOE**

- The table below shows a sample schedule of borrowing and re-payments under financing of the GA.

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Amount by which debt account changes in present year, not including interest	-1,142	-1,667	-2,115	-3,409	-1,819	-1,337	-635	-1,215	-325	451	-187	350	1,531	2,000
Amount by which debt account changes in present year, including interest	-1,142	-1,725	-2,258	-3,665	-2,259	-1,889	-1,282	-1,926	-1,132	-413	-1,072	-588	563	1,061
$ millions	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	0	0
Amount by which debt account changes in present year, including interest	1,114	1,169	1,228	1,289	1,354	1,421	1,492	1,567	1,645	1,728	1,814	1,905	0	0

DRAFT

GA Smoothing – Schedule of Borrowing and Re-Payments

Scenario 1B, 25-year, Monthly Drawdowns

- The table below shows a sample schedule of borrowing and re-payments under financing of the GA. Schedule below assumes monthly drawdown or compounding of debt, as calculated by CEFD staff.

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Amount by which debt account changes in present year, not including interest	-1,142	-1,667	-2,115	-3,409	-1,819	-1,337	-635	-1,215	-325	451	-187	350	1,531	2,000
Annual Interest Costs	*-27*	*-97*	*-196*	*-341*	*-492*	*-596*	*-677*	*-756*	*-834*	*-873*	*-909*	*-952*	*-954*	*-915*
Amount by which debt account changes in present year, including interest	-1,168	-1,765	-2,311	-3,750	-2,311	-1,933	-1,311	-1,971	-1,158	-422	-1,097	-602	576	1,085

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	0	0
Annual Interest Costs	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*	*-232*	*-144*	*-51*	*0*	*0*
Amount by which debt account changes in present year, including interest	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684	1,768	1,856	1,949	0	0

DRAFT

GA Financing Scenario

Option 1a/1b – Annual vs Monthly Drawdown

Corporate and Electricity Finance Division

January 30, 2017

DRAFT

GA Smoothing – Schedule of Borrowing and Re-Payments

Scenario 1B, 25-year, Yearly Drawdowns, **as per MOE**

- The table below shows a sample schedule of borrowing and re-payments under financing of the GA.

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Amount by which debt account changes in present year, not including interest	-1,142	-1,667	-2,115	-3,409	-1,819	-1,337	-635	-1,215	-325	451	-187	350	1,531	2,000
Amount by which debt account changes in present year, including interest	-1,142	-1,725	-2,258	-3,665	-2,259	-1,889	-1,282	-1,926	-1,132	-413	-1,072	-588	563	1,061
$ millions	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	0	0
Amount by which debt account changes in present year, including interest	1,114	1,169	1,228	1,289	1,354	1,421	1,492	1,567	1,645	1,728	1,814	1,905	0	0

DRAFT

GA Smoothing – Schedule of Borrowing and Re-Payments

Scenario 1B, 25-year, Monthly Drawdowns

- The table below shows a sample schedule of borrowing and re-payments under financing of the GA. Schedule below assumes monthly drawdown or compounding of debt, as calculated by CEFD staff.

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Amount by which debt account changes in present year, not including interest	-1,142	-1,667	-2,115	-3,409	-1,819	-1,337	-635	-1,215	-325	451	-187	350	1,531	2,000
Annual Interest Costs	*-27*	*-97*	*-196*	*-341*	*-492*	*-596*	*-677*	*-756*	*-834*	*-873*	*-909*	*-952*	*-954*	*-915*
Amount by which debt account changes in present year, including interest	-1,168	-1,765	-2,311	-3,750	-2,311	-1,933	-1,311	-1,971	-1,158	-422	-1,097	-602	576	1,085

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	0	0
Annual Interest Costs	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*	*-232*	*-144*	*-51*	*0*	*0*
Amount by which debt account changes in present year, including interest	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684	1,768	1,856	1,949	0	0

DRAFT

GA Smoothing – Schedule of Borrowing and Re-Payments

Scenario 1B, 30-year, Monthly Drawdowns

- The table below shows a sample schedule of borrowing and re-payments under financing of the GA. Schedule below assumes monthly drawdown or compounding of debt, as calculated by CEFD staff.

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Amount by which debt account changes in present year, not including interest	-1,416	-1,667	-2,115	-3,409	-1,819	-1,337	-635	-1,215	-325	451	-187	350	1,531	2,000
Annual Interest Costs	*-33*	*-117*	*-229*	*-388*	*-552*	*-671*	*-767*	*-862*	*-958*	*-1,017*	*-1,073*	*-1,138*	*-1,164*	*-1,146*
Amount by which debt account changes in present year, including interest	-1,449	-1,785	-2,344	-3,797	-2,371	-2,008	-1,401	-2,077	-1,283	-566	-1,261	-788	367	854

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*	*-915*	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
Amount by which debt account changes in present year, including interest	893	938	984	1,034	1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684

DRAFT

GA Smoothing – Schedule of Borrowing and Re-Payments

Scenario 1A, 25-year, Monthly Drawdowns

- The table below shows a sample schedule of borrowing and re-payments under financing of the GA. Schedule below assumes monthly drawdown or compounding of debt, as calculated by CEFD staff.

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Amount by which debt account changes in present year, not including interest	-3,107	-1,667	-2,115	-3,409	-1,819	-1,337	-635	-1,215	-325	451	-187	350	1,531	2,000
Annual Interest Costs	*-72*	*-221*	*-355*	*-492*	*-613*	*-690*	*-746*	*-803*	*-863*	*-888*	*-913*	*-950*	*-952*	*-914*
Amount by which debt account changes in present year, including interest	-3,180	-1,888	-2,469	-3,901	-2,433	-2,027	-1,381	-2,018	-1,187	-437	-1,101	-600	578	1,086

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	0	0
Annual Interest Costs	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*	*-232*	*-144*	*-51*	*0*	*0*
Amount by which debt account changes in present year, including interest	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684	1,768	1,856	1,949	0	0

DRAFT

GA Smoothing – Schedule of Borrowing and Re-Payments

Scenario 1A, 30-year, Monthly Drawdowns

- The table below shows a sample schedule of borrowing and re-payments under financing of the GA. Schedule below assumes monthly drawdown or compounding of debt, as calculated by CEFD staff.

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Amount by which debt account changes in present year, not including interest	-3,326	-1,667	-2,115	-3,409	-1,819	-1,337	-635	-1,215	-325	451	-187	350	1,531	2,000
Annual Interest Costs	*-77*	*-237*	*-383*	*-534*	*-668*	*-760*	*-831*	*-905*	*-983*	*-1,027*	*-1,073*	*-1,131*	*-1,156*	*-1,142*
Amount by which debt account changes in present year, including interest	-3,404	-1,905	-2,498	-3,943	-2,488	-2,097	-1,466	-2,120	-1,307	-576	-1,260	-781	375	858

Debt Borrowing/Payment Schedule for GA Financing														
$ millions	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Amount by which debt account changes in present year, not including interest	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Annual Interest Costs	*-1,107*	*-1,062*	*-1,016*	*-966*	*-915*	*-860*	*-803*	*-744*	*-681*	*-615*	*-546*	*-473*	*-397*	*-316*
Amount by which debt account changes in present year, including interest	893	938	984	1,034	1,085	1,140	1,197	1,256	1,319	1,385	1,454	1,527	1,603	1,684



Securitization Servicer Report

Canadian Securitization Market Overview

FEBRUARY 2017

DBRS

Insight beyond the rating.

CONTACT INFORMATION

Jamie Feehely
Managing Director
Canadian Structured Finance
Tel. +1 416 597 7312
jfeehely@dbrs.com

Ernest Chan
Financial Analyst
Canadian Structured Finance
Tel. +1 416 597 7377
echan@dbrs.com

Clara Vargas
Senior Vice President Surveillance
Canadian Structured Finance
Tel. +1 416 597 7473
cvargas@dbrs.com

Conventions used in this report
All currency values are in Canadian Dollars unless otherwise specified.
Percentage values may not add exactly to 100% due to rounding.
Exchange rate: $1.00 US = $1.3281 Canadian

DBRS is a full-service credit rating agency established in 1976. Spanning North America, Europe and Asia, DBRS is respected for its independent, third-party evaluations of corporate and government issues. DBRS's extensive coverage of securitizations and structured finance transactions solidifies our standing as a leading provider of comprehensive, in-depth credit analysis.

All DBRS ratings and research are available in hard-copy format and electronically on Bloomberg and at DBRS.com, our lead delivery tool for organized, Web-based, up-to-the-minute information. We remain committed to continuously refining our expertise in the analysis of credit quality and are dedicated to maintaining objective and credible opinions within the global financial marketplace.

Table of Contents

Market Summary 4
Asset Composition 11
Market Share 13
Appendix A: Canadian Automotive Static Net Loss Curves 15
Appendix B: Canadian Credit Card Performance Metrics 16
Appendix C: Quarterly Residential Mortgage Default Rates 18
Appendix D: GLS Compliant ABCP Issues 20
Appendix E: Asset Class Information 21
Glossary 22

Market Summary

Summary

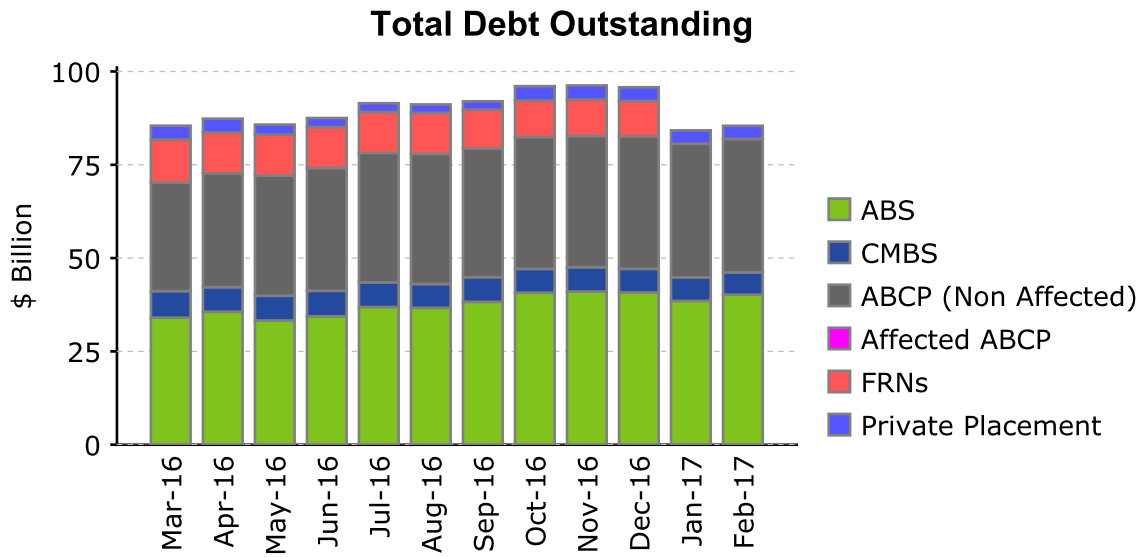
The report provides an overview of the total Canadian securitization market, which includes term asset-backed securities (term-ABS), commercial mortgage-backed securities (CMBS) and asset-backed commercial paper (ABCP).

The total amount outstanding in the Canadian securitization market ended February 2017 at $85.0 billion which is higher than last month's $83.7 billion. During the month the total outstanding amount of ABCP remained the same at $35.7 billion.

The total outstanding amount in the Canadian ABS market was $40.2 billion at the end of February 2017.

Term ABS and CMBS represented 54.3% of the total securitization market as of February 2017, followed by ABCP at 42.01 and private placements at 3.6%.

The Canadian securitization market (excluding private placements) continued to be dominated by credit cards, which accounted for 34.5% of the total market. Auto-related transactions accounted for 20.0%, followed residential mortgages at by a 17.8% share and commercial mortgages at 7.4%.



Credit quality of the underlying collateral remains strong. Nonetheless, the high level of household indebtedness remains a significant cause for concern as it leaves Canadian households more vulnerable to cash flow shortages, as currently seen in resource-dependent provinces. Performance will continue to depend largely on the health of the Canadian economy. However, outstanding notes are enhanced sufficiently to withstand volatility.

Market Summary (continued)

Rating Actions by Asset Class

From February 1st, 2017 to the publication date.

Auto Loans and Leases

New Ratings:

On February 2, 2017 DBRS Limited assigned the following provisional ratings to the Class A-1, Class A-2 and Class A-3 Notes, Series 2017-1 (collectively, the Notes) issued by BMW Canada Auto Trust:

-- Class A-1 Notes, Series 2017-1 (the Class A-1 Notes) provisionally rated AAA (sf)
-- Class A-2 Notes, Series 2017-1 (the Class A-2 Notes) provisionally rated AAA (sf)
-- Class A-3 Notes, Series 2017-1 (the Class A-3 Notes) provisionally rated AAA (sf)

This rating was finalized on February 15, 2017.

On April 20, 2017 DBRS Limited assigned provisional ratings to the following notes to be issued by Ford Auto Securitization Trust (FAST):

-- Asset-Backed Notes, Series 2017-R2, Class A-1 (the Class A-1 Notes) provisionally rated AAA (sf)
-- Asset-Backed Notes, Series 2017-R2, Class A-2 (the Class A-2 Notes) provisionally rated AAA (sf)
-- Asset-Backed Notes, Series 2017-R2, Class A-3 (the Class A-3 Notes and together with the Class A-1 Notes and the Class A-2 Notes, the Class A Notes or the Senior Notes) provisionally rated AAA (sf)
-- Asset-Backed Notes, Series 2017-R2, Class B (the Class B Notes) provisionally rated AA (high) (sf)
-- Asset-Backed Notes, Series 2017-R2, Class C (the Class C Notes) provisionally rated A (high) (sf)
-- Asset-Backed Notes, Series 2017-R2, Class D (the Class D Notes and together with the Class B Notes and the Class C Notes, the Subordinated Notes) provisionally rated BBB (high) (sf)

Discontinuation:

On February 8, 2017 DBRS Limited discontinued its rating on the Ford Auto Securitization Trust 2013-R1, Asset-Backed Notes, Series 2013-R1, Class A-3 as they were fully repaid on January 17, 2017.

Auto Rental

Confirmation:

On March 8, 2017 DBRS Limited confirmed the ratings of the following notes (collectively, the Notes), issued by WTH Car Rental ULC (the Issuer) as part of DBRS's continued effort to provide market participants with updates on an annual basis:

-- Fixed Rate Asset Backed Senior Notes, Series 2014-1, Class A at AAA (sf)

Market Summary (continued)

-- Fixed Rate Asset Backed Subordinated Notes, Series 2014-1, Class B at BBB (high) (sf)
-- Fixed Rate Asset-Backed Senior Notes, Series 2015-1, Class A at AAA (sf)
-- Fixed Rate Asset-Backed Subordinated Notes, Series 2015-1, Class B at A (high) (sf)
-- Fixed Rate Asset-Backed Subordinated Notes, Series 2015-1, Class C at BBB (sf)

Credit Cards and Lines of Credit

New Ratings:

On February 13, 2017 DBRS Limited assigned the following provisional ratings to the Credit Card Receivables-Backed Notes, Series 2017-1 (the Notes) to be issued by Golden Credit Card Trust (the Trust):

-- AAA (sf) to the Credit Card Receivables-Backed Class A Floating Rate Notes, Series 2017-1
-- A (high) (sf) to the Credit Card Receivables-Backed Class B Notes, Series 2017-1
-- BBB (high) (sf) to the Credit Card Receivables-Backed Class C Notes, Series 2017-1

This rating was finalized on February 21, 2017.

On April 17, 2017 DBRS Limited assigned the following provisional ratings to the Credit Card Receivables-Backed Notes, Series 2017-2 (the Notes) to be issued by Golden Credit Card Trust (the Trust):

-- AAA (sf) to the Credit Card Receivables-Backed Class A Notes, Series 2017-2
-- A (high) (sf) to the Credit Card Receivables-Backed Class B Notes, Series 2017-2
-- BBB (high) (sf) to the Credit Card Receivables-Backed Class C Notes, Series 2017-2

This rating was finalized on April 25, 2017.

On April 18, 2017 DBRS Limited assigned the following provisional ratings to the Credit Card Receivables-Backed Notes, Series 2017-3 (the Notes) to be issued by Golden Credit Card Trust (the Trust):

-- AAA (sf) to the Credit Card Receivables-Backed Class A Notes, Series 2017-3
-- A (high) (sf) to the Credit Card Receivables-Backed Class B Notes, Series 2017-3
-- BBB (high) (sf) to the Credit Card Receivables-Backed Class C Notes, Series 2017-3

This rating was finalized on April 25, 2017.

On April 26, 2017 DBRS Limited assigned ratings to the Credit Card Receivables-Backed Notes, Series 2017-2 (the Notes) issued by Master Credit Card Trust II (the Trust) as follows:

-- AAA (sf) to the Credit Card Receivables-Backed Class A Notes, Series 2017-2 (the Class A Notes)
-- AA (sf) to the Credit Card Receivables-Backed Class B Notes, Series 2017-2 (the Class B Notes)
-- BBB (sf) to the Credit Card Receivables-Backed Class C Notes, Series 2017-2 (the Class C Notes)

Confirmation:

On April 24, 2017 DBRS Limited confirmed the ratings of all of the following outstanding notes

Market Summary (continued)

(the Notes) issued by Canadian Credit Card Trust II (CCCT II). The confirmation is part of DBRS's continued effort to provide timely credit rating opinions and increased transparency to market participants.

-- AAA (sf) for Credit Card Receivables-Backed Class A Notes, Series 2015-1 (the Class A Notes, Series 2015-1)
-- A (sf) for Credit Card Receivables-Backed Class B Notes, Series 2015-1 (the Class B Notes, Series 2015-1)
-- BBB (sf) for Credit Card Receivables-Backed Class C Notes, Series 2015-1 (the Class C Notes, Series 2015-1; collectively with the Class A Notes, Series 2015-1 and the Class B Notes, Series 2015-1, the Series 2015-1 Notes)
-- AAA (sf) for Credit Card Receivables-Backed Floating Rate Class A Notes, Series 2016-1 (the Class A Notes, Series 2016-1)
-- A (sf) for Credit Card Receivables-Backed Class B Notes, Series 2016-1 (the Class B Notes, Series 2016-1)
-- BBB (sf) for Credit Card Receivables-Backed Class C Notes, Series 2016-1 (the Class C Notes, Series 2016-1; collectively with the Class A Notes, Series 2016-1 and the Class B Notes, Series 2016-1, the Series 2016-1 Notes)

Discontinuation:

On March 16, 2017 DBRS Limited discontinued the ratings on the Credit Card Receivables-Backed Notes, Series 2014-1 and Series 2016-2 (the Notes) issued by Golden Credit Card Trust as the Notes were fully repaid on March 15, 2017.

On April 25, 2017 DBRS Limited discontinued the ratings of the Credit Card Receivables-Backed Notes, Series 2014-1 (the Notes) issued by Master Credit Card Trust II as the Notes were fully repaid.

Equipment

New Ratings:

On February 15, 2017 DBRS Limited assigned the following provisional ratings to the CNH Capital Canada Receivable-Backed Notes, Series 2017-1, issued by CNH Capital Canada Receivables Trust (CNH CCRT or the Trust):

-- AAA (sf) to the Class A-1 Receivable-Backed Notes, Series 2017-1 (the Class A-1 Notes)
-- AAA (sf) to the Class A-2 Receivable-Backed Notes, Series 2017-1 (the Class A-2 Notes)
-- A (sf) to the Class B Receivable-Backed Notes, Series 2017-1 (the Class B Notes)

This rating was finalized on March 6, 2017

Confirmation:

On March 16, 2017 DBRS Limited confirmed the ratings on the following notes (collectively, the Notes) issued by CNH Capital Canada Receivables Trust as part of DBRS's continued effort to provide market participants with updates on an annual basis:

Market Summary (continued)

-- Class A-2 Receivable-Backed Notes, Series 2013-2 (the Series 2013-2, Class A Notes) at AAA (sf).
-- Class B Receivable-Backed Notes, Series 2013-2 (the Series 2013-2, Class B Notes; collectively, with the Series 2013-2, Class A Notes, the Series 2013-2 Notes) at AA (sf).

-- Class A-2 Receivable-Backed Notes, Series 2014-1 (the Series 2014-1, Class A Notes) at AAA (sf).
-- Class B Receivable-Backed Notes, Series 2014-1 (the Series 2014-1, Class B Notes, collectively, with the Series 2014-1, Class A Notes, the Series 2014-1 Notes) at AA (sf).

-- Class A-2 Receivable-Backed Notes, Series 2015-1 (the Series 2015-1, Class A Notes) at AAA (sf).

-- Class A Receivable-Backed Notes, Series 2015-2 at AAA (sf).

-- Class A Receivable-Backed Notes, Series 2016-1 at AAA (sf).
-- Class B Receivable-Backed Notes, Series 2016-1 at A (sf).

DBRS has also upgraded the following notes:

-- Class B Receivable-Backed Notes, Series 2015-1 (the Series 2015-1, Class B Notes; collectively, with the Series 2015-1, Class A Notes, the Series 2015-1 Notes) to AA (sf) from A (sf).

-- Class B Receivable-Backed Notes, Series 2015-2 to AA (sf) from A (sf).

HELOCs

New Ratings:

On April 11, 2017 DBRS Limited assigned provisional ratings to the Mortgage Pass-Through Certificates, Series 2017-1 to be issued by Bicentennial Trust as follows:

-- AAA (sf) to the Class A Certificates
-- AA (sf) to the Class B Certificates
-- A (sf) to the Class C Certificates
-- BBB (sf) to the Class D Certificates
-- BBB (low) (sf) to the Class E Certificates
-- BB (sf) to the Class F Certificates
-- B (sf) to the Class G Certificates (collectively, the Rated Certificates)

The Class H Certificates and Class Z Certificates (collectively with the Rated Certificates, the Certificates) are not rated by DBRS.

Discontinuation:

On February 16, 2017 DBRS Limited discontinued the ratings on the Real Estate Secured Line of Credit-Backed Notes, Series 2013-1 (the Notes) issued by Genesis Trust II as the Notes were fully repaid on February 15, 2017.

Market Summary (continued)

ABCP

BMO Nesbitt Burns

On April 11, 2017, DBRS Limited released an updated Transaction Summary report providing details of Transaction 23 in Canadian Master Trust, which is secured by a Collateral Note backed a portfolio of automobile, sport-utility vehicle and light truck retail auto leases originated by a captive auto finance company operating in Canada. The update reflects amendments related to the flexibility to permit alternative interest rate swap structures.

On April 12, 2017, DBRS Limited confirmed the Series A Notes of Ridge Trust (the Trust) at R-1 (high) (sf). The rating confirmation is pursuant to the inclusion of a new transaction (Transaction 26) to the Trust on April 12, 2017.

RBC Capital Markets Inc.

On February 21, 2017, DBRS Limited confirmed its ratings on the Series 1 Asset-Backed Commercial Paper Notes issued by Plaza Trust and Series 1 Asset-Backed Commercial Paper Notes issued by Storm King Funding at R-1 (high) (sf). The ratings confirmations are based on the addition of a new transaction to Plaza and Storm King Funding (Transaction 80) on February 17, 2017.

On March 16, 2017, DBRS Limited released an updated Transaction Summary report providing details of Plaza Trust Transaction 77, as part of its ongoing efforts to increase the transparency of reporting asset-backed commercial paper (ABCP) conduit activity. The update reflects an extension of the revolving period of the program by one year and an increase in the transaction size.

On March 24, 2017, DBRS Limited confirmed its rating on the Series 1 Asset-Backed Commercial Paper Notes issued by Plaza Trust at R-1 (high) (sf). The rating confirmation is based on the addition of a new transaction (Transaction 81) to Plaza on March 24, 2017.

Market Updates

On February 28, 2017, DBRS Limited published its annual industry study entitled "Canadian Structured Finance 2016 Year in Review: Excellent Credit-Quality Assets Whetting Investors' Appetites," which discusses the performance of Canadian structured finance in 2016 and the outlook for 2017.

On March 2, 2017 DBRS Limited published the Canadian Credit Card Performance Index (the Index) for Q4 2016. All key performance metrics tracked by DBRS improved or remained stable over the last quarter.

On March 22, 2017 DBRS Limited published indicators on household financial health and consumer credit in Canada (the Consumer Indicators) for Q4 2016.

On March 23, 2017 DBRS Limited published indicators of the housing market in Canada (the Housing Indicators) for Q4 2016. The Housing Indicators provide various measures of the residential mortgage and housing market in Canada as well as additional metrics for the United States for comparison. The Housing Indicators are updated quarterly.

Market Summary (continued)

Methodology Update

On March 28, 2017 DBRS Limited published an updated version of its Rating Canadian ABCP and Related Enhancement Features Methodology (the Methodology). This version supersedes the previous version of the Methodology published in March 2016.

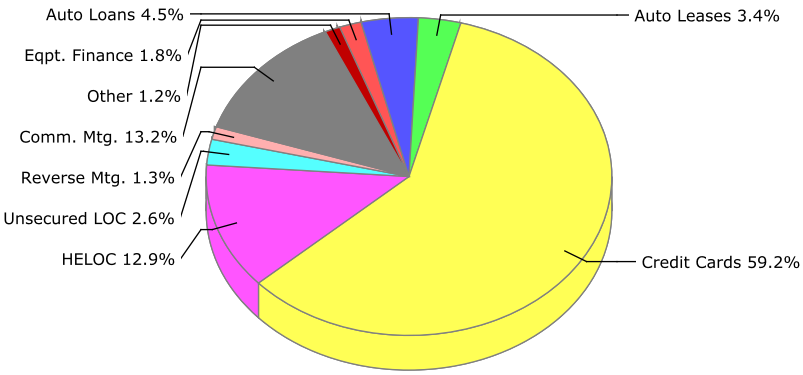
For more details regarding these rating actions, please refer to the press release on www.dbrs.com.

For more details please use these links to the other reports

Monthly Canadian ABS Report
Monthly Canadian ABCP Report
Monthly Canadian Covered Bond Report

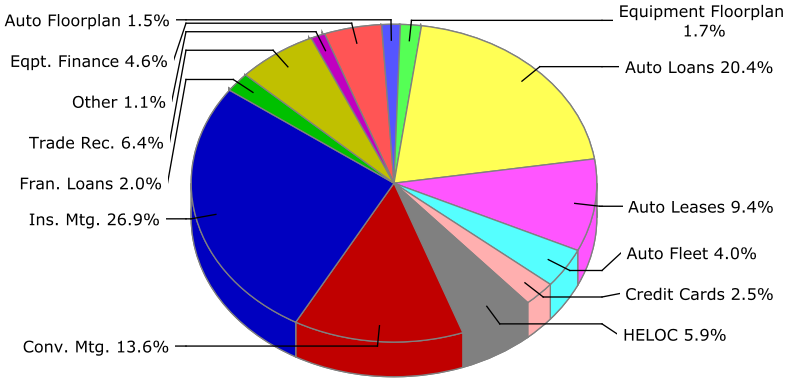
Asset Class Composition Summary

Total ABS (Including CMBS)



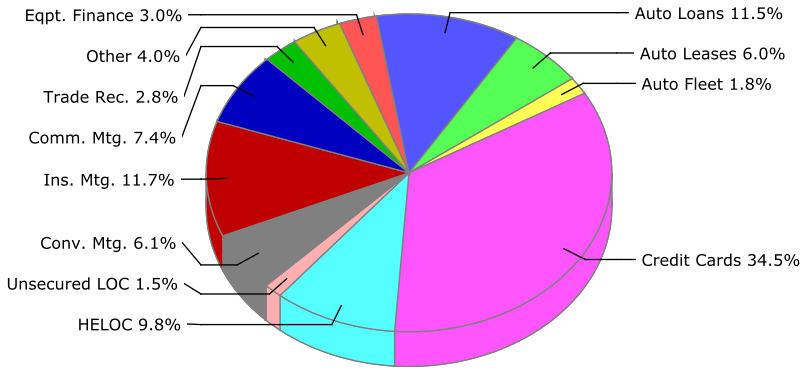
Asset Classes in Other	Percent
Auto Rental	0.93 %
Conv. Mtg.	0.27 %

Total ABCP



Asset Classes in Other	Percent
Auto Rental	0.68 %
Ins. Premium Loans	0.45 %

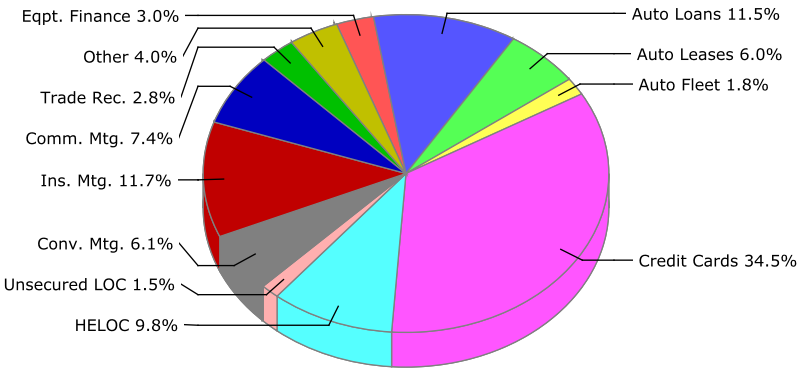
Total ABS (Including CMBS) and ABCP



Asset Classes in Other	Percent
Auto Floorplan	0.65 %
Equipment Floorplan	0.72 %
Auto Rental	0.82 %
Reverse Mtg.	0.73 %
Ins. Premium Loans	0.20 %
Fran. Loans	0.87 %

Asset Class Composition Summary (continued)

Total Asset Backed Securities (excl. Private Placements)



Asset Classes in Other	Percent
Auto Floorplan	0.65 %
Equipment Floorplan	0.72 %
Auto Rental	0.82 %
Reverse Mtg.	0.73 %
Ins. Premium Loans	0.20 %
Fran. Loans	0.87 %

Market Share

Total ABS (Including CMBS)

Dealer	Outstanding Amount	Market Share
RBC Capital Markets Inc.	11,319,780,690	24.5%
BMO Capital Markets	10,740,009,399	23.3%
TD Securities Inc.	6,410,788,811	13.9%
Other	5,941,339,645	12.9%
CIBC World Markets Inc.	4,373,064,345	9.5%
Scotia Capital Inc.	3,424,258,756	7.4%
National Bank Financial Inc.	1,667,794,126	3.6%
Bank of Nova Scotia (BNS)	1,551,896,531	3.4%
Merrill Lynch Canada Inc.	591,797,636	1.3%
HSBC Securities (Canada) Inc.	92,500,000	0.2%
National Bank of Canada (NBC)	60,910,750	0.1%
HSBC Bank Canada	4,349,881	0.0%
Total	**$46,178,490,571**	**100.0%**

Total ABCP

Administrator	Outstanding Amount	Market Share
TD Securities Inc.	14,698,037,910	41.1%
CIBC World Markets Inc.	5,275,487,996	14.8%
RBC Capital Markets Inc.	4,529,791,245	12.7%
Scotia Capital Inc.	4,308,287,000	12.1%
BMO Capital Markets	4,140,232,249	11.6%
National Bank Financial Inc.	2,708,391,552	7.6%
Canadian Tire Bank	89,698,890	0.3%
Total	**$35,749,926,842**	**100.0%**

Total ABS (Including CMBS) and ABCP

Dealer/Administrator	Outstanding Amount	Market Share
TD Securities Inc.	21,108,826,721	25.8%
RBC Capital Markets Inc.	15,849,571,935	19.3%
BMO Capital Markets	14,880,241,648	18.2%
CIBC World Markets Inc.	9,648,552,341	11.8%
Scotia Capital Inc.	7,732,545,756	9.4%
Other	5,941,339,645	7.3%
National Bank Financial Inc.	4,376,185,678	5.3%
Bank of Nova Scotia (BNS)	1,551,896,531	1.9%
Merrill Lynch Canada Inc.	591,797,636	0.7%
HSBC Securities (Canada) Inc.	92,500,000	0.1%
Canadian Tire Bank	89,698,890	0.1%
National Bank of Canada (NBC)	60,910,750	0.1%
HSBC Bank Canada	4,349,881	0.0%
Total	**$81,928,417,413**	**100.0%**

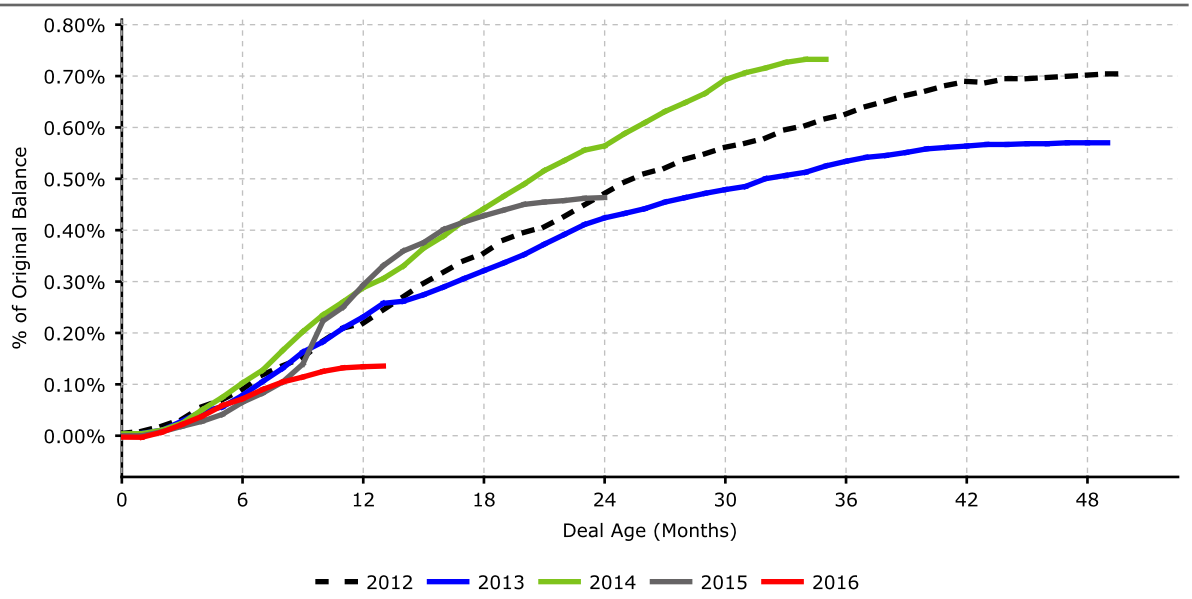
Market Share (continued)

Total Asset Backed Securities (excl. Private Placements)

Dealer/Administrator	Outstanding Amount	Market Share
TD Securities Inc.	21,108,826,721	25.8%
RBC Capital Markets Inc.	15,849,571,935	19.3%
BMO Capital Markets	14,880,241,648	18.2%
CIBC World Markets Inc.	9,648,552,341	11.8%
Scotia Capital Inc.	7,732,545,756	9.4%
Other	5,941,339,645	7.3%
National Bank Financial Inc.	4,376,185,678	5.3%
Bank of Nova Scotia (BNS)	1,551,896,531	1.9%
Merrill Lynch Canada Inc.	591,797,636	0.7%
HSBC Securities (Canada) Inc.	92,500,000	0.1%
Canadian Tire Bank	89,698,890	0.1%
National Bank of Canada (NBC)	60,910,750	0.1%
HSBC Bank Canada	4,349,881	0.0%
Total	**$81,928,417,413**	**100.0%**

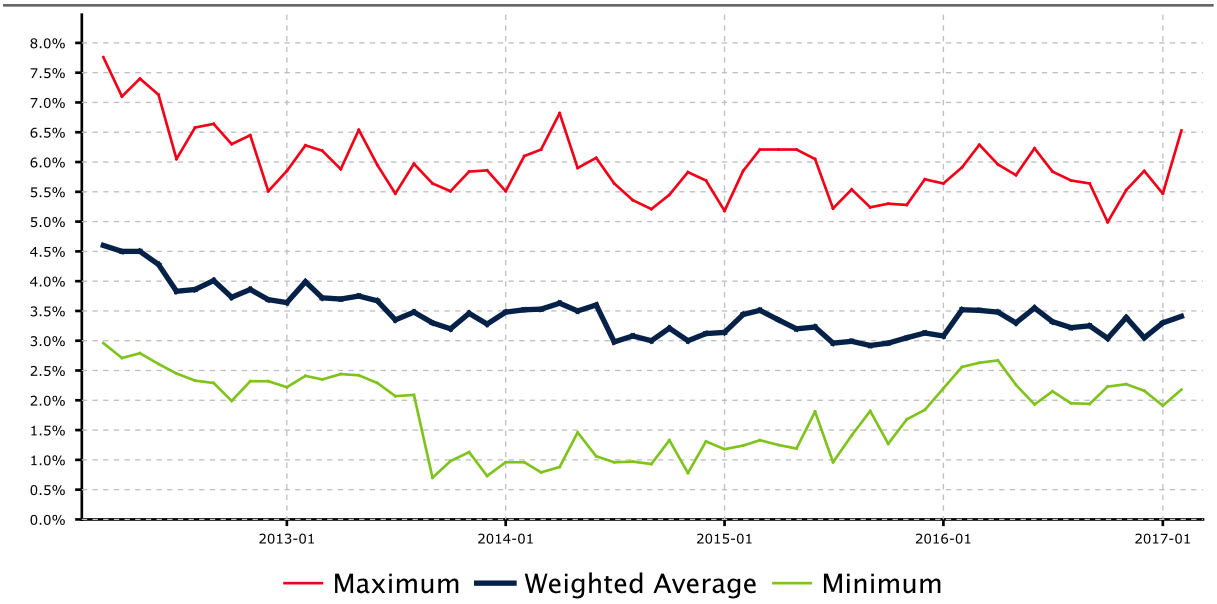
Appendix A: Canadian Automotive Static Net Loss Curves

Automotive Cumulative Credit Losses by Issuance Year

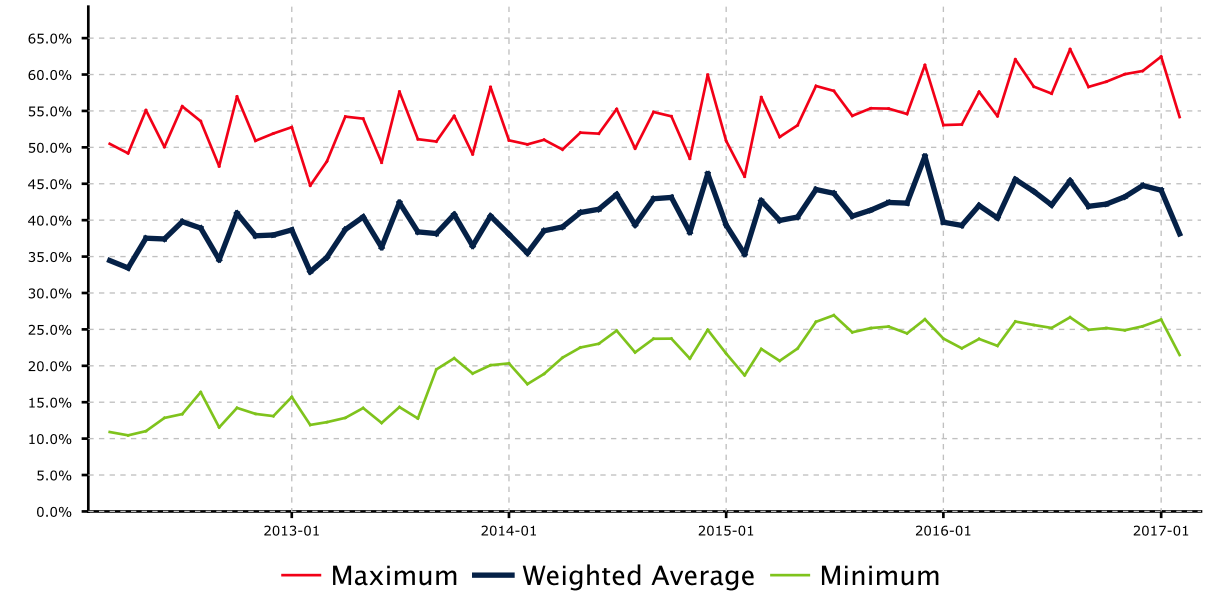


Appendix B: Canadian Credit Card Performance Metrics

Loss Rate



Payment Rate

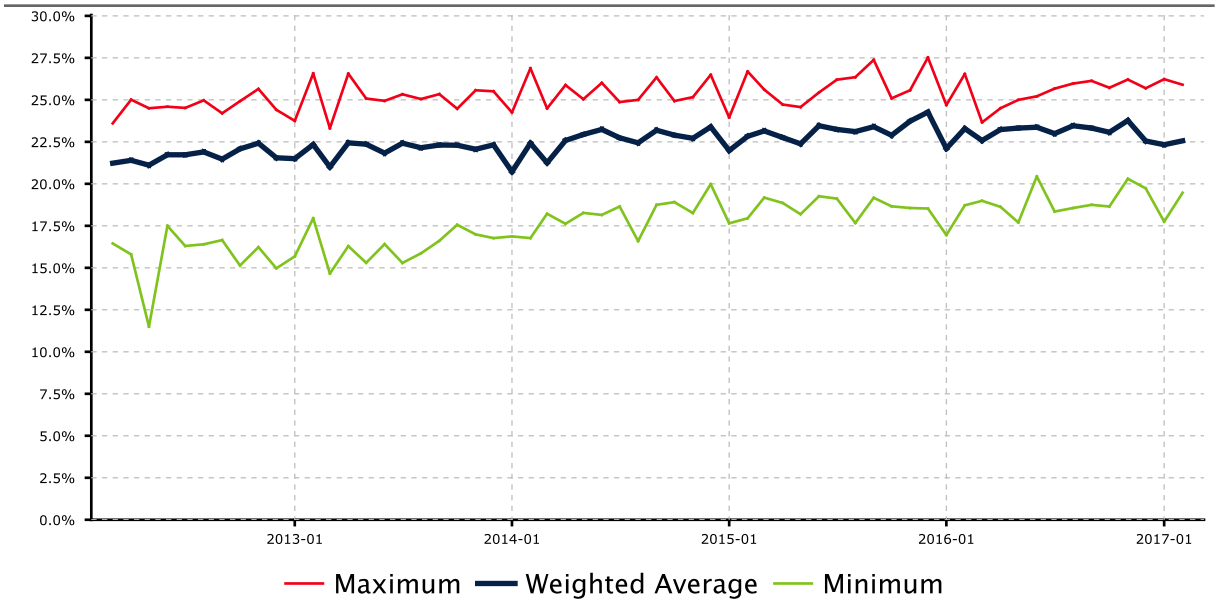


The compilation of the credit card performance charts includes both term and ABCP transactions rated by DBRS. Loss rate, payment rate, yield and excess spread are calculated as a percentage of credit card receivables in each custodial pool. The weighted average rates are weighted by respective outstanding pool balance. The related issuers of the maximum and minimum rates vary each month.

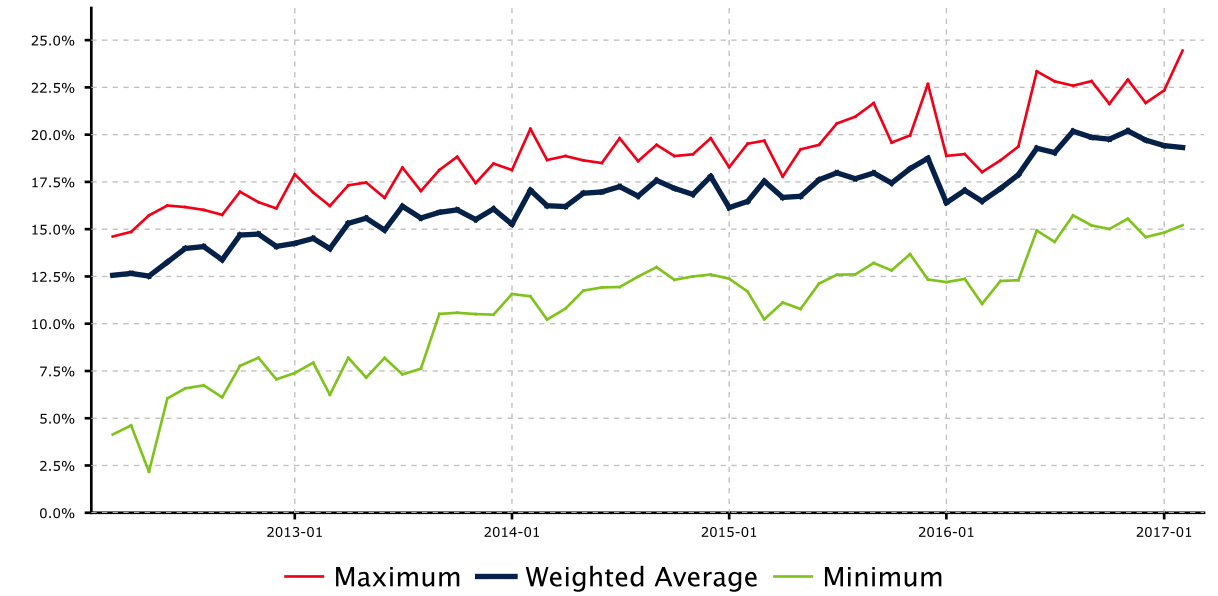
As of January 2014, DBRS excludes excess spread and yield data from trusts with only one series outstanding during the accumulation period.

Appendix B: Canadian Credit Card Performance Metrics (continued)

Yield



Excess Spread

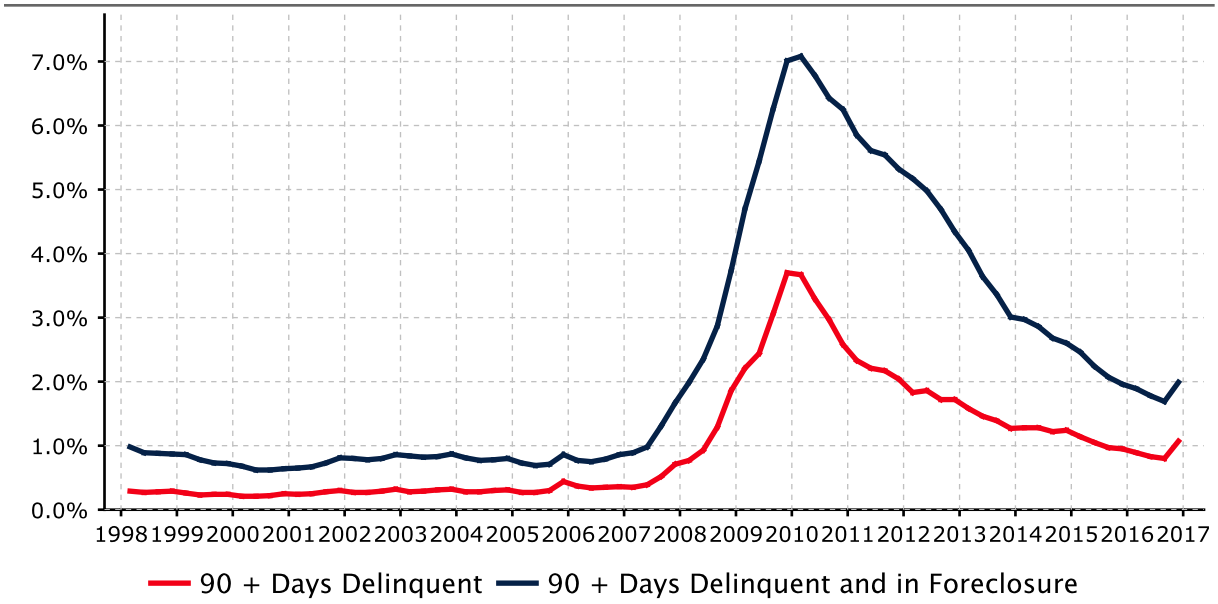


The compilation of the credit card performance charts includes both term and ABCP transactions rated by DBRS. Loss rate, payment rate, yield and excess spread are calculated as a percentage of credit card receivables in each custodial pool. The weighted average rates are weighted by respective outstanding pool balance. The related issuers of the maximum and minimum rates vary each month.

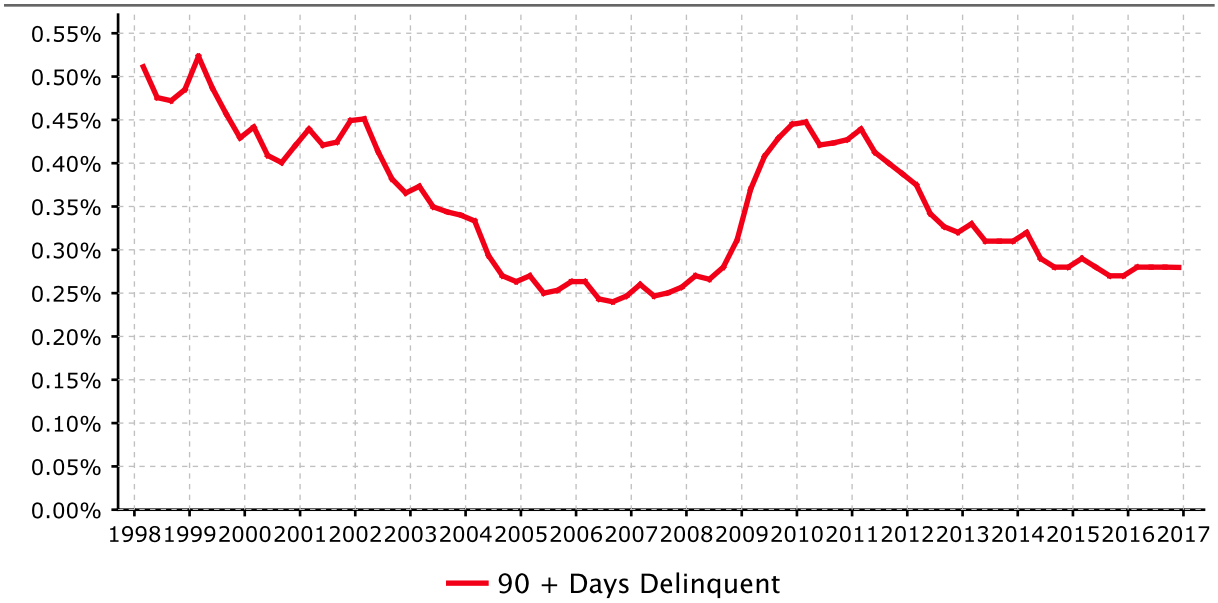
As of January 2014, DBRS excludes excess spread and yield data from trusts with only one series outstanding during the accumulation period.

Appendix C: Quarterly Residential Mortgage Default Rates

U.S. Prime Mortgages



Canadian Prime Mortgages



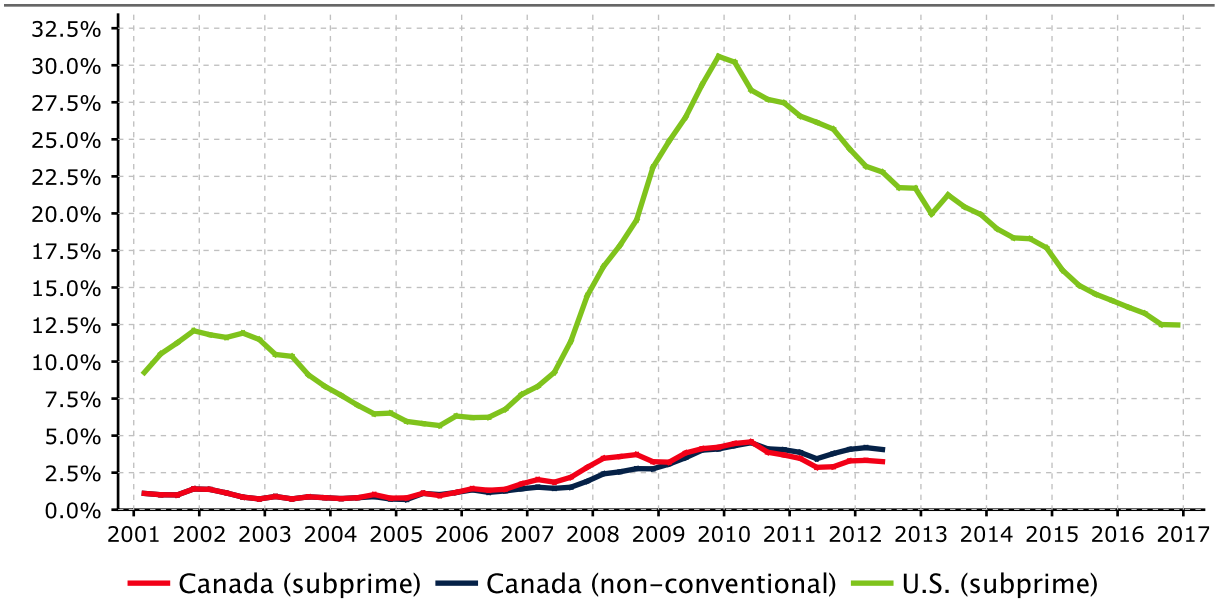
Source: Canadian Bankers Association, The Mortgage Bankers Association

Note:
Defaults include mortgages over 90 days delinquent and in foreclosure.
Canadian Bankers Association data may not include mortgages in foreclosure.

For the subprime mortgages chart: As of Q3 2012 DBRS has discontinued the calculation of the Default Rates for Canada (subprime) and Canada (non-conventional) as the marjority of the securitization programs included in the calculation were terminated in the third quarter.

Appendix C: Quarterly Residential Mortgage Default Rates (continued)

Subprime Mortgages



Source: DBRS, The Mortgage Bankers Association

Note:
Defaults include mortgages over 90 days delinquent and in foreclosure.
Canadian Bankers Association data may not include mortgages in foreclosure.

For the subprime mortgages chart: As of Q3 2012 DBRS has discontinued the calculation of the Default Rates for Canada (subprime) and Canada (non-conventional) as the marjority of the securitization programs included in the calculation were terminated in the third quarter.

Appendix D: GLS Compliant ABCP Issues

Administrator / Issuer	Debt Series	Amount	Percentage
BMO Nesbitt Burns Inc.			
Canadian Master Trust	Series A Notes	1,991,040,803	5.57 %
Ridge Trust	Series A Notes	2,149,191,446	6.01 %
Canadian Tire Bank			
Glacier Credit Card Trust	Asset-Backed Commercial Paper, Series 1997-1	89,698,890	0.25 %
CIBC World Markets Inc.			
SAFE Trust	Senior Short-Term Notes, Series 1996-1	1,738,242,319	4.86 %
SOUND Trust	Senior Short-Term Notes, Series 1998-1	1,809,369,769	5.06 %
SURE Trust	Senior Short Term Notes, Series 2015-1	1,727,875,908	4.83 %
National Bank Financial			
Clarity Trust	Series A, Class A Notes	1,520,795,923	4.25 %
Fusion Trust	Series A, Class A Notes	1,187,595,629	3.32 %
RBC Capital Markets Inc.			
Plaza Trust	Series 1 Asset-Backed Commercial Paper Notes	2,055,365,769	5.75 %
Storm King Funding	Series 1 Asset-Backed Commercial Paper Notes	2,474,425,476	6.92 %
Scotia Capital Inc.			
Bay Street Funding Trust	Short-Term ABN, Series 1, Class A Notes	2,205,957,000	6.17 %
King Street Funding Trust	Asset-Backed CP Promissory Notes	2,102,330,000	5.88 %
TD Securities Inc.			
Banner Trust	Series A Notes	3,627,301,930	10.15 %
Merit Trust	Senior Short-Term Asset-Backed Notes	3,696,727,100	10.34 %
Prime Trust	Senior Short-Term Asset-Backed Notes	3,636,841,080	10.17 %
Zeus Receivables Trust	Senior Short-Term Asset-Backed Notes	3,737,167,800	10.45 %
Total		**35,749,926,842**	**100.00 %**

Appendix E: Asset Class Information

Asset Class	Abbreviation
Auto Fleet	Auto Fleet
Auto Floorplan	Auto Floorplan
Auto Leases	Auto Leases
Auto Loans	Auto Loans
Auto Rental	Auto Rental
Category I Investments	Category I
Category II Investments	Category II
Category III Investments	Category III
Collateralized Loan Obligation	CLO
Commercial Mortgages	Comm. Mtg.
Consumer Loans	Consumer Loans
Conventional Mortgages	Conv. Mtg.
Credit Card Receivables	Credit Cards
Equipment Floorplan	Equipment Floorplan
Equipment Loans & Leases	Eqpt. Finance
Floorplan	Floorplan
Franchise Loans	Fran. Loans
Fully Funded Collateral Debt Obligations	Fully Funded CDO
HELOC	HELOC
Insurance Premium Loans	Ins. Premium Loans
Insured Mortgage	Ins. Mtg.
Leveraged Collateral Debt Obligations	Leveraged CDO
Mutual Fund Fees	Mutual Fund Fees
Non-Conventional Mortgages	Non-Conv. Mtg.
RCA Loans	RCA Loans
RRSP Loans	RRSP Loans
Reverse Mortgages	Reverse Mtg.
Trade Receivables	Trade Rec.
Unsecured Lines of Credit	Unsecured LOC
Waterheater Rentals	Waterheater

Glossary

Asset Backed Securities

A Note or other rated financial instrument issued by a third party securitization vehicle. In this report, ABS refers to the notes with a term to maturity at issurance greater than 364 days.

Auto Leases

Auto Lease Securitizations represent the contractual obligations of customers who have financed their vehicles via leases. The majority of these obligations are arranged through the captive finance companies of automotive manufacturers and predominantly consists of cars and light trucks (including light-to medium-duty trucks, passenger vans, sport utility vehicles and crossovers) retailed to a diverse pool of unrelated obligors throughout Canada. A typical lease contract in Canada is a closed-end lease whereby the obligor has the option to purchase the car at the end of the term (at a predetermined price usually referred to as residual value), extend the lease, or return the vehicle to the financing entity. It is important to note that ownership of the vehicles is maintained by the financing entity and as a result residual value risk is a major concern in a lease securitization.

Auto Loans

Auto Loan Securitizations represent the contractual obligations of customers who have financed the purchase of their vehicles. The majority of these obligations are arranged through the captive finance companies of automotive manufacturers and predominantly consists of cars and light trucks (including light-to medium-duty trucks, passenger vans, sport utility vehicles and crossovers) retailed to a diverse pool of unrelated obligors throughout Canada. It is important to note here that the vehicles are owned by the individual obligors and cannot be returned to the dealer unless re-possessed by the financing entity. The major risk in auto loan securitizations is the credit risk associated with the monthly payments receivable from the obligors.

Auto Fleet

Auto Fleet Securitizations represent the advance of funds to fleet portfolios underwritten by large independently owned and managed automotive dealerships and companies specializing in the fleet business in Canada. The obligors in the fleet portfolios are typically corporate or governmental entities and funds are advanced based on the monthly lease payments receivable from the obligors. A typical fleet contract in a fleet securitization is an open-ended lease whereby the obligor guarantees the residual value at the end of the lease term. As such, residual value risk is not a significant concern in fleet securitizations.

Auto Rental

Auto Rental Securitizations represent the advance of funds to daily rental car companies operating in Canada. The funds are advanced based on the size of the fleet the rental car company owns and operates. Cash flow is generated on a daily basis from the rental of the vehicles to customers as well as from the proceeds on the disposition of the vehicles as they are removed from the fleet. Disposition of rental vehicles from the fleet are managed in two ways: (1) vehicles can be returned to the manufacturing entity that has previously contractually committed to repurchase the vehicle at a pre-set price; or (2) in the case where repurchase agreements are not in place the vehicles are disposed of through auction.

Category I Investments

Category I Investments are defined in the Eligibility Criteria for Master Asset Vehicles I and II. Category I Investments consist of bonds that are issued or explicitly guaranteed by the federal government. Please refer to Schedule B of the Administration and Management Agreement for further information.

Glossary

Category II Investments

Category II Investments are defined in the Eligibility Criteria for Master Asset Vehicles I and II. Category II Investments consist of federal and provincial government bonds, Bankers' Acceptances, short term obligations of Approved Issuers, ABCP, and certain repurchase and TRS agreements. Please refer to Schedule B of the Administration and Management Agreement for further information.

Category III Investments

Category III Investments are defined in the Eligibility Criteria for Master Asset Vehicles I and II. Category III Investments consist of ABS issued by Approved Issuers and certain repurchase and TRS agreements. Please refer to Schedule B of the Administration and Management Agreement for further information.

CMBS Interest Only (IO)

CMBS IO ratings reflect the stability of the senior interest payment stream of the CMBS IO certificate. In order to assess a the stability, DBRS sizes the transaction to a stressed default/prepayment scenario in which the loans contributing the largest amount to the interest only cash flow stream default early in the underlying CMBS pools. Defaults could result in prepayments of the loan without prepayment premium or yield maintenance. As such, the stream of such defaulted loans monthly payments would be absent to pay the scheduled payments to the senior and junior CMBS IO holders.

Collateralized Debt Obligation

A CDO is a form of structured security that references a pool of underlying debt obligations and transfers the related default risk to investors through derivative instruments or variously rated tranched notes. The underlying debt obligations may include corporate, asset-backed or commercial mortgage-backed securities (or a combination thereof). A given transaction may involve the direct ownership of the debt obligations, or more commonly in the current market, may synthetically create an exposure using derivative instruments. Investors then purchase the tranche which matches the desired credit profile. As such, CDOs are a hybrid of securitization and derivative technology. The institutions that create CDOs may be looking for risk capital relief by shifting exposures off-balance sheet or may be attempting to take advantage of a financial or risk arbitrage opportunity in the market.

Collateralized Loan Obligation

A CLO represent a non-synthetic and non-leveraged exposure to an underlying portfolio of corporate loans.

Commercial Mortgage-Backed Securities

Commercial mortgage-backed securities (CMBS) are bonds whose payments stem from a mortgage or a pool of mortgages on commercial real estate. The ratings reflect the timely payment of interest and ultimate repayment of principal.

Commercial Mortgages

A commercial mortgage is a loan secured by a commercial income generating property as collateral.

Consumer Loans

Receivables stemming from retail obligations for the purchase of consumer goods.

Glossary

Conventional Mortgages

An uninsured residential mortgage with a LTV equal to or less than 80% (increased from 75% in April 2007) at origination and underwritten by financial institutions to a prime credit borrower for property purchase, with full documentation, scheduled monthly amortizing payments and generally maximum GDS (gross debt service ratio) of 32% and TDS (total debt service ratio) of 40%.

Credit Cards

A receivable generated from a revolving unsecured credit facility established between a borrower and a lender that allows the borrower to make general purchases or cash advances on credit. The credit facility is restricted to certain limits based on creditworthiness and requires a minimum monthly payment. Interest accrues from the time of transaction on any balances not paid in full prior to the payment due date. There is generally no finite term for the facility and the receivable is payable on demand.

Equipment Leases/Loans

Equipment lease and loan contracts, originated by investment grade and non-investment grade sellers, represent the contractual obligations of customers who have either financed the purchase of their equipment or have arranged to lease their equipment. The underpinning equipment is composed of small, mid, and large ticket items related to various industries including manufacturing, transportation, agriculture and construction.

Floorplan Financings

Floorplan financings are loans provided to affiliated dealers to finance the acquisition of inventory (usually vehicle or equipment dealers) which in turn are sold to the retail and commercial consumers. These floorplan financing loans are originated by both captive financing companies and third party financing companies. The Trust would be granted an assignment on the contractual loans and a perfected security interest in the underpinning inventory and is entitled to the collections remitted by the dealers upon the sale of the vehicle or equipment.

Franchise Loans

A loan established between a lender and a franchisee which is supported by a franchisor. The facility is subject to pre-determined eligibility criteria, and is typically secured with inventory, fixed assets and the subordination of franchisors' rights.

Glossary

Fully Funded Collateralized Debt Obligations

In a CDO structure, an entity (typically a trust is used in DBRS rated transactions in Canada) enters into either a CDS with a swap counterparty to provide credit protection on a portfolio of reference entities (known as synthetic transactions) or enters into a note purchase agreement and the proceeds from the note purchase are used by the counterparty to invest in eligible collateral or purchase bonds. For synthetic transactions, a periodic swap premium will be paid by the swap counterparty to the trust, with the trust obliged to pay the swap counterparty specified amounts upon the occurrence of specified credit events with respect to the tranche on which the trust has provided credit protection. To fund the transaction, the trust will sell notes to investors. The proceeds from the issuance of the notes are invested in eligible investments to be held as collateral for the obligations of the trust to the swap counterparty under the CDS, as well as for the repayment of principal to noteholders upon termination or maturity. To the degree that credit events on the portfolio of reference entities result in incurred losses to the tranche on which the trust provides credit protection, eligible investments held as collateral will be liquidated to pay settlement amounts to the buyer of credit protection (the swap counterparty), thereby reducing the amounts available to repay principal to investors at termination or maturity of the transaction. Fully funded CDO transactions that involve note purchases function in a similar way as synthetic CDO transactions, with the exception that the trust purchases a note rather than enters into a CDS (and the counterparty may use the proceeds to purchase the bonds instead of simply referencing them).

Immigrant Investor Loans

An Immigrant Investor Loan involves an investor immigrant that signs an agreement with a broker and provides the broker with a down payment (for example $100,000). The broker obtains from a trust a loan for the remaining amount (for example $300,000) required for the investment for immigration purpose (in total $400,000) in a qualified investment vehicle through a Crown agency or Investissement Québec. In return for this investment, a five-year, zero coupon note (the Provincial Pledged Note or PPN) with a face value of $400,000 from participating provinces is issued. To provide the loans, the trust issues notes to investors and holds the PPN as collateral for the loans. At the end of the five-year term when the PPN matures, the broker receives the face amount of $400,000 from the qualified investment vehicle and pays back the trust which in turn pays off the outstanding notes. As interests on the loans made by the trust are accrued over five years, the loan provided to the brokers at origination is a discounted amount from $400,000. At the end of five years, the brokers are required to repay the loan and accrued interests (the total equal to $400,000). The loan interest rate charged by the trust is required to be sufficient enough so its funding costs and expenses are covered.

Insurance Premium Loans

Loans provided to pay for a portion of the premiums due from corporations for their property and casualty insurance policies.

Insured Mortgages

Residential mortgage insured by mortgage insurers with insurance premiums either paid by the borrower or the lender. The insurers must be rated at least AA (low) by DBRS to be eligible as securitization counterparty.

Glossary

Leveraged Collateralized Debt Obligations

A leveraged collateralized debt obligation is similar to a fully funded CDO except that it is partially rather than fully collateralized, referencing a super-senior tranche attaching above the minimum AAA required subordination at inception. While credit losses to super-senior tranches are considered a remote credit risk, LSS transactions employ leverage in that the collateralization of the swap will be smaller than the potential maximum exposure under the CDS. As such, the seller of credit protection may be required to post additional collateral during the life of the swap if exposure between the value of the swap and the posted collateral increases beyond predetermined thresholds.

Montréal Accord

An Agreement in principle reached August 16, 2007 among a consortium representing banks, asset providers and major investors in the Affected ABCP Trusts to establish normal operations in the Canadian third-party ABCP market.

Mutual Fund Fees

Monetization of deferred sales charges for mutual fund. Payment from future management and redemption fees.

Non-Conventional Mortgages

An uninsured residential mortgage with a LTV greater than 80% (increased from 75% in April 2007), limited underwriting documentation, lower than monthly amortizing payments and/or to less credit worthy borrowers.

RCA Loans

RCA Loans are loans that are used to make a contribution to a Retirement Compensation Arrangement (RCA) as defined in the Income Tax Act, (Canada) (the Act). RCA is typically established by a company for key employees or executives of the company. A contribution to an RCA is made by the company and can be funded by borrowings such as RCA Loans, the interest expenses of which are deductible for tax purposes. Each year 50% of the contribution is paid to the Canada Revenue Agency as required in the Act. The contributions are refundable when the RCA is terminated.

Reverse Mortgages

A reverse mortgage is a loan available to seniors, and is used to release the home equity in the property. Unlike a typical mortgage which requires regular payments to the lender, the home owner with a reverse mortgage makes no payments and all interest is accrued and added to the loan amount. The homeowner's obligation to repay the loan is deferred until the property is vacant such as the decease of the owner, the sale of the property, or the move-out of the owner.

RRSP Loans

Advances made to individuals to fund RRSP contributions.

Secured Lines of Credit

A receivable generated from a revolving credit facility established between a borrower and a lender which allows the borrower to draw, repay and redraw sums of money up to the committed limit with interest accruing on any amounts outstanding. This credit facility is usually secured by real estate or readily realizable securities, has no finite term and is payable on demand.

Glossary

Trade Receivables

Short term receivables originated by mostly investment grade sellers from various industries. The receivables represent the trade obligation resulting from an extension of credit granted by the seller to a diversified pool of obligors. The sellers receivables are earned after the delivery of product and/or services for billed and unbilled sales. The standard trade terms are typically short term in nature.

U.S. RMBS

Collateralized by US RMBS notes, a type of security collateralized by residential mortgages. These securities receive interest and principal payments that are backed by contractual mortgage obligations from borrowers of residential mortgage loans.

Unsecured Lines of Credit

A receivable generated from a non-revolving facility with an amortizing repayment schedule for a finite term and without any assets used as collateral for the facility.

Waterheater Rentals

Monetization of future monthly obligations due from home owners for their waterheaters.



This page intentionally left blank.

© 2017, DBRS Limited, DBRS, Inc. and DBRS Ratings Limited (collectively, DBRS). All rights reserved. The information upon which DBRS ratings and reports are based is obtained by DBRS from sources DBRS believes to be reliable. DBRS does not audit the information it receives in connection with the rating process, and it does not and cannot independently verify that information in every instance. The extent of any factual investigation or independent verification depends on facts and circumstances. DBRS ratings, reports and any other information provided by DBRS are provided as is and without representation or warranty of any kind. DBRS hereby disclaims any representation or warranty, express or implied, as to the accuracy, timeliness, completeness, merchantability, fitness for any particular purpose or non-infringement of any of such information. In no event shall DBRS or its directors, officers, employees, independent contractors, agents and representatives (collectively, DBRS Representatives) be liable (1) for any inaccuracy, delay, loss of data, interruption in service, error or omission or for any damages resulting therefrom, or (2) for any direct, indirect, incidental, special, compensatory or consequential damages arising from any use of ratings and rating reports or arising from any error (negligent or otherwise) or other circumstance or contingency within or outside the control of DBRS or any DBRS Representative, in connection with or related to obtaining, collecting, compiling, analyzing, interpreting, communicating, publishing or delivering any such information. Ratings and other opinions issued by DBRS are, and must be construed solely as, statements of opinion and not statements of fact as to credit worthiness or recommendations to purchase, sell or hold any securities. A report providing a DBRS rating is neither a prospectus nor a substitute for the information assembled, verified and presented to investors by the issuer and its agents in connection with the sale of the securities. DBRS receives compensation for its rating activities from issuers, insurers, guarantors and/or underwriters of debt securities for assigning ratings and from subscribers to its website. DBRS is not responsible for the content or operation of third party websites accessed through hypertext or other computer links and DBRS shall have no liability to any person or entity for the use of such third party websites. This publication may not be reproduced, retransmitted or distributed in any form without the prior written consent of DBRS. ALL DBRS RATINGS ARE SUBJECT TO DISCLAIMERS AND CERTAIN LIMITATIONS. PLEASE READ THESE DISCLAIMERS AND LIMITATIONS AT http://www.dbrs.com/about/disclaimer. ADDITIONAL INFORMATION REGARDING DBRS RATINGS, INCLUDING DEFINITIONS, POLICIES AND METHODOLOGIES, ARE AVAILABLE ON http://www.dbrs.com.



Insight beyond the rating.

www.dbrs.com

Corporate Headquarters
DBRS Tower
181 University Avenue
Suite 700
Toronto, ON M5H 3M7
TEL +1 416 593 5577

APRIL 2016



DBRS Criteria: Financial Ratio Definitions and Accounting Adjustments – Non-Financial Companies

PREVIOUS RELEASE: JUNE 2015

Contact Information

Paul Holman
Managing Director
Corporate Rating Committee
+1 416 597 7534
pholman@dbrs.com

Michael R. Rao, CFA
Managing Director,
Credit Policy
+1 416 597 7541
mrao@dbrs.com

DBRS is a full-service credit rating agency established in 1976. Privately owned and operated without affiliation to any financial institution, DBRS is respected for its independent, third-party evaluations of corporate and government issues, spanning North America, Europe and Asia. DBRS's extensive coverage of securitizations and structured finance transactions solidifies our standing as a leading provider of comprehensive, in-depth credit analysis.

All DBRS ratings and research are available in hard-copy format and electronically on Bloomberg and at DBRS.com, our lead delivery tool for organized, Web-based, up-to-the-minute information. We remain committed to continuously refining our expertise in the analysis of credit quality and are dedicated to maintaining objective and credible opinions within the global financial marketplace.

Table of Contents

Scope and Limitations 3

Financial Ratios and Definitions 3

DBRS Financial Ratio Adjustments 7

Off-Balance Sheet Items 8

Scope and Limitations

This criteria contains a list of financial ratios used by DBRS and includes a discussion of the common adjustments made to the accounting data to permit ratio comparability between issuers. The methods described herein may not be applicable in all cases; the considerations outlined in DBRS methodologies are not exhaustive, and the relative importance of any specific consideration can vary by issuer. Further, this methodology is meant to provide guidance regarding the DBRS methods used in the sector and should not be interpreted with formulaic inflexibility, but understood in the context of the dynamic environment in which it is intended to be applied.

Financial Ratios and Definitions

Ratio definitions, definitions of the terms used in the ratios and a discussion of the various accounting treatments and DBRS adjustments are presented below. The ratios and financial statement adjustments discussed in this criteria are those generally applied by DBRS.

In the event that there is a material deviation from the standard calculation of ratios listed in this criteria, DBRS generally footnotes the ratio's revised definition in the applicable DBRS publication. While DBRS strives to provide as much clarity as possible to investors with respect to its ratio calculations, certain adjustments to its ratio calculations may be based on confidential information provided by the issuer and the detailed amounts in these cases, therefore, cannot be disclosed publicly.

I. Ratio Definitions

1. Gross margin = gross profit / revenue
2. EBITDA margin = EBITDA / revenue
3. EBIT margin = EBIT / revenue
4. Net margin = core net income before minority interest / revenue
5. EBITDA interest coverage = EBITDA / gross interest expense (assumes operating leases are not material)
6. Lease-adjusted EBITDA interest coverage = (EBITDA + operating lease expense) /(gross interest expense + operating lease interest expense)
7. EBIT interest coverage = EBIT / gross interest expense (assumes operating leases are not material)
8. Lease-adjusted EBIT interest coverage = (EBIT + operating lease interest expense) / (gross interest expense + operating lease interest expense)
9. Fixed-charge coverage = (EBIT + operating lease interest expense) / (gross interest expense + operating lease interest expense + preferred dividends (adjusted using the statutory corporate income tax rate))
10. DSCR for projects = (revenue - cash operating expense – income tax – maintenance capex) / (interest expense + principal amortization)
11. DSCR for utilities = (revenue - cash operating expense – cash income taxes) / (interest expense + principal amortization)
12. Debt / CFADS = total debt / EBITDA before income taxes and after maintenance capex
13. Debt / EBITDA = total debt / EBITDA (assumes operating leases are not material)
14. Lease-adjusted debt / EBITDA = Lease-adjusted debt / Lease-adjusted EBITDAR
15. Return on common equity = core net income after minority interest and preferred share dividends / average common equity
16. Cash return on common equity = (cash flow from operations – preferred share dividends)/ average common equity
17. Return on capital = [EBIT x (1 – income tax rate)] / average total capital

I. Ratio Definitions

18. Cash return on capital = cash flow from operations / average total capital
19. Return on assets = [EBIT x (1-tax rate)] / average total assets
20. Cash return on assets = cash flow from operations / average total assets
21. Lease-adjusted debt / capital = lease-adjusted debt / lease-adjusted capital
22. Net debt / capital = (total debt - cash) / (total capital - cash)
23. Asset coverage = (total assets - goodwill - future tax liability - deferred credits - minority interest - current liabilities + current portion of long-term debt + short-term debt) / total debt.
24. Asset turnover = total revenue / average total assets
25. Current ratio = current assets / current liabilities
26. Current ratio, adjusted = non-monetary current assets / non-monetary current liabilities
27. Quick ratio = (cash + receivables) / (total current liabilities)
28. Inventory turnover days = 365 x (average inventories / cost of goods sold)
29. Receivable turnover days = 365 x (average account receivables / revenues excluding)
30. Payable turnover days = 365 x (average accounts payable / cost of goods sold)
31. Accumulated. depreciation / fixed assets = accumulated depreciation / gross fixed assets
32. Cash flow / interest = (cash flow from operations + interest expense) / after-tax interest expense
33. Cash flow / debt = cash flow from operations / total debt (assumes operating leases are not material)
34. Lease-adjusted cash flow / debt = (cash flow from operations + operating lease non-interest expense) / (total debt + capitalized operating leases)
35. (Cash flow – dividends) / capex = (cash flow from operations - preferred dividends - common dividends) / capex
36. Common dividend payout ratio = common dividends / (core net income less preferred dividends and minority interest)
37. Common dividend / cash flow = common dividends / cash flow from operations
38. Distribution payout ratio = distribution / cash flow available for distribution

II. Ratio Term Definitions[1, 2]

1. Amortization = reported amortization of goodwill & intangible assets
2. Assets, tangible = total assets - goodwill - intangible assets
3. Capex = reported capital expenditures
4. Capital, total = total debt + total preferred equity + total common equity + minority interest+ capital leases
5. Capital leases = all non-operating leases
6. Capital, adjusted = total capital + capitalized operating leases
7. Cash = cash & cash equivalents + short-term investments

II. Ratio Term Definitions[1, 2]

8. Cash flow from operations = core net income + depreciation + amortization + deferred taxes + other non-cash items from income statement (before changes in non-cash working capital items)
9. Cash flow available for distribution = cash flow from operations - maintenance capex
10. Cash flow, free = cash flow from operations - capex - dividends - change in non-cash working capital items
11. Cash flow, free, before change in w/c = cash flow from operations - capex - dividends
12. Cost of goods sold = costs incurred in production before depreciation
13. Debt, total = short-term debt + long-term debt + hybrid debt portion + capital leases
14. Debt, net = total debt - cash
15. Debt, short-term = notes/short-term debt + current portion of long-term debt
16. Debt, long-term = total debt - short-term debt
17. Debt, lease-adjusted = total debt + capitalized operating leases
18. Debt, hybrid = debt securities with equity-like features
19. Depreciation = reported depreciation expense
20. Depletion = reported amortization of value of resource property
21. Distribution = amounts paid out to unit holders (usually from income trusts, REITs and MLPs)
22. EBITDA = revenue - cost of goods sold - SG&A
23. EBITDAR = EBITDA + operating lease expense
24. EBITDA, cash = EBITDA excluding non-cash items
25. EBIT = EBITDA - depreciation - amortization
26. Equity, total = common equity + preferred equity + hybrid equity portion
27. Gross profit = revenue - cost of goods sold
28. Hybrids = debt hybrids + other securities with equity-like features
29. Interest expense, gross = all interest expense + debt hybrid interest expense + capitalized interest (excludes any IFRS adjustments)
30. Interest expense, net = gross interest expense - interest income from cash and short-term investments
31. Lease adjusted debt = total debt + capitalized operating leases
32. Leasing costs = tenant inducements, etc.
33. Minority interest = (also called non-controlling interest) ownership by others of consolidated subsidiaries (including common shares and preferred shares)
34. Minority interest in earnings = minority interest in earnings of consolidated subsidiaries, joint ventures and partnerships
35. Net income, core = reported net income, adjusted to remove the impact of unusual items
36. Operating lease interest expense = operating lease expense ÷ 3

II. Ratio Term Definitions[1, 2]

37. Operating lease non-interest expense = operating lease expense * 2/3
38. Operating lease expense (rent) = next period operating lease expense
39. Operating lease, capitalized = operating lease expense * 6
40. Receivables = reported receivables + notes receivable
41. SG&A = selling, general and administrative expenses
42. Tax, cash = actual cash income taxes remitted
43. Tax, deferred = reported deferred income taxes, may be adjusted to remove the impact of unusual items
44. Tax, income = cash and deferred income tax, adjusted to remove the impact of unusual items
45. Tax, reported = reported income tax, before removing the impact of unusual items
46. Unusual items = merger & restructuring charges + impairment of goodwill + gain (loss) on sale of assets & investments + asset writedown + insurance & legal settlements + other unusual items
47. Working capital = current assets - current liabilities

1 All numbers are typically annualized and normalized where applicable.
2 All ratios include the assets and income of any minority interests. Minority interests are included in total capital.

DBRS Financial Ratio Adjustments

DBRS adjusts financial information to permit better comparability between companies. The adjustments can be applicable across industries (see below) or be industry specific (see the respective DBRS methodology for applicable Primary FRR Metrics).

Asset values reported under U.S. generally accepted accounting principles (GAAP) are normally based on book values. Asset values reported under International Financial Reporting Standards (IFRS) may be based on book or market values.

1. Interest Expense

In its calculation of interest- and fixed-charge coverage ratios, DBRS includes only interest expense directly attributed to indebtedness (including capitalized interest) in the ratio denominator. Any other expense/income items that have been included in interest expense (e.g., amortization of issuance costs) are generally removed.

2. Income Statement Adjustments

Metrics can be distorted by items that may not meet the accounting definition of "extraordinary" but are nevertheless one time and considered unlikely to be repeated or are recurring and result in distortion of underlying economic reality. Unless these unusual items are identified and removed, with tax adjustments if appropriate, then earnings and cash flow metrics and related ratios cannot be considered as "core." Care must be taken in any of the following adjustments:

a. There are cases where it would be incorrect to remove items in isolation (there may be corresponding related expenses or revenues).

b. There are cases where certain costs may be ongoing and the non-recurring description must be challenged (year-after-year reorganization costs is one example).

c. Unusual items should not be confused with volatile items. An entity may have a very unstable revenue source, but it is still part of its ongoing operations and should not be removed from core earnings simply because it is volatile.

d. Companies can default because of one-time costs. It may be reasonable to remove an entity's major litigation settlement or reorganization costs to get a more accurate picture of core results, but one should not forget that whether it is a one-time cost or otherwise, these expenses are still a cost that could cause a variety of challenges, including covenant triggers.

3. Cash Flow from Operations

Cash flow from operations as defined in Ratio Term Definitions (#9) may need to be adjusted as required (for example, for cash items that are not captured by "core net income").

4. Free Cash Flow
Free cash flow as defined in Ratio Term Definitions (#11) may need to be adjusted as required.

5. Equity or Cost Investments
Under many accounting standards, investments by one company in another are accounted for on a cost, equity or consolidated basis. DBRS may adjust the reported statements if it believes that the resulting ratios would be more relevant and effective in depicting the substantive effect of such investments on the entity's credit profile (i.e., cost or equity investments may be consolidated, or consolidated entities may be proportionally consolidated or deconsolidated to an equity or cost basis).

In assessing investments accounted for on a cost or equity basis, DBRS may consider a variety of factors, including some of the following:

a. What is the risk profile (business and financial) of the investment?

b. What is the ownership proportion (economic and voting)? Who are the other owners and what are the implications on control?

c. How core is this investment to the company? Would the company invest more funds if needed? Are there other inter-company dealings between the two entities?

d. What is the dividend policy of the company in which the investment is made?

e. What is the fair market value of the investment and how liquid is it?

6. Preferred Shares and Hybrid Securities
DBRS has criteria that are used to assess the equity weighting for hybrid instruments. For more information, see *DBRS Criteria: Preferred Share and Hybrid Criteria for Corporate Issuers*.

7. Pension Plans
In the case of defined benefit pension plans, DBRS does not typically include unfunded pension liabilities in any standard debt metrics. Where material, however, DBRS may analyze these unfunded pension obligations separately, as they add risk in terms of future obligations and funding. DBRS recognizes that point-in-time assessments of unfunded pension liabilities can be volatile as underlying actuarial and economic factors (especially interest rates) change. Base considerations would include size of the plan and the underfunded position relative to the size of the company and the flexibility the company has to deal with potential cash needs and to return the plan to a more fully funded status. In some cases, other aspects of a plan (including the degree of conservatism in key assumptions) may also be considerations.

Off-Balance Sheet Items
In addition to the aforementioned discussion on adjusting a company's financial statements, there are a variety of ways that traditional debt-related ratios can be distorted by obligations that are not included in the base financial statements. The following represents a checklist of items that DBRS would adjust for (if significant), along with a general description of how the adjustment should be made.

1. Operating Leases
DBRS normally deals with operating leases by estimating the impact they would have on debt and interest costs if they were accounted for on the balance sheet. One method for adjusting debt ratios is to take the operating lease payment for the next one-year period, multiply it by six and add it to debt (and thus it is also added to total capital). For coverage ratios, next year's lease payment is divided by three. This amount is then added to gross operating profit (since the full lease payment is assumed to have been paid in operating expenses) and added to interest expense.

Where possible, the present value of the operating leases can be used in lieu of the estimate described in the paragraph above. The present value is calculated using the minimum operating lease obligations, as recorded in the notes to the financial statements or provided by the issuer. The capitalized amount of operating leases is normally added to on-balance sheet debt in this manner when the amounts are material and represent financing for assets that are a core part of operations.

2. Guarantees and Contingent Liabilities
Generally, if an issuer has guaranteed debt of a separate entity (which debt has not been consolidated), the guaranteed debt should be added to the issuer's on-balance sheet debt for the purpose of calculating the issuer's debt-related ratios. If the guaranteed entity

has more than adequate cash flow to service the guaranteed debt, however, DBRS may take this into account in evaluating debt-related ratios of the issuer.

Contingent liabilities can be similar to guaranteed debt. However, by their nature, there is a much wider horizon of potential situations. In most cases, a contingent liability is not as likely to be added to debt as guaranteed debt because there are circumstances whereby the company may be able to avoid the contingent liability in question. There may also be other options for the company that reduce or avoid the impact of the liability. DBRS assesses contingent liabilities on a case-by-case basis, considering the likelihood and potential magnitude of any impact.

3. Securitizations

As DBRS views securitization as a form of debt financing, securitized assets of non-financial companies are normally added back to debt to calculate adjusted debt ratios. (Note: In most cases IFRS requires securitized assets to be added back.)



© 2016, DBRS Limited, DBRS, Inc. and DBRS Ratings Limited (collectively, DBRS). All rights reserved. The information upon which DBRS ratings and reports are based is obtained by DBRS from sources DBRS believes to be reliable. DBRS does not audit the information it receives in connection with the rating process, and it does not and cannot independently verify that information in every instance. The extent of any factual investigation or independent verification depends on facts and circumstances. DBRS ratings, reports and any other information provided by DBRS are provided "as is" and without representation or warranty of any kind. DBRS hereby disclaims any representation or warranty, express or implied, as to the accuracy, timeliness, completeness, merchantability, fitness for any particular purpose or non-infringement of any of such information. In no event shall DBRS or its directors, officers, employees, independent contractors, agents and representatives (collectively, DBRS Representatives) be liable (1) for any inaccuracy, delay, loss of data, interruption in service, error or omission or for any damages resulting therefrom, or (2) for any direct, indirect, incidental, special, compensatory or consequential damages arising from any use of ratings and rating reports or arising from any error (negligent or otherwise) or other circumstance or contingency within or outside the control of DBRS or any DBRS Representative, in connection with or related to obtaining, collecting, compiling, analyzing, interpreting, communicating, publishing or delivering any such information. Ratings and other opinions issued by DBRS are, and must be construed solely as, statements of opinion and not statements of fact as to credit worthiness or recommendations to purchase, sell or hold any securities. A report providing a DBRS rating is neither a prospectus nor a substitute for the information assembled, verified and presented to investors by the issuer and its agents in connection with the sale of the securities. DBRS receives compensation for its rating activities from issuers, insurers, guarantors and/or underwriters of debt securities for assigning ratings and from subscribers to its website. DBRS is not responsible for the content or operation of third party websites accessed through hypertext or other computer links and DBRS shall have no liability to any person or entity for the use of such third party websites. This publication may not be reproduced, retransmitted or distributed in any form without the prior written consent of DBRS. ALL DBRS RATINGS ARE SUBJECT TO DISCLAIMERS AND CERTAIN LIMITATIONS. PLEASE READ THESE DISCLAIMERS AND LIMITATIONS AT http://www.dbrs.com/about/disclaimer. ADDITIONAL INFORMATION REGARDING DBRS RATINGS, INCLUDING DEFINITIONS, POLICIES AND METHODOLOGIES, ARE AVAILABLE ON http://www.dbrs.com.

Corporate Headquarters | DBRS Tower – 181 University Avenue Suite 700 Toronto, ON M5H 3M7 | TEL +1 416 593 5577 | www.dbrs.com

Insight beyond the rating.

Long Term Obligations Scale

The DBRS® long-term rating scale provides an opinion on the risk of default. That is, the risk that an issuer will fail to satisfy its financial obligations in accordance with the terms under which an obligations has been issued. Ratings are based on quantitative and qualitative considerations relevant to the issuer, and the relative ranking of claims. All rating categories other than AAA and D also contain subcategories "(high)" and "(low)". The absence of either a "(high)" or "(low)" designation indicates the rating is in the middle of the category.

AAA

Highest credit quality. The capacity for the payment of financial obligations is exceptionally high and unlikely to be adversely affected by future events.

AA

Superior credit quality. The capacity for the payment of financial obligations is considered high. Credit quality differs from AAA only to a small degree. Unlikely to be significantly vulnerable to future events.

A

Good credit quality. The capacity for the payment of financial obligations is substantial, but of lesser credit quality than AA. May be vulnerable to future events, but qualifying negative factors are considered manageable.

BBB

Adequate credit quality. The capacity for the payment of financial obligations is considered acceptable. May be vulnerable to future events.

BB

Speculative, non-investment grade credit quality. The capacity for the payment of financial obligations is uncertain. Vulnerable to future events.

B

Highly speculative credit quality. There is a high level of uncertainty as to the capacity to meet financial obligations.

CCC / CC / C

Very highly speculative credit quality. In danger of defaulting on financial obligations. There is little difference between these three categories, although CC and C ratings are normally applied to obligations that are seen as highly likely to default, or subordinated to obligations rated in the CCC to B range. Obligations in respect of which default has not technically taken place but is considered inevitable may be rated in the C category.

D

When the issuer has filed under any applicable bankruptcy, insolvency or winding up statute or there is a failure to satisfy an obligation after the exhaustion of grace periods, a downgrade to D may occur. DBRS may also use SD (Selective Default) in cases where only some securities are impacted, such as the case of a "distressed exchange". See Default Definition for more information.

Effective Date: July 25, 2013

Copyright © 2013, DBRS Limited, DBRS, Inc. and DBRS Ratings Limited (collectively DBRS). All rights reserved.

OCTOBER 2016



METHODOLOGY

Rating Companies in the Regulated Electric, Natural Gas and Water Utilities Industry

Previous Release: October 2015

Contact Information

James Jung, CFA, FRM, CPA, CMA
Senior Vice President
Energy
+1 416 597 7577
jjung@dbrs.com

Andrew Lin, P.Eng., MBA, CFA
Managing Director
Project Finance
+1 416 597 7453
alin@dbrs.com

Eric Beauchemin, CFA
Group Managing Director
Global Corporates
+1 416 597 7552
ebeauchemin@dbrs.com

DBRS is a full-service credit rating agency established in 1976. Spanning North America, Europe and Asia, DBRS is respected for its independent, third-party evaluations of corporate and government issues. DBRS's extensive coverage of securitizations and structured finance transactions solidifies our standing as a leading provider of comprehensive, in-depth credit analysis.

All DBRS ratings and research are available in hard-copy format and electronically on Bloomberg and at DBRS.com, our lead delivery tool for organized, web-based, up-to-the-minute information. We remain committed to continuously refining our expertise in the analysis of credit quality and are dedicated to maintaining objective and credible opinions within the global financial marketplace.

Table of Contents

Scope and Limitations 3

Introduction to DBRS Methodologies 3

Overview of the DBRS Rating Process 4

Regulated Electric, Natural Gas and Water Utilities Industry 5

Regulated Electric, Natural Gas and Water Utilities BRA 6

Regulated Electric, Natural Gas and Water Utilities FRA 9

Blending the BRA and FRA into an Issuer Rating 10

Rating the Specific Instrument and Other Criteria 10

Appendix 1: Regulation 11

Appendix 2: FRA Ratio Definitions and Common Adjustments for the Regulated Electric, Natural Gas and Water Utilities Industry 15

Scope and Limitations

This methodology represents the current DBRS approach for ratings in the regulated electric, natural gas and water utilities industry. It describes the DBRS approach to credit analysis, which includes consideration of historical and expected business and financial risk factors as well as industry-specific issues, regional nuances and other subjective factors and intangible considerations. DBRS's approach incorporates a combination of both quantitative and qualitative factors. The methods described herein may not be applicable in all cases; the considerations outlined in DBRS methodologies are not exhaustive and the relative importance of any specific consideration can vary by issuer. In certain cases, a major strength can compensate for a weakness and, conversely, a single weakness can override major strengths of the issuer in other areas. DBRS may use, and appropriately weight, several methodologies when rating issuers that are involved in multiple business lines. Further, this methodology is meant to provide guidance regarding the DBRS methods used in the sector and should not be interpreted with formulaic inflexibility, but understood in the context of the dynamic environment in which it is intended to be applied.

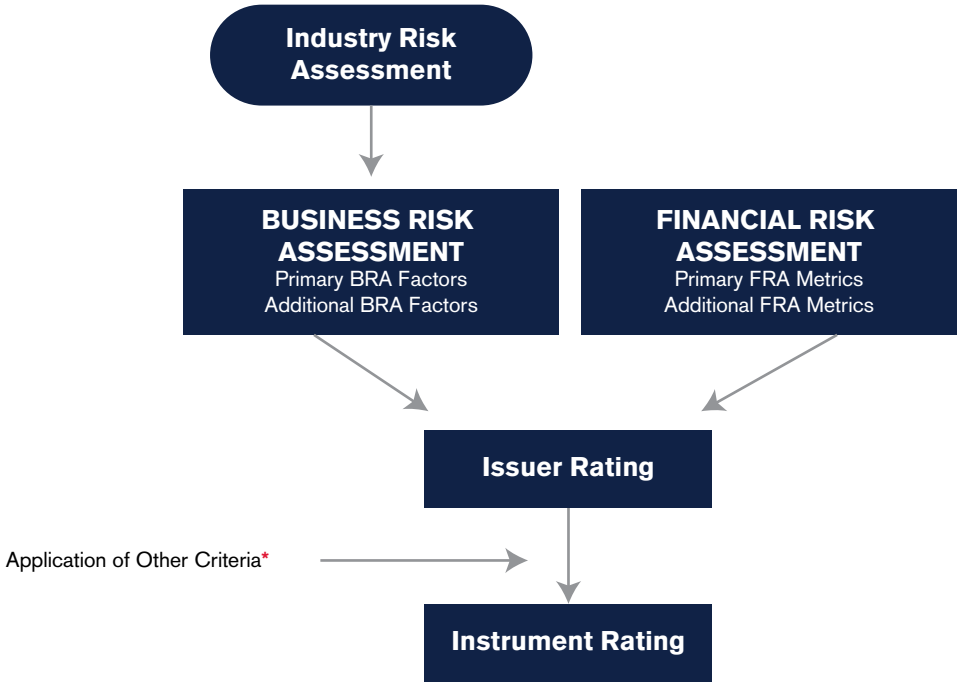
Introduction to DBRS Methodologies

- DBRS publishes rating methodologies to give issuers and investors insight into the rationale behind DBRS's rating opinions.
- In general terms, DBRS ratings are opinions that reflect the creditworthiness of an issuer, a security or an obligation. DBRS ratings assess an issuer's ability to make timely payments on outstanding obligations (whether principal, interest, preferred share dividends or distributions) with respect to the terms of an obligation. In some cases (e.g., non-investment grade corporate issuers), DBRS ratings may also address recovery prospects for a specific instrument given the assumption of an issuer default.
- DBRS operates with a stable rating philosophy; in other words, DBRS strives to factor the impact of a cyclical economic environment into its ratings wherever possible, which minimizes rating changes due to economic cycles. Rating revisions do occur, however, when more structural changes, either positive or negative, have occurred, or appear likely to occur in the near future.
- DBRS also publishes criteria which are an important part of the rating process. Criteria typically cover areas that apply to more than one industry. Both methodologies and criteria are publicly available on the DBRS website and many criteria are listed below under "Rating the Specific Instrument and Other Criteria."

Overview of the DBRS Rating Process

- There are generally three components to the DBRS corporate rating process: (1) an industry risk assessment (IRA); (2) an issuer rating; and (3) considerations for specific securities. The figure below outlines this process.
- An IRA is a relative ranking of most industries that have a DBRS methodology, typically using just three ranges of the DBRS long-term debt rating scale (i.e., "A," BBB and BB), without making use of the "high" or "low" descriptors. The IRA is a general indication of credit risk in an industry and considers, among other things, an industry's: (1) profitability and cash flow; (2) competitive landscape; (3) stability; (4) regulation; and (5) other factors. An "industry," for the purposes of the IRA, is defined as those firms that are generally the larger, more established firms within the countries where the majority of DBRS's rated issuers are based; this remains true for DBRS methodologies that are more global in nature. The IRA helps DBRS set the business risk assessment (BRA) grid (see below) in that it positions, in an approximate way, an average firm in the industry onto the BRA grid. For firms in industries with low IRAs, the IRA can, in effect, act as a constraint or "cap" on the issuer's rating.
- The issuer rating is DBRS's assessment of the probability of default of a specific issuer. It is a function of: (1) the BRA, determined by assessing each of the primary and (where relevant) additional BRA factors in the BRA grid for a specific issuer; and (2) the financial risk assessment (FRA), determined by assessing each of the primary and (where relevant) additional FRA metrics. The two components, BRA and FRA, are combined to determine the issuer rating; in most cases, the BRA will have greater weight than the FRA in determining the issuer rating. Throughout the BRA and FRA determination process, DBRS performs a consistency check of the issuer on these factors against the issuer's peers in the same industry.
- The issuer rating is then used as a basis for specific instrument ratings. DBRS assigns, for example, a recovery rating and notches up or down from the issuer rating to determine a specific instrument rating for instruments of non-investment grade corporate issuers. (See "Rating the Specific Instrument and Other Criteria" below.)

DBRS Rating Analysis Process



* Depending on the instrument, "other criteria" may include the recovery methodology for non-investment grade issuers or the preferred share and hybrid criteria, for example. Please refer to the section below entitled "Rating the Specific Instrument and Other Criteria" for a list of these criteria, as well as other criteria that may be applicable at any stage of the rating process.

Regulated Electric, Natural Gas and Water Utilities Industry

- This methodology applies to rate-regulated utilities whose primary business includes one or more of the following areas: (1) regulated electric generation, transmission and distribution; (2) natural gas transmission and distribution; and (3) water and waste-water utilities.
- For companies that have both material regulated and non-regulated operations in other related industry segments (e.g., non-regulated electricity generation, energy marketing or trading), DBRS applies both this and the *Rating Companies in the Independent Power Producer Industry* methodology. For pipeline or diversified energy companies, see *Rating Companies in the Pipeline and Diversified Energy Industry*. For energy-related project finance transactions, see *Rating Project Finance*, *Rating Wind Power Projects* or *Rating Solar Power Projects*.
- Per the three-tier industry risk rating system described on the previous page, this industry's IRA is "A."
- For the electric-related utilities, there are three broad business areas: generation, transmission and distribution. Some utilities are fully integrated and participate in all three, while others may be involved in only one or two segments.
- Regulated utilities are typically monopolistic. Because of the large amount of fixed costs, one large utility firm can generally provide service at a lower cost than two or more firms serving the same customer base. Utilities are generally regulated by an administrative tribunal (i.e., a government agency) created by statute to assist ratepayers in obtaining reliable energy services on a cost-effective basis. Rate-setting mechanisms generally ensure that utilities receive adequate revenues to recover all costs prudently incurred, including cost of capital, to provide service.
- Utilities are typically regulated under either a traditional cost-of-service (COS) framework or some form of performance-based framework.
- The risks associated with environmental regulation are growing, particularly for the electric industry; however, for a regulated utility, future cost increases attributable to environmental regulation would be expected to be recovered from ratepayers.
- Long-term threats include competition from new distributed energy resources (such as solar and geothermal power) and small-scale power generation sources located close to end users that provide an alternative to traditional electric power generation as well as the transmission and distribution grid.
- Water and waste-water utilities typically operate under similar regulatory frameworks to other regulated utility operations; however, water and waste-water sector regulations can vary widely given that regulation may be at the municipal level rather than the national/state/provincial level. In addition, capital spending may be more volatile for water and waste-water utilities.

Regulated Electric, Natural Gas and Water Utilities BRA

Primary BRA Factors

- The BRA grid below shows the primary factors used by DBRS in determining the BRA. While these primary factors are shown in general order of importance, depending on a specific issuer's business activities, this ranking can vary by issuer.

Regulated Electric, Natural Gas and Water Utilities — Primary BRA Factors

Regulation — The quality of the regulatory regime is typically the most important BRA factor as it lays the foundation for utilities' earning capacity, cost recovery mechanisms and capital structure. A supportive regulatory framework contributes to stable cash flow and earnings, underpinned by a fair rate of return and a full and timely recovery of costs. To determine the BRA for regulation, DBRS reviews eight considerations (see Appendix 1) to assess the regulatory framework in which the utility conducts its business. The eight considerations include the following: (1) deemed equity ratio, (2) allowed return on equity (ROE), (3) energy cost recovery, (4) capital cost recovery (CCR) and operating cost recovery (OCR), (5) COS versus incentive regulation mechanism (IRM), (6) political interference, (7) stranded cost recovery and (8) rate freeze.

AA	A	BBB	BB/B
• Highly supportive regulatory framework with the majority of relevant key regulatory risk factors in Appendix 1 considered to be "excellent."	• Supportive regulatory framework with the majority of relevant key regulatory risk factors in Appendix 1 considered to be "good" or better.	• Reasonable regulatory framework with the majority of relevant key regulatory risk factors in Appendix 1 considered to be "satisfactory" or better.	• Poor regulatory framework with the majority of relevant key regulatory risk factors in Appendix 1 considered to be "below average" and/or "poor."

Diversification (Products/Markets) — The electricity transmission segment generally has the lowest risk. The electricity transmission grid is the backbone of the electricity industry and generally represents a small part of the average residential electricity bill. As a result, there is strong political will to support the transmission owner to maintain safe, reliable operation of the transmission system. The electricity distribution and gas transmission/distribution segments generally entail modestly higher risk, as the distribution segment accounts for a greater portion of the average residential bill and the gas transmission segment is exposed to integrity management risk. The generator segment has the highest risk, as it is exposed to fuel risk and higher operating risk than that of other segments as well as represents the highest portion of the electricity bill, which makes it more susceptible to political risk, in a rising power cost environment. Diversification across low-risk multi-line businesses is positive, limiting the impact of changes in one particular segment.

AA	A	BBB	BB/B
• Primarily electric transmission. • Well-diversified utilities with a range of businesses throughout the utility value chain (natural gas transmission and distribution, electricity transmission and distribution and complementary energy services and generation activities).	• Electric or gas distribution, water or waste-water or an integrated utility or generator with a low-risk profile.	• Integrated utility or generator with a moderate-risk profile.	• Integrated utility or generator with a high-risk profile.

Franchise and Customer Mix — Operating in stable and economically strong service areas generally results in revenue stability and low accounts-receivable write-offs as well as minimizes political interference risk in a rising electricity rate environment. Utilities with a higher proportion of residential and commercial customers possess the ability to better weather economic downturns and demonstrate more stable operating performances than utilities with a greater exposure to industrial customers, which are more inclined to seek lower-cost or more reliable suppliers and are prone to economic cyclicality. However, utilities with a large residential customer base are generally more sensitive to weather conditions, exposing the utilities to greater volume risk.

AA	A	BBB	BB/B
• Strong and consistent levels of load growth. • Economically vibrant service territory. • Customer mix predominantly residential and commercial.	• Reasonable load growth generally tracking the broader economy. • Economically strong service territory. • Customer mix heavily weighted toward residential and commercial.	• Minimal load growth. • Economically stagnant service territory. • Customer mix a balance of residential and commercial versus industrial.	• Consistent load declines. • Economically weak service territory. • Customer mix weighted toward cyclical industrials.

Operating Efficiency (Inputs and Costs) — Utilities with a proven track record of superior operating efficiency generally sustain profitability above their respective regulatory return parameters (i.e., the "allowed" or "deemed" ROE as distinct from the "actual" ROE, which is the company's reported ROE as presented in regulatory filings) and record above-average profitability relative to their peers. Improving operating efficiency also helps minimize political interference (in the form of, for example, the creation of stranded costs, a rate freeze or regulatory lag in the recoupment of costs) in recovering rising input costs and refurbishment costs for aging infrastructure.

AA	A	BBB	BB/B
• Actual ROE has significantly exceeded the allowed ROE as a result of continued operating efficiency. • Strong ROE outperformance is expected to be well sustained in the foreseeable future through incremental cost savings accruing to the company.	• Actual ROE has been in line with the allowed ROE or a difference between the allowed ROE and the actual ROE has not been material. • ROE performance is expected to remain in line with the allowed ROE for the foreseeable future. There is no expectation of material incremental cost savings arising in the foreseeable future.	• Actual ROE has been somewhat below the allowed ROE, and this negative ROE performance relative to allowed ROE is expected to continue for the foreseeable future with no expectation of any material incremental cost savings.	• The utility has generated much lower actual ROE than the allowed ROE, and this negative ROE performance relative to allowed ROE is expected to continue for the foreseeable future with no expectation of any material incremental cost savings.

The following BRA risk factors are relevant to issuers in all industries (although the relevance of sovereign risk can vary considerably):

Sovereign Risk
The issuer rating may, in some cases, be constrained by the credit risk of the sovereign; in other words, the rating of the country in which the issuer operates generally sets a maximum rating for the issuer. If the issuer operates in multiple countries and a material amount of its business is conducted in a lower-rated country, DBRS may reflect this risk by downwardly adjusting its issuer rating.

Corporate Governance
Please refer to *DBRS Criteria: Evaluating Corporate Governance* for further information on how DBRS evaluates corporate governance and management.

Additional BRA Factors

- The additional BRA factors discussed below may be very important for certain issuers, depending on their activities, but they do not necessarily apply to all issuers in the industry.

Capital Spending

- Utilities are capital-intensive businesses. A utility might undertake large capital projects to either meet growing demand in a high-growth franchise area or replace significant aging assets. This could potentially lead to cost overruns and weaker financial metrics — at least during the growth phase.
- For utilities undergoing very significant multi-year capital expansion programs, capital spending may be considered a primary rating factor. This would be particularly relevant for companies with significant nuclear generation development.

Supply/Demand Considerations

- The provision of utility services depends on the presence of adequate supplies of energy (e.g., natural gas and electricity) to meet end-user demand. For electric utilities, generation of sufficient electricity to meet demand is paramount.

Ownership

- The existence of a highly rated parent typically does not result in a lift to a stand-alone utility's rating; however, DBRS may impute some level of support in a utilities rating if it is owned by a highly rated city, despite no explicit guarantee being in place, given the potential unique circumstances of the city-utility relationship.

Size

- In general, larger size can lead to greater economies of scale. Size may have an impact on a company's ability to raise funds, increase rates or execute capital projects. Under performance-based regulation, size would also have an impact on a company's ability to contain costs to achieve operating efficiency targets set by regulators. Given that utilities benefit from the lack of competition because of regulatory protection, a small utility would not likely be significantly disadvantaged relative to a large utility in the same way that a small industrial company might be disadvantaged against a large industrial company.

Retail Exposure

- Distribution companies may be required to provide retail services to customers, such as electricity supply. Under this framework, utilities, depending on commercial arrangements, could be exposed to significant market risk. Key areas of analysis therefore include hedging policies, counterparty risk and the size of the operation. Rates are, however, generally passed on to ratepayers, thereby reducing the risk to the utility.

Competitive Environment

- DBRS assesses the degree of competition from other forms of energy or any other potential threats to natural monopoly, including material development of new distributed energy resources and small-scale power generation sources located close to end users that could ultimately provide an alternative to the traditional electric power transmission and distribution grid.

Regulated Electric, Natural Gas and Water Utilities FRA

Primary FRA Metrics

- The FRA grid below shows the primary FRA metrics used by DBRS to determine the FRA. While these primary FRA metrics are shown in general order of importance, depending on an issuer's activities, the ranking can vary by issuer.
- DBRS ratings are based heavily on future performance expectations, so while past metrics are important, any final rating will incorporate DBRS's opinion on future metrics, a subjective but critical consideration.
- It is not unusual for a company's metrics to move in and out of the ranges noted in the grid below, particularly for cyclical industries. In the application of this matrix, DBRS looks beyond the point-in-time ratio.
- Financial metrics depend on accounting data whose governing principles vary by jurisdiction and, in some cases, industry. DBRS may adjust financial statements to permit comparisons with issuers using different accounting principles.
- Please refer to *DBRS Criteria: Financial Ratio Definitions and Accounting Adjustments – Non-Financial Companies* for definitions of, and common adjustments to, these ratios in the FRA grid below.
- DBRS considers an issuer's financial policy, including factors such as its targeted financial leverage, its dividend policy and the likelihood of share buybacks or other management actions that may favour equityholders over bondholders.
- Liquidity can be an important credit risk factor, especially for lower-rated non-investment grade issuers. While ratios such as the current or quick ratio can give an indication of certain short-term assets in comparison with short-term liabilities, DBRS will typically review all material sources of liquidity (including, for example, cash on hand, cash flow from operations, availability of bank funding, etc.) in comparison with all material short- and medium-term uses of liquidity (such as operations, capital expenditures (capex), mandatory debt repayments, share buybacks and dividends, etc.).
- While free cash flow (i.e., net of changes in working capital, dividends and capex, etc.) can be volatile and, on occasion, negative, DBRS may use this and/or other cash flow metrics to assess a company's ability to generate cash to repay debt.
- While market pricing information (such as market capitalization or credit spreads) may on occasion be of interest to DBRS, particularly where it suggests that an issuer may have difficulty in raising capital, this information does not usually play a material role in DBRS's more fundamental approach to assessing credit risk.

Regulated Electric, Natural Gas and Water Utilities — Primary FRA Metrics

Primary Metric	AA	A	BBB	BB/B
Cash flow-to-debt	> 17.5%	12.5% to 17.5%	10.0% to 12.5%	0.0% to 10.0%
Debt-to-capital	< 55%	55% to 65%	65% to 75%	75% to 90%
EBIT-to-interest	> 2.8x	1.8x to 2.8x	1.5x to 1.8x	1.0x to 1.5x

Additional FRA Metrics

- While the primary FRA metrics above are the most important metrics that DBRS uses in determining the FRA of an issuer, other metrics may be used, depending on an issuer's activities, capital structure, pension liabilities and off-balance-sheet obligations.
- DBRS notes that utilities rated below investment grade are typically rated as such because of heightened business risk levels rather than for credit metric reasons.

Blending the BRA and FRA into an Issuer Rating

- The final issuer rating is a blend of the BRA and FRA. In most cases, the BRA will have greater weight than the FRA in determining the issuer rating.
- At the low end of the rating scale, however, particularly in the B range and below, the FRA and liquidity factors play a much larger role and the BRA would, therefore, typically receive a lower weighting than it would at higher rating levels.
- For regulated utilities, the quality of the regulatory regime, which is a BRA factor, often drives the FRA of a company since the deemed capital structure and ROE are often set by the regulator.

Rating the Specific Instrument and Other Criteria

- For non-investment grade corporate issuers, DBRS assigns a recovery rating and reflects the seniority and the expected recovery of a specific instrument, under an assumed event of default scenario, by notching up or down from the issuer rating in accordance with the principles outlined in *DBRS Criteria: Recovery Ratings for Non-Investment Grade Corporate Issuers.*
- Preferred share and hybrid considerations are discussed in *DBRS Criteria: Preferred Share and Hybrid Security Criteria for Corporate Issuers.*
- The issuer rating (which is an indicator of the probability of default of an issuer's debt) is the basis for rating specific instruments of an issuer, where applicable. DBRS uses a hierarchy in rating long-term debt that affects issuers that have classes of debt that do not rank equally. In most cases, lower-ranking classes would receive a lower DBRS rating. For more detail on this subject, please refer to the general rating information contained in the DBRS rating policy *Underlying Principles*.
- For a discussion on the relationship between short- and long-term ratings and more detail on liquidity factors, please refer to the DBRS policy *Short-Term and Long-Term Rating Relationships* and *DBRS Criteria: Commercial Paper Liquidity Support for Non-Bank Issuers.*
- The existence of holding companies can have a meaningful impact on individual security ratings. For more detail on this subject, please refer to *DBRS Criteria: Rating Holding Companies and Their Subsidiaries.*
- Guarantees and other types of support are discussed in *DBRS Criteria: Guarantees and Other Forms of Support*.
- For further information on how DBRS evaluates corporate governance, please refer to *DBRS Criteria: Evaluating Corporate Governance.*
- Please refer to *DBRS Criteria: Financial Ratio Definitions and Accounting Adjustments – Non-Financial Companies* for definitions of, and common adjustments to, these ratios.

Appendix 1: Regulation

- To determine the BRA for regulation (see page 6), DBRS reviews the eight considerations found below, which assess the regulatory framework in which the utility conducts its business.
- The ranking of the factors is based on a five-point scale (excellent, good, satisfactory, below average and poor).
- The first four factors are generally of greater importance than the others when assessing regulatory risk; however, the factors are not given a specific weighting when assessing the regulatory framework.

Consideration 1: Deemed Equity Ratio

Definition

The deemed equity ratio is the percentage of equity investment in the rate base on which a utility could earn a return. In general, the higher the deemed equity ratio, the higher the earnings for a utility.

Score	Item	Definition
Excellent	50.00%+	• The deemed equity ratio represents 50.00% or more of the utility's rate base. • The treatment of the deemed equity ratio is consistent historically.
Good	45.00% to 49.99%	• The deemed equity ratio represents 45.00% to 49.99% of the utility's capital structure. • The treatment of the deemed equity ratio is consistent historically.
Satisfactory	40.00% to 44.99%	• The deemed equity ratio represents 40.00% to 44.99% of the utility's capital structure. • The treatment of the deemed equity ratio has not been consistent historically.
Below Average	35.00% to 39.99%	• The deemed equity ratio represents 35.00% to 39.99% of the utility's capital structure. • The treatment of the deemed equity ratio has not been consistent historically.
Poor	Below 34.99%	• The deemed equity ratio represents less than 34.99% of the utility's capital structure. • The treatment of the deemed equity ratio has not been consistent historically.

Consideration 2: Allowed ROE

Definition

Allowed ROE is a measurement of returns on the deemed equity portion of the rate base. The regulator assesses and sets an allowed ROE based on a utility's business risk level. These allowed ROE levels assume a current North American or Western European inflationary environment.

Score	Item	Definition
Excellent	10%+	• An allowed ROE is set at 10.00% or higher. • The regulatory treatment of allowed ROE has been consistent historically.
Good	9.00% to 10.00%	• An allowed ROE is set at 9.00% to 10.00%. • The regulatory treatment of allowed ROE has been consistent historically.
Satisfactory	8.00% to 8.99%	• An allowed ROE is set at 8.00% to 8.99%. • The regulatory treatment of allowed ROE has been consistent historically.
Below Average	7.00% to 7.99%	• An allowed ROE is set at 7.00% to 7.99%. • The regulatory treatment of allowed ROE has not been consistent historically.
Poor	Below 7.00%	• An allowed ROE is set at below 7.00%. • The regulatory treatment of allowed ROE has not been consistent historically.

Consideration 3: Energy Cost Recovery

Definition

Fuel and purchased energy cost (F&PE) recovery certainty and the timing of recovery are critical in DBRS's assessment of a regulatory system within a certain jurisdiction. DBRS looks at the following factors: (1) whether F&PE costs are fully passed through to the customers, (2) how often a utility is allowed to adjust the F&PE costs in retail rates charged to customers and (3) if there is a mechanism within a jurisdiction to allow utilities to make F&PE cost adjustments with no or minimal regulatory review. In addition, DBRS also focuses on the generation mix within a certain market. A high power cost market could have an impact on the utility's ability to recover the purchased power costs in a timely manner. DBRS notes that this factor is not applicable for water and waste-water utilities.

Score	Item	Definition
Excellent	Monthly/bimonthly	• F&PE costs are fully passed through. • Adjustment is made on a monthly basis. • There is an automatic adjustment mechanism. • The jurisdiction is in a favourable generation mix market, resulting in low power cost.
Good	Quarterly	• F&PE costs are fully passed through. • Adjustment is made on a quarterly basis. • There is an automatic adjustment mechanism. • The jurisdiction is in a favourable generation mix market, resulting in low power cost.
Satisfactory	Quarterly with regulatory review	• F&PE costs are fully passed through. • Adjustment is made on a quarterly basis. • F&PE cost deferrals are subject to some regulatory review. • The jurisdiction is in a good generation mix market.
Below Average	Annually with automatic adjustment	• F&PE costs are fully passed through or utilities have minimal exposure to energy price volatility. • Adjustment is made on an annual basis and is subject to minimal or some regulatory review. • The jurisdiction is in an above-average power cost market.
Poor	Annually with no automatic adjustment mechanism	• F&PE costs are fully passed through or utilities have minimal exposure to energy price volatility. • Adjustment is made on an annual basis. • F&PE cost deferrals are subject to regulatory review. • The jurisdiction is in an above-average power cost market.

Consideration 4: Capital and Operating Cost Recoveries

Definition

In assessing CCR and OCR, DBRS focuses on the likelihood of a utility's capex being added to its rate base, along with the timing of such an addition. In addition, DBRS focuses on cost-inflation adjustments that could affect the timing of the OCR. In particular, DBRS looks at the following factors: (1) the utilization of future test periods for rate decisions, (2) whether the spending is allowed to be added to the rate base during the construction or will only be added when the project is completed, (3) the level of upfront capital spending required without regulatory approval, (4) the degree of regulatory lag and uncertainty with respect to the CCR and (5) whether or not there is a reasonable mechanism to deal with cost overruns.

Score	Item	Definition
Excellent	Minimal CCR and OCR lag risk	• Work-in-progress costs can be added to the rate base if capex is significant. • Interim base-rate increases have been frequently authorized. • Future test periods are fully incorporated for rate-case decisions. • Rate cases are typically decided well within one year unless the rate cases are litigated or unusual circumstances occur. • There is a reasonable mechanism to deal with cost overruns.
Good	Reasonable CCR and OCR lag risk	• Capital costs are added to the rate base after completion of work. • Interim base-rate increases have been authorized from time to time. • Future test periods are at least partially incorporated for rate-case decisions. • Rate cases are typically decided within one year unless the rate cases are litigated or unusual circumstances occur. • There is a reasonable mechanism to deal with cost overruns.
Satisfactory	Modestly elevated CCR and OCR lag risk	• Capex is generally pre-approved by the regulator, but there is some modest upfront capital spending before regulatory approval. • Interim base-rate increases have been rarely authorized. • Historical test periods are commonly incorporated for rate-case decisions. • Rate cases are typically decided within one year unless the rate cases are litigated or unusual circumstances occur. • There is a reasonable mechanism to deal with cost overruns.
Below Average	Below-average CCR and OCR lag risk	• There is significant upfront capital spending before regulatory approval. • Interim base-rate increases have been rarely authorized. • Historical test periods are commonly incorporated for rate-case decisions. • Rate-case decisions typically take more than one year because of frequent court cases and other circumstances. • There are some mechanisms to deal with cost overruns.
Poor	Significant CCR and OCR lag risk	• Capex is generally not pre-approved by the regulator. • Capital costs are added to the rate base after completion of work. • Utilities face significant regulatory lag risk with respect to the CCR and the OCR. • There is no meaningful mechanism to deal with cost overruns.

Consideration 5: COS versus IRM

Definition

In general, under COS, regulated utilities are allowed to recover prudently incurred operating costs and earn a reasonable return on their investment. Under IRM, revenue requirements for the year are based on a COS base year, adjusted for inflation (using the consumer price index (CPI)) and subtracted a productivity factor, which is set by the regulator. This forces utilities to maintain their operational efficiency to achieve allowed ROE. DBRS views COS as lower risk than IRM. In addition, DBRS also considers the length of an IRM period between COS years. DBRS's scoring system gives a higher score for a shorter IRM period.

Score	Item	Definition
Excellent	COS	• The COS regime allows utilities to recover prudently and reasonably incurred operating costs.
Good	IRM (three years or shorter)	• The IRM regime is a maximum of three years between COS years. • For an IRM period of more than three years, there are reasonable mechanisms in place to mitigate unexpected capital investment and operating costs. In addition, key IRM assumptions, including CPI and productivity factors, are reasonable.
Satisfactory	IRM (four- to five-year framework)	• The IRM period is four to five years.
Below Average	IRM (six- to ten-year framework)	• The IRM period is six to ten years.
Poor	IRM (ten-plus years)	• The IRM period is over ten years.

Consideration 6: Political Interference

Definition

Political interference refers to political risk that could occur within a jurisdiction. Political interference could be in the following forms: (1) influence on the regulator's ability to independently and impartially arrive at a decision, (2) passing legislation to override a decision made by the regulator and (3) the regulator being elected instead of being appointed.

Score	Definition
Excellent	• There is no government influence on the regulatory decision-making process. • There has been no adverse legislation in the regulated utility sector. • The regulator is appointed.
Good	• There is a low degree of government influence on the regulatory decision-making process. • There has been no adverse legislation in the regulated utility sector. • The regulator is appointed.
Satisfactory	• There is a low degree of government influence on the regulatory decision-making process. • There has been no adverse legislation in the regulated utility sector. • The regulator is appointed or elected.
Below Average	• There is a modest degree of government influence on the regulatory decision-making process. • There has been no adverse legislation in the regulated utility sector. • The regulator is appointed or elected.
Poor	• There is a high degree of government influence on the regulatory decision-making process. • There has been some adverse legislation in the regulated utility sector. • The regulator is appointed or elected.

Consideration 7: Stranded Cost Recovery

Definition

Stranded costs occur when a utility has already incurred costs (F&PE, operating cost or capital spending) and faces uncertainty as to when it can recover these costs. In some cases, stranded costs are written off if it is certain that these costs cannot be recovered. DBRS looks at the following factors: (1) whether stranded costs exist and their magnitude, (2) the likelihood of recovering stranded costs, (3) the frequency and materiality of writedowns and (4) the time it takes to recover these costs.

Score	Item	Definition
Excellent	No stranded cost	• No stranded costs associated with legitimate or reasonable costs incurred by utilities.
Good	Full recovery	• Some stranded costs exist. • Stranded costs are fully recovered in a timely manner. • No historical stranded cost writedowns.
Satisfactory	Occasional writedowns	• Some stranded costs exist. • Stranded costs are recovered but subject to some regulatory lag. • Occasional writedowns.
Below Average	Frequent writedowns	• Some stranded costs exist. • Stranded costs are sometimes recovered. • Frequent writedowns. • Takes considerable time to recover costs.
Poor	Frequent significant writedowns	• Significant stranded costs exist. • Stranded costs are not fully recovered. • Significant writedowns occur. • Significant regulatory lag associated with the recovery.

Consideration 8: Rate Freeze

Definition

A rate freeze refers to a fixed retail rate that is charged to customers during a period of time (more than two years). During the rate-freeze period, utilities are exposed to increases in operating and energy costs. The longer the rate-freeze period or the more frequency with which a rate freeze occurs within a jurisdiction, the riskier it is for the utility.

Score	Item	Definition
Excellent	Never	• Rates are never frozen.
Good	Potential	• Rates have the potential to be frozen.
Satisfactory	Occasional	• Rates are occasionally frozen. • The frozen period is fewer than three years.
Below Average	Frequently	• Rates are frequently frozen. • The frozen period is fewer than three years.
Poor	Rate freeze	• Rates are currently frozen. • The frozen period is three years and longer.

Appendix 2: FRA Ratio Definitions and Common Adjustments for the Regulated Electric, Natural Gas and Water Utilities Industry

The primary FRA metrics cited in the table above are defined below with a discussion of common adjustments that are made for the regulated electric, natural gas and water utilities industry. For related definitions and a broader discussion of the common adjustments made to the accounting data to permit ratio comparability between issuers, please refer to *DBRS Criteria: Financial Ratio Definitions and Accounting Adjustments – Non-Financial Companies.*

CASH FLOW-TO-DEBT = CASH FLOW FROM OPERATIONS / TOTAL DEBT

Cash flow from operations = core net income + depreciation + amortization + deferred taxes + other non-cash items from income statement (before changes in non-cash working capital items).

Total debt = short-term debt + long-term debt + hybrid debt portion + capital leases.

Gross interest expense = all interest expense + debt hybrid interest expenses + capitalized interest (excludes any International Financial Reporting Standards (IFRS) adjustments).

DEBT-TO-CAPITAL = TOTAL DEBT / TOTAL CAPITAL

Total capital = total debt + total preferred equity + total common equity + minority interest + capital leases.

EBIT-TO-INTEREST = EBIT / GROSS INTEREST EXPENSE

EBIT = revenue – cost of goods sold – selling, general and administrative expenses – depreciation – amortization.

Gross interest expense = all interest expense + debt hybrid interest expenses + capitalized interest (excludes any IFRS adjustments).

DBRS may adjust certain inputs used in the calculation of the primary FRAs in order to better assess such metrics relative to an issuer's peers. In the regulated electric, natural gas and water utilities industry, DBRS typically adjusts debt and interest expense amounts for operating leases notwithstanding that these amounts are generally not material. Additionally, in rare cases, DBRS also considers net debt amounts in the case of large companies with a long history of maintaining significant cash or equivalents on the balance sheet.



© 2016, DBRS Limited, DBRS, Inc. and DBRS Ratings Limited (collectively, DBRS). All rights reserved. The information upon which DBRS ratings and reports are based is obtained by DBRS from sources DBRS believes to be reliable. DBRS does not audit the information it receives in connection with the rating process, and it does not and cannot independently verify that information in every instance. The extent of any factual investigation or independent verification depends on facts and circumstances. DBRS ratings, reports and any other information provided by DBRS are provided "as is" and without representation or warranty of any kind. DBRS hereby disclaims any representation or warranty, express or implied, as to the accuracy, timeliness, completeness, merchantability, fitness for any particular purpose or non-infringement of any of such information. In no event shall DBRS or its directors, officers, employees, independent contractors, agents and representatives (collectively, DBRS Representatives) be liable (1) for any inaccuracy, delay, loss of data, interruption in service, error or omission or for any damages resulting therefrom, or (2) for any direct, indirect, incidental, special, compensatory or consequential damages arising from any use of ratings and rating reports or arising from any error (negligent or otherwise) or other circumstance or contingency within or outside the control of DBRS or any DBRS Representative, in connection with or related to obtaining, collecting, compiling, analyzing, interpreting, communicating, publishing or delivering any such information. Ratings and other opinions issued by DBRS are, and must be construed solely as, statements of opinion and not statements of fact as to credit worthiness or recommendations to purchase, sell or hold any securities. A report providing a DBRS rating is neither a prospectus nor a substitute for the information assembled, verified and presented to investors by the issuer and its agents in connection with the sale of the securities. DBRS receives compensation for its rating activities from issuers, insurers, guarantors and/or underwriters of debt securities for assigning ratings and from subscribers to its website. DBRS is not responsible for the content or operation of third party websites accessed through hypertext or other computer links and DBRS shall have no liability to any person or entity for the use of such third party websites. This publication may not be reproduced, retransmitted or distributed in any form without the prior written consent of DBRS. ALL DBRS RATINGS ARE SUBJECT TO DISCLAIMERS AND CERTAIN LIMITATIONS. PLEASE READ THESE DISCLAIMERS AND LIMITATIONS AT http://www.dbrs.com/about/disclaimer. ADDITIONAL INFORMATION REGARDING DBRS RATINGS, INCLUDING DEFINITIONS, POLICIES AND METHODOLOGIES, ARE AVAILABLE ON http://www.dbrs.com.

Corporate Headquarters | DBRS Tower – 181 University Avenue Suite 700 Toronto, ON M5H 3M7 | TEL +1 416 593 5577 | www.dbrs.com

Rate Reduction Bonds —
A Diversifying Asset Class

Kristan Blake, Research Analyst

An asset-backed security (ABS) is a bond collateralized by a distinct pool of assets. The most common collateral types found in asset-backed securities are credit card receivables, auto and equipment loans or leases, home equity loans, student loans and installment sales contracts for manufactured housing units. Each bond has a specific collateral pool assigned to it at origination. The performance of the underlying collateral will largely determine the performance of the bond.

The ABS market allows for non-AAA rated issuers to access the capital markets at AAA funding rates. This is accomplished by isolating the ABS from the corporate credit risk of the issuer. Securitized assets are usually accounted for off the balance sheet of the issuer. Investors benefit from the high quality of the ABS market, 85% of which is AAA at origination. High credit quality and increasing issuance have resulted in an extremely liquid and stable market.

What is a Rate Reduction Bond?

A rate reduction bond (RRB) is the securitization of a cashflow stream generated by a fee charged to utility consumers. Deregulation of the electric utilities was introduced to foster a competitive environment and to reduce the rates charged to customers. However, when states deregulated utilities, the resulting decrease in revenue caused many utility company assets to become uneconomic to operate. These uneconomic assets are referred to as "stranded assets." RRBs were developed to enable utilities to bridge the gap between the book value of stranded assets in the previously regulated environment and their current market value in a deregulated one. The use of RRBs allows for an extended recovery period of those costs at a AAA funding rate.

Structure

Utility companies were ***granted the right to charge consumers a fee*** (often referred to as a transition property) to recover the costs associated with their stranded assets. In order to securitize this payment stream, the utility company must transfer the rights for the fee collection to a newly created Special Purpose Vehicle (SPV). The SPV then issues certificates (which are purchased by bondholders) and the proceeds are passed back to the utility company.

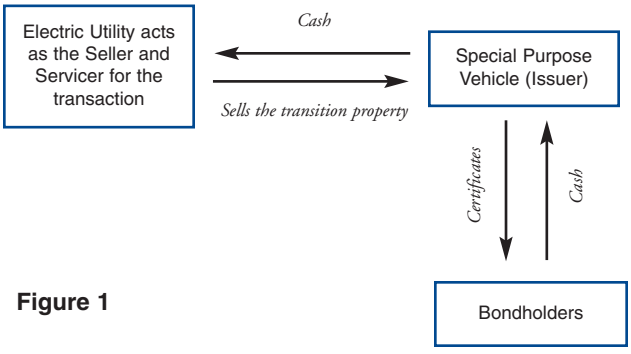


Figure 1

What is the role of an SPV?

An SPV is a bankruptcy-remote entity established for the sole purpose of issuing debt securities. The bankruptcy remote component of the SPV is crucial to the securitization and isolates the bondholders from event risk associated with the originator and servicer. On 4/6/01, Pacific Gas and Electric, a California-based provider, declared bankruptcy following the energy crisis in that state. On 4/9/01, the rating agencies affirmed the AAA rating of all $2.9 billion outstanding PG&E rate reduction bonds. The ratings were affirmed because the assets (the right to collect the transition charge) were sold to PG&E Funding (a bankruptcy remote SPV) and were no longer part of the PG&E bankruptcy estate. All required payments due to bondholders have been made to date.

An Example of a Typical RRB Structure

In August of 2003, Oncor Electric Delivery Company (a wholly owned subsidiary of TXU US Holding Co) came to market with their first rate reduction bond. Oncor Electric Delivery Transition Bond Company is the SPV created by Oncor Electric Delivery Company to issue the bonds. The typical total deal size range for a RRB is anywhere from $35 million to $3 billion. Oncor 2003-1 is an average-sized deal at $500 million. Oncor 2003-1 has a similar structure to most RRBs. It is a fully amortizing, sequential pay bond (see Figure 2). The amortization schedule pays principal first to A1 until A1 is paid in full, then to A2 until A2 is paid in full, and follows in this manner until A4 is paid in full. A1-A4 are all rated AAA by the three major rating agencies (S&P, Moody's, and Fitch), based on the underlying collateral quality and structure of the deal.

Figure 2

Servicer/Seller:	Oncor Electric Delivery Company
Issuer:	Oncor Electric Delivery Transition Bond Company LLC (The Special Purpose Vehicle)
Deal Size:	$500,000,000
Bloomberg Ticker:	ONCOR 2003-1

Bond Structure:

Class	Rating (S&P/Moody's/Fitch)	Average Life
A1	AAA/Aaa/AAA	2.00
A2	AAA/Aaa/AAA	5.00
A3	AAA/Aaa/AAA	8.00
A4	AAA/Aaa/AAA	10.83

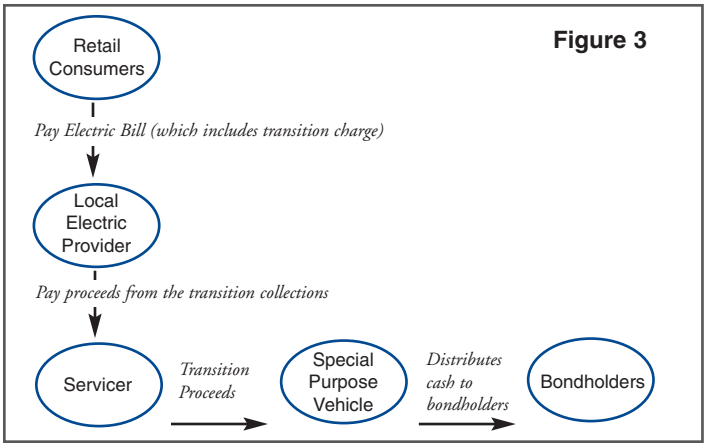
Kristan Blake *is the primary ABS Research Analyst for Conning Asset Management. She joined the firm in 2001 and is responsible for ABS analysis and surveillance. Ms. Blake is a graduate of Springfield College with a BS in Business Management.*

Credit Enhancement

Credit enhancement available to rate reduction bonds includes a prefunded reserve account (typical in basic ABS structures). A reserve account is a predetermined dollar amount that is held by the SPV as further protection for bondholders in the event of any shortfall between fees collected from rate payers and payments owed to bondholders. RRBs also benefit from a "true-up mechanism" which allows for consumer charges to be adjusted up or down in order to amend any shortfalls or surpluses experienced by the trust. The true-up mechanism makes the repayment schedule more predictable than any other ABS asset class. In fact, every transaction since 1995 has adhered exactly to its stated payment schedule with the exception of one transaction for which an early redemption provision was exercised.

Credit Quality

The cash for the repayment of a RRB comes from the fee charged to all utility users in a specific area (this charge often appears at the bottom of a regular electric bill). The charge assessed to customers is based on the amount of power transmitted through the grid irrespective of power supplier. Changing the power supplier (going to a competing supplier) does not void the charge. The only way to avoid the charge is to disconnect from the grid entirely. Because most electric power consumers rely exclusively on the grid for their power delivery, the number of customers and usage patterns is very predictable. The rate-paying group is therefore extremely diverse, and includes both private residences and companies, which significantly reduces credit risk.



Legal Issues

All outstanding RRBs have State pledges to protect bondholders from any alteration to the authorizing legislation that would hurt bondholders. A typical State pledge contains language that articulates that the State will not take any action or permit any action that would impair, reduce, or alter the value of the transition property until the bonds are repaid in full.

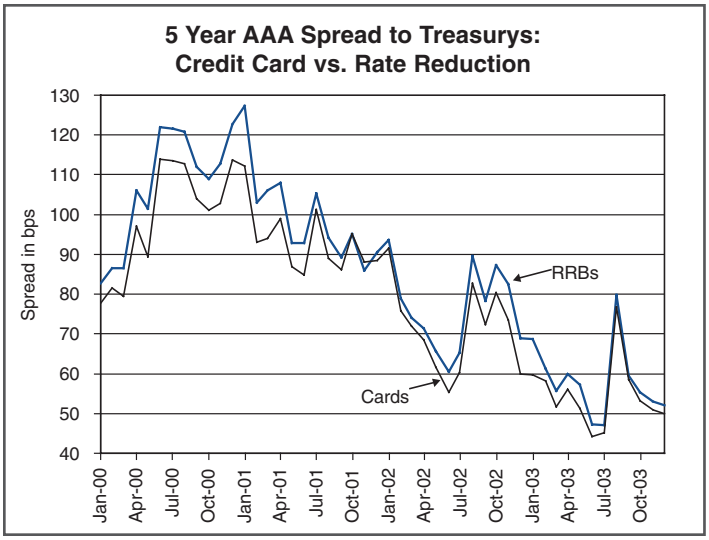
In 1998, a California ballot initiative called Proposition 9 sought to reverse key provisions of AB 1890, the legislation that allowed for the collection of the transition property in California. While the proposition was ultimately defeated, even before its defeat, both S&P and Moody's affirmed the AAA ratings on $6 billion of RRB issuance from California utilities. S&P stated that the bonds were protected by 1) the State pledge not to take or permit action that would impair the bonds and 2) protection from the federal and state constitutional provisions protecting against the impairment of contracts.

How much more Supply can we expect?

Since RRBs were introduced to the ABS market in 1995, there have been more than $31 billion of issuance. Estimates for further rate reduction issuance range between $5-8 billion, with issuance concentrated in Texas, New Jersey and Michigan. Since all of these states have already issued RRBs, the process will not require new legislative action and should be straightforward. Most of the remaining supply is expected to occur in late 2004 and early 2005.

Trading verses other AAA ABS

RRBs currently trade at spreads comparable to AAA-rated credit cards, which are the benchmark for the ABS market. It can be argued that RRBs are in fact of higher credit quality than credit cards because the borrower base is more widely diversified and the transition charge cannot be avoided by the ratepayer. Historical RRB spreads have widened and compressed on headline news, but have generally tracked credit card spreads. Previous RRB spread gaps to credit cards have presented buying opportunities. While recent spread differentials offer only an incremental yield pick-up, RRBs still offer value as a diversifying asset class. ◆



Source: JP Morgan

Asset Management Viewpoint *is published by Conning Asset Management Company. It is intended to inform readers about developments of interest but should not be considered investment advice. Data in this report were compiled from sources we consider reliable but are not guaranteed by us. This report does not purport to be complete. Opinions are subject to change without notice.*

CONNING ASSET MANAGEMENT COMPANY

CityPlace II, 185 Asylum Street, Hartford, CT 06103-4105
860-527-1131, www.conning.com

Copyright 2003
Conning Asset Management Company

CONNING